COMPREHENSIVE PLAN
FOR THE
CITY OF BEAVERTON
VOLUME I:
CITY OF BEAVERTON
COMPREHENSIVE PLAN



COMPREHENSIVE PLAN
FOR THE
CITY OF BEAVERTON

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MERLO STATION COMMUNITY
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MURRAY SCHOLLS TOWN CENTER

FOREWORD

OREGON'S LAND USE PLANNING PROGRAM

Local governments depend on state government for the power to plan and implement plans and policies. In 1919 Oregon passed legislation enabling cities to plan for growth through zoning, as long as the zoning ordinance was a "well-considered plan," established planning commissions, and required planning commission approval of subdivision plats. Soon thereafter, many cities and counties developed zoning and subdivision ordinances, which, became the foundation on which many jurisdictions' exercised their planning function.

The state's role in planning continued to be limited to authorizing local control until it became apparent that local systems were not adequate to respond to the complex pressures and trends created by the population boom following World War II. Oregon's population increased nearly 40 percent between 1950 and 1970, with 80 percent of the growth occurring in the Willamette Valley. Uncontrolled growth carries associated costs that are not immediately apparent. Incrementally, however, the cost was becoming clear to the public in increased water and air pollution; loss of prime, productive farmland to subdivisions; pockets of "leap-frog" development requiring expensive urban services; and increased commercial strips along the coast.

With concern over the loss of farmland and forests (traditionally Oregon's largest industries) as the initial impetus, the Oregon Legislature in 1969 grappled with growth management, environmental preservation, and the economics of providing public services on a regional and statewide basis. Its efforts resulted in passage of Senate Bill 10**,** which mandated that all cities and counties to adopt comprehensive land use plans and zoning regulations. In addition, the first ten statewide planning standards were established (see Appendix for listing of statewide planning goals). However, development of local land use plans and implementing regulations by each jurisdiction throughout the state did not begin in earnest until 1973 when additional legislation was passed to implement the 1969 mandate.

The Oregon Land Use Act of 1973 established the framework needed to implement statewide land use planning. The essentials of the Act are summarized below:

Established the Land Conservation and Development Commission (LCDC) and directed it to develop statewide goals.

Created the Department of Land Conservation and Development (DLCD) to administer the statewide goals and review local comprehensive plans for compliance with these goals.

Required all cities and counties to prepare and adopt comprehensive plans consistent with the statewide goals and to enact zoning, subdivision**,** and other regulatory ordinances to implement the adopted plans.

Required state agency plans and actions to conform to the LCDC goals and to city and county comprehensive plans.

Required widespread opportunities for citizen involvement in the planning process at local and statewide levels.

Allowed for appeals from local decisions alleged to violate statewide goals.

Provided funding to jurisdictions to carry out mandated planning responsibilities.

LCDC ultimately adopted 19 statewide planning goals. The first 14 were adopted by the Commission on December 27, 1974. The last five were adopted between 1975 and 1976. The goals are general standards for land use planning. Planning remains the responsibility of city and county governments, but must be consistent with these statewide standards. All of the statewide goals, except the Willamette River Greenway (15), are accompanied by "guidelines," which are suggestions about how a local government might comply with the state standards. The goals are mandatory; guidelines are not.

Over the years each city and county in Oregon has submitted its comprehensive plan and implementing land use regulations for review and acknowledgement by LCDC, which means that the submittal has been deemed to be in compliance with the statewide goals. After acknowledgment, further amendments to the comprehensive plan and implementing regulations are reviewed by the Commission, but on a less formal basis. Subsequent formal review by LCDC is called "periodic review" and occurs every four to seven years.

LCDC has enforcement power relating to a jurisdiction's compliance with the Land Use Act (ORS 197) and the statewide goals. Each city or county is responsible for assuring that its land use actions conform with the local comprehensive plan. Procedural and substantive grounds for appeal of a local land use decision are set out in the ORS 197. Any appeals of local land use decisions go directly to the Land Use Board of Appeals (LUBA), which was created in 1979 specifically for this purpose. Appeal of a LUBA decision is to the Oregon Court of Appeals. Appeals of land use decisions by LCDC are also filed at LUBA.

In brief, the state enacted legislation which enabled the preparation, adoption and administration of statewide land use goals and guidelines; but the local jurisdictions carry out the law to implement the plans by establishing comprehensive plans and land use regulations that are consistent with the statewide program. Methods for citizen involvement have been established at both the state and local level, including appeal procedures. Planning is a dynamic process that is constantly undergoing review and refinement for the betterment of the citizens of Oregon.

Beaverton's Land Use History

City of Beaverton incorporated February 10, 1893.

City Council directed the mayor to appoint a City Planning Commission ("in as much as there are many things concerning the present development of Beaverton that need to be arranged and planned for...") on September 11, 1944. Ordinance (ORD) 219

City Council sent a resolution to the Planning Commission in April 1945 to investigate a zoning ordinance and recommend zoning district boundaries. In December of that year, the Council held a public hearing on a proposed zoning ordinance.

City Council adopted Beaverton's first zoning ordinance (ORD 226) on January 7, 1946.

Ordinance 226 was repealed and replaced with ORD 550 in January 1960.

City Council adopted the Beaverton Area General Plan on December 18, 1972.

City Council repealed ORD 550 and adopted a new zoning code (ORD 2050), which was designed to implement the goals and policies of the General Plan, on October 20, 1978. The zoning ordinance, ORD 2050, also called the "Development Code", exists today in its amended form.

The Beaverton Area General Plan (comprehensive plan) was acknowledged by the LCDC on March 20, 1981.

The first Periodic Review of the comprehensive plan was approved by LCDC on December 4, 1987.

In 1995 the City began it's second Periodic Review of the comprehensive plan.

PREFACE

This is Volume I of a two volume document, which comprises the Comprehensive Plan. Volume I consists of the Comprehensive Plan. Volume II consists of the background and supporting documents.

The Plan was prepared in cooperation with Washington County, School District 48, and the Tualatin Hills Park and Recreation District. In addition, assisting in the development of this Comprehensive Plan were innumerable residents whose valuable contributions at each step lent assurance that this Plan represents the community's long-term goals.

INTRODUCTION

The Comprehensive Plan is the official long-range land use policy document for the City of Beaverton. It provides a framework for the decision making process and is a means of directing community efforts towards sound future growth, better understanding between public and private efforts, and a more beautiful and livable community. The Plan seeks to capture the essence of the community's vision of its future, translating it into a form that will allow effective implementation.

Beaverton's Comprehensive Plan only pertains to lands within the City limits. In addition, to satisfy Statewide Goal 2 requirement regarding coordination within the Regional Urban Growth Boundary, Beaverton and Washington County entered into an Urban Planning Area Agreement (UPAA) in 1986 and amended the agreement in 1988. The UPAA establishes: (1) a specific urban planning area that includes land outside the City affecting City planning interests; (2) a process for coordinating planning and development in the urban planning area; and, (3) a process to amend the UPAA. Included in this agreement is a method for transferring the County's Plan and zoning land use designations to the City following annexations.

In the broadest sense, planning seeks to guide future development of an area within a framework of goals and objectives that are consistent with the physical characteristics, attitudes, and resources of the community. Without some overall frame of reference or goals, the results can be disorder, confusion, pollution, waste and congestion. Since change is a constant, the choice is not whether it should occur but rather how and where.

The basic aim of the Comprehensive Plan is to organize and coordinate complex interrelationships between people, land, resources, and facilities in such a way as to protect the future health, safety, welfare, and convenience of the citizens. The strength of such a plan lies in its comprehensive approach to the problems of urban growth. It deals with the many public and private uses of land, setting forth relationships and recommendations in graphic and descriptive form as a document to serve as a guide for future growth and change.

The Comprehensive Plan also provides a basis for coordinated action by enabling various public and private interests to undertake specific projects with a consistent understanding of community goals and objectives. The Plan functions as a working frame of reference for government officials and administrators by establishing community policies and by specifying methods and standards for implementation of these policies. Public facilities, such as schools, parks, highways, civic areas, libraries and fire stations are planned and a program for land acquisition and construction can be prepared in advance of need so that services will be available when and where they are needed.

These same community policies serve individual property owners and private interest groups as a means of evaluating their individual decisions in light of community objectives. Clearly stated objectives allow individuals to determine how their interests can best be served in a manner consistent with the Plan. They are assured by the Plan that once they commit their investment to the land, there will be a reasonable continuity of land policies to protect their interests.

The Plan also provides a guide to the various private and public utilities charged with the responsibility of providing services to the community. Future service demands can be anticipated and facilities planned so that development can take place in the most economical and timely manner.

Each individual and organization participates in some way in the planning process. The community planning process is the continuing effort to coordinate short-range and long-range private and public actions toward the fulfillment of generally accepted overall community goals. The Comprehensive Plan provides the foundation for the planning process by establishing long-

range goals and objectives and by providing, through its various elements, an integrated view of future public and private development patterns in the community. It is an important tool to help the City identify problems and to take steps necessary to solve them before the cost of desirable solutions is beyond the community's economic capabilities to achieve.

The planning process is in itself a means of constantly evaluating the Comprehensive Plan. It is essential that the Plan be adaptable, but this must not be interpreted to permit piecemeal amendments that disregard the basic relationships established by the original effort. Proposed changes must be carefully considered in terms of possible overall effects on the entire community. Accommodation of a proposed development that appears very desirable on the surface may, under a thorough investigation with reference to the Plan, prove costly to both the future public interests and to committed private investments. Adherence to the policies developed in the Plan provides a means of protecting existing public and private investments and values.

The Comprehensive Plan is not a zoning plan and no existing zoning rights are changed by the Plan. However, zoning is one of the important legislative tools available to help implement the Plan. Any changes in zoning that occur are subject to a public hearing and a specific decision by the governing body. The greatest single problem between the Plan and zoning activity is timing. Some areas suggested in the Plan for different kinds of land uses can only be justified at some time in the future when sufficient population growth has occurred to warrant the development. All zone changes should be considered in relation to the Comprehensive Plan, and this serves as one of the continuing means of evaluating the Plan. If zone changes are contemplated that are contrary to the Plan, the community should first amend the policies and concepts in the Plan before a change of zone is made. This process ensures that each petition for rezoning is considered in light of the best interests of the entire community.

The Plan recommends appropriate uses for various areas and attempts to provide a maximum range of choice within the limits of the Plan’s goals and objectives. If there is to be choice, various areas must be guarded against intrusion of other uses that would limit or destroy the privacy of homes or the proper and economic functioning of areas of commerce or other special values. If there is to be choice that justifies a long-term investment in homes or businesses, areas must be set aside for different types of uses.

The Plan must be implemented if it is to be of value to the community. The Plan is a vital instrument of civic betterment that hinges on the involvement of both public and private sectors of the community in its realization. It involves extensive daily contact with public groups and individual citizens, the administration of appropriate codes and ordinances influencing development, capital improvement programming for the expenditure of local governmental funds, and the continuing refinement of the Plan in special circumstances**,** such as the downtown, parks and recreation**,** or community appearance. The efforts applied in the continuing planning process extend the Plan from the present to the future accomplishment of its goals and objectives. The Comprehensive Plan provides the basic guidelines that chart a course for change with some assurance the result will be improvement.

To facilitate use of the Plan, as much as possible**,** related topics have been arranged into Elements, e.g., Public Involvement Element, Land Use Element, Economy Element, Housing Element, Public Services Element. Within each Element information has been arranged in a consistent format beginning with a discussion of findings and assumptions to provide the context for the stated Objectives, Policies and Recommended Programs. The overall Goals of the City are stated at the end of this introduction. For the purposes of this Comprehensive Plan document, these categories are defined as follows:

GOAL	A broad, general statement that describes a desired aim for the community.
OBJECTIVE	A target towards which the community directs effort in striving to meet a goal.
POLICY	A statement that provides a consistent direction or course of action to guide and determine present and future decisions moving the community towards attainment of its goals and objectives.
RECOMMENDED PROGRAM	A statement that describes optional plans, ideas, procedures, or activities which may facilitate achievement of community goals and objectives.

The goals and objectives set forth in this Plan represent a City response to community needs. The goals present a broad view of community values and attitudes toward land use. This framework provides direction and cohesion towards development of objectives and policies for each of the elements. Although each goal can stand alone, there is synergy among them. All the objectives, policies**,** and recommended programs have been weighted against these interrelated concepts.

It is recognized that this Plan is based on goals that may not be easily attained. Their pursuit will require sustained commitment, cooperation, and support of the people within the community.

GOALS OF THE CITY OF BEAVERTON

1. Retain Beaverton as an outstanding City.

2. Provide a sound basis for urbanization by establishing proper relationships between residential, commercial, industrial and open land uses.

3. Encourage growth by orderly expansion outward from existing areas of development and thereby avoid unnecessary tax burdens usually associated with scattered, unrelated development.

4. Recognize and respect the natural beauty and resources in the area so that the benefits of each can be enjoyed without detriment to the other.

5. Significantly improve the appearance of the community as one means of developing an individual and distinctive identity for Beaverton within the metropolitan area.

6. Provide a safe, coordinated**,** and economical transportation and circulation system to bring about the best relationships between places where people live, work, shop and seek recreation.

7. Retain and enhance the character and quality of established areas and revitalize, rehabilitate or redevelop those established areas where such improvements are needed.

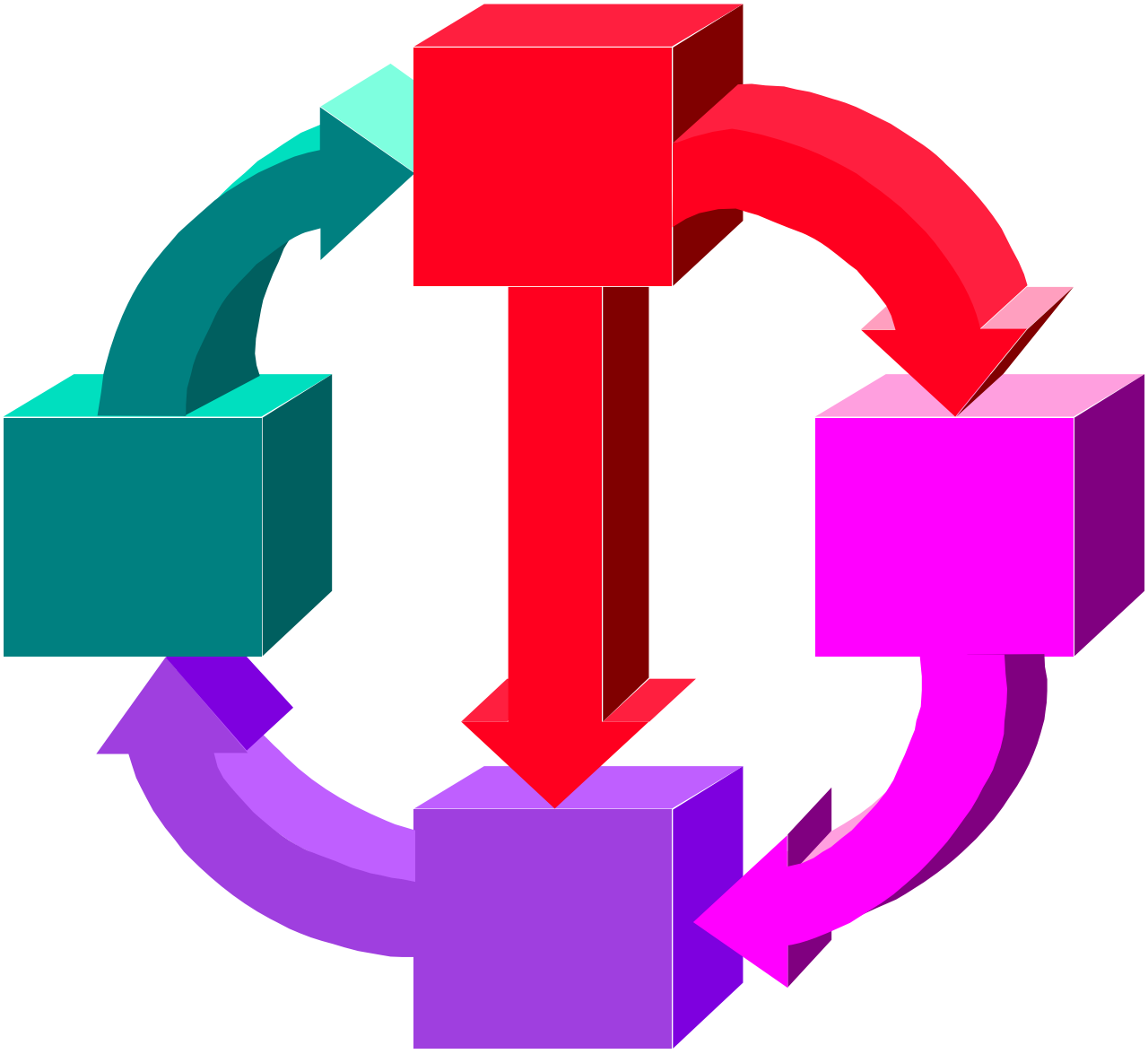
8. Continually strive for excellence in all private developments and public services within the constraints of economic reality. Economic reality should not be interpreted as maximum profit for minimum investment or as maximum local budgets for maximum services.

9. Encourage and promote innovations in development techniques in order to obtain maximum livability and excellence in planning and design for all new developments.

10. Continually explore, within the limits of the public health, safety**,** and general welfare, innovations in development of regulations in order to promote maximum livability for the people of the community.

11. Encourage the development of the downtown as the regional employment and commercial center for the suburban southwest market area of the Portland metropolitan area.

CHAPTER ONE:
COMPREHENSIVE PLAN AMENDMENT PROCEDURES ELEMENT



COMPREHENSIVE PLAN AMENDMENT PROCEDURES

1.1 AMENDMENT INITIATION.

Amendments to the Comprehensive Plan may be initiated by City Council, the Planning Commission, the Mayor, the Community Development Director, or the Engineering Director at any time. Landowners may also initiate an amendment to the Land Use Map pertaining only to their property at any time.

1.1.1 City-initiated Amendments

Amendment requests shall be submitted to the Community Development Director for preparation and analysis for a Planning Commission public hearing or City Council consideration. The Planning Commission and City Council have the right to accept, reject or modify any specific request for amendment in accordance with the City's policies and procedures. The Planning Commission or City Council may enlarge or reduce the geographic area of proposed map amendments, investigate alternative land use designations to those requested, or combine the request with other City-initiated amendments for comprehensive study and determination. If the decision to modify a requested amendment is made after public hearing notice has been provided, the notice shall be reissued and, if necessary, the hearing rescheduled.

1.1.2 Property Owner-initiated Amendments

Amendment requests shall be submitted to the Community Development Director for preparation and analysis for a Planning Commission public hearing. The Planning Commission and City Council reserve the right to approve, approve with conditions, or deny any specific request for amendment in accordance with the City's policies and procedures.

1.1.3 Amendment Processing

Proposed amendments shall be processed as expeditiously as possible, subject to the availability of staff and budgetary resources and project priorities set by the Mayor. Amendments shall be processed in compliance with the procedures established by this Plan as well as Oregon Revised Statutes, Oregon Administrative Rules, Metro Code, the City Charter, and City Ordinances. Property owner-initiated amendments should be processed in the order in which they are submitted and accepted as complete, but the City Council may, by resolution, postpone processing proposed amendments to accelerate processing other amendments to which they give a higher priority.

1.2 PERIODIC REVIEW

Periodic Review amendments are subject to a Land Conservation and Development Commission (LCDC) approved work program and follow separate notice procedures outlined in the Oregon Revised Statutes and Oregon Administrative Rules governing Periodic Review.

1.3 AMENDMENT PROCEDURAL CATEGORIES

Comprehensive Plan Amendments fall into five general categories: Legislative, Quasi-Judicial, Historic Landmark, District and Tree designation removal, Non-Discretionary, and Statewide Planning Goal 5 Inventory Document Amendments.

Legislative Amendments are amendments to the Comprehensive Plan text or map of a generalized nature initiated by the City that applies to an entire land use map category or a large number of individuals or properties or that establishes or modifies policy or procedure. Legislative amendments include additions or deletions of text or land use map categories.

Quasi-Judicial Amendments are amendments to a Land Use Map designation as it applies to specific parcels or that applies to a small number of individuals or properties or locations.

Historic Landmark, District or Tree Designation Removal are amendments, requested from the property owner, to remove said designation pursuant to ORS 197.772. Upon receipt of a letter request to remove said designation, the Community Development Director shall issue a letter removing said designation based on ORS 197.772 and shall cause such letter to be mailed to the property owner and the property owners within an area enclosed by lines parallel to and 500 feet from the exterior boundary of the subject property.

Non-Discretionary Amendments are amendments to the Comprehensive Plan Land Use Map to add an annexed property, or properties, to the Map with a Land Use Map designation assigned through direct application of the Washington County-Beaverton Urban Planning Area Agreement (UPAA). The County land use classification(s) remain in effect under provisions of Oregon Revised Statutes (ORS 197.175(1) and ORS 215.130(2)(a)) until the City acts to implement its own Comprehensive Plan Land Use designation(s) for the annexed territory.

The UPAA requires the City to assign a particular, or most similar, City Comprehensive Plan Land Use designation to the annexed property based on the Washington County designation. Exhibit "B" of the UPAA contains a chart describing a one-to-one relationship between County and City land use designations. The UPAA and the chart referenced as Exhibit "B" is found within Chapter 3 of the Comprehensive Plan in Section 3.15. Where UPAA Exhibit "B" provides a one-to-one relationship and the annexed property is **not** subject to any special policies within the applicable Washington County Community Plan, the decision to apply a specific Land Use Map designation is made under land use standards that do not require interpretation or the exercise of policy or legal judgment. Consequently, the decision is not a land use decision as defined by Oregon Revised Statutes (ORS 197.015(10)(b)(A)).

Statewide Planning Goal 5 Inventory Resource Document Amendments are amendments to Volume III of the Comprehensive Plan. Amendments may be legislative, such as periodic review, or annual updates to maps, or quasi-judicial. Updates to the Significant Natural Resources Map (Local Wetland Inventory Map) incorporating changes approved by the Department of State Lands are non-discretionary map amendments the public notice, decision-making and appeal of the decision occurs when the Division of State Lands approves the wetland delineation and fill or removal permit (OAR 141-086-005 through OAR 141-090-0230, OAR 141-085-0018, OAR 141-085-0025, OAR 141-085-0028, OAR 141-085-0029, OAR 141-085-0031, OAR 141-085-0066, ORS 227.350 (2), and ORS 196.600 to 196.990). As noted under Non-Discretionary Amendments above, when no discretion is exercised, the decision is not a land use decision under Oregon Revised Statutes (ORS 197.015(10)(b)(A)).

1.4 NOTICE REQUIREMENTS

The claim of a person to have not received notice, who may be entitled to notice as provided in this section, shall not invalidate such proceedings if the City can demonstrate by affidavit that such notice was given.

If the Community Development Director or City Council determine that the proposed amendment substantially changes from the proposal described in the initial notice, then notice is required to be sent again as described in the appropriate subsection with specific notation that the proposal has changed and that a new hearing will be held on the matter.

1.4.1 Legislative Amendments.

A. Notice of the initial hearing shall be provided as follows:

1. By mailing the required inter-agency Department of Land Conservation and Development (DLCD) notice to DLCD, Metro, and Washington County at least forty-five (45) calendar days prior to the initial hearing. When the legislative amendment is required through Periodic Review, DLCD notice is not required, therefore, it is not provided;
2. By mailing the required inter-agency DLCD notice to all Neighborhood Association Committee (NAC) chairs and Community Participation Organizations (CPO) in whose area there is property that in the Director's opinion could be affected by the proposed ordinance if adopted, and the Chair of the Committee for Citizen Involvement, at least forty-five (45) calendar days prior to the initial hearing;
3. Mail notice to owners of property within the City for which the proposed ordinance, if adopted, may in the Director's opinion affect the permissible uses of land

   a) The most recent property tax assessment roll of the Washington County Department of Assessment and Taxation shall be used for determining the property owner of record. The failure of a property owner to receive notice does not invalidate the decision.

   b) If a person owns more than one property that could be affected by the proposed ordinance if adopted, the Director may mail that person only one notice of the hearing;
4. By publication of a notice with the information specified in subsection 1.4.1 B.1, 2, and 3 in a newspaper of general circulation within the City;
5. By posting a notice with the applicable information specified in subsection 1.4.1 B at Beaverton City Hall and the Beaverton City Library; and
6. By placing a notice with the applicable information specified in subsection 1.4.1 B on the City's website.

Notice required by Oregon Revised Statutes (ORS 227.186, also known as Ballot Measure 56) shall be provided, when applicable. ORS 227.186(6) specifies notice requirements for city-initiated amendments related to Periodic Review.

Hearing Notices required by numbers 3 through 6 of this subsection, shall be given not less than twenty (20) and not more than forty (40) calendar days prior to the date of the initial hearing.

For Legislative Periodic Review notices, notice described in 1.4.1.B shall be mailed at least 45 days in advance of the initial hearing to Metro, Washington County, all Neighborhood Association Committee (NAC) chairs in whose area there is property that in the Director's opinion could be affected by the proposed ordinance if adopted, and the Chair of the Committee for Citizen Involvement.

B. Mailed notice required in subsection 1.4.1.A.3., posted notice required in subsection 1.4.1.A.5., and web notice required in subsection 1.4.1.A.6. shall:
   1. State the date, time and location of the hearing, and the hearings body;
   2. Explain the nature and purpose of the hearing;
   3. Include the case file number, title or both of the proposed ordinance to be considered at the time of hearing;
   4. List the applicable approval criteria by Comprehensive Plan by section numbers that apply to the application at issue;
   5. State that a copy of the application, all documents and evidence submitted by or on behalf of the applicant, and applicable criteria are available for inspection at no cost and will be provided at reasonable cost and include the days, times and location where available for inspection;
   6. State that a copy of the staff report will be available for inspection at no cost at least seven (7) calendar days prior to the hearing and will be provided at reasonable cost and include the days, times and location where available for inspection;
   7. Include the name and phone number of the City staff person assigned to the application from whom additional information may be obtained;
   8. State that failure of an issue to be raised in a hearing, in person or by letter, or failure to provide statements or evidence sufficient to afford the Planning Commission an opportunity to respond to the issue precludes appeal to the City Council and the Land Use Board of Appeals based on that issue; and
   9. Include a general explanation of the requirements for submission of testimony and procedure for conduct of the hearing.

C. If an application is City-initiated and would change the Land Use Plan Map for a property to a designation that would require a rezone, a notice must be sent to the owner pursuant to Oregon Revised Statutes (ORS 227.186 also known as Ballot Measure 56).

D. Notice of remand hearings, whether they be the entire legislative amendment or part of the amendment, either from the Land Use Board of Appeals to City Council or from City Council to Planning Commission, shall be given following subsections 1.4.1.A. and 1.4.1.B. with the following additional information:
   1. The deadline for submitting written testimony and the place it is to be submitted;
   2. The applicable criteria if the remand is required by the failure to state the criteria or if the criteria have changed;
   3. The scope of the testimony; and
   4. Whether the testimony is de novo or limited to the record and whether it must be submitted in writing or whether oral testimony will be allowed.

   The notice required in this subsection D. shall be mailed to persons who previously provided written or oral testimony in the proceedings on the proposal.

1.4.2 Quasi-Judicial Amendments

A. Notice of the initial hearing shall be provided as follows:

1. By mailing the required inter-agency DLCD notice to DLCD, Metro, and Washington County at least forty-five (45) calendar days prior to the initial hearing;
2. By mailing the required inter-agency DLCD notice to the chair(s) of any City-recognized Neighborhood Association Committee (NAC) or County-recognized Citizen Participation Organization whose boundaries include the proerpty for which the change is contemplated, and the Chair of the Committee for Citizen Involvment at least forty-five (45) calendar days prior to the initial hearing;
3. By publication of a notice with the information specified in 1.4.2.B.1., 2., 3. and 4. in a newspaper of general circulation within the City;
4. By posting notice with the information specified in 1.4.2.B. at Beaverton City Hall and the Beaverton City Library;
5. By mailing notice with the information specified in 1.4.2.B. to property owners included in the proposed change area, if applicable, and within an area enclosed by lines parallel to and 500 feet from the exterior boundary of the property for which the change is contemplated; and
6. By placing notice with the information specified in 1.4.2.B. on the City's web site.

Notice required by Oregon Revised Statutes (ORS 227.186, also known as Ballot Measure 56) shall be provided, when applicable. ORS 227.186(6) specifies notice requirements for city-initiated amendments related to Periodic Review.

Hearing notices required by numbers 3 through 6 of this subsection shall be given not less than twenty (20) and not more than forty (40) calendar days prior to the date of the initial hearing.

B. Notice required in subsection 1.4.2.A.4. and 5. shall:

1. State the date, time, and location of the hearing, and the hearings body;
2. Explain the nature of the application and the use or uses, which could be authorized;
3. Include the case file number, title or both of the proposed ordinance to be considered at the time of hearing;
4. List the applicable criteria from the Comprehensive Plan by section number that apply to the application at issue;
5. State that a copy of the application, all documents and evidence submitted by or on behalf of the applicant, and applicable criteria are available for inspection at no cost and will be provided at reasonable cost and include the days, times and location where available for inspection;
6. State that a copy of the staff report will be available for inspection at no cost at least seven (7) calendar days prior to the hearing and will be provided at reasonable cost include the days, times and location where available for inspection;
7. Include the name and phone number of the City staff person assigned to the application from whom additional information may be obtained;
8. State that failure of an issue to be raised in a hearing, in person or by letter, or failure to provide statements or evidence sufficient to afford the Planning Commission an opportunity to respond to the issue precludes appeal to the City

Council and the Land Use Board of Appeals based on that issue;

9. Include a general explanation of the requirements for submission of testimony and procedure for conduct of the hearing; and
10. Set forth the street address or other easily understood geographical reference to the subject property and include a map, if applicable.

C. If an application is City-initiated and would change the Land Use Plan Map for a property to a designation that would require a rezone, a notice must be sent to the owner pursuant to Oregon Revised Statutes (ORS 227.186(3) also known as Ballot Measure 56).

D. Notice of remand hearings, whether for the entire quasi-judicial amendment or part of the amendment, either from the Land Use Board of Appeals to City Council or from City Council to Planning Commission shall be given following subsection 1.4.2.A. and 1.4.2.B. with the following additions:

1. Any deadline for submitting written testimony and the place it is to be submitted;
2. The applicable criteria if the remand is required by the failure to state the criteria or if the criteria have changed;
3. The scope of the testimony; and
4. Whether the testimony is limited to the record or de novo and whether it must be submitted in writing or whether oral testimony will be allowed.

The notice required in this subsection D. shall be mailed to persons who previously provided written or oral testimony in the proceedings on the proposal.

1.4.3 Non-Discretionary Map Amendments

A Notice for Non-Discretionary Map Amendments shall be provided as follows:

1. By publication of a notice with the information specified in 1.4.3.B.1., 2. and 3. in a newspaper of general circulation within the City;
2. By mailing notice with the information specified in 1.4.3.B. to the Chair of the Committee for Citizen Involvement (CCI), Neighborhood Association Committee (NAC), Community Participation Organization (CPO) and owners of record of the subject property on the most recent property tax assessment roll; and
3. By placing notice with the information specified in 1.4.3.B. on the City's web site.

All notices required by 1. through 3. of this subsection A. shall be given not less than twenty (20) and not more than forty (40) calendar days prior to the date the item initially appears on the City Council agenda.

B. Notice required by subsection 1.4.3.A. shall:

1. State the time, date, place, and purpose of the City Council agenda item;
2. Explain the nature of the application;
3. Include the case file number, title or both of the proposed ordinance to be considered;
4. List the applicable criteria from the Comprehensive Plan and State Law that apply to the application at issue;
5. State that a copy of the application, all documents and evidence submitted by or on behalf of the applicant, and applicable criteria are available for inspection at no cost and will be provided at reasonable cost and include the days, times and location where available for inspection;

6. State that a copy of the staff report will be available for inspection at no cost at least seven (7) calendar days prior to the meeting and will be provided at reasonable cost and include the days, times and location where available for inspection;
7. Include the name and phone number of the City staff person assigned to the application from who additional information may be obtained; and
8. Set forth the street address or other easily understood geographical reference to the subject property, including a map.

C. Notice of Decision for Non-Discretionary Map Amendments

Within five working days after the City Council decision on a Non-Discretionary Map Amendment, notice of the decision shall be mailed to the owner of record, DLCD, the Beaverton Neighborhood Office and the Chairperson of the Committee for Citizen Involvement (CCI). The notice of decision shall include the following:

1. A statement that the decision is final but may be appealed in a court of competent jurisdiction, and
2. A statement that the complete case file is available for review. The statement shall list when and where the case file is available and the name and telephone number of the City representative to contact for information about the case.

1.4.4 Statewide Planning Goal 5 Inventory Resource Document (Volume III) Amendments

A. If the proposal is legislative in nature, as in an update to one of the Statewide Planning Goal 5 Inventory Resource Documents or an addition of a new category of Statewide Planning Goal 5 Inventory Resource Documents, then notice shall follow the legislative notice procedure identified under subsection 1.4.1.

B. If the proposal is quasi-judicial in nature, as in a change on one property or a limited group of properties, the notice shall follow the quasi-judicial notice procedure under subsection 1.4.2.

C. If the proposal is to update the Local Wetland Inventory map of the Significant Natural Resource maps based on approvals of wetland delineations or fill or removal permits issued by the Oregon Department of State Lands, the amendment shall be deemed non-discretionary and shall be updated administratively by City Council ordinance adoption, following the Non-Discretionary Map Amendment procedure under 1.4.3.

1.5 CRITERIA FOR AMENDING THE COMPREHENSIVE PLAN

The adoption by the City Council of any amendment to the Plan shall be supported by findings of fact, based on the record, that demonstrate the criteria of this Section have been met. The City Council and Planning Commission may incorporate by reference facts, findings, reasons, and conclusions proposed by the City staff or others into their decision.

1.5.1 Criteria for Legislative and Quasi-judicial Comprehensive Plan Amendments

A. The proposed amendment is consistent and compatible with relevant Statewide Planning Goals and related Oregon Administrative Rules;

B. The proposed amendment is consistent and compatible with the applicable Titles of the

Metro Urban Growth Management Functional Plan and the Regional Transportation Plan;

C. The proposed amendment is consistent and compatible with the Comprehensive Plan and other applicable local plans; and

D. If the proposed amendment is to the Land Use Map, there is a demonstrated public need, which cannot be satisfied by other properties that now have the same designation as proposed by the amendment.

1.5.2 Criteria for Non-Discretionary Map Amendments

A. Annexation-Related

Discretion occurs when the Washington County-Beaverton Urban Planning Area Agreement (UPAA) is adopted or amended by the County and the City. The UPAA provides specific City-County Land Use Designation Equivalents. Specifically, the UPAA states in Section II (D) "Upon annexation, the city agrees to convert County plan and zoning designations to City plan and zoning designations which most closely approximate the density, use provisions and standards of the County designations. Such conversion shall be made according to the tables shown on Exhibit "B" to this agreement." Consequently, when the conversion from County to City designation is shown on Exhibit B, the City has no discretion.

B. Statewide Planning Goal 5

The Department of State Lands (DSL) and the US Army Corps of Engineers (COE) exercise discretion when these agencies approve wetland delineations and fill/removal permits (OAR 141-085, ORS 227.350, and ORS 196.600 to 196.990). Because the decision is made by another agency, acknowledging the locations of the delineated wetlands and fill/removal activities on the City's Local Wetland Inventory map involves no discretion.

1.5.3 Criteria for Statewide Planning Goal 5 Inventory Resource Document (Volume III) Comprehensive Plan Amendments

A. Local Wetland Inventory Amendments require following the criteria for adoption of a local wetland inventory found within Oregon Revised Statutes and Oregon Administrative Rules (as of November 2004, ORS 196 and OAR 141-086 and OAR 660-023).

B Criteria for Addition of Historic Landmarks and Districts

To qualify as a historic landmark or district, the proposal must meet criterion 1 and at least one factor listed as criteria 2 through 5:

1. Conforms with the purposes of the Beaverton Comprehensive Plan; and
2. The proposed landmark or district is associated with natural history, historic people, or with important events in national, state, or local history; or
3. The proposed landmark or district embodies the distinguishing characteristics of an architecture inherently valuable for a study of a period, style, or method of construction; or

4. The proposed landmark is a notable work of a master builder, designer, or architect; or
5. The proposed landmark or district would serve one or more of the following purposes:
    a) To preserve, enhance, and perpetuate landmarks and districts representing or reflecting elements of the City's cultural, social, economic, political, and architectural history;
    b) To safeguard the City's historic, aesthetic, and cultural heritage as embodied and reflected in said landmarks and districts;
    c) To complement any National Register properties or Historic Districts;
    d) To stabilize and improve property values in such districts;
    e) To foster civic pride in the beauty and accomplishments of the past;
    f) To protect and enhance the City's attractions to tourists and visitors and the support and stimulus to business and industry thereby provided;
    g) To strengthen the economy of the City; and
    h) To promote the use of historic districts and landmarks for the education, pleasure, energy conservation, housing, and public welfare of the City's current and future citizens.

C. Criteria for Adding Historic Trees

The adoption by City Council and Planning Commission of any amendment to add a historic tree to the Historic Tree Inventory shall be based on the following criteria:

1. Conforms with applicable goals and policies of the Beaverton Comprehensive Plan;
2. The proposed historic tree designation is requested by the property owner as determined by the most recent property tax assessment roll of the Washington County Department of Assessment and Taxation; and
3. The proposed historic tree is associated with historic properties, historic people, or with important events in national, state, or local history, or general growth and development of the city.

1.6 HEARINGS PROCEDURES

Before the City Council may adopt any amendment to the Comprehensive Plan, the procedures within this section shall be followed. In the case of Non-Discretionary amendments, no hearing will be held. Consideration of the proposal shall be placed on the City Council Agenda for adoption by ordinance.

1.6.1. After appropriate notice is given, as provided in section 1.4. the Planning Commission or City Council shall hold a public hearing on the amendment, except for Non-Discretionary amendments.

A. At the beginning of the hearing an announcement shall be made to those in attendance that:
    1. States the applicable approval criteria by Comprehensive Plan section number.

2. States testimony, arguments and evidence must be directed toward the applicable criteria.
3. States failure to raise an issue accompanied by statements or evidence with sufficient specificity to afford the Planning Commission or City Council and the parties an opportunity to respond to the issue may preclude appeal to the Land Use Board of Appeals on that issue.
4. States failure of the applicant to raise constitutional or other issues relating to the proposed conditions of approval with sufficient specificity to allow the City to respond to the issue may preclude an action for damages in circuit court.
5. If a quasi-judicial application, states the Planning Commission and City Council must be impartial and that members of the Planning Commission and City Council shall not have any bias or personal or business interest in the outcome of the application.
    a) Prior to the receipt of any testimony, members of the Planning Commission or City Council must announce any ex parte contacts. The Planning Commission or City Council shall afford parties an opportunity to challenge any member thereof based on bias, conflicts of interest or ex parte contacts.
    b) If any member of the Planning Commission or City Council has visited the site (if applicable), they should describe generally what was observed.
6. Summarizes the procedure of the hearing.
7. States that the hearing shall be recorded on audio only or audio and video tape.
8. States any time limits for testimony set by the Planning Commission or City Council at the beginning of the hearing.

B. After the aforementioned announcements, the Chair or Mayor shall call for presentation of the staff report. Staff shall describe the proposal and provide a recommendation.
C. After the presentation of the staff report, the Chair or Mayor shall call for the applicant's testimony, if the City is not the applicant.
D. After the applicant's testimony, the Chair or Mayor shall call for other evidence or testimony in the following sequence unless the Planning Commission or City Council consents to amend the sequence of testimony:
    1. First, evidence or testimony in support of the application.
    2. Second, evidence or testimony in opposition to the application.
    3. Third, evidence or testimony that is neither in support nor in opposition to the application.
E. If the City is not the applicant, the Chair or Mayor shall call for rebuttal by the applicant. Rebuttal testimony shall be limited to the scope of the issues raised by evidence and arguments submitted into the record by persons in opposition to the application. Should the applicant submit new evidence in aid of rebuttal, the Chair or Mayor shall allow any person to respond to such new evidence, and provide for final rebuttal by the applicant.
F. The Chair or Mayor shall offer staff an opportunity to make final comments and answer questions.
G. Provisions for holding a record open or continuing a hearing set forth in Oregon Revised Statutes (ORS 197.763 (6)) shall apply to this Chapter of the Comprehensive Plan, in accordance with the statute.

1.6.2. Following the conclusion of the hearing, the Planning Commission shall take one of the following actions:

A. Continue the hearing to a date, time and location certain, which shall be announced by the Chair. Notice of date, time, and location certain of the continued hearing is not required to be mailed, published or posted, unless the hearing is continued without announcing a date, time, and location certain, in which case notice of the continued hearing shall be given as though it was the initial hearing.
B. Deny the application, approve the application, or approve the application with conditions.
    1. If the Planning Commission proposes to deny, approve, or approve with conditions, the Planning Commission shall announce a brief summary of the basis for the decision and that an order shall be issued as described in 1.7.; provided, the proceedings may be continued for the purpose of considering such order without taking new testimony or evidence.
    2. Provisions for holding a record open or continuing a hearing set forth in ORS 197.763(6) shall apply under this Ordinance in a manner consistent with state law.
    3. If the Planning Commission proposes to approve, or approve with conditions, an ordinance shall be prepared for City Council consideration, consistent with the City Charter.
    4. In conjunction with their adoption of an ordinance approving or approving with conditions a Comprehensive Plan Amendment, the City Council shall adopt written findings which demonstrate that the approval complies with applicable approval criteria.

1.7. FINAL ADOPTION AND APPEALS

1.7.1 Final Order

A. The written decision in the form of a final order shall be prepared regarding the application. The final order shall include:
    1. A listing of the applicable approval criteria by Comprehensive Plan section number.
    2. A statement or summary of the facts upon which the Planning Commission or City Council relies to find the application does or does not comply with each applicable approval criterion and to justify any conditions of approval. The Planning Commission or City Council may adopt or incorporate a staff report or written findings prepared by any party to the proceeding into the final order to satisfy this requirement.
    3. A statement of conclusions based on the facts and findings.
    4. A decision to deny or to approve the application and, if approved, any conditions of approval necessary to ensure compliance with applicable criteria.
B. Within five (5) working days after the Final Decision (City Council Ordinance or Final Order adoption), mail the required DLCD Notice of Adoption to DLCD, pursuant to ORS 197.610 and OAR Chapter 660- Division 18.
C. Within five (5) working days from the date that the Planning Commission or City Council adopts a final order, the Community Development Director shall cause the order to be signed, dated, and mailed to the applicant, the property owner, the Neighborhood Association Committee or County Participation Organization in which the subject property is located, and other persons who appeared orally or in writing before the public record closed. The final order shall be accompanied by a written notice which shall include the following information:
    1. In the case of a Planning Commission decision, a statement that the Planning

Commission decision can be appealed to the City Council following the procedures listed in 1.7.2. The appeal date and the statement that the appeal must be filed within ten (10) calendar days after the date of the signed notice is dated and mailed shall be placed on the notice, with the appeal closing date shown in boldface type. The statement shall generally describe the requirements for filing an appeal and include the name, address and phone number of the Community Development Director.

2. In the case of a City Council decision, a statement that the decision is final, but may be appealed to the Land Use Board of Appeals as provided in Oregon Revised Statutes (ORS 197.805 through 197.860) or to the Land Conservation and Development Commission as provided in Oregon Revised Statutes (ORS 197.633), in the case of Periodic Review Amendments.
3. A statement indicating the Amendment application number, date, and brief summary of the decision. The statement shall list when and where the case file is available and the name and telephone number of the City representative to contact for information about the proposal.
4. A statement of the name and address of the applicant.
5. If applicable, an easily understood geographic reference to the subject property and a map.

1.7.2 Notice of Intent to Appeal

A. The Planning Commission decision may be appealed to the City Council only by the applicant, a person whose name appears on the application, or any person who appeared before the Planning Commission either orally or in writing. An appeal shall be made by filing a Notice of Intent to Appeal with the Community Development Director and within ten (10) calendar days after the signed written order was dated and mailed.

B. A notice of Intent to Appeal shall be in writing and shall contain:

1. A reference to the application number and date of the Planning Commission order;
2. A statement that demonstrates the appellant is the applicant or their representative, a person whose name appears on the application, or a person who appeared before the Planning Commission either orally or in writing;
3 The name, address, and signature of the appellant or the appellant's representative;
4 An appeal fee, as established by Council resolution; if more than one person files an appeal on a specific decision, the appeals shall be consolidated and the appeal fee shall be divided equally among the multiple appellants; and
5. A discussion of the specific issues raised for Council's consideration and specific reasons why the appellant contends that the Planning Commission's findings and/or recommendation is incorrect or not in conformance with applicable criteria.

C. The Community Development Director shall reject the appeal if it

1. is not filed within the ten (10) day appeal period set forth in subsection A. of this section,
2. is not filed in the form required by subsection B. of this section, or
3. does not include the filing fee required by subsection B. of this section.

If the Community Development Director rejects the appeal, the Community Development Director will so notify the appellant by letter. This letter shall include a brief explanation

of the reason why the Community Development Director rejects the appeal. A decision of the Community Development Director to reject an appeal pursuant to this section is a final City decision as of the date of the letter and is not subject to appeal to the City Council. The appellant shall be allowed to correct a failure to comply with subsection B of this section if the correction can be made and is made within the 10 day appeal period provided in subsection A of this section.

D. If a Notice of Intent to Appeal is not filed, or is rejected, an ordinance shall be prepared for City Council consideration, consistent with the City Charter.

If the application is denied, the City Council will adopt a final order which sets forth its decision together with any reasons therefor. The Council's final order or the ordinance is the final decision of the City on the application. Notice of the decision shall be given as provided in 1.7.1.

E. Notwithstanding the provisions of this section, City Council on its own motion, may order a public hearing before the City Council at any time prior to adopting a Council final order or ordinance.

1.7.3 Notice of Appeal Hearing

A. Written notice of the appeal hearing before the City Council will be sent
   1. by regular mail,
   2. no later than twenty (20) days prior to the date of the hearing
   3. to the appellant, the property owner, the applicant, if different from the appellant, persons whose names appear on the application, and all persons who previously testified either orally or in writing before the Planning Commission.

B. Notice of the hearing shall:
   1. State the date, time and location of the hearing;
   2. State that an appeal has been filed, set forth the name of the appellant or appellants and contain a brief description of the reasons for appeal;
   3. Reference the CPA file number or numbers and the appeal number;
   4. List the applicable criteria from the Comprehensive Plan by section number that apply to the application at issue
   5. State that a copy of the Planning Commission's written order, the application, all documents and evidence contained in the record, and the applicable criteria are available for inspection at no cost at least seven (7) calendar days prior to the hearing and can be provided at reasonable cost including the days, times and location where available for inspection;
   6. Include the name and phone number of the City staff person assigned to the application from whom additional information may be obtained;
   8. Include a general explanation of the requirements for submission of testimony and the procedure for conduct of the hearing; and
   9. Set forth the street address or other easily understood geographical reference to the subject property, if applicable.

1.7.4 Preparation of the Record; Staff Report; Transcript

A. Following receipt of a Notice of Intent to Appeal filed in compliance with 1.7.2., the

Community Development Department Director shall prepare a record for Council review containing:

1. All staff reports and memoranda prepared regarding the application that were presented to the Planning Commission;
2. Minutes of the Planning Commission proceedings at which the application was considered;
3. All written testimony and all exhibits, maps documents or other written materials presented to and or rejected by the Planning Commission during the proceedings on the application; and
4. the Planning Commission's Final written order.
5. The appellant may request, and the City Council may allow, a quasi-judicial comprehensive plan amendment appeal hearing be conducted on the record established at the Planning Commission public hearing. If such a request is made and granted, a transcript of the Planning Commission proceeding is required. The appellant shall remit a fee to cover the cost of the transcript of the Planning Commission hearing within five (5) calendar days after the Community Development Director estimates the cost of the transcript. Within ten (10) calendar days of notice of completion of the transcript, the appellant shall remit the balance due on the cost of the transcript. In the event that the Council denies the request for an on the record appeal hearing, and holds a de novo hearing, the transcript fee may be refunded. If the transcription fee estimate exceeds the transcription cost, the balance shall be refunded to the appellant.

B. The Community Development Department Director shall prepare a staff report on the appeal explaining the basis for the Planning Commission's decision as relates to the reason for appeal set forth in the Notice of Intent to Appeal, and such other matters relating to the appeal as the Director deems appropriate.

1.7.5 Scope of Review

A. The City Council appeal hearing shall be de novo, which means any new evidence and argument can be introduced in writing, orally, or both. The City Council may allow, at the appellant's request, a quasi-judicial comprehensive plan amendment appeal hearing be conducted on the record established at the Planning Commission hearing.

B. The Council may take official notice of and may consider in determining the matter any material which may be judicially noticed pursuant to the Oregon Rules of Evidence, ORS 40.060 through 40.090, including an ordinance, comprehensive plan, resolution, order, written policy or other enactment of the City.

C. Preliminary Decision.

At the conclusion of deliberations, the Council shall make a preliminary oral decision. The Council may affirm, reverse or modify the Planning Commission's order in whole or in part, or may remand the decision back to the Planning Commission for additional consideration. (Procedures for noticing a remand hearing are found in sections 1.4.1.D. and 1.4.2.D.) The preliminary oral decision is not a final decision. At any time prior to adoption of the final order or Ordinance pursuant to subsection D of this section, the Council may modify its decision based upon the record or may reopen the hearing.

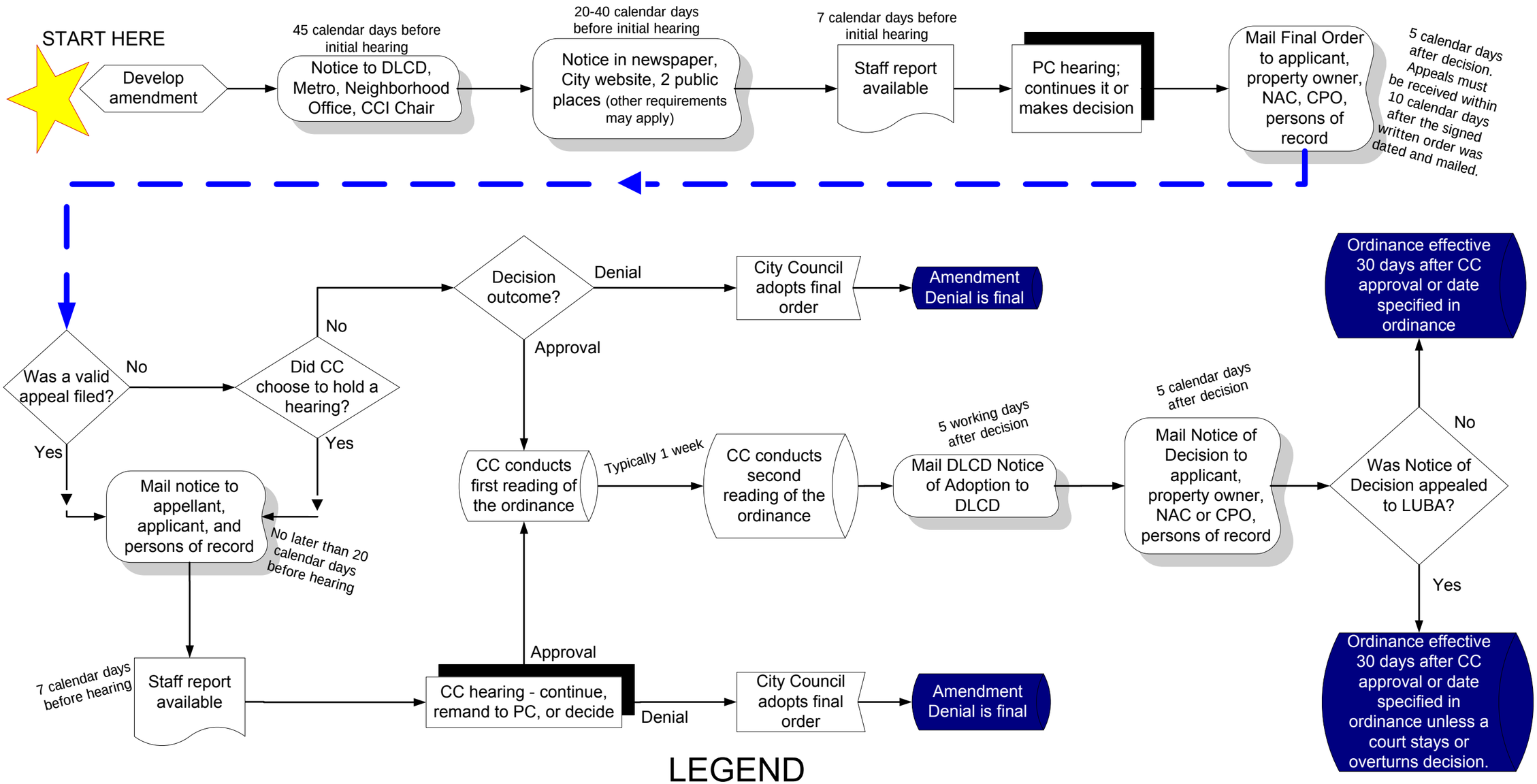
D. Final Order or Ordinance

In the case of a denial, the City Council shall direct staff to prepare a final order or in the case of approval, the Council shall cause the preparation of an Ordinance. The Ordinance or final order shall consist of a brief statement explaining the criteria and standards considered relevant, stating the facts relied on in rendering the decision, and explaining the justification for the decision based upon the criteria and facts set forth. The final order, or Ordinance, is the final decision on the application and the date of the order, or Ordinance, for purposes of appeal is the date on which it is signed by the Mayor.

Procedures for preparation of the Final Order, Ordinance and distribution of the Notice of Decision are found in section 1.7.

The following diagrams, Diagram I-1 through I-4, are intended for illustrative purposes only and are not adopted as procedural requirements within this ordinance. Thus, periodic updates to Diagrams I-1 through I-4 will not require a Comprehensive Plan Amendment.

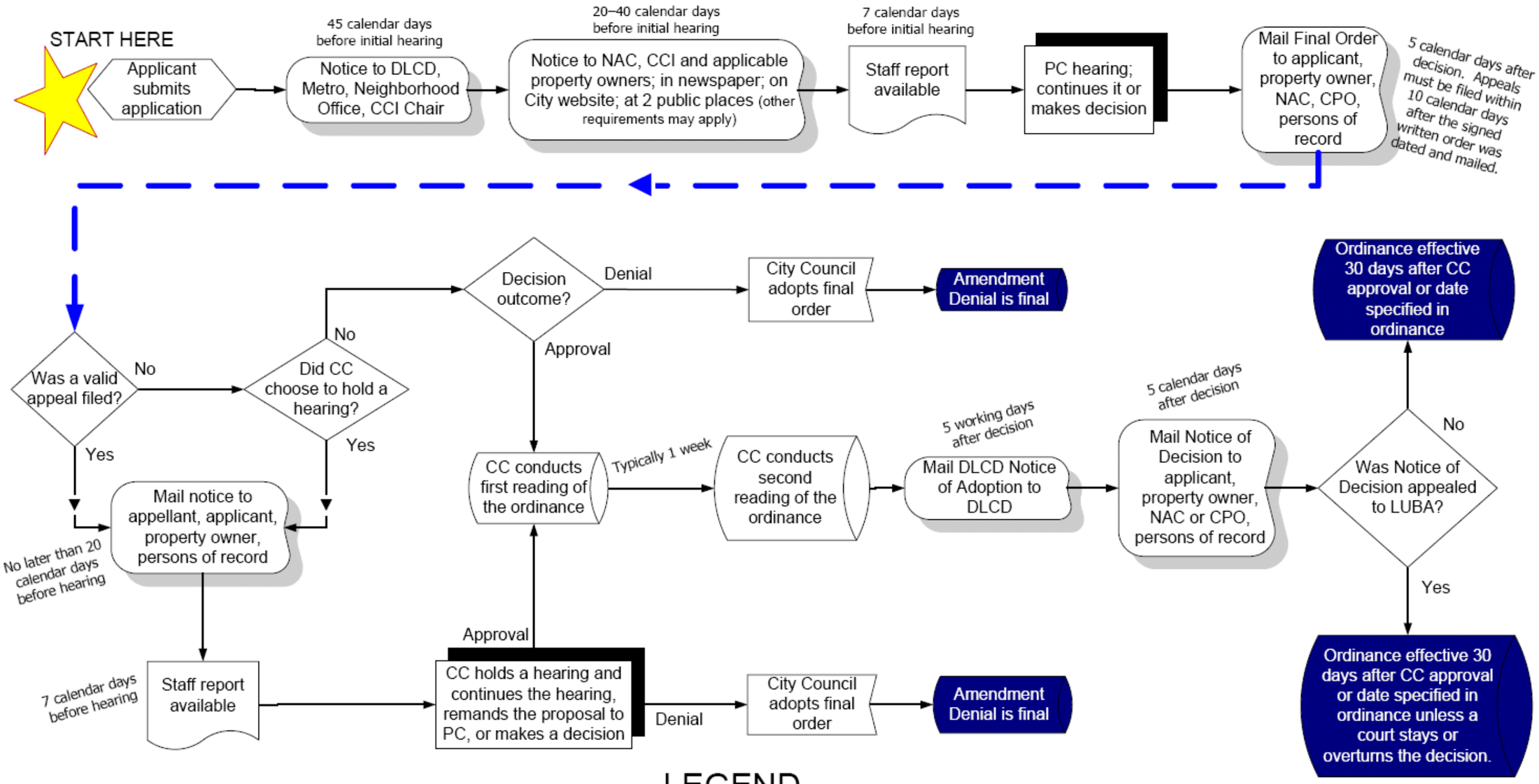
Diagram I-1
Legislative Process



DLCD: DEPARTMENT OF LAND CONSERVATION AND DEVELOPMENT
CCI: COMMITTEE FOR CITIZEN INVOLVEMENT
PC: PLANNING COMMISSION
NAC: NEIGHBORHOOD ASSOCIATION COMMITTEE
CPO: COMMUNITY PARTICIPATION ORGANIZATION
CC: CITY COUNCIL

3/15/06 Supp SR

Diagrams are intended for illustrative purposes only and do not serve as the procedural requirements within this ordinance.

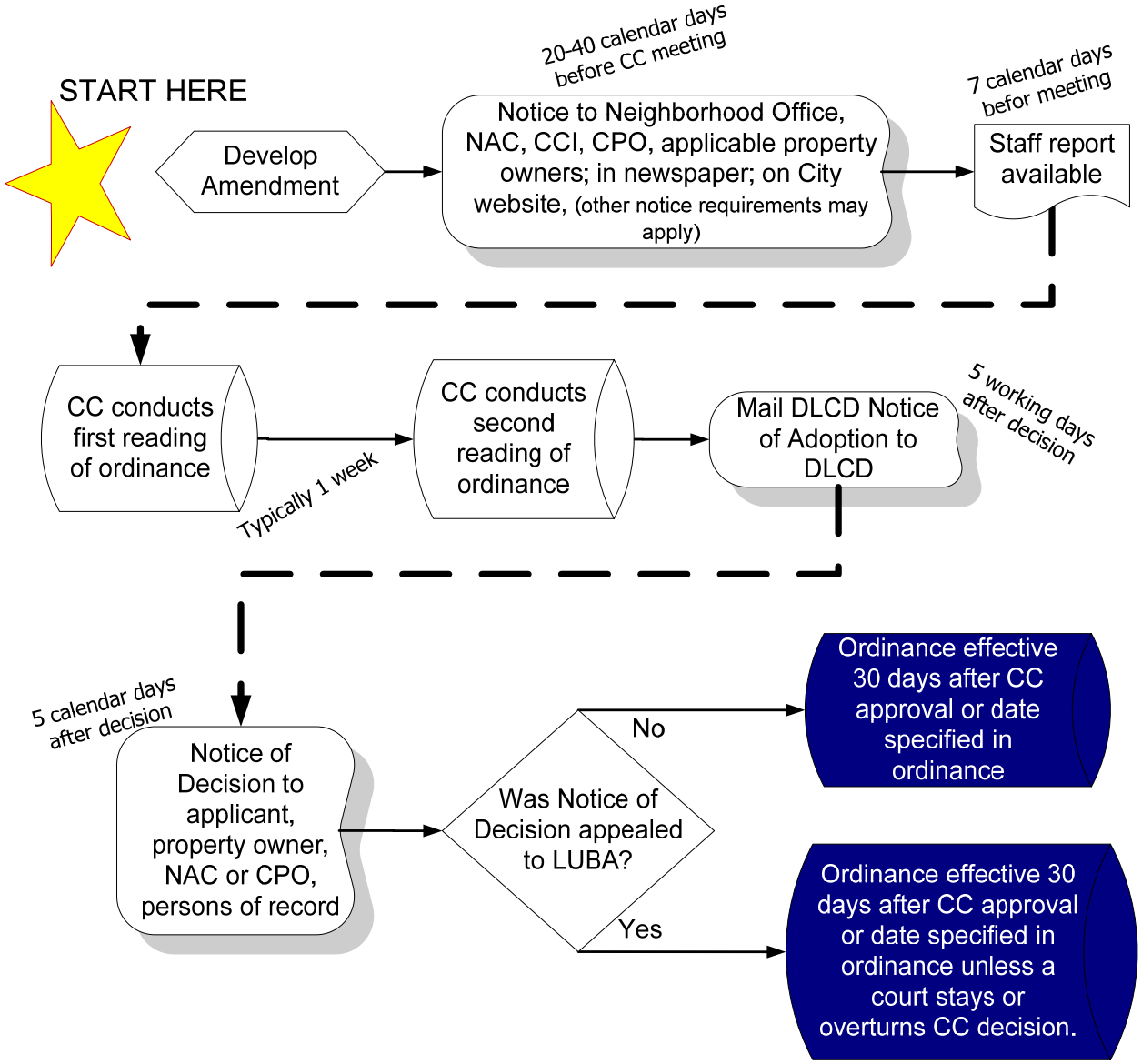


DLCD: DEPARTMENT OF LAND CONSERVATION AND DEVELOPMENT
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CC: CITY COUNCIL

3/15/06 Supp SR

Diagrams are intended for illustrative purposes only and do not serve as the procedural requirements within this ordinance.

Diagram I-3
Non-Discretionary Process



LEGEND

DLCD: DEPARTMENT OF LAND CONSERVATION AND DEVELOPMENT
CCI: COMMITTEE FOR CITIZEN INVOLVEMENT
CPO: COMMUNITY PARTICIPATION ORGANIZATION
NAC: NEIGHBORHOOD ASSOCIATION COMMITTEE
PC: PLANNING COMMISSION
CC: CITY COUNCIL

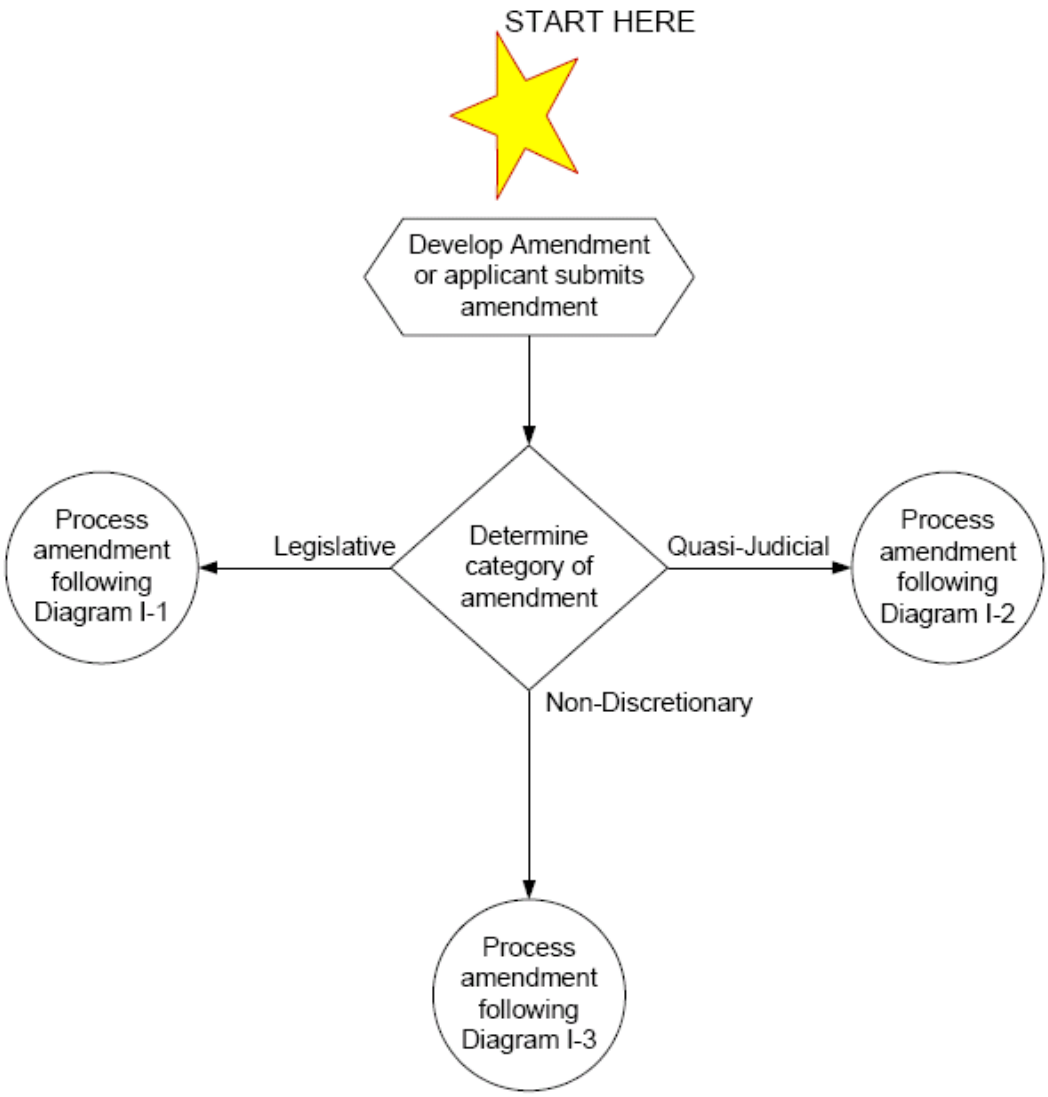
3/15/06 Sup SR

Notices

Final processes

Diagrams are intended for illustrative purposes only and do not serve as the procedural requirements within this ordinance.

Diagram I-4
Statewide Planning Goal 5 Inventory Resource Document Process



3/15/06 Sup SR

Diagrams are intended for illustrative purposes only and do not serve as the procedural requirements within this ordinance.

1.8 APPLICATION FEES

In order to defray expenses incurred in connection with the processing of applications, the City has established a reasonable fee to be paid to the City upon the filing of an application for a Plan amendment. Fees for privately initiated Plan amendments requiring extraordinary staff time or expertise beyond the scope of the average process may be subject to an additional project management fee as established by Council Resolution 3285.

CHAPTER TWO:
PUBLIC INVOLVEMENT ELEMENT



PUBLIC INVOLVEMENT ELEMENT

2.1 OVERVIEW

Engaging the public early and often in the decision-making process is critical to the success of any planning effort, especially in relation to land use and transportation issues. In addition, numerous state and federal laws, as well as local policies, require public review and feedback at critical points in public policy development. For example, the federal Intermodal Surface Transportation Efficiency Act of 1991 underscores the need for public involvement, calling on planning agencies to provide the public, affected public and private agencies, and other interested parties "with a reasonable opportunity to comment" on plans and programs.

2.2 PUBLIC INVOLVEMENT GOALS

Oregon's Statewide Planning Goal 1 charges the governing body with preparing and adopting a comprehensive program for public involvement that clearly defines the procedures by which the general public can become involved in the planning process:

Goal 1 Citizen Involvement: To develop a citizen involvement program that insures the opportunity for citizens to be involved in all phases of the planning process.
(Department of Land Conservation and Development, adopted 1974, amended 1988)

The City of Beaverton's commitment to ensure an optimum level of public participation is reflected in its public involvement goals:

City Council Goal: Enhance citizen involvement and participation.

Comprehensive Plan Public Involvement Goal: The Planning Commission, Council, and other decision making bodies shall use their best efforts to involve the public in the planning process.

In response to these goals, the City has developed a Public Involvement program aimed at expanding opportunities for public involvement throughout the planning process.

2.2 PUBLIC INVOLVEMENT PROGRAM

In order to encourage public participation it is critical that issues important to different groups be identified and addressed early in the planning process. The need for and desirable level of public participation should be determined in the early stages of any planning activity.

Public participation provides information and assistance to staff and policy makers in dealing with issues of interest to the public. When the community and its decision makers work from a common base of information, an active, rather than reactive program can

evolve. Such a program will provide information more suitable to the public's needs.

2.3 PUBLIC INVOLVEMENT PROGRAM OBJECTIVES

A. To involve a cross section of the community in the community planning process.

B. To ensure effective two-way communication between the City and the public.

C. To provide an opportunity for the public to be involved in all phases of the planning process (e.g., scoping, analysis, plan preparation, adoption, implementation, and monitoring).

D. To ensure that technical information is presented in an understandable form.

E. To ensure that the public will receive a response from policy-makers.

F. To ensure appropriate funding for the public involvement program.

2.4 PROGRAM IMPLEMENTATION

2.4.1 CITY-WIDE PUBLIC INVOLVEMENT OUTREACH MECHANISMS

Several existing mechanisms ensure city-wide public involvement in Beaverton's planning process. The City's primary outreach mechanisms are through:

A. The Committee for Citizen Involvement, an advisory committee to the City Council;

B. The Neighborhood Program Office;

C. The Neighborhood Association Committees;

D. Specific committees and special interest groups;

E. *Your City,* a newsletter published six times per year, subject to continued funding, that is designed to keep the public informed and invite participation;

F. Periodic news releases in area newspapers;

G. Contact with the local media;

H. The City's public internet web site;

I. Public workshops and focus groups; and

J. Public hearings.

Each public involvement opportunity is tailored to meet the needs and conditions of the outreach effort, and techniques are often combined.

2.4.2 PUBLIC INVOLVEMENT IN CITY DECISION MAKING PROCESSES

The City's formal decision making processes include several opportunities for public involvement. The public is invited to present their views at the various City board and committee meetings, including but not limited to City Council, Planning Commission, Traffic Commission and Board of Design Review. Public notices, complete with the hearing date, time, location, and hearing body, are mailed out at least twenty (20) calendar days prior to the date of the public hearing. Notices of public hearings are primarily published in the advertisement section of *The Valley Times.* On occasion, public hearing notices are published in *The Oregonian*. Notices are also posted on the City's web site.

Final agendas are posted at least seven calendar days in advance of the meeting at City Hall, located at 4755 S.W. Griffith Drive and the Beaverton Library at 12375 SW Fifth Street. Agendas and meeting notices are available upon request from the City. Documents containing the proposals to be considered at the public hearings are available at the Public Counter of the Community Development Department at least seven (7) calendar days in advance of the hearing, at least twenty (20) calendar days for Comprehensive Plan Amendments.

The public is encouraged to provide staff with written comments or copies of presentations, particularly if the statement is too long to be orally presented in its entirety at a meeting. Individuals unable to attend meetings can submit concerns and ideas in writing to the Community Development Department office prior to the close of the public comment period. Copies of all materials submitted prior to distribution to the appropriate decision making body are included in documentation provided for the deliberation on the matter.

All meetings are held in locations accessible to persons with disabilities. Listening devices or other auxiliary aids, sign language interpreters for people with hearing impairments, and readers for people with visual impairments are provided if requested at least three working days (72 hours) prior to the meeting.

The City may also conduct public meetings, workshops, and focus groups on particular issues to solicit input and involvement in various planning issues. Adopted plans are also available to the public for review at the Community Development Department and the Beaverton Library, and are posted on the City's internet web site. Copies may be acquired for the cost of duplication at the Community Development Department.

2.4.3 CITY-SPONSORED PUBLIC GROUPS

2.4.3.1. Committee for Citizen Involvement (CCI)

Council Resolution 2058 (1978) established the CCI, defining its responsibilities as an advisory committee to the City Council. The *Beaverton Code* specifies membership of the CCI as five at-large members appointed by the Mayor and confirmed by the Council and one member from each recognized Neighborhood Association Committee. The CCI's role is to assure that the community has a continuous opportunity to exchange ideas and information with the City, and to monitor and evaluate City programs as specified in the *Beaverton Code, 1982*, as amended (BC 2.03.050 through 2.03.054).

The Citizen Involvement Program, adopted by Resolution 2229 (1980), established a formalized public participation program for the CCI and provided a method by which the committee and other members of the community could communicate their opinions, inquiries, or complaints about City departments, committees, or the Council.

The program also provides for a newsletter and calendar of City meetings, information flyers, community meetings, and funding for these activities as well as staff support and public hearing notices. The City is committed to providing financial support for public outreach and public participation processes. Staff and resource needs are determined during work program development for each plan, program, and project. In addition, the City's Neighborhood Program Office staff are available to coordinate outreach and work with City departments to realize the full potential of each public participation effort.

2.4.3.2 Neighborhood Association Committees (NACs)

The *Beaverton Code* identifies the procedures by which residents can form Neighborhood Association Committees, add or delete areas of acknowledged NACs and provides a process for termination of NAC Recognition and NAC Grievances (BC 9.06.010 through 9.06.040) Boundaries of the NACs are shown on maps available at City Hall or on the City's website.

NACs provide a forum to identify, discuss, and offer solutions to neighborhood concerns such as traffic, safety, land use, and economic development. Supported by the Neighborhood Program Office, Beaverton's NACs are organized by volunteers, meet regularly, and participate in the public comment process. Monthly agendas and minutes are mailed to active participants. Neighborhood and city-wide issues are usually the main agenda topics.

2.4.3.3. The *Beaverton Code* (Section 2.03.002 – 2.03.300) identifies other City Boards, Commissions and Committees created by ordinance. Additional committees or review commissions may be established to address special projects, such as the Code Review Advisory Committee. These committees provide input to staff as they develop specific proposals, such as amendments to the Development Code.

2.4.4. Citizen's Participation Organizations (CPOs)

Washington County CPOs bordering the City limits are also involved in City planning issues through their newsletters and processes. Each CPO's newsletter details issues of county, city, and region-wide interest to its readers. Public hearing notices and articles of interest concerning Beaverton issues are often included in the CPO newsletters.

2.4.5 PUBLICATIONS AND MAIL NOTIFICATION

"Your City" newsletter is distributed city-wide. It provides information on current issues to the residents of Beaverton. Published approximately six times per year, subject to available funding, "Your City" includes notification of regularly scheduled Board, Commission, Advisory Committee and Neighborhood Association Committee meetings and hearings, articles of interest to residents, and educational opportunities relating to planning and other community issues. Specific mailings, public notices, flyers, surveys and questionnaires, as well as the City's web site, cable broadcasts and other media, are used by the City to obtain input and provide information.

2.5 OPPORTUNITIES FOR PUBLIC INVOLVEMENT

Many City planning processes incorporate specific public involvement procedures, which are identified in Chapter I of this Plan and in the City of Beaverton Development Code.

In addition to the City's public participation processes, Metro requires transportation plans and programs to conform with its adopted Local Public Involvement Policy. This policy defines procedures and includes a certification process for projects proposed for federal funding through Metro.

Early public participation is critical to identifying needs and issues, evaluating alternatives, and developing, implementing, and evaluating projects. Opportunities for public involvement are available during preparation and review phases of City plans. Comments received during plan preparation and review are also made part of the public record. At public hearings, comments are recorded and responses are noted. Public participation opportunities and public notice requirements for city plan and code revisions and updates are specified in the respective plan or code.

CHAPTER THREE:
LAND USE ELEMENT



LAND USES

3.1 OVERVIEW

In the 1970s when the City of Beaverton adopted its first long range "General Plan," the City anticipated moderate growth within its urban service area. At the time, the Plan identified a 49 square mile urban service area that would accommodate 127,000 to 257,000 people. At the close of 1999, the City's population has risen to approximately 68,000 people, increasing by approximately 53% in the last 19 years. Additionally, the 1999 city limits encompasses approximately 16 square miles.

Subsequent to the City's initial planning effort, Metro adopted a series of land use and transportation planning regulations requiring local government action. In order to use the existing regional land supply and resources more efficiently, Metro forecasts the City's fair share of the regional population and employment growth (forecast year 2017) as approximately 21,000 new jobs and 15,000 new housing units. Population and employment targets are based on local government boundaries as of 1996. Maintaining densities and intensities of development established through Washington County planning is important as land annexes to the City as the land subject to incorporation carries a proportionate share of population and employment based on the 1996 jurisdictional boundaries. Planning for the City's targets requires recognition of the requirement to accommodate the targets within the 1996 boundaries. As a result of this regional planning, prominent issues facing the City and the region include efficient provision of public services and efficient use of land while maintaining the resident's concept of livability.

A basic element of any comprehensive plan is prescribing the type, location, and distribution of land uses in the community. In addition, the relationship between land use and urban design is fundamental to quality infill and redevelopment and increased densities. These are the primary issues facing the City of Beaverton in the 20 year planning horizon beginning in the year 2000. As the density of residential and non-residential development increases urban design issues become more important. Consequently, this land use element integrates land use considerations with urban design. In other words, the element integrates the type, location and distribution of land uses with how those uses look and function on the landscape.

Significant differences in the characteristics of existing development patterns can be found in the community. These should be recognized as a factor to be considered when reviewing development proposals. If in any area development has been sufficient to have an established or particular desirable character, it should be identified and maintained. Infill in an established area with an identified character should be designed to be compatible with the area. Compatible characteristics include size, scale and design.

3.2 PLANNING CONTEXT

Within the Portland Metropolitan Area, local governments must comply with both state and regional land use laws. Consistency with the Statewide Planning Goals (referenced in Appendix A), Transportation Planning Rule and other Oregon Administrative Rules (OAR) and Oregon Revised Statutes (ORS) is required. Metro, the elected regional government serving the tri-county area, has adopted a number of planning documents for guiding the region's future growth. In 1995 Metro adopted a future vision titled "Regional Urban Growth Goals and Objectives" and a map titled "2040 Growth Concept". Compiling data from within the region and using the context of the future vision and the map, Metro formulated the Regional Framework Plan (Framework Plan). The Framework Plan highlights programs and provides the basic concepts adopted as directives in the Urban Growth Management Functional Plan (Functional Plan). The city must comply or substantially comply with the directives found within the Functional Plan or justify an exception to the directives. The 2040 Growth Concept provided a general approach to approximately where and how much the urban growth boundary should expand, the mix of uses and range of densities to accommodate projected growth within the boundary.

Specifically, section 3.07.130 of the Functional Plan requires the following:

> *"For each of the following 2040 Growth Concept design types, city and county comprehensive plans shall be amended to include the boundaries of each area, determined by the city or county consistent with the general locations shown on the 2040 Growth Concept Map:*
>
> *Regional Centers – Nine regional centers will become the focus of compact development, redevelopment and high-quality transit service and multimodal street networks.*
>
> *Station Communities – Nodes of development centered approximately one-half mile around a light rail or high capacity transit station that feature a high-quality pedestrian environment.*
>
> *Town Centers – Local retail and services will be provided in town centers with compact development and transit service.*
>
> *Main Streets – Neighborhoods will be served by main streets with retail and service developments served by transit.*
>
> *Corridors – Along good quality transit lines, corridors feature a high-quality pedestrian environment, convenient access to transit, and somewhat higher than current densities.*
>
> *Employment Areas – Various types of employment and some residential development are encouraged in employment areas with limited commercial uses.*
>
> *Inner Neighborhood – Residential areas accessible to jobs and neighborhood businesses with smaller lot sizes are inner neighborhoods."*

Beaverton's Downtown is designated a Regional Center on the 2040 Growth Concept Map. A portion of southeast Beaverton, adjacent to Highway 217, is part of the Washington Square Regional Center. Generally, the zoning districts allowed within the Beaverton Regional Center Comprehensive Plan designation include Regional Center – East, Regional Center – Old Town, and Regional Center – Transit Oriented. Other zoning districts consistent with the City's goals within the Washington Square Regional Center will be developed. The developments known as Koll Business Center, Marathon Industrial Park and Nimbus Industrial Park are located within the Washington Square Regional Center. Generally, densities in the Regional Center are intended to meet Metro's target of 60 persons per acre.

Station Communities in Beaverton include Beaverton Transit, Beaverton Central, South Tektronix, Beaverton Creek and Merlo. The Sunset and 170th/Elmonica Station Communities are located within Beaverton's urban service area, as is the eastern portion of the Willow Creek Station Community. Beaverton's zoning districts focus on the immediate station, within ½ mile, and the outer perimeter, ½ to 1 mile. These zoning district categories are labeled Station Community and Station Area, respectively. The Development Code specifies two Station Community zoning districts: Station Community – High Density Residential and Station Community – Multiple Use. Two Station Area zoning districts are identified as follows: Station Area – Medium Density Residential and Station Area – Multiple Use. Metro's target density is 45 persons per acre for the Station Community design type.

Beaverton has one Town Center, located in the vicinity of the intersection of Scholls Ferry Road and Murray Boulevard. The Bethany, Raleigh Hills, and Cedar Hills/Cedar Mill town centers are within Beaverton's urban service area. Additionally, the Sunset Transit Center is also designated as a town center. (Many of the design type boundaries overlap on the Growth Concept Map, especially in areas adjacent to light rail stations.) City Town Center zoning districts include Town Center – Multiple Use, Town Center – High Density Residential, and Town Center – Medium Density Residential. The Neighborhood Residential Medium Density (R-4) zoning district is also allowed within the Murray/Scholls Town Center. Densities are intended to reach the Metro target of 40 persons per acre.

Metro designated Main Streets on the 2040 Growth Concept Map including the following areas within Beaverton:

Murray Boulevard intersection with Allen Boulevard, and
Hall Boulevard intersection with Allen Boulevard.

Metro also designates Main Streets in the following areas that include both incorporated city areas and unincorporated county areas:

Farmington Road from the Regional Center westerly to the city limits,
Allen Boulevard intersection with Scholls Ferry Road, and
Cornell Road.

Main Streets allow a mix of commercial and medium to high density residential zoning districts. Main Streets within the City and its environs are currently developed primarily as commercial centers with some moderate and high density residential interspersed. Densities within this land use designation are intended to reach the target of 39 persons per acre as the areas redevelop. Although Metro designates Farmington Road as a Main Street, the City applied the Corridor designation due to the character of development adjacent to Farmington Road within the city limits.

Corridors in Beaverton include Walker Road, Cedar Hills Boulevard, Murray Boulevard, Hall Boulevard, Allen Boulevard, Farmington Road, Canyon Road, Scholls Ferry Road, Beaverton-Hillsdale Highway and Tualatin Valley Highway. Corridor development differs from Main Street development with respect to density and mix of uses. In the long term, Main Streets are intended to provide for an integrated mix of residential and employment opportunities. Whereas, Corridors provide nodes of residential and employment that may be integrated, but more likely reside side by side. The Metro density target for the Corridor design type is 25 persons per acre.

Employment Areas within Beaverton generally include the following areas commonly known as the Twin Oaks Industrial Park and Cornell Oaks Corporate Center. These areas are generally within Beaverton's Industrial zoning districts. The majority of Woodside Corporate Park is within the City's urban service boundary and Science Park in Cedar Mill is in the City's urban service area. Target densities within this design type are 20 persons per acre.

Industrial Areas are generally developed with low density industrial development. Designated Industrial Areas in Beaverton include the developments known as Southern Pacific Industrial Park, Allen Business Park, and Bevest Industrial Park. Generally, the block shown on the Comprehensive Plan Land Use Map as Industrial Areas are designated with Beaverton industrial zoning districts. No new commercial zoning will be allowed in these areas.

Generally, all other areas within the city are designated Inner Neighborhood on the Metro 2040 Growth Concept Map. Areas designated on the Comprehensive Plan Land Use Map as Neighborhood Residential generally comply with the Metro Inner Neighborhood Design Type, providing densities of 14 persons per acre. Within the Neighborhood Residential land use designation, four densities are allowed as follows: Low Density, Standard Density, Medium Density and High Density. In addition, commercial development within the Medium and High Density Neighborhood Residential designations will not, generally, be permitted. Existing capacity for residential development within these land use designations is needed to help meet the Metro growth targets. Development of another nature would lessen the City's compliance with these targets, consequently; conversions of Medium and High Density Neighborhood Residential land to other uses will be limited. Where conversions are desired, it must be demonstrated that the "substantial compliance" with the Metro housing capacity targets can be met with the remaining available land as allocated.

Figure III-1, Comprehensive Plan Land Use Map, appropriately designates land uses in compliance with the Statewide Planning Goals and Metro Functional Plan Title 1 requirements to define boundaries of Metro Design Types.

The Comprehensive Plan text is a policy document guiding land use within the City of Beaverton. As such, a hierarchy of policy language is provided in the following manner:

Goals	are brief guiding statements, which describe a desired result.
Policies	are statements of the City's general approach to meeting a goal.
Actions	direct specific City activities or events, consistent with goals and policies.
Text Boxes	provide references to source materials used when developing the goal, policy or action statement. Text boxes can also clarify the intent of a policy, but are not intended to serve as the policy direction itself. Text boxes appear with the typeface shown in this sentence.

3.3 COMMUNITY PLAN CONTEXT

To provide Comprehensive Plan policy text specific to geographical areas, a number of Community Plans have been developed. Full understanding of the Community Plans requires review of the Comprehensive Plan for the policy framework, the Community Plan for the geographically specific text, the Beaverton Development Code for permitted uses and development application permit types and processes, and the Beaverton Engineering Design Manual and Standard Drawings for infrastructure standards.

Maps found in the Comprehensive Plan and the Development Code provide the basis for the mapped figures referenced in Community Plans. The Community Plan figures provide an expanded view of selected Comprehensive Plan and Development Code maps with a focus on a specific geographical area of the City. Community Plan figures include views of the Comprehensive Plan Land Use Map, the Transportation Functional Classification Map, the Significant Natural Resources Map, the Historic Resources Map, the Development Code Zoning Map and Major Pedestrian Route Map. Amendments to these figures follow procedures specified within the document in which they are located. Community Plan figures will be administratively updated as amendments to the Comprehensive Plan and Development Code maps are adopted.

3.4 COMMUNITY IDENTITY

Beaverton's eleven general City planning goals are found in the introduction to the Comprehensive Plan. Each Element of the Comprehensive Plan refines those goals, and creates new goals, within the context of state and regional mandates and the topic of that particular element.

The first general goal states "Retain Beaverton as an outstanding City." An outstanding City is a place of quality for people to live and work. Fundamental to the achievement of this goal is the appearance of the community. There is no doubt that the community will continue to grow and change as new people, businesses, and industries establish themselves in the area. A deliberate and continuous effort will be necessary to see that the multitude of decisions made in the process of growth collectively constitute progress toward an attractive, livable community.

3.4.1 Goal: Provide a policy framework for a community designed to establish a positive identity while enhancing livability.

Policies:

a) The City, through its development review process, shall apply urban design standards to guide public and private investment toward creating a positive community identity.

Action 1: *Adopt and apply land use regulations for landscaping, screening and buffering standards for interfaces between differing zones to reduce impacts of lighting and noises to retain a degree of privacy.*

Action 2: *Adopt and apply land use regulations respecting the natural and physical features of the landscape, including but not limited to, natural areas, site design for hillside areas, flood hazards, earthquake hazards and other environmental constraints.*

Action 3: *Adopt and apply land use regulations promoting development in ways that promote healthy watersheds and natural resources, use a natural system approach to development, and avoid impacting natural resources. A natural system approach includes sustainable stormwater management using habitat friendly development practices and low impact development techniques.*

Action 4: *Adopt and apply land use regulations allowing and encouraging techniques to reduce impacts to natural resources, known as Habitat Friendly Development and Low Impact Development.*

b) The City's urban design standards shall promote creation of public spaces and a good pedestrian environment.

c) Existing overhead utilities shall be placed underground in all parts of the community in conjunction with development.

d) Sign regulations shall limit the size, location, and number of signs throughout the City. Non-conforming signs shall be removed at the time of a change in use. Off-site advertising signs shall be prohibited in all districts of the City.

Action 1: *To ensure fairness, the City shall apply the sign amortization program to annexed properties that had their signs approved by Washington County.*

e) The City shall preserve significant natural resources identified on the City's Statewide Planning Goal 5 Inventories, Volume III of this Plan, through application of regulations requiring the careful siting of development.

Action 1*: Adopt mapping showing habitat benefit areas. Habitat benefit areas, Clean Water Services' vegetated corridors and Beaverton identified Goal 5 Inventory areas frequently mutually support and are coincidental to one another.*

Action 2: *Adopt and apply land use regulations that allow and encourage habitat friendly development practices that reduce impacts to habitat benefit areas, including preservation of the habitat benefit areas.*

Action 3: *Develop a program to monitor reductions in density to allow for preservation and improvement of habitat benefit areas so that the reduction in density may be reported to Metro.*

Action 4: *Promote habitat friendly development practices and low impact development techniques through the pre-application conference with development applicants.*

f) Historic buildings, structures, and sites shall be identified on the City's Statewide Planning Goal 5 Inventories, Volume III of this Plan. These resources shall be protected to the extent practicable to preserve community identity and retain important links with the past.

g) Scenic views and sites shall be identified on the City's Statewide Planning Goal 5 Inventories, Volume III of this Plan, and protected to the extent practicable.

h) Private, semi-public, and public uses such as churches, non-commercial schools and parks that contribute to the livability of Beaverton shall be permitted or conditionally allowed in most City zoning districts.

i) Subsequent to their development in another zoning district, quasi-public and public uses should be converted to the Public/Quasi-Public zoning district on a regular basis through a City-initiated process. This will assist the general public in being aware of the location of such developments in their community and respond to the community's investment in public resources. Modifying only the zoning district and not the land use designation provides for future redevelopment opportunities through the zoning process.

j) Ensure public and private facilities, especially essential public facilities, are available and provided at the time of development to reduce initial and long-range costs to City businesses and residents.

Action 1: *On and off-site improvements should add to the character and quality of the area as a place for people to live and work. This includes such measures as utility undergrounding and basic pedestrian improvements such as street trees and sidewalks. Street trees are central to creating neighborhood community; therefore, land use regulations shall be adopted requiring street trees or a fee-in-lieu.*

3.4.2 Goal: Proper relationships between residential, commercial, industrial, mixed and public land uses to provide a sound basis for urbanization.

Policies:

a) The City, through its Planning Commission and City Council, shall establish and apply

appropriate land use designations to property within the city limits.

b) The City shall establish and maintain a Comprehensive Plan Land Use Map (Figure III.1) designating land uses throughout the city.

c) The City shall apply appropriate City land use designations to annexed areas.

3.5 MIXED USE AREAS

The following goals, policies and actions apply to all mixed use areas. Mixed use areas are conceived as urban neighborhoods containing a variety and intermixing of uses that complement the established surrounding communities. These areas generally integrate compatible land uses vertically, horizontally, or both. A typical vertically integrated development includes retail uses or a mix of retail and office uses on the first floor – with a majority of the wall area fronting the sidewalk in glass. The next floors would include an additional mix of uses such as more office followed by residential dwellings. In some instances the offices are located on the main floor with an internal access to the residential dwelling on the second and third floors. This type of integrated unit has been termed an "Hoffice".

The following Metro design types are Mixed Use Areas: Regional Centers, Town Centers, Station Communities, and Main Streets. The density of development called for in the Metro Urban Growth Management Functional Plan in these areas is greater than other design types. In fact, Beaverton expects to accommodate the majority of its targeted growth within the Mixed Use Areas. Development within City of Beaverton land use designations of Regional Center, Town Center, Station Community and Main Street must comply with the policy framework set by this section (3.5 Mixed Use Areas).

3.5.1 Goal: Beaverton mixed use areas that develop in accordance with community vision and consistent with the 2040 Regional Growth Concept Map.

Policies:

a) Regulate new development in Regional Centers, Town Centers, Station Communities and Main Streets (see Figure III-1, Comprehensive Plan Land Use Map) to ensure compact urban development.

Action 1: *Adopt and apply land use regulations to promote efficient use of land. Land use regulations shall include*

- *minimum densities and floor area ratios (FAR),*
- *minimum and maximum surface parking ratios, with allowance of shared and on-street parking to meet minimum requirements,*
- *maximum setbacks along pedestrian routes, including flexible or zero setbacks, and*
- *increased building heights.*

Action 2: *Adopt and apply land use regulations to permit calculation of residential density and FAR on net buildable land. Exclusions to the density and FAR calculations*

are permitted for lands set aside in an unbuildable tract or dedicated to the public for the following purposes:

- *Protected wetlands,*
- *Natural resource areas,*
- *Other protected or regulated areas,*
- *Drainage areas or drainage facilities, and*
- *Buildable lands devoted to public or private rights-of-way.*

Action 3*: Adopt and apply land use regulations that allow and encourage preserving habitat benefit areas and minimizing the effect of development on those areas.*

Action 4*: Develop a program to monitor reductions in density to allow for preservation and improvement of habitat benefit areas so that the reduction in density may be reported to Metro.*

Action 5: *Identify and develop incentive programs for increased housing densities such as funding programs for multistory parking, combining public open space for use in high density projects, and developing a mitigation bank for wetland impacts.*

b) Allow a mix of complementary land use types, which may include housing, retail, offices, small manufacturing or industry, and civic uses to encourage compact neighborhoods with pedestrian oriented streets in order to promote:

- Independence of movement, especially for the young and elderly to enable them to conveniently walk, cycle, or ride transit;
- Safety in commercial areas, through round-the-clock presence of people;
- Reduction in auto use, especially for shorter trips;
- Support for those who work at home, through the nearby services and parks;
- A range of housing choices so that people of varying cultural, demographic, and economic circumstances may find places to live.

Action 1: *Adopt and apply land use regulations that allow for and encourage mixed use development.*

Action 2: *Adopt and apply land use regulations that promote pedestrian-oriented designs including regulations governing the following:*

- *building orientation and design along pedestrian routes, transit stops and other pedestrian accessways or open spaces actively used by the public;*
- *landscaping, fencing, screening, buffering pedestrian circulation and access; and*
- *other appropriate site design measures that enhance the pedestrian environment.*

c) Design streets and adjacent buildings within mixed use land use designations to ensure a setting that is attractive and accessible to multiple transportation modes, including pedestrians, bicyclists, transit riders and motor vehicles.

Action 1: *Adopt and apply design standards related to building height, massing, siting,*

and detailing to achieve an appearance, micro-climate, and scale along designated streets to encourage walking.

Action 2: *Adopt and apply design standards to Major Pedestrian Routes that clearly identify acceptable vehicular movement such as slow speeds and attention to pedestrian traffic.*

Action 3: *Designate major pedestrian routes joining employment, retail and residential areas and other pedestrian attractors.*

Action 4: *Develop, adopt, and apply land use regulations that concentrate retail activities along pedestrian oriented streets and prohibit or limit uses generating little pedestrian traffic on ground floor frontages.*

d) Incorporate pedestrian and bicycle connections into an area-wide network of public and private open spaces.

e) Promote pedestrian safety by designing streets and pedestrian areas that encourage pedestrian use both day and night, reflect local access functions and use land efficiently.

f) Regulate the design and construction of streets, intersections, and parking facilities to ensure pedestrian safety and convenience.

Action 1: *Adopt and apply land use regulations that exclude parking spaces in structures from maximum parking ratio standards.*

Action 2: *Adopt and apply standards to provide attractive street frontages and visual compatibility with surrounding areas by*

- *minimizing the placement of parking lots and garages along streets,*
- *configuring parking in ways that will not dominate street frontages or public open spaces, and*
- *designing parking areas to accommodate construction of multiple level parking with commercial or office uses dominating the first floor.*

Action 3: *Require minimum sidewalk widths to allow for pedestrian movement and use of sidewalks for temporary uses such as outdoor dining, limited commercial display and placement of pedestrian features such as street furniture, lighting and trees.*

g) Promote use of multiple level parking structures with ground floor storefront design to accommodate parking needs while avoiding dispersal of commercial activities and discontinuity of retail activities.

h) Improve designated pedestrian oriented streets and intersections to stimulate safe, enjoyable walking.

i) Provide usable open spaces throughout mixed use areas, acknowledging such open spaces will generally be smaller and more intensively developed through open spaces in a more suburban setting.

j) Prior to development on any portion of a property or group of properties under single ownership a Design Review Application, or a Planned Unit Development and Design Review Application, must be submitted and approved. The application(s) must demonstrate consistency with the policies in the underlying land use designation.

k) Allow phased development of property through a Planned Unit Development application. Ensure the phasing plan demonstrates compliance with the minimum housing density and commercial floor area ratio requirements.

3.6 REGIONAL CENTER DEVELOPMENT

The Regional Center land use designation is a mixed use designation. Each mixed use designation must comply with the policies and actions set forth in Section 3.5 as well as those promulgated for the individual designation.

3.6.1 Goal: Regional Centers that develop in accordance with community vision and consistent with the 2040 Regional Growth Concept Map.

Policies:

a) Regulate new development in Regional Centers to ensure compact urban development and to maximize the public infrastructure investment in light rail.

b) Apply the Regional Center land use designation generally in the areas identified on the Metro 2040 Regional Growth Concept Map.

c) Apply zoning districts as shown in subsection 3.14 Comprehensive Plan and Zoning District Matrix.

d) Adopt Community Plans identifying Comprehensive Plan Policies applicable to each regional center to provide community vision.

Action 1: *Identify the Downtown Beaverton Regional Center Community Plan Area as the area generally bordered to the east by Highway 217, to the south by 5th Street, to the west by Hocken and to the north by Center and Hall Streets.*

Action 2: *Identify the Washington Square Regional Center Community Plan Area as the area generally bordered to the east by Highway 217, to the north by Denny Road, to the west by Fanno Creek, and to the south by Scholls Ferry Road. This Regional Center is primarily located in the City of Tigard. Planning for this area continues to involve intergovernmental coordination.*

3.7 TOWN CENTER DEVELOPMENT

The Town Center land use designation is a mixed use designation. Each mixed use designation must comply with the policies and actions set forth in Section 3.5 as well as those promulgated for the individual designation.

3.7.1 Goal: Town Centers that develop in accordance with community vision and consistent with the 2040 Regional Growth Concept Map.

Policies:

a) Regulate new development in Town Centers to provide an integrated mix of land uses accessible to pedestrians and bicyclists as well as those who drive.

b) Apply the Town Center land use designation in the general area identified on the Metro 2040 Regional Growth Concept Map.

c) Apply zoning districts as shown in subsection 3.14 Comprehensive Plan and Zoning District Matrix.

d) Adopt Community Plans identifying Comprehensive Plan Policies applicable to town center areas to provide community vision.

Action 1: *Identify the Murray Scholls Town Center Community Plan Area as including properties in the general vicinity of the intersection of Murray Boulevard and Scholls Ferry Road, consistent with the Murray Scholls Town Center study conducted in 1998.*

Action 2: *Prepare and adopt a Town Center Community Plan for each unincorporated Town Center area concurrent with or shortly after annexation. If a plan has been adopted by the County it shall be considered by the City in preparing its Community Plan for the area. In the case of incremental annexation, a Town Center Community Plan may be more appropriately adopted upon annexation of greater than 50% of the area designated as a Town Center by the County.*

3.8 STATION COMMUNITY DEVELOPMENT

The Station Community land use designation is a mixed use designation. Each mixed use designation must comply with the policies and actions set forth in Section 3.5 as well as those promulgated for the individual designation.

3.8.1 Goal: Station Communities that develop in accordance with community vision and consistent with the 2040 Regional Growth Concept Map.

Policies:

a) Regulate new development in Station Communities to maximize the public infrastructure investment in light rail.

b) Apply the Station Community land use designation generally within one mile of light rail

station platforms.

c) Apply zoning districts as shown in subsection 3.14 Comprehensive Plan and Zoning District Matrix.

d) Adopt Community Plans identifying Comprehensive Plan Policies applicable to Station Community Areas to provide community vision.

Action 1: *Identify the South Tektronix Station Community Plan Areas as the area generally north of the Tualatin Valley Highway, west of Hocken, south of SW Millikan Way and east of SW Murray Boulevard.*

Action 2:*Identify the Beaverton Creek Station Community Plan Area as the area bordered by S.W. Jenkins Road to the north, S.W. Murray Boulevard and the railroad spur to the east, S.W. Millikan Boulevard to the south, and S.W. 153rd Drive to the west.*

Action 3:*Identify the Merlo Station Community Plan Area as the area in the vicinity of the Merlo Road/158th Avenue intersection.*

Action 4: *Identify the Elmonica Station Community Plan Area as the area in the vicinity of the Baseline Road/170th Avenue intersection.*

Action 5: *Identify the Willow Creek Station Community Plan Area as the area in the vicinity of the Baseline Road/185th Avenue intersection.*

Action 6: *Prepare and adopt a Station Community Community Plan for each unincorporated Town Center area concurrent with or shortly after annexation. If a plan has been adopted by the County it shall be considered by the City in preparing its Community Plan for the area. In the case of incremental annexation, a Town Center Community Plan may be more appropriately adopted upon annexation of greater than 50% of the area designated as a Town Center by the County.*

3.8.2 Goal: Develop Station Communities with sufficient intensities to generate light rail ridership and around-the-clock activity.

Policies:

a) Regulate new development in Station Communities to provide increased densities and employment to support a high level of transit service.

b) Within ¼ mile of the light rail station platform and along all major pedestrian routes, require development to provide the highest level of design features for pedestrian activity and public access to the light rail station platform.

c) Within ¼ mile of the light rail station platform, design the arrangement of parking and streets to accommodate construction of multiple level structures for parking, commercial, residential and mixed uses.

3.9 MAIN STREET DEVELOPMENT

The Main Street land use designation is a mixed use designation. Each mixed use designation must comply with the policies and actions set forth in Section 3.5 as well as those promulgated for the individual designation. Main Streets are intended to develop as cohesive communities with design features promoting an urban scale and pedestrian environment.

3.9.1 Goal: Main Street Areas with a vibrant mix of neighborhood commercial and residential uses in a pedestrian friendly environment that includes wide sidewalks with pedestrian amenities.

Policies:

a) Regulate new development along designated Main Streets to promote transit– supportive development that is relatively dense, mixed in use, and designed for the safety, interest, and convenience of pedestrians.

Main Street regulations should require ground floor windows for commercial development to promote urban character and pedestrian - orientation, according to the Metro 2040 Land Use Code Workbook: A Guide for Updating Local Land Use Codes. The Corvallis Mixed use Residential and Mixed use Commercial districts require 60% glazing. Gresham and Portland require 50%.

Glazing provides security through "eyes on the street" and provides an interesting environment for pedestrians.

Action 1: *Adopt and apply land use regulations allowing increased building heights along main streets to promote an urban scale.*

Action 2: *Adopt and apply land use regulations requiring design of ground floor facades to support pedestrian uses. Examples of supportive ground floor design include, but are not limited to,*

- *at least 50 % glazing or window displays along the ground floor building frontages facing the main street,*
- *building entrances facing the main street,*
- *retail or small office space on the ground floor inviting activity, and*
- *awnings sheltering the sidewalk area facing the main street.*

The recommended minimum residential density for Main Street development is 15 units per acre according to the Metro 2040 Land Use Code Workbook: A Guide for Updating Local Land Use Codes. Similarly, the Metro Guide recommends minimum commercial floor area ratios of 0.40:1 up to 0.60:1. In areas where lease rates are low, there may be a need to allow shadow plans that demonstrate compliance through future site intensification. Office Commercial zoning, within Main Streets, should provide for 1 to 4 story buildings supplying professional services to the community.

Action 3: *Adopt and apply land use regulations generally requiring street trees planted so that the canopy provides continuous sidewalk coverage at full growth.*

Action 4: *Adopt and apply minimum densities and floor area ratios in designated Main Street areas.*

Action 5: *Adopt and apply modified*

According to the Metro 2040 Land Use Code Workbook: A Guide for Updating Local Land Use Codes, the extent of landscaping needed in mixed use areas will depend on the type of development proposed. More landscaping may be needed to ensure privacy for residential uses, while less landscaping may be desirable for commercial visibility.

landscape standards that allow a reduction in the amount of landscaping required for non-residential and mixed use development within Main Streets in exchange for pedestrian amenities.

Action 6:*Allow limited commercial within residential projects where it can be appropriately integrated.*

Hoffice development typically provides an integrated office and housing unit, which is typically attached vertically or horizontally to the office with internal access.

b) Apply the Main Street land use designation to the areas identified in the Metro 2040 Urban Growth Concept Map:

Action 1: *Designate the following roads, and appropriate properties along the roads, as Main Streets:*

- *the intersection of Murray and Allen Boulevards,*
- *the intersection of Allen and Hall Boulevards, and*
- *the intersection of Allen Boulevard and Scholls Ferry Road.*

c) Apply zoning districts as shown in subsection 3.14 Comprehensive Plan and Zoning District Matrix.

Action 1: *Adopt land use regulations in the Development Code providing criteria for rezones in Main Street Areas pursuant to subsection 3.14 Comprehensive Plan and*

Within the Main Street land use designation, commercial zoning is intended to provide for the shopping and service needs of the immediate neighborhood and should be readily accessible by foot, bicycle, and automobile. Two types of commercial activity are expected, individual stores, generally not exceeding 10,000 square feet in gross floor area and centers where any individual business should not exceed 15,000 square feet, with the exception of food markets. Residential zoning, within the Main Street land use designation, is intended to provide for single family attached and detached and multi-family developments. Generally, housing density will range from 8 to 43 units per acre. Where possible, residential and commercial uses should be part of an integrated mixed use development.

Zoning District Matrix. Recommended criteria include, but are not limited to, minimum and maximum zoning district sizes, floor area ratios, housing densities, distances to other similar zoning classifications, uses, and schools.

3.10 CORRIDOR DEVELOPMENT

3.10.1 Goal: An attractive mix of commercial and higher density residential uses along major roads through the City that invites pedestrian activity where appropriate.

Policies:

a) Regulate new development in Corridors to provide a mix of commercial and residential uses with pedestrian amenities.

Action 1: *Allow limited commercial within residential projects where it can be appropriately integrated.*

Hoffice development typically provides an integrated office and housing unit, which is typically attached vertically or horizontally to the office with internal access.

b) Apply the Corridor land use designation consistent with the Metro 2040 Regional Urban Growth Concept Map.

Action 1: *Designate the following roads, and appropriate properties along the roads, as Corridors:*

- *Murray Boulevard,*
- *Hall Boulevard,*
- *Canyon Road,*
- *Farmington Road,*
- *Cornell Road,*
- *Scholls Ferry Road,*
- *Allen Boulevard,*
- *92nd Avenue,*
- *Tualatin Valley Highway,*
- *Beaverton-Hillsdale Highway,*
- *Walker Road.*

c) Apply zoning districts as shown in subsection 3.14 Comprehensive Plan and Zoning District Matrix.

Action 1: *Adopt land use regulations in the Development Code providing criteria for rezones in compliance with subsection 3.14 Comprehensive Plan and Zoning District Matrix. Recommended criteria include, but are not limited to, minimum and maximum zoning district sizes; minimum floor area ratios and housing densities; minimum distances between other similar zoning classifications, uses, and schools; frontage on specific functional classifications on the Functional Classification of Streets Map (Figure 6.7).*

d) The community shall endeavor to improve the appearance of commercial areas.

Action 1: *Adopt and apply land use regulations that will limit driveway and street access, and provide landscaping along street frontage.*

Action 2*: Adopt and apply land use regulations that will provide landscaped median strips within the street right-of-way on the following streets:*

- *Beaverton-Hillsdale Highway,*
- *Canyon Road*
- *Cedar Hills Boulevard.*

Recommended land use regulations include:
- stepping the heights of buildings down to 35 feet within 100 feet of existing single family residences,
- developing a screening and buffering matrix providing required plant landscaping and screening structures, and
- increasing setbacks when adjacent to residential zones.

Action 3: *Adopt and apply land use regulations requiring buffering of properties designated Neighborhood*

Residential (Standard and Low Density) from commercial and higher density residential uses to mitigate the impacts of such development on adjacent lower density residential development.

Action 4: *Adopt and apply land use standards to limit curb cuts and direct highway access.*

e) Commercial facilities shall be allocated in a reasonable amount and in a planned relationship to the people they will serve.

Action 1: Commercial activities requiring a high degree of visibility, extensive land area, extensive outdoor storage, and or display of merchandise, equipment or inventory should be permitted only along frontage to arterials and freeways as shown on the Functional Classification of Streets Map (Figure 6-7).

Within the Corridor land use designation, commercial zoning is intended to provide for a variety of shopping and service needs. Corridor areas include commercial areas requiring extensive outdoor storage and or display of merchandise, equipment or inventory. Because of the high visibility of this type of commercial area, these areas are limited to parcels with frontage along arterials or freeways. Also, commercial areas serving the immediate neighborhood with pedestrian, bicycle and auto accessibility are provided within the Corridor land use designation provided the market area for the commercial district is within a 2-3 mile radius (i.e. neighborhood scale).

Residential development within Corridors is intended to provide for single family attached and detached and multi-family developments. Generally, housing density will range from 8 to 43 units per acre. Where possible, residential and commercial uses should be part of integrated mixed use development.

3.11 EMPLOYMENT AREAS

3.11.1 Goal: Regulate development in Employment Areas to accommodate changing market trends while maintaining the City's employment base.

Policies:

a) Regulate new development in Employment Areas to promote a functional and attractive mix of office and light industrial uses within the Campus Industrial zoning district. Allow limited commercial and other non-industrial uses to lessen dependence on the automobile for workday activities of employees in the employment areas, increase the attractiveness of the employment center, and to provide a range of synergistic relationships in the development. Examples of regulatory limits on commercial activity include, but are not limited to, size, type, location, and hours of operation.

Metro Code Section 3.07.420 requires local governments apply commercial limitations in certain mapped industrial and employment areas.

Development Code regulations limit the amount of commercial activity in Campus Industrial areas.

Action 1: *Adopt and apply land use regulations limiting commercial activity in employment areas in compliance with Metro Code Section 3.07.420.*

b) Apply the Employment Area land use designation consistent with the Metro 2040 Urban Growth Concept Map.

c) Apply zoning districts as shown in subsection 3.14 Comprehensive Plan and Zoning District Matrix.

3.12 INDUSTRIAL DEVELOPMENT

3.12.1 Goal: Attractive, compatible industrial, manufacturing, warehouse, and heavy industrial development at locations in the City served by good transportation networks.

Policies:

a) Regulate new development in Industrial Areas to maintain economic function while buffering incompatible adjacent uses.

b) Apply the Industrial Area land use designation consistent with the 2040 Regional Urban Growth Concept Map.

c) Apply industrial zoning districts as shown in subsection 3.14 Comprehensive Plan and Zoning District Matrix to provide appropriate locations for different types of industrial development.

d) Promote good design in developing industrial areas to provide a positive contribution to the community environment.

e) Industrial development shall recognize and respect the character of the surrounding development.

Action 1: *Adopt and apply standards requiring industrial areas to develop a system of bicycle and pedestrian facilities that link to residential areas, to lessen dependence on the automobile for work trips.*

f) Ensure that adequate traffic circulation, off-street parking, and loading and service areas are provided to serve the existing and projected development in industrial areas.

Action1: *Adopt and apply standards for adequate traffic circulation, off-street parking and loading areas for industrial development.*

3.13 RESIDENTIAL NEIGHBORHOOD DEVELOPMENT

3.13.1 Goal: Provide for the establishment and maintenance of safe, convenient, attractive and healthful places to live.

Policies:

a) Regulate residential development to provide for diverse housing needs by creating opportunities for single and multi-family development of various sizes, types and configurations.

Action 1: *Adopt and apply land use regulations requiring buffering of properties designated Neighborhood Residential (Standard and Low Density) from commercial and higher density residential uses to mitigate the impacts of such development on adjacent lower density residential development.*

Recommended land use regulations include:
- stepping the heights of buildings down to 35 feet within 100 feet of existing single family residences,
- developing a screening and buffering matrix providing required plant landscaping and screening structures, and
- increasing setbacks when adjacent to residential zones.

b) Encourage a variety of housing types in residential areas, by permitting or conditionally permitting any housing type (one, two or more, family dwellings) within any zoning district so long as the underlying residential density of the zoning district is met. Accessory dwelling units shall not be considered in the calculation of the underlying housing density.

Action 1: *Adopt and apply land use regulations permitting mobile homes in mobile home parks or on individual lots within mobile home subdivision and requiring conformity to the density regulations of the underlying land use designation.*

c) Require Planned Unit Development application procedures for projects proposing two or more families within the Low Density and Standard Density land use designations. Planned Unit Developments encourage flexibility in standards and provide a mechanism for staff to make adequate findings with respect to compatibility in size, scale, and dimension. Exceptions to this requirement are dwellings designed as primary units with an accessory dwelling unit, as specified in the Development Code.

Action 1: *Adopt and apply regulations ensuring that home occupations are limited in scale within the Low Density and Standard Density Residential Neighborhood land use designations to businesses that do not display outward manifestations of a business. This includes limiting the number of customers visiting the site, signage, and number of employees.*

d) Apply Residential Neighborhood designations (Low Density, Standard Density, Medium Density and High Density) consistent with the Metro 2040 Growth Concept Map and the City's housing target implementing strategy.

Residential Neighborhood Designations	Net Square Feet per Dwelling Unit
Low Density	10,000 – 12,500
Standard Density	5,000 – 8,750
Medium Density	2,000 – 4,999
High Density	1,000 – 1,250

e) Apply zoning districts as shown in subsection 3.14 Comprehensive Plan and Zoning District Matrix.

f) New Commercial zoning districts are not allowed within Residential Neighborhood Standard and Low Density land use designations. Existing properties with commercial zoning as shown on Figures III-2 through III-5 and listed by tax lot on said maps shall be allowed to continue in perpetuity. Expansion of the district is not allowed, but any use permitted within said district will be allowed subject to City approval through the procedures specified in the Development Code.

g) Enhance the City’s landscape through design measures considering the natural setting of the land and the character of existing residential neighborhoods.

Action 1: *Adopt and apply land use regulations requiring residential development to provide public, semi-public, and/or private open space.*

h) Foster innovation and variety in design to enhance the visual character of the City’s landscape. Innovation in design can include designing infill structures to integrate into existing neighborhoods through compatible scale, similar design features, and similar setbacks.

Action 1: *Adopt and apply land use regulations that provide flexibility in the Development Code to encourage creative infill and redevelopment solutions where the strict application of typical development standards will not meet the intent of efficient use of the land and preserve existing neighborhoods.*

Action 2: *Adopt and apply land use regulations to provide design standards for infill and redevelopment within existing neighborhoods.*

i) Residential development, in compliance with regional mandates, shall achieve at least 80% of the maximum density allowed in the respective zoning districts as applied through 3.14 Comprehensive Plan and Zoning District Matrix.

For the purposes of density calculation, dwelling unit is defined as the primary dwelling unit. Accessory dwelling units are allowed anywhere a single-family dwelling is permitted. Accessory dwelling units are considered subordinate and accessory to the primary dwelling and are not counted in the density calculation above.

Persons per acre may be calculated using the 1990 US Census Bureau ratio of 2.5 persons per household for Oregon. Generally, Low Density yields approximately 7 to 10 people per acre, Standard Density returns approximately 12 to 20 persons per acre, Medium Density results in a range of 20 to 52 persons per acre and High Density may yield 84 to 107 persons per acre.

LOW DENSITY RESIDENTIAL DEVELOPMENT:

3.13.2 Goal: Retain established large lot zoning in limited areas.

Policies:

a) Due to regional planning efforts to maintain minimal expansion of the regional Urban Growth Boundary, opportunities to increase land designated low density residential shall be limited.

b) Existing pockets of low density residential may continue, but expansion of low density residential areas shall not occur.

Regional inner neighborhood residential densities are 14 persons per acre. At maximum development, low density residential development, as specified herein, nets 10 persons per acre. In April 2000, 200 parcels were designated low density residential totaling approximately 89 acres. Overall, this area yields 356 persons fewer than envisioned by the regional model. To limit the City's deficit in its regional share of population, expansion of the low density residential areas must be prohibited.

STANDARD DENSITY RESIDENTIAL DEVELOPMENT:

3.13.3 Goal: Establish Standard Density Residential areas to provide moderate sized lots for typical single family residences with private open space.

Policies:

a) Apply zoning districts as shown in subsection 3.14 Comprehensive Plan and Zoning District Matrix to allow a variety of housing choices.

Action 1: *In recognition of the urban/suburban character of Beaverton, the City shall eliminate the Residential Agriculture zoning district and apply appropriate zoning consistent with the Comprehensive Plan and Zoning District Matrix (3.14).*

MEDIUM DENSITY RESIDENTIAL DEVELOPMENT:

3.13.4 Goal: Establish Medium Density Residential areas to allow for single family attached and detached, and multiple-family developments.

Policies:

a) Apply zoning districts as shown in subsection 3.14 Comprehensive Plan and Zoning District Matrix

b) Medium Density Residential zoning is located generally in areas with good access to arterial streets, good transit service, commercial service, and public open space, or should be designed in a coordinated manner to provide such amenities in the immediate vicinity.

HIGH DENSITY RESIDENTIAL DEVELOPMENT:

3.13.5 Goal: Establish High Density Residential areas to allow for a variety of housing types.

Policies:

a) Apply zoning districts as shown in subsection 3.14 Comprehensive Plan and Zoning District Matrix in areas with good access to arterial streets, transit service, commercial service, and public open space.

3.14 COMPREHENSIVE PLAN AND ZONING DISTRICT MATRIX

The City's Comprehensive Plan provides the overall planning perspective for the City. Integrating state and regional mandates, the plan provides land use patterns that are further implemented through zoning. The following Matrix prescribes the relationship between the Comprehensive Plan land use designations and zoning districts. Compliance with the Comprehensive Plan is achieved through development application approval consistent with the regulations of the Development Code.

COMPREHENSIVE PLAN AND ZONING DISTRICT MATRIX

Comprehensive Plan Designation	**Zoning District**
Regional Center	RC-E, RC-OT, RC-TO
Station Community	SC-HDR, SC-MU, SA-MDR, SA-MU
Town Center	TC-HDR, TC-MU, TC-MDR
Main Street	Office Commercial, Neighborhood Service, Convenience Service Center, R-1, R-2
Corridor	General Commercial, Convenience Service Center, Office Commercial, Community Service, Neighborhood Service, Corridor-Multiple Use, R-1, R-2, R-3.5, R-4
Employment Areas	Campus Industrial
Industrial	Industrial Park, Light Industrial, Campus Industrial
Neighborhood Residential (equivalent to Metro's Inner and Outer Neighborhood Design Types)	
Low Density	R-10[1]
Standard Density	R-7, R-5[2]
Medium Density	R-4, R-3.5, R-2
High Density	R-1
Any of the plan designations cited above	Institutional

3.15 URBAN PLANNING AREA AGREEMENT

The Washington County Urban Planning Area Agreement (UPAA), including Exhibits A and B, which is dated October 25, 1998 and was signed by the City on May 15, 1989 and signed by the County on February 10, 1989 is hereby incorporated as section 3.15 of this Land Use Element.

[1] Existing pockets of low density residential may continue, but expansion of low density neighborhood residential areas shall not occur.

[2] Existing properties with commercial zoning as shown on Figures III-2 through III-5 and listed by tax lot on said maps shall be allowed to continue in perpetuity. Expansion of the district is not allowed, but any use permitted within said district will be allowed subject to City approval through the procedures specified by the Development Code.

8/88

WASHINGTON COUNTY - BEAVERTON
URBAN PLANNING AREA AGREEMENT

THIS AGREEMENT is entered into this 25th day of October, 19 88 by WASHINGTON COUNTY, a political subdivision of the State of Oregon, hereinafter referred to as the "COUNTY", and the CITY OF BEAVERTON, an incorporated municipality of the State of Oregon, hereinafter referred to as the "CITY".

WHEREAS, ORS 190.010 provides that units of local government may enter into agreements for the performance of any or all functions and activities that a party to the agreement, its officers or agents, have authority to perform; and

WHEREAS, Statewide Planning Goal #2 (Land Use Planning) requires that City, County, State and Federal agency and special district plans and actions shall be consistent with the comprehensive plans of the cities and counties and regional plans adopted under ORS Chapter 197; and

WHEREAS, the Oregon Land Conservation and Development Commission requires each jurisdiction requesting acknowledgment of compliance to submit an agreement setting forth the means by which comprehensive planning coordination within the Regional Urban Growth Boundary will be implemented; and

WHEREAS, the COUNTY and the CITY, to ensure coordinated and consistent comprehensive plans, consider it mutually advantageous to establish:

1. A site-specific Urban Planning Area within the Regional Urban Growth Boundary within which both the COUNTY and the CITY maintain an interest in comprehensive planning;

2. A process for coordinating comprehensive planning and development in the Urban Planning Area; and

3. A process to amend the Urban Planning Agreement.

NOW THEREFORE, THE COUNTY AND THE CITY AGREE AS FOLLOWS:

I. Location of the Urban Planning Area

The Urban Planning Area mutually defined by the COUNTY and the CITY includes the area designated on Exhibit "A" to this agreement.

II. Coordination of Comprehensive Planning and Development

A. Amendments to or Adoption of a Comprehensive Plan or Implementing Regulation

1. Definitions

Comprehensive Plan means a generalized, coordinated land use map and policy statement of the governing body of a local government that interrelates all functional and natural systems and activities relating to the use of lands, including, but not limited to, sewer and water systems, transportation systems, educational facilities, recreational facilities, and natural resources and air and water quality management programs. "Comprehensive Plan" amendments do not include small tract comprehensive plan map changes.

Implementing Regulation means any local government zoning ordinance, land division ordinance adopted under ORS 92.044 or 92.046 or similar general ordinance establishing standards for implementing a comprehensive plan. "Implementing regulation" does not include small tract zoning map amendments, conditional use permits, individual subdivision, partitioning or planned unit development approval or denials, annexations, variances, building permits and similar administrative-type decisions.

2. The County shall provide the CITY with the appropriate opportunity to participate, review and comment on proposed amendments to or adoption of the COUNTY comprehensive plan or implementing regulations. The CITY shall provide the COUNTY with the appropriate opportunity to participate, review and comment on proposed amendments to or adoption of the CITY comprehensive plan or implementing regulations. The following procedures shall be followed by the COUNTY and the CITY to notify and involve one another in the process to amend or adopt a comprehensive plan or implementing regulation:

a. The CITY or the COUNTY, whichever has jurisdiction over the proposal, hereinafter the originating agency, shall notify the other agency, hereinafter the responding agency, of the proposed action at the time such planning efforts are initiated, but in no case less than 45 days prior to the final hearing on adoption. The specific method and level of involvement shall be finalized by "Memorandums of Understanding" negotiated and signed by the planning directors of the CITY and

the COUNTY. The "Memorandums of Understanding" shall clearly outline the process by which the responding agency shall participate in the adoption process. If, at the time of being notified of a proposed action, the responding agency determines it does not need to participate in the adoption process, it may waive the requirement to negotiate and sign a "Memorandum of Understanding".

b. The originating agency shall transmit draft recommendations on any proposed actions to the responding agency for its review and comment before finalizing. Unless otherwise agreed to in a "Memorandum of Understanding", the responding agency shall have ten (10) days after receipt of a draft to submit comments orally or in writing. Lack of response shall be considered "no objection" to the draft.

c. The originating agency shall respond to the comments made by the responding agency either by a) revising the final recommendations, or b) by letter to the responding agency explaining why the comments cannot be addressed in the final draft.

d. Comments from the responding agency shall be given consideration as a part of the public record on the proposed action. If after such consideration, the originating agency acts contrary to the position of the responding agency, the responding agency may seek appeal of the action through the appropriate appeals body and procedures.

e. Upon final adoption of the proposed action by the originating agency, it shall transmit the adopting ordinance to the responding agency as soon as publicly available, or if not adopted by ordinance, whatever other written documentation is available to properly inform the responding agency of the final actions taken.

B. Development Actions Requiring Individual Notice to Property Owners

1. Definition

Development Action Requiring Notice means an action by a local government which requires notifying by mail the owners of property which could potentially be affected (usually specified as a distance measured in feet) by a proposed development action which directly affects and is applied to a specific parcel or parcels. Such development actions may include, but not be limited to small tract zoning or comprehensive plan map amendments, conditional or special use permits, individual subdivi-

sions, partitionings or planned unit developments, variances, and other similar actions requiring a hearings process which is quasi-judicial in nature.

2. The COUNTY will provide the CITY with the opportunity to review and comment on proposed development actions requiring notice within the designated Urban Planning Area. The CITY will provide the COUNTY with the opportunity to review and comment on proposed development actions requiring notice within the CITY limits that may have an affect on unincorporated portions of the designated Urban Planning Area.

3. The following procedures shall be followed by the COUNTY and the CITY to notify one another of proposed development actions:

   a. The CITY or the COUNTY, whichever has jurisdiction over the proposal, hereinafter the originating agency, shall send by first class mail a copy of the public hearing notice which identifies the proposed development action to the other agency, hereinafter the responding agency, at the earliest opportunity, but no less than ten (10) days prior to the date of the scheduled public hearing. The failure of the responding agency to receive a notice shall not invalidate an action if a good faith attempt was made by the originating agency to notify the responding agency.

   b. The agency receiving the notice may respond at its discretion. Comments may be submitted in written form or an oral response may be made at the public hearing. Lack of written or oral response shall be considered "no objection" to the proposal.

   c. If received in a timely manner, the originating agency shall include or attach the comments to the written staff report and respond to any concerns addressed by the responding agency in such report or orally at the hearing.

   d. Comments from the responding agency shall be given consideration as a part of the public record on the proposed action. If, after such consideration, the originating agency acts contrary to the position of the responding agency, the responding agency may seek appeal of the action through the appropriate appeals body and procedures.

C. Additional Coordination Requirements

1. The CITY and the COUNTY shall do the following to notify one another of proposed actions by the CITY and COUNTY Planning Commissions, Board of County Commissioners and City Council which may affect the community, but are not subject to the notification and participation requirements contained in subsections A and B above.

   a. The CITY or the COUNTY, whichever has jurisdiction over the proposed actions, hereinafter the originating agency, shall send by first class mail a copy of all public hearing agendas which contain the proposed actions to the other agency, hereinafter the responding agency, at the earliest opportunity, but no less than three (3) days prior to the date of the scheduled public hearing. The failure of the responding agency to receive an agenda shall not invalidate an action if a good faith attempt was made by the originating agency to notify the responding agency.

   b. The agency receiving the public hearing agenda may respond at its discretion. Comments may be submitted in written form or an oral response may be made at the public hearing. Lack of written or oral response shall be considered "no objection" to the proposal.

   c. Comments from the responding agency shall be given consideration as a part of the public record on the proposed action. If, after such consideration, the originating agency acts contrary to the position of the responding agency, the responding agency may seek appeal of the action through the appropriate appeals body and procedures.

D. The CITY and the COUNTY agree that when annexation to the CITY takes place, the transition in land use designation from one jurisdiction to another should be orderly, logical and based upon a mutually agreed upon plan. Upon annexation, the CITY agrees to convert COUNTY plan and zoning designations to CITY plan and zoning designations which most closely approximate the density, use provisions and standards of the COUNTY designations. Such conversions shall be made according to the tables shown on Exhibit "B" to this Agreement.

II. Special Policies

A. The CITY recognizes and supports the COUNTY's Community Plans and land use designations and agrees to convert COUNTY land use designations to CITY land use designations upon annexation in accordance with Exhibit "B" of this Agreement. In addition, the COUNTY will advise the CITY of adopted policies which apply to the annexed areas and the CITY shall determine whether CITY adoption is appropriate and act accordingly.

B. The CITY and the COUNTY shall provide information of comprehensive planning and development actions to the Community Planning Organizations (CPO) through the notice procedures outlined in Section II of this Agreement.

C. At least one copy of any COUNTY ordinance which proposes to (1) amend the COUNTY comprehensive plan, (2) adopt a new plan, or (3) amend the text of the COUNTY zoning code shall be mailed to the CITY within five (5) days after its introduction.

D. At least one copy of any COUNTY ordinance which proposes to rezone land within one (1) mile of the corporate limits of the CITY shall be mailed to the CITY within five (5) days after its introduction.

E. The CITY is responsible for conducting an urban services study within its urban planning area shown on Exhibit "A". This study will identify the area for long-range provision of urban level services and annexation to the CITY. Services to be studied shall include, but not limited to: water, sanitary sewer, storm sewer and transportation facilities; police and fire protection; land use planning and development services. The COUNTY will participate in this process as outlined in a Memorandum of Understanding and will forward the future proposed urban services boundary and policies to the County Planning Commission and Board of Commissioners for consideration as a possible amendment to the COUNTY Comprehensive Plan.

F. The CITY is responsible for the preparation, adoption and amendment of the public facility plan required by OAR 660-11 within the City limits of Beaverton as of January 1, 1986. The COUNTY is responsible for the preparation, adoption and amendment of the public facility plan required by OAR 660-11 within the unincorporated area of the Urban Planning Area shown on Exhibit "A". The method of coordination and involvement of each jurisdiction in the other's planning process shall be specified in Memorandums of Understanding.

As the CITY annexes territory during the time the COUNTY prepares its public facility plan, this territory shall be withdrawn from the COUNTY's direct responsibility for planning and be given to the CITY unless both jurisdictions agree that it is in everyone's interest to continue with COUNTY responsibility.

G. The CITY and COUNTY shall adopt policy statements in the public facilities plans and/or amend this agreement to identify present and future service providers.

H. The City of Tigard, City of Beaverton and Washington County have agreed to the following stipulations regarding the connection of Murray Boulevard from Old Scholls Ferry Road to the intersection of SW 121st Avenue and Gaarde Street:

1. The City of Tigard, City of Beaverton and Washington County agree to amend their respective comprehensive plans to reflect the following functional classification and design considerations:

   a. Designation: Collector

   b. Number of Travel Lanes: 2 (plus turn lanes at major intersections)

   c. Bike Lanes: Yes

   d. Right-of-Way: 60 feet (plus slope easements where necessary)

   e. Pavement Width: 40 foot minimum

   f. Access: Limited

   g. Design Speed: 35 M.P.H.

   h. Minimum Turning Radius: 350 to 500 feet

   i. Parking Facilities: None provided on street

   j. Upon verification of need by traffic analysis, the connection may be planned to eventually accommodate additional lanes at the Murray/Old Scholls Ferry and Murray/New Scholls Ferry intersections.

   k. The intersection of SW 135th Avenue and Murray Boulevard connection will be designed with Murray Boulevard as a through street with 135th Avenue terminating at the Murray connection with a "T" intersection.

   l. The general alignment of the Murray Boulevard connection is illustrated in Exhibit C.

2. Any changes to land use designations in the Murray Boulevard connection area shall be coordinated with all jurisdictions to assure that traffic impacts are adequately analyzed.

3. The City of Tigard, City of Beaverton and Washington County shall support improvements to the regional transportation system as outlined in the adopted Regional Transportation Plan (RTP).

4. Improvements to SW Gaarde Street between SW 121st Avenue and Pacific Highway 99W should occur coincident with the connection of Murray Boulevard from Walnut/ 135th Avenue to Gaarde Street.

I. The COUNTY and the CITY will execute a Memorandum of Understanding outlining the methodology for transfering COUNTY records regarding land use activities to the CITY when property is annexed to the CITY. The Memorandum of Understanding shall be drafted and executed by December 31, 1988.

J. The COUNTY and the CITY will execute a Memorandum of Understanding outlining the respective responsibilities for collection of fees, inspections and drainage maintenance districts on platted subdivisions annexed to the CITY. The Memorandum of Understanding shall be drafted and executed by December 31, 1988.

IV. Amendments to the Urban Planning Area Agreement

A. The following procedures shall be followed by the CITY and the COUNTY to amend the language of this agreement or the Urban Planning Area Boundary:

1. The CITY or COUNTY, whichever jurisdiction originates the proposal, shall submit a formal request for amendment to the responding agency. In addition, the CITY or the COUNTY shall send a copy of the Request for Amendment to affected Community Planning Organizations (CPO).

2. The formal request shall contain the following:

a. A statement describing the amendment.

b. A statement of findings indicating why the proposed amendment is necessary.

c. If the request is to amend the planning area boundary, a map which clearly indicates the proposed change and surrounding area.

3. Upon receipt of a request for amendment from the originating agency, the responding agency shall schedule a review of the request before the appropriate reviewing body, with said review to be held within 45 days of the date the request is received.

4. The CITY and COUNTY shall make good faith efforts to resolve requests to amend this agreement. Upon completion of the review, the reviewing body may approve the request, deny the request, or make a determination that the proposed amendment warrants additional review. If it is determined that additional review is necessary, the following procedures shall be followed by the CITY and COUNTY:

   a. The CITY and the COUNTY shall agree to initiate a joint study. Such a study shall commence within 30 days of the date it is determined that a proposed amendment creates a disagreement, and shall be completed within 90 days of said date. Methodologies and procedures regulating the conduct of the joint study shall be mutually agreed upon by the CITY and the COUNTY prior to commencing the study.

   b. Upon completion of the joint study, the study and the recommendations drawn from it shall be included within the record of the review. The agency considering the proposed amendment shall give careful consideration to the study prior to making a final decision.

B. The parties will jointly review this Agreement every two (2) years to evaluate the effectiveness of the processes set forth herein and to make any amendments. The review process shall commence two (2) years from the date of execution and shall be completed within 60 days. Both parties shall make a good faith effort to resolve inconsistencies that may have developed since the previous review. If, after completion of the 60 day review period inconsistencies still remain, either party may terminate this Agreement.

V. This Urban Planning Area Agreement repeals and replaces the Urban Planning Area Agreement dated September 9, 1986.

This Agreement commences on October 25, 19 88.

IN WITNESS WHEREOF the parties have executed this Urban Planning Area Agreement on the date set opposite their signatures.

CITY OF BEAVERTON

By _____ Date 5-15-89
Mayor

WASHINGTON COUNTY

By Bonnie L. Hays Date 2-10-89
Chairman, Board of County Commissioners

Pam Peychart Date 2-10-89
Recording Secretary

CITY OF BEAVERTON
URBAN PLANNING AREA

EXHIBIT A

WASHINGTON COUNTY–BEAVERTON URBAN PLANNING AREA AGREEMENT

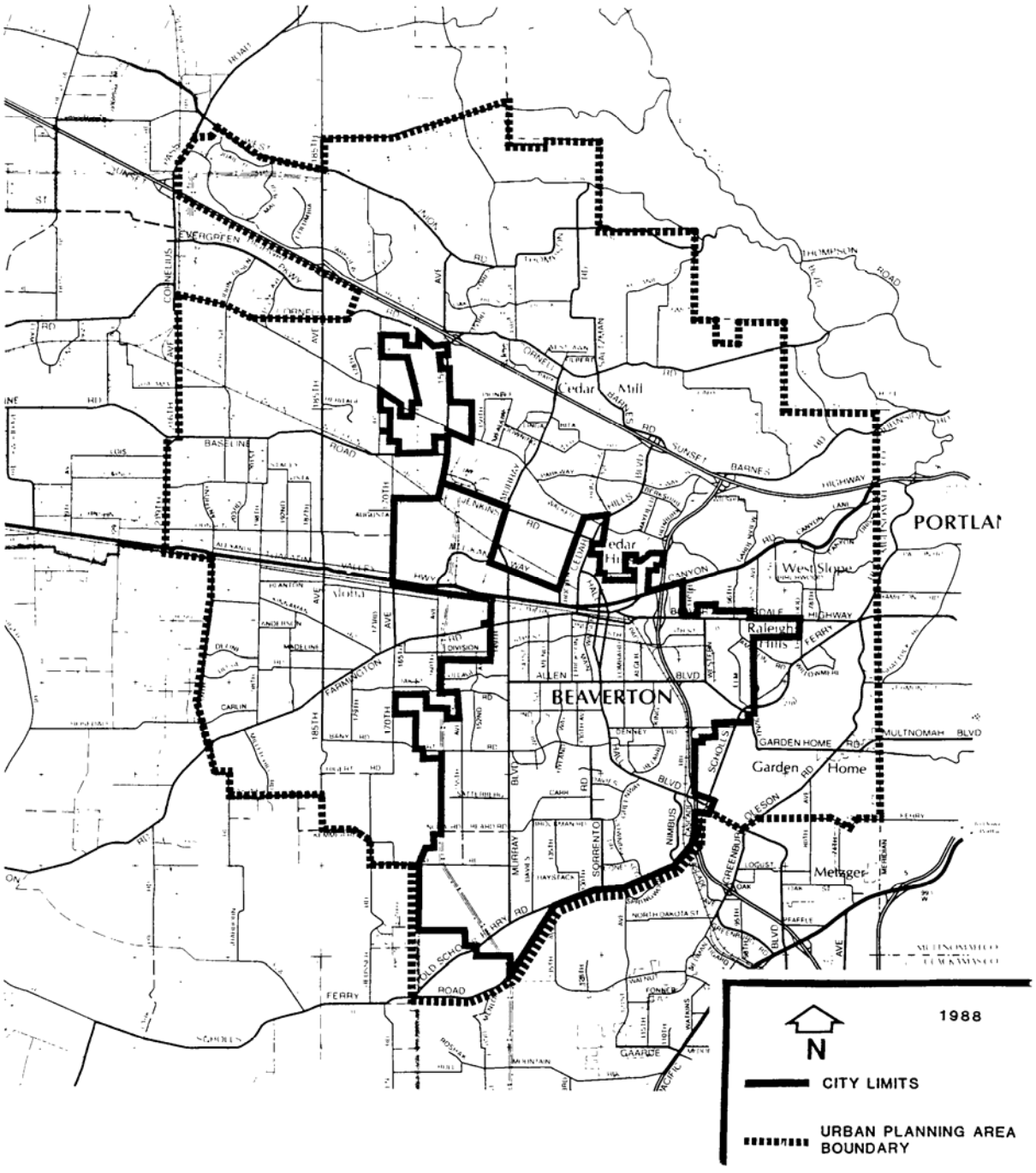


EXHIBIT "B"

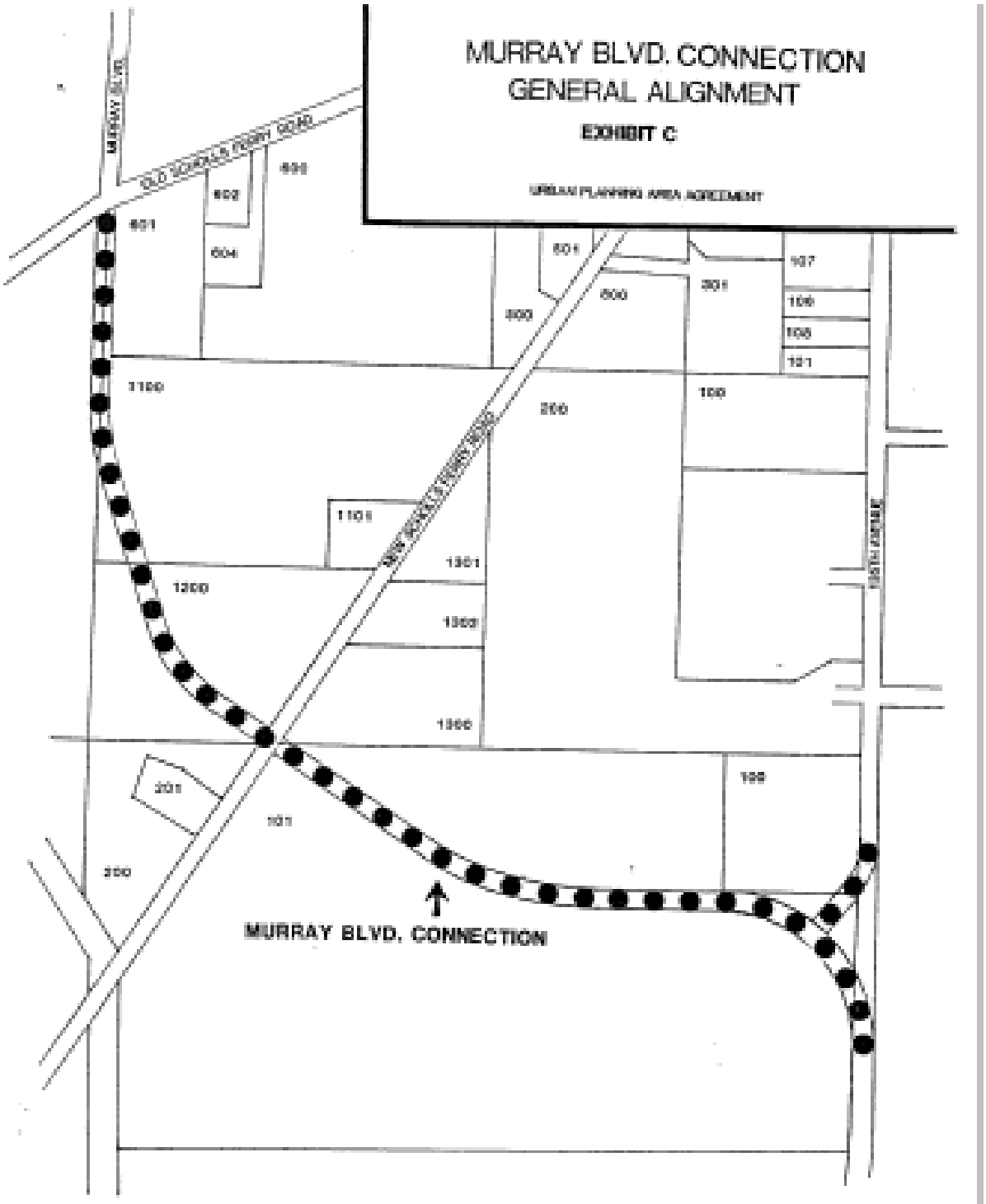
CITY-COUNTY LAND USE DESIGNATION EQUIVALENTS

County		Beaverton*	
Plan/Zoning		Plan	Zoning**
Residential	5 u/ac	Urban Standard Residential	R-7
Residential	6 u/ac	Urban Standard Residential	R-5
Residential	9 u/ac	Urban Standard Residential	R-5
Residential	15 u/ac	Urban Medium Residential	R-2
Residential	24 u/ac	Urban Medium Residential	R-2
Residential	25+ u/ac	Urban High Residential	R-1
Office Commercial		Office Commercial	O.C.
Neighborhood Commercial		Neighborhood Commercial	N.S.
Community Business District		Community Service Town Center (for property west of Hwy. 217 and south of Center only)	C.S.
General Commercial		General Commercial	G.C.
Industrial		Industrial Park Campus Industrial Light Industrial	I.P. C.I. *** L.I.
Institutional		Shown on Plan	Zoned to the most restrictive abutting zone.
Significant Natural Resource		Significant Natural Resource	Not designated on zoning map

* When partially completed developments such as residential subdivisions, apartment complexes, industrial parks, retail or office centers, etc. are annexed to the CITY after receiving development approval from the COUNTY, the CITY may, at its discretion, continue to apply the COUNTY's development standards relating to setbacks, lot sizes, lot coverage and heights for buildings and accessory structures for any new construction taking place after annexation.

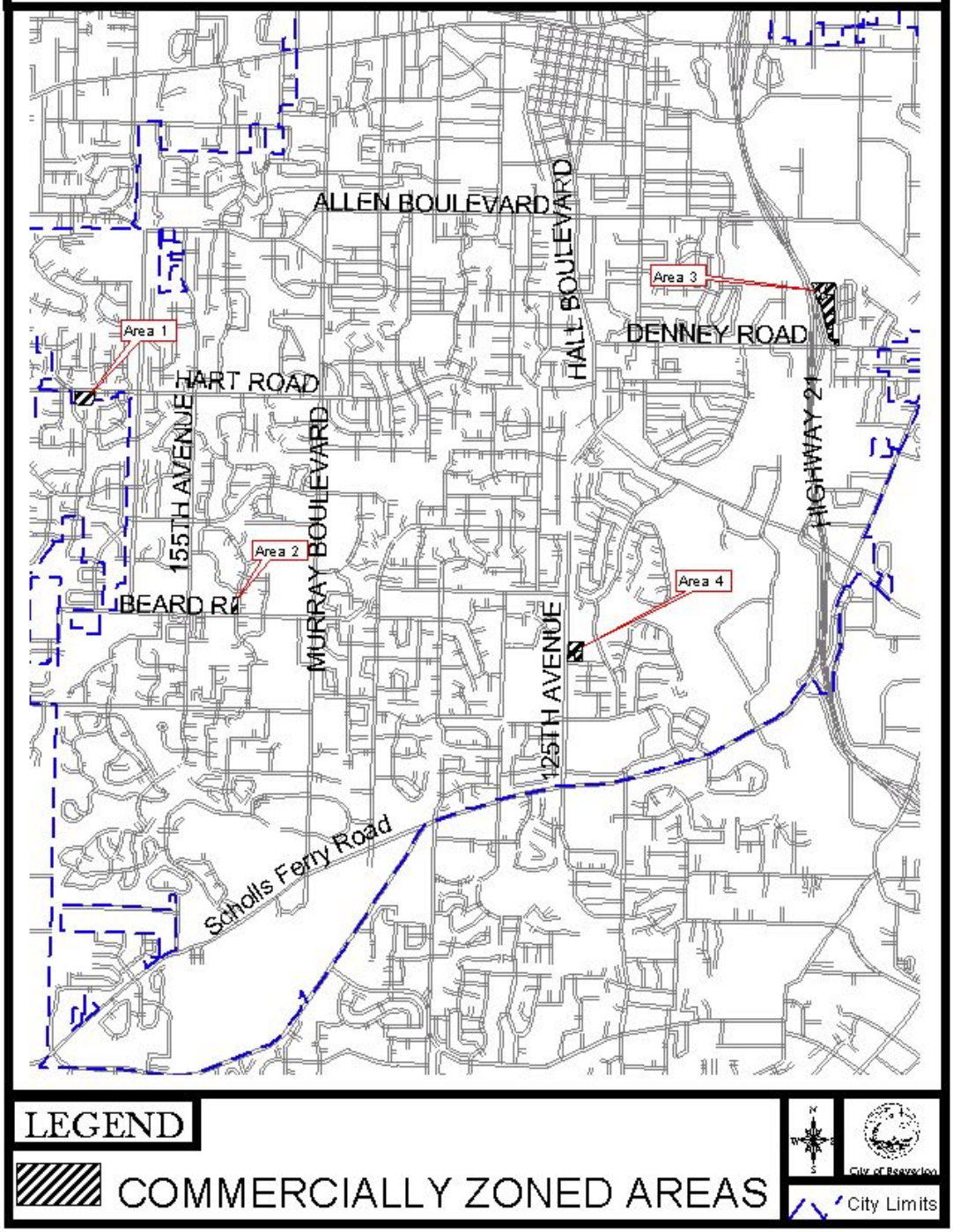
** Beaverton's residential densities identified in Exhibit "B" reflect current standards. Amendments to the City's standards shall revise this exhibit upon final approval by the City.

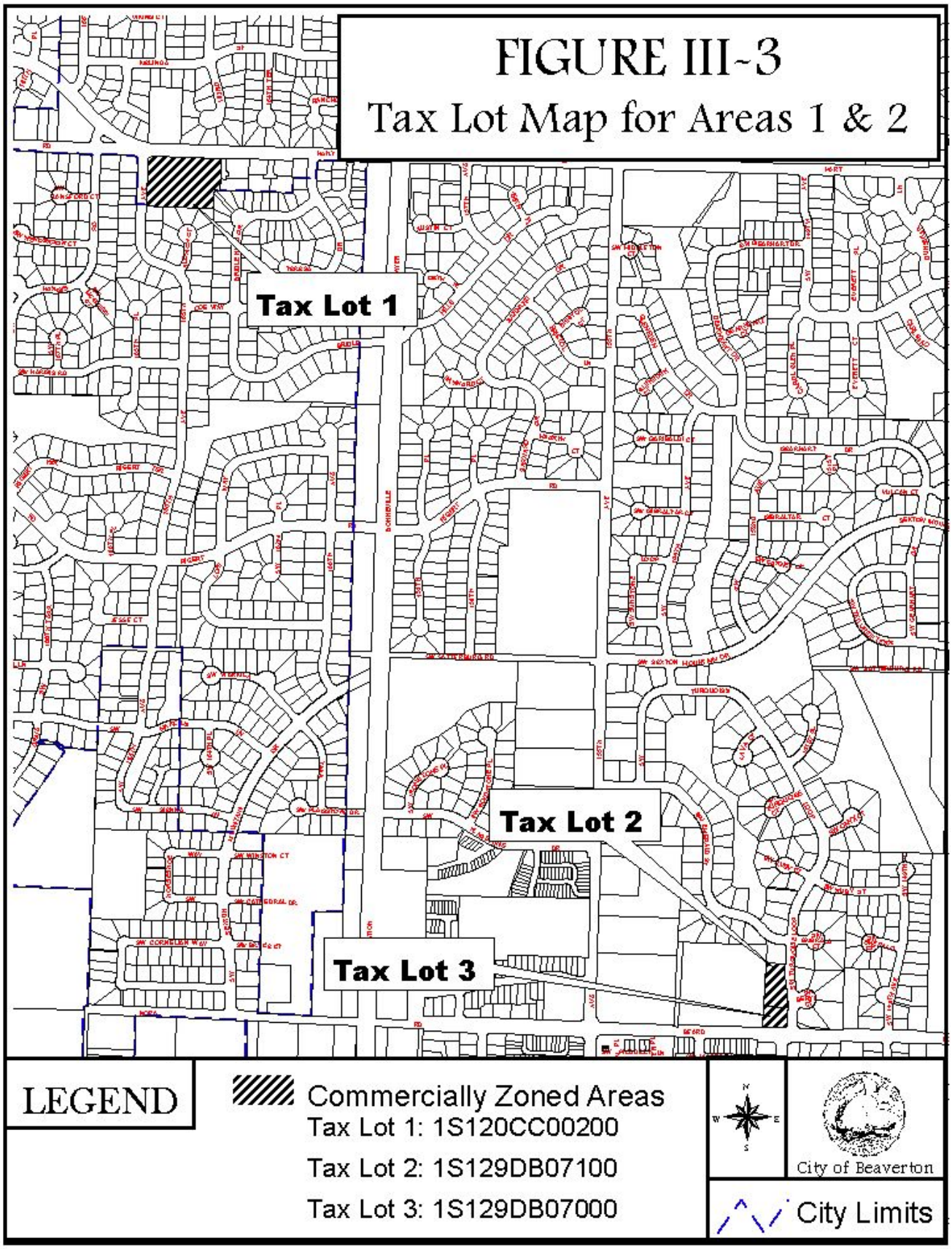
*** Planning Director shall determine the appropriate industrial designation based upon prevailing industrial land uses and the characteristics of individual activities, i.e., extensive outside storage, non-conforming characteristics, etc.

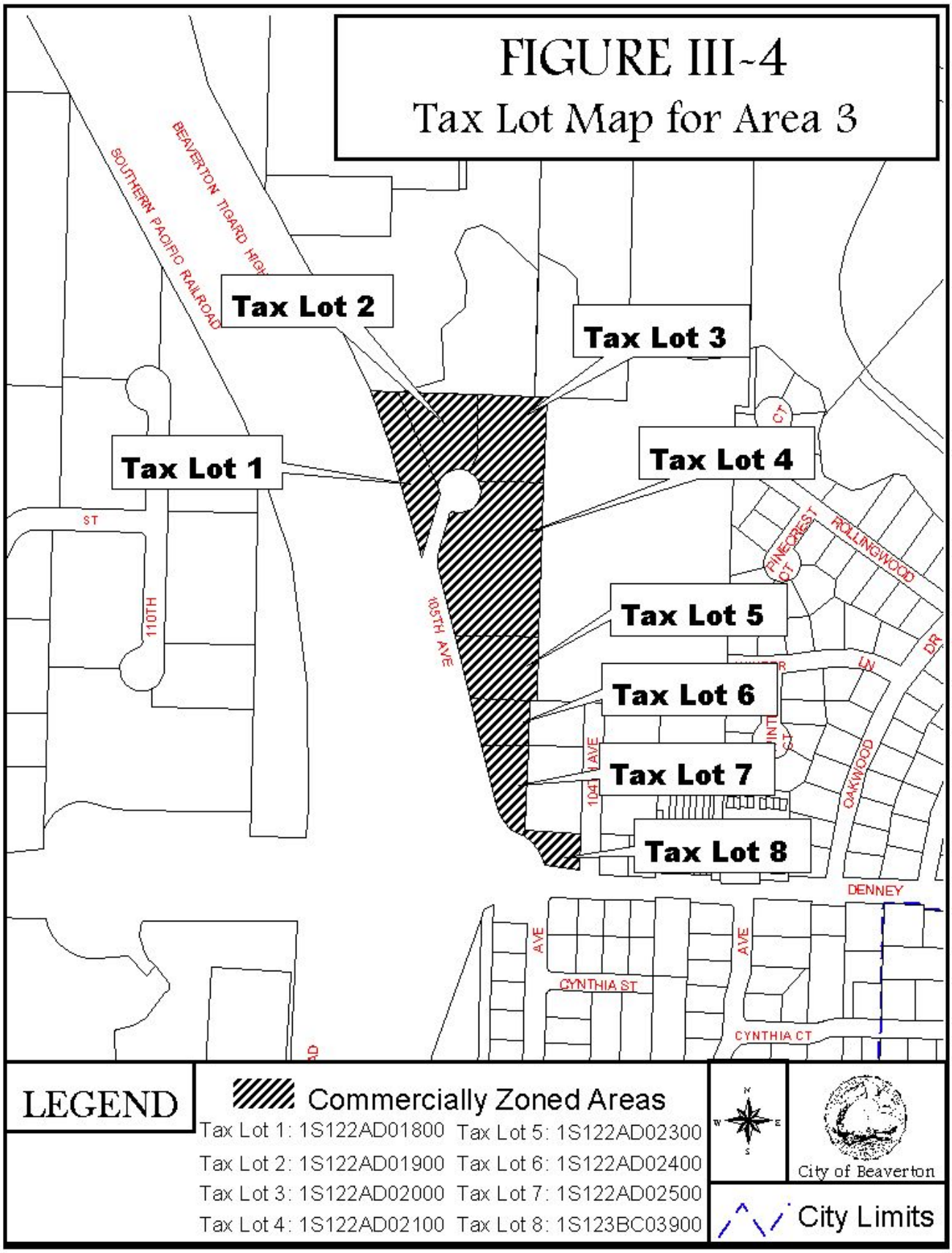

MURRAY BLVD. CONNECTION
GENERAL ALIGNMENT
EXHIBIT C
URBAN PLANNING AREA AGREEMENT
MURRAY BLVD.
OLD SCHOOLS FERRY ROAD
NEW SCHOOLS FERRY ROAD
BRIGHT HOPE
MURRAY BLVD. CONNECTION

Insert Figure III-1 Here Comprehensive Plan Land Use Map

FIGURE III-2
Index Map of
Parcels with Commercial Zoning Districts
and
Neighborhood Residential Land Use Designations
as of Ordinance Effective Date




FIGURE III-3
Tax Lot Map for Areas 1 & 2
Tax Lot 1
Tax Lot 2
Tax Lot 3
LEGEND
Commercially Zoned Areas
Tax Lot 1: 1S120CC00200
Tax Lot 2: 1S129DB07100
Tax Lot 3: 1S129DB07000
City of Beaverton
City Limits


FIGURE III-4
Tax Lot Map for Area 3
SOUTHERN PACIFIC RAILROAD
BEAVERTON TIGARD HIGH
Tax Lot 1
Tax Lot 2
Tax Lot 3
Tax Lot 4
Tax Lot 5
Tax Lot 6
Tax Lot 7
Tax Lot 8
ST
110TH
105TH AVE
CT
PINECREST CT
ROLLINGWOOD
DR
LN
INT
CT
104TH AVE
OAKWOOD
DENNEY
AVE
AVE
CYNTHIA ST
CYNTHIA CT
LEGEND
Commercially Zoned Areas
Tax Lot 1: 1S122AD01800
Tax Lot 2: 1S122AD01900
Tax Lot 3: 1S122AD02000
Tax Lot 4: 1S122AD02100
Tax Lot 5: 1S122AD02300
Tax Lot 6: 1S122AD02400
Tax Lot 7: 1S122AD02500
Tax Lot 8: 1S123BC03900
N
W
E
S
City of Beaverton
City Limits

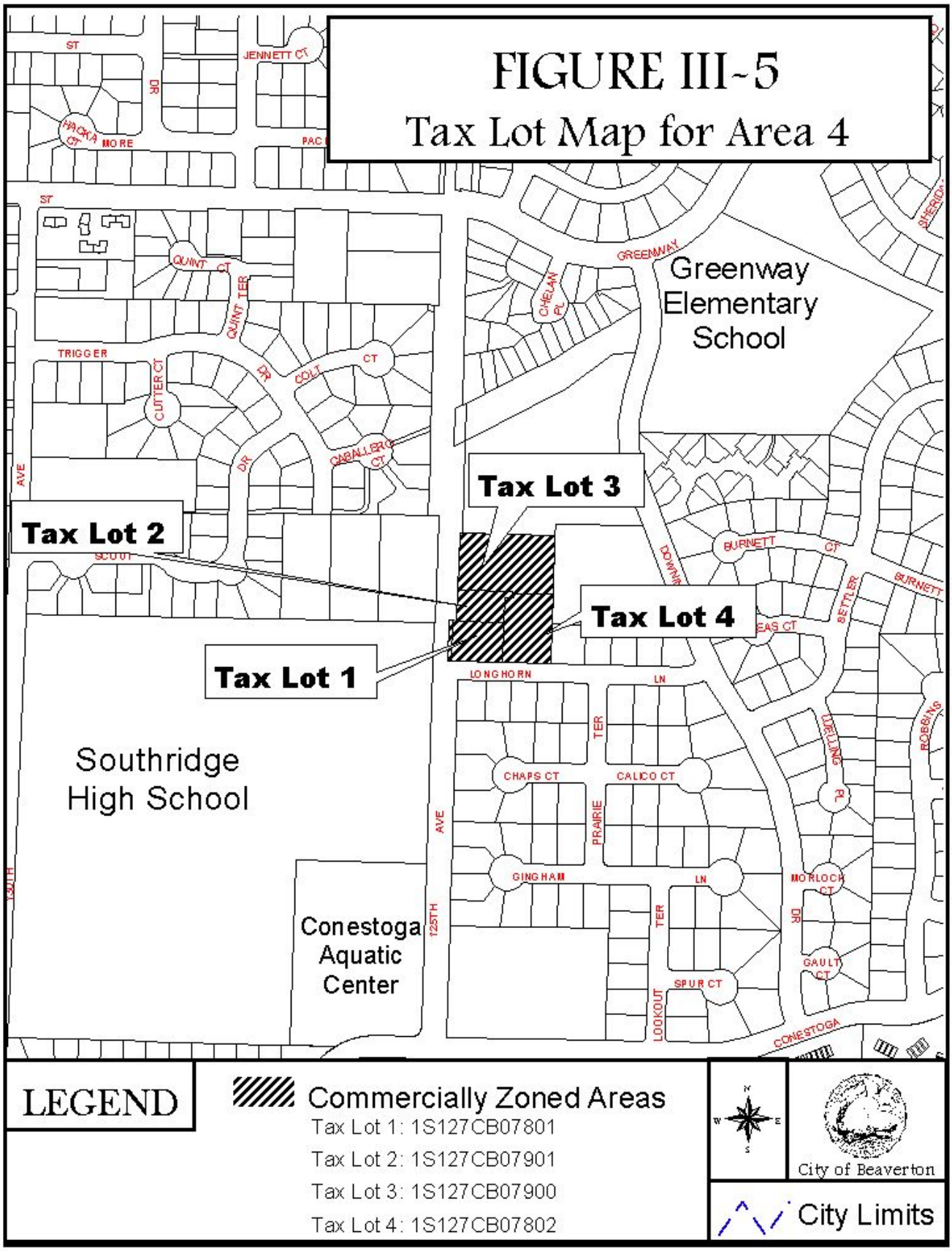
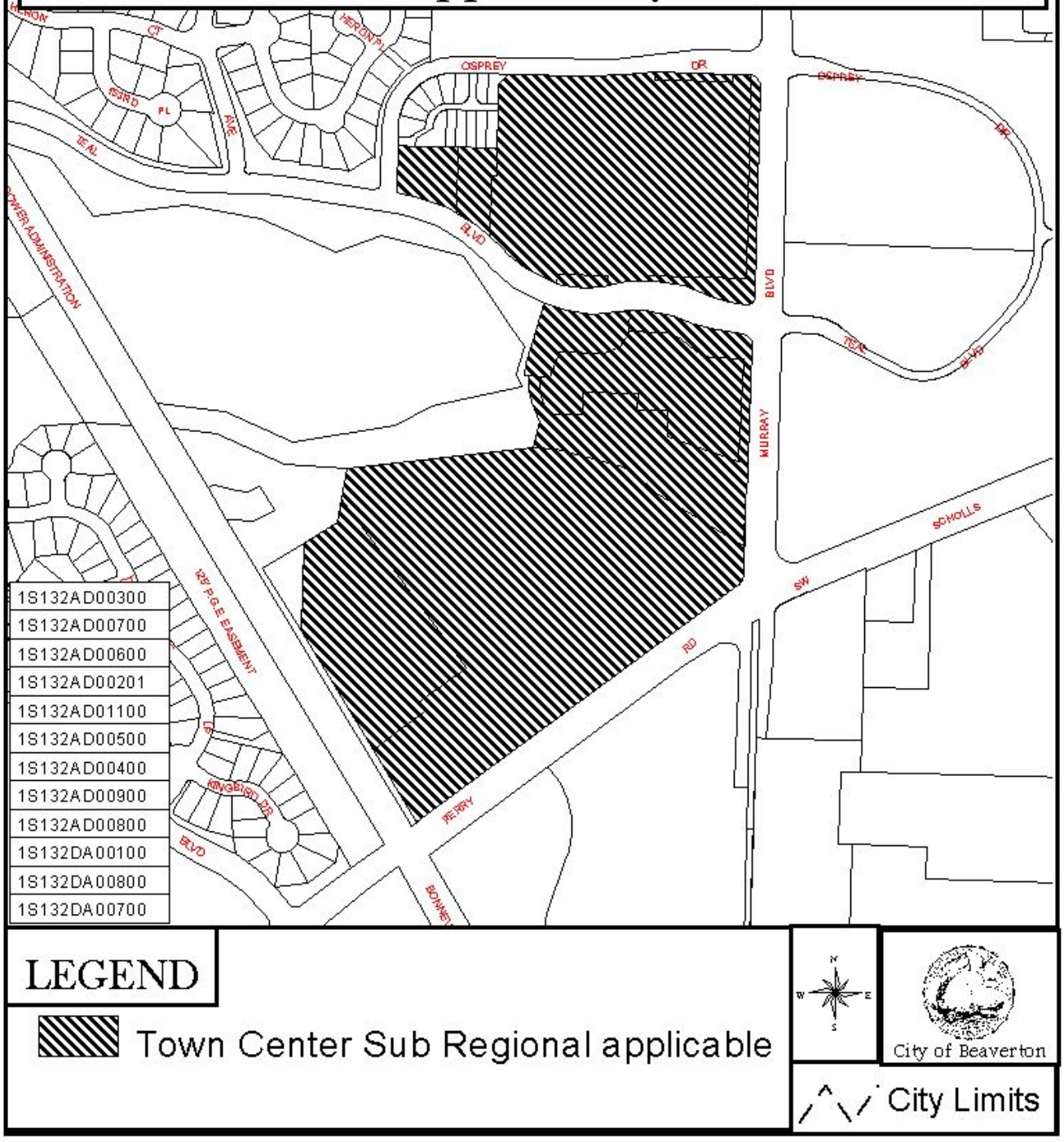

FIGURE III-5
Tax Lot Map for Area 4
Greenway Elementary School
Tax Lot 3
Tax Lot 2
Tax Lot 4
Tax Lot 1
Southridge High School
Conestoga Aquatic Center
LEGEND
Commercially Zoned Areas
Tax Lot 1: 1S127CB07801
Tax Lot 2: 1S127CB07901
Tax Lot 3: 1S127CB07900
Tax Lot 4: 1S127CB07802
City of Beaverton
City Limits

FIGURE III-6
Area of
Town Center Sub Regional Zoning District
Applicability



GEOGRAPHIC INFORMATION SYSTEM

LAND USE MAP

FIGURE III - 1

Integrating
Metro 2040 Mixed Use Design Type Boundaires
From Adjacent Jurisdictions, Where Available

Update Effective April 1, 2008

11,910.7 - Total Acres

City of Beaverton

0 0.25 0.5 0.75 1
Miles

North

LEGEND

NEIGHBORHOOD RESIDENTIAL DESIGNATION

- Low Density (NR-LD) — 10,000 - 20,000 net sq. ft. per unit; 2.3 - 4.4 units per net acre
- Standard Density (NR-SD) — 5,000 - 10,000 net sq. ft. per unit; 4.5 - 8.7 units per net acre
- Medium Density (NR-MD) — 2,000 - 6,000 net sq. ft. per unit; 7.4 - 21.8 units per net acre
- High Density (NR-HD) — 500 - 2,000 net sq. ft. per unit; 21.9 - 87.0 units per net acre

MIXED USE DESIGNATION

- Regional Center (RC)
- Station Community (SC)
- Town Center (TC)
- Main Streets (MS)

INDUSTRIAL DESIGNATION

- Industrial Area (IND)

CORRIDOR DESIGNATION

- Corridor (COR)

EMPLOYMENT DESIGNATION

- Employment Area (EMP)

INTERIM ANNEXATION AREAS

- Interim Washington County Comprehensive Plan in effect (WAcnty)

2040 DESIGN TYPES FROM ADJACENT JURISDICTIONS

- County Design Type Boundary
- Washington Square Regional Center Boundary

MISCELLANEOUS

- Beaverton City Limits
- Approved Annexations - *(Effective at a later date)*
- Taxlots
- Urban Growth Boundary
- County Line
- Light Rail Line
- Light Rail Station

OTHER CITY LIMITS

- Hillsboro
- Portland
- Tigard

Cedar Mill Town Center
Sunset Transit Center Station Community
Elmonica/Merlo Station Community
Beaverton Creek Station Community
Tektronix Station Community
185th & Baseline Station Community
Beaverton Downtown Regional Center
Raleigh Hills Town Center
Washington Square Regional Center
Murray Scholls Town Center

US 26
HWY 8
RD
AVE
BLVD
ST
WALKER
JENKINS
MERLO RD
CORNELL
BARNES
HILLS
CEDAR
CANYON
FERRY
SCHOLLS
FARMINGTON
DAVIS
ALLEN
DENNEY
HART
BROCKMAN
MURRAY
WEIR
ROY
GREENBURG
TIEDMAN
HALL
OLESON
SHATTUCK
BEAVERTON
GARDEN
HOME
MULTNOMAH
WALNUT
GAARDE ST
McDONALD ST
185TH AVE
158TH AVE
143RD AVE
135TH AVE
125TH AVE
121ST AVE
175TH AVE
170TH AVE
217
92ND AV

Notes:

City of Beaverton staff identified boundaries of adopted or proposed mixed use design types including Regional Centers, Station Communities, and Town Centers, where they are available from other jurisdictions. Additional information may be added to this map as data is available from other jurisdictions. Inner and Outer Neighborhoods, Corridors and Main Streets, generally, are not available from the other jurisdictions at present.

Source Data :

City of Beaverton -
- City Limits - Last Updated on 2/14/2008
- LandUse - Last Updated on 2/14/2008

METRO Regional Land Information System (RLIS) -
- Adjacent City Boundaries - Last Updated on 2/1/2008
- County Lines - Last Updated on 1/16/2003
- Light Rail Line and Stations - Last Updated on 11/7/2007
- Multnomah County Taxlots - Last Updated on 2/1/2008
- Streets and Street Names - Last Updated on 3/6/2008
- Urban Growth Boundary - Last Updated on 2/1/2008

Washington County -
- Taxlots - Last Updated on 3/24/2008

Disclaimer :

This product is for information purposes only and may not have been prepared for, or be suitable for, legal, engineering, or surveying purposes. Users of this information should review, or consult, the primary data and information sources to ascertain the usability of the information. This map represents the best data available at the time of publication. While reasonable effort has been made to insure the accuracy of the information shown on this page, the City of Beaverton assumes no responsibility, or liability, for any errors, omissions, or use of this information. Metadata available on request.

08_0069 S:_Maint_Proj\Plots\Annexation_Update\landuse_11x17.mxd GIS-DT 3/24/2008

This map is AVAILABLE INTERNALLY at T:\Maps\Land_Use\landuse_11x17_2008c.pdf

HOUSING

4.1 OVERVIEW

Over the last several decades, Beaverton has undergone many changes in its residential housing makeup. Forty years ago the City's population stood at about 6,000 residents. By the year 2000, that number has increased to almost 70,000 residents. The City's housing market has been subject to various trends over this time span and changed in a variety of ways. Predominant housing characteristics which have occurred in response to this growth become particularly evident when viewing the City's housing trends from the perspective of three indicators – 1) housing supply, 2) mix of housing types, and 3) housing affordability.

1) Housing Supply and Density:
Although the last forty years has seen a tremendous amount of housing production in the City, the rate at which this growth has occurred has not been constant. Examination of how that growth has occurred over time can reveal some interesting patterns. In the year 2000, it is estimated that the City of Beaverton has 32,202 housing units - 15% of which were produced in the 1960s, 21% in the 1970s, and 33% in the 1980s. The steady escalation of growth indicated by these numbers has taken a downturn during the 1990s however to reveal that only 25% of the City's housing units were built during that decade. Further, an examination of the City's building permits data reveals that production of new units has declined from over 2000 issued in fiscal year 1989-90 to just over 200 in fiscal year 1999-00.

Continual production of new housing throughout the City coupled with restrictions imposed by the City's inability to develop outside the Urban Growth Boundary has resulted in a drastic slowdown in growth over the last several years. Although some of this slowdown can be attributed to market fluctuations, a significant measure can also be explained by the fact that while the City's population has increased, the amount of land capable of absorbing the need for new housing has decreased. In essence, the City has nearly depleted its inventory of vacant land. Over the last several years the private market has responded to this trend by modifying their production strategies to focus upon "infill" opportunities while the City has adopted policies designed to increase housing unit densities and maximize the development potential of the land remaining. As a result, development during 1980s was characterized by fewer projects but at much larger scales while the 1990s has seen more projects but at significantly smaller scales.

2) Housing Type:
Back in 1960, housing units in Beaverton were predominately single-family residential, making up approximately 78% of the city's total housing stock. Although much of the housing built in the 1960s catered to residents who commuted to downtown Portland, expansion of the city's consumer base infused the emerging local economy. As a result, the demand for labor needed to staff new businesses expanded the market for multi-family rental housing which grew over the next several decades to occupy a significant segment of the housing market. The supply of multiple-family housing increased further with the emergence

of condominiums which were introduced in the late 1970s. In year 2000, it is estimated that the ratio of single-family to multi-family development stands at 51% to 49%.

In recognition of the fact that Beaverton suffers from a shortage of buildable residential land, the City has begun to examine alternatives associated with housing types that emphasize increasing the density potential for new residential development. Recent policy changes designed to address these factors include the adoption of an R4 zone (allowing for a minimum lot size of 4,000 sq. feet per dwelling unit), the easing of restrictions associated with accessory dwelling units and manufactured housing, adoption of mixed use zones, as well as development code text amendments requiring that all new development achieve a minimum density of 80% of allowable capacity.

3) Housing Affordability:

The affordability of housing has become a topic of great concern over the past decade. The crux of the problem lies in the fact that, throughout the region, wage rates have not been able to keep pace with escalating housing costs. The result is an ever widening affordability gap which has the potential of dislocating area residents. In general, a unit is considered unaffordable when its residents are allocating over 30% of their gross income toward housing costs. However, the population segment considered specifically "at-risk" is identified under Metro's Regional Affordable Housing Strategy (RAHS) as that portion earning below 50% of the area Median Family Income (MFI). According to this document, this population segment not only represents the area of greatest need, but reflects a demographic group regarded as the most vulnerable to losing their housing in a time of personal crisis. Specific groups within this category are particularly affected. These include the elderly on fixed incomes who may find that increasing tax liabilities and maintenance costs exceed their ability to pay for them, single parent households who are overly burdened with extensive childcare costs, and first time homebuyers who may have grown up in an area they can no longer afford to live in.

According to Oregon's Multiple Listing Service the average home price for the Beaverton area was $175,700 in 1999 – up from $91,633 in 1990. In essence, Beaverton's housing prices have almost doubled in the past nine years. While a segment of this increase can be attributed to escalating costs in permit fees, transportation impact fees, and system development charges, the bulk of the change derives from an increase in the value of land. Many upwardly mobile residents receive a windfall in equity appreciation from this trend, however, others less able to bear the costs resulting from property tax increases find it increasingly difficult to make ends meet. Ballot Measure 50 (a referendum which has limited the amount of property taxes local governments are able to levy) has alleviated this burden to some extent but in general the problem continues. In the case of renters, costs associated with these tax liabilities are passed on in the form of higher rents. In Beaverton that amounts to a 50% increase from an average rent of $455 in 1990 to approximately $700 in 1999.

In January 2000 the City conducted a housing survey in order to determine the breadth of its non-affordability problem. The survey found that approximately 17% of Beaverton's households earned under 50% MFI and 7% under 30% MFI. Of the households earning under 50% MFI, somewhere between 54% and 85% could be classified as living in non-affordable units. Overall, that segment accounts for somewhere between 8% and 12% of Beaverton's

population (the exact number for non-affordability could not be determined by the survey given that the definition varies with family size). These numbers are somewhat misleading in defining the depth of the problem, however, because they do not reflect the region as a whole.

Because some jurisdictions are burdened with a disproportionate share of the region's low-income housing while others are lacking in that market segment, solutions to the affordability problem are generally addressed from a regional need perspective. In June 2000, Metro's Affordable Housing Technical Advisory Committee (H-TAC) released its Regional Affordable Housing Strategy (RAHS). That report identifies Beaverton's share of the regional need as 7.2% or approximately 6,500 units (about 40% - 60% above the City's internal need). From that total it also sets a performance goal of 656 affordable units to be developed over the next five years.

4.2 GOALS AND POLICIES

Through comprehensive planning, the City of Beaverton can help guide the quantity, types, and affordability of its housing. Goal 10 of Oregon's Statewide Planning Goals and Guidelines pertains specifically to housing. It stipulates that in preparing Comprehensive Plans, "Buildable lands for residential use shall be inventoried and plans shall encourage availability of adequate numbers of needed housing units at price ranges and rent levels which are commensurate with the financial capabilities of Oregon households and allow for flexibility of housing location, type, and density." In conformance with this provision, as well as those specified in Oregon Revised Statute (ORS) section 197.295 -.314, Oregon Administrative Rules (OAR) section 660-007-008, Metro's Urban Growth Management Functional Plan (UGMFP) - Title 1, and Metro's Regional Affordable Housing Strategy (RAHS), the City conducted a buildable lands analysis and various housing needs studies and has adopted the following goals, policies, and actions to address the City's housing needs as they pertain to the availability of housing supply, housing type, and housing affordability as specified below.

4.2.1 HOUSING SUPPLY AND DENSITY

Like every city and county throughout the state, Beaverton is required under ORS 197.296 to provide enough buildable land to accommodate a future housing need extended out to a twenty year planning horizon. In the Portland Metropolitan Area, Metro is the agency charged with regulating supplies of land within the Portland Metropolitan Urban Growth Boundary and therefore is the agency charged with making the determination as to what that supply of land should be for each jurisdiction under its purview. Determination as to whether local jurisdictions are in compliance with state provisions are made through the Title 1 provisions of Metro's Urban Growth Management Functional Plan. In attempting to address the provisions of this plan, the City conducted a Buildable Lands Analysis and determined that Beaverton would be able to accommodate 12,194 of the 13,580 dwelling units projected by Metro to occur over the next twenty years. This put the City's growth capacity at 91% of

what had been targeted by Metro and allowed the City to obtain a standing of substantial compliance under Metro's regulations.

One component of Title 1 was instrumental in permitting the City to achieve this standing. Section 4 of that title required the City to demonstrate that all residential development occurring between 1990 to 1995 had achieved an overall average net density of 80% of what the applicable zone allows for. If the jurisdiction is not able to demonstrate that it has achieved that required density, the provision suggests that the jurisdiction consider adoption of at least two of five measures specified to increase residential densities. In 1996, the City conducted such a study, (Beaverton's Title 1 Density Study), in order to determine if Beaverton's residential development met Metro's 80% density threshold. The City found that past development densities had not met Metro's 80% minimum, exhibiting instead a 63% measure of development density relative to what the zone allowed. This prompted the City to adopt several Plan and Code amendments identified below.

As indicated above, the most fundamental way to accommodate new development where the land supply is limited, as in Beaverton's case, is to increase unit/acre residential densities. In order to control the degree of sprawl that occurs with an expansion of the urban growth boundary, the state requires cities to demonstrate that their use of land is efficient. They encourage local governments to take measures that have the effect of increasing residential densities. In addition to the Metro required Buildable Lands and Title 1 Density studies mentioned above, the City also conducted several comparable studies to determine if the City is making progress in increasing their overall densities.

OAR 660-007-0035 requires that the City provide for an overall residential density of 10 or more dwelling units per net buildable acre. Since its last periodic review in 1988, net development density surpassed this requirement and achieved an overall average density of 11.23 units/acre. Additionally, OAR 660-007-0600 requires that "During each periodic review local government shall prepare findings regarding the cumulative effects of all plan and zone changes affecting residential use." In consideration of the fact that the City of Beaverton was in Periodic Review at the time this element was being adopted, the City conducted an analysis of its rezoning activity occurring since its last Periodic Review. This Analysis of the Cumulative Effects of City Rezoning study found that the City of Beaverton has accrued the increased capacity to accommodate approximately 5,882 additional units on vacant or buildable land as a result of its rezone approvals over a time span of twelve years. Overall, this amounts to a 377% increase in capacity over what had been previously permitted. Therefore, aside from the conclusions drawn from the Metro Title 1 Density Study, where the City demonstrated a shortfall from the 80% capacity measure, Beaverton has made strides to increase its overall residential densities. The following provisions are adopted in order to continue this trend.

4.2.1.1 Goal: Maximize use of buildable residential land in the City.

Policies:

a) Increase residential capacity in the City to substantially comply with requirements of Title 1 of the Metro Urban Growth Management Functional Plan.

Action 1: *Adopt and apply a Development Code provision to require that net residential development density occur at a minimum of 80% of the maximum density a zone allows for.*

Action 2: *Adopt and apply a new zoning designation allowing for a minimum lot size of 4,000 square feet per dwelling unit.*

Action 3: *Consider adopting and applying land use regulations allowing increased density where low impact development techniques and habitat friendly development practices are applied.*

b) To the extent practical, ease the review process and standards for higher density residential projects.

Action 1: *Amend the City's flexible setback provisions to allow more flexibility in residential design alternatives.*

Action 2: *Consider adopting a two track development review process for higher density development projects proposed outside of established neighborhoods, whereby projects that meet clear and objective design and development standards can be approved administratively. Alternatively, projects whose developers would propose to vary from the standards would be subject to a public hearing process.*

4.2.2 AVAILABILITY OF HOUSING TYPES

Statewide Planning Goal 10 (Housing), ORS 197.296 – 314, .480, & .677, and OAR 660-007-0030 all have provisions requiring that jurisdictions assess the availability of, and provide for, a variety of housing types. Specifically, the intent of these provisions is to "…encourage availability of adequate numbers of needed housing units at price ranges and rent levels which are commensurate with the financial capabilities of Oregon households and allow for flexibility of housing location, type, and density". To satisfy the directives expressed in these provisions, the City of Beaverton conducted a buildable lands analysis and a residential mix and density study. ORS 197.296 requires that local jurisdictions "determine the actual density

and actual average mix of housing types of residential development that have occurred within the urban growth boundary since the last periodic review…" Upon examining the results of these studies the City found that for the development occurring between the City's last Periodic Review in 1988 through 12/31/99, over 66% of new development consisted of multiple family residential units. Broken down into individual types, percentages of units developed were 33.6% single family dwellings, 4.1% townhouses & rowhouses, .9% condominiums, .4% duplexes, and 61% apartments. In total, the City's housing base consists of approximately 50% single family residential (sfr) and 50% multiple family residential (mfr) units with a healthy mix of housing types.

Apart from Beaverton's existing inventory, OAR 660-007-0018 provides that "Sufficient buildable lands shall be designated on the comprehensive plan map to satisfy housing needs by type and density range as determined in the housing needs projection." In attempting to address the requirements of this provision and determine the City's future need, the City also conducted a Housing Types Needs Analysis. This study examined the City's capacity to accommodate future need by first examining which income groups occupy which housing types, by proportion, and then applying those ratios to Metro's 20-year housing need projection. Types included in the model include sfr dwellings, apartments, 2-, 3-, & 4-plex buildings, condominiums, and mobile homes. In identifying which types were associated with each income segment, special consideration was given to that segment of the population under 50% of the median income in order to determine if the City could accommodate Metro's projected affordable housing goal for the City. The study then determined which housing types were permitted in which zones and then proceeded to cross check the need with the buildable lands analysis to derive an estimation of the number of units able to be accommodated in each zone. The study concluded that the City contains adequate buildable land to accommodate housing types associated with each price range and rent level. The map depicting the City's buildable lands is associated with this element as a supporting document labeled Figure 1 in the Housing Inventory section of Comprehensive Plan - Volume 2.

The Housing Type Needs Analysis succeeded in identifying a nexus between income level and housing type. However, three housing types requiring attention were not considered in this study and are therefore be addressed separately below. They include seasonal farmworker housing, manufactured housing, and government assisted housing.

ORS 197.675 requires that every state and local government agency address the health, safety, and welfare needs of seasonal farmworker housing.

- Seasonal Farmworker Housing: Activities associated with this group are centered in the western portion of Washington County. No need to develop or maintain housing for farmworkers in Beaverton has been identified Therefore provisions to address the development and maintenance of farmworker housing are not considered to be applicable to the City.

OAR 660-007-0033 provides that "Each local government shall consider the needs for manufactured housing and government assisted housing within the Portland Metropolitan UGB [Urban Growth Boundary] in arriving at an allocation of housing types."

- Manufactured Housing: The City's Development Code allows for manufactured homes in the City's RA, R5, R7, & R10 zones, mobile home parks in the City's R5 zone and conditionally in the City's R2 zone, and manufactured subdivisions in the City's R5 zone. The City does retain a set of clear and objective criteria relating to the design and placement of manufactured housing without having the effect of discouraging manufactured housing though unreasonable cost or delay. To this extent, the City finds that no further provisions are necessary in order to demonstrate compliance.

- Government Assisted Housing: According to the City of Beaverton's year 2000 Housing Survey, approximately 3% of the City's households receive public housing assistance of one sort or another (10% - 15% of which are in non-affordable housing). Washington County's Housing Authority is the agency responsible for administering public housing authority-related programs in Beaverton. The City's has no role in allocating public housing assistance funding. The City can assist the Washington County Housing Authority in a limited capacity, however, by referring qualified households to the agency.

Although the City's Housing Types Needs Analysis indicated that the City of Beaverton does possess enough buildable land to accommodate a mix of needed housing types, the City recognizes the value of accessory dwelling units as a sensible housing type alternative. This housing type has the effect of increasing urban densities with minimal impact to neighborhood character. Further, this housing type is often accessible to lower income and special needs populations. In response to Metro's Title 1 requirements, the City recently updated its Development Code provisions to allow for accessory dwelling units within all zoning districts allowing single family residential uses.

The following provisions reflect the City's intent to allow a variety of needed housing types.

4.2.2.1 Goal: Provide an adequate variety of quality housing types to serve Beaverton's citizenry

Policies:

a) Allow development of a wide variety of housing types in the City.

Action 1: *Work in partnership with the Washington County Housing Authority to preserve its portfolio of federally assisted housing at rent levels affordable to extremely and very low-income households.*

Action 2: *Determine if Development Code restrictions exist that might impede the development of co-housing, halfway houses, or other innovative housing types and, where evident, make amendments to eliminate or reduce those restrictions.*

b) Maintain the quality and safety of existing Beaverton housing stock.

Action 1: *Investigate the possibility of establishing a Housing Code Enforcement Program to insure that various housing quality and safety standards are met in order assure that low income renters are provided with decent living conditions.*

4.2.3 AVAILABILITY OF AFFORDABLE HOUSING

Conventional wisdom among those closest to the affordable housing issue is that the problems associated with the lack of affordable housing must be addressed from a regional perspective. This outlook derives from an acknowledgement that those local governments that bear a disproportionate share of the region's low-income housing are often the least equipped to bear the fiscal impacts that result. Therefore, in a metropolitan region where fiscal resources are unequally distributed among local governments, each local government should play a role in addressing the problem. It is from this premise that Metro developed its Urban Growth Management Functional Plan (UGMFP) Title 7 provisions. This section specifies that "The Metro Council shall adopt a "fair share" strategy for meeting the housing needs of the urban population in cities and counties based on a subregional analysis…" and proceeds to identify specific affordable housing related factors to be considered. Further, it provides that an Affordable Housing Technical Advisory Committee (H-TAC) be convened in order to formulate policy recommendations that may later be incorporated into Metro's UGMFP.

HTAC did produce a Regional Affordable Housing Strategy (RAHS) and in it established both production targets (which the City has used in conducting its housing needs analysis) as well as a set of recommended "tools" which can be used by local governments to encourage the development of affordable housing. In the years 2002, 2003, and 2004, the City formally considered these tools and other strategies for implementation and where appropriate, has incorporated them into them into the policies that follow.

To address the City's need to provide affordable housing, two areas of concern should receive consideration: 1) the retention of the City's existing affordable housing stock and 2) the production of new units.

1) Retention of Existing Housing Stock:
The City should adopt measures to minimize loss of its existing affordable stock. As the value of Beaverton's housing continues to appreciate, additional cost burdens are placed upon City residents. For city residents deemed "at risk" as a result of their low or fixed income status, this prospect has the potential to cause them to move from their place of residence or spend limited income or resources to retain their residence. Typically, residents under these circumstances will alleviate the escalating burden by drawing upon either the equity invested in their home or upon any disposable income they may have in order to cover costs associated

with maintaining their housing. As the burden increases however, they may be forced to deprive themselves of some basic living necessities such as heat or divert funds away from costs associated with housing maintenance. Substandard living conditions that may ensue could pose a risk to the resident's health and safety. Low income renters can also be at risk when they neglect to demand building improvements from their landlords out of fear that their tenant status may be compromised.

The City can assist residents in this predicament by continuing to provide funding through its Community Development Block Grant and H.O.M.E. programs to service providers that assist this "at risk" population. Additionally, the City can explore the idea of establishing a housing code enforcement program to monitor apartment maintenance as both Tigard and Portland have done. Finally, the City has developed a sound relationship with its community housing development organization (CHDO) partner Tualatin Valley Housing Partners (TVHP). This relationship has resulted in the retention of almost 100 multifamily units affordable to those at or below 60% of the MFI that most likely would have been converted to higher market rate housing. The City can continue to work with this organization to retain endangered affordable housing stock.

4.2.3.1 Goal: Promote the retention of existing affordable housing stock in the City.

Policies:

a) Support low-income homeowners with housing rehabilitation needs through continued funding and administration of the Citywide Housing Rehabilitation Loan Program.

b) Continue to devote funding through the City's CDBG and HOME Programs to local non-profit agencies in order to aid in the rehabilitation of existing long-term affordable housing in the City.

c) Provide continued CDBG funding support to local non-profit service providers so that they may continue to supply needed living and service assistance to low income homeowners and renters.

d) Work in partnership with TVHP, the Bridge Housing Corporation, Community Partners for Affordable Housing, the Housing Development Corporation, and Habitat for Humanity to preserve housing that is affordable to households at or below 60% of the MFI.

e) Assure the long term affordability of City funded housing projects.

Action: 1 *Review CDBG and HOME program requirements that relate to housing assistance and where necessary, establish long term affordability requirements, standards, and guidelines.*

2) Production of new affordable housing stock:
According to Metro's RAHS report, the City of Beaverton should seek the development of an additional 656 affordable units within the next five years. Of that number, 229 units should be available to households earning between 30-50% MFI and 427 should be available to households earning under 30% MFI. This task is by no means a small endeavor. The problem in providing these units lies in the fact that it is very difficult for the free market to produce this housing and still realize the profit necessary to make it stay in business. Often, the only housing developers able to make projects of this kind work are non-profit Community Housing Development Organizations (CHDOs) who receive their funding via public subsidy and private donations of money, materials, or labor, and are able to structure their housing development financing near the break even point. These organizations are proficient in not only creating units affordable to low-income residents, but also play a role in maintaining the affordability status of rented units through their continuous monitoring and effective property management activities.

4.2.3.2 Goal: Promote the production of new affordable housing units in the City.

Policies:

a) Inform Beaverton's residents, property owners, and business owners of the need for additional affordable housing within the City.

Action 1: *Continue participation in statewide efforts to fund affordable housing programs.*

Action 2: *Conduct outreach to local media to raise public awareness of affordable housing needs and build public support for such programs.*

Action 3: *Continue to support and participate in efforts being undertaken by other groups to develop affordable housing in and around Beaverton (e.g., the Washington County Vision Action Network, the Inter-religious Action Network, and the Housing Advocacy Group).*

b) Partner with and assist local non-profit developers (including TVHP, the Bridge Housing Corporation, Community Partners for Affordable Housing, the Housing Development Corporation, and Habitat for Humanity) in supplying additional affordable units throughout the City for "at risk" populations including those at or below 60% of the MFI.

Action 1: *Assign the responsibility of coordinating and responding to inquiries about the development review process that involve the development of affordable housing to a specific staff member.*

Action 2: *Whenever possible, assist developers of affordable housing in the development application and review process by providing a single staff contact to assist with application processing.*

Action 3: *Whenever possible, assign a priority status in the development review and permitting process to applications where affordable housing is being proposed so that application processing time may be reduced.*

Action 4: *Assist housing developers in determining market demand for low income, elderly and special needs housing in the City and identify specific buildable parcels for affordable housing to serve these populations.*

Action 5: *Consider comments received from developers of affordable, senior and disabled housing when considering amendments to the City's Development Code in order to minimize impediments to such projects.*

Action 6: *Consider refining and clarifying criteria for approving alternative parking requirements to reduce the cost of providing parking for affordable housing projects.*

Action 7: *Establish a revolving loan program to assist affordable housing developers with system development charges, development review and permit fees.*

Action 8: *In the interest of leveraging the fund raising capacity of the City's non-profit housing developers, dedicate funding to the Washington County Community Housing Fund. Dedication of funding will be contingent upon establishment by fund trustees of award criteria that would result in allocation of a reasonable proportion of that fund to projects located within or near the City.*

Action 9: *Establish criteria that qualify affordable housing development proposals for property tax abatements.*

c) Continue to devote funding through the City's CDBG/HOME Program to local non-profit housing development agencies in order to aid in the development and maintenance of new long-term affordable housing in the City.

Action 1: *Establish a land banking program utilizing the City's CDBG/HOME entitlement to acquire and make available to developers land for the purpose of increasing the City's inventory of affordable housing units.*

Action 2: *Explore the idea of establishing a program using City funds to leverage employer efforts to secure affordable housing for their lower-income employees.*

Action 3: *Explore establishing a Community Land Trust that would acquire and hold land for affordable housing projects in Beaverton or Washington County as a whole.*

d) Pursue sources of revenue to be directed toward increasing the City's inventory of affordable housing units.

Action 1: *Support efforts to establish a real estate transfer tax or fee with revenues dedicated to assisting in the provision of affordable housing.*

e) Continue to comply or substantially comply with Metro Urban Growth Management Functional Plan (UGMFP) provisions that pertain to affordable housing.

Action 1: *Annually monitor the progress of efforts to increase the supply of affordable housing in Beaverton, and report the findings to Metro as specified by relevant provisions of the UGMFP.*

f) Continue over time to explore various tools and strategies that may serve to encourage the development of affordable housing in Beaverton.

Action 1: *Consider implementing a density bonus or density credit program that focuses on achieving the City's affordable housing goals.*

Action 2: *Consider future implementation of a residential demolition delay policy targeted for residentially zoned properties where redevelopment of the property could result in the loss of affordable units.*

Action 3: *Explore implementing a voluntary inclusionary housing program to be used in combination with various affordable housing incentives.*

Action 4: *Adopt and apply regulations allowing and encouraging low impact development techniques and habitat friendly development practices to facilitate integration of natural resources into affordable housing projects.*

CHAPTER FIVE:
PUBLIC FACILITIES AND SERVICES ELEMENT

5.1 OVERVIEW

Beaverton was platted in December 1868 in anticipation of a railroad link being constructed to Portland. The railroad arrived in 1871. Prior to the railroad the area was developed with farms. The construction of the railroad and electric trains provided reliable access to and from Portland, which was a major improvement over the wood plank Canyon Road constructed in 1851. This connection to Portland allowed Beaverton to develop as a bedroom community. Today Beaverton is an inner ring suburb in the Portland Metropolitan area. Except for the southwest corner of the City, which touches the Urban Growth Boundary, Beaverton is surrounded by urban development. There is very little undeveloped land in the City or in its Urban Services Area. What undeveloped land exists is being developed rapidly. The population of the existing City and its Urban Services Area will continue to increase due to measures taken by both the City and Washington County to allow for or require new development to be at a higher density than currently exists.

Public facilities and services are essential to an urban community. The availability and adequacy of these facilities and services is required for urban land uses. The need to provide these services historically has been a primary reason for cities to incorporate or for areas to annex to existing cities.

The City of Beaverton incorporated in 1893 primarily to provide municipal services. The City has provided these services in the most logical and economic way possible. Over the years, the City has made arrangements with special districts to provide services when that was the most logical route at the time. Because special district jurisdiction also included unincorporated portions of Washington County north, east and west of Beaverton, these areas were able to urbanize, with the provision of limited municipal services by the County such as police patrols, road maintenance and planning, without incorporation. Although the County has supported eventual annexation of these areas to the City, they have also established special districts for enhanced Sheriff's patrols and local road maintenance that allow for an adequate level of urban services to these areas until they are annexed.

Beaverton is not a full service city in terms of providing all necessary public facilities and services itself but has arranged for all of these services to be provided within its incorporated area. The Tualatin Hills Park and Recreation District (THPRD) provides parks and recreation facilities and services. The Tualatin Valley Fire and Rescue District (TVF&R) provides fire and emergency medical services. Several water districts as well as the City, provide potable water. Storm water management and sanitary sewers are provided by cooperation between the City and Clean Water Services (CWS). Solid waste disposal sites, including sites for inert waste, are the responsibility of Metro. Public transportation is primarily provided by Tri-Met, but the City and Washington County retain the option to augment Tri-Met's transit system. K through 12 schools are provided by the Beaverton School District with the exception of the West Slope area, which is in the Portland School District. The City provides library services and the library also is a member of the Washington Cooperative Library System in order to provide better service for residents. The City provides police, planning, zoning, development review, building permitting

and subdivision control for its entire incorporated area.

An Urban Services Area has not yet been established for the City of Beaverton. The requirements for an Urban Services Boundary that will establish an Urban Services Area for Beaverton are set out in ORS 195.020 and 195.060 through 195.085. The basic concept behind the establishment of an Urban Services Area is to define the area that will eventually be incorporated into the City of Beaverton and for which the City will eventually be responsible for the provision of urban services after incorporation. Urban Service Agreements are required by State statute between the City, Washington County and the various service providers to insure a logical, rational and efficient provision of these services. The urban services required by ORS 195.065 to be included in these Urban Services Agreements are sanitary sewers, water, fire protection, parks, open space, recreation, streets, roads and mass transit. The boundary has been agreed to for areas to the north, east and south of the City. The western boundary still has to be agreed to by the City, the City of Hillsboro and Washington County, or established by Metro if such agreement is not possible.

5.2 PUBLIC FACILITIES PLAN

The City's Public Facilities Plan (PFP), mandated by State statute for all cities with a population over 2,500, consists of this Element, the Transportation Element of the Comprehensive Plan, the City's Capital Improvements Plan, and the most recent versions of master plans adopted by providers of the following facilities and services in the City: storm water drainage, potable water, sewage conveyance and processing, parks & recreation, schools and transportation. Master plan documents included in the Public Facilities Plan are:

- Tualatin Valley Water District Water Master and Management Plan
- Water System Plan for the West Slope Water District
- Raleigh Water District Water System Master Plan
- City of Beaverton Water System Facilities Plan
- City of Beaverton Sanitary Sewer Master Plan
- Clean Water Services of Washington County, Sewer System Master Plan
- The City of Beaverton Drainage Master Plan
- Tualatin Hills Park and Recreation District 20-Year Comprehensive Master Plan
- Tualatin Hills Park and Recreation District Trails Master Plan
- Beaverton School District Facilities Plan 2002 (Ord. 4289)
- City of Beaverton Transportation System Plan

The City of Beaverton has chosen to define its Public Facilities Plan in this way because it provides a limited range of municipal services and relies on other independent public agencies to provide many facilities and services for Beaverton residents and property owners. The facilities and services provided by these agencies, as well as the City, are generally described in other sections of this element, by type of facility and service. The exception to this is transportation facilities and services, which are addressed in the Transportation Element of this Plan.

CAPITAL IMPROVEMENT PLAN

The City of Beaverton Capital Improvements Plan (CIP) is an annually updated document with listings of prioritized proposed improvements and expansions of the City's infrastructure system to maintain appropriate service levels to existing City residents and businesses, and to accommodate population growth and land development. The CIP reflects the needs and priorities established by the City and projects the financial resources available to fund projects within a four-year period. The CIP also prioritizes projects many years into the future. The CIP can be modified during the fiscal year (FY) through the supplemental budget process as needs, priorities, and resources change. Although the CIP is a separate document from the fiscal budget, it is used as a road map in preparing and administering the budget.

The CIP is updated and adopted by the City Council on a yearly basis. The City's fiscal year begins on July 1 of each calendar year and ends on June 30 of the next calendar year. Each year, the City Council adopts a fiscal budget in June for the upcoming fiscal year, as recommended to the Council by the City's Budget Committee. By Oregon law, the City of Beaverton can only fund (budget) projects for the current fiscal year and upcoming fiscal year. Therefore, only projects in the CIP that are shown in the first fiscal years are actually funded. Programmed but not funded projects (projects for the following three fiscal years) and future year projects are included in the CIP for information purposes.

Development of a realistic CIP and applying it to the City budgeting process helps provide orderly growth of the community at a manageable cost. The City's CIP only addresses the City's capital needs and projects and not those of the other providers of facilities and services in Beaverton and its proposed Urban Services Area. Service providers are responsible for their own CIP. The City's most current CIP, including any amendments, is adopted as part of this Element by reference and when the City adopts a new CIP or amends the CIP that will be the one referenced.

Beaverton's CIP addresses transportation, potable water, sanitary sewer and storm drainage capital projects. Sanitary sewer and storm drainage improvements are planned for the current incorporated area. Transportation improvements are also planned for the current incorporated area and include those transportation projects for which the City is responsible, namely local and collector roads, pedestrian facilities and bikeways. The City's CIP for potable water only includes those projects in the Beaverton Water Division's service area. The Beaverton School District, Clean Water Services, Tualatin Valley Fire and Rescue District, Tualatin Hills Park and Recreation District, Tualatin Valley Water District, West Slope Water District and Raleigh Water District are each responsible for their own Capital Improvement Plans, funding and project implementation. The City and these agencies coordinate their respective planning efforts pursuant to cooperative agreements that have been signed consistent with ORS 195.

5.3 URBAN SERVICES AREA

URBAN PLANNING AREA AGREEMENT

An Urban Planning Area was established by the adoption of the Washington County – Beaverton Urban Planning Area Agreement (UPAA) in 1989 (the UPAA is adopted in the Land Use Element of this Plan). The City and County entered into the UPAA in order to comply with Statewide Planning Goal #2 and requirements of the Oregon Land and Conservation and Development Commission. The purposes of this agreement are to ensure coordinated and consistent comprehensive plans by creating a defined Urban Planning Area within which both the County and City maintain an interest in comprehensive planning and to create a process for coordinated comprehensive planning and development in this Urban Planning Area. The UPAA and the Urban Planning Area defined by it are out of date and should be amended.

URBAN SERVICES AREA

Cities are traditionally established in the State of Oregon to be urban service providers and to provide a system of governance tailored to responding to and delivering urban services. Toward that end, an Urban Services Boundary is established for two primary purposes:

1. The boundary establishes the extent of the City of Beaverton's direct interest and involvement in planning for and coordination of public facilities and services. This planning and coordination is accomplished through coordination with Washington County and the special districts that currently provide services within the area. It is not necessarily assumed that the City will directly provide all of the services within that boundary in the future. Services planning with the County and special districts will determine the most effective and efficient method of providing these services without further complicating the existing pattern of urban service provision.

   The City provides the following services:

   a) Construction and maintenance of City maintained arterial, collector and local streets
   b) Police protection
   c) Water supply and distribution to approximately eighty-five percent of existing residents
   d) Planning, zoning, building, and development control
   e) Library Services
   f) Franchising of solid waste collection and recycling services provided by private contractors
   g) Municipal Court

   Provision of the following facilities and services is shared or a joint responsibility, generally as specified in intergovernmental agreements:

   a) Sanitary sewer and storm drainage services in conjunction with Clean Water Services

b) Parks and recreation services with Tualatin Hills Park and Recreation District
c) Emergency communication system (911) through Washington County Consolidated Communications Agency

The following are services that are the responsibility of other agencies, but the City may be involved in planning and some aspects of provision of these services:

a) Fire and emergency medical protection by Tualatin Valley Fire and Rescue
b) Solid waste disposal is the responsibility of Metro
c) Justice services are the responsibility of Washington County (with the exception of Municipal Court)
d) K - 12 schools are provided by Beaverton School District with the exception of the West Slope which is in the Portland School District and is a small percentage of our assumed urban services area
e) Community college services are provided by the Portland Community College District
f) Transit services are provided by Tri-Met

2. The Urban Services Boundary establishes the extent of the City's annexation interests, although it does not indicate when or if the City might annex properties within the boundary. In this respect, the boundary serves to inform property owners and citizens in the urban services area of the City's long-term expansion interests and intent.

The Urban Services Boundary is not intended to imply direct changes to land use plans or regulations as established by Washington County. However, to the extent that the establishment of the Boundary creates a planning area for services, it could indirectly influence changes in land use as a result of service planning.

An Urban Services Area has not yet been established for the City of Beaverton. The boundary has been agreed to for the areas to the north, east and south of the City.

In 1985, the cities of Tigard and Beaverton adopted by joint resolution an Annexation Planning Area Agreement -- in effect an urban services boundary between the two cities. The boundary generally lies to the south and east of Beaverton and to the north of Tigard. Metro Council established an Urban Services Boundary between the cities of Beaverton and Portland in 1997. The boundary to the north in the area not covered by the Metro Council's decision is the Urban Growth Boundary. The western boundary still has to be worked out between the City, the City of Hillsboro and Washington County or be determined by Metro. The City is presently working on the East Beaverton Urban Services Agreement with Washington County and the affected service providers. This agreement when adopted will establish an interim western boundary that will create an interim Urban Services Area for the City. The current debate concerns an area west of SW 185th Avenue, which is in the Beaverton School District, the Tualatin Valley Fire and Rescue District and the Tualatin Hills Park and Recreation District. The City is unaware of any objections to Beaverton's western Urban Services Boundary being at least as far west as 185th Avenue with the exception of that part of the City of Hillsboro which is currently east of 185th. This Element will assume that the western Urban Services Boundary is the eastern right-

of-way line of SW 185th Avenue except that where a portion of the City of Hillsboro currently exists east of 185th the boundary shall follow the Hillsboro City limit. Beaverton is not supporting this assumed western Urban Services Boundary as the final boundary but believes that at a minimum it will be located this far west if not further west. The complete assumed Urban Services Boundary and Urban Services Area are shown on Figure V-1.

Changes to the City's Urban Services Boundary will be required in the future if Metro expands the Urban Growth Boundary to the City's north and/or southwest.

5.3.1 Goal: Ensure long-term provision of adequate urban services within existing City limits and areas to be annexed in the future.

Policies:

a) The City shall maintain agreements with the special districts and the County to plan for the long-term provision of services within the City's Urban Services Area.

Action 1: *An Urban Services Boundary shall be established to identify the urban unincorporated area that the City is to consider in planning for urban public facilities and services and for future annexation.*

Action 2: *Adopt the East Beaverton Urban Services Agreement that will establish an interim Urban Services Area when the involved parties have reached agreement. This agreement shall be adopted as part of this Element by reference.*

Action 3: *Finalize the Urban Services Boundary between Beaverton and Hillsboro and adopt an Urban Services Agreement establishing the permanent Urban Services Area. This agreement shall be adopted as part of this Element by reference.*

Action 4: *Work with Washington County to update the Washington County - Beaverton Urban Planning Area Agreement. Upon adoption, the current UPAA, which is in the Land Use Element of this Plan, shall be deleted and the updated UPAA shall be adopted in its place.*

b) The City shall work cooperatively with service providers within its Urban Services Area in the development of master plans that are elements of the City's Public Facility Plan, so as to prescribe the most effective and efficient long-term methods of providing each service.

c) The City will involve owners of properties and residents in the unincorporated portion of its urban services area in planning for facilities and services.

d) The City shall seek to eventually incorporate its entire Urban Services Area.

5.4 STORM WATER AND DRAINAGE

The storm water collection and treatment system maintained by the City consists of inlets and pipe systems, regional detention facilities, streams and their adjacent riparian corridors, wetland areas, and habitat benefit areas. Many streams, habitat benefit areas, and wetland areas are located on private or park district property and are not actively maintained.

Pursuant to the current intergovernmental agreement (IGA) with CWS, ownership and maintenance of facilities operated by CWS are transferred permanently to the City for all areas annexed to the City. The current IGA with CWS establishes certain maintenance service levels that the City follows and may be amended from time to time as allowed by the IGA.

Urban storm water runoff is a major water quantity and quality issue affecting Beaverton area streams. As development continues, the magnitude of this problem can increase without proper mitigation.

Predevelopment or natural hydrologic function is the relationship among the overland and subsurface flow, infiltration, storage and evapotranspiration characteristics of the landscape. Sustainable stormwater management avoids and minimizes impacts to natural resources by protecting native vegetation and natural hydrologic function. A sustainable system mimics natural water flow by minimizing land disturbances and incorporating natural landscape features into a development.

The process of planning, design, construction, and maintenance of storm water run-off facilities is more difficult and expensive when an area is already developed. The management of storm water run-off is a problem that crosses jurisdictional boundaries. The City of Beaverton has worked with CWS to conduct storm water planning, implement storm water utility and system development charge funding methods, develop design standards for storm water facilities and execute agreements for storm water facility operation and maintenance. In addition, the City contracts with CWS for regional stream system water testing and federal/state permitting such as the National Pollution Discharge Elimination System (NPDES) Permit.

In 1990, CWS's jurisdiction was expanded from exclusively sanitary sewer service to include storm water. The State Legislature officially authorized formation of CWS's Surface Water Management (SWM) program on July 23, 1990, to more effectively deal with the quantity (associated with flooding) and quality of urban surface (storm) water runoff. The Oregon Department of Environmental Quality and the U.S. Environmental Protection Agency had previously established strict regulations on water quality to control the pollutants that were being carried directly into streams and rivers. CWS in concert with other cities implemented the Surface Water Management utility to address the new regulations that affected the urbanized portion of Washington County (which includes all of Beaverton's assumed Urban Services Area). This was the first time that surface water runoff was administered regionally in Washington County. At the time that CWS formed the SWM program, the City of Beaverton and Washington County had long recognized and developed drainage systems to convey storm water and control flooding. Today, the City continues to own and operate the storm water

conveyance system and non-regional detention basins within the City limits.

The CWS SWM program focuses on controlling pollution at the source thus reducing the sediments and pollutants that enter receiving streams and the Tualatin River. Preventative measures like using natural and artificial filtration systems, cleaning streets and catch basins, and building holding basins for quantity and quality detention are used. There are also rules for erosion at construction sites, floodplains and wetlands. These methods and many more are currently being used by CWS and cities to effectively control flooding and reduce pollutant loads carried by receiving streams and the Tualatin River.

The City of Beaverton has been involved in a number of studies over the last several years relating to storm water planning and development of storm water design standards. These studies include:

Storm Water Planning

- Millikan Subbasin Drainage Analysis, August 2000, David Evans and Associates
- Beaverton Creek Watershed Management Plan, June 1999, Brown & Caldwell (CWS with City of Beaverton)
- Analysis of the Central Interceptor Drainage System, June 1999, Economic and Engineering Services
- Murray Scholls Town Center Master Plan, April 1998, Zimmer Gunsul Frasca Partnership
- Westside Interceptor Storm Drainage Project, December 1997, KCM
- Fanno Creek Watershed Management Plan, June 1997, Kurahashi & Associates (CWS with City of Beaverton)
- Carrying Capacity Analysis and Capital Improvement Plan for the Beaverton Regional Center and Tek Station Area, December 1996, KCM
- Subbasin Strategies Plan for Rock, Bronson and Willow Creeks, March 1996 (CWS with City of Beaverton)
- The most recent version of The City of Beaverton, Drainage Master Plan

Storm Water Design Standards

- City of Beaverton – Engineering Design Manual and Standard Drawings. CWS standards entitled *"Design and Construction Standards for Sanitary Sewer and Surface Water Management"* are incorporated by reference from the Beaverton Design Standards.

5.4.1 Goal: Ensure long-term provision of adequate storm water management within existing City limits and areas to be annexed in the future.

Policies:

a) The City shall continue to participate in the CWS's Surface Water Management (SWM) program for the urban portion of the Tualatin River watershed. The City shall retain responsibility for planning, construction and maintenance of portions of the local storm water facilities within its incorporated limits.

Action 1: *To facilitate and encourage low impact development techniques consider a reduction in SWM fees and Systems Development Charges (SDC) in proportion to the effective impervious area on site.*

b) On-site detention will be used as a storm water management tool to mitigate the impacts of increased storm water run-off associated with new land development.

Action 1: *Develop programs and adopt and apply regulations allowing and encouraging habitat friendly development practices and low-impact development techniques to reduce the impacts of storm water run-off.*

Action 2: *If a SWM fee or SDC reduction program is implemented, include a biannual or annual monitoring program to allow for follow-up maintenance. If the area is not maintained then the property owner must pay the SWM and SDC fees and build a new structure to accommodate the water quality and quantity issues on site.*

c) All new land development will be connected to a storm water drainage system. Each new development will be responsible for the construction or assurance of construction of their portion of the major storm water run-off facilities that are identified by the SWM program as being necessary to serve the new land development.

5.5 POTABLE WATER

The City operates and maintains a system for the storage and distribution of potable water within a service area that includes the majority of its residents. Several areas along the easterly boundary of the City are served by the West Slope Water District (WSWD), Raleigh Water District (RWD) or Tualatin Valley Water District (TVWD). Similarly, in the northern and western portions of the City, several areas receive water from the Tualatin Valley Water District. The water provider service areas are shown on Figure V-2.

In 1979, the City entered into a joint service agreement with the Cities of Forest Grove and Hillsboro to establish joint operations for the water supply, pumping, treatment and transmission. In conjunction with this agreement, the City constructed new transmission lines, several new reservoirs, and other improvements to the water system. The agreement was amended in 1994 to add the Tualatin Valley Water District. The joint facilities are administered by the Hillsboro - Forest Grove – Beaverton - Tualatin Valley Water District Joint Water Commission. The Joint Water Commission consists of twelve members with three members appointed by each agency.

This joint system obtains raw water (prior to treatment) from the Trask and Tualatin Rivers with

raw water storage in Barney Reservoir and Hagg Lake. Treatment is at the Joint Water Commission Treatment Plant located south of Forest Grove. Treated water is conveyed to Beaverton from the plant through 45, 42 and 36-inch transmission pipes.

The West Slope Water District, Raleigh Water District and a portion of the Tualatin Valley Water District purchase their water from Portland's Bull Run system. Most of this water is delivered by way of the 60-inch Washington County supply line that comes from the Powell Butte reservoir in east Portland. The City has separate intergovernmental agreements for water supply with the Tualatin Valley Water District and West Slope Water District. The agreements establish obligations and boundaries between the parties.

The following documents set forth the City of Beaverton's water service plan, method of financing and maintenance program:

Water System Planning

- Fire Hydrant Replacement Program, Phase 1 Beta Test, Phase 1 Preliminary Prioritization, June 2000, Murray, Smith and Associates, Inc.

- Technical Memorandum, Fire Hydrant Replacement Program Prioritization, Phase 1 and 2 Summary, June 1, 2000.

- Regional Water Providers Consortium Regional Transmission and Storage Strategy, Board Discussion Draft Report, February 22, 2000, Montgomery Watson

- SW 155th Avenue Reservoir Preliminary Siting Evaluation, November 10, 1999, Murray, Smith and Associates, Inc.

- Joint Water Commission, Water Management Plan Final Report, August 1998, Montgomery Watson

- Murray Scholls Town Center Master Plan, April 1998, Zimmer Gunsul Frasca Partnership

- Carrying Capacity Analysis and Capital Improvement Plan for the Beaverton Regional Center and Tek Station Area, December 1996, KCM

- Regional Water Supply Plan for the Portland Metropolitan Area, Final Report, October 1996, Prepared by the Water Providers of the Portland Metropolitan Area

- Report for Phase I, Joint Infrastructure Planning Project for City of Beaverton and Tualatin Valley Water District, March 1993, Murray, Smith and Associates

- Report for Phase II, Joint Infrastructure Planning Project for City of Beaverton and Tualatin Valley Water District, June 1993, Murray, Smith and Associates

- Cooper Mountain Water Storage Tank, July 17,1992, OTAK, Inc.

- Modeling TVWD/Beaverton Water System on Cooper Mountain, April 13, 1992, OTAK, Inc.

- The most recent version of the Water System Facility Plan

Water System Design Standards
- City of Beaverton – Engineering Design Manual and Standard Drawings

5.5.1 Goal: The City shall continue to participate in the Joint Water Commission and work with the West Slope, Raleigh and Tualatin Valley Water Districts to ensure the provision of adequate water service to present and future customers in Beaverton.

Policies:

a) All new land development (residential subdivisions, multiple family dwelling development, and industrial and commercial developments) shall be connected to a public water system.

b) All new development served by the Beaverton Water Division shall be reviewed by the City to determine that the pressure of water available to serve the proposed development meets City standards.

c) The City shall encourage water conservation consistent with current intergovernmental agreements, to prolong existing supplies and to help postpone water system capacity improvements needed to supply expected future demands as a result of projected population increases.

Action 1: *The City shall consider establishing a wellhead protection program.*

d) The City will comply with State and federal laws and regulations relating to potable water.

5.6 SANITARY SEWER

The City owns and maintains the wastewater collection system (all pipes 21-inches and smaller) within its incorporated limits and conveys flows to a trunk interceptor system that is owned and maintained by the sewer treatment service provider, CWS. CWS is a special district that was established in eastern Washington County to provide sanitary sewer service in a coordinated and economic manner necessary to meet federal, state, and regional water quality regulations. The City contracts with CWS for sanitary sewerage treatment, trunkline conveyance service, development of regional minimum design standards for sanitary sewer systems and regulation of industrial discharge permits. The National Pollution Discharge Elimination System Permit (NPDES) permit is held by CWS.

Pursuant to the current intergovernmental agreement (IGA) with CWS, ownership and maintenance of collection pipes 21-inches and less operated by CWS are transferred permanently to the City for all areas annexed to the City. The current IGA with CWS establishes

certain maintenance service levels that the City follows and may be amended from time to time as allowed by the IGA.

The City's collection system directs flow to sewer trunk lines that convey the flow to two treatment plants: the Durham Treatment Plant and the Rock Creek Treatment Plant. Flows from Downtown Beaverton as well as the easterly and southerly areas of the City are conveyed to the Durham Plant located on the north side of the Tualatin River south of Tigard. Flows from the westerly portion of the City are directed to the Rock Creek Plant near Hillsboro.

The following documents set forth the City of Beaverton's sewer service plan and maintenance program:

Sewer System Planning

- Clean Water Services Conveyance System Management Study, Final Draft Report, November 1998, Shaun Pigott Associates

- Murray Scholls Town Center Master Plan, April 1998, Zimmer Gunsul Frasca Partnership

- Carrying Capacity Analysis and Capital Improvement Plan for the Beaverton Regional Center and Tek Station Area, December 1996, KCM

- Clean Water Services of Washington County, Sewer System Master Plan Update 1995, David Evans and Associates

- The most recent version of The City of Beaverton Sanitary Sewer Master Plan

Sewer System Design Standards

- City of Beaverton – Engineering Design Manual and Standard Drawings. CWS standards entitled "*Design and Construction Standards for Sanitary Sewer and Surface Water Management*" are incorporated by reference into the Beaverton Design Standards.

5.6.1. Goal: The City shall continue to cooperate with CWS to ensure long-term provision of an adequate sanitary sewer system within existing City limits and areas to be annexed in the future.

Policies:

a) All new land development (residential subdivisions, and multiple family dwelling, industrial, and commercial developments) shall be connected to the City sewer system.

b) When sewer service is extended into an area that contains existing development, all existing habitable buildings shall be connected to the new sewer if they are within 100 feet of the sewer line and if gravity lateral sewer lines can serve them.

5.7 SCHOOLS

The need for and location of schools is closely related to residential development and housing densities in the community. The location of public schools can significantly influence the direction and rate of growth of a given area. This is especially true of elementary schools. Beaverton School District #48 (the District) is responsible for providing public schools in the community. In order to assist the District with monitoring enrollment potential, the City provides the District with information on development proposals that may potentially impact a present or future school site.

The District is required, by State Statute (ORS 195.110), to adopt a School Facility Plan to identify school facility needs based on population growth projections and land use designations contained in local government comprehensive plans covering the area within the District. The current School Facility Plan was adopted by the District on June 13, 1994 in compliance with ORS 195.110 and adopted by the City as a supporting document to the Comprehensive Plan on March 7, 1995 by ORD. 3920. The School Facility Plan is a supporting document to this Comprehensive Plan and is adopted by reference. The District has adopted the "Beaverton School District Facility Plan 2002" on June 17, 2002, which is incorporated into this Element by reference.. The District is responsible for planning its own facilities and the City may only cooperate and advise them in this process. (Ord. 4289)

State Statutes (ORS 195 and 197) do not allow the City to deny a development request based on school capacity, unless the application involves changes to the local government comprehensive plan or land use regulations, but these Statutes do require the City to provide notice to the "…District when considering a plan or land use regulation amendment that significantly impacts school capacity." The City has gone beyond this minimal requirement in attempting to inform and assist the District regarding their facilities planning and the development of the School Facilities Plan. (Ord. 4289)

5.7.1 Goal: Cooperate with the Beaverton School District in its efforts to provide the best possible educational facilities and services to Beaverton residents.

Policies:

a) The City shall encourage the School District to provide facilities that will adequately accommodate growth while recognizing the limited supply of buildable land in the city for such facilities.

b) Schools should locate within or adjacent to residential districts for the convenience of those the facilities serve. However, public and private school proposals should be assessed for compatibility in order to assure that the stated purposes of the residential districts are not unnecessarily eroded.

c) The City shall encourage the District to provide for schools throughout the City in locations that are easily accessible to those they are intended to serve.

d) The City shall work cooperatively with the School District in implementation of the Comprehensive Plan through the District's various programs, joint acquisition and development efforts.

e) The City shall notify the school district of development proposals that may potentially impact a present or future school site to allow the district the opportunity to comment, purchase or request dedications.

f) The City shall notify the School District when considering Comprehensive Plan or land use regulation amendments that may significantly impact school capacity.

g) The City shall encourage the School District and the Tualatin Hills Park and Recreation District (THPRD) to continue their excellent level of cooperation in the joint acquisition, development and use of facilities for educational and recreational purposes.

5.8 PARKS AND RECREATION

Parks and recreation facilities are basic and essential for the health and welfare of the community. The City coordinates the land use aspects of locating these facilities but does not predetermine sites. Location and improvement decisions for these types of facilities are the responsibility of the Tualatin Hills Park and Recreation District (THPRD).

As Beaverton and the Metro area become more densely developed, the number, location, size and quality of parks and recreation facilities have become increasingly more important. The demand for these facilities has been brought about in part by a higher standard of living; more leisure time resulting from such things as shorter work weeks, earlier retirement, and increasing life span; higher densities of development and a continuing emphasis on health and exercise. The by-products of urbanization in terms of congestion, air pollution and noise have also created a greater awareness of the need for open space in the urban environment. An adequate park and recreation system contributes to the physical and mental health of the community and can be a source of community pride.

As features in the urban landscape, parks improve the character of neighborhoods and tend to stabilize property values. Also, many businesses and industries seek locations with a high level of environmental quality as a means of increasing their ability to attract and retain a stable and productive work force. With improved transportation systems giving greater flexibility for business and industrial site selection, a well-developed park and recreation system can be an important factor in attracting such developments to the community.

THPRD is independent from the City with its own elected five-member Board of Directors and taxing authority. THPRD was established in 1955. THPRD's boundaries include most of Beaverton's assumed Urban Services Area. THPRD, for the most part, has developed its own acquisition and development plan pursuant to the adopted Tualatin Hills Park & Recreation District 20-Year Comprehensive and Trails Master Plans, which are adopted here by reference. In addition to donations and outright purchases, the THPRD works with the City and

Washington County through the land development process to obtain sites by dedication.

The THPRD's plan recognizes different types of park and recreation facilities including regional, neighborhood, community and specialty parks, school parks, recreational/aquatic center, multi-use trail system plan, off-street trail corridors and natural areas along streams. These descriptive park designations relate to the function or character of the parks shown on THPRD's 20-Year Comprehensive Park & Recreation and Trails Master Plans. As the area grows, opportunities will occur in addition to those shown on the plan. Each should be evaluated in terms of conformance with this plan's goals and policies and those of the THPRD 20-Year Comprehensive Park & Recreation and Trails Master Plans.

The Portland General Electric (PGE)/Bonneville Power Administration (BPA) transmission lines provide opportunities for open space and trail corridors in the community. These rights-of-way will not be converted to intensive urban land uses in the foreseeable future.

5.8.1 Goal: Cooperate with THPRD in implementation of its 20-Year Comprehensive Master Plan and Trails Master Plan in order to ensure adequate parks and recreation facilities and programs for current and future City residents.

POLICIES:

a) The City shall support and encourage THPRD efforts to provide parks and recreation facilities that will accommodate growth while recognizing the limited supply of buildable land in the city for such facilities.

b) The City shall encourage THPRD to provide parks and recreation facilities throughout the City in locations that are easily accessible to those they are intended to serve.

c) The City shall support and encourage acquisition of park and recreation sites in advance of need so that the most appropriate sites are available for these vital public facilities.

Action 1: *The City shall work with THPRD to further explore opportunities for mixing public park and recreation activities with revenue-generating public/private partnerships such as restaurants, recreation and aquatic centers, sports complexes, or other concession activities, in order to help finance recreation programming, park acquisition, and maintenance.*

d) The City shall notify THPRD of development proposals that may potentially impact a present or future park site to allow the district the opportunity to comment, purchase or request dedications.

e) A number of financial incentives exist to encourage private property owners to donate, dedicate, or provide easements for resource preservation, park, trail or open space use. The City shall work cooperatively with property owners and THPRD to maximize the use of these tools for the benefit of the community.

Action 1: *The City shall develop a program to encourage preservation and restoration of habitat benefit areas in cooperation with THPRD.*

f) To offset increased densities and to meet the needs of the population, the City and THPRD should work together to provide urban scale public spaces in regional centers, town centers, station communities and main street areas within the city.

g) The planning, acquisition and development of multi-use paths should be consistent with this Plan's Transportation Element and THPRD's Trail Master Plan.

h) The City shall encourage park acquisition and appropriate development in areas designated as Significant Natural Resources, as defined by Volume III of this Comprehensive Plan.

5.9 POLICE

The Beaverton Police Department is a full service agency that operates under the community-oriented policing principle. The police department is comprised of over 130 men and women (circa year 2000). In addition to enforcement of all federal, state, and local laws; Police Department personnel respond to non-criminal calls for assistance. The department utilizes planning and research to maximize use of current technology, participates in the development of law enforcement legislation and interagency operations to combat regional crime problems, and encourages and coordinates citizen crime prevention efforts through various methods and programs. Continuing education within the force has become increasingly important in order to respond appropriately to changes in society. Changes in the cultural mix of the City's population and the nature of crimes, for example, increased incidents of "white collar" crimes, may require modification of current methods. Operating under a community oriented policing and problem solving philosophy, the Department is guided in their efforts by the following mission statement:

"The Beaverton Police Department shall provide the highest quality service, preserving human rights, lives, and property, while striving to achieve the goals of the department, the City, and the community. We are committed to the highest professional standards, working in partnership with our citizens to problem solve and meet the challenges of reducing crime, creating a safer environment, and improving our quality of life."

This philosophy and organizational strategy is based on forging a partnership between the police and the community for the purpose of working together to solve problems of crime and fear of crime and disorder to enhance the overall quality of life in the community's neighborhoods. Community oriented policing shifts the focus of police work from handling random calls, to solving community problems. To further this philosophy, the City has established a policy of providing 1.5 officers per thousand population. This policy was established after careful study to determine the optimal level of officers needed to provide normal police protection and community outreach in line with the City's financial restraints. City voters supported this policy in 1996, with their approval of a tax levy to fund maintaining the ratio of 1.5 officers per 1,000 population.

5.9.1 Goal: Provide full service police protection to the City's incorporated area

and to new areas as they are annexed.

Policies:

a) The City shall endeavor to provide one and a half (1.5) uniformed officers per 1000 population.

b) Apply an integrated, department-wide program of identifying problems, analyzing causation, developing resource strategies, and assessing results as a means of long-term problem solving within the community.

Action 1: *Provide drug and gang education and resistance programs in the community through teaching in the schools, Beaverton Youth Peer Court, adult awareness programs, community talks, and other related programs.*

Action 2: *Provide the community with crime prevention education as part of efforts to expand community policing.*

Action 3: *Target problem times and locations, and deploy police personnel to effect a positive change in our traffic flows and accident potentials.*

Action 4: *Continue the City's Police Department's participation in meeting with and regularly informing Neighborhood Association Committees (NACs).*

c) Be aggressively proactive in the investigation of narcotics and gang-related crimes.

d) Aggressively investigate and pursue prosecution of violent crimes, such as sex abuse, child abuse, and homicide.

e) Proactively train Police Department personnel so as to maximize their knowledge, skills and abilities. Challenge and empower them by delegating responsibility.

f) Provide equipment and facilities of a standard that will make the organization operate efficiently and effectively in a safe, professional, and pleasant work environment.

g) Promote cooperation, communication, and the sharing of vital information among other agencies and internally. Address opportunities as a team.

Action 1: *Continue the City's participation in the first responder agreement with Washington County.*

5.10 FIRE AND EMERGENCY MEDICAL SERVICES

The City has designated the Tualatin Valley Fire and Rescue District (TVF&RD) to be the service provider for fire and emergency medical services for Beaverton. The City no longer provides its own fire protection and emergency medical services. Rather, in 1996, the City annexed to TVF&RD, Oregon's largest fire district, for such services. As a result, the District levies its tax rate within the City and the City no longer levies taxes for these purposes. The

district's elected five-member board of directors provides policy direction in the area of fire and emergency services.

The district operates two stations within, and a number of stations in close proximity to, the City. Recently, the District constructed a new main fire station on Farmington Road to better serve the City's residents. Another new facility, combined with recent modifications to the District's deployment strategies, has markedly improved fire and emergency medical services since the annexation.

5.10.1 Goal: Cooperate with TVF&RD to insure adequate fire and emergency medical services for the current and future residents of the City.

Policies:

a) Retain TVF&RD as the provider of fire and emergency medical services for the entire City of Beaverton incorporated area.

b) The City shall cooperate with TVF&RD in the siting of new facilities.

c) The TVF&RD shall enforce the Uniform Fire Code for existing buildings and the City shall enforce it for new construction.

d) The City shall adopt and enforce the State Building Code.

Action 1: *The City shall adopt and enforce an optional element of the State Building Code that requires automatic fire sprinkler systems for apartments buildings over one story or with more than sixteen (16) units for new construction.*

GEOGRAPHIC INFORMATION SYSTEMS

ASSUMED URBAN SERVICES AREA

Legend

- Beaverton City Limits
- Urban Services Area (Hillsboro and Tigard Boundary is Undetermined)
- City of Portland
- City of Hillsboro
- City of Tigard
- Portland Urban Services Area
- Urban Growth Boundary
- County Line

City of Beaverton

Scale 1" = 3500'

0.5 0 0.5 Miles

North

'EST
SPRINGVILLE
RD
KAISER
UNION
RD
RD
THOMPSON
RD
US 26
RD
AVE
143RD AVE
WALKER
RD
158TH AVE
185TH
RD
CORNELL
RD
BARNES
RD
MERLO RD
JENKINS
RD
WALKER
HILLS
RD
US 26
HWY 8
Aloha
CEDAR
CANYON
RD
PAT
Beaverton
185TH AVE
AVE
FARMINGTON
RD
BEAVERTON
FERRY
SCHOLLS
SHATTUCK
DAVIS
RD
ALLEN
BLVD
170TH
BLVD
DENNEY
HWY
RD
RD
HART
RD
GARDEN
HOME R
217
OLESON
HALL
MURRAY
BROCKMAN ST
BLVD
AVE
62ND AV
WEIR
RD
125TH AVE
FERRY
RD
AVE
BLVD
175TH
SCHOLLS
135TH AVE
121ST AVE
TIEDMAN
GREENBURG
RD
RD
FERRY
WALNUT
ST
Tigard

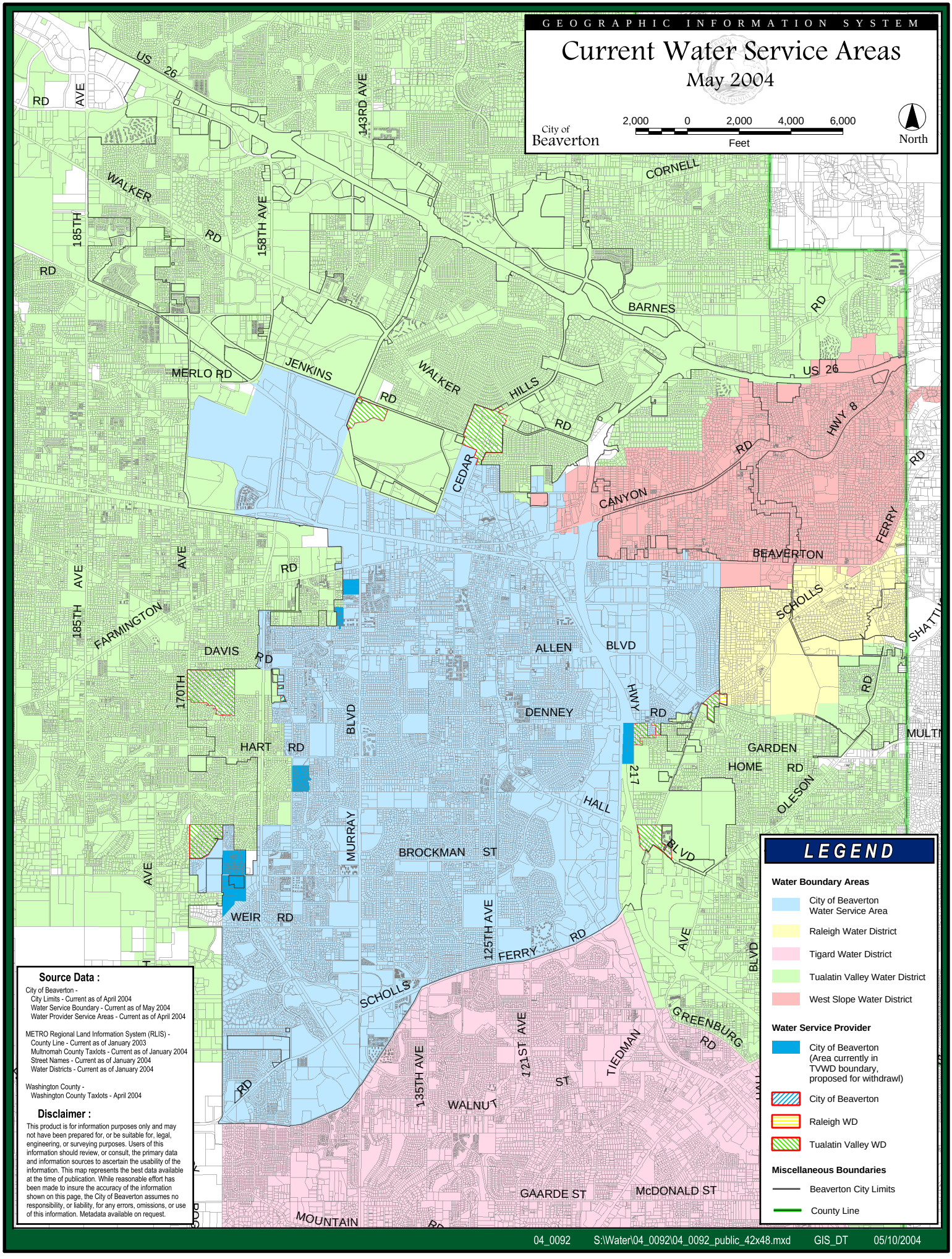
Source:

METRO'S Regional Land Information System (RLIS) - Current as of Nov. 2000
Washington County GIS, Current as of Mar. 2001
City of Beaverton Community Development Dept., Current as of Mar. 2001

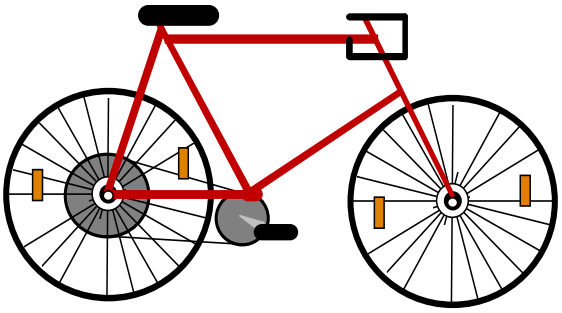
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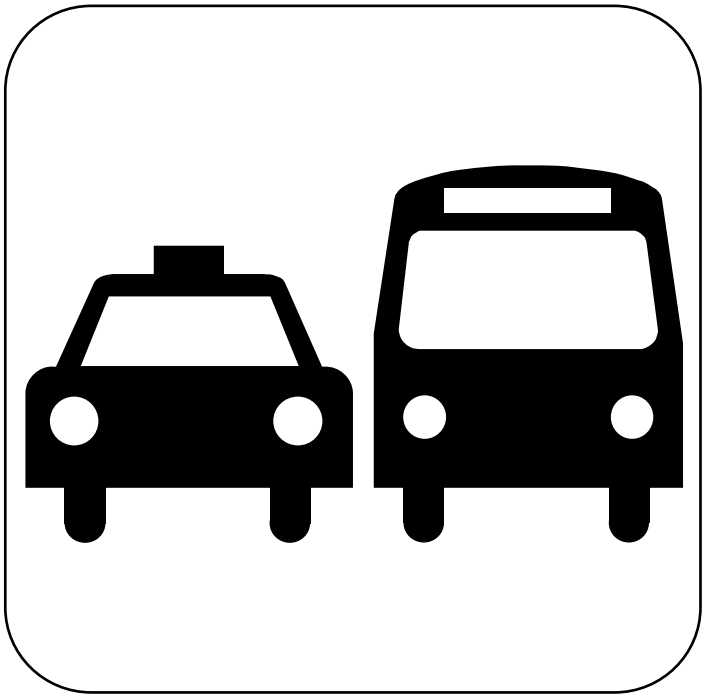
This map represents the best available data at the time of publication. While every effort has been made to insure the accuracy of the information on this page, the City of Beaverton assumes no liability or responsibility for any errors or omissions.

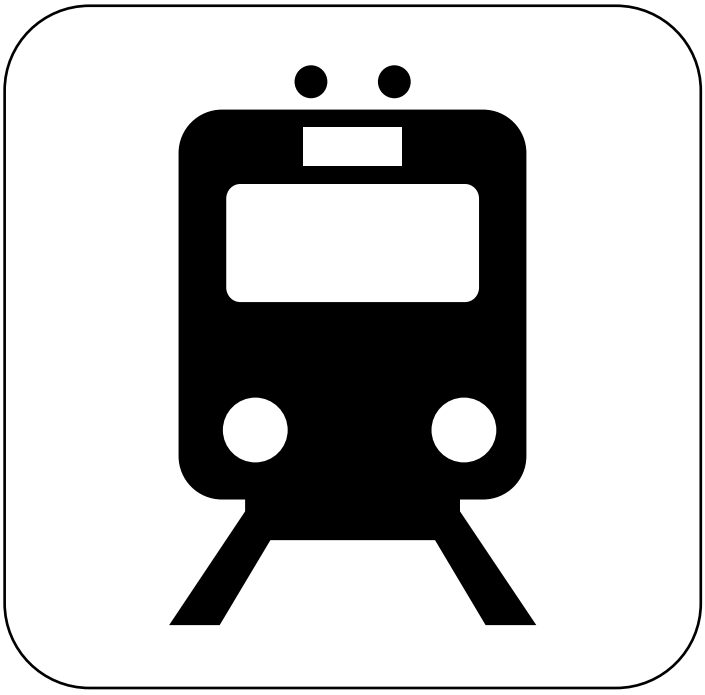
TSS/TM 03/06/01 S:\USB\Water Disticts_USB.apr


GEOGRAPHIC INFORMATION SYSTEM
Current Water Service Areas
May 2004
City of Beaverton
2,000 0 2,000 4,000 6,000
Feet
North
US 26
143RD AVE
158TH AVE
185TH AVE
WALKER RD
MERLO RD
JENKINS RD
HILLS RD
CORNELL
BARNES RD
CEDAR
CANYON RD
HWY 8
FERRY RD
BEAVERTON
SCHOLLS
FARMINGTON
DAVIS RD
ALLEN BLVD
DENNEY RD
HART RD
170TH AVE
BLVD
HWY 217
GARDEN HOME RD
OLESON
HALL BLVD
MURRAY BLVD
BROCKMAN ST
WEIR RD
125TH AVE
FERRY RD
SCHOLLS
GREENBURG RD
121ST AVE
135TH AVE
TIEDMAN
WALNUT ST
GAARDE ST
McDONALD ST
MOUNTAIN RD
LEGEND
Water Boundary Areas
City of Beaverton Water Service Area
Raleigh Water District
Tigard Water District
Tualatin Valley Water District
West Slope Water District
Water Service Provider
City of Beaverton (Area currently in TVWD boundary, proposed for withdrawl)
City of Beaverton
Raleigh WD
Tualatin Valley WD
Miscellaneous Boundaries
Beaverton City Limits
County Line
Source Data :
City of Beaverton -
City Limits - Current as of April 2004
Water Service Boundary - Current as of May 2004
Water Provider Service Areas - Current as of April 2004
METRO Regional Land Information System (RLIS) -
County Line - Current as of January 2003
Multnomah County Taxlots - Current as of January 2004
Street Names - Current as of January 2004
Water Districts - Current as of January 2004
Washington County -
Washington County Taxlots - April 2004
Disclaimer :
This product is for information purposes only and may not have been prepared for, or be suitable for, legal, engineering, or surveying purposes. Users of this information should review, or consult, the primary data and information sources to ascertain the usability of the information. This map represents the best data available at the time of publication. While reasonable effort has been made to insure the accuracy of the information shown on this page, the City of Beaverton assumes no responsibility, or liability, for any errors, omissions, or use of this information. Metadata available on request.
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CHAPTER SIX:
TRANSPORTATION ELEMENT









TRANSPORTATION ELEMENT

6.1. BACKGROUND

Like many communities across the nation, Beaverton's development pattern evolved as a result of several economic and geographic circumstances that established the transportation framework of the City. The historic presence of a large beaver marsh in what is now central Beaverton, the advent of the railroad, and the community's early history as a commercial center of farming and logging activities all influenced its early settlement. The City's location within the Tualatin Valley and its proximity to Willamette River commerce in Portland destined Beaverton to become a regional transportation hub.

As the City grew, so did the demand for roads. The road systems of the various subareas reflect the transportation philosophies and attitudes during the times they were built. The central downtown area was the first to be officially platted and is characterized by the traditional grid pattern of streets. After the original traditional grid was established, subsequent street creation and extension patterns varied greatly as incremental development demanded. East Beaverton residential areas, such as Royal Woodlands, developed with a series of long local streets. In contrast, south Beaverton developed at a time when residents wanted to be protected from through traffic. The result was a maze of short, circuitous, dead-end streets that fulfilled this goal but overburdened the few connecting local streets and adjacent collector and arterial streets with high residential volumes. The road system west of Murray Boulevard was initially designed to serve farming needs. It has proven to be inadequate in accommodating the travel needs of more recent residential development.

Over the years, the City has undertaken a number of efforts to evaluate and improve its transportation system. In l976, *Comprehensive Plan* amendments were adopted that eliminated many proposed major streets in favor of protecting neighborhoods from increased traffic congestion. Beginning in l978, the Beaverton Urban Renewal Agency undertook a number of improvements to the street circulation system of central Beaverton. In l979 through l983, the City participated with the region in planning for a future light rail transit system linking downtown Portland with eastern Washington County. The City updated its transit element and made other changes to the downtown plan, which included the provision for a new transit center in central Beaverton. In l988, Plan amendments were adopted to update the bikeway and pedestrian elements, and to provide for a functional classification of streets.

Beaverton and the Portland region grew significantly in the early 1990s. Legislative changes also occurred. In May 1991, the State adopted the Transportation Planning Rule (Oregon Administrative Rules Section 660 Division 12), which implements Oregon's Statewide Planning Goal 12 (Oregon Administrative Rules Section 660 Division 15) and mandates transportation system planning for Oregon cities, counties, and regions. The Oregon Department of Transportation responded by adopting the *Oregon Transportation Plan* (1992). Metro responded to state and federal mandates by developing its *2040 Land Use Concept* (1995) and adopting its *Urban Growth Management Functional Plan* (1996), *Regional Framework Plan* (1997), and 2020 *Regional Transportation Plan* (2000).

Beaverton complied with these mandates by adopting an updated Transportation Element (1999), which is based on the *1997 Transportation System Plan* (1999) that accommodates the growth projected to occur by forecast year 2015. In 2001, the City updated its *Transportation System Plan* to forecast year 2020 to be consistent with State and Metro plans as required. The 2020 *Transportation System Plan Update* is the product of a yearlong public participation process. This Transportation Element is based on the *Transportation System Plan Update (*included in *Comprehensive Plan, Volume IV).* The updated goals, policies, and actions are included in section 6.2. The analysis and discussion of 2020 system needs are summarized and the system improvements are listed and/or mapped in section 6.3. Section 6.4 summarizes the projected revenues and estimates the cost of the 20-year transportation plan.

2020 Study Area

The 2020 transportation plan study area responds to area wide growth. Projected land uses and population and employment figures reflect the *Comprehensive Plan Land Use Element* and Metro's assumptions for forecast year 2020. The planning area accommodates approximately 22,000 additional households and approximately 53,000 new employees over the next 20 years; 47 percent and 69 percent increases respectively over the 1994 base year household and employment figures. In areas outside City limits, designations and improvements included in this plan are considered recommendations to the appropriate lead agency(ies) responsible for that area or facility.

6.2. TRANSPORTATION GOALS AND POLICIES

The transportation goals and related policies are updated from the previous Transportation Element. They reflect the City's *Comprehensive Plan* goals. The transportation goals are brief guiding statements that describe a desired result. Their related policies focus on how each goal is met and describe necessary actions that move the community toward the goal. Below many of the policies, italic text clarifies the intent of the policy and provides recommended implementing actions.

At times, policies direct the establishment of requirements and standards for new development. The requirements for new development are contained in the Beaverton *Development Code*. The construction standards for improvements are found in the Beaverton *Engineering Design Manual and Standard Drawings*.

6.2.1. **Goal:** Transportation facilities designed and constructed in a manner to enhance Beaverton's livability and meet federal, state, regional, and local requirements.

Policies:

a) Maintain the livability of Beaverton through proper location and design of transportation facilities.

Actions*:*

- *Design streets and highways to respect the characteristics of the surrounding land uses, natural features and natural hazards, and community amenities.*

- *Design streets consistent with habitat friendly development practices and low impact development techniques and water quality and quantity street design principles, where technically feasible and appropriate.*
- *Recognizing that the magnitude and scale of capital facilities also affect aesthetics and environmental quality, the City will continue to require design plans and impact analyses as specified in the Development Code.*
- *Preserve right-of-way for improvements that are slightly beyond or within a specified time period that is beyond the planning forecast year identified in the Transportation System Plan.*

b) Consider noise attenuation in the design and redesign of arterial streets immediately adjacent to residential development.

c) Locate and design recreational multi-use paths to balance the needs of human use and enjoyment with resource preservation in areas identified on the Natural Resource Inventory Plan Map for their Significant Natural Resource values.

Action*:*

- *Proposals for shared-use paths through significant natural resource areas shall assess compatibility of the path with the resource. The assessment shall include the impacts of lighting, appropriate restrictions on uses of the path, and options available to mitigate the impacts of the path. (Ordinance 4301).*

d) Protect neighborhoods from excessive through traffic and travel speeds while providing reasonable access to and from residential areas. Build streets to minimize speeding.

Actions*:*

- *Maintain street design standards and criteria for neighborhood traffic calming for use in new development and existing neighborhoods.*
- *Complete construction of the 125th Avenue extension and the Murray Boulevard connection from Scholls Ferry Road to Barrows Road at Walnut Street prior to completing the Davies Road connection from Scholls Ferry Road to Barrows Road.*

e) New commercial and industrial development shall identify traffic plans for residential streets where increased cut-through traffic may occur due to the proposed development.

6.2.2. **Goal:** A balanced transportation system.

Policies:

a) Implement Beaverton's public street standards that recognize the multi-purpose nature of the street right-of-way for a combination of utility, pedestrian, bicycle, transit, truck, and auto uses, and recognize that streets are important to community identity and provide a needed service.

b) Develop and provide a safe, complete, attractive, efficient, and accessible system of

pedestrian ways and bicycle ways, including bike lanes, shared roadways, multi-use paths, and sidewalks according to the pedestrian and bicycle system maps and the *Development Code* and *Engineering Design Manual and Standard Drawings* requirements.

Actions:

- *Continue to coordinate with Washington County, Metro, Beaverton area schools, Oregon Department of Transportation, and the Tualatin Hills Park and Recreation District.*
- *Sidewalks will remain the responsibility of fronting property owners.*
- *Maintain the opportunity for resident groups to fund multi-use path improvements through the local improvement district process.*

c) Provide connectivity to each area of the City for convenient multi-modal access. Ensure pedestrian, bicycle, transit, and vehicle access to schools, parks, employment and recreational areas, and destinations in station areas, regional and town centers by identifying and developing improvements that address connectivity needs.

d) Develop neighborhood and local connections to provide adequate circulation into and out of neighborhoods.

e) The permanent closure of an existing road in a developed neighborhood is not recommended and will be considered by the City only under the following circumstances: as a measure of last resort, when the quality of life in the neighborhood is being severely threatened by excessive traffic volumes or the presence of a traffic safety hazard; or, as part of a plan reviewed through the City's land use, site development, and/or capital improvement process(es). Maintain existing neighborhood connectivity by avoiding closures of existing streets except when the closure is part of a larger plan for improvements to the neighborhood.

Actions: *Jay Street is recommended to remain open between 158th Avenue and Burlington Drive.*

f) Design streets to accommodate transit while minimizing impacts to traffic flow.

Actions*: Improve transit service, pedestrian facilities leading to bus stop waiting areas, and make the waiting areas themselves safe, comfortable, and attractive. Continue to work with TriMet, the Oregon Department of Transportation, and Washington County to develop and implement a transit shelter program, to place marked crossings at major transit stops, and to provide signal priority.*

6.2.3. **Goal:** A safe transportation system.

Policies:

a) Improve traffic safety through a comprehensive program of engineering, education, and enforcement.

b) Design streets to serve anticipated function and intended uses as determined by the *Comprehensive Plan*.

***Action**: Maintain a functional classification system that meets the City's needs and respects the needs of other agencies including, but not limited to, Washington County, Oregon Department of Transportation, TriMet, Tualatin Valley Fire and Rescue, and Metro.*

c) Enhance safety by prioritizing and mitigating high accident locations within the City.

***Actions**: Work with Washington County to periodically review traffic collision and Safety Priority Index System information in an effort to systematically identify, prioritize, and remedy safety problems. The City should continue to expand its collision record evaluation program working cooperatively with Washington County and Oregon Department of Transportation.*

d) Designate safe routes from residential areas to schools.

***Action**: The City should continue to work with Beaverton area schools and the community in developing safe transit, pedestrian, and bicycle routes to schools. Improvement projects near schools shall consider school access and safety during project development.*

e) Construct multi-use paths only where they can be developed with satisfactory design components that address safety, security, maintainability, and acceptable uses. Multi-use paths should converge at traffic-controlled intersections to provide for safe crossing, although they should be separate and distant from major streets for most of their length.

***Actions**: Study trail crossing treatments for appropriate use at locations where out-of-direction travel by path users to an intersection is significant. When multi-use paths follow rear lot lines, use design treatments to minimize the impacts to private property.*

f) Provide satisfactory levels of maintenance to the transportation system in order to preserve user safety, facility aesthetics, and the integrity of the system as a whole.

g) Maintain access management standards for streets consistent with City, County, and State requirements to reduce conflicts among vehicles, trucks, bicycles, and pedestrians. Preserve the functional integrity of the motor vehicle system by limiting access per City standards.

h) Ensure that adequate access for emergency services vehicles is provided throughout the City.

***Actions**: Work cooperatively with Tualatin Valley Fire and Rescue and other Washington County emergency service providers to designate Primary and Secondary Emergency Response Routes. Work with these agencies to establish acceptable traffic calming*

strategies for these routes. Recognize the route designations and associated acceptable traffic calming strategies in the City's Traffic Calming Program.

i) Meet federal and State safety compliance standards for operation, construction, and maintenance of the rail system.

j) Provide safe routing of hazardous materials consistent with federal guidelines, and provide for public involvement in the process.

Action: *Work with federal agencies, the Public Utility Commission, the Oregon Department of Environmental Quality, public safety providers, and Oregon Department of Transportation to assure consistent routes, laws, and regulations for the transport of hazardous materials.*

6.2.4. **Goal**: An efficient transportation system that reduces the percentage of trips by single occupant vehicles, reduces the number and length of trips, limits congestion, and improves air quality.

Policies:

a) Support and implement trip reduction strategies developed regionally, including employment, tourist, and recreational trip reduction programs.

Actions*: Encourage implementation of travel demand management programs. Work to shift traffic to off-peak travel hours. Coordinate trip reduction strategies with Washington County, Metro, Westside Transportation Alliance, Oregon Department of Transportation, TriMet, neighboring cities, and the Oregon Department of Environmental Quality. Seek to raise p.m. peak average vehicle occupancy (AVO) to 1.3 AVO or more in the evening peak and/or move 50 percent or more of the standard evening peak trip generation outside the peak hour. Educate business groups, employees, and residents about trip reduction strategies. Work with business groups, residents, and employees to develop and implement travel demand management programs. Support and implement strategies that achieve progress toward attaining Metro's 2040 Regional Non-Single Occupant Vehicle Modal Targets.*

2040 Non-Single Occupant Vehicle Modal Targets are as follows:

- *Beaverton Regional Center: 45-55%;*
- *Murray/Scholls Town Center: 45-55%;*
- *Beaverton Main Streets, Station Communities, and Corridors: 45-55%;*
- *Beaverton Industrial Areas, Intermodal Facilities, Employment Areas, Inner and Outer Neighborhoods: 40-45%*
  (Targets apply to trips to, within, and out of each 2040 Design Type. The targets reflect conditions appropriate for the year 2040 and are needed to comply with Oregon Transportation Planning Rule objectives to reduce reliance on single-occupancy vehicles.)

Continue to implement the following action plan to work toward achieving these targets:

- *Encourage development that effectively mixes land uses to reduce vehicle trip*

generation.

- *Develop consistent conditions for land use approval that require future employment related land use developments to agree to reduce peak hour trips through transportation demand management strategies.*
- *Support efforts by Washington County, Oregon Department of Transportation, Department of Environmental Quality, TriMet, and the Westside Transportation Alliance to develop productive demand management measures that reduce vehicle miles traveled and peak hour trips.*
- *Coordinate with Oregon Department of Transportation and TriMet on development of sufficient park-and-rides, including sites at transit stations and freeway interchange locations. Transfer stations and interchange construction and reconstruction projects should be required to identify potential park-and-ride sites. Explore park-and-ride locations along existing bus routes to minimize commuter parking impacts in neighborhoods.*
- *Build on existing percentage of Regional Center employers (seven percent) who provide transit pass discounts to achieve 25 percent by 2020.*
- *Work with Washington County, Westside Transportation Alliance, and TriMet to develop and implement a downtown Beaverton fareless transit area, a regional center transportation management agency, and reduced transit fare programs based on increased demand and funding availability.*

- *Implement the master improvement plans for bicycles, transit, pedestrians, and motor vehicles to implement a convenient multi-modal transportation system that encourages increased bicycle, pedestrian, and transit use.*

b) Limit the provision of parking to meet regional and State standards.

***Actions**: Work to reduce parking per capita in accordance with Metro and State requirements, while minimizing impacts to neighborhoods. Work to reduce parking in habitat benefit areas, where parking can be provided in other locations including off-site, on the street, through shared uses, or in parking structures. Continue to implement the motor vehicle and bicycle parking ratios in new development. Continue to develop and implement a Regional Center parking plan. Implement residential parking permit districts in neighborhoods as requested and approved by City Council. Work toward implementing other parking-based transportation demand management strategies, such as metered and structured parking, to help achieve Metro's 2040 Non-Single Occupant Vehicle mode split targets. (Ordinance 4470)*

c) Manage parking in the Regional Center Old Town area by applying the following principles from the Beaverton Downtown Parking Solutions study.
   - Make the Old Town area accessible to all users through multiple modes.
   - Provide sufficient and convenient parking.
   - Make the Old Town area conveniently accessible for the priority user of the public parking system – the customer.
   - Provide adequate employee parking and encourage implementation of meaningful public and private sector programs that encourage employee use of modes other than the single-occupant vehicle.

- Make parking user-friendly – easy to access, easy to understand.
- Provide clear and strategic direction to new development to assure that new growth improves the overall system of access.
- Manage the public parking supply using the 85% Rule[1] to inform and guide decision-making. (Ordinance 4470)

d) Maintain levels of service consistent with Metro's *Regional Transportation Plan* and the *Oregon Transportation Plan*. Applications for Comprehensive Plan Amendments shall comply with the requirements of OAR 660-012-0060 and as appropriate include a transportation Impact Analysis that shows that the proposal will not degrade system performance below the acceptable two-hour peak demand-to-capacity ratio of 0.98. If the Adopted *Comprehensive Plan* forecasts a two-hour peak demand-to-capacity ratio greater than 0.98 for a facility, then the proposed amendment shall not degrade performance beyond the forecasted ratio. (*Ordinance 4301)*

Reduce traffic congestion and enhance traffic flow through such system management measures as intersection improvements, intelligent transportation systems, incident management, signal priority, optimization, and synchronization, and other similar measures.

Action*: Maintain performance standards that meet the needs of the City and are consistent with regional and State standards. (Ordinance 4301)*

e) Plan land uses to increase opportunities for multi-purpose trips (trip chaining).

Actions*: Encourage mixed-use development where allowed to promote trip chaining in an effort to reduce vehicle trips, cold starts, and air pollution.*

e) Require land use approval of proposals for new or improved transportation facilities. The approval process shall consider the project's identified impacts.

f) Support mixed-use development in appropriate locations.

g) Encourage TriMet to implement transit improvements concurrent with roadway improvements, to improve access and frequency of service, and to increase ridership potential and service area. Encourage development of regional high capacity transit, including light rail transit and commuter rail.

Action*: Support commuter rail and its associated supportive transit services.*

[1] The 85% Rules is a measure of parking utilization that acts as a benchmark against which parking management decisions are based. Within the parking industry, it is assumed that when an inventory of parking shows more than 85 percent occupancy in the peak hour, the supply becomes constrained and may not provide full and convenient access to its intended user. Once a supply of parking routinely exceeds 85 percent occupancy in the peak hour, the 85% Rule would require that parking management strategies be evaluated and/or implemented to bring peak hour occupancies to a level below 85 percent to assure intended uses are conveniently accommodated. (Ordinance 4470)

6.2.5. **Goal**: Transportation facilities that serve and are accessible to all members of the community.

Policies:

a) Construct transportation facilities, including access to and within bus stop waiting areas, to meet the requirements of the Americans with Disabilities Act.

***Action**: Identify, assess, and remove access barriers to persons with disabilities.*

b) Support TriMet, other transit service providers, and employers' and social service agencies' efforts that respond to the transit and transportation needs of elderly, economically disadvantaged, and disabled persons.

6.2.6. **Goal**: Transportation facilities that provide efficient movement of goods.

Policies:

a) Designated arterial routes and freeway access are essential for efficient movement of goods. Design these facilities and adjacent land uses to reflect these needs.

b) Reflect the needs of existing railroad and air transportation facilities in land use decisions.

6.2.7. **Goal:** Implement the transportation plan by working cooperatively with federal, State, regional, and local governments, the private sector, and residents. Create a stable, flexible financial system.

Policies:

a) Coordinate transportation projects, policy issues, and development actions with all affected governmental units in the area. Key agencies for coordination include Washington County, Oregon Department of Transportation, TriMet, Metro, Tualatin Hills Park and Recreation District, Tualatin Valley Fire and Rescue, and the adjacent cities of Tigard, Hillsboro, and Portland.

b) Participate in regional transportation, growth management, and air quality improvement policies. Work with agencies to assure adequate funding of transportation facilities to support these policies.

c) Monitor and update the *Transportation Element* of the *Comprehensive Plan* so that issues and opportunities are addressed in a timely manner. Maintain a current capital improvement program that establishes the City's construction and improvement priorities, and allocates the appropriate level of funding.

***Action**: The City commits to working with Metro and the Department of Land Conservation and Development in the City's next Transportation Plan update to address local issues related to non single-occupant-vehicle strategies.*

d) Use the System Development Charge, Traffic Impact Fees, and development exactions as elements of an overall program to pay for adding capacity to the collector and arterial street system and for making safety improvements related to development impacts.

***Action**: Base the roadway system taxes and fees on the total expected cost of making extra capacity and safety improvements over a twenty-year period, allocated back to development on a pro rata formula taking into account the relative expected future traffic impact of the development in question.*

e) Establish rights-of-way through development review and, where appropriate, officially secure them by dedication or reservation of property.

f) Develop a long-range financial strategy to make needed improvements to the transportation system and to support operational and maintenance requirements by working in partnership with Metro, Oregon Department of Transportation, and other jurisdictions and agencies.

***Actions**: The financial strategy should consider the appropriate shares of motor vehicle fees, impact fees, property tax levies, and development contributions to balance needs, costs, and revenue. View the process of improving the transportation system as that of a partnership between the public (through fees and taxes) and private sectors (through exactions and conditions of development approval), each of which has appropriate roles in the financing of these improvements to meet present and projected needs.*

g) Provide adequate funding for maintenance of the capital investment in transportation facilities.

***Action:** Develop a long-term financing program that provides a stable source of funds to ensure cost-effective maintenance of transportation facilities and efficient effective use of public funds. Apply low impact development techniques on a city-wide basis where projects can accommodate the techniques. Fund the increased cost of the water quality and quantity additions to the streets through the surface water management program fees and systems development charges and other funding sources, as appropriate.*

6.3. TRANSPORTATION SYSTEM PLAN IMPROVEMENTS

The transportation improvements included in this element implement the City's transportation goals and policies and mitigate the needs identified in the 2020 *Transportation System Plan Update*. Improvements are based on the *Regional Transportation Plan* and its land use, population, employment, and mode split assumptions for forecast year 2020. Any improvements included in this plan that are not under City jurisdiction are considered recommendations to the responsible agency.

Modal master plans identify improvements that provide a complete system network and necessary capacity. Modal action plans identify shorter-term improvements that work toward completing the

network and providing capacity by filling key system gaps or serving highly used destinations. Transportation system and demand management projects serve to implement the mode split targets that reduce vehicle miles traveled, traffic congestion, and vehicle emissions.

The improvement figures and tables do not preclude implementing any project whether mapped or not mapped, listed or not listed, in order to take advantage of an opportunity provided by a proposed development or redevelopment, a roadway construction or reconstruction project, or any other project involving infrastructure improvements. The responsibility of new development to provide improvements and the standards to which all improvements must be built are identified in the Beaverton *Development Code*, the *Engineering Design Manual and Standard Drawings*, and the standards of 28 CFR Part 36 Nondiscrimination on the Basis of Disability by Public Accommodations and in Commercial Facilities (the Americans with Disabilities Act).

Any change within or adjacent to a transportation facility or public right-of-way represents an opportunity to expand or improve the system. To take advantage of such opportunities and make the most cost-effective use of public and private funds, the City may schedule and make financing provision for any transportation improvement that the City deems necessary or desirable, whether the improvement is specifically planned in the *Comprehensive Plan* or not, whether the improvement is funded publicly, privately, or in combination, whether the improvement is ultimate or interim, and regardless of the timing of the improvement relative to the priorities and timing in the *Comprehensive Plan*.

Correspondingly, the City Council may include a transportation improvement that it deems necessary in the capital improvement plan and budget. The City may seek state, regional, and federal funding assistance whether an improvement is specifically planned in the *Comprehensive Plan* or not, and whether the improvement is ultimate or interim. However, only those transportation improvements that comply with applicable provisions of the City's adopted codes, ordinances, and *Comprehensive Plan* shall be implemented.

6.3.1. Transportation System Management and Demand Management Improvements

Transportation system and demand management strategies are part of the transportation improvement plan. Transportation system management improvements are relatively lower cost strategies that enhance the transportation system's operational performance by helping to reduce congestion and decrease travel time. Signal coordination and synchronization improvements, intersection channelization, access management, high occupancy vehicle lanes, ramp metering, rapid incident response, intelligent transportation solutions (ITS), and transit operation optimization programs can provide tangible benefits to the public. Though most of these types of improvements focus on the broader regional network, traffic monitoring and surveillance, signal coordination and optimization, signal priority, information availability, and incident management are strategies that Beaverton continues to implement locally.

Transportation demand management improvements remove vehicle trips from the roadway system during peak travel demand periods. Applying demand management strategies over a large geographic area can be an effective tool in reducing vehicle miles traveled. Such strategies include encouraging mixed use in appropriate locations, flexible working hours, compressed work weeks, transit subsidy programs for employees, agency participation in transportation

management associations, park-and-ride facilities, bike parking requirements, minimum and maximum vehicle parking requirements, and fareless transit areas in regional centers. Demand management also includes implementing bicycle, pedestrian, vehicle, and transit system improvements that help make travel more direct and convenient.

Beaverton's transportation policies, actions, and modal improvement plans in this element identify some of the regionally significant transportation system and demand projects the City will implement in working toward attaining the mode split targets over the next 20 years. Smaller more localized improvements are also identified in the City's capital improvement plan.

6.3.2. Pedestrian and Bicycle System Improvements

Beaverton's bicycle system is composed of shared roadways, bicycle lanes, and multi-use paths. Its pedestrian system is made up of sidewalks and multi-use paths. Pedestrian and bicycle system needs and improvement projects are identified in the pedestrian and bicycle action and master plans. The plans work toward filling the gaps in these circulation systems and providing greater access and more direct routes to destinations. Such improvements help provide a safer, more attractive, direct, and well-maintained bicycle and pedestrian network that encourages use. Transportation demand management and system management improvements also help encourage these trip types.

Pedestrian System Improvements

Beaverton's Pedestrian Master Plan (Figure 6.1) is an overall plan that summarizes the desired framework to meet local and regional needs. Improvement projects provide the circulation network that is needed within Beaverton's 2020 study area. Improvement projects also respond to specific needs identified in the *Regional Transportation Plan's* designated pedestrian districts and transit/mixed use corridors where pedestrian scale design, transit interface, and user amenities are a priority due to expected increased pedestrian activity. Designated pedestrian districts and major transit stops are identified on the Pedestrian Master Plan.

The Pedestrian Action Plan (Table 6.1) includes some of the projects that should be funded in the near term. These are projects that fill gaps and provide important connections to destinations. Pedestrian and transit related improvements are also implemented through new development as regulated by the Beaverton *Development Code*.

Table 6.1 Pedestrian Action Plan

Table 6.1 Project	From	To	Approximate Cost (1000s of 2001 dollars)
Priority: Connect key pedestrian corridors to schools, parks, recreational uses and activity centers			
155th Avenue	Davis Road	Nora-Beard Road	410
US 26/Bethany Trail Crossing	US 26	US 26	100
Study US 26 Trail Crossings	143rd Avenue	Canyon Road	80
Study and improve unsignalized trail crossing of roadways	City jurisdiction		10,000
Link Fanno Creek Path over ORE 217 at Denney	ORE 217	ORE 217	100
Study Fanno Creek Path	Rock Creek	Fanno Creek Greenway	80
Priority: Fill in gaps in pedestrian network			
TV Highway/Canyon Road (gaps on one side)	Murray Blvd.	170th Avenue	470
TV Highway/Canyon Road (Boulevard Design)	ORE 217	Murray Blvd.	8,000
Canyon Road/TV Highway (sidewalks and crossings)	91st Avenue	ORE 217	1,465
Canyon Road	US 26	110th Avenue	6,750
Cedar Hills Boulevard	Butner Road	US 26 WB off ramp	124
Murray Boulevard (gaps on one side)	Jenkins Road	Millikan Way	100
Murray Boulevard (gaps)	Farmington Road	TV Highway	112
Denney Road	Nimbus Avenue	Scholls Ferry Road	241
Allen Boulevard (gaps)	Western Avenue	Scholls Ferry Road	69
Western Avenue	5th Street	800 feet south of 5th	55
Division Street	149th Avenue	170th Avenue	365
Davies Road (east side)	Scholls Ferry Road	Hiteon Drive	76
Scholls Ferry Road (gaps)	Barrows Road (west end)	Beaverton-Hillsdale Highway	1,893
Scholls Ferry Road	Beaverton-Hillsdale Highway	Raleighwood Way	151
SW Park Way (gaps)	Walker Road	ORE 217	213
Cornell Road (gaps)	158th Avenue	US 26 WB off ramp	101
Barnes Road	Tuefel Lane	Viewmont Drive	118
Garden Home Road	77th Avenue	76th Avenue	43
Multnomah Boulevard	Garden Home Road	Wash. County line	198

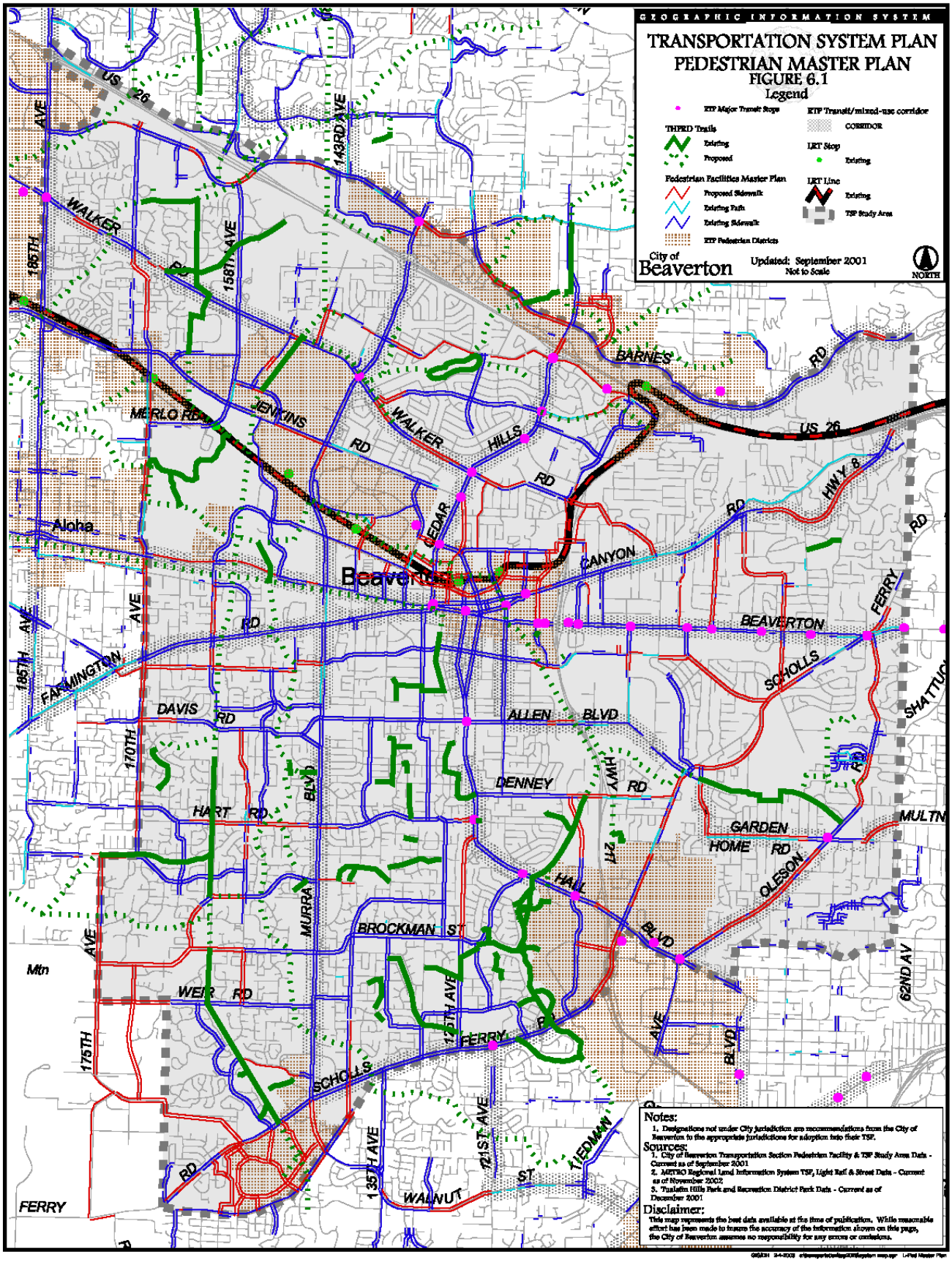
Table 6.1 **Project**	**From**	**To**	**Approximate Cost (1000s of 2001 dollars)**
92nd Avenue	Allen Boulevard	Garden Home Road	302
Garden Home Road (gaps one side)	92nd Avenue	77th Avenue	242
Hall Boulevard	Cascade Avenue	ORE 217 SB ramp	23
Hall Boulevard (gaps one side)	ORE 217 SB ramp	Approximately 470 ft. west of ramp	34
Barnes Road (gaps one side)	117th Avenue	Stark Street	104
Barnes Road	Stark Street	Approximately 100 ft. west of Stark St.	14
Cornell Road (gaps one side)	Approximately 500 ft west of Science Park Dr.	Approximately 500 ft east of 153rd Ave.	101
110th Avenue (gap-one side)	Beaverton-Hillsdale Highway	Canyon Road	34
Priority: Pedestrian corridors to transit stations and stops			
Hall/Watson (Boulevard Design)	Allen Blvd.	Cedar Hills Blvd.	510
160th Avenue	TV Highway	Davis Road	358
117th Avenue (gaps-one side)	Light Rail Transit Line	Center Street	34
Downtown Beaverton Connectivity collector roadways	Hocken Avenue/ TV Highway	110th Avenue/ Cabot Street	1,033
Pedestrian Access to MAX	LRT Stations		1,148
Priority: Construct sidewalks with roadway improvement projects			
125th Avenue	Hall Boulevard	Brockman Road	193
Hall Boulevard	Cedar Hills	Hocken Avenue/Terman Rd.	Part of road improvement
Farmington Road	172nd Avenue	185th Avenue	218
Nimbus Avenue	Denney Road	Cirrus Drive	138
Walker Road	ORE 217	Canyon Road	209
Walker Road (gaps)	173rd Avenue	Mayfield Avenue	441
Davies Road	Scholls Ferry Road	Barrows Road	61
Murray Boulevard	Scholls Ferry Road	Barrows Road	110
170th Avenue	Alexander Street	Baseline/Jenkins	366
173rd Avenue	Cornell Road	Bronson Road	55
Hart Road (gaps)	Hall Boulevard	Murray Boulevard	49
Cornell Road (one side)	158th Avenue	185th Avenue	165
Oak Street/Davis Rd./Allen Blvd. (gaps)	160th Avenue	170th Avenue	244

Table 6.1 **Project**	**From**	**To**	**Approximate Cost (1000s of 2001 dollars)**
Allen Boulevard (gaps)	Alice Lane	Western Avenue	112
Nora-Beard Road	175th Avenue	155th Avenue	281
Weir Road	175th Avenue	160th Avenue	248
175th Avenue-Rigert Road	170th Avenue	Scholls Ferry Road	755
Jenkins Road	153rd Avenue	Murray Boulevard	112
Hart Road/Bany Road (gaps)	170th Avenue	185th Avenue	214
SW Beaverton collector roadway	Scholls Ferry Road	175th Avenue	346
Johnson Street Extension	170th Avenue	209th Avenue	Part of road improvement
Barnes Road Improvements	Highway 217	119th Avenue	Part of road improvement.
Barnes Road Improvements	Saltzman Road	119th Avenue	Part of road improvement
Cornell Road Improvements	US 26	143rd Avenue	Part of road improvement
Cornell Road Improvements	143rd Avenue	Saltzman Road	Part of road improvement
Cornell Road Boulevard Improvements	Barnes Road	Trail Street	2,295
Murray Boulevard Improvement	Science Park Drive	Cornell Road	Part of road improvement
ORE 217 Overcrossing roadway	Scholls Ferry Road	Nimbus	Part of road improvement
Murray/Scholls Ferry Town Center – extensions and new roadways			Part of road improvement
103rd Avenue	Walker Road	Western Boulevard	Part of road improvement
SW Beaverton circulation roadway	High Hill Lane	Nora-Beard Road	275
Priority: Pedestrian corridors that connect neighborhoods			
SW Butner Road (one side)	Murray Boulevard	Park Way	296
SW Downing Road (gaps on south side)	Murray Boulevard	Meadow Drive	41
Meadow Drive (one side)	Downing Road	Walker Road	38
Laurelwood Avenue/87th Avenue	Canyon Road	Scholls Ferry Road	434
Jamieson Road	Pinehurst Drive/Cypress	Scholls Ferry Road	206
Cypress Street	Jamieson Road	Elm Avenue	79
Sexton Mountain Drive (gaps)	Maverick Terrace	Nora-Beard Road	296

Table 6.1 **Project**	**From**	**To**	**Approximate Cost (1000s of 2001 dollars)**
91st Avenue	Canyon Road	Beaverton-Hillsdale Highway	1,970
96th Avenue (one side)	Canyon Road	Beaverton-Hillsdale Highway	90
Unfunded Pedestrian Action Plan Projects Total Estimated Cost:			**$ 45,588**

Sidewalk projects noted as "part of road improvement" are anticipated to be built with the street improvement project so the cost of the sidewalk is included in the street improvement cost estimate in Table 6.3.

Projects with Committed Funding (9/01)	**From**	**To**	**Approximate Cost (1000s of 2001 dollars)**
Priority: Connect key pedestrian corridors to schools, parks, recreational uses and activity centers			
170th Avenue	Rigert Road	Alexander Street	515
170th/173rd Avenue	Baseline/Jenkins	Walker Road	220
Millikan Way	Hocken Avenue	Cedar Hills Blvd.	57
Hart Road/Bany Road (gaps)	Murray Boulevard	170th Avenue	236
Murray Boulevard (gap)	Farmington	TV Highway	112
Oleson Road	Fanno Creek	Hall	Part of road improvement
Pedestrian Improvement Projects with Committed Funds Total Estimated Cost:			**$1,140**


GEOGRAPHIC INFORMATION SYSTEM
TRANSPORTATION SYSTEM PLAN
PEDESTRIAN MASTER PLAN
FIGURE 6.1
Legend
RTP Major Transit Stops
RTP Transit/mixed-use corridor
CORRIDOR
THPRD Trails
Existing
Proposed
LRT Stop
Existing
Pedestrian Facilities Master Plan
Proposed Sidewalk
Existing Path
Existing Sidewalk
LRT Line
Existing
TSP Study Area
RTP Pedestrian Districts
City of Beaverton
Updated: September 2001
Not to Scale
NORTH
Notes:
1. Designations not under City jurisdiction are recommendations from the City of Beaverton to the appropriate jurisdictions for adoption into their TSP.
Sources:
1. City of Beaverton Transportation Section Pedestrian Facility & TSP Study Area Data - Current as of September 2001
2. METRO Regional Land Information System TSP, Light Rail & Street Data - Current as of November 2002
3. Tualatin Hills Park and Recreation District Park Data - Current as of December 2001
Disclaimer:
This map represents the best data available at the time of publication. While reasonable effort has been made to ensure the accuracy of the information shown on this page, the City of Beaverton assumes no responsibility for any errors or omissions.
US 26
143RD AVE
WALKER
185TH AVE
158TH AVE
MERLO RD
JENKINS RD
WALKER RD
HILLS RD
BARNES RD
US 26
HWY 8
CEDAR HILLS
CANYON RD
Beaverton
Aloha
FARMINGTON RD
185TH AVE
170TH AVE
DAVIS RD
ALLEN BLVD
HART RD
MURRAY BLVD
DENNEY RD
HWY 217
BEAVERTON SCHOLLS
FERRY
SHATTUCK
MULTN
GARDEN HOME RD
OLESON
HALL BLVD
BROCKMAN ST
125TH AVE
WEIR RD
175TH AVE
SCHOLLS FERRY RD
135TH AVE
121ST AVE
WALNUT ST
TIEDEMAN
62ND AVE
BLVD
Mtn
FERRY

Bicycle System Improvements

Beaverton's primary bicycle system is its arterial and collector street network that provides access to schools, parks, recreational uses, transit stops, employment, and activity centers. Arterials and collectors usually have higher-speed traffic and larger volumes, so they are designed with bicycle lanes. Beaverton's short-term Bicycle Action Plan (Table 6.2) contains projects that fill gaps in the primary bicycle network, connect to activity centers for convenient access, and should be funded in the near term. The Bicycle Master Plan (Figure 6.2) identifies the full bicycle system needs that should be built by 2020 through development and capital improvement projects. *Regional Transportation Plan* designations are included to acknowledge the regional significance of the bicycle system for both recreational riders and commute cyclists. Bicycle improvements are often part of a larger street improvement project. System management improvements such as bicycle loop detectors and actuated traffic signals also play a role in completing the system and encouraging use.

Table 6.2 Bicycle Action Plan

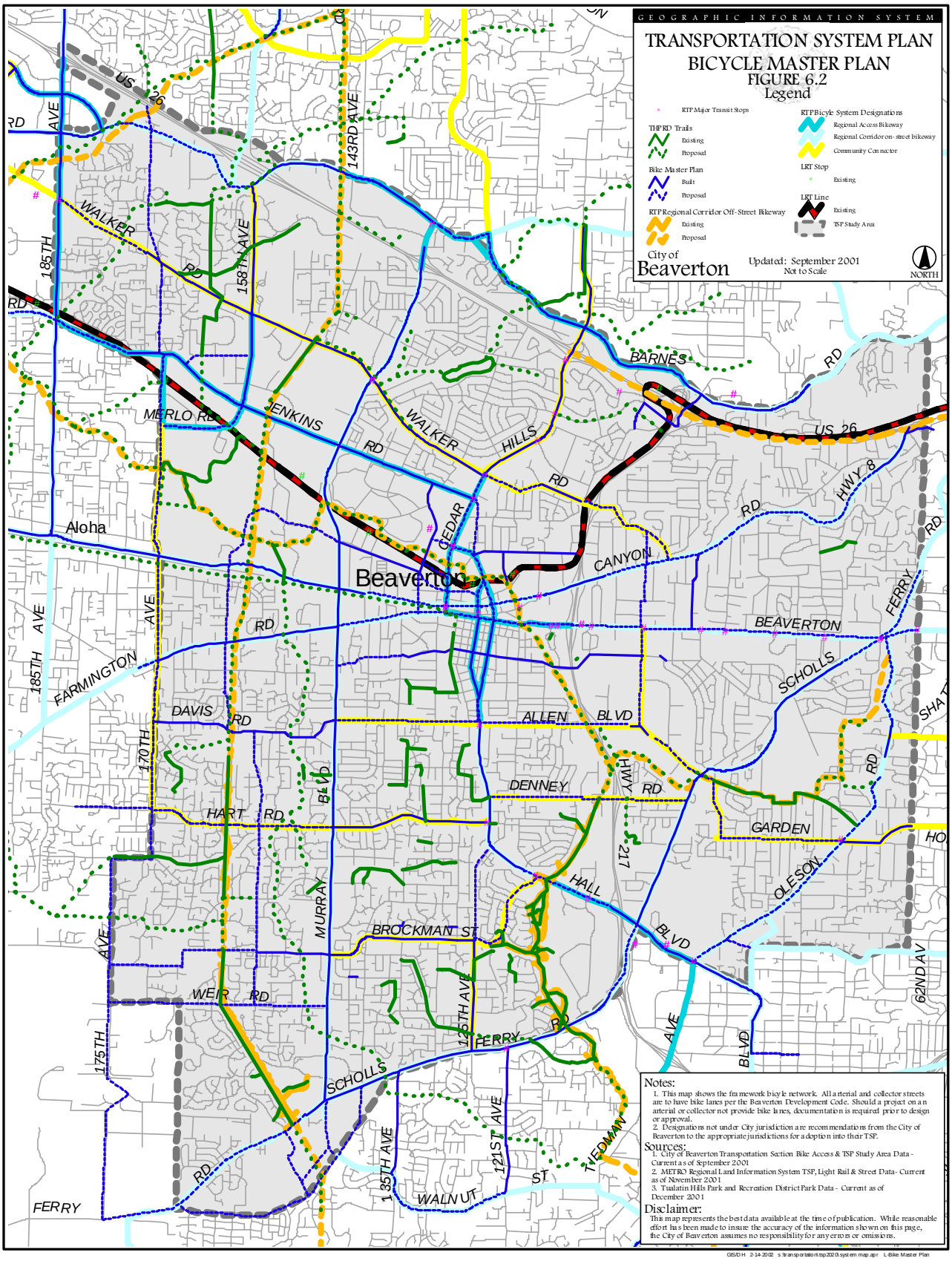
Table 6.2 **Project**	**From**	**To**	**Approximate Cost** **($1000s of 2001 dollars)**
Priority: Connect key bicycle corridors to schools, parks, recreational uses and activity centers			
Greenway Road	Hall Boulevard	125th Avenue	266
155th Avenue/Weir Road	Davis Road	Murray Boulevard	1,190
Millikan Way	Murray Boulevard	TV Highway	521
160th Avenue	TV Highway	Davis Road	503
Canyon Road	142nd Avenue	91st Avenue	1,310
Priority: Fill in gaps in bicycle network			
Hall Boulevard bike lanes	Beaverton-Hillsdale Hwy.	Cedar Hills Blvd.	78
Hall Boulevard Extension	Cedar Hills	Hocken Avenue/Terman Rd.	Part of road improvement
Watson Avenue bike lanes	Beaverton-Hillsdale Hwy.	Hall Boulevard	68
Cedar Hills Boulevard bike lanes	Farmington Road	Walker Road	506
6th Street bike lanes	Murray Boulevard	Menlo Drive	241
Murray Boulevard bike lanes (west side of Murray Boulevard)	Farmington Road	approximately 200 ft south of TV Highway	48
Denney Road bike lanes	Hall Boulevard	Scholls Ferry Road	684
Allen Boulevard bike lanes	approximately 200 ft east of Western Avenue	Scholls Ferry Road	221

Table 6.2 **Project**	**From**	**To**	**Approximate Cost** **($1000s of 2001 dollars)**
Western Avenue bike lanes	Beaverton-Hillsdale Hwy.	Allen Boulevard	337
Beaverton-Hillsdale Hwy. bike lanes	ORE 217	91st Avenue	520
Beaverton-Hillsdale Hwy. bike lanes	91st Avenue	Wash. County Bound.	1,023
Scholls Ferry Road	77th Avenue	Beaverton-Hillsdale Hwy.	251
92nd Avenue	Allen Boulevard	Garden Home Road	377
Garden Home Road	92nd Avenue	Oleson Road	641
Scholls Ferry Road	Hall Boulevard	Cascade Avenue	328
Scholls Ferry Road	Beaverton-Hillsdale Hwy.	Wash. County Bound.	431
Taylors Ferry Road	Oleson Road	Washington Drive	137
Davies Road	Scholls Ferry Road	Barrows Road	187
Barrows Road	Scholls Ferry Road (east)	Scholls Ferry Road (west)	1,180
Scholls Ferry Road	Murray Boulevard	175th Avenue	896
Priority: Construct bike lanes with roadway improvement projects			
125th Avenue bike lanes	Hall Boulevard	Brockman Road	302
Farmington Road Bikeway	Hocken Avenue	ORE 217	3,213
Walker Road bike lanes	ORE 217	Canyon Road	327
Walker Road bike lanes	Cedar Hills Boulevard	Lynnfield Lane	150
Walker Road bike lanes	178th Avenue	185th Avenue	309
170th Avenue bike lanes	Alexander Street	Baseline/Jenkins	573
173rd Avenue bike lanes	Walker Road	Cornell Road	371
Hart Road/Bany Road bike lanes	167th Avenue	170th Avenue	69
Cornell Road bike lanes	158th Avenue	185th Avenue	516
Murray Boulevard bike lanes	Scholls Ferry Road	Barrows Road	72
Allen Boulevard bike lanes	ORE 217	Murray Boulevard	293
Allen Boulevard bike lanes	ORE 217	approximately 200 ft west of Western Ave	108
Nora-Beard Road bike lanes	175th Avenue	155th Avenue	499
Weir Road	175th Avenue	155th Avenue	448
Barnes Road Improvements	Saltzman Road	119th Avenue	Part of road improvement

Table 6.2 **Project**	**From**	**To**	**Approximate Cost** **($1000s of 2001 dollars)**
Cornell Road Improvements	143rd Avenue	Saltzman Road	Part of road improvement
Canyon Road	US 26	110th Avenue	6,750
103rd Avenue Connection	Walker Road	Western Avenue	Part of road improvement
175th Avenue-Rigert Road bike lanes	170th Avenue	Scholls Ferry Road	1,180
Unfunded Bicycle Action Plan Projects Total Estimated Cost:			**$ 27,124**

Bicycle lane projects noted as "part of road improvement" are built with the street improvement project so the cost of the sidewalk is included in the street improvement cost estimate in Table 6.3.

Projects with Committed Funding	**From**	**To**	**Approximate Cost** **($1000s of 2001 dollars)**
Priority: Connect key bicycle corridors to schools, parks, recreational uses and activity centers			
Millikan Way bike lanes	Hocken Avenue	Cedar Hills Blvd.	91
170th Avenue bike lanes	Rigert Road	Alexander Street	804
170th/173rd Avenue bike lanes	Baseline Road	Walker Road	344
Hall Boulevard bike lanes	12th Street	500 ft south of Allen	154
Hart Road bike lanes	Murray Blvd.	167th Avenue	499
Barnes Road Improvements	Saltzman Road	119th Avenue	Part of road improvement
Cornell Road Improvements	Murray Blvd.	Saltzman Road	Part of Road improvement
Hall Boulevard bike lanes	Ridgecrest	ORE 217	357
Oleson Road	Fanno Creek	Hall Blvd.	453
Bicycle Improvement Projects with Committed Funds Total Estimated Cost:			**$ 2,702**

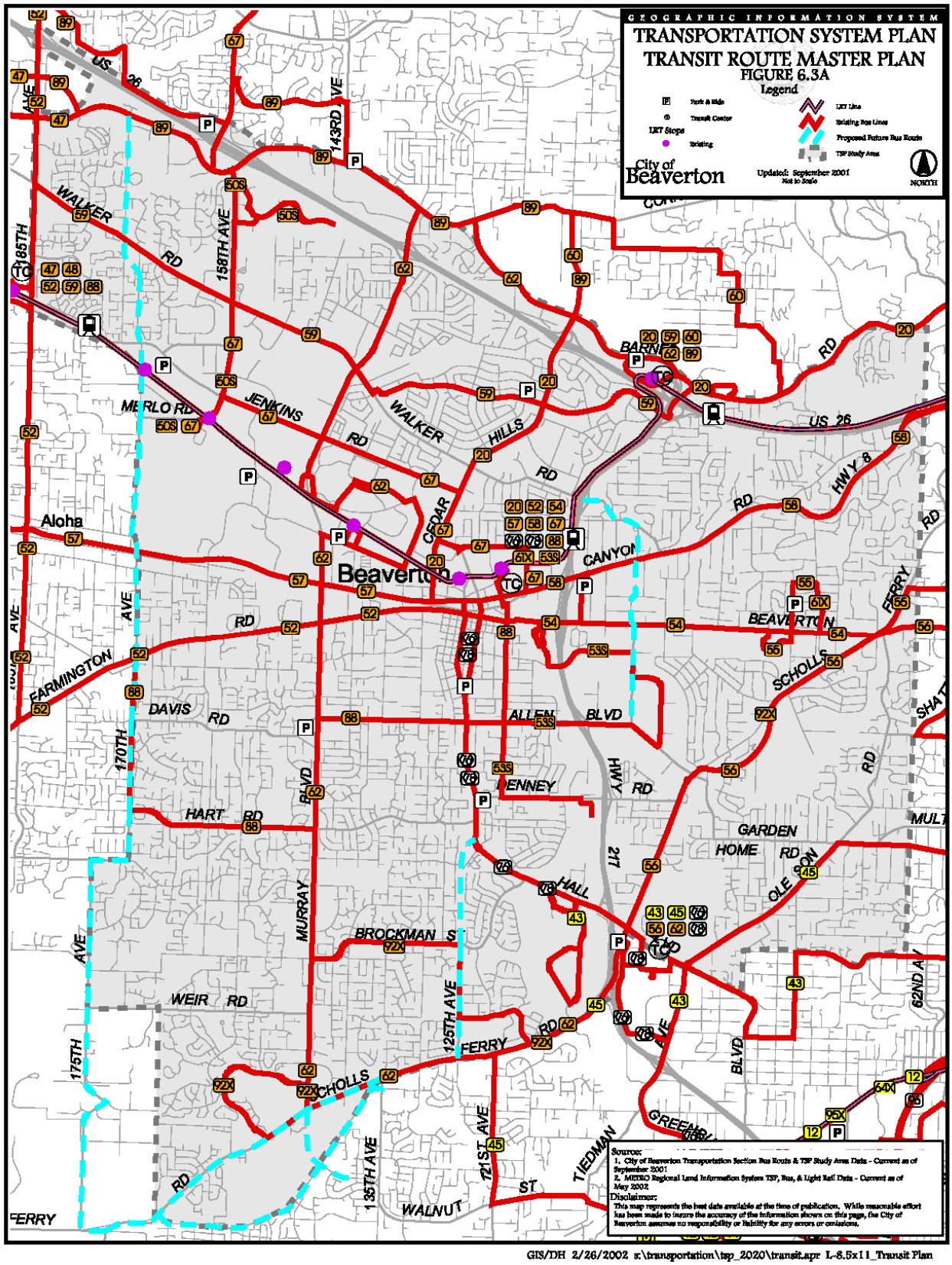

GEOGRAPHIC INFORMATION SYSTEM
TRANSPORTATION SYSTEM PLAN
BICYCLE MASTER PLAN
FIGURE 6.2
Legend
RTP Major Transit Stops
THPRD Trails
Existing
Proposal
Bike Master Plan
Built
Proposal
RTP Regional Corridor Off-Street Bikeway
Existing
Proposal
RTP Bicyle System Designations
Regional Access Bikeway
Regional Corridor on-street bikeway
Community Connector
LRT Stop
Existing
LRT Line
Existing
TSP Study Area
City of Beaverton
Updated: September 2001
Not to Scale
NORTH
Aloha
Beaverton
US 26
HWY 8
BARNES RD
MERLO RD
JENKINS RD
WALKER RD
HILLS RD
CEDAR HILLS
CANYON RD
BEAVERTON
FERRY
SCHOLLS
ALLEN BLVD
DENNEY RD
HART RD
GARDEN
OLESON
HALL BLVD
BROCKMAN ST
WEIR RD
FERRY RD
SCHOLLS FERRY RD
WALNUT ST
TIEDMAN
FARMINGTON
DAVIS RD
MURRAY BLVD
185TH AVE
158TH AVE
143RD AVE
170TH AVE
175TH AVE
135TH AVE
125TH AVE
121ST AVE
217
62ND AV
Notes:
1. This map shows the framework bicyle network. All arterial and collector streets are to have bike lanes per the Beaverton Development Code. Should a project on an arterial or collector not provide bike lanes, documentation is required prior to design or approval.
2. Designations not under City jurisdiction are recommendations from the City of Beaverton to the appropriate jurisdictions for adoption into their TSP.
Sources:
1. City of Beaverton Transportation Section Bike Access & TSP Study Area Data - Current as of September 2001
2. METRO Regional Land Information System TSP, Light Rail & Street Data- Current as of November 2001
3. Tualatin Hills Park and Recreation District Park Data - Current as of December 2001
Disclaimer:
This map represents the best data available at the time of publication. While reasonable effort has been made to insure the accuracy of the information shown on this page, the City of Beaverton assumes no responsibility for any errors or omissions.
GIS/DH 2-14-2002 s:\transportation\tsp2020\system map.apr L-Bike Master Plan

6.3.3. Transit System Improvements

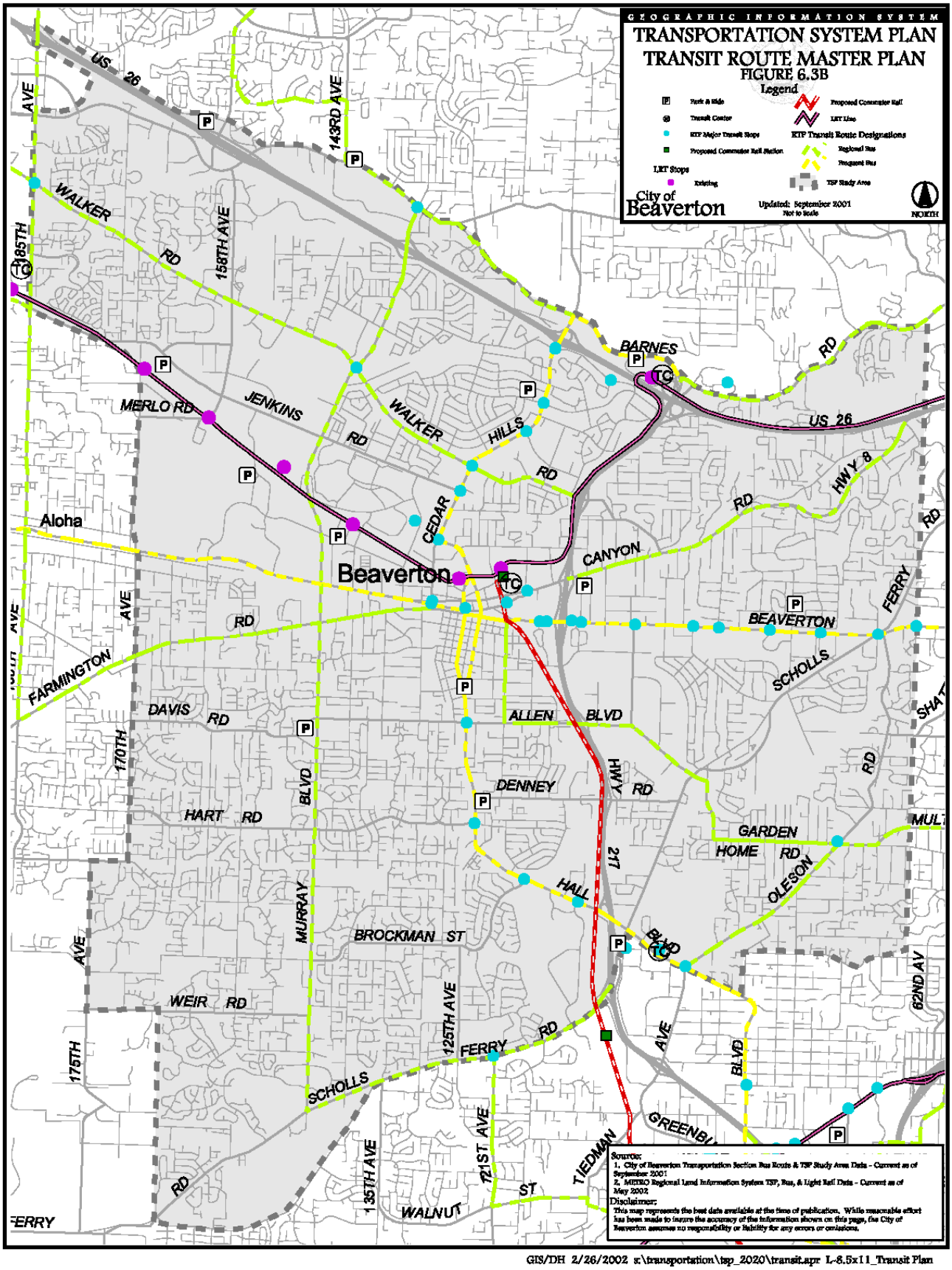
The transit system includes the proposed Beaverton to Wilsonville commuter rail, MAX light rail, and TriMet bus service. Existing and proposed future bus routes are identified in Beaverton's Transit Route Master Plan Figure 6.3.A. The proposed commuter rail system and *Regional Transportation Plan* bus designations are shown on the Transit Route Master Plan Figure 6.3.B. The commuter rail alignment is general in nature. It follows existing Portland & Western railroad tracks from the south into downtown Beaverton. It then turns in a northerly direction along Lombard Avenue at Beaverton-Hillsdale Highway and follows Lombard Avenue into the Beaverton Transit Center. Precise alignment of the tracks in the downtown will be determined during the design phase of the commuter rail project.

The *Regional Transportation Plan* designates Frequent, Regional, and Rapid Bus routes. Frequent Bus service runs at least every 10 minutes and includes transit preferential treatments like bus lanes and signal preemption. Regional Bus service runs on most major urban streets with maximum frequencies of 15 minutes. Rapid Bus emulates light rail and runs at least every 15 minutes during weekdays and during weekend mid-day periods. Rapid Bus is not planned in Beaverton at this time.

Major Transit Stops are mapped on Figure 6.3.B. and indicate higher use stops where shelters and marked crossings should be considered. Park-and-ride sites are also part of the transit system. Expansion of these sites should focus on transit stations and on interchange locations along Highway 217 and US 26. Complete sidewalk networks, park-and-ride lots, and transit amenities such as shelters and benches are important components of the transit system, as are transportation system strategies that serve to improve bus speed and reliability. In combination, all of these types of improvements help encourage transit use by providing a more convenient and pleasant transit experience.



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GEOGRAPHIC INFORMATION SYSTEM
TRANSPORTATION SYSTEM PLAN
TRANSIT ROUTE MASTER PLAN
FIGURE 6.3B
Legend
Park & Ride
Transit Center
RTP Major Transit Stops
Proposed Commuter Rail Station
LRT Stops
Existing
Proposed Commuter Rail
LRT Line
RTP Transit Route Designations
Regional Bus
Frequent Bus
TSP Study Area
City of Beaverton
Updated: September 2001
Not to Scale
NORTH
Beaverton
Aloha
US 26
BARNES RD
MERLO RD
JENKINS RD
WALKER RD
HILLS RD
CEDAR
CANYON RD
HWY 8
BEAVERTON SCHOLLS FERRY RD
FARMINGTON RD
DAVIS RD
ALLEN BLVD
DENNEY RD
HART RD
HALL BLVD
GARDEN HOME RD
OLESON RD
BROCKMAN ST
WEIR RD
SCHOLLS FERRY RD
WALNUT ST
GREENBU
TIEDMAN
185TH AVE
158TH AVE
143RD AVE
170TH AVE
MURRAY BLVD
175TH AVE
135TH AVE
125TH AVE
121ST AVE
217
62ND AV
Source:
1. City of Beaverton Transportation Section Bus Route & TSP Study Area Data - Current as of September 2001
2. METRO Regional Land Information System TSP, Bus, & Light Rail Data - Current as of May 2002
Disclaimer:
This map represents the best data available at the time of publication. While reasonable effort has been made to insure the accuracy of the information shown on this page, the City of Beaverton assumes no responsibility or liability for any errors or omissions.
GIS/DH 2/26/2002 s:\transportation\tsp_2020\transit.apr L-8.5x11_Transit Plan

6.3.4. Motor Vehicle System Improvements

Functional Classification Plan

Beaverton's street functional classifications reflect regional and local mobility and access needs (Figure 6.4). Classifications of freeway, principal arterial, arterial, collector, and neighborhood route are designated based on connectivity as the best indicator of function. Any street not designated either a freeway, principal arterial, arterial, collector, or neighborhood route is considered a local street.

Freeways provide the highest level of connectivity. These roadways generally span several jurisdictions and are of regional and statewide importance.

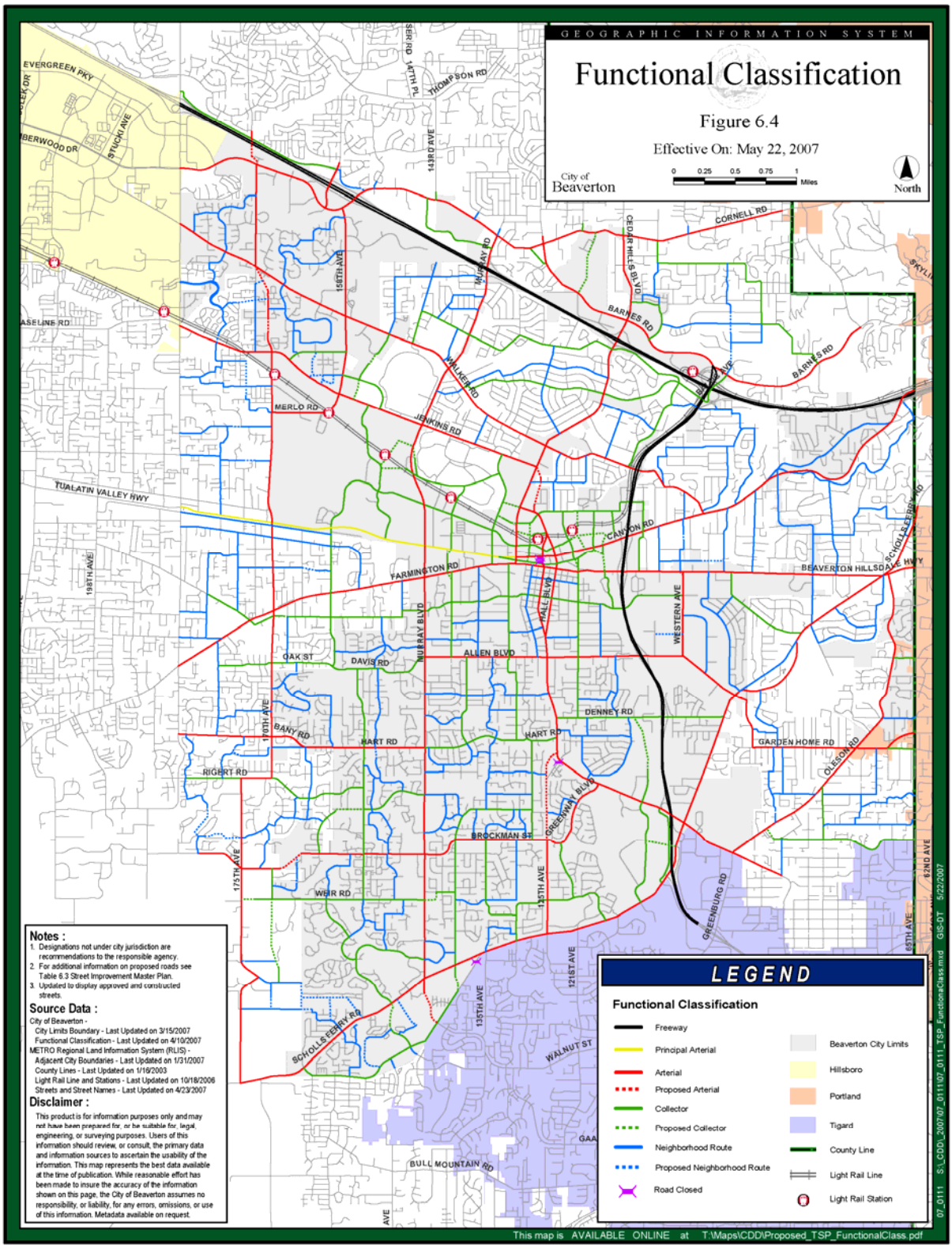
Principal arterial streets serve to connect neighboring cities and urban areas. They are of regional significance and often of statewide importance as well.

Arterial streets serve to interconnect and support principal arterials and freeways. They link major commercial, residential, industrial, and employment areas. Arterials are typically spaced about one mile apart to assure access to through routes and to reduce the incidence of traffic using collectors or local streets in lieu of a well-placed arterial street.

Collector streets balance access and circulation within residential, commercial, and industrial areas. Collectors differ from arterials in that they provide circulation within the city and distribute trips onto neighborhood routes and local streets.

Neighborhood routes are usually longer than local streets and provide connectivity to collectors or arterials. Because they have greater connectivity, they generally have more traffic than local streets and are used by residents to get into and out of their neighborhoods.

Local streets have the sole function of providing access to adjacent land. Local street design deliberately discourages through traffic and is important to neighborhood identity.


GEOGRAPHIC INFORMATION SYSTEM
Functional Classification
Figure 6.4
Effective On: May 22, 2007
City of Beaverton
0 0.25 0.5 0.75 1 Miles
North
Notes :
1. Designations not under city jurisdiction are recommendations to the responsible agency.
2. For additional information on proposed roads see Table 6.3 Street Improvement Master Plan.
3. Updated to display approved and constructed streets.
Source Data :
City of Beaverton -
City Limits Boundary - Last Updated on 3/15/2007
Functional Classification - Last Updated on 4/10/2007
METRO Regional Land Information System (RLIS) -
Adjacent City Boundaries - Last Updated on 1/31/2007
County Lines - Last Updated on 1/16/2003
Light Rail Line and Stations - Last Updated on 10/18/2006
Streets and Street Names - Last Updated on 4/23/2007
Disclaimer :
This product is for information purposes only and may not have been prepared for, or be suitable for, legal, engineering, or surveying purposes. Users of this information should review, or consult, the primary data and information sources to ascertain the usability of the information. This map represents the best data available at the time of publication. While reasonable effort has been made to insure the accuracy of the information shown on this page, the City of Beaverton assumes no responsibility, or liability, for any errors, omissions, or use of this information. Metadata available on request.
LEGEND
Functional Classification
Freeway
Principal Arterial
Arterial
Proposed Arterial
Collector
Proposed Collector
Neighborhood Route
Proposed Neighborhood Route
Road Closed
Beaverton City Limits
Hillsboro
Portland
Tigard
County Line
Light Rail Line
Light Rail Station
This map is AVAILABLE ONLINE at T:\Maps\CDD\Proposed_TSP_FunctionalClass.pdf
EVERGREEN PKY
SPRUCE AVE
THOMPSON RD
143RD AVE
CORNELL RD
CEDAR HILLS BLVD
BARNES RD
156TH AVE
MURRAY RD
WALKER RD
MERLO RD
JENKINS RD
TUALATIN VALLEY HWY
198TH AVE
FARMINGTON RD
CANYON RD
BEAVERTON HILLSDALE HWY
SCHOLLS FERRY RD
HALL BLVD
WESTERN AVE
OAK ST
DAVIS RD
ALLEN BLVD
DENNEY RD
HART RD
GARDEN HOME RD
OLESON RD
BANY RD
RIGERT RD
GREENWAY BLVD
BROCKMAN ST
175TH AVE
WEIR RD
135TH AVE
121ST AVE
GREENBURG RD
WALNUT ST
BULL MOUNTAIN RD
SCHOLLS FERRY RD
82ND AVE
65TH AVE
07_0111 S:\CDD_2007\07_0111\07_0111_TSP_FunctionalClass.mxd GIS-DT 5/22/2007

Access Management

Managing access to land is important to traffic flow, safety, and mobility. Local streets and neighborhood routes function primarily to provide access to adjacent land uses. Collector and arterial streets primarily serve through travel and higher traffic volumes and speeds. When access is not managed effectively, numerous driveways or improperly spaced streets increase the number of potential conflicts and the probability of collisions while decreasing mobility and traffic flow.

The City's access management standards set access point spacing minimums and maximums and corner clearance minimums. Shared access is also encouraged to preserve and improve mobility, flow, and safety. State standards set interchange spacing for State highways where inadequate spacing can increase conflicts and decrease mobility and flow.

Safety

The City monitors intersection collision history through its own safety index program and Washington County's Safety Priority Index System. Both are linked to the Oregon Department of Transportation's safety program. Intersections with high collision rates are given special attention for safety improvements. Safety improvement projects are developed and proposed for funding through various State and local sources.

Street Improvements

Street improvements needed by forecast year 2020 to accommodate projected traffic volumes and circulation needs are identified in the Street Improvement Master Plan (Figure 6.5 and Tables 6.3 and 6.4) and the Intersection Improvement Plan (Table 6.5). The improvements respond to the 2020 *Transportation System Plan Update* needs analysis that showed where connectivity, intersection turning capacity, and north/south and east/west capacity was needed within the study area. Alignments of new streets and extensions of existing streets in Figures 6.4 through 6.6 are general in nature. Specific alignment is determined through the development review process when new development or redevelopment is proposed in that area.

Street improvements are to assure that intersections operate at a future demand-to-capacity ratio of less than 1.0 in the evening two-hour peak period (level of service "E"), and to maintain system performance measures at a two-hour demand to capacity ratio of less than 1.0.

Streets where future right-of-way is needed for more than two lanes are identified in Figure 6.6. At times, right-of-way may be needed for construction of bike lanes on a collector or arterial. Such needs are also included in Figure 6.6. In some cases, a need is anticipated to be slightly beyond the 20-year planning period and is noted as such in Table 6.3 so that the opportunity to preserve the right-of-way is considered if new development is proposed or anticipated in the area. In addition, arterial and collector intersections should plan for right-of-way for turn lanes within 500 feet of the intersection.

The *Regional Transportation Plan* includes street design classifications for certain Beaverton streets. The designs reflect the regional function of the street and surrounding land use designation. The regional street design classifications for Beaverton streets are contained in Appendix F of the 2020 *Transportation System Plan Update* and shall be considered when a street is improved.

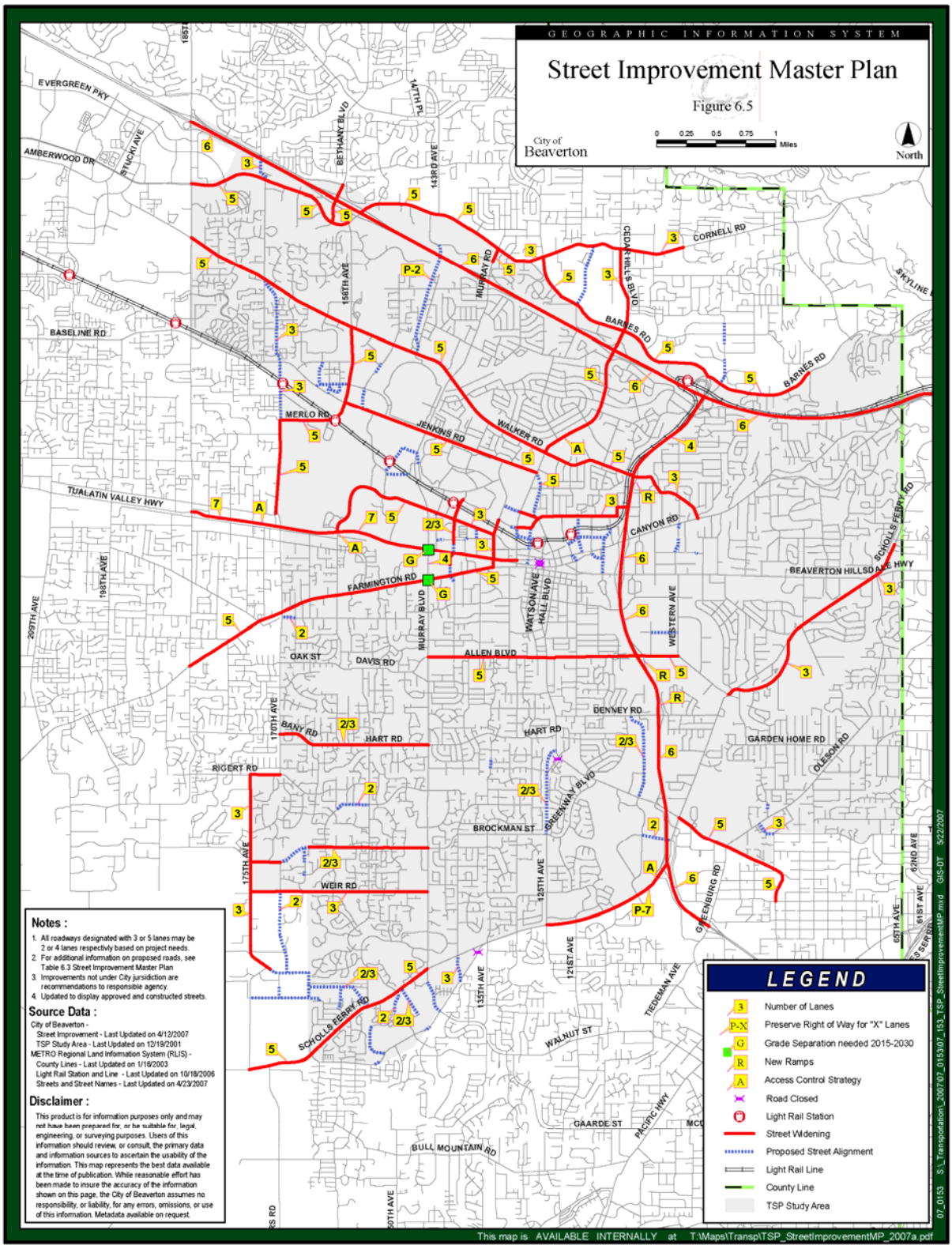

GEOGRAPHIC INFORMATION SYSTEM
Street Improvement Master Plan
Figure 6.5
City of Beaverton
0 0.25 0.5 0.75 1 Miles
North
EVERGREEN PKY
AMBERWOOD DR
STUCKI AVE
BETHANY BLVD
147TH PL
143RD AVE
CORNELL RD
CEDAR HILLS BLVD
SKYLINE
BASELINE RD
156TH AVE
MURRAY RD
BARNES RD
MERLO RD
JENKINS RD
WALKER RD
TUALATIN VALLEY HWY
CANYON RD
SCHOLLS FERRY RD
BEAVERTON HILLSDALE HWY
FARMINGTON RD
198TH AVE
209TH AVE
WATSON AVE
HALL BLVD
WESTERN AVE
OAK ST
DAVIS RD
ALLEN BLVD
DENNEY RD
HART RD
BANY RD
170TH AVE
GARDEN HOME RD
OLESON RD
RIGERT RD
GREENWAY BLVD
BROCKMAN ST
175TH AVE
WEIR RD
125TH AVE
121ST AVE
135TH AVE
TIEDEMAN AVE
GREENBURG RD
WALNUT ST
GAARDE ST
PACIFIC HWY
BULL MOUNTAIN RD
Notes :
1. All roadways designated with 3 or 5 lanes may be 2 or 4 lanes respectivly based on project needs.
2. For additional information on proposed roads, see Table 6.3 Street Improvement Master Plan
3. Improvements not under City jurisdiction are recommendations to responsible agency.
4. Updated to display approved and constructed streets.
Source Data :
City of Beaverton -
Street Improvement - Last Updated on 4/12/2007
TSP Study Area - Last Updated on 12/19/2001
METRO Regional Land Information System (RLIS) -
County Lines - Last Updated on 1/16/2003
Light Rail Station and Line - Last Updated on 10/18/2006
Streets and Street Names - Last Updated on 4/23/2007
Disclaimer :
This product is for information purposes only and may not have been prepared for, or be suitable for, legal, engineering, or surveying purposes. Users of this information should review, or consult, the primary data and information sources to ascertain the usability of the information. This map represents the best data available at the time of publication. While reasonable effort has been made to insure the accuracy of the information shown on this page, the City of Beaverton assumes no responsibility, or liability, for any errors, omissions, or use of this information. Metadata available on request.
LEGEND
3 Number of Lanes
P-X Preserve Right of Way for "X" Lanes
G Grade Separation needed 2015-2030
R New Ramps
A Access Control Strategy
Road Closed
Light Rail Station
Street Widening
Proposed Street Alignment
Light Rail Line
County Line
TSP Study Area
This map is AVAILABLE INTERNALLY at T:\Maps\Transp\TSP_StreetImprovementMP_2007a.pdf
07_0153 S:_Transportation_2007\07_0153\07_153_TSP_StreetImprovementMP.mxd GIS-DT 5/22/2007

Table 6.3 Street Improvement Master Plan

These projects within the Beaverton study area are needed by forecast year 2020. The *Regional Transportation Plan (RTP)* projects are excerpted from the Financially Constrained and the Priority Systems of the adopted August 10, 2000, *RTP*. Most were originally submitted by jurisdictions based on their adopted *Transportation System Plan*s (*TSP*s), Regional Center plans, Town Center plans, and specific area studies.

The table also contains projects that should be implemented by 2020 and should be included in the *RTP* Priority System. These projects are based on Beaverton's 2020 *TSP Update* analysis, 2015 *TSP*, Regional Center plan, Town Center plan, and specific area studies within the *TSP* study area as noted.

Table 6.3 Location	**Improvement Description (Jurisdictional Plan Reference, RTP Project Number and TimeLine)**	**Jurisdiction**	**Approximate Cost in 1000s of 2001 Dollars**
Beaverton-Hillsdale Highway/Scholls Ferry Road	Redesign the intersection to improve safety for all modes of travel. (Raleigh Hills Town Center, RTP #1184 2006-2010)	ODOT County	$14,920
Taylors Ferry: Washington to Oleson	Construct a 3-lane extension with sidewalks and bike lanes. (Washington Square Regional Center, RTP #6017 2011-2020)	County	$2,181
ORE 217 Overcrossing: Nimbus to Mall Area	Construct a 2-lane crossing including sidewalks and bike lanes. (Washington Square Regional Center, RTP #6052 2011-2020)	ODOT Tigard	$28,693
ORE 217	Add capacity based on recommendations from the ORE 217 corridor study. (RTP #3000 2011-2020)	ODOT	$80,339
ORE 217: TV Hwy to US 26	Widen northbound to 3 lanes with ramp improvements. (RTP #3001 2006-2010) Regional Center, 2015 *TSP*: widen ORE 217 from Canyon Rd. to 72nd to six through lanes adding shoulders, auxiliary lanes and ramp braids, widen ramps for ramp meter storage, and add ITS to ORE 217 and adjacent arterial roadways.	ODOT	$24,102
ORE 217 and US 26	Reconfigure the interchange with braided ramps. (2015 *TSP*, Regional Center, RTP #3002 2006-2010)	ODOT	$57,385
ORE 217: Walker and Canyon Ramps	Braid ramps between Canyon and Walker (2015 *TSP*; supplements RTP Priority #3002 2006-2010).	ODOT	$20,800
ORE 217: Allen to Walker	Interchange improvements: NB/SB at Walker, SB at TV Hwy., NB/SB at BH Hwy., and NB/SB at Allen Blvd. (2015 TSP, Regional Center, RTP #3023 2000-2005)	ODOT	$4,132
US 26: ORE 217 to Camelot Court	Widen eastbound to 3 lanes. (RTP #3007 2006-2010)	ODOT	$13,772
US 26: Murray to 185th	Widen freeway to 6 lanes with possible HOV lane. (RTP #3009 2011-2020)	ODOT	$29,840

Table 6.3 **Location**	**Improvement Description (Jurisdictional Plan Reference, RTP Project Number and TimeLine)**	**Jurisdiction**	**Approximate Cost in 1000s of 2001 Dollars**
Beaverton Regional Center Connections	Complete downtown street connections as follows:	Beaverton	
East/west connections:			
Hall: Cedar Hills to Hocken	Construct a 3-lane collector. (2015 TSP, Regional Center (RC), RTP #3034 2000-2005)		$5,279
Center: Cedar Hills to Hocken via Westgate/Dawson	Extend 3-lane collector from Center to Westgate and from Westgate via Dawson to Hocken. (2015 TSP, RC)		$4,500
Crescent: Cedar Hills to Hall	Extend 2-lane collector to Cedar Hills (2015 TSP, RC, RTP #3020 2006-2010)		$1,600
Millikan Way: Hall to 114th	Extend 2-lane collector to 114th (2015 TSP, RC, RTP #3019 2000-2005)		$7,750
Connection: Broadway to 115th	Connect Broadway to 115th/Griffith Drive collector. (2015 TSP, RC, RTP #3020 2006-2010)		$2,100
Electric to Whitney to Carousel to 144th	Connect roadways. (2015 TSP, RC, RTP #3020 2006-2010)		$1,650
North/south connections:			
Hall extension to Jenkins	Extend new 5-lane arterial north of Center to connect with Jenkins at Cedar Hills. (2015 TSP) 2020 TSP: If all downtown connections and ORE 217 improvements are complete, consider 3-lane "boulevard" design with bike lanes and sidewalks separated by landscape strip within the preserved 5-lane right-of-way.		$12,630
Short Avenue:	Close roadway.		
Rose Biggi: Westgate to Broadway	Construct 2-lane collector. (2015 TSP, RC, RTP #3019 2000-2005. 2020 TSP: extend to Broadway.)		$4,200
120th Ave.: Center to Canyon	Construct new 2-lane collector. (2020 TSP)		$4,100
114th/115th: LRT to Beaverton-Hillsdale Hwy./Griffith Drive	Construct 2-lane collector. (2015 TSP, RC, RTP #3020 2006-2010)		$4,200
Tualaway Ave.: Electric to Millikan	Extend 2-lane street. (2015 TSP, RC, RTP #3019 2000-2005)		$1,400
Center: Hall to 113th	Widen to 3 lanes including sidewalks and bike lanes. (2015 TSP, Regional Center, RTP #3038 2011-2020)	Beaverton	$3,673

Table 6.3 **Location**	**Improvement Description (Jurisdictional Plan Reference, RTP Project Number and TimeLine)**	**Jurisdiction**	**Approximate Cost in 1000s of 2001 Dollars**
Hocken at TV Hwy and Farmington Road	• Widen Hocken to accommodate 2 additional lanes between TV and Farmington to allow turn lanes. • Widen Hocken to 3 lanes north to Tek. • Widen TV from 141st to Hocken to allow 3 through lanes and additional turn lanes. (2015 TSP)	ODOT Beaverton	$7,010
141st/142nd: Tek to south of Farmington Rd. 144th to Millikan	• Realign and extend 2/3 lane roadways Tek /141st/142nd/141st to south of Farmington Rd. including sidewalks and bike lanes. • Create signalized intersections at TV and Farmington Rd. • Extend 142nd to Carousel and signalize. Vacate 141st between TV and Carousel. (2015 TSP, Regional Center, South Tek) • Extend 144th to Millikan. (2015 TSP, Regional Center, South Tek)	Beaverton	$3,214
Jenkins: Murray to 158th	Widen to 5 lanes including sidewalks and bike lanes. (2015 TSP, Regional Center, RTP #3022 2006-2010)	County	$2,146
Jenkins: Murray to Cedar Hills	Widen to 5 lanes including sidewalks and bike lanes. (2015 TSP)	County	$4,461
TV Hwy: Cedar Hills to Hillsboro	Add capacity based on recommendation from refinement planning and corridor study. Widen to 7 lanes Cedar Hills to Murray; 6 lanes limited access from Murray to Brookwood and 5 lanes from Brookwood to 10th. (2015 TSP, Regional Center, RTP #3025 2011-2020, RTP #3121 2000-2005)	ODOT County	$38,104
TV Hwy: 117th to Hillsboro	Implement access management strategies. (2015 TSP, RTP #3060 2006-2010)	ODOT County	$17,216
TV Hwy: 209th to ORE 217	Interconnect Traffic Signals. (RTP #3061 2006-2010)	ODOT County	$1,722
TV Hwy: Cedar Hills to Minter Bridge	Refinement planning to identify phased strategy to implement a limited-access facility. (RTP #3121 2000-2005)	ODOT	N/A
Allen: ORE 217 to Murray	Widen to 5 lanes including sidewalks and bike lanes. (2015 TSP, Regional Center, RTP #3031 2011-2020)	Beaverton	$9,777
Allen: ORE 217 to Western	Widen to 5 lanes including sidewalks and bike lanes. (2015 TSP, Regional Center, RTP #3076 2011-2020)	Beaverton	$1,148
Cedar Hills: Farmington Road to Walker Road	Widen to 5 lanes including sidewalks and bike lanes. Study land use changes between Westgate and Jenkins that would	Beaverton	$4,247

Table 6.3 Location	**Improvement Description (Jurisdictional Plan Reference, RTP Project Number and TimeLine)**	**Jurisdiction**	**Approximate Cost in 1000s of 2001 Dollars**
	allow for a 3-lane facility. Widen Cedar Hills between Canyon and Farmington to 6 lanes for queue storage. (2015 TSP, RTP #3032 2006-2010)		
Cedar Hills: Walker to US 26	Complete 5-lane roadway with access control including sidewalks and bike lanes. (2015 TSP)	County	$2,410
Cedar Hills/Barnes	Reconstruct intersection and approaches to add travel lanes, turn lanes, and traffic signal upgrades. (RTP #3177 2000-2005)	County	$2,066
125th: Brockman to Hall	Construct a 2-lane extension with turn lanes including sidewalks and bike lanes. (2015 TSP, RTP #3033 2000-2005)	Beaverton	$8,900
Hall: Scholls Ferry to Locust	Widen to 5 lanes. Includes sidewalk and bike lanes. (Washington Square Regional Center, RTP #6013 2006-2010)	ODOT	$5,394
158th/Merlo: 170th to Walker	• Widen to 5 lanes including sidewalks and bike lanes. (RTP #3036 2011-2020) • Walker to Jenkins: Widen to include bike lanes. (2015 TSP, RTP #3086 2011-2020)	County	$4,591
Scholls Ferry: Hamilton to Garden Home	Widen to 3 lanes including sidewalks and bike lanes. (2015 TSP, RTP #3069 2011-2020)	County	$9,182
Scholls Ferry: Hall to 125th	2020 TSP: preservation of right-of-way for future widening to 7 lanes. (15-30 year project.) Construction project: 2015 TSP: construction of 7 lanes including sidewalks and bike lanes is included in RTP Preferred #6021.)	County ODOT	$18,088
Scholls Ferry: ORE 217 to 125th	Implement system management strategies (2015 TSP, Washington Square Regional Center, RTP #6025 2000-2005)	County	$574
Scholls Ferry: Murray to 175th	Widen to 5 lanes including sidewalks and bike lanes. (2015 TSP)	County	$4,591
170th: Alexander to Merlo	Widen to 5 lanes including sidewalks and bike lanes. (2015 TSP, RTP #3084 2011-2020)	County	$9,182
170th: Merlo to Baseline	Widen to 3 lanes including sidewalks and bike lanes. (2015 TSP)	County	$2,410
173rd/174th	Construct a new 2-lane under crossing of US 26 from Cornell to Bronson including sidewalks and bike lanes. (2015 TSP, RTP #3205 2011-2020)	County	$16,986
Millikan: TV Hwy to 141st	Widen to 5 lanes including sidewalks and bike lanes. (2015 TSP, Regional Center, RTP #3087 2011-2020)	Beaverton	$4,591

Table 6.3 Location	**Improvement Description (Jurisdictional Plan Reference, RTP Project Number and TimeLine)**	**Jurisdiction**	**Approximate Cost in 1000s of 2001 Dollars**
Millikan: 141st to Hocken	Widen to 3 lanes including sidewalks and bike lanes. (2015 TSP, Regional Center, RTP #3088 2011-2020)	County	$3,902
Walker: Cedar Hills to 158th	Widen to 5 lanes including sidewalks and bike lanes. (2015 TSP, RTP #3143 2006-2010)	County	$22,954
Walker: 158th to Amberglen	Widen to 5 lanes including sidewalks and bike lanes. (2015 TSP, RTP # 3144 2006-2010)	County	$11,477
Walker: Cedar Hills to ORE 217	Widen to 3 lanes including sidewalks and bike lanes. (RTP #3148 2006-2010)	County	$9,182
Walker: Cedar Hills to ORE 217	Widen street to 5 lanes including sidewalks and bike lane. (2020 TSP; RTP Preferred #3145 no date)	County	$30,414
Barnes: ORE 217 to 119th	Widen to 5 lanes including sidewalks and bike lanes. (RTP #3175 2006-2010)	County	$7,116
Barnes: 119th to Saltzman	Widen to 5 lanes including sidewalks and bike lanes. (RTP #3185 2000-2005)	County	$6,083
Cornell: US 26 to 143rd	Widen to 5 lanes including sidewalks and bike lanes. (RTP #3181 2011-2020)	County	$3,443
Cornell: 143rd to Saltzman	Widen to 3 lanes including sidewalks and bike lanes. (RTP #3183 2000-2005)	County	$5,279
Cornell: 143rd to Dale	Widen street to 5 lanes including sidewalks and bike lanes. (2020 TSP)	County	$5,197
Cornell: Dale to Saltzman	Future capacity improvement based on additional study and coordination with Washington County. (2020 TSP)	County	$8,620
Cornell	Modify intersections at Saltzman, Barnes, Murray, and Trail. (RTP #3191 2011-2020)	County	$500
Cornell: Bethany to 179th	Widen to 5 lanes including sidewalks and bike lanes. (2015 TSP, RTP #3204 2006-2010)	County	$4,591
Bethany Boulevard: Cornell to Bronson	Widen street to 5 lanes including sidewalks and bike lanes. Project includes the widening of the US 26 overcrossing and intersection improvements. (2020 TSP)	County	$3,424
Murray: Science Park to Cornell	Widen to 5 lanes including sidewalks and bike lanes. (RTP #3186 2000-2005)	County	$3,579
Murray: TV Hwy to Farmington Rd.	Construct a 4-lane overpass--Murray over TV Highway and Farmington Rd.--including sidewalks, bike lanes, and interchange connections. 15-30 year project. (2020 TSP)	County	$28,517
Murray: TV Hwy to Allen	Interconnect Traffic Signals. (RTP #3063 2000-2005)	County	$57
Murray: Scholls Ferry to Barrows	Construct a 2/3-lane extension to Walnut at Barrows including sidewalks and bike	Beaverton Tigard County	$8,172

Table 6.3 Location	**Improvement Description (Jurisdictional Plan Reference, RTP Project Number and TimeLine)**	**Jurisdiction**	**Approximate Cost in 1000s of 2001 Dollars**
	lanes. (2015 TSP, Murray/Scholls Town Center Plan, RTP #6121 2000-2005)		
Murray/Scholls Town Center	Construct 2-lane Teal Road collector extension to Town Center Loop and Barrows, neighborhood route from Murray to Town Center Loop, and new neighborhood route connections. (2015 TSP, Murray/Scholls Town Center Plan, RTP #6119 2011-2020)	County Beaverton	$12,625
Davies Road: Scholls Ferry to Barrows	Construct a 3-lane extension to Barrows including sidewalks and bike lanes. (2015 TSP, Murray/Scholls Town Center Plan, RTP #6122 2006-2010) Complete construction of the 125th Avenue extension and the Murray Boulevard connection from Scholls Ferry Road to Barrows Road at Walnut Street prior to completing the Davies Road connection from Scholls Ferry Road to Barrows Road.	Beaverton	$1,722
Farmington Road: 172nd to 185th	Widen to 5 lanes including sidewalks and bike lanes. (2015 TSP, RTP #3214 2011-2020)	County	$11,477
Bany/Hart: 170th to 160th	Improve to 2-3 lanes including sidewalks and bike lanes. (2015 TSP)	County	$1,148
Hyland Extension: Carr to Hart	Extend roadway. (2015 TSP)	Beaverton	$115
143rd/Meadow: Science Park to Walker	2020 TSP: preservation of right-of-way for future construction beyond 2020. (2015 TSP: construction of new 2 lane road connections including a grade separation of US 26 with sidewalks and bike lanes.)	County	$16,000
Beard/Nora: Murray to 175th	Improve to 2-3 lanes including sidewalks and bike lanes. (2015 TSP)	County	$7,575
Weir: Murray to 175th	Improve to 3 lanes including sidewalks and bike lanes. (2015 TSP)	Beaverton	$4,246
Nimbus: Hall to Denney	Extend 2/3 lane roadway including sidewalks and bike lanes. (2015 TSP; RTP Preferred #3037 no date)	Beaverton	$9,526
103rd: Western to Walker	Improve existing roadway and construct new connections and intersection alignments to provide connectivity and capacity from Walker to Western. Project includes sidewalks and bike lanes and should be built as development occurs. (2020 TSP: Replaces RTP project #6012)	County	$5,500
Connectivity Streets	Add local, neighborhood route and collector connectivity:	Beaverton	$48,089

Table 6.3 **Location**	**Improvement Description (Jurisdictional Plan Reference, RTP Project Number and TimeLine)**	**Jurisdiction**	**Approximate Cost in 1000s of 2001 Dollars**
	SW Beaverton and Tek area west connections; Division extension; Jay to Jenkins connection; Burlington/Koll: Jenkins to Walker; Local Connectivity Map connections; Functional Classification map connections (2015 TSP)		
Traffic Signals	Addition of 50 traffic signals. (2015 TSP)	Beaverton County ODOT	$14,346
Intersection Improvements	Listed in Intersection Improvement Plan	Beaverton County ODOT	$96,350
Unfunded Street Improvement Master Plan Projects Total Estimated Costs			**$898,483**

1998 RTP project cost estimates are factored using a ratio of Seattle 10/01 CCI to national average 10/01 CCI = 1.1477. Metro staff approved updating the RTP costs12/01.

Table 6.4: Street Improvement Master Plan Committed/Completed Improvements

The following have received partial or full funding.

Table 6.4 **Location**	**Description**	**Jurisdiction**	**Cost**
US 26: Camelot Court to Sylvan	Add third through lane and collector distributor system (Phases 2 and 3). (RTP #3006 2000-2005)	ODOT	$22,000
US 26: ORE 217 to Murray	Widen to 6 lanes and add braided ramps. (RTP #3009 2010-2020)	ODOT	$13,000
Oak: 160th to 170th	Widen roadway including sidewalks and bike lanes. (RTP #3027 2000-2005)	County	$1,600
170th: Rigert to Alexander	Widen to 3 lanes Rigert to Division and 5 lanes Division to Alexander including sidewalks and bike lanes. (RTP #3085 2000-2005; 2015 TSP)	County	$26,700
170th/173rd: Baseline to Walker	Widen the street to 3 lanes including sidewalks and bike lanes. Precise alignment to be determined through the project development process. Design to consider safety and circulation around adjacent school. (RTP #3141 2006-2010; 2015 TSP)	Beaverton	$5,500
Millikan: Hocken Avenue to Cedar Hills Boulevard	Construct new 3-lane extension with sidewalks and bike lanes. (2015 TSP; RTP #3026 2000-2005)	Beaverton	$4,300

Table 6.4 **Location**	**Description**	**Jurisdiction**	**Cost**
Beaverton Connectivity	Millikan Way: Cedar Hills to Watson 2 lanes; Rose Biggi: Canyon to light rail tracks 2 lanes (2015 TSP, Beaverton Regional Center RTP #3019)	Beaverton	$3,400
Hart: Murray to 165th	Widen to 3 lanes including sidewalks and bike lanes. (2015 TSP; RTP #3028 2000-2005)	Beaverton	$7,100
Lombard: Broadway to Farmington	Realign and add turn lanes including sidewalks. (2015 TSP; RTP #3029 2000-2005)	Beaverton	$1,600
Hall Boulevard at Scholls Ferry	Provide southbound right turn lane. (2015 TSP; RTP #6048)	ODOT	$250
Hall: 12th to approx. 500 feet south of Allen	Retrofit to include bike lanes; intersection turn lanes at Allen. (2015 TSP; RTP #3074 2000-2005)	Beaverton	$1,438
Farmington Rd.: Murray to Hocken (PE funded)	Widen to 5 lanes including turn lanes, sidewalks, and bike lanes (2015 TSP; RTP #3030 2000-2005) $1,000,000 funded for design)	Beaverton	$9,300
125th: Brockman to Hall (2015 TSP)	Design 2002 (2015 TSP; RTP #3033 2000-2005)	Beaverton	$2,145
Committed Street Improvement Master Plan Projects Total Estimated Costs			**$98,333**

Project cost estimates are not factored as projects were programmed at approximate levels noted.

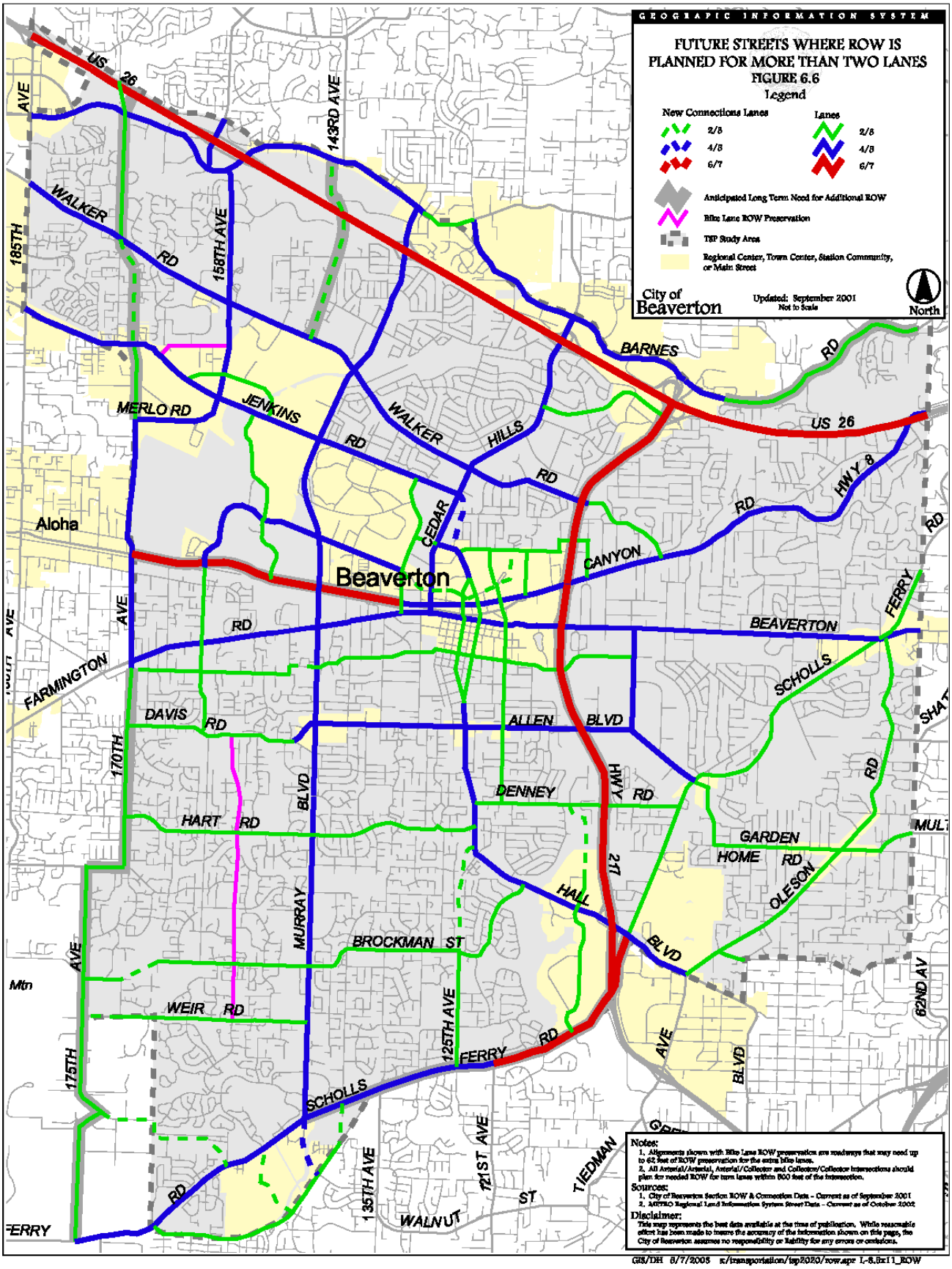

GEOGRAPHIC INFORMATION SYSTEM
FUTURE STREETS WHERE ROW IS PLANNED FOR MORE THAN TWO LANES
FIGURE 6.6
Legend
New Connections Lanes
2/3
4/5
6/7
Lanes
2/3
4/5
6/7
Anticipated Long Term Need for Additional ROW
Bike Lane ROW Preservation
TSP Study Area
Regional Center, Town Center, Station Community, or Main Street
City of Beaverton
Updated: September 2001
Not to Scale
North
Beaverton
Aloha
Mtn
US 26
BARNES RD
MERLO RD
JENKINS RD
WALKER RD
HILLS RD
CEDAR HILLS
CANYON RD
HWY 8
BEAVERTON
SCHOLLS FERRY RD
FARMINGTON RD
DAVIS RD
ALLEN BLVD
HART RD
DENNEY RD
GARDEN HOME RD
OLESON RD
HALL BLVD
BROCKMAN ST
WEIR RD
FERRY RD
SCHOLLS FERRY RD
WALNUT ST
TIEDMAN AVE
185TH AVE
158TH AVE
143RD AVE
170TH AVE
MURRAY BLVD
125TH AVE
135TH AVE
121ST AVE
175TH AVE
217 HWY
62ND AV
Notes:
1. Alignments shown with Bike Lane ROW preservation are roadways that may need up to 62 feet of ROW preservation for the extra bike lanes.
2. All Arterial/Arterial, Arterial/Collector and Collector/Collector intersections should plan for needed ROW for turn lanes within 500 feet of the intersection.
Sources:
1. City of Beaverton Section ROW & Connection Data - Current as of September 2001
2. METRO Regional Land Information System Street Data - Current as of October 2002
Disclaimer:
This map represents the best data available at the time of publication. While reasonable effort has been made to insure the accuracy of the information shown on this page, the City of Beaverton assumes no responsibility or liability for any errors or omissions.
GIS/DH 8/7/2003 s:/transportation/tsp2020/row.apr L-8.5x11_ROW

Table 6.5 Intersection Improvement Plan

#	**Table 6.5 Location**	**Improvements: Source: 1 through 67: 2015 TSP (2020 TSP with modifications noted) 68 through 81: 2020 TSP**	**Approximate Cost in 1000s of 2001 Dollars**
1	Kinnaman/Farmington Rd.	Widen Farmington Rd. to 5 lanes; add WB left turn lane; add NB/SB left turn lane; signal phasing modifications to NB/SB permitted/protected phasing.	$1,435
2	Walker/173rd	Widen Walker Road to 5 lanes; add EB/WB right turn lanes; NB/SB double left turn lanes.	$2,295
3	Baseline/170th	SB double left turn lanes; signal phasing modification of NB/SB to protected phasing; add WB right turn lane.	$1,435
4	Merlo/170th	Signal phase change to permitted/protected for NB/SB approaches and to protected phasing for EB/WB approaches; add NB right turn lane; add NB, SB, and EB left turn lanes. 2020 TSP: Restripe WB leg to include second WB left turn lane; cost for right-of-way is included in project.	$1,722
5	TV Highway/170th	Widen TV Highway to 7 lanes (3 through lanes each way); widen 170th to 5 lanes; add SB right turn lane; WB double left turn lanes.	$1,148
6	Farmington Rd/170th	Widen Farmington to 5 lanes; add NB left turn lane; add NB through lane and restripe SB for additional through lane (widen 170th to 5 lanes) 2020 TSP: add EB right turn lane, WB right turn lane; signal modification $750,000.	Cost included in roadway project
7	Hart-Bany/170th	Install traffic signal; add NB and SB left turn lanes.	$1,435
8	Walker/167th	Install traffic signal; add NB and SB left turn lanes.	$287
9	Cornell/158th	Add EB right turn lane and overlap phasing.	$574
10	Walker/158th	NB/SB double left turn lanes; add EB right turn lane; NB right turn lane; WB through lane (2 through lanes in each direction); signal phasing change to EB/WB permitted/protected phasing.	$2,582
11	Jenkins/158th	Add NB right turn lane; add SB through lane and restripe SB approach; WB double left turn lanes; WB through lane (5 lanes on Jenkins) 2020 TSP: overlap NB right turn lane $125,000.	$1,148 $125
12	TV Highway/Millikan	Widen TV to 7 lanes; add SB and NB lane across intersection.	$1,865
13	Hart/155th	Add WB left turn lane.	$574
14	Jenkins/153rd	Widen Jenkins to 5 lanes (2 through lanes each way).	Cost included in roadway project
15	TV Highway/153rd	Widen TV Highway to 7 lanes (3 through lanes each way).	Cost included in roadway project
16	Farmington/149th	Widen Farmington Rd. to 5 lanes.	Cost included in roadway project
17	Walker/Murray	Add double left turn lanes on all approaches; add right turn lanes on all approaches. 2020 TSP: increase cycle length by 20 seconds to 120 seconds $125,000.	$4,591 $125
18	Murray/Jenkins	Add NB and SB right turn lanes; NB and SB double left turn lanes; widen Jenkins to 5 lanes.	$2,295
19	TV Highway/Murray	Double left turn lanes on all approaches; add NB/SB through lane (3 through lanes each way) ; install median at TV/Railroad	$1,722

#	Table 6.5 Location	Improvements: Source: 1 through 67: 2015 TSP (2020 TSP with modifications noted) 68 through 81: 2020 TSP	Approximate Cost in 1000s of 2001 Dollars
		tracks/Farmington to restrict driveways to right in, right out. 2020 TSP: 2 new signals, 2 right turn lanes, 2 double left turn lanes.	
20	Murray/Farmington	Double left turn lanes on all approaches; SB, EB, and WB right turn lanes. 2020 TSP: 2 new signals, 2 right turn lanes, 2 double left turn lanes.	$2,869
21	Murray/6th	Install traffic signal; add EB and WB left turn lanes.	$287
22	Murray/Allen	Widen Allen to 5 lanes to Murray (drop additional WB through lane after Murray); add SB right turn lane. 2020 TSP: add second WB left turn lane, second WB right turn lane, overlap WB right turn lane, modify signal, $1,250,000.	$687 $1,250
23	Murray/Hart	Signal phase change to permitted/protected phasing for all approaches	$143
24	Murray/Scholls Ferry	Restripe NB, SB, and EB approaches; signal phase change to protected phasing on all approaches.	$143
25	Murray/Barrows/ Walnut	Install traffic signal; add EB left turn lane; restripe NB approach; construct SB approach left turn lane.	$861
26	Scholls Ferry/Barrows (west)	Install traffic signal; restripe SB approach for separate left turn and right turn lanes.	$287
27	Scholls Ferry/Davies	Install traffic signal; restripe WB approach; add NB right turn lane; add NB left turn lane.	$287
28	Scholls Ferry/Barrows (east)	Close Barrows at Scholls Ferry.	$172
29	TV Highway/Hocken	Add EB right turn lane; restripe SB approach; widen Hocken to two SB through lanes.	$3,558
30	Farmington/Hocken	Add WB right turn lanes; SB double left turn lanes (Hocken carries two SB lanes from TV Highway).	$3,443
31	Cedar Hills/Walker	Double left turn lanes on all approaches; add EB right turn lane 2020 TSP: add 40 seconds cycle length to 140 seconds $125,000.	$2,869 $125
32	Cedar Hills/Jenkins	SB and EB double left turn lanes; add SB right turn lane; widen Jenkins to 5 lanes; WB right turn channel; signal modifications to EB/WB protected phasing. 2020 TSP: Jenkins to 5 lanes, overlap WB right turn lane $125,000.	$2,008 $125
33	Cedar Hills/Hall	Add NB right turn lane.	$574
34	Cedar Hills/Westgate	Add NB left turn lane.	$1,492
35	Canyon/Cedar Hills	Widen Canyon to 7 lanes on west leg; add NB left turn lane; add SB left turn lane; add SB right turn lane; add EB/WB left turn lane.	$5,739
36	Farmington/Cedar Hills	SB double left turn lanes (construct SB right turn lane and restripe SB lanes as side-by-side left turn lanes). 2020 TSP: add 2nd EB left turn lane, right-of-way $1,250,000.	$1,148 $1,250
37	Hall/Westgate-Center	Realign intersection; signal modification to EB/WB protected/permitted phasing.	$287
38	Canyon/Watson	Restripe SB approach (add a SB receiving lane).	$803
39	Farmington Rd./Watson	2020 TSP: Preserve right-of-way for 3 through lanes with parking for construction beyond 2020.	$1,500
40	Farmington Rd./Hall	2020 TSP: Preserve right-of-way for 3 through lanes for construction beyond 2020.	$1,500

#	Table 6.5 Location	Improvements: Source: 1 through 67: 2015 TSP (2020 TSP with modifications noted) 68 through 81: 2020 TSP	Approximate Cost in 1000s of 2001 Dollars
41	Hall/Allen	Add EB and WB right turn lanes; NB and SB double left turn lanes.	$1,951
42	Hall/Denney	NB/SB signal phasing change to permitted/protected. 2020 TSP: add 2nd WB left turn lane $500,000.	$172 $500
43	Hall/Greenway	Signal phase change to permitted/protected phasing for EB and WB approaches, overlap NB right turn.	$143
44	Hall/Nimbus	Signal phase change to protected/permitted phasing for NB and SB approaches.	$143
45	Scholls Ferry/Hall	Add double left turn lanes on all approaches; add right turn lane on all approaches.	$3,443
46	Brockman/125th	Signal phase change to protected/permitted phasing for all approaches; add WB left turn lane; restripe NB and EB approaches; construct SB left turn lane, right turn lane, and through lane.	Cost included in roadway project
47	Scholls Ferry/125th	Widen Scholls Ferry Road to 7 lanes (3 through lanes each way); add SB right turn lane. 2020 plan: overlap SB right turn lane $125,000.	$574 $125
48	Scholls Ferry/Nimbus	Widen Scholls Ferry to 7 lanes (3 through lanes in each direction); add NB left turn lane; SB double left turn lanes.	$1,148
49	Scholls Ferry/ORE 217 SB ramps	Channel EB right turn onto ramp and modify signal to allow free movement of EB right turns.	$574
50	Scholls Ferry/Ore 217 NB on-ramp	Channel SB right turn onto ramp and modify signal to allow free movement of SB right turns; add WB through lane onto ramp 2020 TSP: add second NB left turn lane and a second WB left turn lane $1,000,000.	$574 $1,000
51	Farmington/Lombard	Add NB right turn lane.	$574
52	Canyon/Broadway	Add WB right turn lane; signal modification to NB/SB protected phasing.	Completed
53	Canyon/Fred Meyer	Add SB left turn lane; signal modification to NB/SB split phasing.	$143
54	BH Highway/Griffith	Signal phasing modification to NB/SB protected/permitted phasing.	$172
55	BH Highway/Western	Add EB right turn lane; add WB double left turn lanes; add NB through lane.	$1,722
56	Allen/Western	Add EB left turn lane; EB/WB signal phasing change to permitted/protected phasing.	$143
57	Allen/Scholls Ferry	Widen Allen to 5 lanes; restripe WB approach; signal phase change for all approaches to permitted/protected phasing. 2020 TSP: provide curve correction to the east of the intersection $1,500,000.	$1,865
58	Walker/ORE 217 SB	Bridge deck widening; EB double right turn lanes (add right turn lane); WB through lane.	$861
59	Walker/ORE 217 NB	Add NB double left turn lanes.	$287
60	Canyon/ORE 217 SB	Add SB left turn lane and restripe SB lanes.	$574
61	BH Highway/ORE 217 SB	Add SB left turn lane.	$574
62	BH Highway/ORE 217 NB	NB double left turn lanes.	$689

#	Table 6.5 Location	Improvements: Source: 1 through 67: 2015 TSP (2020 TSP with modifications noted) 68 through 81: 2020 TSP	Approximate Cost in 1000s of 2001 Dollars
63	Allen/ORE 217 SB	Add SB right turn lane (double right lanes); EB right turn lane (channel onto ramp; signal modification to allow EB right turn to go with SB left).	$2,295
64	Allen/ORE 217 NB	Add WB right turn lane; signal modifications to NB/SB split phasing.	$574
65	Denney/ORE 217 SB	Install traffic signal. 2020 TSP: add EB right turn lane, structure work, $1,100,000.	$287 $1,100
66	Denney/ORE 217 NB	Install traffic signal.	$287
67	Denney/Lombard	Install traffic signal and EB and WB left turn lanes.	$1,291
		Additional 2020 plan improvements:	
68	Bethany/US 26 WB	Add second WB right turn lane, NB left turn lane.	Included in road project
69	Bethany/Cornell	Overlap SB right turn lane.	Included in road project
70	Cornell/173rd	Add WB right turn lane, second NB left turn lane, NB right turn lane, SB right turn lane.	$2,200
71	Cornell/US 26 WB	Add 2nd WB left turn lane (structure work).	$1,000
72	Murray/Cornell	Overlap NB right turn lane, add 2nd NB left turn lane (Cornell 5 lanes).	$1,000
73	Murray/US 26 WB	Add 2nd WB right turn lane.	$500
74	Cedar Hills/Barnes	Add 2nd NB lane and SB left turn lane.	$1,000
75	Cornell/Saltzman	Add 2nd NB lane and SB left turn lane (Cornell to 5 lanes).	$2,000
76	Canyon/Lombard	Add EB right turn lane.	$500
77	BH Hwy/Laurelwood	Add SB left turn lane (signal modification and right-of-way).	$2,000
78	Scholls Ferry/Laurelwood	Install traffic signal, align with Nicol, right-of-way, 2 left turn lane modifications.	$1,750
79	Hall/ORE 217 SB/Cascade	Add SB right turn lane.	$250
80	Murray/Brockman	Add WB right turn lane, SB right turn lane, add 20 seconds cycle to 120 seconds, right-of-way.	$100
81	Garden Home/92nd	Correct curve deficiency	$1,500
Unfunded Intersection Improvement Plan Projects Total Estimated Costs			**$96,350**

1998 project cost estimates are factored using a ratio of Seattle 10/01 CCI to national average 10/01 CCI = 1.1477.

Local Connectivity Maps

The Local Connectivity Maps identify recommended and adopted local bicycle, pedestrian, and multi-modal street connections. As new development and redevelopment occur, there is an opportunity to work toward completion of the local circulation system by providing new, more direct and convenient connections within subareas for all modes. Such new connections can also help reduce out-of-direction and cut-through vehicle traffic in neighborhoods.

The Local Connectivity Maps (Figures 6.8 through 6.23) identify existing street stubs and potential future local connections that shall be evaluated and considered with new development.

A new connection may be a local street, or if there are environmental or existing development constraints, a pedestrian and bicycle way can be considered. Each potential connection is numbered and an arrow points in the general direction of a possible new connection. A corresponding data table (Table 6.6) notes if a potential or definite environmental problem or another constraint has been identified and whether a street ("multi-modal") or a bicycle and pedestrian connection ("pursue non-auto") is recommended to be pursued or is already adopted. Adopted Washington County connections within Beaverton's planning area are also noted for information.

Table 6.6: Local Connectivity Map Recommendations on Potential Connections

Table 6.6 Connection Number	**Rating:** **P = Potential or Definite Problems** **M = Minimal Problems** **A = City Adopted Street Connections (2015 TSP)** **County = County Adopted Connection**	**Recommendation:**
1	P	Feasibility Constraints
2	M	Pursue Multi-modal
3	M	Pursue Multi-modal
5	P	Pursue Multi-modal
7	P	Pursue Non-auto
8	P	Pursue Multi-modal
9	P	Pursue Multi-modal
10	P	Pursue Multi-modal
11	P	Pursue Multi-modal
12	P	Pursue Multi-modal
13	P	Pursue Multi-modal
14	P	Pursue Multi-modal
17	P	Feasibility Constraints
18	P	Consider Non-auto
19	P	Feasibility Constraints
20	P	Feasibility Constraints
21	P	Pursue Non-auto
22	P	Feasibility Constraints
23	P	Consider Multi-modal
24	P	Consider Multi-modal
25	P	Consider Multi-modal
26	P	Feasibility Constraints
27	P	Pursue Multi-modal
29	P	Consider Multi-modal
31	P	Consider Multi-modal
33	P	Consider Multi-modal
34	P	Pursue Multi-modal
35	P	Feasibility Constraints
36	P	Consider Non-auto

Table 6.6 Connection Number	**Rating:** **P = Potential or Definite Problems** **M = Minimal Problems** **A = City Adopted Street Connections (2015 TSP)** **County = County Adopted Connection**	Recommendation:
37	P	Consider Non-auto
38	M	Pursue Multi-modal
39	M	Consider Multi-modal
40	M	Feasibility Constraints
41	P	Pursue Non-auto
42	P	Pursue Multi-modal
43	P	Pursue Multi-modal
44	P	Pursue Multi-modal
45	P	Feasibility Constraints
46	P	Consider Multi-modal
47	P	Consider Non-auto
48	P	Feasibility Constraints
49	P	Pursue Multi-modal
50	M	Consider Future Cul-de-sac, Pursue Non-auto
51	P	Pursue Non-auto
52	P	Feasibility Constraints
54	P	Pursue Non-auto
55	P	Feasibility Constraints
56	P	Consider Non-auto
58	P	Consider Non-auto
59	P	Feasibility Constraints
60	P	Feasibility Constraints
61	P	Consider Non-auto
62	P	Consider Non-auto
63	P	Consider Non-auto
64	P	Consider Multi-modal
65	P	Pursue Multi-modal
66	P	Consider Multi-modal
67	M	Pursue Multi-modal
68	P	Pursue Multi-modal
70	P	Pursue Multi-modal
71	P	Pursue Multi-modal
74	P	Pursue Multi-modal
75	M	Pursue Multi-modal
76	P	Pursue Multi-modal
77	A	Adopted Street Connection
78	P	Pursue Multi-modal
79	P	Pursue Non-auto

Table 6.6 Connection Number	**Rating:** **P = Potential or Definite Problems** **M = Minimal Problems** **A = City Adopted Street Connections (2015 TSP)** **County = County Adopted Connection**	**Recommendation:**
80	P	Pursue Non-auto
81	M	Pursue Multi-modal (into Transit Center)
82	P	Pursue Multi-modal
83	P	Pursue Multi-modal
84	P	Consider Multi-modal
85	M	Pursue Non-auto
86	M	Pursue Non-auto
87	M	Pursue Non-auto
88	M	Pursue Non-auto
89	P	Pursue Non-auto
90	M	Pursue Non-auto
91	M	Pursue Multi-modal east of 125th, Pursue Non-auto west of 125th
92	P	Consider Multi-modal
93	P	Consider Non-auto
94	P	Consider Non-auto
95	County	Pursue Non-auto
96	County	Feasibility Constraints
97	County	Feasibility Constraints
98	M	Consider Multi-modal
99	County	Consider Non-auto
100	County	Feasibility Constraints
101	County	Consider Non-auto
102	P	Pursue Non-auto
103	M	Pursue Non-auto
105	P	Consider Multi-modal
106	P	Consider Non-auto
107	P	Consider Non-auto
108	P	Consider Non-auto
109	P	Pursue Multi-modal
110	P	Pursue Non-auto
111	P	Pursue Non-auto
112	P	Pursue Non-auto
113	County	Potential Connection
114	P	Consider Non-auto
115	P	Pursue Multi-modal
116	P	Pursue Multi-modal, avoid cut through to Cambray from 185th

Table 6.6 Connection Number	**Rating:** **P = Potential or Definite Problems** **M = Minimal Problems** **A = City Adopted Street Connections (2015 TSP)** **County = County Adopted Connection**	Recommendation:
117	M	Pursue Multi-modal
118	M	Pursue Non-auto
119	M	Pursue Multi-modal
120	M	Pursue Multi-modal
121	M	Pursue Multi-modal
122	M	Pursue Multi-modal
123	M	Pursue Multi-modal
125	P	Pursue Multi-modal
126	P	Consider Multi-modal
127	P	Pursue Multi-modal
129	M	Pursue Multi-modal
130	M	Pursue Multi-modal
131	M	Pursue Multi-modal
132	M	Pursue Multi-modal
133	M	Pursue Multi-modal
134	M	Pursue Multi-modal
135	M	Pursue Multi-modal
136	M	Pursue Multi-modal
137	A	Adopted Street Connection
138	A	Adopted Street Connection
139	A	Adopted Street Connection
140	M	Consider Non-auto
141	A	Adopted Street Connection
142	M	Consider Non-auto
143	M	Pursue Multi-modal
146	M	Pursue Multi-modal
147	M	Pursue Multi-modal
148	County	Pursue Multi-modal
149	County	Pursue Multi-modal

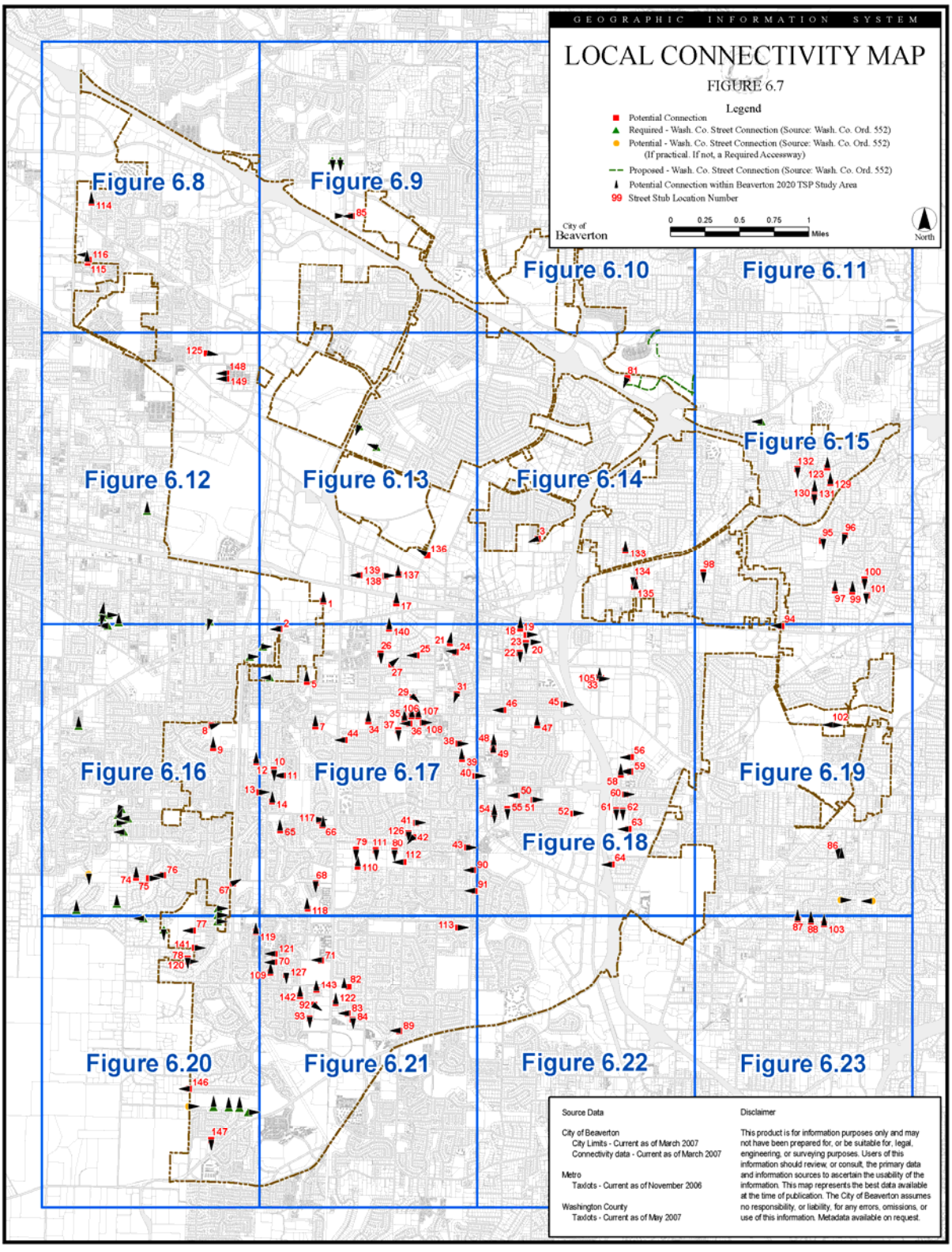

GEOGRAPHIC INFORMATION SYSTEM
LOCAL CONNECTIVITY MAP
FIGURE 6.7
Legend
Potential Connection
Required - Wash. Co. Street Connection (Source: Wash. Co. Ord. 552)
Potential - Wash. Co. Street Connection (Source: Wash. Co. Ord. 552)
(If practical. If not, a Required Accessway)
Proposed - Wash. Co. Street Connection (Source: Wash. Co. Ord. 552)
Potential Connection within Beaverton 2020 TSP Study Area
99 Street Stub Location Number
City of Beaverton
0 0.25 0.5 0.75 1 Miles
North
Figure 6.8
Figure 6.9
Figure 6.10
Figure 6.11
Figure 6.12
Figure 6.13
Figure 6.14
Figure 6.15
Figure 6.16
Figure 6.17
Figure 6.18
Figure 6.19
Figure 6.20
Figure 6.21
Figure 6.22
Figure 6.23
Source Data
City of Beaverton
City Limits - Current as of March 2007
Connectivity data - Current as of March 2007
Metro
Taxlots - Current as of November 2006
Washington County
Taxlots - Current as of May 2007
Disclaimer
This product is for information purposes only and may not have been prepared for, or be suitable for, legal, engineering, or surveying purposes. Users of this information should review, or consult, the primary data and information sources to ascertain the usability of the information. This map represents the best data available at the time of publication. The City of Beaverton assumes no responsibility, or liability, for any errors, omissions, or use of this information. Metadata available on request.
This map is AVAILABLE INTERNALLY at T:\Maps\CDD\Proposed_TSP_LocalConnectivity_IndexMap_8x11.pdf
07_0111 S:_CDD_2007\07_0111\07_0111_8x11_connectivity_index_map.mxd GIS-DT 5-22-2007

Figure 6.8

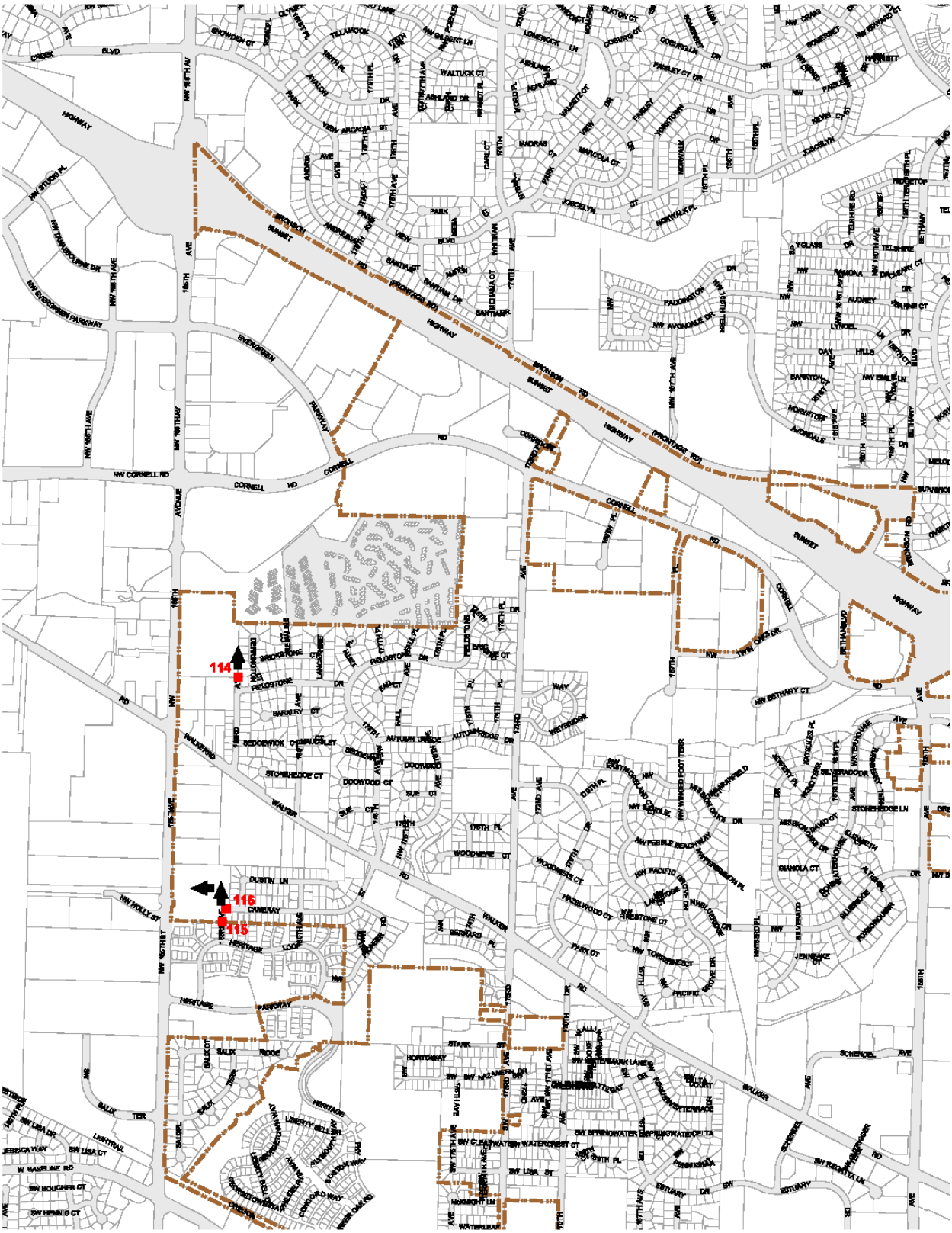

114
116
115
CORNELL RD
HIGHWAY
SUNSET
EVERGREEN PARKWAY
185TH AVE
NW 185TH AVE
NW CORNELL RD
WALKER RD
NW WALKER RD
NW HOLLY ST
NW HERITAGE PKWY
NW CAMEWAY
NW DUSTIN LN
NW 178TH PL
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Figure 6.9

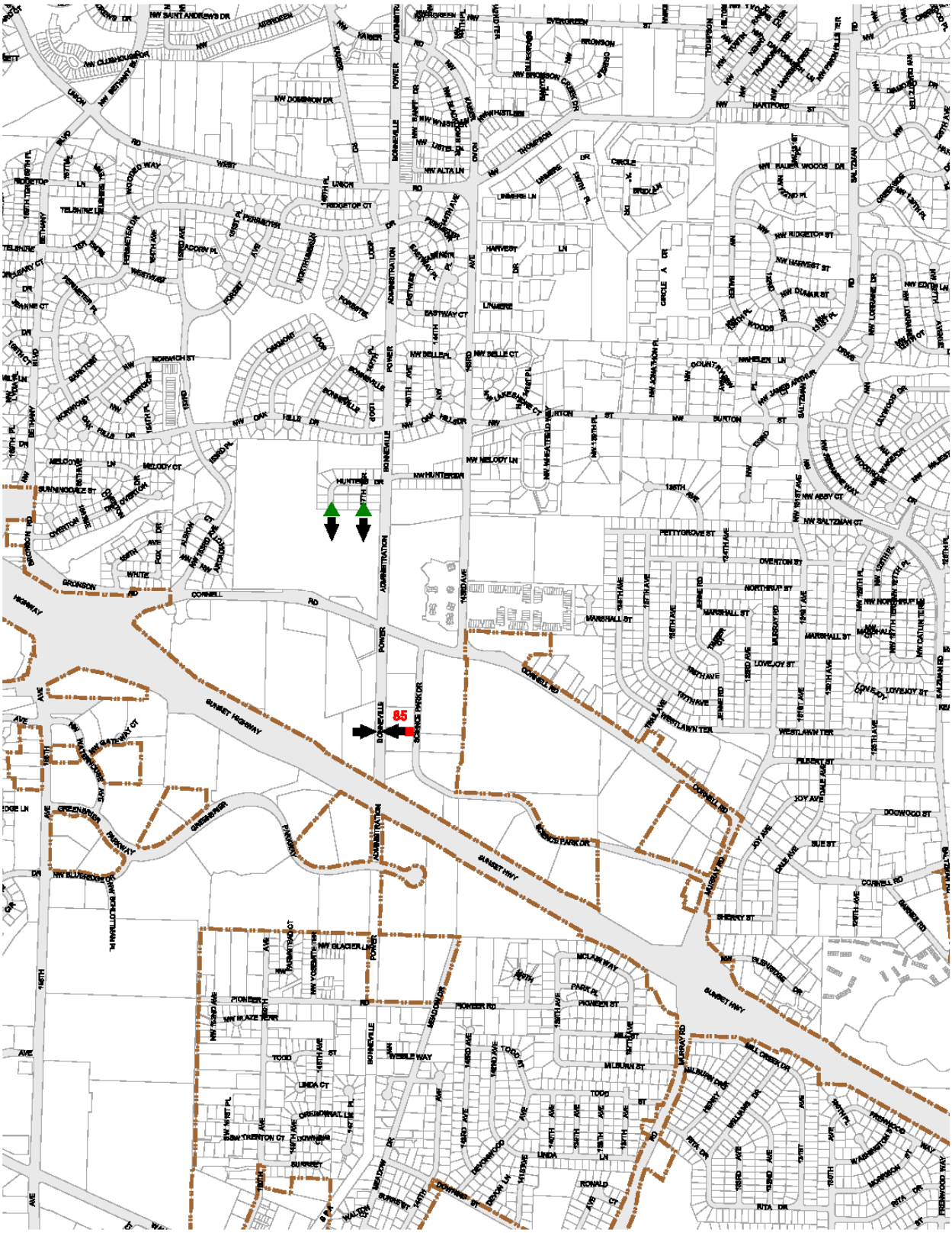

85
BONNEVILLE
POWER
ADMINISTRATION
SUNSET HIGHWAY
CORNELL RD
BONNEVILLE DAM RD
GREENBRIER PARKWAY
NW BLUEBERRY HILL DR
NW 185TH AVE
NW 170TH AVE
NW 158TH AVE
NW 153RD AVE
NW 143RD AVE
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NW 133RD AVE
NW 128TH AVE
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NW 23RD PL
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NW 18TH PL
NW 15TH PL
NW 13TH PL
NW 10TH PL
NW 8TH PL
NW 5TH PL
NW 3RD PL
NW 1ST PL
NW BETHANY BLVD
NW BETHANY
NW SAINT ANDREWS DR
NW DOBSON DR
NW ALTA LN
NW HARTFORD ST
NW RIDGETOP ST
NW HARVEST ST
NW DUMAR ST
NW BELLE PL
NW BELLE CT
NW HUNTERDON
NW MELODY LN
NW BURTON ST
NW 185TH
NW ABBY CT
NW SALTZMAN CT
PETTYGROVE ST
OVERTON ST
NORTHRUP ST
MARSHALL ST
LOVEJOY ST
WESTLAWN TER
PILSEN ST
JOY AVE
DOGWOOD ST
SUE ST
SHERRY ST
MCLAIN WAY
PARK PL
PIONEER ST
PIONEER RD
MILBURN ST
TODD ST
WEBBLE WAY
LINDA CT
NW GLACIER LN
NW YOSEMITE TER
NW BLAZE TERR
NW 160TH AVE
NW 155TH PL
NW THORNTON CT
NW 147TH AVE
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NW 3RD PL
NW 1ST PL

Figure 6.10


NW WELSH DR
NW WOODLAND CT
NW 25TH PL
NW 25TH AVE
HARTFORD
NW 19TH PL
NW 19TH ST
NW 18TH ST
NW 17TH PL
NW 17TH AVE
NW 16TH ST
NW 15TH ST
NW 15TH PL
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NW 5TH PL
NW 5TH AVE
NW 4TH PL
NW 4TH AVE
NW 3RD PL
NW 3RD AVE
NW 2ND PL
NW 2ND AVE
NW 1ST PL
NW 1ST AVE
NW 1ST TER
NW 1ST CT
NW 1ST WAY
NW 1ST LN
NW 1ST DR
NW 1ST ST
NW 1ST RD
NW 1ST CIR
NW 1ST PKWY
NW 1ST BLVD
NW 1ST TRL
NW 1ST PATH
NW 1ST ALLEY
NW 1ST COURT
NW 1ST PLACE
NW 1ST AVENUE
NW 1ST STREET
NW 1ST ROAD
NW 1ST DRIVE
NW 1ST LANE
NW 1ST WAY
NW 1ST TERRACE
NW 1ST CIRCLE
NW 1ST PARKWAY
NW 1ST BOULEVARD
NW 1ST TRAI

Figure 6.11

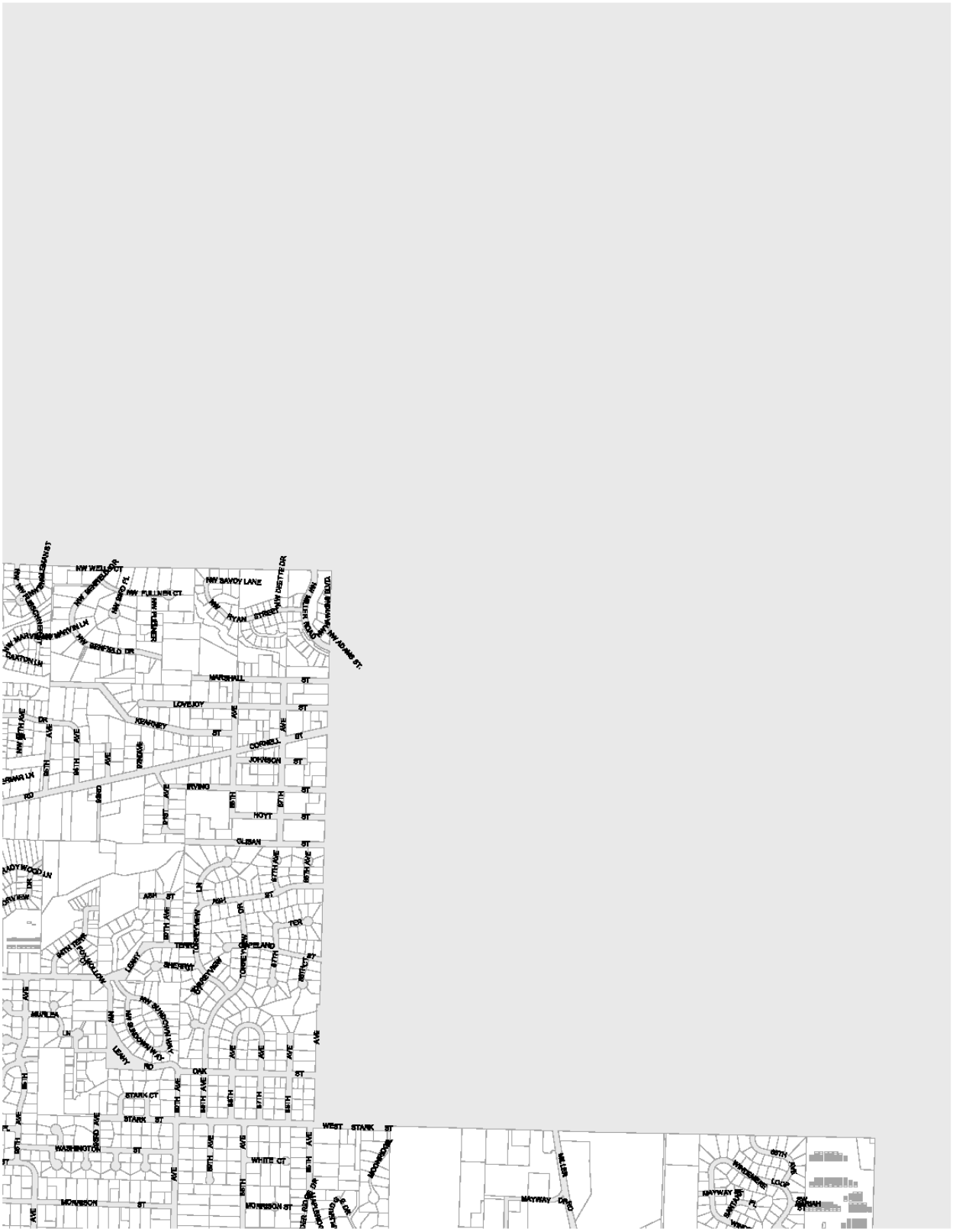

NW SAVOY LANE
NW RYAN STREET
NW BENFIELD DR
MARSHALL ST
LOVEJOY ST
KEARNEY ST
CORNELL ST
JOHNSON ST
IRVING ST
HOYT ST
GLISAN ST
BURNSIDE
LEARY
STARK ST
WEST STARK ST
WASHINGTON ST
MORRISON ST
WHITE CT
MAYWAY DR

Figure 6.12

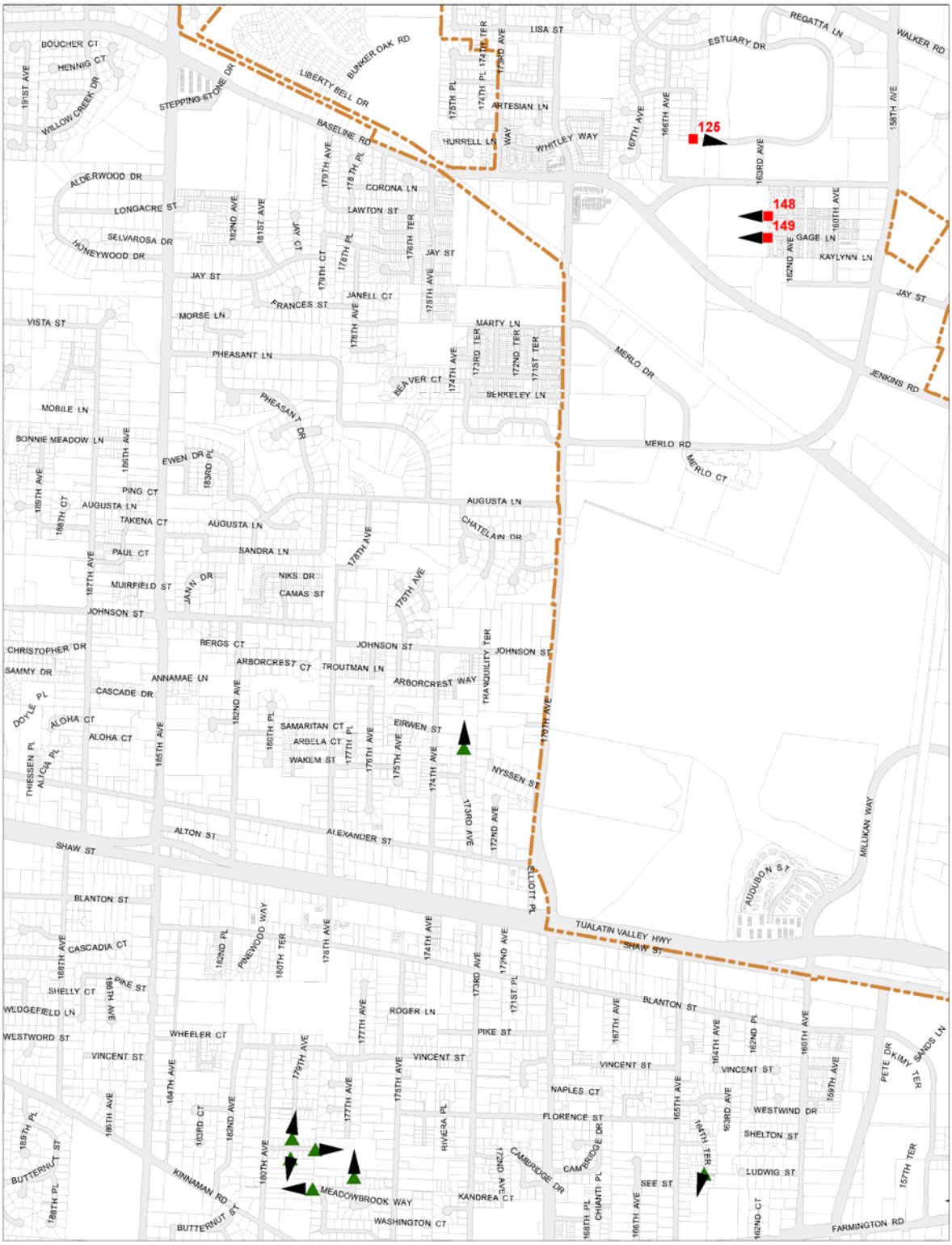

125
148
149
BOUCHER CT
HENNIG CT
WILLOW CREEK DR
STEPPING STONE DR
LIBERTY BELL DR
BUNKER OAK RD
BASELINE RD
LISA ST
ARTESIAN LN
HURRELL LN
WHITLEY WAY
ESTUARY DR
REGATTA LN
WALKER RD
ALDERWOOD DR
LONGACRE ST
SELVAROSA DR
HONEYWOOD DR
CORONA LN
LAWTON ST
JAY ST
JANELL CT
FRANCES ST
MORSE LN
VISTA ST
PHEASANT LN
PHEASANT DR
MARTY LN
BEAVER CT
BERKELEY LN
MERLO DR
MERLO RD
MERLO CT
JENKINS RD
GAGE LN
KAYLYNN LN
MOBILE LN
BONNIE MEADOW LN
EWEN DR
PING CT
AUGUSTA LN
TAKENA CT
CHATELAIN DR
PAUL CT
SANDRA LN
MUIRFIELD ST
JAN N DR
NIKS DR
CAMAS ST
JOHNSON ST
CHRISTOPHER DR
BERGS CT
SAMMY DR
ANNAMAE LN
ARBORCREST CT
TROUTMAN LN
ARBORCREST WAY
TRANQUILITY TER
CASCADE DR
DOYLE PL
ALOHA CT
THIESSEN PL
ALICIA PL
SAMARITAN CT
ARBELA CT
WAKEM ST
EIRWEN ST
NYSSEN ST
ALTON ST
ALEXANDER ST
SHAW ST
BLANTON ST
CASCADIA CT
SHELLY CT
WEDGEFIELD LN
WESTWORD ST
WHEELER CT
VINCENT ST
PINEWOOD WAY
PIKE ST
ROGER LN
NAPLES CT
FLORENCE ST
RIVIERA PL
MEADOWBROOK WAY
KANDREA CT
WASHINGTON CT
BUTTERNUT ST
KINNAMAN RD
CAMBRIDGE DR
CHIANTI PL
SEE ST
LUDWIG ST
SHELTON ST
WESTWIND DR
KIM T ER
PETE DR
SANDS LN
MILLIKAN WAY
AUDUBON ST
TUALATIN VALLEY HWY
FARMINGTON RD

Figure 6.13

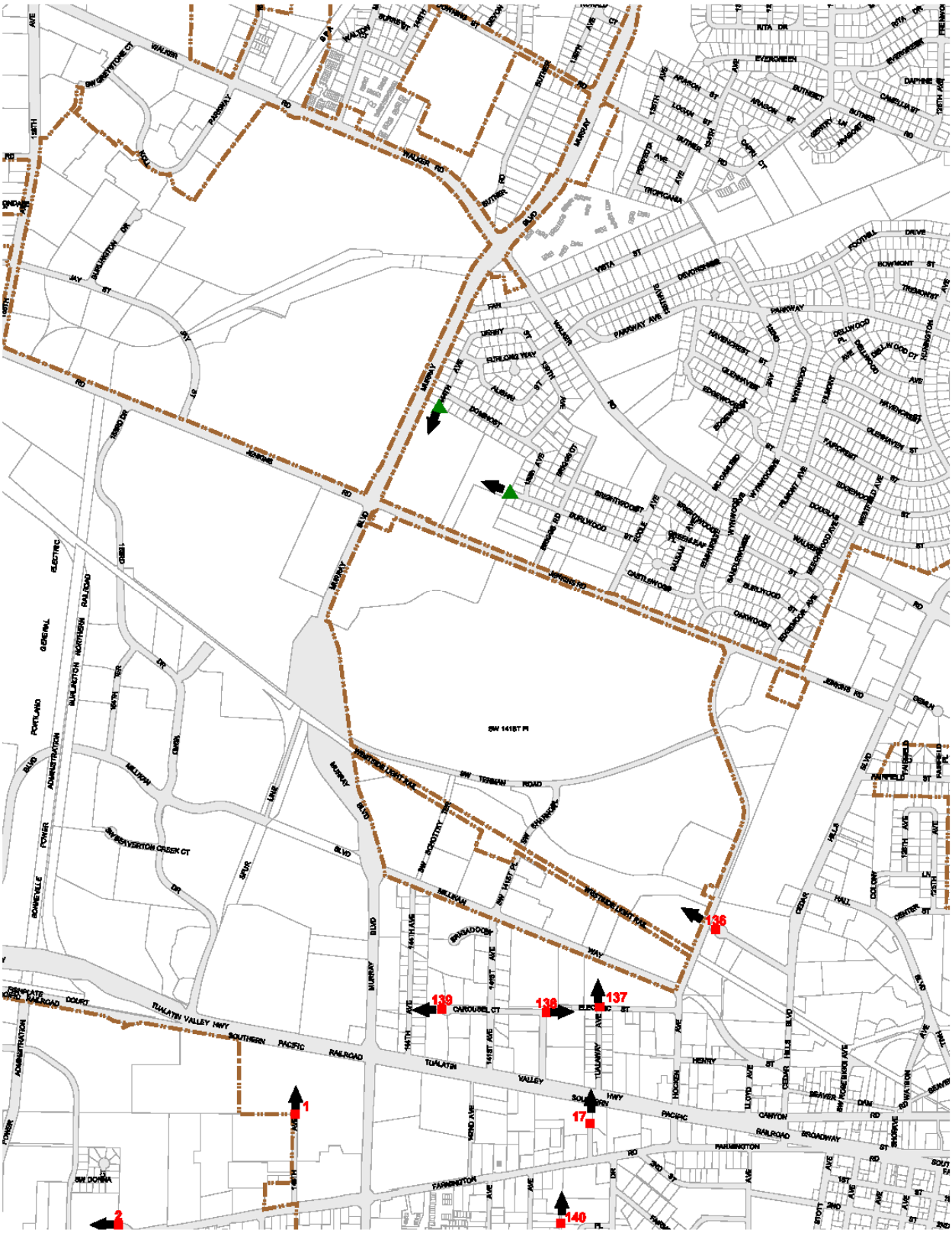

MURRAY BLVD
TUALATIN VALLEY HWY
SOUTHERN PACIFIC RAILROAD
SW 141ST PL
SW TERMAN ROAD
SW FARMINGTON RD
SW 150TH AVE
SW 149TH AVE
SW 148TH AVE
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SW 2ND AVE
SW 1ST AVE
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Figure 6.14

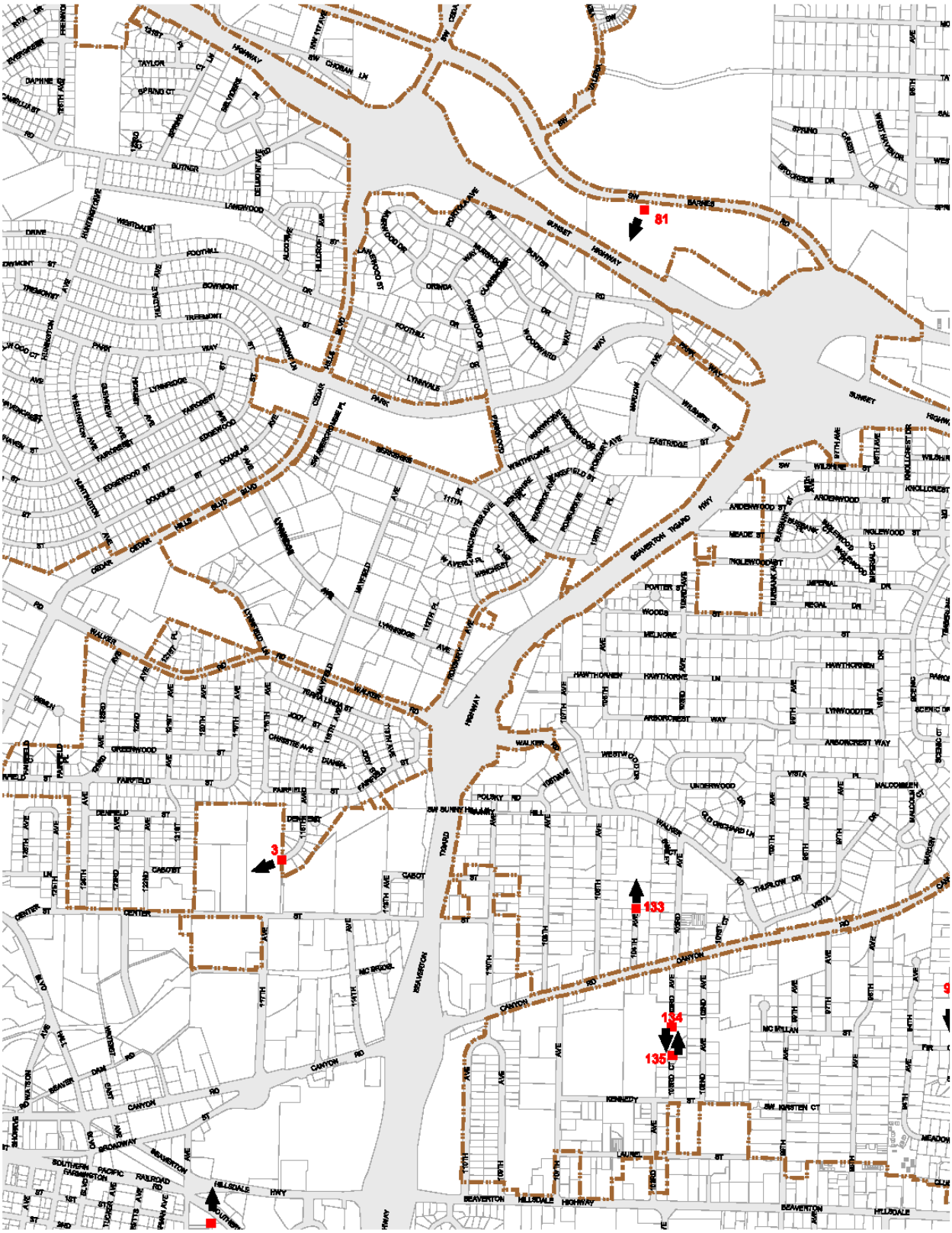


Figure 6.15

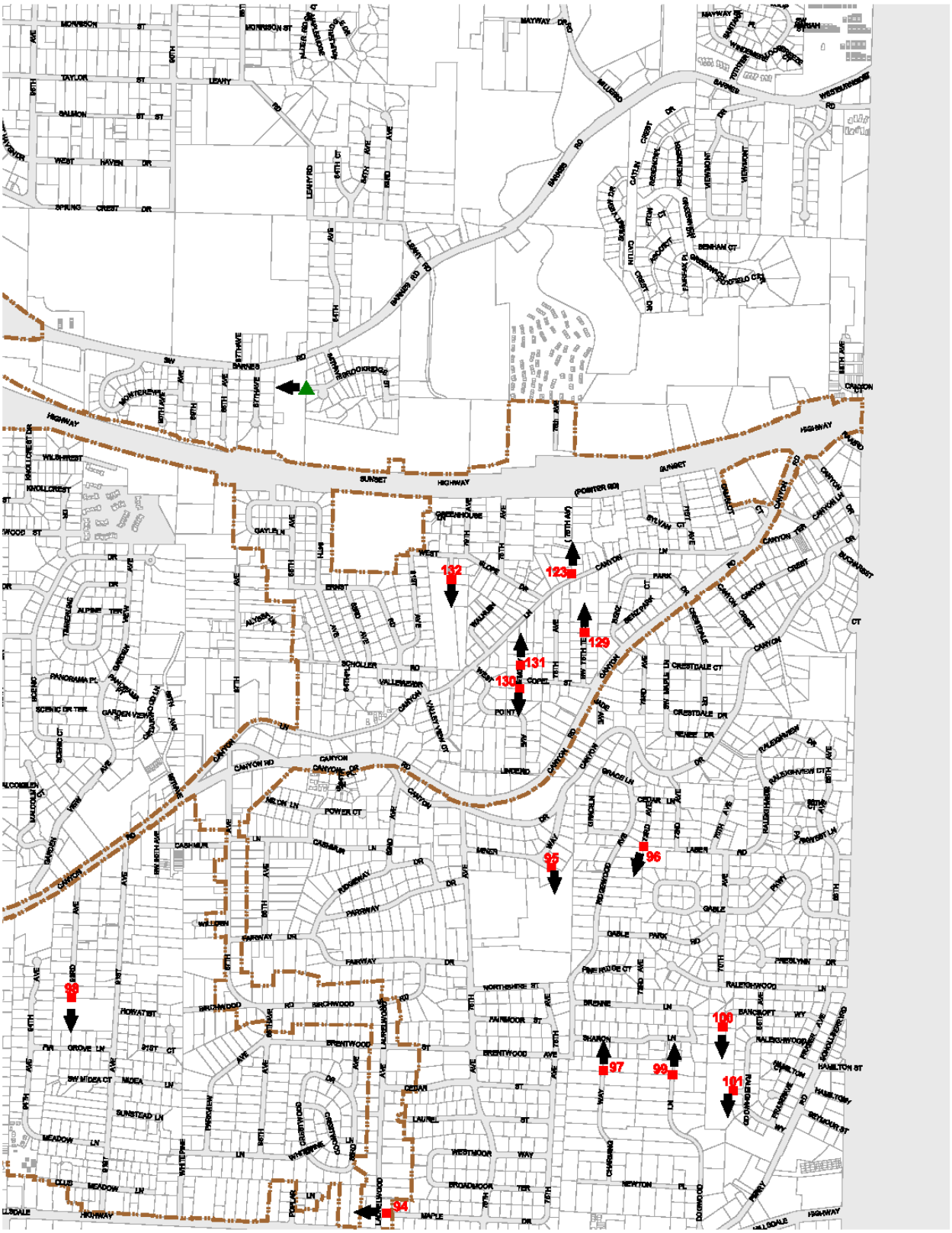


Figure 6.16



Figure 6.17



Figure 6.18

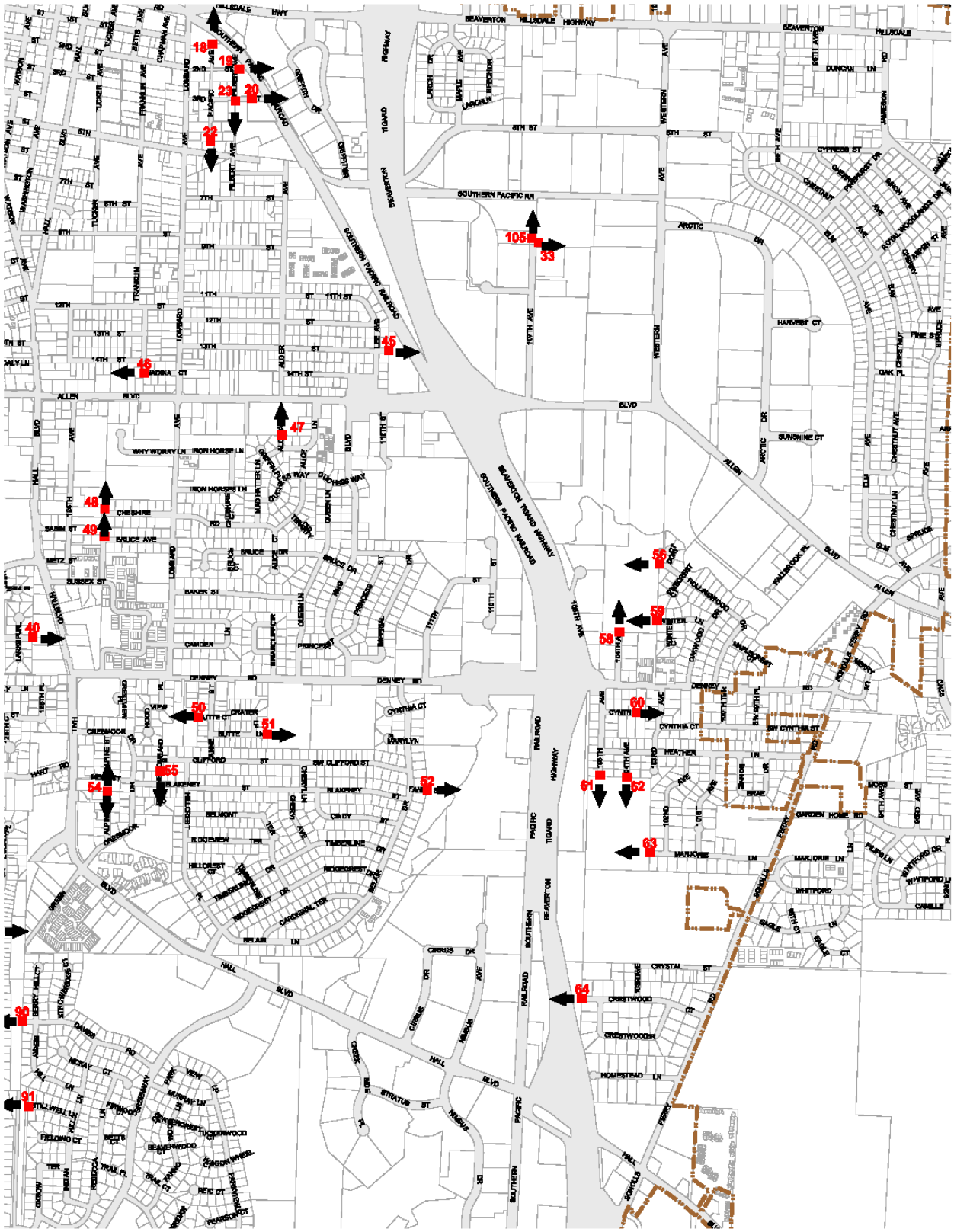

BEAVERTON HILLSDALE HIGHWAY
SOUTHERN PACIFIC RAILROAD
SOUTHERN PACIFIC RUN
BEAVERTON TIGARD HIGHWAY
ALLEN BLVD
WESTERN AVE
10TH AVE
6TH ST
11TH ST
14TH ST
16TH ST
DENNEY RD
HALL BLVD
SCHOLLS FERRY RD
18
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Figure 6.19

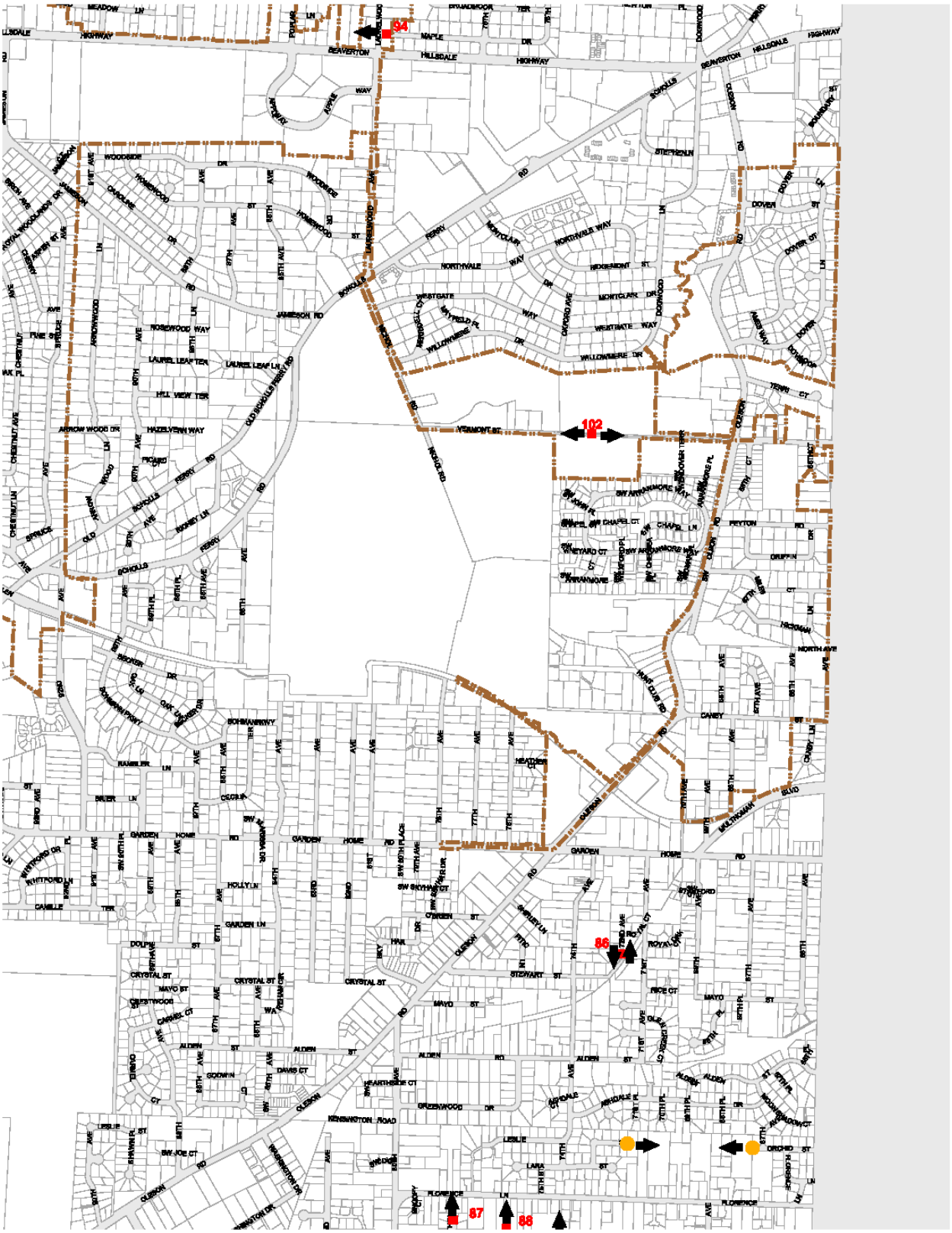

94
102
86
87
88
BEAVERTON HILLSDALE HIGHWAY
JAMESON RD
VERMONT ST
OLESON RD
GARDEN HOME RD
ALDEN ST
MAYO ST
CRYSTAL ST
LESLIE ST
FLORENCE LN

Figure 6.20

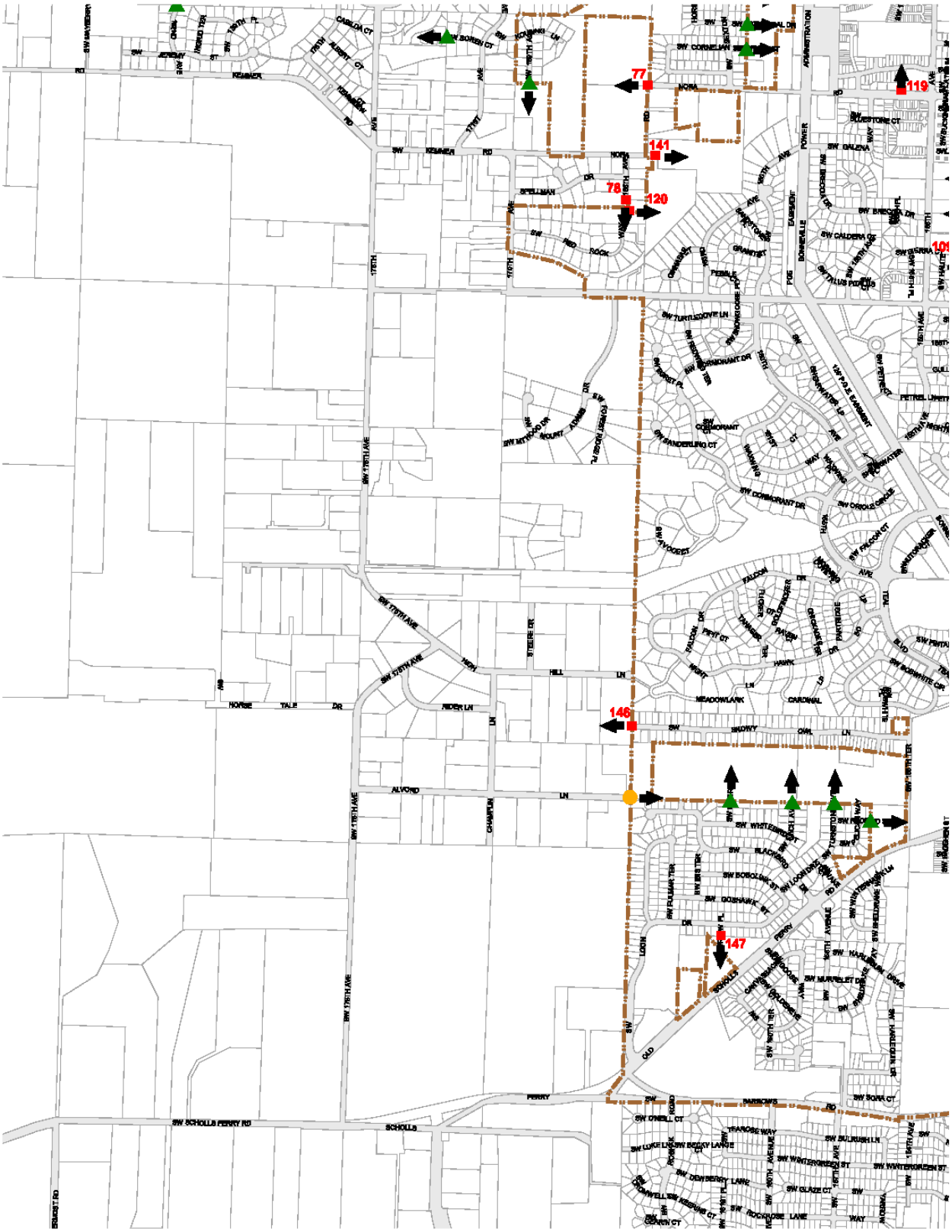

77
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147
SW SCHOLLS FERRY RD
SW 175TH AVE
SW 170TH AVE
SW 173RD AVE
SW 178TH AVE
SW KEMMER RD
SW ALVORD LN
SW OWL LN
SW MEADOWLARK
SW CARDINAL
SW FALCON DR
SW CROQUIS CIRCLE
SW CORMORANT DR
SW TURKLOOVE LN
SW CALDERA AVE
SW GALENA
SW BREDSEL DR
SW WHITEWATER
SW WHITEBERRY CT
SW BLACKFORD
SW BOBOLINK ST
SW GOSHAWK ST
SW MURRELET DR
SW WINTERGREEN ST
SW WINTERGREEN WALK
SW BULRUSH LN
SW DEWBERRY LANE
SW ROCKROSE LANE
SW GLAZE CT
SW SORA CT
SW O'NEILL CT
SW LUKE LANE
SW BECKY LANE
SW HORSE TAIL DR
SW RIDER LN
SW STEERE DR
SW CHAMPLIN
SW PERRY
SW BARROWS RD
SW OLD
SW 150TH AVE
SW 155TH AVE
SW 160TH AVE
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Figure 6.21

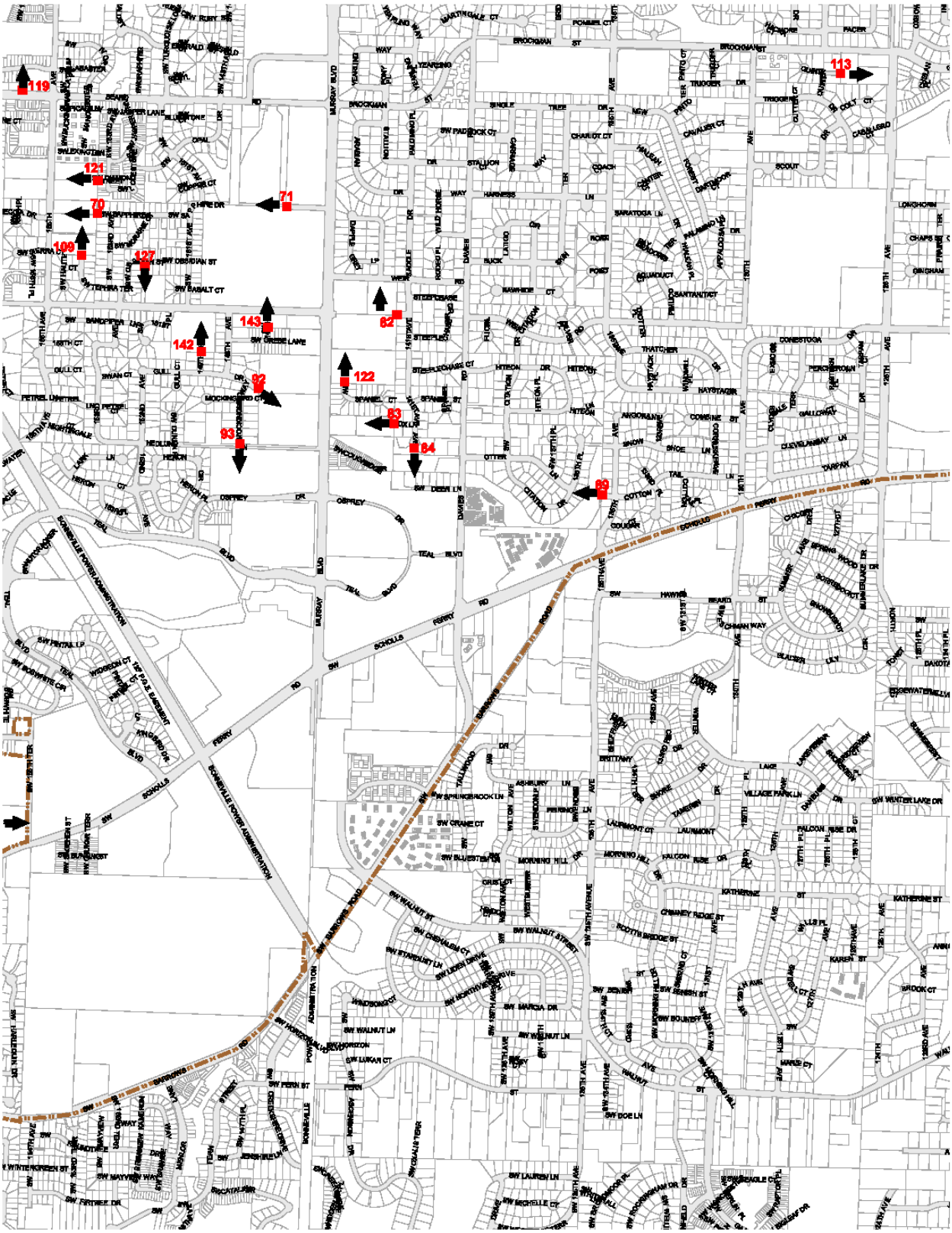

119
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113
SW MURRAY BLVD
SW SCHOLLS FERRY RD
SW TEAL BLVD
SW BARROWS RD
SW WALNUT ST
SW 185TH AVE
SW 170TH AVE
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Figure 6.22

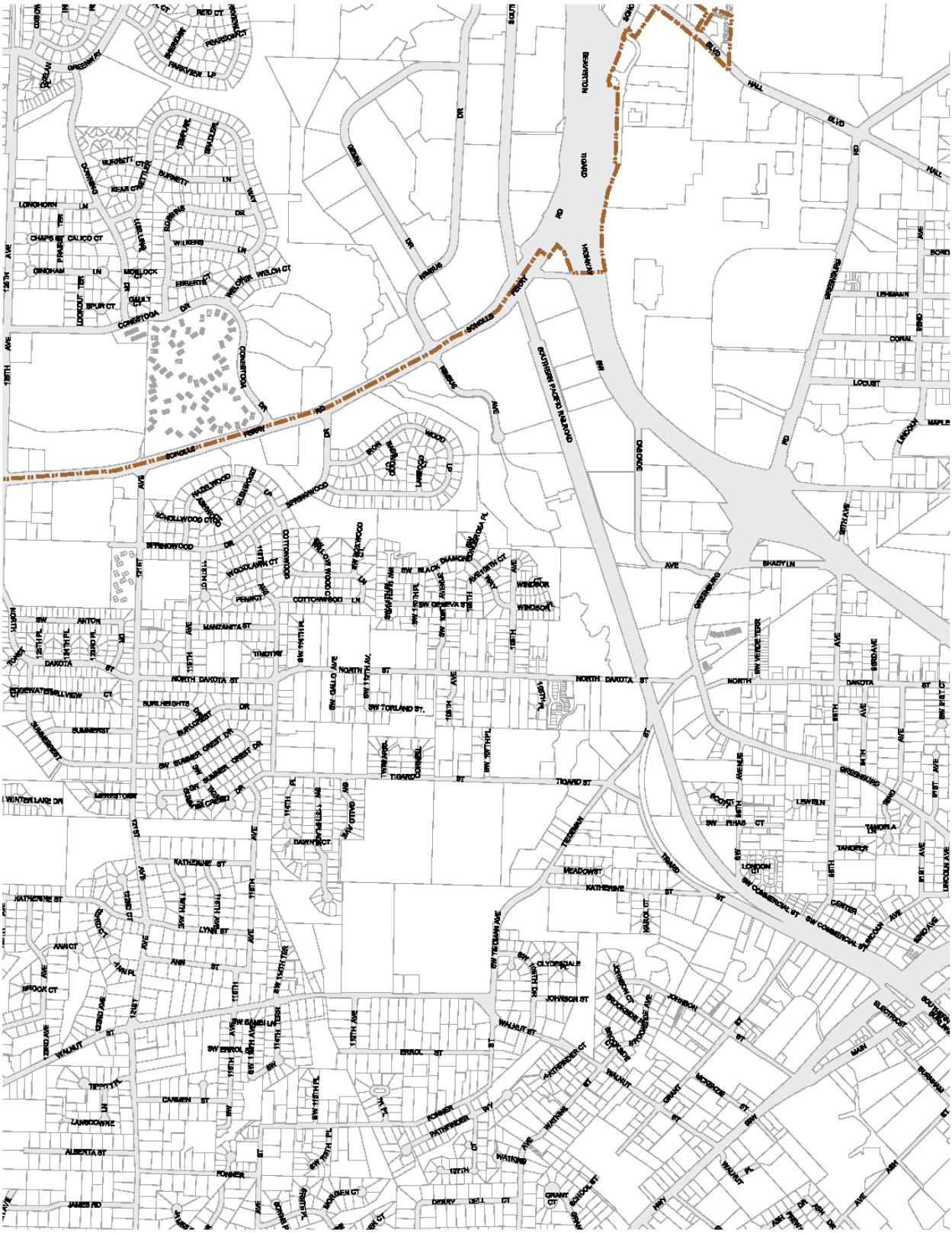

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HALL BLVD
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Figure 6.23


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CHESTNUT ST
ELMWOOD ST
HEMLOCK ST
LARCH ST
LOCUST ST
MAPLELEAF ST
OAK ST
PINE ST
SPRUCE ST
THORN ST
HWY 217
HWY 26
ATLANTA ST
BAYLOR ST
CLINTON ST
DARTMOUTH ST
ELMHURST ST
FRANKLIN ST
GONZAGA ST
HAMPTON ST
CORAL ST
BORDERS AVE
LINCOLN AVE
CENTER ST
BARBARA LN
VENTURA CT
VENTURA DR
ALFRED ST
WALNUT TERR
SW KINGSVIEW CT
SHADY LN
SHADY CT
LOLA LN
SW MAUI CT
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SW LARADA PL
SW MAPLEBEAR CT
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SW 927TH AVE
SW 928TH AVE
SW 929TH AVE
SW 930TH AVE
SW 931ST AVE
SW 932ND AVE
SW 933RD AVE
SW 934TH AVE
SW 935TH AVE
SW 936TH AVE
SW 937TH AVE
SW 938TH AVE
SW 939TH AVE
SW 940TH AVE
SW 941ST AVE
SW 942ND AVE
SW 943RD AVE
SW 944TH AVE
SW 945TH AVE
SW 946TH AVE
SW 947TH AVE
SW 948TH AVE
SW 949TH AVE
SW 950TH AVE
SW 951ST AVE
SW 952ND AVE
SW 953RD AVE
SW 954TH AVE
SW 955TH AVE
SW 956TH AVE
SW 957TH AVE
SW 958TH AVE
SW 959TH AVE
SW 960TH AVE
SW 961ST AVE
SW 962ND AVE
SW 963RD AVE
SW 964TH AVE
SW 965TH AVE
SW 966TH AVE
SW 967TH AVE
SW 968TH AVE
SW 969TH AVE
SW 970TH AVE
SW 971ST AVE
SW 972ND AVE
SW 973RD AVE
SW 974TH AVE
SW 975TH AVE
SW 976TH AVE
SW 977TH AVE
SW 978TH AVE
SW 979TH AVE
SW 980TH AVE
SW 981ST AVE
SW 982ND AVE
SW 983RD AVE
SW 984TH AVE
SW 985TH AVE
SW 986TH AVE
SW 987TH AVE
SW 988TH AVE
SW 989TH AVE
SW 990TH AVE
SW 991ST AVE
SW 992ND AVE
SW 993RD AVE
SW 994TH AVE
SW 995TH AVE
SW 996TH AVE
SW 997TH AVE
SW 998TH AVE
SW 999TH AVE
SW 1000TH AVE

System Maintenance

Preservation and maintenance of the transportation system are essential to protecting the transportation investment. The majority of gas tax revenues are used for maintenance. With an increasing inventory of streets and the need for greater maintenance of older facilities, protecting and increasing maintenance funds is critical.

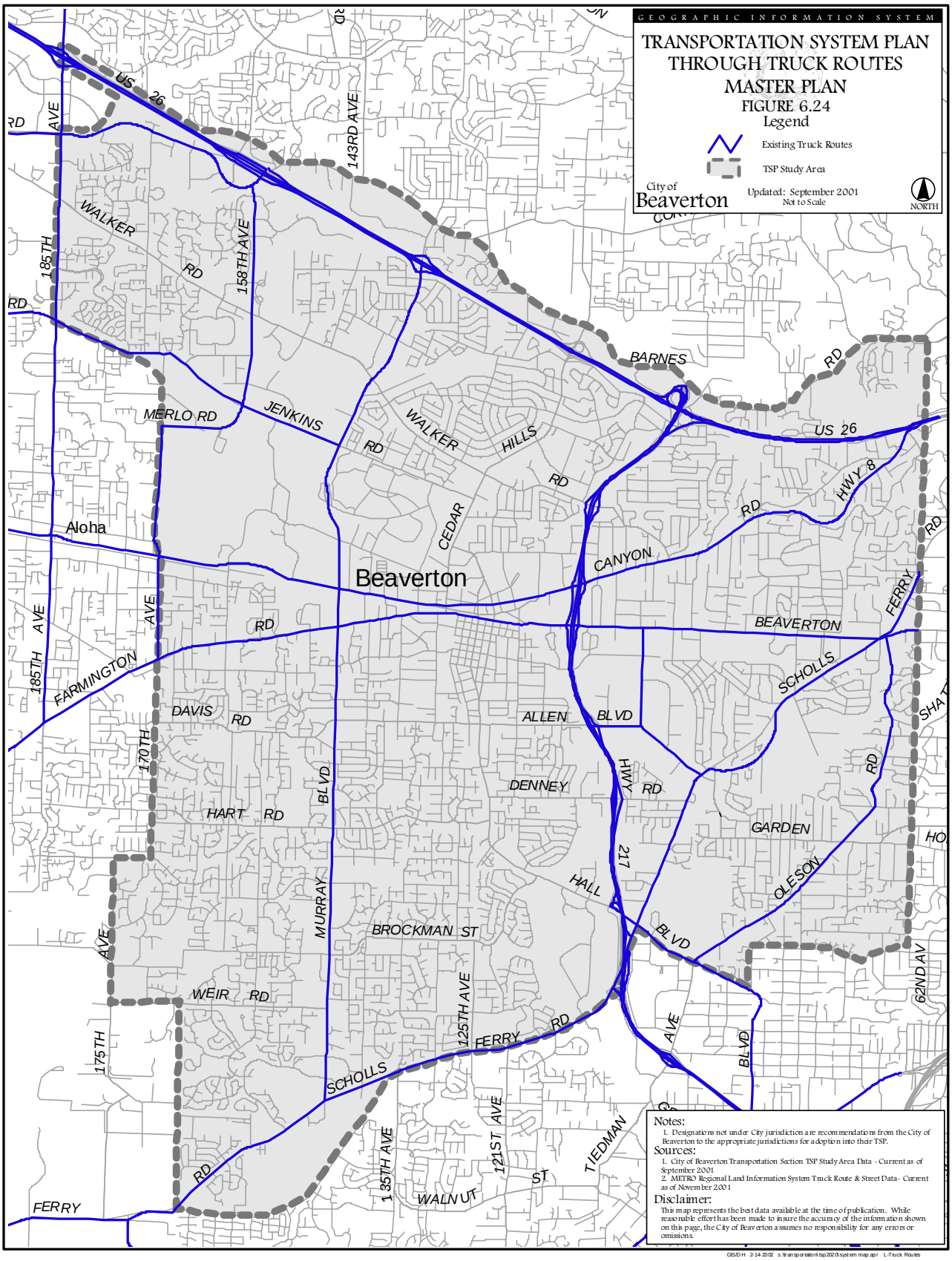
A key concept is that pavement quality deteriorates 40 percent in the first 75 percent of pavement life. However, there is a rapid acceleration of this deterioration later, so that in the next 12 percent of life, there is another 40 percent drop in quality. The City's pavement management program tracks pavement condition so that repairs can be made at an optimum time in pavement life. Pavement management projects are scheduled and funded through the City's capital improvement plan.

Parking

Parking needs are reviewed with new development. The regional parking minimum and maximum ratios are contained in the City's *Development Code*. These ratios address the State required reduction in parking spaces per capita. Shared parking, parking pricing, development of parking districts, and permit parking programs are all strategies for managing demand that the City is using or exploring.

Through Truck Routes

Efficient truck movement plays a vital role in the economical movement of raw materials and finished products. Through truck routes provide for efficient movement while maintaining neighborhood livability, public safety, and minimizing roadway maintenance costs. The Through Truck Route map (Figure 6.24) acknowledges these roadways so that when improvements are made, a "truck friendly" design can be considered. Such designs can include 12-foot wide travel lanes, longer access spacing, 35-foot or larger curb returns, and increased pavement depth.

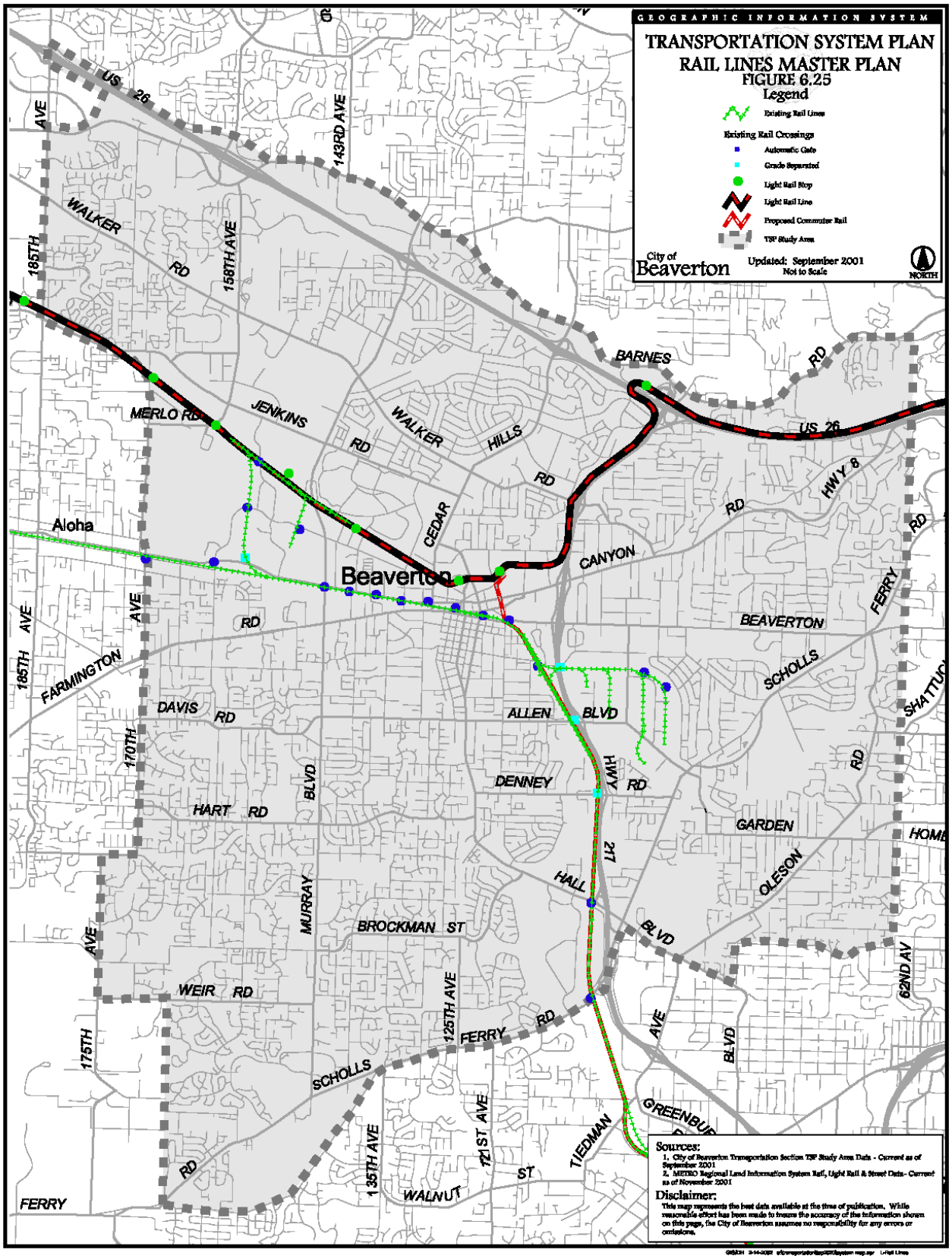

GEOGRAPHIC INFORMATION SYSTEM
TRANSPORTATION SYSTEM PLAN
THROUGH TRUCK ROUTES
MASTER PLAN
FIGURE 6.24
Legend
Existing Truck Routes
TSP Study Area
City of Beaverton
Updated: September 2001
Not to Scale
NORTH
Notes:
1. Designations not under City jurisdiction are recommendations from the City of Beaverton to the appropriate jurisdictions for adoption into their TSP.
Sources:
1. City of Beaverton Transportation Section TSP Study Area Data - Current as of September 2001
2. METRO Regional Land Information System Truck Route & Street Data- Current as of November 2001
Disclaimer:
This map represents the best data available at the time of publication. While reasonable effort has been made to insure the accuracy of the information shown on this page, the City of Beaverton assumes no responsibility for any errors or omissions.
GIS/DH 2-14-2002 s:\transportation\tsp2020\system map.apr L-Truck Routes
Beaverton
Aloha
US 26
BARNES RD
WALKER RD
MERLO RD
JENKINS RD
HILLS RD
CEDAR
CANYON
HWY 8
BEAVERTON
FERRY
SCHOLLS
FARMINGTON
DAVIS RD
ALLEN BLVD
DENNEY
HART RD
MURRAY BLVD
BROCKMAN ST
HALL
OLESON
GARDEN
WEIR RD
125TH AVE
121ST AVE
135TH AVE
WALNUT ST
TIEDMAN
62ND AV
185TH AVE
158TH AVE
143RD AVE
170TH AVE
175TH AVE
217 HWY

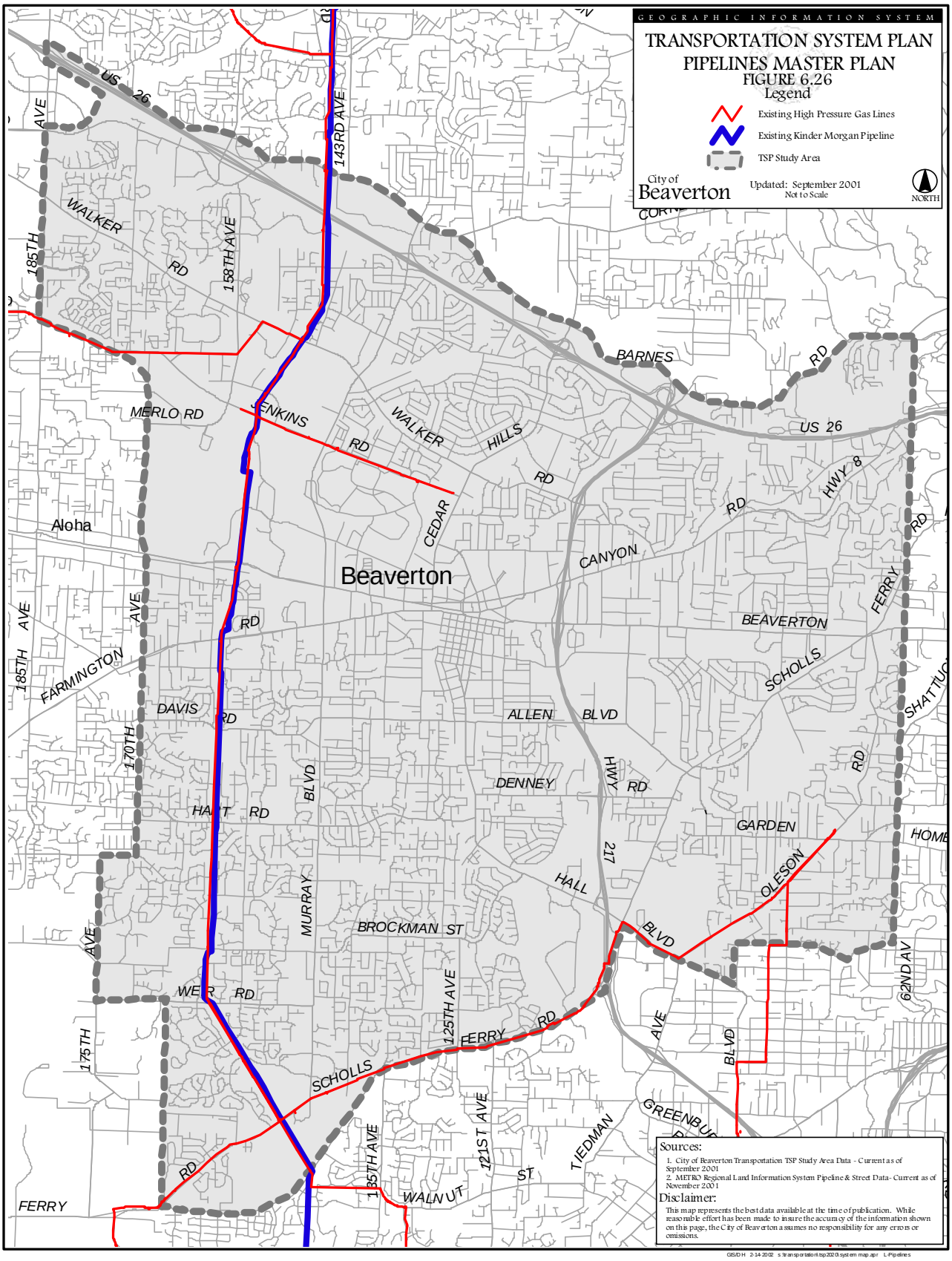
Other Modes (Rail, Air, Pipeline, Waterways)

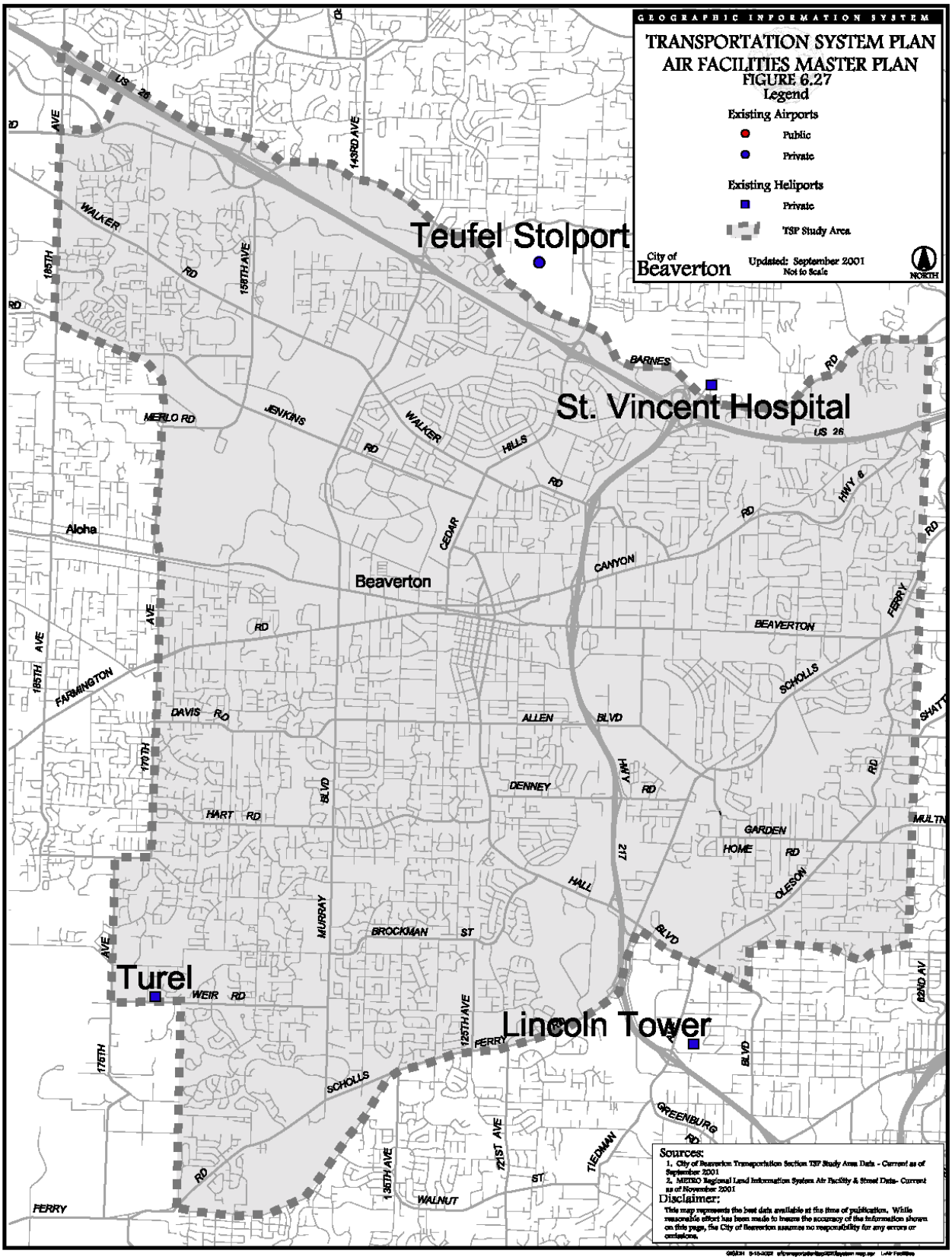
The rail, pipeline, and air facilities master plans show existing and future expansion of these systems. All freight rail lines in the Beaverton area are operated by Portland & Western, a sister company of Willamette & Pacific Railroad, a subsidiary of Genesee & Wyoming Incorporated. Trains operate seven days a week throughout the day. Growth in cars per train will vary in the future based on demand, though train frequency is not expected to change significantly. Long-term growth is based on acquisition of existing trackage in order to expand existing networks that can compete with trucks. (Figure 6.25)

The existing natural gas pipeline system in Beaverton and the petroleum gas line that runs from the Port of Portland to Eugene through Beaverton (Figure 6.26) are not expected to expand during the planning period. Future expansion plans of the Kinder Morgan pipeline could change with market demand.

There are no airports in the Beaverton area, although one private heliport (Turel) is located in southwest Beaverton (Figure 6.27). There are no commercially navigable waterways in the study area for transportation purposes.


GEOGRAPHIC INFORMATION SYSTEM
TRANSPORTATION SYSTEM PLAN
RAIL LINES MASTER PLAN
FIGURE 6.25
Legend
Existing Rail Lines
Existing Rail Crossings
Automatic Gate
Grade Separated
Light Rail Stop
Light Rail Line
Proposed Commuter Rail
TSP Study Area
City of Beaverton
Updated: September 2001
Not to Scale
NORTH
Beaverton
Aloha
US 26
BARNES RD
MERLO RD
JENKINS RD
WALKER RD
HILLS RD
CEDAR
CANYON
HWY 8
BEAVERTON
FERRY
SCHOLLS
SHATTUCK
ALLEN BLVD
DENNEY RD
HART RD
DAVIS RD
FARMINGTON
WEIR RD
FERRY RD
SCHOLLS
GREENBUR
TIEDMAN
HALL
OLESON
GARDEN
HOME
MURRAY BLVD
BROCKMAN ST
WALNUT ST
185TH AVE
158TH AVE
143RD AVE
170TH AVE
175TH AVE
125TH AVE
135TH AVE
121ST AVE
62ND AV
Sources:
1. City of Beaverton Transportation Section TSP Study Area Data - Current as of September 2001
2. METRO Regional Land Information System Rail, Light Rail & Street Data - Current as of November 2001
Disclaimer:
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GEOGRAPHIC INFORMATION SYSTEM
TRANSPORTATION SYSTEM PLAN
PIPELINES MASTER PLAN
FIGURE 6.26
Legend
Existing High Pressure Gas Lines
Existing Kinder Morgan Pipeline
TSP Study Area
City of Beaverton
Updated: September 2001
Not to Scale
NORTH
Beaverton
Aloha
US 26
BARNES RD
MERLO RD
WALKER RD
JENKINS RD
HILLS RD
CEDAR
CANYON
HWY 8
FERRY
BEAVERTON SCHOLLS
FARMINGTON
DAVIS RD
ALLEN BLVD
DENNEY HWY
GARDEN
HOME
OLESON
HALL BLVD
MURRAY BLVD
BROCKMAN ST
WER RD
125TH AVE
FERRY RD
SCHOLLS
135TH AVE
121ST AVE
TIEDMAN
WALNUT ST
GREENBUR
62ND AV
185TH AVE
170TH AVE
175TH
143RD AVE
158TH AVE
Sources:
1. City of Beaverton Transportation TSP Study Area Data - Current as of September 2001
2. METRO Regional Land Information System Pipeline & Street Data- Current as of November 2001
Disclaimer:
This map represents the best data available at the time of publication. While reasonable effort has been made to insure the accuracy of the information shown on this page, the City of Beaverton assumes no responsibility for any errors or omissions.
GIS/DH 2-14-2002 s:\transportation\tsp2020\system map.apr L-Pipelines


GEOGRAPHIC INFORMATION SYSTEM
TRANSPORTATION SYSTEM PLAN
AIR FACILITIES MASTER PLAN
FIGURE 6.27
Legend
Existing Airports
Public
Private
Existing Heliports
Private
TSP Study Area
City of Beaverton
Updated: September 2001
Not to Scale
NORTH
Teufel Stolport
St. Vincent Hospital
Turel
Lincoln Tower
Beaverton
Aloha
US 26
BARNES RD
MERLO RD
JENKINS RD
WALKER RD
HILLS RD
CEDAR HILLS
CANYON
HWY 6
BEAVERTON
FERRY
SCHOLLS
FARMINGTON
DAVIS RD
ALLEN BLVD
DENNEY RD
HART RD
GARDEN HOME RD
OLESON
HALL BLVD
MURRAY BLVD
BROCKMAN ST
WEIR RD
SCHOLLS FERRY RD
GREENBURG RD
TIEDMAN
WALNUT ST
185TH AVE
170TH AVE
175TH AVE
158TH AVE
143RD AVE
125TH AVE
135TH AVE
121ST AVE
217
Sources:
1. City of Beaverton Transportation Section TSP Study Area Data - Current as of September 2001
2. METRO Regional Land Information System Air Facility & Street Data- Current as of November 2001
Disclaimer:
This map represents the best data available at the time of publication. While reasonable effort has been made to insure the accuracy of the information shown on this page, the City of Beaverton assumes no responsibility for any errors or omissions.

6.4 TRANSPORTATION FUNDING

There are several potential funding sources for transportation improvements that have all been used in the past. Chapter 1 of the *Transportation System Plan Update* contains a summary of these options. Often, several sources of funding are used. They can include local system development charges and programs like Washington County's Major Streets Transportation Improvement Program that was approved by the voting public. State and federal grants and transportation allocations are also available. Public support and a consensus on the necessary improvements in the community are critical to funding and building the system improvements. Support is developed through the public participation process that takes place during updates of the *Transportation System Plan*.

Order of magnitude cost estimates for the projects identified in the street, bicycle, and pedestrian action and master plans are contained in previous tables. Other projects are estimated using general unit costs for transportation improvements. Many of the project costs were developed by Washington County, Metro, or the Oregon Department of Transportation for projects in the *Regional Transportation Plan*. Where the City identified the comparable needs, these project costs were used. Table 6.7 summarizes the total costs outlined in the *Transportation System Plan Update*.

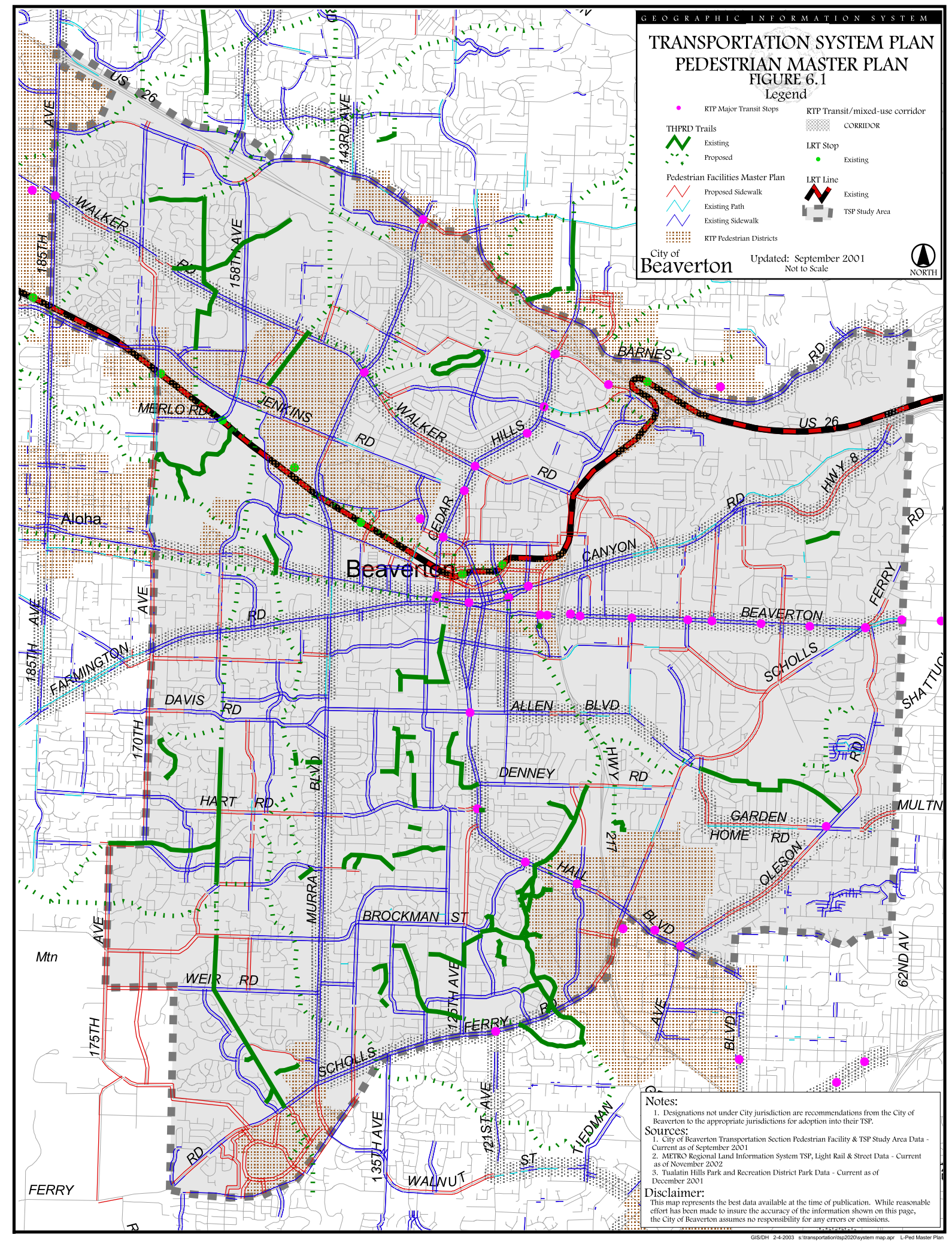
Current transportation revenue for the City of Beaverton is summarized in Table 6.8. Assuming a constant funding level over the next 20 years, the identified revenues would potentially fund slightly over $300,000,000 in transportation projects (maintenance, operation, and construction) leaving a substantial gap between the funding needs and identified funding sources ($1,326,973,000 - $301,600,000 = $1,025,373,000 shortfall). The City continues to work with its regional partners and the State to identify and access improvement funds.

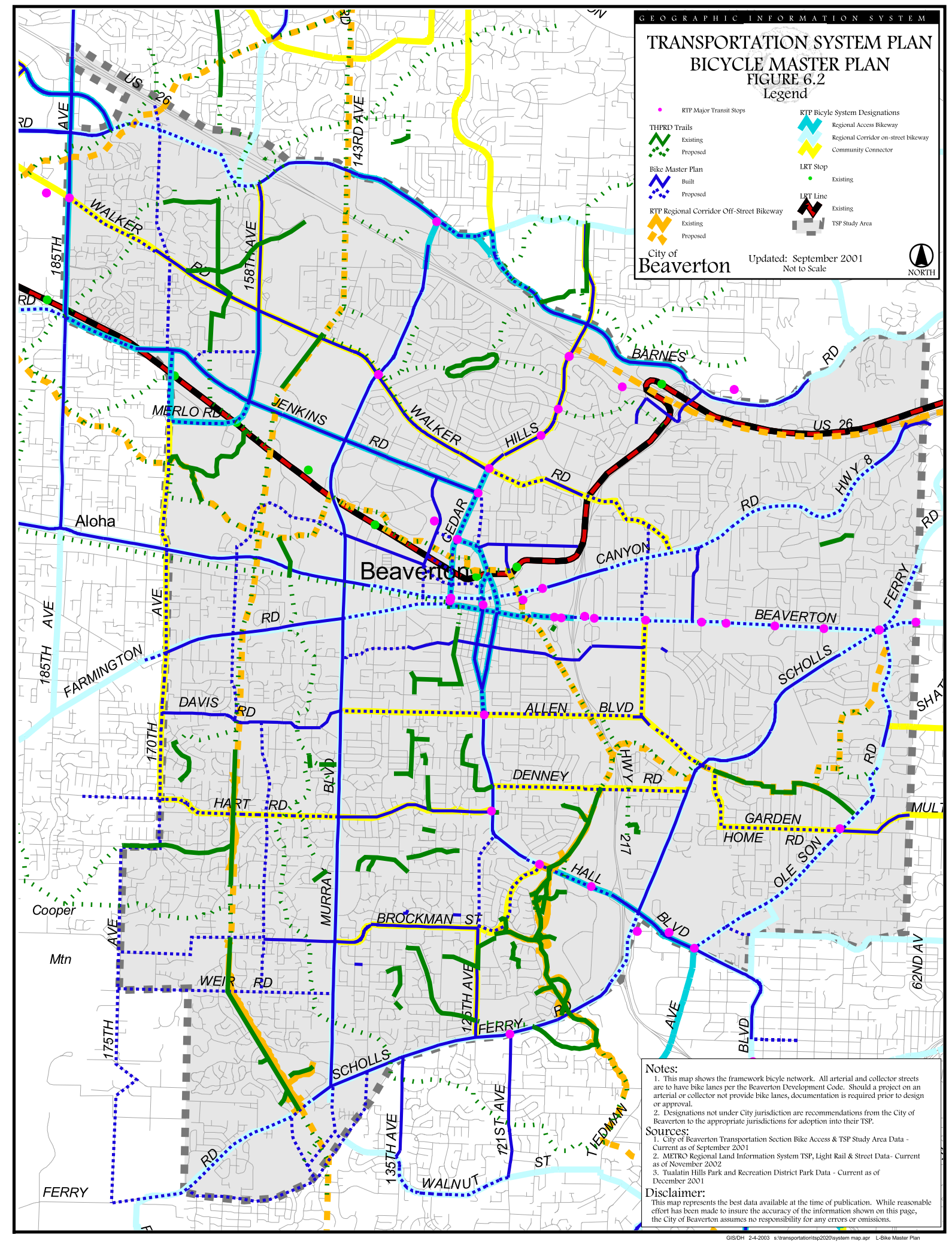
Table 6.7 Approximate Costs for Beaverton Transportation System Plan

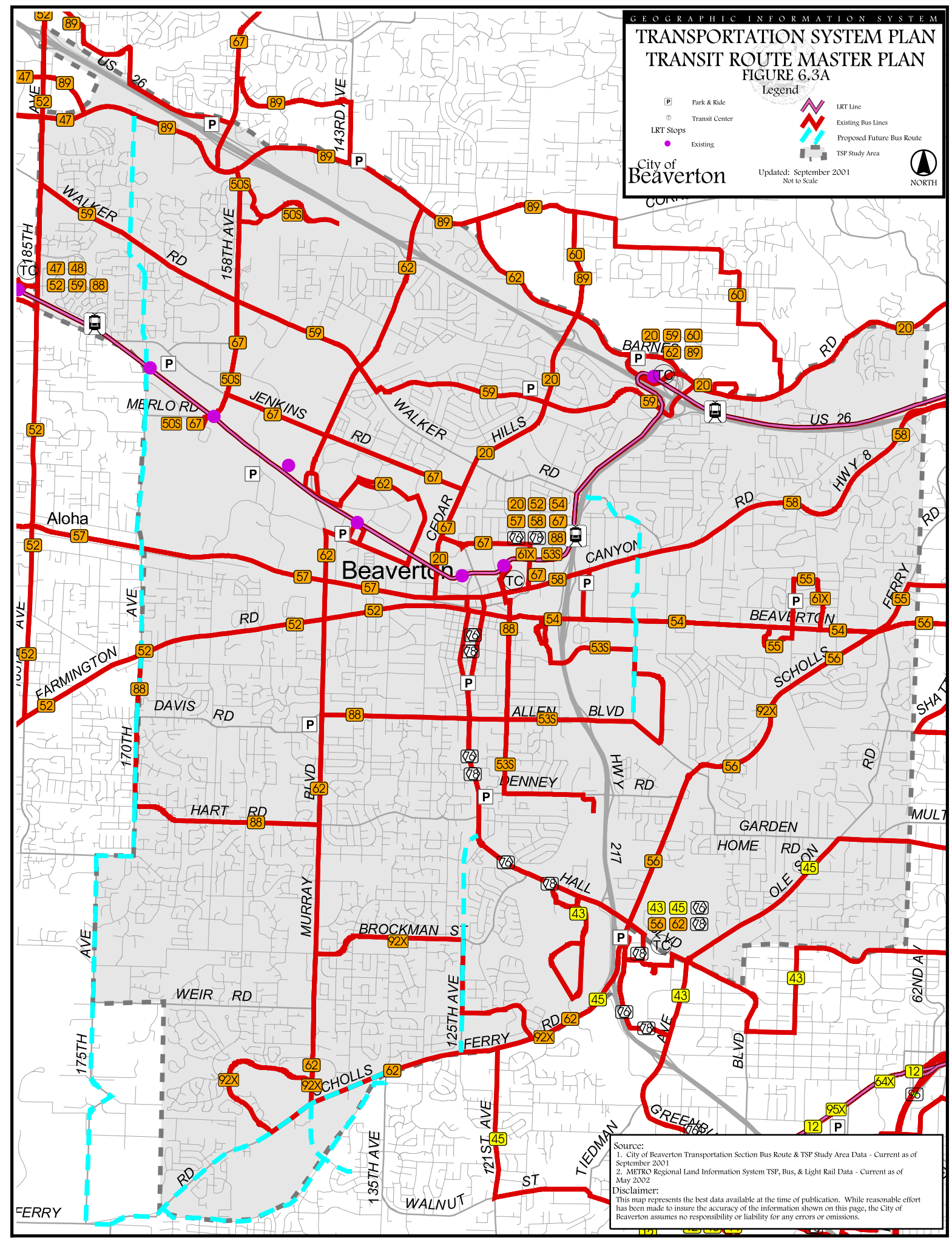
Transportation Improvements		Approximate Cost In 1000s of 2001 Dollars
Street and Intersection Improvement Projects:	Committed	$98,333
	Unfunded	$898,483
Signal Coordination, Intelligent Transportation System, Transportation System Management System Improvements		$6,415
Road Maintenance (assumes 4% per year growth)		$100,000
Bicycle Action Plan		$27,124
Pedestrian Action Plan		$45,588
Transit Service Improvements		$144,830
Pedestrian and School Safety Program ($10,000 per year)		$200
Sidewalk Grant Program ($50,000 per year)		$1,000
Park-and-Ride Expansion (1,000 spaces)		$2,000
Neighborhood Traffic Management ($75,000 per year)		$1,500
TSP Support Documents (i.e., TSP, *Development Code*, *Comprehensive Plan* updates)		$500
Transportation Demand Management Support ($50,000 per year)		$1,000
20-Year Total		**$1,326,973**

Table 6.8 Estimate of Available Transportation Funding From Existing Sources

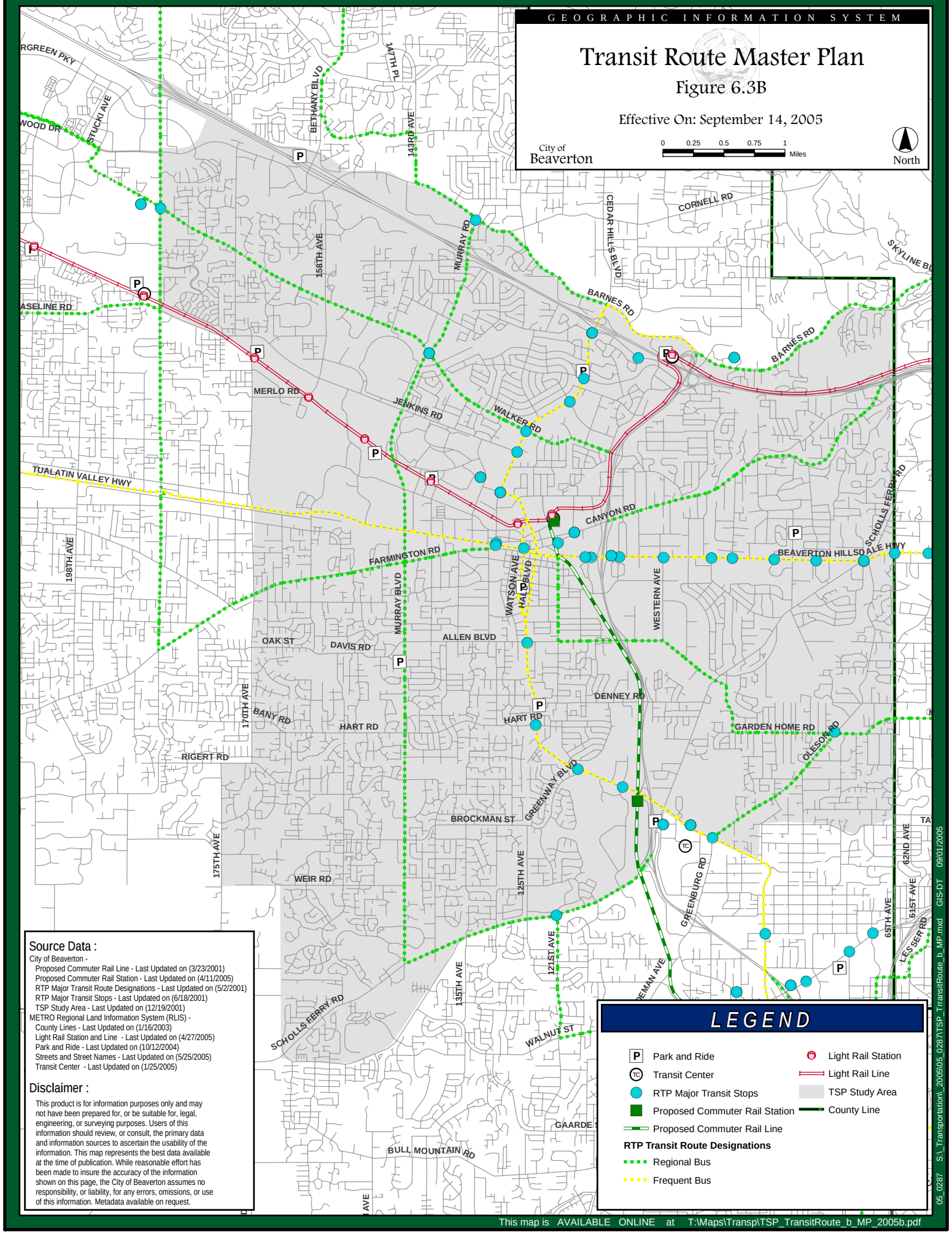
Funding Source	Approximate Annual Revenue In 1000s of 2001 Dollars
State Motor Vehicle Fees to City	$3,400
County Gas Tax to City	$290
Traffic Impact Fees to City	$1,400
Miscellaneous	$290
Major Streets Transportation Improvement Program Funds to City (approximate)	$2,900
State and Federal Fees used in City (approximate, assumes 35% of allocation used for capital)	$6,800
Annual Total	**$15,080**
20-Year Total (Assumes current funding sources only)	**$301,600**

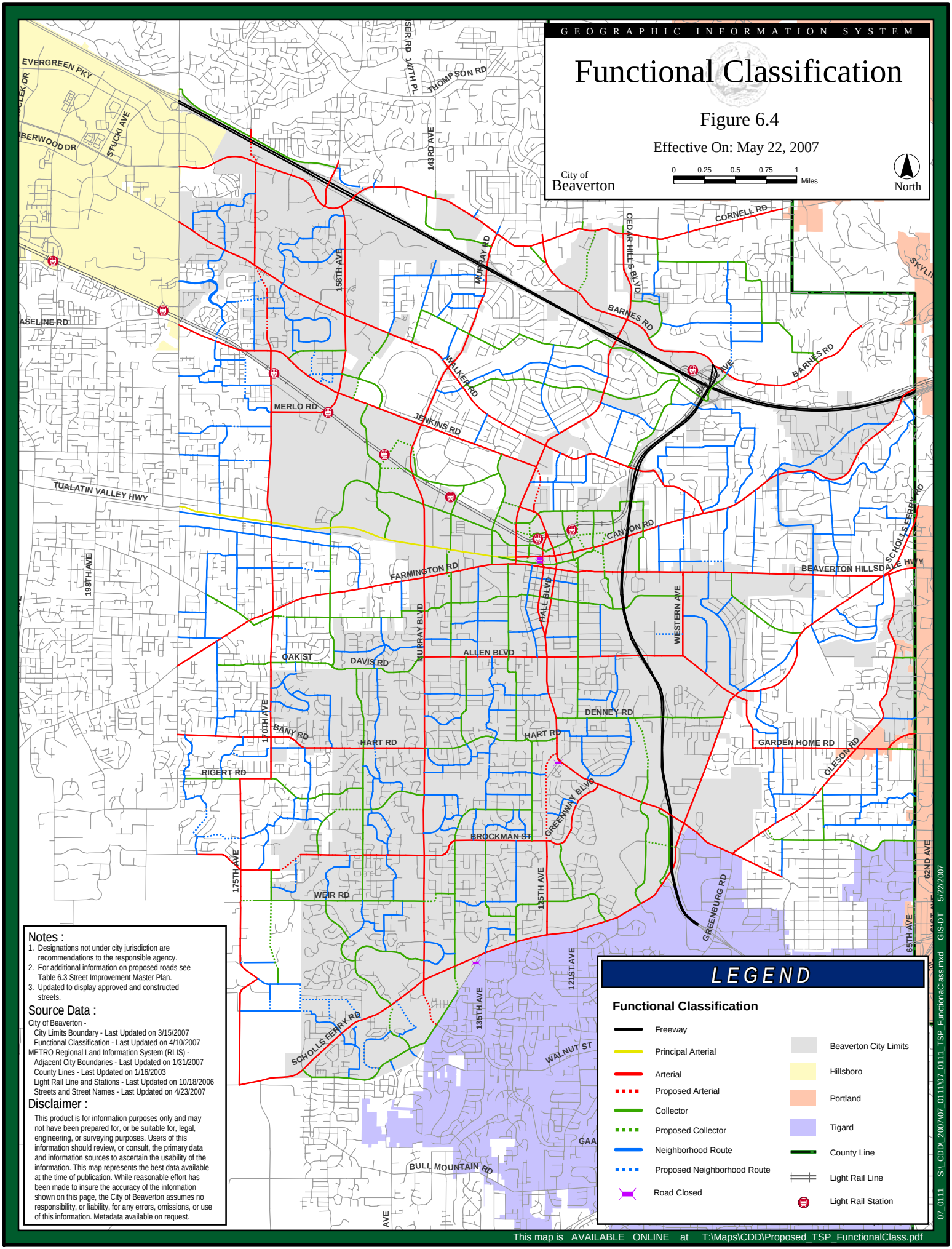

GEOGRAPHIC INFORMATION SYSTEM
TRANSPORTATION SYSTEM PLAN
PEDESTRIAN MASTER PLAN
FIGURE 6.1
Legend
RTP Major Transit Stops
RTP Transit/mixed-use corridor
CORRIDOR
THPRD Trails
Existing
Proposed
LRT Stop
Existing
Pedestrian Facilities Master Plan
Proposed Sidewalk
Existing Path
Existing Sidewalk
LRT Line
Existing
TSP Study Area
RTP Pedestrian Districts
City of Beaverton
Updated: September 2001
Not to Scale
NORTH
Notes:
1. Designations not under City jurisdiction are recommendations from the City of Beaverton to the appropriate jurisdictions for adoption into their TSP.
Sources:
1. City of Beaverton Transportation Section Pedestrian Facility & TSP Study Area Data - Current as of September 2001
2. METRO Regional Land Information System TSP, Light Rail & Street Data - Current as of November 2002
3. Tualatin Hills Park and Recreation District Park Data - Current as of December 2001
Disclaimer:
This map represents the best data available at the time of publication. While reasonable effort has been made to insure the accuracy of the information shown on this page, the City of Beaverton assumes no responsibility for any errors or omissions.
GIS/DH 2-4-2003 s:\transportation\tsp2020\system map.apr L-Ped Master Plan
Beaverton
Aloha
Mtn
US 26
BARNES RD
MERLO RD
JENKINS RD
WALKER RD
HILLS RD
CEDAR HILLS BLVD
CANYON RD
BEAVERTON SCHOLLS FERRY RD
FARMINGTON RD
DAVIS RD
ALLEN BLVD
DENNEY RD
HART RD
MURRAY BLVD
BROCKMAN ST
WEIR RD
SCHOLLS FERRY RD
WALNUT ST
TIEDEMAN AVE
HALL BLVD
GARDEN HOME RD
OLESON RD
HWY 8
HWY 217
185TH AVE
170TH AVE
175TH AVE
158TH AVE
143RD AVE
135TH AVE
125TH AVE
121ST AVE
62ND AVE

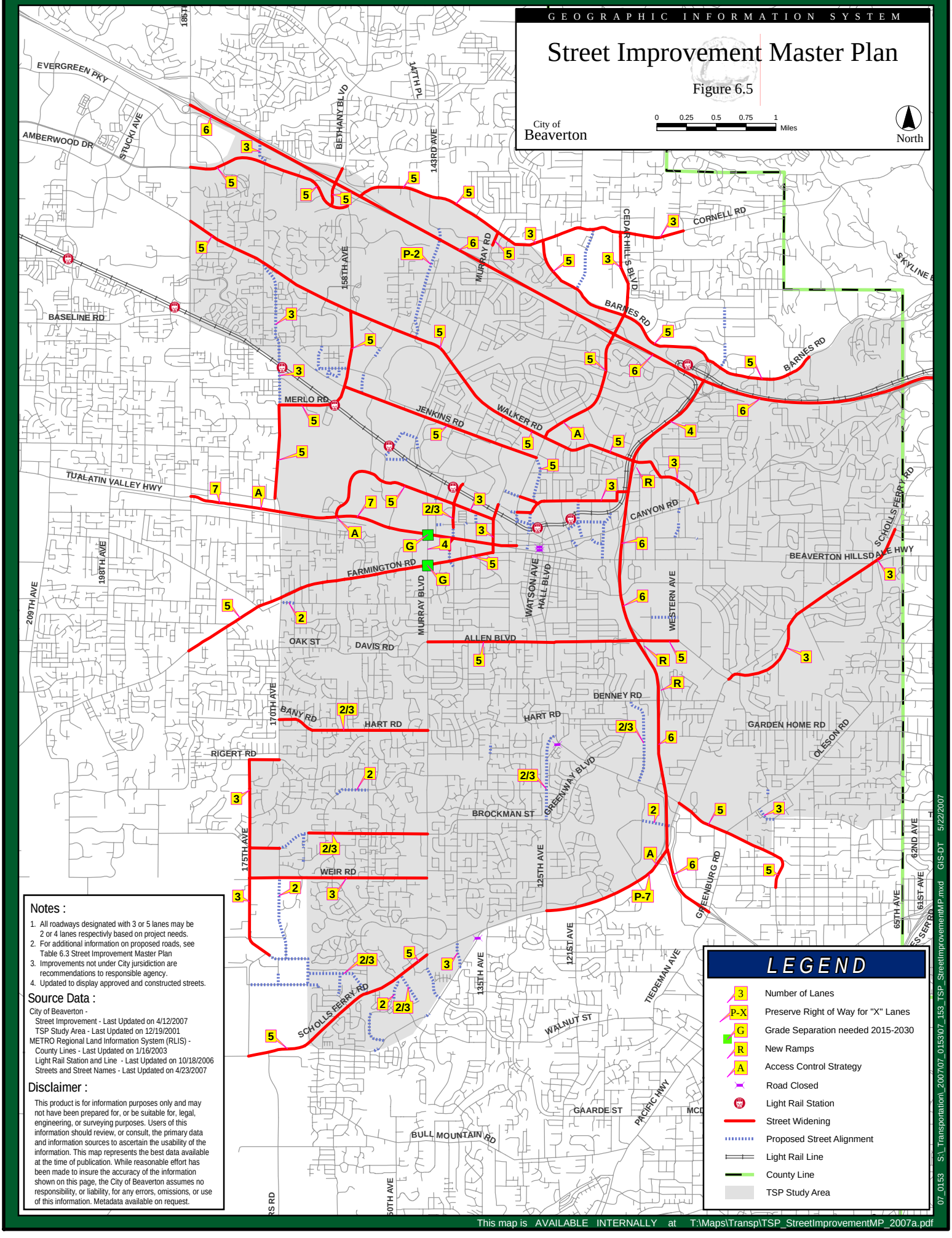

GEOGRAPHIC INFORMATION SYSTEM
TRANSPORTATION SYSTEM PLAN
BICYCLE MASTER PLAN
FIGURE 6.2
Legend
RTP Major Transit Stops
THPRD Trails
Existing
Proposed
Bike Master Plan
Built
Proposed
RTP Regional Corridor Off-Street Bikeway
Existing
Proposed
RTP Bicyle System Designations
Regional Access Bikeway
Regional Corridor on-street bikeway
Community Connector
LRT Stop
Existing
LRT Line
Existing
TSP Study Area
City of Beaverton
Updated: September 2001
Not to Scale
NORTH
Aloha
Beaverton
Cooper Mtn
US 26
WALKER RD
MERLO RD
JENKINS RD
HILLS RD
BARNES RD
CANYON RD
BEAVERTON
HWY 8
FERRY RD
SCHOLLS
FARMINGTON
DAVIS RD
ALLEN BLVD
DENNEY RD
HART RD
GARDEN HOME RD
HALL BLVD
OLESON
BROCKMAN ST
WEIR RD
FERRY RD
WALNUT ST
TIEDMAN
185TH AVE
158TH AVE
143RD AVE
170TH AVE
MURRAY BLVD
135TH AVE
121ST AVE
62ND AVE
175TH AVE
Notes:
1. This map shows the framework bicyle network. All arterial and collector streets are to have bike lanes per the Beaverton Development Code. Should a project on an arterial or collector not provide bike lanes, documentation is required prior to design or approval.
2. Designations not under City jurisdiction are recommendations from the City of Beaverton to the appropriate jurisdictions for adoption into their TSP.
Sources:
1. City of Beaverton Transportation Section Bike Access & TSP Study Area Data - Current as of September 2001
2. METRO Regional Land Information System TSP, Light Rail & Street Data- Current as of November 2002
3. Tualatin Hills Park and Recreation District Park Data - Current as of December 2001
Disclaimer:
This map represents the best data available at the time of publication. While reasonable effort has been made to insure the accuracy of the information shown on this page, the City of Beaverton assumes no responsibility for any errors or omissions.
GIS/DH 2-4-2003 s:\transportation\tsp2020\system map.apr L-Bike Master Plan



GIS/DH 2/26/2002 s:\transportation\tsp_2020\transit.apr L-8.5x11_Transit Plan


GEOGRAPHIC INFORMATION SYSTEM
Transit Route Master Plan
Figure 6.3B
Effective On: September 14, 2005
City of Beaverton
0 0.25 0.5 0.75 1 Miles
North
RGREEN PKY
WOOD DR
STUCKI AVE
BETHANY BLVD
147TH PL
143RD AVE
158TH AVE
MURRAY RD
CEDAR HILLS BLVD
CORNELL RD
S KYLINE BL
ASELINE RD
BARNES RD
MERLO RD
JENKINS RD
WALKER RD
TUALATIN VALLEY HWY
CANYON RD
SCHOLLS FERRY RD
BEAVERTON HILLSDALE HWY
198TH AVE
FARMINGTON RD
MURRAY BLVD
WATSON AVE
HALL BLVD
WESTERN AVE
OAK ST
DAVIS RD
ALLEN BLVD
170TH AVE
BANY RD
HART RD
DENNEY RD
GARDEN HOME RD
OLESON RD
RIGERT RD
GREENWAY BLVD
BROCKMAN ST
175TH AVE
WEIR RD
125TH AVE
GREENBURG RD
62ND AVE
61ST AVE
65TH AVE
LESSER RD
121ST AVE
135TH AVE
WALNUT ST
GAARDE
BULL MOUNTAIN RD
Source Data :
City of Beaverton -
Proposed Commuter Rail Line - Last Updated on (3/23/2001)
Proposed Commuter Rail Station - Last Updated on (4/11/2005)
RTP Major Transit Route Designations - Last Updated on (5/2/2001)
RTP Major Transit Stops - Last Updated on (6/18/2001)
TSP Study Area - Last Updated on (12/19/2001)
METRO Regional Land Information System (RLIS) -
County Lines - Last Updated on (1/16/2003)
Light Rail Station and Line - Last Updated on (4/27/2005)
Park and Ride - Last Updated on (10/12/2004)
Streets and Street Names - Last Updated on (5/25/2005)
Transit Center - Last Updated on (1/25/2005)
Disclaimer :
This product is for information purposes only and may not have been prepared for, or be suitable for, legal, engineering, or surveying purposes. Users of this information should review, or consult, the primary data and information sources to ascertain the usability of the information. This map represents the best data available at the time of publication. While reasonable effort has been made to insure the accuracy of the information shown on this page, the City of Beaverton assumes no responsibility, or liability, for any errors, omissions, or use of this information. Metadata available on request.
LEGEND
Park and Ride
Transit Center
RTP Major Transit Stops
Proposed Commuter Rail Station
Proposed Commuter Rail Line
RTP Transit Route Designations
Regional Bus
Frequent Bus
Light Rail Station
Light Rail Line
TSP Study Area
County Line
This map is AVAILABLE ONLINE at T:\Maps\Transp\TSP_TransitRoute_b_MP_2005b.pdf
05_0287 S:_Transportation_2005\05_0287\TSP_TransitRoute_b_MP.mxd GIS-DT 09/01/2005


GEOGRAPHIC INFORMATION SYSTEM
Functional Classification
Figure 6.4
Effective On: May 22, 2007
City of Beaverton
0 0.25 0.5 0.75 1 Miles
North
Notes :
1. Designations not under city jurisdiction are recommendations to the responsible agency.
2. For additional information on proposed roads see Table 6.3 Street Improvement Master Plan.
3. Updated to display approved and constructed streets.
Source Data :
City of Beaverton -
City Limits Boundary - Last Updated on 3/15/2007
Functional Classification - Last Updated on 4/10/2007
METRO Regional Land Information System (RLIS) -
Adjacent City Boundaries - Last Updated on 1/31/2007
County Lines - Last Updated on 1/16/2003
Light Rail Line and Stations - Last Updated on 10/18/2006
Streets and Street Names - Last Updated on 4/23/2007
Disclaimer :
This product is for information purposes only and may not have been prepared for, or be suitable for, legal, engineering, or surveying purposes. Users of this information should review, or consult, the primary data and information sources to ascertain the usability of the information. This map represents the best data available at the time of publication. While reasonable effort has been made to insure the accuracy of the information shown on this page, the City of Beaverton assumes no responsibility, or liability, for any errors, omissions, or use of this information. Metadata available on request.
LEGEND
Functional Classification
Freeway
Principal Arterial
Arterial
Proposed Arterial
Collector
Proposed Collector
Neighborhood Route
Proposed Neighborhood Route
Road Closed
Beaverton City Limits
Hillsboro
Portland
Tigard
County Line
Light Rail Line
Light Rail Station
EVERGREEN PKY
SUNSET HWY
CORNELL RD
BARNES RD
MERLO RD
JENKINS RD
TUALATIN VALLEY HWY
FARMINGTON RD
CANYON RD
BEAVERTON HILLSDALE HWY
SCHOLLS FERRY RD
OAK ST
DAVIS RD
ALLEN BLVD
DENNEY RD
HART RD
BANY RD
RIGERT RD
GARDEN HOME RD
OLESON RD
BROCKMAN ST
WEIR RD
WALNUT ST
BULL MOUNTAIN RD
GREENBURG RD
MURRAY BLVD
HALL BLVD
WESTERN AVE
GREENWAY BLVD
CEDAR HILLS BLVD
MURRAY RD
WALKER RD
158TH AVE
198TH AVE
170TH AVE
175TH AVE
135TH AVE
125TH AVE
121ST AVE
143RD AVE
147TH PL
THOMPSON RD
62ND AVE
65TH AVE
07_0111 S:_CDD_2007\07_0111\07_0111_TSP_FunctionalClass.mxd GIS-DT 5/22/2007
This map is AVAILABLE ONLINE at T:\Maps\CDD\Proposed_TSP_FunctionalClass.pdf


GEOGRAPHIC INFORMATION SYSTEM
Street Improvement Master Plan
Figure 6.5
City of Beaverton
0 0.25 0.5 0.75 1 Miles
North
EVERGREEN PKY
AMBERWOOD DR
STUCKI AVE
BETHANY BLVD
143RD AVE
147TH PL
CEDAR HILLS BLVD
CORNELL RD
MURRAY RD
158TH AVE
P-2
BARNES RD
BASELINE RD
MERLO RD
JENKINS RD
WALKER RD
TUALATIN VALLEY HWY
CANYON RD
SCHOLLS FERRY RD
BEAVERTON HILLSD ALE HWY
FARMINGTON RD
198TH AVE
209TH AVE
MURRAY BLVD
WATSON AVE
HALL BLVD
WESTERN AVE
OAK ST
DAVIS RD
ALLEN BLVD
DENNEY RD
170TH AVE
BANY RD
HART RD
GARDEN HOME RD
OLESON RD
RIGERT RD
GREENWAY BLVD
BROCKMAN ST
175TH AVE
WEIR RD
125TH AVE
GREENBURG RD
62ND AVE
61ST AVE
65TH AVE
135TH AVE
121ST AVE
TIEDEMAN AVE
WALNUT ST
GAARDE ST
PACIFIC HWY
BULL MOUNTAIN RD
150TH AVE
Notes :
1. All roadways designated with 3 or 5 lanes may be 2 or 4 lanes respectivly based on project needs.
2. For additional information on proposed roads, see Table 6.3 Street Improvement Master Plan
3. Improvements not under City jurisdiction are recommendations to responsible agency.
4. Updated to display approved and constructed streets.
Source Data :
City of Beaverton -
Street Improvement - Last Updated on 4/12/2007
TSP Study Area - Last Updated on 12/19/2001
METRO Regional Land Information System (RLIS) -
County Lines - Last Updated on 1/16/2003
Light Rail Station and Line - Last Updated on 10/18/2006
Streets and Street Names - Last Updated on 4/23/2007
Disclaimer :
This product is for information purposes only and may not have been prepared for, or be suitable for, legal, engineering, or surveying purposes. Users of this information should review, or consult, the primary data and information sources to ascertain the usability of the information. This map represents the best data available at the time of publication. While reasonable effort has been made to insure the accuracy of the information shown on this page, the City of Beaverton assumes no responsibility, or liability, for any errors, omissions, or use of this information. Metadata available on request.
LEGEND
Number of Lanes
P-X Preserve Right of Way for "X" Lanes
G Grade Separation needed 2015-2030
R New Ramps
A Access Control Strategy
Road Closed
Light Rail Station
Street Widening
Proposed Street Alignment
Light Rail Line
County Line
TSP Study Area
This map is AVAILABLE INTERNALLY at T:\Maps\Transp\TSP_StreetImprovementMP_2007a.pdf
07_0153 S:_Transportation_2007\07_0153\07_153_TSP_StreetImprovementMP.mxd GIS-DT 5/22/2007

GEOGRAPHIC INFORMATION SYSTEM

Future Streets Where Right of Way is Planned for More Than Two Lanes

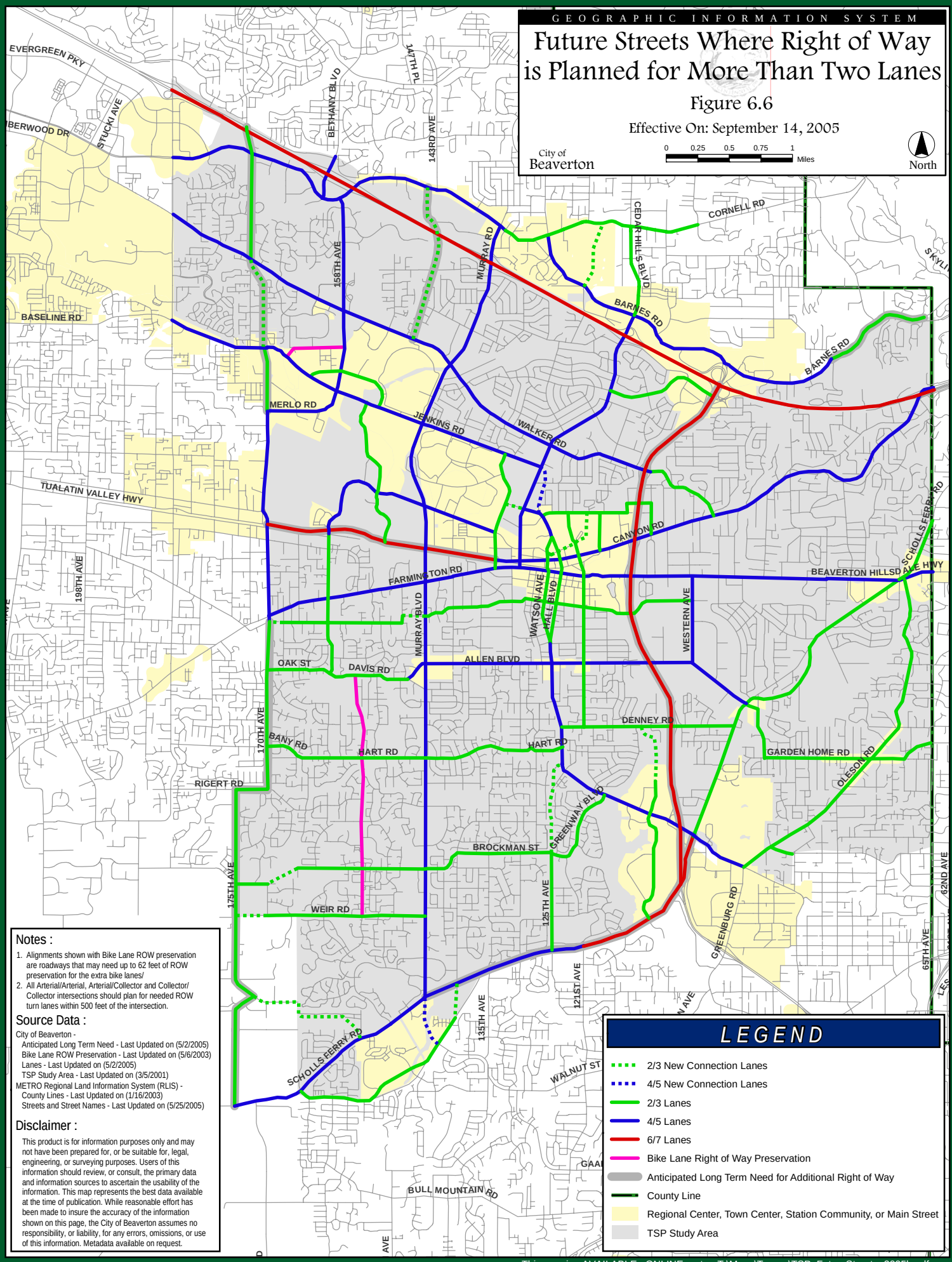
Figure 6.6

Effective On: September 14, 2005

City of Beaverton

0 0.25 0.5 0.75 1 Miles

North



Notes :

1. Alignments shown with Bike Lane ROW preservation are roadways that may need up to 62 feet of ROW preservation for the extra bike lanes/
2. All Arterial/Arterial, Arterial/Collector and Collector/ Collector intersections should plan for needed ROW turn lanes within 500 feet of the intersection.

Source Data :

City of Beaverton -
Anticipated Long Term Need - Last Updated on (5/2/2005)
Bike Lane ROW Preservation - Last Updated on (5/6/2003)
Lanes - Last Updated on (5/2/2005)
TSP Study Area - Last Updated on (3/5/2001)
METRO Regional Land Information System (RLIS) -
County Lines - Last Updated on (1/16/2003)
Streets and Street Names - Last Updated on (5/25/2005)

Disclaimer :

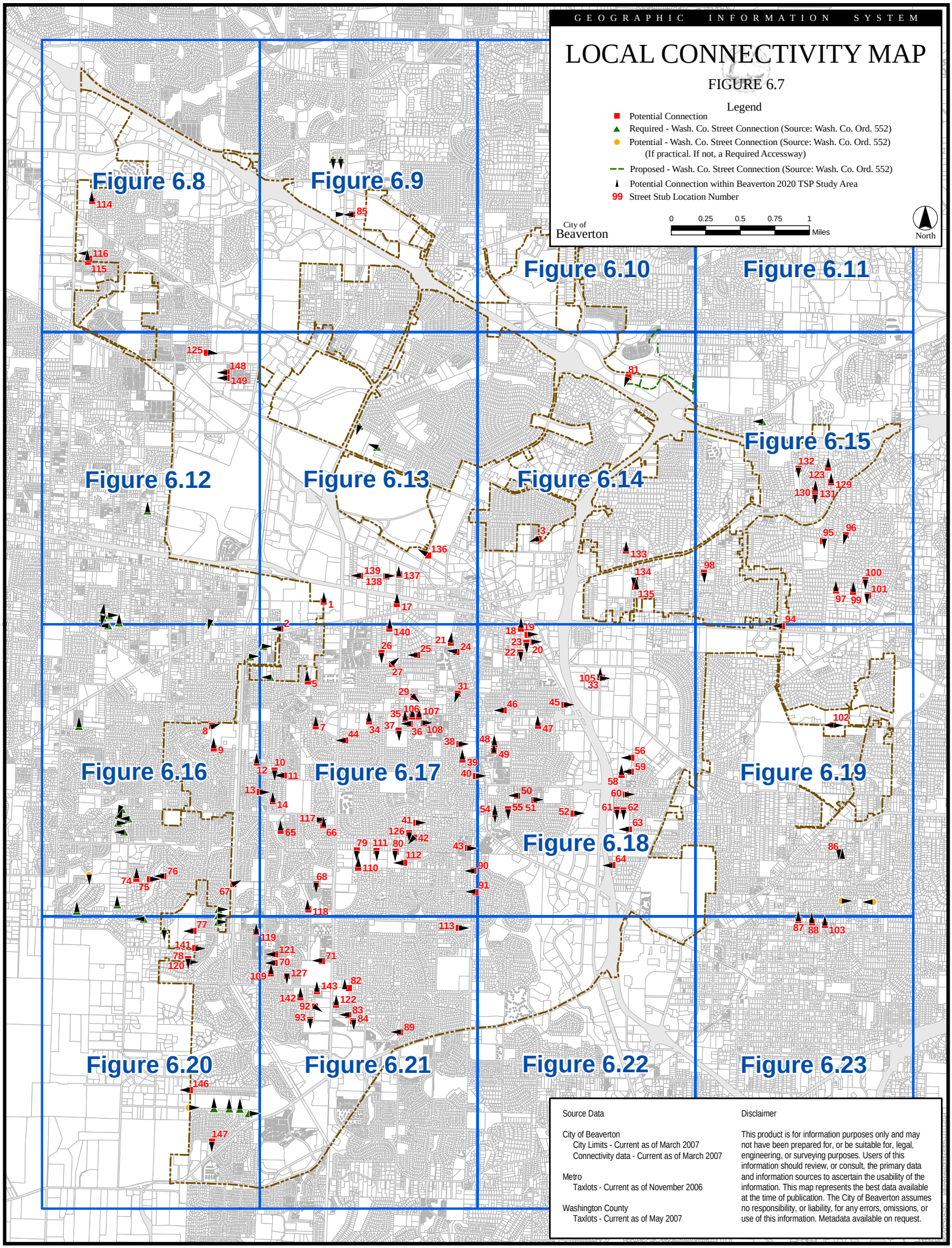
This product is for information purposes only and may not have been prepared for, or be suitable for, legal, engineering, or surveying purposes. Users of this information should review, or consult, the primary data and information sources to ascertain the usability of the information. This map represents the best data available at the time of publication. While reasonable effort has been made to insure the accuracy of the information shown on this page, the City of Beaverton assumes no responsibility, or liability, for any errors, omissions, or use of this information. Metadata available on request.

LEGEND

- 2/3 New Connection Lanes
- 4/5 New Connection Lanes
- 2/3 Lanes
- 4/5 Lanes
- 6/7 Lanes
- Bike Lane Right of Way Preservation
- Anticipated Long Term Need for Additional Right of Way
- County Line
- Regional Center, Town Center, Station Community, or Main Street
- TSP Study Area

This map is AVAILABLE ONLINE at T:\Maps\Transp\TSP_FutureStreets_2005b.pdf

05_0287 S:_Transportation_2005\05_0287\TSP_FutureStreets.mxd GIS-DT 09/06/2005



S:_CDD_2007\07_0111\07_0111_8x11_connectivity_index_map.mxd GIS-DT 5-22-2007

07_0111

This map is AVAILABLE INTERNALLY at T:\Maps\CDD\Proposed_TSP_LocalConnectivity_IndexMap_8x11.pdf

GEOGRAPHIC INFORMATION SYSTEM

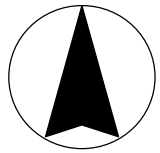
LOCAL CONNECTIVITY MAP

Updated September 14, 2005

Legend

- ■ Potential Connection
- ▲ Required - Wash. Co. Street Connection (Source: Wash. Co. Ord. 552)
- ● Potential - Wash. Co. Street Connection (Source: Wash. Co. Ord. 552)
  (If practical. If not, a Required Accessway)
- ----- Proposed - Wash. Co. Street Connection (Source: Wash. Co. Ord. 552)
- Potential Connection within Beaverton 2020 TSP Study Area
- 99 Street Stub Location Number

City of
Beaverton



North

Figure 6.8

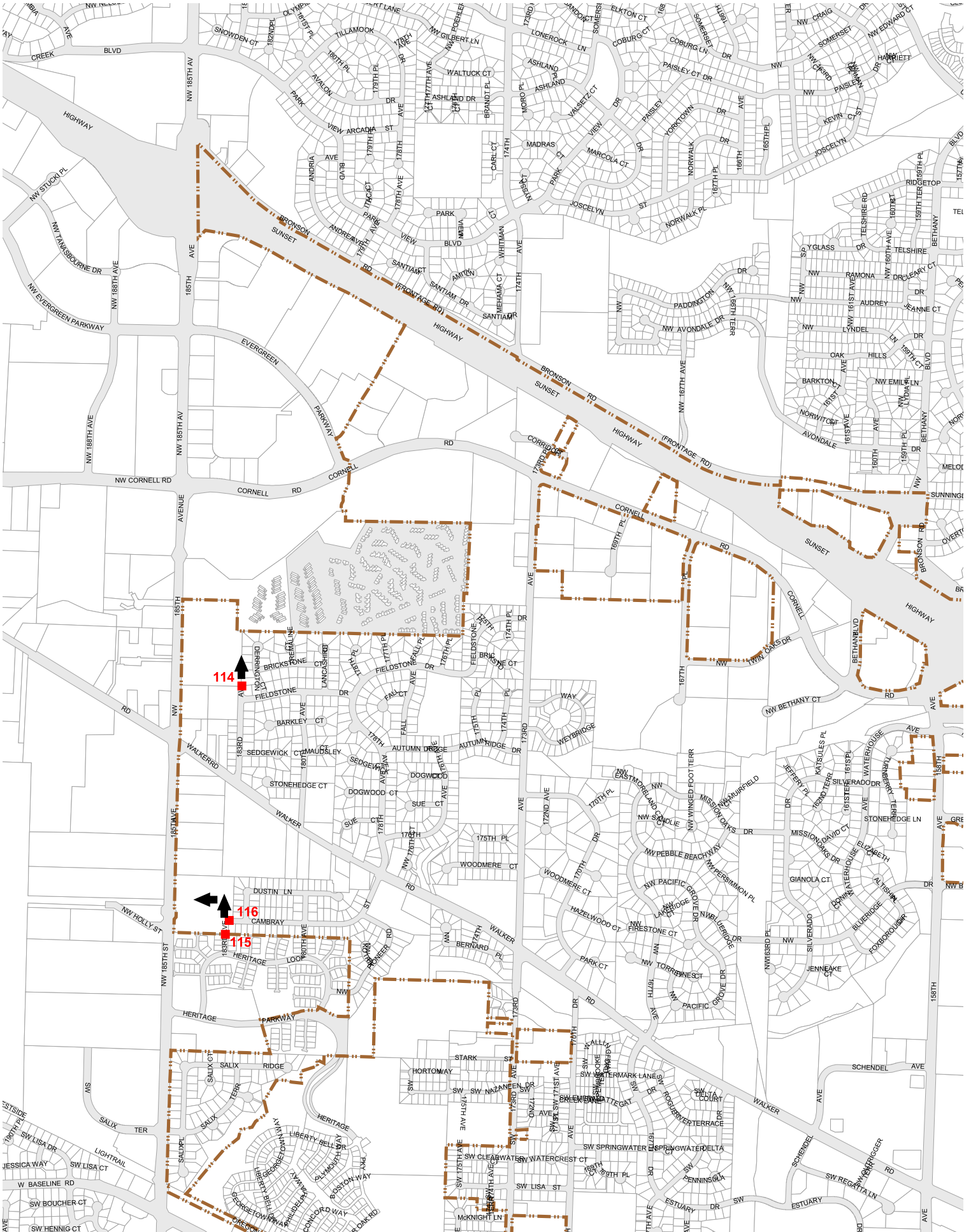

114
116
115
NW CORNELL RD
CORNELL RD
HIGHWAY
BRONSON SUNSET RD
(FRONTAGE RD)
EVERGREEN PARKWAY
NW 185TH AVE
NW 188TH AVE
WALKER RD
HERITAGE PARKWAY
NW HOLLY ST
NW 185TH ST
SUNSET HIGHWAY
CORNELL AVENUE
BETHANY
SCHENDEL AVE
WALKER
NW 167TH AVE
NW 173RD AVE
SW 175TH AVE
SW WATERCREST CT
SW SPRINGWATER DR
SW REGATTA LN
SW LISA ST
SW CLEARWATER
MCKNIGHT LN
WATERLEAF
ESTUARY DR
SW PENNINSULA
SW DELTA COURT
SW ROGUE RIVER TERRACE
SW WATERMARK LANE
SW GREENBROOKE
SW TATTEGAT
SW NAZARETH
SW ZANEEN DR
STARK ST
HORTON WAY
SALIX RIDGE
SALIX TER
SALIX CT
SALIX PL
LIBERTY BELL DR
LIBERTY BELL WAY
GEORGETOWN WAY
PHILADELPHIA WAY
PLYMOUTH WAY
CONCORD WAY
BOSTON WAY
OREGON
LIGHTRAIL
SW LISA DR
SW LISA CT
JESSICA WAY
W BASELINE RD
SW BOUCHER CT
SW HENNIG CT
NW 185TH AVE
NW 188TH AVE
NW TAMISSOURNE DR
NW STUCKI PL
NW EVERGREEN PARKWAY
NW 185TH AVENUE
NW 183RD AVE
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NW 185TH
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NW 178TH PL
NW 179TH PL
NW 180TH PL
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NW 182ND PL
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SW 1ST AVE

Figure 6.9

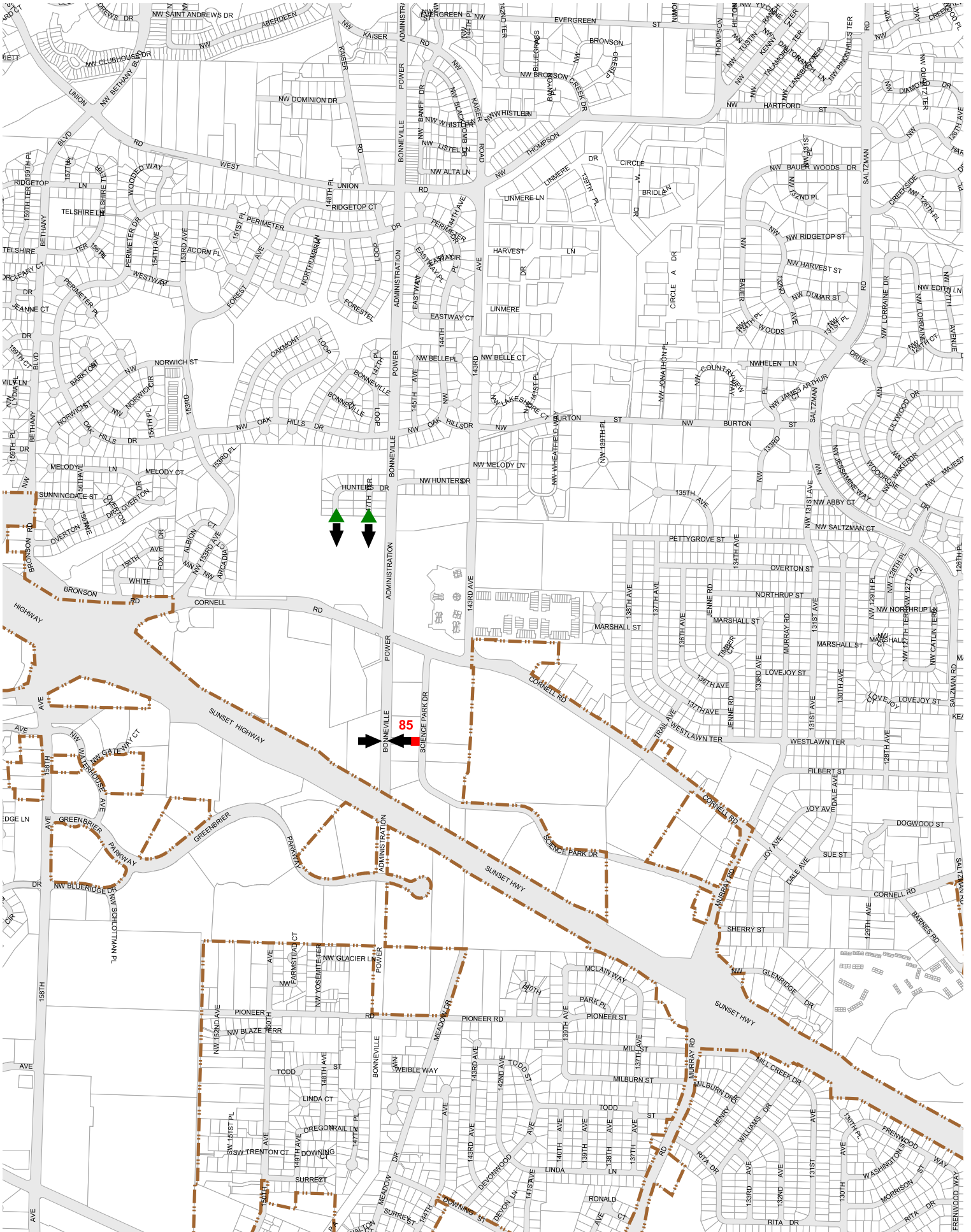

85
BONNEVILLE
ADMINISTRATION
POWER
SUNSET HIGHWAY
SUNSET HWY
CORNELL RD
BRONSON RD
NW BETHANY BLVD
NW SAINT ANDREWS DR
ABERDEEN
NW CLUBHOUSE DR
KAISER RD
NW DOMINION DR
NW EVERGREEN ST
EVERGREEN
NW BRONSON CREEK DR
BRONSON
NW HARTFORD ST
HARTFORD
THOMPSON
NW ALTA LN
NW LISTEL LN
NW WHISTLER LN
NW BANFF DR
NW BLACKHORN DR
NW RIDGETOP CT
RIDGETOP LN
TELSHIRE LP
WOODED WAY
PERIMETER DR
PERIMETER CT
NW ACORN PL
NW 153RD AVE
NW 151ST PL
NW 148TH PL
UNION RD WEST
NW 157TH PL
NW 159TH PL
NW 159TH TER
NW 156TH PL
NW 154TH AVE
NW WESTWAY
NW FOREST
NW NORTHUMBRIAN LOOP
NW FORESTEL
NW EASTWAY CT
NW EASTWAY PL
NW EASTWAY CIR
NW 144TH AVE
NW PERIMETER LOOP
NW HARVEST LN
NW HARVEST ST
NW LINMERE DR
NW LINMERE LN
NW 139TH PL
NW CIRCLE DR
NW BRIDLE LN
NW CIRCLE A DR
NW BAUER WOODS DR
NW 132ND PL
NW CREEKSIDE
NW 128TH PL
NW RIDGETOP ST
NW DUMAR ST
NW BAUER WOODS LN
NW 132ND AVE
NW 131ST PL
NW 134TH PL
NW WOODS DRIVE
NW LORRAINE DR
NW EDITH LN
NW 126TH CT
NW 126TH AVENUE
NW 143RD PL
NW BELLE CT
NW BELLE PL
NW 147TH PL
NW 145TH AVE
NW 144TH
NW 143RD
NW LAKESHORE CT
NW 141ST PL
NW JONATHON PL
NW COUNTRYVIEW PL
NW HELEN LN
NW JAMES ARTHUR CT
NW SALTZMAN
NW BURTON ST
NW BURTON PL
NW 139TH PL
NW WHEATFIELD WAY
NW NORWICH ST
NW NORWICH CIR
NW BARTON ST
NW 159TH CT
NW 159TH PL
NW 153RD
NW 154TH PL
NW OAK HILLS DR
NW OAKMONT LOOP
NW MELODY LN
NW MELODY CT
NW 156TH AVE
NW SUNNINGDALE ST
NW OVERTON DR
NW OVERTON TER
NW 153RD PL
NW HUNTER DR
NW 147TH
NW 143RD AVE
NW 135TH AVE
NW 131ST AVE
NW ABBY CT
NW SALTZMAN CT
NW WOODROW WAKER DR
NW JESSAMINE WAY
NW MAJESTIC
NW LYLYWOOD DR
NW 133RD
NW 134TH AVE
NW PETTYGROVE ST
NW OVERTON ST
NW NORTHRUP ST
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NW 127TH PL
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NW CATLIN TERR
NW MARSHALL ST
NW 138TH AVE
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NW MURRAY RD
NW TIMBER CT
NW 133RD AVE
NW LOVEJOY ST
NW 130TH AVE
NW 131ST AVE
NW LOVE JOY
NW LOVEJOY ST
NW SALZMAN RD
NW 128TH AVE
NW TRAIL AVE
NW WESTLAWN TER
NW FILBERT ST
NW JOY AVE
NW DALE AVE
NW DOGWOOD ST
NW SUE ST
NW AUBREY RD
NW SHERRY ST
NW 129TH AVE
NW BARNES RD
NW GLENRIDGE DR
NW MCLAIN WAY
NW 140TH
NW PARK PL
NW PIONEER ST
NW 139TH AVE
NW MILL ST
NW 137TH AVE
NW MILL CREEK DR
NW MILBURN ST
NW MILBURN DR
NW HENRY
NW WILLIAMS DR
NW 130TH PL
NW FRENWOOD
NW WASHINGTON ST
NW MORRISON ST
NW RITA DR
NW FRENWOOD WAY
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NW DEVONWOOD
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NW MEADOW DR
NW WALTON CT
NW 147TH AVE
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NW DOWNING CT
NW SURREY CT
NW SW 151ST PL
NW SSW TRENTON CT
NW LARMSTEAD CT
NW 150TH
NW 152ND AVE
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NW PIONEER RD
NW YOSEMITE TER
NW GLACIER LN
NW MEADOW DR
NW WEIBLE WAY
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NW SCHLOTTMAN PL
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NW GREENBRIER PARKWAY
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NW GATE WAY CT
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NW FOX DR
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NW 499TH AVE
NW 500TH AVE

Figure 6.10


NW WELSH DR
NW PERIMAN
NW TYLER
NW THOMPSON RD
NW BLACKFIELD LN
NW CYRUS LN
NW WEST RD
NW SOUTH RD
NW SUPREME CT
NW APPELLATE WAY
NW RIDGE
NW CHIPMUNK LN
NW BLACKHAWK DR
NW MCDANIEL
NW DUMAR LN
NW HARDING COURT
NW MARYLEE CT
NW KATHLEEN
NW KATHLEEN DR
NW TUDOR LN
NW RAINMONT RD
NW MAPLE HILL LN
OLD QUARRY RD
NW SUNNINGDALE DR
NW COLEMAN DR
DAMASCUS ST
JERICHO RD
VALLEVUE ST
VALLEVUE CT
MARSHALL ST
NW ANDERSON ST
NW KENZIE LANE
LOVEJOY
KEARNEY ST
NW KEARNEY STREET
REEVES ST
VAUGHAN
WESTLAWN ST
GREEN VIEW LN
BRADY LN
NW BERMAR LN
CORNELL RD
DOGWOOD ST
COPELAND ST
WALTERS
LEAHY RD
FLOTOMA DR
NW ZERMATT
NW EGGERS COURT
NW LUSANNE
NW MONTREUX
NW LUCERNE
ADELE
WASHINGTON
CELESTE
TODD ST
MURLEA DR
ALPENGLOW
ORCHARD
LEE ST
NW BRIE CT
ASH
ASHCREEK LN
SHADYWOOD LN
ARBORVIEW
NOTTAGE
MARING
CAXTON LN
FIELDROAD
LENGLEMAN ST
BARNES RD
SUNSET
CORBY DRIVE
CEDAR HILLS BLVD
NW 117 AVE
NW 123RD AVE
NW 116TH AVE
NW 107TH AVE
NW 102ND AVE
NW 101ST AVE
NW 99TH AVE
NW 97TH AVE
NW 95TH AVE
NW 94TH
SW 121ST
SW 104TH AVE
SW 102ND AVE
SW 101ST AVE
SW 99TH AVE
SW 97TH AVE
SW 95TH AVE

Figure 6.11


NW WELLS CT
NW BENFIELD DR
NW 93RD PL
NW FULLNER CT
NW FULLNER
NW SAVOY LANE
NW DEETTE DR
NW RYAN STREET
NW MILLER ROAD
NW HAWKINS BLVD.
NW ADAMS ST.
NW MARVIN LN
NW BENFIELD DR
CAXTON LN
MARSHALL ST
LOVEJOY ST
KEARNEY ST
CORNELL ST
JOHNSON ST
IRVING ST
HOYT ST
GLISAN ST
ASH ST
TERR
TORREYVIEW DR
APPELAND
SHERRY ST
LEAHY RD
NW SUNDOWN WAY
MURLEA LN
OAK ST
STARK CT
STARK ST
WEST STARK ST
WASHINGTON ST
WHITE CT
MORRISON ST
MAPLERIDGE DR
MOONRIDGE
MILLER
MAYWAY DR
WINDEMERE LOOP
SANTAMARIA PL
68TH AVE
87TH AVE
86TH AVE
90TH AVE
89TH AVE
88TH AVE
87TH AVE
86TH AVE
95TH AVE
94TH AVE
93RD AVE
92ND AVE
91ST AVE

Figure 6.12

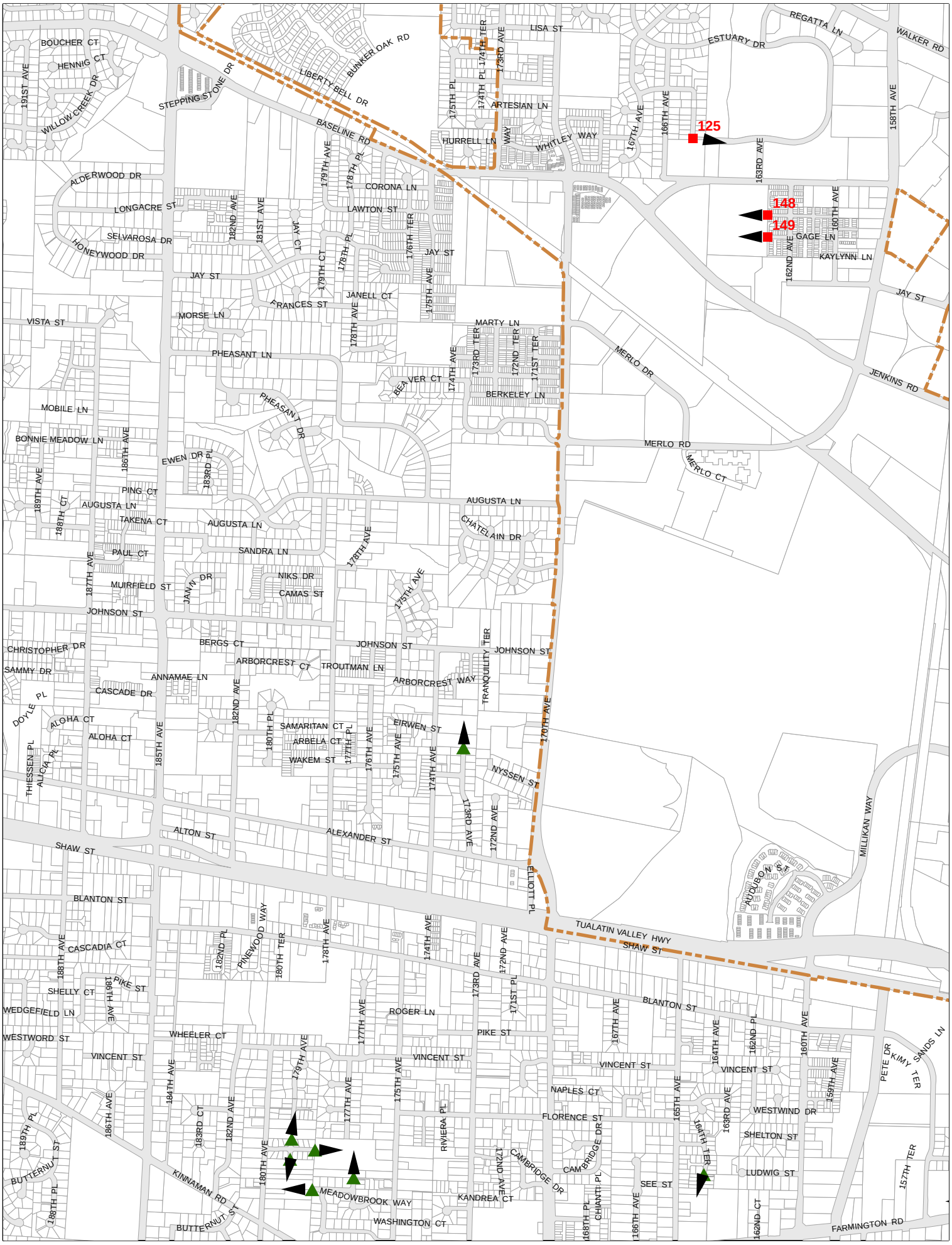

125
148
149
BOUCHER CT
HENNIG CT
191ST AVE
WILLOW CREEK DR
STEPPING STONE DR
BUNKER OAK RD
LIBERTY BELL DR
BASELINE RD
LISA ST
174TH TER
173RD AVE
175TH PL
174TH PL
ARTESIAN LN
HURRELL LN
WAY
WHITLEY WAY
167TH AVE
166TH AVE
REGATTA LN
ESTUARY DR
WALKER RD
158TH AVE
163RD AVE
160TH AVE
GAGE LN
KAYLYNN LN
162ND AVE
JAY ST
ALDERWOOD DR
LONGACRE ST
182ND AVE
181ST AVE
SELVAROSA DR
HONEYWOOD DR
JAY CT
179TH CT
179TH AVE
178TH PL
CORONA LN
LAWTON ST
176TH TER
JAY ST
175TH AVE
JANELL CT
FRANCES ST
MORSE LN
VISTA ST
178TH AVE
MARTY LN
PHEASANT LN
173RD TER
172ND TER
171ST TER
174TH AVE
BEAVER CT
BERKELEY LN
MERLO DR
JENKINS RD
MOBILE LN
PHEASANT DR
BONNIE MEADOW LN
186TH AVE
EWEN DR
183RD PL
MERLO RD
MERLO CT
189TH AVE
PING CT
188TH CT
AUGUSTA LN
TAKENA CT
AUGUSTA LN
CHATELAIN DR
PAUL CT
SANDRA LN
178TH AVE
187TH AVE
MUIRFIELD ST
JANN DR
NIKS DR
CAMAS ST
175TH AVE
JOHNSON ST
CHRISTOPHER DR
BERGS CT
JOHNSON ST
JOHNSON ST
SAMMY DR
ARBORCREST CT
TROUTMAN LN
ARBORCREST WAY
TRANQUILITY TER
ANNAMAE LN
CASCADE DR
182ND AVE
DOYLE PL
ALOHA CT
ALOHA CT
180TH PL
SAMARITAN CT
ARBELA CT
WAKEM ST
177TH PL
176TH AVE
175TH AVE
174TH AVE
EIRWEN ST
170TH AVE
185TH AVE
THIESSEN PL
ALICA PL
NYSSEN ST
173RD AVE
172ND AVE
ALTON ST
ALEXANDER ST
SHAW ST
ELLIOTT PL
MILLIKAN WAY
AUDUBON PARK
BLANTON ST
TUALATIN VALLEY HWY
SHAW ST
CASCADIA CT
188TH AVE
182ND PL
PINEWOOD WAY
180TH TER
178TH AVE
174TH AVE
172ND AVE
173RD AVE
171ST PL
PIKE ST
SHELLY CT
186TH AVE
WEDGEFIELD LN
ROGER LN
177TH AVE
BLANTON ST
167TH AVE
164TH AVE
162ND PL
160TH AVE
WESTWORD ST
WHEELER CT
PIKE ST
VINCENT ST
VINCENT ST
VINCENT ST
VINCENT ST
179TH AVE
184TH AVE
177TH AVE
175TH AVE
NAPLES CT
159TH AVE
PETE DR
KIMY SANDS LN
165TH AVE
163RD AVE
WESTWIND DR
FLORENCE ST
RIVIERA PL
CAMBRIDGE DR
SHELTON ST
186TH AVE
183RD CT
182ND AVE
189TH PL
BUTTERNUT ST
KINNAMAN RD
180TH AVE
MEADOWBROOK WAY
KANDREA CT
CAMBRIDGE DR
LUDWIG ST
SEE ST
188TH PL
WASHINGTON CT
BUTTERNUT ST
168TH PL
CHIANTI PL
166TH AVE
162ND CT
157TH TER
FARMINGTON RD

Figure 6.13

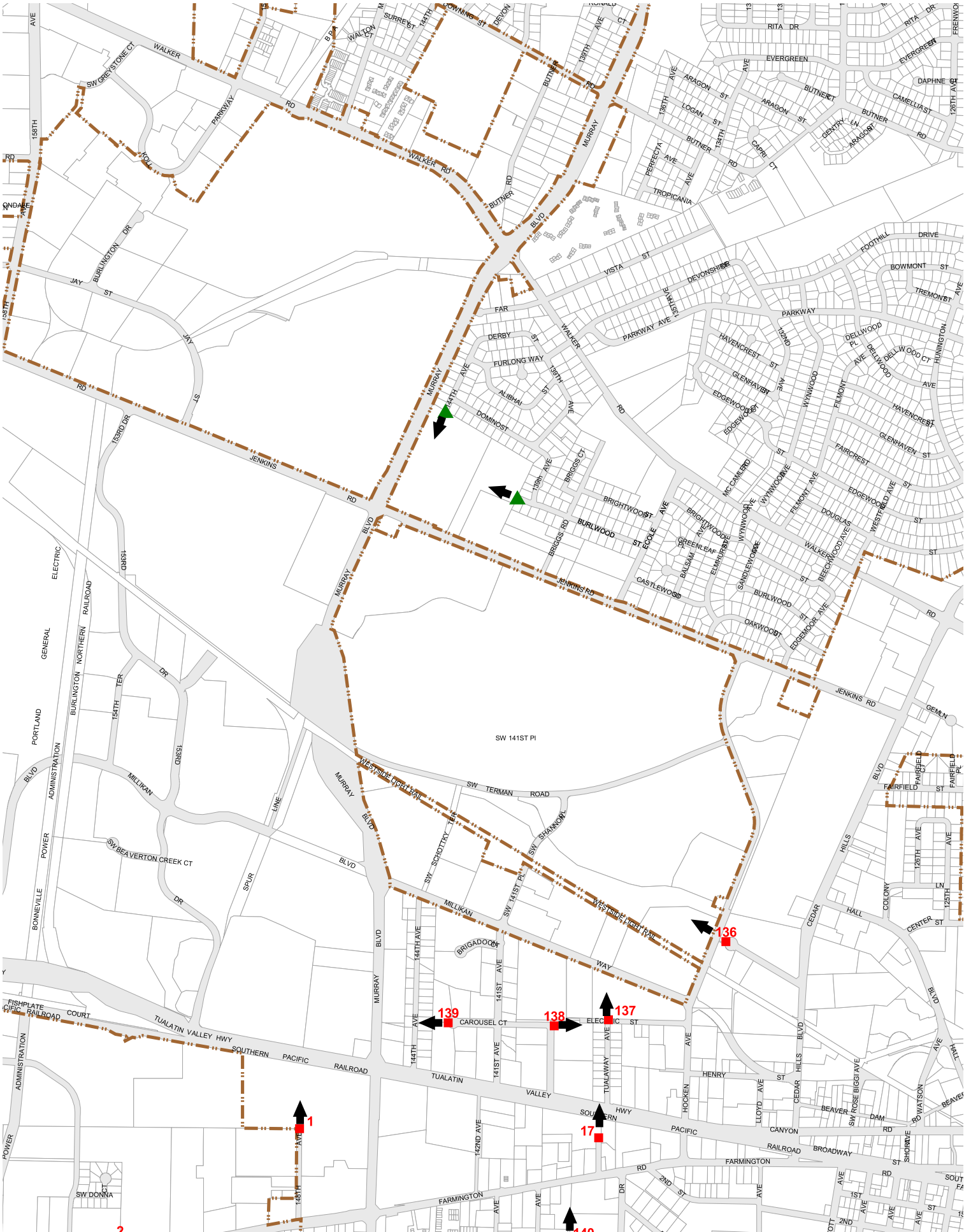

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17
136
137
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139
140
SW 141ST PL
JENKINS RD
SW TERMAN ROAD
TUALATIN VALLEY HWY
SOUTHERN PACIFIC RAILROAD
FARMINGTON
MURRAY BLVD
WEST SIDE LIGHT RAIL
BRIGADOON WAY
CAROUSEL CT
ELECTRIC ST
SW DONNA
SW BEAVERTON CREEK CT
MILLIKAN
WALKER RD
BUTNER RD
PARKWAY
VISTA ST
DERBY ST
FURLONG WAY
ALIBHAI ST
DOMINOST
BRIGGS RD
BRIGHTWOOD AVE
BURLWOOD ST
CASTLEWOOD
OAKWOOD ST
WALKER RD
DOUGLAS
FAIRCREST
GLENHAVEN ST
HAVENCREST ST
DELLWOOD AVE
FOOTHILL DRIVE
BOWMONT ST
TREMONT ST
EVERGREEN
RITA DR
DAPHNE CT
CAMELLIA ST
GENTRY LN
ARAGON ST
LOGAN ST
TROPICANIA
PERFECTA AVE
CAPRI CT
JAY ST
BURLINGTON DR
153RD DR
154TH TER
SW SCHOTTKY TER
SW SHANNORI PL
SW 141ST PL
BRIGADOON WAY
HENRY ST
BROADWAY
RAILROAD
CANYON
BEAVER DAM RD
SW ROSE BIGGI AVE
HOCKEN AVE
CEDAR HILLS BLVD
TUALAWAY AVE
LLOYD AVE
SHORE AVE
WATSON AVE
FAIRFIELD ST
COLONY LN
HALL CENTER ST
126TH AVE
125TH AVE
GEMLN
PORTLAND GENERAL ELECTRIC
BURLINGTON NORTHERN RAILROAD
BONNEVILLE POWER ADMINISTRATION
FISHPLATE COURT
SPUR LINE

Figure 6.14

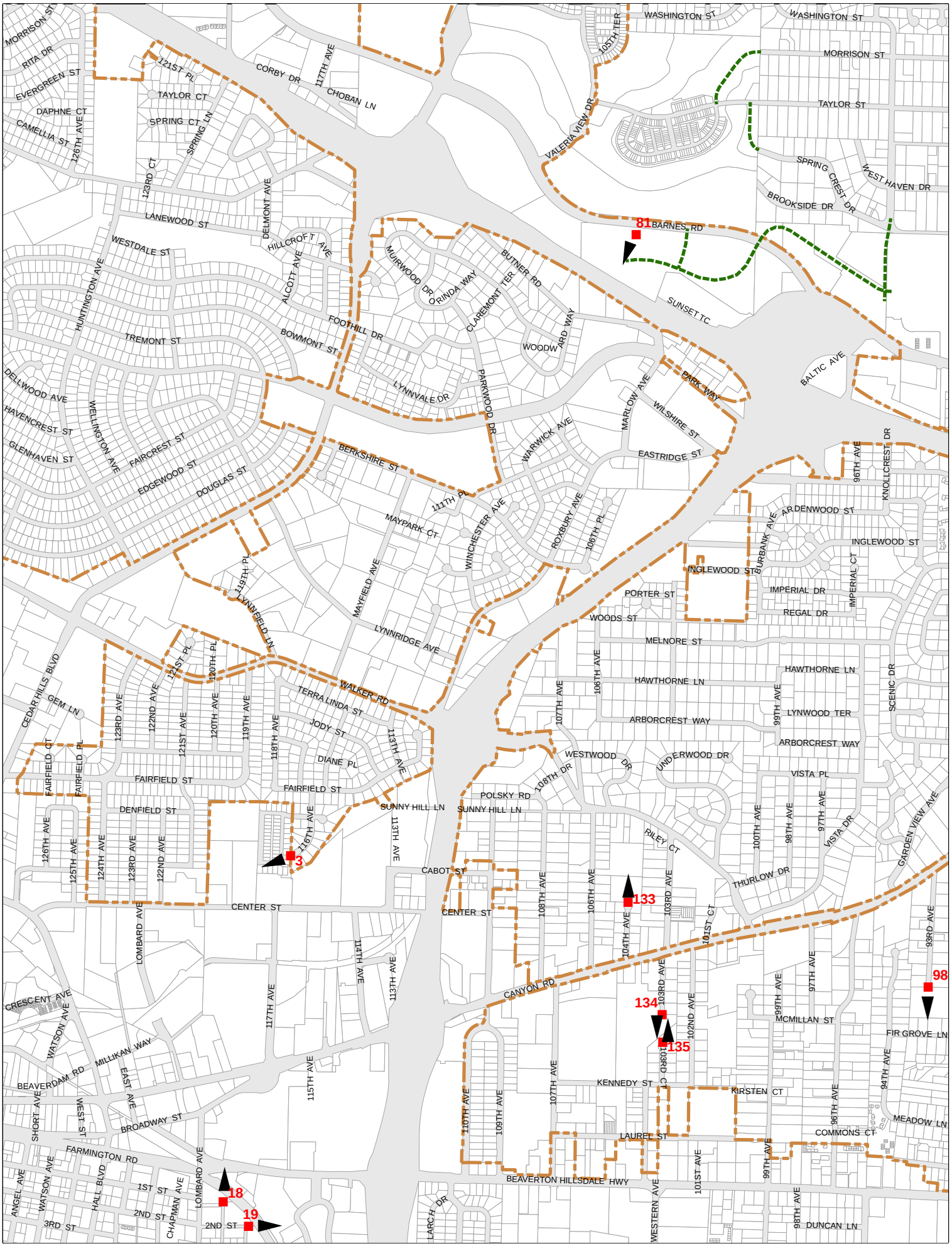

MORRISON ST
RITA DR
EVERGREEN ST
DAPHNE CT
CAMELLIA ST
126TH AVE
121ST PL
TAYLOR CT
SPRING CT
SPRING LN
123RD CT
CORBY DR
117TH AVE
CHOBAN LN
LANEWOOD ST
DELMONT AVE
HILLCROFT AVE
WESTDALE ST
HUNTINGTON AVE
ALCOTT AVE
TREMONT ST
FOOTHILL DR
BOWMONT ST
MUIRWOOD DR
ORINDA WAY
BUTNER RD
CLAREMONT TER
WOODWARD WAY
PARKWOOD DR
LYNNVALE DR
DELLWOOD AVE
HAVENCREST ST
GLENHAVEN ST
WELLINGTON AVE
FAIRCREST ST
EDGEWOOD ST
DOUGLAS ST
BERKSHIRE ST
111TH PL
MAYPARK CT
MAYFIELD AVE
LYNNFIELD LN
119TH PL
LYNNRIDGE AVE
WINCHESTER AVE
ROXBURY AVE
106TH PL
WARWICK AVE
MARLOW AVE
WILSHIRE ST
EASTRIDGE ST
PARK WAY
BALTIC AVE
SUNSET TC
VALERIA VIEW DR
WASHINGTON ST
105TH TER
MORRISON ST
TAYLOR ST
SPRING CREST DR
WEST HAVEN DR
BROOKSIDE DR
81
BARNES RD
96TH AVE
KNOLLCREST DR
ARDENWOOD ST
BURBANK AVE
INGLEWOOD ST
IMPERIAL DR
IMPERIAL CT
REGAL DR
PORTER ST
WOODS ST
MELNORE ST
HAWTHORNE LN
SCENIC DR
LYNWOOD TER
ARBORCREST WAY
UNDERWOOD DR
VISTA PL
VISTA DR
GARDEN VIEW AVE
THURLOW DR
RILEY CT
WESTWOOD DR
108TH DR
POLSKY RD
SUNNY HILL LN
CEDAR HILLS BLVD
GEM LN
123RD AVE
122ND AVE
121ST AVE
120TH AVE
119TH AVE
118TH AVE
120TH PL
121ST PL
WALKER RD
TERRA LINDA ST
JODY ST
DIANE PL
113TH AVE
FAIRFIELD CT
FAIRFIELD PL
FAIRFIELD ST
DENFIELD ST
126TH AVE
125TH AVE
124TH AVE
123RD AVE
122ND AVE
116TH AVE
3
CABOT ST
CENTER ST
LOMBARD AVE
114TH AVE
117TH AVE
115TH AVE
133
108TH AVE
106TH AVE
104TH AVE
103RD AVE
101ST CT
93RD AVE
98
134
135
102ND AVE
109TH CT
99TH AVE
97TH AVE
MCMILLAN ST
FIR GROVE LN
94TH AVE
96TH AVE
MEADOW LN
COMMONS CT
KIRSTEN CT
KENNEDY ST
LAUREL ST
110TH AVE
109TH AVE
107TH AVE
101ST AVE
99TH AVE
98TH AVE
DUNCAN LN
CANYON RD
CRESCENT AVE
WATSON AVE
MILLIKAN WAY
BEAVERDAM RD
EAST AVE
WEST ST
SHORT AVE
BROADWAY ST
FARMINGTON RD
ANGEL AVE
WATSON AVE
HALL BLVD
1ST ST
2ND ST
3RD ST
CHAPMAN AVE
LOMBARD AVE
18
19
2ND ST
LARCH DR
BEAVERTON HILLSDALE HWY
WESTERN AVE

Figure 6.15

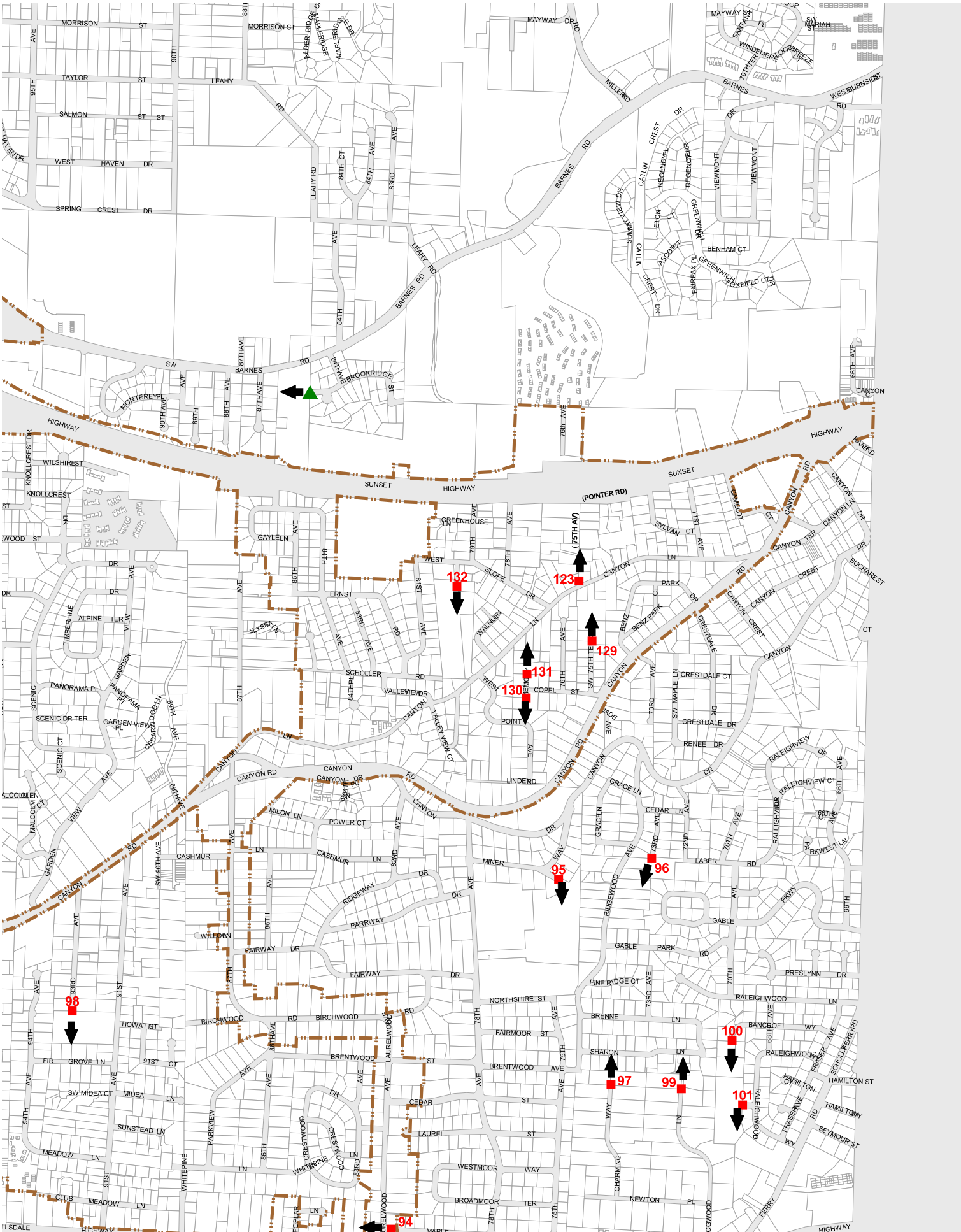

MORRISON ST
TAYLOR ST
LEAHY RD
SALMON ST
WEST HAVEN DR
SPRING CREST DR
MAYWAY DR
MILLER RD
BARNES RD
WEST BURNSIDE RD
BENHAM CT
FOXFIELD CT
GREENWICH CT
FAIRFAX PL
BROOKRIDGE ST
MONTEREY PL
HIGHWAY
SUNSET HIGHWAY
(POINTER RD)
WILSHIRE
KNOLLCREST
GAYLE LN
GREENHOUSE LN
ERNST
ALPINE TER
TIMBERLINE
PANORAMA PL
SCENIC DR TER
GARDEN VIEW PL
CEDARWOOD LN
SCHOLLER RD
VALLEY VIEW DR
VALLEY VIEW CT
COPEL ST
POINT
CANYON RD
CANYON DR
CANYON LN
CANYON CREST
CANYON TER
CRESTDALE DR
CRESTDALE CT
SW MAPLE LN
BENZ PARK
SYLVAN CT
CAMELOT CT
BUCHAREST CT
LINDER RD
MILON LN
POWER CT
CASHMUR LN
MINER WAY
RIDGEWAY DR
PARRWAY
WILDOW
FAIRWAY DR
GRACE LN
CEDAR LN
RENEE DR
LABER RD
RALEIGHVIEW DR
RALEIGHVIEW CT
PARKWEST LN
RIDGEWOOD
GABLE RD
GABLE PARK
PRESLYNN DR
PINE RIDGE CT
RALEIGHWOOD LN
BANCROFT WY
HAMILTON ST
SEYMOUR ST
FERRY
NORTHSHIRE ST
FAIRMOOR ST
BRENNE LN
SHARON LN
BIRCHWOOD RD
BRENTWOOD ST
LAURELWOOD
CEDAR ST
LAUREL ST
WESTMOOR WAY
BROADMOOR TER
NEWTON PL
DOGWOOD
CHARMING
HOWAT ST
FIR GROVE LN
SW MIDEA CT
MIDEA LN
SUNSTEAD LN
MEADOW LN
CLUB MEADOW LN
WHITEPINE
PARKVIEW
CRESTWOOD
MAPLE DR
HILLSDALE HIGHWAY
98
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Figure 6.16


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74
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MEADOWBROOK
WASHINGTON DR
WASHINGTON CT
FARMINGTON RD
ROSA RD
DIVISION ST
SPRINGFIELD ST
WRIGHT ST
OAK ST
SUGARLUM LN
SUGAR PLUM LN
IVY GLENN DR
SUMAC LN
CODYLN
BARCELONA WAY
SW WOODBERRY CT
CANBY CT
CYNTHIA ST
VIKING ST
BANY RD
HART RD
SW LOMA VISTA ST
SW SARALA ST
RIGERT ROAD
SW CONSTANCE STREET
SW CHARLOTTE DR
SW TALLAC TER
SW NAFUS LN
SW WHITETAIL LN
SW MARCILLE LN
SW SATTERBURG RD
SW FLAGSTONE DR
SW SIENNA LN
SW CORNELIAN WAY
SW SOREN CT
CASILDA CT
SW OVIATT ST
SW RED SUNSET LN
SW SHADY MEADOW CT
SW BRECKENRIDGE LN
SW CASTLE DR
SW WHITEOAK LN
SW VICTORIA LN
SW MAYJOHN CT
SW DELINE ST
SW ROSA RD
SW WRIGHT ST
SW OAK ST
SW TRATHMOOR ST
SW SPRINGFIELD ST
SW 187TH PL
SW 187TH AVE
SW 186TH PL
SW 188TH AVE
SW 188TH CT
SW 187TH DR
SW 186TH TER
SW 183RD TERRACE
SW 182ND TERRACE
SW 183RD AVE
SW 182ND AVE
SW 184TH AVE
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SW 181ST AVE
SW 180TH AVE
SW 179TH AVE
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SW 3RD AVE
SW 2ND AVE
SW 1ST AVE

Figure 6.17


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117
118
126
140
MURRAY BLVD
MENLO DR
ERICKSON AVE
SPENCER AVE
FAIRMONT ST
HAZEL ST
BERTHOLD ST
WINDJAMMER WAY
WINDJAMMER CT
SPINNAKER DR
BONNIE BRAE
BONNIE BRAE ST
LISA LN
LARSON ST
ALLEN AVE
SPIREA ST
DAPHNE ST
DAPHNE CT
IVY ST
IVY GLENN CT
KILCHIS ST
KILCHIS CT
BARCELONA CT
ALMONTE WAY
RIDDLE CT
SW BEVERLY BEACH CT
SW BRIGHTON COURT
WOODWIND DR
SW NEPTUNE TER
SW NEPTUNE LN
SW KIWANDA LN
SW SILETZ CT
SW MIDDLETON CT
SW GEARHART DR
SW GARIBALDI CT
SW GIBRALTAR CT
SW SUNSTONE LOOP
SW GARNET CT
SW SEXTON MOUNTAIN DR
SW SATTERBURG TER
SW TELLURIDE TERR
SW TURQUOISE LOOP
SW ONYX CT
SW RUBY ST
SW EMERALD TER
SW LAVA CT
SW JADE CT
SW JASPER PL
SW JAYLEE ST
SW WOODRUFF CT
SW KIRBY LN
SW BYGONES CT
SW GRISBEE CT
SW DIVISION ST
SW PEPPERMILL DR
SW AUTUMN CIR
SW SPRINGFIELD
SW BURNTWOOD
SW VILLAGE
SW WHEATON LN
SW SPRINDALE CT
SW DAVIS RD
SW HICKORY ST
SW WHEATON AVE
SW BROOK RD
SW CRANBERRY CT
SW GLENBROOK RD
SW GLENBROOK CT
SW PEPPERMILL CT
SW AUTUMN CIR
SW DEADLINE ST
SW CHERRY HILL CT
SW DAPHNE AVE
SW AZALEA CT
SW FISHER DR
SW BUCHER AVE
SW CARMEARET
SW NEHALEM LN
SW ROCHESTER DR
SW CHERRY AVE
SW BARLOW RD
SW BARLOW PL
SW BARLOW CT
SW 141ST PL
SW 140TH PL
SW 142ND PL
SW 144TH PL
SW TIERRA DEL MAR DR
SW PALMER WAY
SW FOREST DR
SW FOREST LN
SW HART RD
SW 27TH ST
SW 140TH CT
SW 142ND CT
SW DANIELLE AVE
SW 29TH CT
SW 31ST CT
SW 31ST ST
SW 32ND ST
SW 33RD PL
SW FIRCREST ST
SW WILSON AVE
SW KIMBERLY DR
SW CAROLWOOD DR
SW CAMARAGO PL
SW HARGIS RD
SW 142ND ST
SW 139TH ST
SW 135TH AVE
SW HYLAND WAY
SW HYLAND TER
SW HYLAND PL
SW 133RD AVE
SW BARBERRY DR
SW ROCK CREST CT
SW LANCEWOOD CT
SW ABELA PL
SW SANTOLINA PL
SW BLUEBELL LANE
SW CORAL PL
SW CAMPION CT
SW 129TH TER
SW DAVIES RD
SW SECRETARIAT LN
SW MAVERICK CT
SW MAVERICK PL
SW SECRETARIAT CT
SW SECRETARIAT TER
SW HALTER TER
SW CHEVY PL
SW PACKARD LN
SW DUPONT
SW JUANITA PL
SW 139TH PL
SW 135TH TER
SW CARR ST
SW MONTICELLO CIR
SW MONTICELLO AVE
SW SUFFOLK CT
SW CHEVELAND CT
SW MORGAN CT
SW DELMARCT
SW THOROBRED PL
SW CORTEZ CT
SW TAPADERA ST
SW GALLOP CT
SW STIRRUP CT
SW STIRRUP ST
SW MARTINGALE CT
SW YEARLING WAY
SW POMMEL CT
SW BRIDLETRAIL
SW TENNESSEE CT
SW KENTUCKY PL
SW DAVIES
SW 155TH AVE
SW 155TH PL
SW 155TH TER
SW 151ST PL
SW 150TH CT
SW 150TH AVE
SW 149TH AVE
SW 147TH TER
SW 146TH CT
SW 145TH PL
SW 142ND AVE
SW 139TH AVE
SW 139TH PL
SW 139TH TER
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SW 157TH PL
SW 154TH PL
SW 153RD AVE
SW 152ND AVE
SW 151ST PL

Figure 6.18

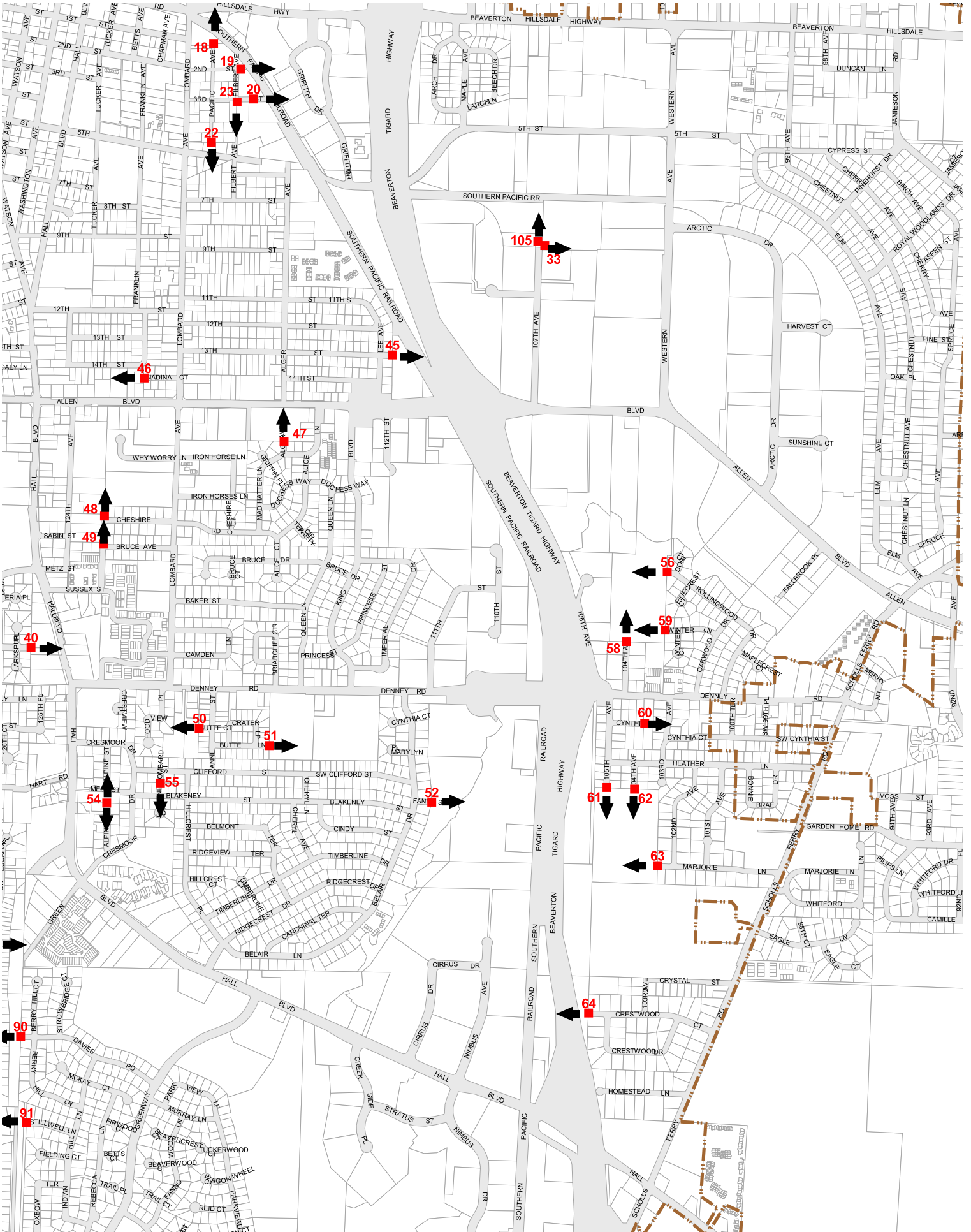

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BEAVERTON HILLSDALE HIGHWAY
SOUTHERN PACIFIC RR
SOUTHERN PACIFIC RAILROAD
BEAVERTON TIGARD HIGHWAY
HIGHWAY
TIGARD
BEAVERTON
HILLSDALE HWY
ALLEN BLVD
BLVD
HALL BLVD
DENNEY RD
SW CLIFFORD ST
SW CYNTHIA ST
BAKER ST
BRUCE AVE
CHESHIRE
SUSSEX ST
METZ ST
SABIN ST
IRON HORSES LN
WHY WORRY LN
IRON HORSE LN
DUCHESS WAY
GRIFFIN PASS WAY
MAD HATTER LN
CAMDEN
PRINCESS
BRIARCLIFF CIR
QUEEN LN
KING
IMPERIAL
BRUCE DR
ALICE DR
ALICE CT
CRESMOOR DR
CRATER
BUTTE CT
BUTTE LN
CLIFFORD ST
BLAKENEY ST
BELMONT
CINDY
RIDGEVIEW TER
TIMBERLINE DR
RIDGECREST DR
HILLCREST CT
CARDINAL TER
BELAIR LN
CYNTHIA CT
MARYLYN
HEATHER LN
MARJORIE LN
WHITFORD
CRESTWOOD CT
CRESTWOOD DR
HOMESTEAD LN
CRYSTAL ST
CIRRUS DR
STRATUS ST
NIMBUS
SIDE CREEK
DAVIES RD
MCKAY CT
MURRAY LN
STILLWELL LN
FIELDING CT
BEAVERWOOD CT
TUCKERWOOD CT
WAGON WHEEL
REID CT
PEARSON CT
PARKVIEW CT
TRAIL CT
TRAIL PL
FANNO
REBECCA
INDIAN
OXBOW
BERRY HILL CT
STRAWBRIDGE CT
GREENWAY
PARK VIEW LP
FIRWOOD
BEAVERCREST
WOODRIDGE
ARCTIC DR
HARVEST CT
SUNSHINE CT
107TH AVE
105TH AVE
104TH AVE
112TH ST
110TH
111TH
WESTERN AVE
5TH ST
CYPRESS ST
CHESTNUT
PINE ST
OAK PL
SPRUCE
ELM
CHESTNUT AVE
CHESTNUT LN
FALLBROOK PL
ROLLINGWOOD DR
WINTER LN
OAKWOOD DR
MAPLECREST
SCHOLLS FERRY RD
MERRY LN
DUNCAN LN
JAMIESON
CHERRYHURST DR
BIRCH AVE
ROYALWOODLANDS DR
CHERRY
CHEARSPEN ST
LARCH DR
LARCH LN
MAPLE AVE
BEECH DR
LEE AVE
ALGER ST
NADINA CT
LOMBARD
FRANKLIN
TUCKER AVE
WATSON
WASHINGTON
HALL
BETTS
CHAPMAN AVE
FILBERT
PACIFIC
GRIFFITH DR
SOUTHERN PACIFIC RAILROAD
BEAVERTON HILLSDALE HIGHWAY
98TH AVE
99TH AVE
100TH TER
102ND
101ST
103RD
105TH
94TH AVE
93RD AVE
92ND
MOSS ST
GARDEN HOME RD
FERRY
PILIPS LN
WHITFORD DR
WHITFORD LN
CAMILLE
98TH CT
EAGLE LN
EAGLE CT
MARJORIE
BONNIE
BRAE
SW 99TH PL
SW 100TH TER
SW 105TH
SW 94TH AVE
SW 103RD
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SW 103RD AVE
SW 104TH AVE
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SW 124TH
SW 125TH PL
SW 126TH CT
SW 92ND
SW 93RD AVE
SW 94TH AVE
SW 98TH AVE
SW 99TH AVE

Figure 6.19

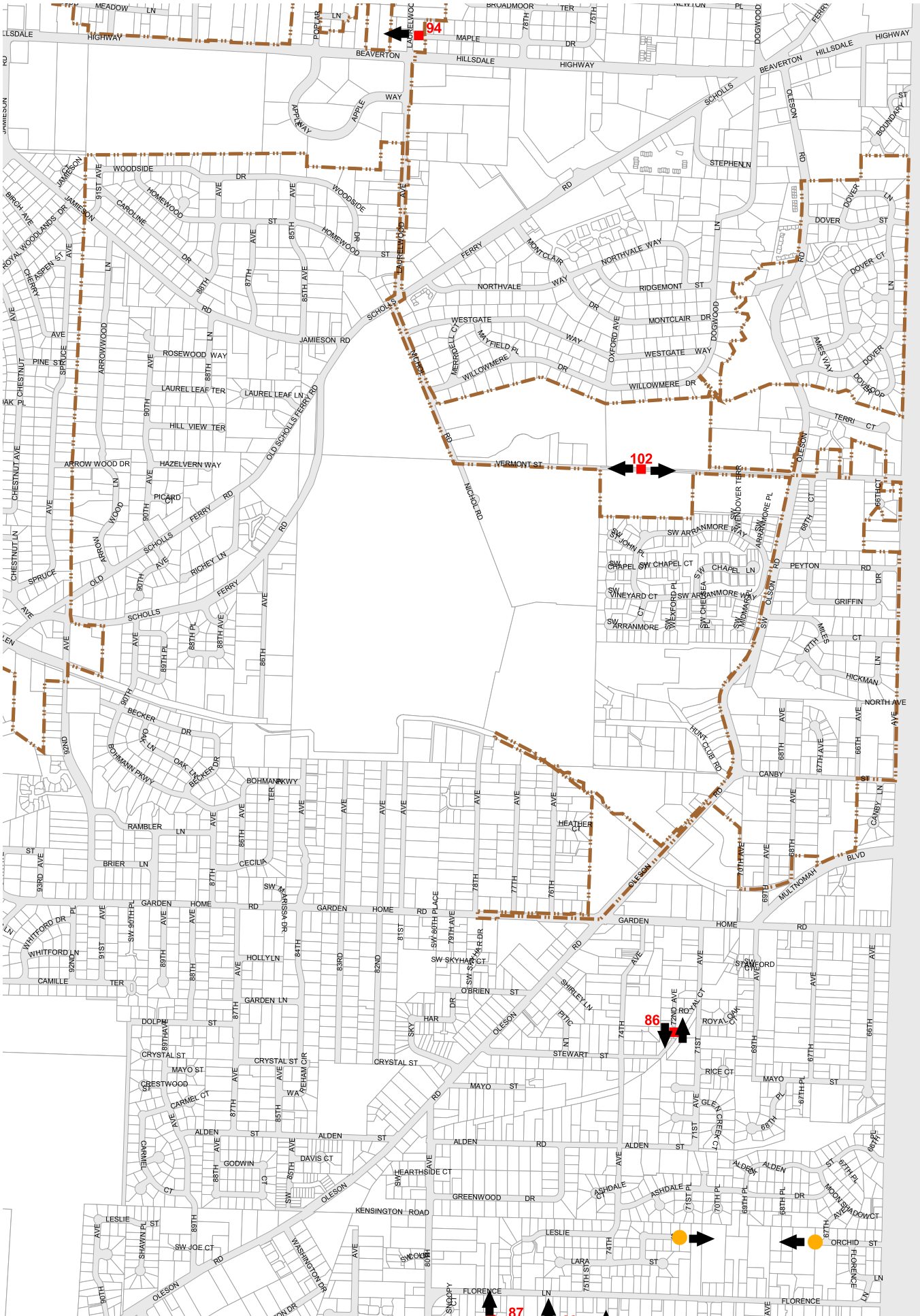

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BEAVERTON HILLSDALE HIGHWAY
MAPLE DR
WOODSIDE DR
HOMEWOOD ST
JAMIESON RD
SCHOLLS FERRY RD
NORTHVALE WAY
WESTGATE WAY
WILLOWMERE DR
MONTCLAIR DR
RIDGEMONT ST
OXFORD AVE
DOGWOOD
VERMONT ST
NICHOL RD
OLESON RD
PEYTON RD
GRIFFIN
HICKMAN
NORTH AVE
CANBY ST
HUNT CLUB RD
MULTNOMAH BLVD
GARDEN HOME RD
HOLLY LN
ALDEN ST
ALDEN RD
KENSINGTON ROAD
GREENWOOD DR
LESLIE ST
FLORENCE LN
ORCHID ST
STEWART ST
MAYO ST
CRYSTAL ST
BOHMANN PKWY
BECKER DR
RAMBLER LN
BRIER LN
CECILIA
WHITFORD DR
CAMILLE TER
DOLPH ST
CRESTWOOD ST
CARMEL CT
GODWIN CT
DAVIS CT
HEARTHSIDE CT
ASHDALE CT
SHIRLEY LN
O'BRIEN ST
SW SKYHAWK CT
SW ARRANMORE WAY
SW CHAPEL CT
SW VINEYARD CT
SW JOHN PL
SW DOVER TERRACE
SW ARRANMORE PL
SW CHERRY LEA CT
SW THOMAS PL
SW ALEXFORD PL
SW STAFFORD CT
ROYAL OAK CT
RICE CT
GLEN CREEK CT
MOONSHADOW CT
AMES WAY
DOVER CT
TERRI CT
MILES CT
ROSEWOOD WAY
LAUREL LEAF TER
LAUREL LEAF LN
HILL VIEW TER
ARROW WOOD DR
HAZELVERN WAY
PICARD RD
RICHEY LN
MERRIDELL CT
MAYFIELD PL
WESTGATE
MONTCLAIR
NORTHVALE
WOODSIDE
HOMEWOOD
CAROLINE
BIRCH AVE
ROYAL WOODLANDS DR
CHERRY
CHESTNUT AVE
CHESTNUT LN
SPRUCE
PINE ST
ARROWWOOD
OLD SCHOLLS FERRY RD
SW JOE CT
SHAWN PL
WASHINGTON DR
SNOOPY CT
LARA ST
ASHDALE
ALDEN
CRYSTAL CIR
WAREHAM CIR
SW 80TH PLACE
SW 80TH PL
SW 79TH AVE
SW 78TH DR
SW 77TH AVE
SW 76TH AVE
SW 74TH AVE
SW 72ND AVE
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SW 82ND AVE
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SW 74TH ST
SW 71ST PL
SW 70TH PL
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SW 66TH CT
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Figure 6.20


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141
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147
SW KEMMER RD
SW NORA RD
SW 175TH AVE
SW 170TH AVE
SW 160TH AVE
SW 155TH AVE
SW SCHOLLS FERRY RD
SW ALVORD LN
SW SNOWY OWL LN
SW HORSE TALE DR
SW RIDER LN
SW HIGH HILL LN
SW SPELLMAN DR
SW RED ROCK
SW TURTLEDOVE LN
SW CORMORANT DR
SW ORIOLE CIRCLE
SW FALCON DR
SW MEADOWLARK
SW CARDINAL
SW BOBWHITE CIR
SW HAWK
SW NIGHT
SW PARTRIDGE
SW TEAL
SW PINTAIL BLVD
SW MORNING DOVE
SW FALCON CT
SW FALCON PIPIT CT
SW TANAGER TER
SW RAVEN
SW CHICKADEE TER
SW GOLDFINCHER
SW FLICKER CT
SW CORNELIAN
SW BLUESTONE CT
SW GALENA
SW BRECCIA DR
SW CALDERA CT
SW SIERRA CT
SW TALUS PITA CT
SW SANDSTONE
SW GRANITE CT
SW PEBBLE CT
SW CINNABAR CT
SW JASPER
SW SNOWGOOSE PL
SW REDWING TER
SW EGRET PL
SW CORMORANT
SW SANDERLING CT
SW MT HOOD DR
SW MOUNT ADAMS
SW FOREST RIDGE PL
SW PETREL CT
SW PETREL LN
SW SHEARWATER LP
SW SHEARWATER PL
SW WAXWING
SW WAXWING WAY
SW 125' P G E EASEMENT
SW BONNEVILLE
SW POWER
SW ADMINISTRATION
SW 155TH TER
SW 155TH AVE
SW 158TH AVE
SW 160TH AVE
SW 161ST PL
SW 161ST CT
SW 170TH
SW 175TH
SW 169TH AVE
SW 17ST AVE
SW 176TH
SW 180TH PL
SW INGRID TER
SW JEREMY ST
SW MAYBERRY
SW KEMMER RD
SW KEMMER LN
SW CASILDA CT
SW ALBERT CT
SW SOREN CT
SW WOLVING LN
SW HORSE
SW SEXTON
SW BUCKINGHAM
SW WHITEBIRD CT
SW BLACKBIRD
SW BOBOLINK ST
SW IBIS TER
SW FULMAR TER
SW GOSHAWK ST
SW LOON DR
SW WINTERHAWK LN
SW SHELDRAKE LN
SW HARLEQUIN DR
SW HARLEQUIN AVENUE
SW MURRELET DR
SW CANVASBACK
SW GOLDENEYE
SW SNOWGOOSE
SW SCHOLLS FERRY
SW OLD FERRY ROAD
SW PARROWS RD
SW SORA CT
SW O'NEILL CT
SW TEAROSE WAY
SW LUKE LN
SW BECKY LANGE ST
SW ROSEROCK
SW BULRUSH LN
SW WINTERGREEN ST
SW DEWBERRY LANE
SW GLAZE CT
SW CROMWELL
SW KEERINS CT
SW CEARIN CT
SW ROCKROSE LANE
SW 154TH AVE
SW 157TH AVE
SW 160TH AVENUE
SW 161ST PL
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SW 158TH AVENUE
SW 155TH TER
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SW 175TH AVE
SW 175TH AVE
SW 175

Figure 6.21

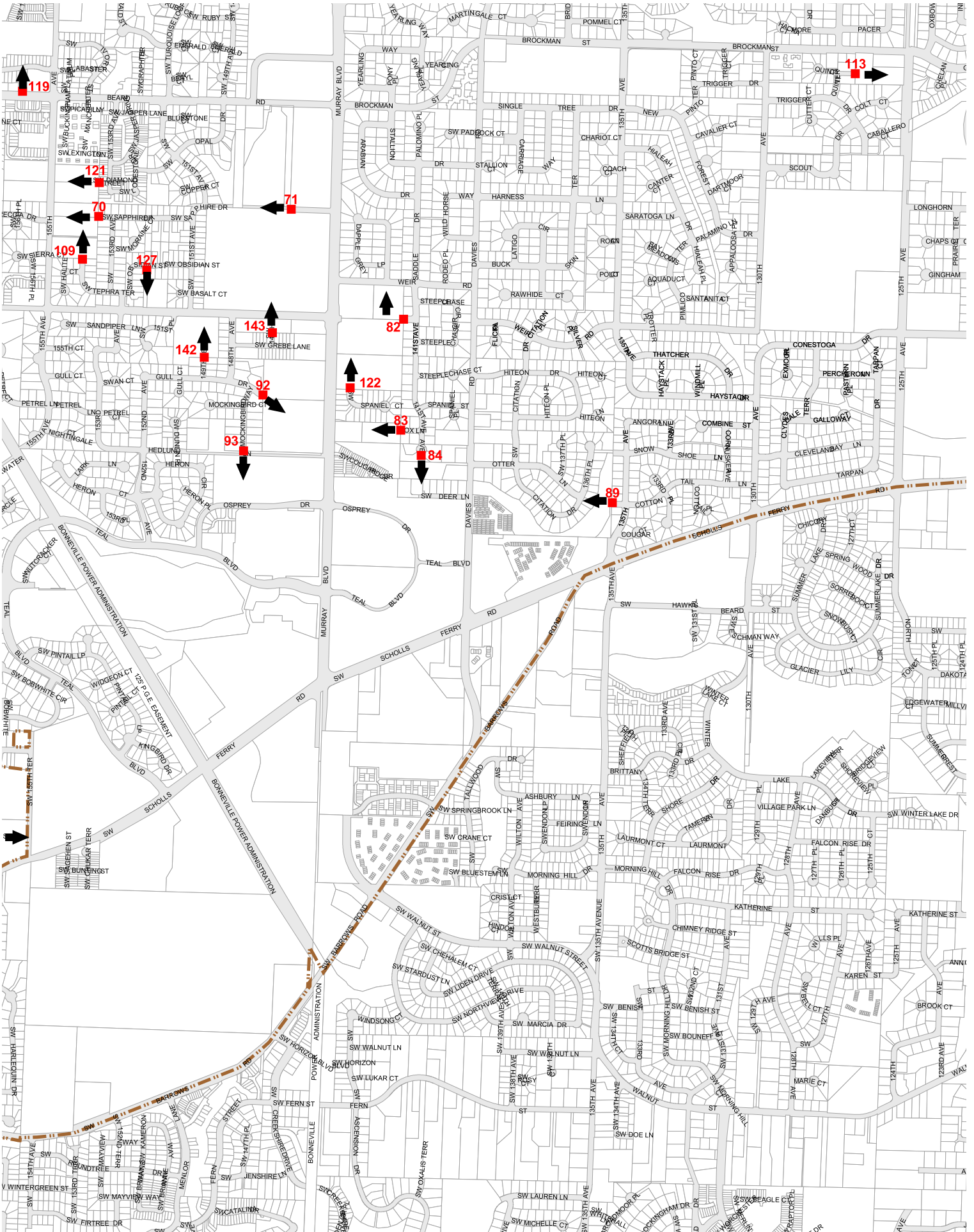
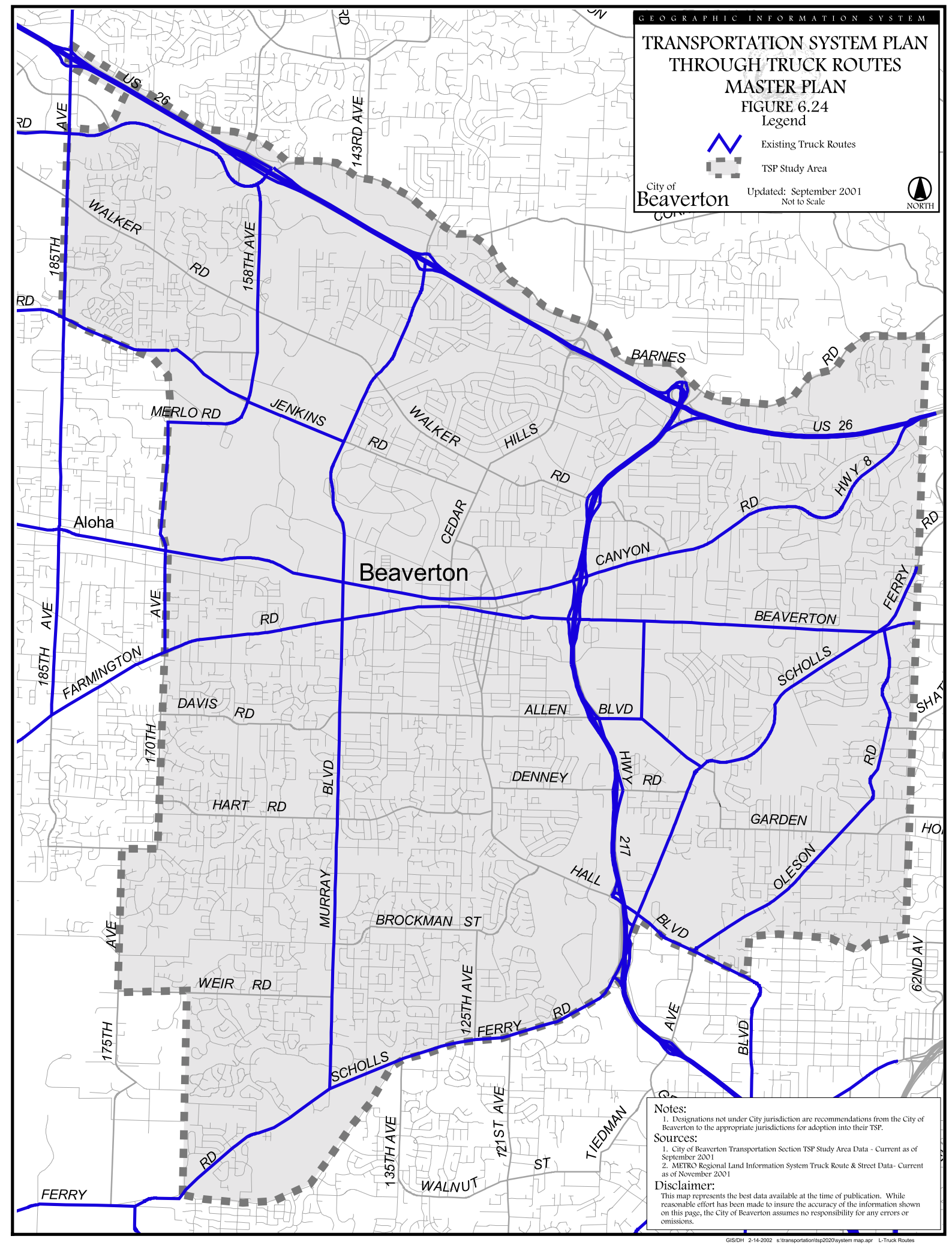

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SW JASPER LANE
SW BLUESTONE DR
SW OPAL
SW COPPER CT
SW DIAMOND TER
SW SAPPHIRE DR
SW SAPPHIRE
SW MORAINE DR
SW SIERRA CT
SW HALITE CT
SW TEPHRA TER
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SW BASALT CT
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SW 23RD TER
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SW 20TH TER
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SW 18TH TER
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SW 8TH TER
SW 7TH TER
SW 6TH TER
SW 5TH TER
SW 4TH TER
SW 3RD TER
SW 2ND TER
SW 1ST TER
SW RUBY ST
SW EMERALD TER
SW 149TH AVE
SW ALABASTER
SW GRAPHITE TER
SW TURQUOISE LOOP
SW JASPER LANE
SW BLUESTONE DR
SW OPAL
SW COPPER CT
SW DIAMOND TER
SW SAPPHIRE DR
SW SAPPHIRE
SW MORAINE DR
SW SIERRA CT
SW HALITE CT
SW TEPHRA TER
SW OBSIDIAN ST
SW BASALT CT
SW SANDPIPER LN
SW GREBE LANE
SW 155TH CT
SW 155TH AVE
SW 153RD AVE
SW 151ST AVE
SW 149TH AVE
SW 148TH AVE
SW 141ST AVE
SW 135TH AVE
SW 130TH AVE
SW 125TH AVE
SW 155TH PL
SW 153RD PL
SW 152ND AVE
SW 147TH PL
SW 136TH PL
SW 135TH PL
SW 134TH PL
SW 133RD AVE
SW 131ST AVE
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SW 128TH AVE
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SW 2ND TER
SW 1ST TER

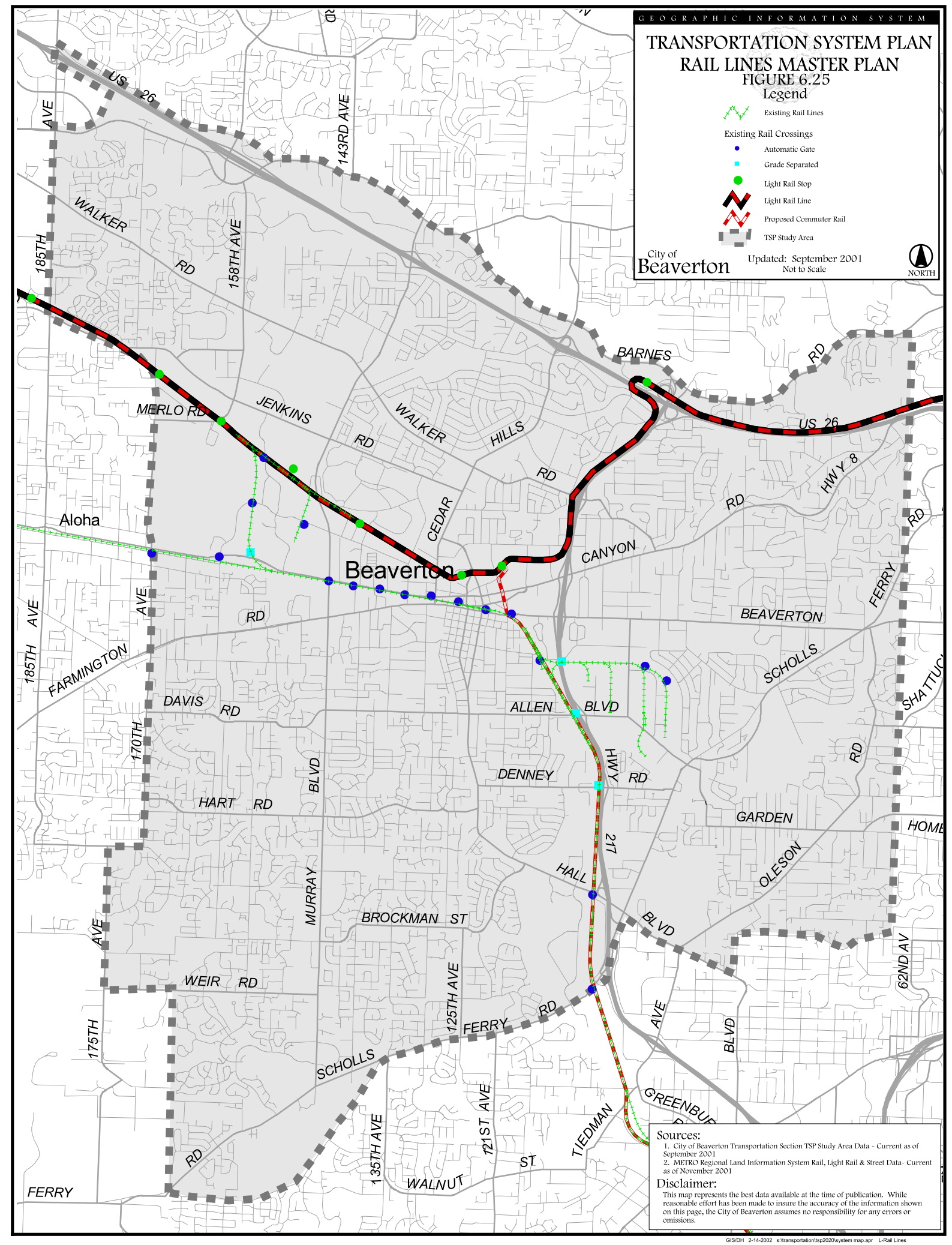
Figure 6.22

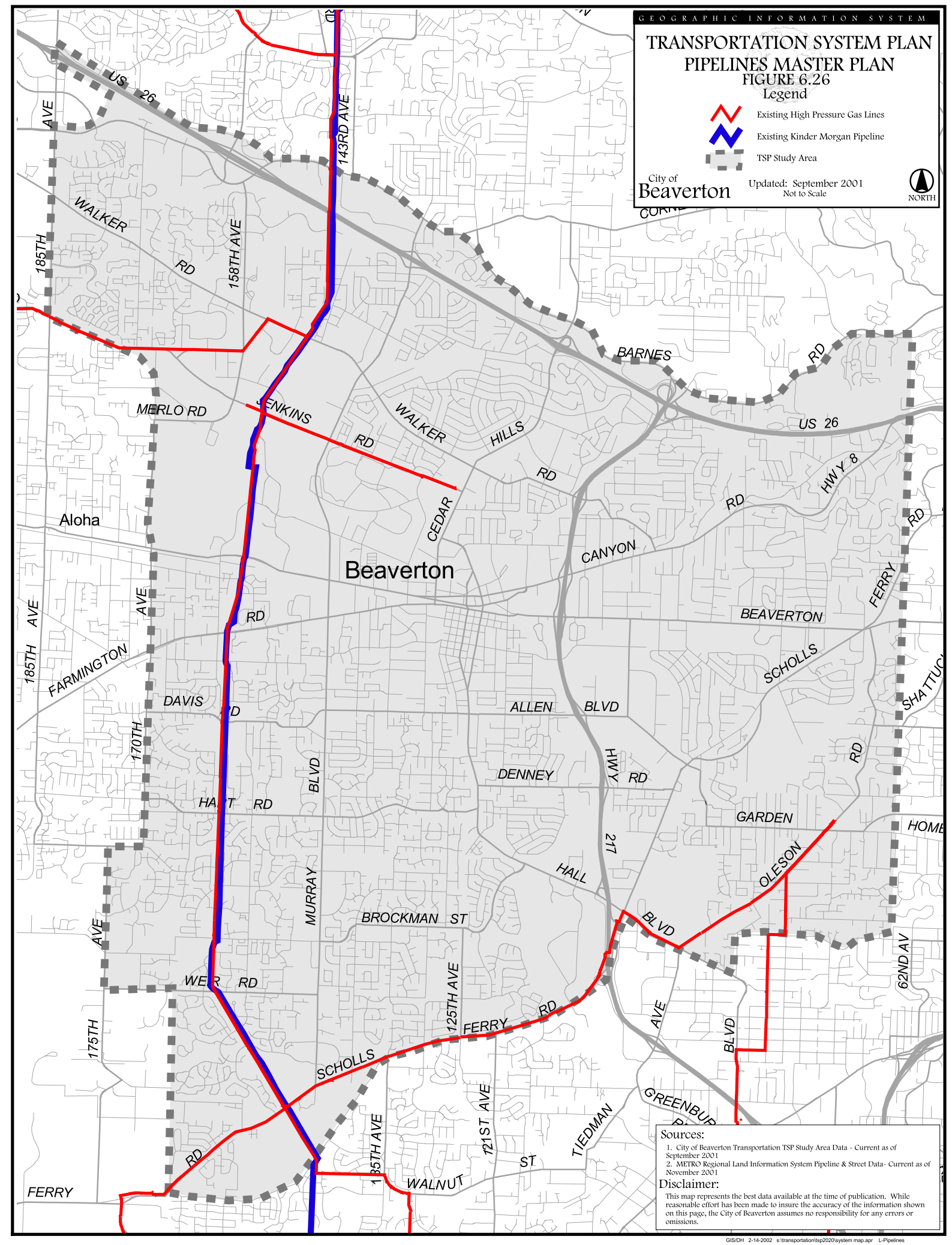

SCHOLLS
TERRY
NIMBUS
GEMINI
BEAVERTON
TIGARD
HIGHWAY
HALL
BLVD
GREENBURG
SOUTHERN PACIFIC RAILROAD
CASCADE
SPRINGWOOD
CONESTOGA
DOWNING
BURNETT
LONGHORN
CHAPS CT
CALICO CT
GINGHAM
MORLOCK
EBBERTS
WELCHER
WELCH CT
GAULT
SPUR CT
LOOKOUT TER
KEAS CT
ROBBINS
WILKENS
TEMPLIN
BRADLEY
REID CT
PEARSON CT
SHERIDAN
PARKVIEW LP
CHELAN
GREENWAY
HAZELWOOD
GLENWOOD
ASHWOOD
SCHOLLWOOD CT
WOODLAWN CT
PENNCT
COTTONWOOD
WILLOWOOD
SW BOXWOOD CT
IRONWOOD
LAMBWOOD
SW BLACK DIAMOND
SW GENEVA ST
WINDSOR
WINDSOR PL
SW ROSA PL
MANZANITA ST
ANTON
TIMOTHY
DAKOTA
NORTH DAKOTA ST
EDGEWATER CT
MILLVIEW CT
BURLHEIGHTS
BURLCREST
SUMMERREST
SUMMERST
SW SUMMER CREST DR
SW TORLAND ST.
SW GALLO AVE
TWINBARR
CORNELL
TIGARD ST
WINTER LAKE DR
MERESTONE
DAWN CT
KATHERINE ST
LYNN ST
ANN CT
ANN PL
ANN ST
BROOK CT
SW BAMBI LN
SW ERROL ST
ERROL ST
WALNUT ST
TIPPITT PL
CARMEN ST
LANSDOWNE
ALBERTA ST
FONNER
PATHFINDER
PATHFINDER CT
JAMES RD
MORGEN CT
DERRY DELL CT
GRANT CT
SCHOOL ST
WATKINS
MCKENZIE
GRANT
JOHNSON ST
JOHNSON CT
BROOKSIDE AVE
SW CLYDESDALE PL
SW TIEDMAN AVE
TIEDEMAN
MEADOWST
KAROL CT
SW COMMERCIAL ST
CENTER
LONDON CT
SW PIHAS CT
SCOTT CT
LEWIS LN
TANGELA LN
TANGELCT
LEHMANN
CORAL
LOCUST
MAPLE
SHADY LN
SW VERDE TERR
93RD AVE
94TH AVE
95TH AVE
92ND
91ST
LINCOLN AVE
ELECTRIC ST
MAIN
BURNHAM
SOUTHERN
ASH
ASH AVE
ASH DR
HWY
SCHOLLS
SW 125TH AVE
SW 121ST
SW 119TH
SW 116TH
SW 114TH
SW 112TH AV.
SW 110TH PL
SW 108TH
SW 107TH PL
SW 106TH
SW 114TH PL
SW 117TH PL
SW 118TH CT
SW 123RD CT
SW 122ND CT
SW 122ND AVE
SW 123RD AVE
SW 124TH PL
SW 125TH PL
SW 113TH PL
SW 112TH AVE
SW 114TH TER
SW 116TH AVE
SW 118TH AVE
SW 119TH AVE
SW 121ST AVE
SW 107TH
SW 98TH
SW 95TH
SW 91ST CT
SW 91ST AVE
SW 92ND AVE
SW 95TH AVE
SW 98W
SW 107TH CT
SW 108TH AVE
SW 108TH WAY
SW 108TH CT
SW 109TH AVENUE
SW 112TH AVE
SW 114TH TER
SW 116TH AVE
SW 118TH AVE
SW 119TH AVE
SW 121ST AVE
SW 122ND AVE
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SW 123RD CT
SW 122ND CT

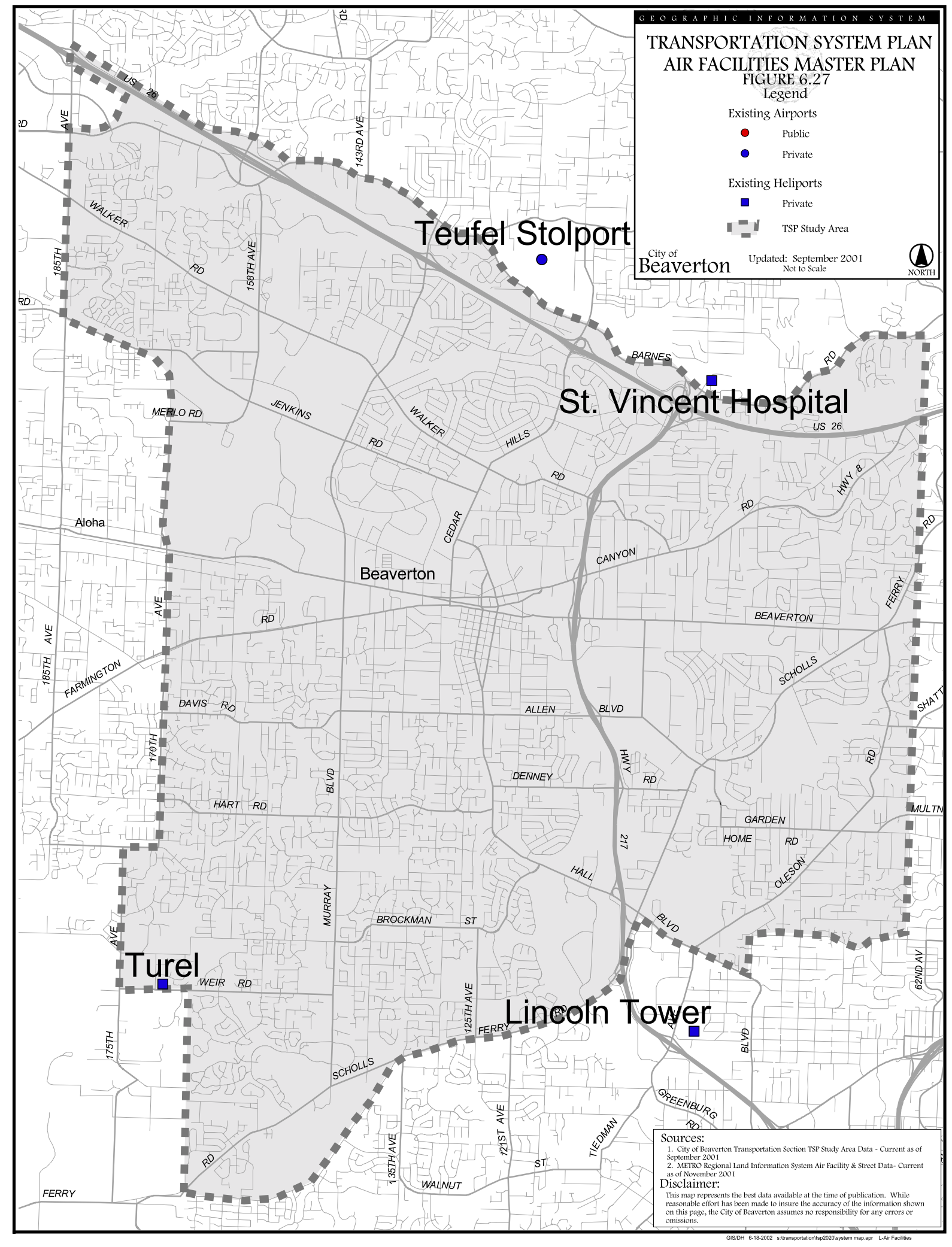
Figure 6.23


87
88
103
FLORENCE LN
SW CHASE LN
TAYLORS FERRY RD
BIRCH ST
CEDARCREST ST
CHESTNUT ST
ELMWOOD ST
BORDERS ST
HEMLOCK ST
LARCH ST
CORAL ST
LOCUST ST
MAPLELEAF ST
OAK ST
PINE ST
SPRUCE ST
THORN ST
STEVE ST
PFAFFLE ST
LOMITA
SHADY LN
LOLA LN
BARBARA LN
VENTURA CT
VENTURA DR
ALFRED ST
WALNUT TERR
SW KINGSVIEW CT
MAPLELEAF CT
ATLANTA ST
BAYLOR ST
CLINTON ST
DARTMOUTH ST
ELMHURST ST
HERMOSO WAY
FRANKLIN ST
BEVELAND ST
GONZAGA ST
HAMPTON ST
GARDEN PL
KNOLL PL
SW 91ST CT
SW MAUI CT
SW SITKA CT
SW LANDAU PL
SW JEFFERSON ST
SW FAST PL
OLESON
WASHINGTON DR
BOMAR DR
CEDARCREST
HALL BLVD
CENTER ST
LINCOLN AVE
COMMERCIAL ST
SOUTHERN PACIFIC BURLINGTON NORTHERN RAILROAD
SCOFFINS ST
BURNHAM ST
ASH ST
HWY 217
99W
PACIFIC HWY
91ST AVE
90TH AVE
89TH AVE
88TH AVE
87TH AVE
85TH AVE
84TH AVE
83RD AVE
82ND AVE
81ST AVE
80TH AVE
79TH AVE
78TH AVE
77TH AVE
75TH AVE
74TH AVE
72ND AVE
70TH AVE
69TH AVE
67TH AVE
66TH AVE
92ND AVE
SW 76TH AVE
SW 75TH AVE
SW 74TH AVE
SW 78TH PL
SW 74TH PL
SW 71ST PL
SW 70TH PL
SW VIENNA PL
SHOPPY CT


GEOGRAPHIC INFORMATION SYSTEM
TRANSPORTATION SYSTEM PLAN
THROUGH TRUCK ROUTES
MASTER PLAN
FIGURE 6.24
Legend
Existing Truck Routes
TSP Study Area
City of Beaverton
Updated: September 2001
Not to Scale
NORTH
Aloha
Beaverton
US 26
BARNES RD
MERLO RD
JENKINS RD
WALKER RD
HILLS RD
CEDAR
CANYON
HWY 8
BEAVERTON
FERRY
SCHOLLS
FARMINGTON
DAVIS RD
ALLEN BLVD
DENNEY
HWY 217
HART RD
MURRAY BLVD
BROCKMAN ST
HALL
OLESON
GARDEN
WEIR RD
125TH AVE
135TH AVE
121ST AVE
TIEDMAN
WALNUT ST
62ND AV
143RD AVE
158TH AVE
185TH AVE
170TH AVE
175TH AVE
Notes:
1. Designations not under City jurisdiction are recommendations from the City of Beaverton to the appropriate jurisdictions for adoption into their TSP.
Sources:
1. City of Beaverton Transportation Section TSP Study Area Data - Current as of September 2001
2. METRO Regional Land Information System Truck Route & Street Data- Current as of November 2001
Disclaimer:
This map represents the best data available at the time of publication. While reasonable effort has been made to insure the accuracy of the information shown on this page, the City of Beaverton assumes no responsibility for any errors or omissions.
GIS/DH 2-14-2002 s:\transportation\tsp2020\system map.apr L-Truck Routes


GEOGRAPHIC INFORMATION SYSTEM
TRANSPORTATION SYSTEM PLAN
RAIL LINES MASTER PLAN
FIGURE 6.25
Legend
Existing Rail Lines
Existing Rail Crossings
Automatic Gate
Grade Separated
Light Rail Stop
Light Rail Line
Proposed Commuter Rail
TSP Study Area
City of Beaverton
Updated: September 2001
Not to Scale
NORTH
Aloha
Beaverton
US 26
BARNES RD
MERLO RD
JENKINS RD
WALKER RD
HILLS RD
CEDAR
CANYON
HWY 8
BEAVERTON
SCHOLLS
FERRY
FARMINGTON
DAVIS RD
ALLEN BLVD
DENNEY RD
HART RD
HWY 217
GARDEN
OLESON
HALL BLVD
BROCKMAN ST
WEIR RD
FERRY RD
SCHOLLS
TIEDMAN
GREENBUR
WALNUT ST
185TH AVE
158TH AVE
143RD AVE
170TH
MURRAY BLVD
125TH AVE
135TH AVE
121ST AVE
175TH
62ND AV
Sources:
1. City of Beaverton Transportation Section TSP Study Area Data - Current as of September 2001
2. METRO Regional Land Information System Rail, Light Rail & Street Data- Current as of November 2001
Disclaimer:
This map represents the best data available at the time of publication. While reasonable effort has been made to insure the accuracy of the information shown on this page, the City of Beaverton assumes no responsibility for any errors or omissions.
GIS/DH 2-14-2002 s:\transportation\tsp2020\system map.apr L-Rail Lines


GEOGRAPHIC INFORMATION SYSTEM
TRANSPORTATION SYSTEM PLAN
PIPELINES MASTER PLAN
FIGURE 6.26
Legend
Existing High Pressure Gas Lines
Existing Kinder Morgan Pipeline
TSP Study Area
City of Beaverton
Updated: September 2001
Not to Scale
NORTH
Sources:
1. City of Beaverton Transportation TSP Study Area Data - Current as of September 2001
2. METRO Regional Land Information System Pipeline & Street Data- Current as of November 2001
Disclaimer:
This map represents the best data available at the time of publication. While reasonable effort has been made to insure the accuracy of the information shown on this page, the City of Beaverton assumes no responsibility for any errors or omissions.
GIS/DH 2-14-2002 s:\transportation\tsp2020\system map.apr L-Pipelines
Beaverton
Aloha
US 26
143RD AVE
158TH AVE
185TH AVE
WALKER RD
MERLO RD
JENKINS RD
WALKER HILLS RD
CEDAR
BARNES RD
US 26
HWY 8
CANYON
BEAVERTON
FERRY
SCHOLLS
SHATTUC
FARMINGTON
DAVIS RD
ALLEN BLVD
DENNEY
HWY 217
GARDEN
HOME
OLESON
HALL
BLVD
MURRAY
BROCKMAN ST
WEIR RD
125TH AVE
FERRY RD
SCHOLLS
175TH AVE
135TH AVE
121ST AVE
WALNUT ST
TIEDMAN
GREENBUR
62ND AV
170TH AVE


GEOGRAPHIC INFORMATION SYSTEM
TRANSPORTATION SYSTEM PLAN
AIR FACILITIES MASTER PLAN
FIGURE 6.27
Legend
Existing Airports
Public
Private
Existing Heliports
Private
TSP Study Area
City of Beaverton
Updated: September 2001
Not to Scale
NORTH
Teufel Stolport
St. Vincent Hospital
Turel
Lincoln Tower
Aloha
Beaverton
US 26
BARNES RD
MERLO RD
JENKINS RD
WALKER RD
HILLS RD
CEDAR HILLS
CANYON RD
HWY 8
BEAVERTON
SCHOLLS FERRY
FARMINGTON
DAVIS RD
ALLEN BLVD
DENNEY RD
HART RD
GARDEN HOME RD
OLESON
HALL BLVD
BROCKMAN ST
WEIR RD
FERRY
SCHOLLS
GREENBURG RD
TIEDMAN
WALNUT ST
185TH AVE
158TH AVE
143RD AVE
170TH
MURRAY BLVD
125TH AVE
135TH AVE
121ST AVE
217
62ND AV
MULTN
Sources:
1. City of Beaverton Transportation Section TSP Study Area Data - Current as of September 2001
2. METRO Regional Land Information System Air Facility & Street Data- Current as of November 2001
Disclaimer:
This map represents the best data available at the time of publication. While reasonable effort has been made to insure the accuracy of the information shown on this page, the City of Beaverton assumes no responsibility for any errors or omissions.
GIS/DH 6-18-2002 s:\transportation\tsp2020\system map.apr L-Air Facilities

CHAPTER SEVEN: NATURAL, CULTURAL, HISTORIC, SCENIC, ENERGY, AND GROUNDWATER RESOURCES ELEMENT

7.1 OVERVIEW

This Plan element addresses natural, cultural, historic, scenic, energy, and groundwater resources within the context of Statewide Planning Goal 5. Statewide Planning Goal 5, Open Spaces, Scenic Resources and Historic Area, and Natural Resources, provides a mechanism for local governments to plan for resources. Procedures to comply with this goal are specified in Oregon Revised Statutes (ORS 660-23-000 through 660-23-250.) The procedures include a three-part process:

1) Inventory the resource,
2) Analyze the economic, social, environmental, and energy (ESEE) consequences that could result from a decision to allow, limit or prohibit a conflicting use, and
3) Adopt a program to implement the decisions made through the ESEE analysis.

An alternative process is also provided for some resources: the Safe Harbor alternative. In this alternative, local governments are given the option to adopt inventories based on information gathered by other agencies, or to adopt standardized programs to implement protection of the resource, thereby eliminating the need to complete the ESEE analysis.

Volume III of the Comprehensive Plan, Statewide Planning Goal 5 Resource Inventory Documents, provides the information necessary to satisfy the inventory requirements of this goal. This information includes quantity, quality and location data on specific resources. Additionally, the inventoried resources are mapped or listed, and a determination of significance of the individual resource sites is provided in map or list form.

The text that follows addresses the third requirement in the Goal 5 process. Where possible, the program decision has been to follow the Safe Harbor regulations of the goal; therefore, an ESEE analysis is not necessary. Where necessary, the ESEE analysis is included in Volume III.

The resource protection goals, policies and actions that follow in this section are divided into Statewide Planning Goal 5 resource categories, to match each City inventory. Each category provides the foundation for the regulations and programs designed to protect, enhance or restore these resources, and to further demonstrate compliance with Statewide Planning Goal 5.

Metro, the regional government encompassing Washington, Clackamas, and Multnomah counties, identified regionally significant wildlife habitat and riparian corridors. These areas were divided into categories: wildlife habitat, riparian corridors, and upland wildlife habitat and subdivided by classes: I, II and III or Class A, B and C. Upon completion of the inventory, the local governments within the Tualatin Basin combined together to form the Tualatin Basin Natural Resource Coordinating Committee, also known as the Tualatin Basin Partners. This group, headed by Washington County, conducted an ESEE analysis and developed a program to protect, conserve and restore Class I and II riparian corridors, Class I and II wildlife habitat, and Class A upland wildlife habitat (termed Habitat Benefit Areas) as a voluntary program. Each local government, through the Tualatin Basin Partnership, agreed to "allow and encourage" habitat friendly development practices to comply with the intergovernmental agreement that the partners

have with Metro. Additionally, to minimize storm water impacts on the Habitat Benefit Areas low impact development techniques are proposed, in some cases, throughout the city. The program, applies only to Habitat Benefit Areas, is implemented through the Beaverton Development Code, Engineering Design Manual and Municipal Code.

The protection of natural resources is necessary to preserve a healthy, sustainable environment in an urban setting. Protection of these resources today will ensure that as the community grows in density and expands its boundaries the natural landscape will be preserved for the health, safety and welfare of its citizens. Natural resources also provide aesthetic beauty. Their protection benefits property values and increases the livability of the City.

Beaverton is fortunate to have natural and historic resources that significantly add to the quality of life. These include streams, adjacent riparian areas, wetlands, large wooded tracts, open space, and historic sites and buildings. Under state planning goals, the citizens of Beaverton have the opportunity and obligation to protect these resources. While it is unreasonable to expect all of Beaverton's resource areas to remain unchanged, we must recognize that the presence of these areas contributes to our overall quality of life. The retention of these resources maintains visual and scenic diversity, provides areas for education and passive or active recreation, and can provide site development amenities for residents and employees alike. Thus, a balance between full protection of all inventoried resources and full development of the inventoried resources is provided in the following goals, policies and actions.

7.1.1 Goal: Balance development rights with natural resource protection.

Policies:

a) Coordinate resource protection programs with affected local, state, and federal regulatory agencies, and notify them of development proposals within natural resource areas.

Action 1: *Adopt land use processes to incorporate notification to appropriate agencies as part of the development review process.*

Action 2: *Continue membership and activity within the Tualatin Basin Natural Resources Coordinating Committee.*

Action 3: *Encourage the use of the habitat friendly development practices of lo9w impact development techniques through the Pre-Application Conference.*

Action 4: *Proactively lead the way with development of city buildings by using habitat friendly development practices and low impact development techniques.*

Action 5: *Develop a comprehensive habitat benefit area plan for the Beaverton Downtown Regional Center to integrate Beaverton Creek into the Regional Center as an amenity.*

b) Where adverse impacts to Significant Natural Resources cannot be practicably avoided, require mitigation of the same resource type commensurate with the impact, at a location as close as possible to the impacted resource site.

c) Allow for relaxation of development standards to protect significant natural and historic resources. Such standards may include but are not limited to minimum setbacks, maximum building height, minimum street width, location of bicycle, pedestrian and multi-use paths, etc.

Action 1: *Adopt and apply land use regulations that allow and encourage habitat friendly and low impact development practices within habitat benefit areas, and where appropriate, throughout the city.*

Action 2: *Adopt and apply a system to allow flexibility in applying the site development standards when development employs low impact development techniques and habitat friendly development practices.*

Action 3: *Adopt and apply an incentive program to encourage the use of the low impact development techniques and habitat friendly development practices.*

d) City policies or regulations shall not interfere with actions necessary for nuisance abatement or protecting the safety, health and welfare of Beaverton's citizens.

e) Upon annexation of unincorporated properties with County Goal 5 natural resource designations, the City shall rely on the Urban Planning Area Agreement with Washington County to determine the appropriate City designation.

Action 1: *The City shall work with Washington County to periodically update the UPAA to ensure compatibility in Goal 5 resource inventories, significance determination, and program decisions.*

7.2 CULTURAL AND HISTORIC RESOURCES

Cultural and Historic Resources are our connection to the past. Cultural resources include areas characterized by evidence of an ethnic, religious, or social group with distinctive traits, beliefs, and social forms. For example, an archaeological site, such as an Indian burial ground, could be an important or significant cultural resource requiring review. There are no known significant or important cultural resources within the city limits.

Historic resources are lands with sites, structures, and objects that have local, regional, statewide, or national historical significance. A continued effort to protect and preserve these types of resources whenever possible will keep Beaverton from being "just another suburb."

In 1983, a county-wide inventory of cultural and historic resources was conducted by Washington County Museum. When the museum staff considered the resources within Beaverton, they realized that the city was so rich in historic resources that they, because of time and staffing restraints, would not be able to do a complete and detailed inventory. Beaverton, therefore, would need to proceed on its own.

At the recommendation of the Washington County Museum and the State Historic Preservation

Office, Beaverton began its inventory with a detailed analysis of the buildings located on the original plat of Beaverton dated December 26, 1868 and the map of Steel's Addition to Beaverton. In August of 1984, the City nominated the "Downtown Beaverton Historic District" to the National Park Service National Register of Historic Places. The district, as described on the nomination form, is an irregular 2 X 3 block area bounded by SW Canyon Boulevard on the north, SW East Street and SW Washington Street on the east, SW Second Street on the south, and SW Watson Street on the west. This district includes buildings used for commercial, entertainment and private residences.

Within the boundaries of the Downtown Beaverton Historic District structures are classified based on building date, architectural style, materials, condition, alterations, building setback and use. Properties within the boundaries of the Historic District are classified into six categories: 1) Primary significant, 2) Secondary significant, 3) Historic non-contributing, 4) Compatible non-contributing, 5) Non-compatible non-contributing, and 6) vacant. The inventory contained in Volume III of this Comprehensive Plan provides more detailed information regarding the individual properties and their designations.

In 1986, the City further developed the inventory of historic resources and evaluated these resources with the assistance of a task force of local historians, architects**,** and interested citizens, following the process specified by Statewide Planning Goal 5. Each resource was reviewed to determine if any conflicting uses existed. If so, the economic, social, environmental**,** and energy consequences of protecting the resource, limiting the conflicting use, or allowing the conflicting use were evaluated. The City has adopted a complete inventory of the city's significant and important historic resources and created an Historic Resource Review Committee (HRRC) to review alterations or demolitions of these resources and to promote, through education, the appreciation of the city's numerous historic resources.

In 1995 a State Statutes were amended to require local governments to allow a property owner to refuse consent to any form of historic property designation at any point in the designation process. This refusal removes the property from consideration for historic property designation by the State Historic Preservation Office and local governments (ORS 197.772). Additionally, similar revisions were made to the Statewide Planning Goal 5 Historic Resources section of the Oregon Revised Statutes (ORS 660-23-200).

Beginning in 1998, a study was undertaken to update the City's Historic Resources Inventory based on guidelines established by OAR 660-23-0200. This work was completed, but has not been adopted. It is anticipated that adoption will occur after a new program for resource protection is defined, so that owners of properties listed in the inventory will be aware of the effects of a listing.

7.2.1 Goal: Preserve, manage and encourage restoration of historic sites, structures, and objects designated as Significant Historic Landmarks, and protect the character of the Downtown Historic

District as listed on the National Register of Historic Places.

Policies:

a) With the cooperation of property owners, protect enhance and perpetuate Significant Historic Landmarks and the Downtown Historic District representing or reflecting elements of the City's cultural, social, economic, political and architectural history.

b) Consistent with State law, property owner permission shall be required before a historic or cultural resource may be listed in the City's Goal 5 inventory. Should a property owner request, in writing, removal of a historic or cultural resource from the inventory, the City shall honor that request as expeditiously as possible.

Action 1: *Adopt procedures to expedite removal of historic or cultural resource designation from properties where property owners request, in writing, said removal.*

c) The Historic Resource Review Committee (HRRC) shall review alterations and demolitions to designated Significant Historic Landmarks as well as new construction in designated historic districts. They shall also comment on other issues pertaining to historic resources. This may include, but is not limited to, making recommendations regarding the designation of proposed Significant Historic Landmarks or Significant Historic Districts to the Planning Commission. The HRRC shall also be responsible for updating the City's significant historic resource inventory.

Action 1: *Adopt an update to the City's Historic Resources Inventory based on survey work done in 1998-1999, after a voluntary, incentive-based program to protect inventoried resources is defined.*

Action 2: *Define and designate local historic districts, and create and adopt architectural design guidelines for historic districts, along with other incentive based programs to preserve the integrity of Significant Historic structures, objects, or sites. Designate a historic district in the Old Town area in conjunction with the adoption of architectural design guidelines for the area to preserve its historic integrity.*

Action 3: *Establish information programs to assist property owners and residents in the recognition and appreciation of significant historic resources.*

Action 4: *Provide the opportunity for innovative design solutions to problems encountered in the adaptive reuse of historic buildings through development of a combination of incentive programs and design guidelines.*

Action 5: *Develop and adopt design criteria for new or redeveloped structures within a designated Historic District so as to preserve or enhance the integrity of the area.*

d) To ensure that no historic resource is lost unnecessarily and that all avenues and possibilities for the retention of the building have been exhausted, before a resource is allowed to be demolished, the person requesting the demolition must establish that the building either cannot

be moved because of a lack of structural integrity or cannot be sold to be moved to another site.

e) Encourage citizen participation in historic preservation and related activities as a source of positive community identity.

f) The City's historic resource protection regulations shall apply to all historic resources in the city on the National Register of Historic Places, regardless of whether these resources are listed in the local inventory.

7.3 NATURAL RESOURCES

Natural Resources are classified and addressed in this section by Statewide Planning Goal 5 categories. Associated with these categories are detailed background data including inventory and assessment information that provided the findings to determine the significance of resources. Adopted inventories of significant natural resources are included in the maps and listings of Significant Natural Resources located in Volume III of the Comprehensive Plan. The inventory lists and maps were adopted over time, based on state regulations.

Statewide Planning Goal 5 continues to be revised and updated. Each periodic review updates the City's inventory, and at the same time applies the most current requirements to ensure continued protection of significant natural resources.

In 1984, an inventory of Beaverton's natural resources was done to determine their quality and quantity. The City adopted a map layer entitled: Significant and Important Natural Resources and Other Important Natural Resources. These areas were then evaluated as to the economic, social, and environmental consequences of protecting the natural resource or allowing conflicting uses. Areas shown on the map as Significant Natural Resources are generally wetlands or riparian-stream corridors that were considered important principally for their wildlife habitat values. Areas shown on the map as Important Natural Resources contained major stands of trees, drainage swales, and other natural vegetation that were determined to be primarily important for their aesthetic value, although many also provide wildlife habitat of some, although relatively less, importance.

The map at that time delineated, as clearly as possible, the appropriate boundaries of the Significant and Important Natural Resources. However, it is also necessary to rely on inventory, field investigation, and other factors conducted in conjunction with the review of a proposed site development to define more precise boundaries, such as the exact location of a riparian corridor boundary on a specific site.

In 1991 the City Board of Design Review adopted an additional significant tree inventory. Although this inventory was not conducted pursuant to Statewide Planning Goal 5, and was not adopted by the City Council, it did serve to further define trees and stands of trees of importance to the City

In 2000, a Local Wetland Inventory (LWI) was completed. The LWI is one of the City's Goal 5 resource inventories comprising Volume III of the Comprehensive Plan. The City employed the

Goal 5 regulations by conducting the inventory reconnaissance using the Oregon Freshwater Assessment Methodology (OFWAM) to satisfy the quality and quantity requirements of the regulations. Significance was determined based on applying the LWI criteria, using the OFWAM findings. The LWI includes wetlands meeting state criteria for significance. A list of locally significant wetlands is found in Comprehensive Plan Volume III, Local Wetland Inventory Text, Appendix A Table 5.

Also in 2000, an Urban Riparian Assessment was completed following the procedures found within the Urban Riparian Inventory and Assessment Guide, developed by the Division of State Lands. This assessment was adopted, and included in Comprehensive Plan Volume III, Appendix C of the Local Wetland Inventory. It is intended to be used as a tool by planners to indicate that additional information on the location of the riparian area is required prior to development approval.

In 2000 the City also determined that certain streams are fish-bearing following the Goal 5 Safe Harbor requirements for Riparian Corridor inventories and determinations of significance. The significant fish bearing streams are identified on page 3 of Planning Commission Order No. 1318, enclosed in the opening pages of the Local Wetland Inventory.

Adequate riparian corridors are of particular importance for their positive effect on the adjacent water resource. They act as natural filters for pollutants, provide flood control benefits, and reduce erosion. Vegetation in riparian corridors provides shade and cover for both fish and other aquatic and upland wildlife species. The riparian corridors within the City are typically located within residential, commercial, and campus industrial areas. Generally the vegetation in these riparian areas has been removed, or altered substantially. As the City continues to grow and increases density, the remaining unaltered riparian corridors will be subject to development pressures. Removal of vegetation and the construction of structures within the riparian areas are the activities most likely to conflict with riparian functions and values. These conflicting uses can be managed through regulatory provisions that limit encroachment. Where encroachment is permitted, prescribed levels of mitigation and restoration can be required.

Although areas of significant wildlife habitat, as defined by the State Goal 5 Administrative Rule, have not been identified in the city, measures to protect significant riparian areas and wetlands also serve to protect fish and wildlife. Areas of fish and wildlife habitat are important to our community because they add to our overall quality of life by permitting observation and appreciation of our stewardship responsibilities in close proximity to our homes and workplaces. While these resources exist elsewhere in Oregon, they are important remnants of the natural environment close to our everyday activities.

In 2002, Metro released a Preliminary Draft Riparian Corridor and Wildlife Habitat Inventory for public review. In September 2003, Metro released a Discussion Draft of the Economic, Social, Environmental and Energy Analysis (ESEE). In 2004, Metro released the Phase II ESEE: Draft Analysis of Program Options. In August 2004, the Tualatin Basin Partners held a public hearing to review the draft program and the mapping. In March 2005, the Tualatin Basin Partners endorsed the staff report, exhibits, program report, and mapping. The package was submitted to Metro for inclusion in their Council action on the overall Metro Nature in the Neighborhoods

Program. Metro Council approved the program in September 2005. The Partners then began to draft two issue papers outlining the habitat friendly development practices and how they might apply in the Tualatin Basin and more specifically, within habitat benefit areas.

7.3.1 SIGNIFICANT NATURAL RESOURCES

7.3.1.1 Goal: Conserve, protect, enhance or restore the functions and values of inventoried Significant Natural Resources.

Policies:

a) Inventoried natural resources shall be conserved, protected, enhanced or restored:

- to retain the visual and scenic diversity of our community;
- for their educational and recreational values;
- to provide habitats for fish and wildlife in our urban area.

b) Conserve, protect and enhance natural resource sites and values though a combination of programs that involve development regulations, purchase of land and conservation easements, educational efforts, and mitigation of impacts on resource sites.

Action 1: *Establish acquisition programs for Significant Goal 5 Resources; prepare and maintain a long-range list of priority resource locations for public acquisition.*

Action 2: *Facilitate and encourage habitat friendly development practices and low impact development through flexibility in site development standards and reduction in surface water management fees and systems development charges.*

c) Inventoried natural resources shall be incorporated into the landscape design of development projects as part of a site development plan, recognizing them as amenities for residents and employees alike.

d) The City shall rely on its site development permitting process as the mechanism to balance the needs of development with natural resource protection.

Action 1: *For properties located within significant natural resource areas, the City shall consider relaxation of its development standards where necessary to accomplish protection of riparian and wetland areas. Such standards include, but are not limited to, setbacks, building height, street width, location of bike paths, etc. Where the combination of riparian, wetlands, and other requirements would result in an unbuildable lot, such a situation may be relevant to a decision that may grant a hardship variance.*

Action 2: *City Staff will provide pre-application conferences to developers of property to provide available information and to discuss alternative methods of development acceptable to meet the adopted policies and ordinance standards.*

Action 3: *Adopt and apply land use regulations that require integration of natural features with the overall design of developments. Natural features include, but are not limited to,*

wetlands and water areas, intermittent and perennial streams, riparian corridors, urban forests and significant individual or community trees, slopes, geologic hazards, flooding, and erosion prone soils.

Action 4: *Adopt and apply land use regulations that will minimize impacts from adjacent uses. Development Code design criteria shall be adopted that address the following considerations:*

- *Land uses immediately adjacent to protected resource areas should be designed to physically separate human activity from the resource activity. Preferred development abutting the resource should be 1) buildings with entrances oriented away from the resource area, and then 2) roadways with limited or no street parking with 3) parking lots as the lowest preference.*
- *Garbage facilities and materials storage areas should be located away from habitat areas.*
- *Habitat areas should be preserved as a few large connected areas, rather than many disconnected small areas and should be designed to minimize the amount of habitat edge exposed to development areas.*
- *Existing native vegetation should be retained to provide wildlife habitat. Snags and dying trees should be left in protected wildlife areas for wildlife use.*
- *To minimize disturbances to wildlife, lights for buildings and parking areas should be screened, and the light should be directed away from the protected habitat areas,*
- *Walkways should not bisect wildlife areas. If walkways do encroach upon wildlife areas, security lighting should be designed to shine primarily on the path and avoid shining directly into habitat areas.*

Regulations to address the above considerations shall not compromise public safety.

Action 5: *Adopt and apply regulations for resource areas, mitigation sites, areas adjacent to natural areas, wetlands, and tree groves that include but are not limited to the following requirements:*

- *Require use of native vegetation in mitigation areas and riparian buffers. Seed-and fruit-producing native plants with aesthetic value should be incorporated into the landscaping at locations adjacent to wildlife habitat areas.*

- *Allow for buffer averaging in order to create opportunities for habitat protection and enhancement while accommodating urban forms of development.*

e) Development within Significant Natural Resource areas shall be consistent with the relevant regulations or guidelines of the National Marine Fisheries Service, U.S. Fish and Wildlife Service, Oregon Department of Fish and Wildlife, U.S. Army Corps of Engineers, Oregon Division of State Lands, Clean Water Services, and the Oregon Department of Environmental Quality.

Action 1*: During pre-application conferences for developers, City staff will attempt to identify any Federal, State, or local requirements and regulations affecting sites in Significant Natural Resource areas.*

Action 2: *The City will continue to monitor and review policies and regulations as necessary, to ensure consistency with Federal, State, and service providers' guidelines and regulations.*

f) Specific uses of or development activities in Significant Natural Resources areas shall be evaluated carefully and those uses or activities that are complementary and compatible with resource protection shall be permitted. This is not intended to prohibit a land use permitted by the underlying zoning district but only to regulate the design of development such as building or parking location or type of landscaping.

g) Limited alteration or improvement of Significant Natural Resource areas may be permitted so long as potential losses are mitigated and "best management practices" are employed.

h) Roads and utilities, which must be located within, or traverse through, a Significant Natural Resource Area, shall be carefully planned and aligned so as to minimize loss and disruption. A rehabilitation or restoration plan shall be a necessary component. The City should allow variations from standard street sections in these areas.

7.3.2 RIPARIAN CORRIDORS

Significant Riparian Corridors are identified in Planning Commission Order No. 1318, located in the beginning of the Local Wetland Inventory within Volume III of the Comprehensive Plan. Properties listed as Significant Riparian Corridors must comply with the policies and actions set forth in Section 7.3.1 as well as those promulgated in this section.

7.3.2.1 Goal: Promote a healthy environment and natural landscape in riparian corridors, and manage conflicting uses through education, and adoption and enforcement of regulations.

Policies:

a) Significant Riparian Corridors shall be protected for their fish and wildlife habitat values, and other values associated with the natural resource area. Development plans for these areas shall treat these components as assets and encroachment into the riparian corridor shall require enhancement, mitigation, or restoration.

Action 1: *Develop and implement a fish habitat protection program in compliance with Statewide Planning Goal 5.*

Action 2: *Amend City regulations and development standards to ensure compliance with Clean Water Services Design and Construction Standards relating to development in or near water resource areas.*

Action 3:*Work with other local governments in the Tualatin River Watershed to develop and implement a program to comply with the Federal Endangered Species Act (ESA) for Federally listed threatened or endangered species found within the watershed.*

b) Streams, creeks, and other watercourses, including a number of small drainages not identified on the Significant Natural Resources inventory maps, can be significant amenities. The City should protect the natural resource values of these areas from damage or degradation caused intentionally or by neglect. The city should cooperate with and assist property owners in maintaining and upgrading these areas for their potential aesthetic, wildlife, or recreational value.

7.3.3 SIGNIFICANT WETLANDS

The Local Wetland Inventory is part of the Statewide Planning Goal 5 Inventory Resource documents. Significant wetlands are found within Appendix A, Table 5 of the Local Wetland Inventory. The Significant Wetlands designation must comply with the policies and actions set forth in Section 7.3.1 as well as those promulgated in this section.

7.3.3.1 Goal: Protect or enhance wetlands adopted as Significant Wetlands in the Local Wetland Inventory.

Policies:

a) Significant Wetlands in the Local Wetland Inventory shall be protected for their filtration, flood control, wildlife habitat, natural vegetation and other water resource values.

b) Development within the buffer area adjacent to a significant wetland shall be subject to restrictions on building, grading, excavation, placement of fill, and native vegetation removal.

Action 1*: Amend the City regulations and development standards as appropriate, to ensure compliance with Clean Water Services Design and Construction Standards provisions for encroachment.*

c) Where development is constrained due to wetland protection regulations, a hardship variance may be granted if approval criteria are met.

Action 1*: Amend the implementing ordinances as appropriate to ensure compliance with Clean Water Services Design and Construction Standards provisions for a hardship variance.*

7.3.4 WILDLIFE HABITAT

OAR 660-23-110 contains procedures and requirements for complying with Statewide Planning Goal 5 as is pertains to protection of wildlife habitat. The rule specifies that a local government must obtain any current habitat inventory information from the Oregon Department of Fish and Wildlife (ODFW) and other state and federal agencies. Under "safe harbor" criteria, OAR 660-23-110(4) says local governments may determine that "wildlife" does not include fish, and that significant wildlife habitat is only those sites where one or more of the following conditions exist:

(a) The habitat has been documented to perform a life support function for a wildlife species listed by the federal government as a threatened or endangered species, or by the state of Oregon as a threatened, endangered or sensitive species;
(b) The habitat has documented occurrences of more than incidental use by a species described under (a) above;

(c) The habitat has been documented as a sensitive bird nesting, roosting, or watering resource site for osprey or great blue herons;
(d) The habitat has been documented to be essential to achieving policies or population objectives specified in a wildlife species management plan adopted by the Oregon Fish and Wildlife Commission; or
(e) The area is identified and mapped by ODFW as habitat for a wildlife species of concern and/or as a habitat of concern.

According to OAR 660-23-110(1)(a), "documented" means that an area is shown on a map published or issued by a state or federal agency, or by a professional with demonstrated expertise in habitat identification.

In 1999 the Planning Commission indicated that staff should use the "safe harbor" criteria to determine the presence of significant wildlife habitat in the city, based on documentation from ODFW and other appropriate agencies. Staff subsequently sent letters to ODFW and the United States Fish and Wildlife Service asking whether they had any documentation regarding the presence in the city of the types of habitat listed above. Both agencies responded with letters indicating that there was no documentation of such habitat in the city, although such habitat may be present. Based on these responses, it has been determined that there is no evidence available to demonstrate the presence of significant wildlife habitat, meeting State "safe harbor" criteria, in the city limits as of the year 2000.

Although there is presently no documented significant wildlife habitat in the city, wildlife habitat that does not meet State safe harbor significance criteria is certainly present. The presence of common wildlife species (e.g., squirrels, raccoons, beaver, various species of birds, etc.) in the city is a source of interest and entertainment for citizens and generally enriches our daily lives. In protecting significant natural resources in the city, such as wetlands, riparian corridors and scenic trees, habitat for these wildlife species can also be protected.

In the event documentation is provided to the City in the future of the presence in the city of wildlife habitat meeting the "safe harbor" criteria, it will be necessary to give further consideration to City programs for wildlife habitat protection.

7.3.4.1 Goal: Protect wildlife habitat in the city in association with protecting significant natural resources.

Policies:

a) Limit impacts from development or human intrusion on sites likely to contain wildlife habitat through use of regulations adopted for protection of other natural resources, or by adopting new regulations if necessary.

Action 1: *Adopt development regulations that call for consideration of impacts of development on wildlife species likely to be present on development sites, and mitigation of such impacts to the extent practicable. These regulations should allow for flexibility in development standards to achieve wildlife habitat protection.*

7.4 SCENIC VIEWS AND SITES

Significant Scenic Views and Sites are lands that are valued for their aesthetic appearance. Conserving the views of surrounding scenic features such as mountain ranges, Mount Hood, streams and wetlands, and forested areas, helps to maintain the quality of life and unique character of the City. Scenic sites in the city may include streams, wetlands, forested areas or single specimen trees identified on either public or private lands. Significant scenic sites may also have value as wildlife habitat while providing a link to other natural resources such as streams and wetlands as well as parks and other open space. Scenic sites can be viewed from surrounding residences, shopping or employment areas, public or semi-public open spaces such as parks, or from nearby or adjoining bicycle, pedestrian and multi-use pathways or streets. Conservation of both Significant Scenic Views and Sites adds to the livability and attractiveness of our community. That, in turn, helps to maintain property values, and provides an attractive backdrop for businesses located in the City.

The City of Beaverton has focused its efforts on identifying and conserving scenic sites, particularly forested areas and specimen trees, because these resources are considered to be most vulnerable to loss as a result of development. Other scenic sites, including streams and wetlands, are protected to some degree under federal, state and local regulations. At this point, the City has chosen to not address conservation of scenic view of surrounding mountains, including Mount Hood, although such scenic views may be present in the city. For scenic sites to have any aesthetic value to the public, however, views of those sites must be conserved along with the sites.

7.4.1 Goal: Conserve Significant Scenic Views and Sites, and the value they add to community.

Policies:

a) Help to preserve and enhance the City's character, beauty and livability through the identification and protection of significant scenic sites in the city and views of those sites.

Action 1: *Following the Goal 5 process:*

- *survey forested areas and specimen trees in the city, evaluating them using the criteria in Policy b) below, and adopt an inventory of scenic sites and views of those sites;*
- *identify land uses or development activities that might conflict with conservation of the inventoried scenic sites and views, as well as the impact area of the conflicting uses on each inventoried scenic site and view;*
- *consider the economic, social, environmental and energy (ESEE) consequences of allowing, limiting or prohibiting identified conflicting uses within each identified impact area; and*
- *devise and adopt a program to conserve the inventoried significant scenic sites and views . The program should make use of a variety of conservation tools including existing and new development regulations, acquisition of property or scenic easements, and public education efforts.*

b) Significant Scenic Sites may include forested areas or a specimen tree and are determined to have two or more of the following characteristics:

- aesthetic value,
- uniqueness of tree size, shape, rarity of specie,
- proximity of forested area to wetlands or riparian areas,
- provides slope stability,
- absorption of rainfall (canopy effects to offset adjoining impervious surfaces), and
- absorbs stormwater runoff.

All significant scenic sites must be visible from an existing or planned viewpoint that is safe and accessible to the general public.

c) The City will balance the conservation of significant scenic resources with the need to allow urban uses and activities.

7.5 ENERGY

Energy is generated from resources such as natural gas, oil, coal, geothermal, uranium, flowing water, sunshine, wind, and municipal waste. The City lacks significant energy sources, as defined by OAR 660-23-019(a). The City's greatest influence over the protection of energy resources derives from efforts to reduce energy consumption

In the 1970s and early 1980s, the rising costs of fossil fuels resulted in government sponsored incentive programs to encourage research, development and feasible applications of renewable energy technologies such as solar and wind. To provide citizens with the opportunity to utilize solar technologies, Beaverton in conjunction with twenty-one other jurisdictions within the Portland-Vancouver Metropolitan area, participated in the development of a uniform solar access protection ordinance.

Current development programs lack incentives or public demand for the use of renewable energy resources, despite federal objectives to reduce energy consumption, continuing price increases for fossil fuels and increased concerns over the impacts of hydro and geothermal power, and nonrenewable energy resources.

Zoning regulations and transportation plans are currently structured to maximize energy savings. The City has higher density and mixed used districts to allow for living, working and shopping in close proximity, thereby reducing energy consumption for travel. Further, the City's transportation plan has mapped multi-modal transportation corridors for use by automobiles, pedestrians and bicycles. The Westside Light Rail was developed as part of a transportation network designed to reduce energy consumption and to improve air quality.

7.5.1 Goal: Development projects and patterns in the City that result in reduced energy consumption.

7.5.2 Goal: Increased use of solar energy and other renewable energy resources in new development in the City.

Policies:

a) Assist in the conservation of energy by promoting more efficient transportation modes and land use patterns.
b) Encourage higher density development where appropriate.
c) Continue to update applicable codes and regulations to promote energy conservation.
d) Support educational programs on energy conservation and use of renewable energy resources through cooperation with other agencies and energy suppliers.
e) Support energy programs that inform senior citizens and low income groups of available local, state, and federal winterization, and energy efficient programs.
f) Support state and federal legislation that encourages energy saving design and building practices.
g) The City should set an energy efficient example by using best management conservation practices in all of their facilities. Alternatives should be economically beneficial.
h) The City shall retain and apply regulations requiring consideration of solar energy options in the development process.

7.6 GROUNDWATER RESOURCES

Although most of the potable water used in the city is imported, at times of peak use water is drawn from aquifers via City wells. Some of this water is injected into aquifers in the winter when supplies exceed demand, and withdrawn during summer months. Contamination of these groundwater resources can occur through pollution emanating from surface sources.

7.6.1 Goal: Protect groundwater in the City from contamination.

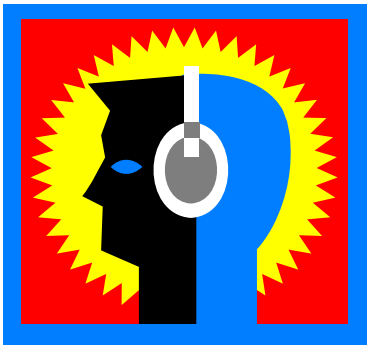
Policies:

a) Cooperate with other local water providers and neighboring jurisdictions in preventing pollution in areas around municipal and domestic wells so as to protect groundwater that is a source of potable water for the City from contamination.

Action 1: *Develop a groundwater wellhead protection program, in cooperation with local water districts and neighboring jurisdictions.*

Chapter Eight: Environmental Quality and Safety Element













ENVIRONMENTAL QUALITY AND SAFETY

8.1 OVERVIEW

In response to the requirements of Statewide Planning Goals 6 (Air, Water and Land Resources Quality) and 7 (Areas Subject to Natural Disasters and Hazards) this chapter contains sections addressing water quality, air quality, noise, seismic hazards, geologic hazards, flood hazards, and solid and hazardous waste. The chapter contains goal, policy and action statements written to ensure that 1) the condition of air, water and land resources is adequately maintained and improved upon, and 2) public safety is protected by prohibiting or regulating development of land in hazardous areas, or by managing the hazards through methods that protect existing development.

8.2 WATER QUALITY

Water quality resource protection is necessary for its life sustaining benefits. The City and the Clean Water Services (CWS) share responsibility for meeting the standards set by the Federal Clean Water Act. These standards, defined by the Total Maximum Daily Loads (TMDLs) of waste water that can be discharged into streams, are set by the Oregon Department of Environmental Quality (DEQ). The primary source of water quality impacts in the City is from runoff flowing into streams and wetlands from streets, parking lots, building roofs and landscaped areas. The flashiness of storm flows in urban areas causes degradation of the vegetative corridors along streams that, in turn, increases the erosion of riparian banks and water turbidity. The scouring of the riparian banks and lack of established native vegetative cover along streams leads to increased water temperatures that also degrade water quality and aquatic habitat.

The quality of water resources can be protected, enhanced or restored through the application of development standards that require planting and maintenance of natural vegetation within riparian areas. This can be achieved through the development process or by voluntary actions on the part of private property owners and volunteer organizations. Voluntary and incentive based reductions to impervious surfaces, along with the use of habitat friendly development practices and low impact development techniques can also reduce impacts to water resources. Overall, sustainable stormwater management balances the hydrologic regime found before development. Pre-development or natural hydrologic function is the relationship among the overall and subsurface flow, infiltration, storage and evapotranspiration characteristics of the landscape. Sustainable stormwater management avoids and minimizes impacts to natural resources by protecting native vegetation and natural drainage sources. The natural stormwater system mimics natural water flow by minimizing land disturbance and incorporating natural landscape features in to the development. Implementation of development requirements that follow the Clean Water Services Design and Construction Standards manual, and erosion control practices, can help to reduce and filter storm drainage flow, particularly during heavy rainfall.

8.2.1. Goal: Maintain and improve water quality, and protect the beneficial uses, functions and values of water resources.

Policies:

a) All water resource areas within the City shall be enhanced, restored or protected to the extent practicable.

Action 1: *Develop incentives programs for property owners that will encourage the enhancement, restoration or protection of vegetative corridors. One such program might include working with CWS to establish an information outreach effort to encourage the creation of separate tracts for water resource areas, or dedication of water resource areas to a public or non-profit agency, thereby limiting development in the identified resource areas, and benefiting property owners by reduced property taxes for the portion set-aside as non-developable.*

Action 2: *Review and refine monitoring and enforcement programs regarding erosion control practices in conjunction with development.*

Action 3: *Cooperatively work with appropriate City departments and service providers, through a technical advisory committee, to review their use of Best Management Practices (BMPs) and other programs approved by the National Marine Fisheries Service in public works projects, and routine maintenance activities that potentially impact stormwater runoff or have a direct effect on streams and wetlands. Adopt and apply appropriate regulations formulated through the cooperative process.*

Action 4: *Adopt and apply appropriate regulations allowing and encouraging habitat friendly and low impact development practices.*

b) The City shall limit development in vegetative corridors along streams through application of the CWS Design and Construction Standards so as to substantially comply with requirements of the Metro Functional Plan Title 3.

Action 1: *Adopt and apply appropriate land use regulations aimed at restoring, enhancing or protecting water quality sensitive areas.*

Action 2: *Adopt and apply appropriate land use regulations that allow and encourage multi-use functions of landscaping so that landscaping can be used for stormwater retention, detention and infiltration.*

Action 3: *Adopt and apply appropriate land use regulations that allow and encourage use of native vegetation and vegetation that mimics the natural environment in landscaping in development.*

c) The City shall support the development of education programs aimed at helping citizens understand the importance of good stewardship and the use of non-regulatory tools that will provide additional water quality resource protection.

Action 1: *Seek funding opportunities such as grants, that would assist development and implementation of Citywide water quality education, information and project management programs that might include a City environmental coordinator position.*

d) Partner with other local jurisdictions and service providers to avoid duplication of efforts and resources.

e) Protect investments in the City by managing stormwater runoff.

Action 1: *Adopt and apply land use regulations that control the rate of runoff to reduce sudden changes in water flow, abnormally high flows, and flooding due to development.*

Action 2: *Adopt and apply land use regulations to provide increased surface water runoff detention and avoid structural damage to improvements. First priority, site improvements are off-channel mitigation and wetlands. Second priority, site improvements are in-channel. Exhaust on-site mitigation opportunities before seeking off-site mitigation.*

Action 3: *Adopt and apply land use regulations to provide undisturbed vegetative buffers between the stream or significant wetland and any hard surface improvement or building. The defined buffer width may be treated as an average dimension to allow flexibility in design and increase opportunities to enhance wildlife habitat. Where undisturbed, vegetative buffers are reduced below the defined width by way of averaging the required buffer width, the adjacent urban development should include increased landscaping, and street tree plantings to maximize tree canopy coverage and reduce the urban heating effect. Increased landscaping will help reduce stream temperatures through the urban area.*

Action 4: *Adopt and apply land use regulations requiring surface storm drainage from walkways, streets, parking areas, and roofs to be designed to flow into detention areas and landscape areas rather than into stream channels and the riparian corridor. Monthly surface water management fees may be discounted through designs that minimize impacts on the storm water system.*

Action 5: *Adopt and apply land use regulations requiring integration of storm water detention and treatment facilities into the design of a development appearing, if feasible, as a component of the landscape rather than as a utility element.*

f) Encourage development in urban environments in ways that promote healthy environments and natural resources.

Action 1: *Adopt and apply regulations that allow and encourage habitat friendly development practices and low impact development techniques and preservation of natural resources. Examples include allowing greater deviation from site development standards when preserving habitat or using habitat friendly or low impact development practice; allowing use of pervious pavements and green street cross sections, where appropriate; rain gardens and ecoroofs.*

Action 3: *Adopt and apply regulations that encourage use of natural stormwater systems that mimic natural hydrologic function by minimizing land disturbances and incorporating natural landscape features. Examples include raingardens, ecoroofs, vegetated swales, pervious pavers, and retention of trees and native vegetation.*

8.3 AIR QUALITY

The primary sources of air pollution are industry and transportation. In determining the air quality impact of these sources, several factors are considered:

- Indirect sources (facilities or buildings) attracting automobiles in sufficient quantities to increase air pollution,
- The concentration of automobiles (as determined by traffic volume, speed, number of stops, and number of trips),
- Emission rates, and
- Land use patterns.

The relationship of land use patterns and transportation systems can greatly impact air quality. Single-use, land use zones create a dependence on the automobile to facilitate travel between home, work, school and shopping. The problem may be further compounded by inadequate local street, walkway and bikeway connections between neighborhoods, along with limited access to public transportation. The land use patterns being implemented today, are designed to provide for a mixture of housing, jobs, and small scale retail services within neighborhoods. This more efficient use of land, combined with the implementation of multi-modal transportation corridors and connecting local streets, bikeways and walkways is designed in part to reduce auto-dependent trips and thereby, reduce vehicle-related air pollution.

The City of Beaverton lies within the Environmental Protection Agency (EPA) - designated Portland-Vancouver Interstate Air Quality Maintenance Area (AQMA) and must comply with state and federal standards for air pollutant concentrations. As a result of Federal requirements, the City will need to continue to work to reduce the emission of air pollutants, particularly ozone (smog), carbon monoxide and particulate matter. The livability of our community is dependent on maintaining and improving our air quality.

8.3.1. Goal: Maintain and improve Beaverton's air quality to increase livability and quality of life.

Policies:

a) Support efforts to reduce air pollutant emissions in the City and within the AQMA.

b) Comply with the EPA, DEQ, and Metro approved plans to achieve federal, state, and regional air quality standards through the adopted regional control strategies.

c) Consider and work to mitigate air quality impacts in the development review process.

Action 1: *Adopt and apply development regulations that include provisions, incentives, or both, for employment centers to encourage employees to make use of*

alternative transportation modes. Continue to require developers to provide car pool parking and bicycle storage facilities.

8.4 NOISE

A healthy acoustical environment is vital to the livability of the City. Sources of environmental noise may be largely classified into four types: 1) building equipment, 2) transportation systems, 3) industrial and commercial activity and 4) human activity. Building equipment primarily includes outdoor units, such as fresh air intakes, cooling towers and condensers, fan rooms, and power transformers. Transportation systems include highway traffic, light rail trains, heavy rail trains and aircraft. Industrial noise is found at industrial sites and utility sources, and also includes construction activity on our streets, buildings and utilities. Noise emanating from human activities, including dog barking, loud voices, and loud audio systems, can be a problem in urban settings if buildings are designed without adequate consideration of noise reduction.

There are two methods the City has available to reduce noise pollution, 1) a noise abatement program as part of the City Municipal Code, Section 5.05, and 2) development standards and design review criteria.

8.4.1. Goal: Create and protect a healthy acoustical environment within the City.

Policies:

a) Noise impacts shall be considered during development review processes.

Action 1: *Adopt and implement appropriate design standards for development permits for all commercial, industrial, high density, mixed use and transportation projects, and others as appropriate. Development applications should be required to demonstrate compliance with applicable noise level standards. Means of meeting the design standards might include, but are not limited to:*

- *Use of year-round landscape elements that absorb parking lot and street noise.*
- *Use of underground parking.*
- *Use of extra-thick windows.*
- *Facades constructed of materials that help to absorb sounds.*
- *Pervious surface landscape and parking lot materials that absorb sounds.*
- *Use of building materials that aid in the reduction of sound traveling through common floors and walls.*
- *Dampers on heating and cooling equipment.*

b) The City shall comply with EPA and DEQ noise standards.

Action 1*: Periodically review and update the City's Municipal Code Section 5.01 pertaining to noise abatement to reflect changes in EPA and DEQ standards and to address impacts of changing land development patterns that encourage mixed uses and higher density housing.*

8.5. SEISMIC HAZARDS

The City recognizes that seismic hazards in the form of liquefaction and ground shaking, along with geological hazards associated with steep slopes, weak foundation soils, erosion and deposition, represent potential threats to life and property.

Seismic hazards should be addressed for the protection of lives and property. The City can utilize two management approaches: 1) limit development in areas subject to seismic hazards, 2) allow development subject to appropriate design standards. It is safer to construct or retrofit earthquake-resistant buildings than to ignore the threat and suffer irreversible harm from the occasional, moderate to great earthquakes that are historically known to occur along the Portland Hills Fault and the more distant Cascadia Subduction Zone Fault. In high risk undeveloped or redevelopable areas, regulations to limit or prohibit certain uses are more appropriate.

8.5.1. Goal: Protect life and property from potential earthquake hazards.

Policies

a) Limit as much as possible the potential loss of life and property resulting from earthquakes, and minimize disruption of public facilities, services, and transportation systems.

Action 1: *Prepare and adopt programs and regulations to reduce the potential impacts of earthquakes on:*

- *Existing and new structures,*
- *infrastructure, and*
- *transportation systems.*

b) Ensure that key public, semi-public and private buildings retain structural integrity and remain functional in the event of an earthquake.

Action 1: *Develop a program and seek funding to retrofit existing public buildings and consider establishing tax incentives to retrofit other semi-public, or private structures that house essential services and are identified as high risk sites.*

8.6 GEOLOGICAL HAZARDS

Geological hazards include unstable steep slopes, erosion and deposition, and weak foundation soils. In the interest of public safety, the location of natural hazards should be determined, and the degree of hazard present should be evaluated. Based on this evaluation, decisions should be made about the amount of development, if any, that should be allowed at the location. If development is to be allowed, consideration should be given to conditioning development approval to limit potential losses resulting from natural disasters.

8.6.1 Goal: Protect life and property from geological hazards associated with identified unstable steep slopes, erosion and deposition, and weak foundation soils.

Policies:

a) Limit or prohibit development in geologically hazardous areas that pose a threat to life and property.

Action 1: *Identify geological hazard sites in the City including unstable steep slopes, weak foundation soils, and areas subject to erosion and deposition. Adopt and apply regulations to these sites through engineering standards and site development design criteria to allow, limit, or prohibit development, as appropriate.*

Action 2: *Periodically review and update the existing erosion control regulations and enforcement procedures to improve their effectiveness.*

Action 3*: Adopt and apply land use regulations requiring that building sites, streets and other improvements in areas with 25% or greater slopes, be designed so that cuts and fills are minimized and best management practices for erosion control are integrated into the design.*

b) The City shall support the reclamation of aggregate sites having a Department of Geology and Mining Industry (DOGAMI) mining permit, to ensure the stability of slopes and prevention of erosion, and to prevent the creation of weak foundation soils.

Action 1: *Adopt and apply appropriate site development code requirements to ensure the DOGAMI reclamation process is completed prior to the issuance of a site development permit.*

8.7 FLOOD HAZARDS

The City supports the Federal Emergency Management Agency (FEMA) guidelines for floodplain development. Floodplain protection is essential for water quality functions and values. Natural floodplains serve as filters that absorb excess stormwater runoff and pollutants, aid in erosion control, and provide important shade and habitat protection. The City protects floodplains through a variety of methods. These include application of the FEMA Flood Insurance Rate Maps, Development Code requirements, engineering standards, CWS Design and Construction Standards, and building code requirements.

8.7.1 Goal: Maintain the functions and values of floodplains, to allow for the storage and conveyance of stream flows and to minimize the loss of life and property.

Policies:

a) Utilize uniform or complementary interjurisdictional floodplain development and management programs to reduce flood hazards, protect natural resources, and permit reasonable development.

Action 1: *Adopt and apply appropriate land use regulations that allow and encourage low impact development techniques and habitat friendly development practices to mimic the natural system, thereby reducing or eliminating the need for piped systems.*

b) Development shall be prohibited in the floodway, except as necessary for the placement of roadways, utilities, stormwater conveyance, bridges, culverts, and grading related to public utility projects as permitted by the appropriate implementing ordinances.

c) Construction within the floodfringe shall be regulated through the City's implementing ordinances, such as the City's Engineering Design Manual and Standard Drawings.

d) Uncontained areas of hazardous materials, as defined by the DEQ, shall be prohibited in the floodplain.

Action 1: *Develop a program to remove hazardous obstructions and debris from floodplains.*

Action 2: *Develop a flood damage reduction program to protect, to the extent practicable, existing development in the 100-year floodplain, following guidelines and regulations established by the Federal Emergency Management Agency (FEMA). Alternatively, explore programs to encourage removal of existing development from floodplains.*

8.8 SOLID AND HAZARDOUS WASTES

Solid waste disposal is a regional concern requiring regional solutions. The City supports the Metro Regional Solid Waste Management Plan 1995 – 2005. Metro's ten-year plan emphasizes waste prevention and reduction, and resource conservation with a commitment to public education, technical assistance, and consistent cooperation with local jurisdictions. In response, the City has adopted a solid and hazardous waste recycling and collection ordinance as part of the City Municipal Code, Section 4.08. City staff oversee the program, which includes solid waste collection and recycling franchises.

8.8.1 Goal: Reduce the amount of solid waste generated per capita.

8.8.2 Goal: Prevent inappropriate disposal of toxic or hazardous waste materials.

Policies:

a) The City shall support efforts to reduce the amount of solid waste generated from household, industrial, and commercial uses through source reduction and recycling activities, pursuant to Municipal Code requirements.

b) The City shall promote public awareness in order to achieve the highest participation possible in:
- the reduction of solid waste,
- recycling, and
- the appropriate handling and disposal of hazardous and toxic waste.

c) The City shall comply with Metro, State, and federal solid and hazardous waste laws and regulations.

Action 1: *Continue to update Municipal Code Section 4.08 in accordance with Metro, State, and federal solid and hazardous waste requirements.*

Action 2: *Obtain an inventory from the DEQ of identified hazardous or toxic material sites located within the City's urban services area. This inventory should be periodically updated and maintained at the Community Development Department, and reviewed as part of the annexation or site development process.*

Action 3: *Develop and apply appropriate site development approval criteria for land identified by DEQ as an environmentally hazardous material or toxic waste site.*

CHAPTER NINE: ECONOMY ELEMENT



ECONOMY

9.1 OVERVIEW

City of Beaverton has a solid economic base which derives its vigor from a healthy mix of businesses. These businesses can typically be categorized as catering to one of three markets; either local, regional, or traded sector markets. Although these market segments occupy different sectors of the economy, they exert highly interdependent forces upon one-another. As a result, Beaverton's economy, like any other local economy, is in a constant state of flux and must compete with other local markets for business. If it is to maintain its development momentum, it is critical that Beaverton's economy evolve and keep pace with predominant market trends.

Through its comprehensive planning efforts, the City of Beaverton can play an active role in helping to guide the local economy so that it continues to support existing businesses and generate new activity. Goal 9 of Oregon's Statewide Planning Goals and Guidelines pertains to economic development. It stipulates that in preparing Comprehensive Plans, jurisdictions fulfill various requirements. Among them, the goal provides that comprehensive plans shall "include an analysis of the community's economic patterns, potentialities, strengths, and deficiencies as they relate to state and national trends." In conformance with this provision, as well as those specified in ORS 197.712, OAR 660-009-0015, and Title 1 of Metro's Functional Plan, the City conducted a Buildable Lands Analysis in order to evaluate land availability and examined market trends as part of the Economic Development Strategic Plan. The findings derived from these studies address the factors identified above. The policy implications are explored in detail within the Economic Development Strategic Plan.

Goal 9 also specifies that Comprehensive Plans "[c]ontain policies concerning the economic development opportunities in the community." The intent of this Comprehensive Plan element is to lay a policy foundation that reflects the City's economic values.

An Economic Development Planning Committee was convened in January of 2000 to produce an Economic Development Strategic Plan. They drafted the following economic development vision statement upon which all relevant City goals and policies would be based:

"Beaverton is a vibrant city that is a great place to run a business and raise a family. It is a community that will provide an array of economic opportunities for the workforce of today and tomorrow, and the infrastructure and leadership needed to compete in our current knowledge-based economy."

The City's strengths and weaknesses, market drivers, and the vision statement were considered by the Economic Development Planning Committee in analyzing various policy stances. In doing so two factors stood out as having a significant influence over the overall strategies that would be developed. The first concerns the City's acknowledgement that in order for the local business climate to remain healthy and strong, a continued emphasis

should be placed upon policies that promote the development of Beaverton as a knowledge-based economy. The second involves recognition of the fact that this City is very limited in the amount of buildable land it is able to provide for business related development.

9.1.1 DEVELOPMENT OF A KNOWLEDGE BASED ECONOMY

In the Economic Development Strategic Plan it is recognized that today's economy is information based and impacts all types of industries in the way business is conducted. E-commerce, Internet communications, on-line marketing and other uses of technology create the capability for "on-the-fly" business transactions. Innovations such as these permit businesses to cut costs and at the same time be more responsive in how they respond to their markets. Almost every type of business requires these new technologies in order to stay competitive, and with them new skills within the workforce needed to utilize them. Not only does Beaverton's local economy already possesses many of these technologies but the City and region also possess a strong educated workforce base and post-secondary education system. These attributes constitute significant strengths and will also serve to drive the local business climate.

The goals and policies contained within this element were designed to not only help Beaverton's existing businesses keep up to date and competitive in the marketplace but also to attract the kinds of new businesses necessary to maintain and increase the City's livability. Land availability, the ability to pay for infrastructure improvements, the connections to city and regional planning goals, and the links to other community development issues all play a role in determining which businesses and industries will continue to develop and prosper in Beaverton. Attention to these factors can enhance the local economy's ability to capture growth in emerging industries. To this end, certain types of industries have been identified in the Strategic Plan as best suited to the City's economic development vision and goals. These include:

- Industries that do not require large parcels of land,
- Industries with job densities that fit comprehensive planning objectives,
- Industries that create or bring in additional wealth by exporting their goods and services outside the region,
- Industries that provide quality jobs (defined as jobs that pay at least 80% of the regions average wage and provide worker benefits) and
- Industries that provide health benefits and education incentives for their workers.

Businesses that produce high tech hardware, software, bioscience, and e-commerce all rank highly in the City's economic development ambitions.

9.1.2 LIMITED LAND FOR BUSINESS RELATED DEVELOPMENT

Goal 9 of Oregon's Statewide Planning Goals and Guidelines, ORS 197.707, and OAR 660-009-0025, all require that local jurisdictions supply enough land to accommodate projected employment growth. In the Portland Metropolitan Area, the agency responsible for monitoring that growth is Metro and the provisions which regulate the level of performance

which each jurisdiction must meet are articulated in Title 1 of Metro's Functional Plan. The City is required to accommodate a specified number of new jobs between 1994 and 2017. To determine whether this is possible, the City conducted a buildable lands analysis. A map depicting buildable commercial and industrial lands as defined in that study as of the year 2000 is associated with this element as a supporting document labeled Figure 1 in the Commercial and Industrial Land Inventory section of the Comprehensive Plan - Volume 2.

The resulting study concluded that the City would fall short of Metro's employment capacity target by 3,754 jobs (approximately fifteen percent), largely due to the limited supply of buildable industrial land in the City. Upon completion of the study the City acknowledged that it would be necessary to ask Metro to grant an exception to the Functional Plan job targets.

A deficiency in the amount of land dedicated to industrial employment is a concern to the City for two reasons. First, it undermines the City efforts to achieve a balance between the number of jobs and the number of housing units it is able to support. Maintaining this balance is important because in so doing, the City can provide an environment conducive to working within close proximity to where one lives. This in turn reduces the need of City residents to commute long distances to work – thereby alleviating the region's traffic congestion problems. Secondly, scarcities in the amount of land dedicated to higher value commercial and industrial uses could limit the City's tax base and create tax rate disparities between jurisdictions. While Hillsboro presently possesses a surplus of buildable industrial and commercially designated land and as a result is seeing a major amount of industrial and office development, Beaverton possesses a very limited supply. Hillsboro in turn is able collect property taxes from a larger tax base per capita which allows them to lower their property tax rate. Beaverton on the other hand must either raise its property tax rate or lower its level of service provision in order to compensate for its lack of higher value commercial and industrial land.

The Economic Development Strategic Plan recognizes the City's shortage of industrial land as a constraint and as a result, stresses the need to maximize the use of industrial land for high density office-type jobs in order to realize significant employment increases. The City also recognizes however that any increase in the supply of buildable industrial land via UGB expansion is predominantly under Metro's purview and is therefore generally beyond the City's ability to address the problem. Furthermore, even if Metro chose to expand the UGB to provide more industrial land, it is unlikely that more buildable industrial land could be designated in the City's Urban Services Area, given the nature of rural land just outside the UGB where it defines the Urban Services Area. Therefore, the City must maximize use of the land that is presently designated for employment related uses.

9.1.3 OTHER CONSIDERATIONS

Finally, Goal 9 requires that comprehensive plans "[l]imit uses on or near sites zoned for specific industrial and commercial uses to those which are compatible with proposed uses". Consideration of incompatible uses occurred in conjunction with the adoption of Ordinance 2050 (the City's Development Code and Zoning Map) and Ordinance 3632 (the Comprehensive Plan Map). For example, the City limits the size of retail uses and the total

amount of retail use permitted in the Campus Industrial zone in compliance with the provisions of Title 4 of Metro's Urban Growth Management Functional Plan. Incompatibility continues to be considered as proposed amendments to the Comprehensive Plan and Zoning maps are reviewed.

9.2 GOALS AND POLICIES

In keeping with the concerns identified in the Economic Development Strategic Plan the following goals and policies are organized into three areas of specific concern: 1) promoting an entrepreneurial climate for existing and new businesses, 2) providing a strong public partnership for economic development, and 3) ensuring a high quality of life. Specific actions and work products associated with these policies are identified in the City's Economic Development Strategic Plan.

9.2.1 PROMOTING AN ENTREPRENEURIAL CLIMATE FOR EXISTING AND NEW BUSINESSES

There are some aspects of business development that are required by any company, regardless of size or industry. These include the ability for businesses to keep up to date on standards and practices, having an adequate supply of skilled workers, and being able to connect with and learn from related businesses and experienced entrepreneurs. It also includes strong regional networks that address issues such as capital and links to higher education. While activities are often driven by a partnership of public and private organizations, local government may have an active role in supporting these issues.

9.2.1.1 Goal: To foster entrepreneurial networks that promote innovative and healthy businesses in Beaverton.

Policies:

a) To increase the networks and connections among Beaverton businesses and with other regional, state and global businesses.

b) To promote the development and expansion of innovative businesses in targeted industry clusters.

9.2.1.2 Goal: To capture the opportunities of the knowledge-based economy by having a skilled workforce and strong connections between business and education.

Policy:

a) Assist in the resolution of key workforce issues related to Beaverton-based companies.

9.2.2 PROVIDING A STRONG PUBLIC PARTNERSHIP FOR ECONOMIC DEVELOPMENT

Attracting any size and type of business also depends on having a set of strong building blocks to form a foundation for business development. These building blocks include having an adequate supply of buildable land to meet projected needs, availability of adequate public facilities and services, and good access via the transportation system. They also include positive support for economic development by public agencies, and a regulatory environment that is conducive to forming or expanding business. The City of Beaverton has a major role in assuring that these building blocks are in place in the Beaverton area.

9.2.2.1 Goal: To support business development through an effective transportation system, targeted land (re)development, and adequate infrastructure.

Policies:

a) To develop business districts that are accessible and provide job and business opportunities as described in the City's Economic Development Strategic Plan.

b) To limit the development of land uses that generate relatively few jobs per acre in areas designated primarily for industrial or office development.

c) To enhance business access to current (state-of-the-art) telecommunications infrastructure.

9.2.2.2 Goal: To enable businesses to easily start or expand their enterprise.

Policies:

a) To streamline the city processes required to start or expand a business.

b) Ensure regulations and codes are consistent with and complementary to one another, and are easy to understand and implement.

9.2.3 ENSURING A HIGH QUALITY OF LIFE

In addition to issues that affect the direct operations of a business, there are quality of life factors from parks and arts to public safety that are critical to the overall economic environment that attracts and retains business owners and their workforce. Successfully linking economic development with the array of community development efforts will enhance both endeavors.

9.2.3.1 Goal: To support a high quality of life for all of Beaverton's citizens.

Policies:

a) To require a high quality of new development within the City to create an attractive environment.

b) To recognize and actively engage the growing cultural diversity in Beaverton.

9.2.3.2 Goal: To promote active partnerships between business and the community.

Policy:

a) To develop long-term and active working relationships between business organizations, community groups, public agencies and elected leadership.

APPENDIX I

OREGON
STATEWIDE PLANNING GOALS

STATEWIDE PLANNING GOALS

GOAL 1 **CITIZEN INVOLVEMENT** To develop a citizen involvement program that insures the opportunity for citizens to be involved in all phases of the planning process.

GOAL 2 **LAND USE PLANNING** To establish a land use planning process and policy framework as a basis for all decisions and actions related to use of land and to assure an adequate factual basis for such decisions and actions.

GOAL 3 **AGRICULTURAL LANDS** To preserve and maintain agricultural lands.

GOAL 4 **FOREST LANDS** To conserve forest lands for forest uses.

GOAL 5 **OPEN SPACES, SCENIC AND HISTORIC AREAS, AND NATURAL RESOURCES** To conserve open space and protect natural and scenic resources.

GOAL 6 **AIR, WATER AND LAND RESOURCES QUALITY** To maintain and improve the quality of air, water and land resources of the state.

GOAL 7 **AREAS SUBJECT TO NATURAL DISASTERS AND HAZARDS** To protect life and property from natural disasters and hazards.

GOAL 8 **RECREATIONAL NEEDS** To satisfy the recreational needs of the citizens of the state and visitors and, where appropriate, to provide for the siting of necessary recreational facilities including destination resorts.

GOAL 9 **ECONOMY OF STATE** To diversify and improve the economy of the state.

GOAL 10 **HOUSING** To provide for the housing needs of citizens of the state.

GOAL 11 **PUBLIC FACILITIES AND SERVICES** To plan and develop a timely, orderly and efficient arrangement of public facilities and services to serve as a framework for urban and rural development.

GOAL 12 **TRANSPORTATION** To provide and encourage a safe, convenient and economic transportation system.

GOAL 13 **ENERGY CONSERVATION** To conserve energy.

GOAL 14 **URBANIZATION** To provide for an orderly and efficient transition from rural to urban land use.

GOAL 15 **WILLAMETTE RIVER GREENWAY** To protect, conserve, enhance and maintain the natural, scenic, historical, agricultural, economic and recreational qualities of lands along the Willamette River as the Willamette River Greenway.

GOAL 16 **ESTUARINE RESOURCES** To recognize and protect the unique environmental, economic, and social values of each estuary and associated wetlands. To protect, maintain, where appropriate develop, and where appropriate restore the long-term environmental, economic, and social values, diversity and benefits of Oregon's estuaries.

GOAL 17 **COASTAL SHORELANDS** To conserve, protect, where appropriate, develop and where appropriate restore the resources and benefits of all coastal shorelands, recognizing their value for protection and maintenance of water quality, fish and wildlife habitat, water- dependent uses, economic resources and recreation and aesthetics. The management of these shoreland areas shall be compatible with the characteristics of the adjacent coastal waters; and

To reduce the hazard to human life and property, and the adverse effects upon water quality and fish and wildlife habitat, resulting from the use and enjoyment of Oregon's coastal shorelands.

GOAL 18 **BEACHES AND DUNES** To conserve, protect, where appropriate develop, and where appropriate restore the resources and benefits of coastal beach and dune areas; and

To reduce the hazard to human life and property from natural or man-induced actions associated with these areas.

GOAL 19 **OCEAN RESOURCES** To conserve the long-term values, benefits, and natural resources of the nearshore ocean and the continental shelf.

All local, state, and federal plans, policies, projects and activities which affect the territorial sea shall be developed, managed and conducted to maintain, and where appropriate, enhance and restore, the long-term benefits derived from the nearshore oceanic resources of Oregon. Since renewable ocean resources and uses, such as food production, water quality, navigation, recreation, and aesthetic enjoyment, will provide greater long-term benefits than will nonrenewable resources, such plans and activities shall give clear priority to the property management and protection of renewable resources.

GLOSSARY OF COMPREHENSIVE PLAN TERMS

The terms in this Plan embody the legislative intent of the City Council. Terms of ordinary usage are to be given their usual and reasonable meanings. Key words and concepts used in this Plan are explained below.

When the meaning ascribed to a term in this section conflicts with an identical or nearly identical term appearing in a closely-related state, regional, or federal law, the intent under this ordinance shall prevail unless a superior source of law requires a different result.

Where terms are not defined in this section, and a term conflicts with a provision of statewide, regional, or City of Beaverton law, the more restrictive interpretation will prevail unless it leads to an unlawful result.

A

ACCESS The place, means or way by which pedestrians, vehicles, or both shall have safe, adequate and usable ingress and egress to a property or use. A private access is an access not in public ownership or control by means of deed, dedication or easement. (Beaverton Development Code)

ACCESSIBILITY The amount of time required to reach a given location or service by any mode of travel. (Metro Code 3.07.1010(a)) (Also Metro Regional Framework Plan)

ACCESSORY DWELLING UNIT A dwelling unit incidental or subordinate to the principal use of a building or project and located on the same site.

ACCESSORY STRUCTURE OR USE A structure or use incidental, appropriate and subordinate to the main structure or use. (Beaverton Development Code)

ACKNOWLEDGEMENT A Land Conservation and Development Commission order that certifies that a comprehensive plan and land use regulations, land use regulation or plan or regulation amendment complies with the goals or certifies that Metro land use planning goals and objectives, Metro Urban Growth Management Functional Plan, amendments to Metro planning goals and objectives or amendments to the Metro Urban Growth Management Functional Plan comply with the statewide planning goals. (ORS 197.015(1))

ACQUIRE OR ACQUISITION The acquisition of land by purchase, lease, gift, grant, or devise.

ACTIONS With regard to implementation actions identified in this Plan: Direct specific City activities or events, consistent with the Comprehensive Plan goals and policies.

ADJACENT Near or close or next to. For example, an Industrial District across the street from a Residential District shall be considered as "adjacent". (Beaverton Development Code)

ADVERSE IMPACT A negative consequence, demonstrated through evidence, to the physical, social or economic environment resulting from an action or development.

AFFORDABLE HOUSING For the purposes of complying with Metro's Title 7 provisions, affordable housing is defined as housing that is affordable to residents earning less than 50% of the Metro area median income whereby no more than 30% of the household's gross income is expended toward housing costs.

ALTERNATIVE MODES Alternative methods of travel to the automobile, including public transportation (light rail, bus and other forms of public transportation), bicycles and walking.

APARTMENT (1) One or more rooms of a building used as a place to live, in a building containing at least one other unit used for the same purpose; (2) A separate suite, not owner occupied, which includes kitchen facilities and is designed for and rented as the

home, residence, or sleeping place of one or more persons living as a single housekeeping unit.

APPROPRIATE An act, condition, or state suitable under the circumstances.

AQUIFER An underground, water bearing layer of earth, porous rock, sand, or gravel, through which water can seep or be held in natural storage.

ARCHAEOLOGICAL Relating to the material remains of past human life, culture, or activities.

ARTERIAL STREET Arterial streets serve to interconnect and support the freeway system. These streets link major areas of the city. Arterial streets are typically spaced about one mile apart to assure accessibility and reduce the incidence of traffic using collectors, neighborhood routes, or local streets in lieu of an arterial street.

AWNING A roof like structure of fabric stretched over a rigid frame projecting from the elevation of a building designed to provide continuous overhead weather protection. (Beaverton Development Code)

B

BEAVERTON CODE The Beaverton Code, 1982, as amended.

BEAVERTON DEVELOPMENT CODE Development Code of the City of Beaverton, Ordinance 2050, as amended, is an ordinance establishing the zoning standards, regulations and procedures, providing related development requirements and providing penalties and otherwise implementing this Plan.

BEAVERTON ENGINEERING DESIGN MANUAL AND STANDARD DRAWINGS A compilation of resolutions and ordinances setting forth the technical engineering standards that implement the City's Site Development Ordinance.

BICYCLE LANE (BIKE LANE) Bicycle lane means the area within the street right-of-way designated specifically for use by bicyclists. The same area may also be referred to as a "bike lane." Bicycle lanes are striped and accommodate only one-way travel. (Beaverton Development Code)

BIKEWAY Bikeway means any path or roadway facility that is intended and suitable for bicycle use. (Beaverton Development Code)

BOULEVARD DESIGN A design concept that emphasizes pedestrian travel, bicycling and the use of public transportation, and accommodates motor vehicle travel.

BUFFER ZONE An area of land separating two distinct land uses that acts to soften or mitigate the effects of one land use on the other.

BUILDABLE LANDS Lands in urban and urbanizable areas that are suitable, available and necessary for residential uses. Buildable lands includes both vacant land and developed land likely to be redeveloped. (ORS 197.295(1))

BUS A motor vehicle designed for carrying 15 or more passengers, exclusive of the driver, and used for the transportation of persons. (ORS 184.675(6))

C

CAPITAL IMPROVEMENT Physical assets constructed or purchased to provide, improve or replace a public facility and that are large in scale and high in cost. The cost of a capital improvement is generally nonrecurring and may require multi-year financing.

CAPITAL IMPROVEMENT PROGRAM (CIP)

A multi-year (usually five or six) schedule of capital improvement projects, including cost estimates and priorities, budgeted to fit financial resources. The CIP is administered by a city or county government and reviewed by its planning commission. It schedules permanent improvements needed in the future, taking into consideration the projected fiscal capability of the local jurisdiction. The CIP is generally reviewed annually for conformance to and consistency with the comprehensive plan. In Beaverton, the CIP is called the Capital Improvements Plan.

CLUSTER DEVELOPMENT Development in which a number of dwelling units are placed in closer proximity than usual, or are attached, with the purpose of retaining an open space area.

COLLECTOR STREET Collector streets provide both access and circulation within major areas of the city. Collectors differ from arterials in that they provide more of a citywide circulation function, do not require as extensive access control, and penetrate residential neighborhoods, distributing trips from the neighborhood and local street system.

COMMERCIAL USES Activities within land areas that are predominantly connected with the sale, rental and distribution of products, or performance of services.

COMMUNITY DEVELOPMENT DIRECTOR The Director of Community Development for the City of Beaverton, Oregon, or designee.

COMMUNITY PLAN Volume V of the Comprehensive Plan. These documents describe policies and action statements and map designations specific to a particular geographic location.

COMPATIBLE Capable of existing together without discord or disharmony.

COMPREHENSIVE PLAN	A generalized, coordinated land use map and policy statement of the governing body of a local government that interrelates all functional and natural systems and activities relating to the use of lands, including but not limited to sewer and water systems, transportation systems, educational facilities, recreational facilities, and natural resources and air and water quality management programs. (ORS 197.015(5))
CONDOMINIUM	A structure of two or more units, the interior spaces of which are individually owned; the balance of the property (both land and building) is owned in common by the owners of the individual units.
CONGESTION	Occurs when traffic demand nears or exceeds the available capacity of the system.
CONNECTIVITY	The degree to which the street systems in a given area are interconnected. (Metro Code 3.07.1010(j))
CONSERVATION EASEMENT	An easement specifically written to maintain or protect a natural resource.
CORRIDORS	While some corridors may be continuous, narrow bands of higher-intensity development along arterial roads, others may be more 'nodal,' that is, a series of smaller centers at major intersections or other locations along the arterial that have high-quality pedestrian environments, good connections to adjacent neighborhoods and good transit service. As long as the average target densities and uses are allowed and encouraged along the corridor, many different development patterns--nodal or linear--may meet the corridor objective. (Metro Regional Framework Plan) Along good quality transit lines, corridors feature a high-quality pedestrian environment, convenient access to transit, and somewhat higher than current densities. (Metro Code 3.07.130) An average of 25 persons per acre is recommended. (Metro Code 3.07.170)
CRITICAL PUBLIC FACILITIES	Critical public facilities and services shall include public water, public sanitary sewer, storm water system (including storm water quality and quantity facilities), transportation, and fire protection. (Engineering Design Manual and Standard Drawings Proposed Definition)
CULTURAL RESOURCES	Areas characterized by evidence of an ethnic, religious or social group with distinctive traits, beliefs, and social forms. For example, an archaeological site, such as an Indian burial ground could be an important cultural site.

D

DECISION, DISCRETIONARY An action taken by a governmental agency that calls for the exercise of judgment in deciding whether to approve and/or how to carry out a project. (See *Decision, Quasi-Judicial*)

DECISION, LEGISLATIVE A decision of a local official or entity based upon the decision-maker's perception of the best course of action. The city typically employs legislative decisions in adopting an ordinance or resolution establishing a basic principle or policy. Examples are decisions to adopt a comprehensive plan, apply a plan designation to a large number of properties, or decisions which affect a large geographic area or number of persons.

DECISION, QUASI-JUDICIAL Quasi-judicial decisions bear different aspects than legislative decisions. For example, requests of quasi-judicial decisions usually must actually result in a decision; quasi-judicial decisions are bound to apply pre-existing criteria to concrete facts; and they are customarily directed at a closely-circumscribed factual situation or small number of persons. The more a local government decision bears these emblems, the more it is a quasi-judicial decision.

DEDICATION The turning over by an owner or developer of private land for public use, and the acceptance of land for such use by the governmental agency having jurisdiction over the public function for which it will be used. Dedications for roads, parks, school sites, or other public uses are often made conditions for approval of development.

DENSITY The ratio of dwelling units or employees per unit of area (square feet, acre, square mile, etc.). Density generally refers to residential uses. A measure of the intensity of the development generally expressed in terms of dwelling units (du) per acre (i.e., less than 7.5 du per acre = low density; 7.5 to 15 du per acre = medium density, etc.) It can also be expressed in terms of population density (people per acre). It is useful for establishing a balance between potential local service use and service capacities.

DENSITY BONUS The allocation of development rights that allows a parcel to accommodate additional square footage or additional residential units beyond the maximum for which the parcel is planned or zoned, usually in exchange for the provision or preservation of an amenity at the same site or at another location.

DENSITY CREDIT The transfer of development density rights from one piece of one property to another piece of the same property. A project site that contains environmentally sensitive areas or other lands that should not be developed, as defined in this comprehensive plan, may be entitled to a density credit.

DENSITY, GROSS The number of dwelling units per gross acre. Gross acreage is the total amount of raw land, including all developable and undevelopable portions.

DENSITY, NET The number of dwelling units allowed on the total acreage of developable portions of the site (net developable acre) within a given land area.

DENSITY, RESIDENTIAL The number of permanent residential dwelling units per acre of land. Densities specified in the comprehensive plan may be expressed in units per gross acre or per net developable acre (See Gross Acres and Net Acres).

DESIGN PLAN A plan for a defined geographic area in a single or multiple ownership that is consistent with the Comprehensive Plan and includes, but is not limited to, a land use and circulation plan, development standards, design guidelines, an open space plan, utilities plans and a program of implementation measures and other mechanisms needed to carry out the plan. The plan shall be created through the Design Review process. (Beaverton Development Code)

DESIGN TYPE The conceptual areas described in the Metro 2040 Growth Concept text and map in Metro's regional goals and objectives, including central city, regional centers, town centers, station communities, corridors, main streets, inner and outer neighborhoods, industrial areas, and employment areas. (Metro Code 3.07.1010(m))

DEVELOPED AREAS NOT PROVIDING VEGETATIVE COVER are areas that lack sufficient vegetative cover to meet the one-acre minimum mapping units of any other type of vegetative cover.

DEVELOPER An individual who or business that prepares land for the construction of buildings or causes to be built physical space for use primarily by others, and in which the preparation of the land or the creation of the building space is in itself a business and is not incidental to another business or activity.

DEVELOPMENT Generally, any man-made change to existing or proposed use of real property. Development activities include: land divisions, lot line adjustments, construction or alteration of structures, construction of roads and any other accessway, establishing utilities or other associated facilities, grading, deposit of refuse, debris or fill, and clearing of vegetative cover. Does not include routine acts of repair or maintenance.

DWELLING UNIT A structure or part of a structure that is used as a home, residence or sleeping place by one person who maintains a household or by two or more persons who maintain a common household. (ORS 90.010(9))

E

EARTHQUAKE HAZARDS Ground shaking, landslides, liquefaction and amplification are all earthquake hazards that can cause damage to structures and infrastructure. (Beaverton Natural Hazards Mitigation Plan)

EASEMENT A form of nonpossessory right to use property owned by another for specific purposes or to gain access to some portion of another's property. For example, utility companies often have easements on the private property of individuals in order to install and maintain utility facilities.

EMPLOYMENT AREAS Areas of mixed employment that include various types of manufacturing, distribution and warehousing uses, commercial and retail development as well as some residential development. Retail uses should primarily serve the needs of people working or living in the immediate employment area. Exceptions to this general policy can be made only for certain areas indicated in a functional plan. Commercial uses are to be limited.

ENCROACHMENT AREA Areas in floodplains and floodways where development is restricted due to potential impacts on natural hydrologic characteristics. Development or raising of the ground level (e.g., to avoid flood damage) in encroachment areas will obstruct flood water flows, raising the water surface level. Demand to build structures in the flood plain, regardless of potential flooding dangers, is common in urban areas. Reasons typically include lack of suitable land or lower flat land development costs compared to building on steeper gradients.

ENDANGERED SPECIES A species of animal or plant is considered to be endangered when its prospects for survival and reproduction are in immediate jeopardy from one or more causes. (See Title 50 of the Code of Federal Regulations)

ENHANCE To improve existing conditions by increasing the quantity or quality of beneficial uses.

ESSENTIAL PUBLIC FACILITIES Essential facilities and services shall include schools, transit improvements, police protection, and public pedestrian and bicycle facilities.

ESTABLISHED NEIGHBORHOOD A neighborhood where platted lands are at least eighty percent developed and occupied, and where substantial deterioration since development has either not occurred or been reversed.

F

FAMILY (1) Two or more persons related by birth, marriage or adoption [U.S. Bureau of the Census]. (2) An individual or a group of persons living together who constitute a *bona fide* single family housekeeping unit in a dwelling unit, not including a fraternity, sorority, club or other group of persons occupying a hotel, lodging house or institution of any kind.

FEASIBLE Capable of being done, executed, or managed successfully from the standpoint of the physical and/or financial abilities of the implementer(s).

FLOODPLAIN Land subject to periodic flooding, including the 100-year floodplain as mapped by FEMA Flood Insurance Studies or other substantial evidence of actual flood events. The floodplain includes the land area identified and designated by the United States Army Corps of Engineers, the Oregon Department of State Lands, FEMA, or Washington County that has been or may be covered temporarily by water as a result of a storm event of identified frequency and the area along a watercourse enclosed by the outer limits of land that is subject to inundation in its natural or lower floodway fringe, and equal to the FIRM designation of an area of special hazard.

FLOODWAY The floodway is the channel of a stream plus any adjacent flood plain areas that must be kept free of encroachment in order that the 100-year flood may be carried without substantial increases in flood heights.

FLOOR AREA RATIO (FAR) The amount of gross floor area in relation to the amount of net site area, expressed in square feet. (Beaverton Development Code)

FOREST CANOPY Areas that are part of a contiguous grove of trees of one acre or larger in area with approximately 60% or greater crown closure, irrespective of whether the grove is near a water feature.

FREEWAY Freeways provide the highest level of connectivity. These roadways generally span several jurisdictions and are often of statewide importance.

FUNCTIONAL CLASSIFICATION OR MAP Street Functional Classification

FUNCTIONAL PLAN in the context of the Comprehensive Plan, Functional Plan means the Metro Urban Growth Management Functional Plan. Metro's Urban Growth Management Functional Plan is one of several Metro Functional Plans.

GOAL A general, long term aim or end toward which programs or activities are ultimately directed.

GOALS The mandatory statewide planning standards adopted by the Land Conservation and Development Commission pursuant to ORS chapters 195, 196, and 197. (ORS 197.015(8)) (OAR 660-018-0010(10))

G

GREEN STREET Stormwater and stream crossing solutions related to street design, including: pavement minimization, pervious paving materials, maximized street tree usage, multi-functional open drainage systems and minimizing the number of stream crossings and/or placing crossings perpendicular to the stream, where possible, allowing narrow street widths through stream corridors, and using habitat sensitive bridge and culvert designs. Metro produced a series of books on Green Streets that can be a valuable reference as a guidance document when implementing the concept of green streets.

GROSS ACRES The entire acreage of a site, including proposed rights of way, easements, environmental lands, etc. Gross acreage is measured from the centerline of proposed bounding streets and to the edge of the right-of-way of existing or dedicated streets.

GROUNDWATER Water under the earth's surface, often confined *in* aquifers, capable of supplying wells and springs.

GROWTH CONCEPT As defined in the Metro Regional Framework Plan, the Growth Concept is a concept for the long-term growth management of our region stating the preferred form of the regional growth and development, including where and how much the UGB should be expanded, what densities should characterize different areas, and which areas should be protected as open space.

GROWTH CONCEPT MAP The conceptual map demonstrating the 2040 Growth Concept design types attached to the Urban Growth Management Functional Plan Appendix and adopted as Metro Code 3.07.1010(z).

GROWTH MANAGEMENT A method to guide development in order to minimize adverse environmental and fiscal impacts and maximize the health, safety, and welfare benefits to the residents of the community.

H

HABITAT Any area where there is naturally occurring food and cover for wildlife.

HABITAT BENEFIT AREA (HBA) An area of loand determined to provide a benefit to wildlife. The general location of habitat benefit areas are shown on Metro's Regionally Significant Fish and Wildlife Habitat Inventory

map as Riparian Habitat Classes I, II and III and Upland Wildlife Habitat Class A. Habitat benefit areas also include a habitat buffer area. Habitat benefit areas are in addition to any areas required for natural resource protection by existing regulations.

HABITAT FRIENDLY DEVELOPMENT PRACTICES (HFDP) A broad range of development techniques and activities that reduce detrimental impacts on fish and wildlife habitat resulting from traditional development practices.

HAZARDOUS MATERIALS Hazardous material or substance includes but is not limited to a substance designated under 33 U.S.C. §1321 (b)(2)(A), any element, compound, mixture, solution or substance designated under 42 U.S.C. §9602, any hazardous waste having characteristics identified under or listed under 42 U.S.C. §6921, any toxic pollutant listed under 33 U.S.C. §1317 (a), any imminently hazardous chemical substance or mixture with respect to which the Administrator of the United States Environmental Protection Agency has taken action under 15 U.S.C. §2606, and any residue classified as hazardous waste pursuant to ORS 466.020(3). (CWS Design and Construction Standards)

HIGH CAPACITY TRANSIT Transit routes that may be either a road designated for frequent bus service or for a light-rail line. (Metro Regional Framework Plan definition)

HIGH OCCUPANCY VEHICLE (HOV) Any vehicle other than a single occupancy vehicle (e.g., a vanpool, a bus, or two or more persons to a car).

HIGHWAY High speed, high capacity, limited access transportation facility serving regional and countywide travel. Highways may cross at a different grade level.

HILLSIDE AREAS Land that has an average percent of slope equal to or exceeding fifteen percent.

HISTORIC An historic building or site is one that is noteworthy for its significance in local, state, or national history or culture, its architecture or design, or its works of art, memorabilia, or artifacts.

HISTORIC BUILDINGS OR STRUCTURES Also known as Historic Resources, these are all areas, districts or sites containing properties listed on the city of Beaverton List of Historic Properties, or the State Historic Preservation Office, or the National Register of Historic Places.

HOUSEHOLD All those persons, related or unrelated, who occupy a single housing unit. (See *Family*)

HOUSING AFFORDABILITY The availability of housing such that no more than 30 percent (an index derived from federal, state and local housing agencies) of the monthly income of the household need be spent on shelter. (Metro Regional Framework Plan definition)

HOUSING UNIT The place of permanent or customary abode of a person or family. A housing unit may be a single family dwelling, multifamily dwelling, condominium, modular home, mobile home, cooperative, or any other residential unit considered real property under State law. A housing unit has, at least, cooking facilities, a bathroom, and a place to sleep.

I

IMPACT The effect of any direct manmade actions or indirect repercussions of manmade actions on existing physical, social, or economic conditions.

IMPACT FEE A fee, also called a development fee, levied on the developer of a project by a city, county, or other public agency as compensation for otherwise unmitigated impacts the project will produce.

INDUSTRIAL Activities generating income from the production, handling or distribution of goods. Industrial uses include, but are not limited to manufacturing, assembly, fabrication, processing, storage, logistics, warehousing, distribution and research and development. Industrial uses may have unique land, infrastructure and transportation requirements. Industrial uses tend to have external impacts on surrounding uses and cluster in traditional or new industrial areas where they are segregated from other non-industrial activities. (OAR 660-009-0005(2))

INDUSTRIAL AREAS An area set aside for industrial activities. Supporting commercial and related uses may be allowed, provided they are intended to serve the primary industrial users. Residential development shall not be considered a supporting use, nor shall retail users whose market area is notably larger than the industrial area be considered supporting uses. (Metro Regional Framework Plan)

INDUSTRIAL PARK See City of Beaverton Development Code

INFILL DEVELOPMENT Development on scattered vacant sites within the urbanized area of a community.

INFLUENT Wastewater coming into a treatment plant.

INFRASTRUCTURE Component of a functioning, orderly urban fabric, such as roads, water systems, sewage systems, systems for storm drainage, telecommunications and energy transmission and distribution systems, bridges, transportation facilities, parks, schools and public facilities developed to support the functioning of the developed portions of the environment. Areas of the undeveloped portions of the environment such as floodplains, riparian and wetland zones, groundwater recharge and discharge areas and Greenspaces that provide important functions related to maintaining the region's air and water quality, reduce the need for infrastructure expenses and

contribute to the region's quality of life. (Metro Regional Framework Plan definition)

INNER NEIGHBORHOODS Areas in Portland and the older cities that are primarily residential, close to employment and shopping areas, and have slightly smaller lot sizes and higher population densities than in outer neighborhoods. (Metro Regional Framework Plan) Beaverton's Land Use Designation Neighborhood Residential identifies its Inner Neighborhoods.

INSTITUTIONAL (1) Privately owned and operated activities that are institutional in nature, such as hospitals, museums, and schools; (2) churches and other religious institutions; and (3) other nonprofit activities of an education, youth, welfare, or philanthropic nature that cannot be considered a residential, commercial or industrial activity (4) academic, governmental and community service uses, either publicly owned or operated by nonprofit organizations; and (5) facilities including transportation, sewer, solid waste, drainage, potable water, and parks and recreation systems or facilities.

INTENSITY A measure of land use activity based on density, use, mass, size, and/or impact.

L

LANDSCAPING The combination of natural elements such as trees, shrubs, ground covers, vines and other living organic and inorganic material which are installed for purposes such as creating an attractive and pleasing environment and screening unsightly views. Other improvements that promote an attractive and pleasing environment that may be included as landscaping includes features such as fountains, patios, decks, fences, street furniture and ornamental concrete or stonework areas. (Beaverton Development Code)

LANDSCAPE STRIP The portion of public right-of-way located between the sidewalk and curb. (Metro Code 3.07.1010(ee))

LAND USE The occupation or use of land or water area for any human activity or any purpose defined in a comprehensive plan.

LAND USE MAP (SERIES) The graphic aid(s) intended to depict the spatial distribution of various land uses by land use category, subject to the goals, policies, implementation measures; and the exceptions and provisions of the Land Use Element text and applicable land development regulations.

LAND USE REGULATION Any local government zoning ordinance, land division ordinance adopted under ORS 92.044 or 92.046 or similar general ordinance establishing standards for implementing a comprehensive plan. (ORS 197.015(11))

LEVEL OF SERVICE (LOS) An indicator of the extent or degree of service provided by or proposed to be provided by a facility based on and related to the operational characteristics of the facility. Level of service generally indicates the capacity per unit of demand for a public facility.

LIGHT RAIL TRANSIT (LRT) STATION SITE Land currently or eventually to be owned or leased by Tri-Met, on which facilities will be located related to a light rail transit station. The station site may include station platforms, park and ride lots, bus stops, and other similar facilities. (Beaverton Development Code)

LOCAL STREET Local streets have the primary function of providing access to adjacent land. Service to through-traffic movement on local streets is deliberately discouraged by design. Residential local streets serve a traffic function as well as being important to neighborhood identity.

LOCAL TRIP A trip of 2½ miles or less in length.

LOT OF RECORD A lot that is part of a subdivision, the plat of which has been recorded in the Office of the Washington County Surveyor; or any parcel of land, whether or not part of a subdivision, that has been officially recorded by a deed in the office of the County Surveyor, provided such lot met the minimum dimensions for lots in the zoning district in which it was located at the time of recording, or was recorded prior to the effective date of zoning in the area where the lot is located and met the requirements of any subdivision regulations in effect at the time of the recording.

LOT A single unit of land such as a tract, lot, block or parcel. A continuous area owned or under the lawful control and in the lawful possession of one distinct ownership undivided by a dedicated street, alley, or other ownership. An abutting "platted lot, or property described by metes and bounds, in the same ownership, shall be considered part of such 'lot'."

LOW IMPACT DEVELOPMENT (LID) A stormwater management and land development strategy applied at the parcel and subdivision scale that emphasizes conservation and use of on-site natural features integrated with engineered, small-scale hydrologic controls to more closely mimic predevelopment hydrologic functions. LID tools are designed to reduce environmental impacts of development, such as increased storm water runoff due to impervious areas, poor water quality and inconsistent water quantity in streams and rivers. LID techniques control storm water runoff volume and reduce pollutant loading to receiving waters. Not all sites are suitable for LID. Considerations shuck as soil permeability, depth of water table and slope must be considered, in addition to other factors. LID techniques may not completely replace the need for conventional stormwater controls.

LOW STRUCTURE VEGETATION OR OPEN SOILS Areas that are part of a contiguous area one acre or larger or grass, meadow, crop-lands, or areas of open soils located within 300 feet of a surface stream.

MAJOR PEDESTRIAN ROUTE Any pedestrian way in a public right-of-way or easement which assists access to a light rail station or transit stop, that is presently used or is likely to be to be used by pedestrians to access public transportation service including light rail or transit stations. (Beaverton Development Code)

M

MAIN STREETS Neighborhood shopping areas along a main street or at an intersection, sometimes having a unique character that draws people from outside the area. Beaverton's main streets generally include two nodes on Allen Boulevard 1) between Hall Boulevard and Murray Road, and 2) at Oleson Road.

MANUFACTURED HOME A structure constructed for movement on the public highways that has sleeping, cooking and plumbing facilities, that is intended for human occupancy, that is being used for residential purposes and that was constructed in accordance with federal manufactured housing construction and safety standards and regulations in effect at the time of construction. (ORS 446.003(26)(a)(C)(i))

MASS TRANSIT Passenger services provided by public, private or non-profit entities such as the following surface transit modes: commuter rail, rapid rail transit, light rail transit, fixed guideway transit, express bus, and local fixed route bus.

MASTER PLAN A plan for a defined geographic area in single or multiple ownership that is consistent with the Comprehensive Plan and includes a land use and circulation plan, land use regulations, development standards, design guidelines, open space plan, utilities plans, and a program of implementation measures and other mechanisms needed to carry out the plan. The plan shall be created through the land use review process, pursuant to the City of Beaverton Development Code. (Beaverton Development Code)

METRO The Metropolitan Services District of the Portland metropolitan area, a municipal corporation established and existing pursuant to Section 14 of Article XI of the Oregon Constitution, ORS Chapter 268 and the Metro Charter. (Metro Code 1.01.040(e))

METRO PLANNING GOALS AND OBJECTIVES The land use goals and objectives that a metropolitan service district is required to adopt under ORS 268.380(1). The goals and objectives do not constitute a comprehensive plan. (ORS 197.015(15))

METRO REGIONAL FRAMEWORK PLAN The regional framework plan and implementing ordinances required by the 1992 Metro Charter or its separate

components. Neither the regional framework plan nor its individual components constitute a comprehensive plan. (ORS 197.015(16))

METRO URBAN GROWTH BOUNDARY The urban growth boundary as adopted and amended by the Metro Council, consistent with state law. Also referred to as "UGB". (Metro Code 3.07.1010(kk))

Means the Urban Growth Boundary for Metro pursuant to ORS 268.390 and 197.005 through 197.430. (Metro Code 1.01.010(v))

METRO URBAN GROWTH MANAGEMENT FUNCTIONAL PLAN The functional plan that implements regional goals and objectives adopted by the Metro Council as the Regional Urban Growth Goals and Objectives (RUGGO), including the Metro 2040 Growth Concept and the Regional Framework Plan. (Metro Code 3.07.010)

METROPOLITAN AREA The area which on October 4, 1997, lies within the boundaries of Clackamas, Multnomah and Washington Counties (ORS 268.020(3))

METROPOLITAN HOUSING RULE A rule (OAR 660, Division 7) adopted by the Land Conservation and Development Commission to assure opportunity for the provision of adequate numbers of needed housing units and the efficient use of land within the Metro UGB. This rule establishes minimum overall net residential densities for all cities and counties within the UGB, and specifies that 50 percent of the land set aside for new residential development be zoned for multi-family housing.

METROPOLITAN SIGNIFICANCE An issue or action with major or significant impact throughout the metropolitan area.

MIXED USE Comprehensive plan or implementing regulations that permit a mixture of commercial and residential development.

Properties on which various uses, such as office, commercial, institutional and residential, are combined in a single building or on a single site in an integrated development project with significant functional interrelationships and a coherent physical design. Land uses, which when combined constitute mixed or multiple uses, exclude parks, golf courses, schools, and public facilities (fire stations, utility substations, etc.).

Mixed- use development is a type of multiple-use in which one or more structures on a lot or contiguous lots in common ownership, accommodate any of the following combinations of uses

(1) Residential Mixed-Use Project with residential units occupying a minimum of 25 percent of the total floor area and the remaining floor area occupied by retail, office, light industrial, community service or other residentially compatible uses or combinations thereof;

(2) Non-Residential Mixed-Use Project consisting of office retail, light industrial, community service or other compatible uses or combination thereof with retail space or other pedestrian oriented commercial uses occupying a minimum of 60% of the street level building frontage.

A building or groups of buildings under one ownership, to encourage a diversity of compatible land uses, which may include a mixture of residential, office, retail, recreational, light industrial, and other miscellaneous uses.

MOBILE HOME A structure constructed for movement on the public highways, that has sleeping, cooking and plumbing facilities, that is intended for human occupancy, that is being used for residential purposes and that was constructed between January 1, 1962 and June 15, 1976, and met the construction requirements of Oregon mobile home law in effect at the time of construction.

MULTI-FAMILY DWELLING UNITS Means attached housing where each dwelling unit is not located on a separate lot. (OAR 660-007-0005(11))

MULTI-MODAL Transportation facilities or programs designed to serve many or all methods of travel, including all forms of motor vehicles, public transportation, bicycles and walking. (Metro Code 3.07.1010(rr))

MULTI-USE OR SHARED-USE PATH

Multi-use or Shared-use path means an off-street path that can be used by several transportation modes including bicycles, pedestrians, and other non-motorized modes. Multi-use paths accommodate two-way travel.

MULTIPLE USE DEVELOPMENTS A building or groups of buildings designed to encourage a diversity of compatible land uses, which include a mixture of two or more of the following uses: residential, office, retail, recreational, light industrial, and other miscellaneous uses. (Beaverton Development Code)

NATURAL AREA Any landscape unit substantially without any human development that is substantially in a native and unaffected state and may be composed of plant and animal communities, water bodies, soil and rock and mitigated habitat. Natural areas must be identified in a city, county or special district open space inventory or plan. (Metro Code 3.01.010(h))

N

Natural areas may include, but are not limited to, wetlands, riparian areas, Significant Natural Resource Areas, and significant groves of trees. (Beaverton Development Code)

NEEDED HOUSING Housing types determined to meet the need shown for housing within an urban growth boundary at particular price ranges

and rent levels. On and after the beginning of the first periodic review of a local government's acknowledged comprehensive plan, "needed housing" also means:

(a) Housing that includes, but is not limited to, attached and detached single-family housing and multiple housing for both owner and renter occupancy;

(b) Government assisted housing;

(c) Mobile home or manufactured dwelling parks as provided in ORS 197.475 to 197.490; and

(d) Manufactured homes on individual lots planned and zoned for single-family residential use that are in addition to lots within designated dwelling subdivisions. (ORS 197.303(1)) (OAR 660-007-00005(12))

NEIGHBORHOOD ROUTE A street that is usually long relative to local streets and provides connectivity to collectors or arterials. Neighborhood routes generally have more traffic than local streets and are used by residents in the area to get into and out of the neighborhood, but do not serve citywide or large area circulation.

NET DEVELOPABLE ACRE The net developable acreage for a site is defined as the proposal size expressed in acreage minus any unbuildable area. The following areas are deemed undevelopable for the purposes of calculating net developable acreage:

1) Street dedications and those areas used for private streets and common driveways; and

2) Environmentally constrained lands, such as open water areas, floodplains, water quality facilities, wetlands, natural resource areas and tree preservation areas set aside in separate tracts or dedicated to a public entity, and

3) Land set aside in separate tracts or dedicated to a public entity for schools, parks, or open space purposes. (Beaverton Development Code)

NET BUILDABLE LAND See Net Developable Acre.

NET DEVELOPED ACRE Consists of 43,560 square feet of land, after excluding present and future rights-of-way, school lands and other public uses. (Metro Code 3.07.1010(vv))

Consists of 43,560 square feet of residentially designated buildable land, after excluding present and future rights-of-way, restricted hazard areas, public open spaces and restricted resource protection areas. (OAR 660-0007-0005(1))

NEWSPAPER A newspaper of general circulation, published in the English language for the dissemination of local or transmitted news or for the dissemination of legal news, made up of at least four pages of at least five columns each, with type matter of a depth

of at least 14 inches, or, if smaller pages, then comprising and equivalent amount of type matter, which has bona fide subscribers representing more than half of the total distribution of copies circulated, or distribution verified by an independent circulation auditing firm, and which has been established and regularly and uninterruptedly published at least once a week during a period of at least 12 consecutive months immediately preceding the first publication of a public notice. (ORS 193.101(2))

NOTICE Any notice that is required by law to be published. (ORS 193.310(2))

O

OBJECTIVE A specific, measurable, intermediate end that is achievable and marks progress toward a goal. An objective should be achievable and, where possible, should be measurable and time specific.

OFFICE A structure for conducting business, professional, or governmental activities in which the showing or delivery from the premises of retail or wholesale goods to a customer is not the typical or principal activity. Office uses include general business offices, medical and professional offices, administrative or headquarters offices for large wholesaling or manufacturing operations, and research and development.

OPEN SPACE Publicly and privately-owned area of land, including parks, natural areas and areas of very low density development inside the UGB. Open spaces may include active or passive recreation. (Metro Regional Framework Plan)

P

PARCEL A lot, or contiguous group of lots, in single ownership or under single control, usually considered a unit for purposes of development.

PARK Open space land on which the primary purpose is recreation. A public area intended for open space and outdoor recreation use that is owned and managed by a city, county, regional government, or park district.

PARK AND RIDE A parking facility near a transit station or stop for the purpose of parking motor vehicles by transit riders. (Beaverton Development Code)

A mode of travel usually associated with movements between work and home that involves use of a private auto on one portion of the trip and a transit vehicle (i.e., a bus or a light-rail vehicle) on another portion of the trip. A park-and-ride trip could consist of an auto trip from home to a parking lot, and transfer at that

point to a bus in order to complete the work trip. (Metro Regional Transportation Plan Definition)

PARKING RATIO The number of parking spaces provided per employee or per 1,000 square feet of floor area (e.g., 2:1 or "two per thousand").

PARKING STRUCTURE A parking garage located above or underground consisting of two (2) or more levels.

PEAK HOUR/PEAK PERIOD For any given roadway, a daily hour or longer period of time during which traffic volume is highest, usually occurring during morning and evening commute times. Where "F" Levels of Service exist, the "peak hour" may stretch into a "peak period" of several hours duration.

PEDESTRIAN ORIENTED DESIGN Site and building design elements that are dimensionally related to pedestrians, such as: small building spaces with individual entrances (e.g., as is typical of downtowns and main street developments); larger buildings which have articulation and detailing to break up large masses; narrower streets with tree canopies; smaller parking areas or parking areas broken up into small components with landscaping; and pedestrian amenities, such as sidewalks, plazas, outdoor seating, lighting, weather protection (e.g., awnings or canopies), and similar features. These features are all generally smaller in scale than those which are primarily intended to accommodate automobile traffic. (Adapted from the Model Development Code and User's Guide for Small Cities, Funded by the Transportation and Growth Management Program of the Oregon Department of Transportation and Oregon Department of Land Conservation and Development)

PEDESTRIAN SCALE Site and building design elements that are dimensionally smaller than those intended to accommodate automobile traffic flow and buffering. Examples include ornamental lighting no higher than twelve feet; bricks, pavers or other paving modules with small dimensions; a variety of planting and landscaping materials; arcades or awnings that reduce the perception of the height of walls; and signage and signpost details designed for viewing from a short distance.

PEDESTRIAN WAY Any paved public or private route intended for pedestrian use, including a multi-use path and esplanade, regardless of use by other transportation modes. A general term used to describe any sidewalk or walkway that is intended and suitable for pedestrian use. (Beaverton Development Code) "Paved" can include any Americans with Disability Act approved surface including pavements and surfaces that are pervious.

PERSON A natural or artificial person, including but not limited to, a human, corporation, partnership, unit of government, an agency, a trust or descendant's estate, or other legal entity whatsoever.

PEOPLE OR PERSONS PER ACRE This is a term expressing the intensity of building development by combining residents per net acre and employees per net acre. (Metro Code 3.07.1010(zz)) (Metro Regional Framework Plan definition)

PLANNING COMMISSION The Planning Commission of the City or any subcommittee thereof. (Beaverton Development Code)

POLICY The way in which programs and activities are conducted to achieve an identified goal. A general direction that a governmental agency sets to follow, in order to meets its goals through implementation measures or action programs.

PRACTICABLE Capable of being accomplished after taking into consideration barriers both existing and reasonably foreseeable.

PRINCIPLE An assumption, fundamental rule, or doctrine that will guide comprehensive plan policies, proposals, standards and implementation measures.

PROGRAMMED A facility that has been officially scheduled for construction in a Capital Improvements Program, Budget, or other local, state, or federal funding document.

PUBLIC FACILITIES A public facility includes water, sewer and transportation facilities.

PUBLIC RIGHT-OF-WAY Land that by deed, conveyance, agreement, easement, dedication, usage or process of law is conveyed, reserved for or dedicated to the use of the general public for street, road or highway purposes, including curbs, gutters, parking strips, pedestrian ways, and sidewalks and bicycle trails. (BC 5.05.015)

PUBLIC ROAD Every public way, road, highway thoroughfare and place including bridges, viaducts and other structures, open, used or intended for use of the general public for vehicles or vehicular traffic as a matter of right. (BC 6.02.030)

PUBLIC WORKS DIRECTOR The director of the Public Works Department of the City of Beaverton, Oregon, or designee.

RARE OR ENDANGERED SPECIES A species of animal or plant listed in Title 50, Code of Federal Regulations, Section 17.11 or 17.2, pursuant to the Federal Endangered Species Act designating species as rare, threatened, or endangered.

R

RECREATION The pursuit of leisure time activities occurring in an indoor or outdoor setting.

RECREATION, ACTIVE A type of recreation or activity that requires the use of organized play areas including, but not limited to, softball, baseball, football and soccer fields, tennis and basketball courts and various forms of children's play equipment.

RECREATION, PASSIVE A type of recreation or activity that does not require the use of organized play areas, and which may function as a view shed (an elevation in the earth's surface from which a view may be seen.), etc. (See *Open Space*)

REDEVELOPABLE LAND Land on which development has already occurred which, due to present or future market forces, there exists the strong likelihood that existing development will be converted to more intensive uses during the planning period. (Metro Code 3.07.1010(ddd))

REDEVELOPMENT Development of land that replaces previous development, usually to achieve a higher return on the owner's investment. Redevelopment may occur due to market forces if the value of land equals or exceeds the value of improvements on that land. A local government may assist in redevelopment by means such as paying for certain on or off-site facilities (e.g. streets or parking structures), assembling small parcels to create a larger site, reducing or deferring up-front development fees, or reducing property taxes over a certain time period. For purposes of the City's commercial and industrial, and residential, buildable lands inventories (Volume II of the Comprehensive Plan) any parcel with a land value to improvement value ratio of 1.25: 1 or greater is assumed to have development or redevelopment potential.

REGIONAL Pertaining to activities or economies at a scale greater than that of a single city, county, or combination thereof, and affecting a broad, related area. (Metro Regional Framework Plan definition)

REGIONAL CENTER Areas of mixed residential and commercial use that serve hundreds of thousands of people and are easily accessible by different types of transit. Examples include traditional centers such as downtown Gresham and new centers such as Clackamas Town Center. (Metro Regional Framework Plan)

Seven regional centers in the Metro region are the focus of compact development, redevelopment and high-quality transit service and multi-modal street networks. (Metro Code 3.07.130, updated) An average of 60 persons per acre is recommended. (Metro Code 3.07.170)

REGIONAL FRAMEWORK PLAN Required of Metro under the Metro Charter, the Regional Framework Plan must address nine specific growth management and land use planning issues (including transportation), with the consultation and advice of the Metropolitan Policy Advisory Committee.

REGIONAL TRANSPORTATION PLAN The official intermodal transportation plan that is developed and adopted through the metropolitan transportation planning process for the metropolitan planning area. (Metro Framework Plan definition)

REGIONAL URBAN GROWTH GOALS AND OBJECTIVES The land use goals and objectives that Metro is required to adopt under ORS 268.380(1). (Metro Code 3.07.1010(eee))

An urban growth policy framework that represents the starting point for the agency's long-range planning program. (Metro Regional Framework Plan definition)

REGULATION A rule or order prescribed for management of government.

RESIDENTIAL USE Activities within land areas used predominantly for housing.

RESIDENTIAL, MULTIPLE FAMILY See Multi Family Dwelling Unit

RESIDENTIAL, SINGLE FAMILY A single dwelling unit on a building site.

RETAIL Activities which include the sale, lease or rent of new or used products to the general public or the provisions of product repair or services for consumer and business goods.

RIGHT-OF-WAY Land in which the state, a county, or a municipality owns the fee simple title or holds an easement or dedication dedicated or required for a transportation or utility use. A strip of land over which transportation and public use facilities are built, such as roadways, railroads, and utility lines.

RIPARIAN A zone of transition from an aquatic ecosystem to a terrestrial ecosystem as defined in ORS 541.351(10). (OAR 141-085-0010(188))

RIPARIAN AREA A zone of transition from an aquatic ecosystem to a terrestrial ecosystem, dependent upon surface or subsurface water, that reveals through the zone's existing or potential soil-vegetation complex the influence of such surface or subsurface water. A riparian area may be located adjacent to a lake, reservoir, estuary, pothole, spring, bog, wet meadow, muskeg or ephemeral, intermittent or perennial stream. (ORS 541.351(10)) (OAR 690-300-0010(44))

RIPARIAN CORRIDOR The water influences area adjacent to a river, lake or stream consisting of the area of transition from an aquatic ecosystem to a terrestrial ecosystem where the presence of water directly influences the soil-vegetation complex and the soil-vegetation complex directly influences the water body. It can be identified primarily by a combination of geomorphologic and ecologic characteristics. (Metro Code 3.07.1010(iii)) A Goal 5 resource that includes the water areas, fish habitat, adjacent riparian areas, and wetlands within the riparian area boundary (OAR 660-023-090(1)(c))

RISK The danger or degree of hazard or potential loss.

ROAD The entire right -of- way of any public or private way that provides ingress to or egress from property by means of vehicles

or other means or that provides travel between places by means of vehicles. "Road" includes, but is not limited to:

(a) Ways described as streets, highways, throughways or alleys;

(b) Road-related structures that are in the right-of-way such as tunnels, culverts or similar structures; and

(c) Structures that provide for continuity of the right of way such as bridges. (ORS 368.001(6))

RUNOFF That portion of precipitation that does not percolate into the ground and is instead discharged into streams.

SCALE Generally refers to relative size or extent.

SCENIC VIEWS AND SITES Lands that are valued for their aesthetic appearance. (OAR 660-023-230(1))



SEISMIC Caused by or subject to earthquakes or earth vibrations.

SETBACK The distance between the property line and any structure.

The minimum allowable horizontal distance from a given point or line of reference to the nearest vertical wall or other element of a principal building or structure as defined herein. The point of line of reference will be the lot line following any required dedication, or a special or reservation line if one is required pursuant to this ordinance. (Beaverton Development Code)

SHALL, MUST OR MAY "Shall and must" are mandatory and "may" is permissive. (BC)

SHALL (WILL), V. A directive verb signifying the action is obligatory or necessary.

SHARED ROADWAY A shared roadway is a street that is recommended for bicycle use but does not have a specific area designated within the right-of-way. (Beaverton Development Code)

SHARED-USE OR MULTI-USE PATH Shared-use or Multi-use path means an off-street path that can be used by several transportation modes including bicycles, pedestrians, and other non-motorized modes. Shared-use paths accommodate two-way travel. (Beaverton Development Code)

SHOULD, V. A directive verb signifying the action is to be carried out unless circumstances make it impracticable .

SIGNIFICANT NATURAL RESOURCES Areas identified on the City's Statewide Planning Goal 5 Inventories, Volume III of the Comprehensive Plan. (Beaverton Development Code)

SINGLE FAMILY ATTACHED DWELLINGS A structure containing two or more single family dwelling units with both side walls (except end units of building) attached from ground to roof.

SINGLE FAMILY DETACHED DWELLING A dwelling unit that is free standing and separate from other dwelling units. (OAR 660-007-0005(4))

SINGLE FAMILY DWELLING A structure containing one or more single family units with each unit occupying the building from ground to roof.

SINGLE OCCUPANT VEHICLE (SOV) Private passenger vehicle carrying one occupant. (Metro Code 3.07.1010(ooo)) (Metro Regional Framework Plan definition)

SITE Any tract, lot or parcel of land or combination of tracts, lots or parcels of land that are in one ownership, or are contiguous and in diverse ownership where development is to be performed as part of a unit, subdivision, or project. **SLOPE** Land gradient described as the vertical rise divided by the horizontal run, and expressed in percent.

SLOPE Land gradient described as the vertical rise divided by the horizontal run, and expressed in percent.

SOIL The unconsolidated material on the immediate surface of the earth created by natural forces that serves as natural medium for growing land plants.

SOLID WASTE "Solid Waste" shall have the same meaning as given that term under Beaverton Code section 4.08.030.

SPECIAL DISTRICT Any unit of local government, other than a city, county, metropolitan service district formed under ORS Chapter 268 or an association of local governments performing land use planning functions under ORS 195.025 authorized and regulated by statute and includes but is not limited to: Water control districts, domestic water associations and water cooperatives, irrigation districts, port districts, regional air quality control authorities, fire districts, school districts, hospital districts, mass transit districts and sanitary districts. (ORS 197.015(19))

Any "district" formed under ORS 198.

STANDARDS A rule or measure establishing a level of quality or quantity that must be complied with or satisfied.

STATE IMPLEMENTATION PLAN A plan for ensuring that all parts of Oregon remain in compliance with federal air quality standards.

STATEWIDE PLANNING GOALS The mandatory state-wide planning standards adopted by the Land Conservation and Development Commission pursuant to ORS Chapters 195, 196 and 197. (ORS 197.015(8))

STATION COMMUNITIES That area generally within a ¼ - to ½ - mile radius of light-rail stations or other high-capacity transit that is planned as a

multi-modal community of mixed uses and substantial pedestrian accessibility improvements. (Metro Regional Framework Plan)

Nodes of development centered approximately one-half mile around a light rail or high capacity transit station that feature a high-quality pedestrian environment. (Metro Code 3.01.130) An average of 45 persons per acre is recommended. (Metro Code 3.01.170)

STORM WATER The water that runs off only from impervious surfaces during rain events. (CWS Design and Construction Standards)

STREAM Means a body of running water moving over the earth's surface in a channel or bed, such as a creek, rivulet or river. It flows at least part of the year, including perennial and intermittent streams. Streams are dynamic in nature and their structure is maintained through build-up and loss of sediment. (Metro Code 3.01.1010(qqq)).

STREAM CHANNEL A natural (perennial or intermittent stream) or human made (e.g. drainage ditch) waterway of perceptible extent that periodically or continuously contains moving water and has a definite bed and banks that serve to confine the water. (OAR 141-085-0010(22))

STREET (1) means a public way, road, highway, thoroughfare or place, including bridges, viaducts and other structures used or intended for use of the general public for pedestrian, bicycle, and vehicular travel as a matter of right, or

(2) when used with the word "private" as a modifier, means a non-public way, road, highway, thoroughfare or place, including bridges, viaducts and other structures, exclusively used or intended for the exclusive use of the underlying property owner or, other persons, for pedestrian, bicycle, and vehicular travel. (Proposed Engineering Design Manual and Standard Drawings Definition)

STREET FUNCTIONAL CLASSIFICATION The assignment of streets into categories according to the character of service they provide in relation to the total street network. Basic functional categories in Beaverton include freeways, arterials, collectors, neighborhood routes, and local streets. Functional classification reflects mobility, access needs, and connectivity. Where appropriate, the levels may be further grouped into urban and rural categories.

STREET FURNITURE Those features associated with a street that are intended to enhance its physical character and use by pedestrians, such as benches, trash receptacles, kiosks, lights, newspaper racks.

STEWARDSHIP A planning and management approach that considers environmental impacts and public benefits of actions as well as public and private dollar costs.

SUBDIVISION The division of a tract of land into defined lots, parcels, tracts, or other divisions of land as defined in applicable State statues and local land development regulations, subdivided lots can be separately conveyed by sale or lease, and altered, or developed.

SUBURBAN Generally, development on the periphery of urban areas, which is predominantly residential in nature and has most urban services available. The intensity of suburban development is usually lower than in urban areas.

SURFACE WATER Water that drains from the landscape via overland flow or ground water resurgence. Surface water flows can and often do include storm water runoff. (CWS Design and Construction Standards)

SYSTEM DEVELOPMENT CHARGE Means a reimbursement fee, an improvement fee or a combination thereof assessed or collected at the time of increased usage of a capital improvement or issuance of a development permit, building permit or connection to the capital improvement. "System development charge" includes that portion of a sewer or water system connection charge that is greater than the amount necessary to reimburse the local government for its average cost of inspecting and installing connections with water and sewer facilities. (ORS 223.299(4)(a))

T

TARGET DENSITIES The average combined household and employment densities established for each design type in the Regional Urban Growth Goals and Objectives 2040 Growth Concept. (Metro Code 3.07.1010(ttt))

TOWN CENTERS Areas of mixed residential and commercial use that serve tens of thousands of people. Examples include the downtowns of Forest Grove and Lake Oswego. (Metro Regional Framework Plan) Town centers provide local shopping, employment and cultural and recreational opportunities within a local market area. They are designed to provide local retail and services, at a minimum. They would also vary greatly in character.

Compact development and transit service should be provided in town centers. An average of 40 persons per acre is recommended. (Metro Code 3.07.170)

TOWNHOUSES Two or more attached single family dwelling units within a structure having common side walls, front and rear yards, and individual entryways. (See Single Family Attached Dwellings)

TRAFFIC CALMING A traffic management program usually designed to address safety and aesthetic issues related to automobile use in residential areas, and which reduces the operating speed of motor vehicles. Features include, landscaping, walkways, speed swales, roadway narrowing and/or increasing the width of bicycle lanes and sidewalks.

TRAFFIC INTENSIVE USES A land use that attracts or generates a relatively high level of traffic activity. A non exhaustive list of such uses would include drive through facilities, supermarkets, and most retail shopping centers. The ITE Trip Generation manual shall be the city's primary reference source for determining whether a particular proposed use is traffic intensive or not.

TRANSIT For the purposes of the Comprehensive Plan, this term refers to publicly funded and managed transportation services and programs within the urban area, including light-rail, regional rapid bus, frequent bus, primary bus, secondary bus, minibus, paratransit and park-and-ride. (Metro Regional Transportation Plan definition)

TRANSPORTATION OR TRAVEL DEMAND MANAGEMENT (TDM) A strategy or action for reducing demand on the road system by reducing the number of vehicles using streets and roads, and/or increasing the number of persons per vehicle. Typically, TDM attempts to reduce the number of persons who drive alone during peak commute periods and to increase the number of people commuting via carpools, vanpools, buses and trains, walking, and biking.

TRANSPORTATION PLANNING RULE The implementing rule of statewide land use planning Goal #12 dealing with transportation, as adopted by the State Land Conservation and Development Commission. (Metro Framework Plan definition)

TRANSPORTATION SYSTEM PLAN A plan for one or more transportation facilities that are planned, developed, operated and maintained in a coordinated manner to supply continuity of movement between modes, and within and between geographic and jurisdictional areas. (Metro Regional Framework Plan definition) (OAR 660-012-0005(32))

TREES, STREET Any tree located within public or private right of way or an easement for vehicular access, or associated public utility easements. (Beaverton Development Code)

TRIP GENERATION The dynamics that account for people making trips in automobiles or by means of public transportation. Trip generation is the basis for estimating the level of use for a transportation system and the impact of additional development or transportation facilities on an existing, local transportation system.

TURBIDITY A measure of water agitation.

URBAN Generally, an area having the characteristics of a city, with intensive development and a full or extensive range of public facilities and services.

U

URBAN FORM The net result of efforts to preserve environmental quality, coordinate the development of jobs, housing and public services and facilities, and interrelate the benefits and consequences of growth in one part of the region with the benefits and consequences of growth in another.

URBAN GROWTH BOUNDARY An acknowledged urban growth boundary contained in a city or county comprehensive plan or an acknowledged urban growth boundary that has been adopted by a metropolitan service district council under ORS 268.390(3). (ORS 195.060(2))

URBAN GROWTH MANAGEMENT FUNCTIONAL PLAN See Metro Urban Growth Management Functional Plan.

URBAN PLANNING AREA A geographical area within an urban growth boundary. (OAR 660-003-0005(6))

URBAN SERVICES The term includes the following services and facilities: a public sanitary and storm sewer system, a public water supply, a street system, police and fire protection, public schools, public parks and library services. (Beaverton Development Code)

URBAN SERVICE AREA The area for which the City is the appropriate and agreed-upon long-term provider of municipal services except for those services that are to be provided by a special or county service district. (Beaverton – Washington County Intergovernmental Agreement Interim Urban Services Plan)

URBAN SERVICE BOUNDARY The boundary establishing the extent of the City's direct interest and involvement in planning for and coordination of public facilities and services and the extent of the City's annexation interest.

USE The main or primary purpose of which land or a structure is designed, arranged or intended or for which it is occupied or maintained. (Beaverton Development Code)

USE PERMIT The discretionary and conditional review of an activity or function or operation on a site or in a building or facility.

VACANT Lands or buildings that are not actively used for any purpose.

VACANT LAND Land identified in the Metro or local government inventory as undeveloped land. (Metro Code 3.07.1010(zzz))

V

VARIANCE A discretionary decision to permit modification of the terms of an implementing ordinance based on a demonstration of unusual hardship or exceptional circumstance unique to a specific property. (Metro Code 3.07.1010(aaaa))

VEGETATIVE CORRIDOR A corridor adjacent to a water quality sensitive area that is preserved and maintained to protect the water quality functions of the water quality sensitive area. (CWS Design and Construction Standards)

VIEW CORRIDOR The line of sight, identified as to height, width and distance, of an observer looking toward an object of significance to the community (e.g., ridgeline, river, historic building, etc.); the route that directs the viewers' attention.

VOLUME-TO-CAPACITY RATIO A measure of the operating capacity of a roadway or intersection, in terms of the number of vehicles passing through, divided by the number of vehicles that theoretically could pass through when the roadway or intersection is operating at its designed capacity. Abbreviated as "v/c". At a v/c ratio of 1.0, the roadway or intersection is operating at capacity. If the ratio is less than 1.0, the traffic facility has additional capacity. Although ratios slightly greater than 1.0 are possible, it is more likely that the peak hour will elongate into a "peak period." (See *Peak Hour* and *Level of Service*)

WAREHOUSE A structure that is primarily used for storage and distribution facilities.

WATER QUALITY SENSITIVE AREA or "sensitive area"

W

A) shall include the following:

1. Existing or created wetlands;
2. Rivers, streams, and springs, whether flow is perennial or intermittent;
3. Natural lakes, ponds and instream impoundments

B) Sensitive areas shall not include:

1. Stormwater infrastructure
2. A vegetated corridor (a buffer) adjacent to the sensitive area;
3. An off-stream recreational lake, lagoon, fire pond or reservoir; or
4. Drainage ditches.

(CWS Design and Construction Standards)

WATERSHED The entire land area drained by a stream or system of connected streams such that all stream flow originating in the area is discharged through a single outlet. (ORS 541.351(14))

WETLANDS Those areas that are inundated or saturated by surface or ground water at a frequency and duration that are sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Categories of wetlands include:

a) Created Wetlands: those wetlands developed in an area previously identified as non-wetland to replace, or mitigate

wetland destruction or displacement. A created wetland shall be regulated and managed the same as an existing wetland.

b) Constructed Wetlands: those wetlands developed as a storm water facility, subject to change and maintenance as such. These areas must be clearly defined or separated from existing or created wetlands. Constructed wetlands shall be regulated as created wetlands only if they serve as wetland mitigation.

c) Existing Jurisdictional Wetlands: jurisdictional wetlands as determined by the Department of State Lands (DSL) or the US Army Corps of Engineers (COE).

(CWS Design and Construction Standards)

WOODY VEGETATION: Areas that are part of a contiguous area one acre or larger of shrub or open or scattered forwest canopy (less than 60% crown clowsure) located within 300 feet of a suraface stream.

Z

ZONE, TRAFFIC In a mathematical traffic model the area to be studied is divided into zones, with each zone treated as producing and attracting trips. The production of trips by a zone is based on the number of trips to or from work or shopping, or other trips produced per dwelling unit.

ZONING In general, the demarcation of an area by ordinance (text and map) into zones and the establishment of regulations to govern the uses within those zones (commercial, industrial, residential, type of residential) and the location, bulk, height, shape, use, and coverage of structures within each zone.

ZONING, INCLUSIONARY Regulations that increase housing choice by requiring construction of more diverse and economical housing to meet the needs of low income families. Such regulations often require a minimum percentage of housing for low and/or moderate income households in new housing developments.

COMPREHENSIVE PLAN
FOR THE
CITY OF BEAVERTON
VOLUME II:
BACKGROUND INFORMATION
AND
SUPPORTING DOCUMENTS



GEOGRAPHIC INFORMATION SYSTEMS

Buildable Lands Inventory

Commercial and Industrial Land

Figure 1

Land Value to Improvement Value of 1.25 :1

Legend

- CBD
- CI
- COM
- IP
- LI
- SC
- TC
- Beaverton City Boundary
- Streams (with 50 Foot buffer)

City of Beaverton

Scale 1" = 3500'

0.5 0 0.5 1 Miles

North

Comp Description	# of Parcels	Acres
CBD	165	82.39
CI	20	54.40
COM	217	176.58
IP	12	16.69
LI	24	56.46
SC	15	117.59
TC	14	115.31

Sources:

City of Beaverton Community Development Department - September 2000
Washington County GIS - Current as of August 2000
Metro's Regional Land Information System (RLIS) - Current as of August 2000

Notes:

This map represents the best available data at the time of publication. While every effort has been made to insure its accuracy, the City of Beaverton assumes no responsibility or liability for any errors or omissions.

Also, it should be noted that this map specifically identifies all commercial and industrial properties in the City of Beaverton which meet the land to building value ratio specified above. Exceptions were considered however, and properties were excluded where topographic or environmental constraints would prohibit development of the property. In such cases, properties were withdrawn on a case-by-case basis. Publicly owned parks and school lands were also excluded.

It should also be noted that the redevelopment potential of some of these properties may be questionable. Some vacant properties may have access or site configuration constraints that make them difficult to develop. Also, some properties that met the inital redevelopable criteria may have little likelyhood of actual redevelopment. This would include properties where products sold from the site are high enough to offset disproportionate land costs. Such is the case with properties supporting gas stations and auto dealerships. Various Tri-Met Park-&-Ride facilities were also included in this inventory in recognition of the fact that transfer of ownership and use could possibly occur at sometime in the future.

Lastly, the information displayed on this map reflects year 2000 data and does not consider some of the assumptions made in the 1996 Buildable Lands Analysis. Conclusions drawn from this source may therefore differ from conclusions made from the original analysis.

This map was updated on Oct. 31, 2000. It was originally produced on Sept. 21, 2000 TM/TSS S:\Buildable Lands 2000\bl 2000

GEOGRAPHIC INFORMATION SYSTEMS

Buildable Lands Inventory

Residentially Zoned Land

Figure 1

Legend

- Vacant Parcels
- Infill Parcels
- Redevelopable Parcels
- Beaverton City Limits
- Streams with 50 ft. buffer

City of Beaverton

Scale 1" = 3500'

0.5 0 0.5 1 Miles

North

Buildable Lands Criteria

Buildable land identified by this map is comprised of parcels that are either vacant, infill or redevelopable as specified by the criteria below.

Vacant - All residentially zoned parcels with $25,000 or less in improvements.

Infill - Single-Family zoned parcels which exceed the minimum lot size required by zone by 2.5 times.

Redevelopable - Multi-Family zoned parcels which have a land value greater than or equal to 1.5 times the value of any structural improvements found on the property.

Zoning Designation	Total Buildable Parcels	Total Buildable Acreage
R1	245	
R10	13	
R2	551	
R3.5	93	
R4	2	
R5	828	
R7	715	
RA	5	
RC-E	29	
RC-OT	84	
RC-TO	62	
SC-HDR	48	
SC-MU	18	
TC-HDR	3	
TC-MDR	138	
TC-MU	5	
TC-SR	2	
TOTAL	2841	1572.29

Sources:

City of Beaverton Community Development Department - Current as of September 2000
Washington County GIS - Current as of August 2000
Metro's Regional Land Information System (RLIS) - Current as of August 2000

Notes:

It should be noted that this map identifies residentially zoned properties within the City of Beaverton which are considered vacant, infill or redevelopable as specified above. Exceptions were considered however and properties were excluded where topographic or environmental constraints would prohibit development of the property. In such cases, properties were withdrawn on a case-by-case basis. Lands supporting churches, group care facilities, public utilities, public parks, schools, light rail stations, and various other facilities were also excluded where the chance for redevelopment was minimal.

It should be further noted that the redevelopment potential of some of these properties may be questionable. While many properties with obvious access and site configuration constraints were excluded, others that exhibited less obvious qualities were retained under an acknowledgement that they may be more difficult to develop. In some cases, properties that met the criteria for redevelopable may nevertheless, have little likelyhood of redevelopment because the value of the products sold from the site are high enough to offset disproportionate land costs, such as gas stations and auto dealerships located in mixed-use zones.

Finally, the information displayed on this map reflects year 2000 data and does not consider some of the assumptions made in the 1996 Buildable Lands Analysis. Conculsions drawn from this source may therefore differ from conclusions made in the original analysis.

The information on this map represents the best available data at the time of publication. While every effort has been made to insure its accuracy, the City of Beaverton assumes no responsibility or liability for any errors or omissions.

This map was produced on Dec. 19, 2000. TM/TSS S:\Buildable Lands 2000\bl 2000

Tualatin Basin Goal 5 Fish and Wildlife Habitat Program

Metro, the regional government encompassing Washington, Clackamas, and Multnomah counties, inventoried fish and wildlife habitat and identified regionally significant wildlife habitat and riparian corridors. The inventory, Regionally Significant Fish and Wildlife Habitat Inventory Map (Metro Ordinance 05-1077c Exhibit a), divided into categories: wildlife habitat, riparian corridors, and upland wildlife habitat and subdivided by classes: I, II and III or Class A, B and C, is hereby incorporated by reference.

Upon completion of the inventory, the local governments within the Tualatin Basin combined together to form the Tualatin Basin Natural Resource Coordinating Committee, also known as the Tualatin Basin Partners. This group, headed by Washington County, conducted an Environmental, Social, Economic, and Energy consequences analysis, hereby incorporated by reference. The Tualatin Basin Partners developed a voluntary program to protect, conserve and restore Classes I and II riparian corridors/wildlife habitat and Class A upland wildlife habitat (termed Habitat Benefit Areas). The City of Beaverton includes Classes I, II and III riparian corridors and Class A upland wildlife habitat as Habitat Benefit Areas on the map titled "Habitat Benefit Areas Map". Habitat Benefit Areas are intended to be the habitat beyond the areas that are managed or protected through other programs such as the City's Goal 5 program or the Clean Water Services Design and Construction Standards.

Each local government, through the Tualatin Basin Partnership, agreed to "allow and encourage" habitat friendly development practices to comply with the intergovernmental agreement that the partners have with Metro. Additionally, to minimize storm water impacts on the Habitat Benefit Areas, low impact development techniques are proposed throughout the city. The program is implemented through the Beaverton Development Code, Engineering Design Manual and Municipal Code.

Definition of habitat and delineation methodology is produced by Metro as the mapping is provided by Metro. The Metro definition of habitat and delineation methodology is cited below:

Verifying boundaries of inventoried riparian habitat. Locating habitat and determining its riparian habitat class is a four-step process:

(1) Locate the Water Feature that is the basis for identifying riparian habitat.

- (a) Locate the top of bank of all streams, rivers, and open water within 200 feet of the property.
- (b) Locate all flood areas within 100 feet of the property.
- (c) Locate all wetlands within 150 feet of the property based on the City of Beaverton Local Wetland Inventory map. Identified wetlands shall be further delineated consistent with methods currently accepted by the Oregon Division of State Lands and the U.S. Army Corps of Engineers.

(2) Identify the vegetative cover status of all areas on the property that are within 200 feet of the top of bank of streams, rivers, and open water, are wetlands or are within 150 feet of wetlands, and are flood areas and within 100 feet of flood areas.

(a) Vegetative cover status shall be as identified on the Metro Vegetative Cover Map

(b) The vegetative cover status of a property may be adjusted only if (1) the property was developed prior to the time the regional program was approved, or (2) an error was made at the time the vegetative cover status was determined. To assert the latter type of error, applicants shall submit an analysis of the vegetative cover on their property using summer 2002 aerial photographs and the definitions of the different vegetative cover types provided in the Glossary of the Comprehensive Plan, Volume I.

(3) Determine whether the degree that the land slopes upward from all streams, rivers, and open water within 200 feet of the property is greater than or less than 25% using the methodology as described in the Clean Water Services Design and Construction Standards; and

(4) Identify the riparian habitat classes applicable to all areas on the property using Table 6, the data supplied in numbers 1, 2, and 3 above and the Glossary of the Comprehensive Plan , Volume I.

Table 6: Method for Locating Boundaries of Class I and II Riparian Areas.

Distance in feet from Water Feature	Development/Vegetation Status[1]			
	Developed areas not providing vegetative cover	Low structure vegetation or open soils	Woody vegetation (shrub and scattered forest canopy)	Forest Canopy (closed to open forest canopy)
Surface Streams				
0-50	Class II	Class I	Class I	Class I
50-100		Class II[2]	Class I	Class I
100-150		Class II[2] if slope>25%	Class II[2] if slope>25%	Class II[2]
150-200		Class II[2] if slope>25%	Class II[2] if slope>25%	Class II[2] if slope>25%
Wetlands (Wetland feature itself is a Class I Riparian Area)				
0-100		Class II[2]	Class I	Class I
100-150				Class II[2]
Flood Areas (Undeveloped portion of flood area is a Class I Riparian Area)				
0-100			Class II[2]	Class II[2]

[1] *The vegetative cover type assigned to any particular area was based on two factors: the type of vegetation observed in aerial photographs and the size of the overall contiguous area of vegetative cover to which a particular piece of vegetation belonged. As an example of how the categories were assigned, in order to qualify as "forest canopy" the forested area had to be part of a larger patch of forest of at least one acre in size.*

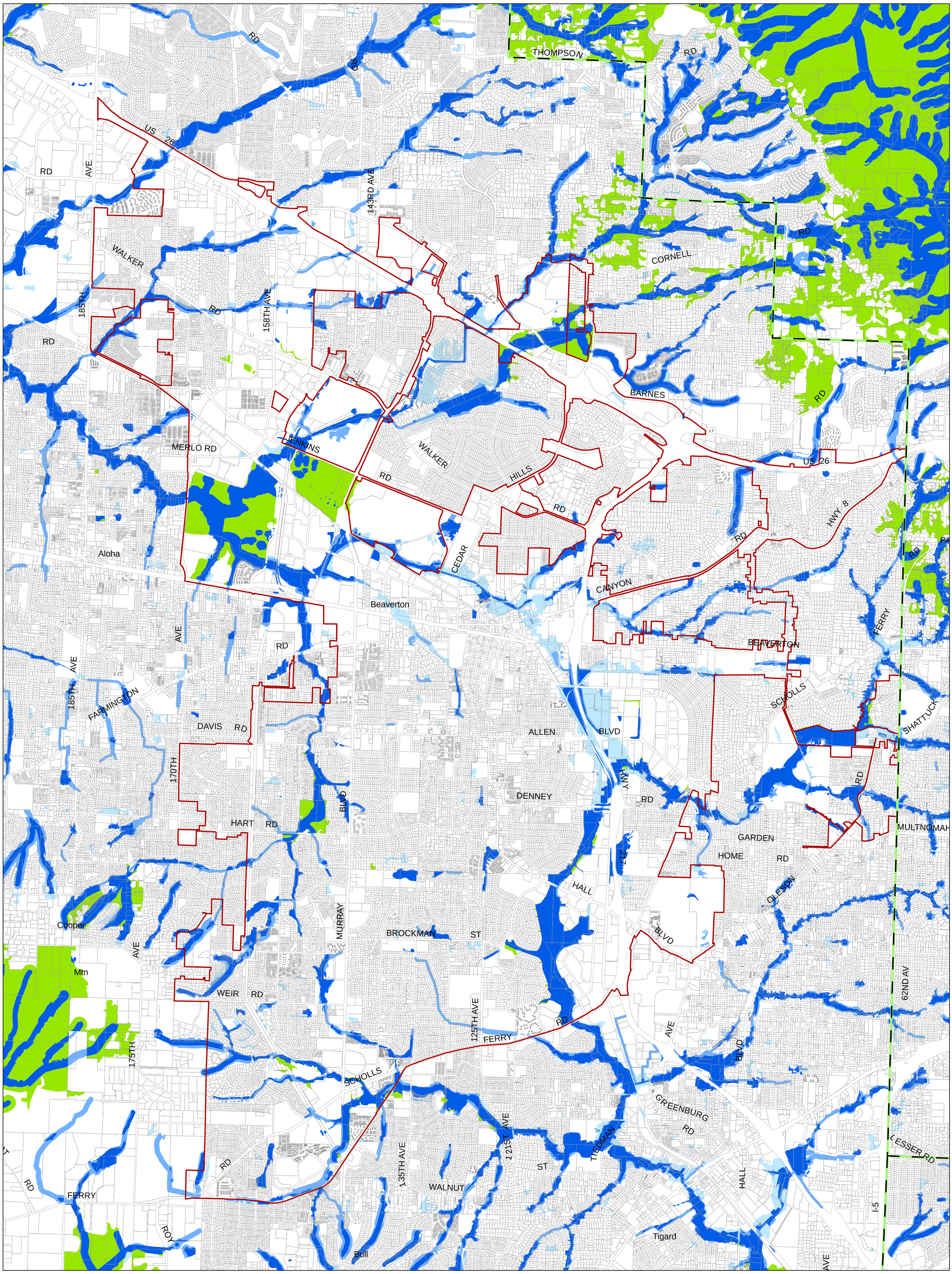
[2] *Areas that have been identified as habitats of concern, as designated on the Metro Habitats of Concern Map (on file in the Metro Council office), shall be treated as Class I riparian habitat areas in all cases, subject to the provision of additional information that establishes that they do not meet the criteria used to identify habitats of concern as described in Metro's Technical Report for Fish and Wildlife. Examples of habitats of concern include: Oregon white oak woodlands, bottomland hardwood forests, wetlands, native grasslands, riverine islands or deltas, and important wildlife migration corridors.*

(5) Identify developed floodplain, floodplain beyond Class I and II riparian areas, identify any forest patches on the aerial not included as Habitat Class A. These areas are Riparian Class III.

Verifying boundaries of inventoried upland habitat. Upland habitat was identified based on the existence of contiguous patches of forest canopy, with limited canopy openings. The "forest canopy" designation is made based on analysis of aerial photographs, as part of determining the vegetative cover status of land within the region. Upland habitat shall be as identified on the Habitat Benefit Areas map unless corrected as provided in this subsection.

1. Except as provided below, vegetative cover status shall be as identified on the Metro Vegetative Cover Map used to inventory habitat at the time the Habitat Benefit Areas map is adopted by this ordinance.
2. The only allowed corrections to the vegetative cover status of a property are as follows:
    a. To correct errors made when the vegetative status of an area was determined based on analysis of the aerial photographs used to inventory the habitat at the time the area was brought within the urban growth boundary. For example, an area may have been identified as "forest canopy" when it can be shown that such area has less than 60% canopy crown closure, and therefore should not have been identified as "forest canopy." The perimeter of an area delineated as "forest canopy" on the Metro Vegetative Cover Map may be adjusted to more precisely indicate the dripline of the trees within the canopied area provided that no areas providing greater than 60% canopy crown closure are de-classified from the "forest canopy" designation. To assert such errors, applicants shall submit an analysis of the vegetative cover on their property using the aerial photographs that were used to inventory the habitat at the time the area was brought within the urban growth boundary and the definitions of the different vegetative cover types provided in the Glossary of Volume I: The Comprehensive Plan; and
    b. To remove tree orchards and Christmas tree farms from inventoried habitat; provided, however, that Christmas tree farms where the trees were planted prior to 1975 and have not been harvested for sale as Christmas trees shall not be removed from the habitat inventory.
3. If the vegetative cover status of any area identified as upland habitat is corrected change the status of an area originally identified as "forest canopy," then such area shall not be considered upland habitat unless it remains part of a forest canopy opening less than one acre in area completely surrounding by an area of contiguous forest canopy.

Volume III Habitat Benefit Areas Map



Legend

- Upland Wildlife Habitat Class A
- Riparian Wildlife Habitat Class I
- Riparian Wildlife Habitat Class II
- Riparian Wildlife Habitat Class III
- Beaverton City Limits
- County Line

Miles

0 0.25 0.5 1 1.5 2

N W E S

COMPREHENSIVE PLAN FOR THE CITY OF BEAVERTON

VOLUME III: STATEWIDE PLANNING GOAL 5 RESOURCE INVENTORY DOCUMENTS

GEOGRAPHIC INFORMATION SYSTEM

LOCAL WETLAND INVENTORY

COMPOSITE MAP

City of Beaverton

0.25 0 0.25 0.5 0.75 1 Miles

North

Legend

- LWI Study Boundary
- Beaverton City Limits
- Perennial
- Intermittent
- Channel
- Sample Points
- Pond
- Entry Permission Granted
- DSL Wetland
- Wetland
- Riparian
- Sections
- Taxlots

Information Current as of:

March 2000

Abbreviations

NLSW= Not Locally Significant Wetland
SWDF= Storm Water Detention Facility
M= Mitigation

AS= Ash Creek
BE= Belaire Creek
BR= Bronson Creek
BV= Beaverton Creek
CE= Center Creek
CM= Cedar Mill Creek
ER= Erickson Creek
FA= Fanno Creek
GO= Golf Creek
HA= Hall Creek
HI= Hiteon Creek
JN= Johnson Creek North
JO= Johnson Creek South
SU= Summer Creek
SY= Sylvan Creek
WA= Waterhouse Creek
WE= Weir Creek
WI= Willow Creek
WO= Woods Creek

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WETLAND INFORMATION IS SUBJECT TO CHANGE

This map is for planning purposes only. Mapped wetland and riparian study area boundaries were not flagged or surveyed (unless noted as delineation study.) There may be exceptions or unmapped wetlands subject to regulation. In all cases, actual field conditions determined wetland boundaries. All wetland boundaries were mapped in the field on aerial photographs at a scale of 1"=400'. Slight variations or inaccuracies in boundaries may occur in transferring data from the aerial photograph scale (1"=400') to the map. On-site verified (Entry Permission Granted) wetland boundaries were mapped accurately to within 25' on the aerial photographs. If site alteration work is proposed, you are advised to contact the Oregon Division of State Lands or the U.S. Army Corps of Engineers with regulatory questions.

Notes:

All wetlands are locally significant unless otherwise noted.
Not locally significant wetlands were assessed using locally significant wetlands criteria or are smaller than the minimum assessment unit.
* Mitigation site according to DSL staff; permit numbers mitigation boundaries not always available.

This map represents the best data available at the time of publication. While every effort has been made to insure the accuracy of the information shown on this page, the City of Beaverton assumes no responsibility or liability for any errors or omissions.

TSS/DT 3/20/01 L_36x48 S:\wetland\lwi.apr

Ordinance No. 4252

CHANGE LOG

Comprehensive Plan Volume IV
Transportation System Plan Update (September 2001)

See ***Comprehensive Plan Chapter Six - Transportation Element*** for the updated text and project improvement figures and tables that reflect changes made through the date of the final ordinance.

1. Beaverton Creek alignment refined in the downtown to follow existing pedestrian ways. Requested THPRD and Metro consider the updated alignment. Both agencies stated their plan alignments are conceptual and do not need to be refined in their plans.
2. Appendix F Functional Classification Matrix was updated to acknowledge State highway designations.
3. The Federal Functional Classification Map of Beaverton was added to Appendix N to acknowledge federal system classifications for funding and emergency preparedness purposes.
4. Correct arrow #116 on Local Connectivity Map Page 1 to point north, then west. The June 2001 draft of the 2020 *TSP Update* is correct based on public comment that the connection should avoid cut through to Cambray. However, due to an oversight, the final September draft did not include this change.
5. Intersection drawings added to Appendix N.
6. Correct Figure 1-2A to show proposed bikeway alignment in Murray/Scholls area that extends from Teal south is on the collector street.
7. Delete octagon at Beaverton High School—map layer error.
8. Add RTP "boulevard design" Hall/Watson project to pedestrian plan table as follows: Hall/Watson Boulevard Design from Allen Blvd to Cedar Hills Blvd for RTP consistency $510,000 (RTP #3041 2000-2005).
9. Master Bike Plan incorrectly shows Hocken bike lanes extending south of Millikan Way. Correct the map.
10. Project tables, descriptions, and costs updated to 2001.
11. Delete the references to PGE heliport in southwest Beaverton. It no longer exists.
12. Reclassify Otter Lane/Citation Drive/136th Place from a Neighborhood Route to a Local street due to past City action and recent development.
13. Remove Neighborhood Route classification of 2nd Street from Erickson to Main to reflect recent City action.
14. Updated Goals, Policies, and Actions to reflect all changes to date.
15. Esplanade removed from maps per City action.

16. Functional Classification of Stillwell between Sorrento and 125th extension revised to a Local to reflect final design. Stillwell will not connect on the west, only on the east. 170th realignment corrected to intersect with existing 170th to the south. 103rd changed to a solid line to reflect it as "existing" north of Canyon Rd.
17. Final refinement revisions per DKS email memo 1/4/02:
    a. Cornell/158th: Modified intersection improvement #9 to include overlap phasing with the added eastbound right turn lane
    b. Merlo/170th: Modified intersection improvement #4 to include restriping of the westbound leg to include a 2nd westbound left turn lane (the 5-lane widening of Merlo includes the right of way for this lane so there are no additional costs).
    c. Scholls Ferry/Allen: The intersection improvement #57 cost increased to $1,500,000 to add curve correction to the east of the intersection that would be a more complete and reasonable solution.
    d. Hall/Watson couplet downtown near Farmington Road: there is marginal need for improvement for three through lanes. Cost estimate is $1.5 million for each intersection improvement (#39 and #40). Note added to preserve right-of-way for construction beyond 2020.
    e. Intersection improvement 43b deleted due to project level analysis conclusions. This solidifies the need for the 125th extension. Updated 2020 Mitigated calculations are included in Appendix J.
    f. Corrected map error omission of 160th Neighborhood Route that extends from 160th tying into Sumac Street west to Timberland Drive.
    g. Corrected map error in Murray/Scholls area on Functional Classification and Pedestrian Master Plan maps of an additional dashed connection from internal circulation roadway to Barrows Road.
    h. 91st Avenue/Canyon and 103rd Extension analysis notation: Originally the 103rd extension was included mainly as a connectivity and bike system improvement. Analysis subsequent to the September 29, 2001 draft TSP Update of 91st at Canyon Road found capacity deficiencies. The 103rd extension may also be a way to reduce/manage congestion on 91st.
    i. Right-of-way map Western Avenue analysis notation: In looking closely at the volumes and cross section, the 5-lane designation may not be ultimately needed and may be hard to achieve with the planned bike lanes and existing built out development. In the TSP mitigated scenario, it looks like a 3-lane section with bike lanes would be feasible though this would be pushing the limits of a 3-lane section. However, this would only work with all of the parallel route improvements, including capacity improvements on Hwy 217.
19. Changed maps to delete three neighborhood route connections north of Nora/Kemmer area. Connections outside of the TSP study area to the west of 175th also deleted to reflect County feasibility analysis. Connections are infeasible due to environmental constraints, greenspaces park, and existing development.
20. Acknowledge name change from Henry Street to Millikan Way.
21. Revise Street Improvement table to reorganize Regional Center projects for ease of reference and to reflect name change.
22. Correct Figure 3-6 map symbol to show that the TV Hwy/Murray Blvd. intersection is at capacity.

23. Revise Pedestrian and Bicycle Master Plans to add a Fanno Creek multi-use path segment south of the northern trail intersection with Hall Boulevard, to the intersection of Creekside and Hall Boulevard, south to the Fanno Farmhouse and then west on the existing trail. This modification was based on the multi-year study of the Fanno Creek Path by Metro and participating public and private agencies including the City of Beaverton.
24. Murray/Scholls Town Center circulation network: Revised figures and tables to acknowledge the following changes analyzed through a 2002 traffic and wetlands analysis:
    a. Revise the northern-most collector transit street to a bicycle/pedestrian connection. A letter from TriMet concludes the transit streets proposed in the Murray/Scholls Town Center Plan are not needed, as sufficient transit access exists. The traffic impact analysis for the site concludes surrounding street circulation, performance, and connectivity is acceptable in the future without the street. Retain the southern-most street that runs from the future extension of Teal Blvd (from Scholls Ferry Road south to Barrows Road at Horizon Blvd.) east to the Murray Blvd. extension (from Scholls Ferry Road south to Barrows Road at Walnut Street) in order to provide multimodal connectivity to City standards.
    b. Revise the functional classification of the remaining southern-most street that runs from the future extension of Teal Blvd (from Scholls Ferry Road south to Barrows Road at Horizon Blvd.) east to the Murray Blvd. extension (from Scholls Ferry Road south to Barrows Road at Walnut Street) from Collector to Neighborhood Route.
    c. Clarify the description and figures containing the Murray Blvd. extension improvement project (from Scholls Ferry Road south to Barrows Road at Walnut Street) to show the need for a two/three-lane street instead of a four-lane street. The Murray Blvd. extension would perform acceptably in the future with two/three lanes and turn lanes at intersections including a right turn lane southbound at Barrows Road.
    d. With new development, consider realigning Barrows Road to the north side of Summer Creek and deleting the east/west circulation street. The Barrows Road realignment could fulfill its function and perform acceptably.
25. Corrections of typographical and minor grammatical errors.

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LIST OF ACRONYMS / ABBREVIATIONS

- CBD – Central Business District
- D/C – Demand to Capacity Ratio
- DEIS – Draft Environmental Impact Study
- DEQ – Department of Environmental Quality
- ECO – Employee Commute Options
- FHWA – Federal Highway Administration
- HCM – Highway Capacity Manual
- ITS – Intelligent Transportation System
- LID – Local Improvement Districts
- LOS – Level of Service
- LRT – Light Rail Transit
- MSTIP – Major Streets Transportation Improvement Projects
- NAC – Neighborhood Action Committee
- ODOT – Oregon Department of Transportation
- OHP – Oregon Highway Plan
- RLIS – Regional Land Information System
- ROW – Right of Way
- RTP – Regional Transportation Plan
- SDC – System Development Charges
- SOV – Single Occupancy Vehicle
- SPIS – Safety Priority Indexing System
- SPWF – Special Public Works Fund
- TAC – Technical Advisory Committee
- TAZ – Transportation Analysis Zone
- TDM – Travel Demand Management
- TGM – Transportation and Growth Management
- TIF – Traffic Impact Fee
- TPR – Transportation Planning Rule
- TSM – Transportation System Management
- TSP – Transportation System Plan
- V/C – Volume to Capacity Ratio
- VPD – Vehicles Per Day
- WACO – Washington County

Chapter 1
Summary

INTRODUCTION

The City of Beaverton has recently completed a thorough review of its transportation system with the 2015 Transportation System Plan. This plan was aimed at fulfilling *Transportation Planning Rule* (TPR) requirements for comprehensive transportation planning in cities in Oregon. The 2015 TSP addressed current problem areas and looked into the future (2015) to identify needs created by growth. Since the adoption of the 2015 TSP, Metro has completed the Regional Transportation Plan (August 2000) based upon 2020 future needs. The State Transportation Planning Rule calls for local agencies to adopt their TSP within 12 months of the completion of a Regional Transportation Plan. To meet this requirement, this Transportation System Plan Update has been prepared. Its aim is to fulfill state mandates for comprehensive planning in Beaverton, to update and address current problem areas, to update and address future needs created by the estimated growth from 2015 to 2020, and bring the Beaverton TSP in alignment with the Regional Transportation Plan.

The TSP provides specific information regarding transportation needs to guide future transportation investment in the City and determine how land use and transportation decisions can be brought together beneficially for the City. This plan addresses issues outlined in the recently adopted Metro's *Regional Transportation Plan* (RTP), ODOT's Oregon Highway Plan (OHP), and considers issues being studied in the Washington County TSP, which is currently under study.

Plan Process

The Beaverton Transportation System Plan Update process included the following elements:

- Inventory/Data Collection to a year 2000 baseline
- Evaluate Existing Conditions and Future Travel Needs Through Forecasting
- Update Needs by Mode and Consider Alternatives
- Refine Improvement Lists to Mitigate Deficiencies by Mode For 2020 Conditions
- Update Planning and Cost Estimates of Improvements
- Draft TSP

The transportation system was broken into five basic modes (or mode groups):

- Pedestrians
- Bicycles
- Transit
- Motor Vehicles
- Other Modes (Including Rail, Air, Water, Pipeline, etc.)

As with the adopted 2015 TSP, the TSP Update's planning objective was to optimize each of these modes of transportation within Beaverton with the 2020 forecasted travel demand. The following sections summarize the findings of the Transportation System Plan studies. Many of the findings from the 2015 TSP are consistent with the RTP and assessment of the 2020 needs. The motor vehicle mode was the only mode requiring extensive additional consideration and analysis to address 2020 needs. Therefore, this TSP Update does not include detailed chapters on each of the travel modes as written in the previous TSP (those chapters adequately address those modal strategies and needs). Specific chapters of this report address TSP Goals and Policies (Chapter 2), Existing Conditions (Chapter 3), and Future Needs and Alternatives (Chapter 4).

Several City of Beaverton Traffic Commission meetings and TSP Technical Advisory Committee (TAC) meetings were held over the course of the study. The Traffic Commission addressed goals and policies related to transportation in Beaverton, transportation needs by mode (motor vehicles, bicycle, pedestrian, transit, other modes, etc.), strategies for choosing alternatives, and review of transportation alternatives. The TAC topics included review of land use information, travel demand forecasting issues, goals and policies, and coordination with adjacent jurisdictions.

GOAL AND POLICIES

Background

The City of Beaverton Draft TSP Update Goals and Policies consist of seven transportation goals with related policies organized under each goal. The Goals and Policies are not prioritized, and reflect the City of Beaverton's citywide transportation goals (Comprehensive Plan page xv). The goals are brief guiding statements that describe a desired result. The policies describe the actions needed to move the community toward a goal. Input and comments received from the Beaverton Traffic Commission, the Beaverton TSP Update Technical Advisory Committee, and Beaverton staff have been incorporated to update and refine the 2015 TSP. The intent of the update was to simplify statements and reflect recent policy information adopted by Metro and ODOT.

The policies are provided in this summary with background information and further explanation in Chapter 2.

6.2.1. Goal: Transportation facilities designed and constructed in a manner to enhance Beaverton's livability and meet federal, state, regional, and local requirements.

6.2.2. Goal: A balanced transportation system.

6.2.3. Goal: A safe transportation system.

6.2.4. Goal: An efficient transportation system that reduces the percentage of trips by single occupant vehicles, reduces the number and length of trips, limits congestion, and improves air quality.

6.2.5. Goal: Transportation facilities that serve and are accessible to all members of the community.

6.2.6. Goal: Transportation facilities that provide efficient movement of goods.

6.2.7. Goal: Implement the transportation plan by working cooperatively with federal, State, regional, and local governments, the private sector, and residents. Create a stable, flexible financial system.

TSM/TDM

Transportation System Management
Transportation System Management (TSM) focuses on low cost strategies to enhance operational performance of the transportation system by seeking solutions to immediate transportation problems, finding ways to better manage transportation, maximizing urban mobility, and treating all modes of travel as a coordinated system. These types of measures include such things as signal improvements, ramp metering, traffic calming, access management, intelligent transportation solutions (ITS) and programs that enhance and smooth transit operations. Typically, the most significant measures that can provide tangible benefits to the traveling public are traffic signal coordination and systems.

TSM measures focus primarily on region wide improvements, however there are a number of TSM measures that could be used in a smaller scale environment such as the Beaverton area. The following TSM measures list summarizes strategies that could be appropriate for the Beaverton 2020 TSP study area.

- Traffic monitoring and surveillance
- Signal coordination and optimization
- Signal priority
- Information availability
- Incident management

TSM Summary

All of the previously mentioned measures of TSM can work together in a transportation environment to help reduce congestion and decrease travel times for travelers. Table 1-1 summarizes the RTP projects that support Beaverton TSM. Beyond the RTP designated TSM projects, the City of Beaverton should coordinate with Tri-Met, ODOT, and Washington County in providing signal priority at signalized intersections along rapid or frequent bus routes (TV Highway and Cedar Hills/Hall corridor – approximately 50 intersections) to increase transit efficiently, reduce transit travel times, and promote non-SOV person trips. Signal priority should be activated for transit vehicles that are operating behind schedule. The implementation of additional strategies should be on a case-by-case basis and evaluated as to the effectiveness.

Table 1-1: RTP Projects supporting TSM
(1998 Dollars)

RTP Project Number	Description	Estimated Cost	Projected Implementation
3016	**Washington County:** Acquire hardware for new traffic operations center and conduct needs analysis	$1,000,000	2000-2005
3061	**TV Highway:** Interconnect signals from 209th Avenue to ORE 217	$1,500,000	2006-2010
3063	**Murray Boulevard:** Signal coordination from TV Highway to Allen	$50,000	2000-2005
6012	**Western Avenue:** Implement TSM improvements between Allen and Canyon Road and extend Western Avenue north to Canyon Road near Walker	$2,500,000	2011-2020
6025	**Scholls Ferry Road:** Implement appropriate TSM strategies, from ORE 217 to 125th Avenue, such as signal interconnects, signal re-timing and channelization to improve traffic flows	$500,000	2000-2005

Source: *Regional Transportation Plan,* Metro, August 2000.

Transportation Demand Management

Transportation Demand Management (TDM) is the general term used to describe any action that removes single occupant vehicle trips from the roadway network during peak travel demand periods. As growth in the Beaverton area occurs, the number of vehicle trips and travel demand in the area will also increase. The ability to change a user's travel behavior and provide alternative mode choices will help accommodate this growth.

Generally, TDM focuses on reducing vehicle miles traveled and promoting alternative modes of travel for large employers of an area. This is due in part to the Employee Commute Options (ECO) rules that were passed by the Oregon Legislature in 1993 to help protect the health of Portland area residents from air pollution and to ensure that the area complied with the Federal Clean Air Act.[1] Research has shown that a comprehensive set of complementary policies implemented over a large geographic area can have an effect on the number of vehicle miles traveled to/from that area.[2] However, the same research indicates that in order for TDM measures to be effective, they should go beyond the low-cost, uncontroversial measures commonly used such as carpooling, transportation coordinators/associations, priority parking spaces, etc. The more effective TDM measures include elements related to parking and

[1] Oregon Administrative Rules, Chapter 340, Division 30.

[2] *The Potential for Land Use Demand Management Policies to Reduce Automobile Trips*, ODOT, by ECO Northwest, June 1992.

congestion pricing, improved services for alternative modes of travel, and other market-based measures.

With many regional trips destined to, or traveling through, the Beaverton area, region wide TDM measures should help to reduce congestion. Metro has established non-SOV (Single Occupancy Vehicle) mode share targets by 2040 for regional centers (similar to Gateway). These targets may also serve as performance measures for areas that have been designated as "Areas of Special Concern" (Beaverton Regional Center is classified by Metro as this type of area).[3] The 2040 non-SOV model target for regional centers, town centers, light rail transit (LRT) communities, main streets, and corridors is 45-55%.[4]

Several TDM strategies were developed in the 2015 TSP that are aimed at achieving the Metro 2040 non-SOV targets. The ranking of the strategies follows from most important to least important:

- Encourage linkage of housing, retail, and employment centers
- Provide incentives to take transit and use other modes (i.e., free transit pass)
- Flexible working hours
- Schedule deliveries outside of peak hours
- Coordinate shift changes/staggered work hours
- Telecommuting
- Participate in Westside Transportation Alliance
- Provide information regarding commute options to larger employers
- Work with property owners to install bicycle racks and bicycle amenities

The 2015 TSP recommended TDM plan, along with multi-modal improvements, should help the City of Beaverton achieve the Metro 2040 non-SOV targets and comply with state, regional, and county policy. The recommended action plan for the City of Beaverton remains as the following:

- Encourage development that effectively mixes land uses to reduce vehicle trip generation. These plans may include development of linkages (particularly non-auto) that support greater use of alternative modes. Land use density should be higher at transit stations (half mile radius) than elsewhere in the community.
- Develop consistent conditions for land use approval that require all future employment related land use developments to agree to reduce peak hour trip making, through individual or collective TDM efforts. For example, measures which are appropriate for site planning such as close-in parking for carpools, bicycle parking, shower facilities, and convenient transit stops should be considered in the

[3] Based on the *2000 Metro Regional Transportation Plan*, Ordinance No. 00-869A (August 10, 2000), page 1-32.

[4] Based on the *2000 Metro Regional Transportation Plan*, Ordinance No. 00-869A (August 10, 2000), page 1-62.

design review process.

- Support continued efforts by Washington County, ODOT, DEQ, Tri-Met, and the Westside Transportation Alliance to develop productive TDM measures that reduce VMT and peak hour trips, including investigating transit pass programs with city employers and implementing a fareless area in the downtown regional center (there are currently 46 employers in Beaverton with transit pass programs, two of which are in the regional center). This may require City funding of TDM management to get maximum benefit or results (possibly $25,000 to $75,000 per year).
- As a capital oriented element, coordinate with ODOT and Tri-Met on the development of park-and-ride transit station or freeway interchange locations in Beaverton (these are locations proven to be successful in attracting carpool/transit use). The Transit Master Plan, Figure 4-9, shows current park-and-ride locations. Expansion of these sites should focus on transit station or freeway interchange locations. Interchange reconstruction projects should be required to identify potential sites for park-and-ride (even small sites of 50 spaces). Over the next 20 years, a reasonable budget for park-and-ride expansion might be about $100,000 per year (about 50 spaces a year, assuming pre-existing ROW).
- Continued implementation of motor vehicle and bicycle minimum and maximum parking ratios for new development (per Development Code 60.20).
- Implementation of downtown connectivity plan as well as local street connectivity improvements identified in Appendix E.
- Implementation of bicyle, pedestrian, motor vehicle and transit system action plan.

Pedestrian

The existing pedestrian system network map was updated from the previous TSP to reflect recent improvements and the expanded TSP Study Area. In most cases sidewalk improvements are aimed at closing gaps in the existing sidewalk network to provide connectivity rather than capacity. In other words, it is much more important that a continuous sidewalk be available than it be of a certain type or size.

The 2000 Regional Transportation System Plan (RTP) includes designations for pedestrian districts and transit/mixed use corridors (see Figure 1-1). The RTP defines pedestrian districts as areas of high or potentially high pedestrian activity where regional policy places priority on creating a safe, direct, and attractive pedestrian environment. In general, these are areas planned for compact, mixed-use development served by transit and correspond to the following 2040 design type designations within the City of Beaverton: regional centers, town centers, and light rail communities. The corresponding areas within the City of Beaverton include the Murray/Scholls Town Center, the Washington Square Regional Center, downtown Beaverton, and the LRT communities. Areas such as these areas are characterized by buildings oriented to the street and by boulevard street design features such as wider sidewalks with buffering from traffic, marked street crossing at intersections, pedestrian-scale lighting, benches, bus shelters, and street trees. Transit/mixed-use corridors are defined as priority areas for pedestrian travel that are served by good quality transit service and that will generate substantial pedestrian traffic near neighborhood-oriented retail development, schools, parks, and bus stops. These corridors should include such design features as wide sidewalks with buffering from traffic, pedestrian scale-lighting, benches, bus shelters, and street trees. The 2040 design type designation for transit/mixed-use corridors is "Corridors". The corresponding corridor areas within the City of Beaverton include TV Highway-Canyon Road, BH Highway-Farmington Road, Murray Boulevard, Cedar Hills Boulevard, Hall Boulevard, and Walker Road. As shown in Figure 1-1, the Pedestrian Facilities Master Plan identifies improvements to provide a connected pedestrian network to and within the RTP designated pedestrian districts and transit/mixed use corridors. The City of Beaverton Development Code regulations should require new development in the pedestrian districts and transit/mixed use corridors to comply with the RTP descriptions listed above.

The most important existing pedestrian need in Beaverton is a well-connected pedestrian system within a half-mile grid and connectivity to light rail transit (LRT) stations and key centers in Beaverton (parks, schools, retail, etc.). Needs include safe, direct and convenient access to transit and crossings of large arterial streets which act as barriers to pedestrian movement, marked crossings at major transit stops, as well as an inventory of local street sidewalk locations in order to complete a detailed sidewalk connectivity plan. A well connected pedestrian system in the pedestrian districts and transit/mixed use corridors will insure direct and logical pedestrian crossing at transit stops. The City of Beaverton should coordinate with Washington County, Tri-Met, Metro, and ODOT to ensure that major transit stops will be located at sites with a signalized

and/or marked pedestrian crossing. In the future, pedestrian needs will be similar in the City, but there will be additional activity centers that will need to be considered and interconnected. The ranking of pedestrian strategies has not changed from the previous TSP and is listed from most important to least important:

- Connect key pedestrian corridors to schools, parks, recreational uses and activity centers (public facilities, commercial areas, etc.)
- Fill in gaps in the network where some sidewalks exist
- Pedestrian corridors to transit stations and stops
- Signalized pedestrian crossings
- Pedestrian corridors that connect neighborhoods
- Improve streets having sidewalks on one side to two sides
- As development occurs, construction of sidewalks by developers
- Pedestrian corridors that commuters might use
- Reconstruct all existing substandard sidewalks to the City of Beaverton Standards

The Pedestrian Master Plan (Figure 1-1) is an overall plan and summarizes the desired framework plan to meet local and regional policy. The more specific, shorter-term Action Plan was updated to include completed improvements and the expanded study area, as well as projects from the Regional Transportation System Plan (RTP) that were not in the previous TSP Pedestrian Action Plan. The Action Plan (Table 1-2) consists of projects that the City or responsible agency could give priority to when funding becomes available. As development occurs, streets are rebuilt, and other opportunities (such as grant programs) arise, projects on the Master Plan should be pursued as well. In addition, all development projects should include an inventory of local street sidewalk conditions in order to populate the City database of sidewalk locations. Table 1-3 lists pedestrian system improvement projects that have committed funds.

Table 1-2: Pedestrian Action Plan
(2001 Dollars)

Project	From	To	Approximate Cost ($1000's dollars)
Priority: Connect key pedestrian corridors to schools, parks, recreational uses and activity centers			
155th Avenue	Davis Road	Nora-Beard Road	410
US 26/Bethany Trail Crossing	US 26	US 26	100
Study US 26 Trail Crossings	143rd Avenue	Canyon Road	80
Study and Improve unsignalized trail crossing of roadways	City jurisdiction		10,000
Link Fanno Creek Path over ORE 217 at Denney	ORE 217	ORE 217	100
Study Fanno Creek Path	Rock Creek	Fanno Creek Greenway	80
Priority: Fill in gaps in pedestrian network			
TV Highway/Canyon Road (gaps on one-side)	Murray Blvd	170th Avenue	470
TV Highway/Canyon Road (Boulevard Design)	ORE 217	Murray Blvd	8,000
Canyon Road/TV Highway (sidewalks and crossings)	91st Avenue	ORE 217	1,465
Canyon Road	US 26	110th Avenue	6,750
Cedar Hills Boulevard	Butner Road	US 26 WB off ramp	124
Murray Boulevard (gaps on one side)	Jenkins Road	Millikan Way	100
Murray Boulevard (gaps)	Farmington	TV Highway	112
Denney Road	Nimbus Avenue	Scholls Ferry Road	241
Allen Boulevard (gaps)	Western Avenue	Scholls Ferry Road	69
Western Avenue	5th Street	800 feet south of 5th	55
Division Street	149th Avenue	170th Avenue	365
Davies Road (east side)	Scholls Ferry Road	Hiteon Drive	76
Scholls Ferry Road (gaps)	Barrows Road (west end)	Beaverton-Hillsdale Highway	1,893
Scholls Ferry Road	BH Highway	Raleighwood Way	151
SW Park Way (gaps)	Walker Road	ORE 217	213

Project	From	To	Approximate Cost ($1000's dollars)
Cornell Road (gaps)	158th Avenue	US 26 WB off ramp	101
Barnes Road	Tuefel Lane	Viewmont Drive	118
Garden Home Road	77th Avenue	76th Avenue	43
Multnomah Boulevard	Garden Home Road	Wash. County line	198
92nd Avenue	Allen Boulevard	Garden Home Road	302
Garden Home Road (gaps one-side)	92nd Avenue	77th Avenue	242
Hall Boulevard	Cascade Avenue	ORE 217 SB ramp	23
Hall Boulevard (gaps one-side)	ORE 217 SB ramp	Approximately 470 ft. west of ramp	34
Barnes Road (gaps one-side)	117th Avenue	Stark Street	104
Barnes Road	Stark Street	Approximately 100 ft. west of Stark St.	14
Cornell Road (gaps one side)	Approximately 500 ft west of Science Park Dr.	Approximately 500 ft east of 153rd Ave.	101
110th Avenue (gap-one side)	Beaverton-Hillsdale Hwy	Canyon Road	34
Priority: Pedestrian corridors to transit stations and stops			
160th Avenue	TV Highway	Davis Road	358
117th Avenue (gaps-one side)	Light Rail Transit Line	Center Street	34
Downtown Beaverton Connectivity collector roadways	Hocken Avenue/ TV Highway	110th Avenue/ Cabot Street	1,033
Pedestrian Access to MAX	LRT Stations		1,148
Priority: Construct sidewalks with roadway improvement projects*			
125th Avenue	Hall Boulevard	Brockman Road	193
Hall Boulevard	Cedar Hills	Hocken/Terman	Part of road improv.
Farmington Road	172nd Avenue	185th Avenue	218
Nimbus Avenue	Denney Road	Cirrus Drive	138
Walker Road	ORE 217	Canyon Road	209
Walker Road (gaps)	173rd Avenue	Mayfield Avenue	441
Davies Road	Scholls Ferry Road	Barrows Road	61
Murray Boulevard	Scholls Ferry Road	Barrows Road	110

Project	From	To	Approximate Cost ($1000's dollars)
170th Avenue	Alexander Street	Baseline/Jenkins	366
173rd Avenue	Cornell Road	Bronson Road	55
Hart Road (gaps)	Hall Boulevard	Murray Boulevard	49
Cornell Road (one-side)	158th Avenue	185th Avenue	165
Oak Street/Davis Road/Allen (gaps)	160th Avenue	170th Avenue	244
Allen Boulevard (gaps)	Alice Lane	Western Avenue	112
Nora-Beard Road	175th Avenue	155th Avenue	281
Weir Road	175th Avenue	160th Avenue	248
175th Avenue-Rigert Road	170th Avenue	Scholls Ferry Road	755
Jenkins Road	153rd Avenue	Murray Boulevard	112
Hart Road/Bany Road (gaps)	170th Avenue	185th Avenue	214
SW Beaverton collector roadway	Scholls Ferry Road	175th Avenue	346
Johnson Street Extension	170th Avenue	209th Avenue	Part of road improv.
Barnes Road Improvements	Highway 217	119th Avenue	Part of road improv.
Barnes Road Improvements	Saltzman Road	119th Avenue	Part of road improv.
Cornell Road Improvements	US 26	143rd Avenue	Part of road improv.
Cornell Road Improvements	143rd Avenue	Saltzman Road	Part of road improv.
Cornell Road Boulevard Improvements	Barnes Road	Trail Street	2,295
Murray Boulevard Improvement	Science Park Drive	Cornell Road	Part of road improv.
Oleson Road	Fanno Creek	Hall	Part of road improv.
ORE 217 Overcrossing roadway	Scholls Ferry Road	Nimbus	Part of road improv.
Murray/Scholls Ferry Town Center – extensions and new roadways			Part of road improv.
103rd Avenue	Walker Road	Western Boulevard	Part of road improv.
SW Beaverton circulation roadway	High Hill Lane	Nora-Beard Road	275
Priority: Pedestrian corridors that connect neighborhoods			
SW Butner Road (one side)	Murray Boulevard	Park Way	296
SW Downing Road (gaps on south side)	Murray Boulevard	Meadow Drive	41
Meadow Drive (one side)	Downing Road	Walker Road	38
Laurelwood Avenue/87th Avenue	Canyon Road	Scholls Ferry Road	434

Project	From	To	Approximate Cost ($1000's dollars)
Jamieson Road	Pinehurst Drive/Cypress	Scholls Ferry Road	206
Cypress Street	Jamieson Road	Elm Avenue	79
Sexton Mountain Drive (gaps)	Maverick Terrace	Nora-Beard Road	296
91st Avenue	Canyon Road	BH Highway	1,970
96th Avenue (one side)	Canyon Road	Beaverton-Hillsdale Highway	90
Pedestrian Action Plan Projects Total Cost:			**$ 45,078**

*Sidewalks to be built with roadway improvement projects are dependent on the ROW and alignment of the road improvement and would not be built without the road improvement

Table 1-3: Pedestrian Action Plan – Projects with Committed Funds
(2001 Dollars)

Project	From	To	Approximate Cost ($1000's dollars)
Priority: Connect key pedestrian corridors to schools, parks, recreational uses and activity centers			
170th Avenue	Rigert Road	Alexander Street	515
170th/173rd Avenue	Baseline/Jenkins	Walker Road	220
Millikan Way	Hocken Avenue	Cedar Hills Blvd	57
Hart Road/Bany Road (gaps)	Murray Boulevard	170th Avenue	236
Pedestrian Improvement Project Committed Funds Total Cost:			**$ 1,028**

DKS *Associates*

City of Beaverton Transportation System Plan

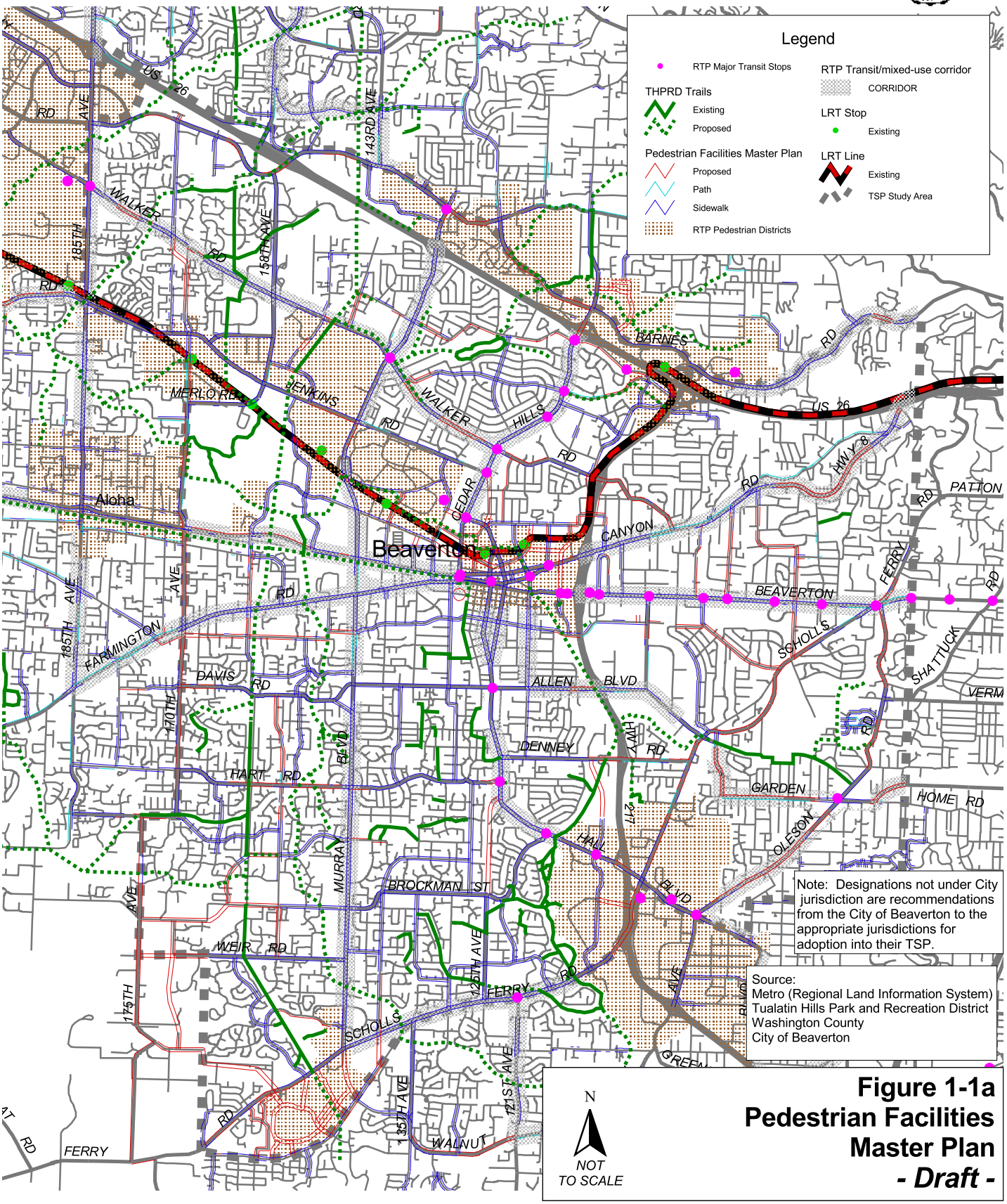


Figure 1-1a
Pedestrian Facilities Master Plan
- Draft -

City of Beaverton
Transportation System Plan

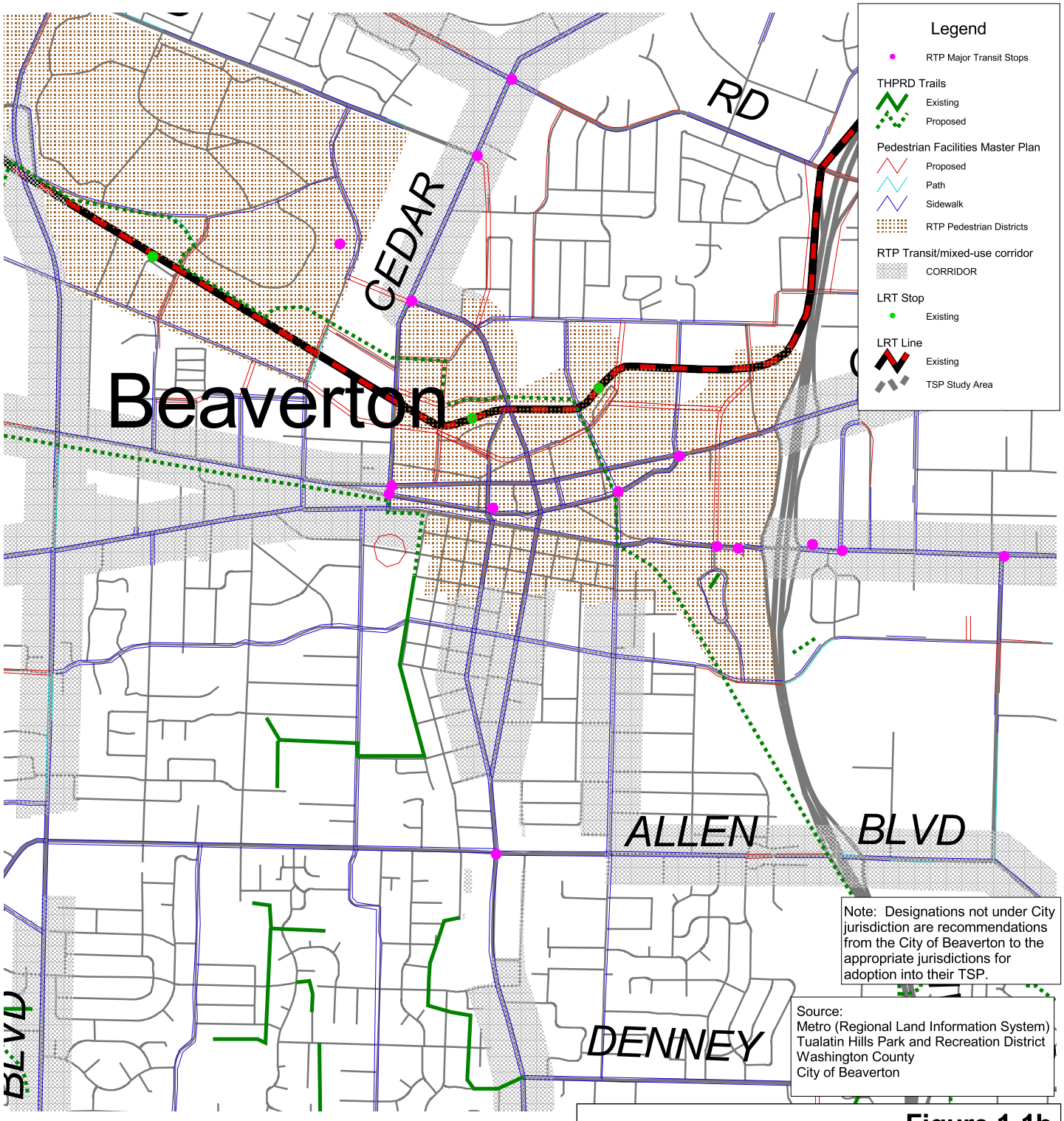


Figure 1-1b
Pedestrian Facilities Master Plan
- Draft -

Bicycle

The Bicycle Master Plan has been updated from the previous TSP to include completed improvement projects and the expanded TSP Study Area (See Figure 1-2). Bikeway improvements are aimed at closing the gaps in the bicycle network along arterial and collector roadways. The ranking of the bicycle strategies has not changed from the previous TSP and is listed from most important to least important:

- Connect Key bicycle corridors to schools, parks, recreational uses and activity centers (public facilities, commercial areas, etc.)
- Fill in gaps in the network where some segments of bikeway exist
- Bicycle corridors that connect neighborhoods
- Construct bike lanes with roadway improvement projects
- Bicycle corridors that commuters might use
- Bicycle corridors providing mobility to and within commercial areas

The 2000 Metro RTP includes a bicycle functional classification system with the following designations (shown on Figure 1-2):

- Regional Access Bikeway: Function focuses on accessibility to and within the central city, regional centers, and larger town centers. Travel time is an important factor as these bikeways generally have high volumes.
- Regional Corridor Bikeway: Functions as longer routes that provide point-to-point connection between the central city, regional centers, and larger town centers. Generally higher automobile speeds and volumes than community connector bikeways.
- Community Connector Bikeway: Connect smaller town centers, main streets, station areas, industrial areas, and other regional attractions.
- Multi-use paths with bicycle transportation function: Likely to be used for commuting to work or school, accessing transit, or travelling to a store, library, or other local destination. Bicycle/pedestrian sidewalks on bridges are included in this classification. Design includes physical separation from motor vehicle traffic by open space or barrier.

The Bicycle Master Plan builds from state policy from the Transportation Planning Rule that all arterial and collector roads have bike lanes. The Action Plan is consistent with plans developed by Metro, Washington County, and the State, including providing bikeways consistent with each of the Metro RTP designated bikeways. Additional linkages with lanes or accommodations are outlined to make a complete network. The Bicycle Action Plan (Table 1-4) consists of projects that the City should actively try to fund in the next ten years. With the action plan, a substantial bicycle network would be in place and would allow attention to move toward infill Master Plan

projects. The bicycle plan will require incremental implementation. As development occurs, streets are rebuilt and other project funding opportunities (such as grant programs) arise, projects on the Master Plan should be integrated into project development. Many of the projects would be elements of multi-modal street improvement projects (e.g. Murray Boulevard extension). The City, through its Capital Improvement Program, joint funding with other agencies (County, Metro, State) and development approval would implement these projects. Table 1-5 lists bicycle system improvement projects with funds already committed.

Table 1-4: Bicycle Action Plan
(2001 Dollars)

Project	From	To	Approximate Cost ($1000's of dollars)
Priority: Connect key bicycle corridors to schools, parks, recreational uses and activity centers			
Greenway Road	Hall Boulevard	125th Avenue	266
155th Avenue/Weir Road	Davis Road	Murray Boulevard	1,190
Millikan Way	Murray Boulevard	TV Highway	521
160th Avenue	TV Highway	Davis Road	503
Canyon Road	142nd Avenue	91st Avenue	1,310
Priority: Fill in gaps in bicycle network			
Hall Boulevard bike lanes	Greenway	ORE 217	357
Hall Boulevard bike lanes	Beaverton-Hillsdale Hwy	Cedar Hills Blvd	78
Hall Boulevard Extension	Cedar Hills	Hocken/Terman	Part of road improv.
Watson Avenue bike lanes	Beaverton-Hillsdale Hwy	Hall Boulevard	68
Cedar Hills Boulevard bike lanes	Farmington Road	Walker Road	506
6th Street bike lanes	Murray Boulevard	Menlo Drive	241
Murray Boulevard bike lanes (west side of Murray Boulevard)	Farmington Road	approximately 200 ft south of TV Highway	48
Denney Road bike lanes	Hall Boulevard	Scholls Ferry Road	684
Allen Boulevard bike lanes	approximately 200 ft east of Western Avenue	Scholls Ferry Road	221
Western Avenue bike lanes	Beaverton-Hillsdale Hwy	Allen Boulevard	337
Beaverton-Hillsdale Hwy bike lanes	ORE 217	91st Avenue	520
Beaverton-Hillsdale Hwy bike lanes	91st Avenue	Wash. County Bound.	1,023
Scholls Ferry Road	77th Avenue	BH Highway	251

Project	From	To	Approximate Cost ($1000's of dollars)
Oleson Road	BH Highway	Terri Court	453
92nd Avenue	Allen Boulevard	Garden Home Road	377
Garden Home Road	92nd Avenue	Oleson Road	641
Scholls Ferry Road	Hall Boulevard	Cascade Avenue	328
Scholls Ferry Road	BH Highway	Wash. County Bound.	431
Taylors Ferry Road	Oleson Road	Washington Drive	137
Davies Road	Scholls Ferry Road	Barrows Road	187
Barrows Road	Scholls Ferry Road (east)	Scholls Ferry Road (west)	1,180
Scholls Ferry Road	Murray Boulevard	175th Avenue	896
Priority: Construct bike lanes with roadway improvement projects*			
125th Avenue bike lanes	Hall Boulevard	Brockman Road	302
Farmington Road Bikeway	Hocken Avenue	Highway 217	3,213
Walker Road bike lanes	ORE 217	Canyon Road	327
Walker Road bike lanes	Cedar Hills Boulevard	Lynnfield Lane	150
Walker Road bike lanes	178th Avenue	185th Avenue	309
Millikan Way bike lanes	Hocken Avenue	Cedar Hills Blvd	91
170th Avenue bike lanes	Alexander Street	Baseline/Jenkins	573
173rd Avenue bike lanes	Walker Road	Cornell Road	371
Hart Road/Bany Road bike lanes	167th Avenue	170th Avenue	69
Cornell Road bike lanes	158th Avenue	185th Avenue	516
Murray Boulevard bike lanes	Scholls Ferry Road	Barrows	172
Allen Boulevard bike lanes	ORE 217	Murray Boulevard	293
Allen Boulevard bike lanes	ORE 217	approximately 200 ft west of Western Ave	108
Nora-Beard Road bike lanes	175th Avenue	155th Avenue	499
Weir Road	175th Avenue	155th Avenue	448
Barnes Road Improvements	Saltzman Road	119th Avenue	Part of road improv
Cornell Road Improvements	143rd Avenue	Saltzman Road	Part of road improv
Canyon Road	US 26	110th Avenue	6,750

Project	From	To	Approximate Cost ($1000's of dollars)
103rd Avenue Connection	Walker Road	Western Avenue	Part of Road improv.
175th Avenue-Rigert Road bike lanes	170th Avenue	ORE 210	1,180
Bicycle Action Plan Projects Total Cost:			**$ 28,125**

*Bike lanes to be built with roadway improvement projects are dependent on the ROW and alignment of the road improvement and would not be built without the road improvement

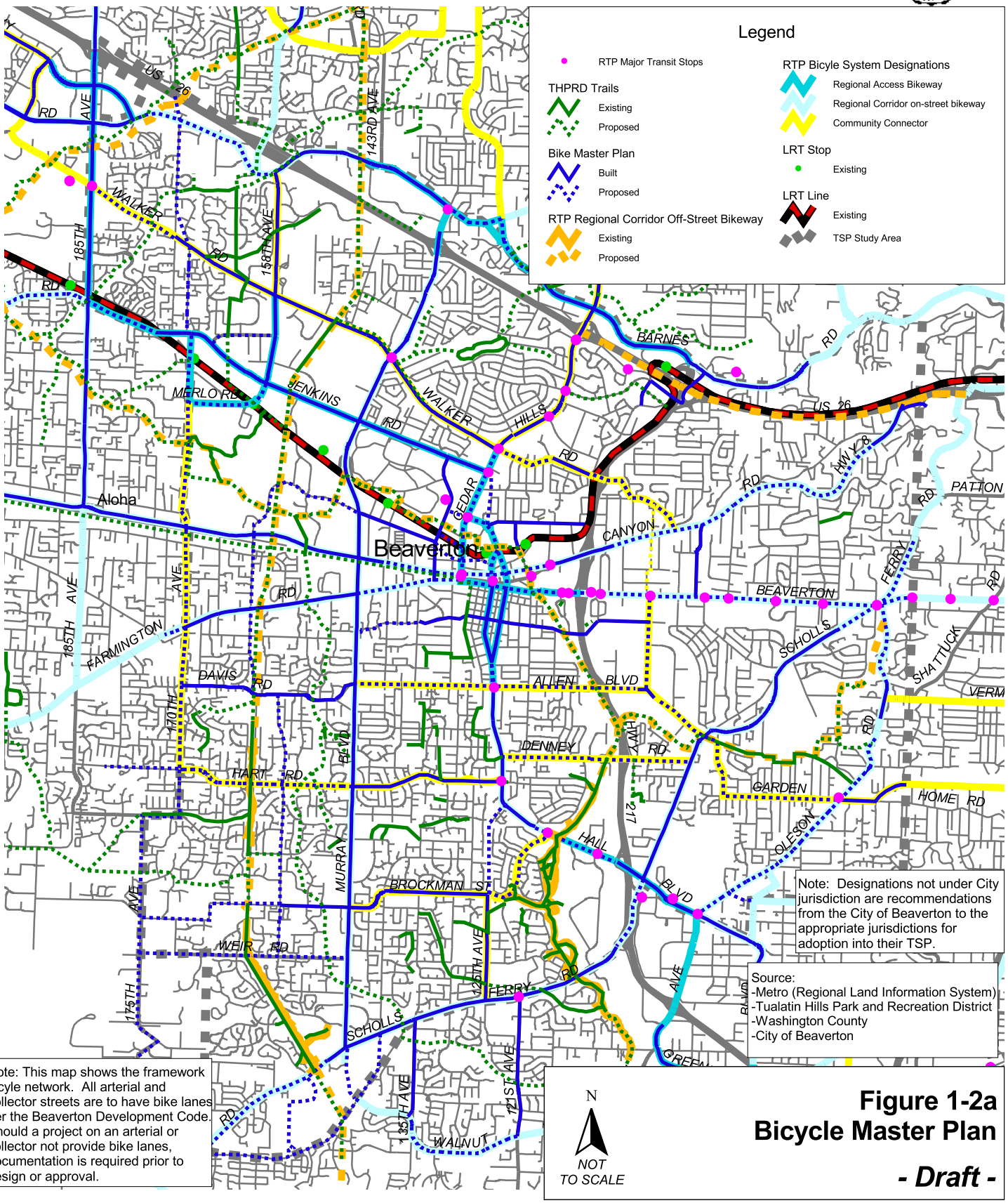
Table 1-5: Bicycle Action Plan – Committed Funding Projects

(2001 Dollars)

Project	From	To	Approximate Cost ($1000's of dollars)
Priority: Connect key bicycle corridors to schools, parks, recreational uses and activity centers			
Millikan Way bike lanes	Hocken Avenue	Cedar Hills Blvd	91
170th Avenue bike lanes	Rigert Road	Alexander Street	804
170th/173rd Avenue bike lanes	Baseline Road	Walker Road	344
Hall Boulevard bike lanes	12th Street	900 ft south of Allen	154
Hart Road bike lanes	Murray Blvd	167th Avenue	499
Barnes Road Improvements	Saltzman Road	119th Avenue	Part of road improv.
Cornell Road Improvements	Murray Blvd	Saltzman Road	Part of Road improv.
Bicycle Action Plan Projects Total Cost (Committed Funding Projects):			**$ 1,892**

DKS *Associates*

City of Beaverton Transportation System Plan



Note: Designations not under City jurisdiction are recommendations from the City of Beaverton to the appropriate jurisdictions for adoption into their TSP.

Source:
-Metro (Regional Land Information System)
-Tualatin Hills Park and Recreation District
-Washington County
-City of Beaverton

Note: This map shows the framework bicycle network. All arterial and collector streets are to have bike lanes per the Beaverton Development Code. Should a project on an arterial or collector not provide bike lanes, documentation is required prior to design or approval.

N

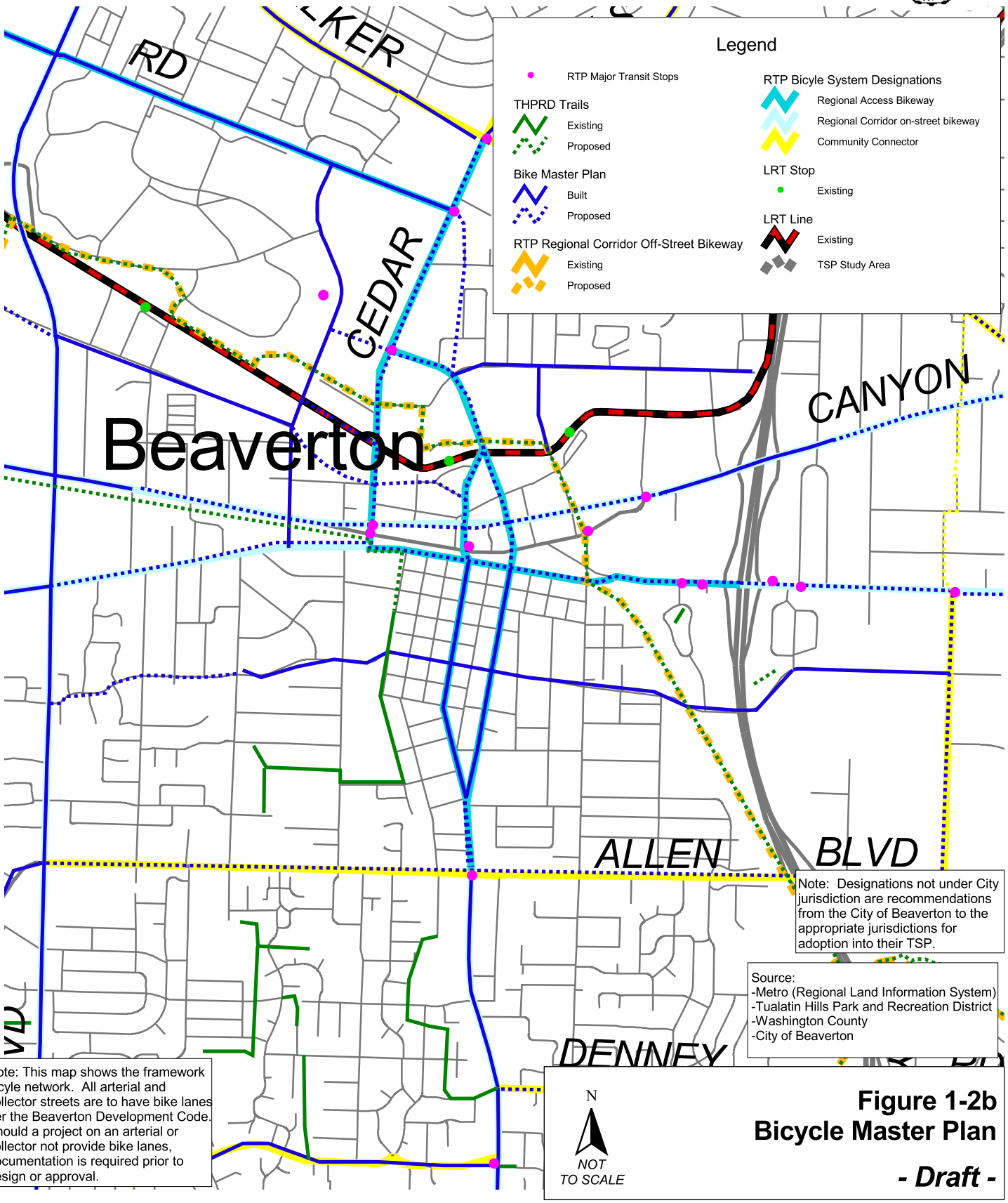
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Figure 1-2a
Bicycle Master Plan

- Draft -

DKS *Associates*

City of Beaverton
Transportation System Plan



Note: Designations not under City jurisdiction are recommendations from the City of Beaverton to the appropriate jurisdictions for adoption into their TSP.

Source:
-Metro (Regional Land Information System)
-Tualatin Hills Park and Recreation District
-Washington County
-City of Beaverton

Note: This map shows the framework bicyle network. All arterial and collector streets are to have bike lanes per the Beaverton Development Code. Should a project on an arterial or collector not provide bike lanes, documentation is required prior to design or approval.

N

NOT TO SCALE

Figure 1-2b
Bicycle Master Plan

- Draft -

Transit

Currently, there are twenty-three transit routes serving Beaverton (see Figure 4-9). The transit service has been significantly changed from the last TSP due to the opening of the Westside MAX. The existing transit system coverage area includes approximately 85 percent of the modeled transit supportive zones within the Beaverton TSP study area[5]. The future 2020 land use would increase the transit supportive area and reduce the percentage of coverage to approximately 80 percent (see Figure 4-10) without an increase in service coverage. Tri-Met has addressed some of the future transit needs in Beaverton with the planned 10-year improvements listed in Table 4-13. The City of Beaverton should coordinate with Tri-Met to focus possible future transit coverage on those transit supportive areas not covered by the existing system. Transit amenities were also identified in the Tri-Met Ten-Year Service Improvements[6] as a high community priority needing attention in 1-5 years. Transit amenities can make transit ridership increase by making transit an attractive travel alternative. The City of Beaverton should coordinate with Tri-Met and Washington County to provide transit shelters at transit stops designated as major transit stops or with daily boardings above 35 persons (costs for transit amenities are included in the TDM Support costs listed in Table 1-12). The City of Beaverton should coordinate the provision of sidewalks along major transit streets with Tri-Met. The City of Beaverton should coordinate the provision of transit pass programs and fareless areas with city employers and the Westside Transportation Alliance TMA.

Due to heavily congested arterial corridors, the City will need to coordinate with Tri-Met on the development of corridor level transit services that can help relieve congestion and forestall more expensive capital infrastructure. High quality regional transit service on corridors such as Scholls Ferry Road, Murray Boulevard, Hall Boulevard, TV Highway, Walker Road, and Allen Boulevard can link many high employment, regional center, and town center areas (consistent with the RTP). Metro's RTP includes transit route designations along corridors defined as follows[7]:

- Rapid Bus. Regional rapid bus service emulates LRT service in speed, frequency and comfort, serving major transit routes with limited stops. This service runs as least every 15 minutes during the weekday and weekend mid-day base periods.
- Frequent Bus. Frequent Bus service provides slightly slower, but more frequent, local bus service than rapid bus along selected transit corridors. This service runs at least every 10 minutes and includes transit preferential treatments such as reserved bus lanes and signal preemption.
- Regional Bus. Regional bus service is provided on most major urban streets. This type of

[5] Coverage is determined as the area within 0.25 miles of a bus stop or 0.50 miles of a LRT stop

[6] Transit Choices For Livability Handbook, Tri-Met, 2000.

[7] Based on the *2000 Regional Transportation Plan*, Metro, August 12, 2000.

bus service operates with maximum frequencies of 15 minutes with conventional stop spacing along the route.

The City of Beaverton should coordinate with Tri-Met, ODOT, and Washington County to provide signal priority for transit routes along the RTP designated frequent bus lines (TV Highway/Farmington and Cedar Hills/Hall – approximately 50 signals at approximately $7000 each – included in the ITS/TSM costs in Table 1-12). Signal priority along the frequent transit routes would improve transit service speed and reliability along these congested corridors with high multi-modal trip potential.

Table 1-6: Tri-Met Ten-Year Service Improvements

Route Description	Frequency** (minutes)	Rough Annual Cost	Projected Implementation
Beaverton-Washington Sq.-Tigard-Tualatin: Rapid bus or commuter rail connections between these communities, including extension to Wilsonville	30	$800,000	3-5 years
Nimbus Businesses: Local service between Nimbus employers and destinations in the Washington Sq. area	30	$385,000	1-3 years
Cornell Oaks Businesses: Shuttle between employers along 158th and in the Cornell Oaks area to MAX, as part of Westside Max start-up	30	$150,000	1-3 years
Existing Tri-Met Lines: Improve frequency and span of service on lines serving Farmington Road, 158th, 185th, 198th, Jenkins, Hart, and Denney		$2,000,000	1-3 years

Source: Transit Choices for Livability Handbook, Tri-Met, 2000.
** Frequency is defined at the time spacing between bus arrivals.

In addition to the Tri-Met 10-year service improvements listed in Table 4-13, the Washington County Commuter Rail project connecting Wilsoville to Beaverton is listed in the RTP as a committed project. The timeline for this project is 2000-2005, with an estimated cost of $71,500,000.

City of Beaverton Transportation System Plan

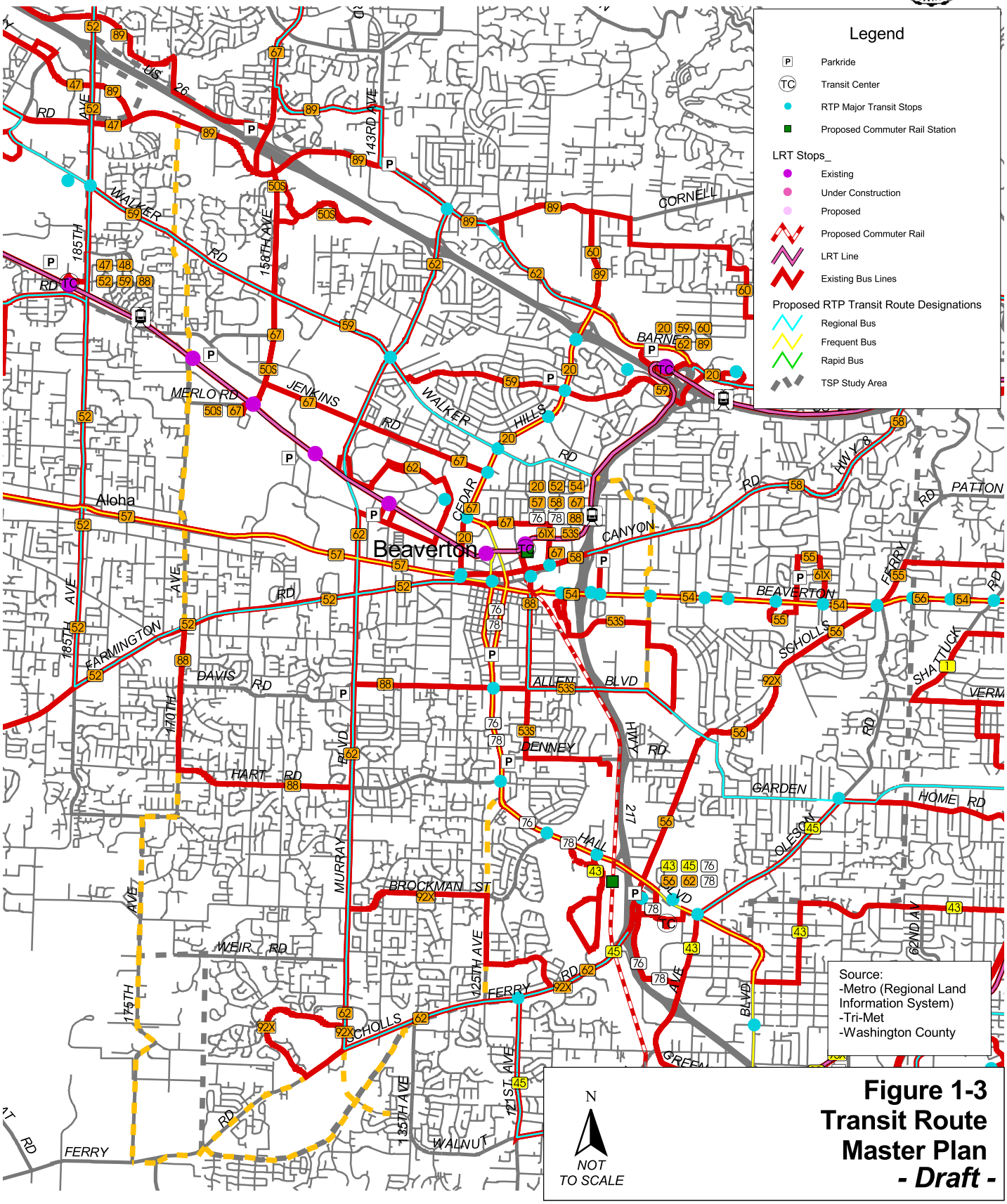


Figure 1-3
Transit Route Master Plan
- Draft -

Motor Vehicles

Based upon the evaluation of intersection level of service, 32 of the study intersections would operate at or worse than D/C ratio 1.0 or Level of Service (LOS) E in the 2020 evening peak hour with no improvements beyond the RTP Priority System or 2015 Beaverton TSP improvements. Intersection operation for the existing and base 2020 scenarios are shown in Appendix D. The impact of future growth would be severe without significant investment in transportation improvements. Corridors would become unmanageably congested, resulting in travel speeds below 5 MPH over long stretches of road. Poor performance on arterials and collectors would result in substantial impacts (added through traffic) to other collectors and neighborhood routes. The greatest problem areas can be grouped into the following areas:

- **Lack of east-west capacity.** Three of the key east-west routes (TV Highway, Walker, Cornell and Farmington) all experience significant congestion problems if improvements are not made.
- **Lack of connectivity.** Areas near ORE 217 between Walker and Hall are the best examples, where all north-south movements must use local streets or divert to neighboring arterials.
- **Lack of intersection turning capacity.** Many intersections experience congested conditions, not the need for through capacity, but the need for additional right or left turning capacity.

To address these deficiencies, a series of alternatives and strategies were considered. The recommended mitigation measures for the street system is listed in Table 1-10. These are improvements that go beyond the RTP Priority System or the 2015 Beaverton TSP identified improvements (listed in Tables 1-7 to 1-9). Figures 1-4 through 1-7 show the RTP Priority System motor vehicle improvements, the 2015 TSP motor vehicle improvements, and the 2020 TSP additional motor vehicle improvements. The major road improvements identified for the 2020 Beaverton TSP Update (Bethany, Cornell, Walker, and Murray/TV Highway) are mainly refinements of the RTP recommendations and include some of the RTP Preferred Scenario improvement projects. The detailed intersection improvements go beyond the level of analysis presented in the RTP and are recommended in this TSP based on the detailed intersection counts, forecasts, and LOS calculations.

Table 1-7
Beaverton Motor Vehicle System Improvements included in the RTP Priority System*
(1998 Dollars)

RTP #	Location	Improvement	Jurisdiction	Time-Line	Cost
1184	BH Highway/Scholls Ferry Road	Redesign the intersection to improve safety for all modes of travel.	ODOT/WACO	2006-2010	$13,000,000
6013	Hall: Scholls Ferry to Locust	Widen to 5 lanes. Includes sidewalk and bike lanes	ODOT	2006-2010	$4,700,000
6017	Taylors Ferry: Washington to Oleson	Construct a 3 lanes extension with sidewalks and bike lanes	WACO	2011-2020	$1,900,000
6025	Scholls Ferry: 217 to 125th	Implement system management strategies	WACO	2000-2005	$500,000
6052	Highway 217 Overcrossing: Nimbus to Mall Area	Construct a 2 lane crossing including sidewalks and bike lanes	Tigard	2011-2020	$25,000,000
6119	Murray/Scholls Town Center	Construct 2 lane Teal Road collector extension to Town Center Loop and Barrows, transit collectors from Murray to Town Center Loop, and new neighborhood route connections	WACO/Beaverton	2011-2020	$11,000,000
6121	Murray: Scholls Ferry to Barrows	Construct a 4 lane extension to Walnut at Barrows including sidewalks and bike lanes	Beaverton/Tigard/WACO	2000-2005	$7,120,000
6122	Davies Road: Scholls Ferry to Barrows	Construct a 3 lane extension to Barrows including sidewalks and bike lanes	Beaverton	2006-2010	$1,500,000
3000	ORE 217	Add capacity based on recommendations from the ORE 217 corridor study	ODOT	2011-2020	$70,000,000
3001	ORE 217: TV Hwy to US 26	Widen the northbound to 3 lanes with ramp improvements	ODOT	2006-2010	$21,000,000
3002	ORE 217 and US 26	Reconfigure the interchange with braided ramps	ODOT	2006-2010	$50,000,000
3006	US 26: Camelot Court to Sylvan	Add 3rd through lane and collector distributor system	ODOT	2000-2005	$22,000,000
3007	US 26: ORE 217 to Camelot Court	Widen eastbound to 3 lanes	ODOT	2006-2010	$12,000,000
3009	US 26: Murray to 185th	Widen freeway to 6 lanes with possible HOV lane	ODOT	2011-2020	$26,000,000
3019	Beaverton Connectivity	Complete several downtown street connections	Beaverton	2000-2005	$13,200,000
3020	Beaverton Connectivity	Complete several downtown street connections	Beaverton	2006-2010	$13,300,000
3022	Jenkins: Murray to 158th	Widen to 5 lanes including sidewalks and bike lanes	WACO	2006-2010	$1,870,000
3023	ORE 217: Allen to Walker	Interchange improvements	ODOT/WACO/Beaverton	2000-2005	$3,600,000
3025	TV Hwy: Cedar Hills to 10th	Add capacity based on recommendation from refinement planning	ODOT/WACO	2011-2020	$33,200,000
3031	Allen: ORE 217 to Murray	Widen to 5 lanes including sidewalks and bike lanes	Beaverton	2011-2020	$8,500,000
3032	Cedar Hills: Farmington to Walker	Widen to 5 lanes including sidewalks and bike lanes	Beaverton	2006-2010	$3,700,000
3033	125th: Brockman to Hall	Construct a 2 lane extension with turn lanes including sidewalks and bike lanes	Beaverton	2000-2005	$9,800,000
3034	Hall: Cedar Hills to Hocken	Construct a 3 lane extension with sidewalks and bike lanes	Beaverton	2000-2005	$4,600,000
3036	158th/Merlo: 170th to Walker	Widen to 5 lanes including sidewalks and bike lanes	WACO	2011-2020	$4,000,000
3038	Center: Hall to 113th	Widen to 3 lanes including sidewalks and bike lanes	Beaverton	2011-2020	$3,200,000

3060	TV Hwy: 117th to Hillsboro	Implement access management strategies	ODOT/WACO	2006-2010	$15,000,000
3061	TV Hwy: 209th to ORE 217	Interconnect Traffic Signals	ODOT/WACO	2006-2010	$1,500,000
3063	Murray: TV Hwy to Allen	Interconnect Traffic Signals	WACO	2000-2005	$50,000
3069	Scholls Ferry: Hamilton to Garden Home	Widen to 3 lanes including sidewalks and bike lanes	WACO	2011-2020	$8,000,000
3076	Allen: ORE 217 to Western	Widen to 5 lanes including sidewalks and bike lanes	Beaverton	2011-2020	$1,000,000
3084	170th: Alexander to Merlo	Widen to 5 lanes including sidewalks and bike lanes	WACO	2011-2020	$8,000,000
3085	170th: Rigert to Blanton to Alexander	Widen to 3 lanes from Rigert to Blanton and 5 lanes from Blanton to Alexander including sidewalks and bike lanes	WACO	2000-2005	$26,700,000
3086	158th: Walker to Jenkins	Widen to 5 lanes including bike lanes	WACO	2011-2020	$450,000
3087	Millikan: TV Hwy to 141st	Widen to 5 lanes including sidewalks and bike lanes	Beaverton	2011-2020	$4,000,000
3088	Millikan: 141st to Hocken	Widen to 3 lanes including sidewalks and bike lanes	WACO	2011-2020	$3,400,000
3121	TV Hwy: Cedar Hills to Minter Bridge	Refinement Planning to identify phased strategy to implement a limited-access facility	ODOT	2000-2005	N/A
3141	170th/173rd: Baseline to Walker	Widen the street to 3 lanes including sidewalks and bike lanes	WACO	2006-2010	$5,500,000
3143	Walker: Cedar Hills to 158th	Widen to 5 lanes including sidewalks and bike lanes	WACO	2006-2010	$20,000,000
3144	Walker: 158th to Amberglen	Widen to 5 lanes including sidewalks and bike lanes	WACO	2006-2010	$10,000,000
3148	Walker: Cedar Hills to ORE 217	Widen to 3 lanes including sidewalks and bike lanes	WACO	2006-2010	$8,000,000
3175	Barnes: ORE 217 to 119th	Widen to 5 lanes including sidewalks and bike lanes	WACO	2006-2010	$6,200,000
3177	Cedar Hills/Barnes	Reconstruct intersection and approaches to add travel lanes, turn lanes, and traffic signal upgrades	WACO	2000-2005	$1,800,000
3181	Cornell: US 26 to 143rd	Widen to 5 lanes including sidewalks and bike lanes	WACO	2011-2020	$3,000,000
3183	Cornell: 143rd to Saltzman	Widen to 3 lanes including sidewalks and bike lanes	WACO	2000-2005	$4,600,000
3185	Barnes: Saltzman to 119th	Widen to 5 lanes including sidewalks and bike lanes	WACO	2000-2005	$5,300,000
3186	Murray: Science Park to Cornell	Widen to 5 lanes including sidewalks and bike lanes	WACO	2000-2005	$3,100,000
3191	Cornell	Modify intersections at Saltzman, Barnes, Murray, and Trail	WACO	2011-2020	$500,000
3204	Cornell: Bethany to 179th	Widen to 5 lanes including sidewalks and bike lanes	WACO	2006-2010	$4,000,000
3205	173rd/174th	Construct a new 2 lane undercrossing of US 26 from Cornell to Bronson including sidewalks and bike lanes	WACO	2011-2020	$14,800,000
3214	Farmington: 172nd to 185th	Widen to 5 lanes including sidewalks and bike lanes	WACO	2011-2020	$10,000,000
			TOTAL		**$529,590,000**

*This project list is based on the August 10th, 2000, *2000 Regional Transportation Plan*, and includes projects in the Financially Constrained and Priority Motor Vehicle System

Table 1-8
Beaverton 2015 TSP Motor Vehicle Improvements not identified in the RTP Priority Scenario
(1997 Dollars)

Location	Description	Jurisdiction	Cost
Hocken at TV and Farmington	Widen Hocken to accommodate 2 additional lanes between TV and Farmington to allow turn lanes, Widen TV from 141st to Hocken to allow 3 through lanes and additional turn lanes	ODOT/Beaverton	$6,100,000
ORE 217: Walker/Cabot/Canyon Ramps	Braid ramps between Canyon and Walker/Cabot split diamond	ODOT	$20,800,000
Bany/Hart: 170th to 160th	Improve to 2-3 lanes including sidewalks and bike lanes	WACO	$1,000,000
170th: Merlo to Baseline	Widen to 3 lanes including sidewalks and bike lanes	WACO	$2,100,000
170th: Division to Blanton	Widen to 5 lanes including sidewalks and bike lanes	WACO	$2,500,000
Hyland Extension: Carr to Hart	Extend Roadway	Beaverton	$115,000
ORE 217: Denney/Allen	Collector/Distributor connection	ODOT	$8,600,000
Cedar Hills: Walker to US 26	Complete 5 lane roadway with access control including sidewalks and bike lanes	WACO	$2,100,000
Walker Road: Murray to ORE 217	Widen to 5 lanes including sidewalks and bike lanes	WACO	$26,500,000
Jenkins: Murray to Cedar Hills	Widen to 5 lanes including sidewalks and bike lanes	WACO	$3,800,000
Scholls Ferry: Hall to 125th	Widen to 7 lanes including sidewalks and bike lanes	WACO/ODOT	$15,760,000
Scholls Ferry: Teal to 175th	Widen to 5 lanes including sidewalks and bike lanes	WACO	$4,000,000
Beard/Nora: Murray to 170th	Improve to 2-3 lanes including sidewalks and bike lanes	WACO	$6,600,000
Weir: Murray to 175th	Improve to 3 lanes including sidewalks and bike lanes	Beaverton	$3,700,000
Hall north of Center	Extend new 5 lane roadway north of Center to connect with Jenkins at Cedar Hills including sidewalks and bike lanes	Beaverton	$11,000,000
Center: Cedar Hills to Hocken via Westgate	Extend public roadway with 3 lanes including sidewalks and bike lanes from Center to Westgate and from Westgate to Hocken	Beaverton	$1,500,000
141st: Tek to Farmington	Realign and extend 2/3 lane roadway including sidewalks and bike lanes	Beaverton	$2,800,000
Nimbus: Hall to Denney	Extend 2/3 lane roadway including sidewalks and bike lanes	Beaverton	$8,300,000
Local Streets	Add local and collector connectivity	Beaverton	$41,900,000
Traffic Signals	Addition of 50 traffic signals per plan	Beaverton/ WACO/ODOT	$12,500,000
Intersection Improvements	Listed in Table 4-16	Beaverton/ WACO/ODOT	$64,025,000
		TOTAL	**$245,700,000**

Table 1-9
Committed/Completed Beaverton 2015 TSP Motor Vehicle Improvements

(1997 Dollars)

Location	Description	Jurisdiction	Cost
Farmington: Murray to 172nd	Widen to 5 lanes including sidewalks and bike lanes	WACO	$15,200,000
Oak: 160th to 170th	Widen roadway including sidewalks and bike lanes	WACO	$1,600,000
US 26: ORE 217 to Murray	Widen to 6 lanes and add braided ramps	ODOT	$13,000,000
Jenkins: Cedar Hills to Murray	Widen to 3 lanes including sidewalks and bike lanes	WACO	$3,100,000
170th: Rigert to Alexander	Widen to 5 lanes including sidewalks and bike lanes	WACO	$8,000,000
Millikan: Hocken to Cedar Hills	Construct new 3 lane extension with sidewalks and bike lanes	Beaverton	$4,300,000
Hart: Murray to 165th	Widen to 3 lanes including sidewalks and bike lanes	Beaverton	$7,100,000
Lombard: Broadway to Farmington	Realign and add turn lanes including sidewalks	Beaverton	$1,600,000
Hall Boulevard at Scholls Ferry	Provide southbound right turn lane	ODOT	$250,000
Hall: 12th St to 500 feet south of Allen	Retrofit to include bike lanes; intersection turn lanes at Allen	Beaverton	$1,438,000
Farmington: Murray to Hocken	Widen to 5 lanes including turn lanes, sidewalks, and bike lanes	Beaverton	$9,300,000
		TOTAL	**$64,888,000**

Table 1-10
Beaverton 2020 TSP Preferred Additional Motor Vehicle Improvement Plan

Note: Location #'s listed as "_b" indicate that the improvement is in addition to an intersection improvement at that location from the 2015 TSP, intersections that were not included in the 2015 TSP improvement plan are numbered starting with 101

(2001 Dollars)

Location #	Location	Description	Cost
	Bethany Boulevard: Cornell to Bronson	Widen street to 5 lanes including sidewalks and bike lanes (this includes the widening of the US 26 overcrossing and intersection improvements).	$3,424,000
	Cornell: 143rd to Dale	Widen street to 5 lanes including sidewalks and bike lanes.	$5,197,500
	Cornell: Dale to Saltzman	Future capacity improvement based on additional study and coordination with Washington County	$8,620,000
	Walker: Cedar Hills to ORE 217	Widen street to 5 lanes including sidewalks and bike lane.	$8,970,000
	Murray: TV Hwy to Farmington	Construct an 4 lane overpass (Murray over TV Highway and Farmington), including sidewalks, bike lanes, and interchange connections	$28,517,500
	103rd: Western to Walker	Improve existing roadway and construct new connections and intersection alignments to provide connectivity from Walker to Western. This project includes sidewalks and bike lanes and should be built as development occurs.	$5,500,000
	120th Avenue: Henry to Canyon Road	Construct a 2 lane collector road, including sidewalks and bike lanes	$3,900,000
	Fairfield: Cedar Hills to Hocken	Construct a 2 lane roadway, including sidewalks and bike lanes	$5,500,000
	Rose Biggi: Canyon to Broadway	Construct a 2 lane collector road, including sidewalks and bike lanes	$1,200,000
101	Bethany/US 26 WB	add 2nd WB RT Lane, NB LT Lane	N/A
102	Bethany/Cornell	overlap SB RT	N/A
103	Cornell/173rd	add WB RT lane, 2nd NB LT lane, NB RT lane, SB RT lane	$2,200,000
6b	170th/Farmington	add EB RT lane, WB RT lane (signal modification)	$750,000
11b	158th/Jenkins	overlap NB RT	$125,000
104	Cornell/US 26 WB	add 2nd WB LT lane (structure work)	$1,000,000
105	Murray/Cornell	overlap NB RT, add 2nd NB LT lane (Cornell 5 lanes)	$1,000,000
106	Murray/US 26 WB	add 2nd WB RT Lane	$500,000
17b	Murray/Walker	increase cycle length by 20 seconds (to 120)	$125,000
19b	Murray/TV Highway	2 new signals, 2 RT Lanes, 2 Double LT Lanes	N/A
20b	Murray/Farmington	2 new signals, 2 RT Lanes, 2 Double LT Lanes	N/A

Location #	Location	Description	Cost
22b	Murray/Allen	add 2nd WB LT lane, 2nd WB RT lane, overlap WB RT lane (signal modification)	$1,250,000
107	Cedar Hills/Barnes	add 2nd NB lane and SB LT lane	$1,000,000
108	Cornell/Saltzman	add 2nd NB lane and SB LT lane (Cornell to 5 lanes)	$2,000,000
109	Canyon/Lombard	add EB RT lane	$500,000
65b	Denney/ORE 217 SB	add EB RT lane (structure work)	$1,100,000
110	BH Highway/Laurelwood	add SB LT lane (signal modification and ROW)	$2,000,000
111	Scholls Ferry/Laurelwood	install traffic signal, align with Nicol, ROW, 2 LT lane modifications	$1,750,000
112	Hall/ORE 217 SB/Cascade	add SB RT lane	$250,000
43b	Hall/Greenway	add EB RT lane	$500,000
42b	Hall/Denney	add 2nd WB LT lane	$500,000
36b	Farmington/Cedar Hills	add 2nd EB LT lane, ROW	$1,250,000
32b	Cedar Hills/Jenkins	Jenkins to 5 lanes, overlap WB RT	$125,000
31b	Cedar Hills/Walker	add 40 seconds cycle length to 140	$125,000
113	Murray/Brockman	add WB RT lane, SB RT lane, add 20 seconds cycle to 120 seconds, ROW	$100,000
47b	Scholls Ferry/125th	overlap SB RT	$125,000
50b	Scholls Ferry/ORE 217 NB on ramp	add 2nd NB LT lane and a 2nd WB LT lane	$1,000,000
		TOTAL	**$90,104,000**

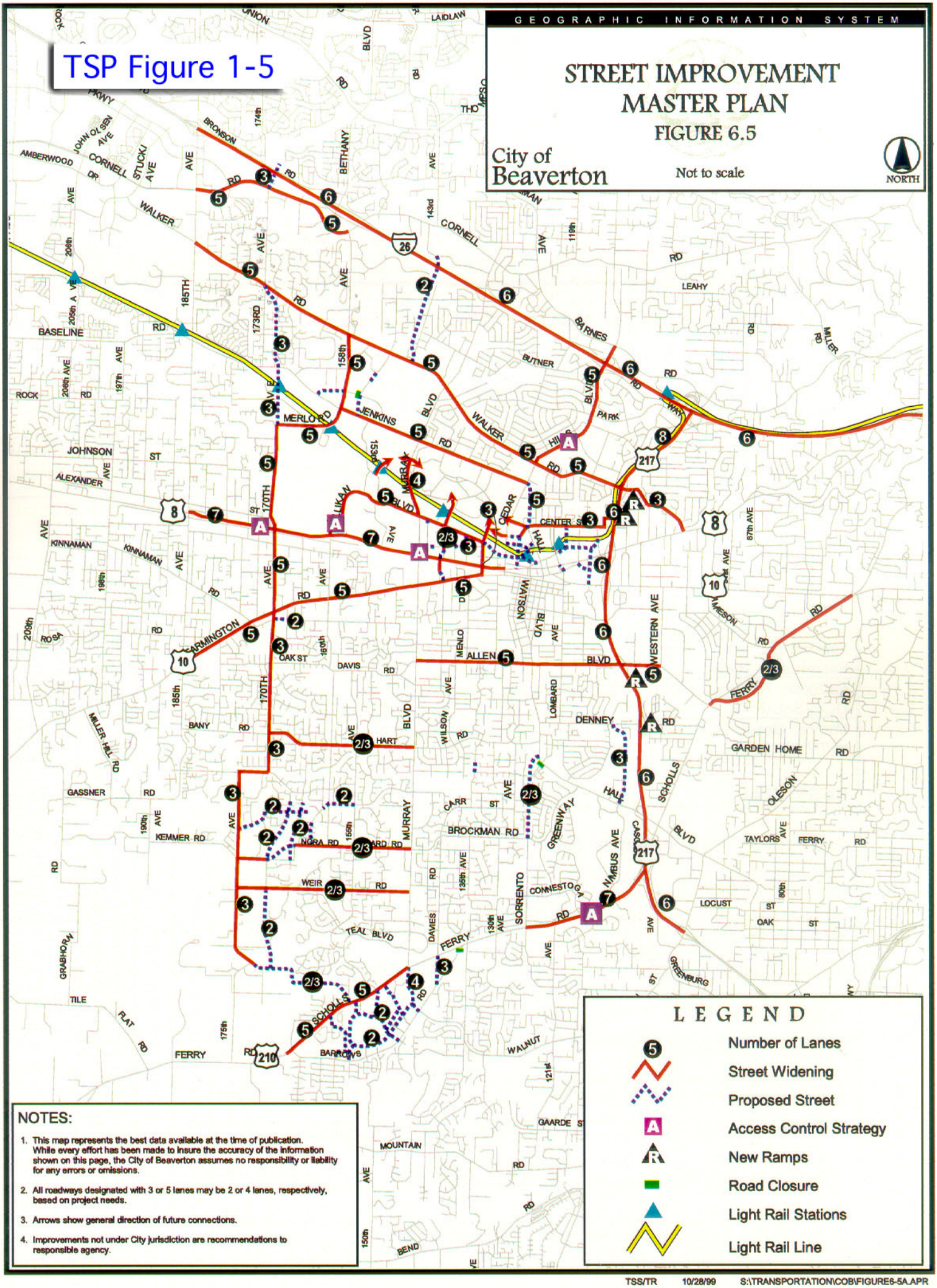
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City of Beaverton Transportation System Plan



Figure 1-4
2020 PRIORITY SYSTEM REGIONAL TRANSPORTATION PLAN MOTOR VEHICLE PROJECTS
- Draft -

TSP Figure 1-5



TSP Figure 1 - 6



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City of Beaverton Transportation System Plan

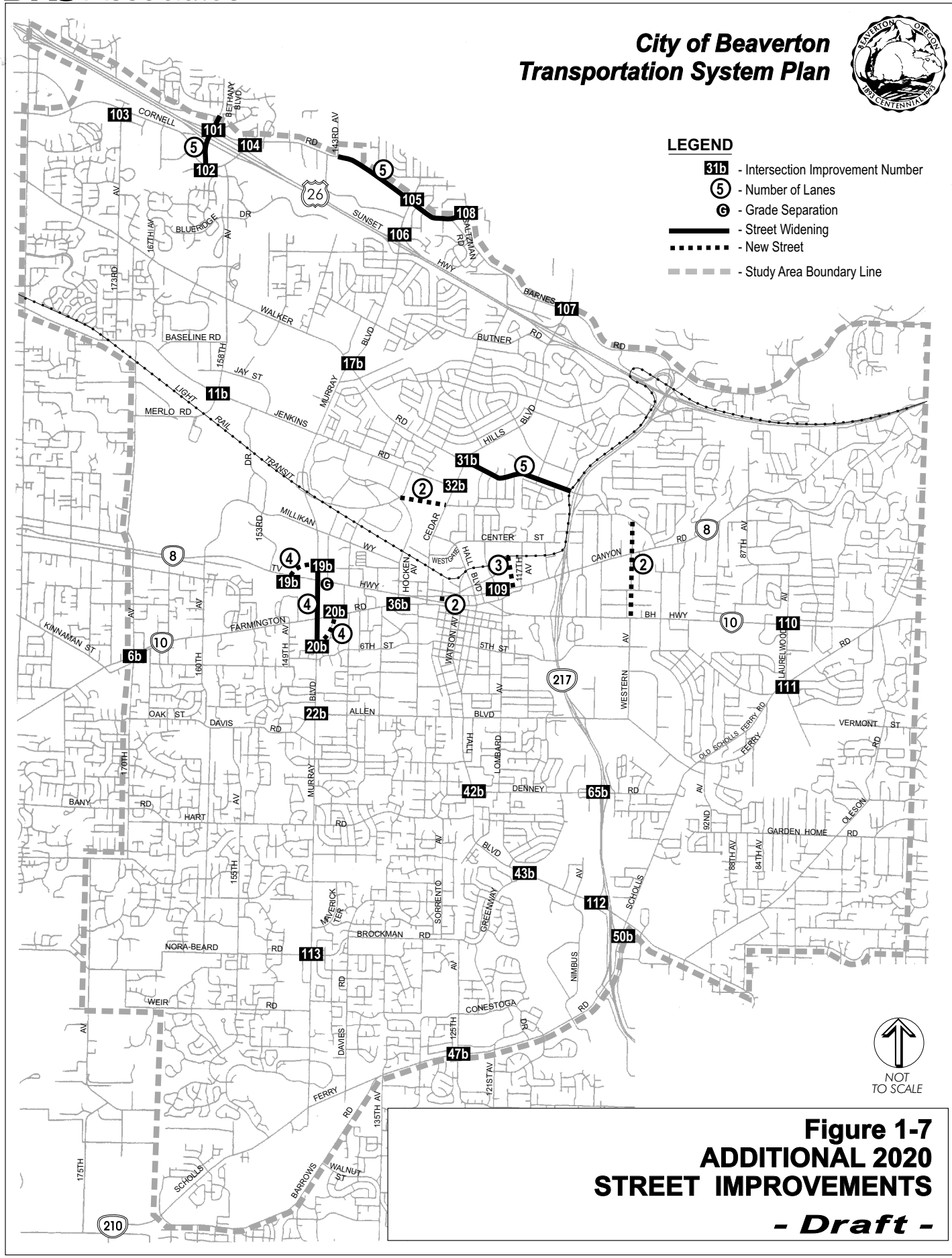


Figure 1-7
ADDITIONAL 2020 STREET IMPROVEMENTS

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Functional Classification

The current functional classification of streets in Beaverton was updated to reflect the expanded TSP study area, on-going regional planning, the functional needs of Beaverton, and consistency with the Regional Transportation Plan. Classifications of principal arterial, arterial, collector, neighborhood route and local have been developed based on connectivity (defined in the 2015 TSP), which is the best indicator of function. Figure 1-8 summarizes the functional classification recommendations. Appendix F summarizes the various jurisdictional functional classifications of major roadways with the TSP study area in a matrix format. This comparison matrix provides a comparison of the adopted City of Beaverton arterial designations to the Washington County and Metro major/minor arterial designations.

The functional classification map includes changes to Jay Street (to keep it open as a collector), changes to Hart Road and Davis Road (to switch the arterial/collector classifications), and changes to TV Highway (changed to a Principal Arterial to be consistent with the RTP). The discussion and recommendations for these changes are included in Chapter 4.

Trucks

Efficient truck movement plays a vital role in the economical movement of raw materials and finished products. The establishment of through truck routes provides for this efficient movement while at the same time maintaining neighborhood livability, public safety, and minimizing maintenance costs of the roadway system. The through truck route map from the previous TSP was updated to include the expanded study area (See Figure 1-9) utilizing information from the currently adopted Washington County Transportation Plan (1988) and the recent RTP (2000). The objective of this route designation is to allow these routes to focus on design criteria that is "truck friendly"; i.e. 12-foot travel lanes, longer access spacing, 35-foot (or larger) curb returns, and pavement design that accommodates a larger share of trucks. The designated through truck routes in the TSP Study area include and exceed the coverage included in the RTP designations.

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City of Beaverton
Transportation System Plan

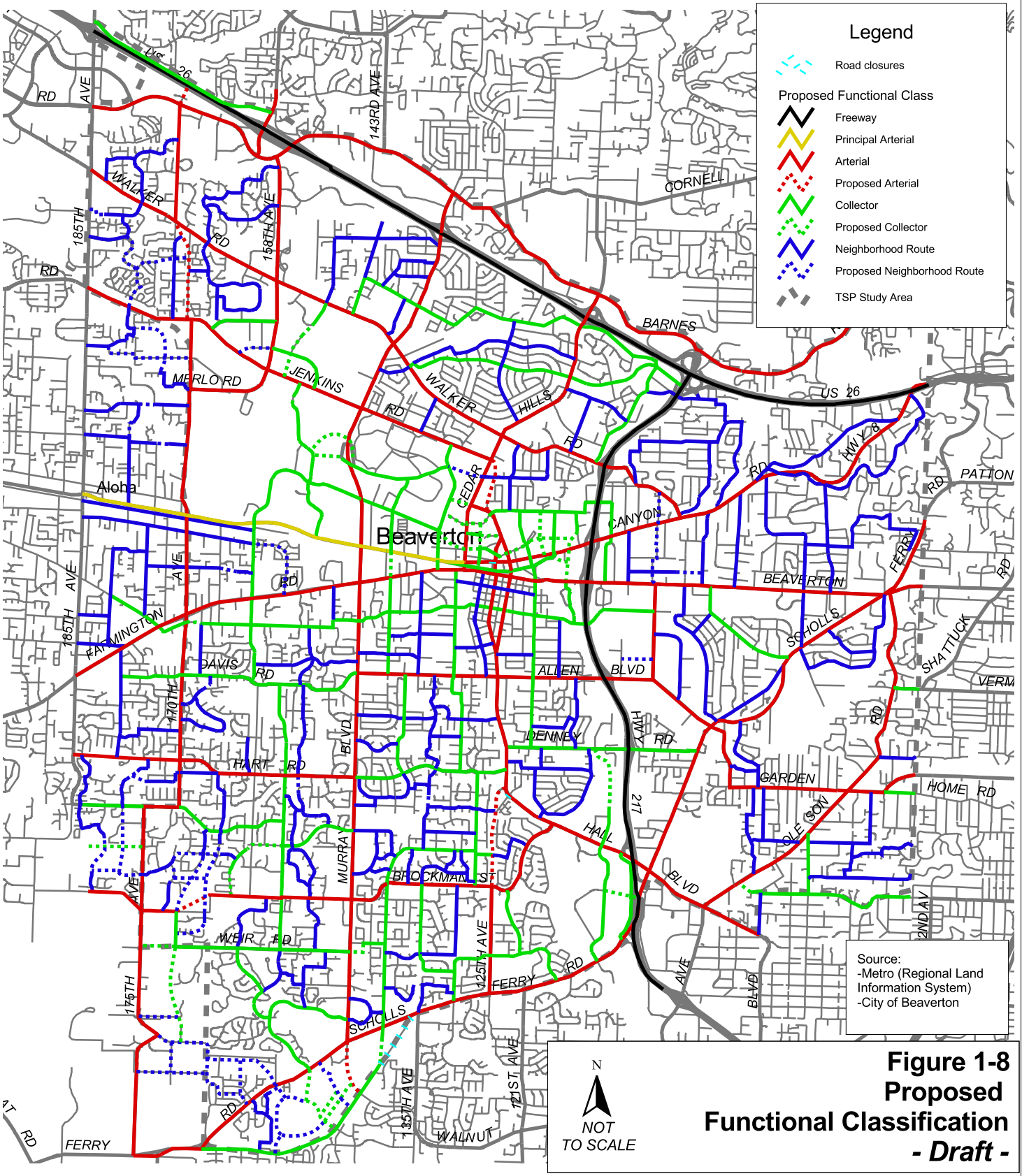


Figure 1-8
Proposed
Functional Classification
- Draft -

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Transportation System Plan

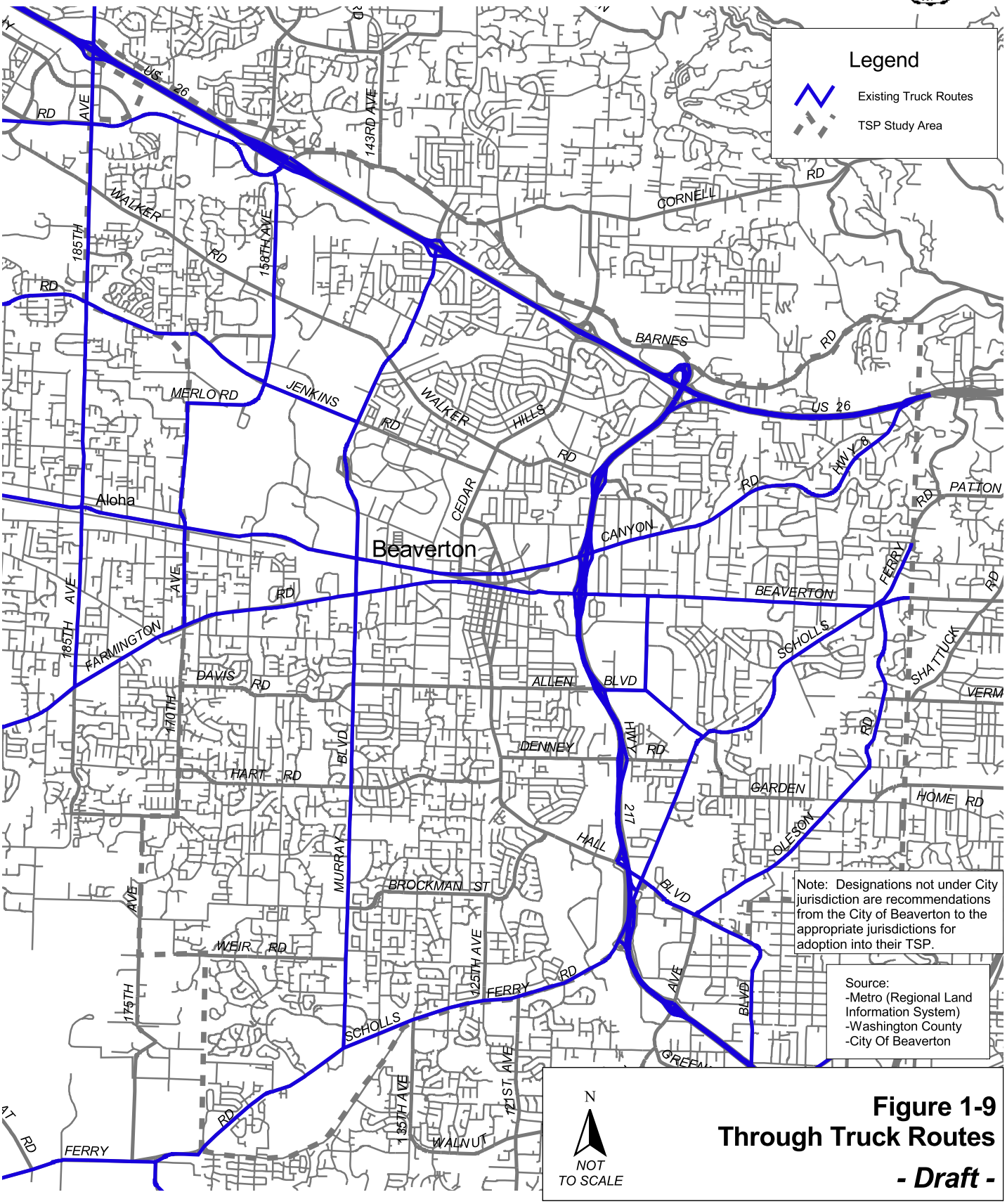


Figure 1-9
Through Truck Routes
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Funding

The 2015 Beaverton TSP identified and discussed the funding sources and opportunities for the City of Beaverton. There are several potential funding sources for transportation improvements. These are sources that have been used in the past by agencies in Oregon. In most cases, these funding sources are sufficient to fund transportation improvements for local communities. Due to the complexity of today's transportation projects, it is necessary to seek several avenues for funding projects. Unique or hybrid funding of projects generally will include these funding sources, combined in a new package. Table 1-11 summarizes several funding options available for transportation improvements. Examples of funding sources which generally do not provide funding for roadways include: Property Tax General Funds, Car Rental Tax, Transient Lodging Tax, Business Income Tax, Business License Tax and Communication Services Tax.

Within the Portland region, local funding for major transportation projects is typically brought to a vote of the public for approval. Specific projects are outlined for use of public funds, such as the Major Streets Transportation Improvement Program (MSTIP) in Washington County or the Westside Light Rail Project. Because of the need to gain public approval for transportation funding, it is important to develop a consensus in the community that supports needed transportation improvements. That is the value of the Transportation System Plan.

Costs

Order of magnitude cost estimates were developed for the projects identified in the auto, bicycle and pedestrian elements. Cost estimates from the RTP or MSTIP projects in Beaverton were used in this study. Other projects were estimated using general unit costs for transportation improvements. Many of the project costs were developed by Washington County, Metro or ODOT for projects in the RTP. Where the TSP identified the comparable needs, these project costs were utilized. Table 1-12 summarizes the total costs outlined in the TSP. Current transportation revenue for the City of Beaverton can be summarized as noted in Table 1-13. Presuming a constant funding level for 20 years, this would potentially fund less than $300,000,000 of transportation projects (maintenance, operation, and construction). There is a substantial gap between the TSP outlined funding needs and the current sources of funding ($1,028 million = 1,292-264). The 2015 TSP outlines several methods for increasing transportation funding or seeking alternative solutions to better balance transportation costs and revenue. These methods are also recommended in this 2020 TSP Update.

Table 1-11
Potential Transportation Revenue Sources

Type	Description
System Development Charges (SDC)	SDCs or Traffic Impact Fees have been used in Oregon and throughout the United States. The cornerstone to development of SDC's involves two principals: 1) there must be a reasonable connection between growth generated by development and the facilities constructed to serve that growth (generally determined by level of service or connectivity); and 2) there must be a general system-wide connection between the fees collected from the development and the benefits development receives. Charges are typically developed based on a measurement of the demand that new development places on the street system and the capital costs required to meet that demand. Washington County has a traffic impact fee (TIF) which was voter approved. SDCs do not require a vote of the public.
Gas Tax	The State, cities and counties provide their basic roadway funding through a tax placed on gasoline. State gas tax is approved legislatively while local gas taxes are approved by voters. State funds are dedicated to roadway construction and maintenance, with one percent allocated to pedestrian and bicycle needs. This tax does not fall under the Measure 5 limits, because it is a pay-as-you-go user tax.
Other Motor Vehicle Fees	The state collects truck weight mile taxes, vehicle registration fees, and license fees. These funds are pooled together with the gas tax in distributing state motor vehicle fees to local agencies. Annual motor vehicle fee allocations to Washington County amount to about $100 million (including gas tax).
Street Utility Fees	Certain cities have used street utility fees for maintenance. The fees are typically collected monthly with water or sewer bills. These funds are not for capacity improvements, but for supporting local roadway maintenance based upon land use type and trip generation. This frees other revenue sources for capacity needs. Utility fees can be vulnerable to Measure 5 limitations, unless they include provisions for property owners to reduce or eliminate charges based on actual use.
Exactions	Frontage improvements are common examples of exaction costs passed onto developers. These have been used to build much of Beaverton's local street system. Developers of sites adjacent to unimproved roadway frontage are responsible to provide those roadway improvements. Developers of sites adjacent to improvements identified as SDC projects can be credited the value of their frontage work, which is included in the SDC project-list cost estimate.
Local Improvement Districts (LID)	LIDs provide a means for funding specific improvements that benefit a specific group of property owners. LIDs require owner/voter approval and a specific project definition. Assessments are placed against benefiting properties to pay for improvements. LIDs can be matched against other funds where a project has system wide benefit, beyond benefiting the adjacent properties. Fees are paid through property tax bills.
Special Assessments	A variety of special assessments are available in Oregon to defray costs of sidewalks, curbs, gutters, street lighting, parking and CBD or commercial zone transportation improvements. These assessments would likely fall within the Measure 5 limitations. In Washington County, other examples of transportation assessments include MSTIP (Major Streets Transportation Improvement Program) and the local maintenance property tax levy. Both of these are property tax assessments, which have been imposed through votes of the public. A regional example would be the Westside LRT where the local share of funding was voter approved as an addition to property tax.
Driveway Fees	Gresham collects a Public Street Charge and a Driveway Approach Permit Fee. These fees are project specific and vary year to year based upon development permits. These funds are used for city maintenance and operation.
Employment Taxes	Tri-Met collects a tax for transit operations in the Portland region through payroll and self employment taxes. Approximately $120 million are collected annually in the Portland region for transit.
Oregon Special Public Works Fund	The Special Public Works Fund (SPWF) Program was created by the legislature in 1985 as an economic development element of the Oregon Lottery. The program provides grants and loan assistance to eligible municipalities. There has been limited use of these funds on urban arterials. This is commonly used on state highways (a recent example being Immediate Opportunity Funds used for the US 26/Shute interchange associated with Nike)

Table 1-12
Costs for Beaverton Transportation Action Plans over 20 years
2001 Dollars

Transportation Element		Approximate Cost
Street Improvement Projects:	Currently Funded	$73,032,000
	Unfunded	$962,235,000
Signal Coordination/ITS/TSM Systems		$6,415,000
Road Maintenance (assumes 4% per year growth)		$100,000,000
Bicycle Master Plan		$28,125,000
Pedestrian Action Plan		$45,078,000
Transit Service Improvements		$144,830,000
Pedestrian/School Safety Program ($10,000/yr)		$200,000
Sidewalk Grant Program ($50,000/yr)		$1,000,000
Park-and-ride Expansion (1,000 spaces)		$2,000,000
Neighborhood Traffic Management ($75,000/yr)		$1,500,000
TSP Support Documents (i.e. Design standard update, TSP updates, …)		$500,000
TDM Support ($50,000/yr)		$1,000,000
TWENTY YEAR TOTAL in 2001 Dollars		$1,292,883,000

Table 1-13
Estimation of Available Transportation Funding From Existing Sources
1997 Dollars (approximate)

Source	Approximate Annual Revenue
State Motor Vehicle Fees to City	$3,000,000
County Gas Tax to City	$250,000
TIF to City	$1,200,000
Miscellaneous	$250,000
MSTIP to City (approximate)	$2,500,000
State/Federal Fees use in City (approximate, assumes 35% of allocation used for capital)	$6,000,000
Annual TOTAL	**$13,200,000**
20 YEARS OF CURRENT FUNDING	**$264,000,000**

Chapter 2
Goals and Policies

These goals and policies have been developed to guide the City's twenty-year vision of transportation system needs. This chapter summarizes the updated goals and policies as revised by the City of Beaverton and includes comments to date from the public and technical advisory committee. The goal and policy numbering system from the Comprehensive Plan is maintained in this chapter for continuity.

There are seven transportation goals with related policies organized under each goal. The goals and policies are not prioritized, and reflect the City of Beaverton's citywide goals (Comprehensive Plan page xv).

The goals are brief guiding statements that describe a desired result. The policies describe the actions needed to move the community toward the goal. Below many of the policies, italic text provides details of the implementing actions and clarifies the intent of the policy. The transportation goals and policies are implemented by these actions, by the improvement projects included in the master plans and action plans for each transportation mode, and by the Development Code.

Construction standards for improvements are found in the Development Code and Engineering Design Manual and Standard Drawings.

6.2.1. **Goal:** Transportation facilities designed and constructed in a manner to enhance Beaverton's livability and meet federal, state, regional, and local requirements.

Policies:

a) Maintain the livability of Beaverton through proper location and design of transportation facilities.

Actions: *Design streets and highways to respect the characteristics of the surrounding land uses, natural features, and other community amenities. Recognizing that the magnitude and scale of capital facilities also affect aesthetics and environmental quality, the City will continue to require design plans and impact analyses as specified in the Development Code.*

b) Consider noise attenuation in the design, redesign, and reconstruction of arterial streets immediately adjacent to residential development.

c) Locate and design recreational and multi-use paths to balance the needs of human use and enjoyment with resource preservation in areas identified on the Natural Resource Inventory Plan Map for their Significant Natural Resource values.

Actions*: Locate multi-use paths to have the lowest level of impact on a stream or sensitive riparian vegetation. Multi-use paths through significant natural resource areas will be designed for day use only and will have no provisions for nighttime illumination. If a natural resource is so delicate that any degree of human intrusion will irreparably destroy it, preservation of the resource will take precedence over the proposed path. Filling gaps in the multi-use path system is encouraged.*

d) Protect neighborhoods from excessive through traffic and travel speeds while providing reasonable access to and from residential areas. Build streets to minimize speeding.

Actions*: Maintain street design standards and criteria for neighborhood traffic management for use in new development and existing neighborhoods. Complete construction of the 125th Avenue extension and the Murray Boulevard connection from Scholls Ferry Road to Barrows Road at Walnut Street prior to completing the Davies Road connection from Scholls Ferry Road to Barrows Road.*

e) New commercial and industrial development shall identify traffic plans for residential streets where increased cut-through traffic may occur due to the proposed development.

6.2.2. **Goal:** A balanced transportation system.

Policies:

a) Implement Beaverton's public street standards that recognize the multi-purpose nature of the street right-of-way for utility, pedestrian, bicycle, transit, truck, and auto use, and recognize these streets as important to community identity as well as providing a needed

service.

b) Develop and provide a safe, complete, attractive, efficient, and accessible system of pedestrian ways and bicycle ways, including bike lanes, shared roadways, multi-use paths, and sidewalks according to the pedestrian and bicycle system maps and the Development Code and Engineering Design Manual and Standard Drawings requirements.

Actions: *Continue to coordinate with Washington County, Metro, Beaverton area schools, Oregon Department of Transportation, and the Tualatin Hills Park and Recreation District. Sidewalks will remain the responsibility of fronting property owners. Maintain the opportunity for resident groups to fund multi-use path improvements through the local improvement district process.*

c) Provide connectivity to each area of the City for convenient multi-modal access. Ensure pedestrian, bicycle, transit, and vehicle access to schools, parks, employment and recreational areas, and destinations in station areas, regional and town centers by identifying and developing improvements that address connectivity needs.

d) Develop neighborhood and local connections to provide adequate circulation into and out of neighborhoods.

e) The permanent closure of an existing road in a developed neighborhood is not recommended and will be considered by the City only under the following circumstances: as a measure of last resort, when the quality of life in the neighborhood is being severely threatened by excessive traffic volumes or the presence of a traffic safety hazard; or as part of a plan reviewed through the City's land use and/or site development process(es), including capital improvement projects.

Actions: *Maintain existing neighborhood connectivity by avoiding closures of existing streets except when the closure is part of a larger plan for improvements to the neighborhood. Jay Street is recommended to remain open between 158th Avenue and Burlington Drive.*

f) Design arterial and collector streets to accommodate pads for public transit and to provide convenient access to transit stops.

Actions*: Continue to work with Tri-Met to improve transit service, pedestrian facilities leading to bus stop waiting areas, and to make the waiting areas themselves safe, comfortable, and attractive. Continue to work with Tri-Met, Oregon Department of Transportation, and Washington County toward developing and implementing a transit shelter program based on Tri-Met placement criteria, to place marked crossings at major transit stops, and to provide signal priority.*

6.2.3. **Goal:** A safe transportation system.

Policies:

a) Improve traffic safety through a comprehensive program of engineering, education, and enforcement.

b) Design streets to serve anticipated function and intended uses as determined by the Comprehensive Plan.

Action: *Maintain a functional classification system that meets the City's needs and respects needs of other agencies including, but not limited to, Washington County, Oregon Department of Transportation, Tri-Met, and Metro.*

c) Enhance safety by prioritizing and mitigating high collision locations within the City.

Actions*: Work with Washington County to periodically review traffic collision/Safety Priority Index System information in an effort to systematically identify, prioritize, and remedy safety problems. The City should continue to expand its collision record evaluation program working cooperatively with Washington County and Oregon Department of Transportation.*

d) Designate safe routes from residential areas to schools.

Actions*: The City should continue to work with Beaverton area schools and the community in developing safe transit, pedestrian, and bicycle routes to schools. Improvement projects near schools shall consider school access and safety during project development.*

e) Construct multi-use paths only where they can be developed with satisfactory design components that address safety, security, maintainability, and acceptable uses.

Actions*: Although multi-use paths should be separate and distant from major streets for most of their length, they should converge at traffic-controlled intersections to provide for safe crossing. Study trail crossing treatments for appropriate use at locations where out-of-direction travel by path users to an intersection is significant. When multi-use paths follow rear lot lines, use design treatments to minimize the impacts to private property.*

f) Provide satisfactory levels of maintenance to the transportation system in order to preserve user safety, facility aesthetics, and the integrity of the system as a whole.

g) Maintain access management standards for streets consistent with City, County, and State requirements to reduce conflicts between vehicles and trucks, and between vehicles, bicycles, and pedestrians.

***Action**: Preserve the functional integrity of the motor vehicle system by limiting access per City standards.*

h) Ensure that adequate access for emergency services vehicles is provided throughout the City.

***Actions**: Work cooperatively with Tualatin Valley Fire and Rescue and other Washington County emergency service providers to designate Primary and Secondary Emergency Response Routes. Work with these agencies to establish acceptable traffic calming strategies for these routes. Recognize the route designations and associated acceptable traffic calming strategies in the City's Traffic Calming Program.*

i) Meet federal and State safety compliance standards for operation, construction, and maintenance of the rail system.

j) Provide safe routing of hazardous materials consistent with federal guidelines, and provide for public involvement in the process.

***Action:** Work with federal agencies, the Public Utility Commission, the Oregon Department of Environmental Quality, public safety providers, and Oregon Department of Transportation to assure consistent routes, laws, and regulations for the transport of hazardous materials.*

6.2.4. **Goal**: An efficient transportation system that reduces the percentage of trips by single occupant vehicles, reduces the number and length of trips, limits congestion, and improves air quality.

Policies:

a) Support and implement trip reduction strategies developed regionally, including employment, tourist, and recreational trip reduction programs.

***Actions**: Encourage implementation of travel demand management programs. Work to*

shift traffic to off-peak travel hours. Coordinate trip reduction strategies with Washington County, Metro, Westside Transportation Alliance, Oregon Department of Transportation, Tri-Met, neighboring cities, and the Oregon Department of Environmental Quality. Seek to raise p.m. peak average vehicle occupancy (AVO) to 1.3 AVO or more in the evening peak and/or move 50 percent or more of the standard evening peak trip generation outside the peak hour. Educate business groups, employees, and residents about trip reduction strategies. Work with business groups, residents, and employees to develop and implement travel demand management programs. Support and implement strategies that achieve progress toward attaining Metro's 2040 Regional Non-Single Occupant Vehicle Modal Targets. 2040 Non-SOV Modal Targets are as follows:

> *Beaverton Regional Center: 45-55%;*
> *Murray/Scholls Town Center: 45-55%;*
> *Beaverton Main Streets, Station Communities, and Corridors: 45-55%;*
> *Beaverton Industrial Areas, Intermodal Facilities, Employment Areas, Inner and Outer Neighborhoods: 40-45%*
> *(Targets apply to trips to, within, and out of each 2040 Design Type. The targets reflect conditions appropriate for the year 2040 and are needed to comply with Oregon Transportation Planning Rule objectives to reduce reliance on single-occupancy vehicles.)*

Continue to implement the following action plan to work toward achieving these targets:

i) *Encourage development that effectively mixes land uses to reduce vehicle trip generation.*
ii) *Develop consistent conditions for land use approval that require future employment related land use developments to agree to reduce peak hour trip making through transportation demand management strategies.*
iii) *Support efforts by Washington County, Oregon Department of Transportation, Department of Environmental Quality, Tri-Met, and the Westside Transportation Alliance to develop productive demand management measures that reduce vehicle miles traveled and peak hour trips.*
iv) *Coordinate with Oregon Department of Transportation and Tri-Met on development of park and rides at transit stations or freeway interchange locations. Interchange reconstruction projects should be required to identify potential park and ride sites.*
v) *Build on existing Regional Center average transit pass discount percentage to achieve a 25 percent discount by 2020.*
vi) *Work with Washington County, Westside Transportation Alliance, and Tri-Met to develop and implement a downtown fareless transit area, a regional center transportation management agency, and reduced transit fare programs based on increased demand and funding availability.*
vii) *Implement the bicycle, transit, pedestrian, and motor vehicle master improvement*

plans to implement a convenient multimodal transportation system that encourages increased bicycle, pedestrian, and transit use.

b) Limit the provision of parking to meet regional and State standards.

***Actions**: Work to reduce parking per capita per Metro and State requirements, while minimizing impacts to neighborhoods. Implement the motor vehicle and bicycle parking ratios in new development. Develop and implement a Regional Center parking plan and a residential parking permit program as demand increases. Continue to implement shared parking and timed parking through new development and existing programs. Work toward implementing other parking-based transportation demand management strategies such as metered and structured parking to help achieve Metro's 2040 Non-SOV mode split targets.*

c) Maintain levels of service consistent with Metro's Regional Transportation Plan and the Oregon Transportation Plan. Reduce traffic congestion and enhance traffic flow through such system management measures as intersection improvements, intelligent transportation systems, incident management, signal priority, optimization, and synchronization, and other similar measures.

***Action**: Adopt level of service standards that are consistent with regional and State standards.*

d) Plan land uses to increase opportunities for multi-purpose trips (trip chaining).

***Actions**: Encourage residents to reduce cold starts, miles traveled, and air quality degradation by combining several trips into one. Encourage mixed use where allowed to reduce vehicle trips and promote trip chaining.*

e) Require land use approval of proposals for new or improved transportation facilities. The approval process shall consider the project's identified impacts.

f) Support mixed-use development where zoning allows.

g) Work with Tri-Met to encourage the implementation of transit improvements concurrent with roadway improvements, improve access and frequency of service, and increase ridership potential and service area. Encourage development of regional high capacity transit, including light rail transit and commuter rail.

***Action**: Support commuter rail and its associated supportive transit services.*

6.2.5. **Goal**: Transportation facilities that serve and are accessible to all members of the community.

Policies:

a) Construct transportation facilities to meet the requirements of the Americans with Disabilities Act.

***Action**: Identify, assess, and remove barriers to mobility.*

b) Support Tri-Met, other transit service providers, and employers and social service agencies' efforts that respond to the transit and transportation needs of the elderly, economically disadvantaged, and disabled.

6.2.6. **Goal**: Transportation facilities that provide efficient movement of goods.

Policies:

a) Designated arterial routes and freeway access are essential for efficient movement of goods. Design these facilities and adjacent land uses to reflect the needs of goods movement.

b) Consider existing railroad and air transportation facilities to be City resources and reflect the needs of these facilities in land use decisions.

6.2.7. **Goal:** Implement the transportation plan by working cooperatively with federal, State, regional, and local governments, the private sector, and residents. Create a stable, flexible financial system.

Policies:

a) Coordinate transportation projects, policy issues, and development actions with all affected governmental units in the area. Key agencies for coordination include Washington County, Oregon Department of Transportation, Tri-Met, Metro, and Tualatin Hills Park and Recreation District, as well as the adjacent cities of Tigard, Hillsboro, and Portland.

b) Participate in regional transportation, growth management, and air quality improvement policies. Work with agencies to assure adequate funding of transportation facilities to support these policies.

c) Monitor and update the Transportation Element of the Comprehensive Plan so that issues and opportunities are addressed in a timely manner. Maintain a current capital improvement program that establishes the City's construction and improvement priorities, and allocates the appropriate level of funding.

d) Use the System Development Charge and Traffic Impact Fee as elements of an overall funding program to pay for adding capacity to the collector and arterial street system, and making safety improvements related to development impacts.

***Action**: Base the roadway system taxes and fees on the total expected cost of making extra capacity and safety improvements over a twenty-year period, allocated back to development on a pro rata formula taking into account the relative expected future traffic impact of the development in question.*

e) Establish rights-of-way at the time of site development and, where appropriate, officially secure them by dedication of property.

f) Working in partnership with Metro, Oregon Department of Transportation, and other jurisdictions and agencies, develop a long-range financial strategy to make needed improvements to the transportation system and support operational and maintenance requirements.

***Actions**: The financial strategy should consider the appropriate share of motor vehicle fees, impact fees, property tax levies, and development contributions to balance needs, costs, and revenue. View the process of improving the transportation system as that of a partnership between the public (through fees and taxes) and private sectors (through exactions and conditions of development approval), each of which has appropriate roles in the financing of these improvements to meet present and projected needs.*

g) Provide adequate funding for maintenance of the capital investment in transportation facilities.

***Action:** Develop a long-term financing program that provides a stable source of funds to ensure cost-effective maintenance of transportation facilities and efficient effective use of public funds.*

Chapter 3
Existing Conditions

Existing transportation conditions were evaluated as part of the City of Beaverton Transportation System Plan 2000 update. This chapter summarizes existing traffic and transportation operation in the City. It considers vehicle traffic, as well as transit, pedestrian, bicycle, truck and other modes. In the summer of 2000, an inventory of traffic conditions in Beaverton was undertaken to establish a base year for updating the existing conditions of the 2015 City of Beaverton Transportation System Plan. Much of this data provides a benchmark (basis of comparison) for future assessment of transportation performance in Beaverton relative to desired policies.

The study area for the 2000 Transportation System Plan Update was expanded to respond to planning area agreements and potential future annexations. The updated study area is shown in Figure 3-1. Ninety-six intersections within the study area were selected for evaluation. Traffic data was gathered at these locations and analyzed in order to evaluate area traffic conditions including volumes and levels of service. The data and a map noting the locations of the intersections are included in the Appendix. The following sections briefly describe the updated functional classification, existing traffic volumes, and levels of service in the Beaverton transportation system.

Functional Classification

Roadways have two functions; to provide mobility and to provide access. From a design perspective, these functions can be incompatible since high or continuous speeds are desirable for mobility, while low speeds are more desirable for land access. Arterials emphasize a high level of mobility for through movement; local facilities emphasize the land access function; and collectors offer a balance of both functions.

Function can be best defined by connectivity. Without connectivity, neither mobility nor access can be served. Roadways that provide the greatest reach of connectivity are the highest level facilities.

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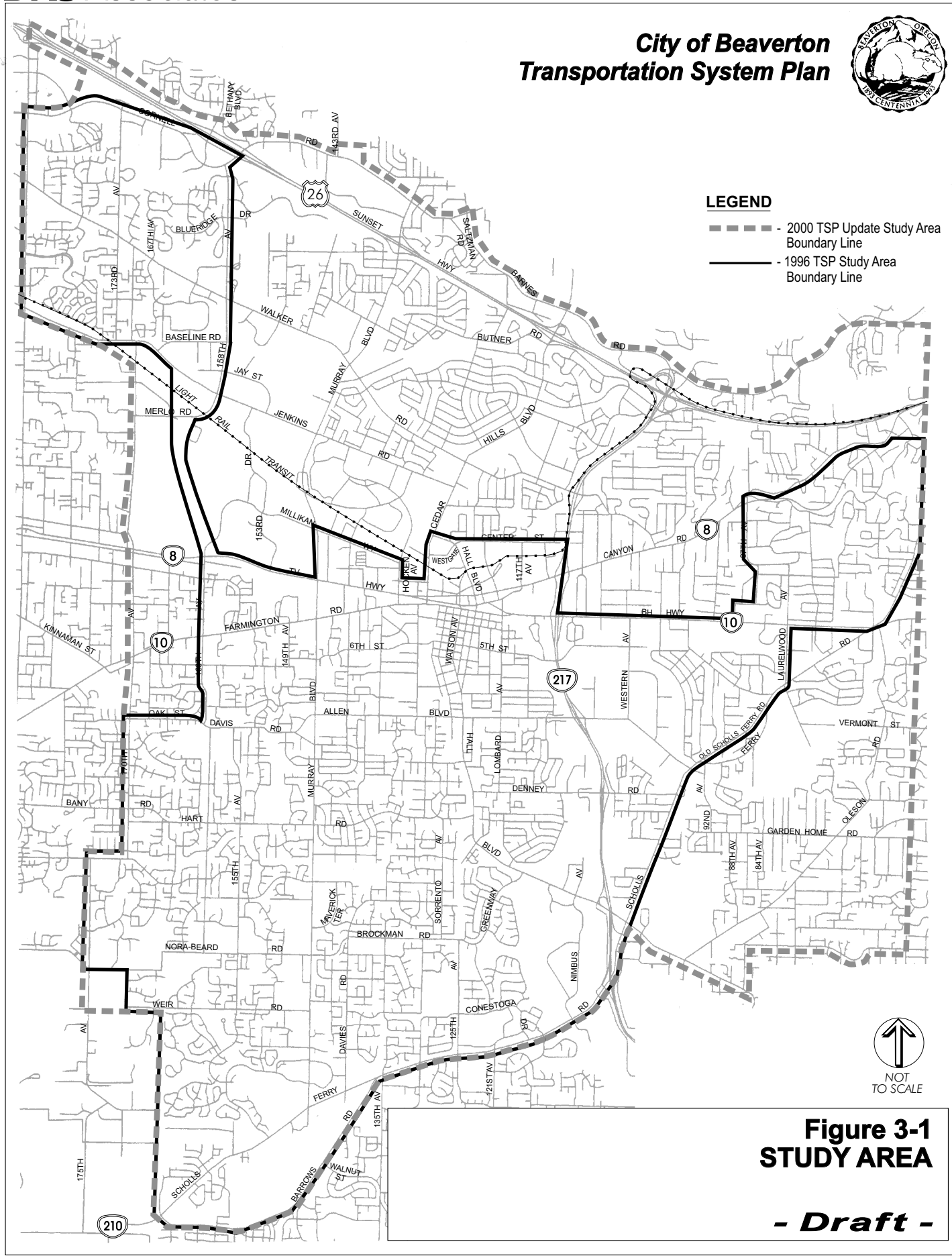


Figure 3-1
STUDY AREA

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The existing Beaverton functional classification was adopted from the previous TSP as part of the Comprehensive Plan. The functional classification of streets in Beaverton is represented by Figure 3-2. Any street not designated as either an arterial, collector or neighborhood route is considered a local street. A jurisdictional comparison of functional classification for streets in Beaverton is provided in the appendix.

Arterial streets serve to interconnect and support the principal arterial highway system. These streets link major commercial, residential, industrial and institutional areas. Arterial streets are typically spaced about one mile apart to assure accessibility and reduce the incidence of traffic using collectors or local streets in lieu of a well placed arterial street. Many of these routes connect to cities surrounding Beaverton.

Collector streets provide both access and circulation within residential and commercial/industrial areas. Collectors differ from arterials in that they provide more of a citywide circulation function, do not require as extensive control of access and penetrate residential neighborhoods, distributing trips from the neighborhood and local street system.

Neighborhood routes are usually long relative to local streets and provide connectivity to collectors or arterials. Because neighborhood routes have greater connectivity, they generally have more traffic than local streets and are used by residents in the area to get out of the neighborhood, but do not serve citywide/large area circulation. Traffic from cul-de-sacs and other local streets may drain onto neighborhood routes to gain access to collectors or arterials.

Local Streets have the sole function of providing access to immediate adjacent land. Service to "through traffic movement" on local streets is deliberately discouraged by design.

Traffic Volume

A complete inventory of peak hour traffic conditions was performed in the fall of 2000 as part of the Beaverton Transportation System Plan 2020 update. The traffic turn movement counts conducted as part of this inventory provide the basis for analyzing existing problem areas as well as establishing a base condition for future monitoring. Turn movement counts were conducted at 96 intersections during the evening (4-6 PM) peak period to determine existing operating conditions. These intersections were chosen in coordination with the City of Beaverton staff in order to update the existing conditions, incorporate the new revised study area, and address areas of noted concern.

Figure 3-3 shows the updated two-way existing traffic volumes in the Beaverton area. Overall, the two-way traffic volumes in the study area have increased from 1996 to 2000 with increases ranging from 5 to 50 percent. However, some of the two-way peak hour traffic volumes have

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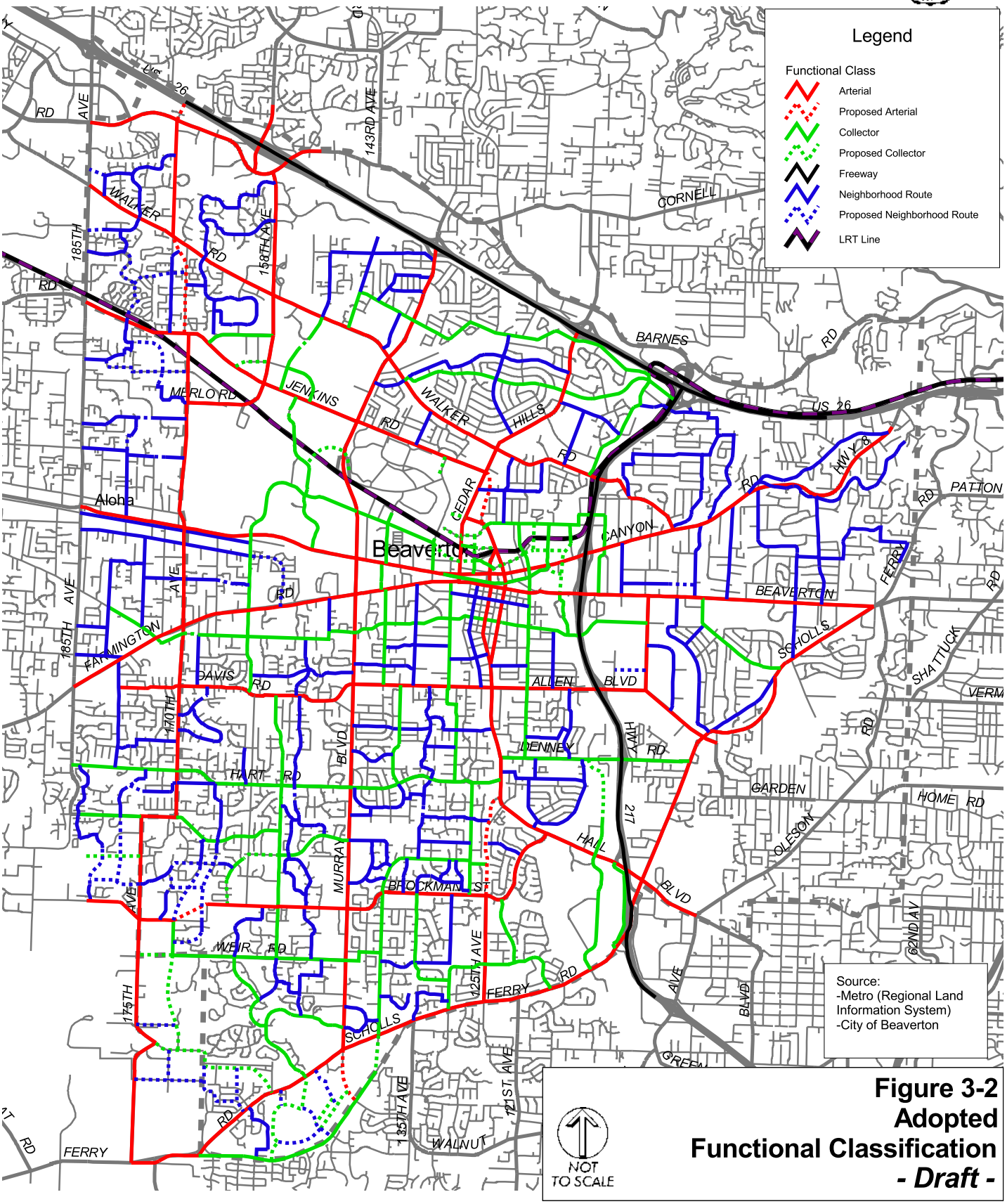


Figure 3-2
Adopted
Functional Classification
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Figure 3-3
EXISTING TRAFFIC VOLUMES

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actually decreased over the four-year period. These reductions can be explained by the construction and improvement of nearby roadways, as well as changes in local traffic patterns due to construction. Minor fluctuations in traffic volumes can be attributed to normal day-to-day variations in traffic flow that can be evident with different traffic counts.

The existing two-way traffic volumes along Scholls Ferry Road have increased substantially. Volumes to the west of Murray Boulevard have increased by approximately 50 percent. This significant increase in traffic volume is likely due to the large amounts of residential development on the west-end of Scholls Ferry Road. Traffic volumes on Scholls Ferry Road near Nimbus Avenue have remained fairly constant at approximately 3,500 vehicles per hour over the four-year period.

Traffic volumes on Murray Boulevard between US 26 and Scholls Ferry Road have not changed significantly since the previous study period. The current turn movement counts have not changed by more than 5 percent. Normal daily traffic volume fluctuation accounts for the slight decreases in two-way volume that are shown in Figure 3-2. The traffic volumes have held steady on Murray Boulevard due to the capacity limits of the roadway that will not allow for a substantial increase in volume.

The traffic volumes on Jenkins Road near Murray Boulevard decreased by approximately 20 percent with the current 2000 traffic counts. This decrease likely occurred because the counts were taken during construction in the area of the intersection, which decreased through traffic volume.

Traffic volumes on 158th Avenue and Walker Road have increased by approximately 15 percent since the previous turn-movement counts were conducted. This growth can be attributed to growth around the Nike Campus as well as the commercial area near IBM. Additionally, the traffic volumes have increased substantially in these areas because the two roadways were able to handle a higher volume and still operate at or under capacity. This allowed volumes to expand relative to other nearby crowded roadways.

The two-way traffic volumes on TV Highway/Canyon Road had significant changes from 1996 to 2000 conditions. To the east of ORE 217, the two-way traffic volumes actually decreased by approximately 10 percent. This is probably due to the construction at US 26 that reduced through volumes and encouraged motorists to find alternative routes. To the west of the Beaverton City Center, the traffic volumes have increased by approximately 5 percent.

Traffic volumes on Farmington Road/Beaverton-Hillsdale Highway had changes similar to the TV Highway/Canyon Road corridor. To the east of ORE 217, the volumes were slightly reduced. To the west of the Cedar Hills Boulevard, the two-way volumes increased by 10 to 20 percent. This large increase occurred because the roadway was able to handle significantly higher volumes while still operating at or near capacity.

TRAVEL TIME RUNS

Travel time is a key measure of transportation service and accessibility in a city. It provides a common reference for comparison between modes and a historical reference in future years. Travel time runs were conducted on several key routes in Beaverton. These travel time runs measured the length of time it took to travel from one end of Beaverton to the other on each key route during the PM peak period (4:00 PM to 6:00 PM) during the week. Seven key routes were surveyed:

- Murray Boulevard from Cornell Road to Scholls Ferry Road
- Scholls Ferry Road from Beaverton Hillsdale Highway to Beef Bend Road
- Walker Road from 106th Avenue to Stucki Road
- Beaverton Hillsdale Highway/Farmington Road from Scholls Ferry Road to 209th Avenue
- Cedar Hills Boulevard-Hall Boulevard from Barnes to Oleson
- Canyon Road from 91st to 185th
- Denney Road-Hart Road from Scholls Ferry to 185th

The time period observed was the weekday evening peak period. The results of these travel time runs are shown in Table 3-1 and Figure 3-4. In general, it is possible to get across town in Beaverton (either north/south or east/west) in approximately 15 to 20 minutes. This translates to average speeds of about 20 to 25 miles per hour, including delays at traffic signals and stop signs. Travel time along urban arterials can also be used as a measure of level of service.[1] Compared to capacity analysis, the average travel speed can help identify congested areas. Murray Boulevard, Cedar Hills Boulevard-Hall Boulevard, Canyon Road-TV Highway, and Denney Road-Hart Road were surveyed in both 1996 and 2000. On the average, average travel speeds on these corridors have decreased by 2-5 mph over the 4-year period. These deteriorations correspond to increases in traffic on cross streets as well as the corridors themselves.

[1] *1998 Highway Capacity Manual*, Special Report 209, Transportation Research Board, Washington D.C., 1998, Chapter 11.

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Figure 3-4
TRAVEL TIME ROUTES

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Table 3-1
Travel Time Surveys

Route	Direction	Distance (miles)	Time (minutes)	Average Speed (mph)
Murray Boulevard	Southbound	6.2	19	20
(from Cornell to Scholls Ferry)	Northbound	6.2	16	23
Scholls Ferry Road	Westbound	7.1	18	24
(from BH Hwy to Beef Bend)	Eastbound	7.1	19	22
Walker Road	Westbound	5.4	15	22
(from 106th to Stucki)	Eastbound	5.4	16	20
Beaverton Hillsdale Highway – Farmington Road	Westbound	7.3	20	22
(from Scholls Ferry to 209th)	Eastbound	7.3	22	20
Cedar Hills Boulevard – Hall Boulevard	Southbound	5.7	28	12
(from Barnes to Oleson)	Northbound	5.7	18	19
Canyon Road – TV Highway	Westbound	4.8	15	20
(from 91st to 185th)	Eastbound	4.8	15	19
Denney Road – Hart Road	Westbound	4.7	14	21
(from Scholls Ferry to 185th)	Eastbound	4.7	12	24
Arterial level of service D (for a class II arterial)*	-			**>17 MPH**

*Class II indicates an arterial that has free flow speeds in the 35-45 mph range

Traffic Control

The existing traffic signals in the Beaverton Transportation System Plan study area were updated with information provided by the City of Beaverton. The current existing traffic signals are shown in Figure 3-5. There were several removals, conversions, and additions of traffic signals from the 1996 conditions to the 2000 existing conditions. The flashing signal on Allen between Wilson and Menlo was removed. The pedestrian signal at 155th Avenue/Sexton Mountain was converted to an all-way flasher. A new signal was constructed at Watson Avenue/3rd Street.

City of Beaverton
Transportation System Plan

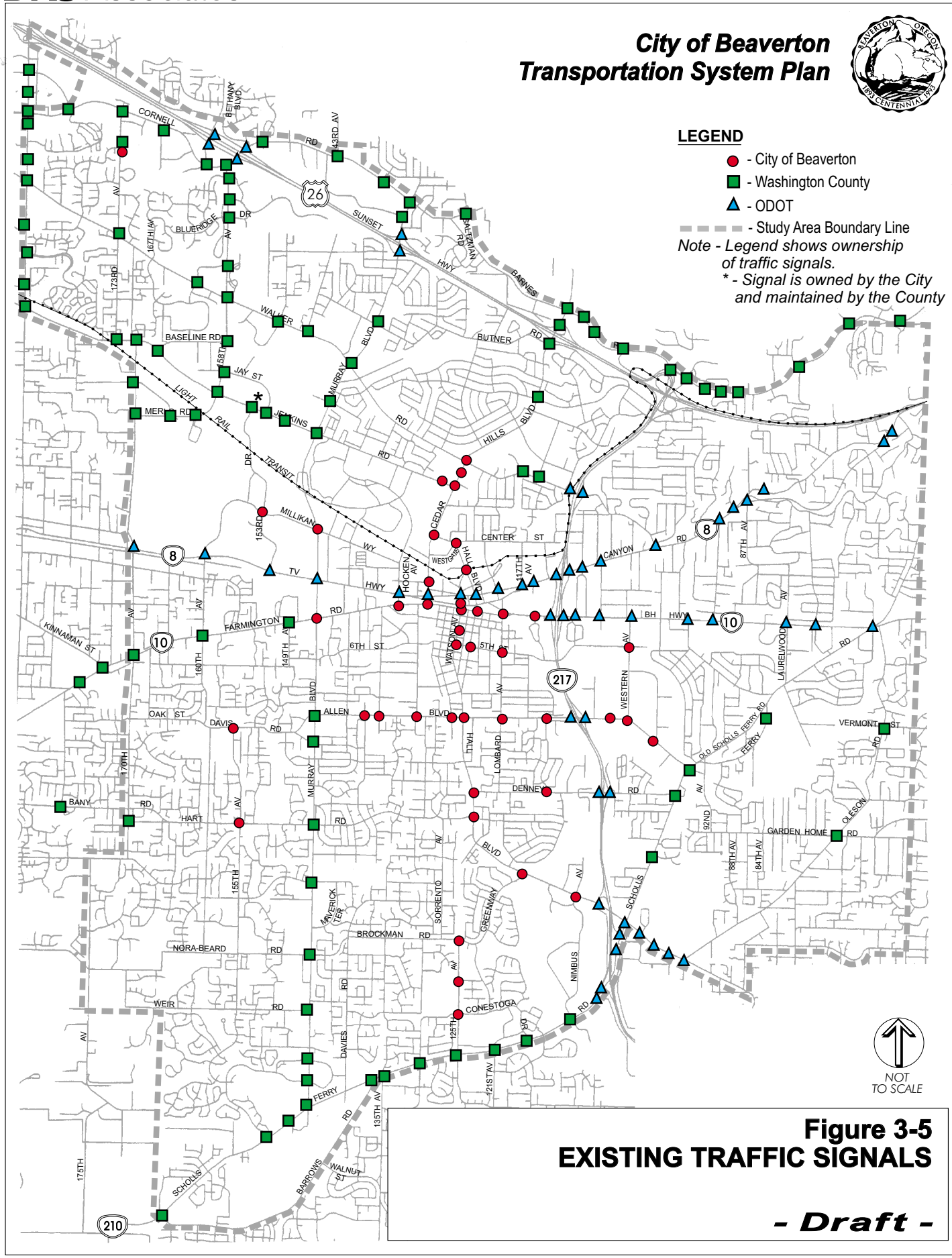


Figure 3-5
EXISTING TRAFFIC SIGNALS

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Traffic Levels of Service

Level of Service (LOS) is used as a measure of effectiveness for intersection operation. It is similar to a "report card" rating based upon average vehicle delay. Level of Service A, B, and C indicate conditions where traffic moves without significant delays over periods of peak hour travel demand. Level of Service D and E are progressively worse peak hour operating conditions. Level of Service F represents conditions where average vehicle delay exceeds 80 seconds per vehicle entering a signalized intersection and demand has exceeded capacity. This condition is typically evident in long queues and delays. Level of service D or better is generally the accepted standard for signalized intersections in urban conditions. Unsignalized intersections provide levels of service for major and minor street turning movements. For this reason, LOS E and even LOS F can occur for a specific turning movement; however, the majority of traffic may not be delayed (in cases where major street traffic is not required to stop). LOS E or F conditions at unsignalized intersections generally provide a basis to study intersections further to determine availability of acceptable gaps, safety and traffic signal warrants. A summary of the descriptions for level of service for signalized and unsignalized intersections is provided in the Level of Service Descriptions in the Beaverton Transportation System Plan technical appendix.

Intersection turn movement counts were conducted during the evening peak periods to determine the existing 2000 LOS based on the *2000 Highway Capacity Manual* methodology for signalized and unsignalized intersections[2] (see Appendix L for descriptions). Traffic counts and level of service calculation sheets can be found in the appendix.

The following sections describe existing conditions along several key corridors in Beaverton. Tables 3-2 to 3-6 provide a summary of the updated PM peak hour levels of service for the study intersections in Beaverton. Most intersections operate at LOS D or better, with some exceptions.

Scholls Ferry Road

Fourteen signalized intersections were analyzed along the Scholls Ferry corridor. Three of the intersections operate at a LOS of B, and six operate at a LOS of C. The remaining five intersections operate at a LOS of D or E. The unsignalized intersections of Scholls Ferry/Davies Road and Scholls Ferry/Laurelwood operate at a LOS of F for the minor street left turns. The current intersection operations indicate an increase in delay from the 1996 conditions. The 1996 existing conditions showed that one intersection operated at a LOS of B, four operated at a LOS of C, five operated at a LOS of D, and none operated at a LOS of E or F. Table 3-2 shows the existing conditions along the Scholls Ferry corridor.

[2] *2000 Highway Capacity Manual*, Transportation Research Board, 2000.

Table 3-2
Existing PM Peak Hour Intersection Level of Service
Study Intersections Along Scholls Ferry Road

Intersection	Level of Service	Average Delay	Volume / Capacity
Murray/Scholls Ferry	C	32.0	0.70
Scholls Ferry/121st	D	40.4	0.96
Scholls Ferry/125th	D	41.6	0.92
Scholls Ferry/135th	B	18.4	0.70
Scholls Ferry/Allen	E	64.5	0.98
Scholls Ferry/Barrows	B	17.3	0.69
Scholls Ferry/Cascade	C	23.8	0.76
Scholls Ferry/Conestoga	B	10.3	0.72
Scholls Ferry/Davies	C/F		
Scholls Ferry/Denney	C	24.6	0.75
Scholls Ferry/Hall	E	65.9	0.99
Scholls Ferry/Nimbus	D	53.6	0.99
Scholls Ferry/Laurelwood	B/F		
Scholls Ferry/ORE 217 northbound off ramp	C	22.2	0.71
Scholls Ferry/ORE 217 northbound on ramp	C	30.3	0.78
Scholls Ferry/ORE 217 southbound ramp	C	31.6	0.76

TV Highway/Canyon Road

Thirteen intersections were analyzed along the TV Highway/Canyon Road corridor. The only intersections with an existing operation of LOS E were 170th/TV Highway and Murray/TV Highway. The other intersections operated at a LOS of D or better, with two at a LOS of B and seven at a LOS of C. The 1996 conditions showed similar results, with two intersections operating at a LOS of B, six operating at a LOS of C, four operating at a LOS of D, and one operating at a LOS of E. Table 3-3 shows the existing conditions along the TV Highway/Canyon Road corridor.

Table 3-3
Existing PM Peak Hour Intersection Level of Service
Study Intersections Along TV Highway/Canyon Road

Intersection	Level of Service	Average Delay	Volume / Capacity
170th/TV Hwy	E	63.1	1.00
160th/TV Hwy	D	49.6	0.97
Canyon/114th	A/C		
Canyon/117th	C	22.9	0.66
Canyon/87th	B	18.7	0.68
Canyon/Cedar Hills	C	34.1	0.85
Canyon/Hall	C	22.9	0.80

Intersection	Level of Service	Average Delay	Volume / Capacity
Canyon/Watson	B	16.8	0.68
Canyon/Lombard	C	21.2	0.66
Canyon/Hocken	D	38.3	0.90
Canyon/ORE 217 northbound ramp	C	24.9	0.66
Canyon/ORE 217 southbound ramp	C	24.3	0.67
TV Hwy/Murray	E	65.1	1.00

Farmington Road/Beaverton Hillsdale Highway

Twelve intersections were analyzed along the Farmington Road/Beaverton-Hillsdale Highway corridor. The only intersection with an existing operation of LOS E or F was Murray/Farmington. The other intersections operated at a LOS of C. The 1996 conditions showed similar levels of delay, with three intersections operating at a LOS of B, seven operating at a LOS of C, three operating at a LOS of D, and one operating at a LOS of E. Table 3-4 shows the existing conditions along the Farmington Road/Beaverton-Hillsdale Highway Corridor.

Table 3-4
Existing PM Peak Hour Intersection Level of Service
Study Intersections Along Farmington Road/Beaverton-Hillsdale Highway

Intersection	Level of Service	Average Delay	Volume / Capacity
170th/Farmington	C	26.1	0.60
BH Hwy/Griffith	C	31.0	0.81
BH Hwy/Laurelwood	C	26.2	0.80
BH Hwy/Western	C	33.7	0.87
Farmington/Cedar Hills	C	27.2	0.90
Farmington/Hall	C	25.4	0.85
Farmington/Hocken	C	22.6	0.84
Farmington/Lombard	C	30.7	0.78
Farmington/ORE 217 northbound ramp	C	34.9	0.94
Farmington/ORE 217 southbound ramp	C	25.6	0.73
Farmington/Watson	C	24.2	0.77
Murray/Farmington	F	89.4	1.00

The other study intersections had operations ranging from a LOS of B to a LOS of F. Five intersections operate at a LOS of B, twenty-three operate at a LOS of C, twelve operate at a LOS of D, and the remaining intersections operate at a LOS of E or F. Comparatively, the 1996 conditions showed that of the remaining study intersections, one operated at a LOS of A, nine operated at a LOS of B, fifteen operated at a LOS of C, thirteen operated at a LOS of D, two operated at a LOS of E, and six operated at a LOS of F. Table 3-5 shows the existing conditions at the remaining study intersections.

Table 3-5
Existing PM Peak Hour Intersections Level of Service
Study Intersections

Intersection	Level of Service	Average Delay	Volume / Capacity
158th/Blueridge	C	26.3	0.71
158th/Cornell	C	27.1	0.78
158th/Jay	C	26.4	0.60
158th/Jenkins	D	38.2	0.86
158th/Walker	E	61.3	1.00
170th/Baseline	C	21.2	0.58
170th/Oak	A/F		
170th/Merlo	C	22.4	0.63
170th/Hart/Bany	F	77.3	1.17
173rd/Walker	E	63.4	0.98
Allen/ORE 217 northbound ramp	C	25.5	0.81
Allen/ORE 217 southbound ramp	C	34.2	0.88
Allen/Western	C	28.7	0.73
Cedar Hills/Barnes	E	68.8	1.00
Cedar Hills/Butner	C	34.7	0.83
Cedar Hills/Hall	C	30.9	0.74
Cedar Hills/Jenkins	D	40.0	0.88
Cedar Hills/US 26 eastbound ramps	C/F		
Cedar Hills/US 26 westbound ramps	B	12.8	0.63
Cedar Hills/Walker	E	58.2	1.00
Cornell/143rd	C	25.5	0.80
Cornell/173rd	D	43.5	0.93
Cornell/Barnes/Saltzman	E	57.3	0.94
Cornell/Bethany	C	30.4	0.76
Denney/ORE 217 northbound ramp	B/F		
Denney/ORE 217 southbound ramp	A/F		
Garden Home/84th	A/D		
Garden Home/88th	A/C		
Greenway/125th	B	17.5	0.52
Hall/Allen	D	44.4	0.91
Hall/Cascade/ORE 217 southbound ramp	D	51.3	0.96
Hall/Center	C	23.8	0.48
Hall/Denney	C	32.4	0.85
Hall/Greenway	E	61.9	1.00
Hall/Nimbus	C	34.3	0.84
Hart/155th	B	18.2	0.77
Murray/6th	C/F		
Murray/Allen	D	51.0	0.95

Intersection	Level of Service	Average Delay	Volume / Capacity
Murray/Brockman/Beard	C	31.4	0.74
Murray/Cornell	E	62.3	0.98
Murray/Hart	D	37.2	0.86
Murray/Jenkins	D	44.5	0.89
Murray/US 26 eastbound ramps	B	15.2	0.55
Murray/US 26 westbound ramps	C	28.1	0.79
Murray/Walker	D	54.2	0.98
Oleson/Garden Home	D	42.8	0.95
Oleson/Vermont	C	25.1	0.76
US 26 eastbound ramp/Bethany	C	22.2	0.66
US 26 eastbound ramp/Cornell	B	17.1	0.66
US 26 westbound ramp/Bethany	D	44.1	0.95
US 26 westbound ramp/Cornell	C	28.4	0.78
Walker/ORE 217 northbound ramp	C	21.1	0.68
Walker/ORE 217 southbound ramp	B	19.4	0.84

Figure 3-6 provides a summary of intersections operating at or near capacity based on level of service calculations. The majority of the study intersections are currently operating at acceptable capacity levels. Table 3-6 provides a list of the intersections operating at capacity under existing conditions, including an indication of how the capacity problem was addressed in the 2015 TSP.

Table 3-6
Intersections Operating at Capacity under Existing Conditions

Intersection	Capacity Issue Improvement Plan
Scholls Ferry/Hall	Addressed in 2015 TSP (add turn lane)
Scholls Ferry/Davies	Addressed in 2015 TSP (Davies improvement)
Scholls Ferry/Allen	Not addressed as a problem in 2015 TSP (acceptable capacity in 2015)
Denney/217 NB ramps	Addressed in 2015 TSP (signalize)
Denney/217 SB ramps	Addressed in 2015 TSP (signalize)
Bany-Hart/170th	Addressed in 2015 TSP (170th improvements)
Oak/170th	Not studied in 2015 TSP (to be addressed in update)
TV Hwy/170th	Addressed in 2015 TSP (TV Hwy and 170th improvements)
Murray/6th	Not addressed in 2015 TSP (construction of a traffic signal planned for summer of 2001)
Farmington/Murray	Addressed in 2015 TSP (Farmington improvement)
Walker/158th	Addressed in 2015 TSP (add turn lanes)
Walker/Cedar Hills	Addressed in 2015 TSP (add turn lanes)
Murray/TV Highway	Addressed in 2015 TSP (add turn lanes)
Murray/Walker	Addressed in 2015 TSP (Walker improvement)
Cedar Hills/Barnes	Not studied in 2015 (to be addressed in update)
Cornell/Barnes	Not studied in 2015 (to be addressed in update)

Intersection	Capacity Issue Improvement Plan
Hall/Greenway	Addressed in 2015 TSP (125th Extension, turn lane)
173rd/Walker	Addressed in 2015 TSP (Walker and 173rd Improvements, turn lanes)
Murray/Cornell	Not studied in 2015 (to be addressed in update)

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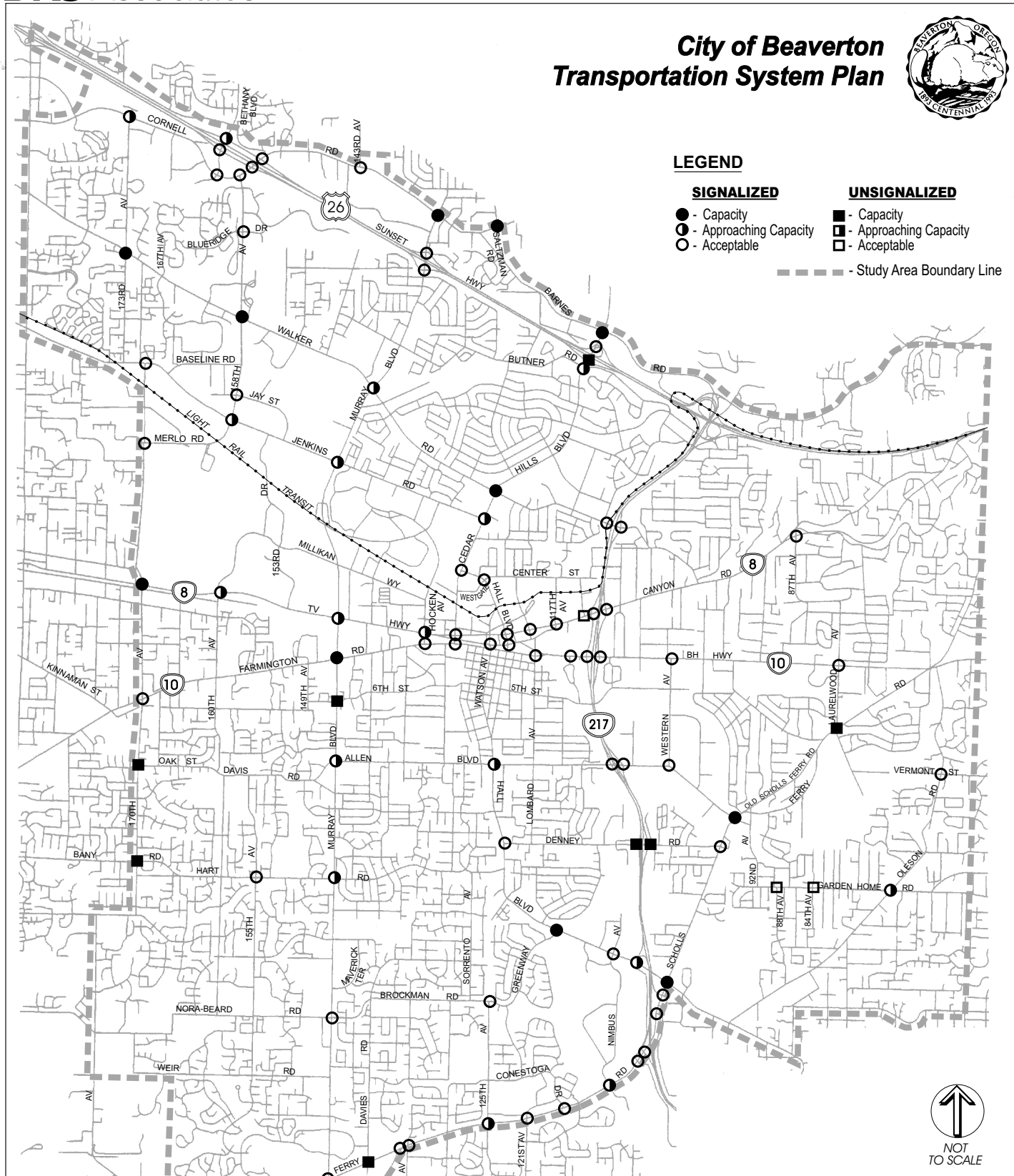


Figure 3-6
CAPACITY SUMMARY

- Draft -

Collisions

Collision data was obtained from Washington County and used to update the high collision intersection list from the 2015 Beaverton Transportation System Plan. The 2015 list contained several of the same intersections as the current list. Intersections that dropped off of the list were likely locations of improvement. Intersections that have been added to the list could have an increase in collision numbers due to an increase in volume and congestion, which can create more conflicts and aggressive driving behavior, or are intersections that are included in this study as part of the new study area. Table 3-7 shows the updated SPIS (Safety Priority Index System, which is a composite number derived from such factors as the number of collisions, type of collisions, injury types, and traffic volume) ranking list (which only includes state and county intersections)[3]. Figure 3-7 shows the location of the intersections on the study area map. The safety at these intersections should be addressed in this TSP update. Collision data for intersections of two City of Beaverton streets was also collected and analyzed by city staff (using the Washington County methodology). The city street/city street intersection rankings are located in appendix M. Not one of the city street city street intersections calculated would rank 10th or higher in the SPIS rankings shown in Table 3-7.

Table 3-7
SPIS Ranking of Ten Highest Beaverton TSP Study Area Intersections

Ranking	Street	Cross Street	Number of Collisions (1997-1999)
1*	Baseline Road	185th Avenue	100
2	Murray Boulevard	TV Highway	133
4	Hall Boulevard	Scholls Ferry Road	85
5	Millikan Way/160th	TV Hwy	37
6	BH Highway	Scholls Ferry Road	47
8	Farmington Road	170th Avenue	31
9	Nimbus Avenue	Scholls Ferry Road	50
10	TV Hwy (Canyon Rd)	110th Avenue	29
12	Garden Home Road	Oleson Avenue	40
13	Farmington Road	Murray Boulevard	74

*Note that the intersection of Baseline/185th Avenue ranked higher than the intersection of Murray/TV Highway due in part to a larger number of fatal/major injury collisions (4 compared to 0).

[3] Note that calculations are based only on officially reported collisions.

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Figure 3-7
TEN HIGHEST COLLISION LOCATIONS IN BEAVERTON AREA (1996-1998)
- Draft -

Transit

Transit service is provided to Beaverton by the Tri-County Metropolitan District of Oregon (Tri-Met). There have been significant changes to the transit system since the 2015 Beaverton Transportation System Plan Study, mainly because of the West-Side Light Rail Project. Figure 3-8 shows current Tri-Met bus routes. Weekday bus boarding information was received from Tri-Met and reflects the current 2000 census. Table 3-8 shows that ridership has changed significantly for the routes serving Beaverton since the 2015 TSP. Many of the routes have gained ridership, while some have decreased due to the light rail. Table 3-9 shows the average headway and rider boarding frequency for Tri-Met routes serving Beaverton. All of the existing routes exceed the Tri-Met minimum boardings per revenue hour performance standard of 10 boarding per revenue hour. All of the transit routes operate at headways of 30 minutes or better during both the AM and PM peak hours, with the exception of route 54 (Beaverton-Hillsdale) which operates with a headway of 60 minutes during the PM peak hour. Headways of 30 minutes or better correspond to a LOS of D or better as defined in *the 2000 Highway Capacity Manual* methodology[4]. Headways of 60 minutes are defined as the LOS of E/F threshold.

Figure 3-9 shows the transit coverage of transit supportive land use in the Beaverton area. The 2000 *Highway Capacity Manual* defines transit supportive areas as having either a household density of 3 HH/acre or an employment density of 4 EMP/acre[5]. The 1994 Metro Travel Demand Model Land Use was used to define existing conditions. The transit coverage area (transit buffer) is defined as 0.25 miles from a bus stop, 0.25 miles from a transit shuttle service area, and 0.50 miles from a LRT station. The existing transit coverage is fairly good in Beaverton, with approximately 85% of the transit supportive zones (8,450 of 9,980 acres) covered within the transit buffer. However, there are small pockets that do not have walking access to transit and therefore do not meet the 2015 Beaverton TSP goal of providing coverage within one-quarter mile to all of Beaverton.

[4] *2000 Highway Capacity Manual*, Transportation Research Board, 2000, Chapter 27.

[5] *Ibid*.

Table 3-8
Average Weekday Boarding Rides System-wide for Tri-Met Routes serving Beaverton

Route	93-94	94-95	95-96	1999	2000
MAX				58,712	
Nimbus Shuttle					
20 East/West Burnside	4,736	6,121	6,385	6,307	6,310
43 Taylors Ferry Road				942	789
45 Garden Home				1,327	1,274
47 Baseline-Evergreen				524	528
48 Cornell				454	573
50S Cornell Oaks				80	120
52 Farmington-185th	1,582	1,781	1,911	2,886	3,058
53S Arctic-Allen				221	166
54 Beaverton-Hillsdale	2,203	2,395	2,421	2,512	2,712
55 Hamilton				434	385
56 Scholls Ferry Road	1,908	2,174	2,256	2,088	2,197
57 Forest Grove	7,389	8,615	8,525	5,634	6,496
58 Canyon Road				2,217	2,100
59 Cedar Hills	1,709	1,716	1,664	330	374
60 Leahy road	141	117	115	54	46
61X Marquam Hill-Beaverton				236	283
62 Murray Boulevard	675	786	791	1,987	2,280
67 Beaverton-Cedar Hill	1,143	1,324	1,062	712	886
76 Tigard-Tualatin	404	610	697	2,318	2,448
78 Beaverton-Lake Oswego	2,131	2,823	3,190	2,239	2,190
88 Hart-198th				1,176	1,350
89 Tanasbourne				698	724
91X TV HWY Express	786	890	975	n/a	n/a
92X South Beaverton Express	n/a	608	691	552	569
94X Walker Road Express	n/a	441	n/a	n/a	n/a

Note: census data from routes that did not yet exist or were discontinued is shown as n/a (not available), unavailable data is denoted by a gray cell

Table 3-9
Existing Weekday System-Wide Frequency (minutes) and Average System-Wide Boarding Rates for Tri-Met Routes Serving the Beaverton Area

Route	7 am-8:30 am	8:30am-4 pm	4 pm-6 pm	6 pm – 9:30 pm	9:30pm-Mid	Boarding Rides/Revenue Hour
MAX	7	10	7	15	15/30	n/a
Nimbus Shuttle	n/a	n/a	n/a	n/a	n/a	n/a
20 East/West Burnside*	15	15	15	15	30	49.8
43 Taylors Ferry Road	30	60	30	-	-	30.5
45 Garden Home	20	60	25	60	-	32.4
47 Baseline-Evergreen	30	60	30	-	-	
48 Cornell	30	30	30	60	-	
50S Cornell Oaks	30	-	30	-	-	17.2
52 Farmington-185th *	15	15	15	30	60	41.5
53S Arctic-Allen*	30	-	30	-	-	20.7
54 Beaverton-Hillsdale	20	30	60	60	60	48.3
55 Hamilton	30	-	25	-	-	21.3
56 Scholls Ferry Road	15	30	15	60	60	43.0
57 Forest Grove	15	15	15	30	30	37.1
58 Canyon Road	15	30	15	30	-	27.2
59 Cedar Hills	30	30	30	60	-	28.2
60 Leahy road	30	-	30	-	-	28.0
61X Marquam Hill-Beaverton	30	-	30	-	-	29.7
62 Murray Boulevard	15	30	15	30	-	36.4
67 Beaverton-Cedar Hill	30	30	30	60	-	32.4
76 Tigard-Tualatin	25	30	30	60	-	34.2
78 Beaverton-Lake Oswego	20	30	20	60	60	36.1
88 Hart-198th	30	30	30	60	-	38.2
89 Tanasbourne*	30	30	30	60	-	22.4
92X South Beaverton Express	15	-	15	-	-	32.1

Source: Transit Choices for Livability Handbook, Tri-Met, Tables 1 and 2.
*Less frequent service provided to portion or end of route

Figure 3-10 shows the existing transit shelters and bus stops in the Beaverton TSP Study Area. Tri-Met's most recent passenger census was used to determine boarding at each bus stop[6]. Bus stops with boardings of at least 35 passengers per day meet Tri-Met's criteria for consideration of bus shelter locations.

[6] *Spring 2000 Passenger Census*, Tri-Met, 2000.

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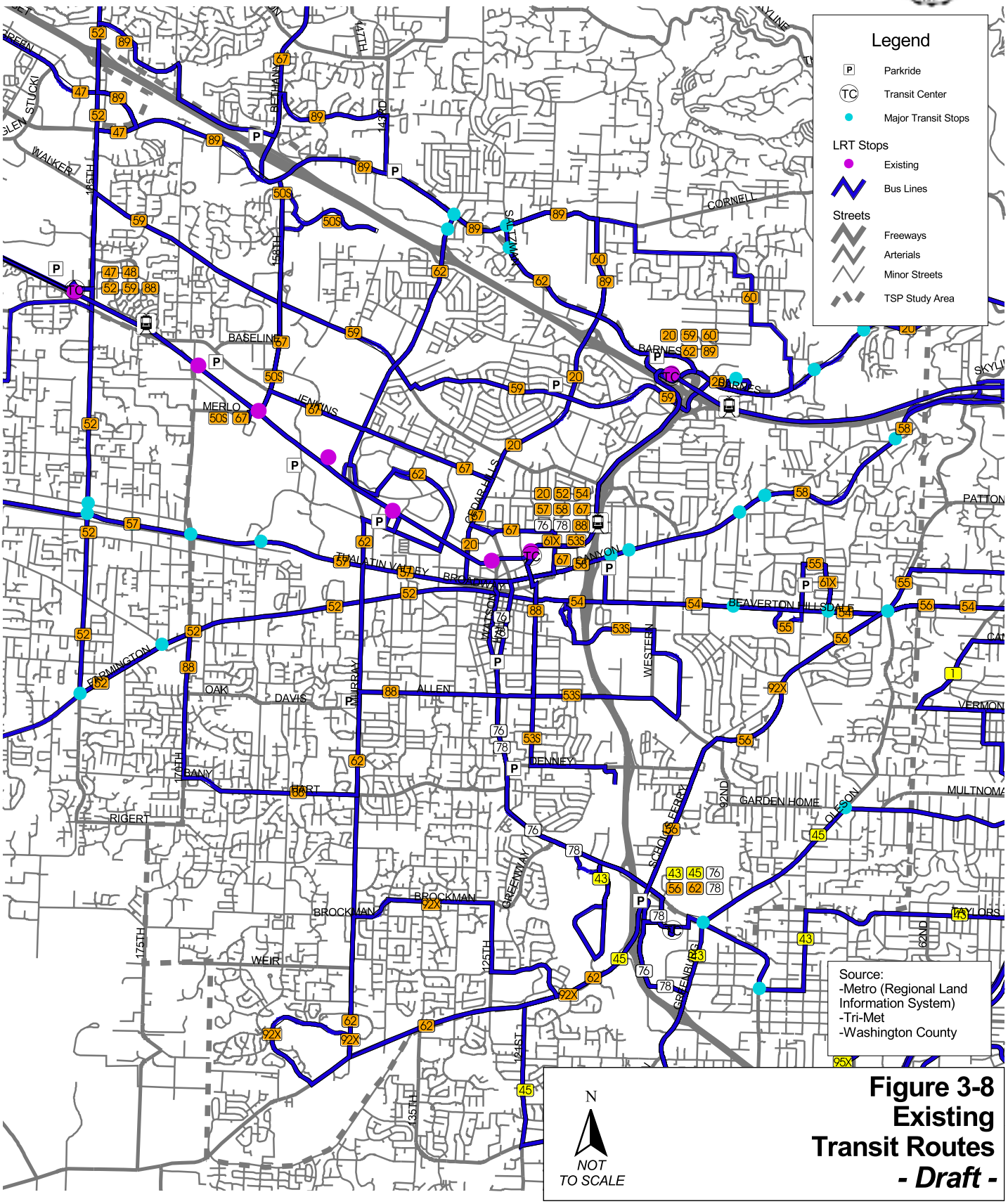


Figure 3-8
Existing Transit Routes
- Draft -

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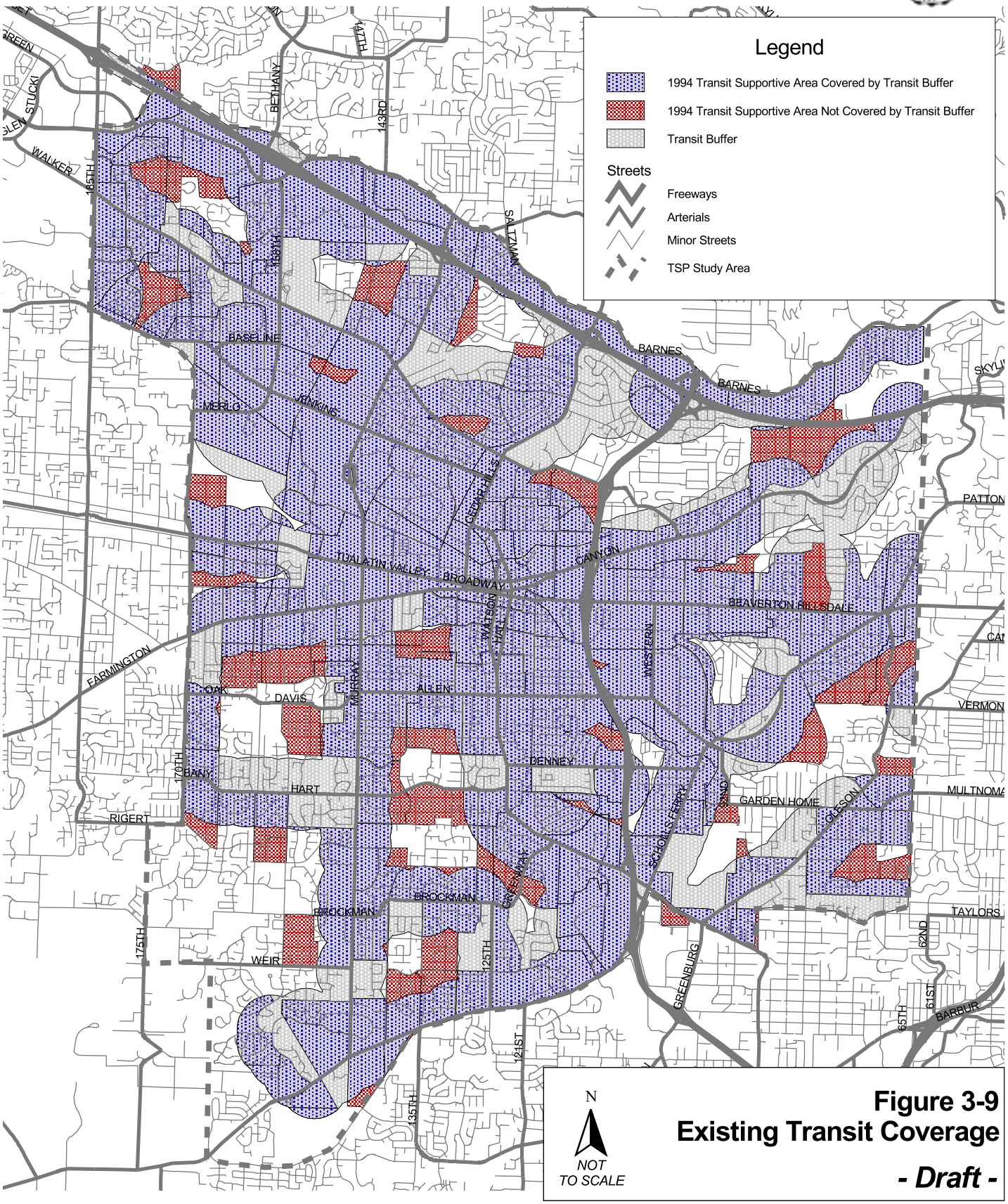


Figure 3-9
Existing Transit Coverage

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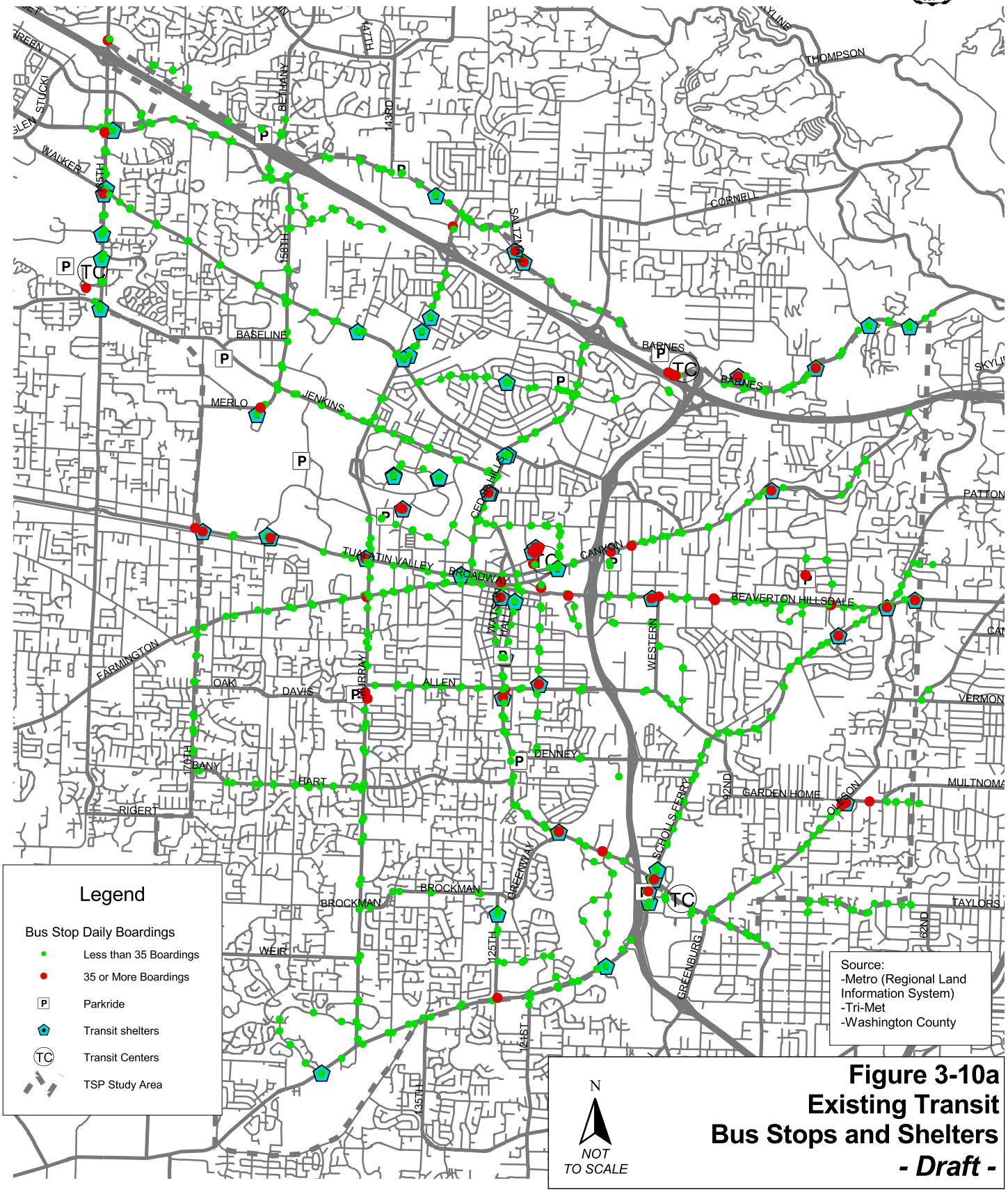


Figure 3-10a
Existing Transit
Bus Stops and Shelters
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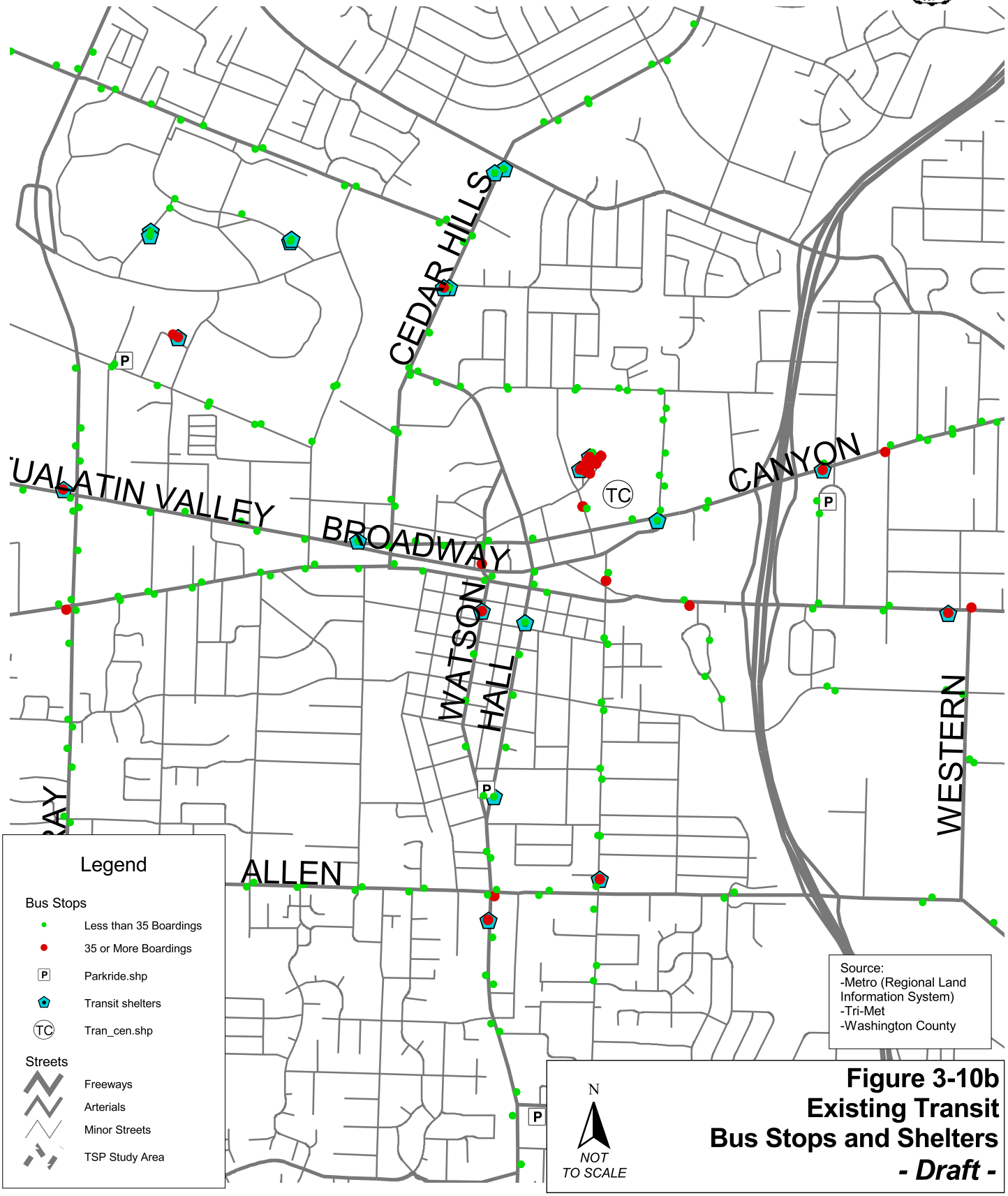


Figure 3-10b
Existing Transit
Bus Stops and Shelters
- Draft -

Bicycle

Bicycle counts were conducted during the evening peak period (4:00 to 6:00 PM) at the study intersections in Beaverton and are shown in Figure 3-11. The updated existing bike lanes, designated bikeways and off-street bike pathways are shown in Figure 3-12. The designated bikeway facilities may or may not have future bike lanes.

There is limited connectivity for bicyclists traveling to activity centers in Beaverton. However, there are two primary north/south routes (Murray Boulevard and Hall Boulevard between Washington Square and Farmington Road) and three primary east/west routes (Scholls Ferry Road, Brockman Road and 5th Street) in Beaverton. Bike lane gaps on Cedar Hills Boulevard, TV Highway, and Farmington Road should be addressed to provide connectivity for bicyclists on the arterials in the City of Beaverton.

Bicycles are permitted on all roadways in the City except for the ORE 217 freeway. Bicycle use in Beaverton is generally for recreational, school and commuting purposes. The City includes lands owned and maintained by the Tualatin Hills Park and Recreation District that provide several off-street bike paths in Beaverton for bicyclists and pedestrians. The Tualatin Hills Park and Recreation District has completed a master plan that includes many proposed trails in Beaverton.

Pedestrians

Figure 3-14 shows the updated existing sidewalks on arterial and collector streets in Beaverton. A majority of arterial and collector streets in Beaverton have sidewalks on at least one side of the street. There are some locations where sidewalks are not connected; however, connectivity and pedestrian linkages are relatively good. In addition, besides the facilities that are shown on this map, many residential streets also have sidewalks.

Pedestrian counts were updated with the current intersection PM peak turn movement counts. The updated pedestrian movement counts are shown in Figure 3-13. The current counts were broken down into the peak hour count for pedestrians, while the 2015 TSP used the peak period (4-6 PM) for pedestrian volumes. Therefore, the current volumes reflect a smaller time interval than the 2015 TSP data. The major change to pedestrian volume in the downtown Beaverton area is related to the new light rail station, which is a large pedestrian generator. The most significant pedestrian movements occur in the Beaverton downtown area on TV Highway, Cedar Hills Boulevard, Farmington Road and Hall Boulevard.

Sidewalks at least five feet wide are required in all new development. Existing roadways that do not have sidewalks are being retrofitted where terrain and right-of-way make it economically

feasible to do so. All newly constructed sidewalks include wheelchair ramps at intersections to permit easy ingress/egress for wheelchairs. In addition to paved sidewalks, pedestrian paths are included in many of the City's parks, open spaces and greenways, including the Tualatin Hills Park and Recreation District pathways. The most important needs are to fill in the gaps on the arterial system such as on TV Highway and Farmington Road. However, the City of Beaverton should work to continue increasing the sidewalk coverage on all arterials, collectors, and residential streets in the Beaverton area.

Trucks

The truck percentages (heavy vehicles) as a portion of through traffic at the study intersections were updated with the current turn movement counts. The current truck percentages, which range from 0 to 4 percent, are shown on Figure 3-15. Overall, the truck percentages have not changed significantly from the 1996 data. Existing through truck routes are shown in Figure 3-16.

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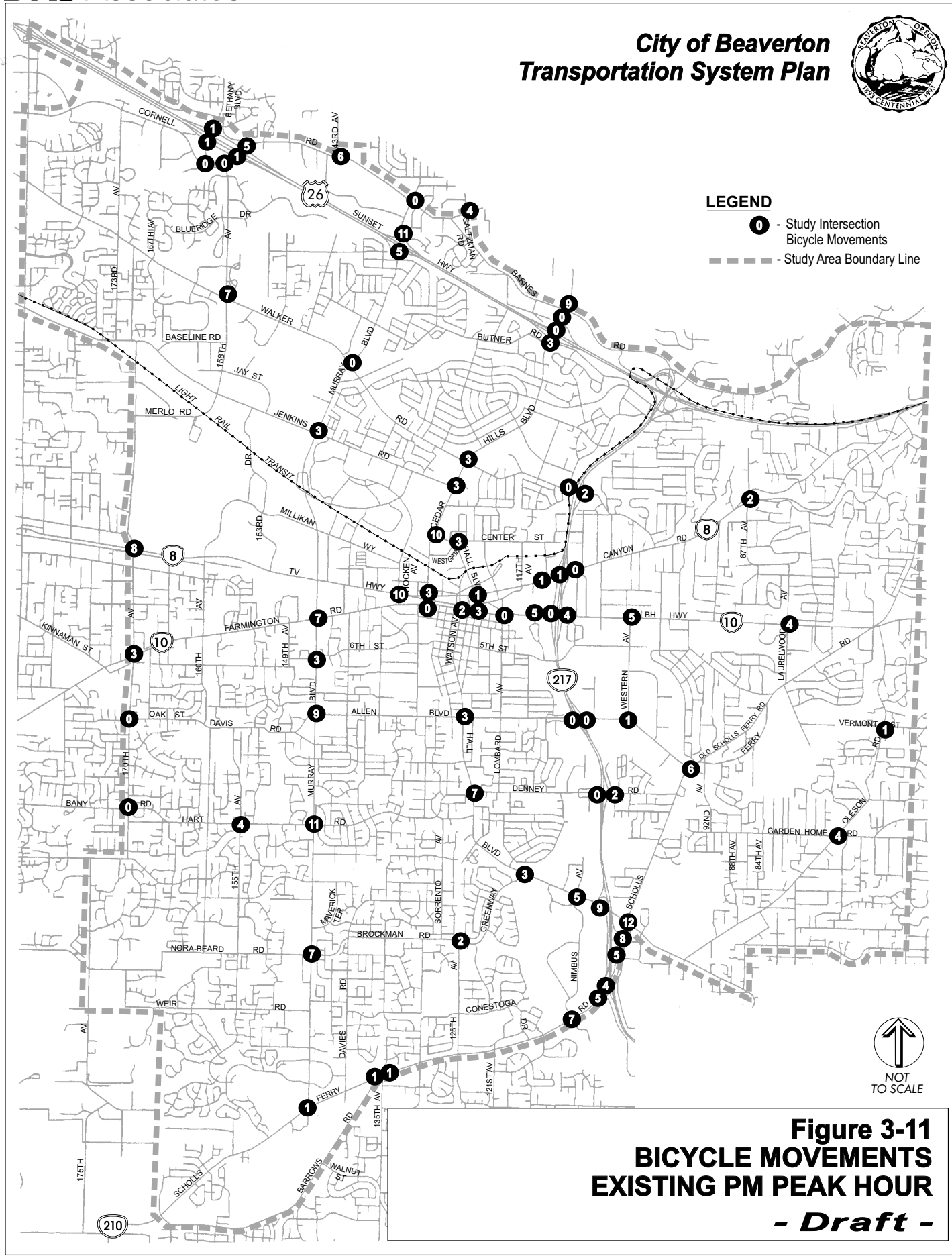


Figure 3-11
BICYCLE MOVEMENTS
EXISTING PM PEAK HOUR
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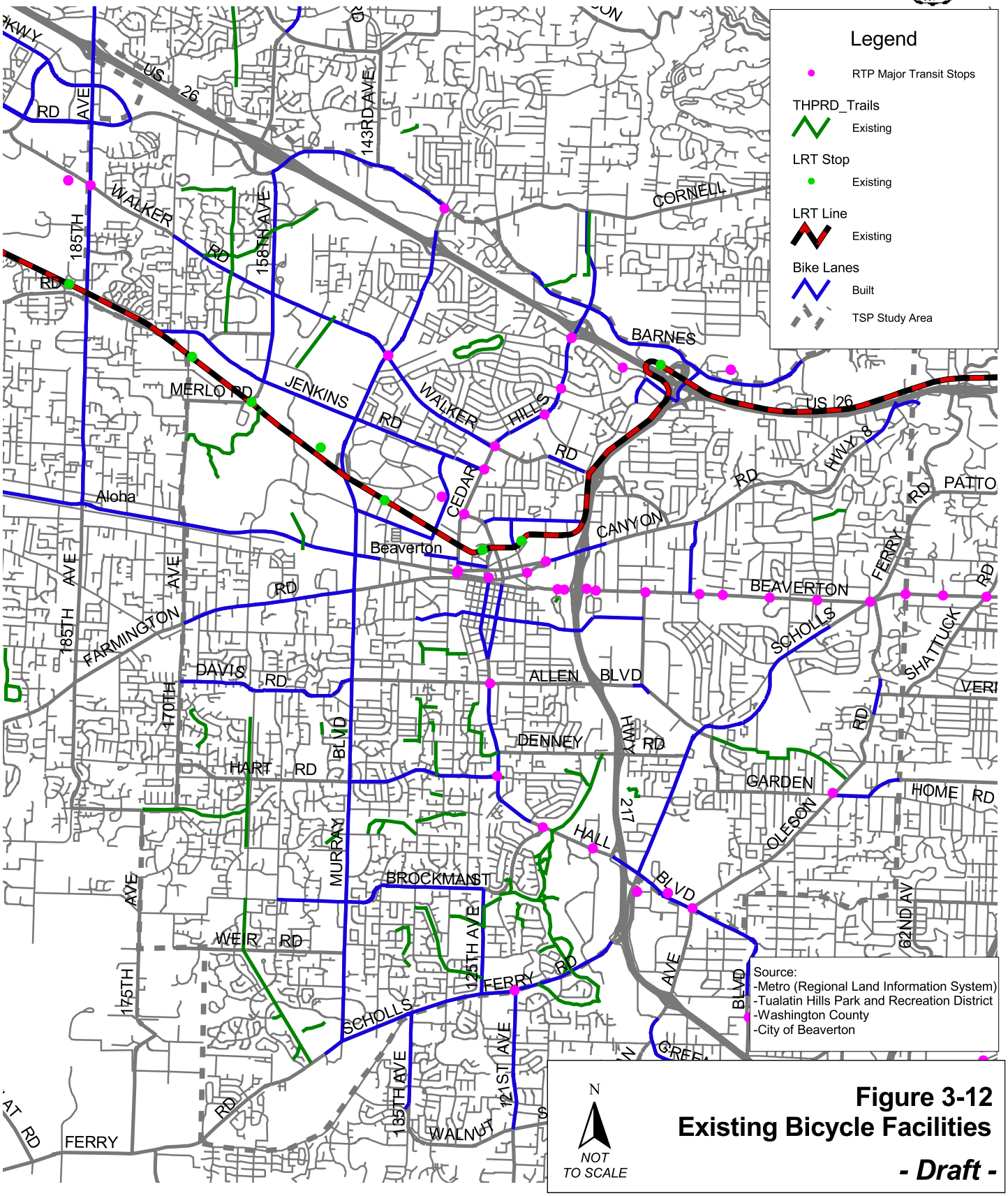


Figure 3-12
Existing Bicycle Facilities
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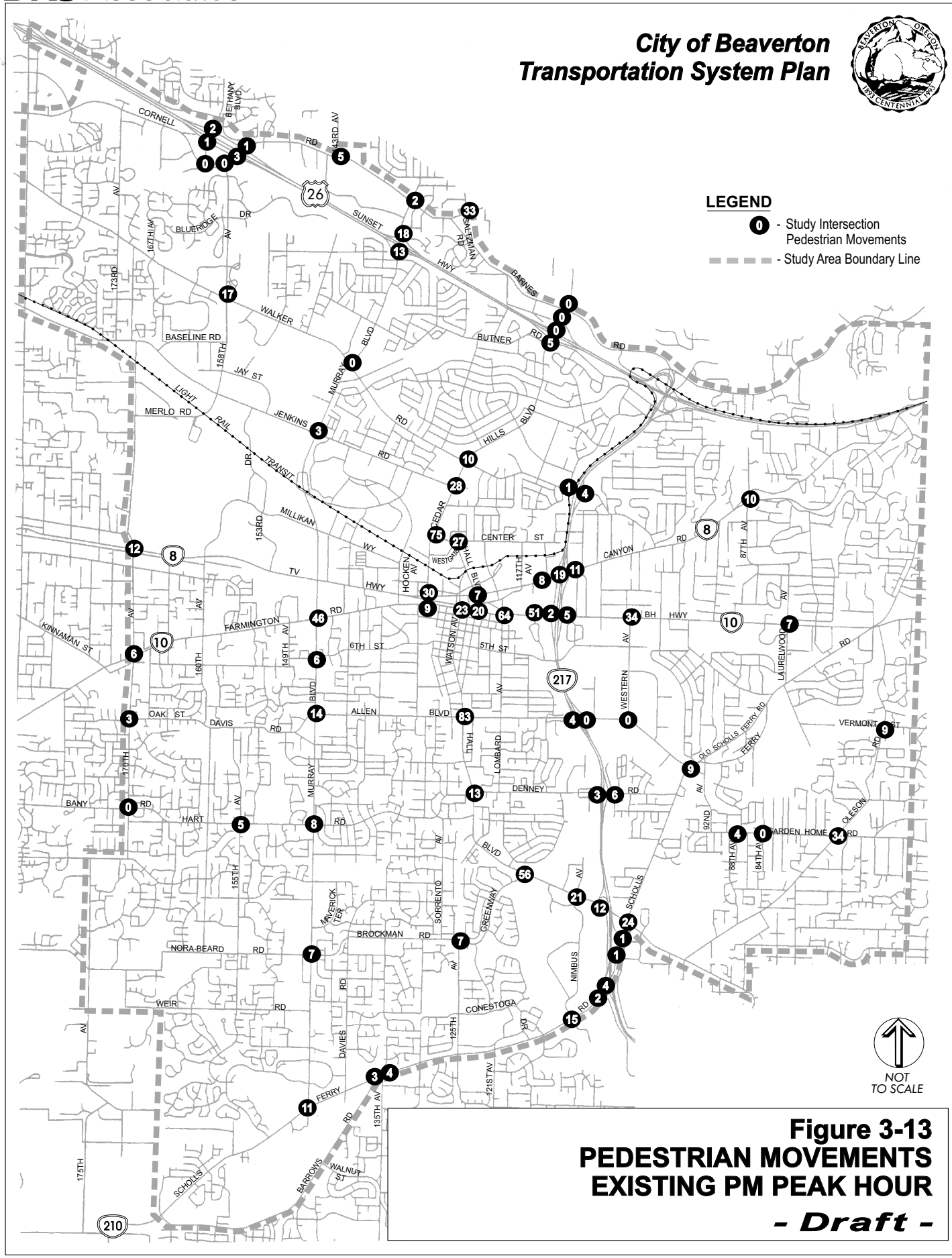


Figure 3-13
PEDESTRIAN MOVEMENTS
EXISTING PM PEAK HOUR
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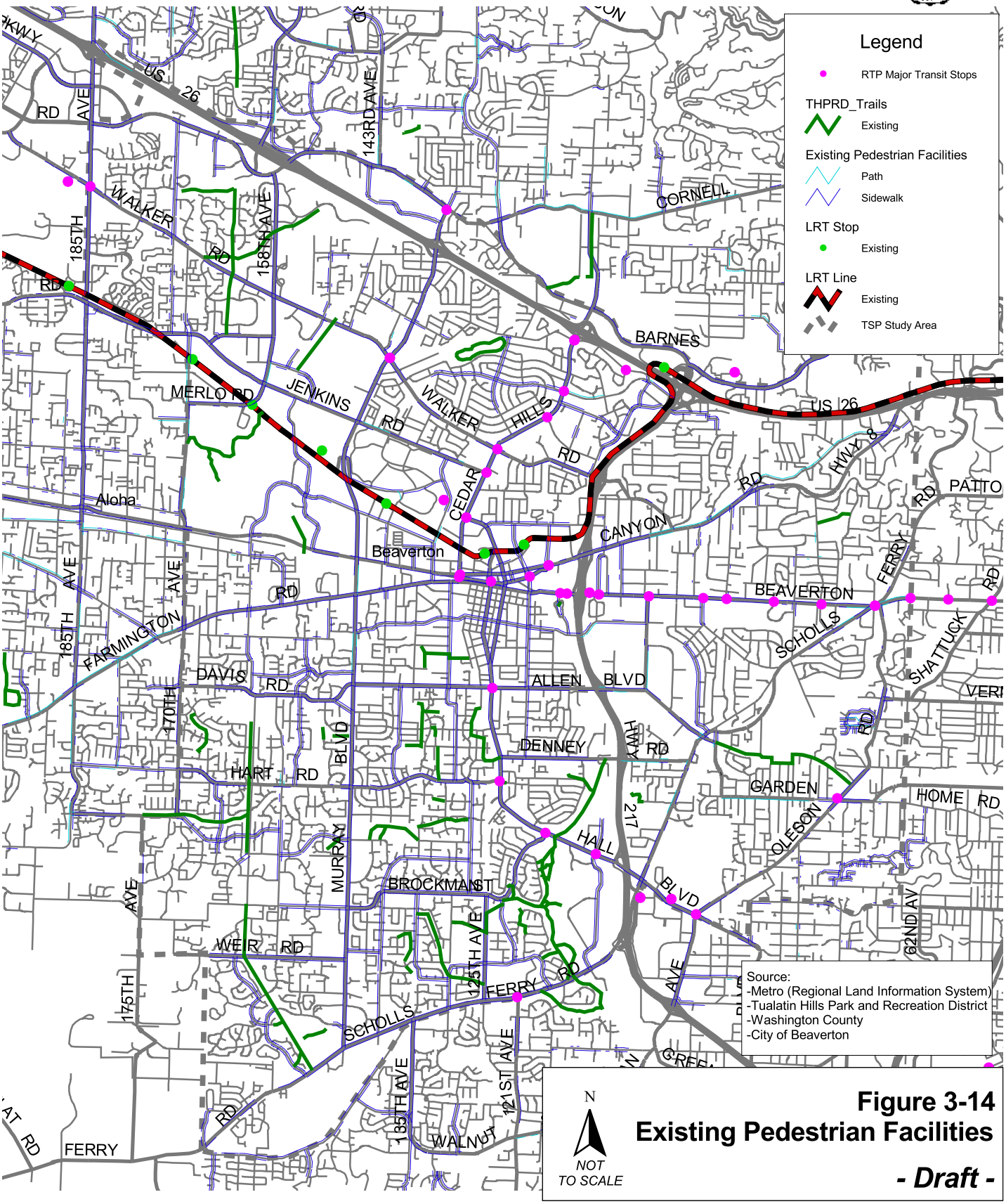


Figure 3-14
Existing Pedestrian Facilities

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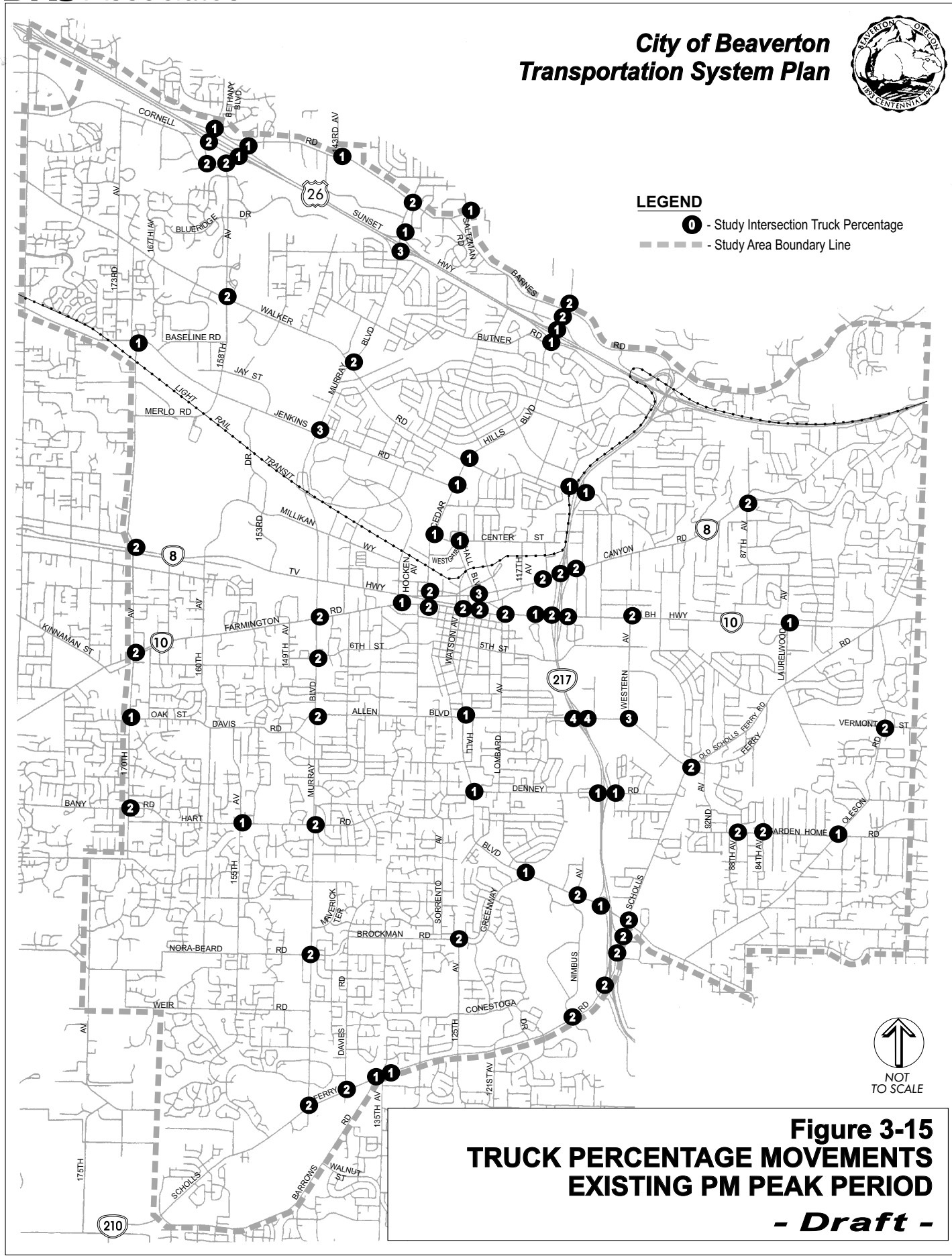


Figure 3-15
TRUCK PERCENTAGE MOVEMENTS
EXISTING PM PEAK PERIOD
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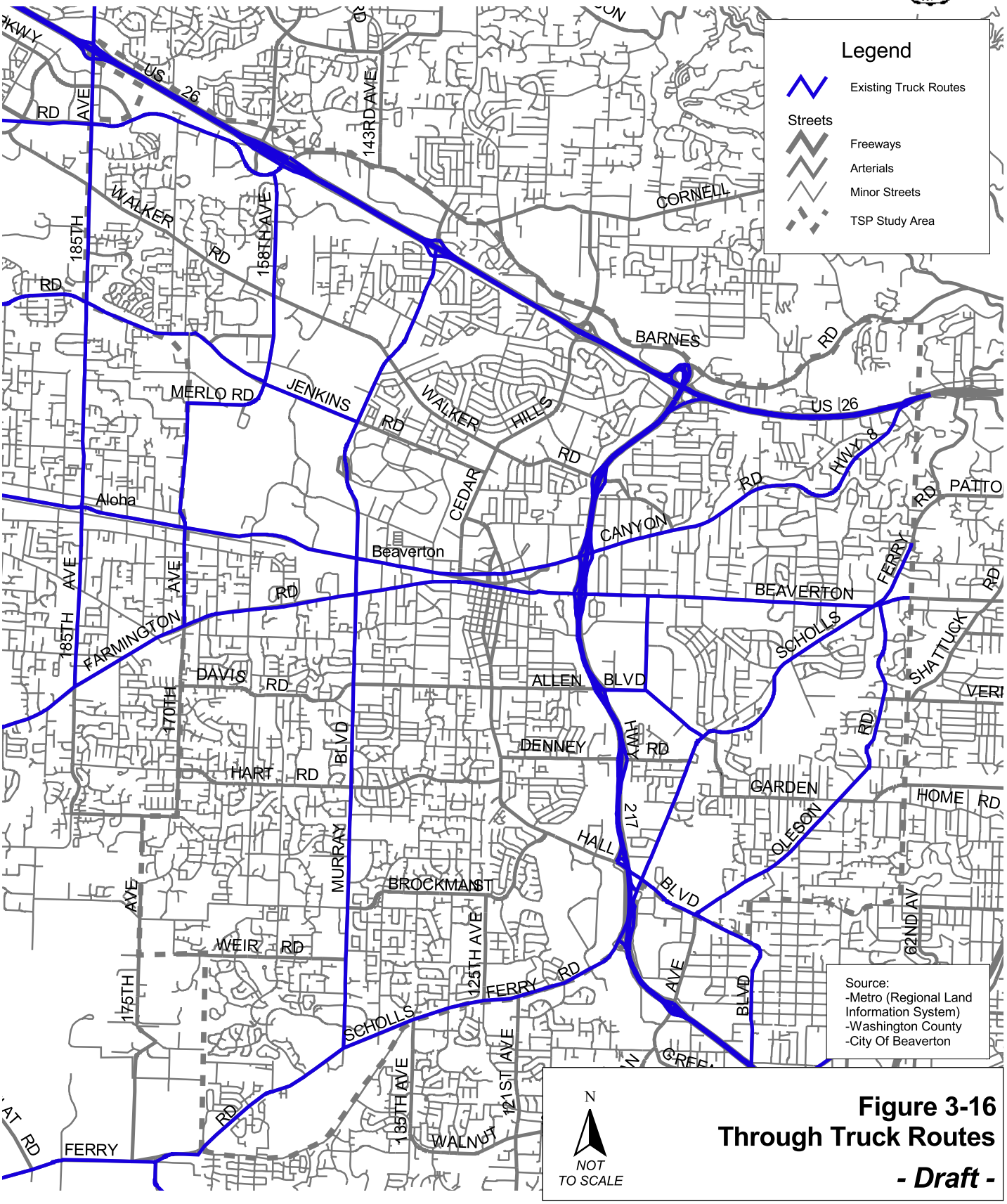


Figure 3-16
Through Truck Routes
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Chapter 4
Future Needs/Improvement Plans

FUTURE DEMAND AND LAND USE

The Beaverton Transportation System Plan Update addresses existing system needs and additional facilities that are required to serve future growth. Metro's urban area transportation forecast model was used to determine future traffic volumes in Beaverton. This forecast model translates assumed land uses into person travel, selects modes, and assigns motor vehicles to the roadway network. These traffic volume projections form the basis for identifying potential roadway deficiencies and for evaluating alternative circulation improvements. This section describes the forecasting process including key assumptions and the land use scenario developed from the existing Comprehensive Plan designations and allowed densities.

Projected Land Uses

Land use is a key factor in developing a functional transportation system. The amount of land that is planned to be developed, the type of land uses, and how the land uses are mixed together have a direct relationship to expected demands on the transportation system. Understanding the amount and type of land use is critical to taking actions to maintain or enhance transportation system operation.

Projected land uses were developed for areas within the urban growth boundary and reflect the Comprehensive Plan and Metro's land use assumptions for the year 2020. Complete land use data sets were developed for the following conditions.

- Existing 1994 Conditions (based travel forecast for the region)
- Year 2020 Conditions

The base year travel model is updated periodically and for this study effort, the available base model provided by Metro was for 1994. Land uses were inventoried throughout Beaverton by

Metro. This land use database includes the number of dwelling units, the number of retail employees, and the number of other employees. Table 4-1 summarizes the land uses for existing conditions and the future scenario within the Beaverton TSP Update study area. Since development of the 2015 Beaverton TSP, more detailed analysis tools were developed that allow refined calculations of the land use data. Therefore, Table 4-1 summarizes data only the for specific land use within the 2020 Beaverton TSP study area (unlike the previous TSP where the land use summaries included data for areas on the fringe of Beaverton in addition to that within Beaverton). However, while these summaries only outline land use in Beaverton for the purposes of this study, the travel demand forecasts that have been evaluated reflect the regional land use growth throughout the Portland metropolitan area (the four county area). A detailed summary of the uses for each Transportation Analysis Zone (TAZ) within the Beaverton study area is provided in the Appendix.

Table 4-1
Beaverton Land Use Summary

Land Use	1994	2020	Increase	Percent Increase
Households (HH)	46,861	68,997	22,136	47%
Retail Employees (RET)	14,585	26,514	11,929	82%
Other Employees (OTH)	61,822	102,835	41,013	66%

Note: The 2015 TSP land use numbers reflected an area beyond the 2020 TSP Study Area. In general, annual growth rates from 2015 to 2020 are similar to the 1994 to 2015 annual growth rates.

At the existing level of land development, the transportation system generally operates without significant deficiencies in the study area. As land uses are changed in proportion to each other (i.e. there is a significant increase in retail employment relative to household growth), there will be a shift in the overall operation of the transportation system. Retail land uses generate higher amounts of trips per acre of land than households do and other land uses. The location and design of retail land uses in a community can greatly affect transportation system operation. Additionally, if a community is homogeneous in land use character (i.e. all employment or residential), the transportation system must support significant trips coming to or from the community rather than within the community. Typically, there should be a mix of residential, commercial, and employment type land uses so that some residents may work and shop locally, reducing the need for residents to travel long distances.

Table 4-1 indicates that significant growth is expected in Beaverton in the coming decades. The transportation system in Beaverton should be monitored to make sure that land uses in the plan are balanced with transportation system capacity. This TSP balances needs with the forecasted 2020 land uses.

For transportation forecasting, the land use data is stratified into geographical areas called transportation analysis zones (TAZs), which represent the sources of vehicle trip generation. There are 107 Metro TAZs within the Beaverton TSP Update study area. These 107 TAZs were subdivided, as part of this plan, into 391 TAZs to more specifically represent land use in Beaverton. The disaggregated model zone boundaries are shown in Figure 4-1.

Metro Area Transportation Model

A determination of future traffic system needs in Beaverton requires the ability to accurately forecast travel demand resulting from estimates of future population and employment for the City. The objective of the transportation planning process is to provide the information necessary for making decisions on when and where improvements should be made to the transportation system to meet travel demand as developed in an urban area travel demand model as part of the Regional Transportation Plan update process. Metro uses EMME/2, a computer based program for transportation planning, to process the large amounts of data for the Portland Metropolitan area. For the Beaverton TSP, the eastern Washington County area was evaluated at a level of detail consistent with Washington County travel forecast efforts for the 2020 travel through a traversal process and substantially more detail added into the Beaverton area.

Traffic forecasting can be divided into several distinct but integrated components that represent the logical sequence of travel behavior (Figure 4-2). These components and their general order in the traffic forecasting process are as follows:

- Trip Generation
- Trip Distribution
- Mode Choice
- Traffic Assignment

The initial roadway network used in the traffic model was the existing streets and roadways. Future 2020 land use scenarios were tested and roadway improvements were added to mitigate the impacts of motor vehicle traffic growth, using the RTP Priority System and the 2015 Beaverton TSP improvements as a starting basis. Improvements in each of these plans (the RTP and TSP) were validated in the study process. Figures 1-4 and 1-5 show the needed RTP and 2015 Beaverton TSP improvements, respectively. Table 1-7 lists the RTP Priority System and the 2015 Beaverton TSP motor vehicle improvements. Forecasts of PM peak period traffic flows were produced for every major roadway segment within Beaverton. Traffic volumes were projected on all arterials and most collector streets. Some local streets were included in the model, but many are represented by centroid connectors in the model process.

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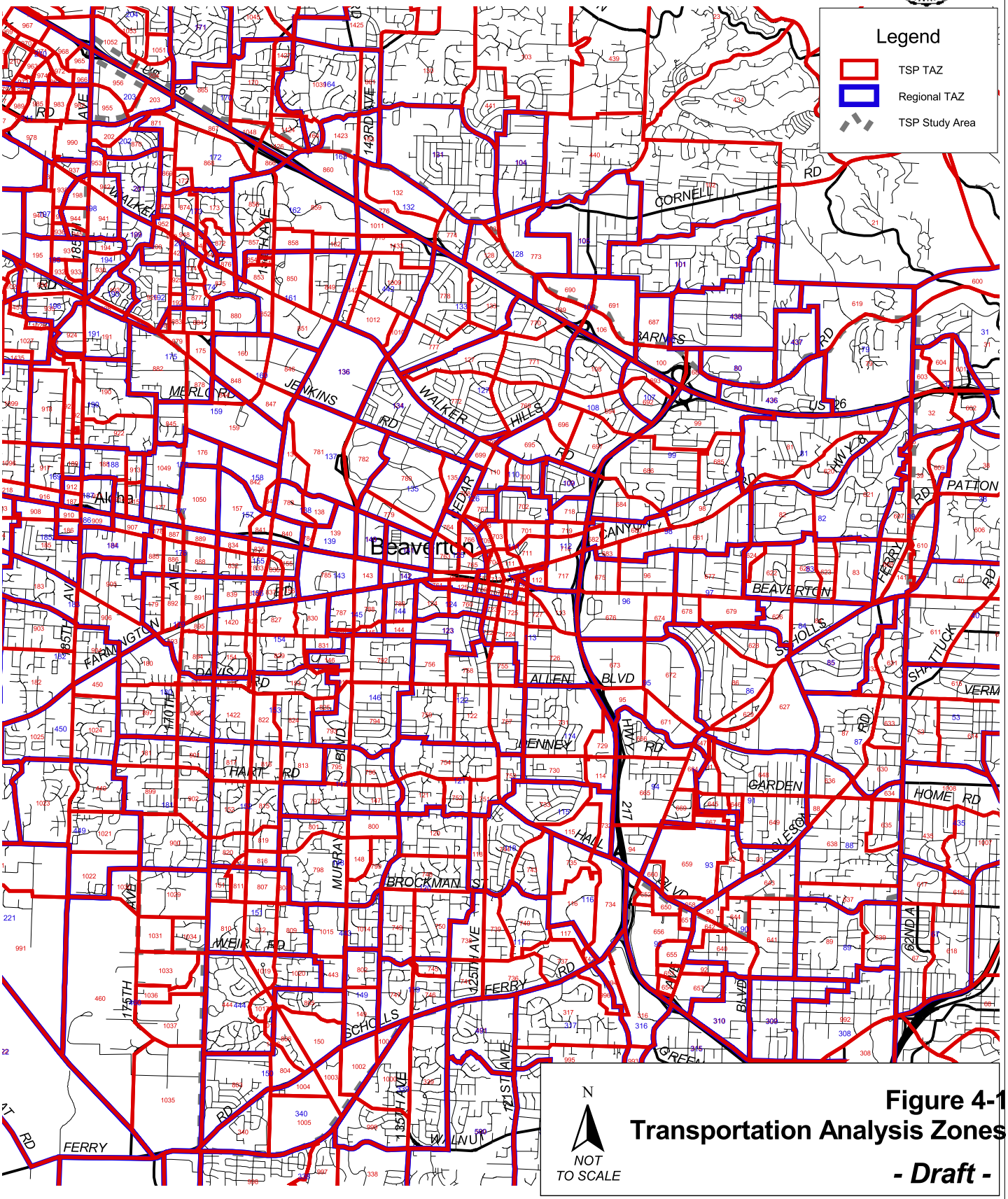


Figure 4-1
Transportation Analysis Zones
- Draft -

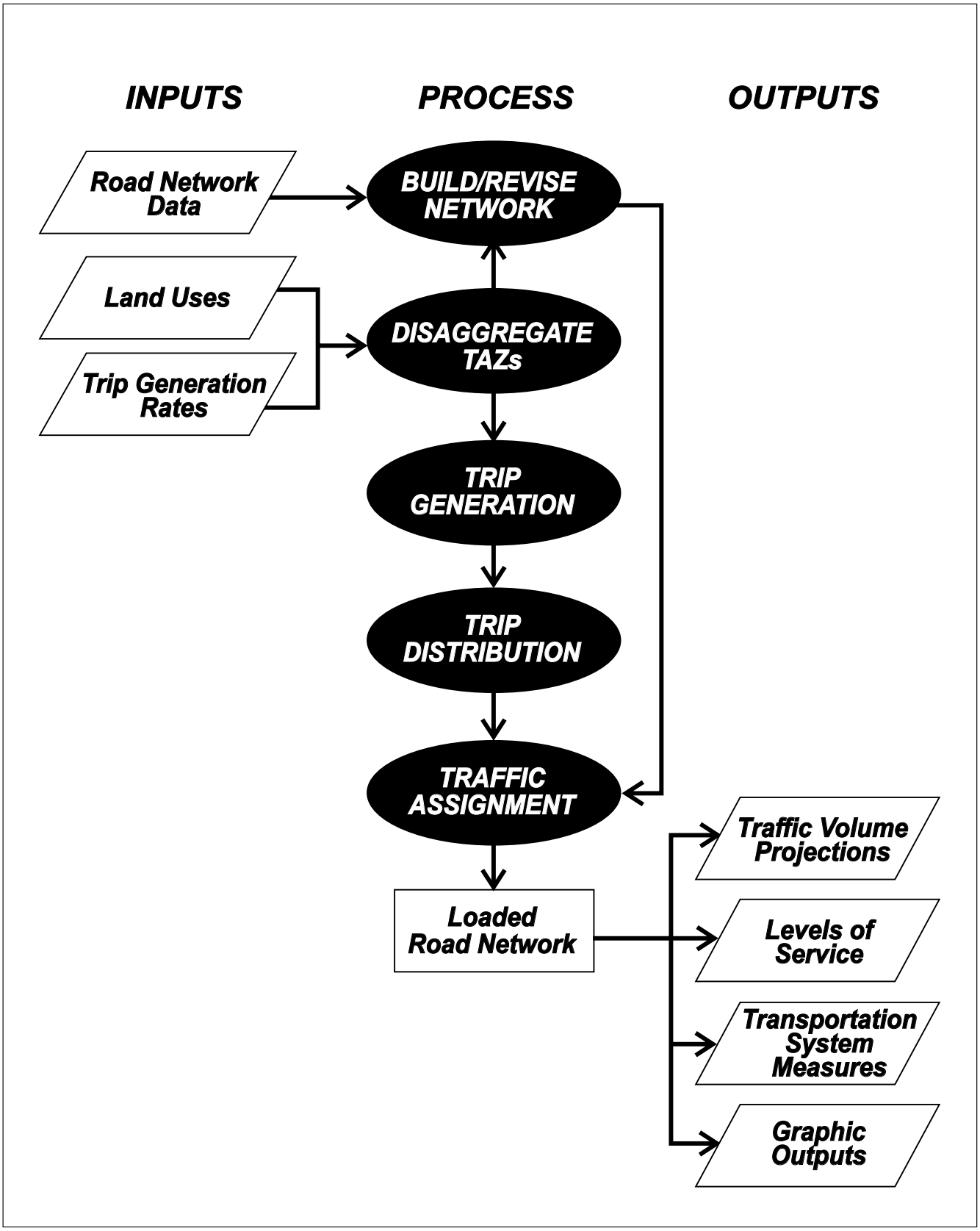


Figure 4-2
MODEL PROCESS

Trip Generation

The trip generation process translates land use quantities (number of dwelling units, retail, and other employment) into vehicle trip ends (number of vehicles entering or leaving a TAZ or sub-TAZ) using trip generation rates established during the model verification process. The Metro trip generation process is elaborate, entailing detailed trip characteristics for various types of housing, retail employment, non-retail employment, and special activities. Typically, most traffic impact studies rely on the Institute of Transportation Engineers (ITE) research for analysis[1]. The model process is tailored to variations in travel characteristics and activities in the region. For reference, Table 4-2 provides a summary of the approximate average evening peak hour trip rates used in the Metro model. These are averaged over a broad area and thus, are different than driveway counts represented by ITE. This data provides a reference for the trip generation process used in the model.

Table 4-2
Approximate Average PM Peak Period Trip Rates Used in Metro Model

	Average Trip Rate/Unit		
Unit	**In**	**Out**	**Total**
Household (HH)	0.43	0.19	0.62
Retail Employee (RET)	0.78	0.69	1.47
Other Employee (OTH)	0.07	0.29	0.36

Source: DKS/Metro

Table 4-3 illustrates the estimated growth in vehicle trips generated within the Beaverton area (the area shown in Figure 4-1) during the PM peak period (2-hr peak) between 1994 and 2020. It indicates that vehicle trips in Beaverton would grow by approximately 50 percent between 1994 and 2020 if the land develops according to Metro's 2020 land use assumptions. Assuming a 26-year horizon to the 2020 scenario, this represents annualized growth rate of about 1.5 percent per year.

Table 4-3
Existing and Future Projected Vehicle Trip Generation
PM Peak 2-Hour Period Vehicle Trips

	1994 Trips	2020 Trips
Beaverton TSP study area	148,700	219,400

[1] *Trip Generation Manual*, 6th Edition, Institute of Transportation Engineers, 1997.

Trip Distribution

This step estimates how many trips travel from one zone in the model to any other zone. Distribution is based on the number of trip ends generated in each zone pair, and on factors that relate the likelihood of travel between any two zones to the travel time between zones. In projecting long-range future traffic volumes, it is important to consider potential changes in regional travel patterns. Although the locations and amounts of traffic generation in Beaverton are essentially a function of future land use in the city, the distribution of trips is influenced by regional growth, particularly in neighboring areas such as Portland and Hillsboro as well as unincorporated areas to the north, south, and west of Beaverton. External trips (trips that have either an origin and not a destination in Beaverton or have a destination but not an origin in Beaverton) and through trips (trips that pass through Beaverton and have neither an origin nor a destination there) were projected using trip distribution patterns based upon census data and traffic counts performed at gateways into the Metro area Urban Growth Boundary (UGB) calibration.

Mode Choice

This is the step where it is determined how many trips will be by various modes (single-occupant vehicle, transit, carpool, pedestrian, bicycle, etc.). The 1994 mode splits are incorporated into the base model and adjustments to that mode split may be made for the future scenario, depending on any expected changes in transit or carpool use. These considerations are built into the forecasts used for 2020.

Based upon analysis of the forecasted mode choice in 2020, an analysis was performed to determine the level of non-single occupant vehicle (SOV) mode share in Beaverton. The travel model provides estimates of the various modes of travel that can be generally assessed at the transportation analysis zone level. Figures 4-5 to 4-7 summarize the level of non-SOV mode share estimated for 2020 using the regional travel demand forecast model in comparison to the modal targets established in the RTP through Table 1-3 of the RTP. Generally the areas served by light rail transit and frequent bus service have the highest levels of non-SOV mode use. Table 4-8 summarizes the non-SOV mode share performance in 2020 for the two-hour PM peak in comparison to the 2040 RTP targets. Overall, the 2040 modal targets for the regional center/town center areas is nearly met in 2020 and is within the lower end of the target range for other land use designations.

Traffic Assignment

In this process, trips from one zone to another are assigned to specific travel routes in the network, and resulting trip volumes are accumulated on links of the network until all trips are assigned.

Network travel times are updated to reflect the congestion effects of the traffic assigned through an equilibrium process. Congested travel times are estimated using what are called "volume-delay functions" in EMME/2. There are different forms of volume/delay functions, all of which

attempt to simulate the impact of congestion on travel times (greater delay) as traffic volume increases. The volume-delay functions take into account the specific characteristics of each roadway link, such as capacity, speed and facility type. This allows the model to reflect conditions somewhat similar to driver behavior.

Model Verification

The base 1994 modeled traffic volumes were compared against actual traffic volume counts across screenlines, on key arterials, and at key intersections. Most arterial traffic volumes meet screenline tolerances for forecast adequacy. Based on this performance, the model was used for future forecasting and assessment of circulation change.

Model Application to Beaverton

Intersection turn movements were extracted from the model at key intersections for both the base year 1994 and forecast year 2020 scenarios. These intersection turn movements were not used directly, but a portion of the increment of the year 2020 turn movements over the 1994 turn movements was applied (added) to existing (actual 2000) turn movement counts in Beaverton.
A post processing technique is utilized to refine model travel forecasts to the volume forecasts utilized for 2020 intersection analysis. The turn movement volumes used for future year intersection analysis can be found in the technical appendix for the TSP.

Forecasted Future Capacity Deficiencies

The base case analysis for the forecasted 2020 growth was based on the RTP Committed Funding scenario. This scenario only includes transportation system improvements that are expected to be constructed/implemented with the current funding levels. Figure 4-3 shows the forecasted demand/capacity on roadways with the Beaverton 2020 TSP Study Area for the committed scenario. As shown in the figure, the committed scenario transportation system does not have adequate roadway capacity to serve the expected future travel needs. Demand/Capacity (D/C) ratios exceed 1.0 system wide. Table 4-4 lists the forecasted D/C ratios on major roadways in the TSP study area that would exceed standards. To meet performance standards and serve future growth, the future transportation system needs significant multi-modal improvements and strategies to manage the forecasted travel demand.

Table 4-4: Forecasted 2020 D/C ratios (Committed Scenario) 2-Hour

Roadway Section	Forecasted D/C ratio
US 26 from ORE 217 to Canyon Road	1.06
US 26 from Murray Boulevard to Cornell Road	1.10
Bethany Boulevard from US 26 to West Union	1.21
Cornell Road from 143rd Avenue to Saltzman Road	1.14
Walker Road from ORE 217 to Cedar Hills Boulevard*	1.02
Walker Road from Cedar Hills Boulevard to 158th Avenue	1.28
Walker Road from 170th Avenue to 185th Avenue	1.14
Jenkins Road from Murray Boulevard to 158th Avenue	1.96
TV Highway from Watson Boulevard to 170th Avenue	1.36
Farmington Road from Cedar Hills Boulevard to 170th Avenue	1.24
Allen Boulevard from ORE 217 to Murray Boulevard	1.34
Greenway from Hall Boulevard to 125th Avenue	1.21
Scholls Ferry Road from Laurelwood Avenue to Denney Road	1.16
Scholls Ferry Road from ORE 217 to 125th Avenue	1.34
170th Avenue from Bany Road to Merlo Road	1.38
Murray Boulevard from Jenkins Road to Brockman Street	1.40
Cedar Hills Boulevard from Walker Road to Hall Boulevard	1.18
ORE 217 from BH Highway to Scholls Ferry Road	1.14

*Based on Priority Scenario with Walker west of Cedar Hills as 5 lanes

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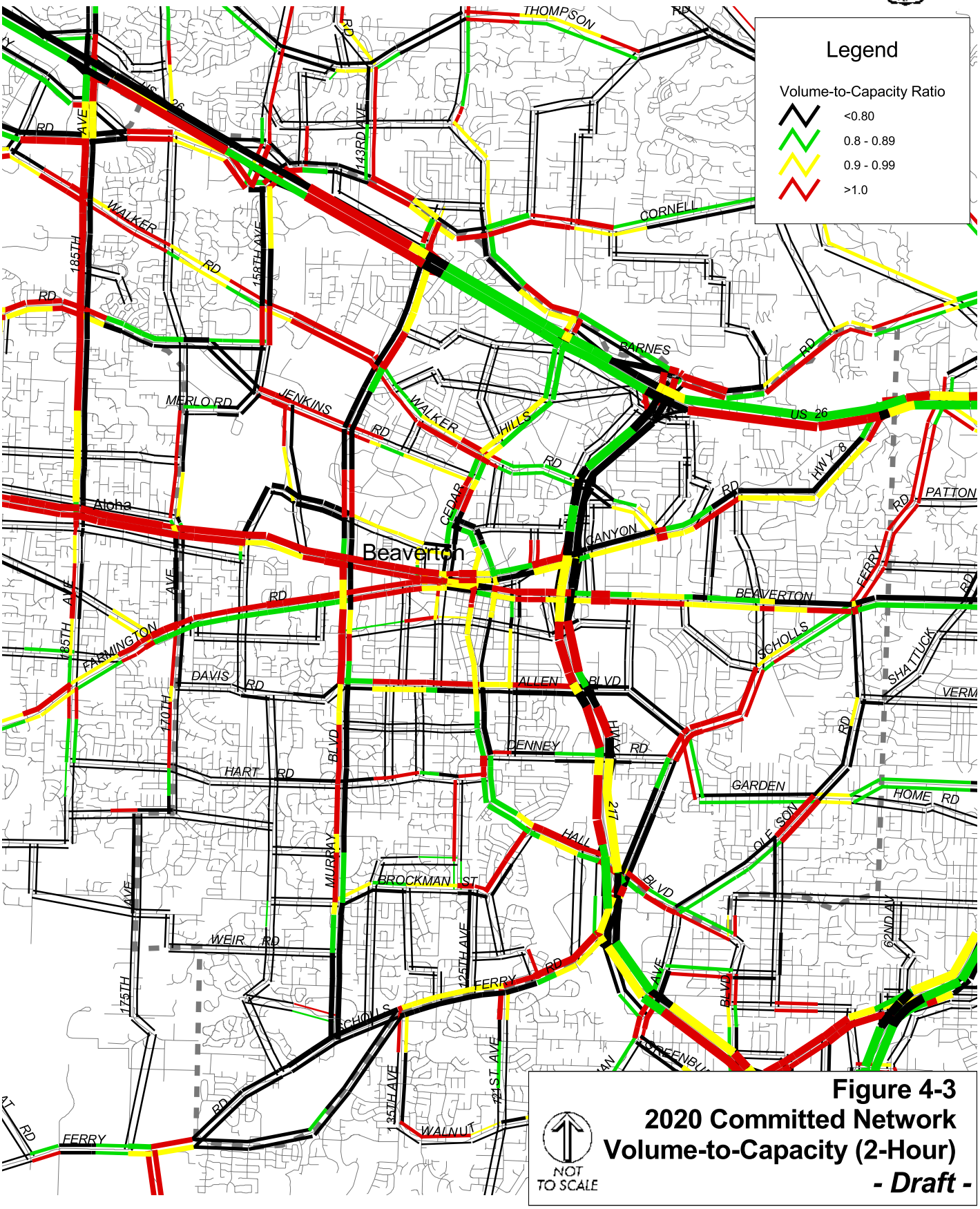


Figure 4-3
2020 Committed Network
Volume-to-Capacity (2-Hour)
- Draft -

ALTERNATIVE/OPTIONS FOR ADDRESSING FUTURE DEFICIENCIES

The transportation system needs in Beaverton were determined for existing and future conditions. The extent and nature of the multi-modal improvements for Beaverton are significant. The impact of future growth would be severe without significant investment in transportation improvements. This section outlines the type of improvements that would be necessary as part of a long-range master plan. Phasing of implementation will be necessary since all of the improvements cannot be done at once. This will require prioritization of projects and periodic updating to reflect current needs. Most importantly, it should be understood that the improvements outlined in the following sections are a guide to managing growth in Beaverton as it occurs over the next 20 years.

Transportation System Management (TSM) / Transportation Demand Management (TDM)

Transportation System Management
Transportation System Management (TSM) focuses on low cost strategies to enhance operational performance of the transportation system by seeking solutions to immediate transportation problems, finding ways to better manage transportation, maximizing urban mobility, and treating all modes of travel as a coordinated system. These types of measures include such things as signal improvements, ramp metering, traffic calming, access management, intelligent transportation solutions (ITS) and programs that enhance and smooth transit operations. Typically, the most significant measures that can provide tangible benefits to the traveling public are traffic signal coordination and systems.

TSM measures focus primarily on region wide improvements, however there are a number of TSM measures that could be used in a smaller scale environment such as the Beaverton area. The following TSM measures list summarizes strategies that could be appropriate for the Beaverton 2020 TSP study area.

- Traffic monitoring and Surveillance
- Signal coordination and optimization
- Signal priority
- Information availability
- Incident management

Traffic Monitoring and Surveillance

Traditionally, the solution to most congestion problems was to build more roadways or widen the existing facilities. Most recently, it has been realized that urban congestion cannot be managed

by simply building roadway capacity. Better management of the existing transportation network is necessary to help reduce congestion. This also means coordinating among various agencies in the area to create a seamless transportation network.

As a monitoring program, the City of Beaverton and Washington County routinely collect traffic volume data in the Beaverton area. This data is then used as a tool to compare historical growth and determine which transportation corridors in the area are being utilized. This information is useful from a growth perspective, however it is difficult to use this data to help enhance the existing transportation environment on a day-by-day basis.

The use of closed circuit television cameras (CCTV) and vehicle detection systems could be used to help survey the transportation network during peak hours of congestion. Adjustments to signal timing can be made from the central control room to help improve traffic flow and decrease delay. Benefits of traffic monitoring and surveillance include reduced congestion, reduced delay, reduced travel time, faster and more accurate identification of locations of incidents, development of specific signal timing plans based on historic trends and reductions in pollutants and wasted fuel.

Signal Coordination and Optimization

Traffic monitoring and surveillance can only produce a certain amount of enhanced service along a corridor. As future growth occurs, congestion is due to increase. Traffic signal systems that were adequate in the past dealing with AM and PM peak hours will need to adapt to the changing environment and deal with additional time periods of congestion.

The state-of-the-art traffic signal systems, using a central computer to communicate and coordinate timing plans, have proven to produce substantial benefits in reducing congestion and travel time while increasing travel speeds. In the Portland area, examples of this benefit has been seen on such corridors as 82nd Avenue, 122nd Avenue, Martin Luther King Jr. Boulevard and SW Naito Parkway where improved signal timing reduced travel times anywhere from 10% to 25% during peak periods.[2]

The addition of signal optimization helps to maximize the total cycle length of a signal to provide optimal timing patterns for both the main arterial and the side street traffic. This optimization can help to skip side street cycles if there are no vehicles present and help to increase the "green time" of a signal for a major movement. Optimization can provide additional reliability and efficiency for the transportation network.

[2] City of Portland, *Intelligent Transportation System Implementation Plan*, June 1997.

Signal Priority

The provision of signal priority works for both transit vehicles and emergency vehicles. Both operate on the same principles, which are improving the reliability and speed the vehicles. Clearly they serve two different purposes, but the idea benefits mobility for both.

Signal priority is achieved by establishing a communication between the approaching vehicle with the signal. Once the communication between the two is made, the approaching vehicle will direct the traffic signal to lengthen the green time for the light (assuming it is safe to do so) and allow for a "priority" through the intersection. This priority is done only when it will not cause significant impact at the intersection.

Studies indicate that with signal priority transit travel times have decreased from 15% to 18 %, while service reliability has increased 12% to 23% for on-time performance.[3] These improvements can help cost effectiveness for transit operations.

Signal priority can also include "smart recovery" at intersections that currently operate in conjunction with LRT. Once an LRT vehicle has passed through the intersection, the signal phasing would "recover" to the same point it was at before the LRT vehicle passed through. This could reduce the potential for delays at intersections due to LRT.

Information Availability

An uninformed public can make inefficient transportation choices that could place a strain on the limited available capacity of a transportation network. This could create more congestion in an area that is already highly congested. By providing travelers with real-time information, the ability to make a more informed and efficient transportation decision is available.

The variety of information services available today include hand-held devices such as pagers, cell phones and personal data assistants (PDAs), as well as transit kiosks, personalized email reports, radio, tv and the internet. All of these devices are aimed at providing the traveler the best available information for making transportation choices.

There is another type of information availability to help travelers along the roadway. These are message signs that help inform a traveler of delays and/or help the traveler make an informed decision on a travel route. The first type of sign is a variable message sign (VMS). A VMS is a stationary sign that can display various messages. The second type of sign is a changeable message sign (CMS). This type of sign is mobile and can be placed at any location along a corridor to display information.

Currently, there are cameras located on US 26 and ORE 217 that show the conditions on the

[3] *Intelligent transportation system initiatives in Clark County: VAST Program*, January 2001.

freeways. These cameras are Internet accessible and help monitor traffic conditions and inform users of traffic conditions.

Incident Management

Typically incident response is focused on freeways. However, there is also a clear need for incident response on arterials. The time to respond to incidents in an urban area can dramatically affect the level of congestion on a corridor.

Incident management includes detection, verification, response, site management, traffic management, clearance time and recovery. Each of these steps takes time, during which the transportation operations along the corridor decrease. Research indicates that effective incident management has the potential to reduce response times by 40% and decrease fatalities by 10% in urban areas.[4] In addition, incident management has the potential to reduce delay to users and reduce emissions from vehicles.

TSM Summary

All of the previously mentioned measures of TSM can work together in a transportation environment to help reduce congestion and decrease travel times for travelers. Table 4-5 summarizes the RTP projects that support Beaverton TSM. Beyond the RTP designated TSM projects, the City of Beaverton should coordinate with Tri-Met, ODOT, and Washington County in providing signal priority at signalized intersections along rapid or frequent bus routes (TV Highway and Cedar Hills/Hall corridor – approximately 50 intersections) to increase transit efficiently, reduce transit travel times, and promote non-SOV person trips. Signal priority should be activated for transit vehicles that are operating behind schedule. The implementation of additional strategies should be on a case-by-case basis and evaluated as to the effectiveness.

[4] *Intelligent Transportation System Initiatives in Clark County: VAST Program*, January 2001.

Table 4-5: RTP Projects supporting TSM

RTP Project Number	Description	Estimated Cost	Projected Implementation
3016	**Washington County:** Acquire hardware for new traffic operations center and conduct needs analysis	$1,000,000	2000-2005
3061	**TV Highway:** Interconnect signals from 209th Avenue to ORE 217	$1,500,000	2006-2010
3063	**Murray Boulevard:** Signal coordination from TV Highway to Allen	$50,000	2000-2005
6012	**Western Avenue:** Implement TSM improvements between Allen and Canyon Road and extend Western Avenue north to Canyon Road new Walker	$2,500,000	2011-2020
6025	**Scholls Ferry Road:** Implement appropriate TSM strategies, from ORE 217 to 125th Avenue, such as signal interconnects, signal re-timing and channelization to improve traffic flows	$500,000	2000-2005

Source: *Regional Transportation Plan,* Metro, August 2000.

Transportation Demand Management

Transportation Demand Management (TDM) is the general term used to describe any action that removes single occupant vehicle trips from the roadway network during peak travel demand periods. As growth in the Beaverton area occurs, the number of vehicle trips and travel demand in the area will also increase. The ability to change a users travel behavior and provide alternative mode choices will help accommodate this growth.

Generally, TDM focuses on reducing vehicle miles traveled and promoting alternative modes of travel for large employers of an area. This is due in part to the Employee Commute Options (ECO) rules that were passed by the Oregon Legislature in 1993 to help protect the health of Portland area residents from air pollution and to ensure that the area complied with the Federal Clean Air Act.[5]

Research has shown that a comprehensive set of complementary policies implemented over a large geographic area can have an effect on the number of vehicle miles traveled to/from that area.[6]

[5] Oregon Administrative Rules, Chapter 340, Division 30.

[6] *The Potential for Land Use Demand Management Policies to Reduce Automobile Trips*, ODOT, by ECO Northwest, June 1992.

However, the same research indicates that in order for TDM measures to be effective, they should go beyond the low-cost, uncontroversial measures commonly used such as carpooling, transportation coordinators/associations, priority parking spaces, etc.

The more effective TDM measures include elements related to parking and congestion pricing, improved services for alternative modes of travel, and other market-based measures.

However, TDM includes a wide variety of actions that are specifically tailored to the individual needs of an area. Table 4-6 provides a list of several strategies outlined in the ECO program that could be applicable to the Beaverton area.

Table 4-6
Transportation Demand Management Strategies

Strategy	Description	Potential Trip Reduction
Telecommuting	Employees perform regular work duties at home or at a work center closer to home, rather than commuting from home to work. This can be full time or on selected workdays. This can require computer equipment to be most effective.	82-91% (Full Time) 14-36% (1-2 day/wk)
Compressed Work Week	Schedule where employees work their regular scheduled number of hours in fewer days per week.	7-9% (9day/80hr) 16-18% (4day/40hr) 32-36% (3day/36hr)
Transit Pass Subsidy	For employees who take transit to work on a regular basis, the employer pays for all or part of the cost of a monthly transit pass.	19-32% (full subsidy, high transit service) 2-3% (half subsidy, medium transit service)
Cash Out Employee Parking	An employer that has been subsidizing parking (free parking) discontinues the subsidy and charges all employees for parking. An amount equivalent to the previous subsidy is then provided to each employee, who then can decide which mode of travel to use.	8-20% (high transit service available) 5-9% (medium transit services available) 2-4% (low transit services available)
Reduced Parking Cost for HOVs	Parking costs charged to employees are reduced for high occupancy vehicles (HOV) such as carpools and vanpools.	1-3%
Alternative Mode Subsidy	For employees that commute to work by modes other than driving alone, the employer provides a monetary bonus to the employee.	21-34% (full subsidy of cost, high alternative modes) 2-4% (half subsidy of cost, medium alternative modes)
Bicycle Program	Provides support services to those employees that bicycle	0-10%

Strategy	Description	Potential Trip Reduction
	to work. Examples include: safe/secure bicycle storage, shower facilities and subsidy of commute bicycle purchase.	
On-site Rideshare Matching for HOVs	Employees who are interested in carpooling or vanpooling provide information to a transportation coordinator regarding their work hours, availability of a vehicle and place of residence. The coordinator then matches employees who can reasonably rideshare together.	1-2%
Provide Vanpools	Employees that live near each other are organized into a vanpool for their trip to work. The employer may subsidize the cost of operation and maintaining the van.	15-25% (company provided van with fee) 30-40% (company subsidized van)
Gift/Awards for Alternative Mode Use	Employees are offered the opportunity to receive a gift or an award for using modes other than driving alone.	0-3%
Walking Program	Provide support services for those who walk to work. This could include buying walking shoes or providing lockers and showers.	0-3%
Company Cars for Business Travel	Employees are allowed to use company cars for business-related travel during the day	0-1%
Guaranteed Ride Home Program	A company owned or leased vehicle or taxi fare is provided in the case of an emergency for employees that use alternative modes.	1-3%
Time off with Pay for Alternative Mode Use	Employees are offered time off with pay as an incentive to use alternative modes.	1-2%

Source: *Guidance for Estimating Trip Reductions from Commute Options*, Oregon Department of Environmental Quality, August 1996.

Redevelopment in the Beaverton area will also allow for TDM friendly development. Setting TDM goals and policies for new development will be necessary to help implement TDM measures in the future.

With many regional trips destined to, or traveling through, the Beaverton area, region wide TDM measures should help to reduce congestion. Metro has established non-SOV (Single Occupancy Vehicle) mode share targets by 2040 for regional centers (similar to Gateway). These targets may also serve as performance measures for areas that have been designated as "Areas of Special

Concern" (Beaverton Regional Center is classified by Metro as this type of area).[7] The 2040 non-SOV model target for regional centers, town centers, LRT communities, main streets, and corridors is 45-55%.[8]

The Metro 2020 Regional Demand Model provides an analysis tool for monitoring non-SOV trip percentages between the various RTP funding scenarios. The forecasted non-SOV trip percentages take into account all RTP improvement projects (including transit, pedestrian, and bicycle system improvements), as well as the TAZ performance factors listed in Table 4-7 (see Appendix G for specific transit route frequency improvements). Parking factors are based on a ratio of parking costs in comparison to a South/North Draft Environmental Impact Study (DEIS) parking survey (for example, in the RTP Priority System a person parking in the Beaverton Regional Center would pay 30% more than a person parking in the Washinton Square Regional Center). Transit Pass factors represent the amount of full transit fare that a transit rider is expected to pay (considering ECO rule and discount downtown fares). Fareless areas assume that fareless transit areas will be developed in the identified 2040 concept areas.

Table 4-7: TDM Assumptions for 2040 Land Use Designations in Beaverton

(P) 2020 Preferred System
(S) 2020 Strategic/Priority System
(FC) 2020 Existing Resources System (roughly equivalent to the committed system)

2040 Grouping	Group Characteristics	Parking Factors			Transit Pass Factor			Fareless Areas		
		P	S	FC	P	S	FC	P	S	FC
Regional Centers - Tier 1 Beaverton	Planned high employment and housing density, with highest level of access by all modes. LRT exists and current land uses approach planned mix and densities.	1.60	1.20	0.80	70%	75%	80%	X	X	X
Regional Centers - Tier 2 Washington Square	Planned high employment and housing density, with highest level of access by all modes; planned LRT. Current land uses do not reflect planned mix and densities.	1.22	0.92	0.60	85%	90%	95%	X	X	
Station Communities Tier 1 Westside Corridor	High housing density mixed with commercial services; highest level of access for transit, bike and walk; existing LRT.	1.60	1.20	0.80	70%	75%	80%			
Town Centers - Tier 2 West Portland Raleigh Hills Hillsdale Sunset	Moderate housing and employment density planned, with high level of access by all modes. Currently has some mix of uses, moderately connected street system and some transit. Existing topography or physical barriers may limit bike and	0.72	0.54	0.36	90%	95%	100%			

[7] Based on the *2000 Metro Regional Transportation Plan*, Ordinance No. 00-869A (August 10, 2000), page 1-32.

[8] Based on the *2000 Metro Regional Transportation Plan*, Ordinance No. 00-869A (August 10, 2000), page 1-62.

2040 Grouping	Group Characteristics	Parking Factors			Transit Pass Factor			Fareless Areas		
	pedestrian travel.									
Town Centers - Tier 3 Farmington Cedar Mill Tannasbourne	Moderate housing and employment density planned, with high level of access by all modes. Currently has modest mix of uses, poorly connected street system and poor transit. Existing topography or physical barriers may limit bike and pedestrian travel.	0.55	0.41	0.28	100%	100%	100%			
Town Centers - Tier 4 Bethany Murrayhill	Moderate housing and employment density planned, with high level of access by all modes. Currently undeveloped or developing urban uses, with skeletal street system and poor transit. Existing topography or physical barriers may limit bike and pedestrian travel.	0.36	0.27	0.18	100%	100%	100%			
Mainstreets - Tier 2 Remaining Region	Moderate housing and employment density planned, with high level of access by all modes. Currently has some mix of uses, moderate connectivity and some transit.	0.72	0.54	0.36	100%	100%	100%			
Corridors Full Region	Moderate housing and employment density planned, with high level of access by all modes. Currently has modest mix of uses, moderate connectivity and some transit.	None	None	None	100%	100%	100%			
Inner Neighborhoods Full Region	Low density housing planned, with moderate level of access by all modes. Currently has moderate connectivity and some transit.	None	None	None	100%	100%	100%			
Outer Neighborhoods - Tier 1 Current Urban Areas	Low density housing planned, with moderate level of access by all modes. Currently has poorly connected street system and little transit.	None	None	None	100%	100%	100%			
Employment Areas Full Region	Low density employment planned, with moderate level of access by all modes. Currently has poorly connected street system and limited transit.	None	None	None	100%	100%	100%			
Industrial Areas - Tier 2 Beaverton Sunset	Low density employment planned, with high level of access by rail and truck freight, and moderate access by other modes. Currently has developing street system and poor transit.	None	None	None	100%	100%	100%			

The RTP (in RTP Table 1-3) outlines non-SOV (Single Occupancy Vehicle) targets for the year 2040 for the Portalnd region. Analysis of the Metro 2020 forecast model indicates non-SOV trip percentages for the Beaverton Area (summarized in Table 4-8). The 2020 Priority system forecasted rates indicate that the significant investment in transportation improvements will, in general, achieve a three percent reduction in SOV trips in the Beaverton area, compared to the committed funding scenario. Figures 4-4 to 4-6 show the non-SOV trip percentages by Metro TAZ for the committed, priority, and priority minus committed scenarios.

Table 4-8:
Forecasted non-SOV shares in the Beaverton TSP Study Area

Area	2020 RTP Committed System Model Rate	2020 RTP Priority System Model Rate	2040 Metro Goal
Overall TSP Study Area	33%	36%	N/A
2040 Design Type: ▪ Regional Centers ▪ Town Centers ▪ LRT Communities ▪ Main Streets ▪ Corridors	34%	37%	45-55%
2040 Design Type: ▪ Industrial areas ▪ Intermodal facilities ▪ Employment areas ▪ Inner neighborhoods ▪ Outer neighborhoods	32%	35%	40-45%

Source: 2020 Metro Regional Travel Demand Model
2000 Metro Regional Transportation Plan

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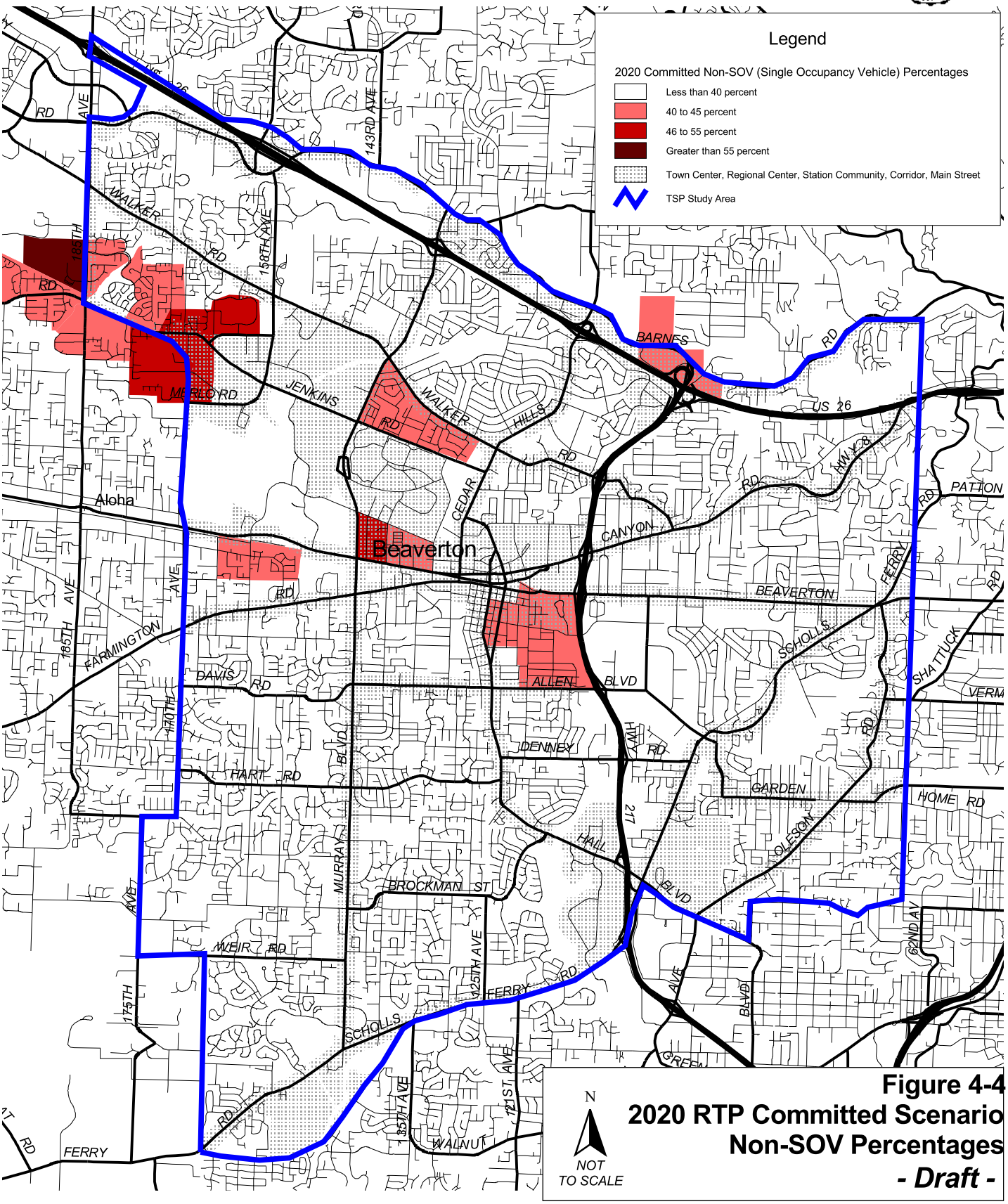


Figure 4-4
2020 RTP Committed Scenario Non-SOV Percentages
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DKS *Associates*

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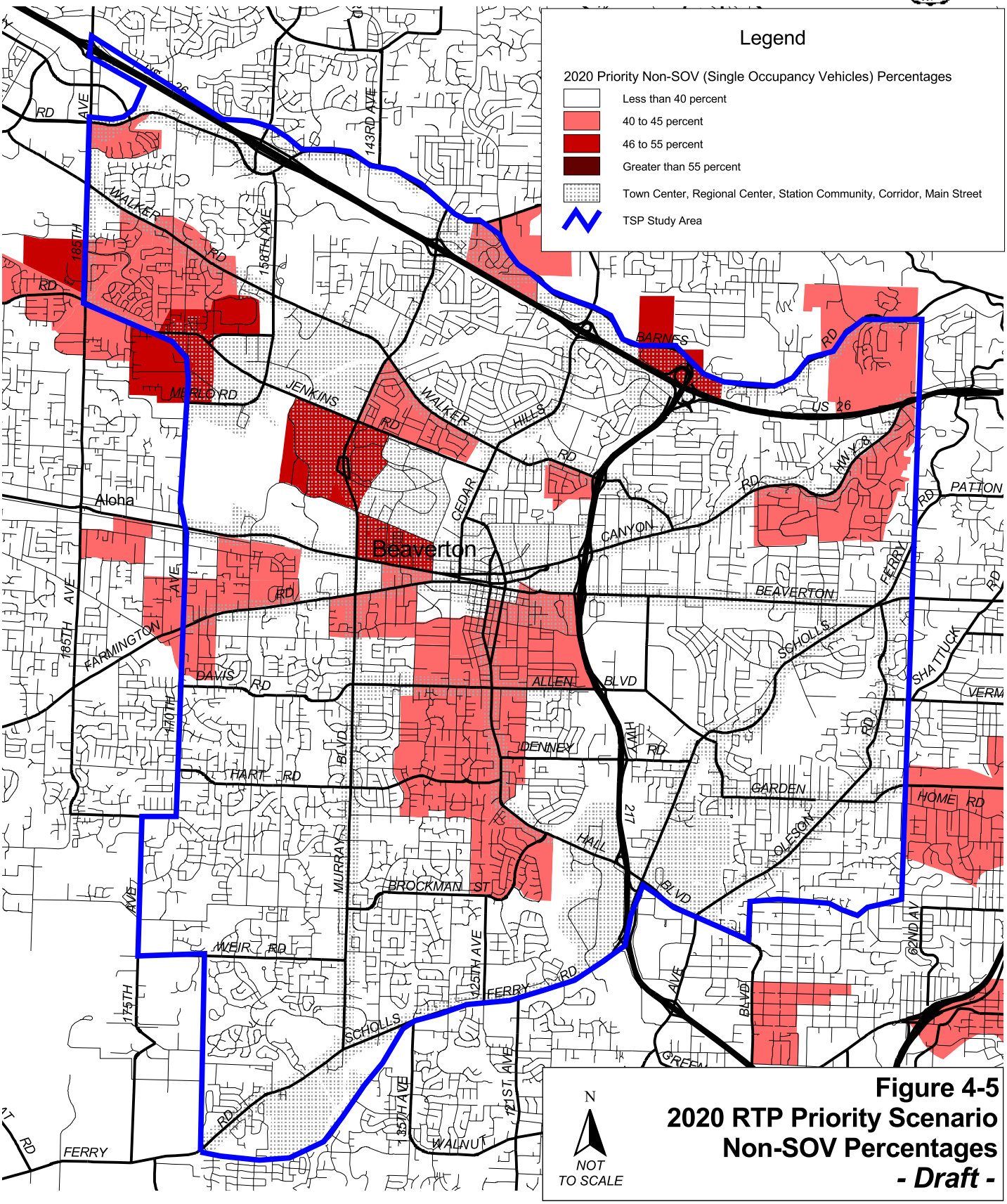


Figure 4-5
2020 RTP Priority Scenario
Non-SOV Percentages
- Draft -

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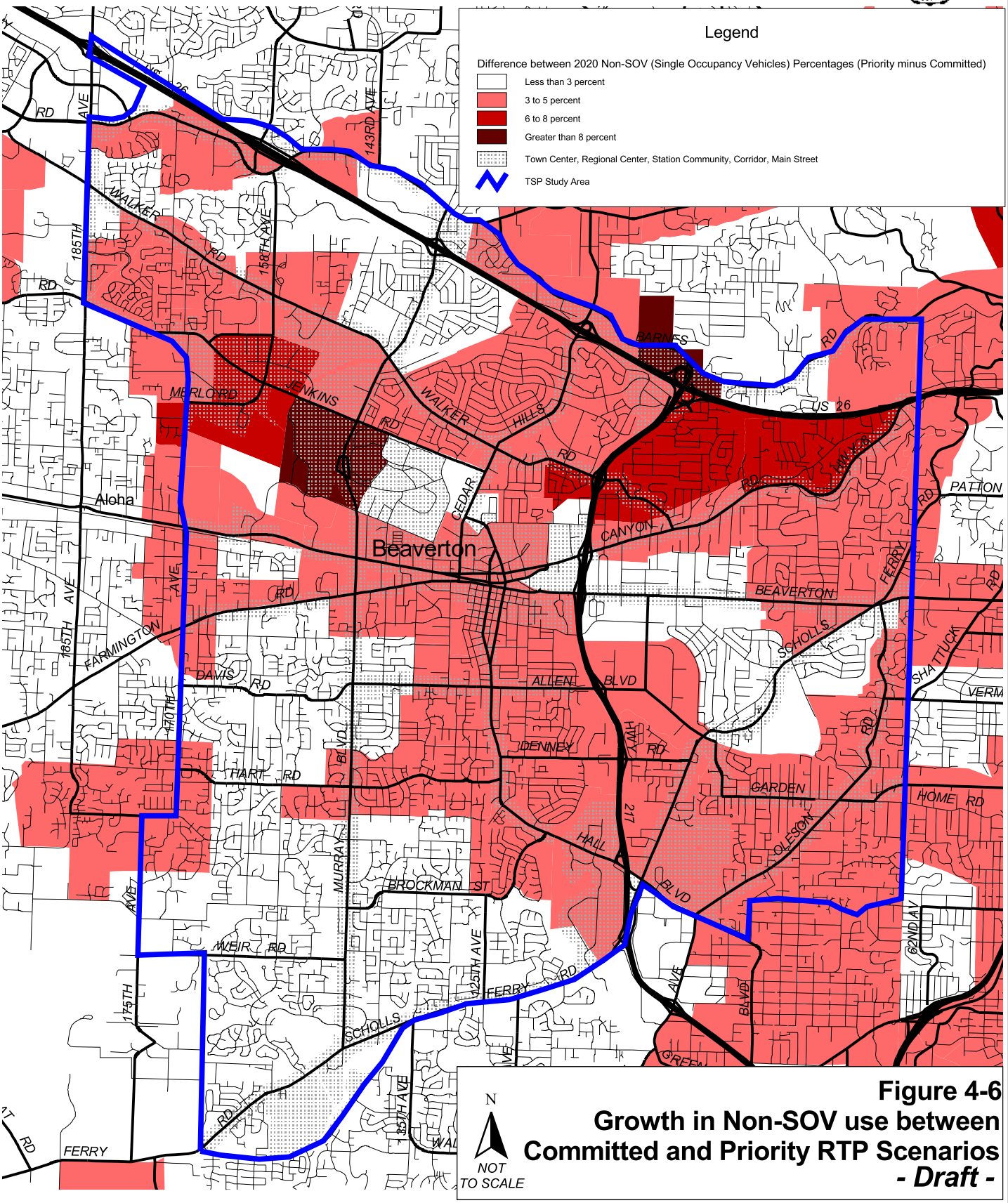


Figure 4-6
Growth in Non-SOV use between Committed and Priority RTP Scenarios
- Draft -

The forecasted non-SOV percentages can only be achieved with significant improvements to the transportation system and implementation of trip reduction strategies. The City of Beaverton should coordinate with Washington County, the Westside Transportation Alliance, and Tri-Met to implement strategies to esure TDM assumptions in the RTP are implemented, including development of a downtown fareless transit area and reduced transit fare program and implementation of the downtown connectivity plan and regional center parking plan. The City of Beaverton, Washington County, and Tri-Met should coordinate to implement the pedestrian, bicycle, and transit system improvements, which offer alternative modes of travel. The following City of Beaverton goals and policies, which have been revised in the TSP Update process, pertain specifically to making progress toward achieving non-SOV modal targets:

6.2.4. **Goal**: An efficient transportation system that reduces the percentage of trips by single occupant vehicles, reduces the number and length of trips, limits congestion, and improves air quality.

Policies:

a) Support and implement trip reduction strategies developed regionally, including employment, tourist, and recreational trip reduction programs.

***Actions**: Encourage implementation of travel demand management programs. Work to shift traffic to off-peak travel hours. Coordinate trip reduction strategies with Washington County, Metro, Westside Transportation Alliance, Oregon Department of Transportation, Tri-Met, neighboring cities, and the Oregon Department of Environmental Quality. Seek to raise PM peak average vehicle occupancy (AVO) to 1.3 AVO or more in the evening peak and/or move 50 percent or more of the standard evening peak trip generation outside the peak hour. Educate business groups, employees, and residents about trip reduction strategies. Work with business groups, residents, and employees to develop and implement travel demand management programs. Support and implement strategies that achieve progress toward attaining Metro's 2040 Regional Non-Single Occupant Vehicle Modal Targets. 2040 Non-SOV Modal Targets are as follows:*

Beaverton Regional Center: 45-55%;
Murray/Scholls Town Center: 45-55%;
Beaverton Main Streets, Station Communities, and Corridors: 45-55%
Beaverton Industrial Areas, Intermodal Facilities, Employment Areas, Inner and Outer Neighborhoods: 40-45%
(Targets apply to trips to, within, and out of each 2040 Design Type. The targets reflect conditions appropriate for the year 2040 and are needed to comply with Oregon Transportation Planning Rule objectives to reduce reliance on single-occupancy vehicles.)

Continue to implement the following action plan to work toward achieving these targets:

i) Encourage development that effectively mixes land uses to reduce vehicle trip generation.

ii) Develop consistent conditions for land use approval that require future employment related land use developments to agree to reduce peak hour trip making through transportation demand management strategies.

iii) Support efforts by Washington County, Oregon Department of Transportation, Department of Environmental Quality, Tri-Met, and the Westside Transportation Alliance to develop productive demand management measures that reduce vehicle miles traveled and peak hour trips.

iv) Coordinate with Oregon Department of Transportation and Tri-Met on the development of park and rides at transit stations or freeway interchange locations. Interchange reconstruction projects should be required to identify potential park and ride sites.

v) Build on existing Regional Center average transit pass discount percentage to achieve a 25 percent discount by 2020.

vi) Work with Washington County, Westside Transportation Alliance, and Tri-Met to develop and implement a downtown fareless transit area, a regional center transportation management agency, and reduced transit fare programs, based on increased demand and funding availability.

vii) Implement the bicycle, transit, pedestrian, and motor vehicle master improvement plans to implement a convenient multimodal transportation system.

b) Limit the provision of parking to meet regional and State standards.

***Actions**: Work to reduce parking per capita per Metro and State requirements, while minimizing impacts to neighborhoods. Implement the motor vehicle and bicycle parking ratios in new development. Develop and implement a Regional Center parking plan and a residential parking permit program as demand increases. Continue to implement shared parking and timed parking through new development and existing programs. Work toward implementing other parking-based transportation demand management strategies such as metered and structured parking to help achieve Metro's 2040 Non-SOV mode split targets.*

c) Maintain levels of service consistent with Metro's Regional Transportation Plan and the Oregon Transportation Plan. Reduce traffic congestion and enhance traffic flow through such measures as intersection improvements, intelligent transportation systems, signal synchronization, and other similar measures.

***Action:** Adopt level of service standards that are consistent with regional and State standards.*

d) Plan land uses to increase opportunities for multi-purpose trips (trip chaining).

Actions: *Encourage residents to reduce cold starts, miles traveled, and air quality degradation by combining several trips into one. Encourage mixed use where allowed to reduce vehicle trips and promote trip chaining.*

e) Require land use approval of proposals for new or improved transportation facilities. The approval process shall identify and consider the project's identified impacts.

f) Support mixed-use development where zoning allows.

g) Work with Tri-Met to encourage the development of transit improvements, improve access and frequency of service, and increase ridership potential and service area. Encourage development of regional high capacity transit, including light rail transit and commuter rail.

Action: *Support commuter rail and its associated supportive transit services.*

Several TDM strategies were developed in the 2015 TSP that are aimed at achieving the Metro 2040 non-SOV targets. The ranking of the strategies follows from most important to least important:

- Encourage linkage of housing, retail, and employment centers
- Provide incentives to take transit and use other modes (i.e., free transit pass)
- Flexible working hours
- Schedule deliveries outside of peak hours
- Coordinate shift changes/staggered work hours
- Telecommuting
- Participate in Westside Transportation Alliance
- Provide information regarding commute options to larger employers
- Work with property owners to install bicycle racks and bicycle amenities

The 2015 TSP recommended TDM plan, along with multi-modal improvements, should help the City of Beaverton achieve the Metro 2040 non-SOV targets and comply with state, regional, and county policy. The recommended action plan for the City of Beaverton remains as the following:

- Encourage development that effectively mixes land uses to reduce vehicle trip generation. These plans may include development of linkages (particularly non-auto) that support greater use of alternative modes. Land use density should be higher at transit stations (half mile radius) than elsewhere in the community.
- Develop consistent conditions for land use approval that require all future employment related land use developments to agree to reduce peak hour trip

making, through individual or collective TDM efforts. For example, measures which are appropriate for site planning such as close-in parking for carpools, bicycle parking, shower facilities, and convenient transit stops should be considered in the design review process.

- Support continued efforts by Washington County, ODOT, DEQ, Tri-Met, and the Westside Transportation Alliance to develop productive TDM measures that reduce VMT and peak hour trips, including investigating transit pass programs with city employers and implementing a fareless area in the downtown regional center (there are currently 46 employers in Beaverton with transit pass programs, two of which are in the regional center). This may require City funding of TDM management to get maximum benefit or results (possibly $25,000 to $75,000 per year).
- As a capital oriented element, coordinate with ODOT and Tri-Met on the development of park-and-ride transit station or freeway interchange locations in Beaverton (these are locations proven to be successful in attracting carpool/transit use). The Transit Master Plan, Figure 4-9, shows current park-and-ride locations. Expansion of these sites should focus on transit station or freeway interchange locations. Interchange reconstruction projects should be required to identify potential sites for park-and-ride (even small sites of 50 spaces). Over the next 20 years, a reasonable budget for park-and-ride expansion might be about $100,000 per year (about 50 spaces a year, assuming pre-existing ROW).
- Continued implementation of motor vehicle and bicycle minimum and maximum parking ratios for new development (per Development Code 60.20).
- Implementation of downtown connectivity plan as well as local street connectivity improvements identified in Appendix E.
- Implementation of bicyle, pedestrian, motor vehicle and transit system action plan.

Pedestrians

The existing pedestrian system network map was updated from the previous TSP to reflect recent improvements and the expanded TSP Study Area. In most cases sidewalk improvements are aimed at closing gaps in the existing sidewalk network to provide connectivity rather than capacity. In other words, it is much more important that a continuous sidewalk be available than it be of a certain type or size.

The 2000 Regional Transportation System Plan (RTP) includes designations for pedestrian districts and transit/mixed use corridors (see Figure 4-7). The RTP defines pedestrian districts as areas of high or potentially high pedestrian activity where regional policy places priority on creating a safe, direct, and attractive pedestrian environment. In general, these are areas planned for compact, mixed-use development served by transit and correspond to the following 2040 design type designations within the City of Beaverton: regional centers, town centers, and light rail communities. The corresponding areas within the City of Beaverton include the Murray/Scholls Town Center, the Washington Square Regional Center, downtown Beaverton, and the LRT communities. Areas such as these areas are characterized by buildings oriented to the street and by boulevard street design features such as wider sidewalks with buffering from traffic, marked street crossing at intersections, pedestrian-scale lighting, benches, bus shelters, and street trees. Transit/mixed-use corridors are defined as priority areas for pedestrian travel that are served by good quality transit service and that will generate substantial pedestrian traffic near neighborhood-oriented retail development, schools, parks, and bus stops. These corridors should include such design features as wide sidewalks with buffering from traffic, pedestrian scale-lighting, benches, bus shelters, and street trees. The 2040 design type designation for transit/mixed-use corridors is "Corridors". The corresponding corridor areas within the City of Beaverton include TV Highway-Canyon Road, BH Highway-Farmington Road, Murray Boulevard, Cedar Hills Boulevard, Hall Boulevard, and Walker Road. As shown in Figure 1-1, the Pedestrian Facilities Master Plan identifies improvements to provide a connected pedestrian network to and within the RTP designated pedestrian districts and transit/mixed use corridors. The City of Beaverton Development Code regulations should require new development in the pedestrian districts and transit/mixed use corridors to comply with the RTP descriptions listed above.

The most important existing pedestrian need in Beaverton is a well-connected pedestrian system within a half-mile grid and connectivity to light rail transit (LRT) stations and key centers in Beaverton (parks, schools, retail, etc.). Needs include safe, direct and convenient access to transit and crossings of large arterial streets which act as barriers to pedestrian movement, marked crossings at major transit stops, as well as an inventory of local street sidewalk locations in order to complete a detailed sidewalk connectivity plan. A well connected pedestrian system in the pedestrian districts and transit/mixed use corridors will insure direct and logical pedestrian crossing at transit stops. The City of Beaverton should coordinate with Washington County, Tri-Met, Metro, and ODOT to ensure that major transit stops will be located at sites with a signalized

and/or marked pedestrian crossing. In the future, pedestrian needs will be similar in the City, but there will be additional activity centers that will need to be considered and interconnected. The ranking of pedestrian strategies has not changed from the previous TSP and is listed from most important to least important:

- Connect key pedestrian corridors to schools, parks, recreational uses and activity centers (public facilities, commercial areas, etc.)
- Fill in gaps in the network where some sidewalks exist
- Pedestrian corridors to transit stations and stops
- Signalized pedestrian crossings
- Pedestrian corridors that connect neighborhoods
- Improve streets having sidewalks on one side to two sides
- As development occurs, construction of sidewalks by developers
- Pedestrian corridors that commuters might use
- Reconstruct all existing substandard sidewalks to the City of Beaverton Standards

The Pedestrian Master Plan (Figure 4-7) is an overall plan and summarizes the desired framework plan to meet local and regional policy. The more specific, shorter-term Action Plan was updated to include completed improvements and the expanded study area, as well as projects from the Regional Transportation System Plan (RTP) that were not in the previous TSP Pedestrian Action Plan. The Action Plan (Table 4-9) consists of projects that the City or responsible agency could give priority to when funding becomes available. As development occurs, streets are rebuilt, and other opportunities (such as grant programs) arise, projects on the Master Plan should be pursued as well. In addition, all development projects should include an inventory of local street sidewalk conditions in order to populate the City database of sidewalk locations. Table 4-10 lists pedestrian system improvement projects that have committed funds.

Table 4-9: Pedestrian Action Plan

Project	From	To	Approximate Cost ($1000's dollars)
Priority: Connect key pedestrian corridors to schools, parks, recreational uses and activity centers			
155th Avenue	Davis Road	Nora-Beard Road	410
US 26/Bethany Trail Crossing	US 26	US 26	100
Study US 26 Trail Crossings	143rd Avenue	Canyon Road	80
Study and Improve unsignalized trail crossing of roadways	City jurisdiction		10,000
Link Fanno Creek Path over ORE 217 at Denney	ORE 217	ORE 217	100
Study Fanno Creek Path	Rock Creek	Fanno Creek Greenway	80
Priority: Fill in gaps in pedestrian network			
TV Highway/Canyon Road (gaps on one-side)	Murray Blvd	170th Avenue	470
TV Highway/Canyon Road (Boulevard Design)	ORE 217	Murray Blvd	8,000
Canyon Road/TV Highway (sidewalks and crossings)	91st Avenue	ORE 217	1,465
Canyon Road	US 26	110th Avenue	6,750
Cedar Hills Boulevard	Butner Road	US 26 WB off ramp	124
Murray Boulevard (gaps on one side)	Jenkins Road	Millikan Way	100
Murray Boulevard (gaps)	Farmington	TV Highway	112
Denney Road	Nimbus Avenue	Scholls Ferry Road	241
Allen Boulevard (gaps)	Western Avenue	Scholls Ferry Road	69
Western Avenue	5th Street	800 feet south of 5th	55
Division Street	149th Avenue	170th Avenue	365
Davies Road (east side)	Scholls Ferry Road	Hiteon Drive	76
Scholls Ferry Road (gaps)	Barrows Road (west end)	Beaverton-Hillsdale Highway	1,893
Scholls Ferry Road	BH Highway	Raleighwood Way	151
SW Park Way (gaps)	Walker Road	ORE 217	213
Cornell Road (gaps)	158th Avenue	US 26 WB off ramp	101

Project	From	To	Approximate Cost ($1000's dollars)
Barnes Road	Tuefel Lane	Viewmont Drive	118
Garden Home Road	77th Avenue	76th Avenue	43
Multnomah Boulevard	Garden Home Road	Wash. County line	198
92nd Avenue	Allen Boulevard	Garden Home Road	302
Garden Home Road (gaps one-side)	92nd Avenue	77th Avenue	242
Hall Boulevard	Cascade Avenue	ORE 217 SB ramp	23
Hall Boulevard (gaps one-side)	ORE 217 SB ramp	Approximately 470 ft. west of ramp	34
Barnes Road (gaps one-side)	117th Avenue	Stark Street	104
Barnes Road	Stark Street	Approximately 100 ft. west of Stark St.	14
Cornell Road (gaps one side)	Approximately 500 ft west of Science Park Dr.	Approximately 500 ft east of 153rd Ave.	101
110th Avenue (gap-one side)	Beaverton-Hillsdale Hwy	Canyon Road	34
Priority: Pedestrian corridors to transit stations and stops			
160th Avenue	TV Highway	Davis Road	358
117th Avenue (gaps-one side)	Light Rail Transit Line	Center Street	34
Downtown Beaverton Connectivity collector roadways	Hocken Avenue/ TV Highway	110th Avenue/ Cabot Street	1,033
Pedestrian Access to MAX	LRT Stations		1,148
Priority: Construct sidewalks with roadway improvement projects*			
125th Avenue	Hall Boulevard	Brockman Road	193
Hall Boulevard	Cedar Hills	Hocken/Terman	Part of road improv.
Farmington Road	172nd Avenue	185th Avenue	218
Nimbus Avenue	Denney Road	Cirrus Drive	138
Walker Road	ORE 217	Canyon Road	209
Walker Road (gaps)	173rd Avenue	Mayfield Avenue	441
Davies Road	Scholls Ferry Road	Barrows Road	61
Murray Boulevard	Scholls Ferry Road	Barrows Road	110
170th Avenue	Alexander Street	Baseline/Jenkins	366

Project	From	To	Approximate Cost ($1000's dollars)
173rd Avenue	Cornell Road	Bronson Road	55
Hart Road (gaps)	Hall Boulevard	Murray Boulevard	49
Cornell Road (one-side)	158th Avenue	185th Avenue	165
Oak Street/Davis Road/Allen (gaps)	160th Avenue	170th Avenue	244
Allen Boulevard (gaps)	Alice Lane	Western Avenue	112
Nora-Beard Road	175th Avenue	155th Avenue	281
Weir Road	175th Avenue	160th Avenue	248
175th Avenue-Rigert Road	170th Avenue	Scholls Ferry Road	755
Jenkins Road	153rd Avenue	Murray Boulevard	112
Hart Road/Bany Road (gaps)	170th Avenue	185th Avenue	214
SW Beaverton collector roadway	Scholls Ferry Road	175th Avenue	346
Johnson Street Extension	170th Avenue	209th Avenue	Part of road improv.
Barnes Road Improvements	Highway 217	119th Avenue	Part of road improv.
Barnes Road Improvements	Saltzman Road	119th Avenue	Part of road improv.
Cornell Road Improvements	US 26	143rd Avenue	Part of road improv.
Cornell Road Improvements	143rd Avenue	Saltzman Road	Part of road improv.
Cornell Road Boulevard Improvements	Barnes Road	Trail Street	2,295
Murray Boulevard Improvement	Science Park Drive	Cornell Road	Part of road improv.
Oleson Road	Fanno Creek	Hall	Part of road improv.
ORE 217 Overcrossing roadway	Scholls Ferry Road	Nimbus	Part of road improv.
Murray/Scholls Ferry Town Center – extensions and new roadways			Part of road improv.
103rd Avenue	Walker Road	Western Boulevard	Part of road improv.
SW Beaverton circulation roadway	High Hill Lane	Nora-Beard Road	275
Priority: Pedestrian corridors that connect neighborhoods			
SW Butner Road (one side)	Murray Boulevard	Park Way	296
SW Downing Road (gaps on south side)	Murray Boulevard	Meadow Drive	41
Meadow Drive (one side)	Downing Road	Walker Road	38
Laurelwood Avenue/87th Avenue	Canyon Road	Scholls Ferry Road	434
Jamieson Road	Pinehurst Drive/Cypress	Scholls Ferry Road	206

Project	From	To	Approximate Cost ($1000's dollars)
Cypress Street	Jamieson Road	Elm Avenue	79
Sexton Mountain Drive (gaps)	Maverick Terrace	Nora-Beard Road	296
91st Avenue	Canyon Road	BH Highway	1,970
96th Avenue (one side)	Canyon Road	Beaverton-Hillsdale Highway	90
Pedestrian Action Plan Projects Total Cost:			**$ 45,078**

*Sidewalks to be built with roadway improvement projects are dependent on the ROW and alignment of the road improvement and would not be built without the road improvement

Table 4-10: Pedestrian Action Plan – Projects with Committed Funds

Project	From	To	Approximate Cost ($1000's dollars)
Priority: Connect key pedestrian corridors to schools, parks, recreational uses and activity centers			
170th Avenue	Rigert Road	Alexander Street	515
170th/173rd Avenue	Baseline/Jenkins	Walker Road	220
Millikan Way	Hocken Avenue	Cedar Hills Blvd	57
Hart Road/Bany Road (gaps)	Murray Boulevard	170th Avenue	236
Pedestrian Improvement Project Committed Funds Total Cost:			**$ 1,028**

City of Beaverton Transportation System Plan

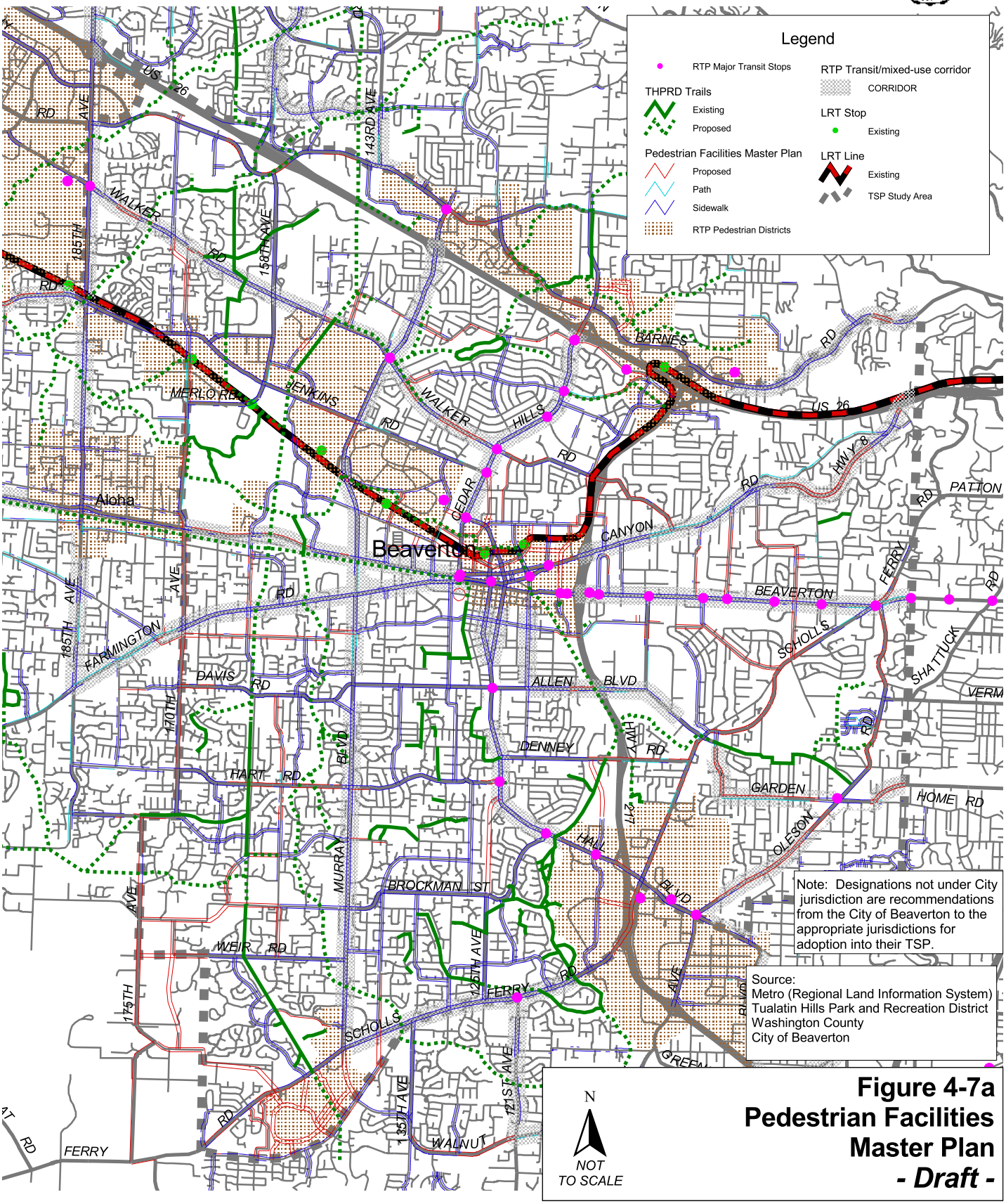


Figure 4-7a
Pedestrian Facilities Master Plan
- Draft -

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Transportation System Plan

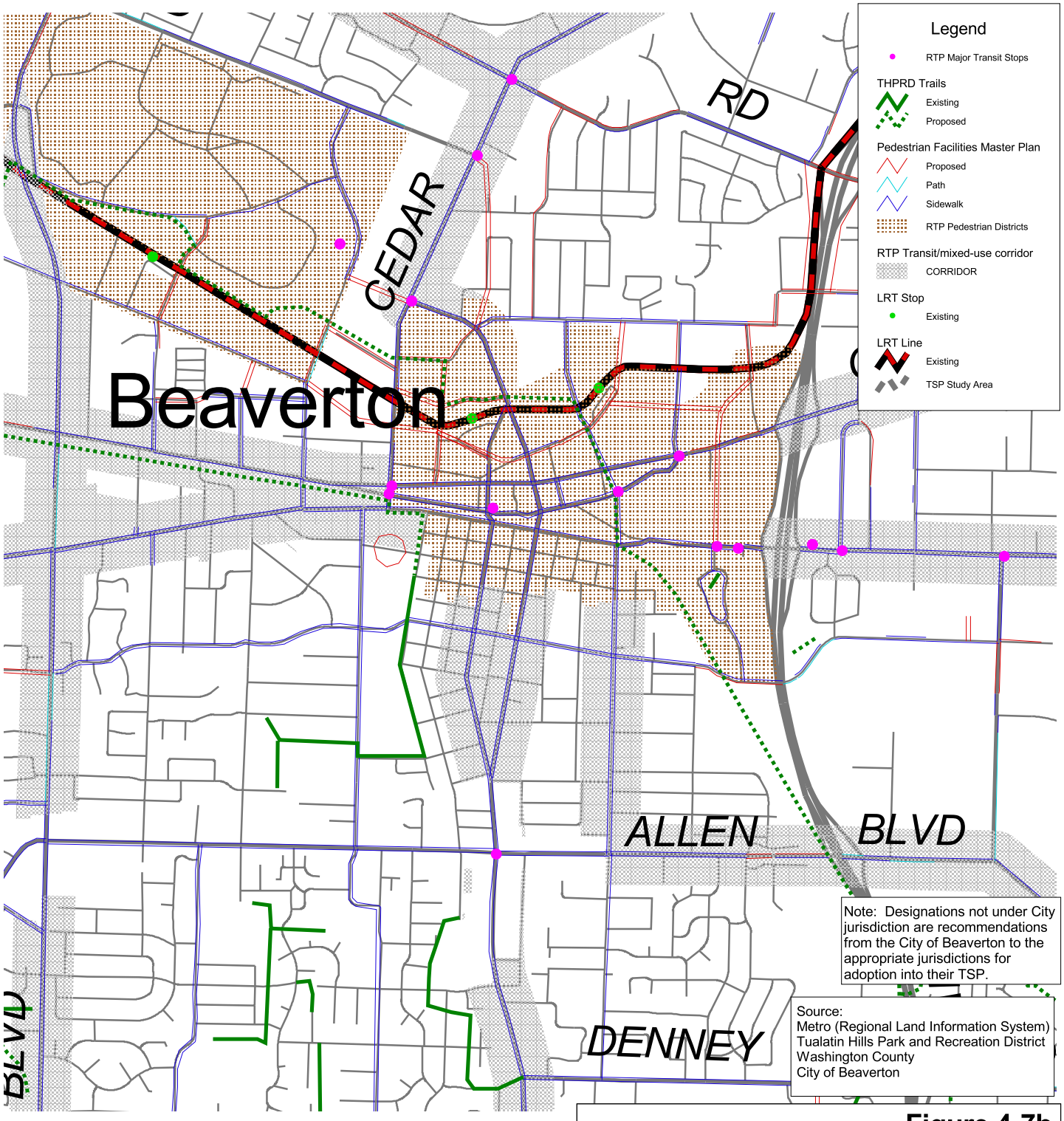


Figure 4-7b
Pedestrian Facilities Master Plan
- Draft -

Bicycles

The Bicycle Master Plan has been updated from the previous TSP to include completed improvement projects and the expanded TSP Study Area (See Figure 4-8). Bikeway improvements are aimed at closing the gaps in the bicycle network along arterial and collector roadways. The ranking of the bicycle strategies has not changed from the previous TSP and is listed from most important to least important:

- Connect Key bicycle corridors to schools, parks, recreational uses and activity centers (public facilities, commercial areas, etc.)
- Fill in gaps in the network where some segments of bikeway exist
- Bicycle corridors that connect neighborhoods
- Construct bike lanes with roadway improvement projects
- Bicycle corridors that commuters might use
- Bicycle corridors providing mobility to and within commercial areas

The 2000 Metro RTP includes a bicycle functional classification system with the following designations (shown on Figure 4-8):

- Regional Access Bikeway: Function focuses on accessibility to and within the central city, regional centers, and larger town centers. Travel time is an important factor as these bikeways generally have high volumes.
- Regional Corridor Bikeway: Functions as longer routes that provide point-to-point connection between the central city, regional centers, and larger town centers. Generally higher automobile speeds and volumes than community connector bikeways.
- Community Connector Bikeway: Connect smaller town centers, main streets, station areas, industrial areas, and other regional attractions.
- Multi-use paths with bicycle transportation function: Likely to be used for commuting to work or school, accessing transit, or travelling to a store, library, or other local destination. Bicycle/pedestrian sidewalks on bridges are included in this classification. Design includes physical separation from motor vehicle traffic by open space or barrier.

The Bicycle Master Plan builds from state policy from the Transportation Planning Rule and from City of Beaverton policy that all arterial and collector roads have bikeways. The Action Plan is consistent with plans developed by Metro, Washington County, and the State, including providing bikeways consistent with each of the Metro RTP designated bikeways. Additional linkages with lanes or accommodations are outlined to make a complete network. The Bicycle Action Plan (Table 4-11) consists of projects that the City should actively try to fund in the next

ten years. With the action plan, a substantial bicycle network would be in place and would allow attention to move toward infill Master Plan projects. The bicycle plan will require incremental implementation. As development occurs, streets are rebuilt and other project funding opportunities (such as grant programs) arise, projects on the Master Plan should be integrated into project development. Many of the projects would be elements of multi-modal street improvement projects (e.g. Murray Boulevard extension). The City, through its Capital Improvement Program, joint funding with other agencies (County, Metro, State) and development approval would implement these projects. Table 4-12 lists bicycle system improvement projects with funds already committed.

Table 4-11: Bicycle Action Plan

Project	From	To	Approximate Cost ($1000's of dollars)
Priority: Connect key bicycle corridors to schools, parks, recreational uses and activity centers			
Greenway Road	Hall Boulevard	125th Avenue	266
155th Avenue/Weir Road	Davis Road	Murray Boulevard	1,190
Millikan Way	Murray Boulevard	TV Highway	521
160th Avenue	TV Highway	Davis Road	503
Canyon Road	142nd Avenue	91st Avenue	1,310
Priority: Fill in gaps in bicycle network			
Hall Boulevard bike lanes	Greenway	ORE 217	357
Hall Boulevard bike lanes	Beaverton-Hillsdale Hwy	Cedar Hills Blvd	78
Hall Boulevard Extension	Cedar Hills	Hocken/Terman	Part of road improv.
Watson Avenue bike lanes	Beaverton-Hillsdale Hwy	Hall Boulevard	68
Cedar Hills Boulevard bike lanes	Farmington Road	Walker Road	506
6th Street bike lanes	Murray Boulevard	Menlo Drive	241
Murray Boulevard bike lanes (west side of Murray Boulevard)	Farmington Road	approximately 200 ft south of TV Highway	48
Denney Road bike lanes	Hall Boulevard	Scholls Ferry Road	684
Allen Boulevard bike lanes	approximately 200 ft east of Western Avenue	Scholls Ferry Road	221
Western Avenue bike lanes	Beaverton-Hillsdale Hwy	Allen Boulevard	337
Beaverton-Hillsdale Hwy bike lanes	ORE 217	91st Avenue	520
Beaverton-Hillsdale Hwy bike lanes	91st Avenue	Wash. County Bound.	1,023

Project	From	To	Approximate Cost ($1000's of dollars)
Scholls Ferry Road	77th Avenue	BH Highway	251
Oleson Road	BH Highway	Terri Court	453
92nd Avenue	Allen Boulevard	Garden Home Road	377
Garden Home Road	92nd Avenue	Oleson Road	641
Scholls Ferry Road	Hall Boulevard	Cascade Avenue	328
Scholls Ferry Road	BH Highway	Wash. County Bound.	431
Taylors Ferry Road	Oleson Road	Washington Drive	137
Davies Road	Scholls Ferry Road	Barrows Road	187
Barrows Road	Scholls Ferry Road (east)	Scholls Ferry Road (west)	1,180
Scholls Ferry Road	Murray Boulevard	175th Avenue	896
Priority: Construct bike lanes with roadway improvement projects*			
125th Avenue bike lanes	Hall Boulevard	Brockman Road	302
Farmington Road Bikeway	Hocken Avenue	Highway 217	3,213
Walker Road bike lanes	ORE 217	Canyon Road	327
Walker Road bike lanes	Cedar Hills Boulevard	Lynnfield Lane	150
Walker Road bike lanes	178th Avenue	185th Avenue	309
Millikan Way bike lanes	Hocken Avenue	Cedar Hills Blvd	91
170th Avenue bike lanes	Alexander Street	Baseline/Jenkins	573
173rd Avenue bike lanes	Walker Road	Cornell Road	371
Hart Road/Bany Road bike lanes	167th Avenue	170th Avenue	69
Cornell Road bike lanes	158th Avenue	185th Avenue	516
Murray Boulevard bike lanes	Scholls Ferry Road	Barrows	172
Allen Boulevard bike lanes	ORE 217	Murray Boulevard	293
Allen Boulevard bike lanes	ORE 217	approximately 200 ft west of Western Ave	108
Nora-Beard Road bike lanes	175th Avenue	155th Avenue	499
Weir Road	175th Avenue	155th Avenue	448
Barnes Road Improvements	Saltzman Road	119th Avenue	Part of road improv
Cornell Road Improvements	143rd Avenue	Saltzman Road	Part of road improv

Project	From	To	Approximate Cost ($1000's of dollars)
Canyon Road	US 26	110th Avenue	6,750
103rd Avenue Connection	Walker Road	Western Avenue	Part of Road improv.
175th Avenue-Rigert Road bike lanes	170th Avenue	ORE 210	1,180
Bicycle Action Plan Projects Total Cost:			**$ 28,125**

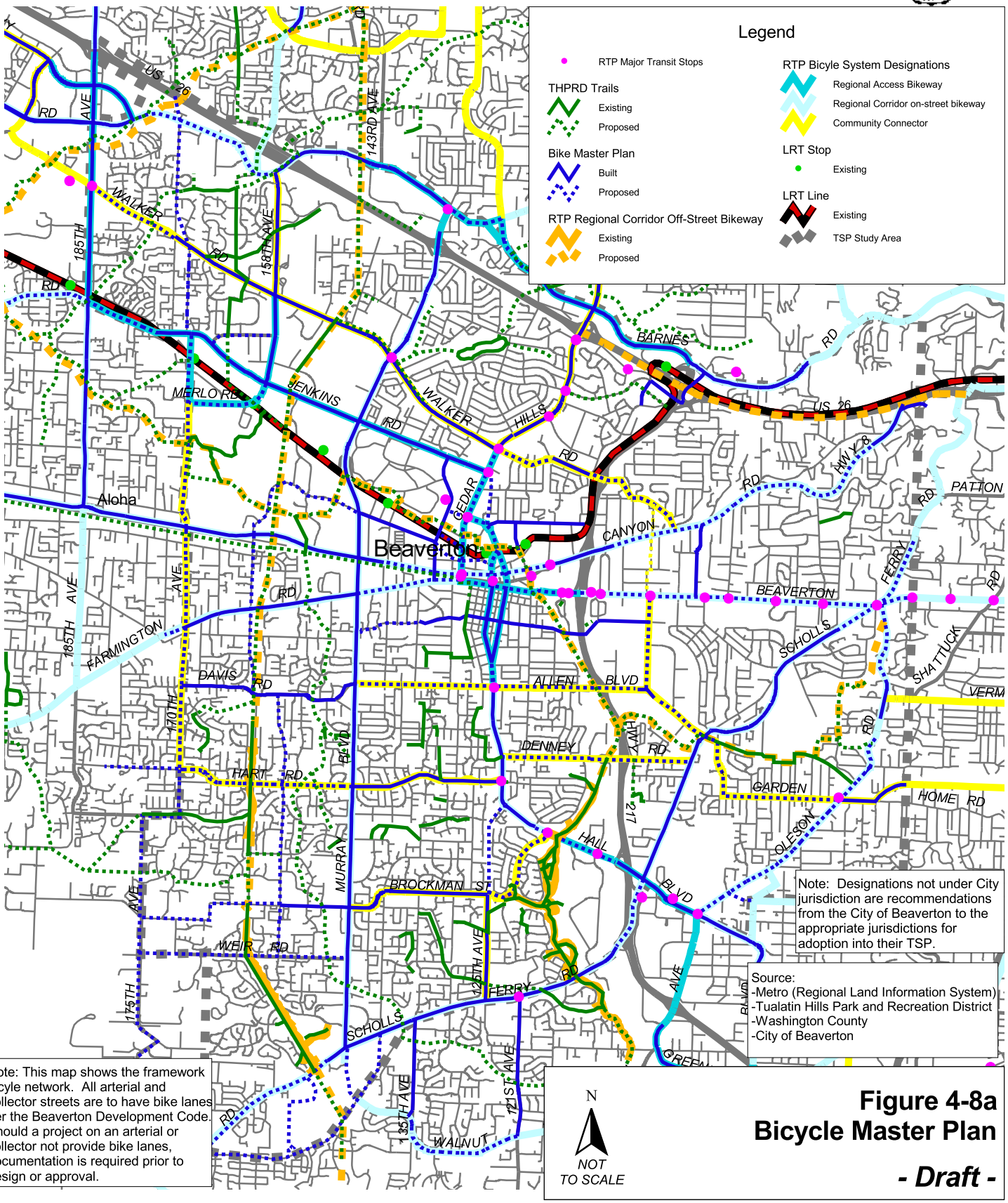
*Bike lanes to be built with roadway improvement projects are dependent on the ROW and alignment of the road improvement and would not be built without the road improvement

Table 4-12: Bicycle Action Plan – Committed Funding Projects

Project	From	To	Approximate Cost ($1000's of dollars)
Priority: Connect key bicycle corridors to schools, parks, recreational uses and activity centers			
Millikan Way bike lanes	Hocken Avenue	Cedar Hills Blvd	91
170th Avenue bike lanes	Rigert Road	Alexander Street	804
170th/173rd Avenue bike lanes	Baseline Road	Walker Road	344
Hall Boulevard bike lanes	12th Street	900 ft south of Allen	154
Hart Road bike lanes	Murray Blvd	167th Avenue	499
Barnes Road Improvements	Saltzman Road	119th Avenue	Part of road improv.
Cornell Road Improvements	Murray Blvd	Saltzman Road	Part of Road improv.
Bicycle Action Plan Projects Total Cost (Committed Funding Projects):			**$ 1,892**

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City of Beaverton Transportation System Plan



Note: Designations not under City jurisdiction are recommendations from the City of Beaverton to the appropriate jurisdictions for adoption into their TSP.

Source:
-Metro (Regional Land Information System)
-Tualatin Hills Park and Recreation District
-Washington County
-City of Beaverton

Note: This map shows the framework bicycle network. All arterial and collector streets are to have bike lanes per the Beaverton Development Code. Should a project on an arterial or collector not provide bike lanes, documentation is required prior to design or approval.

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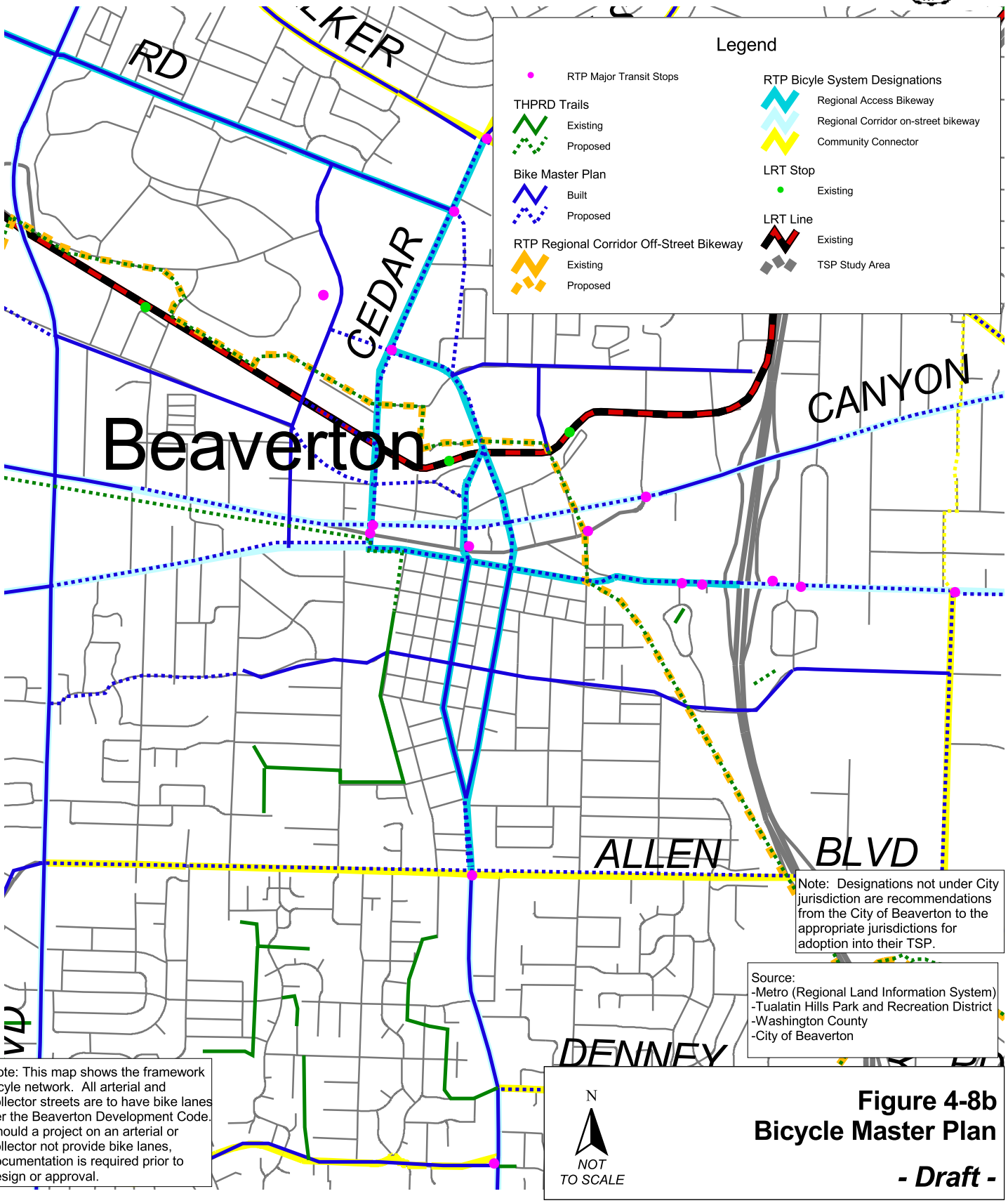
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Figure 4-8a
Bicycle Master Plan

- Draft -

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City of Beaverton
Transportation System Plan



Note: Designations not under City jurisdiction are recommendations from the City of Beaverton to the appropriate jurisdictions for adoption into their TSP.

Source:
-Metro (Regional Land Information System)
-Tualatin Hills Park and Recreation District
-Washington County
-City of Beaverton

Note: This map shows the framework bicyle network. All arterial and collector streets are to have bike lanes per the Beaverton Development Code. Should a project on an arterial or collector not provide bike lanes, documentation is required prior to design or approval.

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NOT TO SCALE

Figure 4-8b
Bicycle Master Plan
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Transit

Currently, there are twenty-three transit routes serving Beaverton (see Figure 4-9). The transit service has been significantly changed from the last TSP due to the opening of the Westside MAX. The existing transit system coverage area includes approximately 85 percent of the modeled transit supportive zones within the Beaverton TSP study area[9]. The future 2020 land use would increase the transit supportive area and reduce the percentage of coverage to approximately 80 percent (see Figure 4-10) without an increase in service coverage. Tri-Met has addressed some of the future transit needs in Beaverton with the planned 10-year improvements listed in Table 4-13. The City of Beaverton should coordinate with Tri-Met to focus possible future transit coverage on those transit supportive areas not covered by the existing system. Transit amenities were also identified in the Tri-Met Ten-Year Service Improvements[10] as a high community priority needing attention in 1-5 years. Transit amenities can make transit ridership increase by making transit an attractive travel alternative. The City of Beaverton should coordinate with Tri-Met and Washington County to provide transit shelters at transit stops designated as major transit stops or with daily boardings above 35 persons. The City of Beaverton should coordinate the provision of sidewalks along major transit streets with Tri-Met. The City of Beaverton should coordinate the provision of transit pass programs and fareless areas with city employers and the Westside Transportation Alliance TMA.

Due to heavily congested arterial corridors, the City will need to coordinate with Tri-Met on the development of corridor level transit services that can help relieve congestion and forestall more expensive capital infrastructure. High quality regional transit service on corridors such as Scholls Ferry Road, Murray Boulevard, Hall Boulevard, TV Highway, Walker Road, and Allen Boulevard can link many high employment, regional center, and town center areas (consistent with the RTP). Metro's RTP includes transit route designations along corridors defined as follows[11]:

- Rapid Bus. Regional rapid bus service emulates LRT service in speed, frequency and comfort, serving major transit routes with limited stops. This service runs as least every 15 minutes during the weekday and weekend mid-day base periods.
- Frequent Bus. Frequent Bus service provides slightly slower, but more frequent, local bus service than rapid bus along selected transit corridors. This service runs at least every 10 minutes and includes transit preferential treatments such as reserved bus lanes and signal preemption.
- Regional Bus. Regional bus service is provided on most major urban streets. This type of bus service operates with maximum frequencies of 15 minutes with

[9] Coverage is determined as the area within 0.25 miles of a bus stop or 0.50 miles of a LRT stop

[10] Transit Choices For Livability Handbook, Tri-Met, 2000.

[11] Based on the *2000 Regional Transportation Plan*, Metro, August 12, 2000.

conventional stop spacing along the route.

The City of Beaverton should coordinate with Tri-Met, ODOT, and Washington County to provide signal priority for transit routes along the RTP designated frequent bus lines (TV Highway/Farmington and Cedar Hills/Hall – approximately 50 signals at approximately $7000 each). Signal priority along the frequent transit routes would improve transit service speed and reliability along these congested corridors with high multi-modal trip potential.

Table 4-13: Tri-Met Ten-Year Service Improvements

Route Description	Frequency** (minutes)	Rough Annual Cost	Projected Implementation
Beaverton-Washington Sq.-Tigard-Tualatin: Rapid bus or commuter rail connections between these communities, including extension to Wilsonville	30	$800,000	3-5 years
Nimbus Businesses: Local service between Nimbus employers and destinations in the Washington Sq. area	30	$385,000	1-3 years
Cornell Oaks Businesses: Shuttle between employers along 158th and in the Cornell Oaks area to MAX, as part of Westside Max start-up	30	$150,000	1-3 years
Existing Tri-Met Lines: Improve frequency and span of service on lines serving Farmington Road, 158th, 185th, 198th, Jenkins, Hart, and Denney		$2,000,000	1-3 years

Source: Transit Choices for Livability Handbook, Tri-Met, 2000.
** Frequency is defined at the time spacing between bus arrivals.

In addition to the Tri-Met 10-year service improvements listed in Table 4-13, the Washington County Commuter Rail project connecting Wilsoville to Beaverton is listed in the RTP as a committed project. The timeline for this project is 2000-2005, with an estimated cost of $71,500,000.

City of Beaverton Transportation System Plan

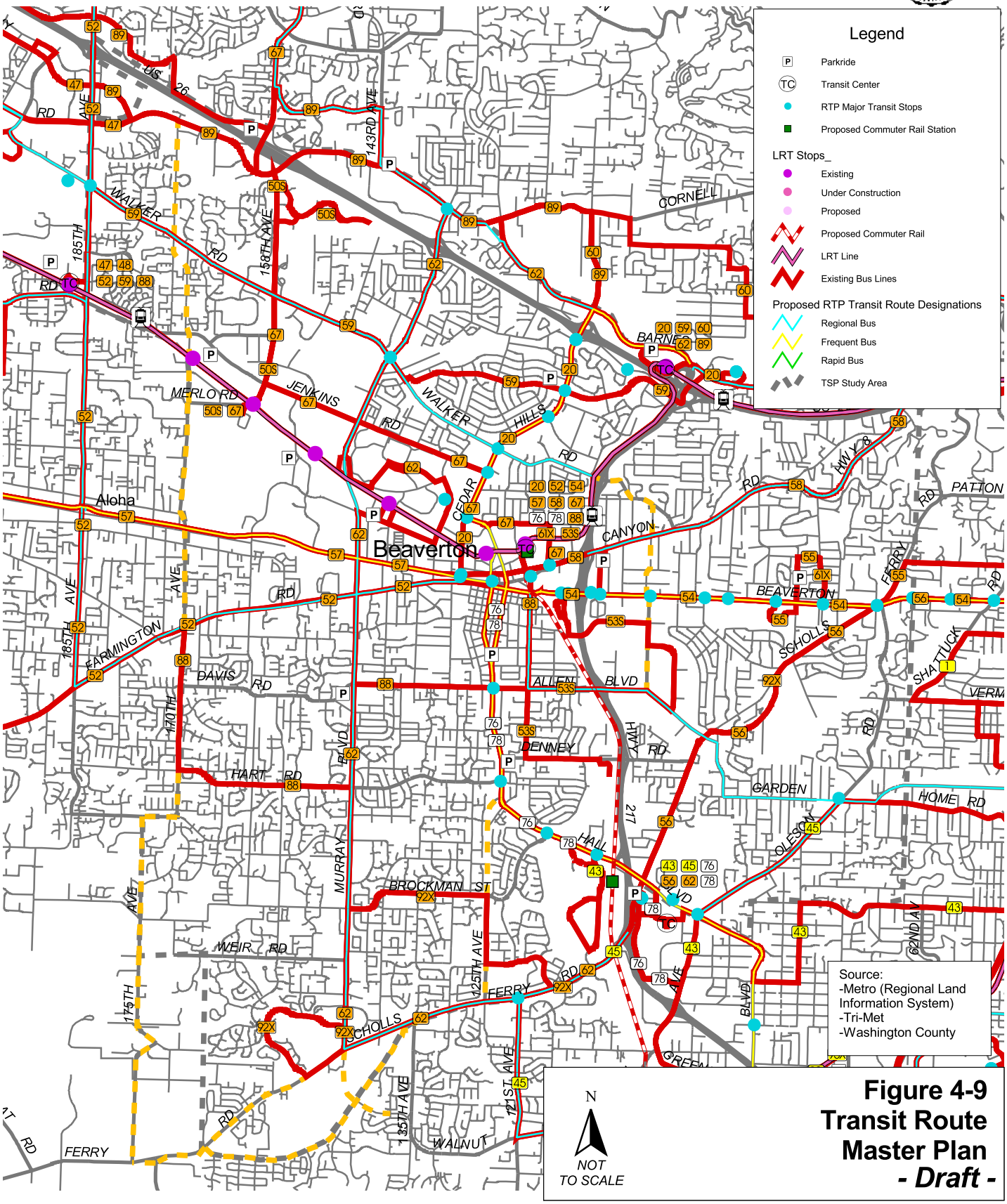
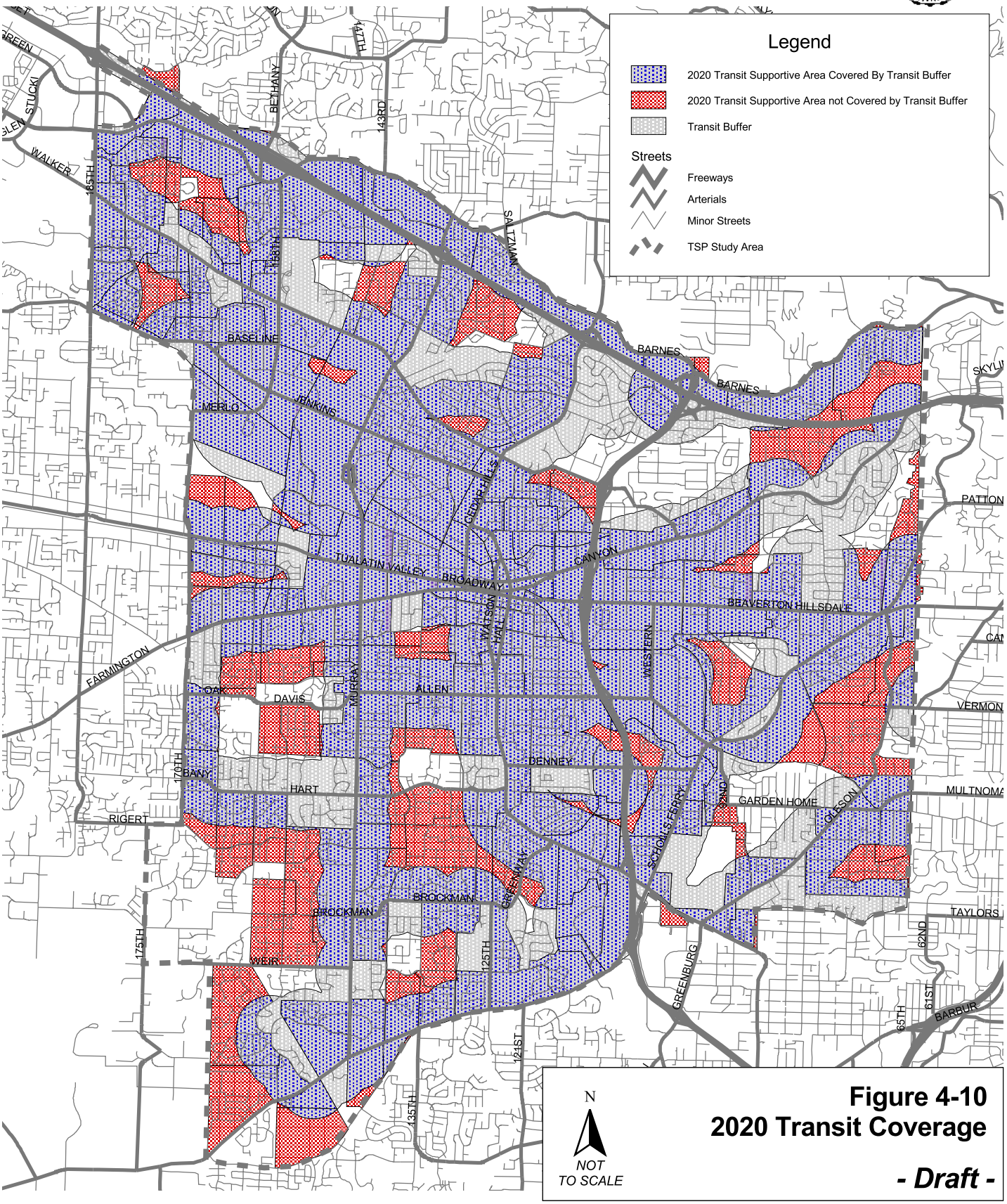


Figure 4-9
Transit Route Master Plan
- Draft -

City of Beaverton
Transportation System Plan



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NOT TO SCALE

Figure 4-10
2020 Transit Coverage

- Draft -

Motor Vehicles

Functional Classification

The current functional classification of streets in Beaverton was updated to reflect the expanded TSP study area, on-going regional planning, the functional needs of Beaverton, and consistency with the Regional Transportation Plan. Classifications of principal arterial, arterial, collector, neighborhood route and local have been developed based on connectivity (defined in the 2015 TSP), which is the best indicator of function. Figure 4-11 summarizes the functional classification recommendations. Appendix F summarizes the various jurisdictional functional classifications of major roadways with the TSP study area in a matrix format. This comparison matrix provides a comparison of the adopted City of Beaverton arterial designations to the Washington County and Metro major/minor arterial designations. These comparisons should be used to require that streets designated in the RTP be designed with a modal orientation that reflects the function of the street and the character of surrounding land uses as defined in Chapter 1 of the RTP (see Appendix L)[12].

Based on input from the TAC (Technical Advisory Committee), City Staff, and the Traffic Commission, additional functional class alternatives were considered on Jay Street, Oak Street/Davis Road, and Hart Road/Bany Road west of Murray.

Jay Street (from Jenkins to 158th) was approved for road closure at 158th based on Washington County ordinance on the development of the IBM site. Currently, the road has not been closed as the development action has not proceeded. The Beaverton Traffic Commission recommends that the Jay Street functional classification remain as a collector roadway as it serves as an important congestion relief to the 158th/Jenkins intersection. The Traffic Commission also recommends that if the road were to be closed, the planned improvements on Jenkins, 158th, and Walker should be constructed to insure adequate capacity in the area. Based on the recommendation of the Traffic Commission, the Beaverton Functional Classification Map shall show Jay Street as a collector so that if a new development application is brought to the County or City, the issues of the road closure can be revisited[13].

The functional classification of Oak Street/Davis Road as an arterial and Hart Road/Bany Road as a collector was also discussed by the TAC and the Traffic Commission. The issues discussed were related to how the roadways currently serve traffic in the Beaverton area. Oak/Davis connects to Allen Boulevard to the east and 170th Avenue to the west. Bany/Hart connects to Murray Boulevard at the east and 185th Avenue to the west. The TAC and the Traffic

[12] Based on the *2000 Regional Transportation Plan*, Metro, August 2000.

[13] Based on Beaverton Traffic Commission Meeting, May 17, 2001.

City of Beaverton
Transportation System Plan

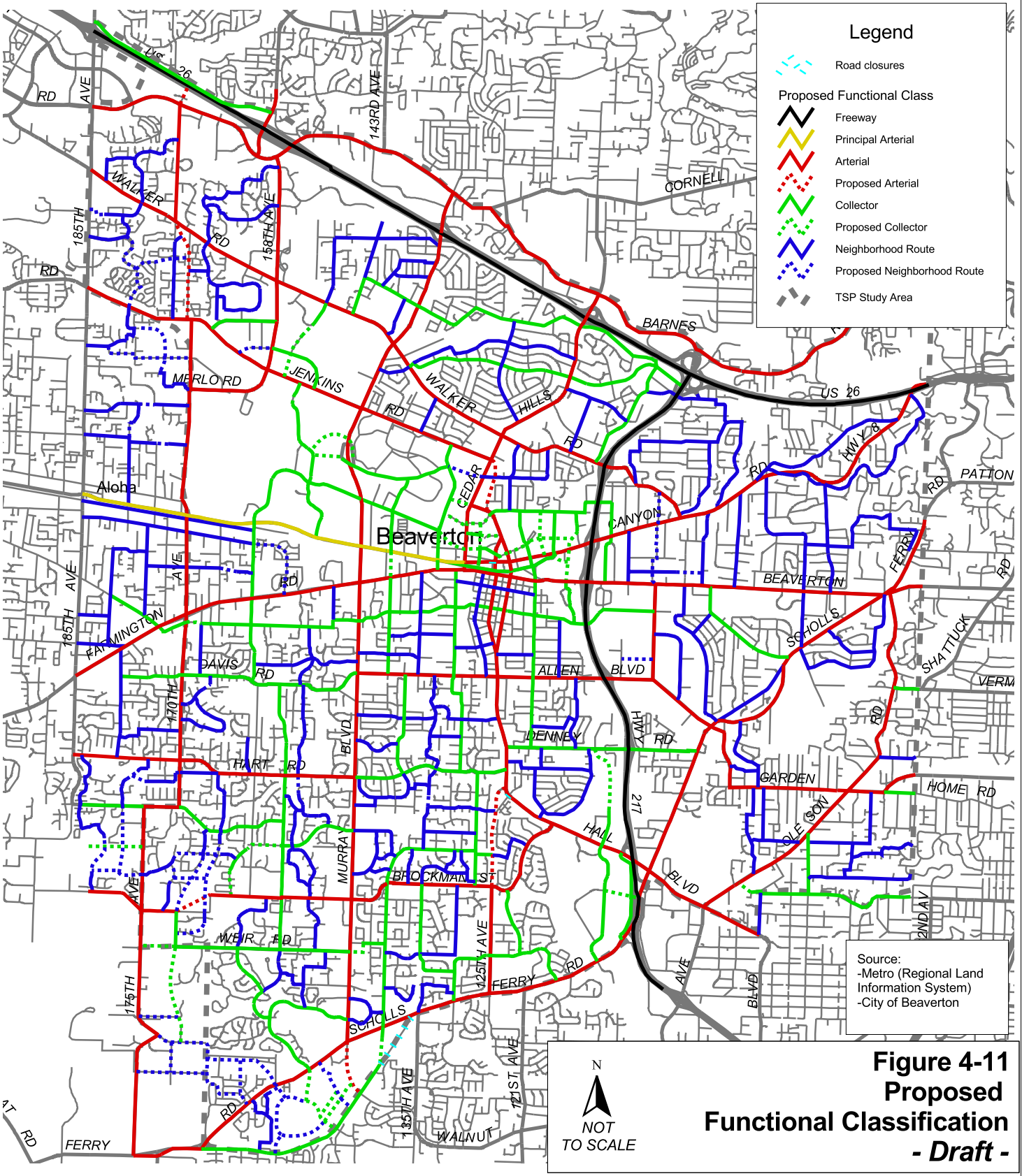


Figure 4-11
Proposed
Functional Classification
- Draft -

Commission both see Hart/Bany connecting to Murray and 185th as the main through route. The access management of the roads was also discussed in relation to an arterial designation having larger access spacing requirements than a collector designation. Oak Street/Davis Road currently has significant residential frontage/access, while Hart Road/Bany Road typically has residential lots backing to the roadway. The Traffic Commission recommended that the functional classification of Oak Street/Davis Road be switched to collector and the classification of Hart Road/Bany Road be switched to arterial based on the function of the road to through traffic and the access characteristics of the roadways[14].

Access Management

Access management is important, particularly on high volume roadways, for maintaining traffic flow and mobility. Where local and neighborhood streets function to provide access, collector and arterial streets serve greater traffic volume. Numerous driveways, or street intersections, increase the number of conflicts and potential collisions and decrease mobility and traffic flow. Beaverton, as with every other city, needs a balance of streets that provide access with streets that serve mobility. The 2015 TSP included the following access management recommendations:

- Incorporate a policy statement regarding prohibition of new single family residential access on arterials and collectors. A design exception process should be outlined that requires mitigation of safety and NTM impacts. This addresses a long standing problem in Beaverton where property owners consume substantial staff time on issues of residential fronting impacts.
- Set standards for access spacing (working with Washington County and ODOT) for arterials (600 foot minimum, 1,000 foot maximum) and collectors (200 foot minimum, 400 foot maximum).
- Specific access management plans be developed for TV Highway and Cedar Hills Boulevard (north of Walker) to maximize the capacity of the existing facilities and protect their functional integrity.

The access management recommendations in the 2015 TSP do not identify specific needs at the freeway interchanges in the study area (along US 26 and ORE 217). Based on the *1999 Oregon Highway Plan* (OHP), access points should not be allowed within 1320 feet of freeway interchanges. Interchanges within the Beaverton 2020 TSP study area exist with numerous access points within 1320 of the interchange. These access points are locations of potential conflict with vehicle queued from the freeway on ramps, especially with queues formed from ramp meters. The following recommendation addresses the need to reclaim vehicular access control near the freeway interchanges to meet ODOT spacing standards:

[14] City of Beaverton Traffic Commission Meeting, May 17, 2001.

- As property redevelops, an evaluation of compliance with relevant access management policies is made for areas proximate to freeway interchange
- If an existing access point is found non-compliant and it is the sole vehicular access for the property, a temporary access permit is issued that allows the property owners to continue access until such a time that alternative means can be made available
- In addition, the applicant will agree to potential cross-easements for circulation between adjoining properties
- When adjoining property re-develops that has compliant alternatives for vehicular access, the temporary permit of the first property owner is terminated and the non-compliant access is closed.

In addition, the proposed functional classification, shown in Figure 4-11, includes a designation of principal arterial for TV Highway west of Cedar Hills. This new designation requires additional code for access spacing and should be coordinated with Washington County and ODOT. The recommended for minimum access spacing on a principal arterial is 1000 feet.

Local Street Connectivity

The 2020 Beaverton TSP Study Area reaches beyond the 2015 TSP Study Area. The 2015 TSP identified potential local street connections for both multi-modal and non-auto connections. The local connectivity map has been updated to include areas not part of the 2015 TSP. Locations of connections within the City have been updated to reflect completed projects and locations where connections where determined unfeasible by City Staff. Connections from Washington County Ordinance 552 were included in the unincorporated areas. Additional multi-modal and non-auto connections were identified both within the City and the unincorporated areas. Detailed connectivity maps, broken into neighborhoods, are shown in Appendix E.

Motor Vehicle Needs

Appendix D provides a detailed analysis of the motor vehicle alternatives analysis. The following summary includes the methodology and resulting improvement projects for the Beaverton 2020 TSP Motor Vehicle Plan. Additional discussion, tables, and figures can be found in Appendix D.

Approach

Existing conditions were identified in Chapter 3. The future 2020 conditions were forecast as noted in Chapter 4. This 2020 forecast includes the Commuter Rail and the highest level of transit service given regional funding constraints[15]. It assumes that Transportation Demand Management (TDM) will occur and that significant shifts to transit will occur. While numerous

[15] This system assumes the commuter rail and all the feeder bus system that supports it. Other westside bus service is provided also.

analysis scenarios were developed, the base 2020 conditions assumed a street network that included the RTP Priority System improvements and the improvements identified in the 2015 Beaverton TSP. This was done because the prior TSP and RTP both confirmed that this level of motor vehicle transportation investment would be necessary to minimally address the future 2020 needs of the Beaverton area. RTP Priority System motor vehicle projects within the Beaverton TSP Study area are listed in Table 4-14. Beaverton 2015 TSP improvements are listed in Tables 4-15 and 4-16. Table 4-17 lists the 2015 TSP projects that have been constructed or have received committed funding for design/construction since the 2015 TSP was adopted. Performance was evaluated using a three-tiered assessment of capacity and operations.

- Demand to capacity (D/C) ratios[16] were evaluated on roadway segments and conditions where the demand to capacity ratio exceeded 1.0 were studied for potential improvements (based on a 1-hour and 2-hour D/C ratio). Areas within a 2040 design type of Regional Center, Town Center, Main Street, or Station Communities were studied if the 1-hour D/C ratio exceeded 1.1 or the second hour exceeded 1.0.
- Intersection level data were developed for about 95 intersections in Beaverton (based upon staff input, for primarily arterial and collector intersections). While this is a broad sampling of intersections, it does not represent every intersection in the City. Therefore, there may be other locations that may require some mitigation. Alternative improvements were considered where D/C ratios exceeded 1.0 or Level of Service (LOS) was at F or worse. Mitigated levels of service were generally brought to the D/C ratio 1.0 or LOS of E/F range for the 20-year planning assessment.
- New roadway alignments were considered if connectivity was needed to reduce traffic volumes on congested roadways. The goal of new road alignments was to achieve a roadway that would carry a daily volume of at least 5,000 to 10,000 vehicles per day or would significantly reduce the volume on other congested roadway facilities. Additionally, new road connections/alignments were considered if they would reduce neighborhood traffic volumes by 2,000 to 4,000 vehicles per day.

[16] Demand to capacity ratio is similar to volume to capacity (V/C) ratio. The difference is that in the future demand is being estimated and therefore the term demand is utilized. For existing conditions, volume refers to the actual traffic on the roadway. While a demand to capacity ratio can exceed 1.0, a volume to capacity ratio would never exceed 1.0.

Table 4-14
Beaverton Motor Vehicle System Improvements included in the RTP Priority System*

RTP #	Location	Improvement	Jurisdiction	Time-Line	Cost
1184	BH Highway/Scholls Ferry Road	Redesign the intersection to improve safety for all modes of travel.	ODOT/WACO	2006-2010	$13,000,000
6013	Hall: Scholls Ferry to Locust	Widen to 5 lanes. Includes sidewalk and bike lanes	ODOT	2006-2010	$4,700,000
6017	Taylors Ferry: Washington to Oleson	Construct a 3 lanes extension with sidewalks and bike lanes	WACO	2011-2020	$1,900,000
6025	Scholls Ferry: 217 to 125th	Implement system management strategies	WACO	2000-2005	$500,000
6052	Highway 217 Overcrossing: Nimbus to Mall Area	Construct a 2 lane crossing including sidewalks and bike lanes	Tigard	2011-2020	$25,000,000
6119	Murray/Scholls Town Center	Construct 2 lane Teal Road collector extension to Town Center Loop and Barrows, transit collectors from Murray to Town Center Loop, and new neighborhood route connections	WACO/Beaverton	2011-2020	$11,000,000
6121	Murray: Scholls Ferry to Barrows	Construct a 4 lane extension to Walnut at Barrows including sidewalks and bike lanes	Beaverton/Tigard/WACO	2000-2005	$7,120,000
6122	Davies Road: Scholls Ferry to Barrows	Construct a 3 lane extension to Barrows including sidewalks and bike lanes	Beaverton	2006-2010	$1,500,000
3000	ORE 217	Add capacity based on recommendations from the ORE 217 corridor study	ODOT	2011-2020	$70,000,000
3001	ORE 217: TV Hwy to US 26	Widen the northbound to 3 lanes with ramp improvements	ODOT	2006-2010	$21,000,000
3002	ORE 217 and US 26	Reconfigure the interchange with braided ramps	ODOT	2006-2010	$50,000,000
3006	US 26: Camelot Court to Sylvan	Add 3rd through lane and collector distributor system	ODOT	2000-2005	$22,000,000
3007	US 26: ORE 217 to Camelot Court	Widen eastbound to 3 lanes	ODOT	2006-2010	$12,000,000
3009	US 26: Murray to 185th	Widen freeway to 6 lanes with possible HOV lane	ODOT	2011-2020	$26,000,000
3019	Beaverton Connectivity	Complete several downtown street connections	Beaverton	2000-2005	$13,200,000
3020	Beaverton Connectivity	Complete several downtown street connections	Beaverton	2006-2010	$13,300,000
3022	Jenkins: Murray to 158th	Widen to 5 lanes including sidewalks and bike lanes	WACO	2006-2010	$1,870,000
3023	ORE 217: Allen to Walker	Interchange improvements	ODOT/WACO/Beaverton	2000-2005	$3,600,000
3025	TV Hwy: Cedar Hills to 10th	Add capacity based on recommendation from refinement planning	ODOT/WACO	2011-2020	$33,200,000
3031	Allen: ORE 217 to Murray	Widen to 5 lanes including sidewalks and bike lanes	Beaverton	2011-2020	$8,500,000
3032	Cedar Hills: Farmington to Walker	Widen to 5 lanes including sidewalks and bike lanes	Beaverton	2006-2010	$3,700,000
3033	125th: Brockman to Hall	Construct a 2 lane extension with turn lanes including sidewalks and bike lanes	Beaverton	2000-2005	$9,800,000
3034	Hall: Cedar Hills to Hocken	Construct a 3 lane extension with sidewalks and bike lanes	Beaverton	2000-2005	$4,600,000
3036	158th/Merlo: 170th to Walker	Widen to 5 lanes including sidewalks and bike lanes	WACO	2011-2020	$4,000,000
3038	Center: Hall to 113th	Widen to 3 lanes including sidewalks and bike lanes	Beaverton	2011-2020	$3,200,000
3060	TV Hwy: 117th to Hillsboro	Implement access management strategies	ODOT/WAC	2006-	$15,000,000

RTP #	Location	Improvement	Jurisdiction	Time-Line	Cost
			O	2010	
3061	TV Hwy: 209th to ORE 217	Interconnect Traffic Signals	ODOT/WACO	2006-2010	$1,500,000
3063	Murray: TV Hwy to Allen	Interconnect Traffic Signals	WACO	2000-2005	$50,000
3069	Scholls Ferry: Hamilton to Garden Home	Widen to 3 lanes including sidewalks and bike lanes	WACO	2011-2020	$8,000,000
3076	Allen: ORE 217 to Western	Widen to 5 lanes including sidewalks and bike lanes	Beaverton	2011-2020	$1,000,000
3084	170th: Alexander to Merlo	Widen to 5 lanes including sidewalks and bike lanes	WACO	2011-2020	$8,000,000
3085	170th: Rigert to Blanton to Alexander	Widen to 3 lanes from Rigert to Blanton and 5 lanes from Blanton to Alexander including sidewalks and bike lanes	WACO	2000-2005	$26,700,000
3086	158th: Walker to Jenkins	Widen to 5 lanes including bike lanes	WACO	2011-2020	$450,000
3087	Millikan: TV Hwy to 141st	Widen to 5 lanes including sidewalks and bike lanes	Beaverton	2011-2020	$4,000,000
3088	Millikan: 141st to Hocken	Widen to 3 lanes including sidewalks and bike lanes	WACO	2011-2020	$3,400,000
3121	TV Hwy: Cedar Hills to Minter Bridge	Refinement Planning to identify phased strategy to implement a limited-access facility	ODOT	2000-2005	N/A
3141	170th/173rd: Baseline to Walker	Widen the street to 3 lanes including sidewalks and bike lanes	WACO	2006-2010	$5,500,000
3143	Walker: Cedar Hills to 158th	Widen to 5 lanes including sidewalks and bike lanes	WACO	2006-2010	$20,000,000
3144	Walker: 158th to Amberglen	Widen to 5 lanes including sidewalks and bike lanes	WACO	2006-2010	$10,000,000
3148	Walker: Cedar Hills to ORE 217	Widen to 3 lanes including sidewalks and bike lanes	WACO	2006-2010	$8,000,000
3175	Barnes: ORE 217 to 119th	Widen to 5 lanes including sidewalks and bike lanes	WACO	2006-2010	$6,200,000
3177	Cedar Hills/Barnes	Reconstruct intersection and approaches to add travel lanes, turn lanes, and traffic signal upgrades	WACO	2000-2005	$1,800,000
3181	Cornell: US 26 to 143rd	Widen to 5 lanes including sidewalks and bike lanes	WACO	2011-2020	$3,000,000
3183	Cornell: 143rd to Saltzman	Widen to 3 lanes including sidewalks and bike lanes	WACO	2000-2005	$4,600,000
3185	Barnes: Saltzman to 119th	Widen to 5 lanes including sidewalks and bike lanes	WACO	2000-2005	$5,300,000
3186	Murray: Science Park to Cornell	Widen to 5 lanes including sidewalks and bike lanes	WACO	2000-2005	$3,100,000
3191	Cornell	Modify intersections at Saltzman, Barnes, Murray, and Trail	WACO	2011-2020	$500,000
3204	Cornell: Bethany to 179th	Widen to 5 lanes including sidewalks and bike lanes	WACO	2006-2010	$4,000,000
3205	173rd/174th	Construct a new 2 lane undercrossing of US 26 from Cornell to Bronson including sidewalks and bike lanes	WACO	2011-2020	$14,800,000
3214	Farmington: 172nd to 185th	Widen to 5 lanes including sidewalks and bike lanes	WACO	2011-2020	$10,000,000
			TOTAL		**$529,590,000**

*This project list is based on the August 10th, 2000, *2000 Regional Transportation Plan*, and includes projects in the Financially Constrained and Priority Motor Vehicle System

Table 4-15
Beaverton 2015 TSP Motor Vehicle Improvements not identified in the RTP Priority Scenario

Location	Description	Jurisdiction	Cost
Hocken at TV and Farmington	Widen Hocken to accommodate 2 additional lanes between TV and Farmington to allow turn lanes, Widen TV from 141st to Hocken to allow 3 through lanes and additional turn lanes	ODOT/Beaverton	$6,100,000
ORE 217: Walker/Cabot/Canyon Ramps	Braid ramps between Canyon and Walker/Cabot split diamond	ODOT	$20,800,000
Bany/Hart: 170th to 160th	Improve to 2-3 lanes including sidewalks and bike lanes	WACO	$1,000,000
170th: Merlo to Baseline	Widen to 3 lanes including sidewalks and bike lanes	WACO	$2,100,000
170th: Division to Blanton	Widen to 5 lanes including sidewalks and bike lanes	WACO	$2,500,000
Hyland Extension: Carr to Hart	Extend Roadway	Beaverton	$115,000
ORE 217: Denney/Allen	Collector/Distributor connection	ODOT	$8,600,000
Cedar Hills: Walker to US 26	Complete 5 lane roadway with access control including sidewalks and bike lanes	WACO	$2,100,000
143rd/Meadow: Science Park - Walker	Construct a new 2 lane road connections including a grade separation of US 26 including sidewalks and bike lanes	WACO	$16,000,000
Walker Road: Murray to ORE 217	Widen to 5 lanes including sidewalks and bike lanes	WACO	$26,500,000
Jenkins: Murray to Cedar Hills	Widen to 5 lanes including sidewalks and bike lanes	WACO	$3,800,000
Scholls Ferry: Hall to 125th	Widen to 7 lanes including sidewalks and bike lanes	WACO/ODOT	$15,760,000
Scholls Ferry: Teal to 175th	Widen to 5 lanes including sidewalks and bike lanes	WACO	$4,000,000
Beard/Nora: Murray to 170th	Improve to 2-3 lanes including sidewalks and bike lanes	WACO	$6,600,000
Weir: Murray to 175th	Improve to 3 lanes including sidewalks and bike lanes	Beaverton	$3,700,000
Hall north of Center	Extend new 5 lane roadway north of Center to connect with Jenkins at Cedar Hills including sidewalks and bike lanes	Beaverton	$11,000,000
Center: Cedar Hills to Hocken via Westgate	Extend public roadway with 3 lanes including sidewalks and bike lanes from Center to Westgate and from Westgate to Hocken	Beaverton	$1,500,000
141st: Tek to Farmington	Realign and extend 2/3 lane roadway including sidewalks and bike lanes	Beaverton	$2,800,000
Nimbus: Hall to Denney	Extend 2/3 lane roadway including sidewalks and bike lanes	Beaverton	$8,300,000
Local Streets	Add local and collector connectivity	Beaverton	$41,900,000
Traffic Signals	Addition of 50 traffic signals per plan	Beaverton/ WACO/ODOT	$12,500,000
Intersection Improvements	Listed in Table 4-16	Beaverton/ WACO/ODOT	$60,325,000
		TOTAL	**$258,000,000**

Table 4-16
2015 TSP Intersection Improvements

#	Location	Improvement	Cost
1	Kinnaman/Farmington	Widen Farmington to 5 lanes; add WB left turn lane; add NB/SB left turn lane; signal phasing modifications to NB/SB permitted/protected phasing	$1,250,000
2	Walker/173rd	Widen Walker Road to 5 lanes; add EB/WB right turn lanes; NB/SB double left turn lanes	$2,000,000
3	Baseline/170th	SB double left turn lanes; signal phasing modification of NB/SB to protected phasing; add WB right turn lane	$1,250,000
4	Merlo/170th	Signal phase change to permitted/protected for NB/SB approaches and to protected phasing for EB/WB approaches; add NB right turn lane; add NB, SB, and EB left turn lanes	$1,500,000
5	TV Highway/170th	Widen TV Highway to 7 lanes (3 through lanes each way); widen 170th to 5 lanes; add SB right turn lane; WB double left turn lanes	$1,000,000
6	Farmington/170th	Widen Farmington to 5 lanes; add NB left turn lane; add NB through lane and restripe SB for additional through lane (widen 170th to 5 lanes)	Cost included in roadway project
7	Hart-Bany/170th	Install traffic signal; add NB and SB left turn lanes	$1,250,000
8	Walker/167th	Install traffic signal; add NB and SB left turn lanes	$250,000
9	Cornell/158th	Add EB right turn lane	$500,000
10	Walker/158th	NB/SB double left turn lanes; add EB right turn lane; NB right turn lane; WB through lane (2 through lanes in each direction); signal phasing change to EB/WB permitted/protected phasing	$2,250,000
11	Jenkins/158th	Add NB right turn lane; add SB through lane and restripe SB approach; WB double left turn lanes; WB through lane (5 lanes on Jenkins)	$1,000,000
12	TV Highway/Millikan	Widen TV to 7 lanes; add SB and NB lane across intersection	$1,625,000
13	Hart/155th	Add WB left turn lane	$500,000
14	Jenkins/153rd	Widen Jenkins to 5 lanes (2 through lanes each way)	Cost included in roadway project
15	TV Highway/153rd	Widen TV Highway to 7 lanes (3 through lanes each way)	Cost included in roadway project
16	Farmington/149th	Widen Farmington to 5 lanes	Cost included in roadway project
17	Walker/Murray	Add double left turn lanes on all approaches; add right turn lanes on all approaches	$4,000,000
18	Murray/Jenkins	Add NB and SB right turn lanes; NB and SB double left turn lanes; widen Jenkins to 5 lanes	$2,000,000
19	TV Highway/Murray	Double left turn lanes on all approaches; add NB/SB through lane (3 through lanes each way) DCP; install median at TV/Railroad tracks/Farmington to restrict driveways to right in, right out	$1,500,000
20	Murray/Farmington	Double left turn lanes on all approaches; SB, EB, and WB right turn lanes	$2,500,000
21	Murray/6th	Install traffic signal; add EB and WB left turn lanes	$250,000
22	Murray/Allen	Widen Allen to 5 lanes to Murray (drop additional WB through lane after Murray); add SB right turn lane	$600,000
23	Murray/Hart	Signal phase change to permitted/protected phasing for all approaches	$125,000
24	Murray/Scholls Ferry	Restripe NB, SB, and EB approaches; signal phase change to protected phasing on all approaches	$125,000
25	Murray/Barrows/ Walnut	Install traffic signal; add EB left turn lane; restripe NB approach; construct SB approach left turn lane	$750,000
26	Scholls Ferry/Barrows (west)	Install traffic signal; restripe SB approach for separate left turn and right turn lanes	$250,000
27	Scholls Ferry/Davies	Install traffic signal; restripe WB approach; add NB right turn lane; add NB left turn lane	$250,000
28	Scholls Ferry/Barrows (east)	Close Barrows at Scholls Ferry	$150,000
29	TV Highway/Hocken	Add EB right turn lane; restripe SB approach; widen Hocken to 2 SB through lanes	$3,100,000
30	Farmington/Hocken	Add WB right turn lanes; SB double left turn lanes (Hocken carries 2 SB lanes from TV Highway)	$3,000,000

#	Location	Improvement	Cost
31	Cedar Hills/Walker	Double left turn lanes on all approaches; add EB right turn lane	$2,500,000
32	Cedar Hills/Jenkins	SB and EB double left turn lanes; add SB right turn lane; widen Jenkins to 5 lanes; WB right turn channel; signal modifications to EB/WB protected phasing	$1,750,000
33	Cedar Hills/Hall	Add NB right turn lane	$500,000
34	Cedar Hills/Westgate	Add NB left turn lane	$1,300,000
35	Canyon/Cedar Hills	Widen Canyon to 7 lanes on west leg; add NB left turn lane; add SB left turn lane; add SB right turn lane; add EB/WB left turn lane	$5,000,000
36	Farmington/Cedar Hills	SB double left turn lanes (construct SB right turn lane and restripe SB lanes as side-by-side left turn lanes)	$1,000,000
37	Hall/Westgate-Center	Realign intersection; signal modification to EB/WB protected/permitted phasing	$250,000
38	Canyon/Watson	Restripe SB approach (add a SB receiving lane)	$700,000
39	Farmington/Watson	Add SB through lane	$500,000
40	Farmington/Hall	Restripe NB approach (add NB receiving lane)	$500,000
41	Hall/Allen	Add EB and WB right turn lanes; NB and SB double left turn lanes	$1,700,000
42	Hall/Denney	NB/SB signal phasing change to permitted/protected	$150,000
43	Hall/Greenway	Signal phase change to permitted/protected phasing for EB and WB approaches, overalap NB right turn	$125,000
44	Hall/Nimbus	Signal phase change to protected/permitted phasing for NB and SB approaches	$125,000
45	Scholls Ferry/Hall	Add double left turn lanes on all approaches; add right turn lane on all approaches	$3,000,000
46	Brockman/125th	Signal phase change to protected/permitted phasing for all approaches; add WB left turn lane; restripe NB and EB approaches; construct SB left turn lane, right turn lane, and through lane	Cost included in roadway project
47	Scholls Ferry/125th	Widen Scholls Ferry Road to 7 lanes (3 through lanes each way); add SB right turn lane	$500,000
48	Scholls Ferry/Nimbus	Widen Scholls Ferry to 7 lanes (3 through lanes in each direction); add NB left turn lane; SB double left turn lanes	$1,000,000
49	Scholls Ferry/ORE 217 SB ramps	Channel EB right turn onto ramp and modify signal to allow free movement of EB right turns	$500,000
50	Scholls Ferry/Ore 217 NB on-ramp	Channel SB right turn onto ramp and modify signal to allow free movement of SB right turns; add WB through lane onto ramp	$500,000
51	Farmington/Lombard	Add NB right turn lane	$500,000
52	Canyon/Broadway	Add WB right turn lane; signal modification to NB/SB protected phasing	$200,000
53	Canyon/Fred Meyer	Add SB left turn lane; signal modification to NB/SB split phasing	$125,000
54	BH Highway/Griffith	Signal phasing modification to NB/SB protected/permitted phasing	$150,000
55	BH Highway/Western	Add EB right turn lane; add WB double left turn lanes; add NB through lane	$1,500,000
56	Allen/Western	Add EB left turn lane; EB/WB signal phasing change to permitted/protected phasing	$125,000
57	Allen/Scholls Ferry	Widen Allen to 5 lanes; restripe WB approach; signal phase change for all approaches to permitted/protected phasing	$125,000
58	Walker/ORE 217 SB	Bridge deck widening; EB double right turn lanes (add right turn lane); WB through lane	$750,000
59	Walker/ORE 217 NB	Add NB double left turn lanes	$250,000
60	Canyon/ORE 217 SB	Add SB left turn lane and restripe SB lanes	$500,000
61	BH Highway/ORE 217 SB	Add SB left turn lane	$500,000
62	BH Highway/ORE 217 NB	NB double left turn lanes	$600,000
63	Allen/ORE 217 SB	Add SB right turn lane (double right lanes); EB right turn lane (channel onto ramp; signal modification to allow EB right turn to go with SB left)	$2,000,000
64	Allen/ORE 217 NB	Add WB right turn lane; signal modifications to NB/SB split phasing	$500,000
65	Denney/ORE 217 SB	Install traffic signal	$250,000
66	Denney/ORE 217 NB	Install traffic signal	$250,000
67	Denney/Lombard	Install traffic signal and EB and WB left turn lanes	$1,125,000
			$64,025,000

Table 4-17
Committed/Completed Beaverton 2015 TSP Motor Vehicle Improvements

Location	Description	Jurisdiction	Cost
Farmington: Murray to 172nd	Widen to 5 lanes including sidewalks and bike lanes	WACO	$15,200,000
Oak: 160th to 170th	Widen roadway including sidewalks and bike lanes	WACO	$1,600,000
US 26: ORE 217 to Murray	Widen to 6 lanes and add braided ramps	ODOT	$13,000,000
Jenkins: Cedar Hills to Murray	Widen to 3 lanes including sidewalks and bike lanes	WACO	$3,100,000
170th: Rigert to Alexander	Widen to 5 lanes including sidewalks and bike lanes	WACO	$8,000,000
Millikan: Hocken to Cedar Hills	Construct new 3 lane extension with sidewalks and bike lanes	Beaverton	$4,300,000
Hart: Murray to 165th	Widen to 3 lanes including sidewalks and bike lanes	Beaverton	$7,100,000
Lombard: Broadway to Farmington	Realign and add turn lanes including sidewalks	Beaverton	$1,600,000
Hall Boulevard at Scholls Ferry	Provide southbound right turn lane	ODOT	$250,000
Hall: 12th St to 500 feet south of Allen	Retrofit to include bike lanes; intersection turn lanes at Allen	Beaverton	$1,438,000
Farmington: Murray to Hocken	Widen to 5 lanes including turn lanes, sidewalks, and bike lanes	Beaverton	$9,300,000
		TOTAL	**$64,888,000**

Assessment of Need

Based upon the evaluation of intersection level of service, 32 of the study intersections would operate at or worse than a D/C ratio 1.0 or a Level of Service (LOS) of E in the 2020 evening peak hour with no improvements beyond the RTP Priority System or 2015 Beaverton TSP improvements. Intersection operation for the existing and base 2020 scenarios are shown in Appendix D. The impact of future growth would be severe without significant investment in transportation improvements. Corridors would become unmanageably congested, resulting in travel speeds below 5 MPH over long stretches of road. Poor performance on arterials and collectors would result in substantial impacts (added through traffic) to other collectors and neighborhood routes. The greatest problem areas can be grouped into the following areas:

- **Lack of east-west capacity.** Three of the key east-west routes (TV Highway, Walker, Cornell and Farmington) all experience significant congestion problems if improvements are not made.
- **Lack of connectivity.** Areas near ORE 217 between Walker and Hall are the best examples, where all north-south movements must use local streets or divert to neighboring arterials.
- **Lack of intersection turning capacity.** Many intersections experience congested conditions, not the need for through capacity, but the need for additional right or left turning capacity.

Recommended Improvement Plan

To address these deficiencies, a series of alternatives and strategies were considered. The range of strategies includes:

- **Do nothing.** This would result in severe impacts to circulation in Beaverton with delays that would not be tolerable. Extreme land use controls would be required to protect livability.
- **Assume that alternative modes can serve excess demand.** The TSP analysis

assumed that these would be developed to their optimal levels to achieve mode-split targets. The order of magnitude of trips to be served by 2020 goes well beyond the capacity of the alternative mode system by themselves, even at their optimal levels. The estimated growth in PM peak period trips far exceeds the capacity of the alternative modes by themselves to support this demand.

- **Build all the road capacity necessary to achieve level of service D conditions at the intersections**. This strategy would result in nearly doubling the cost of the improvements identified in this plan. For example, many five lane cross sections would need to become seven lanes, substantial freeway widening beyond those currently foreseen and very large intersection configurations.
- **Pragmatically add capacity to all modes, developing a balanced system. Outline the long-term configuration of streets to allow development to best accommodate needs. Allow LOS E or D/C ratios of 1.0 at intersections and maintain system performance measures at a 2-hour D/C ratio of 1.0.** This is the strategy that was pursued. It involves significant system improvements, but attempts to balance performance between modes by not only adding additional capacity, but by also providing additional connectivity to serve and promote multi-modal trips.

The mitigation measures for the street system are listed in Table 4-18. These are improvements that go beyond the RTP Priority System or the 2015 Beaverton TSP identified improvements. The major road improvements (Bethany, Cornell, Walker, and Murray/TV Highway) are mainly refinements of the RTP recommendations and include some of the RTP Preferred Scenairo improvement projects. The detailed intersection improvements go beyond the level of analysis presented in the RTP and are recommended in this TSP based on the detailed intersection counts, forecasts, and LOS calculations.

Table 4-18
Beaverton 2020 TSP Preferred Additional Motor Vehicle Improvement Plan

Note: Location #'s listed as "_b" indicate that the improvement is in addition to an intersection improvement at that location from the 2015 TSP, intersections that were not included in the 2015 TSP improvement plan are numbered starting with 101

Location #	Location	Description	Cost
	Bethany Boulevard: Cornell to Bronson	Widen street to 5 lanes including sidewalks and bike lanes (this includes the widening of the US 26 overcrossing and intersection improvements).	$3,424,000
	Cornell: 143rd to Dale	Widen street to 5 lanes including sidewalks and bike lanes.	$5,197,500
	Cornell: Dale to Saltzman	Future capacity improvement based on additional study and coordination with Washington County	$8,620,000
	Walker: Cedar Hills to ORE 217	Widen street to 5 lanes including sidewalks and bike lane.	$8,970,000
	Murray: TV Hwy to Farmington	Construct an 4 lane overpass (Murray over TV Highway and Farmington), including sidewalks, bike lanes, and interchange connections	$28,517,500
	103rd: Western to Walker	Improve existing roadway and construct new connections and intersection alignments to provide connectivity from Walker to Western. This project includes sidewalks and bike lanes and should be built as development occurs.	$5,500,000
	120th Avenue: Henry to Canyon Road	Construct a 2 lane collector road, including sidewalks and bike lanes	$3,900,000

Location #	Location	Description	Cost
	Fairfield: Cedar Hills to Hocken	Construct a 2 lane roadway, including sidewalks and bike lanes	$5,500,000
	Rose Biggi: Canyon to Broadway	Construct a 2 lane collector road, including sidewalks and bike lanes	$1,200,000
101	Bethany/US 26 WB	add 2nd WB RT Lane, NB LT Lane	N/A
102	Bethany/Cornell	overlap SB RT	N/A
103	Cornell/173rd	add WB RT lane, 2nd NB LT lane, NB RT lane, SB RT lane	$2,200,000
6b	170th/Farmington	add EB RT lane, WB RT lane (signal modification)	$750,000
11b	158th/Jenkins	overlap NB RT	$125,000
104	Cornell/US 26 WB	add 2nd WB LT lane (structure work)	$1,000,000
105	Murray/Cornell	overlap NB RT, add 2nd NB LT lane (Cornell 5 lanes)	$1,000,000
106	Murray/US 26 WB	add 2nd WB RT Lane	$500,000
17b	Murray/Walker	increase cycle length by 20 seconds (to 120)	$125,000
19b	Murray/TV Highway	2 new signals, 2 RT Lanes, 2 Double LT Lanes	N/A
20b	Murray/Farmington	2 new signals, 2 RT Lanes, 2 Double LT Lanes	N/A
22b	Murray/Allen	add 2nd WB LT lane, 2nd WB RT lane, overlap WB RT lane (signal modification)	$1,250,000
107	Cedar Hills/Barnes	add 2nd NB lane and SB LT lane	$1,000,000
108	Cornell/Saltzman	add 2nd NB lane and SB LT lane (Cornell to 5 lanes)	$2,000,000
109	Canyon/Lombard	add EB RT lane	$500,000
65b	Denney/ORE 217 SB	add EB RT lane (structure work)	$1,100,000
110	BH Highway/Laurelwood	add SB LT lane (signal modification and ROW)	$2,000,000
111	Scholls Ferry/Laurelwood	install traffic signal, align with Nicol, ROW, 2 LT lane modifications	$1,750,000
112	Hall/ORE 217 SB/Cascade	add SB RT lane	$250,000
43b	Hall/Greenway	add EB RT lane	$500,000
42b	Hall/Denney	add 2nd WB LT lane	$500,000
36b	Farmington/Cedar Hills	add 2nd EB LT lane, ROW	$1,250,000
32b	Cedar Hills/Jenkins	Jenkins to 5 lanes, overlap WB RT	$125,000
31b	Cedar Hills/Walker	add 40 seconds cycle length to 140	$125,000
113	Murray/Brockman	add WB RT lane, SB RT lane, add 20 seconds cycle to 120 seconds, ROW	$100,000
47b	Scholls Ferry/125th	overlap SB RT	$125,000
50b	Scholls Ferry/ORE 217 NB on ramp	add 2nd NB LT lane and a 2nd WB LT lane	$1,000,000
		TOTAL	**$90,104,000**

Results

The result of these improvements is significant. While a D/C ratio of nearly 1.0 and LOS E still exist for the most part, the 2020 traffic conditions can be mitigated to the point that mobility can be preserved in Beaverton and congestion is manageable. Tables summarizing LOS are located in Appendix D and detailed calculations are in Appendices H through J.

Trucks

Efficient truck movement plays a vital role in the economical movement of raw materials and finished products. The establishment of through truck routes provides for this efficient movement while at the same time maintaining neighborhood livability, public safety, and minimizing maintenance costs of the roadway system. The through truck route map from the previous TSP was updated to include the expanded study area (See Figure 4-12) utilizing information from the currently adopted Washington County Transportation Plan (1988) and the recent RTP (2000). The objective of this route designation is to allow these routes to focus on design criteria that is "truck friendly"; i.e. 12-foot travel lanes, longer access spacing, 35-foot (or larger) curb returns, and pavement design that accommodates a larger share of trucks. The designated through truck routes in the TSP Study area include and exceed the coverage included in the RTP designations.

Safety

The existing collision data used for analysis in the Beaverton 2020 TSP was updated from the 2015 TSP with the most recent Washington County SPIS list. Table 4-19 lists the 10 highest ranked intersections from the Washington County SPIS in the study area (shown in Figure 3-7). Each of these top ten intersections is listed for capacity improvements. As the capacity improvements are made, safety enhancements can be incorporated into the design. In the short term, specific action plans should be prepared to address whether beneficial improvements at these locations can be made without affecting future plans.

The 2015 Beaverton TSP identified additional safety issues and strategies that are recommended as part of this 2020 TSP. The strategies are as follows:

- Road Widening: Improve safety on roadways by going from two lanes to three lanes and from four lanes to five lanes.
- Sight Distance Obstructions: All land use developments should be conditioned to maintain adequate sight distance where access to city streets is required.
- School Safety: Education and planning to ensure safety beyond pedestrian improvements ($10,000 per year)

Table 4-19
SPIS Ranking of Ten Highest Beaverton TSP Study Area Intersections

Ranking	Street	Cross Street	Number of Collisions (1997-1999)
1*	Baseline Road	185th Avenue	100
2	Murray Boulevard	TV Highway	133
4	Hall Boulevard	Scholls Ferry Road	85
5	Millikan Way/160th	TV Hwy	37
6	BH Highway	Scholls Ferry Road	47
8	Farmington Road	170th Avenue	31
9	Nimbus Avenue	Scholls Ferry Road	50
10	TV Hwy (Canyon Rd)	110th Avenue	29
12	Garden Home Road	Oleson Avenue	40
13	Farmington Road	Murray Boulevard	74

*Note that the intersection of Baseline/185th Avenue ranked higher than the intersection of Murray/TV Highway due in part to a larger number of fatal/major injury collisions (4 compared to 0).

Maintenance

The transportation maintenance system recommended in the 2015 TSP remains the recommended system in the 2020 TSP. The following strategies are the result of evaluation and ranking by the City of Beaverton Traffic Commission involved in the 2015 TSP:

- Maintain roadways using a balanced approach which develops a pavement management system and budget to address needs over a ten year period (65% of points)
- Maintain roadways using a need based approach which addresses current and future needs as they arise (35% of points)

Based on input from the City of Beaverton, the adopted maintanence budget for the fiscal year 2000-2001 was approximately $3.12 million (the 2015 TSP maintance budget was based on the 1997-1998 budget of $1.74 million)[17]. The 2000-2001 budget reflects areas annexed into the City and contingency costs that were not in the 1997-1998 budget.

[17] Based on data received from Steve Baker, City of Beaverton, June 15, 2001.

Parking

The City of Beaverton Development Code has been updated since the adoption of the 2015 TSP to include parking requirements (*City of Beaverton Development Code, 60.20*). This code includes both motor vehicle and bicycle maximum and required parking ratios for new development. In addition, the City of Beaverton has conducted a regional center parking study (*Beaverton Regional Center Parking and Street Design Study*), as recommended in the 2015 TSP. The implementation of these parking requirements is part of the City's action plan to meet the non-SOV modal targets.

Strategies for managing future parking needs in Beaverton were evaluated and ranked in the 2015 TSP. The strategies, ranked from most important to least important, are as follows:

- Shared Parking
- Parking Pricing
- Lower parking ratios for land uses within ¼ mile of LRT stations
- Parking needs should be reviewed by individual developments at the site plan review stage. Parking ratios should be compared to demand, as identified by ITE or DEQ[18]
- Maximum Parking Ratios

[18] *Parking Demand*, 2nd Edition, Institute of Transportation Engineers, 1987; and *Peak Parking Space Demand Study*, Oregon Department of Environmental Quality, by JHK & Associates, June 1995.

DKS *Associates*

City of Beaverton
Transportation System Plan

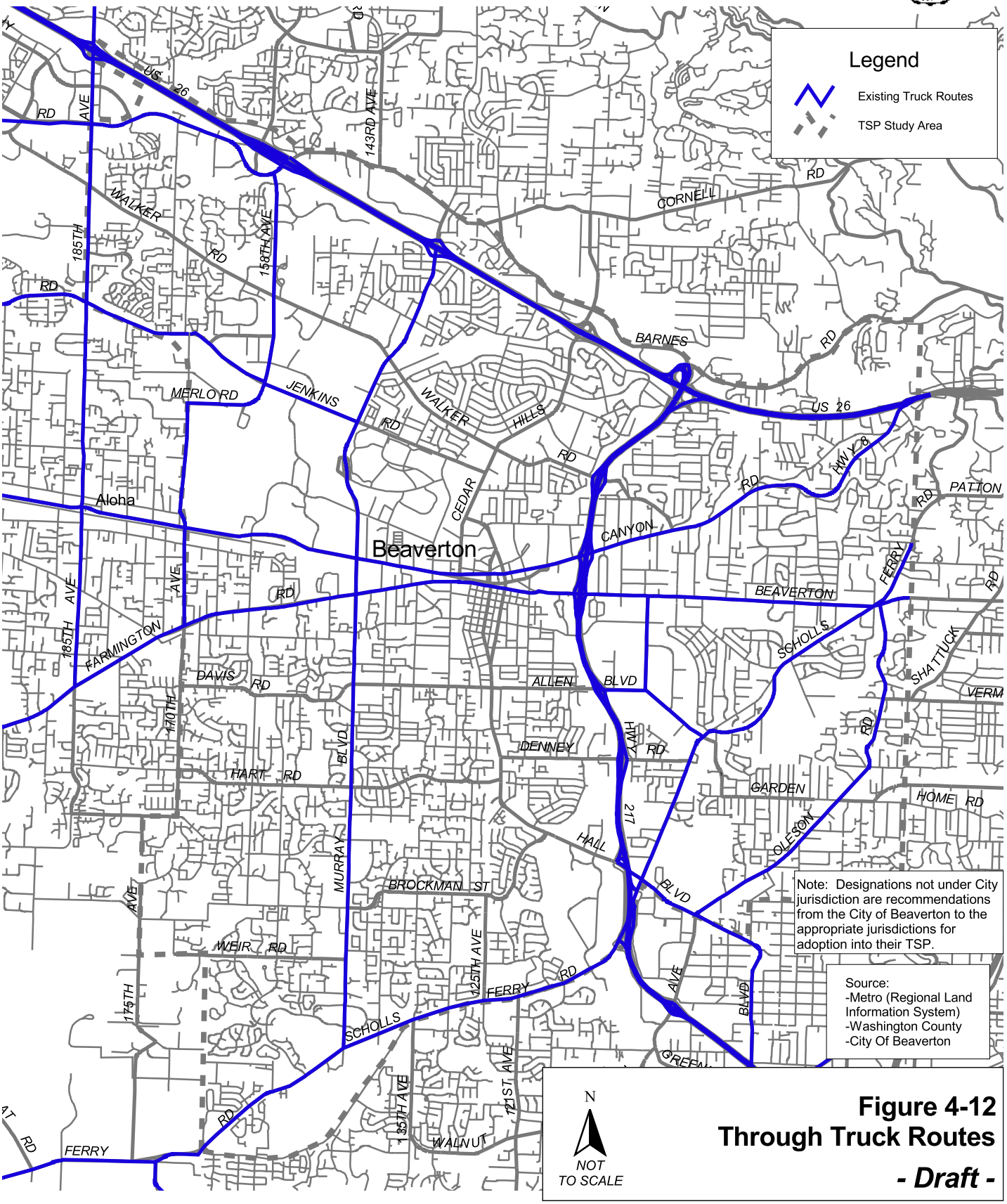


Figure 4-12
Through Truck Routes
- Draft -

Other Modes

The are four other modes of transportation included in the TSP: rail, pipeline, air, and water. All low-density rail lines within the TSP study area are operated by Portland & Western (P&W), a sister company of Willamette & Pacific (W&P) Railroad and a subsidiary of Genesee & Wyoming Incorporated. Trains operate in the Beaverton area seven days per week at various times throughout the day. The current train frequency and plans for growth in cars per train are not anticipated to change from the 2015 to the 2020 planning horizon. All other rail in the Beaverton TSP Study Area is for transit use (LRT and Commuter Rail, see Figure 4-13).
Figure 4-14 shows the existing pipeline plan for the Beaverton TSP Study Area. There are some natural gas pipelines in Beaverton, but no plans were identified for expansion. There is also a petroleum gas line (gasoline and diesel) that runs from the Port of Portland to Eugene through Beaverton, but no plans were identified for expansion[19]. Future expansion plans of the Kinder Morgan pipeline could change with market demand.

There are currently no airports within the Beaverton TSP Study area (see Figure 4-15). There are two private heliports (PGE and Turel) located in the southwest corner of Beaverton. There are also no navigable waterways in Beaverton.

[19] Based on conversation with Don Quinn, Manager of Pipeline Engineering, Kinder Morgan, February 1, 2001.

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City of Beaverton
Transportation System Plan

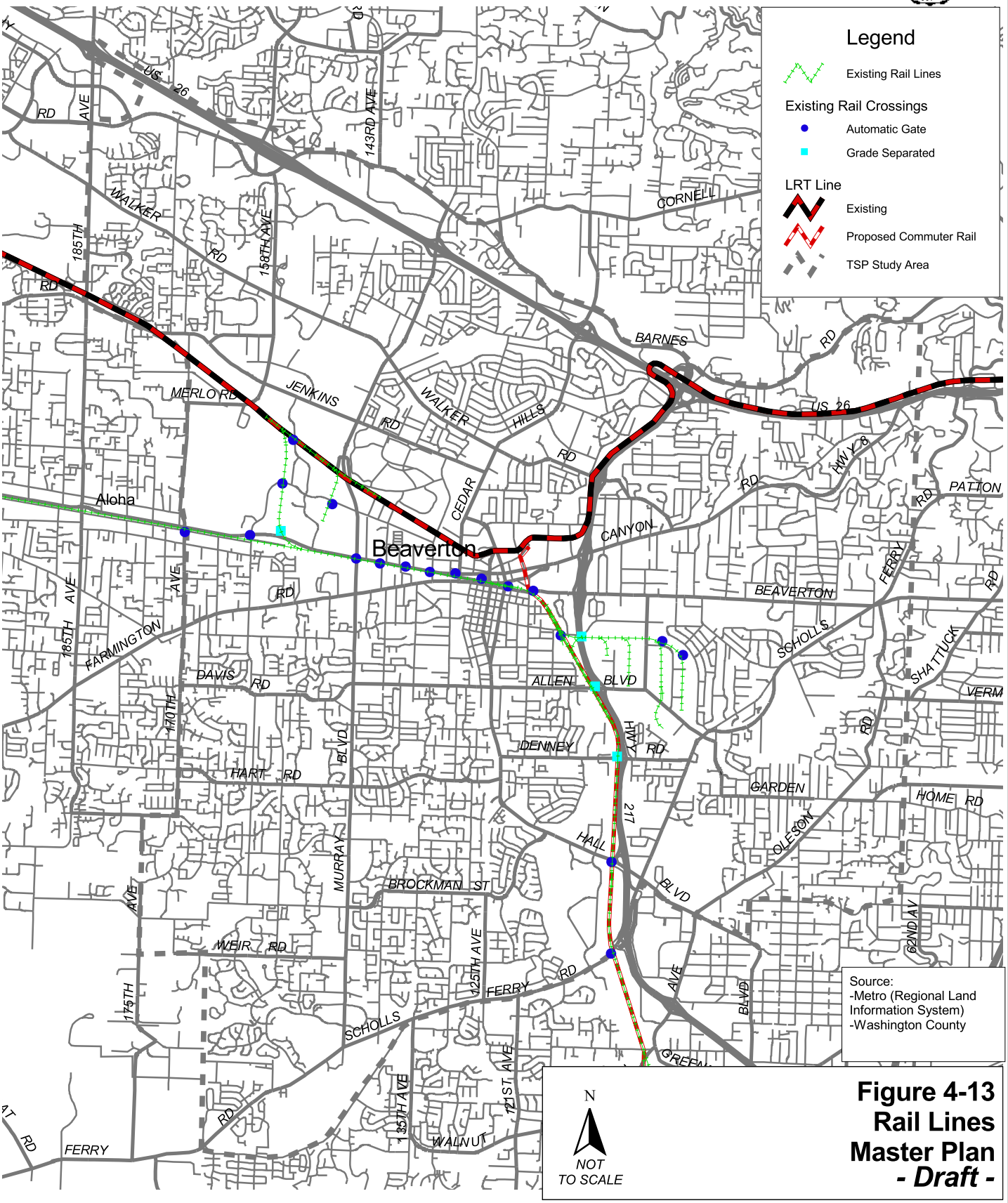


Figure 4-13
Rail Lines
Master Plan
- Draft -

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City of Beaverton Transportation System Plan

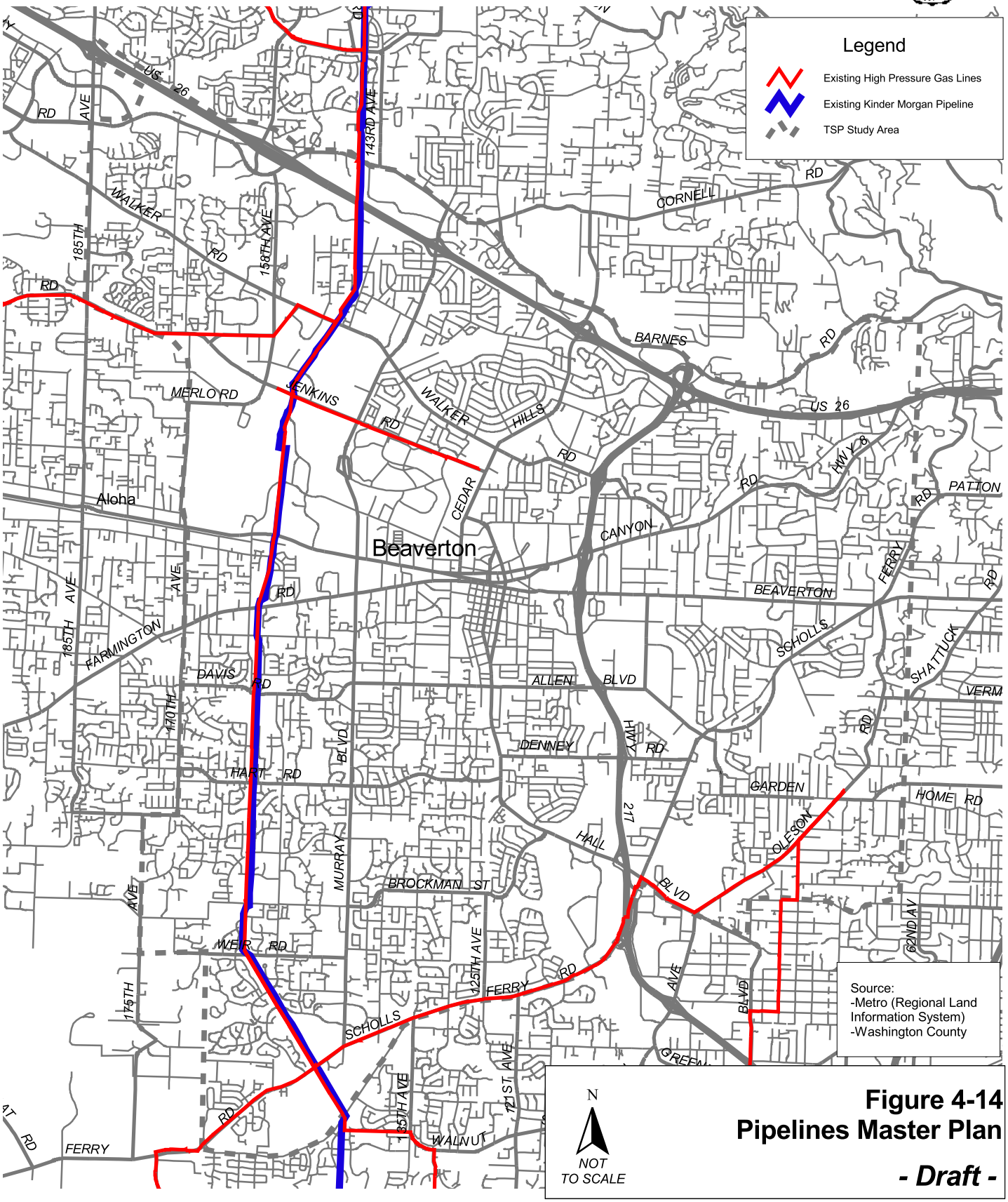


Figure 4-14
Pipelines Master Plan

- Draft -

City of Beaverton
Transportation System Plan

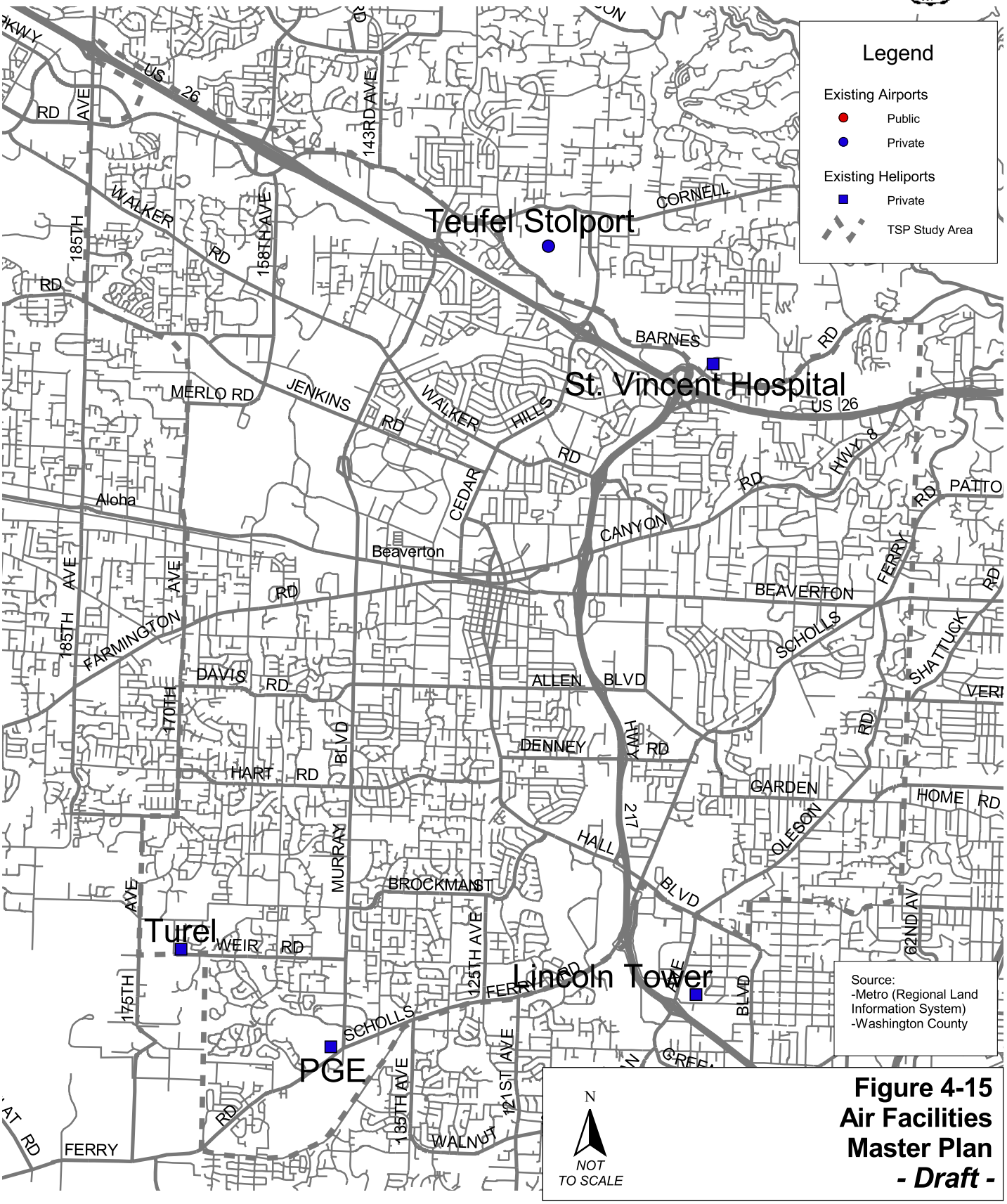


Figure 4-15
Air Facilities
Master Plan
- Draft -

A- Issues Report

Issues Report

Previous Work

There have been several previous studies in recent years that have related to transportation issues in Beaverton. These studies provide background into transportation needs and opportunities in the area, and will become important resources for conducting the current study. An annotated bibliography of a few key studies is provided below:

2000 Regional Transportation Plan, Metro, August 10, 2000 (Ordinance No. 00-869A and Resolution No. 00-2968B).

The Regional Transportation Plan (RTP) is a 20-year blueprint to ensure our ability to get from here to there as the Portland region grows. The RTP establishes transportation policies for all forms of travel - motor vehicle, transit, pedestrian, bicycle and freight - and lays out the priority projects for roads and freight movement as well as bicycling, walking and transit. The plan is based on forecasts of growth in population, households, and jobs as well as future travel patterns and analysis of travel conditions. It considers estimates of federal, state and local funding which will be available for transportation improvements. The plan also comes with cost estimates and funding strategies to meet these costs. The plan was first adopted by the Metro Council in 1983, and is updated periodically to reflect changing conditions and new planning priorities. Local transportation plans are required by state law to be consistent with the RTP.

The following table summarizes the key ways the Beaverton TSP must comply with the RTP:

Issue	*Existing TSP Complies*	*Update Needs to Address*
Local TSP Development (identify needs for 20 year planning period)	✓ Chapters 5-9	✓
System Level Planning (By Mode)	✓ Chapters 5-9	✓
Project Level Planning (By Mode)	✓ Chapters 5-9	✓
Transportation Systems Analysis for Local Plan Amendments (Consider options outlined in RTP 6.4.4 (1-7) before additions of capacity)	✓ Chapters 8, 10	✓

Design Standards for Street Connectivity (local street plan and standards)	✓ Chapter 8	✓
Alternative Mode Analysis	✓ Chapters 5-7, 9	✓
Motor Vehicle Congestion Analysis	✓ Chapter 8	✓
Identify Future RTP Refinements	✓ Chapter 9	✓
Transit Service Planning	✓ Chapter 7	✓
Project Development (considering alternatives such as TSM and Street Design concepts)	✓ Chapters 5-10	✓
Refinement Planning		(not included in this scope)
Specific Corridor Refinements (the only one in Beaverton Area is Sunset Highway)		✓ (acknowledge concern)
Specific Corridor Studies (three affect Beaverton directly—I-5 South, Highway 217 and Tualatin Valley Highway)		✓ (Acknowledge concern)
Area of Special Concern (Beaverton Regional Center)		✓

The RTP projects that shall be included in this TSP update are in the attached table.

The RTP designation of the Beaverton Regional Center as an Area of special Concern requires that the Beaverton TSP must adopt 1 of 2 approaches to address the RTP expectation that the motor vehicle level of service policies set forth will be exceeded. The first approach requires local TSPs that choose the alternative performance measure option to adopt the following performance measures and provide an analysis that demonstrates progress towards meeting these measures in the local TSP:

a. Non-Single Occupant Vehicle (SOV) modal targets

b. Parking ratios consistent with Title 2 of the Urban Growth Management Functional Plan (UGMFP)

c. A street connectivity plan for the Area of Special Concern that meets the connectivity requirements set forth in the RTP

d. A plan for mixed-use development

The second option requires local TSPs to adopt an Area of Special Concern action plan that:

a. Anticipates the growth and subsequent impacts of motor vehicle traffic on multi-modal travel in these areas

b. Establishes an action plan for mitigating the growth and subsequent impact of motor vehicle traffic

c. Establishes performance standards for monitoring and implementing the action plan

The action plan shall consider land-use strategies, as well as transportation solutions for managing the effects of continued traffic growth.

Oregon Highway 217 Corridor Study

This study was conducted as a preliminary analysis to provide a point of reference for operational issues in order to frame improvement elements associated with the widening of ORE 217. It was only a first step in better understanding the nature and character of improvements needed along the corridor. The following were some of the key findings of the study:

- Braided ramps are necessary to provide safe access to ORE 217 with future traffic volumes for all alternatives due to the short, inadequate interchange spacing
- Preliminary estimated cost for alternatives considered are between $290 and $490 million (year 2000 dollars)
- Frequency of access points on ORE 217 and short trips are less than optimal for premium service lane alternatives
  - Ramp meter bypass and/or exclusive drop-in ramps serving regional centers should be evaluated with premium service alternatives
  - "System-wide" connections of premium service alternatives with I-5 at the south and US 26 at the north will significantly improve time savings
- Environmental impacts to water quality and parkland resources, while significant, can be mitigated for alternatives within 150 feet or less right-of-way requirement
- The maximum footprint for any future improvement to ORE 217 can likely NOT exceed a total of six lanes plus auxiliary lanes
- Construction phasing of any alternative to insure minimum levels of service on ORE 217 is absolutely critical
- Given the limitations of the corridor, once a design alternative has been selected, a "building block" phased implementation and funding program should be implemented
- Evaluate paint/pylon and concrete barrier alternatives for enforcement of premium service lanes
- Evaluate operational effectiveness of sub-standard shoulder width

The TSP Update will consider the following design and functional considerations in developing any transportation solutions for this corridor (as outlined in the RTP):

- Expand highway to include a new lane in each direction from I-5 to US 26
- Address the competing needs of serving localized trips to the Washington Square and Beaverton regional centers and longer trips on Highway 217
- Consider express, HOV and peak period pricing when adding new capacity

- Design capacity improvements to maintain some mobility for regional trips during peak travel periods
- Design capacity improvements to preserve freight mobility during off-peak hours
- Retain auxiliary lanes where they currently exist
- Improve parallel routes to accommodate a greater share of the local trips using this corridor
- Improve light rail service with substantially improved headways (time between trains)
- Coordinate with planned commuter rail service from Wilsonville to Beaverton regional center

US 26: Portland to Cannon Beach Study

The US 26 Corridor Plan is a guiding document for ODOT, including OTC adopted objectives and management directions. The corridor plan includes a series of objectives, strategies, and projects to enhance the ability to serve commuter, recreational, and freight travel. Consistent with OTP objectives to promote a balanced multi-modal transportation system, the corridor plan promotes TDM and TSM stategies as the first course in addressing future needs.

The corridor plan also addresses cost-efficiency by combining projects into mulit-modal projects where possible. To the greatest extent possible, projects identified that improve transportation balance in the corridor are to be pursued through maintenance, operations, management, and service projects that minimize capital expense.

The corridor plan identifies that beyond TSM, TDM, and multi-model system improvements, capacity will need to be added to US 26 to handle the forecasted future growth. The plan states that the urban portion of the corridor should increase the capacity of US 26 through the following programmed highway widening improvements:

a. Construct the proposed addition of a third eastbound lane with noise walls on US 26 between ORE 217 and the Camelot Interchange, remove Wilshire on-ramps, and close local accesses

b. Construct the proposed widening of US 26 to six lanes from ORE 217 to Murray Boulevard with a braided ramp west bound from ORE 217

c. Construct the proposed highway project from the Camelot Interchange to the Sylvan interchange that includes reconstruction of the highway mainline, replacing the Canyon Road crossing and adding a third lane

The corridor plan also identifies the following projects to accommodate the additional capacity needed within the corridor's urban portion:

a. Investigate development of dedicated HOV/HOT lanes on US 26 within the corridor's urban portion to accommodate a portion of increased auto and transit trips

b. Investigate widening of US 26 to six lanes from Murray Boulevard to the Metro UGB (Shute Road)

c. Construction of an eastbound on-ramp to US 26 at Cornelius Pass Road, eliminating left-turns across Cornelius Pass Road

Other capacity improvement strategies identified in the plan include:

- Use parallel routes to US 26, such as Evergreen Boulevard, Cornell Road, and West Union Road, to decrease reliance on US 26 for local trips, based upon their limits of capacity, function, policy, and operational roles.

- Investigate the feasability of congestion pricing

- Mile-based and/or emmission based registration fees withing the Metro UGB

- Implement congestion reduction strategies based on the following priorities:

    1. Demand reduction, such as TDM measures like carpooling or telecommuting

    2. System Management, such as optimizing programs or improvements to local street systems to reduce the demand for US 26 improvements

    3. Access management

    4. Improvements and new facilities to accommodate additional capacity

The Beaverton TSP update will include the identified US 26 capacity improvement plans. The TSP will also use the identified congestion reduction strategies to utilize all modes of travel and reduce peak trips.

Sunset Highway Interchange/Corridor Study

The Sunset Highway Interchange Study was conducted in 1998 to identify existing deficiencies, determine future needs, develop alternatives, evaluate alternatives and select a preferred alternative for each of four interchanges along the Sunset Highway. The study included interchanges at Cornelius Pass Road, Shute/Helvetia, Jackson School Road and Glencoe Road. It was also determined that additional freeway mainline capacity would be needed east of Cornelius Pass Road.

In addition, the RTP has indicated that a corridor refinement study will be conducted (in conjunction with local jurisdictions) for the Sunset Highway. Improvements are needed in this corridor to preserve access to and from the central city and the Sunset Corridor employment area, and provide access to the Hillsboro regional center. The following design elements should be considered as improvements implemented in this corridor:

- Maintain off-peak freight mobility
- Phase in capacity improvements from the Sylvan interchange to 185th Avenue, expanding to a total of three general purpose lanes in each direction
- Improve light rail service, with substantially increased headways
- Construct major interchange improvements at Sylvan, Cedar Hills Boulevard and Cornelius Pass Road
- Identify and construct additional overcrossings in the vicinity of interchanges to improve connectivity and travel options for local traffic, thus improving interchange function
- Consider express, peak period pricing or HOV lanes when adding highway capacity, especially west of Highway 217

Metro Tualatin Valley Highway Access Management Strategy

Metro has indicated in the RTP that a corridor study will be conducted (in conjunction with local jurisdictions) for Tualatin Valley Highway (TV Highway) to address existing deficiencies and serve increased travel demand between the Beaverton and Hillsboro regional centers. The following design considerations should be addressed as part of a corridor study.

- Manage access as part of a congestion management strategy.
- Implement TSM and other interim intersection improvements at various locations between Cedar Hills Boulevard and Brookwood Avenue
- The relative trade-offs of a variety of capacity and transit improvements, include:
    1. Improvements on parallel routes such as Farmington, Alexander, Baseline and Walker roads as an alternative to expanding TV Highway
    2. Seven-lane arterial improvements from Cedar Hills Boulevard or Murray Boulevard to Brookwood Avenue or Baseline Road in Hillsboro
    3. A limited access, divided facility from Cedar Hills Boulevard or Murray Boulevard to Brookwood Avenue, with three lanes in each direction and grade separation at major intersections
    4. Transit service that complements both the function of Tualatin Valley Highway and the existing light rail service in the corridor
- Evaluate the impacts of the principal arterial designation, and subsequent operation effects on travel within the Beaverton regional center

The update to the Beaverton TSP will acknowledge that this corridor is a problem, but specific improvements will be an outcome of a specific corridor study, not the TSP.

Washington Square Regional Center Plan

A task force was used to develop this Regional Center Plan. The task force recommended a series of projects to improve access to the Regional Center by transit, bicycle, pedestrians and motorized vehicles into and throughout the district. The following improvements were identified:

- Development of a "transit access and Action Plan" in concert with Tri-Met
- Improvements to the regional roadway system—some key improvements identified were:
    - A bridge over Highway 217 connecting Nimbus Drive to the Mall area
    - Extending Nimbus Drive to Greenburg Road
    - A bridge over Highway 217 connecting Locust to Nimbus
    - A collector system at Oak-Lincoln-Locust
    - Widening Hall Boulevard to three lanes between Oleson Road and the southern study area boundary (while acquiring right-of-way for a five lane section)
    - Interchange capacity improvements at Highway 217
- Bike paths—ensuring easy, safe access to employment, housing and retail development as well as surrounding greenspace.
- Commuter Rail between Wilsonville and Beaverton
- People Mover that will travel throughout the district, linking jobs, housing, retail and services

A grant has been obtained to develop an implemention plan, however, there are still issues concerning funding, environmental and neighborhoods. A transportation management area (TMA) in the area may be an option. The Beaverton TSP Update will need to coordinate with ongoing efforts of this plan and will need to specifically address connections to

Nimbus north of Scholls Ferry Road, improvements to ORE 217 interchanges and commuter rail in Beaverton.

Raleigh Hills Town Center Plan

This planning effort attempted to update (amend) the Raleigh Hills-Garden Home Community Plan. Several maps were developed, including a Transportation Circulation Designations Map, a Street Corridor, Arterial Access and Pedestrian System Designations Map, and a Functional Classification System Map. The key outcome of this study is a proposed reconfiguration of the Beaverton-Hillsdale Highway/Scholls Ferry Road/Oleson Road intersection. No other concepts were approved as a part of this project. The circulation elements can be incorporated in the TSP maps for functional classification in this update.

Cedar Mill Town Center Plan Update (Washington County Ordinance No. 536)

This ordinance updates (amends) the Cedar Hills-Cedar Mill Community Plan and the Bethany Community Plan. The ordinance includes several maps, including a Land Use District Map, a Transportation Circulation Designations Map, a Street Corridor, Area of Special Concern, Arterial Access and Pedestrian System Designations Map, a Functional Classification System Map, and several descriptions of areas of special concern (as identified on the maps). The elements of these maps will be incorporated in the TSP update.

Murray/Scholls Town Center Plan

A Town Center Master Plan was developed for the Murray/Scholls Town Center Area for a 20-year horizon. As part of the Master Plan, transportation analysis was conducted to determine improvements likely to become necessary with the development of the Town Center in the next 20 years. Improvements were grouped into three phases (Phase I: 0-5 years out, Phase II: 5-10 years out and Phase III: 10-20 years out). The total anticipated cost for all three phases of improvements was about $13.5 million. Many of these projects will occur with adjacent development. Elements from the Town Center Plan were already included in the adopted TSP including the roadway network, bicycle and pedestrian circulation elements and local street connections.

Beaverton Regional Center Parking and Street Design Study

This study, which has not yet been reviewed by the City, addresses parking supply and demand in the Beaverton Regional Center area (downtown Beaverton) as well as street design and connectivity in the same area. It was concluded that there are currently about 13,000 available parking spaces in the study area and that an additional 15,000-30,000 parking spaces will become necessary in downtown Beaverton in the next 20 years. The study also concludes that increasing development density will necessitate parking structures as opposed to the surface and on-street parking that is used today.

Two local street connections were proposed in conjunction with the study. The first would extend Rose Biggi Avenue south from Canyon Road to Broadway Street and the second would extend Henry Street south (as 120th Avenue—Henry Street veers 90 degrees west as Henry Street) to Canyon Road. In addition, the existing Short Street is proposed to be vacated. These will be studied for access standards and capacity needs to determine if they should be incorporated in the TSP update local street maps.

Transportation Planning Rule, Oregon Administrative Rules (OAR) 660-12.

The adoption of the Transportation Planning Rule (TPR) in May 1991, (updated in November 1998) mandates comprehensive transportation planning for cities in Oregon. The TPR defines the specific requirements for a transportation system plan. The areas of analysis addressed in the TPR for a transportation system plan include the following:

- Roadway capacity and level of service
- Transit capacity and capacity utilization
- Bicycle and pedestrian system capacity
- Adjustment of turning movement volumes produced by travel demand forecasting models
- Estimation of future transportation needs (person travel), reflecting:
  - population and employment forecasts consistent with comprehensive plans
  - measures to reduce reliance on the automobile
  - increased residential, commercial and retail development densities
  - location of neighborhood shopping centers near residential areas
  - better balance between jobs and housing within sub-areas
  - maximum parking limits for office and institutional developments
  - appropriate levels of transportation facilities to serve land uses identified in transportation plans
  - increases in average automobile occupancy
  - increases in modal shares of non-automobile modes
  - TDM programs and rearranged land uses on the number and length of automobile trips per capita
  - land use and subdivision regulations to increase non-auto trip making
- Estimation of future goods movement needs
- Access management

These were incorporated into the adopted TSP and will be carried forward in the update.

Oregon Transportation Plan, Oregon, 1992 (Updated in 1997 Annual Report).

The Oregon Transportation Plan (OTP) sets the general direction for transportation development statewide for the next twenty years. The purpose of the plan is to guide development of a safe, convenient and efficient transportation system that promotes economic prosperity and livability. The OTP contains two elements: Policy and Systems. The OTP provides overall direction for allocating resources and coordinating modes of transportation. It also reviews the relationship of transportation to land use, economic development, the environment, and energy use. Key aspects of the OTP focus on a transportation system that is balanced, efficient, accessible, environmentally responsible, has connectivity among places and modes and carriers, is safe and financially stable**.** The 1997 Update highlights many of the actions that have been taken to implement the Oregon Transportation Plan in 1997, monitoring its status.

1999 Oregon Highway Plan, Oregon Department of Transportation, May 1999.

The Oregon Highway Plan (OHP) is a specific element of the Oregon Transportation Plan. The plan has three main elements: the Vision, the Policy Element and the System Element. The Vision portion of the plan considers what Oregon's highway system should look like, considering an anticipated 1.2 million new residents over the next 20 years, as well as projections for economic, demographic and technology forecasts. The Policy Element contains policies and actions under goals for System Definition, System Management, Access Management, Travel Alternatives, and Environmental and Scenic

Resources. The System Element begins with an analysis of 20-year state highway needs and lays out investment strategies to meet these needs. This element also lays out an implementation plan for the goals, policies and actions identified in the Policy Element.

Key areas the Beaverton TSP Update will need to comply with are listed in the following table:

Issue	*Existing TSP Complies*	*Update Needs to Address*
Access Spacing Standards (OHP Appendix C)		✓--(meet for highways and interchanges)
Highway Mobility Standards (OHP Tables 6 and 7)		✓--(meet table 7 requirements)
Meet Land Use and Transportation Policy Objectives (i.e. designate STA, Commercial Center, UBA's*)		✓--(designate STA, CC and UBA's)

* STA=Special Transportation Area, UBA= Urban Business Area

These policies apply to the following highways in the Beaverton area (2040 Concept Areas include the Central City, Regional Centers, Town Centers, Station Communities, and Main Streets as identified in the *2000 Metro RTP*):

Highway	*Classification*	*V/C Standard*				*Access Spacing Standard**
		2040 Concept Area		*Non-Concept Area*		
		1st hour	*2nd hour*	*1st hour*	*2nd hour*	
US Route 26	Statewide Highway	0.99	0.99	0.99	0.99	1320 ft
ORE Route 217	Statewide Highway	0.99	0.99	0.99	0.99	1100-1320 ft
ORE Route 8 (Canyon Road – TV Highway)	Statewide Highway (west of ORE 217)	0.99-1.1**	0.99	0.99	0.99	175-990 ft
	District Highway (east of ORE 217)	1.1	0.99	0.99	0.99	175-770 ft

ORE Route 10 (BH Highway – Farmington)	District Highway (County Line to ORE 217 and west of Murray)	1.0-1.1***	0.99	0.99	0.99	175-500 ft
Scholls Ferry Road	District Highway (ORE 217 to Hall and west of 175th)	1.0-1.1***	0.99	0.99	0.99	175-500 ft
Hall Boulevard	District Highway (ORE 217 to 99W)	1.0-1.1***	0.99	0.99	0.99	175-400 ft

*Spacing Standards vary as per designations in Appendix C of the 1999 OHP

**V/C standard varies between Beaverton Regional Center Area of Special Concern (1.0), Principle Arterial Route from Cedar Hills Blvd. to Brookwood Ave. (0.99), 2040 concept areas (1.1), and other 2040 corridor designation (0.99). The Area of Special Concern and Principal Arterial Route standards supercede the other two standards.

***V/C standard in Beaverton Regional Area of Special Concern is 1.0. V/C standard for other 2040 concept areas is 1.1.

Oregon Bicycle and Pedestrian Plan, Oregon Department of Transportation, June 1995.

This plan serves the following purposes:

- To implement the actions recommended by the Oregon Transportation Plan
- To guide ODOT, MPO's, the cities and counties of Oregon and other agencies in developing bikeway and walkway systems
- To explain the laws pertaining to the establishment of bikeways and walkways
- To provide information to citizens interested in bicycle and pedestrian transportation
- To fulfill the requirements of the Intermodal Surface Transportation Efficiency Act (ISTEA), whereby each state must adopt a statewide bicycle and pedestrian plan
- To fulfill the requirements of the Oregon Administrative Rule 660-12 (Transportation Planning Rule 12), and
- To provide standards for planning, designing and maintaining bikeways and walkways

The document includes two sections, including the Policy & Action Plan and Bikeway & Walkway Planning, Design, Maintenance & Safety. The first section contains background information, legal mandates and current conditions, goals, actions and implementation strategies ODOT proposes to improve bicycle and pedestrian transportation. The second section will assist ODOT, cities and counties in designing,

constructing and maintaining pedestrian and bicycle facilities. Design standards are recommended and information on safety is provided.

Statewide Transportation Improvement Program 2000-2003, Oregon Department of Transportation, January 1999.

This document, referred to as the STIP, is a program schedule for the Oregon Department of Transportation. The purpose of the STIP is to schedule funding for Oregon's highest priority transportation projects for the next two years. The following projects are listed in the STIP relevant to Beaverton:

- Washington County ATMS (Advanced Traffic Management Systems): Install video cameras.
- US 26/Camelot Interchange (Phases 2&3).
- ORE 217/Denny Road: Signalize both ramp terminal intersections.
- Tualatin Valley Highway/Hocken: Overlay highway and turn lanes—add safety improvements.
- Washington County Commuter Rail Alternatives Study—Preliminary Engineering Phase.
- Cedar Hills Boulevard between Walker Road and Butner Road—Construct sidewalks and bike lanes.
- Hall Boulevard between 12th and Allen—Add north and southbound left turn lanes, bike lanes.
- 170th between Merlo Road and Elmonica Light Rail Station—Construct 9 foot sidewalks.
- Farmington Road (Hocken/Murray): Preliminary engineering to widen Farmington to 5 lanes, multimodal (including bike lanes and sidewalks), and construct additional turn lanes at Farmington/Murray.
- Hall Boulevard from SPRR to Ridgecrest – Bike lanes and intersection improvements.

Metro Transportation Improvement Program – Priorities 2000, Metro, November 1999.

This document, referred to as the MTIP, is a list of improvement projects for Metro. The purpose of the MTIP Priorities 2000 is to schedule funding for Metro's highest priority transportation projects for the next two years. The following projects are listed in the MTIP relevant to Beaverton:

- Fanno Creek Multi-Use Path Phase 1 (From Allen south to 105th): Construct a multi-use path with boardwalks and bridge structures.
- Fanno Creek Multi-Use Path Phase 2 (East to Allen/Scholls Ferry): Project Engineering and ROW acquisition.
- Hall Boulevard Bikeway (12th/Allen): Construct bike lanes to complete the regional bike system from Farmington to ORE 217.
- Cornell Road Bikeway (Elam Young Parkway to Ray Circle): Add a 6-foot wide bike lane.
- Farmington Road (Hocken/Murray): Preliminary engineering to widen Farmington to 5 lanes, multimodal (including bike lanes and sidewalks), and construct additional turn lanes at Farmington/Murray.
- Washington County ATMS (Advanced Traffic Management Systems): Install video cameras.
- Sentinel Plaza (Cornell Road/Cedar Hills Blvd/113th Ave): Construct a multi-use path and install a Native American totem.
- SW 170th Ave (Merlo Rd/Elmonica LRT Station): Replace deteriorating asphalt with a sidewalk to improve access to the LRT Station.

- Washington County Commuter Rail (Wilsonville/BV): Environmental work and design for trackwork improvements, stations, park and ride facilities, signals, switches and crossing protection.

Wilsonville to Beaverton Commuter Rail, Washington County, August 2000.

The project is a commuter rail line serving eastern Washington County, from Wilsonville to Beaverton, Oregon. The commuter trains would operate on existing tracks, running parallel and west of I-5 and Highway 217, for a distance approximately 15 miles. Users would access the line via five stations, located in Wilsonville, Tualatin, Tigard, and Beaverton. Beaverton and Tigard would share the fifth station, near Washington Square. Beaverton Transit Center's station would connect with Westside MAX Light Rail and buses serving the Portland and Washington County employment centers. This project will require coordination between Metro, Washington County, Tri-Met, The City of Beaverton, The City of Tigard, The City of Tualatin, and the City of Wilsonville. The design for the project is under way and is expected to be completed in June of 2001. Construction of the project is planned to be completed by 2004. On the transit map for the Beaverton TSP, the commuter rail alignment should be updated with stations. Station areas should also be shown on pedestrian maps.

Tektronix Master Plan (South Tek), Washington County Ordinance No. 530, September 1998.

This project relates to the subdivision and master plan of the existing Tektronix Oregon Campus in Washington County. A list of street improvement projects was developed in the plan (specifically identified in the development agreement between Tektronix and the City of Beaverton dated September 1998) and are as follows:

- Jenkins Road: Widen to 3 lanes with curbs, sidewalks and bike lanes and add a traffic signal (complete by 12/31/00).
- Murray Overpass: Widen to 4 lanes (complete by 12/31/01).
- Millikan Way to become Public Right-of -Way.
- Millikan Way (Murray to Hocken): Widen to 3 lanes with curbs, sidewalks, and bike lanes (schedule to be determined by County).
- Millikan Way extension (Hocken to Cedar Hills): Create a new 3-lane connection to Cedar Hills Blvd (complete by 12/31/03).
- Hocken extension (Hall to Jenkins):
  a. Interim standards (2 lanes, with ditches, gravel shoulders and turn lanes as necessary) (complete later of 12/31/01 or 12 months after completion of Jenkins widening project).
  b. Upgrade to urban standards (curbs, sidewalks, landscaping) (completed when adjacent property develops).
  c. Future widening (if street becomes a major collector or arterial due to Hall Street Extension) (schedule to be determined by County/City of Beaverton).
- Hocken Extension (Millikan to Hall ext.): Upgrade to urban standards (complete when adjacent property redevelops).
- Shannon Road: Re-open road and add sidewalk along west side (completed).
- Terman Road (Hocken Ext. to Shannon):
  a. Add sidewalks along northwest side and connect to Jenkins Road (complete by 12/31/00).
  b. Upgrade to urban standards (option to substitute wide sidewalk on one side) (complete when development causes trips to exceed 25% of 1998 levels).
- Terman Road (Shannon to Murray):
  a. Add sidewalk along north side (complete later of 12/31/00 or completion of Murray widening).

b. Upgrade to urban standards (complete when development causes trips to exceed 25% of 1998 levels.

The Beaverton Transportation System Plan Update is to be used in developing portions of this project. The Hocken extension classification and capacity will be defined by the TSP. The Terman Road extension classification and number of lanes should also be addressed through the Beaverton TSP, including coordination with Tektronix.

RTP Projects in the Beaverton Area

Project Name (Facility)	Project Location	Project Description	RTP Program Years
BH Highway/Scholls Redesign	BH Highway/Scholls/Oleson intersection	Redesign intersection to improve safety	2006-10
Oleson Road Improvements	Fanno Creek to Hall Boulevard	Improve to urban standard with bike lanes, sidewalks, lighting, crossings, bus shelters & benches; signal at 80th	2006-10
Scholls Ferry Bikeway	Multnomah County line to BH Highway	Retrofit street to add bike lanes	2011-20
Washington County ATMS	Washington County	Acquire hardware for new traffic operations center and conduct needs analysis	2000-05
Beaverton Connectivity Improvements I	(1) Henry Street: Millikan to Center, (2) Dawson/Westgate: Karl Braun to Hall, (3) Rose Biggi: Canyon to Westgate, (4)Tuala Way to Millikan	Complete central Beaverton street connections	2000-05
Beaverton Connectivity Improvements II	(5) Electric to Whitney to Carousel to 144th, (6) new conn.:Henry & 114, (7) new conn.: Hall and Cedar Hill (8) Griffith to 114th	Complete central Beaverton street connections	2006-10
Jenkins Road Improvement	Murray Boulevard to 158th Avenue	Widen to five lanes	2006-10
Highway 217 Interchange Improvements	NB/SB at Walker Road, SB at TV Highway, NB/SB at BH Highway and at Allen Boulevard	Improve Highway 217 interchanges	2000-05
TV Highway Improvements	Cedar Hills Boulevard to 10th Avenue	Widen to seven lanes Cedar Hills to Murray; six lanes limited access from Murray to Brookwood and five lanes from Brookwood to 10th	2011-20
Millikan Extension	Hocken to Cedar Hills	Three lane extension to connect with Cedar Hills at Henry Street	2000-05
Davis Improvements	160th Avenue to 170th Avenue	Three lane improvement to add bike and pedestrian facilities	2000-05
Hart Improvements	Murray to 165th	Three lane improvement with sidewalks, bikeways and signal at 155th Avenue	2000-05
Lombard Improvements	Broadway to Farmington	Three lane improvement to realign road with segment to the north with pedestrian facilities	2000-05
Farmington Road Improvements	Hocken Avenue to Murray Boulevard	Widen to five lanes; improve intersections at Murray Boulevard and Hocken Avenue	2000-05
Allen Boulevard Improvements	Highway 217 to Murray Boulevard	Widen to five lanes	2011-20
Cedar Hills Boulevard Improvements	Farmington Road to Walker Road	Widen to five lanes with sidewalks and bike lanes	2006-10
125th Avenue Extension	Brockman Street to Hall Boulevard	Construct two-lane extension with turn lanes from Brockman Street to Hall Boulevard	2000-05
Hall Boulevard Extension	Cedar Hills Boulevard to Terman/Hocken	Construct three-lane extension with bikeways and sidewalks	2000-05
158th/Merlo Road Improvements	170th Avenue to Walker Road	Widen to five lanes with sidewalks and bike lanes	2011-20
Nimbus Road Extension	Hall Boulevard to Denney Road	Extend two-lane roadway	
Center Street Improvements	Hall Boulevard to 113th Avenue	Widen to three lanes with bikeways and sidewalks (only bike lanes and sidewalks in financially constrained system)	2011-20
Hall/Watson Improvements	Allen Boulevard to Cedar Hills Boulevard	Complete boulevard design improvements	2000-05
TV Highway Pedestrian Access to Transit Improvements	Murray to Highway 217	Improve sidewalks, lighting, crossings, bus shelters and benches	2006-10
Walker Road Improvements	Cedar Hills Boulevard to Murray Boulevard	Widen to seven lanes with sidewalks and bike lanes	
Farmington Road Bikeway	Hocken to Highway 217	Retrofit to include bike lanes	2006-10
Hall Boulevard Bikeway	BH Highway to Cedar Hills Boulevard	Retrofit to include bike lanes	2000-05
Watson Avenue Bikeway	BH Highway to Hall Boulevard	Retrofit to include bike lanes	2000-05
Downtown Beaverton Pedestrian Improvements	Hocken Avenue/TV Highway/113th Avenue/110th Avenue/Cabot Street	Improve sidewalks, bike lanes, lighting, crossings, bus shelters and benches	2000-05
Walker Road Pedestrian Improvements	Polsky/108th to Highway 217	Improve sidewalks, lighting, crossings, bus shelters and benches	
Hall Boulevard/Watson Pedestrian-to-Transit Improvements	Cedar Hills Boulevard to Tigard TC	Improve sidewalks, lighting, crossings, bus shelters and benches	2006-10
110th Avenue Pedestrian Improvements	B-H Highway to Canyon Road	Fill in missing sidewalks	2000-05
117th Avenue Pedestrian Improvements	light rail transit to Center Street	Improve sidewalks, lighting, crossings	2000-05
Murray Boulevard Bike/Pedestrian Improvements	Scholls Ferry Road to TV Highway	Safety islands and pedestrian crossing improvements at intersections, fill in bicycle network gaps	2011-20
Beaverton-Hillsdale Highway Pedestrian and Bicycle Improvements	65th Avenue to Highway 217	Improve sidewalks, lighting, crossings, bus shelters and benches; stripe bike lanes	2011-20
Canyon Road/TV Highway Bike and Pedestrian Improvements	SW 91st Avenue to Highway 217	Bike lanes, sidewalks and pedestrian crossings	2011-20
Denney Road Bike/Pedestrian Improvements	Nimbus Avenue to Scholls Ferry Road	Improve sidewalks, crossings and fill in bicycle network gaps	
Beaverton Regional Center TMA	Beaverton Regional Center	Implements a transportation management association with area employers	2000-05

TV Highway Access Management	117th Avenue to Hillsboro	Access management	2006-10
TV Highway System Management	TV Highway from Highway 217 to 209th	Interconnect signals on TV Highway from 209th Avenue to Highway 217	2006-10
Murray Boulevard Improvements	TV Highway to Allen Boulevard	Signal coordination	2000-05
Garden Home/92nd Avenue Improvements	Allen Boulevard to Oleson Road	Widen to three lanes with bikeways and sidewalks	
Scholls Ferry Road Improvements	Hamilton to Garden Home Road	Widen to three lanes with bikeways and sidewalks	2011-20
Fanno Creek Greenway Multi-Use Path	Allen Boulevard to Denney Road east of Highway 217 and from Highway 217 to Allen Boulevard near Scholls Ferry Road	Completes Fanno Creek Greenway multi-use path	2000-05
Beaverton Powerline Multi-use Trail	Farmington Road to Scholls Ferry Road	Construct multi-use trail within powerline easement	2000-05
Barnes Road Bikeway	Burnside to Leahy Road	Retrofit to include bike lanes	
Hall Boulevard Bikeway	12th Street to south of Allen Boulevard	Retrofit to include bike lanes; intersection turn lanes at Allen Boulevard	2000-05
Cedar Hills Boulevard Improvements	Butner Road to Walker Road	Improve sidewalks, lighting, crossings, bike lanes, bus shelters and benches	2000-05
Allen Boulevard Improvements	Highway 217 to Western Avenue	Widen to five lanes with bike lanes and sidewalks	2011-20
Western Avenue Pedestrian Improvements	5th Street to 800 feet south of 5th Street	Improve sidewalks, lighting, crossings, bus shelters and benches	
Canyon Road Bicycle and Pedestrian Improvements	US 26 to 110th Avenue	Retrofit to include bike lanes/sidewalks	2006-10
Allen Boulevard Bike/Ped Improvements	Western Avenue to Scholls Ferry Road	Retrofit to include bike lanes and fill in missing sidewalks	2006-10
Western Avenue Bike Lanes	B-H Highway to Allen Boulevard	Retrofit to include bike lanes	
170th Improvement	Blanton Street to Farmington Road	Widen to five lanes with sidewalks and bike lanes	
170th Improvement	Alexander Road to Merlo Road	Widen to five lanes with sidewalks and bike lanes	2011-20
170th Improvement	Rigert to Alexander	Three lanes from Rigert to Blanton; five lanes from Blanton to Alexander	2000-05
158th Avenue Improvements	Walker to Jenkins Road	Widen to include bike lanes	2011-20
Millikan Way Improvements	TV Highway to 141st Avenue	Widen to five lanes with sidewalks and bike lanes	2011-20
Millikan Way Improvements	141st Avenue to Hocken Road	Widen to three lanes with sidewalks and bike lanes	2011-20
160th Avenue Improvements	Tualatin Valley Highway to Farmington Road	Widen to five lanes with sidewalks and bike lanes	
Walker Road Improvements	173rd to Stucki Boulevard	Widen to include bike lanes	
Murray Boulevard Bikeway	Farmington Road to S of TV Highway	Retrofit to include bike lanes	2011-20
170th Avenue Pedestrian Improvements	Merlo Drive to Elmonica light rail station	Fill in sidewalk gaps and extend to light rail eastside only	2000-05
Pedestrian Access to MAX	Westside LRT station areas	Provide pedestrian connections to light rail stations	2000-05
Walker Road Bike/Ped Improvements	Canyon Road to Cedar Hills Boulevard	Retrofit to include bike lanes and sidewalks	2011-20
Baseline Road Improvements	Murray Boulevard to Brookwood Road	Widen to five lanes with bike lanes and sidewalks	
TV Highway Pedestrian Improvements	10th to Cornelius Pass Road	Improve sidewalks, lighting, crossings, bus shelters and benches	
Murray LRT Overcrossing and Pedestrian Improvements	Terman Road to Millikan Way	Expand LRT bridge from 2 to 4 lanes and improve sidewalks, lighting crossings, bus shelters, benches and landscaped buffers on bridge approach	2000-05
170th/173rd Improvements	Baseline to Walker	Improve to 3 lanes	2006-10
Johnson Street Extension	170th Avenue to 209th Avenue	Three lane extension (two lanes west bound and one lane eastbound with turn lanes), including bike lanes and sidewalks	2000-05
Walker Road Improvements	Cedar Hills to 158th Avenue	Widen to five lanes including sidewalks and bike lanes (three lanes in the financially constrained system	2006-10
Walker Road Improvements	158th Avenue to Amberglen Parkway	Widen to five lanes including sidewalks and bike lanes (three lanes in the financially constrained system	2006-10
Walker Road Improvements	Highway 217 to Cedar Hills Boulevard	Widen to five lanes including sidewalks and bike lanes	
Walker Road Improvements	Highway 217 to Cedar Hills Boulevard	Widen to three lanes including sidewalks and bike lanes (only Lynnfield to Cedar Hills in financially constrained)	2006-10
US 26 Undercrossing - Sunset TC	Barnes to Butner west of Highway 217	Construct new underpass to better connect areas north and south of US 26	
Barnes Road Improvements	Miller Road to 84th Avenue	Widen to three lanes with bike lanes and sidewalks	
Barnes Road Improvements	Highway 217 to 119th Avenue	Widen to five lanes with bike lanes and sidewalks	2006-10
90th/98th Avenue Extension	Leahy Road to Barnes Road	Construct new two-lane road connection with bike and pedestrian facilities	2011-20
Cedar Hills Boulevard/Barnes Road Intersection Improvement	Cedar Hills at Barnes Road	Add through and turn lanes, new traffic signal and signal at US 26 EB off-ramp	2000-05
119th Avenue Extension	Barnes Road to Cornell Road	Construct new 3/5 lane extension with sidewalks and bike lanes	2006-10
Cornell Road Improvements - West Cedar Mill	US 26 to 143rd Avenue	Widen to five lanes with bike lanes and sidewalks	2011-20
Cornell Road Improvements - West Cedar Mill	143rd Avenue to Dale Road	Widen to five lanes with boulevard design treatment	
Cornell Road Improvements	143rd Avenue to Saltzman	Widen to three lanes with bikeways and sidewalks	2000-05
Cornell Road Improvements - East Cedar Mill	Saltzman to Miller Road	Widen to three lanes and improve crossings, bus shelters	2011-20
Barnes Road Improvement	Saltzman Road to 119th Avenue	Widen to five lanes with intersection improvement	2000-05

		at Saltzman	
Murray Boulevard Improvements - Cedar Mill	Science Park Drive to Cornell	Widen Murray Boulevard to five lanes	2000-05
Saltzman Road Improvements	Cornell Road to Burton Street	Widen to three lanes with sidewalks and bike lanes	2011-20
143rd Avenue Improvements	Cornell Road to West Union Road	Widen to three lanes with sidewalks and bike lanes	2006-10
Cornell Intersection Improvements	Intersections at Saltzman, Barnes, Murray and Trail	Improve intersections to relieve congestion and improve safety	2011-20
Cedar Mill Town Center Local Connectivity, Phase 1	Various locations in the town center	Construct additional local road connections to improve traffic circulations	2000-05
Cornell Road Boulevard Treatment	Trail Avenue to Saltzman	Add bike lanes, sidewalks, median, landscaping	2000-05
Cedar Mill Multi-Use Path	North of Cornell Road from 113th Avenue to 119th Avenue	Construct multi-use path along north side of Cornell Road	2000-05
Saltzman Pedestrian Improvements	Marshall Road to Dogwood Road	Construct sidewalks on west side of road	2000-05
Cornell Road Improvements - East Tanasbourne	179th Avenue to Bethany Boulevard	Widen to five lanes with sidewalks and bike lanes	2006-10
173rd/174th Undercrossing	Cornell Road to Bronson Road	Construct new two lane undercrossing with sidewalks and bike lanes	2011-20
185th Avenue Improvements	Improve 185th Avenue and Cornell Road with "boulevard" design treatment, including improved sidewalks and bus stops, curb extensions, street trees, lighting, etc., within the town center.	Complete boulevard design improvements	
Farmington TC Pedestrian Improvements	Farmington Road, Kinnaman, 170th and intersecting streets	Improve sidewalks, lighting, crossings, bus shelters and benches	2011-20
Washington Square Connectivity Improvements	Washington Square Regional Center	Increase local street connections based on recommendations in regional center plan	2011-20
Highway 217 Interchange Imp. - Denney Road	Denney Road at the Highway 217 on and off-ramps	Improve Denney Road at the Highway 217 on and off-ramps, including lights and covered culverts	2011-20
Highway 217 Overcrossing - Cascade Plaza	Nimbus to Locust	Provide a new connection from Nimbus to Washington Square south of Scholls Ferry Road	
Western Avenue Improvements	Allen Boulevard to Walker Road	To improve north/south traffic flow and connectivity east of Highway 217, implement TSM improvements between Allen Boulevard and Canyon Road and extend Western Avenue north to Canyon Road near Walker Road.	2011-20
Taylors Ferry Road Extension	Washington Drive to Oleson Road	Three lane extension with bikeway and sidewalks	2011-20
Scholls Ferry/Allen Intersection Improvement	Scholls Ferry Road/Allen Boulevard intersection	Realign intersection	2006-10
Oak Street Improvements	Hall Boulevard to 80th Avenue	Signal improvement, bikeway and sidewalks	2000-05
Scholls Ferry Road Improvements	Highway 217 to 125th Avenue	Widen to seven lanes with access management	
Scholls Ferry Pedestrian Improvements	Beaverton-Hillsdale Highway to Hall Boulevard	Improve sidewalks, lighting, crossings, bus shelters and benches	2011-20
Scholls Ferry Road TSM Improvements	Highway 217 to 125th Avenue	Implement appropriate TSM strategies such as signal interconnects, signal re-timing and channelization to improve traffic flows	2000-05
Washington Square Regional Center TMA Startup Program	Washington Square Regional Center	Implements a transportation management association program with employers	2000-05
Scholls Ferry Road Intersection Improvement	At Hall Boulevard	Add SB right turn lane from SB Hall Boulevard	
Murray/Scholls Connectivity Improvements	Teal collector extension to loop road and Barrows Road, transit collectors from Murray Boulevard to loop road; new neighborhood route connections	Teal collector extension to loop road and Barrows Road, transit collectors from Murray Boulevard to loop road; new neighborhood route connections	2011-20
Barrows Road Improvements	Murray Boulevard to 175th Avenue	Widen to add bike lanes	
Murray Boulevard Extension	Scholls Ferry Road to Barrows Road at Walnut Street	Four lane extension with bikeways and sidewalks	2000-05
Davies Road Connection	Scholls Ferry Road to Barrows Road	Three lane connection with bikeways and sidewalks	2006-10

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B- TAZ Map and Land Use

City of Beaverton
Transportation System Plan

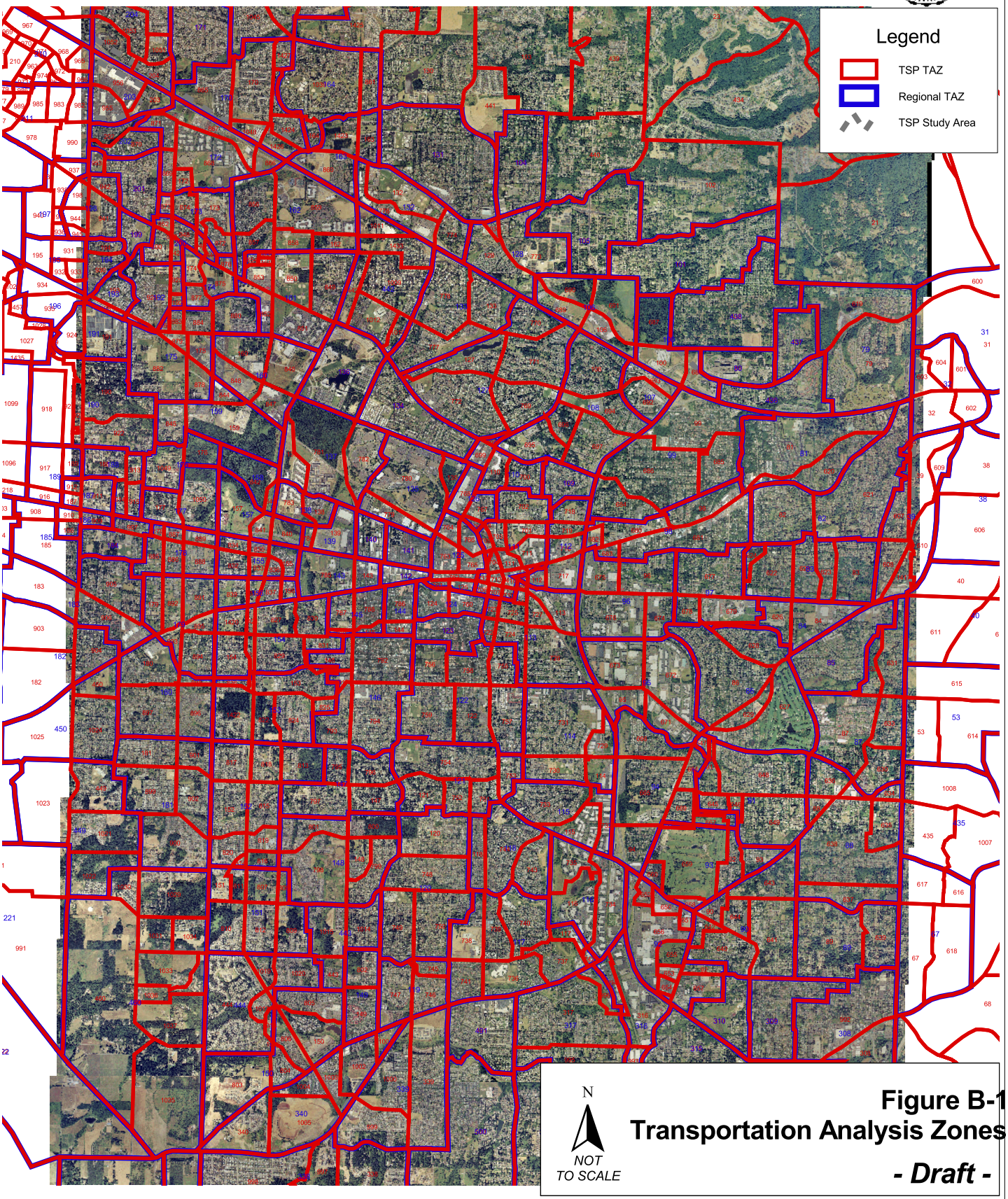


Figure B-1
Transportation Analysis Zones
- Draft -

Key: TAZ = Transportation Analysis Zone
WACO = Washington County
TSP = Transportation System Plan (Beaverton)
HH = Households
RET = Retail Employment
OTH = Other Employment
CH = Change (1994 to 2020)
94 = 1994
2020 = 2020

Metro TAZ	WACO TAZ	TSP TAZ	94HH	2020HH	CH HH	94RET	2020RET	CH RET	94OTH	2020OTH	CH OTH
32	32	605	0	0	0	0	0	0	0	0	0
39	39	607	95	174	79	63	129	66	77	121	44
39	39	608	79	145	66	52	106	54	64	101	37
39	39	1417	55	101	46	36	74	38	44	70	26
79	79	79	641	1123	482	5	27	22	72	115	43
81	81	81	693	869	176	39	111	72	419	490	71
81	81	620	195	214	19	17	44	27	179	189	10
82	82	82	230	255	25	1	13	12	36	55	19
82	82	621	553	624	71	4	29	25	106	126	20
83	83	83	204	274	70	6	0	0	77	145	68
83	83	622	151	150	0	13	0	0	160	305	145
83	83	623	74	67	0	0	0	0	4	10	6
83	83	624	32	31	0	1	0	0	12	16	4
83	83	625	161	149	0	1	0	0	12	25	13
84	84	84	289	359	70	579	595	16	1006	1492	486
84	84	626	27	58	31	142	143	1	252	348	96
85	85	85	592	736	144	60	143	83	599	598	0
86	86	86	519	536	17	3	0	0	72	114	42
86	86	627	126	135	9	14	40	26	842	842	0
86	86	628	118	131	13	0	0	0	0	13	13
86	86	629	39	45	6	0	0	0	28	38	10
87	87	87	360	484	124	18	5	0	82	129	47
87	87	630	218	237	19	3	1	0	10	23	13
87	87	631	249	272	23	6	2	0	24	44	20
87	87	632	94	159	65	0	0	0	1	5	4
87	87	633	110	110	0	1	0	0	3	9	6
88	88	88	39	61	22	7	14	7	17	27	10
88	88	634	133	138	5	6	15	9	14	29	15
88	88	635	139	152	13	7	12	5	15	23	8
88	88	636	69	85	16	18	28	10	40	49	9
88	88	637	115	155	40	15	26	11	34	49	15
88	88	638	716	854	138	60	107	47	136	196	60
90	90	90	92	107	15	2	8	6	172	228	56
90	90	643	183	200	17	1	4	3	86	126	40
90	90	644	92	116	24	0	0	0	12	24	12
91	91	91	332	395	63	33	43	10	34	34	0
91	91	645	64	70	6	2	6	4	3	5	2
91	91	646	25	27	2	1	3	2	1	3	2
91	91	647	67	103	36	10	16	6	11	13	2
91	91	648	281	328	47	14	43	29	15	33	18
91	91	649	15	46	31	0	27	27	0	20	20
92	92	650	21	46	25	316	590	274	604	694	90
93	93	93	86	106	20	4	6	2	6	22	16
93	93	658	15	14	0	67	98	31	100	372	272

Metro TAZ	WACO TAZ	TSP TAZ	94HH	2020HH	CH HH	94RET	2020RET	CH RET	94OTH	2020OTH	CH OTH
93	93	659	3	3	0	14	11	0	20	22	2
93	93	660	204	196	0	29	32	3	43	100	57
93	93	661	8	8	0	2	2	0	3	8	5
93	93	662	124	122	0	12	12	0	18	36	18
94	94	94	157	156	0	4	23	19	193	281	88
94	94	663	33	51	18	1	4	3	41	44	3
94	94	664	69	142	73	2	8	6	84	106	22
94	94	665	323	336	13	9	43	34	488	566	78
94	94	666	205	217	12	5	27	22	251	396	145
94	94	667	33	36	3	1	4	3	40	38	0
94	94	668	0	0	0	0	0	0	0	0	0
94	94	669	116	155	39	0	0	0	9	28	19
95	95	95	41	41	0	40	33	0	580	776	196
95	95	671	43	45	2	42	34	0	618	855	237
95	95	672	55	298	243	42	38	0	631	1056	425
95	95	673	0	0	0	63	54	0	937	1376	439
96	96	96	340	643	303	212	453	241	967	892	0
96	96	674	91	95	4	150	319	169	690	622	0
96	96	675	39	39	0	336	723	387	1531	1526	0
96	96	676	107	109	2	354	757	403	1659	1567	0
97	97	97	13	13	0	7	21	14	57	50	0
97	97	677	275	341	66	43	104	61	415	411	0
97	97	678	84	85	1	12	33	21	104	97	0
97	97	679	14	14	0	141	340	199	1192	1204	12
98	98	98	99	111	12	129	214	85	96	81	0
98	98	680	99	121	22	222	352	130	165	133	0
98	98	681	296	313	17	246	406	160	193	157	0
98	98	682	0	0	0	113	160	47	84	59	0
98	98	683	12	21	9	59	103	44	44	39	0
99	99	99	324	336	12	4	24	20	294	328	34
99	99	684	144	160	16	1	6	5	88	112	24
99	99	685	113	123	10	0	0	0	20	32	12
99	99	686	356	374	18	1	6	5	59	85	26
100	100	100	15	228	213	0	0	0	81	718	637
100	100	688	11	13	2	0	0	0	60	439	379
106	106	106	8	245	237	45	680	635	49	129	80
106	106	689	8	8	0	45	149	104	50	91	41
107	107	107	0	0	0	0	0	0	0	0	0
107	107	692	152	175	23	47	147	100	595	1331	736
107	107	693	55	469	414	25	69	44	317	643	326
108	108	108	229	240	11	6	2	0	39	106	67
108	108	694	133	141	8	11	4	0	76	148	72
108	108	695	34	37	3	15	5	0	93	139	46
108	108	696	16	19	3	0	0	0	3	15	12
108	108	697	154	164	10	2	1	0	17	40	23
109	109	109	232	240	8	0	0	0	5	58	53
110	110	110	88	411	323	134	347	213	131	427	296
110	110	698	16	269	253	18	56	38	17	73	56
110	110	699	4	4	0	142	285	143	138	339	201
110	110	700	156	189	33	2	26	24	2	34	32
111	111	111	12	12	0	266	414	148	181	276	95
111	111	701	232	391	159	10	148	138	7	153	146
111	111	702	138	225	87	8	53	45	5	44	39
111	111	703	85	88	3	315	445	130	215	298	83

Metro TAZ	WACO TAZ	TSP TAZ	94HH	2020HH	CH HH	94RET	2020RET	CH RET	94OTH	2020OTH	CH OTH
111	111	704	25	25	0	81	149	68	55	102	47
111	111	705	7	7	0	22	42	20	15	35	20
111	111	706	10	10	0	91	141	50	61	94	33
111	111	707	19	19	0	62	110	48	42	74	32
126	111	708	0	0	0	0	0	0	0	0	0
111	111	709	29	29	0	94	199	105	64	149	85
111	111	710	17	17	0	57	105	48	38	71	33
111	111	711	89	293	204	463	809	346	316	557	241
111	111	712	0	0	0	42	72	30	29	49	20
111	111	713	5	5	0	132	193	61	90	128	38
111	111	714	10	10	0	33	53	20	22	35	13
111	111	715	0	0	0	0	80	80	0	30	30
111	111	1418	36	36	0	115	146	31	79	130	51
112	112	112	0	0	0	185	305	120	37	99	62
112	112	716	61	63	2	343	569	226	68	185	117
112	112	717	3	3	0	614	954	340	122	300	178
112	112	718	150	209	59	30	58	28	5	20	15
112	112	719	134	154	20	177	226	49	36	71	35
112	112	721	18	18	0	24	43	19	5	14	9
113	113	113	51	51	0	217	605	388	1725	1750	25
113	113	722	24	329	305	4	13	9	32	36	4
113	113	723	9	71	62	33	92	59	262	261	0
113	113	724	164	353	189	13	38	25	105	125	20
113	113	725	71	357	286	29	85	56	230	260	30
113	113	726	481	1462	981	35	115	80	278	416	138
113	113	727	91	581	490	60	167	107	472	469	0
113	113	728	9	9	0	4	13	9	34	58	24
113	113	1419	1	1	0	31	85	54	242	241	0
114	114	114	15	16	1	6	12	6	208	261	53
114	114	729	29	29	0	8	18	10	269	365	96
114	114	730	138	141	3	5	11	6	167	201	34
114	114	731	735	818	83	16	39	23	583	810	227
115	115	115	19	19	0	60	44	0	1361	1492	131
115	115	732	80	78	0	23	16	0	511	597	86
115	115	733	390	383	0	14	9	0	324	375	51
116	116	116	2	2	0	144	177	33	1720	2065	345
116	116	734	2	2	0	167	203	36	1988	2534	546
116	116	735	2	2	0	104	128	24	1239	1419	180
117	117	117	70	70	0	13	21	8	32	50	18
117	117	736	303	321	18	2	9	7	4	43	39
117	117	737	235	234	0	83	114	31	211	221	10
117	117	738	49	53	4	21	30	9	55	62	7
117	117	739	486	491	5	73	100	27	184	191	7
117	117	740	243	246	3	53	74	21	132	140	8
117	117	741	150	150	0	5	9	4	13	25	12
117	117	742	22	22	0	4	7	3	10	17	7
118	118	118	164	164	0	0	0	0	3	23	20
118	118	743	321	325	4	3	0	0	73	113	40
118	118	744	547	735	188	2	0	0	9	69	60
119	119	745	56	58	2	0	0	0	10	19	9
119	119	746	148	155	7	0	0	0	27	51	24
119	119	747	230	276	46	0	0	0	33	81	48
120	120	120	256	308	52	6	7	1	18	49	31
120	120	748	378	384	6	7	7	0	20	49	29

Metro TAZ	WACO TAZ	TSP TAZ	94HH	2020HH	CH HH	94RET	2020RET	CH RET	94OTH	2020OTH	CH OTH
120	120	749	229	230	1	10	10	0	29	54	25
120	120	750	314	363	49	7	8	1	20	55	35
121	121	121	188	188	0	2	1	0	9	29	20
121	121	751	114	177	63	1	0	0	5	18	13
121	121	752	108	108	0	1	0	0	5	16	11
121	121	753	105	105	0	1	0	0	4	15	11
121	121	754	349	376	27	21	10	0	121	169	48
122	122	122	246	279	33	18	54	36	224	268	44
122	122	755	208	210	2	7	21	14	84	103	19
122	122	756	239	244	5	1	7	6	18	48	30
122	122	757	601	627	26	24	70	46	305	355	50
122	122	758	457	523	66	6	21	15	73	106	33
122	122	759	595	615	20	13	42	29	163	208	45
123	123	123	296	302	6	0	0	0	65	92	27
124	124	124	57	172	115	13	50	37	49	129	80
124	124	760	51	92	41	21	119	98	81	290	209
125	125	125	4	6	2	24	46	22	37	69	32
125	125	761	54	80	26	3	15	12	4	23	19
125	125	762	1	1	0	50	123	73	77	186	109
125	125	763	42	61	19	202	397	195	310	603	293
125	125	764	0	0	0	133	265	132	204	393	189
125	125	765	18	26	8	108	304	196	165	483	318
125	125	766	18	26	8	113	320	207	173	501	328
126	126	126	4	4	0	77	101	24	92	125	33
126	126	767	201	209	8	295	372	77	350	404	54
126	126	768	5	5	0	757	942	185	910	987	77
127	127	127	175	175	0	0	0	0	9	18	9
127	127	769	272	271	0	1	1	0	15	28	13
127	127	770	136	136	0	1	1	0	23	38	15
127	127	771	458	456	0	2	2	0	38	64	26
127	127	772	493	492	0	14	19	5	242	308	66
128	128	128	482	773	291	23	105	82	251	387	136
132	132	132	74	74	0	270	209	0	692	825	133
132	132	774	40	57	17	145	109	0	371	475	104
132	132	776	54	57	3	197	151	0	504	615	111
133	133	133	193	270	77	1	1	0	25	12	0
133	133	777	131	223	92	2	2	0	36	17	0
133	133	778	353	433	80	6	7	1	108	37	0
134	134	134	744	758	14	0	0	0	33	93	60
135	135	135	7	8	1	0	14	14	77	1110	1033
135	135	779	17	20	3	2	26	24	154	1574	1420
135	135	780	43	51	8	4	89	85	565	5794	5229
136	136	136	32	41	9	108	157	49	2466	7638	5172
137	137	137	0	0	0	0	0	0	947	1015	68
137	137	781	0	1472	1472	0	0	0	44	668	624
137	137	782	25	25	0	0	8	8	3391	3566	175
138	138	138	0	239	239	0	0	0	31	369	338
138	138	783	0	0	0	0	0	0	11	723	712
139	139	139	5	5	0	173	221	48	449	1098	649
139	139	784	0	0	0	5	13	8	13	96	83
140	140	140	31	915	884	1	0	0	830	1169	339
141	141	141	405	918	513	250	243	0	139	325	186
142	142	142	146	289	143	90	61	0	521	653	132
143	143	143	181	182	1	94	265	171	177	212	35

Metro TAZ	WACO TAZ	TSP TAZ	94HH	2020HH	CH HH	94RET	2020RET	CH RET	94OTH	2020OTH	CH OTH
143	143	785	107	491	384	46	46	0	87	230	143
144	144	144	428	476	48	0	0	0	2	28	26
144	144	786	0	23	23	12	4	0	60	117	57
145	145	145	75	75	0	0	0	0	43	52	9
145	145	787	252	319	67	2	0	0	182	217	35
145	145	788	301	337	36	2	0	0	160	199	39
145	145	789	51	52	1	0	0	0	27	31	4
146	146	146	127	127	0	51	69	18	58	64	6
146	146	790	0	0	0	0	0	0	0	0	0
146	146	791	46	46	0	18	35	17	21	40	19
146	146	792	538	576	38	151	151	0	173	258	85
146	146	793	234	233	0	94	225	131	109	129	20
146	146	794	457	466	9	237	337	100	272	329	57
147	147	147	168	171	3	2	5	3	7	20	13
147	147	795	77	87	10	1	3	2	4	12	8
147	147	796	193	213	20	1	4	3	4	17	13
147	147	797	133	178	45	2	6	4	7	25	18
148	148	148	74	91	17	0	0	0	8	8	0
148	148	798	294	493	199	0	2	2	32	45	13
148	148	799	197	245	48	0	0	0	18	14	0
148	148	800	57	171	114	0	0	0	7	6	0
148	148	801	111	255	144	0	0	0	9	10	1
149	149	149	425	523	98	0	0	0	43	92	49
149	149	802	69	69	0	0	0	0	19	39	20
150	150	150	99	99	0	40	127	87	206	356	150
150	150	803	31	962	931	3	3	0	12	154	142
150	150	804	63	112	49	2	2	0	8	32	24
150	150	805	412	412	0	97	97	0	499	592	93
150	150	806	80	82	2	15	15	0	78	90	12
151	151	151	5	21	16	0	0	0	0	3	3
151	151	807	30	220	190	0	1	1	2	9	7
151	151	808	27	99	72	0	1	1	1	10	9
151	151	809	301	393	92	4	4	0	3	11	8
151	151	810	63	71	8	0	1	1	8	15	7
151	151	811	3	19	16	0	0	0	0	3	3
151	151	812	66	319	253	0	1	1	3	8	5
152	152	152	192	210	18	2	3	1	16	37	21
152	152	813	57	60	3	1	2	1	4	15	11
152	152	814	2	12	10	0	0	0	0	1	1
152	152	815	164	163	0	1	2	1	9	26	17
152	152	816	20	20	0	0	0	0	1	9	8
152	152	817	125	127	2	3	4	1	22	40	18
152	152	818	90	96	6	1	2	1	7	22	15
152	152	819	75	75	0	11	9	0	87	96	9
152	152	820	52	152	100	1	1	0	5	14	9
153	153	153	154	187	33	0	4	4	24	51	27
153	153	821	7	7	0	0	0	0	1	1	0
153	153	822	31	164	133	0	2	2	5	24	19
153	153	823	10	11	1	0	0	0	1	2	1
153	153	824	348	351	3	0	2	2	10	34	24
153	153	825	29	32	3	0	0	0	5	10	5
153	153	826	24	47	23	0	0	0	4	6	2
153	153	1422	178	204	26	0	4	4	28	61	33
154	154	154	195	202	7	0	0	0	10	29	19

Metro TAZ	WACO TAZ	TSP TAZ	94HH	2020HH	CH HH	94RET	2020RET	CH RET	94OTH	2020OTH	CH OTH
154	154	827	167	299	132	0	0	0	9	40	31
154	154	828	35	35	0	0	0	0	2	3	1
154	154	829	244	247	3	0	0	0	20	55	35
154	154	830	185	213	28	0	0	0	6	36	30
154	154	831	98	104	6	0	0	0	3	19	16
154	154	1420	48	136	88	0	0	0	5	21	16
154	154	1421	32	37	5	0	0	0	2	7	5
155	155	155	56	58	2	0	0	0	1	4	3
155	155	832	96	100	4	0	0	0	3	4	1
155	155	833	14	58	44	0	0	0	1	2	1
155	155	834	84	89	5	0	0	0	2	3	1
155	155	835	13	33	20	0	0	0	1	2	1
155	155	836	29	39	10	0	0	0	1	2	1
156	156	156	46	100	54	0	0	0	2	60	58
156	156	837	147	144	0	0	0	0	0	29	29
156	156	838	43	74	31	0	0	0	2	18	16
156	156	839	119	142	23	0	0	0	4	38	34
157	157	157	106	106	0	0	107	107	0	250	250
157	157	840	0	0	0	0	0	0	0	99	99
157	157	841	19	19	0	0	0	0	0	244	244
158	158	842	0	19	19	0	9	9	0	52	52
158	158	843	0	19	19	0	98	98	0	541	541
159	159	159	50	50	0	0	0	0	1440	1833	393
159	159	844	0	0	0	0	0	0	399	626	227
160	160	160	12	180	168	132	191	59	458	1038	580
160	160	846	6	6	0	71	152	81	246	1058	812
160	160	847	0	0	0	15	36	21	61	248	187
160	160	848	3	66	63	41	69	28	141	424	283
161	161	161	3	3	0	13	8	0	52	59	7
161	161	849	93	199	106	48	31	0	149	176	27
161	161	850	26	28	2	0	0	0	0	0	0
161	161	851	34	36	2	139	79	0	568	822	254
161	161	852	37	46	9	10	3	0	120	184	64
161	161	853	74	94	20	300	203	0	1223	1330	107
161	161	854	22	35	13	1	1	0	3	5	2
161	161	855	3	4	1	5	3	0	21	23	2
162	162	162	13	390	377	1	4	3	16	67	51
162	162	856	184	345	161	11	24	13	241	399	158
162	162	857	128	164	36	2	7	5	27	87	60
162	162	858	1	1	0	0	0	0	0	2	2
162	162	859	20	20	0	81	166	85	1707	3018	1311
163	163	860	284	299	15	31	76	45	38	146	108
170	170	1048	28	183	155	0	0	0	3	20	17
170	170	1426	32	65	33	0	0	0	4	6	2
172	172	172	7	9	2	0	0	0	9	16	7
172	172	866	14	18	4	6	14	8	104	231	127
172	172	867	44	56	12	18	47	29	311	779	468
172	172	868	26	33	7	61	101	40	1050	1387	337
172	172	869	81	111	30	0	1	1	7	24	17
202	172	870	172	218	46	0	0	0	2	32	30
172	172	871	114	237	123	1	3	2	14	41	27
173	173	173	82	332	250	0	0	0	1	25	24
173	173	872	39	115	76	0	0	0	1	13	12
173	173	873	18	28	10	0	0	0	0	8	8

Metro TAZ	WACO TAZ	TSP TAZ	94HH	2020HH	CH HH	94RET	2020RET	CH RET	94OTH	2020OTH	CH OTH
173	173	874	44	84	40	0	0	0	1	18	17
174	174	174	13	354	341	0	0	0	0	50	50
174	174	875	79	86	7	0	0	0	8	73	65
174	174	876	23	252	229	0	0	0	3	24	21
174	174	877	48	65	17	0	0	0	5	47	42
175	175	175	38	104	66	0	0	0	21	177	156
175	175	878	10	49	39	0	0	0	119	335	216
175	175	879	8	8	0	0	0	0	57	96	39
175	175	880	184	279	95	0	0	0	11	58	47
175	175	881	7	48	41	0	0	0	4	10	6
175	175	883	16	54	38	0	0	0	9	19	10
175	175	884	35	161	126	0	0	0	19	56	37
176	176	176	18	18	0	0	0	0	2	2	0
177	177	1050	292	294	2	1	37	36	11	132	121
178	178	888	139	153	14	6	10	4	17	31	14
178	178	889	22	85	63	36	51	15	106	138	32
179	179	891	113	173	60	0	0	0	5	22	17
179	179	894	118	146	28	0	0	0	12	27	15
179	179	895	36	37	1	0	0	0	2	7	5
180	180	896	203	232	29	56	74	18	30	27	0
180	180	898	30	34	4	9	12	3	4	4	0
181	181	900	135	312	177	0	0	0	6	9	3
181	181	901	78	119	41	0	0	0	7	5	0
181	181	902	204	242	38	0	0	0	71	35	0
192	192	192	21	22	1	0	0	0	4	6	2
192	192	925	40	53	13	0	0	0	7	12	5
192	192	926	301	371	70	0	0	0	37	69	32
192	192	927	16	16	0	0	0	0	2	23	21
193	193	193	160	159	0	1	0	0	37	68	31
193	193	928	33	33	0	0	0	0	12	42	30
194	194	194	98	101	3	2	0	0	4	11	7
194	194	929	0	0	0	0	0	0	0	0	0
194	194	930	146	150	4	5	0	0	9	29	20
198	198	941	140	557	417	7	315	308	24	37	13
198	198	942	69	105	36	49	641	592	195	133	0
199	199	199	87	227	140	0	0	0	0	50	50
200	200	200	52	238	186	0	0	0	16	29	13
200	200	946	13	43	30	0	0	0	4	7	3
200	200	947	12	13	1	0	0	0	4	8	4
200	200	948	32	30	0	0	0	0	11	21	10
200	200	949	0	0	0	0	0	0	0	0	0
200	200	950	0	0	0	0	0	0	0	0	0
200	200	951	0	0	0	0	0	0	0	0	0
200	200	952	16	20	4	0	0	0	5	11	6
200	200	1428	17	104	87	0	0	0	6	13	7
201	201	201	340	353	13	0	67	67	7	16	9
201	201	953	55	70	15	0	18	18	46	28	0
202	202	202	192	357	165	0	0	0	16	67	51
203	203	203	0	0	0	252	651	399	185	401	216
203	203	955	2	2	0	38	287	249	24	143	119
203	203	956	0	0	0	166	505	339	105	258	153
340	340	340	26	94	68	0	0	0	0	172	172
340	340	1001	239	514	275	0	0	0	0	33	33
340	340	1002	207	305	98	0	0	0	0	108	108

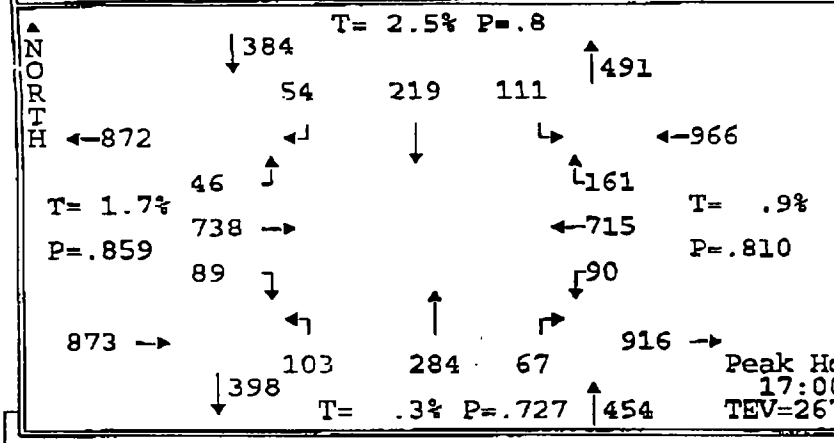
Metro TAZ	WACO TAZ	TSP TAZ	94HH	2020HH	CH HH	94RET	2020RET	CH RET	94OTH	2020OTH	CH OTH
340	340	1003	61	103	42	0	0	0	0	64	64
340	340	1004	45	480	435	0	0	0	0	65	65
340	340	1005	33	249	216	1	0	0	42	1143	1101
80	436	436	536	615	79	0	0	0	11	15	4
133	442	442	107	212	105	3	4	1	83	109	26
133	442	1009	306	297	0	2	3	1	44	70	26
133	442	1010	159	136	0	1	1	0	18	27	9
133	442	1011	12	10	0	4	6	2	84	175	91
133	442	1012	383	332	0	19	26	7	381	509	128
133	442	1013	1	0	0	0	0	0	1	0	0
133	442	1433	90	82	0	3	4	1	50	80	30
148	443	443	23	34	11	0	1	1	22	31	9
148	443	1014	182	178	0	0	1	1	14	33	19
148	443	1015	38	310	272	2	2	0	51	73	22
151	444	444	389	644	255	4	2	0	20	39	19
151	444	1016	0	0	0	0	0	0	0	0	0
151	444	1017	16	26	10	0	0	0	0	2	2
151	444	1018	11	24	13	0	0	0	3	3	0
151	444	1019	5	11	6	0	0	0	25	20	0
151	444	1020	5	10	5	0	0	0	71	58	0
221	460	1029	56	93	37	1	0	0	22	6	0
221	460	1031	10	17	7	8	0	0	100	22	0
221	460	1034	37	44	7	1	0	0	16	4	0

C- Traffic Counts

FROM : TRAFFIC SMITHY PHONE NO. : 5036438866 Dec. 01 2000 10:49AM P7

INTERSECTION TURN MOVEMENT COUNT SUMMARY REPORT
173RD AVENUE AT WALKER ROAD

1234



DATE OF COUNT: 04/20/99
DAY OF WEEK: Tue
TIME STARTED: 16:00
TIME ENDED: 18:00

TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

NSCY

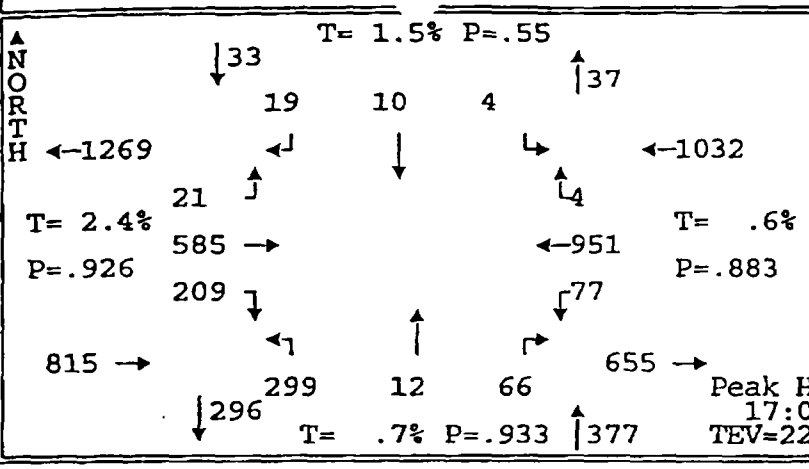
Peak Hour
17:00-18:00
TEV=2677

Traffic Smithy
(503) 641-6333

TIME PERIOD FROM - TO	EAST BOUND ↓	EAST BOUND →	EAST BOUND ↑	SOUTH BOUND ↲	SOUTH BOUND ↓	SOUTH BOUND ↳	NORTH BOUND ↰	NORTH BOUND ↑	NORTH BOUND ↱	WEST BOUND ↓	WEST BOUND ←	WEST BOUND ↑	ALL
16:00-16:05	3	44	3	8	21	13	6	12	2	5	40	5	162
16:05-16:10	6	43	2	6	26	17	6	21	9	9	49	13	207
16:10-16:15	15	64	7	4	18	7	4	18	3	5	35	7	187
16:15-16:20	13	48	2	3	14	8	3	15	3	8	46	13	176
16:20-16:25	8	40	2	13	11	7	6	20	2	8	43	11	171
16:25-16:30	4	56	1	7	10	1	2	14	4	9	44	11	163
16:30-16:35	8	46	2	7	11	3	5	13	2	4	52	7	160
16:35-16:40	8	41	6	4	19	10	8	21	5	4	47	5	178
16:40-16:45	7	60	5	3	13	7	2	11	4	5	51	12	180
16:45-16:50	6	71	3	8	13	6	5	8	1	9	45	9	184
16:50-16:55	10	43	5	4	22	7	4	32	4	5	64	7	207
16:55-17:00	10	54	0	12	23	13	8	21	4	5	54	2	206
17:00-17:05	8	45	3	7	10	8	3	25	4	3	39	8	163
17:05-17:10	9	58	3	3	8	10	9	19	7	5	58	10	199
17:10-17:15	5	64	2	7	24	5	13	21	8	3	52	11	215
17:15-17:20	8	72	4	5	20	9	5	17	3	8	70	14	235
17:20-17:25	8	64	3	3	34	8	7	25	7	11	59	13	242
17:25-17:30	16	75	4	4	12	10	4	12	3	14	70	8	232
17:30-17:35	5	53	5	5	33	11	17	41	9	7	69	15	270
17:35-17:40	4	75	1	3	12	5	8	18	6	8	77	30	247
17:40-17:45	7	53	6	9	15	10	11	40	6	6	49	8	220
17:45-17:50	9	69	5	1	14	10	12	18	4	8	60	13	223
17:50-17:55	6	50	2	2	25	11	5	24	7	13	61	15	221
17:55-18:00	4	60	8	5	12	14	9	24	3	4	51	16	210
Total Survey	187	1348	84	133	420	210	162	490	110	166	1285	263	4858
PHF	.7	.87	.77	.79	.69	.79	.72	.72	.8	.68	.83	.76	.893
% Trucks	1.1	1.8	1.2	4.5	2.6	1	.6	0	.9	1.2	.8	1.1	1.3
Stopped Buses	0	0	0	0	0	0	0	0	0	0	2	0	
Peds	0	1	0	0	2	0	0	11	0	0	4	0	
Hourly Totals													
16:00-17:00	98	610	38	79	201	99	59	206	43	76	570	102	2181
16:15-17:15	96	626	34	78	178	85	68	220	48	68	595	106	2202
16:30-17:30	103	693	40	67	209	96	73	225	52	76	661	106	2401
16:45-17:45	96	727	39	70	226	102	94	279	62	84	706	135	2620
17:00-18:00	89	738	46	54	219	111	103	284	67	90	715	161	2677

INTERSECTION TURN MOVEMENT COUNT SUMMARY REPORT
VASELINE ROAD AT 170TH AVENUE

22326



DATE OF COUNT: 01/12/00
DAY OF WEEK: Wed
TIME STARTED: 16:00
TIME ENDED: 18:00

TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

BKSH

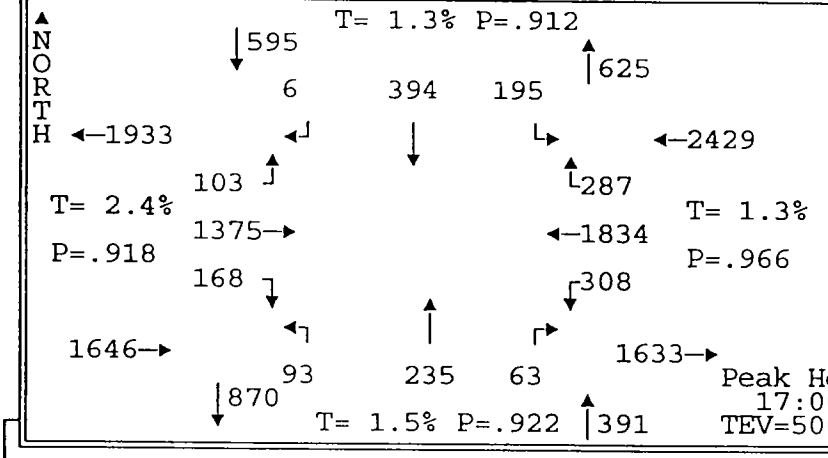
Peak Hour
17:00-18:00
TEV=2257

Traffic Smithy
(503) 641-6333

TIME PERIOD FROM - TO	EAST BOUND ↓	EAST BOUND →	EAST BOUND ↑	SOUTH BOUND ↲	SOUTH BOUND ↓	SOUTH BOUND ↳	NORTH BOUND ↰	NORTH BOUND ↑	NORTH BOUND ↱	WEST BOUND ↓	WEST BOUND ←	WEST BOUND ↑	ALL
16:00-16:05	16	25	0	1	0	1	13	3	2	2	60	1	124
16:05-16:10	17	50	1	3	1	1	10	1	4	5	72	1	166
16:10-16:15	23	60	0	0	0	0	21	3	5	4	51	1	168
16:15-16:20	19	48	3	1	2	1	14	1	2	4	73	2	170
16:20-16:25	16	36	0	2	1	0	22	0	7	12	62	0	158
16:25-16:30	21	45	0	0	0	0	20	0	7	5	67	0	165
16:30-16:35	16	44	1	2	1	0	21	1	2	2	58	1	149
16:35-16:40	17	46	2	0	1	1	36	0	9	3	64	0	179
16:40-16:45	17	43	1	2	0	0	21	1	8	4	75	4	176
16:45-16:50	17	54	1	3	1	1	19	2	7	8	71	2	186
16:50-16:55	17	44	0	5	0	1	14	1	9	5	70	3	169
16:55-17:00	12	35	0	1	0	2	23	2	1	3	62	2	143
17:00-17:05	16	49	3	0	1	0	29	0	10	9	60	0	177
17:05-17:10	18	58	2	3	0	0	19	0	5	6	88	0	199
17:10-17:15	14	48	1	1	0	0	30	2	6	8	96	0	206
17:15-17:20	17	46	1	2	0	0	24	1	6	3	73	0	173
17:20-17:25	25	54	0	1	0	0	20	3	5	4	79	0	191
17:25-17:30	23	43	1	0	2	0	28	0	6	7	90	0	200
17:30-17:35	15	44	3	2	1	1	23	2	3	5	74	2	175
17:35-17:40	18	40	0	3	1	2	28	1	5	5	96	1	200
17:40-17:45	14	40	2	4	1	0	29	1	8	10	61	1	171
17:45-17:50	14	57	0	0	0	0	10	0	6	14	104	0	205
17:50-17:55	12	51	6	0	4	1	29	1	2	3	61	0	170
17:55-18:00	23	55	2	3	0	0	30	1	4	3	69	0	190
Total Survey	417	1115	30	39	17	12	533	27	129	134	1736	21	4210
PHF	.8	.9	.66	.53	.5	.33	.93	.5	.79	.66	.91	.25	.969
% Trucks	4.6	1.7	0	2.6	0	0	.8	0	.8	.7	.6	0	1.3
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	
Peds	0	8	0	0	2	0	0	15	0	0	3	0	
Hourly Totals													
16:00-17:00	208	530	9	20	7	8	234	15	63	57	785	17	1953
16:15-17:15	200	550	14	20	7	6	268	10	73	69	846	14	2077
16:30-17:30	209	564	13	20	6	5	284	13	74	62	886	12	2148
16:45-17:45	206	555	14	25	7	7	286	15	71	73	920	11	2190
17:00-18:00	209	585	21	19	10	4	299	12	66	77	951	4	2257

INTERSECTION TURN MOVEMENT COUNT SUMMARY REPORT
170TH AVENUE AT TUALATIN VALLEY HIGHWAY

23906



DATE OF COUNT: 6/13/00
DAY OF WEEK: Tue
TIME STARTED: 16:00
TIME ENDED: 18:00

TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

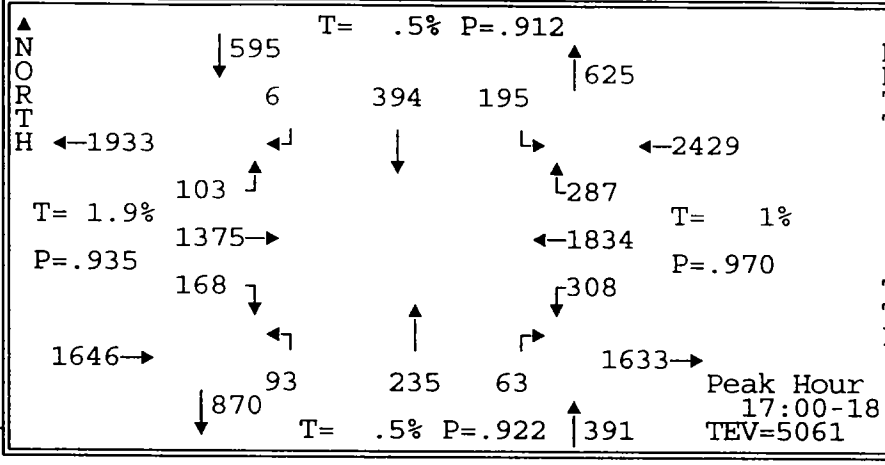
bkvj

Peak Hour
17:00-18:00
TEV=5061

Traffic Smithy
(503) 641-6333

TIME PERIOD FROM - TO	EAST BOUND ↓	EAST BOUND →	EAST BOUND ↑	SOUTH BOUND ↵	SOUTH BOUND ↓	SOUTH BOUND ↳	NORTH BOUND ↰	NORTH BOUND ↑	NORTH BOUND ↱	WEST BOUND ↓	WEST BOUND ←	WEST BOUND ↑	ALL
16:00-16:05	10	128	10	1	22	12	12	15	1	16	132	20	379
16:05-16:10	9	121	9	0	24	8	12	17	5	20	163	17	405
16:10-16:15	14	89	10	2	36	19	8	21	9	7	106	13	334
16:15-16:20	13	101	9	2	30	14	9	19	3	25	138	13	376
16:20-16:25	11	103	9	4	30	19	11	16	5	22	140	19	389
16:25-16:30	14	128	8	1	24	8	8	17	4	20	137	20	389
16:30-16:35	7	137	7	2	28	12	9	22	6	16	166	21	433
16:35-16:40	12	117	9	1	39	17	13	21	6	13	132	20	400
16:40-16:45	9	90	11	0	35	20	8	11	15	22	138	24	383
16:45-16:50	17	118	9	1	29	14	6	19	5	25	152	22	417
16:50-16:55	17	151	6	0	31	17	4	16	4	14	119	21	400
16:55-17:00	4	128	6	0	23	4	12	19	2	25	164	24	411
17:00-17:05	11	116	7	0	37	22	9	22	4	20	141	36	425
17:05-17:10	8	104	10	0	42	14	7	25	7	15	141	25	398
17:10-17:15	6	129	14	0	30	18	6	21	5	28	146	27	430
17:15-17:20	16	141	4	1	29	19	9	19	7	20	163	27	455
17:20-17:25	17	116	5	0	33	14	10	18	6	27	171	19	436
17:25-17:30	19	114	8	1	30	20	6	18	4	27	151	21	419
17:30-17:35	14	117	9	0	32	13	12	21	5	16	159	27	425
17:35-17:40	11	117	9	1	32	13	5	21	4	35	162	21	431
17:40-17:45	13	126	11	0	32	13	7	17	5	30	126	24	404
17:45-17:50	14	105	4	1	34	11	5	14	5	35	165	21	414
17:50-17:55	21	83	9	1	30	19	8	20	6	32	133	21	383
17:55-18:00	18	107	13	1	33	19	9	19	5	23	176	18	441
Total Survey	305	2786	206	20	745	359	205	448	128	533	3521	521	9777
PHF	.79	.89	.83	.5	.9	.9	.83	.86	.83	.77	.95	.82	.957
% Trucks	2.3	2.4	2.4	0	1.1	1.9	2.9	.9	1.6	.4	1.1	3.3	1.7
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	
Peds	0	3	0	0	0	0	0	0	0	0	14	0	
Hourly Totals													
16:00-17:00	137	1411	103	14	351	164	112	213	65	225	1687	234	4716
16:15-17:15	129	1422	105	11	378	179	102	228	66	245	1714	272	4851
16:30-17:30	143	1461	96	6	386	191	99	231	71	252	1784	287	5007
16:45-17:45	153	1477	98	4	380	181	93	236	58	282	1795	294	5051
17:00-18:00	168	1375	103	6	394	195	93	235	63	308	1834	287	5061

INTERSECTION TURN MOVEMENT COUNT PEAK HOUR REPORT
170TH AVENUE AT TUALATIN VALLEY HIGHWAY



DATE OF COUNT: 6/13/00
DAY OF WEEK: Tue
TIME STARTED: 16:00
TIME ENDED: 18:00

TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

bkvj

Peak Hour
17:00-18:00
TEV=5061

Traffic Smithy
(503)641-6333

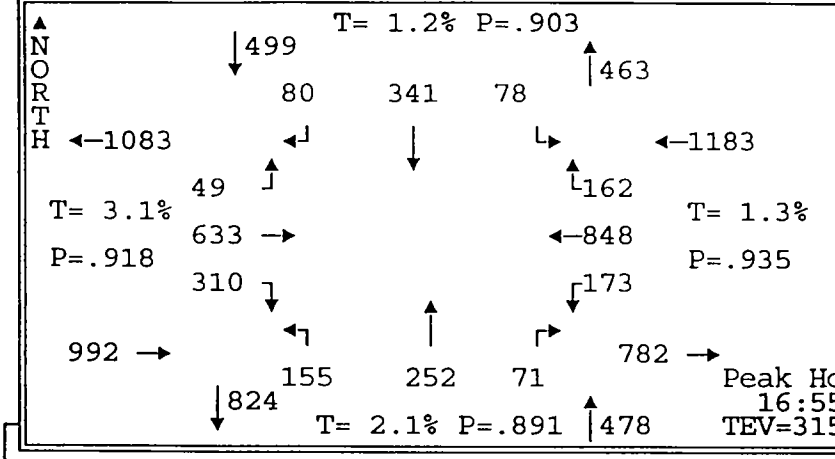
TIME PERIOD FROM - TO	EAST BOUND ↓	EAST BOUND →	EAST BOUND ↑	SOUTH BOUND ↵	SOUTH BOUND ↓	SOUTH BOUND ↳	NORTH BOUND ↰	NORTH BOUND ↑	NORTH BOUND ↱	WEST BOUND ↓	WEST BOUND ←	WEST BOUND ↑	ALL
ALL VEHICLES													
17:00-17:15	25	349	31	0	109	54	22	68	16	63	428	88	1253
17:15-17:30	52	371	17	2	92	53	25	55	17	74	485	67	1310
17:30-17:45	38	360	29	1	96	39	24	59	14	81	447	72	1260
17:45-18:00	53	295	26	3	97	49	22	53	16	90	474	60	1238
LIGHT TRUCKS (SINGLE UNIT 2 AXLES)													
17:00-17:15	0	8	0	0	0	0	1	0	0	0	2	2	13
17:15-17:30	1	3	0	0	0	0	0	0	0	0	6	3	13
17:30-17:45	1	6	0	0	0	0	0	0	0	0	1	1	9
17:45-18:00	0	5	0	0	1	0	1	0	0	0	2	0	9
MEDIUM TRUCKS (SINGLE UNIT > 2 AXLES)													
17:00-17:15	0	0	0	0	0	0	0	0	0	0	1	0	1
17:15-17:30	0	0	0	0	0	0	0	0	0	0	2	0	2
17:30-17:45	0	0	0	0	0	0	0	0	0	0	1	2	3
17:45-18:00	0	0	0	0	0	0	0	0	0	0	0	0	0
HEAVY TRUCKS (SEMI-TRACTOR TRAILER)													
17:00-17:15	0	0	0	0	1	0	0	0	0	0	0	0	1
17:15-17:30	0	2	0	0	1	0	0	0	0	0	0	0	3
17:30-17:45	0	3	0	0	0	0	0	0	0	0	1	0	4
17:45-18:00	0	2	0	0	0	0	0	0	0	0	0	0	2
BICYCLES													
17:00-17:15	0	1	0	0	0	0	0	0	0	0	0	0	1
17:15-17:30	0	0	0	0	0	0	0	0	0	0	0	0	0
17:30-17:45	0	2	0	0	0	0	0	2	0	0	0	0	4
17:45-18:00	0	1	0	0	0	0	0	1	0	0	1	0	3

PEDESTRIANS	CROSSWALK USEAGE SOUTH	WEST	EAST	NORTH	ALL
17:00-17:15	1	0	0	1	2
17:15-17:30	0	0	0	2	2
17:30-17:45	1	0	0	7	8
17:45-18:00	0	0	0	0	0

Peak Hour by Movement													
PHF	.79	.93	.83	.5	.9	.9	.93	.86	.93	.86	.95	.82	.965
% Trucks(all)	1.2	2.1	0	0	.8	0	2.2	0	0	0	.9	2.8	1.2
% Trucks(M+H)	0	.5	0	0	.5	0	0	0	0	0	.3	.7	.3
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	
Hourly Totals													
16:00-17:00	137	1411	103	14	351	164	112	213	65	225	1687	234	4716
16:15-17:15	129	1422	105	11	378	179	102	228	66	245	1714	272	4851
16:30-17:30	143	1461	96	6	386	191	99	231	71	252	1784	287	5007
16:45-17:45	153	1477	98	4	380	181	93	236	58	282	1795	294	5051
17:00-18:00	168	1375	103	6	394	195	93	235	63	308	1834	287	5061

INTERSECTION TURN MOVEMENT COUNT SUMMARY REPORT
170TH AVENUE AT FARMINGTON ROAD

27494



DATE OF COUNT: 05/31/00
DAY OF WEEK: Wed
TIME STARTED: 16:00
TIME ENDED: 18:00

TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

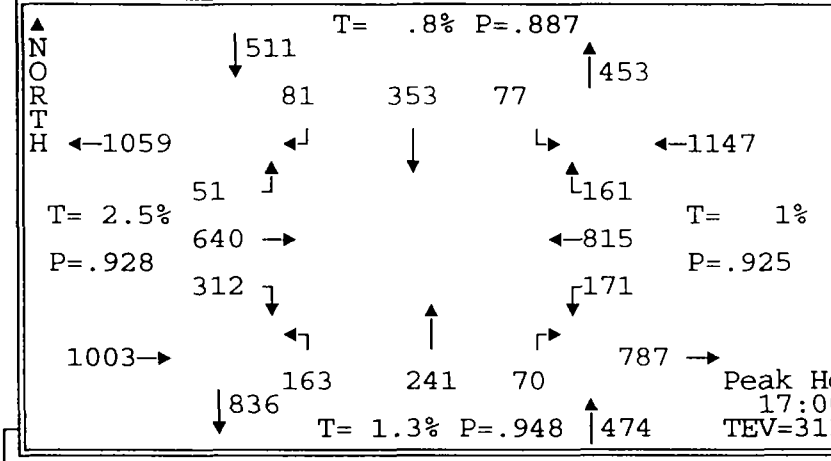
ERLJ

Peak Hour
16:55-17:55
TEV=3152

Traffic Smithy
(503) 641-6333

TIME PERIOD FROM - TO	EAST BOUND ↓	EAST BOUND →	EAST BOUND ↑	SOUTH BOUND ↙	SOUTH BOUND ↓	SOUTH BOUND ↳	NORTH BOUND ↰	NORTH BOUND ↑	NORTH BOUND ↱	WEST BOUND ↓	WEST BOUND ←	WEST BOUND ↑	ALL
16:00-16:05	21	60	3	5	19	6	6	20	6	13	57	8	224
16:05-16:10	31	52	7	5	19	3	8	15	4	14	67	7	232
16:10-16:15	18	53	5	7	28	3	15	18	3	14	73	5	242
16:15-16:20	34	49	4	8	25	6	14	14	4	11	54	9	232
16:20-16:25	17	62	6	13	24	3	6	12	8	11	90	8	260
16:25-16:30	14	51	6	6	28	11	12	14	5	12	80	18	257
16:30-16:35	22	50	4	10	25	5	7	14	4	9	77	10	237
16:35-16:40	17	54	6	9	22	1	12	23	4	10	65	11	234
16:40-16:45	22	47	1	12	25	10	10	14	6	16	84	11	258
16:45-16:50	24	55	4	10	20	3	14	13	10	12	60	8	233
16:50-16:55	12	52	5	7	25	3	13	16	4	10	71	9	227
16:55-17:00	19	38	3	8	28	8	9	30	4	14	59	8	228
17:00-17:05	25	60	6	5	16	10	16	19	2	11	77	21	268
17:05-17:10	25	46	6	2	29	3	11	26	12	7	78	18	263
17:10-17:15	29	49	1	9	29	5	14	19	6	10	64	12	247
17:15-17:20	25	61	2	9	31	6	19	18	9	15	66	15	276
17:20-17:25	27	51	9	9	28	4	4	21	6	19	81	18	277
17:25-17:30	27	48	3	8	33	10	11	30	6	14	68	12	270
17:30-17:35	28	52	6	7	26	7	19	31	4	19	67	18	284
17:35-17:40	30	60	4	8	27	6	22	7	4	20	72	15	275
17:40-17:45	30	57	3	6	30	4	11	19	2	19	71	9	261
17:45-17:50	20	49	4	4	34	6	8	14	10	10	77	7	243
17:50-17:55	25	62	2	5	30	9	11	18	6	15	68	9	260
17:55-18:00	21	45	5	9	40	7	17	19	3	12	26	7	211
Total Survey	563	1263	105	181	641	139	289	444	132	317	1652	273	5999
PHF	.88	.94	.68	.74	.91	.85	.75	.77	.66	.75	.96	.79	.948
% Trucks	2.3	3	7.6	1.7	.9	2.2	2.8	1.8	1.5	.3	1.6	.7	2
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	
Peds	0	9	0	0	3	0	0	0	0	0	5	0	
Hourly Totals													
16:00-17:00	251	623	54	100	288	62	126	203	62	146	837	112	2864
16:15-17:15	260	613	52	99	296	68	138	214	69	133	859	143	2944
16:30-17:30	274	611	50	98	311	68	140	243	73	147	850	153	3018
16:45-17:45	301	629	52	88	322	69	163	249	69	170	834	163	3109
17:00-18:00	312	640	51	81	353	77	163	241	70	171	815	161	3135

INTERSECTION TURN MOVEMENT COUNT PEAK HOUR REPORT
170TH AVENUE AT FARMINGTON ROAD



DATE OF COUNT: 05/31/00
DAY OF WEEK: Wed
TIME STARTED: 16:00
TIME ENDED: 18:00

TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

ERLJ

Peak Hour
17:00-18:00
TEV=3135

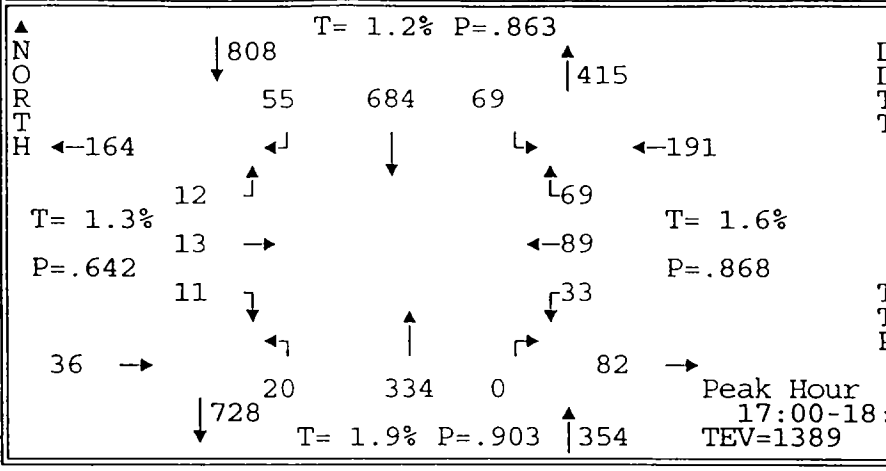
Traffic Smithy
(503)641-6333

TIME PERIOD FROM - TO	EAST BOUND ↓	EAST BOUND →	EAST BOUND ↑	SOUTH BOUND ↵	SOUTH BOUND ↓	SOUTH BOUND ↳	NORTH BOUND ↰	NORTH BOUND ↑	NORTH BOUND ↱	WEST BOUND ↓	WEST BOUND ←	WEST BOUND ↑	ALL
ALL VEHICLES													
17:00-17:15	79	155	13	16	74	18	41	64	20	28	219	51	778
17:15-17:30	79	160	14	26	92	20	34	69	21	48	215	45	823
17:30-17:45	88	169	13	21	83	17	52	57	10	58	210	42	820
17:45-18:00	66	156	11	18	104	22	36	51	19	37	171	23	714
LIGHT TRUCKS (SINGLE UNIT 2 AXLES)													
17:00-17:15	1	5	0	0	0	0	3	0	0	1	4	0	14
17:15-17:30	0	2	1	0	1	0	0	2	0	0	2	0	8
17:30-17:45	3	4	0	0	0	1	1	0	0	0	2	0	11
17:45-18:00	1	1	2	0	2	0	0	0	0	0	1	0	7
MEDIUM TRUCKS (SINGLE UNIT > 2 AXLES)													
17:00-17:15	0	1	0	0	0	0	0	0	0	0	0	0	1
17:15-17:30	0	0	0	0	0	0	0	0	0	0	0	0	0
17:30-17:45	0	1	0	0	0	0	0	0	0	0	0	0	1
17:45-18:00	0	0	0	0	0	0	0	0	0	0	0	0	0
HEAVY TRUCKS (SEMI-TRACTOR TRAILER)													
17:00-17:15	0	3	0	0	0	0	0	0	0	0	0	0	3
17:15-17:30	0	0	0	0	0	0	0	0	0	0	1	0	1
17:30-17:45	0	0	0	0	0	0	0	0	0	0	0	0	0
17:45-18:00	0	0	0	0	0	0	0	0	0	0	0	0	0
BICYCLES													
17:00-17:15	0	0	0	0	0	0	1	0	0	0	1	0	2
17:15-17:30	0	0	0	0	0	0	0	0	0	0	1	0	1
17:30-17:45	0	0	0	0	0	0	0	0	0	0	0	0	0
17:45-18:00	0	0	0	0	0	0	0	0	0	0	0	0	0

PEDESTRIANS	CROSSWALK USEAGE SOUTH	WEST	EAST	NORTH	ALL
17:00-17:15	0	0	0	0	0
17:15-17:30	2	0	0	2	4
17:30-17:45	0	0	0	0	0
17:45-18:00	1	1	0	0	2

Peak Hour by Movement													
PHF	.89	.95	.91	.78	.85	.88	.78	.87	.83	.74	.93	.79	.952
% Trucks(all)	1.6	2.7	5.9	0	.8	1.3	2.5	.8	0	.6	1.2	0	1.5
% Trucks(M+H)	0	.8	0	0	0	0	0	0	0	0	.1	0	.2
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	
Hourly Totals													
16:00-17:00	251	623	54	100	288	62	126	203	62	146	837	112	2864
16:15-17:15	260	613	52	99	296	68	138	214	69	133	859	143	2944
16:30-17:30	274	611	50	98	311	68	140	243	73	147	850	153	3018
16:45-17:45	301	629	52	88	322	69	163	249	69	170	834	163	3109
17:00-18:00	312	640	51	81	353	77	163	241	70	171	815	161	3135

INTERSECTION TURN MOVEMENT COUNT SUMMARY REPORT
170TH AVENUE AT OAK STREET



DATE OF COUNT: 06/07/00
DAY OF WEEK: WED
TIME STARTED: 16:00
TIME ENDED: 18:00

TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

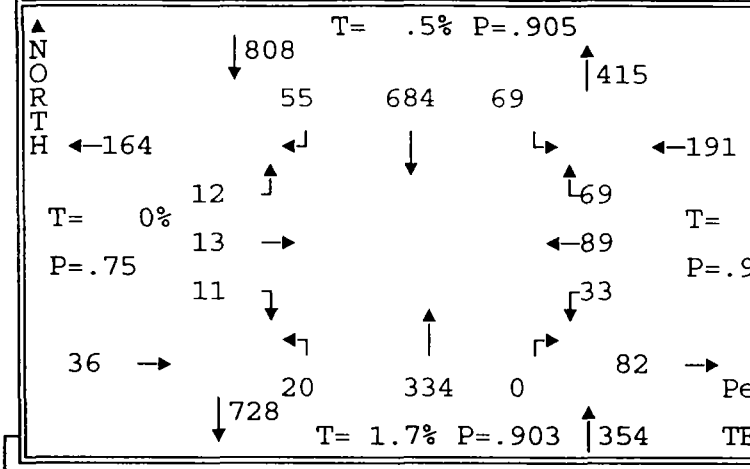
EHPA

Peak Hour
17:00-18:00
TEV=1389

Traffic Smithy
(503) 641-6333

TIME PERIOD FROM - TO	EAST BOUND ↓	EAST BOUND →	EAST BOUND ↑	SOUTH BOUND ↵	SOUTH BOUND ↓	SOUTH BOUND ↳	NORTH BOUND ↰	NORTH BOUND ↑	WEST BOUND ↱	WEST BOUND ↓	WEST BOUND ←	WEST BOUND ↑	ALL
16:00-16:05	2	0	2	3	32	1	4	19	1	2	4	4	74
16:05-16:10	1	1	1	3	38	1	3	33	0	2	6	2	91
16:10-16:15	1	1	1	8	34	4	2	28	0	5	1	3	88
16:15-16:20	2	0	1	3	43	8	2	29	0	3	3	4	98
16:20-16:25	0	1	0	8	40	5	0	18	0	7	3	1	83
16:25-16:30	2	1	0	5	48	2	0	23	0	3	3	2	89
16:30-16:35	0	1	1	4	39	2	1	25	0	0	2	1	76
16:35-16:40	2	1	0	4	50	5	1	24	0	2	1	4	94
16:40-16:45	1	2	1	2	48	4	2	32	0	1	3	8	104
16:45-16:50	2	2	1	3	52	11	2	30	1	1	2	7	114
16:50-16:55	1	2	2	4	53	6	3	27	1	3	3	6	111
16:55-17:00	2	0	1	8	62	7	1	22	0	2	9	3	117
17:00-17:05	0	3	0	6	49	6	1	30	0	4	5	4	108
17:05-17:10	0	3	1	3	39	4	1	19	0	2	13	3	88
17:10-17:15	2	2	1	4	47	9	0	31	0	2	14	3	115
17:15-17:20	2	0	2	6	60	5	3	28	0	2	7	9	124
17:20-17:25	2	1	2	5	53	5	3	29	0	4	3	8	115
17:25-17:30	0	0	1	4	72	13	1	34	0	1	4	11	141
17:30-17:35	0	0	0	3	72	5	2	21	0	0	6	1	110
17:35-17:40	0	1	0	4	57	4	1	25	0	4	9	5	110
17:40-17:45	1	0	0	4	53	3	0	27	0	3	10	6	107
17:45-17:50	0	2	3	6	56	6	3	33	0	5	5	6	125
17:50-17:55	2	0	1	4	69	7	2	30	0	6	4	3	128
17:55-18:00	2	1	1	6	57	2	3	27	0	0	9	10	118
Total Survey	27	25	23	110	1223	125	41	644	3	64	129	114	2528
PHF	.46	.41	.6	.86	.85	.75	.63	.92	0	.59	.65	.62	.913
% Trucks	0	4	0	1.8	1.1	.8	0	1.9	33.3	3.1	0	2.6	1.4
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	
Peds	0	1	0	0	0	0	0	4	0	0	1	0	
Hourly Totals													
16:00-17:00	16	12	11	55	539	56	21	310	3	31	40	45	1139
16:15-17:15	14	18	9	54	570	69	14	310	2	30	61	46	1197
16:30-17:30	14	17	13	53	624	77	19	331	2	24	66	67	1307
16:45-17:45	12	14	11	54	669	78	18	323	2	28	85	66	1360
17:00-18:00	11	13	12	55	684	69	20	334	0	33	89	69	1389

INTERSECTION TURN MOVEMENT COUNT PEAK HOUR REPORT
170TH AVENUE AT OAK STREET



DATE OF COUNT: 06/07/00
DAY OF WEEK: WED
TIME STARTED: 16:00
TIME ENDED: 18:00

TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

EHPA

Peak Hour
17:00-18:00

Traffic Smithy
(503)641-6333

TIME PERIOD FROM - TO	EAST BOUND ↓	EAST BOUND →	EAST BOUND ↑	SOUTH BOUND ↵	SOUTH BOUND ↓	SOUTH BOUND ↳	NORTH BOUND ↰	NORTH BOUND ↑	NORTH BOUND ↱	WEST BOUND ↓	WEST BOUND ←	WEST BOUND ↰	ALL
ALL VEHICLES													
17:00-17:15	2	8	2	13	135	19	2	80	0	8	32	10	311
17:15-17:30	4	1	5	15	185	23	7	91	0	7	14	28	380
17:30-17:45	1	1	0	11	182	12	3	73	0	7	25	12	327
17:45-18:00	4	3	5	16	182	15	8	90	0	11	18	19	371
LIGHT TRUCKS (SINGLE UNIT 2 AXLES)													
17:00-17:15	0	0	0	0	0	0	0	1	0	0	0	0	1
17:15-17:30	0	0	0	0	1	0	0	2	0	0	0	0	3
17:30-17:45	0	0	0	0	3	0	0	0	0	0	0	0	3
17:45-18:00	0	0	0	0	0	0	0	1	0	1	0	0	2
MEDIUM TRUCKS (SINGLE UNIT > 2 AXLES)													
17:00-17:15	0	0	0	0	0	0	0	0	0	0	0	0	0
17:15-17:30	0	0	0	0	0	0	0	0	0	0	0	0	0
17:30-17:45	0	0	0	0	0	0	0	0	0	0	0	0	0
17:45-18:00	0	0	0	0	0	0	0	0	0	0	0	1	1
HEAVY TRUCKS (SEMI-TRACTOR TRAILER)													
17:00-17:15	0	0	0	0	0	0	0	1	0	0	0	0	1
17:15-17:30	0	0	0	0	0	0	0	0	0	0	0	0	0
17:30-17:45	0	0	0	0	0	0	0	0	0	0	0	0	0
17:45-18:00	0	0	0	0	0	0	0	1	0	0	0	0	1
BICYCLES													
17:00-17:15	0	0	0	0	0	0	0	0	0	0	0	0	0
17:15-17:30	0	0	0	0	0	0	0	0	0	0	0	0	0
17:30-17:45	0	0	0	0	0	0	0	0	0	0	0	0	0
17:45-18:00	0	0	0	0	0	0	0	0	0	0	0	0	0

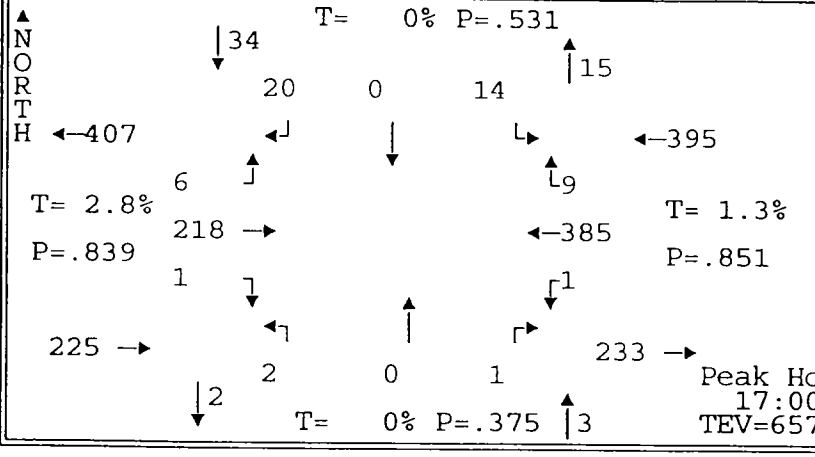
PEDESTRIANS	CROSSWALK USEAGE SOUTH	WEST	EAST	NORTH	ALL
17:00-17:15	0	0	0	0	0
17:15-17:30	0	0	2	0	2
17:30-17:45	0	0	0	1	1
17:45-18:00	0	0	0	0	0

Peak Hour by Movement													
PHF	.69	.41	.6	.86	.92	.75	.63	.92	0	.75	.7	.62	.913
% Trucks(all)	0	0	0	0	.6	0	0	1.8	0	3	0	1.4	.9
% Trucks(M+H)	0	0	0	0	0	0	0	.6	0	0	0	1.4	.2
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	

Hourly Totals													
16:00-17:00	16	12	11	55	539	56	21	310	3	31	40	45	1139
16:15-17:15	14	18	9	54	570	69	14	310	2	30	61	46	1197
16:30-17:30	14	17	13	53	624	77	19	331	2	24	66	67	1307
16:45-17:45	12	14	11	54	669	78	18	323	2	28	85	66	1360
17:00-18:00	11	13	12	55	684	69	20	334	0	33	89	69	1389

INTERSECTION TURN MOVEMENT COUNT SUMMARY REPORT
173RD AVENUE AT BANY ROAD

24088



DATE OF COUNT: 06/28/00
DAY OF WEEK: Wed
TIME STARTED: 16:00
TIME ENDED: 18:00

TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

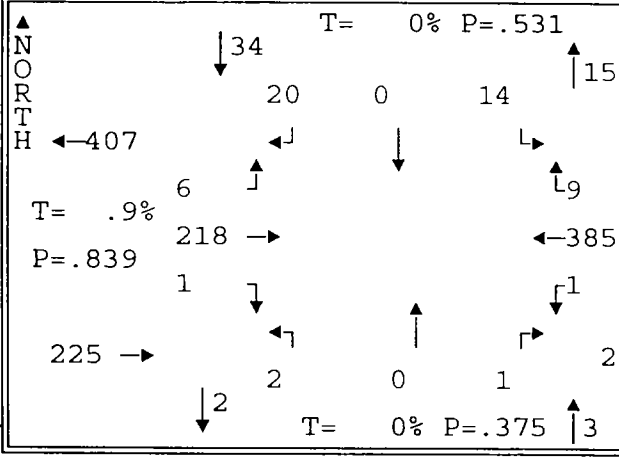
tbea

Peak Hour
17:00-18:00
TEV=657

Traffic Smithy
(503) 641-6333

TIME PERIOD FROM - TO	EAST BOUND ↓	EAST BOUND →	EAST BOUND ↑	SOUTH BOUND ↙	SOUTH BOUND ↓	SOUTH BOUND ↳	NORTH BOUND ↰	NORTH BOUND ↑	NORTH BOUND ↱	WEST BOUND ↓	WEST BOUND ←	WEST BOUND ↑	ALL
16:00-16:05	0	11	0	0	1	0	0	1	0	0	14	0	27
16:05-16:10	1	20	2	0	0	1	0	0	0	1	31	0	56
16:10-16:15	1	19	0	0	0	1	0	0	0	0	23	0	44
16:15-16:20	0	17	0	0	0	1	0	0	0	0	26	1	45
16:20-16:25	0	14	0	2	0	0	1	0	0	0	26	1	44
16:25-16:30	0	15	1	0	0	0	0	0	0	0	23	1	40
16:30-16:35	0	18	1	0	0	0	0	0	0	0	35	1	55
16:35-16:40	0	8	2	0	0	0	0	0	0	0	27	0	37
16:40-16:45	0	21	1	1	0	1	0	0	0	1	22	1	48
16:45-16:50	0	14	0	0	0	2	0	0	0	0	23	0	39
16:50-16:55	0	24	2	1	0	1	1	0	1	0	22	2	54
16:55-17:00	0	11	0	1	0	0	0	0	0	0	37	0	49
17:00-17:05	0	20	0	0	0	1	0	0	0	0	24	0	45
17:05-17:10	0	12	0	1	0	1	0	0	0	0	32	0	46
17:10-17:15	0	10	2	4	0	2	1	0	1	0	41	2	63
17:15-17:20	0	18	1	0	0	0	0	0	0	0	30	0	49
17:20-17:25	0	14	0	2	0	2	0	0	0	1	36	0	55
17:25-17:30	0	23	1	1	0	2	0	0	0	0	26	2	55
17:30-17:35	0	22	1	0	0	0	0	0	0	0	30	2	55
17:35-17:40	0	15	1	1	0	0	0	0	0	0	30	0	47
17:40-17:45	1	17	0	1	0	0	0	0	0	0	22	1	42
17:45-17:50	0	27	0	6	0	3	0	0	0	0	42	1	79
17:50-17:55	0	20	0	1	0	3	1	0	0	0	32	1	58
17:55-18:00	0	20	0	3	0	0	0	0	0	0	40	0	63
Total Survey	3	410	15	25	1	21	4	1	2	3	694	16	1195
PHF	.25	.81	.5	.5	0	.58	.5	0	.25	.25	.84	.56	.821
% Trucks	0	2.9	0	0	0	0	0	0	0	0	1.2	6.3	1.8
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	
Peds	0	0	0	0	0	0	0	2	0	0	1	0	
Hourly Totals													
16:00-17:00	2	192	9	5	1	7	2	1	1	2	309	7	538
16:15-17:15	0	184	9	10	0	9	3	0	2	1	338	9	565
16:30-17:30	0	193	10	11	0	12	2	0	2	2	355	8	595
16:45-17:45	1	200	8	12	0	11	2	0	2	1	353	9	599
17:00-18:00	1	218	6	20	0	14	2	0	1	1	385	9	657

INTERSECTION TURN MOVEMENT COUNT PEAK HOUR REPORT
173RD AVENUE AT BANY ROAD



DATE OF COUNT: 06/28/00
DAY OF WEEK: Wed
TIME STARTED: 16:00
TIME ENDED: 18:00

TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

tbea

Peak Hour
17:00-18:00
TEV=657

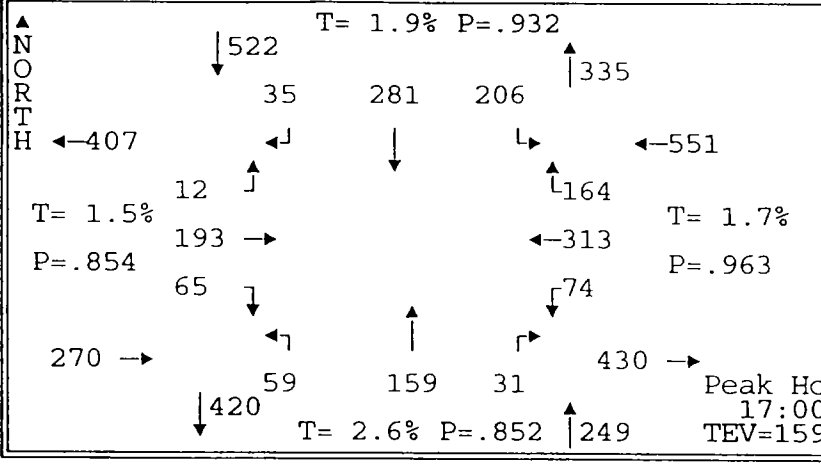
Traffic Smithy
(503)641-6333

TIME PERIOD FROM - TO	EAST BOUND ↓	EAST BOUND →	EAST BOUND ↑	SOUTH BOUND ↓	SOUTH BOUND ↵	SOUTH BOUND ↳	NORTH BOUND ↰	NORTH BOUND ↑	NORTH BOUND ↱	WEST BOUND ↓	WEST BOUND ←	WEST BOUND ↑	ALL
ALL VEHICLES													
17:00-17:15	0	42	2	5	0	4	1	0	1	0	97	2	154
17:15-17:30	0	55	2	3	0	4	0	0	0	1	92	2	159
17:30-17:45	1	54	2	2	0	0	0	0	0	0	82	3	144
17:45-18:00	0	67	0	10	0	6	1	0	0	0	114	2	200
LIGHT TRUCKS (SINGLE UNIT 2 AXLES)													
17:00-17:15	0	1	0	0	0	0	0	0	0	0	1	0	2
17:15-17:30	0	0	0	0	0	0	0	0	0	0	1	0	1
17:30-17:45	0	0	0	0	0	0	0	0	0	0	0	0	0
17:45-18:00	0	1	0	0	0	0	0	0	0	0	0	0	1
MEDIUM TRUCKS (SINGLE UNIT > 2 AXLES)													
17:00-17:15	0	0	0	0	0	0	0	0	0	0	0	0	0
17:15-17:30	0	0	0	0	0	0	0	0	0	0	1	0	1
17:30-17:45	0	0	0	0	0	0	0	0	0	0	0	0	0
17:45-18:00	0	0	0	0	0	0	0	0	0	0	0	0	0
HEAVY TRUCKS (SEMI-TRACTOR TRAILER)													
17:00-17:15	0	0	0	0	0	0	0	0	0	0	0	0	0
17:15-17:30	0	0	0	0	0	0	0	0	0	0	0	0	0
17:30-17:45	0	0	0	0	0	0	0	0	0	0	0	0	0
17:45-18:00	0	0	0	0	0	0	0	0	0	0	0	0	0
BICYCLES													
17:00-17:15	0	0	0	0	0	0	0	0	0	0	0	0	0
17:15-17:30	0	1	0	0	0	0	0	0	0	0	0	0	1
17:30-17:45	0	0	0	0	1	0	0	1	0	0	0	0	2
17:45-18:00	0	0	0	0	3	0	0	0	0	0	0	1	4

PEDESTRIANS	CROSSWALK USEAGE SOUTH	WEST	EAST	NORTH	ALL
17:00-17:15	0	0	0	0	0
17:15-17:30	0	0	0	0	0
17:30-17:45	0	0	0	0	0
17:45-18:00	0	0	2	0	2

Peak Hour by Movement													
PHF	.25	.81	.75	.5	0	.58	.5	0	.25	.25	.84	.75	.821
% Trucks(all)	0	.9	0	0	0	0	0	0	0	0	.8	0	.8
% Trucks(M+H)	0	0	0	0	0	0	0	0	0	0	.3	0	.2
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	
Hourly Totals													
16:00-17:00	2	192	9	5	1	7	2	1	1	2	309	7	538
16:15-17:15	0	184	9	10	0	9	3	0	2	1	338	9	565
16:30-17:30	0	193	10	11	0	12	2	0	2	2	355	8	595
16:45-17:45	1	200	8	12	0	11	2	0	2	1	353	9	599
17:00-18:00	1	218	6	20	0	14	2	0	1	1	385	9	657

INTERSECTION TURN MOVEMENT COUNT SUMMARY REPORT
170TH AVENUE AT BANY ROAD



DATE OF COUNT: 06/07/00
DAY OF WEEK: WED
TIME STARTED: 16:00
TIME ENDED: 18:00

TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

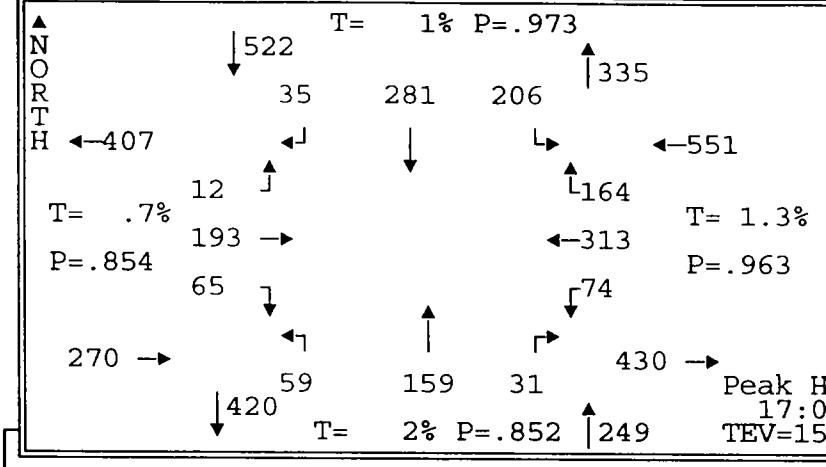
BK18

Peak Hour
17:00-18:00
TEV=1592

Traffic Smithy
(503) 641-6333

TIME PERIOD FROM - TO	EAST BOUND ↓	EAST BOUND →	EAST BOUND ↑	SOUTH BOUND ↵	SOUTH BOUND ↓	SOUTH BOUND ↳	NORTH BOUND ↰	NORTH BOUND ↑	NORTH BOUND ↱	WEST BOUND ↓	WEST BOUND ←	WEST BOUND ↑	ALL
16:00-16:05	2	12	3	3	14	8	6	16	6	4	16	16	106
16:05-16:10	2	7	1	1	12	9	4	15	7	2	9	20	89
16:10-16:15	3	8	3	3	23	14	2	15	4	7	15	14	111
16:15-16:20	3	13	3	2	20	11	6	16	0	3	19	9	105
16:20-16:25	3	12	0	1	21	16	4	9	2	2	15	15	100
16:25-16:30	1	15	2	1	20	16	4	13	1	3	29	13	118
16:30-16:35	5	7	2	3	14	14	4	11	5	5	18	13	101
16:35-16:40	4	13	3	1	16	13	1	13	5	2	18	10	99
16:40-16:45	4	6	2	2	30	14	4	12	3	4	16	13	110
16:45-16:50	0	8	4	0	23	12	5	17	1	1	23	16	110
16:50-16:55	4	18	5	5	18	20	5	10	4	4	22	11	126
16:55-17:00	2	15	3	1	20	21	2	15	7	4	20	11	121
17:00-17:05	5	12	2	5	21	21	2	10	5	10	27	13	133
17:05-17:10	5	11	2	3	19	18	6	14	1	3	26	11	119
17:10-17:15	2	21	1	5	20	15	7	12	2	1	27	10	123
17:15-17:20	3	15	1	2	19	20	3	12	3	9	28	13	128
17:20-17:25	8	14	1	2	21	20	10	11	1	10	21	18	137
17:25-17:30	10	10	0	3	30	13	5	13	2	6	24	9	125
17:30-17:35	5	19	0	0	23	24	5	6	4	5	29	21	141
17:35-17:40	4	13	1	4	28	15	3	15	3	4	23	7	120
17:40-17:45	9	26	2	1	19	20	5	16	0	7	31	15	151
17:45-17:50	1	16	2	4	26	15	5	19	4	6	23	19	140
17:50-17:55	6	17	0	5	29	15	4	10	3	4	21	16	130
17:55-18:00	7	19	0	1	26	10	4	21	3	9	33	12	145
Total Survey	98	327	43	58	512	374	106	321	76	115	533	325	2888
PHF	.71	.82	.6	.67	.87	.87	.74	.8	.77	.74	.94	.82	.945
% Trucks	2	.9	4.7	5.2	1.8	1.6	4.7	1.6	3.9	.9	1.3	2.8	1.9
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	
Peds	0	2	0	0	0	0	0	0	0	0	0	0	
Hourly Totals													
16:00-17:00	33	134	31	23	231	168	47	162	45	41	220	161	1296
16:15-17:15	38	151	29	29	242	191	50	152	36	42	260	145	1365
16:30-17:30	52	150	26	32	251	201	54	150	39	59	270	148	1432
16:45-17:45	57	182	22	31	261	219	58	151	33	64	301	155	1534
17:00-18:00	65	193	12	35	281	206	59	159	31	74	313	164	1592

INTERSECTION TURN MOVEMENT COUNT PEAK HOUR REPORT
170TH AVENUE AT BANY ROAD



DATE OF COUNT: 06/07/00
DAY OF WEEK: WED
TIME STARTED: 16:00
TIME ENDED: 18:00

TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

BK18

Peak Hour
17:00-18:00
TEV=1592

Traffic Smithy
(503)641-6333

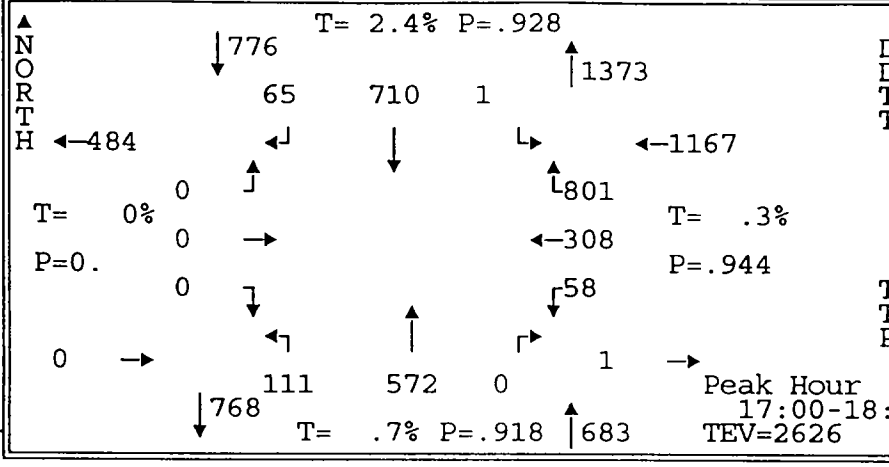
TIME PERIOD FROM - TO	EAST BOUND ↓	EAST BOUND →	EAST BOUND ↱	SOUTH BOUND ↳	SOUTH BOUND ↓	SOUTH BOUND ↴	NORTH BOUND ↰	NORTH BOUND ↑	NORTH BOUND ↗	WEST BOUND ↘	WEST BOUND ←	WEST BOUND ↲	ALL
ALL VEHICLES													
17:00-17:15	12	44	5	13	60	54	15	36	8	14	80	34	375
17:15-17:30	21	39	2	7	70	53	18	36	6	25	73	40	390
17:30-17:45	18	58	3	5	70	59	13	37	7	16	83	43	412
17:45-18:00	14	52	2	10	81	40	13	50	10	19	77	47	415
LIGHT TRUCKS (SINGLE UNIT 2 AXLES)													
17:00-17:15	0	0	1	0	0	0	1	0	1	0	1	0	4
17:15-17:30	0	0	0	1	1	0	0	0	0	0	0	2	4
17:30-17:45	0	0	0	0	2	1	1	1	0	0	1	0	6
17:45-18:00	1	0	0	0	0	0	0	0	0	0	1	1	3
MEDIUM TRUCKS (SINGLE UNIT > 2 AXLES)													
17:00-17:15	0	0	0	0	0	0	0	0	0	0	0	0	0
17:15-17:30	0	0	0	0	0	0	0	0	0	0	0	0	0
17:30-17:45	0	0	0	0	0	0	0	0	0	0	0	0	0
17:45-18:00	0	0	0	0	0	0	0	0	0	0	0	1	1
HEAVY TRUCKS (SEMI-TRACTOR TRAILER)													
17:00-17:15	0	0	0	0	0	0	0	1	0	0	0	0	1
17:15-17:30	0	0	0	0	0	0	0	0	0	0	0	0	0
17:30-17:45	0	0	0	0	0	0	0	0	0	0	0	0	0
17:45-18:00	0	0	0	0	0	0	0	0	0	0	0	0	0
BICYCLES													
17:00-17:15	0	0	0	0	0	0	0	0	0	0	0	0	0
17:15-17:30	0	0	0	0	0	0	0	0	0	0	0	0	0
17:30-17:45	0	0	0	0	0	0	0	0	0	0	0	0	0
17:45-18:00	0	0	0	0	0	0	0	0	0	0	0	0	0

PEDESTRIANS	CROSSWALK USEAGE SOUTH	WEST	EAST	NORTH	ALL
17:00-17:15	0	0	0	0	0
17:15-17:30	0	0	0	0	0
17:30-17:45	0	0	0	0	0
17:45-18:00	0	0	0	0	0

Peak Hour by Movement													
PHF	.77	.83	.6	.67	.87	.87	.82	.8	.77	.74	.94	.87	.959
% Trucks(all)	1.5	0	8.3	2.9	1.1	.5	3.4	1.3	3.2	0	1	2.4	1.2
% Trucks(M+H)	0	0	0	0	0	0	0	.6	0	0	0	.6	.1
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	

Hourly Totals													
16:00-17:00	33	134	31	23	231	168	47	162	45	41	220	161	1296
16:15-17:15	38	151	29	29	242	191	50	152	36	42	260	145	1365
16:30-17:30	52	150	26	32	251	201	54	150	39	59	270	148	1432
16:45-17:45	57	182	22	31	261	219	58	151	33	64	301	155	1534
17:00-18:00	65	193	12	35	281	206	59	159	31	74	313	164	1592

INTERSECTION TURN MOVEMENT COUNT SUMMARY REPORT
BETHANY BOULEVARD AT HIGHWAY 26 WB RAMPS



DATE OF COUNT: 05/31/00
DAY OF WEEK: WED
TIME STARTED: 16:00
TIME ENDED: 18:00

TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

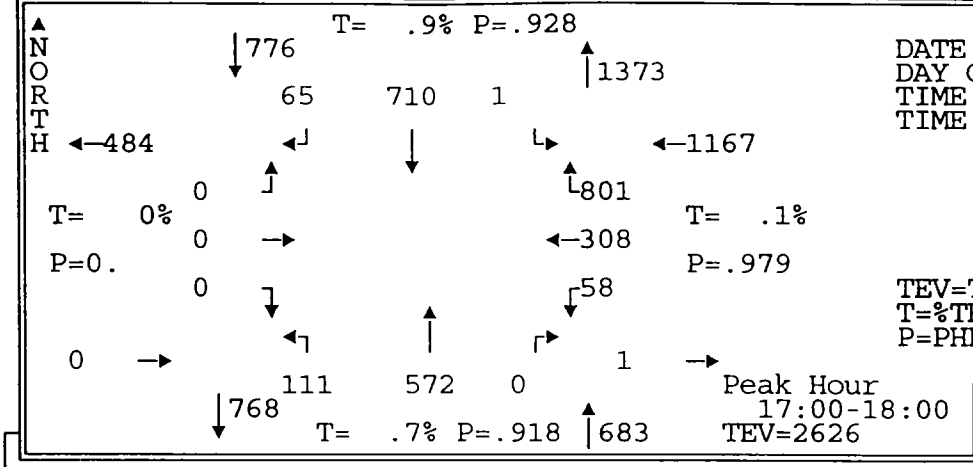
MP51

Peak Hour
17:00-18:00
TEV=2626

Traffic Smithy
(503) 641-6333

TIME PERIOD FROM - TO	EAST BOUND ↓	EAST BOUND →	EAST BOUND ↑	SOUTH BOUND ↲	SOUTH BOUND ↓	SOUTH BOUND ↳	NORTH BOUND ↰	NORTH BOUND ↑	NORTH BOUND ↱	WEST BOUND ↓	WEST BOUND ←	WEST BOUND ↑	ALL
16:00-16:05	0	0	0	2	56	0	10	29	0	3	9	50	159
16:05-16:10	0	0	0	1	36	0	12	27	0	3	11	44	134
16:10-16:15	0	0	0	5	56	0	7	26	0	4	27	46	171
16:15-16:20	0	0	0	5	49	0	8	37	0	3	12	56	170
16:20-16:25	0	0	0	4	51	0	11	43	0	2	18	51	180
16:25-16:30	0	0	0	2	44	0	8	24	0	5	19	53	155
16:30-16:35	0	0	0	5	32	0	6	48	0	2	12	49	154
16:35-16:40	0	0	0	4	58	1	8	39	0	4	20	46	180
16:40-16:45	0	0	0	4	43	0	5	33	0	7	22	66	180
16:45-16:50	0	0	0	5	58	0	9	36	0	4	19	50	181
16:50-16:55	0	0	0	2	42	0	5	39	0	6	20	63	177
16:55-17:00	0	0	0	7	51	0	10	40	0	4	19	57	188
17:00-17:05	0	0	0	7	73	0	4	47	0	4	29	67	231
17:05-17:10	0	0	0	3	41	0	15	38	0	8	25	60	190
17:10-17:15	0	0	0	6	71	0	10	46	0	3	17	65	218
17:15-17:20	0	0	0	5	50	0	8	46	0	9	29	71	218
17:20-17:25	0	0	0	7	55	0	11	61	0	5	22	58	219
17:25-17:30	0	0	0	6	60	0	11	47	0	7	29	66	226
17:30-17:35	0	0	0	5	50	0	11	43	0	4	20	72	205
17:35-17:40	0	0	0	7	65	0	6	43	0	0	24	61	206
17:40-17:45	0	0	0	2	54	0	6	44	0	7	30	80	223
17:45-17:50	0	0	0	7	69	1	6	59	0	2	26	58	228
17:50-17:55	0	0	0	4	65	0	11	44	0	6	27	73	230
17:55-18:00	0	0	0	6	57	0	12	54	0	3	30	70	232
Total Survey	0	0	0	111	1286	2	210	993	0	105	516	1432	4655
PHF	0	0	0	.9	.93	.25	.84	.91	0	.69	.93	.94	.951
% Trucks	0	0	0	.9	2.6	0	1.4	.6	0	0	.4	.3	1.1
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	
Peds	0	0	0	0	1	0	0	1	0	0	0	0	
Hourly Totals													
16:00-17:00	0	0	0	46	576	1	99	421	0	47	208	631	2029
16:15-17:15	0	0	0	54	613	1	99	470	0	52	232	683	2204
16:30-17:30	0	0	0	61	634	1	102	520	0	63	263	718	2362
16:45-17:45	0	0	0	62	670	0	106	530	0	61	283	770	2482
17:00-18:00	0	0	0	65	710	1	111	572	0	58	308	801	2626

INTERSECTION TURN MOVEMENT COUNT PEAK HOUR REPORT
BETHANY BOULEVARD AT HIGHWAY 26 WB RAMPS



DATE OF COUNT: 05/31/00
DAY OF WEEK: WED
TIME STARTED: 16:00
TIME ENDED: 18:00

MP51

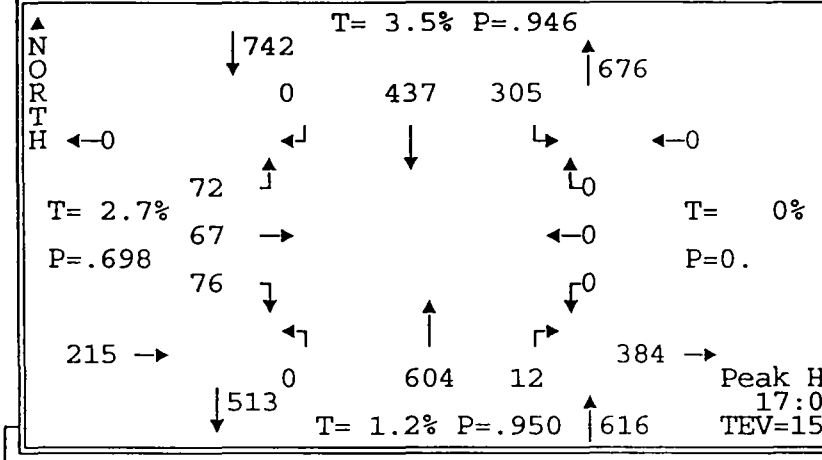
Traffic Smithy
(503)641-6333

TIME PERIOD FROM - TO	EAST BOUND ↓	EAST BOUND →	EAST BOUND ↑	SOUTH BOUND ↲	SOUTH BOUND ↓	SOUTH BOUND ↳	NORTH BOUND ↰	NORTH BOUND ↑	NORTH BOUND ↱	WEST BOUND ↓	WEST BOUND ←	WEST BOUND ↑	ALL
ALL VEHICLES													
17:00-17:15	0	0	0	16	185	0	29	131	0	15	71	192	639
17:15-17:30	0	0	0	18	165	0	30	154	0	21	80	195	663
17:30-17:45	0	0	0	14	169	0	23	130	0	11	74	213	634
17:45-18:00	0	0	0	17	191	1	29	157	0	11	83	201	690
LIGHT TRUCKS (SINGLE UNIT 2 AXLES)													
17:00-17:15	0	0	0	0	1	0	1	1	0	0	0	0	3
17:15-17:30	0	0	0	0	3	0	1	0	0	0	0	1	5
17:30-17:45	0	0	0	0	1	0	0	2	0	0	0	0	3
17:45-18:00	0	0	0	0	1	0	0	0	0	0	0	0	1
MEDIUM TRUCKS (SINGLE UNIT > 2 AXLES)													
17:00-17:15	0	0	0	0	0	0	0	0	0	0	0	0	0
17:15-17:30	0	0	0	0	0	0	0	0	0	0	0	0	0
17:30-17:45	0	0	0	0	0	0	0	0	0	0	0	0	0
17:45-18:00	0	0	0	1	0	0	0	0	0	0	0	0	1
HEAVY TRUCKS (SEMI-TRACTOR TRAILER)													
17:00-17:15	0	0	0	0	0	0	0	0	0	0	0	0	0
17:15-17:30	0	0	0	0	0	0	0	0	0	0	0	0	0
17:30-17:45	0	0	0	0	0	0	0	0	0	0	0	0	0
17:45-18:00	0	0	0	0	0	0	0	0	0	0	0	0	0
BICYCLES													
17:00-17:15	0	0	0	0	0	0	0	0	0	0	0	0	0
17:15-17:30	0	0	0	0	0	0	0	0	0	0	0	0	0
17:30-17:45	0	0	0	0	0	0	0	0	0	0	0	0	0
17:45-18:00	0	0	0	0	0	0	0	1	0	0	0	0	1

PEDESTRIANS	CROSSWALK USEAGE SOUTH	WEST	EAST	NORTH	ALL
17:00-17:15	0	0	1	0	1
17:15-17:30	0	0	0	0	0
17:30-17:45	0	0	0	0	0
17:45-18:00	0	1	0	0	1

Peak Hour by Movement													
PHF	0	0	0	.9	.93	.25	.93	.91	0	.69	.93	.94	.951
% Trucks(all)	0	0	0	1.5	.8	0	1.8	.5	0	0	0	.1	.5
% Trucks(M+H)	0	0	0	1.5	0	0	0	0	0	0	0	0	0
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	
Hourly Totals													
16:00-17:00	0	0	0	46	576	1	99	421	0	47	208	631	2029
16:15-17:15	0	0	0	54	613	1	99	470	0	52	232	683	2204
16:30-17:30	0	0	0	61	634	1	102	520	0	63	263	718	2362
16:45-17:45	0	0	0	62	670	0	106	530	0	61	283	770	2482
17:00-18:00	0	0	0	65	710	1	111	572	0	58	308	801	2626

INTERSECTION TURN MOVEMENT COUNT SUMMARY REPORT
BETHANY BOULEVARD AT HIGHWAY EASTBOUND RAMPS



DATE OF COUNT: 05/30/00
DAY OF WEEK: TUE
TIME STARTED: 16:00
TIME ENDED: 18:00

TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

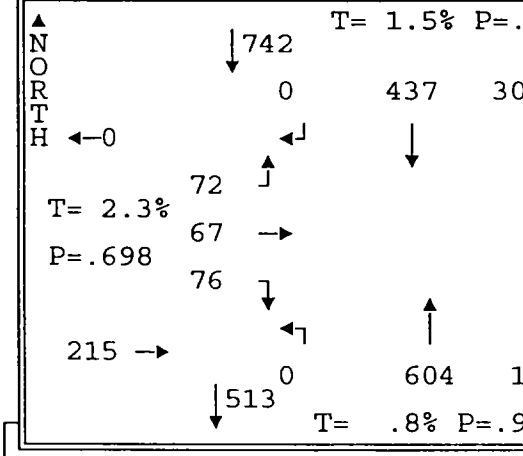
GMAI

Peak Hour
17:00-18:00
TEV=1573

Traffic Smithy
(503) 641-6333

TIME PERIOD FROM - TO	EAST BOUND ↓	EAST BOUND →	EAST BOUND ↑	SOUTH BOUND ↲	SOUTH BOUND ↓	SOUTH BOUND ↳	NORTH BOUND ↰	NORTH BOUND ↑	WEST BOUND ↱	WEST BOUND ↓	WEST BOUND ←	WEST BOUND ↑	ALL
16:00-16:05	5	2	5	0	29	28	0	41	5	0	0	0	115
16:05-16:10	7	3	3	0	24	13	0	29	1	0	0	0	80
16:10-16:15	1	4	4	0	39	22	0	29	0	0	0	0	99
16:15-16:20	2	4	5	0	35	16	0	48	2	0	0	0	112
16:20-16:25	3	9	3	0	28	23	0	42	3	0	0	0	111
16:25-16:30	5	5	2	0	22	27	0	38	1	0	0	0	100
16:30-16:35	3	6	6	0	24	11	0	38	0	0	0	0	88
16:35-16:40	3	6	5	0	34	26	0	41	2	0	0	0	117
16:40-16:45	8	5	13	0	36	15	0	33	2	0	0	0	112
16:45-16:50	6	4	4	0	41	19	0	34	3	0	0	0	111
16:50-16:55	6	1	5	0	31	16	0	50	2	0	0	0	111
16:55-17:00	4	4	1	0	31	24	0	38	2	0	0	0	104
17:00-17:05	3	5	3	0	45	30	0	50	0	0	0	0	136
17:05-17:10	4	8	2	0	28	20	0	55	2	0	0	0	119
17:10-17:15	5	1	5	0	46	27	0	44	2	0	0	0	130
17:15-17:20	7	5	6	0	34	24	0	59	0	0	0	0	135
17:20-17:25	7	13	13	0	33	20	0	47	0	0	0	0	133
17:25-17:30	7	8	11	0	37	31	0	47	0	0	0	0	141
17:30-17:35	8	6	2	0	37	17	0	52	2	0	0	0	124
17:35-17:40	6	3	6	0	35	29	0	40	2	0	0	0	121
17:40-17:45	10	6	5	0	38	21	0	54	1	0	0	0	135
17:45-17:50	4	5	6	0	34	29	0	48	1	0	0	0	127
17:50-17:55	5	4	5	0	40	29	0	53	1	0	0	0	137
17:55-18:00	10	3	8	0	30	28	0	55	1	0	0	0	135
Total Survey	129	120	128	0	811	545	0	1065	35	0	0	0	2833
PHF	.79	.62	.6	0	.92	.89	0	.96	.6	0	0	0	.961
% Trucks	2.3	1.7	3.9	0	2.5	5.1	0	1	5.7	0	0	0	2.5
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	
Peds	0	0	0	0	0	0	0	1	0	0	0	0	
Hourly Totals													
16:00-17:00	53	53	56	0	374	240	0	461	23	0	0	0	1260
16:15-17:15	52	58	54	0	401	254	0	511	21	0	0	0	1351
16:30-17:30	63	66	74	0	420	263	0	536	15	0	0	0	1437
16:45-17:45	73	64	63	0	436	278	0	570	16	0	0	0	1500
17:00-18:00	76	67	72	0	437	305	0	604	12	0	0	0	1573

INTERSECTION TURN MOVEMENT COUNT PEAK HOUR REPORT
BETHANY BOULEVARD AT HIGHWAY EASTBOUND RAMPS



DATE OF COUNT: 05/30/00
DAY OF WEEK: TUE
TIME STARTED: 16:00
TIME ENDED: 18:00

TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

GMAI

Peak Hour
17:00-18:00
TEV=1573

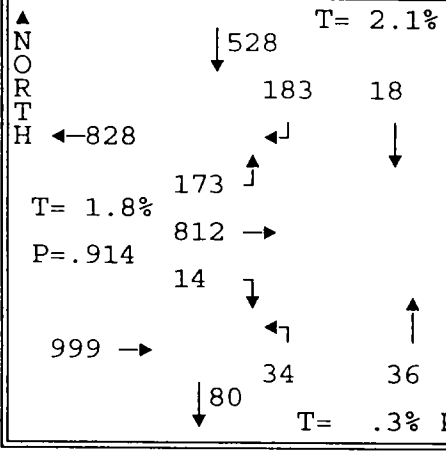
Traffic Smithy
(503)641-6333

TIME PERIOD FROM - TO	EAST BOUND ↓	EAST BOUND →	EAST BOUND ↑	SOUTH BOUND ↓	SOUTH BOUND ←	SOUTH BOUND ↑	NORTH BOUND ↓	NORTH BOUND →	NORTH BOUND ↑	WEST BOUND ↓	WEST BOUND ←	WEST BOUND ↑	ALL
ALL VEHICLES													
17:00-17:15	12	14	10	0	119	77	0	149	4	0	0	0	385
17:15-17:30	21	26	30	0	104	75	0	153	0	0	0	0	409
17:30-17:45	24	15	13	0	110	67	0	146	5	0	0	0	380
17:45-18:00	19	12	19	0	104	86	0	156	3	0	0	0	399
LIGHT TRUCKS (SINGLE UNIT 2 AXLES)													
17:00-17:15	0	0	0	0	1	1	0	3	0	0	0	0	5
17:15-17:30	0	0	2	0	1	3	0	0	0	0	0	0	6
17:30-17:45	0	1	1	0	2	1	0	1	0	0	0	0	6
17:45-18:00	0	0	0	0	1	1	0	1	0	0	0	0	3
MEDIUM TRUCKS (SINGLE UNIT > 2 AXLES)													
17:00-17:15	0	0	0	0	0	0	0	0	0	0	0	0	0
17:15-17:30	0	0	0	0	0	0	0	0	0	0	0	0	0
17:30-17:45	0	1	0	0	0	0	0	0	0	0	0	0	1
17:45-18:00	0	0	0	0	0	0	0	0	0	0	0	0	0
HEAVY TRUCKS (SEMI-TRACTOR TRAILER)													
17:00-17:15	0	0	0	0	0	0	0	0	0	0	0	0	0
17:15-17:30	0	0	0	0	0	0	0	0	0	0	0	0	0
17:30-17:45	0	0	0	0	0	0	0	0	0	0	0	0	0
17:45-18:00	0	0	0	0	0	0	0	0	0	0	0	0	0
BICYCLES													
17:00-17:15	0	0	0	0	0	0	0	0	0	0	0	0	0
17:15-17:30	0	0	0	0	0	0	0	0	0	0	0	0	0
17:30-17:45	0	0	0	0	0	0	0	1	0	0	0	0	1
17:45-18:00	0	0	0	0	0	0	0	0	0	0	0	0	0

PEDESTRIANS	CROSSWALK USEAGE SOUTH	WEST	EAST	NORTH	ALL
17:00-17:15	0	0	0	0	0
17:15-17:30	0	0	1	0	1
17:30-17:45	0	0	0	0	0
17:45-18:00	0	0	0	0	0

Peak Hour by Movement													
PHF	.79	.64	.6	0	.92	.89	0	.97	.6	0	0	0	.961
% Trucks(all)	0	3	4.2	0	1.1	2	0	.8	0	0	0	0	1.3
% Trucks(M+H)	0	1.5	0	0	0	0	0	0	0	0	0	0	.1
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	
Hourly Totals													
16:00-17:00	53	53	56	0	374	240	0	461	23	0	0	0	1260
16:15-17:15	52	58	54	0	401	254	0	511	21	0	0	0	1351
16:30-17:30	63	66	74	0	420	263	0	536	15	0	0	0	1437
16:45-17:45	73	64	63	0	436	278	0	570	16	0	0	0	1500
17:00-18:00	76	67	72	0	437	305	0	604	12	0	0	0	1573

INTERSECTION TURN MOVEMENT COUNT SUMMARY REPORT
CORNELL ROAD AT BETHANY BOULEVARD



DATE OF COUNT: 06/06/00
DAY OF WEEK: Tue
TIME STARTED: 16:00
TIME ENDED: 18:00

TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

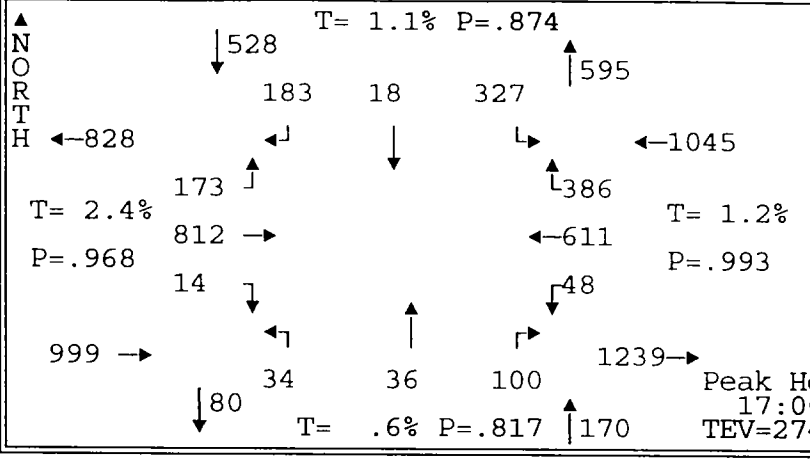
gmaq

Peak Hour
17:00-18:00
TEV=2742

Traffic Smithy
(503) 641-6333

TIME PERIOD FROM - TO	EAST BOUND ↓	EAST BOUND →	EAST BOUND ↑	SOUTH BOUND ↵	SOUTH BOUND ↓	SOUTH BOUND ↳	NORTH BOUND ↰	NORTH BOUND ↑	NORTH BOUND ↱	WEST BOUND ↓	WEST BOUND ←	WEST BOUND ↑	ALL
16:00-16:05	3	77	4	22	1	31	3	1	8	10	49	22	231
16:05-16:10	0	65	9	11	1	19	1	2	12	4	52	34	210
16:10-16:15	1	41	10	10	1	36	3	2	7	7	45	16	179
16:15-16:20	0	47	9	12	2	31	2	2	2	6	60	37	210
16:20-16:25	2	66	10	14	1	21	3	3	8	3	58	31	220
16:25-16:30	1	54	9	18	2	40	3	1	6	3	50	22	209
16:30-16:35	0	36	11	16	0	25	3	2	3	2	59	36	193
16:35-16:40	1	63	7	13	2	28	4	0	4	6	51	28	207
16:40-16:45	2	42	7	18	3	34	2	2	5	4	56	31	206
16:45-16:50	2	65	10	15	1	21	1	0	1	10	63	29	218
16:50-16:55	0	63	11	16	5	25	2	1	9	10	57	22	221
16:55-17:00	2	73	15	16	2	12	1	5	11	3	51	28	219
17:00-17:05	1	62	9	8	2	29	5	5	8	2	49	29	209
17:05-17:10	0	68	26	10	0	28	3	6	12	8	48	33	242
17:10-17:15	2	81	9	11	0	28	2	3	8	3	59	30	236
17:15-17:20	0	61	20	13	3	21	4	1	9	3	48	29	212
17:20-17:25	2	85	13	14	2	17	3	4	7	4	51	34	236
17:25-17:30	1	51	19	19	0	30	5	2	9	8	50	31	225
17:30-17:35	3	61	10	16	2	29	2	1	11	3	46	33	217
17:35-17:40	3	54	13	12	3	26	5	2	10	2	47	36	213
17:40-17:45	1	85	14	24	3	27	0	0	5	1	58	37	255
17:45-17:50	1	76	12	11	0	22	1	3	8	5	42	40	221
17:50-17:55	0	65	18	20	3	33	1	5	8	5	52	27	237
17:55-18:00	0	63	10	25	0	37	3	4	5	4	61	27	239
Total Survey	28	1504	285	364	39	650	62	57	176	116	1262	722	5265
PHF	.5	.89	.79	.82	.56	.89	.71	.64	.83	.8	.97	.85	.961
% Trucks	3.6	1.9	1.1	1.4	2.6	2.5	0	1.8	0	.9	1.7	1	1.6
Stopped Buses	0	1	0	0	0	0	0	0	0	0	0	0	
Peds	0	0	0	0	0	0	0	0	0	0	0	0	
Hourly Totals													
16:00-17:00	14	692	112	181	21	323	28	21	76	68	651	336	2523
16:15-17:15	13	720	133	167	20	322	31	30	77	60	661	356	2590
16:30-17:30	13	750	157	169	20	298	35	31	86	63	642	360	2624
16:45-17:45	17	809	169	174	23	293	33	30	100	57	627	371	2703
17:00-18:00	14	812	173	183	18	327	34	36	100	48	611	386	2742

INTERSECTION TURN MOVEMENT COUNT PEAK HOUR REPORT
CORNELL ROAD AT BETHANY BOULEVARD



DATE OF COUNT: 06/06/00
DAY OF WEEK: Tue
TIME STARTED: 16:00
TIME ENDED: 18:00

TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

gmaq

Peak Hour
17:00-18:00
TEV=2742

Traffic Smithy
(503)641-6333

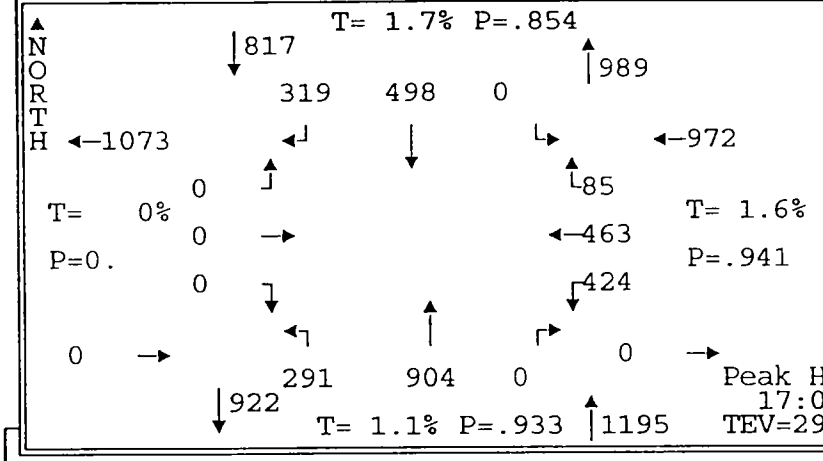
TIME PERIOD FROM - TO	EAST BOUND ↓	EAST BOUND →	EAST BOUND ↑	SOUTH BOUND ↵	SOUTH BOUND ↓	SOUTH BOUND ↳	NORTH BOUND ↰	NORTH BOUND ↑	NORTH BOUND ↱	WEST BOUND ↓	WEST BOUND ←	WEST BOUND ↑	ALL
ALL VEHICLES													
17:00-17:15	3	211	44	29	2	85	10	14	28	13	156	92	687
17:15-17:30	3	197	52	46	5	68	12	7	25	15	149	94	673
17:30-17:45	7	200	37	52	8	82	7	3	26	6	151	106	685
17:45-18:00	1	204	40	56	3	92	5	12	21	14	155	94	697
LIGHT TRUCKS (SINGLE UNIT 2 AXLES)													
17:00-17:15	0	6	0	0	0	0	0	0	0	1	2	1	10
17:15-17:30	0	6	2	1	0	3	0	0	0	0	2	0	14
17:30-17:45	0	4	1	0	0	0	0	0	0	0	0	2	7
17:45-18:00	0	1	0	0	0	1	0	0	0	0	4	0	6
MEDIUM TRUCKS (SINGLE UNIT > 2 AXLES)													
17:00-17:15	0	2	0	0	0	0	0	0	0	0	0	0	2
17:15-17:30	0	0	0	0	0	0	0	0	0	0	0	0	0
17:30-17:45	0	1	0	0	0	0	0	0	0	0	0	0	1
17:45-18:00	0	0	0	0	0	0	0	0	0	0	0	0	0
HEAVY TRUCKS (SEMI-TRACTOR TRAILER)													
17:00-17:15	0	0	0	0	0	0	0	1	0	0	0	0	1
17:15-17:30	0	0	0	0	0	1	0	0	0	0	1	0	2
17:30-17:45	0	1	0	0	0	0	0	0	0	0	0	0	1
17:45-18:00	0	0	0	0	0	0	0	0	0	0	0	0	0
BICYCLES													
17:00-17:15	0	0	0	0	0	0	0	0	0	0	0	0	0
17:15-17:30	0	0	0	0	0	0	0	0	0	0	0	0	0
17:30-17:45	0	0	0	0	0	0	0	0	0	0	0	0	0
17:45-18:00	0	0	0	0	0	0	0	0	0	0	0	0	0

PEDESTRIANS	CROSSWALK USEAGE SOUTH	WEST	EAST	NORTH	ALL
17:00-17:15	0	0	0	0	0
17:15-17:30	0	0	0	0	0
17:30-17:45	0	0	0	0	0
17:45-18:00	0	0	0	0	0

Peak Hour by Movement													
PHF	.5	.96	.83	.82	.56	.89	.71	.64	.89	.8	.98	.91	.983
% Trucks(all)	0	2.6	1.7	.5	0	1.5	0	2.8	0	2.1	1.5	.8	1.6
% Trucks(M+H)	0	.5	0	0	0	.3	0	2.8	0	0	.2	0	.3
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	

Hourly Totals													
16:00-17:00	14	692	112	181	21	323	28	21	76	68	651	336	2523
16:15-17:15	13	720	133	167	20	322	31	30	77	60	661	356	2590
16:30-17:30	13	750	157	169	20	298	35	31	86	63	642	360	2624
16:45-17:45	17	809	169	174	23	293	33	30	100	57	627	371	2703
17:00-18:00	14	812	173	183	18	327	34	36	100	48	611	386	2742

INTERSECTION TURN MOVEMENT COUNT SUMMARY REPORT
CORNELL ROAD AT US 26 WESTBOUND RAMPS



DATE OF COUNT: 5/31/00
DAY OF WEEK: wed
TIME STARTED: 16:00
TIME ENDED: 18:00

TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

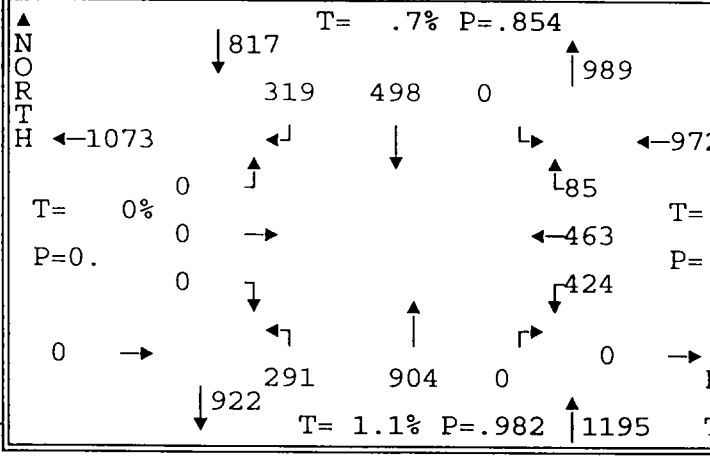
gmav

Peak Hour
17:00-18:00
TEV=2984

Traffic Smithy
(503) 641-6333

TIME PERIOD FROM - TO	EAST BOUND ↓	EAST BOUND →	EAST BOUND ↑	SOUTH BOUND ↲	SOUTH BOUND ↓	SOUTH BOUND ↳	NORTH BOUND ↰	NORTH BOUND ↑	NORTH BOUND ↱	WEST BOUND ↓	WEST BOUND ←	WEST BOUND ↑	ALL
16:00-16:05	0	0	0	20	39	0	8	42	0	35	31	10	185
16:05-16:10	0	0	0	28	46	0	7	44	0	38	27	9	199
16:10-16:15	0	0	0	21	39	0	15	45	0	39	39	8	206
16:15-16:20	0	0	0	19	46	0	14	68	0	32	33	10	222
16:20-16:25	0	0	0	28	30	0	9	50	0	33	39	11	200
16:25-16:30	0	0	0	17	33	0	17	73	0	35	34	9	218
16:30-16:35	0	0	0	26	54	0	9	60	0	38	28	9	224
16:35-16:40	0	0	0	18	39	0	14	53	0	38	35	10	207
16:40-16:45	0	0	0	32	45	0	19	73	0	28	43	7	247
16:45-16:50	0	0	0	27	40	0	18	66	0	38	29	9	227
16:50-16:55	0	0	0	25	46	0	18	76	1	34	43	11	254
16:55-17:00	0	0	0	38	46	0	17	70	0	32	31	4	238
17:00-17:05	0	0	0	20	31	0	21	64	0	38	45	9	228
17:05-17:10	0	0	0	27	55	0	29	83	0	38	33	6	271
17:10-17:15	0	0	0	26	41	0	25	69	0	35	41	7	244
17:15-17:20	0	0	0	22	39	0	27	87	0	27	32	6	240
17:20-17:25	0	0	0	32	47	0	23	75	0	44	38	8	267
17:25-17:30	0	0	0	17	34	0	25	64	0	43	38	12	233
17:30-17:35	0	0	0	23	37	0	30	93	0	26	42	7	258
17:35-17:40	0	0	0	23	37	0	21	71	0	37	35	8	232
17:40-17:45	0	0	0	37	30	0	16	73	0	24	49	7	236
17:45-17:50	0	0	0	30	50	0	27	79	0	29	27	2	244
17:50-17:55	0	0	0	30	44	0	22	62	0	39	45	6	248
17:55-18:00	0	0	0	32	53	0	25	84	0	44	38	7	283
Total Survey	0	0	0	618	1001	0	456	1624	1	844	875	192	5611
PHF	0	0	0	.82	.85	0	.9	.95	0	.93	.92	.79	.962
% Trucks	0	0	0	1.5	1.9	0	.7	1.2	0	2.5	.6	2.1	1.4
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	
Peds	0	0	0	0	3	0	0	6	0	0	0	0	
Hourly Totals													
16:00-17:00	0	0	0	299	503	0	165	720	1	420	412	107	2627
16:15-17:15	0	0	0	303	506	0	210	805	1	419	434	102	2780
16:30-17:30	0	0	0	310	517	0	245	840	1	433	436	98	2880
16:45-17:45	0	0	0	317	483	0	270	891	1	416	456	94	2928
17:00-18:00	0	0	0	319	498	0	291	904	0	424	463	85	2984

INTERSECTION TURN MOVEMENT COUNT PEAK HOUR REPORT
CORNELL ROAD AT US 26 WESTBOUND RAMPS



DATE OF COUNT: 5/31/00
DAY OF WEEK: wed
TIME STARTED: 16:00
TIME ENDED: 18:00

TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

gmav

Peak Hour
17:00-18:00
TEV=2984

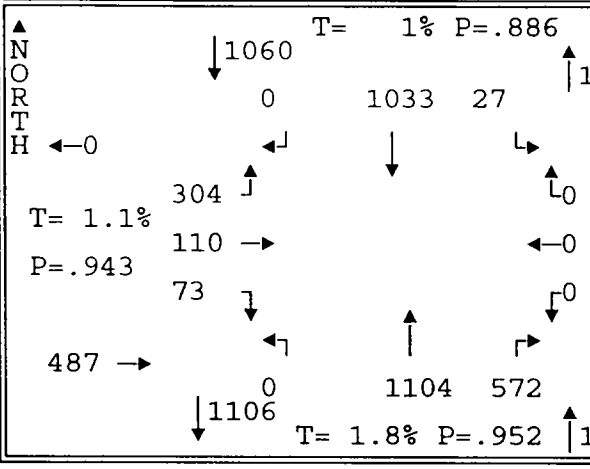
Traffic Smithy
(503)641-6333

TIME PERIOD FROM - TO	EAST BOUND ↓	EAST BOUND →	EAST BOUND ↑	SOUTH BOUND ↲	SOUTH BOUND ↓	SOUTH BOUND ↳	NORTH BOUND ↰	NORTH BOUND ↑	NORTH BOUND ↱	WEST BOUND ↓	WEST BOUND ←	WEST BOUND ↑	ALL
ALL VEHICLES													
17:00-17:15	0	0	0	73	127	0	75	216	0	111	119	22	743
17:15-17:30	0	0	0	71	120	0	75	226	0	114	108	26	740
17:30-17:45	0	0	0	83	104	0	67	237	0	87	126	22	726
17:45-18:00	0	0	0	92	147	0	74	225	0	112	110	15	775
LIGHT TRUCKS (SINGLE UNIT 2 AXLES)													
17:00-17:15	0	0	0	0	0	0	0	8	0	0	1	0	9
17:15-17:30	0	0	0	1	2	0	0	0	0	2	1	0	6
17:30-17:45	0	0	0	1	0	0	0	2	0	2	0	1	6
17:45-18:00	0	0	0	0	1	0	0	1	0	3	2	0	7
MEDIUM TRUCKS (SINGLE UNIT > 2 AXLES)													
17:00-17:15	0	0	0	0	0	0	0	0	0	0	0	0	0
17:15-17:30	0	0	0	0	0	0	0	0	0	0	0	0	0
17:30-17:45	0	0	0	0	0	0	0	1	0	0	0	0	1
17:45-18:00	0	0	0	0	0	0	0	0	0	0	0	0	0
HEAVY TRUCKS (SEMI-TRACTOR TRAILER)													
17:00-17:15	0	0	0	0	0	0	0	0	0	0	0	0	0
17:15-17:30	0	0	0	0	1	0	0	0	0	1	0	0	2
17:30-17:45	0	0	0	0	0	0	0	1	0	0	0	0	1
17:45-18:00	0	0	0	0	0	0	0	0	0	0	0	0	0
BICYCLES													
17:00-17:15	0	0	0	0	0	0	0	0	0	0	0	0	0
17:15-17:30	0	0	0	0	0	0	0	1	0	0	0	0	1
17:30-17:45	0	0	0	0	0	0	0	0	0	0	0	0	0
17:45-18:00	0	0	0	0	0	0	0	0	0	0	0	0	0

PEDESTRIANS	CROSSWALK USEAGE SOUTH	WEST	EAST	NORTH	ALL
17:00-17:15	0	0	0	0	0
17:15-17:30	0	0	0	0	0
17:30-17:45	0	1	1	0	2
17:45-18:00	0	1	1	0	2

Peak Hour by Movement													
PHF	0	0	0	.87	.85	0	.97	.95	0	.93	.92	.82	.962
% Trucks(all)	0	0	0	.6	.8	0	0	1.4	0	1.9	.9	1.2	1.1
% Trucks(M+H)	0	0	0	0	.2	0	0	.2	0	.2	0	0	.1
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	
Hourly Totals													
16:00-17:00	0	0	0	299	503	0	165	720	1	420	412	107	2627
16:15-17:15	0	0	0	303	506	0	210	805	1	419	434	102	2780
16:30-17:30	0	0	0	310	517	0	245	840	1	433	436	98	2880
16:45-17:45	0	0	0	317	483	0	270	891	1	416	456	94	2928
17:00-18:00	0	0	0	319	498	0	291	904	0	424	463	85	2984

INTERSECTION TURN MOVEMENT COUNT SUMMARY REPORT
CORNELL ROAD AT HIGHWAY 26 EB RAMPS



DATE OF COUNT: 06/22/00
DAY OF WEEK: THU
TIME STARTED: 16:00
TIME ENDED: 18:00

TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

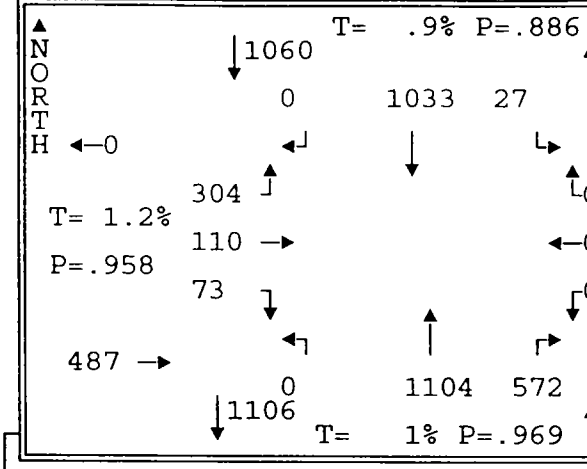
MP50

Peak Hour
17:00-18:00
TEV=3223

Traffic Smithy
(503) 641-6333

TIME PERIOD FROM - TO	EAST BOUND ↓	EAST BOUND →	EAST BOUND ↑	SOUTH BOUND ↵	SOUTH BOUND ↓	SOUTH BOUND ↳	NORTH BOUND ↰	NORTH BOUND ↑	NORTH BOUND ↱	WEST BOUND ↓	WEST BOUND ←	WEST BOUND ↑	ALL
16:00-16:05	3	8	14	0	74	3	0	64	31	0	0	0	197
16:05-16:10	3	10	24	0	71	3	0	38	31	0	0	0	180
16:10-16:15	2	10	19	0	74	0	0	73	36	0	0	0	214
16:15-16:20	3	11	18	0	78	3	0	53	38	0	0	0	204
16:20-16:25	4	9	17	0	84	3	0	57	46	0	0	0	220
16:25-16:30	2	10	16	0	72	5	0	57	28	0	0	0	190
16:30-16:35	2	4	21	0	89	3	0	57	52	0	0	0	228
16:35-16:40	8	7	21	0	84	1	0	81	49	0	0	0	251
16:40-16:45	6	9	28	0	57	4	0	65	36	0	0	0	205
16:45-16:50	13	5	28	0	89	2	0	72	35	0	0	0	244
16:50-16:55	14	4	29	0	58	0	0	82	27	0	0	0	214
16:55-17:00	9	9	23	0	89	3	0	66	26	0	0	0	225
17:00-17:05	10	8	30	0	87	0	0	110	40	0	0	0	285
17:05-17:10	6	12	26	0	68	0	0	79	54	0	0	0	245
17:10-17:15	3	10	13	0	89	1	0	95	30	0	0	0	241
17:15-17:20	3	8	23	0	74	2	0	109	45	0	0	0	264
17:20-17:25	2	11	29	0	75	4	0	75	49	0	0	0	245
17:25-17:30	2	12	25	0	91	0	0	104	50	0	0	0	284
17:30-17:35	3	10	27	0	93	5	0	80	48	0	0	0	266
17:35-17:40	14	9	17	0	82	7	0	95	59	0	0	0	283
17:40-17:45	10	8	29	0	82	1	0	94	43	0	0	0	267
17:45-17:50	5	11	23	0	108	3	0	85	64	0	0	0	299
17:50-17:55	9	7	27	0	85	2	0	96	51	0	0	0	277
17:55-18:00	6	4	35	0	99	2	0	82	39	0	0	0	267
Total Survey	142	206	562	0	1952	57	0	1869	1007	0	0	0	5795
PHF	.63	.83	.89	0	.88	.52	0	.96	.86	0	0	0	.949
% Trucks	.7	1.5	1.1	0	1	1.8	0	.9	3.6	0	0	0	1.4
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	
Peds	0	0	0	0	3	0	0	1	0	0	0	0	
Hourly Totals													
16:00-17:00	69	96	258	0	919	30	0	765	435	0	0	0	2572
16:15-17:15	80	98	270	0	944	25	0	874	461	0	0	0	2752
16:30-17:30	78	99	296	0	950	20	0	995	493	0	0	0	2931
16:45-17:45	89	106	299	0	977	25	0	1061	506	0	0	0	3063
17:00-18:00	73	110	304	0	1033	27	0	1104	572	0	0	0	3223

INTERSECTION TURN MOVEMENT COUNT PEAK HOUR REPORT
CORNELL ROAD AT HIGHWAY 26 EB RAMPS



DATE OF COUNT: 06/22/00
DAY OF WEEK: THU
TIME STARTED: 16:00
TIME ENDED: 18:00

TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

MP50

Peak Hour
17:00-18:00
TEV=3223

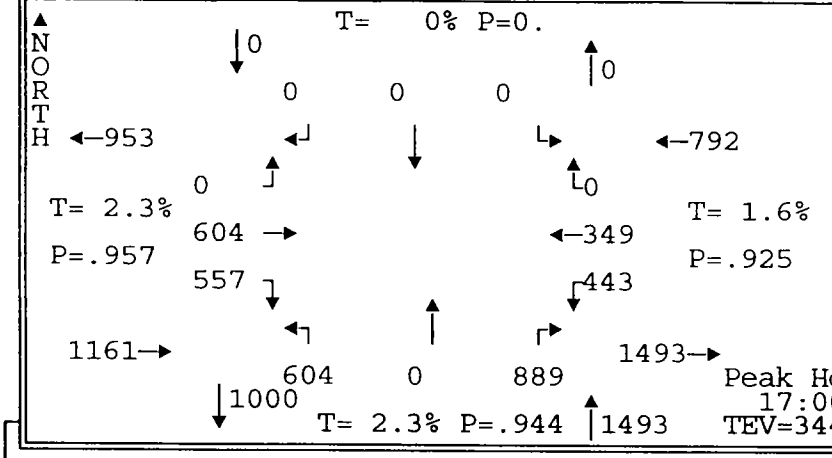
Traffic Smithy
(503)641-6333

TIME PERIOD FROM - TO	EAST BOUND ↓	EAST BOUND →	EAST BOUND ↑	SOUTH BOUND ↵	SOUTH BOUND ↓	SOUTH BOUND ↳	NORTH BOUND ↰	NORTH BOUND ↑	NORTH BOUND ↱	WEST BOUND ↓	WEST BOUND ←	WEST BOUND ↑	ALL
ALL VEHICLES													
17:00-17:15	19	30	69	0	244	1	0	284	124	0	0	0	771
17:15-17:30	7	31	77	0	240	6	0	288	144	0	0	0	793
17:30-17:45	27	27	73	0	257	13	0	269	150	0	0	0	816
17:45-18:00	20	22	85	0	292	7	0	263	154	0	0	0	843
LIGHT TRUCKS (SINGLE UNIT 2 AXLES)													
17:00-17:15	0	1	0	0	3	0	0	1	0	0	0	0	5
17:15-17:30	0	1	1	0	3	0	0	2	1	0	0	0	8
17:30-17:45	1	0	1	0	1	0	0	1	4	0	0	0	8
17:45-18:00	0	0	1	0	1	1	0	3	0	0	0	0	6
MEDIUM TRUCKS (SINGLE UNIT > 2 AXLES)													
17:00-17:15	0	0	0	0	0	0	0	0	0	0	0	0	0
17:15-17:30	0	0	0	0	1	0	0	0	0	0	0	0	1
17:30-17:45	0	0	0	0	0	0	0	0	0	0	0	0	0
17:45-18:00	0	0	0	0	0	0	0	0	1	0	0	0	1
HEAVY TRUCKS (SEMI-TRACTOR TRAILER)													
17:00-17:15	0	0	0	0	0	0	0	0	0	0	0	0	0
17:15-17:30	0	0	0	0	0	0	0	0	3	0	0	0	3
17:30-17:45	0	0	0	0	0	0	0	0	0	0	0	0	0
17:45-18:00	0	0	0	0	0	0	0	0	1	0	0	0	1
BICYCLES													
17:00-17:15	0	0	0	0	1	0	0	0	0	0	0	0	1
17:15-17:30	0	0	0	0	0	0	0	0	0	0	0	0	0
17:30-17:45	0	0	0	0	0	0	0	0	0	0	0	0	0
17:45-18:00	0	0	0	0	1	0	0	3	0	0	0	0	4

PEDESTRIANS	CROSSWALK USEAGE				ALL
	SOUTH	WEST	EAST	NORTH	
17:00-17:15	0	1	0	0	1
17:15-17:30	0	1	0	0	1
17:30-17:45	0	0	0	0	0
17:45-18:00	0	0	1	0	1

Peak Hour by Movement													
PHF	.68	.89	.89	0	.88	.52	0	.96	.93	0	0	0	.955
% Trucks(all)	1.4	1.8	1	0	.9	3.7	0	.6	1.7	0	0	0	1
% Trucks(M+H)	0	0	0	0	.1	0	0	0	.9	0	0	0	.2
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	
Hourly Totals													
16:00-17:00	69	96	258	0	919	30	0	765	435	0	0	0	2572
16:15-17:15	80	98	270	0	944	25	0	874	461	0	0	0	2752
16:30-17:30	78	99	296	0	950	20	0	995	493	0	0	0	2931
16:45-17:45	89	106	299	0	977	25	0	1061	506	0	0	0	3063
17:00-18:00	73	110	304	0	1033	27	0	1104	572	0	0	0	3223

INTERSECTION TURN MOVEMENT COUNT SUMMARY REPORT
158TH AVENUE AT CORNELL ROAD



DATE OF COUNT: 06/06/00
DAY OF WEEK: TUE
TIME STARTED: 16:00
TIME ENDED: 18:00

TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

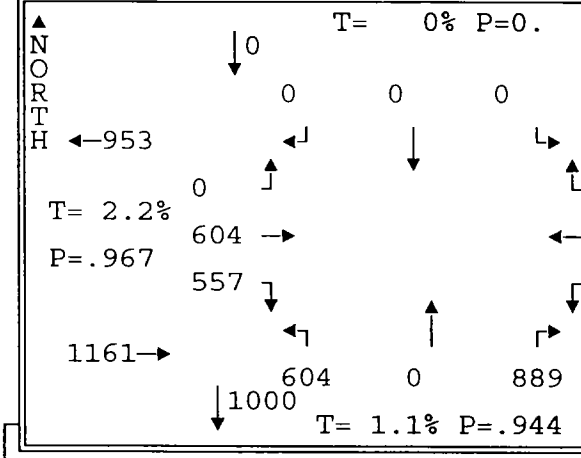
GMBD

Peak Hour
17:00-18:00
TEV=3446

Traffic Smithy
(503) 641-6333

TIME PERIOD FROM - TO	EAST BOUND ↓	EAST BOUND →	EAST BOUND ↑	SOUTH BOUND ↵	SOUTH BOUND ↓	SOUTH BOUND ↳	NORTH BOUND ↰	NORTH BOUND ↑	NORTH BOUND ↱	WEST BOUND ↓	WEST BOUND ←	WEST BOUND ↑	ALL
16:00-16:05	49	26	0	0	0	0	46	0	46	30	26	0	223
16:05-16:10	53	54	0	0	0	0	35	0	55	38	43	0	278
16:10-16:15	41	42	0	0	0	0	44	0	64	23	31	0	245
16:15-16:20	50	40	0	0	0	0	52	0	75	51	40	0	308
16:20-16:25	45	49	0	0	0	0	45	0	56	23	33	0	251
16:25-16:30	57	22	0	0	0	0	58	0	42	42	27	0	248
16:30-16:35	48	36	0	0	0	0	41	0	51	23	19	0	218
16:35-16:40	49	32	0	0	0	0	45	0	59	23	36	0	244
16:40-16:45	52	37	0	0	0	0	44	0	62	32	41	0	268
16:45-16:50	40	45	0	0	0	0	52	0	49	30	36	0	252
16:50-16:55	46	44	0	0	0	0	43	0	57	38	43	0	271
16:55-17:00	38	58	0	0	0	0	27	0	22	30	37	0	212
17:00-17:05	37	49	0	0	0	0	58	0	70	34	34	0	282
17:05-17:10	49	56	0	0	0	0	48	0	83	45	27	0	308
17:10-17:15	48	58	0	0	0	0	55	0	81	28	26	0	296
17:15-17:20	49	43	0	0	0	0	48	0	78	35	26	0	279
17:20-17:25	49	55	0	0	0	0	42	0	71	38	40	0	295
17:25-17:30	31	41	0	0	0	0	75	0	77	35	23	0	282
17:30-17:35	56	52	0	0	0	0	45	0	68	38	26	0	285
17:35-17:40	36	56	0	0	0	0	54	0	69	31	32	0	278
17:40-17:45	56	40	0	0	0	0	48	0	90	55	26	0	315
17:45-17:50	57	56	0	0	0	0	37	0	69	28	42	0	289
17:50-17:55	47	39	0	0	0	0	57	0	81	29	17	0	270
17:55-18:00	42	59	0	0	0	0	37	0	52	47	30	0	267
Total Survey	1125	1089	0	0	0	0	1136	0	1527	826	761	0	6464
PHF	.87	.93	0	0	0	0	.87	0	.92	.89	.87	0	.972
% Trucks	1.6	2.9	0	0	0	0	1.4	0	2.9	1.1	2.2	0	2.1
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	
Peds	0	0	0	0	0	0	0	0	0	0	0	0	
Hourly Totals													
16:00-17:00	568	485	0	0	0	0	532	0	638	383	412	0	3018
16:15-17:15	559	526	0	0	0	0	568	0	707	399	399	0	3158
16:30-17:30	536	554	0	0	0	0	578	0	760	391	388	0	3207
16:45-17:45	535	597	0	0	0	0	595	0	815	437	376	0	3355
17:00-18:00	557	604	0	0	0	0	604	0	889	443	349	0	3446

INTERSECTION TURN MOVEMENT COUNT PEAK HOUR REPORT
158TH AVENUE AT CORNELL ROAD



DATE OF COUNT: 06/06/00
DAY OF WEEK: TUE
TIME STARTED: 16:00
TIME ENDED: 18:00

TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

GMBD

Peak Hour
17:00-18:00
TEV=3446

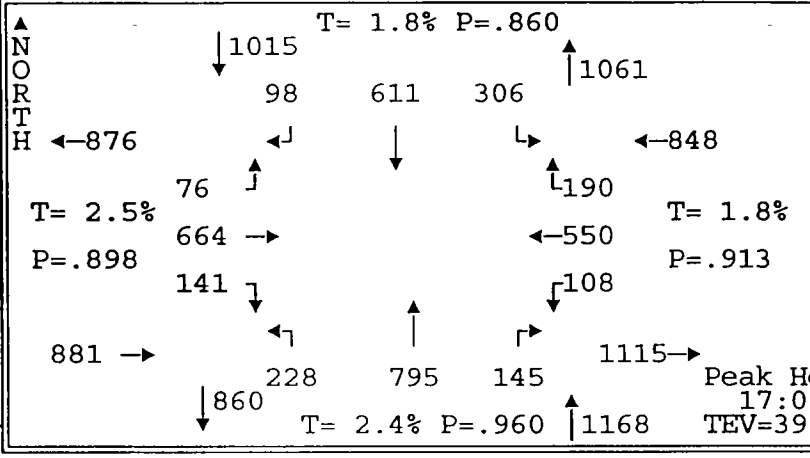
Traffic Smithy
(503)641-6333

TIME PERIOD FROM - TO	EAST BOUND ↓	EAST BOUND →	EAST BOUND ↱	SOUTH BOUND ↲	SOUTH BOUND ↓	SOUTH BOUND ↳	NORTH BOUND ↰	NORTH BOUND ↑	NORTH BOUND ↱	WEST BOUND ↓	WEST BOUND ←	WEST BOUND ↳	ALL
ALL VEHICLES													
17:00-17:15	134	163	0	0	0	0	161	0	234	107	87	0	886
17:15-17:30	129	139	0	0	0	0	165	0	226	108	89	0	856
17:30-17:45	148	148	0	0	0	0	147	0	227	124	84	0	878
17:45-18:00	146	154	0	0	0	0	131	0	202	104	89	0	826
LIGHT TRUCKS (SINGLE UNIT 2 AXLES)													
17:00-17:15	1	4	0	0	0	0	5	0	1	0	0	0	11
17:15-17:30	3	3	0	0	0	0	0	0	3	0	2	0	11
17:30-17:45	1	5	0	0	0	0	3	0	0	1	0	0	10
17:45-18:00	1	1	0	0	0	0	0	0	0	0	3	0	5
MEDIUM TRUCKS (SINGLE UNIT > 2 AXLES)													
17:00-17:15	0	3	0	0	0	0	0	0	0	0	0	0	3
17:15-17:30	0	1	0	0	0	0	0	0	0	0	0	0	1
17:30-17:45	0	1	0	0	0	0	0	0	0	0	0	0	1
17:45-18:00	0	0	0	0	0	0	0	0	0	0	0	0	0
HEAVY TRUCKS (SEMI-TRACTOR TRAILER)													
17:00-17:15	0	0	0	0	0	0	0	0	2	0	0	0	2
17:15-17:30	1	0	0	0	0	0	0	0	0	0	1	0	2
17:30-17:45	0	1	0	0	0	0	0	0	0	0	1	0	2
17:45-18:00	0	0	0	0	0	0	0	0	3	1	0	0	4
BICYCLES													
17:00-17:15	0	0	0	0	0	0	0	0	0	0	0	0	0
17:15-17:30	0	0	0	0	0	0	0	0	0	0	0	0	0
17:30-17:45	0	0	0	0	0	0	0	0	0	0	0	0	0
17:45-18:00	0	0	0	0	0	0	0	0	0	0	0	0	0

PEDESTRIANS	CROSSWALK USEAGE				ALL
	SOUTH	WEST	EAST	NORTH	
17:00-17:15	0	0	0	0	0
17:15-17:30	0	0	0	0	0
17:30-17:45	0	0	0	0	0
17:45-18:00	0	0	0	0	0

Peak Hour by Movement													
PHF	.94	.93	0	0	0	0	.92	0	.95	.89	.98	0	.972
% Trucks(all)	1.3	3.1	0	0	0	0	1.3	0	1	.5	2	0	1.5
% Trucks(M+H)	.2	1	0	0	0	0	0	0	.6	.2	.6	0	.4
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	
Hourly Totals													
16:00-17:00	568	485	0	0	0	0	532	0	638	383	412	0	3018
16:15-17:15	559	526	0	0	0	0	568	0	707	399	399	0	3158
16:30-17:30	536	554	0	0	0	0	578	0	760	391	388	0	3207
16:45-17:45	535	597	0	0	0	0	595	0	815	437	376	0	3355
17:00-18:00	557	604	0	0	0	0	604	0	889	443	349	0	3446

INTERSECTION TURN MOVEMENT COUNT SUMMARY REPORT
158TH AVENUE AT WALKER ROAD



DATE OF COUNT: 6/6/00
DAY OF WEEK: TUE
TIME STARTED: 16:00
TIME ENDED: 18:00

TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

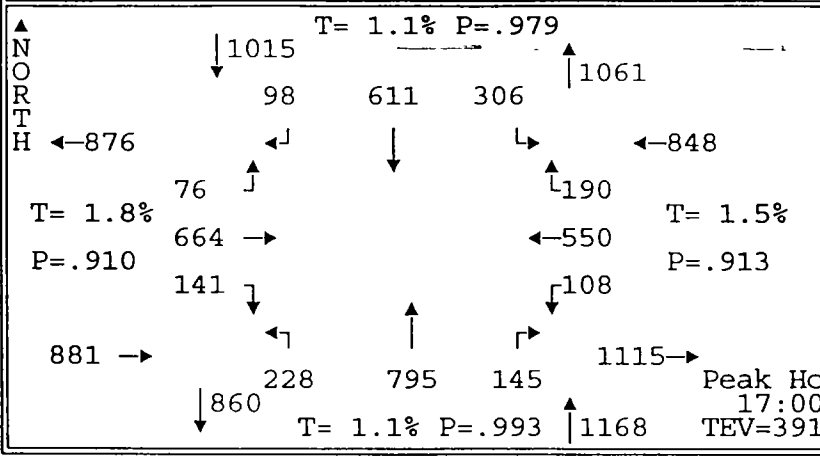
gmbg

Peak Hour
17:00-18:00
TEV=3912

Traffic Smithy
(503) 641-6333

TIME PERIOD FROM - TO	EAST BOUND ↓	EAST BOUND →	EAST BOUND ↑	SOUTH BOUND ↲	SOUTH BOUND ↓	SOUTH BOUND ↳	NORTH BOUND ↰	NORTH BOUND ↑	NORTH BOUND ↱	WEST BOUND ↓	WEST BOUND ←	WEST BOUND ↑	ALL
16:00-16:05	14	33	9	3	50	26	12	48	8	10	50	13	276
16:05-16:10	14	40	3	3	54	23	22	47	12	13	35	11	277
16:10-16:15	16	55	9	7	56	15	21	41	9	16	40	11	296
16:15-16:20	7	53	0	5	48	30	9	31	10	8	62	11	274
16:20-16:25	10	49	4	2	36	28	26	50	5	9	34	16	269
16:25-16:30	5	33	6	6	50	27	21	50	15	12	37	12	274
16:30-16:35	9	48	6	6	30	30	15	40	9	6	43	13	255
16:35-16:40	6	38	4	4	43	23	17	48	18	10	41	10	262
16:40-16:45	10	26	4	6	43	23	20	42	13	8	48	18	261
16:45-16:50	8	59	2	2	42	26	19	53	12	4	54	10	291
16:50-16:55	19	68	9	6	53	27	23	41	12	4	48	21	331
16:55-17:00	13	49	8	6	44	24	23	54	11	6	46	7	291
17:00-17:05	5	36	7	5	36	21	16	61	10	13	43	12	265
17:05-17:10	12	70	2	7	57	36	24	74	5	1	52	19	359
17:10-17:15	9	59	5	8	57	25	23	68	12	2	44	19	331
17:15-17:20	16	61	5	0	40	29	23	59	8	14	49	18	322
17:20-17:25	17	58	5	18	63	15	12	85	14	12	56	14	369
17:25-17:30	15	56	8	11	50	26	18	60	8	8	47	14	321
17:30-17:35	10	32	9	9	71	32	20	69	13	14	36	11	326
17:35-17:40	11	50	4	2	44	32	19	70	15	6	46	12	311
17:40-17:45	7	66	4	11	34	24	24	52	12	11	49	19	313
17:45-17:50	9	71	9	4	52	23	17	62	9	8	49	16	329
17:50-17:55	17	56	6	9	53	21	11	73	21	8	40	11	326
17:55-18:00	13	49	12	14	54	22	21	62	18	11	39	25	340
Total Survey	272	1215	140	154	1160	608	456	1340	279	214	1088	343	7269
PHF	.73	.86	.7	.64	.83	.85	.81	.93	.76	.79	.9	.85	.956
% Trucks	1.5	2.6	3.6	1.9	2.2	1	.4	3.3	1.4	2.3	1.6	2.3	2.1
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	
Peds	0	11	0	0	19	0	0	6	0	0	4	0	
Hourly Totals													
16:00-17:00	131	551	64	56	549	302	228	545	134	106	538	153	3357
16:15-17:15	113	588	57	63	539	320	236	612	132	83	552	168	3463
16:30-17:30	139	628	65	79	558	305	233	685	132	88	571	175	3658
16:45-17:45	142	664	68	85	591	317	244	746	132	95	570	176	3830
17:00-18:00	141	664	76	98	611	306	228	795	145	108	550	190	3912

INTERSECTION TURN MOVEMENT COUNT PEAK HOUR REPORT
158TH AVENUE AT WALKER ROAD



DATE OF COUNT: 6/6/00
DAY OF WEEK: TUE
TIME STARTED: 16:00
TIME ENDED: 18:00

TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

gmbg

Peak Hour
17:00-18:00
TEV=3912

Traffic Smithy
(503)641-6333

TIME PERIOD FROM - TO	EAST BOUND ↓	EAST BOUND →	EAST BOUND ↑	SOUTH BOUND ↓	SOUTH BOUND ←	SOUTH BOUND ↑	NORTH BOUND ↓	NORTH BOUND →	NORTH BOUND ↑	WEST BOUND ↓	WEST BOUND ←	WEST BOUND ↑	ALL
ALL VEHICLES													
17:00-17:15	26	165	14	20	150	82	63	203	27	16	139	50	955
17:15-17:30	48	175	18	29	153	70	53	204	30	34	152	46	1012
17:30-17:45	28	148	17	22	149	88	63	191	40	31	131	42	950
17:45-18:00	39	176	27	27	159	66	49	197	48	27	128	52	995
LIGHT TRUCKS (SINGLE UNIT 2 AXLES)													
17:00-17:15	0	4	1	0	2	0	0	2	0	0	1	1	11
17:15-17:30	0	3	0	0	3	1	0	1	0	2	2	0	12
17:30-17:45	2	3	0	0	2	0	0	2	0	0	2	0	11
17:45-18:00	0	1	1	0	1	0	0	0	1	1	2	1	8
MEDIUM TRUCKS (SINGLE UNIT > 2 AXLES)													
17:00-17:15	0	0	0	0	0	0	0	0	0	0	0	0	0
17:15-17:30	0	0	0	0	0	0	0	0	0	0	0	0	0
17:30-17:45	0	0	0	0	0	0	0	0	0	0	0	0	0
17:45-18:00	0	0	0	0	0	0	0	1	0	0	0	0	1
HEAVY TRUCKS (SEMI-TRACTOR TRAILER)													
17:00-17:15	0	1	0	0	0	0	0	1	0	0	0	1	3
17:15-17:30	0	0	0	0	1	0	1	0	1	0	0	0	3
17:30-17:45	0	0	0	0	0	0	0	1	0	0	0	0	1
17:45-18:00	0	0	0	0	1	0	0	2	0	0	0	0	3
BICYCLES													
17:00-17:15	0	0	1	0	0	0	0	0	0	0	0	0	1
17:15-17:30	0	0	0	0	0	0	0	1	0	0	0	0	1
17:30-17:45	0	0	0	0	0	0	0	1	0	0	0	0	1
17:45-18:00	0	1	0	0	0	0	0	2	0	0	0	1	4

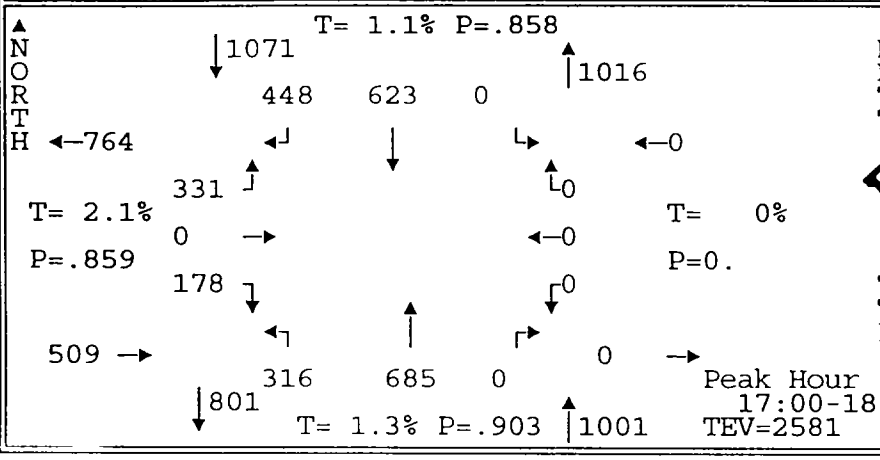
PEDESTRIANS	CROSSWALK USEAGE				ALL
	SOUTH	WEST	EAST	NORTH	
17:00-17:15	1	2	1	0	4
17:15-17:30	1	2	0	0	3
17:30-17:45	3	3	2	0	8
17:45-18:00	0	2	0	0	2

Peak Hour by Movement													
PHF	.73	.94	.7	.84	.96	.87	.9	.97	.76	.79	.9	.91	.966
% Trucks(all)	1.4	1.8	2.6	0	1.6	.3	.4	1.3	1.4	2.8	1.3	1.6	1.4
% Trucks(M+H)	0	.2	0	0	.3	0	.4	.6	.7	0	0	.5	.3
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	

Hourly Totals													
16:00-17:00	131	551	64	56	549	302	228	545	134	106	538	153	3357
16:15-17:15	113	588	57	63	539	320	236	612	132	83	552	168	3463
16:30-17:30	139	628	65	79	558	305	233	685	132	88	571	175	3658
16:45-17:45	142	664	68	85	591	317	244	746	132	95	570	176	3830
17:00-18:00	141	664	76	98	611	306	228	795	145	108	550	190	3912

INTERSECTION TURN MOVEMENT COUNT SUMMARY REPORT
143RD AVENUE AT CORNELL ROAD

27495



DATE OF COUNT: 5/31/00
DAY OF WEEK: Wed
TIME STARTED: 16:00
TIME ENDED: 18:00

TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

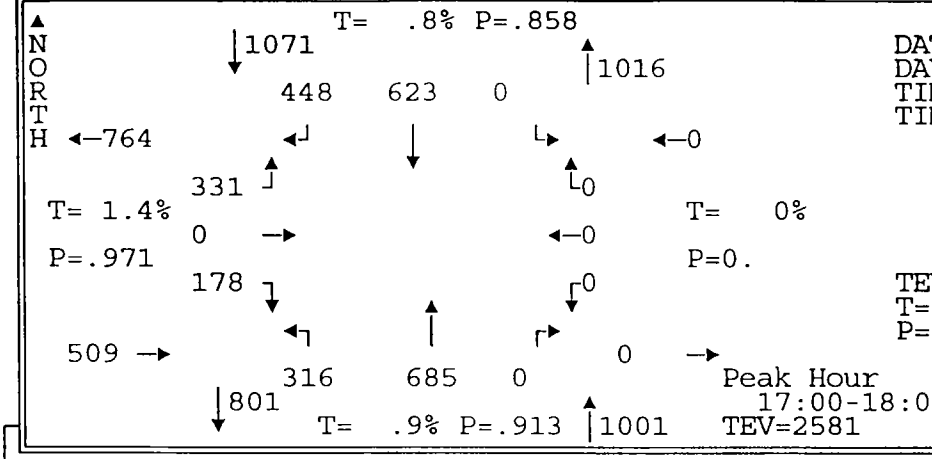
tbde

Peak Hour
17:00-18:00
TEV=2581

Traffic Smithy
(503) 641-6333

TIME PERIOD FROM - TO	EAST BOUND ↓	EAST BOUND →	EAST BOUND ↑	SOUTH BOUND ↵	SOUTH BOUND ↓	SOUTH BOUND ↳	NORTH BOUND ↰	NORTH BOUND ↑	NORTH BOUND ↱	WEST BOUND ↓	WEST BOUND ←	WEST BOUND ↑	ALL
16:00-16:05	11	0	22	33	49	0	16	41	0	0	0	0	172
16:05-16:10	14	0	24	27	39	0	23	35	0	0	0	0	162
16:10-16:15	11	0	29	25	50	0	18	43	0	0	0	0	176
16:15-16:20	21	0	27	36	42	0	19	50	0	0	0	0	195
16:20-16:25	9	0	29	28	50	0	15	36	0	0	0	0	167
16:25-16:30	11	0	28	38	25	0	8	48	0	0	0	0	158
16:30-16:35	18	0	28	37	53	0	22	61	0	0	0	0	219
16:35-16:40	18	0	21	34	53	0	25	56	0	0	0	0	207
16:40-16:45	7	0	22	34	64	0	21	42	0	0	0	0	190
16:45-16:50	12	0	15	47	57	0	20	70	0	0	0	0	221
16:50-16:55	13	0	35	38	55	0	26	49	0	0	0	0	216
16:55-17:00	12	0	24	46	63	0	27	49	0	0	0	0	221
17:00-17:05	22	0	28	31	41	0	24	55	0	0	0	0	201
17:05-17:10	11	0	27	52	50	0	15	58	0	0	0	0	213
17:10-17:15	15	0	28	33	53	0	34	54	0	0	0	0	217
17:15-17:20	9	0	30	34	45	0	20	41	0	0	0	0	179
17:20-17:25	9	0	26	34	56	0	19	58	0	0	0	0	202
17:25-17:30	15	0	40	31	54	0	29	60	0	0	0	0	229
17:30-17:35	15	0	32	30	44	0	37	39	0	0	0	0	197
17:35-17:40	14	0	32	34	40	0	36	76	0	0	0	0	232
17:40-17:45	17	0	17	53	44	0	22	64	0	0	0	0	217
17:45-17:50	18	0	20	37	57	0	22	54	0	0	0	0	208
17:50-17:55	15	0	28	37	67	0	27	53	0	0	0	0	227
17:55-18:00	18	0	23	42	72	0	31	73	0	0	0	0	259
Total Survey	335	0	635	871	1223	0	556	1265	0	0	0	0	4885
PHF	.87	0	.8	.88	.79	0	.77	.88	0	0	0	0	.929
% Trucks	1.2	0	2.5	1	1.1	0	.9	1.5	0	0	0	0	1.4
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	
Peds	0	2	0	0	7	0	0	0	0	0	6	0	
Hourly Totals													
16:00-17:00	157	0	304	423	600	0	240	580	0	0	0	0	2304
16:15-17:15	169	0	312	454	606	0	256	628	0	0	0	0	2425
16:30-17:30	161	0	324	451	644	0	282	653	0	0	0	0	2515
16:45-17:45	164	0	334	463	602	0	309	673	0	0	0	0	2545
17:00-18:00	178	0	331	448	623	0	316	685	0	0	0	0	2581

INTERSECTION TURN MOVEMENT COUNT PEAK HOUR REPORT
143RD AVENUE AT CORNELL ROAD



DATE OF COUNT: 5/31/00
DAY OF WEEK: Wed
TIME STARTED: 16:00
TIME ENDED: 18:00

TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

tbde

Peak Hour
17:00-18:00
TEV=2581

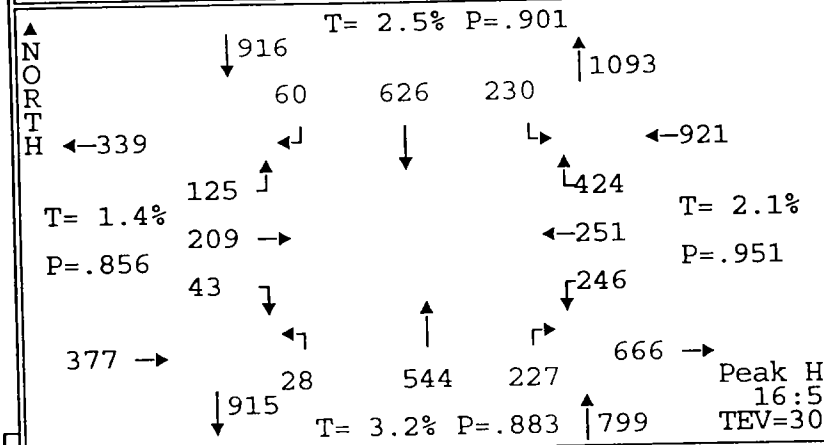
Traffic Smithy
(503)641-6333

TIME PERIOD FROM - TO	EAST BOUND ↓	EAST BOUND →	EAST BOUND ↑	SOUTH BOUND ↵	SOUTH BOUND ↓	SOUTH BOUND ↳	NORTH BOUND ↰	NORTH BOUND ↑	NORTH BOUND ↱	WEST BOUND ↱	WEST BOUND ←	WEST BOUND ↳	ALL
ALL VEHICLES													
17:00-17:15	48	0	83	116	144	0	73	167	0	0	0	0	631
17:15-17:30	33	0	96	99	155	0	68	159	0	0	0	0	610
17:30-17:45	46	0	81	117	128	0	95	179	0	0	0	0	646
17:45-18:00	51	0	71	116	196	0	80	180	0	0	0	0	694
LIGHT TRUCKS (SINGLE UNIT 2 AXLES)													
17:00-17:15	0	0	2	2	1	0	1	4	0	0	0	0	10
17:15-17:30	0	0	1	0	3	0	0	1	0	0	0	0	5
17:30-17:45	1	0	1	1	0	0	0	1	0	0	0	0	4
17:45-18:00	0	0	1	0	2	0	0	0	0	0	0	0	3
MEDIUM TRUCKS (SINGLE UNIT > 2 AXLES)													
17:00-17:15	0	0	0	0	0	0	0	0	0	0	0	0	0
17:15-17:30	1	0	0	0	0	0	0	0	0	0	0	0	1
17:30-17:45	0	0	0	0	0	0	0	2	0	0	0	0	2
17:45-18:00	0	0	0	0	0	0	0	0	0	0	0	0	0
HEAVY TRUCKS (SEMI-TRACTOR TRAILER)													
17:00-17:15	0	0	0	0	0	0	0	0	0	0	0	0	0
17:15-17:30	0	0	0	0	0	0	0	0	0	0	0	0	0
17:30-17:45	0	0	0	0	0	0	0	0	0	0	0	0	0
17:45-18:00	0	0	0	0	0	0	0	0	0	0	0	0	0
BICYCLES													
17:00-17:15	0	0	0	0	0	0	0	1	0	0	0	0	1
17:15-17:30	0	0	0	1	0	0	1	1	0	0	0	0	3
17:30-17:45	0	0	1	0	0	0	0	1	0	0	0	0	2
17:45-18:00	0	0	0	0	0	0	0	0	0	0	0	0	0

PEDESTRIANS	CROSSWALK USEAGE SOUTH	WEST	EAST	NORTH	ALL
17:00-17:15	0	0	0	0	0
17:15-17:30	1	1	0	0	2
17:30-17:45	0	0	0	1	1
17:45-18:00	0	1	0	1	2

Peak Hour by Movement													
PHF	.87	0	.86	.96	.79	0	.83	.95	0	0	0	0	.929
% Trucks(all)	1.1	0	1.5	.7	1	0	.3	1.2	0	0	0	0	1
% Trucks(M+H)	.6	0	0	0	0	0	0	.3	0	0	0	0	.1
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	
Hourly Totals													
16:00-17:00	157	0	304	423	600	0	240	580	0	0	0	0	2304
16:15-17:15	169	0	312	454	606	0	256	628	0	0	0	0	2425
16:30-17:30	161	0	324	451	644	0	282	653	0	0	0	0	2515
16:45-17:45	164	0	334	463	602	0	309	673	0	0	0	0	2545
17:00-18:00	178	0	331	448	623	0	316	685	0	0	0	0	2581

INTERSECTION TURN MOVEMENT COUNT SUMMARY REPORT
CORNELL ROAD AT MURRAY BOULEVARD



DATE OF COUNT: 6/8/00
DAY OF WEEK: THUR
TIME STARTED: 16:00
TIME ENDED: 18:00

TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

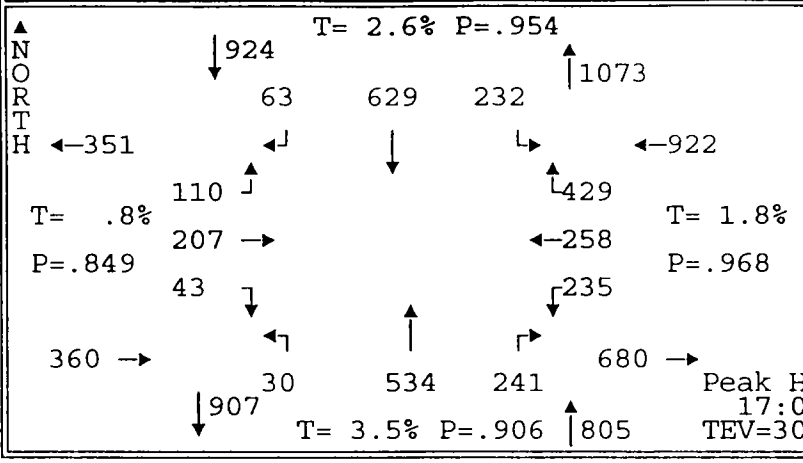
gmal

Peak Hour
16:55-17:55
TEV=3013

Traffic Smithy
(503) 641-6333

TIME PERIOD FROM - TO	EAST BOUND ↓	EAST BOUND →	EAST BOUND ↑	SOUTH BOUND ↵	SOUTH BOUND ↓	SOUTH BOUND ↳	NORTH BOUND ↰	NORTH BOUND ↑	NORTH BOUND ↱	WEST BOUND ↓	WEST BOUND ←	WEST BOUND ↑	ALL
16:00-16:05	3	18	11	8	47	25	2	48	21	21	20	21	245
16:05-16:10	2	16	8	8	46	21	0	36	25	20	16	25	223
16:10-16:15	4	11	10	6	49	16	0	43	21	28	20	22	230
16:15-16:20	1	19	6	4	34	14	4	34	23	24	20	28	211
16:20-16:25	4	11	4	7	59	19	4	47	11	20	11	20	217
16:25-16:30	2	13	10	5	45	20	0	40	18	21	6	30	210
16:30-16:35	2	18	2	5	42	32	0	41	15	19	16	17	209
16:35-16:40	3	21	11	6	44	23	6	40	15	12	19	36	236
16:40-16:45	3	17	5	13	43	24	2	45	11	22	18	29	232
16:45-16:50	4	17	7	2	58	25	1	48	23	18	25	24	252
16:50-16:55	3	16	9	4	37	22	6	44	28	19	16	23	227
16:55-17:00	4	14	21	3	54	20	2	52	15	25	13	29	252
17:00-17:05	7	8	9	2	53	25	0	45	11	18	25	31	234
17:05-17:10	4	26	11	6	46	20	3	35	21	13	22	42	249
17:10-17:15	6	25	10	4	59	18	3	39	15	21	24	37	261
17:15-17:20	5	10	13	8	46	10	2	48	20	24	18	34	238
17:20-17:25	4	15	6	3	59	13	6	49	21	22	12	35	245
17:25-17:30	1	16	5	6	52	16	0	54	22	20	25	36	253
17:30-17:35	5	23	8	9	47	14	3	47	24	22	23	39	264
17:35-17:40	2	21	8	4	62	22	3	34	25	21	19	37	258
17:40-17:45	1	17	12	6	53	25	0	52	12	16	18	30	242
17:45-17:50	4	17	13	4	50	28	3	40	18	22	26	40	265
17:50-17:55	0	17	9	5	45	19	3	49	23	22	26	34	252
17:55-18:00	4	12	6	6	57	22	4	42	29	14	20	34	250
Total Survey	78	398	214	134	1187	493	57	1052	467	484	458	733	5755
PHF	.63	.86	.76	.79	.95	.77	.64	.9	.8	.92	.88	.94	.971
% Trucks	0	1.3	2.3	.7	1.9	4.5	0	3.5	3	1.9	.7	3.1	2.5
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	
Peds	0	0	0	0	7	0	0	0	0	0	0	0	
Hourly Totals													
16:00-17:00	35	191	104	71	558	261	27	518	226	249	200	304	2744
16:15-17:15	43	205	105	61	574	262	31	510	206	232	215	346	2790
16:30-17:30	46	203	109	62	593	248	31	540	217	233	233	373	2888
16:45-17:45	46	208	119	57	626	230	29	547	237	239	240	397	2975
17:00-18:00	43	207	110	63	629	232	30	534	241	235	258	429	3011

INTERSECTION TURN MOVEMENT COUNT PEAK HOUR REPORT
CORNELL ROAD AT MURRAY BOULEVARD



DATE OF COUNT: 6/8/00
DAY OF WEEK: THUR
TIME STARTED: 16:00
TIME ENDED: 18:00

TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

gmal

Peak Hour
17:00-18:00
TEV=3011

Traffic Smithy
(503)641-6333

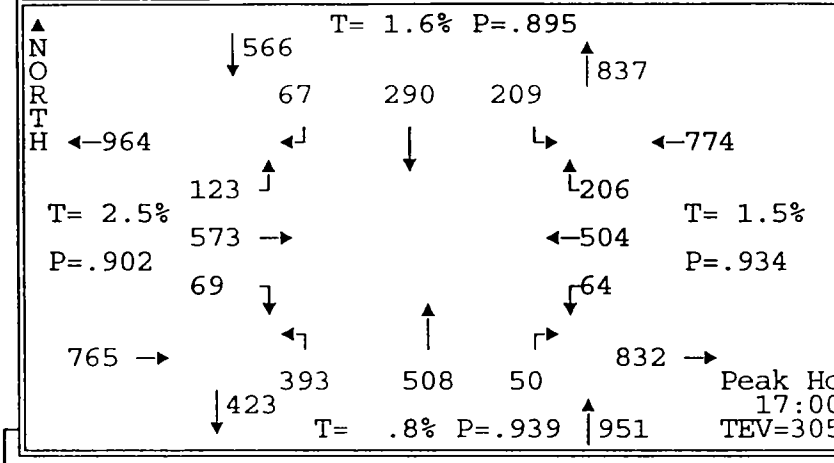
TIME PERIOD FROM - TO	EAST BOUND ↓	EAST BOUND →	EAST BOUND ↑	SOUTH BOUND ↲	SOUTH BOUND ↓	SOUTH BOUND ↳	NORTH BOUND ↰	NORTH BOUND ↑	NORTH BOUND ↱	WEST BOUND ↓	WEST BOUND ←	WEST BOUND ↑	ALL
ALL VEHICLES													
17:00-17:15	17	59	30	12	158	63	6	119	47	52	71	110	744
17:15-17:30	10	41	24	17	157	39	8	151	63	66	55	105	736
17:30-17:45	8	61	28	19	162	61	6	133	61	59	60	106	764
17:45-18:00	8	46	28	15	152	69	10	131	70	58	72	108	767
LIGHT TRUCKS (SINGLE UNIT 2 AXLES)													
17:00-17:15	0	1	0	0	4	0	7	2	3	0	5		22
17:15-17:30	0	0	0	0	5	3	0	2	0	0	1	2	13
17:30-17:45	0	0	1	1	3	2	0	4	2	0	0	1	14
17:45-18:00	0	1	0	0	2	2	0	6	1	1	0	4	17
MEDIUM TRUCKS (SINGLE UNIT > 2 AXLES)													
17:00-17:15	0	0	0	0	0	1	0	0	0	0	0	0	1
17:15-17:30	0	0	0	0	0	1	0	0	0	0	0	0	1
17:30-17:45	0	0	0	0	0	0	0	1	0	0	0	0	1
17:45-18:00	0	0	0	0	0	0	0	0	0	0	0	0	0
HEAVY TRUCKS (SEMI-TRACTOR TRAILER)													
17:00-17:15	0	0	0	0	0	0	0	3	0	0	0	0	3
17:15-17:30	0	0	0	0	0	0	0	0	0	0	0	0	0
17:30-17:45	0	0	0	0	0	0	0	0	0	0	0	0	0
17:45-18:00	0	0	0	0	0	0	0	0	0	0	0	0	0
BICYCLES													
17:00-17:15	0	0	0	0	0	0	0	0	0	0	0	0	0
17:15-17:30	0	0	0	0	0	0	0	0	0	0	0	0	0
17:30-17:45	0	0	0	0	0	0	0	0	0	0	0	0	0
17:45-18:00	0	0	0	0	0	0	0	0	0	0	0	0	0

PEDESTRIANS	CROSSWALK USEAGE SOUTH	WEST	EAST	NORTH	ALL
17:00-17:15	0	0	0	0	0
17:15-17:30	0	0	0	0	0
17:30-17:45	0	1	0	0	1
17:45-18:00	0	1	0	0	1

Peak Hour by Movement													
PHF	.63	.85	.92	.83	.97	.84	.75	.88	.86	.89	.9	.98	.981
% Trucks(all)	0	1	.9	1.6	1.6	5.6	0	4.3	2.1	1.7	.4	2.8	2.4
% Trucks(M+H)	0	0	0	0	0	.9	0	.7	0	0	0	0	.2
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	
Hourly Totals													
16:00-17:00	35	191	104	71	558	261	27	518	226	249	200	304	2744
16:15-17:15	43	205	105	61	574	262	31	510	206	232	215	346	2790
16:30-17:30	46	203	109	62	593	248	31	540	217	233	233	373	2888
16:45-17:45	46	208	119	57	626	230	29	547	237	239	240	397	2975
17:00-18:00	43	207	110	63	629	232	30	534	241	235	258	429	3011

INTERSECTION TURN MOVEMENT COUNT SUMMARY REPORT
CORNELL ROAD AT SALTZMAN ROAD

24074



DATE OF COUNT: 06/27/00
DAY OF WEEK: Tue
TIME STARTED: 16:00
TIME ENDED: 18:00

TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

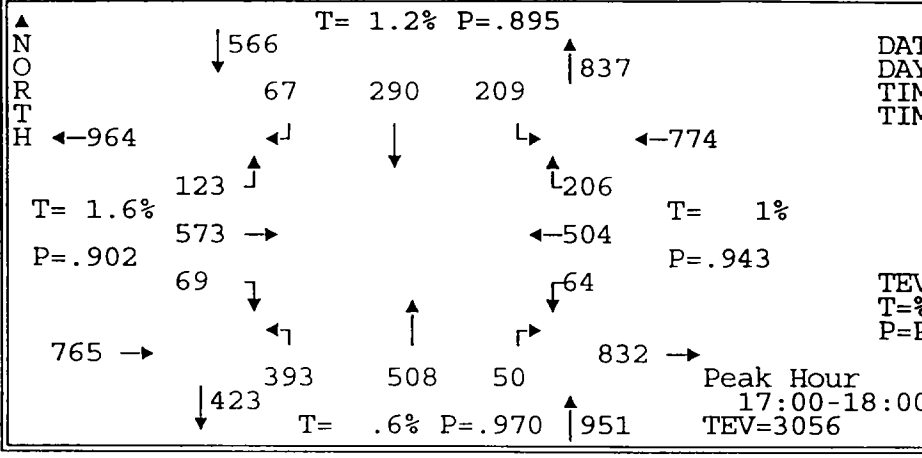
mpqo

Peak Hour
17:00-18:00
TEV=3056

Traffic Smithy
(503) 641-6333

TIME PERIOD FROM - TO	EAST BOUND ↓	EAST BOUND →	EAST BOUND ↑	SOUTH BOUND ↙	SOUTH BOUND ↓	SOUTH BOUND ↳	NORTH BOUND ↰	NORTH BOUND ↑	NORTH BOUND ↱	WEST BOUND ↓	WEST BOUND ←	WEST BOUND ↑	ALL
16:00-16:05	7	41	10	7	29	12	25	23	5	5	27	16	207
16:05-16:10	8	32	10	8	18	9	23	28	2	9	40	20	207
16:10-16:15	11	38	2	8	31	11	25	21	2	3	35	14	201
16:15-16:20	6	42	3	6	23	21	28	23	4	10	36	15	217
16:20-16:25	3	51	8	7	28	8	25	24	2	2	40	8	206
16:25-16:30	4	42	12	4	22	14	35	34	0	7	44	22	240
16:30-16:35	17	40	5	6	17	12	27	26	4	6	42	13	215
16:35-16:40	2	33	8	4	16	24	22	27	4	11	38	15	204
16:40-16:45	3	37	6	11	17	16	39	42	4	2	39	17	233
16:45-16:50	8	41	9	2	19	14	32	39	1	4	35	8	212
16:50-16:55	6	38	9	4	21	25	38	36	5	9	46	17	254
16:55-17:00	2	38	8	5	28	14	24	35	1	3	52	18	228
17:00-17:05	9	40	11	8	27	10	37	37	3	4	29	11	226
17:05-17:10	6	47	10	8	18	20	31	33	2	5	47	19	246
17:10-17:15	9	32	10	2	20	15	31	50	3	6	47	16	241
17:15-17:20	2	43	4	11	25	15	28	45	4	4	42	21	244
17:20-17:25	1	56	14	8	20	20	36	41	6	4	42	11	259
17:25-17:30	3	48	12	5	26	15	27	45	8	10	43	8	250
17:30-17:35	7	57	7	2	28	31	37	42	4	6	41	16	278
17:35-17:40	8	55	15	3	23	19	24	37	2	3	50	30	269
17:40-17:45	4	48	11	7	26	19	43	45	5	3	38	18	267
17:45-17:50	4	46	8	5	28	18	32	46	5	7	42	14	255
17:50-17:55	7	54	10	2	28	9	29	45	3	3	44	19	253
17:55-18:00	9	47	11	6	21	18	38	42	5	9	39	23	268
Total Survey	146	1046	213	139	559	389	736	866	84	135	978	389	5680
PHF	.72	.89	.9	.7	.88	.76	.94	.93	.69	.8	.93	.8	.938
% Trucks	4.8	2.5	.9	2.9	2	.5	1.4	.3	0	.7	2.1	.3	1.5
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	
Peds	0	16	0	0	28	0	0	9	0	0	16	0	
Hourly Totals													
16:00-17:00	77	473	90	72	269	180	343	358	34	71	474	183	2624
16:15-17:15	75	481	99	67	256	193	369	406	33	69	495	179	2722
16:30-17:30	68	493	106	74	254	200	372	456	45	68	502	174	2812
16:45-17:45	65	543	120	65	281	217	388	485	44	61	512	193	2974
17:00-18:00	69	573	123	67	290	209	393	508	50	64	504	206	3056

INTERSECTION TURN MOVEMENT COUNT PEAK HOUR REPORT
CORNELL ROAD AT SALTZMAN ROAD



DATE OF COUNT: 06/27/00
DAY OF WEEK: Tue
TIME STARTED: 16:00
TIME ENDED: 18:00

TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

mpqo

Peak Hour
17:00-18:00
TEV=3056

Traffic Smithy
(503)641-6333

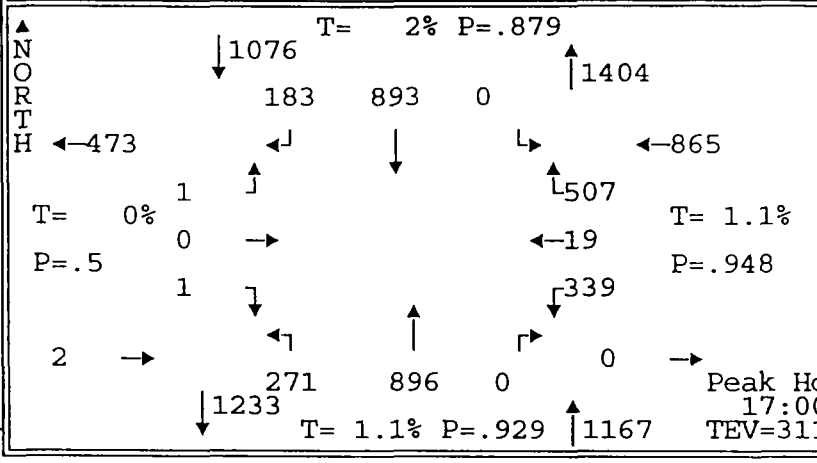
TIME PERIOD FROM - TO	EAST BOUND ↓	EAST BOUND →	EAST BOUND ↑	SOUTH BOUND ↵	SOUTH BOUND ↓	SOUTH BOUND ↳	NORTH BOUND ↰	NORTH BOUND ↑	NORTH BOUND ↱	WEST BOUND ↴	WEST BOUND ←	WEST BOUND ↰	ALL
ALL VEHICLES													
17:00-17:15	24	119	31	18	65	45	99	120	8	15	123	46	713
17:15-17:30	6	147	30	24	71	50	91	131	18	18	127	40	753
17:30-17:45	19	160	33	12	77	69	104	124	11	12	129	64	814
17:45-18:00	20	147	29	13	77	45	99	133	13	19	125	56	776
LIGHT TRUCKS (SINGLE UNIT 2 AXLES)													
17:00-17:15	1	2	0	0	0	1	1	0	0	0	1	0	6
17:15-17:30	0	2	0	0	3	0	2	0	0	0	1	0	8
17:30-17:45	2	1	0	1	1	0	1	0	0	0	3	1	10
17:45-18:00	1	2	0	1	0	0	1	0	0	0	1	0	6
MEDIUM TRUCKS (SINGLE UNIT > 2 AXLES)													
17:00-17:15	0	0	0	0	0	0	0	0	0	0	0	0	0
17:15-17:30	0	0	0	0	0	0	0	1	0	0	0	0	1
17:30-17:45	0	0	0	0	0	0	0	0	0	0	0	0	0
17:45-18:00	0	0	0	0	0	0	0	0	0	0	1	0	1
HEAVY TRUCKS (SEMI-TRACTOR TRAILER)													
17:00-17:15	0	0	0	0	0	0	0	0	0	0	0	0	0
17:15-17:30	0	1	0	0	0	0	0	0	0	0	0	0	1
17:30-17:45	0	0	0	0	0	0	0	0	0	0	0	0	0
17:45-18:00	0	0	0	0	0	0	0	0	0	0	0	0	0
BICYCLES													
17:00-17:15	0	1	0	0	0	0	0	0	0	0	0	0	1
17:15-17:30	0	0	0	0	0	0	0	0	0	0	0	0	0
17:30-17:45	0	1	0	0	0	0	0	0	0	0	0	0	1
17:45-18:00	0	1	0	0	0	0	1	0	0	0	0	0	2

PEDESTRIANS ---CROSSWALK USEAGE---	SOUTH	WEST	EAST	NORTH	ALL
17:00-17:15	3	1	0	1	5
17:15-17:30	1	7	3	4	15
17:30-17:45	1	4	0	0	5
17:45-18:00	5	0	3	0	8

Peak Hour by Movement													
PHF	.72	.9	.93	.7	.94	.76	.94	.95	.69	.84	.98	.8	.938
% Trucks(all)	5.8	1.4	0	3	1.4	.5	1.3	.2	0	0	1.4	.5	1.1
% Trucks(M+H)	0	.2	0	0	0	0	0	.2	0	0	.2	0	.1
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	
Hourly Totals													
16:00-17:00	77	473	90	72	269	180	343	358	34	71	474	183	2624
16:15-17:15	75	481	99	67	256	193	369	406	33	69	495	179	2722
16:30-17:30	68	493	106	74	254	200	372	456	45	68	502	174	2812
16:45-17:45	65	543	120	65	281	217	388	485	44	61	512	193	2974
17:00-18:00	69	573	123	67	290	209	393	508	50	64	504	206	3056

INTERSECTION TURN MOVEMENT COUNT SUMMARY REPORT
MURRAY BOULEVARD AT HIGHWAY 26 WESTBOUND RAMPS

27520



DATE OF COUNT: 06/01/00
DAY OF WEEK: Thu
TIME STARTED: 16:00
TIME ENDED: 18:00

TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

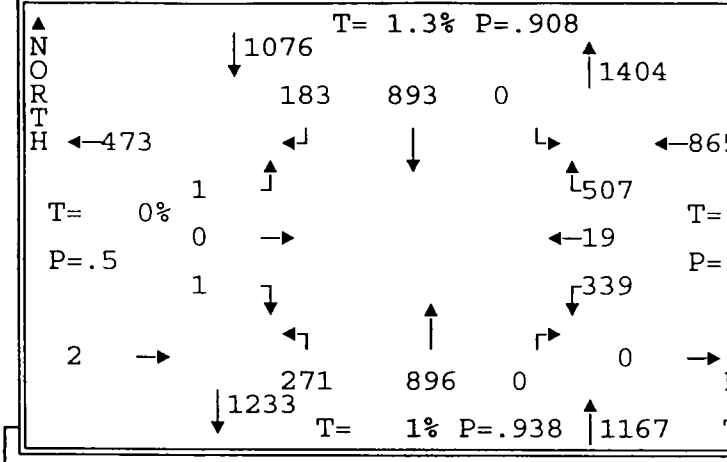
MPQI

Peak Hour
17:00-18:00
TEV=3110

Traffic Smithy
(503) 641-6333

TIME PERIOD FROM - TO	EAST BOUND ↓	EAST BOUND →	EAST BOUND ↑	SOUTH BOUND ↲	SOUTH BOUND ↓	SOUTH BOUND ↳	NORTH BOUND ↰	NORTH BOUND ↑	NORTH BOUND ↱	WEST BOUND ↓	WEST BOUND ←	WEST BOUND ↑	ALL
16:00-16:05	0	0	0	21	73	0	13	61	0	37	0	37	242
16:05-16:10	0	0	0	17	77	0	14	42	0	28	0	42	220
16:10-16:15	0	0	0	18	65	0	16	55	0	28	0	39	221
16:15-16:20	0	0	0	12	67	0	11	61	0	30	0	31	212
16:20-16:25	0	0	0	14	87	0	19	51	0	36	0	39	246
16:25-16:30	0	0	0	15	76	0	19	80	0	31	0	35	256
16:30-16:35	0	0	0	20	77	0	15	57	0	36	0	30	235
16:35-16:40	0	0	0	15	67	0	15	60	0	24	0	35	216
16:40-16:45	0	0	0	14	65	0	17	67	0	31	1	37	232
16:45-16:50	0	0	0	13	73	0	24	61	0	29	0	35	235
16:50-16:55	0	0	0	20	89	0	20	58	0	28	0	30	245
16:55-17:00	0	0	0	8	83	0	18	59	0	37	0	31	236
17:00-17:05	0	0	0	13	81	0	28	56	0	38	0	41	257
17:05-17:10	0	0	1	19	87	0	27	70	0	22	0	45	271
17:10-17:15	0	0	0	15	81	0	22	61	0	30	1	32	242
17:15-17:20	0	0	0	23	81	0	27	67	0	26	0	52	276
17:20-17:25	0	0	0	17	69	0	24	80	0	29	1	33	253
17:25-17:30	0	0	0	12	56	0	25	84	0	30	1	48	256
17:30-17:35	0	0	0	14	73	0	24	77	0	23	2	43	256
17:35-17:40	0	0	0	13	83	0	18	69	0	30	2	35	250
17:40-17:45	1	0	0	15	89	0	22	75	0	21	2	50	275
17:45-17:50	0	0	0	17	67	0	22	82	0	37	4	37	266
17:50-17:55	0	0	0	13	64	0	12	82	0	28	5	36	240
17:55-18:00	0	0	0	12	62	0	20	93	0	25	1	55	268
Total Survey	1	0	1	370	1792	0	472	1608	0	714	20	928	5906
PHF	.25	0	.25	.8	.9	0	.88	.87	0	.94	.43	.95	.982
% Trucks	0	0	0	1.9	2	0	1.7	.9	0	1.5	0	.8	1.4
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	
Peds	0	0	0	0	21	0	0	20	0	0	1	0	
Hourly Totals													
16:00-17:00	0	0	0	187	899	0	201	712	0	375	1	421	2796
16:15-17:15	0	0	1	178	933	0	235	741	0	372	2	421	2883
16:30-17:30	0	0	1	189	909	0	262	780	0	360	4	449	2954
16:45-17:45	1	0	1	182	945	0	279	817	0	343	9	475	3052
17:00-18:00	1	0	1	183	893	0	271	896	0	339	19	507	3110

INTERSECTION TURN MOVEMENT COUNT PEAK HOUR REPORT
MURRAY BOULEVARD AT HIGHWAY 26 WESTBOUND RAMPS



DATE OF COUNT: 06/01/00
DAY OF WEEK: Thu
TIME STARTED: 16:00
TIME ENDED: 18:00

TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

MPQI

Peak Hour
17:00-18:00
TEV=3110

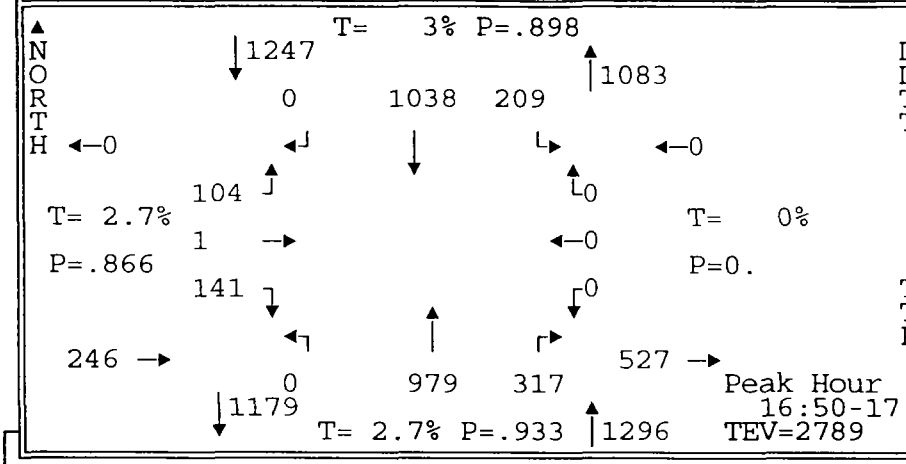
Traffic Smithy
(503)641-6333

TIME PERIOD FROM - TO	EAST BOUND ↓	EAST BOUND →	EAST BOUND ↑	SOUTH BOUND ↵	SOUTH BOUND ↓	SOUTH BOUND ↳	NORTH BOUND ↰	NORTH BOUND ↑	NORTH BOUND ↱	WEST BOUND ↓	WEST BOUND ←	WEST BOUND ↑	ALL
ALL VEHICLES													
17:00-17:15	0	0	1	47	249	0	77	187	0	90	1	118	770
17:15-17:30	0	0	0	52	206	0	76	231	0	85	2	133	785
17:30-17:45	1	0	0	42	245	0	64	221	0	74	6	128	781
17:45-18:00	0	0	0	42	193	0	54	257	0	90	10	128	774
LIGHT TRUCKS (SINGLE UNIT 2 AXLES)													
17:00-17:15	0	0	0	0	1	0	2	2	0	0	0	0	5
17:15-17:30	0	0	0	0	3	0	1	1	0	0	0	0	5
17:30-17:45	0	0	0	1	3	0	0	1	0	0	0	0	5
17:45-18:00	0	0	0	0	3	0	1	2	0	0	0	0	6
MEDIUM TRUCKS (SINGLE UNIT > 2 AXLES)													
17:00-17:15	0	0	0	0	0	0	0	0	0	0	0	0	0
17:15-17:30	0	0	0	0	0	0	0	0	0	0	0	0	0
17:30-17:45	0	0	0	0	1	0	0	1	0	0	0	0	2
17:45-18:00	0	0	0	0	0	0	0	0	0	0	0	0	0
HEAVY TRUCKS (SEMI-TRACTOR TRAILER)													
17:00-17:15	0	0	0	0	0	0	0	0	0	1	0	1	2
17:15-17:30	0	0	0	1	1	0	0	0	0	1	0	0	3
17:30-17:45	0	0	0	0	0	0	0	0	0	0	0	1	1
17:45-18:00	0	0	0	0	0	0	0	1	0	2	0	0	3
BICYCLES													
17:00-17:15	0	0	0	0	0	0	0	0	0	0	0	0	0
17:15-17:30	0	0	0	0	1	0	0	2	0	0	0	0	3
17:30-17:45	0	0	0	0	0	0	0	0	0	0	0	0	0
17:45-18:00	0	0	0	0	1	0	0	1	0	0	0	0	2

PEDESTRIANS	CROSSWALK USEAGE SOUTH	WEST	EAST	NORTH	ALL
17:00-17:15	0	4	1	0	5
17:15-17:30	0	2	0	0	2
17:30-17:45	0	3	1	0	4
17:45-18:00	0	0	6	1	7

Peak Hour by Movement													
PHF	.25	0	.25	.88	.9	0	.88	.87	0	.94	.47	.95	.990
% Trucks(all)	0	0	0	1.1	1.3	0	1.5	.9	0	1.2	0	.4	1
% Trucks(M+H)	0	0	0	.5	.2	0	0	.2	0	1.2	0	.4	.4
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	
Hourly Totals													
16:00-17:00	0	0	0	187	899	0	201	712	0	375	1	421	2796
16:15-17:15	0	0	1	178	933	0	235	741	0	372	2	421	2883
16:30-17:30	0	0	1	189	909	0	262	780	0	360	4	449	2954
16:45-17:45	1	0	1	182	945	0	279	817	0	343	9	475	3052
17:00-18:00	1	0	1	183	893	0	271	896	0	339	19	507	3110

INTERSECTION TURN MOVEMENT COUNT SUMMARY REPORT
MURRAY BOULEVARD AT HIGHWAY 26 EASTBOUND RAMPS



DATE OF COUNT: 6/1/00
DAY OF WEEK: THUR
TIME STARTED: 16:00
TIME ENDED: 18:00

TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

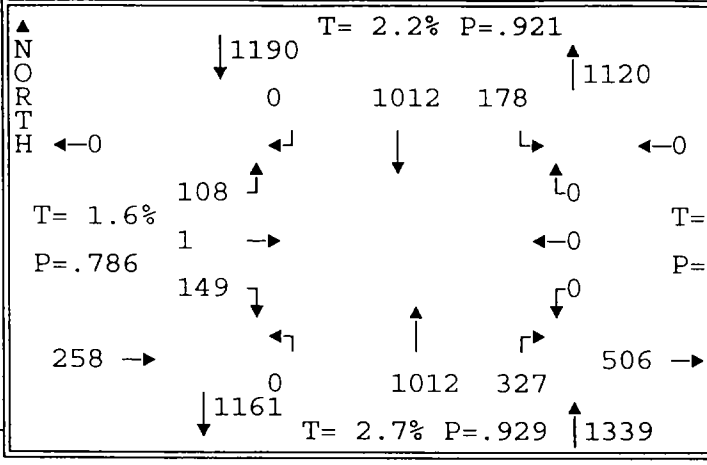
gmax

Peak Hour
16:50-17:50
TEV=2789

Traffic Smithy
(503) 641-6333

TIME PERIOD FROM - TO	EAST BOUND ↓	EAST BOUND →	EAST BOUND ↑	SOUTH BOUND ↲	SOUTH BOUND ↓	SOUTH BOUND ↳	NORTH BOUND ↰	NORTH BOUND ↑	NORTH BOUND ↱	WEST BOUND ↓	WEST BOUND ←	WEST BOUND ↑	ALL
16:00-16:05	10	0	14	0	58	22	0	57	32	0	0	0	193
16:05-16:10	11	0	8	0	73	21	0	51	34	0	0	0	198
16:10-16:15	15	0	12	0	73	19	0	49	28	0	0	0	196
16:15-16:20	8	0	5	0	78	22	0	81	31	0	0	0	225
16:20-16:25	8	0	6	0	95	30	0	67	28	0	0	0	234
16:25-16:30	11	0	9	0	82	22	0	77	26	0	0	0	227
16:30-16:35	15	0	7	0	85	23	0	69	15	0	0	0	214
16:35-16:40	14	0	5	0	72	14	0	73	27	0	0	0	205
16:40-16:45	8	0	5	0	75	18	0	74	26	0	0	0	206
16:45-16:50	11	0	5	0	77	17	0	68	19	0	0	0	197
16:50-16:55	14	0	13	0	99	19	0	69	31	0	0	0	245
16:55-17:00	7	0	10	0	88	29	0	72	21	0	0	0	227
17:00-17:05	11	1	7	0	92	20	0	67	27	0	0	0	225
17:05-17:10	16	0	8	0	81	20	0	70	30	0	0	0	225
17:10-17:15	9	0	7	0	92	18	0	83	38	0	0	0	247
17:15-17:20	13	0	5	0	81	15	0	85	26	0	0	0	225
17:20-17:25	7	0	10	0	82	14	0	93	22	0	0	0	228
17:25-17:30	9	0	12	0	72	12	0	93	19	0	0	0	217
17:30-17:35	10	0	6	0	78	13	0	87	17	0	0	0	211
17:35-17:40	13	0	5	0	93	20	0	67	14	0	0	0	212
17:40-17:45	16	0	11	0	91	18	0	97	44	0	0	0	277
17:45-17:50	16	0	10	0	89	11	0	96	28	0	0	0	250
17:50-17:55	11	0	11	0	85	7	0	84	37	0	0	0	235
17:55-18:00	18	0	16	0	76	10	0	90	25	0	0	0	235
Total Survey	281	1	207	0	1967	434	0	1819	645	0	0	0	5354
PHF	.78	.25	.87	0	.93	.76	0	.9	.83	0	0	0	.943
% Trucks	2.1	0	3.4	0	2.5	5.1	0	2.1	4.3	0	0	0	2.8
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	
Peds	0	5	0	0	13	0	0	15	0	0	0	0	
Hourly Totals													
16:00-17:00	132	0	99	0	955	256	0	807	318	0	0	0	2567
16:15-17:15	132	1	87	0	1016	252	0	870	319	0	0	0	2677
16:30-17:30	134	1	94	0	996	219	0	916	301	0	0	0	2661
16:45-17:45	136	1	99	0	1026	215	0	951	308	0	0	0	2736
17:00-18:00	149	1	108	0	1012	178	0	1012	327	0	0	0	2787

INTERSECTION TURN MOVEMENT COUNT PEAK HOUR REPORT
MURRAY BOULEVARD AT HIGHWAY 26 EASTBOUND RAMPS



DATE OF COUNT: 6/1/00
DAY OF WEEK: THUR
TIME STARTED: 16:00
TIME ENDED: 18:00

TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

gmax

Peak Hour
17:00-18:00
TEV=2787

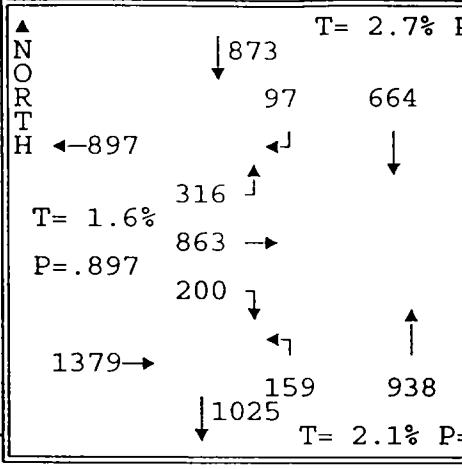
Traffic Smithy
(503)641-6333

TIME PERIOD FROM - TO	EAST BOUND ↓	EAST BOUND →	EAST BOUND ↑	SOUTH BOUND ↲	SOUTH BOUND ↓	SOUTH BOUND ↳	NORTH BOUND ↰	NORTH BOUND ↑	NORTH BOUND ↱	WEST BOUND ↓	WEST BOUND ←	WEST BOUND ↑	ALL
ALL VEHICLES													
17:00-17:15	36	1	22	0	265	58	0	220	95	0	0	0	697
17:15-17:30	29	0	27	0	235	41	0	271	67	0	0	0	670
17:30-17:45	39	0	22	0	262	51	0	251	75	0	0	0	700
17:45-18:00	45	0	37	0	250	28	0	270	90	0	0	0	720
LIGHT TRUCKS (SINGLE UNIT 2 AXLES)													
17:00-17:15	0	0	0	0	4	0	0	8	1	0	0	0	13
17:15-17:30	0	0	0	0	4	3	0	4	0	0	0	0	11
17:30-17:45	1	0	0	0	4	0	0	2	2	0	0	0	9
17:45-18:00	0	0	1	0	4	1	0	4	2	0	0	0	12
MEDIUM TRUCKS (SINGLE UNIT > 2 AXLES)													
17:00-17:15	0	0	0	0	0	0	0	1	0	0	0	0	1
17:15-17:30	0	0	0	0	0	0	0	1	0	0	0	0	1
17:30-17:45	0	0	0	0	1	0	0	0	1	0	0	0	2
17:45-18:00	0	0	0	0	0	0	0	1	0	0	0	0	1
HEAVY TRUCKS (SEMI-TRACTOR TRAILER)													
17:00-17:15	0	0	1	0	1	0	0	2	2	0	0	0	6
17:15-17:30	0	0	0	0	1	1	0	0	2	0	0	0	4
17:30-17:45	1	0	0	0	0	0	0	1	2	0	0	0	4
17:45-18:00	0	0	0	0	2	0	0	0	0	0	0	0	2
BICYCLES													
17:00-17:15	0	0	0	0	4	0	0	0	0	0	0	0	4
17:15-17:30	0	0	0	0	1	0	0	2	0	0	0	0	3
17:30-17:45	0	0	0	0	0	0	0	1	0	0	0	0	1
17:45-18:00	0	0	0	0	1	0	0	2	0	0	0	0	3

PEDESTRIANS ----------CROSSWALK USEAGE----------	SOUTH	WEST	EAST	NORTH	ALL
17:00-17:15	0	1	0	0	1
17:15-17:30	0	2	0	0	2
17:30-17:45	0	2	3	0	5
17:45-18:00	0	0	5	0	5

Peak Hour by Movement													
PHF	.83	.25	.73	0	.95	.77	0	.93	.86	0	0	0	.967
% Trucks(all)	1.3	0	1.9	0	2.1	2.8	0	2.4	3.7	0	0	0	2.4
% Trucks(M+H)	.7	0	.9	0	.5	.6	0	.6	2.1	0	0	0	.8
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	
Hourly Totals													
16:00-17:00	132	0	99	0	955	256	0	807	318	0	0	0	2567
16:15-17:15	132	1	87	0	1016	252	0	870	319	0	0	0	2677
16:30-17:30	134	1	94	0	996	219	0	916	301	0	0	0	2661
16:45-17:45	136	1	99	0	1026	215	0	951	308	0	0	0	2736
17:00-18:00	149	1	108	0	1012	178	0	1012	327	0	0	0	2787

INTERSECTION TURN MOVEMENT COUNT SUMMARY REPORT
MURRAY BOULEVARD AT WALKER ROAD



DATE OF COUNT: 06/06/00
DAY OF WEEK: TUE
TIME STARTED: 16:00
TIME ENDED: 18:00

TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

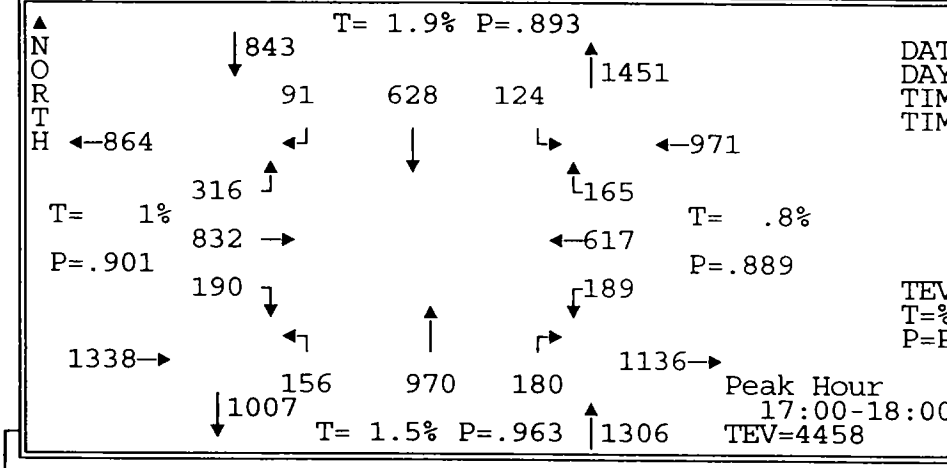
BK14

Peak Hour
16:50-17:50
TEV=4487

Traffic Smithy
(503) 641-6333

TIME PERIOD FROM - TO	EAST BOUND ↓	EAST BOUND →	EAST BOUND ↑	SOUTH BOUND ↙	SOUTH BOUND ↓	SOUTH BOUND ↳	NORTH BOUND ↰	NORTH BOUND ↑	NORTH BOUND ↱	WEST BOUND ↓	WEST BOUND ←	WEST BOUND ↑	ALL
16:00-16:05	10	50	16	16	67	12	15	48	13	6	31	6	290
16:05-16:10	12	38	18	9	60	10	10	86	14	8	44	12	321
16:10-16:15	7	43	26	6	54	17	13	70	5	10	41	8	300
16:15-16:20	18	84	20	10	44	7	12	56	9	6	66	10	342
16:20-16:25	13	53	18	13	49	17	18	65	14	7	46	7	320
16:25-16:30	6	48	25	12	69	11	17	94	12	9	41	9	353
16:30-16:35	14	74	21	9	49	8	10	64	7	5	60	10	331
16:35-16:40	29	91	23	9	55	11	9	72	10	9	66	6	390
16:40-16:45	16	50	16	9	52	13	23	75	12	7	56	10	339
16:45-16:50	9	54	12	14	69	5	8	87	11	12	49	10	340
16:50-16:55	22	86	19	10	53	8	7	53	12	8	49	14	341
16:55-17:00	14	77	26	10	65	9	16	69	16	6	52	13	373
17:00-17:05	9	56	20	10	68	3	16	84	15	11	48	12	352
17:05-17:10	17	63	41	6	63	17	6	81	14	19	43	6	376
17:10-17:15	19	60	33	11	51	7	16	91	16	15	46	19	384
17:15-17:20	23	103	25	5	41	3	14	65	14	15	64	11	383
17:20-17:25	15	79	24	9	51	7	22	85	9	15	55	12	383
17:25-17:30	12	71	19	4	66	12	7	86	23	12	48	19	379
17:30-17:35	17	83	28	8	44	11	14	62	14	23	64	13	381
17:35-17:40	15	63	31	10	51	15	11	79	22	10	57	14	378
17:40-17:45	21	72	27	8	42	6	16	84	10	11	67	14	378
17:45-17:50	16	50	23	6	69	14	14	99	10	16	48	14	379
17:50-17:55	10	61	23	9	24	12	8	76	18	24	34	20	319
17:55-18:00	16	71	22	5	58	17	12	78	15	18	43	11	366
Total Survey	360	1580	556	218	1314	252	314	1809	315	282	1218	280	8498
PHF	.85	.85	.8	.81	.85	.74	.76	.9	.74	.81	.85	.88	.975
% Trucks	2.5	1.3	1.8	0	3.3	2	.6	2.7	.3	.7	1.1	1.4	1.9
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	
Peds	0	0	0	0	0	0	0	0	0	0	0	0	
Hourly Totals													
16:00-17:00	170	748	240	127	686	128	158	839	135	93	601	115	4040
16:15-17:15	186	796	274	123	687	116	158	891	148	114	622	126	4241
16:30-17:30	199	864	279	106	683	103	154	912	159	134	636	142	4371
16:45-17:45	193	867	305	105	664	103	153	926	176	157	642	157	4448
17:00-18:00	190	832	316	91	628	124	156	970	180	189	617	165	4458

INTERSECTION TURN MOVEMENT COUNT PEAK HOUR REPORT
MURRAY BOULEVARD AT WALKER ROAD



DATE OF COUNT: 06/06/00
DAY OF WEEK: TUE
TIME STARTED: 16:00
TIME ENDED: 18:00

TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

BK14

Peak Hour
17:00-18:00
TEV=4458

Traffic Smithy
(503)641-6333

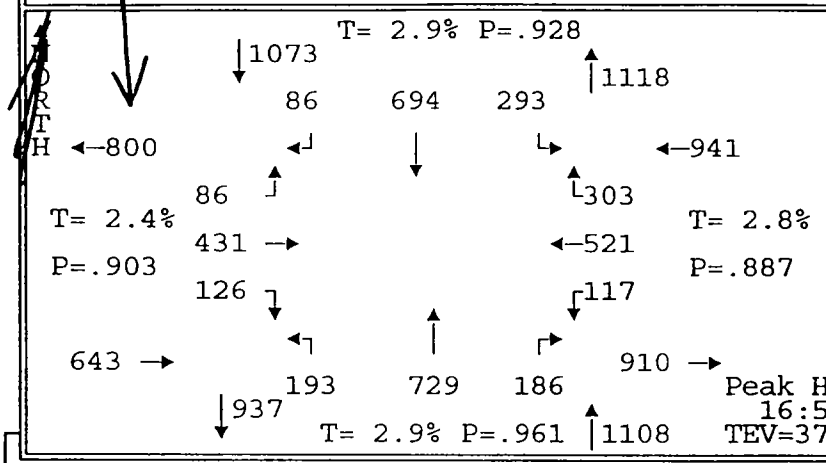
TIME PERIOD FROM - TO	EAST BOUND ↓	EAST BOUND →	EAST BOUND ↑	SOUTH BOUND ↵	SOUTH BOUND ↓	SOUTH BOUND ↳	NORTH BOUND ↰	NORTH BOUND ↑	NORTH BOUND ↱	WEST BOUND ↓	WEST BOUND ←	WEST BOUND ↑	ALL
ALL VEHICLES													
17:00-17:15	45	179	94	27	182	27	38	256	45	45	137	37	1112
17:15-17:30	50	253	68	18	158	22	43	236	46	42	167	42	1145
17:30-17:45	53	218	86	26	137	32	41	225	46	44	188	41	1137
17:45-18:00	42	182	68	20	151	43	34	253	43	58	125	45	1064
LIGHT TRUCKS (SINGLE UNIT 2 AXLES)													
17:00-17:15	1	2	1	0	4	0	0	5	0	0	2	0	15
17:15-17:30	3	1	0	0	2	0	0	4	0	1	1	0	12
17:30-17:45	0	1	0	0	1	0	0	3	0	0	0	1	6
17:45-18:00	1	0	0	0	3	0	0	2	0	0	3	0	9
MEDIUM TRUCKS (SINGLE UNIT > 2 AXLES)													
17:00-17:15	0	0	0	0	1	0	0	0	0	0	0	0	1
17:15-17:30	0	0	0	0	0	0	0	0	0	0	0	0	0
17:30-17:45	0	0	0	0	2	0	0	0	0	0	0	0	2
17:45-18:00	0	0	0	0	0	0	0	0	0	0	0	0	0
HEAVY TRUCKS (SEMI-TRACTOR TRAILER)													
17:00-17:15	0	0	1	0	0	0	0	3	0	0	0	0	4
17:15-17:30	0	0	1	0	3	0	0	1	0	0	0	0	5
17:30-17:45	0	1	0	0	0	0	0	0	0	0	0	0	1
17:45-18:00	0	0	0	0	0	0	0	2	0	0	0	0	2
BICYCLES													
17:00-17:15	0	0	0	0	0	0	0	0	0	0	0	0	0
17:15-17:30	0	0	0	0	0	0	0	0	0	0	0	0	0
17:30-17:45	0	0	0	0	0	0	0	0	0	0	0	0	0
17:45-18:00	0	0	0	0	0	0	0	0	0	0	0	0	0

PEDESTRIANS	CROSSWALK USEAGE				ALL
	SOUTH	WEST	EAST	NORTH	
17:00-17:15	0	0	0	0	0
17:15-17:30	0	0	0	0	0
17:30-17:45	0	0	0	0	0
17:45-18:00	0	0	0	0	0

Peak Hour by Movement													
PHF	.9	.82	.84	.84	.86	.72	.91	.95	.98	.81	.82	.92	.973
% Trucks(all)	2.6	.6	.9	0	2.5	0	0	2.1	0	.5	1	.6	1.3
% Trucks(M+H)	0	.1	.6	0	1	0	0	.6	0	0	0	0	.3
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	

Hourly Totals													
16:00-17:00	170	748	240	127	686	128	158	839	135	93	601	115	4040
16:15-17:15	186	796	274	123	687	116	158	891	148	114	622	126	4241
16:30-17:30	199	864	279	106	683	103	154	912	159	134	636	142	4371
16:45-17:45	193	867	305	105	664	103	153	926	176	157	642	157	4448
17:00-18:00	190	832	316	91	628	124	156	970	180	189	617	165	4458

INTERSECTION TURN MOVEMENT COUNT SUMMARY REPORT
MURRAY BOULEVARD AT JENKINS ROAD



DATE OF COUNT: 6/7/00
DAY OF WEEK: Wed
TIME STARTED: 16:00
TIME ENDED: 18:00

TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

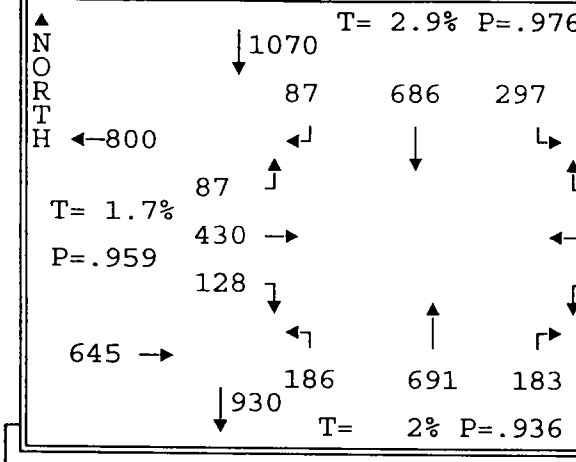
gmau

Peak Hour
16:55-17:55
TEV=3765

Traffic Smithy
(503) 641-6333

TIME PERIOD FROM - TO	EAST BOUND ↓	EAST BOUND →	EAST BOUND ↑	SOUTH BOUND ↙	SOUTH BOUND ↓	SOUTH BOUND ↘	NORTH BOUND ↖	NORTH BOUND ↑	NORTH BOUND ↗	WEST BOUND ↓	WEST BOUND ←	WEST BOUND ↑	ALL
16:00-16:05	7	23	9	8	67	18	5	61	8	6	19	25	256
16:05-16:10	15	38	9	7	48	25	10	47	13	11	38	30	291
16:10-16:15	12	23	7	9	60	14	4	57	14	15	39	28	282
16:15-16:20	12	40	6	7	62	24	10	41	8	5	37	22	274
16:20-16:25	8	33	13	3	49	7	5	54	11	15	39	26	263
16:25-16:30	11	25	2	3	50	25	7	62	9	13	47	29	283
16:30-16:35	13	20	6	5	61	12	8	51	11	18	39	25	269
16:35-16:40	10	52	4	8	47	18	8	51	5	13	53	19	288
16:40-16:45	15	28	8	7	82	28	10	48	14	10	29	32	311
16:45-16:50	9	37	8	9	47	26	9	27	15	11	50	31	279
16:50-16:55	9	29	7	3	57	18	4	62	9	16	43	25	282
16:55-17:00	8	32	5	8	62	19	15	81	14	9	37	25	315
17:00-17:05	8	41	10	9	51	17	9	56	10	10	47	26	294
17:05-17:10	14	33	6	11	53	29	23	57	17	4	44	28	319
17:10-17:15	8	27	7	6	76	22	9	83	13	9	43	27	330
17:15-17:20	8	49	10	5	54	22	13	48	13	15	55	34	326
17:20-17:25	13	36	6	10	47	28	29	49	11	14	44	24	311
17:25-17:30	8	29	9	7	73	17	10	69	18	12	34	21	307
17:30-17:35	10	39	0	6	44	33	21	48	18	6	48	20	293
17:35-17:40	12	29	9	11	72	26	16	70	18	7	34	22	326
17:40-17:45	16	45	8	2	49	21	17	56	19	15	52	30	330
17:45-17:50	10	44	5	4	54	37	22	54	14	7	49	28	328
17:50-17:55	11	27	11	7	59	22	9	58	21	9	34	18	286
17:55-18:00	10	31	6	9	54	23	8	43	11	8	43	19	265
Total Survey	257	810	171	164	1378	531	281	1333	314	258	997	614	7108
PHF	.83	.91	.86	.77	.92	.87	.8	.93	.85	.71	.92	.85	.956
% Trucks	1.6	3.2	0	1.2	3	3.2	1.1	3.2	3.2	3.5	1.9	4.1	2.8
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	
Peds	0	0	0	0	4	0	0	0	0	0	1	0	
Hourly Totals													
16:00-17:00	129	380	84	77	692	234	95	642	131	142	470	317	3393
16:15-17:15	125	397	82	79	697	245	117	673	136	133	508	315	3507
16:30-17:30	123	413	86	88	710	256	147	682	150	141	518	317	3631
16:45-17:45	123	426	85	87	685	278	175	706	175	128	531	313	3712
17:00-18:00	128	430	87	87	686	297	186	691	183	116	527	297	3715

INTERSECTION TURN MOVEMENT COUNT PEAK HOUR REPORT
MURRAY BOULEVARD AT JENKINS ROAD



DATE OF COUNT: 6/7/00
DAY OF WEEK: Wed
TIME STARTED: 16:00
TIME ENDED: 18:00

TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

gmau

Peak Hour
17:00-18:00
TEV=3715

Traffic Smithy
(503)641-6333

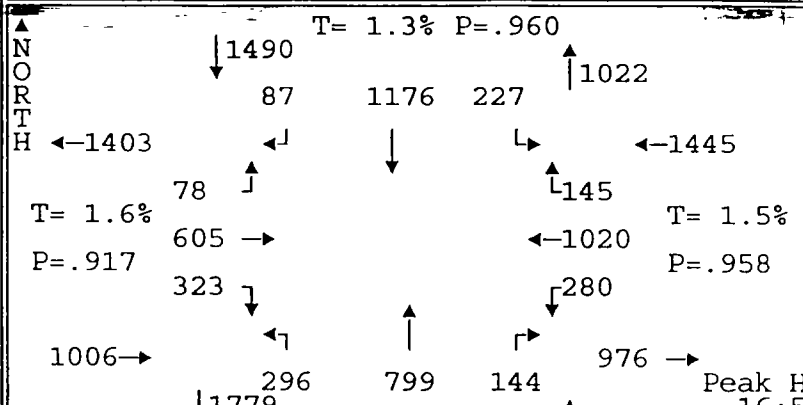
TIME PERIOD FROM - TO	EAST BOUND ↓	EAST BOUND →	EAST BOUND ↑	SOUTH BOUND ↲	SOUTH BOUND ↓	SOUTH BOUND ↳	NORTH BOUND ↰	NORTH BOUND ↑	NORTH BOUND ↱	WEST BOUND ↓	WEST BOUND ←	WEST BOUND ↑	ALL
ALL VEHICLES													
17:00-17:15	30	101	23	26	180	68	41	196	40	23	134	81	943
17:15-17:30	29	114	25	22	174	67	52	166	42	41	133	79	944
17:30-17:45	38	113	17	19	165	80	54	174	55	28	134	72	949
17:45-18:00	31	102	22	20	167	82	39	155	46	24	126	65	879
LIGHT TRUCKS (SINGLE UNIT 2 AXLES)													
17:00-17:15	0	2	0	1	4	0	1	4	1	0	1	2	16
17:15-17:30	0	2	0	1	6	2	0	3	0	0	2	1	17
17:30-17:45	0	5	0	0	4	0	0	3	0	1	1	0	14
17:45-18:00	0	2	0	0	2	6	0	1	0	1	0	1	13
MEDIUM TRUCKS (SINGLE UNIT > 2 AXLES)													
17:00-17:15	0	0	0	0	0	0	0	0	1	0	0	1	2
17:15-17:30	0	0	0	0	0	0	0	0	0	0	0	0	0
17:30-17:45	0	0	0	0	0	0	0	0	0	0	0	0	0
17:45-18:00	0	0	0	0	0	0	0	0	0	0	0	0	0
HEAVY TRUCKS (SEMI-TRACTOR TRAILER)													
17:00-17:15	0	0	0	0	4	1	0	2	0	0	0	1	8
17:15-17:30	0	0	0	0	0	0	0	1	1	1	0	0	3
17:30-17:45	0	0	0	0	0	0	0	1	1	0	0	0	2
17:45-18:00	0	0	0	0	0	0	0	1	0	1	0	0	2
BICYCLES													
17:00-17:15	0	0	0	0	0	0	0	0	0	0	0	0	0
17:15-17:30	0	0	0	0	0	0	0	0	0	0	1	0	1
17:30-17:45	0	0	0	0	0	0	1	0	0	0	0	0	1
17:45-18:00	0	0	0	0	0	0	0	0	0	0	1	0	1

PEDESTRIANS	CROSSWALK USEAGE				ALL
	SOUTH	WEST	EAST	NORTH	
17:00-17:15	0	0	0	0	0
17:15-17:30	0	1	0	0	1
17:30-17:45	0	1	0	0	1
17:45-18:00	0	1	0	0	1

Peak Hour by Movement													
PHF	.84	.94	.87	.84	.95	.91	.86	.88	.83	.71	.98	.92	.978
% Trucks(all)	0	2.6	0	2.3	2.9	3	.5	2.3	2.2	3.4	.8	2	2.1
% Trucks(M+H)	0	0	0	0	.6	.3	0	.7	1.6	1.7	0	.7	.5
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	
Hourly Totals													
16:00-17:00	129	380	84	77	692	234	95	642	131	142	470	317	3393
16:15-17:15	125	397	82	79	697	245	117	673	136	133	508	315	3507
16:30-17:30	123	413	86	88	710	256	147	682	150	141	518	317	3631
16:45-17:45	123	426	85	87	685	278	175	706	175	128	531	313	3712
17:00-18:00	128	430	87	87	686	297	186	691	183	116	527	297	3715

INTERSECTION TURN MOVEMENT COUNT SUMMARY REPORT
MURRAY BOULEVARD AT FARMINGTON ROAD

23930



DATE OF COUNT: 6/14/00
DAY OF WEEK: Wed
TIME STARTED: 16:00
TIME ENDED: 18:00

TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

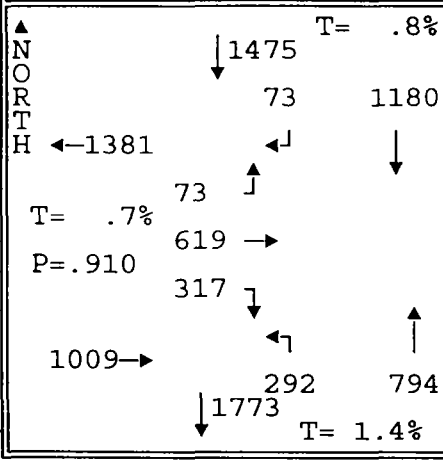
mpqk

Peak Hour
16:50-17:50
TEV=5180

Traffic Smithy
(503) 641-6333

TIME PERIOD FROM - TO	EAST BOUND ↓	EAST BOUND →	EAST BOUND ↑	SOUTH BOUND ↙	SOUTH BOUND ↓	SOUTH BOUND ↘	NORTH BOUND ↖	NORTH BOUND ↑	NORTH BOUND ↗	WEST BOUND ↓	WEST BOUND ←	WEST BOUND ↑	ALL
16:00-16:05	11	46	2	7	102	18	23	51	6	22	62	14	364
16:05-16:10	26	49	6	6	64	17	23	55	5	14	58	12	335
16:10-16:15	15	32	5	3	94	16	17	44	6	28	76	10	346
16:15-16:20	23	44	12	12	75	12	24	69	11	24	65	14	385
16:20-16:25	24	54	10	5	88	13	26	75	8	19	66	16	404
16:25-16:30	32	48	13	9	82	14	22	60	23	23	57	17	400
16:30-16:35	20	48	8	15	83	16	25	64	7	24	78	6	394
16:35-16:40	22	54	1	3	78	26	25	64	9	28	99	15	424
16:40-16:45	13	65	7	10	85	17	22	67	12	26	56	16	396
16:45-16:50	19	50	9	6	94	10	26	85	10	23	58	8	398
16:50-16:55	27	38	9	17	92	19	24	67	15	23	87	6	424
16:55-17:00	28	66	7	6	100	16	25	65	12	23	76	16	440
17:00-17:05	21	42	3	11	98	20	23	73	11	22	88	13	425
17:05-17:10	19	50	11	4	103	29	22	53	15	23	79	12	420
17:10-17:15	25	68	3	10	92	21	23	62	11	22	88	17	442
17:15-17:20	24	59	4	5	108	16	25	79	9	21	94	13	457
17:20-17:25	35	52	4	6	95	22	26	78	14	24	90	8	454
17:25-17:30	20	37	5	5	100	11	24	80	13	22	84	14	415
17:30-17:35	30	58	7	7	99	16	26	59	10	25	84	10	431
17:35-17:40	22	33	5	5	93	20	23	55	12	28	95	13	404
17:40-17:45	38	46	11	3	97	24	30	63	13	22	78	11	436
17:45-17:50	34	56	9	8	99	13	25	65	9	25	77	12	432
17:50-17:55	27	67	7	3	91	8	23	59	17	24	80	15	421
17:55-18:00	22	51	4	6	105	22	22	68	7	18	79	12	416
Total Survey	577	1213	162	172	2217	416	574	1560	265	553	1854	300	9863
PHF	.86	.84	.78	.64	.97	.81	.94	.84	.95	.93	.94	.86	.957
% Trucks	1	1.6	3.7	.6	1.2	2.2	1.4	2.1	1.1	.5	1.5	3.3	1.5
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	
Peds	0	21	0	0	28	0	0	29	0	0	14	0	
Hourly Totals													
16:00-17:00	260	594	89	99	1037	194	282	766	124	277	838	150	4710
16:15-17:15	273	627	93	108	1070	213	287	804	144	280	897	156	4952
16:30-17:30	273	629	71	98	1128	223	290	837	138	281	977	144	5089
16:45-17:45	308	599	78	85	1171	224	297	819	145	278	1001	141	5146
17:00-18:00	317	619	73	73	1180	222	292	794	141	276	1016	150	5153

INTERSECTION TURN MOVEMENT COUNT PEAK HOUR REPORT
MURRAY BOULEVARD AT FARMINGTON ROAD



DATE OF COUNT: 6/14/00
DAY OF WEEK: Wed
TIME STARTED: 16:00
TIME ENDED: 18:00

TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

mpqk

Peak Hour
17:00-18:00
TEV=5153

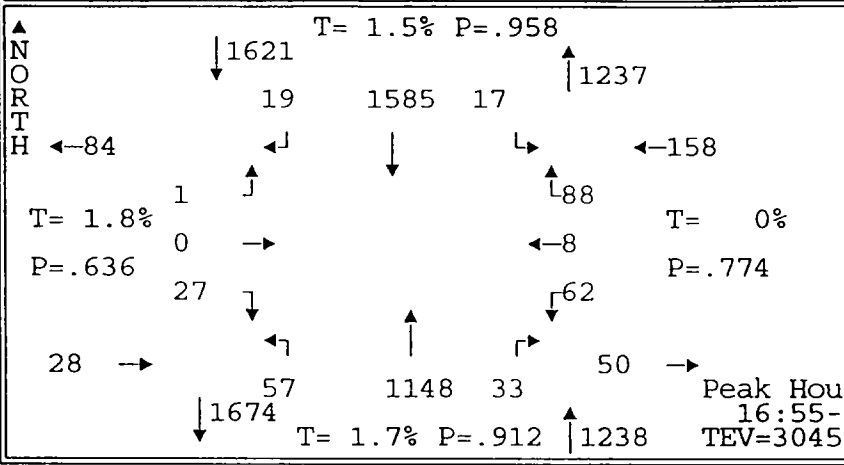
Traffic Smithy
(503)641-6333

TIME PERIOD FROM - TO	EAST BOUND ↓	EAST BOUND →	EAST BOUND ↑	SOUTH BOUND ↲	SOUTH BOUND ↓	SOUTH BOUND ↳	NORTH BOUND ↰	NORTH BOUND ↑	NORTH BOUND ↱	WEST BOUND ↓	WEST BOUND ←	WEST BOUND ↑	ALL
ALL VEHICLES													
17:00-17:15	65	160	17	25	293	70	68	188	37	67	255	42	1287
17:15-17:30	79	148	13	16	303	49	75	237	36	67	268	35	1326
17:30-17:45	90	137	23	15	289	60	79	177	35	75	257	34	1271
17:45-18:00	83	174	20	17	295	43	70	192	33	67	236	39	1269
LIGHT TRUCKS (SINGLE UNIT 2 AXLES)													
17:00-17:15	0	0	0	0	2	0	1	4	1	0	6	0	14
17:15-17:30	0	3	0	0	4	0	0	2	0	0	3	3	15
17:30-17:45	0	1	0	0	4	1	1	1	0	0	4	2	14
17:45-18:00	0	1	0	0	0	0	0	5	1	0	4	3	14
MEDIUM TRUCKS (SINGLE UNIT > 2 AXLES)													
17:00-17:15	0	0	0	0	0	0	0	0	1	0	0	0	1
17:15-17:30	0	0	0	0	0	0	0	0	0	0	0	0	0
17:30-17:45	0	0	0	0	0	0	0	0	0	0	0	0	0
17:45-18:00	0	0	0	0	0	0	0	0	0	0	0	0	0
HEAVY TRUCKS (SEMI-TRACTOR TRAILER)													
17:00-17:15	0	0	0	0	0	0	0	0	0	0	0	0	0
17:15-17:30	1	1	0	0	0	0	0	0	0	0	0	0	2
17:30-17:45	0	0	0	0	1	0	0	0	0	0	0	0	1
17:45-18:00	0	0	0	0	0	0	0	0	0	0	0	0	0
BICYCLES													
17:00-17:15	0	0	0	0	4	0	0	1	0	0	0	0	5
17:15-17:30	0	0	0	0	0	0	0	0	0	0	0	0	0
17:30-17:45	0	0	0	0	0	0	0	0	0	0	0	0	0
17:45-18:00	0	0	0	0	0	0	0	2	0	0	0	0	2

PEDESTRIANS	CROSSWALK USEAGE				ALL
	SOUTH	WEST	EAST	NORTH	
17:00-17:15	3	6	2	3	14
17:15-17:30	3	3	5	0	11
17:30-17:45	1	1	3	0	5
17:45-18:00	8	4	4	0	16

Peak Hour by Movement													
PHF	.88	.89	.79	.73	.97	.79	.92	.84	.95	.92	.95	.89	.971
% Trucks(all)	.3	1	0	0	.9	.5	.7	1.5	2.1	0	1.7	5.3	1.2
% Trucks(M+H)	.3	.2	0	0	.1	0	0	0	.7	0	0	0	.1
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	
Hourly Totals													
16:00-17:00	260	594	89	99	1037	194	282	766	124	277	838	150	4710
16:15-17:15	273	627	93	108	1070	213	287	804	144	280	897	156	4952
16:30-17:30	273	629	71	98	1128	223	290	837	138	281	977	144	5089
16:45-17:45	308	599	78	85	1171	224	297	819	145	278	1001	141	5146
17:00-18:00	317	619	73	73	1180	222	292	794	141	276	1016	150	5153

INTERSECTION TURN MOVEMENT COUNT SUMMARY REPORT
MURRAY BOULEVARD AT 6TH STREET



DATE OF COUNT: 06/06/00
DAY OF WEEK: TUE
TIME STARTED: 16:00
TIME ENDED: 18:00

TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

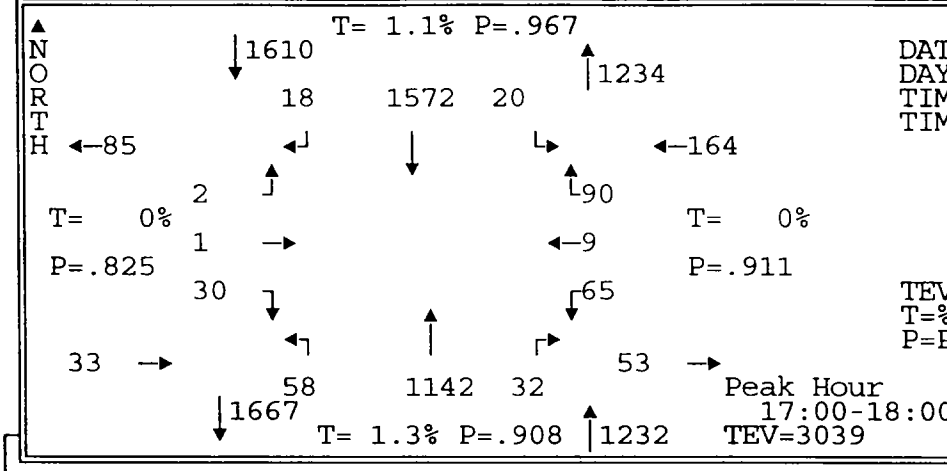
BK13

Peak Hour
16:55-17:55

Traffic Smithy
(503) 641-6333

TIME PERIOD FROM - TO	EAST BOUND ↓	EAST BOUND →	EAST BOUND ↑	SOUTH BOUND ↙	SOUTH BOUND ↓	SOUTH BOUND ↘	NORTH BOUND ↖	NORTH BOUND ↑	NORTH BOUND ↗	WEST BOUND ↓	WEST BOUND ←	WEST BOUND ↑	ALL
16:00-16:05	1	0	0	3	122	2	2	83	1	3	0	4	221
16:05-16:10	1	0	1	1	122	1	1	91	3	2	0	1	224
16:10-16:15	0	0	0	0	114	1	4	91	2	2	1	5	220
16:15-16:20	1	0	0	0	118	1	7	98	1	1	0	2	229
16:20-16:25	3	0	0	1	119	1	5	87	3	0	2	3	224
16:25-16:30	1	0	0	0	117	3	5	113	4	0	1	6	250
16:30-16:35	2	1	0	0	127	2	1	107	2	1	1	10	254
16:35-16:40	1	0	0	3	116	2	5	84	2	6	1	1	221
16:40-16:45	1	0	1	2	126	2	3	116	1	2	1	6	261
16:45-16:50	3	0	0	0	137	0	0	83	2	4	0	7	236
16:50-16:55	5	0	0	2	125	2	5	106	5	1	0	3	254
16:55-17:00	1	0	0	1	133	1	3	92	4	3	0	6	244
17:00-17:05	1	0	0	2	124	2	6	91	2	3	0	4	235
17:05-17:10	1	0	0	1	118	0	8	82	1	3	0	13	227
17:10-17:15	3	0	1	4	134	0	5	100	5	5	1	11	269
17:15-17:20	4	0	0	1	135	1	3	100	5	4	3	5	261
17:20-17:25	3	0	0	2	127	0	4	85	2	9	2	11	245
17:25-17:30	3	0	0	0	139	0	5	85	1	4	0	5	242
17:30-17:35	1	0	0	4	144	4	4	117	3	6	1	8	292
17:35-17:40	2	0	0	1	129	2	6	113	3	5	1	3	265
17:40-17:45	5	0	0	1	129	2	4	88	1	7	0	5	242
17:45-17:50	2	0	0	0	140	3	5	84	5	6	0	7	252
17:50-17:55	1	0	0	2	133	2	4	111	1	7	0	10	271
17:55-18:00	4	1	1	0	120	4	4	86	3	6	1	8	238
Total Survey	50	2	4	31	3048	38	99	2293	62	90	16	144	5877
PHF	.68	0	.25	.68	.96	.53	.75	.9	.69	.77	.33	.76	.952
% Trucks	2	0	0	0	1.5	2.6	0	1.7	1.6	0	0	0	1.5
Stopped Buses	0	0	0	0	0	0	0	1	0	0	0	0	
Peds	0	0	0	0	6	0	0	2	0	0	0	0	
Hourly Totals													
16:00-17:00	20	1	2	13	1476	18	41	1151	30	25	7	54	2838
16:15-17:15	23	1	2	16	1494	16	53	1159	32	29	7	72	2904
16:30-17:30	28	1	2	18	1541	12	48	1131	32	45	9	82	2949
16:45-17:45	32	0	1	19	1574	14	53	1142	34	54	8	81	3012
17:00-18:00	30	1	2	18	1572	20	58	1142	32	65	9	90	3039

INTERSECTION TURN MOVEMENT COUNT PEAK HOUR REPORT
MURRAY BOULEVARD AT 6TH STREET



DATE OF COUNT: 06/06/00
DAY OF WEEK: TUE
TIME STARTED: 16:00
TIME ENDED: 18:00

TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

BK13

Peak Hour
17:00-18:00
TEV=3039

Traffic Smithy
(503)641-6333

TIME PERIOD FROM - TO	EAST BOUND ↓	EAST BOUND →	EAST BOUND ↑	SOUTH BOUND ↵	SOUTH BOUND ↓	SOUTH BOUND ↳	NORTH BOUND ↰	NORTH BOUND ↑	NORTH BOUND ↱	WEST BOUND ↓	WEST BOUND ←	WEST BOUND ↑	ALL
ALL VEHICLES													
17:00-17:15	5	0	1	7	376	2	19	273	8	11	1	28	731
17:15-17:30	10	0	0	3	401	1	12	270	8	17	5	21	748
17:30-17:45	8	0	0	6	402	8	14	318	7	18	2	16	799
17:45-18:00	7	1	1	2	393	9	13	281	9	19	1	25	761
LIGHT TRUCKS (SINGLE UNIT 2 AXLES)													
17:00-17:15	0	0	0	0	4	0	0	3	0	0	0	0	7
17:15-17:30	0	0	0	0	2	0	0	3	0	0	0	0	5
17:30-17:45	0	0	0	0	4	0	0	3	0	0	0	0	7
17:45-18:00	0	0	0	0	4	0	0	7	0	0	0	0	11
MEDIUM TRUCKS (SINGLE UNIT > 2 AXLES)													
17:00-17:15	0	0	0	0	0	0	0	0	0	0	0	0	0
17:15-17:30	0	0	0	0	1	0	0	0	0	0	0	0	1
17:30-17:45	0	0	0	0	0	0	0	0	0	0	0	0	0
17:45-18:00	0	0	0	0	2	0	0	0	0	0	0	0	2
HEAVY TRUCKS (SEMI-TRACTOR TRAILER)													
17:00-17:15	0	0	0	0	0	0	0	0	0	0	0	0	0
17:15-17:30	0	0	0	0	0	0	0	0	0	0	0	0	0
17:30-17:45	0	0	0	0	0	0	0	0	0	0	0	0	0
17:45-18:00	0	0	0	0	1	0	0	0	0	0	0	0	1
BICYCLES													
17:00-17:15	0	0	0	0	1	0	0	0	0	0	0	0	1
17:15-17:30	0	0	0	0	2	0	0	0	0	0	0	0	2
17:30-17:45	0	0	0	0	0	0	0	0	0	0	0	0	0
17:45-18:00	0	0	0	0	0	0	0	0	0	0	0	0	0

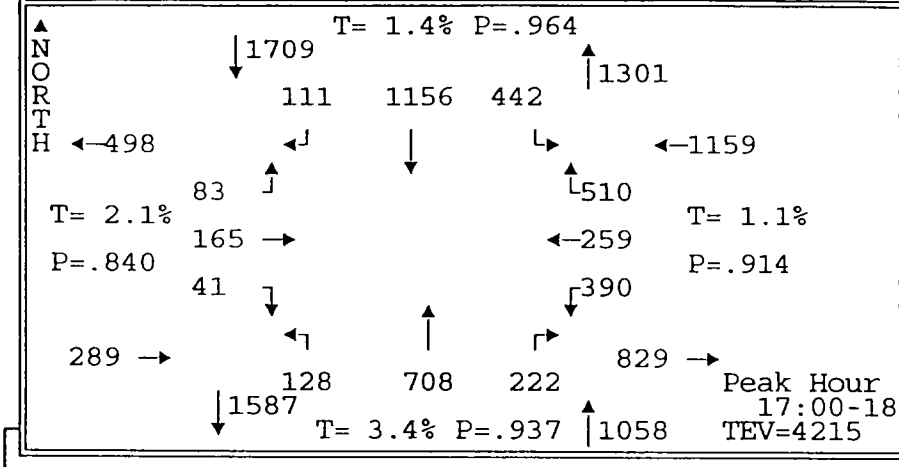
PEDESTRIANS	CROSSWALK USEAGE SOUTH	WEST	EAST	NORTH	ALL
17:00-17:15	0	0	0	0	0
17:15-17:30	0	0	0	0	0
17:30-17:45	0	3	2	0	5
17:45-18:00	0	1	0	0	1

Peak Hour by Movement													
PHF	.75	.25	.5	.64	.98	.56	.76	.9	.89	.86	.45	.8	.950
% Trucks(all)	0	0	0	0	1.1	0	0	1.4	0	0	0	0	1.1
% Trucks(M+H)	0	0	0	0	.3	0	0	0	0	0	0	0	.1
Stopped Buses	0	0	0	0	0	0	0	1	0	0	0	0	

Hourly Totals													
16:00-17:00	20	1	2	13	1476	18	41	1151	30	25	7	54	2838
16:15-17:15	23	1	2	16	1494	16	53	1159	32	29	7	72	2904
16:30-17:30	28	1	2	18	1541	12	48	1131	32	45	9	82	2949
16:45-17:45	32	0	1	19	1574	14	53	1142	34	54	8	81	3012
17:00-18:00	30	1	2	18	1572	20	58	1142	32	65	9	90	3039

INTERSECTION TURN MOVEMENT COUNT SUMMARY REPORT
MURRAY BOULEVARD AT ALLEN BOULEVARD (COMPOSITE)

23932



DATE OF COUNT: 6/13/00
DAY OF WEEK: Tue
TIME STARTED: 16:00
TIME ENDED: 18:00

TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

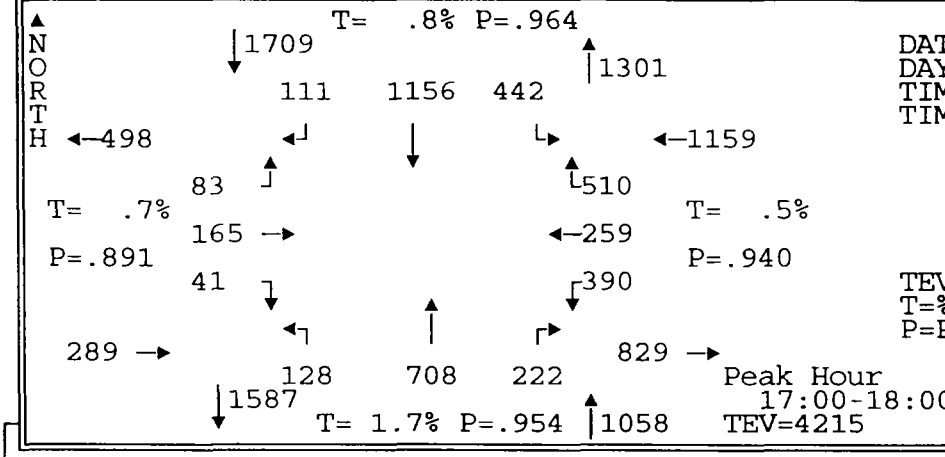
erlt

Peak Hour
17:00-18:00
TEV=4215

Traffic Smithy
(503) 641-6333

TIME PERIOD FROM - TO	EAST BOUND ↓	EAST BOUND →	EAST BOUND ↑	SOUTH BOUND ↙	SOUTH BOUND ↓	SOUTH BOUND ↳	NORTH BOUND ↰	NORTH BOUND ↑	NORTH BOUND ↱	WEST BOUND ↓	WEST BOUND ←	WEST BOUND ↑	ALL
16:00-16:05	4	9	4	6	58	33	10	67	16	18	17	29	271
16:05-16:10	1	7	4	6	72	40	12	52	19	25	18	43	299
16:10-16:15	0	13	7	7	70	37	4	49	14	36	26	32	295
16:15-16:20	5	10	6	6	83	32	8	74	12	23	10	22	291
16:20-16:25	5	16	9	5	89	42	1	40	11	30	30	57	335
16:25-16:30	4	5	8	7	86	35	14	68	14	17	16	39	313
16:30-16:35	2	5	5	6	69	39	9	49	17	27	18	46	292
16:35-16:40	4	10	11	6	99	42	3	36	18	23	21	32	305
16:40-16:45	2	9	7	7	87	26	12	55	22	39	25	42	333
16:45-16:50	1	8	7	13	92	27	5	86	18	24	13	39	333
16:50-16:55	1	13	4	12	93	27	12	52	15	47	20	46	342
16:55-17:00	3	15	11	7	62	43	11	53	13	25	19	36	298
17:00-17:05	1	11	5	8	101	42	9	69	19	32	15	43	355
17:05-17:10	6	13	11	10	103	32	7	49	8	22	19	49	329
17:10-17:15	3	13	10	10	89	30	18	60	23	44	27	44	371
17:15-17:20	2	17	8	9	86	32	6	56	18	40	21	46	341
17:20-17:25	1	13	6	11	93	49	12	67	22	29	21	45	369
17:25-17:30	4	8	5	11	117	26	7	66	23	27	26	53	373
17:30-17:35	4	15	2	7	85	39	11	52	15	37	28	42	337
17:35-17:40	4	8	9	10	86	53	15	51	20	22	19	33	330
17:40-17:45	6	17	6	12	114	37	10	53	16	39	15	51	376
17:45-17:50	7	22	7	7	80	22	18	56	19	37	28	47	350
17:50-17:55	1	10	3	7	81	49	8	66	15	31	25	29	325
17:55-18:00	2	18	11	9	121	31	7	63	24	30	15	28	359
Total Survey	73	285	166	199	2116	865	229	1389	411	724	492	973	7922
PHF	.6	.82	.72	.9	.98	.86	.74	.94	.88	.86	.86	.89	.972
% Trucks	1.4	2.5	1.8	.5	1.7	.9	0	3.2	6.3	1.5	.6	.9	1.9
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	
Peds	0	23	0	0	0	0	0	0	0	0	5	0	
Hourly Totals													
16:00-17:00	32	120	83	88	960	423	101	681	189	334	233	463	3707
16:15-17:15	37	128	94	97	1053	417	109	691	190	353	233	495	3897
16:30-17:30	30	135	90	110	1091	415	111	698	216	379	245	521	4041
16:45-17:45	36	151	84	120	1121	437	123	714	210	388	243	527	4154
17:00-18:00	41	165	83	111	1156	442	128	708	222	390	259	510	4215

INTERSECTION TURN MOVEMENT COUNT PEAK HOUR REPORT
MURRAY BOULEVARD AT ALLEN BOULEVARD (COMPOSITE)



DATE OF COUNT: 6/13/00
DAY OF WEEK: Tue
TIME STARTED: 16:00
TIME ENDED: 18:00

TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

erlt

Peak Hour
17:00-18:00
TEV=4215

Traffic Smithy
(503)641-6333

TIME PERIOD FROM - TO	EAST BOUND ↓	EAST BOUND →	EAST BOUND ↑	SOUTH BOUND ↵	SOUTH BOUND ↓	SOUTH BOUND ↳	NORTH BOUND ↰	NORTH BOUND ↑	NORTH BOUND ↱	WEST BOUND ↓	WEST BOUND ←	WEST BOUND ↑	ALL
ALL VEHICLES													
17:00-17:15	10	37	26	28	293	104	34	178	50	98	61	136	1055
17:15-17:30	7	38	19	31	296	107	25	189	63	96	68	144	1083
17:30-17:45	14	40	17	29	285	129	36	156	51	98	62	126	1043
17:45-18:00	10	50	21	23	282	102	33	185	58	98	68	104	1034
LIGHT TRUCKS (SINGLE UNIT 2 AXLES)													
17:00-17:15	0	1	0	0	1	0	0	7	2	0	0	1	12
17:15-17:30	0	0	0	0	2	0	0	3	0	1	0	0	6
17:30-17:45	0	0	1	0	4	0	0	3	2	0	0	0	10
17:45-18:00	0	0	0	0	3	0	0	1	0	2	0	2	8
MEDIUM TRUCKS (SINGLE UNIT > 2 AXLES)													
17:00-17:15	0	0	0	0	0	0	0	0	0	0	0	0	0
17:15-17:30	0	0	0	0	1	0	0	0	0	0	0	0	1
17:30-17:45	0	0	0	0	0	0	0	0	0	0	0	0	0
17:45-18:00	0	0	0	0	0	0	0	0	0	0	0	0	0
HEAVY TRUCKS (SEMI-TRACTOR TRAILER)													
17:00-17:15	0	0	0	0	0	0	0	0	0	0	0	0	0
17:15-17:30	0	0	0	0	1	0	0	0	0	0	0	0	1
17:30-17:45	0	0	0	0	1	0	0	0	0	0	0	0	1
17:45-18:00	0	0	0	0	0	0	0	0	0	0	0	0	0
BICYCLES													
17:00-17:15	0	0	0	0	1	0	0	0	0	0	0	1	2
17:15-17:30	0	0	0	0	4	0	0	2	0	0	0	0	6
17:30-17:45	0	0	0	0	1	0	0	0	0	0	0	0	1
17:45-18:00	0	0	0	0	0	0	0	0	0	0	0	0	0

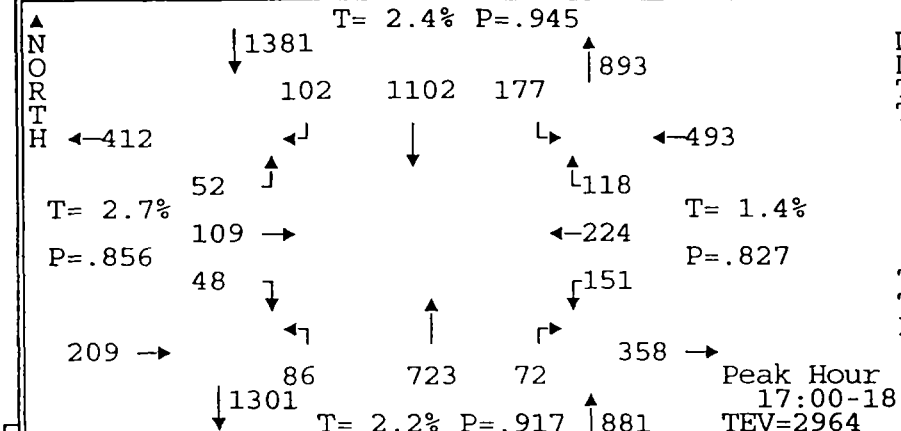
PEDESTRIANS	CROSSWALK USEAGE				ALL
	SOUTH	WEST	EAST	NORTH	
17:00-17:15	4	0	0	0	4
17:15-17:30	4	0	0	0	4
17:30-17:45	3	0	0	0	3
17:45-18:00	2	0	0	1	3

Peak Hour by Movement													
PHF	.73	.82	.8	.9	.98	.86	.89	.94	.88	.99	.95	.89	.972
% Trucks(all)	0	.6	1.2	0	1.1	0	0	2	1.8	.8	0	.6	.9
% Trucks(M+H)	0	0	0	0	.3	0	0	0	0	0	0	0	.1
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	

Hourly Totals													
16:00-17:00	32	120	83	88	960	423	101	681	189	334	233	463	3707
16:15-17:15	37	128	94	97	1053	417	109	691	190	353	233	495	3897
16:30-17:30	30	135	90	110	1091	415	111	698	216	379	245	521	4041
16:45-17:45	36	151	84	120	1121	437	123	714	210	388	243	527	4154
17:00-18:00	41	165	83	111	1156	442	128	708	222	390	259	510	4215

INTERSECTION TURN MOVEMENT COUNT SUMMARY REPORT
MURRAY BOULEVARD AT BROCKMAN/BEARD ROAD

23948



DATE OF COUNT: 6/8/00
DAY OF WEEK: THUR
TIME STARTED: 16:00
TIME ENDED: 18:00

TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

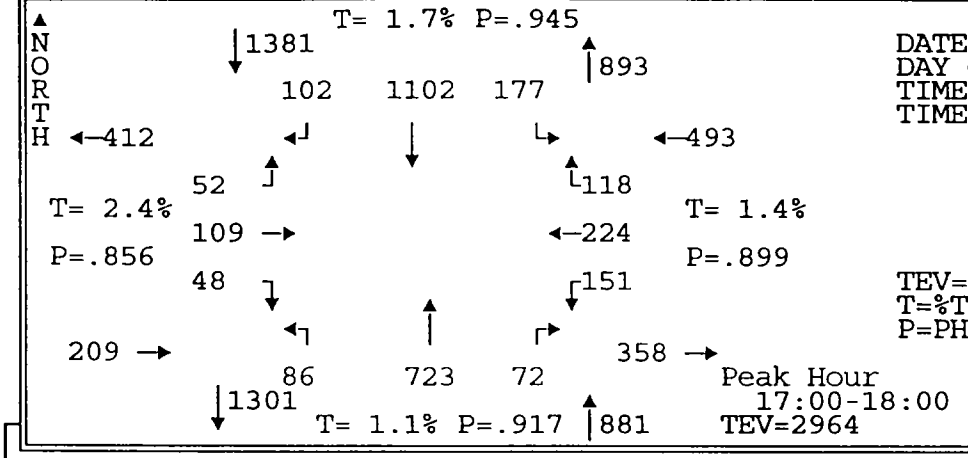
gmac

Peak Hour
17:00-18:00
TEV=2964

Traffic Smithy
(503) 641-6333

TIME PERIOD FROM - TO	EAST BOUND ↓	EAST BOUND →	EAST BOUND ↑	SOUTH BOUND ↲	SOUTH BOUND ↓	SOUTH BOUND ↳	NORTH BOUND ↰	NORTH BOUND ↑	NORTH BOUND ↱	WEST BOUND ↓	WEST BOUND ←	WEST BOUND ↑	ALL
16:00-16:05	4	10	2	5	81	6	3	43	5	3	13	10	185
16:05-16:10	6	11	4	9	62	9	8	61	5	13	13	4	205
16:10-16:15	5	7	0	6	80	11	3	57	2	7	17	7	202
16:15-16:20	5	14	6	4	56	4	7	45	4	6	12	10	173
16:20-16:25	5	6	2	2	81	15	0	63	6	13	12	6	211
16:25-16:30	5	5	1	6	76	12	6	58	7	9	17	8	210
16:30-16:35	2	11	6	7	87	10	6	62	3	8	16	6	224
16:35-16:40	6	11	1	5	65	10	5	52	1	18	29	14	217
16:40-16:45	2	6	4	7	74	12	7	68	6	7	7	11	211
16:45-16:50	1	6	12	3	60	14	9	57	3	11	19	14	209
16:50-16:55	2	9	1	6	90	16	7	62	7	2	11	5	218
16:55-17:00	4	13	3	6	67	14	6	57	2	11	18	6	207
17:00-17:05	4	4	7	7	88	19	10	59	4	11	15	4	232
17:05-17:10	4	8	3	12	90	11	10	53	5	10	18	11	235
17:10-17:15	4	11	5	8	89	25	10	54	5	15	18	16	260
17:15-17:20	8	7	2	9	91	7	5	71	6	8	15	2	231
17:20-17:25	5	11	2	6	89	15	10	62	8	19	22	20	269
17:25-17:30	1	10	1	10	104	12	4	66	8	7	23	5	251
17:30-17:35	5	16	7	7	79	13	7	52	3	18	26	9	242
17:35-17:40	2	6	5	9	105	11	4	65	6	12	17	11	253
17:40-17:45	5	8	7	10	75	15	4	68	3	16	18	10	239
17:45-17:50	2	10	3	11	93	15	8	70	11	10	15	6	254
17:50-17:55	4	13	4	7	84	16	4	50	7	11	22	12	234
17:55-18:00	4	.5	6	6	115	18	10	53	6	14	15	12	264
Total Survey	95	218	94	168	1981	310	153	1408	123	259	408	219	5436
PHF	.71	.74	.68	.85	.94	.8	.72	.89	.75	.82	.79	.78	.972
% Trucks	1.1	2.8	4.3	1.2	2.7	1	2.6	2.1	2.4	3.9	0	.9	2.2
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	
Peds	0	1	0	0	6	0	0	4	0	0	1	0	
Hourly Totals													
16:00-17:00	47	109	42	66	879	133	67	685	51	108	184	101	2472
16:15-17:15	44	104	51	73	923	162	83	690	53	121	192	111	2607
16:30-17:30	43	107	47	86	994	165	89	723	58	127	211	114	2764
16:45-17:45	45	109	55	93	1027	172	86	726	60	140	220	113	2846
17:00-18:00	48	109	52	102	1102	177	86	723	72	151	224	118	2964

INTERSECTION TURN MOVEMENT COUNT PEAK HOUR REPORT
MURRAY BOULEVARD AT BROCKMAN/BEARD ROAD



DATE OF COUNT: 6/8/00
DAY OF WEEK: THUR
TIME STARTED: 16:00
TIME ENDED: 18:00

TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

gmac

Peak Hour
17:00-18:00
TEV=2964

Traffic Smithy
(503)641-6333

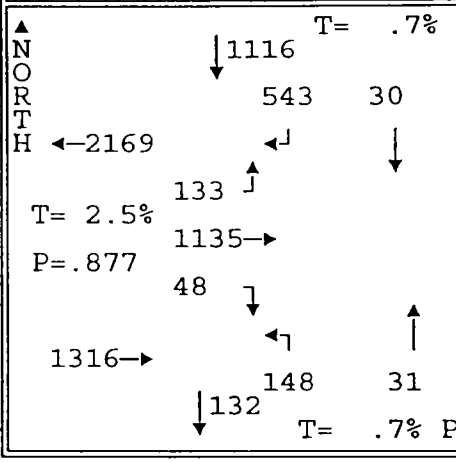
TIME PERIOD FROM - TO	EAST BOUND ↓	EAST BOUND →	EAST BOUND ↑	SOUTH BOUND ↓	SOUTH BOUND →	SOUTH BOUND ↑	NORTH BOUND ↓	NORTH BOUND →	NORTH BOUND ↑	WEST BOUND ↓	WEST BOUND →	WEST BOUND ↑	ALL
ALL VEHICLES													
17:00-17:15	12	23	15	27	267	55	30	166	14	36	51	31	727
17:15-17:30	14	28	5	25	284	34	19	199	22	34	60	27	751
17:30-17:45	12	30	19	26	259	39	15	185	12	46	61	30	734
17:45-18:00	10	28	13	24	292	49	22	173	24	35	52	30	752
LIGHT TRUCKS (SINGLE UNIT 2 AXLES)													
17:00-17:15	0	0	1	0	5	0	0	2	0	1	0	1	10
17:15-17:30	0	0	0	1	6	0	1	1	0	0	0	0	9
17:30-17:45	0	1	2	1	5	0	1	0	0	2	0	1	13
17:45-18:00	0	0	0	0	4	0	0	2	0	2	0	0	8
MEDIUM TRUCKS (SINGLE UNIT > 2 AXLES)													
17:00-17:15	0	0	0	0	0	0	0	0	0	0	0	0	0
17:15-17:30	0	0	0	0	0	0	0	0	0	0	0	0	0
17:30-17:45	0	0	0	0	0	0	0	0	0	0	0	0	0
17:45-18:00	0	1	0	0	1	0	1	0	0	0	0	0	3
HEAVY TRUCKS (SEMI-TRACTOR TRAILER)													
17:00-17:15	0	0	0	0	0	0	0	0	0	0	0	0	0
17:15-17:30	0	0	0	0	0	0	1	0	0	0	0	0	1
17:30-17:45	0	0	0	0	0	0	0	0	0	0	0	0	0
17:45-18:00	0	0	0	0	0	0	0	1	0	0	0	0	1
BICYCLES													
17:00-17:15	0	0	0	0	2	0	0	0	1	0	0	0	3
17:15-17:30	0	0	0	0	0	0	0	1	0	0	0	0	1
17:30-17:45	0	0	0	0	1	0	0	2	0	0	0	0	3
17:45-18:00	0	0	0	0	0	0	0	0	0	0	0	0	0

PEDESTRIANS	CROSSWALK USEAGE SOUTH	WEST	EAST	NORTH	ALL
17:00-17:15	0	0	0	0	0
17:15-17:30	1	0	0	0	1
17:30-17:45	0	0	0	0	0
17:45-18:00	0	1	4	1	6

Peak Hour by Movement													
PHF	.86	.91	.68	.94	.94	.8	.72	.91	.75	.82	.92	.95	.985
% Trucks(all)	0	1.8	5.8	2	1.9	0	4.7	.8	0	3.3	0	1.7	1.5
% Trucks(M+H)	0	.9	0	0	.1	0	2.3	.1	0	0	0	0	.2
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	

Hourly Totals													
16:00-17:00	47	109	42	66	879	133	67	685	51	108	184	101	2472
16:15-17:15	44	104	51	73	923	162	83	690	53	121	192	111	2607
16:30-17:30	43	107	47	86	994	165	89	723	58	127	211	114	2764
16:45-17:45	45	109	55	93	1027	172	86	726	60	140	220	113	2846
17:00-18:00	48	109	52	102	1102	177	86	723	72	151	224	118	2964

INTERSECTION TURN MOVEMENT COUNT SUMMARY REPORT
NIMBUS AVENUE AT SCHOLLS FERRY ROAD



DATE OF COUNT: 6/13/00
DAY OF WEEK: Tue
TIME STARTED: 16:00
TIME ENDED: 18:00

TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

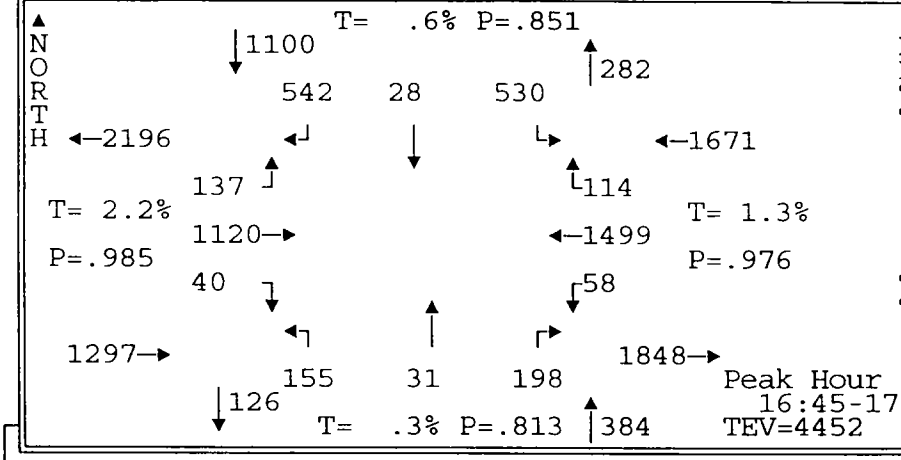
djmk

Peak Hour
16:55-17:55
TEV=4457

Traffic Smithy
(503) 641-6333

TIME PERIOD FROM - TO	EAST BOUND ↓	EAST BOUND →	EAST BOUND ↑	SOUTH BOUND ↙	SOUTH BOUND ↓	SOUTH BOUND ↘	NORTH BOUND ↰	NORTH BOUND ↑	NORTH BOUND ↱	WEST BOUND ↓	WEST BOUND ←	WEST BOUND ↑	ALL
16:00-16:05	5	106	14	24	5	41	10	5	11	6	123	17	367
16:05-16:10	12	76	11	30	3	43	6	2	15	8	114	17	337
16:10-16:15	3	102	19	22	1	38	10	0	9	12	128	12	356
16:15-16:20	2	85	12	33	4	42	10	2	10	10	129	17	356
16:20-16:25	9	77	12	31	5	25	5	0	7	9	133	12	325
16:25-16:30	6	74	9	22	3	37	14	3	17	7	133	13	338
16:30-16:35	3	96	6	32	1	23	9	6	21	4	119	8	328
16:35-16:40	2	97	8	41	1	51	11	2	14	7	137	4	375
16:40-16:45	3	88	10	33	2	38	13	4	12	6	135	8	352
16:45-16:50	1	95	14	40	1	25	9	3	19	3	137	12	359
16:50-16:55	5	104	17	26	2	25	9	1	5	9	146	8	357
16:55-17:00	4	80	9	49	2	35	18	4	13	4	96	13	327
17:00-17:05	2	73	15	49	2	53	14	2	30	8	115	11	374
17:05-17:10	10	94	10	43	0	58	7	1	19	5	127	12	386
17:10-17:15	1	100	15	51	2	43	19	3	23	4	134	7	402
17:15-17:20	5	106	10	60	3	53	7	2	18	9	124	8	405
17:20-17:25	2	91	16	47	2	59	16	2	27	5	133	9	409
17:25-17:30	3	86	6	48	5	46	9	7	11	4	95	11	331
17:30-17:35	1	86	8	45	3	47	13	0	9	1	134	12	359
17:35-17:40	5	92	11	43	3	39	16	4	14	3	130	9	369
17:40-17:45	1	113	6	41	3	47	18	2	10	3	128	2	374
17:45-17:50	6	87	17	34	3	39	4	3	22	6	133	8	362
17:50-17:55	8	127	10	33	2	24	7	1	7	2	129	9	359
17:55-18:00	2	89	5	31	7	20	6	0	9	2	134	9	314
Total Survey	101	2224	270	908	65	951	260	59	352	137	3046	248	8621
PHF	.75	.87	.81	.86	.68	.86	.79	.7	.7	.75	.94	.77	.916
% Trucks	0	2.9	.4	.4	3.1	.7	.4	0	1.1	0	1.5	1.6	1.5
Stopped Buses	0	0	0	0	0	0	0	0	0	0	1	0	
Peds	0	9	0	0	0	0	0	0	0	0	17	0	
Hourly Totals													
16:00-17:00	55	1080	141	383	30	423	124	32	153	85	1530	141	4177
16:15-17:15	48	1063	137	450	25	455	138	31	190	76	1541	125	4279
16:30-17:30	41	1110	136	519	23	509	141	37	212	68	1498	111	4405
16:45-17:45	40	1120	137	542	28	530	155	31	198	58	1499	114	4452
17:00-18:00	46	1144	129	525	35	528	136	27	199	52	1516	107	4444

INTERSECTION TURN MOVEMENT COUNT PEAK HOUR REPORT
NIMBUS AVENUE AT SCHOLLS FERRY ROAD



DATE OF COUNT: 6/13/00
DAY OF WEEK: Tue
TIME STARTED: 16:00
TIME ENDED: 18:00

TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

djmk

Peak Hour
16:45-17:45
TEV=4452

Traffic Smithy
(503)641-6333

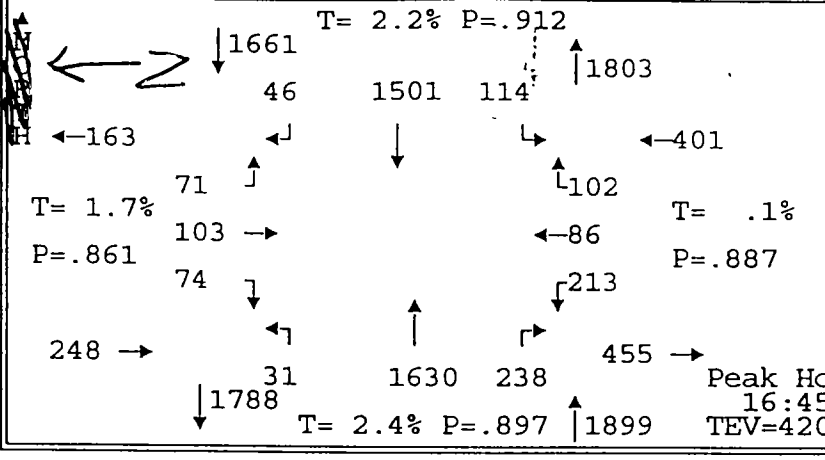
TIME PERIOD FROM - TO	EAST BOUND ↓	EAST BOUND →	EAST BOUND ↑	SOUTH BOUND ↵	SOUTH BOUND ↓	SOUTH BOUND ↳	NORTH BOUND ↰	NORTH BOUND ↑	NORTH BOUND ↱	WEST BOUND ↓	WEST BOUND ←	WEST BOUND ↑	ALL
ALL VEHICLES													
16:45-17:00	10	279	40	115	5	85	36	8	37	16	379	33	1043
17:00-17:15	13	267	40	143	4	154	40	6	72	17	376	30	1162
17:15-17:30	10	283	32	155	10	158	32	11	56	18	352	28	1145
17:30-17:45	7	291	25	129	9	133	47	6	33	7	392	23	1102
LIGHT TRUCKS (SINGLE UNIT 2 AXLES)													
16:45-17:00	0	1	0	2	1	1	0	0	0	0	5	0	10
17:00-17:15	0	8	1	1	0	0	0	0	1	0	2	0	13
17:15-17:30	0	8	0	0	0	0	0	0	0	0	4	0	12
17:30-17:45	0	4	0	1	0	0	0	0	0	0	7	0	12
MEDIUM TRUCKS (SINGLE UNIT > 2 AXLES)													
16:45-17:00	0	1	0	0	0	0	0	0	0	0	1	0	2
17:00-17:15	0	1	0	0	0	0	0	0	0	0	1	0	2
17:15-17:30	0	1	0	0	0	0	0	0	0	0	0	0	1
17:30-17:45	0	0	0	0	0	0	0	0	0	0	0	0	0
HEAVY TRUCKS (SEMI-TRACTOR TRAILER)													
16:45-17:00	0	3	0	0	0	0	0	0	0	0	0	1	4
17:00-17:15	0	0	0	0	0	0	0	0	0	0	0	0	0
17:15-17:30	0	0	0	0	0	0	0	0	0	0	0	0	0
17:30-17:45	0	1	0	0	0	1	0	0	0	0	0	0	2
BICYCLES													
16:45-17:00	0	0	0	0	0	0	0	0	0	0	0	0	0
17:00-17:15	0	1	0	0	0	0	0	0	0	0	1	0	2
17:15-17:30	0	0	0	1	0	0	0	0	0	0	1	0	2
17:30-17:45	0	1	0	0	0	0	0	0	0	0	2	0	3

PEDESTRIANS	CROSSWALK USEAGE SOUTH	WEST	EAST	NORTH	ALL
16:45-17:00	0	0	0	2	2
17:00-17:15	1	0	0	5	6
17:15-17:30	0	0	0	1	1
17:30-17:45	1	0	0	5	6

Peak Hour by Movement													
PHF	.77	.96	.86	.87	.7	.84	.82	.7	.69	.81	.96	.86	.957
% Trucks(all)	0	2.5	.7	.7	3.6	.4	0	0	.5	0	1.3	.9	1.3
% Trucks(M+H)	0	.6	0	0	0	.2	0	0	0	0	.1	.9	.2
Stopped Buses	0	0	0	0	0	0	0	0	0	0	1	0	
Hourly Totals													
16:00-17:00	55	1080	141	383	30	423	124	32	153	85	1530	141	4177
16:15-17:15	48	1063	137	450	25	455	138	31	190	76	1541	125	4279
16:30-17:30	41	1110	136	519	23	509	141	37	212	68	1498	111	4405
16:45-17:45	40	1120	137	542	28	530	155	31	198	58	1499	114	4452
17:00-18:00	46	1144	129	525	35	528	136	27	199	52	1516	107	4444

INTERSECT TURN MOVEMENT COUNT SUMMARY EPORT
SCHOOLS FERRY ROAD AT CASCADE AVENUE

19909



DATE OF COUNT: 05/20/99
DAY OF WEEK: Thu
TIME STARTED: 16:00
TIME ENDED: 18:00

TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

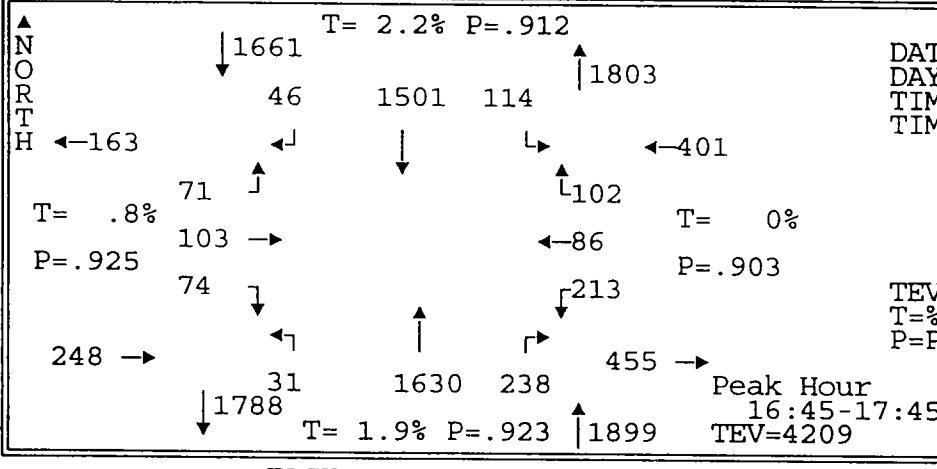
BKNH

Peak Hour
16:45-17:45
TEV=4209

Traffic Smithy
(503) 641-6333

TIME PERIOD FROM - TO	EAST BOUND ↓	EAST BOUND →	EAST BOUND ↑	SOUTH BOUND ↵	SOUTH BOUND ↓	SOUTH BOUND ↳	NORTH BOUND ↰	NORTH BOUND ↑	NORTH BOUND ↱	WEST BOUND ↓	WEST BOUND ←	WEST BOUND ↑	ALL
16:00-16:05	5	6	4	9	134	10	3	124	23	15	2	9	344
16:05-16:10	5	18	3	6	109	11	1	153	14	14	7	7	348
16:10-16:15	7	9	3	6	124	8	1	147	11	21	9	5	351
16:15-16:20	15	6	6	2	123	11	3	128	22	19	4	7	346
16:20-16:25	9	8	4	4	123	8	4	118	10	14	5	6	313
16:25-16:30	9	3	3	4	117	12	6	125	13	17	5	10	324
16:30-16:35	4	13	5	8	124	5	2	140	15	12	1	10	339
16:35-16:40	6	9	3	5	126	8	1	134	19	11	4	8	334
16:40-16:45	5	6	3	5	115	14	4	106	18	19	7	8	310
16:45-16:50	7	12	5	6	129	8	2	137	14	11	9	14	354
16:50-16:55	4	8	3	1	142	10	5	138	14	23	5	6	359
16:55-17:00	6	5	9	4	108	10	4	123	13	15	7	6	310
17:00-17:05	8	8	2	1	105	12	2	129	29	19	8	10	333
17:05-17:10	5	6	6	2	127	7	1	148	23	20	3	9	357
17:10-17:15	7	9	9	4	105	13	2	158	22	8	8	14	359
17:15-17:20	8	11	7	4	135	7	3	149	23	26	6	10	389
17:20-17:25	7	7	7	4	119	10	4	153	15	19	8	5	358
17:25-17:30	2	10	8	3	119	11	5	124	14	21	10	6	333
17:30-17:35	8	11	7	4	142	14	2	109	24	16	11	5	353
17:35-17:40	7	11	5	9	133	4	1	132	15	24	8	12	361
17:40-17:45	5	5	3	4	137	8	0	130	32	11	3	5	343
17:45-17:50	4	13	3	3	106	12	3	143	13	8	6	14	328
17:50-17:55	10	6	4	8	144	12	1	112	20	23	3	10	353
17:55-18:00	5	4	5	6	136	4	4	108	11	19	5	11	318
Total Survey	158	204	117	112	2982	229	64	3168	427	405	144	207	8217
PHF	.84	.8	.77	.68	.91	.81	.65	.89	.8	.81	.74	.77	.951
% Trucks	1.9	2	.9	.9	2.3	.4	0	2.7	.7	.2	0	0	2
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	
Peds	0	3	0	0	2	0	0	1	0	0	0	0	
Hourly Totals													
16:00-17:00	82	103	51	60	1474	115	36	1573	186	191	65	96	4032
16:15-17:15	85	93	58	46	1444	118	36	1584	212	188	66	108	4038
16:30-17:30	69	104	67	47	1454	115	35	1639	219	204	76	106	4135
16:45-17:45	74	103	71	46	1501	114	31	1630	238	213	86	102	4209
17:00-18:00	76	101	66	52	1508	114	28	1595	241	214	79	111	4185

INTERSECTIC TURN MOVEMENT COUNT PEAK HOI REPORT
SCHC LS FERRY ROAD AT CASCADE AVEN



DATE OF COUNT: 05/20/99
DAY OF WEEK: Thu
TIME STARTED: 16:00
TIME ENDED: 18:00

TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

BKNH

Peak Hour
16:45-17:45
TEV=4209

Traffic Smithy
(503)641-6333

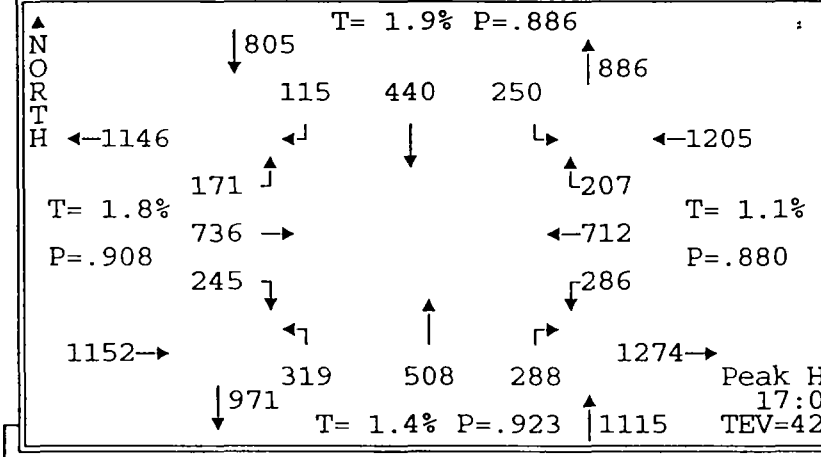
TIME PERIOD FROM - TO	EAST BOUND ↓	EAST BOUND →	EAST BOUND ↑	SOUTH BOUND ↵	SOUTH BOUND ↓	SOUTH BOUND ↳	NORTH BOUND ↰	NORTH BOUND ↑	NORTH BOUND ↱	WEST BOUND ↱	WEST BOUND ←	WEST BOUND ↰	ALL
ALL VEHICLES													
16:45-17:00	17	25	17	11	379	28	11	398	41	49	21	26	1023
17:00-17:15	20	23	17	7	337	32	5	435	74	47	19	33	1049
17:15-17:30	17	28	22	11	373	28	12	426	52	66	24	21	1080
17:30-17:45	20	27	15	17	412	26	3	371	71	51	22	22	1057
LIGHT TRUCKS (SINGLE UNIT 2 AXLES)													
16:45-17:00	0	0	0	0	10	0	0	10	0	0	0	0	20
17:00-17:15	1	0	0	1	5	0	0	8	0	0	0	0	15
17:15-17:30	0	0	0	0	9	1	0	8	0	0	0	0	18
17:30-17:45	0	1	0	0	4	0	0	1	0	0	0	0	6
MEDIUM TRUCKS (SINGLE UNIT > 2 AXLES)													
16:45-17:00	0	0	0	0	1	0	0	0	0	0	0	0	1
17:00-17:15	0	0	0	0	2	0	0	1	0	0	0	0	3
17:15-17:30	0	0	0	0	0	0	0	1	0	0	0	0	1
17:30-17:45	0	0	0	0	0	0	0	0	0	0	0	0	0
HEAVY TRUCKS (SEMI-TRACTOR TRAILER)													
16:45-17:00	0	0	0	0	1	0	0	4	0	0	0	0	5
17:00-17:15	0	0	0	0	0	0	0	0	0	0	0	0	0
17:15-17:30	0	0	0	0	0	0	0	2	0	0	0	0	2
17:30-17:45	0	0	0	0	2	0	0	1	0	0	0	0	3
BICYCLES													
16:45-17:00	0	0	0	0	1	0	0	0	0	0	1	0	2
17:00-17:15	0	0	0	0	0	0	0	0	0	0	0	0	0
17:15-17:30	0	1	0	0	0	0	0	0	0	1	0	0	2
17:30-17:45	0	0	0	0	1	0	0	0	0	0	0	0	1

PEDESTRIANS	CROSSWALK USEAGE				ALL
	SOUTH	WEST	EAST	NORTH	
16:45-17:00	1	0	0	0	1
17:00-17:15	0	0	0	0	0
17:15-17:30	0	0	0	0	0
17:30-17:45	0	1	0	0	1

Peak Hour by Movement													
PHF	.93	.92	.81	.68	.91	.89	.65	.94	.8	.81	.9	.77	.974
% Trucks(all)	1.4	1	0	2.2	2.3	.9	0	2.2	0	0	0	0	1.8
% Trucks(M+H)	0	0	0	0	.4	0	0	.6	0	0	0	0	.4
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	
Hourly Totals													
16:00-17:00	82	103	51	60	1474	115	36	1573	186	191	65	96	4032
16:15-17:15	85	93	58	46	1444	118	36	1584	212	188	66	108	4038
16:30-17:30	69	104	67	47	1454	115	35	1639	219	204	76	106	4135
16:45-17:45	74	103	71	46	1501	114	31	1630	238	213	86	102	4209
17:00-18:00	76	101	66	52	1508	114	28	1595	241	214	79	111	4185

INTERSECTION TURN MOVEMENT COUNT SUMMARY REPORT
HALL BOULEVARD AT SCHOLLS FERRY ROAD

23931



DATE OF COUNT: 6/14/00
DAY OF WEEK: Wed
TIME STARTED: 16:00
TIME ENDED: 18:00

TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

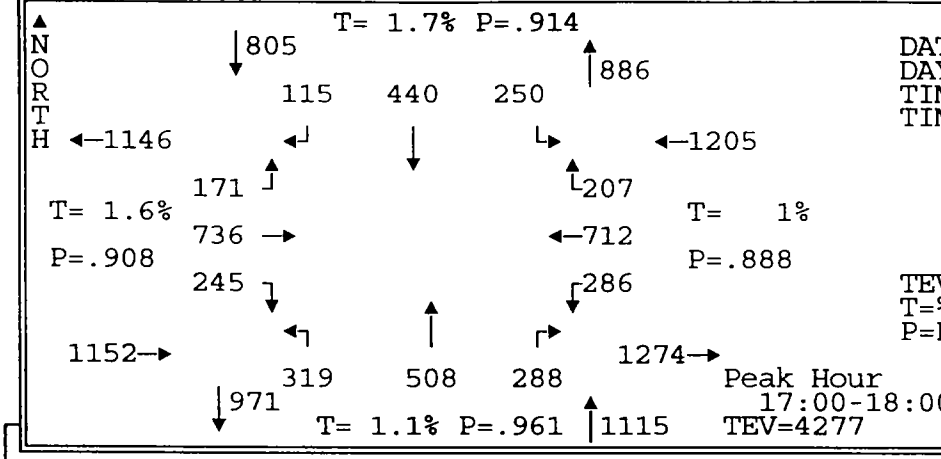
dlyj

Peak Hour
17:00-18:00
TEV=4277

Traffic Smithy
(503) 641-6333

TIME PERIOD FROM - TO	EAST BOUND ↓	EAST BOUND →	EAST BOUND ↑	SOUTH BOUND ↰	SOUTH BOUND ↓	SOUTH BOUND ↳	NORTH BOUND ↰	NORTH BOUND ↑	NORTH BOUND ↱	WEST BOUND ↓	WEST BOUND ←	WEST BOUND ↑	ALL
16:00-16:05	17	46	17	4	43	22	21	32	24	27	50	9	312
16:05-16:10	30	70	14	9	32	13	25	29	18	18	45	14	317
16:10-16:15	24	43	16	14	29	23	28	50	23	25	46	16	337
16:15-16:20	22	70	9	10	45	16	24	32	22	16	64	14	344
16:20-16:25	31	66	15	13	52	22	19	33	18	24	44	14	351
16:25-16:30	11	40	12	11	44	24	21	44	27	19	53	21	327
16:30-16:35	24	70	3	11	33	17	20	28	15	18	56	10	305
16:35-16:40	26	56	17	6	50	17	31	38	20	28	44	14	347
16:40-16:45	15	59	16	12	51	21	19	39	26	23	45	18	344
16:45-16:50	8	70	1	8	29	15	24	30	36	30	73	17	341
16:50-16:55	20	72	15	3	34	19	32	33	23	24	50	15	340
16:55-17:00	22	58	7	10	34	16	19	30	16	17	47	16	292
17:00-17:05	21	58	13	9	21	19	30	48	22	28	78	17	364
17:05-17:10	20	73	17	4	53	21	23	25	18	29	65	13	361
17:10-17:15	13	52	19	13	42	27	28	54	27	19	67	23	384
17:15-17:20	26	63	10	12	36	17	24	47	21	33	77	16	382
17:20-17:25	25	64	17	20	39	21	29	35	32	13	44	19	358
17:25-17:30	29	67	16	10	41	24	23	47	29	7	51	13	357
17:30-17:35	22	54	9	5	26	19	28	55	24	26	57	22	347
17:35-17:40	21	74	16	8	42	16	26	43	18	26	44	15	349
17:40-17:45	17	64	13	8	29	26	24	43	29	23	59	19	354
17:45-17:50	14	31	17	5	27	25	29	38	23	32	68	20	329
17:50-17:55	16	67	10	11	49	15	31	35	24	30	57	17	362
17:55-18:00	21	69	14	10	35	20	24	38	21	20	45	13	330
Total Survey	495	1456	313	226	916	475	602	926	556	555	1329	385	8234
PHF	.77	.94	.87	.64	.84	.93	.95	.88	.85	.84	.85	.89	.948
% Trucks	3	1.6	.6	0	2.9	.6	1	2.1	.9	.5	1.6	.5	1.5
Stopped Buses	0	0	0	0	2	0	0	0	0	0	6	0	
Peds	0	0	0	0	18	0	0	23	0	0	0	0	
Hourly Totals													
16:00-17:00	250	720	142	111	476	225	283	418	268	269	617	178	3957
16:15-17:15	233	744	144	110	488	234	290	434	270	275	686	192	4100
16:30-17:30	249	762	151	118	463	234	302	454	285	269	697	191	4175
16:45-17:45	244	769	153	110	426	240	310	490	295	275	712	205	4229
17:00-18:00	245	736	171	115	440	250	319	508	288	286	712	207	4277

INTERSECTION TURN MOVEMENT COUNT PEAK HOUR REPORT
HALL BOULEVARD AT SCHOLLS FERRY ROAD



DATE OF COUNT: 6/14/00
DAY OF WEEK: Wed
TIME STARTED: 16:00
TIME ENDED: 18:00

TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

dlyj

Peak Hour
17:00-18:00
TEV=4277

Traffic Smithy
(503)641-6333

TIME PERIOD FROM - TO	EAST BOUND ↓	EAST BOUND →	EAST BOUND ↑	SOUTH BOUND ↵	SOUTH BOUND ↓	SOUTH BOUND ↳	NORTH BOUND ↰	NORTH BOUND ↑	NORTH BOUND ↱	WEST BOUND ↓	WEST BOUND ←	WEST BOUND ↑	ALL
ALL VEHICLES													
17:00-17:15	54	183	49	26	116	67	81	127	67	76	210	53	1109
17:15-17:30	80	194	43	42	116	62	76	129	82	53	172	48	1097
17:30-17:45	60	192	38	21	97	61	78	141	71	75	160	56	1050
17:45-18:00	51	167	41	26	111	60	84	111	68	82	170	50	1021
LIGHT TRUCKS (SINGLE UNIT 2 AXLES)													
17:00-17:15	2	1	0	0	4	0	1	3	0	0	4	0	15
17:15-17:30	1	2	1	0	2	0	0	1	0	0	1	0	8
17:30-17:45	2	4	0	0	2	0	1	1	1	0	1	0	12
17:45-18:00	1	2	0	0	4	1	1	1	0	1	4	0	15
MEDIUM TRUCKS (SINGLE UNIT > 2 AXLES)													
17:00-17:15	0	0	0	0	1	0	0	0	0	0	0	0	1
17:15-17:30	1	1	0	0	0	0	0	0	1	0	0	0	3
17:30-17:45	1	0	0	0	0	0	0	0	0	0	0	0	1
17:45-18:00	0	0	0	0	0	0	0	0	0	0	0	0	0
HEAVY TRUCKS (SEMI-TRACTOR TRAILER)													
17:00-17:15	0	0	0	0	0	0	0	0	0	0	0	1	1
17:15-17:30	0	0	0	0	0	0	0	0	0	0	0	0	0
17:30-17:45	0	0	0	0	0	0	0	1	0	0	0	0	1
17:45-18:00	0	0	0	0	0	0	0	0	0	0	0	0	0
BICYCLES													
17:00-17:15	0	0	0	0	0	0	0	0	0	0	2	0	2
17:15-17:30	0	0	0	0	1	0	0	0	0	0	0	0	1
17:30-17:45	1	3	0	0	1	0	0	0	0	0	0	0	5
17:45-18:00	0	0	0	0	1	0	0	2	0	0	1	0	4

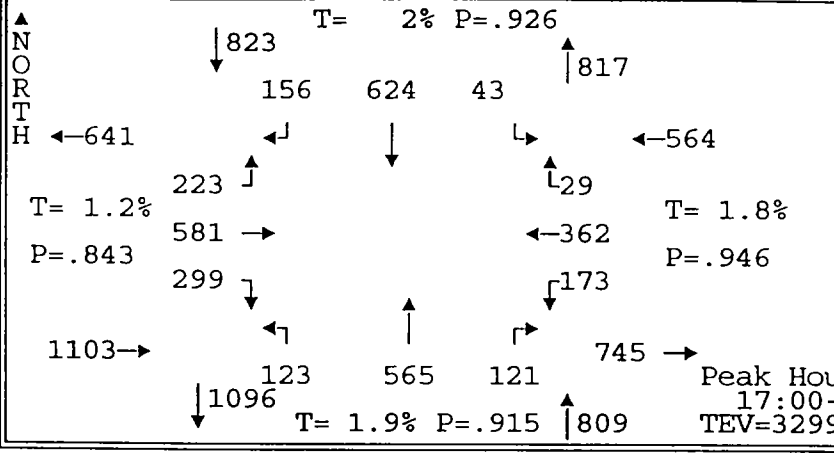
PEDESTRIANS	CROSSWALK USEAGE SOUTH	WEST	EAST	NORTH	ALL
17:00-17:15	0	1	6	0	7
17:15-17:30	0	2	6	0	8
17:30-17:45	0	2	2	0	4
17:45-18:00	0	4	1	0	5

Peak Hour by Movement													
PHF	.77	.95	.87	.68	.95	.93	.95	.9	.88	.87	.85	.92	.964
% Trucks(all)	3.3	1.4	.6	0	3	.4	.9	1.4	.7	.3	1.4	.5	1.3
% Trucks(M+H)	.8	.1	0	0	.2	0	0	.2	.3	0	0	.5	.2
Stopped Buses	0	0	0	0	1	0	0	0	0	0	3	0	

Hourly Totals													
16:00-17:00	250	720	142	111	476	225	283	418	268	269	617	178	3957
16:15-17:15	233	744	144	110	488	234	290	434	270	275	686	192	4100
16:30-17:30	249	762	151	118	463	234	302	454	285	269	697	191	4175
16:45-17:45	244	769	153	110	426	240	310	490	295	275	712	205	4229
17:00-18:00	245	736	171	115	440	250	319	508	288	286	712	207	4277

INTERSECTION TURN MOVEMENT COUNT SUMMARY REPORT
ALLEN BOULEVARD AT SCHOLLS FERRY ROAD

27496



DATE OF COUNT: 05/31/00
DAY OF WEEK: Wed
TIME STARTED: 16:00
TIME ENDED: 18:00

TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

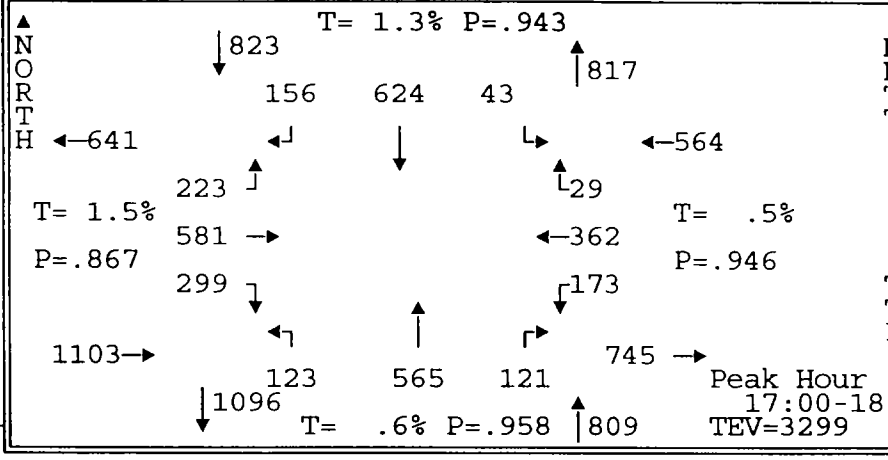
BKUZ

Peak Hour
17:00-18:00
TEV=3299

Traffic Smithy
(503) 641-6333

TIME PERIOD FROM - TO	EAST BOUND ↓	EAST BOUND →	EAST BOUND ↑	SOUTH BOUND ↙	SOUTH BOUND ↓	SOUTH BOUND ↳	NORTH BOUND ↰	NORTH BOUND ↑	NORTH BOUND ↱	WEST BOUND ↓	WEST BOUND ←	WEST BOUND ↑	ALL
16:00-16:05	14	29	15	17	30	3	15	43	16	7	29	1	219
16:05-16:10	23	51	24	11	32	2	22	42	7	8	32	0	254
16:10-16:15	26	49	16	18	49	2	6	35	10	6	26	3	246
16:15-16:20	20	48	9	18	45	3	11	36	12	15	32	7	256
16:20-16:25	17	30	20	16	54	4	17	46	13	7	17	2	243
16:25-16:30	23	44	13	11	47	2	14	45	11	12	27	2	251
16:30-16:35	30	35	13	14	43	0	13	43	13	12	28	2	246
16:35-16:40	29	45	23	18	47	2	9	37	10	7	28	2	257
16:40-16:45	23	44	24	6	47	2	6	35	17	14	37	0	255
16:45-16:50	21	29	8	15	59	4	8	52	12	12	27	3	250
16:50-16:55	13	45	26	7	43	2	12	46	11	8	23	0	236
16:55-17:00	19	43	8	9	52	2	11	51	11	12	37	2	257
17:00-17:05	44	47	19	12	37	2	10	29	10	21	30	3	264
17:05-17:10	30	39	25	13	57	2	10	41	15	13	25	3	273
17:10-17:15	38	61	15	11	48	4	12	43	14	8	35	1	290
17:15-17:20	30	62	27	10	46	6	9	45	14	14	31	4	298
17:20-17:25	17	44	20	13	63	2	14	60	10	14	27	5	289
17:25-17:30	22	53	17	17	53	8	8	43	8	13	35	4	281
17:30-17:35	18	51	12	14	50	2	8	49	10	18	28	5	265
17:35-17:40	21	36	19	6	59	2	11	52	8	16	28	1	259
17:40-17:45	26	55	13	19	55	4	8	55	5	8	24	1	273
17:45-17:50	18	53	24	14	43	6	13	43	6	11	41	1	273
17:50-17:55	12	32	22	15	62	3	10	54	10	24	23	1	268
17:55-18:00	23	48	10	12	51	2	10	51	11	13	35	0	266
Total Survey	557	1073	422	316	1172	71	267	1076	264	293	705	53	6269
PHF	.67	.87	.83	.81	.94	.67	.88	.91	.7	.9	.91	.52	.940
% Trucks	1.4	1	1.4	2.5	1.9	1.4	6	1.1	1.1	.3	2.4	1.9	1.7
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	
Peds	0	5	0	0	12	0	0	14	0	0	22	0	
Hourly Totals													
16:00-17:00	258	492	199	160	548	28	144	511	143	120	343	24	2970
16:15-17:15	307	510	203	150	579	29	133	504	149	141	346	27	3078
16:30-17:30	316	547	225	145	595	36	122	525	145	148	363	29	3196
16:45-17:45	299	565	209	146	622	40	121	566	128	157	350	32	3235
17:00-18:00	299	581	223	156	624	43	123	565	121	173	362	29	3299

INTERSECTION TURN MOVEMENT COUNT PEAK HOUR REPORT
ALLEN BOULEVARD AT SCHOLLS FERRY ROAD



DATE OF COUNT: 05/31/00
DAY OF WEEK: Wed
TIME STARTED: 16:00
TIME ENDED: 18:00

TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

BKUZ

Peak Hour
17:00-18:00
TEV=3299

Traffic Smithy
(503)641-6333

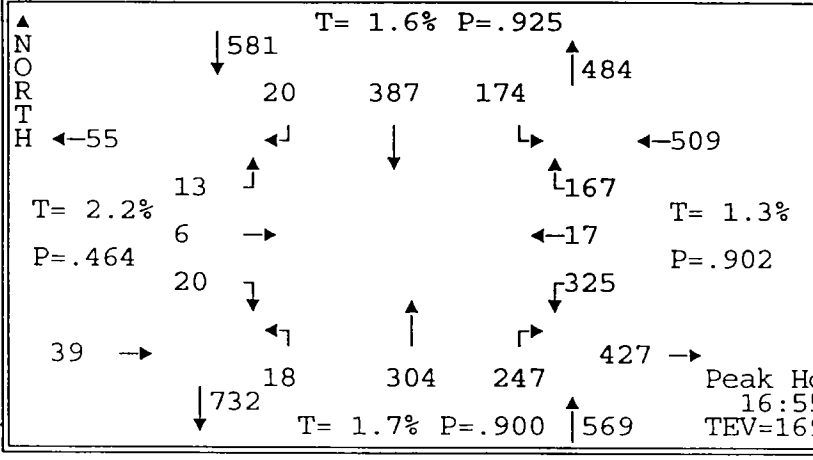
TIME PERIOD FROM - TO	EAST BOUND ↓	EAST BOUND →	EAST BOUND ↑	SOUTH BOUND ↵	SOUTH BOUND ↓	SOUTH BOUND ↳	NORTH BOUND ↰	NORTH BOUND ↑	NORTH BOUND ↱	WEST BOUND ↴	WEST BOUND ←	WEST BOUND ↰	ALL
ALL VEHICLES													
17:00-17:15	112	147	59	36	142	8	32	113	39	42	90	7	827
17:15-17:30	69	159	64	40	162	16	31	148	32	41	93	13	868
17:30-17:45	65	142	44	39	164	8	27	156	23	42	80	7	797
17:45-18:00	53	133	56	41	156	11	33	148	27	48	99	2	807
LIGHT TRUCKS (SINGLE UNIT 2 AXLES)													
17:00-17:15	5	3	1	0	2	0	1	0	0	0	0	1	13
17:15-17:30	2	1	2	0	2	0	0	1	0	0	2	0	10
17:30-17:45	0	1	0	1	3	0	0	1	1	0	0	0	7
17:45-18:00	0	1	1	0	2	0	0	1	0	0	0	0	5
MEDIUM TRUCKS (SINGLE UNIT > 2 AXLES)													
17:00-17:15	0	0	0	0	0	0	0	0	0	0	0	0	0
17:15-17:30	0	0	0	0	0	0	0	0	0	0	0	0	0
17:30-17:45	0	0	0	0	0	0	0	0	0	0	0	0	0
17:45-18:00	0	0	0	0	0	0	0	0	0	0	0	0	0
HEAVY TRUCKS (SEMI-TRACTOR TRAILER)													
17:00-17:15	0	0	0	0	0	0	0	0	0	0	0	0	0
17:15-17:30	0	0	0	0	0	0	0	0	0	0	0	0	0
17:30-17:45	0	0	0	0	1	0	0	0	0	0	0	0	1
17:45-18:00	0	0	0	0	0	0	0	0	0	0	0	0	0
BICYCLES													
17:00-17:15	0	2	0	0	0	0	0	0	0	0	0	0	2
17:15-17:30	0	0	0	0	1	0	0	0	0	0	1	0	2
17:30-17:45	0	1	0	0	0	0	0	1	0	0	0	0	2
17:45-18:00	0	0	0	0	0	0	0	0	0	0	0	0	0

PEDESTRIANS	CROSSWALK USEAGE SOUTH	WEST	EAST	NORTH	ALL
17:00-17:15	0	0	0	3	3
17:15-17:30	0	0	0	1	1
17:30-17:45	1	0	0	0	1
17:45-18:00	1	2	1	0	4

Peak Hour by Movement													
PHF	.67	.91	.87	.95	.95	.67	.93	.91	.78	.9	.91	.56	.950
% Trucks(all)	2.3	1	1.8	.6	1.6	0	.8	.5	.8	0	.6	3.4	1.1
% Trucks(M+H)	0	0	0	0	.2	0	0	0	0	0	0	0	0
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	
Hourly Totals													
16:00-17:00	258	492	199	160	548	28	144	511	143	120	343	24	2970
16:15-17:15	307	510	203	150	579	29	133	504	149	141	346	27	3078
16:30-17:30	316	547	225	145	595	36	122	525	145	148	363	29	3196
16:45-17:45	299	565	209	146	622	40	121	566	128	157	350	32	3235
17:00-18:00	299	581	223	156	624	43	123	565	121	173	362	29	3299

INTERSECTION TURN MOVEMENT COUNT SUMMARY REPORT
OLESON ROAD AT VERMONT STREET

23834



DATE OF COUNT: 06/06/00
DAY OF WEEK: Tue
TIME STARTED: 16:00
TIME ENDED: 18:00

TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

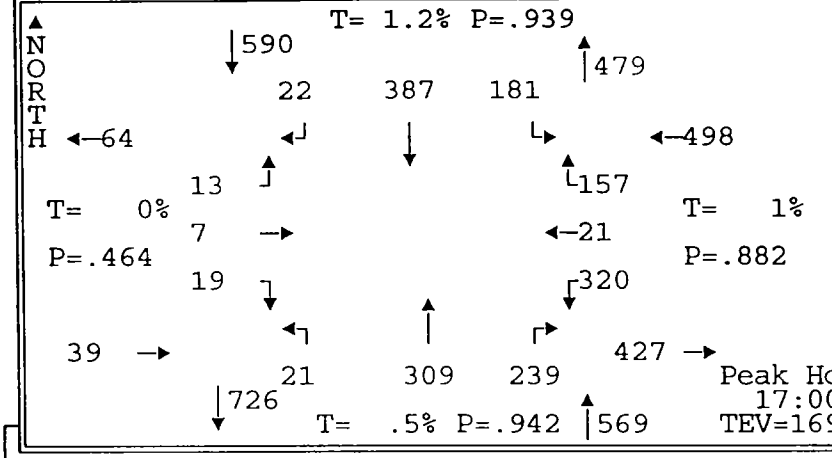
dl

Peak Hour
16:55-17:55
TEV=1698

Traffic Smithy
(503) 641-6333

TIME PERIOD FROM - TO	EAST BOUND ↓	EAST BOUND →	EAST BOUND ↑	SOUTH BOUND ↲	SOUTH BOUND ↓	SOUTH BOUND ↳	NORTH BOUND ↰	NORTH BOUND ↑	NORTH BOUND ↱	WEST BOUND ↓	WEST BOUND ←	WEST BOUND ↑	ALL
16:00-16:05	2	0	1	1	23	9	4	19	18	21	3	8	109
16:05-16:10	1	2	1	3	27	19	2	19	11	13	2	16	116
16:10-16:15	6	1	2	0	21	15	4	23	12	17	1	9	111
16:15-16:20	2	0	0	1	29	18	0	25	25	26	2	14	142
16:20-16:25	1	1	5	1	33	12	1	20	13	28	1	7	123
16:25-16:30	1	2	0	1	25	13	1	25	23	20	1	15	127
16:30-16:35	1	3	0	0	27	15	0	16	11	21	0	10	104
16:35-16:40	2	0	2	1	26	17	1	28	15	15	1	10	118
16:40-16:45	1	2	0	0	44	13	1	25	17	23	3	8	137
16:45-16:50	2	0	1	2	25	15	3	13	18	19	1	16	115
16:50-16:55	5	0	3	2	26	19	3	20	12	25	1	14	130
16:55-17:00	3	0	0	3	28	8	1	19	20	28	0	16	126
17:00-17:05	3	1	5	4	39	13	3	20	25	18	1	9	141
17:05-17:10	7	1	1	2	33	12	0	28	16	14	0	15	129
17:10-17:15	1	0	2	1	29	15	0	31	20	33	0	16	148
17:15-17:20	0	0	2	1	38	14	1	26	22	29	3	11	147
17:20-17:25	1	0	0	1	31	14	1	22	11	28	2	12	123
17:25-17:30	1	1	0	2	38	18	0	25	25	25	4	10	149
17:30-17:35	1	0	0	1	30	15	0	25	22	40	0	12	146
17:35-17:40	1	1	0	0	28	18	0	29	19	25	1	21	143
17:40-17:45	1	0	3	2	30	14	3	27	17	24	2	16	139
17:45-17:50	0	1	0	2	32	19	4	30	23	28	1	13	153
17:50-17:55	1	1	0	1	31	14	5	22	27	33	3	16	154
17:55-18:00	2	1	0	5	28	15	4	24	12	23	4	6	124
Total Survey	46	18	28	37	721	354	42	561	434	576	37	300	3154
PHF	.38	.75	.41	.56	.9	.85	.38	.88	.92	.87	.47	.83	.951
% Trucks	2.2	5.6	0	0	1.8	1.4	2.4	1.2	2.3	1.7	2.7	.3	1.6
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	
Peds	0	1	0	0	4	0	0	3	0	0	6	0	
Hourly Totals													
16:00-17:00	27	11	15	15	334	173	21	252	195	256	16	143	1458
16:15-17:15	29	10	19	18	364	170	14	270	215	270	11	150	1540
16:30-17:30	27	8	16	19	384	173	14	273	212	278	16	147	1567
16:45-17:45	26	4	17	21	375	175	15	285	227	308	15	168	1636
17:00-18:00	19	7	13	22	387	181	21	309	239	320	21	157	1696

INTERSECTION TURN MOVEMENT COUNT PEAK HOUR REPORT
OLESON ROAD AT VERMONT STREET



DATE OF COUNT: 06/06/00
DAY OF WEEK: Tue
TIME STARTED: 16:00
TIME ENDED: 18:00

TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

dl

Peak Hour
17:00-18:00
TEV=1696

Traffic Smithy
(503)641-6333

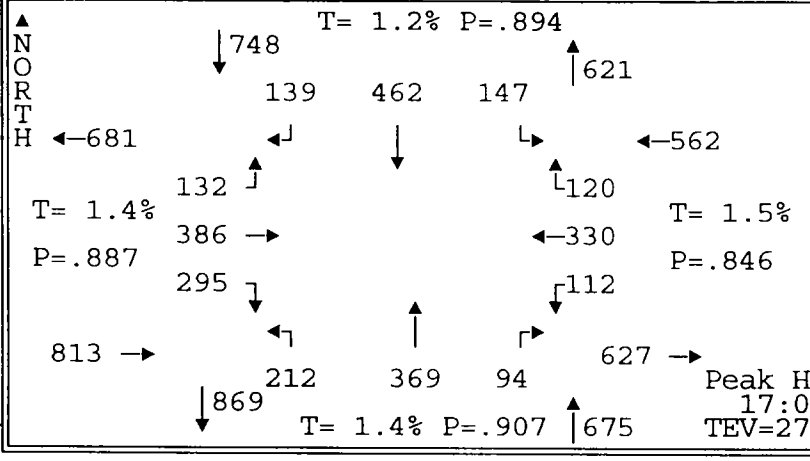
TIME PERIOD FROM - TO	EAST BOUND ↓	EAST BOUND →	EAST BOUND ↑	SOUTH BOUND ↙	SOUTH BOUND ↓	SOUTH BOUND ↳	NORTH BOUND ↰	NORTH BOUND ↑	NORTH BOUND ↱	WEST BOUND ↓	WEST BOUND ←	WEST BOUND ↑	ALL
ALL VEHICLES													
17:00-17:15	11	2	8	7	101	40	3	79	61	65	1	40	418
17:15-17:30	2	1	2	4	107	46	2	73	58	82	9	33	419
17:30-17:45	3	1	3	3	88	47	3	81	58	89	3	49	428
17:45-18:00	3	3	0	8	91	48	13	76	62	84	8	35	431
LIGHT TRUCKS (SINGLE UNIT 2 AXLES)													
17:00-17:15	0	0	0	0	2	0	0	0	1	1	0	0	4
17:15-17:30	0	0	0	0	1	2	0	0	0	0	0	0	3
17:30-17:45	0	0	0	0	2	0	0	0	0	0	0	0	2
17:45-18:00	0	0	0	0	0	0	0	0	1	1	0	1	3
MEDIUM TRUCKS (SINGLE UNIT > 2 AXLES)													
17:00-17:15	0	0	0	0	0	0	0	0	0	1	0	0	1
17:15-17:30	0	0	0	0	0	0	0	0	1	0	0	0	1
17:30-17:45	0	0	0	0	0	0	0	0	0	0	0	0	0
17:45-18:00	0	0	0	0	0	0	0	0	0	0	0	0	0
HEAVY TRUCKS (SEMI-TRACTOR TRAILER)													
17:00-17:15	0	0	0	0	0	0	0	0	0	1	0	0	1
17:15-17:30	0	0	0	0	0	0	0	0	0	0	0	0	0
17:30-17:45	0	0	0	0	0	0	0	0	0	0	0	0	0
17:45-18:00	0	0	0	0	0	0	0	0	0	0	0	0	0
BICYCLES													
17:00-17:15	0	0	0	0	0	0	0	0	0	0	0	0	0
17:15-17:30	0	0	0	0	0	0	0	0	0	0	0	0	0
17:30-17:45	0	0	0	0	0	0	0	1	0	0	0	0	1
17:45-18:00	0	0	0	0	0	0	0	0	0	0	0	0	0

PEDESTRIANS	CROSSWALK USEAGE				ALL
	SOUTH	WEST	EAST	NORTH	
17:00-17:15	0	1	0	2	3
17:15-17:30	0	0	0	0	0
17:30-17:45	1	0	3	2	6
17:45-18:00	0	0	0	0	0

Peak Hour by Movement													
PHF	.43	.58	.41	.69	.9	.94	.4	.95	.96	.9	.58	.8	.983
% Trucks(all)	0	0	0	0	1.3	1.1	0	0	1.3	1.3	0	.6	.9
% Trucks(M+H)	0	0	0	0	0	0	0	0	.4	.6	0	0	.2
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	

Hourly Totals													
16:00-17:00	27	11	15	15	334	173	21	252	195	256	16	143	1458
16:15-17:15	29	10	19	18	364	170	14	270	215	270	11	150	1540
16:30-17:30	27	8	16	19	384	173	14	273	212	278	16	147	1567
16:45-17:45	26	4	17	21	375	175	15	285	227	308	15	168	1636
17:00-18:00	19	7	13	22	387	181	21	309	239	320	21	157	1696

INTERSECTION TURN MOVEMENT COUNT SUMMARY REPORT
OELSON ROAD AT GARDEN HOME ROAD



DATE OF COUNT: 03/01/00
DAY OF WEEK: Wed
TIME STARTED: 16:00
TIME ENDED: 18:00

TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

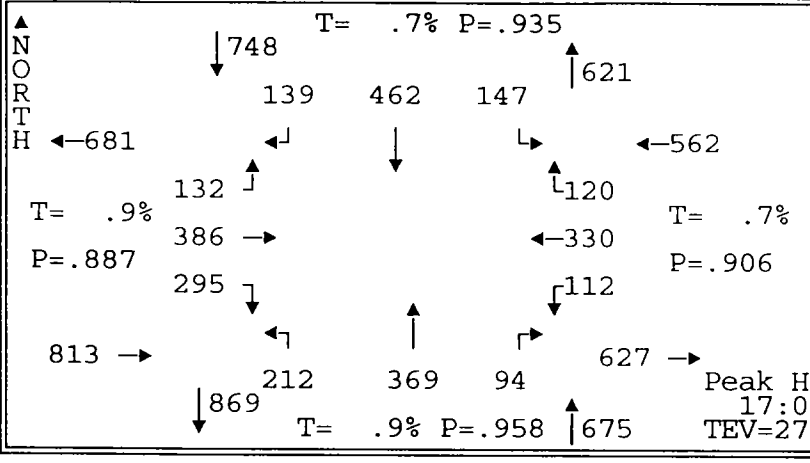
pbay

Peak Hour
17:00-18:00
TEV=2798

Traffic Smithy
(503) 641-6333

TIME PERIOD FROM - TO	EAST BOUND ↓	EAST BOUND →	EAST BOUND ↑	SOUTH BOUND ↵	SOUTH BOUND ↓	SOUTH BOUND ↳	NORTH BOUND ↰	NORTH BOUND ↑	NORTH BOUND ↱	WEST BOUND ↓	WEST BOUND ←	WEST BOUND ↑	ALL
16:00-16:05	20	23	1	13	20	15	12	15	10	3	16	3	151
16:05-16:10	22	16	2	11	31	12	17	22	2	6	19	10	170
16:10-16:15	16	27	9	7	28	7	11	28	0	9	14	7	163
16:15-16:20	24	24	8	8	36	9	17	20	5	2	26	11	190
16:20-16:25	18	28	10	10	29	11	23	26	4	7	19	16	201
16:25-16:30	19	23	6	13	46	13	25	35	3	5	19	14	221
16:30-16:35	18	23	6	7	19	11	18	26	4	7	24	17	180
16:35-16:40	10	17	8	12	38	11	12	23	5	11	27	8	182
16:40-16:45	30	36	4	8	38	12	16	21	11	8	26	9	219
16:45-16:50	20	28	11	5	29	15	14	27	4	10	25	10	198
16:50-16:55	22	23	12	12	29	11	20	23	10	9	29	10	210
16:55-17:00	22	14	6	13	34	10	14	34	8	10	31	11	207
17:00-17:05	22	37	10	8	27	11	12	29	5	11	21	7	200
17:05-17:10	30	31	11	16	24	7	21	36	5	6	20	11	218
17:10-17:15	24	35	15	19	41	14	13	27	8	6	19	7	228
17:15-17:20	23	28	10	10	43	14	10	34	3	4	31	9	219
17:20-17:25	24	25	8	14	45	9	19	33	7	14	30	15	243
17:25-17:30	24	31	12	10	46	9	18	35	12	5	33	14	249
17:30-17:35	25	37	10	12	40	11	22	35	5	9	37	9	252
17:35-17:40	24	17	7	12	34	11	26	21	4	10	30	11	207
17:40-17:45	19	35	10	17	32	16	23	33	7	12	22	5	231
17:45-17:50	31	35	13	10	46	19	14	26	11	14	35	5	259
17:50-17:55	21	40	11	7	42	12	11	33	13	11	28	15	244
17:55-18:00	28	35	15	4	42	14	23	27	14	10	24	12	248
Total Survey	536	668	215	258	839	284	411	669	160	199	605	246	5090
PHF	.92	.88	.85	.77	.86	.78	.75	.9	.62	.76	.82	.79	.931
% Trucks	1.7	.6	3.3	1.6	1	1.4	1.9	1	1.3	.5	1.8	1.6	1.4
Stopped Buses	0	3	0	0	0	0	0	0	0	0	0	0	
Peds	0	7	0	0	12	0	0	24	0	0	13	0	
Hourly Totals													
16:00-17:00	241	282	83	119	377	137	199	300	66	87	275	126	2292
16:15-17:15	259	319	107	131	390	135	205	327	72	92	286	131	2454
16:30-17:30	269	328	113	134	413	134	187	348	82	101	316	128	2553
16:45-17:45	279	341	122	148	424	138	212	367	78	106	328	119	2662
17:00-18:00	295	386	132	139	462	147	212	369	94	112	330	120	2798

INTERSECTION TURN MOVEMENT COUNT PEAK HOUR REPORT
OELSON ROAD AT GARDEN HOME ROAD



DATE OF COUNT: 03/01/00
DAY OF WEEK: Wed
TIME STARTED: 16:00
TIME ENDED: 18:00

TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

pbay

Peak Hour
17:00-18:00
TEV=2798

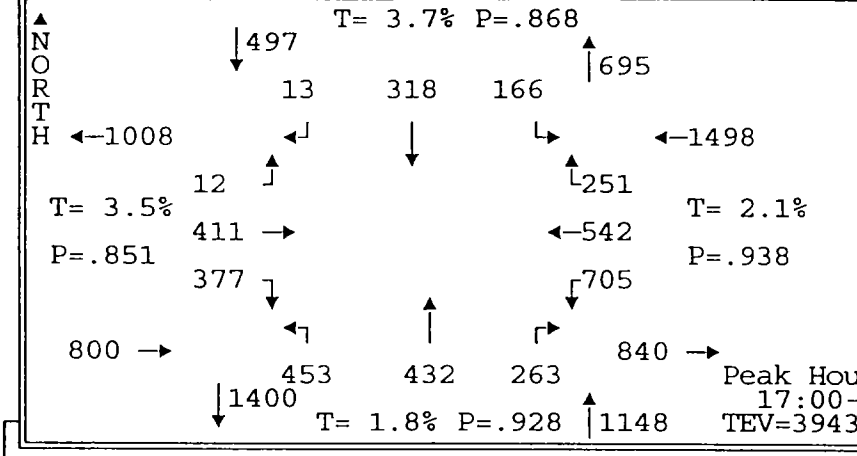
Traffic Smithy
(503)641-6333

TIME PERIOD FROM - TO	EAST BOUND ↓	EAST BOUND →	EAST BOUND ↑	SOUTH BOUND ↵	SOUTH BOUND ↓	SOUTH BOUND ↳	NORTH BOUND ↰	NORTH BOUND ↑	NORTH BOUND ↱	WEST BOUND ↓	WEST BOUND ←	WEST BOUND ↑	ALL
ALL VEHICLES													
17:00-17:15	76	103	36	43	92	32	46	92	18	23	60	25	646
17:15-17:30	71	84	30	34	134	32	47	102	22	23	94	38	711
17:30-17:45	68	89	27	41	106	38	71	89	16	31	89	25	690
17:45-18:00	80	110	39	21	130	45	48	86	38	35	87	32	751
LIGHT TRUCKS (SINGLE UNIT 2 AXLES)													
17:00-17:15	0	0	2	0	2	0	1	0	0	0	1	0	6
17:15-17:30	2	0	0	1	0	0	1	0	0	0	1	0	5
17:30-17:45	1	0	0	1	0	0	1	0	1	1	0	0	5
17:45-18:00	1	1	0	0	0	0	1	0	1	0	0	0	4
MEDIUM TRUCKS (SINGLE UNIT > 2 AXLES)													
17:00-17:15	0	0	0	0	0	0	0	0	0	0	0	0	0
17:15-17:30	0	0	0	0	0	0	0	0	0	0	0	0	0
17:30-17:45	0	0	0	0	0	0	0	0	0	0	0	0	0
17:45-18:00	0	0	0	0	0	0	0	0	0	0	0	0	0
HEAVY TRUCKS (SEMI-TRACTOR TRAILER)													
17:00-17:15	0	0	0	0	0	0	0	0	0	0	0	0	0
17:15-17:30	0	0	0	0	0	0	0	0	0	0	0	0	0
17:30-17:45	0	0	0	0	0	0	0	0	0	0	0	0	0
17:45-18:00	0	0	0	0	1	0	0	0	0	0	1	0	2
BICYCLES													
17:00-17:15	0	0	0	0	0	0	0	0	0	0	0	0	0
17:15-17:30	1	0	0	0	0	0	0	0	0	0	0	0	1
17:30-17:45	0	0	0	0	2	0	0	0	0	0	0	0	2
17:45-18:00	0	0	0	1	0	0	0	0	0	0	0	0	1

PEDESTRIANS	CROSSWALK USEAGE				ALL
	SOUTH	WEST	EAST	NORTH	
17:00-17:15	3	5	1	3	12
17:15-17:30	0	2	8	2	12
17:30-17:45	0	0	1	0	1
17:45-18:00	0	3	3	3	9

Peak Hour by Movement													
PHF	.92	.88	.85	.81	.86	.82	.75	.9	.62	.8	.88	.79	.931
% Trucks(all)	1.4	.3	1.5	1.4	.6	0	1.9	0	2.1	.9	.9	0	.8
% Trucks(M+H)	0	0	0	0	.2	0	0	0	0	0	.3	0	.1
Stopped Buses	0	1	0	0	0	0	0	0	0	0	0	0	
Hourly Totals													
16:00-17:00	241	282	83	119	377	137	199	300	66	87	275	126	2292
16:15-17:15	259	319	107	131	390	135	205	327	72	92	286	131	2454
16:30-17:30	269	328	113	134	413	134	187	348	82	101	316	128	2553
16:45-17:45	279	341	122	148	424	138	212	367	78	106	328	119	2662
17:00-18:00	295	386	132	139	462	147	212	369	94	112	330	120	2798

INTERSECTION TURN MOVEMENT COUNT SUMMARY REPORT
CEDAR HILLS BOULEVARD AT BARNES ROAD 24002



DATE OF COUNT: 6/21/00
DAY OF WEEK: Wed
TIME STARTED: 16:00
TIME ENDED: 18:00

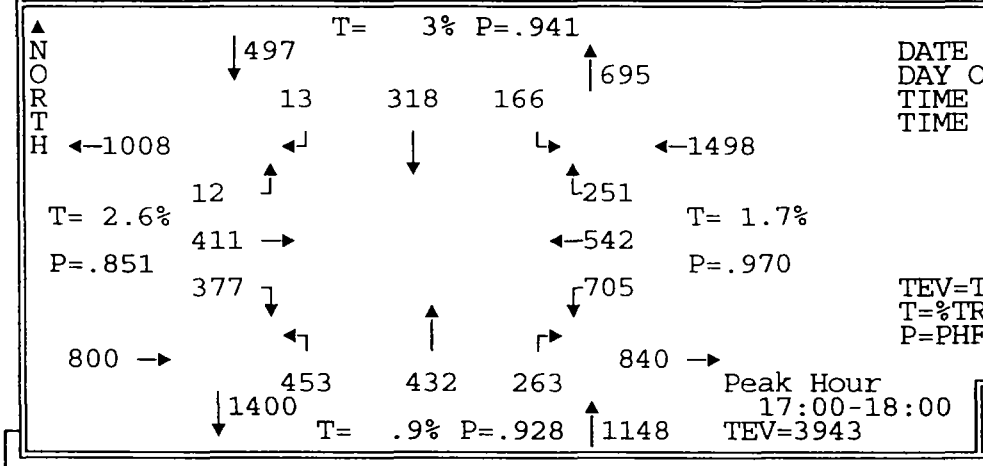
TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

dlyn

Traffic Smithy
(503) 641-6333

TIME PERIOD FROM - TO	EAST BOUND ↓	EAST BOUND →	EAST BOUND ↑	SOUTH BOUND ↙	SOUTH BOUND ↓	SOUTH BOUND ↳	NORTH BOUND ↰	NORTH BOUND ↑	NORTH BOUND ↱	WEST BOUND ↓	WEST BOUND ←	WEST BOUND ↑	ALL
16:00-16:05	21	26	0	0	21	11	32	21	8	44	25	12	221
16:05-16:10	31	24	1	2	19	9	46	35	24	48	28	17	284
16:10-16:15	27	28	1	0	18	10	33	39	23	47	29	16	271
16:15-16:20	29	21	1	0	20	13	28	27	21	46	50	28	284
16:20-16:25	15	16	0	1	24	7	39	18	17	56	32	15	240
16:25-16:30	9	11	0	0	20	12	47	43	26	44	35	12	259
16:30-16:35	37	32	1	3	27	11	23	25	24	59	35	10	287
16:35-16:40	38	34	0	1	19	15	34	34	22	72	43	17	329
16:40-16:45	42	31	1	0	15	17	23	23	32	43	47	20	294
16:45-16:50	26	27	3	1	35	11	15	29	21	51	39	14	272
16:50-16:55	16	35	0	1	28	19	48	25	18	39	33	18	280
16:55-17:00	24	32	1	3	19	11	20	31	26	43	34	15	259
17:00-17:05	38	33	0	0	32	17	37	33	17	57	28	12	304
17:05-17:10	22	33	1	0	22	14	42	35	19	67	49	19	323
17:10-17:15	28	37	2	0	27	19	27	28	33	63	43	17	324
17:15-17:20	28	30	0	0	27	11	49	47	21	58	45	23	339
17:20-17:25	27	34	4	4	34	21	39	33	27	60	42	26	351
17:25-17:30	27	38	0	0	24	11	30	33	18	56	40	24	301
17:30-17:35	38	38	1	4	23	13	45	39	28	52	57	17	355
17:35-17:40	34	38	1	0	20	14	39	40	21	60	52	23	342
17:40-17:45	44	39	2	1	16	13	44	28	25	58	38	26	334
17:45-17:50	37	32	0	0	29	11	42	40	24	63	55	24	357
17:50-17:55	31	33	1	1	27	5	30	37	18	61	51	19	314
17:55-18:00	23	26	0	3	37	17	29	39	12	50	42	21	299
Total Survey	692	728	21	25	583	312	841	782	525	1297	972	445	7223
PHF	.81	.89	.5	.41	.85	.81	.88	.93	.81	.94	.91	.86	.954
% Trucks	2.2	4.7	4.8	8	2.7	5.1	1.5	2.4	1.3	1	2.7	4.3	2.5
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	
Peds	0	1	0	0	0	0	0	1	0	0	2	0	
Hourly Totals													
16:00-17:00	315	317	9	12	265	146	388	350	262	592	430	194	3280
16:15-17:15	324	342	10	10	288	166	383	351	276	640	468	197	3455
16:30-17:30	353	396	13	13	309	177	387	376	278	668	478	215	3663
16:45-17:45	352	414	15	14	307	174	435	401	274	664	500	234	3784
17:00-18:00	377	411	12	13	318	166	453	432	263	705	542	251	3943

INTERSECTION TURN MOVEMENT COUNT PEAK HOUR REPORT
CEDAR HILLS BOULEVARD AT BARNES ROAD



DATE OF COUNT: 6/21/00
DAY OF WEEK: Wed
TIME STARTED: 16:00
TIME ENDED: 18:00

TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

dlyn

Peak Hour
17:00-18:00
TEV=3943

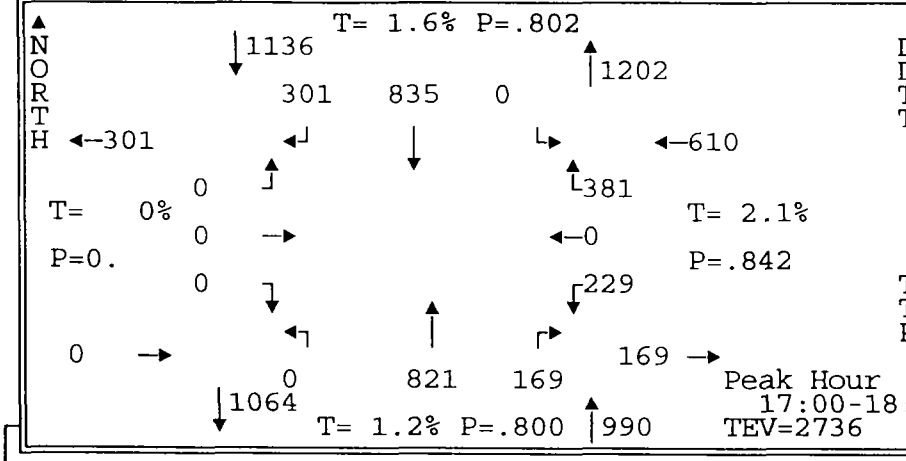
Traffic Smithy
(503)641-6333

TIME PERIOD FROM - TO	EAST BOUND ↓	EAST BOUND →	EAST BOUND ↑	SOUTH BOUND ↵	SOUTH BOUND ↓	SOUTH BOUND ↳	NORTH BOUND ↰	NORTH BOUND ↑	NORTH BOUND ↱	WEST BOUND ↓	WEST BOUND ←	WEST BOUND ↑	ALL
ALL VEHICLES													
17:00-17:15	88	103	3	0	81	50	106	96	69	187	120	48	951
17:15-17:30	82	102	4	4	85	43	118	113	66	174	127	73	991
17:30-17:45	116	115	4	5	59	40	128	107	74	170	147	66	1031
17:45-18:00	91	91	1	4	93	33	101	116	54	174	148	64	970
LIGHT TRUCKS (SINGLE UNIT 2 AXLES)													
17:00-17:15	1	4	0	0	0	3	1	1	1	1	2	1	15
17:15-17:30	2	1	0	0	4	2	1	1	0	1	4	3	19
17:30-17:45	1	6	0	0	1	2	1	1	0	4	1	4	21
17:45-18:00	1	3	0	0	1	1	0	0	1	0	1	2	10
MEDIUM TRUCKS (SINGLE UNIT > 2 AXLES)													
17:00-17:15	0	1	0	0	0	0	0	0	0	0	1	0	2
17:15-17:30	0	0	0	0	0	0	0	0	0	0	0	0	0
17:30-17:45	0	1	0	0	0	1	0	1	0	0	0	0	3
17:45-18:00	0	0	0	0	0	0	0	0	0	0	0	0	0
HEAVY TRUCKS (SEMI-TRACTOR TRAILER)													
17:00-17:15	0	0	0	0	0	0	0	0	0	0	0	0	0
17:15-17:30	0	0	0	0	0	0	0	1	0	0	0	0	1
17:30-17:45	0	0	0	0	0	0	0	0	0	0	0	0	0
17:45-18:00	0	0	0	0	0	0	0	0	0	0	0	0	0
BICYCLES													
17:00-17:15	0	0	0	0	0	0	0	0	0	0	0	0	0
17:15-17:30	0	0	0	0	0	0	0	3	0	0	0	0	3
17:30-17:45	0	0	0	0	0	0	0	0	0	0	0	0	0
17:45-18:00	0	1	0	0	0	0	0	4	0	0	1	0	6

PEDESTRIANS	CROSSWALK USEAGE SOUTH	WEST	EAST	NORTH	ALL
17:00-17:15	0	0	0	0	0
17:15-17:30	0	0	0	0	0
17:30-17:45	0	0	0	0	0
17:45-18:00	0	0	0	0	0

Peak Hour by Movement													
PHF	.81	.89	.75	.65	.85	.83	.88	.93	.89	.94	.92	.86	.956
% Trucks(all)	1.3	3.9	0	0	1.9	5.4	.7	1.2	.8	.9	1.7	4	1.8
% Trucks(M+H)	0	.5	0	0	0	.6	0	.5	0	0	.2	0	.2
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	
Hourly Totals													
16:00-17:00	315	317	9	12	265	146	388	350	262	592	430	194	3280
16:15-17:15	324	342	10	10	288	166	383	351	276	640	468	197	3455
16:30-17:30	353	396	13	13	309	177	387	376	278	668	478	215	3663
16:45-17:45	352	414	15	14	307	174	435	401	274	664	500	234	3784
17:00-18:00	377	411	12	13	318	166	453	432	263	705	542	251	3943

INTERSECTION TURN MOVEMENT COUNT SUMMARY REPORT
CEDAR HILLS BOULEVARD AT HIGHWAY 26 WESTBOUND RAMPS



DATE OF COUNT: 06/01/00
DAY OF WEEK: THU
TIME STARTED: 16:00
TIME ENDED: 18:00

TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

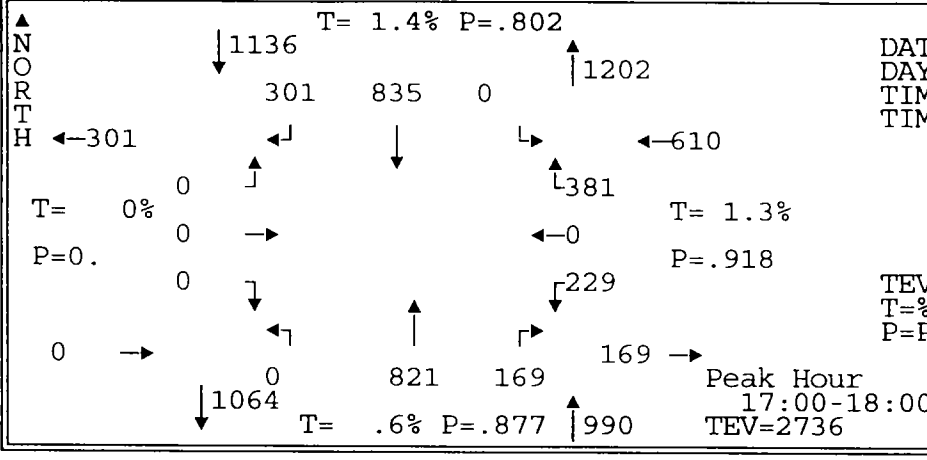
GMBA

Peak Hour
17:00-18:00
TEV=2736

Traffic Smithy
(503) 641-6333

TIME PERIOD FROM - TO	EAST BOUND ↓	EAST BOUND →	EAST BOUND ↑	SOUTH BOUND ↲	SOUTH BOUND ↓	SOUTH BOUND ↳	NORTH BOUND ↰	NORTH BOUND ↑	NORTH BOUND ↱	WEST BOUND ↓	WEST BOUND ←	WEST BOUND ↑	ALL
16:00-16:05	0	0	0	27	64	0	0	46	13	17	0	19	186
16:05-16:10	0	0	0	24	59	0	0	49	22	17	0	24	195
16:10-16:15	0	0	0	32	66	0	0	41	13	10	0	26	188
16:15-16:20	0	0	0	21	64	0	0	39	9	13	0	26	172
16:20-16:25	0	0	0	23	58	0	0	50	13	14	0	22	180
16:25-16:30	0	0	0	30	56	0	0	45	7	11	0	24	173
16:30-16:35	0	0	0	20	63	0	0	39	6	15	0	34	177
16:35-16:40	0	0	0	30	66	0	0	52	11	14	0	44	217
16:40-16:45	0	0	0	24	62	0	0	51	10	13	0	23	183
16:45-16:50	0	0	0	39	72	0	0	31	20	13	0	31	206
16:50-16:55	0	0	0	36	72	0	0	38	16	21	0	39	222
16:55-17:00	0	0	0	23	81	0	0	47	12	15	0	25	203
17:00-17:05	0	0	0	28	82	0	0	67	17	19	0	21	234
17:05-17:10	0	0	0	30	99	0	0	51	12	13	0	28	233
17:10-17:15	0	0	0	31	84	0	0	46	22	21	0	44	248
17:15-17:20	0	0	0	23	80	0	0	66	18	16	0	36	239
17:20-17:25	0	0	0	20	67	0	0	63	11	20	0	44	225
17:25-17:30	0	0	0	20	71	0	0	72	15	21	0	29	228
17:30-17:35	0	0	0	17	56	0	0	66	6	22	0	25	192
17:35-17:40	0	0	0	29	56	0	0	92	18	19	0	35	249
17:40-17:45	0	0	0	24	58	0	0	90	10	22	0	18	222
17:45-17:50	0	0	0	29	61	0	0	84	15	19	0	24	232
17:50-17:55	0	0	0	22	60	0	0	59	15	22	0	45	223
17:55-18:00	0	0	0	28	61	0	0	65	10	15	0	32	211
Total Survey	0	0	0	630	1618	0	0	1349	321	402	0	718	5038
PHF	0	0	0	.85	.79	0	0	.77	.81	.91	0	.77	.95
% Trucks	0	0	0	1.1	1.9	0	0	1	1.9	1	0	2.6	1.6
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	
Peds	0	0	0	0	0	0	0	0	0	0	0	0	
Hourly Totals													
16:00-17:00	0	0	0	329	783	0	0	528	152	173	0	337	2302
16:15-17:15	0	0	0	335	859	0	0	556	155	182	0	361	2448
16:30-17:30	0	0	0	324	899	0	0	623	170	201	0	398	2615
16:45-17:45	0	0	0	320	878	0	0	729	177	222	0	375	2701
17:00-18:00	0	0	0	301	835	0	0	821	169	229	0	381	2736

INTERSECTION TURN MOVEMENT COUNT PEAK HOUR REPORT
CEDAR HILLS BOULEVARD AT HIGHWAY 26 WESTBOUND RAMPS



DATE OF COUNT: 06/01/00
DAY OF WEEK: THU
TIME STARTED: 16:00
TIME ENDED: 18:00

TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

GMBA

Peak Hour
17:00-18:00
TEV=2736

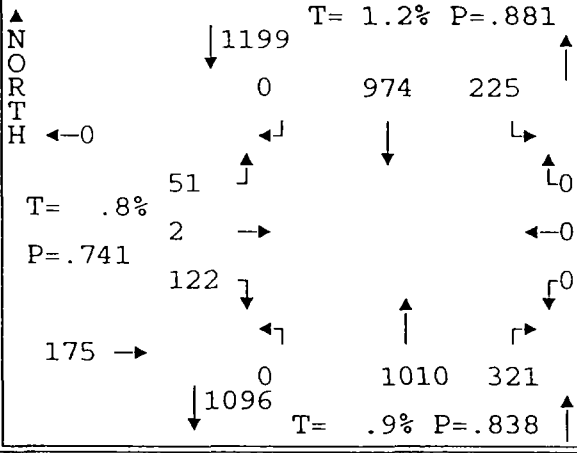
Traffic Smithy
(503)641-6333

TIME PERIOD FROM - TO	EAST BOUND ↓	EAST BOUND →	EAST BOUND ↑	SOUTH BOUND ↲	SOUTH BOUND ↓	SOUTH BOUND ↳	NORTH BOUND ↰	NORTH BOUND ↑	NORTH BOUND ↱	WEST BOUND ↓	WEST BOUND ←	WEST BOUND ↑	ALL
ALL VEHICLES													
17:00-17:15	0	0	0	89	265	0	0	164	51	53	0	93	715
17:15-17:30	0	0	0	63	218	0	0	201	44	57	0	109	692
17:30-17:45	0	0	0	70	170	0	0	248	34	63	0	78	663
17:45-18:00	0	0	0	79	182	0	0	208	40	56	0	101	666
LIGHT TRUCKS (SINGLE UNIT 2 AXLES)													
17:00-17:15	0	0	0	1	3	0	0	0	0	0	0	1	5
17:15-17:30	0	0	0	0	4	0	0	3	0	2	0	1	10
17:30-17:45	0	0	0	0	3	0	0	2	0	0	0	2	7
17:45-18:00	0	0	0	1	2	0	0	1	0	0	0	2	6
MEDIUM TRUCKS (SINGLE UNIT > 2 AXLES)													
17:00-17:15	0	0	0	0	1	0	0	0	0	0	0	0	1
17:15-17:30	0	0	0	0	0	0	0	0	0	0	0	0	0
17:30-17:45	0	0	0	0	0	0	0	0	0	0	0	0	0
17:45-18:00	0	0	0	0	0	0	0	0	0	0	0	0	0
HEAVY TRUCKS (SEMI-TRACTOR TRAILER)													
17:00-17:15	0	0	0	0	0	0	0	0	0	0	0	0	0
17:15-17:30	0	0	0	0	0	0	0	0	0	0	0	0	0
17:30-17:45	0	0	0	0	0	0	0	0	0	0	0	0	0
17:45-18:00	0	0	0	1	0	0	0	0	0	0	0	0	1
BICYCLES													
17:00-17:15	0	0	0	0	0	0	0	0	0	0	0	0	0
17:15-17:30	0	0	0	0	0	0	0	0	0	0	0	0	0
17:30-17:45	0	0	0	0	0	0	0	0	0	0	0	0	0
17:45-18:00	0	0	0	0	0	0	0	0	0	0	0	0	0

PEDESTRIANS	CROSSWALK USEAGE SOUTH	WEST	EAST	NORTH	ALL
17:00-17:15	0	0	0	0	0
17:15-17:30	0	0	0	0	0
17:30-17:45	0	0	0	0	0
17:45-18:00	0	0	0	0	0

Peak Hour by Movement													
PHF	0	0	0	.85	.79	0	0	.83	.83	.91	0	.87	.956
% Trucks(all)	0	0	0	1	1.6	0	0	.7	0	.9	0	1.6	1.1
% Trucks(M+H)	0	0	0	.3	.1	0	0	0	0	0	0	0	.1
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	
Hourly Totals													
16:00-17:00	0	0	0	329	783	0	0	528	152	173	0	337	2302
16:15-17:15	0	0	0	335	859	0	0	556	155	182	0	361	2448
16:30-17:30	0	0	0	324	899	0	0	623	170	201	0	398	2615
16:45-17:45	0	0	0	320	878	0	0	729	177	222	0	375	2701
17:00-18:00	0	0	0	301	835	0	0	821	169	229	0	381	2736

INTERSECTION TURN MOVEMENT COUNT SUMMARY REPORT
CEDAR HILLS BOULEVARD AT HIGHWAY 26 EB RAMPS



DATE OF COUNT: 06/01/00
DAY OF WEEK: THU
TIME STARTED: 16:00
TIME ENDED: 18:00

TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

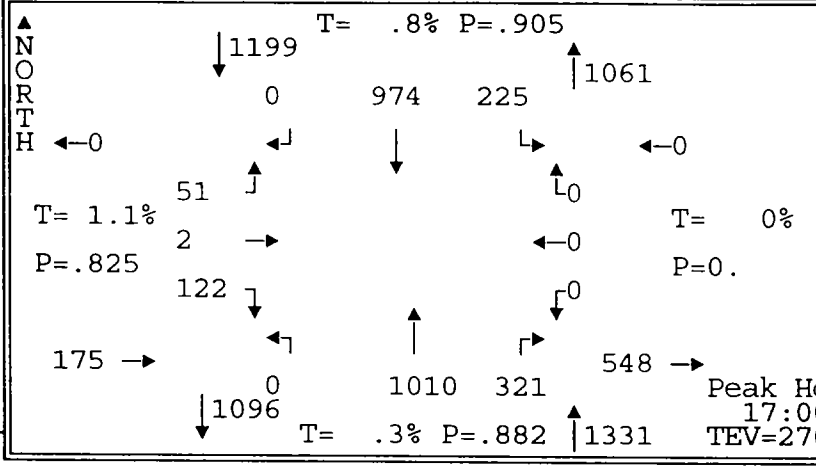
BK09

Peak Hour
17:00-18:00
TEV=2705

Traffic Smithy
(503) 641-6333

TIME PERIOD FROM - TO	EAST BOUND ↓	EAST BOUND →	EAST BOUND ↑	SOUTH BOUND ↵	SOUTH BOUND ↓	SOUTH BOUND ↳	NORTH BOUND ↰	NORTH BOUND ↑	NORTH BOUND ↱	WEST BOUND ↓	WEST BOUND ←	WEST BOUND ↑	ALL
16:00-16:05	18	0	9	0	59	19	0	70	21	0	0	0	196
16:05-16:10	15	0	3	0	53	24	0	66	29	0	0	0	190
16:10-16:15	14	0	4	0	62	19	0	53	19	0	0	0	171
16:15-16:20	12	0	2	0	70	9	0	52	30	0	0	0	175
16:20-16:25	12	0	3	0	57	19	0	60	26	0	0	0	177
16:25-16:30	11	0	6	0	51	27	0	59	26	0	0	0	180
16:30-16:35	11	0	3	0	62	21	0	43	20	0	0	0	160
16:35-16:40	10	1	3	0	59	20	0	66	18	0	0	0	177
16:40-16:45	10	0	4	0	59	24	0	59	23	0	0	0	179
16:45-16:50	10	0	4	0	61	29	1	50	25	0	0	0	180
16:50-16:55	6	0	3	0	76	19	0	51	25	0	0	0	180
16:55-17:00	6	0	5	0	74	23	0	60	25	0	0	0	193
17:00-17:05	10	0	5	0	82	16	0	82	27	0	0	0	222
17:05-17:10	9	0	5	0	99	20	0	70	29	0	0	0	232
17:10-17:15	19	0	5	0	88	26	0	75	29	0	0	0	242
17:15-17:20	17	0	4	0	88	19	0	74	28	0	0	0	230
17:20-17:25	4	0	4	0	88	16	0	89	19	0	0	0	220
17:25-17:30	10	0	2	0	88	15	0	91	35	0	0	0	241
17:30-17:35	15	0	1	0	83	15	0	90	38	0	0	0	242
17:35-17:40	5	0	2	0	59	24	0	119	24	0	0	0	233
17:40-17:45	8	0	3	0	86	16	0	80	26	0	0	0	219
17:45-17:50	10	0	10	0	80	17	0	87	24	0	0	0	228
17:50-17:55	4	0	3	0	76	16	0	73	24	0	0	0	196
17:55-18:00	11	2	7	0	57	25	0	80	18	0	0	0	200
Total Survey	257	3	100	0	1717	478	1	1699	608	0	0	0	4863
PHF	.68	.25	.64	0	.89	.87	0	.84	.83	0	0	0	.944
% Trucks	.8	33.3	0	0	.9	2.1	0	1	.5	0	0	0	1
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	
Peds	0	0	0	0	0	0	0	0	0	0	0	0	
Hourly Totals													
16:00-17:00	135	1	49	0	743	253	1	689	287	0	0	0	2158
16:15-17:15	126	1	48	0	838	253	1	727	303	0	0	0	2297
16:30-17:30	122	1	47	0	924	248	1	810	303	0	0	0	2456
16:45-17:45	119	0	43	0	972	238	1	931	330	0	0	0	2634
17:00-18:00	122	2	51	0	974	225	0	1010	321	0	0	0	2705

INTERSECTION TURN MOVEMENT COUNT PEAK HOUR REPORT
CEDAR HILLS BOULEVARD AT HIGHWAY 26 EB RAMPS



DATE OF COUNT: 06/01/00
DAY OF WEEK: THU
TIME STARTED: 16:00
TIME ENDED: 18:00

TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

BK09

Peak Hour
17:00-18:00
TEV=2705

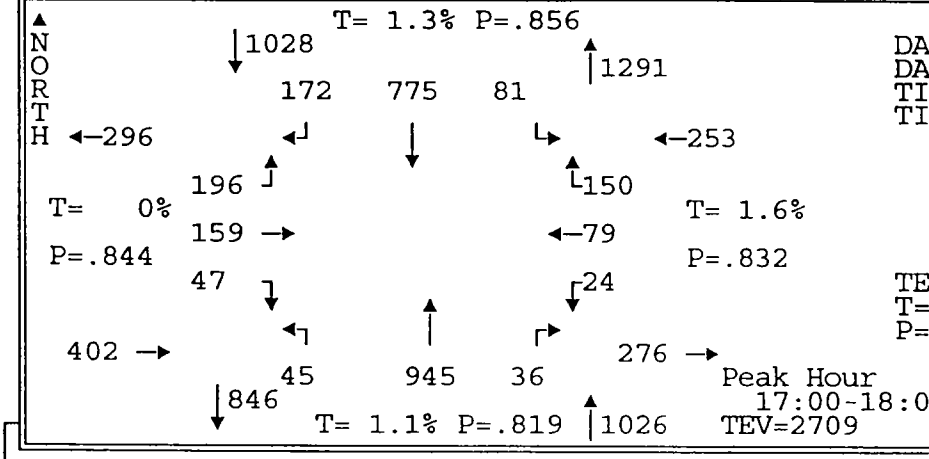
Traffic Smithy
(503)641-6333

TIME PERIOD FROM - TO	EAST BOUND ↓	EAST BOUND →	EAST BOUND ↑	SOUTH BOUND ↵	SOUTH BOUND ↓	SOUTH BOUND ↳	NORTH BOUND ↰	NORTH BOUND ↑	NORTH BOUND ↱	WEST BOUND ↓	WEST BOUND ←	WEST BOUND ↑	ALL
ALL VEHICLES													
17:00-17:15	38	0	15	0	269	62	0	227	85	0	0	0	696
17:15-17:30	31	0	10	0	264	50	0	254	82	0	0	0	691
17:30-17:45	28	0	6	0	228	55	0	289	88	0	0	0	694
17:45-18:00	25	2	20	0	213	58	0	240	66	0	0	0	624
LIGHT TRUCKS (SINGLE UNIT 2 AXLES)													
17:00-17:15	0	0	0	0	1	1	0	1	0	0	0	0	3
17:15-17:30	0	0	0	0	2	1	0	1	0	0	0	0	4
17:30-17:45	0	0	0	0	1	0	0	1	0	0	0	0	2
17:45-18:00	0	1	0	0	1	1	0	1	0	0	0	0	4
MEDIUM TRUCKS (SINGLE UNIT > 2 AXLES)													
17:00-17:15	0	0	0	0	0	1	0	0	0	0	0	0	1
17:15-17:30	0	0	0	0	0	0	0	0	0	0	0	0	0
17:30-17:45	0	0	0	0	0	0	0	0	0	0	0	0	0
17:45-18:00	0	0	0	0	0	0	0	0	0	0	0	0	0
HEAVY TRUCKS (SEMI-TRACTOR TRAILER)													
17:00-17:15	0	0	0	0	0	0	0	0	0	0	0	0	0
17:15-17:30	1	0	0	0	0	0	0	0	0	0	0	0	1
17:30-17:45	0	0	0	0	0	0	0	0	0	0	0	0	0
17:45-18:00	0	0	0	0	0	0	0	0	0	0	0	0	0
BICYCLES													
17:00-17:15	0	0	0	0	0	0	0	0	0	0	0	0	0
17:15-17:30	0	0	0	0	0	0	0	0	0	0	0	0	0
17:30-17:45	0	0	0	0	0	0	0	0	0	0	0	0	0
17:45-18:00	0	0	0	0	0	0	0	0	0	0	0	0	0

PEDESTRIANS	CROSSWALK USEAGE SOUTH	WEST	EAST	NORTH	ALL
17:00-17:15	0	0	0	0	0
17:15-17:30	0	0	0	0	0
17:30-17:45	0	0	0	0	0
17:45-18:00	0	0	0	0	0

Peak Hour by Movement													
PHF	.8	.25	.64	0	.91	.91	0	.87	.91	0	0	0	.971
% Trucks(all)	.8	50	0	0	.5	1.8	0	.4	0	0	0	0	.6
% Trucks(M+H)	.8	0	0	0	0	.4	0	0	0	0	0	0	.1
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	
Hourly Totals													
16:00-17:00	135	1	49	0	743	253	1	689	287	0	0	0	2158
16:15-17:15	126	1	48	0	838	253	1	727	303	0	0	0	2297
16:30-17:30	122	1	47	0	924	248	1	810	303	0	0	0	2456
16:45-17:45	119	0	43	0	972	238	1	931	330	0	0	0	2634
17:00-18:00	122	2	51	0	974	225	0	1010	321	0	0	0	2705

INTERSECTION TURN MOVEMENT COUNT SUMMARY REPORT
CEDAR HILLS BOULEVARD AT BUTNER ROAD



DATE OF COUNT: 6/1/00
DAY OF WEEK: Thu
TIME STARTED: 16:00
TIME ENDED: 18:00

TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

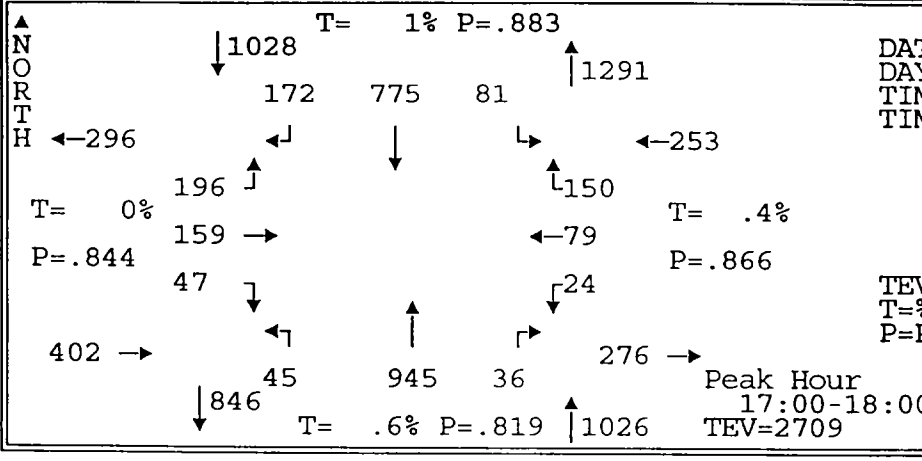
gmbb

Peak Hour
17:00-18:00
TEV=2709

Traffic Smithy
(503) 641-6333

TIME PERIOD FROM - TO	EAST BOUND ↓	EAST BOUND →	EAST BOUND ↑	SOUTH BOUND ↲	SOUTH BOUND ↓	SOUTH BOUND ↳	NORTH BOUND ↰	NORTH BOUND ↑	NORTH BOUND ↱	WEST BOUND ↓	WEST BOUND ←	WEST BOUND ↑	ALL
16:00-16:05	3	7	9	6	43	6	1	64	0	2	5	7	153
16:05-16:10	2	4	12	13	41	5	2	57	2	5	2	12	157
16:10-16:15	2	8	4	7	57	13	0	68	2	2	4	7	174
16:15-16:20	3	13	9	10	57	8	3	64	2	2	5	7	183
16:20-16:25	1	7	11	13	46	11	3	62	1	3	2	14	174
16:25-16:30	2	8	8	7	47	6	2	62	2	1	7	7	159
16:30-16:35	3	6	12	11	51	10	1	43	3	1	2	7	150
16:35-16:40	5	6	12	8	46	10	0	60	1	1	4	7	160
16:40-16:45	2	5	16	6	50	7	6	58	1	0	8	8	167
16:45-16:50	0	12	11	12	41	5	6	52	2	1	8	10	160
16:50-16:55	4	4	4	18	63	3	1	69	2	1	4	7	180
16:55-17:00	4	10	10	10	63	3	3	68	2	2	6	7	188
17:00-17:05	6	10	11	9	70	2	4	69	2	5	14	18	220
17:05-17:10	4	11	20	14	82	8	3	70	2	1	5	8	228
17:10-17:15	3	19	16	13	84	9	4	80	4	3	3	16	254
17:15-17:20	5	13	15	11	70	9	5	66	0	0	2	11	207
17:20-17:25	5	15	23	15	68	7	1	95	3	1	8	11	252
17:25-17:30	2	13	14	15	74	8	5	73	3	1	9	23	240
17:30-17:35	4	8	15	12	63	12	6	104	6	3	8	12	253
17:35-17:40	2	12	12	10	42	5	5	99	4	1	10	8	210
17:40-17:45	3	10	12	14	65	6	2	86	1	3	8	8	218
17:45-17:50	5	24	26	22	57	8	1	63	6	1	6	13	232
17:50-17:55	4	14	18	22	50	4	4	65	3	4	4	12	204
17:55-18:00	4	10	14	15	50	3	5	75	2	1	2	10	191
Total Survey	78	249	314	293	1380	168	73	1672	56	45	136	250	4714
PHF	.9	.83	.84	.73	.82	.75	.7	.82	.69	.67	.73	.82	.909
% Trucks	0	0	0	.7	1.4	1.8	1.4	1.1	1.8	4.4	.7	1.6	1.1
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	
Peds	0	3	0	0	2	0	0	2	0	0	3	0	
Hourly Totals													
16:00-17:00	31	90	118	121	605	87	28	727	20	21	57	100	2005
16:15-17:15	37	111	140	131	700	82	36	757	24	21	68	116	2223
16:30-17:30	43	124	164	142	762	81	39	803	25	17	73	133	2406
16:45-17:45	42	137	163	153	785	77	45	931	31	22	85	139	2610
17:00-18:00	47	159	196	172	775	81	45	945	36	24	79	150	2709

INTERSECTION TURN MOVEMENT COUNT PEAK HOUR REPORT
CEDAR HILLS BOULEVARD AT BUTNER ROAD



DATE OF COUNT: 6/1/00
DAY OF WEEK: Thu
TIME STARTED: 16:00
TIME ENDED: 18:00

TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

gmbb

Peak Hour
17:00-18:00
TEV=2709

Traffic Smithy
(503)641-6333

TIME PERIOD FROM - TO	EAST BOUND ↓	EAST BOUND →	EAST BOUND ↑	SOUTH BOUND ↙	SOUTH BOUND ↓	SOUTH BOUND ↘	NORTH BOUND ↖	NORTH BOUND ↑	NORTH BOUND ↗	WEST BOUND ↓	WEST BOUND ←	WEST BOUND ↑	ALL
ALL VEHICLES													
17:00-17:15	13	40	47	36	236	19	11	219	8	9	22	42	702
17:15-17:30	12	41	52	41	212	24	11	234	6	2	19	45	699
17:30-17:45	9	30	39	36	170	23	13	289	11	7	26	28	681
17:45-18:00	13	48	58	59	157	15	10	203	11	6	12	35	627
LIGHT TRUCKS (SINGLE UNIT 2 AXLES)													
17:00-17:15	0	0	0	0	2	0	0	1	1	0	0	1	5
17:15-17:30	0	0	0	1	3	0	0	1	0	0	0	0	5
17:30-17:45	0	0	0	0	1	1	0	0	0	0	0	0	2
17:45-18:00	0	0	0	0	1	0	0	0	0	0	0	0	1
MEDIUM TRUCKS (SINGLE UNIT > 2 AXLES)													
17:00-17:15	0	0	0	0	0	0	0	0	0	0	0	0	0
17:15-17:30	0	0	0	0	0	0	0	0	0	0	0	0	0
17:30-17:45	0	0	0	0	0	0	0	0	0	0	0	0	0
17:45-18:00	0	0	0	0	0	0	0	0	0	0	0	0	0
HEAVY TRUCKS (SEMI-TRACTOR TRAILER)													
17:00-17:15	0	0	0	0	0	0	0	0	0	0	0	0	0
17:15-17:30	0	0	0	0	1	0	0	0	0	0	0	0	1
17:30-17:45	0	0	0	0	0	0	0	0	0	0	0	0	0
17:45-18:00	0	0	0	0	0	0	0	0	0	0	0	0	0
BICYCLES													
17:00-17:15	0	0	0	0	0	0	0	0	0	0	0	1	1
17:15-17:30	0	0	0	0	0	0	0	0	0	0	0	0	0
17:30-17:45	0	0	1	0	0	0	0	0	0	0	0	0	1
17:45-18:00	0	1	0	0	0	0	0	0	0	0	0	0	1

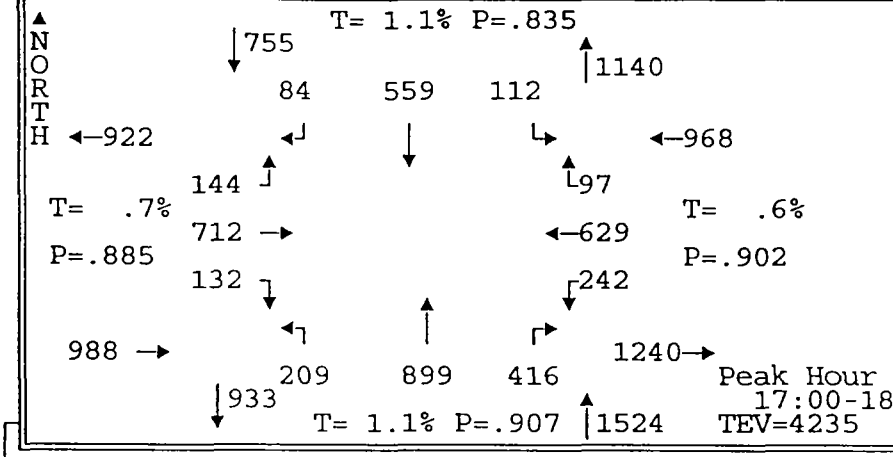
PEDESTRIANS	CROSSWALK USEAGE SOUTH	WEST	EAST	NORTH	ALL
17:00-17:15	0	0	0	0	0
17:15-17:30	0	0	0	1	1
17:30-17:45	2	0	2	0	4
17:45-18:00	0	0	0	0	0

Peak Hour by Movement													
PHF	.9	.83	.84	.73	.82	.84	.87	.82	.82	.67	.76	.83	.964
% Trucks(all)	0	0	0	.6	1	1.2	0	.5	2.8	0	0	.7	.6
% Trucks(M+H)	0	0	0	0	.1	0	0	0	0	0	0	0	0
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	

Hourly Totals													
16:00-17:00	31	90	118	121	605	87	28	727	20	21	57	100	2005
16:15-17:15	37	111	140	131	700	82	36	757	24	21	68	116	2223
16:30-17:30	43	124	164	142	762	81	39	803	25	17	73	133	2406
16:45-17:45	42	137	163	153	785	77	45	931	31	22	85	139	2610
17:00-18:00	47	159	196	172	775	81	45	945	36	24	79	150	2709

INTERSECTION TURN MOVEMENT COUNT SUMMARY REPORT
CEDAR HILLS BOULEVARD AT WALKER ROAD

23850



DATE OF COUNT: 6/7/00
DAY OF WEEK: Wed
TIME STARTED: 16:30
TIME ENDED: 18:30

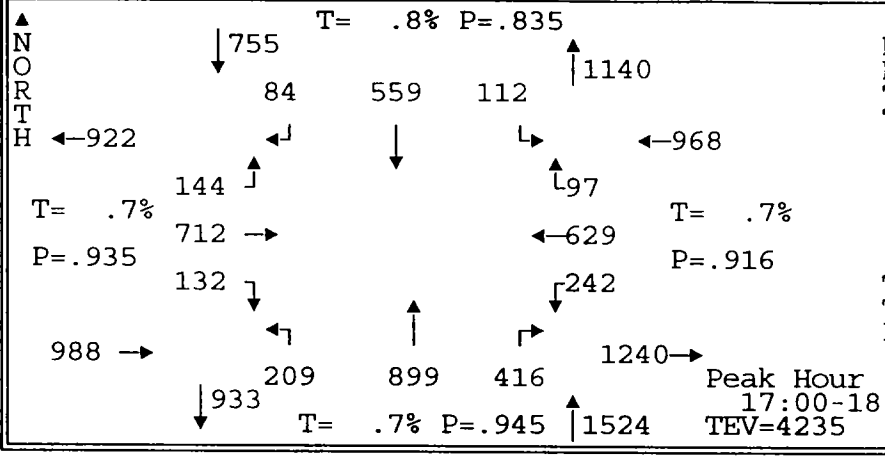
TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

dlyc

Traffic Smithy
(503) 641-6333

TIME PERIOD FROM - TO	EAST BOUND ↓	EAST BOUND →	EAST BOUND ↑	SOUTH BOUND ↙	SOUTH BOUND ↓	SOUTH BOUND ↘	NORTH BOUND ↖	NORTH BOUND ↑	NORTH BOUND ↗	WEST BOUND ↓	WEST BOUND ←	WEST BOUND ↑	ALL
16:30-16:35	7	60	5	3	31	8	13	55	22	20	51	8	283
16:35-16:40	17	47	13	11	34	11	20	55	34	20	50	7	319
16:40-16:45	9	47	7	9	53	9	17	56	38	16	38	4	303
16:45-16:50	8	47	9	11	45	12	14	67	31	20	38	9	311
16:50-16:55	9	49	15	5	44	12	21	72	24	22	35	5	313
16:55-17:00	9	39	6	7	43	9	12	65	24	22	37	9	282
17:00-17:05	9	62	12	6	32	11	11	73	35	25	47	9	332
17:05-17:10	8	63	9	5	44	8	26	95	35	15	45	3	356
17:10-17:15	7	51	15	9	52	8	21	63	30	21	58	10	345
17:15-17:20	14	71	9	10	45	5	28	92	30	14	46	5	369
17:20-17:25	9	63	14	11	65	16	21	82	32	14	57	13	397
17:25-17:30	11	43	14	13	50	11	18	57	33	22	60	10	342
17:30-17:35	6	61	5	5	32	6	14	86	40	24	63	5	347
17:35-17:40	19	69	8	3	39	10	21	96	38	20	30	11	364
17:40-17:45	15	59	22	5	50	6	16	56	36	14	56	7	342
17:45-17:50	14	60	13	4	57	8	16	77	34	20	51	7	361
17:50-17:55	10	65	7	9	44	9	8	58	41	26	52	10	339
17:55-18:00	10	45	16	4	49	14	9	64	32	27	64	7	341
18:00-18:05	7	58	0	10	40	8	17	73	19	26	44	10	312
18:05-18:10	16	63	7	5	41	11	16	61	33	24	39	8	324
18:10-18:15	8	60	11	8	33	8	17	69	22	17	55	8	316
18:15-18:20	17	64	13	16	40	11	24	67	27	11	53	11	354
18:20-18:25	13	67	11	15	34	8	15	59	32	14	48	4	320
18:25-18:30	14	40	16	7	45	9	8	59	23	15	45	5	286
Total Survey	266	1353	257	191	1042	228	403	1657	745	469	1162	185	7958
PHF	.69	.94	.84	.62	.86	.85	.7	.9	.91	.83	.87	.87	.952
% Trucks	1.1	.6	.8	0	1.5	0	.2	1.3	1.2	.6	.7	0	.9
Stopped Buses	0	0	0	0	0	0	0	0	0	0	1	0	
Peds	0	0	0	0	5	0	0	10	0	0	1	0	
Hourly Totals													
16:30-17:30	117	642	128	100	538	120	222	832	368	231	562	92	3952
16:45-17:45	124	677	138	90	541	114	223	904	388	233	572	96	4100
17:00-18:00	132	712	144	84	559	112	209	899	416	242	629	97	4235
17:15-18:15	139	717	126	87	545	112	201	871	390	248	617	101	4154
17:30-18:30	149	711	129	91	504	108	181	825	377	238	600	93	4006

INTERSECTION TURN MOVEMENT COUNT PEAK HOUR REPORT
CEDAR HILLS BOULEVARD AT WALKER ROAD



DATE OF COUNT: 6/7/00
DAY OF WEEK: Wed
TIME STARTED: 16:30
TIME ENDED: 18:30

TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

dlyc

Peak Hour
17:00-18:00
TEV=4235

Traffic Smithy
(503)641-6333

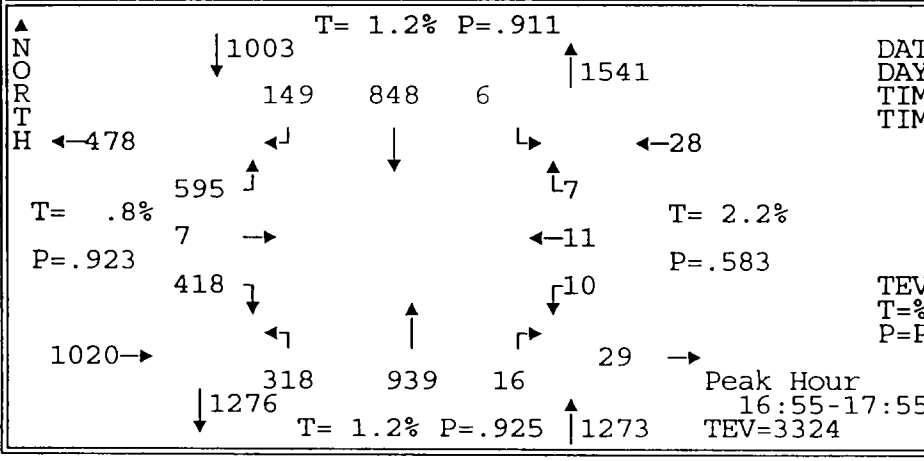
TIME PERIOD FROM - TO	EAST BOUND ↓	EAST BOUND →	EAST BOUND ↑	SOUTH BOUND ↵	SOUTH BOUND ↓	SOUTH BOUND ↳	NORTH BOUND ↰	NORTH BOUND ↑	NORTH BOUND ↱	WEST BOUND ↓	WEST BOUND ←	WEST BOUND ↑	ALL
ALL VEHICLES													
17:00-17:15	24	176	36	20	128	27	58	231	100	61	150	22	1033
17:15-17:30	34	177	37	34	160	32	67	231	95	50	163	28	1108
17:30-17:45	40	189	35	13	121	22	51	238	114	58	149	23	1053
17:45-18:00	34	170	36	17	150	31	33	199	107	73	167	24	1041
LIGHT TRUCKS (SINGLE UNIT 2 AXLES)													
17:00-17:15	0	3	0	0	2	0	0	2	0	0	3	0	10
17:15-17:30	0	0	1	0	1	0	0	1	1	0	1	0	5
17:30-17:45	0	0	0	0	1	0	0	3	0	2	1	0	7
17:45-18:00	1	0	1	0	2	0	0	1	0	0	0	0	5
MEDIUM TRUCKS (SINGLE UNIT > 2 AXLES)													
17:00-17:15	0	1	0	0	0	0	0	1	0	0	0	0	2
17:15-17:30	0	0	0	0	0	0	0	1	0	0	0	0	1
17:30-17:45	0	0	0	0	0	0	0	0	0	0	0	0	0
17:45-18:00	0	0	0	0	0	0	0	0	0	0	0	0	0
HEAVY TRUCKS (SEMI-TRACTOR TRAILER)													
17:00-17:15	0	0	0	0	0	0	0	0	0	0	0	0	0
17:15-17:30	0	0	0	0	0	0	0	0	0	0	0	0	0
17:30-17:45	0	0	0	0	0	0	0	0	0	0	0	0	0
17:45-18:00	0	0	0	0	0	0	0	0	0	0	0	0	0
BICYCLES													
17:00-17:15	0	1	0	0	0	0	0	0	0	0	0	0	1
17:15-17:30	0	1	0	0	0	0	0	0	0	0	0	0	1
17:30-17:45	0	0	0	0	0	0	0	0	0	0	0	0	0
17:45-18:00	0	1	0	0	0	0	0	0	0	0	0	0	1

PEDESTRIANS	CROSSWALK USEAGE SOUTH	WEST	EAST	NORTH	ALL
17:00-17:15	0	0	0	0	0
17:15-17:30	0	2	2	0	4
17:30-17:45	0	0	2	1	3
17:45-18:00	0	2	1	0	3

Peak Hour by Movement													
PHF	.82	.94	.97	.62	.87	.88	.78	.94	.91	.83	.94	.87	.955
% Trucks(all)	.8	.6	1.4	0	1.1	0	0	1	.2	.8	.8	0	.7
% Trucks(M+H)	0	.1	0	0	0	0	0	.2	0	0	0	0	.1
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	
Hourly Totals													
16:30-17:30	117	642	128	100	538	120	222	832	368	231	562	92	3952
16:45-17:45	124	677	138	90	541	114	223	904	388	233	572	96	4100
17:00-18:00	132	712	144	84	559	112	209	899	416	242	629	97	4235
17:15-18:15	139	717	126	87	545	112	201	871	390	248	617	101	4154
17:30-18:30	149	711	129	91	504	108	181	825	377	238	600	93	4006

INTERSECTION TURN MOVEMENT COUNT SUMMARY REPORT
CEDAR HILLS BOULEVARD AT JENKINS ROAD

27514



DATE OF COUNT: 06/01/00
DAY OF WEEK: Thu
TIME STARTED: 16:00
TIME ENDED: 18:00

TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

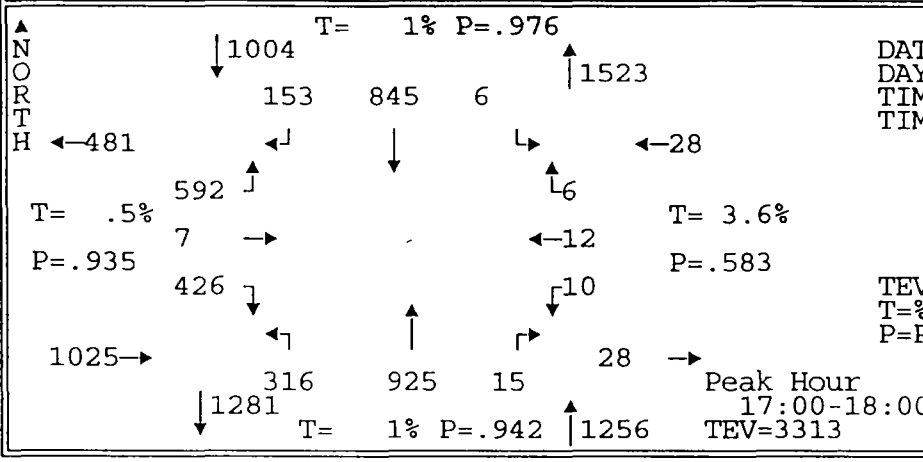
erlk

Peak Hour
16:55-17:55

Traffic Smithy
(503) 641-6333

TIME PERIOD FROM - TO	EAST BOUND ↓	EAST BOUND →	EAST BOUND ↑	SOUTH BOUND ↲	SOUTH BOUND ↓	SOUTH BOUND ↳	NORTH BOUND ↰	NORTH BOUND ↑	NORTH BOUND ↱	WEST BOUND ↓	WEST BOUND ←	WEST BOUND ↑	ALL
16:00-16:05	27	0	31	12	65	0	20	66	0	1	1	0	223
16:05-16:10	29	0	41	14	79	1	17	63	0	0	0	0	244
16:10-16:15	35	1	34	14	76	0	21	71	1	0	0	1	254
16:15-16:20	19	0	57	15	62	0	29	63	5	1	1	0	252
16:20-16:25	30	0	43	13	64	0	24	81	2	1	0	1	259
16:25-16:30	42	1	32	10	63	0	25	71	0	0	0	1	245
16:30-16:35	23	4	32	11	80	1	19	71	0	0	0	0	241
16:35-16:40	27	0	50	8	50	0	18	57	0	1	0	0	211
16:40-16:45	18	0	30	12	80	1	30	70	1	1	1	3	247
16:45-16:50	36	0	50	17	70	0	15	60	1	0	0	0	249
16:50-16:55	35	0	49	13	69	0	23	73	0	2	0	0	264
16:55-17:00	37	2	50	9	58	1	29	90	3	0	0	1	280
17:00-17:05	34	1	53	11	53	0	10	70	0	2	0	0	234
17:05-17:10	20	1	40	12	84	1	29	76	1	0	2	0	266
17:10-17:15	28	0	54	19	77	0	27	84	2	0	0	1	292
17:15-17:20	34	0	46	8	73	1	40	84	0	2	1	1	290
17:20-17:25	33	0	48	15	61	1	32	73	2	0	2	1	268
17:25-17:30	32	0	58	16	75	0	27	75	0	2	2	1	288
17:30-17:35	44	0	42	12	79	2	31	79	1	0	0	0	290
17:35-17:40	39	1	47	16	62	0	23	64	3	0	0	0	255
17:40-17:45	42	1	53	6	80	0	25	81	2	1	1	2	294
17:45-17:50	35	1	53	15	71	0	22	76	2	2	1	0	278
17:50-17:55	40	0	51	10	75	0	23	87	0	1	2	0	289
17:55-18:00	45	2	47	13	55	1	27	76	2	0	1	0	269
Total Survey	784	15	1091	301	1661	10	586	1761	28	17	15	13	6282
PHF	.84	.44	.95	.85	.91	.5	.8	.96	.57	.63	.55	.58	.965
% Trucks	.8	0	.8	2.3	1	0	1.2	1.2	0	0	6.7	0	1.1
Stopped Buses	0	0	0	0	0	0	0	5	0	0	0	0	
Peds	0	20	0	0	8	0	0	15	0	0	12	0	
Hourly Totals													
16:00-17:00	358	8	499	148	816	4	270	836	13	7	3	7	2969
16:15-17:15	349	9	540	150	810	4	278	866	15	8	4	7	3040
16:30-17:30	357	8	560	151	830	6	299	883	10	10	8	8	3130
16:45-17:45	414	6	590	154	841	6	311	909	15	9	8	7	3270
17:00-18:00	426	7	592	153	845	6	316	925	15	10	12	6	3313

INTERSECTION TURN MOVEMENT COUNT PEAK HOUR REPORT
CEDAR HILLS BOULEVARD AT JENKINS ROAD



DATE OF COUNT: 06/01/00
DAY OF WEEK: Thu
TIME STARTED: 16:00
TIME ENDED: 18:00

TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

erlk

Peak Hour
17:00-18:00

Traffic Smithy
(503)641-6333

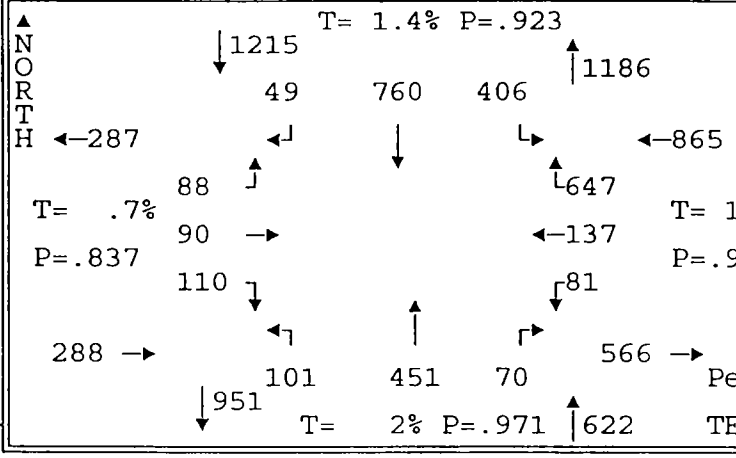
TIME PERIOD FROM - TO	EAST BOUND ↰	EAST BOUND →	EAST BOUND ↱	SOUTH BOUND ↰	SOUTH BOUND ↓	SOUTH BOUND ↱	NORTH BOUND ↰	NORTH BOUND ↑	NORTH BOUND ↱	WEST BOUND ↰	WEST BOUND ←	WEST BOUND ↱	ALL
ALL VEHICLES													
17:00-17:15	82	2	147	42	214	1	66	230	3	2	2	1	792
17:15-17:30	99	0	152	39	209	2	99	232	2	4	5	3	846
17:30-17:45	125	2	142	34	221	2	79	224	6	1	1	2	839
17:45-18:00	120	3	151	38	201	1	72	239	4	3	4	0	836
LIGHT TRUCKS (SINGLE UNIT 2 AXLES)													
17:00-17:15	1	0	1	0	5	0	1	0	0	0	0	0	8
17:15-17:30	0	0	1	0	0	0	1	3	0	0	0	0	5
17:30-17:45	0	0	0	0	2	0	0	2	0	0	0	0	4
17:45-18:00	1	0	1	1	1	0	1	2	0	0	1	0	8
MEDIUM TRUCKS (SINGLE UNIT > 2 AXLES)													
17:00-17:15	0	0	0	0	0	0	0	3	0	0	0	0	3
17:15-17:30	0	0	0	0	0	0	0	0	0	0	0	0	0
17:30-17:45	0	0	0	0	0	0	0	0	0	0	0	0	0
17:45-18:00	0	0	0	0	0	0	0	0	0	0	0	0	0
HEAVY TRUCKS (SEMI-TRACTOR TRAILER)													
17:00-17:15	0	0	0	0	0	0	0	0	0	0	0	0	0
17:15-17:30	0	0	0	0	0	0	0	0	0	0	0	0	0
17:30-17:45	0	0	0	0	1	0	0	0	0	0	0	0	1
17:45-18:00	0	0	0	0	0	0	0	0	0	0	0	0	0
BICYCLES													
17:00-17:15	0	0	0	0	0	0	0	0	0	0	0	0	0
17:15-17:30	0	0	0	0	0	0	0	0	0	0	0	0	0
17:30-17:45	0	0	0	0	0	0	0	0	1	0	0	0	1
17:45-18:00	1	0	1	0	0	0	0	0	0	0	0	0	2

PEDESTRIANS	CROSSWALK USEAGE				ALL
	SOUTH	WEST	EAST	NORTH	
17:00-17:15	3	1	5	1	10
17:15-17:30	2	1	3	1	7
17:30-17:45	2	0	3	1	6
17:45-18:00	3	0	1	1	5

Peak Hour by Movement													
PHF	.85	.58	.97	.91	.96	.75	.8	.97	.63	.63	.6	.5	.979
% Trucks(all)	.5	0	.5	.7	1.1	0	.9	1.1	0	0	8.3	0	.9
% Trucks(M+H)	0	0	0	0	.1	0	0	.3	0	0	0	0	.1
Stopped Buses	0	0	0	0	0	0	0	1	0	0	0	0	

Hourly Totals													
16:00-17:00	358	8	499	148	816	4	270	836	13	7	3	7	2969
16:15-17:15	349	9	540	150	810	4	278	866	15	8	4	7	3040
16:30-17:30	357	8	560	151	830	6	299	883	10	10	8	8	3130
16:45-17:45	414	6	590	154	841	6	311	909	15	9	8	7	3270
17:00-18:00	426	7	592	153	845	6	316	925	15	10	12	6	3313

INTERSECTION TURN MOVEMENT COUNT SUMMARY REPORT
CEDAR HILLS BOULEVARD AT HALL BOULEVARD 24003



DATE OF COUNT: 06/21/00
DAY OF WEEK: Wed
TIME STARTED: 16:00
TIME ENDED: 18:00

TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

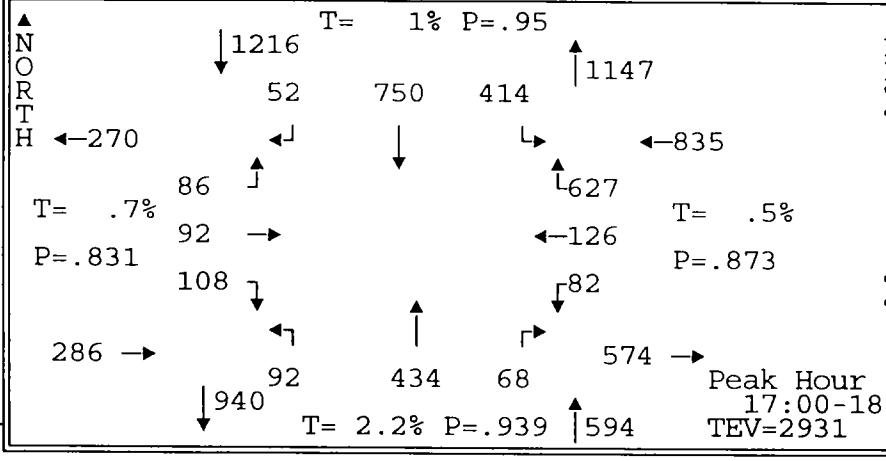
BKVP

Peak Hour
16:55-17:55
TEV=2990

Traffic Smithy
(503) 641-6333

TIME PERIOD FROM - TO	EAST BOUND ↓	EAST BOUND →	EAST BOUND ↑	SOUTH BOUND ↲	SOUTH BOUND ↓	SOUTH BOUND ↳	NORTH BOUND ↰	NORTH BOUND ↑	NORTH BOUND ↱	WEST BOUND ↓	WEST BOUND ←	WEST BOUND ↑	ALL
16:00-16:05	13	9	8	6	52	24	8	27	1	5	14	46	213
16:05-16:10	8	9	7	7	51	25	6	24	6	4	16	45	208
16:10-16:15	7	11	7	5	72	35	5	34	6	6	9	44	241
16:15-16:20	14	14	6	3	45	29	11	26	3	11	17	61	240
16:20-16:25	10	5	7	3	45	27	9	36	3	9	7	52	213
16:25-16:30	9	10	11	2	48	30	5	24	2	7	12	34	194
16:30-16:35	14	7	2	5	53	28	11	34	7	2	12	55	230
16:35-16:40	6	9	7	2	53	37	8	28	7	6	7	56	226
16:40-16:45	5	14	5	3	60	33	13	34	8	5	13	47	240
16:45-16:50	11	2	10	2	52	32	6	31	6	7	15	57	231
16:50-16:55	8	9	11	4	39	21	10	29	4	6	10	53	204
16:55-17:00	12	5	6	2	63	35	13	44	4	3	16	59	262
17:00-17:05	3	10	5	6	57	28	10	35	0	11	9	54	228
17:05-17:10	11	6	5	3	76	25	5	42	5	9	10	57	254
17:10-17:15	10	9	10	7	58	35	7	43	3	8	19	62	271
17:15-17:20	13	4	7	2	68	38	11	34	5	4	13	55	254
17:20-17:25	12	9	11	3	67	35	9	39	4	5	9	56	259
17:25-17:30	14	7	9	3	62	32	10	41	5	6	9	54	252
17:30-17:35	9	4	3	4	56	25	7	30	8	12	13	63	234
17:35-17:40	6	9	7	5	67	24	9	37	13	4	7	41	229
17:40-17:45	4	4	7	5	61	44	7	20	10	5	10	53	230
17:45-17:50	5	15	12	6	63	42	5	51	8	9	12	55	283
17:50-17:55	11	8	6	3	62	43	8	35	5	5	10	38	234
17:55-18:00	10	7	4	5	53	43	4	27	2	4	5	39	203
Total Survey	225	196	173	96	1383	770	197	805	125	153	274	1236	5633
PHF	.71	.8	.79	.77	.94	.79	.84	.93	.56	.72	.82	.93	.953
% Trucks	1.3	0	.6	0	1.8	.9	0	2.7	.8	2	.7	1.1	1.4
Stopped Buses	0	0	0	0	3	0	0	2	0	0	3	0	
Peds	0	34	0	0	21	0	0	27	0	0	86	0	
Hourly Totals													
16:00-17:00	117	104	87	44	633	356	105	371	57	71	148	609	2702
16:15-17:15	113	100	85	42	649	360	108	406	52	84	147	647	2793
16:30-17:30	119	91	88	42	708	379	113	434	58	72	142	665	2911
16:45-17:45	113	78	91	46	726	374	104	425	67	80	140	664	2908
17:00-18:00	108	92	86	52	750	414	92	434	68	82	126	627	2931

INTERSECTION TURN MOVEMENT COUNT PEAK HOUR REPORT
CEDAR HILLS BOULEVARD AT HALL BOULEVARD



DATE OF COUNT: 06/21/00
DAY OF WEEK: Wed
TIME STARTED: 16:00
TIME ENDED: 18:00

TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

BKVP

Peak Hour
17:00-18:00
TEV=2931

Traffic Smithy
(503)641-6333

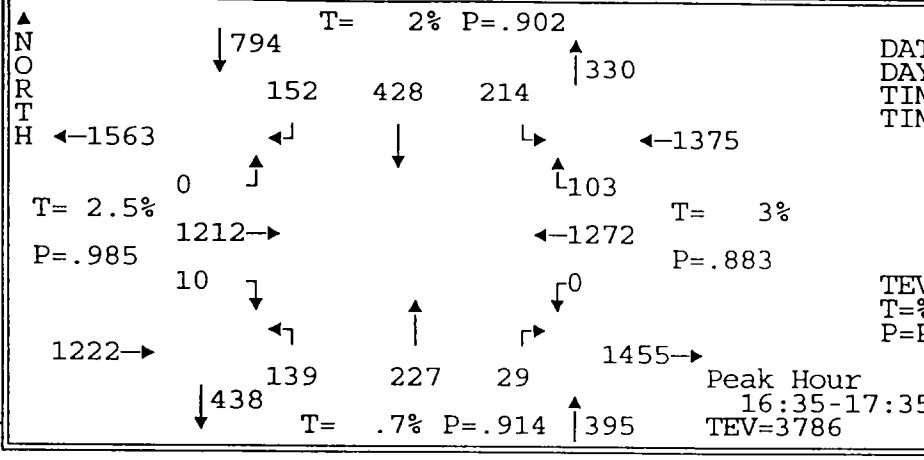
TIME PERIOD FROM - TO	EAST BOUND ↓	EAST BOUND →	EAST BOUND ↑	SOUTH BOUND ↲	SOUTH BOUND ↓	SOUTH BOUND ↳	NORTH BOUND ↰	NORTH BOUND ↑	NORTH BOUND ↱	WEST BOUND ↓	WEST BOUND ←	WEST BOUND ↑	ALL
ALL VEHICLES													
17:00-17:15	24	25	20	16	191	88	22	120	8	28	38	173	753
17:15-17:30	39	20	27	8	197	105	30	114	14	15	31	165	765
17:30-17:45	19	17	17	14	184	93	23	87	31	21	30	157	693
17:45-18:00	26	30	22	14	178	128	17	113	15	18	27	132	720
LIGHT TRUCKS (SINGLE UNIT 2 AXLES)													
17:00-17:15	0	0	0	0	2	2	0	2	0	0	0	1	7
17:15-17:30	1	0	0	0	2	0	0	4	0	0	0	2	9
17:30-17:45	0	0	0	0	1	1	0	1	0	0	0	1	4
17:45-18:00	0	0	1	0	2	0	0	3	0	0	0	0	6
MEDIUM TRUCKS (SINGLE UNIT > 2 AXLES)													
17:00-17:15	0	0	0	0	0	0	0	0	0	0	0	0	0
17:15-17:30	0	0	0	0	0	0	0	0	0	0	0	0	0
17:30-17:45	0	0	0	0	0	0	0	1	0	0	0	0	1
17:45-18:00	0	0	0	0	0	0	0	1	0	0	0	0	1
HEAVY TRUCKS (SEMI-TRACTOR TRAILER)													
17:00-17:15	0	0	0	0	1	0	0	1	0	0	0	0	2
17:15-17:30	0	0	0	0	0	0	0	0	0	0	0	0	0
17:30-17:45	0	0	0	0	0	0	0	0	0	0	0	0	0
17:45-18:00	0	0	0	0	1	0	0	0	0	0	0	0	1
BICYCLES													
17:00-17:15	0	0	0	0	0	1	0	0	0	0	0	0	1
17:15-17:30	0	0	0	0	1	0	0	1	0	0	0	0	2
17:30-17:45	0	1	0	0	0	0	0	0	0	0	0	1	2
17:45-18:00	0	2	0	0	0	3	0	0	0	0	0	0	5

PEDESTRIANS — CROSSWALK USEAGE	SOUTH	WEST	EAST	NORTH	ALL
17:00-17:15	4	1	8	10	23
17:15-17:30	1	0	2	15	18
17:30-17:45	4	3	2	10	19
17:45-18:00	5	0	2	8	15

Peak Hour by Movement													
PHF	.69	.77	.8	.81	.95	.81	.77	.9	.55	.73	.83	.91	.957
% Trucks(all)	.9	0	1.2	0	1.2	.7	0	3	0	0	0	.6	1.1
% Trucks(M+H)	0	0	0	0	.3	0	0	.7	0	0	0	0	.2
Stopped Buses	0	0	0	0	2	0	0	2	0	0	1	0	
Hourly Totals													
16:00-17:00	117	104	87	44	633	356	105	371	57	71	148	609	2702
16:15-17:15	113	100	85	42	649	360	108	406	52	84	147	647	2793
16:30-17:30	119	91	88	42	708	379	113	434	58	72	142	665	2911
16:45-17:45	113	78	91	46	726	374	104	425	67	80	140	664	2908
17:00-18:00	108	92	86	52	750	414	92	434	68	82	126	627	2931

INTERSECTION TURN MOVEMENT COUNT SUMMARY REPORT
CANYON ROAD AT CEDAR HILLS BOULEVARD

23949



DATE OF COUNT: 06/08/00
DAY OF WEEK: Thu
TIME STARTED: 16:00
TIME ENDED: 18:00

TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

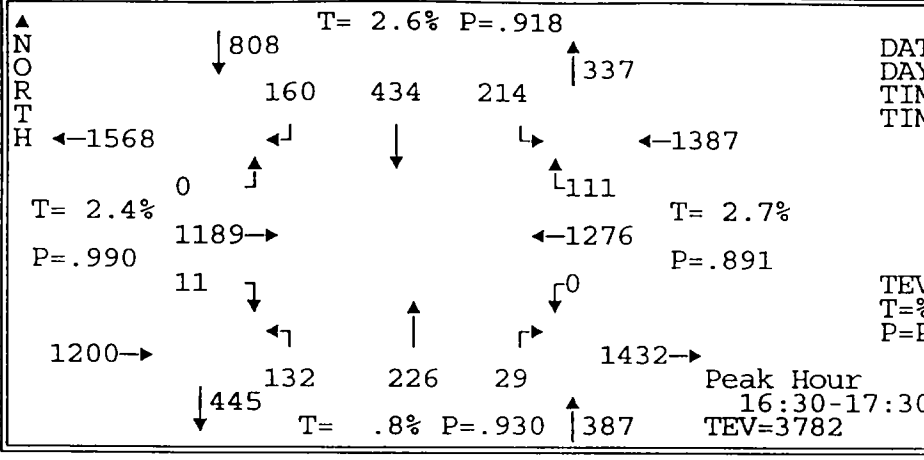
GMAH

Peak Hour
16:35-17:35
TEV=3786

Traffic Smithy
(503) 641-6333

TIME PERIOD FROM - TO	EAST BOUND ↓	EAST BOUND →	EAST BOUND ↑	SOUTH BOUND ↙	SOUTH BOUND ↓	SOUTH BOUND ↳	NORTH BOUND ↰	NORTH BOUND ↑	NORTH BOUND ↱	WEST BOUND ↓	WEST BOUND ←	WEST BOUND ↑	ALL
16:00-16:05	1	58	0	14	24	17	10	12	2	0	93	8	239
16:05-16:10	2	93	0	14	33	10	9	16	0	0	119	6	302
16:10-16:15	1	99	0	10	27	11	12	16	0	0	120	10	306
16:15-16:20	0	83	0	12	33	18	9	20	0	0	103	5	283
16:20-16:25	0	90	0	6	34	13	10	19	2	0	104	10	288
16:25-16:30	2	75	0	10	25	9	8	17	2	0	116	11	275
16:30-16:35	1	95	0	16	44	8	7	23	2	0	115	12	323
16:35-16:40	0	94	0	14	38	18	16	24	3	0	103	8	318
16:40-16:45	0	113	0	14	34	14	13	15	1	0	107	7	318
16:45-16:50	0	89	0	10	37	17	9	22	1	0	111	9	305
16:50-16:55	0	106	0	14	33	15	9	18	3	0	121	13	332
16:55-17:00	2	104	0	10	22	13	11	17	4	0	130	5	318
17:00-17:05	0	97	0	13	33	27	6	27	3	0	100	14	320
17:05-17:10	0	99	0	16	33	24	12	14	3	0	83	11	295
17:10-17:15	0	102	0	18	34	19	13	14	2	0	102	6	310
17:15-17:20	0	109	0	15	40	19	11	13	3	0	110	14	334
17:20-17:25	1	86	0	6	46	19	11	14	1	0	105	10	299
17:25-17:30	7	95	0	14	40	21	14	25	3	0	89	2	310
17:30-17:35	0	118	0	8	38	8	14	24	2	0	111	4	327
17:35-17:40	0	91	0	8	37	20	15	21	4	0	99	7	302
17:40-17:45	1	88	0	12	37	21	9	20	4	0	106	4	302
17:45-17:50	0	91	0	4	39	14	10	24	1	0	111	4	298
17:50-17:55	1	94	0	15	37	22	13	20	1	0	111	4	318
17:55-18:00	1	104	0	12	44	20	8	19	3	0	118	10	339
Total Survey	20	2273	0	285	842	397	259	454	50	0	2587	194	7361
PHF	.31	.98	0	.78	.85	.76	.89	.9	.73	0	.88	.8	.975
% Trucks	0	2.5	0	1.1	1.2	4.5	1.2	.4	0	0	2.6	7.7	2.4
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	
Peds	0	3	0	0	1	0	0	31	0	0	20	0	
Hourly Totals													
16:00-17:00	9	1099	0	144	384	163	123	219	20	0	1342	104	3607
16:15-17:15	5	1147	0	153	400	195	123	230	26	0	1295	111	3685
16:30-17:30	11	1189	0	160	434	214	132	226	29	0	1276	111	3782
16:45-17:45	11	1184	0	144	430	223	134	229	33	0	1267	99	3754
17:00-18:00	11	1174	0	141	458	234	136	235	30	0	1245	90	3754

INTERSECTION TURN MOVEMENT COUNT PEAK HOUR REPORT
CANYON ROAD AT CEDAR HILLS BOULEVARD



DATE OF COUNT: 06/08/00
DAY OF WEEK: Thu
TIME STARTED: 16:00
TIME ENDED: 18:00

TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

GMAH

Peak Hour
16:30-17:30

Traffic Smithy
(503)641-6333

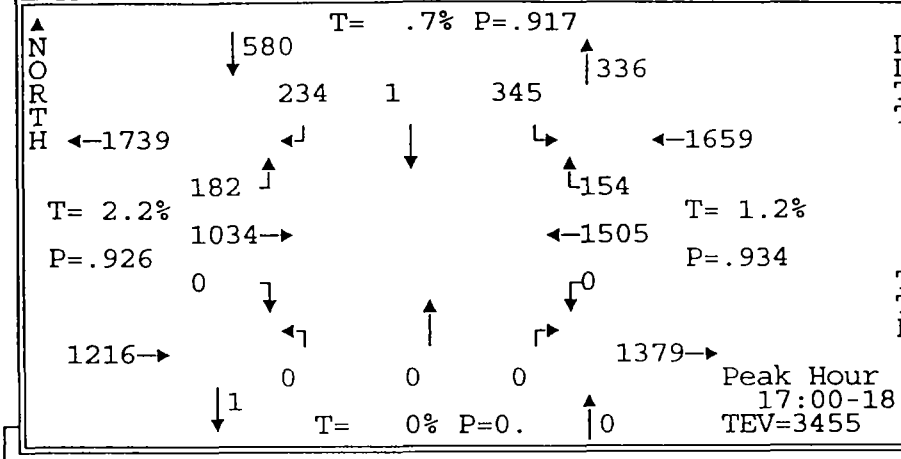
TIME PERIOD FROM - TO	EAST BOUND ↓	EAST BOUND →	EAST BOUND ↑	SOUTH BOUND ↓	SOUTH BOUND →	SOUTH BOUND ↑	NORTH BOUND ↓	NORTH BOUND →	NORTH BOUND ↑	WEST BOUND ↓	WEST BOUND →	WEST BOUND ↑	ALL
ALL VEHICLES													
16:30-16:45	1	302	0	44	116	40	36	62	6	0	325	27	959
16:45-17:00	2	299	0	34	92	45	29	57	8	0	362	27	955
17:00-17:15	0	298	0	47	100	70	31	55	8	0	285	31	925
17:15-17:30	8	290	0	35	126	59	36	52	7	0	304	26	943
LIGHT TRUCKS (SINGLE UNIT 2 AXLES)													
16:30-16:45	0	7	0	1	2	2	1	0	0	0	8	1	22
16:45-17:00	0	2	0	0	2	0	0	0	0	0	5	2	11
17:00-17:15	0	4	0	0	1	3	0	1	0	0	5	1	15
17:15-17:30	0	6	0	1	1	5	0	0	0	0	6	2	21
MEDIUM TRUCKS (SINGLE UNIT > 2 AXLES)													
16:30-16:45	0	1	0	0	0	0	1	0	0	0	1	0	3
16:45-17:00	0	0	0	0	0	0	0	0	0	0	1	0	1
17:00-17:15	0	0	0	0	0	0	0	0	0	0	0	0	0
17:15-17:30	0	2	0	0	0	0	0	0	0	0	0	0	2
HEAVY TRUCKS (SEMI-TRACTOR TRAILER)													
16:30-16:45	0	3	0	0	1	0	0	0	0	0	1	0	5
16:45-17:00	0	2	0	0	0	0	0	0	0	0	1	1	4
17:00-17:15	0	2	0	1	0	1	0	0	0	0	1	0	5
17:15-17:30	0	0	0	0	0	0	0	0	0	0	1	0	1
BICYCLES													
16:30-16:45	0	0	0	0	1	0	0	0	0	0	0	0	1
16:45-17:00	0	1	0	0	0	0	0	1	0	0	0	0	2
17:00-17:15	0	0	0	0	0	0	0	0	0	0	0	0	0
17:15-17:30	0	0	0	0	0	0	0	0	0	0	0	0	0

PEDESTRIANS	CROSSWALK USEAGE SOUTH	WEST	EAST	NORTH	ALL
16:30-16:45	0	0	4	6	10
16:45-17:00	0	0	4	1	5
17:00-17:15	0	0	1	4	5
17:15-17:30	2	0	3	5	10

Peak Hour by Movement													
PHF	.34	.98	0	.85	.86	.76	.92	.91	.91	0	.88	.9	.985
% Trucks(all)	0	2.4	0	1.9	1.6	5.1	1.5	.4	0	0	2.4	6.3	2.4
% Trucks(M+H)	0	.8	0	.6	.2	.5	.8	0	0	0	.5	.9	.6
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	

Hourly Totals													
16:00-17:00	9	1099	0	144	384	163	123	219	20	0	1342	104	3607
16:15-17:15	5	1147	0	153	400	195	123	230	26	0	1295	111	3685
16:30-17:30	11	1189	0	160	434	214	132	226	29	0	1276	111	3782
16:45-17:45	11	1184	0	144	430	223	134	229	33	0	1267	99	3754
17:00-18:00	11	1174	0	141	458	234	136	235	30	0	1245	90	3754

INTERSECTION TURN MOVEMENT COUNT SUMMARY REPORT
CEDAR HILLS BOULEVARD AT FARMINGTON ROAD 23828



DATE OF COUNT: 06/06/00
DAY OF WEEK: Tue
TIME STARTED: 16:00
TIME ENDED: 18:00

TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

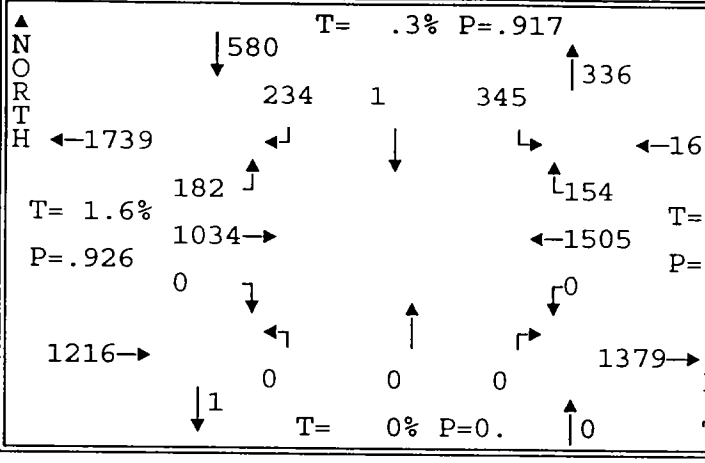
ERLN

Peak Hour
17:00-18:00
TEV=3455

Traffic Smithy
(503) 641-6333

TIME PERIOD FROM - TO	EAST BOUND ↓	EAST BOUND →	EAST BOUND ↑	SOUTH BOUND ↲	SOUTH BOUND ↓	SOUTH BOUND ↳	NORTH BOUND ↰	NORTH BOUND ↑	NORTH BOUND ↱	WEST BOUND ↓	WEST BOUND ←	WEST BOUND ↑	ALL
16:00-16:05	0	79	14	5	0	8	0	0	0	0	111	14	231
16:05-16:10	0	77	14	18	0	24	0	0	0	0	104	12	249
16:10-16:15	0	106	20	19	0	28	0	0	0	0	100	15	288
16:15-16:20	0	87	9	15	0	22	0	0	0	0	108	13	254
16:20-16:25	0	72	15	23	0	15	0	0	0	0	110	23	258
16:25-16:30	0	103	14	18	0	17	0	0	0	0	119	12	283
16:30-16:35	0	77	18	20	0	23	0	0	0	0	114	12	264
16:35-16:40	0	82	12	10	0	27	0	0	0	0	108	9	248
16:40-16:45	0	86	25	16	0	27	0	0	0	0	98	10	262
16:45-16:50	0	98	14	13	0	23	0	0	0	0	137	13	298
16:50-16:55	0	109	14	17	0	25	0	0	0	0	119	12	296
16:55-17:00	0	84	10	19	0	25	0	0	0	0	100	16	254
17:00-17:05	0	79	15	19	0	26	0	0	0	0	84	6	229
17:05-17:10	0	87	14	22	0	18	0	0	0	0	129	13	283
17:10-17:15	0	95	11	18	0	21	0	0	0	0	116	12	273
17:15-17:20	0	76	15	17	0	31	0	0	0	0	140	15	294
17:20-17:25	0	65	18	17	0	40	0	0	0	0	128	14	282
17:25-17:30	0	96	11	14	1	31	0	0	0	0	135	10	298
17:30-17:35	0	90	11	18	0	27	0	0	0	0	128	15	289
17:35-17:40	0	101	12	17	0	30	0	0	0	0	127	13	300
17:40-17:45	0	79	13	25	0	30	0	0	0	0	130	16	293
17:45-17:50	0	90	27	25	0	30	0	0	0	0	133	13	318
17:50-17:55	0	86	12	18	0	28	0	0	0	0	135	17	296
17:55-18:00	0	90	23	24	0	33	0	0	0	0	120	10	300
Total Survey	0	2094	361	427	1	609	0	0	0	0	2833	315	6640
PHF	0	.9	.73	.86	.25	.85	0	0	0	0	.93	.84	.945
% Trucks	0	2.6	0	.2	0	1	0	0	0	0	1.3	.3	1.5
Stopped Buses	0	0	0	0	0	0	0	0	0	0	6	0	
Peds	0	0	0	0	17	0	0	0	0	0	8	0	
Hourly Totals													
16:00-17:00	0	1060	179	193	0	264	0	0	0	0	1328	161	3185
16:15-17:15	0	1059	171	210	0	269	0	0	0	0	1342	151	3202
16:30-17:30	0	1034	177	202	1	317	0	0	0	0	1408	142	3281
16:45-17:45	0	1059	158	216	1	327	0	0	0	0	1473	155	3389
17:00-18:00	0	1034	182	234	1	345	0	0	0	0	1505	154	3455

INTERSECTION TURN MOVEMENT COUNT PEAK HOUR REPORT
CEDAR HILLS BOULEVARD AT FARMINGTON ROAD



DATE OF COUNT: 06/06/00
DAY OF WEEK: Tue
TIME STARTED: 16:00
TIME ENDED: 18:00

TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

ERLN

Peak Hour
17:00-18:00
TEV=3455

Traffic Smithy
(503)641-6333

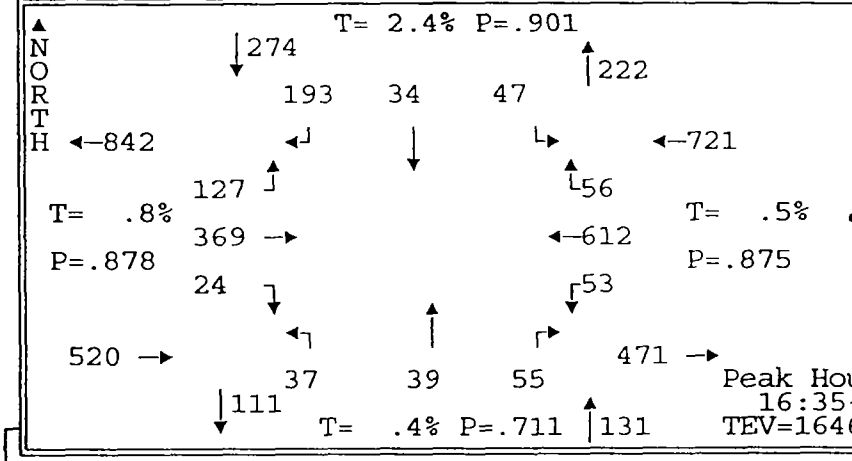
TIME PERIOD FROM - TO	EAST BOUND ↓	EAST BOUND →	EAST BOUND ↑	SOUTH BOUND ↵	SOUTH BOUND ↓	SOUTH BOUND ↳	NORTH BOUND ↰	NORTH BOUND ↑	NORTH BOUND ↱	WEST BOUND ↓	WEST BOUND ←	WEST BOUND ↑	ALL
ALL VEHICLES													
17:00-17:15	0	261	40	59	0	65	0	0	0	0	329	31	785
17:15-17:30	0	237	44	48	1	102	0	0	0	0	403	39	874
17:30-17:45	0	270	36	60	0	87	0	0	0	0	385	44	882
17:45-18:00	0	266	62	67	0	91	0	0	0	0	388	40	914
LIGHT TRUCKS (SINGLE UNIT 2 AXLES)													
17:00-17:15	0	6	0	0	0	1	0	0	0	0	4	0	11
17:15-17:30	0	2	0	0	0	0	0	0	0	0	8	0	10
17:30-17:45	0	4	0	0	0	1	0	0	0	0	5	0	10
17:45-18:00	0	5	0	0	0	0	0	0	0	0	4	0	9
MEDIUM TRUCKS (SINGLE UNIT > 2 AXLES)													
17:00-17:15	0	0	0	0	0	0	0	0	0	0	0	0	0
17:15-17:30	0	0	0	0	0	0	0	0	0	0	1	0	1
17:30-17:45	0	0	0	0	0	0	0	0	0	0	0	0	0
17:45-18:00	0	2	0	0	0	0	0	0	0	0	0	0	2
HEAVY TRUCKS (SEMI-TRACTOR TRAILER)													
17:00-17:15	0	0	0	0	0	0	0	0	0	0	0	0	0
17:15-17:30	0	0	0	0	0	0	0	0	0	0	0	0	0
17:30-17:45	0	0	0	0	0	0	0	0	0	0	0	1	1
17:45-18:00	0	0	0	0	0	0	0	0	0	0	0	0	0
BICYCLES													
17:00-17:15	0	0	0	0	0	0	0	0	0	0	0	0	0
17:15-17:30	0	0	0	0	0	0	0	0	0	0	0	0	0
17:30-17:45	0	0	0	0	0	0	0	0	0	0	0	0	0
17:45-18:00	0	0	0	0	0	0	0	0	0	0	0	0	0

PEDESTRIANS	CROSSWALK USEAGE				ALL
	SOUTH	WEST	EAST	NORTH	
17:00-17:15	0	2	0	1	3
17:15-17:30	0	1	0	1	2
17:30-17:45	0	1	0	0	1
17:45-18:00	0	2	0	1	3

Peak Hour by Movement													
PHF	0	.96	.73	.87	.25	.85	0	0	0	0	.93	.88	.945
% Trucks(all)	0	1.8	0	0	0	.6	0	0	0	0	1.5	.6	1.3
% Trucks(M+H)	0	.2	0	0	0	0	0	0	0	0	.1	.6	.1
Stopped Buses	0	0	0	0	0	0	0	0	0	0	4	0	

Hourly Totals													
16:00-17:00	0	1060	179	193	0	264	0	0	0	0	1328	161	3185
16:15-17:15	0	1059	171	210	0	269	0	0	0	0	1342	151	3202
16:30-17:30	0	1034	177	202	1	317	0	0	0	0	1408	142	3281
16:45-17:45	0	1059	158	216	1	327	0	0	0	0	1473	155	3389
17:00-18:00	0	1034	182	234	1	345	0	0	0	0	1505	154	3455

INTERSECTION TURN MOVEMENT COUNT SUMMARY REPORT
HALL BOULEVARD AT CENTER STREET



DATE OF COUNT: 6/8/00
DAY OF WEEK: THU
TIME STARTED: 16:00
TIME ENDED: 18:00

TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

gmaj

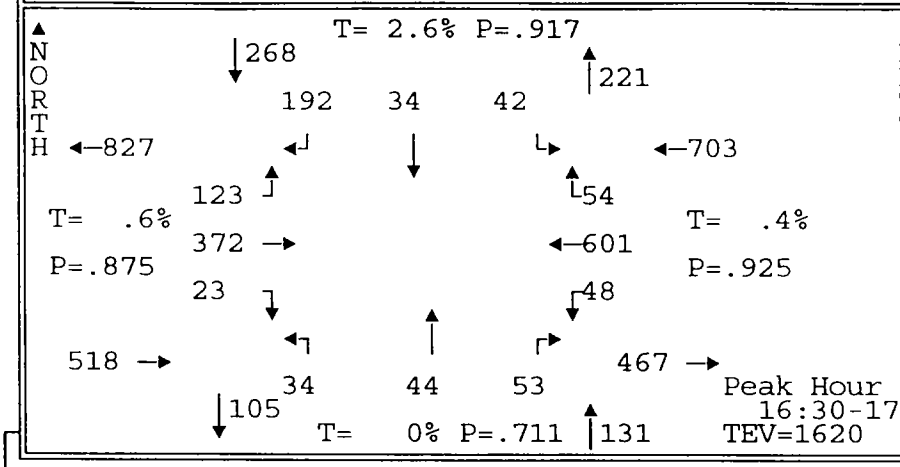
Peak Hour
16:35-17:35
TEV=1646

Traffic Smithy
(503) 641-6333

TIME PERIOD FROM - TO	EAST BOUND ↓	EAST BOUND →	EAST BOUND ↑	SOUTH BOUND ↙	SOUTH BOUND ↓	SOUTH BOUND ↳	NORTH BOUND ↰	NORTH BOUND ↑	NORTH BOUND ↱	WEST BOUND ↓	WEST BOUND ←	WEST BOUND ↰	ALL
16:00-16:05	1	27	6	18	5	1	3	4	4	4	47	4	124
16:05-16:10	2	30	6	8	3	4	2	5	1	3	46	1	111
16:10-16:15	0	34	10	17	3	4	3	4	4	2	50	6	137
16:15-16:20	2	22	9	20	2	4	3	5	3	1	30	4	105
16:20-16:25	3	24	5	21	0	3	1	3	1	4	41	4	110
16:25-16:30	0	29	12	17	6	3	2	5	2	6	42	3	127
16:30-16:35	0	28	9	13	1	1	1	6	1	1	41	3	105
16:35-16:40	2	30	12	20	0	0	3	5	1	3	72	6	154
16:40-16:45	3	28	8	14	7	7	5	3	6	6	55	3	145
16:45-16:50	5	22	11	17	3	5	3	1	10	5	52	4	138
16:50-16:55	1	30	7	19	2	2	0	4	6	6	53	6	136
16:55-17:00	0	32	12	17	2	6	7	7	8	2	38	5	136
17:00-17:05	1	32	11	16	5	6	3	4	2	0	47	1	128
17:05-17:10	0	33	8	18	3	0	2	1	2	8	42	5	122
17:10-17:15	1	33	11	14	3	2	2	6	2	3	55	4	136
17:15-17:20	4	26	12	16	1	4	3	3	2	3	44	9	127
17:20-17:25	4	41	14	16	6	5	3	0	8	5	38	4	144
17:25-17:30	2	37	8	12	1	4	2	4	5	6	64	4	149
17:30-17:35	1	25	13	14	1	6	4	1	3	6	52	5	131
17:35-17:40	1	36	10	14	2	2	0	1	7	3	55	3	134
17:40-17:45	3	39	11	18	1	2	1	1	5	3	47	4	135
17:45-17:50	1	35	11	22	2	4	4	7	2	0	53	5	146
17:50-17:55	0	25	12	19	2	5	3	4	4	8	35	6	123
17:55-18:00	4	35	3	18	2	6	1	4	2	1	28	5	109
Total Survey	41	733	231	398	63	86	61	88	91	89	1127	104	3112
PHF	.6	.89	.86	.91	.71	.78	.77	.65	.57	.78	.85	.78	.941
% Trucks	0	.4	2.2	2.8	1.6	1.2	0	1.1	0	0	.6	0	.9
Stopped Buses	0	0	0	0	1	0	0	0	0	0	0	0	
Peds	0	18	0	0	15	0	0	8	0	0	25	0	
Hourly Totals													
16:00-17:00	19	336	107	201	34	40	33	52	47	43	567	49	1528
16:15-17:15	18	343	115	206	34	39	32	50	44	45	568	48	1542
16:30-17:30	23	372	123	192	34	42	34	44	53	48	601	54	1620
16:45-17:45	23	386	128	191	30	44	30	33	60	50	587	54	1616
17:00-18:00	22	397	124	197	29	46	28	36	44	46	560	55	1584

352

INTERSECTION TURN MOVEMENT COUNT PEAK HOUR REPORT
HALL BOULEVARD AT CENTER STREET



DATE OF COUNT: 6/8/00
DAY OF WEEK: THU
TIME STARTED: 16:00
TIME ENDED: 18:00

TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

gmaj

Peak Hour
16:30-17:30
TEV=1620

Traffic Smithy
(503)641-6333

TIME PERIOD FROM - TO	EAST BOUND ↓	EAST BOUND →	EAST BOUND ↑	SOUTH BOUND ↵	SOUTH BOUND ↓	SOUTH BOUND ↳	NORTH BOUND ↰	NORTH BOUND ↑	NORTH BOUND ↱	WEST BOUND ↓	WEST BOUND ←	WEST BOUND ↑	ALL
ALL VEHICLES													
16:30-16:45	5	86	29	47	8	8	9	14	8	10	168	12	404
16:45-17:00	6	84	30	53	7	13	10	12	24	13	143	15	410
17:00-17:15	2	98	30	48	11	8	7	11	6	11	144	10	386
17:15-17:30	10	104	34	44	8	13	8	7	15	14	146	17	420
LIGHT TRUCKS (SINGLE UNIT 2 AXLES)													
16:30-16:45	0	1	0	2	0	0	0	0	0	0	1	0	4
16:45-17:00	0	0	1	0	0	0	0	0	0	0	0	0	1
17:00-17:15	0	0	1	4	0	0	0	0	0	0	1	0	6
17:15-17:30	0	0	0	0	0	1	0	0	0	0	1	0	2
MEDIUM TRUCKS (SINGLE UNIT > 2 AXLES)													
16:30-16:45	0	0	0	0	0	0	0	0	0	0	0	0	0
16:45-17:00	0	0	0	0	0	0	0	0	0	0	0	0	0
17:00-17:15	0	0	0	0	0	0	0	0	0	0	0	0	0
17:15-17:30	0	0	0	0	0	0	0	0	0	0	0	0	0
HEAVY TRUCKS (SEMI-TRACTOR TRAILER)													
16:30-16:45	0	0	0	0	0	0	0	0	0	0	0	0	0
16:45-17:00	0	0	0	0	0	0	0	0	0	0	0	0	0
17:00-17:15	0	0	0	0	0	0	0	0	0	0	0	0	0
17:15-17:30	0	0	0	0	0	0	0	0	0	0	0	0	0
BICYCLES													
16:30-16:45	0	0	0	0	1	0	0	0	0	0	0	0	1
16:45-17:00	0	1	0	0	0	0	0	0	0	0	0	0	1
17:00-17:15	0	0	0	1	0	0	0	0	0	0	0	0	1
17:15-17:30	0	0	0	0	0	0	0	0	0	0	0	0	0

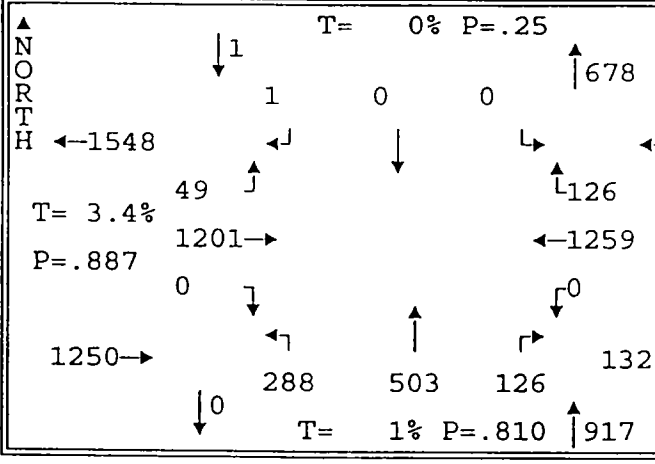
PEDESTRIANS	CROSSWALK USEAGE SOUTH	WEST	EAST	NORTH	ALL
16:30-16:45	3	1	0	7	11
16:45-17:00	1	0	0	4	5
17:00-17:15	2	1	0	3	6
17:15-17:30	1	1	3	0	5

Peak Hour by Movement													
PHF	.57	.89	.9	.91	.77	.81	.85	.79	.55	.86	.89	.79	.964
% Trucks(all)	0	.3	1.6	3.1	0	2.4	0	0	0	0	.5	0	.8
% Trucks(M+H)	0	0	0	0	0	0	0	0	0	0	0	0	0
Stopped Buses	0	0	0	0	1	0	0	0	0	0	0	0	
Hourly Totals													
16:00-17:00	19	336	107	201	34	40	33	52	47	43	567	49	1528
16:15-17:15	18	343	115	206	34	39	32	50	44	45	568	48	1542
16:30-17:30	23	372	123	192	34	42	34	44	53	48	601	54	1620
16:45-17:45	23	386	128	191	30	44	30	33	60	50	587	54	1616
17:00-18:00	22	397	124	197	29	46	28	36	44	46	560	55	1584

040

INTERSECT[illegible] TURN MOVEMENT COUNT SUMMAR[illegible] REPORT
[illegible]ALL BOULEVARD AT CANYON ROAD

19773



DATE OF COUNT: 05/13/99
DAY OF WEEK: Thu
TIME STARTED: 16:01
TIME ENDED: 18:01

TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

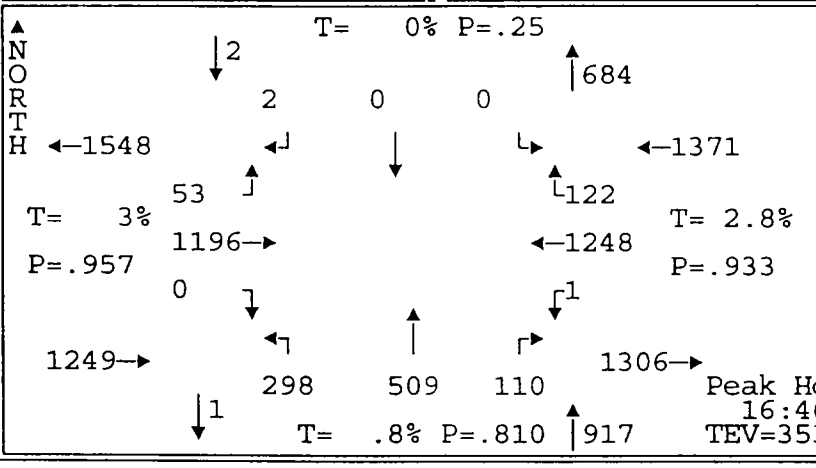
ERVB

Peak Hour
16:56-17:56
TEV=3553

Traffic Smithy
(503) 641-6333

TIME PERIOD FROM - TO	EAST BOUND ↓	EAST BOUND →	EAST BOUND ↑	SOUTH BOUND ↲	SOUTH BOUND ↓	SOUTH BOUND ↳	NORTH BOUND ↰	NORTH BOUND ↑	NORTH BOUND ↱	WEST BOUND ↓	WEST BOUND ←	WEST BOUND ↑	ALL
16:01-16:06	0	85	3	0	0	0	19	35	10	0	85	7	244
16:06-16:11	0	82	2	0	0	0	23	26	14	0	92	8	247
16:11-16:16	0	89	6	0	0	0	22	39	5	0	68	5	234
16:16-16:21	0	120	3	0	0	0	29	38	5	0	87	10	292
16:21-16:26	0	80	3	0	0	0	30	43	5	0	98	12	271
16:26-16:31	0	87	7	0	0	0	28	43	5	0	90	10	270
16:31-16:36	0	91	4	0	0	0	20	39	6	0	91	19	270
16:36-16:41	0	94	3	0	0	0	24	38	11	0	89	13	272
16:41-16:46	0	96	5	0	0	0	22	27	11	0	103	12	276
16:46-16:51	0	89	3	1	0	0	26	43	7	1	83	10	263
16:51-16:56	0	96	9	0	0	0	25	37	5	0	95	11	278
16:56-17:01	0	124	5	1	0	0	22	46	7	0	85	9	299
17:01-17:06	0	122	8	0	0	0	26	28	12	0	88	5	289
17:06-17:11	0	87	6	0	0	0	23	39	10	0	118	12	295
17:11-17:16	0	98	2	0	0	0	26	31	10	0	118	9	294
17:16-17:21	0	118	3	0	0	0	37	61	9	0	109	11	348
17:21-17:26	0	91	7	0	0	0	20	41	13	0	115	6	293
17:26-17:31	0	68	3	0	0	0	34	54	14	0	107	12	292
17:31-17:36	0	118	2	0	0	0	24	41	9	0	82	14	290
17:36-17:41	0	75	2	0	0	0	16	47	9	0	121	13	283
17:41-17:46	0	110	3	0	0	0	19	41	5	0	127	10	315
17:46-17:51	0	79	4	0	0	0	30	48	14	0	85	13	273
17:51-17:56	0	111	4	0	0	0	11	26	14	0	104	12	282
17:56-18:01	0	100	3	0	0	0	18	48	8	0	85	7	269
Total Survey	0	2310	100	2	0	0	574	959	218	1	2325	250	6739
PHF	0	.9	.64	.25	0	0	.79	.81	.88	0	.91	.81	.947
% Trucks	0	3.4	2	0	0	0	.9	.3	4.6	0	3.7	.4	2.8
Stopped Buses	0	0	0	0	0	0	0	0	0	0	4	0	
Peds	0	1	0	0	4	0	0	14	0	0	1	0	
Hourly Totals													
16:01-17:01	0	1133	53	2	0	0	290	454	91	1	1066	126	3216
16:16-17:16	0	1184	58	2	0	0	301	452	94	1	1145	132	3369
16:31-17:31	0	1174	58	2	0	0	305	484	115	1	1201	129	3469
16:46-17:46	0	1196	53	2	0	0	298	509	110	1	1248	122	3539
17:01-18:01	0	1177	47	0	0	0	284	505	127	0	1259	124	3523

INTERSECTION TURN MOVEMENT COUNT PEAK HOUR REPORT
LL BOULEVARD AT CANYON ROAD



DATE OF COUNT: 05/13/99
DAY OF WEEK: Thu
TIME STARTED: 16:01
TIME ENDED: 18:01

TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

ERVB

Peak Hour
16:46-17:46
TEV=3539

Traffic Smithy
(503)641-6333

TIME PERIOD FROM - TO	EAST BOUND ↓	EAST BOUND →	EAST BOUND ↑	SOUTH BOUND ↓	SOUTH BOUND ↵	SOUTH BOUND ↳	NORTH BOUND ↰	NORTH BOUND ↑	NORTH BOUND ↱	WEST BOUND ↓	WEST BOUND ←	WEST BOUND ↑	ALL
ALL VEHICLES													
16:46-17:01	0	309	17	2	0	0	73	126	19	1	263	30	840
17:01-17:16	0	307	16	0	0	0	75	98	32	0	324	26	878
17:16-17:31	0	277	13	0	0	0	91	156	36	0	331	29	933
17:31-17:46	0	303	7	0	0	0	59	129	23	0	330	37	888
LIGHT TRUCKS (SINGLE UNIT 2 AXLES)													
16:46-17:01	0	9	0	0	0	0	0	0	1	0	8	0	18
17:01-17:16	0	5	0	0	0	0	1	0	1	0	7	0	14
17:16-17:31	0	8	0	0	0	0	0	1	1	0	7	0	17
17:31-17:46	0	2	0	0	0	0	0	0	1	0	7	0	10
MEDIUM TRUCKS (SINGLE UNIT > 2 AXLES)													
16:46-17:01	0	2	0	0	0	0	0	0	0	0	2	0	4
17:01-17:16	0	4	0	0	0	0	0	0	0	0	1	0	5
17:16-17:31	0	1	0	0	0	0	1	0	0	0	0	0	2
17:31-17:46	0	1	0	0	0	0	0	0	0	0	1	0	2
HEAVY TRUCKS (SEMI-TRACTOR TRAILER)													
16:46-17:01	0	0	0	0	0	0	0	0	0	0	1	0	1
17:01-17:16	0	2	0	0	0	0	0	0	0	0	2	0	4
17:16-17:31	0	2	0	0	0	0	0	0	0	0	0	0	2
17:31-17:46	0	1	0	0	0	0	0	0	0	0	3	0	4
BICYCLES													
16:46-17:01	0	0	0	0	0	0	0	0	0	0	0	0	0
17:01-17:16	0	0	0	0	0	0	0	1	0	0	0	0	1
17:16-17:31	0	0	0	0	0	0	0	0	0	0	0	0	0
17:31-17:46	0	0	0	0	0	0	0	0	0	0	0	0	0

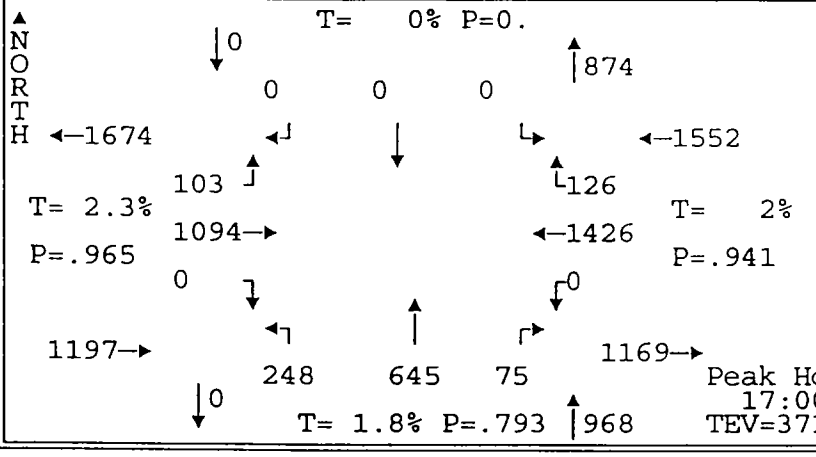
PEDESTRIANS — CROSSWALK USEAGE	SOUTH	WEST	EAST	NORTH	ALL
16:46-17:01	0	1	1	0	2
17:01-17:16	0	0	1	0	1
17:16-17:31	0	0	2	0	2
17:31-17:46	1	1	0	0	2

Peak Hour by Movement	EAST BOUND ↓	EAST BOUND →	EAST BOUND ↑	SOUTH BOUND ↓	SOUTH BOUND ↵	SOUTH BOUND ↳	NORTH BOUND ↰	NORTH BOUND ↑	NORTH BOUND ↱	WEST BOUND ↓	WEST BOUND ←	WEST BOUND ↑	ALL
PHF	0	.97	.78	.25	0	0	.82	.82	.76	.25	.94	.82	.948
% Trucks(all)	0	3.1	0	0	0	0	.7	.2	3.6	0	3.1	0	2.3
% Trucks(M+H)	0	1.1	0	0	0	0	.3	0	0	0	.8	0	.7
Stopped Buses	0	0	0	0	0	0	0	0	0	0	1	0	

Hourly Totals	EAST BOUND ↓	EAST BOUND →	EAST BOUND ↑	SOUTH BOUND ↓	SOUTH BOUND ↵	SOUTH BOUND ↳	NORTH BOUND ↰	NORTH BOUND ↑	NORTH BOUND ↱	WEST BOUND ↓	WEST BOUND ←	WEST BOUND ↑	ALL
16:01-17:01	0	1133	53	2	0	0	290	454	91	1	1066	126	3216
16:16-17:16	0	1184	58	2	0	0	301	452	94	1	1145	132	3369
16:31-17:31	0	1174	58	2	0	0	305	484	115	1	1201	129	3469
16:46-17:46	0	1196	53	2	0	0	298	509	110	1	1248	122	3539
17:01-18:01	0	1177	47	0	0	0	284	505	127	0	1259	124	3523

INTERSECTI TURN MOVEMENT COUNT SUMMARY EPORT
FARMINGTON ROAD AT HALL BOULEVARD

19772



DATE OF COUNT: 05/13/99
DAY OF WEEK: Thu
TIME STARTED: 16:00
TIME ENDED: 18:00

TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

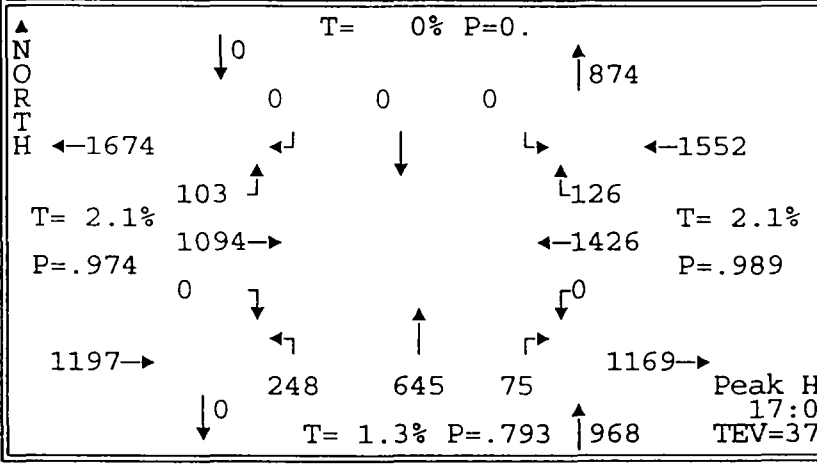
DMAO

Peak Hour
17:00-18:00
TEV=3717

Traffic Smithy
(503) 641-6333

TIME PERIOD FROM - TO	EAST BOUND ↓	EAST BOUND →	EAST BOUND ↑	SOUTH BOUND ↓	SOUTH BOUND ←	SOUTH BOUND ↑	NORTH BOUND ↓	NORTH BOUND →	NORTH BOUND ↑	WEST BOUND ↓	WEST BOUND ←	WEST BOUND ↑	ALL
16:00-16:05	0	74	9	0	0	0	17	66	2	0	82	9	259
16:05-16:10	1	93	7	0	0	0	20	39	8	0	75	7	250
16:10-16:15	0	90	6	0	0	0	21	41	4	0	128	13	303
16:15-16:20	0	87	8	0	0	0	25	55	4	0	118	12	309
16:20-16:25	1	109	4	0	0	0	22	61	10	0	108	12	327
16:25-16:30	0	75	6	0	0	0	29	57	5	0	101	8	281
16:30-16:35	0	89	8	0	0	0	23	51	8	0	112	5	296
16:35-16:40	0	77	7	0	0	0	23	55	11	0	122	9	304
16:40-16:45	0	107	4	0	0	0	21	43	5	0	108	16	304
16:45-16:50	0	83	7	0	0	0	17	47	7	0	111	15	287
16:50-16:55	0	78	9	0	0	0	13	52	5	0	113	8	278
16:55-17:00	0	95	13	0	0	0	21	35	8	0	102	6	280
17:00-17:05	0	95	10	0	0	0	18	56	7	0	115	9	310
17:05-17:10	0	80	8	0	0	0	16	59	2	0	102	14	281
17:10-17:15	0	100	5	0	0	0	18	46	5	0	133	13	320
17:15-17:20	0	99	8	0	0	0	31	69	5	0	127	9	348
17:20-17:25	0	87	10	0	0	0	31	63	10	0	118	8	327
17:25-17:30	0	85	11	0	0	0	28	64	4	0	121	9	322
17:30-17:35	0	87	8	0	0	0	19	53	12	0	124	12	315
17:35-17:40	0	87	6	0	0	0	19	47	4	0	98	10	271
17:40-17:45	0	106	13	0	0	0	24	46	4	0	128	11	332
17:45-17:50	0	91	7	0	0	0	16	59	9	0	137	13	332
17:50-17:55	0	86	6	0	0	0	14	41	4	0	113	10	274
17:55-18:00	0	91	11	0	0	0	14	42	9	0	110	8	285
Total Survey	2	2151	191	0	0	0	500	1247	152	0	2706	246	7195
PHF	0	.96	.89	0	0	0	.69	.82	.72	0	.94	.88	.932
% Trucks	0	2.5	.5	0	0	0	2.6	1.6	1.3	0	2.2	.4	2.1
Stopped Buses	0	1	0	0	0	0	0	0	0	0	1	0	
Peds	0	8	0	0	17	0	0	24	0	0	9	0	
Hourly Totals													
16:00-17:00	2	1057	88	0	0	0	252	602	77	0	1280	120	3478
16:15-17:15	1	1075	89	0	0	0	246	617	77	0	1345	127	3577
16:30-17:30	0	1075	100	0	0	0	260	640	77	0	1384	121	3657
16:45-17:45	0	1082	108	0	0	0	255	637	73	0	1392	124	3671
17:00-18:00	0	1094	103	0	0	0	248	645	75	0	1426	126	3717

INTERSECTION TURN MOVEMENT COUNT PEAK HOUR REPORT
F. .INGTON ROAD AT HALL BOULEVA



DATE OF COUNT: 05/13/99
DAY OF WEEK: Thu
TIME STARTED: 16:00
TIME ENDED: 18:00

TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

DMAO

Peak Hour
17:00-18:00
TEV=3717

Traffic Smithy
(503)641-6333

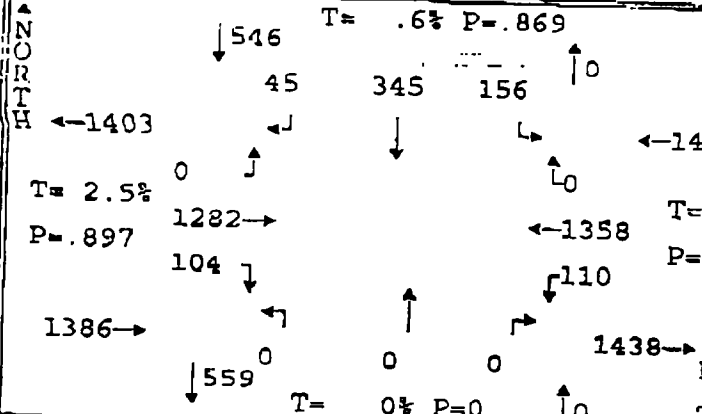
TIME PERIOD FROM - TO	EAST BOUND ↓	EAST BOUND →	EAST BOUND ↑	SOUTH BOUND ↓	SOUTH BOUND ↓	SOUTH BOUND ↓	NORTH BOUND ↑	NORTH BOUND ↑	NORTH BOUND ↑	WEST BOUND ↓	WEST BOUND ←	WEST BOUND ↑	ALL
ALL VEHICLES													
17:00-17:15	0	275	23	0	0	0	52	161	14	0	350	36	911
17:15-17:30	0	271	29	0	0	0	90	196	19	0	366	26	997
17:30-17:45	0	280	27	0	0	0	62	146	20	0	350	33	918
17:45-18:00	0	268	24	0	0	0	44	142	22	0	360	31	891
LIGHT TRUCKS (SINGLE UNIT 2 AXLES)													
17:00-17:15	0	8	0	0	0	0	1	2	0	0	10	0	21
17:15-17:30	0	2	0	0	0	0	2	1	0	0	5	0	10
17:30-17:45	0	5	1	0	0	0	0	2	0	0	3	0	11
17:45-18:00	0	4	0	0	0	0	1	3	0	0	9	0	17
MEDIUM TRUCKS (SINGLE UNIT > 2 AXLES)													
17:00-17:15	0	2	0	0	0	0	0	0	0	0	1	0	3
17:15-17:30	0	0	0	0	0	0	0	1	0	0	1	0	2
17:30-17:45	0	0	0	0	0	0	0	0	0	0	0	0	0
17:45-18:00	0	0	0	0	0	0	0	0	0	0	0	0	0
HEAVY TRUCKS (SEMI-TRACTOR TRAILER)													
17:00-17:15	0	1	0	0	0	0	0	0	0	0	0	1	2
17:15-17:30	0	2	0	0	0	0	0	0	0	0	0	0	2
17:30-17:45	0	0	0	0	0	0	0	0	0	0	1	0	1
17:45-18:00	0	0	0	0	0	0	0	0	0	0	1	0	1
BICYCLES													
17:00-17:15	0	0	0	0	0	0	0	2	0	0	0	0	2
17:15-17:30	0	0	0	0	0	0	0	0	0	0	0	0	0
17:30-17:45	0	0	0	0	0	0	0	0	0	0	0	0	0
17:45-18:00	0	0	0	0	0	0	0	0	0	0	1	0	1

PEDESTRIANS — CROSSWALK USEAGE	SOUTH	WEST	EAST	NORTH	ALL
17:00-17:15	1	1	1	1	4
17:15-17:30	0	0	1	1	2
17:30-17:45	1	2	3	0	6
17:45-18:00	2	3	3	0	8

Peak Hour by Movement													
PHF	0	.98	.89	0	0	0	.69	.82	.85	0	.97	.88	.932
% Trucks(all)	0	2.2	1	0	0	0	1.6	1.4	0	0	2.2	.8	1.9
% Trucks(M+H)	0	.5	0	0	0	0	0	.2	0	0	.3	.8	.3
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	
Hourly Totals													
16:00-17:00	2	1057	88	0	0	0	252	602	77	0	1280	120	3478
16:15-17:15	1	1075	89	0	0	0	246	617	77	0	1345	127	3577
16:30-17:30	0	1075	100	0	0	0	260	640	77	0	1384	121	3657
16:45-17:45	0	1082	108	0	0	0	255	637	73	0	1392	124	3671
17:00-18:00	0	1094	103	0	0	0	248	645	75	0	1426	126	3717

INTERSECTION TURN MOVEMENT COUNT SUMMARY REPORT
TV HIGHWAY AT WATSON AVENUE

25526



DATE OF COUNT: 11/28/00
DAY OF WEEK: Tue
TIME STARTED: 16:00
TIME ENDED: 18:00

TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

Peak Hour
17:00-18:00
TEV=3400

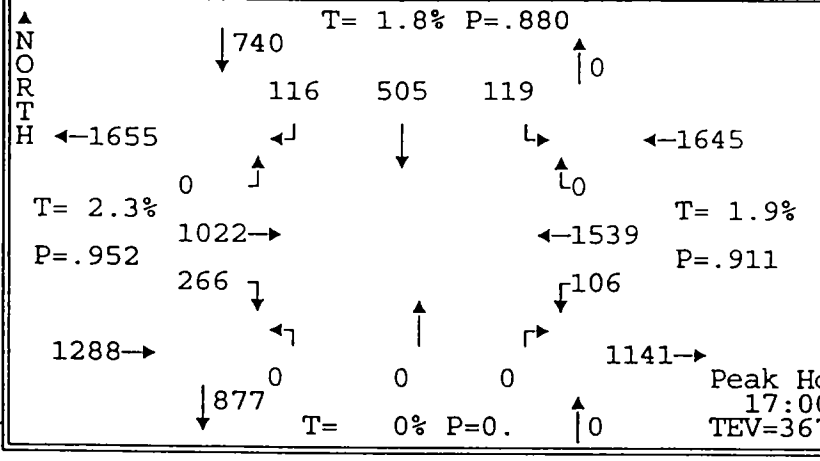
ERPL

Traffic Smithy
(503) 641-6333

TIME PERIOD FROM - TO	EAST BOUND ↓	EAST BOUND →	EAST BOUND ⌐	SOUTH BOUND ↵	SOUTH BOUND ↓	SOUTH BOUND ↳	NORTH BOUND ↰	NORTH BOUND ↑	NORTH BOUND ↱	WEST BOUND ⌐	WEST BOUND ←	WEST BOUND ↰	ALL
16:00-16:05	8	91	0	5	24	5	0	0	0	5	121	0	259
16:05-16:10	9	111	0	3	30	18	0	0	0	6	113	0	290
16:10-16:15	7	99	0	5	33	15	0	0	0	3	127	0	289
16:15-16:20	7	87	0	8	30	13	0	0	0	11	108	0	264
16:20-16:25	5	135	0	3	25	9	0	0	0	7	131	0	315
16:25-16:30	8	102	0	5	25	14	0	0	0	6	126	0	284
16:30-16:35	6	116	0	4	29	12	0	0	0	8	117	0	289
16:35-16:40	5	105	0	2	34	10	0	0	0	5	115	0	273
16:40-16:45	6	94	0	6	30	6	0	0	0	7	114	0	263
16:45-16:50	6	105	0	2	30	8	0	0	0	7	105	0	263
16:50-16:55	11	87	0	6	30	11	0	0	0	4	123	0	272
16:55-17:00	10	86	0	2	22	12	0	0	0	8	128	0	268
17:00-17:05	5	95	0	9	31	13	0	0	0	9	91	0	253
17:05-17:10	10	102	0	1	22	9	0	0	0	4	142	0	290
17:10-17:15	11	93	0	11	37	13	0	0	0	7	130	0	302
17:15-17:20	10	120	0	1	25	17	0	0	0	8	130	0	311
17:20-17:25	10	91	0	1	39	13	0	0	0	11	111	0	276
17:25-17:30	9	120	0	1	34	11	0	0	0	14	106	0	295
17:30-17:35	17	116	0	4	20	9	0	0	0	6	109	0	281
17:35-17:40	4	120	0	3	22	16	0	0	0	10	96	0	271
17:40-17:45	6	108	0	3	31	14	0	0	0	9	124	0	295
17:45-17:50	8	100	0	2	23	10	0	0	0	14	102	0	259
17:50-17:55	6	106	0	3	26	12	0	0	0	10	113	0	276
17:55-18:00	8	111	0	6	35	19	0	0	0	8	104	0	291
Total Survey	192	2500	0	93	682	289	0	0	0	187	2786	0	6729
PHF	.72	.9	0	.54	.85	.91	0	0	0	.83	.84	0	.941
% Trucks	1.6	2.6	0	3.2	.3	.3	0	0	0	4.3	2.5	0	2.2
Stopped Buses	0	6	0	0	0	0	0	0	0	0	2	0	
Peds	0	6	0	0	22	0	0	5	0	0	6	0	
Hourly Totals													
16:00-17:00	88	1218	0	48	337	133	0	0	0	77	1428	0	3329
16:15-17:15	90	1207	0	56	340	130	0	0	0	83	1430	0	3336
16:30-17:30	99	1214	0	45	358	135	0	0	0	92	1412	0	3355
16:45-17:45	109	1243	0	44	343	146	0	0	0	97	1395	0	3377
17:00-18:00	104	1282	0	45	345	156	0	0	0	110	1358	0	3400

INTERSECTION TURN MOVEMENT COUNT SUMMARY REPORT
FARMINGTON ROAD AT WATSON AVENUE

19771



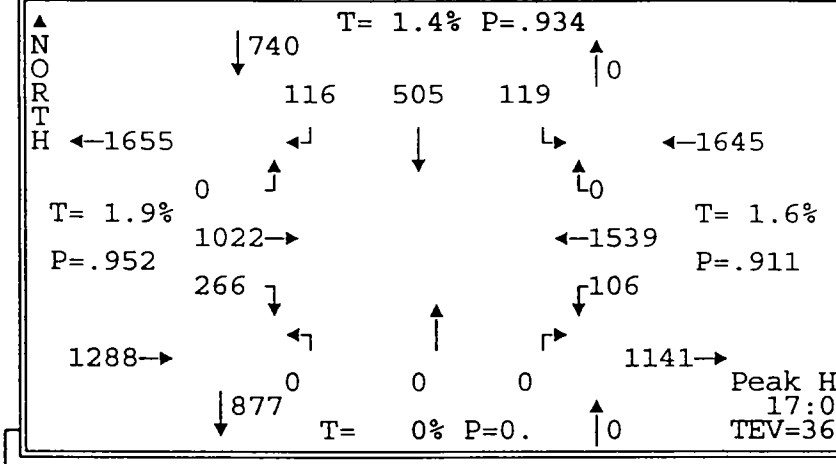
DATE OF COUNT: 05/13/99
DAY OF WEEK: Thu
TIME STARTED: 16:00
TIME ENDED: 18:00

BKNB

Traffic Smithy
(503) 641-6333

TIME PERIOD FROM - TO	EAST BOUND ↓	EAST BOUND →	EAST BOUND ↑	SOUTH BOUND ↓	SOUTH BOUND ←	SOUTH BOUND ↳	NORTH BOUND ↰	NORTH BOUND ↑	NORTH BOUND ↱	WEST BOUND ↓	WEST BOUND ←	WEST BOUND ↑	ALL
16:00-16:05	21	74	0	9	33	8	0	0	0	10	108	0	263
16:05-16:10	9	87	0	9	43	8	0	0	0	5	68	0	229
16:10-16:15	11	87	0	7	33	10	0	0	0	9	138	0	295
16:15-16:20	22	76	0	3	33	12	0	0	0	10	133	0	289
16:20-16:25	15	95	0	3	21	12	0	0	0	11	125	0	282
16:25-16:30	22	68	0	6	34	6	0	0	0	4	125	0	265
16:30-16:35	24	80	0	5	34	16	0	0	0	10	114	0	283
16:35-16:40	23	74	0	6	38	12	0	0	0	8	116	0	277
16:40-16:45	15	105	0	11	38	13	0	0	0	7	123	0	312
16:45-16:50	21	82	0	5	34	6	0	0	0	7	108	0	263
16:50-16:55	17	95	0	7	34	14	0	0	0	8	106	0	281
16:55-17:00	15	96	0	2	38	11	0	0	0	3	109	0	274
17:00-17:05	18	89	0	7	34	7	0	0	0	10	123	0	288
17:05-17:10	17	91	0	10	50	6	0	0	0	8	117	0	299
17:10-17:15	21	80	0	14	55	15	0	0	0	11	115	0	311
17:15-17:20	22	91	0	8	41	11	0	0	0	11	140	0	324
17:20-17:25	22	85	0	16	36	8	0	0	0	5	144	0	316
17:25-17:30	26	79	0	11	49	13	0	0	0	9	142	0	329
17:30-17:35	23	79	0	11	42	11	0	0	0	10	138	0	314
17:35-17:40	17	72	0	5	48	10	0	0	0	11	115	0	278
17:40-17:45	23	95	0	7	38	10	0	0	0	8	126	0	307
17:45-17:50	25	82	0	9	41	13	0	0	0	8	138	0	316
17:50-17:55	25	85	0	10	34	8	0	0	0	8	119	0	289
17:55-18:00	27	94	0	8	37	7	0	0	0	7	122	0	302
Total Survey	481	2041	0	189	918	247	0	0	0	198	2912	0	6986
PHF	.86	.98	0	.76	.86	.88	0	0	0	.88	.9	0	.947
% Trucks	2.3	2.3	0	1.1	2	1.6	0	0	0	2	1.9	0	2
Stopped Buses	0	1	0	0	0	0	0	0	0	0	2	0	
Peds	0	26	0	0	0	0	0	17	0	0	0	0	
Hourly Totals													
16:00-17:00	215	1019	0	73	413	128	0	0	0	92	1373	0	3313
16:15-17:15	230	1031	0	79	443	130	0	0	0	97	1414	0	3424
16:30-17:30	241	1047	0	102	481	132	0	0	0	97	1457	0	3557
16:45-17:45	242	1034	0	103	499	122	0	0	0	101	1483	0	3584
17:00-18:00	266	1022	0	116	505	119	0	0	0	106	1539	0	3673

INTERSECTI[ON] TURN MOVEMENT COUNT PEAK HO[UR] REPORT
F[ARMINGTON] ROAD AT WATSON AVENU[E]



DATE OF COUNT: 05/13/99
DAY OF WEEK: Thu
TIME STARTED: 16:00
TIME ENDED: 18:00

TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

BKNB

Peak Hour
17:00-18:00
TEV=3673

Traffic Smithy
(503)641-6333

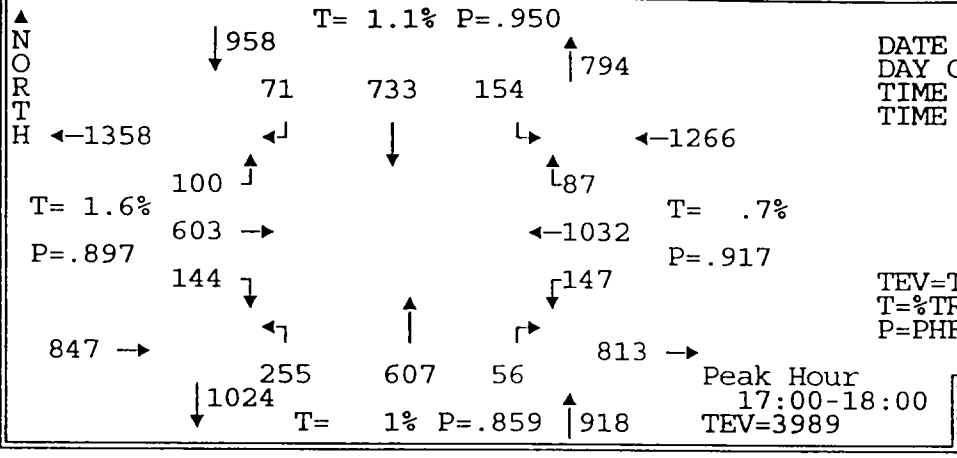
TIME PERIOD FROM - TO	EAST BOUND ↓	EAST BOUND →	EAST BOUND ↑	SOUTH BOUND ↵	SOUTH BOUND ↓	SOUTH BOUND ↳	NORTH BOUND ↰	NORTH BOUND ↑	NORTH BOUND ↱	WEST BOUND ↓	WEST BOUND ←	WEST BOUND ↑	ALL
ALL VEHICLES													
17:00-17:15	56	260	0	31	139	28	0	0	0	29	355	0	898
17:15-17:30	70	255	0	35	126	32	0	0	0	25	426	0	969
17:30-17:45	63	246	0	23	128	31	0	0	0	29	379	0	899
17:45-18:00	77	261	0	27	112	28	0	0	0	23	379	0	907
LIGHT TRUCKS (SINGLE UNIT 2 AXLES)													
17:00-17:15	1	4	0	0	1	1	0	0	0	0	9	0	16
17:15-17:30	1	3	0	0	2	0	0	0	0	1	6	0	13
17:30-17:45	1	5	0	0	3	0	0	0	0	0	3	0	12
17:45-18:00	1	4	0	0	3	0	0	0	0	0	6	0	14
MEDIUM TRUCKS (SINGLE UNIT > 2 AXLES)													
17:00-17:15	0	2	0	0	0	0	0	0	0	0	1	0	3
17:15-17:30	0	0	0	0	0	0	0	0	0	0	0	0	0
17:30-17:45	0	0	0	0	0	0	0	0	0	0	0	0	0
17:45-18:00	0	0	0	0	0	0	0	0	0	0	0	0	0
HEAVY TRUCKS (SEMI-TRACTOR TRAILER)													
17:00-17:15	0	1	0	0	0	0	0	0	0	0	0	0	1
17:15-17:30	0	2	0	0	0	0	0	0	0	0	0	0	2
17:30-17:45	0	0	0	0	0	0	0	0	0	0	0	0	0
17:45-18:00	0	0	0	0	0	0	0	0	0	0	1	0	1
BICYCLES													
17:00-17:15	0	0	0	0	0	0	0	0	0	0	0	0	0
17:15-17:30	0	0	0	0	0	0	0	0	0	0	0	0	0
17:30-17:45	0	1	0	0	0	0	0	0	0	0	0	0	1
17:45-18:00	0	0	0	0	0	0	0	0	0	1	0	0	1

PEDESTRIANS	CROSSWALK USEAGE SOUTH	WEST	EAST	NORTH	ALL
17:00-17:15	3	0	4	0	7
17:15-17:30	4	0	5	0	9
17:30-17:45	2	0	1	0	3
17:45-18:00	2	0	2	0	4

Peak Hour by Movement													
PHF	.86	.98	0	.83	.91	.93	0	0	0	.91	.9	0	.947
% Trucks(all)	1.5	2.1	0	0	1.8	.8	0	0	0	.9	1.7	0	1.7
% Trucks(M+H)	0	.5	0	0	0	0	0	0	0	0	.1	0	.2
Stopped Buses	0	0	0	0	0	0	0	0	0	0	1	0	
Hourly Totals													
16:00-17:00	215	1019	0	73	413	128	0	0	0	92	1373	0	3313
16:15-17:15	230	1031	0	79	443	130	0	0	0	97	1414	0	3424
16:30-17:30	241	1047	0	102	481	132	0	0	0	97	1457	0	3557
16:45-17:45	242	1034	0	103	499	122	0	0	0	101	1483	0	3584
17:00-18:00	266	1022	0	116	505	119	0	0	0	106	1539	0	3673

INTERSECTION TURN MOVEMENT COUNT SUMMARY REPORT
HALL BOULEVARD AT ALLEN BOULEVARD

24030



DATE OF COUNT: 06/22/00
DAY OF WEEK: Thu
TIME STARTED: 16:00
TIME ENDED: 18:00

TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

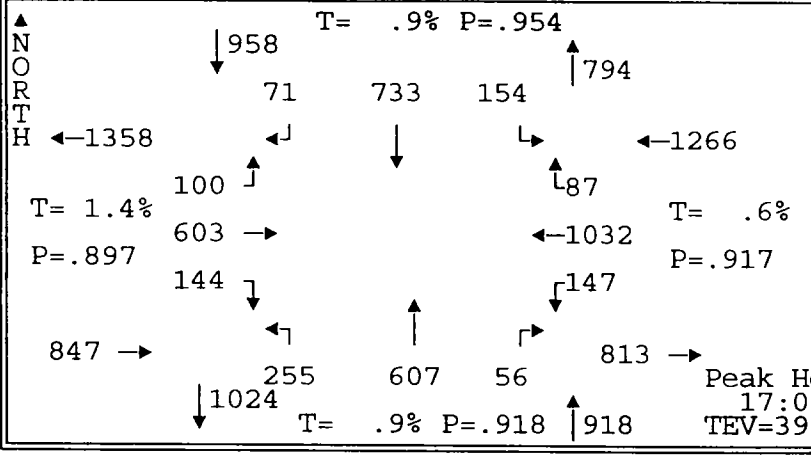
MPQN

Peak Hour
17:00-18:00
TEV=3989

Traffic Smithy
(503) 641-6333

TIME PERIOD FROM - TO	EAST BOUND ↓	EAST BOUND →	EAST BOUND ↑	SOUTH BOUND ↲	SOUTH BOUND ↓	SOUTH BOUND ↳	NORTH BOUND ↰	NORTH BOUND ↑	NORTH BOUND ↱	WEST BOUND ↓	WEST BOUND ←	WEST BOUND ↑	ALL
16:00-16:05	14	60	3	13	40	15	21	46	6	12	64	5	299
16:05-16:10	19	55	9	8	47	11	26	44	6	7	67	9	308
16:10-16:15	10	38	9	10	50	10	17	47	6	11	61	6	275
16:15-16:20	15	44	6	8	39	10	22	36	10	12	75	12	289
16:20-16:25	13	39	7	4	52	5	18	64	7	15	66	8	298
16:25-16:30	12	49	7	10	41	5	20	35	7	14	64	15	279
16:30-16:35	10	42	7	7	55	10	20	48	10	12	74	7	302
16:35-16:40	14	46	4	5	40	12	21	51	7	15	87	7	309
16:40-16:45	15	28	7	6	64	11	24	71	4	13	69	3	315
16:45-16:50	16	55	9	8	41	14	22	45	5	10	105	1	331
16:50-16:55	13	36	8	3	73	9	21	58	9	12	70	4	316
16:55-17:00	15	52	8	7	38	11	17	39	7	10	97	5	306
17:00-17:05	11	42	4	10	61	10	15	62	5	9	71	7	307
17:05-17:10	10	51	10	2	44	13	19	42	5	15	92	7	310
17:10-17:15	7	46	5	6	80	17	31	66	5	7	89	6	365
17:15-17:20	18	45	10	7	44	12	14	54	5	18	99	12	338
17:20-17:25	6	42	8	6	71	8	28	61	3	12	85	6	336
17:25-17:30	10	46	12	7	64	10	19	41	9	18	88	7	331
17:30-17:35	14	61	6	4	59	16	29	42	6	10	94	5	346
17:35-17:40	13	54	17	9	52	11	21	61	1	13	93	7	352
17:40-17:45	12	54	5	4	64	16	21	36	5	9	99	8	333
17:45-17:50	16	46	6	2	84	10	15	49	2	11	72	9	322
17:50-17:55	13	71	9	4	46	17	25	46	6	9	72	7	325
17:55-18:00	14	45	8	10	64	14	18	47	4	16	78	6	324
Total Survey	310	1147	184	160	1313	277	504	1191	140	290	1931	169	7616
PHF	.84	.88	.71	.89	.92	.9	.84	.84	.78	.77	.9	.87	.959
% Trucks	1.3	1.8	.5	.6	1.4	.4	.8	1.2	0	.3	.7	.6	1.1
Stopped Buses	0	1	0	0	0	0	0	1	0	0	1	0	
Peds	0	5	0	0	88	0	0	38	0	0	22	0	
Hourly Totals													
16:00-17:00	166	544	84	89	580	123	249	584	84	143	899	82	3627
16:15-17:15	151	530	82	76	628	127	250	617	81	144	959	82	3727
16:30-17:30	145	531	92	74	675	137	251	638	74	151	1026	72	3866
16:45-17:45	145	584	102	73	691	147	257	607	65	143	1082	75	3971
17:00-18:00	144	603	100	71	733	154	255	607	56	147	1032	87	3989

INTERSECTION TURN MOVEMENT COUNT PEAK HOUR REPORT
HALL BOULEVARD AT ALLEN BOULEVARD



DATE OF COUNT: 06/22/00
DAY OF WEEK: Thu
TIME STARTED: 16:00
TIME ENDED: 18:00

TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

MPQN

Peak Hour
17:00-18:00
TEV=3989

Traffic Smithy
(503)641-6333

TIME PERIOD FROM - TO	EAST BOUND ↓	EAST BOUND →	EAST BOUND ↑	SOUTH BOUND ↵	SOUTH BOUND ↓	SOUTH BOUND ↳	NORTH BOUND ↰	NORTH BOUND ↑	NORTH BOUND ↱	WEST BOUND ↓	WEST BOUND ←	WEST BOUND ↑	ALL
ALL VEHICLES													
17:00-17:15	28	139	19	18	185	40	65	170	15	31	252	20	982
17:15-17:30	34	133	30	20	179	30	61	156	17	48	272	25	1005
17:30-17:45	39	169	28	17	175	43	71	139	12	32	286	20	1031
17:45-18:00	43	162	23	16	194	41	58	142	12	36	222	22	971
LIGHT TRUCKS (SINGLE UNIT 2 AXLES)													
17:00-17:15	1	1	1	0	2	0	0	3	0	0	2	0	10
17:15-17:30	1	2	0	0	2	0	0	1	0	0	2	1	9
17:30-17:45	0	3	0	0	1	0	0	3	0	0	2	0	9
17:45-18:00	1	2	0	1	3	0	0	0	0	0	0	0	7
MEDIUM TRUCKS (SINGLE UNIT > 2 AXLES)													
17:00-17:15	0	0	0	0	0	0	0	0	0	0	0	0	0
17:15-17:30	0	0	0	0	0	0	0	0	0	0	0	0	0
17:30-17:45	0	0	0	0	0	0	0	0	0	0	0	0	0
17:45-18:00	0	0	0	0	0	0	1	0	0	0	0	0	1
HEAVY TRUCKS (SEMI-TRACTOR TRAILER)													
17:00-17:15	0	0	0	0	0	0	0	0	0	0	0	0	0
17:15-17:30	0	0	0	0	0	0	0	0	0	0	0	0	0
17:30-17:45	0	0	0	0	0	0	0	0	0	0	0	0	0
17:45-18:00	0	0	0	0	0	0	0	0	0	0	0	0	0
BICYCLES													
17:00-17:15	0	0	0	0	0	0	0	0	0	0	0	0	0
17:15-17:30	0	0	0	0	1	0	0	0	0	0	0	0	1
17:30-17:45	0	0	0	0	0	0	0	1	0	0	0	0	1
17:45-18:00	0	0	0	0	1	0	0	0	0	0	0	0	1

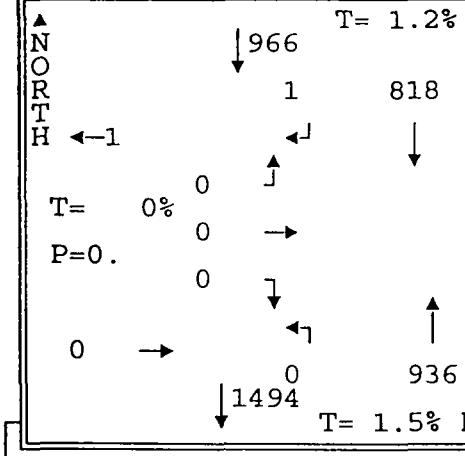
PEDESTRIANS	CROSSWALK USEAGE SOUTH	WEST	EAST	NORTH	ALL
17:00-17:15	0	13	11	8	32
17:15-17:30	0	9	3	1	13
17:30-17:45	0	8	6	3	17
17:45-18:00	5	8	3	5	21

Peak Hour by Movement													
PHF	.84	.89	.83	.89	.94	.9	.9	.89	.82	.77	.9	.87	.967
% Trucks(all)	2.1	1.3	1	1.4	1.1	0	.4	1.2	0	0	.6	1.1	.9
% Trucks(M+H)	0	0	0	0	0	0	.4	0	0	0	0	0	0
Stopped Buses	0	1	0	0	0	0	0	0	0	0	1	0	

Hourly Totals													
16:00-17:00	166	544	84	89	580	123	249	584	84	143	899	82	3627
16:15-17:15	151	530	82	76	628	127	250	617	81	144	959	82	3727
16:30-17:30	145	531	92	74	675	137	251	638	74	151	1026	72	3866
16:45-17:45	145	584	102	73	691	147	257	607	65	143	1082	75	3971
17:00-18:00	144	603	100	71	733	154	255	607	56	147	1032	87	3989

INTERSECTION TURN MOVEMENT COUNT SUMMARY REPORT
HALL BOULEVARD AT DENNEY ROAD

27515



DATE OF COUNT: 06/01/00
DAY OF WEEK: Thu
TIME STARTED: 16:00
TIME ENDED: 18:00

TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

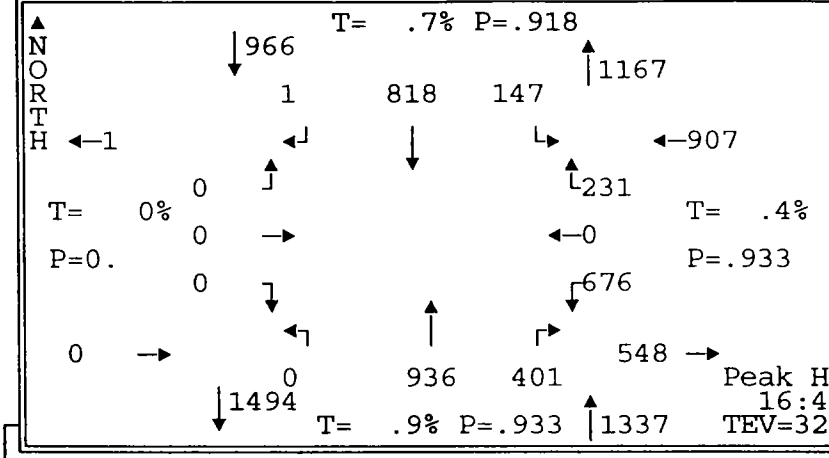
TBDF

Peak Hour
16:45-17:45

Traffic Smithy
(503) 641-6333

TIME PERIOD FROM - TO	EAST BOUND ↓	EAST BOUND →	EAST BOUND ↑	SOUTH BOUND ↲	SOUTH BOUND ↓	SOUTH BOUND ↳	NORTH BOUND ↰	NORTH BOUND ↑	NORTH BOUND ↱	WEST BOUND ↓	WEST BOUND ←	WEST BOUND ↑	ALL
16:00-16:05	0	0	0	0	47	13	0	67	28	26	0	24	205
16:05-16:10	0	0	0	0	68	7	0	70	34	37	0	23	239
16:10-16:15	0	0	0	0	52	22	0	77	44	36	0	12	243
16:15-16:20	0	0	1	0	48	12	0	68	17	54	0	22	222
16:20-16:25	0	0	0	0	72	9	0	72	25	57	1	22	258
16:25-16:30	0	0	0	0	62	18	0	64	28	33	0	21	226
16:30-16:35	0	0	0	0	55	12	1	81	35	38	0	26	248
16:35-16:40	0	0	0	0	56	15	0	79	35	54	0	21	260
16:40-16:45	0	0	0	0	51	8	0	91	25	44	0	14	233
16:45-16:50	0	0	0	0	75	12	0	83	34	49	0	26	279
16:50-16:55	0	0	0	0	68	11	0	66	35	62	0	15	257
16:55-17:00	0	0	0	0	83	14	0	64	28	44	0	16	249
17:00-17:05	0	0	0	0	52	15	0	90	24	53	0	22	256
17:05-17:10	0	0	0	0	69	16	0	80	38	47	0	16	266
17:10-17:15	0	0	0	0	63	17	0	82	44	59	0	19	284
17:15-17:20	0	0	0	0	78	10	0	92	34	58	0	14	286
17:20-17:25	0	0	0	0	56	14	0	79	28	69	0	23	269
17:25-17:30	0	0	0	1	74	16	0	83	33	59	0	20	286
17:30-17:35	0	0	0	0	49	4	0	61	27	71	0	23	235
17:35-17:40	0	0	0	0	73	8	0	86	43	44	0	20	274
17:40-17:45	0	0	0	0	78	10	0	70	33	61	0	17	269
17:45-17:50	0	0	0	0	55	11	0	87	27	46	0	17	243
17:50-17:55	0	0	0	0	62	5	0	74	22	65	0	16	244
17:55-18:00	0	0	0	0	55	4	0	66	24	45	0	11	205
Total Survey	0	0	1	1	1501	283	1	1832	745	1211	1	460	6036
PHF	0	0	0	.25	.9	.77	0	.92	.86	.85	0	.88	.954
% Trucks	0	0	0	0	1.2	1.4	0	1.3	2	.5	0	1.3	1.2
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	
Peds	0	0	0	0	0	0	0	1	0	0	15	0	
Hourly Totals													
16:00-17:00	0	0	1	0	737	153	1	882	368	534	1	242	2919
16:15-17:15	0	0	1	0	754	159	1	920	368	594	1	240	3038
16:30-17:30	0	0	0	1	780	160	1	970	393	636	0	232	3173
16:45-17:45	0	0	0	1	818	147	0	936	401	676	0	231	3210
17:00-18:00	0	0	0	1	764	130	0	950	377	677	0	218	3117

INTERSECTION TURN MOVEMENT COUNT PEAK HOUR REPORT
HALL BOULEVARD AT DENNEY ROAD



DATE OF COUNT: 06/01/00
DAY OF WEEK: Thu
TIME STARTED: 16:00
TIME ENDED: 18:00

TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

TBDF

Peak Hour
16:45-17:45
TEV=3210

Traffic Smithy
(503)641-6333

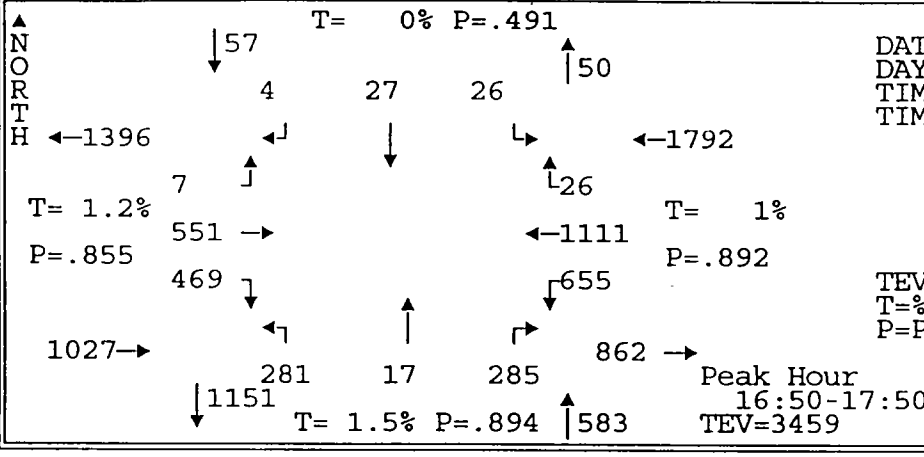
TIME PERIOD FROM - TO	EAST BOUND ↓	EAST BOUND →	EAST BOUND ↑	SOUTH BOUND ↲	SOUTH BOUND ↓	SOUTH BOUND ↳	NORTH BOUND ↰	NORTH BOUND ↑	NORTH BOUND ↱	WEST BOUND ↓	WEST BOUND ←	WEST BOUND ↑	ALL
ALL VEHICLES													
16:45-17:00	0	0	0	0	226	37	0	213	97	155	0	57	785
17:00-17:15	0	0	0	0	184	48	0	252	106	159	0	57	806
17:15-17:30	0	0	0	1	208	40	0	254	95	186	0	57	841
17:30-17:45	0	0	0	0	200	22	0	217	103	176	0	60	778
LIGHT TRUCKS (SINGLE UNIT 2 AXLES)													
16:45-17:00	0	0	0	0	1	0	0	0	1	1	0	1	4
17:00-17:15	0	0	0	0	2	0	0	5	1	0	0	1	9
17:15-17:30	0	0	0	0	1	1	0	0	1	0	0	0	3
17:30-17:45	0	0	0	0	2	0	0	2	1	0	0	1	6
MEDIUM TRUCKS (SINGLE UNIT > 2 AXLES)													
16:45-17:00	0	0	0	0	0	0	0	0	0	0	0	0	0
17:00-17:15	0	0	0	0	0	0	0	1	0	0	0	0	1
17:15-17:30	0	0	0	0	0	0	0	0	0	0	0	0	0
17:30-17:45	0	0	0	0	0	0	0	0	0	0	0	0	0
HEAVY TRUCKS (SEMI-TRACTOR TRAILER)													
16:45-17:00	0	0	0	0	0	0	0	0	0	0	0	0	0
17:00-17:15	0	0	0	0	0	0	0	0	0	0	0	0	0
17:15-17:30	0	0	0	0	0	0	0	0	0	0	0	0	0
17:30-17:45	0	0	0	0	0	0	0	0	0	0	0	0	0
BICYCLES													
16:45-17:00	0	0	0	0	1	0	0	0	2	0	0	0	3
17:00-17:15	0	0	0	0	0	0	0	0	0	0	0	0	0
17:15-17:30	0	0	0	0	0	0	0	0	1	0	0	0	1
17:30-17:45	0	0	0	0	0	0	0	3	0	0	0	0	3

PEDESTRIANS	CROSSWALK USEAGE SOUTH	WEST	EAST	NORTH	ALL
16:45-17:00	0	0	1	5	6
17:00-17:15	0	0	0	3	3
17:15-17:30	0	0	0	2	2
17:30-17:45	0	0	0	2	2

Peak Hour by Movement													
PHF	0	0	0	.25	.9	.77	0	.92	.95	.91	0	.96	.954
% Trucks(all)	0	0	0	0	.7	.7	0	.9	1	.1	0	1.3	.7
% Trucks(M+H)	0	0	0	0	0	0	0	.1	0	0	0	0	0
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	
Hourly Totals													
16:00-17:00	0	0	1	0	737	153	1	882	368	534	1	242	2919
16:15-17:15	0	0	1	0	754	159	1	920	368	594	1	240	3038
16:30-17:30	0	0	0	1	780	160	1	970	393	636	0	232	3173
16:45-17:45	0	0	0	1	818	147	0	936	401	676	0	231	3210
17:00-18:00	0	0	0	1	764	130	0	950	377	677	0	218	3117

INTERSECTION TURN MOVEMENT COUNT SUMMARY REPORT
HALL BOULEVARD AT GREENWAY ROAD

27516



DATE OF COUNT: 06/01/00
DAY OF WEEK: Thu
TIME STARTED: 16:00
TIME ENDED: 18:00

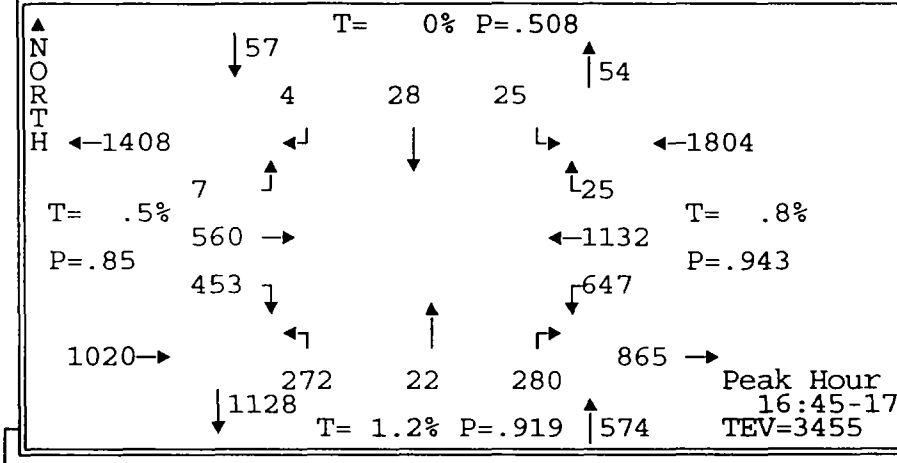
TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

DJMC

Traffic Smithy
(503) 641-6333

TIME PERIOD FROM - TO	EAST BOUND ↓	EAST BOUND →	EAST BOUND ↑	SOUTH BOUND ↵	SOUTH BOUND ↓	SOUTH BOUND ↳	NORTH BOUND ↰	NORTH BOUND ↑	NORTH BOUND ↱	WEST BOUND ↓	WEST BOUND ←	WEST BOUND ↑	ALL
16:00-16:05	25	52	0	0	0	0	18	0	14	44	83	0	236
16:05-16:10	21	52	1	0	1	1	22	0	22	25	87	0	232
16:10-16:15	32	36	0	1	0	0	18	0	28	53	76	2	246
16:15-16:20	22	42	0	0	0	0	28	1	27	49	78	0	247
16:20-16:25	31	61	0	1	1	0	15	0	31	44	78	1	263
16:25-16:30	25	61	0	0	0	0	25	0	27	27	58	1	224
16:30-16:35	19	40	0	1	2	2	22	1	31	49	102	2	271
16:35-16:40	25	44	0	0	0	0	21	0	26	57	83	0	256
16:40-16:45	28	41	0	0	0	0	24	0	25	57	78	0	253
16:45-16:50	24	47	1	0	2	11	13	9	23	49	81	3	263
16:50-16:55	34	53	1	2	2	1	25	2	33	55	82	1	291
16:55-17:00	45	36	0	1	1	8	20	6	25	49	85	2	278
17:00-17:05	31	44	0	0	0	0	27	1	24	42	76	1	246
17:05-17:10	47	40	1	0	0	0	21	0	15	68	126	0	318
17:10-17:15	23	29	0	1	1	1	29	0	23	55	109	1	272
17:15-17:20	38	63	0	0	2	1	28	0	23	41	101	1	298
17:20-17:25	57	58	1	0	3	0	21	1	16	58	110	2	327
17:25-17:30	42	39	2	0	2	1	23	0	26	63	96	0	294
17:30-17:35	36	53	0	0	0	1	22	0	23	47	75	5	262
17:35-17:40	40	39	1	0	13	1	25	2	27	61	109	9	327
17:40-17:45	36	59	0	0	2	0	18	1	22	59	82	0	279
17:45-17:50	40	38	1	0	1	12	22	4	28	57	60	4	267
17:50-17:55	38	67	0	2	2	2	31	0	19	37	52	1	251
17:55-18:00	26	37	0	0	0	0	24	0	22	71	66	1	247
Total Survey	785	1131	9	9	35	42	542	28	580	1217	2033	37	6448
PHF	.86	.86	.58	.33	.42	.5	.9	.47	.87	.93	.83	.46	.940
% Trucks	.5	1.8	0	0	0	0	1.7	0	1.4	1	1	2.7	1.1
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	
Peds	0	38	0	0	12	0	0	36	0	0	13	0	
Hourly Totals													
16:00-17:00	331	565	3	6	9	23	251	19	312	558	971	12	3060
16:15-17:15	354	538	3	6	9	23	270	20	310	601	1036	12	3182
16:30-17:30	413	534	6	5	15	25	274	20	290	643	1129	13	3367
16:45-17:45	453	560	7	4	28	25	272	22	280	647	1132	25	3455
17:00-18:00	454	566	6	3	26	19	291	9	268	659	1062	25	3388

INTERSECTION TURN MOVEMENT COUNT PEAK HOUR REPORT
HALL BOULEVARD AT GREENWAY ROAD



DATE OF COUNT: 06/01/00
DAY OF WEEK: Thu
TIME STARTED: 16:00
TIME ENDED: 18:00

TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

DJMC

Peak Hour
16:45-17:45
TEV=3455

Traffic Smithy
(503)641-6333

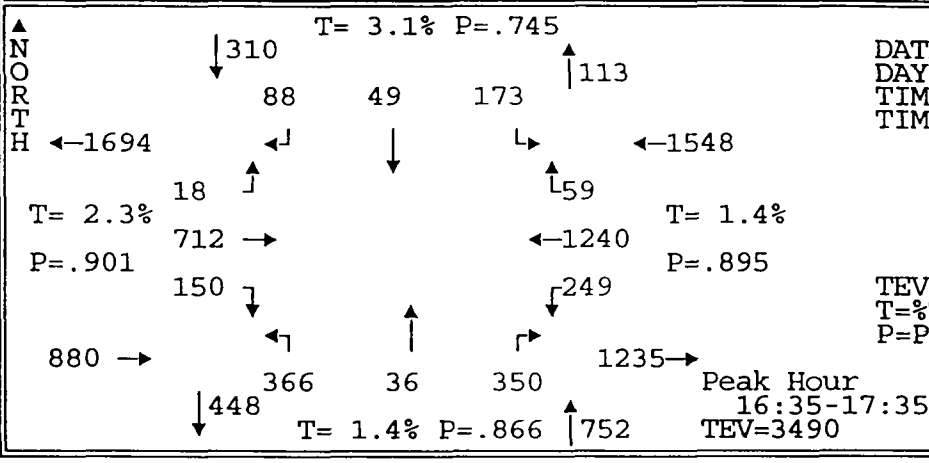
TIME PERIOD FROM - TO	EAST BOUND ↓	EAST BOUND →	EAST BOUND ↑	SOUTH BOUND ↵	SOUTH BOUND ↓	SOUTH BOUND ↳	NORTH BOUND ↰	NORTH BOUND ↑	NORTH BOUND ↱	WEST BOUND ↓	WEST BOUND ←	WEST BOUND ↑	ALL
ALL VEHICLES													
16:45-17:00	103	136	2	3	5	20	58	17	81	153	248	6	832
17:00-17:15	101	113	1	1	1	1	77	1	62	165	311	2	836
17:15-17:30	137	160	3	0	7	2	72	1	65	162	307	3	919
17:30-17:45	112	151	1	0	15	2	65	3	72	167	266	14	868
LIGHT TRUCKS (SINGLE UNIT 2 AXLES)													
16:45-17:00	0	1	0	0	0	0	2	0	0	1	1	0	5
17:00-17:15	0	1	0	0	0	0	0	0	1	3	3	1	9
17:15-17:30	0	2	0	0	0	0	0	0	2	1	1	0	6
17:30-17:45	0	1	0	0	0	0	1	0	0	3	1	0	6
MEDIUM TRUCKS (SINGLE UNIT > 2 AXLES)													
16:45-17:00	0	0	0	0	0	0	0	0	0	0	0	0	0
17:00-17:15	0	0	0	0	0	0	0	0	0	0	0	0	0
17:15-17:30	0	0	0	0	0	0	0	0	0	0	0	0	0
17:30-17:45	0	0	0	0	0	0	0	0	0	0	0	0	0
HEAVY TRUCKS (SEMI-TRACTOR TRAILER)													
16:45-17:00	0	0	0	0	0	0	0	0	0	0	0	0	0
17:00-17:15	0	0	0	0	0	0	0	0	1	0	0	0	1
17:15-17:30	0	0	0	0	0	0	0	0	0	0	0	0	0
17:30-17:45	0	0	0	0	0	0	0	0	0	0	0	0	0
BICYCLES													
16:45-17:00	0	0	0	0	0	0	1	0	0	0	0	0	1
17:00-17:15	0	1	0	0	0	0	0	0	0	0	0	0	1
17:15-17:30	0	1	0	0	0	0	0	0	0	0	0	0	1
17:30-17:45	0	0	0	0	0	0	0	0	0	0	0	0	0

PEDESTRIANS	CROSSWALK USEAGE SOUTH	WEST	EAST	NORTH	ALL
16:45-17:00	1	0	5	1	7
17:00-17:15	7	2	10	2	21
17:15-17:30	4	1	4	2	11
17:30-17:45	7	6	1	3	17

Peak Hour by Movement													
PHF	.83	.88	.58	.33	.47	.31	.88	.32	.86	.97	.91	.45	.939
% Trucks(all)	0	.9	0	0	0	0	1.1	0	1.4	1.2	.5	4	.8
% Trucks(M+H)	0	0	0	0	0	0	0	0	.4	0	0	0	0
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	
Hourly Totals													
16:00-17:00	331	565	3	6	9	23	251	19	312	558	971	12	3060
16:15-17:15	354	538	3	6	9	23	270	20	310	601	1036	12	3182
16:30-17:30	413	534	6	5	15	25	274	20	290	643	1129	13	3367
16:45-17:45	453	560	7	4	28	25	272	22	280	647	1132	25	3455
17:00-18:00	454	566	6	3	26	19	291	9	268	659	1062	25	3388

INTERSECTION TURN MOVEMENT COUNT SUMMARY REPORT
HALL BOULEVARD AT NIMBUS AVENUE

27517



DATE OF COUNT: 06/01/00
DAY OF WEEK: Thu
TIME STARTED: 16:00
TIME ENDED: 18:00

Peak Hour
16:35-17:35
TEV=3490

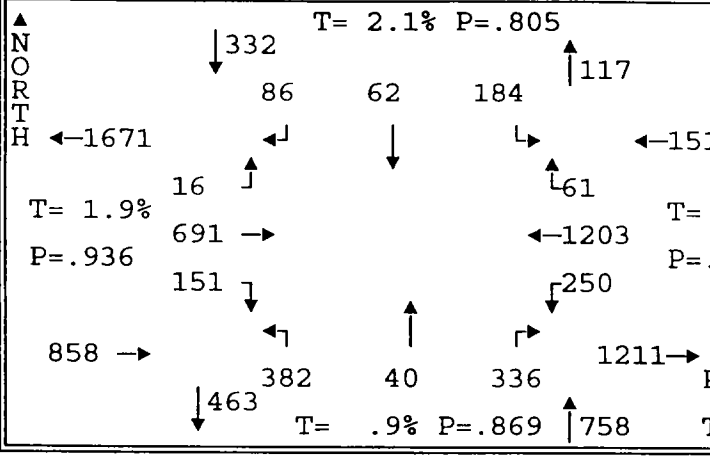
TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

DLXZ

Traffic Smithy
(503) 641-6333

TIME PERIOD FROM - TO	EAST BOUND ↓	EAST BOUND →	SOUTH BOUND ↑	SOUTH BOUND ↙	SOUTH BOUND ↓	SOUTH BOUND ↳	NORTH BOUND ↰	NORTH BOUND ↑	WEST BOUND ↱	WEST BOUND ↓	WEST BOUND ←	WEST BOUND ↑	ALL
16:00-16:05	13	54	4	5	3	15	28	1	40	12	84	4	263
16:05-16:10	9	46	1	5	3	10	38	2	36	25	66	3	244
16:10-16:15	18	59	1	4	4	9	20	1	29	15	101	7	268
16:15-16:20	17	55	2	4	2	5	23	4	22	23	96	3	256
16:20-16:25	27	74	1	2	4	6	21	3	14	22	98	8	280
16:25-16:30	17	53	2	8	6	17	19	3	32	16	70	3	246
16:30-16:35	15	48	1	11	13	22	37	5	19	15	84	5	275
16:35-16:40	5	59	3	3	6	30	38	2	44	22	69	1	282
16:40-16:45	14	50	2	3	4	11	34	7	32	25	112	4	298
16:45-16:50	14	50	1	7	6	10	26	6	19	23	108	7	277
16:50-16:55	18	75	2	4	2	10	31	1	32	24	95	4	298
16:55-17:00	10	56	3	7	3	12	25	3	21	27	98	7	272
17:00-17:05	13	66	1	7	8	27	24	5	33	12	85	4	285
17:05-17:10	6	60	0	11	10	19	40	4	30	17	90	9	296
17:10-17:15	13	48	1	7	2	8	44	1	31	26	107	3	291
17:15-17:20	11	65	0	10	2	13	37	3	27	24	123	6	321
17:20-17:25	19	53	2	9	2	12	23	1	24	18	122	3	288
17:25-17:30	13	61	0	7	4	10	23	2	24	17	110	8	279
17:30-17:35	14	69	3	13	0	11	21	1	33	14	121	3	303
17:35-17:40	13	42	0	7	3	12	31	2	27	21	99	6	263
17:40-17:45	12	68	0	7	3	11	34	1	19	20	101	7	283
17:45-17:50	17	63	0	2	1	9	20	4	23	17	92	6	254
17:50-17:55	8	66	1	2	2	10	15	0	21	24	105	7	261
17:55-18:00	9	54	1	2	2	10	15	1	14	22	88	2	220
Total Survey	325	1394	32	147	95	309	667	63	646	481	2324	120	6603
PHF	.82	.9	.75	.76	.58	.75	.76	.6	.92	.84	.87	.74	.960
% Trucks	2.2	2.4	3.1	1.4	6.3	2.9	1.2	0	1.7	1.7	1.1	6.7	1.8
Stopped Buses	0	5	0	0	0	0	0	0	0	0	0	0	
Peds	0	18	0	0	17	0	0	4	0	0	6	0	
Hourly Totals													
16:00-17:00	177	679	23	63	56	157	340	38	340	249	1081	56	3259
16:15-17:15	169	694	19	74	66	177	362	44	329	252	1112	58	3356
16:30-17:30	151	691	16	86	62	184	382	40	336	250	1203	61	3462
16:45-17:45	156	713	13	96	45	155	359	30	320	243	1259	67	3456
17:00-18:00	148	715	9	84	39	152	327	25	306	232	1243	64	3344

INTERSECTION TURN MOVEMENT COUNT PEAK HOUR REPORT
HALL BOULEVARD AT NIMBUS AVENUE



DATE OF COUNT: 06/01/00
DAY OF WEEK: Thu
TIME STARTED: 16:00
TIME ENDED: 18:00

TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

DLXZ

Peak Hour
16:30-17:30
TEV=3462

Traffic Smithy
(503)641-6333

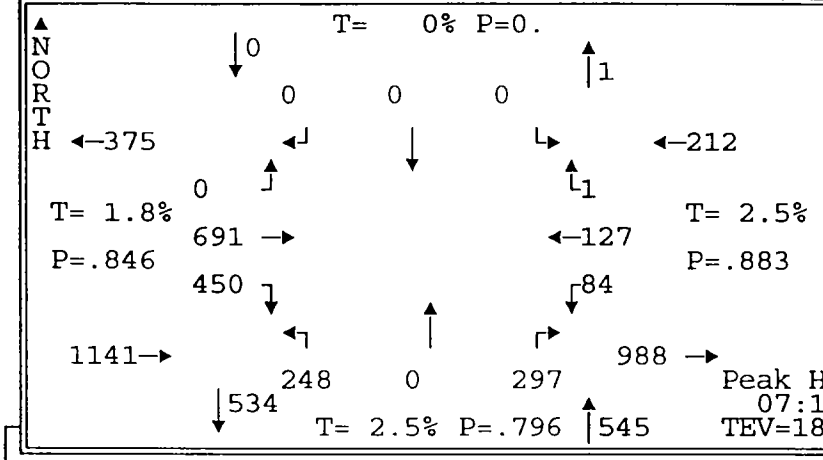
TIME PERIOD FROM - TO	EAST BOUND ↓	EAST BOUND →	EAST BOUND ↑	SOUTH BOUND ↓	SOUTH BOUND ←	SOUTH BOUND ↑	NORTH BOUND ↓	NORTH BOUND →	NORTH BOUND ↑	WEST BOUND ↓	WEST BOUND ←	WEST BOUND ↑	ALL
ALL VEHICLES													
16:30-16:45	34	157	6	17	23	63	109	14	95	62	265	10	855
16:45-17:00	42	181	6	18	11	32	82	10	72	74	301	18	847
17:00-17:15	32	174	2	25	20	54	108	10	94	55	282	16	872
17:15-17:30	43	179	2	26	8	35	83	6	75	59	355	17	888
LIGHT TRUCKS (SINGLE UNIT 2 AXLES)													
16:30-16:45	2	1	0	0	2	0	2	0	1	0	1	1	10
16:45-17:00	0	5	0	0	1	1	0	0	2	1	3	1	14
17:00-17:15	1	3	0	0	0	0	1	0	1	1	7	0	14
17:15-17:30	0	3	0	0	0	0	0	0	0	1	1	0	5
MEDIUM TRUCKS (SINGLE UNIT > 2 AXLES)													
16:30-16:45	0	0	0	0	0	0	0	0	0	0	0	0	0
16:45-17:00	0	0	0	0	0	0	0	0	0	0	0	0	0
17:00-17:15	0	0	0	0	0	0	0	0	0	0	0	0	0
17:15-17:30	0	0	0	0	0	0	0	0	0	0	0	0	0
HEAVY TRUCKS (SEMI-TRACTOR TRAILER)													
16:30-16:45	0	0	0	0	1	0	0	0	0	0	0	0	1
16:45-17:00	0	0	0	0	0	0	0	0	0	0	1	0	1
17:00-17:15	0	1	0	0	0	1	0	0	0	0	0	1	3
17:15-17:30	0	0	0	0	0	1	0	0	0	0	0	0	1
BICYCLES													
16:30-16:45	0	1	0	0	0	0	0	0	0	0	0	0	1
16:45-17:00	0	0	0	0	0	0	0	0	0	0	1	0	1
17:00-17:15	0	1	0	0	0	0	0	0	0	0	0	0	1
17:15-17:30	0	0	0	0	1	0	0	0	0	0	1	0	2

PEDESTRIANS	CROSSWALK USEAGE				ALL
	SOUTH	WEST	EAST	NORTH	
16:30-16:45	2	2	0	0	4
16:45-17:00	1	1	1	2	5
17:00-17:15	0	6	0	1	7
17:15-17:30	3	2	0	0	5

Peak Hour by Movement													
PHF	.88	.95	.67	.83	.67	.73	.88	.71	.88	.84	.85	.85	.974
% Trucks(all)	2	1.9	0	0	6.5	1.6	.8	0	1.2	1.2	1.1	4.9	1.4
% Trucks(M+H)	0	.1	0	0	1.6	1.1	0	0	0	0	.1	1.6	.2
Stopped Buses	0	1	0	0	0	0	0	0	0	0	0	0	
Hourly Totals													
16:00-17:00	177	679	23	63	56	157	340	38	340	249	1081	56	3259
16:15-17:15	169	694	19	74	66	177	362	44	329	252	1112	58	3356
16:30-17:30	151	691	16	86	62	184	382	40	336	250	1203	61	3462
16:45-17:45	156	713	13	96	45	155	359	30	320	243	1259	67	3456
17:00-18:00	148	715	9	84	39	152	327	25	306	232	1243	64	3344

INTERSECTION TURN MOVEMENT COUNT SUMMARY REPORT
125TH AVENUE AT GREENWAY ROAD

23835



DATE OF COUNT: 06/06/00
DAY OF WEEK: Tue
TIME STARTED: 07:00
TIME ENDED: 09:00

TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

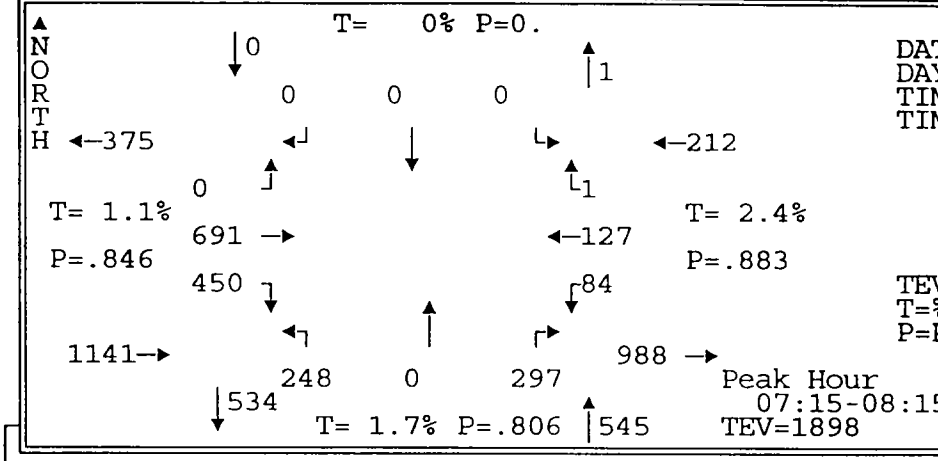
tbdg

Peak Hour
07:15-08:15
TEV=1898

Traffic Smithy
(503) 641-6333

TIME PERIOD FROM - TO	EAST BOUND ↓	EAST BOUND →	EAST BOUND ↑	SOUTH BOUND ↵	SOUTH BOUND ↓	SOUTH BOUND ↳	NORTH BOUND ↰	NORTH BOUND ↑	NORTH BOUND ↱	WEST BOUND ↓	WEST BOUND ←	WEST BOUND ↑	ALL
07:00-07:05	12	35	0	0	0	0	13	0	10	5	13	0	88
07:05-07:10	27	57	0	0	0	0	8	0	13	7	8	0	120
07:10-07:15	29	33	0	0	0	0	12	0	15	5	13	0	107
07:15-07:20	25	59	0	0	0	0	13	0	18	4	6	0	125
07:20-07:25	28	45	0	0	0	0	12	0	13	11	9	0	118
07:25-07:30	44	51	0	0	0	0	16	0	23	7	11	0	152
07:30-07:35	63	47	0	0	0	0	32	0	22	11	7	1	183
07:35-07:40	60	56	0	0	0	0	27	0	26	7	7	0	183
07:40-07:45	57	54	0	0	0	0	24	0	23	10	14	0	182
07:45-07:50	41	67	0	0	0	0	33	0	34	4	10	0	189
07:50-07:55	30	71	0	0	0	0	23	0	34	6	10	0	174
07:55-08:00	36	59	0	0	0	0	18	0	27	4	13	0	157
08:00-08:05	34	71	0	0	0	0	15	0	19	4	16	0	159
08:05-08:10	20	60	0	0	0	0	19	0	28	10	10	0	147
08:10-08:15	12	51	0	0	0	0	16	0	30	6	14	0	129
08:15-08:20	21	32	0	0	0	0	6	0	16	13	15	0	103
08:20-08:25	15	65	0	0	0	0	14	0	21	9	13	0	137
08:25-08:30	13	41	0	0	0	0	12	0	5	6	13	0	90
08:30-08:35	17	48	0	0	0	0	16	0	17	8	17	0	123
08:35-08:40	18	32	0	0	0	0	17	0	13	4	5	0	89
08:40-08:45	37	32	0	0	0	0	18	0	7	10	11	0	115
08:45-08:50	24	32	0	0	0	0	24	0	14	5	13	0	112
08:50-08:55	30	28	0	0	0	0	17	0	15	3	11	0	104
08:55-09:00	20	30	0	0	0	0	16	0	18	4	12	0	100
Total Survey	713	1156	0	0	0	0	421	0	461	163	271	1	3186
PHF	.63	.86	0	0	0	0	.74	0	.78	.72	.79	.25	.856
% Trucks	3.1	1	0	0	0	0	3.8	0	1.3	3.7	1.8	0	2.1
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	
Peds	0	2	0	0	0	0	0	16	0	0	3	0	
Hourly Totals													
07:00-08:00	452	634	0	0	0	0	231	0	258	81	121	1	1778
07:15-08:15	450	691	0	0	0	0	248	0	297	84	127	1	1898
07:30-08:30	402	674	0	0	0	0	239	0	285	90	142	1	1833
07:45-08:45	294	629	0	0	0	0	207	0	251	84	147	0	1612
08:00-09:00	261	522	0	0	0	0	190	0	203	82	150	0	1408

INTERSECTION TURN MOVEMENT COUNT PEAK HOUR REPORT
125TH AVENUE AT GREENWAY ROAD



DATE OF COUNT: 06/06/00
DAY OF WEEK: Tue
TIME STARTED: 07:00
TIME ENDED: 09:00

TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

tbdg

Peak Hour
07:15-08:15
TEV=1898

Traffic Smithy
(503)641-6333

TIME PERIOD FROM - TO	EAST BOUND ↓	EAST BOUND →	SOUTH BOUND ↱	SOUTH BOUND ←	SOUTH BOUND ↓	SOUTH BOUND ↳	NORTH BOUND ↰	NORTH BOUND ↑	NORTH BOUND ↱	WEST BOUND ↓	WEST BOUND ←	WEST BOUND ↳	ALL
ALL VEHICLES													
07:15-07:30	97	155	0	0	0	0	41	0	54	22	26	0	395
07:30-07:45	180	157	0	0	0	0	83	0	71	28	28	1	548
07:45-08:00	107	197	0	0	0	0	74	0	95	14	33	0	520
08:00-08:15	66	182	0	0	0	0	50	0	77	20	40	0	435
LIGHT TRUCKS (SINGLE UNIT 2 AXLES)													
07:15-07:30	4	1	0	0	0	0	2	0	1	1	1	0	10
07:30-07:45	2	0	0	0	0	0	2	0	1	1	0	0	6
07:45-08:00	1	4	0	0	0	0	3	0	0	0	0	0	8
08:00-08:15	1	0	0	0	0	0	0	0	0	1	1	0	3
MEDIUM TRUCKS (SINGLE UNIT > 2 AXLES)													
07:15-07:30	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30-07:45	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45-08:00	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00-08:15	0	0	0	0	0	0	0	0	0	0	0	0	0
HEAVY TRUCKS (SEMI-TRACTOR TRAILER)													
07:15-07:30	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30-07:45	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45-08:00	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00-08:15	0	0	0	0	0	0	0	0	0	0	0	0	0
BICYCLES													
07:15-07:30	0	0	0	0	0	0	1	0	0	0	0	0	1
07:30-07:45	0	0	0	0	0	0	1	0	0	0	0	0	1
07:45-08:00	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00-08:15	0	0	0	0	0	0	0	0	0	0	0	0	0

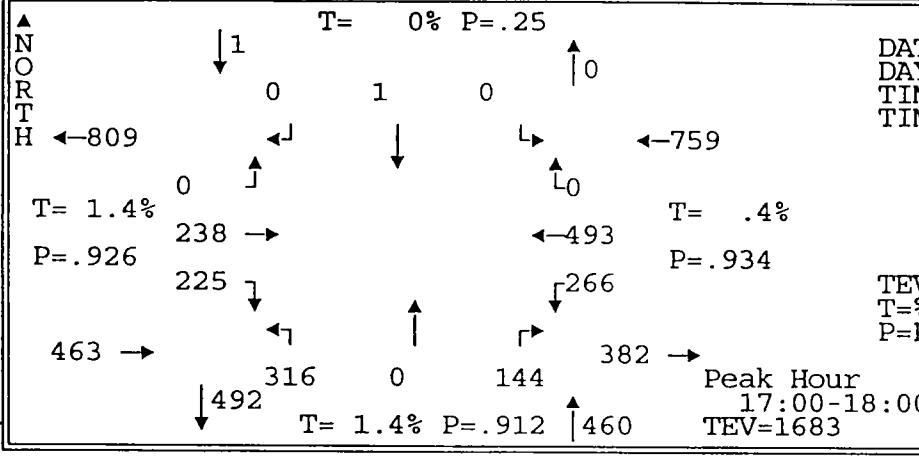
PEDESTRIANS	CROSSWALK USEAGE SOUTH	WEST	EAST	NORTH	ALL
07:15-07:30	0	0	1	1	2
07:30-07:45	0	0	0	0	0
07:45-08:00	0	0	0	2	2
08:00-08:15	0	0	3	0	3

Peak Hour by Movement													
PHF	.63	.88	0	0	0	0	.75	0	.78	.75	.79	.25	.865
% Trucks(all)	1.8	.7	0	0	0	0	2.8	0	.7	3.6	1.6	0	1.4
% Trucks(M+H)	0	0	0	0	0	0	0	0	0	0	0	0	0
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	

Hourly Totals													
07:00-08:00	452	634	0	0	0	0	231	0	258	81	121	1	1778
07:15-08:15	450	691	0	0	0	0	248	0	297	84	127	1	1898
07:30-08:30	402	674	0	0	0	0	239	0	285	90	142	1	1833
07:45-08:45	294	629	0	0	0	0	207	0	251	84	147	0	1612
08:00-09:00	261	522	0	0	0	0	190	0	203	82	150	0	1408

INTERSECTION TURN MOVEMENT COUNT SUMMARY REPORT
125TH AVENUE AT GREENWAY ROAD

23851



DATE OF COUNT: 06/07/00
DAY OF WEEK: Wed
TIME STARTED: 16:00
TIME ENDED: 18:00

TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

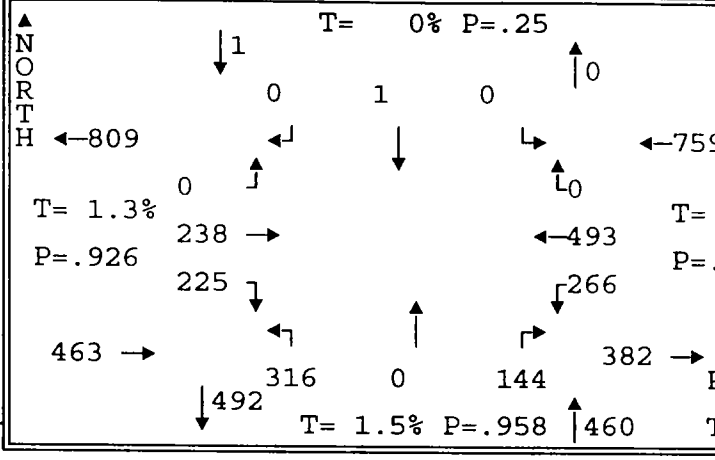
PBBO

Peak Hour
17:00-18:00
TEV=1683

Traffic Smithy
(503) 641-6333

TIME PERIOD FROM - TO	EAST BOUND ↓	EAST BOUND →	EAST BOUND ↑	SOUTH BOUND ↵	SOUTH BOUND ↓	SOUTH BOUND ↳	NORTH BOUND ↰	NORTH BOUND ↑	NORTH BOUND ↱	WEST BOUND ↓	WEST BOUND ←	WEST BOUND ↑	ALL
16:00-16:05	14	15	0	0	1	0	32	1	15	15	36	0	129
16:05-16:10	17	20	0	0	0	0	29	0	11	13	20	0	110
16:10-16:15	18	12	0	0	0	0	24	0	10	13	35	0	112
16:15-16:20	17	18	0	0	0	0	21	0	9	14	31	0	110
16:20-16:25	15	25	0	0	0	0	22	0	10	14	28	0	114
16:25-16:30	18	28	0	0	0	0	33	0	15	17	41	0	152
16:30-16:35	12	27	0	0	0	0	19	0	11	15	36	0	120
16:35-16:40	22	24	0	0	0	0	26	0	11	18	32	0	133
16:40-16:45	17	18	0	0	0	0	14	0	10	25	36	0	120
16:45-16:50	16	21	0	0	0	0	25	0	8	11	41	0	122
16:50-16:55	13	24	0	0	0	0	22	0	9	32	26	0	126
16:55-17:00	24	18	0	0	0	0	23	0	7	23	42	0	137
17:00-17:05	14	16	0	0	0	0	27	0	13	27	52	0	149
17:05-17:10	22	25	0	0	0	0	26	0	5	24	31	0	133
17:10-17:15	19	17	0	0	0	0	27	0	15	14	35	0	127
17:15-17:20	23	16	0	0	0	0	24	0	10	22	33	0	128
17:20-17:25	14	24	0	0	1	0	36	0	5	23	42	0	145
17:25-17:30	19	16	0	0	0	0	27	0	11	24	43	0	140
17:30-17:35	25	20	0	0	0	0	20	0	13	24	44	0	146
17:35-17:40	22	18	0	0	0	0	30	0	17	26	34	0	147
17:40-17:45	20	20	0	0	0	0	25	0	15	24	34	0	138
17:45-17:50	11	27	0	0	0	0	26	0	13	15	52	0	144
17:50-17:55	17	17	0	0	0	0	22	0	7	18	45	0	126
17:55-18:00	19	22	0	0	0	0	26	0	20	25	48	0	160
Total Survey	428	488	0	0	2	0	606	1	270	476	897	0	3168
PHF	.84	.9	0	0	.25	0	.91	0	.8	.9	.85	0	.971
% Trucks	1.2	1.6	0	0	0	0	1.3	0	1.5	0	.7	0	1
Stopped Buses	0	1	0	0	0	0	0	0	0	0	0	0	
Peds	0	0	0	0	0	0	0	0	0	0	17	0	
Hourly Totals													
16:00-17:00	203	250	0	0	1	0	290	1	126	210	404	0	1485
16:15-17:15	209	261	0	0	0	0	285	0	123	234	431	0	1543
16:30-17:30	215	246	0	0	1	0	296	0	115	258	449	0	1580
16:45-17:45	231	235	0	0	1	0	312	0	128	274	457	0	1638
17:00-18:00	225	238	0	0	1	0	316	0	144	266	493	0	1683

INTERSECTION TURN MOVEMENT COUNT PEAK HOUR REPORT
125TH AVENUE AT GREENWAY ROAD



DATE OF COUNT: 06/07/00
DAY OF WEEK: Wed
TIME STARTED: 16:00
TIME ENDED: 18:00

TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

PBBO

Peak Hour
17:00-18:00
TEV=1683

Traffic Smithy
(503)641-6333

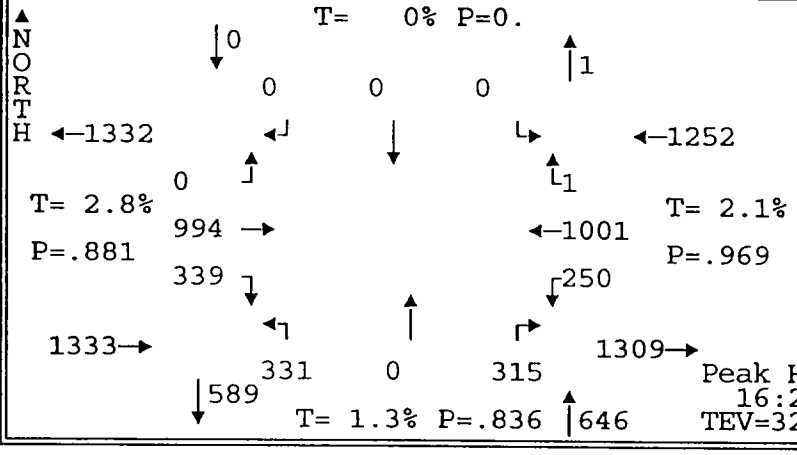
TIME PERIOD FROM - TO	EAST BOUND ↓	EAST BOUND →	EAST BOUND ↑	SOUTH BOUND ↵	SOUTH BOUND ↓	SOUTH BOUND ↳	NORTH BOUND ↰	NORTH BOUND ↑	NORTH BOUND ↱	WEST BOUND ↓	WEST BOUND ←	WEST BOUND ↑	ALL
ALL VEHICLES													
17:00-17:15	55	58	0	0	0	0	80	0	33	65	118	0	409
17:15-17:30	56	56	0	0	1	0	87	0	26	69	118	0	413
17:30-17:45	67	58	0	0	0	0	75	0	45	74	112	0	431
17:45-18:00	47	66	0	0	0	0	74	0	40	58	145	0	430
LIGHT TRUCKS (SINGLE UNIT 2 AXLES)													
17:00-17:15	0	3	0	0	0	0	1	0	0	0	1	0	5
17:15-17:30	2	0	0	0	0	0	0	0	0	0	1	0	3
17:30-17:45	0	0	0	0	0	0	3	0	1	0	1	0	5
17:45-18:00	0	1	0	0	0	0	2	0	0	0	0	0	3
MEDIUM TRUCKS (SINGLE UNIT > 2 AXLES)													
17:00-17:15	0	0	0	0	0	0	0	0	0	0	0	0	0
17:15-17:30	0	0	0	0	0	0	0	0	0	0	0	0	0
17:30-17:45	0	0	0	0	0	0	0	0	0	0	0	0	0
17:45-18:00	0	0	0	0	0	0	0	0	0	0	0	0	0
HEAVY TRUCKS (SEMI-TRACTOR TRAILER)													
17:00-17:15	0	0	0	0	0	0	0	0	0	0	0	0	0
17:15-17:30	0	0	0	0	0	0	0	0	0	0	0	0	0
17:30-17:45	0	0	0	0	0	0	0	0	0	0	0	0	0
17:45-18:00	0	0	0	0	0	0	0	0	0	0	0	0	0
BICYCLES													
17:00-17:15	0	0	0	0	0	0	0	0	0	0	0	0	0
17:15-17:30	0	0	0	0	0	0	0	0	0	0	0	0	0
17:30-17:45	0	0	0	0	0	0	0	0	0	0	0	0	0
17:45-18:00	0	1	0	0	0	0	0	0	0	0	0	0	1

PEDESTRIANS — CROSSWALK USEAGE	SOUTH	WEST	EAST	NORTH	ALL
17:00-17:15	0	0	0	1	1
17:15-17:30	0	0	0	2	2
17:30-17:45	0	0	0	0	0
17:45-18:00	0	0	0	2	2

Peak Hour by Movement													
PHF	.84	.9	0	0	.25	0	.91	0	.8	.9	.85	0	.976
% Trucks(all)	.9	1.7	0	0	0	0	1.9	0	.7	0	.6	0	1
% Trucks(M+H)	0	0	0	0	0	0	0	0	0	0	0	0	0
Stopped Buses	0	1	0	0	0	0	0	0	0	0	0	0	
Hourly Totals													
16:00-17:00	203	250	0	0	1	0	290	1	126	210	404	0	1485
16:15-17:15	209	261	0	0	0	0	285	0	123	234	431	0	1543
16:30-17:30	215	246	0	0	1	0	296	0	115	258	449	0	1580
16:45-17:45	231	235	0	0	1	0	312	0	128	274	457	0	1638
17:00-18:00	225	238	0	0	1	0	316	0	144	266	493	0	1683

INTERSECTION TURN MOVEMENT COUNT SUMMARY REPORT
WESTERN AVENUE AT BEAVERTON HILLSDALE HIGHWAY

23908



DATE OF COUNT: 06/13/00
DAY OF WEEK: Tue
TIME STARTED: 16:00
TIME ENDED: 18:00

TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

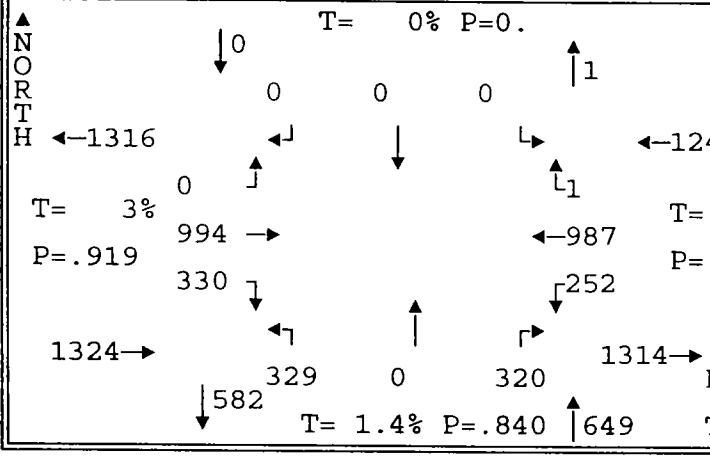
PBBS

Peak Hour
16:20-17:20
TEV=3231

Traffic Smithy
(503) 641-6333

TIME PERIOD FROM - TO	EAST BOUND ↓	EAST BOUND →	EAST BOUND ↑	SOUTH BOUND ↲	SOUTH BOUND ↓	SOUTH BOUND ↳	NORTH BOUND ↰	NORTH BOUND ↑	NORTH BOUND ↱	WEST BOUND ↓	WEST BOUND ←	WEST BOUND ↑	ALL
16:00-16:05	23	74	0	0	0	2	22	0	22	18	70	0	231
16:05-16:10	16	85	0	0	0	0	15	0	27	20	80	0	243
16:10-16:15	25	62	0	0	0	0	28	0	25	20	82	0	242
16:15-16:20	18	75	0	0	0	0	15	0	24	23	75	0	230
16:20-16:25	39	107	0	0	0	0	20	0	24	17	87	0	294
16:25-16:30	29	92	0	0	0	0	24	0	19	21	87	0	272
16:30-16:35	35	69	0	0	0	0	20	0	20	25	86	0	255
16:35-16:40	16	78	0	0	0	0	24	0	25	10	86	0	239
16:40-16:45	39	99	0	0	0	0	31	0	18	26	86	0	299
16:45-16:50	31	104	0	0	0	0	38	0	34	17	77	0	301
16:50-16:55	18	87	0	0	0	0	34	0	31	13	96	0	279
16:55-17:00	18	67	0	0	0	0	27	0	29	34	69	0	244
17:00-17:05	21	61	0	0	0	0	28	0	28	22	89	0	249
17:05-17:10	31	83	0	0	0	0	34	0	38	19	76	0	281
17:10-17:15	35	72	0	0	0	0	34	0	30	25	73	1	270
17:15-17:20	27	75	0	0	0	0	17	0	19	21	89	0	248
17:20-17:25	14	68	0	0	0	0	20	0	26	18	45	0	191
17:25-17:30	29	69	0	0	0	0	16	0	34	28	36	0	212
17:30-17:35	25	82	0	0	0	0	20	0	19	30	82	0	258
17:35-17:40	22	64	0	0	0	0	21	0	36	19	68	0	230
17:40-17:45	26	80	0	0	0	0	19	0	29	19	63	0	236
17:45-17:50	21	73	0	0	0	0	16	0	20	26	97	0	253
17:50-17:55	19	93	0	0	0	0	18	0	20	16	95	0	261
17:55-18:00	16	87	0	0	0	0	20	0	29	26	82	0	260
Total Survey	593	1906	0	0	0	2	561	0	626	513	1876	1	6078
PHF	.82	.86	0	0	0	0	.8	0	.82	.83	.96	.25	.918
% Trucks	4.6	2.3	0	0	0	0	1.4	0	1.3	1.9	2.2	0	2.3
Stopped Buses	0	0	0	0	0	0	0	0	0	0	1	0	
Peds	0	17	0	0	0	0	0	25	0	0	14	0	
Hourly Totals													
16:00-17:00	307	999	0	0	0	2	298	0	298	244	981	0	3129
16:15-17:15	330	994	0	0	0	0	329	0	320	252	987	1	3213
16:30-17:30	314	932	0	0	0	0	323	0	332	258	908	1	3068
16:45-17:45	297	912	0	0	0	0	308	0	353	265	863	1	2999
17:00-18:00	286	907	0	0	0	0	263	0	328	269	895	1	2949

INTERSECTION TURN MOVEMENT COUNT PEAK HOUR REPORT
WESTERN AVENUE AT BEAVERTON HILLSDALE HIGHWAY



DATE OF COUNT: 06/13/00
DAY OF WEEK: Tue
TIME STARTED: 16:00
TIME ENDED: 18:00

TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

PBBS

Peak Hour
16:15-17:15
TEV=3213

Traffic Smithy
(503)641-6333

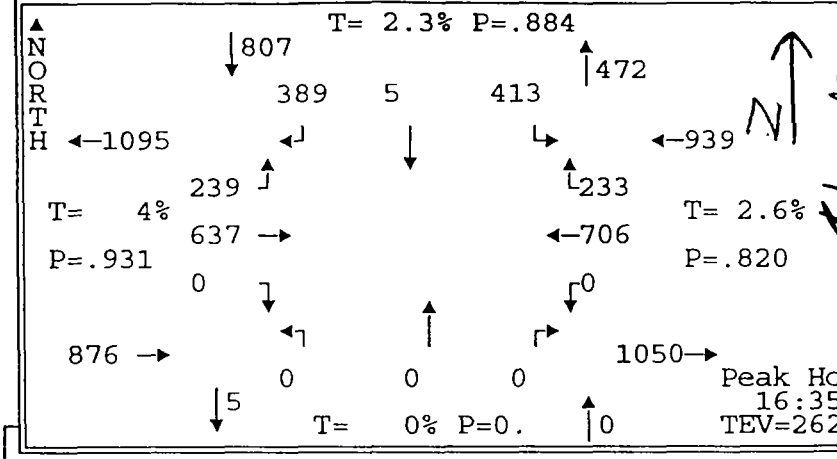
TIME PERIOD FROM - TO	EAST BOUND ↓	EAST BOUND →	EAST BOUND ↑	SOUTH BOUND ↵	SOUTH BOUND ↓	SOUTH BOUND ↳	NORTH BOUND ↰	NORTH BOUND ↑	NORTH BOUND ↱	WEST BOUND ↓	WEST BOUND ←	WEST BOUND ↑	ALL
ALL VEHICLES													
16:15-16:30	86	274	0	0	0	0	59	0	67	61	249	0	796
16:30-16:45	90	246	0	0	0	0	75	0	63	61	258	0	793
16:45-17:00	67	258	0	0	0	0	99	0	94	64	242	0	824
17:00-17:15	87	216	0	0	0	0	96	0	96	66	238	1	800
LIGHT TRUCKS (SINGLE UNIT 2 AXLES)													
16:15-16:30	9	6	0	0	0	0	1	0	0	3	6	0	25
16:30-16:45	4	4	0	0	0	0	0	0	0	0	5	0	13
16:45-17:00	2	5	0	0	0	0	2	0	1	0	5	0	15
17:00-17:15	1	2	0	0	0	0	0	0	2	1	8	0	14
MEDIUM TRUCKS (SINGLE UNIT > 2 AXLES)													
16:15-16:30	0	0	0	0	0	0	0	0	0	1	0	0	1
16:30-16:45	2	1	0	0	0	0	0	0	0	0	0	0	3
16:45-17:00	0	1	0	0	0	0	0	0	0	1	1	0	3
17:00-17:15	1	0	0	0	0	0	1	0	1	0	0	0	3
HEAVY TRUCKS (SEMI-TRACTOR TRAILER)													
16:15-16:30	0	0	0	0	0	0	0	0	0	0	0	0	0
16:30-16:45	1	0	0	0	0	0	0	0	0	0	0	0	1
16:45-17:00	0	0	0	0	0	0	0	0	0	0	0	0	0
17:00-17:15	0	1	0	0	0	0	0	0	1	0	0	0	2
BICYCLES													
16:15-16:30	0	0	0	0	0	0	0	0	0	0	2	0	2
16:30-16:45	0	0	0	0	0	0	0	0	1	0	0	0	1
16:45-17:00	0	0	0	0	0	0	0	0	0	0	1	0	1
17:00-17:15	0	1	0	0	0	0	0	0	0	0	0	0	1

PEDESTRIANS	CROSSWALK USEAGE				ALL
	SOUTH	WEST	EAST	NORTH	
16:15-16:30	1	0	1	0	2
16:30-16:45	4	0	1	0	5
16:45-17:00	5	0	7	10	22
17:00-17:15	0	0	5	0	5

Peak Hour by Movement													
PHF	.92	.91	0	0	0	0	.83	0	.83	.95	.96	.25	.974
% Trucks(all)	6.1	2	0	0	0	0	1.2	0	1.6	2.4	2.5	0	2.5
% Trucks(M+H)	1.2	.3	0	0	0	0	.3	0	.6	.8	.1	0	.4
Stopped Buses	0	0	0	0	0	0	0	0	0	0	1	0	
Hourly Totals													
16:00-17:00	307	999	0	0	0	2	298	0	298	244	981	0	3129
16:15-17:15	330	994	0	0	0	0	329	0	320	252	987	1	3213
16:30-17:30	314	932	0	0	0	0	323	0	332	258	908	1	3068
16:45-17:45	297	912	0	0	0	0	308	0	353	265	863	1	2999
17:00-18:00	286	907	0	0	0	0	263	0	328	269	895	1	2949

INTERSECTION TURN MOVEMENT COUNT SUMMARY REPORT
WESTERN AVENUE AT ALLEN BOULEVARD

23836



DATE OF COUNT: 06/06/00
DAY OF WEEK: Tue
TIME STARTED: 16:00
TIME ENDED: 18:00

TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

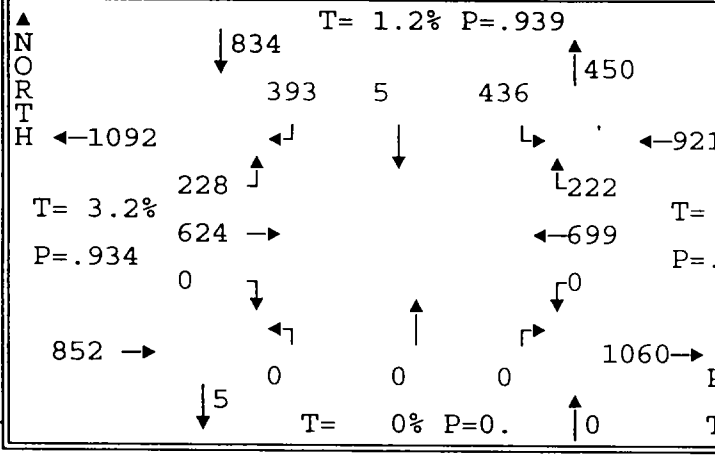
DJMD

Peak Hour
16:35-17:35
TEV=2622

Traffic Smithy
(503) 641-6333

TIME PERIOD FROM - TO	EAST BOUND ↓	EAST BOUND →	EAST BOUND ↑	SOUTH BOUND ↵	SOUTH BOUND ↓	SOUTH BOUND ↳	NORTH BOUND ↰	NORTH BOUND ↑	NORTH BOUND ↱	WEST BOUND ↓	WEST BOUND ←	WEST BOUND ↑	ALL
16:00-16:05	0	46	22	17	0	17	0	0	0	0	57	14	173
16:05-16:10	0	40	23	31	0	28	0	0	0	0	49	18	189
16:10-16:15	0	59	21	22	0	18	0	0	0	0	53	15	188
16:15-16:20	0	41	17	40	0	35	0	0	0	0	43	13	189
16:20-16:25	0	44	22	29	0	31	0	0	0	0	54	23	203
16:25-16:30	0	40	21	18	0	24	0	0	0	0	48	12	163
16:30-16:35	0	44	20	30	0	23	0	0	0	0	53	17	187
16:35-16:40	0	44	26	30	0	22	0	0	0	0	72	23	217
16:40-16:45	0	62	18	33	0	32	0	0	0	0	49	17	211
16:45-16:50	0	54	26	28	0	34	0	0	0	0	41	17	200
16:50-16:55	0	47	22	33	0	38	0	0	0	0	48	19	207
16:55-17:00	0	68	11	19	1	41	0	0	0	0	53	15	208
17:00-17:05	0	57	30	37	0	26	0	0	0	0	59	14	223
17:05-17:10	0	56	12	40	0	39	0	0	0	0	114	23	284
17:10-17:15	0	53	20	35	0	45	0	0	0	0	58	18	229
17:15-17:20	0	50	19	33	1	35	0	0	0	0	48	22	208
17:20-17:25	0	47	13	33	2	25	0	0	0	0	66	24	210
17:25-17:30	0	49	16	32	0	38	0	0	0	0	49	20	204
17:30-17:35	0	50	26	36	1	38	0	0	0	0	49	21	221
17:35-17:40	0	43	21	33	0	44	0	0	0	0	56	9	206
17:40-17:45	0	50	12	34	0	33	0	0	0	0	58	20	207
17:45-17:50	0	55	13	36	0	41	0	0	0	0	51	7	203
17:50-17:55	0	38	16	28	0	37	0	0	0	0	50	11	180
17:55-18:00	0	59	18	24	0	24	0	0	0	0	28	11	164
Total Survey	0	1196	465	731	5	768	0	0	0	0	1306	403	4874
PHF	0	.88	.85	.87	.42	.87	0	0	0	0	.76	.88	.890
% Trucks	0	2.8	7.1	3.3	20	1.3	0	0	0	0	2.8	2	3
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	
Peds	0	0	0	0	1	0	0	0	0	0	0	0	
Hourly Totals													
16:00-17:00	0	589	249	330	1	343	0	0	0	0	620	203	2335
16:15-17:15	0	610	245	372	1	390	0	0	0	0	692	211	2521
16:30-17:30	0	631	233	383	4	398	0	0	0	0	710	229	2588
16:45-17:45	0	624	228	393	5	436	0	0	0	0	699	222	2607
17:00-18:00	0	607	216	401	4	425	0	0	0	0	686	200	2539

INTERSECTION TURN MOVEMENT COUNT PEAK HOUR REPORT
WESTERN AVENUE AT ALLEN BOULEVARD



DATE OF COUNT: 06/06/00
DAY OF WEEK: Tue
TIME STARTED: 16:00
TIME ENDED: 18:00

TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

DJMD

Peak Hour
16:45-17:45
TEV=2607

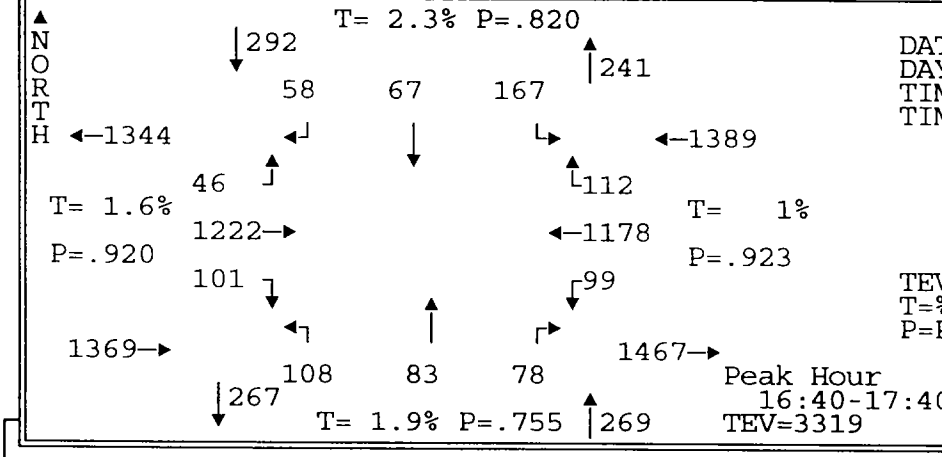
Traffic Smithy
(503)641-6333

TIME PERIOD FROM - TO	EAST BOUND ↓	EAST BOUND →	EAST BOUND ↑	SOUTH BOUND ↲	SOUTH BOUND ↓	SOUTH BOUND ↳	NORTH BOUND ↰	NORTH BOUND ↑	NORTH BOUND ↱	WEST BOUND ↓	WEST BOUND ←	WEST BOUND ↰	ALL
ALL VEHICLES													
16:45-17:00	0	169	59	80	1	113	0	0	0	0	142	51	615
17:00-17:15	0	166	62	112	0	110	0	0	0	0	231	55	736
17:15-17:30	0	146	48	98	3	98	0	0	0	0	163	66	622
17:30-17:45	0	143	59	103	1	115	0	0	0	0	163	50	634
LIGHT TRUCKS (SINGLE UNIT 2 AXLES)													
16:45-17:00	0	4	1	1	0	0	0	0	0	0	3	0	9
17:00-17:15	0	5	4	1	0	0	0	0	0	0	1	0	11
17:15-17:30	0	1	1	0	0	0	0	0	0	0	2	0	4
17:30-17:45	0	2	1	0	1	1	0	0	0	0	1	0	6
MEDIUM TRUCKS (SINGLE UNIT > 2 AXLES)													
16:45-17:00	0	0	0	0	0	0	0	0	0	0	1	0	1
17:00-17:15	0	0	1	1	0	0	0	0	0	0	0	0	2
17:15-17:30	0	0	1	0	0	0	0	0	0	0	4	0	5
17:30-17:45	0	0	2	1	0	0	0	0	0	0	1	0	4
HEAVY TRUCKS (SEMI-TRACTOR TRAILER)													
16:45-17:00	0	1	0	0	0	2	0	0	0	0	1	0	4
17:00-17:15	0	0	0	0	0	0	0	0	0	0	0	0	0
17:15-17:30	0	2	0	1	0	0	0	0	0	0	0	0	3
17:30-17:45	0	0	1	0	0	1	0	0	0	0	1	0	3
BICYCLES													
16:45-17:00	0	0	0	0	0	0	0	0	0	0	0	0	0
17:00-17:15	0	0	0	0	0	0	0	0	0	0	1	0	1
17:15-17:30	0	0	0	0	0	0	0	0	0	0	0	0	0
17:30-17:45	0	0	0	0	0	0	0	0	0	0	0	0	0

PEDESTRIANS	CROSSWALK USEAGE				ALL
	SOUTH	WEST	EAST	NORTH	
16:45-17:00	0	0	0	0	0
17:00-17:15	0	0	0	0	0
17:15-17:30	0	0	0	0	0
17:30-17:45	0	0	0	0	0

Peak Hour by Movement													
PHF	0	.92	.92	.88	.42	.95	0	0	0	0	.76	.84	.885
% Trucks(all)	0	2.4	5.3	1.3	20	.9	0	0	0	0	2.1	0	2
% Trucks(M+H)	0	.5	2.2	.8	0	.7	0	0	0	0	1.1	0	.8
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	
Hourly Totals													
16:00-17:00	0	589	249	330	1	343	0	0	0	0	620	203	2335
16:15-17:15	0	610	245	372	1	390	0	0	0	0	692	211	2521
16:30-17:30	0	631	233	383	4	398	0	0	0	0	710	229	2588
16:45-17:45	0	624	228	393	5	436	0	0	0	0	699	222	2607
17:00-18:00	0	607	216	401	4	425	0	0	0	0	686	200	2539

INTERSECTION TURN MOVEMENT COUNT SUMMARY REPORT
BEAVERTON-HILLSDALE HIGHWAY AT LAURELWOOD AVENUE



DATE OF COUNT: 04/04/00
DAY OF WEEK: Tue
TIME STARTED: 16:00
TIME ENDED: 18:00

TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

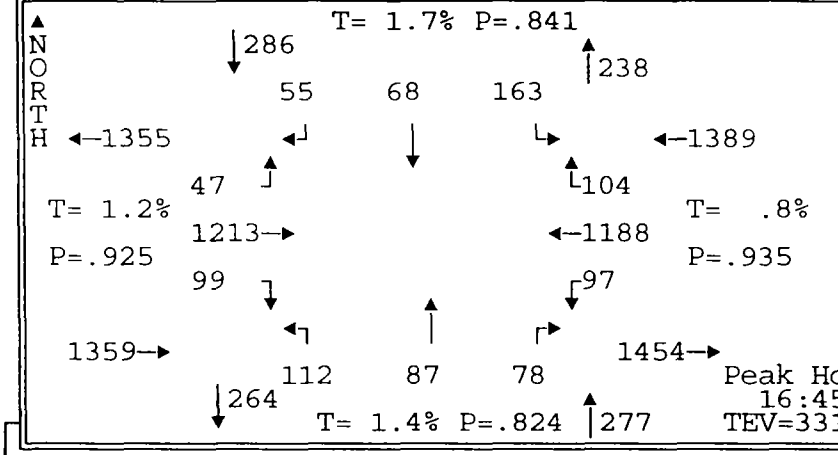
djkv

Peak Hour
16:40-17:40
TEV=3319

Traffic Smithy
(503) 641-6333

TIME PERIOD FROM - TO	EAST BOUND ↓	EAST BOUND →	EAST BOUND ↑	SOUTH BOUND ↵	SOUTH BOUND ↓	SOUTH BOUND ↳	NORTH BOUND ↰	NORTH BOUND ↑	NORTH BOUND ↱	WEST BOUND ↓	WEST BOUND ←	WEST BOUND ↑	ALL
16:00-16:05	0	89	5	4	10	12	7	8	6	9	98	9	257
16:05-16:10	7	98	3	6	9	15	10	9	11	7	81	10	266
16:10-16:15	11	84	6	6	7	14	8	11	4	3	80	11	245
16:15-16:20	11	92	7	2	5	13	9	6	5	5	69	21	245
16:20-16:25	6	97	7	3	5	13	12	7	9	7	98	14	278
16:25-16:30	9	88	4	3	2	11	8	15	4	9	80	2	235
16:30-16:35	1	99	1	0	3	10	2	5	5	3	97	11	237
16:35-16:40	7	83	2	7	9	13	6	4	6	2	94	13	246
16:40-16:45	8	90	3	3	4	17	7	6	5	11	88	14	256
16:45-16:50	6	93	1	5	6	16	4	7	2	8	112	11	271
16:50-16:55	7	100	5	2	10	9	5	5	10	7	95	7	262
16:55-17:00	8	113	7	1	8	16	7	4	12	10	113	8	307
17:00-17:05	9	104	1	9	7	16	8	7	9	4	100	10	284
17:05-17:10	6	110	3	9	6	17	9	6	5	8	97	5	281
17:10-17:15	12	114	8	8	2	11	5	1	5	8	119	5	298
17:15-17:20	9	106	4	1	4	10	8	13	6	8	85	11	265
17:20-17:25	16	96	1	1	2	14	19	10	4	11	112	17	303
17:25-17:30	9	106	3	6	8	17	10	7	7	8	91	10	282
17:30-17:35	6	101	3	7	7	12	15	11	6	5	75	5	253
17:35-17:40	5	89	7	6	3	12	11	6	7	11	91	9	257
17:40-17:45	6	81	4	0	5	13	11	10	5	9	98	6	248
17:45-17:50	9	89	1	4	8	13	4	5	3	3	94	10	243
17:50-17:55	10	111	3	9	8	9	2	6	9	15	102	5	289
17:55-18:00	2	87	5	5	6	5	8	10	6	9	84	7	234
Total Survey	180	2320	94	107	144	308	195	179	151	180	2253	231	6342
PHF	.68	.93	.77	.56	.67	.85	.61	.69	.63	.92	.92	.74	.951
% Trucks	.6	1.7	1.1	7.5	2.1	.6	1	3.9	.7	0	1.1	.9	1.4
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	
Peds	0	22	0	0	2	0	0	2	0	0	3	0	
Hourly Totals													
16:00-17:00	81	1126	51	42	78	159	85	87	79	81	1105	131	3105
16:15-17:15	90	1183	49	52	67	162	82	73	77	82	1162	121	3200
16:30-17:30	98	1214	39	52	69	166	90	75	76	88	1203	122	3292
16:45-17:45	99	1213	47	55	68	163	112	87	78	97	1188	104	3311
17:00-18:00	99	1194	43	65	66	149	110	92	72	99	1148	100	3237

INTERSECTION TURN MOVEMENT COUNT PEAK HOUR REPORT
BEAVERTON-HILLSDALE HIGHWAY AT LAURELWOOD AVENUE



DATE OF COUNT: 04/04/00
DAY OF WEEK: Tue
TIME STARTED: 16:00
TIME ENDED: 18:00

TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

djkv

Peak Hour
16:45-17:45
TEV=3311

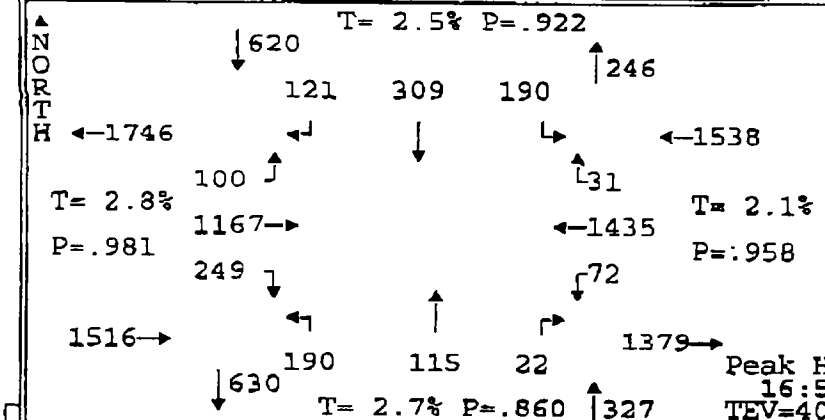
Traffic Smithy
(503)641-6333

TIME PERIOD FROM - TO	EAST BOUND ↓	EAST BOUND →	EAST BOUND ↑	SOUTH BOUND ↵	SOUTH BOUND ↓	SOUTH BOUND ↳	NORTH BOUND ↰	NORTH BOUND ↑	NORTH BOUND ↱	WEST BOUND ↓	WEST BOUND ←	WEST BOUND ↑	ALL
ALL VEHICLES													
16:45-17:00	21	306	13	8	24	41	16	16	24	25	320	26	840
17:00-17:15	27	328	12	26	15	44	22	14	19	20	316	20	863
17:15-17:30	34	308	8	8	14	41	37	30	17	27	288	38	850
17:30-17:45	17	271	14	13	15	37	37	27	18	25	264	20	758
LIGHT TRUCKS (SINGLE UNIT 2 AXLES)													
16:45-17:00	0	2	0	1	0	0	0	0	0	0	3	0	6
17:00-17:15	0	4	0	2	0	1	1	1	0	0	4	0	13
17:15-17:30	1	3	0	0	0	0	0	0	0	0	1	0	5
17:30-17:45	0	4	0	0	0	0	0	2	0	0	3	0	9
MEDIUM TRUCKS (SINGLE UNIT > 2 AXLES)													
16:45-17:00	0	1	0	0	0	0	0	0	0	0	0	0	1
17:00-17:15	0	0	0	0	0	0	0	0	0	0	0	0	0
17:15-17:30	0	0	0	1	0	0	0	0	0	0	0	0	1
17:30-17:45	0	0	0	0	0	0	0	0	0	0	0	0	0
HEAVY TRUCKS (SEMI-TRACTOR TRAILER)													
16:45-17:00	0	0	0	0	0	0	0	0	0	0	0	0	0
17:00-17:15	0	0	0	0	0	0	0	0	0	0	0	0	0
17:15-17:30	0	1	0	0	0	0	0	0	0	0	0	0	1
17:30-17:45	0	0	0	0	0	0	0	0	0	0	0	0	0
BICYCLES													
16:45-17:00	0	1	0	0	0	0	0	0	0	0	0	0	1
17:00-17:15	0	1	0	0	0	0	0	0	0	0	0	0	1
17:15-17:30	0	0	0	0	0	0	0	0	0	0	0	0	0
17:30-17:45	0	0	0	0	0	0	0	0	0	0	2	0	2

PEDESTRIANS	CROSSWALK USEAGE				ALL
	SOUTH	WEST	EAST	NORTH	
16:45-17:00	1	0	0	0	1
17:00-17:15	0	0	0	0	0
17:15-17:30	3	1	1	1	6
17:30-17:45	0	0	0	0	0

Peak Hour by Movement													
PHF	.73	.92	.84	.53	.71	.93	.76	.73	.81	.9	.93	.68	.959
% Trucks(all)	1	1.2	0	7.3	0	.6	.9	3.4	0	0	.9	0	1.1
% Trucks(M+H)	0	.2	0	1.8	0	0	0	0	0	0	0	0	.1
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	
Hourly Totals													
16:00-17:00	81	1126	51	42	78	159	85	87	79	81	1105	131	3105
16:15-17:15	90	1183	49	52	67	162	82	73	77	82	1162	121	3200
16:30-17:30	98	1214	39	52	69	166	90	75	76	88	1203	122	3292
16:45-17:45	99	1213	47	55	68	163	112	87	78	97	1188	104	3311
17:00-18:00	99	1194	43	65	66	149	110	92	72	99	1148	100	3237

INTERSECTION TURN MOVEMENT COUNT SUMMARY REPORT
TUALATIN VALLEY HIGHWAY AT HOCKEN AVENUE



DATE OF COUNT: 12/14/99
DAY OF WEEK: Tue
TIME STARTED: 16:00
TIME ENDED: 18:00

TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

Peak Hour
16:50-17:50
TEV=4001

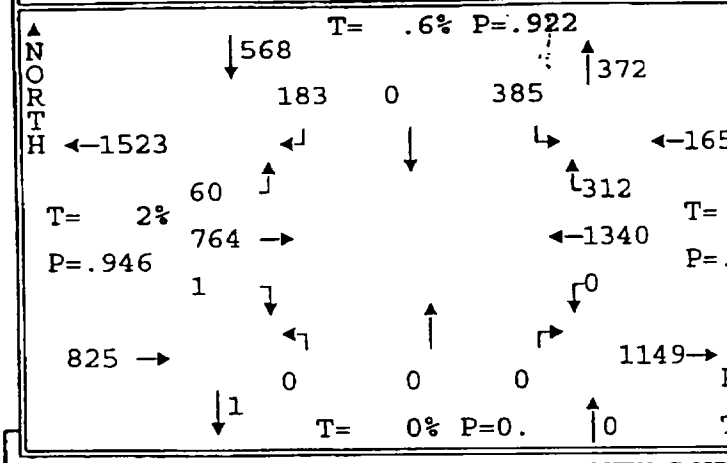
BKRV

Traffic Smithy
(503) 641-6333

TIME PERIOD FROM - TO	EAST BOUND ↓	EAST BOUND →	EAST BOUND ↑	SOUTH BOUND ↵	SOUTH BOUND ↓	SOUTH BOUND ↳	NORTH BOUND ↰	NORTH BOUND ↑	NORTH BOUND ↱	WEST BOUND ↓	WEST BOUND ←	WEST BOUND ↑	ALL
16:00-16:05	13	68	6	13	12	10	15	5	2	6	119	3	272
16:05-16:10	24	93	12	6	22	12	10	7	3	5	126	4	324
16:10-16:15	19	99	15	10	25	4	15	10	0	8	116	4	325
16:15-16:20	15	100	5	7	18	11	9	6	2	4	137	4	318
16:20-16:25	13	103	9	7	9	3	21	8	2	7	112	2	296
16:25-16:30	18	86	6	14	31	7	12	8	2	2	122	6	314
16:30-16:35	20	94	9	15	21	11	10	5	4	6	129	4	328
16:35-16:40	19	106	10	11	25	14	20	10	2	2	115	2	336
16:40-16:45	17	70	7	14	25	5	10	4	4	9	133	3	301
16:45-16:50	11	69	12	14	26	11	19	9	1	6	116	3	297
16:50-16:55	21	110	8	16	15	19	8	9	2	9	127	2	346
16:55-17:00	17	89	9	6	18	8	19	11	3	4	119	7	310
17:00-17:05	19	87	12	12	26	17	12	14	2	7	113	2	323
17:05-17:10	19	105	8	6	29	14	21	2	0	8	124	3	339
17:10-17:15	24	99	6	9	30	20	14	16	2	3	114	3	340
17:15-17:20	23	91	3	10	30	16	17	14	1	4	136	6	351
17:20-17:25	25	93	12	6	26	17	20	9	2	5	111	3	329
17:25-17:30	23	99	9	17	24	11	15	10	2	7	116	1	334
17:30-17:35	17	100	8	15	30	14	11	5	3	7	114	1	325
17:35-17:40	17	89	9	9	26	20	21	13	1	6	118	1	330
17:40-17:45	27	107	7	10	28	16	11	4	1	5	125	2	343
17:45-17:50	17	98	9	5	27	18	21	8	3	7	118	0	331
17:50-17:55	13	98	16	8	27	11	11	3	0	5	106	7	305
17:55-18:00	22	92	14	16	28	18	17	9	1	7	113	4	341
Total Survey	453	2245	221	256	578	307	359	199	45	139	2879	77	7758
PHF	.86	.99	.86	.74	.87	.88	.9	.74	.79	.9	.96	.65	.971
% Trucks	2	2.8	4.5	3.9	1.6	3.3	1.7	5	0	.7	2	6.5	2.5
Stopped Buses	0	3	0	0	0	0	0	0	0	0	0	0	
Peds	0	3	0	0	8	0	0	9	0	0	6	0	
Hourly Totals													
16:00-17:00	207	1087	108	133	247	115	168	92	27	68	1471	44	3767
16:15-17:15	213	1118	101	131	273	140	175	102	26	67	1461	41	3848
16:30-17:30	238	1112	105	136	295	163	185	113	25	70	1453	39	3934
16:45-17:45	243	1138	103	130	308	183	188	116	20	71	1433	34	3967
17:00-18:00	246	1158	113	123	331	192	191	107	18	71	1408	33	3991

INTERSECTION TURN MOVEMENT COUNT SUMMARY REPORT
BEAVERTON HILLSDALE HIGHWAY AT HOCKEN AVENUE

20408



DATE OF COUNT: 07/14/99
DAY OF WEEK: Wed
TIME STARTED: 16:00
TIME ENDED: 18:00

TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

ERWI

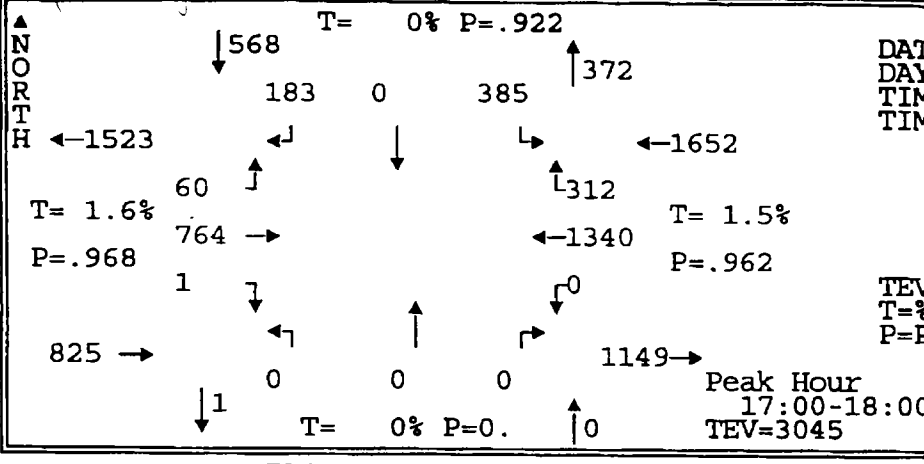
Peak Hour
17:00-18:00
TEV=3045

Traffic Smithy
(503) 641-6333

TIME PERIOD FROM - TO	EAST BOUND ↓	EAST BOUND →	EAST BOUND ↑	SOUTH BOUND ↲	SOUTH BOUND ↓	SOUTH BOUND ↳	NORTH BOUND ↰	NORTH BOUND ↑	NORTH BOUND ↱	WEST BOUND ↓	WEST BOUND ←	WEST BOUND ↑	ALL
16:00-16:05	0	63	2	12	0	28	0	0	0	0	96	16	217
16:05-16:10	0	73	4	15	0	25	0	0	0	0	52	6	175
16:10-16:15	0	55	4	17	0	30	0	0	0	0	104	26	236
16:15-16:20	0	68	9	12	0	25	0	0	0	0	89	16	219
16:20-16:25	0	71	5	9	0	29	0	0	0	0	95	23	232
16:25-16:30	0	69	4	10	0	37	0	0	0	0	91	21	232
16:30-16:35	0	60	5	13	0	32	0	0	0	0	104	19	233
16:35-16:40	0	55	5	11	0	30	0	0	0	0	87	21	209
16:40-16:45	0	56	4	13	0	31	0	0	0	0	101	19	224
16:45-16:50	0	69	6	10	0	32	0	0	0	0	86	18	221
16:50-16:55	0	68	8	8	0	26	0	0	0	0	72	21	203
16:55-17:00	0	58	3	16	0	28	0	0	0	0	109	19	233
17:00-17:05	0	62	7	21	0	37	0	0	0	0	97	34	258
17:05-17:10	0	55	1	12	0	21	0	0	0	0	129	30	248
17:10-17:15	0	75	4	15	0	34	0	0	0	0	96	22	246
17:15-17:20	0	60	7	17	0	37	0	0	0	0	123	22	266
17:20-17:25	0	66	6	14	0	32	0	0	0	0	113	23	254
17:25-17:30	0	66	3	10	0	39	0	0	0	0	110	38	266
17:30-17:35	0	62	4	16	0	35	0	0	0	0	121	32	270
17:35-17:40	1	67	4	11	0	39	0	0	0	0	110	30	262
17:40-17:45	0	59	3	22	0	31	0	0	0	0	108	14	237
17:45-17:50	0	66	9	15	0	23	0	0	0	0	115	20	248
17:50-17:55	0	61	7	18	0	30	0	0	0	0	101	25	242
17:55-18:00	0	65	5	12	0	27	0	0	0	0	117	22	248
Total Survey	1	1529	119	329	0	738	0	0	0	0	2426	537	5679
PHF	.25	.95	.71	.83	0	.85	0	0	0	0	.96	.78	.953
% Trucks	0	1.8	5	.3	0	.7	0	0	0	0	1.5	2.2	1.5
Stopped Buses	0	0	0	0	0	0	0	0	0	0	2	0	
Peds	0	0	0	0	11	0	0	0	0	0	9	0	
Hourly Totals													
16:00-17:00	0	765	59	146	0	353	0	0	0	0	1086	225	2634
16:15-17:15	0	766	61	150	0	362	0	0	0	0	1156	263	2758
16:30-17:30	0	750	59	160	0	379	0	0	0	0	1227	286	2861
16:45-17:45	1	767	56	172	0	391	0	0	0	0	1274	303	2964
17:00-18:00	1	764	60	183	0	385	0	0	0	0	1340	312	3045

INTERSECTION TURN MOVEMENT COUNT PEAK HOUR REPORT
BEAVERTON HILLSDALE HIGHWAY AT HOCKEN AVENUE

(Canyon)



DATE OF COUNT: 07/14/99
DAY OF WEEK: Wed
TIME STARTED: 16:00
TIME ENDED: 18:00

TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

ERWI

Peak Hour
17:00-18:00
TEV=3045

Traffic Smithy
(503)641-6333

TIME PERIOD FROM - TO	EAST BOUND ↓	EAST BOUND →	EAST BOUND ↑	SOUTH BOUND ↵	SOUTH BOUND ↓	SOUTH BOUND ↳	NORTH BOUND ↰	NORTH BOUND ↑	NORTH BOUND ↱	WEST BOUND ↓	WEST BOUND ←	WEST BOUND ↑	ALL
ALL VEHICLES													
17:00-17:15	0	192	12	48	0	92	0	0	0	0	322	86	752
17:15-17:30	0	192	16	41	0	108	0	0	0	0	346	83	786
17:30-17:45	1	188	11	49	0	105	0	0	0	0	339	76	769
17:45-18:00	0	192	21	45	0	80	0	0	0	0	333	67	738
LIGHT TRUCKS (SINGLE UNIT 2 AXLES)													
17:00-17:15	0	3	0	0	0	0	0	0	0	0	6	1	10
17:15-17:30	0	3	0	0	0	0	0	0	0	0	2	3	8
17:30-17:45	0	3	0	0	0	0	0	0	0	0	3	4	10
17:45-18:00	0	1	1	0	0	0	0	0	0	0	5	0	7
MEDIUM TRUCKS (SINGLE UNIT > 2 AXLES)													
17:00-17:15	0	0	0	0	0	0	0	0	0	0	0	0	0
17:15-17:30	0	0	0	0	0	0	0	0	0	0	0	0	0
17:30-17:45	0	0	0	0	0	0	0	0	0	0	0	0	0
17:45-18:00	0	0	0	0	0	0	0	0	0	0	0	0	0
HEAVY TRUCKS (SEMI-TRACTOR TRAILER)													
17:00-17:15	0	1	0	0	0	0	0	0	0	0	0	0	1
17:15-17:30	0	0	0	0	0	0	0	0	0	0	0	0	0
17:30-17:45	0	1	0	0	0	0	0	0	0	0	0	0	1
17:45-18:00	0	0	0	0	0	0	0	0	0	0	0	0	0
BICYCLES													
17:00-17:15	0	0	0	1	0	0	0	0	0	0	0	1	2
17:15-17:30	0	0	0	1	0	1	0	0	0	0	0	0	2
17:30-17:45	0	1	0	2	0	2	0	0	0	0	0	0	5
17:45-18:00	0	0	0	0	0	0	0	0	0	0	1	0	1

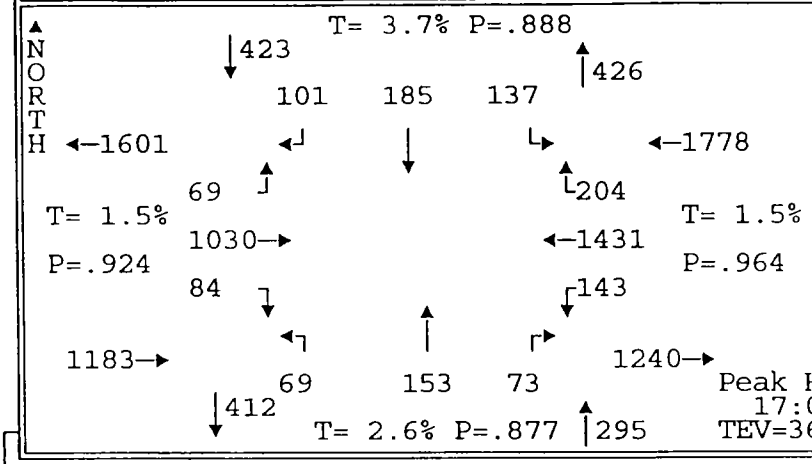
PEDESTRIANS	CROSSWALK USEAGE SOUTH	WEST	EAST	NORTH	ALL
17:00-17:15	0	2	0	2	4
17:15-17:30	0	0	0	1	1
17:30-17:45	0	2	0	2	4
17:45-18:00	0	1	0	0	1

Peak Hour by Movement													
PHF	.25	.99	.71	.93	0	.89	0	0	0	0	.97	.91	.968
% Trucks(all)	0	1.6	1.7	0	0	0	0	0	0	0	1.2	2.6	1.2
% Trucks(M+H)	0	.3	0	0	0	0	0	0	0	0	0	0	.1
Stopped Buses	0	0	0	0	0	0	0	0	0	0	1	0	

Hourly Totals													
16:00-17:00	0	765	59	146	0	353	0	0	0	0	1086	225	2634
16:15-17:15	0	766	61	150	0	362	0	0	0	0	1156	263	2758
16:30-17:30	0	750	59	160	0	379	0	0	0	0	1227	286	2861
16:45-17:45	1	767	56	172	0	391	0	0	0	0	1274	303	2964
17:00-18:00	1	764	60	183	0	385	0	0	0	0	1340	312	3045

INTERSECTION TURN MOVEMENT COUNT SUMMARY REPORT
LOMBARD AVENUE AT FARMINGTON ROAD

23982



DATE OF COUNT: 06/20/00
DAY OF WEEK: Tue
TIME STARTED: 16:00
TIME ENDED: 18:00

TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

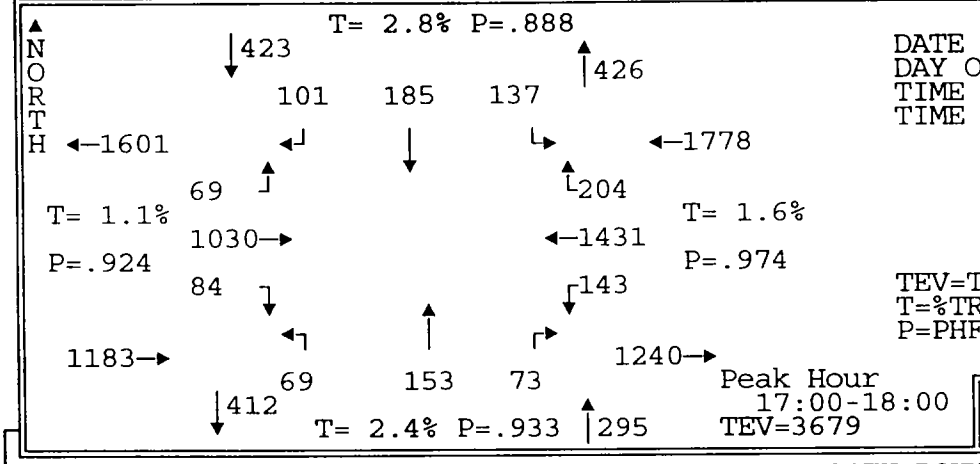
BKVP

Peak Hour
17:00-18:00
TEV=3679

Traffic Smithy
(503) 641-6333

TIME PERIOD FROM - TO	EAST BOUND ↓	EAST BOUND →	EAST BOUND ↑	SOUTH BOUND ↲	SOUTH BOUND ↓	SOUTH BOUND ↳	NORTH BOUND ↰	NORTH BOUND ↑	NORTH BOUND ↱	WEST BOUND ↓	WEST BOUND ←	WEST BOUND ↑	ALL
16:00-16:05	8	72	8	3	10	14	9	9	8	8	78	13	240
16:05-16:10	6	86	5	4	24	8	6	10	10	20	127	15	321
16:10-16:15	10	79	2	5	20	12	9	7	10	15	125	16	310
16:15-16:20	9	77	5	6	17	13	3	10	4	10	104	18	276
16:20-16:25	4	73	6	7	18	7	3	11	7	16	122	17	291
16:25-16:30	7	81	6	6	20	9	4	12	3	12	113	13	286
16:30-16:35	4	72	5	10	9	7	4	14	4	11	111	14	265
16:35-16:40	5	68	9	2	11	14	11	10	7	7	81	13	238
16:40-16:45	4	82	6	6	13	10	4	17	5	16	141	17	321
16:45-16:50	7	82	5	5	17	14	5	12	9	13	114	7	290
16:50-16:55	4	98	6	4	13	5	4	8	5	11	111	21	290
16:55-17:00	11	64	1	8	17	13	10	9	4	17	112	13	279
17:00-17:05	6	90	8	10	10	11	6	6	9	9	121	13	299
17:05-17:10	5	97	6	12	12	14	8	10	5	12	114	21	316
17:10-17:15	8	86	7	8	19	7	13	12	10	8	116	19	313
17:15-17:20	8	92	4	3	20	9	2	13	7	12	127	15	312
17:20-17:25	5	87	7	7	10	12	8	16	3	11	110	19	295
17:25-17:30	6	67	5	7	15	8	7	17	5	17	123	22	299
17:30-17:35	5	82	6	11	17	14	7	12	7	15	111	26	313
17:35-17:40	4	87	4	11	14	10	4	14	6	9	124	14	301
17:40-17:45	7	70	4	9	18	15	4	9	7	11	126	18	298
17:45-17:50	10	96	6	7	16	18	1	15	5	19	124	9	326
17:50-17:55	7	95	5	5	17	8	5	12	2	15	117	13	301
17:55-18:00	13	81	7	11	17	11	4	17	7	5	118	15	306
Total Survey	163	1964	133	167	374	263	141	282	149	299	2770	381	7086
PHF	.7	.94	.82	.81	.91	.8	.64	.83	.76	.79	.96	.76	.977
% Trucks	3.7	1	6	4.8	2.9	4.2	1.4	3.5	2	.3	1.4	3.1	1.8
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	
Peds	0	16	0	0	1	0	0	96	0	0	7	0	
Hourly Totals													
16:00-17:00	79	934	64	66	189	126	72	129	76	156	1339	177	3407
16:15-17:15	74	970	70	84	176	124	75	131	72	142	1360	186	3464
16:30-17:30	73	985	69	82	166	124	82	144	73	144	1381	194	3517
16:45-17:45	76	1002	63	95	182	132	78	138	77	145	1409	208	3605
17:00-18:00	84	1030	69	101	185	137	69	153	73	143	1431	204	3679

INTERSECTION TURN MOVEMENT COUNT PEAK HOUR REPORT
LOMBARD AVENUE AT FARMINGTON ROAD



DATE OF COUNT: 06/20/00
DAY OF WEEK: Tue
TIME STARTED: 16:00
TIME ENDED: 18:00

TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

BKVP

Peak Hour
17:00-18:00
TEV=3679

Traffic Smithy
(503)641-6333

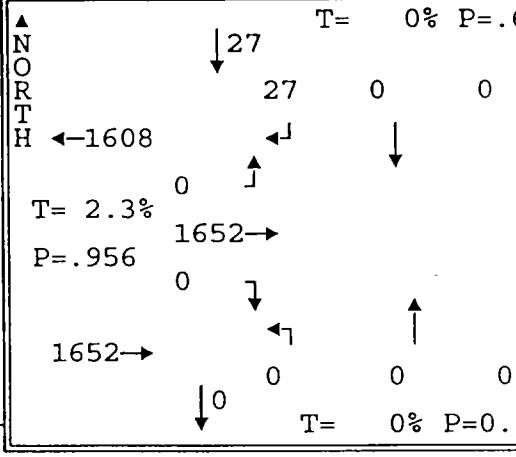
TIME PERIOD FROM - TO	EAST BOUND ↓	EAST BOUND →	EAST BOUND ↑	SOUTH BOUND ↵	SOUTH BOUND ↓	SOUTH BOUND ↳	NORTH BOUND ↰	NORTH BOUND ↑	NORTH BOUND ↱	WEST BOUND ↓	WEST BOUND ←	WEST BOUND ↑	ALL
ALL VEHICLES													
17:00-17:15	19	273	21	30	41	32	27	28	24	29	351	53	928
17:15-17:30	19	246	16	17	45	29	17	46	15	40	360	56	906
17:30-17:45	16	239	14	31	49	39	15	35	20	35	361	58	912
17:45-18:00	30	272	18	23	50	37	10	44	14	39	359	37	933
LIGHT TRUCKS (SINGLE UNIT 2 AXLES)													
17:00-17:15	0	3	1	1	2	0	0	1	0	0	4	2	14
17:15-17:30	0	1	1	1	0	1	0	1	0	0	2	2	9
17:30-17:45	0	1	1	1	2	1	0	2	0	0	6	2	16
17:45-18:00	2	0	1	1	0	1	0	2	0	0	8	1	16
MEDIUM TRUCKS (SINGLE UNIT > 2 AXLES)													
17:00-17:15	0	0	0	0	1	0	0	0	0	0	1	0	2
17:15-17:30	0	0	0	0	0	0	0	1	0	0	0	0	1
17:30-17:45	0	0	0	0	0	0	0	0	0	0	0	0	0
17:45-18:00	1	0	0	0	0	0	0	0	0	0	0	0	1
HEAVY TRUCKS (SEMI-TRACTOR TRAILER)													
17:00-17:15	0	0	0	0	0	0	0	0	0	0	0	0	0
17:15-17:30	0	0	0	0	0	0	0	0	0	0	0	0	0
17:30-17:45	0	0	0	0	0	0	0	0	0	0	0	0	0
17:45-18:00	1	0	0	0	0	0	0	0	0	0	0	0	1
BICYCLES													
17:00-17:15	0	0	0	0	0	0	0	0	0	0	0	0	0
17:15-17:30	0	0	0	0	0	0	0	0	0	0	0	0	0
17:30-17:45	0	0	0	0	0	0	0	0	0	0	0	0	0
17:45-18:00	0	0	0	0	0	0	0	0	0	0	0	0	0

PEDESTRIANS	CROSSWALK USEAGE SOUTH	WEST	EAST	NORTH	ALL
17:00-17:15	0	0	16	1	17
17:15-17:30	5	0	14	0	19
17:30-17:45	0	0	3	2	5
17:45-18:00	5	0	17	1	23

Peak Hour by Movement													
PHF	.7	.94	.82	.81	.93	.88	.64	.83	.76	.89	.99	.88	.985
% Trucks(all)	4.8	.5	5.8	4	2.7	2.2	0	4.6	0	0	1.5	3.4	1.6
% Trucks(M+H)	2.4	0	0	0	.5	0	0	.7	0	0	.1	0	.1
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	
Hourly Totals													
16:00-17:00	79	934	64	66	189	126	72	129	76	156	1339	177	3407
16:15-17:15	74	970	70	84	176	124	75	131	72	142	1360	186	3464
16:30-17:30	73	985	69	82	166	124	82	144	73	144	1381	194	3517
16:45-17:45	76	1002	63	95	182	132	78	138	77	145	1409	208	3605
17:00-18:00	84	1030	69	101	185	137	69	153	73	143	1431	204	3679

INTERSECTION TURN MOVEMENT COUNT SUMMARY REPORT
CANYON ROAD AT 114TH AVENUE

23950



DATE OF COUNT: 6/8/00
DAY OF WEEK: THU
TIME STARTED: 16:00
TIME ENDED: 18:00

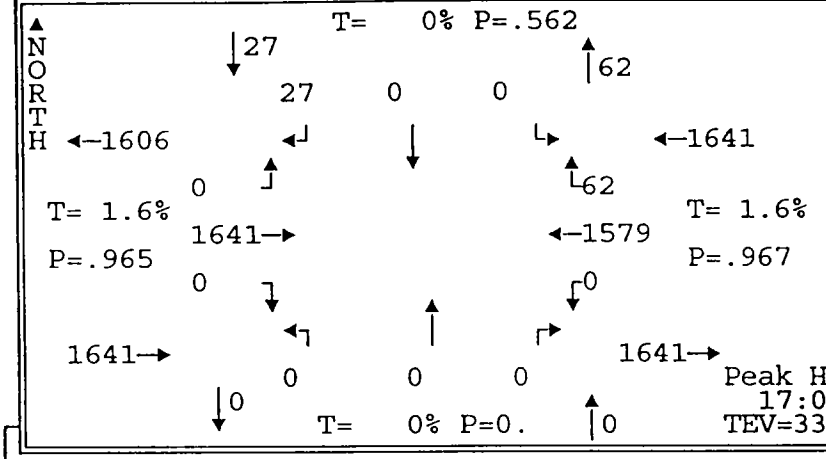
TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

gmaa

Traffic Smithy
(503) 641-6333

TIME PERIOD FROM - TO	EAST BOUND ↓	EAST BOUND →	EAST BOUND ↑	SOUTH BOUND ↵	SOUTH BOUND ↓	SOUTH BOUND ↳	NORTH BOUND ↰	NORTH BOUND ↑	NORTH BOUND ↱	WEST BOUND ↓	WEST BOUND ←	WEST BOUND ↑	ALL
16:00-16:05	0	89	0	3	0	0	0	0	0	0	138	10	240
16:05-16:10	0	116	0	2	0	0	0	0	0	0	136	4	258
16:10-16:15	0	129	0	2	0	0	0	0	0	0	139	10	280
16:15-16:20	0	133	0	2	0	0	0	0	0	0	142	5	282
16:20-16:25	0	124	0	4	0	0	0	0	0	0	118	9	255
16:25-16:30	0	131	0	2	0	0	0	0	0	0	132	7	272
16:30-16:35	0	105	0	3	0	0	0	0	0	0	123	3	234
16:35-16:40	0	123	0	0	0	0	0	0	0	0	152	3	278
16:40-16:45	0	143	0	0	0	0	0	0	0	0	141	8	292
16:45-16:50	0	129	0	3	0	0	0	0	0	0	124	5	261
16:50-16:55	0	120	0	4	0	0	0	0	0	0	146	5	275
16:55-17:00	0	118	0	1	0	0	0	0	0	0	121	7	247
17:00-17:05	0	147	0	2	0	0	0	0	0	0	131	8	288
17:05-17:10	0	132	0	1	0	0	0	0	0	0	128	12	273
17:10-17:15	0	146	0	3	0	0	0	0	0	0	141	4	294
17:15-17:20	0	140	0	1	0	0	0	0	0	0	138	4	283
17:20-17:25	0	146	0	1	0	0	0	0	0	0	118	8	273
17:25-17:30	0	136	0	2	0	0	0	0	0	0	127	3	268
17:30-17:35	0	139	0	3	0	0	0	0	0	0	130	2	274
17:35-17:40	0	156	0	6	0	0	0	0	0	0	136	5	303
17:40-17:45	0	125	0	3	0	0	0	0	0	0	124	3	255
17:45-17:50	0	132	0	0	0	0	0	0	0	0	131	4	267
17:50-17:55	0	122	0	3	0	0	0	0	0	0	139	6	270
17:55-18:00	0	120	0	2	0	0	0	0	0	0	136	3	261
Total Survey	0	3101	0	53	0	0	0	0	0	0	3191	138	6483
PHF	0	.96	0	.61	0	0	0	0	0	0	.96	.66	.973
% Trucks	0	2.3	0	0	0	0	0	0	0	0	2.3	.7	2.2
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	
Peds	0	0	0	0	0	0	0	0	0	0	17	0	
Hourly Totals													
16:00-17:00	0	1460	0	26	0	0	0	0	0	0	1612	76	3174
16:15-17:15	0	1551	0	25	0	0	0	0	0	0	1599	76	3251
16:30-17:30	0	1585	0	21	0	0	0	0	0	0	1590	70	3266
16:45-17:45	0	1634	0	30	0	0	0	0	0	0	1564	66	3294
17:00-18:00	0	1641	0	27	0	0	0	0	0	0	1579	62	3309

INTERSECTION TURN MOVEMENT COUNT PEAK HOUR REPORT
CANYON ROAD AT 114TH AVENUE



DATE OF COUNT: 6/8/00
DAY OF WEEK: THU
TIME STARTED: 16:00
TIME ENDED: 18:00

TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

gmaa

Peak Hour
17:00-18:00
TEV=3309

Traffic Smithy
(503)641-6333

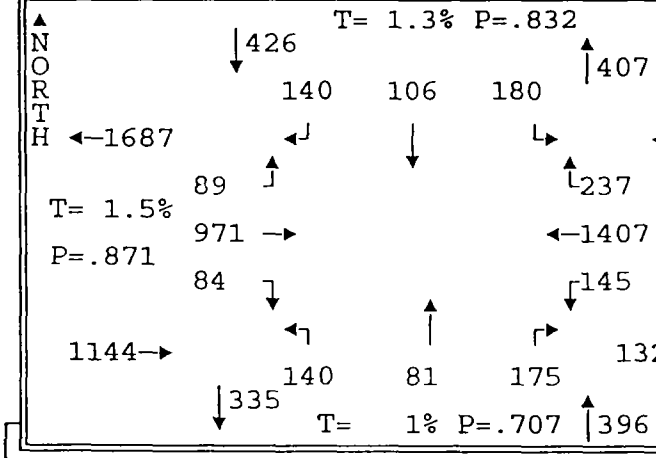
TIME PERIOD FROM - TO	EAST BOUND ↓	EAST BOUND →	EAST BOUND ↑	SOUTH BOUND ↲	SOUTH BOUND ↓	SOUTH BOUND ↳	NORTH BOUND ↰	NORTH BOUND ↑	NORTH BOUND ↱	WEST BOUND ↓	WEST BOUND ←	WEST BOUND ↑	ALL
ALL VEHICLES													
17:00-17:15	0	425	0	6	0	0	0	0	0	0	400	24	855
17:15-17:30	0	422	0	4	0	0	0	0	0	0	383	15	824
17:30-17:45	0	420	0	12	0	0	0	0	0	0	390	10	832
17:45-18:00	0	374	0	5	0	0	0	0	0	0	406	13	798
LIGHT TRUCKS (SINGLE UNIT 2 AXLES)													
17:00-17:15	0	4	0	0	0	0	0	0	0	0	6	0	10
17:15-17:30	0	9	0	0	0	0	0	0	0	0	5	0	14
17:30-17:45	0	2	0	0	0	0	0	0	0	0	3	0	5
17:45-18:00	0	0	0	0	0	0	0	0	0	0	6	0	6
MEDIUM TRUCKS (SINGLE UNIT > 2 AXLES)													
17:00-17:15	0	2	0	0	0	0	0	0	0	0	1	0	3
17:15-17:30	0	2	0	0	0	0	0	0	0	0	0	0	2
17:30-17:45	0	0	0	0	0	0	0	0	0	0	1	0	1
17:45-18:00	0	0	0	0	0	0	0	0	0	0	0	0	0
HEAVY TRUCKS (SEMI-TRACTOR TRAILER)													
17:00-17:15	0	5	0	0	0	0	0	0	0	0	1	0	6
17:15-17:30	0	1	0	0	0	0	0	0	0	0	1	0	2
17:30-17:45	0	0	0	0	0	0	0	0	0	0	2	0	2
17:45-18:00	0	2	0	0	0	0	0	0	0	0	1	0	3
BICYCLES													
17:00-17:15	0	0	0	0	0	0	0	0	0	0	0	0	0
17:15-17:30	0	0	0	0	0	0	0	0	0	0	0	0	0
17:30-17:45	0	0	0	0	0	0	0	0	0	0	0	0	0
17:45-18:00	0	0	0	0	0	0	0	0	0	0	1	0	1

PEDESTRIANS	CROSSWALK USEAGE SOUTH	WEST	EAST	NORTH	ALL
17:00-17:15	0	0	0	3	3
17:15-17:30	0	0	0	1	1
17:30-17:45	0	0	0	1	1
17:45-18:00	0	0	0	3	3

Peak Hour by Movement													
PHF	0	.97	0	.56	0	0	0	0	0	0	.97	.65	.967
% Trucks(all)	0	1.6	0	0	0	0	0	0	0	0	1.7	0	1.6
% Trucks(M+H)	0	.7	0	0	0	0	0	0	0	0	.4	0	.6
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	
Hourly Totals													
16:00-17:00	0	1460	0	26	0	0	0	0	0	0	1612	76	3174
16:15-17:15	0	1551	0	25	0	0	0	0	0	0	1599	76	3251
16:30-17:30	0	1585	0	21	0	0	0	0	0	0	1590	70	3266
16:45-17:45	0	1634	0	30	0	0	0	0	0	0	1564	66	3294
17:00-18:00	0	1641	0	27	0	0	0	0	0	0	1579	62	3309

INTERSECTION TURN MOVEMENT COUNT SUMMARY REPORT
GRIFFITH DRIVE AT BEAVERTON-HILLSDALE HIGHWAY

23983



DATE OF COUNT: 6/13/00
DAY OF WEEK: Tue
TIME STARTED: 16:00
TIME ENDED: 18:00

TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

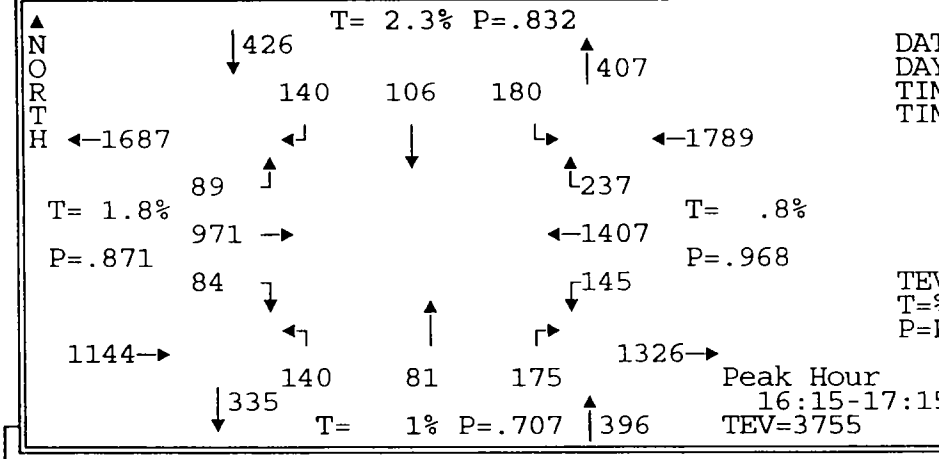
gtjz

Peak Hour
16:15-17:15
TEV=3755

Traffic Smithy
(503) 641-6333

TIME PERIOD FROM - TO	EAST BOUND ↓	EAST BOUND →	EAST BOUND ↑	SOUTH BOUND ↙	SOUTH BOUND ↓	SOUTH BOUND ↳	NORTH BOUND ↰	NORTH BOUND ↑	NORTH BOUND ↱	WEST BOUND ↓	WEST BOUND ←	WEST BOUND ↑	ALL
16:00-16:05	2	61	11	5	4	15	9	5	14	16	110	15	267
16:05-16:10	13	89	10	14	16	7	15	5	9	9	86	17	290
16:10-16:15	8	83	14	15	5	18	17	3	12	10	87	14	286
16:15-16:20	7	78	5	7	15	13	8	6	15	18	125	28	325
16:20-16:25	6	81	6	11	10	14	15	7	5	25	95	17	292
16:25-16:30	9	75	6	23	13	22	6	2	16	11	123	20	326
16:30-16:35	4	72	7	12	7	12	12	7	11	10	118	18	290
16:35-16:40	6	66	8	15	5	9	12	5	26	13	122	19	306
16:40-16:45	7	83	10	7	5	16	12	11	8	10	126	23	318
16:45-16:50	12	87	6	11	5	17	4	5	14	13	126	19	319
16:50-16:55	4	72	6	11	10	16	8	9	5	12	128	11	292
16:55-17:00	12	74	7	15	10	13	10	7	10	10	108	26	302
17:00-17:05	5	90	9	9	8	18	16	4	15	6	123	17	320
17:05-17:10	3	100	11	10	7	13	22	12	29	7	122	19	355
17:10-17:15	9	93	8	9	11	17	15	6	21	10	91	20	310
17:15-17:20	5	93	10	13	12	19	10	7	19	11	81	19	299
17:20-17:25	9	88	11	9	8	16	7	5	16	9	97	10	285
17:25-17:30	8	68	4	9	7	8	12	9	16	14	127	24	306
17:30-17:35	7	72	10	12	13	11	6	8	9	9	109	16	282
17:35-17:40	4	106	6	15	6	15	8	7	21	16	85	12	301
17:40-17:45	7	73	3	15	10	15	15	7	13	9	132	27	326
17:45-17:50	11	95	9	13	4	21	6	9	5	13	130	17	333
17:50-17:55	9	79	6	13	7	13	6	4	8	9	116	17	287
17:55-18:00	5	83	5	15	3	16	9	1	8	8	122	19	294
Total Survey	172	1961	188	288	201	354	260	151	325	278	2689	444	7311
PHF	.75	.86	.79	.7	.7	.92	.66	.81	.67	.67	.93	.91	.953
% Trucks	0	1.7	0	1	.5	2	1.5	.7	.6	.4	1.6	.5	1.3
Stopped Buses	0	2	0	0	0	0	0	0	0	0	0	0	
Peds	0	14	0	0	36	0	0	38	0	0	14	0	
Hourly Totals													
16:00-17:00	90	921	96	146	105	172	128	72	145	157	1354	227	3613
16:15-17:15	84	971	89	140	106	180	140	81	175	145	1407	237	3755
16:30-17:30	84	986	97	130	95	174	140	87	190	125	1369	225	3702
16:45-17:45	85	1016	91	138	107	178	133	86	188	126	1329	220	3697
17:00-18:00	82	1040	92	142	96	182	132	79	180	121	1335	217	3698

INTERSECTION TURN MOVEMENT COUNT PEAK HOUR REPORT
GRIFFITH DRIVE AT BEAVERTON-HILLSDALE HIGHWAY



DATE OF COUNT: 6/13/00
DAY OF WEEK: Tue
TIME STARTED: 16:00
TIME ENDED: 18:00

TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

gtjz

Peak Hour
16:15-17:15
TEV=3755

Traffic Smithy
(503)641-6333

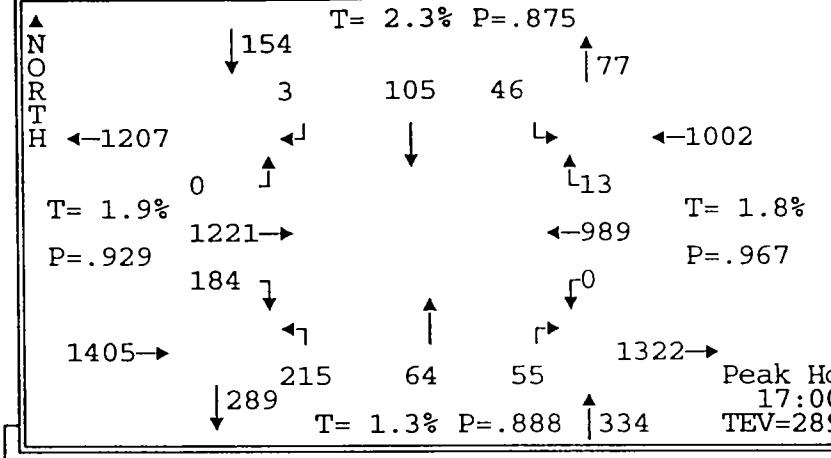
TIME PERIOD FROM - TO	EAST BOUND ↓	EAST BOUND →	EAST BOUND ↑	SOUTH BOUND ↲	SOUTH BOUND ↓	SOUTH BOUND ↳	NORTH BOUND ↰	NORTH BOUND ↑	NORTH BOUND ↱	WEST BOUND ↓	WEST BOUND ←	WEST BOUND ↑	ALL
ALL VEHICLES													
16:15-16:30	22	234	17	41	38	49	29	15	36	54	343	65	943
16:30-16:45	17	221	25	34	17	37	36	23	45	33	366	60	914
16:45-17:00	28	233	19	37	25	46	22	21	29	35	362	56	913
17:00-17:15	17	283	28	28	26	48	53	22	65	23	336	56	985
LIGHT TRUCKS (SINGLE UNIT 2 AXLES)													
16:15-16:30	0	5	0	0	0	0	1	0	0	1	3	1	11
16:30-16:45	0	5	0	1	0	3	0	0	1	0	2	0	12
16:45-17:00	0	3	0	0	0	3	1	0	1	0	1	0	9
17:00-17:15	0	2	0	1	0	0	0	0	0	0	5	1	9
MEDIUM TRUCKS (SINGLE UNIT > 2 AXLES)													
16:15-16:30	0	2	0	0	0	0	0	0	0	0	0	0	2
16:30-16:45	0	1	0	0	0	0	0	0	0	0	1	0	2
16:45-17:00	0	0	0	1	0	0	0	0	0	0	0	0	1
17:00-17:15	0	1	0	0	0	1	0	0	0	0	0	0	2
HEAVY TRUCKS (SEMI-TRACTOR TRAILER)													
16:15-16:30	0	0	0	0	0	0	0	0	0	0	0	0	0
16:30-16:45	0	1	0	0	0	0	0	0	0	0	0	0	1
16:45-17:00	0	1	0	0	0	0	0	0	0	0	0	0	1
17:00-17:15	0	0	0	0	0	0	0	0	0	0	0	0	0
BICYCLES													
16:15-16:30	0	0	0	0	1	0	0	0	1	0	1	0	3
16:30-16:45	0	0	0	0	0	0	0	0	0	0	1	0	1
16:45-17:00	0	0	0	0	0	0	0	0	0	0	0	0	0
17:00-17:15	0	0	0	0	0	0	0	1	0	0	0	0	1

PEDESTRIANS	CROSSWALK USEAGE				ALL
	SOUTH	WEST	EAST	NORTH	
16:15-16:30	0	8	6	3	17
16:30-16:45	2	5	0	0	7
16:45-17:00	3	2	6	2	13
17:00-17:15	3	5	6	0	14

Peak Hour by Movement													
PHF	.75	.86	.79	.85	.7	.92	.66	.88	.67	.67	.96	.91	.953
% Trucks(all)	0	2.2	0	2.1	0	3.9	1.4	0	1.1	.7	.9	.8	1.3
% Trucks(M+H)	0	.6	0	.7	0	.6	0	0	0	0	.1	0	.2
Stopped Buses	0	1	0	0	0	0	0	0	0	0	0	0	
Hourly Totals													
16:00-17:00	90	921	96	146	105	172	128	72	145	157	1354	227	3613
16:15-17:15	84	971	89	140	106	180	140	81	175	145	1407	237	3755
16:30-17:30	84	986	97	130	95	174	140	87	190	125	1369	225	3702
16:45-17:45	85	1016	91	138	107	178	133	86	188	126	1329	220	3697
17:00-18:00	82	1040	92	142	96	182	132	79	180	121	1335	217	3698

INTERSECTION TURN MOVEMENT COUNT SUMMARY REPORT
CANYON ROAD AT 87TH AVENUE

23951



DATE OF COUNT: 6/8/00
DAY OF WEEK: Thu
TIME STARTED: 16:00
TIME ENDED: 18:00

TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

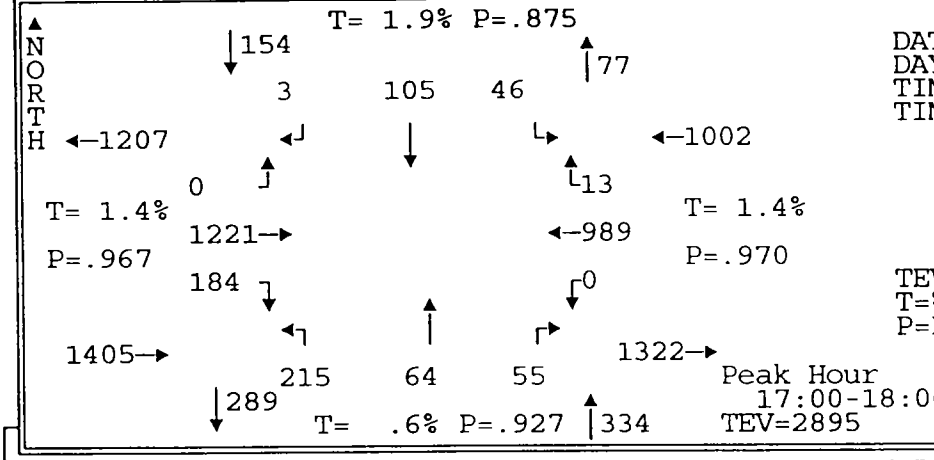
gmag

Peak Hour
17:00-18:00
TEV=2895

Traffic Smithy
(503) 641-6333

TIME PERIOD FROM - TO	EAST BOUND ↓	EAST BOUND →	EAST BOUND ↑	SOUTH BOUND ↵	SOUTH BOUND ↓	SOUTH BOUND ↳	NORTH BOUND ↰	NORTH BOUND ↑	NORTH BOUND ↱	WEST BOUND ↓	WEST BOUND ←	WEST BOUND ↑	ALL
16:00-16:05	14	52	0	0	12	8	16	2	2	0	45	0	151
16:05-16:10	12	67	0	2	6	5	21	4	6	0	68	1	192
16:10-16:15	12	84	0	2	11	1	15	7	6	0	73	0	211
16:15-16:20	18	79	0	0	4	5	13	3	1	0	66	4	193
16:20-16:25	14	99	0	0	11	4	17	5	0	0	69	1	220
16:25-16:30	13	72	0	0	5	1	13	7	5	0	77	1	194
16:30-16:35	14	74	0	0	13	3	18	4	6	0	76	0	208
16:35-16:40	14	88	0	1	9	0	18	6	4	0	71	1	212
16:40-16:45	13	105	0	1	5	4	13	9	5	0	76	1	232
16:45-16:50	14	92	0	0	8	3	13	5	2	0	83	0	220
16:50-16:55	14	108	0	0	8	1	11	10	9	0	78	2	241
16:55-17:00	19	83	0	0	10	4	12	4	6	0	74	2	214
17:00-17:05	10	76	0	0	9	5	20	6	9	0	91	1	227
17:05-17:10	18	119	0	0	5	4	14	5	4	0	69	2	240
17:10-17:15	6	123	0	0	16	5	18	3	6	0	83	0	260
17:15-17:20	9	96	0	0	5	2	25	7	8	0	96	1	249
17:20-17:25	19	112	0	0	7	2	18	7	2	0	79	0	246
17:25-17:30	14	113	0	1	9	5	16	4	3	0	81	1	247
17:30-17:35	17	100	0	0	12	5	13	7	7	0	83	3	247
17:35-17:40	16	118	0	0	11	1	20	5	4	0	81	0	256
17:40-17:45	20	92	0	1	6	3	15	3	1	0	71	2	214
17:45-17:50	22	101	0	1	6	3	20	3	5	0	89	0	250
17:50-17:55	19	69	0	0	11	4	17	8	4	0	92	0	224
17:55-18:00	14	102	0	0	8	7	19	6	2	0	74	3	235
Total Survey	355	2224	0	9	207	85	395	130	107	0	1845	26	5383
PHF	.75	.9	0	.38	.82	.82	.88	.89	.72	0	.96	.65	.958
% Trucks	1.7	1.9	0	11.1	2.4	1.2	.5	3.1	1.9	0	1.8	0	1.8
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	
Peds	0	2	0	0	0	0	0	6	0	0	8	0	
Hourly Totals													
16:00-17:00	171	1003	0	6	102	39	180	66	52	0	856	13	2488
16:15-17:15	167	1118	0	2	103	39	180	67	57	0	913	15	2661
16:30-17:30	164	1189	0	3	104	38	196	70	64	0	957	11	2796
16:45-17:45	176	1232	0	2	106	40	195	66	61	0	969	14	2861
17:00-18:00	184	1221	0	3	105	46	215	64	55	0	989	13	2895

INTERSECTION TURN MOVEMENT COUNT PEAK HOUR REPORT
CANYON ROAD AT 87TH AVENUE



DATE OF COUNT: 6/8/00
DAY OF WEEK: Thu
TIME STARTED: 16:00
TIME ENDED: 18:00

TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

gmag

Traffic Smithy
(503)641-6333

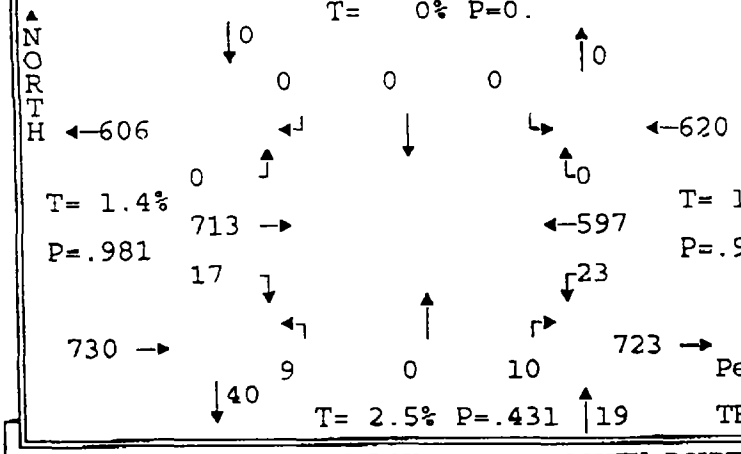
TIME PERIOD FROM - TO	EAST BOUND ↓	EAST BOUND →	EAST BOUND ↑	SOUTH BOUND ↓	SOUTH BOUND →	SOUTH BOUND ↑	NORTH BOUND ↓	NORTH BOUND →	NORTH BOUND ↑	WEST BOUND ↓	WEST BOUND →	WEST BOUND ↑	ALL
ALL VEHICLES													
17:00-17:15	34	318	0	0	30	14	52	14	19	0	243	3	727
17:15-17:30	42	321	0	1	21	9	59	18	13	0	256	2	742
17:30-17:45	53	310	0	1	29	9	48	15	12	0	235	5	717
17:45-18:00	55	272	0	1	25	14	56	17	11	0	255	3	709
LIGHT TRUCKS (SINGLE UNIT 2 AXLES)													
17:00-17:15	1	4	0	0	0	0	0	1	0	0	2	0	8
17:15-17:30	0	6	0	0	1	0	0	1	0	0	4	0	12
17:30-17:45	0	3	0	0	1	0	0	0	0	0	1	0	5
17:45-18:00	2	1	0	0	1	0	0	0	0	0	6	0	10
MEDIUM TRUCKS (SINGLE UNIT > 2 AXLES)													
17:00-17:15	0	0	0	0	0	0	0	0	0	0	1	0	1
17:15-17:30	0	1	0	0	0	0	0	0	0	0	0	0	1
17:30-17:45	0	0	0	0	0	0	0	0	0	0	0	0	0
17:45-18:00	0	0	0	0	0	0	0	0	0	0	0	0	0
HEAVY TRUCKS (SEMI-TRACTOR TRAILER)													
17:00-17:15	0	1	0	0	0	0	0	0	0	0	0	0	1
17:15-17:30	0	1	0	0	0	0	0	0	0	0	0	0	1
17:30-17:45	0	0	0	0	0	0	0	0	0	0	0	0	0
17:45-18:00	0	0	0	0	0	0	0	0	0	0	0	0	0
BICYCLES													
17:00-17:15	0	1	0	0	0	0	0	0	0	0	0	0	1
17:15-17:30	0	0	0	0	0	0	0	0	0	0	0	0	0
17:30-17:45	0	0	0	0	0	0	0	0	0	0	0	0	0
17:45-18:00	0	0	0	0	0	0	0	0	0	0	1	0	1

PEDESTRIANS	CROSSWALK USEAGE SOUTH	WEST	EAST	NORTH	ALL
17:00-17:15	0	0	0	3	3
17:15-17:30	0	0	3	1	4
17:30-17:45	0	0	0	1	1
17:45-18:00	0	0	0	2	2

Peak Hour by Movement													
PHF	.84	.95	0	.75	.88	.82	.91	.89	.72	0	.97	.65	.975
% Trucks(all)	1.6	1.4	0	0	2.9	0	0	3.1	0	0	1.4	0	1.3
% Trucks(M+H)	0	.2	0	0	0	0	0	0	0	0	.1	0	.1
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	
Hourly Totals													
16:00-17:00	171	1003	0	6	102	39	180	66	52	0	856	13	2488
16:15-17:15	167	1118	0	2	103	39	180	67	57	0	913	15	2661
16:30-17:30	164	1189	0	3	104	38	196	70	64	0	957	11	2796
16:45-17:45	176	1232	0	2	106	40	195	66	61	0	969	14	2861
17:00-18:00	184	1221	0	3	105	46	215	64	55	0	989	13	2895

INTERSECTION TURN MOVEMENT COUNT SUMMARY REPORT
GARDEN HOME ROAD AT 88TH AVENUE

24785



DATE OF COUNT: 09/13/00
DAY OF WEEK: Wed
TIME STARTED: 16:00
TIME ENDED: 18:00

TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

ERNJ

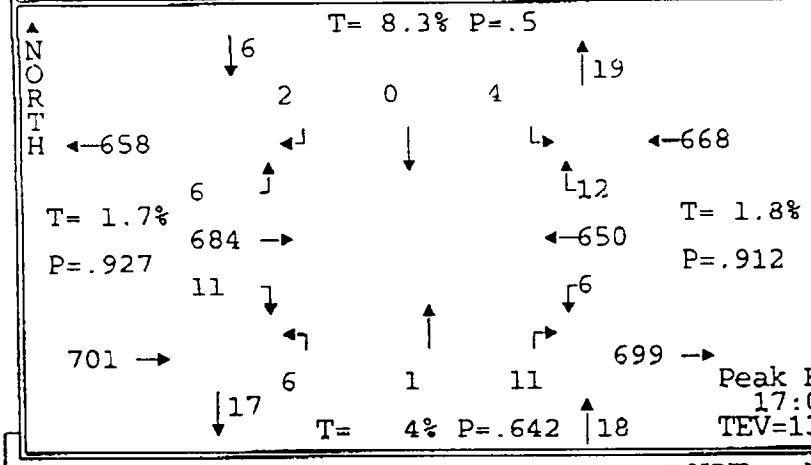
Peak Hour
17:00-18:00
TEV=1369

Traffic Smithy
(503) 641-6333

TIME PERIOD FROM - TO	EAST BOUND ↓	EAST BOUND →	EAST BOUND ↑	SOUTH BOUND ↵	SOUTH BOUND ↓	SOUTH BOUND ↳	NORTH BOUND ↰	NORTH BOUND ↑	NORTH BOUND ↱	WEST BOUND ↓	WEST BOUND ←	WEST BOUND ↑	ALL
16:00-16:05	1	47	0	0	0	0	0	0	0	0	37	0	85
16:05-16:10	0	33	0	0	0	0	1	0	0	1	23	0	58
16:10-16:15	3	47	0	0	0	0	4	0	0	0	32	0	86
16:15-16:20	0	47	0	0	0	0	1	0	2	0	42	0	92
16:20-16:25	0	37	0	0	0	0	0	0	2	0	45	0	84
16:25-16:30	1	51	0	0	0	0	0	0	1	1	46	0	100
16:30-16:35	1	36	0	0	0	0	1	0	1	0	44	0	83
16:35-16:40	2	51	0	0	0	0	0	0	1	1	37	0	92
16:40-16:45	2	51	0	0	0	0	1	0	1	2	53	0	110
16:45-16:50	1	57	0	0	0	0	1	0	1	0	47	0	107
16:50-16:55	1	51	0	0	0	0	1	0	1	3	39	0	96
16:55-17:00	3	64	0	0	0	0	1	0	0	1	51	0	120
17:00-17:05	4	64	0	0	0	0	1	0	0	0	62	0	131
17:05-17:10	0	58	0	0	0	0	1	0	1	0	48	0	108
17:10-17:15	3	52	0	0	0	0	0	0	0	1	50	0	106
17:15-17:20	1	59	0	0	0	0	1	0	0	4	43	0	108
17:20-17:25	3	57	0	0	0	0	0	0	1	1	58	0	120
17:25-17:30	2	55	0	0	0	0	1	0	0	3	32	0	93
17:30-17:35	1	68	0	0	0	0	1	0	3	4	54	0	131
17:35-17:40	1	57	0	0	0	0	2	0	2	3	47	0	112
17:40-17:45	0	59	0	0	0	0	1	0	2	0	60	0	122
17:45-17:50	0	52	0	0	0	0	0	0	0	5	50	0	107
17:50-17:55	1	61	0	0	0	0	1	0	0	0	47	0	110
17:55-18:00	1	71	0	0	0	0	0	0	1	2	46	0	121
Total Survey	32	1285	0	0	0	0	20	0	20	32	1093	0	2482
PHF	.61	.97	0	0	0	0	.56	0	.36	.57	.93	0	.937
% Trucks	0	1.4	0	0	0	0	0	0	5	3.1	1.5	0	1.5
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	
Peds	0	0	0	0	0	0	0	0	0	0	0	0	
Hourly Totals													
16:00-17:00	15	572	0	0	0	0	11	0	10	9	496	0	1113
16:15-17:15	18	619	0	0	0	0	8	0	11	9	564	0	1229
16:30-17:30	23	655	0	0	0	0	9	0	7	16	564	0	1274
16:45-17:45	20	701	0	0	0	0	11	0	11	20	591	0	1354
17:00-18:00	17	713	0	0	0	0	9	0	10	23	597	0	1369

INTERSECTION TURN MOVEMENT COUNT SUMMARY REPORT
GARDEN HOME ROAD AT 84TH AVENUE

24784



DATE OF COUNT: 09/13/00
DAY OF WEEK: Wed
TIME STARTED: 16:00
TIME ENDED: 18:00

TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

Peak Hour
17:00-18:00
TEV=1393

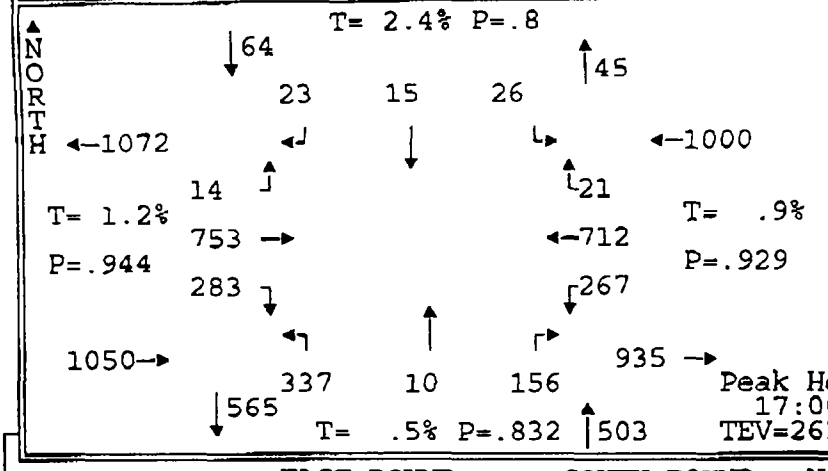
TBFE

Traffic Smithy
(503) 641-6333

TIME PERIOD FROM - TO	EAST BOUND ↓	EAST BOUND →	EAST BOUND ↑	SOUTH BOUND ↲	SOUTH BOUND ↓	SOUTH BOUND ↳	NORTH BOUND ↰	NORTH BOUND ↑	NORTH BOUND ↱	WEST BOUND ↴	WEST BOUND ←	WEST BOUND ↰	ALL
16:00-16:05	1	32	0	1	0	0	0	0	1	1	33	0	69
16:05-16:10	0	35	1	0	0	0	0	0	2	0	30	0	68
16:10-16:15	1	51	0	0	1	0	0	0	0	1	32	0	86
16:15-16:20	0	46	1	0	0	0	0	0	0	0	45	0	92
16:20-16:25	0	41	0	0	0	0	0	0	0	0	43	0	84
16:25-16:30	0	49	0	1	1	0	0	0	0	1	37	0	89
16:30-16:35	0	40	0	0	0	0	0	0	2	4	48	0	94
16:35-16:40	0	43	0	0	0	1	1	0	0	0	44	1	90
16:40-16:45	0	50	0	0	0	0	0	0	0	1	52	2	105
16:45-16:50	0	53	0	0	0	0	0	0	0	1	47	1	102
16:50-16:55	2	44	0	0	0	0	0	0	0	1	47	0	94
16:55-17:00	2	65	0	1	0	0	0	0	1	1	40	0	110
17:00-17:05	2	61	0	1	0	1	2	0	2	1	67	2	139
17:05-17:10	1	48	1	0	0	0	1	0	0	1	52	0	104
17:10-17:15	1	58	2	0	0	0	0	0	2	2	57	0	122
17:15-17:20	1	45	0	1	0	0	1	0	0	0	51	1	100
17:20-17:25	1	59	0	0	0	0	1	1	0	0	50	1	113
17:25-17:30	1	69	0	0	0	0	0	0	1	0	46	0	117
17:30-17:35	0	59	0	0	0	1	0	0	2	1	56	2	121
17:35-17:40	0	59	1	0	0	1	0	0	0	0	62	0	123
17:40-17:45	2	67	0	0	0	1	0	0	1	0	55	2	128
17:45-17:50	1	50	0	0	0	0	1	0	2	0	64	0	118
17:50-17:55	1	48	0	0	0	0	0	0	0	0	44	1	94
17:55-18:00	0	61	2	0	0	0	0	0	1	1	46	3	114
Total Survey	17	1233	8	5	2	5	7	1	17	17	1148	16	2476
PHF	.69	.91	.5	.5	0	.33	.5	.25	.69	.38	.9	.75	.936
% Trucks	5.9	1.6	0	20	0	0	0	0	5.9	0	1.8	0	1.8
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	
Peds	0	1	0	0	0	0	0	2	0	0	4	0	
Hourly Totals													
16:00-17:00	6	549	2	3	2	1	1	0	6	11	498	4	1083
16:15-17:15	8	598	4	3	1	2	4	0	7	13	579	6	1225
16:30-17:30	11	635	3	3	0	2	6	1	8	12	601	8	1290
16:45-17:45	13	687	4	3	0	4	5	1	9	8	630	9	1373
17:00-18:00	11	684	6	2	0	4	6	1	11	6	650	12	1393

INTERSECTION TURN MOVEMENT COUNT SUMMARY REPORT
CORNELL ROAD AT 173RD AVENUE

24668



DATE OF COUNT: 08/23/00
DAY OF WEEK: Wed
TIME STARTED: 16:00
TIME ENDED: 18:00

TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

ERNC

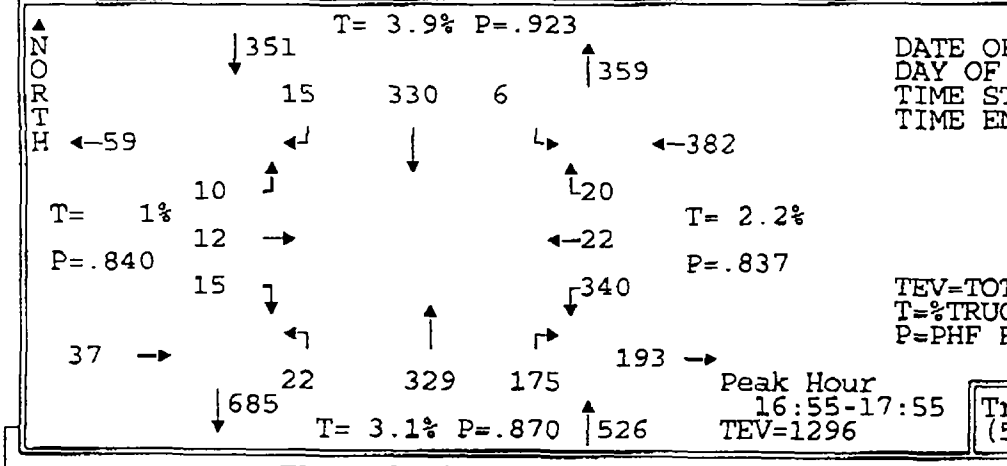
Peak Hour
17:00-18:00
TEV=2617

Traffic Smithy
(503) 641-6333

TIME PERIOD FROM - TO	EAST BOUND ↓	EAST BOUND →	EAST BOUND ↑	SOUTH BOUND ↲	SOUTH BOUND ↓	SOUTH BOUND ↳	NORTH BOUND ↰	NORTH BOUND ↑	NORTH BOUND ↱	WEST BOUND ↓	WEST BOUND ←	WEST BOUND ↑	ALL
16:00-16:05	12	49	1	2	0	1	17	1	5	16	47	2	153
16:05-16:10	17	48	2	1	1	4	22	0	2	10	54	0	161
16:10-16:15	21	51	1	2	1	2	17	1	9	5	55	4	169
16:15-16:20	13	47	1	2	4	4	17	0	12	15	49	2	166
16:20-16:25	20	45	2	1	1	1	19	0	9	13	61	0	172
16:25-16:30	19	43	1	4	2	1	25	0	10	6	65	2	178
16:30-16:35	17	44	0	4	2	1	21	1	10	14	39	1	154
16:35-16:40	14	46	0	2	3	1	13	0	7	10	48	3	147
16:40-16:45	16	68	2	2	0	4	21	0	11	18	53	0	195
16:45-16:50	17	48	1	0	0	2	21	0	14	15	57	0	175
16:50-16:55	14	78	0	0	1	0	19	0	8	9	48	1	178
16:55-17:00	18	51	1	0	3	1	14	2	11	16	48	0	165
17:00-17:05	17	59	1	1	4	3	22	1	9	12	59	1	189
17:05-17:10	23	61	0	1	1	2	31	2	10	22	62	1	216
17:10-17:15	19	73	1	0	0	1	41	1	13	24	52	2	227
17:15-17:20	22	77	1	2	0	2	18	1	8	18	63	1	213
17:20-17:25	28	55	2	4	0	2	29	0	14	24	52	2	212
17:25-17:30	23	61	1	3	0	4	19	1	11	24	66	0	213
17:30-17:35	14	73	0	2	2	2	27	2	12	16	69	2	221
17:35-17:40	22	67	3	2	2	0	29	0	11	25	53	1	215
17:40-17:45	25	51	1	3	2	2	34	1	17	24	55	3	218
17:45-17:50	29	61	1	2	1	2	33	0	18	26	60	2	235
17:50-17:55	26	52	1	3	1	4	28	1	19	28	69	2	234
17:55-18:00	35	63	2	0	2	2	26	0	14	24	52	4	224
Total Survey	481	1371	26	43	33	48	563	15	264	414	1336	36	4630
PHF	.79	.89	.7	.64	.63	.81	.88	.63	.72	.86	.95	.66	.944
% Trucks	.2	1.5	0	0	3	4.2	.2	13.3	.4	.2	1.1	0	1
Stopped Buses	0	2	0	0	0	0	0	0	0	0	1	0	
Peds	0	6	0	0	1	0	0	1	0	0	2	0	
Hourly Totals													
16:00-17:00	198	618	12	20	18	22	226	5	108	147	624	15	2013
16:15-17:15	207	663	10	17	21	21	264	7	124	174	641	13	2162
16:30-17:30	228	721	10	19	14	23	269	9	126	206	647	12	2284
16:45-17:45	242	754	12	18	15	21	304	11	138	229	684	14	2442
17:00-18:00	283	753	14	23	15	26	337	10	156	267	712	21	2617

INTERSECTION TURN MOVEMENT COUNT SUMMARY REPORT
170TH AVENUE AT MERLO ROAD

23373



DATE OF COUNT: 04/13/00
DAY OF WEEK: THUR
TIME STARTED: 15:00
TIME ENDED: 18:00

TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

DLXE

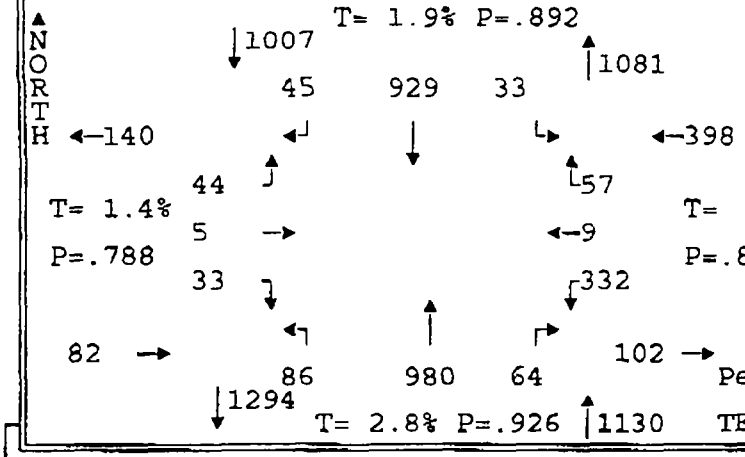
Peak Hour
16:55-17:55
TEV=1296

Traffic Smithy
(503) 641-6333

TIME PERIOD FROM - TO	EAST BOUND ↓	EAST BOUND →	EAST BOUND ↑	SOUTH BOUND ↲	SOUTH BOUND ↓	SOUTH BOUND ↳	NORTH BOUND ↰	NORTH BOUND ↑	NORTH BOUND ↱	WEST BOUND ↓	WEST BOUND ←	WEST BOUND ↑	ALL
15:00-15:05	4	2	2	0	16	1	1	19	9	28	4	4	90
15:05-15:10	0	2	0	3	13	1	4	20	16	23	1	2	85
15:10-15:15	1	0	1	0	18	3	0	28	15	22	2	2	92
15:15-15:20	2	1	1	0	13	0	1	27	17	24	0	3	89
15:20-15:25	4	1	2	1	12	2	5	18	14	11	0	0	70
15:25-15:30	1	0	0	1	22	1	0	20	22	18	1	3	89
15:30-15:35	0	0	0	4	23	1	2	21	14	18	1	0	84
15:35-15:40	0	0	1	0	17	0	2	20	16	21	1	4	82
15:40-15:45	2	0	1	2	18	2	0	14	12	36	0	2	89
15:45-15:50	0	0	0	0	24	2	1	14	12	21	0	2	76
15:50-15:55	0	1	1	1	17	1	0	15	9	20	1	1	67
15:55-16:00	2	0	0	1	25	1	1	19	16	22	0	0	87
16:00-16:05	0	1	0	1	22	1	2	13	11	22	1	0	74
16:05-16:10	1	0	1	2	26	2	1	19	11	23	2	3	91
16:10-16:15	1	2	0	2	15	1	2	25	15	30	1	0	94
16:15-16:20	2	0	0	4	30	1	2	31	15	21	0	1	107
16:20-16:25	0	0	1	0	17	2	2	23	13	31	1	0	90
16:25-16:30	1	1	0	2	30	0	3	24	14	22	4	1	102
16:30-16:35	2	3	0	3	17	2	0	19	8	30	1	9	94
16:35-16:40	1	0	1	0	30	1	2	30	17	35	4	1	122
16:40-16:45	2	1	0	1	20	1	2	22	9	28	2	4	92
16:45-16:50	2	2	0	3	20	1	3	20	14	19	1	3	88
16:50-16:55	1	3	0	2	17	3	0	28	12	29	1	2	98
16:55-17:00	2	1	1	2	20	1	2	20	14	26	1	2	92
17:00-17:05	1	0	1	0	30	0	0	27	14	35	2	2	111
17:05-17:10	3	1	1	1	33	1	2	27	8	38	0	0	115
17:10-17:15	1	0	1	0	29	1	1	29	10	32	2	3	108
17:15-17:20	1	1	1	1	26	0	3	16	10	29	1	4	93
17:20-17:25	0	0	2	2	31	1	1	39	16	23	2	1	118
17:25-17:30	2	2	0	0	32	0	1	29	11	29	1	2	109
17:30-17:35	2	2	0	3	24	0	3	30	20	39	4	2	129
17:35-17:40	1	0	2	1	31	0	4	25	13	24	0	0	101
17:40-17:45	0	0	1	0	21	1	1	33	15	26	5	1	104
17:45-17:50	0	3	1	3	33	1	3	25	25	14	2	1	111
17:50-17:55	2	2	1	2	20	0	1	29	19	25	2	2	105
17:55-18:00	3	2	1	2	21	1	1	26	16	15	2	1	91
Total Survey	47	34	23	50	813	37	59	844	502	909	53	68	3439
PHF	.63	.6	.63	.75	.9	.75	.69	.84	.74	.81	.61	.63	.910
% Trucks	2.1	0	0	2	3.9	5.4	0	3.3	3.2	2.2	1.9	2.9	3
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	
Peds	0	2	0	0	20	0	0	3	0	0	12	0	
Hourly Totals													
15:00-16:00	16	7	9	13	218	15	17	235	172	264	11	23	1000
15:15-16:15	13	6	7	15	234	14	17	225	169	266	8	18	992
15:30-16:30	9	5	5	19	264	14	18	238	158	287	12	14	1043
15:45-16:45	12	9	4	17	273	15	18	254	150	305	17	22	1096
16:00-17:00	15	14	4	22	264	16	21	274	153	316	19	26	1144
16:15-17:15	18	12	4	18	293	14	19	300	148	346	19	28	1219
16:30-17:30	18	14	6	15	305	12	17	306	143	353	18	33	1240
16:45-17:45	16	12	8	15	314	9	21	323	157	349	20	22	1266
17:00-18:00	16	13	10	15	331	6	21	335	177	329	23	19	1295

INTERSECTION TURN MOVEMENT COUNT SUMMARY REPORT
BLUERIDGE DRIVE AT 158TH AVENUE

22809



DATE OF COUNT: 02/29/00
DAY OF WEEK: Tue
TIME STARTED: 16:00
TIME ENDED: 18:00

TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

ERJG

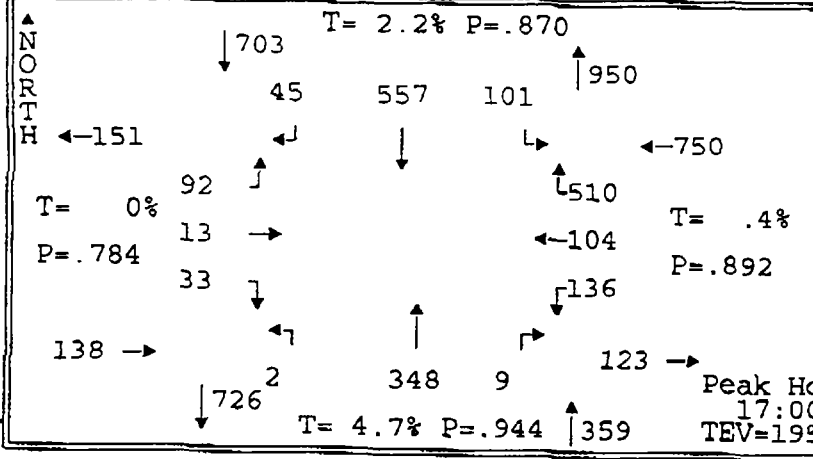
Peak Hour
17:00-18:00
TEV=2617

Traffic Smithy
(503) 641-6333

TIME PERIOD FROM - TO	EAST BOUND ↓	EAST BOUND →	EAST BOUND ↑	SOUTH BOUND ↲	SOUTH BOUND ↓	SOUTH BOUND ↳	NORTH BOUND ↰	NORTH BOUND ↑	NORTH BOUND ↱	WEST BOUND ↓	WEST BOUND ←	WEST BOUND ↑	ALL
16:00-16:05	1	0	4	1	65	3	7	62	10	14	1	3	171
16:05-16:10	1	0	3	3	44	2	3	83	9	13	1	6	168
16:10-16:15	5	1	0	0	82	1	8	58	8	9	0	2	174
16:15-16:20	1	1	4	4	55	2	5	63	2	19	0	4	160
16:20-16:25	0	0	6	3	65	2	4	60	8	34	0	0	182
16:25-16:30	3	0	5	3	85	1	5	66	6	36	0	3	213
16:30-16:35	7	1	1	0	77	4	3	56	5	12	0	4	170
16:35-16:40	2	0	1	1	60	1	4	76	6	13	0	1	165
16:40-16:45	2	0	0	4	74	0	7	81	2	18	0	1	189
16:45-16:50	6	0	1	10	72	3	4	75	6	14	0	2	193
16:50-16:55	3	0	0	1	68	4	9	62	1	14	0	4	166
16:55-17:00	3	0	2	4	61	5	3	75	7	10	0	1	171
17:00-17:05	4	0	4	5	66	5	6	59	10	21	0	1	181
17:05-17:10	3	1	2	5	83	2	6	83	7	36	1	6	235
17:10-17:15	3	0	1	4	96	3	7	92	3	35	1	2	247
17:15-17:20	0	1	5	4	83	2	7	70	3	32	3	4	214
17:20-17:25	2	0	4	3	78	4	8	86	4	28	0	10	227
17:25-17:30	6	0	6	5	74	0	3	88	8	40	1	5	236
17:30-17:35	4	0	4	3	94	1	6	83	4	18	1	9	227
17:35-17:40	2	0	4	3	57	3	8	77	3	29	0	3	189
17:40-17:45	2	3	3	3	67	4	5	86	6	21	0	5	205
17:45-17:50	3	0	4	3	74	3	14	97	5	28	1	7	239
17:50-17:55	1	0	5	3	62	2	10	77	5	21	1	4	191
17:55-18:00	3	0	2	4	95	4	6	82	6	23	0	1	226
Total Survey	67	8	71	79	1737	61	148	1797	134	538	11	88	4739
PHF	.69	.42	.73	.8	.89	.82	.72	.94	.8	.81	.45	.59	.940
% Trucks	1.5	0	1.4	2.5	1.8	3.3	0	2.9	4.5	.2	0	0	2
Stopped Buses	0	0	0	0	0	0	0	2	0	0	0	0	
Peds	0	8	0	0	10	0	0	1	0	0	2	0	
Hourly Totals													
16:00-17:00	34	3	27	34	808	28	62	817	70	206	2	31	2122
16:15-17:15	37	3	27	44	862	32	63	848	63	262	2	29	2272
16:30-17:30	41	3	27	46	892	33	67	903	62	273	6	41	2394
16:45-17:45	38	5	36	50	899	36	72	936	62	298	7	52	2491
17:00-18:00	33	5	44	45	929	33	86	980	64	332	9	57	2617

INTERSECTION TURN MOVEMENT COUNT SUMMARY REPORT
158TH AVENUE AT JAY STREET

23273



DATE OF COUNT: 04/05/00
DAY OF WEEK: Wed
TIME STARTED: 16:00
TIME ENDED: 18:00

TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

Peak Hour
17:00-18:00
TEV=1950

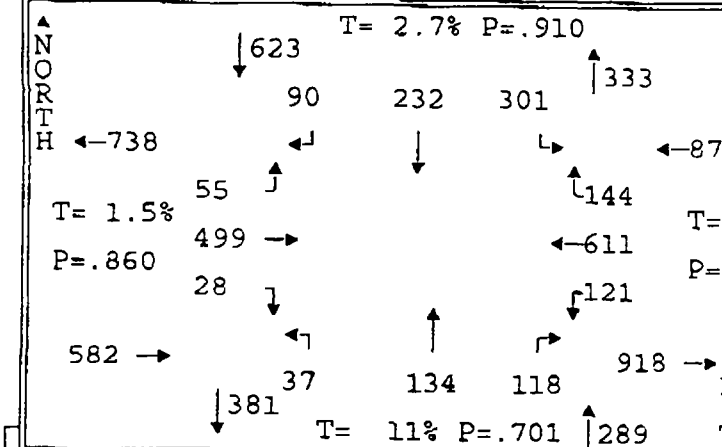
ERKA

Traffic Smithy
(503) 641-6333

TIME PERIOD FROM - TO	EAST BOUND ↓	EAST BOUND →	EAST BOUND ↑	SOUTH BOUND ↵	SOUTH BOUND ↓	SOUTH BOUND ↳	NORTH BOUND ↰	NORTH BOUND ↑	NORTH BOUND ↱	WEST BOUND ↓	WEST BOUND ←	WEST BOUND ↑	ALL
16:00-16:05	1	1	11	1	44	8	2	35	0	2	1	19	125
16:05-16:10	5	1	8	5	44	5	1	39	1	3	3	18	133
16:10-16:15	2	1	5	3	40	5	0	37	2	5	4	16	120
16:15-16:20	3	1	9	5	40	4	0	26	0	3	5	16	112
16:20-16:25	2	1	14	4	55	13	1	25	0	7	2	14	138
16:25-16:30	5	2	7	3	55	4	0	28	2	5	4	22	137
16:30-16:35	3	0	5	7	37	3	0	31	3	4	2	26	121
16:35-16:40	0	1	10	3	28	8	0	41	0	6	3	19	119
16:40-16:45	2	3	9	3	42	9	0	31	0	9	4	32	144
16:45-16:50	5	5	6	2	45	7	2	29	2	5	1	24	133
16:50-16:55	4	0	8	2	52	8	0	36	1	5	3	30	149
16:55-17:00	2	1	11	4	35	10	0	22	2	5	2	21	115
17:00-17:05	2	1	4	5	45	9	0	31	1	8	4	35	145
17:05-17:10	5	2	12	2	28	9	0	29	1	11	6	42	147
17:10-17:15	3	2	9	6	44	1	0	25	1	12	12	46	161
17:15-17:20	2	0	9	5	58	10	0	21	0	13	13	51	182
17:20-17:25	2	0	5	4	53	6	0	36	1	13	7	43	170
17:25-17:30	2	0	8	4	35	8	0	33	0	12	11	42	155
17:30-17:35	2	1	6	7	53	8	0	24	1	11	9	53	175
17:35-17:40	4	0	8	5	58	7	0	34	1	17	10	41	185
17:40-17:45	5	2	4	0	50	14	0	31	0	13	8	38	165
17:45-17:50	2	1	8	0	49	11	1	24	1	10	12	45	164
17:50-17:55	1	2	13	2	47	8	0	36	2	13	8	37	169
17:55-18:00	3	2	6	5	37	10	1	24	0	3	4	37	132
Total Survey	67	30	195	87	1074	185	8	728	22	195	138	767	3496
PHF	.75	.65	.77	.7	.86	.77	.25	.94	.75	.83	.81	.91	.928
% Trucks	0	0	0	0	2.7	0	0	4.9	0	1	0	.3	2
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	
Peds	0	2	0	0	9	0	0	17	0	0	0	0	
Hourly Totals													
16:00-17:00	34	17	103	42	517	84	6	380	13	59	34	257	1546
16:15-17:15	36	19	104	46	506	85	3	354	13	80	48	327	1621
16:30-17:30	32	15	96	47	502	88	2	365	12	103	68	411	1741
16:45-17:45	38	14	90	46	556	97	2	351	11	125	86	466	1882
17:00-18:00	33	13	92	45	557	101	2	348	9	136	104	510	1950

INTERSECTION TURN MOVEMENT COUNT SUMMARY REPORT
158TH AVENUE AT JENKINS ROAD

3370



DATE OF COUNT: 04/13/00
DAY OF WEEK: Thu
TIME STARTED: 15:00
TIME ENDED: 18:00

TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

ERKH

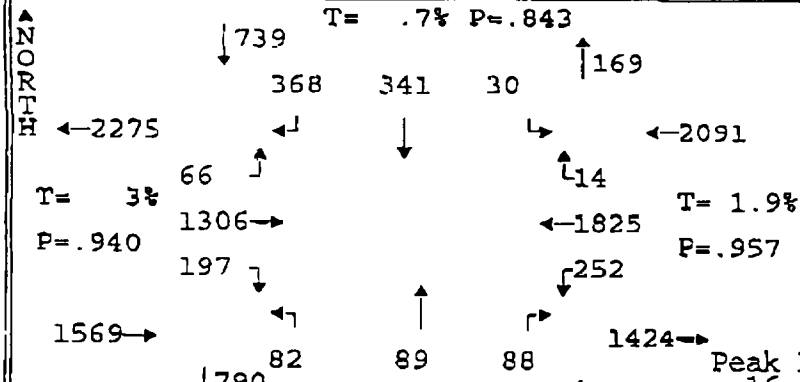
Peak Hour
17:00-18:00
TEV=2370

Traffic Smithy
(503) 641-6333

TIME PERIOD FROM - TO	EAST BOUND ↓	EAST BOUND →	EAST BOUND ↑	SOUTH BOUND ↵	SOUTH BOUND ↓	SOUTH BOUND ↳	NORTH BOUND ↰	NORTH BOUND ↑	NORTH BOUND ↱	WEST BOUND ↴	WEST BOUND ←	WEST BOUND ↥	ALL
15:00-15:05	2	49	8	1	23	9	3	19	10	7	37	9	177
15:05-15:10	2	26	3	4	22	24	3	7	13	15	31	6	156
15:10-15:15	0	40	5	6	8	18	1	10	7	10	52	5	162
15:15-15:20	2	27	4	6	22	18	2	17	11	9	35	9	162
15:20-15:25	3	42	3	1	7	14	2	14	12	7	49	14	168
15:25-15:30	4	37	4	2	14	15	4	11	6	12	43	11	163
15:30-15:35	2	48	3	3	11	21	3	9	11	6	36	19	172
15:35-15:40	4	33	13	2	6	8	2	15	8	9	41	20	161
15:40-15:45	5	37	6	3	24	17	4	7	19	9	45	14	190
15:45-15:50	2	28	1	5	23	25	2	14	3	17	49	14	183
15:50-15:55	2	44	7	3	12	17	1	14	8	6	52	10	176
15:55-16:00	5	35	5	0	10	19	2	9	9	6	45	6	151
16:00-16:05	2	29	2	4	22	20	2	15	4	2	53	10	165
16:05-16:10	2	46	11	4	12	18	3	10	12	9	50	6	183
16:10-16:15	1	34	7	4	15	30	5	11	9	10	42	10	178
16:15-16:20	0	47	1	4	23	30	3	6	4	5	60	12	195
16:20-16:25	1	24	4	4	23	18	4	21	7	8	49	10	173
16:25-16:30	0	25	5	4	28	29	4	17	4	17	44	7	184
16:30-16:35	3	43	8	6	13	32	4	7	5	4	45	15	185
16:35-16:40	3	35	6	0	20	10	2	11	21	6	47	14	175
16:40-16:45	2	22	3	5	26	33	6	22	6	6	36	8	175
16:45-16:50	2	39	12	4	18	24	4	7	9	11	53	10	193
16:50-16:55	4	34	7	5	14	24	2	13	6	10	51	14	184
16:55-17:00	3	45	6	2	11	19	0	16	11	9	57	8	187
17:00-17:05	2	24	5	1	18	26	1	7	6	12	57	7	166
17:05-17:10	4	35	4	6	21	21	7	15	7	13	47	8	188
17:10-17:15	1	39	4	11	30	31	2	9	10	12	47	11	207
17:15-17:20	4	53	1	4	14	21	0	7	9	4	61	14	192
17:20-17:25	2	43	6	11	27	22	3	3	17	8	44	13	199
17:25-17:30	1	41	13	9	20	30	3	8	8	12	38	10	193
17:30-17:35	4	56	3	6	18	24	2	9	5	10	56	15	208
17:35-17:40	2	36	5	9	17	28	0	11	14	13	44	10	189
17:40-17:45	1	40	4	16	19	24	3	12	8	5	55	15	202
17:45-17:50	4	44	2	8	13	22	3	20	16	11	55	9	207
17:50-17:55	2	48	7	5	15	30	9	11	9	10	56	9	211
17:55-18:00	1	40	1	4	20	22	4	22	9	11	51	23	208
Total Survey	84	1368	189	172	639	793	105	436	333	331	1713	405	6568
PHF	.78	.89	.63	.68	.82	.92	.58	.63	.78	.82	.92	.88	.946
% Trucks	3.6	1.2	2.1	.6	4.2	1.9	0	14.7	9.6	14.5	1.1	1.5	3.6
Stopped Buses	0	0	0	0	1	0	0	1	0	0	0	0	
Peds	0	1	0	0	8	0	0	15	0	0	1	0	
Hourly Totals													
15:00-16:00	33	446	62	36	182	205	29	146	117	113	515	137	2021
15:15-16:15	34	440	66	37	178	222	32	146	112	102	540	143	2052
15:30-16:30	26	430	65	40	209	252	35	148	98	104	566	138	2111
15:45-16:45	23	412	60	43	227	281	38	157	92	96	572	122	2123
16:00-17:00	23	423	72	46	225	287	39	156	98	97	587	124	2177
16:15-17:15	25	412	65	52	245	297	39	151	96	113	593	124	2212
16:30-17:30	31	453	75	64	232	293	34	125	115	107	583	132	2244
16:45-17:45	30	485	70	84	227	294	27	117	110	119	610	135	2308
17:00-18:00	28	499	55	90	232	301	37	134	118	121	611	144	2370

INTERSECTION TURN MOVEMENT COUNT SUMMARY REPORT
TV HIGHWAY AT 160TH AVENUE/MILLIKAN BOULEVARD

25480



DATE OF COUNT: 11/16/00
DAY OF WEEK: Thu
TIME STARTED: 16:00
TIME ENDED: 18:00

TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

DLBS

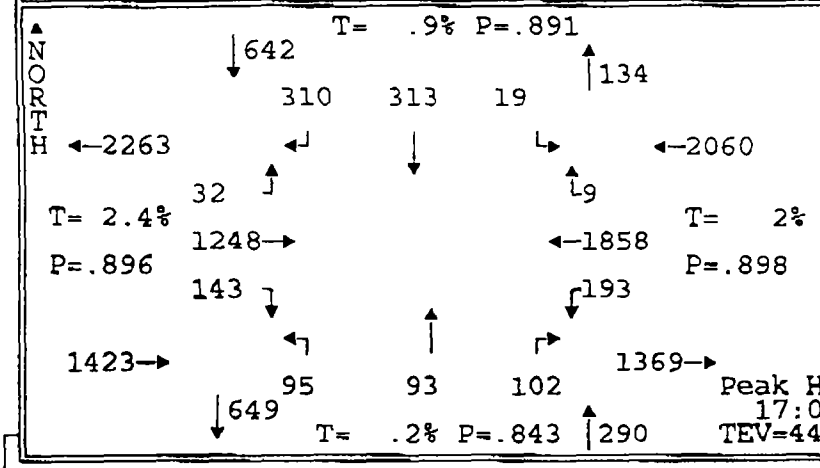
Peak Hour
16:55-17:55
TEV=4658

Traffic Smithy
(503) 641-6333

TIME PERIOD FROM - TO	EAST BOUND ↰	EAST BOUND →	EAST BOUND ↱	SOUTH BOUND ↲	SOUTH BOUND ↓	SOUTH BOUND ↳	NORTH BOUND ↰	NORTH BOUND ↑	NORTH BOUND ↱	WEST BOUND ↲	WEST BOUND ←	WEST BOUND ↳	ALL
16:00-16:05	14	135	7	18	18	1	12	7	6	8	161	4	391
16:05-16:10	9	123	3	32	25	2	4	7	2	18	164	0	389
16:10-16:15	11	105	3	11	18	4	7	12	6	16	118	2	313
16:15-16:20	17	108	7	35	26	2	4	8	1	8	188	2	406
16:20-16:25	17	100	2	17	17	2	7	14	10	16	131	3	336
16:25-16:30	7	124	2	26	27	1	9	2	3	11	170	0	382
16:30-16:35	19	118	1	29	22	6	8	14	4	18	121	1	361
16:35-16:40	8	92	5	39	30	2	9	7	7	10	179	2	390
16:40-16:45	17	154	0	24	19	0	11	8	3	10	148	1	395
16:45-16:50	13	122	6	26	24	3	3	4	9	17	171	1	399
16:50-16:55	18	141	9	9	21	2	8	14	3	9	89	2	325
16:55-17:00	12	83	3	28	31	4	5	9	5	31	179	1	391
17:00-17:05	17	134	3	20	18	0	4	5	5	18	149	1	374
17:05-17:10	10	90	6	49	40	5	8	6	2	19	147	1	383
17:10-17:15	13	135	7	37	25	3	5	3	5	17	171	2	423
17:15-17:20	12	109	2	37	21	2	5	11	9	23	153	1	385
17:20-17:25	13	118	8	31	24	3	4	9	9	14	151	1	385
17:25-17:30	23	118	1	27	23	3	9	3	6	28	155	0	396
17:30-17:35	18	91	12	23	41	1	9	9	16	17	128	1	366
17:35-17:40	22	125	4	41	20	1	11	9	8	27	143	0	411
17:40-17:45	15	70	12	38	43	1	10	9	5	18	166	3	390
17:45-17:50	24	139	2	18	27	3	5	8	9	16	152	1	404
17:50-17:55	18	94	6	19	28	4	7	8	9	24	131	2	350
17:55-18:00	13	90	1	25	28	0	7	10	4	17	152	1	348
Total Survey	360	2718	112	659	616	55	171	196	146	410	3617	33	9093
PHF	.78	.9	.59	.75	.82	.75	.68	.82	.71	.88	.96	.58	.966
% Trucks	3.9	2.9	.9	.6	.6	1.8	.6	.5	1.4	1.5	2	0	2
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	
Peds	0	0	0	0	0	0	0	0	0	0	0	0	
Hourly Totals													
16:00-17:00	162	1405	48	294	278	29	87	106	59	172	1819	19	4478
16:15-17:15	168	1401	51	339	300	30	81	94	57	184	1843	17	4565
16:30-17:30	175	1414	51	356	298	33	79	93	67	214	1813	14	4607
16:45-17:45	186	1336	73	366	331	28	81	91	82	238	1802	14	4628
17:00-18:00	198	1313	64	365	338	26	84	90	87	238	1798	14	4615

INTERSECTION TURN MOVEMENT COUNT SUMMARY REPORT
TUALATIN VALLEY HIGHWAY AT MILIKAN WAY / 160TH AVENUE

12978



DATE OF COUNT: 04/09/97
DAY OF WEEK: Wed
TIME STARTED: 16:00
TIME ENDED: 18:00

TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

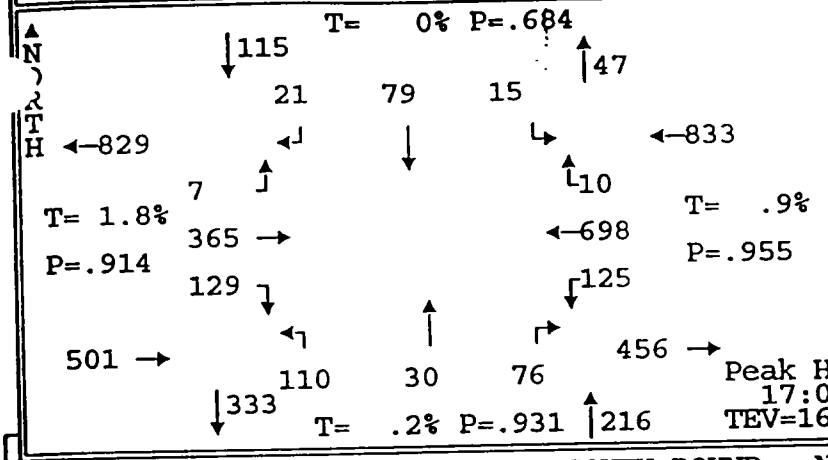
Peak Hour
17:00-18:00
TEV=4415

Traffic Smithy
Traffic Survey Service

TIME PERIOD FROM - TO	EAST BOUND ↓	EAST BOUND →	EAST BOUND ↑	SOUTH BOUND ↵	SOUTH BOUND ↓	SOUTH BOUND ↳	NORTH BOUND ↰	NORTH BOUND ↑	NORTH BOUND ↱	WEST BOUND ↴	WEST BOUND ←	WEST BOUND ↰	ALL
16:00-16:05	4	121	3	19	11	2	6	6	9	5	93	1	280
16:05-16:10	8	98	1	17	13	3	7	5	10	17	111	1	291
16:10-16:15	13	134	3	18	20	2	8	6	9	8	129	0	350
16:15-16:20	6	112	3	12	11	2	7	7	8	13	140	1	322
16:20-16:25	4	95	1	16	18	0	4	3	12	4	132	2	291
16:25-16:30	6	91	5	12	28	1	8	12	10	12	148	3	336
16:30-16:35	12	142	1	19	4	3	4	2	7	14	153	1	362
16:35-16:40	4	99	2	12	20	0	7	7	7	18	142	1	319
16:40-16:45	10	138	3	20	12	3	9	4	14	18	113	3	347
16:45-16:50	9	93	3	11	22	3	8	5	4	16	144	0	318
16:50-16:55	10	111	2	19	18	2	6	1	10	9	157	5	350
16:55-17:00	5	101	2	18	22	2	2	4	7	16	138	0	317
17:00-17:05	11	104	1	20	20	1	9	11	7	18	161	0	363
17:05-17:10	18	110	2	21	11	2	11	8	7	11	180	1	382
17:10-17:15	11	91	3	31	36	2	5	5	11	19	127	2	343
17:15-17:20	13	131	2	24	25	2	9	10	11	17	156	0	400
17:20-17:25	18	92	4	26	25	0	4	6	5	20	204	0	404
17:25-17:30	7	130	0	32	22	3	9	7	12	14	161	1	398
17:30-17:35	3	116	1	25	42	1	4	7	7	11	157	1	375
17:35-17:40	12	90	3	28	23	0	8	5	8	17	165	0	359
17:40-17:45	10	112	2	30	23	2	7	5	6	17	144	0	358
17:45-17:50	14	66	7	33	30	2	7	11	8	16	138	3	335
17:50-17:55	14	100	4	23	34	3	3	6	7	19	156	0	369
17:55-18:00	12	106	3	17	22	1	19	12	13	14	109	1	329
Total Survey	234	2583	61	503	512	42	171	155	209	343	3458	27	8298
PHF	.85	.88	.57	.85	.88	.68	.82	.8	.88	.86	.89	.56	.918
% Trucks	.4	2.5	4.9	.8	.8	2.4	0	0	.5	.3	2.1	0	1.9
Stopped Buses	0	2	0	1	0	0	0	0	0	0	17	0	
Peds	0	8	0	0	6	0	0	176	0	0	3	0	
Hourly Totals													
16:00-17:00	91	1335	29	193	199	23	76	62	107	150	1600	18	3883
16:15-17:15	106	1287	28	211	222	21	80	69	104	168	1735	19	4050
16:30-17:30	128	1342	25	253	237	23	83	70	102	190	1836	14	4303
16:45-17:45	127	1281	25	285	289	20	82	74	95	185	1894	10	4367
17:00-18:00	143	1248	32	310	313	19	95	93	102	193	1858	9	4415

INTERSECTION TURN MOVEMENT COUNT SUMMARY REPORT
HART ROAD AT 155TH AVENUE

21246



DATE OF COUNT: 10/06/99
DAY OF WEEK: Wed
TIME STARTED: 16:00
TIME ENDED: 18:30

TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

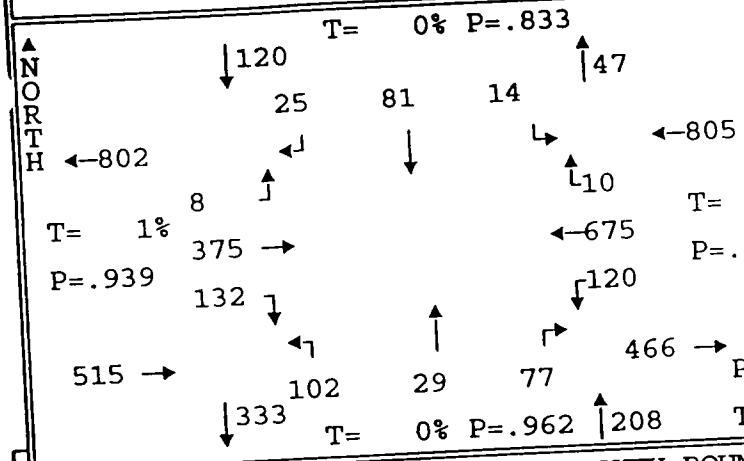
BKQQ

Peak Hour
17:05-18:05
TEV=1665

Traffic Smithy
(503) 641-6333

TIME PERIOD FROM - TO	EAST BOUND ↓	EAST BOUND →	EAST BOUND ↑	SOUTH BOUND ↵	SOUTH BOUND ↓	SOUTH BOUND ↳	NORTH BOUND ↰	NORTH BOUND ↑	NORTH BOUND ↱	WEST BOUND ↓	WEST BOUND ←	WEST BOUND ↑	ALL
16:00-16:05	10	25	1	2	3	0	4	1	7	8	22	1	84
16:05-16:10	7	26	0	0	4	1	9	1	4	8	51	0	111
16:10-16:15	8	27	0	4	3	1	7	4	6	12	41	4	117
16:15-16:20	5	36	0	1	3	0	13	1	6	9	37	1	112
16:20-16:25	11	19	1	0	1	0	4	3	6	6	39	0	90
16:25-16:30	6	24	1	1	2	0	3	0	5	7	40	0	89
16:30-16:35	5	27	0	1	3	0	11	2	7	8	43	1	108
16:35-16:40	6	31	1	1	2	0	4	3	4	8	41	0	101
16:40-16:45	2	21	1	1	2	2	5	0	6	7	55	4	106
16:45-16:50	9	31	0	0	4	0	8	2	4	2	57	0	117
16:50-16:55	15	24	0	0	5	1	8	3	7	11	40	1	115
16:55-17:00	10	40	0	1	5	1	9	2	6	11	43	1	129
17:00-17:05	14	26	0	1	3	1	10	1	10	9	48	1	124
17:05-17:10	6	25	1	0	2	1	11	2	11	9	59	0	127
17:10-17:15	8	33	0	0	5	2	8	2	4	13	61	1	137
17:15-17:20	10	32	0	1	8	1	7	2	5	7	59	0	132
17:20-17:25	14	25	1	2	7	1	10	5	10	10	62	0	147
17:25-17:30	9	24	0	3	6	1	7	3	4	13	63	1	134
17:30-17:35	14	29	1	2	4	2	6	2	10	15	54	0	139
17:35-17:40	13	35	2	3	6	1	12	2	5	9	52	0	140
17:40-17:45	10	30	1	4	7	1	7	3	7	8	56	3	137
17:45-17:50	15	29	0	4	10	1	9	0	4	11	57	1	141
17:50-17:55	6	39	0	1	13	1	11	2	3	10	51	2	139
17:55-18:00	12	36	0	0	5	1	13	4	7	11	59	2	150
18:00-18:05	12	28	1	1	6	2	9	3	6	9	65	0	142
18:05-18:10	7	33	2	1	5	0	7	0	11	5	52	1	124
18:10-18:15	10	35	0	3	4	2	4	3	5	12	45	0	123
18:15-18:20	14	29	1	1	6	0	4	1	3	11	49	0	119
18:20-18:25	9	41	3	0	11	2	10	1	6	11	44	2	140
18:25-18:30	7	30	1	3	5	0	3	3	5	6	45	1	109
Total Survey	284	890	19	42	150	26	233	61	184	276	1490	28	3683
PHF	.85	.88	.44	.48	.66	.94	.83	.75	.79	.82	.95	.42	.965
% Trucks	.7	2.1	0	0	0	0	.4	0	0	.7	.9	0	1
Stopped Buses	0	1	0	0	0	0	0	0	0	0	2	0	
Peds	0	1	0	0	3	0	0	7	0	0	3	0	
Hourly Totals													
16:00-17:00	94	331	5	12	37	6	85	22	68	97	509	13	1279
16:15-17:15	97	337	5	7	37	8	94	21	76	100	563	10	1355
16:30-17:30	108	339	4	11	52	11	98	27	78	108	631	10	1477
16:45-17:45	132	354	6	17	62	13	103	29	83	117	654	8	1578
17:00-18:00	131	363	6	21	76	14	111	28	80	125	681	11	1647
17:15-18:15	132	375	8	25	81	14	102	29	77	120	675	10	1648
17:30-18:30	129	394	12	23	82	13	95	24	72	118	629	12	1603

INTERSECTION TURN MOVEMENT COUNT PEAK HOUR REPORT
HART ROAD AT 155TH AVENUE



DATE OF COUNT: 10/06/99
DAY OF WEEK: Wed
TIME STARTED: 16:00
TIME ENDED: 18:30

TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

BKQQ

Peak Hour
17:15-18:15
TEV=1648

Traffic Smithy
(503)641-6333

TIME PERIOD FROM - TO	EAST BOUND ↓	EAST BOUND →	SOUTH BOUND ↱	SOUTH BOUND ↓	SOUTH BOUND ↳	NORTH BOUND ↰	NORTH BOUND ↑	NORTH BOUND ↱	WEST BOUND ↓	WEST BOUND ←	WEST BOUND ↳	ALL
ALL VEHICLES												
17:15-17:30	33	81	1	6	21	3	24	10	19	30	184	1 413
17:30-17:45	37	94	4	9	17	4	25	7	22	32	162	3 416
17:45-18:00	33	104	0	5	28	3	33	6	14	32	167	5 430
18:00-18:15	29	96	3	5	15	4	20	6	22	26	162	1 389
LIGHT TRUCKS (SINGLE UNIT 2 AXLES)												
17:15-17:30	0	2	0	0	0	0	0	0	0	1	0	3
17:30-17:45	0	1	0	0	0	0	0	0	0	0	0	1
17:45-18:00	0	1	0	0	0	0	0	0	0	2	0	3
18:00-18:15	0	0	0	0	0	0	0	0	0	1	0	1
MEDIUM TRUCKS (SINGLE UNIT > 2 AXLES)												
17:15-17:30	0	0	0	0	0	0	0	0	0	0	0	0
17:30-17:45	0	0	0	0	0	0	0	0	0	0	0	0
17:45-18:00	0	0	0	0	0	0	0	0	0	0	0	0
18:00-18:15	0	0	0	0	0	0	0	0	0	0	0	0
HEAVY TRUCKS (SEMI-TRACTOR TRAILER)												
17:15-17:30	0	1	0	0	0	0	0	0	0	0	0	1
17:30-17:45	0	0	0	0	0	0	0	0	0	0	0	0
17:45-18:00	0	0	0	0	0	0	0	0	0	0	0	0
18:00-18:15	0	0	0	0	0	0	0	0	0	0	0	0
BICYCLES												
17:15-17:30	0	0	0	0	1	0	0	0	0	0	1	0 2
17:30-17:45	0	0	0	0	0	0	0	0	0	0	0	0 0
17:45-18:00	0	0	0	0	0	0	0	0	0	1	1	0 2
18:00-18:15	0	0	0	0	0	0	0	0	0	0	0	0 0

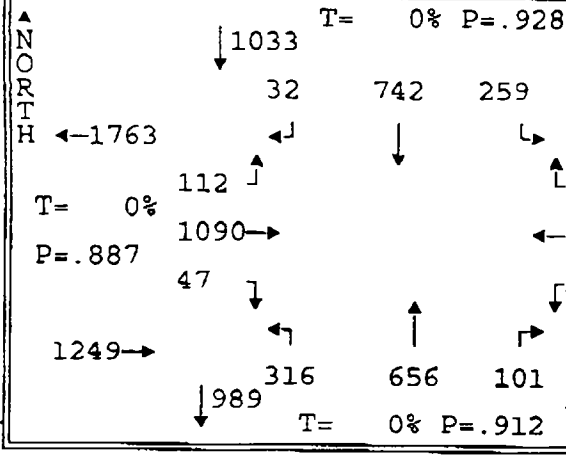
PEDESTRIANS	CROSSWALK USEAGE SOUTH	WEST	EAST	NORTH	ALL
17:15-17:30	0	0	0	0	0
17:30-17:45	0	0	0	0	0
17:45-18:00	0	0	2	0	2
18:00-18:15	0	0	3	0	3

Peak Hour by Movement												
PHF	.89	.9	.5	.69	.72	.88	.77	.73	.88	.94	.92	.5 .958
% Trucks(all)	0	1.3	0	0	0	0	0	0	0	0	.6	0 .5
% Trucks(M+H)	0	.3	0	0	0	0	0	0	0	0	0	0 .1
Stopped Buses	0	0	0	0	0	0	0	0	0	0	2	0

Hourly Totals												
16:00-17:00	94	331	5	12	37	6	85	22	68	97	509	13 1279
16:15-17:15	97	337	5	7	37	8	94	21	76	100	563	10 1355
16:30-17:30	108	339	4	11	52	11	98	27	78	108	631	10 1477
16:45-17:45	132	354	6	17	62	13	103	29	83	117	654	8 1578
17:00-18:00	131	363	6	21	76	14	111	28	80	125	681	11 1647
17:15-18:15	132	375	8	25	81	14	102	29	77	120	675	10 1648
17:30-18:30	129	394	12	23	82	13	95	24	72	118	629	12 1603

INTERSECTION TURN MOVEMENT COUNT SUMMARY REPORT
TUALATIN VALLEY HIGHWAY AT MURRAY BOULEVARD

21668



DATE OF COUNT: 11/10/99
DAY OF WEEK: Wed
TIME STARTED: 16:00
TIME ENDED: 18:00

TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

djhu

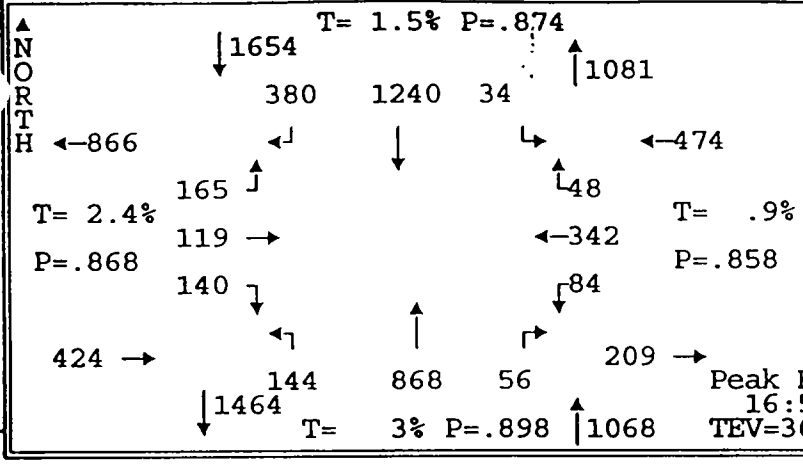
Peak Hour
16:30-17:30
TEV=5159

Traffic Smithy
(503) 641-6333

TIME PERIOD FROM - TO	EAST BOUND ↓	EAST BOUND →	EAST BOUND ↑	SOUTH BOUND ↲	SOUTH BOUND ↓	SOUTH BOUND ↳	NORTH BOUND ↰	NORTH BOUND ↑	NORTH BOUND ↱	WEST BOUND ↓	WEST BOUND ←	WEST BOUND ↑	ALL
16:00-16:05	4	68	20	9	50	13	33	46	14	9	78	17	361
16:05-16:10	4	86	6	6	57	30	16	44	14	16	112	16	407
16:10-16:15	8	115	8	6	49	24	26	43	2	13	116	12	422
16:15-16:20	4	73	6	4	81	17	22	54	12	9	69	14	365
16:20-16:25	3	119	2	6	29	18	22	46	9	17	118	10	399
16:25-16:30	8	96	11	5	59	24	18	26	10	15	123	16	411
16:30-16:35	6	64	17	2	81	11	28	76	17	11	104	14	431
16:35-16:40	0	126	6	2	54	18	21	49	10	19	116	13	434
16:40-16:45	4	59	8	2	70	38	36	51	6	17	105	21	417
16:45-16:50	4	80	9	3	63	21	21	59	12	18	107	5	402
16:50-16:55	8	128	9	3	46	19	24	47	12	17	124	20	457
16:55-17:00	9	96	5	2	54	23	24	54	10	16	130	17	440
17:00-17:05	3	90	4	2	84	21	41	47	9	13	109	17	440
17:05-17:10	1	83	15	3	56	21	23	46	6	27	114	7	402
17:10-17:15	0	95	6	4	55	24	19	45	5	15	147	16	431
17:15-17:20	2	71	18	4	77	14	31	58	5	12	104	16	412
17:20-17:25	4	98	9	2	51	25	19	72	5	20	118	16	439
17:25-17:30	6	100	6	3	51	24	29	52	4	15	137	27	454
17:30-17:35	9	80	3	2	55	27	33	43	1	13	117	12	395
17:35-17:40	2	81	10	1	72	22	24	59	1	23	114	11	420
17:40-17:45	6	112	7	0	56	21	18	49	1	15	147	20	452
17:45-17:50	5	72	3	3	85	22	21	59	3	13	104	10	400
17:50-17:55	0	117	5	3	57	15	23	57	1	9	116	11	414
17:55-18:00	3	58	10	0	56	21	18	39	5	17	132	15	374
Total Survey	103	2167	203	77	1448	513	590	1221	174	369	2761	353	9979
PHF	.56	.87	.72	.73	.9	.83	.89	.9	.74	.89	.96	.8	.964
% Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	
Peds	0	0	0	0	0	0	0	0	0	0	0	0	
Hourly Totals													
16:00-17:00	62	1110	107	50	693	256	291	595	128	177	1302	175	4946
16:15-17:15	50	1109	98	38	732	255	299	600	118	194	1366	170	5029
16:30-17:30	47	1090	112	32	742	259	316	656	101	200	1415	189	5159
16:45-17:45	54	1114	101	29	720	262	306	631	71	204	1468	184	5144
17:00-18:00	41	1057	96	27	755	257	299	626	46	192	1459	178	5033

INTERSECTION TURN MOVEMENT COUNT SUMMARY REPORT
MURRAY BOULEVARD AT HART ROAD

21208



DATE OF COUNT: 09/30/99
DAY OF WEEK: Thu
TIME STARTED: 16:00
TIME ENDED: 18:00

TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

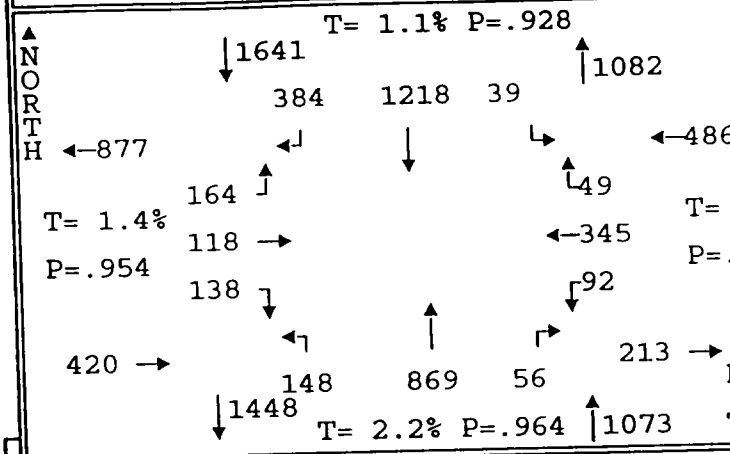
BKQP

Peak Hour
16:50-17:50

Traffic Smithy
(503) 641-6333

TIME PERIOD FROM - TO	EAST BOUND ↓	EAST BOUND →	EAST BOUND ↑	SOUTH BOUND ↵	SOUTH BOUND ↓	SOUTH BOUND ↳	NORTH BOUND ↰	NORTH BOUND ↑	NORTH BOUND ↱	WEST BOUND ↓	WEST BOUND ←	WEST BOUND ↑	ALL
16:00-16:05	8	14	13	15	71	4	10	46	2	3	12	5	203
16:05-16:10	8	7	12	32	102	2	8	77	3	5	20	2	278
16:10-16:15	12	14	14	27	97	2	2	47	1	1	28	0	245
16:15-16:20	9	8	10	26	93	2	12	70	4	6	29	2	271
16:20-16:25	14	9	20	32	63	0	15	70	3	7	18	3	254
16:25-16:30	9	11	12	21	79	7	17	57	3	4	38	2	260
16:30-16:35	15	12	20	16	104	0	2	65	0	1	21	10	266
16:35-16:40	14	11	13	30	83	7	10	41	1	4	33	3	250
16:40-16:45	15	10	13	25	104	0	10	76	3	8	15	3	282
16:45-16:50	20	16	21	21	82	4	16	58	3	2	21	4	268
16:50-16:55	9	7	7	26	138	1	8	77	3	3	25	2	306
16:55-17:00	14	11	21	32	93	0	5	69	2	4	25	1	277
17:00-17:05	9	8	10	39	101	3	12	74	2	3	21	7	289
17:05-17:10	11	9	16	25	78	3	12	57	10	4	41	7	273
17:10-17:15	15	9	10	26	99	5	16	88	7	3	25	3	306
17:15-17:20	13	14	16	28	77	1	5	77	5	10	34	3	283
17:20-17:25	5	14	10	36	100	5	19	70	10	6	39	3	317
17:25-17:30	11	10	17	33	108	2	16	61	2	16	24	3	303
17:30-17:35	8	5	13	38	108	4	19	62	5	7	30	6	305
17:35-17:40	13	5	19	35	141	4	6	89	6	13	20	5	356
17:40-17:45	17	15	14	18	90	4	17	62	1	8	40	4	290
17:45-17:50	15	12	12	44	107	2	9	82	3	7	18	4	315
17:50-17:55	18	13	18	18	85	4	13	51	3	11	34	1	269
17:55-18:00	3	4	9	44	124	2	4	96	2	4	19	3	314
Total Survey	285	248	340	687	2327	68	263	1622	84	140	630	86	6780
PHF	.78	.78	.84	.89	.87	.71	.67	.92	.64	.58	.86	.71	.938
% Trucks	.7	1.6	4.4	1.5	1.5	1.5	1.1	3.3	3.6	.7	1	1.2	2
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	
Peds	0	5	0	0	4	0	0	4	0	0	4	0	
Hourly Totals													
16:00-17:00	147	130	176	303	1109	29	115	753	28	48	285	37	3160
16:15-17:15	154	121	173	319	1117	32	135	802	41	49	312	47	3302
16:30-17:30	151	131	174	337	1167	31	131	813	48	64	324	49	3420
16:45-17:45	145	123	174	357	1215	36	151	844	56	79	345	48	3573
17:00-18:00	138	118	164	384	1218	39	148	869	56	92	345	49	3620

INTERSECTION TURN MOVEMENT COUNT PEAK HOUR REPORT
MURRAY BOULEVARD AT HART ROAD



DATE OF COUNT: 09/30/99
DAY OF WEEK: Thu
TIME STARTED: 16:00
TIME ENDED: 18:00

TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

BKQP

Peak Hour
17:00-18:00
TEV=3620

Traffic Smithy
(503)641-6333

TIME PERIOD FROM - TO	EAST BOUND ↓	EAST BOUND →	EAST BOUND ↑	SOUTH BOUND ↵	SOUTH BOUND ↓	SOUTH BOUND ↳	NORTH BOUND ↰	NORTH BOUND ↑	NORTH BOUND ↱	WEST BOUND ↴	WEST BOUND ←	WEST BOUND ↲	ALL
ALL VEHICLES													
17:00-17:15	35	26	36	90	278	11	40	219	19	10	87	17	868
17:15-17:30	29	38	43	97	285	8	40	208	17	32	97	9	903
17:30-17:45	38	25	46	91	339	12	42	213	12	28	90	15	951
17:45-18:00	36	29	39	106	316	8	26	229	8	22	71	8	898
LIGHT TRUCKS (SINGLE UNIT 2 AXLES)													
17:00-17:15	0	0	1	1	2	0	0	5	0	0	1	0	10
17:15-17:30	0	1	1	1	2	0	0	4	0	0	1	0	10
17:30-17:45	1	0	0	1	1	0	1	4	0	0	0	0	8
17:45-18:00	0	0	1	3	6	0	0	5	1	0	0	0	16
MEDIUM TRUCKS (SINGLE UNIT > 2 AXLES)													
17:00-17:15	0	0	0	0	0	0	0	0	0	0	0	0	0
17:15-17:30	0	0	0	0	0	0	0	1	0	0	0	0	1
17:30-17:45	0	0	0	0	0	0	0	0	0	0	0	0	0
17:45-18:00	0	0	0	0	0	0	0	0	0	0	0	0	0
HEAVY TRUCKS (SEMI-TRACTOR TRAILER)													
17:00-17:15	0	0	0	0	1	0	0	0	0	0	0	0	1
17:15-17:30	0	0	0	0	0	0	0	1	0	0	1	0	2
17:30-17:45	0	0	0	0	0	0	0	1	0	0	0	0	1
17:45-18:00	0	0	1	0	0	0	0	1	0	0	0	0	2
BICYCLES													
17:00-17:15	0	0	0	0	0	0	0	0	0	0	0	0	0
17:15-17:30	0	0	0	0	3	0	0	0	1	0	0	0	4
17:30-17:45	0	0	0	0	2	0	0	0	0	0	0	0	2
17:45-18:00	0	0	0	1	0	0	1	3	0	0	0	0	5

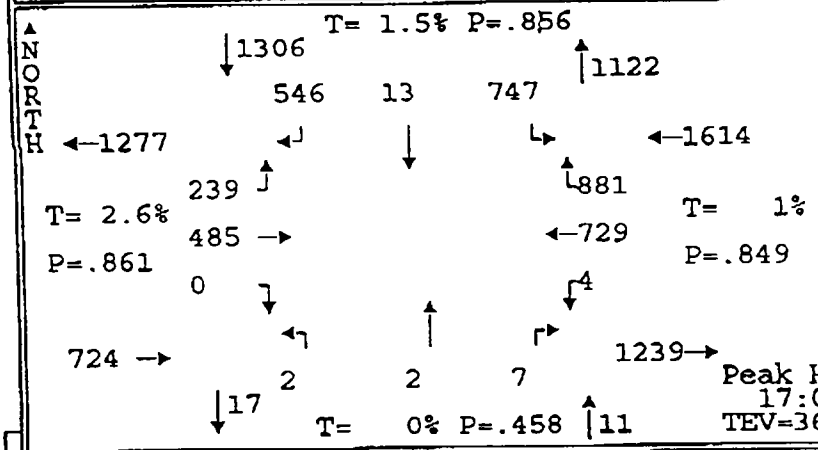
PEDESTRIANS	CROSSWALK USEAGE				ALL
	SOUTH	WEST	EAST	NORTH	
17:00-17:15	1	0	0	0	1
17:15-17:30	1	1	2	1	5
17:30-17:45	2	0	0	0	2
17:45-18:00	0	0	0	0	0

Peak Hour by Movement													
PHF	.91	.78	.89	.91	.9	.81	.88	.95	.74	.72	.89	.72	.951
% Trucks(all)	.7	.8	2.4	1.6	1	0	.7	2.5	1.8	0	.9	0	1.4
% Trucks(M+H)	0	0	.6	0	.1	0	0	.5	0	0	.3	0	.2
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	

Hourly Totals													
16:00-17:00	147	130	176	303	1109	29	115	753	28	48	285	37	3160
16:15-17:15	154	121	173	319	1117	32	135	802	41	49	312	47	3302
16:30-17:30	151	131	174	337	1167	31	131	813	48	64	324	49	3420
16:45-17:45	145	123	174	357	1215	36	151	844	56	79	345	48	3573
17:00-18:00	138	118	164	384	1218	39	148	869	56	92	345	49	3620

INTERSECTION TURN MOVEMENT COUNT SUMMARY REPORT
MURRAY BOULEVARD AT SCHOLLS FERRY ROAD

21970



DATE OF COUNT: 12/07/99
DAY OF WEEK: Tue
TIME STARTED: 16:30
TIME ENDED: 18:30

TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

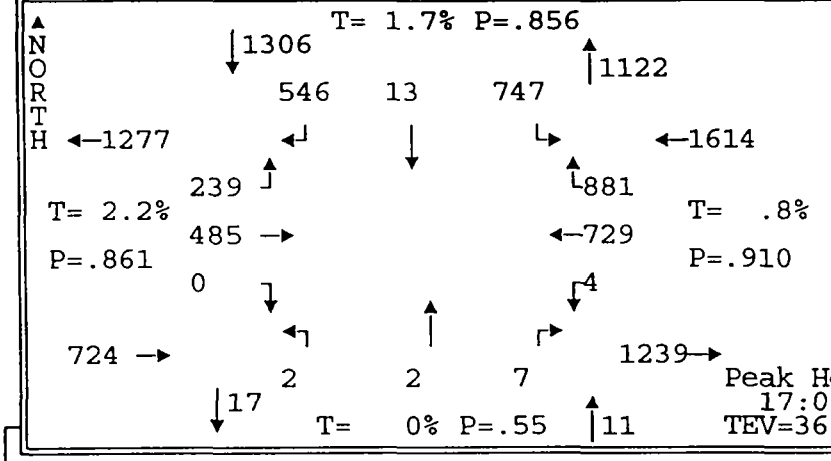
LTIW

Peak Hour
17:00-18:00
TEV=3655

Traffic Smithy
(503) 641-6333

TIME PERIOD FROM - TO	EAST BOUND ↓	EAST BOUND →	EAST BOUND ↑	SOUTH BOUND ↵	SOUTH BOUND ↓	SOUTH BOUND ↳	NORTH BOUND ↰	NORTH BOUND ↑	NORTH BOUND ↱	WEST BOUND ↓	WEST BOUND ←	WEST BOUND ↑	ALL
16:30-16:35	0	20	15	33	1	63	1	0	1	0	37	53	224
16:35-16:40	0	39	17	23	4	55	0	1	1	0	58	55	253
16:40-16:45	0	39	28	38	0	43	1	0	0	1	58	60	268
16:45-16:50	0	36	12	39	0	75	0	0	2	0	57	71	292
16:50-16:55	0	29	29	42	2	58	0	0	0	0	47	57	264
16:55-17:00	1	27	18	26	0	62	0	0	0	0	45	69	248
17:00-17:05	0	27	18	51	0	58	0	0	0	0	59	63	276
17:05-17:10	0	40	21	34	0	42	0	0	0	1	64	61	263
17:10-17:15	0	33	11	47	0	74	0	0	0	0	83	79	327
17:15-17:20	0	43	35	52	0	67	0	0	1	1	61	66	326
17:20-17:25	0	47	7	51	0	78	0	1	0	1	64	104	353
17:25-17:30	0	47	31	39	1	37	1	0	1	0	67	79	303
17:30-17:35	0	36	9	37	3	72	1	0	2	0	70	90	320
17:35-17:40	0	38	31	31	2	55	0	1	0	0	46	73	277
17:40-17:45	0	40	24	49	4	41	0	0	1	1	53	70	283
17:45-17:50	0	49	22	47	0	75	0	0	0	0	62	80	335
17:50-17:55	0	45	18	65	1	87	0	0	1	0	43	61	321
17:55-18:00	0	40	12	43	2	61	0	0	1	0	57	55	271
18:00-18:05	1	26	27	39	0	57	0	0	0	0	42	54	246
18:05-18:10	0	29	15	42	4	58	0	1	1	0	48	61	259
18:10-18:15	0	31	10	29	0	60	1	0	0	1	61	60	253
18:15-18:20	0	29	22	43	0	49	0	0	1	0	62	68	274
18:20-18:25	0	25	11	33	5	71	0	0	0	1	48	58	252
18:25-18:30	0	41	17	30	1	61	0	0	0	0	62	57	269
Total Survey	2	856	460	963	30	1459	5	4	13	7	1354	1604	6757
PHF	0	.89	.78	.85	.36	.84	.25	.5	.58	.5	.88	.81	.908
% Trucks	0	2.6	2.6	2	0	1.2	0	0	0	0	.8	1.1	1.5
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	
Peds	0	16	0	0	10	0	0	17	0	0	4	0	
Hourly Totals													
16:30-17:30	1	427	242	475	8	712	3	2	6	4	700	817	3397
16:45-17:45	1	443	246	498	12	719	2	2	7	4	716	882	3532
17:00-18:00	0	485	239	546	13	747	2	2	7	4	729	881	3655
17:15-18:15	1	471	241	524	17	748	3	3	8	4	674	853	3547
17:30-18:30	1	429	218	488	22	747	2	2	7	3	654	787	3360

INTERSECTI TURN MOVEMENT COUNT PEAK HO REPORT
MURRAY BOULEVARD AT SCHOLLS FERRY ROAD



DATE OF COUNT: 12/07/99
DAY OF WEEK: Tue
TIME STARTED: 16:30
TIME ENDED: 18:30

TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

LTIW

Peak Hour
17:00-18:00
TEV=3655

Traffic Smithy
(503)641-6333

TIME PERIOD FROM - TO	EAST BOUND ↓	EAST BOUND →	EAST BOUND ↑	SOUTH BOUND ↵	SOUTH BOUND ↓	SOUTH BOUND ↳	NORTH BOUND ↰	NORTH BOUND ↑	NORTH BOUND ↱	WEST BOUND ↓	WEST BOUND ←	WEST BOUND ↑	ALL
ALL VEHICLES													
17:00-17:15	0	100	50	132	0	174	0	0	0	1	206	203	866
17:15-17:30	0	137	73	142	1	182	1	1	2	2	192	249	982
17:30-17:45	0	114	64	117	9	168	1	1	3	1	169	233	880
17:45-18:00	0	134	52	155	3	223	0	0	2	0	162	196	927
LIGHT TRUCKS (SINGLE UNIT 2 AXLES)													
17:00-17:15	0	4	0	2	0	1	0	0	0	0	2	1	10
17:15-17:30	0	3	2	3	0	3	0	0	0	0	1	1	13
17:30-17:45	0	2	2	3	0	2	0	0	0	0	0	2	11
17:45-18:00	0	1	0	2	0	5	0	0	0	0	2	2	12
MEDIUM TRUCKS (SINGLE UNIT > 2 AXLES)													
17:00-17:15	0	0	0	0	0	0	0	0	0	0	0	0	0
17:15-17:30	0	1	0	0	0	0	0	0	0	0	0	0	1
17:30-17:45	0	0	0	1	0	0	0	0	0	0	0	0	1
17:45-18:00	0	0	0	0	0	0	0	0	0	0	0	0	0
HEAVY TRUCKS (SEMI-TRACTOR TRAILER)													
17:00-17:15	0	0	0	0	0	0	0	0	0	0	1	0	1
17:15-17:30	0	1	0	0	0	0	0	0	0	0	1	0	2
17:30-17:45	0	0	0	0	0	0	0	0	0	0	0	0	0
17:45-18:00	0	0	0	0	0	0	0	0	0	0	0	0	0
BICYCLES													
17:00-17:15	0	0	0	0	0	0	0	0	0	0	0	0	0
17:15-17:30	0	0	0	0	0	0	0	1	0	0	0	0	1
17:30-17:45	0	0	0	0	0	0	0	0	0	0	0	0	0
17:45-18:00	0	0	0	0	0	0	0	0	0	0	0	0	0

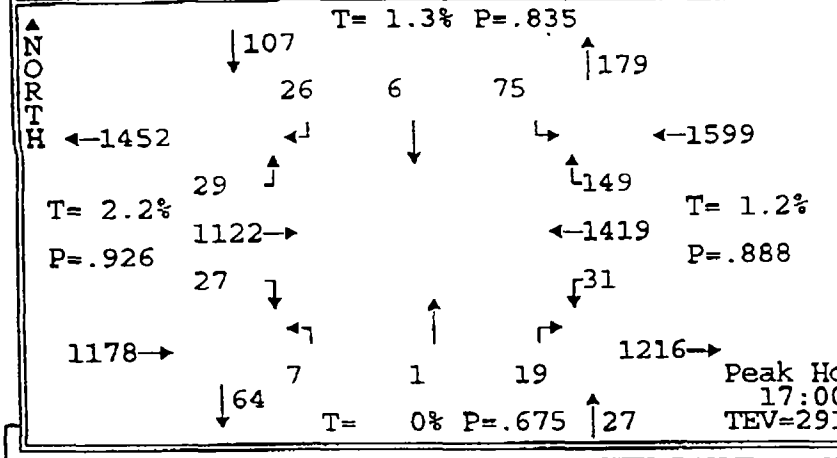
PEDESTRIANS	CROSSWALK USEAGE SOUTH	WEST	EAST	NORTH	ALL
17:00-17:15	0	1	0	0	1
17:15-17:30	1	2	0	0	3
17:30-17:45	0	2	2	3	7
17:45-18:00	0	0	0	0	0

Peak Hour by Movement													
PHF	0	.89	.82	.88	.36	.84	.5	.5	.58	.5	.88	.88	.930
% Trucks(all)	0	2.5	1.7	2	0	1.5	0	0	0	0	1	.7	1.4
% Trucks(M+H)	0	.4	0	.2	0	0	0	0	0	0	.3	0	.1
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	
Hourly Totals													
16:30-17:30	1	427	242	475	8	712	3	2	6	4	700	817	3397
16:45-17:45	1	443	246	498	12	719	2	2	7	4	716	882	3532
17:00-18:00	0	485	239	546	13	747	2	2	7	4	729	881	3655
17:15-18:15	1	471	241	524	17	748	3	3	8	4	674	853	3547
17:30-18:30	1	429	218	488	22	747	2	2	7	3	654	787	3360

INTERSEC. JN TURN MOVEMENT COUNT SUMMA REPORT

DAVIES ROAD AT SCHOLLS FERRY ROAD

22109



DATE OF COUNT: 12/16/99
DAY OF WEEK: Tue
TIME STARTED: 16:00
TIME ENDED: 18:00

TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

DLUO

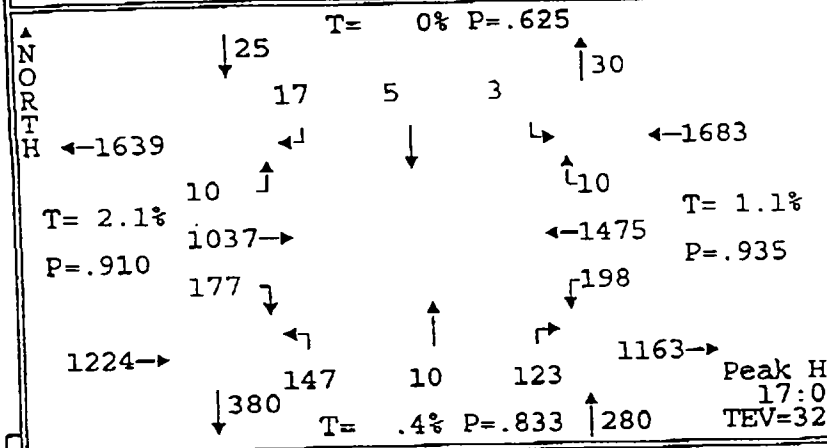
Peak Hour
17:00-18:00
TEV=2911

Traffic Smithy
(503) 641-6333

TIME PERIOD FROM - TO	EAST BOUND ↓	EAST BOUND →	EAST BOUND ↑	SOUTH BOUND ↙	SOUTH BOUND ↓	SOUTH BOUND ↳	NORTH BOUND ↰	NORTH BOUND ↑	NORTH BOUND ↱	WEST BOUND ↓	WEST BOUND ←	WEST BOUND ↑	ALL
16:00-16:05	0	72	0	3	0	11	0	0	1	2	120	14	223
16:05-16:10	2	81	2	2	1	11	1	1	1	0	115	8	225
16:10-16:15	2	64	1	2	0	9	0	0	0	2	119	16	215
16:15-16:20	2	81	1	0	0	8	0	0	0	3	106	11	212
16:20-16:25	2	77	1	1	0	9	0	0	0	1	93	8	192
16:25-16:30	0	75	0	1	0	9	1	1	0	1	78	7	173
16:30-16:35	1	66	5	3	1	6	0	0	3	2	107	13	207
16:35-16:40	1	76	4	4	0	3	0	0	2	3	103	17	213
16:40-16:45	2	73	3	3	2	8	1	0	1	0	117	4	214
16:45-16:50	0	65	3	2	0	4	0	1	1	1	98	14	189
16:50-16:55	2	89	1	1	0	7	1	0	0	2	108	9	220
16:55-17:00	1	73	0	1	0	11	0	0	1	4	94	10	195
17:00-17:05	5	124	0	0	0	7	0	0	1	2	137	11	287
17:05-17:10	2	87	0	3	2	5	0	0	2	5	112	11	229
17:10-17:15	1	94	5	0	0	3	1	0	3	1	101	10	219
17:15-17:20	2	95	7	5	0	4	0	0	1	3	120	17	254
17:20-17:25	1	102	2	2	0	4	0	0	3	2	139	10	265
17:25-17:30	4	84	1	3	0	9	1	0	3	1	146	12	264
17:30-17:35	0	80	3	4	0	9	0	1	2	2	108	15	224
17:35-17:40	1	88	5	2	0	3	0	0	0	5	133	18	255
17:40-17:45	4	77	2	2	1	7	0	0	0	0	111	9	213
17:45-17:50	1	91	1	0	1	5	3	0	1	4	88	10	205
17:50-17:55	2	96	0	3	0	12	1	0	2	4	109	11	240
17:55-18:00	4	104	3	2	2	7	1	0	1	2	115	15	256
Total Survey	42	2014	50	49	10	171	11	4	29	52	2677	280	5389
PHF	.84	.92	.52	.65	.5	.78	.35	.25	.59	.77	.88	.83	.929
% Trucks	2.4	2.3	0	0	0	1.8	0	0	0	0	1.4	0	1.6
Stopped Buses	0	0	0	0	0	0	0	0	0	0	2	0	
Peds	0	2	0	0	0	0	0	0	0	0	0	0	
Hourly Totals													
16:00-17:00	15	892	21	23	4	96	4	3	10	21	1258	131	2478
16:15-17:15	19	980	23	19	5	80	4	2	14	25	1254	125	2550
16:30-17:30	22	1028	31	27	5	71	4	1	21	26	1382	138	2756
16:45-17:45	23	1058	29	25	3	73	3	2	17	28	1407	146	2814
17:00-18:00	27	1122	29	26	6	75	7	1	19	31	1419	149	2911

INTERSECTION TURN MOVEMENT COUNT SUMMARY REPORT
SCHOLLS FERRY ROAD AT 135TH AVENUE

21976



DATE OF COUNT: 12/07/99
DAY OF WEEK: Tue
TIME STARTED: 16:30
TIME ENDED: 18:30

TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

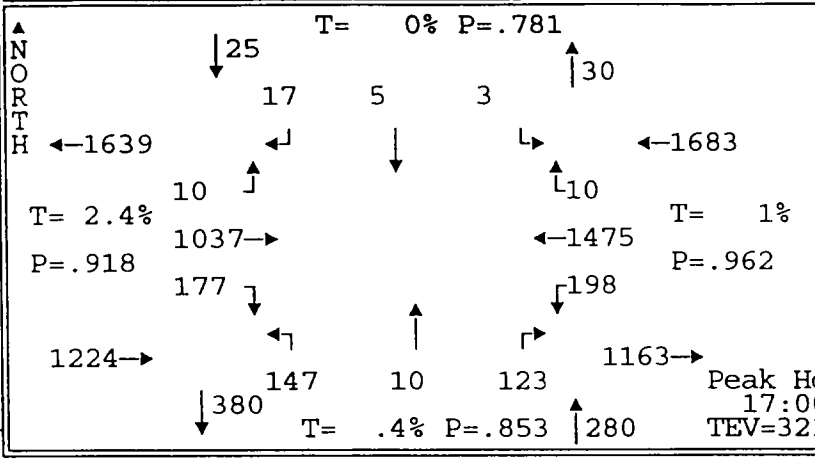
JWIC

Peak Hour
17:00-18:00
TEV=3212

Traffic Smithy
(503) 641-6333

TIME PERIOD FROM - TO	EAST BOUND ↓	EAST BOUND →	SOUTH BOUND ↑	SOUTH BOUND ↵	SOUTH BOUND ↓	SOUTH BOUND ↳	NORTH BOUND ↰	NORTH BOUND ↑	NORTH BOUND ↱	WEST BOUND ↓	WEST BOUND ←	WEST BOUND ↑	ALL
16:30-16:35	13	89	1	2	0	1	4	0	5	24	113	1	253
16:35-16:40	19	89	2	1	1	0	11	1	7	11	115	1	258
16:40-16:45	13	76	0	1	0	1	24	0	8	15	120	0	258
16:45-16:50	28	91	0	0	2	0	8	0	7	15	136	2	289
16:50-16:55	16	64	0	0	0	0	13	3	10	26	112	1	245
16:55-17:00	13	78	0	0	0	1	12	1	10	13	94	0	222
17:00-17:05	18	91	0	1	0	1	14	1	12	7	112	0	257
17:05-17:10	8	67	2	1	1	0	17	2	10	21	127	0	256
17:10-17:15	18	94	0	1	0	0	12	0	11	18	149	1	304
17:15-17:20	16	72	0	2	0	0	19	0	13	13	114	0	249
17:20-17:25	22	102	0	0	3	0	11	0	16	18	136	1	309
17:25-17:30	8	73	0	2	0	1	13	0	10	14	140	1	262
17:30-17:35	19	81	1	4	0	0	16	0	5	22	101	1	250
17:35-17:40	14	99	3	2	0	0	13	0	7	19	142	2	301
17:40-17:45	5	78	0	1	0	0	10	5	8	12	113	1	233
17:45-17:50	17	108	2	2	0	0	7	0	7	20	139	0	302
17:50-17:55	18	107	1	0	0	1	3	1	15	15	90	1	252
17:55-18:00	14	65	1	1	1	0	12	1	9	19	112	2	237
18:00-18:05	12	106	1	2	0	1	6	1	8	14	87	1	239
18:05-18:10	5	67	1	2	0	3	26	0	12	25	79	4	224
18:10-18:15	27	88	1	0	0	1	7	0	10	21	133	1	289
18:15-18:20	17	59	1	2	1	0	12	2	12	15	100	1	222
18:20-18:25	15	63	0	1	1	0	9	0	19	29	119	0	256
18:25-18:30	17	87	1	1	0	0	10	1	12	13	104	0	246
Total Survey	372	1994	18	29	10	11	289	19	243	419	2787	22	6213
PHF	.79	.88	.5	.53	.42	.75	.77	.42	.77	.9	.92	.63	.931
% Trucks	1.1	2.3	5.6	0	0	0	.3	0	.4	.5	1.3	0	1.4
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	
Peds	0	6	0	0	2	0	0	5	0	0	2	0	
Hourly Totals													
16:30-17:30	192	986	5	11	7	5	158	8	119	195	1468	8	3162
16:45-17:45	185	990	6	14	6	3	158	12	119	198	1476	10	3177
17:00-18:00	177	1037	10	17	5	3	147	10	123	198	1475	10	3212
17:15-18:15	177	1046	11	18	4	7	143	8	120	212	1386	15	3147
17:30-18:30	180	1008	13	18	3	6	131	11	124	224	1319	14	3051

INTERSECTION TURN MOVEMENT COUNT PEAK HOUR REPORT
S OLLS FERRY ROAD AT 135TH AVE



DATE OF COUNT: 12/07/99
DAY OF WEEK: Tue
TIME STARTED: 16:30
TIME ENDED: 18:30

TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

JWIC

Peak Hour
17:00-18:00
TEV=3212

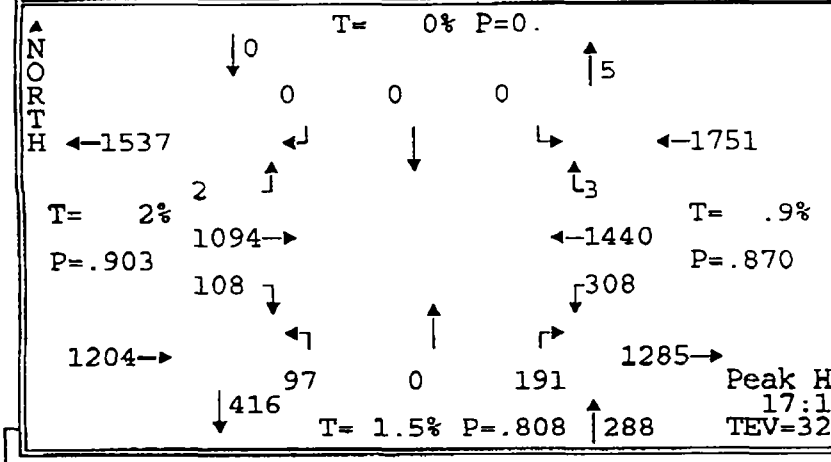
Traffic Smithy
(503)641-6333

TIME PERIOD FROM - TO	EAST BOUND ↓	EAST BOUND →	EAST BOUND ↑	SOUTH BOUND ↲	SOUTH BOUND ↓	SOUTH BOUND ↳	NORTH BOUND ↰	NORTH BOUND ↑	NORTH BOUND ↱	WEST BOUND ↓	WEST BOUND ←	WEST BOUND ↑	ALL
ALL VEHICLES													
17:00-17:15	44	252	2	3	1	1	43	3	33	46	388	1	817
17:15-17:30	46	247	0	4	3	1	43	0	39	45	390	2	820
17:30-17:45	38	258	4	7	0	0	39	5	20	53	356	4	784
17:45-18:00	49	280	4	3	1	1	22	2	31	54	341	3	791
LIGHT TRUCKS (SINGLE UNIT 2 AXLES)													
17:00-17:15	1	6	0	0	0	0	0	0	1	3	0		11
17:15-17:30	1	7	0	0	0	0	0	0	0	4	0		12
17:30-17:45	0	5	0	0	0	0	0	0	0	2	0		7
17:45-18:00	0	5	1	0	0	0	0	0	1	0	3	0	10
MEDIUM TRUCKS (SINGLE UNIT > 2 AXLES)													
17:00-17:15	0	1	0	0	0	0	0	0	0	0	0	0	1
17:15-17:30	0	1	0	0	0	0	0	0	0	0	1	0	2
17:30-17:45	0	0	0	0	0	0	0	0	0	0	1	0	1
17:45-18:00	0	0	0	0	0	0	0	0	0	0	0	0	0
HEAVY TRUCKS (SEMI-TRACTOR TRAILER)													
17:00-17:15	0	0	0	0	0	0	0	0	0	0	1	0	1
17:15-17:30	0	1	0	0	0	0	0	0	0	0	0	0	1
17:30-17:45	0	0	0	0	0	0	0	0	0	0	0	0	0
17:45-18:00	0	0	0	0	0	0	0	0	0	0	0	0	0
BICYCLES													
17:00-17:15	0	0	0	0	0	0	0	0	0	0	0	0	0
17:15-17:30	0	0	0	0	0	0	0	0	0	0	0	0	0
17:30-17:45	0	1	0	0	0	0	0	0	0	0	0	0	1
17:45-18:00	0	0	0	0	0	0	0	0	0	0	0	0	0

PEDESTRIANS	CROSSWALK USEAGE				ALL
	SOUTH	WEST	EAST	NORTH	
17:00-17:15	1	0	0	0	1
17:15-17:30	0	1	1	0	2
17:30-17:45	0	1	0	0	1
17:45-18:00	0	0	0	0	0

Peak Hour by Movement													
PHF	.9	.93	.63	.61	.42	.75	.85	.5	.79	.92	.95	.63	.979
% Trucks(all)	1.1	2.5	10	0	0	0	0	0	.8	.5	1	0	1.4
% Trucks(M+H)	0	.3	0	0	0	0	0	0	0	0	.2	0	.2
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	
Hourly Totals													
16:30-17:30	192	986	5	11	7	5	158	8	119	195	1468	8	3162
16:45-17:45	185	990	6	14	6	3	158	12	119	198	1476	10	3177
17:00-18:00	177	1037	10	17	5	3	147	10	123	198	1475	10	3212
17:15-18:15	177	1046	11	18	4	7	143	8	120	212	1386	15	3147
17:30-18:30	180	1008	13	18	3	6	131	11	124	224	1319	14	3051

INTERSECTION TURN MOVEMENT COUNT SUMMARY REPORT
SCHOLLS FERRY ROAD AT BARROWS ROAD



DATE OF COUNT: 12/07/99
DAY OF WEEK: Tue
TIME STARTED: 16:30
TIME ENDED: 18:30

TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

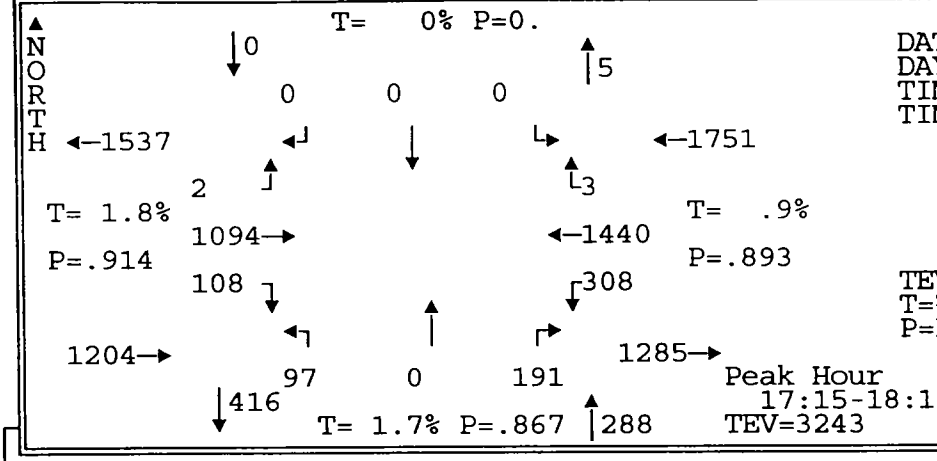
mcwh

Peak Hour
17:15-18:15
TEV=3243

Traffic Smithy
(503) 641-6333

TIME PERIOD FROM - TO	EAST BOUND ↓	EAST BOUND →	EAST BOUND ↑	SOUTH BOUND ↵	SOUTH BOUND ↓	SOUTH BOUND ↳	NORTH BOUND ↰	NORTH BOUND ↑	NORTH BOUND ↱	WEST BOUND ↓	WEST BOUND ←	WEST BOUND ↑	ALL
16:30-16:35	8	74	0	0	0	0	6	0	15	34	87	0	224
16:35-16:40	8	99	1	0	0	0	9	0	23	23	130	0	293
16:40-16:45	12	66	0	0	0	0	3	0	15	26	118	0	240
16:45-16:50	10	108	0	0	0	0	8	0	20	23	120	0	289
16:50-16:55	15	79	0	0	0	0	6	0	9	16	134	0	259
16:55-17:00	8	68	0	0	0	0	12	0	12	29	95	0	224
17:00-17:05	7	95	0	0	0	0	3	0	14	21	132	0	272
17:05-17:10	10	68	0	0	0	0	2	0	10	44	117	0	251
17:10-17:15	5	91	1	0	0	0	21	2	11	17	88	1	237
17:15-17:20	10	95	0	0	0	0	7	0	8	22	149	0	291
17:20-17:25	7	83	0	0	0	0	11	0	16	31	112	0	260
17:25-17:30	10	96	0	0	0	0	10	0	11	22	153	1	303
17:30-17:35	10	91	1	0	0	0	10	0	17	35	141	0	305
17:35-17:40	8	86	0	0	0	0	16	0	21	21	130	0	282
17:40-17:45	6	86	0	0	0	0	3	0	14	16	140	1	266
17:45-17:50	11	95	1	0	0	0	16	0	19	34	94	0	270
17:50-17:55	12	122	0	0	0	0	1	0	9	20	99	1	264
17:55-18:00	6	82	0	0	0	0	1	0	15	34	103	0	241
18:00-18:05	9	98	0	0	0	0	9	0	18	18	86	0	238
18:05-18:10	12	72	0	0	0	0	6	0	20	22	110	0	242
18:10-18:15	7	88	0	0	0	0	7	0	23	33	123	0	281
18:15-18:20	16	77	0	0	0	0	4	0	17	22	134	0	270
18:20-18:25	8	65	0	0	0	0	5	0	19	33	115	0	245
18:25-18:30	7	109	0	0	0	0	3	0	10	25	101	0	255
Total Survey	222	2093	4	0	0	0	179	2	366	621	2811	4	6302
PHF	.93	.9	.5	0	0	0	.67	0	.78	.88	.85	.38	.910
% Trucks	1.8	2.1	0	0	0	0	.6	0	1.9	.8	1	0	1.4
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	
Peds	0	4	0	0	0	0	0	0	0	0	2	0	
Hourly Totals													
16:30-17:30	110	1022	2	0	0	0	98	2	164	308	1435	2	3143
16:45-17:45	106	1046	2	0	0	0	109	2	163	297	1511	3	3239
17:00-18:00	102	1090	3	0	0	0	101	2	165	317	1458	4	3242
17:15-18:15	108	1094	2	0	0	0	97	0	191	308	1440	3	3243
17:30-18:30	112	1071	2	0	0	0	81	0	202	313	1376	2	3159

INTERSECTION TURN MOVEMENT COUNT PEAK HOUR REPORT
SOLLS FERRY ROAD AT BARROWS RD



DATE OF COUNT: 12/07/99
DAY OF WEEK: Tue
TIME STARTED: 16:30
TIME ENDED: 18:30

TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

mcwh

Peak Hour
17:15-18:15
TEV=3243

Traffic Smithy
(503)641-6333

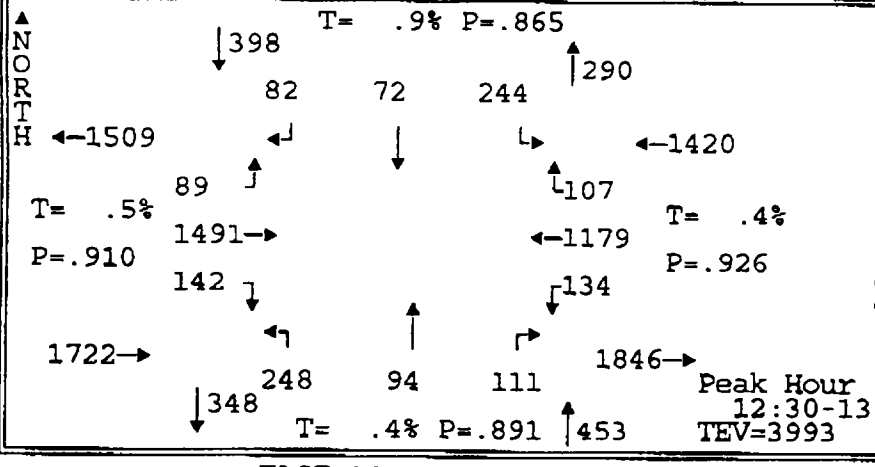
TIME PERIOD FROM - TO	EAST BOUND ↓	EAST BOUND →	EAST BOUND ↑	SOUTH BOUND ↵	SOUTH BOUND ↓	SOUTH BOUND ↳	NORTH BOUND ↰	NORTH BOUND ↑	NORTH BOUND ↱	WEST BOUND ↓	WEST BOUND ←	WEST BOUND ↑	ALL
ALL VEHICLES													
17:15-17:30	27	274	0	0	0	0	28	0	35	75	414	1	854
17:30-17:45	24	263	1	0	0	0	29	0	52	72	411	1	853
17:45-18:00	29	299	1	0	0	0	18	0	43	88	296	1	775
18:00-18:15	28	258	0	0	0	0	22	0	61	73	319	0	761
LIGHT TRUCKS (SINGLE UNIT 2 AXLES)													
17:15-17:30	1	5	0	0	0	0	0	0	0	1	3	0	10
17:30-17:45	0	5	0	0	0	0	1	0	1	2	1	0	10
17:45-18:00	2	5	0	0	0	0	0	0	2	0	2	0	11
18:00-18:15	0	2	0	0	0	0	0	0	1	0	5	0	8
MEDIUM TRUCKS (SINGLE UNIT > 2 AXLES)													
17:15-17:30	0	1	0	0	0	0	0	0	0	0	0	0	1
17:30-17:45	0	0	0	0	0	0	0	0	0	0	0	0	0
17:45-18:00	0	0	0	0	0	0	0	0	0	0	0	0	0
18:00-18:15	0	0	0	0	0	0	0	0	0	0	0	0	0
HEAVY TRUCKS (SEMI-TRACTOR TRAILER)													
17:15-17:30	0	1	0	0	0	0	0	0	0	0	1	0	2
17:30-17:45	0	0	0	0	0	0	0	0	0	0	0	0	0
17:45-18:00	0	0	0	0	0	0	0	0	0	0	0	0	0
18:00-18:15	0	0	0	0	0	0	0	0	0	0	0	0	0
BICYCLES													
17:15-17:30	0	0	0	0	0	0	0	0	0	0	0	0	0
17:30-17:45	0	0	0	0	0	0	0	0	0	0	0	0	0
17:45-18:00	0	0	0	0	0	0	0	0	0	0	1	0	1
18:00-18:15	0	0	0	0	0	0	0	0	0	0	0	0	0

PEDESTRIANS	CROSSWALK USEAGE SOUTH	WEST	EAST	NORTH	ALL
17:15-17:30	0	0	0	1	1
17:30-17:45	0	0	0	1	1
17:45-18:00	0	0	0	0	0
18:00-18:15	1	0	0	0	1

Peak Hour by Movement													
PHF	.93	.91	.5	0	0	0	.84	0	.78	.88	.87	.75	.949
% Trucks(all)	2.8	1.7	0	0	0	0	1	0	2.1	1	.8	0	1.3
% Trucks(M+H)	0	.2	0	0	0	0	0	0	0	0	.1	0	.1
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	

Hourly Totals													
16:30-17:30	110	1022	2	0	0	0	98	2	164	308	1435	2	3143
16:45-17:45	106	1046	2	0	0	0	109	2	163	297	1511	3	3239
17:00-18:00	102	1090	3	0	0	0	101	2	165	317	1458	4	3242
17:15-18:15	108	1094	2	0	0	0	97	0	191	308	1440	3	3243
17:30-18:30	112	1071	2	0	0	0	81	0	202	313	1376	2	3159

INTERSECTION TURN MOVEMENT COUNT SUMMARY REPORT
SCHOLLS FERRY ROAD AT 125TH AVENUE



DATE OF COUNT: 12/04/99
DAY OF WEEK: SAT
TIME STARTED: 12:00
TIME ENDED: 14:00

TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

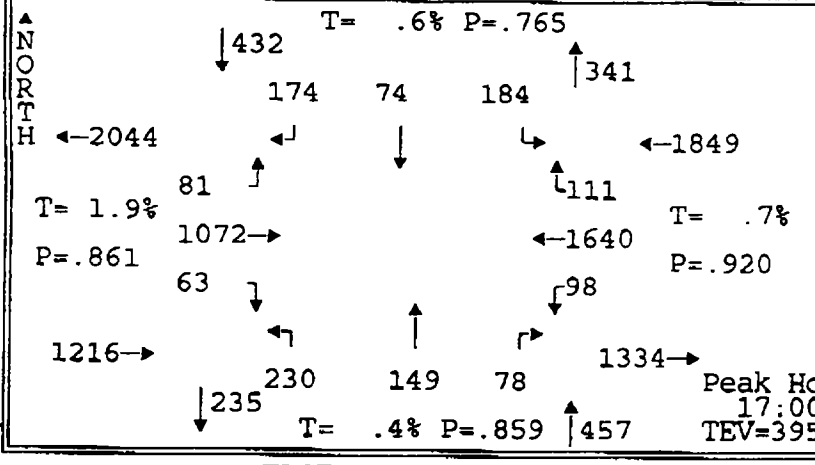
MP03

Peak Hour
12:30-13:30
TEV=3993

Traffic Smithy
(503) 641-6333

TIME PERIOD FROM - TO	EAST BOUND ↓	EAST BOUND →	EAST BOUND ↑	SOUTH BOUND ↵	SOUTH BOUND ↓	SOUTH BOUND ↳	NORTH BOUND ↰	NORTH BOUND ↑	NORTH BOUND ↱	WEST BOUND ↱	WEST BOUND ←	WEST BOUND ↰	ALL
12:00-12:05	9	112	8	16	4	9	13	2	5	11	96	11	296
12:05-12:10	12	122	6	16	6	19	19	1	13	10	121	5	350
12:10-12:15	7	121	12	10	8	16	15	12	6	9	86	8	310
12:15-12:20	9	102	5	5	8	16	11	4	10	19	124	10	323
12:20-12:25	13	121	7	7	9	12	7	7	13	14	69	6	285
12:25-12:30	14	108	10	10	1	23	26	4	9	16	112	7	340
12:30-12:35	11	125	7	4	6	16	22	6	11	12	107	11	338
12:35-12:40	12	118	5	8	6	24	31	4	5	12	115	4	344
12:40-12:45	13	140	6	8	6	17	19	7	13	10	99	13	351
12:45-12:50	11	112	6	6	6	16	19	11	8	5	77	7	284
12:50-12:55	15	140	8	4	3	25	17	9	8	6	92	10	337
12:55-13:00	10	100	1	5	7	23	23	12	8	14	108	8	319
13:00-13:05	7	129	10	9	6	13	12	9	5	10	90	12	312
13:05-13:10	8	105	10	7	5	21	20	7	10	17	85	12	307
13:10-13:15	12	121	9	8	12	26	21	10	12	15	102	10	358
13:15-13:20	19	131	6	6	5	25	29	8	10	15	79	7	340
13:20-13:25	12	152	11	11	4	14	11	2	7	9	113	4	350
13:25-13:30	12	118	10	6	6	24	24	9	14	9	112	9	353
13:30-13:35	9	118	7	8	3	10	13	3	9	10	89	8	287
13:35-13:40	10	110	3	5	5	17	28	8	10	13	115	4	328
13:40-13:45	12	127	9	7	4	13	15	4	7	15	102	8	323
13:45-13:50	9	120	7	7	4	22	28	7	8	13	104	11	340
13:50-13:55	8	133	14	8	10	21	18	8	7	5	87	11	330
13:55-14:00	7	103	5	7	1	26	27	9	14	15	90	8	312
Total Survey	261	2888	182	188	135	448	468	163	222	284	2374	204	7817
PHF	.83	.92	.77	.82	.78	.85	.86	.73	.87	.71	.92	.79	.952
% Trucks	0	.5	1.1	.5	.7	1.1	0	.6	.9	0	.5	0	.5
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	
Peds	0	22	0	0	17	0	0	9	0	0	7	0	
Hourly Totals													
12:00-13:00	136	1421	81	99	70	216	222	79	109	138	1206	100	3877
12:15-13:15	135	1421	84	81	75	232	228	90	112	150	1180	110	3898
12:30-13:30	142	1491	89	82	72	244	248	94	111	134	1179	107	3993
12:45-13:45	137	1463	90	82	66	227	232	92	108	138	1164	99	3898
13:00-14:00	125	1467	101	89	65	232	246	84	113	146	1168	104	3940

INTERSECTION TURN MOVEMENT COUNT SUMMARY REPORT
SCHOLLS FERRY ROAD AT 125TH AVENUE



DATE OF COUNT: 12/07/99
DAY OF WEEK: TUE
TIME STARTED: 16:30
TIME ENDED: 18:30

TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

BK17

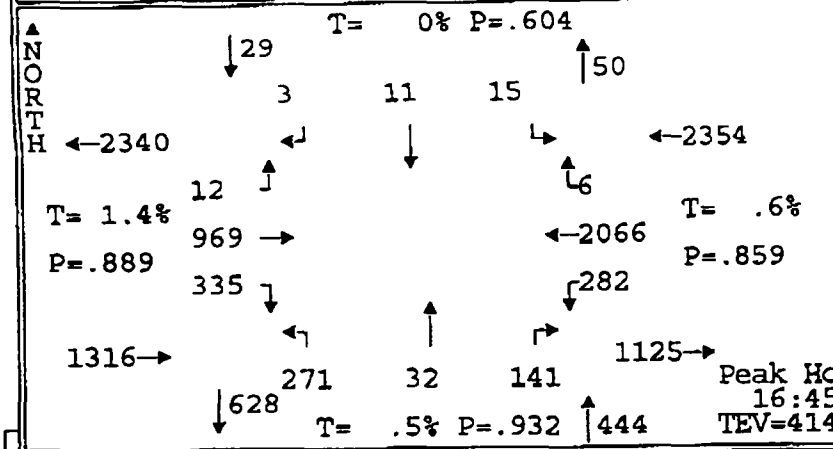
Peak Hour
17:00-18:00
TEV=3954

Traffic Smithy
(503) 641-6333

TIME PERIOD FROM - TO	EAST BOUND ↓	EAST BOUND →	EAST BOUND ↑	SOUTH BOUND ↵	SOUTH BOUND ↓	SOUTH BOUND ↳	NORTH BOUND ↰	NORTH BOUND ↑	NORTH BOUND ↱	WEST BOUND ↴	WEST BOUND ←	WEST BOUND ↑	ALL
16:30-16:35	5	98	8	10	6	9	14	10	5	5	138	14	322
16:35-16:40	7	79	7	9	3	18	17	12	6	6	113	21	298
16:40-16:45	1	77	12	19	8	16	23	13	3	9	92	8	281
16:45-16:50	3	93	6	11	4	16	13	4	3	11	150	11	325
16:50-16:55	7	76	7	17	8	26	15	10	4	5	125	6	306
16:55-17:00	3	66	14	17	10	16	15	9	8	13	95	10	276
17:00-17:05	5	82	4	14	3	16	18	8	7	20	172	15	364
17:05-17:10	6	86	15	15	11	16	20	10	5	4	89	8	285
17:10-17:15	2	89	5	14	3	7	22	20	6	5	171	4	348
17:15-17:20	10	63	2	13	2	18	14	16	6	9	157	1	311
17:20-17:25	7	99	16	13	0	17	21	17	5	8	135	8	346
17:25-17:30	5	91	3	15	3	6	19	13	9	10	161	13	348
17:30-17:35	2	82	5	21	12	25	21	19	9	6	113	6	321
17:35-17:40	10	93	6	17	11	19	10	10	7	8	144	4	339
17:40-17:45	3	68	4	14	2	20	21	4	9	13	109	15	282
17:45-17:50	5	110	8	14	13	15	25	18	1	8	140	6	363
17:50-17:55	4	107	6	10	5	8	18	5	10	4	136	24	337
17:55-18:00	4	102	7	14	9	17	21	9	4	3	113	7	310
18:00-18:05	6	109	7	6	7	12	13	1	4	3	122	2	292
18:05-18:10	8	61	3	17	7	18	18	8	11	10	111	12	284
18:10-18:15	7	99	12	19	3	13	10	7	8	10	120	10	318
18:15-18:20	2	77	12	9	8	13	10	2	16	16	147	5	317
18:20-18:25	7	72	11	20	5	17	22	8	2	7	103	4	278
18:25-18:30	5	116	6	8	5	12	6	7	6	9	135	6	321
Total Survey	124	2095	186	336	148	370	406	240	154	202	3091	220	7572
PHF	.72	.84	.84	.82	.69	.72	.9	.7	.78	.84	.89	.62	.973
% Trucks	0	2.1	1.6	0	1.4	.8	.5	0	.6	0	.8	.5	1.1
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	
Peds	0	4	0	0	6	0	0	12	0	0	0	0	
Hourly Totals													
16:30-17:30	61	999	99	167	61	181	211	142	67	105	1598	119	3810
16:45-17:45	63	988	87	181	69	202	209	140	78	112	1621	101	3851
17:00-18:00	63	1072	81	174	74	184	230	149	78	98	1640	111	3954
17:15-18:15	71	1084	79	173	74	188	211	127	83	92	1561	108	3851
17:30-18:30	63	1096	87	169	87	189	195	98	87	97	1493	101	3762

INTERSECTION TURN MOVEMENT COUNT SUMMARY REPORT
SCHOLLS FERRY ROAD AT 121ST AVENUE

22067



DATE OF COUNT: 12/07/99
DAY OF WEEK: TUE
TIME STARTED: 16:30
TIME ENDED: 18:30

TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

MP10

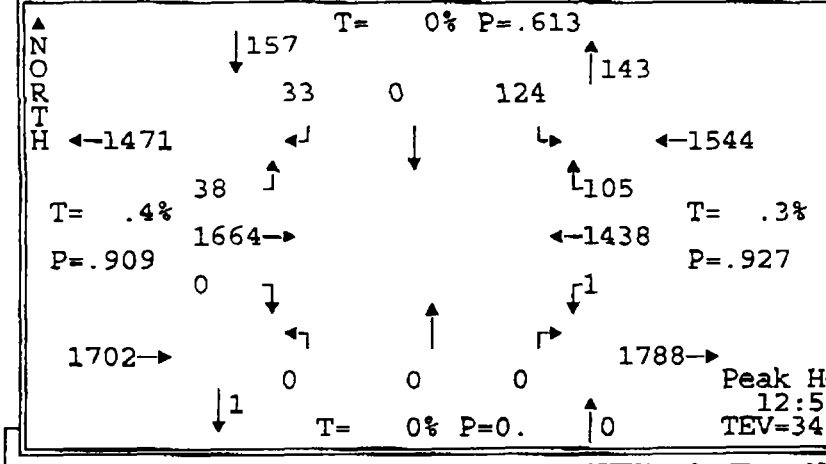
Peak Hour
16:45-17:45
TEV=4143

Traffic Smithy
(503) 641-6333

TIME PERIOD FROM - TO	EAST BOUND ↓	EAST BOUND →	EAST BOUND ↑	SOUTH BOUND ↵	SOUTH BOUND ↓	SOUTH BOUND ↳	NORTH BOUND ↰	NORTH BOUND ↑	NORTH BOUND ↱	WEST BOUND ↓	WEST BOUND ←	WEST BOUND ↑	ALL
16:30-16:35	20	66	0	1	2	2	20	0	18	22	119	1	271
16:35-16:40	19	59	1	0	0	0	15	1	12	28	175	1	311
16:40-16:45	18	76	2	0	1	1	26	1	16	14	103	0	258
16:45-16:50	21	88	1	0	1	0	16	1	11	29	179	1	348
16:50-16:55	35	74	2	0	3	2	24	1	20	25	153	3	342
16:55-17:00	22	53	1	0	1	0	21	0	12	37	155	0	302
17:00-17:05	36	80	0	0	2	4	25	5	8	19	191	0	370
17:05-17:10	25	105	1	0	0	1	24	2	9	24	151	1	343
17:10-17:15	30	69	0	1	1	0	22	0	9	33	226	0	391
17:15-17:20	26	60	1	0	1	1	28	4	16	17	185	0	339
17:20-17:25	36	100	3	1	1	0	25	2	13	18	205	1	405
17:25-17:30	24	102	0	0	0	2	16	2	12	24	201	0	383
17:30-17:35	33	70	2	0	0	2	20	7	11	12	130	0	287
17:35-17:40	27	88	0	0	1	2	25	7	7	22	155	0	334
17:40-17:45	20	80	1	1	0	1	25	1	13	22	135	0	299
17:45-17:50	21	71	0	0	0	0	21	13	8	27	130	0	291
17:50-17:55	13	114	6	0	1	0	22	3	11	22	182	0	374
17:55-18:00	30	84	4	0	2	1	14	4	10	32	129	0	310
18:00-18:05	18	103	1	1	2	2	18	4	13	13	140	0	315
18:05-18:10	22	39	2	0	3	0	18	6	15	29	131	0	265
18:10-18:15	21	105	7	0	0	2	23	1	9	15	165	2	350
18:15-18:20	13	87	0	1	0	4	11	1	26	23	168	0	334
18:20-18:25	18	49	0	1	3	0	12	5	17	20	136	2	263
18:25-18:30	21	109	1	0	3	0	23	3	12	13	159	0	344
Total Survey	569	1931	36	7	28	27	494	74	308	540	3803	12	7829
PHF	.9	.89	.6	.38	.46	.63	.9	.5	.82	.77	.84	.38	.912
% Trucks	1.4	1.5	0	0	0	0	.4	0	.6	1.5	.5	0	.8
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	
Peds	0	2	0	0	3	0	0	0	0	0	0	0	
Hourly Totals													
16:30-17:30	312	932	12	3	13	13	262	19	156	290	2043	8	4063
16:45-17:45	335	969	12	3	11	15	271	32	141	282	2066	6	4143
17:00-18:00	321	1023	18	3	9	14	267	50	127	272	2020	2	4126
17:15-18:15	291	1016	27	3	11	13	255	54	138	253	1888	3	3952
17:30-18:30	257	999	24	4	15	14	232	55	152	250	1760	4	3766

INTERSECTION TURN MOVEMENT COUNT SUMMARY REPORT
SCHOLLS FERRY ROAD AT CONESTOGA DRIVE

22069



DATE OF COUNT: 12/04/99
DAY OF WEEK: SAT
TIME STARTED: 12:00
TIME ENDED: 14:00

TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

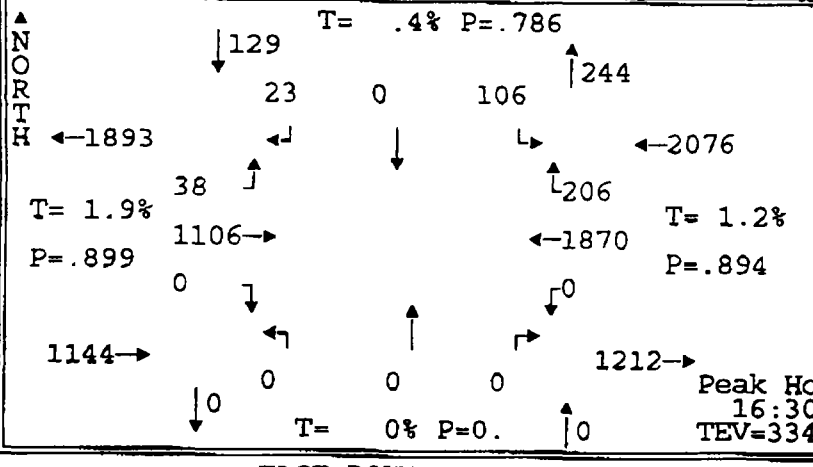
MP01

Peak Hour
12:55-13:55
TEV=3403

Traffic Smithy
(503) 641-6333

TIME PERIOD FROM - TO	EAST BOUND ↓	EAST BOUND →	EAST BOUND ↑	SOUTH BOUND ↲	SOUTH BOUND ↓	SOUTH BOUND ↳	NORTH BOUND ↰	NORTH BOUND ↑	NORTH BOUND ↱	WEST BOUND ↴	WEST BOUND ←	WEST BOUND ↖	ALL
12:00-12:05	0	129	1	4	0	5	0	0	0	0	129	4	272
12:05-12:10	0	127	2	2	0	13	0	0	0	0	116	10	270
12:10-12:15	0	127	1	2	0	5	0	0	0	0	146	13	294
12:15-12:20	0	132	5	2	0	17	0	0	0	0	106	6	268
12:20-12:25	0	143	0	0	0	4	0	0	0	0	105	5	257
12:25-12:30	0	110	3	2	0	10	0	0	0	0	132	5	262
12:30-12:35	0	123	2	3	0	9	0	0	0	0	106	11	254
12:35-12:40	0	157	4	2	0	12	0	0	0	0	115	8	298
12:40-12:45	0	156	4	0	0	7	0	0	0	0	115	10	292
12:45-12:50	0	131	1	3	0	17	0	0	0	0	100	8	260
12:50-12:55	0	146	3	1	0	4	0	0	0	0	86	7	247
12:55-13:00	0	135	4	1	0	8	0	0	0	0	144	10	302
13:00-13:05	0	141	2	2	0	13	0	0	0	0	126	7	291
13:05-13:10	0	113	2	1	0	16	0	0	0	0	119	10	261
13:10-13:15	0	129	2	2	0	9	0	0	0	0	135	14	291
13:15-13:20	0	150	1	0	0	5	0	0	0	0	93	5	254
13:20-13:25	0	135	3	5	0	7	0	0	0	0	137	11	298
13:25-13:30	0	147	3	3	0	7	0	0	0	1	116	9	286
13:30-13:35	0	150	1	4	0	6	0	0	0	0	107	10	278
13:35-13:40	0	107	9	4	0	15	0	0	0	0	117	12	264
13:40-13:45	0	154	3	4	0	13	0	0	0	0	115	4	293
13:45-13:50	0	150	5	6	0	22	0	0	0	0	106	6	295
13:50-13:55	0	153	3	1	0	3	0	0	0	0	123	7	290
13:55-14:00	0	130	2	5	0	8	0	0	0	0	115	11	271
Total Survey	0	3275	66	59	0	235	0	0	0	1	2809	203	6648
PHF	0	.91	.56	.59	0	.62	0	0	0	.25	.92	.85	.968
% Trucks	0	.4	0	0	0	0	0	0	0	0	.3	0	.3
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	
Peds	0	0	0	0	4	0	0	0	0	0	12	0	
Hourly Totals													
12:00-13:00	0	1616	30	22	0	111	0	0	0	0	1400	97	3276
12:15-13:15	0	1616	32	19	0	126	0	0	0	0	1389	101	3283
12:30-13:30	0	1663	31	23	0	114	0	0	0	1	1392	110	3334
12:45-13:45	0	1638	34	30	0	120	0	0	0	1	1395	107	3325
13:00-14:00	0	1659	36	37	0	124	0	0	0	1	1409	106	3372

INTERSECTION TURN MOVEMENT COUNT SUMMARY REPORT
SCHOLLS FERRY ROAD AT CONESTOGA DRIVE



DATE OF COUNT: 12/07/99
DAY OF WEEK: TUE
TIME STARTED: 16:30
TIME ENDED: 18:30

TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

BK21

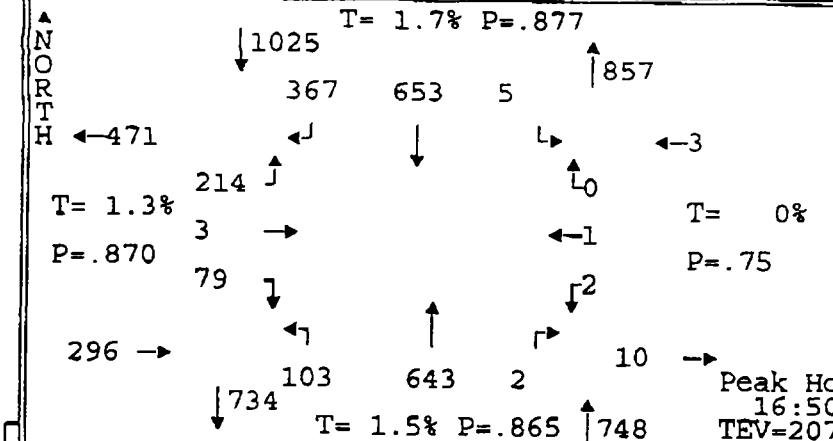
Peak Hour
16:30-17:30
TEV=3349

Traffic Smithy
(503) 641-6333

TIME PERIOD FROM - TO	EAST BOUND ↓	EAST BOUND →	EAST BOUND ↑	SOUTH BOUND ↲	SOUTH BOUND ↓	SOUTH BOUND ↳	NORTH BOUND ↰	NORTH BOUND ↑	NORTH BOUND ↱	WEST BOUND ↓	WEST BOUND ←	WEST BOUND ↑	ALL
16:30-16:35	0	112	1	1	0	5	0	0	0	0	159	14	292
16:35-16:40	0	102	7	2	0	5	0	0	0	0	140	12	268
16:40-16:45	0	93	3	1	0	8	0	0	0	0	146	26	277
16:45-16:50	0	88	2	2	0	6	0	0	0	0	170	13	281
16:50-16:55	0	99	2	0	0	9	0	0	0	0	128	12	250
16:55-17:00	0	92	2	2	0	12	0	0	0	0	160	15	283
17:00-17:05	0	93	2	3	0	7	0	0	0	0	158	20	283
17:05-17:10	0	84	4	6	0	10	0	0	0	0	141	15	260
17:10-17:15	0	80	3	1	0	11	0	0	0	0	197	16	308
17:15-17:20	0	78	4	1	0	12	0	0	0	0	155	17	267
17:20-17:25	0	79	6	2	0	13	0	0	0	0	172	23	295
17:25-17:30	0	106	2	2	0	8	0	0	0	0	144	23	285
17:30-17:35	0	84	3	3	0	14	0	0	0	0	134	18	256
17:35-17:40	0	89	3	3	0	3	0	0	0	0	163	18	279
17:40-17:45	0	86	2	2	0	10	0	0	0	0	118	11	229
17:45-17:50	0	100	3	2	0	7	0	0	0	0	161	10	283
17:50-17:55	0	104	5	3	0	7	0	0	0	0	159	15	293
17:55-18:00	0	115	2	1	0	11	0	0	0	0	139	21	289
18:00-18:05	0	118	0	4	0	2	0	0	0	0	138	14	276
18:05-18:10	0	73	2	3	0	11	0	0	0	0	124	17	230
18:10-18:15	0	97	4	2	0	3	0	0	0	0	177	20	303
18:15-18:20	0	104	5	3	0	7	0	0	0	0	149	18	286
18:20-18:25	0	86	5	1	0	9	0	0	0	0	132	19	252
18:25-18:30	0	103	1	3	0	10	0	0	0	0	150	15	282
Total Survey	0	2265	73	53	0	200	0	0	0	0	3614	402	6607
PHF	0	.9	.73	.52	0	.74	0	0	0	0	.89	.82	.962
% Trucks	0	1.9	0	0	0	.5	0	0	0	0	1.1	2.2	1.4
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	
Peds	0	9	0	0	8	0	0	5	0	0	4	0	
Hourly Totals													
16:30-17:30	0	1106	38	23	0	106	0	0	0	0	1870	206	3349
16:45-17:45	0	1058	35	27	0	115	0	0	0	0	1840	201	3276
17:00-18:00	0	1098	39	29	0	113	0	0	0	0	1841	207	3327
17:15-18:15	0	1129	36	28	0	101	0	0	0	0	1784	207	3285
17:30-18:30	0	1159	35	30	0	94	0	0	0	0	1744	196	3258

INTERSECTION TURN MOVEMENT COUNT SUMMARY REPORT
SCHOLLS FERRY ROAD AT DENNEY ROAD

22795



DATE OF COUNT: 02/29/00
DAY OF WEEK: Tue
TIME STARTED: 16:00
TIME ENDED: 18:00

TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

PBAW

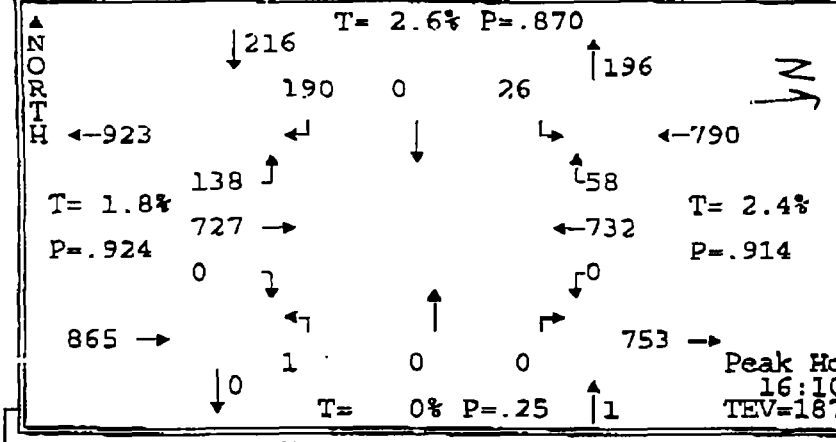
Peak Hour
16:50-17:50
TEV=2072

Traffic Smithy
(503) 641-6333

TIME PERIOD FROM - TO	EAST BOUND ↓	EAST BOUND →	EAST BOUND ↑	SOUTH BOUND ↵	SOUTH BOUND ↓	SOUTH BOUND ↳	NORTH BOUND ↰	NORTH BOUND ↑	NORTH BOUND ↱	WEST BOUND ↓	WEST BOUND ←	WEST BOUND ↑	ALL
16:00-16:05	6	1	14	24	31	0	9	45	0	0	0	0	130
16:05-16:10	4	0	10	21	38	0	4	38	0	0	0	0	115
16:10-16:15	8	0	18	32	37	1	9	43	0	0	0	0	148
16:15-16:20	5	0	16	30	48	1	8	36	0	0	0	0	144
16:20-16:25	10	0	9	22	43	0	11	37	0	0	0	0	132
16:25-16:30	4	0	18	31	38	0	6	31	0	0	0	0	128
16:30-16:35	7	1	21	26	36	1	8	44	0	1	0	0	145
16:35-16:40	5	0	17	34	74	0	9	44	0	0	0	0	183
16:40-16:45	5	0	10	20	54	0	4	39	0	0	0	0	132
16:45-16:50	6	0	15	26	58	0	7	48	0	0	0	0	160
16:50-16:55	8	0	20	34	48	0	6	49	0	0	0	0	165
16:55-17:00	8	0	14	25	54	1	8	42	0	1	0	0	153
17:00-17:05	12	0	22	30	52	1	10	57	0	0	0	0	184
17:05-17:10	8	1	18	24	55	0	8	45	0	0	0	0	159
17:10-17:15	7	0	17	42	68	0	4	54	0	0	0	0	192
17:15-17:20	7	0	17	42	61	0	19	61	1	0	0	0	208
17:20-17:25	1	1	24	32	41	0	10	55	0	0	0	0	164
17:25-17:30	4	0	21	33	43	1	10	60	0	0	0	0	172
17:30-17:35	10	0	17	22	66	0	4	48	0	1	0	0	168
17:35-17:40	3	0	19	27	65	0	12	56	1	0	0	0	183
17:40-17:45	4	0	12	27	49	1	4	56	0	0	0	0	153
17:45-17:50	7	1	13	29	51	1	8	60	0	0	1	0	171
17:50-17:55	10	0	25	23	44	0	12	43	0	0	0	0	157
17:55-18:00	6	0	12	26	63	0	9	42	0	0	0	0	158
Total Survey	155	5	399	682	1217	8	199	1133	2	3	1	0	3804
PHF	.71	.75	.86	.79	.89	.63	.66	.91	.5	.5	.25	0	.918
% Trucks	1.3	0	1.3	1	2	12.5	1.5	1.5	0	0	0	0	1.6
Stopped Buses	0	0	0	0	0	0	0	2	0	0	0	0	
Peds	0	1	0	0	11	0	0	8	0	0	0	0	
Hourly Totals													
16:00-17:00	76	2	182	325	559	4	89	496	0	2	0	0	1735
16:15-17:15	85	2	197	344	628	4	89	526	0	2	0	0	1877
16:30-17:30	78	3	216	368	644	4	103	598	1	2	0	0	2017
16:45-17:45	78	2	216	364	660	4	102	631	2	2	0	0	2061
17:00-18:00	79	3	217	357	658	4	110	637	2	1	1	0	2069

INTERSECTION TURN MOVEMENT COUNT SUMMARY REPORT
SCHOLLS FERRY ROAD AT LAURELWOOD AVENUE

25461



DATE OF COUNT: 11/15/00
DAY OF WEEK: Wed
TIME STARTED: 16:00
TIME ENDED: 18:00

TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

DJQB

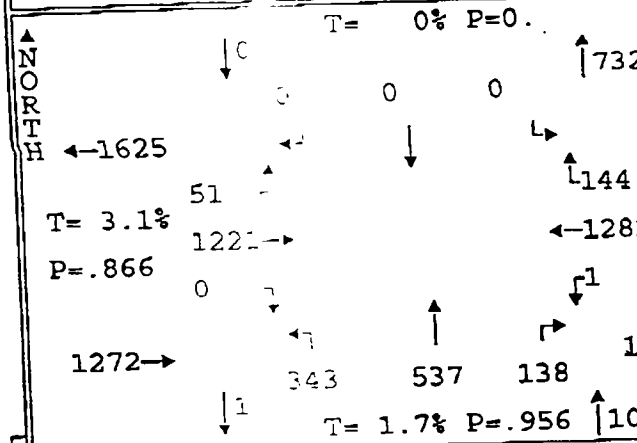
Peak Hour
16:10-17:10
TEV=1872

Traffic Smithy
(503) 641-6333

TIME PERIOD FROM - TO	EAST BOUND ↓	EAST BOUND →	EAST BOUND ↑	SOUTH BOUND ↵	SOUTH BOUND ↓	SOUTH BOUND ↳	NORTH BOUND ↰	NORTH BOUND ↑	NORTH BOUND ↱	WEST BOUND ↓	WEST BOUND ←	WEST BOUND ↑	ALL
16:00-16:05	0	59	12	20	1	5	1	0	0	0	51	11	160
16:05-16:10	0	60	23	13	0	0	0	0	0	1	62	1	160
16:10-16:15	0	68	10	23	0	2	0	0	0	0	55	2	160
16:15-16:20	0	57	11	14	0	2	0	0	0	0	70	10	164
16:20-16:25	0	58	11	16	0	1	0	0	0	0	66	3	155
16:25-16:30	0	51	14	14	0	1	0	0	0	0	53	5	138
16:30-16:35	0	50	10	18	0	2	0	0	0	0	65	8	153
16:35-16:40	0	61	14	16	0	2	0	0	0	0	50	2	145
16:40-16:45	0	67	9	15	0	2	0	0	0	0	61	3	157
16:45-16:50	0	54	15	10	0	1	0	0	0	0	55	2	137
16:50-16:55	0	59	12	14	0	4	0	0	0	0	58	6	153
16:55-17:00	0	62	12	17	0	4	0	0	0	0	66	5	166
17:00-17:05	0	71	7	19	0	4	1	0	0	0	58	5	165
17:05-17:10	0	69	13	14	0	1	0	0	0	0	75	7	179
17:10-17:15	0	58	10	18	0	1	0	0	0	0	44	6	137
17:15-17:20	0	60	14	10	0	2	0	0	0	0	62	4	152
17:20-17:25	0	43	11	9	0	0	0	0	0	0	63	7	133
17:25-17:30	0	53	13	13	0	1	0	0	0	0	69	4	153
17:30-17:35	0	45	17	23	0	0	0	0	0	0	69	6	160
17:35-17:40	0	54	6	14	1	2	0	0	0	0	56	5	138
17:40-17:45	0	55	8	15	0	4	0	0	0	0	69	10	161
17:45-17:50	0	58	8	18	0	2	0	0	0	0	82	5	173
17:50-17:55	0	50	10	20	0	2	0	0	0	0	66	2	150
17:55-18:00	0	48	8	8	0	4	0	0	0	0	61	11	140
Total Survey	0	1370	278	371	2	49	2	0	0	1	1486	130	3689
PHF	0	.9	.88	.9	0	.54	.25	0	0	0	.92	.81	.917
% Trucks	0	2	1.1	2.4	0	4.1	0	0	0	0	2.4	2.3	2.1
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	
Peds	0	0	0	0	0	0	0	0	0	0	2	0	
Hourly Totals													
16:00-17:00	0	706	153	190	1	26	1	0	0	1	712	58	1848
16:15-17:15	0	717	138	185	0	25	1	0	0	0	721	62	1849
16:30-17:30	0	707	140	173	0	24	1	0	0	0	726	59	1830
16:45-17:45	0	683	138	176	1	24	1	0	0	0	744	67	1834
17:00-18:00	0	664	125	181	1	23	1	0	0	0	774	72	1841

21500

INTERSECTION TURN MOVEMENT COUNT SUMMARY REPORT
CANYON RD AT HALL BOULEVARD



DATE OF COUNT: 10/28/99
DAY OF WEEK: Thu
TIME STARTED: 16:00
TIME ENDED: 18:00

TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

DLTI

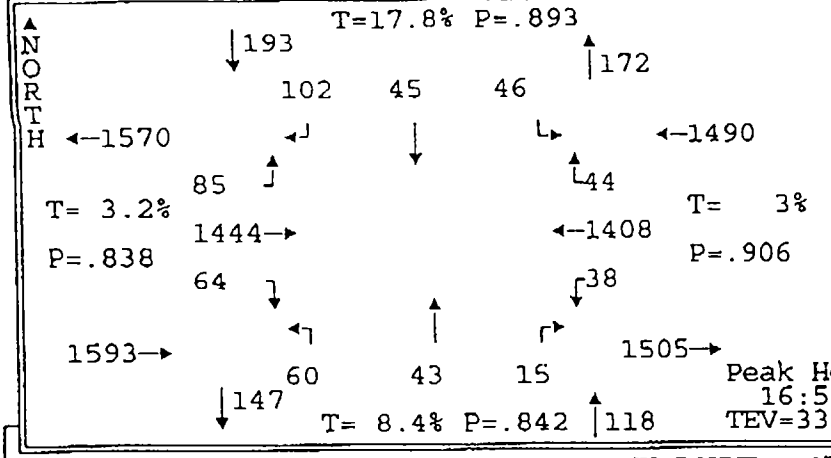
Peak Hour
16:40-17:40
TEV=3717

Traffic Smithy
(503) 641-6333

TIME PERIOD FROM - TO	EAST BOUND ↓	EAST BOUND →	EAST BOUND ↑	SOUTH BOUND ↲	SOUTH BOUND ↓	SOUTH BOUND ↳	NORTH BOUND ↰	NORTH BOUND ↑	NORTH BOUND ↱	WEST BOUND ↓	WEST BOUND ←	WEST BOUND ↑	ALL
16:00-16:05	0	114	4	0	0	0	17	51	10	0	99	13	308
16:05-16:10	0	89	7	0	0	0	17	31	9	0	131	6	290
16:10-16:15	0	115	5	0	0	0	25	38	11	0	113	10	317
16:15-16:20	0	91	6	0	0	0	40	36	19	0	118	9	319
16:20-16:25	0	93	3	0	0	0	17	28	9	0	104	11	265
16:25-16:30	0	102	2	0	0	0	30	37	9	0	102	16	298
16:30-16:35	0	106	1	0	0	0	16	25	7	0	114	9	278
16:35-16:40	0	91	9	0	0	0	25	35	7	0	96	11	274
16:40-16:45	0	106	5	0	0	0	33	43	12	0	114	9	322
16:45-16:50	0	84	2	0	0	0	30	42	13	0	128	11	310
16:50-16:55	0	74	4	0	0	0	25	32	10	0	119	13	277
16:55-17:00	0	89	4	0	0	0	25	56	12	0	98	13	297
17:00-17:05	0	108	4	0	0	0	25	44	9	0	97	9	296
17:05-17:10	0	129	0	0	0	0	33	51	11	0	106	13	343
17:10-17:15	0	121	3	0	0	0	30	51	12	0	106	10	333
17:15-17:20	0	111	3	0	0	0	24	41	9	0	107	11	306
17:20-17:25	0	104	8	0	0	0	34	45	15	0	91	10	307
17:25-17:30	0	105	6	0	0	0	30	51	12	1	107	18	330
17:30-17:35	0	84	7	0	0	0	28	36	15	0	118	15	303
17:35-17:40	0	106	5	0	0	0	26	45	8	0	91	12	293
17:40-17:45	0	121	6	0	0	0	16	38	11	0	104	8	304
17:45-17:50	0	96	7	0	0	0	25	50	9	0	108	8	303
17:50-17:55	0	112	6	0	0	0	20	33	5	0	87	13	276
17:55-18:00	0	112	3	0	0	0	22	44	12	0	111	7	311
Total Survey	0	2463	110	0	0	0	613	983	256	1	2569	265	7260
PHF	0	.85	.61	0	0	0	.93	.89	.82	.25	.89	.8	.946
% Trucks	0	3.2	.9	0	0	0	1.8	.9	4.7	0	3.5	.4	2.8
Stopped Buses	0	0	0	0	0	0	0	0	0	0	3	0	
Peds	0	9	0	0	3	0	0	28	0	0	9	0	
Hourly Totals													
16:00-17:00	0	1154	52	0	0	0	300	454	128	0	1336	131	3551
16:15-17:15	0	1194	43	0	0	0	329	480	130	0	1302	134	3611
16:30-17:30	0	1228	49	0	0	0	330	516	129	1	1283	137	3673
16:45-17:45	0	1236	52	0	0	0	326	532	137	1	1272	143	3699
17:00-18:00	0	1309	58	0	0	0	313	529	128	1	1233	134	3705

INTERSECTION TURN MOVEMENT COUNT SUMMARY REPORT
LOMBARD AVENUE AT CANYON ROAD

13127



DATE OF COUNT: 04/24/98
DAY OF WEEK: Thu
TIME STARTED: 16:00
TIME ENDED: 18:00

TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

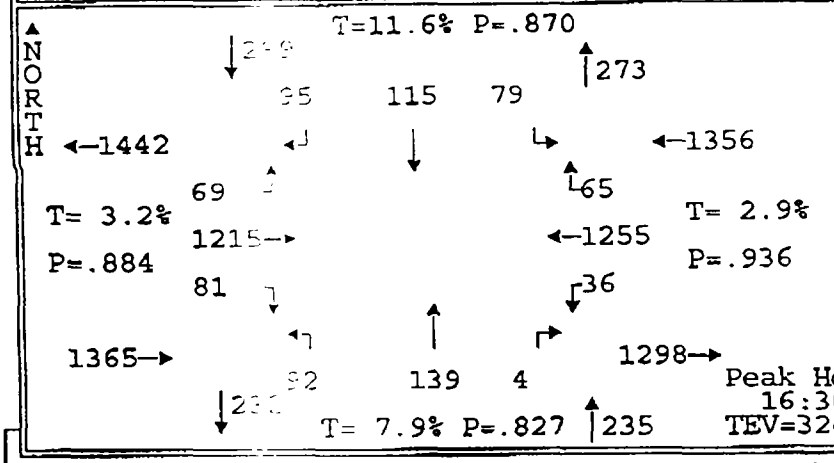
Peak Hour
16:55-17:55
TEV=3394

Traffic Smithy
Traffic Survey Service

TIME PERIOD FROM - TO	EAST BOUND R	EAST BOUND T	SOUTH BOUND L	SOUTH BOUND R	SOUTH BOUND T	NORTH BOUND L	NORTH BOUND L	NORTH BOUND T	WEST BOUND R	WEST BOUND L	WEST BOUND T	WEST BOUND R	ALL
16:00-16:05	1	88	8	4	7	9	10	1	3	4	102	4	241
16:05-16:10	4	117	2	7	3	2	7	0	0	2	114	2	260
16:10-16:15	6	124	4	5	2	4	9	2	4	4	108	3	275
16:15-16:20	2	130	6	19	8	6	7	2	0	1	91	1	273
16:20-16:25	6	98	8	10	0	2	6	6	1	5	113	12	267
16:25-16:30	5	106	8	10	4	5	7	4	0	4	111	4	268
16:30-16:35	7	120	2	11	6	6	6	5	2	2	118	3	288
16:35-16:40	6	90	6	7	4	6	9	7	3	0	109	2	249
16:40-16:45	5	96	7	10	8	4	6	5	0	3	105	3	252
16:45-16:50	5	99	3	13	3	3	4	0	2	4	133	6	275
16:50-16:55	3	144	9	9	3	7	6	1	0	5	117	2	306
16:55-17:00	5	97	4	7	4	1	5	6	3	6	108	2	248
17:00-17:05	5	109	6	8	2	6	6	4	0	4	125	3	278
17:05-17:10	4	97	4	9	0	6	5	2	1	2	113	5	248
17:10-17:15	7	113	6	6	3	1	7	7	0	0	120	3	273
17:15-17:20	3	132	10	8	7	6	7	3	1	7	108	7	299
17:20-17:25	5	115	6	8	4	3	7	2	1	2	131	4	288
17:25-17:30	6	100	10	6	2	3	3	3	1	6	87	4	231
17:30-17:35	1	136	6	10	8	6	3	3	5	0	99	2	279
17:35-17:40	7	121	3	11	2	4	6	5	0	2	123	6	290
17:40-17:45	9	147	13	8	4	1	8	3	2	2	115	1	313
17:45-17:50	3	131	7	10	5	6	2	5	0	3	151	4	327
17:50-17:55	9	146	10	11	4	3	1	0	1	4	128	3	320
17:55-18:00	3	111	6	6	2	2	4	2	0	1	98	0	235
Total Survey	117	2767	154	213	95	102	141	78	30	73	2727	86	6583
PHF	.76	.85	.71	.88	.8	.88	.71	.83	.54	.63	.89	.73	.883
% Trucks	1.7	2.4	18.2	18.8	17.9	15.7	1.4	24.4	0	0	2.6	19.8	4.2
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	
Peds	0	8	0	0	38	0	0	44	0	0	19	0	
Hourly Totals													
16:00-17:00	55	1309	67	112	52	55	82	39	18	40	1329	44	3202
16:15-17:15	60	1299	69	119	45	53	74	49	12	36	1363	46	3225
16:30-17:30	61	1312	73	102	46	52	71	45	14	41	1374	44	3235
16:45-17:45	60	1410	80	103	42	47	67	39	16	40	1379	45	3328
17:00-18:00	62	1458	87	101	43	47	59	39	12	33	1398	420	3381

INTERSECTION TURN MOVEMENT COUNT SUMMARY REPORT
CANYON ROAD AT LOMBARD AVENUE

21413



DATE OF COUNT: 10/21/99
DAY OF WEEK: Thu
TIME STARTED: 16:00
TIME ENDED: 18:00

TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

djhf

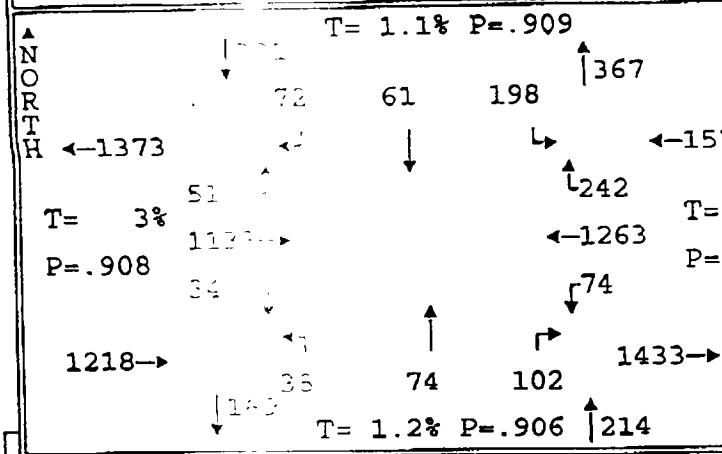
Peak Hour
16:30-17:30
TEV=3245

Traffic Smithy
(503) 641-6333

TIME PERIOD FROM - TO	EAST BOUND ↰	EAST BOUND →	EAST BOUND ↱	SOUTH BOUND ↲	SOUTH BOUND ↓	SOUTH BOUND ↳	NORTH BOUND ↰	NORTH BOUND ↑	NORTH BOUND ↱	WEST BOUND ↰	WEST BOUND ←	WEST BOUND ↱	ALL
16:00-16:05	7	91	6	9	10	7	9	5	0	3	83	5	235
16:05-16:10	10	101	6	3	9	4	10	8	5	6	101	8	271
16:10-16:15	3	78	3	13	2	3	10	6	2	6	108	5	239
16:15-16:20	13	77	9	5	7	2	8	18	0	3	107	6	255
16:20-16:25	7	86	6	7	10	4	9	12	3	2	105	4	255
16:25-16:30	5	61	5	8	8	4	7	24	3	4	108	2	239
16:30-16:35	6	95	3	7	8	8	11	3	0	6	110	9	266
16:35-16:40	6	114	9	5	13	9	12	10	0	1	95	7	281
16:40-16:45	10	83	9	8	4	11	5	13	0	7	92	3	245
16:45-16:50	6	108	8	12	10	11	16	15	0	3	99	8	296
16:50-16:55	9	110	4	8	7	4	7	9	0	2	114	5	279
16:55-17:00	4	73	6	4	7	5	6	8	3	2	106	6	230
17:00-17:05	5	86	4	11	12	6	5	16	1	1	118	8	273
17:05-17:10	8	116	6	5	9	3	9	10	0	1	95	1	263
17:10-17:15	8	113	4	8	10	3	5	12	0	4	121	6	294
17:15-17:20	6	115	7	9	11	4	10	10	0	1	84	6	263
17:20-17:25	6	121	6	9	13	9	3	17	0	3	113	3	303
17:25-17:30	7	81	3	9	11	6	3	16	0	5	108	3	252
17:30-17:35	3	87	6	9	12	4	9	14	1	0	101	9	255
17:35-17:40	4	72	6	5	5	5	3	9	0	1	105	5	220
17:40-17:45	5	111	7	9	9	2	8	3	0	3	109	4	270
17:45-17:50	8	101	7	12	8	5	7	11	0	0	106	6	271
17:50-17:55	2	105	6	9	7	9	1	15	3	3	82	7	249
17:55-18:00	3	99	10	12	9	7	3	8	1	2	89	9	252
Total Survey	151	2284	146	196	211	135	176	272	22	69	2459	135	6256
PHF	.81	.87	.66	.85	.82	.64	.7	.81	.25	.64	.93	.86	.943
% Trucks	1.3	2.4	18.5	14.8	10	9.6	2.8	11.8	0	0	2.5	11.9	4.2
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	
Peds	0	17	0	0	23	0	0	105	0	0	12	0	
Hourly Totals													
16:00-17:00	86	1077	74	89	95	72	110	131	16	45	1228	68	3091
16:15-17:15	87	1122	73	88	105	70	100	150	10	36	1270	65	3176
16:30-17:30	81	1215	69	95	115	79	92	139	4	36	1255	65	3245
16:45-17:45	71	1193	67	98	116	62	84	139	5	26	1273	64	3198
17:00-18:00	65	1207	72	107	116	63	66	141	6	24	1231	67	3165

INTERSECTION TURN MOVEMENT COUNT SUMMARY REPORT
CANYON ROAD AT 117TH AVENUE/BROADWAY

21411



DATE OF COUNT: 10/21/99
DAY OF WEEK: Thu
TIME STARTED: 16:00
TIME ENDED: 18:00

TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

erys

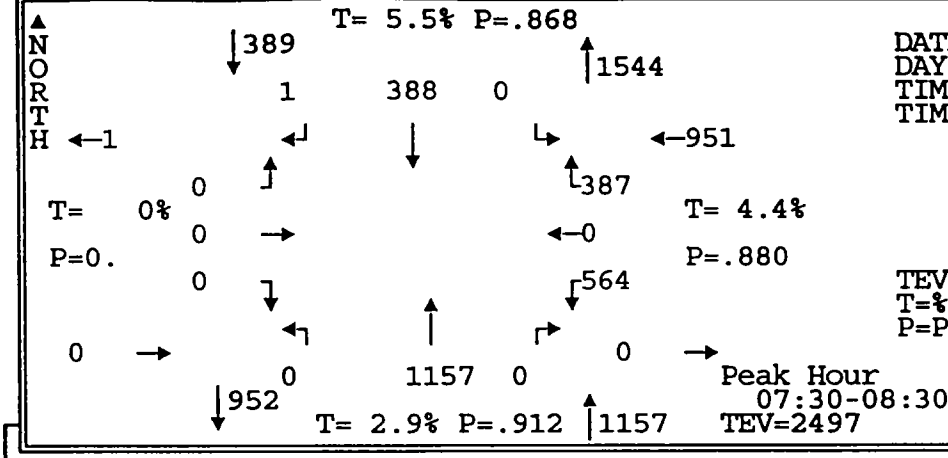
Peak Hour
16:35-17:35
TEV=3342

Traffic Smithy
(503) 641-6333

TIME PERIOD FROM - TO	EAST BOUND ↰	→	↱	SOUTH BOUND ↰	↓	↳	NORTH BOUND ↰	↑	↱	WEST BOUND ↰	←	↳	ALL
16:00-16:05	4	72	6	2	3	19	1	5	8	2	85	15	222
16:05-16:10	3	84	3	5	4	21	3	8	17	2	80	26	256
16:10-16:15	5	93	4	8	2	19	6	2	5	13	103	24	284
16:15-16:20	3	90	4	7	7	22	5	4	15	7	104	20	288
16:20-16:25	1	75	2	6	4	10	4	4	14	4	105	20	249
16:25-16:30	3	85	4	4	7	12	2	5	9	12	100	29	272
16:30-16:35	1	66	6	5	6	13	5	10	9	3	105	20	249
16:35-16:40	3	91	4	5	6	16	3	8	5	10	110	14	275
16:40-16:45	4	103	2	5	5	18	1	4	15	7	103	21	288
16:45-16:50	2	106	5	7	11	18	3	4	9	4	92	19	280
16:50-16:55	1	92	6	4	2	16	5	5	10	4	97	21	263
16:55-17:00	4	90	5	6	5	16	4	10	5	8	115	25	293
17:00-17:05	6	75	3	4	3	18	3	9	8	8	105	16	258
17:05-17:10	1	80	5	8	7	10	3	5	11	7	121	24	282
17:10-17:15	1	87	6	8	5	21	3	3	9	2	89	21	255
17:15-17:20	1	97	4	6	4	17	2	6	6	10	122	18	293
17:20-17:25	4	109	1	6	3	14	4	7	12	3	93	20	276
17:25-17:30	1	111	7	6	6	14	3	5	7	6	110	17	293
17:30-17:35	6	92	3	7	4	20	4	8	5	5	106	26	286
17:35-17:40	6	75	5	8	8	22	1	5	10	5	98	22	265
17:40-17:45	3	63	3	4	10	22	2	5	9	5	107	20	253
17:45-17:50	3	82	5	7	10	15	4	9	10	5	110	20	280
17:50-17:55	4	90	5	9	6	26	2	1	10	7	99	27	286
17:55-18:00	3	115	6	7	4	25	4	4	3	6	85	15	277
Total Survey	73	2123	104	144	132	424	77	136	221	145	2444	500	6523
PHF	.77	.89	.8	.82	.69	.95	.79	.77	.75	.8	.93	.93	.969
% Trucks	0	3	3.8	3.5	0	.7	1.3	1.5	.9	.7	2.7	.6	2.3
Stopped Buses	0	2	0	0	1	0	0	0	0	0	0	0	
Peds	0	17	0	0	35	0	0	27	0	0	16	0	
Hourly Totals													
16:00-17:00	34	1047	51	64	62	200	42	69	121	76	1199	254	3219
16:15-17:15	30	1040	52	69	68	190	41	71	119	76	1246	250	3252
16:30-17:30	29	1107	54	70	63	191	39	76	106	72	1262	236	3305
16:45-17:45	36	1077	53	74	68	208	37	72	101	67	1255	249	3297
17:00-18:00	39	1076	53	80	70	224	35	67	100	69	1245	246	3304

INTERSECTION TURN MOVEMENT COUNT SUMMARY REPORT
SCHOLLS FERRY ROAD AT HIGHWAY 217 NORTHBOUND OFF RAMP

19268



DATE OF COUNT: 04/14/99
DAY OF WEEK: Wed
TIME STARTED: 07:00
TIME ENDED: 09:00

TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

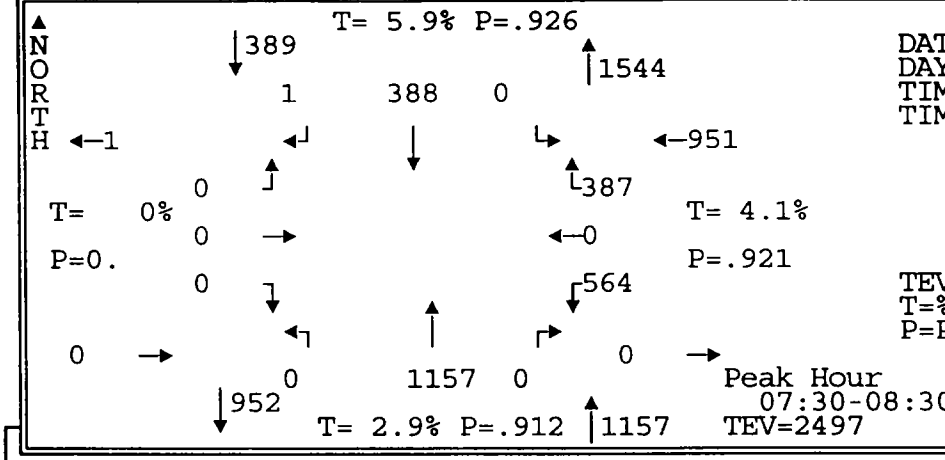
GHMT

Peak Hour
07:30-08:30
TEV=2497

Traffic Smithy
(503) 641-6333

TIME PERIOD FROM - TO	EAST BOUND ↓	EAST BOUND →	EAST BOUND ↑	SOUTH BOUND ↲	SOUTH BOUND ↓	SOUTH BOUND ↳	NORTH BOUND ↰	NORTH BOUND ↑	NORTH BOUND ↱	WEST BOUND ↓	WEST BOUND ←	WEST BOUND ↑	ALL
07:00-07:05	0	0	0	0	17	0	0	84	0	35	0	18	154
07:05-07:10	0	0	0	1	21	0	0	103	0	38	0	12	175
07:10-07:15	0	0	0	0	14	0	0	116	0	28	0	18	176
07:15-07:20	0	0	0	0	21	0	0	95	0	27	0	22	165
07:20-07:25	0	0	0	0	12	0	0	133	0	32	0	25	202
07:25-07:30	0	0	0	0	18	0	0	128	0	30	0	39	215
07:30-07:35	0	0	0	0	22	0	0	118	0	39	0	30	209
07:35-07:40	0	0	0	0	35	0	0	109	0	52	0	28	224
07:40-07:45	0	0	0	0	34	0	0	90	0	30	0	31	185
07:45-07:50	0	0	0	0	30	0	0	107	0	42	0	27	206
07:50-07:55	0	0	0	0	30	0	0	103	0	54	0	46	233
07:55-08:00	0	0	0	1	44	0	0	78	0	48	0	35	206
08:00-08:05	0	0	0	0	21	0	0	85	0	56	0	31	193
08:05-08:10	0	0	0	0	22	0	0	104	0	55	0	32	213
08:10-08:15	0	0	0	0	47	0	0	59	0	50	0	34	190
08:15-08:20	0	0	0	0	33	0	0	94	0	36	0	32	195
08:20-08:25	0	0	0	0	32	0	0	91	0	53	0	26	202
08:25-08:30	0	0	0	0	38	0	0	119	0	49	0	35	241
08:30-08:35	0	0	0	1	30	0	0	72	0	44	0	24	171
08:35-08:40	0	0	0	0	35	0	0	93	0	39	0	19	186
08:40-08:45	0	0	0	0	30	0	0	81	0	41	0	29	181
08:45-08:50	0	0	0	0	28	0	0	92	0	42	0	31	193
08:50-08:55	0	0	0	0	45	0	0	80	0	50	0	32	207
08:55-09:00	0	0	0	0	29	0	0	68	0	38	0	27	162
Total Survey	0	0	0	3	688	0	0	2302	0	1008	0	683	4684
PHF	0	0	0	.25	.87	0	0	.91	0	.88	0	.86	.967
% Trucks	0	0	0	0	5.5	0	0	2.9	0	4.8	0	3.8	3.8
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	
Peds	0	0	0	0	0	0	0	2	0	0	0	0	
Hourly Totals													
07:00-08:00	0	0	0	2	298	0	0	1264	0	455	0	331	2350
07:15-08:15	0	0	0	1	336	0	0	1209	0	515	0	380	2441
07:30-08:30	0	0	0	1	388	0	0	1157	0	564	0	387	2497
07:45-08:45	0	0	0	2	392	0	0	1086	0	567	0	370	2417
08:00-09:00	0	0	0	1	390	0	0	1038	0	553	0	352	2334

INTERSECTION TURN MOVEMENT COUNT PEAK HOUR REPORT
SCHOLLS FERRY ROAD AT HIGHWAY 217 NORTHBOUND OFF RAMP



DATE OF COUNT: 04/14/99
DAY OF WEEK: Wed
TIME STARTED: 07:00
TIME ENDED: 09:00

TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

GHMT

Peak Hour
07:30-08:30
TEV=2497

Traffic Smithy
(503)641-6333

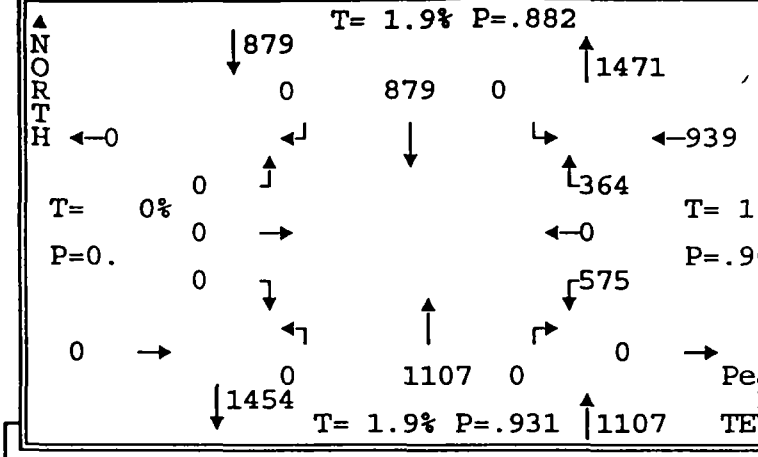
TIME PERIOD FROM - TO	EAST BOUND ↓	EAST BOUND →	EAST BOUND ↑	SOUTH BOUND ↵	SOUTH BOUND ↓	SOUTH BOUND ↳	NORTH BOUND ↰	NORTH BOUND ↑	NORTH BOUND ↱	WEST BOUND ↓	WEST BOUND ←	WEST BOUND ↑	ALL
ALL VEHICLES													
07:30-07:45	0	0	0	0	91	0	0	317	0	121	0	89	618
07:45-08:00	0	0	0	1	104	0	0	288	0	144	0	108	645
08:00-08:15	0	0	0	0	90	0	0	248	0	161	0	97	596
08:15-08:30	0	0	0	0	103	0	0	304	0	138	0	93	638
LIGHT TRUCKS (SINGLE UNIT 2 AXLES)													
07:30-07:45	0	0	0	0	5	0	0	6	0	3	0	4	18
07:45-08:00	0	0	0	0	2	0	0	6	0	3	0	0	11
08:00-08:15	0	0	0	0	6	0	0	6	0	5	0	1	18
08:15-08:30	0	0	0	0	4	0	0	6	0	5	0	7	22
MEDIUM TRUCKS (SINGLE UNIT > 2 AXLES)													
07:30-07:45	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45-08:00	0	0	0	0	1	0	0	5	0	1	0	0	7
08:00-08:15	0	0	0	0	1	0	0	0	0	2	0	0	3
08:15-08:30	0	0	0	0	3	0	0	1	0	1	0	0	5
HEAVY TRUCKS (SEMI-TRACTOR TRAILER)													
07:30-07:45	0	0	0	0	0	0	0	0	0	1	0	1	2
07:45-08:00	0	0	0	0	0	0	0	0	0	2	0	0	2
08:00-08:15	0	0	0	0	0	0	0	2	0	2	0	1	5
08:15-08:30	0	0	0	0	1	0	0	1	0	0	0	0	2
BICYCLES													
07:30-07:45	0	0	0	0	0	0	0	1	0	0	0	0	1
07:45-08:00	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00-08:15	0	0	0	0	1	0	0	0	0	0	0	0	1
08:15-08:30	0	0	0	0	0	0	0	0	0	0	0	0	0

PEDESTRIANS	CROSSWALK USEAGE SOUTH	WEST	EAST	NORTH	ALL
07:30-07:45	0	0	0	0	0
07:45-08:00	0	0	0	0	0
08:00-08:15	0	0	0	0	0
08:15-08:30	0	0	0	0	0

Peak Hour by Movement													
PHF	0	0	0	.25	.93	0	0	.91	0	.88	0	.9	.967
% Trucks(all)	0	0	0	0	5.9	0	0	2.9	0	4.4	0	3.6	3.8
% Trucks(M+H)	0	0	0	0	1.5	0	0	.8	0	1.6	0	.5	1
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	
Hourly Totals													
07:00-08:00	0	0	0	2	298	0	0	1264	0	455	0	331	2350
07:15-08:15	0	0	0	1	336	0	0	1209	0	515	0	380	2441
07:30-08:30	0	0	0	1	388	0	0	1157	0	564	0	387	2497
07:45-08:45	0	0	0	2	392	0	0	1086	0	567	0	370	2417
08:00-09:00	0	0	0	1	390	0	0	1038	0	553	0	352	2334

INTERSECTION TURN MOVEMENT COUNT SUMMARY REPORT
SCHOLLS FERRY ROAD AT HIGHWAY 217 NORTHBOUND OFF RAMP

19269



DATE OF COUNT: 04/14/99
DAY OF WEEK: Wed
TIME STARTED: 16:00
TIME ENDED: 18:00

TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

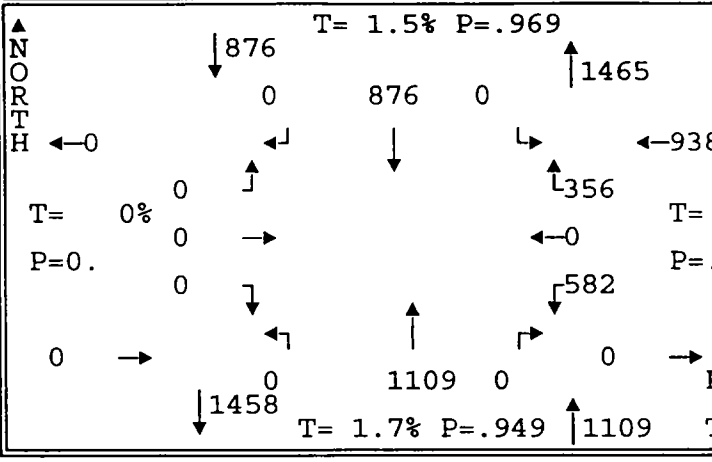
DJCC

Peak Hour
16:35-17:35
TEV=2925

Traffic Smithy
(503) 641-6333

TIME PERIOD FROM - TO	EAST BOUND ↓	EAST BOUND →	EAST BOUND ↑	SOUTH BOUND ↲	SOUTH BOUND ↓	SOUTH BOUND ↳	NORTH BOUND ↰	NORTH BOUND ↑	WEST BOUND ↱	WEST BOUND ↓	WEST BOUND ←	WEST BOUND ↑	ALL
16:00-16:05	0	0	0	0	74	6	0	91	0	53	0	23	247
16:05-16:10	0	0	0	0	74	0	0	75	0	47	0	35	231
16:10-16:15	0	0	0	0	52	0	0	86	0	43	0	38	219
16:15-16:20	0	0	0	0	55	0	0	97	0	41	0	28	221
16:20-16:25	0	0	0	0	55	0	0	75	0	56	0	33	219
16:25-16:30	0	0	0	0	68	0	0	72	0	44	0	36	220
16:30-16:35	0	0	0	0	65	0	0	98	0	50	0	19	232
16:35-16:40	0	0	0	0	82	0	0	87	0	55	0	19	243
16:40-16:45	0	0	0	0	77	0	0	74	0	54	0	33	238
16:45-16:50	0	0	0	0	90	0	0	94	0	55	0	37	276
16:50-16:55	0	0	0	0	62	0	0	95	0	43	0	38	238
16:55-17:00	0	0	0	0	74	0	0	80	0	43	0	22	219
17:00-17:05	0	0	0	0	67	0	0	97	0	48	0	35	247
17:05-17:10	0	0	0	0	79	0	0	99	0	43	0	27	248
17:10-17:15	0	0	0	0	58	0	0	96	0	57	0	42	253
17:15-17:20	0	0	0	0	79	0	0	102	0	46	0	33	260
17:20-17:25	0	0	0	0	69	0	0	95	0	51	0	19	234
17:25-17:30	0	0	0	0	74	0	0	92	0	37	0	32	235
17:30-17:35	0	0	0	0	68	0	0	96	0	43	0	27	234
17:35-17:40	0	0	0	0	56	0	0	85	0	54	0	30	225
17:40-17:45	0	0	0	0	63	0	0	100	0	51	0	21	235
17:45-17:50	0	0	0	0	66	0	0	84	0	45	0	33	228
17:50-17:55	0	0	0	0	67	0	0	105	0	44	0	42	258
17:55-18:00	0	0	0	0	56	0	0	99	0	49	0	45	249
Total Survey	0	0	0	0	1630	6	0	2174	0	1152	0	747	5709
PHF	0	0	0	0	.88	0	0	.93	0	.88	0	.84	.960
% Trucks	0	0	0	0	1.9	0	0	1.9	0	2.1	0	.5	1.8
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	
Peds	0	0	0	0	0	0	0	1	0	0	0	0	
Hourly Totals													
16:00-17:00	0	0	0	0	828	6	0	1024	0	584	0	361	2803
16:15-17:15	0	0	0	0	832	0	0	1064	0	589	0	369	2854
16:30-17:30	0	0	0	0	876	0	0	1109	0	582	0	356	2923
16:45-17:45	0	0	0	0	839	0	0	1131	0	571	0	363	2904
17:00-18:00	0	0	0	0	802	0	0	1150	0	568	0	386	2906

INTERSECTION TURN MOVEMENT COUNT PEAK HOUR REPORT
SCHOLLS FERRY ROAD AT HIGHWAY 217 NORTHBOUND OFF RAMP



DATE OF COUNT: 04/14/99
DAY OF WEEK: Wed
TIME STARTED: 16:00
TIME ENDED: 18:00

TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

DJCC

Peak Hour
16:30-17:30
TEV=2923

Traffic Smithy
(503)641-6333

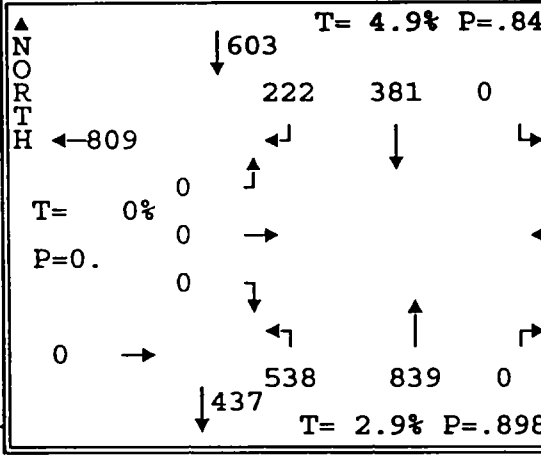
TIME PERIOD FROM - TO	EAST BOUND ↓	EAST BOUND →	EAST BOUND ↑	SOUTH BOUND ↲	SOUTH BOUND ↓	SOUTH BOUND ↳	NORTH BOUND ↰	NORTH BOUND ↑	NORTH BOUND ↱	WEST BOUND ↓	WEST BOUND ←	WEST BOUND ↑	ALL
ALL VEHICLES													
16:30-16:45	0	0	0	0	224	0	0	259	0	159	0	71	713
16:45-17:00	0	0	0	0	226	0	0	269	0	141	0	97	733
17:00-17:15	0	0	0	0	204	0	0	292	0	148	0	104	748
17:15-17:30	0	0	0	0	222	0	0	289	0	134	0	84	729
LIGHT TRUCKS (SINGLE UNIT 2 AXLES)													
16:30-16:45	0	0	0	0	4	0	0	2	0	1	0	0	7
16:45-17:00	0	0	0	0	2	0	0	7	0	3	0	1	13
17:00-17:15	0	0	0	0	2	0	0	4	0	2	0	0	8
17:15-17:30	0	0	0	0	4	0	0	3	0	1	0	0	8
MEDIUM TRUCKS (SINGLE UNIT > 2 AXLES)													
16:30-16:45	0	0	0	0	0	0	0	0	0	0	0	1	1
16:45-17:00	0	0	0	0	0	0	0	0	0	0	0	0	0
17:00-17:15	0	0	0	0	0	0	0	0	0	0	0	0	0
17:15-17:30	0	0	0	0	1	0	0	0	0	0	0	0	1
HEAVY TRUCKS (SEMI-TRACTOR TRAILER)													
16:30-16:45	0	0	0	0	0	0	0	1	0	1	0	0	2
16:45-17:00	0	0	0	0	0	0	0	2	0	0	0	1	3
17:00-17:15	0	0	0	0	0	0	0	0	0	0	0	0	0
17:15-17:30	0	0	0	0	0	0	0	0	0	1	0	0	1
BICYCLES													
16:30-16:45	0	0	0	0	1	0	0	0	0	0	0	0	1
16:45-17:00	0	0	0	0	1	0	0	0	0	0	0	0	1
17:00-17:15	0	0	0	0	1	0	0	0	0	0	0	0	1
17:15-17:30	0	0	0	0	0	0	0	2	0	0	0	0	2

PEDESTRIANS	CROSSWALK USEAGE SOUTH	WEST	EAST	NORTH	ALL
16:30-16:45	0	0	0	0	0
16:45-17:00	0	0	0	0	0
17:00-17:15	0	0	1	0	1
17:15-17:30	0	0	0	0	0

Peak Hour by Movement													
PHF	0	0	0	0	.97	0	0	.95	0	.92	0	.86	.976
% Trucks(all)	0	0	0	0	1.5	0	0	1.7	0	1.5	0	.8	1.5
% Trucks(M+H)	0	0	0	0	.1	0	0	.3	0	.3	0	.6	.3
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	

Hourly Totals													
16:00-17:00	0	0	0	0	828	6	0	1024	0	584	0	361	2803
16:15-17:15	0	0	0	0	832	0	0	1064	0	589	0	369	2854
16:30-17:30	0	0	0	0	876	0	0	1109	0	582	0	356	2923
16:45-17:45	0	0	0	0	839	0	0	1131	0	571	0	363	2904
17:00-18:00	0	0	0	0	802	0	0	1150	0	568	0	386	2906

INTERSECTION TURN MOVEMENT COUNT SUMMARY REPORT
SCHOLLS FERRY ROAD AT HIGHWAY 217 NORTHBOUND ON RAMP 19204



DATE OF COUNT: 04/15/99
DAY OF WEEK: Thu
TIME STARTED: 07:00
TIME ENDED: 09:00

TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

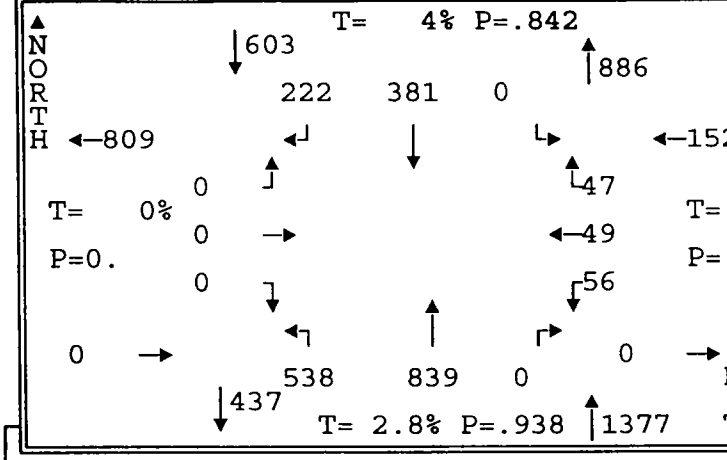
DLND

Peak Hour
07:15-08:15

Traffic Smithy
(503) 641-6333

TIME PERIOD FROM - TO	EAST BOUND ↓	EAST BOUND →	EAST BOUND ↑	SOUTH BOUND ↵	SOUTH BOUND ↓	SOUTH BOUND ↳	NORTH BOUND ↰	NORTH BOUND ↑	NORTH BOUND ↱	WEST BOUND ↓	WEST BOUND ←	WEST BOUND ↑	ALL
07:00-07:05	0	0	0	13	16	0	31	47	0	2	2	2	113
07:05-07:10	0	0	0	16	14	0	41	64	0	2	4	3	144
07:10-07:15	0	0	0	29	29	0	39	55	0	6	5	1	164
07:15-07:20	0	0	0	17	30	0	55	72	0	6	7	4	191
07:20-07:25	0	0	0	6	24	0	49	67	0	3	6	3	158
07:25-07:30	0	0	0	18	20	0	60	64	0	7	2	4	175
07:30-07:35	0	0	0	26	24	0	48	76	0	9	2	2	187
07:35-07:40	0	0	0	15	25	0	58	77	0	2	4	3	184
07:40-07:45	0	0	0	21	33	0	31	59	0	5	2	6	157
07:45-07:50	0	0	0	17	40	0	56	79	0	4	2	3	201
07:50-07:55	0	0	0	22	26	0	28	55	0	2	5	5	143
07:55-08:00	0	0	0	18	42	0	48	85	0	1	8	3	205
08:00-08:05	0	0	0	22	29	0	24	55	0	7	4	6	147
08:05-08:10	0	0	0	14	45	0	51	71	0	5	5	2	193
08:10-08:15	0	0	0	26	43	0	30	79	0	5	2	6	191
08:15-08:20	0	0	0	22	36	0	45	61	0	4	2	3	173
08:20-08:25	0	0	0	16	40	0	37	59	0	1	4	4	161
08:25-08:30	0	0	0	16	29	0	35	65	0	5	3	1	154
08:30-08:35	0	0	0	21	36	0	58	74	0	4	7	2	202
08:35-08:40	0	0	0	27	33	0	32	60	0	6	2	5	165
08:40-08:45	0	0	0	29	24	0	40	53	0	5	6	8	165
08:45-08:50	0	0	0	16	21	0	55	46	0	6	5	4	153
08:50-08:55	0	0	0	22	33	0	47	54	0	3	3	4	166
08:55-09:00	0	0	0	26	33	0	33	36	0	4	3	1	136
Total Survey	0	0	0	475	725	0	1031	1513	0	104	95	85	4028
PHF	0	0	0	.9	.81	0	.81	.96	0	.74	.72	.84	.970
% Trucks	0	0	0	5.7	4.4	0	2.3	3.3	0	12.5	5.3	7.1	3.9
Stopped Buses	0	0	0	0	0	0	0	8	0	0	0	0	
Peds	0	45	0	0	0	0	0	11	0	0	3	0	
Hourly Totals													
07:00-08:00	0	0	0	218	323	0	544	800	0	49	49	39	2022
07:15-08:15	0	0	0	222	381	0	538	839	0	56	49	47	2132
07:30-08:30	0	0	0	235	412	0	491	821	0	50	43	44	2096
07:45-08:45	0	0	0	250	423	0	484	796	0	49	50	48	2100
08:00-09:00	0	0	0	257	402	0	487	713	0	55	46	46	2006

INTERSECTION TURN MOVEMENT COUNT PEAK HOUR REPORT
SCHOLLS FERRY ROAD AT HIGHWAY 217 NORTHBOUND ON RAMP



DATE OF COUNT: 04/15/99
DAY OF WEEK: Thu
TIME STARTED: 07:00
TIME ENDED: 09:00

TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

DLND

Peak Hour
07:15-08:15
TEV=2132

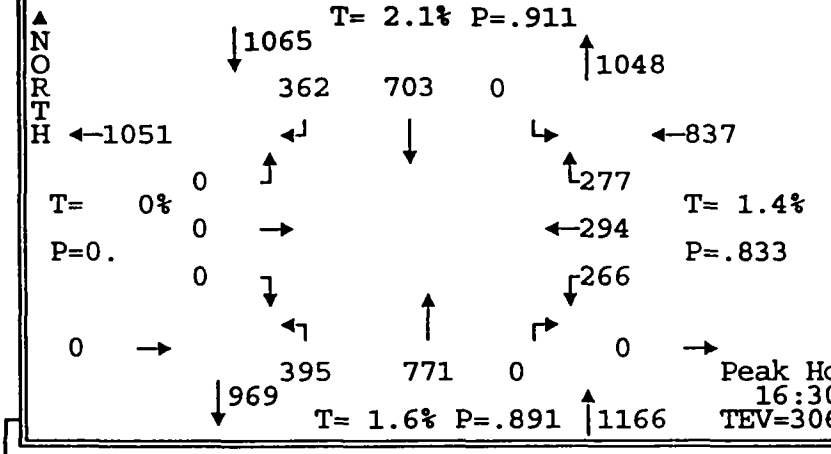
Traffic Smithy
(503)641-6333

TIME PERIOD FROM - TO	EAST BOUND ↓	EAST BOUND →	EAST BOUND ↑	SOUTH BOUND ↲	SOUTH BOUND ↓	SOUTH BOUND ↳	NORTH BOUND ↰	NORTH BOUND ↑	NORTH BOUND ↱	WEST BOUND ↓	WEST BOUND ←	WEST BOUND ↑	ALL
ALL VEHICLES													
07:15-07:30	0	0	0	41	74	0	164	203	0	16	15	11	524
07:30-07:45	0	0	0	62	82	0	137	212	0	16	8	11	528
07:45-08:00	0	0	0	57	108	0	132	219	0	7	15	11	549
08:00-08:15	0	0	0	62	117	0	105	205	0	17	11	14	531
LIGHT TRUCKS (SINGLE UNIT 2 AXLES)													
07:15-07:30	0	0	0	1	1	0	2	4	0	1	1	2	12
07:30-07:45	0	0	0	3	5	0	1	6	0	1	0	0	16
07:45-08:00	0	0	0	1	2	0	3	3	0	2	1	1	13
08:00-08:15	0	0	0	0	3	0	0	7	0	3	0	0	13
MEDIUM TRUCKS (SINGLE UNIT > 2 AXLES)													
07:15-07:30	0	0	0	1	1	0	0	0	0	0	0	0	2
07:30-07:45	0	0	0	0	2	0	1	0	0	0	0	0	3
07:45-08:00	0	0	0	0	0	0	0	2	0	0	0	0	2
08:00-08:15	0	0	0	1	0	0	1	4	0	0	0	0	6
HEAVY TRUCKS (SEMI-TRACTOR TRAILER)													
07:15-07:30	0	0	0	0	0	0	1	0	0	0	0	0	1
07:30-07:45	0	0	0	0	0	0	0	1	0	0	0	0	1
07:45-08:00	0	0	0	1	0	0	0	2	0	0	0	0	3
08:00-08:15	0	0	0	1	1	0	0	1	0	0	0	0	3
BICYCLES													
07:15-07:30	0	0	0	0	1	0	0	0	0	0	0	0	1
07:30-07:45	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45-08:00	0	0	0	0	1	0	0	0	0	0	0	0	1
08:00-08:15	0	0	0	0	1	0	0	0	0	0	0	0	1

PEDESTRIANS	CROSSWALK USEAGE SOUTH	WEST	EAST	NORTH	ALL
07:15-07:30	9	0	2	0	11
07:30-07:45	7	0	0	0	7
07:45-08:00	4	0	2	1	7
08:00-08:15	5	0	1	1	7

Peak Hour by Movement													
PHF	0	0	0	.9	.81	0	.82	.96	0	.82	.82	.84	.970
% Trucks(all)	0	0	0	4.1	3.9	0	1.7	3.6	0	12.5	4.1	6.4	3.5
% Trucks(M+H)	0	0	0	1.8	1	0	.6	1.2	0	0	0	0	1
Stopped Buses	0	0	0	0	0	0	0	6	0	0	0	0	
Hourly Totals													
07:00-08:00	0	0	0	218	323	0	544	800	0	49	49	39	2022
07:15-08:15	0	0	0	222	381	0	538	839	0	56	49	47	2132
07:30-08:30	0	0	0	235	412	0	491	821	0	50	43	44	2096
07:45-08:45	0	0	0	250	423	0	484	796	0	49	50	48	2100
08:00-09:00	0	0	0	257	402	0	487	713	0	55	46	46	2006

INTERSECTION TURN MOVEMENT COUNT SUMMARY REPORT
SCHOLLS FERRY ROAD AT HIGHWAY 217 NORTHBOUND ON RAMP 19270



DATE OF COUNT: 04/14/99
DAY OF WEEK: Wed
TIME STARTED: 16:00
TIME ENDED: 18:00

TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

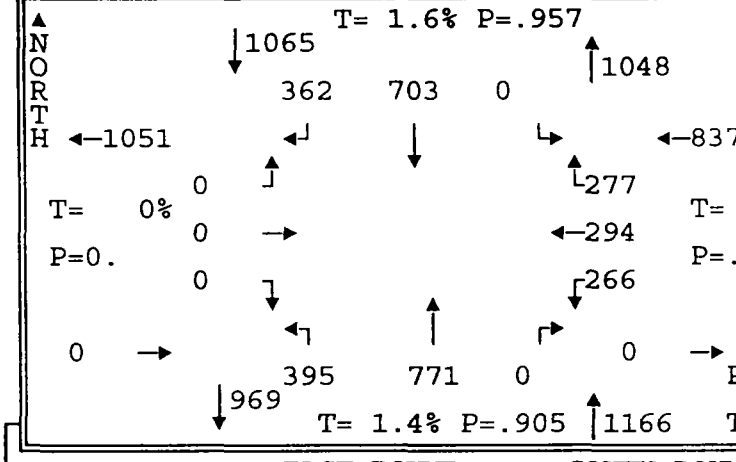
DLNC

Peak Hour
16:30-17:30
TEV=3068

Traffic Smithy
(503) 641-6333

TIME PERIOD FROM - TO	EAST BOUND ↓	EAST BOUND →	EAST BOUND ↑	SOUTH BOUND ↲	SOUTH BOUND ↓	SOUTH BOUND ↳	NORTH BOUND ↰	NORTH BOUND ↑	NORTH BOUND ↱	WEST BOUND ↓	WEST BOUND ←	WEST BOUND ↑	ALL
16:00-16:05	0	0	0	27	65	0	35	53	0	20	24	12	236
16:05-16:10	0	0	0	23	48	0	24	62	0	25	21	14	217
16:10-16:15	0	0	0	28	55	0	31	67	0	17	18	17	233
16:15-16:20	0	0	0	24	41	0	28	75	0	17	23	24	232
16:20-16:25	0	0	0	32	45	0	39	50	0	19	30	14	229
16:25-16:30	0	0	0	24	51	0	24	63	0	31	14	13	220
16:30-16:35	0	0	0	22	62	0	41	45	0	15	27	10	222
16:35-16:40	0	0	0	20	61	0	33	57	0	27	24	19	241
16:40-16:45	0	0	0	37	70	0	18	50	0	28	24	19	246
16:45-16:50	0	0	0	23	66	0	42	66	0	21	17	26	261
16:50-16:55	0	0	0	31	65	0	34	69	0	17	19	16	251
16:55-17:00	0	0	0	28	41	0	33	46	0	31	22	16	217
17:00-17:05	0	0	0	41	60	0	36	75	0	24	36	18	290
17:05-17:10	0	0	0	37	44	0	32	76	0	25	25	33	272
17:10-17:15	0	0	0	34	62	0	21	82	0	17	24	42	282
17:15-17:20	0	0	0	34	69	0	38	78	0	21	28	36	304
17:20-17:25	0	0	0	26	46	0	34	58	0	22	28	29	243
17:25-17:30	0	0	0	29	57	0	33	69	0	18	20	13	239
17:30-17:35	0	0	0	16	47	0	35	58	0	16	20	19	211
17:35-17:40	0	0	0	22	60	0	37	60	0	18	19	18	234
17:40-17:45	0	0	0	31	48	0	40	61	0	20	22	12	234
17:45-17:50	0	0	0	27	59	0	27	61	0	18	20	19	231
17:50-17:55	0	0	0	33	54	0	34	77	0	18	19	12	247
17:55-18:00	0	0	0	28	57	0	28	53	0	21	21	12	220
Total Survey	0	0	0	677	1333	0	777	1511	0	506	545	463	5812
PHF	0	0	0	.81	.87	0	.91	.82	0	.83	.86	.62	.893
% Trucks	0	0	0	2.4	2	0	3.1	.8	0	2.6	.2	1.5	1.7
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	
Peds	0	2	0	0	4	0	0	1	0	0	2	0	
Hourly Totals													
16:00-17:00	0	0	0	319	670	0	382	703	0	268	263	200	2805
16:15-17:15	0	0	0	353	668	0	381	754	0	272	285	250	2963
16:30-17:30	0	0	0	362	703	0	395	771	0	266	294	277	3068
16:45-17:45	0	0	0	352	665	0	415	798	0	250	280	278	3038
17:00-18:00	0	0	0	358	663	0	395	808	0	238	282	263	3007

INTERSECTION TURN MOVEMENT COUNT PEAK HOUR REPORT
SCHOLLS FERRY ROAD AT HIGHWAY 217 NORTHBOUND ON RAMP



DATE OF COUNT: 04/14/99
DAY OF WEEK: Wed
TIME STARTED: 16:00
TIME ENDED: 18:00

TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

DLNC

Peak Hour
16:30-17:30
TEV=3068

Traffic Smithy
(503)641-6333

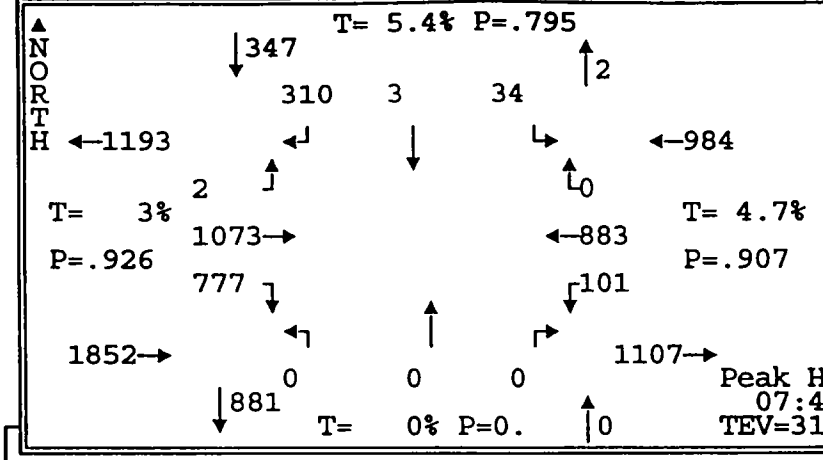
TIME PERIOD FROM - TO	EAST BOUND ↓	EAST BOUND →	EAST BOUND ↑	SOUTH BOUND ↵	SOUTH BOUND ↓	SOUTH BOUND ↳	NORTH BOUND ↰	NORTH BOUND ↑	NORTH BOUND ↱	WEST BOUND ↓	WEST BOUND ←	WEST BOUND ↑	ALL
ALL VEHICLES													
16:30-16:45	0	0	0	79	193	0	92	152	0	70	75	48	709
16:45-17:00	0	0	0	82	172	0	109	181	0	69	58	58	729
17:00-17:15	0	0	0	112	166	0	89	233	0	66	85	93	844
17:15-17:30	0	0	0	89	172	0	105	205	0	61	76	78	786
LIGHT TRUCKS (SINGLE UNIT 2 AXLES)													
16:30-16:45	0	0	0	2	4	0	2	0	0	1	0	0	9
16:45-17:00	0	0	0	0	2	0	5	1	0	1	0	1	10
17:00-17:15	0	0	0	0	3	0	2	1	0	1	0	0	7
17:15-17:30	0	0	0	1	2	0	3	0	0	2	0	2	10
MEDIUM TRUCKS (SINGLE UNIT > 2 AXLES)													
16:30-16:45	0	0	0	1	0	0	0	0	0	0	0	0	1
16:45-17:00	0	0	0	0	0	0	0	0	0	0	0	0	0
17:00-17:15	0	0	0	0	0	0	0	0	0	0	0	0	0
17:15-17:30	0	0	0	0	0	0	0	0	0	0	0	0	0
HEAVY TRUCKS (SEMI-TRACTOR TRAILER)													
16:30-16:45	0	0	0	1	0	0	0	0	0	0	0	0	1
16:45-17:00	0	0	0	0	0	0	0	2	0	0	0	0	2
17:00-17:15	0	0	0	1	0	0	0	0	0	0	0	0	1
17:15-17:30	0	0	0	0	0	0	0	0	0	0	0	0	0
BICYCLES													
16:30-16:45	0	0	0	0	1	0	0	1	0	0	0	0	2
16:45-17:00	0	0	0	0	1	0	0	0	0	0	0	0	1
17:00-17:15	0	0	0	0	2	0	0	0	0	0	0	0	2
17:15-17:30	0	0	0	0	1	0	0	2	0	0	0	0	3

PEDESTRIANS	CROSSWALK USEAGE SOUTH	WEST	EAST	NORTH	ALL
16:30-16:45	0	1	0	0	1
16:45-17:00	0	0	0	0	0
17:00-17:15	0	0	0	0	0
17:15-17:30	0	0	0	0	0

Peak Hour by Movement													
PHF	0	0	0	.81	.91	0	.91	.83	0	.95	.86	.74	.908
% Trucks(all)	0	0	0	1.7	1.6	0	3	.5	0	1.9	0	1.1	1.3
% Trucks(M+H)	0	0	0	.8	0	0	0	.3	0	0	0	0	.2
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	
Hourly Totals													
16:00-17:00	0	0	0	319	670	0	382	703	0	268	263	200	2805
16:15-17:15	0	0	0	353	668	0	381	754	0	272	285	250	2963
16:30-17:30	0	0	0	362	703	0	395	771	0	266	294	277	3068
16:45-17:45	0	0	0	352	665	0	415	798	0	250	280	278	3038
17:00-18:00	0	0	0	358	663	0	395	808	0	238	282	263	3007

INTERSECTION TURN MOVEMENT COUNT SUMMARY REPORT
SCHOLLS FERRY ROAD AT HIGHWAY 217 SOUTHBOUND RAMPS

19271



DATE OF COUNT: 04/14/99
DAY OF WEEK: Wed
TIME STARTED: 07:00
TIME ENDED: 09:00

TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

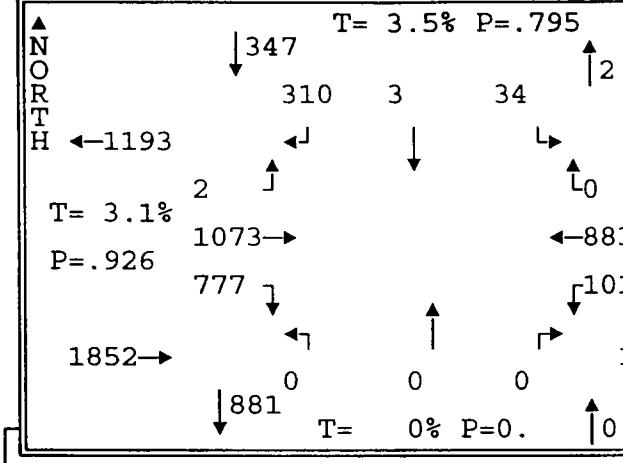
ERUC

Peak Hour
07:45-08:45
TEV=3183

Traffic Smithy
(503) 641-6333

TIME PERIOD FROM - TO	EAST BOUND ↓	EAST BOUND →	EAST BOUND ↑	SOUTH BOUND ↵	SOUTH BOUND ↓	SOUTH BOUND ↳	NORTH BOUND ↰	NORTH BOUND ↑	NORTH BOUND ↱	WEST BOUND ↓	WEST BOUND ←	WEST BOUND ↑	ALL
07:00-07:05	68	86	0	24	0	3	0	0	0	3	71	0	255
07:05-07:10	49	93	0	31	0	0	0	0	0	7	44	0	224
07:10-07:15	63	117	0	17	0	2	0	0	0	2	52	0	253
07:15-07:20	55	84	0	20	0	2	0	0	0	3	37	0	201
07:20-07:25	61	108	0	21	0	1	0	0	0	5	37	0	233
07:25-07:30	68	126	0	19	0	4	0	0	0	5	46	0	268
07:30-07:35	72	109	0	22	1	3	0	0	0	3	43	0	253
07:35-07:40	72	108	0	21	0	2	0	0	0	7	50	0	260
07:40-07:45	55	79	0	14	0	6	0	0	0	7	67	0	228
07:45-07:50	74	136	0	22	0	0	0	0	0	3	64	0	299
07:50-07:55	64	84	0	20	0	2	0	0	0	11	74	0	255
07:55-08:00	49	93	0	20	0	1	0	0	0	7	86	0	256
08:00-08:05	76	92	0	29	0	3	0	0	0	6	81	0	287
08:05-08:10	69	85	0	32	0	2	0	0	0	6	70	0	264
08:10-08:15	65	77	0	19	0	1	0	0	0	7	69	0	238
08:15-08:20	52	78	0	23	1	6	0	0	0	8	75	0	243
08:20-08:25	56	65	0	40	0	8	0	0	0	6	66	0	241
08:25-08:30	55	96	0	27	1	3	0	0	0	16	82	0	280
08:30-08:35	74	111	0	21	1	2	0	0	0	9	76	0	294
08:35-08:40	78	82	2	29	0	4	0	0	0	13	75	0	283
08:40-08:45	65	74	0	28	0	2	0	0	0	9	65	0	243
08:45-08:50	82	101	0	27	0	2	0	0	0	7	55	0	274
08:50-08:55	78	74	0	23	0	3	0	0	0	11	72	0	261
08:55-09:00	50	53	2	29	0	6	0	0	0	16	80	0	236
Total Survey	1550	2211	4	578	4	68	0	0	0	177	1537	0	6129
PHF	.9	.86	.25	.86	.38	.5	0	0	0	.66	.92	0	.928
% Trucks	2.6	3.2	0	5.9	0	1.5	0	0	0	2.8	4.9	0	3.7
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	
Peds	0	3	0	0	0	0	0	0	0	0	0	0	
Hourly Totals													
07:00-08:00	750	1223	0	251	1	26	0	0	0	63	671	0	2985
07:15-08:15	780	1181	0	259	1	27	0	0	0	70	724	0	3042
07:30-08:30	759	1102	0	289	3	37	0	0	0	87	827	0	3104
07:45-08:45	777	1073	2	310	3	34	0	0	0	101	883	0	3183
08:00-09:00	800	988	4	327	3	42	0	0	0	114	866	0	3144

INTERSECTION TURN MOVEMENT COUNT PEAK HOUR REPORT
SCHOLLS FERRY ROAD AT HIGHWAY 217 SOUTHBOUND RAMPS



DATE OF COUNT: 04/14/99
DAY OF WEEK: Wed
TIME STARTED: 07:00
TIME ENDED: 09:00

TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

ERUC

Peak Hour
07:45-08:45
TEV=3183

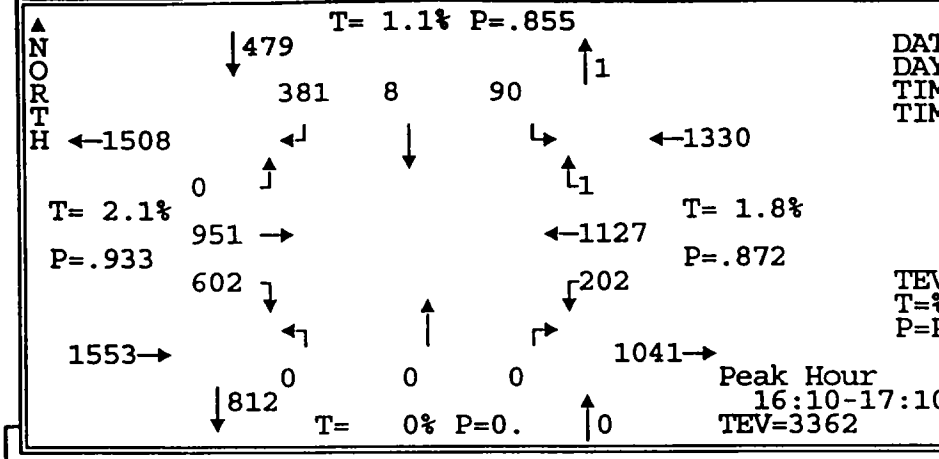
Traffic Smithy
(503)641-6333

TIME PERIOD FROM - TO	EAST BOUND ↓	EAST BOUND →	EAST BOUND ↑	SOUTH BOUND ↵	SOUTH BOUND ↓	SOUTH BOUND ↳	NORTH BOUND ↰	NORTH BOUND ↑	NORTH BOUND ↱	WEST BOUND ↓	WEST BOUND ←	WEST BOUND ↑	ALL
ALL VEHICLES													
07:45-08:00	187	313	0	62	0	3	0	0	0	21	224	0	810
08:00-08:15	210	254	0	80	0	6	0	0	0	19	220	0	789
08:15-08:30	163	239	0	90	2	17	0	0	0	30	223	0	764
08:30-08:45	217	267	2	78	1	8	0	0	0	31	216	0	820
LIGHT TRUCKS (SINGLE UNIT 2 AXLES)													
07:45-08:00	5	5	0	2	0	0	0	0	0	0	7	0	19
08:00-08:15	0	6	0	1	0	0	0	0	0	0	6	0	13
08:15-08:30	4	4	0	1	0	0	0	0	0	0	7	0	16
08:30-08:45	0	7	0	1	0	0	0	0	0	0	11	0	19
MEDIUM TRUCKS (SINGLE UNIT > 2 AXLES)													
07:45-08:00	0	5	0	0	0	0	0	0	0	0	1	0	6
08:00-08:15	4	2	0	1	0	0	0	0	0	1	4	0	12
08:15-08:30	2	1	0	2	0	0	0	0	0	2	3	0	10
08:30-08:45	1	3	0	2	0	0	0	0	0	0	3	0	9
HEAVY TRUCKS (SEMI-TRACTOR TRAILER)													
07:45-08:00	0	0	0	0	0	0	0	0	0	0	1	0	1
08:00-08:15	0	0	0	0	0	0	0	0	0	0	1	0	1
08:15-08:30	3	0	0	1	0	0	0	0	0	1	0	0	5
08:30-08:45	1	5	0	1	0	0	0	0	0	1	1	0	9
BICYCLES													
07:45-08:00	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00-08:15	0	0	0	0	0	0	0	0	0	0	1	0	1
08:15-08:30	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30-08:45	0	1	0	0	0	0	0	0	0	0	0	0	1

PEDESTRIANS	CROSSWALK USEAGE SOUTH	WEST	EAST	NORTH	ALL
07:45-08:00	0	0	0	0	0
08:00-08:15	0	0	0	0	0
08:15-08:30	0	0	0	0	0
08:30-08:45	2	0	0	0	2

Peak Hour by Movement													
PHF	.9	.86	.25	.86	.38	.5	0	0	0	.81	.99	0	.970
% Trucks(all)	2.6	3.5	0	3.9	0	0	0	0	0	5	5.1	0	3.8
% Trucks(M+H)	1.4	1.5	0	2.3	0	0	0	0	0	5	1.6	0	1.7
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	
Hourly Totals													
07:00-08:00	750	1223	0	251	1	26	0	0	0	63	671	0	2985
07:15-08:15	780	1181	0	259	1	27	0	0	0	70	724	0	3042
07:30-08:30	759	1102	0	289	3	37	0	0	0	87	827	0	3104
07:45-08:45	777	1073	2	310	3	34	0	0	0	101	883	0	3183
08:00-09:00	800	988	4	327	3	42	0	0	0	114	866	0	3144

INTERSECTION TURN MOVEMENT COUNT SUMMARY REPORT
SCHOLLS FERRY ROAD AT HIGHWAY 217 SOUTHBOUND RAMPS 19272



DATE OF COUNT: 04/14/99
DAY OF WEEK: Wed
TIME STARTED: 16:00
TIME ENDED: 18:00

TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

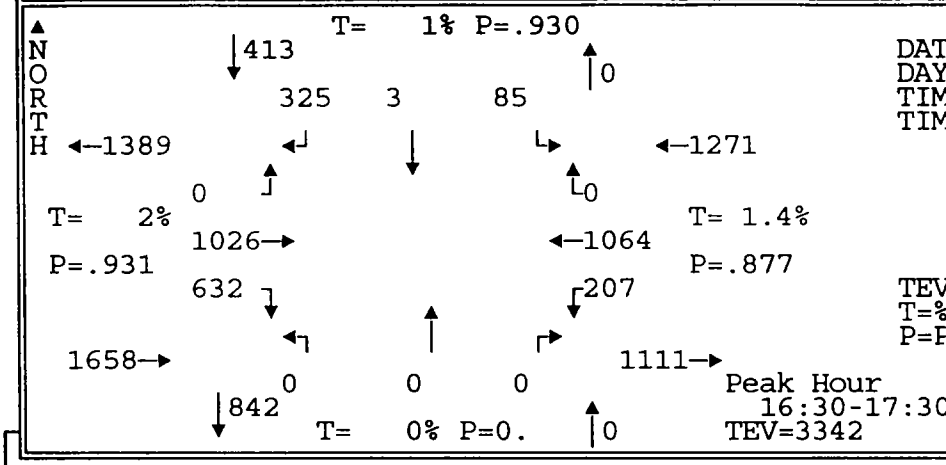
ERUD

Peak Hour
16:10-17:10
TEV=3362

Traffic Smithy
(503) 641-6333

TIME PERIOD FROM - TO	EAST BOUND ↓	EAST BOUND →	EAST BOUND ↑	SOUTH BOUND ↵	SOUTH BOUND ↓	SOUTH BOUND ↳	NORTH BOUND ↰	NORTH BOUND ↑	NORTH BOUND ↱	WEST BOUND ↓	WEST BOUND ←	WEST BOUND ↑	ALL
16:00-16:05	50	77	0	33	0	5	0	0	0	14	85	0	264
16:05-16:10	51	65	0	27	1	10	0	0	0	27	98	0	279
16:10-16:15	53	73	0	45	0	10	0	0	0	21	85	0	287
16:15-16:20	59	90	0	35	0	9	0	0	0	18	75	0	286
16:20-16:25	43	71	0	33	0	8	0	0	0	8	83	0	246
16:25-16:30	35	52	0	30	6	4	0	0	0	17	99	1	244
16:30-16:35	52	76	0	27	0	8	0	0	0	21	81	0	265
16:35-16:40	48	86	0	32	0	8	0	0	0	10	111	0	295
16:40-16:45	61	92	0	25	1	5	0	0	0	20	119	0	323
16:45-16:50	45	64	0	26	1	4	0	0	0	23	98	0	261
16:50-16:55	55	94	0	41	0	6	0	0	0	19	102	0	317
16:55-17:00	52	75	0	26	0	7	0	0	0	19	83	0	262
17:00-17:05	49	91	0	31	0	14	0	0	0	3	80	0	268
17:05-17:10	50	87	0	30	0	7	0	0	0	23	111	0	308
17:10-17:15	53	83	0	18	1	5	0	0	0	20	66	0	246
17:15-17:20	64	96	0	31	0	7	0	0	0	21	64	0	283
17:20-17:25	45	96	0	17	0	5	0	0	0	13	65	0	241
17:25-17:30	58	86	0	21	0	9	0	0	0	15	84	0	273
17:30-17:35	50	83	0	30	0	8	0	0	0	18	86	0	275
17:35-17:40	45	84	0	29	0	5	0	0	0	14	78	0	255
17:40-17:45	52	100	0	26	0	7	0	0	0	10	97	0	292
17:45-17:50	54	76	0	36	0	9	0	0	0	12	87	0	274
17:50-17:55	43	74	0	30	1	11	0	0	0	13	92	0	264
17:55-18:00	51	85	0	22	0	10	0	0	0	12	87	0	267
Total Survey	1218	1956	0	701	11	181	0	0	0	391	2116	1	6575
PHF	.93	.91	0	.84	.33	.8	0	0	0	.81	.86	.25	.932
% Trucks	2.2	2	0	1	0	1.7	0	0	0	1.3	1.8	0	1.8
Stopped Buses	0	1	0	0	0	0	0	0	0	1	0	0	
Peds	0	1	0	0	2	0	0	0	0	0	1	0	
Hourly Totals													
16:00-17:00	604	915	0	380	9	84	0	0	0	217	1119	1	3329
16:15-17:15	602	961	0	354	9	85	0	0	0	201	1108	1	3321
16:30-17:30	632	1026	0	325	3	85	0	0	0	207	1064	0	3342
16:45-17:45	618	1039	0	326	2	84	0	0	0	198	1014	0	3281
17:00-18:00	614	1041	0	321	2	97	0	0	0	174	997	0	3246

INTERSECTION TURN MOVEMENT COUNT PEAK HOUR REPORT
SCHOLLS FERRY ROAD AT HIGHWAY 217 SOUTHBOUND RAMPS



DATE OF COUNT: 04/14/99
DAY OF WEEK: Wed
TIME STARTED: 16:00
TIME ENDED: 18:00

TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

ERUD

Peak Hour
16:30-17:30
TEV=3342

Traffic Smithy
(503)641-6333

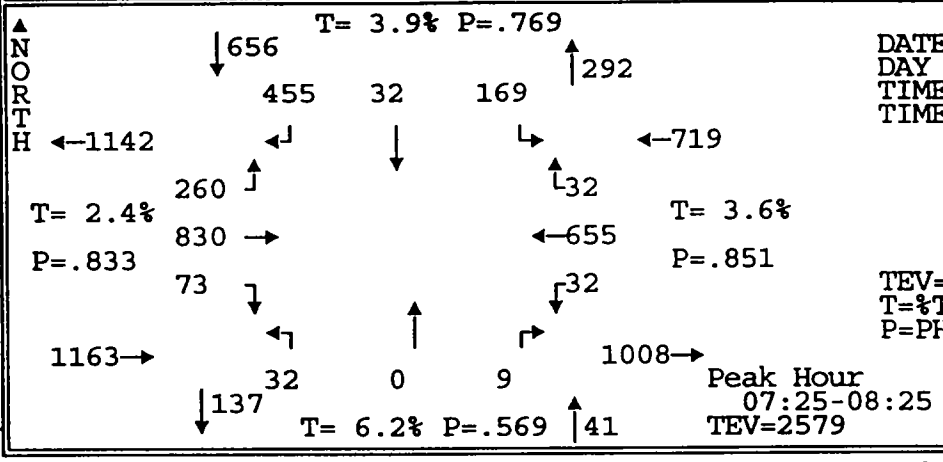
TIME PERIOD FROM - TO	EAST BOUND ↓	EAST BOUND →	EAST BOUND ↑	SOUTH BOUND ↲	SOUTH BOUND ↓	SOUTH BOUND ↳	NORTH BOUND ↰	NORTH BOUND ↑	NORTH BOUND ↱	WEST BOUND ↓	WEST BOUND ←	WEST BOUND ↑	ALL
ALL VEHICLES													
16:30-16:45	161	254	0	84	1	21	0	0	0	51	311	0	883
16:45-17:00	152	233	0	93	1	17	0	0	0	61	283	0	840
17:00-17:15	152	261	0	79	1	26	0	0	0	46	257	0	822
17:15-17:30	167	278	0	69	0	21	0	0	0	49	213	0	797
LIGHT TRUCKS (SINGLE UNIT 2 AXLES)													
16:30-16:45	2	3	0	0	0	0	0	0	0	1	6	0	12
16:45-17:00	2	7	0	2	0	0	0	0	0	0	2	0	13
17:00-17:15	4	5	0	0	0	0	0	0	0	0	2	0	11
17:15-17:30	1	4	0	0	0	0	0	0	0	0	5	0	10
MEDIUM TRUCKS (SINGLE UNIT > 2 AXLES)													
16:30-16:45	2	0	0	0	0	0	0	0	0	0	0	0	2
16:45-17:00	0	0	0	0	0	0	0	0	0	0	0	0	0
17:00-17:15	0	0	0	0	0	0	0	0	0	0	0	0	0
17:15-17:30	0	0	0	0	0	0	0	0	0	0	0	0	0
HEAVY TRUCKS (SEMI-TRACTOR TRAILER)													
16:30-16:45	2	0	0	1	0	0	0	0	0	0	0	0	3
16:45-17:00	1	0	0	0	0	1	0	0	0	0	1	0	3
17:00-17:15	0	0	0	0	0	0	0	0	0	0	0	0	0
17:15-17:30	0	0	0	0	0	0	0	0	0	0	1	0	1
BICYCLES													
16:30-16:45	0	0	0	0	0	0	0	0	0	0	1	0	1
16:45-17:00	0	0	0	0	0	0	0	0	0	0	1	0	1
17:00-17:15	0	0	0	0	0	0	0	0	0	0	2	0	2
17:15-17:30	0	0	0	0	0	0	0	0	0	0	0	0	0

PEDESTRIANS	CROSSWALK USEAGE SOUTH	WEST	EAST	NORTH	ALL
16:30-16:45	0	0	0	0	0
16:45-17:00	1	1	0	0	2
17:00-17:15	0	0	0	0	0
17:15-17:30	0	1	0	1	2

Peak Hour by Movement													
PHF	.95	.92	0	.87	.75	.82	0	0	0	.85	.86	0	.946
% Trucks(all)	2.2	1.9	0	.9	0	1.2	0	0	0	.5	1.6	0	1.6
% Trucks(M+H)	.8	0	0	.3	0	1.2	0	0	0	0	.2	0	.3
Stopped Buses	0	1	0	0	0	0	0	0	0	1	0	0	
Hourly Totals													
16:00-17:00	604	915	0	380	9	84	0	0	0	217	1119	1	3329
16:15-17:15	602	961	0	354	9	85	0	0	0	201	1108	1	3321
16:30-17:30	632	1026	0	325	3	85	0	0	0	207	1064	0	3342
16:45-17:45	618	1039	0	326	2	84	0	0	0	198	1014	0	3281
17:00-18:00	614	1041	0	321	2	97	0	0	0	174	997	0	3246

INTERSECTION TURN MOVEMENT COUNT SUMMARY REPORT
HALL BOULEVARD AT HIGHWAY 217 SOUTHBOUND RAMPS

19302



DATE OF COUNT: 04/15/99
DAY OF WEEK: Thu
TIME STARTED: 07:00
TIME ENDED: 09:00

TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

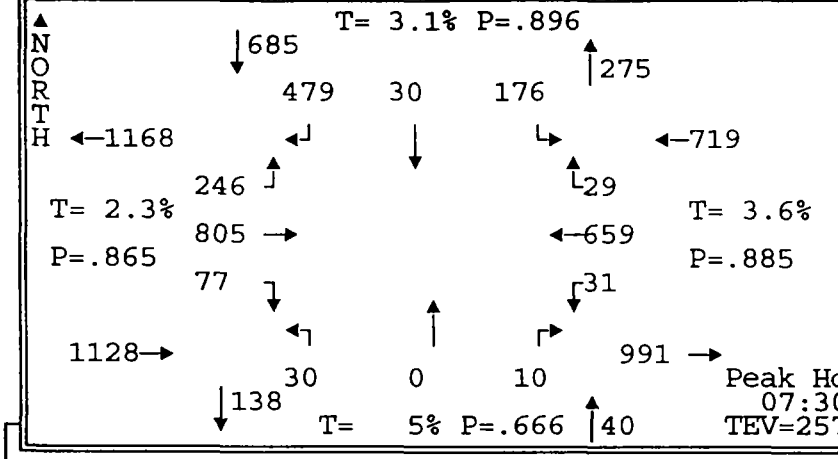
GHMV

Peak Hour
07:25-08:25
TEV=2579

Traffic Smithy
(503) 641-6333

TIME PERIOD FROM - TO	EAST BOUND ↓	EAST BOUND →	EAST BOUND ↑	SOUTH BOUND ↲	SOUTH BOUND ↓	SOUTH BOUND ↳	NORTH BOUND ↰	NORTH BOUND ↑	NORTH BOUND ↱	WEST BOUND ↓	WEST BOUND ←	WEST BOUND ↑	ALL
07:00-07:05	4	34	17	23	2	6	0	0	1	3	29	4	123
07:05-07:10	6	38	13	26	3	9	3	0	0	2	32	3	135
07:10-07:15	1	51	22	21	1	17	1	0	0	0	42	3	159
07:15-07:20	3	43	18	27	1	5	0	0	1	3	44	1	146
07:20-07:25	2	46	21	36	3	10	1	0	0	1	49	9	178
07:25-07:30	3	79	31	20	4	11	2	0	0	3	51	4	208
07:30-07:35	1	68	22	47	1	8	2	0	1	1	51	2	204
07:35-07:40	3	68	24	25	0	16	1	0	0	1	48	3	189
07:40-07:45	7	88	31	27	2	12	0	0	0	2	52	2	223
07:45-07:50	14	84	23	37	2	9	3	0	1	3	59	3	238
07:50-07:55	6	73	23	51	2	18	3	0	0	2	54	5	237
07:55-08:00	7	70	26	50	7	15	2	0	0	6	58	3	244
08:00-08:05	12	61	23	48	7	15	2	0	1	4	50	1	224
08:05-08:10	7	75	13	34	0	16	5	0	4	3	81	5	243
08:10-08:15	2	46	13	39	3	12	3	0	0	2	56	1	177
08:15-08:20	5	61	19	36	2	19	5	0	1	5	47	2	202
08:20-08:25	6	57	12	41	2	18	4	0	1	0	48	1	190
08:25-08:30	7	54	17	44	2	18	0	0	1	2	55	1	201
08:30-08:35	2	60	16	38	1	16	3	0	0	1	59	1	197
08:35-08:40	6	58	12	31	1	14	3	0	1	3	41	4	174
08:40-08:45	4	45	11	26	3	13	1	0	1	1	44	1	150
08:45-08:50	4	52	17	38	4	13	0	0	1	0	53	0	182
08:50-08:55	5	50	19	25	4	7	3	1	0	5	39	3	161
08:55-09:00	3	50	9	27	4	9	0	0	2	2	39	3	148
Total Survey	120	1411	452	817	61	306	47	1	17	55	1181	65	4533
PHF	.68	.85	.83	.76	.5	.86	.62	0	.45	.62	.87	.73	.896
% Trucks	.8	2.8	1.3	2.8	8.2	5.9	6.4	0	5.9	3.6	3.6	4.6	3.2
Stopped Buses	0	2	0	0	0	0	0	0	0	0	0	0	
Peds	0	11	0	0	4	0	0	0	0	0	0	0	
Hourly Totals													
07:00-08:00	57	742	271	390	28	136	18	0	4	27	569	42	2284
07:15-08:15	67	801	268	441	32	147	24	0	8	31	653	39	2511
07:30-08:30	77	805	246	479	30	176	30	0	10	31	659	29	2572
07:45-08:45	78	744	208	475	32	183	34	0	11	32	652	28	2477
08:00-09:00	63	669	181	427	33	170	29	1	13	28	612	23	2249

INTERSECTION TURN MOVEMENT COUNT PEAK HOUR REPORT
HALL BOULEVARD AT HIGHWAY 217 SOUTHBOUND RAMPS



DATE OF COUNT: 04/15/99
DAY OF WEEK: Thu
TIME STARTED: 07:00
TIME ENDED: 09:00

TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

GHMV

Peak Hour
07:30-08:30
TEV=2572

Traffic Smithy
(503)641-6333

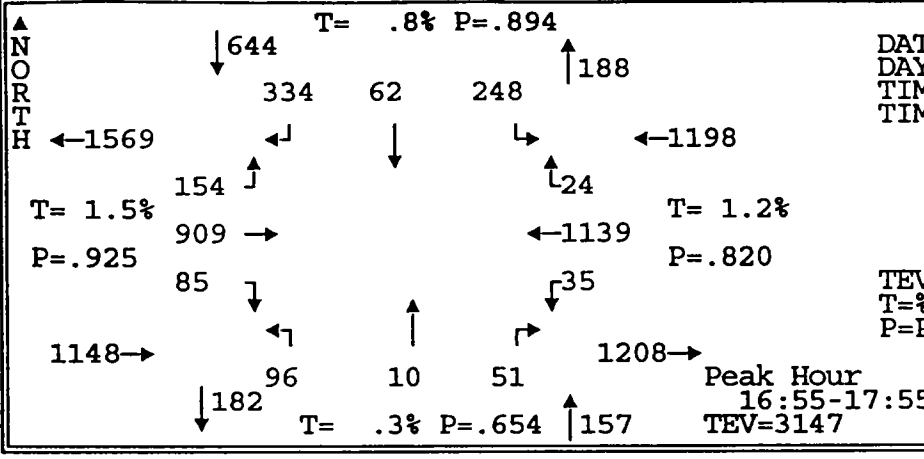
TIME PERIOD FROM - TO	EAST BOUND ↓	EAST BOUND →	EAST BOUND ↑	SOUTH BOUND ↲	SOUTH BOUND ↓	SOUTH BOUND ↳	NORTH BOUND ↰	NORTH BOUND ↑	NORTH BOUND ↱	WEST BOUND ↓	WEST BOUND ←	WEST BOUND ↑	ALL
ALL VEHICLES													
07:30-07:45	11	224	77	99	3	36	3	0	1	4	151	7	616
07:45-08:00	27	227	72	138	11	42	8	0	1	11	171	11	719
08:00-08:15	21	182	49	121	10	43	10	0	5	9	187	7	644
08:15-08:30	18	172	48	121	6	55	9	0	3	7	150	4	593
LIGHT TRUCKS (SINGLE UNIT 2 AXLES)													
07:30-07:45	0	6	0	1	1	1	0	0	0	0	4	0	13
07:45-08:00	1	3	0	0	0	1	0	0	0	0	2	0	7
08:00-08:15	0	4	0	2	0	0	1	0	0	1	6	2	16
08:15-08:30	0	3	0	1	0	3	0	0	0	0	4	1	12
MEDIUM TRUCKS (SINGLE UNIT > 2 AXLES)													
07:30-07:45	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45-08:00	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00-08:15	0	2	0	1	1	1	0	0	0	0	0	0	5
08:15-08:30	0	0	0	1	0	2	0	0	1	0	0	0	4
HEAVY TRUCKS (SEMI-TRACTOR TRAILER)													
07:30-07:45	0	1	0	1	0	1	0	0	0	0	1	0	4
07:45-08:00	0	2	1	0	0	2	0	0	0	0	2	0	7
08:00-08:15	0	1	1	0	0	0	0	0	0	0	1	0	3
08:15-08:30	0	1	0	1	0	0	0	0	0	0	2	0	4
BICYCLES													
07:30-07:45	0	0	0	0	0	0	0	0	0	0	2	0	2
07:45-08:00	0	1	0	0	0	0	0	0	0	0	0	0	1
08:00-08:15	0	0	0	0	0	0	0	0	0	0	1	0	1
08:15-08:30	0	1	0	0	0	0	0	0	0	0	1	0	2

PEDESTRIANS	CROSSWALK USEAGE SOUTH	WEST	EAST	NORTH	ALL
07:30-07:45	2	2	0	0	4
07:45-08:00	2	1	0	0	3
08:00-08:15	2	1	0	0	3
08:15-08:30	0	0	0	0	0

Peak Hour by Movement													
PHF	.71	.89	.8	.87	.68	.8	.75	0	.5	.7	.88	.66	.894
% Trucks(all)	1.3	2.9	.8	1.7	6.7	6.3	3.3	0	10	3.2	3.3	10.3	2.9
% Trucks(M+H)	0	.9	.8	.8	3.3	3.4	0	0	10	0	.9	0	1
Stopped Buses	0	1	0	0	0	0	0	0	0	0	0	0	
Hourly Totals													
07:00-08:00	57	742	271	390	28	136	18	0	4	27	569	42	2284
07:15-08:15	67	801	268	441	32	147	24	0	8	31	653	39	2511
07:30-08:30	77	805	246	479	30	176	30	0	10	31	659	29	2572
07:45-08:45	78	744	208	475	32	183	34	0	11	32	652	28	2477
08:00-09:00	63	669	181	427	33	170	29	1	13	28	612	23	2249

INTERSECTION TURN MOVEMENT COUNT SUMMARY REPORT
HALL BOULEVARD AT HIGHWAY 217 SOUTHBOUND RAMPS

19308



DATE OF COUNT: 04/15/99
DAY OF WEEK: Thu
TIME STARTED: 16:00
TIME ENDED: 18:00

TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

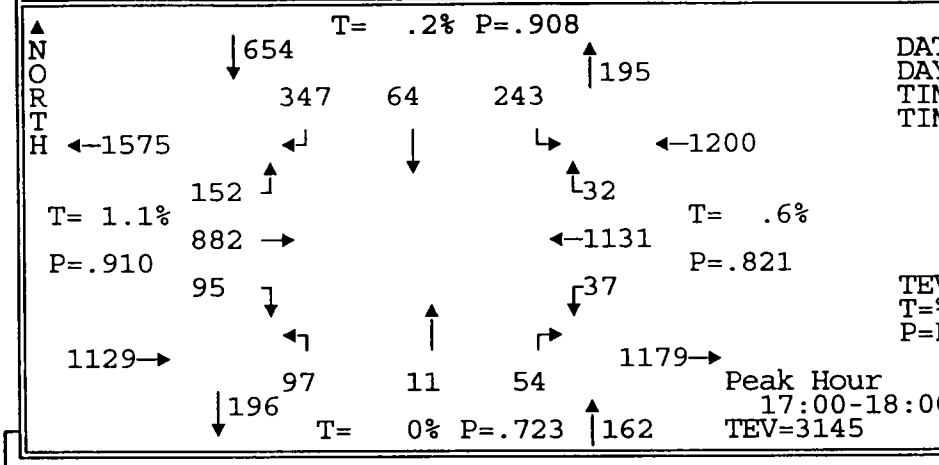
GHMW

Peak Hour
16:55-17:55
TEV=3147

Traffic Smithy
(503) 641-6333

TIME PERIOD FROM - TO	EAST BOUND ↓	EAST BOUND →	EAST BOUND ↑	SOUTH BOUND ↵	SOUTH BOUND ↓	SOUTH BOUND ↳	NORTH BOUND ↰	NORTH BOUND ↑	NORTH BOUND ↱	WEST BOUND ↓	WEST BOUND ←	WEST BOUND ↑	ALL
16:00-16:05	8	51	8	27	6	15	8	3	8	1	65	4	204
16:05-16:10	8	78	13	19	7	20	12	4	13	2	56	3	235
16:10-16:15	2	67	15	26	5	21	8	3	6	1	90	2	246
16:15-16:20	7	72	19	20	5	23	5	1	5	3	81	3	244
16:20-16:25	6	63	15	26	8	30	7	4	5	7	62	3	236
16:25-16:30	5	70	14	38	4	12	9	0	6	3	73	1	235
16:30-16:35	4	76	15	22	8	17	7	0	6	1	69	3	228
16:35-16:40	9	74	6	24	6	22	13	0	5	0	70	2	231
16:40-16:45	5	72	11	24	8	25	4	0	2	8	81	0	240
16:45-16:50	9	69	8	26	7	19	7	1	3	3	88	6	246
16:50-16:55	10	65	10	27	8	22	8	2	9	2	74	1	238
16:55-17:00	6	88	9	16	2	27	5	1	2	3	85	1	245
17:00-17:05	7	92	5	21	6	14	7	1	4	5	83	1	246
17:05-17:10	8	72	21	30	11	21	13	3	8	0	73	3	263
17:10-17:15	11	74	20	29	4	18	12	2	6	1	113	0	290
17:15-17:20	5	74	13	31	3	19	11	1	4	4	96	2	263
17:20-17:25	8	82	13	33	4	22	7	0	5	2	136	3	315
17:25-17:30	4	67	10	22	5	23	8	2	5	5	111	6	268
17:30-17:35	8	62	12	31	4	27	9	0	4	1	92	2	252
17:35-17:40	7	81	11	37	5	19	7	0	3	3	83	0	256
17:40-17:45	5	76	5	32	5	20	6	0	6	3	102	2	262
17:45-17:50	3	70	17	27	6	20	8	0	1	4	76	3	235
17:50-17:55	13	71	18	25	7	18	3	0	3	4	89	1	252
17:55-18:00	16	61	7	29	4	22	6	2	5	5	77	9	243
Total Survey	174	1727	295	642	138	496	190	30	124	71	2025	61	5973
PHF	.82	.9	.71	.83	.74	.86	.67	.42	.71	.8	.83	.55	.906
% Trucks	1.1	1.6	1	.8	.7	.8	.5	0	0	0	1.2	1.6	1.2
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	
Peds	0	33	0	0	6	0	0	0	0	0	2	0	
Hourly Totals													
16:00-17:00	79	845	143	295	74	253	93	19	70	34	894	29	2828
16:15-17:15	87	887	153	303	77	250	97	15	61	36	952	24	2942
16:30-17:30	86	905	141	305	72	249	102	13	59	34	1079	28	3073
16:45-17:45	88	902	137	335	64	251	100	13	59	32	1136	27	3144
17:00-18:00	95	882	152	347	64	243	97	11	54	37	1131	32	3145

INTERSECTION TURN MOVEMENT COUNT PEAK HOUR REPORT
HALL BOULEVARD AT HIGHWAY 217 SOUTHBOUND RAMPS



DATE OF COUNT: 04/15/99
DAY OF WEEK: Thu
TIME STARTED: 16:00
TIME ENDED: 18:00

TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

GHMW

Peak Hour
17:00-18:00
TEV=3145

Traffic Smithy
(503)641-6333

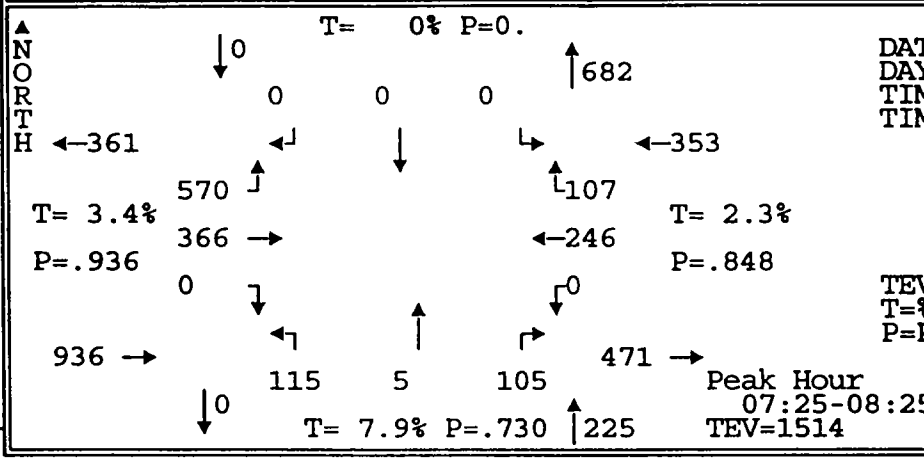
TIME PERIOD FROM - TO	EAST BOUND ↓	EAST BOUND →	EAST BOUND ↑	SOUTH BOUND ↲	SOUTH BOUND ↓	SOUTH BOUND ↳	NORTH BOUND ↰	NORTH BOUND ↑	NORTH BOUND ↱	WEST BOUND ↓	WEST BOUND ←	WEST BOUND ↑	ALL
ALL VEHICLES													
17:00-17:15	26	238	46	80	21	53	32	6	18	6	269	4	799
17:15-17:30	17	223	36	86	12	64	26	3	14	11	343	11	846
17:30-17:45	20	219	28	100	14	66	22	0	13	7	277	4	770
17:45-18:00	32	202	42	81	17	60	17	2	9	13	242	13	730
LIGHT TRUCKS (SINGLE UNIT 2 AXLES)													
17:00-17:15	0	1	1	0	0	0	0	0	0	0	1	0	3
17:15-17:30	0	3	0	0	0	0	0	0	0	0	3	0	6
17:30-17:45	1	2	0	0	0	0	0	0	0	0	1	0	4
17:45-18:00	0	2	1	1	0	0	0	0	0	0	1	0	5
MEDIUM TRUCKS (SINGLE UNIT > 2 AXLES)													
17:00-17:15	0	0	0	0	0	0	0	0	0	0	0	0	0
17:15-17:30	0	0	0	0	0	0	0	0	0	0	0	0	0
17:30-17:45	0	0	0	0	0	0	0	0	0	0	0	0	0
17:45-18:00	0	0	0	0	0	0	0	0	0	0	0	0	0
HEAVY TRUCKS (SEMI-TRACTOR TRAILER)													
17:00-17:15	0	0	0	0	0	0	0	0	0	0	0	0	0
17:15-17:30	0	1	0	0	0	0	0	0	0	0	0	0	1
17:30-17:45	0	0	0	0	0	0	0	0	0	0	1	0	1
17:45-18:00	0	0	0	0	0	0	0	0	0	0	0	0	0
BICYCLES													
17:00-17:15	0	0	0	0	0	0	0	0	0	0	0	0	0
17:15-17:30	0	1	0	0	0	0	0	0	0	0	2	0	3
17:30-17:45	0	3	0	0	0	0	0	0	0	0	0	0	3
17:45-18:00	0	3	0	0	0	0	0	0	0	0	0	0	3

PEDESTRIANS	CROSSWALK USEAGE SOUTH	WEST	EAST	NORTH	ALL
17:00-17:15	4	0	0	0	4
17:15-17:30	4	1	0	0	5
17:30-17:45	2	0	0	0	2
17:45-18:00	1	0	0	0	1

Peak Hour by Movement													
PHF	.74	.93	.83	.87	.76	.92	.76	.46	.75	.71	.82	.62	.929
% Trucks(all)	1.1	1	1.3	.3	0	0	0	0	0	0	.6	0	.6
% Trucks(M+H)	0	.1	0	0	0	0	0	0	0	0	.1	0	.1
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	
Hourly Totals													
16:00-17:00	79	845	143	295	74	253	93	19	70	34	894	29	2828
16:15-17:15	87	887	153	303	77	250	97	15	61	36	952	24	2942
16:30-17:30	86	905	141	305	72	249	102	13	59	34	1079	28	3073
16:45-17:45	88	902	137	335	64	251	100	13	59	32	1136	27	3144
17:00-18:00	95	882	152	347	64	243	97	11	54	37	1131	32	3145

INTERSECTION TURN MOVEMENT COUNT SUMMARY REPORT
DENNEY ROAD AT HIGHWAY 217 NORTHBOUND RAMPS

19297



DATE OF COUNT: 04/15/99
DAY OF WEEK: Thu
TIME STARTED: 07:00
TIME ENDED: 09:00

TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

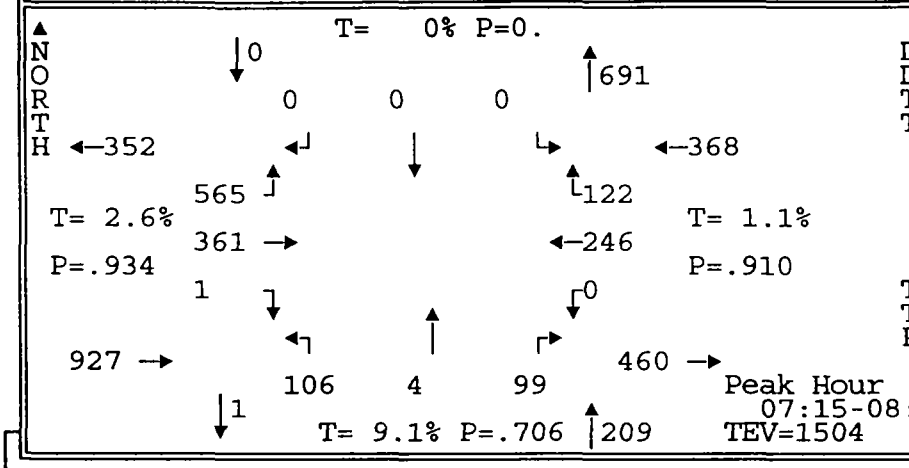
MPB5

Peak Hour
07:25-08:25
TEV=1514

Traffic Smithy
(503) 641-6333

TIME PERIOD FROM - TO	EAST BOUND ↓	EAST BOUND →	EAST BOUND ↑	SOUTH BOUND ↵	SOUTH BOUND ↓	SOUTH BOUND ↳	NORTH BOUND ↰	NORTH BOUND ↑	NORTH BOUND ↱	WEST BOUND ↓	WEST BOUND ←	WEST BOUND ↑	ALL
07:00-07:05	0	17	45	0	0	0	9	0	2	0	11	5	89
07:05-07:10	0	14	53	0	0	0	2	0	6	0	14	3	92
07:10-07:15	0	30	46	0	0	0	9	0	6	0	18	8	117
07:15-07:20	0	26	56	0	0	0	5	0	9	0	17	6	119
07:20-07:25	1	35	43	0	0	0	4	0	5	0	15	16	119
07:25-07:30	0	33	54	0	0	0	9	0	4	0	21	10	131
07:30-07:35	0	18	51	0	0	0	5	0	3	0	27	9	113
07:35-07:40	0	32	45	0	0	0	9	0	10	0	17	14	127
07:40-07:45	0	26	43	0	0	0	7	0	6	0	21	13	116
07:45-07:50	0	33	49	0	0	0	10	1	8	0	23	10	134
07:50-07:55	0	32	40	0	0	0	6	0	10	0	23	14	125
07:55-08:00	0	33	45	0	0	0	12	2	10	0	20	9	131
08:00-08:05	0	23	50	0	0	0	10	0	7	0	14	4	108
08:05-08:10	0	38	43	0	0	0	10	0	13	0	23	8	135
08:10-08:15	0	32	46	0	0	0	19	1	14	0	25	9	146
08:15-08:20	0	34	57	0	0	0	13	1	6	0	10	5	126
08:20-08:25	0	32	47	0	0	0	5	0	14	0	22	2	122
08:25-08:30	0	26	42	0	0	0	13	4	8	0	14	11	118
08:30-08:35	0	29	38	0	0	0	13	3	18	0	15	4	120
08:35-08:40	0	17	33	0	0	0	17	1	8	0	25	7	108
08:40-08:45	0	30	33	0	0	0	5	0	5	0	18	8	99
08:45-08:50	0	26	34	0	0	0	9	0	5	0	20	2	96
08:50-08:55	0	29	28	0	0	0	8	0	3	0	25	7	100
08:55-09:00	0	25	28	0	0	0	9	0	8	0	17	5	92
Total Survey	1	670	1049	0	0	0	218	13	188	0	455	189	2783
PHF	0	.88	.95	0	0	0	.68	.42	.77	0	.92	.72	.929
% Trucks	0	3	3.6	0	0	0	12.8	7.7	2.1	0	2.2	2.6	3.8
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	
Peds	0	0	0	0	0	0	0	0	0	0	0	0	
Hourly Totals													
07:00-08:00	1	329	570	0	0	0	87	3	79	0	227	117	1413
07:15-08:15	1	361	565	0	0	0	106	4	99	0	246	122	1504
07:30-08:30	0	359	558	0	0	0	119	9	109	0	239	108	1501
07:45-08:45	0	359	523	0	0	0	133	13	121	0	232	91	1472
08:00-09:00	0	341	479	0	0	0	131	10	109	0	228	72	1370

INTERSECTION TURN MOVEMENT COUNT PEAK HOUR REPORT
DENNEY ROAD AT HIGHWAY 217 NORTHBOUND RAMPS



DATE OF COUNT: 04/15/99
DAY OF WEEK: Thu
TIME STARTED: 07:00
TIME ENDED: 09:00

TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

MPB5

Peak Hour
07:15-08:15
TEV=1504

Traffic Smithy
(503)641-6333

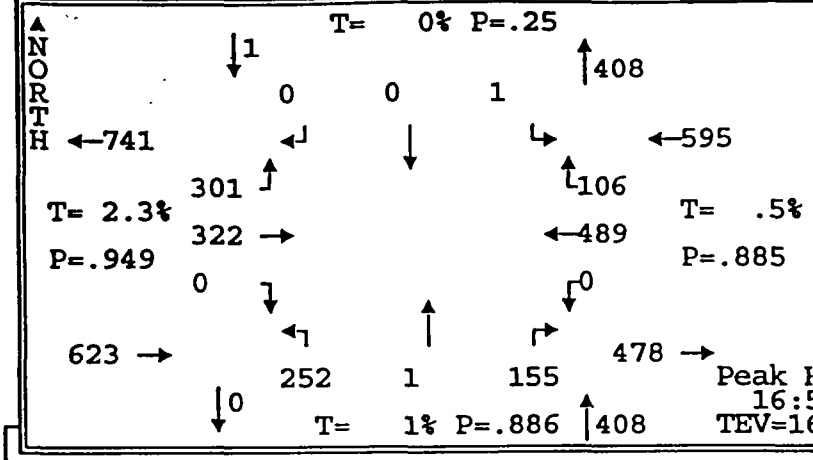
TIME PERIOD FROM - TO	EAST BOUND ↓	EAST BOUND →	EAST BOUND ↑	SOUTH BOUND ↲	SOUTH BOUND ↓	SOUTH BOUND ↳	NORTH BOUND ↰	NORTH BOUND ↑	NORTH BOUND ↱	WEST BOUND ↓	WEST BOUND ←	WEST BOUND ↑	ALL
ALL VEHICLES													
07:15-07:30	1	94	153	0	0	0	18	0	18	0	53	32	369
07:30-07:45	0	76	139	0	0	0	21	0	19	0	65	36	356
07:45-08:00	0	98	134	0	0	0	28	3	28	0	66	33	390
08:00-08:15	0	93	139	0	0	0	39	1	34	0	62	21	389
LIGHT TRUCKS (SINGLE UNIT 2 AXLES)													
07:15-07:30	0	2	0	0	0	0	2	0	0	0	0	1	5
07:30-07:45	0	1	2	0	0	0	1	0	0	0	1	1	6
07:45-08:00	0	3	0	0	0	0	2	0	0	0	0	0	5
08:00-08:15	0	2	3	0	0	0	1	0	0	0	0	0	6
MEDIUM TRUCKS (SINGLE UNIT > 2 AXLES)													
07:15-07:30	0	0	3	0	0	0	2	0	0	0	1	0	6
07:30-07:45	0	0	3	0	0	0	2	0	0	0	0	0	5
07:45-08:00	0	0	2	0	0	0	1	0	0	0	0	0	3
08:00-08:15	0	1	1	0	0	0	3	0	0	0	0	0	5
HEAVY TRUCKS (SEMI-TRACTOR TRAILER)													
07:15-07:30	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30-07:45	0	0	1	0	0	0	3	0	0	0	0	0	4
07:45-08:00	0	0	0	0	0	0	1	1	0	0	0	0	2
08:00-08:15	0	0	0	0	0	0	0	0	0	0	0	0	0
BICYCLES													
07:15-07:30	0	1	0	0	0	0	0	0	0	0	0	0	1
07:30-07:45	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45-08:00	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00-08:15	0	0	0	0	0	0	0	0	0	0	0	0	0

PEDESTRIANS	CROSSWALK USEAGE SOUTH	WEST	EAST	NORTH	ALL
07:15-07:30	0	0	0	0	0
07:30-07:45	0	0	0	0	0
07:45-08:00	0	0	0	0	0
08:00-08:15	0	0	0	0	0

Peak Hour by Movement													
PHF	.25	.92	.92	0	0	0	.68	.33	.73	0	.93	.85	.964
% Trucks(all)	0	2.5	2.7	0	0	0	17	25	0	0	.8	1.6	3.1
% Trucks(M+H)	0	.3	1.8	0	0	0	11.3	25	0	0	.4	0	1.7
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	
Hourly Totals													
07:00-08:00	1	329	570	0	0	0	87	3	79	0	227	117	1413
07:15-08:15	1	361	565	0	0	0	106	4	99	0	246	122	1504
07:30-08:30	0	359	558	0	0	0	119	9	109	0	239	108	1501
07:45-08:45	0	359	523	0	0	0	133	13	121	0	232	91	1472
08:00-09:00	0	341	479	0	0	0	131	10	109	0	228	72	1370

INTERSECTION TURN MOVEMENT COUNT SUMMARY REPORT
DENNEY ROAD AT HIGHWAY 217 NORTHBOUND RAMPS

19266



DATE OF COUNT: 04/14/99
DAY OF WEEK: Wed
TIME STARTED: 16:00
TIME ENDED: 18:00

Peak Hour
16:55-17:55
TEV=1627

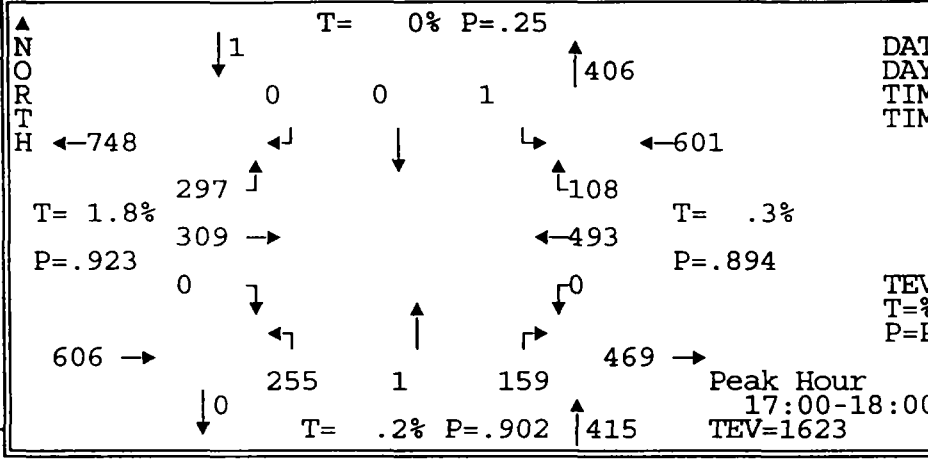
TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

EBAA

Traffic Smithy
(503) 641-6333

TIME PERIOD FROM - TO	EAST BOUND ↓	EAST BOUND →	EAST BOUND ↑	SOUTH BOUND ↵	SOUTH BOUND ↓	SOUTH BOUND ↳	NORTH BOUND ↰	NORTH BOUND ↑	NORTH BOUND ↱	WEST BOUND ↓	WEST BOUND ←	WEST BOUND ↑	ALL
16:00-16:05	0	16	30	0	0	0	28	0	13	0	28	8	123
16:05-16:10	0	24	26	0	0	0	17	1	12	0	25	7	112
16:10-16:15	0	16	32	0	0	0	20	0	12	0	33	16	129
16:15-16:20	0	15	21	0	0	0	23	0	7	0	36	3	105
16:20-16:25	0	33	23	0	0	0	20	0	10	0	21	5	112
16:25-16:30	0	18	16	0	0	0	26	1	8	0	30	4	103
16:30-16:35	0	27	22	0	0	0	15	0	10	0	35	4	113
16:35-16:40	0	14	18	0	0	0	16	0	6	0	43	9	106
16:40-16:45	0	26	25	0	0	0	21	0	9	0	38	11	130
16:45-16:50	0	27	21	0	0	0	21	1	8	0	34	10	122
16:50-16:55	0	20	23	0	0	0	18	0	4	0	29	8	102
16:55-17:00	0	30	23	0	0	0	22	0	5	0	29	8	117
17:00-17:05	0	28	22	0	0	0	22	1	14	0	46	7	140
17:05-17:10	0	34	24	0	0	0	21	0	15	0	47	9	150
17:10-17:15	0	21	31	0	0	1	11	0	16	0	49	10	139
17:15-17:20	0	27	21	0	0	0	25	0	14	0	33	7	127
17:20-17:25	0	32	32	0	0	0	18	0	10	0	51	6	149
17:25-17:30	0	23	29	0	0	0	18	0	12	0	42	13	137
17:30-17:35	0	26	22	0	0	0	22	0	20	0	43	13	146
17:35-17:40	0	19	31	0	0	0	22	0	11	0	32	8	123
17:40-17:45	0	30	26	0	0	0	26	0	14	0	41	7	144
17:45-17:50	0	26	24	0	0	0	21	0	11	0	36	13	131
17:50-17:55	0	26	16	0	0	0	24	0	13	0	40	5	124
17:55-18:00	0	17	19	0	0	0	25	0	9	0	33	10	113
Total Survey	0	575	577	0	0	1	502	4	263	0	874	201	2997
PHF	0	.88	.9	0	0	.25	.89	.25	.86	0	.86	.78	.941
% Trucks	0	.7	3.8	0	0	0	1.4	0	.4	0	.5	.5	1.3
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	
Peds	0	0	0	0	0	0	0	0	0	0	9	0	
Hourly Totals													
16:00-17:00	0	266	280	0	0	0	247	3	104	0	381	93	1374
16:15-17:15	0	293	269	0	0	1	236	3	112	0	437	88	1439
16:30-17:30	0	309	291	0	0	1	228	2	123	0	476	102	1532
16:45-17:45	0	317	305	0	0	1	246	2	143	0	476	106	1596
17:00-18:00	0	309	297	0	0	1	255	1	159	0	493	108	1623

INTERSECTION TURN MOVEMENT COUNT PEAK HOUR REPORT
DENNEY ROAD AT HIGHWAY 217 NORTHBOUND RAMPS



DATE OF COUNT: 04/14/99
DAY OF WEEK: Wed
TIME STARTED: 16:00
TIME ENDED: 18:00

TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

EBAA

Peak Hour
17:00-18:00
TEV=1623

Traffic Smithy
(503)641-6333

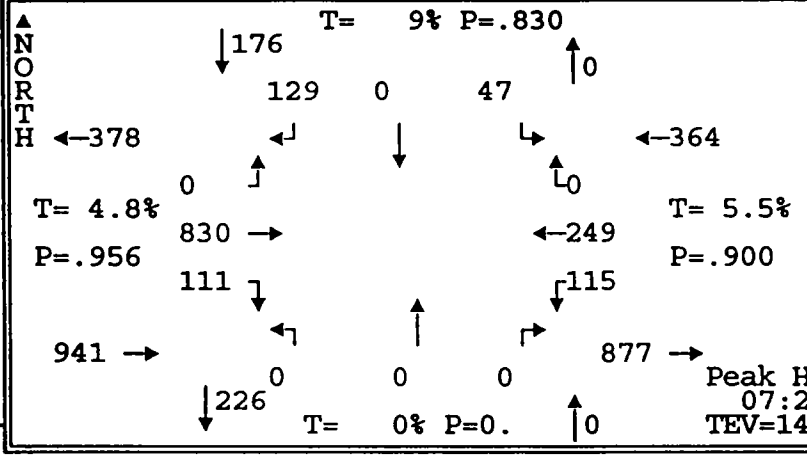
TIME PERIOD FROM - TO	EAST BOUND ↓	EAST BOUND →	EAST BOUND ↑	SOUTH BOUND ↲	SOUTH BOUND ↓	SOUTH BOUND ↳	NORTH BOUND ↰	NORTH BOUND ↑	NORTH BOUND ↱	WEST BOUND ↓	WEST BOUND ←	WEST BOUND ↑	ALL
ALL VEHICLES													
17:00-17:15	0	83	77	0	0	1	54	1	45	0	142	26	429
17:15-17:30	0	82	82	0	0	0	61	0	36	0	126	26	413
17:30-17:45	0	75	79	0	0	0	70	0	45	0	116	28	413
17:45-18:00	0	69	59	0	0	0	70	0	33	0	109	28	368
LIGHT TRUCKS (SINGLE UNIT 2 AXLES)													
17:00-17:15	0	0	0	0	0	0	1	0	0	0	0	1	2
17:15-17:30	0	0	3	0	0	0	0	0	0	0	0	0	3
17:30-17:45	0	1	1	0	0	0	0	0	0	0	0	0	2
17:45-18:00	0	1	2	0	0	0	0	0	0	0	0	0	3
MEDIUM TRUCKS (SINGLE UNIT > 2 AXLES)													
17:00-17:15	0	0	1	0	0	0	0	0	0	0	0	0	1
17:15-17:30	0	0	0	0	0	0	0	0	0	0	0	0	0
17:30-17:45	0	0	0	0	0	0	0	0	0	0	1	0	1
17:45-18:00	0	0	0	0	0	0	0	0	0	0	0	0	0
HEAVY TRUCKS (SEMI-TRACTOR TRAILER)													
17:00-17:15	0	0	1	0	0	0	0	0	0	0	0	0	1
17:15-17:30	0	0	0	0	0	0	0	0	0	0	0	0	0
17:30-17:45	0	0	1	0	0	0	0	0	0	0	0	0	1
17:45-18:00	0	0	0	0	0	0	0	0	0	0	0	0	0
BICYCLES													
17:00-17:15	0	0	0	0	0	0	0	0	0	0	0	0	0
17:15-17:30	0	1	0	0	0	0	0	0	0	0	0	0	1
17:30-17:45	0	1	0	0	0	0	0	0	0	0	0	0	1
17:45-18:00	0	0	0	0	0	0	0	0	0	0	0	0	0

PEDESTRIANS	CROSSWALK USEAGE SOUTH	WEST	EAST	NORTH	ALL
17:00-17:15	0	0	0	1	1
17:15-17:30	0	0	0	4	4
17:30-17:45	0	0	0	0	0
17:45-18:00	0	0	0	1	1

Peak Hour by Movement													
PHF	0	.93	.91	0	0	.25	.91	.25	.88	0	.87	.96	.945
% Trucks(all)	0	.6	3	0	0	0	.4	0	0	0	.2	.9	.9
% Trucks(M+H)	0	0	1	0	0	0	0	0	0	0	.2	0	.2
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	
Hourly Totals													
16:00-17:00	0	266	280	0	0	0	247	3	104	0	381	93	1374
16:15-17:15	0	293	269	0	0	1	236	3	112	0	437	88	1439
16:30-17:30	0	309	291	0	0	1	228	2	123	0	476	102	1532
16:45-17:45	0	317	305	0	0	1	246	2	143	0	476	106	1596
17:00-18:00	0	309	297	0	0	1	255	1	159	0	493	108	1623

INTERSECTION TURN MOVEMENT COUNT SUMMARY REPORT
DENNEY ROAD AT HIGHWAY 217 SOUTHBOUND RAMPS

19298



DATE OF COUNT: 04/15/99
DAY OF WEEK: Thu
TIME STARTED: 07:00
TIME ENDED: 09:00

TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

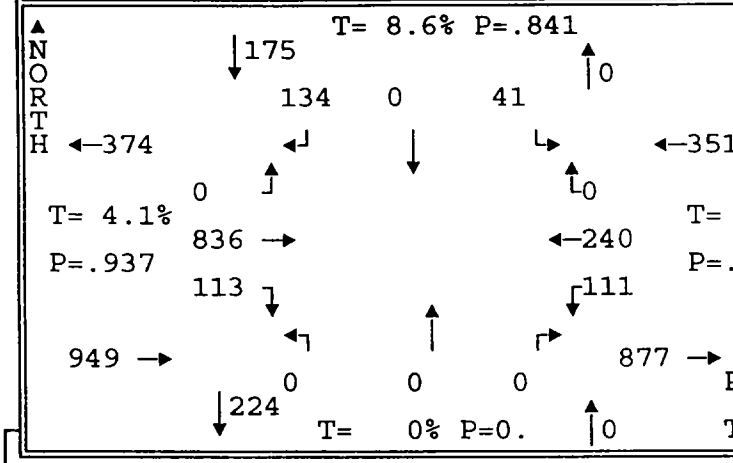
EBA2

Peak Hour
07:25-08:25
TEV=1481

Traffic Smithy
(503) 641-6333

TIME PERIOD FROM - TO	EAST BOUND ↓	EAST BOUND →	EAST BOUND ↑	SOUTH BOUND ↵	SOUTH BOUND ↓	SOUTH BOUND ↳	NORTH BOUND ↰	NORTH BOUND ↑	NORTH BOUND ↱	WEST BOUND ↓	WEST BOUND ←	WEST BOUND ↑	ALL
07:00-07:05	5	63	0	5	0	0	0	0	0	7	13	0	93
07:05-07:10	8	57	0	4	0	2	0	0	0	6	8	0	85
07:10-07:15	10	69	0	1	0	3	1	0	2	7	20	0	113
07:15-07:20	9	73	0	14	0	3	0	0	0	7	12	0	118
07:20-07:25	6	73	0	12	0	4	0	0	0	5	15	0	115
07:25-07:30	10	82	0	8	0	3	0	0	0	10	19	0	132
07:30-07:35	11	65	0	7	0	3	0	0	0	5	25	0	116
07:35-07:40	7	71	0	9	0	2	0	0	0	4	24	0	117
07:40-07:45	10	65	0	9	0	0	0	0	0	9	21	0	114
07:45-07:50	10	71	0	13	0	3	0	0	0	13	16	0	126
07:50-07:55	10	67	0	15	0	6	0	0	0	14	18	0	130
07:55-08:00	12	68	0	7	0	5	0	0	0	10	23	0	125
08:00-08:05	9	58	0	12	0	4	0	0	0	8	19	0	110
08:05-08:10	9	76	0	19	0	6	0	0	0	10	18	0	138
08:10-08:15	10	67	0	9	0	2	0	0	0	16	30	0	134
08:15-08:20	9	73	0	9	0	5	0	0	0	4	17	0	117
08:20-08:25	4	67	0	12	0	8	0	0	0	12	19	0	122
08:25-08:30	11	54	0	11	0	5	0	0	0	3	20	0	104
08:30-08:35	8	57	0	9	0	6	0	0	0	7	19	0	106
08:35-08:40	10	44	0	8	0	4	0	0	0	11	26	0	103
08:40-08:45	11	59	0	12	0	4	0	0	0	12	13	0	111
08:45-08:50	10	47	0	8	0	8	0	0	0	9	19	0	101
08:50-08:55	5	45	0	8	0	9	0	0	0	13	18	0	98
08:55-09:00	9	42	0	8	0	8	0	0	0	10	15	0	92
Total Survey	213	1513	0	229	0	103	1	0	2	212	447	0	2720
PHF	.87	.95	0	.81	0	.78	0	0	0	.78	.89	0	.951
% Trucks	14.1	3.5	0	12.7	0	1	0	0	0	0	8.1	0	5.5
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	
Peds	0	0	0	0	0	0	0	0	0	0	6	0	
Hourly Totals													
07:00-08:00	108	824	0	104	0	34	1	0	2	97	214	0	1384
07:15-08:15	113	836	0	134	0	41	0	0	0	111	240	0	1475
07:30-08:30	112	802	0	132	0	49	0	0	0	108	250	0	1453
07:45-08:45	113	761	0	136	0	58	0	0	0	120	238	0	1426
08:00-09:00	105	689	0	125	0	69	0	0	0	115	233	0	1336

INTERSECTION TURN MOVEMENT COUNT PEAK HOUR REPORT
DENNEY ROAD AT HIGHWAY 217 SOUTHBOUND RAMPS



DATE OF COUNT: 04/15/99
DAY OF WEEK: Thu
TIME STARTED: 07:00
TIME ENDED: 09:00

TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

EBA2

Peak Hour
07:15-08:15
TEV=1475

Traffic Smithy
(503)641-6333

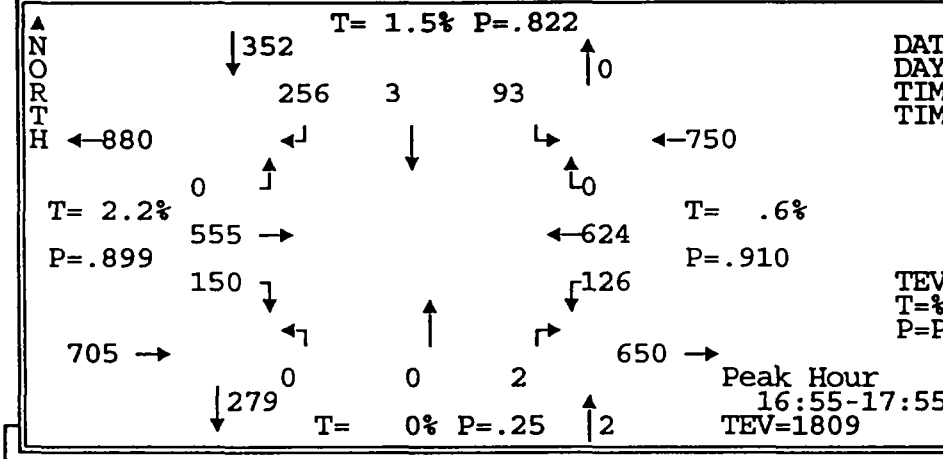
TIME PERIOD FROM - TO	EAST BOUND ↓	EAST BOUND →	EAST BOUND ↑	SOUTH BOUND ↲	SOUTH BOUND ↓	SOUTH BOUND ↳	NORTH BOUND ↰	NORTH BOUND ↑	NORTH BOUND ↱	WEST BOUND ↓	WEST BOUND ←	WEST BOUND ↑	ALL
ALL VEHICLES													
07:15-07:30	25	228	0	34	0	10	0	0	0	22	46	0	365
07:30-07:45	28	201	0	25	0	5	0	0	0	18	70	0	347
07:45-08:00	32	206	0	35	0	14	0	0	0	37	57	0	381
08:00-08:15	28	201	0	40	0	12	0	0	0	34	67	0	382
LIGHT TRUCKS (SINGLE UNIT 2 AXLES)													
07:15-07:30	2	5	0	2	0	0	0	0	0	0	2	0	11
07:30-07:45	2	2	0	2	0	0	0	0	0	0	1	0	7
07:45-08:00	2	2	0	3	0	0	0	0	0	0	2	0	9
08:00-08:15	3	5	0	2	0	0	0	0	0	0	2	0	12
MEDIUM TRUCKS (SINGLE UNIT > 2 AXLES)													
07:15-07:30	0	3	0	0	0	0	0	0	0	0	3	0	6
07:30-07:45	1	3	0	1	0	0	0	0	0	0	2	0	7
07:45-08:00	0	2	0	2	0	0	0	0	0	0	1	0	5
08:00-08:15	0	2	0	2	0	0	0	0	0	0	2	0	6
HEAVY TRUCKS (SEMI-TRACTOR TRAILER)													
07:15-07:30	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30-07:45	0	0	0	0	0	0	0	0	0	0	3	0	3
07:45-08:00	0	0	0	0	0	0	0	0	0	0	1	0	1
08:00-08:15	4	1	0	1	0	0	0	0	0	0	0	0	6
BICYCLES													
07:15-07:30	0	1	0	0	0	0	0	0	0	0	0	0	1
07:30-07:45	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45-08:00	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00-08:15	0	0	0	0	0	0	0	0	0	0	0	0	0

PEDESTRIANS	CROSSWALK USEAGE SOUTH	WEST	EAST	NORTH	ALL
07:15-07:30	0	0	0	0	0
07:30-07:45	0	0	0	2	2
07:45-08:00	0	0	0	0	0
08:00-08:15	0	0	0	2	2

Peak Hour by Movement													
PHF	.88	.92	0	.84	0	.73	0	0	0	.75	.86	0	.965
% Trucks(all)	12.4	3	0	11.2	0	0	0	0	0	0	7.9	0	4.9
% Trucks(M+H)	4.4	1.3	0	4.5	0	0	0	0	0	0	5	0	2.3
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	
Hourly Totals													
07:00-08:00	108	824	0	104	0	34	1	0	2	97	214	0	1384
07:15-08:15	113	836	0	134	0	41	0	0	0	111	240	0	1475
07:30-08:30	112	802	0	132	0	49	0	0	0	108	250	0	1453
07:45-08:45	113	761	0	136	0	58	0	0	0	120	238	0	1426
08:00-09:00	105	689	0	125	0	69	0	0	0	115	233	0	1336

INTERSECTION TURN MOVEMENT COUNT SUMMARY REPORT
DENNEY ROAD AT HIGHWAY 217 SOUTHBOUND RAMPS

19286



DATE OF COUNT: 04/13/99
DAY OF WEEK: Tue
TIME STARTED: 16:00
TIME ENDED: 18:00

TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

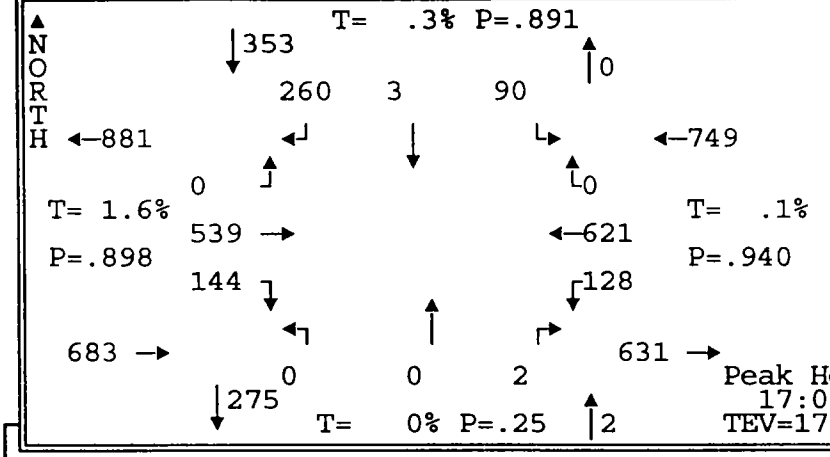
WMAJ

Peak Hour
16:55-17:55
TEV=1809

Traffic Smithy
(503) 641-6333

TIME PERIOD FROM - TO	EAST BOUND ↓	EAST BOUND →	EAST BOUND ↑	SOUTH BOUND ↵	SOUTH BOUND ↓	SOUTH BOUND ↳	NORTH BOUND ↰	NORTH BOUND ↑	NORTH BOUND ↱	WEST BOUND ↓	WEST BOUND ←	WEST BOUND ↑	ALL
16:00-16:05	9	48	0	15	0	7	0	0	0	8	32	0	119
16:05-16:10	11	53	0	18	0	6	0	0	0	16	37	0	141
16:10-16:15	17	43	0	11	0	10	0	0	0	13	34	0	128
16:15-16:20	4	53	0	20	0	6	0	0	0	3	46	0	132
16:20-16:25	13	51	0	27	0	7	0	0	0	4	51	0	153
16:25-16:30	11	53	0	22	0	8	0	0	0	4	42	0	140
16:30-16:35	5	42	0	25	0	7	0	0	0	13	33	0	125
16:35-16:40	15	51	0	9	0	8	0	0	0	15	43	0	141
16:40-16:45	8	46	0	17	0	7	0	0	0	10	44	0	132
16:45-16:50	10	50	0	26	0	6	0	0	0	11	43	0	146
16:50-16:55	12	39	1	23	0	10	0	0	0	8	38	1	132
16:55-17:00	18	51	0	17	0	8	0	0	0	5	44	0	143
17:00-17:05	7	47	0	21	0	6	0	0	0	8	46	0	135
17:05-17:10	10	59	0	19	0	4	0	0	0	15	47	0	154
17:10-17:15	14	53	0	23	0	4	0	0	0	14	52	0	160
17:15-17:20	4	56	0	17	0	6	0	0	0	15	45	0	143
17:20-17:25	11	41	0	22	0	11	0	0	2	8	65	0	160
17:25-17:30	12	41	0	24	0	15	0	0	0	10	56	0	158
17:30-17:35	14	30	0	25	0	10	0	0	0	16	51	0	146
17:35-17:40	19	48	0	18	0	10	0	0	0	4	53	0	152
17:40-17:45	19	40	0	28	2	6	0	0	0	7	55	0	157
17:45-17:50	9	41	0	21	0	8	0	0	0	10	53	0	142
17:50-17:55	13	48	0	21	1	5	0	0	0	14	57	0	159
17:55-18:00	12	35	0	21	0	5	0	0	0	7	41	0	121
Total Survey	277	1119	1	490	3	180	0	0	2	238	1108	1	3419
PHF	.72	.83	0	.9	.25	.65	0	0	.25	.72	.91	0	.974
% Trucks	1.8	2.3	0	1.6	0	1.1	0	0	0	.4	.6	0	1.4
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	
Peds	0	1	0	0	0	0	0	0	0	0	5	0	
Hourly Totals													
16:00-17:00	133	580	1	230	0	90	0	0	0	110	487	1	1632
16:15-17:15	127	595	1	249	0	81	0	0	0	110	529	1	1693
16:30-17:30	126	576	1	243	0	92	0	0	2	132	556	1	1729
16:45-17:45	150	555	1	263	2	96	0	0	2	121	595	1	1786
17:00-18:00	144	539	0	260	3	90	0	0	2	128	621	0	1787

INTERSECTION TURN MOVEMENT COUNT PEAK HOUR REPORT
DENNEY ROAD AT HIGHWAY 217 SOUTHBOUND RAMPS



DATE OF COUNT: 04/13/99
DAY OF WEEK: Tue
TIME STARTED: 16:00
TIME ENDED: 18:00

TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

WMAJ

Peak Hour
17:00-18:00
TEV=1787

Traffic Smithy
(503)641-6333

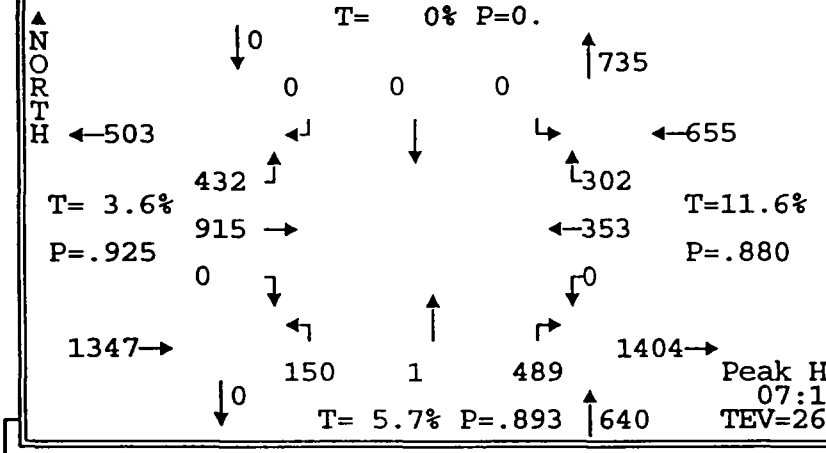
TIME PERIOD FROM - TO	EAST BOUND ↓	EAST BOUND →	EAST BOUND ↑	SOUTH BOUND ↲	SOUTH BOUND ↓	SOUTH BOUND ↳	NORTH BOUND ↰	NORTH BOUND ↑	NORTH BOUND ↱	WEST BOUND ↓	WEST BOUND ←	WEST BOUND ↑	ALL
ALL VEHICLES													
17:00-17:15	31	159	0	63	0	14	0	0	0	37	145	0	449
17:15-17:30	27	138	0	63	0	32	0	0	2	33	166	0	461
17:30-17:45	52	118	0	71	2	26	0	0	0	27	159	0	455
17:45-18:00	34	124	0	63	1	18	0	0	0	31	151	0	422
LIGHT TRUCKS (SINGLE UNIT 2 AXLES)													
17:00-17:15	1	3	0	0	0	0	0	0	0	0	0	0	4
17:15-17:30	1	0	0	1	0	0	0	0	0	0	1	0	3
17:30-17:45	0	3	0	0	0	0	0	0	0	0	0	0	3
17:45-18:00	0	2	0	0	0	0	0	0	0	0	0	0	2
MEDIUM TRUCKS (SINGLE UNIT > 2 AXLES)													
17:00-17:15	0	0	0	0	0	0	0	0	0	0	0	0	0
17:15-17:30	0	0	0	0	0	0	0	0	0	0	0	0	0
17:30-17:45	0	1	0	0	0	0	0	0	0	0	0	0	1
17:45-18:00	0	0	0	0	0	0	0	0	0	0	0	0	0
HEAVY TRUCKS (SEMI-TRACTOR TRAILER)													
17:00-17:15	0	0	0	0	0	0	0	0	0	0	0	0	0
17:15-17:30	0	0	0	0	0	0	0	0	0	0	0	0	0
17:30-17:45	0	0	0	0	0	0	0	0	0	0	0	0	0
17:45-18:00	0	0	0	0	0	0	0	0	0	0	0	0	0
BICYCLES													
17:00-17:15	0	0	0	0	0	0	0	0	0	0	0	0	0
17:15-17:30	0	0	0	0	0	0	0	0	0	0	0	0	0
17:30-17:45	0	0	0	0	0	0	0	0	0	0	0	0	0
17:45-18:00	0	0	0	0	0	0	0	0	0	0	0	0	0

PEDESTRIANS	CROSSWALK USEAGE SOUTH	WEST	EAST	NORTH	ALL
17:00-17:15	0	0	0	1	1
17:15-17:30	0	0	0	0	0
17:30-17:45	1	0	0	1	2
17:45-18:00	0	0	0	0	0

Peak Hour by Movement													
PHF	.69	.85	0	.92	.38	.7	0	0	.25	.86	.94	0	.969
% Trucks(all)	1.4	1.7	0	.4	0	0	0	0	0	0	.2	0	.7
% Trucks(M+H)	0	.2	0	0	0	0	0	0	0	0	0	0	.1
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	
Hourly Totals													
16:00-17:00	133	580	1	230	0	90	0	0	0	110	487	1	1632
16:15-17:15	127	595	1	249	0	81	0	0	0	110	529	1	1693
16:30-17:30	126	576	1	243	0	92	0	0	2	132	556	1	1729
16:45-17:45	150	555	1	263	2	96	0	0	2	121	595	1	1786
17:00-18:00	144	539	0	260	3	90	0	0	2	128	621	0	1787

INTERSECTION TURN MOVEMENT COUNT SUMMARY REPORT
ALLEN BOULEVARD AT HIGHWAY 217 NORTHBOUND RAMPS

19291



DATE OF COUNT: 04/15/99
DAY OF WEEK: Thu
TIME STARTED: 07:00
TIME ENDED: 09:00

TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

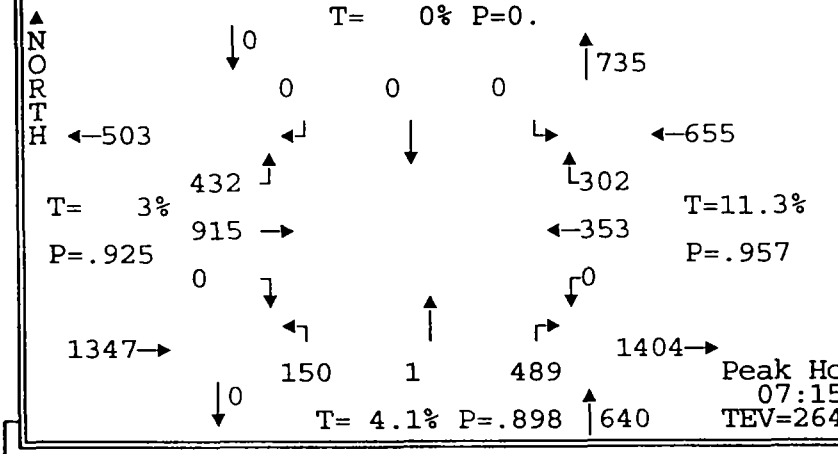
DJCD

Peak Hour
07:15-08:15
TEV=2642

Traffic Smithy
(503) 641-6333

TIME PERIOD FROM - TO	EAST BOUND ↓	EAST BOUND →	EAST BOUND ↑	SOUTH BOUND ↵	SOUTH BOUND ↓	SOUTH BOUND ↳	NORTH BOUND ↰	NORTH BOUND ↑	NORTH BOUND ↱	WEST BOUND ↓	WEST BOUND ←	WEST BOUND ↑	ALL
07:00-07:05	0	77	32	0	0	0	11	0	30	0	20	40	210
07:05-07:10	0	68	27	0	0	0	5	0	31	0	30	24	185
07:10-07:15	0	77	33	0	0	0	9	0	48	0	27	30	224
07:15-07:20	0	64	39	0	0	0	10	0	33	0	31	19	196
07:20-07:25	0	76	36	0	0	0	17	0	51	0	34	25	239
07:25-07:30	0	80	36	0	0	0	15	0	52	0	28	28	239
07:30-07:35	0	81	31	0	0	0	13	0	31	0	35	19	210
07:35-07:40	0	64	46	0	0	0	17	0	39	0	33	17	216
07:40-07:45	0	74	37	0	0	0	9	0	34	0	27	36	217
07:45-07:50	0	75	33	0	0	0	11	0	53	0	30	29	231
07:50-07:55	0	77	33	0	0	0	13	0	53	0	37	27	240
07:55-08:00	0	73	28	0	0	0	8	0	21	0	15	14	159
08:00-08:05	0	94	26	0	0	0	12	1	39	0	32	34	238
08:05-08:10	0	74	33	0	0	0	14	0	54	0	21	26	222
08:10-08:15	0	83	54	0	0	0	11	0	29	0	30	28	235
08:15-08:20	0	69	26	0	0	0	13	0	35	0	25	24	192
08:20-08:25	0	59	23	0	0	0	14	1	48	0	21	30	196
08:25-08:30	0	64	37	0	0	0	9	0	38	0	24	37	209
08:30-08:35	0	69	30	0	0	0	11	0	37	0	34	23	204
08:35-08:40	0	51	36	0	0	0	22	1	20	0	35	27	192
08:40-08:45	0	60	39	0	0	0	16	0	23	0	25	19	182
08:45-08:50	0	62	25	0	0	0	14	0	21	0	32	38	192
08:50-08:55	0	51	23	0	0	0	15	0	31	0	29	24	173
08:55-09:00	0	55	27	0	0	0	18	0	33	0	17	15	165
Total Survey	0	1677	790	0	0	0	307	3	884	0	672	633	4966
PHF	0	.91	.93	0	0	0	.83	.25	.87	0	.91	.82	.950
% Trucks	0	4.4	2	0	0	0	5.2	0	5.9	0	12.4	10.9	6.2
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	
Peds	0	0	0	0	0	0	0	0	0	0	0	0	
Hourly Totals													
07:00-08:00	0	886	411	0	0	0	138	0	476	0	347	308	2566
07:15-08:15	0	915	432	0	0	0	150	1	489	0	353	302	2642
07:30-08:30	0	887	407	0	0	0	144	2	474	0	330	321	2565
07:45-08:45	0	848	398	0	0	0	154	3	450	0	329	318	2500
08:00-09:00	0	791	379	0	0	0	169	3	408	0	325	325	2400

INTERSECTION TURN MOVEMENT COUNT PEAK HOUR REPORT
ALLEN BOULEVARD AT HIGHWAY 217 NORTHBOUND RAMPS



DATE OF COUNT: 04/15/99
DAY OF WEEK: Thu
TIME STARTED: 07:00
TIME ENDED: 09:00

TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

DJCD

Peak Hour
07:15-08:15
TEV=2642

Traffic Smithy
(503)641-6333

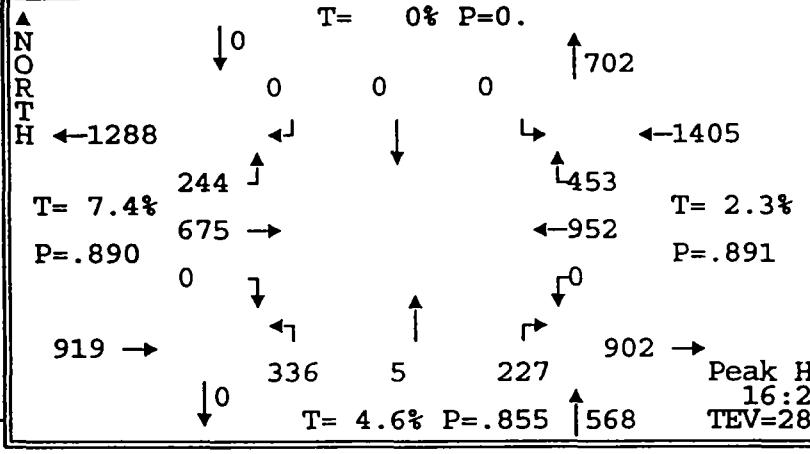
TIME PERIOD FROM - TO	EAST BOUND ↓	EAST BOUND →	EAST BOUND ↑	SOUTH BOUND ↵	SOUTH BOUND ↓	SOUTH BOUND ↳	NORTH BOUND ↰	NORTH BOUND ↑	NORTH BOUND ↱	WEST BOUND ↓	WEST BOUND ←	WEST BOUND ↑	ALL
ALL VEHICLES													
07:15-07:30	0	220	111	0	0	0	42	0	136	0	93	72	674
07:30-07:45	0	219	114	0	0	0	39	0	104	0	95	72	643
07:45-08:00	0	225	94	0	0	0	32	0	127	0	82	70	630
08:00-08:15	0	251	113	0	0	0	37	1	122	0	83	88	695
LIGHT TRUCKS (SINGLE UNIT 2 AXLES)													
07:15-07:30	0	5	0	0	0	0	1	0	4	0	21	3	34
07:30-07:45	0	6	1	0	0	0	0	0	1	0	8	3	19
07:45-08:00	0	4	2	0	0	0	1	0	3	0	2	1	13
08:00-08:15	0	7	3	0	0	0	0	0	2	0	4	1	17
MEDIUM TRUCKS (SINGLE UNIT > 2 AXLES)													
07:15-07:30	0	0	0	0	0	0	0	0	1	0	0	0	1
07:30-07:45	0	0	0	0	0	0	0	0	1	0	3	1	5
07:45-08:00	0	0	2	0	0	0	0	0	1	0	2	1	6
08:00-08:15	0	0	1	0	0	0	0	0	1	0	2	4	8
HEAVY TRUCKS (SEMI-TRACTOR TRAILER)													
07:15-07:30	0	1	0	0	0	0	0	0	3	0	1	2	7
07:30-07:45	0	4	0	0	0	0	1	0	3	0	1	2	11
07:45-08:00	0	1	1	0	0	0	1	0	2	0	1	8	14
08:00-08:15	0	2	0	0	0	0	0	0	0	0	2	1	5
BICYCLES													
07:15-07:30	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30-07:45	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45-08:00	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00-08:15	0	0	0	0	0	0	0	0	0	0	0	0	0

PEDESTRIANS	CROSSWALK USEAGE SOUTH	WEST	EAST	NORTH	ALL
07:15-07:30	0	0	0	0	0
07:30-07:45	0	0	0	0	0
07:45-08:00	0	0	0	0	0
08:00-08:15	0	0	0	0	0

Peak Hour by Movement													
PHF	0	.91	.95	0	0	0	.89	.25	.9	0	.93	.86	.950
% Trucks(all)	0	3.3	2.3	0	0	0	2.7	0	4.5	0	13.3	8.9	5.3
% Trucks(M+H)	0	.9	.9	0	0	0	1.3	0	2.5	0	3.4	6.3	2.2
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	
Hourly Totals													
07:00-08:00	0	886	411	0	0	0	138	0	476	0	347	308	2566
07:15-08:15	0	915	432	0	0	0	150	1	489	0	353	302	2642
07:30-08:30	0	887	407	0	0	0	144	2	474	0	330	321	2565
07:45-08:45	0	848	398	0	0	0	154	3	450	0	329	318	2500
08:00-09:00	0	791	379	0	0	0	169	3	408	0	325	325	2400

INTERSECTION TURN MOVEMENT COUNT SUMMARY REPORT
ALLEN BOULEVARD AT HIGHWAY 217 NORTHBOUND RAMPS

19292



DATE OF COUNT: 04/15/99
DAY OF WEEK: Thu
TIME STARTED: 16:00
TIME ENDED: 18:00

TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

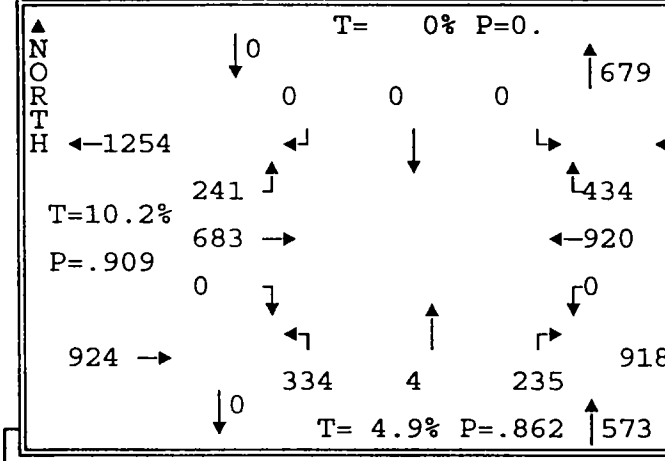
DJCE

Peak Hour
16:20-17:20
TEV=2892

Traffic Smithy
(503) 641-6333

TIME PERIOD FROM - TO	EAST BOUND ↓	EAST BOUND →	EAST BOUND ↑	SOUTH BOUND ↵	SOUTH BOUND ↓	SOUTH BOUND ↳	NORTH BOUND ↰	NORTH BOUND ↑	NORTH BOUND ↱	WEST BOUND ↓	WEST BOUND ←	WEST BOUND ↑	ALL
16:00-16:05	0	53	26	0	0	0	28	1	19	0	46	25	198
16:05-16:10	0	54	14	0	0	0	31	0	20	0	78	38	235
16:10-16:15	0	59	14	0	0	0	33	0	15	0	73	44	238
16:15-16:20	0	58	18	0	0	0	26	0	26	0	51	18	197
16:20-16:25	0	56	21	0	0	0	23	0	19	0	80	39	238
16:25-16:30	0	68	14	0	0	0	38	1	33	0	76	29	259
16:30-16:35	0	68	18	0	0	0	29	0	14	0	58	41	228
16:35-16:40	0	66	24	0	0	0	23	3	18	0	81	39	254
16:40-16:45	0	53	25	0	0	0	29	0	18	0	95	25	245
16:45-16:50	0	58	21	0	0	0	29	0	11	0	79	54	252
16:50-16:55	0	54	16	0	0	0	23	0	16	0	65	28	202
16:55-17:00	0	62	18	0	0	0	30	0	23	0	81	31	245
17:00-17:05	0	53	21	0	0	0	34	0	28	0	71	39	246
17:05-17:10	0	37	20	0	0	0	30	0	21	0	87	54	249
17:10-17:15	0	50	25	0	0	0	20	0	8	0	96	37	236
17:15-17:20	0	50	21	0	0	0	28	1	18	0	83	37	238
17:20-17:25	0	52	16	0	0	0	20	0	16	0	63	33	200
17:25-17:30	0	53	30	0	0	0	36	0	21	0	64	33	237
17:30-17:35	0	62	20	0	0	0	27	0	20	0	72	32	233
17:35-17:40	0	62	20	0	0	0	42	0	25	0	59	29	237
17:40-17:45	0	62	19	0	0	0	28	0	19	0	71	17	216
17:45-17:50	0	67	11	0	0	0	29	0	20	0	59	19	205
17:50-17:55	0	49	26	0	0	0	24	0	25	0	65	25	214
17:55-18:00	0	42	13	0	0	0	28	0	14	0	65	23	185
Total Survey	0	1348	471	0	0	0	688	6	467	0	1718	789	5487
PHF	0	.84	.87	0	0	0	.89	.31	.79	0	.89	.87	.962
% Trucks	0	9.5	1.5	0	0	0	1.3	0	9.4	0	1.8	3.3	4.5
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	
Peds	0	0	0	0	2	0	0	0	0	0	0	0	
Hourly Totals													
16:00-17:00	0	709	229	0	0	0	342	5	232	0	863	411	2791
16:15-17:15	0	683	241	0	0	0	334	4	235	0	920	434	2851
16:30-17:30	0	656	255	0	0	0	331	4	212	0	923	451	2832
16:45-17:45	0	655	247	0	0	0	347	1	226	0	891	424	2791
17:00-18:00	0	639	242	0	0	0	346	1	235	0	855	378	2696

INTERSECTION TURN MOVEMENT COUNT PEAK HOUR REPORT
ALLEN BOULEVARD AT HIGHWAY 217 NORTHBOUND RAMPS



DATE OF COUNT: 04/15/99
DAY OF WEEK: Thu
TIME STARTED: 16:00
TIME ENDED: 18:00

TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

DJCE

Peak Hour
16:15-17:15
TEV=2851

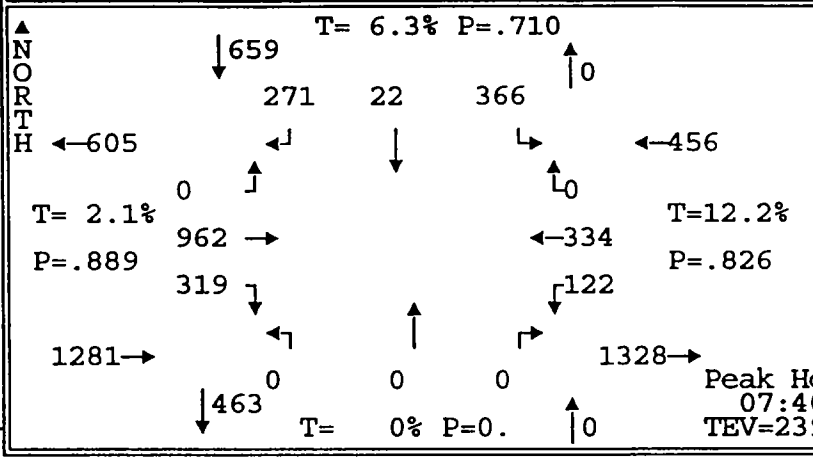
Traffic Smithy
(503)641-6333

TIME PERIOD FROM - TO	EAST BOUND ↓	EAST BOUND →	EAST BOUND ↑	SOUTH BOUND ↵	SOUTH BOUND ↓	SOUTH BOUND ↳	NORTH BOUND ↰	NORTH BOUND ↑	NORTH BOUND ↱	WEST BOUND ↓	WEST BOUND ←	WEST BOUND ↑	ALL
ALL VEHICLES													
16:15-16:30	0	182	53	0	0	0	87	1	78	0	207	86	694
16:30-16:45	0	187	67	0	0	0	81	3	50	0	234	105	727
16:45-17:00	0	174	55	0	0	0	82	0	50	0	225	113	699
17:00-17:15	0	140	66	0	0	0	84	0	57	0	254	130	731
LIGHT TRUCKS (SINGLE UNIT 2 AXLES)													
16:15-16:30	0	46	3	1	0	0	1	0	10	0	3	3	67
16:30-16:45	0	27	0	1	0	0	1	0	4	0	1	0	34
16:45-17:00	0	8	0	0	0	0	0	0	2	0	1	1	12
17:00-17:15	0	3	0	0	0	0	0	0	0	0	4	1	8
MEDIUM TRUCKS (SINGLE UNIT > 2 AXLES)													
16:15-16:30	0	1	0	0	0	0	0	0	0	0	0	0	1
16:30-16:45	0	1	0	0	0	0	0	0	0	0	0	0	1
16:45-17:00	0	0	0	0	0	0	1	0	2	0	0	0	3
17:00-17:15	0	0	0	0	0	0	0	0	2	0	0	0	2
HEAVY TRUCKS (SEMI-TRACTOR TRAILER)													
16:15-16:30	0	0	0	0	0	0	0	0	3	0	2	4	9
16:30-16:45	0	1	1	0	0	0	0	0	2	0	2	3	9
16:45-17:00	0	2	1	0	0	0	0	0	0	0	1	4	8
17:00-17:15	0	0	0	0	0	0	0	0	0	0	0	1	1
BICYCLES													
16:15-16:30	0	0	0	0	0	0	0	0	0	0	0	0	0
16:30-16:45	0	0	0	0	0	0	0	0	0	0	0	0	0
16:45-17:00	0	0	0	0	0	0	0	0	0	0	0	0	0
17:00-17:15	0	0	0	0	0	0	0	0	0	0	0	0	0

PEDESTRIANS	CROSSWALK USEAGE SOUTH	WEST	EAST	NORTH	ALL
16:15-16:30	0	0	0	0	0
16:30-16:45	0	0	0	0	0
16:45-17:00	0	0	0	0	0
17:00-17:15	0	0	0	0	0

Peak Hour by Movement													
PHF	0	.91	.9	0	0	0	.96	.33	.75	0	.91	.83	.975
% Trucks(all)	0	13	2.1	0	0	0	.9	0	10.6	0	1.5	3.9	5.4
% Trucks(M+H)	0	.7	.8	0	0	0	.3	0	3.8	0	.5	2.8	1.2
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	
Hourly Totals													
16:00-17:00	0	709	229	0	0	0	342	5	232	0	863	411	2791
16:15-17:15	0	683	241	0	0	0	334	4	235	0	920	434	2851
16:30-17:30	0	656	255	0	0	0	331	4	212	0	923	451	2832
16:45-17:45	0	655	247	0	0	0	347	1	226	0	891	424	2791
17:00-18:00	0	639	242	0	0	0	346	1	235	0	855	378	2696

INTERSECTION TURN MOVEMENT COUNT SUMMARY REPORT
ALLEN BOULEVARD AT HIGHWAY 217 SOUTHBOUND RAMPS 19405



DATE OF COUNT: 04/22/99
DAY OF WEEK: Thu
TIME STARTED: 07:00
TIME ENDED: 09:00

TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

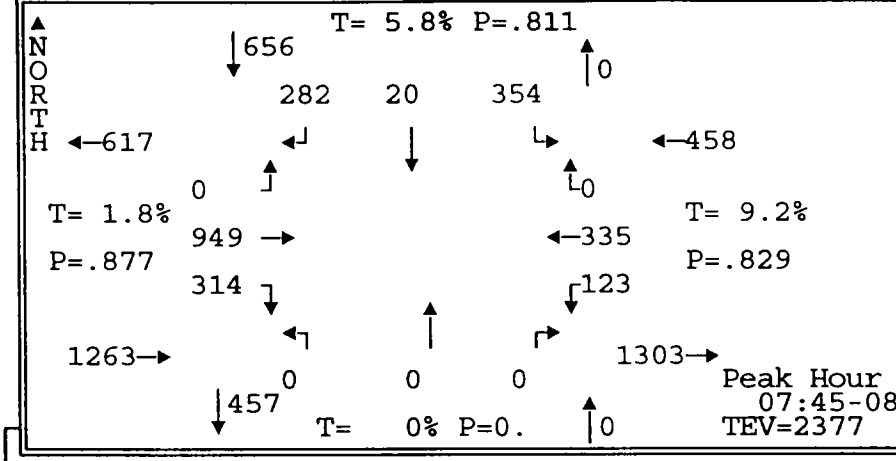
MCQN

Peak Hour
07:40-08:40
TEV=2396

Traffic Smithy
(503) 641-6333

TIME PERIOD FROM - TO	EAST BOUND ↓	EAST BOUND →	EAST BOUND ↑	SOUTH BOUND ↵	SOUTH BOUND ↓	SOUTH BOUND ↳	NORTH BOUND ↰	NORTH BOUND ↑	NORTH BOUND ↱	WEST BOUND ↓	WEST BOUND ←	WEST BOUND ↑	ALL
07:00-07:05	33	84	0	9	0	23	0	0	0	9	22	0	180
07:05-07:10	36	83	0	15	0	18	0	0	0	11	23	0	186
07:10-07:15	38	78	0	7	0	30	0	0	0	13	21	0	187
07:15-07:20	40	77	0	10	0	35	0	0	0	13	28	0	203
07:20-07:25	25	86	0	11	0	36	0	0	0	10	37	0	205
07:25-07:30	27	86	0	16	0	27	0	0	0	11	25	0	192
07:30-07:35	16	68	0	9	0	43	0	0	0	12	19	0	167
07:35-07:40	34	70	0	7	1	20	0	0	0	19	39	0	190
07:40-07:45	34	78	0	10	4	40	0	0	0	10	22	0	198
07:45-07:50	22	84	0	11	0	48	0	0	0	19	38	0	222
07:50-07:55	21	96	0	7	0	24	0	0	0	12	33	0	193
07:55-08:00	43	94	0	8	0	25	0	0	0	9	27	0	206
08:00-08:05	18	80	0	18	3	38	0	0	0	7	16	0	180
08:05-08:10	29	88	0	11	0	22	0	0	0	9	18	0	177
08:10-08:15	21	87	0	11	0	28	0	0	0	8	35	0	190
08:15-08:20	34	68	0	14	2	35	0	0	0	12	25	0	190
08:20-08:25	33	59	0	49	3	23	0	0	0	8	27	0	202
08:25-08:30	27	82	0	46	4	24	0	0	0	7	29	0	219
08:30-08:35	16	82	0	45	3	35	0	0	0	11	23	0	215
08:35-08:40	21	64	0	41	3	24	0	0	0	10	41	0	204
08:40-08:45	29	65	0	21	2	28	0	0	0	11	23	0	179
08:45-08:50	21	52	0	13	1	34	0	0	0	13	24	0	158
08:50-08:55	17	90	0	20	0	30	0	0	0	16	48	0	221
08:55-09:00	21	77	0	26	0	28	0	0	0	13	34	0	199
Total Survey	656	1878	0	435	26	718	0	0	0	273	677	0	4663
PHF	.85	.88	0	.48	.55	.82	0	0	0	.74	.85	0	.938
% Trucks	1.5	2.3	0	3.7	0	8.1	0	0	0	17.9	9.9	0	5.2
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	
Peds	0	0	0	0	0	0	0	0	0	0	0	0	
Hourly Totals													
07:00-08:00	369	984	0	120	5	369	0	0	0	148	334	0	2329
07:15-08:15	330	994	0	129	8	386	0	0	0	139	337	0	2323
07:30-08:30	332	954	0	201	17	370	0	0	0	132	328	0	2334
07:45-08:45	314	949	0	282	20	354	0	0	0	123	335	0	2377
08:00-09:00	287	894	0	315	21	349	0	0	0	125	343	0	2334

INTERSECTION TURN MOVEMENT COUNT PEAK HOUR REPORT
ALLEN BOULEVARD AT HIGHWAY 217 SOUTHBOUND RAMPS



DATE OF COUNT: 04/22/99
DAY OF WEEK: Thu
TIME STARTED: 07:00
TIME ENDED: 09:00

TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

MCQN

Peak Hour
07:45-08:45
TEV=2377

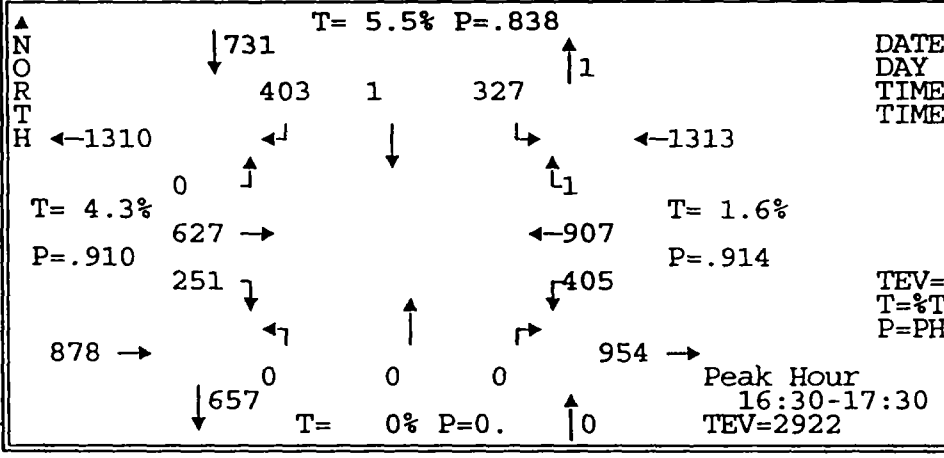
Traffic Smithy
(503)641-6333

TIME PERIOD FROM - TO	EAST BOUND ↓	EAST BOUND →	EAST BOUND ↑	SOUTH BOUND ↵	SOUTH BOUND ↓	SOUTH BOUND ↳	NORTH BOUND ↰	NORTH BOUND ↑	NORTH BOUND ↱	WEST BOUND ↓	WEST BOUND ←	WEST BOUND ↑	ALL
ALL VEHICLES													
07:45-08:00	86	274	0	26	0	97	0	0	0	40	98	0	621
08:00-08:15	68	255	0	40	3	88	0	0	0	24	69	0	547
08:15-08:30	94	209	0	109	9	82	0	0	0	27	81	0	611
08:30-08:45	66	211	0	107	8	87	0	0	0	32	87	0	598
LIGHT TRUCKS (SINGLE UNIT 2 AXLES)													
07:45-08:00	1	3	0	2	0	0	0	0	0	1	6	0	13
08:00-08:15	1	3	0	1	0	5	0	0	0	3	3	0	16
08:15-08:30	0	1	0	2	0	1	0	0	0	2	6	0	12
08:30-08:45	0	4	0	3	0	6	0	0	0	2	7	0	22
MEDIUM TRUCKS (SINGLE UNIT > 2 AXLES)													
07:45-08:00	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00-08:15	1	0	0	0	0	1	0	0	0	0	0	0	2
08:15-08:30	0	1	0	0	0	2	0	0	0	1	0	0	4
08:30-08:45	1	2	0	0	0	0	0	0	0	0	0	0	3
HEAVY TRUCKS (SEMI-TRACTOR TRAILER)													
07:45-08:00	0	1	0	0	0	2	0	0	0	1	0	0	4
08:00-08:15	1	1	0	1	0	4	0	0	0	1	0	0	8
08:15-08:30	0	1	0	1	0	4	0	0	0	2	0	0	8
08:30-08:45	1	0	0	1	0	2	0	0	0	6	1	0	11
BICYCLES													
07:45-08:00	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00-08:15	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15-08:30	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30-08:45	0	0	0	0	0	0	0	0	0	0	0	0	0

PEDESTRIANS	CROSSWALK USEAGE SOUTH	WEST	EAST	NORTH	ALL
07:45-08:00	0	0	0	0	0
08:00-08:15	0	0	0	0	0
08:15-08:30	0	0	0	0	0
08:30-08:45	0	0	0	0	0

Peak Hour by Movement													
PHF	.84	.87	0	.65	.56	.91	0	0	0	.77	.85	0	.956
% Trucks(all)	1.9	1.8	0	3.9	0	7.6	0	0	0	15.4	6.9	0	4.3
% Trucks(M+H)	1.3	.6	0	1.1	0	4.2	0	0	0	8.9	.3	0	1.7
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	
Hourly Totals													
07:00-08:00	369	984	0	120	5	369	0	0	0	148	334	0	2329
07:15-08:15	330	994	0	129	8	386	0	0	0	139	337	0	2323
07:30-08:30	332	954	0	201	17	370	0	0	0	132	328	0	2334
07:45-08:45	314	949	0	282	20	354	0	0	0	123	335	0	2377
08:00-09:00	287	894	0	315	21	349	0	0	0	125	343	0	2334

INTERSECTION TURN MOVEMENT COUNT SUMMARY REPORT
ALLEN BOULEVARD AT HIGHWAY 217 SOUTHBOUND RAMPS 1957



DATE OF COUNT: 04/21/99
DAY OF WEEK: Wed
TIME STARTED: 16:00
TIME ENDED: 18:00

TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

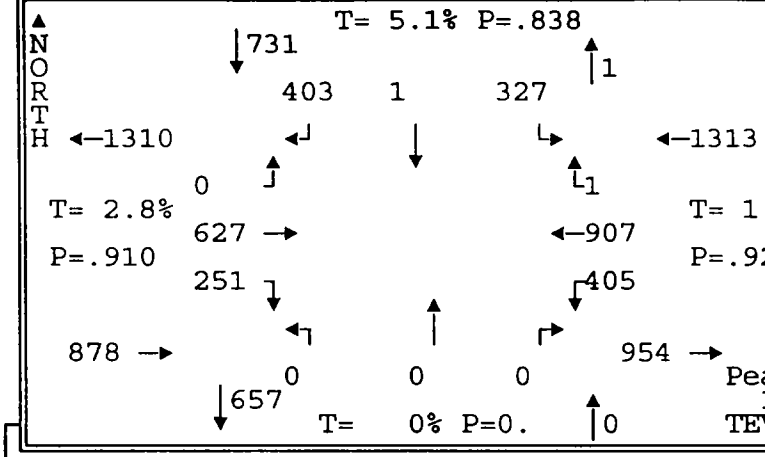
MCQM

Peak Hour
16:30-17:30
TEV=2922

Traffic Smithy
(503) 641-6333

TIME PERIOD FROM - TO	EAST BOUND ↓	EAST BOUND →	EAST BOUND ↑	SOUTH BOUND ↵	SOUTH BOUND ↓	SOUTH BOUND ↳	NORTH BOUND ↰	NORTH BOUND ↑	NORTH BOUND ↱	WEST BOUND ↓	WEST BOUND ←	WEST BOUND ↑	ALL
16:00-16:05	32	51	0	27	1	19	0	0	0	30	61	0	221
16:05-16:10	21	62	0	34	0	22	0	0	0	36	57	0	232
16:10-16:15	22	43	0	34	0	29	0	0	0	25	46	0	199
16:15-16:20	23	62	0	28	0	19	0	0	0	19	53	0	204
16:20-16:25	33	40	0	32	0	29	0	0	0	29	75	0	238
16:25-16:30	22	59	0	37	0	24	0	0	0	20	66	0	228
16:30-16:35	18	61	0	35	0	22	0	0	0	27	67	0	230
16:35-16:40	26	61	0	29	0	28	0	0	0	45	89	0	278
16:40-16:45	20	52	0	28	0	21	0	0	0	33	64	1	219
16:45-16:50	25	39	0	31	0	23	0	0	0	28	91	0	237
16:50-16:55	22	46	0	47	0	33	0	0	0	30	71	0	249
16:55-17:00	15	48	0	29	0	17	0	0	0	30	68	0	207
17:00-17:05	18	63	0	31	0	23	0	0	0	30	76	0	241
17:05-17:10	21	47	0	26	0	33	0	0	0	47	69	0	243
17:10-17:15	17	38	0	27	0	30	0	0	0	47	85	0	244
17:15-17:20	17	53	0	43	0	27	0	0	0	31	80	0	251
17:20-17:25	27	50	0	38	1	35	0	0	0	33	82	0	266
17:25-17:30	25	69	0	39	0	35	0	0	0	24	65	0	257
17:30-17:35	15	49	0	52	1	29	0	0	0	25	59	0	230
17:35-17:40	26	51	0	43	0	22	0	0	0	21	72	0	235
17:40-17:45	19	65	0	37	1	25	0	0	0	22	72	0	241
17:45-17:50	14	52	0	54	2	21	0	0	0	20	74	0	237
17:50-17:55	15	44	0	46	2	29	0	0	0	18	52	0	206
17:55-18:00	13	46	0	40	0	22	0	0	0	25	75	0	221
Total Survey	506	1251	0	867	8	617	0	0	0	695	1669	1	5614
PHF	.88	.9	0	.84	.25	.84	0	0	0	.81	.92	.25	.943
% Trucks	3.4	4.7	0	.6	0	12.5	0	0	0	2.9	1.1	0	3.5
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	
Peds	0	0	0	0	0	0	0	0	0	0	5	0	
Hourly Totals													
16:00-17:00	279	624	0	391	1	286	0	0	0	352	808	1	2742
16:15-17:15	260	616	0	380	0	302	0	0	0	385	874	1	2818
16:30-17:30	251	627	0	403	1	327	0	0	0	405	907	1	2922
16:45-17:45	247	618	0	443	3	332	0	0	0	368	890	0	2901
17:00-18:00	227	627	0	476	7	331	0	0	0	343	861	0	2872

INTERSECTION TURN MOVEMENT COUNT PEAK HOUR REPORT
ALLEN BOULEVARD AT HIGHWAY 217 SOUTHBOUND RAMPS



DATE OF COUNT: 04/21/99
DAY OF WEEK: Wed
TIME STARTED: 16:00
TIME ENDED: 18:00

TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

MCQM

Peak Hour
16:30-17:30
TEV=2922

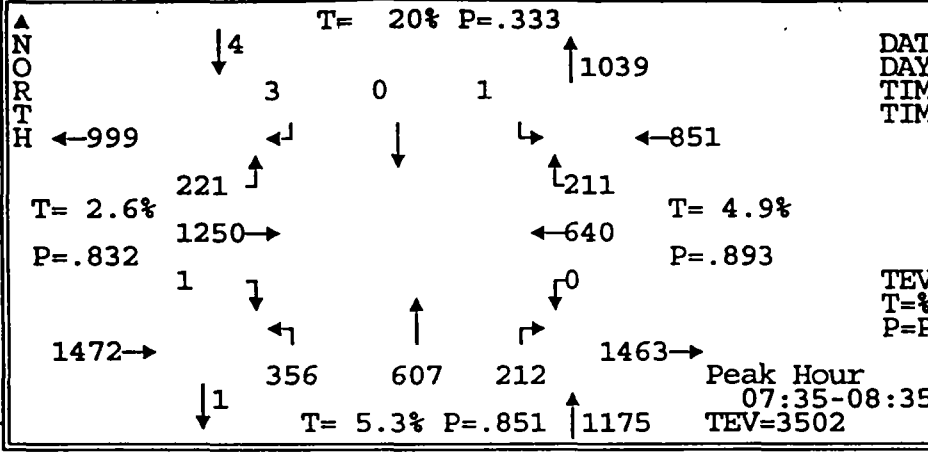
Traffic Smithy
(503)641-6333

TIME PERIOD FROM - TO	EAST BOUND ↓	EAST BOUND →	EAST BOUND ↑	SOUTH BOUND ↲	SOUTH BOUND ↓	SOUTH BOUND ↳	NORTH BOUND ↰	NORTH BOUND ↑	NORTH BOUND ↱	WEST BOUND ↓	WEST BOUND ←	WEST BOUND ↑	ALL
ALL VEHICLES													
16:30-16:45	64	174	0	92	0	71	0	0	0	105	220	1	727
16:45-17:00	62	133	0	107	0	73	0	0	0	88	230	0	693
17:00-17:15	56	148	0	84	0	86	0	0	0	124	230	0	728
17:15-17:30	69	172	0	120	1	97	0	0	0	88	227	0	774
LIGHT TRUCKS (SINGLE UNIT 2 AXLES)													
16:30-16:45	4	5	0	0	0	18	0	0	0	2	3	0	32
16:45-17:00	3	4	0	0	0	2	0	0	0	0	3	0	12
17:00-17:15	2	3	0	2	0	3	0	0	0	1	2	0	13
17:15-17:30	1	1	0	1	0	2	0	0	0	2	0	0	7
MEDIUM TRUCKS (SINGLE UNIT > 2 AXLES)													
16:30-16:45	0	0	0	0	0	0	0	0	0	0	0	0	0
16:45-17:00	0	1	0	0	0	0	0	0	0	0	0	0	1
17:00-17:15	1	0	0	0	0	0	0	0	0	0	0	0	1
17:15-17:30	0	0	0	0	0	0	0	0	0	0	0	0	0
HEAVY TRUCKS (SEMI-TRACTOR TRAILER)													
16:30-16:45	0	0	0	0	0	2	0	0	0	0	0	0	2
16:45-17:00	0	0	0	0	0	0	0	0	0	2	0	0	2
17:00-17:15	0	0	0	0	0	3	0	0	0	0	0	0	3
17:15-17:30	0	0	0	0	0	4	0	0	0	3	0	0	7
BICYCLES													
16:30-16:45	0	0	0	0	0	0	0	0	0	0	0	0	0
16:45-17:00	0	0	0	0	0	0	0	0	0	0	0	0	0
17:00-17:15	0	0	0	0	0	0	0	0	0	0	0	0	0
17:15-17:30	0	0	0	0	0	0	0	0	0	0	0	0	0

PEDESTRIANS	CROSSWALK USEAGE SOUTH	WEST	EAST	NORTH	ALL
16:30-16:45	0	0	0	2	2
16:45-17:00	0	0	0	0	0
17:00-17:15	0	0	0	1	1
17:15-17:30	0	0	0	1	1

Peak Hour by Movement													
PHF	.91	.9	0	.84	.25	.84	0	0	0	.82	.99	.25	.943
% Trucks(all)	4.4	2.2	0	.7	0	10.4	0	0	0	2.5	.9	0	2.7
% Trucks(M+H)	.4	.2	0	0	0	2.8	0	0	0	1.2	0	0	.5
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	
Hourly Totals													
16:00-17:00	279	624	0	391	1	286	0	0	0	352	808	1	2742
16:15-17:15	260	616	0	380	0	302	0	0	0	385	874	1	2818
16:30-17:30	251	627	0	403	1	327	0	0	0	405	907	1	2922
16:45-17:45	247	618	0	443	3	332	0	0	0	368	890	0	2901
17:00-18:00	227	627	0	476	7	331	0	0	0	343	861	0	2872

INTERSECTION TURN MOVEMENT COUNT SUMMARY REPORT
BEAVERTON-HILLSDALE HIGHWAY AT HIGHWAY 217 NORTHBOUND RAMPS 19249



DATE OF COUNT: 04/13/99
DAY OF WEEK: Tue
TIME STARTED: 07:00
TIME ENDED: 09:00

TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

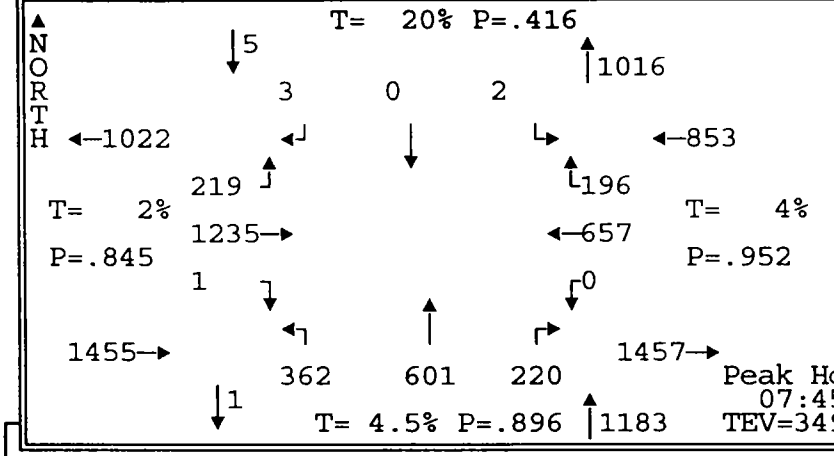
MCQI

Peak Hour
07:35-08:35
TEV=3502

Traffic Smithy
(503) 641-6333

TIME PERIOD FROM - TO	EAST BOUND ↓	EAST BOUND →	EAST BOUND ↑	SOUTH BOUND ↵	SOUTH BOUND ↓	SOUTH BOUND ↳	NORTH BOUND ↰	NORTH BOUND ↑	NORTH BOUND ↱	WEST BOUND ↓	WEST BOUND ←	WEST BOUND ↑	ALL
07:00-07:05	0	67	17	0	0	0	11	36	17	0	39	16	203
07:05-07:10	0	77	20	0	0	0	20	29	16	0	47	11	220
07:10-07:15	0	50	13	0	0	0	39	44	22	0	37	13	218
07:15-07:20	0	88	7	0	0	0	41	42	16	0	58	26	278
07:20-07:25	0	97	16	0	0	0	28	50	19	0	40	21	271
07:25-07:30	0	96	18	0	0	0	39	51	18	0	32	22	276
07:30-07:35	0	88	13	0	0	0	19	68	14	0	39	26	267
07:35-07:40	0	117	21	0	0	0	18	60	12	0	39	17	284
07:40-07:45	0	63	16	0	0	0	25	52	16	0	38	24	234
07:45-07:50	0	93	19	0	0	0	16	36	14	0	69	19	266
07:50-07:55	0	152	20	3	0	0	13	30	14	0	71	17	320
07:55-08:00	0	71	11	0	0	0	41	53	21	0	34	14	245
08:00-08:05	0	78	17	0	0	0	40	49	20	0	59	13	276
08:05-08:10	0	119	21	0	0	0	40	47	9	0	57	15	308
08:10-08:15	0	92	14	0	0	0	48	54	17	0	52	28	305
08:15-08:20	0	90	16	0	0	1	26	79	25	0	55	20	312
08:20-08:25	0	151	24	0	0	0	24	51	17	0	51	13	331
08:25-08:30	1	121	27	0	0	0	30	51	27	0	62	14	333
08:30-08:35	0	103	15	0	0	0	35	45	20	0	53	17	288
08:35-08:40	0	82	16	0	0	1	19	50	22	0	47	12	249
08:40-08:45	0	83	19	0	0	0	30	56	14	0	47	14	263
08:45-08:50	0	88	15	0	0	0	17	45	9	0	63	13	250
08:50-08:55	0	83	10	0	0	0	28	41	13	0	46	16	237
08:55-09:00	0	114	15	0	0	0	35	53	27	0	34	19	297
Total Survey	1	2263	400	3	0	2	682	1172	419	0	1169	420	6531
PHF	.25	.83	.82	.25	0	.25	.7	.82	.77	0	.9	.84	.897
% Trucks	0	2.7	1.5	0	0	50	4.7	5.6	5.3	0	4.3	6.7	4.1
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	
Peds	0	0	0	0	3	0	0	0	0	0	0	0	
Hourly Totals													
07:00-08:00	0	1059	191	3	0	0	310	551	199	0	543	226	3082
07:15-08:15	0	1154	193	3	0	0	368	592	190	0	588	242	3330
07:30-08:30	1	1235	219	3	0	1	340	630	206	0	626	220	3481
07:45-08:45	1	1235	219	3	0	2	362	601	220	0	657	196	3496
08:00-09:00	1	1204	209	0	0	2	372	621	220	0	626	194	3449

INTERSECTION TURN MOVEMENT COUNT PEAK HOUR REPORT
BEAVERTON-HILLSDALE HIGHWAY AT HIGHWAY 217 NORTHBOUND RAMPS



DATE OF COUNT: 04/13/99
DAY OF WEEK: Tue
TIME STARTED: 07:00
TIME ENDED: 09:00

TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

MCQI

Peak Hour
07:45-08:45
TEV=3496

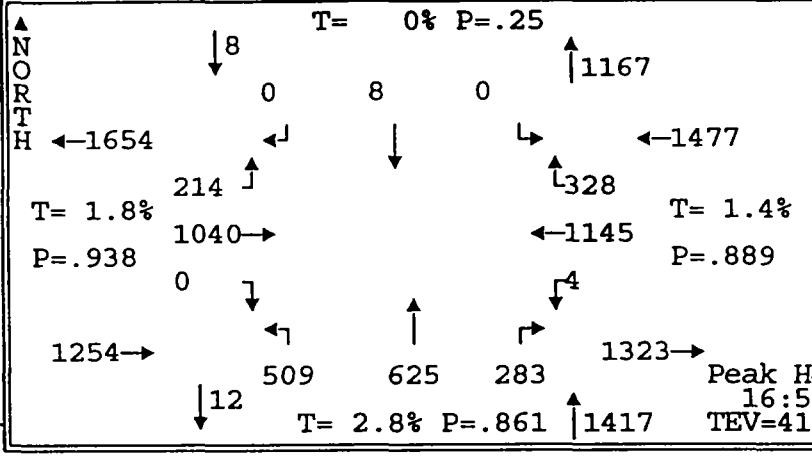
Traffic Smithy
(503)641-6333

TIME PERIOD FROM - TO	EAST BOUND ↓	EAST BOUND →	EAST BOUND ↑	SOUTH BOUND ↵	SOUTH BOUND ↓	SOUTH BOUND ↳	NORTH BOUND ↰	NORTH BOUND ↑	NORTH BOUND ↱	WEST BOUND ↴	WEST BOUND ←	WEST BOUND ↑	ALL
ALL VEHICLES													
07:45-08:00	0	316	50	3	0	0	70	119	49	0	174	50	831
08:00-08:15	0	289	52	0	0	0	128	150	46	0	168	56	889
08:15-08:30	1	362	67	0	0	1	80	181	69	0	168	47	976
08:30-08:45	0	268	50	0	0	1	84	151	56	0	147	43	800
LIGHT TRUCKS (SINGLE UNIT 2 AXLES)													
07:45-08:00	0	2	0	0	0	0	2	4	0	0	5	2	15
08:00-08:15	0	6	0	0	0	0	4	1	1	0	4	1	17
08:15-08:30	0	2	1	0	0	0	1	8	1	0	6	3	22
08:30-08:45	0	8	1	0	0	1	4	4	4	0	4	0	26
MEDIUM TRUCKS (SINGLE UNIT > 2 AXLES)													
07:45-08:00	0	0	0	0	0	0	0	1	0	0	0	0	1
08:00-08:15	0	1	0	0	0	0	1	0	0	0	0	1	3
08:15-08:30	0	0	0	0	0	0	0	1	0	0	0	0	1
08:30-08:45	0	1	0	0	0	0	0	1	0	0	1	1	4
HEAVY TRUCKS (SEMI-TRACTOR TRAILER)													
07:45-08:00	0	1	0	0	0	0	1	2	0	0	1	0	5
08:00-08:15	0	3	0	0	0	0	3	1	0	0	0	1	8
08:15-08:30	0	1	0	0	0	0	0	3	0	0	2	0	6
08:30-08:45	0	2	0	0	0	0	1	2	2	0	2	0	9
BICYCLES													
07:45-08:00	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00-08:15	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15-08:30	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30-08:45	0	0	0	0	0	0	0	0	0	0	0	0	0

PEDESTRIANS	CROSSWALK USEAGE SOUTH	WEST	EAST	NORTH	ALL
07:45-08:00	0	1	0	0	1
08:00-08:15	0	2	0	0	2
08:15-08:30	0	0	0	0	0
08:30-08:45	0	0	0	0	0

Peak Hour by Movement													
PHF	.25	.85	.82	.25	0	.5	.71	.83	.8	0	.94	.88	.895
% Trucks(all)	0	2.2	.9	0	0	50	4.7	4.7	3.6	0	3.8	4.6	3.3
% Trucks(M+H)	0	.7	0	0	0	0	1.7	1.8	.9	0	.9	1.5	1.1
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	
Hourly Totals													
07:00-08:00	0	1059	191	3	0	0	310	551	199	0	543	226	3082
07:15-08:15	0	1154	193	3	0	0	368	592	190	0	588	242	3330
07:30-08:30	1	1235	219	3	0	1	340	630	206	0	626	220	3481
07:45-08:45	1	1235	219	3	0	2	362	601	220	0	657	196	3496
08:00-09:00	1	1204	209	0	0	2	372	621	220	0	626	194	3449

INTERSECTION TURN MOVEMENT COUNT SUMMARY REPORT
BEAVERTON-HILLSDALE HIGHWAY AT HIGHWAY 217 NORTHBOUND RAMPS 19381



DATE OF COUNT: 04/22/99
DAY OF WEEK: Thu
TIME STARTED: 16:00
TIME ENDED: 18:00

TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

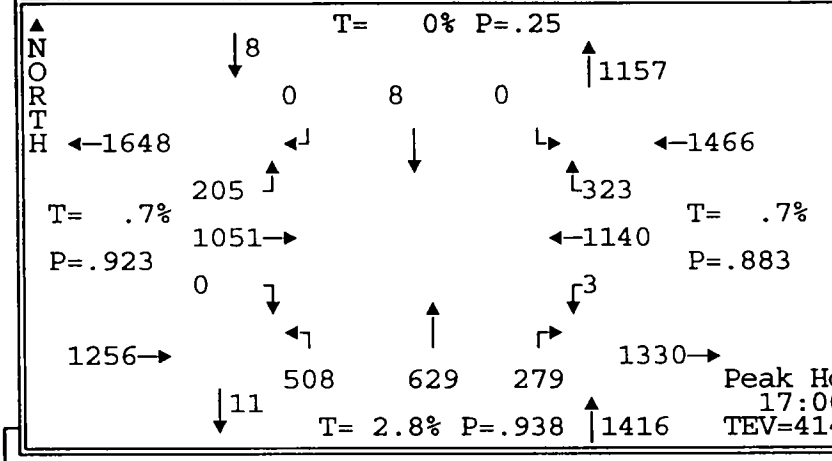
MCQO

Peak Hour
16:55-17:55
TEV=4156

Traffic Smithy
(503) 641-6333

TIME PERIOD FROM - TO	EAST BOUND ↓	EAST BOUND →	EAST BOUND ↑	SOUTH BOUND ↵	SOUTH BOUND ↓	SOUTH BOUND ↳	NORTH BOUND ↰	NORTH BOUND ↑	NORTH BOUND ↱	WEST BOUND ↓	WEST BOUND ←	WEST BOUND ↑	ALL
16:00-16:05	0	100	6	0	0	0	46	52	20	0	94	28	346
16:05-16:10	0	86	12	0	0	0	30	44	18	0	75	27	292
16:10-16:15	0	83	10	0	0	0	39	52	25	0	82	32	323
16:15-16:20	0	89	7	0	0	0	47	49	20	0	105	20	337
16:20-16:25	0	102	16	0	0	0	47	42	28	0	96	28	359
16:25-16:30	0	93	25	0	0	0	52	48	25	0	94	16	353
16:30-16:35	0	81	21	0	0	0	44	48	18	0	96	33	341
16:35-16:40	0	92	19	0	0	0	32	49	20	0	111	37	360
16:40-16:45	0	92	21	0	0	0	44	63	16	0	92	27	355
16:45-16:50	0	89	23	0	0	0	53	63	21	0	97	26	372
16:50-16:55	0	103	9	0	0	0	32	43	22	0	100	31	340
16:55-17:00	0	92	19	0	0	0	38	42	29	1	99	28	348
17:00-17:05	0	89	18	0	0	0	37	50	21	0	94	28	337
17:05-17:10	0	72	17	0	0	0	35	45	19	0	90	22	300
17:10-17:15	0	70	15	0	8	0	41	45	21	2	92	28	322
17:15-17:20	0	87	13	0	0	0	48	65	9	0	67	28	317
17:20-17:25	0	87	23	0	0	0	36	48	15	1	83	24	317
17:25-17:30	0	100	15	0	0	0	51	66	26	0	98	20	376
17:30-17:35	0	87	22	0	0	0	48	52	31	0	112	40	392
17:35-17:40	0	80	18	0	0	0	44	62	31	0	109	28	372
17:40-17:45	0	83	20	0	0	0	34	43	32	0	96	30	338
17:45-17:50	0	96	15	0	0	0	54	50	31	0	110	25	381
17:50-17:55	0	97	19	0	0	0	43	57	18	0	95	27	356
17:55-18:00	0	103	10	0	0	0	37	46	25	0	94	23	338
Total Survey	0	2153	393	0	8	0	1012	1224	541	4	2281	656	8272
PHF	0	.94	.89	0	.25	0	.89	.87	.75	.33	.9	.84	.911
% Trucks	0	2.1	.5	0	0	0	2.8	3.3	2	0	1.3	1.5	2
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	
Peds	0	5	0	0	0	0	0	1	0	0	15	0	
Hourly Totals													
16:00-17:00	0	1102	188	0	0	0	504	595	262	1	1141	333	4126
16:15-17:15	0	1064	210	0	8	0	502	587	260	3	1166	324	4124
16:30-17:30	0	1054	213	0	8	0	491	627	237	4	1119	332	4085
16:45-17:45	0	1039	212	0	8	0	497	624	277	4	1137	333	4131
17:00-18:00	0	1051	205	0	8	0	508	629	279	3	1140	323	4146

INTERSECTION TURN MOVEMENT COUNT PEAK HOUR REPORT
BEAVERTON-HILLSDALE HIGHWAY AT HIGHWAY 217 NORTHBOUND RAMPS



DATE OF COUNT: 04/22/99
DAY OF WEEK: Thu
TIME STARTED: 16:00
TIME ENDED: 18:00

TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

MCQO

Peak Hour
17:00-18:00
TEV=4146

Traffic Smithy
(503)641-6333

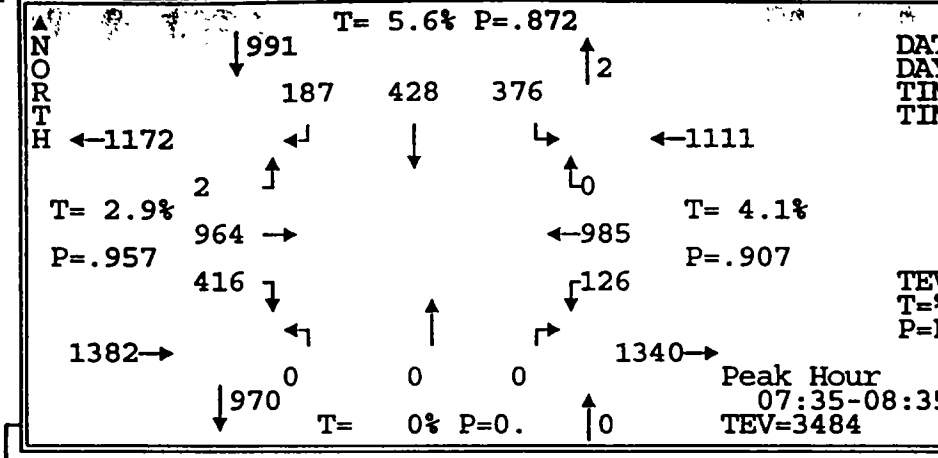
TIME PERIOD FROM - TO	EAST BOUND ↓	EAST BOUND →	EAST BOUND ↑	SOUTH BOUND ↲	SOUTH BOUND ↓	SOUTH BOUND ↳	NORTH BOUND ↰	NORTH BOUND ↑	NORTH BOUND ↱	WEST BOUND ↓	WEST BOUND ←	WEST BOUND ↑	ALL
ALL VEHICLES													
17:00-17:15	0	231	50	0	8	0	113	140	61	2	276	78	959
17:15-17:30	0	274	51	0	0	0	135	179	50	1	248	72	1010
17:30-17:45	0	250	60	0	0	0	126	157	94	0	317	98	1102
17:45-18:00	0	296	44	0	0	0	134	153	74	0	299	75	1075
LIGHT TRUCKS (SINGLE UNIT 2 AXLES)													
17:00-17:15	0	1	0	0	0	0	5	6	0	0	2	0	14
17:15-17:30	0	1	0	0	0	0	1	3	0	0	2	0	7
17:30-17:45	0	1	0	0	0	0	2	3	1	0	3	0	10
17:45-18:00	0	3	0	0	0	0	8	1	1	0	1	0	14
MEDIUM TRUCKS (SINGLE UNIT > 2 AXLES)													
17:00-17:15	0	0	0	0	0	0	0	0	0	0	0	0	0
17:15-17:30	0	0	1	0	0	0	0	1	0	0	0	0	2
17:30-17:45	0	0	0	0	0	0	0	1	0	0	0	0	1
17:45-18:00	0	0	0	0	0	0	0	0	0	0	0	0	0
HEAVY TRUCKS (SEMI-TRACTOR TRAILER)													
17:00-17:15	0	0	0	0	0	0	0	0	1	0	0	0	1
17:15-17:30	0	1	0	0	0	0	0	1	0	0	0	0	2
17:30-17:45	0	1	0	0	0	0	1	2	0	0	0	0	4
17:45-18:00	0	0	0	0	0	0	0	0	2	0	1	1	4
BICYCLES													
17:00-17:15	0	0	0	0	0	0	0	0	0	0	1	0	1
17:15-17:30	0	0	0	0	0	0	0	0	0	0	0	0	0
17:30-17:45	0	1	0	0	0	0	0	0	0	0	1	0	2
17:45-18:00	0	0	0	0	0	0	0	0	0	0	1	0	1

PEDESTRIANS	CROSSWALK USEAGE SOUTH	WEST	EAST	NORTH	ALL
17:00-17:15	0	0	0	1	1
17:15-17:30	2	0	0	0	2
17:30-17:45	0	0	0	0	0
17:45-18:00	0	0	0	2	2

Peak Hour by Movement													
PHF	0	.89	.85	0	.25	0	.94	.88	.74	.38	.9	.82	.940
% Trucks(all)	0	.8	.5	0	0	0	3.3	2.9	1.8	0	.8	.3	1.4
% Trucks(M+H)	0	.2	.5	0	0	0	.2	.8	1.1	0	.1	.3	.3
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	

Hourly Totals													
16:00-17:00	0	1102	188	0	0	0	504	595	262	1	1141	333	4126
16:15-17:15	0	1064	210	0	8	0	502	587	260	3	1166	324	4124
16:30-17:30	0	1054	213	0	8	0	491	627	237	4	1119	332	4085
16:45-17:45	0	1039	212	0	8	0	497	624	277	4	1137	333	4131
17:00-18:00	0	1051	205	0	8	0	508	629	279	3	1140	323	4146

INTERSECTION TURN MOVEMENT COUNT SUMMARY REPORT
BEAVERTON-HILLSDALE HIGHWAY AT HIGHWAY 217 SOUTHBOUND ON RAMP 1925



DATE OF COUNT: 04/13/99
DAY OF WEEK: Tue
TIME STARTED: 07:00
TIME ENDED: 09:00

TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

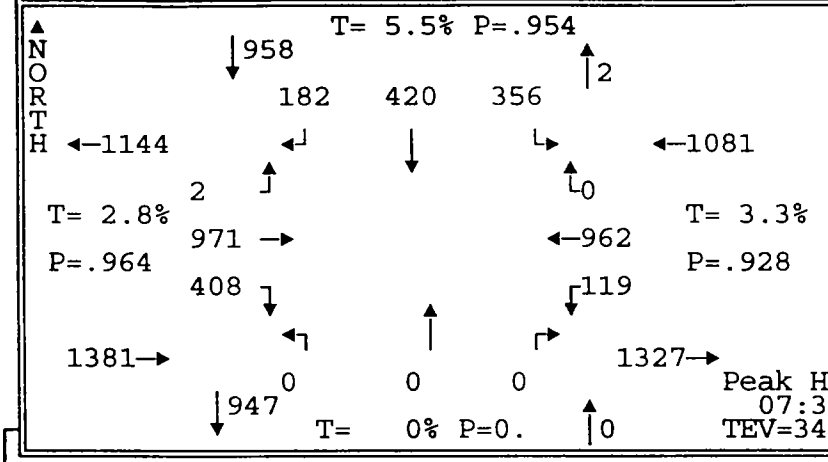
ERUA

Peak Hour
07:35-08:35
TEV=3484

Traffic Smithy
(503) 641-6333

TIME PERIOD FROM - TO	EAST BOUND ↓	EAST BOUND →	EAST BOUND ↑	SOUTH BOUND ↲	SOUTH BOUND ↓	SOUTH BOUND ↳	NORTH BOUND ↰	NORTH BOUND ↑	NORTH BOUND ↱	WEST BOUND ↓	WEST BOUND ←	WEST BOUND ↑	ALL
07:00-07:05	31	76	0	6	25	23	0	0	0	7	41	0	209
07:05-07:10	39	68	0	7	25	14	0	0	0	9	45	0	207
07:10-07:15	34	66	0	8	33	12	0	0	0	8	54	0	215
07:15-07:20	29	59	0	13	32	13	0	0	0	5	91	0	242
07:20-07:25	29	74	0	9	36	22	0	0	0	8	67	0	245
07:25-07:30	33	81	0	14	31	24	0	0	0	11	69	0	263
07:30-07:35	27	101	0	11	30	22	0	0	0	8	63	0	262
07:35-07:40	32	84	2	11	34	20	0	0	0	8	67	0	258
07:40-07:45	44	68	0	11	46	41	0	0	0	6	84	0	300
07:45-07:50	40	69	0	17	25	24	0	0	0	14	73	0	262
07:50-07:55	36	98	0	23	48	24	0	0	0	12	107	0	348
07:55-08:00	40	72	0	23	36	31	0	0	0	7	78	0	287
08:00-08:05	31	84	0	19	23	28	0	0	0	9	93	0	287
08:05-08:10	29	70	0	13	31	28	0	0	0	13	86	0	270
08:10-08:15	22	80	0	20	37	33	0	0	0	11	58	0	261
08:15-08:20	49	90	0	7	30	24	0	0	0	7	91	0	298
08:20-08:25	31	76	0	14	41	39	0	0	0	17	84	0	302
08:25-08:30	27	79	0	13	39	42	0	0	0	7	78	0	285
08:30-08:35	35	94	0	16	38	42	0	0	0	15	86	0	326
08:35-08:40	31	72	0	17	19	26	0	0	0	33	46	0	244
08:40-08:45	29	61	0	17	30	27	0	0	0	13	71	0	248
08:45-08:50	31	82	0	11	22	21	0	0	0	17	72	0	256
08:50-08:55	31	68	0	17	40	19	0	0	0	17	55	0	247
08:55-09:00	35	62	0	14	37	26	0	0	0	11	84	0	269
Total Survey	795	1834	2	331	788	625	0	0	0	273	1743	0	6391
PHF	.87	.95	.25	.72	.9	.76	0	0	0	.81	.89	0	.944
% Trucks	3.5	2.7	0	1.5	7	5.9	0	0	0	4	4.1	0	4
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	
Peds	0	2	0	0	3	0	0	0	0	0	8	0	
Hourly Totals													
07:00-08:00	414	916	2	153	401	270	0	0	0	103	839	0	3098
07:15-08:15	392	940	2	184	409	310	0	0	0	112	936	0	3285
07:30-08:30	408	971	2	182	420	356	0	0	0	119	962	0	3420
07:45-08:45	400	945	0	199	397	368	0	0	0	158	951	0	3418
08:00-09:00	381	918	0	178	387	355	0	0	0	170	904	0	3293

INTERSECTION TURN MOVEMENT COUNT PEAK HOUR REPORT
BEAVERTON-HILLSDALE HIGHWAY AT HIGHWAY 217 SOUTHBOUND ON RAMP



DATE OF COUNT: 04/13/99
DAY OF WEEK: Tue
TIME STARTED: 07:00
TIME ENDED: 09:00

TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

ERUA

Peak Hour
07:30-08:30
TEV=3420

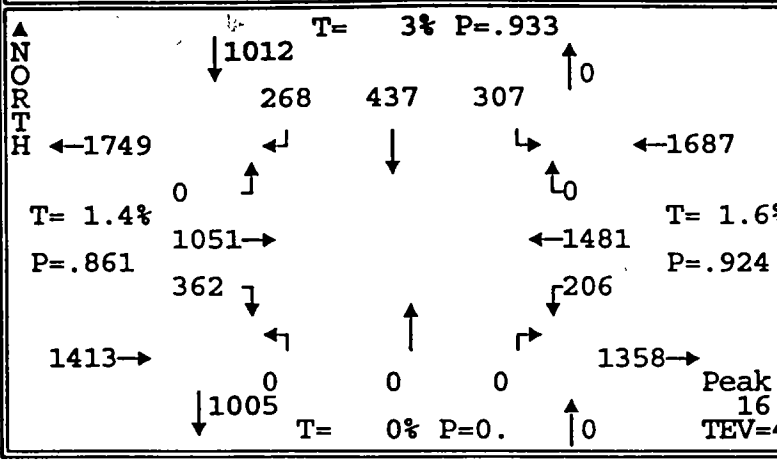
Traffic Smithy
(503)641-6333

TIME PERIOD FROM - TO	EAST BOUND ↓	EAST BOUND →	EAST BOUND ↑	SOUTH BOUND ↵	SOUTH BOUND ↓	SOUTH BOUND ↳	NORTH BOUND ↰	NORTH BOUND ↑	NORTH BOUND ↱	WEST BOUND ↴	WEST BOUND ←	WEST BOUND ↰	ALL
ALL VEHICLES													
07:30-07:45	103	253	2	33	110	83	0	0	0	22	214	0	820
07:45-08:00	116	239	0	63	109	79	0	0	0	33	258	0	897
08:00-08:15	82	234	0	52	91	89	0	0	0	33	237	0	818
08:15-08:30	107	245	0	34	110	105	0	0	0	31	253	0	885
LIGHT TRUCKS (SINGLE UNIT 2 AXLES)													
07:30-07:45	4	6	0	0	3	6	0	0	0	0	4	0	23
07:45-08:00	0	4	0	1	2	2	0	0	0	1	8	0	18
08:00-08:15	1	5	0	1	2	3	0	0	0	0	1	0	13
08:15-08:30	3	3	0	0	6	2	0	0	0	2	10	0	26
MEDIUM TRUCKS (SINGLE UNIT > 2 AXLES)													
07:30-07:45	2	0	0	0	6	1	0	0	0	0	1	0	10
07:45-08:00	0	0	0	0	1	0	0	0	0	0	0	0	1
08:00-08:15	0	1	0	0	2	1	0	0	0	2	1	0	7
08:15-08:30	2	0	0	0	1	2	0	0	0	0	1	0	6
HEAVY TRUCKS (SEMI-TRACTOR TRAILER)													
07:30-07:45	1	1	0	0	1	1	0	0	0	0	1	0	5
07:45-08:00	1	0	0	0	1	0	0	0	0	0	2	0	4
08:00-08:15	1	1	0	0	2	2	0	0	0	1	0	0	7
08:15-08:30	2	0	0	1	2	1	0	0	0	1	0	0	7
BICYCLES													
07:30-07:45	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45-08:00	0	0	0	0	0	0	0	0	0	0	1	0	1
08:00-08:15	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15-08:30	0	0	0	0	0	0	0	0	0	0	0	0	0

PEDESTRIANS	CROSSWALK USEAGE SOUTH	WEST	EAST	NORTH	ALL
07:30-07:45	0	0	0	0	0
07:45-08:00	0	1	0	2	3
08:00-08:15	1	1	0	0	2
08:15-08:30	0	0	0	3	3

Peak Hour by Movement													
PHF	.88	.96	.25	.72	.95	.85	0	0	0	.9	.93	0	.953
% Trucks(all)	4.2	2.2	0	1.6	6.9	5.9	0	0	0	5.9	3	0	3.7
% Trucks(M+H)	2.2	.3	0	.5	3.8	2.2	0	0	0	3.4	.6	0	1.4
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	
Hourly Totals													
07:00-08:00	414	916	2	153	401	270	0	0	0	103	839	0	3098
07:15-08:15	392	940	2	184	409	310	0	0	0	112	936	0	3285
07:30-08:30	408	971	2	182	420	356	0	0	0	119	962	0	3420
07:45-08:45	400	945	0	199	397	368	0	0	0	158	951	0	3418
08:00-09:00	381	918	0	178	387	355	0	0	0	170	904	0	3293

INTERSECTION TURN MOVEMENT COUNT SUMMARY REPORT
BEAVERTON-HILLSDALE HIGHWAY AT HIGHWAY 217 SOUTHBOUND ON RAMP 19251



DATE OF COUNT: 04/13/99
DAY OF WEEK: Tue
TIME STARTED: 16:00
TIME ENDED: 18:00

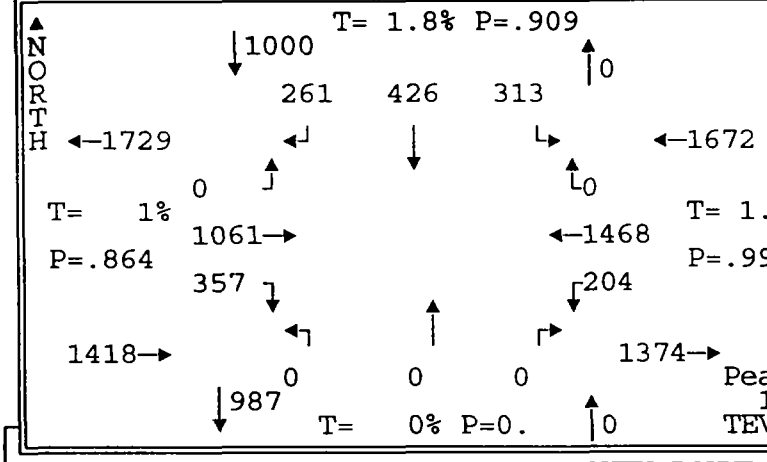
TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

ERUB

Traffic Smithy
(503) 641-6333

TIME PERIOD FROM - TO	EAST BOUND ↓	EAST BOUND →	EAST BOUND ↑	SOUTH BOUND ↵	SOUTH BOUND ↓	SOUTH BOUND ↳	NORTH BOUND ↰	NORTH BOUND ↑	NORTH BOUND ↱	WEST BOUND ↓	WEST BOUND ←	WEST BOUND ↑	ALL
16:00-16:05	20	77	0	22	27	24	0	0	0	9	105	0	284
16:05-16:10	21	81	0	24	31	20	0	0	0	10	116	0	303
16:10-16:15	25	82	0	20	38	22	0	0	0	13	113	0	313
16:15-16:20	21	90	1	19	21	28	0	0	0	13	114	0	307
16:20-16:25	13	80	0	27	31	22	0	0	0	13	87	0	273
16:25-16:30	29	101	0	26	25	29	0	0	0	4	126	0	340
16:30-16:35	33	83	0	16	35	25	0	0	0	11	109	0	312
16:35-16:40	21	77	0	24	35	24	0	0	0	16	121	0	318
16:40-16:45	25	88	0	31	38	16	0	0	0	13	121	0	332
16:45-16:50	22	66	0	20	27	31	0	0	0	12	119	0	297
16:50-16:55	20	74	0	21	42	23	0	0	0	19	124	0	323
16:55-17:00	36	72	0	31	43	25	0	0	0	18	114	0	339
17:00-17:05	37	87	0	13	31	30	0	0	0	17	139	0	354
17:05-17:10	37	106	0	15	37	18	0	0	0	16	115	0	344
17:10-17:15	39	104	0	24	30	25	0	0	0	21	111	0	354
17:15-17:20	22	86	0	19	30	23	0	0	0	25	124	0	329
17:20-17:25	25	97	0	22	35	21	0	0	0	12	109	0	321
17:25-17:30	31	97	0	26	43	24	0	0	0	10	134	0	365
17:30-17:35	18	83	0	23	38	35	0	0	0	20	118	0	335
17:35-17:40	39	85	0	23	37	20	0	0	0	20	108	0	332
17:40-17:45	25	78	0	22	34	27	0	0	0	17	136	0	339
17:45-17:50	28	83	0	26	38	40	0	0	0	13	147	0	375
17:50-17:55	25	73	0	24	41	19	0	0	0	17	126	0	325
17:55-18:00	31	82	0	24	32	31	0	0	0	16	101	0	317
Total Survey	643	2032	1	542	819	602	0	0	0	355	2837	0	7831
PHF	.8	.88	0	.93	.93	.88	0	0	0	.83	.91	0	.977
% Trucks	1.1	1.5	0	.6	3.8	4.2	0	0	0	2.8	1.4	0	1.9
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	
Peds	0	0	0	0	5	0	0	0	0	0	0	0	
Hourly Totals													
16:00-17:00	286	971	1	281	393	289	0	0	0	151	1369	0	3741
16:15-17:15	333	1028	1	267	395	296	0	0	0	173	1400	0	3893
16:30-17:30	348	1037	0	262	426	285	0	0	0	190	1440	0	3988
16:45-17:45	351	1035	0	259	427	302	0	0	0	207	1451	0	4032
17:00-18:00	357	1061	0	261	426	313	0	0	0	204	1468	0	4090

INTERSECTION TURN MOVEMENT COUNT PEAK HOUR REPORT
BEAVERTON-HILLSDALE HIGHWAY AT HIGHWAY 217 SOUTHBOUND ON RAMP



DATE OF COUNT: 04/13/99
DAY OF WEEK: Tue
TIME STARTED: 16:00
TIME ENDED: 18:00

TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

ERUB

Peak Hour
17:00-18:00
TEV=4090

Traffic Smithy
(503)641-6333

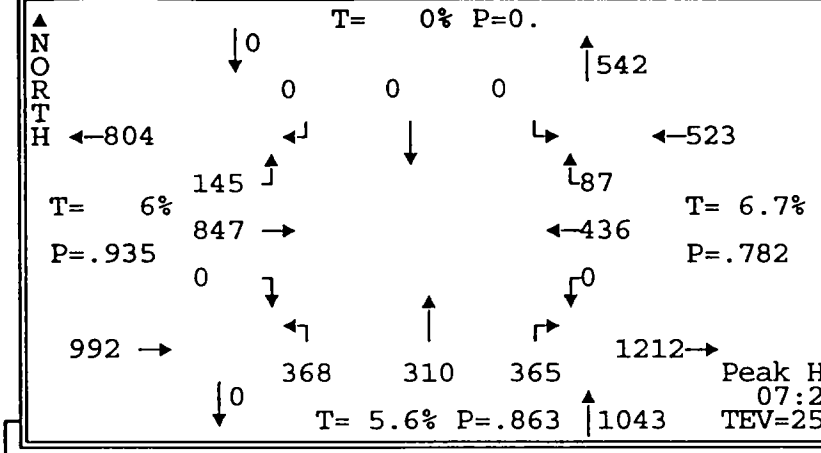
TIME PERIOD FROM - TO	EAST BOUND ↓	EAST BOUND →	EAST BOUND ↑	SOUTH BOUND ↵	SOUTH BOUND ↓	SOUTH BOUND ↳	NORTH BOUND ↰	NORTH BOUND ↑	NORTH BOUND ↱	WEST BOUND ↓	WEST BOUND ←	WEST BOUND ↑	ALL
ALL VEHICLES													
17:00-17:15	113	297	0	52	98	73	0	0	0	54	365	0	1052
17:15-17:30	78	280	0	67	108	68	0	0	0	47	367	0	1015
17:30-17:45	82	246	0	68	109	82	0	0	0	57	362	0	1006
17:45-18:00	84	238	0	74	111	90	0	0	0	46	374	0	1017
LIGHT TRUCKS (SINGLE UNIT 2 AXLES)													
17:00-17:15	0	4	0	0	1	1	0	0	0	1	6	0	13
17:15-17:30	2	2	0	0	1	0	0	0	0	0	4	0	9
17:30-17:45	0	4	0	1	1	0	0	0	0	0	4	0	10
17:45-18:00	0	1	0	0	1	1	0	0	0	0	8	0	11
MEDIUM TRUCKS (SINGLE UNIT > 2 AXLES)													
17:00-17:15	0	0	0	0	1	0	0	0	0	0	0	0	1
17:15-17:30	0	1	0	0	1	1	0	0	0	0	1	0	4
17:30-17:45	0	0	0	0	0	0	0	0	0	1	0	0	1
17:45-18:00	0	0	0	0	0	0	0	0	0	0	0	0	0
HEAVY TRUCKS (SEMI-TRACTOR TRAILER)													
17:00-17:15	0	0	0	0	3	0	0	0	0	1	0	0	4
17:15-17:30	0	0	0	0	2	0	0	0	0	0	0	0	2
17:30-17:45	0	0	0	0	1	2	0	0	0	0	0	0	3
17:45-18:00	0	0	0	0	0	0	0	0	0	0	0	0	0
BICYCLES													
17:00-17:15	0	0	0	0	0	0	0	0	0	0	0	0	0
17:15-17:30	0	0	0	0	0	0	0	0	0	0	0	0	0
17:30-17:45	0	0	0	0	0	0	0	0	0	0	0	0	0
17:45-18:00	0	0	0	0	0	0	0	0	0	0	0	0	0

PEDESTRIANS	CROSSWALK USEAGE SOUTH	WEST	EAST	NORTH	ALL
17:00-17:15	0	2	0	0	2
17:15-17:30	0	0	0	0	0
17:30-17:45	0	0	0	0	0
17:45-18:00	0	0	0	0	0

Peak Hour by Movement													
PHF	.79	.89	0	.88	.96	.87	0	0	0	.89	.98	0	.971
% Trucks(all)	.6	1.1	0	.4	2.8	1.6	0	0	0	1.5	1.6	0	1.4
% Trucks(M+H)	0	.1	0	0	1.9	1	0	0	0	1	.1	0	.4
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	
Hourly Totals													
16:00-17:00	286	971	1	281	393	289	0	0	0	151	1369	0	3741
16:15-17:15	333	1028	1	267	395	296	0	0	0	173	1400	0	3893
16:30-17:30	348	1037	0	262	426	285	0	0	0	190	1440	0	3988
16:45-17:45	351	1035	0	259	427	302	0	0	0	207	1451	0	4032
17:00-18:00	357	1061	0	261	426	313	0	0	0	204	1468	0	4090

INTERSECTION TURN MOVEMENT COUNT SUMMARY REPORT
CANYON ROAD AT HIGHWAY 217 NORTHBOUND RAMPS

19407



DATE OF COUNT: 04/22/99
DAY OF WEEK: Thu
TIME STARTED: 07:00
TIME ENDED: 09:00

TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

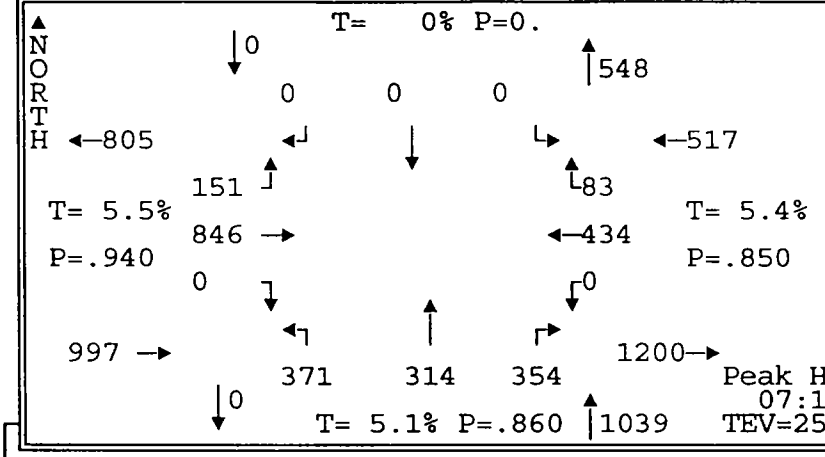
DLNJ

Peak Hour
07:20-08:20
TEV=2558

Traffic Smithy
(503) 641-6333

TIME PERIOD FROM - TO	EAST BOUND ↓	EAST BOUND →	EAST BOUND ↑	SOUTH BOUND ↵	SOUTH BOUND ↓	SOUTH BOUND ↳	NORTH BOUND ↰	NORTH BOUND ↑	NORTH BOUND ↱	WEST BOUND ↓	WEST BOUND ←	WEST BOUND ↑	ALL
07:00-07:05	0	68	6	0	0	0	22	17	23	0	24	3	163
07:05-07:10	0	92	10	0	0	0	23	13	21	0	18	3	180
07:10-07:15	0	56	11	0	0	0	28	13	31	0	32	1	172
07:15-07:20	0	68	14	0	0	0	26	27	24	0	36	3	198
07:20-07:25	0	81	7	0	0	0	24	13	28	0	24	4	181
07:25-07:30	0	57	17	0	0	0	34	21	36	0	31	7	203
07:30-07:35	0	89	8	0	0	0	31	19	35	0	33	6	221
07:35-07:40	0	83	11	0	0	0	25	22	32	0	24	8	205
07:40-07:45	0	57	17	0	0	0	34	33	16	0	34	7	198
07:45-07:50	0	73	10	0	0	0	35	38	28	0	33	7	224
07:50-07:55	0	74	10	0	0	0	34	33	40	0	41	8	240
07:55-08:00	0	67	14	0	0	0	39	24	31	0	49	10	234
08:00-08:05	0	72	18	0	0	0	28	27	31	0	52	6	234
08:05-08:10	0	73	12	0	0	0	29	21	28	0	40	10	213
08:10-08:15	0	52	13	0	0	0	32	36	25	0	37	7	202
08:15-08:20	0	69	8	0	0	0	23	23	35	0	38	7	203
08:20-08:25	0	70	9	0	0	0	18	29	30	0	17	8	181
08:25-08:30	0	63	10	0	0	0	27	31	24	0	31	7	193
08:30-08:35	0	57	15	0	0	0	24	32	35	0	37	9	209
08:35-08:40	0	64	11	0	0	0	22	21	31	0	34	10	193
08:40-08:45	0	61	8	0	0	0	26	25	23	0	45	15	203
08:45-08:50	0	69	12	0	0	0	40	32	32	0	37	7	229
08:50-08:55	0	56	13	0	0	0	32	29	27	0	45	2	204
08:55-09:00	0	62	32	0	0	0	16	24	49	0	32	8	223
Total Survey	0	1633	296	0	0	0	672	603	715	0	824	163	4906
PHF	0	.92	.82	0	0	0	.85	.75	.89	0	.77	.84	.903
% Trucks	0	5.5	8.4	0	0	0	8.8	4.5	3.5	0	6.2	9.2	6
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	
Peds	0	0	0	0	6	0	0	0	0	0	0	0	
Hourly Totals													
07:00-08:00	0	865	135	0	0	0	355	273	345	0	379	67	2419
07:15-08:15	0	846	151	0	0	0	371	314	354	0	434	83	2553
07:30-08:30	0	842	140	0	0	0	355	336	355	0	429	91	2548
07:45-08:45	0	795	138	0	0	0	337	340	361	0	454	104	2529
08:00-09:00	0	768	161	0	0	0	317	330	370	0	445	96	2487

INTERSECTION TURN MOVEMENT COUNT PEAK HOUR REPORT
CANYON ROAD AT HIGHWAY 217 NORTHBOUND RAMPS



DATE OF COUNT: 04/22/99
DAY OF WEEK: Thu
TIME STARTED: 07:00
TIME ENDED: 09:00

TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

DLNJ

Peak Hour
07:15-08:15
TEV=2553

Traffic Smithy
(503)641-6333

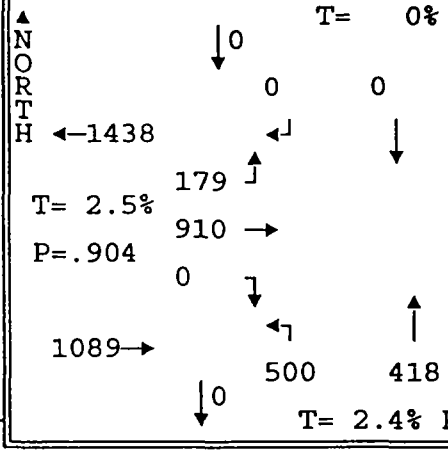
TIME PERIOD FROM - TO	EAST BOUND ↓	EAST BOUND →	EAST BOUND ↑	SOUTH BOUND ↵	SOUTH BOUND ↓	SOUTH BOUND ↳	NORTH BOUND ↰	NORTH BOUND ↑	NORTH BOUND ↱	WEST BOUND ↱	WEST BOUND ←	WEST BOUND ↰	ALL
ALL VEHICLES													
07:15-07:30	0	206	38	0	0	0	84	61	88	0	91	14	582
07:30-07:45	0	229	36	0	0	0	90	74	83	0	91	21	624
07:45-08:00	0	214	34	0	0	0	108	95	99	0	123	25	698
08:00-08:15	0	197	43	0	0	0	89	84	84	0	129	23	649
LIGHT TRUCKS (SINGLE UNIT 2 AXLES)													
07:15-07:30	0	8	2	0	0	0	4	5	2	0	5	1	27
07:30-07:45	0	11	1	0	0	0	2	1	1	0	3	2	21
07:45-08:00	0	4	4	0	0	0	8	2	3	0	3	1	25
08:00-08:15	0	6	3	0	0	0	6	1	0	0	6	0	22
MEDIUM TRUCKS (SINGLE UNIT > 2 AXLES)													
07:15-07:30	0	1	0	0	0	0	1	1	1	0	0	0	4
07:30-07:45	0	2	0	0	0	0	0	0	1	0	0	0	3
07:45-08:00	0	0	0	0	0	0	1	0	0	0	0	1	2
08:00-08:15	0	4	1	0	0	0	1	0	1	0	1	0	8
HEAVY TRUCKS (SEMI-TRACTOR TRAILER)													
07:15-07:30	0	0	2	0	0	0	3	1	1	0	2	1	10
07:30-07:45	0	0	2	0	0	0	1	1	0	0	1	0	5
07:45-08:00	0	0	0	0	0	0	1	0	1	0	1	0	3
08:00-08:15	0	1	3	0	0	0	1	0	1	0	0	0	6
BICYCLES													
07:15-07:30	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30-07:45	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45-08:00	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00-08:15	0	0	0	0	0	0	0	0	0	0	0	0	0

PEDESTRIANS	CROSSWALK USEAGE SOUTH	WEST	EAST	NORTH	ALL
07:15-07:30	0	1	0	0	1
07:30-07:45	0	1	0	0	1
07:45-08:00	0	1	0	0	1
08:00-08:15	0	3	0	0	3

Peak Hour by Movement													
PHF	0	.92	.88	0	0	0	.86	.83	.89	0	.84	.83	.914
% Trucks(all)	0	4.4	11.9	0	0	0	7.8	3.8	3.4	0	5.1	7.2	5.3
% Trucks(M+H)	0	.9	5.3	0	0	0	2.4	1	1.7	0	1.2	2.4	1.6
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	
Hourly Totals													
07:00-08:00	0	865	135	0	0	0	355	273	345	0	379	67	2419
07:15-08:15	0	846	151	0	0	0	371	314	354	0	434	83	2553
07:30-08:30	0	842	140	0	0	0	355	336	355	0	429	91	2548
07:45-08:45	0	795	138	0	0	0	337	340	361	0	454	104	2529
08:00-09:00	0	768	161	0	0	0	317	330	370	0	445	96	2487

INTERSECTION TURN MOVEMENT COUNT SUMMARY REPORT
CANYON ROAD AT HIGHWAY 217 NORTHBOUND RAMPS

19408



DATE OF COUNT: 04/22/99
DAY OF WEEK: Thu
TIME STARTED: 16:00
TIME ENDED: 18:00

TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

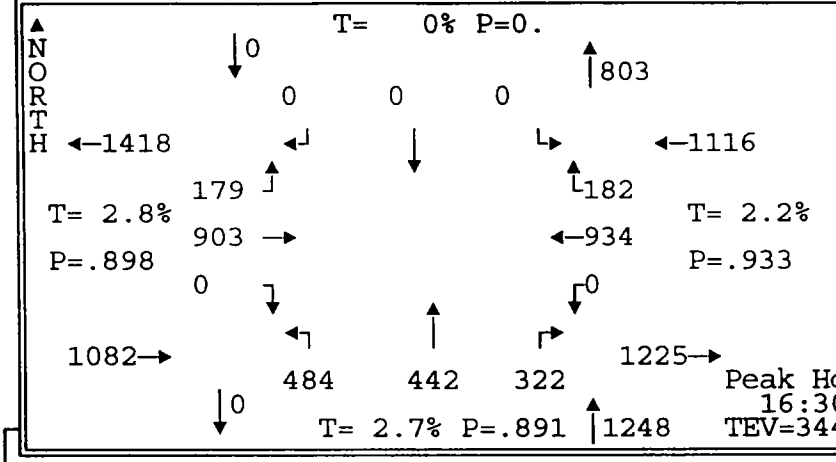
DLNK

Peak Hour
16:40-17:40
TEV=3457

Traffic Smithy
(503) 641-6333

TIME PERIOD FROM - TO	EAST BOUND ↓	EAST BOUND →	EAST BOUND ↑	SOUTH BOUND ↵	SOUTH BOUND ↓	SOUTH BOUND ↳	NORTH BOUND ↰	NORTH BOUND ↑	NORTH BOUND ↱	WEST BOUND ↓	WEST BOUND ←	WEST BOUND ↑	ALL
16:00-16:05	0	54	18	0	0	0	35	47	18	0	72	14	258
16:05-16:10	0	88	11	0	0	0	24	32	29	0	93	15	292
16:10-16:15	0	89	14	0	0	0	44	24	19	0	73	7	270
16:15-16:20	0	78	18	0	0	0	44	26	19	0	80	12	277
16:20-16:25	0	79	16	0	0	0	31	36	15	0	73	15	265
16:25-16:30	0	67	14	0	0	0	29	29	16	0	52	9	216
16:30-16:35	0	61	22	0	0	0	44	28	23	0	76	14	268
16:35-16:40	0	53	7	0	0	0	40	79	26	0	75	16	296
16:40-16:45	0	94	12	0	0	0	48	36	26	0	74	12	302
16:45-16:50	0	76	10	0	0	0	48	29	30	0	90	15	298
16:50-16:55	0	77	18	0	0	0	39	26	19	0	86	16	281
16:55-17:00	0	68	12	0	0	0	24	40	21	0	80	12	257
17:00-17:05	0	75	23	0	0	0	42	28	26	0	76	9	279
17:05-17:10	0	74	16	0	0	0	48	46	27	0	65	17	293
17:10-17:15	0	66	17	0	0	0	23	40	31	0	79	22	278
17:15-17:20	0	73	9	0	0	0	53	43	38	0	67	8	291
17:20-17:25	0	100	13	0	0	0	35	21	31	0	82	24	306
17:25-17:30	0	86	20	0	0	0	40	26	24	0	84	17	297
17:30-17:35	0	39	9	0	0	0	45	56	33	0	65	15	262
17:35-17:40	0	82	20	0	0	0	55	27	24	0	90	15	313
17:40-17:45	0	97	16	0	0	0	35	30	23	0	74	15	290
17:45-17:50	0	63	13	0	0	0	38	26	19	0	81	24	264
17:50-17:55	0	75	12	0	0	0	30	41	22	0	75	12	267
17:55-18:00	1	61	20	0	0	0	35	27	23	0	74	19	260
Total Survey	1	1775	360	0	0	0	929	843	582	0	1836	354	6680
PHF	0	.88	.8	0	0	0	.89	.81	.82	0	.92	.81	.966
% Trucks	0	2.4	3.1	0	0	0	3.6	.9	2.7	0	2.5	1.7	2.4
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	
Peds	0	0	0	0	20	0	0	0	0	0	0	0	
Hourly Totals													
16:00-17:00	0	884	172	0	0	0	450	432	261	0	924	157	3280
16:15-17:15	0	868	185	0	0	0	460	443	279	0	906	169	3310
16:30-17:30	0	903	179	0	0	0	484	442	322	0	934	182	3446
16:45-17:45	0	913	183	0	0	0	487	412	327	0	938	185	3445
17:00-18:00	1	891	188	0	0	0	479	411	321	0	912	197	3400

INTERSECTION TURN MOVEMENT COUNT PEAK HOUR REPORT
CANYON ROAD AT HIGHWAY 217 NORTHBOUND RAMPS



DATE OF COUNT: 04/22/99
DAY OF WEEK: Thu
TIME STARTED: 16:00
TIME ENDED: 18:00

TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

DLNK

Peak Hour
16:30-17:30
TEV=3446

Traffic Smithy
(503)641-6333

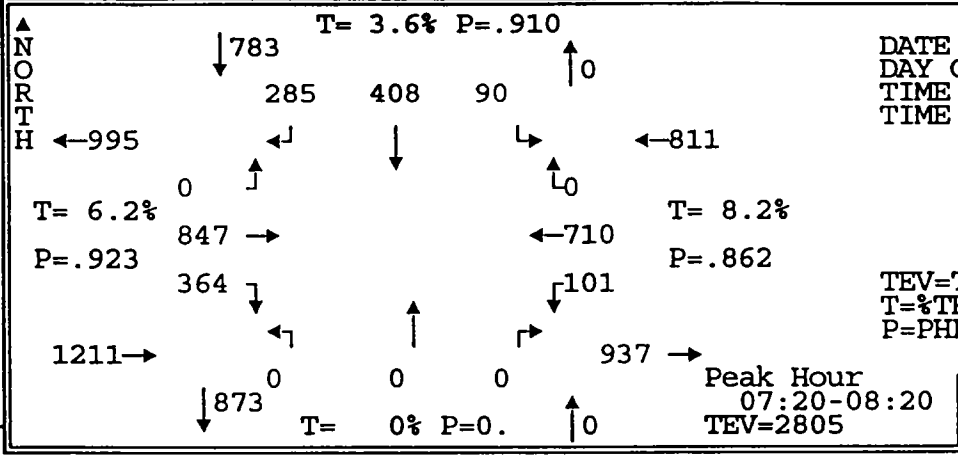
TIME PERIOD FROM - TO	EAST BOUND ↓	EAST BOUND →	EAST BOUND ↑	SOUTH BOUND ↵	SOUTH BOUND ↓	SOUTH BOUND ↳	NORTH BOUND ↰	NORTH BOUND ↑	NORTH BOUND ↱	WEST BOUND ↓	WEST BOUND ←	WEST BOUND ↑	ALL
ALL VEHICLES													
16:30-16:45	0	208	41	0	0	0	132	143	75	0	225	42	866
16:45-17:00	0	221	40	0	0	0	111	95	70	0	256	43	836
17:00-17:15	0	215	56	0	0	0	113	114	84	0	220	48	850
17:15-17:30	0	259	42	0	0	0	128	90	93	0	233	49	894
LIGHT TRUCKS (SINGLE UNIT 2 AXLES)													
16:30-16:45	0	3	0	0	0	0	7	1	2	0	4	1	18
16:45-17:00	0	2	1	0	0	0	2	0	0	0	6	0	11
17:00-17:15	0	7	2	0	0	0	2	1	3	0	2	1	18
17:15-17:30	0	5	0	0	0	0	3	1	2	0	6	1	18
MEDIUM TRUCKS (SINGLE UNIT > 2 AXLES)													
16:30-16:45	0	0	0	0	0	0	0	0	0	0	1	0	1
16:45-17:00	0	0	0	0	0	0	1	1	0	0	1	0	3
17:00-17:15	0	0	0	0	0	0	0	0	0	0	0	1	1
17:15-17:30	0	0	0	0	0	0	1	0	0	0	0	0	1
HEAVY TRUCKS (SEMI-TRACTOR TRAILER)													
16:30-16:45	0	1	0	0	0	0	0	0	0	0	0	0	1
16:45-17:00	0	4	2	0	0	0	5	0	0	0	0	0	11
17:00-17:15	0	2	0	0	0	0	1	0	0	0	0	0	3
17:15-17:30	0	1	0	0	0	0	0	0	1	0	1	0	3
BICYCLES													
16:30-16:45	0	0	0	0	0	0	0	0	0	0	0	0	0
16:45-17:00	0	0	0	0	0	0	0	0	0	0	0	0	0
17:00-17:15	0	0	0	0	0	0	0	0	0	0	0	0	0
17:15-17:30	0	0	0	0	0	0	0	0	0	0	0	0	0

PEDESTRIANS	CROSSWALK USEAGE				ALL
	SOUTH	WEST	EAST	NORTH	
16:30-16:45	0	3	0	0	3
16:45-17:00	0	4	0	0	4
17:00-17:15	0	1	0	0	1
17:15-17:30	0	3	0	0	3

Peak Hour by Movement													
PHF	0	.87	.8	0	0	0	.92	.77	.87	0	.91	.93	.963
% Trucks(all)	0	2.8	2.8	0	0	0	4.5	.9	2.5	0	2.2	2.2	2.6
% Trucks(M+H)	0	.9	1.1	0	0	0	1.7	.2	.3	0	.3	.5	.7
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	
Hourly Totals													
16:00-17:00	0	884	172	0	0	0	450	432	261	0	924	157	3280
16:15-17:15	0	868	185	0	0	0	460	443	279	0	906	169	3310
16:30-17:30	0	903	179	0	0	0	484	442	322	0	934	182	3446
16:45-17:45	0	913	183	0	0	0	487	412	327	0	938	185	3445
17:00-18:00	1	891	188	0	0	0	479	411	321	0	912	197	3400

INTERSECTION TURN MOVEMENT COUNT SUMMARY REPORT
CANYON ROAD AT HIGHWAY 217 SOUTHBOUND RAMPS

19295



DATE OF COUNT: 04/15/99
DAY OF WEEK: Thu
TIME STARTED: 07:00
TIME ENDED: 09:00

TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

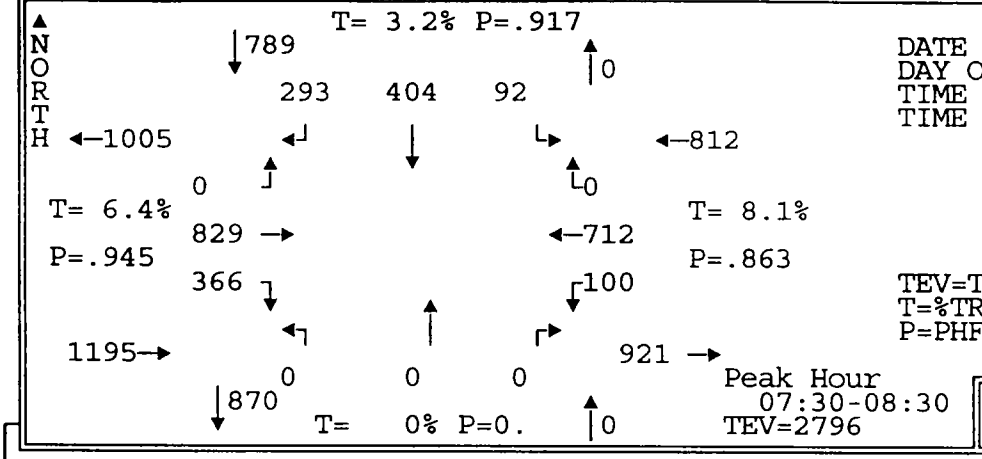
GMZN

Peak Hour
07:20-08:20
TEV=2805

Traffic Smithy
(503) 641-6333

TIME PERIOD FROM - TO	EAST BOUND ↓	EAST BOUND →	EAST BOUND ↑	SOUTH BOUND ↵	SOUTH BOUND ↓	SOUTH BOUND ↳	NORTH BOUND ↰	NORTH BOUND ↑	NORTH BOUND ↱	WEST BOUND ↓	WEST BOUND ←	WEST BOUND ↑	ALL
07:00-07:05	15	64	0	20	16	4	0	0	0	3	47	0	169
07:05-07:10	40	77	0	18	17	2	0	0	0	4	45	0	203
07:10-07:15	26	84	0	32	22	4	0	0	0	2	56	0	226
07:15-07:20	27	56	0	26	28	4	0	0	0	9	59	0	209
07:20-07:25	35	77	0	32	32	13	0	0	0	7	45	0	241
07:25-07:30	31	84	0	13	31	6	0	0	0	6	57	0	228
07:30-07:35	25	76	0	23	32	11	0	0	0	10	65	0	242
07:35-07:40	30	82	0	25	20	6	0	0	0	10	63	0	236
07:40-07:45	37	61	0	22	27	2	0	0	0	9	78	0	236
07:45-07:50	24	52	0	22	42	7	0	0	0	6	55	0	208
07:50-07:55	33	65	0	24	37	9	0	0	0	2	68	0	238
07:55-08:00	32	83	0	28	37	3	0	0	0	10	53	0	246
08:00-08:05	25	62	0	24	44	8	0	0	0	16	59	0	238
08:05-08:10	33	69	0	25	37	9	0	0	0	7	55	0	235
08:10-08:15	27	63	0	27	32	9	0	0	0	13	57	0	228
08:15-08:20	32	73	0	20	37	7	0	0	0	5	55	0	229
08:20-08:25	35	67	0	20	36	14	0	0	0	4	53	0	229
08:25-08:30	33	76	0	33	23	7	0	0	0	8	51	0	231
08:30-08:35	26	61	0	22	30	8	0	0	0	8	51	1	207
08:35-08:40	24	58	0	14	31	16	0	0	0	12	41	0	196
08:40-08:45	32	84	0	20	27	11	0	0	0	9	67	0	250
08:45-08:50	39	67	0	21	31	14	0	0	0	15	52	0	239
08:50-08:55	27	65	0	27	35	13	0	0	0	11	66	0	244
08:55-09:00	25	57	0	22	30	8	0	0	0	15	56	0	213
Total Survey	713	1663	0	560	734	195	0	0	0	201	1354	1	5421
PHF	.97	.88	0	.93	.86	.75	0	0	0	.7	.86	0	.971
% Trucks	10.5	4.3	0	4.1	3.3	3.6	0	0	0	6	8.4	100	6.1
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	
Peds	0	2	0	0	0	0	0	1	0	0	14	0	
Hourly Totals													
07:00-08:00	355	861	0	285	341	71	0	0	0	78	691	0	2682
07:15-08:15	359	830	0	291	399	87	0	0	0	105	714	0	2785
07:30-08:30	366	829	0	293	404	92	0	0	0	100	712	0	2796
07:45-08:45	356	813	0	279	413	108	0	0	0	100	665	1	2735
08:00-09:00	358	802	0	275	393	124	0	0	0	123	663	1	2739

INTERSECTION TURN MOVEMENT COUNT PEAK HOUR REPORT
CANYON ROAD AT HIGHWAY 217 SOUTHBOUND RAMPS



DATE OF COUNT: 04/15/99
DAY OF WEEK: Thu
TIME STARTED: 07:00
TIME ENDED: 09:00

TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

GMZN

Peak Hour
07:30-08:30
TEV=2796

Traffic Smithy
(503)641-6333

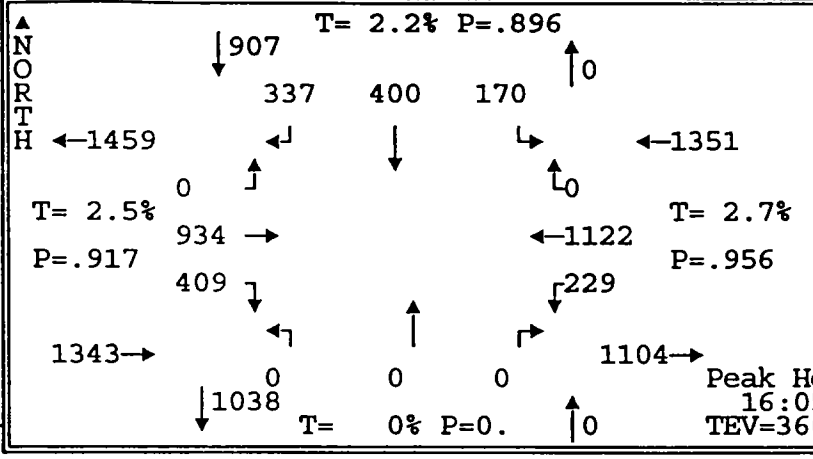
TIME PERIOD FROM - TO	EAST BOUND ↓	EAST BOUND →	EAST BOUND ↑	SOUTH BOUND ↵	SOUTH BOUND ↓	SOUTH BOUND ↳	NORTH BOUND ↰	NORTH BOUND ↑	NORTH BOUND ↱	WEST BOUND ↓	WEST BOUND ←	WEST BOUND ↑	ALL
ALL VEHICLES													
07:30-07:45	92	219	0	70	79	19	0	0	0	29	206	0	714
07:45-08:00	89	200	0	74	116	19	0	0	0	18	176	0	692
08:00-08:15	85	194	0	76	113	26	0	0	0	36	171	0	701
08:15-08:30	100	216	0	73	96	28	0	0	0	17	159	0	689
LIGHT TRUCKS (SINGLE UNIT 2 AXLES)													
07:30-07:45	7	5	0	5	2	0	0	0	0	0	13	0	32
07:45-08:00	4	5	0	2	2	0	0	0	0	1	7	0	21
08:00-08:15	6	7	0	1	3	0	0	0	0	1	12	0	30
08:15-08:30	10	6	0	2	1	0	0	0	0	2	10	0	31
MEDIUM TRUCKS (SINGLE UNIT > 2 AXLES)													
07:30-07:45	1	2	0	0	0	0	0	0	0	0	0	0	3
07:45-08:00	3	0	0	0	0	0	0	0	0	0	2	0	5
08:00-08:15	2	1	0	0	1	0	0	0	0	0	1	0	5
08:15-08:30	3	1	0	0	1	0	0	0	0	0	1	0	6
HEAVY TRUCKS (SEMI-TRACTOR TRAILER)													
07:30-07:45	2	1	0	0	1	0	0	0	0	0	5	0	9
07:45-08:00	2	2	0	1	0	0	0	0	0	0	5	0	10
08:00-08:15	4	3	0	1	0	0	0	0	0	0	4	0	12
08:15-08:30	0	0	0	0	1	1	0	0	0	0	2	0	4
BICYCLES													
07:30-07:45	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45-08:00	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00-08:15	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15-08:30	0	0	0	0	0	0	0	0	0	0	0	0	0

PEDESTRIANS	CROSSWALK USEAGE SOUTH	WEST	EAST	NORTH	ALL
07:30-07:45	0	0	0	4	4
07:45-08:00	0	0	0	1	1
08:00-08:15	0	0	0	0	0
08:15-08:30	0	0	0	4	4

Peak Hour by Movement													
PHF	.92	.95	0	.96	.87	.82	0	0	0	.69	.86	0	.978
% Trucks(all)	12	4	0	4.1	3	1.1	0	0	0	4	8.7	0	6
% Trucks(M+H)	4.6	1.2	0	.7	1	1.1	0	0	0	0	2.8	0	1.9
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	
Hourly Totals													
07:00-08:00	355	861	0	285	341	71	0	0	0	78	691	0	2682
07:15-08:15	359	830	0	291	399	87	0	0	0	105	714	0	2785
07:30-08:30	366	829	0	293	404	92	0	0	0	100	712	0	2796
07:45-08:45	356	813	0	279	413	108	0	0	0	100	665	1	2735
08:00-09:00	358	802	0	275	393	124	0	0	0	123	663	1	2739

INTERSECTION TURN MOVEMENT COUNT SUMMARY REPORT
CANYON ROAD AT HIGHWAY 217 SOUTHBOUND RAMPS

19296



DATE OF COUNT: 04/15/99
DAY OF WEEK: Thu
TIME STARTED: 16:00
TIME ENDED: 18:00

TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

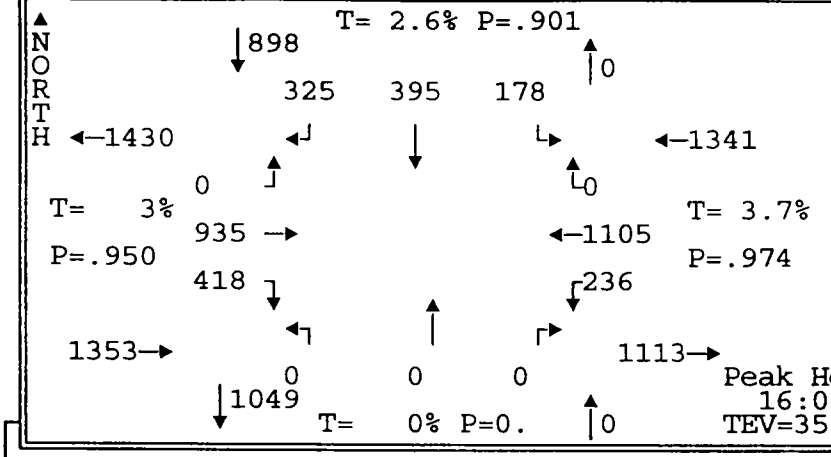
GMZO

Peak Hour
16:05-17:05
TEV=3601

Traffic Smithy
(503) 641-6333

TIME PERIOD FROM - TO	EAST BOUND ↓	EAST BOUND →	EAST BOUND ↑	SOUTH BOUND ↵	SOUTH BOUND ↓	SOUTH BOUND ↳	NORTH BOUND ↰	NORTH BOUND ↑	NORTH BOUND ↱	WEST BOUND ↓	WEST BOUND ←	WEST BOUND ↑	ALL
16:00-16:05	46	71	0	20	22	23	0	0	0	30	84	0	296
16:05-16:10	35	75	0	21	38	8	0	0	0	22	93	0	292
16:10-16:15	42	87	0	24	32	17	0	0	0	17	95	0	314
16:15-16:20	39	86	0	24	28	20	0	0	0	18	87	0	302
16:20-16:25	34	78	0	27	27	13	0	0	0	28	96	0	303
16:25-16:30	34	67	0	25	31	15	0	0	0	17	92	0	281
16:30-16:35	33	86	0	29	37	14	0	0	0	28	84	0	311
16:35-16:40	38	91	0	36	32	13	0	0	0	14	81	0	305
16:40-16:45	33	73	0	41	29	18	0	0	0	12	99	0	305
16:45-16:50	36	77	0	32	41	11	0	0	0	17	98	0	312
16:50-16:55	27	83	0	23	37	9	0	0	0	21	101	0	301
16:55-17:00	21	61	0	23	41	17	0	0	0	12	95	0	270
17:00-17:05	37	70	0	32	27	15	0	0	0	23	101	0	305
17:05-17:10	35	88	0	29	25	16	0	0	0	14	74	0	281
17:10-17:15	33	87	0	31	23	15	0	0	0	14	87	0	290
17:15-17:20	17	68	0	25	40	11	0	0	0	7	91	0	259
17:20-17:25	45	95	0	31	40	11	0	0	0	10	111	0	343
17:25-17:30	26	79	0	30	23	13	0	0	0	21	79	0	271
17:30-17:35	28	67	0	34	33	19	0	0	0	17	103	0	301
17:35-17:40	44	102	0	26	26	8	0	0	0	12	92	0	310
17:40-17:45	42	73	0	28	28	11	0	0	0	17	81	0	280
17:45-17:50	42	67	0	29	31	14	0	0	0	17	89	0	289
17:50-17:55	44	76	0	24	31	11	0	0	0	14	101	0	301
17:55-18:00	39	66	0	22	32	11	0	0	0	19	110	0	299
Total Survey	850	1873	0	666	754	333	0	0	0	421	2224	0	7121
PHF	.88	.93	0	.77	.84	.85	0	0	0	.78	.94	0	.976
% Trucks	3.2	2.1	0	1.8	2.9	1.5	0	0	0	1.9	2.8	0	2.5
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	
Peds	0	15	0	0	0	0	0	0	0	0	18	0	
Hourly Totals													
16:00-17:00	418	935	0	325	395	178	0	0	0	236	1105	0	3592
16:15-17:15	400	947	0	352	378	176	0	0	0	218	1095	0	3566
16:30-17:30	381	958	0	362	395	163	0	0	0	193	1101	0	3553
16:45-17:45	391	950	0	344	384	156	0	0	0	185	1113	0	3523
17:00-18:00	432	938	0	341	359	155	0	0	0	185	1119	0	3529

INTERSECTION TURN MOVEMENT COUNT PEAK HOUR REPORT
CANYON ROAD AT HIGHWAY 217 SOUTHBOUND RAMPS



DATE OF COUNT: 04/15/99
DAY OF WEEK: Thu
TIME STARTED: 16:00
TIME ENDED: 18:00

TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

GMZO

Peak Hour
16:00-17:00
TEV=3592

Traffic Smithy
(503)641-6333

TIME PERIOD FROM - TO	EAST BOUND ↓	EAST BOUND →	EAST BOUND ↱	SOUTH BOUND ↲	SOUTH BOUND ↓	SOUTH BOUND ↳	NORTH BOUND ↰	NORTH BOUND ↑	NORTH BOUND ↱	WEST BOUND ↓	WEST BOUND ←	WEST BOUND ↰	ALL
ALL VEHICLES													
16:00-16:15	123	233	0	65	92	48	0	0	0	69	272	0	902
16:15-16:30	107	231	0	76	86	48	0	0	0	63	275	0	886
16:30-16:45	104	250	0	106	98	45	0	0	0	54	264	0	921
16:45-17:00	84	221	0	78	119	37	0	0	0	50	294	0	883
LIGHT TRUCKS (SINGLE UNIT 2 AXLES)													
16:00-16:15	3	2	0	1	3	2	0	0	0	1	8	0	20
16:15-16:30	4	3	0	0	4	0	0	0	0	0	11	0	22
16:30-16:45	1	6	0	1	8	0	0	0	0	1	6	0	23
16:45-17:00	2	5	0	0	1	0	0	0	0	1	8	0	17
MEDIUM TRUCKS (SINGLE UNIT > 2 AXLES)													
16:00-16:15	0	0	0	1	0	0	0	0	0	0	0	0	1
16:15-16:30	0	0	0	0	1	0	0	0	0	3	0	0	4
16:30-16:45	0	0	0	0	0	0	0	0	0	0	2	0	2
16:45-17:00	0	0	0	0	0	0	0	0	0	0	0	0	0
HEAVY TRUCKS (SEMI-TRACTOR TRAILER)													
16:00-16:15	0	0	0	0	0	0	0	0	0	1	1	0	2
16:15-16:30	3	3	0	0	0	0	0	0	0	0	1	0	7
16:30-16:45	2	2	0	1	0	0	0	0	0	0	2	0	7
16:45-17:00	1	3	0	0	0	0	0	0	0	0	4	0	8
BICYCLES													
16:00-16:15	0	1	0	0	0	0	0	0	0	0	0	0	1
16:15-16:30	0	0	0	0	0	0	0	0	0	0	0	0	0
16:30-16:45	0	0	0	0	0	0	0	0	0	0	0	0	0
16:45-17:00	0	0	0	0	0	0	0	0	0	0	0	0	0

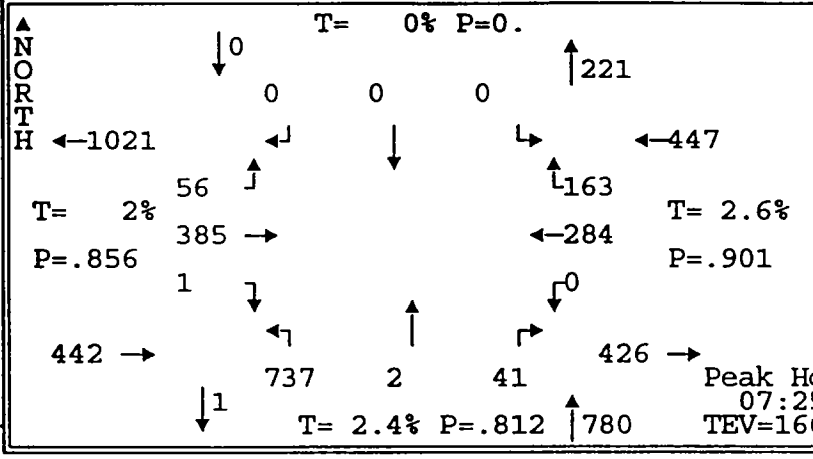
PEDESTRIANS	CROSSWALK USEAGE SOUTH	WEST	EAST	NORTH	ALL
16:00-16:15	2	0	0	2	4
16:15-16:30	1	0	0	6	7
16:30-16:45	2	0	0	1	3
16:45-17:00	2	0	0	3	5

Peak Hour by Movement													
PHF	.85	.94	0	.77	.83	.93	0	0	0	.86	.94	0	.975
% Trucks(all)	3.8	2.6	0	1.2	4.3	1.1	0	0	0	3	3.9	0	3.1
% Trucks(M+H)	1.4	.9	0	.6	.3	0	0	0	0	1.7	.9	0	.9
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	

Hourly Totals													
16:00-17:00	418	935	0	325	395	178	0	0	0	236	1105	0	3592
16:15-17:15	400	947	0	352	378	176	0	0	0	218	1095	0	3566
16:30-17:30	381	958	0	362	395	163	0	0	0	193	1101	0	3553
16:45-17:45	391	950	0	344	384	156	0	0	0	185	1113	0	3523
17:00-18:00	432	938	0	341	359	155	0	0	0	185	1119	0	3529

INTERSECTION TURN MOVEMENT COUNT SUMMARY REPORT
WALKER ROAD AT HIGHWAY 217 NORTHBOUND RAMPS

19348



DATE OF COUNT: 04/15/99
DAY OF WEEK: THU
TIME STARTED: 07:00
TIME ENDED: 09:00

TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

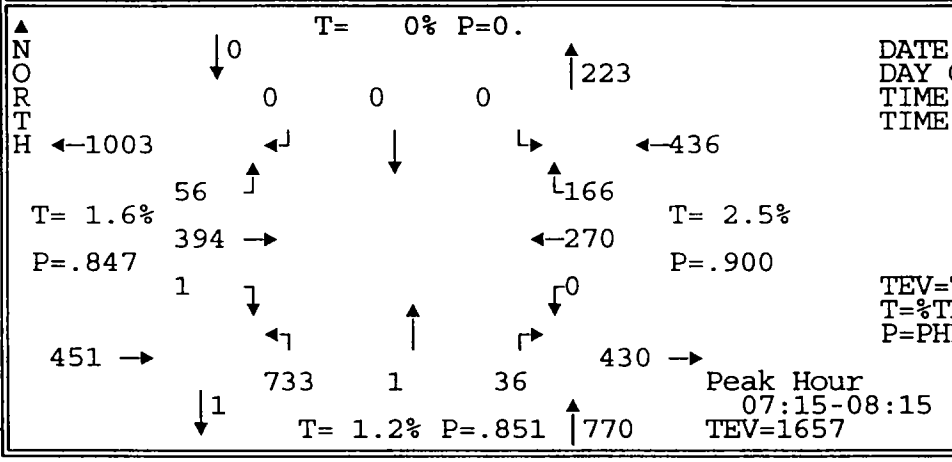
MP24

Peak Hour
07:25-08:25
TEV=1669

Traffic Smithy
(503) 641-6333

TIME PERIOD FROM - TO	EAST BOUND ↓	EAST BOUND →	EAST BOUND ↑	SOUTH BOUND ↵	SOUTH BOUND ↓	SOUTH BOUND ↳	NORTH BOUND ↰	NORTH BOUND ↑	NORTH BOUND ↱	WEST BOUND ↓	WEST BOUND ←	WEST BOUND ↑	ALL
07:00-07:05	0	29	9	0	0	0	41	0	0	0	10	7	96
07:05-07:10	0	35	7	0	0	0	44	0	4	0	17	9	116
07:10-07:15	0	41	8	0	0	0	45	0	2	0	13	10	119
07:15-07:20	0	27	6	0	0	0	56	0	1	0	8	15	113
07:20-07:25	0	45	3	0	0	0	41	0	3	0	21	14	127
07:25-07:30	0	40	12	0	0	0	65	0	3	0	21	10	151
07:30-07:35	0	39	6	0	0	0	47	1	1	0	28	17	139
07:35-07:40	0	30	2	0	0	0	70	0	1	0	13	12	128
07:40-07:45	0	27	5	0	0	0	75	0	4	0	31	19	161
07:45-07:50	1	23	2	0	0	0	78	0	4	0	26	14	148
07:50-07:55	0	29	3	0	0	0	77	0	2	0	20	14	145
07:55-08:00	0	44	5	0	0	0	61	0	4	0	21	11	146
08:00-08:05	0	33	4	0	0	0	58	0	5	0	27	10	137
08:05-08:10	0	26	5	0	0	0	56	0	3	0	29	15	134
08:10-08:15	0	31	3	0	0	0	49	0	5	0	25	15	128
08:15-08:20	0	21	2	0	0	0	48	0	6	0	16	13	106
08:20-08:25	0	42	7	0	0	0	53	1	3	0	27	13	146
08:25-08:30	0	26	7	0	0	0	49	0	2	2	19	13	118
08:30-08:35	0	42	5	0	0	0	51	1	7	0	24	9	139
08:35-08:40	0	24	6	0	0	0	34	1	6	0	14	14	99
08:40-08:45	0	24	7	0	0	0	40	0	5	0	20	8	104
08:45-08:50	1	21	2	0	0	0	46	0	2	1	9	12	94
08:50-08:55	0	26	12	0	0	0	39	0	4	0	15	10	106
08:55-09:00	0	25	1	0	0	0	45	0	5	0	18	9	103
Total Survey	2	750	129	0	0	0	1268	4	82	3	472	293	3003
PHF	.25	.88	.7	0	0	0	.8	.5	.73	0	.88	.85	.919
% Trucks	50	1.9	2.3	0	0	0	2.3	0	4.9	0	2.5	2.7	2.4
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	
Peds	0	0	0	0	0	0	0	0	0	0	1	0	
Hourly Totals													
07:00-08:00	1	409	68	0	0	0	700	1	29	0	229	152	1589
07:15-08:15	1	394	56	0	0	0	733	1	36	0	270	166	1657
07:30-08:30	1	371	51	0	0	0	721	2	40	2	282	166	1636
07:45-08:45	1	365	56	0	0	0	654	3	52	2	268	149	1550
08:00-09:00	1	341	61	0	0	0	568	3	53	3	243	141	1414

INTERSECTION TURN MOVEMENT COUNT PEAK HOUR REPORT
WALKER ROAD AT HIGHWAY 217 NORTHBOUND RAMPS



DATE OF COUNT: 04/15/99
DAY OF WEEK: THU
TIME STARTED: 07:00
TIME ENDED: 09:00

TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

MP24

Peak Hour
07:15-08:15
TEV=1657

Traffic Smithy
(503)641-6333

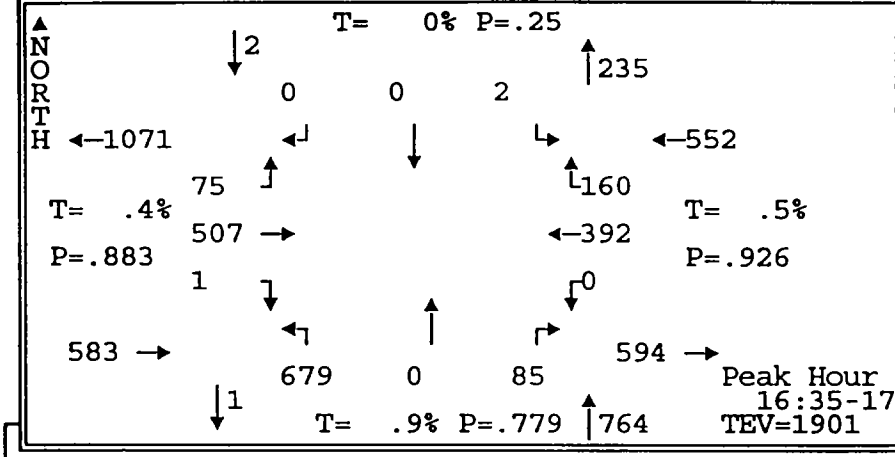
TIME PERIOD FROM - TO	EAST BOUND ↓	EAST BOUND →	EAST BOUND ↑	SOUTH BOUND ↲	SOUTH BOUND ↓	SOUTH BOUND ↳	NORTH BOUND ↰	NORTH BOUND ↑	NORTH BOUND ↱	WEST BOUND ↓	WEST BOUND ←	WEST BOUND ↑	ALL
ALL VEHICLES													
07:15-07:30	0	112	21	0	0	0	162	0	7	0	50	39	391
07:30-07:45	0	96	13	0	0	0	192	1	6	0	72	48	428
07:45-08:00	1	96	10	0	0	0	216	0	10	0	67	39	439
08:00-08:15	0	90	12	0	0	0	163	0	13	0	81	40	399
LIGHT TRUCKS (SINGLE UNIT 2 AXLES)													
07:15-07:30	0	3	0	0	0	0	3	0	0	0	1	1	8
07:30-07:45	0	1	0	0	0	0	2	0	0	0	2	1	6
07:45-08:00	0	2	0	0	0	0	1	0	0	0	1	2	6
08:00-08:15	0	1	0	0	0	0	1	0	1	0	3	0	6
MEDIUM TRUCKS (SINGLE UNIT > 2 AXLES)													
07:15-07:30	0	0	0	0	0	0	1	0	0	0	0	0	1
07:30-07:45	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45-08:00	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00-08:15	0	0	0	0	0	0	0	0	0	0	0	0	0
HEAVY TRUCKS (SEMI-TRACTOR TRAILER)													
07:15-07:30	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30-07:45	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45-08:00	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00-08:15	0	0	0	0	0	0	0	0	0	0	0	0	0
BICYCLES													
07:15-07:30	0	0	0	0	0	0	0	0	0	0	1	0	1
07:30-07:45	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45-08:00	0	0	0	0	0	0	0	0	0	0	3	0	3
08:00-08:15	0	0	0	0	0	0	0	0	0	0	0	0	0

PEDESTRIANS	CROSSWALK USEAGE SOUTH	WEST	EAST	NORTH	ALL
07:15-07:30	0	0	0	1	1
07:30-07:45	0	0	0	0	0
07:45-08:00	0	0	0	0	0
08:00-08:15	0	0	0	0	0

Peak Hour by Movement													
PHF	.25	.88	.67	0	0	0	.85	.25	.69	0	.83	.86	.943
% Trucks(all)	0	1.8	0	0	0	0	1.1	0	2.8	0	2.6	2.4	1.6
% Trucks(M+H)	0	0	0	0	0	0	.1	0	0	0	0	0	.1
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	
Hourly Totals													
07:00-08:00	1	409	68	0	0	0	700	1	29	0	229	152	1589
07:15-08:15	1	394	56	0	0	0	733	1	36	0	270	166	1657
07:30-08:30	1	371	51	0	0	0	721	2	40	2	282	166	1636
07:45-08:45	1	365	56	0	0	0	654	3	52	2	268	149	1550
08:00-09:00	1	341	61	0	0	0	568	3	53	3	243	141	1414

INTERSECTION TURN MOVEMENT COUNT SUMMARY REPORT
WALKER ROAD AT HIGHWAY 217 NORTHBOUND RAMPS

19349



DATE OF COUNT: 04/13/99
DAY OF WEEK: TUE
TIME STARTED: 16:00
TIME ENDED: 18:00

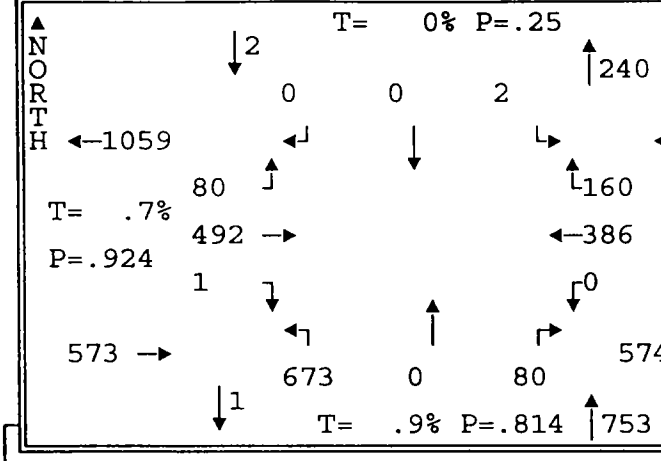
TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

MP23

Traffic Smithy
(503) 641-6333

TIME PERIOD FROM - TO	EAST BOUND ↓	EAST BOUND →	EAST BOUND ↑	SOUTH BOUND ↵	SOUTH BOUND ↓	SOUTH BOUND ↳	NORTH BOUND ↰	NORTH BOUND ↑	NORTH BOUND ↱	WEST BOUND ↓	WEST BOUND ←	WEST BOUND ↑	ALL
16:00-16:05	0	39	10	0	0	0	42	1	7	0	8	10	117
16:05-16:10	0	38	8	0	0	0	47	0	7	0	22	13	135
16:10-16:15	0	48	11	0	0	0	50	0	3	1	31	20	164
16:15-16:20	11	23	12	0	0	0	62	0	3	0	21	6	138
16:20-16:25	0	33	10	0	0	0	45	1	2	0	19	7	117
16:25-16:30	0	26	6	0	0	0	51	0	5	0	25	14	127
16:30-16:35	0	37	10	0	0	0	39	0	1	0	25	13	125
16:35-16:40	0	38	5	0	0	0	55	0	7	0	34	17	156
16:40-16:45	0	38	3	0	0	0	58	0	13	0	31	13	156
16:45-16:50	0	40	7	0	0	0	51	0	8	0	26	10	142
16:50-16:55	0	49	4	0	0	0	48	0	7	0	36	6	150
16:55-17:00	0	34	10	0	0	0	30	0	4	0	36	15	129
17:00-17:05	0	46	5	0	0	0	64	0	3	0	31	12	161
17:05-17:10	0	37	5	0	0	0	51	0	4	0	37	12	146
17:10-17:15	0	39	11	0	0	0	70	0	9	0	32	14	175
17:15-17:20	0	44	3	0	0	0	84	0	13	0	35	14	193
17:20-17:25	0	42	7	0	0	0	62	0	7	0	33	21	172
17:25-17:30	1	48	10	0	0	2	61	0	4	0	30	13	169
17:30-17:35	0	52	5	0	0	0	45	0	6	0	31	13	152
17:35-17:40	0	46	5	0	0	0	39	0	6	0	23	16	135
17:40-17:45	0	33	2	0	0	0	60	0	2	0	18	12	127
17:45-17:50	0	38	5	0	0	0	53	0	7	0	22	12	137
17:50-17:55	0	50	8	0	0	0	49	0	6	0	16	14	143
17:55-18:00	0	44	8	0	0	0	54	0	4	0	23	12	145
Total Survey	12	962	170	0	0	2	1270	2	138	1	645	309	3511
PHF	.25	.89	.85	0	0	.25	.79	0	.73	0	.94	.82	.880
% Trucks	0	.3	1.2	0	0	0	1	0	0	0	.6	.3	.7
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	
Peds	0	0	0	0	0	0	0	0	0	0	5	0	
Hourly Totals													
16:00-17:00	11	443	96	0	0	0	578	2	67	1	314	144	1656
16:15-17:15	11	440	88	0	0	0	624	1	66	0	353	139	1722
16:30-17:30	1	492	80	0	0	2	673	0	80	0	386	160	1874
16:45-17:45	1	510	74	0	0	2	665	0	73	0	368	158	1851
17:00-18:00	1	519	74	0	0	2	692	0	71	0	331	165	1855

INTERSECTION TURN MOVEMENT COUNT PEAK HOUR REPORT
WALKER ROAD AT HIGHWAY 217 NORTHBOUND RAMPS



DATE OF COUNT: 04/13/99
DAY OF WEEK: TUE
TIME STARTED: 16:00
TIME ENDED: 18:00

TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

MP23

Peak Hour
16:30-17:30
TEV=1874

Traffic Smithy
(503)641-6333

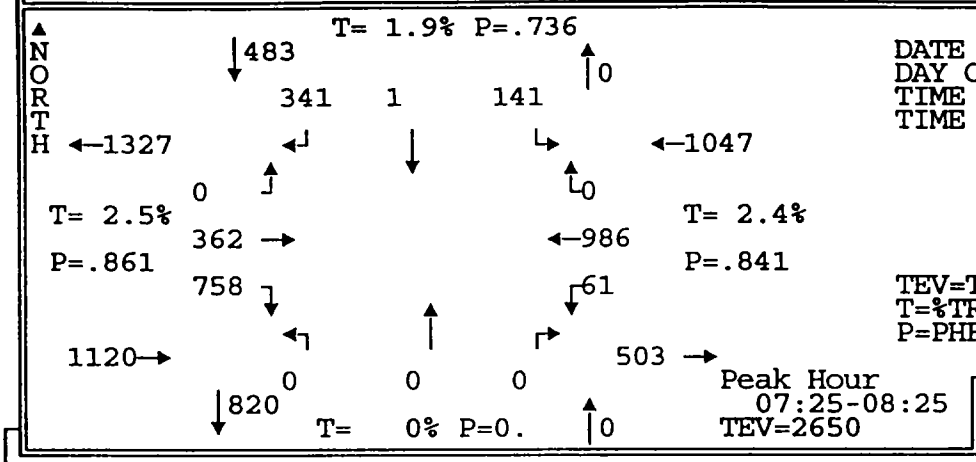
TIME PERIOD FROM - TO	EAST BOUND ↓	EAST BOUND →	EAST BOUND ↑	SOUTH BOUND ↵	SOUTH BOUND ↓	SOUTH BOUND ↳	NORTH BOUND ↰	NORTH BOUND ↑	NORTH BOUND ↱	WEST BOUND ↓	WEST BOUND ←	WEST BOUND ↑	ALL
ALL VEHICLES													
16:30-16:45	0	113	18	0	0	0	152	0	21	0	90	43	437
16:45-17:00	0	123	21	0	0	0	129	0	19	0	98	31	421
17:00-17:15	0	122	21	0	0	0	185	0	16	0	100	38	482
17:15-17:30	1	134	20	0	0	2	207	0	24	0	98	48	534
LIGHT TRUCKS (SINGLE UNIT 2 AXLES)													
16:30-16:45	0	1	1	0	0	0	0	0	0	0	0	0	2
16:45-17:00	0	0	0	0	0	0	0	0	0	0	0	1	1
17:00-17:15	0	1	1	0	0	0	3	0	0	0	0	0	5
17:15-17:30	0	0	0	0	0	0	0	0	0	0	1	0	1
MEDIUM TRUCKS (SINGLE UNIT > 2 AXLES)													
16:30-16:45	0	0	0	0	0	0	0	0	0	0	0	0	0
16:45-17:00	0	0	0	0	0	0	0	0	0	0	0	0	0
17:00-17:15	0	0	0	0	0	0	1	0	0	0	0	0	1
17:15-17:30	0	0	0	0	0	0	1	0	0	0	0	0	1
HEAVY TRUCKS (SEMI-TRACTOR TRAILER)													
16:30-16:45	0	0	0	0	0	0	2	0	0	0	0	0	2
16:45-17:00	0	0	0	0	0	0	0	0	0	0	0	0	0
17:00-17:15	0	0	0	0	0	0	0	0	0	0	0	0	0
17:15-17:30	0	0	0	0	0	0	0	0	0	0	0	0	0
BICYCLES													
16:30-16:45	0	0	0	0	0	0	0	0	0	0	0	0	0
16:45-17:00	0	0	0	0	0	0	0	0	0	0	0	0	0
17:00-17:15	0	1	0	0	0	0	0	0	0	0	0	0	1
17:15-17:30	0	1	0	0	0	0	0	0	0	0	0	0	1

PEDESTRIANS	CROSSWALK USEAGE SOUTH	WEST	EAST	NORTH	ALL
16:30-16:45	0	0	0	0	0
16:45-17:00	0	0	0	2	2
17:00-17:15	0	0	0	0	0
17:15-17:30	0	0	0	2	2

Peak Hour by Movement													
PHF	.25	.92	.95	0	0	.25	.81	0	.83	0	.96	.83	.877
% Trucks(all)	0	.4	2.5	0	0	0	1	0	0	0	.3	.6	.7
% Trucks(M+H)	0	0	0	0	0	0	.6	0	0	0	0	0	.2
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	
Hourly Totals													
16:00-17:00	11	443	96	0	0	0	578	2	67	1	314	144	1656
16:15-17:15	11	440	88	0	0	0	624	1	66	0	353	139	1722
16:30-17:30	1	492	80	0	0	2	673	0	80	0	386	160	1874
16:45-17:45	1	510	74	0	0	2	665	0	73	0	368	158	1851
17:00-18:00	1	519	74	0	0	2	692	0	71	0	331	165	1855

INTERSECTION TURN MOVEMENT COUNT SUMMARY REPORT
WALKER ROAD AT HIGHWAY 217 SOUTHBOUND RAMPS

19350



DATE OF COUNT: 04/15/99
DAY OF WEEK: THUR
TIME STARTED: 07:00
TIME ENDED: 09:00

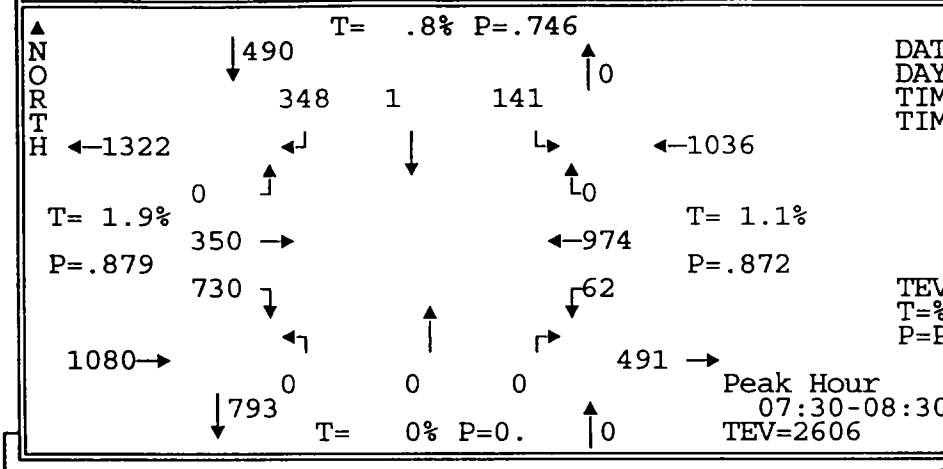
TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

MP26

Traffic Smithy
(503) 641-6333

TIME PERIOD FROM - TO	EAST BOUND ↓	EAST BOUND →	EAST BOUND ↑	SOUTH BOUND ↙	SOUTH BOUND ↓	SOUTH BOUND ↘	NORTH BOUND ↖	NORTH BOUND ↑	NORTH BOUND ↗	WEST BOUND ↓	WEST BOUND ←	WEST BOUND ↑	ALL
07:00-07:05	52	33	0	7	0	6	0	0	0	2	59	0	159
07:05-07:10	44	30	0	8	0	12	0	0	0	2	56	0	152
07:10-07:15	59	26	0	12	0	12	0	0	0	2	60	0	171
07:15-07:20	46	35	0	4	0	4	0	0	0	5	52	0	146
07:20-07:25	51	51	0	12	0	6	0	0	0	3	57	0	180
07:25-07:30	66	31	0	11	0	13	0	0	0	7	76	0	204
07:30-07:35	65	34	0	9	0	6	0	0	0	5	85	0	204
07:35-07:40	67	21	0	22	0	10	0	0	0	7	72	0	199
07:40-07:45	91	29	0	35	0	5	0	0	0	3	103	0	266
07:45-07:50	81	27	0	42	0	9	0	0	0	9	99	0	267
07:50-07:55	66	31	0	49	0	15	0	0	0	2	95	0	258
07:55-08:00	41	46	0	39	0	10	0	0	0	7	85	0	228
08:00-08:05	55	32	0	36	0	9	0	0	0	6	74	0	212
08:05-08:10	56	30	0	32	0	13	0	0	0	3	80	0	214
08:10-08:15	57	23	0	31	1	18	0	0	0	3	79	0	212
08:15-08:20	64	27	0	19	0	20	0	0	0	3	60	0	193
08:20-08:25	49	31	0	16	0	13	0	0	0	6	78	0	193
08:25-08:30	38	19	0	18	0	13	0	0	0	8	64	0	160
08:30-08:35	48	26	0	16	0	16	0	0	0	0	59	0	165
08:35-08:40	69	27	0	4	0	8	0	0	0	2	57	1	168
08:40-08:45	41	23	0	9	0	8	0	0	0	3	51	0	135
08:45-08:50	46	11	0	19	0	19	0	0	0	0	53	0	148
08:50-08:55	30	27	0	10	0	21	0	0	0	2	59	0	149
08:55-09:00	40	13	0	10	0	5	0	0	0	4	61	0	133
Total Survey	1322	683	0	470	1	271	0	0	0	94	1674	1	4516
PHF	.79	.83	0	.66	.25	.69	0	0	0	.8	.83	0	.837
% Trucks	2.8	2	0	1.5	0	2.6	0	0	0	0	2.6	0	2.4
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	
Peds	0	0	0	0	0	0	0	0	0	0	0	0	
Hourly Totals													
07:00-08:00	729	394	0	250	0	108	0	0	0	54	899	0	2434
07:15-08:15	742	390	0	322	1	118	0	0	0	60	957	0	2590
07:30-08:30	730	350	0	348	1	141	0	0	0	62	974	0	2606
07:45-08:45	665	342	0	311	1	152	0	0	0	52	881	1	2405
08:00-09:00	593	289	0	220	1	163	0	0	0	40	775	1	2082

INTERSECTION TURN MOVEMENT COUNT PEAK HOUR REPORT
WALKER ROAD AT HIGHWAY 217 SOUTHBOUND RAMPS



DATE OF COUNT: 04/15/99
DAY OF WEEK: THUR
TIME STARTED: 07:00
TIME ENDED: 09:00

TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

MP26

Peak Hour
07:30-08:30
TEV=2606

Traffic Smithy
(503)641-6333

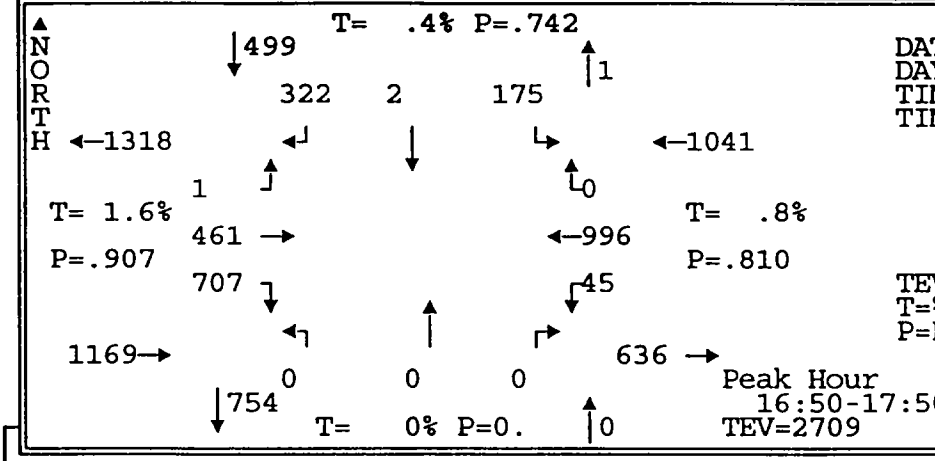
TIME PERIOD FROM - TO	EAST BOUND ↓	EAST BOUND →	EAST BOUND ↑	SOUTH BOUND ↵	SOUTH BOUND ↓	SOUTH BOUND ↳	NORTH BOUND ↰	NORTH BOUND ↑	NORTH BOUND ↱	WEST BOUND ↓	WEST BOUND ←	WEST BOUND ↑	ALL
ALL VEHICLES													
07:30-07:45	223	84	0	66	0	21	0	0	0	15	260	0	669
07:45-08:00	188	104	0	130	0	34	0	0	0	18	279	0	753
08:00-08:15	168	85	0	99	1	40	0	0	0	12	233	0	638
08:15-08:30	151	77	0	53	0	46	0	0	0	17	202	0	546
LIGHT TRUCKS (SINGLE UNIT 2 AXLES)													
07:30-07:45	2	1	0	0	0	0	0	0	0	0	2	0	5
07:45-08:00	3	1	0	3	0	0	0	0	0	0	2	0	9
08:00-08:15	6	2	0	0	0	0	0	0	0	0	3	0	11
08:15-08:30	2	1	0	0	0	0	0	0	0	0	2	0	5
MEDIUM TRUCKS (SINGLE UNIT > 2 AXLES)													
07:30-07:45	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45-08:00	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00-08:15	0	0	0	0	0	0	0	0	0	0	1	0	1
08:15-08:30	3	0	0	0	0	0	0	0	0	0	1	0	4
HEAVY TRUCKS (SEMI-TRACTOR TRAILER)													
07:30-07:45	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45-08:00	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00-08:15	0	0	0	1	0	0	0	0	0	0	0	0	1
08:15-08:30	0	0	0	0	0	0	0	0	0	0	0	0	0
BICYCLES													
07:30-07:45	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45-08:00	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00-08:15	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15-08:30	0	0	0	0	0	0	0	0	0	0	0	0	0

PEDESTRIANS	CROSSWALK USEAGE SOUTH	WEST	EAST	NORTH	ALL
07:30-07:45	0	0	0	0	0
07:45-08:00	0	0	0	0	0
08:00-08:15	0	0	0	0	0
08:15-08:30	0	0	0	0	0

Peak Hour by Movement													
PHF	.82	.84	0	.67	.25	.77	0	0	0	.86	.87	0	.865
% Trucks(all)	2.2	1.4	0	1.1	0	0	0	0	0	0	1.1	0	1.4
% Trucks(M+H)	.4	0	0	.3	0	0	0	0	0	0	.2	0	.2
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	
Hourly Totals													
07:00-08:00	729	394	0	250	0	108	0	0	0	54	899	0	2434
07:15-08:15	742	390	0	322	1	118	0	0	0	60	957	0	2590
07:30-08:30	730	350	0	348	1	141	0	0	0	62	974	0	2606
07:45-08:45	665	342	0	311	1	152	0	0	0	52	881	1	2405
08:00-09:00	593	289	0	220	1	163	0	0	0	40	775	1	2082

INTERSECTION TURN MOVEMENT COUNT SUMMARY REPORT
WALKER ROAD AT HIGHWAY 217 SOUTHBOUND RAMPS

19351



DATE OF COUNT: 04/13/99
DAY OF WEEK: TUE
TIME STARTED: 16:00
TIME ENDED: 18:00

TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

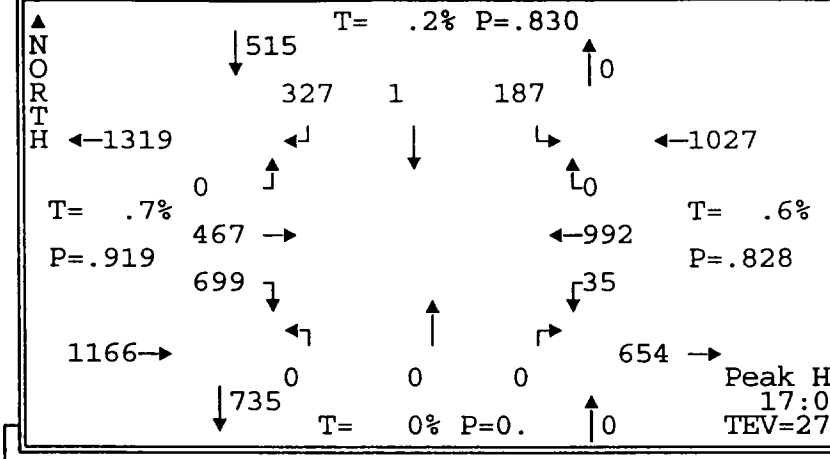
MP25

Peak Hour
16:50-17:50
TEV=2709

Traffic Smithy
(503) 641-6333

TIME PERIOD FROM - TO	EAST BOUND ↓	EAST BOUND →	EAST BOUND ↑	SOUTH BOUND ↲	SOUTH BOUND ↓	SOUTH BOUND ↳	NORTH BOUND ↰	NORTH BOUND ↑	NORTH BOUND ↱	WEST BOUND ↓	WEST BOUND ←	WEST BOUND ↑	ALL
16:00-16:05	39	39	0	15	0	10	0	0	0	7	53	0	163
16:05-16:10	63	40	0	19	0	11	0	0	0	4	60	0	197
16:10-16:15	60	55	0	12	0	14	0	0	0	1	78	0	220
16:15-16:20	56	41	0	20	0	11	0	0	0	1	78	0	207
16:20-16:25	48	31	0	15	0	5	0	0	0	3	69	0	171
16:25-16:30	48	33	0	22	0	13	0	0	0	6	65	0	187
16:30-16:35	48	33	0	20	0	12	0	0	0	3	65	0	181
16:35-16:40	46	28	0	23	0	18	0	0	0	3	71	0	189
16:40-16:45	64	35	0	20	0	14	0	0	0	6	84	0	223
16:45-16:50	56	28	0	23	0	16	0	0	0	3	77	0	203
16:50-16:55	49	38	0	20	0	19	0	0	0	8	69	0	203
16:55-17:00	62	39	1	21	1	7	0	0	0	5	65	0	201
17:00-17:05	45	49	0	18	1	10	0	0	0	5	87	0	215
17:05-17:10	36	33	0	22	0	10	0	0	0	4	85	0	190
17:10-17:15	58	39	0	26	0	12	0	0	0	3	98	0	236
17:15-17:20	63	37	0	21	0	29	0	0	0	0	113	0	263
17:20-17:25	58	29	0	23	0	13	0	0	0	4	103	0	230
17:25-17:30	62	41	0	36	0	17	0	0	0	3	87	0	246
17:30-17:35	60	49	0	37	0	13	0	0	0	4	80	0	243
17:35-17:40	66	44	0	41	0	24	0	0	0	5	61	0	241
17:40-17:45	69	29	0	32	0	8	0	0	0	2	64	0	204
17:45-17:50	79	34	0	25	0	13	0	0	0	2	84	0	237
17:50-17:55	55	35	0	24	0	22	0	0	0	1	50	0	187
17:55-18:00	48	48	0	22	0	16	0	0	0	2	80	0	216
Total Survey	1338	907	1	557	2	337	0	0	0	85	1826	0	5053
PHF	.83	.86	.25	.71	.25	.74	0	0	0	.63	.79	0	.916
% Trucks	2.2	.8	0	.5	0	.3	0	0	0	1.2	.8	0	1.1
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	
Peds	0	0	0	0	0	0	0	0	0	0	1	0	
Hourly Totals													
16:00-17:00	639	440	1	230	1	150	0	0	0	50	834	0	2345
16:15-17:15	616	427	1	250	2	147	0	0	0	50	913	0	2406
16:30-17:30	647	429	1	273	2	177	0	0	0	47	1004	0	2580
16:45-17:45	684	455	1	320	2	178	0	0	0	46	989	0	2675
17:00-18:00	699	467	0	327	1	187	0	0	0	35	992	0	2708

INTERSECTION TURN MOVEMENT COUNT PEAK HOUR REPORT
WALKER ROAD AT HIGHWAY 217 SOUTHBOUND RAMPS



DATE OF COUNT: 04/13/99
DAY OF WEEK: TUE
TIME STARTED: 16:00
TIME ENDED: 18:00

TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

MP25

Peak Hour
17:00-18:00
TEV=2708

Traffic Smithy
(503)641-6333

TIME PERIOD FROM - TO	EAST BOUND ↓	EAST BOUND →	EAST BOUND ↑	SOUTH BOUND ↵	SOUTH BOUND ↓	SOUTH BOUND ↳	NORTH BOUND ↰	NORTH BOUND ↑	NORTH BOUND ↱	WEST BOUND ↓	WEST BOUND ←	WEST BOUND ↑	ALL
ALL VEHICLES													
17:00-17:15	139	121	0	66	1	32	0	0	0	12	270	0	641
17:15-17:30	183	107	0	80	0	59	0	0	0	7	303	0	739
17:30-17:45	195	122	0	110	0	45	0	0	0	11	205	0	688
17:45-18:00	182	117	0	71	0	51	0	0	0	5	214	0	640
LIGHT TRUCKS (SINGLE UNIT 2 AXLES)													
17:00-17:15	1	2	0	0	0	0	0	0	0	0	3	0	6
17:15-17:30	3	0	0	1	0	0	0	0	0	0	1	0	5
17:30-17:45	1	0	0	0	0	0	0	0	0	0	0	0	1
17:45-18:00	1	0	0	0	0	0	0	0	0	0	0	0	1
MEDIUM TRUCKS (SINGLE UNIT > 2 AXLES)													
17:00-17:15	0	0	0	0	0	0	0	0	0	0	0	0	0
17:15-17:30	0	0	0	0	0	0	0	0	0	0	2	0	2
17:30-17:45	0	0	0	0	0	0	0	0	0	0	0	0	0
17:45-18:00	0	0	0	0	0	0	0	0	0	0	0	0	0
HEAVY TRUCKS (SEMI-TRACTOR TRAILER)													
17:00-17:15	0	0	0	0	0	0	0	0	0	0	0	0	0
17:15-17:30	0	0	0	0	0	0	0	0	0	0	0	0	0
17:30-17:45	0	0	0	0	0	0	0	0	0	0	0	0	0
17:45-18:00	0	0	0	0	0	0	0	0	0	0	0	0	0
BICYCLES													
17:00-17:15	0	0	0	0	0	0	0	0	0	0	0	0	0
17:15-17:30	0	0	0	0	0	0	0	0	0	0	0	0	0
17:30-17:45	0	0	0	0	0	0	0	0	0	0	0	0	0
17:45-18:00	0	0	0	0	0	0	0	0	0	0	0	0	0

PEDESTRIANS	CROSSWALK USEAGE SOUTH	WEST	EAST	NORTH	ALL
17:00-17:15	0	0	0	0	0
17:15-17:30	0	0	0	0	0
17:30-17:45	0	0	0	1	1
17:45-18:00	0	0	0	0	0

Peak Hour by Movement													
PHF	.9	.96	0	.74	.25	.79	0	0	0	.73	.82	0	.916
% Trucks(all)	.9	.4	0	.3	0	0	0	0	0	0	.6	0	.6
% Trucks(M+H)	0	0	0	0	0	0	0	0	0	0	.2	0	.1
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	
Hourly Totals													
16:00-17:00	639	440	1	230	1	150	0	0	0	50	834	0	2345
16:15-17:15	616	427	1	250	2	147	0	0	0	50	913	0	2406
16:30-17:30	647	429	1	273	2	177	0	0	0	47	1004	0	2580
16:45-17:45	684	455	1	320	2	178	0	0	0	46	989	0	2675
17:00-18:00	699	467	0	327	1	187	0	0	0	35	992	0	2708

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D- Motor Vehicle Analysis

Appendix D
Motor Vehicle Alternatives Analysis

Circulation and Capacity Needs

The motor vehicle capacity and circulation needs in Beaverton were determined for existing and future conditions. The process used for analysis is outlined below, followed by the findings and recommendations of the analysis. The extent and nature of the street improvements for Beaverton are significant. This section outlines the type of street improvements that would be necessary as part of a long-range master plan. Phasing of implementation will be necessary since all of the improvements cannot be done at once. This will require prioritization of projects and periodic updating to reflect current needs. Most importantly, it should be understood that the improvements outlined in the following sections are a guide to managing growth in Beaverton, defining types of right-of-way and street needs that will be required as development occurs over the next 20 years.

Approach

Existing conditions were identified in Chapter 3. The future 2020 conditions were forecast as noted in the Chapter 4. This 2020 forecast includes the Commuter Rail and the highest level of transit service given regional funding constraints[1]. It assumes that Transportation Demand Management (TDM) will occur and that significant shifts to transit will occur. While numerous analysis scenarios were developed, the base 2020 conditions assumed a street network that included the RTP Priority System improvements and the improvements identified in the 2015 Beaverton TSP. This was done because the prior TSP and RTP both confirmed that this level of motor vehicle transportation investment would be necessary to minimally address the future 2020 needs of the Beaverton area. RTP Priority System motor vehicle projects within the Beaverton

[1] This system assumes the commuter rail and all the feeder bus system that supports it. Other westside bus service is provided also.

TSP Study area are shown in Figure D-1 and are listed in Table D-1. Beaverton 2015 TSP improvements are shown in Figures D-2 and D-3 and are listed in Table D-2 to D-3. Table D-4 lists the 2015 TSP projects that have been constructed or have received committed funding for design/construction since the 2015 TSP was adopted. Performance was evaluated using a three-tiered assessment of capacity and operations.

- Demand to capacity (D/C) ratios[2] were evaluated on roadway segments and conditions where the demand to capacity ratio exceeded 1.0 were studied for potential improvements (based on a 1-hour and 2-hour D/C ratio). Areas within a 2040 design type of Regional Center, Town Center, Main Street, or Station Communities were studied if the 1-hour D/C ratio exceeded 1.1 or the second hour exceeded 1.0.
- Intersection level data were developed for about 95 intersections in Beaverton (based upon staff input, for primarily arterial and collector intersections). While this is a broad sampling of intersections, it does not represent every intersection in the City. Therefore, there may be other locations that may require some mitigation. Alternative improvements were considered where D/C ratios exceeded 1.0 or Level of Service (LOS) was at F or worse. Mitigated levels of service were generally brought to the D/C ratio 1.0 or LOS of E/F range for the 20-year planning assessment.
- New roadway alignments were considered if connectivity was needed to reduce traffic volumes on congested roadways. The goal of new road alignments was to achieve a roadway that would carry a daily volume of at least 5,000 to 10,000 vehicles per day or would significantly reduce the volume on other congested roadway facilities. Additionally, new road connections/alignments were considered if they would reduce neighborhood traffic volumes by 2,000 to 4,000 vehicles per day.

[2] Demand to capacity ratio is similar to volume to capacity (V/C) ratio. The difference is that in the future demand is being estimated and therefore the term demand is utilized. For existing conditions, volume refers to the actual traffic on the roadway. While a demand to capacity ratio can exceed 1.0, a volume to capacity ratio would never exceed 1.0.

Table D-1
Beaverton Motor Vehicle System Improvements included in the RTP Priority System*

RTP #	Location	Improvement	Jurisdiction	Time-Line	Cost
1184	BH Highway/Scholls Ferry Road	Redesign the intersection to improve safety for all modes of travel.	ODOT/WACO	2006-2010	$13,000,000
6013	Hall: Scholls Ferry to Locust	Widen to 5 lanes. Includes sidewalk and bike lanes	ODOT	2006-2010	$4,700,000
6017	Taylors Ferry: Washington to Oleson	Construct a 3 lanes extension with sidewalks and bike lanes	WACO	2011-2020	$1,900,000
6025	Scholls Ferry: 217 to 125th	Implement system management strategies	WACO	2000-2005	$500,000
6052	Highway 217 Overcrossing: Nimbus to Mall Area	Construct a 2 lane crossing including sidewalks and bike lanes	Tigard	2011-2020	$25,000,000
6119	Murray/Scholls Town Center	Construct 2 lane Teal Road collector extension to Town Center Loop and Barrows, transit collectors from Murray to Town Center Loop, and new neighborhood route connections	WACO/Beaverton	2011-2020	$11,000,000
6121	Murray: Scholls Ferry to Barrows	Construct a 4 lane extension to Walnut at Barrows including sidewalks and bike lanes	Beaverton/Tigard/WACO	2000-2005	$7,120,000
6122	Davies Road: Scholls Ferry to Barrows	Construct a 3 lane extension to Barrows including sidewalks and bike lanes	Beaverton	2006-2010	$1,500,000
3000	ORE 217	Add capacity based on recommendations from the ORE 217 corridor study	ODOT	2011-2020	$70,000,000
3001	ORE 217: TV Hwy to US 26	Widen the northbound to 3 lanes with ramp improvements	ODOT	2006-2010	$21,000,000
3002	ORE 217 and US 26	Reconfigure the interchange with braided ramps	ODOT	2006-2010	$50,000,000
3006	US 26: Camelot Court to Sylvan	Add 3rd through lane and collector distributor system	ODOT	2000-2005	$22,000,000
3007	US 26: ORE 217 to Camelot Court	Widen eastbound to 3 lanes	ODOT	2006-2010	$12,000,000
3009	US 26: Murray to 185th	Widen freeway to 6 lanes with possible HOV lane	ODOT	2011-2020	$26,000,000
3019	Beaverton Connectivity	Complete several downtown street connections	Beaverton	2000-2005	$13,200,000
3020	Beaverton Connectivity	Complete several downtown street connections	Beaverton	2006-2010	$13,300,000
3022	Jenkins: Murray to 158th	Widen to 5 lanes including sidewalks and bike lanes	WACO	2006-2010	$1,870,000
3023	ORE 217: Allen to Walker	Interchange improvements	ODOT/WACO/Beaverton	2000-2005	$3,600,000
3025	TV Hwy: Cedar Hills to 10th	Add capacity based on recommendation from refinement planning	ODOT/WACO	2011-2020	$33,200,000
3031	Allen: ORE 217 to Murray	Widen to 5 lanes including sidewalks and bike lanes	Beaverton	2011-2020	$8,500,000
3032	Cedar Hills: Farmington to Walker	Widen to 5 lanes including sidewalks and bike lanes	Beaverton	2006-2010	$3,700,000
3033	125th: Brockman to Hall	Construct a 2 lane extension with turn lanes including sidewalks and bike lanes	Beaverton	2000-2005	$9,800,000
3034	Hall: Cedar Hills to Hocken	Construct a 3 lane extension with sidewalks and bike lanes	Beaverton	2000-2005	$4,600,000
3036	158th/Merlo: 170th to Walker	Widen to 5 lanes including sidewalks and bike lanes	WACO	2011-2020	$4,000,000
3038	Center: Hall to 113th	Widen to 3 lanes including sidewalks and bike lanes	Beaverton	2011-2020	$3,200,000
3060	TV Hwy: 117th to Hillsboro	Implement access management strategies	ODOT/WAC	2006-	$15,000,000

			O	2010	
3061	TV Hwy: 209th to ORE 217	Interconnect Traffic Signals	ODOT/WACO	2006-2010	$1,500,000
3063	Murray: TV Hwy to Allen	Interconnect Traffic Signals	WACO	2000-2005	$50,000
3069	Scholls Ferry: Hamilton to Garden Home	Widen to 3 lanes including sidewalks and bike lanes	WACO	2011-2020	$8,000,000
3076	Allen: ORE 217 to Western	Widen to 5 lanes including sidewalks and bike lanes	Beaverton	2011-2020	$1,000,000
3084	170th: Alexander to Merlo	Widen to 5 lanes including sidewalks and bike lanes	WACO	2011-2020	$8,000,000
3085	170th: Rigert to Blanton to Alexander	Widen to 3 lanes from Rigert to Blanton and 5 lanes from Blanton to Alexander including sidewalks and bike lanes	WACO	2000-2005	$26,700,000
3086	158th: Walker to Jenkins	Widen to 5 lanes including bike lanes	WACO	2011-2020	$450,000
3087	Millikan: TV Hwy to 141st	Widen to 5 lanes including sidewalks and bike lanes	Beaverton	2011-2020	$4,000,000
3088	Millikan: 141st to Hocken	Widen to 3 lanes including sidewalks and bike lanes	WACO	2011-2020	$3,400,000
3121	TV Hwy: Cedar Hills to Minter Bridge	Refinement Planning to identify phased strategy to implement a limited-access facility	ODOT	2000-2005	N/A
3141	170th/173rd: Baseline to Walker	Widen the street to 3 lanes including sidewalks and bike lanes	WACO	2006-2010	$5,500,000
3143	Walker: Cedar Hills to 158th	Widen to 5 lanes including sidewalks and bike lanes	WACO	2006-2010	$20,000,000
3144	Walker: 158th to Amberglen	Widen to 5 lanes including sidewalks and bike lanes	WACO	2006-2010	$10,000,000
3148	Walker: Cedar Hills to ORE 217	Widen to 3 lanes including sidewalks and bike lanes	WACO	2006-2010	$8,000,000
3175	Barnes: ORE 217 to 119th	Widen to 5 lanes including sidewalks and bike lanes	WACO	2006-2010	$6,200,000
3177	Cedar Hills/Barnes	Reconstruct intersection and approaches to add travel lanes, turn lanes, and traffic signal upgrades	WACO	2000-2005	$1,800,000
3181	Cornell: US 26 to 143rd	Widen to 5 lanes including sidewalks and bike lanes	WACO	2011-2020	$3,000,000
3183	Cornell: 143rd to Saltzman	Widen to 3 lanes including sidewalks and bike lanes	WACO	2000-2005	$4,600,000
3185	Barnes: Saltzman to 119th	Widen to 5 lanes including sidewalks and bike lanes	WACO	2000-2005	$5,300,000
3186	Murray: Science Park to Cornell	Widen to 5 lanes including sidewalks and bike lanes	WACO	2000-2005	$3,100,000
3191	Cornell	Modify intersections at Saltzman, Barnes, Murray, and Trail	WACO	2011-2020	$500,000
3204	Cornell: Bethany to 179th	Widen to 5 lanes including sidewalks and bike lanes	WACO	2006-2010	$4,000,000
3205	173rd/174th	Construct a new 2 lane undercrossing of US 26 from Cornell to Bronson including sidewalks and bike lanes	WACO	2011-2020	$14,800,000
3214	Farmington: 172nd to 185th	Widen to 5 lanes including sidewalks and bike lanes	WACO	2011-2020	$10,000,000
			TOTAL		**$529,590,000**

*This project list is based on the August 10th, 2000, *2000 Regional Transportation Plan*, and includes projects in the Financially Constrained and Priority Motor Vehicle System

Table D-2
Beaverton 2015 TSP Motor Vehicle Improvements not identified in the RTP Priority Scenario

Location	Description	Jurisdiction	Cost
Hocken at TV and Farmington	Widen Hocken to accommodate 2 additional lanes between TV and Farmington to allow turn lanes, Widen TV from 141st to Hocken to allow 3 through lanes and additional turn lanes	ODOT/Beaverton	$6,100,000
ORE 217: Walker/Cabot/Canyon Ramps	Braid ramps between Canyon and Walker/Cabot split diamond	ODOT	$20,800,000
Bany/Hart: 170th to 160th	Improve to 2-3 lanes including sidewalks and bike lanes	WACO	$1,000,000
170th: Merlo to Baseline	Widen to 3 lanes including sidewalks and bike lanes	WACO	$2,100,000
170th: Division to Blanton	Widen to 5 lanes including sidewalks and bike lanes	WACO	$2,500,000
Hyland Extension: Carr to Hart	Extend Roadway	Beaverton	$115,000
ORE 217: Denney/Allen	Collector/Distributor connection	ODOT	$8,600,000
Cedar Hills: Walker to US 26	Complete 5 lane roadway with access control including sidewalks and bike lanes	WACO	$2,100,000
143rd/Meadow: Science Park - Walker	Construct a new 2 lane road connections including a grade separation of US 26 including sidewalks and bike lanes	WACO	$16,000,000
Walker Road: Murray to ORE 217	Widen to 5 lanes including sidewalks and bike lanes	WACO	$26,500,000
Jenkins: Murray to Cedar Hills	Widen to 5 lanes including sidewalks and bike lanes	WACO	$3,800,000
Scholls Ferry: Hall to 125th	Widen to 7 lanes including sidewalks and bike lanes	WACO/ODOT	$15,760,000
Scholls Ferry: Teal to 175th	Widen to 5 lanes including sidewalks and bike lanes	WACO	$4,000,000
Beard/Nora: Murray to 170th	Improve to 2-3 lanes including sidewalks and bike lanes	WACO	$6,600,000
Weir: Murray to 175th	Improve to 3 lanes including sidewalks and bike lanes	Beaverton	$3,700,000
Hall north of Center	Extend new 5 lane roadway north of Center to connect with Jenkins at Cedar Hills including sidewalks and bike lanes	Beaverton	$11,000,000
Center: Cedar Hills to Hocken via Westgate	Extend public roadway with 3 lanes including sidewalks and bike lanes from Center to Westgate and from Westgate to Hocken	Beaverton	$1,500,000
141st: Tek to Farmington	Realign and extend 2/3 lane roadway including sidewalks and bike lanes	Beaverton	$2,800,000
Nimbus: Hall to Denney	Extend 2/3 lane roadway including sidewalks and bike lanes	Beaverton	$8,300,000
Local Streets	Add local and collector connectivity	Beaverton	$41,900,000
Traffic Signals	Addition of 50 traffic signals per plan	Beaverton/ WACO/ODOT	$12,500,000
Intersection Improvements	Listed in Table D-3	Beaverton/ WACO/ODOT	$60,325,000
		TOTAL	**$258,000,000**

Table D-3
2015 TSP Intersection Improvements

#	Location	Improvement	Cost
1	Kinnaman/Farmington	Widen Farmington to 5 lanes; add WB left turn lane; add NB/SB left turn lane; signal phasing modifications to NB/SB permitted/protected phasing	$1,250,000
2	Walker/173rd	Widen Walker Road to 5 lanes; add EB/WB right turn lanes; NB/SB double left turn lanes	$2,000,000
3	Baseline/170th	SB double left turn lanes; signal phasing modification of NB/SB to protected phasing; add WB right turn lane	$1,250,000
4	Merlo/170th	Signal phase change to permitted/protected for NB/SB approaches and to protected phasing for EB/WB approaches; add NB right turn lane; add NB, SB, and EB left turn lanes	$1,500,000
5	TV Highway/170th	Widen TV Highway to 7 lanes (3 through lanes each way); widen 170th to 5 lanes; add SB right turn lane; WB double left turn lanes	$1,000,000
6	Farmington/170th	Widen Farmington to 5 lanes; add NB left turn lane; add NB through lane and restripe SB for additional through lane (widen 170th to 5 lanes)	Cost included in roadway project
7	Hart-Bany/170th	Install traffic signal; add NB and SB left turn lanes	$1,250,000
8	Walker/167th	Install traffic signal; add NB and SB left turn lanes	$250,000
9	Cornell/158th	Add EB right turn lane	$500,000
10	Walker/158th	NB/SB double left turn lanes; add EB right turn lane; NB right turn lane; WB through lane (2 through lanes in each direction); signal phasing change to EB/WB permitted/protected phasing	$2,250,000
11	Jenkins/158th	Add NB right turn lane; add SB through lane and restripe SB approach; WB double left turn lanes; WB through lane (5 lanes on Jenkins)	$1,000,000
12	TV Highway/Millikan	Widen TV to 7 lanes; add SB and NB lane across intersection	$1,625,000
13	Hart/155th	Add WB left turn lane	$500,000
14	Jenkins/153rd	Widen Jenkins to 5 lanes (2 through lanes each way)	Cost included in roadway project
15	TV Highway/153rd	Widen TV Highway to 7 lanes (3 through lanes each way)	Cost included in roadway project
16	Farmington/149th	Widen Farmington to 5 lanes	Cost included in roadway project
17	Walker/Murray	Add double left turn lanes on all approaches; add right turn lanes on all approaches	$4,000,000
18	Murray/Jenkins	Add NB and SB right turn lanes; NB and SB double left turn lanes; widen Jenkins to 5 lanes	$2,000,000
19	TV Highway/Murray	Double left turn lanes on all approaches; add NB/SB through lane (3 through lanes each way) DCP; install median at TV/Railroad tracks/Farmington to restrict driveways to right in, right out	$1,500,000
20	Murray/Farmington	Double left turn lanes on all approaches; SB, EB, and WB right turn lanes	$2,500,000
21	Murray/6th	Install traffic signal; add EB and WB left turn lanes	$250,000
22	Murray/Allen	Widen Allen to 5 lanes to Murray (drop additional WB through lane after Murray); add SB right turn lane	$600,000
23	Murray/Hart	Signal phase change to permitted/protected phasing for all approaches	$125,000
24	Murray/Scholls Ferry	Restripe NB, SB, and EB approaches; signal phase change to protected phasing on all approaches	$125,000
25	Murray/Barrows/ Walnut	Install traffic signal; add EB left turn lane; restripe NB approach; construct SB approach left turn lane	$750,000
26	Scholls Ferry/Barrows (west)	Install traffic signal; restripe SB approach for separate left turn and right turn lanes	$250,000
27	Scholls Ferry/Davies	Install traffic signal; restripe WB approach; add NB right turn lane; add NB left turn lane	$250,000
28	Scholls Ferry/Barrows (east)	Close Barrows at Scholls Ferry	$150,000
29	TV Highway/Hocken	Add EB right turn lane; restripe SB approach; widen Hocken to 2 SB through lanes	$3,100,000
30	Farmington/Hocken	Add WB right turn lanes; SB double left turn lanes (Hocken carries 2 SB lanes from TV Highway)	$3,000,000

31	Cedar Hills/Walker	Double left turn lanes on all approaches; add EB right turn lane	$2,500,000
32	Cedar Hills/Jenkins	SB and EB double left turn lanes; add SB right turn lane; widen Jenkins to 5 lanes; WB right turn channel; signal modifications to EB/WB protected phasing	$1,750,000
33	Cedar Hills/Hall	Add NB right turn lane	$500,000
34	Cedar Hills/Westgate	Add NB left turn lane	$1,300,000
35	Canyon/Cedar Hills	Widen Canyon to 7 lanes on west leg; add NB left turn lane; add SB left turn lane; add SB right turn lane; add EB/WB left turn lane	$5,000,000
36	Farmington/Cedar Hills	SB double left turn lanes (construct SB right turn lane and restripe SB lanes as side-by-side left turn lanes)	$1,000,000
37	Hall/Westgate-Center	Realign intersection; signal modification to EB/WB protected/permitted phasing	$250,000
38	Canyon/Watson	Restripe SB approach (add a SB receiving lane)	$700,000
39	Farmington/Watson	Add SB through lane	$500,000
40	Farmington/Hall	Restripe NB approach (add NB receiving lane)	$500,000
41	Hall/Allen	Add EB and WB right turn lanes; NB and SB double left turn lanes	$1,700,000
42	Hall/Denney	NB/SB signal phasing change to permitted/protected	$150,000
43	Hall/Greenway	Signal phase change to permitted/protected phasing for EB and WB approaches, overalap NB right turn	$125,000
44	Hall/Nimbus	Signal phase change to protected/permitted phasing for NB and SB approaches	$125,000
45	Scholls Ferry/Hall	Add double left turn lanes on all approaches; add right turn lane on all approaches	$3,000,000
46	Brockman/125th	Signal phase change to protected/permitted phasing for all approaches; add WB left turn lane; restripe NB and EB approaches; construct SB left turn lane, right turn lane, and through lane	Cost included in roadway project
47	Scholls Ferry/125th	Widen Scholls Ferry Road to 7 lanes (3 through lanes each way); add SB right turn lane	$500,000
48	Scholls Ferry/Nimbus	Widen Scholls Ferry to 7 lanes (3 through lanes in each direction); add NB left turn lane; SB double left turn lanes	$1,000,000
49	Scholls Ferry/ORE 217 SB ramps	Channel EB right turn onto ramp and modify signal to allow free movement of EB right turns	$500,000
50	Scholls Ferry/Ore 217 NB on-ramp	Channel SB right turn onto ramp and modify signal to allow free movement of SB right turns; add WB through lane onto ramp	$500,000
51	Farmington/Lombard	Add NB right turn lane	$500,000
52	Canyon/Broadway	Add WB right turn lane; signal modification to NB/SB protected phasing	$200,000
53	Canyon/Fred Meyer	Add SB left turn lane; signal modification to NB/SB split phasing	$125,000
54	BH Highway/Griffith	Signal phasing modification to NB/SB protected/permitted phasing	$150,000
55	BH Highway/Western	Add EB right turn lane; add WB double left turn lanes; add NB through lane	$1,500,000
56	Allen/Western	Add EB left turn lane; EB/WB signal phasing change to permitted/protected phasing	$125,000
57	Allen/Scholls Ferry	Widen Allen to 5 lanes; restripe WB approach; signal phase change for all approaches to permitted/protected phasing	$125,000
58	Walker/ORE 217 SB	Bridge deck widening; EB double right turn lanes (add right turn lane); WB through lane	$750,000
59	Walker/ORE 217 NB	Add NB double left turn lanes	$250,000
60	Canyon/ORE 217 SB	Add SB left turn lane and restripe SB lanes	$500,000
61	BH Highway/ORE 217 SB	Add SB left turn lane	$500,000
62	BH Highway/ORE 217 NB	NB double left turn lanes	$600,000
63	Allen/ORE 217 SB	Add SB right turn lane (double right lanes); EB right turn lane (channel onto ramp; signal modification to allow EB right turn to go with SB left)	$2,000,000
64	Allen/ORE 217 NB	Add WB right turn lane; signal modifications to NB/SB split phasing	$500,000
65	Denney/ORE 217 SB	Install traffic signal	$250,000
66	Denney/ORE 217 NB	Install traffic signal	$250,000
67	Denney/Lombard	Install traffic signal and EB and WB left turn lanes	$1,125,000
			$64,025,000

Table D-4
Committed/Completed Beaverton 2015 TSP Motor Vehicle Improvements

Location	Description	Jurisdiction	Cost
Farmington: Murray to 172nd	Widen to 5 lanes including sidewalks and bike lanes	WACO	$15,200,000
Oak: 160th to 170th	Widen roadway including sidewalks and bike lanes	WACO	$1,600,000
US 26: ORE 217 to Murray	Widen to 6 lanes and add braided ramps	ODOT	$13,000,000
Jenkins: Cedar Hills to Murray	Widen to 3 lanes including sidewalks and bike lanes	WACO	$3,100,000
170th: Rigert to Alexander	Widen to 5 lanes including sidewalks and bike lanes	WACO	$8,000,000
Millikan: Hocken to Cedar Hills	Construct new 3 lane extension with sidewalks and bike lanes	Beaverton	$4,300,000
Hart: Murray to 165th	Widen to 3 lanes including sidewalks and bike lanes	Beaverton	$7,100,000
Lombard: Broadway to Farmington	Realign and add turn lanes including sidewalks	Beaverton	$1,600,000
Hall Boulevard at Scholls Ferry	Provide southbound right turn lane	ODOT	$250,000
Hall: 12th St to 500 feet south of Allen	Retrofit to include bike lanes; intersection turn lanes at Allen	Beaverton	$1,438,000
Farmington: Murray to Hocken	Widen to 5 lanes including turn lanes, sidewalks, and bike lanes	Beaverton	$9,300,000
		TOTAL	**$64,888,000**

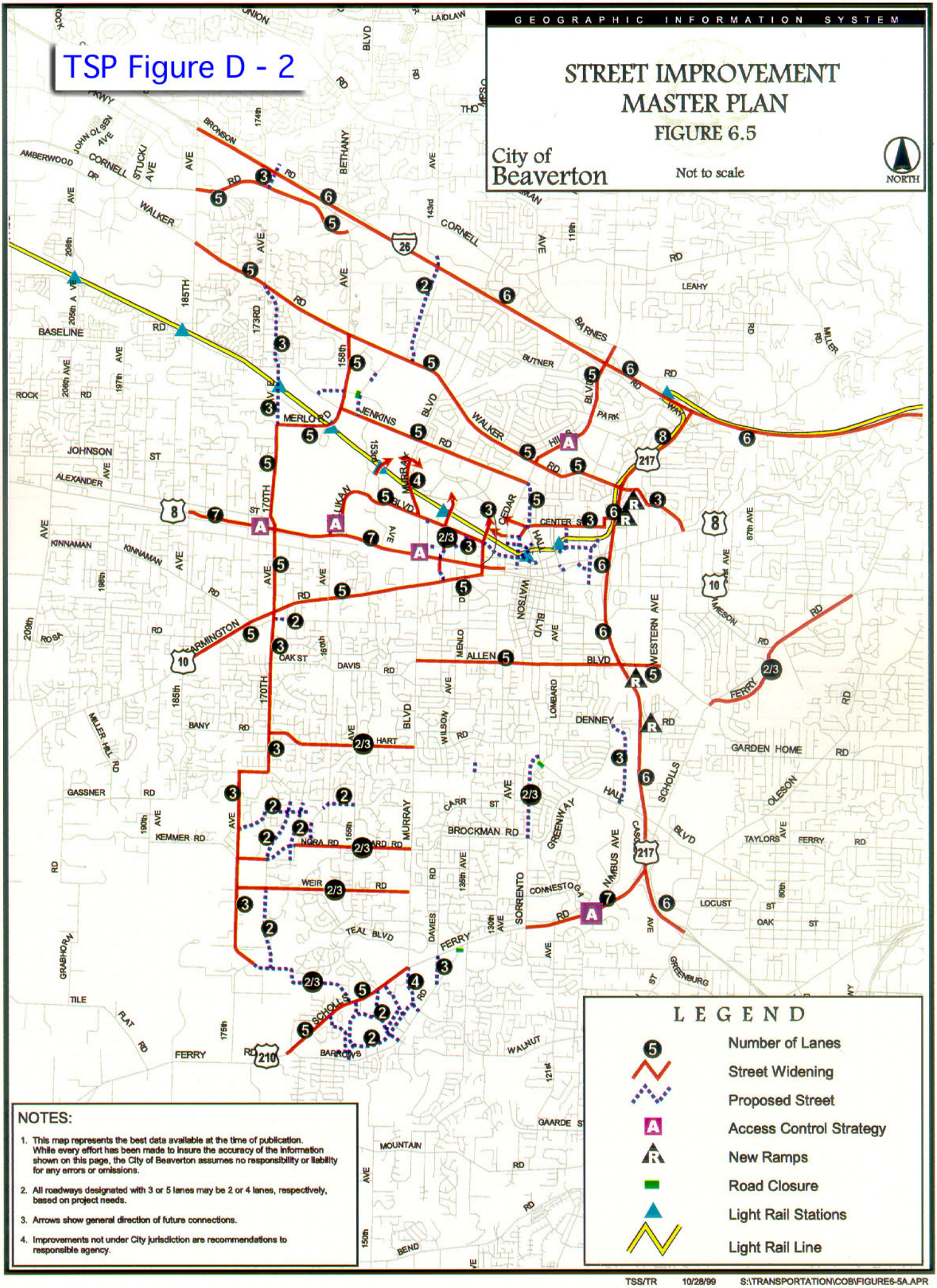
DKS Associates

City of Beaverton
Transportation System Plan



Figure D-1
2020 PRIORITY SYSTEM
REGIONAL TRANSPORTATION PLAN
MOTOR VEHICLE PROJECTS
- Draft -

TSP Figure D - 2



TSP Figure D - 3



Assessment of Need

Based upon the evaluation of intersection level of service, 32 of the study intersections would operate at or worse than D/C ratio 1.0 or Level of Service (LOS) E in the 2020 evening peak hour with no improvements beyond the RTP Priority System or 2015 Beaverton TSP improvements. Intersection operation for the existing and base 2020 scenarios are shown in Table D-5. The impact of future growth would be severe without significant investment in transportation improvements. Corridors would become unmanageably congested, resulting in travel speeds below 5 MPH over long stretches of road. Poor performance on arterials and collectors would result in substantial impacts (added through traffic) to other collectors and neighborhood routes. The greatest problem areas can be grouped into the following areas:

- **Lack of east-west capacity.** Three of the key east-west routes (TV Highway, Walker, Cornell and Farmington) all experience significant congestion problems if improvements are not made.
- **Lack of connectivity.** Areas near ORE 217 between Walker and Hall are the best examples, where all north-south movements must use local streets or divert to neighboring arterials.
- **Lack of intersection turning capacity.** Many intersections experience congested conditions, not the need for through capacity, but the need for additional right or left turning capacity.

Figure D-4 shows the major alternatives that were modeled and analyzed for the 2020 TSP Update. These alternatives are improvements that were not assumed in the base 2020 network (which includes the RTP Priority Scenario improvements).

Table D-5
Existing and 2020 Base Intersection Operation (PM Peak Hour)

Study Intersections Along Scholls Ferry Road

Intersection	Existing (2000)			Forecasted Priority Base (2020)		
	Level of Service	Average Delay	Demand/ Capacity	Level of Service	Average Delay	Demand/ Capacity
Murray/Scholls Ferry	C	32.0	0.70	D	54.2	0.97
Scholls Ferry/121st	D	40.4	0.96	D	37.3	0.93
Scholls Ferry/125th	D	41.6	0.92	E	63.3	1.05
Scholls Ferry/135th	B	18.4	0.70	B	13.4	0.66
Scholls Ferry/Allen	E	64.5	0.98	D	50.2	0.95
Scholls Ferry/Barrows	B	17.3	0.69	Road Closure		
Scholls Ferry/Cascade	C	23.8	0.76	C	32.9	0.93
Scholls Ferry/Conestoga	B	10.3	0.72	B	12.7	0.78
Scholls Ferry/Davies	C/F			B	18.2	0.70
Scholls Ferry/Denney	C	24.6	0.75	C	24.7	0.77

Intersection	Existing (2000) Level of Service	Average Delay	Demand/ Capacity	Forecasted Priority Base (2020) Level of Service	Average Delay	Demand/ Capacity
Scholls Ferry/Hall	E	65.9	0.99	D	40.9	0.75
Scholls Ferry/Nimbus	D	53.6	0.99	E	65.4	1.07
Scholls Ferry/Laurelwood	B/F			B/F		
Scholls Ferry/ORE 217 northbound off ramp	C	22.2	0.71	B	19.6	0.64
Scholls Ferry/ORE 217 northbound on ramp	C	30.3	0.78	F	>100.0	1.43
Scholls Ferry/ORE 217 southbound ramp	C	31.6	0.76	C	32.3	0.74

Study Intersections Along TV Highway/Canyon Road

Intersection	Existing (2000) Level of Service	Average Delay	Demand/ Capacity	Forecasted Priority Base (2020) Level of Service	Average Delay	Demand / Capacity
170th/TV Hwy	E	63.1	1.00	F	89.3	1.15
160th/TV Hwy	D	49.6	0.97	E	73.8	1.14
Canyon/117th	C	22.9	0.66	C	25.9	0.76
Canyon/87th	B	18.7	0.68	C	25.0	0.85
Canyon/Cedar Hills	C	34.1	0.85	D	37.9	0.95
Canyon/Hall	C	22.9	0.80	C	25.3	0.84
Canyon/Watson	B	16.8	0.68	C	22.7	0.84
Canyon/Lombard	C	21.2	0.66	D	44.7	0.95
Canyon/Hocken	D	38.3	0.90	D	49.5	1.03
Canyon/ORE 217 northbound ramp	C	24.9	0.66	C	28.5	0.81
Canyon/ORE 217 southbound ramp	C	24.3	0.67	C	28.4	0.84
TV Hwy/Murray	E	65.1	1.00	F	>100.0	1.10

Study Intersections Along Farmington Road/Beaverton-Hillsdale Highway

Intersection	Existing (2000) Level of Service	Average Delay	Demand/ Capacity	Forecasted Priority Base (2020) Level of Service	Average Delay	Demand / Capacity
170th/Farmington	C	26.1	0.60	F	88.3	1.14
BH Hwy/Griffith	C	31.0	0.81	C	30.8	0.76
BH Hwy/Laurelwood	C	26.2	0.80	E	66.7	1.09
BH Hwy/Western	C	33.7	0.87	C	29.4	0.72
Farmington/Cedar Hills	C	27.2	0.90	D	53.2	1.08
Farmington/Hall	C	25.4	0.85	C	28.7	0.90
Farmington/Hocken	C	22.6	0.84	C	22.4	0.74

Intersection	Existing (2000) Level of Service	Average Delay	Demand/ Capacity	Forecasted Priority Base (2020) Level of Service	Average Delay	Demand / Capacity
Farmington/Lombard	C	30.7	0.78	D	51.6	0.97
Farmington/ORE 217 northbound ramp	C	34.9	0.94	C	28.4	0.80
Farmington/ORE 217 southbound ramp	C	25.6	0.73	C	33.5	0.89
Farmington/Watson	C	24.2	0.77	C	23.4	0.85
Murray/Farmington	F	89.4	1.00	F	>100.0	1.16

Remaining Study Intersections

Intersection	Existing (2000) Level of Service	Average Delay	Demand/ Capacity	Forecasted Priority Base (2020) Level of Service	Average Delay	Demand / Capacity
158th/Blueridge	C	26.3	0.71	D	40.7	0.99
158th/Cornell	C	27.1	0.78	D	39.2	0.97
158th/Jay	C	26.4	0.60	C	32.9	0.92
158th/Jenkins	D	38.2	0.86	E	78.6	1.10
158th/Walker	E	61.3	1.00	E	58.9	1.01
170th/Baseline	C	21.2	0.58	D	43.5	0.95
170th/Oak	A/F			B	12.6	0.75
170th/Merlo	C	22.4	0.63	C	27.8	0.72
170th/Hart/Bany	C/F/C/F			C	33.6	0.71
173rd/Walker	E	63.4	0.98	D	36.0	0.86
Allen/ORE 217 northbound ramp	C	25.5	0.81	C	32.4	0.90
Allen/ORE 217 southbound ramp	C	34.2	0.88	C	35.0	0.90
Allen/Western	C	28.7	0.73	D	37.2	0.92
Cedar Hills/Barnes	E	68.8	1.00	F	>100.0	1.22
Cedar Hills/Butner	C	34.7	0.83	D	40.2	0.95
Cedar Hills/Hall	C	30.9	0.74	D	35.5	0.90
Cedar Hills/Jenkins	D	40.0	0.88	D	41.8	0.92
Cedar Hills/US 26 eastbound ramps	C/F			C	29.5	0.90
Cedar Hills/US 26 westbound ramps	B	12.8	0.63	C	29.9	0.97
Cedar Hills/Walker	E	58.2	1.00	F	>100.0	1.34
Cornell/143rd	C	25.5	0.80	E	55.3	0.90
Cornell/173rd	D	43.5	0.93	F	>100.0	1.24
Cornell/Barnes/Saltzman	E	57.3	0.94	F	>100.0	1.42
Cornell/Bethany	C	30.4	0.76	E	54.3	1.02
Denney/ORE 217	B/F			D	37.0	0.85

Intersection	Existing (2000) Level of Service	Average Delay	Demand/ Capacity	Forecasted Priority Base (2020) Level of Service	Average Delay	Demand / Capacity
northbound ramp						
Denney/ORE 217 southbound ramp	A/F			D	42.7	0.96
Garden Home/84th	A/D			A/D		
Garden Home/88th	A/C			A/C		
Greenway/125th	B	17.5	0.52	D	36.5	0.77
Hall/Allen	D	44.4	0.91	D	48.6	0.97
Hall/Cascade/ORE 217 southbound ramp	D	51.3	0.96	E	76.0	1.11
Hall/Center	C	23.8	0.48	C	25.7	0.68
Hall/Denney	C	32.4	0.85	E	57.9	1.02
Hall/Greenway	E	61.9	1.00	D	49.9	1.01
Hall/Nimbus	C	34.3	0.84	D	43.9	0.95
Hart/155th	B	18.2	0.77	B	15.8	0.52
Murray/6th	C/F			C	34.2	0.98
Murray/Allen	D	51.0	0.95	F	>100.0	1.27
Murray/Brockman/Beard	C	31.4	0.74	F	98.7	1.19
Murray/Cornell	E	62.3	0.98	F	>100.0	1.39
Murray/Hart	D	37.2	0.86	D	52.6	1.01
Murray/Jenkins	D	44.5	0.89	E	75.4	1.15
Murray/US 26 eastbound ramps	B	15.2	0.55	B	14.6	0.68
Murray/US 26 westbound ramps	C	28.1	0.79	E	65.1	1.10
Murray/Walker	D	54.2	0.98	E	60.9	1.06
Oleson/Garden Home	D	42.8	0.95	D	49.7	1.00
Oleson/Vermont	C	25.1	0.76	C	25.4	0.78
US 26 eastbound ramp/Bethany	C	22.2	0.66	D	53.8	1.01
US 26 eastbound ramp/Cornell	B	17.1	0.66	C	23.5	0.86
US 26 westbound ramp/Bethany	D	44.1	0.95	F	85.9	1.19
US 26 westbound ramp/Cornell	C	28.4	0.78	D	53.2	1.01
Walker/ORE 217 northbound ramp	C	21.1	0.68	C	24.1	0.76
Walker/ORE 217 southbound ramp	B	19.4	0.84	B	15.9	0.64

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City of Beaverton Transportation System Plan

- Study Area Boundary
- A1 - Murray Overcrossing
- A2 - TV Hwy. 7-Lanes
- B1 - 143rd Extension
- B2 - Cornell 5-Lanes
- B3 - 143rd Overcrossing

LEGEND

- C1 - Western-Walker Extension
- C2 - Denney-Allen
- C3 - Nimbus Extension
- D1 - Jenkins Extension
- D2 - Hall Extension
- D3 - Downtown Connectivity
- D4 - Fairfield-Terman
- E - Bethany from Bronson to US-26
- F1 - Scholls Ferry Overcrossing Cascade
- F2 - Scholls Ferry 7-Lanes
- H - 170th/173rd Couplet
- J - Walker 5-Lanes
- K - 217 Frontage Rd.
- L1 - Murrary Extension
- L2 - Davies Extension

NOT TO SCALE

Figure D-4
2020 MAJOR ROAD IMPROVEMENT ALTERNATIVES CONSIDERED
- Draft -

Recommended Improvement Plan

To address these deficiencies, a series of alternatives and strategies were considered. The range of strategies includes:

- **Do nothing.** This would result in severe impacts to circulation in Beaverton with delays that would not be tolerable. Extreme land use controls would be required to protect livability.
- **Assume that alternative modes can serve excess demand.** The TSP analysis assumed that these would be developed to their optimal levels to achieve mode-split targets. The order of magnitude of trips to be served by 2020 goes well beyond the capacity of the alternative mode system by themselves, even at their optimal levels. The estimated growth in PM peak period trips far exceeded the capacity of the alternative modes by themselves to support this demand.
- **Build all the road capacity necessary to achieve level of service D conditions at the intersections**. This strategy would result in nearly doubling the cost of the improvements identified in this plan. For example, many five lane cross sections would need to become seven lanes, substantial freeway widening beyond those currently foreseen and very large intersection configurations.
- **Pragmatically add capacity to all modes, developing a balanced system. Outline the long-term configuration of streets to allow development to best accommodate needs. Allow LOS E or D/C ratios of 1.0 at intersections and maintain system performance measures at a 2-hour D/C ratio of 1.0.** This is the strategy that was pursued. It involves significant system improvements, but attempts to balance performance between modes by not only adding additional capacity, but by also providing additional connectivity to serve multi-modal trips.

The mitigation measures for the street system are outlined in a graphic and a table. Figure D-5 outlines the street and intersection improvements, which are summarized in Table D-6. Figure D-6 shows the future streets where right of way is planned for more than two lanes. Each of the following problem areas noted previously have been addressed in the following manner:

East-West Capacity. Capacity improvements were considered in the following areas:

- **Cornell (B1-B3).** Capacity problems were identified from Saltzman to 143rd and further to the west at US 26. The majority of the problems are the result of a lack of route choices from the north of Cornell to the south of US 26 for both east-west and north-south circulation. Several improvement scenarios were tested that included variations and combinations of widening Cornell to 5 lanes, creating a new US 26 crossing from Science Park to Cornell Oaks or Walker, and widening Walker to 7 lanes. The new US 26 overcrossing was found to attract significant volume from Murray/Cornell as well as 158th/Cornell (in addition to providing additional multi-model connectivity), but it did not completely mitigate the capacity problems on Cornell from Murray to 143rd by itself. Possible combinations of alignments that would extend from Trail to Science Park, over US 26 to Greenbrier and the

powerlines right-of-way south to Walker were tested. The maximum benefit accrued when the alignment of this new roadway extended south to Walker (approximately 12,000 vehicles per day (vpd)). Connections that did not continue south of Greenbrier had substantially lower benefits to the surrounding street system (only attracting about 4,000 vpd). There were no feasible alignments for overcrossings of US 26 to the east of Murray that could be identified without extensive wetland, neighborhood and property impacts. Extending the 5-lane cross section on Cornell to the east of Murray (to Dale Avenue) addressed the capacity deficiency on Cornell from Murray - without the 143rd-Walker US 26 overcrossing. This project improvement is also identified in the RTP Preferred Scenario. Unfortunately, there would be no remaining capacity in this sub-area should further urban growth boundary expansions be considered than those identified in the 2020 Metro land use forecast. Further to the east, the Cedar Mill Town Center Plan identified Cornell as a 3-lane section from Murray to Saltzman Road. Forecasted volumes in the section exceed thresholds for link volumes and intersection capacity at Cornell/Saltzman. Other parallel routes and connections were considered in the Cedar Mill Town Center Plan, but none were approved or adopted. Walker was tested as a 7-lane facility from ORE 217 to 158th, but it did not attract significant volume from Cornell (less than 500 vpd). Therefore, Cornell will be identified in this TSP as needing five lanes to just east of Murray (Dale Avenue). Further study and refinement in this sub-area will be required in the next twenty years to address deficiencies at the Barnes-Saltzman/Cornell intersection and the need for additional east/west and north/south capacity beyond 2020 (including refining the limits of the 5-lane section of Cornell), which may include the need for the 143rd overcrossing corridor (from Trail to Walker). Based on input from the Traffic Commission, the 143rd extension from Cornell to Walker (including the US 26 overcrossing) should be identified for ROW reservation to ensure that as development occurs, the possibility remains that a multi-modal project could be considered in the future[3]. The Traffic Commission agreed that this area would need additional capacity and connectivity in the future.

- **TV Highway (A2).** TV Highway was identified in the RTP for capacity improvements. An expressway facility was identified in the RTP west of Hocken to Hillsboro. The prior TSP has recommended a 7-lane cross section and an access managed high-volume facility, consistent with the Washington County Transportation Plan from 1988. Both options would satisfy the need for east-west capacity. Further corridor study refinement should be conducted to determine the ultimate design (this study should outline some initial basic options, alignment and right-of-way issues as well as the access and frontage road needs). For this TSP, a placeholder project of seven lanes was assumed (consistent with prior adopted

[3] City of Beaverton Traffic Commission Meeting, May 17, 2001.

plans), which would be superceded by any future corridor study findings.

- **Walker Road (J1).** Walker Road between Cedar Hills and ORE 217 is identified for improvement to a 3-lane section in the RTP (5-lanes in the RTP Preferred Scenario). Forecasted volumes indicate that a 3-lane section would not be adequate to carry future 2020 traffic volumes. The two-hour peak period performance as well as the key intersection capacity would both be exceeded. Alternative modeled scenarios included downtown capacity improvements, ORE 217 frontage road improvements, and Cornell Road improvements in addition to five lanes on Walker Road. None of the alternatives would relieve the need for 5 lanes from ORE 217 to Cedar Hills Boulevard. Therefore, for this TSP a five lane Walker Road from ORE 217 west to Hillsboro is included in the plan (similar to the prior TSP and consistent with the RTP Preferred Scenario).

- **Downtown (D1-D4).** Improvements to east-west capacity in the downtown area were examined to attempt relief to the congested major routes serving Beaverton (TV Highway, Murray, Farmington, Jenkins, and Walker). The downtown connectivity improvements were included in the base improvement scenario (from the RTP Priority system and prior TSP) including the extension of Millikan eastward through the downtown via Henry Street, Rose Biggi and 120th. Each of these connections improve circulation in the downtown area for the future scenario. The existing Short Avenue was assumed to be replaced (closed) with the future opening of Rose Biggi between Canyon and Broadway, having no significant traffic impact. One of the most significant connections in the downtown area in the prior TSP was the extension of Hall to Jenkins. Cedar Hills north of Canyon would experience several segments above the 1.0 and 1.1 D/C ratio in 2020 and options for improvements in this area were evaluated. Different connection opportunities were tested both individually (Hall to Hocken, Hall to Jenkins, Dawson to Hocken, Fairfield to Hocken) and in groups. Key findings of the alternatives tested were:
    - Connecting Hall to Hocken without other parallel connections would overload the Hall section from Hocken to Cedar Hills and would create intersection capacity problems.
    - Connecting Hall to Jenkins and improving Jenkins to 5 lanes from Murray to Hall would attract significant volume, but would not allow traffic to disperse through several parallel roadways. This concentration would result in the need for several turn lane improvements.
    - Connecting Hall, Dawson, and Fairfield to Hocken would overload the Cedar Hills/Hall area. Combined, these connections/extensions would remove a significant volume of traffic from Farmington, TV Highway, and Murray. It would also create enough connectivity to carry significant volume though the downtown area without creating intersection capacity

problems.

- Connecting all streets in this sub-area (Hall to Jenkins, Hall to Hocken, Dawson to Hocken and Fairfield to Terman) would have significant benefit to surrounding arterials (reduce traffic on Murray by 4,000 to 6,000 vpd, TV Highway by 3,000 vpd, Walker by 2,000 vpd and Millikan by 2,000 vpd). Each of the connections when considered together would attract volumes that would be significant (Hall to Jenkins – 15,000 vpd, Hall to Hocken – 7,000 vpd, Dawson to Hocken and Fairfield to Terman – 4,000 to 6,000 vpd).

Based upon these findings, it is recommended that each of the connections be pursued in the future, progressively over time. Collectively the connections have significant mitigating effects on critical intersections that are over capacity in the future and cannot easily be mitigated by intersection widenings, grade separations or other new routes. The first connections might be the Hall extension to Hocken and the Dawson extension to Hocken since both require the least right-of-way or impacts. The Hall extension to Jenkins and the Fairfield extension to Terman should be planned in the next 20 years and implemented as performance standards in the area are exceeded. The value of the collective set of connections in this area are the far reaching benefits that they have as a group, reducing traffic at critical locations away from Cedar Hills Boulevard, such as TV Highway and Murray. Additionally, if all of the connections are made, the traffic volumes on Jenkins from Hall/Center to Cedar Hills and on Hall from Center to Cedar Hills would be reduced to a level that could allow for three travel lanes (allowing the potential to revise these streets to a boulevard style with the same paved width from curb to curb).

Lack of North-South Connectivity east of ORE 217. The issue of circulation on the east side of ORE 217 was raised at technical advisory and public meetings. This issue was studied to determine the benefits of improved connectivity in this area. Improvements were considered in three segments:

- **Walker to Western (C1).** A new road alignment was modeled that connected Walker Road at Canyon to Western Avenue at BH Highway. The new roadway would attract roughly 5,000 to 7,000 vpd but would not mitigate any capacity deficiencies in the surrounding area. Additionally, the net benefit to local/neighborhood through routes (connections between and including 91st to 107th) is a reduction of about 1,000 vpd (not more than 2,000 vehicles per day). Connections east of 91st and west of 107th would not experience significant volume reductions. The new connection would not divert traffic from areas with congestion problems. The arterial/collector intersections and links east of ORE 217 would not generally experience an improvement in performance and there were no deficiencies corrected by this new connector. Since the alignment would have significant

property, wetland and business impacts would likely outweigh the benefits of the traffic reductions, the existing connectivity between Canyon and BH was determined to adequately serve future traffic demand. An alternative alignment of alternative C1 was considered that would utilize the 103rd Avenue existing alignments to reach from Western to Walker. This connection would serve the greatest benefit as a bike system connection, as well as providing additional connectivity for motor vehicle traffic. Based on input from the Traffic Commission, the 103rd extension alignment is the recommended improvement project for the C1 alternative and should be constructed as development occurs along the proposed alignment[4]. The Traffic Commission agreed that this connection would be an important bicycle connection and that additional north/south motor vehicle connectivity would be a valuable result.

- **Allen to Denney (C2).** A new road alignment was modeled that connected Allen to Denney just east of ORE 217. The new roadway did not prove to carry/attract volumes above 5,000 vehicles per day or divert significant volumes from congested roadways. In addition, the placement of new intersections for this connection would be in the vicinity of interchanges on ORE 217 and not meet ODOT's prescribed access spacing standards (1,320 feet). Based upon these findings, this option was not pursued in the TSP.

- **Nimbus from Hall to Denney (C3).** A new road alignment was modeled that extended Nimbus from Hall north to Denney. This connection was included in the 2015 Beaverton TSP, but was not adopted in the RTP Priority System. The Nimbus extension shows the ability to attract/carry over 5,000 vehicles per day (approximately 7,000). In addition, it would divert traffic from Hall Boulevard near Cascade, Greenway, and the proposed 125th connection, which all experience capacity deficiencies in the PM peak and would reduce the potential for cut-through traffic in the Vose neighborhood. Therefore, this new road alignment was determined to have significant benefits to the transportation system and retained in the TSP. Wetland issues and alignment issues through private property will need to be addressed in further consideration of this alternative.

Intersection Capacity. One of the lower cost means of improving motor vehicle performance is increasing capacity at intersections through addition of turn lanes and signal phasing modifications. These improvements can many times be made in advance of a major street improvement to increase capacity until more expensive street modifications can be made (for example the intersection improvements at Murray/Jenkins preceded the Murray overcrossing widening by several years). There are few alternatives to these improvements that do not have greater impacts or are not as effective at mitigating capacity deficiencies. While intersection

[4] Based on Beaverton Traffic Commission special meeting, May 17, 2001.

improvements can be lower cost improvements that improve motor vehicle capacity, they can add to the width of intersections which impacts pedestrian crossing by increasing exposure and lengthening crossing times. A series of 35 intersection improvements were identified which primarily add turning movement capacity.

Other issues. Beyond these capacity and circulation issues noted above, public input provided direction to investigate several other issues as options to roadways already identified in the RTP or TSP for future improvements. Alternatives were analyzed at the following locations:

- **Bethany Boulevard (E).** The RTP identifies Bethany Boulevard to be improved to 5 lanes from Bronson to West Union Road. Analysis was done to determine the benefits of extending the 5-lane section south to the US 26 westbound ramp as well as all the way to Cornell (including a widening of the US 26 overcrossing). The results showed that the full improvement (5 lanes from Cornell to Bronson) would be needed to satisfy traffic volume demand. Capacity deficiencies on Bethany could not be mitigated without the extension of the 5-lane section of Bethany south to Cornell in 2020.
- **Scholls Ferry Road (F1-F2).** The RTP identifies Scholls Ferry Road to be improved with system management from ORE 217 to 125th. Alternative improvements were analyzed that included increasing the section to 7 lanes and constructing Scholls Ferry overcrossing of Cascade to Nimbus. Results indicated that these alternatives would not be necessary to further improve the transportation system in 2020 due to additional connections in the Washington Square area (proposed in the priority RTP). The proposed street performance standards could be met (marginally) in 2020 without widening to seven lanes. However, the corridor is on the fringe of acceptable operating performance and for future planning the Scholls Ferry corridor from Hall to Murray should be anticipated that at some time further widening to seven lanes will be necessary. Therefore, reservation of right of way to seven lanes should be considered, consistent with the 1988 Washington County Transportation Plan, prior TSP and preferred RTP. In particular, when the ORE 217 corridor study is conducted, the reconstruction of the Scholls Ferry Road overcrossing of ORE 217 should consider the potential to extend the grade separation beyond the railroad tracks southwest of ORE 217 to provide for access spacing consistent with standards in the Oregon Highway Plan (1,320 feet to the first signal at Nimbus).

- **170th/173rd (H).** The existing traffic count on 173rd to the south of Walker indicates that the daily traffic volume on 173rd is approximately 9,000 vehicles per day (vpd). Currently, 170th is a dead-end north of Baseline. The existing through movement between Baseline and Walker must travel on 173rd today. The existing peak hour level of service (LOS) at 173rd/Walker is LOS E, with a volume to capacity (V/C) ratio of 0.98. The existing peak hour operation at 170th/Baseline is LOS C with a V/C of 0.58.

Forecasted base 2020 volumes (RTP Priority Scenario without the 170th/173rd improvement project where 173rd is the only north-south route and 170th is a dead-end) indicate that approximately 13,000 vpd would use 173rd between Walker and Baseline. The corresponding LOS at 173rd/Walker is LOS D with a demand to capacity ratio (D/C) of 1.01 (due to Walker becoming 5 lanes in the priority scenario). The operation at 170th/Baseline would be LOS F with a D/C ratio of 1.06 due to heavy turning traffic to get to 173rd. Previous transportation plans in the area have identified the need for a corridor improvement to handle this traffic growth. Plans including the 1988 Washington County Transportation System Plan (TSP), the 2015 Beaverton TSP, and the 2000 Metro Regional Transportation Plan (RTP) have all identified a new road alignment that extends 170th north of Baseline to create a through route linking to 173rd south of Walker Road. As part of the MSTIP program, voters approved the funding for the 170th/173rd project as part of a larger list of specific projects. Additional options proposed at public forums for this 2020 Beaverton TSP update have been analyzed and information is summarized below.

TSP/RTP/MSTIP Project. This option would extend 170th north of Baseline as a 3 lane roadway and would curve to the west near Walker to connect to the existing 173rd/Walker intersection. The alignment of 173rd would be changed to intersect the new through roadway to the south of Walker. Land development along the planned 170th alignment has been coordinated with the improvement project, including preservation of right of way and restriction of residential fronting access. Intersection improvements associated with the planned projects and redirection of turning movements to through movements would improve the intersection operation at 173rd/Walker to LOS D with a D/C of 0.97 and improve 170th/Baseline to LOS D with a D/C of 0.91 (2020 PM peak hour). This through route would also provide the capacity to relieve congestion from corridors including 158th and 185th by keeping sub-area traffic in 170th/173rd rather than impacting other arterial corridors with out of direction travel. The forecasted volume on the proposed though roadway to the south of Walker and to the north of the 173rd connection is approximately 18,000 vpd (approximately 11,000 vpd near Baseline). The remaining piece of 173rd north of Baseline would become a neighborhood route with lower volume.

170th/173 couplet and 173rd extension. An alternative improvement option was proposed at the public forum that includes maintaining 173rd as a 2 lane road, extending 173rd south over the LRT line and connecting it at 170th/Merlo, and extending 170th directly north to Walker as a 2 lane road parallel to 173rd. The goal of this alternative was to spread the through traffic between the two roadways (170th and 173rd). Traffic forecasts indicate that the traffic would spread between the two roadways as expected, with forecasted volumes on 173rd at 9,000 vpd and on 170th

at 4,000 vpd. However, there were several impacts to the transportation system resulting from this alternative. First, creating a couplet road system from Baseline to Walker removes the single through route on the 170th/173rd corridor, which would force traffic to use Baseline, Walker, and the neighborhoods streets that connect the two (resulting in neighborhood impacts of 2,000 to 5,000 vpd). Second, the increase of turn volumes at the intersection of 173rd/Walker and 170th/Baseline would decrease their operation to a LOS of E with a D/C of 1.04 and a LOS of D with a D/C of 0.94, respectively. Third, the queue lengths on Baseline and 173rd were analyzed to determine storage capacity, as traffic would potentially back up towards the intersection of 173rd/Baseline from the LRT gated crossings. It was determined that with the forecasted 2020 volumes, queue lengths could exceed the available storage and potentially cross at the intersection of 173rd/Baseline, creating potential for a traffic gridlock condition. Fourth, the new rail crossing would need significant study, as required by ODOT, that proves it would be of significant benefit to the transportation system (as explained above, it would not). Finally, removing the through route on the 170th/173rd corridor would force traffic onto nearby congested corridors. This would decrease intersection operation to a D/C of larger than one at the study intersections including 158th/Walker, 158th/Cornell, 158th/Jenkins, Cornell/173rd, 158th/Blueridge, 158th/Jay, and 170th/TV Highway. Based upon these findings this option was rejected.

TSP/MSTIP/RTP project alternative alignment. An alternative alignment of the 170th extension from Baseline to Walker was proposed at a public forum. The proposed alignment would curve 170th to the west closer to Baseline (just south of Elmonica School). The goal of this alignment change would be to re-route through traffic away from Elmonica School changing the crossover point between 173rd and 170th further south. Operationally speaking, this alignment change results in similar intersection operations as the original 170th/173rd alignment since the 173rd/Walker and 170th/Baseline intersections are unchanged. The only issues that would arise are the right of way impacts along the new road alignment both in terms of the fronting properties and the impact of the reversing curves to make the 170th/173rd transition. The curve transition from 170th to 173rd, although it was originally proposed to pass through undeveloped land, would impact potentially 6 to12 homes with this option as the curve reverses just south of Elmonica Elementary School. Additionally, 173rd from Walker to the curve would have right of way impacts to widen to 3 lanes. There are also a few residential units that would have fronting access onto the new through route on 173rd with the proposed alignment alternative (generally there are none on the original alignment).

Based on the above finding, the planned 2015 TSP/MSTIP/RTP project is continued to be recommended for this 2020 Beaverton TSP update. Additionally, it is recommended that the alternative curve alignment and Elmonica School circulation

and access issues be reviewed in the project design process[5].

- **ORE 217 frontage road (K).** The 2015 TSP included a frontage roadway linking Walker to Canyon Road and Cabot/Center Street, combined with braiding of ORE 217 freeway ramps. An option would be simply to braid the Walker/Canyon freeway ramps to ORE 217. Based upon testing both options, in 2020 the benefits of the frontage road connection on adjacent streets were not as significant as the benefits of extra connectivity on the Hall/Jenkins/Cedar Hills area. The frontage road would reduce the volumes on Walker by less than 500 vpd and would decrease volumes on Canyon by less than 2,000 vpd. The extra connectivity on the Hall/Jenkins/Cedar Hills area, as described previously, would reduce traffic volume in the range of 2,000 to 4,000 vpd on several congested arterials, including TV Highway and Walker. Therefore, the TSP should include the braiding of ramps as part of the ORE 217 improvements between Canyon and Walker, but the frontage road improvements would not need to be part of the TSP (see appendix N for a photo-simulation of the interchange from the 2015 TSP, which included the frontage road).

- **Murray/Davies Extensions (L1-L2).** This area was analyzed to determine the impact of the planned improvements on the local street network of extending Murray Boulevard to Walnut at Barrows and extending Davies Road south to Barrows disconnecting Barrows at Scholls Ferry Road. Tests were run extending both Murray and Davies, extending each individually and looking at turn restrictions at Davies/Barrows/Scholls Ferry. The need for the Davies/Barrows realignment is two fold: 1) the existing spacing between 135th and Barrows on Scholls does not meet access spacing standards; 2) the short spacing has resulted in a significant number of collisions that can be mitigated by realigning Barrows with Davies. The realignment of Barrows with Davies would not significantly increase traffic on Davies as long as the extension of Murray to Walnut is in place. The majority of Barrows traffic is destined for Scholls Ferry Road and would not be benefited by using Davies based upon results from travel forecast testing. Building the Murray extension after the Davies extension shows that additional though traffic would be diverted onto Davies north of Scholls Ferry. Turn restrictions were modeled at Davies/Scholls Ferry that eliminated northbound cut-though traffic on Davies after the Murray extension was built and Scholls Ferry/Barrows was closed. These turn restrictions indicate that traffic from Davies would be diverted to adjoining neighboring local streets (Weir/Haystack/130th all would experience a significant increase in traffic compared to existing volume – about 1,000 vpd). Therefore, the extension of Murray Boulevard to Walnut should be complete before the Davies extension to Barrows is complete and the intersection of Davies/Scholls Ferry

[5] City of Beaverton Traffic Commission Meetings, May 17th and June 14th, 2001.

should be a non-turn-restricted intersection.

- **Murray/TV Hwy and Murray/Farmington (A1).** These intersections were further examined for possible improvements to handle the large north-south and east-west (as well as turning) volumes. In the prior TSP, the maximum numbers of turning lanes were assumed at these locations to achieve marginally acceptable operating performance. Improving each approach with turn lanes and signal controls would greatly improve the intersection operation and increase the intersection capacity, but it would not ultimately handle the projected 2020 volumes. Additionally, if TV Hwy were identified for improvement to an access-controlled facility by the corridor study, there would be a grade separation at Murray Boulevard. With the railroad crossing immediately to the south of TV Highway, a grade separation of Murray over TV Highway and the railroad tracks would be a future alternative for safety and operational performance. To solve both issues at once, raising Murray as four through lanes over TV Highway and Farmington would solve the intersection capacity problems at both intersections. Furthermore, the Murray overcrossing would eliminate the at-grade railroad crossing on Murray, which could benefit a potential future Commuter Rail extension to south Hillsboro. Turn volumes from TV Highway and Farmington to Murray would be handled by an interchange design to be identified in further review and design. Therefore, to mitigate the intersection capacities at these major intersections, turn lane improvements would be a 10-15 year solution (which would solve existing capacity problems) and the Murray overcrossing would be the ultimate 15-30 year improvement.

Table D-6

Beaverton 2020 TSP Preferred Additional Motor Vehicle Improvement Plan

Note: Location #'s listed as "_b" indicate that the improvement is in addition to an intersection improvement at that location from the 2015 TSP, intersections that were not included in the 2015 TSP improvement plan are numbered starting with 101

Location #	Location	Description	Cost
	Bethany Boulevard: Cornell to Bronson	Widen street to 5 lanes including sidewalks and bike lanes (this includes the widening of the US 26 overcrossing and intersection improvements).	$3,424,000
	Cornell: 143rd to Dale	Widen street to 5 lanes including sidewalks and bike lanes.	$5,197,500
	Cornell: Dale to Saltzman	Future capacity improvement based on additional study and coordination with Washington County	$8,620,000
	Walker: Cedar Hills to ORE 217	Widen street to 5 lanes including sidewalks and bike lane.	$8,970,000
	Murray: TV Hwy to Farmington	Construct an 4 lane overpass (Murray over TV Highway and Farmington), including sidewalks, bike lanes, and interchange connections	$28,517,500
	103rd: Western to Walker	Improve existing roadway and construct new connections and intersection alignments to provide connectivity from Walker to Western. This project includes sidewalks and bike lanes and should be built as development occurs.	$5,500,000
	120th Avenue: Henry to Canyon Road	Construct a 2 lane collector road, including sidewalks and bike lanes	$3,900,000
	Fairfield: Cedar Hills to Hocken	Construct a 2 lane roadway, including sidewalks and bike lanes	$5,500,000
	Rose Biggi: Canyon to Broadway	Construct a 2 lane collector road, including sidewalks and bike lanes	$1,200,000
101	Bethany/US 26 WB	add 2nd WB RT Lane, NB LT Lane	N/A
102	Bethany/Cornell	overlap SB RT	N/A
103	Cornell/173rd	add WB RT lane, 2nd NB LT lane, NB RT lane, SB RT lane	$2,200,000
6b	170th/Farmington	add EB RT lane, WB RT lane (signal modification)	$750,000
11b	158th/Jenkins	overlap NB RT	$125,000
104	Cornell/US 26 WB	add 2nd WB LT lane (structure work)	$1,000,000
105	Murray/Cornell	overlap NB RT, add 2nd NB LT lane (Cornell 5 lanes)	$1,000,000
106	Murray/US 26 WB	add 2nd WB RT Lane	$500,000
17b	Murray/Walker	increase cycle length by 20 seconds (to 120)	$125,000
19b	Murray/TV Highway	2 new signals, 2 RT Lanes, 2 Double LT Lanes	N/A
20b	Murray/Farmington	2 new signals, 2 RT Lanes, 2 Double LT Lanes	N/A
22b	Murray/Allen	add 2nd WB LT lane, 2nd WB RT lane, overlap WB RT lane (signal modification)	$1,250,000
107	Cedar Hills/Barnes	add 2nd NB lane and SB LT lane	$1,000,000
108	Cornell/Saltzman	add 2nd NB lane and SB LT lane (Cornell to 5 lanes)	$2,000,000
109	Canyon/Lombard	add EB RT lane	$500,000
65b	Denney/ORE 217 SB	add EB RT lane (structure work)	$1,100,000
110	BH Highway/Laurelwood	add SB LT lane (signal modification and ROW)	$2,000,000
111	Scholls Ferry/Laurelwood	install traffic signal, align with Nicol, ROW, 2 LT lane modifications	$1,750,000
112	Hall/ORE 217 SB/Cascade	add SB RT lane	$250,000
43b	Hall/Greenway	add EB RT lane	$500,000
42b	Hall/Denney	add 2nd WB LT lane	$500,000
36b	Farmington/Cedar Hills	add 2nd EB LT lane, ROW	$1,250,000
32b	Cedar Hills/Jenkins	Jenkins to 5 lanes, overlap WB RT	$125,000
31b	Cedar Hills/Walker	add 40 seconds cycle length to 140	$125,000
113	Murray/Brockman	add WB RT lane, SB RT lane, add 20 seconds cycle to 120 seconds, ROW	$100,000
47b	Scholls Ferry/125th	overlap SB RT	$125,000
50b	Scholls Ferry/ORE 217 NB on ramp	add 2nd NB LT lane and a 2nd WB LT lane	$1,000,000
		TOTAL	**$90,104,000**

DKS Associates

City of Beaverton Transportation System Plan

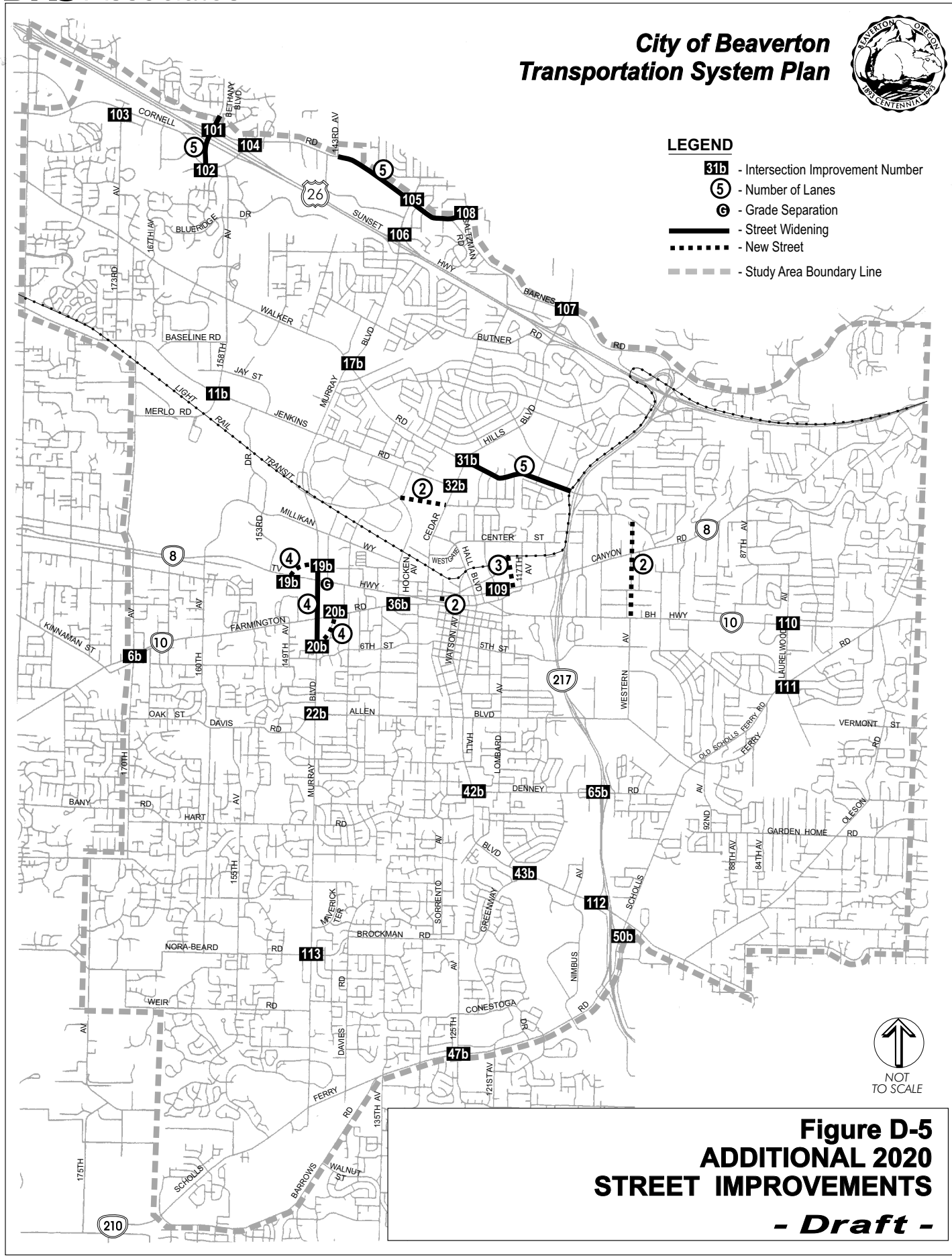


Figure D-5
ADDITIONAL 2020 STREET IMPROVEMENTS
- Draft -

DKS *Associates*

City of Beaverton
Transportation System Plan

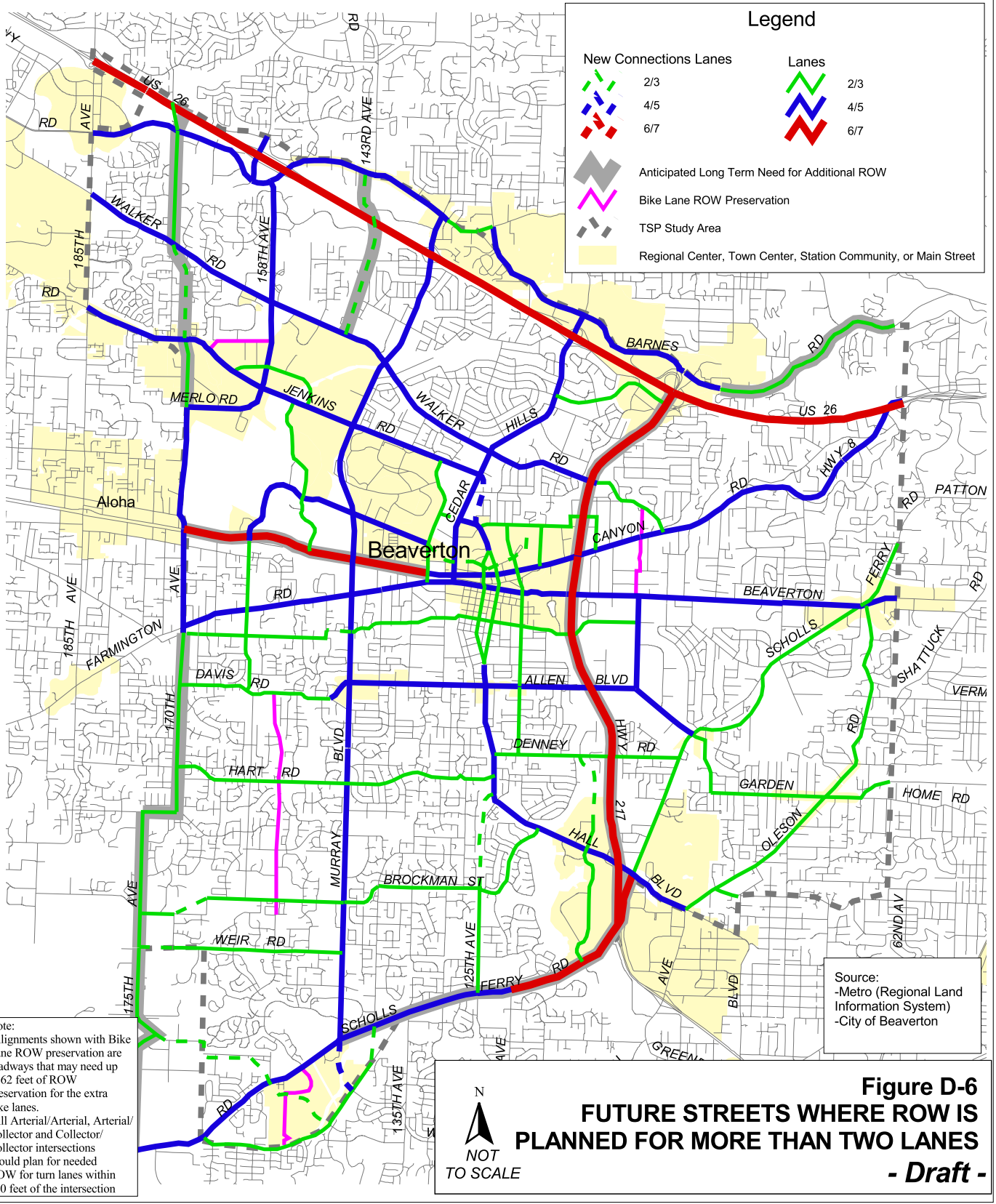


Figure D-6
FUTURE STREETS WHERE ROW IS PLANNED FOR MORE THAN TWO LANES
- Draft -

Results

The result of these improvements is significant. While a D/C ratio of nearly 1.0 and LOS E still exist for the most part, the 2020 traffic conditions can be mitigated to the point that mobility can be preserved in Beaverton and congestion is manageable. Table D-7 lists the intersection operation for the base 2020 and the TSP mitigated 2020 scenarios. Figure D-7 shows the forecasted 2020 PM peak hour volumes in Beaverton for the TSP mitigated scenario.

Table D-7
PM Peak Hour Intersection Level of Service
Study Intersections Along Scholls Ferry Road

Intersection	Base 2020			Mitigated 2020		
	Level of Service	Average Delay	Demand/ Capacity	Level of Service	Average Delay	Demand/ Capacity
Murray/Scholls Ferry	D	54.2	0.97	D	49.2	0.93
Scholls Ferry/121st	D	37.3	0.93	D	37.0	0.92
Scholls Ferry/125th	E	63.3	1.05	D	51.4	0.98
Scholls Ferry/135th	B	13.4	0.66	B	13.0	0.64
Scholls Ferry/Allen	D	50.2	0.95	D	52.3	0.96
Scholls Ferry/Barrows	Road Closure			Road Closure		
Scholls Ferry/Cascade	C	32.9	0.93	C	32.7	0.93
Scholls Ferry/Conestoga	B	12.7	0.78	B	12.5	0.77
Scholls Ferry/Davies	B	18.2	0.70	B	18.1	0.70
Scholls Ferry/Denney	C	24.7	0.77	C	24.6	0.77
Scholls Ferry/Hall	D	40.9	0.75	D	38.8	0.77
Scholls Ferry/Nimbus	E	65.4	1.07	D	41.8	0.92
Scholls Ferry/Laurelwood	B/F			A	9.0	0.62
Scholls Ferry/ORE 217 northbound off ramp	B	19.6	0.64	C	20.1	0.68
Scholls Ferry/ORE 217 northbound on ramp	F	>100.0	1.43	D	42.7	0.96
Scholls Ferry/ORE 217 southbound ramp	C	32.3	0.74	C	34.0	0.78

Study Intersections Along TV Highway/Canyon Road

Intersection	Base 2020			Mitigated 2020		
	Level of Service	Average Delay	Demand/ Capacity	Level of Service	Average Delay	Demand / Capacity
170th/TV Hwy	F	89.3	1.15	D	47.7	0.96
160th/TV Hwy	E	73.8	1.14	C	34.8	0.90
Canyon/117th	C	25.9	0.76	C	24.5	0.74
Canyon/87th	C	25.0	0.85	C	25.1	0.85
Canyon/Cedar Hills	D	37.9	0.95	D	54.5	0.99

Intersection	Base 2020 Level of Service	Base 2020 Average Delay	Base 2020 Demand/ Capacity	Mitigated 2020 Level of Service	Mitigated 2020 Average Delay	Mitigated 2020 Demand / Capacity
Canyon/Hall	C	25.3	0.84	C	26.7	0.85
Canyon/Watson	C	22.7	0.84	C	30.4	0.91
Canyon/Lombard	D	44.7	0.95	D	44.1	0.94
Canyon/Hocken	D	49.5	1.03	C	34.2	0.84
Canyon/ORE 217 northbound ramp	C	28.5	0.81	C	26.2	0.74
Canyon/ORE 217 southbound ramp	C	28.4	0.84	C	25.6	0.77
TV Hwy/Murray	F	>100.0	1.10	C	22.2	0.71

Study Intersections Along Farmington Road/Beaverton-Hillsdale Highway

Intersection	Base 2020 Level of Service	Base 2020 Average Delay	Base 2020 Demand/ Capacity	Mitigated 2020 Level of Service	Mitigated 2020 Average Delay	Mitigated 2020 Demand / Capacity
170th/Farmington	F	88.3	1.14	D	54.1	0.98
BH Hwy/Griffith	C	30.8	0.76	C	30.5	0.74
BH Hwy/Laurelwood	E	66.7	1.09	C	34.4	0.94
BH Hwy/Western	C	29.4	0.72	D	43.9	0.93
Farmington/Cedar Hills	D	53.2	1.08	C	21.1	0.72
Farmington/Hall	C	28.7	0.90	C	30.4	0.92
Farmington/Hocken	C	22.4	0.74	C	31.4	0.88
Farmington/Lombard	D	51.6	0.97	D	50.9	0.97
Farmington/ORE 217 northbound ramp	C	28.4	0.80	C	27.4	0.78
Farmington/ORE 217 southbound ramp	C	33.5	0.89	C	29.9	0.85
Farmington/Watson	C	23.4	0.85	C	27.6	0.88
Murray/Farmington	F	>100.0	1.16	C	30.1	0.77

Remaining Study Intersections

Intersection	Base 2020 Level of Service	Base 2020 Average Delay	Base 2020 Demand/ Capacity	Mitigated 2020 Level of Service	Mitigated 2020 Average Delay	Mitigated 2020 Demand / Capacity
158th/Blueridge	D	40.7	0.99	D	38.8	0.98
158th/Cornell	D	39.2	0.97	D	41.5	0.98
158th/Jay	C	32.9	0.92	D	44.1	0.99
158th/Jenkins	E	78.6	1.10	D	46.5	0.94
158th/Walker	E	58.9	1.01	D	52.4	0.98
170th/Baseline	D	43.5	0.95	D	53.3	0.99
170th/Oak	B	12.6	0.75	B	13.3	0.78
170th/Merlo	C	27.8	0.72	C	27.8	0.72

Intersection	Base 2020 Level of Service	Base 2020 Average Delay	Base 2020 Demand/ Capacity	Mitigated 2020 Level of Service	Mitigated 2020 Average Delay	Mitigated 2020 Demand / Capacity
170th/Hart/Bany	C	33.6	0.71	C	34.8	0.75
173rd/Walker	D	36.0	0.86	D	36.1	0.87
Allen/ORE 217 northbound ramp	C	32.4	0.90	D	37.2	0.95
Allen/ORE 217 southbound ramp	C	35.0	0.90	D	37.1	0.93
Allen/Western	D	37.2	0.92	D	47.2	0.98
Cedar Hills/Barnes	F	>100.0	1.22	E	59.2	0.96
Cedar Hills/Butner	D	40.2	0.95	D	41.7	0.97
Cedar Hills/Hall	D	35.5	0.90	D	42.6	0.90
Cedar Hills/Jenkins	D	41.8	0.92	D	48.6	0.92
Cedar Hills/US 26 eastbound ramps	C	29.5	0.90	C	24.9	0.85
Cedar Hills/US 26 westbound ramps	C	29.9	0.97	C	25.1	0.93
Cedar Hills/Walker	F	>100.0	1.34	E	53.9	0.98
Cornell/143rd	E	55.3	0.90	E	56.2	0.74
Cornell/173rd	F	>100.0	1.24	E	56.5	0.98
Cornell/Barnes/Saltzman	F	>100.0	1.42	E	63.3	0.97
Cornell/Bethany	E	54.3	1.02	D	38.6	0.91
Denney/ORE 217 northbound ramp	D	37.0	0.85	D	42.1	0.88
Denney/ORE 217 southbound ramp	D	42.7	0.96	D	40.1	0.94
Garden Home/84th	A/D			A/D		
Garden Home/88th	A/C			A/C		
Greenway/125th	D	36.5	0.77	D	38.9	0.81
Hall/Allen	D	48.6	0.97	D	46.3	0.95
Hall/Cascade/ORE 217 southbound ramp	E	76.0	1.11	D	41.0	0.88
Hall/Center	C	25.7	0.68	C	25.4	0.72
Hall/Denney	E	57.9	1.02	C	26.9	0.88
Hall/Greenway	D	49.9	1.01	D	35.6	0.97
Hall/Nimbus	D	43.9	0.95	C	31.5	0.83
Hart/155th	B	15.8	0.52	B	15.9	0.52
Murray/6th	C	34.2	0.98	C	28.8	0.90
Murray/Allen	F	>100.0	1.27	D	44.7	0.88
Murray/Brockman/Beard	F	98.7	1.19	D	48.6	0.95
Murray/Cornell	F	>100.0	1.39	E	56.3	0.98
Murray/Hart	D	52.6	1.01	D	40.4	0.98
Murray/Jenkins	E	75.4	1.15	D	38.8	0.89

Intersection	Base 2020 Level of Service	Base 2020 Average Delay	Base 2020 Demand/ Capacity	Mitigated 2020 Level of Service	Mitigated 2020 Average Delay	Mitigated 2020 Demand / Capacity
Murray/US 26 eastbound ramps	B	14.6	0.68	B	16.5	0.64
Murray/US 26 westbound ramps	E	65.1	1.10	C	30.3	0.87
Murray/Walker	E	60.9	1.06	D	49.4	0.96
Oleson/Garden Home	D	49.7	1.00	D	49.6	1.00
Oleson/Vermont	C	25.4	0.78	C	25.4	0.78
US 26 eastbound ramp/Bethany	D	53.8	1.01	C	31.9	0.86
US 26 eastbound ramp/Cornell	C	23.5	0.86	C	25.7	0.90
US 26 westbound ramp/Bethany	F	85.9	1.19	D	37.3	0.95
US 26 westbound ramp/Cornell	D	53.2	1.01	D	37.3	0.91
Walker/ORE 217 northbound ramp	C	24.1	0.76	C	27.4	0.83
Walker/ORE 217 southbound ramp	B	15.9	0.64	B	18.6	0.80

City of Beaverton
Transportation System Plan

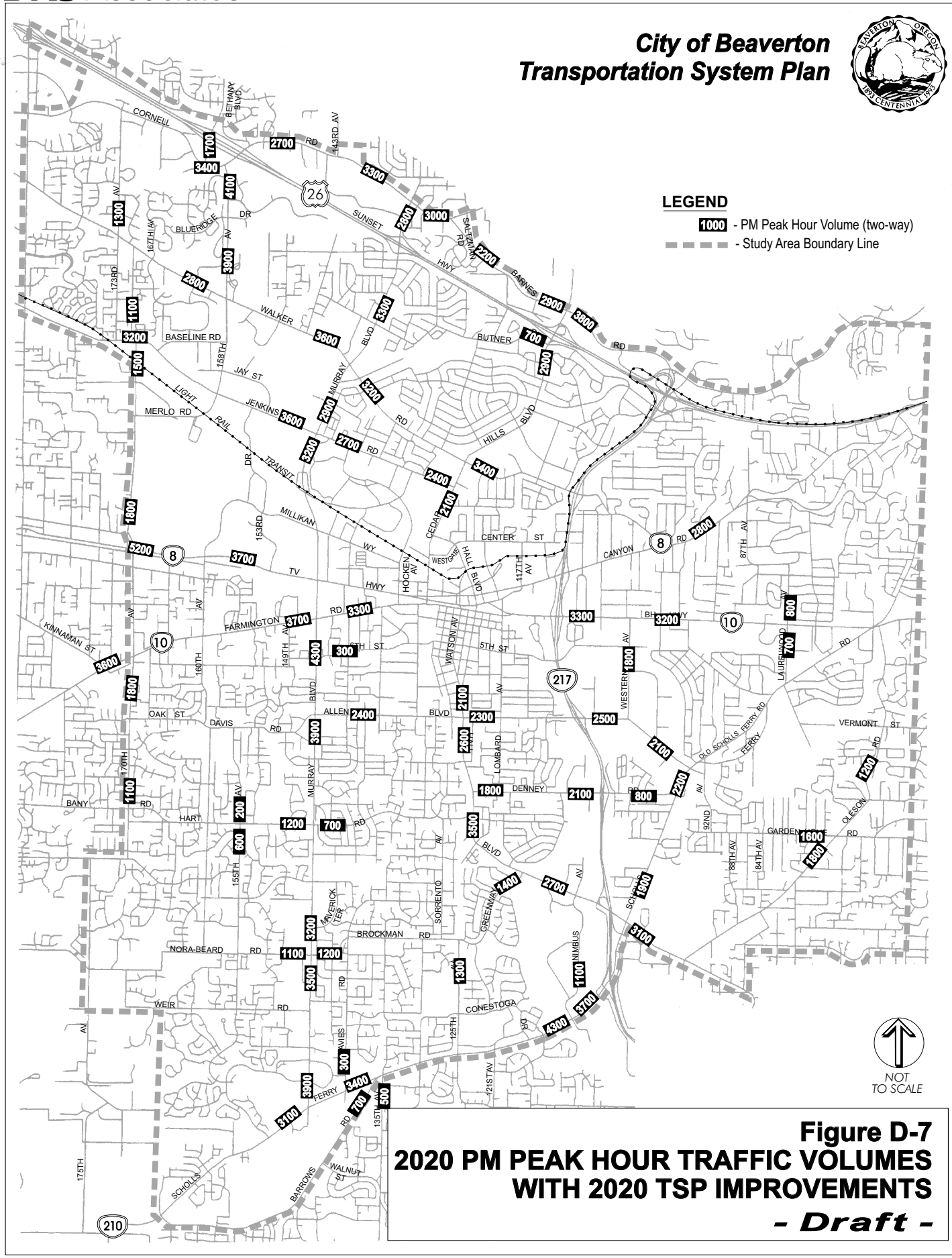


Figure D-7
2020 PM PEAK HOUR TRAFFIC VOLUMES WITH 2020 TSP IMPROVEMENTS
- Draft -

E- Local Connectivity Maps

GEOGRAPHIC INFORMATION SYSTEM

LOCAL CONNECTIVITY MAP

Legend

- ■ Potential Connection
- ▲ Required - Wash. Co. Street Connection (Source: Wash. Co. Ord. 552)
- ● Potential - Wash. Co. Street Connection (Source: Wash. Co. Ord. 552)
  (If practical. If not, a Required Accessway)
- ⬆ Potential Connection within Beaverton 2020 TSP Study Area
- 99 Street Stub Location Number

City of Beaverton

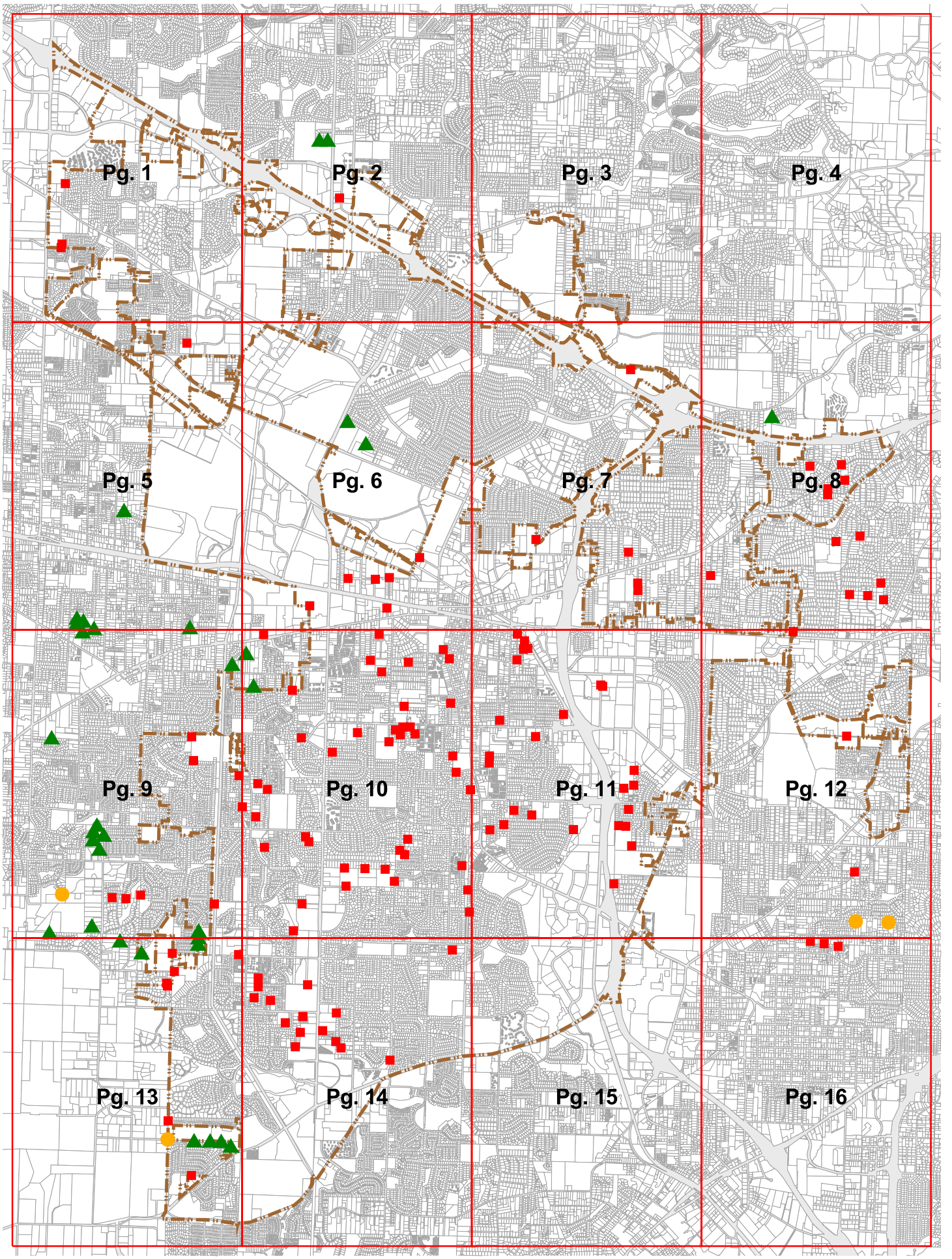
May, 2001

North

Notes:

This map represents the best data available at the time of publication. While every effort has been made to insure the accuracy of the information shown on this page, the City of Beaverton assumes no responsibility or liability for any errors or omissions.

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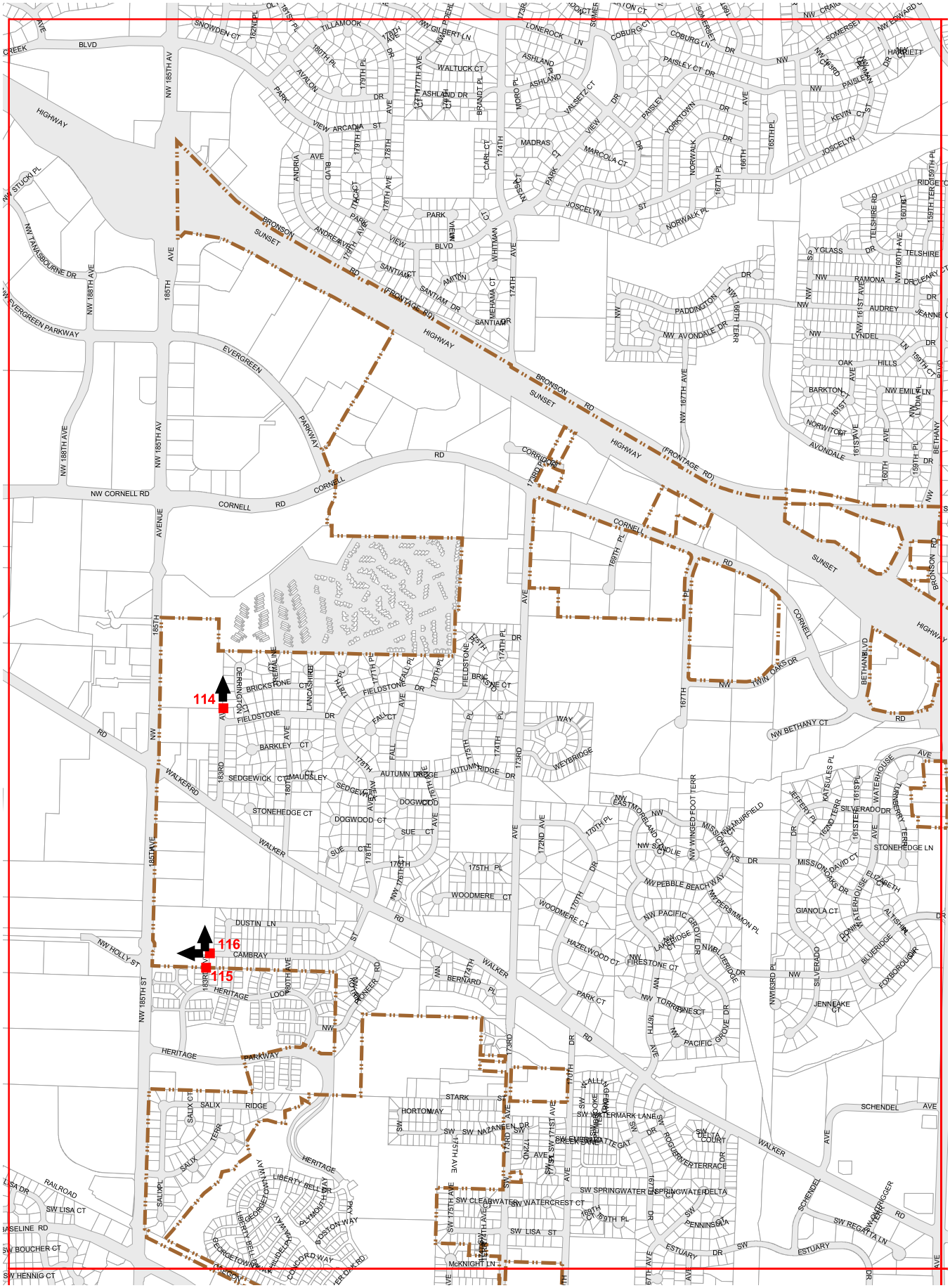

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Pg. 2
Pg. 3
Pg. 4
Pg. 5
Pg. 6
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Pg. 11
Pg. 12
Pg. 13
Pg. 14
Pg. 15
Pg. 16

Local Connectivity Datasheet
Potential Connection
P = Potenial or Definite Problems
M = Minimal Problems
A = Adopted

Location	Rating	Recommendation
1	P	Feasibility Constraints
2	M	Pursue Multi-modal
3	M	Pursue Multi-modal
5	P	Pursue Multi-modal
7	P	Pursue Non-auto
8	P	Pursue Multi-modal
9	P	Pursue Multi-modal
10	P	Pursue Multi-modal
11	P	Pursue Multi-modal
12	P	Pursue Multi-modal
13	P	Pursue Multi-modal
14	P	Pursue Multi-modal
17	P	Feasibility Constraints
18	P	Consider Non-auto
19	P	Feasibility Constraints
20	P	Feasibility Constraints
21	P	Pursue Non-auto
22	P	Feasibility Constraints
23	P	Consider Multi-modal
24	P	Consider Multi-modal
25	P	Consider Multi-modal
26	P	Feasibility Constraints
27	P	Pursue Multi-modal
29	P	Consider Multi-modal
31	P	Consider Multi-modal
33	P	Consider Multi-modal
34	P	Pursue Multi-modal
35	P	Feasibility Constraints
36	P	Consider Non-auto
37	P	Consider Non-auto
38	M	Pursue Multi-modal
39	M	Consider Multi-modal
40	M	Feasibility Constraints
41	P	Pursue Non-auto
42	P	Pursue Multi-modal
43	P	Pursue Multi-modal
44	P	Pursue Multi-modal
45	P	Feasibility Constraints
46	P	Consider Multi-modal
47	P	Consider Non-auto
48	P	Feasibility Constraints
49	P	Pursue Multi-modal
50	M	Consider Future Cul-de-sac, Pursue Non-auto
51	P	Pursue Non-auto
52	P	Feasibility Constraints
54	P	Pursue Non-auto

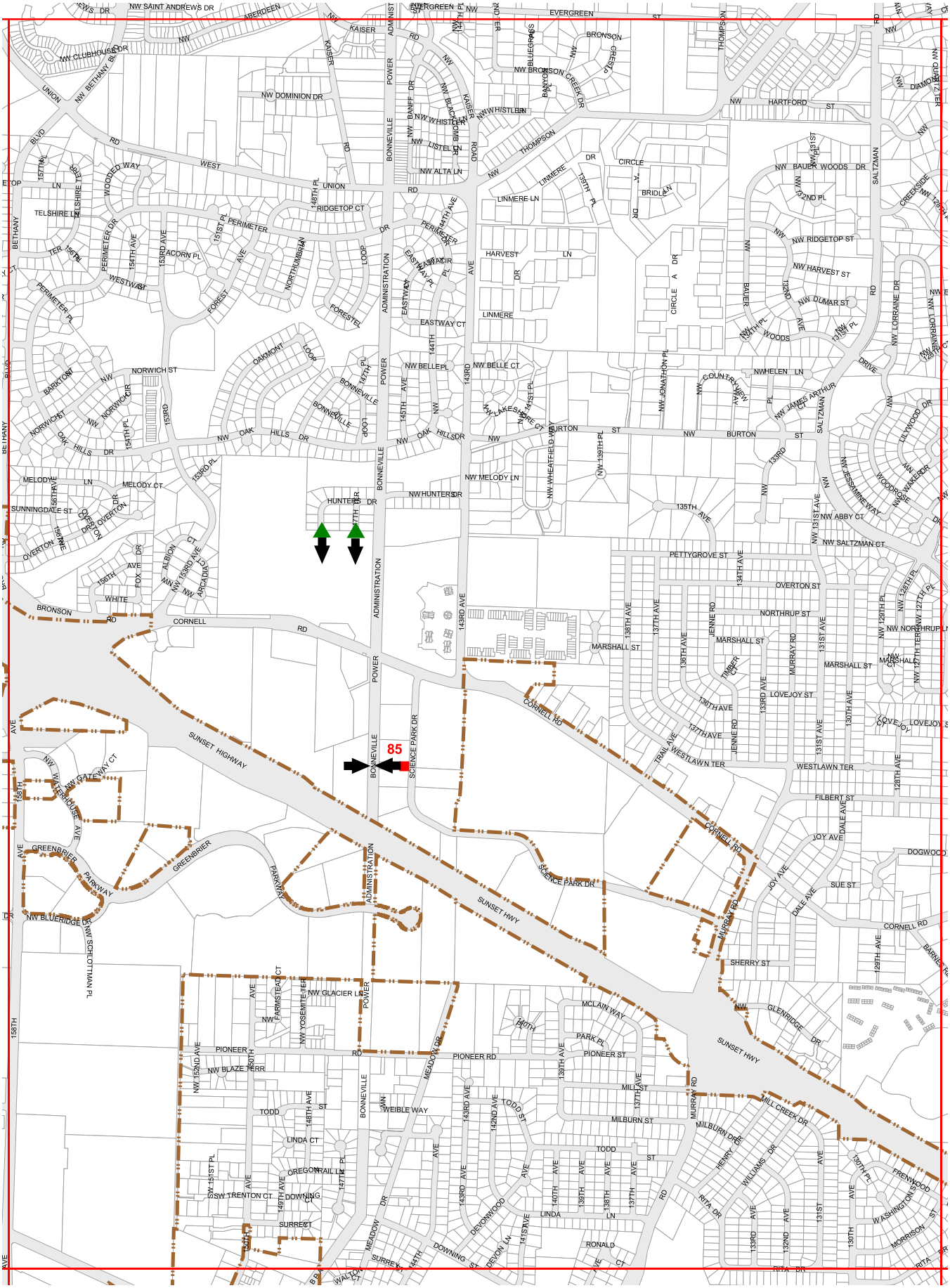
55	P	Feasibility Constraints
56	P	Consider Non-auto
58	P	Consider Non-auto
59	P	Feasibility Constraints
60	P	Feasibility Constraints
61	P	Consider Non-auto
62	P	Consider Non-auto
63	P	Consider Non-auto
64	P	Consider Multi-modal
65	P	Pursue Multi-modal
66	P	Consider Multi-modal
67	M	Pursue Multi-modal
68	P	Pursue Multi-modal
70	P	Pursue Multi-modal
71	P	Pursue Multi-modal
74	P	Pursue Multi-modal
75	M	Pursue Multi-modal
76	P	Pursue Multi-modal
77	P	Pursue Multi-modal
78	P	Pursue Multi-modal
79	P	Pursue Non-auto
80	P	Pursue Non-auto
81	M	Pursue Multi-modal (into Transit Center)
82	P	Pursue Multi-modal
83	P	Pursue Multi-modal
84	P	Consider Multi-modal
85	M	Pursue Non-auto
86	M	Pursue Non-auto
87	M	Pursue Non-auto
88	M	Pursue Non-auto
89	P	Pursue Non-auto
90	M	Pursue Non-auto
91	M	Pursue Multi-modal east of 125, Non-auto west
92	P	Consider Multi-modal
93	P	Consider Non-auto
94	P	Consider Non-auto
95	County	Pursue Non-auto
96	County	Feasibility Constraints
97	County	Feasibility Constraints
98	M	Consider Multi-modal
99	County	Consider Non-auto
100	County	Feasibility Constraints
101	County	Consider Non-auto
102	P	Pursue Non-auto
103	M	Pursue Non-auto
105	P	Consider Multi-modal
106	P	Consider Non-auto
107	P	Consider Non-auto
108	P	Consider Non-auto
109	P	Pursue Multi-modal
110	P	Pursue Non-auto
111	P	Pursue Non-auto

112	P	Pursue Non-auto
113	County	Potential Connection
114	P	Consider Non-auto
115	P	Pursue Multi-modal
116	P	Pursue Multi-modal, avoid cut thru to Cambray
117	M	Pursue Multi-modal
118	M	Pursue Non-auto
119	M	Pursue Multi-modal
120	M	Pursue Multi-modal
121	M	Pursue Multi-modal
122	M	Pursue Multi-modal
123	M	Pursue Multi-modal
125	P	Pursue Multi-modal
126	P	Consider Multi-modal
127	P	Pursue Multi-modal
129	M	Pursue Multi-modal
130	M	Pursue Multi-modal
131	M	Pursue Multi-modal
132	M	Pursue Multi-modal
133	M	Pursue Multi-modal
134	M	Pursue Multi-modal
135	M	Pursue Multi-modal
136	M	Pursue Multi-modal
137	A	Adopted Street Connection
138	A	Adopted Street Connection
139	A	Adopted Street Connection
140	M	Consider Non-auto
141	A	Adopted Street Connection
142	M	Consider Non-auto
143	M	Pursue Multi-modal
146	M	Pursue Multi-modal
147	M	Pursue Multi-modal



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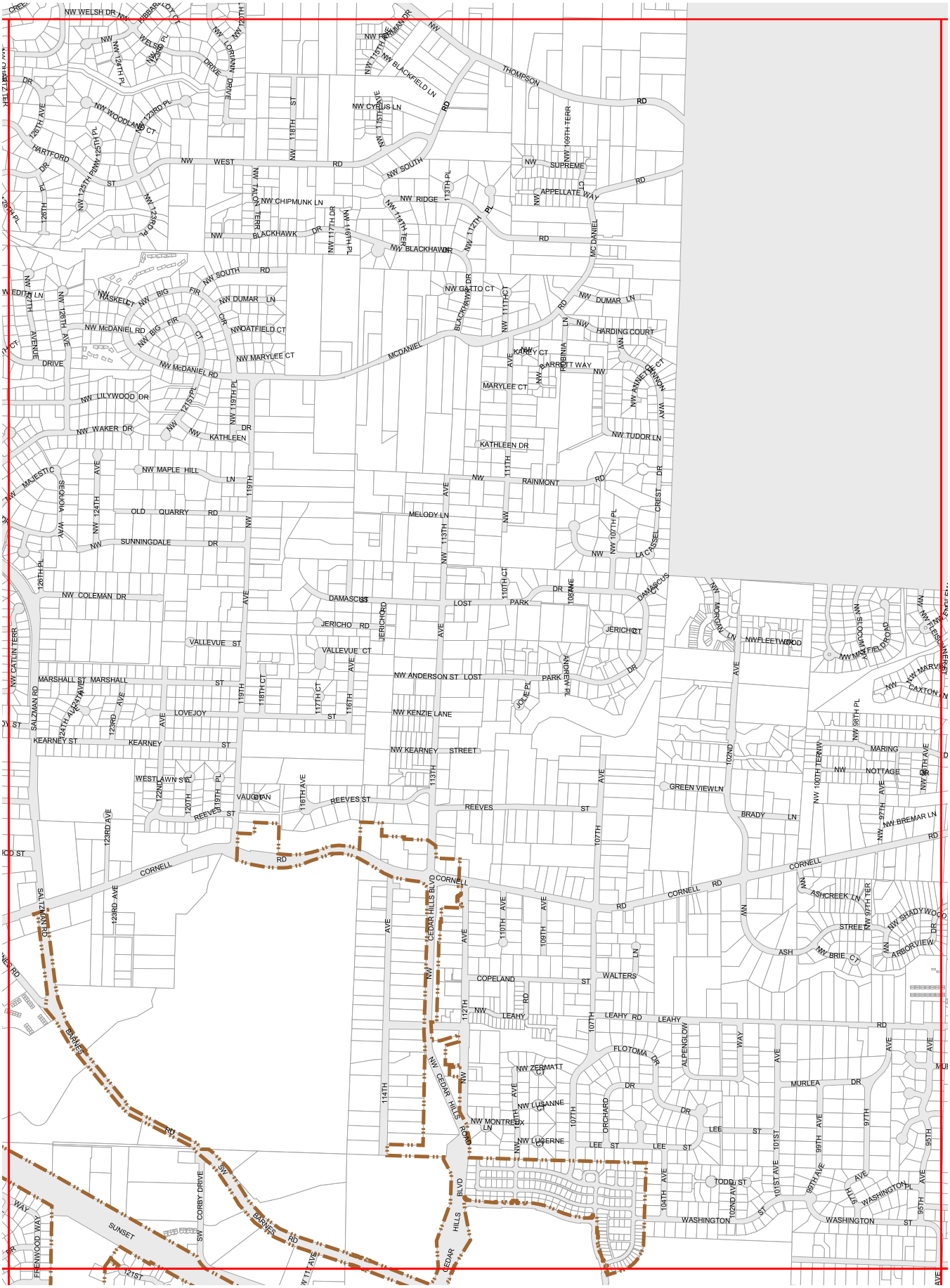
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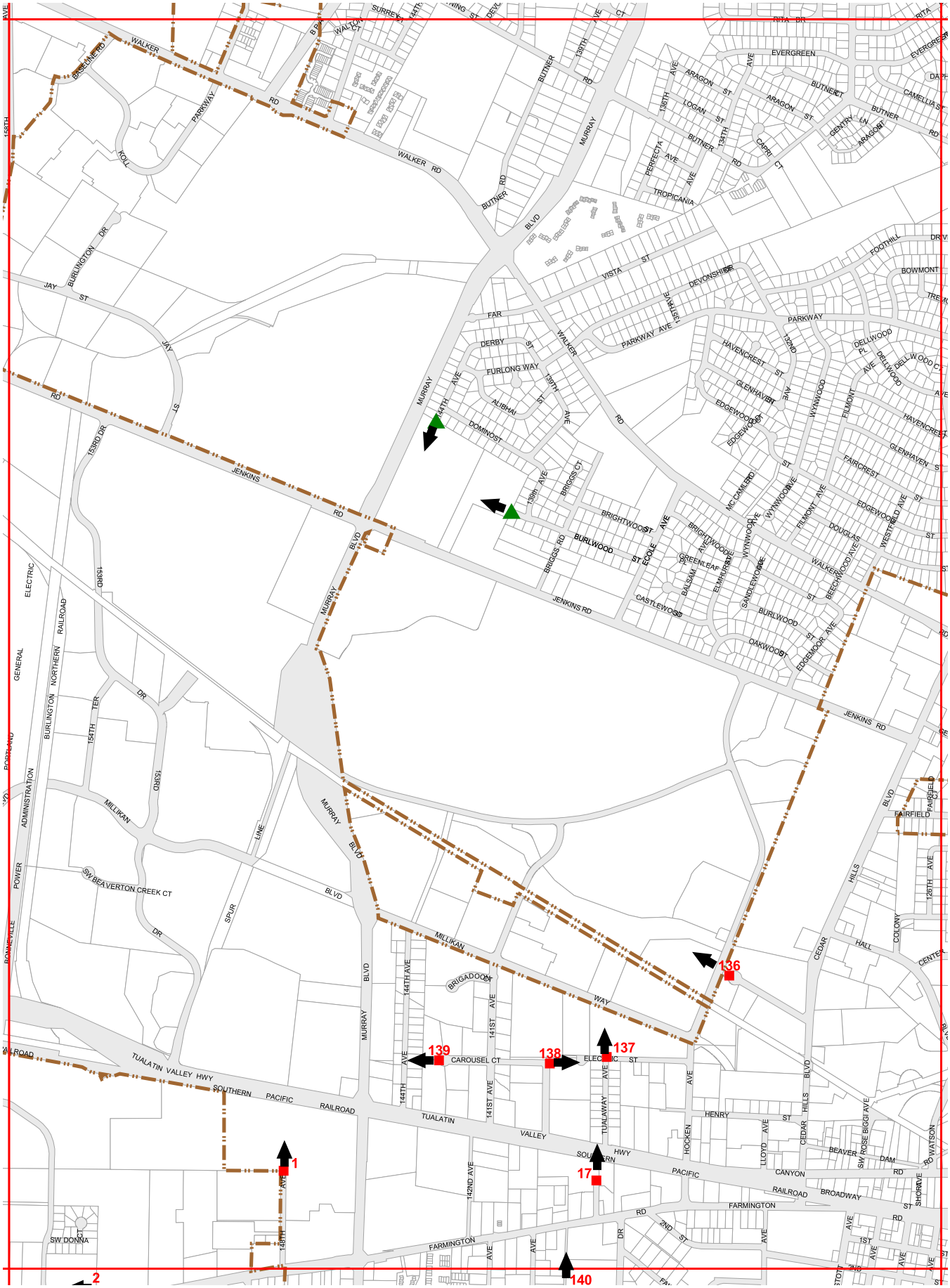


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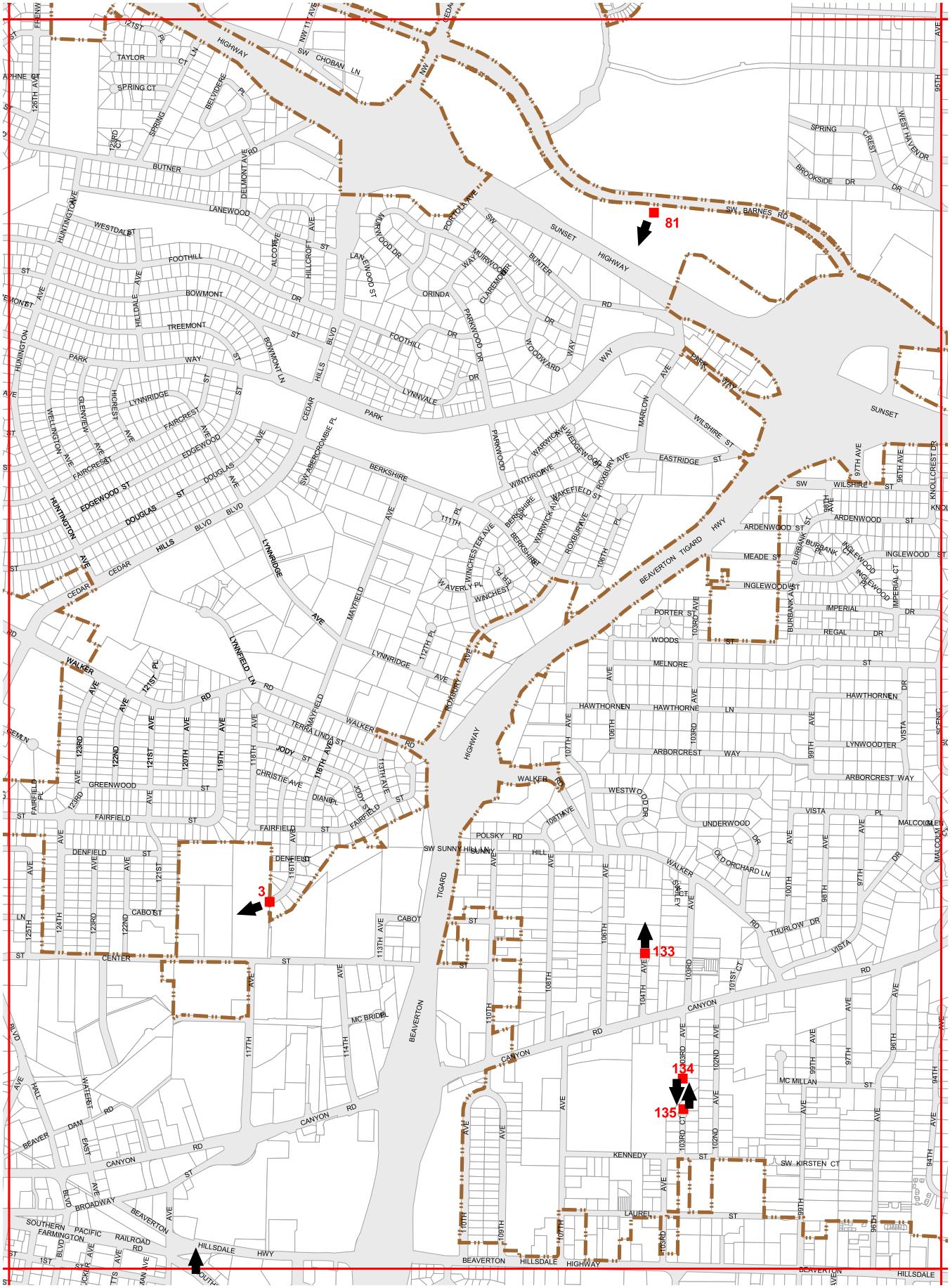
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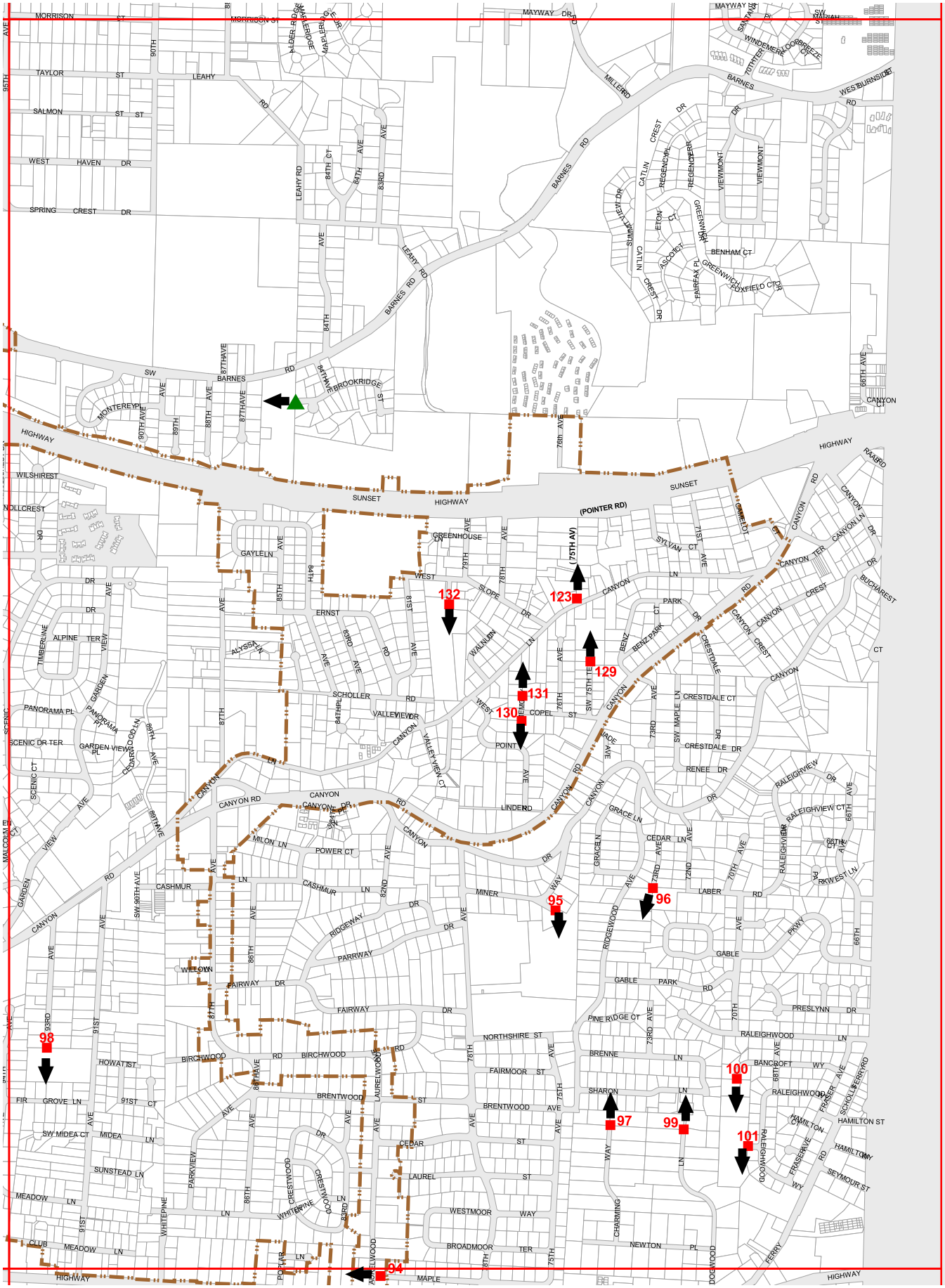
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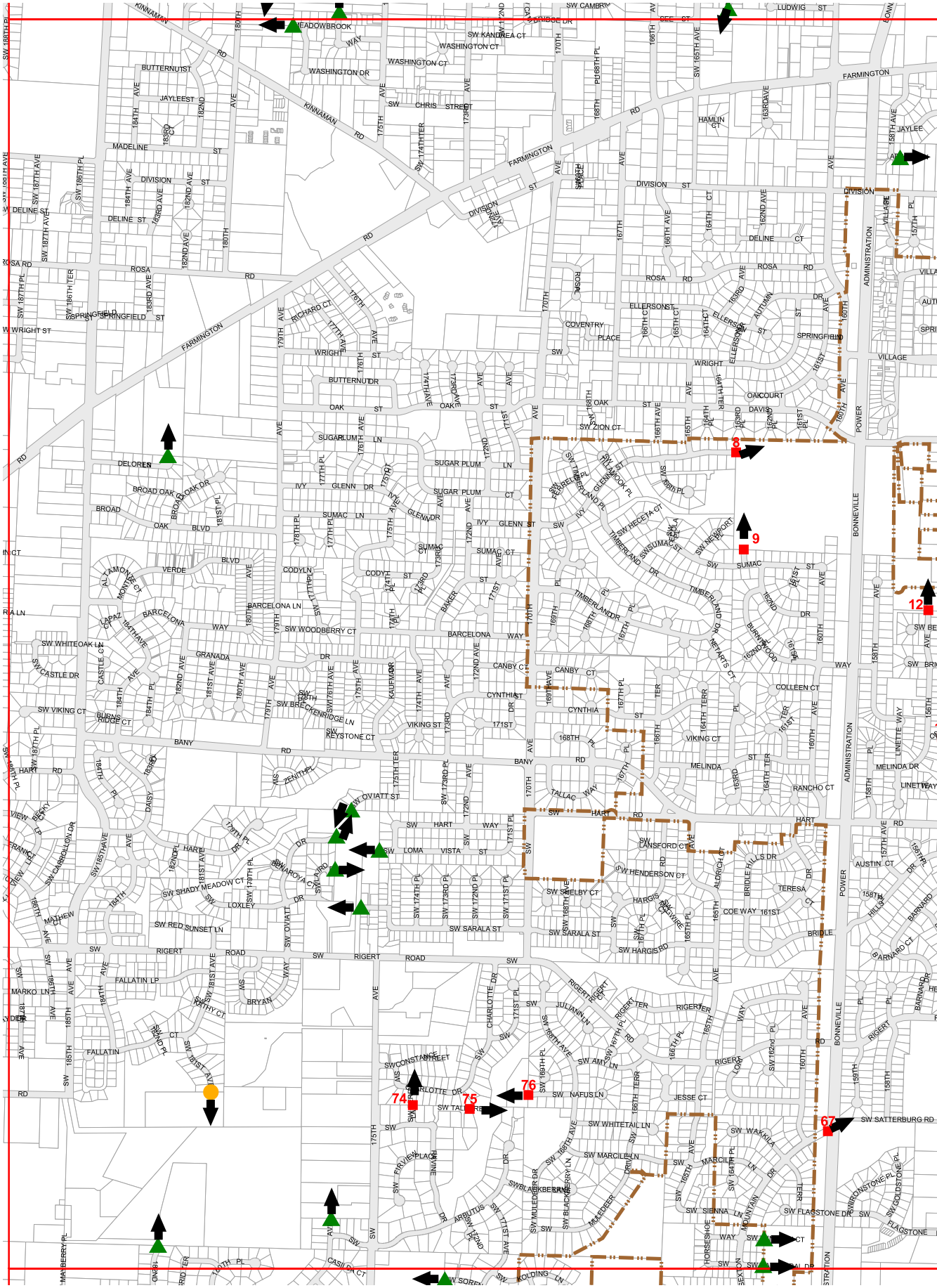


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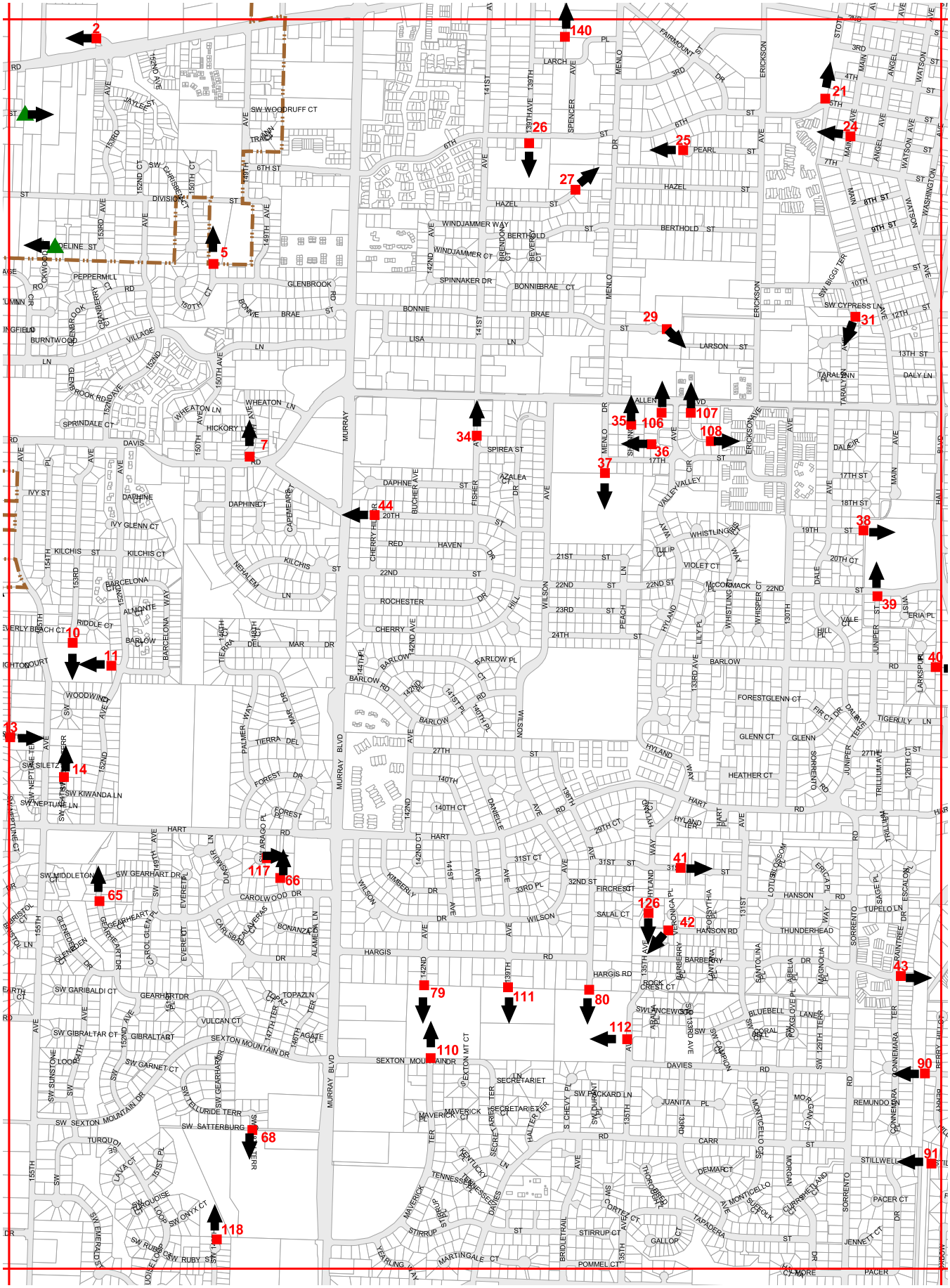
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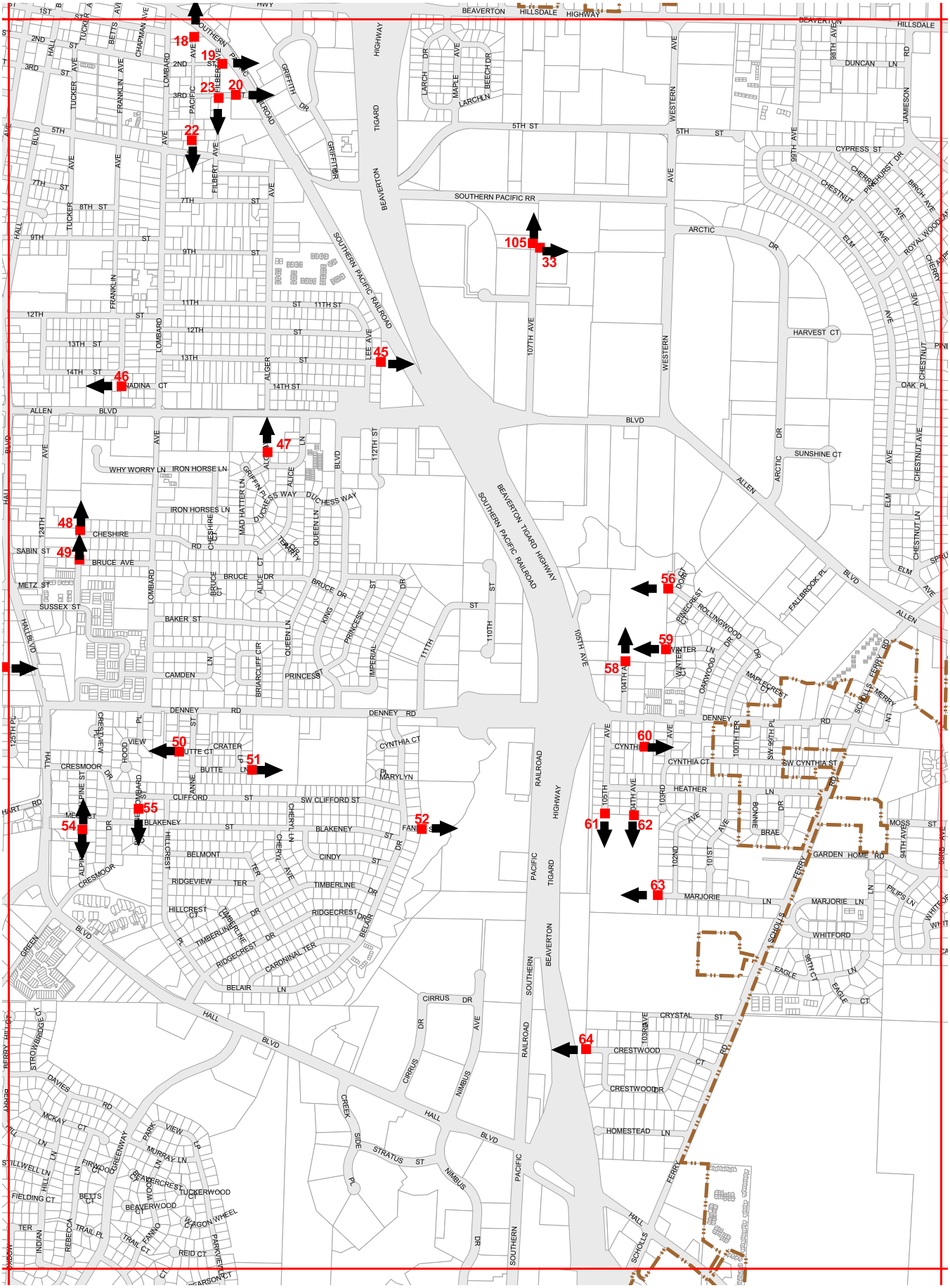


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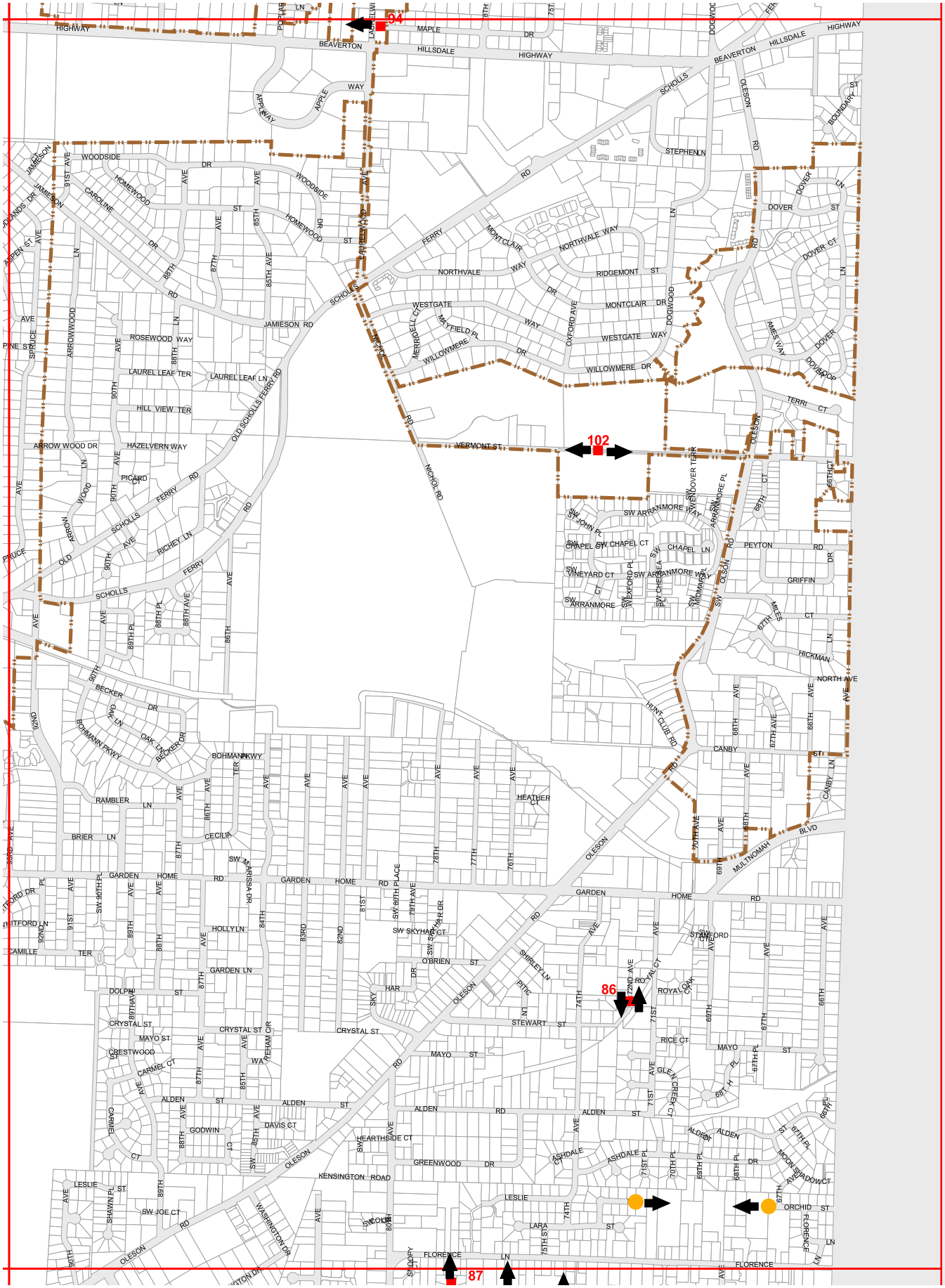
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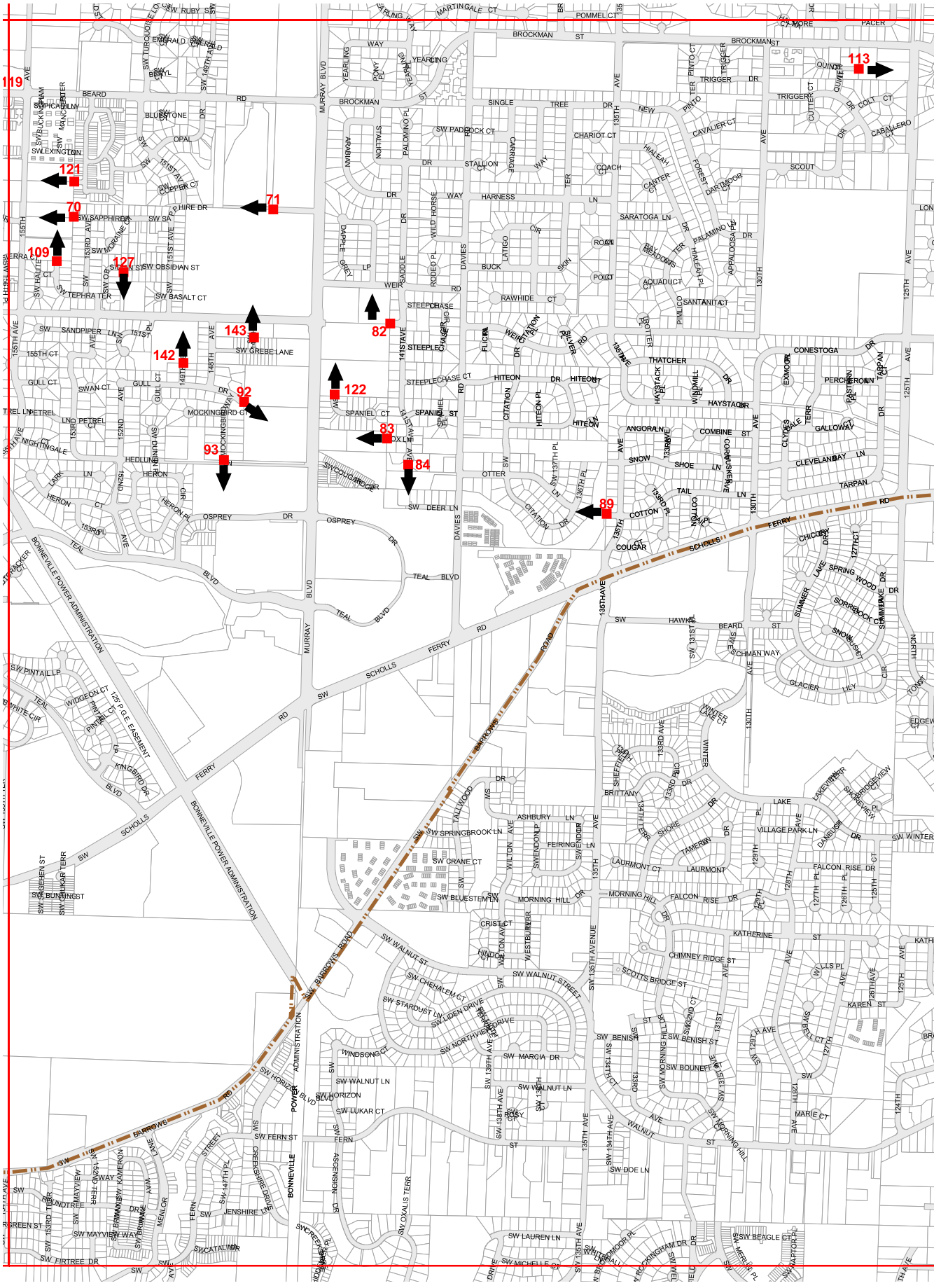


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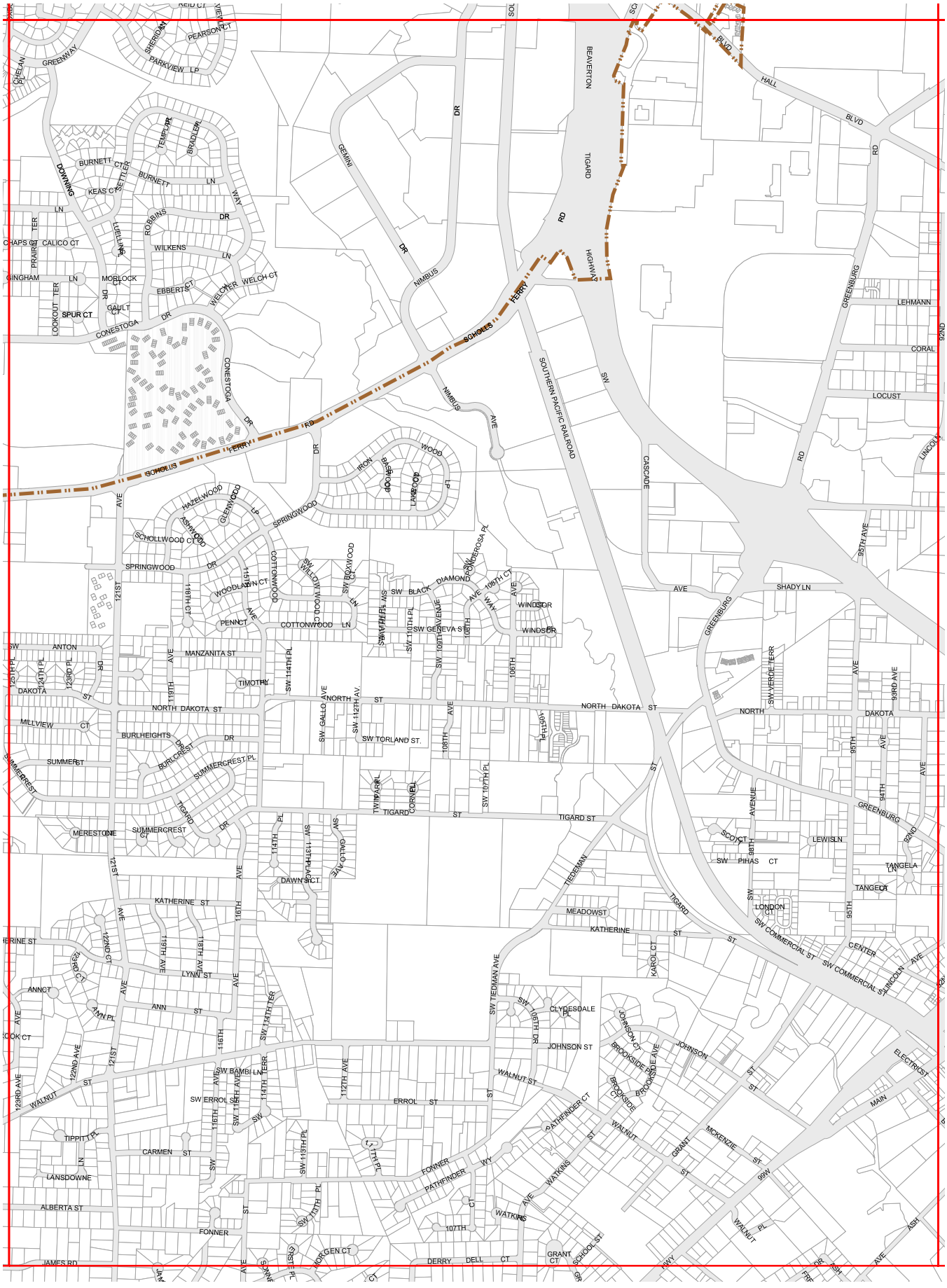


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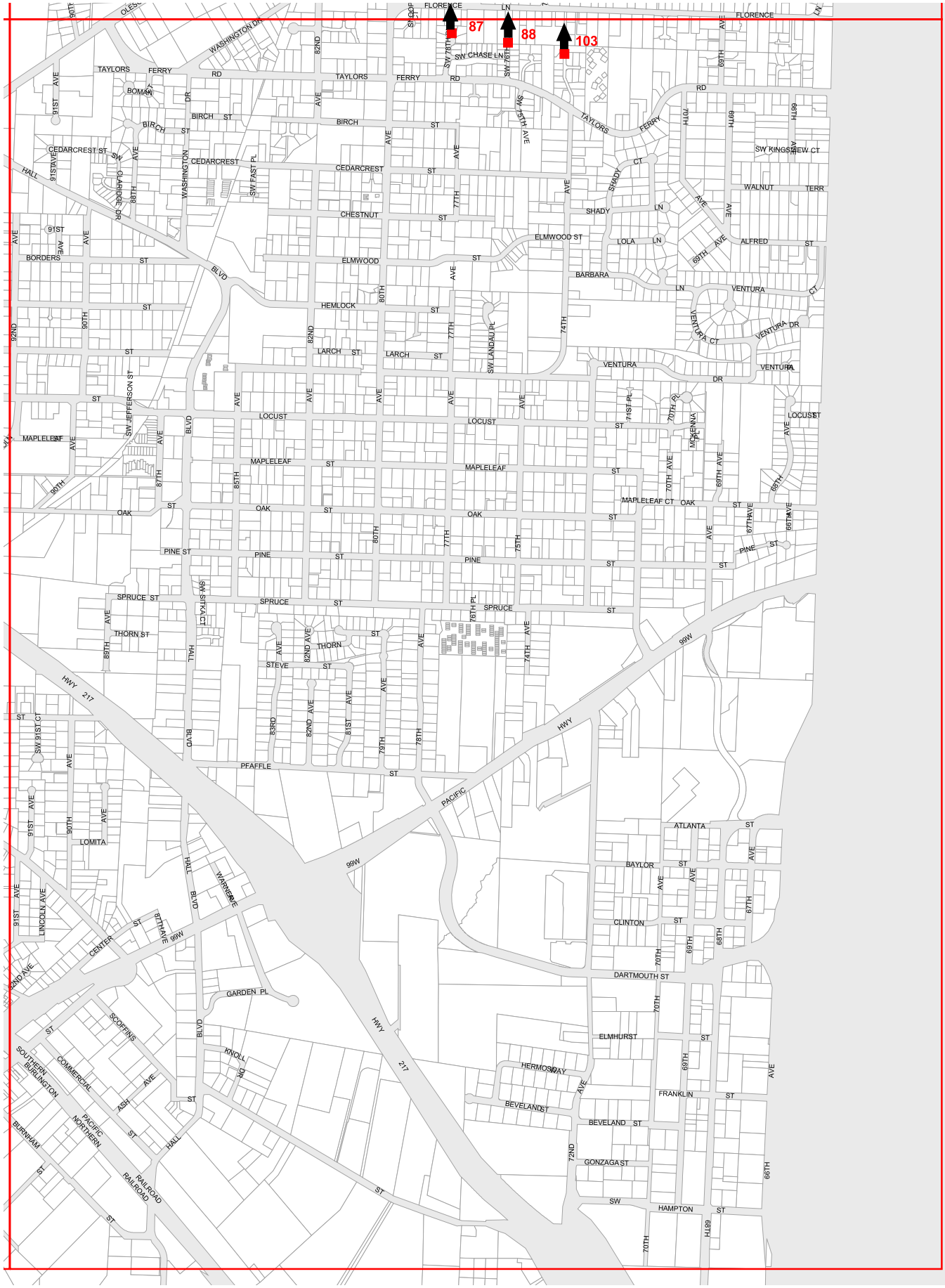

77
NORA
141
78
120
SPELLMAN
SW KEMMER RD
SW 175TH AVE
SW 160TH AVE
SW 155TH AVE
SW 150TH AVE



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F- Functional Class Matrix

	Adopted Beaverton Classification (as of 5/01)	Washington County Classification(s)	Metro RTP Classifications within Beaverton's Designated 2020 TSP Study Area					
Roadway (Jurisdiction)			**Motor Vehicle Classification**	**Street Design Classification(s)**	**Freight Classification**	**Public Transportation Classification**	**Pedestrian System Classification(s)**	**Bicycle System Classification(s)**
Cornell Road (County)	Arterial	Major/Minor Arterial	Major/Minor Arterial	Regional Street/Regional Boulevard/Community Street/Community Boulevard	No Classification	Regional bus/major bus stops	Transit/mixed-use corridor and pedestrian district	Regional corridor on-Street bikeway/Regional access bikeway
Barnes Road (County)	No Classification	Minor Arterial	Major/Minor Arterial	Community Street/Community Boulevard	No Classification	Rapid bus/Regional bus/major bus stops	Transit/mixed-use corridor and pedestrian district	Regional corridor on-Street bikeway/Regional access bikeway
Walker Road (County)	Arterial	Minor Arterial	Minor Arterial	Community Street	No Classification	Regional bus/major bus stops	Transit/mixed-use corridor	Community Connector
Jenkins Road (County/City)	Arterial	Minor Arterial	Minor Arterial	Community Street/Community Boulevard	Road Connector	No Classification	No Classification	Regional access bikeway
Baseline Road (County)	Collector/Arterial	Minor Arterial	Minor Arterial	Community Street/Community Boulevard	No Classification	No Classification	No Classification	Regional Access Bikeway
Center Street/ 113th/Cabot/110th (City/County)	Collector	Collector	Collector of Regional Significance	No Classification	No Classification	No Classification	No Classification	No Classification
Tualatin Valley Highway (ODOT)	Principal Arterial	Principal Arterial	Principal Arterial	Urban road	Road Connector	Frequent bus	Transit/mixed-use corridor	Regional corridor on-Street bikeway
Canyon Road (ODOT)	Arterial	Major Arterial	Major Arterial	Regional Street	Road Connector	Regional bus	Transit/mixed-use corridor	Regional corridor on-Street bikeway
Farmington Road (City/County)	Arterial	Major Arterial	Major Arterial	Regional Street/Regional Boulevard	No Classification	Regional bus	Transit/mixed-use corridor	Regional corridor on-Street bikeway
Beaverton-Hillsdale Highway (ODOT)	Arterial	Major Arterial	Major Arterial	Regional Street/Regional Boulevard	Road Connector	Frequent bus/major bus stops	Transit/mixed-use corridor	Regional corridor on-Street bikeway
Millikan Way (City/County)	Collector	Minor Arterial	Collector of Regional Significance	Community Street	No Classification	No Classification	No Classification	No Classification
Henry Street (City)	Collector	No Classification	Collector of Regional Significance	No Classification	No Classification	No Classification	No Classification	No Classification
Allen Boulevard (City)	Arterial	Minor Arterial	Minor Arterial	Community Street/Community Boulevard	Road Connector	Regional bus	Transit/mixed-use corridor	Community Connector

	Adopted Beaverton Classification (as of 5/01)	Washington County Classification(s)	Metro RTP Classifications within Beaverton's Designated 2020 TSP Study Area					
Roadway (Jurisdiction)			**Motor Vehicle Classification**	**Street Design Classification(s)**	**Freight Classification**	**Public Transportation Classification**	**Pedestrian System Classification(s)**	**Bicycle System Classification(s)**
Oak-Davis (City)	Arterial*	Major Collector	Collector of Regional Significance	Community Street	No Classification	No Classification	No Classification	No Classification
Hart Road (City)	Collector**	Major Collector	Collector of Regional Significance	Community Street	No Classification	No Classification	No Classification	Community Connector
Denney Road (City)	Collector	Minor Arterial	Collector of Regional Significance	Community Street	Road Connector	No Classification	No Classification	Community Connector
92nd Avenue (County)	Arterial	Minor Arterial	Minor Arterial	Community Street	No Classification	Regional bus	No Classification	Community Connector
Garden Home Road (County)	Arterial	Minor Arterial	Minor Arterial	Community Street/Community Boulevard	No Classification	Regional bus/major bus stops	Transit/mixed-use corridor	Community Connector
Greenway Drive (City)	Arterial	Minor Arterial	Minor Arterial	Community Street	No Classification	No Classification	No Classification	Community Connector
Brockman Road (City)	Arterial	Minor Arterial	Minor Arterial	Community Street	No Classification	No Classification	No Classification	Community Connector
Scholls Ferry Road (County)	Arterial	Major/Minor Arterial	Major/Minor Arterial	Community Street/Community Boulevard/ Regional Street/Regional Boulevard	Road Connector	Regional bus/major bus stops	Pedestrian district/Transit/mixed-use corridor	Regional corridor on-Street bikeway
185th Avenue (County)	No Classification	Major arterial	Major arterial	Regional Street/community Street	Road Connector	Regional bus/major bus stops	Pedestrian district/Transit/mixed-use corridor	Regional access bikeway/Regional corridor on-Street bikeway
170th Avenue (County)	Arterial	Minor Arterial	Minor Arterial	Community Street	No Classification	No Classification	No Classification	Community Connector/ Regional access bikeway
175th Avenue (County)	Arterial	Minor Arterial	Rural Arterial	Rural Road	No Classification	No Classification	No Classification	No Classification
Merlo Road (County)	Arterial	Minor Arterial	Minor Arterial	Community Street/Community Boulevard	No Classification	No Classification	No Classification	Regional access bikeway
158th Avenue (County)	Arterial	Minor Arterial	Minor Arterial	Community Street/Community Boulevard	Road Connector	No Classification	No Classification	Community Connector/ Regional access bikeway

	Adopted Beaverton Classification (as of 5/01)	Washington County Classification	Metro RTP Classifications within Beaverton's Designated 2020 TSP Study Area					
Roadway (Jurisdiction)			**Motor Vehicle Classification**	**Street Design Classification(s)**	**Freight Classification**	**Public Transportation Classification**	**Pedestrian System Classification(s)**	**Bicycle System Classification(s)**
Murray Boulevard (County)	Arterial	Major Arterial	Major Arterial	Regional Street	Road Connector	Regional bus/major bus stops	Pedestrian district/Transit/mixed-use corridor	Regional access bikeway/Regional corridor on-Street bikeway
Cedar Hills Boulevard (City)	Arterial	Minor Arterial	Minor Arterial	Community Street	No Classification	Frequent bus/major bus stops	Pedestrian district/Transit/mixed-use corridor	Regional access bikeway/Community Connector
Hall Boulevard (City/County)	Arterial	Minor Arterial	Major Arterial	Regional Street/Regional Boulevard	No Classification	Frequent bus/major bus stops	Pedestrian district/Transit/mixed-use corridor	Regional access bikeway/Regional corridor on-Street bikeway
125th Avenue (City)	Arterial	Minor Arterial	Minor Arterial	Community Street	No Classification	No Classification	No Classification	Community Connector
Western Avenue (City)	Arterial	Minor Arterial	Minor Arterial	Community Street	No Classification	No Classification	No Classification	Community Connector
Oleson Road (County)	No Classification	Minor Arterial	Minor Arterial	Community Street/Community Boulevard	No Classification	Regional bus/major bus stops	Pedestrian district/Transit/mixed-use corridor	Regional corridor on-Street bikeway

NOTES:

1. Design Regional Streets with a modal orientation that reflects the function and character of surrounding land uses consistent with the Regional classifications.
2. Refer to adopted RTP for definitions of classifications.
3. Streets that intersection or cross/over/under ODOT facilities are under ODOT jurisdiction within ODOT right-of-way.
4. The Beaverton classifications correspond to Beaverton's 2020 Study Area and RTP classifications as shown in this table.

*Proposed as a collector in 2020 TSP Update

**Proposed as an arterial (west of Murray) in 2020 TSP Update

G- Meto Regional Model Transit Headway Data

Metro 2020 Regional Demand Model Transit Headways

PM Peak Hour

	Headway (minutes)	
Route	**Committed**	**Priority**
MAX	10	10
01COMR	0	30
20	30	8
43	60	8
45	30	10
47	30	10
48	30	10
50	0	0
52	15	10
53	0	15
54	30	8
55	0	15
56	30	10
57	15	10
58	30	15
59	30	0
60	0	10
61	0	15
62	30	10
67	30	15
76	30	0
78	30	8
88	30	0
89	60	0
92	0	30

H- Existing (2000) LOS Calculations

Scenario Report

Scenario: Existing (2000)

Command:	Existing (2000)
Volume:	Existing (2000)
Geometry:	Existing (2000)
Impact Fee:	Default Impact Fee
Trip Generation:	pm peak
Trip Distribution:	dist
Paths:	Default Paths
Routes:	Default Routes
Configuration:	Default Configuration

Impact Analysis Report
Level Of Service

Intersection	Base LOS	Base Del/Veh	Base V/C	Future LOS	Future Del/Veh	Future V/C	Change in
# 1 170th/TV Highway	E	63.1	1.008	E	63.1	1.008	+ 0.000 D/V
# 2 170th/Farmington	C	26.1	0.605	C	26.1	0.605	+ 0.000 D/V
# 3 170th/Oak	F	174.0	0.000	F	174.0	0.000	+ 0.000 V/C
# 5 170th/Bany	F	77.3	1.170	F	77.3	1.170	+ 0.000 V/C
# 6 Bethany/US 26 west ramp	D	44.1	0.952	D	44.1	0.952	+ 0.000 D/V
# 7 Bethany/US 26 east ramp	C	22.2	0.663	C	22.2	0.663	+ 0.000 D/V
# 8 Bethany/Cornell	C	30.4	0.757	C	30.4	0.757	+ 0.000 D/V
# 9 Cornell/US 26 east ramp	B	17.1	0.656	B	17.1	0.656	+ 0.000 D/V
# 10 Cornell/US 26 west ramp	C	28.4	0.785	C	28.4	0.785	+ 0.000 D/V
# 11 158th/Cornell	C	27.1	0.783	C	27.1	0.783	+ 0.000 D/V
# 12 158th/Walker	E	61.3	0.995	E	61.3	0.995	+ 0.000 D/V
# 13 143rd/Cornell	C	25.5	0.803	C	25.5	0.803	+ 0.000 D/V
# 14 Murray/Cornell	E	62.3	0.980	E	62.3	0.980	+ 0.000 D/V
# 15 Barnes/Saltzman/Cornell	E	57.3	0.937	E	57.3	0.937	+ 0.000 D/V
# 16 Murray/US 26 west ramp	C	28.1	0.787	C	28.1	0.787	+ 0.000 D/V
# 17 Murray/US 26 east ramps	B	15.2	0.547	B	15.2	0.547	+ 0.000 D/V
# 18 Murray/Walker	D	54.2	0.983	D	54.2	0.983	+ 0.000 D/V
# 19 Murray/Jenkins	D	44.5	0.889	D	44.5	0.889	+ 0.000 D/V
# 20 Murray/Farmington	F	89.4	1.070	F	89.4	1.070	+ 0.000 D/V
# 21 Murray/6th	F	OVRFL	0.000	F	OVRFL	0.000	+ 0.000 V/C
# 22 Murray/Allen	D	51.0	0.951	D	51.0	0.951	+ 0.000 D/V
# 23 Murray/Brockman/Beard	C	31.4	0.739	C	31.4	0.739	+ 0.000 D/V
# 24 Nimbus/Scholls Ferry	D	53.6	0.994	D	53.6	0.994	+ 0.000 D/V
# 25 Hall/Scholls Ferry	E	65.9	0.989	E	65.9	0.989	+ 0.000 D/V
# 26 Allen/Schools Ferry	E	64.5	0.980	E	64.5	0.980	+ 0.000 D/V

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Intersection	Base LOS	Del/ Veh	V/ C	Future LOS	Del/ Veh	V/ C	Change in
# 27 Oleson/Vermont	C	25.1	0.761	C	25.1	0.761	+ 0.000 D/V
# 28 Oleson/Garden Home	D	42.8	0.950	D	42.8	0.950	+ 0.000 D/V
# 29 Cedar Hills/Barnes	E	68.8	1.002	E	68.8	1.002	+ 0.000 D/V
# 30 Cedar Hills/US 26 west ramps	B	12.8	0.628	B	12.8	0.628	+ 0.000 D/V
# 31 Cedar Hills/US 26 east ramps	F	690.9	0.000	F	690.9	0.000	+ 0.000 V/C
# 32 Cedar Hills/Butner	C	34.7	0.828	C	34.7	0.828	+ 0.000 D/V
# 33 Cedar Hills/Walker	E	58.2	1.006	E	58.2	1.006	+ 0.000 D/V
# 34 Cedar Hills/Jenkins	D	40.0	0.876	D	40.0	0.876	+ 0.000 D/V
# 35 Cedar Hills/Hall	C	30.9	0.745	C	30.9	0.745	+ 0.000 D/V
# 36 Cedar Hills/Canyon	C	34.1	0.848	C	34.1	0.848	+ 0.000 D/V
# 37 Cedar Hills/Farmington	C	27.2	0.905	C	27.2	0.905	+ 0.000 D/V
# 38 Hall/Center	C	23.8	0.477	C	23.8	0.477	+ 0.000 D/V
# 39 Hall/Allen	D	44.4	0.914	D	44.4	0.914	+ 0.000 D/V
# 40 Hall/Denney	C	32.4	0.852	C	32.4	0.852	+ 0.000 D/V
# 41 Hall/Greenway	E	61.9	1.029	E	61.9	1.029	+ 0.000 D/V
# 42 Hall/Nimbus	C	34.3	0.841	C	34.3	0.841	+ 0.000 D/V
# 43 125th/Greenway	B	17.5	0.515	B	17.5	0.515	+ 0.000 D/V
# 44 Western/Beaverton Hillsdale	C	33.7	0.868	C	33.7	0.868	+ 0.000 D/V
# 45 Western/Allen	C	28.7	0.726	C	28.7	0.726	+ 0.000 D/V
# 46 Laurelwood/Beaverton Hillsdale	C	26.2	0.795	C	26.2	0.795	+ 0.000 D/V
# 47 Lombard/Farmington	C	30.7	0.775	C	30.7	0.775	+ 0.000 D/V
# 48 114th/Canyon	C	15.7	0.000	C	15.7	0.000	+ 0.000 V/C
# 49 Griffith/Beaverton Hillsdale	C	31.0	0.808	C	31.0	0.808	+ 0.000 D/V
# 50 87th/Canyon	B	18.7	0.676	B	18.7	0.676	+ 0.000 D/V
# 51 Garden Home/84th	D	32.6	0.000	D	32.6	0.000	+ 0.000 V/C
# 52 Garden Home/88th	C	23.5	0.000	C	23.5	0.000	+ 0.000 V/C

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Intersection	Base LOS	Del/ Veh	V/ C	Future LOS	Del/ Veh	V/ C	Change in
# 53 158th/Jenkins	D	38.2	0.857	D	38.2	0.857	+ 0.000 D/V
# 54 170th/Merlo	C	22.4	0.631	C	22.4	0.631	+ 0.000 D/V
# 56 TV Highway/Murray	E	65.1	0.999	E	65.1	0.999	+ 0.000 D/V
# 57 Farmington/Hall	C	25.4	0.847	C	25.4	0.847	+ 0.000 D/V
# 58 Canyon/Hall	C	22.9	0.796	C	22.9	0.796	+ 0.000 D/V
# 59 Walker/173rd	E	63.4	0.984	E	63.4	0.984	+ 0.000 D/V
# 60 170th/Baseline	C	21.2	0.582	C	21.2	0.582	+ 0.000 D/V
# 64 Cornell/173rd	D	43.5	0.933	D	43.5	0.933	+ 0.000 D/V
# 66 Scholls Ferry/Cascade	C	23.8	0.762	C	23.8	0.762	+ 0.000 D/V
# 72 Canyon/Watson	B	16.8	0.676	B	16.8	0.676	+ 0.000 D/V
# 73 Farmington/Watson	C	24.2	0.770	C	24.2	0.770	+ 0.000 D/V
# 76 Scholls Ferry/Denney	C	24.6	0.754	C	24.6	0.754	+ 0.000 D/V
# 77 Farmington/Hocken	C	22.6	0.844	C	22.6	0.844	+ 0.000 D/V
# 78 TV Highway/Hocken	D	38.3	0.896	D	38.3	0.896	+ 0.000 D/V
# 81 158th/Blueridge	C	26.3	0.708	C	26.3	0.708	+ 0.000 D/V
# 83 158th/Jay	C	26.4	0.600	C	26.4	0.600	+ 0.000 D/V
# 85 TV Highway/160th	D	49.6	0.974	D	49.6	0.974	+ 0.000 D/V
# 87 Hart/155th	B	18.2	0.766	B	18.2	0.766	+ 0.000 D/V
# 88 Murray/Hart	D	37.2	0.855	D	37.2	0.855	+ 0.000 D/V
# 89 Murray/Scholls Ferry	C	32.0	0.697	C	32.0	0.697	+ 0.000 D/V
# 90 Scholls Ferry/Davies	F	OVRFL	0.000	F	OVRFL	0.000	+ 0.000 V/C
# 91 Scholls Ferry/Barrows	B	17.3	0.686	B	17.3	0.686	+ 0.000 D/V
# 92 Scholls Ferry/135th	B	18.4	0.697	B	18.4	0.697	+ 0.000 D/V
# 93 Scholls Ferry/125th	D	41.6	0.916	D	41.6	0.916	+ 0.000 D/V
# 94 Scholls Ferry/121st	D	40.4	0.961	D	40.4	0.961	+ 0.000 D/V
# 95 Scholls Ferry/Conestoga	B	10.3	0.717	B	10.3	0.717	+ 0.000 D/V

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Intersection	Base LOS	Del/ Veh	V/ C	Future LOS	Del/ Veh	V/ C	Change in
#102 Scholls Ferry/Laurelwood	F	239.6	0.000	F	239.6	0.000	+ 0.000 V/C
#103 Canyon/Lombard	C	21.2	0.663	C	21.2	0.663	+ 0.000 D/V
#105 Canyon/117th	C	22.9	0.658	C	22.9	0.658	+ 0.000 D/V
#114 ORE 217 SB Ramp/Canyon	C	24.3	0.668	C	24.3	0.668	+ 0.000 D/V
#115 ORE 217 NB Ramp/Canyon	C	24.9	0.663	C	24.9	0.663	+ 0.000 D/V
#116 ORE 217 SB Ramp/Farmington	C	25.6	0.729	C	25.6	0.729	+ 0.000 D/V
#117 ORE 217 NB Ramp/Farmington	C	34.9	0.938	C	34.9	0.938	+ 0.000 D/V
#118 ORE 217 SB Ramp/Allen	C	34.2	0.877	C	34.2	0.877	+ 0.000 D/V
#119 ORE 217 NB Ramp/Allen	C	25.5	0.809	C	25.5	0.809	+ 0.000 D/V
#120 ORE 217 SB Ramp/Denney	F	50.5	0.000	F	50.5	0.000	+ 0.000 V/C
#121 ORE 217 NB Ramp/Denney	F	597.2	0.000	F	597.2	0.000	+ 0.000 V/C
#122 ORE 217 SB off Ramp/Hall/Casca	D	51.3	0.964	D	51.3	0.964	+ 0.000 D/V
#123 ORE 217 NB on Ramp/Scholls Fer	C	30.3	0.781	C	30.3	0.781	+ 0.000 D/V
#125 ORE 217 NB off Ramp/Scholls Fe	C	22.2	0.708	C	22.2	0.708	+ 0.000 D/V
#129 ORE 217 NB Ramp/Walker	C	21.1	0.675	C	21.1	0.675	+ 0.000 D/V
#130 ORE 217 SB Ramp/Walker	B	19.4	0.841	B	19.4	0.841	+ 0.000 D/V
#131 Scholls Ferry/ORE 217 SB on Ra	C	31.6	0.757	C	31.6	0.757	+ 0.000 D/V

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #1 170th/TV Highway

Cycle (sec): 120 Critical Vol./Cap. (X): 1.008
Loss Time (sec): 16 (Y+R = 4 sec) Average Delay (sec/veh): 63.1
Optimal Cycle: 180 Level Of Service: E

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Ovl			Ovl		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1 0	0 1	0	1 0	0 1	0	1 0	2 0	1	1 0	2 0	1
Volume Module:												
Base Vol:	93	235	63	195	394	6	103	1375	168	308	1834	287
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	93	235	63	195	394	6	103	1375	168	308	1834	287
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
PHF Volume:	97	246	66	204	412	6	108	1437	176	322	1916	300
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	97	246	66	204	412	6	108	1437	176	322	1916	300
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	97	246	66	204	412	6	108	1437	176	322	1916	300
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.97	0.97	0.95	1.00	1.00	0.95	0.95	0.85	0.95	0.95	0.85
Lanes:	1.00	0.79	0.21	1.00	0.99	0.01	1.00	2.00	1.00	1.00	2.00	1.00
Final Sat.:	1805	1450	389	1805	1869	27	1805	3610	1615	1805	3610	1615
Capacity Analysis Module:												
Vol/Sat:	0.05	0.17	0.17	0.11	0.22	0.22	0.06	0.40	0.11	0.18	0.53	0.19
Crit Moves:		****		****			****				****	
Green/Cycle:	0.05	0.17	0.17	0.11	0.23	0.23	0.06	0.40	0.46	0.18	0.53	0.64
Volume/Cap:	0.98	1.01	1.01	1.01	0.98	0.98	1.01	0.98	0.24	0.98	1.01	0.29
Uniform Del:	56.6	49.9	49.9	53.3	46.2	46.2	56.4	35.3	19.7	48.9	28.4	9.6
IncremntDel:	82.7	53.1	53.1	65.2	37.5	37.5	89.0	19.6	0.2	45.1	22.5	0.2
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	139.4	103	103.0	118.5	83.6	83.6	145.4	54.9	19.8	94.0	50.9	9.8
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	139.4	103	103.0	118.5	83.6	83.6	145.4	54.9	19.8	94.0	50.9	9.8
DesignQueue:	6	14	4	12	23	0	7	63	6	18	70	8

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #2 170th/Farmington

Cycle (sec): 100 Critical Vol./Cap. (X): 0.605
Loss Time (sec): 16 (Y+R = 4 sec) Average Delay (sec/veh): 26.1
Optimal Cycle: 58 Level Of Service: C

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Permitted				Permitted				Protected				Protected			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0	
Lanes:	1	0	1	1 0	1	0	1	1 0	1	0	2	0 1	1	0	2	0 1
Volume Module:																
Base Vol:	155	252	71		78	341	80		49	633	310		173	848	162	
Growth Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Initial Bse:	155	252	71		78	341	80		49	633	310		173	848	162	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	0.95	0.95	0.95		0.95	0.95	0.95		0.95	0.95	0.95		0.95	0.95	0.95	
PHF Volume:	164	266	75		82	360	84		52	668	327		182	895	171	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	164	266	75		82	360	84		52	668	327		182	895	171	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Final Vol.:	164	266	75		82	360	84		52	668	327		182	895	171	
Saturation Flow Module:																
Sat/Lane:	1900	1900	1900		1900	1900	1900		1900	1900	1900		1900	1900	1900	
Adjustment:	0.42	0.92	0.92		0.51	0.92	0.92		0.95	0.95	0.85		0.95	0.95	0.85	
Lanes:	1.00	1.56	0.44		1.00	1.62	0.38		1.00	2.00	1.00		1.00	2.00	1.00	
Final Sat.:	800	2723	768		963	2845	664		1805	3610	1615		1805	3610	1615	
Capacity Analysis Module:																
Vol/Sat:	0.21	0.10	0.10		0.09	0.13	0.13		0.03	0.19	0.20		0.10	0.25	0.11	
Crit Moves:	****										****		****			
Green/Cycle:	0.34	0.34	0.34		0.34	0.34	0.34		0.05	0.33	0.33		0.17	0.45	0.45	
Volume/Cap:	0.61	0.29	0.29		0.25	0.37	0.37		0.55	0.55	0.61		0.61	0.55	0.24	
Uniform Del:	27.5	24.2	24.2		23.9	25.0	25.0		46.3	27.2	27.8		38.6	20.2	17.0	
IncremntDel:	3.9	0.1	0.1		0.4	0.2	0.2		6.9	0.6	2.0		3.5	0.4	0.2	
Delay Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Delay/Veh:	31.4	24.4	24.4		24.3	25.2	25.2		53.2	27.7	29.7		42.1	20.6	17.1	
User DelAdj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
AdjDel/Veh:	31.4	24.4	24.4		24.3	25.2	25.2		53.2	27.7	29.7		42.1	20.6	17.1	
DesignQueue:	6	10	3		3	14	3		3	26	13		9	29	5	

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #3 170th/Oak

Average Delay (sec/veh): 174.0 Worst Case Level Of Service: F

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Uncontrolled				Uncontrolled				Stop Sign				Stop Sign			
Rights:	Include				Include				Include				Include			
Lanes:	0	1	0	0 0	1	0	0	1 0	0	0	1!	0 0	0	0	1!	0 0
Volume Module:																
Base Vol:	20	334	0		69	684	55		12	13	11		33	89	69	
Growth Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Initial Bse:	20	334	0		69	684	55		12	13	11		33	89	69	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	0.91	0.91	0.91		0.91	0.91	0.91		0.91	0.91	0.91		0.91	0.91	0.91	
PHF Volume:	22	366	0		76	749	60		13	14	12		36	97	76	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Final Vol.:	22	366	0		76	749	60		13	14	12		36	97	76	
Critical Gap Module:																
Critical Gp:	4.1	xxxx	xxxxx		4.1	xxxx	xxxxx		7.1	6.5	6.2		7.1	6.5	6.2	
FollowUpTim:	2.2	xxxx	xxxxx		2.2	xxxx	xxxxx		3.5	4.0	3.3		3.5	4.0	3.3	
Capacity Module:																
Cnflict Vol:	809	xxxx	xxxxx		366	xxxx	xxxxx		1427	1340	779		1353	1370	366	
Potent Cap.:	825	xxxx	xxxxx		1204	xxxx	xxxxx		114	154	399		128	148	684	
Move Cap.:	825	xxxx	xxxxx		1204	xxxx	xxxxx		39	140	399		107	135	684	
Level Of Service Module:																
Stopped Del:	9.4	xxxx	xxxxx		8.2	xxxx	xxxxx		xxxxx	xxxx	xxxxx		xxxxx	xxxx	xxxxx	
LOS by Move:	A	*	*		A	*	*		*	*	*		*	*	*	
Movement:	LT	-	LTR	- RT	LT	-	LTR	- RT	LT	-	LTR	- RT	LT	-	LTR	- RT
Shared Cap.:	xxxx	xxxx	xxxxx		xxxx	xxxx	xxxxx		xxxx		85	xxxxx	xxxx		179	xxxxx
Shrd StpDel:	9.5	xxxx	xxxxx		xxxxx	xxxx	xxxxx		xxxxx		80.2	xxxxx	xxxxx		174	xxxxx
Shared LOS:	A	*	*		*	*	*		*		F	*	*		F	*
ApproachDel:	xxxxxx				xxxxxx				80.2				174.0			
ApproachLOS:	*				*				F				F			

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #5 170th/Bany

Cycle (sec):	100	Critical Vol./Cap. (X):	1.170
Loss Time (sec):	0 (Y+R = 4 sec)	Average Delay (sec/veh):	77.3
Optimal Cycle:	0	Level Of Service:	F

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0 0	1! 0	0	0 0	1! 0	0	1 0	0 1	0	1 0	0 1	0
Volume Module:												
Base Vol:	59	159	31	206	281	35	12	193	65	74	313	164
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	59	159	31	206	281	35	12	193	65	74	313	164
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	62	168	33	218	297	37	13	204	69	78	331	174
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	62	168	33	218	297	37	13	204	69	78	331	174
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	62	168	33	218	297	37	13	204	69	78	331	174
Saturation Flow Module:												
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.24	0.64	0.12	0.39	0.54	0.07	1.00	0.75	0.25	1.00	0.66	0.34
Final Sat.:	101	273	54	186	254	32	392	316	107	422	304	160
Capacity Analysis Module:												
Vol/Sat:	0.61	0.61	0.61	1.17	1.17	1.17	0.03	0.64	0.64	0.18	1.09	1.09
Crit Moves:		****			****			****			****	
Delay/Veh:	23.2	23.2	23.2	122.8	123	122.8	12.1	24.7	24.7	13.1	95.9	95.9
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	23.2	23.2	23.2	122.8	123	122.8	12.1	24.7	24.7	13.1	95.9	95.9
LOS by Move:	C	C	C	F	F	F	B	C	C	B	F	F
ApproachDel:		23.2			122.8			24.1			84.8	
Delay Adj:		1.00			1.00			1.00			1.00	
ApprAdjDel:		23.2			122.8			24.1			84.8	
LOS by Appr:		C			F			C			F	

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #6 Bethany/US 26 west ramp

Cycle (sec):	100	Critical Vol./Cap. (X):	0.952
Loss Time (sec):	12 (Y+R = 4 sec)	Average Delay (sec/veh):	44.1
Optimal Cycle:	140	Level Of Service:	D

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Split Phase			Split Phase		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1 0	1 0	0	0 0	1 1	0	0 0	0 0	0	0 1	0 0	1
Volume Module:												
Base Vol:	111	572	0	0	710	65	0	0	0	58	308	801
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	111	572	0	0	710	65	0	0	0	58	308	801
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	117	601	0	0	747	68	0	0	0	61	324	842
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	117	601	0	0	747	68	0	0	0	61	324	842
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	117	601	0	0	747	68	0	0	0	61	324	842
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	1.00	1.00	1.00	0.94	0.94	1.00	1.00	1.00	0.85	0.85	0.85
Lanes:	1.00	1.00	0.00	0.00	1.83	0.17	0.00	0.00	0.00	0.16	0.84	1.00
Final Sat.:	1805	1900	0	0	3269	298	0	0	0	256	1359	1615
Capacity Analysis Module:												
Vol/Sat:	0.06	0.32	0.00	0.00	0.23	0.23	0.00	0.00	0.00	0.24	0.24	0.52
Crit Moves:		****		****								****
Green/Cycle:	0.07	0.33	0.00	0.00	0.26	0.26	0.00	0.00	0.00	0.55	0.55	0.55
Volume/Cap:	0.88	0.95	0.00	0.00	0.88	0.88	0.00	0.00	0.00	0.44	0.44	0.95
Uniform Del:	45.9	32.6	0.0	0.0	35.6	35.6	0.0	0.0	0.0	13.4	13.4	21.4
IncremntDel:	44.9	24.5	0.0	0.0	10.0	10.0	0.0	0.0	0.0	0.3	0.3	19.5
Delay Adj:	1.00	1.00	0.00	0.00	1.00	1.00	0.00	0.00	0.00	1.00	1.00	1.00
Delay/Veh:	90.8	57.1	0.0	0.0	45.6	45.6	0.0	0.0	0.0	13.8	13.8	40.9
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	90.8	57.1	0.0	0.0	45.6	45.6	0.0	0.0	0.0	13.8	13.8	40.9
DesignQueue:	6	24	0	0	33	3	0	0	0	2	9	24

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #7 Bethany/US 26 east ramp

Cycle (sec): 100 Critical Vol./Cap. (X): 0.663
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 22.2
Optimal Cycle: 55 Level Of Service: C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Split Phase			Split Phase		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	0	0 1	0	1	0 2	0	0 1	0 1	0	0	0 0
Volume Module:												
Base Vol:	0	604	12	305	437	0	72	67	76	0	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	604	12	305	437	0	72	67	76	0	0	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
PHF Volume:	0	629	12	317	455	0	75	70	79	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	629	12	317	455	0	75	70	79	0	0	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	0	629	12	317	455	0	75	70	79	0	0	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	0.95	0.95	1.00	0.85	0.85	0.85	1.00	1.00	1.00
Lanes:	0.00	0.98	0.02	1.00	2.00	0.00	0.67	0.62	0.71	0.00	0.00	0.00
Final Sat.:	0	1859	35	1805	3610	0	1084	1012	1142	0	0	0
Capacity Analysis Module:												
Vol/Sat:	0.00	0.34	0.34	0.18	0.13	0.00	0.07	0.07	0.07	0.00	0.00	0.00
Crit Moves:		****		****				****				
Green/Cycle:	0.00	0.51	0.51	0.27	0.78	0.00	0.10	0.10	0.10	0.00	0.00	0.00
Volume/Cap:	0.00	0.66	0.66	0.66	0.16	0.00	0.66	0.66	0.66	0.00	0.00	0.00
Uniform Del:	0.0	18.1	18.1	32.8	2.9	0.0	43.1	43.1	43.1	0.0	0.0	0.0
IncremntDel:	0.0	1.7	1.7	3.5	0.0	0.0	4.9	4.9	4.9	0.0	0.0	0.0
Delay Adj:	0.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	0.00	0.00	0.00
Delay/Veh:	0.0	19.8	19.8	36.2	2.9	0.0	48.0	48.0	48.0	0.0	0.0	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	19.8	19.8	36.2	2.9	0.0	48.0	48.0	48.0	0.0	0.0	0.0
DesignQueue:	0	19	0	14	6	0	4	4	4	0	0	0

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #8 Bethany/Cornell

Cycle (sec): 100 Critical Vol./Cap. (X): 0.757
Loss Time (sec): 16 (Y+R = 4 sec) Average Delay (sec/veh): 30.4
Optimal Cycle: 78 Level Of Service: C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0	0 1	0	1	1 0	0	1	0 1	1	0	1 0 1
Volume Module:												
Base Vol:	34	36	100	327	18	183	173	812	14	48	611	386
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	34	36	100	327	18	183	173	812	14	48	611	386
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
PHF Volume:	35	37	104	340	19	190	180	845	15	50	636	402
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	35	37	104	340	19	190	180	845	15	50	636	402
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	35	37	104	340	19	190	180	845	15	50	636	402
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.89	0.89	0.96	0.96	0.85	0.95	0.95	0.95	0.95	1.00	0.85
Lanes:	1.00	0.26	0.74	1.89	0.11	1.00	1.00	1.97	0.03	1.00	1.00	1.00
Final Sat.:	1805	443	1246	3437	192	1615	1805	3536	63	1805	1900	1615
Capacity Analysis Module:												
Vol/Sat:	0.02	0.08	0.08	0.10	0.10	0.12	0.10	0.24	0.24	0.03	0.33	0.25
Crit Moves:			****			****	****				****	
Green/Cycle:	0.11	0.11	0.11	0.16	0.16	0.16	0.13	0.51	0.51	0.06	0.44	0.44
Volume/Cap:	0.18	0.76	0.76	0.64	0.64	0.76	0.76	0.46	0.46	0.46	0.76	0.56
Uniform Del:	40.4	43.2	43.2	39.6	39.6	40.4	41.9	15.5	15.5	45.5	23.4	20.7
IncremntDel:	0.4	16.2	16.2	2.4	2.4	12.4	13.0	0.2	0.2	3.1	4.0	1.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	40.8	59.4	59.4	42.0	42.0	52.8	54.9	15.7	15.7	48.6	27.3	21.7
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	40.8	59.4	59.4	42.0	42.0	52.8	54.9	15.7	15.7	48.6	27.3	21.7
DesignQueue:	2	2	5	16	1	9	9	24	0	3	22	13

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #9 Cornell/US 26 east ramp

Cycle (sec): 100 Critical Vol./Cap. (X): 0.656
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 17.1
Optimal Cycle: 54 Level Of Service: B

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Split Phase			Split Phase		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	0 2	0 1	1	0 2	0 0	0	1 0	1 0	0	0 0	0 0
Volume Module:												
Base Vol:	0	1104	572	27	1033	0	304	110	73	0	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	1104	572	27	1033	0	304	110	73	0	0	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	0	1163	603	28	1089	0	320	116	77	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	1163	603	28	1089	0	320	116	77	0	0	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	0	1163	603	28	1089	0	320	116	77	0	0	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	0.95	0.85	0.95	0.95	1.00	0.89	0.89	0.89	1.00	1.00	1.00
Lanes:	0.00	2.00	1.00	1.00	2.00	0.00	1.00	0.60	0.40	0.00	0.00	0.00
Final Sat.:	0	3610	1615	1805	3610	0	1697	1020	677	0	0	0
Capacity Analysis Module:												
Vol/Sat:	0.00	0.32	0.37	0.02	0.30	0.00	0.19	0.11	0.11	0.00	0.00	0.00
Crit Moves:			****	****			****					
Green/Cycle:	0.00	0.57	0.57	0.02	0.59	0.00	0.29	0.29	0.29	0.00	0.00	0.00
Volume/Cap:	0.00	0.57	0.66	0.66	0.51	0.00	0.66	0.40	0.40	0.00	0.00	0.00
Uniform Del:	0.0	13.7	14.8	48.4	11.9	0.0	31.3	28.6	28.6	0.0	0.0	0.0
IncremntDel:	0.0	0.4	1.7	31.5	0.2	0.0	2.0	0.2	0.2	0.0	0.0	0.0
Delay Adj:	0.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	0.00	0.00	0.00
Delay/Veh:	0.0	14.1	16.6	79.9	12.1	0.0	33.3	28.8	28.8	0.0	0.0	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	14.1	16.6	79.9	12.1	0.0	33.3	28.8	28.8	0.0	0.0	0.0
DesignQueue:	0	30	16	2	27	0	13	5	3	0	0	0

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #10 Cornell/US 26 west ramp

Cycle (sec): 100 Critical Vol./Cap. (X): 0.785
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 28.4
Optimal Cycle: 74 Level Of Service: C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Split Phase			Split Phase		
Rights:	Include			Include			Include			Ignore		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0 2	0 0	0	0 2	1 0	0	0 0	0 0	1	1 0	0 1
Volume Module:												
Base Vol:	291	904	0	0	498	319	0	0	0	424	463	85
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	291	904	0	0	498	319	0	0	0	424	463	85
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
PHF Adj:	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.00
PHF Volume:	302	940	0	0	518	332	0	0	0	441	481	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	302	940	0	0	518	332	0	0	0	441	481	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
Final Vol.:	302	940	0	0	518	332	0	0	0	441	481	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.95	1.00	1.00	0.91	0.77	1.00	1.00	1.00	0.85	0.85	1.00
Lanes:	1.00	2.00	0.00	0.00	2.00	1.00	0.00	0.00	0.00	1.00	1.00	1.00
Final Sat.:	1805	3610	0	0	3458	1470	0	0	0	1615	1615	1900
Capacity Analysis Module:												
Vol/Sat:	0.17	0.26	0.00	0.00	0.15	0.23	0.00	0.00	0.00	0.27	0.30	0.00
Crit Moves:	****					****					****	
Green/Cycle:	0.21	0.50	0.00	0.00	0.29	0.29	0.00	0.00	0.00	0.38	0.38	0.00
Volume/Cap:	0.79	0.52	0.00	0.00	0.52	0.79	0.00	0.00	0.00	0.72	0.79	0.00
Uniform Del:	37.2	16.9	0.0	0.0	29.8	32.8	0.0	0.0	0.0	26.5	27.4	0.0
IncremntDel:	10.2	0.3	0.0	0.0	0.3	3.9	0.0	0.0	0.0	2.0	3.6	0.0
Delay Adj:	1.00	1.00	0.00	0.00	1.00	1.00	0.00	0.00	0.00	1.00	1.00	0.00
Delay/Veh:	47.4	17.1	0.0	0.0	30.1	36.6	0.0	0.0	0.0	28.5	31.0	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	47.4	17.1	0.0	0.0	30.1	36.6	0.0	0.0	0.0	28.5	31.0	0.0
DesignQueue:	14	28	0	0	21	14	0	0	0	16	18	0

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #11 158th/Cornell

Cycle (sec): 90 Critical Vol./Cap. (X): 0.783
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 27.1
Optimal Cycle: 71 Level Of Service: C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Protected			Protected		
Rights:		Ovl			Include			Include			Include	
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	2	0	0	0	2	0	0	0	0	0	1	1	0	2	0	1	0	0
Volume Module:												
Base Vol:	604	0	889	0	0	0	0	604	557	443	349	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	604	0	889	0	0	0	0	604	557	443	349	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
PHF Volume:	621	0	915	0	0	0	0	621	573	456	359	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	621	0	915	0	0	0	0	621	573	456	359	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	621	0	915	0	0	0	0	621	573	456	359	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.75	1.00	1.00	1.00	1.00	0.88	0.88	0.92	1.00	1.00
Lanes:	2.00	0.00	2.00	0.00	0.00	0.00	0.00	1.04	0.96	2.00	1.00	0.00
Final Sat.:	3502	0	2842	0	0	0	0	1742	1608	3502	1900	0
Capacity Analysis Module:												
Vol/Sat:	0.18	0.00	0.32	0.00	0.00	0.00	0.00	0.36	0.36	0.13	0.19	0.00
Crit Moves:			****					****		****		
Green/Cycle:	0.24	0.00	0.41	0.00	0.00	0.00	0.00	0.46	0.46	0.17	0.62	0.00
Volume/Cap:	0.72	0.00	0.78	0.00	0.00	0.00	0.00	0.78	0.78	0.78	0.30	0.00
Uniform Del:	31.2	0.0	23.0	0.0	0.0	0.0	0.0	20.7	20.7	36.0	7.9	0.0
IncremntDel:	3.1	0.0	3.5	0.0	0.0	0.0	0.0	2.7	2.7	6.8	0.1	0.0
Delay Adj:	1.00	0.00	1.00	0.00	0.00	0.00	0.00	1.00	1.00	1.00	1.00	0.00
Delay/Veh:	34.3	0.0	26.5	0.0	0.0	0.0	0.0	23.5	23.5	42.8	8.1	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	34.3	0.0	26.5	0.0	0.0	0.0	0.0	23.5	23.5	42.8	8.1	0.0
DesignQueue:	25	0	29	0	0	0	0	18	17	20	7	0

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #12 158th/Walker

Cycle (sec): 120 Critical Vol./Cap. (X): 0.995
Loss Time (sec): 16 (Y+R = 4 sec) Average Delay (sec/veh): 61.3
Optimal Cycle: 180 Level Of Service: E

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:		Include			Include			Include			Ovl	
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0	1	1	0	1	0	1	1	0	1	0	1	1	0	1	0	1
Volume Module:												
Base Vol:	228	795	145	306	611	98	76	664	141	108	550	190
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	228	795	145	306	611	98	76	664	141	108	550	190
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
PHF Volume:	233	811	148	312	623	100	78	678	144	110	561	194
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	233	811	148	312	623	100	78	678	144	110	561	194
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	233	811	148	312	623	100	78	678	144	110	561	194
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.93	0.93	0.95	0.93	0.93	0.95	1.00	0.85	0.95	1.00	0.85
Lanes:	1.00	1.69	0.31	1.00	1.72	0.28	1.00	1.00	1.00	1.00	1.00	1.00
Final Sat.:	1805	2983	544	1805	3045	489	1805	1900	1615	1805	1900	1615
Capacity Analysis Module:												
Vol/Sat:	0.13	0.27	0.27	0.17	0.20	0.20	0.04	0.36	0.09	0.06	0.30	0.12
Crit Moves:		****		****				****		****		
Green/Cycle:	0.17	0.27	0.27	0.17	0.27	0.27	0.05	0.36	0.36	0.06	0.37	0.54
Volume/Cap:	0.75	1.00	1.00	1.00	0.75	0.75	0.81	1.00	0.25	1.00	0.81	0.22
Uniform Del:	47.1	43.5	43.5	49.5	39.8	39.8	56.2	38.4	27.1	56.3	34.2	14.4
IncremntDel:	9.5	27.8	27.8	49.5	3.2	3.2	37.4	33.2	0.2	84.0	6.9	0.1
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	56.6	71.3	71.3	99.0	43.0	43.0	93.6	71.6	27.3	140.3	41.1	14.6
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	56.6	71.3	71.3	99.0	43.0	43.0	93.6	71.6	27.3	140.3	41.1	14.6
DesignQueue:	13	42	8	18	32	5	5	32	6	7	26	6

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #13 143rd/Cornell

Cycle (sec): 100 Critical Vol./Cap. (X): 0.803
Loss Time (sec): 8 (Y+R = 4 sec) Average Delay (sec/veh): 25.5
Optimal Cycle: 66 Level Of Service: C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Prot+Permit			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	0	0	1	0	0	1	0	1	0	1	0
Volume Module:												
Base Vol:	0	0	0	331	0	178	316	685	0	0	623	448
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	331	0	178	316	685	0	0	623	448
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
PHF Volume:	0	0	0	356	0	192	340	737	0	0	671	482
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	356	0	192	340	737	0	0	671	482
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	0	0	0	356	0	192	340	737	0	0	671	482
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	0.95	1.00	0.85	0.39	1.00	1.00	1.00	1.00	0.85
Lanes:	0.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00
Final Sat.:	0	0	0	1805	0	1615	749	1900	0	0	1900	1615
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.20	0.00	0.12	0.45	0.39	0.00	0.00	0.35	0.30
Crit Moves:				****			****				****	
Green/Cycle:	0.00	0.00	0.00	0.25	0.00	0.25	0.67	0.67	0.00	0.00	0.44	0.44
Volume/Cap:	0.00	0.00	0.00	0.80	0.00	0.48	0.67	0.58	0.00	0.00	0.80	0.68
Uniform Del:	0.0	0.0	0.0	35.4	0.0	32.3	23.3	8.7	0.0	0.0	24.3	22.4
IncremntDel:	0.0	0.0	0.0	10.2	0.0	0.9	3.5	0.6	0.0	0.0	5.7	2.7
Delay Adj:	0.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00
Delay/Veh:	0.0	0.0	0.0	45.6	0.0	33.2	26.9	9.3	0.0	0.0	29.9	25.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	45.6	0.0	33.2	26.9	9.3	0.0	0.0	29.9	25.0
DesignQueue:	0	0	0	16	0	8	15	15	0	0	23	16

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #14 Murray/Cornell

Cycle (sec): 120 Critical Vol./Cap. (X): 0.980
Loss Time (sec): 16 (Y+R = 4 sec) Average Delay (sec/veh): 62.3
Optimal Cycle: 180 Level Of Service: E

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Ovl			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0	1	0	1	1	0	0	1	0	1	0
Volume Module:												
Base Vol:	246	251	424	125	209	43	228	544	227	230	626	60
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	246	251	424	125	209	43	228	544	227	230	626	60
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
PHF Volume:	253	258	437	129	215	44	235	560	234	237	645	62
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	253	258	437	129	215	44	235	560	234	237	645	62
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	253	258	437	129	215	44	235	560	234	237	645	62
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	1.00	0.85	0.95	0.98	0.98	0.95	1.00	0.85	0.95	0.99	0.99
Lanes:	1.00	1.00	1.00	1.00	0.83	0.17	1.00	1.00	1.00	1.00	0.91	0.09
Final Sat.:	1805	1900	1615	1805	1538	315	1805	1900	1615	1805	1711	164
Capacity Analysis Module:												
Vol/Sat:	0.14	0.14	0.27	0.07	0.14	0.14	0.13	0.29	0.14	0.13	0.38	0.38
Crit Moves:			****	****			****				****	
Green/Cycle:	0.17	0.28	0.28	0.07	0.17	0.17	0.13	0.36	0.53	0.16	0.38	0.38
Volume/Cap:	0.80	0.49	0.98	0.98	0.80	0.80	0.98	0.82	0.27	0.82	0.98	0.98
Uniform Del:	47.5	36.4	43.1	55.5	47.6	47.6	51.9	35.1	15.3	48.8	36.5	36.5
IncremntDel:	13.7	0.7	37.2	72.0	13.4	13.4	52.3	8.0	0.2	17.2	28.4	28.4
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	61.2	37.1	80.3	127.5	61.0	61.0	104.1	43.1	15.5	65.9	64.9	64.9
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	61.2	37.1	80.3	127.5	61.0	61.0	104.1	43.1	15.5	65.9	64.9	64.9
DesignQueue:	14	13	22	8	12	3	14	26	8	14	29	3

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #15 Barnes/Saltzman/Cornell

Cycle (sec): 100 Critical Vol./Cap. (X): 0.937
Loss Time (sec): 16 (Y+R = 4 sec) Average Delay (sec/veh): 57.3
Optimal Cycle: 134 Level Of Service: E

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Protected				Protected			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0	
Lanes:	1	0	1	0 1	1	0	0	1 0	1	0	1	0 1	1	0	1	0 1
Volume Module:																
Base Vol:	393	508	50		209	290	67		123	573	69		64	504	206	
Growth Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Initial Bse:	393	508	50		209	290	67		123	573	69		64	504	206	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	0.95	0.95	0.95		0.95	0.95	0.95		0.95	0.95	0.95		0.95	0.95	0.95	
PHF Volume:	414	535	53		220	305	71		129	603	73		67	531	217	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	414	535	53		220	305	71		129	603	73		67	531	217	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Final Vol.:	414	535	53		220	305	71		129	603	73		67	531	217	
Saturation Flow Module:																
Sat/Lane:	1900	1900	1900		1900	1900	1900		1900	1900	1900		1900	1900	1900	
Adjustment:	0.95	1.00	0.85		0.95	0.97	0.97		0.95	1.00	0.85		0.95	1.00	0.85	
Lanes:	1.00	1.00	1.00		1.00	0.81	0.19		1.00	1.00	1.00		1.00	1.00	1.00	
Final Sat.:	1805	1900	1615		1805	1498	349		1805	1900	1615		1805	1900	1615	
Capacity Analysis Module:																
Vol/Sat:	0.23	0.28	0.03		0.12	0.20	0.20		0.07	0.32	0.05		0.04	0.28	0.13	
Crit Moves:	****					****				****			****			
Green/Cycle:	0.24	0.32	0.32		0.14	0.22	0.22		0.08	0.34	0.34		0.04	0.30	0.30	
Volume/Cap:	0.94	0.87	0.10		0.87	0.94	0.94		0.93	0.94	0.13		0.94	0.93	0.45	
Uniform Del:	37.0	32.0	23.7		42.2	38.5	38.5		45.9	32.0	22.9		47.9	33.9	28.2	
IncremntDel:	27.7	13.2	0.1		26.8	29.5	29.5		54.9	21.4	0.1		84.7	21.6	0.7	
Delay Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Delay/Veh:	64.7	45.1	23.8		68.9	68.0	68.0		100.7	53.5	23.0		132.6	55.4	28.9	
User DelAdj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
AdjDel/Veh:	64.7	45.1	23.8		68.9	68.0	68.0		100.7	53.5	23.0		132.6	55.4	28.9	
DesignQueue:	18	22	2		11	14	3		7	24	3		4	22	9	

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #16 Murray/US 26 west ramp

Cycle (sec): 100 Critical Vol./Cap. (X): 0.787
Loss Time (sec): 8 (Y+R = 4 sec) Average Delay (sec/veh): 28.1
Optimal Cycle: 62 Level Of Service: C

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Permitted				Split Phase				Split Phase			
Rights:	Include				Ignore				Include				Include			
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0	
Lanes:	1	0	2	0 0	0	0	2	0 1	0	0	0	0 0	1	1	0	0 1
Volume Module:																
Base Vol:	271	896	0		0	893	183		0	0	0		339	19	507	
Growth Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Initial Bse:	271	896	0		0	893	183		0	0	0		339	19	507	
User Adj:	1.00	1.00	1.00		1.00	1.00	0.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	0.98	0.98	0.98		0.98	0.98	0.00		0.98	0.98	0.98		0.98	0.98	0.98	
PHF Volume:	276	912	0		0	909	0		0	0	0		345	19	516	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	276	912	0		0	909	0		0	0	0		345	19	516	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	0.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	0.00		1.00	1.00	1.00		1.00	1.00	1.00	
Final Vol.:	276	912	0		0	909	0		0	0	0		345	19	516	
Saturation Flow Module:																
Sat/Lane:	1900	1900	1900		1900	1900	1900		1900	1900	1900		1900	1900	1900	
Adjustment:	0.95	0.95	1.00		1.00	0.95	1.00		1.00	1.00	1.00		0.85	0.85	0.85	
Lanes:	1.00	2.00	0.00		0.00	2.00	1.00		0.00	0.00	0.00		1.90	0.10	1.00	
Final Sat.:	1805	3610	0		0	3610	1900		0	0	0		3061	169	1615	
Capacity Analysis Module:																
Vol/Sat:	0.15	0.25	0.00		0.00	0.25	0.00		0.00	0.00	0.00		0.11	0.11	0.32	
Crit Moves:	****					****									****	
Green/Cycle:	0.19	0.51	0.00		0.00	0.32	0.00		0.00	0.00	0.00		0.41	0.41	0.41	
Volume/Cap:	0.79	0.49	0.00		0.00	0.79	0.00		0.00	0.00	0.00		0.28	0.28	0.79	
Uniform Del:	38.3	15.8	0.0		0.0	30.9	0.0		0.0	0.0	0.0		19.9	19.9	25.9	
IncremntDel:	11.3	0.2	0.0		0.0	3.7	0.0		0.0	0.0	0.0		0.1	0.1	6.3	
Delay Adj:	1.00	1.00	0.00		0.00	1.00	0.00		0.00	0.00	0.00		1.00	1.00	1.00	
Delay/Veh:	49.6	16.0	0.0		0.0	34.6	0.0		0.0	0.0	0.0		20.0	20.0	32.2	
User DelAdj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
AdjDel/Veh:	49.6	16.0	0.0		0.0	34.6	0.0		0.0	0.0	0.0		20.0	20.0	32.2	
DesignQueue:	13	26	0		0	37	0		0	0	0		12	1	18	

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #17 Murray/US 26 east ramps

Cycle (sec): 100 Critical Vol./Cap. (X): 0.547
Loss Time (sec): 8 (Y+R = 4 sec) Average Delay (sec/veh): 15.2
Optimal Cycle: 35 Level Of Service: B

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Protected			Split Phase			Split Phase		
Rights:	Ignore			Ignore			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	0 2	0 1	1	0 2	0 0	0 1	0 0	0 1	0	0 0	0 0
Volume Module:												
Base Vol:	0	979	317	209	1038	0	104	0	141	0	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	979	317	209	1038	0	104	0	141	0	0	0
User Adj:	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.94	0.94	0.00	0.94	0.94	0.00	0.94	0.94	0.94	0.94	0.94	0.94
PHF Volume:	0	1038	0	222	1101	0	110	0	150	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	1038	0	222	1101	0	110	0	150	0	0	0
PCE Adj:	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	0	1038	0	222	1101	0	110	0	150	0	0	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	0.95	1.00	0.95	0.95	1.00	0.95	1.00	0.85	1.00	1.00	1.00
Lanes:	0.00	2.00	1.00	1.00	2.00	0.00	1.00	0.00	1.00	0.00	0.00	0.00
Final Sat.:	0	3610	1900	1805	3610	0	1809	0	1615	0	0	0
Capacity Analysis Module:												
Vol/Sat:	0.00	0.29	0.00	0.12	0.30	0.00	0.06	0.00	0.09	0.00	0.00	0.00
Crit Moves:		****		****					****			
Green/Cycle:	0.00	0.53	0.00	0.22	0.75	0.00	0.17	0.00	0.17	0.00	0.00	0.00
Volume/Cap:	0.00	0.55	0.00	0.55	0.41	0.00	0.36	0.00	0.55	0.00	0.00	0.00
Uniform Del:	0.0	15.8	0.0	34.3	4.5	0.0	36.7	0.0	38.0	0.0	0.0	0.0
IncremntDel:	0.0	0.3	0.0	1.6	0.1	0.0	0.7	0.0	2.3	0.0	0.0	0.0
Delay Adj:	0.00	1.00	0.00	1.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00	0.00
Delay/Veh:	0.0	16.1	0.0	35.8	4.6	0.0	37.4	0.0	40.3	0.0	0.0	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	16.1	0.0	35.8	4.6	0.0	37.4	0.0	40.3	0.0	0.0	0.0
DesignQueue:	0	29	0	10	17	0	5	0	7	0	0	0

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #18 Murray/Walker

Cycle (sec): 100 Critical Vol./Cap. (X): 0.983
Loss Time (sec): 16 (Y+R = 4 sec) Average Delay (sec/veh): 54.2
Optimal Cycle: 163 Level Of Service: D

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0 1	1 0	1	0 1	1 0	2	0 1	1 0	1	0 1	0 1
Volume Module:												
Base Vol:	159	938	175	112	664	97	316	863	200	161	641	161
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	159	938	175	112	664	97	316	863	200	161	641	161
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
PHF Volume:	163	962	179	115	681	99	324	885	205	165	657	165
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	163	962	179	115	681	99	324	885	205	165	657	165
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	163	962	179	115	681	99	324	885	205	165	657	165
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.93	0.93	0.95	0.93	0.93	0.92	0.92	0.92	0.95	1.00	0.85
Lanes:	1.00	1.69	0.31	1.00	1.75	0.25	2.00	1.62	0.38	1.00	1.00	1.00
Final Sat.:	1805	2971	553	1805	3092	449	3502	2849	660	1805	1900	1615
Capacity Analysis Module:												
Vol/Sat:	0.09	0.32	0.32	0.06	0.22	0.22	0.09	0.31	0.31	0.09	0.35	0.10
Crit Moves:		****		****			****				****	
Green/Cycle:	0.11	0.33	0.33	0.06	0.28	0.28	0.09	0.34	0.34	0.10	0.35	0.35
Volume/Cap:	0.79	0.98	0.98	0.98	0.79	0.79	0.98	0.90	0.90	0.90	0.98	0.29
Uniform Del:	43.1	33.3	33.3	46.7	33.3	33.3	45.2	31.2	31.2	44.4	32.1	23.4
IncremntDel:	18.0	22.3	22.3	77.7	4.3	4.3	44.9	9.5	9.5	40.0	30.5	0.3
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	61.1	55.6	55.6	124.4	37.6	37.6	90.1	40.7	40.7	84.4	62.6	23.7
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	61.1	55.6	55.6	124.4	37.6	37.6	90.1	40.7	40.7	84.4	62.6	23.7
DesignQueue:	8	39	7	6	29	4	17	35	8	8	26	6

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #19 Murray/Jenkins

Cycle (sec): 100 Critical Vol./Cap. (X): 0.889
Loss Time (sec): 16 (Y+R = 4 sec) Average Delay (sec/veh): 44.5
Optimal Cycle: 112 Level Of Service: D

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Ovl			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	2	0 1	1 0	1	0 1	1 0	1	0 1	0 1	1	0 0	1 0
Volume Module:												
Base Vol:	293	694	86	193	729	186	117	521	303	86	431	126
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	293	694	86	193	729	186	117	521	303	86	431	126
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
PHF Volume:	306	726	90	202	763	195	122	545	317	90	451	132
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	306	726	90	202	763	195	122	545	317	90	451	132
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	306	726	90	202	763	195	122	545	317	90	451	132
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.93	0.93	0.95	0.92	0.92	0.95	1.00	0.85	0.95	0.97	0.97
Lanes:	2.00	1.78	0.22	1.00	1.59	0.41	1.00	1.00	1.00	1.00	0.77	0.23
Final Sat.:	3502	3160	392	1805	2786	712	1805	1900	1615	1805	1420	416
Capacity Analysis Module:												
Vol/Sat:	0.09	0.23	0.23	0.11	0.27	0.27	0.07	0.29	0.20	0.05	0.32	0.32
Crit Moves:	****				****		****				****	
Green/Cycle:	0.10	0.27	0.27	0.13	0.31	0.31	0.08	0.37	0.47	0.06	0.36	0.36
Volume/Cap:	0.89	0.84	0.84	0.84	0.89	0.89	0.89	0.78	0.42	0.78	0.89	0.89
Uniform Del:	44.5	34.3	34.3	42.3	33.0	33.0	45.8	27.9	17.6	46.1	30.3	30.3
IncremntDel:	23.4	6.7	6.7	22.4	9.2	9.2	45.2	5.5	0.4	27.5	14.1	14.1
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	67.9	40.9	40.9	64.7	42.2	42.2	91.0	33.4	18.0	73.6	44.3	44.3
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	67.9	40.9	40.9	64.7	42.2	42.2	91.0	33.4	18.0	73.6	44.3	44.3
DesignQueue:	16	31	4	10	31	8	6	21	10	5	18	5

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #20 Murray/Farmington

Cycle (sec): 160 Critical Vol./Cap. (X): 1.070
Loss Time (sec): 16 (Y+R = 4 sec) Average Delay (sec/veh): 89.4
Optimal Cycle: 180 Level Of Service: F

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0 1	1 0	1	0 1	1 0	1	0 1	1 0	1	0 1	1 0
Volume Module:												
Base Vol:	296	799	144	227	1176	87	78	605	323	280	1020	145
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	296	799	144	227	1176	87	78	605	323	280	1020	145
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
PHF Volume:	302	815	147	232	1200	89	80	617	330	286	1041	148
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	302	815	147	232	1200	89	80	617	330	286	1041	148
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	302	815	147	232	1200	89	80	617	330	286	1041	148
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.93	0.93	0.95	0.94	0.94	0.95	0.90	0.90	0.95	0.93	0.93
Lanes:	1.00	1.69	0.31	1.00	1.86	0.14	1.00	1.30	0.70	1.00	1.75	0.25
Final Sat.:	1805	2988	539	1805	3327	247	1805	2230	1193	1805	3101	441
Capacity Analysis Module:												
Vol/Sat:	0.17	0.27	0.27	0.13	0.36	0.36	0.04	0.28	0.28	0.16	0.34	0.34
Crit Moves:	****				****			****		****		
Green/Cycle:	0.16	0.34	0.34	0.16	0.34	0.34	0.05	0.26	0.26	0.15	0.36	0.36
Volume/Cap:	1.07	0.81	0.81	0.81	1.07	1.07	0.93	1.07	1.07	1.07	0.93	0.93
Uniform Del:	67.5	48.6	48.6	65.1	53.0	53.0	76.0	59.3	59.3	68.2	49.5	49.5
IncremntDel:	73.4	4.4	4.4	16.2	46.9	46.9	75.5	50.8	50.8	74.9	12.7	12.7
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	140.9	53.0	53.0	81.3	xxxx	100.0	151.5	110	110.2	143.0	62.1	62.1
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	140.9	53.0	53.0	81.3	xxxx	100.0	151.5	110	110.2	143.0	62.1	62.1
DesignQueue:	24	52	9	18	78	6	7	44	23	23	65	9

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #21 Murray/6th

Average Delay (sec/veh): 1727.9 Worst Case Level Of Service: F

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Uncontrolled				Uncontrolled				Stop Sign				Stop Sign			
Rights:	Include				Include				Include				Include			
Lanes:	1	0	1	1 0	1	0	1	1 0	0	0	1!	0 0	0	0	1!	0 0
Volume Module:																
Base Vol:	57	1148		33	17	1585		19	1		0	27	62		8	88
Growth Adj:	1.00	1.00		1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00		1.00	1.00
Initial Bse:	57	1148		33	17	1585		19	1		0	27	62		8	88
User Adj:	1.00	1.00		1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00		1.00	1.00
PHF Adj:	0.95	0.95		0.95	0.95	0.95		0.95	0.95		0.95	0.95	0.95		0.95	0.95
PHF Volume:	60	1206		35	18	1665		20	1		0	28	65		8	92
Reduct Vol:	0	0		0	0	0		0	0		0	0	0		0	0
Final Vol.:	60	1206		35	18	1665		20	1		0	28	65		8	92
Critical Gap Module:																
Critical Gp:	4.1	xxxx	xxxxx		4.1	xxxx	xxxxx		7.5	xxxx		6.9	7.5	6.5		6.9
FollowUpTim:	2.2	xxxx	xxxxx		2.2	xxxx	xxxxx		3.5	xxxx		3.3	3.5	4.0		3.3
Capacity Module:																
Cnflict Vol:	1685	xxxx	xxxxx		1241	xxxx	xxxxx		2438	xxxx		842	2211	3064		620
Potent Cap.:	385	xxxx	xxxxx		568	xxxx	xxxxx		17	xxxx		312	25	13		436
Move Cap.:	385	xxxx	xxxxx		568	xxxx	xxxxx		4	xxxx		312	20	10		436
Level Of Service Module:																
Stopped Del:	16.1	xxxx	xxxxx		11.5	xxxx	xxxxx		xxxxx	xxxx	xxxxx		xxxxx	xxxx	xxxxx	
LOS by Move:	C	*		*	B	*		*	*	*		*	*	*		*
Movement:	LT - LTR - RT				LT - LTR - RT				LT - LTR - RT				LT - LTR - RT			
Shared Cap.:	xxxx	xxxx	xxxxx		xxxx	xxxx	xxxxx		xxxx		78	xxxxx	xxxx		38	xxxxx
Shrd StpDel:	xxxxx	xxxx	xxxxx		xxxxx	xxxx	xxxxx		xxxxx		76.2	xxxxx	xxxxx		1728	xxxxx
Shared LOS:	*	*		*	*	*		*	*		F	*	*		F	*
ApproachDel:	xxxxxx				xxxxxx				76.2				1727.9			
ApproachLOS:	*				*				F				F			

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #22 Murray/Allen

Cycle (sec): 120 Critical Vol./Cap. (X): 0.951
Loss Time (sec): 16 (Y+R = 4 sec) Average Delay (sec/veh): 51.0
Optimal Cycle: 162 Level Of Service: D

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Split Phase				Split Phase			
Rights:	Ovl				Include				Include				Include			
Min. Green:	0	0		0	0	0		0	0	0		0	0	0		0
Lanes:	1	0	2	0 1	2	0	1	1 0	1	0	1	1 0	1	0	1	0 1
Volume Module:																
Base Vol:	128	708		222	442	1156		111	83	165		41	390	259		510
Growth Adj:	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00
Initial Bse:	128	708		222	442	1156		111	83	165		41	390	259		510
User Adj:	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00
PHF Adj:	0.97	0.97		0.97	0.97	0.97		0.97	0.97	0.97		0.97	0.97	0.97		0.97
PHF Volume:	132	728		228	455	1189		114	85	170		42	401	266		525
Reduct Vol:	0	0		0	0	0		0	0	0		0	0	0		0
Reduced Vol:	132	728		228	455	1189		114	85	170		42	401	266		525
PCE Adj:	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00
MLF Adj:	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00
Final Vol.:	132	728		228	455	1189		114	85	170		42	401	266		525
Saturation Flow Module:																
Sat/Lane:	1900	1900		1900	1900	1900		1900	1900	1900		1900	1900	1900		1900
Adjustment:	0.95	0.95		0.85	0.92	0.94		0.94	0.95	0.92		0.92	0.95	1.00		0.85
Lanes:	1.00	2.00		1.00	2.00	1.83		0.17	1.00	1.60		0.40	1.00	1.00		1.00
Final Sat.:	1805	3610		1615	3502	3251		312	1805	2808		694	1805	1900		1615
Capacity Analysis Module:																
Vol/Sat:	0.07	0.20		0.14	0.13	0.37		0.37	0.05	0.06		0.06	0.22	0.14		0.33
Crit Moves:	****					****						****				****
Green/Cycle:	0.08	0.28		0.62	0.18	0.38		0.38	0.06	0.06		0.06	0.34	0.34		0.34
Volume/Cap:	0.95	0.72		0.23	0.72	0.95		0.95	0.74	0.95		0.95	0.65	0.41		0.95
Uniform Del:	55.2	38.9		10.0	46.3	35.8		35.8	55.2	56.0		56.0	33.4	30.2		38.5
IncremntDel:	61.4	2.5		0.1	4.0	14.3		14.3	22.3	46.6		46.6	2.5	0.4		26.6
Delay Adj:	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00
Delay/Veh:	116.6	41.4		10.1	50.3	50.2		50.2	77.5	103		102.6	35.9	30.7		65.1
User DelAdj:	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00
AdjDel/Veh:	116.6	41.4		10.1	50.3	50.2		50.2	77.5	103		102.6	35.9	30.7		65.1
DesignQueue:	8	37		6	26	54		5	5	11		3	19	12		25

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #23 Murray/Brockman/Beard

Cycle (sec): 100 Critical Vol./Cap. (X): 0.739
Loss Time (sec): 16 (Y+R = 4 sec) Average Delay (sec/veh): 31.4
Optimal Cycle: 75 Level Of Service: C

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	- T	- R		L	- T	- R		L	- T	- R		L	- T	- R	
Control:	Protected				Protected				Protected				Protected			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0	
Lanes:	1	0 1	1	0	1	0 1	1	0	1	0 0	1	0	1	0 0	1	0
Volume Module:																
Base Vol:	86	723	72		177	1102	102		52	109	48		151	224	118	
Growth Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Initial Bse:	86	723	72		177	1102	102		52	109	48		151	224	118	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	0.97	0.97	0.97		0.97	0.97	0.97		0.97	0.97	0.97		0.97	0.97	0.97	
PHF Volume:	88	744	74		182	1134	105		53	112	49		155	230	121	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	88	744	74		182	1134	105		53	112	49		155	230	121	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Final Vol.:	88	744	74		182	1134	105		53	112	49		155	230	121	
Saturation Flow Module:																
Sat/Lane:	1900	1900	1900		1900	1900	1900		1900	1900	1900		1900	1900	1900	
Adjustment:	0.95	0.94	0.94		0.95	0.94	0.94		0.95	0.95	0.95		0.95	0.95	0.95	
Lanes:	1.00	1.82	0.18		1.00	1.83	0.17		1.00	0.70	0.30		1.00	0.66	0.34	
Final Sat.:	1805	3241	322		1805	3261	302		1805	1261	552		1805	1180	621	
Capacity Analysis Module:																
Vol/Sat:	0.05	0.23	0.23		0.10	0.35	0.35		0.03	0.09	0.09		0.09	0.19	0.19	
Crit Moves:	****					****			****					****		
Green/Cycle:	0.07	0.37	0.37		0.16	0.47	0.47		0.04	0.15	0.15		0.15	0.26	0.26	
Volume/Cap:	0.74	0.62	0.62		0.62	0.74	0.74		0.74	0.58	0.58		0.58	0.74	0.74	
Uniform Del:	45.9	25.5	25.5		38.9	21.5	21.5		47.5	39.2	39.2		39.6	33.7	33.7	
IncremntDel:	21.5	0.9	0.9		3.9	1.8	1.8		33.0	2.9	2.9		3.0	6.1	6.1	
Delay Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Delay/Veh:	67.4	26.4	26.4		42.8	23.3	23.3		80.5	42.2	42.2		42.6	39.7	39.7	
User DelAdj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
AdjDel/Veh:	67.4	26.4	26.4		42.8	23.3	23.3		80.5	42.2	42.2		42.6	39.7	39.7	
DesignQueue:	5	27	3		9	36	3		3	5	2		7	10	5	

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #24 Nimbus/Scholls Ferry

Cycle (sec): 120 Critical Vol./Cap. (X): 0.994
Loss Time (sec): 16 (Y+R = 4 sec) Average Delay (sec/veh): 53.6
Optimal Cycle: 180 Level Of Service: D

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	- T	- R		L	- T	- R		L	- T	- R		L	- T	- R	
Control:	Split Phase				Split Phase				Protected				Protected			
Rights:	Ovl				Ovl				Ovl				Ovl			
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0	
Lanes:	0	1 0	0	1	1	1 0	0	1	1	0 2	0	1	1	0 2	0	1
Volume Module:																
Base Vol:	148	31	203		543	30	543		133	1135	48		54	1478	111	
Growth Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Initial Bse:	148	31	203		543	30	543		133	1135	48		54	1478	111	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	0.98	0.98	0.98		0.98	0.98	0.98		0.98	0.98	0.98		0.98	0.98	0.98	
PHF Volume:	151	32	207		554	31	554		136	1158	49		55	1508	113	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	151	32	207		554	31	554		136	1158	49		55	1508	113	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Final Vol.:	151	32	207		554	31	554		136	1158	49		55	1508	113	
Saturation Flow Module:																
Sat/Lane:	1900	1900	1900		1900	1900	1900		1900	1900	1900		1900	1900	1900	
Adjustment:	0.96	0.96	0.85		0.96	0.96	0.85		0.95	0.95	0.85		0.95	0.95	0.85	
Lanes:	0.83	0.17	1.00		1.89	0.11	1.00		1.00	2.00	1.00		1.00	2.00	1.00	
Final Sat.:	1505	319	1615		3437	192	1615		1805	3610	1615		1805	3610	1615	
Capacity Analysis Module:																
Vol/Sat:	0.10	0.10	0.13		0.16	0.16	0.34		0.08	0.32	0.03		0.03	0.42	0.07	
Crit Moves:		****					****		****					****		
Green/Cycle:	0.10	0.10	0.14		0.27	0.27	0.35		0.08	0.45	0.55		0.04	0.42	0.69	
Volume/Cap:	0.99	0.99	0.89		0.60	0.60	0.99		0.99	0.71	0.05		0.71	0.99	0.10	
Uniform Del:	53.9	53.9	50.4		38.2	38.2	39.2		55.4	26.4	12.3		56.7	34.6	6.2	
IncremntDel:	64.3	64.3	31.5		1.0	1.0	36.4		74.8	1.5	0.0		25.8	21.5	0.0	
Delay Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Delay/Veh:	118.2	118	81.9		39.2	39.2	75.5		130.3	27.9	12.3		82.5	56.1	6.2	
User DelAdj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
AdjDel/Veh:	118.2	118	81.9		39.2	39.2	75.5		130.3	27.9	12.3		82.5	56.1	6.2	
DesignQueue:	9	2	12		28	2	26		9	46	1		4	65	2	

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #25 Hall/Scholls Ferry

Cycle (sec): 120 Critical Vol./Cap. (X): 0.989
Loss Time (sec): 16 (Y+R = 4 sec) Average Delay (sec/veh): 65.9
Optimal Cycle: 180 Level Of Service: E

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1 0	1	0	1 0	1	1 0	1 0	1	1 0	1 0	1	1 0
Volume Module:												
Base Vol:	319	508	288	250	440	115	171	736	245	286	712	207
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	319	508	288	250	440	115	171	736	245	286	712	207
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	336	536	304	264	464	121	180	776	258	302	751	218
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	336	536	304	264	464	121	180	776	258	302	751	218
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	336	536	304	264	464	121	180	776	258	302	751	218
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.90	0.90	0.95	0.92	0.92	0.95	0.91	0.91	0.95	0.92	0.92
Lanes:	1.00	1.28	0.72	1.00	1.59	0.41	1.00	1.50	0.50	1.00	1.55	0.45
Final Sat.:	1805	2179	1236	1805	2775	724	1805	2609	867	1805	2703	785
Capacity Analysis Module:												
Vol/Sat:	0.19	0.25	0.25	0.15	0.17	0.17	0.10	0.30	0.30	0.17	0.28	0.28
Crit Moves:		****		****				****		****		
Green/Cycle:	0.21	0.25	0.25	0.15	0.19	0.19	0.12	0.30	0.30	0.17	0.35	0.35
Volume/Cap:	0.89	0.99	0.99	0.99	0.89	0.89	0.80	0.99	0.99	0.99	0.80	0.80
Uniform Del:	46.1	44.9	44.9	51.0	47.5	47.5	51.1	41.8	41.8	49.7	35.6	35.6
IncremntDel:	22.2	28.0	28.0	51.8	14.3	14.3	18.6	25.0	25.0	48.3	4.0	4.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	68.3	72.9	72.9	102.8	61.8	61.8	69.7	66.8	66.8	98.0	39.6	39.6
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	68.3	72.9	72.9	102.8	61.8	61.8	69.7	66.8	66.8	98.0	39.6	39.6
DesignQueue:	19	29	16	16	26	7	11	39	13	17	35	10

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #26 Allen/Schools Ferry

Cycle (sec): 120 Critical Vol./Cap. (X): 0.980
Loss Time (sec): 16 (Y+R = 4 sec) Average Delay (sec/veh): 64.5
Optimal Cycle: 180 Level Of Service: E

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Ovl			Ovl			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1 0	0	1 0	1 0	1	0 1	1 0	1	0 1	1 0	1	0 1
Volume Module:												
Base Vol:	123	565	121	43	624	156	223	581	299	173	362	29
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	123	565	121	43	624	156	223	581	299	173	362	29
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
PHF Volume:	131	601	129	46	664	166	237	618	318	184	385	31
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	131	601	129	46	664	166	237	618	318	184	385	31
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	131	601	129	46	664	166	237	618	318	184	385	31
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.97	0.97	0.95	1.00	0.85	0.95	1.00	0.85	0.95	0.99	0.99
Lanes:	1.00	0.82	0.18	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.93	0.07
Final Sat.:	1805	1522	327	1805	1900	1615	1805	1900	1615	1805	1739	140
Capacity Analysis Module:												
Vol/Sat:	0.07	0.39	0.39	0.03	0.35	0.10	0.13	0.33	0.20	0.10	0.22	0.22
Crit Moves:	****				****			****		****		
Green/Cycle:	0.07	0.40	0.40	0.03	0.36	0.52	0.16	0.33	0.41	0.10	0.27	0.27
Volume/Cap:	0.98	0.98	0.98	0.98	0.98	0.20	0.81	0.98	0.48	0.98	0.81	0.81
Uniform Del:	55.5	35.2	35.2	58.4	38.2	15.5	48.5	39.7	26.4	53.6	40.7	40.7
IncremntDel:	71.4	26.9	26.9	121.7	29.5	0.1	15.3	30.7	0.6	59.6	9.3	9.3
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	126.9	62.1	62.1	180.1	67.6	15.6	63.8	70.4	26.9	113.2	49.9	49.9
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	126.9	62.1	62.1	180.1	67.6	15.6	63.8	70.4	26.9	113.2	49.9	49.9
DesignQueue:	8	27	6	3	31	5	14	30	13	11	20	2

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #27 Oleson/Vermont

Cycle (sec): 100 Critical Vol./Cap. (X): 0.761
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 25.1
Optimal Cycle: 69 Level Of Service: C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Prot+Permit			Prot+Permit			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0	0 1	0	1	0	1	0	0 1	0	1	0
Volume Module:												
Base Vol:	18	304	247	174	387	20	13	6	20	325	17	167
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	18	304	247	174	387	20	13	6	20	325	17	167
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	19	320	260	183	407	21	14	6	21	342	18	176
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	19	320	260	183	407	21	14	6	21	342	18	176
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	19	320	260	183	407	21	14	6	21	342	18	176
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.42	0.93	0.93	0.36	0.99	0.99	0.54	0.88	0.88	0.75	0.86	0.86
Lanes:	1.00	0.55	0.45	1.00	0.95	0.05	1.00	0.22	0.78	1.00	0.09	0.91
Final Sat.:	795	978	795	676	1794	93	1034	373	1305	1417	152	1489
Capacity Analysis Module:												
Vol/Sat:	0.02	0.33	0.33	0.27	0.23	0.23	0.01	0.02	0.02	0.24	0.12	0.12
Crit Moves:		****		****						****		
Green/Cycle:	0.45	0.43	0.43	0.60	0.54	0.54	0.32	0.32	0.32	0.32	0.32	0.32
Volume/Cap:	0.05	0.76	0.76	0.45	0.42	0.42	0.04	0.05	0.05	0.76	0.37	0.37
Uniform Del:	15.6	24.2	24.2	13.5	13.8	13.8	23.6	23.7	23.7	30.7	26.5	26.5
IncremntDel:	0.1	4.5	4.5	0.8	0.3	0.3	0.1	0.0	0.0	7.5	0.5	0.5
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	15.6	28.7	28.7	14.3	14.1	14.1	23.7	23.7	23.7	38.2	26.9	26.9
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	15.6	28.7	28.7	14.3	14.1	14.1	23.7	23.7	23.7	38.2	26.9	26.9
DesignQueue:	1	11	9	9	11	1	1	0	1	14	1	7

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #28 Oleson/Garden Home

Cycle (sec): 100 Critical Vol./Cap. (X): 0.950
Loss Time (sec): 16 (Y+R = 4 sec) Average Delay (sec/veh): 42.8
Optimal Cycle: 140 Level Of Service: D

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Prot+Permit			Prot+Permit			Prot+Permit			Prot+Permit		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0	1 0	1	1	0	1	0	1 0	1	1	0
Volume Module:												
Base Vol:	212	369	94	147	462	139	132	386	295	112	330	120
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	212	369	94	147	462	139	132	386	295	112	330	120
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.70
PHF Adj:	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
PHF Volume:	228	396	101	158	496	149	142	415	317	120	354	90
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	228	396	101	158	496	149	142	415	317	120	354	90
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	228	396	101	158	496	149	142	415	317	120	354	90
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.34	1.00	0.85	0.47	0.97	0.97	0.32	1.00	0.85	0.34	0.97	0.97
Lanes:	1.00	1.00	1.00	1.00	0.77	0.23	1.00	1.00	1.00	1.00	0.80	0.20
Final Sat.:	648	1900	1615	887	1410	424	599	1900	1615	655	1469	374
Capacity Analysis Module:												
Vol/Sat:	0.35	0.21	0.06	0.18	0.35	0.35	0.24	0.22	0.20	0.18	0.24	0.24
Crit Moves:	****				****		****				****	
Green/Cycle:	0.49	0.35	0.35	0.54	0.37	0.37	0.38	0.26	0.26	0.33	0.25	0.25
Volume/Cap:	0.72	0.59	0.18	0.33	0.95	0.95	0.63	0.85	0.76	0.55	0.95	0.95
Uniform Del:	21.8	26.3	22.2	13.4	30.6	30.6	24.4	35.2	34.3	25.8	36.7	36.7
IncremntDel:	7.9	1.4	0.1	0.4	22.9	22.9	5.6	12.9	8.0	3.0	29.2	29.2
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	29.7	27.7	22.4	13.8	53.4	53.4	30.0	48.1	42.2	28.8	65.9	65.9
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	29.7	27.7	22.4	13.8	53.4	53.4	30.0	48.1	42.2	28.8	65.9	65.9
DesignQueue:	11	15	4	8	19	6	7	18	14	6	16	4

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #29 Cedar Hills/Barnes

Cycle (sec): 140 Critical Vol./Cap. (X): 1.002
Loss Time (sec): 16 (Y+R = 4 sec) Average Delay (sec/veh): 68.8
Optimal Cycle: 180 Level Of Service: E

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Protected				Protected			
Rights:	Ovl				Include				Ovl				Include			
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0	
Lanes:	1	0	1	0 1	1	0	0	1 0	1	0	1	0 1	2	0	0	1 0
Volume Module:																
Base Vol:	453	432	263		166	318	13		12	411	377		705	542	251	
Growth Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Initial Bse:	453	432	263		166	318	13		12	411	377		705	542	251	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	0.98	0.98	0.98		0.98	0.98	0.98		0.98	0.98	0.98		0.98	0.98	0.98	
PHF Volume:	462	441	268		169	324	13		12	419	385		719	553	256	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	462	441	268		169	324	13		12	419	385		719	553	256	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Final Vol.:	462	441	268		169	324	13		12	419	385		719	553	256	
Saturation Flow Module:																
Sat/Lane:	1900	1900	1900		1900	1900	1900		1900	1900	1900		1900	1900	1900	
Adjustment:	0.95	1.00	0.85		0.95	0.99	0.99		0.95	1.00	0.85		0.92	0.95	0.95	
Lanes:	1.00	1.00	1.00		1.00	0.96	0.04		1.00	1.00	1.00		2.00	0.68	0.32	
Final Sat.:	1805	1900	1615		1805	1816	73		1805	1900	1615		3502	1238	573	
Capacity Analysis Module:																
Vol/Sat:	0.26	0.23	0.17		0.09	0.18	0.18		0.01	0.22	0.24		0.21	0.45	0.45	
Crit Moves:	****					****			****					****		
Green/Cycle:	0.26	0.31	0.53		0.12	0.18	0.18		0.01	0.23	0.49		0.22	0.45	0.45	
Volume/Cap:	1.00	0.75	0.31		0.75	1.00	1.00		1.00	0.94	0.49		0.94	1.00	1.00	
Uniform Del:	52.1	43.6	18.8		59.2	57.5	57.5		69.5	52.7	23.9		53.9	38.8	38.8	
IncremntDel:	42.5	5.4	0.2		13.3	49.7	49.7		261.0	28.4	0.5		19.7	32.3	32.3	
Delay Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Delay/Veh:	94.6	49.0	19.0		72.5	107	107.2		330.5	81.0	24.4		73.5	71.1	71.1	
User DelAdj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
AdjDel/Veh:	94.6	49.0	19.0		72.5	107	107.2		330.5	81.0	24.4		73.5	71.1	71.1	
DesignQueue:	29	25	10		12	22	1		1	26	16		46	27	12	

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #30 Cedar Hills/US 26 west ramps

Cycle (sec): 60 Critical Vol./Cap. (X): 0.628
Loss Time (sec): 8 (Y+R = 4 sec) Average Delay (sec/veh): 12.8
Optimal Cycle: 38 Level Of Service: B

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Permitted				Permitted				Split Phase				Split Phase			
Rights:	Include				Ignore				Include				Include			
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0	
Lanes:	0	0	1	1 0	0	0	2	0 2	0	0	0	0 0	2	0	0	1
Volume Module:																
Base Vol:	0	821	169		0	835	301		0	0	0		229	0	381	
Growth Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Initial Bse:	0	821	169		0	835	301		0	0	0		229	0	381	
User Adj:	1.00	1.00	1.00		1.00	1.00	0.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	0.95	0.95	0.95		0.95	0.95	0.00		0.95	0.95	0.95		0.95	0.95	0.95	
PHF Volume:	0	864	178		0	879	0		0	0	0		241	0	401	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	0	864	178		0	879	0		0	0	0		241	0	401	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	0.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	0.00		1.00	1.00	1.00		1.00	1.00	1.00	
Final Vol.:	0	864	178		0	879	0		0	0	0		241	0	401	
Saturation Flow Module:																
Sat/Lane:	1900	1900	1900		1900	1900	1900		1900	1900	1900		1900	1900	1900	
Adjustment:	1.00	0.93	0.93		1.00	0.95	0.88		1.00	1.00	1.00		0.92	1.00	0.85	
Lanes:	0.00	1.66	0.34		0.00	2.00	2.00		0.00	0.00	0.00		2.00	0.00	1.00	
Final Sat.:	0	2915	601		0	3610	3344		0	0	0		3502	0	1615	
Capacity Analysis Module:																
Vol/Sat:	0.00	0.30	0.30		0.00	0.24	0.00		0.00	0.00	0.00		0.07	0.00	0.25	
Crit Moves:		****													****	
Green/Cycle:	0.00	0.47	0.47		0.00	0.47	0.00		0.00	0.00	0.00		0.40	0.00	0.40	
Volume/Cap:	0.00	0.63	0.63		0.00	0.52	0.00		0.00	0.00	0.00		0.17	0.00	0.63	
Uniform Del:	0.0	11.9	11.9		0.0	11.1	0.0		0.0	0.0	0.0		11.8	0.0	14.6	
IncremntDel:	0.0	0.8	0.8		0.0	0.3	0.0		0.0	0.0	0.0		0.1	0.0	2.0	
Delay Adj:	0.00	1.00	1.00		0.00	1.00	0.00		0.00	0.00	0.00		1.00	0.00	1.00	
Delay/Veh:	0.0	12.7	12.7		0.0	11.4	0.0		0.0	0.0	0.0		11.8	0.0	16.6	
User DelAdj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
AdjDel/Veh:	0.0	12.7	12.7		0.0	11.4	0.0		0.0	0.0	0.0		11.8	0.0	16.6	
DesignQueue:	0	16	3		0	16	0		0	0	0		5	0	9	

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #31 Cedar Hills/US 26 east ramps

Average Delay (sec/veh): 690.9 Worst Case Level Of Service: F

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Uncontrolled				Uncontrolled				Stop Sign				Stop Sign			
Rights:	Include				Include				Include				Include			
Lanes:	0	0	2	0 1	1	0	2	0 0	0	0	1!	0 0	0	0	0	0 0
Volume Module:																
Base Vol:	0	1010		321	225	974		0	51		2	122	0		0	0
Growth Adj:	1.00	1.00		1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00		1.00	1.00
Initial Bse:	0	1010		321	225	974		0	51		2	122	0		0	0
User Adj:	1.00	1.00		1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00		1.00	1.00
PHF Adj:	0.94	0.94		0.94	0.94	0.94		0.94	0.94		0.94	0.94	0.94		0.94	0.94
PHF Volume:	0	1070		340	238	1032		0	54		2	129	0		0	0
Reduct Vol:	0	0		0	0	0		0	0		0	0	0		0	0
Final Vol.:	0	1070		340	238	1032		0	54		2	129	0		0	0
Critical Gap Module:																
Critical Gp:	xxxxx	xxxx	xxxxx		4.1	xxxx	xxxxx		6.8	6.5		6.9	xxxxx	xxxx	xxxxx	
FollowUpTim:	xxxxx	xxxx	xxxxx		2.2	xxxx	xxxxx		3.5	4.0		3.3	xxxxx	xxxx	xxxxx	
Capacity Module:																
Cnflict Vol:	xxxx	xxxx	xxxxx		1410	xxxx	xxxxx		2043	2918		516	xxxx	xxxx	xxxxx	
Potent Cap.:	xxxx	xxxx	xxxxx		490	xxxx	xxxxx		50	16		509	xxxx	xxxx	xxxxx	
Move Cap.:	xxxx	xxxx	xxxxx		490	xxxx	xxxxx		31	8		509	xxxx	xxxx	xxxxx	
Level Of Service Module:																
Stopped Del:	xxxxx	xxxx	xxxxx		19.1	xxxx	xxxxx		xxxxx	xxxx	xxxxx		xxxxx	xxxx	xxxxx	
LOS by Move:	*	*	*		C	*	*		*	*	*		*	*	*	
Movement:	LT - LTR - RT				LT - LTR - RT				LT - LTR - RT				LT - LTR - RT			
Shared Cap.:	xxxx	xxxx	xxxxx		xxxx	xxxx	xxxxx		xxxx		82		xxxxx	xxxx	xxxx	xxxxx
Shrd StpDel:	xxxxx	xxxx	xxxxx		xxxxx	xxxx	xxxxx		xxxxx		691		xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*		*	*	*		*		F		*	*	*	
ApproachDel:	xxxxxx				xxxxxx				690.9				xxxxxx			
ApproachLOS:	*				*				F				*			

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #32 Cedar Hills/Butner

Cycle (sec): 100 Critical Vol./Cap. (X): 0.828
Loss Time (sec): 16 (Y+R = 4 sec) Average Delay (sec/veh): 34.7
Optimal Cycle: 93 Level Of Service: C

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Permitted				Permitted			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0		0	0	0		0	0	0		0	0	0		0
Lanes:	1	0	2	0 1	1	0	1	1 0	0	0	1!	0 0	0	0	1!	0 0
Volume Module:																
Base Vol:	45	945		36	81	775		172	196		159	47	24		79	150
Growth Adj:	1.00	1.00		1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00		1.00	1.00
Initial Bse:	45	945		36	81	775		172	196		159	47	24		79	150
User Adj:	1.00	1.00		1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00		1.00	1.00
PHF Adj:	0.91	0.91		0.91	0.91	0.91		0.91	0.91		0.91	0.91	0.91		0.91	0.91
PHF Volume:	50	1040		40	89	853		189	216		175	52	26		87	165
Reduct Vol:	0	0		0	0	0		0	0		0	0	0		0	0
Reduced Vol:	50	1040		40	89	853		189	216		175	52	26		87	165
PCE Adj:	1.00	1.00		1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00		1.00	1.00
MLF Adj:	1.00	1.00		1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00		1.00	1.00
Final Vol.:	50	1040		40	89	853		189	216		175	52	26		87	165
Saturation Flow Module:																
Sat/Lane:	1900	1900		1900	1900	1900		1900	1900		1900	1900	1900		1900	1900
Adjustment:	0.95	0.95		0.85	0.95	0.92		0.92	0.65		0.65	0.65	0.86		0.86	0.86
Lanes:	1.00	2.00		1.00	1.00	1.64		0.36	0.49		0.39	0.12	0.09		0.31	0.60
Final Sat.:	1805	3610		1615	1805	2875		637	603		488	145	154		514	974
Capacity Analysis Module:																
Vol/Sat:	0.03	0.29		0.02	0.05	0.30		0.30	0.36		0.36	0.36	0.17		0.17	0.17
Crit Moves:		****			****						****					
Green/Cycle:	0.03	0.35		0.35	0.06	0.37		0.37	0.43		0.43	0.43	0.43		0.43	0.43
Volume/Cap:	0.80	0.83		0.07	0.83	0.80		0.80	0.83		0.83	0.83	0.39		0.39	0.39
Uniform Del:	47.9	29.9		21.8	46.5	28.0		28.0	25.1		25.1	25.1	19.4		19.4	19.4
IncremntDel:	49.2	4.7		0.1	39.0	3.5		3.5	10.4		10.4	10.4	0.4		0.4	0.4
Delay Adj:	1.00	1.00		1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00		1.00	1.00
Delay/Veh:	97.1	34.6		21.9	85.5	31.5		31.5	35.5		35.5	35.5	19.7		19.7	19.7
User DelAdj:	1.00	1.00		1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00		1.00	1.00
AdjDel/Veh:	97.1	34.6		21.9	85.5	31.5		31.5	35.5		35.5	35.5	19.7		19.7	19.7
DesignQueue:	3	41		1	5	32		7	7		6	2	1		3	5

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #33 Cedar Hills/Walker

Cycle (sec): 100 Critical Vol./Cap. (X): 1.006
Loss Time (sec): 16 (Y+R = 4 sec) Average Delay (sec/veh): 58.2
Optimal Cycle: 180 Level Of Service: E

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0 2	0 1	1	0 2	0 1	1	0 1	0 1	1	0 1	1 0
Volume Module:												
Base Vol:	209	899	416	112	559	84	144	712	132	242	629	97
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	209	899	416	112	559	84	144	712	132	242	629	97
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
PHF Volume:	213	917	424	114	570	86	147	727	135	247	642	99
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	213	917	424	114	570	86	147	727	135	247	642	99
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	213	917	424	114	570	86	147	727	135	247	642	99
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.95	0.85	0.95	0.95	0.85	0.95	1.00	0.85	0.95	0.93	0.93
Lanes:	1.00	2.00	1.00	1.00	2.00	1.00	1.00	1.00	1.00	1.00	1.73	0.27
Final Sat.:	1805	3610	1615	1805	3610	1615	1805	1900	1615	1805	3065	473
Capacity Analysis Module:												
Vol/Sat:	0.12	0.25	0.26	0.06	0.16	0.05	0.08	0.38	0.08	0.14	0.21	0.21
Crit Moves:			****	****				****		****		
Green/Cycle:	0.14	0.26	0.26	0.06	0.19	0.19	0.14	0.38	0.38	0.14	0.37	0.37
Volume/Cap:	0.85	0.97	1.01	1.01	0.85	0.29	0.56	1.01	0.22	1.01	0.56	0.56
Uniform Del:	42.1	36.6	37.0	46.9	39.4	35.1	39.8	31.0	21.0	43.2	25.0	25.0
IncremntDel:	23.5	23.0	45.4	86.2	10.3	0.5	2.8	35.0	0.2	59.0	0.6	0.6
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	65.5	59.6	82.3	133.1	49.7	35.6	42.7	66.0	21.1	102.2	25.5	25.5
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	65.5	59.6	82.3	133.1	49.7	35.6	42.7	66.0	21.1	102.2	25.5	25.5
DesignQueue:	11	40	18	6	27	4	7	28	5	12	24	4

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #34 Cedar Hills/Jenkins

Cycle (sec): 120 Critical Vol./Cap. (X): 0.876
Loss Time (sec): 16 (Y+R = 4 sec) Average Delay (sec/veh): 40.0
Optimal Cycle: 118 Level Of Service: D

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Split Phase			Split Phase		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0 1	1 0	1	0 1	1 0	1	1 0	0 1	0	0 1!	0 0
Volume Module:												
Base Vol:	318	939	16	6	848	149	595	7	418	10	11	7
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	318	939	16	6	848	149	595	7	418	10	11	7
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
PHF Volume:	330	973	17	6	879	154	617	7	433	10	11	7
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	330	973	17	6	879	154	617	7	433	10	11	7
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	330	973	17	6	879	154	617	7	433	10	11	7
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.95	0.95	0.95	0.93	0.93	0.95	0.95	0.85	0.95	0.95	0.95
Lanes:	1.00	1.97	0.03	1.00	1.70	0.30	1.98	0.02	1.00	0.36	0.39	0.25
Final Sat.:	1805	3537	62	1805	3004	526	3581	41	1615	644	708	451
Capacity Analysis Module:												
Vol/Sat:	0.18	0.28	0.28	0.00	0.29	0.29	0.17	0.17	0.27	0.02	0.02	0.02
Crit Moves:	****				****				****		****	
Green/Cycle:	0.21	0.54	0.54	0.01	0.33	0.33	0.31	0.31	0.31	0.02	0.02	0.02
Volume/Cap:	0.88	0.51	0.51	0.51	0.88	0.88	0.56	0.56	0.88	0.88	0.88	0.88
Uniform Del:	46.0	17.8	17.8	59.4	37.6	37.6	34.9	34.9	39.5	58.8	58.8	58.8
IncremntDel:	19.9	0.2	0.2	33.8	7.6	7.6	0.7	0.7	16.0	108.3	108	108.3
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	65.9	18.0	18.0	93.2	45.2	45.2	35.6	35.6	55.5	167.1	167	167.1
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	65.9	18.0	18.0	93.2	45.2	45.2	35.6	35.6	55.5	167.1	167	167.1
DesignQueue:	18	32	1	0	42	7	30	0	21	1	1	0

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #35 Cedar Hills/Hall

Cycle (sec): 100 Critical Vol./Cap. (X): 0.745
Loss Time (sec): 16 (Y+R = 4 sec) Average Delay (sec/veh): 30.9
Optimal Cycle: 76 Level Of Service: C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Ovl		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0 1	0	1	0 1	1 0	1	0 1	1 0	1	0 1	0 1
Volume Module:												
Base Vol:	101	451	70	406	760	49	88	90	110	81	137	647
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	101	451	70	406	760	49	88	90	110	81	137	647
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	106	473	73	426	797	51	92	94	115	85	144	679
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	106	473	73	426	797	51	92	94	115	85	144	679
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	106	473	73	426	797	51	92	94	115	85	144	679
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.93	0.93	0.95	0.94	0.94	0.95	0.95	0.81	0.95	1.00	0.85
Lanes:	1.00	1.73	0.27	1.00	1.88	0.12	1.00	1.00	1.00	1.00	1.00	1.00
Final Sat.:	1805	3065	473	1805	3362	215	1805	1805	1534	1805	1900	1615
Capacity Analysis Module:												
Vol/Sat:	0.06	0.15	0.15	0.24	0.24	0.24	0.05	0.05	0.07	0.05	0.08	0.42
Crit Moves:		****		****			****					****
Green/Cycle:	0.10	0.21	0.21	0.32	0.42	0.42	0.07	0.19	0.19	0.12	0.25	0.56
Volume/Cap:	0.56	0.74	0.74	0.74	0.56	0.56	0.74	0.27	0.39	0.39	0.31	0.74
Uniform Del:	42.6	37.2	37.2	30.5	22.0	22.0	45.7	34.3	35.1	40.5	30.6	16.4
IncremntDel:	3.9	4.2	4.2	5.3	0.5	0.5	21.6	0.2	0.5	1.1	0.4	3.4
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	46.6	41.3	41.3	35.8	22.5	22.5	67.3	34.4	35.6	41.6	31.0	19.7
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	46.6	41.3	41.3	35.8	22.5	22.5	67.3	34.4	35.6	41.6	31.0	19.7
DesignQueue:	5	22	3	17	27	2	5	4	5	4	6	18

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #36 Cedar Hills/Canyon

Cycle (sec): 100 Critical Vol./Cap. (X): 0.848
Loss Time (sec): 16 (Y+R = 4 sec) Average Delay (sec/veh): 34.1
Optimal Cycle: 99 Level Of Service: C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Protected			Protected		
Rights:	Include			Include			Include			Ovl		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	1 0	1 0	0	1 0	1 0	0	0 1	1 0	0	0 2	0 1
Volume Module:												
Base Vol:	139	227	29	214	428	152	0	1212	10	0	1272	103
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	139	227	29	214	428	152	0	1212	10	0	1272	103
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
PHF Volume:	143	233	30	219	439	156	0	1243	10	0	1305	106
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	143	233	30	219	439	156	0	1243	10	0	1305	106
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	143	233	30	219	439	156	0	1243	10	0	1305	106
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.90	0.93	0.93	0.91	0.91	0.91	1.00	0.95	0.95	1.00	0.95	0.85
Lanes:	0.72	1.13	0.15	0.54	1.08	0.38	0.00	1.98	0.02	0.00	2.00	1.00
Final Sat.:	1235	2012	259	931	1866	663	0	3578	29	0	3610	1615
Capacity Analysis Module:												
Vol/Sat:	0.12	0.12	0.12	0.24	0.24	0.24	0.00	0.35	0.35	0.00	0.36	0.07
Crit Moves:			****	****			****				****	
Green/Cycle:	0.14	0.14	0.14	0.28	0.28	0.28	0.00	0.43	0.43	0.00	0.43	0.70
Volume/Cap:	0.85	0.85	0.85	0.85	0.85	0.85	0.00	0.82	0.82	0.00	0.85	0.09
Uniform Del:	42.2	42.2	42.2	34.1	34.1	34.1	0.0	25.2	25.2	0.0	25.8	4.7
IncremntDel:	13.3	13.3	13.3	7.2	7.2	7.2	0.0	3.5	3.5	0.0	4.6	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00
Delay/Veh:	55.5	55.5	55.5	41.3	41.3	41.3	0.0	28.7	28.7	0.0	30.4	4.7
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	55.5	55.5	55.5	41.3	41.3	41.3	0.0	28.7	28.7	0.0	30.4	4.7
DesignQueue:	7	12	1	9	19	7	0	43	0	0	46	2

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #37 Cedar Hills/Farmington

Cycle (sec): 100 Critical Vol./Cap. (X): 0.905
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 27.2
Optimal Cycle: 112 Level Of Service: C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Ovl		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	0	0	1	0	1!	0	1	0	2	0	1
Volume Module:												
Base Vol:	0	0	0	345	0	234	182	1304	0	0	1505	154
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	345	0	234	182	1304	0	0	1505	154
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	0	0	0	365	0	248	193	1380	0	0	1593	163
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	365	0	248	193	1380	0	0	1593	163
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	0	0	0	365	0	248	193	1380	0	0	1593	163
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	0.91	1.00	0.91	0.95	0.95	1.00	1.00	0.95	0.85
Lanes:	0.00	0.00	0.00	1.42	0.00	0.58	1.00	2.00	0.00	0.00	2.00	1.00
Final Sat.:	0	0	0	2467	0	998	1805	3610	0	0	3610	1615
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.15	0.00	0.25	0.11	0.38	0.00	0.00	0.44	0.10
Crit Moves:						****	****				****	
Green/Cycle:	0.00	0.00	0.00	0.27	0.00	0.27	0.12	0.61	0.00	0.00	0.49	0.76
Volume/Cap:	0.00	0.00	0.00	0.54	0.00	0.91	0.91	0.63	0.00	0.00	0.91	0.13
Uniform Del:	0.0	0.0	0.0	30.9	0.0	35.0	43.5	12.6	0.0	0.0	23.5	3.2
IncremntDel:	0.0	0.0	0.0	0.5	0.0	15.8	36.8	0.6	0.0	0.0	7.1	0.0
Delay Adj:	0.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00
Delay/Veh:	0.0	0.0	0.0	31.4	0.0	50.8	80.3	13.2	0.0	0.0	30.6	3.2
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	31.4	0.0	50.8	80.3	13.2	0.0	0.0	30.6	3.2
DesignQueue:	0	0	0	15	0	11	10	33	0	0	51	2

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #38 Hall/Center

Cycle (sec): 100 Critical Vol./Cap. (X): 0.477
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 23.8
Optimal Cycle: 39 Level Of Service: C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0	1	1	0	1	0	1	1	0	1	0
Volume Module:												
Base Vol:	53	612	56	127	369	24	37	39	55	47	34	193
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	53	612	56	127	369	24	37	39	55	47	34	193
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
PHF Volume:	56	650	60	135	392	26	39	41	58	50	36	205
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	56	650	60	135	392	26	39	41	58	50	36	205
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	56	650	60	135	392	26	39	41	58	50	36	205
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.94	0.94	0.95	0.94	0.94	0.47	0.91	0.91	0.69	0.87	0.87
Lanes:	1.00	1.83	0.17	1.00	1.88	0.12	1.00	0.41	0.59	1.00	0.15	0.85
Final Sat.:	1805	3262	301	1805	3355	223	891	718	1015	1309	247	1409
Capacity Analysis Module:												
Vol/Sat:	0.03	0.20	0.20	0.07	0.12	0.12	0.04	0.06	0.06	0.04	0.15	0.15
Crit Moves:		****		****							****	
Green/Cycle:	0.12	0.42	0.42	0.16	0.45	0.45	0.31	0.31	0.31	0.31	0.31	0.31
Volume/Cap:	0.26	0.48	0.48	0.48	0.26	0.26	0.14	0.19	0.19	0.13	0.48	0.48
Uniform Del:	39.9	21.2	21.2	38.4	16.9	16.9	25.2	25.6	25.6	25.1	28.3	28.3
IncremntDel:	0.6	0.2	0.2	1.3	0.1	0.1	0.2	0.2	0.2	0.1	0.7	0.7
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	40.5	21.4	21.4	39.7	16.9	16.9	25.5	25.8	25.8	25.2	29.0	29.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	40.5	21.4	21.4	39.7	16.9	16.9	25.5	25.8	25.8	25.2	29.0	29.0
DesignQueue:	3	22	2	6	12	1	2	2	2	2	1	8

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #39 Hall/Allen

Cycle (sec): 100 Critical Vol./Cap. (X): 0.914
Loss Time (sec): 16 (Y+R = 4 sec) Average Delay (sec/veh): 44.4
Optimal Cycle: 122 Level Of Service: D

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0 1	1 0	1	0 1	1 0	1	0 1	1 0	1	0 1	1 0
Volume Module:												
Base Vol:	255	607	56	154	733	71	100	603	144	147	1032	87
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	255	607	56	154	733	71	100	603	144	147	1032	87
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
PHF Volume:	266	633	58	161	764	74	104	629	150	153	1076	91
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	266	633	58	161	764	74	104	629	150	153	1076	91
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	266	633	58	161	764	74	104	629	150	153	1076	91
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.94	0.94	0.95	0.94	0.94	0.95	0.92	0.92	0.95	0.94	0.94
Lanes:	1.00	1.83	0.17	1.00	1.82	0.18	1.00	1.61	0.39	1.00	1.84	0.16
Final Sat.:	1805	3264	299	1805	3248	315	1805	2830	675	1805	3289	278
Capacity Analysis Module:												
Vol/Sat:	0.15	0.19	0.19	0.09	0.24	0.24	0.06	0.22	0.22	0.08	0.33	0.33
Crit Moves:	****				****		****				****	
Green/Cycle:	0.16	0.29	0.29	0.13	0.26	0.26	0.06	0.30	0.30	0.12	0.36	0.36
Volume/Cap:	0.91	0.68	0.68	0.68	0.91	0.91	0.91	0.73	0.73	0.73	0.91	0.91
Uniform Del:	41.2	31.5	31.5	41.4	36.0	36.0	46.6	31.1	31.1	42.7	30.6	30.6
IncremntDel:	31.2	1.8	1.8	7.5	13.3	13.3	57.9	2.6	2.6	12.2	10.2	10.2
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	72.5	33.4	33.4	48.9	49.4	49.4	104.4	33.6	33.6	54.8	40.8	40.8
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	72.5	33.4	33.4	48.9	49.4	49.4	104.4	33.6	33.6	54.8	40.8	40.8
DesignQueue:	13	26	2	8	33	3	5	26	6	8	42	4

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #40 Hall/Denney

Cycle (sec): 100 Critical Vol./Cap. (X): 0.852
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 32.4
Optimal Cycle: 91 Level Of Service: C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Split Phase			Split Phase		
Rights:	Ignore			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	0 2	0 1	1	0 2	0 0	0	0 0	0 0	1	0 0	0 1
Volume Module:												
Base Vol:	0	936	401	147	818	0	0	0	0	676	0	231
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	936	401	147	818	0	0	0	0	676	0	231
User Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.00	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	0	981	0	154	857	0	0	0	0	709	0	242
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	981	0	154	857	0	0	0	0	709	0	242
PCE Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	0	981	0	154	857	0	0	0	0	709	0	242
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	0.95	1.00	0.85
Lanes:	0.00	2.00	1.00	1.00	2.00	0.00	0.00	0.00	0.00	1.00	0.00	1.00
Final Sat.:	0	3610	1900	1805	3610	0	0	0	0	1805	0	1615
Capacity Analysis Module:												
Vol/Sat:	0.00	0.27	0.00	0.09	0.24	0.00	0.00	0.00	0.00	0.39	0.00	0.15
Crit Moves:		****		****						****		
Green/Cycle:	0.00	0.32	0.00	0.10	0.42	0.00	0.00	0.00	0.00	0.46	0.00	0.46
Volume/Cap:	0.00	0.85	0.00	0.85	0.57	0.00	0.00	0.00	0.00	0.85	0.00	0.33
Uniform Del:	0.0	31.8	0.0	44.3	22.1	0.0	0.0	0.0	0.0	23.9	0.0	17.1
IncremntDel:	0.0	6.3	0.0	30.1	0.5	0.0	0.0	0.0	0.0	8.4	0.0	0.3
Delay Adj:	0.00	1.00	0.00	1.00	1.00	0.00	0.00	0.00	0.00	1.00	0.00	1.00
Delay/Veh:	0.0	38.1	0.0	74.4	22.6	0.0	0.0	0.0	0.0	32.4	0.0	17.3
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	38.1	0.0	74.4	22.6	0.0	0.0	0.0	0.0	32.4	0.0	17.3
DesignQueue:	0	40	0	8	29	0	0	0	0	24	0	7

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #41 Hall/Greenway

Cycle (sec): 120 Critical Vol./Cap. (X): 1.029
Loss Time (sec): 16 (Y+R = 4 sec) Average Delay (sec/veh): 61.9
Optimal Cycle: 180 Level Of Service: E

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Split Phase				Split Phase				Protected				Protected			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0	
Lanes:	0	1	0	0 1	0	0	1!	0 0	1	0	1	1 0	1	0	1	1 0
Volume Module:																
Base Vol:	281	17	285		26	27	4		7	551	469		655	1111	26	
Growth Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Initial Bse:	281	17	285		26	27	4		7	551	469		655	1111	26	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	0.98	0.98	0.98		0.98	0.98	0.98		0.98	0.98	0.98		0.98	0.98	0.98	
PHF Volume:	287	17	291		27	28	4		7	562	479		668	1134	27	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	287	17	291		27	28	4		7	562	479		668	1134	27	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Final Vol.:	287	17	291		27	28	4		7	562	479		668	1134	27	
Saturation Flow Module:																
Sat/Lane:	1900	1900	1900		1900	1900	1900		1900	1900	1900		1900	1900	1900	
Adjustment:	0.96	0.96	0.85		0.97	0.97	0.97		0.95	0.88	0.88		0.95	0.95	0.95	
Lanes:	0.94	0.06	1.00		0.46	0.47	0.07		1.00	1.08	0.92		1.00	1.95	0.05	
Final Sat.:	1713	101	1615		843	874	125		1805	1814	1546		1805	3515	84	
Capacity Analysis Module:																
Vol/Sat:	0.17	0.17	0.18		0.03	0.03	0.03		0.00	0.31	0.31		0.37	0.32	0.32	
Crit Moves:			****		****					****			****			
Green/Cycle:	0.18	0.18	0.18		0.03	0.03	0.03		0.01	0.30	0.30		0.36	0.65	0.65	
Volume/Cap:	0.96	0.96	1.03		1.03	1.03	1.03		0.49	1.03	1.03		1.03	0.49	0.49	
Uniform Del:	49.0	49.0	49.5		58.1	58.1	58.1		59.3	41.9	41.9		38.4	10.7	10.7	
IncremntDel:	39.0	39.0	61.3		127.4	127	127.4		24.7	36.0	36.0		43.0	0.2	0.2	
Delay Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Delay/Veh:	88.0	88.0	110.8		185.5	186	185.5		83.9	78.0	78.0		81.5	10.9	10.9	
User DelAdj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
AdjDel/Veh:	88.0	88.0	110.8		185.5	186	185.5		83.9	78.0	78.0		81.5	10.9	10.9	
DesignQueue:	16	1	17		2	2	0		0	28	24		31	29	1	

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #42 Hall/Nimbus

Cycle (sec): 100 Critical Vol./Cap. (X): 0.841
Loss Time (sec): 16 (Y+R = 4 sec) Average Delay (sec/veh): 34.3
Optimal Cycle: 97 Level Of Service: C

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Permitted				Permitted				Protected				Protected			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0	
Lanes:	1	0	0	1 0	1	0	0	1 0	1	0	1	1 0	1	0	2	0 1
Volume Module:																
Base Vol:	366	36	350		173	49	88		18	712	150		249	1240	59	
Growth Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Initial Bse:	366	36	350		173	49	88		18	712	150		249	1240	59	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	0.96	0.96	0.96		0.96	0.96	0.96		0.96	0.96	0.96		0.96	0.96	0.96	
PHF Volume:	381	38	365		180	51	92		19	742	156		259	1292	61	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	381	38	365		180	51	92		19	742	156		259	1292	61	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Final Vol.:	381	38	365		180	51	92		19	742	156		259	1292	61	
Saturation Flow Module:																
Sat/Lane:	1900	1900	1900		1900	1900	1900		1900	1900	1900		1900	1900	1900	
Adjustment:	0.65	0.86	0.86		0.33	0.90	0.90		0.95	0.93	0.93		0.95	0.95	0.85	
Lanes:	1.00	0.09	0.91		1.00	0.36	0.64		1.00	1.65	0.35		1.00	2.00	1.00	
Final Sat.:	1239	155	1487		635	613	1105		1805	2905	611		1805	3610	1615	
Capacity Analysis Module:																
Vol/Sat:	0.31	0.25	0.25		0.28	0.08	0.08		0.01	0.26	0.26		0.14	0.36	0.04	
Crit Moves:	****									****			****			
Green/Cycle:	0.37	0.37	0.37		0.37	0.37	0.37		0.01	0.30	0.30		0.17	0.46	0.46	
Volume/Cap:	0.84	0.67	0.67		0.78	0.23	0.23		0.78	0.84	0.84		0.84	0.78	0.08	
Uniform Del:	29.1	26.7	26.7		28.1	21.9	21.9		49.2	32.6	32.6		40.2	22.6	15.1	
IncremntDel:	13.2	3.0	3.0		15.1	0.2	0.2		88.3	6.1	6.1		18.3	2.4	0.0	
Delay Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Delay/Veh:	42.3	29.6	29.6		43.1	22.1	22.1		137.4	38.7	38.7		58.5	25.0	15.2	
User DelAdj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
AdjDel/Veh:	42.3	29.6	29.6		43.1	22.1	22.1		137.4	38.7	38.7		58.5	25.0	15.2	
DesignQueue:	14	1	14		7	2	3		1	31	6		12	43	2	

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #43 125th/Greenway

Cycle (sec): 100 Critical Vol./Cap. (X): 0.515
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 17.5
Optimal Cycle: 42 Level Of Service: B

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Split Phase				Split Phase				Permitted				Permitted			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0	0	0 1	0	0	0	0 0	0	0	1	0 1	0	1	1	0 0
Volume Module:																
Base Vol:	316	0	144		0	0	0		0	238	225		266	493	0	
Growth Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Initial Bse:	316	0	144		0	0	0		0	238	225		266	493	0	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	0.97	0.97	0.97		0.97	0.97	0.97		0.97	0.97	0.97		0.97	0.97	0.97	
PHF Volume:	325	0	148		0	0	0		0	245	232		274	508	0	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	325	0	148		0	0	0		0	245	232		274	508	0	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Final Vol.:	325	0	148		0	0	0		0	245	232		274	508	0	
Saturation Flow Module:																
Sat/Lane:	1900	1900	1900		1900	1900	1900		1900	1900	1900		1900	1900	1900	
Adjustment:	0.95	1.00	0.85		1.00	1.00	1.00		1.00	1.00	0.85		0.54	0.95	1.00	
Lanes:	1.00	0.00	1.00		0.00	0.00	0.00		0.00	1.00	1.00		0.97	1.03	0.00	
Final Sat.:	1805	0	1615		0	0	0		0	1900	1615		1002	1858	0	
Capacity Analysis Module:																
Vol/Sat:	0.18	0.00	0.09		0.00	0.00	0.00		0.00	0.13	0.14		0.27	0.27	0.00	
Crit Moves:	****													****		
Green/Cycle:	0.35	0.00	0.35		0.00	0.00	0.00		0.00	0.53	0.53		0.53	0.53	0.00	
Volume/Cap:	0.52	0.00	0.26		0.00	0.00	0.00		0.00	0.24	0.27		0.52	0.52	0.00	
Uniform Del:	25.8	0.0	23.3		0.0	0.0	0.0		0.0	12.6	12.9		15.2	15.2	0.0	
IncremntDel:	0.7	0.0	0.2		0.0	0.0	0.0		0.0	0.1	0.2		0.3	0.3	0.0	
Delay Adj:	1.00	0.00	1.00		0.00	0.00	0.00		0.00	1.00	1.00		1.00	1.00	0.00	
Delay/Veh:	26.5	0.0	23.5		0.0	0.0	0.0		0.0	12.8	13.0		15.5	15.5	0.0	
User DelAdj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
AdjDel/Veh:	26.5	0.0	23.5		0.0	0.0	0.0		0.0	12.8	13.0		15.5	15.5	0.0	
DesignQueue:	12	0	5		0	0	0		0	7	6		7	14	0	

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #44 Western/Beaverton Hillsdale

Cycle (sec): 120 Critical Vol./Cap. (X): 0.868
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 33.7
Optimal Cycle: 104 Level Of Service: C

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Split Phase				Split Phase				Protected				Protected			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0	0	0 1	0	0	0	0 0	0	0	1	1 0	1	0	2	0 0
Volume Module:																
Base Vol:	331	0	315		0	0	0		0	994	339		250	1001	0	
Growth Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Initial Bse:	331	0	315		0	0	0		0	994	339		250	1001	0	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	0.92	0.92	0.92		0.92	0.92	0.92		0.92	0.92	0.92		0.92	0.92	0.92	
PHF Volume:	361	0	343		0	0	0		0	1083	369		272	1090	0	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	361	0	343		0	0	0		0	1083	369		272	1090	0	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Final Vol.:	361	0	343		0	0	0		0	1083	369		272	1090	0	
Saturation Flow Module:																
Sat/Lane:	1900	1900	1900		1900	1900	1900		1900	1900	1900		1900	1900	1900	
Adjustment:	0.95	1.00	0.85		1.00	1.00	1.00		1.00	0.91	0.91		0.95	0.95	1.00	
Lanes:	1.00	0.00	1.00		0.00	0.00	0.00		0.00	1.49	0.51		1.00	2.00	0.00	
Final Sat.:	1805	0	1615		0	0	0		0	2590	883		1805	3610	0	
Capacity Analysis Module:																
Vol/Sat:	0.20	0.00	0.21		0.00	0.00	0.00		0.00	0.42	0.42		0.15	0.30	0.00	
Crit Moves:			****								****		****			
Green/Cycle:	0.24	0.00	0.24		0.00	0.00	0.00		0.00	0.48	0.48		0.17	0.66	0.00	
Volume/Cap:	0.82	0.00	0.87		0.00	0.00	0.00		0.00	0.87	0.87		0.87	0.46	0.00	
Uniform Del:	42.8	0.0	43.5		0.0	0.0	0.0		0.0	27.7	27.7		48.2	10.2	0.0	
IncremntDel:	11.3	0.0	18.1		0.0	0.0	0.0		0.0	5.1	5.1		21.8	0.1	0.0	
Delay Adj:	1.00	0.00	1.00		0.00	0.00	0.00		0.00	1.00	1.00		1.00	1.00	0.00	
Delay/Veh:	54.1	0.0	61.6		0.0	0.0	0.0		0.0	32.8	32.8		70.0	10.4	0.0	
User DelAdj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
AdjDel/Veh:	54.1	0.0	61.6		0.0	0.0	0.0		0.0	32.8	32.8		70.0	10.4	0.0	
DesignQueue:	19	0	18		0	0	0		0	42	14		16	27	0	

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #45 Western/Allen

Cycle (sec): 100 Critical Vol./Cap. (X): 0.726
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 28.7
Optimal Cycle: 63 Level Of Service: C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Protected			Protected		
Rights:	Include			Include			Include			Ignore		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	0	0	1	0	0	1	0	2	0	0	1
Volume Module:												
Base Vol:	0	0	0	413	0	389	239	637	0	0	706	233
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	413	0	389	239	637	0	0	706	233
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
PHF Adj:	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.00
PHF Volume:	0	0	0	464	0	437	269	716	0	0	793	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	464	0	437	269	716	0	0	793	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
Final Vol.:	0	0	0	464	0	437	269	716	0	0	793	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	0.95	1.00	0.85	0.95	0.95	1.00	1.00	0.95	1.00
Lanes:	0.00	0.00	0.00	1.00	0.00	1.00	1.00	2.00	0.00	0.00	2.00	1.00
Final Sat.:	0	0	0	1805	0	1615	1805	3610	0	0	3610	1900
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.26	0.00	0.27	0.15	0.20	0.00	0.00	0.22	0.00
Crit Moves:						****	****				****	
Green/Cycle:	0.00	0.00	0.00	0.37	0.00	0.37	0.21	0.51	0.00	0.00	0.30	0.00
Volume/Cap:	0.00	0.00	0.00	0.69	0.00	0.73	0.73	0.39	0.00	0.00	0.73	0.00
Uniform Del:	0.0	0.0	0.0	26.5	0.0	27.0	37.1	15.1	0.0	0.0	31.2	0.0
IncremntDel:	0.0	0.0	0.0	3.1	0.0	4.4	7.0	0.1	0.0	0.0	2.5	0.0
Delay Adj:	0.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00
Delay/Veh:	0.0	0.0	0.0	29.6	0.0	31.4	44.2	15.3	0.0	0.0	33.7	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	29.6	0.0	31.4	44.2	15.3	0.0	0.0	33.7	0.0
DesignQueue:	0	0	0	17	0	16	12	21	0	0	33	0

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #46 Laurelwood/Beaverton Hillsdale

Cycle (sec): 100 Critical Vol./Cap. (X): 0.795
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 26.2
Optimal Cycle: 76 Level Of Service: C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0	0	1	0	0	0	1!	0	0	1	0	1	0	1	0
Volume Module:												
Base Vol:	108	83	78	167	67	58	46	1222	101	99	1178	112
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	108	83	78	167	67	58	46	1222	101	99	1178	112
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	114	87	82	176	70	61	48	1285	106	104	1239	118
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	114	87	82	176	70	61	48	1285	106	104	1239	118
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	114	87	82	176	70	61	48	1285	106	104	1239	118
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.74	0.93	0.93	0.64	0.64	0.64	0.95	0.94	0.94	0.95	0.94	0.94
Lanes:	1.00	0.51	0.49	0.57	0.23	0.20	1.00	1.85	0.15	1.00	1.83	0.17
Final Sat.:	1412	907	855	697	277	242	1805	3298	272	1805	3253	310
Capacity Analysis Module:												
Vol/Sat:	0.08	0.10	0.10	0.25	0.25	0.25	0.03	0.39	0.39	0.06	0.38	0.38
Crit Moves:					****			****		****		
Green/Cycle:	0.32	0.32	0.32	0.32	0.32	0.32	0.04	0.49	0.49	0.07	0.53	0.53
Volume/Cap:	0.25	0.30	0.30	0.79	0.79	0.79	0.72	0.79	0.79	0.79	0.72	0.72
Uniform Del:	25.3	25.8	25.8	31.2	31.2	31.2	47.7	21.3	21.3	45.6	18.2	18.2
IncremntDel:	0.3	0.3	0.3	10.9	10.9	10.9	32.5	2.6	2.6	27.6	1.4	1.4
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	25.6	26.1	26.1	42.0	42.0	42.0	80.1	23.9	23.9	73.3	19.6	19.6
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	25.6	26.1	26.1	42.0	42.0	42.0	80.1	23.9	23.9	73.3	19.6	19.6
DesignQueue:	4	3	3	7	3	2	3	40	3	5	36	3

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #47 Lombard/Farmington

Cycle (sec): 100 Critical Vol./Cap. (X): 0.775
Loss Time (sec): 16 (Y+R = 4 sec) Average Delay (sec/veh): 30.7
Optimal Cycle: 81 Level Of Service: C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Ignore			Ignore		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0	0 1	0	1	0 0 1	0	1	0 2	0 1	1	0 2 0 1
Volume Module:												
Base Vol:	69	153	73	137	185	101	69	1030	84	143	1431	204
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	69	153	73	137	185	101	69	1030	84	143	1431	204
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
PHF Adj:	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.00	0.98	0.98	0.00
PHF Volume:	71	157	75	140	189	103	71	1054	0	146	1465	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	71	157	75	140	189	103	71	1054	0	146	1465	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
Final Vol.:	71	157	75	140	189	103	71	1054	0	146	1465	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	1.00	0.95	0.95	1.00
Lanes:	1.00	0.68	0.32	1.00	0.65	0.35	1.00	2.00	1.00	1.00	2.00	1.00
Final Sat.:	1805	1224	585	1805	1165	635	1805	3610	1900	1805	3610	1900
Capacity Analysis Module:												
Vol/Sat:	0.04	0.13	0.13	0.08	0.16	0.16	0.04	0.29	0.00	0.08	0.41	0.00
Crit Moves:		****		****			****				****	
Green/Cycle:	0.05	0.17	0.17	0.10	0.21	0.21	0.05	0.45	0.00	0.12	0.52	0.00
Volume/Cap:	0.76	0.77	0.77	0.77	0.76	0.76	0.77	0.65	0.00	0.65	0.77	0.00
Uniform Del:	46.8	39.9	39.9	43.9	36.9	36.9	46.9	21.4	0.0	41.7	19.1	0.0
IncremntDel:	29.7	11.9	11.9	18.7	8.5	8.5	32.9	0.9	0.0	6.5	2.1	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
Delay/Veh:	76.5	51.9	51.9	62.6	45.4	45.4	79.8	22.3	0.0	48.2	21.2	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	76.5	51.9	51.9	62.6	45.4	45.4	79.8	22.3	0.0	48.2	21.2	0.0
DesignQueue:	4	8	4	7	9	5	4	35	0	7	43	0

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #48 114th/Canyon

Average Delay (sec/veh): 15.7 Worst Case Level Of Service: C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0	0 0	0 0	0	0 0	0 0 1	0	0 0	0 0 0	0	0	1 1 0
Volume Module:												
Base Vol:	0	0	0	0	0	27	0	0	0	0	1581	71
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	0	0	27	0	0	0	0	1581	71
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
PHF Volume:	0	0	0	0	0	28	0	0	0	0	1625	73
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	0	0	0	0	0	28	0	0	0	0	1625	73
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	6.2	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
FollowUpTim:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	3.3	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	xxxx	xxxx	849	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Potent Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	364	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Move Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	364	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Level Of Service Module:												
Stopped Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	15.7	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	C	*	*	*	*	*	*
Movement:	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Shrd StpDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	*
ApproachDel:	xxxxxx			15.7			xxxxxx			xxxxxx		
ApproachLOS:	*			C			*			*		

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #49 Griffith/Beaverton Hillsdale

Cycle (sec): 100 Critical Vol./Cap. (X): 0.808
Loss Time (sec): 16 (Y+R = 4 sec) Average Delay (sec/veh): 31.0
Optimal Cycle: 88 Level Of Service: C

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Split Phase				Split Phase				Protected				Protected			
Rights:	Include				Include				Include				Ovl			
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0	
Lanes:	1	0	1	0 1	1	0	1	0 1	1	0	1	1 0	1	0	2	0 1
Volume Module:																
Base Vol:	140	81	175		180	106	140		89	971		84	145	1407		237
Growth Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00		1.00
Initial Bse:	140	81	175		180	106	140		89	971		84	145	1407		237
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00		1.00
PHF Adj:	0.95	0.95	0.95		0.95	0.95	0.95		0.95	0.95		0.95	0.95	0.95		0.95
PHF Volume:	147	85	184		189	111	147		93	1019		88	152	1476		249
Reduct Vol:	0	0	0		0	0	0		0	0		0	0	0		0
Reduced Vol:	147	85	184		189	111	147		93	1019		88	152	1476		249
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00		1.00
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00		1.00
Final Vol.:	147	85	184		189	111	147		93	1019		88	152	1476		249
Saturation Flow Module:																
Sat/Lane:	1900	1900	1900		1900	1900	1900		1900	1900		1900	1900	1900		1900
Adjustment:	0.95	1.00	0.85		0.95	1.00	0.85		0.95	0.94		0.94	0.95	0.95		0.85
Lanes:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.84		0.16	1.00	2.00		1.00
Final Sat.:	1805	1900	1615		1805	1900	1615		1805	3283		284	1805	3610		1615
Capacity Analysis Module:																
Vol/Sat:	0.08	0.04	0.11		0.10	0.06	0.09		0.05	0.31		0.31	0.08	0.41		0.15
Crit Moves:			****		****				****					****		
Green/Cycle:	0.14	0.14	0.14		0.13	0.13	0.13		0.06	0.45		0.45	0.12	0.51		0.64
Volume/Cap:	0.58	0.32	0.81		0.81	0.45	0.70		0.81	0.69		0.69	0.69	0.81		0.24
Uniform Del:	40.2	38.6	41.6		42.3	40.2	41.7		46.2	22.1		22.1	42.1	20.7		7.9
IncremntDel:	3.3	0.7	19.0		18.5	1.3	10.3		33.1	1.3		1.3	9.2	2.8		0.1
Delay Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00		1.00
Delay/Veh:	43.5	39.3	60.6		60.9	41.6	52.0		79.3	23.4		23.4	51.3	23.5		8.0
User DelAdj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00		1.00
AdjDel/Veh:	43.5	39.3	60.6		60.9	41.6	52.0		79.3	23.4		23.4	51.3	23.5		8.0
DesignQueue:	7	4	9		9	5	7		5	34		3	8	45		5

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #50 87th/Canyon

Cycle (sec): 100 Critical Vol./Cap. (X): 0.676
Loss Time (sec): 8 (Y+R = 4 sec) Average Delay (sec/veh): 18.7
Optimal Cycle: 46 Level Of Service: B

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Permitted				Permitted				Permitted				Permitted			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0	
Lanes:	0	0	1!	0 0	0	0	1!	0 0	0	0	2	0 1	0	0	1	1 0
Volume Module:																
Base Vol:	215	64	55		46	105	3		0	1221		184	0	989		13
Growth Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00		1.00
Initial Bse:	215	64	55		46	105	3		0	1221		184	0	989		13
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00		1.00
PHF Adj:	0.96	0.96	0.96		0.96	0.96	0.96		0.96	0.96		0.96	0.96	0.96		0.96
PHF Volume:	224	67	57		48	110	3		0	1275		192	0	1032		14
Reduct Vol:	0	0	0		0	0	0		0	0		0	0	0		0
Reduced Vol:	224	67	57		48	110	3		0	1275		192	0	1032		14
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00		1.00
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00		1.00
Final Vol.:	224	67	57		48	110	3		0	1275		192	0	1032		14
Saturation Flow Module:																
Sat/Lane:	1900	1900	1900		1900	1900	1900		1900	1900		1900	1900	1900		1900
Adjustment:	0.68	0.68	0.68		0.84	0.84	0.84		1.00	0.95		0.85	1.00	0.95		0.95
Lanes:	0.65	0.19	0.16		0.30	0.68	0.02		0.00	2.00		1.00	0.00	1.97		0.03
Final Sat.:	832	249	212		475	1088	30		0	3610		1615	0	3555		48
Capacity Analysis Module:																
Vol/Sat:	0.27	0.27	0.27		0.10	0.10	0.10		0.00	0.35		0.12	0.00	0.29		0.29
Crit Moves:		****								****						
Green/Cycle:	0.40	0.40	0.40		0.40	0.40	0.40		0.00	0.52		0.52	0.00	0.52		0.52
Volume/Cap:	0.68	0.68	0.68		0.25	0.25	0.25		0.00	0.68		0.23	0.00	0.56		0.56
Uniform Del:	24.8	24.8	24.8		20.2	20.2	20.2		0.0	17.6		13.0	0.0	16.1		16.1
IncremntDel:	3.6	3.6	3.6		0.2	0.2	0.2		0.0	1.0		0.1	0.0	0.4		0.4
Delay Adj:	1.00	1.00	1.00		1.00	1.00	1.00		0.00	1.00		1.00	0.00	1.00		1.00
Delay/Veh:	28.4	28.4	28.4		20.4	20.4	20.4		0.0	18.6		13.1	0.0	16.5		16.5
User DelAdj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00		1.00
AdjDel/Veh:	28.4	28.4	28.4		20.4	20.4	20.4		0.0	18.6		13.1	0.0	16.5		16.5
DesignQueue:	8	2	2		2	4	0		0	37		5	0	30		0

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #51 Garden Home/84th

Average Delay (sec/veh): 32.6 Worst Case Level Of Service: D

Approach:	North Bound						South Bound						East Bound						West Bound					
Movement:	L	-	T	-	R		L	-	T	-	R		L	-	T	-	R		L	-	T	-	R	
Control:	Stop Sign						Stop Sign						Uncontrolled						Uncontrolled					
Rights:	Include						Include						Include						Include					
Lanes:	0	0	1!	0	0		0	0	1!	0	0		0	0	1!	0	0		0	0	1!	0	0	
Volume Module:																								
Base Vol:	6		1		11		4		0		2		6		684		11		6		650		12	
Growth Adj:	1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00	
Initial Bse:	6		1		11		4		0		2		6		684		11		6		650		12	
User Adj:	1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00	
PHF Adj:	0.94		0.94		0.94		0.94		0.94		0.94		0.94		0.94		0.94		0.94		0.94		0.94	
PHF Volume:	6		1		12		4		0		2		6		731		12		6		694		13	
Reduct Vol:	0		0		0		0		0		0		0		0		0		0		0		0	
Final Vol.:	6		1		12		4		0		2		6		731		12		6		694		13	
Critical Gap Module:																								
Critical Gp:	7.1		6.5		6.2		7.1	xxxx			6.2		4.1	xxxx	xxxxx				4.1	xxxx	xxxxx			
FollowUpTim:	3.5		4.0		3.3		3.5	xxxx			3.3		2.2	xxxx	xxxxx				2.2	xxxx	xxxxx			
Capacity Module:																								
Cnflict Vol:	1464		1470		737		1470	xxxx			701		707	xxxx	xxxxx				743	xxxx	xxxxx			
Potent Cap.:	107		129		422		107	xxxx			442		901	xxxx	xxxxx				874	xxxx	xxxxx			
Move Cap.:	106		127		422		102	xxxx			442		901	xxxx	xxxxx				874	xxxx	xxxxx			
Level Of Service Module:																								
Stopped Del:	xxxxx		xxxx		xxxxx		xxxxx		xxxx		xxxxx		9.0	xxxx	xxxxx				9.1	xxxx	xxxxx			
LOS by Move:	*		*		*		*		*		*		A	*	*				A	*	*			
Movement:	LT	-	LTR	-	RT		LT	-	LTR	-	RT		LT	-	LTR	-	RT		LT	-	LTR	-	RT	
Shared Cap.:	xxxx		198		xxxxx		xxxx		137		xxxxx		xxxx	xxxx	xxxxx				xxxx	xxxx	xxxxx			
Shrd StpDel:	xxxxx		25.1		xxxxx		xxxxx		32.6		xxxxx		xxxxx	xxxx	xxxxx				xxxxx	xxxx	xxxxx			
Shared LOS:	*		D		*		*		D		*		*	*	*				*	*	*			
ApproachDel:			25.1						32.6					xxxxxx						xxxxxx				
ApproachLOS:			D						D					*						*				

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #52 Garden Home/88th

Average Delay (sec/veh): 23.5 Worst Case Level Of Service: C

Approach:	North Bound						South Bound						East Bound						West Bound					
Movement:	L	-	T	-	R		L	-	T	-	R		L	-	T	-	R		L	-	T	-	R	
Control:	Stop Sign						Stop Sign						Uncontrolled						Uncontrolled					
Rights:	Include						Include						Include						Include					
Lanes:	0	0	1!	0	0		0	0	0	0	0		0	0	0	1	0		0	1	0	0	0	
Volume Module:																								
Base Vol:	9		0		10		0		0		0		0		713		17		23		597		0	
Growth Adj:	1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00	
Initial Bse:	9		0		10		0		0		0		0		713		17		23		597		0	
User Adj:	1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00	
PHF Adj:	0.94		0.94		0.94		0.94		0.94		0.94		0.94		0.94		0.94		0.94		0.94		0.94	
PHF Volume:	10		0		11		0		0		0		0		761		18		25		637		0	
Reduct Vol:	0		0		0		0		0		0		0		0		0		0		0		0	
Final Vol.:	10		0		11		0		0		0		0		761		18		25		637		0	
Critical Gap Module:																								
Critical Gp:	6.4	xxxx			6.2		xxxxx	xxxx			xxxxx		xxxx	xxxxx					4.1	xxxx	xxxxx			
FollowUpTim:	3.5	xxxx			3.3		xxxxx	xxxx			xxxxx		xxxx	xxxxx					2.2	xxxx	xxxxx			
Capacity Module:																								
Cnflict Vol:	1456	xxxx			770		xxxx	xxxx			xxxxx		xxxx	xxxx					779	xxxx	xxxxx			
Potent Cap.:	144	xxxx			404		xxxx	xxxx			xxxxx		xxxx	xxxx					847	xxxx	xxxxx			
Move Cap.:	141	xxxx			404		xxxx	xxxx			xxxxx		xxxx	xxxx					847	xxxx	xxxxx			
Level Of Service Module:																								
Stopped Del:	xxxxx	xxxx			xxxxx		xxxxx	xxxx			xxxxx		xxxxx	xxxx					9.3	xxxx	xxxxx			
LOS by Move:	*	*			*		*	*			*		*	*					A	*	*			
Movement:	LT	-	LTR	-	RT		LT	-	LTR	-	RT		LT	-	LTR	-	RT		LT	-	LTR	-	RT	
Shared Cap.:	xxxx		215		xxxxx		xxxx	xxxx			xxxxx		xxxx	xxxx					xxxx	xxxx	xxxxx			
Shrd StpDel:	xxxxx		23.5		xxxxx		xxxxx	xxxx			xxxxx		xxxxx	xxxx					9.4	xxxx	xxxxx			
Shared LOS:	*		C		*		*	*			*		*	*					A	*	*			
ApproachDel:			23.5						xxxxxx					xxxxxx						xxxxxx				
ApproachLOS:			C						*					*						*				

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #53 158th/Jenkins

Cycle (sec): 100 Critical Vol./Cap. (X): 0.857
Loss Time (sec): 16 (Y+R = 4 sec) Average Delay (sec/veh): 38.2
Optimal Cycle: 101 Level Of Service: D

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Ovl			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1 0	1	0	1 0	1	0 1	1 0	1	1 0	1 0	0	1 0
Volume Module:												
Base Vol:	37	134	118	301	232	90	55	499	28	121	611	144
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	37	134	118	301	232	90	55	499	28	121	611	144
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	39	142	125	318	245	95	58	527	30	128	646	152
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	39	142	125	318	245	95	58	527	30	128	646	152
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	39	142	125	318	245	95	58	527	30	128	646	152
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.88	0.88	0.95	1.00	0.85	0.95	0.94	0.94	0.95	0.97	0.97
Lanes:	1.00	1.06	0.94	1.00	1.00	1.00	1.00	1.89	0.11	1.00	0.81	0.19
Final Sat.:	1805	1786	1572	1805	1900	1615	1805	3388	193	1805	1495	352
Capacity Analysis Module:												
Vol/Sat:	0.02	0.08	0.08	0.18	0.13	0.06	0.03	0.16	0.16	0.07	0.43	0.43
Crit Moves:		****		****			****				****	
Green/Cycle:	0.04	0.09	0.09	0.21	0.26	0.29	0.04	0.37	0.37	0.17	0.50	0.50
Volume/Cap:	0.50	0.86	0.86	0.86	0.50	0.20	0.86	0.42	0.42	0.42	0.86	0.86
Uniform Del:	46.8	44.7	44.7	38.3	31.8	26.6	47.9	23.3	23.3	37.1	21.6	21.6
IncremntDel:	5.3	20.3	20.3	17.6	0.9	0.2	62.4	0.2	0.2	0.9	8.0	8.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	52.1	65.0	65.0	55.9	32.7	26.8	110.3	23.6	23.6	38.0	29.6	29.6
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	52.1	65.0	65.0	55.9	32.7	26.8	110.3	23.6	23.6	38.0	29.6	29.6
DesignQueue:	2	7	6	15	10	4	3	19	1	6	20	5

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #54 170th/Merlo

Cycle (sec): 100 Critical Vol./Cap. (X): 0.631
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 22.4
Optimal Cycle: 51 Level Of Service: C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Split Phase			Split Phase		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0 0	1!	0 0	0 0	1!	0 0	0 0	1!	0 0	1 0	0	1 0
Volume Module:												
Base Vol:	22	329	175	6	330	15	10	12	15	340	22	20
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	22	329	175	6	330	15	10	12	15	340	22	20
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
PHF Volume:	24	361	192	7	362	16	11	13	16	373	24	22
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	24	361	192	7	362	16	11	13	16	373	24	22
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	24	361	192	7	362	16	11	13	16	373	24	22
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.93	0.93	0.93	0.99	0.99	0.99	0.93	0.93	0.93	0.95	0.93	0.93
Lanes:	0.04	0.63	0.33	0.02	0.94	0.04	0.27	0.33	0.40	1.00	0.52	0.48
Final Sat.:	74	1108	589	34	1760	78	487	576	709	1805	920	843
Capacity Analysis Module:												
Vol/Sat:	0.33	0.33	0.33	0.21	0.21	0.21	0.02	0.02	0.02	0.21	0.03	0.03
Crit Moves:		****					****			****		
Green/Cycle:	0.52	0.52	0.52	0.52	0.52	0.52	0.04	0.04	0.04	0.33	0.33	0.33
Volume/Cap:	0.63	0.63	0.63	0.40	0.40	0.40	0.63	0.63	0.63	0.63	0.08	0.08
Uniform Del:	17.3	17.3	17.3	14.7	14.7	14.7	47.6	47.6	47.6	28.5	23.2	23.2
IncremntDel:	1.4	1.4	1.4	0.3	0.3	0.3	18.7	18.7	18.7	2.2	0.1	0.1
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	18.8	18.8	18.8	15.0	15.0	15.0	66.3	66.3	66.3	30.7	23.3	23.3
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	18.8	18.8	18.8	15.0	15.0	15.0	66.3	66.3	66.3	30.7	23.3	23.3
DesignQueue:	1	11	6	0	10	0	1	1	1	15	1	1

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #56 TV Highway/Murray

Cycle (sec): 120 Critical Vol./Cap. (X): 0.999
Loss Time (sec): 16 (Y+R = 4 sec) Average Delay (sec/veh): 65.1
Optimal Cycle: 180 Level Of Service: E

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Protected				Protected			
Rights:	Include				Ignore				Include				Include			
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0	
Lanes:	1	0	1	1 0	1	0	2	0 1	1	0	2	0 1	1	0	2	0 1
Volume Module: >> Count Date: 10 Nov 1999 <<																
Base Vol:	316	656	101		259	742	32		112	1090	47		200	1415	189	
Growth Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Initial Bse:	316	656	101		259	742	32		112	1090	47		200	1415	189	
User Adj:	1.00	1.00	1.00		1.00	1.00	0.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	0.96	0.96	0.96		0.96	0.96	0.00		0.96	0.96	0.96		0.96	0.96	0.96	
PHF Volume:	328	680	105		269	770	0		116	1131	49		207	1468	196	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	328	680	105		269	770	0		116	1131	49		207	1468	196	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	0.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	0.00		1.00	1.00	1.00		1.00	1.00	1.00	
Final Vol.:	328	680	105		269	770	0		116	1131	49		207	1468	196	
Saturation Flow Module:																
Sat/Lane:	1900	1900	1900		1900	1900	1900		1900	1900	1900		1900	1900	1900	
Adjustment:	0.95	0.93	0.93		0.95	0.95	1.00		0.95	0.95	0.85		0.95	0.95	0.85	
Lanes:	1.00	1.73	0.27		1.00	2.00	1.00		1.00	2.00	1.00		1.00	2.00	1.00	
Final Sat.:	1805	3065	473		1805	3610	1900		1805	3610	1615		1805	3610	1615	
Capacity Analysis Module:																
Vol/Sat:	0.18	0.22	0.22		0.15	0.21	0.00		0.06	0.31	0.03		0.11	0.41	0.12	
Crit Moves:	****					****			****					****		
Green/Cycle:	0.18	0.24	0.24		0.16	0.21	0.00		0.06	0.35	0.35		0.13	0.41	0.41	
Volume/Cap:	1.00	0.94	0.94		0.94	1.00	0.00		1.00	0.91	0.09		0.91	1.00	0.30	
Uniform Del:	49.1	44.9	44.9		49.9	47.2	0.0		56.1	37.5	26.5		51.7	35.6	24.0	
IncremntDel:	49.4	17.9	17.9		36.9	32.2	0.0		83.2	9.8	0.1		35.7	23.3	0.3	
Delay Adj:	1.00	1.00	1.00		1.00	1.00	0.00		1.00	1.00	1.00		1.00	1.00	1.00	
Delay/Veh:	98.5	62.9	62.9		86.8	79.4	0.0		139.4	47.3	26.6		87.4	58.8	24.3	
User DelAdj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
AdjDel/Veh:	98.5	62.9	62.9		86.8	79.4	0.0		139.4	47.3	26.6		87.4	58.8	24.3	
DesignQueue:	19	37	6		16	43	0		7	54	2		12	65	8	

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #57 Farmington/Hall

Cycle (sec): 100 Critical Vol./Cap. (X): 0.847
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 25.4
Optimal Cycle: 90 Level Of Service: C

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Split Phase				Split Phase				Protected				Protected			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0	
Lanes:	1	0	1	1 0	0	0	0	0 0	1	0	2	0 0	0	0	1	1 0
Volume Module: >> Count Date: 13 May 1999 <<																
Base Vol:	248	645	75		0	0	0		103	1094	0		0	1426	126	
Growth Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Initial Bse:	248	645	75		0	0	0		103	1094	0		0	1426	126	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	0.93	0.93	0.93		0.93	0.93	0.93		0.93	0.93	0.93		0.93	0.93	0.93	
PHF Volume:	266	692	80		0	0	0		111	1174	0		0	1530	135	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	266	692	80		0	0	0		111	1174	0		0	1530	135	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Final Vol.:	266	692	80		0	0	0		111	1174	0		0	1530	135	
Saturation Flow Module:																
Sat/Lane:	1900	1900	1900		1900	1900	1900		1900	1900	1900		1900	1900	1900	
Adjustment:	0.98	0.93	0.93		1.00	1.00	1.00		0.95	0.95	1.00		1.00	0.94	0.94	
Lanes:	1.00	1.79	0.21		0.00	0.00	0.00		1.00	2.00	0.00		0.00	1.84	0.16	
Final Sat.:	1870	3184	368		0	0	0		1805	3610	0		0	3277	289	
Capacity Analysis Module:																
Vol/Sat:	0.14	0.22	0.22		0.00	0.00	0.00		0.06	0.33	0.00		0.00	0.47	0.47	
Crit Moves:		****							****					****		
Green/Cycle:	0.26	0.26	0.26		0.00	0.00	0.00		0.07	0.62	0.00		0.00	0.55	0.55	
Volume/Cap:	0.55	0.85	0.85		0.00	0.00	0.00		0.85	0.52	0.00		0.00	0.85	0.85	
Uniform Del:	32.2	35.3	35.3		0.0	0.0	0.0		45.8	10.5	0.0		0.0	18.9	18.9	
IncremntDel:	1.4	7.5	7.5		0.0	0.0	0.0		37.3	0.2	0.0		0.0	3.6	3.6	
Delay Adj:	1.00	1.00	1.00		0.00	0.00	0.00		1.00	1.00	0.00		0.00	1.00	1.00	
Delay/Veh:	33.7	42.8	42.8		0.0	0.0	0.0		83.2	10.7	0.0		0.0	22.6	22.6	
User DelAdj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
AdjDel/Veh:	33.7	42.8	42.8		0.0	0.0	0.0		83.2	10.7	0.0		0.0	22.6	22.6	
DesignQueue:	11	30	3		0	0	0		6	27	0		0	43	4	

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #58 Canyon/Hall

Cycle (sec): 100 Critical Vol./Cap. (X): 0.796
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 22.9
Optimal Cycle: 76 Level Of Service: C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0 1	2	0 1	0	0 0	0 0	1	0 2	0 0	0	0 1	1 0
Volume Module: >> Count Date: 28 Oct 1999 <<												
Base Vol:	343	537	138	0	0	0	51	1221	0	0	1282	144
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	343	537	138	0	0	0	51	1221	0	0	1282	144
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	363	568	146	0	0	0	54	1291	0	0	1355	152
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	363	568	146	0	0	0	54	1291	0	0	1355	152
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	363	568	146	0	0	0	54	1291	0	0	1355	152
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.77	0.91	0.85	1.00	1.00	1.00	0.95	0.95	1.00	1.00	0.94	0.94
Lanes:	1.00	2.00	1.00	0.00	0.00	0.00	1.00	2.00	0.00	0.00	1.80	0.20
Final Sat.:	1470	3458	1615	0	0	0	1805	3610	0	0	3197	359
Capacity Analysis Module:												
Vol/Sat:	0.25	0.16	0.09	0.00	0.00	0.00	0.03	0.36	0.00	0.00	0.42	0.42
Crit Moves:	****						****				****	
Green/Cycle:	0.31	0.31	0.31	0.00	0.00	0.00	0.04	0.57	0.00	0.00	0.53	0.53
Volume/Cap:	0.80	0.53	0.29	0.00	0.00	0.00	0.80	0.63	0.00	0.00	0.80	0.80
Uniform Del:	31.6	28.5	26.2	0.0	0.0	0.0	47.7	14.4	0.0	0.0	19.0	19.0
IncremntDel:	3.9	0.3	0.3	0.0	0.0	0.0	46.5	0.6	0.0	0.0	2.4	2.4
Delay Adj:	1.00	1.00	1.00	0.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00
Delay/Veh:	35.5	28.8	26.5	0.0	0.0	0.0	94.2	15.0	0.0	0.0	21.4	21.4
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	35.5	28.8	26.5	0.0	0.0	0.0	94.2	15.0	0.0	0.0	21.4	21.4
DesignQueue:	15	23	6	0	0	0	3	34	0	0	39	4

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #59 Walker/173rd

Cycle (sec): 100 Critical Vol./Cap. (X): 0.984
Loss Time (sec): 16 (Y+R = 4 sec) Average Delay (sec/veh): 63.4
Optimal Cycle: 164 Level Of Service: E

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	6	8	0	6	8	0	6	0	0	6	0	0
Lanes:	1 0	0	1 0	1	0 0	1 0	1	0 0	1 0	1	0 0	1 0
Volume Module:												
Base Vol:	103	284	67	111	219	54	46	738	89	90	715	161
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	103	284	67	111	219	54	46	738	89	90	715	161
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
PHF Volume:	113	312	74	122	241	59	51	811	98	99	786	177
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	113	312	74	122	241	59	51	811	98	99	786	177
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	113	312	74	122	241	59	51	811	98	99	786	177
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.97	0.97	0.95	0.97	0.97	0.95	0.98	0.98	0.95	0.97	0.97
Lanes:	1.00	0.81	0.19	1.00	0.80	0.20	1.00	0.89	0.11	1.00	0.82	0.18
Final Sat.:	1805	1491	354	1805	1481	362	1805	1668	202	1805	1507	339
Capacity Analysis Module:												
Vol/Sat:	0.06	0.21	0.21	0.07	0.16	0.16	0.03	0.49	0.49	0.05	0.52	0.52
Crit Moves:		****		****			****				****	
Green/Cycle:	0.08	0.20	0.20	0.07	0.20	0.20	0.06	0.51	0.51	0.06	0.51	0.51
Volume/Cap:	0.83	1.02	1.02	1.02	0.83	0.83	0.47	0.95	0.95	0.91	1.02	1.02
Uniform Del:	45.6	39.8	39.8	46.7	38.7	38.7	45.5	23.4	23.4	46.7	24.5	24.5
IncremntDel:	33.6	52.4	52.4	88.8	15.2	15.2	3.2	19.0	19.0	59.9	35.4	35.4
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	79.2	92.2	92.2	135.5	53.9	53.9	48.7	42.4	42.4	106.6	59.9	59.9
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	79.2	92.2	92.2	135.5	53.9	53.9	48.7	42.4	42.4	106.6	59.9	59.9
DesignQueue:	6	15	3	6	11	3	3	25	3	5	25	6

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #60 170th/Baseline

Cycle (sec): 90 Critical Vol./Cap. (X): 0.582
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 21.2
Optimal Cycle: 46 Level Of Service: C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0	0 1	0	1	0 0 1	0	1	0 1	1	0	1 0
Volume Module:												
Base Vol:	299	12	66	4	10	19	21	585	209	77	951	4
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	299	12	66	4	10	19	21	585	209	77	951	4
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
PHF Volume:	309	12	68	4	10	20	22	604	216	79	981	4
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	309	12	68	4	10	20	22	604	216	79	981	4
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	309	12	68	4	10	20	22	604	216	79	981	4
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.74	0.87	0.87	0.70	0.90	0.90	0.95	0.91	0.91	0.95	0.95	0.95
Lanes:	1.00	0.15	0.85	1.00	0.33	0.67	1.00	1.47	0.53	1.00	1.99	0.01
Final Sat.:	1412	249	1410	1338	570	1140	1805	2555	914	1805	3592	15
Capacity Analysis Module:												
Vol/Sat:	0.22	0.05	0.05	0.00	0.02	0.02	0.01	0.24	0.24	0.04	0.27	0.27
Crit Moves:	****						****				****	
Green/Cycle:	0.38	0.38	0.38	0.38	0.38	0.38	0.02	0.41	0.41	0.08	0.47	0.47
Volume/Cap:	0.58	0.13	0.13	0.01	0.05	0.05	0.58	0.57	0.57	0.57	0.58	0.58
Uniform Del:	22.4	18.4	18.4	17.6	17.8	17.8	43.7	20.2	20.2	40.1	17.4	17.4
IncremntDel:	1.6	0.1	0.1	0.0	0.0	0.0	20.9	0.6	0.6	5.6	0.5	0.5
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	24.1	18.5	18.5	17.6	17.9	17.9	64.6	20.8	20.8	45.7	17.9	17.9
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	24.1	18.5	18.5	17.6	17.9	17.9	64.6	20.8	20.8	45.7	17.9	17.9
DesignQueue:	10	0	2	0	0	1	1	19	7	4	28	0

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #64 Cornell/173rd

Cycle (sec): 110 Critical Vol./Cap. (X): 0.933
Loss Time (sec): 16 (Y+R = 4 sec) Average Delay (sec/veh): 43.5
Optimal Cycle: 140 Level Of Service: D

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0	0 1	0	1	0 0 1	0	1	0 1	1	0	1 0
Volume Module:												
Base Vol:	337	10	156	26	15	23	14	753	283	267	712	21
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	337	10	156	26	15	23	14	753	283	267	712	21
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
PHF Volume:	357	11	165	28	16	24	15	798	300	283	754	22
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	357	11	165	28	16	24	15	798	300	283	754	22
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	357	11	165	28	16	24	15	798	300	283	754	22
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.86	0.86	0.95	0.91	0.91	0.95	1.00	0.85	0.95	1.00	1.00
Lanes:	1.00	0.06	0.94	1.00	0.40	0.60	1.00	1.00	1.00	1.00	0.97	0.03
Final Sat.:	1805	102	1530	1805	692	1037	1805	1900	1615	1805	1839	54
Capacity Analysis Module:												
Vol/Sat:	0.20	0.11	0.11	0.02	0.02	0.02	0.01	0.42	0.19	0.16	0.41	0.41
Crit Moves:	****				****			****		****		
Green/Cycle:	0.21	0.21	0.21	0.03	0.02	0.02	0.01	0.45	0.45	0.17	0.61	0.61
Volume/Cap:	0.93	0.52	0.52	0.52	0.93	0.93	0.68	0.93	0.41	0.93	0.68	0.68
Uniform Del:	42.6	38.8	38.8	52.6	53.5	53.5	54.1	28.7	20.4	45.2	14.5	14.5
IncremntDel:	29.7	1.5	1.5	8.9	111	111.5	60.5	16.9	0.4	34.6	1.6	1.6
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	72.2	40.2	40.2	61.5	165	165.0	114.6	45.6	20.8	79.7	16.1	16.1
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	72.2	40.2	40.2	61.5	165	165.0	114.6	45.6	20.8	79.7	16.1	16.1
DesignQueue:	18	1	8	2	1	1	1	30	11	15	20	1

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #66 Scholls Ferry/Cascade

Cycle (sec): 100 Critical Vol./Cap. (X): 0.762
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 23.8
Optimal Cycle: 69 Level Of Service: C

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Permitted				Permitted				Protected				Protected			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0	0	1 0	1	0	0	1 0	1	0	2	1 0	1	0	2	0 1
Volume Module: >> Count Date: 20 May 1999 <<																
Base Vol:	213	86	102		71	103	74		31	1630	238		114	1501	46	
Growth Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Initial Bse:	213	86	102		71	103	74		31	1630	238		114	1501	46	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	0.95	0.95	0.95		0.95	0.95	0.95		0.95	0.95	0.95		0.95	0.95	0.95	
PHF Volume:	224	90	107		75	108	78		33	1714	250		120	1578	48	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	224	90	107		75	108	78		33	1714	250		120	1578	48	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Final Vol.:	224	90	107		75	108	78		33	1714	250		120	1578	48	
Saturation Flow Module:																
Sat/Lane:	1900	1900	1900		1900	1900	1900		1900	1900	1900		1900	1900	1900	
Adjustment:	0.54	0.92	0.92		0.52	0.94	0.94		0.95	0.89	0.89		0.95	0.95	0.85	
Lanes:	1.00	0.46	0.54		1.00	0.58	0.42		1.00	2.62	0.38		1.00	2.00	1.00	
Final Sat.:	1026	798	948		992	1034	747		1805	4441	648		1805	3610	1615	
Capacity Analysis Module:																
Vol/Sat:	0.22	0.11	0.11		0.08	0.10	0.10		0.02	0.39	0.39		0.07	0.44	0.03	
Crit Moves:	****									****			****			
Green/Cycle:	0.29	0.29	0.29		0.29	0.29	0.29		0.02	0.51	0.51		0.09	0.57	0.57	
Volume/Cap:	0.76	0.39	0.39		0.26	0.36	0.36		0.77	0.76	0.76		0.76	0.77	0.05	
Uniform Del:	32.6	28.7	28.7		27.5	28.4	28.4		48.5	19.8	19.8		44.6	16.4	9.5	
IncremntDel:	11.2	0.5	0.5		0.5	0.4	0.4		56.7	1.4	1.4		19.5	1.8	0.0	
Delay Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Delay/Veh:	43.7	29.2	29.2		28.0	28.9	28.9		105.3	21.2	21.2		64.1	18.2	9.6	
User DelAdj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
AdjDel/Veh:	43.7	29.2	29.2		28.0	28.9	28.9		105.3	21.2	21.2		64.1	18.2	9.6	
DesignQueue:	9	4	4		3	4	3		2	52	8		6	42	1	

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #72 Canyon/Watson

Cycle (sec): 100 Critical Vol./Cap. (X): 0.676
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 16.8
Optimal Cycle: 56 Level Of Service: B

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Split Phase				Split Phase				Protected				Protected			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	0	0	0 0	1	1	0	1 0	0	0	1	1 0	1	0	2	0 0
Volume Module: >> Count Date: 7 Aug 1996 <<																
Base Vol:	0	0	0		156	345	45		0	1282	104		110	1358	0	
Growth Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Initial Bse:	0	0	0		156	345	45		0	1282	104		110	1358	0	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	0.94	0.94	0.94		0.94	0.94	0.94		0.94	0.94	0.94		0.94	0.94	0.94	
PHF Volume:	0	0	0		166	367	48		0	1362	111		117	1443	0	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	0	0	0		166	367	48		0	1362	111		117	1443	0	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Final Vol.:	0	0	0		166	367	48		0	1362	111		117	1443	0	
Saturation Flow Module:																
Sat/Lane:	1900	1900	1900		1900	1900	1900		1900	1900	1900		1900	1900	1900	
Adjustment:	1.00	1.00	1.00		0.93	0.93	0.93		1.00	0.94	0.94		0.95	0.95	1.00	
Lanes:	0.00	0.00	0.00		1.00	1.77	0.23		0.00	1.85	0.15		1.00	2.00	0.00	
Final Sat.:	0	0	0		1762	3116	408		0	3301	269		1805	3610	0	
Capacity Analysis Module:																
Vol/Sat:	0.00	0.00	0.00		0.09	0.12	0.12		0.00	0.41	0.41		0.06	0.40	0.00	
Crit Moves:							****			****			****			
Green/Cycle:	0.00	0.00	0.00		0.17	0.17	0.17		0.00	0.61	0.61		0.10	0.71	0.00	
Volume/Cap:	0.00	0.00	0.00		0.54	0.68	0.68		0.00	0.68	0.68		0.68	0.57	0.00	
Uniform Del:	0.0	0.0	0.0		37.7	38.7	38.7		0.0	12.9	12.9		43.7	7.2	0.0	
IncremntDel:	0.0	0.0	0.0		0.6	2.2	2.2		0.0	0.9	0.9		10.2	0.3	0.0	
Delay Adj:	0.00	0.00	0.00		1.00	1.00	1.00		0.00	1.00	1.00		1.00	1.00	0.00	
Delay/Veh:	0.0	0.0	0.0		38.2	40.8	40.8		0.0	13.8	13.8		53.9	7.5	0.0	
User DelAdj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
AdjDel/Veh:	0.0	0.0	0.0		38.2	40.8	40.8		0.0	13.8	13.8		53.9	7.5	0.0	
DesignQueue:	0	0	0		8	17	2		0	33	3		6	26	0	

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #73 Farmington/Watson

Cycle (sec): 100 Critical Vol./Cap. (X): 0.770
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 24.2
Optimal Cycle: 71 Level Of Service: C

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Split Phase				Split Phase				Protected				Protected			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	0	0	0	0	1	0	1	0	0	1	1	0	1	0	2	0	0
Volume Module: >> Count Date: 13 May 1999 <<																
Base Vol:	0	0	0		119	505	116		0	1022	266		106	1539		0
Growth Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00		1.00
Initial Bse:	0	0	0		119	505	116		0	1022	266		106	1539		0
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00		1.00
PHF Adj:	0.95	0.95	0.95		0.95	0.95	0.95		0.95	0.95	0.95		0.95	0.95		0.95
PHF Volume:	0	0	0		126	533	122		0	1079	281		112	1625		0
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0		0
Reduced Vol:	0	0	0		126	533	122		0	1079	281		112	1625		0
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00		1.00
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00		1.00
Final Vol.:	0	0	0		126	533	122		0	1079	281		112	1625		0
Saturation Flow Module:																
Sat/Lane:	1900	1900	1900		1900	1900	1900		1900	1900	1900		1900	1900		1900
Adjustment:	1.00	1.00	1.00		0.91	0.91	0.91		1.00	0.92	0.92		0.95	0.95		1.00
Lanes:	0.00	0.00	0.00		0.32	1.37	0.31		0.00	1.59	0.41		1.00	2.00		0.00
Final Sat.:	0	0	0		556	2352	538		0	2775	723		1805	3610		0
Capacity Analysis Module:																
Vol/Sat:	0.00	0.00	0.00		0.23	0.23	0.23		0.00	0.39	0.39		0.06	0.45		0.00
Crit Moves:						****				****				****		
Green/Cycle:	0.00	0.00	0.00		0.29	0.29	0.29		0.00	0.51	0.51		0.08	0.59		0.00
Volume/Cap:	0.00	0.00	0.00		0.77	0.77	0.77		0.00	0.77	0.77		0.77	0.77		0.00
Uniform Del:	0.0	0.0	0.0		32.2	32.2	32.2		0.0	20.0	20.0		45.1	15.6		0.0
IncremntDel:	0.0	0.0	0.0		3.7	3.7	3.7		0.0	2.1	2.1		21.8	1.8		0.0
Delay Adj:	0.00	0.00	0.00		1.00	1.00	1.00		0.00	1.00	1.00		1.00	1.00		0.00
Delay/Veh:	0.0	0.0	0.0		35.8	35.8	35.8		0.0	22.2	22.2		66.9	17.4		0.0
User DelAdj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00		1.00
AdjDel/Veh:	0.0	0.0	0.0		35.8	35.8	35.8		0.0	22.2	22.2		66.9	17.4		0.0
DesignQueue:	0	0	0		5	22	5		0	33	9		6	42		0

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #76 Scholls Ferry/Denney

Cycle (sec): 100 Critical Vol./Cap. (X): 0.754
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 24.6
Optimal Cycle: 68 Level Of Service: C

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Permitted				Permitted			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0	0	1	0	1	0	1	0	1	0	1	0	0	1!	0	0	0	1	0	0	0
Volume Module:																
Base Vol:	103	643	2		5	653	367		214	3	79		2	1		0
Growth Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00		1.00
Initial Bse:	103	643	2		5	653	367		214	3	79		2	1		0
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00		1.00
PHF Adj:	0.92	0.92	0.92		0.92	0.92	0.92		0.92	0.92	0.92		0.92	0.92		0.92
PHF Volume:	112	700	2		5	711	400		233	3	86		2	1		0
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0		0
Reduced Vol:	112	700	2		5	711	400		233	3	86		2	1		0
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00		1.00
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00		1.00
Final Vol.:	112	700	2		5	711	400		233	3	86		2	1		0
Saturation Flow Module:																
Sat/Lane:	1900	1900	1900		1900	1900	1900		1900	1900	1900		1900	1900		1900
Adjustment:	0.95	1.00	1.00		0.95	1.00	0.85		0.75	0.75	0.75		0.90	0.90		1.00
Lanes:	1.00	0.99	0.01		1.00	1.00	1.00		0.72	0.01	0.27		0.67	0.33		0.00
Final Sat.:	1805	1895	5		1805	1900	1615		1024	13	378		1137	569		0
Capacity Analysis Module:																
Vol/Sat:	0.06	0.37	0.37		0.00	0.37	0.25		0.23	0.23	0.23		0.00	0.00		0.00
Crit Moves:	****					****				****						
Green/Cycle:	0.08	0.57	0.57		0.00	0.50	0.50		0.30	0.30	0.30		0.30	0.30		0.00
Volume/Cap:	0.75	0.64	0.64		0.64	0.75	0.50		0.75	0.75	0.75		0.01	0.01		0.00
Uniform Del:	44.9	14.4	14.4		49.7	20.3	16.9		31.6	31.6	31.6		24.4	24.4		0.0
IncremntDel:	19.5	1.3	1.3		111.1	3.5	0.5		7.5	7.5	7.5		0.0	0.0		0.0
Delay Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00		0.00
Delay/Veh:	64.4	15.7	15.7		160.8	23.8	17.4		39.0	39.0	39.0		24.4	24.4		0.0
User DelAdj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00		1.00
AdjDel/Veh:	64.4	15.7	15.7		160.8	23.8	17.4		39.0	39.0	39.0		24.4	24.4		0.0
DesignQueue:	6	18	0		0	22	12		9	0	3		0	0		0

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #77 Farmington/Hocken

Cycle (sec): 100 Critical Vol./Cap. (X): 0.844
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 22.6
Optimal Cycle: 88 Level Of Service: C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0 0	0	0 0	1 0	1! 0	0	1 0	2	0 0	0 0	1	1 0
Volume Module: >> Count Date: 11 Jan 2000 <<												
Base Vol:	0	0	0	385	0	183	60	764	0	0	1340	312
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	385	0	183	60	764	0	0	1340	312
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
PHF Volume:	0	0	0	398	0	189	62	789	0	0	1384	322
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	398	0	189	62	789	0	0	1384	322
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	0	0	0	398	0	189	62	789	0	0	1384	322
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	0.92	1.00	0.92	0.95	0.95	1.00	1.00	0.92	0.92
Lanes:	0.00	0.00	0.00	1.51	0.00	0.49	1.00	2.00	0.00	0.00	1.62	0.38
Final Sat.:	0	0	0	2646	0	852	1805	3610	0	0	2847	662
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.15	0.00	0.22	0.03	0.22	0.00	0.00	0.49	0.49
Crit Moves:						****	****				****	
Green/Cycle:	0.00	0.00	0.00	0.26	0.00	0.26	0.04	0.62	0.00	0.00	0.58	0.58
Volume/Cap:	0.00	0.00	0.00	0.57	0.00	0.84	0.84	0.35	0.00	0.00	0.84	0.84
Uniform Del:	0.0	0.0	0.0	32.0	0.0	34.9	47.6	9.4	0.0	0.0	17.5	17.5
IncremntDel:	0.0	0.0	0.0	0.8	0.0	9.2	55.4	0.1	0.0	0.0	3.4	3.4
Delay Adj:	0.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00
Delay/Veh:	0.0	0.0	0.0	32.8	0.0	44.2	103.1	9.5	0.0	0.0	20.9	20.9
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	32.8	0.0	44.2	103.1	9.5	0.0	0.0	20.9	20.9
DesignQueue:	0	0	0	17	0	8	3	18	0	0	37	9

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #78 TV Highway/Hocken

Cycle (sec): 100 Critical Vol./Cap. (X): 0.896
Loss Time (sec): 16 (Y+R = 4 sec) Average Delay (sec/veh): 38.3
Optimal Cycle: 115 Level Of Service: D

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Ovl			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1 0	0	1 0	1 0	1	0 1	1 0	1	1 0	1 0	1	1 0
Volume Module: >> Count Date: 14 Dec 1999 <<												
Base Vol:	190	115	22	190	309	121	100	1167	249	72	1435	31
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	190	115	22	190	309	121	100	1167	249	72	1435	31
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
PHF Volume:	196	118	23	196	318	125	103	1202	256	74	1478	32
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	196	118	23	196	318	125	103	1202	256	74	1478	32
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	196	118	23	196	318	125	103	1202	256	74	1478	32
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.98	0.98	0.95	1.00	0.85	0.95	0.93	0.93	0.95	0.95	0.95
Lanes:	1.00	0.84	0.16	1.00	1.00	1.00	1.00	1.65	0.35	1.00	1.96	0.04
Final Sat.:	1805	1552	302	1805	1900	1615	1805	2899	617	1805	3523	76
Capacity Analysis Module:												
Vol/Sat:	0.11	0.08	0.08	0.11	0.17	0.08	0.06	0.41	0.41	0.04	0.42	0.42
Crit Moves:	****				****		****				****	
Green/Cycle:	0.12	0.13	0.13	0.18	0.19	0.25	0.06	0.48	0.48	0.05	0.47	0.47
Volume/Cap:	0.90	0.60	0.60	0.60	0.90	0.31	0.90	0.86	0.86	0.86	0.90	0.90
Uniform Del:	43.3	41.3	41.3	37.6	39.7	30.4	46.5	22.7	22.7	47.3	24.4	24.4
IncremntDel:	34.1	4.2	4.2	3.1	24.0	0.4	52.8	4.5	4.5	52.7	6.7	6.7
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	77.5	45.5	45.5	40.7	63.7	30.9	99.3	27.3	27.3	100.0	31.1	31.1
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	77.5	45.5	45.5	40.7	63.7	30.9	99.3	27.3	27.3	100.0	31.1	31.1
DesignQueue:	10	6	1	9	15	5	5	38	8	4	49	1

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #81 158th/Blueridge

Cycle (sec): 100 Critical Vol./Cap. (X): 0.708
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 26.3
Optimal Cycle: 60 Level Of Service: C

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Permitted				Permitted			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0	
Lanes:	1	0	2	0 1	1	0	1	1 0	0	0	1!	0 0	0	1	0	0 1
Volume Module:																
Base Vol:	86	980	64		33	929	45		44	5	33		332	9	57	
Growth Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Initial Bse:	86	980	64		33	929	45		44	5	33		332	9	57	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	0.94	0.94	0.94		0.94	0.94	0.94		0.94	0.94	0.94		0.94	0.94	0.94	
PHF Volume:	91	1043	68		35	988	48		47	5	35		353	10	61	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	91	1043	68		35	988	48		47	5	35		353	10	61	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Final Vol.:	91	1043	68		35	988	48		47	5	35		353	10	61	
Saturation Flow Module:																
Sat/Lane:	1900	1900	1900		1900	1900	1900		1900	1900	1900		1900	1900	1900	
Adjustment:	0.95	0.95	0.85		0.95	0.94	0.94		0.69	0.69	0.69		0.67	0.67	0.85	
Lanes:	1.00	2.00	1.00		1.00	1.91	0.09		0.54	0.06	0.40		0.97	0.03	1.00	
Final Sat.:	1805	3610	1615		1805	3419	166		705	75	525		1245	35	1615	
Capacity Analysis Module:																
Vol/Sat:	0.05	0.29	0.04		0.02	0.29	0.29		0.07	0.07	0.07		0.28	0.28	0.04	
Crit Moves:	****					****								****		
Green/Cycle:	0.07	0.45	0.45		0.03	0.41	0.41		0.40	0.40	0.40		0.40	0.40	0.40	
Volume/Cap:	0.71	0.64	0.09		0.64	0.71	0.71		0.17	0.17	0.17		0.71	0.71	0.09	
Uniform Del:	45.4	21.3	15.8		48.0	24.6	24.6		19.3	19.3	19.3		25.1	25.1	18.7	
IncremntDel:	16.6	0.9	0.1		23.3	1.6	1.6		0.2	0.2	0.2		4.5	4.5	0.1	
Delay Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Delay/Veh:	62.0	22.2	15.9		71.3	26.2	26.2		19.4	19.4	19.4		29.6	29.6	18.7	
User DelAdj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
AdjDel/Veh:	62.0	22.2	15.9		71.3	26.2	26.2		19.4	19.4	19.4		29.6	29.6	18.7	
DesignQueue:	5	34	2		2	35	2		2	0	1		12	0	2	

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #83 158th/Jay

Cycle (sec): 100 Critical Vol./Cap. (X): 0.600
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 26.4
Optimal Cycle: 73 Level Of Service: C

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Prot+Permit				Prot+Permit				Permitted				Permitted			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0	
Lanes:	1	0	1	1 0	1	0	0	1 0	0	0	1!	0 0	0	1	0	0 1
Volume Module:																
Base Vol:	2	348	9		101	557	45		92	13	33		136	104	510	
Growth Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Initial Bse:	2	348	9		101	557	45		92	13	33		136	104	510	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	0.93	0.93	0.93		0.93	0.93	0.93		0.93	0.93	0.93		0.93	0.93	0.93	
PHF Volume:	2	375	10		109	600	48		99	14	36		147	112	550	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	2	375	10		109	600	48		99	14	36		147	112	550	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Final Vol.:	2	375	10		109	600	48		99	14	36		147	112	550	
Saturation Flow Module:																
Sat/Lane:	1900	1900	1900		1900	1900	1900		1900	1900	1900		1900	1900	1900	
Adjustment:	0.15	0.95	0.95		0.58	0.99	0.99		0.65	0.65	0.65		0.75	0.75	0.85	
Lanes:	1.00	1.95	0.05		1.00	0.93	0.07		0.67	0.09	0.24		0.57	0.43	1.00	
Final Sat.:	276	3502	93		1095	1740	139		822	116	299		806	614	1615	
Capacity Analysis Module:																
Vol/Sat:	0.01	0.11	0.11		0.10	0.34	0.34		0.12	0.12	0.12		0.18	0.18	0.34	
Crit Moves:	****					****									****	
Green/Cycle:	0.28	0.28	0.28		0.48	0.44	0.44		0.44	0.44	0.44		0.44	0.44	0.44	
Volume/Cap:	0.03	0.38	0.38		0.21	0.78	0.78		0.28	0.28	0.28		0.42	0.42	0.78	
Uniform Del:	29.6	28.7	28.7		14.6	23.8	23.8		18.0	18.0	18.0		19.4	19.4	24.1	
IncremntDel:	0.1	0.2	0.2		0.2	4.8	4.8		0.3	0.3	0.3		0.5	0.5	5.6	
Delay Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Delay/Veh:	29.7	29.0	29.0		14.8	28.5	28.5		18.3	18.3	18.3		19.9	19.9	29.7	
User DelAdj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
AdjDel/Veh:	29.7	29.0	29.0		14.8	28.5	28.5		18.3	18.3	18.3		19.9	19.9	29.7	
DesignQueue:	0	15	0		5	20	2		3	0	1		5	4	19	

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #85 TV Highway/160th

Cycle (sec): 120 Critical Vol./Cap. (X): 0.974
Loss Time (sec): 16 (Y+R = 4 sec) Average Delay (sec/veh): 49.6
Optimal Cycle: 180 Level Of Service: D

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Ovl			Ovl		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0 1	1 0	1	0 1	0 1	1	0 2	0 1	1	0 2	0 1
Volume Module: >> Count Date: 16 Nov 1900 <<												
Base Vol:	82	89	88	30	341	368	66	1306	197	252	1825	14
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	82	89	88	30	341	368	66	1306	197	252	1825	14
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
PHF Volume:	85	92	91	31	353	381	68	1352	204	261	1889	14
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	85	92	91	31	353	381	68	1352	204	261	1889	14
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	85	92	91	31	353	381	68	1352	204	261	1889	14
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.88	0.88	0.95	1.00	0.85	0.95	0.95	0.85	0.95	0.95	0.85
Lanes:	1.00	1.01	0.99	1.00	1.00	1.00	1.00	2.00	1.00	1.00	2.00	1.00
Final Sat.:	1805	1679	1661	1805	1900	1615	1805	3610	1615	1805	3610	1615
Capacity Analysis Module:												
Vol/Sat:	0.05	0.05	0.05	0.02	0.19	0.24	0.04	0.37	0.13	0.14	0.52	0.01
Crit Moves:	****					****	****				****	
Green/Cycle:	0.05	0.22	0.22	0.07	0.24	0.24	0.04	0.42	0.46	0.16	0.54	0.61
Volume/Cap:	0.97	0.25	0.25	0.25	0.77	0.97	0.97	0.90	0.27	0.90	0.97	0.01
Uniform Del:	57.0	38.5	38.5	52.9	42.3	45.1	57.6	32.8	19.7	49.4	26.9	9.4
IncremntDel:	87.3	0.2	0.2	1.0	7.6	38.4	98.3	7.8	0.2	28.9	14.7	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	144.4	38.7	38.7	53.9	49.9	83.5	155.9	40.6	19.9	78.4	41.6	9.4
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	144.4	38.7	38.7	53.9	49.9	83.5	155.9	40.6	19.9	78.4	41.6	9.4
DesignQueue:	5	5	5	2	19	20	4	58	8	15	67	0

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #87 Hart/155th

Cycle (sec): 110 Critical Vol./Cap. (X): 0.766
Loss Time (sec): 8 (Y+R = 4 sec) Average Delay (sec/veh): 18.2
Optimal Cycle: 59 Level Of Service: B

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	0 1!	0 0	0	0 1!	0 0	0	0 1!	0 0	0	0 1!	0 0
Volume Module: >> Count Date: 6 Oct 1999 <<												
Base Vol:	110	30	76	15	79	21	7	365	129	125	698	10
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	110	30	76	15	79	21	7	365	129	125	698	10
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
PHF Volume:	114	31	79	16	82	22	7	378	134	130	723	10
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	114	31	79	16	82	22	7	378	134	130	723	10
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	114	31	79	16	82	22	7	378	134	130	723	10
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.68	0.68	0.68	0.93	0.93	0.93	0.96	0.96	0.96	0.85	0.85	0.85
Lanes:	0.51	0.14	0.35	0.13	0.69	0.18	0.01	0.73	0.26	0.15	0.84	0.01
Final Sat.:	658	179	456	236	1208	324	24	1322	469	242	1347	19
Capacity Analysis Module:												
Vol/Sat:	0.17	0.17	0.17	0.07	0.07	0.07	0.29	0.29	0.29	0.54	0.54	0.54
Crit Moves:		****									****	
Green/Cycle:	0.23	0.23	0.23	0.23	0.23	0.23	0.70	0.70	0.70	0.70	0.70	0.70
Volume/Cap:	0.77	0.77	0.77	0.30	0.30	0.30	0.41	0.41	0.41	0.77	0.77	0.77
Uniform Del:	39.8	39.8	39.8	35.3	35.3	35.3	6.9	6.9	6.9	10.6	10.6	10.6
IncremntDel:	11.5	11.5	11.5	0.4	0.4	0.4	0.2	0.2	0.2	3.2	3.2	3.2
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	51.3	51.3	51.3	35.8	35.8	35.8	7.1	7.1	7.1	13.8	13.8	13.8
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	51.3	51.3	51.3	35.8	35.8	35.8	7.1	7.1	7.1	13.8	13.8	13.8
DesignQueue:	6	2	4	1	4	1	0	7	3	3	15	0

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #88 Murray/Hart

Cycle (sec): 120 Critical Vol./Cap. (X): 0.855
Loss Time (sec): 16 (Y+R = 4 sec) Average Delay (sec/veh): 37.2
Optimal Cycle: 110 Level Of Service: D

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Ovl			Ovl			Ovl		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0 1	1 0	1	0 2	0 1	1	0 1	0 1	1	0 1	0 1
Volume Module: >> Count Date: 30 Sep 1999 <<												
Base Vol:	144	868	56	34	1240	380	165	119	140	84	342	48
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	144	868	56	34	1240	380	165	119	140	84	342	48
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
PHF Volume:	154	925	60	36	1322	405	176	127	149	90	365	51
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	154	925	60	36	1322	405	176	127	149	90	365	51
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	154	925	60	36	1322	405	176	127	149	90	365	51
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.94	0.94	0.95	0.95	0.85	0.95	1.00	0.85	0.95	1.00	0.85
Lanes:	1.00	1.88	0.12	1.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Sat.:	1805	3360	218	1805	3610	1615	1805	1900	1615	1805	1900	1615
Capacity Analysis Module:												
Vol/Sat:	0.09	0.28	0.28	0.02	0.37	0.25	0.10	0.07	0.09	0.05	0.19	0.03
Crit Moves:	****				****		****				****	
Green/Cycle:	0.10	0.49	0.49	0.04	0.43	0.54	0.11	0.19	0.29	0.14	0.22	0.26
Volume/Cap:	0.86	0.56	0.56	0.56	0.86	0.46	0.86	0.34	0.31	0.34	0.86	0.12
Uniform Del:	53.2	21.3	21.3	56.9	30.9	16.8	52.2	41.8	33.0	46.2	44.6	33.9
IncremntDel:	30.8	0.4	0.4	10.6	4.9	0.4	27.8	0.6	0.4	0.8	15.5	0.1
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	84.0	21.7	21.7	67.5	35.9	17.2	80.0	42.3	33.4	47.0	60.1	34.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	84.0	21.7	21.7	67.5	35.9	17.2	80.0	42.3	33.4	47.0	60.1	34.0
DesignQueue:	9	34	2	2	55	13	11	7	7	5	20	3

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #89 Murray/Scholls Ferry

Cycle (sec): 120 Critical Vol./Cap. (X): 0.697
Loss Time (sec): 16 (Y+R = 4 sec) Average Delay (sec/veh): 32.0
Optimal Cycle: 72 Level Of Service: C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Ovl			Ovl			Ignore			Ignore		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0 1	0 1	2	0 1	0 1	1	0 2	0 1	1	0 2	0 1
Volume Module: >> Count Date: 7 Dec 1999 <<												
Base Vol:	2	2	7	747	13	546	239	485	0	4	729	881
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	2	2	7	747	13	546	239	485	0	4	729	881
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
PHF Adj:	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.00	0.91	0.91	0.00
PHF Volume:	2	2	8	823	14	601	263	534	0	4	803	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	2	2	8	823	14	601	263	534	0	4	803	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
Final Vol.:	2	2	8	823	14	601	263	534	0	4	803	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	1.00	0.85	0.92	1.00	0.85	0.95	0.95	1.00	0.95	0.95	1.00
Lanes:	1.00	1.00	1.00	2.00	1.00	1.00	1.00	2.00	1.00	1.00	2.00	1.00
Final Sat.:	1805	1900	1615	3502	1900	1615	1805	3610	1900	1805	3610	1900
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.24	0.01	0.37	0.15	0.15	0.00	0.00	0.22	0.00
Crit Moves:		****		****			****				****	
Green/Cycle:	0.00	0.00	0.01	0.34	0.34	0.55	0.21	0.52	0.00	0.01	0.32	0.00
Volume/Cap:	0.67	0.70	0.53	0.70	0.02	0.68	0.70	0.28	0.00	0.28	0.70	0.00
Uniform Del:	59.9	59.9	59.2	34.5	26.6	19.7	43.9	16.2	0.0	59.2	35.8	0.0
IncremntDel:	236.0	264	32.2	1.9	0.0	2.2	5.6	0.1	0.0	10.8	1.9	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
Delay/Veh:	295.9	323	91.3	36.3	26.6	21.9	49.6	16.3	0.0	70.0	37.7	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	295.9	323	91.3	36.3	26.6	21.9	49.6	16.3	0.0	70.0	37.7	0.0
DesignQueue:	0	0	1	39	1	20	14	18	0	0	39	0

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #90 Scholls Ferry/Davies

Average Delay (sec/veh): 1421.8 Worst Case Level Of Service: F

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 0 1!	0	0	1	0	0 1	0	1	0 1 1	0	0 1	1 0 1
Volume Module: >> Count Date: 16 Dec 1999 <<												
Base Vol:	7	1	19	75	6	26	29	1122	27	31	1419	149
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	7	1	19	75	6	26	29	1122	27	31	1419	149
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
PHF Volume:	8	1	20	81	6	28	31	1208	29	33	1527	160
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	8	1	20	81	6	28	31	1208	29	33	1527	160
Critical Gap Module:												
Critical Gp:	7.5	6.5	6.9	7.5	6.5	6.9	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	3.5	4.0	3.3	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	2118	3039	618	2261	2893	764	1688	xxxx	xxxxx	1237	xxxx	xxxxx
Potent Cap.:	29	13	437	23	16	351	384	xxxx	xxxxx	570	xxxx	xxxxx
Move Cap.:	16	11	437	18	14	351	384	xxxx	xxxxx	570	xxxx	xxxxx
Level Of Service Module:												
Stopped Del:	xxxxx	xxxx	xxxxx	1980	xxxx	xxxxx	15.2	xxxx	xxxxx	11.3	xxxx	xxxxx
LOS by Move:	*	*	*	F	*	*	C	*	*	B	*	*
Movement:	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT
Shared Cap.:	xxxx	47	xxxxx	xxxx	xxxx	64	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Shrd StpDel:	xxxxx	168	xxxxx	xxxxx	xxxx	114.4	xxxxx	xxxx	xxxxx	11.7	xxxx	xxxxx
Shared LOS:	*	F	*	*	*	F	*	*	*	B	*	*
ApproachDel:	167.6			1421.8			xxxxxx			xxxxxx		
ApproachLOS:	F			F			*			*		

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #91 Scholls Ferry/Barrows

Cycle (sec): 120 Critical Vol./Cap. (X): 0.686
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 17.3
Optimal Cycle: 60 Level Of Service: B

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Protected			Protected		
Rights:	Ovl			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1 0	0	0 1	0	0	0 0	0	0	1 1 0	1	0	2 0 0
Volume Module: >> Count Date: 7 Dec 1999 <<												
Base Vol:	97	0	191	0	0	0	0	1096	108	308	1443	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	97	0	191	0	0	0	0	1096	108	308	1443	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
PHF Volume:	107	0	210	0	0	0	0	1204	119	338	1586	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	107	0	210	0	0	0	0	1204	119	338	1586	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	107	0	210	0	0	0	0	1204	119	338	1586	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	1.00	0.85	1.00	1.00	1.00	1.00	0.94	0.94	0.95	0.95	1.00
Lanes:	1.00	0.00	1.00	0.00	0.00	0.00	0.00	1.82	0.18	1.00	2.00	0.00
Final Sat.:	1805	0	1615	0	0	0	0	3243	320	1805	3610	0
Capacity Analysis Module:												
Vol/Sat:	0.06	0.00	0.13	0.00	0.00	0.00	0.00	0.37	0.37	0.19	0.44	0.00
Crit Moves:	****							****		****		
Green/Cycle:	0.09	0.00	0.36	0.00	0.00	0.00	0.00	0.54	0.54	0.27	0.81	0.00
Volume/Cap:	0.69	0.00	0.36	0.00	0.00	0.00	0.00	0.69	0.69	0.69	0.54	0.00
Uniform Del:	53.2	0.0	28.3	0.0	0.0	0.0	0.0	20.1	20.1	39.0	3.7	0.0
IncremntDel:	12.1	0.0	0.4	0.0	0.0	0.0	0.0	1.1	1.1	4.0	0.2	0.0
Delay Adj:	1.00	0.00	1.00	0.00	0.00	0.00	0.00	1.00	1.00	1.00	1.00	0.00
Delay/Veh:	65.3	0.0	28.7	0.0	0.0	0.0	0.0	21.2	21.2	43.1	3.9	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	65.3	0.0	28.7	0.0	0.0	0.0	0.0	21.2	21.2	43.1	3.9	0.0
DesignQueue:	7	0	9	0	0	0	0	41	4	17	22	0

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #92 Scholls Ferry/135th

Cycle (sec): 100 Critical Vol./Cap. (X): 0.697
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 18.4
Optimal Cycle: 59 Level Of Service: B

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Permitted				Permitted				Protected				Protected			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	1	0	0 1	0	0	1!	0 0	1	0	1	1 0	1	0	2	0 1
Volume Module: >> Count Date: 7 Dec 1999 <<																
Base Vol:	147	10	123		3	5	17		10	1037	177		198	1475	10	
Growth Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Initial Bse:	147	10	123		3	5	17		10	1037	177		198	1475	10	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	0.93	0.93	0.93		0.93	0.93	0.93		0.93	0.93	0.93		0.93	0.93	0.93	
PHF Volume:	158	11	132		3	5	18		11	1114	190		213	1584	11	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	158	11	132		3	5	18		11	1114	190		213	1584	11	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Final Vol.:	158	11	132		3	5	18		11	1114	190		213	1584	11	
Saturation Flow Module:																
Sat/Lane:	1900	1900	1900		1900	1900	1900		1900	1900	1900		1900	1900	1900	
Adjustment:	0.71	0.71	0.85		0.88	0.88	0.88		0.95	0.93	0.93		0.95	0.95	0.85	
Lanes:	0.93	0.07	1.00		0.12	0.19	0.69		1.00	1.71	0.29		1.00	2.00	1.00	
Final Sat.:	1258	88	1615		193	322	1160		1805	3016	514		1805	3610	1615	
Capacity Analysis Module:																
Vol/Sat:	0.13	0.13	0.08		0.02	0.02	0.02		0.01	0.37	0.37		0.12	0.44	0.01	
Crit Moves:		****								****			****			
Green/Cycle:	0.18	0.18	0.18		0.18	0.18	0.18		0.01	0.53	0.53		0.17	0.69	0.69	
Volume/Cap:	0.70	0.70	0.45		0.09	0.09	0.09		0.64	0.70	0.70		0.70	0.64	0.01	
Uniform Del:	38.4	38.4	36.6		34.1	34.1	34.1		49.3	17.5	17.5		39.1	8.6	4.8	
IncremntDel:	8.6	8.6	1.1		0.1	0.1	0.1		58.5	1.2	1.2		6.9	0.6	0.0	
Delay Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Delay/Veh:	47.0	47.0	37.7		34.2	34.2	34.2		107.9	18.7	18.7		46.0	9.1	4.8	
User DelAdj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
AdjDel/Veh:	47.0	47.0	37.7		34.2	34.2	34.2		107.9	18.7	18.7		46.0	9.1	4.8	
DesignQueue:	7	1	6		0	0	1		1	32	5		10	31	0	

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #93 Scholls Ferry/125th

Cycle (sec): 120 Critical Vol./Cap. (X): 0.916
Loss Time (sec): 16 (Y+R = 4 sec) Average Delay (sec/veh): 41.6
Optimal Cycle: 138 Level Of Service: D

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Protected				Protected			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0	1	0 1	1	0	0	1 0	1	0	1	1 0	1	0	2	0 1
Volume Module: >> Count Date: 7 Dec 1999 <<																
Base Vol:	230	149	78		184	74	174		81	1072	63		98	1640	111	
Growth Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Initial Bse:	230	149	78		184	74	174		81	1072	63		98	1640	111	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	0.97	0.97	0.97		0.97	0.97	0.97		0.97	0.97	0.97		0.97	0.97	0.97	
PHF Volume:	236	153	80		189	76	179		83	1102	65		101	1686	114	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	236	153	80		189	76	179		83	1102	65		101	1686	114	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Final Vol.:	236	153	80		189	76	179		83	1102	65		101	1686	114	
Saturation Flow Module:																
Sat/Lane:	1900	1900	1900		1900	1900	1900		1900	1900	1900		1900	1900	1900	
Adjustment:	0.95	1.00	0.85		0.95	0.90	0.90		0.95	0.94	0.94		0.95	0.95	0.85	
Lanes:	1.00	1.00	1.00		1.00	0.30	0.70		1.00	1.89	0.11		1.00	2.00	1.00	
Final Sat.:	1805	1900	1615		1805	507	1194		1805	3382	199		1805	3610	1615	
Capacity Analysis Module:																
Vol/Sat:	0.13	0.08	0.05		0.10	0.15	0.15		0.05	0.33	0.33		0.06	0.47	0.07	
Crit Moves:	****					****			****					****		
Green/Cycle:	0.14	0.13	0.13		0.17	0.16	0.16		0.05	0.48	0.48		0.08	0.51	0.51	
Volume/Cap:	0.92	0.60	0.37		0.60	0.92	0.92		0.92	0.68	0.68		0.68	0.92	0.14	
Uniform Del:	50.7	49.0	47.4		45.8	49.4	49.4		56.7	24.2	24.2		53.5	27.0	15.5	
IncremntDel:	34.4	4.1	1.1		3.3	32.7	32.7		67.3	1.1	1.1		12.2	7.7	0.1	
Delay Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Delay/Veh:	85.2	53.1	48.5		49.1	82.0	82.0		124.1	25.4	25.4		65.8	34.7	15.6	
User DelAdj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
AdjDel/Veh:	85.2	53.1	48.5		49.1	82.0	82.0		124.1	25.4	25.4		65.8	34.7	15.6	
DesignQueue:	14	9	5		11	4	10		5	42	2		6	62	4	

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #94 Scholls Ferry/121st

Cycle (sec): 140 Critical Vol./Cap. (X): 0.961
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 40.4
Optimal Cycle: 180 Level Of Service: D

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Permitted				Permitted				Protected				Protected			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	1	0	0 1	0	0	1!	0 0	1	0	2	0 1	1	0	2	0 1
Volume Module: >> Count Date: 7 Dec 1999 <<																
Base Vol:	271	32	141		15	11	3		12	969	335		282	2066	6	
Growth Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Initial Bse:	271	32	141		15	11	3		12	969	335		282	2066	6	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	0.91	0.91	0.91		0.91	0.91	0.91		0.91	0.91	0.91		0.91	0.91	0.91	
PHF Volume:	297	35	155		16	12	3		13	1062	367		309	2265	7	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	297	35	155		16	12	3		13	1062	367		309	2265	7	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Final Vol.:	297	35	155		16	12	3		13	1062	367		309	2265	7	
Saturation Flow Module:																
Sat/Lane:	1900	1900	1900		1900	1900	1900		1900	1900	1900		1900	1900	1900	
Adjustment:	0.72	0.72	0.85		0.71	0.71	0.71		0.95	0.95	0.85		0.95	0.95	0.85	
Lanes:	0.89	0.11	1.00		0.51	0.39	0.10		1.00	2.00	1.00		1.00	2.00	1.00	
Final Sat.:	1215	143	1615		692	519	130		1805	3610	1615		1805	3610	1615	
Capacity Analysis Module:																
Vol/Sat:	0.24	0.24	0.10		0.02	0.02	0.02		0.01	0.29	0.23		0.17	0.63	0.00	
Crit Moves:		****							****					****		
Green/Cycle:	0.25	0.25	0.25		0.25	0.25	0.25		0.01	0.42	0.42		0.24	0.65	0.65	
Volume/Cap:	0.96	0.96	0.38		0.09	0.09	0.09		0.96	0.71	0.54		0.71	0.96	0.01	
Uniform Del:	51.5	51.5	43.1		39.9	39.9	39.9		69.5	33.7	30.8		48.4	22.7	8.5	
IncremntDel:	38.1	38.1	0.6		0.1	0.1	0.1		223.9	1.5	0.9		5.2	11.0	0.0	
Delay Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Delay/Veh:	89.7	89.7	43.7		40.0	40.0	40.0		293.4	35.2	31.7		53.6	33.6	8.5	
User DelAdj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
AdjDel/Veh:	89.7	89.7	43.7		40.0	40.0	40.0		293.4	35.2	31.7		53.6	33.6	8.5	
DesignQueue:	18	2	9		1	1	0		1	52	18		19	73	0	

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #95 Scholls Ferry/Conestoga

Cycle (sec): 120 Critical Vol./Cap. (X): 0.717
Loss Time (sec): 16 (Y+R = 4 sec) Average Delay (sec/veh): 10.3
Optimal Cycle: 75 Level Of Service: B

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Split Phase				Split Phase				Protected				Protected			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	0	0	0 0	1	0	0	0 1	1	0	2	0 0	0	0	2	0 1
Volume Module: >> Count Date: 7 Dec 1999 <<																
Base Vol:	0	0	0		106	0	23		38	1106	0		0	1870	206	
Growth Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Initial Bse:	0	0	0		106	0	23		38	1106	0		0	1870	206	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	0.96	0.96	0.96		0.96	0.96	0.96		0.96	0.96	0.96		0.96	0.96	0.96	
PHF Volume:	0	0	0		110	0	24		40	1150	0		0	1944	214	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	0	0	0		110	0	24		40	1150	0		0	1944	214	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Final Vol.:	0	0	0		110	0	24		40	1150	0		0	1944	214	
Saturation Flow Module:																
Sat/Lane:	1900	1900	1900		1900	1900	1900		1900	1900	1900		1900	1900	1900	
Adjustment:	1.00	1.00	1.00		0.95	1.00	0.85		0.95	0.95	1.00		1.00	0.95	0.85	
Lanes:	0.00	0.00	0.00		1.00	0.00	1.00		1.00	2.00	0.00		0.00	2.00	1.00	
Final Sat.:	0	0	0		1805	0	1615		1805	3610	0		0	3610	1615	
Capacity Analysis Module:																
Vol/Sat:	0.00	0.00	0.00		0.06	0.00	0.01		0.02	0.32	0.00		0.00	0.54	0.13	
Crit Moves:					****				****					****		
Green/Cycle:	0.00	0.00	0.00		0.08	0.00	0.08		0.03	0.78	0.00		0.00	0.75	0.75	
Volume/Cap:	0.00	0.00	0.00		0.72	0.00	0.17		0.72	0.41	0.00		0.00	0.72	0.18	
Uniform Del:	0.0	0.0	0.0		53.5	0.0	51.0		57.6	4.2	0.0		0.0	8.1	4.3	
IncremntDel:	0.0	0.0	0.0		15.0	0.0	0.6		36.0	0.1	0.0		0.0	0.9	0.1	
Delay Adj:	0.00	0.00	0.00		1.00	0.00	1.00		1.00	1.00	0.00		0.00	1.00	1.00	
Delay/Veh:	0.0	0.0	0.0		68.5	0.0	51.6		93.6	4.3	0.0		0.0	9.0	4.4	
User DelAdj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
AdjDel/Veh:	0.0	0.0	0.0		68.5	0.0	51.6		93.6	4.3	0.0		0.0	9.0	4.4	
DesignQueue:	0	0	0		7	0	1		3	18	0		0	37	4	

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #102 Scholls Ferry/Laurelwood

Average Delay (sec/veh): 239.6 Worst Case Level Of Service: F

Approach:	North Bound						South Bound						East Bound						West Bound					
Movement:	L	-	T	-	R		L	-	T	-	R		L	-	T	-	R		L	-	T	-	R	
Control:	Uncontrolled						Uncontrolled						Stop Sign						Stop Sign					
Rights:	Include						Include						Include						Include					
Lanes:	1	0	0	1	0		0	0	0	1	0		1	0	0	0	1		1	0	0	0	1	
Volume Module: >> Count Date: 15 Nov 1900 <<																								
Base Vol:	138	727		0		0	732		58			26		0	190			1		0		0		
Growth Adj:	1.00	1.00		1.00		1.00	1.00		1.00			1.00		1.00	1.00			1.00		1.00		1.00		
Initial Bse:	138	727		0		0	732		58			26		0	190			1		0		0		
User Adj:	1.00	1.00		1.00		1.00	1.00		1.00			1.00		1.00	1.00			1.00		1.00		1.00		
PHF Adj:	0.92	0.92		0.92		0.92	0.92		0.92			0.92		0.92	0.92			0.92		0.92		0.92		
PHF Volume:	150	793		0		0	798		63			28		0	207			1		0		0		
Reduct Vol:	0	0		0		0	0		0			0		0	0			0		0		0		
Final Vol.:	150	793		0		0	798		63			28		0	207			1		0		0		
Critical Gap Module:																								
Critical Gp:	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx			7.1	xxxx		6.2			7.1	xxxx	xxxxx							
FollowUpTim:	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx			3.5	xxxx		3.3			3.5	xxxx	xxxxx							
Capacity Module:																								
Cnflict Vol:	862	xxxx	xxxxx		xxxx	xxxx	xxxxx		1924	xxxx		830			2027	xxxx	xxxxx							
Potent Cap.:	789	xxxx	xxxxx		xxxx	xxxx	xxxxx		51	xxxx		373			43	xxxx	xxxxx							
Move Cap.:	789	xxxx	xxxxx		xxxx	xxxx	xxxxx		44	xxxx		373			16	xxxx	xxxxx							
Level Of Service Module:																								
Stopped Del:	10.6	xxxx	xxxxx	xxxxx	xxxx	xxxxx	182.6	xxxx			26.0				239.6	xxxx	xxxxx							
LOS by Move:	B	*		*		*	F	*			D				F	*	*							
Movement:	LT - LTR - RT						LT - LTR - RT						LT - LTR - RT						LT - LTR - RT					
Shared Cap.:	xxxx	xxxx	xxxxx		xxxx	xxxx	xxxxx		xxxx	xxxx	xxxxx				xxxx	xxxx	xxxxx							
Shrd StpDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx					xxxx	xxxx	xxxxx							
Shared LOS:	*	*		*	*		*	*			*				*	*								
ApproachDel:	xxxxxx			xxxxxx			44.9				239.6													
ApproachLOS:	*			*			E				F													

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #103 Canyon/Lombard

Cycle (sec): 100 Critical Vol./Cap. (X): 0.663
Loss Time (sec): 16 (Y+R = 4 sec) Average Delay (sec/veh): 21.2
Optimal Cycle: 64 Level Of Service: C

Approach:	North Bound						South Bound						East Bound						West Bound					
Movement:	L	-	T	-	R		L	-	T	-	R		L	-	T	-	R		L	-	T	-	R	
Control:	Protected						Protected						Protected						Protected					
Rights:	Include						Include						Include						Include					
Min. Green:	0	0		0			0	0		0			0	0		0			0	0		0		
Lanes:	1	0	0	1	0		1	0	1	0	1		1	0	1	1	0		1	0	1	1	0	
Volume Module: >> Count Date: 21 Oct 1999 <<																								
Base Vol:	92	139		4			79	115		95			69	1215		81			36	1255		65		
Growth Adj:	1.00	1.00		1.00			1.00	1.00		1.00			1.00	1.00		1.00			1.00	1.00		1.00		
Initial Bse:	92	139		4			79	115		95			69	1215		81			36	1255		65		
User Adj:	1.00	1.00		1.00			1.00	1.00		1.00			1.00	1.00		1.00			1.00	1.00		1.00		
PHF Adj:	0.94	0.94		0.94			0.94	0.94		0.94			0.94	0.94		0.94			0.94	0.94		0.94		
PHF Volume:	98	147		4			84	122		101			73	1288		86			38	1331		69		
Reduct Vol:	0	0		0			0	0		0			0	0		0			0	0		0		
Reduced Vol:	98	147		4			84	122		101			73	1288		86			38	1331		69		
PCE Adj:	1.00	1.00		1.00			1.00	1.00		1.00			1.00	1.00		1.00			1.00	1.00		1.00		
MLF Adj:	1.00	1.00		1.00			1.00	1.00		1.00			1.00	1.00		1.00			1.00	1.00		1.00		
Final Vol.:	98	147		4			84	122		101			73	1288		86			38	1331		69		
Saturation Flow Module:																								
Sat/Lane:	1900	1900		1900			1900	1900		1900			1900	1900		1900			1900	1900		1900		
Adjustment:	0.95	1.00		1.00			0.95	1.00		0.85			0.95	0.94		0.94			0.95	0.94		0.94		
Lanes:	1.00	0.97		0.03			1.00	1.00		1.00			1.00	1.87		0.13			1.00	1.90		0.10		
Final Sat.:	1805	1842		50			1805	1900		1615			1805	3354		224			1805	3408		177		
Capacity Analysis Module:																								
Vol/Sat:	0.05	0.08		0.08			0.05	0.06		0.06			0.04	0.38		0.38			0.02	0.39		0.39		
Crit Moves:		****						****						****						****				
Green/Cycle:	0.09	0.12		0.12			0.07	0.10		0.10			0.06	0.62		0.62			0.03	0.59		0.59		
Volume/Cap:	0.62	0.66		0.66			0.66	0.62		0.61			0.66	0.62		0.62			0.62	0.66		0.66		
Uniform Del:	44.0	42.1		42.1			45.3	43.0		42.9			45.9	12.0		12.0			47.7	13.9		13.9		
IncremntDel:	7.5	7.2		7.2			12.5	6.1		6.3			14.2	0.6		0.6			18.4	0.8		0.8		
Delay Adj:	1.00	1.00		1.00			1.00	1.00		1.00			1.00	1.00		1.00			1.00	1.00		1.00		
Delay/Veh:	51.6	49.2		49.2			57.8	49.0		49.2			60.1	12.5		12.5			66.1	14.7		14.7		
User DelAdj:	1.00	1.00		1.00			1.00	1.00		1.00			1.00	1.00		1.00			1.00	1.00		1.00		
AdjDel/Veh:	51.6	49.2		49.2			57.8	49.0		49.2			60.1	12.5		12.5			66.1	14.7		14.7		
DesignQueue:	5	7		0			4	6		5			4	30		2			2	34		2		

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #105 Canyon/117th

Cycle (sec): 100 Critical Vol./Cap. (X): 0.658
Loss Time (sec): 16 (Y+R = 4 sec) Average Delay (sec/veh): 22.9
Optimal Cycle: 64 Level Of Service: C

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Protected				Protected			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0	0	1 0	2	0	0	1 0	1	0	1	1 0	1	0	2	0 1
Volume Module: >> Count Date: 21 Oct 1999 <<																
Base Vol:	38	74	102		198	61	72		51	1133	34		74	1263	242	
Growth Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Initial Bse:	38	74	102		198	61	72		51	1133	34		74	1263	242	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	0.97	0.97	0.97		0.97	0.97	0.97		0.97	0.97	0.97		0.97	0.97	0.97	
PHF Volume:	39	76	105		204	63	74		53	1169	35		76	1303	250	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	39	76	105		204	63	74		53	1169	35		76	1303	250	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Final Vol.:	39	76	105		204	63	74		53	1169	35		76	1303	250	
Saturation Flow Module:																
Sat/Lane:	1900	1900	1900		1900	1900	1900		1900	1900	1900		1900	1900	1900	
Adjustment:	0.95	0.91	0.91		0.92	0.92	0.92		0.95	0.95	0.95		0.95	0.95	0.85	
Lanes:	1.00	0.42	0.58		2.00	0.46	0.54		1.00	1.94	0.06		1.00	2.00	1.00	
Final Sat.:	1805	728	1006		3502	803	943		1805	3491	105		1805	3610	1615	
Capacity Analysis Module:																
Vol/Sat:	0.02	0.10	0.10		0.06	0.08	0.08		0.03	0.33	0.33		0.04	0.36	0.15	
Crit Moves:		****			****				****					****		
Green/Cycle:	0.05	0.16	0.16		0.09	0.19	0.19		0.04	0.53	0.53		0.07	0.55	0.55	
Volume/Cap:	0.41	0.66	0.66		0.66	0.41	0.41		0.66	0.64	0.64		0.64	0.66	0.28	
Uniform Del:	45.8	39.5	39.5		44.1	35.3	35.3		47.0	16.8	16.8		45.5	16.0	12.1	
IncremntDel:	2.8	5.7	5.7		5.1	0.8	0.8		18.2	0.7	0.7		10.8	0.8	0.2	
Delay Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Delay/Veh:	48.6	45.3	45.3		49.2	36.1	36.1		65.2	17.6	17.6		56.3	16.8	12.2	
User DelAdj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
AdjDel/Veh:	48.6	45.3	45.3		49.2	36.1	36.1		65.2	17.6	17.6		56.3	16.8	12.2	
DesignQueue:	2	4	5		10	3	3		3	34	1		4	36	6	

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #114 ORE 217 SB Ramp/Canyon

Cycle (sec): 100 Critical Vol./Cap. (X): 0.668
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 24.3
Optimal Cycle: 55 Level Of Service: C

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Split Phase				Split Phase				Protected				Protected			
Rights:	Include				Include				Ignore				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	0	0	0 0	0	1	0	1 1	0	0	2	0 1	1	0	2	0 0
Volume Module: >> Count Date: 15 Apr 1999 <<																
Base Vol:	0	0	0		170	400	337		0	934	409		229	1122	0	
Growth Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Initial Bse:	0	0	0		170	400	337		0	934	409		229	1122	0	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	0.00		1.00	1.00	1.00	
PHF Adj:	0.98	0.98	0.98		0.98	0.98	0.98		0.98	0.98	0.00		0.98	0.98	0.98	
PHF Volume:	0	0	0		174	410	345		0	957	0		235	1150	0	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	0	0	0		174	410	345		0	957	0		235	1150	0	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	0.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	0.00		1.00	1.00	1.00	
Final Vol.:	0	0	0		174	410	345		0	957	0		235	1150	0	
Saturation Flow Module:																
Sat/Lane:	1900	1900	1900		1900	1900	1900		1900	1900	1900		1900	1900	1900	
Adjustment:	1.00	1.00	1.00		0.85	0.85	0.85		1.00	0.95	1.00		0.95	0.95	1.00	
Lanes:	0.00	0.00	0.00		0.56	1.33	1.11		0.00	2.00	1.00		1.00	2.00	0.00	
Final Sat.:	0	0	0		904	2130	1792		0	3610	1900		1805	3610	0	
Capacity Analysis Module:																
Vol/Sat:	0.00	0.00	0.00		0.19	0.19	0.19		0.00	0.27	0.00		0.13	0.32	0.00	
Crit Moves:						****				****			****			
Green/Cycle:	0.00	0.00	0.00		0.29	0.29	0.29		0.00	0.40	0.00		0.19	0.59	0.00	
Volume/Cap:	0.00	0.00	0.00		0.67	0.67	0.67		0.00	0.67	0.00		0.67	0.54	0.00	
Uniform Del:	0.0	0.0	0.0		31.4	31.4	31.4		0.0	24.7	0.0		37.3	12.2	0.0	
IncremntDel:	0.0	0.0	0.0		1.3	1.3	1.3		0.0	1.2	0.0		4.9	0.3	0.0	
Delay Adj:	0.00	0.00	0.00		1.00	1.00	1.00		0.00	1.00	0.00		1.00	1.00	0.00	
Delay/Veh:	0.0	0.0	0.0		32.6	32.6	32.6		0.0	26.0	0.0		42.1	12.5	0.0	
User DelAdj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
AdjDel/Veh:	0.0	0.0	0.0		32.6	32.6	32.6		0.0	26.0	0.0		42.1	12.5	0.0	
DesignQueue:	0	0	0		7	17	14		0	34	0		11	28	0	

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #115 ORE 217 NB Ramp/Canyon

Cycle (sec): 100 Critical Vol./Cap. (X): 0.663
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 24.9
Optimal Cycle: 55 Level Of Service: C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Protected			Protected		
Rights:		Ovl			Include			Include			Ovl	
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	1 1	0 1	0	0 0	0 0	1	0 2	0 0	0	0 2	0 1
Volume Module: >> Count Date: 22 Apr 1999 <<												
Base Vol:	500	418	330	0	0	0	179	910	0	0	938	182
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	500	418	330	0	0	0	179	910	0	0	938	182
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
PHF Volume:	518	433	342	0	0	0	185	942	0	0	971	188
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	518	433	342	0	0	0	185	942	0	0	971	188
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	518	433	342	0	0	0	185	942	0	0	971	188
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.81	0.81	0.85	1.00	1.00	1.00	0.95	0.95	1.00	1.00	0.95	0.85
Lanes:	1.63	1.37	1.00	0.00	0.00	0.00	1.00	2.00	0.00	0.00	2.00	1.00
Final Sat.:	2507	2096	1615	0	0	0	1805	3610	0	0	3610	1615
Capacity Analysis Module:												
Vol/Sat:	0.21	0.21	0.21	0.00	0.00	0.00	0.10	0.26	0.00	0.00	0.27	0.12
Crit Moves:			****				****				****	
Green/Cycle:	0.32	0.32	0.32	0.00	0.00	0.00	0.15	0.56	0.00	0.00	0.41	0.41
Volume/Cap:	0.65	0.65	0.66	0.00	0.00	0.00	0.66	0.47	0.00	0.00	0.66	0.29
Uniform Del:	29.2	29.2	29.4	0.0	0.0	0.0	39.8	13.1	0.0	0.0	24.1	20.0
IncremntDel:	1.0	1.0	3.2	0.0	0.0	0.0	5.9	0.2	0.0	0.0	1.2	0.2
Delay Adj:	1.00	1.00	1.00	0.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00
Delay/Veh:	30.2	30.2	32.6	0.0	0.0	0.0	45.7	13.2	0.0	0.0	25.3	20.2
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	30.2	30.2	32.6	0.0	0.0	0.0	45.7	13.2	0.0	0.0	25.3	20.2
DesignQueue:	20	17	14	0	0	0	9	25	0	0	34	6

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #116 ORE 217 SB Ramp/Farmington

Cycle (sec): 100 Critical Vol./Cap. (X): 0.729
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 25.6
Optimal Cycle: 64 Level Of Service: C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Protected			Protected		
Rights:		Include			Include			Include			Include	
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	0 0	0 0	0	1 1	0 1	0	0 2	0 1	1	0 2	0 0
Volume Module: >> Count Date: 13 Apr 1999 <<												
Base Vol:	0	0	0	307	437	268	0	1051	362	206	1481	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	307	437	268	0	1051	362	206	1481	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
PHF Volume:	0	0	0	314	447	274	0	1076	371	211	1516	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	314	447	274	0	1076	371	211	1516	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	0	0	0	314	447	274	0	1076	371	211	1516	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	0.81	0.95	0.85	1.00	0.95	0.85	0.95	0.95	1.00
Lanes:	0.00	0.00	0.00	0.90	1.10	1.00	0.00	2.00	1.00	1.00	2.00	0.00
Final Sat.:	0	0	0	1388	1977	1615	0	3610	1615	1805	3610	0
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.23	0.23	0.17	0.00	0.30	0.23	0.12	0.42	0.00
Crit Moves:				****				****		****		
Green/Cycle:	0.00	0.00	0.00	0.31	0.31	0.31	0.00	0.41	0.41	0.16	0.57	0.00
Volume/Cap:	0.00	0.00	0.00	0.73	0.73	0.55	0.00	0.73	0.56	0.73	0.74	0.00
Uniform Del:	0.0	0.0	0.0	30.7	30.7	28.6	0.0	24.9	22.7	39.9	16.0	0.0
IncremntDel:	0.0	0.0	0.0	2.6	2.6	1.3	0.0	1.9	1.1	9.0	1.4	0.0
Delay Adj:	0.00	0.00	0.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.00
Delay/Veh:	0.0	0.0	0.0	33.3	33.3	29.9	0.0	26.7	23.8	48.9	17.4	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	33.3	33.3	29.9	0.0	26.7	23.8	48.9	17.4	0.0
DesignQueue:	0	0	0	13	18	11	0	38	13	10	41	0

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #117 ORE 217 NB Ramp/Farmington

Cycle (sec): 100 Critical Vol./Cap. (X): 0.938
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 34.9
Optimal Cycle: 131 Level Of Service: C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Protected			Protected		
Rights:		Ovl			Include			Include			Ovl	
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0 2	0 1	0	0 0	0 0	1	0 2	0 0	0	0 2	0 1
Volume Module: >> Count Date: 22 Apr 1999 <<												
Base Vol:	509	625	283	0	0	0	214	1040	0	0	1149	328
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	509	625	283	0	0	0	214	1040	0	0	1149	328
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
PHF Volume:	559	686	311	0	0	0	235	1142	0	0	1261	360
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	559	686	311	0	0	0	235	1142	0	0	1261	360
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	559	686	311	0	0	0	235	1142	0	0	1261	360
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.85	0.95	0.85	1.00	1.00	1.00	0.95	0.95	1.00	1.00	0.95	0.85
Lanes:	1.00	2.00	1.00	0.00	0.00	0.00	1.00	2.00	0.00	0.00	2.00	1.00
Final Sat.:	1615	3610	1615	0	0	0	1805	3610	0	0	3610	1615
Capacity Analysis Module:												
Vol/Sat:	0.35	0.19	0.19	0.00	0.00	0.00	0.13	0.32	0.00	0.00	0.35	0.22
Crit Moves:	****						****				****	
Green/Cycle:	0.37	0.37	0.37	0.00	0.00	0.00	0.14	0.51	0.00	0.00	0.37	0.37
Volume/Cap:	0.94	0.52	0.52	0.00	0.00	0.00	0.94	0.62	0.00	0.00	0.94	0.60
Uniform Del:	30.5	24.6	24.7	0.0	0.0	0.0	42.6	17.5	0.0	0.0	30.3	25.4
IncremntDel:	22.7	0.3	0.8	0.0	0.0	0.0	40.2	0.6	0.0	0.0	12.6	1.7
Delay Adj:	1.00	1.00	1.00	0.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00
Delay/Veh:	53.2	24.9	25.5	0.0	0.0	0.0	82.8	18.1	0.0	0.0	42.9	27.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	53.2	24.9	25.5	0.0	0.0	0.0	82.8	18.1	0.0	0.0	42.9	27.0
DesignQueue:	21	25	11	0	0	0	12	34	0	0	48	13

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #118 ORE 217 SB Ramp/Allen

Cycle (sec): 100 Critical Vol./Cap. (X): 0.877
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 34.2
Optimal Cycle: 100 Level Of Service: C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Protected			Protected		
Rights:		Include			Ovl			Include			Include	
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	0 0	0 0	0	1 0	0 1	0	0 1	1 0	1	0 2	0 0
Volume Module: >> Count Date: 21 Apr 1999 <<												
Base Vol:	0	0	0	327	1	403	0	627	251	405	908	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	327	1	403	0	627	251	405	908	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
PHF Volume:	0	0	0	347	1	427	0	665	266	429	963	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	347	1	427	0	665	266	429	963	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	0	0	0	347	1	427	0	665	266	429	963	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	0.85	0.85	0.85	1.00	0.91	0.91	0.95	0.95	1.00
Lanes:	0.00	0.00	0.00	0.99	0.01	1.00	0.00	1.43	0.57	1.00	2.00	0.00
Final Sat.:	0	0	0	1610	5	1615	0	2468	987	1805	3610	0
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.22	0.22	0.26	0.00	0.27	0.27	0.24	0.27	0.00
Crit Moves:						****		****		****		
Green/Cycle:	0.00	0.00	0.00	0.30	0.30	0.30	0.00	0.31	0.31	0.27	0.58	0.00
Volume/Cap:	0.00	0.00	0.00	0.71	0.71	0.88	0.00	0.88	0.88	0.88	0.46	0.00
Uniform Del:	0.0	0.0	0.0	31.1	31.1	33.2	0.0	32.8	32.8	34.8	12.1	0.0
IncremntDel:	0.0	0.0	0.0	5.0	5.0	16.3	0.0	8.4	8.4	16.3	0.2	0.0
Delay Adj:	0.00	0.00	0.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.00
Delay/Veh:	0.0	0.0	0.0	36.1	36.1	49.5	0.0	41.2	41.2	51.1	12.3	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	36.1	36.1	49.5	0.0	41.2	41.2	51.1	12.3	0.0
DesignQueue:	0	0	0	14	0	18	0	27	11	18	24	0

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #119 ORE 217 NB Ramp/Allen

Cycle (sec): 100 Critical Vol./Cap. (X): 0.809
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 25.5
Optimal Cycle: 79 Level Of Service: C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Protected			Protected		
Rights:	Ovl			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	1 0	0 1	0	0 0	0 0	1	0 2	0 0	0	0 1	1 0
Volume Module: >> Count Date: 15 Apr 1999 <<												
Base Vol:	336	0	227	0	0	0	244	675	0	0	952	453
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	336	0	227	0	0	0	244	675	0	0	952	453
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
PHF Volume:	349	0	236	0	0	0	254	702	0	0	990	471
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	349	0	236	0	0	0	254	702	0	0	990	471
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	349	0	236	0	0	0	254	702	0	0	990	471
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	1.00	0.85	1.00	1.00	1.00	0.95	0.95	1.00	1.00	0.90	0.90
Lanes:	2.00	0.00	1.00	0.00	0.00	0.00	1.00	2.00	0.00	0.00	1.36	0.64
Final Sat.:	3618	0	1615	0	0	0	1805	3610	0	0	2329	1108
Capacity Analysis Module:												
Vol/Sat:	0.10	0.00	0.15	0.00	0.00	0.00	0.14	0.19	0.00	0.00	0.43	0.43
Crit Moves:			****				****				****	
Green/Cycle:	0.18	0.00	0.18	0.00	0.00	0.00	0.17	0.70	0.00	0.00	0.53	0.53
Volume/Cap:	0.53	0.00	0.81	0.00	0.00	0.00	0.81	0.28	0.00	0.00	0.81	0.81
Uniform Del:	37.2	0.0	39.3	0.0	0.0	0.0	39.7	5.6	0.0	0.0	19.6	19.6
IncremntDel:	0.9	0.0	15.4	0.0	0.0	0.0	14.4	0.1	0.0	0.0	2.8	2.8
Delay Adj:	1.00	0.00	1.00	0.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00
Delay/Veh:	38.0	0.0	54.7	0.0	0.0	0.0	54.2	5.7	0.0	0.0	22.4	22.4
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	38.0	0.0	54.7	0.0	0.0	0.0	54.2	5.7	0.0	0.0	22.4	22.4
DesignQueue:	16	0	11	0	0	0	12	12	0	0	29	14

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #120 ORE 217 SB Ramp/Denney

Average Delay (sec/veh): 50.5 Worst Case Level Of Service: F

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 0	0	0 0	0	1	0 0 1	0	0	0 1	0	1	0 1 0
Volume Module: >> Count Date: 13 Apr 1999 <<												
Base Vol:	0	0	0	93	3	256	0	555	150	128	624	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	93	3	256	0	555	150	128	624	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
PHF Volume:	0	0	0	95	3	263	0	570	154	131	641	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	0	0	0	95	3	263	0	570	154	131	641	0
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	6.4	6.5	6.2	xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:	xxxxx	xxxx	xxxxx	3.5	4.0	3.3	xxxxx	xxxx	xxxxx	2.2	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	1550	1627	641	xxxx	xxxx	xxxxx	724	xxxx	xxxxx
Potent Cap.:	xxxx	xxxx	xxxxx	127	103	479	xxxx	xxxx	xxxxx	888	xxxx	xxxxx
Move Cap.:	xxxx	xxxx	xxxxx	112	88	479	xxxx	xxxx	xxxxx	888	xxxx	xxxxx
Level Of Service Module:												
Stopped Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	21.3	xxxxx	xxxx	xxxxx	9.8	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	C	*	*	*	A	*	*
Movement:	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT
Shared Cap.:	xxxx	xxxx	xxxxx	111	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Shrd StpDel:	xxxxx	xxxx	xxxxx	128.3	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	F	*	*	*	*	*	*	*	*
ApproachDel:	xxxxxx			50.5			xxxxxx			xxxxxx		
ApproachLOS:	*			F			*			*		

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #121 ORE 217 NB Ramp/Denney

Average Delay (sec/veh): 597.2 Worst Case Level Of Service: F

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Stop Sign				Stop Sign				Uncontrolled				Uncontrolled			
Rights:	Include				Include				Include				Include			
Lanes:	0	1	0	0 1	0	0	0	0 0	1	0	1	0 0	0	0	0	1 0
Volume Module: >> Count Date: 14 Apr 1999 <<																
Base Vol:	252	1	155		0	0	0		301	322	0		0	489	107	
Growth Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Initial Bse:	252	1	155		0	0	0		301	322	0		0	489	107	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	0.94	0.94	0.94		0.94	0.94	0.94		0.94	0.94	0.94		0.94	0.94	0.94	
PHF Volume:	268	1	165		0	0	0		320	342	0		0	520	114	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Final Vol.:	268	1	165		0	0	0		320	342	0		0	520	114	
Critical Gap Module:																
Critical Gp:	6.4	6.5	6.2		xxxxx	xxxx	xxxxx		4.1	xxxx	xxxxx		xxxxx	xxxx	xxxxx	
FollowUpTim:	3.5	4.0	3.3		xxxxx	xxxx	xxxxx		2.2	xxxx	xxxxx		xxxxx	xxxx	xxxxx	
Capacity Module:																
Cnflict Vol:	1558	1615	342		xxxx	xxxx	xxxxx		633	xxxx	xxxxx		xxxx	xxxx	xxxxx	
Potent Cap.:	125	105	705		xxxx	xxxx	xxxxx		959	xxxx	xxxxx		xxxx	xxxx	xxxxx	
Move Cap.:	93	70	705		xxxx	xxxx	xxxxx		959	xxxx	xxxxx		xxxx	xxxx	xxxxx	
Level Of Service Module:																
Stopped Del:	xxxxx	xxxx	11.7		xxxxx	xxxx	xxxxx		10.6	xxxx	xxxxx		xxxxx	xxxx	xxxxx	
LOS by Move:	*	*	B		*	*	*		B	*	*		*	*	*	
Movement:	LT -	LTR -	RT		LT -	LTR -	RT		LT -	LTR -	RT		LT -	LTR -	RT	
Shared Cap.:	93	xxxx	xxxxx		xxxx	xxxx	xxxxx		xxxx	xxxx	xxxxx		xxxx	xxxx	xxxxx	
Shrd StpDel:	955.9	xxxx	xxxxx		xxxxx	xxxx	xxxxx		xxxxx	xxxx	xxxxx		xxxxx	xxxx	xxxxx	
Shared LOS:	F	*	*		*	*	*		*	*	*		*	*	*	
ApproachDel:	597.2				xxxxxx				xxxxxx				xxxxxx			
ApproachLOS:	F				*				*				*			

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #122 ORE 217 SB off Ramp/Hall/Cascade

Cycle (sec): 120 Critical Vol./Cap. (X): 0.964
Loss Time (sec): 16 (Y+R = 4 sec) Average Delay (sec/veh): 51.3
Optimal Cycle: 172 Level Of Service: D

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Split Phase				Split Phase				Protected				Protected			
Rights:	Ovl				Include				Include				Ignore			
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0	
Lanes:	1	0	1	0 1	1	0	1!	0 0	1	0	1	1 0	1	0	2	0 1
Volume Module: >> Count Date: 15 Apr 1999 <<																
Base Vol:	96	10	51		248	62	334		154	909	85		35	1139	24	
Growth Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Initial Bse:	96	10	51		248	62	334		154	909	85		35	1139	24	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	0.00	
PHF Adj:	0.91	0.91	0.91		0.91	0.91	0.91		0.91	0.91	0.91		0.91	0.91	0.00	
PHF Volume:	106	11	56		274	68	369		170	1003	94		39	1257	0	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	106	11	56		274	68	369		170	1003	94		39	1257	0	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	0.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	0.00	
Final Vol.:	106	11	56		274	68	369		170	1003	94		39	1257	0	
Saturation Flow Module:																
Sat/Lane:	1900	1900	1900		1900	1900	1900		1900	1900	1900		1900	1900	1900	
Adjustment:	0.95	1.00	0.85		0.90	0.90	0.90		0.95	0.94	0.94		0.95	0.95	1.00	
Lanes:	1.00	1.00	1.00		1.24	0.12	0.64		1.00	1.83	0.17		1.00	2.00	1.00	
Final Sat.:	1805	1900	1615		2129	204	1105		1805	3258	305		1805	3610	1900	
Capacity Analysis Module:																
Vol/Sat:	0.06	0.01	0.03		0.13	0.33	0.33		0.09	0.31	0.31		0.02	0.35	0.00	
Crit Moves:	****					****			****					****		
Green/Cycle:	0.06	0.06	0.09		0.35	0.35	0.35		0.10	0.43	0.43		0.03	0.36	0.00	
Volume/Cap:	0.96	0.09	0.38		0.37	0.96	0.96		0.96	0.72	0.72		0.72	0.96	0.00	
Uniform Del:	56.2	53.2	51.4		29.4	38.5	38.5		53.9	28.3	28.3		57.7	37.5	0.0	
IncremntDel:	74.0	0.4	1.6		0.1	24.4	24.4		56.9	1.7	1.7		36.9	16.9	0.0	
Delay Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	0.00	
Delay/Veh:	130.2	53.6	53.0		29.5	62.9	62.9		110.8	29.9	29.9		94.5	54.5	0.0	
User DelAdj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
AdjDel/Veh:	130.2	53.6	53.0		29.5	62.9	62.9		110.8	29.9	29.9		94.5	54.5	0.0	
DesignQueue:	7	1	3		12	3	17		10	41	4		3	59	0	

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #123 ORE 217 NB on Ramp/Scholls Ferry

Cycle (sec): 100 Critical Vol./Cap. (X): 0.781
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 30.3
Optimal Cycle: 73 Level Of Service: C

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	- T	- R		L	- T	- R		L	- T	- R		L	- T	- R	
Control:	Protected				Protected				Split Phase				Split Phase			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0	
Lanes:	1	0 2	0	0	0	0 2	0	1	0	0 0	0	0	1	0 1	0	1
Volume Module: >> Count Date: 14 Apr 1999 <<																
Base Vol:	395	771	0		0	703	362		0	0	0		266	294		277
Growth Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00		1.00
Initial Bse:	395	771	0		0	703	362		0	0	0		266	294		277
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00		1.00
PHF Adj:	0.89	0.89	0.89		0.89	0.89	0.89		0.89	0.89	0.89		0.89	0.89		0.89
PHF Volume:	442	863	0		0	787	405		0	0	0		298	329		310
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0		0
Reduced Vol:	442	863	0		0	787	405		0	0	0		298	329		310
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00		1.00
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00		1.00
Final Vol.:	442	863	0		0	787	405		0	0	0		298	329		310
Saturation Flow Module:																
Sat/Lane:	1900	1900	1900		1900	1900	1900		1900	1900	1900		1900	1900		1900
Adjustment:	0.95	0.95	1.00		1.00	0.95	0.85		1.00	1.00	1.00		0.85	1.00		0.85
Lanes:	1.00	2.00	0.00		0.00	2.00	1.00		0.00	0.00	0.00		1.00	1.00		1.00
Final Sat.:	1805	3610	0		0	3610	1615		0	0	0		1615	1900		1615
Capacity Analysis Module:																
Vol/Sat:	0.24	0.24	0.00		0.00	0.22	0.25		0.00	0.00	0.00		0.18	0.17		0.19
Crit Moves:	****						****									****
Green/Cycle:	0.31	0.63	0.00		0.00	0.32	0.32		0.00	0.00	0.00		0.25	0.25		0.25
Volume/Cap:	0.78	0.38	0.00		0.00	0.68	0.78		0.00	0.00	0.00		0.75	0.70		0.78
Uniform Del:	31.2	8.8	0.0		0.0	29.5	30.8		0.0	0.0	0.0		34.9	34.4		35.2
IncremntDel:	6.9	0.1	0.0		0.0	1.6	7.5		0.0	0.0	0.0		7.8	4.9		9.7
Delay Adj:	1.00	1.00	0.00		0.00	1.00	1.00		0.00	0.00	0.00		1.00	1.00		1.00
Delay/Veh:	38.2	8.9	0.0		0.0	31.1	38.3		0.0	0.0	0.0		42.7	39.3		44.9
User DelAdj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00		1.00
AdjDel/Veh:	38.2	8.9	0.0		0.0	31.1	38.3		0.0	0.0	0.0		42.7	39.3		44.9
DesignQueue:	18	19	0		0	31	16		0	0	0		13	14		14

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #125 ORE 217 NB off Ramp/Scholls Ferry

Cycle (sec): 100 Critical Vol./Cap. (X): 0.708
Loss Time (sec): 8 (Y+R = 4 sec) Average Delay (sec/veh): 22.2
Optimal Cycle: 49 Level Of Service: C

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	- T	- R		L	- T	- R		L	- T	- R		L	- T	- R	
Control:	Permitted				Permitted				Split Phase				Split Phase			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0	
Lanes:	0	0 2	0	0	0	0 2	0	0	0	0 0	0	0	1	0 0	0	1
Volume Module: >> Count Date: 14 Apr 1999 <<																
Base Vol:	0	1107	0		0	879	0		0	0	0		575	0		364
Growth Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00		1.00
Initial Bse:	0	1107	0		0	879	0		0	0	0		575	0		364
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00		1.00
PHF Adj:	0.96	0.96	0.96		0.96	0.96	0.96		0.96	0.96	0.96		0.96	0.96		0.96
PHF Volume:	0	1153	0		0	916	0		0	0	0		599	0		379
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0		0
Reduced Vol:	0	1153	0		0	916	0		0	0	0		599	0		379
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00		1.00
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00		1.00
Final Vol.:	0	1153	0		0	916	0		0	0	0		599	0		379
Saturation Flow Module:																
Sat/Lane:	1900	1900	1900		1900	1900	1900		1900	1900	1900		1900	1900		1900
Adjustment:	1.00	0.95	1.00		1.00	0.95	1.00		1.00	1.00	1.00		0.95	1.00		0.85
Lanes:	0.00	2.00	0.00		0.00	2.00	0.00		0.00	0.00	0.00		1.00	0.00		1.00
Final Sat.:	0	3610	0		0	3610	0		0	0	0		1805	0		1615
Capacity Analysis Module:																
Vol/Sat:	0.00	0.32	0.00		0.00	0.25	0.00		0.00	0.00	0.00		0.33	0.00		0.23
Crit Moves:		****											****			
Green/Cycle:	0.00	0.45	0.00		0.00	0.45	0.00		0.00	0.00	0.00		0.47	0.00		0.47
Volume/Cap:	0.00	0.71	0.00		0.00	0.56	0.00		0.00	0.00	0.00		0.71	0.00		0.50
Uniform Del:	0.0	22.1	0.0		0.0	20.2	0.0		0.0	0.0	0.0		21.1	0.0		18.4
IncremntDel:	0.0	1.5	0.0		0.0	0.5	0.0		0.0	0.0	0.0		2.8	0.0		0.5
Delay Adj:	0.00	1.00	0.00		0.00	1.00	0.00		0.00	0.00	0.00		1.00	0.00		1.00
Delay/Veh:	0.0	23.6	0.0		0.0	20.6	0.0		0.0	0.0	0.0		23.9	0.0		19.0
User DelAdj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00		1.00
AdjDel/Veh:	0.0	23.6	0.0		0.0	20.6	0.0		0.0	0.0	0.0		23.9	0.0		19.0
DesignQueue:	0	38	0		0	30	0		0	0	0		19	0		12

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #129 ORE 217 NB Ramp/Walker

Cycle (sec): 80 Critical Vol./Cap. (X): 0.675
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 21.1
Optimal Cycle: 53 Level Of Service: C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0 1!	0	0	0 0	0 0	1	0 1	0 0	0	0 1	0 1
Volume Module: >> Count Date: 15 Apr 1999 <<												
Base Vol:	679	0	85	0	0	0	75	507	0	0	392	162
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	679	0	85	0	0	0	75	507	0	0	392	162
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
PHF Volume:	772	0	97	0	0	0	85	576	0	0	445	184
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	772	0	97	0	0	0	85	576	0	0	445	184
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	772	0	97	0	0	0	85	576	0	0	445	184
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.94	1.00	0.94	1.00	1.00	1.00	0.95	1.00	1.00	1.00	1.00	0.85
Lanes:	1.80	0.00	0.20	0.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00
Final Sat.:	3216	0	359	0	0	0	1805	1900	0	0	1900	1615
Capacity Analysis Module:												
Vol/Sat:	0.24	0.00	0.27	0.00	0.00	0.00	0.05	0.30	0.00	0.00	0.23	0.11
Crit Moves:			****					****		****		
Green/Cycle:	0.40	0.00	0.40	0.00	0.00	0.00	0.08	0.45	0.00	0.00	0.37	0.37
Volume/Cap:	0.60	0.00	0.67	0.00	0.00	0.00	0.63	0.67	0.00	0.00	0.63	0.30
Uniform Del:	18.9	0.0	19.7	0.0	0.0	0.0	35.9	17.4	0.0	0.0	20.5	17.7
IncremntDel:	0.7	0.0	1.4	0.0	0.0	0.0	8.9	2.2	0.0	0.0	1.8	0.3
Delay Adj:	1.00	0.00	1.00	0.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00
Delay/Veh:	19.6	0.0	21.1	0.0	0.0	0.0	44.8	19.6	0.0	0.0	22.2	18.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	19.6	0.0	21.1	0.0	0.0	0.0	44.8	19.6	0.0	0.0	22.2	18.0
DesignQueue:	22	0	3	0	0	0	4	15	0	0	13	5

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #130 ORE 217 SB Ramp/Walker

Cycle (sec): 80 Critical Vol./Cap. (X): 0.841
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 19.4
Optimal Cycle: 80 Level Of Service: B

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	0 0	0	0	1 0	0 1	0	0 1	0 1	1	0 2	0 0
Volume Module: >> Count Date: 13 Apr 1999 <<												
Base Vol:	0	0	0	187	1	327	0	467	699	35	992	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	187	1	327	0	467	699	35	992	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
PHF Volume:	0	0	0	204	1	357	0	510	763	38	1083	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	204	1	357	0	510	763	38	1083	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	0	0	0	204	1	357	0	510	763	38	1083	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	0.85	0.85	0.85	1.00	1.00	0.85	0.95	0.95	1.00
Lanes:	0.00	0.00	0.00	0.99	0.01	1.00	0.00	1.00	1.00	1.00	2.00	0.00
Final Sat.:	0	0	0	1607	8	1615	0	1900	1615	1805	3610	0
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.13	0.13	0.22	0.00	0.27	0.47	0.02	0.30	0.00
Crit Moves:						****			****	****		
Green/Cycle:	0.00	0.00	0.00	0.26	0.26	0.26	0.00	0.56	0.56	0.03	0.59	0.00
Volume/Cap:	0.00	0.00	0.00	0.48	0.48	0.84	0.00	0.48	0.84	0.84	0.51	0.00
Uniform Del:	0.0	0.0	0.0	24.9	24.9	27.9	0.0	10.5	14.5	38.8	9.7	0.0
IncremntDel:	0.0	0.0	0.0	0.9	0.9	13.9	0.0	0.3	7.1	76.0	0.2	0.0
Delay Adj:	0.00	0.00	0.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.00
Delay/Veh:	0.0	0.0	0.0	25.8	25.8	41.8	0.0	10.8	21.6	114.8	10.0	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	25.8	25.8	41.8	0.0	10.8	21.6	114.8	10.0	0.0
DesignQueue:	0	0	0	7	0	12	0	11	17	2	21	0

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #131 Scholls Ferry/ORE 217 SB on Ramp

Cycle (sec): 120 Critical Vol./Cap. (X): 0.757
Loss Time (sec): 16 (Y+R = 4 sec) Average Delay (sec/veh): 31.6
Optimal Cycle: 83 Level Of Service: C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Protected			Protected		
Rights:	Include			Include			Ignore			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0 0	0 0	0	0 1	0 0	1	0 0	1 1	1	1 0	2 0	0
Volume Module: >> Count Date: 14 Apr 1999 <<												
Base Vol:	0	0	0	90	8	381	0	951	602	202	1128	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	90	8	381	0	951	602	202	1128	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
PHF Adj:	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.00	0.93	0.93	0.93
PHF Volume:	0	0	0	97	9	409	0	1020	0	217	1210	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	97	9	409	0	1020	0	217	1210	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Final Vol.:	0	0	0	97	9	409	0	1020	0	217	1210	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	0.85	0.85	0.85	1.00	0.95	0.95	0.95	0.95	1.00
Lanes:	0.00	0.00	0.00	0.92	0.08	1.00	0.00	2.00	1.00	1.00	2.00	0.00
Final Sat.:	0	0	0	1478	137	1615	0	3610	1805	1805	3610	0
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.07	0.07	0.25	0.00	0.28	0.00	0.12	0.34	0.00
Crit Moves:						****		****		****		
Green/Cycle:	0.00	0.00	0.00	0.33	0.33	0.33	0.00	0.37	0.00	0.16	0.53	0.00
Volume/Cap:	0.00	0.00	0.00	0.20	0.20	0.76	0.00	0.76	0.00	0.76	0.63	0.00
Uniform Del:	0.0	0.0	0.0	28.4	28.4	35.6	0.0	32.8	0.0	48.3	19.8	0.0
IncremntDel:	0.0	0.0	0.0	0.2	0.2	6.1	0.0	2.5	0.0	11.0	0.7	0.0
Delay Adj:	0.00	0.00	0.00	1.00	1.00	1.00	0.00	1.00	0.00	1.00	1.00	0.00
Delay/Veh:	0.0	0.0	0.0	28.6	28.6	41.7	0.0	35.4	0.0	59.3	20.4	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	28.6	28.6	41.7	0.0	35.4	0.0	59.3	20.4	0.0
DesignQueue:	0	0	0	4	0	19	0	46	0	13	41	0

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I – 2020 RTP Priority Network Base LOS Calculations

Scenario Report

Scenario:	Base 2020
Command:	Base 2020
Volume:	Base 2020
Geometry:	Base 2020
Impact Fee:	Default Impact Fee
Trip Generation:	pm peak
Trip Distribution:	dist
Paths:	Default Paths
Routes:	Default Routes
Configuration:	Default Configuration

Impact Analysis Report
Level Of Service

Intersection	Base LOS	Base Del/ Veh	Base V/ C	Future LOS	Future Del/ Veh	Future V/ C	Change in
# 1 170th/TV Highway	F	89.3	1.154	F	89.3	1.154	+ 0.000 D/V
# 2 170th/Farmington	F	88.3	1.139	F	88.3	1.139	+ 0.000 D/V
# 3 170th/Oak	B	12.6	0.749	B	12.6	0.749	+ 0.000 D/V
# 5 170th/Bany	C	33.6	0.713	C	33.6	0.713	+ 0.000 D/V
# 6 Bethany/US 26 west ramp	F	85.9	1.187	F	85.9	1.187	+ 0.000 D/V
# 7 Bethany/US 26 east ramp	D	53.8	1.010	D	53.8	1.010	+ 0.000 D/V
# 8 Bethany/Cornell	D	54.3	1.016	D	54.3	1.016	+ 0.000 D/V
# 9 Cornell/US 26 east ramp	C	23.5	0.857	C	23.5	0.857	+ 0.000 D/V
# 10 Cornell/US 26 west ramp	D	53.2	1.012	D	53.2	1.012	+ 0.000 D/V
# 11 158th/Cornell	D	39.2	0.968	D	39.2	0.968	+ 0.000 D/V
# 12 158th/Walker	E	58.9	1.010	E	58.9	1.010	+ 0.000 D/V
# 13 143rd/Cornell	E	55.3	0.901	E	55.3	0.901	+ 0.000 D/V
# 14 Murray/Cornell	F	160.8	1.387	F	160.8	1.387	+ 0.000 D/V
# 15 Barnes/Saltzman/Cornell	F	193.3	1.420	F	193.3	1.420	+ 0.000 D/V
# 16 Murray/US 26 west ramp	E	65.1	1.104	E	65.1	1.104	+ 0.000 D/V
# 17 Murray/US 26 east ramps	B	14.6	0.675	B	14.6	0.675	+ 0.000 D/V
# 18 Murray/Walker	E	60.9	1.065	E	60.9	1.065	+ 0.000 D/V
# 19 Murray/Jenkins	E	75.4	1.153	E	75.4	1.153	+ 0.000 D/V
# 20 Murray/Farmington	F	103.6	1.161	F	103.6	1.161	+ 0.000 D/V
# 21 Murray/6th	C	34.2	0.984	C	34.2	0.984	+ 0.000 D/V
# 22 Murray/Allen	F	120.1	1.274	F	120.1	1.274	+ 0.000 D/V
# 23 Murray/Brockman/Beard	F	98.7	1.194	F	98.7	1.194	+ 0.000 D/V
# 24 Nimbus/Scholls Ferry	E	65.4	1.071	E	65.4	1.071	+ 0.000 D/V
# 25 Hall/Scholls Ferry	D	40.9	0.746	D	40.9	0.746	+ 0.000 D/V
# 26 Allen/Schools Ferry	D	50.2	0.950	D	50.2	0.950	+ 0.000 D/V

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Intersection	Base LOS	Base Del/ Veh	Base V/ C	Future LOS	Future Del/ Veh	Future V/ C	Change in
# 27 Oleson/Vermont	C	25.4	0.778	C	25.4	0.778	+ 0.000 D/V
# 28 Oleson/Garden Home	D	49.7	0.999	D	49.7	0.999	+ 0.000 D/V
# 29 Cedar Hills/Barnes	F	105.6	1.224	F	105.6	1.224	+ 0.000 D/V
# 30 Cedar Hills/US 26 west ramps	C	29.9	0.967	C	29.9	0.967	+ 0.000 D/V
# 31 Cedar Hills/US 26 east ramps	C	29.5	0.903	C	29.5	0.903	+ 0.000 D/V
# 32 Cedar Hills/Butner	D	40.2	0.952	D	40.2	0.952	+ 0.000 D/V
# 33 Cedar Hills/Walker	F	134.9	1.337	F	134.9	1.337	+ 0.000 D/V
# 34 Cedar Hills/Jenkins	D	41.8	0.916	D	41.8	0.916	+ 0.000 D/V
# 35 Cedar Hills/Hall	D	35.5	0.895	D	35.5	0.895	+ 0.000 D/V
# 36 Cedar Hills/Canyon	D	37.9	0.947	D	37.9	0.947	+ 0.000 D/V
# 37 Cedar Hills/Farmington	D	53.2	1.077	D	53.2	1.077	+ 0.000 D/V
# 38 Hall/Center	C	25.7	0.682	C	25.7	0.682	+ 0.000 D/V
# 39 Hall/Allen	D	48.6	0.971	D	48.6	0.971	+ 0.000 D/V
# 40 Hall/Denney	E	57.9	1.019	E	57.9	1.019	+ 0.000 D/V
# 41 Hall/Greenway	D	49.9	1.010	D	49.9	1.010	+ 0.000 D/V
# 42 Hall/Nimbus	D	43.9	0.952	D	43.9	0.952	+ 0.000 D/V
# 43 125th/Greenway	D	36.5	0.771	D	36.5	0.771	+ 0.000 D/V
# 44 Western/Beaverton Hillsdale	C	29.4	0.723	C	29.4	0.723	+ 0.000 D/V
# 45 Western/Allen	D	37.2	0.922	D	37.2	0.922	+ 0.000 D/V
# 46 Laurelwood/Beaverton Hillsdale	E	66.7	1.090	E	66.7	1.090	+ 0.000 D/V
# 47 Lombard/Farmington	D	51.6	0.967	D	51.6	0.967	+ 0.000 D/V
# 48 114th/Canyon	C	26.1	0.843	C	26.1	0.843	+ 0.000 D/V
# 49 Griffith/Beaverton Hillsdale	C	30.8	0.756	C	30.8	0.756	+ 0.000 D/V
# 50 87th/Canyon	C	25.0	0.846	C	25.0	0.846	+ 0.000 D/V
# 51 Garden Home/84th	D	33.1	0.000	D	33.1	0.000	+ 0.000 V/C
# 52 Garden Home/88th	C	23.3	0.000	C	23.3	0.000	+ 0.000 V/C

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Intersection	Base LOS	Base Del/ Veh	Base V/ C	Future LOS	Future Del/ Veh	Future V/ C	Change in
# 53 158th/Jenkins	E	78.6	1.102	E	78.6	1.102	+ 0.000 D/V
# 54 170th/Merlo	C	27.8	0.722	C	27.8	0.722	+ 0.000 D/V
# 56 TV Highway/Murray	E	76.0	1.096	E	76.0	1.096	+ 0.000 D/V
# 57 Farmington/Hall	C	28.7	0.905	C	28.7	0.905	+ 0.000 D/V
# 58 Canyon/Hall	C	25.3	0.836	C	25.3	0.836	+ 0.000 D/V
# 59 Walker/173rd	D	36.0	0.862	D	36.0	0.862	+ 0.000 D/V
# 60 170th/Baseline	D	43.5	0.953	D	43.5	0.953	+ 0.000 D/V
# 64 Cornell/173rd	F	119.6	1.241	F	119.6	1.241	+ 0.000 D/V
# 66 Scholls Ferry/Cascade	C	32.9	0.932	C	32.9	0.932	+ 0.000 D/V
# 72 Canyon/Watson	C	22.7	0.842	C	22.7	0.842	+ 0.000 D/V
# 73 Farmington/Watson	C	23.4	0.852	C	23.4	0.852	+ 0.000 D/V
# 76 Scholls Ferry/Denney	C	24.7	0.767	C	24.7	0.767	+ 0.000 D/V
# 77 Farmington/Hocken	C	22.4	0.745	C	22.4	0.745	+ 0.000 D/V
# 78 TV Highway/Hocken	D	49.5	1.026	D	49.5	1.026	+ 0.000 D/V
# 81 158th/Blueridge	D	40.7	0.987	D	40.7	0.987	+ 0.000 D/V
# 83 158th/Jay	C	32.9	0.917	C	32.9	0.917	+ 0.000 D/V
# 85 TV Highway/160th	E	73.8	1.136	E	73.8	1.136	+ 0.000 D/V
# 87 Hart/155th	B	15.8	0.520	B	15.8	0.520	+ 0.000 D/V
# 88 Murray/Hart	D	52.6	1.011	D	52.6	1.011	+ 0.000 D/V
# 89 Murray/Scholls Ferry	D	54.2	0.974	D	54.2	0.974	+ 0.000 D/V
# 90 Scholls Ferry/Davies	B	18.2	0.701	B	18.2	0.701	+ 0.000 D/V
# 92 Scholls Ferry/135th	B	13.4	0.660	B	13.4	0.660	+ 0.000 D/V
# 93 Scholls Ferry/125th	E	63.3	1.051	E	63.3	1.051	+ 0.000 D/V
# 94 Scholls Ferry/121st	D	37.3	0.932	D	37.3	0.932	+ 0.000 D/V
# 95 Scholls Ferry/Conestoga	B	12.7	0.779	B	12.7	0.779	+ 0.000 D/V
#102 Scholls Ferry/Laurelwood	F	129.0	0.000	F	129.0	0.000	+ 0.000 V/C

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Intersection	Base LOS	Del/ Veh	V/ C	Future LOS	Del/ Veh	V/ C	Change in
#103 Canyon/Lombard	D	44.7	0.950	D	44.7	0.950	+ 0.000 D/V
#105 Canyon/117th	C	25.9	0.762	C	25.9	0.762	+ 0.000 D/V
#114 ORE 217 SB Ramp/Canyon	C	28.4	0.835	C	28.4	0.835	+ 0.000 D/V
#115 ORE 217 NB Ramp/Canyon	C	28.5	0.811	C	28.5	0.811	+ 0.000 D/V
#116 ORE 217 SB Ramp/Farmington	C	33.5	0.891	C	33.5	0.891	+ 0.000 D/V
#117 ORE 217 NB Ramp/Farmington	C	28.5	0.809	C	28.5	0.809	+ 0.000 D/V
#118 ORE 217 SB Ramp/Allen	C	35.0	0.900	C	35.0	0.900	+ 0.000 D/V
#119 ORE 217 NB Ramp/Allen	C	32.4	0.900	C	32.4	0.900	+ 0.000 D/V
#120 ORE 217 SB Ramp/Denney	D	42.7	0.957	D	42.7	0.957	+ 0.000 D/V
#121 ORE 217 NB Ramp/Denney	D	37.0	0.848	D	37.0	0.848	+ 0.000 D/V
#122 ORE 217 SB off Ramp/Hall/Casca	E	76.0	1.106	E	76.0	1.106	+ 0.000 D/V
#123 ORE 217 NB on Ramp/Scholls Fer	F	148.9	1.429	F	148.9	1.429	+ 0.000 D/V
#125 ORE 217 NB off Ramp/Scholls Fe	B	19.6	0.645	B	19.6	0.645	+ 0.000 D/V
#129 ORE 217 NB Ramp/Walker	C	24.1	0.756	C	24.1	0.756	+ 0.000 D/V
#130 ORE 217 SB Ramp/Walker	B	15.9	0.643	B	15.9	0.643	+ 0.000 D/V
#131 Scholls Ferry/ORE 217 SB on Ra	C	32.3	0.741	C	32.3	0.741	+ 0.000 D/V

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #1 170th/TV Highway

Cycle (sec): 120 Critical Vol./Cap. (X): 1.154
Loss Time (sec): 16 (Y+R = 4 sec) Average Delay (sec/veh): 89.3
Optimal Cycle: 180 Level Of Service: F

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Ovl			Ovl		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1 0	1 1	0	1 0	2 0	1	1 0	2 0	1	2 0	2 0	1
Volume Module:												
Base Vol:	136	342	66	343	615	5	112	1911	222	521	1992	372
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	136	342	66	343	615	5	112	1911	222	521	1992	372
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	136	342	66	343	615	5	112	1911	222	521	1992	372
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	136	342	66	343	615	5	112	1911	222	521	1992	372
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	136	342	66	343	615	5	112	1911	222	521	1992	372
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.93	0.91	0.91	0.94	0.94	0.84	0.93	0.93	0.83	0.91	0.94	0.84
Lanes:	1.00	1.68	0.32	1.00	2.00	1.00	1.00	2.00	1.00	2.00	2.00	1.00
Final Sat.:	1769	2894	559	1787	3574	1599	1769	3538	1583	3467	3574	1599
Capacity Analysis Module:												
Vol/Sat:	0.08	0.12	0.12	0.19	0.17	0.00	0.06	0.54	0.14	0.15	0.56	0.23
Crit Moves:		****		****				****		****		
Green/Cycle:	0.08	0.10	0.10	0.17	0.19	0.19	0.06	0.47	0.55	0.13	0.54	0.70
Volume/Cap:	0.93	1.15	1.15	1.15	0.93	0.02	1.04	1.15	0.25	1.15	1.04	0.33
Uniform Del:	54.7	53.9	53.9	50.0	48.1	39.9	56.3	31.9	14.1	52.2	27.8	6.9
IncremntDel:	52.7	96.8	96.8	100.8	19.2	0.0	97.2	76.9	0.2	92.0	31.1	0.2
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	107.4	151	150.7	150.8	67.2	39.9	153.5	109	14.2	144.2	58.9	7.1
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	107.4	151	150.7	150.8	67.2	39.9	153.5	109	14.2	144.2	58.9	7.1
DesignQueue:	8	21	4	20	35	0	7	78	7	31	71	8

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #2 170th/Farmington

Cycle (sec):	100	Critical Vol./Cap. (X):	1.139				
Loss Time (sec):	16 (Y+R = 4 sec)	Average Delay (sec/veh):	88.3				
Optimal Cycle:	180	Level Of Service:	F				

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1 0	1	0	1 0	1	0	1 0	1	0	1 0	1	0
Volume Module:												
Base Vol:	298	315	108	111	490	283	90	1034	489	184	1403	175
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	298	315	108	111	490	283	90	1034	489	184	1403	175
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	298	315	108	111	490	283	90	1034	489	184	1403	175
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	298	315	108	111	490	283	90	1034	489	184	1403	175
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	298	315	108	111	490	283	90	1034	489	184	1403	175
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.93	0.90	0.90	0.94	0.89	0.89	0.92	0.88	0.88	0.94	0.92	0.92
Lanes:	1.00	1.49	0.51	1.00	1.27	0.73	1.00	1.36	0.64	1.00	1.78	0.22
Final Sat.:	1769	2534	869	1787	2141	1236	1753	2266	1071	1787	3124	390
Capacity Analysis Module:												
Vol/Sat:	0.17	0.12	0.12	0.06	0.23	0.23	0.05	0.46	0.46	0.10	0.45	0.45
Crit Moves:	****				****			****		****		
Green/Cycle:	0.15	0.23	0.23	0.12	0.20	0.20	0.05	0.40	0.40	0.09	0.44	0.44
Volume/Cap:	1.14	0.53	0.53	0.53	1.14	1.14	1.02	1.14	1.14	1.14	1.02	1.02
Uniform Del:	42.6	33.6	33.6	41.6	40.0	40.0	47.5	30.0	30.0	45.5	28.0	28.0
IncremntDel:	98.4	0.7	0.7	2.7	79.6	79.6	101.1	72.1	72.1	113.0	27.8	27.8
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	141.0	34.3	34.3	44.3	120	119.5	148.6	102	102.1	158.5	55.8	55.8
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	141.0	34.3	34.3	44.3	120	119.5	148.6	102	102.1	158.5	55.8	55.8
DesignQueue:	15	14	5	6	23	13	5	38	18	10	49	6

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #3 170th/Oak

Cycle (sec):	100	Critical Vol./Cap. (X):	0.749				
Loss Time (sec):	0 (Y+R = 4 sec)	Average Delay (sec/veh):	12.6				
Optimal Cycle:	57	Level Of Service:	B				

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0 0	1!	0	1 0	0	1	0 0	1!	0	0 0	1!	0
Volume Module:												
Base Vol:	21	417	14	136	1013	55	12	18	6	52	40	190
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	21	417	14	136	1013	55	12	18	6	52	40	190
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	21	417	14	136	1013	55	12	18	6	52	40	190
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	21	417	14	136	1013	55	12	18	6	52	40	190
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	21	417	14	136	1013	55	12	18	6	52	40	190
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.91	0.91	0.91	0.54	0.98	0.98	0.85	0.85	0.85	0.84	0.84	0.84
Lanes:	0.05	0.92	0.03	1.00	0.95	0.05	0.33	0.50	0.17	0.18	0.14	0.68
Final Sat.:	81	1603	54	1028	1770	96	541	811	270	295	227	1077
Capacity Analysis Module:												
Vol/Sat:	0.26	0.26	0.26	0.13	0.57	0.57	0.02	0.02	0.02	0.18	0.18	0.18
Crit Moves:					****						****	
Green/Cycle:	0.76	0.76	0.76	0.76	0.76	0.76	0.24	0.24	0.24	0.24	0.24	0.24
Volume/Cap:	0.34	0.34	0.34	0.17	0.75	0.75	0.09	0.09	0.09	0.75	0.75	0.75
Uniform Del:	3.8	3.8	3.8	3.2	6.5	6.5	29.9	29.9	29.9	35.5	35.5	35.5
IncremntDel:	0.2	0.2	0.2	0.1	2.2	2.2	0.1	0.1	0.1	8.1	8.1	8.1
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	3.9	3.9	3.9	3.3	8.7	8.7	30.0	30.0	30.0	43.6	43.6	43.6
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	3.9	3.9	3.9	3.3	8.7	8.7	30.0	30.0	30.0	43.6	43.6	43.6
DesignQueue:	0	6	0	2	16	1	1	1	0	2	2	8

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #5 170th/Bany

Cycle (sec): 100 Critical Vol./Cap. (X): 0.713
Loss Time (sec): 16 (Y+R = 4 sec) Average Delay (sec/veh): 33.6
Optimal Cycle: 71 Level Of Service: C

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Protected				Protected			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0	0	1 0	1	0	0	1 0	1	0	0	1 0	1	0	0	1 0
Volume Module:																
Base Vol:	60	167		33	242	487		39	15	209		74	80	312		181
Growth Adj:	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00
Initial Bse:	60	167		33	242	487		39	15	209		74	80	312		181
User Adj:	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00
PHF Adj:	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00
PHF Volume:	60	167		33	242	487		39	15	209		74	80	312		181
Reduct Vol:	0	0		0	0	0		0	0	0		0	0	0		0
Reduced Vol:	60	167		33	242	487		39	15	209		74	80	312		181
PCE Adj:	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00
MLF Adj:	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00
Final Vol.:	60	167		33	242	487		39	15	209		74	80	312		181
Saturation Flow Module:																
Sat/Lane:	1900	1900		1900	1900	1900		1900	1900	1900		1900	1900	1900		1900
Adjustment:	0.95	0.98		0.98	0.95	0.99		0.99	0.92	0.93		0.93	0.94	0.94		0.94
Lanes:	1.00	0.83		0.17	1.00	0.93		0.07	1.00	0.74		0.26	1.00	0.63		0.37
Final Sat.:	1805	1547		306	1805	1740		139	1753	1309		464	1787	1125		653
Capacity Analysis Module:																
Vol/Sat:	0.03	0.11		0.11	0.13	0.28		0.28	0.01	0.16		0.16	0.04	0.28		0.28
Crit Moves:	****				****				****					****		
Green/Cycle:	0.05	0.20		0.20	0.24	0.39		0.39	0.01	0.31		0.31	0.09	0.39		0.39
Volume/Cap:	0.71	0.55		0.55	0.55	0.71		0.71	0.71	0.51		0.51	0.51	0.71		0.71
Uniform Del:	47.0	36.2		36.2	33.1	25.6		25.6	49.2	28.1		28.1	43.6	25.8		25.8
IncremntDel:	24.9	1.8		1.8	1.5	3.3		3.3	75.1	0.8		0.8	2.8	3.5		3.5
Delay Adj:	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00
Delay/Veh:	71.9	38.1		38.1	34.6	28.9		28.9	124.3	28.9		28.9	46.3	29.4		29.4
User DelAdj:	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00
AdjDel/Veh:	71.9	38.1		38.1	34.6	28.9		28.9	124.3	28.9		28.9	46.3	29.4		29.4
DesignQueue:	3	8		2	11	18		1	1	8		3	4	11		7

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #6 Bethany/US 26 west ramp

Cycle (sec): 100 Critical Vol./Cap. (X): 1.187
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 85.9
Optimal Cycle: 180 Level Of Service: F

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Split Phase				Split Phase			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0	1	0 0	0	0	1	1 0	0	0	0	0 0	0	1	0	0 1
Volume Module:																
Base Vol:	135	1014		0	0	1081		119	0	0		0	0	292		816
Growth Adj:	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00
Initial Bse:	135	1014		0	0	1081		119	0	0		0	0	292		816
User Adj:	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00
PHF Adj:	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00
PHF Volume:	135	1014		0	0	1081		119	0	0		0	0	292		816
Reduct Vol:	0	0		0	0	0		0	0	0		0	0	0		0
Reduced Vol:	135	1014		0	0	1081		119	0	0		0	0	292		816
PCE Adj:	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00
MLF Adj:	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00
Final Vol.:	135	1014		0	0	1081		119	0	0		0	0	292		816
Saturation Flow Module:																
Sat/Lane:	1900	1900		1900	1900	1900		1900	1900	1900		1900	1900	1900		1900
Adjustment:	0.94	0.99		1.00	1.00	0.92		0.92	1.00	1.00		1.00	1.00	1.00		0.85
Lanes:	1.00	1.00		0.00	0.00	1.80		0.20	0.00	0.00		0.00	0.00	1.00		1.00
Final Sat.:	1787	1881		0	0	3139		346	0	0		0	0	1900		1615
Capacity Analysis Module:																
Vol/Sat:	0.08	0.54		0.00	0.00	0.34		0.34	0.00	0.00		0.00	0.00	0.15		0.51
Crit Moves:		****			****											****
Green/Cycle:	0.08	0.45		0.00	0.00	0.37		0.37	0.00	0.00		0.00	0.00	0.43		0.43
Volume/Cap:	0.92	1.19		0.00	0.00	0.92		0.92	0.00	0.00		0.00	0.00	0.36		1.19
Uniform Del:	45.6	27.3		0.0	0.0	30.0		30.0	0.0	0.0		0.0	0.0	19.5		28.7
IncremntDel:	52.2	95.8		0.0	0.0	11.2		11.2	0.0	0.0		0.0	0.0	0.3		98.3
Delay Adj:	1.00	1.00		0.00	0.00	1.00		1.00	0.00	0.00		0.00	0.00	1.00		1.00
Delay/Veh:	97.9	123		0.0	0.0	41.2		41.2	0.0	0.0		0.0	0.0	19.8		127.0
User DelAdj:	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00
AdjDel/Veh:	97.9	123		0.0	0.0	41.2		41.2	0.0	0.0		0.0	0.0	19.8		127.0
DesignQueue:	7	36		0	0	41		5	0	0		0	0	10		29

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #7 Bethany/US 26 east ramp

Cycle (sec): 100 Critical Vol./Cap. (X): 1.010
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 53.8
Optimal Cycle: 180 Level Of Service: D

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Split Phase				Split Phase			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	0	0	1 0	1	0	2	0 0	0	1	0	1 0	0	0	0	0 0
Volume Module:																
Base Vol:	0	931		33	474	574		0	160		93	76	0		0	0
Growth Adj:	1.00	1.00		1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00		1.00	1.00
Initial Bse:	0	931		33	474	574		0	160		93	76	0		0	0
User Adj:	1.00	1.00		1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00		1.00	1.00
PHF Adj:	1.00	1.00		1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00		1.00	1.00
PHF Volume:	0	931		33	474	574		0	160		93	76	0		0	0
Reduct Vol:	0	0		0	0	0		0	0		0	0	0		0	0
Reduced Vol:	0	931		33	474	574		0	160		93	76	0		0	0
PCE Adj:	1.00	1.00		1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00		1.00	1.00
MLF Adj:	1.00	1.00		1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00		1.00	1.00
Final Vol.:	0	931		33	474	574		0	160		93	76	0		0	0
Saturation Flow Module:																
Sat/Lane:	1900	1900		1900	1900	1900		1900	1900		1900	1900	1900		1900	1900
Adjustment:	1.00	0.99		0.99	0.91	0.91		1.00	0.86		0.86	0.86	1.00		1.00	1.00
Lanes:	0.00	0.97		0.03	1.00	2.00		0.00	0.97		0.57	0.46	0.00		0.00	0.00
Final Sat.:	0	1808		64	1736	3473		0	1590		924	755	0		0	0
Capacity Analysis Module:																
Vol/Sat:	0.00	0.52		0.52	0.27	0.17		0.00	0.10		0.10	0.10	0.00		0.00	0.00
Crit Moves:		****			****						****					
Green/Cycle:	0.00	0.51		0.51	0.27	0.78		0.00	0.10		0.10	0.10	0.00		0.00	0.00
Volume/Cap:	0.00	1.01		1.01	1.01	0.21		0.00	1.01		1.01	1.01	0.00		0.00	0.00
Uniform Del:	0.0	24.5		24.5	36.5	2.9		0.0	45.0		45.0	45.0	0.0		0.0	0.0
IncremntDel:	0.0	31.6		31.6	44.0	0.0		0.0	52.4		52.4	52.4	0.0		0.0	0.0
Delay Adj:	0.00	1.00		1.00	1.00	1.00		0.00	1.00		1.00	1.00	0.00		0.00	0.00
Delay/Veh:	0.0	56.1		56.1	80.5	2.9		0.0	97.4		97.4	97.4	0.0		0.0	0.0
User DelAdj:	1.00	1.00		1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00		1.00	1.00
AdjDel/Veh:	0.0	56.1		56.1	80.5	2.9		0.0	97.4		97.4	97.4	0.0		0.0	0.0
DesignQueue:	0	29		1	21	7		0	8		5	4	0		0	0

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #8 Bethany/Cornell

Cycle (sec): 120 Critical Vol./Cap. (X): 1.016
Loss Time (sec): 16 (Y+R = 4 sec) Average Delay (sec/veh): 54.3
Optimal Cycle: 180 Level Of Service: D

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Split Phase				Split Phase				Protected				Protected			
Rights:	Include				Include				Include				Ovl			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0	0	1 0	1	1	0	0 1	1	0	1	1 0	1	0	2	0 1
Volume Module:																
Base Vol:	34	36		100	340	18		328	464		1354	14	48		1180	438
Growth Adj:	1.00	1.00		1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00		1.00	1.00
Initial Bse:	34	36		100	340	18		328	464		1354	14	48		1180	438
User Adj:	1.00	1.00		1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00		1.00	1.00
PHF Adj:	1.00	1.00		1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00		1.00	1.00
PHF Volume:	34	36		100	340	18		328	464		1354	14	48		1180	438
Reduct Vol:	0	0		0	0	0		0	0		0	0	0		0	0
Reduced Vol:	34	36		100	340	18		328	464		1354	14	48		1180	438
PCE Adj:	1.00	1.00		1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00		1.00	1.00
MLF Adj:	1.00	1.00		1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00		1.00	1.00
Final Vol.:	34	36		100	340	18		328	464		1354	14	48		1180	438
Saturation Flow Module:																
Sat/Lane:	1900	1900		1900	1900	1900		1900	1900		1900	1900	1900		1900	1900
Adjustment:	0.95	0.89		0.89	0.94	0.94		0.83	0.93		0.93	0.93	0.94		0.94	0.84
Lanes:	1.00	0.26		0.74	1.90	0.10		1.00	1.00		1.98	0.02	1.00		2.00	1.00
Final Sat.:	1805	448		1243	3378	179		1583	1769		3498	36	1787		3574	1599
Capacity Analysis Module:																
Vol/Sat:	0.02	0.08		0.08	0.10	0.10		0.21	0.26		0.39	0.39	0.03		0.33	0.27
Crit Moves:		****						****	****						****	
Green/Cycle:	0.08	0.08		0.08	0.20	0.20		0.20	0.26		0.55	0.55	0.04		0.33	0.53
Volume/Cap:	0.24	1.02		1.02	0.49	0.49		1.02	1.02		0.71	0.71	0.71		1.02	0.52
Uniform Del:	51.8	55.2		55.2	42.3	42.3		47.8	44.5		20.2	20.2	57.1		40.5	18.3
IncremntDel:	0.9	82.0		82.0	0.5	0.5		54.1	46.1		1.2	1.2	29.4		30.3	0.6
Delay Adj:	1.00	1.00		1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00		1.00	1.00
Delay/Veh:	52.7	137		137.2	42.8	42.8		101.8	90.6		21.5	21.5	86.4		70.8	18.9
User DelAdj:	1.00	1.00		1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00		1.00	1.00
AdjDel/Veh:	52.7	137		137.2	42.8	42.8		101.8	90.6		21.5	21.5	86.4		70.8	18.9
DesignQueue:	2	2		6	19	1		18	25		45	0	3		58	15

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #9 Cornell/US 26 east ramp

Cycle (sec): 100 Critical Vol./Cap. (X): 0.857
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 23.5
Optimal Cycle: 93 Level Of Service: C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Split Phase			Split Phase		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	0 2	0 1	1	0 2	0 0	0	1 0	1 0	0	0 0	0 0
Volume Module:												
Base Vol:	0	1806	718	42	1881	0	313	111	279	0	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	1806	718	42	1881	0	313	111	279	0	0	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	1806	718	42	1881	0	313	111	279	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	1806	718	42	1881	0	313	111	279	0	0	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	0	1806	718	42	1881	0	313	111	279	0	0	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	0.93	0.83	0.94	0.94	1.00	0.84	0.84	0.84	1.00	1.00	1.00
Lanes:	0.00	2.00	1.00	1.00	2.00	0.00	0.89	0.32	0.79	0.00	0.00	0.00
Final Sat.:	0	3538	1583	1787	3574	0	1421	504	1267	0	0	0
Capacity Analysis Module:												
Vol/Sat:	0.00	0.51	0.45	0.02	0.53	0.00	0.22	0.22	0.22	0.00	0.00	0.00
Crit Moves:		****		****			****					
Green/Cycle:	0.00	0.60	0.60	0.03	0.62	0.00	0.26	0.26	0.26	0.00	0.00	0.00
Volume/Cap:	0.00	0.86	0.76	0.86	0.84	0.00	0.86	0.86	0.86	0.00	0.00	0.00
Uniform Del:	0.0	16.7	15.0	48.4	15.0	0.0	35.4	35.4	35.4	0.0	0.0	0.0
IncremntDel:	0.0	3.7	3.7	77.2	3.2	0.0	8.9	8.9	8.9	0.0	0.0	0.0
Delay Adj:	0.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	0.00	0.00	0.00
Delay/Veh:	0.0	20.4	18.7	125.7	18.2	0.0	44.3	44.3	44.3	0.0	0.0	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	20.4	18.7	125.7	18.2	0.0	44.3	44.3	44.3	0.0	0.0	0.0
DesignQueue:	0	46	18	2	45	0	14	5	12	0	0	0

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #10 Cornell/US 26 west ramp

Cycle (sec): 100 Critical Vol./Cap. (X): 1.012
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 53.2
Optimal Cycle: 180 Level Of Service: D

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Split Phase			Split Phase		
Rights:	Include			Include			Include			Ignore		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0 2	0 0	0	0 2	1 0	0	0 0	0 0	1	1 0	0 1
Volume Module:												
Base Vol:	312	1595	0	0	782	313	0	0	0	1003	404	390
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	312	1595	0	0	782	313	0	0	0	1003	404	390
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
PHF Volume:	312	1595	0	0	782	313	0	0	0	1003	404	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	312	1595	0	0	782	313	0	0	0	1003	404	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
Final Vol.:	312	1595	0	0	782	313	0	0	0	1003	404	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.94	0.94	1.00	1.00	0.85	0.85	1.00	1.00	1.00	0.83	0.83	1.00
Lanes:	1.00	2.00	0.00	0.00	2.14	0.86	0.00	0.00	0.00	1.43	0.57	1.00
Final Sat.:	1787	3574	0	0	3474	1391	0	0	0	2257	909	1900
Capacity Analysis Module:												
Vol/Sat:	0.17	0.45	0.00	0.00	0.23	0.23	0.00	0.00	0.00	0.44	0.44	0.00
Crit Moves:		****		****						****		
Green/Cycle:	0.19	0.44	0.00	0.00	0.25	0.25	0.00	0.00	0.00	0.44	0.44	0.00
Volume/Cap:	0.91	1.01	0.00	0.00	0.91	0.91	0.00	0.00	0.00	1.01	1.01	0.00
Uniform Del:	39.5	28.0	0.0	0.0	36.5	36.5	0.0	0.0	0.0	28.0	28.0	0.0
IncremntDel:	26.5	25.7	0.0	0.0	9.9	9.9	0.0	0.0	0.0	27.2	27.2	0.0
Delay Adj:	1.00	1.00	0.00	0.00	1.00	1.00	0.00	0.00	0.00	1.00	1.00	0.00
Delay/Veh:	66.0	53.7	0.0	0.0	46.4	46.4	0.0	0.0	0.0	55.2	55.2	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	66.0	53.7	0.0	0.0	46.4	46.4	0.0	0.0	0.0	55.2	55.2	0.0
DesignQueue:	15	56	0	0	34	14	0	0	0	35	14	0

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #11 158th/Cornell

Cycle (sec): 90 Critical Vol./Cap. (X): 0.968
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 39.2
Optimal Cycle: 142 Level Of Service: D

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Protected			Protected		
Rights:		Ovl			Include			Include			Include	
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	2 0	0 0	2	0 0	0 0	0	0 0	2 0	2	2 0	2 0	0
Volume Module:												
Base Vol:	746	0	1579	0	0	0	0	963	753	1018	828	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	746	0	1579	0	0	0	0	963	753	1018	828	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	746	0	1579	0	0	0	0	963	753	1018	828	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	746	0	1579	0	0	0	0	963	753	1018	828	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	746	0	1579	0	0	0	0	963	753	1018	828	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.90	1.00	0.73	1.00	1.00	1.00	1.00	0.93	0.73	0.90	0.93	1.00
Lanes:	2.00	0.00	2.00	0.00	0.00	0.00	0.00	2.00	2.00	2.00	2.00	0.00
Final Sat.:	3432	0	2786	0	0	0	0	3538	2786	3432	3538	0
Capacity Analysis Module:												
Vol/Sat:	0.22	0.00	0.57	0.00	0.00	0.00	0.00	0.27	0.27	0.30	0.23	0.00
Crit Moves:			****					****		****		
Green/Cycle:	0.28	0.00	0.59	0.00	0.00	0.00	0.00	0.28	0.28	0.31	0.59	0.00
Volume/Cap:	0.78	0.00	0.97	0.00	0.00	0.00	0.00	0.97	0.96	0.97	0.40	0.00
Uniform Del:	29.9	0.0	17.8	0.0	0.0	0.0	0.0	31.9	31.9	30.8	10.0	0.0
IncremntDel:	4.1	0.0	15.4	0.0	0.0	0.0	0.0	21.1	23.1	20.4	0.1	0.0
Delay Adj:	1.00	0.00	1.00	0.00	0.00	0.00	0.00	1.00	1.00	1.00	1.00	0.00
Delay/Veh:	34.0	0.0	33.2	0.0	0.0	0.0	0.0	53.1	54.9	51.2	10.1	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	34.0	0.0	33.2	0.0	0.0	0.0	0.0	53.1	54.9	51.2	10.1	0.0
DesignQueue:	28	0	37	0	0	0	0	37	29	38	18	0

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #12 158th/Walker

Cycle (sec): 120 Critical Vol./Cap. (X): 1.010
Loss Time (sec): 16 (Y+R = 4 sec) Average Delay (sec/veh): 58.9
Optimal Cycle: 180 Level Of Service: E

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Permit+Prot			Permit+Prot		
Rights:		Include			Include			Include			Ovl	
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	2 0	2 0	1	2 0	1 1	0	1 0	2 0	1	1 0	2 0	1
Volume Module:												
Base Vol:	242	1189	154	561	1062	126	95	1150	151	121	934	367
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	242	1189	154	561	1062	126	95	1150	151	121	934	367
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	242	1189	154	561	1062	126	95	1150	151	121	934	367
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	242	1189	154	561	1062	126	95	1150	151	121	934	367
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	242	1189	154	561	1062	126	95	1150	151	121	934	367
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.90	0.93	0.83	0.90	0.92	0.92	0.32	0.93	0.82	0.32	0.93	0.83
Lanes:	2.00	2.00	1.00	2.00	1.79	0.21	1.00	2.00	1.00	1.00	2.00	1.00
Final Sat.:	3432	3538	1583	3432	3112	369	600	3538	1566	605	3538	1577
Capacity Analysis Module:												
Vol/Sat:	0.07	0.34	0.10	0.16	0.34	0.34	0.16	0.33	0.10	0.20	0.26	0.23
Crit Moves:		****		****				****		****		
Green/Cycle:	0.08	0.33	0.33	0.16	0.40	0.40	0.42	0.32	0.32	0.43	0.32	0.48
Volume/Cap:	0.85	1.03	0.30	1.03	0.85	0.85	0.37	1.03	0.31	0.47	0.83	0.49
Uniform Del:	54.3	40.4	30.2	50.5	32.6	32.6	43.9	41.1	31.1	47.7	38.0	21.5
IncremntDel:	20.7	34.6	0.3	46.6	5.1	5.1	0.9	35.0	0.4	1.3	5.4	0.5
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	75.0	75.0	30.5	97.1	37.7	37.7	44.8	76.1	31.5	49.1	43.4	22.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	75.0	75.0	30.5	97.1	37.7	37.7	44.8	76.1	31.5	49.1	43.4	22.0
DesignQueue:	15	58	7	33	46	5	6	57	7	7	45	14

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #13 143rd/Cornell

Cycle (sec):	100	Critical Vol./Cap. (X):	0.901
Loss Time (sec):	8 (Y+R = 4 sec)	Average Delay (sec/veh):	55.3
Optimal Cycle:	180	Level Of Service:	E

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Prot+Permit			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0 0	0	0 0	1	0 0	0 1	1 0	1	0 0	0	0 1	0 1
Volume Module:												
Base Vol:	0	0	0	487	0	273	415	1008	0	0	655	851
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	487	0	273	415	1008	0	0	655	851
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	487	0	273	415	1008	0	0	655	851
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	487	0	273	415	1008	0	0	655	851
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	0	0	0	487	0	273	415	1008	0	0	655	851
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	0.93	1.00	0.83	0.39	0.99	1.00	1.00	0.99	0.84
Lanes:	0.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00
Final Sat.:	0	0	0	1769	0	1583	735	1881	0	0	1881	1587
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.28	0.00	0.17	0.56	0.54	0.00	0.00	0.35	0.54
Crit Moves:				****			****					****
Green/Cycle:	0.00	0.00	0.00	0.24	0.00	0.24	0.68	0.68	0.00	0.00	0.47	0.47
Volume/Cap:	0.00	0.00	0.00	1.13	0.00	0.71	0.83	0.79	0.00	0.00	0.74	1.14
Uniform Del:	0.0	0.0	0.0	37.9	0.0	34.6	22.2	11.2	0.0	0.0	21.4	26.4
IncremntDel:	0.0	0.0	0.0	85.1	0.0	6.1	11.6	3.5	0.0	0.0	3.3	77.1
Delay Adj:	0.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00
Delay/Veh:	0.0	0.0	0.0	123.0	0.0	40.7	33.7	14.7	0.0	0.0	24.7	103.5
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	123.0	0.0	40.7	33.7	14.7	0.0	0.0	24.7	103.5
DesignQueue:	0	0	0	22	0	12	19	21	0	0	21	28

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #14 Murray/Cornell

Cycle (sec):	120	Critical Vol./Cap. (X):	1.387
Loss Time (sec):	16 (Y+R = 4 sec)	Average Delay (sec/veh):	160.8
Optimal Cycle:	180	Level Of Service:	F

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Ovl			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1 0	1	0 1	1	0 0	1 0	1	0 1	0	1	0 0	1 0
Volume Module:												
Base Vol:	628	352	663	125	167	26	215	840	400	464	555	77
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	628	352	663	125	167	26	215	840	400	464	555	77
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	628	352	663	125	167	26	215	840	400	464	555	77
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	628	352	663	125	167	26	215	840	400	464	555	77
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	628	352	663	125	167	26	215	840	400	464	555	77
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.97	0.83	0.93	0.96	0.96	0.94	0.99	0.84	0.93	0.96	0.96
Lanes:	1.00	1.00	1.00	1.00	0.87	0.13	1.00	1.00	1.00	1.00	0.88	0.12
Final Sat.:	1753	1845	1568	1769	1579	246	1787	1881	1599	1769	1606	223
Capacity Analysis Module:												
Vol/Sat:	0.36	0.19	0.42	0.07	0.11	0.11	0.12	0.45	0.25	0.26	0.35	0.35
Crit Moves:				****	****			****		****		
Green/Cycle:	0.27	0.30	0.30	0.05	0.08	0.08	0.13	0.32	0.60	0.19	0.38	0.38
Volume/Cap:	1.30	0.63	1.39	1.39	1.30	1.30	0.91	1.39	0.42	1.39	0.91	0.91
Uniform Del:	43.5	35.8	41.7	56.9	55.1	55.1	51.4	40.7	13.0	48.7	35.4	35.4
IncremntDel:	151.6	2.2	186.9	228.8	177	177.4	35.7	184	0.3	191.8	16.4	16.4
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	195.1	38.1	228.6	285.7	233	232.5	87.1	225	13.3	240.5	51.7	51.7
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	195.1	38.1	228.6	285.7	233	232.5	87.1	225	13.3	240.5	51.7	51.7
DesignQueue:	33	17	34	8	11	2	13	43	11	27	25	3

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #15 Barnes/Saltzman/Cornell

Cycle (sec): 100 Critical Vol./Cap. (X): 1.420
Loss Time (sec): 16 (Y+R = 4 sec) Average Delay (sec/veh): 193.3
Optimal Cycle: 180 Level Of Service: F

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Protected				Protected			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0	1	0 1	1	0	0	1 0	1	0	1	0 1	1	0	1	0 1
Volume Module:																
Base Vol:	362	791		38	328	537		210	184	1029		67	34	638		302
Growth Adj:	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00
Initial Bse:	362	791		38	328	537		210	184	1029		67	34	638		302
User Adj:	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00
PHF Adj:	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00
PHF Volume:	362	791		38	328	537		210	184	1029		67	34	638		302
Reduct Vol:	0	0		0	0	0		0	0	0		0	0	0		0
Reduced Vol:	362	791		38	328	537		210	184	1029		67	34	638		302
PCE Adj:	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00
MLF Adj:	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00
Final Vol.:	362	791		38	328	537		210	184	1029		67	34	638		302
Saturation Flow Module:																
Sat/Lane:	1900	1900		1900	1900	1900		1900	1900	1900		1900	1900	1900		1900
Adjustment:	0.94	0.99		0.84	0.93	0.94		0.94	0.93	0.98		0.83	0.93	0.98		0.83
Lanes:	1.00	1.00		1.00	1.00	0.72		0.28	1.00	1.00		1.00	1.00	1.00		1.00
Final Sat.:	1787	1881		1599	1769	1282		501	1769	1862		1583	1769	1862		1583
Capacity Analysis Module:																
Vol/Sat:	0.20	0.42		0.02	0.19	0.42		0.42	0.10	0.55		0.04	0.02	0.34		0.19
Crit Moves:	****					****				****			****			
Green/Cycle:	0.14	0.30		0.30	0.13	0.29		0.29	0.09	0.39		0.39	0.01	0.31		0.31
Volume/Cap:	1.42	1.39		0.08	1.39	1.42		1.42	1.11	1.42		0.11	1.42	1.11		0.62
Uniform Del:	42.9	34.8		24.8	43.3	35.3		35.3	45.3	30.5		19.5	49.3	34.6		29.5
IncremntDel:	210.6	184		0.1	197.4	200		200.1	102.3	197		0.1	333.4	71.2		2.4
Delay Adj:	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00
Delay/Veh:	253.5	219		24.9	240.7	235		235.4	147.6	228		19.6	382.7	106		31.9
User DelAdj:	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00
AdjDel/Veh:	253.5	219		24.9	240.7	235		235.4	147.6	228		19.6	382.7	106		31.9
DesignQueue:	18	34		1	17	23		9	10	41		2	2	27		12

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #16 Murray/US 26 west ramp

Cycle (sec): 100 Critical Vol./Cap. (X): 1.104
Loss Time (sec): 8 (Y+R = 4 sec) Average Delay (sec/veh): 65.1
Optimal Cycle: 180 Level Of Service: E

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Permitted				Split Phase				Split Phase			
Rights:	Include				Ignore				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0	2	0 0	0	0	2	0 1	0	0	0	0 0	1	1	0	0 1
Volume Module:																
Base Vol:	324	1191		0	0	1153		147	0	0		0	590	0		813
Growth Adj:	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00
Initial Bse:	324	1191		0	0	1153		147	0	0		0	590	0		813
User Adj:	1.00	1.00		1.00	1.00	1.00		0.00	1.00	1.00		1.00	1.00	1.00		1.00
PHF Adj:	1.00	1.00		1.00	1.00	1.00		0.00	1.00	1.00		1.00	1.00	1.00		1.00
PHF Volume:	324	1191		0	0	1153		0	0	0		0	590	0		813
Reduct Vol:	0	0		0	0	0		0	0	0		0	0	0		0
Reduced Vol:	324	1191		0	0	1153		0	0	0		0	590	0		813
PCE Adj:	1.00	1.00		1.00	1.00	1.00		0.00	1.00	1.00		1.00	1.00	1.00		1.00
MLF Adj:	1.00	1.00		1.00	1.00	1.00		0.00	1.00	1.00		1.00	1.00	1.00		1.00
Final Vol.:	324	1191		0	0	1153		0	0	0		0	590	0		813
Saturation Flow Module:																
Sat/Lane:	1900	1900		1900	1900	1900		1900	1900	1900		1900	1900	1900		1900
Adjustment:	0.94	0.94		1.00	1.00	0.93		1.00	1.00	1.00		1.00	0.94	1.00		0.84
Lanes:	1.00	2.00		0.00	0.00	2.00		1.00	0.00	0.00		0.00	2.00	0.00		1.00
Final Sat.:	1787	3574		0	0	3538		1900	0	0		0	3581	0		1599
Capacity Analysis Module:																
Vol/Sat:	0.18	0.33		0.00	0.00	0.33		0.00	0.00	0.00		0.00	0.16	0.00		0.51
Crit Moves:	****					****										****
Green/Cycle:	0.16	0.46		0.00	0.00	0.30		0.00	0.00	0.00		0.00	0.46	0.00		0.46
Volume/Cap:	1.10	0.73		0.00	0.00	1.10		0.00	0.00	0.00		0.00	0.36	0.00		1.10
Uniform Del:	41.8	21.9		0.0	0.0	35.2		0.0	0.0	0.0		0.0	17.4	0.0		27.0
IncremntDel:	83.4	1.6		0.0	0.0	60.9		0.0	0.0	0.0		0.0	0.1	0.0		65.4
Delay Adj:	1.00	1.00		0.00	0.00	1.00		0.00	0.00	0.00		0.00	1.00	0.00		1.00
Delay/Veh:	125.2	23.6		0.0	0.0	96.1		0.0	0.0	0.0		0.0	17.6	0.0		92.3
User DelAdj:	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00
AdjDel/Veh:	125.2	23.6		0.0	0.0	96.1		0.0	0.0	0.0		0.0	17.6	0.0		92.3
DesignQueue:	16	39		0	0	49		0	0	0		0	18	0		27

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #17 Murray/US 26 east ramps

Cycle (sec): 100 Critical Vol./Cap. (X): 0.675
Loss Time (sec): 8 (Y+R = 4 sec) Average Delay (sec/veh): 14.6
Optimal Cycle: 45 Level Of Service: B

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Permitted				Protected				Split Phase				Split Phase			
Rights:	Ignore				Ignore				Include				Include			
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0	
Lanes:	0	0	2	0 1	1	0	2	0 0	0	1	0	0 1	0	0	0	0 0
Volume Module:																
Base Vol:	0	1402	421		218	1544	0		130	0	152		0	0	0	
Growth Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Initial Bse:	0	1402	421		218	1544	0		130	0	152		0	0	0	
User Adj:	1.00	1.00	0.00		1.00	1.00	0.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	0.00		1.00	1.00	0.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	0	1402	0		218	1544	0		130	0	152		0	0	0	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	0	1402	0		218	1544	0		130	0	152		0	0	0	
PCE Adj:	1.00	1.00	0.00		1.00	1.00	0.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	0.00		1.00	1.00	0.00		1.00	1.00	1.00		1.00	1.00	1.00	
Final Vol.:	0	1402	0		218	1544	0		130	0	152		0	0	0	
Saturation Flow Module:																
Sat/Lane:	1900	1900	1900		1900	1900	1900		1900	1900	1900		1900	1900	1900	
Adjustment:	1.00	0.92	1.00		0.92	0.92	1.00		0.92	1.00	0.83		1.00	1.00	1.00	
Lanes:	0.00	2.00	1.00		1.00	2.00	0.00		1.00	0.00	1.00		0.00	0.00	0.00	
Final Sat.:	0	3505	1900		1753	3505	0		1756	0	1568		0	0	0	
Capacity Analysis Module:																
Vol/Sat:	0.00	0.40	0.00		0.12	0.44	0.00		0.07	0.00	0.10		0.00	0.00	0.00	
Crit Moves:		****			****						****					
Green/Cycle:	0.00	0.59	0.00		0.18	0.78	0.00		0.14	0.00	0.14		0.00	0.00	0.00	
Volume/Cap:	0.00	0.68	0.00		0.68	0.57	0.00		0.52	0.00	0.68		0.00	0.00	0.00	
Uniform Del:	0.0	13.9	0.0		38.0	4.5	0.0		39.6	0.0	40.6		0.0	0.0	0.0	
IncremntDel:	0.0	0.9	0.0		5.6	0.3	0.0		1.9	0.0	7.9		0.0	0.0	0.0	
Delay Adj:	0.00	1.00	0.00		1.00	1.00	0.00		1.00	0.00	1.00		0.00	0.00	0.00	
Delay/Veh:	0.0	14.7	0.0		43.6	4.7	0.0		41.5	0.0	48.5		0.0	0.0	0.0	
User DelAdj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
AdjDel/Veh:	0.0	14.7	0.0		43.6	4.7	0.0		41.5	0.0	48.5		0.0	0.0	0.0	
DesignQueue:	0	35	0		10	21	0		6	0	7		0	0	0	

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #18 Murray/Walker

Cycle (sec): 100 Critical Vol./Cap. (X): 1.065
Loss Time (sec): 16 (Y+R = 4 sec) Average Delay (sec/veh): 60.9
Optimal Cycle: 180 Level Of Service: E

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Protected				Protected			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0	
Lanes:	2	0	2	0 1	2	0	2	0 1	2	0	2	0 1	2	0	2	0 1
Volume Module:																
Base Vol:	173	1467	324		109	1092	180		335	1404	323		176	1099	193	
Growth Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Initial Bse:	173	1467	324		109	1092	180		335	1404	323		176	1099	193	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	173	1467	324		109	1092	180		335	1404	323		176	1099	193	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	173	1467	324		109	1092	180		335	1404	323		176	1099	193	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Final Vol.:	173	1467	324		109	1092	180		335	1404	323		176	1099	193	
Saturation Flow Module:																
Sat/Lane:	1900	1900	1900		1900	1900	1900		1900	1900	1900		1900	1900	1900	
Adjustment:	0.90	0.93	0.83		0.89	0.92	0.83		0.90	0.93	0.83		0.91	0.94	0.84	
Lanes:	2.00	2.00	1.00		2.00	2.00	1.00		2.00	2.00	1.00		2.00	2.00	1.00	
Final Sat.:	3432	3538	1583		3400	3505	1568		3432	3538	1583		3467	3574	1599	
Capacity Analysis Module:																
Vol/Sat:	0.05	0.41	0.20		0.03	0.31	0.11		0.10	0.40	0.20		0.05	0.31	0.12	
Crit Moves:		****			****					****			****			
Green/Cycle:	0.06	0.39	0.39		0.03	0.36	0.36		0.10	0.37	0.37		0.05	0.32	0.32	
Volume/Cap:	0.86	1.06	0.53		1.06	0.86	0.32		0.96	1.06	0.55		1.06	0.96	0.38	
Uniform Del:	46.7	30.5	23.4		48.5	29.6	23.1		44.8	31.4	24.7		47.6	33.5	26.4	
IncremntDel:	29.7	43.5	0.8		107.5	6.3	0.3		38.5	44.0	1.1		88.2	18.5	0.5	
Delay Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Delay/Veh:	76.4	74.0	24.3		156.0	36.0	23.4		83.3	75.3	25.8		135.9	52.0	26.8	
User DelAdj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
AdjDel/Veh:	76.4	74.0	24.3		156.0	36.0	23.4		83.3	75.3	25.8		135.9	52.0	26.8	
DesignQueue:	9	55	12		6	42	7		17	54	12		9	45	8	

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #19 Murray/Jenkins

Cycle (sec): 100 Critical Vol./Cap. (X): 1.153
Loss Time (sec): 16 (Y+R = 4 sec) Average Delay (sec/veh): 75.4
Optimal Cycle: 180 Level Of Service: E

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Ovl			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	2	0 2	0 1	2	0 2	0 1	1	0 2	0 1	1	0 2	0 1
Volume Module:												
Base Vol:	673	913	108	191	968	359	170	693	1008	87	562	102
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	673	913	108	191	968	359	170	693	1008	87	562	102
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	673	913	108	191	968	359	170	693	1008	87	562	102
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	673	913	108	191	968	359	170	693	1008	87	562	102
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	673	913	108	191	968	359	170	693	1008	87	562	102
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.89	0.92	0.83	0.89	0.92	0.83	0.92	0.92	0.83	0.93	0.93	0.83
Lanes:	2.00	2.00	1.00	2.00	2.00	1.00	1.00	2.00	1.00	1.00	2.00	1.00
Final Sat.:	3400	3505	1568	3400	3505	1568	1753	3505	1568	1769	3538	1583
Capacity Analysis Module:												
Vol/Sat:	0.20	0.26	0.07	0.06	0.28	0.23	0.10	0.20	0.64	0.05	0.16	0.06
Crit Moves:	****				****				****	****		
Green/Cycle:	0.17	0.34	0.34	0.07	0.24	0.24	0.16	0.39	0.56	0.04	0.27	0.27
Volume/Cap:	1.15	0.77	0.20	0.77	1.15	0.96	0.60	0.51	1.15	1.15	0.60	0.24
Uniform Del:	41.4	29.6	23.5	45.5	38.0	37.5	38.8	23.5	22.1	47.9	32.0	28.8
IncremntDel:	87.0	3.1	0.2	13.7	82.2	34.8	3.4	0.3	81.7	150.7	1.1	0.3
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	128.4	32.7	23.7	59.2	120	72.3	42.3	23.8	103.8	198.6	33.1	29.1
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	128.4	32.7	23.7	59.2	120	72.3	42.3	23.8	103.8	198.6	33.1	29.1
DesignQueue:	32	36	4	10	44	16	8	25	29	5	24	4

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #20 Murray/Farmington

Cycle (sec): 160 Critical Vol./Cap. (X): 1.161
Loss Time (sec): 16 (Y+R = 4 sec) Average Delay (sec/veh): 103.6
Optimal Cycle: 180 Level Of Service: F

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	2	0 1	1 0	2	0 2	0 1	2	0 2	0 1	2	0 2	0 1
Volume Module:												
Base Vol:	338	1253	318	230	1851	473	147	944	418	327	1363	153
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	338	1253	318	230	1851	473	147	944	418	327	1363	153
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	338	1253	318	230	1851	473	147	944	418	327	1363	153
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	338	1253	318	230	1851	473	147	944	418	327	1363	153
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	338	1253	318	230	1851	473	147	944	418	327	1363	153
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.90	0.90	0.90	0.91	0.94	0.84	0.90	0.93	0.83	0.90	0.93	0.83
Lanes:	2.00	1.60	0.40	2.00	2.00	1.00	2.00	2.00	1.00	2.00	2.00	1.00
Final Sat.:	3432	2737	695	3467	3574	1599	3432	3538	1583	3432	3538	1583
Capacity Analysis Module:												
Vol/Sat:	0.10	0.46	0.46	0.07	0.52	0.30	0.04	0.27	0.26	0.10	0.39	0.10
Crit Moves:	****				****		****				****	
Green/Cycle:	0.08	0.46	0.46	0.07	0.45	0.45	0.04	0.27	0.27	0.10	0.33	0.33
Volume/Cap:	1.16	0.99	0.99	0.99	1.16	0.66	1.16	0.98	0.97	0.98	1.16	0.29
Uniform Del:	73.2	42.4	42.4	74.6	44.3	34.8	77.0	57.9	57.6	72.1	53.4	39.5
IncremntDel:	103.5	19.4	19.4	55.1	79.7	2.3	129.6	24.5	35.9	44.2	82.0	0.3
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	176.7	61.8	61.8	129.6	124	37.2	206.6	82.4	93.5	116.3	135	39.8
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	176.7	61.8	61.8	129.6	124	37.2	206.6	82.4	93.5	116.3	135	39.8
DesignQueue:	28	67	17	19	105	25	13	65	29	27	89	9

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #21 Murray/6th

Cycle (sec): 120 Critical Vol./Cap. (X): 0.984
Loss Time (sec): 16 (Y+R = 4 sec) Average Delay (sec/veh): 34.2
Optimal Cycle: 180 Level Of Service: C

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Protected				Protected			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0	
Lanes:	1	0	1	1 0	1	0	1	1 0	1	0	0	1 0	1	0	0	1 0
Volume Module:																
Base Vol:	172	1772	42		93	2323	21		2	11	50		67	57	100	
Growth Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Initial Bse:	172	1772	42		93	2323	21		2	11	50		67	57	100	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	172	1772	42		93	2323	21		2	11	50		67	57	100	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	172	1772	42		93	2323	21		2	11	50		67	57	100	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Final Vol.:	172	1772	42		93	2323	21		2	11	50		67	57	100	
Saturation Flow Module:																
Sat/Lane:	1900	1900	1900		1900	1900	1900		1900	1900	1900		1900	1900	1900	
Adjustment:	0.93	0.93	0.93		0.93	0.93	0.93		0.93	0.86	0.86		0.95	0.90	0.90	
Lanes:	1.00	1.95	0.05		1.00	1.98	0.02		1.00	0.18	0.82		1.00	0.36	0.64	
Final Sat.:	1769	3439	82		1769	3503	32		1769	294	1339		1805	624	1094	
Capacity Analysis Module:																
Vol/Sat:	0.10	0.52	0.52		0.05	0.66	0.66		0.00	0.04	0.04		0.04	0.09	0.09	
Crit Moves:	****					****			****					****		
Green/Cycle:	0.10	0.70	0.70		0.07	0.67	0.67		0.00	0.05	0.05		0.05	0.09	0.09	
Volume/Cap:	0.98	0.74	0.74		0.74	0.98	0.98		0.98	0.79	0.79		0.79	0.98	0.98	
Uniform Del:	54.0	11.1	11.1		54.6	19.0	19.0		59.9	56.6	56.6		56.6	54.3	54.3	
IncremntDel:	63.2	1.2	1.2		19.9	14.9	14.9		614.9	41.3	41.3		38.4	66.3	66.3	
Delay Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Delay/Veh:	117.2	12.2	12.2		74.5	33.8	33.8		674.8	97.9	97.9		95.1	121	120.7	
User DelAdj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
AdjDel/Veh:	117.2	12.2	12.2		74.5	33.8	33.8		674.8	97.9	97.9		95.1	121	120.7	
DesignQueue:	11	40	1		6	60	1		0	1	3		4	4	6	

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #22 Murray/Allen

Cycle (sec): 120 Critical Vol./Cap. (X): 1.274
Loss Time (sec): 16 (Y+R = 4 sec) Average Delay (sec/veh): 120.1
Optimal Cycle: 180 Level Of Service: F

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Split Phase				Split Phase			
Rights:	Ovl				Include				Include				Include			
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0	
Lanes:	1	0	2	0 1	2	0	2	0 1	1	0	1	0 1	1	0	2	0 1
Volume Module:																
Base Vol:	132	1237	295		491	1784	120		136	245	45		417	500	636	
Growth Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Initial Bse:	132	1237	295		491	1784	120		136	245	45		417	500	636	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	132	1237	295		491	1784	120		136	245	45		417	500	636	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	132	1237	295		491	1784	120		136	245	45		417	500	636	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Final Vol.:	132	1237	295		491	1784	120		136	245	45		417	500	636	
Saturation Flow Module:																
Sat/Lane:	1900	1900	1900		1900	1900	1900		1900	1900	1900		1900	1900	1900	
Adjustment:	0.92	0.92	0.83		0.91	0.94	0.84		0.93	0.98	0.83		0.94	0.94	0.84	
Lanes:	1.00	2.00	1.00		2.00	2.00	1.00		1.00	1.00	1.00		1.00	2.00	1.00	
Final Sat.:	1753	3505	1568		3467	3574	1599		1769	1862	1583		1787	3574	1599	
Capacity Analysis Module:																
Vol/Sat:	0.08	0.35	0.19		0.14	0.50	0.08		0.08	0.13	0.03		0.23	0.14	0.40	
Crit Moves:	****					****				****					****	
Green/Cycle:	0.06	0.32	0.63		0.13	0.39	0.39		0.10	0.10	0.10		0.31	0.31	0.31	
Volume/Cap:	1.27	1.10	0.30		1.10	1.27	0.19		0.74	1.27	0.28		0.75	0.45	1.27	
Uniform Del:	56.5	40.7	9.9		52.2	36.5	24.0		52.3	53.8	49.7		37.0	33.0	41.3	
IncremntDel:	178.8	57.2	0.2		71.2	129	0.1		15.2	157	0.9		5.5	0.3	138.1	
Delay Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Delay/Veh:	235.3	97.8	10.1		123.5	165	24.1		67.5	211	50.6		42.5	33.3	179.4	
User DelAdj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
AdjDel/Veh:	235.3	97.8	10.1		123.5	165	24.1		67.5	211	50.6		42.5	33.3	179.4	
DesignQueue:	8	61	8		30	83	5		8	15	3		20	24	32	

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #23 Murray/Brockman/Beard

Cycle (sec):	100	Critical Vol./Cap. (X):	1.194
Loss Time (sec):	16 (Y+R = 4 sec)	Average Delay (sec/veh):	98.7
Optimal Cycle:	180	Level Of Service:	F

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1 0	1	1 0	1 0	1	1 0	1 0	0	1 0	1 0	0	1 0
Volume Module:												
Base Vol:	130	1332	75	213	1758	198	100	172	72	168	437	128
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	130	1332	75	213	1758	198	100	172	72	168	437	128
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	130	1332	75	213	1758	198	100	172	72	168	437	128
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	130	1332	75	213	1758	198	100	172	72	168	437	128
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	130	1332	75	213	1758	198	100	172	72	168	437	128
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.93	0.92	0.92	0.93	0.92	0.92	0.92	0.93	0.93	0.94	0.96	0.96
Lanes:	1.00	1.89	0.11	1.00	1.80	0.20	1.00	0.70	0.30	1.00	0.77	0.23
Final Sat.:	1769	3322	187	1769	3132	353	1753	1243	520	1787	1405	412
Capacity Analysis Module:												
Vol/Sat:	0.07	0.40	0.40	0.12	0.56	0.56	0.06	0.14	0.14	0.09	0.31	0.31
Crit Moves:	****				****		****				****	
Green/Cycle:	0.06	0.41	0.41	0.12	0.47	0.47	0.05	0.18	0.18	0.12	0.26	0.26
Volume/Cap:	1.19	0.98	0.98	0.98	1.19	1.19	1.19	0.75	0.75	0.75	1.19	1.19
Uniform Del:	46.9	29.2	29.2	43.7	26.5	26.5	47.6	38.7	38.7	42.3	37.0	37.0
IncremntDel:	147.4	19.2	19.2	55.3	93.5	93.5	159.6	9.6	9.6	13.6	106	106.4
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	194.4	48.3	48.3	99.0	120	120.0	207.2	48.3	48.3	55.8	143	143.4
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	194.4	48.3	48.3	99.0	120	120.0	207.2	48.3	48.3	55.8	143	143.4
DesignQueue:	7	48	3	11	60	7	5	8	3	8	19	6

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #24 Nimbus/Scholls Ferry

Cycle (sec):	120	Critical Vol./Cap. (X):	1.071
Loss Time (sec):	16 (Y+R = 4 sec)	Average Delay (sec/veh):	65.4
Optimal Cycle:	180	Level Of Service:	E

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Protected			Protected		
Rights:	Ovl			Ovl			Ovl			Ovl		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1 0	1	0 1	2 0	0	1 1	1 0	2	0 1	1 0	2	0 1
Volume Module:												
Base Vol:	489	32	219	396	46	440	133	1548	140	15	1537	32
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	489	32	219	396	46	440	133	1548	140	15	1537	32
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	489	32	219	396	46	440	133	1548	140	15	1537	32
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	489	32	219	396	46	440	133	1548	140	15	1537	32
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	489	32	219	396	46	440	133	1548	140	15	1537	32
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.94	0.99	0.84	0.91	0.86	0.86	0.93	0.93	0.83	0.94	0.94	0.84
Lanes:	1.00	1.00	1.00	2.00	0.19	1.81	1.00	2.00	1.00	1.00	2.00	1.00
Final Sat.:	1787	1881	1599	3467	308	2943	1769	3538	1583	1787	3574	1592
Capacity Analysis Module:												
Vol/Sat:	0.27	0.02	0.14	0.11	0.15	0.15	0.08	0.44	0.09	0.01	0.43	0.02
Crit Moves:	****				****		****				****	
Green/Cycle:	0.26	0.26	0.26	0.14	0.14	0.21	0.07	0.46	0.72	0.01	0.40	0.54
Volume/Cap:	1.07	0.07	0.52	0.82	1.07	0.71	1.07	0.95	0.12	0.95	1.07	0.04
Uniform Del:	44.7	33.8	37.6	50.1	51.6	44.1	55.8	30.8	5.2	59.4	35.9	12.9
IncremntDel:	62.5	0.1	1.1	10.5	62.6	3.6	101.2	11.8	0.0	198.0	45.4	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	107.2	33.9	38.8	60.7	114	47.6	156.9	42.6	5.3	257.5	81.3	12.9
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	107.2	33.9	38.8	60.7	114	47.6	156.9	42.6	5.3	257.5	81.3	12.9
DesignQueue:	26	2	11	23	3	24	8	62	3	1	69	1

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #25 Hall/Scholls Ferry

Cycle (sec): 120 Critical Vol./Cap. (X): 0.746
Loss Time (sec): 16 (Y+R = 4 sec) Average Delay (sec/veh): 40.9
Optimal Cycle: 80 Level Of Service: D

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	2	0 2	0 1	2	0 2	0 1	2	0 2	0 1	2	0 2	0 1
Volume Module:												
Base Vol:	478	601	315	339	560	7	97	942	356	292	851	322
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	478	601	315	339	560	7	97	942	356	292	851	322
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	478	601	315	339	560	7	97	942	356	292	851	322
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	478	601	315	339	560	7	97	942	356	292	851	322
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	478	601	315	339	560	7	97	942	356	292	851	322
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.91	0.94	0.84	0.90	0.93	0.83	0.90	0.93	0.83	0.91	0.94	0.82
Lanes:	2.00	2.00	1.00	2.00	2.00	1.00	2.00	2.00	1.00	2.00	2.00	1.00
Final Sat.:	3467	3574	1599	3432	3538	1570	3432	3538	1583	3467	3574	1560
Capacity Analysis Module:												
Vol/Sat:	0.14	0.17	0.20	0.10	0.16	0.00	0.03	0.27	0.22	0.08	0.24	0.21
Crit Moves:	****				****			****			****	
Green/Cycle:	0.18	0.26	0.26	0.13	0.21	0.21	0.05	0.36	0.36	0.11	0.42	0.42
Volume/Cap:	0.75	0.64	0.75	0.75	0.75	0.02	0.57	0.75	0.63	0.75	0.57	0.49
Uniform Del:	46.3	39.0	40.4	50.1	44.2	37.4	55.7	33.8	32.0	51.6	26.5	25.4
IncremntDel:	4.8	1.4	7.1	6.6	4.1	0.0	4.4	2.5	2.3	7.7	0.5	0.6
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	51.0	40.5	47.5	56.7	48.4	37.4	60.2	36.3	34.3	59.2	27.0	26.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	51.0	40.5	47.5	56.7	48.4	37.4	60.2	36.3	34.3	59.2	27.0	26.0
DesignQueue:	27	31	16	20	31	0	6	43	16	18	35	13

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #26 Allen/Schools Ferry

Cycle (sec): 120 Critical Vol./Cap. (X): 0.950
Loss Time (sec): 16 (Y+R = 4 sec) Average Delay (sec/veh): 50.2
Optimal Cycle: 180 Level Of Service: D

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permit+Prot			Permit+Prot			Permit+Prot			Permit+Prot		
Rights:	Include			Ovl			Ovl			Ovl		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0 1	0 1	1	0 1	0 1	1	0 1	1 0	1	0 1	1 0
Volume Module:												
Base Vol:	165	658	128	46	628	165	286	703	428	182	401	34
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	165	658	128	46	628	165	286	703	428	182	401	34
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	165	658	128	46	628	165	286	703	428	182	401	34
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	165	658	128	46	628	165	286	703	428	182	401	34
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	165	658	128	46	628	165	286	703	428	182	401	34
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.34	0.98	0.82	0.25	0.98	0.82	0.68	0.89	0.88	0.50	0.92	0.92
Lanes:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.24	0.76	1.00	1.84	0.16
Final Sat.:	644	1862	1566	470	1862	1566	1293	2093	1274	954	3221	273
Capacity Analysis Module:												
Vol/Sat:	0.26	0.35	0.08	0.10	0.34	0.11	0.22	0.34	0.34	0.19	0.12	0.12
Crit Moves:	****				****			****			****	
Green/Cycle:	0.47	0.40	0.40	0.41	0.34	0.58	0.48	0.33	0.43	0.34	0.19	0.22
Volume/Cap:	0.54	0.88	0.20	0.24	1.00	0.18	0.46	1.00	0.79	0.57	0.65	0.57
Uniform Del:	45.6	33.4	23.5	49.1	39.8	11.7	28.9	39.9	29.6	45.5	44.9	41.7
IncremntDel:	2.0	12.2	0.2	0.6	36.7	0.1	0.5	27.6	2.9	2.3	2.3	1.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	47.6	45.6	23.7	49.8	76.6	11.8	29.4	67.5	32.5	47.8	47.2	42.7
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	47.6	45.6	23.7	49.8	76.6	11.8	29.4	67.5	32.5	47.8	47.2	42.7
DesignQueue:	10	29	5	3	30	5	14	34	18	11	22	2

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #27 Oleson/Vermont

Cycle (sec): 100 Critical Vol./Cap. (X): 0.778
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 25.4
Optimal Cycle: 72 Level Of Service: C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Prot+Permit			Prot+Permit			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1 0	0 1	0	1 0	0 1	0	1 0	0 1	0	1 0	0 1	0
Volume Module:												
Base Vol:	18	344	252	179	440	20	13	6	20	339	17	171
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	18	344	252	179	440	20	13	6	20	339	17	171
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	18	344	252	179	440	20	13	6	20	339	17	171
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	18	344	252	179	440	20	13	6	20	339	17	171
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	18	344	252	179	440	20	13	6	20	339	17	171
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.39	0.92	0.92	0.34	0.97	0.97	0.54	0.87	0.87	0.74	0.85	0.85
Lanes:	1.00	0.58	0.42	1.00	0.96	0.04	1.00	0.23	0.77	1.00	0.09	0.91
Final Sat.:	732	1006	737	646	1770	80	1017	380	1266	1403	146	1465
Capacity Analysis Module:												
Vol/Sat:	0.02	0.34	0.34	0.28	0.25	0.25	0.01	0.02	0.02	0.24	0.12	0.12
Crit Moves:		****		****						****		
Green/Cycle:	0.46	0.44	0.44	0.61	0.55	0.55	0.31	0.31	0.31	0.31	0.31	0.31
Volume/Cap:	0.05	0.78	0.78	0.45	0.45	0.45	0.04	0.05	0.05	0.78	0.38	0.38
Uniform Del:	15.3	23.9	23.9	13.4	13.7	13.7	24.1	24.1	24.1	31.3	26.9	26.9
IncremntDel:	0.1	5.1	5.1	0.8	0.3	0.3	0.1	0.0	0.0	8.7	0.5	0.5
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	15.4	29.0	29.0	14.3	14.0	14.0	24.1	24.2	24.2	40.0	27.4	27.4
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	15.4	29.0	29.0	14.3	14.0	14.0	24.1	24.2	24.2	40.0	27.4	27.4
DesignQueue:	1	12	9	9	12	1	0	0	1	14	1	7

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #28 Oleson/Garden Home

Cycle (sec): 100 Critical Vol./Cap. (X): 0.999
Loss Time (sec): 16 (Y+R = 4 sec) Average Delay (sec/veh): 49.7
Optimal Cycle: 177 Level Of Service: D

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Prot+Permit			Prot+Permit			Prot+Permit			Prot+Permit		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1 0	1 0	1	1 0	0 1	0	1 0	1 0	1	1 0	0 1	0
Volume Module:												
Base Vol:	219	398	198	147	488	146	138	479	325	200	343	120
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	219	398	198	147	488	146	138	479	325	200	343	120
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	219	398	198	147	488	146	138	479	325	200	343	120
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	219	398	198	147	488	146	138	479	325	200	343	120
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	219	398	198	147	488	146	138	479	325	200	343	120
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.34	0.99	0.81	0.43	0.96	0.95	0.35	0.99	0.82	0.35	0.94	0.94
Lanes:	1.00	1.00	1.00	1.00	0.77	0.23	1.00	1.00	1.00	1.00	0.74	0.26
Final Sat.:	639	1881	1542	826	1397	418	667	1881	1558	674	1324	463
Capacity Analysis Module:												
Vol/Sat:	0.34	0.21	0.13	0.18	0.35	0.35	0.21	0.25	0.21	0.30	0.26	0.26
Crit Moves:	****				****			****		****		
Green/Cycle:	0.46	0.34	0.34	0.51	0.35	0.35	0.34	0.25	0.25	0.41	0.28	0.28
Volume/Cap:	0.74	0.62	0.38	0.35	1.00	1.00	0.61	1.00	0.82	0.73	0.91	0.91
Uniform Del:	22.0	27.7	25.0	15.3	32.5	32.5	26.1	37.3	35.1	23.7	34.7	34.7
IncremntDel:	9.7	1.9	0.5	0.5	35.6	35.6	4.8	41.0	12.6	9.4	21.2	21.2
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	31.7	29.6	25.5	15.8	68.1	68.1	30.9	78.2	47.7	33.1	55.8	55.8
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	31.7	29.6	25.5	15.8	68.1	68.1	30.9	78.2	47.7	33.1	55.8	55.8
DesignQueue:	11	15	7	7	19	6	7	21	14	10	15	5

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #29 Cedar Hills/Barnes

Cycle (sec): 140 Critical Vol./Cap. (X): 1.224
Loss Time (sec): 16 (Y+R = 4 sec) Average Delay (sec/veh): 105.6
Optimal Cycle: 180 Level Of Service: F

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Ovl			Include			Ovl			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0 1	0 1	1	0 0	1 0	1	0 2	0 1	2	0 1	1 0
Volume Module:												
Base Vol:	726	551	765	272	321	13	28	807	552	884	778	381
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	726	551	765	272	321	13	28	807	552	884	778	381
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	726	551	765	272	321	13	28	807	552	884	778	381
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	726	551	765	272	321	13	28	807	552	884	778	381
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	726	551	765	272	321	13	28	807	552	884	778	381
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.93	0.98	0.83	0.91	0.96	0.96	0.91	0.91	0.82	0.90	0.89	0.89
Lanes:	1.00	1.00	1.00	1.00	0.96	0.04	1.00	2.00	1.00	2.00	1.34	0.66
Final Sat.:	1769	1862	1583	1736	1746	71	1736	3473	1554	3432	2258	1106
Capacity Analysis Module:												
Vol/Sat:	0.41	0.30	0.48	0.16	0.18	0.18	0.02	0.23	0.36	0.26	0.34	0.34
Crit Moves:	****				****			****		****		
Green/Cycle:	0.34	0.32	0.53	0.17	0.15	0.15	0.02	0.19	0.53	0.21	0.38	0.38
Volume/Cap:	1.22	0.93	0.92	0.93	1.22	1.22	0.90	1.22	0.68	1.22	0.90	0.90
Uniform Del:	46.5	46.3	30.2	57.5	59.5	59.5	68.6	56.7	24.5	55.3	40.7	40.7
IncremntDel:	115.4	21.8	14.6	35.2	129	129.0	120.0	114	2.3	113.0	8.9	8.9
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	161.9	68.1	44.8	92.6	189	188.5	188.7	171	26.8	168.3	49.7	49.7
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	161.9	68.1	44.8	92.6	189	188.5	188.7	171	26.8	168.3	49.7	49.7
DesignQueue:	42	32	31	18	22	1	2	54	22	58	41	20

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #30 Cedar Hills/US 26 west ramps

Cycle (sec): 60 Critical Vol./Cap. (X): 0.967
Loss Time (sec): 8 (Y+R = 4 sec) Average Delay (sec/veh): 29.9
Optimal Cycle: 106 Level Of Service: C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Split Phase			Split Phase		
Rights:	Include			Ignore			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	0 2	0 0	0	0 2	0 2	0	0 0	0 0	2	0 0	1
Volume Module:												
Base Vol:	0	1440	0	0	1495	0	0	0	0	281	0	657
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	1440	0	0	1495	0	0	0	0	281	0	657
User Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	1440	0	0	1495	0	0	0	0	281	0	657
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	1440	0	0	1495	0	0	0	0	281	0	657
PCE Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	0	1440	0	0	1495	0	0	0	0	281	0	657
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	0.94	1.00	1.00	0.93	0.88	1.00	1.00	1.00	0.90	1.00	0.83
Lanes:	0.00	2.00	0.00	0.00	2.00	2.00	0.00	0.00	0.00	2.00	0.00	1.00
Final Sat.:	0	3574	0	0	3538	3344	0	0	0	3432	0	1583
Capacity Analysis Module:												
Vol/Sat:	0.00	0.40	0.00	0.00	0.42	0.00	0.00	0.00	0.00	0.08	0.00	0.42
Crit Moves:					****							****
Green/Cycle:	0.00	0.44	0.00	0.00	0.44	0.00	0.00	0.00	0.00	0.43	0.00	0.43
Volume/Cap:	0.00	0.92	0.00	0.00	0.97	0.00	0.00	0.00	0.00	0.19	0.00	0.97
Uniform Del:	0.0	15.9	0.0	0.0	16.5	0.0	0.0	0.0	0.0	10.6	0.0	16.7
IncremntDel:	0.0	9.4	0.0	0.0	15.6	0.0	0.0	0.0	0.0	0.1	0.0	26.3
Delay Adj:	0.00	1.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	1.00	0.00	1.00
Delay/Veh:	0.0	25.3	0.0	0.0	32.1	0.0	0.0	0.0	0.0	10.7	0.0	43.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	25.3	0.0	0.0	32.1	0.0	0.0	0.0	0.0	10.7	0.0	43.0
DesignQueue:	0	30	0	0	31	0	0	0	0	5	0	14

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #31 Cedar Hills/US 26 east ramps

Cycle (sec): 100 Critical Vol./Cap. (X): 0.903
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 29.5
Optimal Cycle: 111 Level Of Service: C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	0 2	0 1	1	0 2	0 0	0	0 1!	0 0	0	0 0	0 0
Volume Module:												
Base Vol:	0	1429	380	288	1406	0	228	0	102	0	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	1429	380	288	1406	0	228	0	102	0	0	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	1429	380	288	1406	0	228	0	102	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	1429	380	288	1406	0	228	0	102	0	0	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	0	1429	380	288	1406	0	228	0	102	0	0	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	0.94	0.84	0.94	0.94	1.00	0.74	1.00	0.74	1.00	1.00	1.00
Lanes:	0.00	2.00	1.00	1.00	2.00	0.00	0.69	0.00	0.31	0.00	0.00	0.00
Final Sat.:	0	3574	1599	1787	3574	0	975	0	436	0	0	0
Capacity Analysis Module:												
Vol/Sat:	0.00	0.40	0.24	0.16	0.39	0.00	0.23	0.00	0.23	0.00	0.00	0.00
Crit Moves:		****		****			****					
Green/Cycle:	0.00	0.44	0.44	0.18	0.62	0.00	0.26	0.00	0.26	0.00	0.00	0.00
Volume/Cap:	0.00	0.90	0.54	0.90	0.63	0.00	0.90	0.00	0.90	0.00	0.00	0.00
Uniform Del:	0.0	25.9	20.4	40.2	11.8	0.0	35.8	0.0	35.8	0.0	0.0	0.0
IncremntDel:	0.0	7.6	0.8	27.4	0.6	0.0	24.8	0.0	24.8	0.0	0.0	0.0
Delay Adj:	0.00	1.00	1.00	1.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00	0.00
Delay/Veh:	0.0	33.5	21.2	67.6	12.4	0.0	60.6	0.0	60.6	0.0	0.0	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	33.5	21.2	67.6	12.4	0.0	60.6	0.0	60.6	0.0	0.0	0.0
DesignQueue:	0	49	12	14	33	0	10	0	4	0	0	0

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #32 Cedar Hills/Butner

Cycle (sec): 100 Critical Vol./Cap. (X): 0.952
Loss Time (sec): 16 (Y+R = 4 sec) Average Delay (sec/veh): 40.2
Optimal Cycle: 142 Level Of Service: D

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0 2	0 1	1	0 1	1 0	0	0 1!	0 0	0	0 1!	0 0
Volume Module:												
Base Vol:	54	1428	36	37	1287	198	202	160	54	24	81	154
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	54	1428	36	37	1287	198	202	160	54	24	81	154
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	54	1428	36	37	1287	198	202	160	54	24	81	154
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	54	1428	36	37	1287	198	202	160	54	24	81	154
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	54	1428	36	37	1287	198	202	160	54	24	81	154
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.94	0.94	0.84	0.94	0.92	0.92	0.63	0.63	0.63	0.85	0.85	0.85
Lanes:	1.00	2.00	1.00	1.00	1.73	0.27	0.49	0.38	0.13	0.09	0.31	0.60
Final Sat.:	1787	3574	1599	1787	3035	467	585	463	156	150	505	961
Capacity Analysis Module:												
Vol/Sat:	0.03	0.40	0.02	0.02	0.42	0.42	0.35	0.35	0.35	0.16	0.16	0.16
Crit Moves:	****				****			****				
Green/Cycle:	0.03	0.45	0.45	0.02	0.45	0.45	0.36	0.36	0.36	0.36	0.36	0.36
Volume/Cap:	0.95	0.88	0.05	0.88	0.95	0.95	0.95	0.95	0.95	0.44	0.44	0.44
Uniform Del:	48.3	24.9	15.3	48.7	26.7	26.7	31.0	31.0	31.0	24.2	24.2	24.2
IncremntDel:	101.7	6.0	0.0	93.4	13.1	13.1	30.9	30.9	30.9	0.5	0.5	0.5
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	150.0	30.8	15.3	142.1	39.8	39.8	61.9	61.9	61.9	24.7	24.7	24.7
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	150.0	30.8	15.3	142.1	39.8	39.8	61.9	61.9	61.9	24.7	24.7	24.7
DesignQueue:	3	48	1	2	44	7	8	6	2	1	3	6

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #33 Cedar Hills/Walker

Cycle (sec): 100 Critical Vol./Cap. (X): 1.337
Loss Time (sec): 16 (Y+R = 4 sec) Average Delay (sec/veh): 134.9
Optimal Cycle: 180 Level Of Service: F

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	2	0 2	0 1	1	0 1	1 0	2	0 1	0 1	2	0 1	1 0
Volume Module:												
Base Vol:	326	1322	440	149	1021	89	208	1115	328	267	925	136
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	326	1322	440	149	1021	89	208	1115	328	267	925	136
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	326	1322	440	149	1021	89	208	1115	328	267	925	136
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	326	1322	440	149	1021	89	208	1115	328	267	925	136
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	326	1322	440	149	1021	89	208	1115	328	267	925	136
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.91	0.94	0.84	0.94	0.93	0.93	0.91	0.99	0.84	0.91	0.92	0.92
Lanes:	2.00	2.00	1.00	1.00	1.84	0.16	2.00	1.00	1.00	2.00	1.74	0.26
Final Sat.:	3467	3574	1599	1787	3248	283	3467	1881	1599	3467	3050	449
Capacity Analysis Module:												
Vol/Sat:	0.09	0.37	0.28	0.08	0.31	0.31	0.06	0.59	0.21	0.08	0.30	0.30
Crit Moves:		****		****				****		****		
Green/Cycle:	0.08	0.28	0.28	0.06	0.26	0.26	0.08	0.44	0.44	0.06	0.42	0.42
Volume/Cap:	1.20	1.34	0.99	1.34	1.20	1.20	0.73	1.34	0.46	1.34	0.73	0.73
Uniform Del:	46.1	36.2	36.1	46.9	37.0	37.0	44.8	27.8	19.5	47.1	24.3	24.3
IncremntDel:	121.7	159	41.3	200.2	102	102.4	8.9	160	0.5	181.5	1.8	1.8
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	167.8	195	77.4	247.1	139	139.4	53.6	188	20.0	228.6	26.1	26.1
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	167.8	195	77.4	247.1	139	139.4	53.6	188	20.0	228.6	26.1	26.1
DesignQueue:	17	58	19	8	45	4	11	41	11	14	32	5

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #34 Cedar Hills/Jenkins

Cycle (sec): 120 Critical Vol./Cap. (X): 0.916
Loss Time (sec): 16 (Y+R = 4 sec) Average Delay (sec/veh): 41.8
Optimal Cycle: 138 Level Of Service: D

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Split Phase			Split Phase		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0 1	1 0	1	0 2	0 1	2	0 0	1 1	0	0 1!	0 0
Volume Module:												
Base Vol:	327	1042	16	6	1204	292	894	7	503	10	11	7
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	327	1042	16	6	1204	292	894	7	503	10	11	7
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	327	1042	16	6	1204	292	894	7	503	10	11	7
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	327	1042	16	6	1204	292	894	7	503	10	11	7
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	327	1042	16	6	1204	292	894	7	503	10	11	7
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.94	0.93	0.93	0.94	0.94	0.84	0.91	0.84	0.84	0.93	0.93	0.93
Lanes:	1.00	1.97	0.03	1.00	2.00	1.00	2.00	0.03	1.97	0.36	0.39	0.25
Final Sat.:	1787	3478	53	1787	3574	1599	3467	44	3161	631	694	442
Capacity Analysis Module:												
Vol/Sat:	0.18	0.30	0.30	0.00	0.34	0.18	0.26	0.16	0.16	0.02	0.02	0.02
Crit Moves:	****				****		****				****	
Green/Cycle:	0.20	0.56	0.56	0.01	0.37	0.37	0.28	0.28	0.28	0.02	0.02	0.02
Volume/Cap:	0.92	0.53	0.53	0.53	0.92	0.50	0.92	0.56	0.56	0.92	0.92	0.92
Uniform Del:	47.0	16.5	16.5	59.4	36.2	29.3	41.7	36.8	36.8	58.9	58.9	58.9
IncremntDel:	27.5	0.3	0.3	41.8	10.2	0.7	12.9	0.8	0.8	127.1	127	127.1
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	74.5	16.8	16.8	101.3	46.3	30.0	54.6	37.7	37.7	186.0	186	186.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	74.5	16.8	16.8	101.3	46.3	30.0	54.6	37.7	37.7	186.0	186	186.0
DesignQueue:	18	33	1	0	55	13	46	0	25	1	1	0

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #35 Cedar Hills/Hall

Cycle (sec): 100 Critical Vol./Cap. (X): 0.895
Loss Time (sec): 16 (Y+R = 4 sec) Average Delay (sec/veh): 35.5
Optimal Cycle: 114 Level Of Service: D

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Protected				Protected			
Rights:	Include				Include				Include				Ovl			
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0	
Lanes:	1	0	2	0 1	1	0	1	1 0	1	0	1	1 0	1	0	1	0 1
Volume Module:																
Base Vol:	101	675		73	784	1055		49	88		90	110	81		137	748
Growth Adj:	1.00	1.00		1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00		1.00	1.00
Initial Bse:	101	675		73	784	1055		49	88		90	110	81		137	748
User Adj:	1.00	1.00		1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00		1.00	1.00
PHF Adj:	1.00	1.00		1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00		1.00	1.00
PHF Volume:	101	675		73	784	1055		49	88		90	110	81		137	748
Reduct Vol:	0	0		0	0	0		0	0		0	0	0		0	0
Reduced Vol:	101	675		73	784	1055		49	88		90	110	81		137	748
PCE Adj:	1.00	1.00		1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00		1.00	1.00
MLF Adj:	1.00	1.00		1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00		1.00	1.00
Final Vol.:	101	675		73	784	1055		49	88		90	110	81		137	748
Saturation Flow Module:																
Sat/Lane:	1900	1900		1900	1900	1900		1900	1900		1900	1900	1900		1900	1900
Adjustment:	0.93	0.93		0.83	0.94	0.93		0.93	0.94		0.94	0.80	0.94		0.99	0.83
Lanes:	1.00	2.00		1.00	1.00	1.91		0.09	1.00		1.00	1.00	1.00		1.00	1.00
Final Sat.:	1769	3538		1570	1787	3371		157	1787		1787	1519	1787		1881	1580
Capacity Analysis Module:																
Vol/Sat:	0.06	0.19		0.05	0.44	0.31		0.31	0.05		0.05	0.07	0.05		0.07	0.47
Crit Moves:		****			****				****						****	
Green/Cycle:	0.11	0.21		0.21	0.49	0.60		0.60	0.06		0.08	0.08	0.05		0.08	0.57
Volume/Cap:	0.53	0.89		0.22	0.89	0.53		0.53	0.89		0.60	0.86	0.86		0.89	0.83
Uniform Del:	42.1	38.2		32.5	23.1	11.9		11.9	47.0		44.2	45.2	47.0		45.5	17.4
IncremntDel:	2.7	13.2		0.3	11.7	0.2		0.2	58.1		3.0	26.7	51.4		43.4	6.4
Delay Adj:	1.00	1.00		1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00		1.00	1.00
Delay/Veh:	44.8	51.4		32.8	34.8	12.2		12.2	105.1		47.2	71.9	98.5		88.9	23.9
User DelAdj:	1.00	1.00		1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00		1.00	1.00
AdjDel/Veh:	44.8	51.4		32.8	34.8	12.2		12.2	105.1		47.2	71.9	98.5		88.9	23.9
DesignQueue:	5	31		3	25	26		1	5		5	6	4		7	20

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #36 Cedar Hills/Canyon

Cycle (sec): 100 Critical Vol./Cap. (X): 0.947
Loss Time (sec): 16 (Y+R = 4 sec) Average Delay (sec/veh): 37.9
Optimal Cycle: 139 Level Of Service: D

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Protected				Protected			
Rights:	Include				Include				Include				Ovl			
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0	
Lanes:	2	0	1	1 0	1	0	2	0 1	1	0	2	0 1	1	0	2	1 0
Volume Module:																
Base Vol:	205	636		225	246	766		218	0	1436		113	0	1392		89
Growth Adj:	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00
Initial Bse:	205	636		225	246	766		218	0	1436		113	0	1392		89
User Adj:	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00
PHF Adj:	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00
PHF Volume:	205	636		225	246	766		218	0	1436		113	0	1392		89
Reduct Vol:	0	0		0	0	0		0	0	0		0	0	0		0
Reduced Vol:	205	636		225	246	766		218	0	1436		113	0	1392		89
PCE Adj:	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00
MLF Adj:	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00
Final Vol.:	205	636		225	246	766		218	0	1436		113	0	1392		89
Saturation Flow Module:																
Sat/Lane:	1900	1900		1900	1900	1900		1900	1900	1900		1900	1900	1900		1900
Adjustment:	0.91	0.90		0.90	0.93	0.93		0.83	1.00	0.93		0.83	1.00	0.88		0.88
Lanes:	2.00	1.48		0.52	1.00	2.00		1.00	1.00	2.00		1.00	1.00	2.82		0.18
Final Sat.:	3467	2537		898	1769	3538		1583	1900	3538		1583	1900	4691		300
Capacity Analysis Module:																
Vol/Sat:	0.06	0.25		0.25	0.14	0.22		0.14	0.00	0.41		0.07	0.00	0.30		0.30
Crit Moves:		****			****					****			****			
Green/Cycle:	0.09	0.26		0.26	0.15	0.32		0.32	0.00	0.43		0.43	0.00	0.43		0.58
Volume/Cap:	0.67	0.95		0.95	0.95	0.67		0.43	0.00	0.95		0.17	0.00	0.69		0.52
Uniform Del:	44.2	36.1		36.1	42.3	29.2		26.6	0.0	27.5		17.6	0.0	23.2		12.8
IncremntDel:	5.7	18.4		18.4	41.5	1.6		0.6	0.0	12.7		0.1	0.0	1.0		0.2
Delay Adj:	1.00	1.00		1.00	1.00	1.00		1.00	0.00	1.00		1.00	0.00	1.00		1.00
Delay/Veh:	49.8	54.4		54.4	83.7	30.8		27.1	0.0	40.2		17.7	0.0	24.2		13.0
User DelAdj:	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00
AdjDel/Veh:	49.8	54.4		54.4	83.7	30.8		27.1	0.0	40.2		17.7	0.0	24.2		13.0
DesignQueue:	11	28		10	12	30		8	0	51		4	0	47		2

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #37 Cedar Hills/Farmington

Cycle (sec): 100 Critical Vol./Cap. (X): 1.077
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 53.2
Optimal Cycle: 180 Level Of Service: D

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Protected			Protected		
Rights:	Include			Include			Include			Ovl		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	0	0	2	0	1	1	2	0	0	2	1
Volume Module:												
Base Vol:	0	0	0	766	0	460	513	1410	0	0	1324	454
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	766	0	460	513	1410	0	0	1324	454
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	766	0	460	513	1410	0	0	1324	454
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	766	0	460	513	1410	0	0	1324	454
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	0	0	0	766	0	460	513	1410	0	0	1324	454
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	0.91	1.00	0.84	0.93	0.93	1.00	1.00	0.94	0.82
Lanes:	0.00	0.00	0.00	2.00	0.00	1.00	1.00	2.00	0.00	0.00	2.00	1.00
Final Sat.:	0	0	0	3467	0	1599	1769	3538	0	0	3574	1560
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.22	0.00	0.29	0.29	0.40	0.00	0.00	0.37	0.29
Crit Moves:						****	****				****	
Green/Cycle:	0.00	0.00	0.00	0.27	0.00	0.27	0.27	0.61	0.00	0.00	0.34	0.61
Volume/Cap:	0.00	0.00	0.00	0.83	0.00	1.08	1.08	0.65	0.00	0.00	1.08	0.48
Uniform Del:	0.0	0.0	0.0	34.5	0.0	36.6	36.5	12.5	0.0	0.0	32.8	10.7
IncremntDel:	0.0	0.0	0.0	6.3	0.0	65.9	63.7	0.7	0.0	0.0	49.3	0.4
Delay Adj:	0.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00
Delay/Veh:	0.0	0.0	0.0	40.7	0.0	102.5	100.2	13.2	0.0	0.0	82.1	11.1
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	40.7	0.0	102.5	100.2	13.2	0.0	0.0	82.1	11.1
DesignQueue:	0	0	0	33	0	20	22	34	0	0	53	10

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #38 Hall/Center

Cycle (sec): 100 Critical Vol./Cap. (X): 0.682
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 25.7
Optimal Cycle: 57 Level Of Service: C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Prot+Permit			Prot+Permit			Prot+Permit			Prot+Permit		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0	1	1	0	1	0	1	1	0	1	0
Volume Module:												
Base Vol:	56	679	103	338	528	24	37	43	66	85	54	219
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	56	679	103	338	528	24	37	43	66	85	54	219
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	56	679	103	338	528	24	37	43	66	85	54	219
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	56	679	103	338	528	24	37	43	66	85	54	219
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	56	679	103	338	528	24	37	43	66	85	54	219
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.49	0.93	0.92	0.50	0.93	0.93	0.37	0.91	0.90	0.65	0.86	0.85
Lanes:	1.00	1.74	0.26	1.00	1.91	0.09	1.00	0.39	0.61	1.00	0.20	0.80
Final Sat.:	933	3064	465	941	3398	154	697	678	1041	1234	320	1299
Capacity Analysis Module:												
Vol/Sat:	0.06	0.22	0.22	0.36	0.16	0.16	0.05	0.06	0.06	0.07	0.17	0.17
Crit Moves:		****		****			****				****	
Green/Cycle:	0.43	0.33	0.33	0.63	0.50	0.50	0.19	0.16	0.16	0.31	0.25	0.25
Volume/Cap:	0.14	0.68	0.68	0.57	0.31	0.31	0.28	0.40	0.40	0.22	0.68	0.68
Uniform Del:	17.5	29.3	29.3	15.2	14.7	14.7	34.4	37.9	37.9	25.5	34.1	34.1
IncremntDel:	0.2	1.7	1.7	1.3	0.1	0.1	1.2	1.0	1.0	0.3	4.8	4.8
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	17.6	31.0	31.0	16.5	14.8	14.8	35.6	38.9	38.9	25.8	38.8	38.8
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	17.6	31.0	31.0	16.5	14.8	14.8	35.6	38.9	38.9	25.8	38.8	38.8
DesignQueue:	3	27	4	14	15	1	2	2	3	4	2	10

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #39 Hall/Allen

Cycle (sec):	100	Critical Vol./Cap. (X):	0.971
Loss Time (sec):	16 (Y+R = 4 sec)	Average Delay (sec/veh):	48.6
Optimal Cycle:	154	Level Of Service:	D

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	2	0 1	1 0	2	0 1	1 0	1	0 2	0 1	1	0 2	0 1
Volume Module:												
Base Vol:	417	598	62	174	991	71	106	722	331	153	1198	98
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	417	598	62	174	991	71	106	722	331	153	1198	98
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	417	598	62	174	991	71	106	722	331	153	1198	98
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	417	598	62	174	991	71	106	722	331	153	1198	98
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	417	598	62	174	991	71	106	722	331	153	1198	98
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.91	0.93	0.93	0.91	0.93	0.93	0.93	0.93	0.83	0.94	0.94	0.84
Lanes:	2.00	1.81	0.19	2.00	1.87	0.13	1.00	2.00	1.00	1.00	2.00	1.00
Final Sat.:	3467	3186	330	3467	3302	237	1769	3538	1576	1787	3574	1592
Capacity Analysis Module:												
Vol/Sat:	0.12	0.19	0.19	0.05	0.30	0.30	0.06	0.20	0.21	0.09	0.34	0.06
Crit Moves:	****				****		****				****	
Green/Cycle:	0.12	0.34	0.34	0.09	0.31	0.31	0.06	0.29	0.29	0.12	0.35	0.35
Volume/Cap:	0.97	0.55	0.55	0.55	0.97	0.97	0.97	0.71	0.73	0.73	0.97	0.18
Uniform Del:	43.6	26.7	26.7	43.5	34.1	34.1	46.8	31.7	32.0	42.6	32.2	22.8
IncremntDel:	35.8	0.5	0.5	2.0	20.4	20.4	76.6	2.3	5.8	11.9	19.0	0.2
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	79.4	27.2	27.2	45.5	54.5	54.5	123.4	34.0	37.8	54.5	51.2	23.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	79.4	27.2	27.2	45.5	54.5	54.5	123.4	34.0	37.8	54.5	51.2	23.0
DesignQueue:	21	23	2	9	41	3	6	30	14	8	48	4

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #40 Hall/Denney

Cycle (sec):	100	Critical Vol./Cap. (X):	1.019
Loss Time (sec):	12 (Y+R = 4 sec)	Average Delay (sec/veh):	57.9
Optimal Cycle:	180	Level Of Service:	E

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permit+Prot			Permit+Prot			Split Phase			Split Phase		
Rights:	Ignore			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	0 2	0 1	1	0 2	0 0	0	0 0	0 0	1	0 0	0 1
Volume Module:												
Base Vol:	0	1110	497	226	1238	0	0	0	0	895	0	237
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	1110	497	226	1238	0	0	0	0	895	0	237
User Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	1110	0	226	1238	0	0	0	0	895	0	237
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	1110	0	226	1238	0	0	0	0	895	0	237
PCE Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	0	1110	0	226	1238	0	0	0	0	895	0	237
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	0.93	1.00	0.42	0.94	1.00	1.00	1.00	1.00	0.94	1.00	0.84
Lanes:	0.00	2.00	1.00	1.00	2.00	0.00	0.00	0.00	0.00	1.00	0.00	1.00
Final Sat.:	0	3538	1900	793	3574	0	0	0	0	1787	0	1599
Capacity Analysis Module:												
Vol/Sat:	0.00	0.31	0.00	0.29	0.35	0.00	0.00	0.00	0.00	0.50	0.00	0.15
Crit Moves:		****		****						****		
Green/Cycle:	0.00	0.29	0.00	0.45	0.41	0.00	0.00	0.00	0.00	0.47	0.00	0.47
Volume/Cap:	0.00	1.07	0.00	0.63	0.84	0.00	0.00	0.00	0.00	1.07	0.00	0.32
Uniform Del:	0.0	35.3	0.0	37.3	26.5	0.0	0.0	0.0	0.0	26.6	0.0	16.6
IncremntDel:	0.0	48.5	0.0	3.6	4.6	0.0	0.0	0.0	0.0	51.4	0.0	0.2
Delay Adj:	0.00	1.00	0.00	1.00	1.00	0.00	0.00	0.00	0.00	1.00	0.00	1.00
Delay/Veh:	0.0	83.8	0.0	40.9	31.0	0.0	0.0	0.0	0.0	78.0	0.0	16.8
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	83.8	0.0	40.9	31.0	0.0	0.0	0.0	0.0	78.0	0.0	16.8
DesignQueue:	0	47	0	11	44	0	0	0	0	30	0	7

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #41 Hall/Greenway

Cycle (sec): 120 Critical Vol./Cap. (X): 1.010
Loss Time (sec): 16 (Y+R = 4 sec) Average Delay (sec/veh): 49.9
Optimal Cycle: 180 Level Of Service: D

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Permit+Prot			Permit+Prot		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0 1	0	0 1	0 0	1! 0	0	1 0	1	1 0	1 0	1	1 0
Volume Module:												
Base Vol:	151	17	258	26	27	4	7	883	309	641	1297	26
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	151	17	258	26	27	4	7	883	309	641	1297	26
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	151	17	258	26	27	4	7	883	309	641	1297	26
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	151	17	258	26	27	4	7	883	309	641	1297	26
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	151	17	258	26	27	4	7	883	309	641	1297	26
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.94	0.94	0.83	0.97	0.97	0.97	0.22	0.90	0.89	0.55	0.94	0.94
Lanes:	0.90	0.10	1.00	0.46	0.47	0.07	1.00	1.48	0.52	1.00	1.96	0.04
Final Sat.:	1602	180	1583	840	872	129	411	2534	887	1048	3493	70
Capacity Analysis Module:												
Vol/Sat:	0.09	0.09	0.16	0.03	0.03	0.03	0.02	0.35	0.35	0.61	0.37	0.37
Crit Moves:			****		****			****		****		
Green/Cycle:	0.16	0.16	0.16	0.03	0.03	0.03	0.39	0.34	0.34	0.72	0.67	0.67
Volume/Cap:	0.60	0.60	1.04	1.04	1.04	1.04	0.04	1.04	1.04	0.84	0.55	0.55
Uniform Del:	47.1	47.1	50.6	58.2	58.2	58.2	37.1	39.9	39.9	31.1	10.2	10.2
IncremntDel:	3.6	3.6	67.9	133.2	133	133.2	0.1	37.5	37.5	8.6	0.3	0.3
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	50.7	50.7	118.5	191.5	191	191.5	37.2	77.4	77.4	39.7	10.5	10.5
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	50.7	50.7	118.5	191.5	191	191.5	37.2	77.4	77.4	39.7	10.5	10.5
DesignQueue:	9	1	15	2	2	0	0	43	15	29	31	1

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #42 Hall/Nimbus

Cycle (sec): 100 Critical Vol./Cap. (X): 0.952
Loss Time (sec): 16 (Y+R = 4 sec) Average Delay (sec/veh): 43.9
Optimal Cycle: 142 Level Of Service: D

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Prot+Permit			Prot+Permit			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1 0	0	1 0	1 0	0	1 0	1	0	1 0	1 0	2	0 1
Volume Module:												
Base Vol:	156	36	356	173	49	88	18	1078	84	220	1512	59
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	156	36	356	173	49	88	18	1078	84	220	1512	59
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	156	36	356	173	49	88	18	1078	84	220	1512	59
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	156	36	356	173	49	88	18	1078	84	220	1512	59
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	156	36	356	173	49	88	18	1078	84	220	1512	59
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.67	0.86	0.85	0.49	0.88	0.86	0.93	0.91	0.91	0.94	0.94	0.84
Lanes:	1.00	0.09	0.91	1.00	0.35	0.65	1.00	1.86	0.14	1.00	2.00	1.00
Final Sat.:	1274	149	1470	922	590	1059	1769	3213	250	1787	3574	1599
Capacity Analysis Module:												
Vol/Sat:	0.12	0.24	0.24	0.19	0.08	0.08	0.01	0.34	0.34	0.12	0.42	0.04
Crit Moves:		****		****				****		****		
Green/Cycle:	0.40	0.25	0.25	0.28	0.17	0.17	0.01	0.35	0.35	0.13	0.47	0.47
Volume/Cap:	0.31	0.95	0.95	0.68	0.48	0.48	0.90	0.95	0.95	0.95	0.90	0.08
Uniform Del:	20.2	36.7	36.7	30.4	37.2	37.2	49.4	31.5	31.5	43.2	24.3	14.6
IncremntDel:	0.3	32.1	32.1	7.0	1.3	1.3	153.5	15.6	15.6	45.7	6.9	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	20.5	68.8	68.8	37.5	38.5	38.5	202.8	47.2	47.2	88.9	31.2	14.6
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	20.5	68.8	68.8	37.5	38.5	38.5	202.8	47.2	47.2	88.9	31.2	14.6
DesignQueue:	7	2	16	9	2	4	1	42	3	11	50	2

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #43 125th/Greenway

Cycle (sec): 100 Critical Vol./Cap. (X): 0.771
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 36.5
Optimal Cycle: 71 Level Of Service: D

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Protected				Protected			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0	
Lanes:	1	0	0	1 0	1	0	1	0 1	1	0	0	1 0	1	0	0	1 0
Volume Module:																
Base Vol:	196	255		82	27	313		192	52	241		236	217	542		26
Growth Adj:	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00
Initial Bse:	196	255		82	27	313		192	52	241		236	217	542		26
User Adj:	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00
PHF Adj:	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00
PHF Volume:	196	255		82	27	313		192	52	241		236	217	542		26
Reduct Vol:	0	0		0	0	0		0	0	0		0	0	0		0
Reduced Vol:	196	255		82	27	313		192	52	241		236	217	542		26
PCE Adj:	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00
MLF Adj:	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00
Final Vol.:	196	255		82	27	313		192	52	241		236	217	542		26
Saturation Flow Module:																
Sat/Lane:	1900	1900		1900	1900	1900		1900	1900	1900		1900	1900	1900		1900
Adjustment:	0.93	0.94		0.94	0.93	0.98		0.83	0.93	0.91		0.91	0.93	0.97		0.97
Lanes:	1.00	0.76		0.24	1.00	1.00		1.00	1.00	0.51		0.49	1.00	0.95		0.05
Final Sat.:	1769	1358		437	1769	1862		1583	1769	871		853	1769	1764		85
Capacity Analysis Module:																
Vol/Sat:	0.11	0.19		0.19	0.02	0.17		0.12	0.03	0.28		0.28	0.12	0.31		0.31
Crit Moves:	****					****				****			****			
Green/Cycle:	0.14	0.33		0.33	0.03	0.22		0.22	0.05	0.36		0.36	0.16	0.47		0.47
Volume/Cap:	0.77	0.56		0.56	0.56	0.77		0.56	0.65	0.77		0.77	0.77	0.65		0.65
Uniform Del:	41.2	27.2		27.2	48.0	36.7		34.8	47.0	28.4		28.4	40.3	20.1		20.1
IncremntDel:	13.4	1.2		1.2	14.2	8.8		2.0	17.3	5.9		5.9	12.3	1.7		1.7
Delay Adj:	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00
Delay/Veh:	54.7	28.5		28.5	62.2	45.5		36.8	64.2	34.3		34.3	52.6	21.8		21.8
User DelAdj:	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00
AdjDel/Veh:	54.7	28.5		28.5	62.2	45.5		36.8	64.2	34.3		34.3	52.6	21.8		21.8
DesignQueue:	10	10		3	1	14		9	3	9		9	10	17		1

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #44 Western/Beaverton Hillsdale

Cycle (sec): 120 Critical Vol./Cap. (X): 0.723
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 29.4
Optimal Cycle: 65 Level Of Service: C

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Split Phase				Split Phase				Protected				Protected			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0	
Lanes:	1	0	1!	0 1	0	0	0	0 0	0	0	2	0 1	2	0	2	0 0
Volume Module:																
Base Vol:	394		0	495	0		0	0	0	1159		496	452	1004		0
Growth Adj:	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00
Initial Bse:	394		0	495	0		0	0	0	1159		496	452	1004		0
User Adj:	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00
PHF Adj:	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00
PHF Volume:	394		0	495	0		0	0	0	1159		496	452	1004		0
Reduct Vol:	0		0	0	0		0	0	0	0		0	0	0		0
Reduced Vol:	394		0	495	0		0	0	0	1159		496	452	1004		0
PCE Adj:	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00
MLF Adj:	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00
Final Vol.:	394		0	495	0		0	0	0	1159		496	452	1004		0
Saturation Flow Module:																
Sat/Lane:	1900	1900		1900	1900	1900		1900	1900	1900		1900	1900	1900		1900
Adjustment:	0.89	1.00		0.89	1.00	1.00		1.00	1.00	0.92		0.83	0.90	0.93		1.00
Lanes:	1.44	0.00		1.56	0.00	0.00		0.00	0.00	2.00		1.00	2.00	2.00		0.00
Final Sat.:	2432		0	2623	0		0	0	0	3505		1568	3432	3531		0
Capacity Analysis Module:																
Vol/Sat:	0.16	0.00		0.19	0.00	0.00		0.00	0.00	0.33		0.32	0.13	0.28		0.00
Crit Moves:				****							****			****		
Green/Cycle:	0.26	0.00		0.26	0.00	0.00		0.00	0.00	0.46		0.46	0.18	0.64		0.00
Volume/Cap:	0.62	0.00		0.72	0.00	0.00		0.00	0.00	0.72		0.69	0.72	0.44		0.00
Uniform Del:	39.1	0.0		40.4	0.0	0.0		0.0	0.0	26.4		25.9	46.2	10.9		0.0
IncremntDel:	0.8	0.0		2.2	0.0	0.0		0.0	0.0	1.7		2.9	4.2	0.1		0.0
Delay Adj:	1.00	0.00		1.00	0.00	0.00		0.00	0.00	1.00		1.00	1.00	1.00		0.00
Delay/Veh:	40.0	0.0		42.6	0.0	0.0		0.0	0.0	28.1		28.8	50.4	11.1		0.0
User DelAdj:	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00
AdjDel/Veh:	40.0	0.0		42.6	0.0	0.0		0.0	0.0	28.1		28.8	50.4	11.1		0.0
DesignQueue:	20	0		26	0	0		0	0	46		19	25	26		0

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #45 Western/Allen

Cycle (sec): 100 Critical Vol./Cap. (X): 0.922
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 37.2
Optimal Cycle: 128 Level Of Service: D

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Permit+Prot			Permit+Prot		
Rights:	Include			Include			Include			Ignore		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0 0	0	0 0	1 0	0	0 1	1 0	2	0 0	0 0	2	0 1
Volume Module:												
Base Vol:	0	0	0	578	0	615	398	790	0	0	716	346
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	578	0	615	398	790	0	0	716	346
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
PHF Volume:	0	0	0	578	0	615	398	790	0	0	716	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	578	0	615	398	790	0	0	716	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
Final Vol.:	0	0	0	578	0	615	398	790	0	0	716	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	0.93	1.00	0.83	0.61	0.91	1.00	1.00	0.92	1.00
Lanes:	0.00	0.00	0.00	1.00	0.00	1.00	1.00	2.00	0.00	0.00	2.00	1.00
Final Sat.:	0	0	0	1769	0	1583	1151	3473	0	0	3505	1900
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.33	0.00	0.39	0.35	0.23	0.00	0.00	0.20	0.00
Crit Moves:						****	****				****	
Green/Cycle:	0.00	0.00	0.00	0.42	0.00	0.42	0.52	0.46	0.00	0.00	0.22	0.00
Volume/Cap:	0.00	0.00	0.00	0.79	0.00	0.93	0.66	0.49	0.00	0.00	0.93	0.00
Uniform Del:	0.0	0.0	0.0	25.3	0.0	27.9	27.3	18.6	0.0	0.0	38.4	0.0
IncremntDel:	0.0	0.0	0.0	5.6	0.0	20.5	2.7	0.2	0.0	0.0	18.4	0.0
Delay Adj:	0.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00
Delay/Veh:	0.0	0.0	0.0	30.9	0.0	48.4	30.0	18.8	0.0	0.0	56.7	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	30.9	0.0	48.4	30.0	18.8	0.0	0.0	56.7	0.0
DesignQueue:	0	0	0	20	0	22	16	25	0	0	33	0

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #46 Laurelwood/Beaverton Hillsdale

Cycle (sec): 100 Critical Vol./Cap. (X): 1.090
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 66.7
Optimal Cycle: 180 Level Of Service: E

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0 0	1!	0 0	0 0	1!	0 0	1 0	1	1 0	1 0	1	1 0
Volume Module:												
Base Vol:	121	127	108	277	103	73	79	1431	137	139	1265	168
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	121	127	108	277	103	73	79	1431	137	139	1265	168
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	121	127	108	277	103	73	79	1431	137	139	1265	168
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	121	127	108	277	103	73	79	1431	137	139	1265	168
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	121	127	108	277	103	73	79	1431	137	139	1265	168
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.72	0.72	0.72	0.55	0.55	0.55	0.93	0.92	0.92	0.94	0.92	0.92
Lanes:	0.34	0.36	0.30	0.61	0.23	0.16	1.00	1.83	0.17	1.00	1.77	0.23
Final Sat.:	464	487	414	641	238	169	1769	3187	305	1787	3098	411
Capacity Analysis Module:												
Vol/Sat:	0.26	0.26	0.26	0.43	0.43	0.43	0.04	0.45	0.45	0.08	0.41	0.41
Crit Moves:					****			****		****		
Green/Cycle:	0.40	0.40	0.40	0.40	0.40	0.40	0.05	0.41	0.41	0.07	0.44	0.44
Volume/Cap:	0.66	0.66	0.66	1.09	1.09	1.09	0.94	1.09	1.09	1.09	0.94	0.94
Uniform Del:	24.6	24.6	24.6	30.2	30.2	30.2	47.5	29.4	29.4	46.4	26.9	26.9
IncremntDel:	3.0	3.0	3.0	70.5	70.5	70.5	76.8	52.1	52.1	105.7	11.2	11.2
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	27.6	27.6	27.6	100.6	101	100.6	124.3	81.5	81.5	152.2	38.1	38.1
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	27.6	27.6	27.6	100.6	101	100.6	124.3	81.5	81.5	152.2	38.1	38.1
DesignQueue:	4	4	4	10	4	3	4	52	5	7	44	6

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #47 Lombard/Farmington

Cycle (sec): 100 Critical Vol./Cap. (X): 0.967
Loss Time (sec): 16 (Y+R = 4 sec) Average Delay (sec/veh): 51.6
Optimal Cycle: 151 Level Of Service: D

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Protected				Protected			
Rights:	Include				Include				Ignore				Ignore			
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0	
Lanes:	1	0	1	0 1	1	0	0	1 0	1	0	2	0 1	1	0	2	0 1
Volume Module:																
Base Vol:	121	201	95		316	360	68		82	1342		194	168	1617		370
Growth Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00		1.00
Initial Bse:	121	201	95		316	360	68		82	1342		194	168	1617		370
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00		0.00	1.00	1.00		0.00
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00		0.00	1.00	1.00		0.00
PHF Volume:	121	201	95		316	360	68		82	1342		0	168	1617		0
Reduct Vol:	0	0	0		0	0	0		0	0		0	0	0		0
Reduced Vol:	121	201	95		316	360	68		82	1342		0	168	1617		0
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00		0.00	1.00	1.00		0.00
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00		0.00	1.00	1.00		0.00
Final Vol.:	121	201	95		316	360	68		82	1342		0	168	1617		0
Saturation Flow Module:																
Sat/Lane:	1900	1900	1900		1900	1900	1900		1900	1900		1900	1900	1900		1900
Adjustment:	0.92	0.97	0.83		0.91	0.94	0.94		0.93	0.93		1.00	0.93	0.93		1.00
Lanes:	1.00	1.00	1.00		1.00	0.84	0.16		1.00	2.00		1.00	1.00	2.00		1.00
Final Sat.:	1753	1845	1568		1736	1501	283		1769	3538		1900	1769	3538		1900
Capacity Analysis Module:																
Vol/Sat:	0.07	0.11	0.06		0.18	0.24	0.24		0.05	0.38		0.00	0.09	0.46		0.00
Crit Moves:	****					****			****					****		
Green/Cycle:	0.07	0.12	0.12		0.20	0.25	0.25		0.05	0.42		0.00	0.10	0.47		0.00
Volume/Cap:	0.97	0.91	0.51		0.91	0.97	0.97		0.97	0.91		0.00	0.91	0.97		0.00
Uniform Del:	46.3	43.5	41.3		39.1	37.2	37.2		47.5	27.4		0.0	44.3	25.6		0.0
IncremntDel:	70.0	37.1	2.2		27.1	34.2	34.2		86.5	8.8		0.0	41.9	14.9		0.0
Delay Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00		0.00	1.00	1.00		0.00
Delay/Veh:	116.3	80.6	43.5		66.2	71.4	71.4		134.0	36.3		0.0	86.3	40.5		0.0
User DelAdj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00		1.00
AdjDel/Veh:	116.3	80.6	43.5		66.2	71.4	71.4		134.0	36.3		0.0	86.3	40.5		0.0
DesignQueue:	6	10	5		15	16	3		4	48		0	9	53		0

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #48 114th/Canyon

Cycle (sec): 100 Critical Vol./Cap. (X): 0.843
Loss Time (sec): 16 (Y+R = 4 sec) Average Delay (sec/veh): 26.1
Optimal Cycle: 97 Level Of Service: C

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Split Phase				Split Phase				Protected				Protected			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0	
Lanes:	1	0	1	0 1	2	0	0	1 0	1	0	2	0 1	2	0	2	0 1
Volume Module:																
Base Vol:	29	122	1		292	59	126		133	1922		46	12	1633		374
Growth Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00		1.00
Initial Bse:	29	122	1		292	59	126		133	1922		46	12	1633		374
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00		1.00
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00		1.00
PHF Volume:	29	122	1		292	59	126		133	1922		46	12	1633		374
Reduct Vol:	0	0	0		0	0	0		0	0		0	0	0		0
Reduced Vol:	29	122	1		292	59	126		133	1922		46	12	1633		374
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00		1.00
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00		1.00
Final Vol.:	29	122	1		292	59	126		133	1922		46	12	1633		374
Saturation Flow Module:																
Sat/Lane:	1900	1900	1900		1900	1900	1900		1900	1900		1900	1900	1900		1900
Adjustment:	0.95	1.00	0.85		0.92	0.90	0.90		0.95	0.95		0.85	0.92	0.95		0.85
Lanes:	1.00	1.00	1.00		2.00	0.32	0.68		1.00	2.00		1.00	2.00	2.00		1.00
Final Sat.:	1805	1900	1615		3502	544	1162		1805	3610		1615	3502	3610		1615
Capacity Analysis Module:																
Vol/Sat:	0.02	0.06	0.00		0.08	0.11	0.11		0.07	0.53		0.03	0.00	0.45		0.23
Crit Moves:		****				****				****			****			
Green/Cycle:	0.08	0.08	0.08		0.13	0.13	0.13		0.09	0.63		0.63	0.00	0.55		0.55
Volume/Cap:	0.21	0.84	0.01		0.65	0.84	0.84		0.83	0.84		0.05	0.84	0.83		0.42
Uniform Del:	43.4	45.6	42.7		41.4	42.6	42.6		44.8	14.5		7.0	49.8	18.8		13.4
IncremntDel:	0.8	33.9	0.0		3.3	24.6	24.6		28.6	3.1		0.0	157.7	3.1		0.3
Delay Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00		1.00
Delay/Veh:	44.1	79.5	42.7		44.7	67.2	67.2		73.4	17.6		7.0	207.5	21.9		13.7
User DelAdj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00		1.00
AdjDel/Veh:	44.1	79.5	42.7		44.7	67.2	67.2		73.4	17.6		7.0	207.5	21.9		13.7
DesignQueue:	1	6	0		14	3	6		7	45		1	1	46		10

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #49 Griffith/Beaverton Hillsdale

Cycle (sec): 100 Critical Vol./Cap. (X): 0.756
Loss Time (sec): 16 (Y+R = 4 sec) Average Delay (sec/veh): 30.8
Optimal Cycle: 96 Level Of Service: C

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Prot+Permit				Prot+Permit				Protected				Protected			
Rights:	Include				Include				Include				Ovl			
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0	
Lanes:	1	0	1	0 1	1	0	1	0 1	1	0	2	0 1	1	0	2	0 1
Volume Module:																
Base Vol:	155	96	182		186	119	143		96	1334	120		178	1495	349	
Growth Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Initial Bse:	155	96	182		186	119	143		96	1334	120		178	1495	349	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	155	96	182		186	119	143		96	1334	120		178	1495	349	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	155	96	182		186	119	143		96	1334	120		178	1495	349	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Final Vol.:	155	96	182		186	119	143		96	1334	120		178	1495	349	
Saturation Flow Module:																
Sat/Lane:	1900	1900	1900		1900	1900	1900		1900	1900	1900		1900	1900	1900	
Adjustment:	0.64	0.99	0.80		0.76	0.99	0.80		0.93	0.93	0.83		0.94	0.94	0.84	
Lanes:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	2.00	1.00		1.00	2.00	1.00	
Final Sat.:	1220	1881	1514		1450	1881	1518		1769	3538	1570		1787	3574	1599	
Capacity Analysis Module:																
Vol/Sat:	0.13	0.05	0.12		0.13	0.06	0.09		0.05	0.38	0.08		0.10	0.42	0.22	
Crit Moves:			****		****					****			****			
Green/Cycle:	0.31	0.14	0.14		0.27	0.14	0.14		0.07	0.45	0.45		0.12	0.50	0.63	
Volume/Cap:	0.41	0.36	0.84		0.48	0.45	0.67		0.83	0.84	0.17		0.84	0.83	0.35	
Uniform Del:	26.3	38.7	41.7		30.1	39.5	40.8		46.2	24.3	16.4		43.1	21.2	8.7	
IncremntDel:	0.7	0.8	23.9		0.9	1.2	8.1		37.4	4.1	0.1		24.4	3.4	0.2	
Delay Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Delay/Veh:	27.0	39.5	65.6		31.0	40.7	48.9		83.6	28.4	16.5		67.5	24.6	8.9	
User DelAdj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
AdjDel/Veh:	27.0	39.5	65.6		31.0	40.7	48.9		83.6	28.4	16.5		67.5	24.6	8.9	
DesignQueue:	8	5	9		9	6	7		5	45	4		9	46	8	

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #50 87th/Canyon

Cycle (sec): 100 Critical Vol./Cap. (X): 0.846
Loss Time (sec): 8 (Y+R = 4 sec) Average Delay (sec/veh): 25.0
Optimal Cycle: 78 Level Of Service: C

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Permitted				Permitted				Permitted				Permitted			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0	
Lanes:	0	0	1!	0 0	0	0	1!	0 0	0	0	2	0 1	0	0	1	1 0
Volume Module:																
Base Vol:	214	144	88		51	138	119		0	1416	272		0	1035	18	
Growth Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Initial Bse:	214	144	88		51	138	119		0	1416	272		0	1035	18	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	214	144	88		51	138	119		0	1416	272		0	1035	18	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	214	144	88		51	138	119		0	1416	272		0	1035	18	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Final Vol.:	214	144	88		51	138	119		0	1416	272		0	1035	18	
Saturation Flow Module:																
Sat/Lane:	1900	1900	1900		1900	1900	1900		1900	1900	1900		1900	1900	1900	
Adjustment:	0.62	0.62	0.62		0.82	0.82	0.82		1.00	0.93	0.83		1.00	0.93	0.93	
Lanes:	0.48	0.32	0.20		0.16	0.45	0.39		0.00	2.00	1.00		0.00	1.97	0.03	
Final Sat.:	565	380	233		258	699	603		0	3538	1579		0	3467	60	
Capacity Analysis Module:																
Vol/Sat:	0.38	0.38	0.38		0.20	0.20	0.20		0.00	0.40	0.17		0.00	0.30	0.30	
Crit Moves:		****								****						
Green/Cycle:	0.45	0.45	0.45		0.45	0.45	0.45		0.00	0.47	0.47		0.00	0.47	0.47	
Volume/Cap:	0.85	0.85	0.85		0.44	0.44	0.44		0.00	0.85	0.36		0.00	0.63	0.63	
Uniform Del:	24.6	24.6	24.6		19.0	19.0	19.0		0.0	23.2	16.8		0.0	19.8	19.8	
IncremntDel:	12.1	12.1	12.1		0.4	0.4	0.4		0.0	4.2	0.3		0.0	0.8	0.8	
Delay Adj:	1.00	1.00	1.00		1.00	1.00	1.00		0.00	1.00	1.00		0.00	1.00	1.00	
Delay/Veh:	36.7	36.7	36.7		19.5	19.5	19.5		0.0	27.4	17.1		0.0	20.6	20.6	
User DelAdj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
AdjDel/Veh:	36.7	36.7	36.7		19.5	19.5	19.5		0.0	27.4	17.1		0.0	20.6	20.6	
DesignQueue:	7	5	3		2	4	4		0	46	8		0	33	1	

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #51 Garden Home/84th

Average Delay (sec/veh): 33.1 Worst Case Level Of Service: D

Approach:	North Bound						South Bound						East Bound						West Bound					
Movement:	L	-	T	-	R		L	-	T	-	R		L	-	T	-	R		L	-	T	-	R	
Control:	Stop Sign						Stop Sign						Uncontrolled						Uncontrolled					
Rights:			Include						Include						Include						Include			
Lanes:	0	0	1!	0	0		0	0	1!	0	0		0	0	1!	0	0		0	0	1!	0	0	
Volume Module:																								
Base Vol:	6		1		11		4		0		2		6		733		11		6		677		12	
Growth Adj:	1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00	
Initial Bse:	6		1		11		4		0		2		6		733		11		6		677		12	
User Adj:	1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00	
PHF Adj:	1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00	
PHF Volume:	6		1		11		4		0		2		6		733		11		6		677		12	
Reduct Vol:	0		0		0		0		0		0		0		0		0		0		0		0	
Final Vol.:	6		1		11		4		0		2		6		733		11		6		677		12	
Critical Gap Module:																								
Critical Gp:	7.1		6.5		6.2		7.2	xxxx			6.3		4.1	xxxx	xxxxx				4.1	xxxx	xxxxx			
FollowUpTim:	3.5		4.0		3.3		3.6	xxxx			3.4		2.2	xxxx	xxxxx				2.2	xxxx	xxxxx			
Capacity Module:																								
Cnflict Vol:	1450		1454		745		1456	xxxx			684		689	xxxx	xxxxx				746	xxxx	xxxxx			
Potent Cap.:	108		129		411		105	xxxx			438		905	xxxx	xxxxx				862	xxxx	xxxxx			
Move Cap.:	106		127		409		100	xxxx			438		905	xxxx	xxxxx				861	xxxx	xxxxx			
Level Of Service Module:																								
Stopped Del:	xxxxx		xxxx		xxxxx		xxxxx	xxxx			xxxxx		9.0	xxxx	xxxxx				9.2	xxxx	xxxxx			
LOS by Move:	*		*		*		*	*			*		A	*	*				A	*	*			
Movement:	LT	-	LTR	-	RT		LT	-	LTR	-	RT		LT	-	LTR	-	RT		LT	-	LTR	-	RT	
Shared Cap.:	xxxx		197		xxxxx		xxxx		134		xxxxx		xxxx	xxxx	xxxxx				xxxx	xxxx	xxxxx			
Shrd StpDel:	xxxxx		25.1		xxxxx		xxxxx		33.1		xxxxx		xxxxx	xxxx	xxxxx				xxxxx	xxxx	xxxxx			
Shared LOS:	*		D		*		*		D		*		*	*	*				*	*	*			
ApproachDel:			25.1						33.1						xxxxxx						xxxxxx			
ApproachLOS:			D						D						*						*			

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #52 Garden Home/88th

Average Delay (sec/veh): 23.3 Worst Case Level Of Service: C

Approach:	North Bound						South Bound						East Bound						West Bound					
Movement:	L	-	T	-	R		L	-	T	-	R		L	-	T	-	R		L	-	T	-	R	
Control:	Stop Sign						Stop Sign						Uncontrolled						Uncontrolled					
Rights:			Include						Include						Include						Include			
Lanes:	0	0	1!	0	0		0	0	0	0	0		0	0	0	1	0		0	1	0	0	0	
Volume Module:																								
Base Vol:	9		0		10		0		0		0		0		762		17		23		624		0	
Growth Adj:	1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00	
Initial Bse:	9		0		10		0		0		0		0		762		17		23		624		0	
User Adj:	1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00	
PHF Adj:	1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00	
PHF Volume:	9		0		10		0		0		0		0		762		17		23		624		0	
Reduct Vol:	0		0		0		0		0		0		0		0		0		0		0		0	
Final Vol.:	9		0		10		0		0		0		0		762		17		23		624		0	
Critical Gap Module:																								
Critical Gp:	6.4	xxxx			6.2		xxxxx	xxxx			xxxxx		xxxx	xxxxx			4.1		xxxx	xxxxx				
FollowUpTim:	3.5	xxxx			3.3		xxxxx	xxxx			xxxxx		xxxx	xxxxx			2.2		xxxx	xxxxx				
Capacity Module:																								
Cnflict Vol:	1440	xxxx			771		xxxx	xxxx			xxxxx		xxxx	xxxx			779		xxxx	xxxxx				
Potent Cap.:	146	xxxx			400		xxxx	xxxx			xxxxx		xxxx	xxxx			838		xxxx	xxxxx				
Move Cap.:	143	xxxx			400		xxxx	xxxx			xxxxx		xxxx	xxxx			838		xxxx	xxxxx				
Level Of Service Module:																								
Stopped Del:	xxxxx	xxxx			xxxxx		xxxxx	xxxx			xxxxx		xxxxx	xxxx			9.3		xxxx	xxxxx				
LOS by Move:	*	*			*		*	*			*		*	*			A		*	*				
Movement:	LT	-	LTR	-	RT		LT	-	LTR	-	RT		LT	-	LTR	-	RT		LT	-	LTR	-	RT	
Shared Cap.:	xxxx		216		xxxxx		xxxx		xxxx		xxxxx		xxxx	xxxx	xxxxx				xxxx	xxxx	xxxxx			
Shrd StpDel:	xxxxx		23.3		xxxxx		xxxxx		xxxx		xxxxx		xxxxx	xxxx	xxxxx				9.4	xxxx	xxxxx			
Shared LOS:	*		C		*		*		*		*		*	*	*				A	*	*			
ApproachDel:			23.3						xxxxxx						xxxxxx						xxxxxx			
ApproachLOS:			C						*						*						*			

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #53 158th/Jenkins

Cycle (sec): 100 Critical Vol./Cap. (X): 1.102
Loss Time (sec): 16 (Y+R = 4 sec) Average Delay (sec/veh): 78.6
Optimal Cycle: 180 Level Of Service: E

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Protected				Protected			
Rights:	Include				Ovl				Include				Include			
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0	
Lanes:	1	0	2	0 1	1	0	1	1 0	1	0	1	1 0	2	0	1	1 0
Volume Module:																
Base Vol:	37	208	267		493	372	93		64	1043	31		529	914	327	
Growth Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Initial Bse:	37	208	267		493	372	93		64	1043	31		529	914	327	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	37	208	267		493	372	93		64	1043	31		529	914	327	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	37	208	267		493	372	93		64	1043	31		529	914	327	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Final Vol.:	37	208	267		493	372	93		64	1043	31		529	914	327	
Saturation Flow Module:																
Sat/Lane:	1900	1900	1900		1900	1900	1900		1900	1900	1900		1900	1900	1900	
Adjustment:	0.86	0.86	0.76		0.92	0.89	0.89		0.93	0.93	0.93		0.89	0.89	0.89	
Lanes:	1.00	2.00	1.00		1.00	1.60	0.40		1.00	1.94	0.06		2.00	1.47	0.53	
Final Sat.:	1626	3253	1449		1753	2720	680		1769	3422	102		3400	2481	888	
Capacity Analysis Module:																
Vol/Sat:	0.02	0.06	0.18		0.28	0.14	0.14		0.04	0.30	0.30		0.16	0.37	0.37	
Crit Moves:			****		****					****			****			
Green/Cycle:	0.06	0.17	0.17		0.26	0.36	0.40		0.04	0.28	0.28		0.14	0.38	0.38	
Volume/Cap:	0.38	0.38	1.10		1.10	0.38	0.34		0.97	1.10	1.10		1.10	0.97	0.97	
Uniform Del:	45.2	37.1	41.6		37.2	23.6	20.9		48.1	36.2	36.2		42.9	30.4	30.4	
IncremntDel:	2.4	0.5	87.9		73.3	0.2	0.2		99.4	61.0	61.0		71.9	18.1	18.1	
Delay Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Delay/Veh:	47.6	37.5	129.6		110.5	23.8	21.0		147.5	97.2	97.2		114.8	48.5	48.5	
User DelAdj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
AdjDel/Veh:	47.6	37.5	129.6		110.5	23.8	21.0		147.5	97.2	97.2		114.8	48.5	48.5	
DesignQueue:	2	10	13		22	14	3		3	45	1		26	34	12	

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #54 170th/Merlo

Cycle (sec): 100 Critical Vol./Cap. (X): 0.722
Loss Time (sec): 16 (Y+R = 4 sec) Average Delay (sec/veh): 27.8
Optimal Cycle: 74 Level Of Service: C

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Permit+Prot				Permit+Prot				Protected				Protected			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0	
Lanes:	1	0	1	0 1	1	0	0	1 0	1	0	1	0 1	2	0	1	0 1
Volume Module:																
Base Vol:	22	497	360		92	640	15		10	12	15		793	22	128	
Growth Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Initial Bse:	22	497	360		92	640	15		10	12	15		793	22	128	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	22	497	360		92	640	15		10	12	15		793	22	128	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	22	497	360		92	640	15		10	12	15		793	22	128	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Final Vol.:	22	497	360		92	640	15		10	12	15		793	22	128	
Saturation Flow Module:																
Sat/Lane:	1900	1900	1900		1900	1900	1900		1900	1900	1900		1900	1900	1900	
Adjustment:	0.25	0.97	0.82		0.41	0.96	0.96		0.94	0.91	0.91		0.90	0.85	0.85	
Lanes:	1.00	1.00	1.00		1.00	0.98	0.02		1.00	0.44	0.56		2.00	0.15	0.85	
Final Sat.:	476	1845	1563		778	1781	42		1787	767	958		3432	238	1386	
Capacity Analysis Module:																
Vol/Sat:	0.05	0.27	0.23		0.12	0.36	0.36		0.01	0.02	0.02		0.23	0.09	0.09	
Crit Moves:	****					****					****		****			
Green/Cycle:	0.48	0.42	0.42		0.55	0.49	0.49		0.02	0.02	0.02		0.31	0.32	0.32	
Volume/Cap:	0.10	0.64	0.55		0.22	0.74	0.74		0.29	0.74	0.74		0.74	0.29	0.29	
Uniform Del:	30.8	22.9	21.7		22.6	20.5	20.5		48.4	48.7	48.7		30.6	25.8	25.8	
IncremntDel:	0.2	1.8	1.0		0.3	3.3	3.3		4.7	55.3	55.3		2.7	0.3	0.3	
Delay Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Delay/Veh:	31.0	24.6	22.7		22.8	23.7	23.7		53.1	104	104.0		33.3	26.1	26.1	
User DelAdj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
AdjDel/Veh:	31.0	24.6	22.7		22.8	23.7	23.7		53.1	104	104.0		33.3	26.1	26.1	
DesignQueue:	1	17	12		5	20	0		1	1	1		32	1	5	

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #56 TV Highway/Murray

Cycle (sec): 120 Critical Vol./Cap. (X): 1.096
Loss Time (sec): 16 (Y+R = 4 sec) Average Delay (sec/veh): 76.0
Optimal Cycle: 180 Level Of Service: E

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Ignore			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	2	0 2	0 1	2	0 2	0 1	2	0 3	0 1	2	0 3	0 1
Volume Module:												
Base Vol:	451	1098	108	323	1613	56	125	1477	173	313	1508	153
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	451	1098	108	323	1613	56	125	1477	173	313	1508	153
User Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	451	1098	108	323	1613	0	125	1477	173	313	1508	153
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	451	1098	108	323	1613	0	125	1477	173	313	1508	153
PCE Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	451	1098	108	323	1613	0	125	1477	173	313	1508	153
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.95	0.85	0.92	0.95	1.00	0.92	0.91	0.85	0.92	0.91	0.85
Lanes:	2.00	2.00	1.00	2.00	2.00	1.00	2.00	3.00	1.00	2.00	3.00	1.00
Final Sat.:	3502	3610	1615	3502	3610	1900	3502	5187	1615	3502	5187	1615
Capacity Analysis Module:												
Vol/Sat:	0.13	0.30	0.07	0.09	0.45	0.00	0.04	0.28	0.11	0.09	0.29	0.09
Crit Moves:	****				****			****		****		
Green/Cycle:	0.12	0.40	0.40	0.12	0.41	0.00	0.04	0.26	0.26	0.08	0.30	0.30
Volume/Cap:	1.10	0.75	0.17	0.75	1.10	0.00	0.96	1.10	0.41	1.10	0.96	0.31
Uniform Del:	52.9	30.7	22.9	50.9	35.5	0.0	57.7	44.4	36.8	55.1	41.0	32.1
IncremntDel:	72.8	2.3	0.1	7.5	54.3	0.0	65.0	55.1	0.7	81.3	13.7	0.4
Delay Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	125.7	33.0	23.0	58.4	89.8	0.0	122.7	99.5	37.5	136.4	54.6	32.5
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	125.7	33.0	23.0	58.4	89.8	0.0	122.7	99.5	37.5	136.4	54.6	32.5
DesignQueue:	27	47	4	19	72	0	8	78	9	20	75	7

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #57 Farmington/Hall

Cycle (sec): 100 Critical Vol./Cap. (X): 0.905
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 28.7
Optimal Cycle: 112 Level Of Service: C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	1 1	0	0	0 0	0 0	1	0 2	0 0	0	0 1	1 0
Volume Module:												
Base Vol:	273	724	143	0	0	0	109	1475	0	0	1532	209
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	273	724	143	0	0	0	109	1475	0	0	1532	209
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	273	724	143	0	0	0	109	1475	0	0	1532	209
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	273	724	143	0	0	0	109	1475	0	0	1532	209
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	273	724	143	0	0	0	109	1475	0	0	1532	209
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.86	0.86	0.86	1.00	1.00	1.00	0.93	0.93	1.00	1.00	0.91	0.91
Lanes:	0.72	1.90	0.38	0.00	0.00	0.00	1.00	2.00	0.00	0.00	1.76	0.24
Final Sat.:	1171	3107	614	0	0	0	1769	3531	0	0	3051	416
Capacity Analysis Module:												
Vol/Sat:	0.23	0.23	0.23	0.00	0.00	0.00	0.06	0.42	0.00	0.00	0.50	0.50
Crit Moves:		****					****				****	
Green/Cycle:	0.26	0.26	0.26	0.00	0.00	0.00	0.07	0.62	0.00	0.00	0.55	0.55
Volume/Cap:	0.91	0.91	0.91	0.00	0.00	0.00	0.91	0.67	0.00	0.00	0.91	0.91
Uniform Del:	36.0	36.0	36.0	0.0	0.0	0.0	46.3	12.2	0.0	0.0	19.9	19.9
IncremntDel:	9.5	9.5	9.5	0.0	0.0	0.0	53.7	0.8	0.0	0.0	6.6	6.6
Delay Adj:	1.00	1.00	1.00	0.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00
Delay/Veh:	45.5	45.5	45.5	0.0	0.0	0.0	100.0	13.0	0.0	0.0	26.5	26.5
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	45.5	45.5	45.5	0.0	0.0	0.0	100.0	13.0	0.0	0.0	26.5	26.5
DesignQueue:	12	32	6	0	0	0	6	34	0	0	43	6

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #58 Canyon/Hall

Cycle (sec): 100 Critical Vol./Cap. (X): 0.836
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 25.3
Optimal Cycle: 86 Level Of Service: C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	1 1	0	0	0 0	0	1	0 2	0	0	1 1	0
Volume Module:												
Base Vol:	416	544	158	0	0	0	61	1599	0	0	1304	236
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	416	544	158	0	0	0	61	1599	0	0	1304	236
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	416	544	158	0	0	0	61	1599	0	0	1304	236
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	416	544	158	0	0	0	61	1599	0	0	1304	236
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	416	544	158	0	0	0	61	1599	0	0	1304	236
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.87	0.87	0.87	1.00	1.00	1.00	0.92	0.92	1.00	1.00	0.90	0.90
Lanes:	1.00	1.55	0.45	0.00	0.00	0.00	1.00	2.00	0.00	0.00	1.69	0.31
Final Sat.:	1654	2563	744	0	0	0	1753	3505	0	0	2900	525
Capacity Analysis Module:												
Vol/Sat:	0.25	0.21	0.21	0.00	0.00	0.00	0.03	0.46	0.00	0.00	0.45	0.45
Crit Moves:	****						****				****	
Green/Cycle:	0.30	0.30	0.30	0.00	0.00	0.00	0.04	0.58	0.00	0.00	0.54	0.54
Volume/Cap:	0.84	0.71	0.71	0.00	0.00	0.00	0.84	0.79	0.00	0.00	0.84	0.84
Uniform Del:	32.7	31.0	31.0	0.0	0.0	0.0	47.6	16.3	0.0	0.0	19.4	19.4
IncremntDel:	4.8	1.5	1.5	0.0	0.0	0.0	53.8	2.1	0.0	0.0	3.5	3.5
Delay Adj:	1.00	1.00	1.00	0.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00
Delay/Veh:	37.4	32.5	32.5	0.0	0.0	0.0	101.4	18.4	0.0	0.0	22.9	22.9
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	37.4	32.5	32.5	0.0	0.0	0.0	101.4	18.4	0.0	0.0	22.9	22.9
DesignQueue:	17	22	6	0	0	0	3	42	0	0	38	7

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #59 Walker/173rd

Cycle (sec): 100 Critical Vol./Cap. (X): 0.862
Loss Time (sec): 16 (Y+R = 4 sec) Average Delay (sec/veh): 36.0
Optimal Cycle: 103 Level Of Service: D

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	2	0 1	0	1	2	0 1	0	1	0 1	1	0 2	0 1
Volume Module:												
Base Vol:	342	501	75	135	342	85	48	1277	454	108	1084	172
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	342	501	75	135	342	85	48	1277	454	108	1084	172
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	342	501	75	135	342	85	48	1277	454	108	1084	172
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	342	501	75	135	342	85	48	1277	454	108	1084	172
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	342	501	75	135	342	85	48	1277	454	108	1084	172
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.85	0.90	0.98	0.83	0.93	0.93	0.83	0.94	0.94	0.83
Lanes:	2.00	1.00	1.00	2.00	1.00	1.00	1.00	2.00	1.00	1.00	2.00	1.00
Final Sat.:	3502	1900	1615	3432	1862	1583	1769	3538	1583	1787	3574	1586
Capacity Analysis Module:												
Vol/Sat:	0.10	0.26	0.05	0.04	0.18	0.05	0.03	0.36	0.29	0.06	0.30	0.11
Crit Moves:		****		****				****		****		
Green/Cycle:	0.12	0.31	0.31	0.05	0.23	0.23	0.04	0.42	0.42	0.07	0.45	0.45
Volume/Cap:	0.80	0.86	0.15	0.86	0.80	0.23	0.68	0.86	0.69	0.86	0.68	0.24
Uniform Del:	42.7	32.7	25.3	47.4	36.4	31.4	47.4	26.5	23.7	46.0	21.8	17.1
IncremntDel:	10.3	12.6	0.1	35.7	10.3	0.3	23.0	5.5	3.0	41.9	1.2	0.2
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	53.1	45.3	25.4	83.1	46.7	31.7	70.3	31.9	26.7	87.9	23.0	17.2
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	53.1	45.3	25.4	83.1	46.7	31.7	70.3	31.9	26.7	87.9	23.0	17.2
DesignQueue:	17	21	3	7	15	4	3	45	16	6	36	5

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #60 170th/Baseline

Cycle (sec): 90 Critical Vol./Cap. (X): 0.953
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 43.5
Optimal Cycle: 131 Level Of Service: D

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0	0 1	0	2	0 0 1	0	1	0 1 1	0	1	0 2 0 1
Volume Module:												
Base Vol:	308	347	155	289	263	19	24	1052	239	154	1404	180
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	308	347	155	289	263	19	24	1052	239	154	1404	180
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	308	347	155	289	263	19	24	1052	239	154	1404	180
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	308	347	155	289	263	19	24	1052	239	154	1404	180
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	308	347	155	289	263	19	24	1052	239	154	1404	180
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.94	0.94	0.94	0.90	0.97	0.97	0.93	0.90	0.90	0.94	0.94	0.84
Lanes:	1.00	0.69	0.31	2.00	0.93	0.07	1.00	1.63	0.37	1.00	2.00	1.00
Final Sat.:	1787	1240	554	3432	1719	124	1769	2802	637	1787	3574	1599
Capacity Analysis Module:												
Vol/Sat:	0.17	0.28	0.28	0.08	0.15	0.15	0.01	0.38	0.38	0.09	0.39	0.11
Crit Moves:		****		****				****		****		
Green/Cycle:	0.20	0.29	0.29	0.09	0.18	0.18	0.02	0.39	0.39	0.09	0.47	0.47
Volume/Cap:	0.85	0.95	0.95	0.95	0.85	0.85	0.84	0.95	0.95	0.95	0.84	0.24
Uniform Del:	34.6	31.2	31.2	40.8	35.8	35.8	44.2	26.4	26.4	40.7	20.9	14.3
IncremntDel:	17.3	27.6	27.6	39.0	18.6	18.6	101.3	14.6	14.6	56.6	3.9	0.2
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	51.9	58.8	58.8	79.8	54.3	54.3	145.4	41.1	41.1	97.3	24.9	14.5
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	51.9	58.8	58.8	79.8	54.3	54.3	145.4	41.1	41.1	97.3	24.9	14.5
DesignQueue:	13	13	6	13	11	1	1	35	8	7	41	5

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #64 Cornell/173rd

Cycle (sec): 110 Critical Vol./Cap. (X): 1.241
Loss Time (sec): 16 (Y+R = 4 sec) Average Delay (sec/veh): 119.6
Optimal Cycle: 180 Level Of Service: F

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0	0 1	0	1	0 0 1	0	1	0 2	0 1	1	0 1 1 0
Volume Module:												
Base Vol:	390	256	170	123	121	184	487	1414	347	300	1283	96
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	390	256	170	123	121	184	487	1414	347	300	1283	96
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	390	256	170	123	121	184	487	1414	347	300	1283	96
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	390	256	170	123	121	184	487	1414	347	300	1283	96
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	390	256	170	123	121	184	487	1414	347	300	1283	96
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.94	0.94	0.92	0.88	0.88	0.94	0.94	0.83	0.94	0.93	0.93
Lanes:	1.00	0.60	0.40	1.00	0.40	0.60	1.00	2.00	1.00	1.00	1.86	0.14
Final Sat.:	1805	1073	713	1753	666	1013	1787	3574	1586	1787	3285	246
Capacity Analysis Module:												
Vol/Sat:	0.22	0.24	0.24	0.07	0.18	0.18	0.27	0.40	0.22	0.17	0.39	0.39
Crit Moves:	****				****		****				****	
Green/Cycle:	0.17	0.25	0.25	0.07	0.15	0.15	0.22	0.38	0.38	0.16	0.31	0.31
Volume/Cap:	1.24	0.96	0.96	0.96	1.24	1.24	1.24	1.06	0.58	1.06	1.24	1.24
Uniform Del:	45.4	40.9	40.9	50.8	47.0	47.0	42.9	34.4	27.5	46.2	37.7	37.7
IncremntDel:	132.7	33.4	33.4	68.1	138	138.2	128.6	40.5	1.5	68.6	116	116.4
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	178.2	74.3	74.3	118.9	185	185.2	171.5	74.9	29.0	114.8	154	154.1
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	178.2	74.3	74.3	118.9	185	185.2	171.5	74.9	29.0	114.8	154	154.1
DesignQueue:	21	13	8	7	7	10	25	60	14	16	59	4

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #66 Scholls Ferry/Cascade

Cycle (sec): 100 Critical Vol./Cap. (X): 0.932
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 32.9
Optimal Cycle: 127 Level Of Service: C

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Permitted				Permitted				Protected				Protected			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0	
Lanes:	1	0	0	1 0	1	0	0	1 0	1	0	2	1 0	1	0	2	0 1
Volume Module:																
Base Vol:	292	115		75	90	139		128	19	1848		243	128	1259		33
Growth Adj:	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00
Initial Bse:	292	115		75	90	139		128	19	1848		243	128	1259		33
User Adj:	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00
PHF Adj:	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00
PHF Volume:	292	115		75	90	139		128	19	1848		243	128	1259		33
Reduct Vol:	0	0		0	0	0		0	0	0		0	0	0		0
Reduced Vol:	292	115		75	90	139		128	19	1848		243	128	1259		33
PCE Adj:	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00
MLF Adj:	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00
Final Vol.:	292	115		75	90	139		128	19	1848		243	128	1259		33
Saturation Flow Module:																
Sat/Lane:	1900	1900		1900	1900	1900		1900	1900	1900		1900	1900	1900		1900
Adjustment:	0.47	0.94		0.94	0.55	0.91		0.91	0.93	0.88		0.88	0.93	0.93		0.83
Lanes:	1.00	0.61		0.39	1.00	0.52		0.48	1.00	2.65		0.35	1.00	2.00		1.00
Final Sat.:	886	1082		706	1054	899		828	1769	4416		581	1769	3538		1583
Capacity Analysis Module:																
Vol/Sat:	0.33	0.11		0.11	0.09	0.15		0.15	0.01	0.42		0.42	0.07	0.36		0.02
Crit Moves:	****									****			****			
Green/Cycle:	0.35	0.35		0.35	0.35	0.35		0.35	0.02	0.45		0.45	0.08	0.51		0.51
Volume/Cap:	0.93	0.30		0.30	0.24	0.44		0.44	0.70	0.93		0.93	0.93	0.70		0.04
Uniform Del:	31.2	23.4		23.4	22.8	24.7		24.7	49.0	26.1		26.1	45.9	18.6		12.2
IncremntDel:	33.6	0.3		0.3	0.3	0.5		0.5	57.0	7.8		7.8	56.4	1.2		0.0
Delay Adj:	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00
Delay/Veh:	64.7	23.6		23.6	23.2	25.2		25.2	106.0	34.0		34.0	102.3	19.8		12.2
User DelAdj:	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00
AdjDel/Veh:	64.7	23.6		23.6	23.2	25.2		25.2	106.0	34.0		34.0	102.3	19.8		12.2
DesignQueue:	11	4		3	3	5		5	1	63		8	7	37		1

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #72 Canyon/Watson

Cycle (sec): 100 Critical Vol./Cap. (X): 0.842
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 22.7
Optimal Cycle: 88 Level Of Service: C

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Split Phase				Split Phase				Protected				Protected			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0	
Lanes:	0	0	0	0 0	0	1	1	1 0	0	0	1	1 0	1	0	2	0 0
Volume Module:																
Base Vol:	0	0		0	151	467		115	0	1621		105	162	1401		0
Growth Adj:	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00
Initial Bse:	0	0		0	151	467		115	0	1621		105	162	1401		0
User Adj:	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00
PHF Adj:	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00
PHF Volume:	0	0		0	151	467		115	0	1621		105	162	1401		0
Reduct Vol:	0	0		0	0	0		0	0	0		0	0	0		0
Reduced Vol:	0	0		0	151	467		115	0	1621		105	162	1401		0
PCE Adj:	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00
MLF Adj:	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00
Final Vol.:	0	0		0	151	467		115	0	1621		105	162	1401		0
Saturation Flow Module:																
Sat/Lane:	1900	1900		1900	1900	1900		1900	1900	1900		1900	1900	1900		1900
Adjustment:	1.00	1.00		1.00	0.86	0.86		0.86	1.00	0.91		0.91	0.92	0.92		1.00
Lanes:	0.00	0.00		0.00	0.62	1.91		0.47	0.00	1.88		0.12	1.00	2.00		0.00
Final Sat.:	0	0		0	1008	3116		767	0	3253		211	1753	3491		0
Capacity Analysis Module:																
Vol/Sat:	0.00	0.00		0.00	0.15	0.15		0.15	0.00	0.50		0.50	0.09	0.40		0.00
Crit Moves:								****				****		****		
Green/Cycle:	0.00	0.00		0.00	0.18	0.18		0.18	0.00	0.59		0.59	0.11	0.70		0.00
Volume/Cap:	0.00	0.00		0.00	0.84	0.84		0.84	0.00	0.84		0.84	0.84	0.57		0.00
Uniform Del:	0.0	0.0		0.0	39.7	39.7		39.7	0.0	16.6		16.6	43.7	7.4		0.0
IncremntDel:	0.0	0.0		0.0	7.4	7.4		7.4	0.0	3.3		3.3	26.9	0.3		0.0
Delay Adj:	0.00	0.00		0.00	1.00	1.00		1.00	0.00	1.00		1.00	1.00	1.00		0.00
Delay/Veh:	0.0	0.0		0.0	47.2	47.2		47.2	0.0	19.9		19.9	70.6	7.7		0.0
User DelAdj:	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00
AdjDel/Veh:	0.0	0.0		0.0	47.2	47.2		47.2	0.0	19.9		19.9	70.6	7.7		0.0
DesignQueue:	0	0		0	7	22		5	0	42		3	8	26		0

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #73 Farmington/Watson

Cycle (sec): 100 Critical Vol./Cap. (X): 0.852
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 23.4
Optimal Cycle: 91 Level Of Service: C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0 0	0 0	0	0 1	1! 1	0	0 0	1 1	0	1 0	2 0	0
Volume Module:												
Base Vol:	0	0	0	158	688	43	0	1385	355	113	1702	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	158	688	43	0	1385	355	113	1702	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	158	688	43	0	1385	355	113	1702	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	158	688	43	0	1385	355	113	1702	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	0	0	0	158	688	43	0	1385	355	113	1702	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	0.88	0.88	0.88	1.00	0.90	0.90	0.93	0.93	1.00
Lanes:	0.00	0.00	0.00	0.53	2.32	0.15	0.00	1.59	0.41	1.00	2.00	0.00
Final Sat.:	0	0	0	891	3879	242	0	2723	698	1769	3524	0
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.18	0.18	0.18	0.00	0.51	0.51	0.06	0.48	0.00
Crit Moves:					****			****		****		
Green/Cycle:	0.00	0.00	0.00	0.21	0.21	0.21	0.00	0.60	0.60	0.07	0.67	0.00
Volume/Cap:	0.00	0.00	0.00	0.85	0.85	0.85	0.00	0.85	0.85	0.85	0.72	0.00
Uniform Del:	0.0	0.0	0.0	38.1	38.1	38.1	0.0	16.5	16.5	45.7	10.4	0.0
IncremntDel:	0.0	0.0	0.0	6.9	6.9	6.9	0.0	3.7	3.7	38.0	1.1	0.0
Delay Adj:	0.00	0.00	0.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.00
Delay/Veh:	0.0	0.0	0.0	45.0	45.0	45.0	0.0	20.2	20.2	83.7	11.5	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	45.0	45.0	45.0	0.0	20.2	20.2	83.7	11.5	0.0
DesignQueue:	0	0	0	7	32	2	0	35	9	6	35	0

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #76 Scholls Ferry/Denney

Cycle (sec): 100 Critical Vol./Cap. (X): 0.767
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 24.7
Optimal Cycle: 70 Level Of Service: C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1 0	0 1	0	1 0	1 0	1	0 0	1! 0	0	0 1	0 0	0
Volume Module:												
Base Vol:	103	736	2	5	730	408	227	3	85	2	1	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	103	736	2	5	730	408	227	3	85	2	1	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	103	736	2	5	730	408	227	3	85	2	1	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	103	736	2	5	730	408	227	3	85	2	1	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	103	736	2	5	730	408	227	3	85	2	1	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.93	0.97	0.97	0.93	0.98	0.83	0.74	0.74	0.74	0.90	0.90	1.00
Lanes:	1.00	0.99	0.01	1.00	1.00	1.00	0.72	0.01	0.27	0.67	0.33	0.00
Final Sat.:	1769	1842	5	1769	1862	1583	1011	13	379	1137	569	0
Capacity Analysis Module:												
Vol/Sat:	0.06	0.40	0.40	0.00	0.39	0.26	0.22	0.22	0.22	0.00	0.00	0.00
Crit Moves:	****				****			****				
Green/Cycle:	0.08	0.58	0.58	0.00	0.51	0.51	0.29	0.29	0.29	0.29	0.29	0.00
Volume/Cap:	0.77	0.69	0.69	0.69	0.77	0.50	0.77	0.77	0.77	0.01	0.01	0.00
Uniform Del:	45.3	14.5	14.5	49.7	19.6	16.1	32.2	32.2	32.2	25.1	25.1	0.0
IncremntDel:	22.9	1.9	1.9	139.6	3.8	0.5	8.4	8.4	8.4	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
Delay/Veh:	68.2	16.3	16.3	189.3	23.4	16.6	40.7	40.7	40.7	25.1	25.1	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	68.2	16.3	16.3	189.3	23.4	16.6	40.7	40.7	40.7	25.1	25.1	0.0
DesignQueue:	5	19	0	0	22	12	9	0	3	0	0	0

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #77 Farmington/Hocken

Cycle (sec): 100 Critical Vol./Cap. (X): 0.745
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 22.4
Optimal Cycle: 66 Level Of Service: C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	0	0	2	0	1	1	0	2	0	2	1
Volume Module:												
Base Vol:	0	0	0	644	0	287	130	1140	0	0	1403	306
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	644	0	287	130	1140	0	0	1403	306
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	644	0	287	130	1140	0	0	1403	306
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	644	0	287	130	1140	0	0	1403	306
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	0	0	0	644	0	287	130	1140	0	0	1403	306
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	0.91	1.00	0.84	0.93	0.93	1.00	1.00	0.93	0.83
Lanes:	0.00	0.00	0.00	2.00	0.00	1.00	1.00	2.00	0.00	0.00	2.00	1.00
Final Sat.:	0	0	0	3467	0	1599	1769	3538	0	0	3538	1570
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.19	0.00	0.18	0.07	0.32	0.00	0.00	0.40	0.19
Crit Moves:				****			****				****	
Green/Cycle:	0.00	0.00	0.00	0.25	0.00	0.25	0.10	0.63	0.00	0.00	0.53	0.53
Volume/Cap:	0.00	0.00	0.00	0.75	0.00	0.72	0.75	0.51	0.00	0.00	0.75	0.37
Uniform Del:	0.0	0.0	0.0	34.6	0.0	34.3	43.8	10.1	0.0	0.0	18.1	13.6
IncremntDel:	0.0	0.0	0.0	3.6	0.0	6.3	16.0	0.2	0.0	0.0	1.7	0.3
Delay Adj:	0.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00
Delay/Veh:	0.0	0.0	0.0	38.2	0.0	40.6	59.8	10.3	0.0	0.0	19.8	13.9
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	38.2	0.0	40.6	59.8	10.3	0.0	0.0	19.8	13.9
DesignQueue:	0	0	0	28	0	12	7	25	0	0	40	8

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #78 TV Highway/Hocken

Cycle (sec): 100 Critical Vol./Cap. (X): 1.026
Loss Time (sec): 16 (Y+R = 4 sec) Average Delay (sec/veh): 49.5
Optimal Cycle: 180 Level Of Service: D

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Ovl			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0	0	1	0	1	0	2	0	1	1	0	2	1	0
Volume Module:															
Base Vol:	188	140	62	339	344	118	97	1550	448	201	1498	55
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	188	140	62	339	344	118	97	1550	448	201	1498	55
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	188	140	62	339	344	118	97	1550	448	201	1498	55
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	188	140	62	339	344	118	97	1550	448	201	1498	55
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	188	140	62	339	344	118	97	1550	448	201	1498	55
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.93	0.93	0.93	0.93	0.83	0.92	0.92	0.82	0.93	0.89	0.89
Lanes:	1.00	0.69	0.31	1.00	2.00	1.00	1.00	2.00	1.00	1.00	2.89	0.11
Final Sat.:	1753	1220	540	1769	3538	1583	1753	3505	1549	1769	4879	179
Capacity Analysis Module:												
Vol/Sat:	0.11	0.11	0.11	0.19	0.10	0.07	0.06	0.44	0.29	0.11	0.31	0.31
Crit Moves:		****		****				****		****		
Green/Cycle:	0.16	0.11	0.11	0.19	0.14	0.22	0.08	0.43	0.43	0.11	0.46	0.46
Volume/Cap:	0.69	1.03	1.03	1.03	0.69	0.33	0.67	1.03	0.67	1.03	0.67	0.67
Uniform Del:	39.8	44.4	44.4	40.7	40.8	32.5	44.5	28.5	22.8	44.5	21.1	21.1
IncremntDel:	7.0	71.2	71.2	56.5	3.9	0.6	11.5	30.2	2.7	71.4	0.8	0.8
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	46.9	116	115.6	97.1	44.7	33.0	56.0	58.6	25.5	115.9	21.9	21.9
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	46.9	116	115.6	97.1	44.7	33.0	56.0	58.6	25.5	115.9	21.9	21.9
DesignQueue:	9	7	3	16	17	5	5	55	15	10	49	2

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #81 158th/Blueridge

Cycle (sec): 100 Critical Vol./Cap. (X): 0.987
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 40.7
Optimal Cycle: 173 Level Of Service: D

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1 0	2 0	1	1 0	1 1	0	0 0	1! 0	0	0 1	0 0	1
Volume Module:												
Base Vol:	159	1612	64	33	1606	51	50	5	102	332	9	57
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	159	1612	64	33	1606	51	50	5	102	332	9	57
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	159	1612	64	33	1606	51	50	5	102	332	9	57
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	159	1612	64	33	1606	51	50	5	102	332	9	57
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	159	1612	64	33	1606	51	50	5	102	332	9	57
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.92	0.82	0.93	0.93	0.93	0.62	0.62	0.61	0.58	0.59	0.85
Lanes:	1.00	2.00	1.00	1.00	1.94	0.06	0.32	0.03	0.65	0.97	0.03	1.00
Final Sat.:	1753	3505	1556	1769	3412	108	372	37	760	1082	29	1612
Capacity Analysis Module:												
Vol/Sat:	0.09	0.46	0.04	0.02	0.47	0.47	0.13	0.13	0.13	0.31	0.31	0.04
Crit Moves:	****				****						****	
Green/Cycle:	0.09	0.55	0.55	0.02	0.48	0.48	0.31	0.31	0.31	0.31	0.31	0.31
Volume/Cap:	0.99	0.84	0.08	0.84	0.99	0.99	0.43	0.43	0.43	0.99	0.99	0.11
Uniform Del:	45.3	19.0	10.7	48.7	25.8	25.8	27.4	27.4	27.4	34.2	34.2	24.6
IncremntDel:	66.7	3.5	0.0	83.5	18.8	18.8	0.8	0.8	0.8	44.7	44.7	0.1
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	112.1	22.5	10.7	132.2	44.6	44.6	28.2	28.2	28.2	78.9	78.9	24.7
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	112.1	22.5	10.7	132.2	44.6	44.6	28.2	28.2	28.2	78.9	78.9	24.7
DesignQueue:	8	46	2	2	53	2	2	0	4	13	0	2

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #83 158th/Jay

Cycle (sec): 100 Critical Vol./Cap. (X): 0.917
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 32.9
Optimal Cycle: 118 Level Of Service: C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Prot+Permit			Prot+Permit			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1 0	1 1	0	1 0	0 1	0	0 0	1! 0	0	0 1	0 0	1
Volume Module:												
Base Vol:	116	531	7	65	782	105	184	0	191	0	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	116	531	7	65	782	105	184	0	191	0	0	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	116	531	7	65	782	105	184	0	191	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	116	531	7	65	782	105	184	0	191	0	0	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	116	531	7	65	782	105	184	0	191	0	0	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.19	0.90	0.90	0.47	0.96	0.96	0.78	1.00	0.78	1.00	1.00	1.00
Lanes:	1.00	1.97	0.03	1.00	0.88	0.12	0.49	0.00	0.51	0.00	1.00	1.00
Final Sat.:	354	3385	45	897	1612	216	724	0	752	0	1900	1900
Capacity Analysis Module:												
Vol/Sat:	0.33	0.16	0.16	0.07	0.49	0.49	0.25	0.00	0.25	0.00	0.00	0.00
Crit Moves:	****				****		****					
Green/Cycle:	0.56	0.49	0.49	0.64	0.53	0.53	0.28	0.00	0.28	0.00	0.00	0.00
Volume/Cap:	0.58	0.32	0.32	0.11	0.92	0.92	0.92	0.00	0.92	0.00	0.00	0.00
Uniform Del:	21.6	15.5	15.5	7.1	21.5	21.5	35.0	0.0	35.0	0.0	0.0	0.0
IncremntDel:	4.4	0.1	0.1	0.1	13.1	13.1	25.1	0.0	25.1	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	0.00	0.00	0.00
Delay/Veh:	26.0	15.6	15.6	7.1	34.7	34.7	60.2	0.0	60.2	0.0	0.0	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	26.0	15.6	15.6	7.1	34.7	34.7	60.2	0.0	60.2	0.0	0.0	0.0
DesignQueue:	6	16	0	3	23	3	8	0	8	0	0	0

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #85 TV Highway/160th

Cycle (sec):	120	Critical Vol./Cap. (X):	1.136
Loss Time (sec):	16 (Y+R = 4 sec)	Average Delay (sec/veh):	73.8
Optimal Cycle:	180	Level Of Service:	E

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Ovl			Ovl		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1 0	1	0 1	1 0	1	1 1	1 0	2	0 1	1 0	2	0 1
Volume Module:												
Base Vol:	82	115	99	0	0	722	275	1624	345	0	1926	13
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	82	115	99	0	0	722	275	1624	345	0	1926	13
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	82	115	99	0	0	722	275	1624	345	0	1926	13
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	82	115	99	0	0	722	275	1624	345	0	1926	13
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	82	115	99	0	0	722	275	1624	345	0	1926	13
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.94	0.99	0.84	1.00	0.95	0.80	0.92	0.92	0.83	1.00	0.93	0.83
Lanes:	1.00	1.00	1.00	1.00	1.00	2.00	1.00	2.00	1.00	1.00	2.00	1.00
Final Sat.:	1787	1881	1599	1900	1805	3038	1753	3505	1568	1900	3538	1583
Capacity Analysis Module:												
Vol/Sat:	0.05	0.06	0.06	0.00	0.00	0.24	0.16	0.46	0.22	0.00	0.54	0.01
Crit Moves:	****					****	****				****	
Green/Cycle:	0.04	0.25	0.25	0.00	0.00	0.21	0.14	0.62	0.66	0.00	0.48	0.48
Volume/Cap:	1.14	0.25	0.25	0.00	0.00	1.14	1.14	0.75	0.33	0.00	1.14	0.02
Uniform Del:	57.6	36.0	36.0	0.0	0.0	47.5	51.7	16.4	9.0	0.0	31.3	16.4
IncremntDel:	147.7	0.3	0.3	0.0	0.0	79.6	99.6	1.5	0.2	0.0	69.2	0.0
Delay Adj:	1.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00
Delay/Veh:	205.3	36.3	36.4	0.0	0.0	127.0	151.3	17.9	9.2	0.0	100	16.4
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	205.3	36.3	36.4	0.0	0.0	127.0	151.3	17.9	9.2	0.0	100	16.4
DesignQueue:	5	6	5	0	0	40	16	47	8	0	77	0

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #87 Hart/155th

Cycle (sec):	110	Critical Vol./Cap. (X):	0.520
Loss Time (sec):	8 (Y+R = 4 sec)	Average Delay (sec/veh):	15.8
Optimal Cycle:	33	Level Of Service:	B

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0 0	1!	0 0	0 0	1!	0 0	0 0	1!	0 0	0 1	0	1 0
Volume Module:												
Base Vol:	111	32	78	31	80	22	7	380	129	127	725	11
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	111	32	78	31	80	22	7	380	129	127	725	11
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	111	32	78	31	80	22	7	380	129	127	725	11
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	111	32	78	31	80	22	7	380	129	127	725	11
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	111	32	78	31	80	22	7	380	129	127	725	11
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.73	0.73	0.73	0.88	0.88	0.88	0.94	0.94	0.94	0.70	0.70	0.70
Lanes:	0.51	0.14	0.35	0.23	0.60	0.17	0.01	0.74	0.25	0.29	1.68	0.03
Final Sat.:	695	200	488	389	1004	276	24	1309	444	394	2247	34
Capacity Analysis Module:												
Vol/Sat:	0.16	0.16	0.16	0.08	0.08	0.08	0.29	0.29	0.29	0.32	0.32	0.32
Crit Moves:		****									****	
Green/Cycle:	0.31	0.31	0.31	0.31	0.31	0.31	0.62	0.62	0.62	0.62	0.62	0.62
Volume/Cap:	0.52	0.52	0.52	0.26	0.26	0.26	0.47	0.47	0.47	0.52	0.52	0.52
Uniform Del:	31.4	31.4	31.4	28.7	28.7	28.7	11.2	11.2	11.2	11.7	11.7	11.7
IncremntDel:	1.2	1.2	1.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	32.6	32.6	32.6	29.0	29.0	29.0	11.5	11.5	11.5	12.0	12.0	12.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	32.6	32.6	32.6	29.0	29.0	29.0	11.5	11.5	11.5	12.0	12.0	12.0
DesignQueue:	5	1	3	1	3	1	0	9	3	3	18	0

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #88 Murray/Hart

Cycle (sec): 120 Critical Vol./Cap. (X): 1.011
Loss Time (sec): 16 (Y+R = 4 sec) Average Delay (sec/veh): 52.6
Optimal Cycle: 180 Level Of Service: D

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permit+Prot			Permit+Prot			Permit+Prot			Permit+Prot		
Rights:	Include			Ovl			Ovl			Ovl		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0 1	1 0	1	0 2	0 1	1	0 1	0 1	1	0 1	0 1
Volume Module:												
Base Vol:	184	1511	65	41	2144	280	146	131	164	101	284	103
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	184	1511	65	41	2144	280	146	131	164	101	284	103
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	184	1511	65	41	2144	280	146	131	164	101	284	103
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	184	1511	65	41	2144	280	146	131	164	101	284	103
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	184	1511	65	41	2144	280	146	131	164	101	284	103
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.23	0.92	0.92	0.18	0.93	0.83	0.60	0.98	0.82	0.74	0.99	0.84
Lanes:	1.00	1.92	0.08	1.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Sat.:	442	3341	144	342	3538	1577	1149	1862	1567	1405	1881	1588
Capacity Analysis Module:												
Vol/Sat:	0.42	0.45	0.45	0.12	0.61	0.18	0.13	0.07	0.10	0.07	0.15	0.06
Crit Moves:	****				****		****				****	
Green/Cycle:	0.70	0.62	0.62	0.63	0.56	0.63	0.24	0.12	0.21	0.26	0.14	0.17
Volume/Cap:	0.60	0.73	0.73	0.19	1.09	0.28	0.53	0.59	0.49	0.28	1.09	0.38
Uniform Del:	46.2	15.8	15.8	29.4	26.6	9.9	47.6	50.1	41.3	38.6	51.7	44.2
IncremntDel:	3.2	1.3	1.3	0.4	49.5	0.2	2.0	4.3	1.1	0.4	81.9	0.9
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	49.4	17.1	17.1	29.8	76.2	10.0	49.6	54.4	42.4	39.0	134	45.1
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	49.4	17.1	17.1	29.8	76.2	10.0	49.6	54.4	42.4	39.0	134	45.1
DesignQueue:	11	43	2	3	75	7	9	8	9	6	17	6

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #89 Murray/Scholls Ferry

Cycle (sec): 120 Critical Vol./Cap. (X): 0.974
Loss Time (sec): 16 (Y+R = 4 sec) Average Delay (sec/veh): 54.2
Optimal Cycle: 180 Level Of Service: D

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Ovl			Ovl			Ignore			Ignore		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0 1	1 0	2	0 1	0 1	2	0 1	1 0	1	0 2	0 1
Volume Module:												
Base Vol:	98	560	7	705	546	807	463	698	67	4	998	827
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	98	560	7	705	546	807	463	698	67	4	998	827
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
PHF Volume:	98	560	7	705	546	807	463	698	0	4	998	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	98	560	7	705	546	807	463	698	0	4	998	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
Final Vol.:	98	560	7	705	546	807	463	698	0	4	998	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.93	0.93	0.93	0.90	0.98	0.83	0.89	0.92	0.95	0.94	0.94	1.00
Lanes:	1.00	1.98	0.02	2.00	1.00	1.00	2.00	2.00	0.00	1.00	2.00	1.00
Final Sat.:	1769	3487	44	3432	1862	1583	3400	3505	0	1787	3574	1900
Capacity Analysis Module:												
Vol/Sat:	0.06	0.16	0.16	0.21	0.29	0.51	0.14	0.20	0.00	0.00	0.28	0.00
Crit Moves:	****					****	****				****	
Green/Cycle:	0.06	0.19	0.20	0.25	0.38	0.52	0.14	0.42	0.00	0.00	0.29	0.00
Volume/Cap:	0.97	0.83	0.81	0.83	0.76	0.97	0.97	0.47	0.00	0.47	0.97	0.00
Uniform Del:	56.5	46.5	46.0	42.8	32.3	27.8	51.4	25.1	0.0	59.6	42.4	0.0
IncremntDel:	81.2	8.5	7.1	7.0	4.9	25.0	34.6	0.2	0.0	36.3	22.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
Delay/Veh:	137.7	55.1	53.1	49.8	37.2	52.9	86.0	25.3	0.0	95.9	64.4	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	137.7	55.1	53.1	49.8	37.2	52.9	86.0	25.3	0.0	95.9	64.4	0.0
DesignQueue:	6	31	0	37	24	29	27	28	0	0	51	0

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #90 Scholls Ferry/Davies

Cycle (sec): 100 Critical Vol./Cap. (X): 0.701
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): 18.2
Optimal Cycle: 76 Level Of Service: B

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Protected				Protected			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0	
Lanes:	1	0	1	0 1	1	0	0	1 0	1	0	1	1 0	1	0	1	1 0
Volume Module:																
Base Vol:	67	19	200		50	20	29		32	1176	134		308	1590	121	
Growth Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Initial Bse:	67	19	200		50	20	29		32	1176	134		308	1590	121	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	67	19	200		50	20	29		32	1176	134		308	1590	121	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	67	19	200		50	20	29		32	1176	134		308	1590	121	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Final Vol.:	67	19	200		50	20	29		32	1176	134		308	1590	121	
Saturation Flow Module:																
Sat/Lane:	1900	1900	1900		1900	1900	1900		1900	1900	1900		1900	1900	1900	
Adjustment:	0.94	0.99	0.84		0.94	0.90	0.90		0.93	0.92	0.92		0.94	0.93	0.93	
Lanes:	1.00	1.00	1.00		1.00	0.41	0.59		1.00	1.80	0.20		1.00	1.86	0.14	
Final Sat.:	1787	1881	1599		1787	699	1014		1769	3128	356		1787	3271	249	
Capacity Analysis Module:																
Vol/Sat:	0.04	0.01	0.13		0.03	0.03	0.03		0.02	0.38	0.38		0.17	0.49	0.49	
Crit Moves:			****		****					****			****			
Green/Cycle:	0.12	0.18	0.18		0.04	0.09	0.09		0.03	0.54	0.54		0.25	0.75	0.75	
Volume/Cap:	0.30	0.06	0.70		0.70	0.30	0.30		0.64	0.70	0.70		0.70	0.64	0.64	
Uniform Del:	39.9	34.1	38.6		47.4	42.2	42.2		48.1	17.2	17.2		34.4	5.9	5.9	
IncremntDel:	0.8	0.1	7.6		26.8	1.1	1.1		25.6	1.2	1.2		5.0	0.6	0.6	
Delay Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Delay/Veh:	40.7	34.2	46.2		74.2	43.3	43.3		73.7	18.5	18.5		39.4	6.5	6.5	
User DelAdj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
AdjDel/Veh:	40.7	34.2	46.2		74.2	43.3	43.3		73.7	18.5	18.5		39.4	6.5	6.5	
DesignQueue:	3	1	9		3	1	1		2	33	4		13	25	2	

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #92 Scholls Ferry/135th

Cycle (sec): 100 Critical Vol./Cap. (X): 0.660
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 13.4
Optimal Cycle: 54 Level Of Service: B

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Permitted				Permitted				Protected				Protected			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0	
Lanes:	0	1	0	0 1	0	0	1!	0 0	1	0	1	1 0	1	0	2	0 1
Volume Module:																
Base Vol:	96	13	102		3	8	26		24	1276	146		122	1743	10	
Growth Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Initial Bse:	96	13	102		3	8	26		24	1276	146		122	1743	10	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	96	13	102		3	8	26		24	1276	146		122	1743	10	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	96	13	102		3	8	26		24	1276	146		122	1743	10	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Final Vol.:	96	13	102		3	8	26		24	1276	146		122	1743	10	
Saturation Flow Module:																
Sat/Lane:	1900	1900	1900		1900	1900	1900		1900	1900	1900		1900	1900	1900	
Adjustment:	0.72	0.72	0.84		0.89	0.89	0.88		0.93	0.92	0.92		0.94	0.94	0.84	
Lanes:	0.88	0.12	1.00		0.08	0.22	0.70		1.00	1.79	0.21		1.00	2.00	1.00	
Final Sat.:	1207	163	1604		136	363	1181		1769	3127	358		1787	3574	1599	
Capacity Analysis Module:																
Vol/Sat:	0.08	0.08	0.06		0.02	0.02	0.02		0.01	0.41	0.41		0.07	0.49	0.01	
Crit Moves:		****								****				****		
Green/Cycle:	0.12	0.12	0.12		0.12	0.12	0.12		0.02	0.65	0.65		0.11	0.74	0.74	
Volume/Cap:	0.66	0.66	0.53		0.18	0.18	0.18		0.66	0.63	0.63		0.63	0.66	0.01	
Uniform Del:	42.0	42.0	41.3		39.5	39.5	39.5		48.6	10.3	10.3		42.6	6.7	3.4	
IncremntDel:	9.5	9.5	2.7		0.4	0.4	0.4		36.9	0.6	0.6		6.4	0.6	0.0	
Delay Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Delay/Veh:	51.5	51.5	44.0		40.0	40.0	40.0		85.5	10.9	10.9		49.0	7.3	3.4	
User DelAdj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
AdjDel/Veh:	51.5	51.5	44.0		40.0	40.0	40.0		85.5	10.9	10.9		49.0	7.3	3.4	
DesignQueue:	5	1	5		0	0	1		1	27	3		6	29	0	

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #93 Scholls Ferry/125th

Cycle (sec): 120 Critical Vol./Cap. (X): 1.051
Loss Time (sec): 16 (Y+R = 4 sec) Average Delay (sec/veh): 63.3
Optimal Cycle: 180 Level Of Service: E

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0 1	0 1	1	0 1	0 1	1	0 1	1 0	1	0 2	0 1
Volume Module:												
Base Vol:	273	152	260	203	123	268	147	1281	84	97	1843	140
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	273	152	260	203	123	268	147	1281	84	97	1843	140
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	273	152	260	203	123	268	147	1281	84	97	1843	140
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	273	152	260	203	123	268	147	1281	84	97	1843	140
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	273	152	260	203	123	268	147	1281	84	97	1843	140
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	1.00	0.85	0.94	0.99	0.84	0.95	0.94	0.94	0.95	0.95	0.85
Lanes:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.88	0.12	1.00	2.00	1.00
Final Sat.:	1805	1900	1615	1787	1881	1599	1805	3357	220	1805	3610	1615
Capacity Analysis Module:												
Vol/Sat:	0.15	0.08	0.16	0.11	0.07	0.17	0.08	0.38	0.38	0.05	0.51	0.09
Crit Moves:	****					****	****				****	
Green/Cycle:	0.14	0.18	0.18	0.13	0.16	0.16	0.08	0.49	0.49	0.07	0.49	0.49
Volume/Cap:	1.05	0.45	0.91	0.91	0.41	1.05	1.05	0.77	0.77	0.77	1.05	0.18
Uniform Del:	51.4	44.1	48.3	51.8	45.4	50.4	55.4	24.9	24.9	54.9	30.9	17.4
IncremntDel:	69.8	1.0	29.8	35.5	0.9	70.4	90.3	2.2	2.2	25.1	36.3	0.1
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	121.2	45.0	78.2	87.2	46.3	120.8	145.7	27.0	27.0	80.0	67.2	17.5
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	121.2	45.0	78.2	87.2	46.3	120.8	145.7	27.0	27.0	80.0	67.2	17.5
DesignQueue:	16	9	15	12	7	16	9	48	3	6	72	5

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #94 Scholls Ferry/121st

Cycle (sec): 140 Critical Vol./Cap. (X): 0.932
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 37.3
Optimal Cycle: 154 Level Of Service: D

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	1 0	0 1	0	0 1!	0 0	1	0 2	0 1	1	0 2	0 1
Volume Module:												
Base Vol:	263	39	144	40	15	11	24	1290	411	301	2189	68
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	263	39	144	40	15	11	24	1290	411	301	2189	68
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	263	39	144	40	15	11	24	1290	411	301	2189	68
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	263	39	144	40	15	11	24	1290	411	301	2189	68
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	263	39	144	40	15	11	24	1290	411	301	2189	68
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.70	0.71	0.85	0.51	0.51	0.51	0.94	0.94	0.84	0.94	0.94	0.84
Lanes:	0.87	0.13	1.00	0.60	0.23	0.17	1.00	2.00	1.00	1.00	2.00	1.00
Final Sat.:	1164	173	1615	583	219	160	1787	3574	1599	1787	3574	1599
Capacity Analysis Module:												
Vol/Sat:	0.23	0.23	0.09	0.07	0.07	0.07	0.01	0.36	0.26	0.17	0.61	0.04
Crit Moves:		****					****				****	
Green/Cycle:	0.24	0.24	0.24	0.24	0.24	0.24	0.01	0.46	0.46	0.21	0.66	0.66
Volume/Cap:	0.93	0.93	0.37	0.28	0.28	0.28	0.93	0.79	0.56	0.79	0.93	0.06
Uniform Del:	51.9	51.9	44.1	43.1	43.1	43.1	68.9	32.2	27.7	52.0	21.2	8.6
IncremntDel:	32.7	32.7	0.6	0.7	0.7	0.7	147.0	2.6	1.0	10.5	7.5	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	84.6	84.6	44.7	43.8	43.8	43.8	215.9	34.8	28.7	62.5	28.7	8.6
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	84.6	84.6	44.7	43.8	43.8	43.8	215.9	34.8	28.7	62.5	28.7	8.6
DesignQueue:	16	2	9	2	1	1	2	60	18	19	69	2

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #95 Scholls Ferry/Conestoga

Cycle (sec): 120 Critical Vol./Cap. (X): 0.779
Loss Time (sec): 16 (Y+R = 4 sec) Average Delay (sec/veh): 12.7
Optimal Cycle: 87 Level Of Service: B

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Split Phase				Split Phase				Protected				Protected			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	0	0	0	1	0	0	1	1	0	2	0	0	0	2	0 1
Volume Module:																
Base Vol:	0	0	0	142	0	37	47	1448	0	0	2060	196				
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Initial Bse:	0	0	0	142	0	37	47	1448	0	0	2060	196				
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Volume:	0	0	0	142	0	37	47	1448	0	0	2060	196				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0				
Reduced Vol:	0	0	0	142	0	37	47	1448	0	0	2060	196				
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Final Vol.:	0	0	0	142	0	37	47	1448	0	0	2060	196				
Saturation Flow Module:																
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900				
Adjustment:	1.00	1.00	1.00	0.95	1.00	0.85	0.95	0.95	1.00	1.00	0.95	0.85				
Lanes:	0.00	0.00	0.00	1.00	0.00	1.00	1.00	2.00	0.00	0.00	2.00	1.00				
Final Sat.:	0	0	0	1805	0	1615	1805	3610	0	0	3610	1615				
Capacity Analysis Module:																
Vol/Sat:	0.00	0.00	0.00	0.08	0.00	0.02	0.03	0.40	0.00	0.00	0.57	0.12				
Crit Moves:				****			****				****					
Green/Cycle:	0.00	0.00	0.00	0.10	0.00	0.10	0.03	0.77	0.00	0.00	0.73	0.73				
Volume/Cap:	0.00	0.00	0.00	0.78	0.00	0.23	0.78	0.52	0.00	0.00	0.78	0.17				
Uniform Del:	0.0	0.0	0.0	52.6	0.0	49.6	57.6	5.5	0.0	0.0	10.0	4.9				
IncremntDel:	0.0	0.0	0.0	19.0	0.0	0.7	46.7	0.2	0.0	0.0	1.5	0.1				
Delay Adj:	0.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00				
Delay/Veh:	0.0	0.0	0.0	71.7	0.0	50.3	104.2	5.7	0.0	0.0	11.6	5.0				
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
AdjDel/Veh:	0.0	0.0	0.0	71.7	0.0	50.3	104.2	5.7	0.0	0.0	11.6	5.0				
DesignQueue:	0	0	0	9	0	2	3	25	0	0	43	4				

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #102 Scholls Ferry/Laurelwood

Average Delay (sec/veh): 129.0 Worst Case Level Of Service: F

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Uncontrolled				Uncontrolled				Stop Sign				Stop Sign			
Rights:	Include				Include				Include				Include			
Lanes:	1	0	0	1 0	0	0	0	1 0	1	0	0	0 1	1	0	0	0 1
Volume Module:																
Base Vol:	179	922	0	0	742	74	74	0	211	0	0	0				
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Initial Bse:	179	922	0	0	742	74	74	0	211	0	0	0				
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Volume:	179	922	0	0	742	74	74	0	211	0	0	0				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0				
Final Vol.:	179	922	0	0	742	74	74	0	211	0	0	0				
Critical Gap Module:																
Critical Gp:	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	6.4	xxxx	6.2	xxxxx	xxxx	xxxxx				
FollowUpTim:	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	3.5	xxxx	3.3	xxxxx	xxxx	xxxxx				
Capacity Module:																
Cnflict Vol:	816	xxxx	xxxxx	xxxx	xxxx	xxxxx	2061	xxxx	779	xxxx	xxxx	xxxxx				
Potent Cap.:	820	xxxx	xxxxx	xxxx	xxxx	xxxxx	60	xxxx	396	xxxx	xxxx	xxxxx				
Move Cap.:	820	xxxx	xxxxx	xxxx	xxxx	xxxxx	50	xxxx	396	xxxx	xxxx	xxxxx				
Level Of Service Module:																
Stopped Del:	10.6	xxxx	xxxxx	xxxxx	xxxx	xxxxx	428.3	xxxx	24.0	xxxxx	xxxx	xxxxx				
LOS by Move:	B	*	*	*	*	*	F	*	C	*	*	*				
Movement:	LT - LTR - RT			LT - LTR - RT			LT - LTR - RT			LT - LTR - RT						
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx				
Shrd StpDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx				
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	*				
ApproachDel:	xxxxxx			xxxxxx			129.0			xxxxxx						
ApproachLOS:	*			*			F			*						

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #103 Canyon/Lombard

Cycle (sec): 100 Critical Vol./Cap. (X): 0.950
Loss Time (sec): 16 (Y+R = 4 sec) Average Delay (sec/veh): 44.7
Optimal Cycle: 140 Level Of Service: D

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Protected				Protected			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0	0	1 0	1	0	1	0 1	1	0	1	1 0	1	0	1	1 0
Volume Module:																
Base Vol:	125	314		7	122	414		96	70	1448		86	43	1282		100
Growth Adj:	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00
Initial Bse:	125	314		7	122	414		96	70	1448		86	43	1282		100
User Adj:	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00
PHF Adj:	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00
PHF Volume:	125	314		7	122	414		96	70	1448		86	43	1282		100
Reduct Vol:	0	0		0	0	0		0	0	0		0	0	0		0
Reduced Vol:	125	314		7	122	414		96	70	1448		86	43	1282		100
PCE Adj:	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00
MLF Adj:	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00
Final Vol.:	125	314		7	122	414		96	70	1448		86	43	1282		100
Saturation Flow Module:																
Sat/Lane:	1900	1900		1900	1900	1900		1900	1900	1900		1900	1900	1900		1900
Adjustment:	0.88	0.92		0.92	0.80	0.85		0.72	0.92	0.92		0.92	0.92	0.91		0.91
Lanes:	1.00	0.98		0.02	1.00	1.00		1.00	1.00	1.89		0.11	1.00	1.86		0.14
Final Sat.:	1671	1716		38	1529	1609		1368	1753	3282		195	1753	3216		251
Capacity Analysis Module:																
Vol/Sat:	0.07	0.18		0.18	0.08	0.26		0.07	0.04	0.44		0.44	0.02	0.40		0.40
Crit Moves:	****					****				****				****		
Green/Cycle:	0.08	0.24		0.24	0.11	0.27		0.27	0.04	0.46		0.46	0.03	0.45		0.45
Volume/Cap:	0.95	0.75		0.75	0.75	0.95		0.26	0.89	0.95		0.95	0.95	0.89		0.89
Uniform Del:	45.9	35.0		35.0	43.4	35.8		28.6	47.5	25.7		25.7	48.6	25.5		25.5
IncremntDel:	62.9	7.3		7.3	17.7	30.5		0.4	67.1	12.5		12.5	114.2	7.1		7.1
Delay Adj:	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00
Delay/Veh:	108.7	42.4		42.4	61.1	66.3		29.0	114.6	38.1		38.1	162.8	32.7		32.7
User DelAdj:	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00
AdjDel/Veh:	108.7	42.4		42.4	61.1	66.3		29.0	114.6	38.1		38.1	162.8	32.7		32.7
DesignQueue:	7	14		0	6	18		4	4	48		3	2	44		3

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #105 Canyon/117th

Cycle (sec): 100 Critical Vol./Cap. (X): 0.762
Loss Time (sec): 16 (Y+R = 4 sec) Average Delay (sec/veh): 25.9
Optimal Cycle: 79 Level Of Service: C

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Protected				Protected			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0	1	0 1	2	0	0	1 0	1	0	2	0 1	2	0	2	0 1
Volume Module:																
Base Vol:	38	77		201	244	66		83	57	1436		34	117	1328		315
Growth Adj:	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00
Initial Bse:	38	77		201	244	66		83	57	1436		34	117	1328		315
User Adj:	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00
PHF Adj:	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00
PHF Volume:	38	77		201	244	66		83	57	1436		34	117	1328		315
Reduct Vol:	0	0		0	0	0		0	0	0		0	0	0		0
Reduced Vol:	38	77		201	244	66		83	57	1436		34	117	1328		315
PCE Adj:	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00
MLF Adj:	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00
Final Vol.:	38	77		201	244	66		83	57	1436		34	117	1328		315
Saturation Flow Module:																
Sat/Lane:	1900	1900		1900	1900	1900		1900	1900	1900		1900	1900	1900		1900
Adjustment:	0.94	0.99		0.84	0.91	0.90		0.90	0.92	0.92		0.82	0.90	0.93		0.83
Lanes:	1.00	1.00		1.00	2.00	0.44		0.56	1.00	2.00		1.00	2.00	2.00		1.00
Final Sat.:	1787	1881		1599	3467	760		956	1753	3505		1556	3432	3538		1583
Capacity Analysis Module:																
Vol/Sat:	0.02	0.04		0.13	0.07	0.09		0.09	0.03	0.41		0.02	0.03	0.38		0.20
Crit Moves:					****	****					****		****			
Green/Cycle:	0.05	0.17		0.17	0.09	0.21		0.21	0.05	0.54		0.54	0.04	0.54		0.54
Volume/Cap:	0.42	0.25		0.76	0.76	0.42		0.42	0.70	0.76		0.04	0.76	0.70		0.37
Uniform Del:	46.0	36.3		39.9	44.3	34.5		34.5	47.0	18.1		10.9	47.2	17.2		13.4
IncremntDel:	3.1	0.4		12.3	10.3	0.8		0.8	23.7	1.9		0.0	19.8	1.2		0.3
Delay Adj:	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00
Delay/Veh:	49.2	36.8		52.1	54.6	35.3		35.3	70.7	20.0		10.9	67.0	18.4		13.7
User DelAdj:	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00
AdjDel/Veh:	49.2	36.8		52.1	54.6	35.3		35.3	70.7	20.0		10.9	67.0	18.4		13.7
DesignQueue:	2	4		10	13	3		4	3	41		1	6	38		8

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #114 ORE 217 SB Ramp/Canyon

Cycle (sec): 100 Critical Vol./Cap. (X): 0.835
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 28.4
Optimal Cycle: 86 Level Of Service: C

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Split Phase				Split Phase				Protected				Protected			
Rights:	Include				Include				Ignore				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	0	0	0	1	0	1	1	0	0	2	0	1	0	2	0
Volume Module:																
Base Vol:	0	0	0		191	508	387		0	1237	486		314	1203	0	
Growth Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Initial Bse:	0	0	0		191	508	387		0	1237	486		314	1203	0	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	0.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	0.00		1.00	1.00	1.00	
PHF Volume:	0	0	0		191	508	387		0	1237	0		314	1203	0	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	0	0	0		191	508	387		0	1237	0		314	1203	0	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	0.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	0.00		1.00	1.00	1.00	
Final Vol.:	0	0	0		191	508	387		0	1237	0		314	1203	0	
Saturation Flow Module:																
Sat/Lane:	1900	1900	1900		1900	1900	1900		1900	1900	1900		1900	1900	1900	
Adjustment:	1.00	1.00	1.00		0.90	0.85	0.85		1.00	0.90	1.00		0.88	0.88	1.00	
Lanes:	0.00	0.00	0.00		1.00	1.70	1.30		0.00	2.00	1.00		1.00	2.00	0.00	
Final Sat.:	0	0	0		1709	2765	2106		0	3404	1900		1671	3343	0	
Capacity Analysis Module:																
Vol/Sat:	0.00	0.00	0.00		0.11	0.18	0.18		0.00	0.36	0.00		0.19	0.36	0.00	
Crit Moves:							****			****			****			
Green/Cycle:	0.00	0.00	0.00		0.22	0.22	0.22		0.00	0.44	0.00		0.22	0.66	0.00	
Volume/Cap:	0.00	0.00	0.00		0.51	0.84	0.84		0.00	0.84	0.00		0.84	0.55	0.00	
Uniform Del:	0.0	0.0	0.0		34.2	37.3	37.3		0.0	25.1	0.0		37.0	9.0	0.0	
IncremntDel:	0.0	0.0	0.0		1.1	5.8	5.8		0.0	4.3	0.0		14.9	0.3	0.0	
Delay Adj:	0.00	0.00	0.00		1.00	1.00	1.00		0.00	1.00	0.00		1.00	1.00	0.00	
Delay/Veh:	0.0	0.0	0.0		35.4	43.1	43.1		0.0	29.4	0.0		51.9	9.3	0.0	
User DelAdj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
AdjDel/Veh:	0.0	0.0	0.0		35.4	43.1	43.1		0.0	29.4	0.0		51.9	9.3	0.0	
DesignQueue:	0	0	0		9	23	17		0	42	0		14	25	0	

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #115 ORE 217 NB Ramp/Canyon

Cycle (sec): 100 Critical Vol./Cap. (X): 0.811
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 28.5
Optimal Cycle: 80 Level Of Service: C

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Split Phase				Split Phase				Protected				Protected			
Rights:	Ovl				Include				Include				Ovl			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	1	1	0	1	0	0	0	0	1	0	2	0	0	0	1
Volume Module:																
Base Vol:	508	494	380		0	0	0		226	1187	0		0	1119	210	
Growth Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Initial Bse:	508	494	380		0	0	0		226	1187	0		0	1119	210	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	508	494	380		0	0	0		226	1187	0		0	1119	210	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	508	494	380		0	0	0		226	1187	0		0	1119	210	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Final Vol.:	508	494	380		0	0	0		226	1187	0		0	1119	210	
Saturation Flow Module:																
Sat/Lane:	1900	1900	1900		1900	1900	1900		1900	1900	1900		1900	1900	1900	
Adjustment:	0.76	0.76	0.80		1.00	1.00	1.00		0.90	0.90	1.00		1.00	0.89	0.79	
Lanes:	1.52	1.48	1.00		0.00	0.00	0.00		1.00	2.00	0.00		0.00	2.00	1.00	
Final Sat.:	2201	2140	1523		0	0	0		1702	3404	0		0	3375	1510	
Capacity Analysis Module:																
Vol/Sat:	0.23	0.23	0.25		0.00	0.00	0.00		0.13	0.35	0.00		0.00	0.33	0.14	
Crit Moves:			****						****					****		
Green/Cycle:	0.31	0.31	0.31		0.00	0.00	0.00		0.16	0.57	0.00		0.00	0.41	0.41	
Volume/Cap:	0.75	0.75	0.81		0.00	0.00	0.00		0.81	0.61	0.00		0.00	0.81	0.34	
Uniform Del:	31.2	31.2	31.9		0.0	0.0	0.0		40.3	14.0	0.0		0.0	26.2	20.3	
IncremntDel:	2.4	2.4	10.3		0.0	0.0	0.0		16.3	0.6	0.0		0.0	3.7	0.3	
Delay Adj:	1.00	1.00	1.00		0.00	0.00	0.00		1.00	1.00	0.00		0.00	1.00	1.00	
Delay/Veh:	33.6	33.6	42.2		0.0	0.0	0.0		56.6	14.6	0.0		0.0	29.9	20.6	
User DelAdj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
AdjDel/Veh:	33.6	33.6	42.2		0.0	0.0	0.0		56.6	14.6	0.0		0.0	29.9	20.6	
DesignQueue:	20	20	15		0	0	0		11	31	0		0	40	7	

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #116 ORE 217 SB Ramp/Farmington

Cycle (sec): 100 Critical Vol./Cap. (X): 0.891
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 33.5
Optimal Cycle: 106 Level Of Service: C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	0	0	1	0	2	0	1	0	1	0	2	0	0
Volume Module:														
Base Vol:	0	0	0	449	555	277	0	1249	495	231	1705	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	449	555	277	0	1249	495	231	1705	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	449	555	277	0	1249	495	231	1705	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	449	555	277	0	1249	495	231	1705	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	0	0	0	449	555	277	0	1249	495	231	1705	0
Saturation Flow Module:														
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	0.80	0.90	0.80	1.00	0.92	0.83	0.91	0.91	1.00
Lanes:	0.00	0.00	0.00	1.00	2.00	1.00	0.00	2.00	1.00	1.00	2.00	0.00
Final Sat.:	0	0	0	1523	3404	1523	0	3505	1568	1736	3473	0
Capacity Analysis Module:														
Vol/Sat:	0.00	0.00	0.00	0.29	0.16	0.18	0.00	0.36	0.32	0.13	0.49	0.00
Crit Moves:				****				****		****		
Green/Cycle:	0.00	0.00	0.00	0.33	0.33	0.33	0.00	0.40	0.40	0.15	0.55	0.00
Volume/Cap:	0.00	0.00	0.00	0.89	0.49	0.55	0.00	0.89	0.79	0.89	0.89	0.00
Uniform Del:	0.0	0.0	0.0	31.7	26.7	27.4	0.0	28.0	26.3	41.7	20.0	0.0
IncremntDel:	0.0	0.0	0.0	17.7	0.3	1.3	0.0	7.5	6.7	29.3	5.9	0.0
Delay Adj:	0.00	0.00	0.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.00
Delay/Veh:	0.0	0.0	0.0	49.5	27.1	28.7	0.0	35.5	33.0	71.1	25.9	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	49.5	27.1	28.7	0.0	35.5	33.0	71.1	25.9	0.0
DesignQueue:	0	0	0	18	21	11	0	46	18	11	48	0

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #117 ORE 217 NB Ramp/Farmington

Cycle (sec): 100 Critical Vol./Cap. (X): 0.809
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 28.5
Optimal Cycle: 79 Level Of Service: C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Protected			Protected		
Rights:	Ovl			Include			Include			Ovl		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	2	0	2	0	1	0	0	0	0	0	1	0	2	0	1
Volume Module:														
Base Vol:	731	651	353	0	0	0	222	1390	0	0	1170	423
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	731	651	353	0	0	0	222	1390	0	0	1170	423
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	731	651	353	0	0	0	222	1390	0	0	1170	423
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	731	651	353	0	0	0	222	1390	0	0	1170	423
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	731	651	353	0	0	0	222	1390	0	0	1170	423
Saturation Flow Module:														
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.78	0.90	0.81	1.00	1.00	1.00	0.92	0.92	1.00	1.00	0.90	0.81
Lanes:	2.00	2.00	1.00	0.00	0.00	0.00	1.00	2.00	0.00	0.00	2.00	1.00
Final Sat.:	2983	3437	1537	0	0	0	1753	3505	0	0	3437	1537
Capacity Analysis Module:														
Vol/Sat:	0.25	0.19	0.23	0.00	0.00	0.00	0.13	0.40	0.00	0.00	0.34	0.28
Crit Moves:	****						****				****	
Green/Cycle:	0.30	0.30	0.30	0.00	0.00	0.00	0.16	0.58	0.00	0.00	0.42	0.42
Volume/Cap:	0.81	0.63	0.76	0.00	0.00	0.00	0.81	0.69	0.00	0.00	0.81	0.65
Uniform Del:	32.2	30.0	31.5	0.0	0.0	0.0	40.7	14.8	0.0	0.0	25.4	23.2
IncremntDel:	5.5	1.2	7.1	0.0	0.0	0.0	16.3	1.0	0.0	0.0	3.5	2.4
Delay Adj:	1.00	1.00	1.00	0.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00
Delay/Veh:	37.7	31.2	38.6	0.0	0.0	0.0	57.0	15.8	0.0	0.0	29.0	25.6
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	37.7	31.2	38.6	0.0	0.0	0.0	57.0	15.8	0.0	0.0	29.0	25.6
DesignQueue:	30	26	14	0	0	0	11	36	0	0	41	14

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #118 ORE 217 SB Ramp/Allen

Cycle (sec): 100 Critical Vol./Cap. (X): 0.900
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 35.0
Optimal Cycle: 110 Level Of Service: C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Protected			Protected		
Rights:	Include			Ovl			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0 0	0	0 0	0 1	1 0	2	0 0	2	0 1	1 0	2	0 0
Volume Module:												
Base Vol:	0	0	0	385	0	518	0	867	312	498	1258	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	385	0	518	0	867	312	498	1258	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	385	0	518	0	867	312	498	1258	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	385	0	518	0	867	312	498	1258	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	0	0	0	385	0	518	0	867	312	498	1258	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	0.85	0.95	0.71	1.00	0.93	0.83	0.85	0.85	1.00
Lanes:	0.00	0.00	0.00	1.00	1.00	2.00	0.00	2.00	1.00	1.00	2.00	0.00
Final Sat.:	0	0	0	1617	1805	2680	0	3538	1583	1612	3224	0
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.24	0.00	0.19	0.00	0.25	0.20	0.31	0.39	0.00
Crit Moves:				****				****		****		
Green/Cycle:	0.00	0.00	0.00	0.26	0.00	0.26	0.00	0.27	0.27	0.34	0.62	0.00
Volume/Cap:	0.00	0.00	0.00	0.90	0.00	0.73	0.00	0.90	0.72	0.90	0.63	0.00
Uniform Del:	0.0	0.0	0.0	35.5	0.0	33.5	0.0	35.1	33.0	31.2	12.1	0.0
IncremntDel:	0.0	0.0	0.0	21.5	0.0	3.9	0.0	11.3	6.0	17.7	0.7	0.0
Delay Adj:	0.00	0.00	0.00	1.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	0.00
Delay/Veh:	0.0	0.0	0.0	57.0	0.0	37.4	0.0	46.4	39.0	48.9	12.8	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	57.0	0.0	37.4	0.0	46.4	39.0	48.9	12.8	0.0
DesignQueue:	0	0	0	17	0	22	0	37	13	20	29	0

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #119 ORE 217 NB Ramp/Allen

Cycle (sec): 100 Critical Vol./Cap. (X): 0.900
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 32.4
Optimal Cycle: 110 Level Of Service: C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Protected			Protected		
Rights:	Ovl			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1 1	0	0 1	0 0	0	0 0	1 0	2	0 0	0 0	2	0 1
Volume Module:												
Base Vol:	462	0	344	0	0	0	300	919	0	0	1269	496
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	462	0	344	0	0	0	300	919	0	0	1269	496
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	462	0	344	0	0	0	300	919	0	0	1269	496
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	462	0	344	0	0	0	300	919	0	0	1269	496
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	462	0	344	0	0	0	300	919	0	0	1269	496
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.90	1.00	0.80	1.00	1.00	1.00	0.91	0.91	1.00	1.00	0.85	0.76
Lanes:	2.00	0.00	1.00	0.00	0.00	0.00	1.00	2.00	0.00	0.00	2.00	1.00
Final Sat.:	3411	0	1523	0	0	0	1736	3473	0	0	3224	1442
Capacity Analysis Module:												
Vol/Sat:	0.14	0.00	0.23	0.00	0.00	0.00	0.17	0.26	0.00	0.00	0.39	0.34
Crit Moves:			****				****				****	
Green/Cycle:	0.25	0.00	0.25	0.00	0.00	0.00	0.19	0.63	0.00	0.00	0.44	0.44
Volume/Cap:	0.54	0.00	0.90	0.00	0.00	0.00	0.90	0.42	0.00	0.00	0.90	0.79
Uniform Del:	32.5	0.0	36.2	0.0	0.0	0.0	39.5	9.4	0.0	0.0	26.1	24.1
IncremntDel:	0.7	0.0	23.5	0.0	0.0	0.0	26.0	0.1	0.0	0.0	8.2	6.5
Delay Adj:	1.00	0.00	1.00	0.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00
Delay/Veh:	33.2	0.0	59.7	0.0	0.0	0.0	65.4	9.5	0.0	0.0	34.3	30.7
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	33.2	0.0	59.7	0.0	0.0	0.0	65.4	9.5	0.0	0.0	34.3	30.7
DesignQueue:	20	0	15	0	0	0	14	20	0	0	44	17

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #120 ORE 217 SB Ramp/Denney

Cycle (sec): 100 Critical Vol./Cap. (X): 0.957
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 42.7
Optimal Cycle: 145 Level Of Service: D

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	0	0	0	1	0	0	1	0	1	0	0
Volume Module:												
Base Vol:	0	0	0	111	0	402	0	643	208	144	659	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	111	0	402	0	643	208	144	659	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	111	0	402	0	643	208	144	659	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	111	0	402	0	643	208	144	659	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	0	0	0	111	0	402	0	643	208	144	659	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	0.87	1.00	0.78	1.00	0.92	0.92	0.90	0.94	1.00
Lanes:	0.00	0.00	0.00	1.00	0.00	1.00	0.00	0.76	0.24	1.00	1.00	0.00
Final Sat.:	0	0	0	1659	0	1481	0	1322	428	1702	1792	0
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.07	0.00	0.27	0.00	0.49	0.49	0.08	0.37	0.00
Crit Moves:						****		****		****		
Green/Cycle:	0.00	0.00	0.00	0.28	0.00	0.28	0.00	0.51	0.51	0.09	0.60	0.00
Volume/Cap:	0.00	0.00	0.00	0.24	0.00	0.96	0.00	0.96	0.96	0.96	0.62	0.00
Uniform Del:	0.0	0.0	0.0	27.5	0.0	35.2	0.0	23.6	23.6	45.4	12.9	0.0
IncremntDel:	0.0	0.0	0.0	0.3	0.0	33.0	0.0	20.5	20.5	60.4	1.1	0.0
Delay Adj:	0.00	0.00	0.00	1.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	0.00
Delay/Veh:	0.0	0.0	0.0	27.8	0.0	68.2	0.0	44.1	44.1	105.8	14.0	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	27.8	0.0	68.2	0.0	44.1	44.1	105.8	14.0	0.0
DesignQueue:	0	0	0	4	0	17	0	20	6	7	16	0

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #121 ORE 217 NB Ramp/Denney

Cycle (sec): 100 Critical Vol./Cap. (X): 0.848
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 37.0
Optimal Cycle: 90 Level Of Service: D

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	1	0	0	1	0	0	0	0	1	0	0
Volume Module:												
Base Vol:	275	0	196	0	0	0	411	335	0	0	518	113
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	275	0	196	0	0	0	411	335	0	0	518	113
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	275	0	196	0	0	0	411	335	0	0	518	113
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	275	0	196	0	0	0	411	335	0	0	518	113
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	275	0	196	0	0	0	411	335	0	0	518	113
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.88	1.00	0.79	1.00	1.00	1.00	0.92	0.97	1.00	1.00	0.96	0.96
Lanes:	1.00	0.00	1.00	0.00	0.00	0.00	1.00	1.00	0.00	0.00	0.82	0.18
Final Sat.:	1675	0	1495	0	0	0	1753	1845	0	0	1492	325
Capacity Analysis Module:												
Vol/Sat:	0.16	0.00	0.13	0.00	0.00	0.00	0.23	0.18	0.00	0.00	0.35	0.35
Crit Moves:	****						****				****	
Green/Cycle:	0.19	0.00	0.19	0.00	0.00	0.00	0.28	0.69	0.00	0.00	0.41	0.41
Volume/Cap:	0.85	0.00	0.68	0.00	0.00	0.00	0.85	0.26	0.00	0.00	0.85	0.85
Uniform Del:	38.9	0.0	37.4	0.0	0.0	0.0	34.2	6.0	0.0	0.0	26.7	26.7
IncremntDel:	18.4	0.0	6.3	0.0	0.0	0.0	13.1	0.1	0.0	0.0	9.0	9.0
Delay Adj:	1.00	0.00	1.00	0.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00
Delay/Veh:	57.3	0.0	43.7	0.0	0.0	0.0	47.3	6.1	0.0	0.0	35.7	35.7
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	57.3	0.0	43.7	0.0	0.0	0.0	47.3	6.1	0.0	0.0	35.7	35.7
DesignQueue:	13	0	9	0	0	0	18	6	0	0	19	4

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #122 ORE 217 SB off Ramp/Hall/Cascade

Cycle (sec): 120 Critical Vol./Cap. (X): 1.106
Loss Time (sec): 16 (Y+R = 4 sec) Average Delay (sec/veh): 76.0
Optimal Cycle: 180 Level Of Service: E

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Split Phase				Split Phase				Protected				Protected			
Rights:	Ovl				Include				Include				Ignore			
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0	
Lanes:	1	0	1	0 1	1	0	1!	0 0	1	0	1	1 0	1	0	2	0 1
Volume Module:																
Base Vol:	192	10	47		498	90	264		154	1135	155		24	1398	24	
Growth Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Initial Bse:	192	10	47		498	90	264		154	1135	155		24	1398	24	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	0.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	0.00	
PHF Volume:	192	10	47		498	90	264		154	1135	155		24	1398	0	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	192	10	47		498	90	264		154	1135	155		24	1398	0	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	0.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	0.00	
Final Vol.:	192	10	47		498	90	264		154	1135	155		24	1398	0	
Saturation Flow Module:																
Sat/Lane:	1900	1900	1900		1900	1900	1900		1900	1900	1900		1900	1900	1900	
Adjustment:	0.90	0.94	0.80		0.89	0.89	0.89		0.93	0.91	0.91		0.91	0.91	1.00	
Lanes:	1.00	1.00	1.00		1.41	0.15	0.44		1.00	1.76	0.24		1.00	2.00	1.00	
Final Sat.:	1702	1792	1523		2395	253	742		1769	3044	416		1736	3473	1900	
Capacity Analysis Module:																
Vol/Sat:	0.11	0.01	0.03		0.21	0.36	0.36		0.09	0.37	0.37		0.01	0.40	0.00	
Crit Moves:	****					****			****					****		
Green/Cycle:	0.10	0.10	0.12		0.32	0.32	0.32		0.08	0.43	0.43		0.02	0.36	0.00	
Volume/Cap:	1.11	0.05	0.26		0.65	1.11	1.11		1.11	0.87	0.87		0.87	1.11	0.00	
Uniform Del:	53.9	48.7	48.2		34.8	40.7	40.7		55.3	31.4	31.4		58.9	38.2	0.0	
IncremntDel:	99.4	0.1	0.8		1.1	65.3	65.3		107.4	6.0	6.0		117.4	59.4	0.0	
Delay Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	0.00	
Delay/Veh:	153.3	48.8	49.0		36.0	106	106.0		162.7	37.4	37.4		176.4	97.6	0.0	
User DelAdj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
AdjDel/Veh:	153.3	48.8	49.0		36.0	106	106.0		162.7	37.4	37.4		176.4	97.6	0.0	
DesignQueue:	12	1	3		24	4	13		10	48	7		2	66	0	

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #123 ORE 217 NB on Ramp/Scholls Ferry

Cycle (sec): 100 Critical Vol./Cap. (X): 1.429
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 148.9
Optimal Cycle: 180 Level Of Service: F

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Split Phase				Split Phase			
Rights:	Include				Ignore				Include				Include			
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0	
Lanes:	1	0	2	0 0	0	0	2	0 1	0	0	0	0 0	1	0	2	0 1
Volume Module:																
Base Vol:	713	916	0		0	1362	573		0	0	0		679	722	292	
Growth Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Initial Bse:	713	916	0		0	1362	573		0	0	0		679	722	292	
User Adj:	1.00	1.00	1.00		1.00	1.00	0.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	0.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	713	916	0		0	1362	0		0	0	0		679	722	292	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	713	916	0		0	1362	0		0	0	0		679	722	292	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	0.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	0.00		1.00	1.00	1.00		1.00	1.00	1.00	
Final Vol.:	713	916	0		0	1362	0		0	0	0		679	722	292	
Saturation Flow Module:																
Sat/Lane:	1900	1900	1900		1900	1900	1900		1900	1900	1900		1900	1900	1900	
Adjustment:	0.92	0.91	1.00		1.00	0.90	1.00		1.00	1.00	1.00		0.79	0.88	0.79	
Lanes:	1.00	2.00	0.00		0.00	2.00	1.00		0.00	0.00	0.00		1.00	2.00	1.00	
Final Sat.:	1753	3449	0		0	3437	1900		0	0	0		1495	3343	1495	
Capacity Analysis Module:																
Vol/Sat:	0.41	0.27	0.00		0.00	0.40	0.00		0.00	0.00	0.00		0.45	0.22	0.20	
Crit Moves:	****					****								****		
Green/Cycle:	0.28	0.56	0.00		0.00	0.28	0.00		0.00	0.00	0.00		0.32	0.32	0.32	
Volume/Cap:	1.43	0.47	0.00		0.00	1.43	0.00		0.00	0.00	0.00		1.43	0.68	0.61	
Uniform Del:	35.8	13.0	0.0		0.0	36.1	0.0		0.0	0.0	0.0		34.1	29.7	28.9	
IncremntDel:	204.2	0.2	0.0		0.0	199	0.0		0.0	0.0	0.0		204.8	1.8	2.4	
Delay Adj:	1.00	1.00	0.00		0.00	1.00	0.00		0.00	0.00	0.00		1.00	1.00	1.00	
Delay/Veh:	240.0	13.2	0.0		0.0	235	0.0		0.0	0.0	0.0		238.9	31.5	31.3	
User DelAdj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
AdjDel/Veh:	240.0	13.2	0.0		0.0	235	0.0		0.0	0.0	0.0		238.9	31.5	31.3	
DesignQueue:	31	24	0		0	60	0		0	0	0		28	29	12	

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #125 ORE 217 NB off Ramp/Scholls Ferry

Cycle (sec): 100 Critical Vol./Cap. (X): 0.645
Loss Time (sec): 8 (Y+R = 4 sec) Average Delay (sec/veh): 19.6
Optimal Cycle: 42 Level Of Service: B

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Permitted				Permitted				Split Phase				Split Phase			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0	
Lanes:	0	0	2	0 0	0	0	2	0 0	0	0	0	0 0	1	0	0	0 1
Volume Module:																
Base Vol:	0	1117	0		0	771	0		0	0	0		247	0	427	
Growth Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Initial Bse:	0	1117	0		0	771	0		0	0	0		247	0	427	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	0	1117	0		0	771	0		0	0	0		247	0	427	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	0	1117	0		0	771	0		0	0	0		247	0	427	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Final Vol.:	0	1117	0		0	771	0		0	0	0		247	0	427	
Saturation Flow Module:																
Sat/Lane:	1900	1900	1900		1900	1900	1900		1900	1900	1900		1900	1900	1900	
Adjustment:	1.00	0.92	1.00		1.00	0.90	1.00		1.00	1.00	1.00		0.91	1.00	0.82	
Lanes:	0.00	2.00	0.00		0.00	2.00	0.00		0.00	0.00	0.00		1.00	0.00	1.00	
Final Sat.:	0	3505	0		0	3437	0		0	0	0		1736	0	1554	
Capacity Analysis Module:																
Vol/Sat:	0.00	0.32	0.00		0.00	0.22	0.00		0.00	0.00	0.00		0.14	0.00	0.27	
Crit Moves:		****													****	
Green/Cycle:	0.00	0.49	0.00		0.00	0.49	0.00		0.00	0.00	0.00		0.43	0.00	0.43	
Volume/Cap:	0.00	0.65	0.00		0.00	0.45	0.00		0.00	0.00	0.00		0.33	0.00	0.65	
Uniform Del:	0.0	18.8	0.0		0.0	16.5	0.0		0.0	0.0	0.0		19.2	0.0	22.7	
IncremntDel:	0.0	0.8	0.0		0.0	0.2	0.0		0.0	0.0	0.0		0.3	0.0	2.2	
Delay Adj:	0.00	1.00	0.00		0.00	1.00	0.00		0.00	0.00	0.00		1.00	0.00	1.00	
Delay/Veh:	0.0	19.6	0.0		0.0	16.7	0.0		0.0	0.0	0.0		19.5	0.0	24.9	
User DelAdj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
AdjDel/Veh:	0.0	19.6	0.0		0.0	16.7	0.0		0.0	0.0	0.0		19.5	0.0	24.9	
DesignQueue:	0	34	0		0	23	0		0	0	0		8	0	14	

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #129 ORE 217 NB Ramp/Walker

Cycle (sec): 80 Critical Vol./Cap. (X): 0.756
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 24.1
Optimal Cycle: 64 Level Of Service: C

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Split Phase				Split Phase				Protected				Protected			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0	
Lanes:	2	0	0	1 0	0	0	0	0 0	1	0	1	0 0	0	0	0	1 0
Volume Module:																
Base Vol:	918	0	81		0	0	0		82	676	0		0	394	186	
Growth Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Initial Bse:	918	0	81		0	0	0		82	676	0		0	394	186	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	918	0	81		0	0	0		82	676	0		0	394	186	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	918	0	81		0	0	0		82	676	0		0	394	186	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Final Vol.:	918	0	81		0	0	0		82	676	0		0	394	186	
Saturation Flow Module:																
Sat/Lane:	1900	1900	1900		1900	1900	1900		1900	1900	1900		1900	1900	1900	
Adjustment:	0.90	1.00	0.83		1.00	1.00	1.00		0.93	0.98	1.00		1.00	0.93	0.93	
Lanes:	2.00	0.00	1.00		0.00	0.00	0.00		1.00	1.00	0.00		0.00	0.68	0.32	
Final Sat.:	3432	0	1583		0	0	0		1769	1862	0		0	1199	566	
Capacity Analysis Module:																
Vol/Sat:	0.27	0.00	0.05		0.00	0.00	0.00		0.05	0.36	0.00		0.00	0.33	0.33	
Crit Moves:	****								****					****		
Green/Cycle:	0.35	0.00	0.35		0.00	0.00	0.00		0.06	0.50	0.00		0.00	0.43	0.43	
Volume/Cap:	0.76	0.00	0.14		0.00	0.00	0.00		0.76	0.73	0.00		0.00	0.76	0.76	
Uniform Del:	22.8	0.0	17.6		0.0	0.0	0.0		37.0	16.0	0.0		0.0	19.0	19.0	
IncremntDel:	2.8	0.0	0.1		0.0	0.0	0.0		25.7	3.0	0.0		0.0	4.3	4.3	
Delay Adj:	1.00	0.00	1.00		0.00	0.00	0.00		1.00	1.00	0.00		0.00	1.00	1.00	
Delay/Veh:	25.6	0.0	17.7		0.0	0.0	0.0		62.7	19.0	0.0		0.0	23.4	23.4	
User DelAdj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
AdjDel/Veh:	25.6	0.0	17.7		0.0	0.0	0.0		62.7	19.0	0.0		0.0	23.4	23.4	
DesignQueue:	28	0	2		0	0	0		3	17	0		0	11	5	

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #130 ORE 217 SB Ramp/Walker

Cycle (sec): 80 Critical Vol./Cap. (X): 0.643
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 15.9
Optimal Cycle: 50 Level Of Service: B

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0 0	0	0 0	0 1	0	0 1	0 0	1	0 2	1 0	2	0 0
Volume Module:												
Base Vol:	0	0	0	243	0	289	0	639	912	36	1269	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	243	0	289	0	639	912	36	1269	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	243	0	289	0	639	912	36	1269	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	243	0	289	0	639	912	36	1269	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	0	0	0	243	0	289	0	639	912	36	1269	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	0.93	1.00	0.83	1.00	0.98	0.73	0.93	0.93	1.00
Lanes:	0.00	0.00	0.00	1.00	0.00	1.00	0.00	1.00	2.00	1.00	2.00	0.00
Final Sat.:	0	0	0	1773	0	1583	0	1862	2786	1769	3538	0
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.14	0.00	0.18	0.00	0.34	0.33	0.02	0.36	0.00
Crit Moves:						****		****		****		
Green/Cycle:	0.00	0.00	0.00	0.28	0.00	0.28	0.00	0.53	0.53	0.03	0.57	0.00
Volume/Cap:	0.00	0.00	0.00	0.48	0.00	0.64	0.00	0.64	0.61	0.64	0.63	0.00
Uniform Del:	0.0	0.0	0.0	23.8	0.0	25.1	0.0	13.2	12.9	38.3	11.8	0.0
IncremntDel:	0.0	0.0	0.0	0.7	0.0	3.2	0.0	1.4	0.8	22.7	0.7	0.0
Delay Adj:	0.00	0.00	0.00	1.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	0.00
Delay/Veh:	0.0	0.0	0.0	24.5	0.0	28.2	0.0	14.7	13.7	61.0	12.4	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	24.5	0.0	28.2	0.0	14.7	13.7	61.0	12.4	0.0
DesignQueue:	0	0	0	8	0	10	0	15	20	2	27	0

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #131 Scholls Ferry/ORE 217 SB on Ramp

Cycle (sec): 120 Critical Vol./Cap. (X): 0.741
Loss Time (sec): 16 (Y+R = 4 sec) Average Delay (sec/veh): 32.3
Optimal Cycle: 79 Level Of Service: C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Protected			Protected		
Rights:	Include			Include			Ignore			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0 0	0	0 0	0 1	0	0 1	0 0	1	1 1	1 0	2	0 0
Volume Module:												
Base Vol:	0	0	0	90	0	434	0	961	802	147	746	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	90	0	434	0	961	802	147	746	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
PHF Volume:	0	0	0	90	0	434	0	961	0	147	746	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	90	0	434	0	961	0	147	746	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Final Vol.:	0	0	0	90	0	434	0	961	0	147	746	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	0.91	1.00	0.81	1.00	0.92	0.95	0.90	0.90	1.00
Lanes:	0.00	0.00	0.00	1.00	0.00	1.00	0.00	2.00	1.00	1.00	2.00	0.00
Final Sat.:	0	0	0	1722	0	1537	0	3505	1805	1718	3437	0
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.05	0.00	0.28	0.00	0.27	0.00	0.09	0.22	0.00
Crit Moves:						****		****		****		
Green/Cycle:	0.00	0.00	0.00	0.38	0.00	0.38	0.00	0.37	0.00	0.12	0.49	0.00
Volume/Cap:	0.00	0.00	0.00	0.14	0.00	0.74	0.00	0.74	0.00	0.74	0.45	0.00
Uniform Del:	0.0	0.0	0.0	24.3	0.0	32.0	0.0	32.8	0.0	51.3	20.3	0.0
IncremntDel:	0.0	0.0	0.0	0.1	0.0	5.0	0.0	2.3	0.0	13.8	0.2	0.0
Delay Adj:	0.00	0.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00	1.00	0.00
Delay/Veh:	0.0	0.0	0.0	24.3	0.0	37.0	0.0	35.1	0.0	65.2	20.5	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	24.3	0.0	37.0	0.0	35.1	0.0	65.2	20.5	0.0
DesignQueue:	0	0	0	4	0	19	0	43	0	9	27	0

J – 2020 TSP Mitigated LOS Calculations

Scenario Report

Scenario:	2020 MIT
Command:	2020 MIT
Volume:	Base 2020
Geometry:	Base 2020
Impact Fee:	Default Impact Fee
Trip Generation:	pm peak
Trip Distribution:	dist
Paths:	Default Paths
Routes:	Default Routes
Configuration:	Default Configuration

Impact Analysis Report
Level Of Service

Intersection	Base LOS	Base Del/ Veh	Base V/ C	Future LOS	Future Del/ Veh	Future V/ C	Change in
# 1 170th/TV Highway	D	47.7	0.958	D	47.7	0.958	+ 0.000 D/V
# 2 170th/Farmington	D	54.1	0.982	D	54.1	0.982	+ 0.000 D/V
# 3 170th/Oak	B	13.3	0.775	B	13.3	0.775	+ 0.000 D/V
# 5 170th/Bany	C	34.8	0.750	C	34.8	0.750	+ 0.000 D/V
# 6 Bethany/US 26 west ramp	D	37.3	0.952	D	37.3	0.952	+ 0.000 D/V
# 7 Bethany/US 26 east ramp	C	31.9	0.862	C	31.9	0.862	+ 0.000 D/V
# 8 Bethany/Cornell	D	38.6	0.906	D	38.6	0.906	+ 0.000 D/V
# 9 Cornell/US 26 east ramp	C	25.7	0.895	C	25.7	0.895	+ 0.000 D/V
# 10 Cornell/US 26 west ramp	D	37.3	0.913	D	37.3	0.913	+ 0.000 D/V
# 11 158th/Cornell	D	41.5	0.977	D	41.5	0.977	+ 0.000 D/V
# 12 158th/Walker	D	52.4	0.984	D	52.4	0.984	+ 0.000 D/V
# 13 143rd/Cornell	E	56.2	0.742	E	56.2	0.742	+ 0.000 D/V
# 14 Murray/Cornell	E	56.3	0.981	E	56.3	0.981	+ 0.000 D/V
# 15 Barnes/Saltzman/Cornell	E	63.3	0.971	E	63.3	0.971	+ 0.000 D/V
# 16 Murray/US 26 west ramp	C	30.3	0.866	C	30.3	0.866	+ 0.000 D/V
# 17 Murray/US 26 east ramps	B	16.5	0.645	B	16.5	0.645	+ 0.000 D/V
# 18 Murray/Walker	D	49.4	0.964	D	49.4	0.964	+ 0.000 D/V
# 19 Murray/Jenkins	D	38.8	0.886	D	38.8	0.886	+ 0.000 D/V
# 20 Murray/Farmington	C	30.1	0.773	C	30.1	0.773	+ 0.000 D/V
# 21 Murray/6th	C	28.8	0.898	C	28.8	0.898	+ 0.000 D/V
# 22 Murray/Allen	D	44.7	0.883	D	44.7	0.883	+ 0.000 D/V
# 23 Murray/Brockman/Beard	D	48.6	0.950	D	48.6	0.950	+ 0.000 D/V
# 24 Nimbus/Scholls Ferry	D	41.8	0.918	D	41.8	0.918	+ 0.000 D/V
# 25 Hall/Scholls Ferry	D	38.8	0.772	D	38.8	0.772	+ 0.000 D/V
# 26 Allen/Schools Ferry	D	52.3	0.965	D	52.3	0.965	+ 0.000 D/V

Intersection	Base LOS	Del/ Veh	V/ C	Future LOS	Del/ Veh	V/ C	Change in
# 27 Oleson/Vermont	C	25.4	0.778	C	25.4	0.778	+ 0.000 D/V
# 28 Oleson/Garden Home	D	49.6	0.998	D	49.6	0.998	+ 0.000 D/V
# 29 Cedar Hills/Barnes	E	59.2	0.956	E	59.2	0.956	+ 0.000 D/V
# 30 Cedar Hills/US 26 west ramps	C	25.1	0.933	C	25.1	0.933	+ 0.000 D/V
# 31 Cedar Hills/US 26 east ramps	C	24.9	0.853	C	24.9	0.853	+ 0.000 D/V
# 32 Cedar Hills/Butner	D	41.7	0.968	D	41.7	0.968	+ 0.000 D/V
# 33 Cedar Hills/Walker	D	53.9	0.981	D	53.9	0.981	+ 0.000 D/V
# 34 Cedar Hills/Jenkins	D	48.6	0.918	D	48.6	0.918	+ 0.000 D/V
# 35 Cedar Hills/Hall	D	42.6	0.897	D	42.6	0.897	+ 0.000 D/V
# 36 Cedar Hills/Canyon	D	54.5	0.989	D	54.5	0.989	+ 0.000 D/V
# 37 Cedar Hills/Farmington	C	21.1	0.719	C	21.1	0.719	+ 0.000 D/V
# 38 Hall/Center	C	25.4	0.723	C	25.4	0.723	+ 0.000 D/V
# 39 Hall/Allen	D	46.3	0.953	D	46.3	0.953	+ 0.000 D/V
# 40 Hall/Denney	C	26.9	0.876	C	26.9	0.876	+ 0.000 D/V
# 41 Hall/Greenway	D	35.6	0.968	D	35.6	0.968	+ 0.000 D/V
# 42 Hall/Nimbus	C	31.5	0.832	C	31.5	0.832	+ 0.000 D/V
# 43 125th/Greenway	D	38.9	0.812	D	38.9	0.812	+ 0.000 D/V
# 44 Western/Beaverton Hillsdale	D	43.9	0.930	D	43.9	0.930	+ 0.000 D/V
# 45 Western/Allen	D	47.2	0.982	D	47.2	0.982	+ 0.000 D/V
# 46 Laurelwood/Beaverton Hillsdale	C	34.4	0.936	C	34.4	0.936	+ 0.000 D/V
# 47 Lombard/Farmington	D	50.9	0.965	D	50.9	0.965	+ 0.000 D/V
# 48 114th/Canyon	C	24.7	0.839	C	24.7	0.839	+ 0.000 D/V
# 49 Griffith/Beaverton Hillsdale	C	30.5	0.738	C	30.5	0.738	+ 0.000 D/V
# 50 87th/Canyon	C	25.1	0.853	C	25.1	0.853	+ 0.000 D/V
# 51 Garden Home/84th	D	33.5	0.000	D	33.5	0.000	+ 0.000 V/C
# 52 Garden Home/88th	C	23.5	0.000	C	23.5	0.000	+ 0.000 V/C

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Intersection	Base LOS	Del/ Veh	V/ C	Future LOS	Del/ Veh	V/ C	Change in
# 53 158th/Jenkins	D	46.5	0.942	D	46.5	0.942	+ 0.000 D/V
# 54 170th/Merlo	C	27.8	0.718	C	27.8	0.718	+ 0.000 D/V
# 56 TV Highway/Murray	C	22.2	0.714	C	22.2	0.714	+ 0.000 D/V
# 57 Farmington/Hall	C	30.4	0.919	C	30.4	0.919	+ 0.000 D/V
# 58 Canyon/Hall	C	26.7	0.850	C	26.7	0.850	+ 0.000 D/V
# 59 Walker/173rd	D	36.1	0.871	D	36.1	0.871	+ 0.000 D/V
# 60 170th/Baseline	D	53.3	0.987	D	53.3	0.987	+ 0.000 D/V
# 64 Cornell/173rd	E	56.5	0.983	E	56.5	0.983	+ 0.000 D/V
# 66 Scholls Ferry/Cascade	C	32.7	0.934	C	32.7	0.934	+ 0.000 D/V
# 72 Canyon/Watson	C	30.4	0.909	C	30.4	0.909	+ 0.000 D/V
# 73 Farmington/Watson	C	27.6	0.878	C	27.6	0.878	+ 0.000 D/V
# 76 Scholls Ferry/Denney	C	24.6	0.765	C	24.6	0.765	+ 0.000 D/V
# 77 Farmington/Hocken	C	31.4	0.883	C	31.4	0.883	+ 0.000 D/V
# 78 TV Highway/Hocken	C	34.2	0.839	C	34.2	0.839	+ 0.000 D/V
# 81 158th/Blueridge	D	38.8	0.977	D	38.8	0.977	+ 0.000 D/V
# 83 158th/Jay	D	44.1	0.991	D	44.1	0.991	+ 0.000 D/V
# 85 TV Highway/160th	C	34.8	0.902	C	34.8	0.902	+ 0.000 D/V
# 87 Hart/155th	B	15.9	0.515	B	15.9	0.515	+ 0.000 D/V
# 88 Murray/Hart	D	40.4	0.978	D	40.4	0.978	+ 0.000 D/V
# 89 Murray/Scholls Ferry	D	49.2	0.927	D	49.2	0.927	+ 0.000 D/V
# 90 Scholls Ferry/Davies	B	18.1	0.698	B	18.1	0.698	+ 0.000 D/V
# 92 Scholls Ferry/135th	B	13.0	0.643	B	13.0	0.643	+ 0.000 D/V
# 93 Scholls Ferry/125th	D	51.4	0.981	D	51.4	0.981	+ 0.000 D/V
# 94 Scholls Ferry/121st	D	37.0	0.919	D	37.0	0.919	+ 0.000 D/V
# 95 Scholls Ferry/Conestoga	B	12.5	0.774	B	12.5	0.774	+ 0.000 D/V
#102 Scholls Ferry/Laurelwood	A	9.0	0.620	A	9.0	0.620	+ 0.000 D/V

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Intersection	Base LOS	Del/ Veh	V/ C	Future LOS	Del/ Veh	V/ C	Change in
#103 Canyon/Lombard	D	44.1	0.945	D	44.1	0.945	+ 0.000 D/V
#105 Canyon/117th	C	24.5	0.745	C	24.5	0.745	+ 0.000 D/V
#114 ORE 217 SB Ramp/Canyon	C	25.6	0.772	C	25.6	0.772	+ 0.000 D/V
#115 ORE 217 NB Ramp/Canyon	C	26.2	0.745	C	26.2	0.745	+ 0.000 D/V
#116 ORE 217 SB Ramp/Farmington	C	29.9	0.848	C	29.9	0.848	+ 0.000 D/V
#117 ORE 217 NB Ramp/Farmington	C	27.4	0.781	C	27.4	0.781	+ 0.000 D/V
#118 ORE 217 SB Ramp/Allen	D	37.1	0.929	D	37.1	0.929	+ 0.000 D/V
#119 ORE 217 NB Ramp/Allen	D	37.2	0.950	D	37.2	0.950	+ 0.000 D/V
#120 ORE 217 SB Ramp/Denney	D	40.1	0.938	D	40.1	0.938	+ 0.000 D/V
#121 ORE 217 NB Ramp/Denney	D	42.1	0.881	D	42.1	0.881	+ 0.000 D/V
#122 ORE 217 SB off Ramp/Hall/Casca	D	41.0	0.884	D	41.0	0.884	+ 0.000 D/V
#123 ORE 217 NB on Ramp/Scholls Fer	D	42.7	0.965	D	42.7	0.965	+ 0.000 D/V
#125 ORE 217 NB off Ramp/Scholls Fe	C	20.1	0.678	C	20.1	0.678	+ 0.000 D/V
#129 ORE 217 NB Ramp/Walker	C	27.4	0.828	C	27.4	0.828	+ 0.000 D/V
#130 ORE 217 SB Ramp/Walker	B	18.6	0.798	B	18.6	0.798	+ 0.000 D/V
#131 Scholls Ferry/ORE 217 SB on Ra	C	34.0	0.784	C	34.0	0.784	+ 0.000 D/V

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #1 170th/TV Highway

Cycle (sec): 120 Critical Vol./Cap. (X): 0.958
Loss Time (sec): 16 (Y+R = 4 sec) Average Delay (sec/veh): 47.7
Optimal Cycle: 168 Level Of Service: D

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Ovl			Ovl		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0 1	1 0	1	0 2	0 1	1	0 3	0 1	2	0 3	0 1
Volume Module:												
Base Vol:	142	344	75	331	628	18	123	1898	221	521	1983	352
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	142	344	75	331	628	18	123	1898	221	521	1983	352
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	142	344	75	331	628	18	123	1898	221	521	1983	352
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	142	344	75	331	628	18	123	1898	221	521	1983	352
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	142	344	75	331	628	18	123	1898	221	521	1983	352
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.93	0.91	0.91	0.94	0.94	0.84	0.93	0.89	0.83	0.91	0.90	0.84
Lanes:	1.00	1.64	0.36	1.00	2.00	1.00	1.00	3.00	1.00	2.00	3.00	1.00
Final Sat.:	1769	2826	616	1787	3574	1599	1769	5083	1583	3467	5135	1599
Capacity Analysis Module:												
Vol/Sat:	0.08	0.12	0.12	0.19	0.18	0.01	0.07	0.37	0.14	0.15	0.39	0.22
Crit Moves:		****		****				****		****		
Green/Cycle:	0.10	0.13	0.13	0.19	0.22	0.22	0.08	0.39	0.49	0.16	0.46	0.66
Volume/Cap:	0.80	0.96	0.96	0.96	0.80	0.05	0.83	0.96	0.28	0.96	0.83	0.34
Uniform Del:	52.8	52.1	52.1	47.9	44.3	36.9	54.2	35.7	18.1	50.2	28.2	9.1
IncremntDel:	22.0	32.4	32.4	37.4	5.8	0.1	31.6	11.9	0.2	28.3	2.7	0.2
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	74.8	84.5	84.5	85.3	50.1	37.0	85.8	47.6	18.3	78.5	30.9	9.3
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	74.8	84.5	84.5	85.3	50.1	37.0	85.8	47.6	18.3	78.5	30.9	9.3
DesignQueue:	9	21	4	19	34	1	8	85	8	30	78	8

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #2 170th/Farmington

Cycle (sec): 100 Critical Vol./Cap. (X): 0.982
Loss Time (sec): 16 (Y+R = 4 sec) Average Delay (sec/veh): 54.1
Optimal Cycle: 162 Level Of Service: D

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0 1	1 0	1	0 1	1 0	1	0 2	0 1	1	0 2	0 1
Volume Module:												
Base Vol:	313	321	116	107	503	283	90	1022	489	206	1384	175
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	313	321	116	107	503	283	90	1022	489	206	1384	175
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	313	321	116	107	503	283	90	1022	489	206	1384	175
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	313	321	116	107	503	283	90	1022	489	206	1384	175
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	313	321	116	107	503	283	90	1022	489	206	1384	175
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.93	0.94	0.94	0.94	0.94	0.94	0.92	0.97	0.83	0.94	0.99	0.84
Lanes:	1.00	1.47	0.53	1.00	1.28	0.72	1.00	2.00	1.00	1.00	2.00	1.00
Final Sat.:	1769	2626	949	1787	2277	1281	1753	3690	1568	1787	3762	1599
Capacity Analysis Module:												
Vol/Sat:	0.18	0.12	0.12	0.06	0.22	0.22	0.05	0.28	0.31	0.12	0.37	0.11
Crit Moves:	****				****				****	****		
Green/Cycle:	0.18	0.27	0.27	0.13	0.22	0.22	0.05	0.32	0.32	0.12	0.38	0.38
Volume/Cap:	0.98	0.45	0.45	0.45	0.98	0.98	0.96	0.87	0.98	0.98	0.96	0.29
Uniform Del:	40.8	30.2	30.2	40.0	38.6	38.6	47.2	32.2	33.8	44.0	30.2	21.5
IncremntDel:	45.4	0.3	0.3	1.4	27.3	27.3	81.0	7.4	35.6	56.8	15.9	0.3
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	86.2	30.5	30.5	41.3	65.8	65.8	128.3	39.6	69.4	100.8	46.2	21.7
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	86.2	30.5	30.5	41.3	65.8	65.8	128.3	39.6	69.4	100.8	46.2	21.7
DesignQueue:	15	13	5	5	23	13	5	42	20	10	53	6

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #3 170th/Oak

Cycle (sec): 100 Critical Vol./Cap. (X): 0.775
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): 13.3
Optimal Cycle: 64 Level Of Service: B

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	0 1!	0 0	1	0 0	1 0	0	0 1!	0 0	0	0 1!	0 0
Volume Module:												
Base Vol:	21	433	14	128	1056	55	12	18	6	45	40	205
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	21	433	14	128	1056	55	12	18	6	45	40	205
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	21	433	14	128	1056	55	12	18	6	45	40	205
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	21	433	14	128	1056	55	12	18	6	45	40	205
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	21	433	14	128	1056	55	12	18	6	45	40	205
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.91	0.91	0.91	0.54	0.98	0.98	0.84	0.84	0.84	0.85	0.85	0.85
Lanes:	0.04	0.93	0.03	1.00	0.95	0.05	0.33	0.50	0.17	0.15	0.14	0.71
Final Sat.:	78	1603	52	1025	1775	92	532	798	266	249	222	1136
Capacity Analysis Module:												
Vol/Sat:	0.27	0.27	0.27	0.12	0.59	0.59	0.02	0.02	0.02	0.18	0.18	0.18
Crit Moves:					****						****	
Green/Cycle:	0.77	0.77	0.77	0.77	0.77	0.77	0.23	0.23	0.23	0.23	0.23	0.23
Volume/Cap:	0.35	0.35	0.35	0.16	0.78	0.78	0.10	0.10	0.10	0.78	0.78	0.78
Uniform Del:	3.7	3.7	3.7	3.1	6.7	6.7	30.1	30.1	30.1	35.9	35.9	35.9
IncremntDel:	0.2	0.2	0.2	0.1	2.7	2.7	0.1	0.1	0.1	9.8	9.8	9.8
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	3.9	3.9	3.9	3.2	9.4	9.4	30.2	30.2	30.2	45.7	45.7	45.7
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	3.9	3.9	3.9	3.2	9.4	9.4	30.2	30.2	30.2	45.7	45.7	45.7
DesignQueue:	0	6	0	2	16	1	1	1	0	2	2	9

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #5 170th/Bany

Cycle (sec):	100	Critical Vol./Cap. (X):	0.750
Loss Time (sec):	16 (Y+R = 4 sec)	Average Delay (sec/veh):	34.8
Optimal Cycle:	77	Level Of Service:	C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0	1	0	1	0	1	0	1	0	1	0
Volume Module:												
Base Vol:	65	183	31	239	528	38	16	213	78	80	324	181
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	65	183	31	239	528	38	16	213	78	80	324	181
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	65	183	31	239	528	38	16	213	78	80	324	181
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	65	183	31	239	528	38	16	213	78	80	324	181
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	65	183	31	239	528	38	16	213	78	80	324	181
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.98	0.98	0.95	0.99	0.99	0.92	0.93	0.93	0.94	0.94	0.94
Lanes:	1.00	0.86	0.14	1.00	0.93	0.07	1.00	0.73	0.27	1.00	0.64	0.36
Final Sat.:	1805	1589	269	1805	1755	126	1753	1296	475	1787	1142	638
Capacity Analysis Module:												
Vol/Sat:	0.04	0.12	0.12	0.13	0.30	0.30	0.01	0.16	0.16	0.04	0.28	0.28
Crit Moves:	****				****		****				****	
Green/Cycle:	0.05	0.21	0.21	0.24	0.40	0.40	0.01	0.31	0.31	0.08	0.38	0.38
Volume/Cap:	0.75	0.55	0.55	0.55	0.75	0.75	0.75	0.54	0.54	0.54	0.75	0.75
Uniform Del:	47.0	35.4	35.4	33.3	25.6	25.6	49.2	28.7	28.7	44.0	27.0	27.0
IncremntDel:	30.0	1.7	1.7	1.5	4.2	4.2	87.0	1.0	1.0	3.8	4.7	4.7
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	77.0	37.1	37.1	34.8	29.8	29.8	136.2	29.8	29.8	47.7	31.7	31.7
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	77.0	37.1	37.1	34.8	29.8	29.8	136.2	29.8	29.8	47.7	31.7	31.7
DesignQueue:	3	8	1	10	19	1	1	9	3	4	12	7

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #6 Bethany/US 26 west ramp

Cycle (sec):	100	Critical Vol./Cap. (X):	0.952
Loss Time (sec):	12 (Y+R = 4 sec)	Average Delay (sec/veh):	37.3
Optimal Cycle:	140	Level Of Service:	D

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Permitted			Split Phase			Split Phase		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0	2	0	0	0	1	1	0	0	1	2
Volume Module:												
Base Vol:	106	1145	0	0	1265	131	0	0	0	0	308	1075
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	106	1145	0	0	1265	131	0	0	0	0	308	1075
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	106	1145	0	0	1265	131	0	0	0	0	308	1075
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	106	1145	0	0	1265	131	0	0	0	0	308	1075
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	106	1145	0	0	1265	131	0	0	0	0	308	1075
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.94	0.94	1.00	1.00	0.92	0.92	1.00	1.00	1.00	1.00	1.00	0.75
Lanes:	1.00	2.00	0.00	0.00	1.81	0.19	0.00	0.00	0.00	0.00	1.00	2.00
Final Sat.:	1787	3574	0	0	3161	327	0	0	0	0	1900	2842
Capacity Analysis Module:												
Vol/Sat:	0.06	0.32	0.00	0.00	0.40	0.40	0.00	0.00	0.00	0.00	0.16	0.38
Crit Moves:	****				****							****
Green/Cycle:	0.06	0.48	0.00	0.00	0.42	0.42	0.00	0.00	0.00	0.00	0.40	0.40
Volume/Cap:	0.95	0.66	0.00	0.00	0.95	0.95	0.00	0.00	0.00	0.00	0.41	0.95
Uniform Del:	46.7	19.7	0.0	0.0	28.0	28.0	0.0	0.0	0.0	0.0	21.7	29.2
IncremntDel:	69.9	1.0	0.0	0.0	13.7	13.7	0.0	0.0	0.0	0.0	0.4	16.5
Delay Adj:	1.00	1.00	0.00	0.00	1.00	1.00	0.00	0.00	0.00	0.00	1.00	1.00
Delay/Veh:	116.7	20.7	0.0	0.0	41.7	41.7	0.0	0.0	0.0	0.0	22.0	45.7
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	116.7	20.7	0.0	0.0	41.7	41.7	0.0	0.0	0.0	0.0	22.0	45.7
DesignQueue:	6	36	0	0	45	5	0	0	0	0	11	39

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #7 Bethany/US 26 east ramp

Cycle (sec):	100	Critical Vol./Cap. (X):	0.862
Loss Time (sec):	12 (Y+R = 4 sec)	Average Delay (sec/veh):	31.9
Optimal Cycle:	94	Level Of Service:	C

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Split Phase				Split Phase			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0	
Lanes:	0	0	1	1 0	1	0	2	0 0	0	1	0	1 0	0	0	0	0 0
Volume Module:																
Base Vol:	0	1008		25	615	616		0	185	85		79	0	0		0
Growth Adj:	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00
Initial Bse:	0	1008		25	615	616		0	185	85		79	0	0		0
User Adj:	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00
PHF Adj:	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00
PHF Volume:	0	1008		25	615	616		0	185	85		79	0	0		0
Reduct Vol:	0	0		0	0	0		0	0	0		0	0	0		0
Reduced Vol:	0	1008		25	615	616		0	185	85		79	0	0		0
PCE Adj:	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00
MLF Adj:	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00
Final Vol.:	0	1008		25	615	616		0	185	85		79	0	0		0
Saturation Flow Module:																
Sat/Lane:	1900	1900		1900	1900	1900		1900	1900	1900		1900	1900	1900		1900
Adjustment:	1.00	0.94		0.94	0.91	0.91		1.00	0.86	0.86		0.86	1.00	1.00		1.00
Lanes:	0.00	1.95		0.05	1.00	2.00		0.00	1.00	0.52		0.48	0.00	0.00		0.00
Final Sat.:	0	3473		86	1736	3473		0	1626	843		783	0	0		0
Capacity Analysis Module:																
Vol/Sat:	0.00	0.29		0.29	0.35	0.18		0.00	0.11	0.10		0.10	0.00	0.00		0.00
Crit Moves:		****			****				****							
Green/Cycle:	0.00	0.34		0.34	0.41	0.75		0.00	0.13	0.13		0.13	0.00	0.00		0.00
Volume/Cap:	0.00	0.86		0.86	0.86	0.24		0.00	0.86	0.76		0.76	0.00	0.00		0.00
Uniform Del:	0.0	31.0		31.0	26.8	3.9		0.0	42.5	41.9		41.9	0.0	0.0		0.0
IncremntDel:	0.0	6.6		6.6	10.5	0.0		0.0	16.9	7.5		7.5	0.0	0.0		0.0
Delay Adj:	0.00	1.00		1.00	1.00	1.00		0.00	1.00	1.00		1.00	0.00	0.00		0.00
Delay/Veh:	0.0	37.6		37.6	37.3	3.9		0.0	59.4	49.4		49.4	0.0	0.0		0.0
User DelAdj:	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00
AdjDel/Veh:	0.0	37.6		37.6	37.3	3.9		0.0	59.4	49.4		49.4	0.0	0.0		0.0
DesignQueue:	0	40		1	22	9		0	9	4		4	0	0		0

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #8 Bethany/Cornell

Cycle (sec):	120	Critical Vol./Cap. (X):	0.906
Loss Time (sec):	16 (Y+R = 4 sec)	Average Delay (sec/veh):	38.6
Optimal Cycle:	132	Level Of Service:	D

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Split Phase				Split Phase				Protected				Protected			
Rights:	Include				Ovl				Include				Ovl			
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0	
Lanes:	1	0	0	1 0	1	1	0	0 1	1	0	1	1 0	1	0	2	0 1
Volume Module:																
Base Vol:	34	36		100	352	18		360	498	1352		14	48	1140		471
Growth Adj:	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00
Initial Bse:	34	36		100	352	18		360	498	1352		14	48	1140		471
User Adj:	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00
PHF Adj:	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00
PHF Volume:	34	36		100	352	18		360	498	1352		14	48	1140		471
Reduct Vol:	0	0		0	0	0		0	0	0		0	0	0		0
Reduced Vol:	34	36		100	352	18		360	498	1352		14	48	1140		471
PCE Adj:	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00
MLF Adj:	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00
Final Vol.:	34	36		100	352	18		360	498	1352		14	48	1140		471
Saturation Flow Module:																
Sat/Lane:	1900	1900		1900	1900	1900		1900	1900	1900		1900	1900	1900		1900
Adjustment:	0.95	0.89		0.89	0.94	0.94		0.83	0.93	0.93		0.93	0.94	0.94		0.84
Lanes:	1.00	0.26		0.74	1.90	0.10		1.00	1.00	1.98		0.02	1.00	2.00		1.00
Final Sat.:	1805	448		1243	3383	173		1583	1769	3498		36	1787	3574		1599
Capacity Analysis Module:																
Vol/Sat:	0.02	0.08		0.08	0.10	0.10		0.23	0.28	0.39		0.39	0.03	0.32		0.29
Crit Moves:		****			****				****					****		
Green/Cycle:	0.09	0.09		0.09	0.11	0.11		0.43	0.31	0.62		0.62	0.04	0.35		0.47
Volume/Cap:	0.21	0.91		0.91	0.91	0.91		0.53	0.91	0.62		0.62	0.62	0.91		0.63
Uniform Del:	50.8	54.2		54.2	52.5	52.5		25.6	39.7	14.1		14.1	56.5	37.0		24.2
IncremntDel:	0.7	46.6		46.6	23.2	23.2		0.8	18.6	0.6		0.6	14.9	9.5		1.7
Delay Adj:	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00
Delay/Veh:	51.4	101		100.8	75.7	75.7		26.5	58.2	14.7		14.7	71.3	46.5		25.9
User DelAdj:	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00
AdjDel/Veh:	51.4	101		100.8	75.7	75.7		26.5	58.2	14.7		14.7	71.3	46.5		25.9
DesignQueue:	2	2		6	21	1		15	25	38		0	3	53		18

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #9 Cornell/US 26 east ramp

Cycle (sec): 100 Critical Vol./Cap. (X): 0.895
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 25.7
Optimal Cycle: 107 Level Of Service: C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Split Phase			Split Phase		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	0 2	0 1	1	0 2	0 0	0	1 0	1 0	0	0 0	0 0
Volume Module:												
Base Vol:	0	1852	697	0	1822	0	302	179	347	0	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	1852	697	0	1822	0	302	179	347	0	0	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	1852	697	0	1822	0	302	179	347	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	1852	697	0	1822	0	302	179	347	0	0	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	0	1852	697	0	1822	0	302	179	347	0	0	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	0.93	0.83	1.00	0.94	1.00	0.83	0.83	0.83	1.00	1.00	1.00
Lanes:	0.00	2.00	1.00	1.00	2.00	0.00	0.73	0.43	0.84	0.00	0.00	0.00
Final Sat.:	0	3538	1583	1900	3574	0	1144	678	1315	0	0	0
Capacity Analysis Module:												
Vol/Sat:	0.00	0.52	0.44	0.00	0.51	0.00	0.26	0.26	0.26	0.00	0.00	0.00
Crit Moves:		****		****					****			
Green/Cycle:	0.00	0.59	0.59	0.00	0.59	0.00	0.29	0.29	0.29	0.00	0.00	0.00
Volume/Cap:	0.00	0.89	0.75	0.00	0.87	0.00	0.89	0.89	0.89	0.00	0.00	0.00
Uniform Del:	0.0	18.1	15.4	0.0	17.6	0.0	33.8	33.8	33.8	0.0	0.0	0.0
IncremntDel:	0.0	5.5	3.5	0.0	4.3	0.0	11.1	11.1	11.1	0.0	0.0	0.0
Delay Adj:	0.00	1.00	1.00	0.00	1.00	0.00	1.00	1.00	1.00	0.00	0.00	0.00
Delay/Veh:	0.0	23.6	18.9	0.0	21.9	0.0	44.9	44.9	44.9	0.0	0.0	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	23.6	18.9	0.0	21.9	0.0	44.9	44.9	44.9	0.0	0.0	0.0
DesignQueue:	0	49	18	0	48	0	13	7	14	0	0	0

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #10 Cornell/US 26 west ramp

Cycle (sec): 100 Critical Vol./Cap. (X): 0.913
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 37.3
Optimal Cycle: 116 Level Of Service: D

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Split Phase			Split Phase		
Rights:	Include			Include			Include			Ignore		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0 2	0 0	0	0 2	1 0	0	0 0	0 0	2	0 1	0 1
Volume Module:												
Base Vol:	488	1453	0	0	661	309	0	0	0	1013	508	268
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	488	1453	0	0	661	309	0	0	0	1013	508	268
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
PHF Volume:	488	1453	0	0	661	309	0	0	0	1013	508	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	488	1453	0	0	661	309	0	0	0	1013	508	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
Final Vol.:	488	1453	0	0	661	309	0	0	0	1013	508	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.94	0.94	1.00	1.00	0.85	0.85	1.00	1.00	1.00	0.81	0.98	1.00
Lanes:	1.00	2.00	0.00	0.00	2.04	0.96	0.00	0.00	0.00	2.00	1.00	1.00
Final Sat.:	1787	3574	0	0	3298	1542	0	0	0	3070	1862	1900
Capacity Analysis Module:												
Vol/Sat:	0.27	0.41	0.00	0.00	0.20	0.20	0.00	0.00	0.00	0.33	0.27	0.00
Crit Moves:	****				****					****		
Green/Cycle:	0.30	0.52	0.00	0.00	0.22	0.22	0.00	0.00	0.00	0.36	0.36	0.00
Volume/Cap:	0.91	0.78	0.00	0.00	0.91	0.91	0.00	0.00	0.00	0.91	0.76	0.00
Uniform Del:	33.8	19.5	0.0	0.0	38.1	38.1	0.0	0.0	0.0	30.4	28.0	0.0
IncremntDel:	20.1	2.3	0.0	0.0	11.8	11.8	0.0	0.0	0.0	11.4	4.9	0.0
Delay Adj:	1.00	1.00	0.00	0.00	1.00	1.00	0.00	0.00	0.00	1.00	1.00	0.00
Delay/Veh:	53.9	21.8	0.0	0.0	49.9	49.9	0.0	0.0	0.0	41.8	32.9	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	53.9	21.8	0.0	0.0	49.9	49.9	0.0	0.0	0.0	41.8	32.9	0.0
DesignQueue:	20	43	0	0	30	14	0	0	0	39	19	0

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #11 158th/Cornell

Cycle (sec): 90 Critical Vol./Cap. (X): 0.977
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 41.5
Optimal Cycle: 149 Level Of Service: D

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Protected			Protected		
Rights:	Ovl			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	2	0	0	0	2	0	0	0	0	0	0	2	0	2	2	0	2	0	0
Volume Module:																			
Base Vol:	782	0	1599	0	0	0	0	966	760	1071	784	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	782	0	1599	0	0	0	0	966	760	1071	784	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	782	0	1599	0	0	0	0	966	760	1071	784	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	782	0	1599	0	0	0	0	966	760	1071	784	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	782	0	1599	0	0	0	0	966	760	1071	784	0
Saturation Flow Module:																			
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.90	1.00	0.73	1.00	1.00	1.00	1.00	0.93	0.73	0.90	0.93	1.00
Lanes:	2.00	0.00	2.00	0.00	0.00	0.00	0.00	2.00	2.00	2.00	2.00	0.00
Final Sat.:	3432	0	2786	0	0	0	0	3538	2786	3432	3538	0
Capacity Analysis Module:																			
Vol/Sat:	0.23	0.00	0.57	0.00	0.00	0.00	0.00	0.27	0.27	0.31	0.22	0.00
Crit Moves:			****					****		****		
Green/Cycle:	0.27	0.00	0.59	0.00	0.00	0.00	0.00	0.28	0.28	0.32	0.60	0.00
Volume/Cap:	0.85	0.00	0.98	0.00	0.00	0.00	0.00	0.98	0.98	0.98	0.37	0.00
Uniform Del:	31.2	0.0	18.0	0.0	0.0	0.0	0.0	32.1	32.1	30.3	9.3	0.0
IncremntDel:	7.6	0.0	17.1	0.0	0.0	0.0	0.0	23.2	26.5	21.8	0.1	0.0
Delay Adj:	1.00	0.00	1.00	0.00	0.00	0.00	0.00	1.00	1.00	1.00	1.00	0.00
Delay/Veh:	38.8	0.0	35.1	0.0	0.0	0.0	0.0	55.3	58.6	52.1	9.4	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	38.8	0.0	35.1	0.0	0.0	0.0	0.0	55.3	58.6	52.1	9.4	0.0
DesignQueue:	30	0	37	0	0	0	0	37	29	39	17	0

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #12 158th/Walker

Cycle (sec): 120 Critical Vol./Cap. (X): 0.984
Loss Time (sec): 16 (Y+R = 4 sec) Average Delay (sec/veh): 52.4
Optimal Cycle: 180 Level Of Service: D

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Permit+Prot			Permit+Prot		
Rights:	Include			Include			Ovl			Ovl		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	2	0	2	0	1	2	0	1	1	0	1	0	2	0	1	1	0	2	0	1
Volume Module:																			
Base Vol:	239	1221	154	592	1074	128	85	1144	164	101	949	392
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	239	1221	154	592	1074	128	85	1144	164	101	949	392
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	239	1221	154	592	1074	128	85	1144	164	101	949	392
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	239	1221	154	592	1074	128	85	1144	164	101	949	392
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	239	1221	154	592	1074	128	85	1144	164	101	949	392
Saturation Flow Module:																			
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.93	0.98	0.83	0.93	0.96	0.96	0.29	0.98	0.83	0.29	0.98	0.83
Lanes:	2.00	2.00	1.00	2.00	1.79	0.21	1.00	2.00	1.00	1.00	2.00	1.00
Final Sat.:	3538	3724	1583	3538	3274	390	559	3724	1583	557	3724	1583
Capacity Analysis Module:																			
Vol/Sat:	0.07	0.33	0.10	0.17	0.33	0.33	0.15	0.31	0.10	0.18	0.25	0.25
Crit Moves:		****		****				****		****		
Green/Cycle:	0.09	0.33	0.33	0.17	0.41	0.41	0.40	0.31	0.40	0.40	0.31	0.48
Volume/Cap:	0.79	0.99	0.29	0.99	0.79	0.79	0.38	0.99	0.26	0.45	0.82	0.52
Uniform Del:	53.8	40.0	29.8	49.8	30.7	30.7	45.4	41.3	24.5	49.1	38.4	21.7
IncremntDel:	13.3	23.6	0.3	34.6	2.9	2.9	1.1	24.4	0.2	1.5	5.0	0.6
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	67.2	63.6	30.1	84.4	33.6	33.6	46.5	65.7	24.7	50.6	43.4	22.4
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	67.2	63.6	30.1	84.4	33.6	33.6	46.5	65.7	24.7	50.6	43.4	22.4
DesignQueue:	15	60	7	34	46	5	5	57	7	6	47	14

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #13 143rd/Cornell

Cycle (sec):	100	Critical Vol./Cap. (X):	0.742
Loss Time (sec):	8 (Y+R = 4 sec)	Average Delay (sec/veh):	56.2
Optimal Cycle:	180	Level Of Service:	E

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Prot+Permit			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	0	0	1	0	0	1	0	2	0	2	1
Volume Module:												
Base Vol:	0	0	0	546	0	259	363	1128	0	0	723	918
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	546	0	259	363	1128	0	0	723	918
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	546	0	259	363	1128	0	0	723	918
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	546	0	259	363	1128	0	0	723	918
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	0	0	0	546	0	259	363	1128	0	0	723	918
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	0.93	1.00	0.83	0.44	0.94	1.00	1.00	0.94	0.84
Lanes:	0.00	0.00	0.00	1.00	0.00	1.00	1.00	2.00	0.00	0.00	2.00	1.00
Final Sat.:	0	0	0	1769	0	1583	836	3574	0	0	3574	1599
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.31	0.00	0.16	0.43	0.32	0.00	0.00	0.20	0.57
Crit Moves:				****			****					****
Green/Cycle:	0.00	0.00	0.00	0.26	0.00	0.26	0.66	0.66	0.00	0.00	0.49	0.49
Volume/Cap:	0.00	0.00	0.00	1.18	0.00	0.63	0.66	0.48	0.00	0.00	0.42	1.18
Uniform Del:	0.0	0.0	0.0	36.9	0.0	32.6	9.3	8.5	0.0	0.0	16.5	25.7
IncremntDel:	0.0	0.0	0.0	101.5	0.0	3.0	3.0	0.2	0.0	0.0	0.2	94.2
Delay Adj:	0.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00
Delay/Veh:	0.0	0.0	0.0	138.4	0.0	35.6	12.3	8.7	0.0	0.0	16.7	119.9
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	138.4	0.0	35.6	12.3	8.7	0.0	0.0	16.7	119.9
DesignQueue:	0	0	0	24	0	11	18	23	0	0	22	30

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #14 Murray/Cornell

Cycle (sec):	120	Critical Vol./Cap. (X):	0.981
Loss Time (sec):	16 (Y+R = 4 sec)	Average Delay (sec/veh):	56.3
Optimal Cycle:	180	Level Of Service:	E

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Ovl			Include			Ovl			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	2	0	1	0	1	1	0	0	1	0	1	0
Volume Module:												
Base Vol:	737	218	691	125	166	26	215	1006	446	436	634	60
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	737	218	691	125	166	26	215	1006	446	436	634	60
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	737	218	691	125	166	26	215	1006	446	436	634	60
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	737	218	691	125	166	26	215	1006	446	436	634	60
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	737	218	691	125	166	26	215	1006	446	436	634	60
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.89	0.97	0.83	0.93	0.96	0.96	0.94	0.94	0.84	0.93	0.92	0.92
Lanes:	2.00	1.00	1.00	1.00	0.86	0.14	1.00	2.00	1.00	1.00	1.83	0.17
Final Sat.:	3400	1845	1568	1769	1578	247	1787	3574	1599	1769	3190	302
Capacity Analysis Module:												
Vol/Sat:	0.22	0.12	0.44	0.07	0.11	0.11	0.12	0.28	0.28	0.25	0.20	0.20
Crit Moves:	****				****			****		****		
Green/Cycle:	0.22	0.24	0.49	0.09	0.11	0.11	0.20	0.29	0.51	0.25	0.34	0.34
Volume/Cap:	0.98	0.49	0.90	0.81	0.98	0.98	0.59	0.98	0.55	0.98	0.59	0.59
Uniform Del:	46.5	39.2	27.7	53.7	53.4	53.4	43.3	42.4	20.1	44.6	33.1	33.1
IncremntDel:	28.0	0.9	13.0	25.8	58.5	58.5	2.6	23.4	0.8	37.5	0.8	0.8
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	74.4	40.1	40.7	79.6	112	112.0	45.9	65.8	20.9	82.1	33.9	33.9
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	74.4	40.1	40.7	79.6	112	112.0	45.9	65.8	20.9	82.1	33.9	33.9
DesignQueue:	40	11	26	8	10	2	12	51	16	23	30	3

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #15 Barnes/Saltzman/Cornell

Cycle (sec): 100 Critical Vol./Cap. (X): 0.971
Loss Time (sec): 16 (Y+R = 4 sec) Average Delay (sec/veh): 63.3
Optimal Cycle: 154 Level Of Service: E

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Protected				Protected			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0	
Lanes:	2	0	1	0 1	2	0	0	1 0	1	0	2	0 1	1	0	2	0 1
Volume Module:																
Base Vol:	373	754	60		276	454	210		262	1099	110		34	660	285	
Growth Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Initial Bse:	373	754	60		276	454	210		262	1099	110		34	660	285	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	373	754	60		276	454	210		262	1099	110		34	660	285	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	373	754	60		276	454	210		262	1099	110		34	660	285	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Final Vol.:	373	754	60		276	454	210		262	1099	110		34	660	285	
Saturation Flow Module:																
Sat/Lane:	1900	1900	1900		1900	1900	1900		1900	1900	1900		1900	1900	1900	
Adjustment:	0.91	0.99	0.84		0.90	0.93	0.93		0.93	0.93	0.83		0.93	0.93	0.83	
Lanes:	2.00	1.00	1.00		2.00	0.68	0.32		1.00	2.00	1.00		1.00	2.00	1.00	
Final Sat.:	3467	1881	1599		3432	1213	561		1769	3538	1583		1769	3538	1583	
Capacity Analysis Module:																
Vol/Sat:	0.11	0.40	0.04		0.08	0.37	0.37		0.15	0.31	0.07		0.02	0.19	0.18	
Crit Moves:		****			****				****					****		
Green/Cycle:	0.11	0.41	0.41		0.08	0.38	0.38		0.15	0.32	0.32		0.02	0.19	0.19	
Volume/Cap:	0.97	0.97	0.09		0.97	0.97	0.97		0.97	0.96	0.21		0.96	0.97	0.94	
Uniform Del:	44.3	28.8	17.9		45.7	30.2	30.2		42.2	33.1	24.5		49.0	40.1	39.8	
IncremntDel:	38.5	25.3	0.1		45.4	27.6	27.6		46.7	17.3	0.2		133.4	27.4	35.4	
Delay Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Delay/Veh:	82.8	54.1	18.0		91.1	57.8	57.8		88.9	50.4	24.7		182.3	67.5	75.2	
User DelAdj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
AdjDel/Veh:	82.8	54.1	18.0		91.1	57.8	57.8		88.9	50.4	24.7		182.3	67.5	75.2	
DesignQueue:	19	27	2		14	17	8		13	45	4		2	31	13	

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #16 Murray/US 26 west ramp

Cycle (sec): 100 Critical Vol./Cap. (X): 0.866
Loss Time (sec): 8 (Y+R = 4 sec) Average Delay (sec/veh): 30.3
Optimal Cycle: 85 Level Of Service: C

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Permitted				Split Phase				Split Phase			
Rights:	Include				Ignore				Include				Include			
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0	
Lanes:	1	0	2	0 0	0	0	2	0 1	0	0	0	0 0	1	1	0	0 2
Volume Module:																
Base Vol:	273	1099	0		0	1152	159		0	0	0		370	0	895	
Growth Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Initial Bse:	273	1099	0		0	1152	159		0	0	0		370	0	895	
User Adj:	1.00	1.00	1.00		1.00	1.00	0.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	0.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	273	1099	0		0	1152	0		0	0	0		370	0	895	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	273	1099	0		0	1152	0		0	0	0		370	0	895	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	0.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	0.00		1.00	1.00	1.00		1.00	1.00	1.00	
Final Vol.:	273	1099	0		0	1152	0		0	0	0		370	0	895	
Saturation Flow Module:																
Sat/Lane:	1900	1900	1900		1900	1900	1900		1900	1900	1900		1900	1900	1900	
Adjustment:	0.94	0.94	1.00		1.00	0.93	1.00		1.00	1.00	1.00		0.94	1.00	0.74	
Lanes:	1.00	2.00	0.00		0.00	2.00	1.00		0.00	0.00	0.00		2.00	0.00	2.00	
Final Sat.:	1787	3574	0		0	3538	1900		0	0	0		3581	0	2814	
Capacity Analysis Module:																
Vol/Sat:	0.15	0.31	0.00		0.00	0.33	0.00		0.00	0.00	0.00		0.10	0.00	0.32	
Crit Moves:	****					****									****	
Green/Cycle:	0.18	0.55	0.00		0.00	0.38	0.00		0.00	0.00	0.00		0.37	0.00	0.37	
Volume/Cap:	0.87	0.56	0.00		0.00	0.87	0.00		0.00	0.00	0.00		0.28	0.00	0.87	
Uniform Del:	40.0	14.5	0.0		0.0	28.9	0.0		0.0	0.0	0.0		22.3	0.0	29.3	
IncremntDel:	21.3	0.4	0.0		0.0	6.2	0.0		0.0	0.0	0.0		0.1	0.0	7.8	
Delay Adj:	1.00	1.00	0.00		0.00	1.00	0.00		0.00	0.00	0.00		1.00	0.00	1.00	
Delay/Veh:	61.3	14.8	0.0		0.0	35.1	0.0		0.0	0.0	0.0		22.4	0.0	37.1	
User DelAdj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
AdjDel/Veh:	61.3	14.8	0.0		0.0	35.1	0.0		0.0	0.0	0.0		22.4	0.0	37.1	
DesignQueue:	13	30	0		0	43	0		0	0	0		13	0	34	

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #17 Murray/US 26 east ramps

Cycle (sec): 100 Critical Vol./Cap. (X): 0.645
Loss Time (sec): 8 (Y+R = 4 sec) Average Delay (sec/veh): 16.5
Optimal Cycle: 42 Level Of Service: B

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Protected			Split Phase			Split Phase		
Rights:	Ignore			Ignore			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	0 2	0 1	1	0 2	0 0	0	1 0	0 1	0	0 0	0 0
Volume Module:												
Base Vol:	0	1210	365	257	1284	0	178	0	144	0	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	1210	365	257	1284	0	178	0	144	0	0	0
User Adj:	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	1210	0	257	1284	0	178	0	144	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	1210	0	257	1284	0	178	0	144	0	0	0
PCE Adj:	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	0	1210	0	257	1284	0	178	0	144	0	0	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	0.92	1.00	0.92	0.92	1.00	0.92	1.00	0.83	1.00	1.00	1.00
Lanes:	0.00	2.00	1.00	1.00	2.00	0.00	1.00	0.00	1.00	0.00	0.00	0.00
Final Sat.:	0	3505	1900	1753	3505	0	1756	0	1568	0	0	0
Capacity Analysis Module:												
Vol/Sat:	0.00	0.35	0.00	0.15	0.37	0.00	0.10	0.00	0.09	0.00	0.00	0.00
Crit Moves:		****		****			****					
Green/Cycle:	0.00	0.54	0.00	0.23	0.76	0.00	0.16	0.00	0.16	0.00	0.00	0.00
Volume/Cap:	0.00	0.64	0.00	0.64	0.48	0.00	0.64	0.00	0.58	0.00	0.00	0.00
Uniform Del:	0.0	16.5	0.0	35.0	4.4	0.0	39.5	0.0	39.1	0.0	0.0	0.0
IncremntDel:	0.0	0.8	0.0	3.6	0.1	0.0	5.2	0.0	3.6	0.0	0.0	0.0
Delay Adj:	0.00	1.00	0.00	1.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00	0.00
Delay/Veh:	0.0	17.3	0.0	38.6	4.6	0.0	44.7	0.0	42.7	0.0	0.0	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	17.3	0.0	38.6	4.6	0.0	44.7	0.0	42.7	0.0	0.0	0.0
DesignQueue:	0	34	0	11	19	0	9	0	7	0	0	0

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #18 Murray/Walker

Cycle (sec): 120 Critical Vol./Cap. (X): 0.964
Loss Time (sec): 16 (Y+R = 4 sec) Average Delay (sec/veh): 49.4
Optimal Cycle: 173 Level Of Service: D

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	2	0 2	0 1	2	0 2	0 1	2	0 2	0 1	2	0 2	0 1
Volume Module:												
Base Vol:	185	1292	308	124	853	131	295	1366	373	166	1087	153
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	185	1292	308	124	853	131	295	1366	373	166	1087	153
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	185	1292	308	124	853	131	295	1366	373	166	1087	153
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	185	1292	308	124	853	131	295	1366	373	166	1087	153
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	185	1292	308	124	853	131	295	1366	373	166	1087	153
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.90	0.93	0.83	0.89	0.92	0.83	0.90	0.93	0.83	0.91	0.94	0.84
Lanes:	2.00	2.00	1.00	2.00	2.00	1.00	2.00	2.00	1.00	2.00	2.00	1.00
Final Sat.:	3432	3538	1583	3400	3505	1568	3432	3538	1583	3467	3574	1599
Capacity Analysis Module:												
Vol/Sat:	0.05	0.37	0.19	0.04	0.24	0.08	0.09	0.39	0.24	0.05	0.30	0.10
Crit Moves:		****		****				****		****		
Green/Cycle:	0.08	0.38	0.38	0.04	0.34	0.34	0.10	0.40	0.40	0.05	0.35	0.35
Volume/Cap:	0.71	0.96	0.51	0.96	0.71	0.24	0.87	0.96	0.59	0.96	0.87	0.27
Uniform Del:	54.2	36.5	28.8	57.6	34.4	28.4	53.3	35.1	28.2	56.9	36.3	28.0
IncremntDel:	9.0	16.7	0.8	68.0	2.1	0.2	20.2	16.1	1.5	57.8	6.6	0.3
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	63.2	53.2	29.5	125.7	36.5	28.7	73.5	51.3	29.7	114.8	42.9	28.2
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	63.2	53.2	29.5	125.7	36.5	28.7	73.5	51.3	29.7	114.8	42.9	28.2
DesignQueue:	12	59	13	8	40	6	18	60	16	11	51	7

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #19 Murray/Jenkins

Cycle (sec): 100 Critical Vol./Cap. (X): 0.886
Loss Time (sec): 16 (Y+R = 4 sec) Average Delay (sec/veh): 38.8
Optimal Cycle: 111 Level Of Service: D

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Ovl			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	2	0 2	0 1	2	0 2	0 1	1	0 2	0 1	1	0 2	0 1
Volume Module:												
Base Vol:	431	770	105	232	820	272	126	1175	618	86	949	126
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	431	770	105	232	820	272	126	1175	618	86	949	126
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	431	770	105	232	820	272	126	1175	618	86	949	126
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	431	770	105	232	820	272	126	1175	618	86	949	126
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	431	770	105	232	820	272	126	1175	618	86	949	126
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.89	0.92	0.83	0.89	0.92	0.83	0.92	0.92	0.83	0.93	0.93	0.83
Lanes:	2.00	2.00	1.00	2.00	2.00	1.00	1.00	2.00	1.00	1.00	2.00	1.00
Final Sat.:	3400	3505	1568	3400	3505	1568	1753	3505	1568	1769	3538	1583
Capacity Analysis Module:												
Vol/Sat:	0.13	0.22	0.07	0.07	0.23	0.17	0.07	0.34	0.39	0.05	0.27	0.08
Crit Moves:	****				****			****		****		
Green/Cycle:	0.14	0.31	0.31	0.10	0.26	0.26	0.09	0.38	0.52	0.05	0.34	0.34
Volume/Cap:	0.89	0.71	0.22	0.71	0.89	0.66	0.79	0.89	0.76	0.89	0.79	0.23
Uniform Del:	42.1	30.5	25.5	43.8	35.4	32.8	44.5	29.1	18.9	46.9	29.6	23.6
IncremntDel:	17.6	2.2	0.2	6.9	10.3	3.8	22.1	7.5	4.1	56.3	3.5	0.2
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	59.6	32.6	25.7	50.8	45.7	36.6	66.5	36.6	23.0	103.3	33.1	23.8
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	59.6	32.6	25.7	50.8	45.7	36.6	66.5	36.6	23.0	103.3	33.1	23.8
DesignQueue:	21	31	4	12	36	12	6	44	18	5	37	5

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #20 Murray/Farmington

Cycle (sec): 120 Critical Vol./Cap. (X): 0.773
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 30.1
Optimal Cycle: 75 Level Of Service: C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Protected			Protected		
Rights:	Include			Ovl			Ovl			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	2	0 0	0 1	0	0 0	0 0	0	0 2	0 1	2	0 2	0 0
Volume Module:												
Base Vol:	739	0	494	0	0	0	0	961	518	362	1427	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	739	0	494	0	0	0	0	961	518	362	1427	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	739	0	494	0	0	0	0	961	518	362	1427	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	739	0	494	0	0	0	0	961	518	362	1427	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	739	0	494	0	0	0	0	961	518	362	1427	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.93	1.00	0.83	1.00	1.00	1.00	1.00	0.98	0.83	0.93	0.98	1.00
Lanes:	2.00	0.00	1.00	0.00	0.00	0.00	0.00	2.00	1.00	2.00	2.00	0.00
Final Sat.:	3538	0	1583	0	0	0	0	3724	1583	3538	3724	0
Capacity Analysis Module:												
Vol/Sat:	0.21	0.00	0.31	0.00	0.00	0.00	0.00	0.26	0.33	0.10	0.38	0.00
Crit Moves:			****				****				****	
Green/Cycle:	0.40	0.00	0.40	0.00	0.00	0.00	0.00	0.38	0.78	0.12	0.50	0.00
Volume/Cap:	0.52	0.00	0.77	0.00	0.00	0.00	0.00	0.68	0.42	0.87	0.77	0.00
Uniform Del:	26.9	0.0	31.0	0.0	0.0	0.0	0.0	31.3	4.2	52.0	24.7	0.0
IncremntDel:	0.3	0.0	5.8	0.0	0.0	0.0	0.0	1.4	0.2	17.1	2.1	0.0
Delay Adj:	1.00	0.00	1.00	0.00	0.00	0.00	0.00	1.00	1.00	1.00	1.00	0.00
Delay/Veh:	27.3	0.0	36.8	0.0	0.0	0.0	0.0	32.7	4.5	69.0	26.8	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	27.3	0.0	36.8	0.0	0.0	0.0	0.0	32.7	4.5	69.0	26.8	0.0
DesignQueue:	31	0	21	0	0	0	0	43	8	22	53	0

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #21 Murray/6th

Cycle (sec):	120	Critical Vol./Cap. (X):	0.898
Loss Time (sec):	16 (Y+R = 4 sec)	Average Delay (sec/veh):	28.8
Optimal Cycle:	128	Level Of Service:	C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1 0	1	1 0	1 0	1	1 0	1 0	0	1 0	1 0	0	1 0
Volume Module:												
Base Vol:	189	1454	40	53	1926	10	30	30	66	30	67	117
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	189	1454	40	53	1926	10	30	30	66	30	67	117
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	189	1454	40	53	1926	10	30	30	66	30	67	117
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	189	1454	40	53	1926	10	30	30	66	30	67	117
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	189	1454	40	53	1926	10	30	30	66	30	67	117
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.88	0.88	0.95	0.91	0.91
Lanes:	1.00	1.95	0.05	1.00	1.99	0.01	1.00	0.31	0.69	1.00	0.36	0.64
Final Sat.:	1769	3422	94	1769	3516	18	1769	522	1148	1805	626	1093
Capacity Analysis Module:												
Vol/Sat:	0.11	0.42	0.42	0.03	0.55	0.55	0.02	0.06	0.06	0.02	0.11	0.11
Crit Moves:	****				****		****				****	
Green/Cycle:	0.12	0.68	0.68	0.05	0.61	0.61	0.02	0.11	0.11	0.03	0.12	0.12
Volume/Cap:	0.90	0.62	0.62	0.62	0.90	0.90	0.90	0.54	0.54	0.54	0.90	0.90
Uniform Del:	52.1	10.6	10.6	56.1	20.2	20.2	58.8	50.8	50.8	57.3	52.1	52.1
IncremntDel:	35.6	0.5	0.5	13.6	5.5	5.5	114.1	3.2	3.2	10.0	36.3	36.3
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	87.8	11.2	11.2	69.7	25.7	25.7	172.9	54.0	54.0	67.3	88.4	88.4
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	87.8	11.2	11.2	69.7	25.7	25.7	172.9	54.0	54.0	67.3	88.4	88.4
DesignQueue:	11	35	1	3	58	0	2	2	4	2	4	7

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #22 Murray/Allen

Cycle (sec):	120	Critical Vol./Cap. (X):	0.883
Loss Time (sec):	16 (Y+R = 4 sec)	Average Delay (sec/veh):	44.7
Optimal Cycle:	121	Level Of Service:	D

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Split Phase			Split Phase		
Rights:	Ovl			Include			Include			Ovl		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1 0	2	0 1	2 0	2	0 1	1 0	1	0 1	2 0	2	0 2
Volume Module:												
Base Vol:	131	1104	276	444	1402	102	136	251	45	474	583	496
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	131	1104	276	444	1402	102	136	251	45	474	583	496
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	131	1104	276	444	1402	102	136	251	45	474	583	496
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	131	1104	276	444	1402	102	136	251	45	474	583	496
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	131	1104	276	444	1402	102	136	251	45	474	583	496
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.92	0.83	0.91	0.94	0.84	0.93	0.98	0.83	0.91	0.94	0.74
Lanes:	1.00	2.00	1.00	2.00	2.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Final Sat.:	1753	3505	1568	3467	3574	1599	1769	1862	1583	3467	3574	2814
Capacity Analysis Module:												
Vol/Sat:	0.07	0.31	0.18	0.13	0.39	0.06	0.08	0.13	0.03	0.14	0.16	0.18
Crit Moves:	****				****			****			****	
Green/Cycle:	0.08	0.38	0.56	0.15	0.44	0.44	0.15	0.15	0.15	0.18	0.18	0.34
Volume/Cap:	0.88	0.84	0.31	0.84	0.88	0.14	0.50	0.88	0.19	0.74	0.88	0.52
Uniform Del:	54.3	34.1	14.0	49.4	30.5	19.8	46.7	49.8	44.3	46.2	47.6	31.9
IncremntDel:	41.5	4.9	0.2	11.2	6.2	0.1	1.5	25.9	0.4	4.6	13.3	0.5
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	95.8	39.0	14.2	60.6	36.7	19.9	48.2	75.7	44.7	50.8	60.9	32.5
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	95.8	39.0	14.2	60.6	36.7	19.9	48.2	75.7	44.7	50.8	60.9	32.5
DesignQueue:	8	50	8	26	58	4	8	15	3	27	33	23

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #23 Murray/Brockman/Beard

Cycle (sec):	120	Critical Vol./Cap. (X):	0.950
Loss Time (sec):	16 (Y+R = 4 sec)	Average Delay (sec/veh):	48.6
Optimal Cycle:	161	Level Of Service:	D

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0 1	1 0	1	0 2	0 1	1	0 0	1 0	1	0 1	0 1
Volume Module:												
Base Vol:	129	1193	75	159	1598	188	97	184	71	177	458	126
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	129	1193	75	159	1598	188	97	184	71	177	458	126
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	129	1193	75	159	1598	188	97	184	71	177	458	126
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	129	1193	75	159	1598	188	97	184	71	177	458	126
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	129	1193	75	159	1598	188	97	184	71	177	458	126
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.93	0.92	0.92	0.93	0.93	0.83	0.92	0.93	0.93	0.94	0.99	0.84
Lanes:	1.00	1.88	0.12	1.00	2.00	1.00	1.00	0.72	0.28	1.00	1.00	1.00
Final Sat.:	1769	3299	207	1769	3538	1583	1753	1275	492	1787	1881	1599
Capacity Analysis Module:												
Vol/Sat:	0.07	0.36	0.36	0.09	0.45	0.12	0.06	0.14	0.14	0.10	0.24	0.08
Crit Moves:	****				****		****				****	
Green/Cycle:	0.08	0.44	0.44	0.11	0.48	0.48	0.06	0.19	0.19	0.13	0.26	0.26
Volume/Cap:	0.95	0.82	0.82	0.82	0.95	0.25	0.95	0.77	0.77	0.77	0.95	0.31
Uniform Del:	55.2	29.2	29.2	52.2	30.1	18.7	56.3	46.4	46.4	50.6	43.9	36.0
IncremntDel:	61.9	3.5	3.5	23.0	12.2	0.2	72.8	10.9	10.9	15.1	28.7	0.4
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	117.0	32.8	32.8	75.2	42.3	18.9	129.2	57.3	57.3	65.7	72.6	36.5
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	117.0	32.8	32.8	75.2	42.3	18.9	129.2	57.3	57.3	65.7	72.6	36.5
DesignQueue:	8	49	3	10	63	7	6	10	4	11	24	6

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #24 Nimbus/Scholls Ferry

Cycle (sec):	120	Critical Vol./Cap. (X):	0.918
Loss Time (sec):	16 (Y+R = 4 sec)	Average Delay (sec/veh):	41.8
Optimal Cycle:	139	Level Of Service:	D

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Protected			Protected		
Rights:	Ovl			Ovl			Ovl			Ovl		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	2	0 1	0 1	2	0 0	1 1	1	0 2	0 1	1	0 2	0 1
Volume Module:												
Base Vol:	486	32	219	395	33	460	140	1579	142	15	1514	31
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	486	32	219	395	33	460	140	1579	142	15	1514	31
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	486	32	219	395	33	460	140	1579	142	15	1514	31
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	486	32	219	395	33	460	140	1579	142	15	1514	31
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	486	32	219	395	33	460	140	1579	142	15	1514	31
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.91	0.99	0.84	0.91	0.85	0.85	0.93	0.93	0.83	0.94	0.94	0.84
Lanes:	2.00	1.00	1.00	2.00	0.13	1.87	1.00	2.00	1.00	1.00	2.00	1.00
Final Sat.:	3467	1881	1599	3467	217	3019	1769	3538	1583	1787	3574	1592
Capacity Analysis Module:												
Vol/Sat:	0.14	0.02	0.14	0.11	0.15	0.15	0.08	0.45	0.09	0.01	0.42	0.02
Crit Moves:	****				****		****				****	
Green/Cycle:	0.15	0.15	0.16	0.17	0.17	0.25	0.09	0.54	0.69	0.01	0.46	0.63
Volume/Cap:	0.92	0.11	0.84	0.69	0.92	0.60	0.92	0.83	0.13	0.83	0.92	0.03
Uniform Del:	50.1	43.8	48.7	47.1	49.2	39.6	54.4	23.2	6.3	59.3	30.2	8.5
IncremntDel:	21.0	0.2	21.1	3.5	20.8	1.3	49.1	3.2	0.1	130.7	8.6	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	71.1	44.0	69.8	50.6	70.0	40.9	103.5	26.4	6.4	190.0	38.8	8.5
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	71.1	44.0	69.8	50.6	70.0	40.9	103.5	26.4	6.4	190.0	38.8	8.5
DesignQueue:	28	2	13	23	2	24	9	55	3	1	61	1

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #25 Hall/Scholls Ferry

Cycle (sec): 120 Critical Vol./Cap. (X): 0.772
Loss Time (sec): 16 (Y+R = 4 sec) Average Delay (sec/veh): 38.8
Optimal Cycle: 86 Level Of Service: D

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Ovl			Include			Ovl			Ovl		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	2 0	2	0 1	2	0 1	1 0	2	0 2	0 1	2	0 2	0 1
Volume Module:												
Base Vol:	478	606	313	346	579	70	84	925	324	287	872	323
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	478	606	313	346	579	70	84	925	324	287	872	323
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	478	606	313	346	579	70	84	925	324	287	872	323
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	478	606	313	346	579	70	84	925	324	287	872	323
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	478	606	313	346	579	70	84	925	324	287	872	323
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.91	0.94	0.84	0.90	0.91	0.91	0.90	0.93	0.83	0.91	0.94	0.82
Lanes:	2.00	2.00	1.00	2.00	1.78	0.22	2.00	2.00	1.00	2.00	2.00	1.00
Final Sat.:	3467	3574	1599	3432	3093	374	3432	3538	1583	3467	3574	1560
Capacity Analysis Module:												
Vol/Sat:	0.14	0.17	0.20	0.10	0.19	0.19	0.02	0.26	0.20	0.08	0.24	0.21
Crit Moves:	****				****			****		****		
Green/Cycle:	0.18	0.26	0.37	0.16	0.24	0.24	0.04	0.34	0.52	0.11	0.41	0.56
Volume/Cap:	0.77	0.64	0.53	0.64	0.77	0.77	0.60	0.77	0.40	0.77	0.60	0.37
Uniform Del:	47.0	39.1	29.5	47.4	42.4	42.4	56.6	35.5	17.6	52.1	28.1	14.5
IncremntDel:	6.0	1.5	0.9	2.6	4.5	4.5	7.2	3.2	0.3	9.6	0.7	0.3
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	52.9	40.7	30.4	50.1	46.8	46.8	63.8	38.7	17.9	61.8	28.8	14.8
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	52.9	40.7	30.4	50.1	46.8	46.8	63.8	38.7	17.9	61.8	28.8	14.8
DesignQueue:	27	31	14	20	31	4	5	44	11	17	37	10

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #26 Allen/Schools Ferry

Cycle (sec): 120 Critical Vol./Cap. (X): 0.965
Loss Time (sec): 16 (Y+R = 4 sec) Average Delay (sec/veh): 52.3
Optimal Cycle: 180 Level Of Service: D

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Permit+Prot			Permit+Prot			Permit+Prot			Permit+Prot		
Rights:	Include			Ovl			Ovl			Ovl		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1 0	1	0 1	1	0 1	0 1	1	0 1	1 0	1	0 1	1 0
Volume Module:												
Base Vol:	188	651	128	46	627	168	292	706	456	182	406	34
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	188	651	128	46	627	168	292	706	456	182	406	34
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	188	651	128	46	627	168	292	706	456	182	406	34
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	188	651	128	46	627	168	292	706	456	182	406	34
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	188	651	128	46	627	168	292	706	456	182	406	34
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.36	0.98	0.83	0.25	0.98	0.83	0.68	0.89	0.89	0.50	0.92	0.92
Lanes:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.22	0.78	1.00	1.85	0.15
Final Sat.:	681	1862	1583	482	1862	1583	1297	2043	1320	950	3225	270
Capacity Analysis Module:												
Vol/Sat:	0.28	0.35	0.08	0.10	0.34	0.11	0.23	0.35	0.35	0.19	0.13	0.13
Crit Moves:	****				****			****		****		
Green/Cycle:	0.48	0.40	0.40	0.40	0.33	0.57	0.48	0.34	0.44	0.33	0.19	0.22
Volume/Cap:	0.58	0.87	0.20	0.24	1.03	0.19	0.47	1.03	0.79	0.57	0.66	0.57
Uniform Del:	45.3	33.1	23.4	49.3	40.4	12.2	29.3	39.8	28.8	45.7	45.1	41.8
IncremntDel:	2.7	11.0	0.2	0.6	44.0	0.1	0.6	34.3	2.9	2.5	2.5	1.1
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	48.0	44.1	23.6	49.9	84.3	12.3	29.8	74.2	31.7	48.3	47.6	42.9
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	48.0	44.1	23.6	49.9	84.3	12.3	29.8	74.2	31.7	48.3	47.6	42.9
DesignQueue:	11	29	5	3	31	5	14	34	19	11	23	2

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #27 Oleson/Vermont

Cycle (sec): 100 Critical Vol./Cap. (X): 0.778
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 25.4
Optimal Cycle: 72 Level Of Service: C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Prot+Permit			Prot+Permit			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0	0 1	0	1	0	1	0	0 1	0	1	0
Volume Module:												
Base Vol:	18	345	252	179	441	20	13	6	20	339	17	173
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	18	345	252	179	441	20	13	6	20	339	17	173
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	18	345	252	179	441	20	13	6	20	339	17	173
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	18	345	252	179	441	20	13	6	20	339	17	173
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	18	345	252	179	441	20	13	6	20	339	17	173
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.38	0.92	0.92	0.34	0.97	0.97	0.54	0.87	0.87	0.74	0.85	0.85
Lanes:	1.00	0.58	0.42	1.00	0.96	0.04	1.00	0.23	0.77	1.00	0.09	0.91
Final Sat.:	731	1008	736	646	1771	80	1019	380	1268	1405	145	1478
Capacity Analysis Module:												
Vol/Sat:	0.02	0.34	0.34	0.28	0.25	0.25	0.01	0.02	0.02	0.24	0.12	0.12
Crit Moves:		****		****						****		
Green/Cycle:	0.46	0.44	0.44	0.61	0.55	0.55	0.31	0.31	0.31	0.31	0.31	0.31
Volume/Cap:	0.05	0.78	0.78	0.45	0.45	0.45	0.04	0.05	0.05	0.78	0.38	0.38
Uniform Del:	15.3	23.9	23.9	13.4	13.6	13.6	24.1	24.2	24.2	31.4	27.0	27.0
IncremntDel:	0.1	5.1	5.1	0.8	0.3	0.3	0.1	0.0	0.0	8.6	0.5	0.5
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	15.4	28.9	28.9	14.3	14.0	14.0	24.2	24.2	24.2	40.0	27.4	27.4
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	15.4	28.9	28.9	14.3	14.0	14.0	24.2	24.2	24.2	40.0	27.4	27.4
DesignQueue:	1	12	9	9	12	1	0	0	1	14	1	7

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #28 Oleson/Garden Home

Cycle (sec): 100 Critical Vol./Cap. (X): 0.998
Loss Time (sec): 16 (Y+R = 4 sec) Average Delay (sec/veh): 49.6
Optimal Cycle: 176 Level Of Service: D

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Prot+Permit			Prot+Permit			Prot+Permit			Prot+Permit		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0	1 0 1	1	0	0 1	0	1	0 1	1	0	0 1
Volume Module:												
Base Vol:	218	399	200	145	490	146	138	479	329	198	349	119
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	218	399	200	145	490	146	138	479	329	198	349	119
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	218	399	200	145	490	146	138	479	329	198	349	119
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	218	399	200	145	490	146	138	479	329	198	349	119
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	218	399	200	145	490	146	138	479	329	198	349	119
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.33	0.99	0.84	0.44	0.96	0.96	0.35	0.99	0.83	0.35	0.94	0.94
Lanes:	1.00	1.00	1.00	1.00	0.77	0.23	1.00	1.00	1.00	1.00	0.75	0.25
Final Sat.:	633	1881	1599	832	1400	417	664	1881	1580	670	1336	455
Capacity Analysis Module:												
Vol/Sat:	0.34	0.21	0.13	0.17	0.35	0.35	0.21	0.25	0.21	0.30	0.26	0.26
Crit Moves:	****				****			****		****		
Green/Cycle:	0.46	0.34	0.34	0.51	0.35	0.35	0.34	0.26	0.26	0.41	0.28	0.28
Volume/Cap:	0.74	0.62	0.37	0.34	1.00	1.00	0.61	1.00	0.82	0.73	0.92	0.92
Uniform Del:	21.7	27.5	24.7	15.0	32.4	32.4	26.1	37.2	35.0	23.7	34.8	34.8
IncremntDel:	9.8	1.9	0.4	0.5	35.2	35.2	5.0	40.6	12.2	9.4	22.4	22.4
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	31.5	29.3	25.2	15.5	67.6	67.6	31.1	77.9	47.3	33.0	57.1	57.1
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	31.5	29.3	25.2	15.5	67.6	67.6	31.1	77.9	47.3	33.0	57.1	57.1
DesignQueue:	11	15	8	7	19	6	7	21	14	10	15	5

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #29 Cedar Hills/Barnes

Cycle (sec): 140 Critical Vol./Cap. (X): 0.956
Loss Time (sec): 16 (Y+R = 4 sec) Average Delay (sec/veh): 59.2
Optimal Cycle: 180 Level Of Service: E

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Ovl			Include			Ovl			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	2 0	1 0	1	2 0	0 1	0	1 0	2 0	1	2 0	1 1	0
Volume Module:												
Base Vol:	725	530	691	275	281	10	31	774	543	868	760	387
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	725	530	691	275	281	10	31	774	543	868	760	387
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	725	530	691	275	281	10	31	774	543	868	760	387
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	725	530	691	275	281	10	31	774	543	868	760	387
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	725	530	691	275	281	10	31	774	543	868	760	387
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.90	0.98	0.83	0.89	0.96	0.96	0.91	0.91	0.82	0.90	0.88	0.88
Lanes:	2.00	1.00	1.00	2.00	0.97	0.03	1.00	2.00	1.00	2.00	1.33	0.67
Final Sat.:	3432	1862	1583	3369	1756	62	1736	3473	1554	3432	2225	1133
Capacity Analysis Module:												
Vol/Sat:	0.21	0.28	0.44	0.08	0.16	0.16	0.02	0.22	0.35	0.25	0.34	0.34
Crit Moves:	****				****			****		****		
Green/Cycle:	0.22	0.30	0.57	0.09	0.17	0.17	0.02	0.23	0.45	0.26	0.47	0.47
Volume/Cap:	0.96	0.94	0.77	0.94	0.96	0.96	0.72	0.96	0.77	0.96	0.72	0.72
Uniform Del:	53.9	47.7	23.4	63.6	57.8	57.8	67.8	53.0	32.1	50.7	29.6	29.6
IncremntDel:	22.5	24.7	4.2	37.8	39.8	39.8	45.7	21.6	5.2	20.0	1.7	1.7
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	76.4	72.4	27.5	101.4	97.6	97.6	113.5	74.6	37.3	70.7	31.2	31.2
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	76.4	72.4	27.5	101.4	97.6	97.6	113.5	74.6	37.3	70.7	31.2	31.2
DesignQueue:	46	31	26	20	19	1	2	49	25	53	34	17

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #30 Cedar Hills/US 26 west ramps

Cycle (sec): 60 Critical Vol./Cap. (X): 0.933
Loss Time (sec): 8 (Y+R = 4 sec) Average Delay (sec/veh): 25.1
Optimal Cycle: 90 Level Of Service: C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Permitted			Permitted			Split Phase			Split Phase		
Rights:	Include			Ignore			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0 0	2 0	0	0 0	2 0	2	0 0	0 0	0	2 0	0 0	1
Volume Module:												
Base Vol:	0	1360	0	0	1430	0	0	0	0	345	0	640
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	1360	0	0	1430	0	0	0	0	345	0	640
User Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	1360	0	0	1430	0	0	0	0	345	0	640
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	1360	0	0	1430	0	0	0	0	345	0	640
PCE Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	0	1360	0	0	1430	0	0	0	0	345	0	640
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	0.94	1.00	1.00	0.93	0.88	1.00	1.00	1.00	0.90	1.00	0.83
Lanes:	0.00	2.00	0.00	0.00	2.00	2.00	0.00	0.00	0.00	2.00	0.00	1.00
Final Sat.:	0	3574	0	0	3538	3344	0	0	0	3432	0	1583
Capacity Analysis Module:												
Vol/Sat:	0.00	0.38	0.00	0.00	0.40	0.00	0.00	0.00	0.00	0.10	0.00	0.40
Crit Moves:					****							****
Green/Cycle:	0.00	0.43	0.00	0.00	0.43	0.00	0.00	0.00	0.00	0.43	0.00	0.43
Volume/Cap:	0.00	0.88	0.00	0.00	0.93	0.00	0.00	0.00	0.00	0.23	0.00	0.93
Uniform Del:	0.0	15.6	0.0	0.0	16.2	0.0	0.0	0.0	0.0	10.7	0.0	16.2
IncremntDel:	0.0	6.1	0.0	0.0	10.8	0.0	0.0	0.0	0.0	0.1	0.0	19.7
Delay Adj:	0.00	1.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	1.00	0.00	1.00
Delay/Veh:	0.0	21.6	0.0	0.0	26.9	0.0	0.0	0.0	0.0	10.8	0.0	35.9
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	21.6	0.0	0.0	26.9	0.0	0.0	0.0	0.0	10.8	0.0	35.9
DesignQueue:	0	28	0	0	30	0	0	0	0	7	0	13

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #31 Cedar Hills/US 26 east ramps

Cycle (sec): 100 Critical Vol./Cap. (X): 0.853
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 24.9
Optimal Cycle: 91 Level Of Service: C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	0 2	0 1	1	0 2	0 0	0	0 1!	0 0	0	0 0	0 0
Volume Module:												
Base Vol:	0	1431	402	273	1447	0	171	0	112	0	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	1431	402	273	1447	0	171	0	112	0	0	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	1431	402	273	1447	0	171	0	112	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	1431	402	273	1447	0	171	0	112	0	0	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	0	1431	402	273	1447	0	171	0	112	0	0	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	0.94	0.84	0.94	0.94	1.00	0.75	1.00	0.75	1.00	1.00	1.00
Lanes:	0.00	2.00	1.00	1.00	2.00	0.00	0.60	0.00	0.40	0.00	0.00	0.00
Final Sat.:	0	3574	1599	1787	3574	0	866	0	568	0	0	0
Capacity Analysis Module:												
Vol/Sat:	0.00	0.40	0.25	0.15	0.40	0.00	0.20	0.00	0.20	0.00	0.00	0.00
Crit Moves:		****		****			****					
Green/Cycle:	0.00	0.47	0.47	0.18	0.65	0.00	0.23	0.00	0.23	0.00	0.00	0.00
Volume/Cap:	0.00	0.85	0.54	0.85	0.62	0.00	0.85	0.00	0.85	0.00	0.00	0.00
Uniform Del:	0.0	23.5	18.8	39.8	10.4	0.0	36.8	0.0	36.8	0.0	0.0	0.0
IncremntDel:	0.0	4.5	0.8	19.3	0.5	0.0	18.7	0.0	18.7	0.0	0.0	0.0
Delay Adj:	0.00	1.00	1.00	1.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00	0.00
Delay/Veh:	0.0	27.9	19.6	59.1	10.9	0.0	55.5	0.0	55.5	0.0	0.0	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	27.9	19.6	59.1	10.9	0.0	55.5	0.0	55.5	0.0	0.0	0.0
DesignQueue:	0	47	13	13	31	0	8	0	5	0	0	0

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #32 Cedar Hills/Butner

Cycle (sec): 100 Critical Vol./Cap. (X): 0.968
Loss Time (sec): 16 (Y+R = 4 sec) Average Delay (sec/veh): 41.7
Optimal Cycle: 152 Level Of Service: D

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0 2	0 1	1	0 1	1 0	0	0 1!	0 0	0	0 1!	0 0
Volume Module:												
Base Vol:	58	1459	36	37	1346	189	200	160	57	24	81	148
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	58	1459	36	37	1346	189	200	160	57	24	81	148
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	58	1459	36	37	1346	189	200	160	57	24	81	148
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	58	1459	36	37	1346	189	200	160	57	24	81	148
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	58	1459	36	37	1346	189	200	160	57	24	81	148
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.94	0.94	0.84	0.94	0.92	0.92	0.64	0.64	0.64	0.85	0.85	0.85
Lanes:	1.00	2.00	1.00	1.00	1.75	0.25	0.48	0.38	0.14	0.09	0.32	0.59
Final Sat.:	1787	3574	1599	1787	3077	432	583	466	166	154	518	947
Capacity Analysis Module:												
Vol/Sat:	0.03	0.41	0.02	0.02	0.44	0.44	0.34	0.34	0.34	0.16	0.16	0.16
Crit Moves:	****				****			****				
Green/Cycle:	0.03	0.46	0.46	0.02	0.45	0.45	0.35	0.35	0.35	0.35	0.35	0.35
Volume/Cap:	0.97	0.88	0.05	0.88	0.97	0.97	0.97	0.97	0.97	0.44	0.44	0.44
Uniform Del:	48.3	24.5	14.8	48.7	26.7	26.7	31.7	31.7	31.7	24.7	24.7	24.7
IncremntDel:	104.5	6.0	0.0	94.7	15.6	15.6	35.0	35.0	35.0	0.5	0.5	0.5
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	152.7	30.5	14.8	143.4	42.3	42.3	66.7	66.7	66.7	25.2	25.2	25.2
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	152.7	30.5	14.8	143.4	42.3	42.3	66.7	66.7	66.7	25.2	25.2	25.2
DesignQueue:	3	49	1	2	46	6	8	6	2	1	3	5

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #33 Cedar Hills/Walker

Cycle (sec): 120 Critical Vol./Cap. (X): 0.981
Loss Time (sec): 16 (Y+R = 4 sec) Average Delay (sec/veh): 53.9
Optimal Cycle: 180 Level Of Service: D

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Ovl			Include			Ovl			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	2	0 2	0 1	2	0 1	1 0	2	0 2	0 1	2	0 1	1 0
Volume Module:												
Base Vol:	262	1363	541	194	1043	91	162	1218	249	392	968	177
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	262	1363	541	194	1043	91	162	1218	249	392	968	177
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	262	1363	541	194	1043	91	162	1218	249	392	968	177
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	262	1363	541	194	1043	91	162	1218	249	392	968	177
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	262	1363	541	194	1043	91	162	1218	249	392	968	177
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.94	0.99	0.84	0.94	0.98	0.98	0.94	0.99	0.84	0.94	0.97	0.97
Lanes:	2.00	2.00	1.00	2.00	1.84	0.16	2.00	2.00	1.00	2.00	1.69	0.31
Final Sat.:	3574	3762	1599	3574	3419	298	3574	3762	1599	3574	3101	567
Capacity Analysis Module:												
Vol/Sat:	0.07	0.36	0.34	0.05	0.31	0.31	0.05	0.32	0.16	0.11	0.31	0.31
Crit Moves:		****		****				****		****		
Green/Cycle:	0.08	0.37	0.48	0.06	0.34	0.34	0.06	0.33	0.41	0.11	0.39	0.39
Volume/Cap:	0.89	0.98	0.70	0.98	0.89	0.89	0.81	0.98	0.38	0.98	0.81	0.81
Uniform Del:	54.5	37.4	24.4	56.6	37.3	37.3	56.0	39.8	24.5	53.2	32.9	32.9
IncremntDel:	26.7	19.6	3.0	58.2	8.2	8.2	21.2	21.0	0.4	39.8	3.6	3.6
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	81.2	57.0	27.4	114.8	45.5	45.5	77.2	60.8	24.9	93.0	36.5	36.5
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	81.2	57.0	27.4	114.8	45.5	45.5	77.2	60.8	24.9	93.0	36.5	36.5
DesignQueue:	16	63	20	12	50	4	10	59	10	24	43	8

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #34 Cedar Hills/Jenkins

Cycle (sec): 120 Critical Vol./Cap. (X): 0.918
Loss Time (sec): 16 (Y+R = 4 sec) Average Delay (sec/veh): 48.6
Optimal Cycle: 139 Level Of Service: D

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Ovl			Include			Ovl		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0 1	1 0	1	0 2	0 1	2	0 1	0 1	1	0 1	0 1
Volume Module:												
Base Vol:	251	709	16	459	823	463	920	226	347	35	127	485
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	251	709	16	459	823	463	920	226	347	35	127	485
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	251	709	16	459	823	463	920	226	347	35	127	485
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	251	709	16	459	823	463	920	226	347	35	127	485
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	251	709	16	459	823	463	920	226	347	35	127	485
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.94	0.93	0.93	0.94	0.94	0.84	0.91	0.99	0.84	0.93	0.98	0.83
Lanes:	1.00	1.96	0.04	1.00	2.00	1.00	2.00	1.00	1.00	1.00	1.00	1.00
Final Sat.:	1787	3450	78	1787	3574	1599	3467	1881	1599	1769	1862	1583
Capacity Analysis Module:												
Vol/Sat:	0.14	0.21	0.21	0.26	0.23	0.29	0.27	0.12	0.22	0.02	0.07	0.31
Crit Moves:		****		****			****				****	
Green/Cycle:	0.19	0.22	0.22	0.28	0.31	0.60	0.29	0.33	0.33	0.03	0.07	0.35
Volume/Cap:	0.74	0.92	0.92	0.92	0.74	0.48	0.92	0.36	0.65	0.65	0.92	0.87
Uniform Del:	45.7	45.5	45.5	41.9	36.8	13.4	41.3	30.4	34.1	57.6	55.2	36.1
IncremntDel:	8.2	15.7	15.7	22.0	2.6	0.4	13.0	0.4	2.9	25.1	52.5	13.3
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	53.9	61.2	61.2	63.9	39.4	13.8	54.3	30.7	37.0	82.6	108	49.4
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	53.9	61.2	61.2	63.9	39.4	13.8	54.3	30.7	37.0	82.6	108	49.4
DesignQueue:	14	39	1	24	40	13	47	10	16	2	8	22

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #35 Cedar Hills/Hall

Cycle (sec): 100 Critical Vol./Cap. (X): 0.897
Loss Time (sec): 16 (Y+R = 4 sec) Average Delay (sec/veh): 42.6
Optimal Cycle: 115 Level Of Service: D

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Ovl		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0 2	0 1	1	0 1	1 0	1	0 1	0 1	1	0 1	0 1
Volume Module:												
Base Vol:	162	597	70	98	1039	85	208	511	226	80	425	159
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	162	597	70	98	1039	85	208	511	226	80	425	159
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	162	597	70	98	1039	85	208	511	226	80	425	159
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	162	597	70	98	1039	85	208	511	226	80	425	159
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	162	597	70	98	1039	85	208	511	226	80	425	159
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.93	0.93	0.83	0.94	0.92	0.92	0.94	0.99	0.84	0.94	0.99	0.83
Lanes:	1.00	2.00	1.00	1.00	1.85	0.15	1.00	1.00	1.00	1.00	1.00	1.00
Final Sat.:	1769	3538	1570	1787	3248	266	1787	1881	1599	1787	1881	1580
Capacity Analysis Module:												
Vol/Sat:	0.09	0.17	0.04	0.05	0.32	0.32	0.12	0.27	0.14	0.04	0.23	0.10
Crit Moves:	****				****		****				****	
Green/Cycle:	0.10	0.35	0.35	0.11	0.36	0.36	0.13	0.33	0.33	0.05	0.25	0.36
Volume/Cap:	0.90	0.49	0.13	0.49	0.90	0.90	0.90	0.83	0.43	0.83	0.90	0.28
Uniform Del:	44.4	25.7	22.4	41.7	30.4	30.4	42.9	31.0	26.3	46.8	36.2	22.5
IncremntDel:	39.4	0.3	0.1	1.9	8.8	8.8	33.1	9.2	0.6	42.5	19.5	0.3
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	83.7	26.0	22.5	43.5	39.3	39.3	75.9	40.3	26.9	89.3	55.7	22.7
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	83.7	26.0	22.5	43.5	39.3	39.3	75.9	40.3	26.9	89.3	55.7	22.7
DesignQueue:	8	23	3	5	40	3	10	21	9	4	19	6

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #36 Cedar Hills/Canyon

Cycle (sec): 100 Critical Vol./Cap. (X): 0.989
Loss Time (sec): 16 (Y+R = 4 sec) Average Delay (sec/veh): 54.5
Optimal Cycle: 167 Level Of Service: D

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Protected			Protected		
Rights:	Include			Ovl			Include			Ovl		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	1 0	1 0	1	0 2	0 1	1	0 1	1 0	1	0 2	0 1
Volume Module:												
Base Vol:	367	425	100	274	718	191	158	1423	0	160	1209	72
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	367	425	100	274	718	191	158	1423	0	160	1209	72
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	367	425	100	274	718	191	158	1423	0	160	1209	72
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	367	425	100	274	718	191	158	1423	0	160	1209	72
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	367	425	100	274	718	191	158	1423	0	160	1209	72
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.94	0.96	0.96	0.93	0.98	0.83	0.93	0.98	1.00	0.92	0.97	0.83
Lanes:	1.25	1.42	0.33	1.00	2.00	1.00	1.00	2.00	0.00	1.00	2.00	1.00
Final Sat.:	2235	2589	609	1769	3724	1583	1769	3724	0	1753	3690	1568
Capacity Analysis Module:												
Vol/Sat:	0.16	0.16	0.16	0.15	0.19	0.12	0.09	0.38	0.00	0.09	0.33	0.05
Crit Moves:			****		****			****			****	
Green/Cycle:	0.17	0.17	0.17	0.20	0.20	0.30	0.10	0.39	0.00	0.09	0.38	0.57
Volume/Cap:	0.99	0.99	0.99	0.79	0.99	0.41	0.87	0.99	0.00	0.99	0.87	0.08
Uniform Del:	41.6	41.6	41.6	38.3	40.1	28.1	44.2	30.5	0.0	45.3	28.9	9.6
IncremntDel:	27.1	27.1	27.1	12.0	30.4	0.6	33.6	20.9	0.0	67.2	6.3	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Delay/Veh:	68.7	68.7	68.7	50.3	70.6	28.6	77.8	51.4	0.0	112.5	35.2	9.7
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	68.7	68.7	68.7	50.3	70.6	28.6	77.8	51.4	0.0	112.5	35.2	9.7
DesignQueue:	18	21	5	13	34	8	8	54	0	8	46	2

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #37 Cedar Hills/Farmington

Cycle (sec): 100 Critical Vol./Cap. (X): 0.719
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 21.1
Optimal Cycle: 62 Level Of Service: C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Ovl			Include			Ovl		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0 0	0	0 0	2	0 0	0 1	2	0 2	0 0	0	0 2	0 1
Volume Module:												
Base Vol:	0	0	0	696	0	279	310	1382	0	0	1221	611
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	696	0	279	310	1382	0	0	1221	611
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	696	0	279	310	1382	0	0	1221	611
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	696	0	279	310	1382	0	0	1221	611
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	0	0	0	696	0	279	310	1382	0	0	1221	611
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	0.91	1.00	0.84	0.90	0.93	1.00	1.00	0.94	0.82
Lanes:	0.00	0.00	0.00	2.00	0.00	1.00	2.00	2.00	0.00	0.00	2.00	1.00
Final Sat.:	0	0	0	3467	0	1599	3432	3538	0	0	3574	1560
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.20	0.00	0.17	0.09	0.39	0.00	0.00	0.34	0.39
Crit Moves:				****			****				****	
Green/Cycle:	0.00	0.00	0.00	0.28	0.00	0.40	0.13	0.60	0.00	0.00	0.48	0.75
Volume/Cap:	0.00	0.00	0.00	0.72	0.00	0.43	0.72	0.65	0.00	0.00	0.72	0.52
Uniform Del:	0.0	0.0	0.0	32.5	0.0	21.5	42.0	13.1	0.0	0.0	20.9	5.0
IncremntDel:	0.0	0.0	0.0	2.6	0.0	0.5	5.8	0.7	0.0	0.0	1.5	0.4
Delay Adj:	0.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00
Delay/Veh:	0.0	0.0	0.0	35.1	0.0	21.9	47.8	13.8	0.0	0.0	22.4	5.4
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	35.1	0.0	21.9	47.8	13.8	0.0	0.0	22.4	5.4
DesignQueue:	0	0	0	29	0	10	15	34	0	0	39	9

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #38 Hall/Center

Cycle (sec): 100 Critical Vol./Cap. (X): 0.723
Loss Time (sec): 16 (Y+R = 4 sec) Average Delay (sec/veh): 25.4
Optimal Cycle: 72 Level Of Service: C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Prot+Permit			Prot+Permit			Split Phase			Split Phase		
Rights:	Ovl			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1 0	1	0 1	1	0 0	1 0	1	0 0	1 0	1	0 1!	0 0
Volume Module:												
Base Vol:	18	504	527	87	511	24	37	52	51	500	68	94
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	18	504	527	87	511	24	37	52	51	500	68	94
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	18	504	527	87	511	24	37	52	51	500	68	94
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	18	504	527	87	511	24	37	52	51	500	68	94
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	18	504	527	87	511	24	37	52	51	500	68	94
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.23	1.00	0.85	0.29	0.98	0.98	0.95	0.93	0.93	0.92	0.92	0.92
Lanes:	1.00	1.00	1.00	1.00	0.96	0.04	1.00	0.50	0.50	1.61	0.16	0.23
Final Sat.:	440	1900	1609	556	1784	84	1805	888	871	2824	290	401
Capacity Analysis Module:												
Vol/Sat:	0.04	0.27	0.33	0.16	0.29	0.29	0.02	0.06	0.06	0.18	0.23	0.23
Crit Moves:		****		****				****			****	
Green/Cycle:	0.38	0.37	0.69	0.47	0.42	0.42	0.08	0.08	0.08	0.32	0.32	0.32
Volume/Cap:	0.11	0.72	0.47	0.33	0.68	0.68	0.25	0.72	0.72	0.55	0.72	0.72
Uniform Del:	21.5	27.3	7.1	17.9	23.6	23.6	43.1	44.9	44.9	27.7	29.8	29.8
IncremntDel:	0.3	3.7	0.3	0.7	2.5	2.5	0.9	16.6	16.6	0.5	2.9	2.9
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	21.7	31.0	7.4	18.6	26.1	26.1	44.0	61.4	61.4	28.2	32.7	32.7
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	21.7	31.0	7.4	18.6	26.1	26.1	44.0	61.4	61.4	28.2	32.7	32.7
DesignQueue:	1	19	10	5	18	1	2	3	3	20	3	4

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #39 Hall/Allen

Cycle (sec):	100	Critical Vol./Cap. (X):	0.953
Loss Time (sec):	16 (Y+R = 4 sec)	Average Delay (sec/veh):	46.3
Optimal Cycle:	142	Level Of Service:	D

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	2	0 1	1 0	2	0 1	1 0	1	0 2	0 1	1	0 2	0 1
Volume Module:												
Base Vol:	381	648	63	156	1044	67	100	672	314	166	1145	90
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	381	648	63	156	1044	67	100	672	314	166	1145	90
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	381	648	63	156	1044	67	100	672	314	166	1145	90
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	381	648	63	156	1044	67	100	672	314	166	1145	90
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	381	648	63	156	1044	67	100	672	314	166	1145	90
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.91	0.93	0.93	0.91	0.93	0.93	0.93	0.93	0.83	0.94	0.94	0.84
Lanes:	2.00	1.82	0.18	2.00	1.88	0.12	1.00	2.00	1.00	1.00	2.00	1.00
Final Sat.:	3467	3208	312	3467	3328	214	1769	3538	1576	1787	3574	1592
Capacity Analysis Module:												
Vol/Sat:	0.11	0.20	0.20	0.04	0.31	0.31	0.06	0.19	0.20	0.09	0.32	0.06
Crit Moves:	****				****		****				****	
Green/Cycle:	0.12	0.36	0.36	0.08	0.33	0.33	0.06	0.27	0.27	0.13	0.34	0.34
Volume/Cap:	0.95	0.56	0.56	0.56	0.95	0.95	0.95	0.70	0.74	0.74	0.95	0.17
Uniform Del:	44.0	25.4	25.4	44.2	32.8	32.8	46.9	32.9	33.3	42.1	32.4	23.4
IncremntDel:	33.0	0.5	0.5	2.4	16.3	16.3	72.6	2.4	6.7	12.2	16.0	0.1
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	76.9	25.9	25.9	46.7	49.1	49.1	119.5	35.3	40.0	54.3	48.4	23.5
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	76.9	25.9	25.9	46.7	49.1	49.1	119.5	35.3	40.0	54.3	48.4	23.5
DesignQueue:	19	24	2	8	42	3	5	29	13	8	46	3

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #40 Hall/Denney

Cycle (sec):	100	Critical Vol./Cap. (X):	0.876
Loss Time (sec):	12 (Y+R = 4 sec)	Average Delay (sec/veh):	26.9
Optimal Cycle:	81	Level Of Service:	C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permit+Prot			Permit+Prot			Split Phase			Split Phase		
Rights:	Ignore			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	0 2	0 1	1	0 2	0 0	0	0 0	0 0	2	0 0	0 1
Volume Module:												
Base Vol:	0	1125	370	260	1254	0	0	0	0	889	0	236
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	1125	370	260	1254	0	0	0	0	889	0	236
User Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	1125	0	260	1254	0	0	0	0	889	0	236
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	1125	0	260	1254	0	0	0	0	889	0	236
PCE Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	0	1125	0	260	1254	0	0	0	0	889	0	236
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	0.93	1.00	0.42	0.94	1.00	1.00	1.00	1.00	0.91	1.00	0.84
Lanes:	0.00	2.00	1.00	1.00	2.00	0.00	0.00	0.00	0.00	2.00	0.00	1.00
Final Sat.:	0	3538	1900	798	3574	0	0	0	0	3467	0	1599
Capacity Analysis Module:												
Vol/Sat:	0.00	0.32	0.00	0.33	0.35	0.00	0.00	0.00	0.00	0.26	0.00	0.15
Crit Moves:		****		****						****		
Green/Cycle:	0.00	0.39	0.00	0.63	0.57	0.00	0.00	0.00	0.00	0.31	0.00	0.31
Volume/Cap:	0.00	0.82	0.00	0.52	0.62	0.00	0.00	0.00	0.00	0.82	0.00	0.47
Uniform Del:	0.0	27.4	0.0	28.8	14.5	0.0	0.0	0.0	0.0	31.7	0.0	27.6
IncremntDel:	0.0	4.0	0.0	1.0	0.6	0.0	0.0	0.0	0.0	5.0	0.0	0.7
Delay Adj:	0.00	1.00	0.00	1.00	1.00	0.00	0.00	0.00	0.00	1.00	0.00	1.00
Delay/Veh:	0.0	31.4	0.0	29.8	15.1	0.0	0.0	0.0	0.0	36.7	0.0	28.3
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	31.4	0.0	29.8	15.1	0.0	0.0	0.0	0.0	36.7	0.0	28.3
DesignQueue:	0	41	0	11	33	0	0	0	0	36	0	9

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #41 Hall/Greenway

Cycle (sec):	120	Critical Vol./Cap. (X):	0.968
Loss Time (sec):	16 (Y+R = 4 sec)	Average Delay (sec/veh):	35.6
Optimal Cycle:	171	Level Of Service:	D

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Permit+Prot			Permit+Prot		
Rights:	Ovl			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	1 0	0 1	0	0 1!	0 0	1	0 1	1 0	1	0 1	1 0
Volume Module:												
Base Vol:	146	17	317	26	27	4	7	847	309	669	1219	26
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	146	17	317	26	27	4	7	847	309	669	1219	26
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	146	17	317	26	27	4	7	847	309	669	1219	26
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	146	17	317	26	27	4	7	847	309	669	1219	26
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	146	17	317	26	27	4	7	847	309	669	1219	26
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.94	0.94	0.83	0.97	0.97	0.97	0.25	0.90	0.90	0.56	0.94	0.94
Lanes:	0.90	0.10	1.00	0.46	0.47	0.07	1.00	1.47	0.53	1.00	1.96	0.04
Final Sat.:	1596	186	1583	840	872	129	483	2514	917	1068	3489	74
Capacity Analysis Module:												
Vol/Sat:	0.09	0.09	0.20	0.03	0.03	0.03	0.01	0.34	0.34	0.63	0.35	0.35
Crit Moves:		****			****			****		****		
Green/Cycle:	0.10	0.10	0.48	0.03	0.03	0.03	0.40	0.35	0.35	0.78	0.73	0.73
Volume/Cap:	0.96	0.96	0.41	0.96	0.96	0.96	0.04	0.96	0.96	0.80	0.48	0.48
Uniform Del:	54.1	54.1	20.0	58.0	58.0	58.0	30.7	38.2	38.2	26.9	6.7	6.7
IncremntDel:	57.7	57.7	0.4	102.9	103	102.9	0.1	17.6	17.6	5.5	0.1	0.1
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	111.8	112	20.3	160.9	161	160.9	30.8	55.8	55.8	32.4	6.8	6.8
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	111.8	112	20.3	160.9	161	160.9	30.8	55.8	55.8	32.4	6.8	6.8
DesignQueue:	9	1	11	2	2	0	0	40	15	28	24	1

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #42 Hall/Nimbus

Cycle (sec):	100	Critical Vol./Cap. (X):	0.832
Loss Time (sec):	16 (Y+R = 4 sec)	Average Delay (sec/veh):	31.5
Optimal Cycle:	94	Level Of Service:	C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0 0	1 0	1	0 0	1 0	1	0 1	1 0	1	0 2	0 1
Volume Module:												
Base Vol:	146	36	333	173	49	88	18	999	86	196	1386	59
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	146	36	333	173	49	88	18	999	86	196	1386	59
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	146	36	333	173	49	88	18	999	86	196	1386	59
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	146	36	333	173	49	88	18	999	86	196	1386	59
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	146	36	333	173	49	88	18	999	86	196	1386	59
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.65	0.86	0.86	0.33	0.88	0.88	0.93	0.91	0.91	0.94	0.94	0.84
Lanes:	1.00	0.10	0.90	1.00	0.36	0.64	1.00	1.84	0.16	1.00	2.00	1.00
Final Sat.:	1230	159	1468	627	597	1071	1769	3186	274	1787	3574	1599
Capacity Analysis Module:												
Vol/Sat:	0.12	0.23	0.23	0.28	0.08	0.08	0.01	0.31	0.31	0.11	0.39	0.04
Crit Moves:				****				****		****		
Green/Cycle:	0.33	0.33	0.33	0.33	0.33	0.33	0.01	0.38	0.38	0.13	0.50	0.50
Volume/Cap:	0.36	0.68	0.68	0.83	0.25	0.25	0.78	0.83	0.83	0.83	0.78	0.07
Uniform Del:	25.4	28.9	28.9	30.9	24.4	24.4	49.2	28.3	28.3	42.3	20.8	13.2
IncremntDel:	0.5	3.6	3.6	23.9	0.2	0.2	94.1	4.7	4.7	21.6	2.3	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	25.9	32.5	32.5	54.7	24.6	24.6	143.3	33.0	33.0	63.9	23.1	13.2
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	25.9	32.5	32.5	54.7	24.6	24.6	143.3	33.0	33.0	63.9	23.1	13.2
DesignQueue:	6	1	13	7	2	3	1	37	3	10	43	2

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #43 125th/Greenway

Cycle (sec): 100 Critical Vol./Cap. (X): 0.812
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 38.9
Optimal Cycle: 80 Level Of Service: D

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0	0 1	0	1	0 1	1	0	0 1	0	0	0 1
Volume Module:												
Base Vol:	222	223	89	31	373	164	41	257	204	219	559	23
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	222	223	89	31	373	164	41	257	204	219	559	23
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	222	223	89	31	373	164	41	257	204	219	559	23
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	222	223	89	31	373	164	41	257	204	219	559	23
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	222	223	89	31	373	164	41	257	204	219	559	23
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.93	0.94	0.94	0.93	0.98	0.83	0.93	0.92	0.92	0.93	0.97	0.97
Lanes:	1.00	0.71	0.29	1.00	1.00	1.00	1.00	0.56	0.44	1.00	0.96	0.04
Final Sat.:	1769	1274	508	1769	1862	1583	1769	970	770	1769	1778	73
Capacity Analysis Module:												
Vol/Sat:	0.13	0.18	0.18	0.02	0.20	0.10	0.02	0.27	0.27	0.12	0.31	0.31
Crit Moves:	****				****			****		****		
Green/Cycle:	0.15	0.36	0.36	0.04	0.25	0.25	0.03	0.33	0.33	0.15	0.45	0.45
Volume/Cap:	0.81	0.48	0.48	0.48	0.81	0.42	0.71	0.81	0.81	0.81	0.71	0.71
Uniform Del:	40.9	24.5	24.5	47.2	35.5	31.7	47.9	30.9	30.9	41.0	22.4	22.4
IncremntDel:	16.6	0.6	0.6	5.5	10.5	0.7	32.5	8.7	8.7	16.8	2.8	2.8
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	57.5	25.0	25.0	52.8	46.0	32.4	80.4	39.6	39.6	57.8	25.2	25.2
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	57.5	25.0	25.0	52.8	46.0	32.4	80.4	39.6	39.6	57.8	25.2	25.2
DesignQueue:	11	8	3	2	16	7	2	10	8	11	19	1

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #44 Western/Beaverton Hillsdale

Cycle (sec): 120 Critical Vol./Cap. (X): 0.930
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 43.9
Optimal Cycle: 140 Level Of Service: D

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0	1! 0	1	0	0 1	0	1	1 0	2	0	1 1 0
Volume Module:												
Base Vol:	364	124	503	83	187	0	0	1131	402	486	951	89
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	364	124	503	83	187	0	0	1131	402	486	951	89
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	364	124	503	83	187	0	0	1131	402	486	951	89
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	364	124	503	83	187	0	0	1131	402	486	951	89
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	364	124	503	83	187	0	0	1131	402	486	951	89
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.90	0.90	0.90	0.95	1.00	1.00	0.95	0.92	0.83	0.90	0.92	0.92
Lanes:	1.33	0.22	1.45	1.00	1.00	0.00	0.00	2.00	1.00	2.00	1.83	0.17
Final Sat.:	2264	380	2477	1805	1900	0	0	3505	1568	3432	3187	298
Capacity Analysis Module:												
Vol/Sat:	0.16	0.33	0.20	0.05	0.10	0.00	0.00	0.32	0.26	0.14	0.30	0.30
Crit Moves:		****		****				****		****		
Green/Cycle:	0.25	0.35	0.35	0.05	0.15	0.00	0.00	0.35	0.35	0.15	0.50	0.50
Volume/Cap:	0.65	0.93	0.58	0.93	0.65	0.00	0.00	0.93	0.74	0.93	0.60	0.60
Uniform Del:	40.4	37.5	31.7	56.8	47.8	0.0	0.0	37.8	34.4	50.2	21.4	21.4
IncremntDel:	1.0	13.8	0.5	72.2	5.0	0.0	0.0	12.5	5.3	23.3	0.6	0.6
Delay Adj:	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	41.3	51.3	32.2	129.0	52.9	0.0	0.0	50.3	39.7	73.5	22.0	22.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	41.3	51.3	32.2	129.0	52.9	0.0	0.0	50.3	39.7	73.5	22.0	22.0
DesignQueue:	19	6	23	5	11	0	0	53	19	28	34	3

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #45 Western/Allen

Cycle (sec):	100	Critical Vol./Cap. (X):	0.982
Loss Time (sec):	12 (Y+R = 4 sec)	Average Delay (sec/veh):	47.2
Optimal Cycle:	180	Level Of Service:	D

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Permit+Prot			Permit+Prot		
Rights:	Include			Include			Include			Ignore		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0 0	0	0 0	1	0 0	0 1	1	0 2	0 0	0	0 2	0 1
Volume Module:												
Base Vol:	0	0	0	622	0	663	466	785	0	0	727	368
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	622	0	663	466	785	0	0	727	368
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
PHF Volume:	0	0	0	622	0	663	466	785	0	0	727	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	622	0	663	466	785	0	0	727	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
Final Vol.:	0	0	0	622	0	663	466	785	0	0	727	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	0.93	1.00	0.83	0.63	0.91	1.00	1.00	0.92	1.00
Lanes:	0.00	0.00	0.00	1.00	0.00	1.00	1.00	2.00	0.00	0.00	2.00	1.00
Final Sat.:	0	0	0	1769	0	1583	1204	3473	0	0	3505	1900
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.35	0.00	0.42	0.39	0.23	0.00	0.00	0.21	0.00
Crit Moves:						****	****				****	
Green/Cycle:	0.00	0.00	0.00	0.41	0.00	0.41	0.53	0.47	0.00	0.00	0.20	0.00
Volume/Cap:	0.00	0.00	0.00	0.85	0.00	1.02	0.73	0.48	0.00	0.00	1.02	0.00
Uniform Del:	0.0	0.0	0.0	26.7	0.0	29.4	27.4	18.3	0.0	0.0	39.8	0.0
IncremntDel:	0.0	0.0	0.0	9.6	0.0	39.5	4.4	0.2	0.0	0.0	37.9	0.0
Delay Adj:	0.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00
Delay/Veh:	0.0	0.0	0.0	36.3	0.0	68.9	31.8	18.5	0.0	0.0	77.7	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	36.3	0.0	68.9	31.8	18.5	0.0	0.0	77.7	0.0
DesignQueue:	0	0	0	22	0	24	19	25	0	0	34	0

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #46 Laurelwood/Beaverton Hillsdale

Cycle (sec):	100	Critical Vol./Cap. (X):	0.936
Loss Time (sec):	12 (Y+R = 4 sec)	Average Delay (sec/veh):	34.4
Optimal Cycle:	129	Level Of Service:	C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1 0	0	1 0	1	0 0	1 0	1	0 1	1 0	1	0 1	1 0
Volume Module:												
Base Vol:	121	127	108	252	98	72	76	1471	140	139	1276	168
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	121	127	108	252	98	72	76	1471	140	139	1276	168
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	121	127	108	252	98	72	76	1471	140	139	1276	168
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	121	127	108	252	98	72	76	1471	140	139	1276	168
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	121	127	108	252	98	72	76	1471	140	139	1276	168
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.56	0.91	0.91	0.47	0.92	0.92	0.93	0.92	0.92	0.94	0.92	0.92
Lanes:	1.00	0.54	0.46	1.00	0.58	0.42	1.00	1.83	0.17	1.00	1.77	0.23
Final Sat.:	1069	937	797	886	1005	738	1769	3188	303	1787	3104	409
Capacity Analysis Module:												
Vol/Sat:	0.11	0.14	0.14	0.28	0.10	0.10	0.04	0.46	0.46	0.08	0.41	0.41
Crit Moves:				****				****		****		
Green/Cycle:	0.30	0.30	0.30	0.30	0.30	0.30	0.05	0.49	0.49	0.08	0.52	0.52
Volume/Cap:	0.37	0.45	0.45	0.94	0.32	0.32	0.79	0.94	0.94	0.94	0.79	0.79
Uniform Del:	27.3	28.0	28.0	33.9	26.9	26.9	46.7	23.9	23.9	45.6	19.4	19.4
IncremntDel:	0.7	0.6	0.6	37.8	0.4	0.4	33.9	10.1	10.1	54.7	2.4	2.4
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	28.0	28.6	28.6	71.7	27.2	27.2	80.6	34.0	34.0	100.3	21.8	21.8
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	28.0	28.6	28.6	71.7	27.2	27.2	80.6	34.0	34.0	100.3	21.8	21.8
DesignQueue:	5	5	4	10	4	3	4	47	4	7	38	5

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #47 Lombard/Farmington

Cycle (sec): 100 Critical Vol./Cap. (X): 0.965
Loss Time (sec): 16 (Y+R = 4 sec) Average Delay (sec/veh): 50.9
Optimal Cycle: 150 Level Of Service: D

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Ignore			Ignore		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0 1	0 1	1	0 0 1	0	1	0 2	0 1	1	0 2	0 1
Volume Module:												
Base Vol:	106	206	101	325	379	72	78	1306	210	159	1604	356
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	106	206	101	325	379	72	78	1306	210	159	1604	356
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
PHF Volume:	106	206	101	325	379	72	78	1306	0	159	1604	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	106	206	101	325	379	72	78	1306	0	159	1604	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
Final Vol.:	106	206	101	325	379	72	78	1306	0	159	1604	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.97	0.83	0.91	0.94	0.94	0.93	0.93	1.00	0.93	0.93	1.00
Lanes:	1.00	1.00	1.00	1.00	0.84	0.16	1.00	2.00	1.00	1.00	2.00	1.00
Final Sat.:	1753	1845	1568	1736	1499	285	1769	3538	1900	1769	3538	1900
Capacity Analysis Module:												
Vol/Sat:	0.06	0.11	0.06	0.19	0.25	0.25	0.04	0.37	0.00	0.09	0.45	0.00
Crit Moves:	****				****		****				****	
Green/Cycle:	0.06	0.12	0.12	0.20	0.26	0.26	0.05	0.41	0.00	0.10	0.47	0.00
Volume/Cap:	0.97	0.92	0.53	0.92	0.97	0.97	0.97	0.89	0.00	0.89	0.97	0.00
Uniform Del:	46.8	43.5	41.3	39.0	36.5	36.5	47.6	27.2	0.0	44.4	25.7	0.0
IncremntDel:	74.5	39.0	2.9	28.7	32.7	32.7	88.1	7.2	0.0	38.2	14.7	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
Delay/Veh:	121.3	82.4	44.1	67.7	69.1	69.1	135.7	34.4	0.0	82.6	40.4	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	121.3	82.4	44.1	67.7	69.1	69.1	135.7	34.4	0.0	82.6	40.4	0.0
DesignQueue:	6	10	5	15	17	3	4	47	0	8	53	0

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #48 114th/Canyon

Cycle (sec): 100 Critical Vol./Cap. (X): 0.839
Loss Time (sec): 16 (Y+R = 4 sec) Average Delay (sec/veh): 24.7
Optimal Cycle: 96 Level Of Service: C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0 1	0 1	2	0 0 1	0	1	0 2	0 1	2	0 2	0 1
Volume Module:												
Base Vol:	19	98	0	245	69	123	128	1944	27	11	1640	277
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	19	98	0	245	69	123	128	1944	27	11	1640	277
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	19	98	0	245	69	123	128	1944	27	11	1640	277
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	19	98	0	245	69	123	128	1944	27	11	1640	277
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	19	98	0	245	69	123	128	1944	27	11	1640	277
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	1.00	1.00	0.92	0.90	0.90	0.95	0.95	0.85	0.92	0.95	0.85
Lanes:	1.00	1.00	1.00	2.00	0.36	0.64	1.00	2.00	1.00	2.00	2.00	1.00
Final Sat.:	1805	1900	1900	3502	617	1100	1805	3610	1615	3502	3610	1615
Capacity Analysis Module:												
Vol/Sat:	0.01	0.05	0.00	0.07	0.11	0.11	0.07	0.54	0.02	0.00	0.45	0.17
Crit Moves:		****			****			****		****		
Green/Cycle:	0.06	0.06	0.00	0.13	0.13	0.13	0.09	0.64	0.64	0.00	0.56	0.56
Volume/Cap:	0.17	0.84	0.00	0.53	0.84	0.84	0.81	0.84	0.03	0.84	0.81	0.31
Uniform Del:	44.5	46.4	0.0	40.4	42.3	42.3	44.8	13.9	6.5	49.8	17.9	11.8
IncremntDel:	0.7	38.9	0.0	1.1	23.1	23.1	26.6	2.9	0.0	163.4	2.7	0.2
Delay Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	45.2	85.3	0.0	41.5	65.4	65.4	71.5	16.8	6.5	213.2	20.5	12.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	45.2	85.3	0.0	41.5	65.4	65.4	71.5	16.8	6.5	213.2	20.5	12.0
DesignQueue:	1	5	0	12	3	6	7	45	1	1	45	7

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #49 Griffith/Beaverton Hillsdale

Cycle (sec): 100 Critical Vol./Cap. (X): 0.738
Loss Time (sec): 16 (Y+R = 4 sec) Average Delay (sec/veh): 30.5
Optimal Cycle: 90 Level Of Service: C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Prot+Permit			Prot+Permit			Protected			Protected		
Rights:	Include			Include			Include			Ovl		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0 1	0 1	1	0 1	0 1	1	0 2	0 1	1	0 2	0 1
Volume Module:												
Base Vol:	158	97	187	189	119	147	100	1307	120	177	1450	321
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	158	97	187	189	119	147	100	1307	120	177	1450	321
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	158	97	187	189	119	147	100	1307	120	177	1450	321
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	158	97	187	189	119	147	100	1307	120	177	1450	321
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	158	97	187	189	119	147	100	1307	120	177	1450	321
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.66	0.99	0.84	0.79	0.99	0.84	0.93	0.93	0.83	0.94	0.94	0.84
Lanes:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	1.00	1.00	2.00	1.00
Final Sat.:	1245	1881	1599	1493	1881	1599	1769	3538	1570	1787	3574	1599
Capacity Analysis Module:												
Vol/Sat:	0.13	0.05	0.12	0.13	0.06	0.09	0.06	0.37	0.08	0.10	0.41	0.20
Crit Moves:			****	****			****				****	
Green/Cycle:	0.31	0.14	0.14	0.27	0.14	0.14	0.07	0.45	0.45	0.12	0.50	0.63
Volume/Cap:	0.41	0.36	0.82	0.47	0.45	0.66	0.82	0.83	0.17	0.83	0.82	0.32
Uniform Del:	26.1	38.7	41.5	29.9	39.5	40.8	45.9	24.2	16.6	43.0	21.2	8.7
IncremntDel:	0.7	0.8	19.7	0.9	1.3	7.2	32.8	3.7	0.1	22.5	3.0	0.2
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	26.8	39.5	61.3	30.8	40.8	48.0	78.7	28.0	16.7	65.4	24.3	8.9
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	26.8	39.5	61.3	30.8	40.8	48.0	78.7	28.0	16.7	65.4	24.3	8.9
DesignQueue:	8	5	9	9	6	7	5	44	4	9	45	7

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #50 87th/Canyon

Cycle (sec): 100 Critical Vol./Cap. (X): 0.853
Loss Time (sec): 8 (Y+R = 4 sec) Average Delay (sec/veh): 25.1
Optimal Cycle: 80 Level Of Service: C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	0 1!	0 0	0	0 1!	0 0	0	0 2	0 1	0	0 1	1 0
Volume Module:												
Base Vol:	213	145	85	51	138	118	0	1444	240	0	1014	18
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	213	145	85	51	138	118	0	1444	240	0	1014	18
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	213	145	85	51	138	118	0	1444	240	0	1014	18
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	213	145	85	51	138	118	0	1444	240	0	1014	18
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	213	145	85	51	138	118	0	1444	240	0	1014	18
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.62	0.62	0.62	0.82	0.82	0.82	1.00	0.93	0.83	1.00	0.93	0.93
Lanes:	0.48	0.33	0.19	0.17	0.45	0.38	0.00	2.00	1.00	0.00	1.97	0.03
Final Sat.:	566	385	226	260	702	600	0	3538	1583	0	3466	62
Capacity Analysis Module:												
Vol/Sat:	0.38	0.38	0.38	0.20	0.20	0.20	0.00	0.41	0.15	0.00	0.29	0.29
Crit Moves:		****						****				
Green/Cycle:	0.44	0.44	0.44	0.44	0.44	0.44	0.00	0.48	0.48	0.00	0.48	0.48
Volume/Cap:	0.85	0.85	0.85	0.45	0.45	0.45	0.00	0.85	0.32	0.00	0.61	0.61
Uniform Del:	25.0	25.0	25.0	19.4	19.4	19.4	0.0	23.0	16.0	0.0	19.2	19.2
IncremntDel:	12.9	12.9	12.9	0.5	0.5	0.5	0.0	4.4	0.2	0.0	0.7	0.7
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00
Delay/Veh:	37.9	37.9	37.9	19.9	19.9	19.9	0.0	27.4	16.3	0.0	19.9	19.9
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	37.9	37.9	37.9	19.9	19.9	19.9	0.0	27.4	16.3	0.0	19.9	19.9
DesignQueue:	7	5	3	2	4	4	0	47	7	0	32	1

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #51 Garden Home/84th

Average Delay (sec/veh): 33.5 Worst Case Level Of Service: D

Approach:	North Bound						South Bound						East Bound						West Bound					
Movement:	L	-	T	-	R		L	-	T	-	R		L	-	T	-	R		L	-	T	-	R	
Control:	Stop Sign						Stop Sign						Uncontrolled						Uncontrolled					
Rights:	Include						Include						Include						Include					
Lanes:	0	0	1!	0	0		0	0	1!	0	0		0	0	1!	0	0		0	0	1!	0	0	
Volume Module:																								
Base Vol:	6		1		11		4		0		2		6		737		11		6		682		12	
Growth Adj:	1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00	
Initial Bse:	6		1		11		4		0		2		6		737		11		6		682		12	
User Adj:	1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00	
PHF Adj:	1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00	
PHF Volume:	6		1		11		4		0		2		6		737		11		6		682		12	
Reduct Vol:	0		0		0		0		0		0		0		0		0		0		0		0	
Final Vol.:	6		1		11		4		0		2		6		737		11		6		682		12	
Critical Gap Module:																								
Critical Gp:	7.1		6.5		6.2		7.2	xxxx			6.3		4.1	xxxx		xxxxx			4.1	xxxx		xxxxx		
FollowUpTim:	3.5		4.0		3.3		3.6	xxxx			3.4		2.2	xxxx		xxxxx			2.2	xxxx		xxxxx		
Capacity Module:																								
Cnflict Vol:	1459		1463		749		1465	xxxx			689		694	xxxx		xxxxx			750	xxxx		xxxxx		
Potent Cap.:	106		127		409		103	xxxx			436		901	xxxx		xxxxx			859	xxxx		xxxxx		
Move Cap.:	104		125		407		98	xxxx			435		901	xxxx		xxxxx			858	xxxx		xxxxx		
Level Of Service Module:																								
Stopped Del:	xxxxx		xxxx		xxxxx		xxxxx		xxxx		xxxxx		9.0	xxxx		xxxxx			9.2	xxxx		xxxxx		
LOS by Move:	*		*		*		*		*		*		A	*		*			A	*		*		
Movement:	LT	-	LTR	-	RT		LT	-	LTR	-	RT		LT	-	LTR	-	RT		LT	-	LTR	-	RT	
Shared Cap.:	xxxx		195		xxxxx		xxxx		132		xxxxx		xxxx		xxxx		xxxxx		xxxx		xxxx		xxxxx	
Shrd StpDel:	xxxxx		25.4		xxxxx		xxxxx		33.5		xxxxx		xxxxx		xxxx		xxxxx		xxxxx		xxxx		xxxxx	
Shared LOS:	*		D		*		*		D		*		*		*		*		*		*		*	
ApproachDel:			25.4						33.5						xxxxxx						xxxxxx			
ApproachLOS:			D						D						*						*			

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #52 Garden Home/88th

Average Delay (sec/veh): 23.5 Worst Case Level Of Service: C

Approach:	North Bound						South Bound						East Bound						West Bound					
Movement:	L	-	T	-	R		L	-	T	-	R		L	-	T	-	R		L	-	T	-	R	
Control:	Stop Sign						Stop Sign						Uncontrolled						Uncontrolled					
Rights:	Include						Include						Include						Include					
Lanes:	0	0	1!	0	0		0	0	0	0	0		0	0	0	1	0		0	1	0	0	0	
Volume Module:																								
Base Vol:	9		0		10		0		0		0		0		766		17		23		629		0	
Growth Adj:	1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00	
Initial Bse:	9		0		10		0		0		0		0		766		17		23		629		0	
User Adj:	1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00	
PHF Adj:	1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00	
PHF Volume:	9		0		10		0		0		0		0		766		17		23		629		0	
Reduct Vol:	0		0		0		0		0		0		0		0		0		0		0		0	
Final Vol.:	9		0		10		0		0		0		0		766		17		23		629		0	
Critical Gap Module:																								
Critical Gp:	6.4	xxxx			6.2		xxxxx	xxxx		xxxxx		xxxx	xxxxx			4.1	xxxx		xxxxx					
FollowUpTim:	3.5	xxxx			3.3		xxxxx	xxxx		xxxxx		xxxx	xxxxx			2.2	xxxx		xxxxx					
Capacity Module:																								
Cnflict Vol:	1450	xxxx			775		xxxx	xxxx		xxxxx		xxxx	xxxx			783	xxxx		xxxxx					
Potent Cap.:	144	xxxx			398		xxxx	xxxx		xxxxx		xxxx	xxxx			835	xxxx		xxxxx					
Move Cap.:	141	xxxx			398		xxxx	xxxx		xxxxx		xxxx	xxxx			835	xxxx		xxxxx					
Level Of Service Module:																								
Stopped Del:	xxxxx	xxxx			xxxxx		xxxxx	xxxx		xxxxx		xxxx	xxxxx			9.3	xxxx		xxxxx					
LOS by Move:	*	*			*		*	*		*		*	*			A	*		*					
Movement:	LT	-	LTR	-	RT		LT	-	LTR	-	RT		LT	-	LTR	-	RT		LT	-	LTR	-	RT	
Shared Cap.:	xxxx		214		xxxxx		xxxx		xxxx		xxxxx		xxxx		xxxx		xxxxx		xxxx		xxxx		xxxxx	
Shrd StpDel:	xxxxx		23.5		xxxxx		xxxxx		xxxx		xxxxx		xxxxx		xxxx		xxxxx		9.4		xxxx		xxxxx	
Shared LOS:	*		C		*		*		*		*		*		*		*		A		*		*	
ApproachDel:			23.5						xxxxxx						xxxxxx						xxxxxx			
ApproachLOS:			C						*						*						*			

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #53 158th/Jenkins

Cycle (sec): 100 Critical Vol./Cap. (X): 0.942
Loss Time (sec): 16 (Y+R = 4 sec) Average Delay (sec/veh): 46.5
Optimal Cycle: 136 Level Of Service: D

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Ovl			Ovl			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1 0	2	0 1	1 0	1	1 0	1 0	1	1 0	2 0	1	1 0
Volume Module:												
Base Vol:	37	216	274	449	390	93	64	1084	31	517	1004	296
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	37	216	274	449	390	93	64	1084	31	517	1004	296
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	37	216	274	449	390	93	64	1084	31	517	1004	296
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	37	216	274	449	390	93	64	1084	31	517	1004	296
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	37	216	274	449	390	93	64	1084	31	517	1004	296
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.86	0.86	0.76	0.92	0.90	0.90	0.93	0.93	0.93	0.89	0.89	0.89
Lanes:	1.00	2.00	1.00	1.00	1.61	0.39	1.00	1.94	0.06	2.00	1.54	0.46
Final Sat.:	1626	3253	1449	1753	2748	655	1769	3426	98	3400	2615	771
Capacity Analysis Module:												
Vol/Sat:	0.02	0.07	0.19	0.26	0.14	0.14	0.04	0.32	0.32	0.15	0.38	0.38
Crit Moves:		****		****				****		****		
Green/Cycle:	0.05	0.07	0.23	0.27	0.30	0.34	0.04	0.34	0.34	0.16	0.45	0.45
Volume/Cap:	0.48	0.94	0.82	0.94	0.48	0.42	0.84	0.94	0.94	0.94	0.84	0.84
Uniform Del:	46.4	46.3	36.4	35.6	28.9	25.5	47.5	32.2	32.2	41.5	24.1	24.1
IncremntDel:	4.7	43.4	14.2	27.2	0.4	0.2	54.5	14.4	14.4	24.7	4.5	4.5
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	51.1	89.6	50.6	62.8	29.3	25.8	102.0	46.6	46.6	66.2	28.6	28.6
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	51.1	89.6	50.6	62.8	29.3	25.8	102.0	46.6	46.6	66.2	28.6	28.6
DesignQueue:	2	11	12	19	16	4	3	43	1	25	33	10

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #54 170th/Merlo

Cycle (sec): 100 Critical Vol./Cap. (X): 0.718
Loss Time (sec): 16 (Y+R = 4 sec) Average Delay (sec/veh): 27.8
Optimal Cycle: 74 Level Of Service: C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permit+Prot			Permit+Prot			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1 0	1	0 1	1 0	0	1 0	1 0	1	0 1	2 0	0	1 0
Volume Module:												
Base Vol:	22	472	367	100	640	15	10	12	15	783	22	144
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	22	472	367	100	640	15	10	12	15	783	22	144
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	22	472	367	100	640	15	10	12	15	783	22	144
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	22	472	367	100	640	15	10	12	15	783	22	144
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	22	472	367	100	640	15	10	12	15	783	22	144
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.25	0.97	0.83	0.43	0.96	0.96	0.94	0.91	0.91	0.90	0.85	0.85
Lanes:	1.00	1.00	1.00	1.00	0.98	0.02	1.00	0.44	0.56	2.00	0.13	0.87
Final Sat.:	474	1845	1568	824	1781	42	1787	767	958	3432	215	1405
Capacity Analysis Module:												
Vol/Sat:	0.05	0.26	0.23	0.12	0.36	0.36	0.01	0.02	0.02	0.23	0.10	0.10
Crit Moves:	****				****			****		****		
Green/Cycle:	0.47	0.41	0.41	0.55	0.49	0.49	0.02	0.02	0.02	0.31	0.32	0.32
Volume/Cap:	0.10	0.62	0.57	0.22	0.73	0.73	0.32	0.73	0.73	0.73	0.32	0.32
Uniform Del:	31.4	23.1	22.4	21.7	20.3	20.3	48.6	48.6	48.6	30.7	26.1	26.1
IncremntDel:	0.2	1.5	1.2	0.2	3.2	3.2	6.1	54.2	54.2	2.7	0.4	0.4
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	31.5	24.6	23.6	21.9	23.4	23.4	54.6	103	102.9	33.4	26.5	26.5
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	31.5	24.6	23.6	21.9	23.4	23.4	54.6	103	102.9	33.4	26.5	26.5
DesignQueue:	1	16	13	5	20	0	1	1	1	32	1	6

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #56 TV Highway/Murray

Cycle (sec): 120 Critical Vol./Cap. (X): 0.714
Loss Time (sec): 16 (Y+R = 4 sec) Average Delay (sec/veh): 22.2
Optimal Cycle: 74 Level Of Service: C

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Split Phase				Split Phase			
Rights:	Include				Ovl				Ovl				Include			
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0	
Lanes:	2	0	2	0 0	0	0	2	0 1	2	0	0	0 1	0	0	0	0 0
Volume Module:																
Base Vol:	507	960	0	0	1535	103	170	0	277	0	0	0				
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Initial Bse:	507	960	0	0	1535	103	170	0	277	0	0	0				
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Volume:	507	960	0	0	1535	103	170	0	277	0	0	0				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0				
Reduced Vol:	507	960	0	0	1535	103	170	0	277	0	0	0				
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Final Vol.:	507	960	0	0	1535	103	170	0	277	0	0	0				
Saturation Flow Module:																
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900				
Adjustment:	0.92	0.95	1.00	1.00	0.95	0.85	0.92	1.00	0.85	1.00	1.00	1.00				
Lanes:	2.00	2.00	0.00	0.00	2.00	1.00	2.00	0.00	1.00	0.00	0.00	0.00				
Final Sat.:	3502	3610	0	0	3610	1615	3502	0	1615	0	0	0				
Capacity Analysis Module:																
Vol/Sat:	0.14	0.27	0.00	0.00	0.43	0.06	0.05	0.00	0.17	0.00	0.00	0.00				
Crit Moves:	****				****		****									
Green/Cycle:	0.20	0.80	0.00	0.00	0.60	0.66	0.07	0.00	0.27	0.00	0.00	0.00				
Volume/Cap:	0.71	0.33	0.00	0.00	0.71	0.10	0.71	0.00	0.63	0.00	0.00	0.00				
Uniform Del:	44.6	3.3	0.0	0.0	17.1	7.2	54.8	0.0	38.5	0.0	0.0	0.0				
IncremntDel:	3.4	0.1	0.0	0.0	1.2	0.0	9.8	0.0	3.0	0.0	0.0	0.0				
Delay Adj:	1.00	1.00	0.00	0.00	1.00	1.00	1.00	0.00	1.00	0.00	0.00	0.00				
Delay/Veh:	48.0	3.4	0.0	0.0	18.2	7.3	64.6	0.0	41.5	0.0	0.0	0.0				
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
AdjDel/Veh:	48.0	3.4	0.0	0.0	18.2	7.3	64.6	0.0	41.5	0.0	0.0	0.0				
DesignQueue:	28	14	0	0	46	2	11	0	14	0	0	0				

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #57 Farmington/Hall

Cycle (sec): 100 Critical Vol./Cap. (X): 0.919
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 30.4
Optimal Cycle: 119 Level Of Service: C

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Split Phase				Split Phase				Protected				Protected			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0	
Lanes:	0	1	1	1 0	0	0	0	0 0	1	0	2	0 0	0	0	1	1 0
Volume Module:																
Base Vol:	252	777	136	0	0	0	133	1457	0	0						
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00						
Initial Bse:	252	777	136	0	0	0	133	1457	0	0						
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00						
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00						
PHF Volume:	252	777	136	0	0	0	133	1457	0	0						
Reduct Vol:	0	0	0	0	0	0	0	0	0	0						
Reduced Vol:	252	777	136	0	0	0	133	1457	0	0						
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00						
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00						
Final Vol.:	252	777	136	0	0	0	133	1457	0	0						
Saturation Flow Module:																
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900						
Adjustment:	0.86	0.86	0.86	1.00	1.00	1.00	0.93	0.93	1.00	1.00						
Lanes:	0.65	2.00	0.35	0.00	0.00	0.00	1.00	2.00	0.00	0.00						
Final Sat.:	1060	3269	572	0	0	0	1769	3531	0	0						
Capacity Analysis Module:																
Vol/Sat:	0.24	0.24	0.24	0.00	0.00	0.00	0.08	0.41	0.00	0.00						
Crit Moves:	****						****									
Green/Cycle:	0.26	0.26	0.26	0.00	0.00	0.00	0.08	0.62	0.00	0.00						
Volume/Cap:	0.92	0.92	0.92	0.00	0.00	0.00	0.92	0.66	0.00	0.00						
Uniform Del:	36.0	36.0	36.0	0.0	0.0	0.0	45.6	12.2	0.0	0.0						
IncremntDel:	10.8	10.8	10.8	0.0	0.0	0.0	51.1	0.8	0.0	0.0						
Delay Adj:	1.00	1.00	1.00	0.00	0.00	0.00	1.00	1.00	0.00	0.00						
Delay/Veh:	46.8	46.8	46.8	0.0	0.0	0.0	96.7	13.0	0.0	0.0						
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00						
AdjDel/Veh:	46.8	46.8	46.8	0.0	0.0	0.0	96.7	13.0	0.0	0.0						
DesignQueue:	11	34	6	0	0	0	7	34	0	0						

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #58 Canyon/Hall

Cycle (sec): 100 Critical Vol./Cap. (X): 0.850
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 26.7
Optimal Cycle: 91 Level Of Service: C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	1 1	1 0	0	0 0	0 0	1	0 2	0 0	0	0 1	1 0
Volume Module:												
Base Vol:	398	692	182	0	0	0	51	1622	0	0	1288	291
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	398	692	182	0	0	0	51	1622	0	0	1288	291
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	398	692	182	0	0	0	51	1622	0	0	1288	291
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	398	692	182	0	0	0	51	1622	0	0	1288	291
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	398	692	182	0	0	0	51	1622	0	0	1288	291
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.87	0.87	0.87	1.00	1.00	1.00	0.92	0.92	1.00	1.00	0.90	0.90
Lanes:	0.94	1.63	0.43	0.00	0.00	0.00	1.00	2.00	0.00	0.00	1.63	0.37
Final Sat.:	1557	2707	712	0	0	0	1753	3505	0	0	2779	628
Capacity Analysis Module:												
Vol/Sat:	0.26	0.26	0.26	0.00	0.00	0.00	0.03	0.46	0.00	0.00	0.46	0.46
Crit Moves:		****					****				****	
Green/Cycle:	0.30	0.30	0.30	0.00	0.00	0.00	0.03	0.58	0.00	0.00	0.55	0.55
Volume/Cap:	0.85	0.85	0.85	0.00	0.00	0.00	0.85	0.80	0.00	0.00	0.85	0.85
Uniform Del:	32.9	32.9	32.9	0.0	0.0	0.0	48.0	16.5	0.0	0.0	19.3	19.3
IncremntDel:	4.8	4.8	4.8	0.0	0.0	0.0	65.6	2.3	0.0	0.0	4.0	4.0
Delay Adj:	1.00	1.00	1.00	0.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00
Delay/Veh:	37.7	37.7	37.7	0.0	0.0	0.0	113.6	18.8	0.0	0.0	23.2	23.2
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	37.7	37.7	37.7	0.0	0.0	0.0	113.6	18.8	0.0	0.0	23.2	23.2
DesignQueue:	16	29	8	0	0	0	3	43	0	0	37	8

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #59 Walker/173rd

Cycle (sec): 100 Critical Vol./Cap. (X): 0.871
Loss Time (sec): 16 (Y+R = 4 sec) Average Delay (sec/veh): 36.1
Optimal Cycle: 106 Level Of Service: D

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	2	0 1	0 1	2	0 1	0 1	1	0 2	0 1	1	0 2	0 1
Volume Module:												
Base Vol:	322	505	76	137	345	83	47	1294	442	107	1124	176
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	322	505	76	137	345	83	47	1294	442	107	1124	176
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	322	505	76	137	345	83	47	1294	442	107	1124	176
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	322	505	76	137	345	83	47	1294	442	107	1124	176
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	322	505	76	137	345	83	47	1294	442	107	1124	176
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.85	0.90	0.98	0.83	0.93	0.93	0.83	0.94	0.94	0.83
Lanes:	2.00	1.00	1.00	2.00	1.00	1.00	1.00	2.00	1.00	1.00	2.00	1.00
Final Sat.:	3502	1900	1615	3432	1862	1583	1769	3538	1583	1787	3574	1586
Capacity Analysis Module:												
Vol/Sat:	0.09	0.27	0.05	0.04	0.19	0.05	0.03	0.37	0.28	0.06	0.31	0.11
Crit Moves:		****		****				****		****		
Green/Cycle:	0.12	0.31	0.31	0.05	0.23	0.23	0.04	0.42	0.42	0.07	0.45	0.45
Volume/Cap:	0.79	0.87	0.15	0.87	0.79	0.22	0.70	0.87	0.66	0.87	0.70	0.25
Uniform Del:	43.0	32.9	25.3	47.4	35.9	30.9	47.5	26.5	23.3	46.1	22.0	17.0
IncremntDel:	10.0	13.5	0.1	37.2	9.4	0.3	27.5	5.9	2.6	44.4	1.4	0.2
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	53.0	46.3	25.5	84.7	45.3	31.2	75.0	32.4	25.9	90.5	23.4	17.1
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	53.0	46.3	25.5	84.7	45.3	31.2	75.0	32.4	25.9	90.5	23.4	17.1
DesignQueue:	16	21	3	7	15	4	3	46	15	6	37	6

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #60 170th/Baseline

Cycle (sec):	100	Critical Vol./Cap. (X):	0.987
Loss Time (sec):	16 (Y+R = 4 sec)	Average Delay (sec/veh):	53.3
Optimal Cycle:	166	Level Of Service:	D

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0	0	1	0	2	0	0	1	0	1	0	1	1	0	1	0	2	0	1
Volume Module:																				
Base Vol:	307	341	161	267	275	19	24	1073	237	161	1434	171
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	307	341	161	267	275	19	24	1073	237	161	1434	171
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	307	341	161	267	275	19	24	1073	237	161	1434	171
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	307	341	161	267	275	19	24	1073	237	161	1434	171
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	307	341	161	267	275	19	24	1073	237	161	1434	171
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.94	0.94	0.94	0.90	0.97	0.97	0.93	0.91	0.91	0.94	0.94	0.84
Lanes:	1.00	0.68	0.32	2.00	0.94	0.06	1.00	1.64	0.36	1.00	2.00	1.00
Final Sat.:	1787	1216	574	3432	1724	119	1769	2820	623	1787	3574	1599
Capacity Analysis Module:												
Vol/Sat:	0.17	0.28	0.28	0.08	0.16	0.16	0.01	0.38	0.38	0.09	0.40	0.11
Crit Moves:		****		****				****		****		
Green/Cycle:	0.19	0.28	0.28	0.08	0.17	0.17	0.02	0.39	0.39	0.09	0.46	0.46
Volume/Cap:	0.91	0.99	0.99	0.99	0.91	0.91	0.87	0.99	0.99	0.99	0.87	0.23
Uniform Del:	39.8	35.6	35.6	46.0	40.5	40.5	49.1	30.5	30.5	45.4	24.2	16.2
IncremntDel:	28.1	36.3	36.3	50.8	28.9	28.9	115.8	21.5	21.5	66.3	5.3	0.2
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	67.9	71.9	71.9	96.9	69.5	69.5	164.9	51.9	51.9	111.7	29.5	16.4
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	67.9	71.9	71.9	96.9	69.5	69.5	164.9	51.9	51.9	111.7	29.5	16.4
DesignQueue:	14	15	7	14	13	1	1	40	9	8	48	5

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #64 Cornell/173rd

Cycle (sec):	110	Critical Vol./Cap. (X):	0.983
Loss Time (sec):	16 (Y+R = 4 sec)	Average Delay (sec/veh):	56.5
Optimal Cycle:	178	Level Of Service:	E

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	2	0	1	0	1	1	0	1	0	1	1	0	2	0	1	1	0	2	0	1
Volume Module:																				
Base Vol:	393	260	173	110	123	184	454	1456	349	299	1274	97
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	393	260	173	110	123	184	454	1456	349	299	1274	97
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	393	260	173	110	123	184	454	1456	349	299	1274	97
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	393	260	173	110	123	184	454	1456	349	299	1274	97
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	393	260	173	110	123	184	454	1456	349	299	1274	97
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.85	0.92	0.97	0.83	0.94	0.94	0.83	0.94	0.94	0.84
Lanes:	2.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	1.00	1.00	2.00	1.00
Final Sat.:	3502	1900	1615	1753	1845	1568	1787	3574	1586	1787	3574	1592
Capacity Analysis Module:												
Vol/Sat:	0.11	0.14	0.11	0.06	0.07	0.12	0.25	0.41	0.22	0.17	0.36	0.06
Crit Moves:	****					****	****				****	
Green/Cycle:	0.11	0.16	0.16	0.07	0.12	0.12	0.26	0.44	0.44	0.18	0.36	0.36
Volume/Cap:	0.98	0.85	0.67	0.85	0.56	0.98	0.98	0.93	0.50	0.93	0.98	0.17
Uniform Del:	48.6	45.0	43.5	50.4	45.7	48.3	40.5	29.1	22.1	44.3	34.7	23.8
IncremntDel:	40.4	20.4	6.6	39.4	3.2	60.6	37.3	9.7	0.6	31.4	20.9	0.1
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	89.0	65.3	50.1	89.8	48.9	109.0	77.9	38.8	22.7	75.8	55.7	23.9
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	89.0	65.3	50.1	89.8	48.9	109.0	77.9	38.8	22.7	75.8	55.7	23.9
DesignQueue:	22	14	9	6	7	10	22	55	13	16	54	4

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #66 Scholls Ferry/Cascade

Cycle (sec): 100 Critical Vol./Cap. (X): 0.934
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 32.7
Optimal Cycle: 128 Level Of Service: C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0	0 1	0	1	0 0 1	0	1	0 2 1	0	1	0 2 0 1
Volume Module:												
Base Vol:	281	128	81	85	147	128	19	1883	237	127	1247	33
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	281	128	81	85	147	128	19	1883	237	127	1247	33
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	281	128	81	85	147	128	19	1883	237	127	1247	33
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	281	128	81	85	147	128	19	1883	237	127	1247	33
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	281	128	81	85	147	128	19	1883	237	127	1247	33
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.45	0.94	0.94	0.53	0.91	0.91	0.93	0.88	0.88	0.93	0.93	0.83
Lanes:	1.00	0.61	0.39	1.00	0.53	0.47	1.00	2.66	0.34	1.00	2.00	1.00
Final Sat.:	863	1096	694	1004	926	806	1769	4438	559	1769	3538	1583
Capacity Analysis Module:												
Vol/Sat:	0.33	0.12	0.12	0.08	0.16	0.16	0.01	0.42	0.42	0.07	0.35	0.02
Crit Moves:	****							****		****		
Green/Cycle:	0.35	0.35	0.35	0.35	0.35	0.35	0.02	0.45	0.45	0.08	0.52	0.52
Volume/Cap:	0.93	0.33	0.33	0.24	0.46	0.46	0.68	0.93	0.93	0.93	0.68	0.04
Uniform Del:	31.4	24.0	24.0	23.2	25.2	25.2	49.0	25.9	25.9	45.9	18.1	12.0
IncremntDel:	34.8	0.3	0.3	0.4	0.5	0.5	52.6	7.9	7.9	57.2	1.1	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	66.3	24.3	24.3	23.5	25.8	25.8	101.6	33.8	33.8	103.1	19.2	12.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	66.3	24.3	24.3	23.5	25.8	25.8	101.6	33.8	33.8	103.1	19.2	12.0
DesignQueue:	11	5	3	3	6	5	1	63	8	7	37	1

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #72 Canyon/Watson

Cycle (sec): 100 Critical Vol./Cap. (X): 0.909
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 30.4
Optimal Cycle: 114 Level Of Service: C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	0	0 0 0	0	1	1 1 0	0	0	1 1 0	1	0	2 0 0
Volume Module:												
Base Vol:	0	0	0	223	770	161	0	1538	99	163	1365	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	223	770	161	0	1538	99	163	1365	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	223	770	161	0	1538	99	163	1365	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	223	770	161	0	1538	99	163	1365	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	0	0	0	223	770	161	0	1538	99	163	1365	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	0.86	0.86	0.86	1.00	0.91	0.91	0.92	0.92	1.00
Lanes:	0.00	0.00	0.00	0.58	2.00	0.42	0.00	1.88	0.12	1.00	2.00	0.00
Final Sat.:	0	0	0	951	3284	687	0	3254	209	1753	3491	0
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.23	0.23	0.23	0.00	0.47	0.47	0.09	0.39	0.00
Crit Moves:					****			****		****		
Green/Cycle:	0.00	0.00	0.00	0.26	0.26	0.26	0.00	0.52	0.52	0.10	0.62	0.00
Volume/Cap:	0.00	0.00	0.00	0.91	0.91	0.91	0.00	0.91	0.91	0.91	0.63	0.00
Uniform Del:	0.0	0.0	0.0	36.0	36.0	36.0	0.0	21.9	21.9	44.4	11.7	0.0
IncremntDel:	0.0	0.0	0.0	9.8	9.8	9.8	0.0	7.3	7.3	42.2	0.6	0.0
Delay Adj:	0.00	0.00	0.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.00
Delay/Veh:	0.0	0.0	0.0	45.8	45.8	45.8	0.0	29.1	29.1	86.7	12.3	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	45.8	45.8	45.8	0.0	29.1	29.1	86.7	12.3	0.0
DesignQueue:	0	0	0	10	34	7	0	46	3	8	32	0

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #73 Farmington/Watson

Cycle (sec): 100 Critical Vol./Cap. (X): 0.878
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 27.6
Optimal Cycle: 100 Level Of Service: C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	0 0	0 0	0	1	1! 1 0	0	0 1	1 0	1	0 2	0 0
Volume Module:												
Base Vol:	0	0	0	284	725	140	0	1259	368	108	1642	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	284	725	140	0	1259	368	108	1642	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	284	725	140	0	1259	368	108	1642	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	284	725	140	0	1259	368	108	1642	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	0	0	0	284	725	140	0	1259	368	108	1642	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	0.86	0.86	0.86	1.00	0.90	0.90	0.93	0.93	1.00
Lanes:	0.00	0.00	0.00	0.74	1.89	0.37	0.00	1.55	0.45	1.00	2.00	0.00
Final Sat.:	0	0	0	1212	3093	597	0	2639	771	1769	3524	0
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.23	0.23	0.23	0.00	0.48	0.48	0.06	0.47	0.00
Crit Moves:					****			****		****		
Green/Cycle:	0.00	0.00	0.00	0.27	0.27	0.27	0.00	0.54	0.54	0.07	0.61	0.00
Volume/Cap:	0.00	0.00	0.00	0.88	0.88	0.88	0.00	0.88	0.88	0.88	0.76	0.00
Uniform Del:	0.0	0.0	0.0	35.1	35.1	35.1	0.0	19.9	19.9	46.1	14.0	0.0
IncremntDel:	0.0	0.0	0.0	7.0	7.0	7.0	0.0	5.1	5.1	46.0	1.6	0.0
Delay Adj:	0.00	0.00	0.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.00
Delay/Veh:	0.0	0.0	0.0	42.1	42.1	42.1	0.0	25.1	25.1	92.1	15.6	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	42.1	42.1	42.1	0.0	25.1	25.1	92.1	15.6	0.0
DesignQueue:	0	0	0	12	31	6	0	36	11	6	40	0

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #76 Scholls Ferry/Denney

Cycle (sec): 100 Critical Vol./Cap. (X): 0.765
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 24.6
Optimal Cycle: 70 Level Of Service: C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0 0	1 0	1	0	1 0	1	0	1	0	0 1! 0	0 0
Volume Module:												
Base Vol:	90	743	2	5	733	429	235	3	83	2	1	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	90	743	2	5	733	429	235	3	83	2	1	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	90	743	2	5	733	429	235	3	83	2	1	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	90	743	2	5	733	429	235	3	83	2	1	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	90	743	2	5	733	429	235	3	83	2	1	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.93	0.97	0.97	0.93	0.98	0.83	0.74	0.74	0.74	0.90	0.90	1.00
Lanes:	1.00	0.99	0.01	1.00	1.00	1.00	0.73	0.01	0.26	0.67	0.33	0.00
Final Sat.:	1769	1842	5	1769	1862	1583	1026	13	362	1137	569	0
Capacity Analysis Module:												
Vol/Sat:	0.05	0.40	0.40	0.00	0.39	0.27	0.23	0.23	0.23	0.00	0.00	0.00
Crit Moves:	****				****			****				
Green/Cycle:	0.07	0.58	0.58	0.00	0.51	0.51	0.30	0.30	0.30	0.30	0.30	0.00
Volume/Cap:	0.77	0.70	0.70	0.70	0.77	0.53	0.77	0.77	0.77	0.01	0.01	0.00
Uniform Del:	45.9	15.0	15.0	49.7	19.5	16.2	31.8	31.8	31.8	24.6	24.6	0.0
IncremntDel:	25.4	2.1	2.1	149.8	3.7	0.6	8.2	8.2	8.2	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
Delay/Veh:	71.3	17.1	17.1	199.6	23.2	16.8	40.1	40.1	40.1	24.6	24.6	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	71.3	17.1	17.1	199.6	23.2	16.8	40.1	40.1	40.1	24.6	24.6	0.0
DesignQueue:	5	20	0	0	22	12	10	0	3	0	0	0

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #77 Farmington/Hocken

Cycle (sec): 100 Critical Vol./Cap. (X): 0.883
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 31.4
Optimal Cycle: 102 Level Of Service: C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0 0	0	0 0	2	0 0	0 1	1	0 2	0 0	0	0 2	0 1
Volume Module:												
Base Vol:	0	0	0	546	0	412	284	987	0	0	1270	91
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	546	0	412	284	987	0	0	1270	91
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	546	0	412	284	987	0	0	1270	91
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	546	0	412	284	987	0	0	1270	91
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	0	0	0	546	0	412	284	987	0	0	1270	91
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	0.91	1.00	0.84	0.93	0.93	1.00	1.00	0.93	0.83
Lanes:	0.00	0.00	0.00	2.00	0.00	1.00	1.00	2.00	0.00	0.00	2.00	1.00
Final Sat.:	0	0	0	3467	0	1599	1769	3538	0	0	3538	1570
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.16	0.00	0.26	0.16	0.28	0.00	0.00	0.36	0.06
Crit Moves:						****	****				****	
Green/Cycle:	0.00	0.00	0.00	0.29	0.00	0.29	0.18	0.59	0.00	0.00	0.41	0.41
Volume/Cap:	0.00	0.00	0.00	0.54	0.00	0.88	0.88	0.47	0.00	0.00	0.88	0.14
Uniform Del:	0.0	0.0	0.0	29.8	0.0	33.8	39.9	11.8	0.0	0.0	27.5	18.7
IncremntDel:	0.0	0.0	0.0	0.6	0.0	17.7	23.7	0.2	0.0	0.0	6.8	0.1
Delay Adj:	0.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00
Delay/Veh:	0.0	0.0	0.0	30.4	0.0	51.5	63.6	11.9	0.0	0.0	34.3	18.8
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	30.4	0.0	51.5	63.6	11.9	0.0	0.0	34.3	18.8
DesignQueue:	0	0	0	22	0	17	13	24	0	0	46	3

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #78 TV Highway/Hocken

Cycle (sec): 100 Critical Vol./Cap. (X): 0.839
Loss Time (sec): 16 (Y+R = 4 sec) Average Delay (sec/veh): 34.2
Optimal Cycle: 96 Level Of Service: C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Ovl			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1 0	0	1 0	1	0 1	0 1	1	0 3	0 1	1	0 2	1 0
Volume Module:												
Base Vol:	0	191	144	167	499	343	191	1304	385	135	1490	65
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	191	144	167	499	343	191	1304	385	135	1490	65
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	191	144	167	499	343	191	1304	385	135	1490	65
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	191	144	167	499	343	191	1304	385	135	1490	65
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	0	191	144	167	499	343	191	1304	385	135	1490	65
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	0.91	0.91	0.93	0.98	0.83	0.92	0.88	0.82	0.93	0.89	0.89
Lanes:	1.00	0.57	0.43	1.00	1.00	1.00	1.00	3.00	1.00	1.00	2.87	0.13
Final Sat.:	1900	985	742	1769	1862	1583	1753	5037	1549	1769	4842	211
Capacity Analysis Module:												
Vol/Sat:	0.00	0.19	0.19	0.09	0.27	0.22	0.11	0.26	0.25	0.08	0.31	0.31
Crit Moves:		****		****			****				****	
Green/Cycle:	0.00	0.23	0.23	0.11	0.34	0.47	0.13	0.38	0.38	0.11	0.37	0.37
Volume/Cap:	0.00	0.84	0.84	0.84	0.78	0.46	0.84	0.68	0.65	0.68	0.84	0.84
Uniform Del:	0.0	36.7	36.7	43.5	29.4	17.7	42.5	25.6	25.3	42.6	29.0	29.0
IncremntDel:	0.0	14.6	14.6	25.9	6.1	0.4	23.3	1.0	2.5	8.8	3.6	3.6
Delay Adj:	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	0.0	51.3	51.3	69.4	35.6	18.1	65.7	26.6	27.8	51.4	32.6	32.6
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	51.3	51.3	69.4	35.6	18.1	65.7	26.6	27.8	51.4	32.6	32.6
DesignQueue:	0	9	6	8	20	11	9	48	14	7	57	2

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #81 158th/Blueridge

Cycle (sec): 100 Critical Vol./Cap. (X): 0.977
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 38.8
Optimal Cycle: 162 Level Of Service: D

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0 2	0 1	1	0 1	1 0	0	0 1!	0 0	0	1	0 0 1
Volume Module:												
Base Vol:	167	1649	64	33	1652	50	50	5	102	332	9	57
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	167	1649	64	33	1652	50	50	5	102	332	9	57
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	167	1649	64	33	1652	50	50	5	102	332	9	57
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	167	1649	64	33	1652	50	50	5	102	332	9	57
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	167	1649	64	33	1652	50	50	5	102	332	9	57
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.97	0.82	0.93	0.98	0.98	0.62	0.62	0.62	0.59	0.59	0.85
Lanes:	1.00	2.00	1.00	1.00	1.94	0.06	0.32	0.03	0.65	0.97	0.03	1.00
Final Sat.:	1753	3690	1556	1769	3600	109	375	37	765	1088	29	1615
Capacity Analysis Module:												
Vol/Sat:	0.10	0.45	0.04	0.02	0.46	0.46	0.13	0.13	0.13	0.31	0.31	0.04
Crit Moves:	****				****						****	
Green/Cycle:	0.10	0.54	0.54	0.02	0.47	0.47	0.31	0.31	0.31	0.31	0.31	0.31
Volume/Cap:	0.98	0.82	0.08	0.82	0.98	0.98	0.43	0.43	0.43	0.98	0.98	0.11
Uniform Del:	45.0	18.7	10.8	48.7	26.0	26.0	27.3	27.3	27.3	34.0	34.0	24.5
IncremntDel:	61.7	2.8	0.0	75.4	16.3	16.3	0.8	0.8	0.8	41.7	41.7	0.1
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	106.7	21.6	10.8	124.1	42.3	42.3	28.1	28.1	28.1	75.7	75.7	24.6
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	106.7	21.6	10.8	124.1	42.3	42.3	28.1	28.1	28.1	75.7	75.7	24.6
DesignQueue:	9	47	2	2	55	2	2	0	4	13	0	2

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #83 158th/Jay

Cycle (sec): 100 Critical Vol./Cap. (X): 0.991
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 44.1
Optimal Cycle: 179 Level Of Service: D

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Prot+Permit			Prot+Permit			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0 1	1 0	1	0 0	1 0	0	0 1!	0 0	0	1	0 0 1
Volume Module:												
Base Vol:	98	527	7	65	773	124	201	12	174	71	103	455
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	98	527	7	65	773	124	201	12	174	71	103	455
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	98	527	7	65	773	124	201	12	174	71	103	455
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	98	527	7	65	773	124	201	12	174	71	103	455
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	98	527	7	65	773	124	201	12	174	71	103	455
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.18	0.90	0.90	0.46	0.96	0.96	0.63	0.63	0.63	0.74	0.74	0.85
Lanes:	1.00	1.97	0.03	1.00	0.86	0.14	0.52	0.03	0.45	0.41	0.59	1.00
Final Sat.:	339	3385	45	882	1571	252	622	37	538	576	836	1615
Capacity Analysis Module:												
Vol/Sat:	0.29	0.16	0.16	0.07	0.49	0.49	0.32	0.32	0.32	0.12	0.12	0.28
Crit Moves:	****				****			****				
Green/Cycle:	0.51	0.45	0.45	0.59	0.50	0.50	0.33	0.33	0.33	0.33	0.33	0.33
Volume/Cap:	0.57	0.35	0.35	0.12	0.99	0.99	0.99	0.99	0.99	0.38	0.38	0.86
Uniform Del:	23.0	18.0	18.0	9.1	25.0	25.0	33.6	33.6	33.6	25.9	25.9	31.6
IncremntDel:	4.6	0.1	0.1	0.1	27.7	27.7	43.1	43.1	43.1	0.5	0.5	13.8
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	27.6	18.2	18.2	9.2	52.7	52.7	76.7	76.7	76.7	26.4	26.4	45.5
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	27.6	18.2	18.2	9.2	52.7	52.7	76.7	76.7	76.7	26.4	26.4	45.5
DesignQueue:	5	17	0	3	25	4	8	0	7	3	4	18

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #85 TV Highway/160th

Cycle (sec): 120 Critical Vol./Cap. (X): 0.902
Loss Time (sec): 16 (Y+R = 4 sec) Average Delay (sec/veh): 34.8
Optimal Cycle: 130 Level Of Service: C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Ovl			Ovl		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0 1	0 1	1	0 1	1 1	1	0 3	0 1	1	0 3	0 1
Volume Module:												
Base Vol:	82	112	103	0	0	664	232	1617	377	0	1955	5
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	82	112	103	0	0	664	232	1617	377	0	1955	5
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	82	112	103	0	0	664	232	1617	377	0	1955	5
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	82	112	103	0	0	664	232	1617	377	0	1955	5
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	82	112	103	0	0	664	232	1617	377	0	1955	5
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.94	0.99	0.84	1.00	0.95	0.80	0.92	0.88	0.83	1.00	0.89	0.83
Lanes:	1.00	1.00	1.00	1.00	1.00	2.00	1.00	3.00	1.00	1.00	3.00	1.00
Final Sat.:	1787	1881	1599	1900	1805	3038	1753	5037	1568	1900	5083	1583
Capacity Analysis Module:												
Vol/Sat:	0.05	0.06	0.06	0.00	0.00	0.22	0.13	0.32	0.24	0.00	0.38	0.00
Crit Moves:	****					****	****				****	
Green/Cycle:	0.05	0.29	0.29	0.00	0.00	0.24	0.15	0.57	0.62	0.00	0.43	0.43
Volume/Cap:	0.90	0.20	0.22	0.00	0.00	0.90	0.90	0.56	0.39	0.00	0.90	0.01
Uniform Del:	56.6	31.9	32.0	0.0	0.0	44.1	50.3	16.1	11.2	0.0	32.1	19.8
IncremntDel:	63.1	0.2	0.2	0.0	0.0	14.3	31.6	0.3	0.3	0.0	5.7	0.0
Delay Adj:	1.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00
Delay/Veh:	119.7	32.0	32.3	0.0	0.0	58.3	81.9	16.3	11.4	0.0	37.7	19.8
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	119.7	32.0	32.3	0.0	0.0	58.3	81.9	16.3	11.4	0.0	37.7	19.8
DesignQueue:	5	5	5	0	0	35	14	50	10	0	82	0

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #87 Hart/155th

Cycle (sec): 110 Critical Vol./Cap. (X): 0.515
Loss Time (sec): 8 (Y+R = 4 sec) Average Delay (sec/veh): 15.9
Optimal Cycle: 33 Level Of Service: B

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	0 1!	0 0	0	0 1!	0 0	0	0 1!	0 0	0	1 0	1 0
Volume Module:												
Base Vol:	111	32	78	34	82	23	7	377	129	120	733	10
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	111	32	78	34	82	23	7	377	129	120	733	10
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	111	32	78	34	82	23	7	377	129	120	733	10
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	111	32	78	34	82	23	7	377	129	120	733	10
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	111	32	78	34	82	23	7	377	129	120	733	10
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.73	0.73	0.73	0.87	0.87	0.87	0.94	0.94	0.94	0.72	0.72	0.72
Lanes:	0.51	0.14	0.35	0.24	0.59	0.17	0.01	0.74	0.25	0.28	1.70	0.02
Final Sat.:	693	200	487	405	978	274	24	1306	447	378	2308	31
Capacity Analysis Module:												
Vol/Sat:	0.16	0.16	0.16	0.08	0.08	0.08	0.29	0.29	0.29	0.32	0.32	0.32
Crit Moves:		****									****	
Green/Cycle:	0.31	0.31	0.31	0.31	0.31	0.31	0.62	0.62	0.62	0.62	0.62	0.62
Volume/Cap:	0.52	0.52	0.52	0.27	0.27	0.27	0.47	0.47	0.47	0.52	0.52	0.52
Uniform Del:	31.1	31.1	31.1	28.5	28.5	28.5	11.4	11.4	11.4	11.9	11.9	11.9
IncremntDel:	1.1	1.1	1.1	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	32.2	32.2	32.2	28.8	28.8	28.8	11.7	11.7	11.7	12.1	12.1	12.1
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	32.2	32.2	32.2	28.8	28.8	28.8	11.7	11.7	11.7	12.1	12.1	12.1
DesignQueue:	5	1	3	1	4	1	0	10	3	3	18	0

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #88 Murray/Hart

Cycle (sec):	120			Critical Vol./Cap. (X):			0.978						
Loss Time (sec):	16 (Y+R = 4 sec)			Average Delay (sec/veh):			40.4						
Optimal Cycle:	180			Level Of Service:			D						
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Permit+Prot			Permit+Prot			Permit+Prot			Permit+Prot			
Rights:	Include			Ovl			Ovl			Ovl			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Lanes:	1	0 1	1 0	1	0 2	0 1	1	0 1	0 1	1	0 1	0 1	
Volume Module:													
Base Vol:	174	1384	65	25	1877	261	141	144	158	105	305	53	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	174	1384	65	25	1877	261	141	144	158	105	305	53	
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	174	1384	65	25	1877	261	141	144	158	105	305	53	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	174	1384	65	25	1877	261	141	144	158	105	305	53	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Final Vol.:	174	1384	65	25	1877	261	141	144	158	105	305	53	
Saturation Flow Module:													
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Adjustment:	0.25	0.92	0.92	0.19	0.93	0.83	0.57	0.98	0.83	0.73	0.99	0.84	
Lanes:	1.00	1.91	0.09	1.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Final Sat.:	466	3325	156	354	3538	1583	1079	1862	1583	1379	1881	1599	
Capacity Analysis Module:													
Vol/Sat:	0.37	0.42	0.42	0.07	0.53	0.16	0.13	0.08	0.10	0.08	0.16	0.03	
Crit Moves:	****				****		****				****		
Green/Cycle:	0.67	0.61	0.61	0.59	0.53	0.61	0.26	0.14	0.24	0.28	0.16	0.18	
Volume/Cap:	0.56	0.69	0.69	0.12	1.01	0.27	0.50	0.57	0.42	0.27	1.01	0.18	
Uniform Del:	45.7	16.0	16.0	27.8	28.4	11.1	46.9	48.5	39.0	36.7	50.3	41.5	
IncremntDel:	2.2	1.0	1.0	0.3	22.2	0.2	1.4	3.0	0.8	0.4	53.2	0.3	
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Delay/Veh:	48.0	17.0	17.0	28.1	50.6	11.3	48.3	51.4	39.8	37.1	103	41.9	
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
AdjDel/Veh:	48.0	17.0	17.0	28.1	50.6	11.3	48.3	51.4	39.8	37.1	103	41.9	
DesignQueue:	10	40	2	2	68	7	8	8	8	6	18	3	

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #89 Murray/Scholls Ferry

Cycle (sec):	120			Critical Vol./Cap. (X):			0.927						
Loss Time (sec):	16 (Y+R = 4 sec)			Average Delay (sec/veh):			49.2						
Optimal Cycle:	145			Level Of Service:			D						
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Protected			Protected			Protected			Protected			
Rights:	Ovl			Ovl			Ignore			Ignore			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Lanes:	1	0 1	1 0	2	0 1	0 1	2	0 1	1 0	1	0 2	0 1	
Volume Module:													
Base Vol:	99	513	7	683	492	731	435	705	67	4	1021	763	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	99	513	7	683	492	731	435	705	67	4	1021	763	
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	
PHF Volume:	99	513	7	683	492	731	435	705	0	4	1021	0	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	99	513	7	683	492	731	435	705	0	4	1021	0	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	
Final Vol.:	99	513	7	683	492	731	435	705	0	4	1021	0	
Saturation Flow Module:													
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Adjustment:	0.93	0.93	0.93	0.90	0.98	0.83	0.89	0.92	0.95	0.94	0.94	1.00	
Lanes:	1.00	1.97	0.03	2.00	1.00	1.00	2.00	2.00	0.00	1.00	2.00	1.00	
Final Sat.:	1769	3483	48	3432	1862	1583	3400	3505	0	1787	3574	1900	
Capacity Analysis Module:													
Vol/Sat:	0.06	0.15	0.15	0.20	0.26	0.46	0.13	0.20	0.00	0.00	0.29	0.00	
Crit Moves:	****					****	****				****		
Green/Cycle:	0.06	0.18	0.18	0.24	0.36	0.50	0.14	0.44	0.00	0.00	0.31	0.00	
Volume/Cap:	0.93	0.82	0.80	0.82	0.73	0.93	0.93	0.46	0.00	0.46	0.93	0.00	
Uniform Del:	56.1	47.4	46.9	43.1	33.4	28.1	51.1	23.5	0.0	59.5	40.2	0.0	
IncremntDel:	64.1	8.6	7.1	6.7	4.2	16.9	24.6	0.2	0.0	33.3	13.1	0.0	
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	
Delay/Veh:	120.2	56.1	54.0	49.8	37.6	45.0	75.8	23.7	0.0	92.8	53.3	0.0	
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
AdjDel/Veh:	120.2	56.1	54.0	49.8	37.6	45.0	75.8	23.7	0.0	92.8	53.3	0.0	
DesignQueue:	6	29	0	36	23	27	26	28	0	0	51	0	

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #90 Scholls Ferry/Davies

Cycle (sec): 100 Critical Vol./Cap. (X): 0.698
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): 18.1
Optimal Cycle: 75 Level Of Service: B

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Protected				Protected			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0	
Lanes:	1	0	1	0 1	1	0	0	1 0	1	0	1	1 0	1	0	1	1 0
Volume Module:																
Base Vol:	64	19	195		51	19	30		32	1168	129		313	1551	114	
Growth Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Initial Bse:	64	19	195		51	19	30		32	1168	129		313	1551	114	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	64	19	195		51	19	30		32	1168	129		313	1551	114	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	64	19	195		51	19	30		32	1168	129		313	1551	114	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Final Vol.:	64	19	195		51	19	30		32	1168	129		313	1551	114	
Saturation Flow Module:																
Sat/Lane:	1900	1900	1900		1900	1900	1900		1900	1900	1900		1900	1900	1900	
Adjustment:	0.94	0.99	0.84		0.94	0.90	0.90		0.93	0.92	0.92		0.94	0.93	0.93	
Lanes:	1.00	1.00	1.00		1.00	0.39	0.61		1.00	1.80	0.20		1.00	1.86	0.14	
Final Sat.:	1787	1881	1599		1787	662	1046		1769	3138	347		1787	3283	241	
Capacity Analysis Module:																
Vol/Sat:	0.04	0.01	0.12		0.03	0.03	0.03		0.02	0.37	0.37		0.18	0.47	0.47	
Crit Moves:			****		****					****			****			
Green/Cycle:	0.12	0.17	0.17		0.04	0.10	0.10		0.03	0.53	0.53		0.25	0.76	0.76	
Volume/Cap:	0.30	0.06	0.70		0.70	0.30	0.30		0.63	0.70	0.70		0.70	0.63	0.63	
Uniform Del:	40.2	34.4	38.8		47.3	42.1	42.1		48.0	17.3	17.3		34.0	5.7	5.7	
IncremntDel:	0.8	0.1	7.6		25.7	1.0	1.0		21.9	1.2	1.2		4.8	0.5	0.5	
Delay Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Delay/Veh:	41.0	34.5	46.3		73.0	43.1	43.1		69.9	18.5	18.5		38.8	6.1	6.1	
User DelAdj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
AdjDel/Veh:	41.0	34.5	46.3		73.0	43.1	43.1		69.9	18.5	18.5		38.8	6.1	6.1	
DesignQueue:	3	1	9		3	1	2		2	33	4		14	24	2	

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #92 Scholls Ferry/135th

Cycle (sec): 100 Critical Vol./Cap. (X): 0.643
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 13.0
Optimal Cycle: 53 Level Of Service: B

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Permitted				Permitted				Protected				Protected			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0	
Lanes:	0	1	0	0 1	0	0	1!	0 0	1	0	1	1 0	1	0	2	0 1
Volume Module:																
Base Vol:	96	13	105		3	8	22		16	1273	144		117	1705	10	
Growth Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Initial Bse:	96	13	105		3	8	22		16	1273	144		117	1705	10	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	96	13	105		3	8	22		16	1273	144		117	1705	10	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	96	13	105		3	8	22		16	1273	144		117	1705	10	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Final Vol.:	96	13	105		3	8	22		16	1273	144		117	1705	10	
Saturation Flow Module:																
Sat/Lane:	1900	1900	1900		1900	1900	1900		1900	1900	1900		1900	1900	1900	
Adjustment:	0.72	0.72	0.85		0.89	0.89	0.89		0.93	0.92	0.92		0.94	0.94	0.84	
Lanes:	0.88	0.12	1.00		0.09	0.24	0.67		1.00	1.80	0.20		1.00	2.00	1.00	
Final Sat.:	1200	162	1615		154	410	1126		1769	3131	354		1787	3574	1599	
Capacity Analysis Module:																
Vol/Sat:	0.08	0.08	0.07		0.02	0.02	0.02		0.01	0.41	0.41		0.07	0.48	0.01	
Crit Moves:		****								****				****		
Green/Cycle:	0.12	0.12	0.12		0.12	0.12	0.12		0.01	0.65	0.65		0.10	0.74	0.74	
Volume/Cap:	0.64	0.64	0.52		0.16	0.16	0.16		0.64	0.62	0.62		0.62	0.64	0.01	
Uniform Del:	41.7	41.7	41.0		39.1	39.1	39.1		49.0	10.3	10.3		42.9	6.4	3.4	
IncremntDel:	8.2	8.2	2.5		0.4	0.4	0.4		45.7	0.6	0.6		6.5	0.5	0.0	
Delay Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Delay/Veh:	49.9	49.9	43.5		39.5	39.5	39.5		94.7	10.8	10.8		49.3	6.9	3.4	
User DelAdj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
AdjDel/Veh:	49.9	49.9	43.5		39.5	39.5	39.5		94.7	10.8	10.8		49.3	6.9	3.4	
DesignQueue:	5	1	5		0	0	1		1	27	3		6	28	0	

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #93 Scholls Ferry/125th

Cycle (sec): 120 Critical Vol./Cap. (X): 0.981
Loss Time (sec): 16 (Y+R = 4 sec) Average Delay (sec/veh): 51.4
Optimal Cycle: 180 Level Of Service: D

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Ovl			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0 1	0 1	1	0 1	0 1	1	0 1	1 0	1	0 2	0 1
Volume Module:												
Base Vol:	243	165	277	197	117	313	132	1294	85	103	1787	157
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	243	165	277	197	117	313	132	1294	85	103	1787	157
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	243	165	277	197	117	313	132	1294	85	103	1787	157
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	243	165	277	197	117	313	132	1294	85	103	1787	157
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	243	165	277	197	117	313	132	1294	85	103	1787	157
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	1.00	0.85	0.94	0.99	0.84	0.95	0.94	0.94	0.95	0.95	0.85
Lanes:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.88	0.12	1.00	2.00	1.00
Final Sat.:	1805	1900	1615	1787	1881	1599	1805	3357	221	1805	3610	1615
Capacity Analysis Module:												
Vol/Sat:	0.13	0.09	0.17	0.11	0.06	0.20	0.07	0.39	0.39	0.06	0.50	0.10
Crit Moves:			****	****			****				****	
Green/Cycle:	0.15	0.17	0.17	0.11	0.14	0.21	0.07	0.50	0.50	0.07	0.50	0.50
Volume/Cap:	0.90	0.50	0.98	0.98	0.45	0.93	0.98	0.76	0.76	0.76	0.98	0.19
Uniform Del:	50.1	44.7	49.3	53.1	47.7	46.4	55.4	24.0	24.0	54.5	29.1	16.3
IncremntDel:	29.2	1.2	48.0	57.7	1.3	30.5	71.4	2.0	2.0	22.4	16.7	0.1
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	79.2	45.9	97.3	110.8	48.9	76.9	126.8	25.9	25.9	76.9	45.8	16.4
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	79.2	45.9	97.3	110.8	48.9	76.9	126.8	25.9	25.9	76.9	45.8	16.4
DesignQueue:	14	9	16	12	7	17	8	47	3	6	67	5

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #94 Scholls Ferry/121st

Cycle (sec): 140 Critical Vol./Cap. (X): 0.919
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 37.0
Optimal Cycle: 143 Level Of Service: D

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	1 0	0 1	0	0 1!	0 0	1	0 2	0 1	1	0 2	0 1
Volume Module:												
Base Vol:	259	39	151	41	15	11	24	1318	406	313	2161	69
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	259	39	151	41	15	11	24	1318	406	313	2161	69
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	259	39	151	41	15	11	24	1318	406	313	2161	69
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	259	39	151	41	15	11	24	1318	406	313	2161	69
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	259	39	151	41	15	11	24	1318	406	313	2161	69
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.71	0.71	0.85	0.51	0.51	0.51	0.94	0.94	0.84	0.94	0.94	0.84
Lanes:	0.87	0.13	1.00	0.62	0.22	0.16	1.00	2.00	1.00	1.00	2.00	1.00
Final Sat.:	1164	175	1615	590	216	158	1787	3574	1599	1787	3574	1599
Capacity Analysis Module:												
Vol/Sat:	0.22	0.22	0.09	0.07	0.07	0.07	0.01	0.37	0.25	0.18	0.60	0.04
Crit Moves:		****					****				****	
Green/Cycle:	0.24	0.24	0.24	0.24	0.24	0.24	0.01	0.46	0.46	0.22	0.66	0.66
Volume/Cap:	0.92	0.92	0.39	0.29	0.29	0.29	0.92	0.81	0.56	0.81	0.92	0.07
Uniform Del:	51.7	51.7	44.4	43.2	43.2	43.2	68.9	32.8	27.8	52.1	20.7	8.6
IncremntDel:	30.1	30.1	0.6	0.7	0.7	0.7	140.5	3.1	1.0	12.0	6.5	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	81.9	81.9	45.0	43.9	43.9	43.9	209.4	36.0	28.7	64.1	27.2	8.6
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	81.9	81.9	45.0	43.9	43.9	43.9	209.4	36.0	28.7	64.1	27.2	8.6
DesignQueue:	16	2	9	2	1	1	2	61	18	20	68	2

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #95 Scholls Ferry/Conestoga

Cycle (sec): 120 Critical Vol./Cap. (X): 0.774
Loss Time (sec): 16 (Y+R = 4 sec) Average Delay (sec/veh): 12.5
Optimal Cycle: 86 Level Of Service: B

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0 0	0	0 0	1 0	0	0 1	1 0	2	0 0	0 0	2	0 1
Volume Module:												
Base Vol:	0	0	0	140	0	36	47	1485	0	0	2047	196
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	140	0	36	47	1485	0	0	2047	196
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	140	0	36	47	1485	0	0	2047	196
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	140	0	36	47	1485	0	0	2047	196
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	0	0	0	140	0	36	47	1485	0	0	2047	196
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	0.95	1.00	0.85	0.95	0.95	1.00	1.00	0.95	0.85
Lanes:	0.00	0.00	0.00	1.00	0.00	1.00	1.00	2.00	0.00	0.00	2.00	1.00
Final Sat.:	0	0	0	1805	0	1615	1805	3610	0	0	3610	1615
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.08	0.00	0.02	0.03	0.41	0.00	0.00	0.57	0.12
Crit Moves:				****			****				****	
Green/Cycle:	0.00	0.00	0.00	0.10	0.00	0.10	0.03	0.77	0.00	0.00	0.73	0.73
Volume/Cap:	0.00	0.00	0.00	0.77	0.00	0.22	0.77	0.54	0.00	0.00	0.77	0.17
Uniform Del:	0.0	0.0	0.0	52.7	0.0	49.7	57.5	5.6	0.0	0.0	9.9	4.9
IncremntDel:	0.0	0.0	0.0	18.5	0.0	0.7	45.2	0.2	0.0	0.0	1.5	0.1
Delay Adj:	0.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00
Delay/Veh:	0.0	0.0	0.0	71.2	0.0	50.4	102.7	5.8	0.0	0.0	11.4	4.9
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	71.2	0.0	50.4	102.7	5.8	0.0	0.0	11.4	4.9
DesignQueue:	0	0	0	9	0	2	3	26	0	0	43	4

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #102 Scholls Ferry/Laurelwood

Cycle (sec): 100 Critical Vol./Cap. (X): 0.620
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): 9.0
Optimal Cycle: 49 Level Of Service: A

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Split Phase			Split Phase		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1 0	0	1 0	0 0	0	1 0	1 0	0	1	1 0	0	0 1
Volume Module:												
Base Vol:	179	926	0	0	738	76	74	0	210	0	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	179	926	0	0	738	76	74	0	210	0	0	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	179	926	0	0	738	76	74	0	210	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	179	926	0	0	738	76	74	0	210	0	0	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	179	926	0	0	738	76	74	0	210	0	0	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.44	1.00	1.00	1.00	0.96	0.96	0.93	1.00	0.83	1.00	1.00	1.00
Lanes:	1.00	1.00	0.00	0.00	0.91	0.09	1.00	0.00	1.00	1.00	0.00	1.00
Final Sat.:	832	1900	0	0	1651	170	1769	0	1583	1900	0	1900
Capacity Analysis Module:												
Vol/Sat:	0.22	0.49	0.00	0.00	0.45	0.45	0.04	0.00	0.13	0.00	0.00	0.00
Crit Moves:		****							****			
Green/Cycle:	0.79	0.79	0.00	0.00	0.79	0.79	0.21	0.00	0.21	0.00	0.00	0.00
Volume/Cap:	0.27	0.62	0.00	0.00	0.57	0.57	0.20	0.00	0.62	0.00	0.00	0.00
Uniform Del:	2.9	4.5	0.0	0.0	4.1	4.1	32.2	0.0	35.6	0.0	0.0	0.0
IncremntDel:	0.2	0.8	0.0	0.0	0.5	0.5	0.3	0.0	3.5	0.0	0.0	0.0
Delay Adj:	1.00	1.00	0.00	0.00	1.00	1.00	1.00	0.00	1.00	0.00	0.00	0.00
Delay/Veh:	3.1	5.3	0.0	0.0	4.7	4.7	32.5	0.0	39.1	0.0	0.0	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	3.1	5.3	0.0	0.0	4.7	4.7	32.5	0.0	39.1	0.0	0.0	0.0
DesignQueue:	2	13	0	0	10	1	3	0	9	0	0	0

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #103 Canyon/Lombard

Cycle (sec):	100	Critical Vol./Cap. (X):	0.945
Loss Time (sec):	16 (Y+R = 4 sec)	Average Delay (sec/veh):	44.1
Optimal Cycle:	138	Level Of Service:	D

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1 0	0 1	0	1 0	1 0	1	1 0	2 0	1	1 0	1 1	0
Volume Module:												
Base Vol:	120	292	8	120	436	97	70	1452	106	37	1328	100
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	120	292	8	120	436	97	70	1452	106	37	1328	100
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	120	292	8	120	436	97	70	1452	106	37	1328	100
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	120	292	8	120	436	97	70	1452	106	37	1328	100
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	120	292	8	120	436	97	70	1452	106	37	1328	100
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.88	0.92	0.92	0.80	0.85	0.72	0.92	0.92	0.83	0.92	0.91	0.91
Lanes:	1.00	0.97	0.03	1.00	1.00	1.00	1.00	2.00	1.00	1.00	1.86	0.14
Final Sat.:	1671	1706	47	1529	1609	1368	1753	3505	1568	1753	3227	243
Capacity Analysis Module:												
Vol/Sat:	0.07	0.17	0.17	0.08	0.27	0.07	0.04	0.41	0.07	0.02	0.41	0.41
Crit Moves:	****				****		****				****	
Green/Cycle:	0.08	0.25	0.25	0.11	0.29	0.29	0.04	0.45	0.45	0.02	0.44	0.44
Volume/Cap:	0.95	0.69	0.69	0.69	0.95	0.25	0.95	0.91	0.15	0.91	0.95	0.95
Uniform Del:	46.0	34.1	34.1	42.6	34.9	27.4	47.8	25.4	16.0	48.7	27.1	27.1
IncremntDel:	62.9	4.6	4.6	11.1	28.5	0.3	85.7	8.3	0.1	106.7	12.5	12.5
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	108.9	38.7	38.7	53.7	63.4	27.7	133.4	33.7	16.1	155.5	39.6	39.6
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	108.9	38.7	38.7	53.7	63.4	27.7	133.4	33.7	16.1	155.5	39.6	39.6
DesignQueue:	6	13	0	6	18	4	4	49	3	2	46	3

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #105 Canyon/117th

Cycle (sec):	100	Critical Vol./Cap. (X):	0.745
Loss Time (sec):	16 (Y+R = 4 sec)	Average Delay (sec/veh):	24.5
Optimal Cycle:	76	Level Of Service:	C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1 0	1 0	1	2 0	0 1	0	1 0	2 0	1	2 0	2 0	1
Volume Module:												
Base Vol:	38	73	195	235	76	68	45	1449	34	77	1383	293
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	38	73	195	235	76	68	45	1449	34	77	1383	293
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	38	73	195	235	76	68	45	1449	34	77	1383	293
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	38	73	195	235	76	68	45	1449	34	77	1383	293
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	38	73	195	235	76	68	45	1449	34	77	1383	293
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.94	0.99	0.84	0.91	0.92	0.92	0.92	0.92	0.82	0.90	0.93	0.83
Lanes:	1.00	1.00	1.00	2.00	0.53	0.47	1.00	2.00	1.00	2.00	2.00	1.00
Final Sat.:	1787	1881	1599	3467	919	822	1753	3505	1556	3432	3538	1583
Capacity Analysis Module:												
Vol/Sat:	0.02	0.04	0.12	0.07	0.08	0.08	0.03	0.41	0.02	0.02	0.39	0.19
Crit Moves:			****	****				****		****		
Green/Cycle:	0.05	0.16	0.16	0.09	0.20	0.20	0.04	0.56	0.56	0.03	0.55	0.55
Volume/Cap:	0.41	0.24	0.74	0.74	0.41	0.41	0.71	0.74	0.04	0.74	0.71	0.34
Uniform Del:	45.9	36.4	39.8	44.3	34.7	34.7	47.7	16.9	10.1	48.1	16.7	12.5
IncremntDel:	2.9	0.4	11.0	9.3	0.8	0.8	31.5	1.6	0.0	25.1	1.3	0.2
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	48.8	36.8	50.8	53.6	35.4	35.4	79.2	18.5	10.1	73.2	17.9	12.7
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	48.8	36.8	50.8	53.6	35.4	35.4	79.2	18.5	10.1	73.2	17.9	12.7
DesignQueue:	2	3	9	12	3	3	2	40	1	4	38	8

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #114 ORE 217 SB Ramp/Canyon

Cycle (sec): 100 Critical Vol./Cap. (X): 0.772
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 25.6
Optimal Cycle: 71 Level Of Service: C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Protected			Protected		
Rights:	Include			Include			Ignore			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	0 0 0	0	1	0 1 1 1		0	0 2	0 1	1	0 2	0 0
Volume Module:												
Base Vol:	0	0	0	218	467	333	0	1221	474	262	1166	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	218	467	333	0	1221	474	262	1166	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
PHF Volume:	0	0	0	218	467	333	0	1221	0	262	1166	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	218	467	333	0	1221	0	262	1166	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Final Vol.:	0	0	0	218	467	333	0	1221	0	262	1166	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	0.90	0.86	0.86	1.00	0.90	1.00	0.88	0.88	1.00
Lanes:	0.00	0.00	0.00	1.00	1.75	1.25	0.00	2.00	1.00	1.00	2.00	0.00
Final Sat.:	0	0	0	1714	2852	2034	0	3404	1900	1671	3343	0
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.13	0.16	0.16	0.00	0.36	0.00	0.16	0.35	0.00
Crit Moves:					****			****		****		
Green/Cycle:	0.00	0.00	0.00	0.21	0.21	0.21	0.00	0.46	0.00	0.20	0.67	0.00
Volume/Cap:	0.00	0.00	0.00	0.60	0.77	0.77	0.00	0.77	0.00	0.77	0.52	0.00
Uniform Del:	0.0	0.0	0.0	35.6	37.1	37.1	0.0	22.3	0.0	37.7	8.5	0.0
IncremntDel:	0.0	0.0	0.0	2.8	3.6	3.6	0.0	2.4	0.0	10.4	0.2	0.0
Delay Adj:	0.00	0.00	0.00	1.00	1.00	1.00	0.00	1.00	0.00	1.00	1.00	0.00
Delay/Veh:	0.0	0.0	0.0	38.3	40.7	40.7	0.0	24.7	0.0	48.1	8.7	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	38.3	40.7	40.7	0.0	24.7	0.0	48.1	8.7	0.0
DesignQueue:	0	0	0	10	21	15	0	40	0	12	23	0

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #115 ORE 217 NB Ramp/Canyon

Cycle (sec): 100 Critical Vol./Cap. (X): 0.745
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 26.2
Optimal Cycle: 66 Level Of Service: C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Protected			Protected		
Rights:	Ovl			Include			Include			Ovl		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	1 1 0	1	0	0 0 0	0	1	0 2	0 0	0	0 2	0 1
Volume Module:												
Base Vol:	483	476	354	0	0	0	188	1236	0	0	1056	261
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	483	476	354	0	0	0	188	1236	0	0	1056	261
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	483	476	354	0	0	0	188	1236	0	0	1056	261
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	483	476	354	0	0	0	188	1236	0	0	1056	261
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	483	476	354	0	0	0	188	1236	0	0	1056	261
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.76	0.76	0.80	1.00	1.00	1.00	0.90	0.90	1.00	1.00	0.89	0.79
Lanes:	1.51	1.49	1.00	0.00	0.00	0.00	1.00	2.00	0.00	0.00	2.00	1.00
Final Sat.:	2186	2154	1523	0	0	0	1702	3404	0	0	3375	1510
Capacity Analysis Module:												
Vol/Sat:	0.22	0.22	0.23	0.00	0.00	0.00	0.11	0.36	0.00	0.00	0.31	0.17
Crit Moves:			****				****				****	
Green/Cycle:	0.31	0.31	0.31	0.00	0.00	0.00	0.15	0.57	0.00	0.00	0.42	0.42
Volume/Cap:	0.71	0.71	0.75	0.00	0.00	0.00	0.75	0.64	0.00	0.00	0.75	0.41
Uniform Del:	30.4	30.4	30.8	0.0	0.0	0.0	40.8	14.6	0.0	0.0	24.5	20.3
IncremntDel:	1.8	1.8	6.3	0.0	0.0	0.0	11.4	0.7	0.0	0.0	2.2	0.4
Delay Adj:	1.00	1.00	1.00	0.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00
Delay/Veh:	32.1	32.1	37.2	0.0	0.0	0.0	52.2	15.4	0.0	0.0	26.7	20.8
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	32.1	32.1	37.2	0.0	0.0	0.0	52.2	15.4	0.0	0.0	26.7	20.8
DesignQueue:	19	19	14	0	0	0	9	32	0	0	37	9

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #116 ORE 217 SB Ramp/Farmington

Cycle (sec): 100 Critical Vol./Cap. (X): 0.848
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 29.9
Optimal Cycle: 90 Level Of Service: C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Protected			Protected		
Rights:		Include			Include			Include			Include	
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0 0	0	0 0	1 0	2	0 1	0 0	2	0 1	1 0	2	0 0
Volume Module:												
Base Vol:	0	0	0	400	503	274	0	1170	555	225	1634	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	400	503	274	0	1170	555	225	1634	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	400	503	274	0	1170	555	225	1634	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	400	503	274	0	1170	555	225	1634	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	0	0	0	400	503	274	0	1170	555	225	1634	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	0.80	0.90	0.80	1.00	0.92	0.83	0.91	0.91	1.00
Lanes:	0.00	0.00	0.00	1.00	2.00	1.00	0.00	2.00	1.00	1.00	2.00	0.00
Final Sat.:	0	0	0	1523	3404	1523	0	3505	1568	1736	3473	0
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.26	0.15	0.18	0.00	0.33	0.35	0.13	0.47	0.00
Crit Moves:				****					****	****		
Green/Cycle:	0.00	0.00	0.00	0.31	0.31	0.31	0.00	0.42	0.42	0.15	0.57	0.00
Volume/Cap:	0.00	0.00	0.00	0.85	0.48	0.58	0.00	0.80	0.85	0.85	0.83	0.00
Uniform Del:	0.0	0.0	0.0	32.3	28.0	29.0	0.0	25.5	26.3	41.2	17.4	0.0
IncremntDel:	0.0	0.0	0.0	13.4	0.3	1.8	0.0	3.2	10.1	21.7	3.0	0.0
Delay Adj:	0.00	0.00	0.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.00
Delay/Veh:	0.0	0.0	0.0	45.8	28.3	30.9	0.0	28.7	36.4	62.9	20.4	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	45.8	28.3	30.9	0.0	28.7	36.4	62.9	20.4	0.0
DesignQueue:	0	0	0	16	20	11	0	41	19	11	44	0

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #117 ORE 217 NB Ramp/Farmington

Cycle (sec): 100 Critical Vol./Cap. (X): 0.781
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 27.4
Optimal Cycle: 73 Level Of Service: C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Protected			Protected		
Rights:		Ovl			Include			Include			Ovl	
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	2 0	2	0 1	0 0	0	0 0	1 0	2	0 0	0 0	2	0 1
Volume Module:												
Base Vol:	732	608	304	0	0	0	218	1268	0	0	1090	400
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	732	608	304	0	0	0	218	1268	0	0	1090	400
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	732	608	304	0	0	0	218	1268	0	0	1090	400
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	732	608	304	0	0	0	218	1268	0	0	1090	400
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	732	608	304	0	0	0	218	1268	0	0	1090	400
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.78	0.90	0.81	1.00	1.00	1.00	0.92	0.92	1.00	1.00	0.90	0.81
Lanes:	2.00	2.00	1.00	0.00	0.00	0.00	1.00	2.00	0.00	0.00	2.00	1.00
Final Sat.:	2983	3437	1537	0	0	0	1753	3505	0	0	3437	1537
Capacity Analysis Module:												
Vol/Sat:	0.25	0.18	0.20	0.00	0.00	0.00	0.12	0.36	0.00	0.00	0.32	0.26
Crit Moves:	****						****				****	
Green/Cycle:	0.31	0.31	0.31	0.00	0.00	0.00	0.16	0.57	0.00	0.00	0.41	0.41
Volume/Cap:	0.78	0.56	0.63	0.00	0.00	0.00	0.78	0.64	0.00	0.00	0.78	0.64
Uniform Del:	31.1	28.6	29.3	0.0	0.0	0.0	40.4	14.8	0.0	0.0	25.8	23.8
IncremntDel:	4.3	0.7	2.6	0.0	0.0	0.0	13.2	0.7	0.0	0.0	2.9	2.2
Delay Adj:	1.00	1.00	1.00	0.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00
Delay/Veh:	35.4	29.2	31.9	0.0	0.0	0.0	53.6	15.5	0.0	0.0	28.7	26.1
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	35.4	29.2	31.9	0.0	0.0	0.0	53.6	15.5	0.0	0.0	28.7	26.1
DesignQueue:	29	24	12	0	0	0	10	34	0	0	39	14

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #118 ORE 217 SB Ramp/Allen

Cycle (sec): 100 Critical Vol./Cap. (X): 0.929
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 37.1
Optimal Cycle: 125 Level Of Service: D

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Protected			Protected		
Rights:	Include			Ovl			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0 0	0 0	0	0	1 1	0 2	0	0 2	0 1	1	0 2	0 0
Volume Module:												
Base Vol:	0	0	0	368	0	499	0	866	254	557	1209	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	368	0	499	0	866	254	557	1209	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	368	0	499	0	866	254	557	1209	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	368	0	499	0	866	254	557	1209	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	0	0	0	368	0	499	0	866	254	557	1209	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	0.85	0.95	0.71	1.00	0.93	0.83	0.85	0.85	1.00
Lanes:	0.00	0.00	0.00	1.00	1.00	2.00	0.00	2.00	1.00	1.00	2.00	0.00
Final Sat.:	0	0	0	1617	1805	2680	0	3538	1583	1612	3224	0
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.23	0.00	0.19	0.00	0.24	0.16	0.35	0.38	0.00
Crit Moves:				****				****		****		
Green/Cycle:	0.00	0.00	0.00	0.24	0.00	0.24	0.00	0.26	0.26	0.37	0.64	0.00
Volume/Cap:	0.00	0.00	0.00	0.93	0.00	0.76	0.00	0.93	0.61	0.93	0.59	0.00
Uniform Del:	0.0	0.0	0.0	36.9	0.0	35.0	0.0	35.9	32.3	30.2	10.6	0.0
IncremntDel:	0.0	0.0	0.0	28.2	0.0	5.2	0.0	15.3	2.6	21.1	0.5	0.0
Delay Adj:	0.00	0.00	0.00	1.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	0.00
Delay/Veh:	0.0	0.0	0.0	65.1	0.0	40.2	0.0	51.2	34.9	51.2	11.1	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	65.1	0.0	40.2	0.0	51.2	34.9	51.2	11.1	0.0
DesignQueue:	0	0	0	16	0	22	0	38	11	21	27	0

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #119 ORE 217 NB Ramp/Allen

Cycle (sec): 100 Critical Vol./Cap. (X): 0.950
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 37.2
Optimal Cycle: 139 Level Of Service: D

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Protected			Protected		
Rights:	Ovl			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1 1	0	0 1	0	0 0	0 0	1	0 2	0 0	0	0 2	0 1
Volume Module:												
Base Vol:	420	0	404	0	0	0	280	919	0	0	1321	502
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	420	0	404	0	0	0	280	919	0	0	1321	502
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	420	0	404	0	0	0	280	919	0	0	1321	502
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	420	0	404	0	0	0	280	919	0	0	1321	502
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	420	0	404	0	0	0	280	919	0	0	1321	502
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.90	1.00	0.80	1.00	1.00	1.00	0.91	0.91	1.00	1.00	0.85	0.76
Lanes:	2.00	0.00	1.00	0.00	0.00	0.00	1.00	2.00	0.00	0.00	2.00	1.00
Final Sat.:	3411	0	1523	0	0	0	1736	3473	0	0	3224	1442
Capacity Analysis Module:												
Vol/Sat:	0.12	0.00	0.27	0.00	0.00	0.00	0.16	0.26	0.00	0.00	0.41	0.35
Crit Moves:			****				****				****	
Green/Cycle:	0.28	0.00	0.28	0.00	0.00	0.00	0.17	0.60	0.00	0.00	0.43	0.43
Volume/Cap:	0.44	0.00	0.95	0.00	0.00	0.00	0.95	0.44	0.00	0.00	0.95	0.81
Uniform Del:	29.6	0.0	35.4	0.0	0.0	0.0	41.1	10.8	0.0	0.0	27.4	24.8
IncremntDel:	0.3	0.0	31.2	0.0	0.0	0.0	39.1	0.1	0.0	0.0	14.0	7.7
Delay Adj:	1.00	0.00	1.00	0.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00
Delay/Veh:	30.0	0.0	66.5	0.0	0.0	0.0	80.2	11.0	0.0	0.0	41.4	32.5
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	30.0	0.0	66.5	0.0	0.0	0.0	80.2	11.0	0.0	0.0	41.4	32.5
DesignQueue:	17	0	17	0	0	0	13	22	0	0	46	17

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #120 ORE 217 SB Ramp/Denney

Cycle (sec):	100	Critical Vol./Cap. (X):	0.938
Loss Time (sec):	12 (Y+R = 4 sec)	Average Delay (sec/veh):	40.1
Optimal Cycle:	130	Level Of Service:	D

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	0	0	0	1	0	0	1	0	1	0	0
Volume Module:												
Base Vol:	0	0	0	110	0	492	0	748	215	135	639	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	110	0	492	0	748	215	135	639	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	110	0	492	0	748	215	135	639	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	110	0	492	0	748	215	135	639	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	0	0	0	110	0	492	0	748	215	135	639	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	0.87	1.00	0.78	1.00	0.95	0.81	0.90	0.94	1.00
Lanes:	0.00	0.00	0.00	1.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	0.00
Final Sat.:	0	0	0	1659	0	1481	0	1809	1537	1702	1792	0
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.07	0.00	0.33	0.00	0.41	0.14	0.08	0.36	0.00
Crit Moves:						****		****		****		
Green/Cycle:	0.00	0.00	0.00	0.35	0.00	0.35	0.00	0.44	0.44	0.08	0.53	0.00
Volume/Cap:	0.00	0.00	0.00	0.19	0.00	0.94	0.00	0.94	0.32	0.94	0.68	0.00
Uniform Del:	0.0	0.0	0.0	22.3	0.0	31.2	0.0	26.6	18.2	45.5	17.5	0.0
IncremntDel:	0.0	0.0	0.0	0.2	0.0	24.7	0.0	18.4	0.3	56.3	2.0	0.0
Delay Adj:	0.00	0.00	0.00	1.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	0.00
Delay/Veh:	0.0	0.0	0.0	22.5	0.0	55.9	0.0	45.1	18.4	101.8	19.5	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	22.5	0.0	55.9	0.0	45.1	18.4	101.8	19.5	0.0
DesignQueue:	0	0	0	4	0	19	0	26	7	7	18	0

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #121 ORE 217 NB Ramp/Denney

Cycle (sec):	100	Critical Vol./Cap. (X):	0.881
Loss Time (sec):	12 (Y+R = 4 sec)	Average Delay (sec/veh):	42.1
Optimal Cycle:	101	Level Of Service:	D

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	1	0	0	1	0	0	0	0	1	0	1	0	0	0	0	1	0
Volume Module:												
Base Vol:	224	0	200	0	0	0	508	343	0	0	540	101
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	224	0	200	0	0	0	508	343	0	0	540	101
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	224	0	200	0	0	0	508	343	0	0	540	101
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	224	0	200	0	0	0	508	343	0	0	540	101
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	224	0	200	0	0	0	508	343	0	0	540	101
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.88	1.00	0.79	1.00	1.00	1.00	0.92	0.97	1.00	1.00	0.96	0.96
Lanes:	1.00	0.00	1.00	0.00	0.00	0.00	1.00	1.00	0.00	0.00	0.84	0.16
Final Sat.:	1675	0	1495	0	0	0	1753	1845	0	0	1536	287
Capacity Analysis Module:												
Vol/Sat:	0.13	0.00	0.13	0.00	0.00	0.00	0.29	0.19	0.00	0.00	0.35	0.35
Crit Moves:	****						****				****	
Green/Cycle:	0.15	0.00	0.15	0.00	0.00	0.00	0.33	0.73	0.00	0.00	0.40	0.40
Volume/Cap:	0.88	0.00	0.88	0.00	0.00	0.00	0.88	0.26	0.00	0.00	0.88	0.88
Uniform Del:	41.5	0.0	41.5	0.0	0.0	0.0	31.7	4.5	0.0	0.0	27.8	27.8
IncremntDel:	27.9	0.0	30.3	0.0	0.0	0.0	14.7	0.1	0.0	0.0	12.1	12.1
Delay Adj:	1.00	0.00	1.00	0.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00
Delay/Veh:	69.4	0.0	71.8	0.0	0.0	0.0	46.4	4.6	0.0	0.0	39.9	39.9
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	69.4	0.0	71.8	0.0	0.0	0.0	46.4	4.6	0.0	0.0	39.9	39.9
DesignQueue:	11	0	10	0	0	0	20	5	0	0	20	4

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #122 ORE 217 SB off Ramp/Hall/Cascade

Cycle (sec): 120 Critical Vol./Cap. (X): 0.884
Loss Time (sec): 16 (Y+R = 4 sec) Average Delay (sec/veh): 41.0
Optimal Cycle: 121 Level Of Service: D

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Split Phase				Split Phase				Protected				Protected			
Rights:		Ovl				Include				Include				Ignore		
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0	
Lanes:	1	0	1	0 1	1	1	0	0 1	1	0	1	1 0	1	0	2	0 1
Volume Module:																
Base Vol:	206	10		49	462	85		180	154	1101		159	24	1395		24
Growth Adj:	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00
Initial Bse:	206	10		49	462	85		180	154	1101		159	24	1395		24
User Adj:	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		0.00
PHF Adj:	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		0.00
PHF Volume:	206	10		49	462	85		180	154	1101		159	24	1395		0
Reduct Vol:	0	0		0	0	0		0	0	0		0	0	0		0
Reduced Vol:	206	10		49	462	85		180	154	1101		159	24	1395		0
PCE Adj:	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		0.00
MLF Adj:	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		0.00
Final Vol.:	206	10		49	462	85		180	154	1101		159	24	1395		0
Saturation Flow Module:																
Sat/Lane:	1900	1900		1900	1900	1900		1900	1900	1900		1900	1900	1900		1900
Adjustment:	0.90	0.94		0.80	0.92	0.92		0.82	0.93	0.91		0.91	0.91	0.91		1.00
Lanes:	1.00	1.00		1.00	1.69	0.31		1.00	1.00	1.75		0.25	1.00	2.00		1.00
Final Sat.:	1702	1792		1523	2961	545		1554	1769	3020		436	1736	3473		1900
Capacity Analysis Module:																
Vol/Sat:	0.12	0.01		0.03	0.16	0.16		0.12	0.09	0.36		0.36	0.01	0.40		0.00
Crit Moves:	****					****			****					****		
Green/Cycle:	0.14	0.14		0.16	0.18	0.18		0.18	0.10	0.53		0.53	0.02	0.45		0.00
Volume/Cap:	0.88	0.04		0.20	0.88	0.88		0.66	0.88	0.68		0.68	0.68	0.88		0.00
Uniform Del:	50.8	44.9		44.0	48.2	48.2		46.0	53.4	20.6		20.6	58.4	29.8		0.0
IncremntDel:	30.2	0.1		0.4	14.1	14.1		5.7	37.3	1.1		1.1	43.7	6.3		0.0
Delay Adj:	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		0.00
Delay/Veh:	81.1	45.0		44.5	62.3	62.3		51.7	90.7	21.7		21.7	102.1	36.1		0.0
User DelAdj:	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00
AdjDel/Veh:	81.1	45.0		44.5	62.3	62.3		51.7	90.7	21.7		21.7	102.1	36.1		0.0
DesignQueue:	12	1		3	26	5		10	9	38		5	2	56		0

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #123 ORE 217 NB on Ramp/Scholls Ferry

Cycle (sec): 100 Critical Vol./Cap. (X): 0.965
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 42.7
Optimal Cycle: 151 Level Of Service: D

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Split Phase				Split Phase			
Rights:		Include				Ovl				Include				Include		
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0	
Lanes:	2	0	2	0 0	0	0	2	0 1	0	0	0	0 0	2	0	2	0 1
Volume Module:																
Base Vol:	714	926		0	0	1371		548	0	0		0	696	717		284
Growth Adj:	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00
Initial Bse:	714	926		0	0	1371		548	0	0		0	696	717		284
User Adj:	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00
PHF Adj:	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00
PHF Volume:	714	926		0	0	1371		548	0	0		0	696	717		284
Reduct Vol:	0	0		0	0	0		0	0	0		0	0	0		0
Reduced Vol:	714	926		0	0	1371		548	0	0		0	696	717		284
PCE Adj:	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00
MLF Adj:	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00
Final Vol.:	714	926		0	0	1371		548	0	0		0	696	717		284
Saturation Flow Module:																
Sat/Lane:	1900	1900		1900	1900	1900		1900	1900	1900		1900	1900	1900		1900
Adjustment:	0.89	0.91		1.00	1.00	0.90		0.81	1.00	1.00		1.00	0.76	0.88		0.79
Lanes:	2.00	2.00		0.00	0.00	2.00		1.00	0.00	0.00		0.00	2.00	2.00		1.00
Final Sat.:	3400	3449		0	0	3437		1537	0	0		0	2901	3343		1495
Capacity Analysis Module:																
Vol/Sat:	0.21	0.27		0.00	0.00	0.40		0.36	0.00	0.00		0.00	0.24	0.21		0.19
Crit Moves:	****					****								****		
Green/Cycle:	0.22	0.63		0.00	0.00	0.41		0.41	0.00	0.00		0.00	0.25	0.25		0.25
Volume/Cap:	0.96	0.43		0.00	0.00	0.96		0.86	0.00	0.00		0.00	0.96	0.86		0.76
Uniform Del:	38.7	9.3		0.0	0.0	28.6		26.7	0.0	0.0		0.0	37.1	35.9		34.8
IncremntDel:	24.6	0.1		0.0	0.0	16.2		11.6	0.0	0.0		0.0	25.0	9.2		9.1
Delay Adj:	1.00	1.00		0.00	0.00	1.00		1.00	0.00	0.00		0.00	1.00	1.00		1.00
Delay/Veh:	63.3	9.4		0.0	0.0	44.8		38.3	0.0	0.0		0.0	62.1	45.1		43.9
User DelAdj:	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00
AdjDel/Veh:	63.3	9.4		0.0	0.0	44.8		38.3	0.0	0.0		0.0	62.1	45.1		43.9
DesignQueue:	33	20		0	0	49		19	0	0		0	31	31		12

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #125 ORE 217 NB off Ramp/Scholls Ferry

Cycle (sec): 100 Critical Vol./Cap. (X): 0.678
Loss Time (sec): 8 (Y+R = 4 sec) Average Delay (sec/veh): 20.1
Optimal Cycle: 46 Level Of Service: C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Split Phase			Split Phase		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	0 2	0 0	0	0 2	0 0	0	0 0 0	0 0	1	0 0	0 1
Volume Module:												
Base Vol:	0	1181	0	0	795	0	0	0	0	216	0	446
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	1181	0	0	795	0	0	0	0	216	0	446
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	1181	0	0	795	0	0	0	0	216	0	446
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	1181	0	0	795	0	0	0	0	216	0	446
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	0	1181	0	0	795	0	0	0	0	216	0	446
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	0.92	1.00	1.00	0.90	1.00	1.00	1.00	1.00	0.91	1.00	0.82
Lanes:	0.00	2.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00	1.00	0.00	1.00
Final Sat.:	0	3505	0	0	3437	0	0	0	0	1736	0	1554
Capacity Analysis Module:												
Vol/Sat:	0.00	0.34	0.00	0.00	0.23	0.00	0.00	0.00	0.00	0.12	0.00	0.29
Crit Moves:		****										****
Green/Cycle:	0.00	0.50	0.00	0.00	0.50	0.00	0.00	0.00	0.00	0.42	0.00	0.42
Volume/Cap:	0.00	0.68	0.00	0.00	0.47	0.00	0.00	0.00	0.00	0.29	0.00	0.68
Uniform Del:	0.0	19.1	0.0	0.0	16.5	0.0	0.0	0.0	0.0	19.0	0.0	23.3
IncremntDel:	0.0	1.1	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.2	0.0	2.9
Delay Adj:	0.00	1.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	1.00	0.00	1.00
Delay/Veh:	0.0	20.2	0.0	0.0	16.7	0.0	0.0	0.0	0.0	19.2	0.0	26.2
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	20.2	0.0	0.0	16.7	0.0	0.0	0.0	0.0	19.2	0.0	26.2
DesignQueue:	0	36	0	0	24	0	0	0	0	7	0	15

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #129 ORE 217 NB Ramp/Walker

Cycle (sec): 80 Critical Vol./Cap. (X): 0.828
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 27.4
Optimal Cycle: 77 Level Of Service: C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	2	0 0	1 0	0	0 0	0 0	1	0 1	0 0	0	0 0	1 0
Volume Module:												
Base Vol:	1047	0	66	0	0	0	124	743	0	0	428	108
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	1047	0	66	0	0	0	124	743	0	0	428	108
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	1047	0	66	0	0	0	124	743	0	0	428	108
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	1047	0	66	0	0	0	124	743	0	0	428	108
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	1047	0	66	0	0	0	124	743	0	0	428	108
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.90	1.00	0.83	1.00	1.00	1.00	0.93	0.98	1.00	1.00	0.94	0.94
Lanes:	2.00	0.00	1.00	0.00	0.00	0.00	1.00	1.00	0.00	0.00	0.80	0.20
Final Sat.:	3432	0	1583	0	0	0	1769	1862	0	0	1433	362
Capacity Analysis Module:												
Vol/Sat:	0.31	0.00	0.04	0.00	0.00	0.00	0.07	0.40	0.00	0.00	0.30	0.30
Crit Moves:	****							****		****		
Green/Cycle:	0.37	0.00	0.37	0.00	0.00	0.00	0.09	0.48	0.00	0.00	0.39	0.39
Volume/Cap:	0.83	0.00	0.11	0.00	0.00	0.00	0.77	0.83	0.00	0.00	0.77	0.77
Uniform Del:	23.0	0.0	16.7	0.0	0.0	0.0	35.5	17.9	0.0	0.0	21.2	21.2
IncremntDel:	4.7	0.0	0.1	0.0	0.0	0.0	19.3	6.5	0.0	0.0	5.1	5.1
Delay Adj:	1.00	0.00	1.00	0.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00
Delay/Veh:	27.7	0.0	16.7	0.0	0.0	0.0	54.8	24.4	0.0	0.0	26.3	26.3
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	27.7	0.0	16.7	0.0	0.0	0.0	54.8	24.4	0.0	0.0	26.3	26.3
DesignQueue:	32	0	2	0	0	0	5	19	0	0	13	3

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #130 ORE 217 SB Ramp/Walker

Cycle (sec): 80 Critical Vol./Cap. (X): 0.798
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 18.6
Optimal Cycle: 71 Level Of Service: B

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	0 0 0	0	0	1 0 0	1	0	0 1	0 2	1	0 2	0 0
Volume Module:												
Base Vol:	0	0	0	185	0	376	0	805	975	15	1455	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	185	0	376	0	805	975	15	1455	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	185	0	376	0	805	975	15	1455	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	185	0	376	0	805	975	15	1455	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	0	0	0	185	0	376	0	805	975	15	1455	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	0.93	1.00	0.83	1.00	0.98	0.73	0.93	0.93	1.00
Lanes:	0.00	0.00	0.00	1.00	0.00	1.00	0.00	1.00	2.00	1.00	2.00	0.00
Final Sat.:	0	0	0	1773	0	1583	0	1862	2786	1769	3538	0
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.10	0.00	0.24	0.00	0.43	0.35	0.01	0.41	0.00
Crit Moves:						****		****		****		
Green/Cycle:	0.00	0.00	0.00	0.30	0.00	0.30	0.00	0.54	0.54	0.01	0.55	0.00
Volume/Cap:	0.00	0.00	0.00	0.35	0.00	0.80	0.00	0.80	0.65	0.80	0.74	0.00
Uniform Del:	0.0	0.0	0.0	22.0	0.0	25.9	0.0	14.8	12.9	39.5	13.6	0.0
IncremntDel:	0.0	0.0	0.0	0.4	0.0	9.3	0.0	4.6	1.0	113.8	1.6	0.0
Delay Adj:	0.00	0.00	0.00	1.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	0.00
Delay/Veh:	0.0	0.0	0.0	22.4	0.0	35.2	0.0	19.3	13.9	153.3	15.2	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	22.4	0.0	35.2	0.0	19.3	13.9	153.3	15.2	0.0
DesignQueue:	0	0	0	6	0	12	0	18	21	1	32	0

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #131 Scholls Ferry/ORE 217 SB on Ramp

Cycle (sec): 120 Critical Vol./Cap. (X): 0.784
Loss Time (sec): 16 (Y+R = 4 sec) Average Delay (sec/veh): 34.0
Optimal Cycle: 89 Level Of Service: C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Protected			Protected		
Rights:	Include			Include			Ignore			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	0 0 0	0	0	1 0 0	1	0	0 1	1 1	1	0 2	0 0
Volume Module:												
Base Vol:	0	0	0	90	0	445	0	1025	774	168	721	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	90	0	445	0	1025	774	168	721	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
PHF Volume:	0	0	0	90	0	445	0	1025	0	168	721	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	90	0	445	0	1025	0	168	721	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Final Vol.:	0	0	0	90	0	445	0	1025	0	168	721	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	0.91	1.00	0.81	1.00	0.92	0.95	0.90	0.90	1.00
Lanes:	0.00	0.00	0.00	1.00	0.00	1.00	0.00	2.00	1.00	1.00	2.00	0.00
Final Sat.:	0	0	0	1722	0	1537	0	3505	1805	1718	3437	0
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.05	0.00	0.29	0.00	0.29	0.00	0.10	0.21	0.00
Crit Moves:						****		****		****		
Green/Cycle:	0.00	0.00	0.00	0.37	0.00	0.37	0.00	0.37	0.00	0.12	0.50	0.00
Volume/Cap:	0.00	0.00	0.00	0.14	0.00	0.78	0.00	0.78	0.00	0.78	0.42	0.00
Uniform Del:	0.0	0.0	0.0	25.2	0.0	33.6	0.0	33.3	0.0	51.0	19.2	0.0
IncremntDel:	0.0	0.0	0.0	0.1	0.0	7.1	0.0	3.2	0.0	17.1	0.2	0.0
Delay Adj:	0.00	0.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00	1.00	0.00
Delay/Veh:	0.0	0.0	0.0	25.3	0.0	40.7	0.0	36.5	0.0	68.0	19.3	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	25.3	0.0	40.7	0.0	36.5	0.0	68.0	19.3	0.0
DesignQueue:	0	0	0	4	0	20	0	46	0	10	25	0

K- LOS Interpretation (HCM 2000 Methodology)

TRAFFIC LEVELS OF SERVICE

Analysis of traffic volumes is useful in understanding the general nature of traffic in an area, but by itself indicates neither the ability of the street network to carry additional traffic nor the quality of service afforded by the street facilities. For this, the concept of *level of service* has been developed to subjectively describe traffic performance. Level of service can be measured at intersections and along key roadway segments.

Level of service categories are similar to report card ratings for traffic performance. Intersections are typically the controlling bottlenecks of traffic flow and the ability of a roadway system to carry traffic efficiently is generally diminished in their vicinities. Levels of Service A, B and C indicate conditions where traffic moves without significant delays over periods of peak travel demand. Level of service D and E are progressively worse peak hour operating conditions and F conditions represent where demand exceeds the capacity of an intersection. Most urban communities set level of service D as the minimum acceptable level of service for peak hour operation and plan for level of service C or better for all other times of the day. The *Highway Capacity Manual* provides level of service calculation methodology for both intersections and arterials.[1] The following three sections provide interpretations of the analysis approaches.

[1] *2000 Highway Capacity Manual*, Transportation Research Board, Washington D.C., 2000, Chapters 16 and 17.

ALL-WAY STOP CONTROLLED INTERSECTIONS

Unsignalized intersections and all-way stop controlled intersections are each subject to a separate capacity analysis methodology. All-way stop controlled intersection operations are reported by leg of the intersection.

This method calculates a delay value for each approach to the intersection. The *2000 Highway Capacity Manual* describes the detailed methodology. The following table describes the amount of delay associated with each level of service.

Delay (Seconds)	Level of Service
0 - 10	A
10 - 15	B
15 - 25	C
25 - 35	D
35 - 50	E
> 50	F

Source: 2000 *Highway Capacity Manual*, Transportation Research Board, Washington, D.C.

UNSIGNALIZED INTERSECTIONS (Two-Way Stop Controlled)

Unsignalized intersection level of service is reported for the major street and minor street (generally, left turn movements). The method assesses available and critical gaps in the traffic stream which make it possible for side street traffic to enter the main street flow. The *2000 Highway Capacity Manual* describes the detailed methodology. It is not unusual for an intersection to experience level of service E or F conditions for the minor street left turn movement. It should be understood that, often, a poor level of service is experienced by only a few vehicles and the intersection as a whole operates acceptably.

Unsignalized intersection levels of service are described in the following table.

Level of Service	Expected Delay	(Sec/Veh)
A	Little or no delay	0-10.0
B	Short traffic delay	>10.1-15.0
C	Average traffic delays	>15.1-25.0
D	Long traffic delays	>25.1-35.0
E	Very long traffic delays	>35.1-50.0
F	Extreme delays potentially affecting other traffic movements in the intersection	> 50

Source: 2000 *Highway Capacity Manual*, Transportation Research Board Washington, D.C.

SIGNALIZED INTERSECTIONS

For signalized intersections, level of service is evaluated based upon average vehicle delay experienced by vehicles entering an intersection. Control delay (or signal delay) includes initial deceleration delya, queue move-up time, stopped delay, and final acceleration delay. In previous versions of this chapter of the HCM (1994 and earlier), delay included only stopped delay. As delay increases, the level of service decreases. Calculations for signalized and unsignalized intersections are different due to the variation in traffic control. The *2000 Highway Capacity Manual* provides the basis for these calculations.

Level of Service	Delay (secs.)	Description
A	≤10.00	**Free Flow/Insignificant Delays:** No approach phase is fully utilized by traffic and no vehicle waits longer than one red indication. Most vehicles do not stop at all. Progression is extremely favorable and most vehicles arrive during the green phase.
B	10.1-20.0	**Stable Operation/Minimal Delays:** An occasional approach phase is fully utilized. Many drivers begin to feel somewhat restricted within platoons of vehicles. This level generally occurs with good progression, short cycle lengths, or both.
C	20.1-35.0	**Stable Operation/Acceptable Delays:** Major approach phases fully utilized. Most drivers feel somewhat restricted. Higher delays may result from fair progression, longer cycle lengths, or both. Individual cycle failures may begin to appear at this level, and the number of vehicles stopping is significant.
D	35.1-55.0	**Approaching Unstable/Tolerable Delays:** The influence of congestion becomes more noticeable. Drivers may have to wait through more than one red signal indication. Longer delays may result from some combination of unfavorable progression, long cycle lengths, or high v/c ratios. The proportion of vehicles not stopping declines, and individual cycle failures are noticeable.
E	55.1-80.0	**Unstable Operation/Significant Delays:** Volumes at or near capacity. Vehicles may wait though several signal cycles. Long queues form upstream from intersection. These high delay values generally indicate poor progression, long cycle lengths, and high v/c ratios. Individual cycle failures are a frequent occurrence.
F	≥80.0	**Forced Flow/Excessive Delays:** Represents jammed conditions. Queues may block upstream intersections. This level occurs when arrival flow rates exceed intersection capacity, and is considered to be unacceptable to most drivers. Poor progression, long cycle lengths, and v/c ratios approaching 1.0 may contribute to these high delay levels.

Source: *2000 Highway Capacity Manual*, Transportation Research Board, Washington D.C.

ARTERIAL LEVEL OF SERVICE

Arterial level of service is based on the average travel speed for the segment, section, or entire arterial under consideration. The average travel speed is computed from the running time on the arterial segment(s) and the intersection approach delay. It is strongly influenced by the number of signals per mile and the average intersection delay. On a given facility, factors such as inappropriate signal timing, poor progression, and increasing traffic flow can substantially degrade the arterial LOS.[2]

Arterial levels of service are summarized in the following table.

Arterial Levels of Service

Arterial Class	**I**	**II**	**III**
Range of Free Flow Speeds (mph)	45 to 35	35 to 30	35 to 25
Typical Free Flow Speed (mph)	40 mph	33 mph	27 mph
Level of Service	**Average Travel Speed (mph)**		
A	35	30	25
B	28	24	19
C	22	18	13
D	17	14	9
E	13	10	7
F	< 13	< 10	< 7

[2] *1994 Highway Capacity Manual*, Special Report 209, Transportation Research Board, Washington D.C., 1994, Chapter 11.

The three arterial classes (I, II, and III) used to find the appropriate level of service are based on design and functional characteristics shown in the table below.

Definition of functional categories

Functional Category	Characteristics
Principal Arterial	! Mobility very important ! Heavily restricted access ! Connected to freeways, important activity centers, major traffic generators ! Relatively long trips between above points and through trips entering, leaving,and going through the city.
Minor Arterial	! Mobility important ! Substantially restricted access ! Connected to principal arterials ! Trips of moderate lengths within relatively small geographical area

Design Category	Characteristics
Suburban	! Low access density ! Multilane divided; undivided or two-lane with shoulders arterial ! No parking ! Separate left turn lanes ! 1 to 5 signals per mile ! 40 to 45 mph speed limits ! Little Pedestrian activity ! Low to medium roadside development density
Intermediate	! Moderate access density ! Multilane divided or undivided; one way or two lane arterial ! Some parking ! Usually separate left turn lanes ! 4 to 10 signals per mile ! 30 to 40 mph speed limits ! Some pedestrian activity ! Medium to moderate roadside development density
Urban	! High access density ! Undivided one way; two way, two or more lanes arterial ! Much parking ! Some separate left-turn lanes ! 6 to 12 signals per mile ! 25 to 35 mph speed limits ! Usually pedestrian activity ! High density roadside development

Once the arterial is classified using the functional and design categories, the table below can be used to find the associated arterial class.

Arterial Class According to Design and Functional Categories

	FUNCTIONAL CATEGORY	
DESIGN CATEGORY	**PRINCIPAL ARTERIAL**	**MINOR ARTERIAL**
TYPICAL SUBURBAN	I	II
INTERMEDIATE	II	II OR III
TYPICAL URBAN	II OR III	III

L – Metro Street Design Policies/Designations

CHAPTER 1
1.3.5 Designing the Transportation System

The design and function of individual transportation facilities and entire systems have a significant impact on adjacent land uses and the character of the communities they serve. As a result, transportation systems planning must consider larger regional and community goals and values, such as protection of the environment, the regional economy and the quality of life that area residents presently enjoy.

The Regional Transportation Plan measures economic and quality-of-life impacts of the proposed system by evaluating key indicators, such as access to jobs and retail services, mode share, vehicle miles traveled, travel times, travel speeds, level of congestion and air quality impacts. Other key indicators include economic benefits to the community, access to transportation by the traditionally underserved, including low-income and minority households and the disabled, energy costs and protection of natural resources. The Regional Transportation Plan defines a transportation system that balances all of the policies in this plan. Sometimes these policies are in conflict – so each transportation project or program must be evaluated in terms of financial constraints, associated social, economic and environmental impacts, and how it best achieves an overall balance between those conflicting goals.

The following policy guides planning and implementation of the region's transportation system.

Policy 11.0. Regional Street Design
Design regional streets with a modal orientation that reflects the function and character of surrounding land uses, consistent with regional street design concepts.
a. Objective: Support local implementation of regional street design concepts in local transportation system plans.

Regional street design policies address federal, state and regional transportation planning mandates with street design concepts intended to support local implementation of the 2040 Growth Concept. The design concepts reflect the fact that streets perform many, often conflicting functions, and the need to reconcile conflicts among travel modes to make the transportation system safer for all modes of travel. Implementation of the design concepts is intended to promote community livability by balancing all modes of travel and address the function and character of surrounding land uses when designing streets of regional significance.

Regional street design concepts

Regional street design concepts are intended to serve multiple modes of travel in a manner that supports the specific needs of the 2040 land-use components. The street design concepts fall into five broad classifications:

- **Throughways** – emphasize motor vehicle travel and connect major activity centers, industrial areas and intermodal facilities

- **Boulevards** – serve major centers of urban activity and emphasize public transportation, bicycle and pedestrian travel while balancing the many travel demands of intensely developed areas

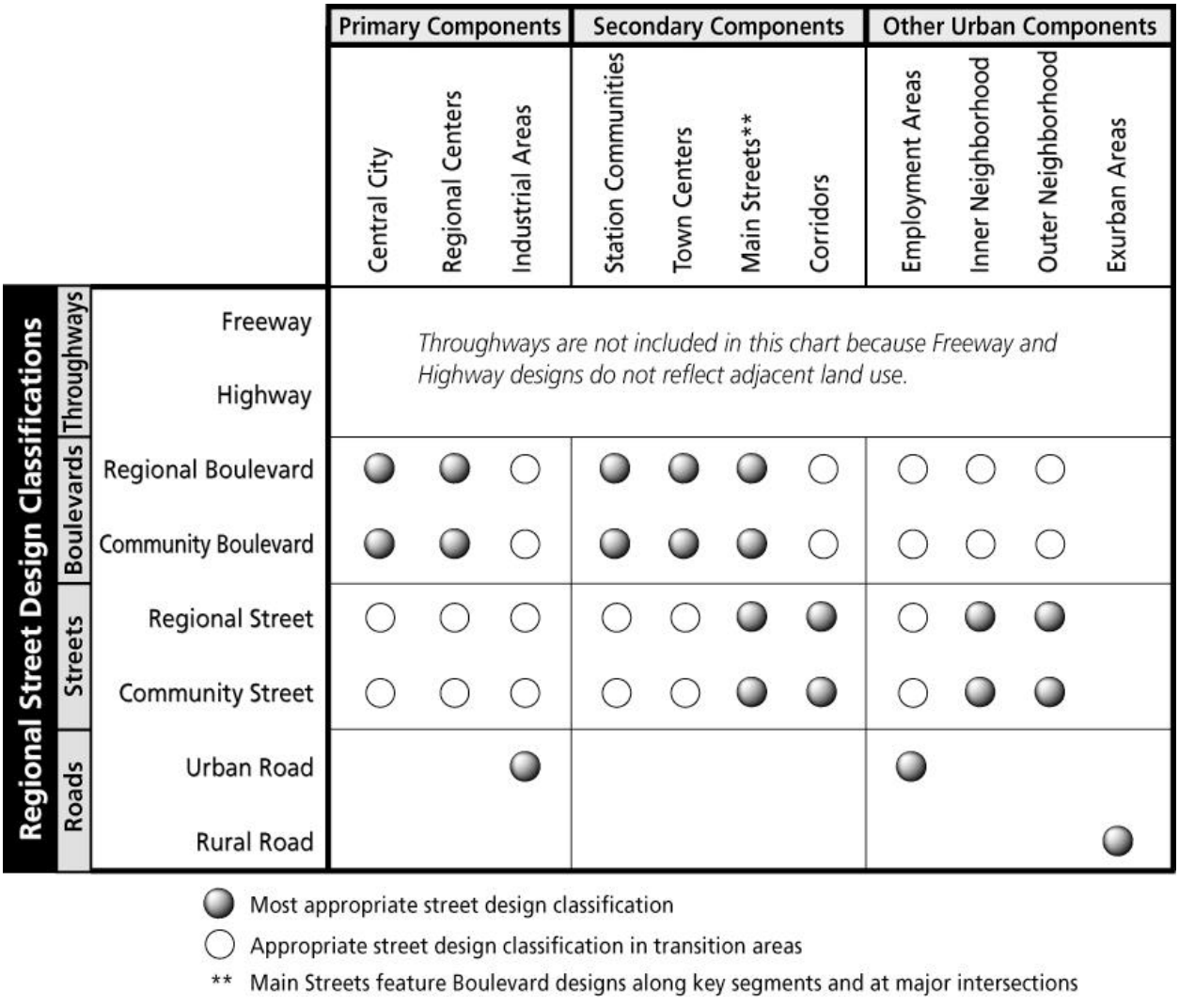
- **Streets** – serve transit corridors, main streets and neighborhoods with designs that integrate many modes of travel and provide easy pedestrian, bicycle and public transportation travel

- **Roads** – are traffic-oriented with designs that integrate all modes but primarily serve motor vehicles

- **Local streets** – complement the regional system by serving neighborhoods and carrying local traffic.

These design concepts apply to the regional system as they relate to specific 2040 Growth Concept land-use components. Figure 1.3 provides a chart of regional street design classifications for roadways that serve a given 2040 land use. The most appropriate street design classification for roadways that serve a given land use is indicated with a solid circle(s). Separate regional street design guidelines were developed to guide local implementation of the design concepts. A detailed discussion of these guidelines can be found in *Creating Livable Streets: Street Design for 2040*. The regional street design map, Figure 1.4, applies the regional street design concepts to streets of regional significance. Following Figure 1.4 is a detailed description of the purpose and design emphasis of each design concept.

Figure 1.3
Regional Street Design Classifications and the 2040 Growth Concept



Throughways

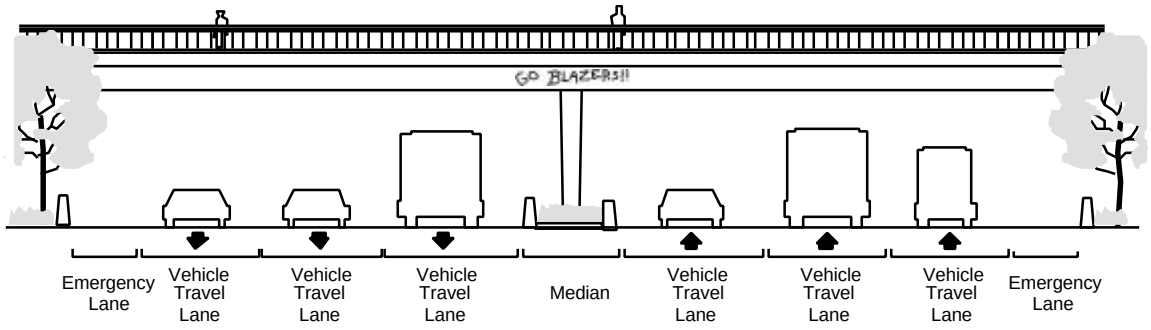
The purpose of throughways is to connect major activity centers within the region, including the central city, regional centers, industrial areas and intermodal facilities to one another and to points outside the region. Throughways are divided into limited access freeway designs where all intersections have separated grades, and highways that include a mix of separate and at-grade intersections.

Both freeways and highways are designed to provide high-speed travel for longer motor vehicle trips throughout the region, are primary freight routes and serve all 2040 Growth Concept land-use components. In addition to facility designs that promote mobility, throughways may also benefit from access management and advanced traffic management system techniques. These facilities may carry transit through-service, with supporting amenities limited to transit stations. These facilities may also incorporate transit-priority design treatment where appropriate, and may incorporate light rail or other high-capacity transit.

Freeways

Freeways usually consist of four to six vehicle travel lanes, with additional lanes in some situations. They are completely divided, with no left-turn lanes. Freeway designs have few street connections, and always occur at separated grades with access controlled by ramps. There is no driveway access to freeways or buildings oriented toward these facilities – only emergency parking is allowed. Freeway designs do not include pedestrian amenities, with the exception of improved crossings on overpasses and access ramps. Bikeways designed in conjunction with freeway improvements usually are separated facilities. Figure 1.5 illustrates a typical cross-section of a freeway.

Figure 1.5
Freeway Design Elements



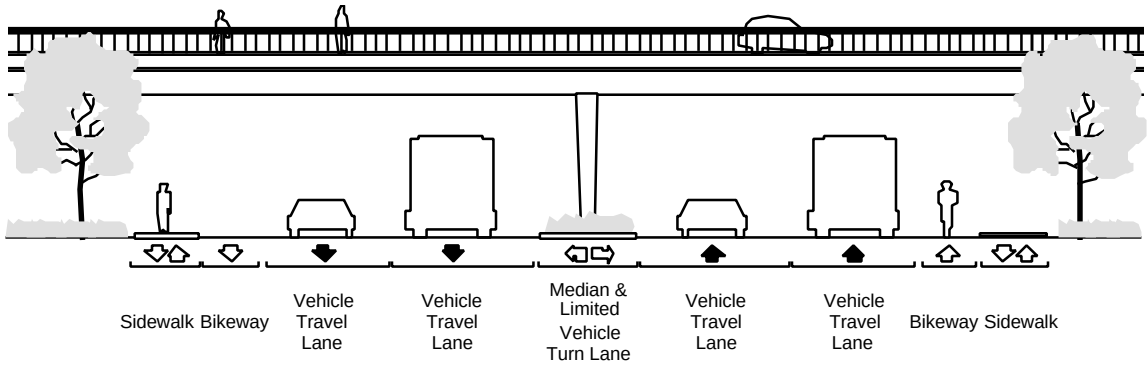
Source: Metro

Highways

Highways usually consist of four to six vehicle travel lanes, with additional lanes in some situations. Highway designs have few street connections, and they may occur at same-grade or on separate grades. Highways are usually divided with a median, but also have left-turn lanes where at-grade intersections exist. There are few driveways on highways, and buildings are not usually oriented toward these facilities. On-street parking is usually prohibited in highway designs, but may exist in some locations.

Highway designs include striped bikeways and sidewalks with optional buffering. Improved pedestrian crossings are located on overpasses, underpasses and at same-grade intersections. Figure 1.6 illustrates a typical cross-section of a highway.

Figure 1.6
Highway Design Elements



Source: Metro

Boulevards

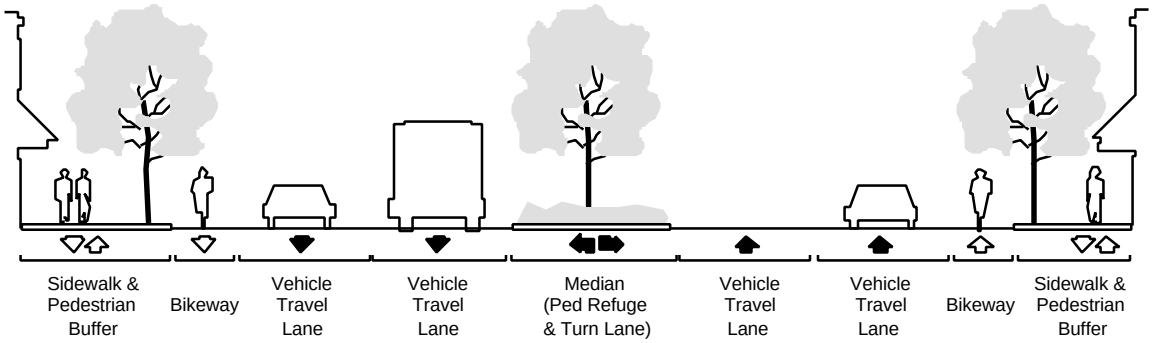
Boulevards are designed with special amenities that promote pedestrian, bicycle and public transportation travel in the districts they serve. Boulevards serve the multi-modal needs of the region's most intensely developed activity centers, including the central city, regional centers, station communities, town centers and some main streets. As such, these facilities may benefit from access management, traffic calming and ATMS techniques that reinforce pedestrian, bicycle and public transportation travel. Boulevards are divided into regional and community-scale designs.

Regional boulevards

Regional boulevards mix a significant amount of motor vehicle traffic with public transportation, bicycle and pedestrian travel where dense development is oriented toward the street. These designs feature low to moderate vehicle speeds and usually include four vehicle lanes. Additional lanes or one-way couplets may be included in some situations. Regional boulevards have many street connections and some driveways, although combined driveways are preferable. These facilities may include on-street parking when possible. The center median serves as a pedestrian refuge and allows for left-turn movements at intersections.

Regional boulevards are designed to be transit-oriented, with high-quality service and substantial transit amenities at stops and station areas. Pedestrian improvements are substantial on boulevards, including broad sidewalks, pedestrian buffering, special street lighting and crossings at all intersections with special crossing amenities at major intersections. These facilities have bike lanes or wide outside lanes where bike lanes are not physically possible, or are shared roadways where motor vehicle speeds are low. They also serve as primary freight routes and may include loading facilities within the street design. Loading facilities should occur on side streets, where feasible. Figure 1.7 illustrates a typical cross-section of a regional boulevard.

Figure 1.7
Regional Boulevard Design Elements

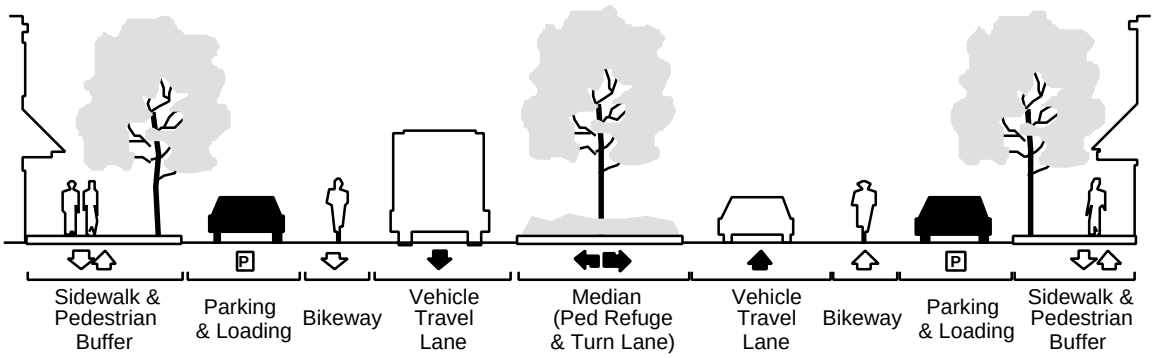


Source: Metro

Community boulevards

Community boulevards mix motor vehicle traffic with public transportation, bicycle and pedestrian travel where dense development is oriented toward the street. These facilities are designed for low motor vehicle speeds and usually include four vehicle lanes and on-street parking. Fewer vehicle lanes may be appropriate in some situations, particularly when necessary to provide on-street parking. Community boulevards have many street connections and some driveways, although combined driveways are preferable. Where appropriate, center medians offer a pedestrian refuge and allow for left turn movements at intersections. Figure 1.8 illustrates a typical cross-section of a community boulevard.

Figure 1.8
Community Boulevard Design Elements



Source: Metro

Community boulevards are designed to be transit-oriented, with high-quality service supported by substantial transit amenities at stops and station areas. Pedestrian improvements are also substantial,

including broad sidewalks, pedestrian buffering, special street lighting and crossings at all intersections with special crossing amenities at major intersections. Community boulevards have striped or shared bikeways and some on-street parking. These facilities also serve as secondary freight routes, and may include loading facilities within the street design. Loading facilities should occur on side streets, where feasible.

Boulevard intersections
Boulevard design classifications are usually focused on centers and some main streets where a pedestrian and transit-oriented street design can best complement higher density, mixed-use development patterns. However, there are many locations where corridors and some main streets intersect along major streets. At these intersections, motor vehicle traffic must be managed to limit negative impacts on other modes and adjacent land uses. While boulevard intersections accommodate a significant amount of motor vehicle traffic, they are designed with special amenities that promote pedestrian, bicycle and public transportation travel. Pedestrian improvements are substantial, including broad sidewalks, special lighting, crossings on all streets and special crossing features where unusually heavy motor vehicle traffic is present.

Streets

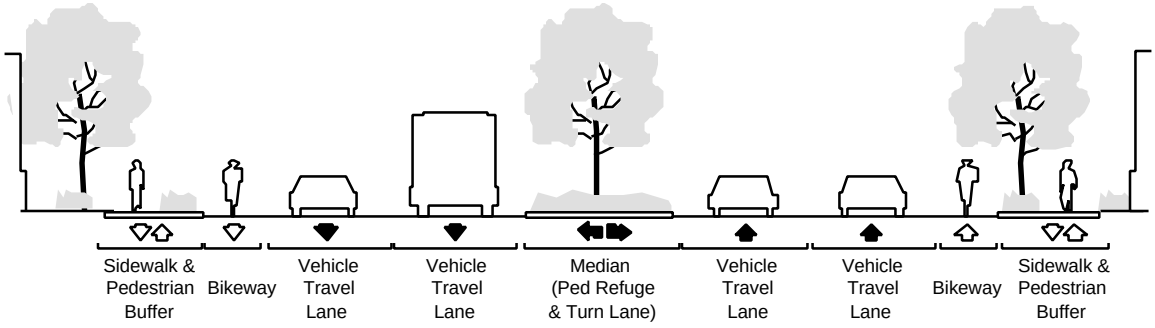
Streets are designed with amenities that promote pedestrian, bicycle and public transportation travel in the districts they serve, particularly where development densities warrant special transit and pedestrian design consideration. Streets serve the multi-modal needs of the region's corridors, neighborhoods and some main streets. As such, these facilities may benefit from access management, traffic calming and ATMS techniques that enhance pedestrian, bicycle and public transportation travel, while providing appropriate vehicle mobility. Streets are divided into regional and community scale designs.

Regional streets
Regional streets are designed to carry significant vehicle traffic while also providing for public transportation, bicycle and pedestrian travel. These facilities serve a development pattern that ranges from low-density residential neighborhoods to more densely developed corridors and main streets, where buildings are often oriented toward the street at major intersections and transit stops. Regional street designs accommodate moderate motor vehicle speeds and usually include four vehicle lanes. Additional motor vehicle lanes may be appropriate in some situations. These facilities have some to many street connections, depending on the district they are serving. Regional streets have few driveways that are combined whenever possible. On-street parking may be included, and a center median serves as a pedestrian refuge and allows for left turn movements at intersections.

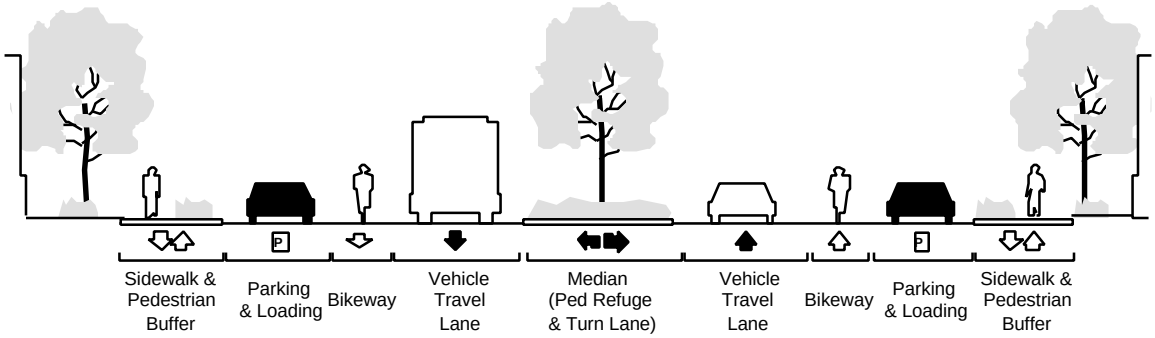
These facilities are designed to be transit-oriented, with high-quality service and substantial transit amenities at stops and station areas. Although less substantial than in boulevard designs, pedestrian improvements are important along regional streets, including sidewalks that are buffered from motor vehicle travel, crossings at all intersections and special crossing amenities at major intersections. Regional streets have bike lanes or wide outside lanes where bike lanes are not physically possible, or are shared roadways where motor vehicle speeds are low. They also serve as primary freight routes and may include loading facilities within the street design, where appropriate. Figure 1.9 illustrates a typical cross-section of a regional and community street.

Figure 1.9
Regional and Community Street Design Elements

Regional Street Design Elements



Community Street Design Elements



Source: Metro

Community streets

Community streets are designed to carry vehicle traffic while providing for public transportation, bicycle and pedestrian travel. These facilities serve lower-density residential neighborhoods as well as more densely developed corridors and main streets, where buildings are often oriented toward the street at main intersections and transit stops. Community street designs allow for moderate motor vehicle speeds and usually include four motor vehicle lanes and on-street parking. However, fewer travel lanes may be appropriate when necessary to provide for on-street parking. These facilities have some to many street connections, depending on the 2040 Growth Concept land-use components they serve. Community streets have few driveways that are shared when possible. A center median serves as a pedestrian refuge and allows for left-turn movements at intersections.

Community streets are transit-oriented in design, with transit amenities at stops and station areas. Although less substantial than in boulevard designs, pedestrian improvements are important on community streets, including sidewalks that are buffered from motor vehicle travel, crossings at all

intersections and special crossing features at major intersections. Community streets have striped or shared bikeways. These facilities also serve as secondary freight routes and may include loading facilities within the street design, where appropriate. Loading facilities should occur on side streets, where feasible.

Roads

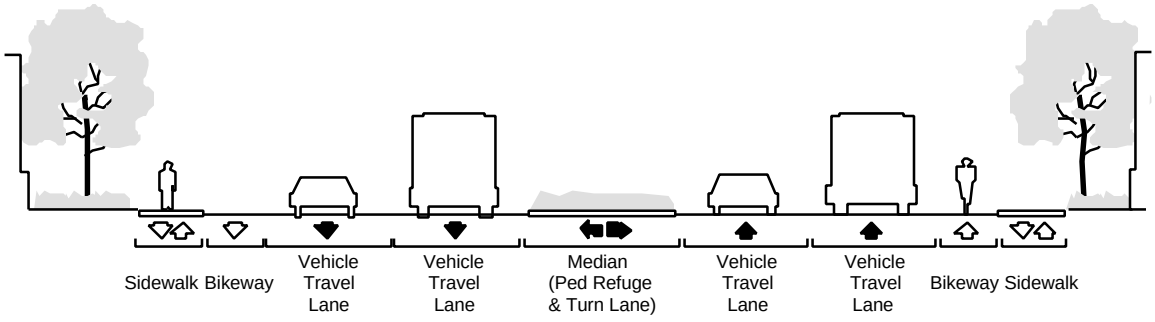
Roads are traffic-oriented designs that provide motor vehicle mobility in the 2040 Growth Concept land-use components they serve and accommodate a minimal amount of pedestrian and public transportation travel. These facilities may benefit from access management and ATMS techniques. Roads serve the travel needs of the region's lower density industrial and employment areas as well as rural areas located outside the urban growth boundary. Roads are, therefore, divided into urban and rural designs.

Urban roads

These facilities are designed to carry significant motor vehicle traffic while providing for some public transportation, bicycle and pedestrian travel. Urban roads serve industrial areas, intermodal facilities and employment centers where buildings are less oriented toward the street. These facilities also serve new urban areas (UGB additions) where plans for urban land use and infrastructure are not complete. Urban roads are designed to accommodate moderate vehicle speeds and usually include four motor vehicle lanes, although additional lanes may be appropriate in some situations. These designs have some street connections, but few driveways. Urban roads rarely include on-street parking, and a center median primarily serves to optimize motor vehicle travel and to allow for left-turn movements at intersections.

Urban roads serve as primary freight routes and often include special design treatments to improve freight mobility. These facilities are designed for transit through-service, with limited amenities at transit stops. Sidewalks are included in urban road designs, although buffering is optional. Pedestrian crossings are included at intersections. Urban roads have striped bikeways. Figure 1.10 illustrates a typical cross-section of an urban road.

Figure 1.10
Urban Road Design Elements



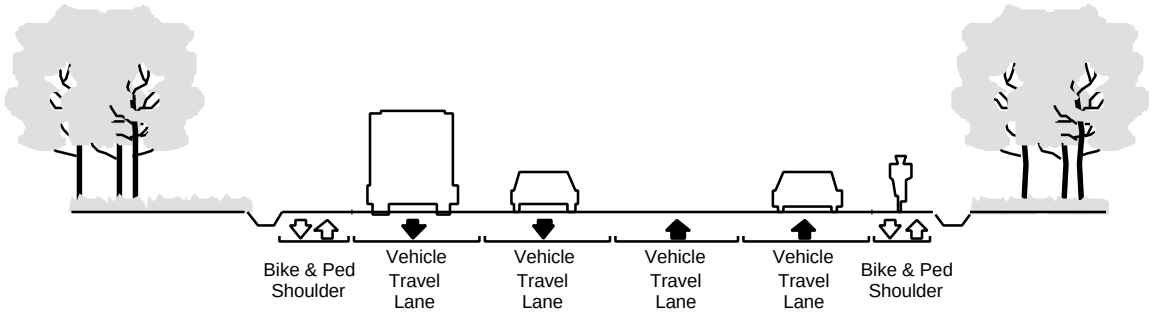
Source: Metro

Rural roads

Rural roads are designed to carry rural traffic while accommodating limited public transportation, bicycle and pedestrian travel. In some cases rural roads serve to connect urban traffic to throughways. Rural

roads serve urban reserves, rural reserves and green corridors, where development is widely scattered and usually located away from the road. These facilities are designed to allow moderate motor vehicle speeds and usually consist of two to four motor vehicle lanes, with occasional auxiliary lanes appropriate in some situations. Rural roads have some street connections and few driveways. On-street parking occurs on an unimproved shoulder, and is usually discouraged. These facilities may include center turn lanes, where appropriate. Figure 1.11 illustrates a typical cross-section of a rural road.

Figure 1.11
Rural Road Design Elements



Source: Metro

Rural roads serve as primary freight routes and often provide important farm-to-market connections. Special design treatments to improve freight mobility are therefore important in these designs. Rural roads rarely serve public transportation, but may include limited amenities at rural transit stops where transit service does exist. Bicycles and pedestrians share a common striped shoulder on these facilities, and improved pedestrian crossings occur only in unique situations (such as rural schools or commercial districts).

Policy 12.0. Local Street Design
Design local street systems to complement planned land uses and to reduce dependence on major streets for local circulation, consistent with Section 6.4.5 in Chapter 6 of this plan.

Local streets include all facilities not identified on the regional motor vehicle system map in Figure 1.11 of this plan. Local streets serve the immediate travel needs of the region at the neighborhood level. These facilities are multi-modal and are designed to serve most short automobile, bicycle and pedestrian trips. They generally do not carry freight in residential areas, but are important to freight movement in industrial and commercial areas. Local streets may serve as transit routes in some situations. Local street designs include many connections with other streets, and bicycle and pedestrian accessways where topography or existing development patterns prevent full street extensions.

Policy 13.0. Regional Motor Vehicle System
Provide a regional motor vehicle system of arterials and collectors that connect the central city, regional centers, industrial areas and intermodal facilities, and other regional destinations, and provide mobility within and through the region.

a. Objective: Provide for statewide, national and international connections to and from the region, consistent with the Oregon Transportation Plan.
b. Objective: Provide a system of principal arterials for long-distance, high-speed, interstate, inter-region and intra-region travel.
c. Objective: Provide an adequate system of arterials that supports local and regional travel.
d. Objective: Provide an adequate system of local streets that supports localized travel, thereby reducing dependence on the regional system for local travel.
e. Objective: Maintain an acceptable level of service on the regional motor vehicle system during peak and off-peak periods of demand, as defined in Table 1.2.
f. Objective: Minimize the effect of improved regional access outside the urban area.
g. Objective: Minimize the impact of urban travel on rural land uses. Limit access to and minimize urban development pressure on rural land uses and resource lands by maintaining appropriate levels of access to support rural activities, while discouraging urban traffic.
h. Objective: Implement a congestion management system to identify and evaluate low cost strategies to mitigate and limit congestion in the region.

These policies and objectives direct the region's planning and investment in the regional motor vehicle system. The regional motor vehicle system is designed to provide access to the central city, regional centers, industrial areas and intermodal facilities with an emphasis on mobility between these destinations. The regional motor vehicle system is shown in Figure 1.12 of this plan.

This plan recognizes the need to accommodate a variety of trip types on the regional motor vehicle system that include personal errands, commuting to work or school, commerce, freight movement and public transportation. In general, this plan recognizes there would be a higher degree of mobility during the mid-day compared to the peak-hour. Although focused on motor vehicle travel, the system described in this section is multi-modal, with design criteria intended to serve motor vehicle mobility needs while reinforcing the urban form of the 2040 Growth Concept. While the motor vehicle system usually serves bicycle and pedestrian travel, the system is designed to limit impacts of motor vehicles on pedestrian and transit-oriented districts.

Finally, the Regional Transportation Plan must demonstrate that it defines an adequate transportation system to serve planned land uses. The motor vehicle performance measures identified in Table 1.2 serve as the basis for making this determination.

In areas of special concern, substitute performance measures identified in Chapter 6 will be used to make a determination of whether the transportation system is adequate to serve planned land uses. Areas with this designation are planned for mixed used development, but are also characterized by physical, environmental or other constraints that limit the range of acceptable transportation solutions for addressing a level-of-service need, but where alternative routes for regional through-traffic are provided. Figure 1.13 in this chapter defines areas where this designation applies. In these areas, substitute performance measures are allowed by OAR.660.012.0060(1)(d). Provisions for determining the alternative performance measures are included in Section 6.7.7 of this plan. Adopted performance measures for these areas are detailed in Appendix 3.6.

Table 1.2

Regional Motor Vehicle Performance Measures

Deficiency Thresholds and Operating Standards[1]

Location	Mid-Day One-Hour Peak			A.M./P.M. Two-Hour Peak					
	Preferred Operating Standard	Acceptable Operating Standard	Exceeds Deficiency Threshold	Preferred Operating Standard		Acceptable Operating Standard		Exceeds Deficiency Threshold	
				1st Hour	2nd Hour	1st Hour	2nd Hour	1st Hour	2nd Hour
Central City **Regional Centers** **Town Centers** **Main Streets** **Station Communities**	C	E	F	E	E	F	E	F	F
Corridors **Industrial Areas** **Intermodal Facilities** **Employment Areas** **Inner Neighborhoods** **Outer Neighborhoods**	C	D	E	E	D	E	E	F	E
Banfield Freeway[1] *(from I-5 to I-205)*	C	E	F	E	E	F	E	F	F
I-5 North* *(from Marquam Bridge to Interstate Bridge)*	C	E	F	E	E	F	E	F	F
Highway 99E[1] *(from the Central City to Highway 224 interchange)*	C	E	F	E	E	F	E	F	F
Sunset Highway[1] *(from I-405 to Sylvan interchange)*	C	E	F	E	E	F	E	F	F
Stadium Freeway[1] *(I-5 South to I-5 North)*	C	E	F	E	E	F	E	F	F
Other Principal Arterial Routes	C	D	E	E	D	E	E	F	E
Areas of Special Concern	Areas with this designation are planned for mixed used development, but are also characterized by physical, environmental or other constraints that limit the range of acceptable transportation solutions for addressing a level-of-service need, but where alternative routes for regional through-traffic are provided. Figures 1.13.a-e in this chapter define areas where this designation applies. In these areas, substitute performance measures are allowed by OAR.660.012.0060(1)(d). Provisions for determining the alternative performance measures are included in Section 6.7.7 of this plan. Adopted performance measures for these areas are detailed in Appendix 3.3.								

Level-of-service is determined by using either the latest edition of the Highway Capacity Manual (Transportation Research Board) or through volume to capacity ratio equivalencies as follows: LOS C = .8 or better; LOS D = .8 to .9; LOS E = .9 to 1.0; and LOS F = 1.0 to 1.1. A copy of the level of service tables from the Highway Capacity Manual is shown in Appendix 1.6.

[1] Thresholds shown are for interim purposes only; refinement plans for these corridors are required in Chapter 6 of this plan, and will include a recommended motor vehicle performance policy for each corridor.

Source: Metro

Figure 1.13.a
Portland Central City
Area of Special Concern



The Portland central city area east of the Willamette River and generally within the I-405 freeway ring has an extensive grid of well-connected arterial, collector and local streets. The Willamette River bridges are a key part of the transportation system, connecting the central city and adjacent neighborhoods to the region. The hilly topography has constrained much of the transportation system in the Northwest and Southwest portions of the central city. Despite these limitations, this area is expected to continue to be served by high-quality transit and be conducive to bicycle and pedestrian travel. Refer to Appendix 3.3 for detail on alternative performance measures identified for this area of special concern.

Figure 1.13.b
Gateway Regional Center
Area of Special Concern



Gateway regional center is defined as a major crossroads of transportation that is impacted by through traffic that is not destined for the regional center such and which presents barriers to local circulation where congested through-streets isolate some parts of the regional center. Refer to Chapter 6 for detail on refinement planning identified for this area of special concern.

Figure 1.13.c
Beaverton Regional Center
Area of Special Concern



Beaverton has historically been defined as a crossroads of transportation, with both the advantages and limitations that heavy through traffic brings. While the level of access has helped make the Beaverton regional center a focus of commerce in Washington County, it also presents barriers to local circulation where congested through-streets isolate some parts of the area. Refer to Appendix 3.3 for detail on alternative performance measures identified for this area of special concern.

Figure 1.13.d
Highway 99W
Area of Special Concern



The Highway 99W corridor between Highway 217 and Tualatin Road is designated as a mixed-use corridor in the 2040 Growth Concept and connects the Tigard and Tualatin town centers. This corridor is also designated as an area of special concern due to existing development patterns and economic constraints that limit adding capacity to address heavy travel demand in this corridor. Local planning studies have found that approximately 50 percent of the traffic using this corridor is local. The Regional Transportation Plan establishes the proposed I-5 to 99W connector as the principal route connecting the Metro region to the 99W corridor outside of the region as an alternative to 99W. Refer to Chapter 6 for detail on refinement planning identified for this area of special concern.

Figure 1.13.e
Tualatin Town Center
Area of Special Concern

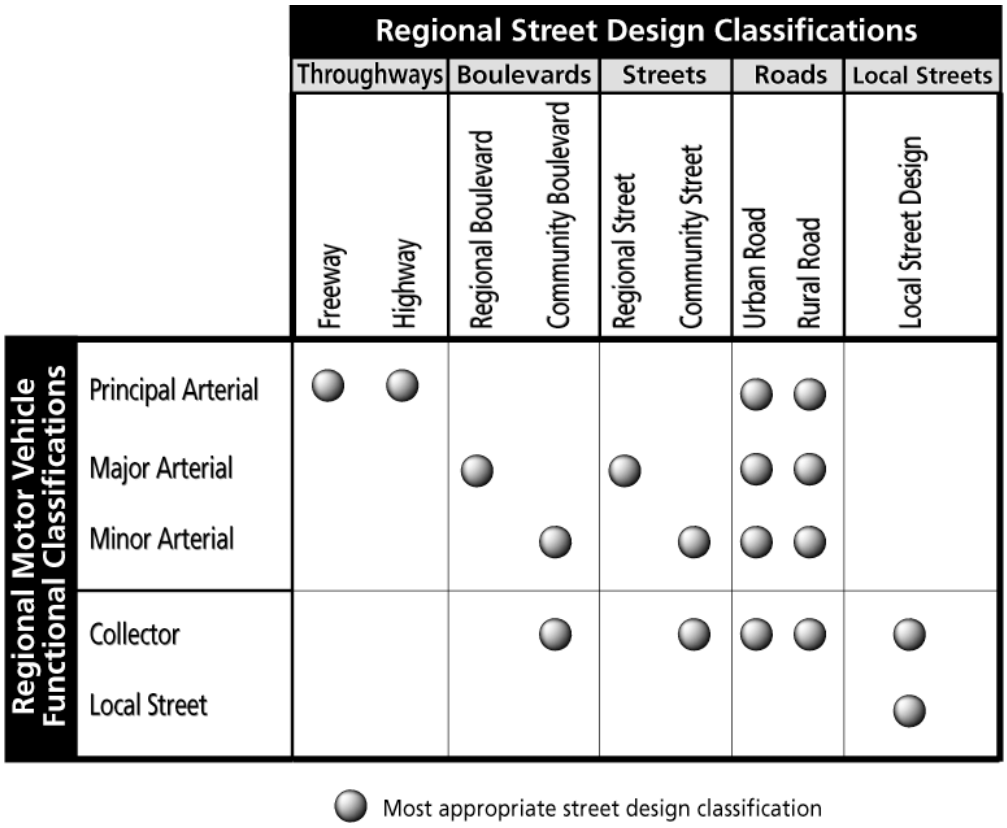


Tualatin town center is adjacent to an important industrial area and employment center. New street connections and capacity improvements to streets parallel to 99W and I-5 help improve local circulation and maintain adequate access to the industrial and employment area in Tualatin. However, the analysis of travel demand on regional streets shows that several streets continue to exceed the LOS policy established in Table 1.2, including Hall Boulevard and Boones Ferry Road. Refer to Chapter 6 for detail on refinement planning identified for this area of special concern.

Regional Motor Vehicle Functional Classification System

The regional motor vehicle system includes principal arterials, major and minor arterials, rural arterials and collectors of regional significance. These routes are designated on the motor vehicle system map, Figure 1.12. Local comprehensive plans also include additional minor arterials, collectors and local streets. Figure 1.14 provides a chart of the regional motor vehicle functional classifications and their relationship to the regional street design classifications. The most appropriate street design classification for roadways that serve a given functional classification is indicated with a solid circle(s). Following Figure 1.14 is a detailed description of the regional motor vehicle functional classification categories.

Figure 1.14
Relationship Between Regional Street Design and Motor Vehicle Classifications



Source: Metro

The following are the regional functional classification categories:

Principal arterials: These facilities form the backbone of the motor vehicle network. Motor vehicle trips entering and leaving the urban area follow these routes, as well as those destined for the central city, regional centers, industrial areas or intermodal facilities. These routes also form the primary connection between neighbor cities and the urban area. Principal arterials serve as major freight routes, with an emphasis on mobility. These routes fall within regional freeway, highway and road designs, as defined in the regional street design concepts.

Principal arterial system design criteria:

- Principal arterials should provide an integrated system that is continuous throughout the urbanized area and should also provide for statewide continuity of the rural arterial system.
- The principal arterial system should serve the central city, regional centers, industrial areas and intermodal facilities, and should connect key freight routes within the region to points outside the region.

- A principal arterial should provide direct service: from each entry point to each exit point or from each entry point to the central city. If more than one route is available, the most direct route will be designated as the principal arterial when it supports the planned urban form.

Major arterials: These facilities serve as primary links to the principal arterial system. Major arterials, in combination with principal arterials, are intended to provide general mobility for travel within the region. Motor vehicle trips between the central city, regional centers, industrial areas and intermodal facilities should occur on these routes. Major arterials serve as freight routes, with an emphasis on mobility. These routes fall within regional boulevard, regional street, urban road and rural road designs, as defined in the regional street design concepts.

Major arterial system design criteria:
- Major arterials should provide motor vehicle connections between the central city, regional centers, industrial areas and intermodal facilities and connect to the principal arterial system. If more than one route is available, the more direct route will be designated when it supports the planned urban form.
- Major arterials should serve as primary connections to principal arterials, and should also connect to other arterials, collectors and local streets, where appropriate.
- Freight movement should not be restricted on the principal arterial network.
- The principal and major arterial systems in total should comprise 5-10 percent of the motor vehicle system and carry 40-65 percent of the total vehicle miles traveled.

Minor arterials: The minor arterial system complements and supports the principal and major arterial systems, but is primarily oriented toward motor vehicle travel at the community level connecting town centers, corridors, main streets and neighborhoods. As such, minor arterials usually serve shorter trips than principal and major arterials, and therefore must balance mobility and accessibility demands. Minor arterials may serve as freight routes, providing both access and mobility. These routes fall within community boulevard, community street, urban road and rural road designs, as defined in the regional street design concepts.

Minor arterial system design criteria:
- Minor arterials generally connect town centers, corridors, main streets and neighborhoods to the nearby regional centers or other major destinations.
- Minor arterials should connect to major arterials, collectors, local streets and some principal arterials, where appropriate.
- The principal, major and minor arterial system should comprise 15-25 percent of the motor vehicle system and carry 65-80 percent of the total vehicle miles traveled.

Rural arterials: The rural arterial system serves urban reserve areas, rural reserve areas and green corridors. There are two functional categories of rural arterial – urban-to-urban and farm-to-market. Urban-to-urban rural arterials provide key connections to the regional motor vehicle system and 2040 land-use components inside the urban growth boundary. While principal arterials provide primary connections from the Metro region to neighboring cities, urban-to-urban rural arterials also function as secondary connections to neighboring cities. Farm-to-market rural arterials provide farm-to-market access between urban and rural areas.

Collectors: While some collectors are of regional significance, most of the collector system operates at the community level to provide local connections to the minor and major arterial systems. As such, collectors

carry fewer motor vehicles than arterials, with reduced travel speeds. However, an adequate collector system is needed to serve these local motor vehicle travel needs. Collectors may serve as freight access routes, providing local connections to the arterial network. Collectors fall within the plan's local street design principles.

Collectors of regional significance connect the regional arterial system and the local collector system by collecting and distributing neighborhood traffic to arterials. Collectors of regional significance have three purposes. First, these facilities ensure adequate access to the primary and secondary land-use components of the 2040 Growth Concept. Second, collectors of regional significance allow dispersion of arterial level traffic over a number of lesser facilities where an adequate local street network exists. Third, collectors of regional significance help define appropriate collector level movement between jurisdictions.

Collector system design criteria:

- Collectors should connect neighborhoods to nearby centers, corridors, station areas, main streets and other nearby destinations.
- Collectors should connect to minor and major arterials and other collectors, as well as local streets.
- The collector system should comprise 5-10 percent of the motor vehicle system and carry 5-10 percent of the total vehicle miles traveled.

Local streets: The local street system is used throughout the region to provide for local circulation and access. However, arterials in the region's newest neighborhoods are often the most congested due to a lack of local street connections. The lack of local street connections forces local auto trips onto the principal and major arterial network, resulting in significant congestion on many suburban arterials. These routes fall within the plan's local street design principles.

Local Street System Design Criteria:

- Local streets should connect neighborhoods, provide local circulation and give access to adjacent centers, corridors, station areas and main streets.
- The local street system should be designed to serve local, low-speed motor vehicle travel with closely interconnected local streets intersecting at no more than 530-foot intervals. Closed local street systems are appropriate only where topography, environmental or infill limitations exist. Local streets should connect to major and minor arterials and collectors at a density of 10 to 16 street intersections per mile.
- Local streets should comprise 65-80 percent of the motor vehicle system and carry 10-30 percent of the total vehicle miles traveled.

Policy 14.0. Regional Public Transportation System
Provide an appropriate level, quality and range of public transportation options to serve this region and support implementation of the 2040 Growth Concept, consistent with Figures 1.15 and 1.16.

a. Objective: Serve this region with appropriate public transportation service as defined in Figures 1.15 and 1.16.
b. Objective: Continue to work with local jurisdictions and Tri-Met to implement Tri-Met's Transit Choices for Livability community transit plan.
c. Objective: Provide transit service that is accessible to the mobility impaired and provide para-transit to the portions of the region without adequate fixed-route service to comply with the Americans with Disabilities Act of 1990.
d. Objective: Develop a long-term strategy for potential use of freight railroad lines for passenger use and work with jurisdictions inside and outside of the Metro area to explore other commuter rail opportunities.

Policy 14.1. Public Transportation Awareness and Education
Expand the amount of information available about public transportation to allow more people to use the system.

a. Objective: Increase awareness of public transportation and how to use it through expanded education and public information media and easy to understand schedule information and format.
b. Objective: Improve mechanisms for receiving and responding to feedback from public transportation users.
c. Objective: Explore new technologies to improve the availability of schedule, route, transfer and other service information.

Policy 14.2. Public Transportation Safety and Environmental Impacts
Continue efforts to make public transportation an environmentally-friendly and safe form of motorized transportation.

a. Objective: Continue to reduce the amount of air pollutants and noise generated by public transportation vehicles.
b. Objective: Support efforts by the region's transit providers to improve the existing level of passenger safety and security on public transportation and reduce the number of avoidable accidents involving transit vehicles.

Policy 14.3. Regional Public Transportation Performance
Provide transit service that is fast, reliable and has competitive travel times compared to the automobile.

a. Objective: Transit travel time (in-vehicle) for trips on light rail transit and rapid bus routes during the peak hours of service should be no slower than 150 percent of the auto travel time during the off-peak hours. Exceeding this threshold would result in considering preferential treatment to the road system for transit and express operation.
b. Objective: Total transit travel time (in-vehicle + non-weighted wait time) for trips on regional bus routes should be no slower than 200 percent of the total auto travel time.

These policies and objectives direct the region's planning and investment in the regional public transportation system. Public transportation has been an increasingly important component of our region's transportation system during the past 25 years. In the next 20 years, public transportation will play a critical role in linking people to activity centers throughout the region and getting them around their local communities. On an average weekday in 1998, approximately 186,000 riders used the bus and rail systems in this region. By 2020 that number is expected to increase to 500,000 riders as a result of expected growth and transit improvements identified in this plan.

Figure 1.15
Relationship Between 2040 Growth Concept and Public Transportation System

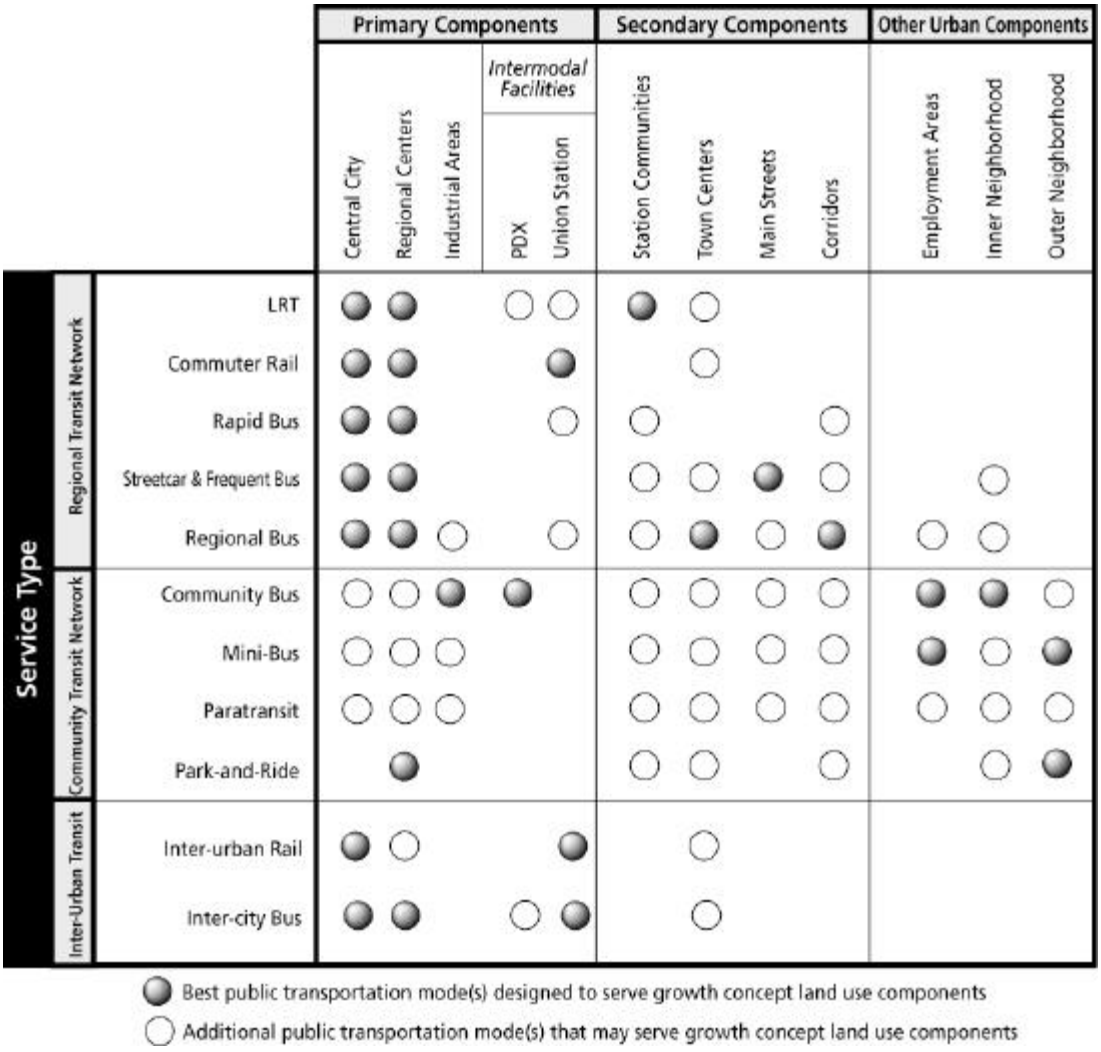


Figure 1.15 provides a hierarchy of public transportation service for 2040 Growth Concept land-use components. "Core service" is defined as the most efficient level of public transportation service planned for a given land use and is indicated with a solid circle(s). A description of each type of core service follows the public transportation policies.

Source: Metro

Regional public transportation system components

Metro's role is to establish a 20-year plan for regional transit improvements, such as major bus or rail service, through the Regional Transportation Plan. Tri-Met is the primary public transportation provider for the metropolitan region and is committed to providing the appropriate level of transit service to achieve regional 2040 Growth Concept objectives. Tri-Met implements transit improvements identified in the Regional Transportation Plan through annual updates and expansions to their service plan. In addition, Tri-Met plans for improvements to community-level transit service, such as local bus lines or lift

services. Annual growth trends, ridership and traffic congestion are all considerations in where expanded transit service is most needed each year.

However, this plan recognizes that providers other than Tri-Met are needed to serve special transportation needs. Other public transit operators in region include SMART, which serves the Wilsonville area, and C-Tran, which serves Clark County and includes bus service to points in Portland. Metro works with these operators, as well, to ensure that planned transit service is adequate to meet our 20-year needs. While this is not required in this plan, Metro is committed to helping coordinate agreements to address special needs as they arise. Such special needs may be served by private service providers, public/private partnerships, or public actions, as appropriate.

Public transportation should serve the entire urban area, and the hierarchy of service types described in this section defines what level and type of service is appropriate for specific areas of the region. The public transportation system is divided in three categories based on frequency of service and the areas of the region each network serves – the regional transit network, or RTN; the community transit network, or CTN; and interurban public transportation. The regional public transportation system map, Figure 1.16, depicts the regional transit network and interurban public transportation components.

The following section describes:

- the types of transit service each network provides;
- the principal 2040 Growth Concept land-use components (primary and secondary) served by each service type; and
- facility design guidelines to provide an appropriate operating environment and level of pedestrian and bicycle accessibility.

Regional transit network

The regional transit network is a fast and frequent transit system designed to serve the primary land-use components identified in the 2040 Growth Concept, including central city, regional centers, industrial areas and intermodal facilities such as the Portland International Airport. This system serves as the framework for consistency among plans of local jurisdictions and Tri-Met and consists of six major transit modes that operate at frequencies of 15 minutes or less all day. The six primary transit modes included in this plan are light rail transit, commuter rail, rapid bus, streetcar, frequent bus and regional bus service. The regional transit network is designed to provide convenient transit access and improve connections between transit modes. Any transit trip between two points located in a primary or secondary 2040 Growth Concept land-use component could be completed on the regional transit network. This includes the central city, regional centers, town centers, main streets, stations areas or corridors. The following is a description of the functional and operational characteristics of the regional transit network's major transit modes.

Light rail transit. Light rail transit (LRT) is a frequent and high-capacity service that operates on a fixed guideway within an exclusive right-of-way to the extent possible, connecting the central city with regional centers. LRT also serves existing regional public attractions such as Civic Stadium, the Oregon Convention Center and the Rose Garden, and station communities. LRT service runs at least every 10 minutes during the weekday and weekend midday base periods with limited stops and operates at higher speed outside of downtown Portland. A high level of passenger amenities are provided at transit stations and station communities including schedule information, ticket machines, special lighting,

benches, shelters, bicycle parking and commercial services. The speed and schedule reliability of LRT can be maintained by the provision of signal preemption at-grade crossings and/or intersections.

Commuter rail. Commuter rail is the use of existing freight railroad tracks either exclusively or shared with freight use, for passenger service. The service is typically focused on peak commute periods but can be offered other times of the day when demand exists and where rail capacity is available. The stations are typically located one or more miles apart, depending on the overall route length. Stations offer basic amenities for passengers, bus and LRT transfer opportunities and parking if supported by adjacent land uses.

Rapid bus. Regional rapid bus service emulates LRT service in speed, frequency and comfort, serving major transit routes with limited stops. This service runs at least every 15 minutes during the weekday and weekend mid-day base periods. Passenger amenities are concentrated at transit centers. Regional rapid bus passenger amenities include schedule information, ticket machines, special lighting, benches, covered bus shelters and bicycle parking.

Street cars. Street cars provide fixed-route transit service for more locally oriented trips in higher density mixed-use centers. This service runs at least every 15 minutes and includes transit preferential treatments such as signal preemption and enhanced passenger amenities along the corridor such as covered bus shelters, curb extensions and special lighting.

Frequent bus. Frequent bus service provides slightly slower, but more frequent, local bus service than rapid bus along selected transit corridors. This service runs at least every 10 minutes and includes transit preferential treatments such as reserved bus lanes and signal preemption and enhanced passenger amenities along the corridor and at major bus stops such as covered bus shelters, curb extensions, special lighting and median stations.

Regional bus. Regional bus service is provided on most major urban streets. This type of bus service operates with maximum frequencies of 15 minutes with conventional stop spacing along the route. Transit preferential treatments and passenger amenities such as covered bus shelters, special lighting, signal preemption and curb extensions are appropriate at high ridership locations.

Major transit stops. Major transit stops are intended to provide a high degree of transit passenger comfort and access. Major transit stops are located at stops on light rail, commuter rail, rapid bus, frequent bus or streetcar lines in the central city, regional and town centers, main streets and corridors. Major transit stops may also be located where bus lines intersect or serve intermodal facilities, major hospitals, colleges and universities. Major transit stops shall provide schedule information, lighting, benches, shelters and trash cans. Other features may include real time information, special lighting or shelter design, public art and bicycle parking.

Pedestrian district. A pedestrian district is a comprehensive plan designation or implementing land use regulations designed to provide safe and convenient pedestrian circulation, with a mix of uses, density, and design that support high levels of pedestrian activity and transit use. The pedestrian district can be a concentrated area of pedestrian activity or a corridor. Pedestrian districts can be designated within the 2040 Design types of Central City, Regional and Town Centers, Corridors and Main Streets, as designated in local plans. Pedestrian districts emphasize a safe and convenient pedestrian environment, and facilities to support and integrate efficient use of several modes within one area (e.g., pedestrian, auto, transit, and bike).

Community transit network (CTN)

Underlying the primary transit network of fast and frequent service is a community network of transit service that provides more locally-oriented public transportation. Tri-Met and local jurisdictions will develop specific elements of the community transit network. The community transit network is comprised of community bus, mini-bus, para-transit and park-and-ride service. This service is focused more on accessibility, frequency of service along the route and coverage to a wide range of land use options rather than on speed between two points. Community transit is designed as an alternative to the single-occupant vehicle by providing frequent reliable service. Community bus service generally is designed to serve travel with one trip end occurring within a secondary land use component, including town centers, main streets, station communities and corridors.

Community bus. Community bus lines provide coverage and access to primary and secondary land-use components. Community bus service runs as often as every 30 minutes on weekdays. Weekend service is provided as demand warrants.

Mini-bus. Mini-bus service provides coverage in lower density areas by providing transit connections to primary and secondary land-use components. Mini-bus services, which may range from fixed route to purely demand responsive including dial-a-ride, employer shuttles and bus pools, provide at least a 60-minute response time on weekdays. Weekend service is provided as demand warrants.

Para-transit. Para-transit service is defined as non-fixed route service that serves special transit markets, including "ADA" service throughout the greater metro region.

Park-and-ride. Park-and-ride facilities provide convenient auto access to regional trunk route service for areas not directly served by transit. Bicycle and pedestrian access as well as parking and storage accommodations for bicyclists are considered in the siting process of new park-and-ride facilities. In addition, the need for a complementary relationship between park-and-ride facilities and regional and local land use goals exists and requires periodic evaluation over time for continued appropriateness.

Interurban public transportation

The federal ISTEA has identified interurban travel and passenger "intermodal" facilities (e.g., bus and train stations) as a new element of regional transportation planning. The following interurban components are important to the regional transportation system:

Passenger rail. Inter-city high-speed rail (up to 79 miles per hour) is part of the state transportation system and extends from the Willamette Valley north to British Columbia. Amtrak already provides service south to California, east to the rest of the continental United States and north to Canada. These systems should be integrated with other public transportation services within the metropolitan region with connections to passenger intermodal facilities. High-speed rail needs to be complemented by urban transit systems within the region.

Inter-city bus. Inter-city bus connects points within the region to nearby destinations, including neighboring cities, recreational activities and tourist destinations. Several private inter-city bus services are currently provided in the region.

Passenger intermodal facilities. Passenger intermodal facilities serve as the hub for various passenger modes and the transfer point between modes. These facilities are closely interconnected with urban

public transportation service and highly accessible by all modes. They include Portland International Airport, Union Station and inter-city bus stations.

Transit service for special needs populations

Public transportation service often provides the only available transportation service to many people in the region, including students, the elderly, the economically disadvantaged, the mobility impaired and others with special needs. It is important that the region's transportation service providers consider the special needs of those people who rely on their services as their primary transportation option for access to jobs, job training and services. Section 6.8.12 describes a collaborative effort that is underway for special transportation planning in the tri-county area. As sponsors of this plan, the Areas Agencies on Aging and Disabilities of Washington, Multnomah and Clackamas counties, Tri-Met and the Special Transportation Fund Advisory Committee are coordinating a broad-based effort to create an elderly and disabled transportation services plan. The plan will develop special needs transportation options for both the urban and rural portions of the tri-county area and will be included in the Regional Transportation Plan. In anticipation of completing this program, interim policies and objectives have been included in the RTP. These policies will be updated during the next RTP update, reflecting the recommendations from the special needs transit plan.

Policy 15.0. Regional Freight System

Provide efficient, cost-effective and safe movement of freight in and through the region.

a. Objective: Provide high-quality access between freight transportation corridors and the region's freight intermodal facilities and industrial sanctuaries.
b. Objective: Maintain a reasonable and reliable travel time for moving freight through the region in freight transportation corridors that enhances the region's economic competitive advantage.
    - Freight operation (such as weigh-in-motion, automated truck counts, enhanced signal timing on freight connectors).
    - Where appropriate, consider improvements that are dedicated to freight travel only.
c. Objective: Consider the movement of freight when conducting multi-modal transportation studies.
d. Objective: Work with the private sector, local jurisdictions, ODOT and other public agencies to:
    - develop the regional Intermodal Management System (IMS) and Congestion Management System (CMS)
    - monitor the efficiency of freight movements on the regional transportation network
    - identify existing and future freight mobility problems and opportunities
    - reduce inefficiencies or conflicts on the freight network
    - maximize use of ship, rail, air and truck for a multi-modal freight system
    - address safety concerns related to freight.
e. Objective: Coordinate public policies to reduce or eliminate conflicts between current and future land uses, transportation uses and freight mobility needs, including those relating to:
    - land use changes/encroachments on industrial lands; and
    - transportation and/or land use actions or policies that reduce accessibility to terminal facilities or reduce the efficiency of the freight system.
f. Objective: Ensure that jurisdictions develop local strategies that provide adequate freight loading and parking strategies in the central city, regional centers, town centers and main streets.
g. Objective: Develop improved measures of freight movement as defined in the 2040 Growth Concept.
h. Objective: Correct existing safety deficiencies on the freight network relating to:
    - roadway geometry and traffic controls;
    - bridges and overpasses;
    - at-grade railroad crossings;
    - truck infiltration in neighborhoods; and
    - congestion on interchanges and hill climbs.

Policy 15.1. Regional Freight System Investments
Protect and enhance public and private investments in the freight network.

a. Objective: Improve opportunities for partnerships between the private freight transportation industry and public agencies to improve and maintain the region's integrated multi-modal freight network:
- work with the private transportation industry, Oregon Economic Development Department, Portland Development Commission, Port of Portland and others to identify and realize investment opportunities that enhance freight mobility and support the state and regional economy

b. Objective: Analyze market demand and linkages in estimating and expanding the life of public investments in the freight network.

c. Objective: Encourage efforts to provide flexible public funding for freight mobility investments.

These policies and objectives direct the region's planning and investment in the regional freight system. Freight mobility is the movement of goods and services. National and international freight movement contributes significantly to our regional economy, and will likely play an even larger role in the future. The region's relative number of jobs in transportation and wholesale trade exceeds the national average. The regional economy has historically, and continues to be, closely tied to the transportation and distribution sectors. This trend is projected to continue. A study of goods movement in the region, the 2040 Commodity Flow analysis, predicts freight volume to more than double by 2040 – a rate higher than projected population growth.

The significant growth in freight projected by the 2040 Commodity Flow Analysis indicates the need to make available adequate land for expansion of intermodal facilities, manufacturing, wholesale and distribution activities, and to continue maintaining and enhancing the freight transportation network. The 2040 Growth Concept identifies industrial sanctuaries for distribution and manufacturing activities. Figure 1.17 identifies the transportation infrastructure and intermodal facilities that serve these land uses and commodities that flow through the region to national and international markets.

Regional freight system functional classification system
The following definitions reflect the regional freight system functional classification categories shown in Figure 1.17.

Main roadway route. Main roadway routes connect major activity centers in the region to other areas in Oregon or other states throughout the U.S., Mexico and Canada.

Road connectors. A road that connects freight facilities or freight generation areas to the main roadway route.

Main railroad line. Class I rail lines (e.g., Union Pacific and Burlington Northern / Sante Fe).

Branch railroad lines. Non-Class I rail lines, including shortline or branch lines.

Marine facility. A facility where freight is transferred between water-based and land-based modes.

Reload facility. A facility that serves as the primary gateway for freight entering and leaving the region by truck.

Air cargo facility. A facility that has direct access to an airport runway and transfers commodities between airplanes and land-based modes.

Distribution facility. A facility where freight is reloaded from one land-based mode to another for further distribution.

Truck terminal. A facility that serves as a primary gateway for commodities entering/leaving the region by truck. A truck terminal operates only truck to truck transfers of commodities.

Intermodal facility. An intermodal facility is a transportation element that accommodates and interconnects different modes of transportation and serves the statewide, interstate and international movement of people and goods.

Intermodal railyard. An intermodal railyard is a railyard that facilitates the transfer of containers or trailers between truck and rail.

Policy 16.0. Regional Bicycle System Connectivity
Provide a continuous regional network of safe and convenient bikeways connected to other transportation modes and local bikeway systems, consistent with regional street design guidelines.

a. Objective: Integrate the efforts of the state, counties and cities in the region to develop a convenient, safe, accessible and appealing regional system of bikeways.
b. Objective: Design the regional bikeway system to function as part of the overall transportation system and include appropriate bicycle facilities in all transportation projects.
c. Objective: Integrate multi-use paths with on-street bikeways, consistent with established design standards.
d. Objective: Work with local jurisdictions, ODOT and other public agencies to identify high-frequency bicycle-related crash locations and improvements to address safety concerns in these locations.

Policy 16.1. Regional Bicycle System Mode Share and Accessibility
Increase the bicycle mode share throughout the region and improve bicycle access to the region's public transportation system.

a. Objective: Promote increased bicycle use for all travel purposes.
b. Objective: Coordinate with Tri-Met to improve bicycle access and parking facilities at existing and future light rail stations, transit centers and park-and-ride locations.
c. Objective: Work with local jurisdictions, ODOT and other public agencies to provide appropriate short and long-term bicycle parking and other end-of-trip facilities at regional activity centers through the use of established design standards.
d. Objective: Develop travel-demand forecasting for bicycle use and integrate with regional transportation planning efforts.

These policies and objectives direct the region's planning and investment in the regional bicycle system. The bicycle is an important component in the region's strategy to provide a multi-modal transportation system. The 2040 Growth Concept focuses growth in the central city and regional centers, station communities, town centers and main streets. One way to meet the region's travel needs is to provide more opportunities to use bicycles for shorter trips.

The regional bikeway system identifies a network of bikeways throughout the region that provide for bicyclist mobility between and accessibility to and within the central city, regional centers and town centers. A complementary system of on-street and off-street regional bikeway corridors, regional multi-use trails and local bikeways is proposed to provide a continuous network. In addition to major bikeway corridors that create a network of regional through-routes, the system provides accessibility to and within regional and town centers.

Regional bicycle functional classification system
The following are the regional bicycle system functional classification categories as identified in Figure 1.18. These classifications, including regional access bikeways, regional corridor bikeways and community connector bikeways, are on-street bikeways that would be designed using a flexible "toolbox" of bikeway designs, including bike lanes, shoulder bikeways, bicycle boulevards and shared roadway / wide outside lanes. The appropriateness of each design is based on adjacent motor vehicle speeds and volumes. The most appropriate bikeway design is defined in the regional street design concepts and in *Creating Livable Streets: Street Design Guidelines for 2040*. Regional streets provide the

primary network for bicycle travel in the region, and require features that support bicycle traffic. Bicycle lanes are the preferred bikeway design for throughway (highway), boulevard, street and road design classification concepts.

Regional access bikeway: The function of regional access bikeways is to focus on accessibility to and within the central city, regional centers and some of the larger town centers. Bicyclist travel time to and from activity centers is an important consideration on regional access bikeways. Regional access bikeways generally have higher bicyclist volumes because they serve areas with higher population and employment density.

Regional corridor bikeway: Regional corridor bikeways function as longer routes that provide point-to-point connectivity between the central city, regional centers and larger town centers. Regional corridor bikeways are generally of longer distance than regional access bikeways and community connector bikeways. Regional corridor bikeways generally have higher automobile speeds and volumes than community connector bikeways.

Community connector bikeway: These bikeways connect smaller town centers, main streets, station areas, industrial areas and other regional attractions to the regional bikeway system.

Multi-use paths with bicycle transportation function: Multi-use paths with a bicycle transportation function are connections that are likely to be used by people bicycling to work or school, to access transit or to travel to a store, library or other local destination. Multi-use paths that support both utilitarian and recreational bicycle functions are included as part of the bicycle transportation system.
Bicycle / pedestrian sidewalks on bridges are also included in this functional classification. In terms of design, multi-use paths are physically separated from motor vehicle traffic by open space or a barrier, and are either within the highway right-of-way or within an independent right-of-way. In addition to bicyclists, pedestrians, joggers, skaters and other non-motorized travelers use multi-use paths.

Policy 17.0. Regional Pedestrian System
Design the pedestrian environment to be safe, direct, convenient, attractive and accessible for all users.

a. Objective: Work with local, regional and state jurisdictions to complete pedestrian facilities (i.e., sidewalks, street crossings, curb ramps) needed to provide safe, direct and convenient pedestrian access to and within the central city, regional centers, town centers, main streets, corridors and to the region's public transportation system.
b. Objective: Work with local, regional and state jurisdictions to provide landscaping, pedestrian-scale street lighting, benches and shelters affecting the pedestrian and transit user near and within the central city, regional centers, town centers, main streets, corridors and along the regional transit network.

Policy 17.1. Regional Pedestrian Mode Share
Increase walking for short trips and improve pedestrian access to the region's public transportation system through pedestrian improvements and changes in land use patterns, designs and densities.

a. Objective: Increase the walk mode share for short trips, including walking to public transportation, near and within the central city, regional centers, town centers, main streets, corridors and LRT station communities.
b. Objective: Work with local, regional and state jurisdictions to improve walkway networks serving transit centers, stations and stops.

Policy 17.2. Regional Pedestrian Access and Connectivity
Provide direct pedestrian access, appropriate to existing and planned land uses, street design classification and public transportation, as a part of all transportation projects.

a. Objective: Among regional pedestrian projects, give funding priority to those projects which are most likely to increase pedestrian travel, improve the quality of the pedestrian system and help complete pedestrian networks near and within the central city, regional centers, town centers, main streets, corridors and LRT station communities.
b. Objective: Integrate pedestrian access needs into planning, programming, design and construction of all transportation projects.

These policies and objectives direct the region's planning and investment in the regional pedestrian system as defined in Figure 1.19. By providing dedicated space for those on foot or using mobility devices, pedestrian facilities are recognized as an important incentive that promotes walking as a mode of travel. Throughout this plan, the term "walking" should be interpreted to include traveling on foot as well as those pedestrians using mobility aids, such as wheelchairs. Walking for short distances is an attractive option for most people when safe and convenient pedestrian facilities are available. Combined with adequate sidewalks and curb ramps, pedestrian elements such as benches, curb extensions, marked street crossings, landscaping and wide planting strips make walking an attractive, convenient and safe mode of travel. The focus of the regional pedestrian system is identifying areas of high, or potentially high, pedestrian activity in order to target infrastructure improvements that can be made with regional funds.

A well-connected high-quality pedestrian environment facilitates walking trips by providing safe and convenient access to pedestrian destinations within a short distance. Public transportation use is enhanced by pedestrian improvements, especially those facilities that connect stations or bus stops to surrounding areas or that provide safe and attractive waiting areas. Improving walkway connections between office and commercial districts and surrounding neighborhoods provides opportunities for

residents to walk to work, shopping or to run personal errands. This reduces the need to bring an automobile to work and enhances public transportation and carpooling as commute options.

Regional pedestrian system functional classification

An integrated pedestrian system supports and links every other element of the regional transportation system and complements the region's land-use goals. The following definitions reflect the regional pedestrian system functional classification categories shown in Figure 1.19.

Pedestrian district: Pedestrian districts are areas of high, or potentially high, pedestrian activity where the region places priority on creating a walkable environment. Specifically, the central city, regional and town centers and light rail station communities are areas planned for the levels of compact mixed-use development served by transit needed to generate substantial walking. These areas are defined as pedestrian districts. Pedestrian districts should be designed to reflect an urban development and design pattern where walking is a safe, convenient and interesting travel mode. These areas will be characterized by buildings oriented to the street and boulevard-type street design features such as wide sidewalks with buffering from adjacent motor vehicle traffic, marked street crossings at all intersections with special crossing amenities at some locations, special lighting, benches, bus shelters, awnings and street trees. All streets within pedestrian districts are important pedestrian connections.

Transit/mixed-use corridor: Transit / mixed-use corridors (referred to only as corridors in the 2040 Growth Concept) are also priority areas for pedestrian improvements. They are located along good-quality transit lines and will be redeveloped at densities that are somewhat more than today. These corridors will generate substantial pedestrian traffic near neighborhood-oriented retail development, schools, parks and bus stops. These corridors should be designed to promote pedestrian travel with such features as wide sidewalks with buffering from adjacent motor vehicle traffic, street crossings at least every 530 feet (unless there are no intersections, bus stops or other pedestrian attractions), special crossing amenities at some locations, special lighting, benches, bus shelters, awnings and street trees. This designation includes multi-modal bridges.

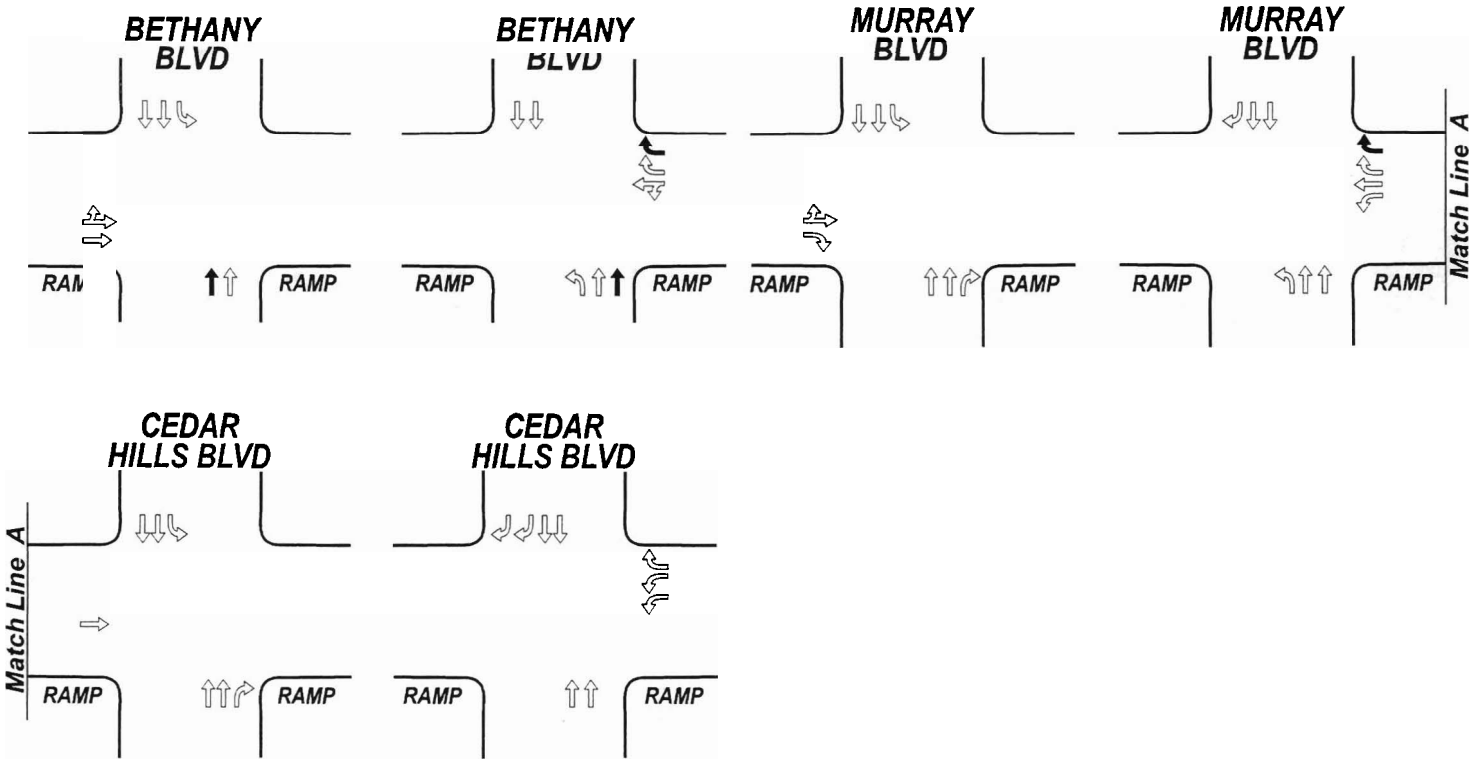
Multi-use path with pedestrian transportation function: These paths are paved off-street regional facilities that accommodate pedestrian and bicycle travel and meet the requirements of the Americans with Disabilities Act. Multi-use paths with a pedestrian transportation function are connections that are likely to be used by people walking to work or school, to access transit or to travel to a store or library. These paths are generally located near or in residential areas or near mixed-use centers. Paths that support purely recreational uses are not considered part of this transportation network, although they are important components of the regional parks and greenspaces map. Pedestrian / bicycle-only bridges also are included in this designation.

M- City of Beaverton SPIS

Approx. Rank	type	LOCATION	INTERSECTING ROAD	ADT	**SPIS**	**#ACC**	**Fatal**	**F&A**	**B&C**	**PDO**	**COMMENTS**
59th	ci/ci	Hall Blvd	Allen Blvd	42647	**57.09**	28	0	1	9	18	STIP funded project
76th	ci/ci	Farmington Rd	Hall Blvd	47405	**49.75**	18	0	1	8	9	
114th	ci/ci	Griffith Dr	BH/Farmington	51925	**40.28**	26	0	0	10	16	red-light photo enforcement added in 2001
159th	ci/ci	Hall Blvd	Greenway/Brockman	32215	**34.24**	8	0	1	2	5	125th extension project programmed
178th	ci/ci	Hall Blvd	Nimbus Ave	43992	**30.95**	12	0	0	9	3	STIP funded project
179th	ci/ci	Farmington Rd	Lombard Ave	32189	**30.78**	24	0	0	3	21	commuter rail project planned for 2004
198th	ci/ci	Farmington Rd	Watson Ave	48316	**28.96**	16	0	0	6	10	
232nd	ci/ci	Lombard Ave	Allen Blvd	32597	**25.81**	14	0	0	4	10	red-light photo enforcement added in 2001
242nd	ci/ci	Cedar Hills Blvd	Hall Blvd	38587	**24.54**	13	0	0	4	9	
NA	ci/ci	Farmington Rd	Cedar Hills Blvd	50509	**18.41**	8	0	0	3	5	
NA	ci/ci	Western Ave	Allen Blvd	33022	**18.16**	7	0	0	3	4	
NA	ci/ci	Hall Blvd	Hart Rd	29672	**15.73**	6	0	0	2	4	
NA	ci/ci	Hall Blvd	Denney Road	38681	**14.27**	4	0	0	3	1	
NA	ci/ci	Farmington Rd	Hocken Ave	29453	**12.99**	5	0	0	1	4	STIP funded project (PE)

NA= too low to be ranked

Rankings do not go below 241

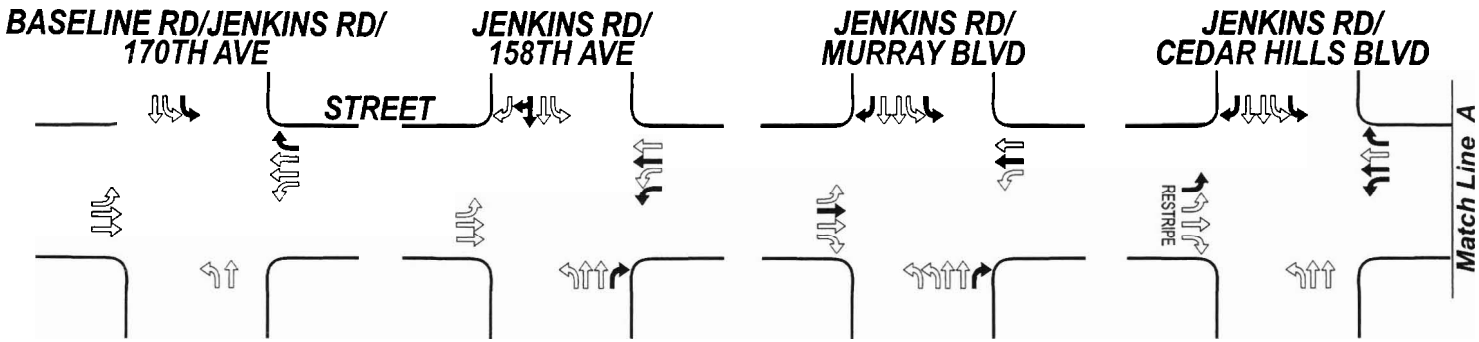


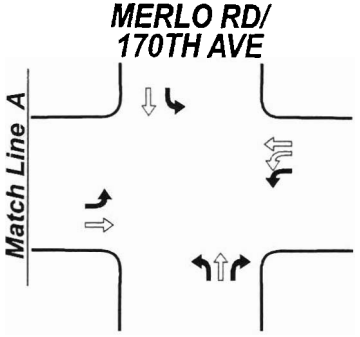
LEGEND

⇦ - Existing Lane Configuration

⬅ - Proposed Lane Configuration

US 26 INTERCHANGES
EXISTING/PROPOSED LANE CONFIGURATION





LEGEND

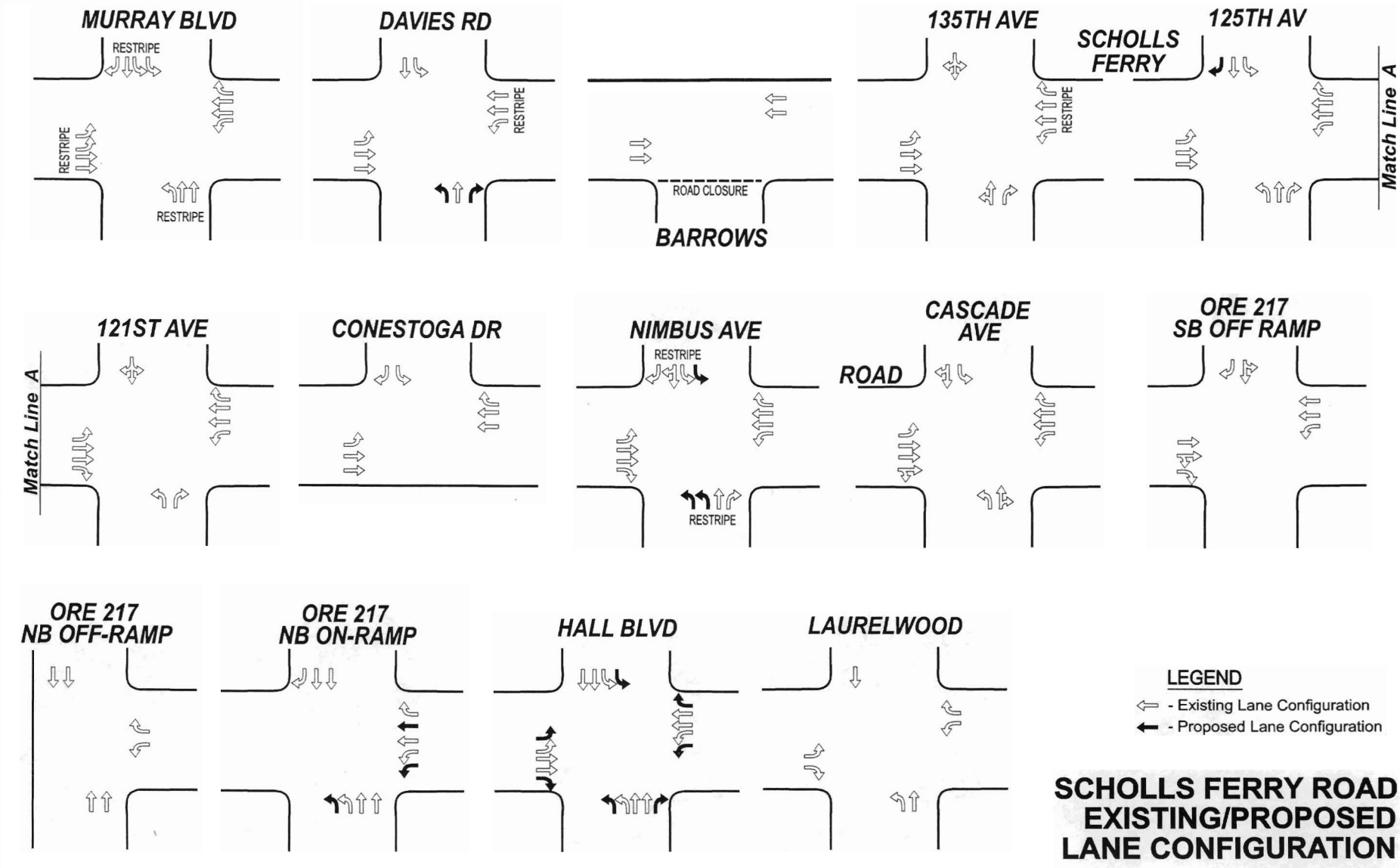
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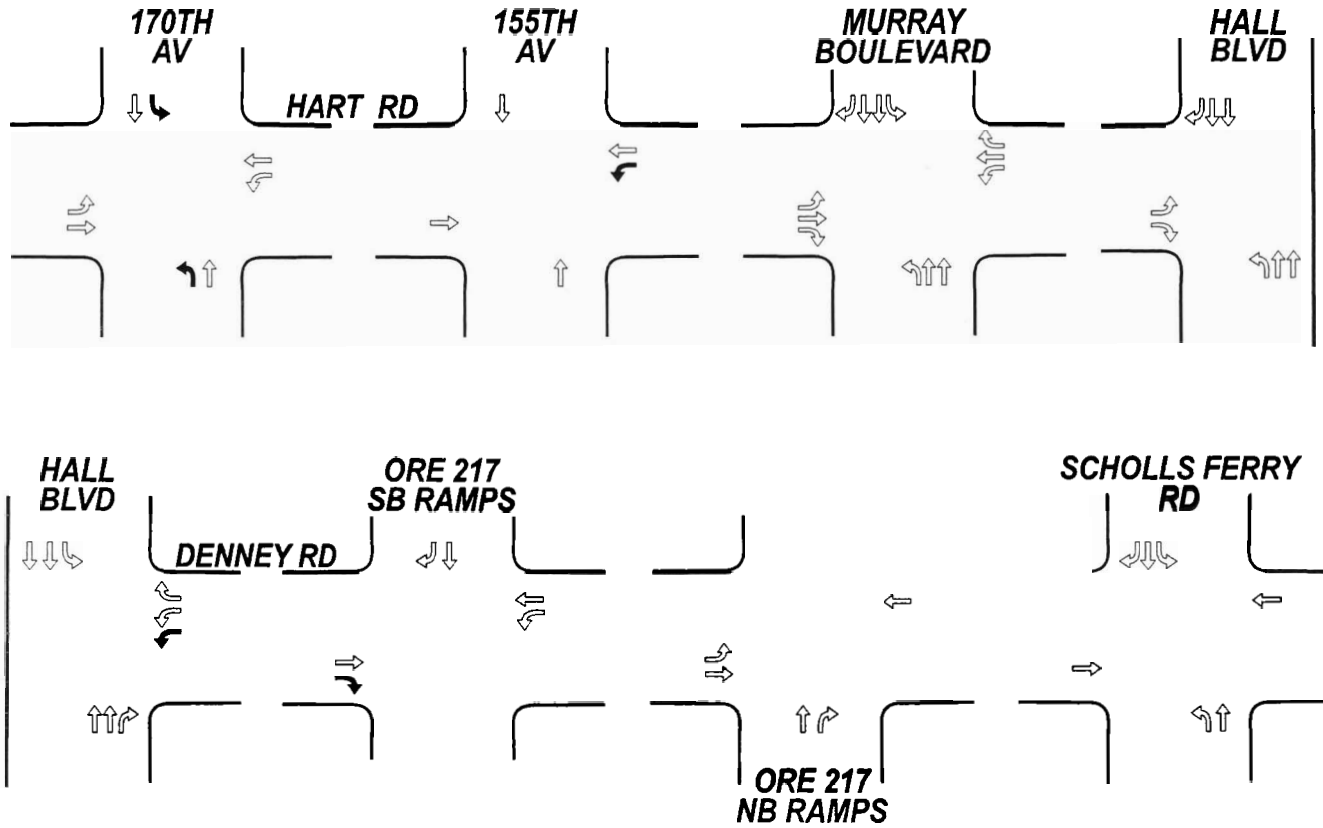
JENKINS ROAD/MERLO ROAD
EXISTING/PROPOSED LANE CONFIGURATION

DKS Associates

City of Beaverton
Transportation System Plan

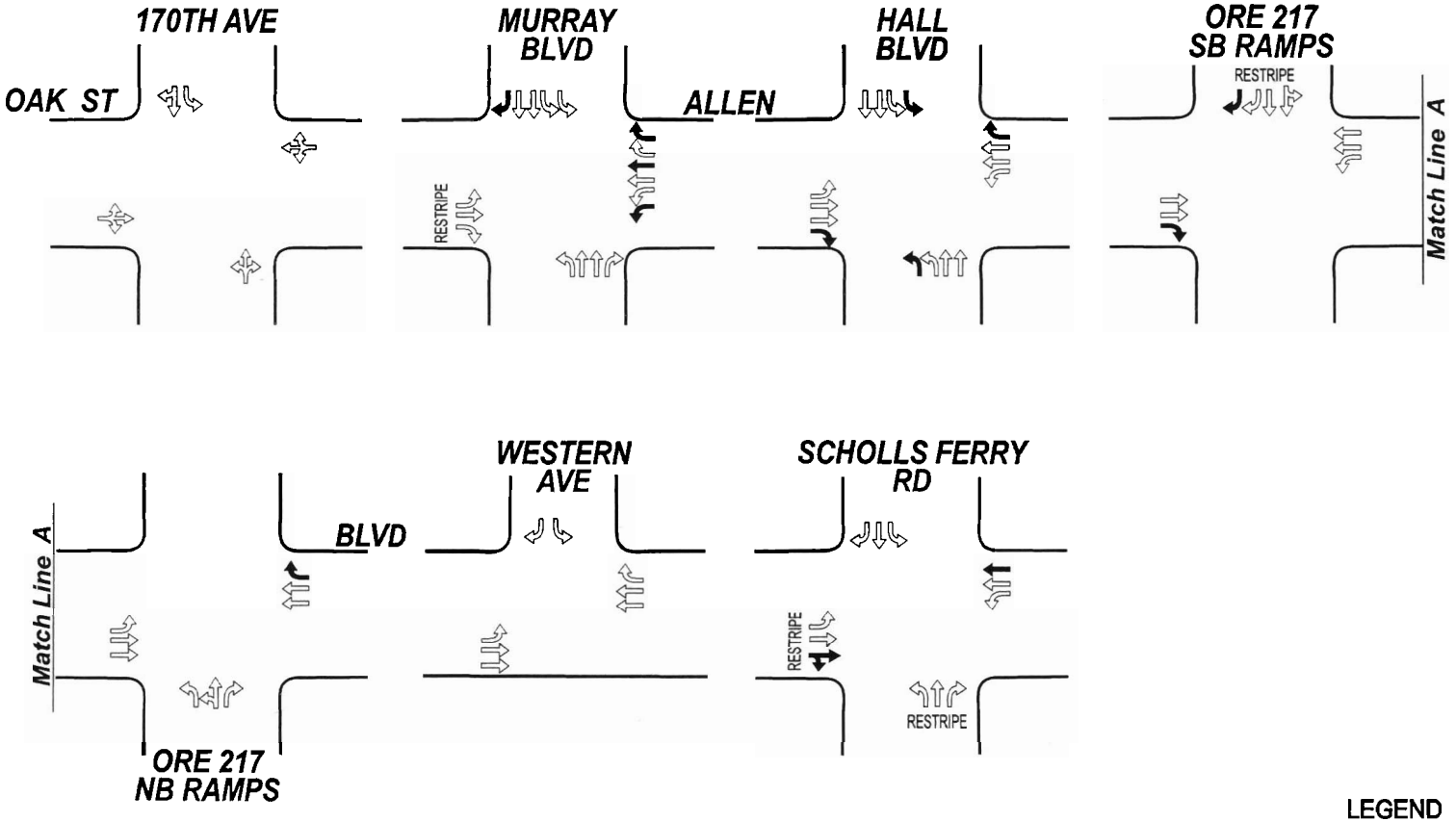


SCHOLLS FERRY ROAD EXISTING/PROPOSED LANE CONFIGURATION



LEGEND
⇦ - Existing Lane Configuration
⬅ - Proposed Lane Configuration

HART/DENNEY ROAD
EXISTING/PROPOSED LANE CONFIGURATION

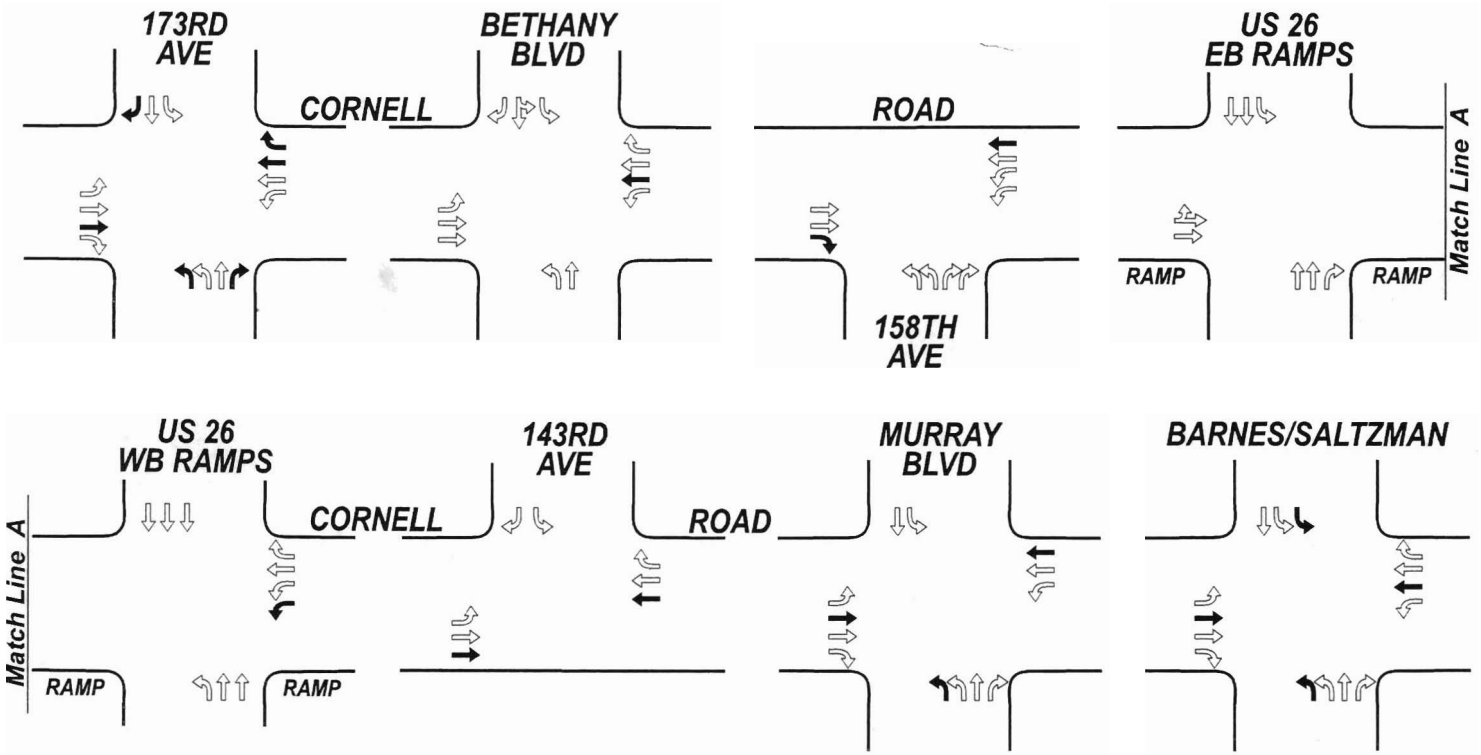


LEGEND

⇦ - Existing Lane Configuration

⬅ - Proposed Lane Configuration

ALLEN BOULEVARD
EXISTING/PROPOSED LANE CONFIGURATION

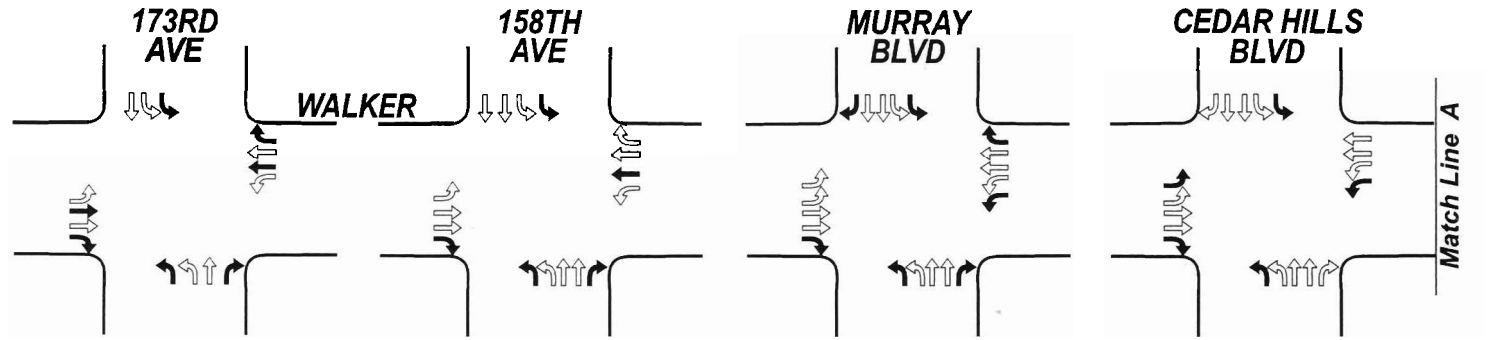


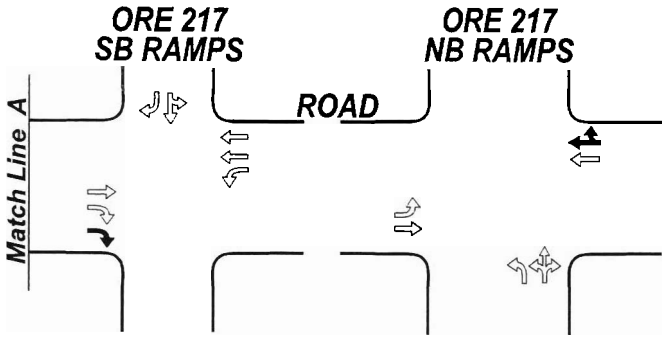
LEGEND

⇦ - Existing Lane Configuration

⬅ - Proposed Lane Configuration

CORNELL ROAD
EXISTING/PROPOSED LANE CONFIGURATION





LEGEND

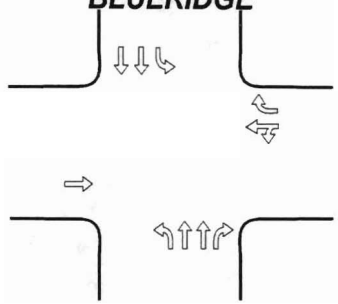
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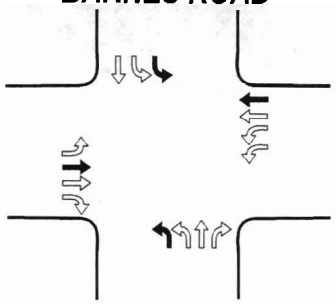
WALKER ROAD
EXISTING/PROPOSED LANE CONFIGURATION

City of Beaverton
Transportation System Plan

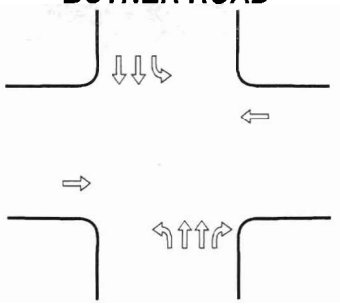
158TH AV/ BLUERIDGE



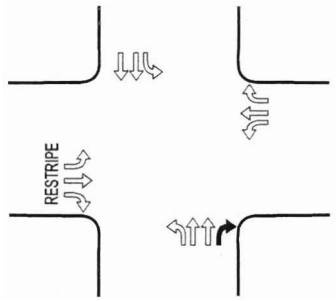
CEDAR HILLS BLVD/ BARNES ROAD



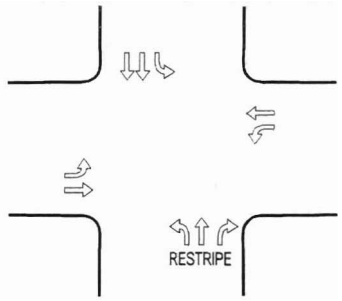
CEDAR HILLS BLVD/ BUTNER ROAD



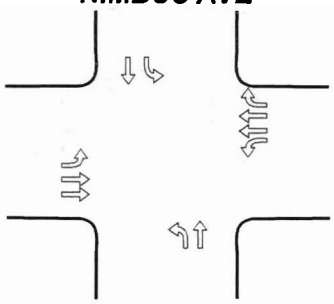
CEDAR HILLS BLVD/ HALL BLVD



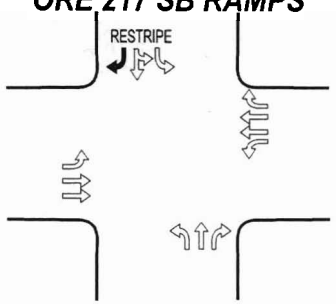
HALL BLVD/ WESTGATE-CENTER ST



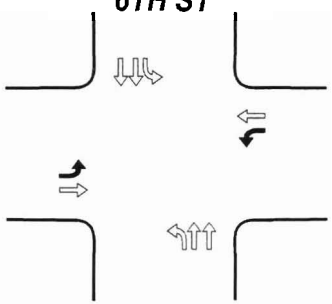
HALL BLVD/ NIMBUS AVE



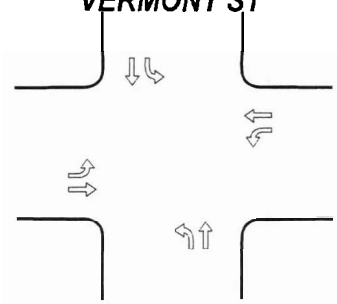
HALL BLVD/ ORE 217 SB RAMPS



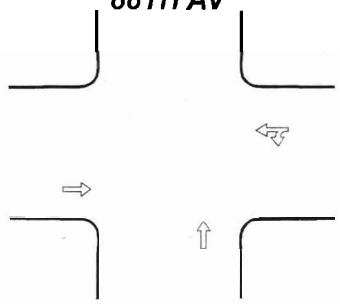
MURRAY BLVD/ 6TH ST



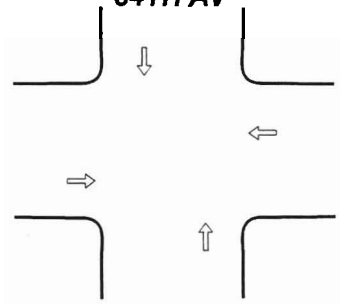
OLESON ROAD/ VERMONT ST



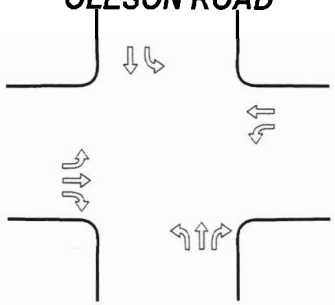
GARDEN HOME/ 88TH AV



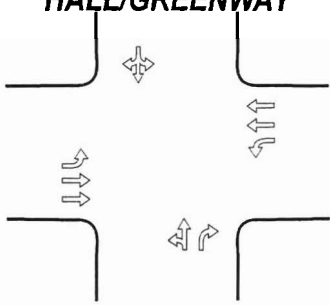
GARDEN HOME/ 84TH AV



GARDEN HOME/ OLESON ROAD



HALL/GREENWAY



LEGEND

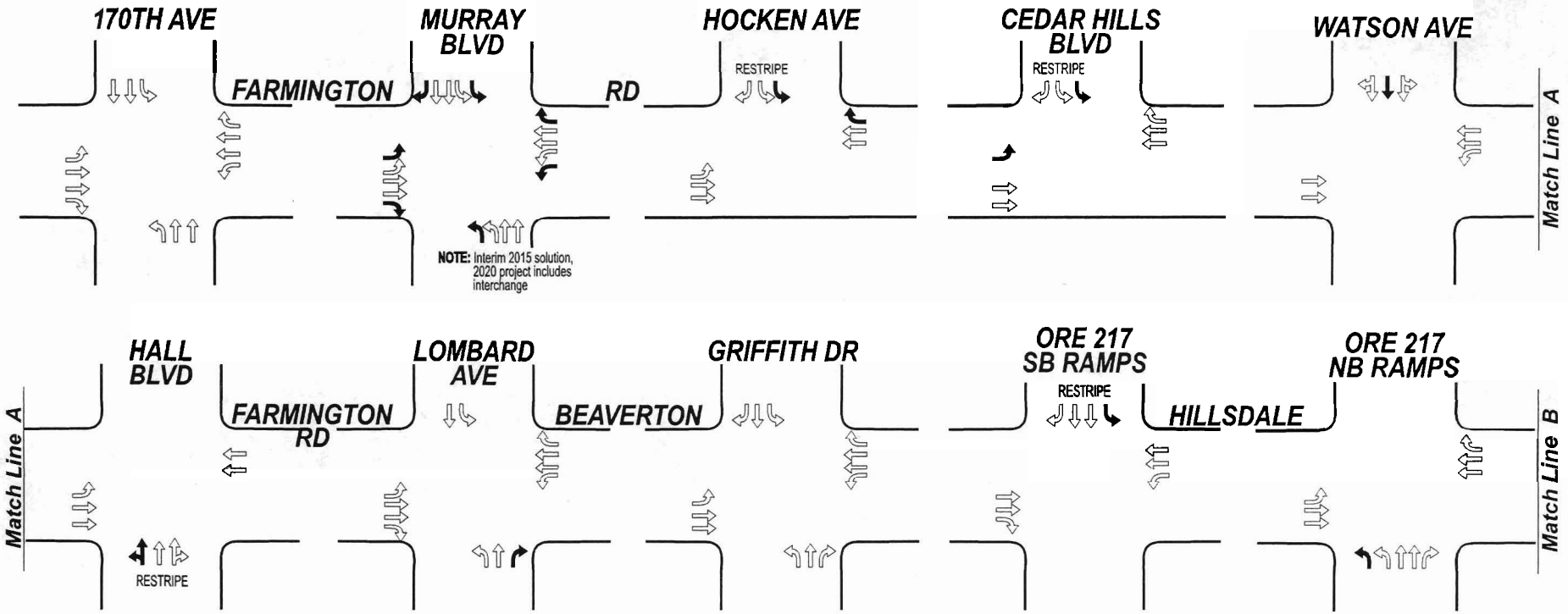
⇦ - Existing Lane Configuration

⬅ - Proposed Lane Configuration

OTHER INTERSECTIONS EXISTING/PROPOSED LANE CONFIGURATION

DKS Associates

City of Beaverton
Transportation System Plan



LEGEND

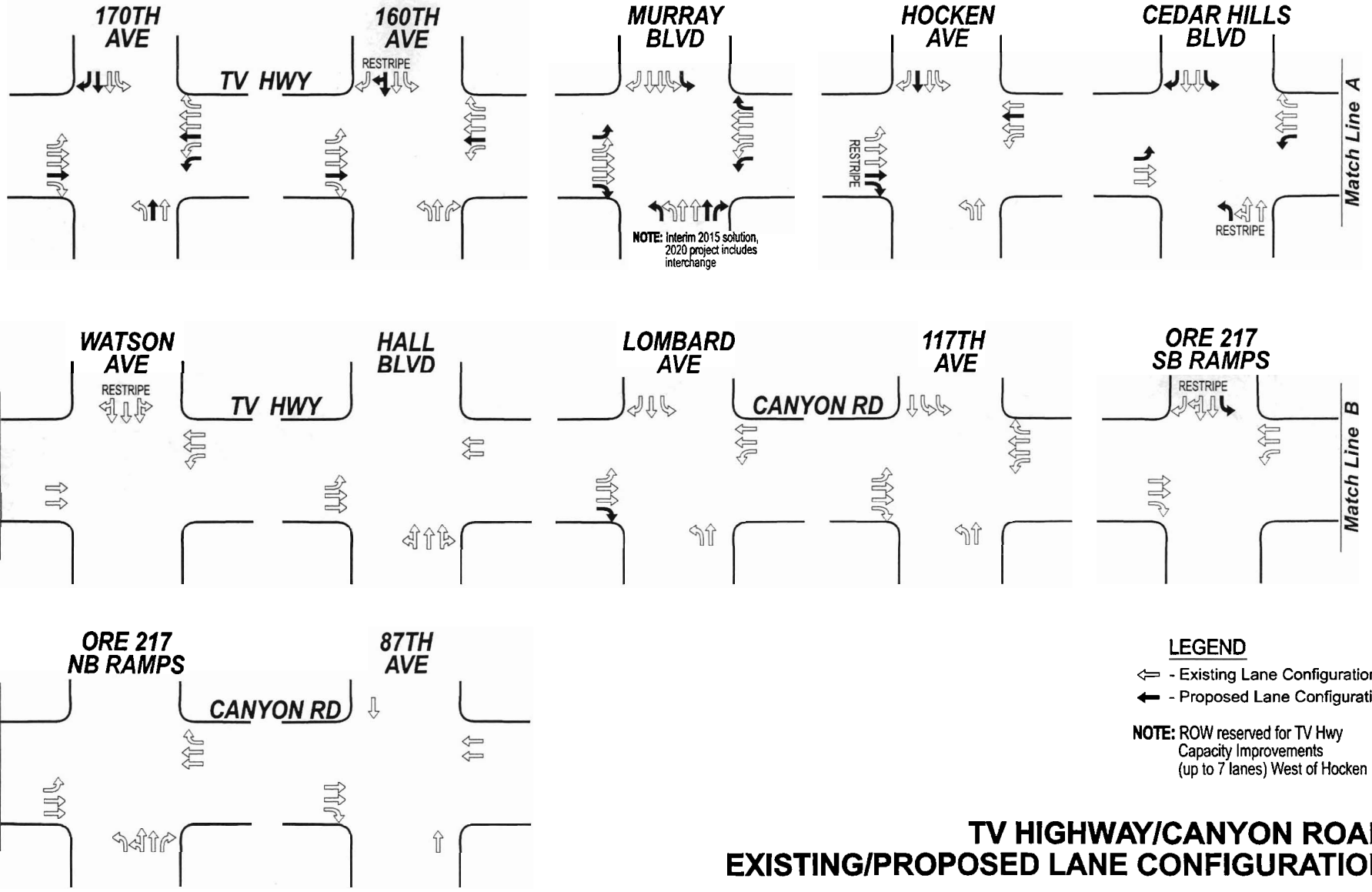
⇦ - Existing Lane Configuration

⬅ - Proposed Lane Configuration

FARMINGTON ROAD/ BEAVERTON HILLSDALE HWY. EXISTING/PROPOSED LANE CONFIGURATION

DKS Associates

City of Beaverton
Transportation System Plan



LEGEND

⇦ - Existing Lane Configuration

⬅ - Proposed Lane Configuration

NOTE: ROW reserved for TV Hwy Capacity Improvements (up to 7 lanes) West of Hocken

TV HIGHWAY/CANYON ROAD EXISTING/PROPOSED LANE CONFIGURATION

COMPREHENSIVE PLAN FOR THE CITY OF BEAVERTON

VOLUME IV:
TRANSPORTATION SYSTEM PLAN

ORDINANCE NO. 4062

AN ORDINANCE AMENDING ORDINANCE NO. 1800, THE COMPREHENSIVE PLAN, BY ADOPTING THE UPDATED 1997 TRANSPORTATION SYSTEM PLAN **AS** PART OF THE PUBLIC FACILITIES PLAN; CPA 98022.

WHEREAS, the purpose of the proposed amendments to the Comprehensive Plan, Development Code, Engineering Design Manual and City Code is to implement the updated 1997 Transportation System Plan (TSP) as required by Periodic Review, the State Transportation Planning rule and the Metro Urban Growth Management Functional Plan; and

WHEREAS, on February 2, 1998, following a work session on the 1997 draft TSP, Council directed staff to proceed with the implementation of the TSP, which resulted in draft ordinance language that was then circulated, reviewed and commented on by the general public, City Boards, Commissions, Committees and Task Forces; and

WHEREAS, the compilation of public comment and information was used to produce a Staff Report, dated December 15, 1998; and

WHEREAS, the Planning Commission held public hearings on January 20 and February 10, 1999 to consider the TSP implementation applications; and

WHEREAS, on February 10, 1999 the Planning Commission recommended approval of the proposed TSP implementation applications based upon the original Staff Report of December 15, 1998 as modified by three Staff Report addenda that resulted from the *two* public hearings; and .

WHEREAS, land use orders were prepared memorializing the Planning Commission's recommendations and placed before the City Council on its Consent Agenda at its April 5, 1999 meeting, at which time the Council remanded the land use orders to the Planning Commission for consideration of additional suggested modifications, which suggested modifications were submitted after the Planning Commission's final decision; and

WHEREAS, the Planning Commission held a public hearing on May 26, 1999 on remand, considering additional modifications to the Comprehensive Plan text at which time the Commission approved certain modifications, as recommended by staff, and reaffirmed the previous land use orders (CPA 98020/1174, CPA 98021/1175, CPA 98022/1176 and TA 980008/1177) with modifications; and

WHEREAS, the City Council on June 28, 1999 approved new land use orders (CPA 98020/1203, CPA 98021/1204, CPA 98022/1205 and TA 980008/1206) that affirmed and modified, as appropriate, the Planning Commission's previous land use orders; and

WHEREAS, in approving the new land use orders the City Council also approved the adoption of the following as facts, findings, reasons, conclusions and criteria applicable to the new land use orders: The Engineering Department Staff Report of April **21,** 1999; The Memorandum from staff to the Planning Commission dated April 21, 1999; and The Engineering Department Staff Report of December 15, 1998 including Exhibits 1 - 6 of Appendix A to the December Staff Report, Appendix D to the December Staff Report, and three addenda to the December Staff Report (consisting of two addenda dated January 20, 1999 and one dated February 10, 1999);

Now, therefore,

THE CITY OF BEAVERTON ORDAINS AS FOLLOWS:

Section 1. Ordinance No. 1800, the Comprehensive Plan, is amended by adopting the 1997 Transportation System Plan as part of the Public Facilities Plan, a support document to the Comprehensive Plan, including TSP Attachment A "Recommended Changes" (2/98), TSP Attachment B "Corrections" (2/98), and TSP Attachment C "Recommended Changes and Corrections" (1/98 to 10/15/98), and a Local Connectivity Map for Vermont Avenue to be included in Chapter 8 of the TSP, which text and map (Figure 8-20 **A)** are set forth in Exhibit "A," attached hereto.

Section 2. It shall be considered that it is the legislative intent, in the adoption of this ordinance, that if any part of the ordinance should be determined by any tribunal of competent jurisdiction, i.e., the Land Use Board of Appeals or the Land Conservation and Development Commission, to be unconstitutional or not acknowledged as in compliance with applicable statewide planning goals, the remaining parts of the ordinance shall remain in force and acknowledged unless: (1) the tribunal determines that the remaining parts are so essential and inseparably connected with and dependent upon the unconstitutional or unacknowledged part that it is apparent the remaining parts would not have been enacted without the unconstitutional or unacknowledged part; or (2) the remaining parts, standing alone, are incomplete and incapable of being executed in accordance with legislative intent.

First reading this 30th day of August, 1999.

Passed by the Council this 13th day of September, 1999.

Approved by the Mayor this 15th day of SEPTEMBER, 1999.

ATTEST:

Darleen Cogburn

DARLEEN COGBURN, City Recorder

APPROVED:

ROB DRAKE, Mayor

CITY OF BEAVERTON
TRANSPORTATION SYSTEM PLAN

Recommended Amendments to the September **1997** Draft TSP
Accepted by Planning Commission and City Council **(2198)** to be included in the
TSP Implementing Amendments

Attachment A - Recommended Changes

1. Page 1-7 and page 2-8 - Add a new Policy 3 to Goal 5 in Chapters 1 and 2 to reflect the new road closure policy language, as directed by City Council action 11/97, as follows:- "The proposed closure of a road in a developed neighborhood will be considered by the City as a measure of last resort, and only when the quality of life in that neighborhood is being severely threatened by excessive traffic volumes or the presence of a traffic safety hazard."
2. Tables 1-3, 8-3, 11-5 Motor Vehicle Improvement List and Figure 1-9 Functional Classification Plan - Correct omission - The City's Capital Improvement Program contains Project **3** 125, the extension of Hyland to 135th, providing a connection between Carr and Hart, which is deferred pending completion of a circulation study. The project should include a change in functional classification from minor collector to neighborhood route. The project should also be included in Tables **1-3, 8-** 3 and **11-5** Motor Vehicle Improvement List under projects included in funding programs for **$115,000** and adjust the table total. Also, include project in Figure **1-9** Functional Classification Plan as a neighborhood route.
3. Page 2-1 In order to appropriately identify the "intent" language based on City and DLCD comment, italicized language will be preceded with the words Recommended Action(s) and specific text will be developed in subsequent amendments to City documents in early 1998, i.e., the Comprehensive Plan, Beaverton Development Code, Beaverton City Code and/or Beaverton Engineering Design Standards and Drawings. **'Wills** and shalls" should appear only in the future specific language, so current text should be changed to "shoulds and mays" to avoid issues of legality. The goals and policies developed in the September 1997 Draft TSP Goals and Policies (Chapter 2) will be the starting point for the amendments. Clarify this approach with text changes to Page 2-1 last paragraph **as** follows (see Attachment C for specific language changes to reflect this change):
   "Below many of the policies, the italic text represents a detailed description about the intent of the policy. The italics are not policy and cannot be appealed in land use decisions. They are recommended actions to amend City plans and programs to reflect the Draft TSP. The recommendations to be developed include amendments to the Comprehensive Plan, City Code, Development Code and Engineering Design Standards and Drawings. The Draft TSP Goals and Policies are linked to mode maps provided in the City of Beaverton TSP. The TSP will include master plan maps for automobiles, pedestrians, bicycles, transit and other modes."
4. Page 8-17 third paragraph - Clarify - "These cross sections are provided for guiding discussions that will update the City of Beaverton Engineering Design Manual. The street design cross sections will be developed through the upcoming public process of developing Comprehensive Plan, Development Code and Engineering Design Manual Standards and Drawings and City Code amendments, beginning in early **1998."**
5. Changes to Local Connectivity Maps in Chapter 8: Figure 8-9 - Field check verified that #2 and #11 are complete - delete #2 and #11. Figure 8-17 - Field check verified that #9 bike/ped path is complete to 170th - delete #9. #14 is no longer a possibility due to wetlands considerations - delete #14. (#12 and #14 were Planning Commission decisions on Snowshoe Lane and Cottontail extensions).
6. Page 1-4 Background paragraph - Clarify - "Goals were developed ~~which should~~ with a view to **reflecting** community needs and values for many years...The policies focus on how goals will be met **by** describing the types of action that will contribute to achieving ~~the~~ each goal. Policies may change ~~as time goes on~~ and would be the focus of any plan update (generally within 5 to 10 years.)" Page 1-**5** - second paragraph - Clarify - "~~The policies are provided in this summary with~~ Bbackground

information and ~~further~~ explanation **provided with some policies** in Chapter **2 represented by italicized text is not policy itself and cannot constitute part of an appeal in a land use decision."**

7. Page 1-6 Goal **3** Policy 5 - Clarify - "Designate routes to schools for each school and **to/from** any new residential project."
8. Page **6-3** Facilities last sentence - delete as it is redundant - "~~The Beaverton TSP designations focuses on lanes, bikeways and multi-use paths.~~"
9. Page **6-5** Strategy **2** - Fill in Gaps in the Network Where Some Bikeways Exist: - Clarify - "This strategy maximizes the use of existing bicycle facilities to create complete sections of an overall bikeway; ~~network~~ **and also provides people with the opportunity to enjoy a lengthy bikeway ride, like they do in the Seattle area (the Burke-Gilman Trail) or Multnomah County (the Springwater Trail)."**
10. Pages **1-8** and **2-9** Goal 7 Policy **2** - Clarify - "Participate in regional **transportation and** growth management policy~~ies~~ and work with regional agencies to assure adequate funding of transportation facilities to support those policies."
11. Pages **1-27** and **8-8,** Figures **1-9** and **8-3** Functional Classification Plan - Delete Longhorn and Snowshoe extensions per recent Planning Commission action. The connections will remain, but be non-auto. Add to Figures **1-2, 1-3, 1-4** and **1-5,** and Figures **5-1, 5-2, 6-1** and **6-2** to reflect the bicycle and pedestrian path on master and action plans.
12. Page **1-22** Figure **1-7,** page **1-23** Figure **1-8,** page **1-27** Figure **1-9,** page **8-8** Figure **8-3,** page **8-18** Figure **8-8,** page **8-36** Figure **8-22** (Street Improvement Master Plan, Future Streets Where ROW is Planned For More Than Two Lanes, and Functional Classification Plan) - Clarify - Make changes on all figures to reflect the current Murray/Scholls town center concept. The collector would run east and connect with the Murray extension and Scholls to service the planned retail/commercial area on the east side of the town center. The western roadway would be changed to a neighborhood route.
13. Page **1-19** last paragraph - Add text to reflect potential of commuter rail - **"Expansion of commuter rail, such as the proposed route to Wilsonville, can also link employment and activity centers."**
14. Page **8-22,** Figure **8-11** add location **17** just north of **117"** Avenue at Center Street connecting to 116th Avenue, Rating: P, Recommendation: Consider Non-Auto.

CITY OF BEAVERTON
TRANSPORTATION SYSTEM PLAN

Recommended Amendments to the September 1997 Draft TSP
Accepted by Planning Commission and City Council (2/98) to be included in the TSP Implementing Amendments

Attachment B - Corrections

The following are minor typographical or grammatical corrections or inclusions of information that were omitted in error.

- Correct all i.e., notations to read **i.e.,**
- Delete apostrophes in plural acronyms e.g., ~~SDC's~~ **SDCs**, and costs e.g., ~~$1,000's~~ **$1000s**.

1. Page 1-3 last line - Correct - "...infrastructure and assist officials in making short term decisions, which do not contradict future needs, ~~and~~ thus reducing costs in the long run..."
2. Page 1-4 first paragraph - Clarification - "...(i.e., Beaverton Downtown Connectivity Plan ~~completed~~ **adopted** in 1996)..."
3. Page 1-4 second paragraph - Correct - "...(which is called the Regional Transportation Plan ~~- RTP~~ **[RTP])** next year..."
4. Page 1-8 Goal 7 Policy **5** - Correct - "Utilize the ~~*System*~~ ***Traffic Impact Fee*** as an element of an overall..."
5. Page 1-10 Figure 1-2 and page **5-8** Figure 5-1 Pedestrian Master Plan - Clarify - Add words as follows to key - **"Proposed and Existing** Multi-use Path." Also correct Fanno Creek Bikepath alignment to current Comprehensive Plan alignment; path should connect to existing path on the east side of the Operations building.
6. Page 1-11 Table 1-1, page 5-10 Table 5-2, and page 11-6 Table 11-3 Pedestrian Action Plan Project Priorities - first line - Correct - "~~Davies Road~~ **Davis Road"**
7. Page 1-13 Figure 1-3 and Page 5-9 Figure 5-2 Pedestrian Action Plan - Clarify - Add word as follows to key - **"Existing** Multi-use Path."
8. Page 1-14 last paragraph - Correction and clarification - "It builds from the state policy from the Transportation Planning Rule that all arterial and collector roads have bike ~~lanes~~ **ways, and the Beaverton Development Code requirement, which requires bike lanes on all arterials and collectors."**
9. Pages 1-15 and 6-8, Figures 1-4 and 6-1 Bicycle Master Plan key - Clarify - **"Existing** Multi-use Path".
10. Page 1-17 Table 1-2 and Page 6-10 Table 6-3 Bicycle Action Plan Project Priorities - Add Fanno Creek Bikepath, which was omitted in error under first priority project listing that connects key bicycle corridors to recreational uses and activity centers as follows: **Fanno Creek Multi-use Path** from **Allen Boulevard and 105th** to **Scholls Ferry Road** with (approximate cost in $1,000s of dollars) **$1,100,** and adjust table totals where appropriate.
11. Page 1-19 third paragraph - Clarify - "In east Beaverton, a new shuttle serves the **Arctic and Allen Boulevard** industrial area ~~of east Beaverton with~~ **which has** 3,000 to 5,000 employees...In Southwest Beaverton, a new shuttle connects ~~SW Beaverton~~ **the area** with the Beaverton Transit Center."
12. Page 1-20 first bullet - Clarify - "virtually every east-west route in Beaverton **from** Scholls Ferry Road north to Walker Road would be over capacity, **except in the Regional Center where the Downtown Connectivity Plan accommodates 2015 capacity needs."**
13. Page 1-20 last paragraph first sentence - Correct - " coordinated set of multi-modal improvements to the roadway system were developed, **as** (outlined in Figures 1-7, and Table 1-3."
14. Page 1-23 Figure 1-8 and page **8-18** Figure **8-8** Future Streets Where ROW is Planned for More Than Two Lanes - **Murray Extension** was omitted in error; correct to show it. Typo in key - "Note: All Arterial/Arterial, Arterial/Collector...for turn lanes ~~with~~ **within** 500 ft. of intersection." Additionally,

regional designation boundary lines should be omitted in central Beaverton to avoid confusing them with a roadway. Full area should be shaded instead.

15. Page 1-26 Functional Classification - Clarify Freeway classification in text and Figure 1-9 - Classifications of "~~principal arterial (freeway),~~ **freeway (principal arterial),** arterial, collector, neighborhood and local have been developed based on connectivity,..."
16. Page 1-28 Other Modes - Correct - "~~The~~ **There** are four other modes discussed in the TSP:...There is a heliport at ~~the~~ St. Vincent's Hospital used for life flight. There are ~~not~~ **no** navigable waterways in Beaverton..."
17. Page 1-29 Costs - Clarify - "Many of the project costs were ~~been~~ developed by Washington county,...~~Table 1-6 identifies the known revenue sources.~~ Current transportation revenue for the City of Beaverton can be summarized as noted in Table 1-6...There is a substantial gap **of $380 million** between the TSP outlined funding needs **($660 million)** and the current sources of finding **($280 million)."**
18. Page 2-10 Other Plans - Correct - "The relationship of the TSP to other regional planning documents can be **a** puzzle of activities...Correct TDM definition - ...an element of **a ~~TSP's~~ TSP** that is..." Also, correct ECO definition - "... of employers ~~of 50 or more~~ **more than 50** staff in the..."
19. Page 2-11 definitions - Clarify - Functional Plan by correcting text to read "Urban Growth Management Functional Plan."
20. Page 3-7 Figure 3-2 Speed Zones Per State Files - Delete "~~Travel Time Routes"~~ reference in key as not applicable.
21. Page 3-16 first paragraph second to last sentence - Correct - "...LOS **E** or F conditions at unsignalized intersections generally provide a basis to study intersections further to..."
22. Page 3-25 Figure 3-12 Existing Transit - Omission - Show park and rides at Cornell/Bethany and Sunset Transit Center, and future LRT route through Sunset Transit Center as far east **as** the map allows, to be correct and consistent with Figure 10-1 Park and Ride Sites (page 10-7).
23. Page 3-26 last paragraph - Clarify - "Several meetings were held involving public input to Tri-Met during the transit sessions called Transit Choices for Livability in which Beaverton **residents and City staff** gave Tri-Met perspectives..."
24. Page 3-28 last sentence - Correct - "The City of Beaverton Development Code defines ***At a major transit stop*** ~~is~~ as a parcel that is ..."
25. Page 3-29 last word - Clarify - "...open spaces and greenways, including the Tualatin Hills Park and Recreation District ~~pathways~~ **facilities."**
26. Page 3-1 Figure 3-14 Existing Pedestrian Network - Correct figure to show sidewalks on both sides of Griffith Drive and the pedestrian bridge to Sunset Transit Center.
27. Page 3-37 Footnote 21 - Correct "~~then~~" to **"than".**
28. Page 3-40 Table 3-18 Programmed Transportation Improvements List - Add footnote to define MM acronym "**MM: multi-modal includes bikeways and sidewalks."**
29. Chapters 5, 6, 7, 9 and 10 - Delete referenced italicized text. In preliminary draft TSP, text was recommended for deletion as irrelevant in context, but was not carried through in subsequent drafts of Chapters 5, 6, 7, 9, and 10. Correct.
30. Page 5-12 Safety - Correct first sentence - "In the safety section of Chapter 8 Motor Vehicles, there is discussion ~~regardi9ng~~ **regarding** improving ..."
31. Page 6-1 first paragraph, third sentence - Correct - "The needs, criteria and strategies were identified in working with the City's Traffic Commission, TSP ~~Transportation~~ **Technical** Advisory Committee (TAC) and the Bike Task Force. The Traffic Commission, TAC, **public** and Bike Task Force provided..."
32. Page 6-6 under Strategy 6 - Correct - "This strategy focuses on ~~provides~~ **providing** bikeways to and within retail areas which are popular destinations..."
33. Page 7-1 Needs section, second sentence - Clarify -" ~~Much~~ **Some** of the existing route structure will be modified to access and integrate Light Rail Transit Service (LRT)."
34. Page 7-1 third paragraph, second sentence - Clarify - "Several meetings were held involving public input to Tri-Met during sessions called the Transit Choices for Livability in which Beaverton **residents** gave Tri-Met input..."

35. Page 7-2 Criteria - Clarify - "Beaverton's Traffic Commission, the public and **TSP** Technical Advisory Committee created a set of goals and policies..."
36. Page 7-6 first paragraph, second sentence - Clarify - "In east Beaverton, Route 53 serves the industrial area, **which services** ~~of Beaverton with~~ 3,000 to 5,000 employees, connecting to other Tri-Met service...In Southwest Beaverton, Route 50 connects ~~SW~~ **southwest** Beaverton with the Beaverton Transit Center."
37. Page 8-3 Correct goal and policy reference language to be consistent with agreed upon changes in previous drafts and Chapter 1, which were not carried forward into chapter language - Goal 1 Policy 2 "~~Include~~ **Consider** noise attenuation..." Goal **3** Policy 4 "Establish rights-of-way at the time of site development and officially secure them by ~~either an easement or~~ dedication of property." Page 8-4 Goal 3 Policy 7 delete last sentence for consistency with current version of policy.
38. Page 8-6 first paragraph, third sentence - Clarify reference to functional classification designations - "These routes go beyond the city limits in providing connectivity and can be defined into two groups: freeways/principal arterials (typically state routes) and arterials." Third paragraph, sixth sentence - Correct - "In Beaverton, it is not possible to have **a** citywide neo-traditional layout."
39. **As** in No. 15 above, page 8-7 - Clarify Freeway designation in text and associated graphic Figure 8-3 - **"Freeways (also referred to as** Principal Arterials) are typically freeways and state highways that provide the highest level of connectivity."
40. Page 8-11 first paragraph, second to last sentence - Correct - "Linkages to regional centers, town centers and station areas are ...frequency of ~~routs~~ **routes** of certain functional class."
41. Page 8-17 third paragraph, second to last sentence - Clarify - "Metro has designated Regional Street Design in their draft of the RTP **and developed regional street design guidelines to assist jurisdictions in implementation."**
42. Page 8-35 last sentence - Clarify - "Benefit and performance of **High Occupancy Vehicle** (HOV) lanes will need to be studied further as the ORE 217 project goes into corridor assessment."
43. Page 8-49 first words - Correct - "~~Everyone~~ **Every one** of the top ten accident sites..."
44. Page 8-50 first paragraph - Correct - "As a response to this program, establishing an annual ... benefits to be achieved and determine effectiveness in Beaverton, without ..."
45. Page 8-53 second sentence - Correct - "Maintenance already consumes the majority of the gas tax funds the City receives and a ..."
46. Page 8-54 second paragraph, second to last sentence - Correct - "Most importantly, the goals and policies of this plan calls for land use development to outline..."
47. Page 8-55 second paragraph, last sentence - Correct by adding closing quotation mark.
48. Page 10-1 first paragraph, second to last sentence - Correct - "...in working with the City's **T**traffic Commission, the public..."
49. Page 10-1 second paragraph, second sentence - Correct - "The Employee Commute Options (ECO) ~~rules are~~ **rule** ~~provisions of the law~~ **was adopted by the State in 1996."**
50. Page 11-12 first paragraph, fifth sentence - Correct - **"A** rough estimate of the potential value of fronting development exactions is about $30 to $50 million ~~dollars~~ over 20 years..."
51. Page 11-14 second paragraph - Correct - "Rising land costs, development of vacant land adjacent to roadways ~~which~~ **with** increasing mitigation requirements and greater..."
52. Page 11-15 first sentence - Correct - "If all the motor vehicle fees of the state, county and city were increased proportionately to ~~by themselves~~ fund **the** Beaverton transportation shortfall, it would require an increase of over $0.75 per gallon of gasoline."
53. Page 11-16 third bullet - Correct - "Given the size of relative gas tax increases..."
54. Page 11-17 last sentence of first paragraph - Correct - "...concerns of proactively addressing transportation needs before they become more expensive **to** address."
55. Page 11-17 last paragraph, second sentence - Correct - "This may take several forms and ~~will~~ required more assessment."
56. Page 1-23 Figure 1-8, Page 8-18 Figure 8-8 - Future Streets Where ROW is Planned for More than Two Lanes - Correct - TV Hwy 7-lane designation is to Cedar Hills Blvd. to correctly identify the improvement.
57. Page 1-22 Figure 1-7 and page 8-36 Figure 8-22 – edit; show 7 lane Scholls to 125th.

58. Page 1-24 Table 3 and Page 8-38, Table 8-3 page 11-11 Table 11-5 – include omitted lines for Scholls Ferry work between Murray ($1,600,000) and North/South Collector and west of N/S collector to Scholls ($1,400,000)
59. Page 1-25 Figure 1-8 and gage 8-18 Figure 8-8) - show TV Highway as 7 lanes to Cedar Hills, show Scholls Ferry Road as 7 lanes to 125th from 217.
60. Page 1-27 Figure 1-9 and page 8-8 Figure 8-3 – include note change: replace USRA with "the urban reserves"; add gray area to cover Green at Hall on 125th, add note to 155th by a "*" stating "Access control on 160th meets collector function where 155th does not."
61. Page 3-2 – change subheading to read "Arterial State Highways"
62. Page 8-12 Figure 8-4 edit sidewalk width criteria "6 – 8 **10** ft.)
63. Page 8-16 Table 8-2 edit sidewalks on collectors " **6-84"** "5-7 ft"
64. Page 8-24 Figure 8-13 and page 8-28 Figure 8-17 reflect attachment **A,** change #2 as a location. Also on page 8-28 reflect attachment **A** change # 11 as a location.
65. Page 8-29 Figure 8-18 add the Barberry arrow consistent with Figure 8-13.
66. Page 8-40 Table 8-4 include omitted improvement #12 is TV Highway/Millikan-160th, add southbound and northbound lane across intersection. Edit improvement #26 description to read (as replacement) "Install traffic signal."
67. Page 8-39 Figure 8-23 and page 8-42 Table 8-4 add 67th intersection improvement at Denney/Lombard. Denney/Lombard description is "Install traffic signal and E/B and W/B left turn lanes."
68. Page 8-43 Figure 8-24 add to note "This plan reflects sites which may …classification. Other sites **may** also be signalized depending **on** signal warrants, consistency with this plan and protecting functional integrity."
69. Page 10-3 edit text to read – "However, the ~~emphasis of much of the~~ research also indicates that for TDM to have substantial impact these policies would need ***to*** go well.. ."

CITY OF BEAVERTON
TRANSPORTATION SYSTEM PLAN

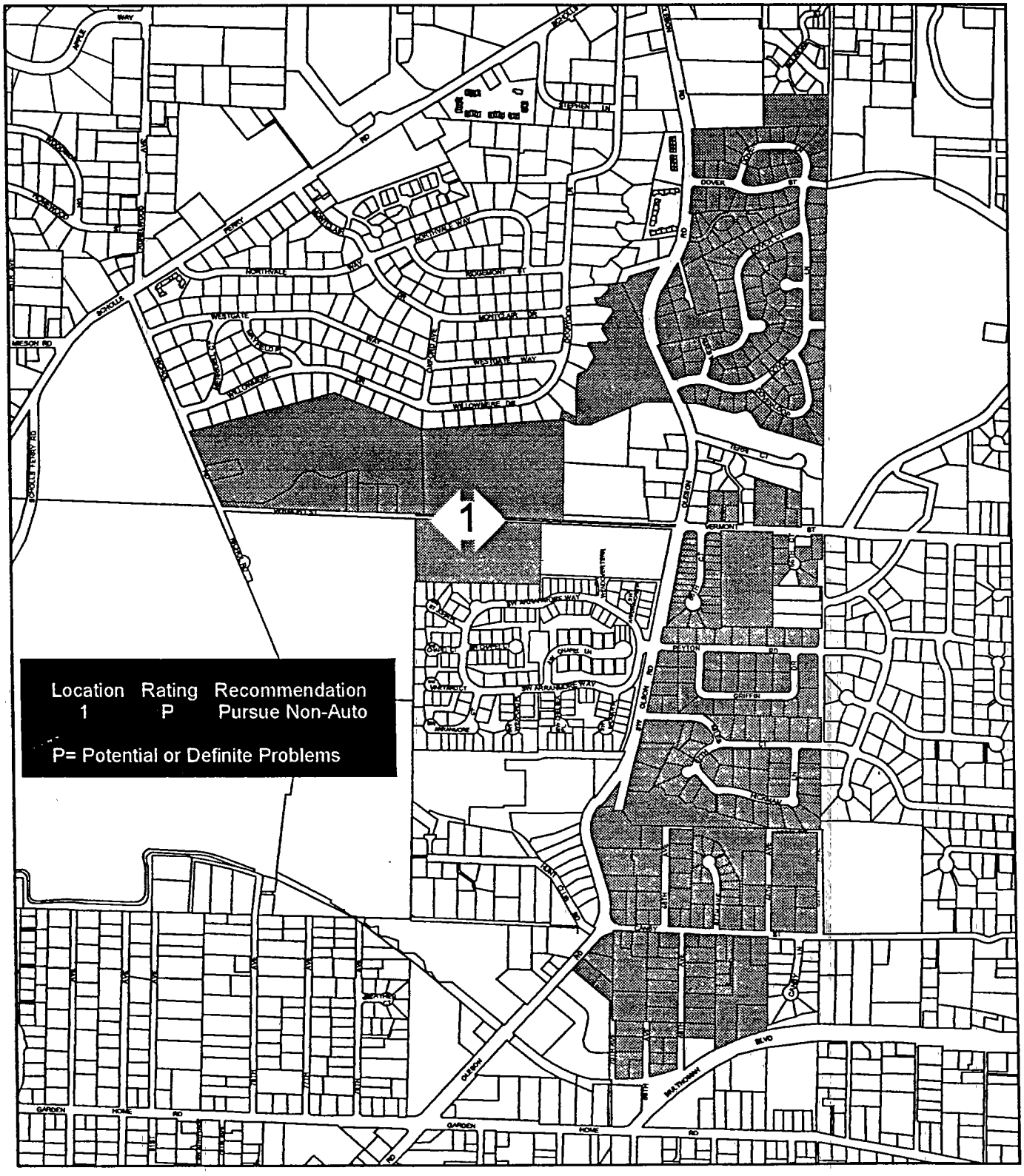
Recommended Changes and Corrections to the
Draft 1997 TSP
(1198 – 10115198)

Attachment C

City and County development actions, City Council Work Session comments, City Attorney comments, and additional public comments received through mid-October were considered in the Public Review Draft of the TSP Implementing Amendments. Specific changes are specified below. On October 15, 1998, the Public Review Draft of the TSP Implementing Amendments was released for public comment. Comments received from October 15, 1998, through December 4, 1998, will be documented in the Public Log and considered in the Staff Report to the Planning Commission.

1. 1997 TSP addition due to City annexation: Add Local Connectivity Map to 1997 TSP as Figure 8-20A – Vermont Avenue; Rating: P; Recommendation: Pursue Non-Auto. (attached and included in CPA 98020 action)
2. County Action: Update Street Improvement Master Plan and Functional Classification Plan to reflect deletion of Jay connection from Burlington to 158th (vacated). Add connection from Burlington north to Koll Parkway and Burlington south to Jenkins . Signalize intersection of Jenkins and Burlington/Koll. Classify connection as future collector (dashed green line). Maps and text of CPAs 98020,98021, and 98022 reflect this action.
3. Update Draft 1997 TSP to reflect City Attorney minor changes to goals and policies for language correctness. CPA 98020, 98021,98022 reflect these minor corrections.
4. Correct 1997 TSP Figure 3.1 Road Jurisdiction to show Farmington Road is under City jurisdiction within City limits.

1997 TSP – Figure 8-20 A



City of Beaverton

LOCAL STREET CONNECTIVITY - VERMONT AVENUE

COMMUNITY DEVELOPMENT **DEPARTMENT**

Policy and Research Division

Map Number
multiple

N

no scale

Application #
CPA96001/RZ960002,
CPA96002/RZ960003

9

See ***Comprehensive Plan Chapter Six – Transportation Element*** for updated text and project improvement maps and tables that reflect completed projects and project development from January 1998 through March 1999. City committee and public comments received through the development review and public hearings on Comprehensive Plan and city code amendments (CPA 98020, CPA 98021, CPA 98022 and **TA** 980008) are also reflected in the updated chapter.

DKS Associates

921 S W Washington Street, Suite 612
Portland, OR 97205-2824
Phone (503) 243-3500
Fax (503) 243-7934

September 30, 1997

Margaret Middleton
City of Beaverton
4755 SW Griffith Drive
Beaverton, OR 97076-4755

Subject: **Beaverton Transportation System Plan** P96258
Draft Report

Dear Margaret:

DKS Associates is pleased to submit this draft Transportation System Plan for the City of Beaverton. After extensive meetings with the Traffic Commission and the public, review by the agency technical advisory committee and 10 months of intensive transportation planning and analysis, this document represents the completion of the purchase order 12-20-96 and the ODOT TGM contract no. PSC 14,453. Enclosed is a reproducible copy of the draft TSP, a bound version of the same report, the technical appendix and a floppy disk with the report in Word 6.0 format. Please feel free to contact if you have any questions. It has been our pleasure to serve you on this important project.

Sincerely,

DKS Associates
A Corporation

Ransford S. McCourt, P.E.
Principal

REGISTERED PROFESSIONAL ENGINEER 13,230
OREGON MAY 22, 1985 R.S. McCOURT
Exp. 12/31/98

cc. Lidwien Rahman, ODOT

X:\PROJECTS\1996\P96258\REPORT\REPT9-97\coverlet.wpd

CITY OF BEAVERTON TRAFFIC COMMISSION

Chairman Eric Johansen
Traffic Commissioner Louise Clark
Traffic Commissioner Matt Hsu
Traffic Commissioner Scott Knees
Traffic Commissioner Tom Stearns
Traffic Commissioner David Swanson
Traffic Commissioner Jack Young

TSP TECHNICAL ADVISORY COMMITTEE

Lidwien Rahman, ODOT
Tracy Lester, ODOT
Fred Eberle, ODOT
Bill Ciz, ODOT
Tim Wilson, ODOT
Terry Whistler, Metro
Mike Hoglund, Metro
Mark Brown, Washington County
Blair Crumpacker, Washington County
Laurie Nicholson, City of Tigard
Dennis Grimmer, Tri-Met
Ken Scheet, Beaverton School District
Andy Priebe, THPRD
Eric McMullen, Tualatin Valley Fire and Rescue
Rex Jeffries, Tualatin Valley Fire and Rescue
Sargeant Steve Wilson, City of Beaverton Police Department
John Jackson, Unified Sewerage Agency
Steve Baker, City of Beaverton
Daryl Steffan, City of Beaverton
Randy Wooley, City of Beaverton
Terry Waldele, City of Beaverton
Alwin Turiel, City of Beaverton
Irish Bunnell, City of Beaverton
Sean Morrison, City of Beaverton

This project is partially funded by a grant from the Transportation and Growth Management (TGM) Program, a joint program of the Oregon Department of Transportation and the Oregon Department of Land Conservation and Development. TGM grants rely on federal Intermodal Surface Transportation Efficiency Act and Oregon Lottery funds. The contents of this document do not necessarily reflect views or policies of the State of Oregon.

ACKNOWLEDGEMENT

Production of this report has been the collective effort of the following people:

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City of Beaverton

Margaret Middleton
Project Manager

Oregon Department of Transportation

Lidwien Rahman

Chapter 1
Summary

INTRODUCTION

The City of Beaverton has not recently undertaken a thorough review of its transportation system. Transportation issues in the City of Beaverton were last addressed, via objectives and policies in the Transportation Element of the Comprehensive Plan in 1988. Since that time, Beaverton has grown significantly and the adoption of the *Transportation Planning Rule* statewide in May, 1991 mandates comprehensive transportation planning for cities in Oregon. To meet these needs, this Transportation System Plan has been prepared. Its aim is to fulfill the state mandate (Goal 12) for comprehensive planning in Beaverton, to address current problem areas, to look into the future to identify the needs created by growth and to provide guideiines for neighborhood traffic planning in the future.

The Transportation System Plan (TSP) provides specific information regarding transportation needs to guide future transportation investment in the City and determine how land use and transportation decisions can be brought together beneficially for the City. This plan is intended to be consistent with other jurisdictional plans including Metro's *Regional Transportation Plan* (RTP), Washington County's *Transportation Plan* and *Bicycle Plan*, and ODOT's *Oregon Transportation Plan* (OTP).

After several months of extensive engineering and planning analysis, the draft Transportation System Plan has been prepared for public review. The plan process began with the involvement of the public (through the City of Beaverton Traffic Commission comprised of Beaverton citizens) and will continue with the public providing key perspectives on the vision for transportation in Beaverton through review of the ***DRAFT*** *Transportation System Plan.*

Plan Process

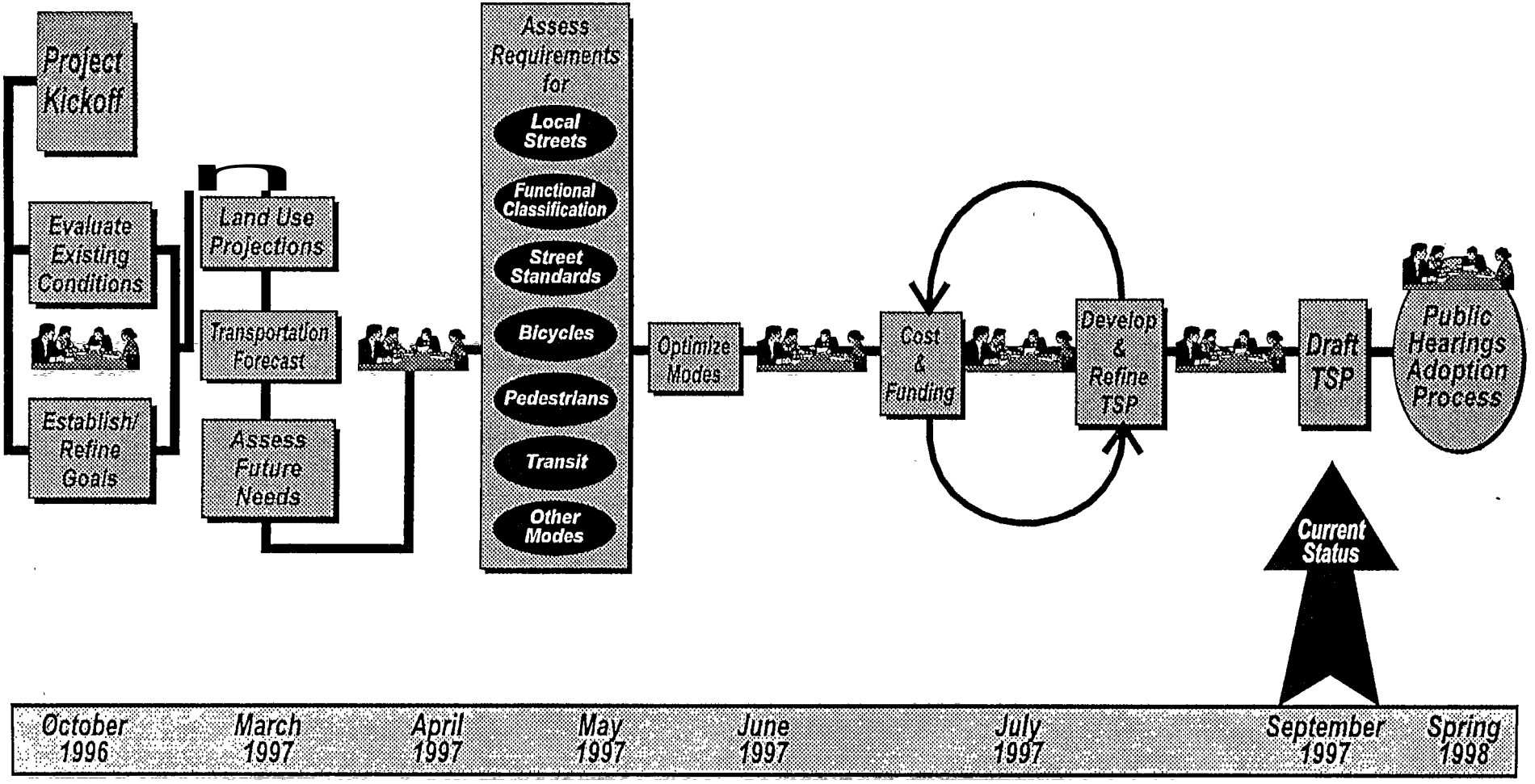
The Beaverton Transportation System Plan process/timeline is summarized in Figure 1-1, and includes the following elements:

- Inventory/Data Collection
- Evaluate Existing Conditions and Needs Travel Forecasting Needs
- Determine Needs by Mode
- Develop Improvements to Mitigate Deficiencies by Mode
- Cost Estimates of Improvement
- Action Plan
- Draft TSP

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Figure 1-1

TSP Work Approach



The transportation system was broken into five basic modes (or mode groups):

- Pedestrians
- Bicycles
- Transit
- Motor Vehicles
- Other Modes (Including Rail, Air, Water, Pipeline, etc.)

The TSP planning objective was to optimize each of these modes of transportation within Beaverton. The following sections summarize the findings of the Transportation System Plan technical studies. Specific chapters of this report address TSP Goals and Policies (Chapter 2), Existing Conditions (Chapter 3), Future Demand and Land Use (Chapter 4), Pedestrians (Chapter 5), Bicycles (Chapter 6), Transit (Chapter 7), Motor Vehicles (Chapter 8), Other Modes (Chapter 9), Transportation Demand Management (Chapter 10) and Costs/Phasing (Chapter 11).

Several City of Beaverton Traffic Commission meetings and TSP Technical Advisory Committee (TAC) meetings were held over the course of the study. The Traffic Commission addressed goals and policies related to transportation in Beaverton, transportation needs by mode (motor vehicles, bicycle, pedestrian, transit, other modes, etc.), strategies for choosing alternatives, and review of transportation alternatives. The TAC addressed technical issues and coordination with adjacent and other jurisdictions. The TAC topics included land use issues, travel demand forecasting issues, goals and policies and coordination with adjacent jurisdictions.

Preface

As a starting point for this plan, a few of the commonly asked questions have been outlined to provide an understanding of what this plan is and why it is being updated ROW.

Why do a transportation system plan?

There are two basic reasons for updating the City's current transportation plan. First, it is required by Oregon State law. Statewide Planning Goal **12,** Transportation, requires that all Oregon communities prepare a transportation plan to address existing and future access and circulation needs of the community. The adopted Transportation Planning Rule (May 1991, and updated April 1995) further defines the specific requirements for a transportation system plan.

A second reason for preparing a transportation plan is that it makes good sense. Just as with family financial planning, transportation planning allows a community to look at its present and future needs and develop strategies to address those needs for the quality of environment it desires. It **is a** road map to good, well thought out transportation investment within Beaverton. The plan can help avoid building unneeded, redundant or unwanted public infrastructure and assist officials in making short term decisions, which do not contradict future needs, and thus reducing costs in the long run.

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What is a transportation system plan?

A transportation system plan establishes the City's goals in developing its transportation facilities for both the short and long term. It identifies existing and future facility needs and the improvements necessary to address them. The transportation plan can be developed in components, such as a Trails Plan, an Airport Master Plan, a Transit Plan and a Streets Plan. In Beaverton, Pedestrian, Bicycle, Transit, Motor Vehicles and Other Modes (Air, Rail, Water, Pipelines, etc.) are all incorporated into the Transportation System Plan, although other plans may address each mode in a more detailed manner (i.e. Beaverton Downtown Connectivity Plan completed in 1996). Basically, the TSP is a master plan to guide decision making in Beaverton and focus future evaluation of transportation facilities within a community context. Further detailed project specific or corridor studies will be Undertaken as implementing actions of the TSP.

*Why do the plan **now?***

Periodic review of the City's Comprehensive Plan is required every 4 to 10 years (House Bill 2150). The Transportation System Plan is an approved work task in the City's current Periodic Review Work Program. It is timely and important to complete the updated Transportation System Plan and adopt it this year. Metro will complete the Portland region's TSP (which is called the Regional Transportation Plan - RTP) next year and all cities are required to have a local TSP in place within 12 months of the adoption of Metro's RTP. In planning for regional growth, Beaverton must identify the transportation needs associated with accommodating over 30,000 additional households and 60,000 new employees by the year 2015.

How** can I continue to make my concerns **known?

Public review of the draft Transportation System Plan and public hearings (Traffic Commission and Planning Cornmission) will provide the forum for continued public comment as the plan heads toward adoption.

GOALS AND POLICIES

Background

The City of Beaverton Draft TSP Goals and Policies consist of seven goals with related policies organized under each goal. Goals were developed which should reflect community needs and values for many years. The goals are simple, brief guiding statements which describe a desired end state. The policies focus on how goals will be met by describing the types of action that will contribute to achieving the goal. Policies may change as time goes on and would be the focus of any plan update (generally 5 to 10 years.) Input and comments received from the Beaverton Traffic Commission, the Beaverton TSP Technical Advisory Committee and Beaverton staff have been incorporated into this draft. The existing City of Beaverton Objectives and Policies in the Transportation Element of the

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Comprehensive Plan have been incorporated into these Goals and Policies, reflecting other regional policy from the state, region and adjacent jurisdictions.

The policies are provided in this summary with background information and further explanation in Chapter 2. The Draft TSP Goals and Policies are linked to mode maps provided in the City of Beaverton TSP. The TSP will include master plan maps for motor vehicles, pedestrians, bicycles, transit and other modes.

Goal 1. Transportation facilities designed and constructed in a manner to enhance Beaverton's livability.

1. Maintain the livability of Beaverton through proper location and design of transportation facilities.

2. Consider noise attenuation in the design (including redesign and reconstruction) of arterial streets immediately adjacent to residential development.

3. Locate and design recreation/bicycle pathways so as to balance the needs of human use and enjoyment with resource preservation in areas identified for their Significant Natural Resource values.

4. Meet the appropriate requirements of state and federal resource agencies for wetlands or stream corridors in development of City transportation facilities.

5. Protect neighborhoods from excessive through traffic and travel speeds while providing reasonable access to and from residential areas. Build local, neighborhood and collector streets to minimize speeding.

6. Require new commercial development to identify traffic plans for residential streets where increased cut-through traffic may occur.

Goal 2. A balanced transportation system.

1. Develop and implement public street standards that recognize the multi-purpose nature of the street right-of-way for utility, pedestrian, bicycle, transit, truck, and auto use and recognize these streets as important to community identity as well as providing a needed service.

2. Provide connectivity to each area of the City for convenient multi-modal access.

3. Develop a safe, complete, attractive and efficient system of pedestrian ways and bicycle ways, including bike lanes, shared roadways, off-street pathways and sidewalks according to the pedestrian and bicycle system maps.

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4. Design arterial and collector streets to accommodate pads for public transit.

5. When development or redevelopment of land occurs, provide bike and pedestrian facilities that are consistent with standards and policies of this plan.

Goal 3. A safe transportation system.

1. Improve traffic safety through a comprehensive program of engineering, education and enforcement.

2. Design streets to serve their anticipated function and intended uses as determined by the comprehensive plan.

3. Enhance safety by prioritizing and mitigating high accident locations within the City.

4. Establish rights-of-way at the time of site development and officially secure them by dedication of property.

5. Designate routes to schools for each school and any new residential project.

6. Construct pathways only where they can be developed with satisfactory design components that address safety, security, maintainability and acceptable pathway use.

7. Provide satisfactory levels of maintenance to the transportation system in order to preserve user safety, facility aesthetics and the credibility of the system as a whole.

8. Maintain access management standards for arterial and collector roadways consistent with City, County and State requirements to reduce conflicts between vehicles and trucks, as well as conflicts between vehicles and pedestrians.

9. Ensure adequate access for emergency services vehicles is provided throughout the City.

Goal 4. An efficient transportation system that reduces the number of trips and limits congestion.

1. Support trip reduction strategies developed regionally, including employment, tourist and recreational trip programs.

2. Limit the provision of parking to meet regional and state standards.

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3. Maintain level of service consistent with regional goals. Reduce traffic congestion and enhance traffic flow through such measures as intersection improvements, intelligent transportation systems and signal synchronization.

4. Plan land uses to increase opportunities for multi-purpose trips (trip chaining).

5. Require land use approval for proposals for new or improved transportation facilities including identification of potential impacts.

6. Support mixed-use development.

7. Improve local transit services to increase transit ridership potential.

8. Encourage development of regional high capacity transit, including light rail transit and commuter rail.

Goal 5. Transportation facilities which are accessible to all members of the community and reduce trip length.

1. Construct transportation facilities to meet the requirements of the Americans with Disabilities Act.

2. Develop neighborhood and local connections to provide adequate circulation in and out of the neighborhoods.

Goal 6. Transportation facilities which provide efficient movement of goods.

1. Designated arterial routes and freeway access areas in Beaverton are essential for efficient movement of goods; design these facilities and adjacent land uses to reflect the needs of goods movement.

2. Consider grade separation or gate control for all primary railroad crossings of arterial streets.

3. Meet federal and state safety compliance standards for operation, construction and maintenance of rail system.

4. Consider existing railroad and air transportation facilities to be City resources and reflect the needs of these facilities in land use decisions.

5. Provide safe routing of hazardous materials consistent with federal guidelines and provide for public involvement in the process.

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Goal 7. Implement the transportation plan by working cooperatively with federal, regional and local governments, private sector and citizens and by creating a stable, flexible financial system.

1. Coordinate transportation projects, policy issues, and development actions with all affected governmental units in the area. Key agencies for coordination include Washington County, ODOT, Tri-Met and Metro as well as adjacent cities (Tigard, Hillsboro and Portland.)

2. Participate in regional growth management policy and work with regional agencies to assure adequate funding of transportation facilities to support those policies.

3. Work with Tri-Met to encourage the development of transit improvements.

4. Monitor and update the transportation element of the comprehensive plan so that issues and opportunities related to change are resolved in a timely manner. Develop and update an annual capital improvements program which establishes the construction and improvement priorities of the City and allocates the appropriate level of funding.

5. Utilize the *System Traffic Impact Fee* as an element of an overall funding program to pay for adding capacity to the collector and arterial street system and make safety improvements caused by increased land use development.

6. Develop a long-range financial strategy to make needed improvements in the transportation system and support operational and maintenance requirements.

Recommendations

Optimal modal plans have been developed for each mode of transportation used in Beaverton including bicycles, pedestrians, transit, motor vehicles and other modes (i.e., air, water, rail, pipeline). A master plan, showing long range priorities for each mode, and an action plan, showing modal priorities for routes in the City, were developed for each mode of transportation with the exception of trucks and transit. The master plan summarizes projects which are desirable to complete the modal network in Beaverton and should be pursued as opportunities arise through development or other means. The action plan consists of projects which would be the steps or building blocks needed to implement the intent of the modal master plan. These projects should become priorities for Beaverton to pursue, either through development, state, county or City funding. Action plan projects generally complete key links in the modal networks or serve highly used locations. Modal summaries are generally two to ten page elements that have summary text, master plan graphic, action plan list and action plan graphic.

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PEDESTRIANS

Sidewalks are provided on many of the arterial and collector roadways and along many of the newer local streets and roadways in the City of Beaverton, forming an existing pedestrian network. However, there are several gaps in the existing network where the sidewalks are discontinuous along a segment of roadway. These gaps significantly impact the potential for pedestrian circulation. Generally, where sidewalks are available, there is sufficient capacity. In other words, it is much more important that a continuous sidewalk be available than that it be of a certain size or type.

The most important existing pedestrian need in Beaverton is an interconnecting system of walkways within a half mile grid and connectivity to light rail transit (LRT) stations and key activity centers in Beaverton (parks, schools, retail, etc.). Needs include safe, convenient crossings of large arterial streets which act as barriers to pedestrian movement. In the future, pedestrian needs will be similar in the City, but there will be additional activity centers that will need to be considered and interconnected.

The Beaverton Traffic Commission evaluated various strategies and then ranked them. Each Traffic Commissioner and public participant were assigned a certain number of points that he or she could allocate to each of the strategies according to his or her vision of priorities for the City of Beaverton. The ranking of these strategies follows from most important to least important[1]:

- Connect key pedestrian corridors to schools, parks, recreational uses and activity centers (public facilities, commercial areas, etc.)
- Fill in gaps in the network where some sidewalks exist
- Pedestrian corridors to transit stations and stops
- Signalized pedestrian crossings
- Pedestrian corridors that connect neighborhoods
- One-sided to two-sided sidewalks
- As development occurs, construction of sidewalks by developers
- Pedestrian corridors that commuters might use
- Reconstruct all existing substandard sidewalks to City of Beaverton Standards

The Pedestrian Master Plan (Figure 1-2) is an overall plan and summarizes the desired framework plan to meet local and regional policy. From this Master Plan, a more specific, shorter-term Action Plan was developed. The Action Plan reflects the priority of strategies from the Traffic Commission and public participants. The Action Plan (Table 1-1 and Figure 1-3) consists of projects that the City should give priority to when funding becomes available. As development occurs, streets are rebuilt and other opportunities (such as grant programs) arise, projects on the Master Plan should be pursued as well.

[1] **Appendix H contains overall scoring**

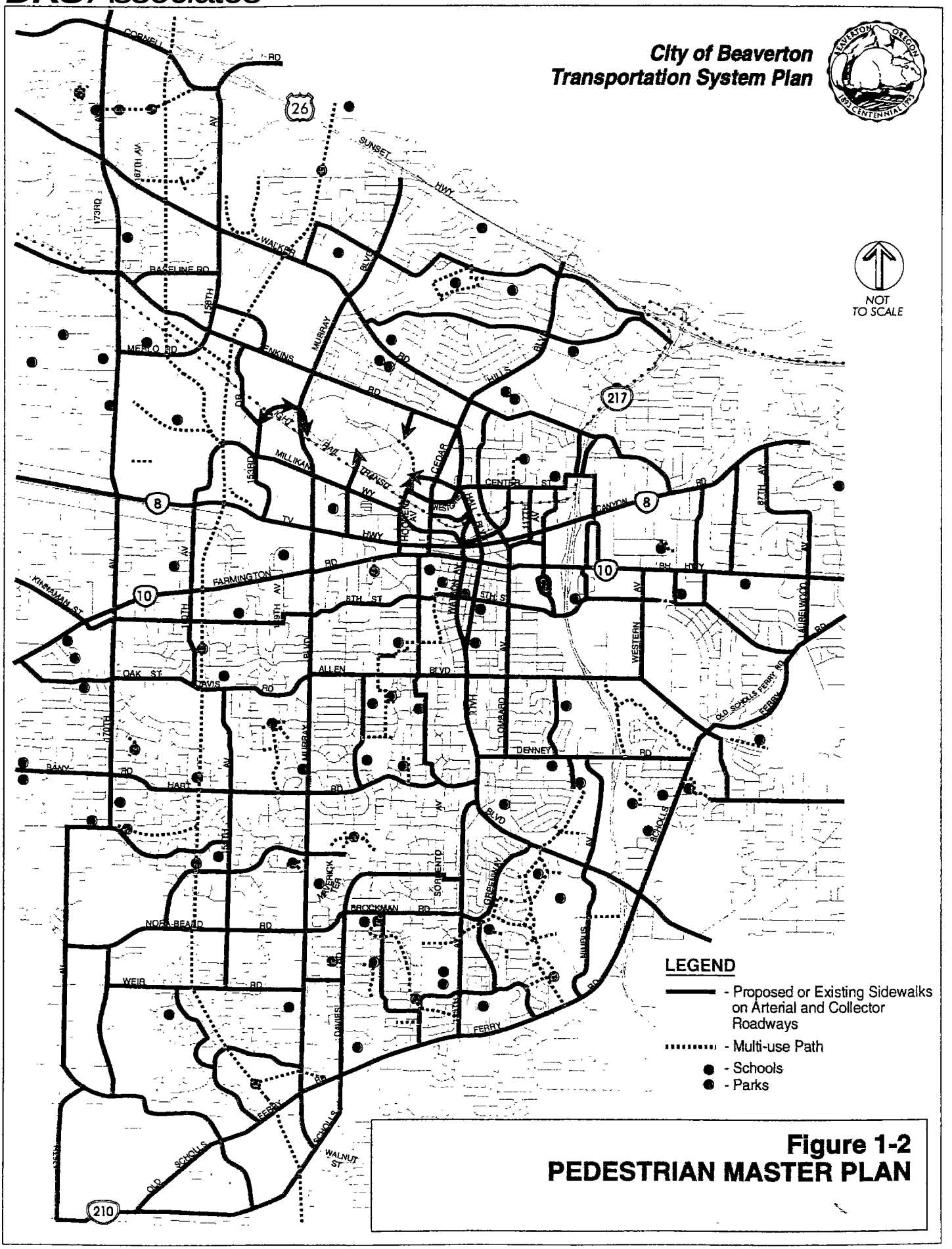


Figure 1-2
PEDESTRIAN MASTER PLAN

Table 1-1
Pedestrian Action Plan Project Priorities

Project	From	To	Approximate Cost ($1000's dollars)
Priority: Connect key pedestrian corridors to schools, parks, recreational uses and activity centers			
155' Avenue	Davies Road	Nora-Beard Road	357
Priority: Fill in gaps in pedestrian network			
Farmington Road/B-H Highway	Hocken Avenue	Erickson Avenue	42
Beaverton-Hillsdale Hwy (north side)	91" Avenue	Laurelwood Avenue	64
TV Highway/Canyon Road (gaps on one-side)	170" Avenue	87' Avenue	323
158" Avenue (east side)	Blue Ridge Drive	approx 500 ft south	30
Cedar Hills Boulevard (west side)	Walker Road	Park Way	87
Cedar Hills Boulevard	Park Way	Butner Road	90
Murray Boulevard	[illegible] Road	Millikan Way	270
Denney [illegible]	Nimbus	Scholls Ferry Road	210
Allen Boulevard (gaps)	Western Avenue	Scholls Ferry Road	60
Western Avenue	5" Street	800 feet south of 5	48
5th Street (south side)	Alger Avenue	Western Avenue	117
6" Street/Division Street	Murray Boulevard	170" Avenue	318
Davies Road (east side)	Scholls Ferry Road	Hiteon Drive	66
Scholls Ferry Road/Old Scholls Ferry Road (gaps)	Scholls/Old Scholls (west end)	Beaverton-Hillsdale Highway	1,650
SW Park Way (gaps)	Walker Road	ORE 217	186
110" Avenue (gap-one side)	Beaverton-Hilldale Hwy	Canyon Road	30
Priority: Pedestrian corridors to transit stations and stops			
153rd Drive	Jenkins Road	Light Rail Transit	114
Connection Roadway	153rd Avenue	Murray Boulevard	84
Millikan Way	Murray Boulevarrd	Hocken Avenue	180
160th Avenue	TV Highway	Davis Road	312
117th Avenue	Light Rail Transit	Center Street	30
Downtown Beaverton Connectivity collector roadways	Hocken Avenue/ TV Highway	110th Avenue/ Cabot Street	900
Lombard Avenue	Center Street	Beaverdam Road	60
Jay Street	158" Avenue	Jenkins Road	126
Priority: Construct sidewalks with roadway improvement projects			
125" Avenue	Hhll Boulevard	Brockman Road	168
Farmington Road	Murray Boulevard	172nd Avenue	346
Farmington Road	172nd Avenue	185th Avenue	190
Nimbus Avenue	Denney Road	Cirrus Drive	120
Walker Road	ORE 217	Canyon Road	182
Walker Road (gaps)	173rd Avenue	Mayfield Avenue	384
Davies Road	Old Scholls Ferry Road	Scholls Ferry Road	53
Murray Boulevard	Old Scholls Ferry Road	Scholls Ferry Road	96
Millikan Way	Hocken Avenue	Cedar Hills Blvd	50
170th Avenue	Rigert Road	Alexander Street	449
170' Avenue	Alexander Street	Baseline/Jenkins	319

Project	From	To	Approximate Cost ($1000's dollars)
170th/173rd Avenue	Baseline/Jenkins Road	Walker Road	192
173rd Avenue	Walker Road	Cornell Road	206
173rd Avenue	Cornell Road	Bronson Road	48
Hart Road/Bany Road (gaps)	Murray Boulevard	170th Avenue	206
Hart Road (gaps)	Hall Boulevard	Murray Boulevard	43
Cornell Road (one-side)	158th Avenue	185th Avenue	144
Baseline Road	158th Avenue	166th Avenue	96
Oak Street/Davis Road/Allen (gaps)	Murray Boulevard	170th Avenue	144
Allen Boulevard (gaps)	Alice Lane	Western Avenue	98
Nora-Beard Road	175th Avenue	155th Avenue	245
Weir Road	175th Avenue	160th Avenue	216
175th Avenue-Rigert Road	170th Avenue	ORE 210	658
Merlo Road/158th Avenue (gaps)	Jay Street	Walker Road	53
Jenkins Road	153rd Avenue	Murray Boulevard	98
Hart Road/Bany Road	170th Avenue	185th Avenue	187
SW Beaverton collector roadway	Scholls Ferry Road	175th Avenue	302
SW Beaverton circulation roadway	High Hill Lane	Nora-Beard Road	240
Priority: Pedestrian corridors that connect neighborhoods			
SW Butner Road (one side)	Murray Boulevard	Park Way	258
SW Downing Road (gaps on south side)	Murray Boulevard	Meadow Drive	36
Meadow Drive (one side)	Downing Road	Walker Road	33
Laurelwood Avenue/87th Avenue	Canyon Road	Scholls Ferry Road	378
Jamieson Road	Pinehurst Drive/Cypress	Scholls Ferry Road	180
Cypress Street	Jamieson Road	Elm Avenue	69
Sexton Mountain Drive (gaps)	Maverick Terrace	Nora-Beard Road	258
96th Avenue (one side)	Canyon Road	Beaverton-Hillsdale Highway	78
Pedestrian Action Plan Projects Total Cost:			**$ 12,583**

City of Beaverton
Transportation System Plan

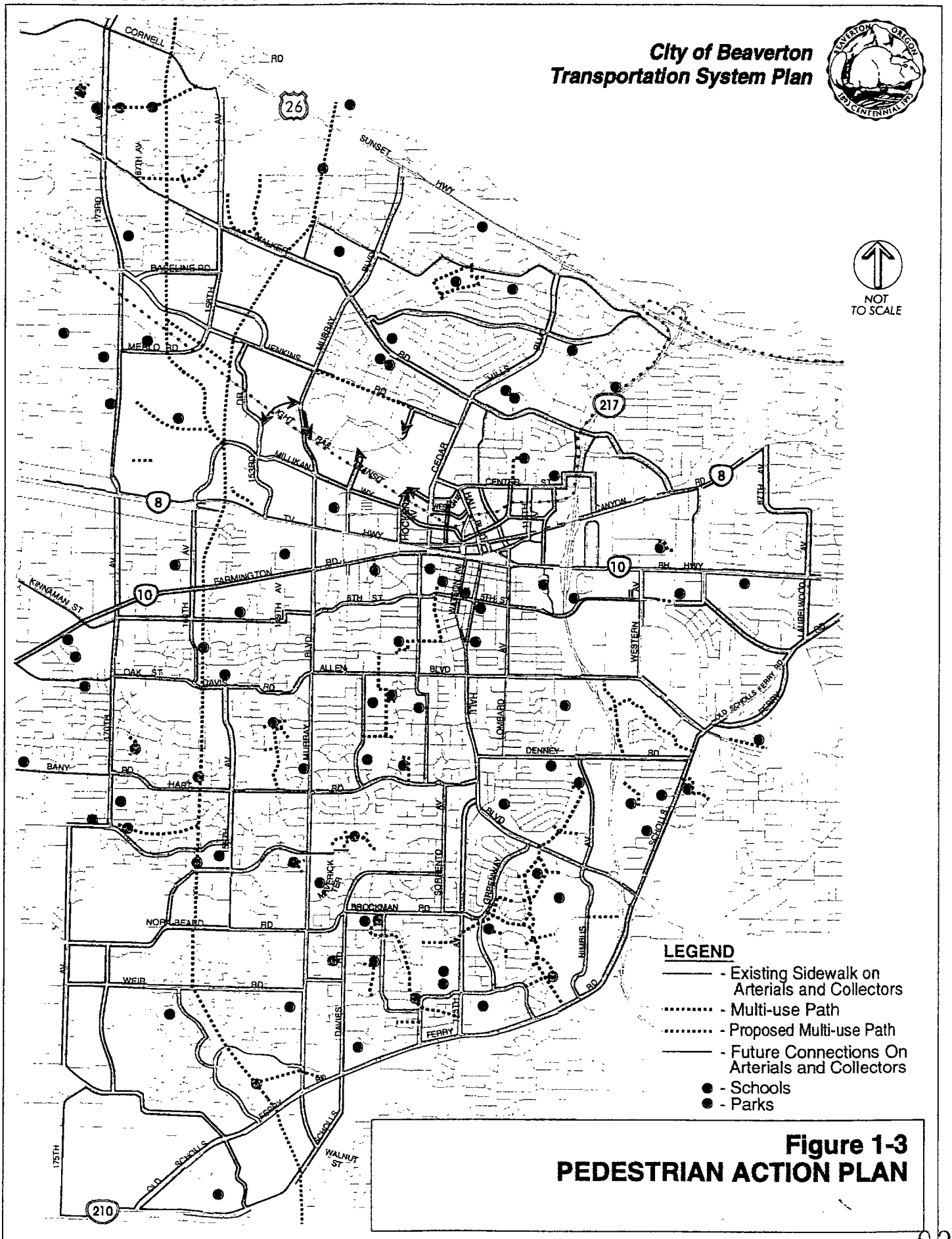


Figure 1-3
PEDESTRIAN ACTION PLAN

BICYCLES

Bikeways are currently provided on some of the arterial and collector roadways in the City of Beaverton, forming a bikeway network. Bikeways generally consist of designated bike lanes and segments where specific accommodation has been made for bicyclists. However, there are many gaps in the bicycle network where bikeways do not exist along arterial and collector roadways. Continuity and connectivity are key issues for bicyclists and gaps in the bikeway network cause the most significant problems for bicyclists.

The ranking of the bicycle strategies evaluated by the Traffic Commission and public participants follows, from most important to least important?

- Connect key bicycle corridors to schools, parks, recreational uses and activity centers (public facilities, commercial areas, etc.)
- Fill in gaps in the network where some segments of bikeways exist
- Bicycle corridors that connect neighborhoods
- Construct bike lanes with roadway improvement projects
- Bicycle corridors that commuters might use
- Bicycle corridors providing mobility to and within commercial areas

The Bicycle Master Plan (Figure 1-4) outlines where bicycle facilities will be required in the future. It builds from the state policy from the Transportation Planning Rule that all arterial and collector roads have bike lanes. Additional linkages with lanes or accommodations are outlined to make a complete network. The Bicycle Action Plan (Figure 1-5 and Table 1-2) consists of projects that the City should actively try to fund in the next ten years. With the action plan, a substantial bicycle network would be in place and would allow attention to move toward infill Master Plan projects. The Action Plan is consistent with plans developed by Metro, Washington County and the State.3 The bicycle plan will require incremental implementation. As development occurs, streets are rebuilt and other project funding opportunities (such as grant programs) arise, projects on the Master Plan should be integrated into project development. Many of the projects would be elements of multi-modal street improvement projects (i.e. Murray Boulevard extension). The City, through its Capital Improvement Program, joint finding with other agencies (County, Metro and State) and development approval would implement these projects.

2 The overall scoring is included in the appendix

3 *Draft* ***1995 Interim Federal Regional Transportation Plan,*** **April** 1995, Metro and Draft Bikeway Plan, Washington County, Oregon, June, 1995.

City of Beaverton
Transportation System Plan

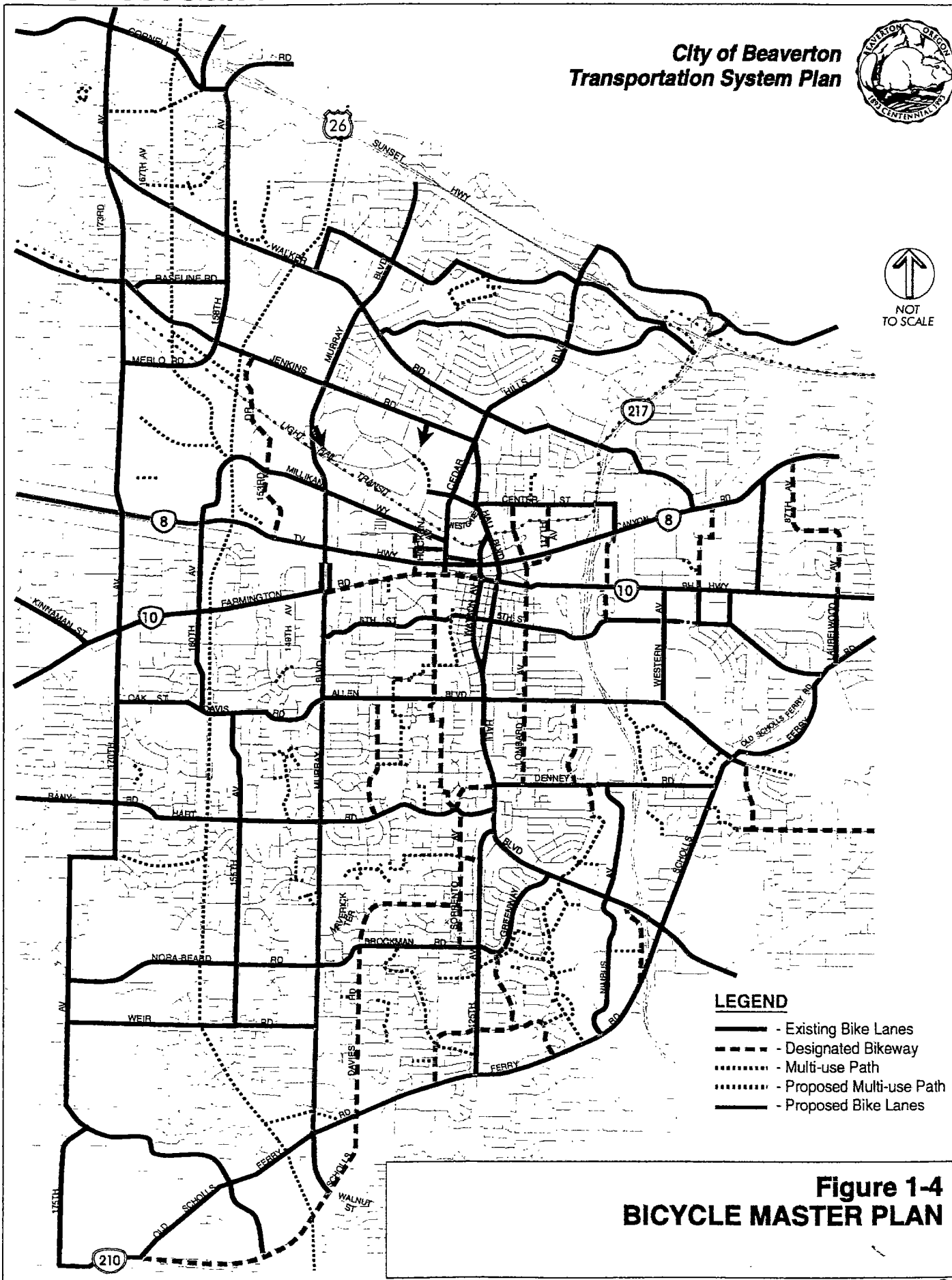


Figure 1-4
BICYCLE MASTER PLAN

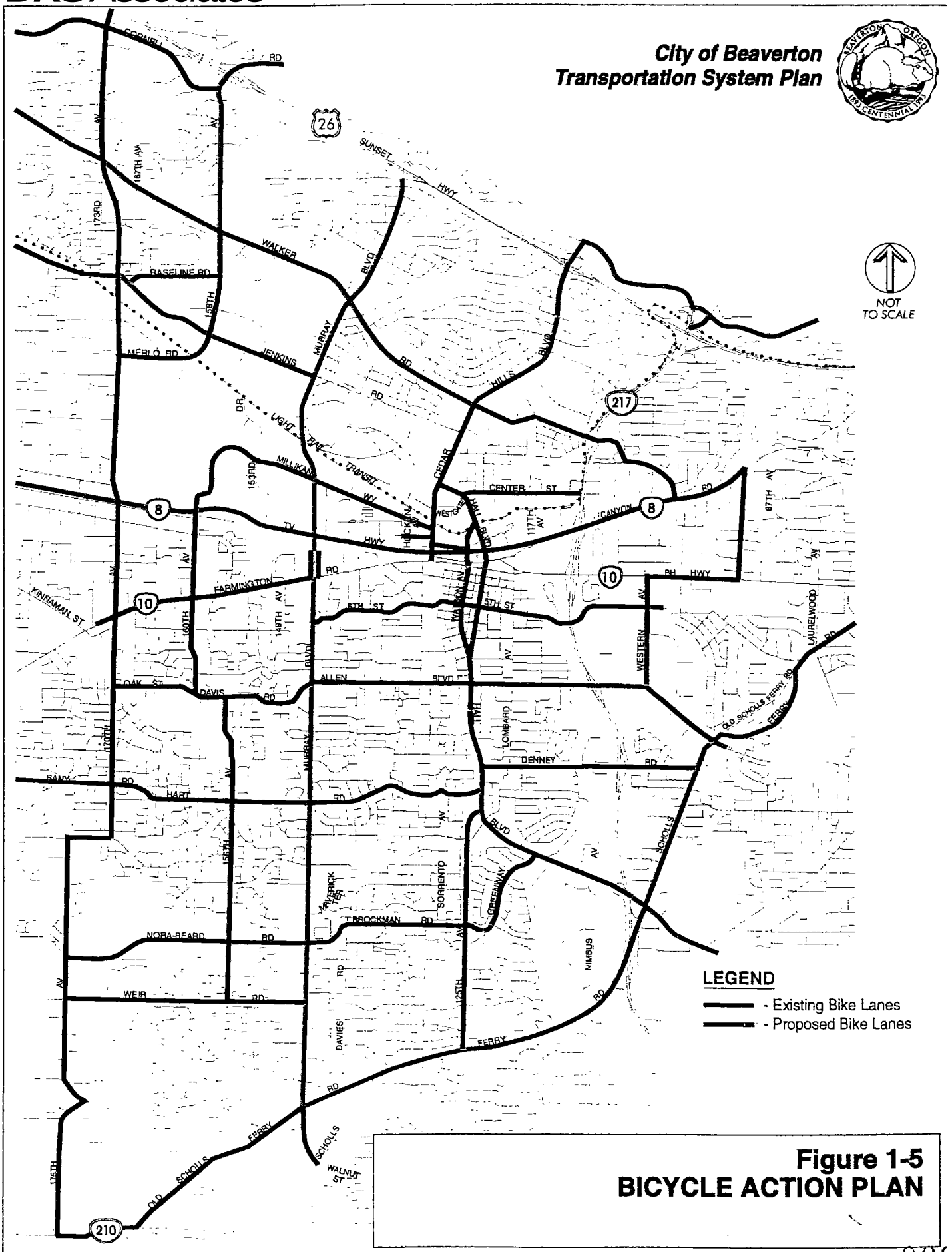


Figure 1-5
BICYCLE ACTION PLAN

Table 1-2
Bicycle Action Plan Project Priorities

Project	From	To	Approximate Cost ($1000's of dollars)
Priority: Connect key bicycle corridors to schools, parks, recreational uses and activity centers			
Greenway Road bike lanes	Hall Boulevard	approx. 200 feet east of Downing	214
155th Avenue/Weir Road bike lanes	Davis Road	Murray Boulevard	1,037
Millikan Way/160th bike lanes	Murray Boulevard	TV Highway	454
Millikan Way/160th bike lanes	TV Highway	Davis Road	438
125th Avenue	Scholls Ferry Road	Brockman Road	277
Canyon Road	142nd Avenue	91st Avenue	1142
Priority: Fill in gaps in bicycle network			
Greenway/Brockman bike lanes	125th Avenue	approx 200 ft east of 125th Avenue	17
Hall Boulevard bike lanes	Greenway	ORE 217	311
Hall Boulevard bike lanes	12th Street	900 ft south of Allen	134
Hall Boulevard bike lanes	Beaverton-Hillsdale Hwy	Cedar Hills Blvd	68
Watson Avenue bike lanes	Beaverton-Hillsdale Hwy	Hall Boulevard	59
Cedar Hills Boulevard bike lanes	Farmington Road	Walker Road	441
Cedar Hills Boulevard bike lanes	US 26	Foothill Drive	84
6th Street bike lanes	Murray Boulevard	Menlo Drive	210
Murray Boulevard bike lanes (west side of Murray Boulevard)	Farmington Road	approximately 200 ft south of TV Highway	42
Denney Road bike lanes	Bel Aire Drive	Scholls Ferry Road	319
Allen Boulevard bike lanes	approximately 200 ft east of Western Avenue	Scholls Ferry Road	193
Western Avenue bike lanes	Beaverton-Hillsdale Hwy	Allen Boulevard	294
Beaverton-Hillsdale Hwy bike lanes	Western Avenue	91st Avenue	235
91st Avenue bike lanes	Beaverton-Hillsdale Hwy	Canyon Road	249
Old Scholls Ferry Road	Murray Boulevard	175th Avenue	781
Priority: Construct bike lanes with roadway improvement projects			
125th Avenue bike lanes	Hall Boulevard	Brockman Road	263
Farmington Road bike lanes	Murray Boulevard	172nd Avenue	540
Farmington Road bike lanes	approximately 500 ft east of Lombard	approximately 500 ft west of Lombard	75
Walker Road bike lanes	ORE 217	Canyon Road	285
Walker Road bike lanes	Cedar Hills Boulevard	Lynnfield Lane	131
Walker Road bike lanes	178th Avenue	185th Avenue	270
Millikan Way bike lanes	Hocken Avenue	Cedar Hills Blvd	79
170th Avenue bike lanes	Rigert Road	Alexander Street	701
170th/173rd Avenue bike lanes	Baseline Road	Walker Road	300
170th Avenue bike lanes	Alexander Street	Baseline/Jenkins	499
173rd Avenue bike lanes	Walker Road	Cornell Road	323
Hart Road bike lanes	Murray Boulevard	167th Avenue	435
Hart Road bike lanes	Hall Boulevard	Murray Boulevard	450
Hart Road/Bany Road bike lanes	167th Avenue	170th Avenue	60
Cornell Road bike lanes	158th Avenue	185th Avenue	450

Project	From	To	Approximate Cost
Murray Boulevard bike lanes	Old Scholls Ferry Road	Scholls Ferry Road	150
Oak Street/Davis Road/Allen bike lanes	Murray Boulevard	170'' Avenue	420
Allen Boulevard bike lanes	ORE 217	Murray Boulevard	255
Allen Boulevard bike lanes	ORE 217	approximately 200 ft west of Western Ave	94
Nora-Beard Road bike lanes	175'' Avenue	155th Avenue	435
Weir Road	175'' Avenue	155'' Avenue	390
175th Avenue-Rigert Road bike lanes	170'' Avenue	ORE 210	1,028
Bicycle Action Plan Projects Total Cost:			**$14,813**

TRANSIT

Currently, there are twenty bus routes which serve Beaverton. Much of the existing route structure will be modified to access and integrate light rail transit (LRT) service. The future needs include providing service to activity centers that are created by future development in Beaverton. These activity centers will have significant employment generation and will be destinations for many people.

The City provides information regarding service planning individually to Tri-Met through Tri-Met's Senior Service Planner responsible for this area and regionally to Washington County. Several public meetings were held for the Transit Choices for Livability public outreach effort in which Beaverton gave 'Tri-Met information for improving the transit system. Tri-Met is working on a sketch plan for proposed transit service integrating Westside Light Rail and will have preliminary sketches available for public workshops in the fall of 1997.

Tri-Met has implemented community transit pilot projects in east and southwest Beaverton. In east Beaverton, a new shuttle serves the industrial area of east Beaverton with 3,000 to 5,000 employees. This shuttle provides connections to other Tri-Met service at the Beaverton Transit Center from an area 'where there is currently no service. In Southwest Beaverton, a new shuttle connects SW Beaverton with the Beaverton Transit Center.4

The ranking of the transit strategies evaluated by the Traffic Commission and public participants follows, from most important to least important:

- Provide direct access to/from Light Rail Transit (MAX) by integration of bus services
- Provide access to commercial/employment areas
- Provide frequent service
- Provide improved transit amenities
- Provide express routes to regional employment centers
- Dial-a-ride demand responsive
- Provide Park and Ride lots
- Provide access to activity and service centers (schools, etc.)
- Provide access to regional town centers/main streets (i.e. Central Beaverton)
- Encourage enhanced local services

Due to the heavily congested arterial corridors, the City will need to coordinate with Tri-Met on the development of corridor level transit services that can help relieve congestion and forestall more expensive capital infrastructure. Fast Link or high capacity transit services on corridors such as Scholls Ferry Road, Murray Boulevard, Hall Boulevard, TV Highway, Walker Road and Allen Boulevard can link many high employment, regional center and town center areas (consistent with the draft RTP public transportation system).

4 Based on fax transmittal received from Dennis Grimmer, Tri-Met, September *26,* 1997.

MOTOR VEHICLES

Based upon the evaluation of intersection level of service, over 62 intersections would operate at or worse than level of service (LOS) E in the 2015 evening peak hour with no improvements (Figure 1-6). This compares with four intersections operating at these levels today. The impact of future growth would be severe without significant investment in transportation improvements. Travel speeds would be below five MPH over long stretches of road (three to eight mile segments of roadways) resulting in unmanageable congestion. Poor performance on freeways and arterials would result in substantial impacts to neighborhood and collector routes. The greatest problem areas can be grouped as follows:

- **Lack of east-west capacity.** Virtually every east-west route in Beaverton from Scholls Ferry Road north to Walker Road would be over capacity.
- **Lack of north-south capacity.** ORE 217, Murray Road, Hall Boulevard, Cedar Hills Boulevard and 185th Avenue to the west all experience demands well in excess of capacity.
- **Lack of freeway crossings results in traffic concentrations at interchanges.** Throughout Beaverton there are few places to cross the freeways except at interchanges (Cabot and Fifth crossing ORE, 217 are examples). This results in interchange areas not only serving high freeway access needs, but through-arterial traffic and local circulation. This results in congestion at interchanges.
- **Lack of mainline freeway capacity.** Both US 26 and ORE 217 would be over capacity without widening. This condition exists on ORE 217 over its entire length. On US 26, the imbalance between demand and capacity is most prevalent east of 185th Avenue.
- **Lack of local street system and connectivity.** Areas adjacent to 170th/185th between Farmington and Cornell and the downtown area are the best examples where all through moving traffic and much of the local access must use the arterials.
- **Lack of intersection turning capacity.** Many intersections experience LOS F conditions, not for need of through capacity, but the need for additional right or left turning capacity.
- **Lack of adequate means to cross arterials.** Traffic volume increases are such that the ability to cross or access arterial/collector routes in the future is very difficult. Traffic signal control must be planned to allow adequate control for autos, bikes and pedestrians, while not resulting in disruption caused by placing signals at low priority locations, such as private site driveways, or at locations too close to existing traffic signals.

A coordinated set of multi-modal improvements to the roadway system were developed, (outlined in Figures 1-7, and Table 1-3. Figure 1-8 summarizes the motor vehicle master plan, indicating the number of lanes to assist in identifying future right of way (ROW). Several roadway connections will be needed within neighborhood areas to reduce out of direction travel for vehicles, pedestrians and bicyclists (as outlined in Chapter 8). In preparing the functional classification map, arrows were used to indicate desired connection points and access links to arterial or collector roadways. In each case, these connections are aimed at meeting the goal of improved connectivity in the community. To protect existing neighborhoods from potential traffic impacts of extending stub end streets, connector roadways should incorporate neighborhood traffic management into their design and construction. Neighborhood traffic management devices could include speed humps, traffic circles, curvilinear street design, or other measures devised to constrain vehicle speeds and to discourage non-neighborhood through traffic.

City of Beaverton
Transportation System Plan

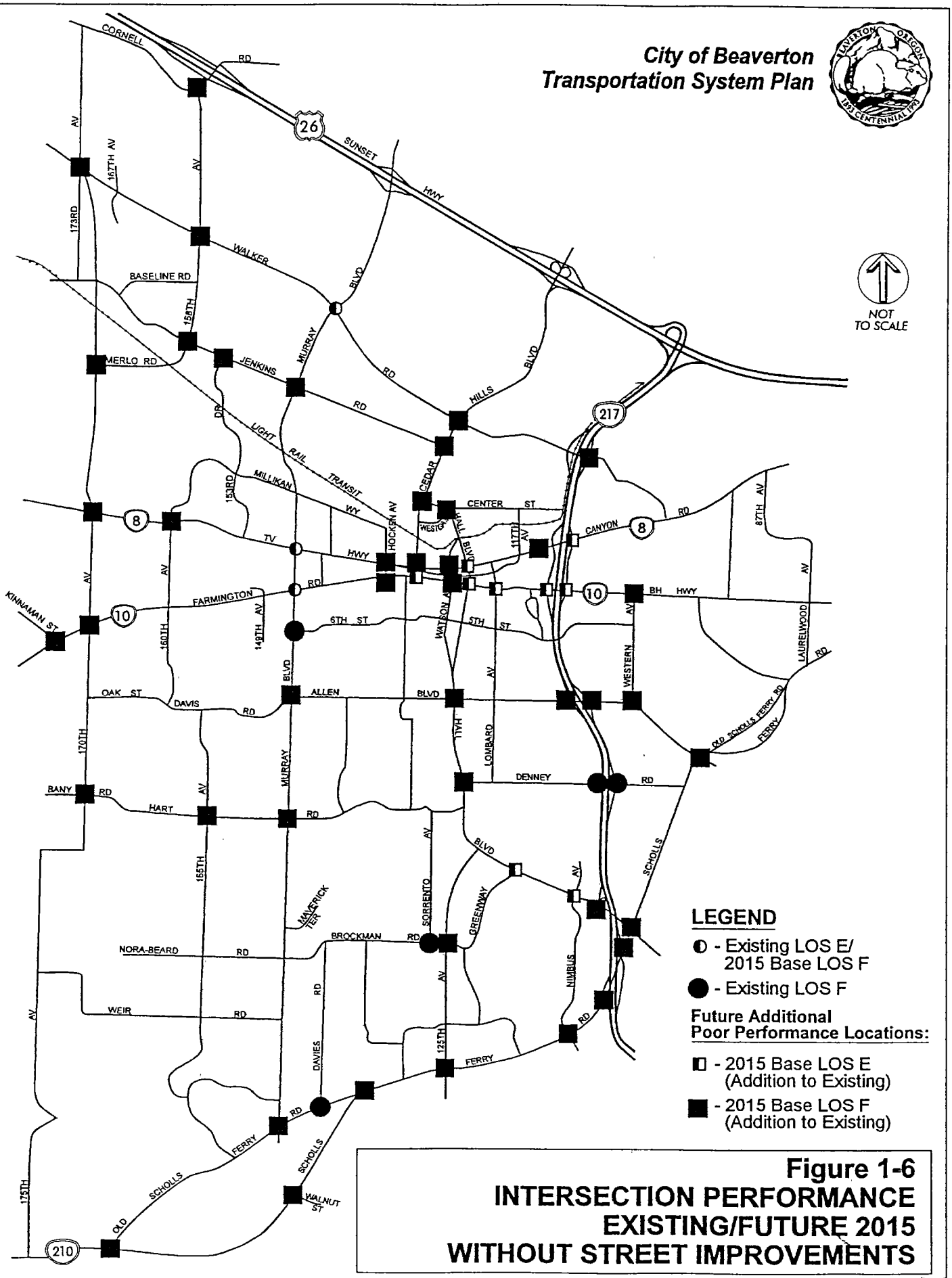


Figure 1-6
INTERSECTION PERFORMANCE
EXISTING/FUTURE 2015
WITHOUT STREET IMPROVEMENTS

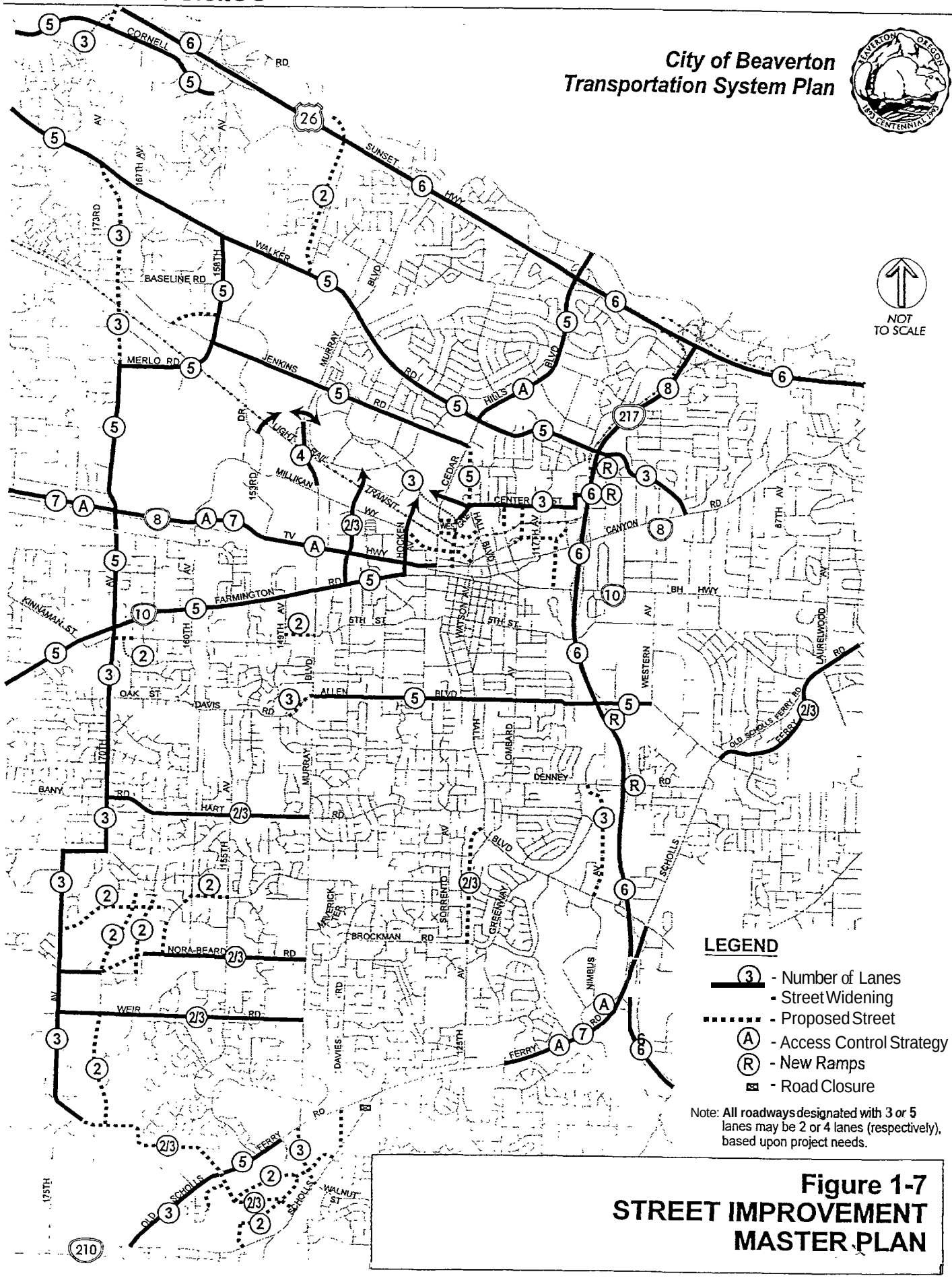


Figure 1-7
STREET IMPROVEMENT MASTER PLAN

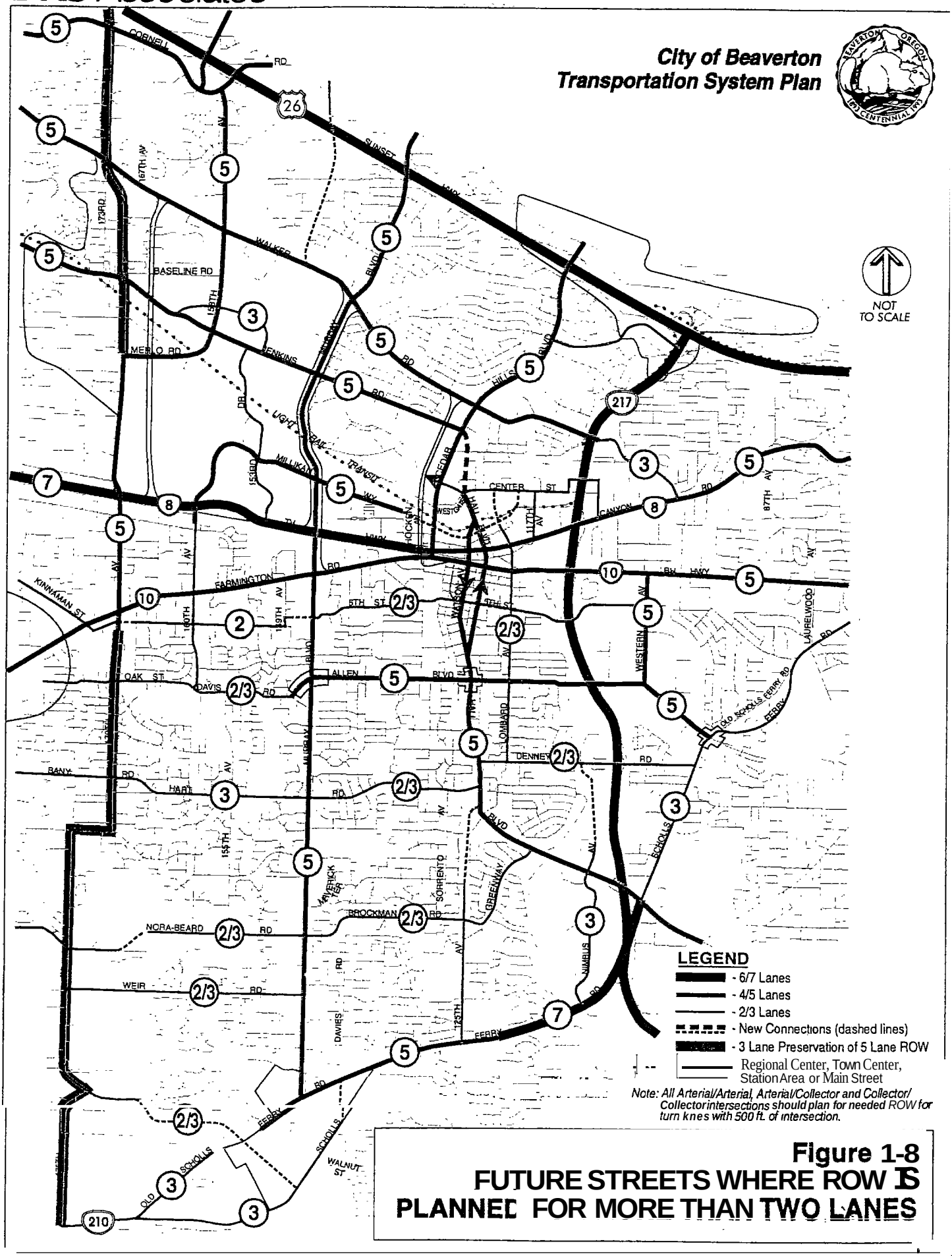


Figure 1-8
FUTURE STREETS WHERE ROW IS PLANNED FOR MORE THAN TWO LANES

Roadway/Intersection	Improvement	Jurisdiction	cost
Project Included in the RTP/MSTIP/STIP/CIP Funding Programs			
Farmington Road	Widen to 5 lanes with bike lanes from Murray Boulevard to 173rd Avenue	Wash Co/ODOT	$ 12,000,000
Farmington Road	Widen to 5 lanes with bike lanes from 173rd to 209th	ODOT	$ 26,288,000
Scholls Ferry Road	Add turn lanes/widen/realign Scholls Ferry/Old Scholls Ferry city limits to 175th	ODOT/Wash Co	$ 4,200,000
170th Avenue	Widen to 3 lanes with S/W and B L Rigert to Blanton to Alexander	Wash Co/MSTIP	$ 12,400,000
170th/173rd Avenue	Construct/widen road to 3 lanes with S/W and B/L Baseline Road to Walker Road	Wash Co/MSTIP	$ 3,100,000
Jenkins: Murray to 158th	Widen to 5 lanes MM	Wash Co.	$ 1,700,000
Jenkins: Cedar Hills to Murray	Widen to 3 lanes MM	Wash Co.	$ 2,800,000
Walker Rd: Murray to 185th	Widen to 5 lanes with bike lanes and sidewalks	Wash Co	$ 10,800,000
Cornell Road: Bethany to 179th	Widen to 5 lanes with bike lanes and sidewalks	Wash Co	$ 3,100,000
Murray Boulevard Overcrossing	Widen to four lanes Millikan to Terman	Wash Co.	$ 4,700,000
Lombard: Broadway to Farmington	Realign roadway to align with segment to the north (3 lanes)	City/MSTIP	$ 1,600,000
Davis Road	Widen road and add bike and pedestrian facilities from Allen to 170th Avenue.	City/MSTIP	$ 4,300,000
Lombard: LRT to Center	Extend 3 lane section with sidewalks	City	$ 1,700,000
Allen: Menlo to Main	Widen to 5 lanes	City	$ 3,100,000
125 Avenue: Greenway to Hall	Extend 3 lane section with sidewalks	City	$ 10,000,000
6th/Division: Murray to 149th	Extend 2 lane roadway	City	$ 700,000
Millikan: Hocken to Cedar Hills	Extend Millikan to the east to connect to Cedar Hills at Henry Street	City/MSTIP	$ 2,700,000
Canyon Road: ORE 217 to 117th	Provide median access control, relocate traffic signal, add turn lanes	ODOT	$ 5,950,000
US 26: ORE 217 to Murray	Widen highway to 6 lanes and add braided ramps	ODOT	$ 13,797,000
ORE 217: US 26 to Canyon	Widen highway and complete ramp work	ODOT	$ 30,500,000
ORE 217: TV Hway to 72nd	Widen highway to 6 lanes and provide auxiliary lanes to freeway	ODOT	$ 60,000,000
Hall Boulevard at Scholls Ferry	Provvide southbound right turn lane	ODOT	$ 250,000
Murray Boulevard	Traffic signal interconnect Farmington to Millikan	ODOT	$ 35,000
SUBTOTAL OF PROJECTS IN FUNDING PROGRAMS			**$ 215,720,000**
Projects NOT included in current funding programs			
US 26: 185th to Murray	Widen highway to 6 lanes, install auxiliary lanes as warranted between interchanges	ODOT	$ 23,700,000
ORE 217: Walker/Cabot/Canyon Braid	Braid ramps between Canyon and Walker/Cabot split diamond	ODOT	$ 20,800,000
ORE 217: Denny/Allen CD		ODOT	$ 8,600,000
TV Highway: Cedar Hills to 185th	Widen to 7 lanes/MM	ODOT	$ 33,200,000
TV Highway: 117th to Hillsboro	Access Control strategies to improve lane capacities	ODOT	$ 15,000,000
Farmington: Hocken to Murray	Widen to 5 lanes/MM	ODOT/City	$ 4,100,000

Table 1-3
Motor **Vehicle Improvement List**

170th: Division to Blanton	Widen to 5 lanes/MM	Wash Co	$ 2,500,000
170th: Alexander to Merlo	Widen to 5 lanes/MM	Wash Co	$ 2,800,000
170th: Merlo to Baseline	Widen to 3 lanes/MM	Wash Co	$ 2,100,000
173rd: Cornell to Bronson	Build new 2/3 lane roadway with grade separation of US 26 connecting to 174th/MM	Wash Co/ODOT	$ 14,800,000
158th/Merlo: 170th to Walker	Widen to 5 lanes/MM	City	$ 4,000,000
Cedar Hill Blvd: Walker to US 26	Complete 5 lane roadway/MM/Access Control	Wash Co	$ 2,100,000
143rd/Meadow: Science Park - Walker	Establish a new 2 lane roadway connection, including a grade separation of US 26/MM	Wash Co	$ 19,900,000
Walker Road: Murray to ORE 217	Widen to 5 lanes/MM	Wash Co	$ 26,500,000
Jenkins Road: Murray to Cedar Hills	Widen to 5 lanes/MM	Wash Co	$ 3,800,000
Scholls Ferry: Hall to Old Scholls	Widen to 7 lanes/MM	Wash Co	$ 15,300,000
Murray: Old Scholls to Scholls Ferry	Extend Murray south to Walnut as 3 lane road/MM	Wash Co.	$ 3,500,000
Bany/Hart: 170th to Murray	Improve to 2-3 lanes/MM	Wash Co	$ 3,800,000
Beard/Nora: Murray to 175th	Improve to 2-3 lanes/MM	Wash Co	$ 6,600,000
Center: 114 to Cedar Hills	Widen to 3 lanes	City/Co	$ 3,200,000
Allen: ORE 217 to Western	Widen to 5 lanes/MM	City	$ 1,000,000
Allen: ORE 217 to Murray	Complete 5 lane widening/MM	City	$ 5,400,000
Weir: Murray to 175th	Improve roadway with 3 lanes/MM	City	$ 3,700,000
Davies: Old Scholls to Scholls Ferry	Close Scholls at Old Scholls, Extend Davies south to Scholls 3 lanes/MM	City	$ 1,500,000
Hall north of Center	Extend new 5 lane roadway north of Center to connect with Jenkins at Cedar Hills/MM	City	$ 11,000,000
Center: Cedar Hills to Karl Braun	Extend public roadway 3 lanes/MM	City	$ 1,500,000
141st: Tek to Farmington	Realign and extend 2/3 lane roadway/MM	City	$ 2,800,000
Nimbus Avenue: Hall to Denney	Extend 2/3 lane roadway/MM	City	$ 8,300,000
Local Streets: Downtown Area	Henry Street, Rose Biggi, 114th/Griffith, Broadway extension and others per Regional Ctr	City	$ 25,600,000
Local Streets: NW Beaverton	185th/Cornell/170th/TV Highway - add local connectivity	City	$ 4,900,000
Local Streets: SW Beaverton	175th/Weir/155th/Sexton Mountain - add local connectivity	City	$ 3,900,000
Local Street: Scholls	Scholls Ferry to 175th north to Alvord - add local and collector connectivity	City	$ 6,600,000
Intersection Improvements	Addtion of intersection turning lanes	City/County/State	$ 57,175,000
Traffic Signals	Addition of 50 traffic signals per plan	City/County/State	$ 12,500,000
SUBTOTOAL OF PROJECTS NOT IN CURRENT FUNDING PROGRAMS			**$ 362,175,000**
TOTAL OF MOTOR VEHICLE MASTER PLAN			**$ 577,895,000**
NOTE: MM - **Multi-modal improvement including sidewalks and bicycle lanes**			

Functional Classification

The current functional classification of streets in Beaverton was updated to reflect on-going regional planning and the functional needs of Beaverton. Classifications of principal arterial (freeway), arterial, collector, neighborhood and local have been developed based upon connectivity, which is the best indicator of function. Figure 1-9 summarizes the functional classification recommendations.

Neighborhood Traffic Management

Neighborhood Traffic Management (NTM) is a term that has been used to describe traffic control devices typically used in residential neighborhoods to slow traffic. A number of streets in Beaverton have been identified as neighborhood routes which would be appropriate locations for potential of NTM applications. It is recommended that the City develop a NTM program. This program can build off City experience and success and be used to prioritize implementation and address issues on a systematic basis rather than a reactive basis. Most importantly, the goals and policies of this plan calls for land use development to outline impacts to neighborhoods in an attempt to have new land uses design in NTM features to avoid future problems

Trucks

Efficient truck movement plays a vital role in the economical movement of raw materials and finished products. The establishment of through truck routes provides for this efficient movement while at the same time maintaining neighborhood livability, public safety and minimizing maintenance costs of the roadway system. To accomplish this, a map of through truck routes in Beaverton has been developed. This is aimed at addressing the through movement of trucks, not the local deliveries. The objective of this route designation is to allow these routes to focus on design criteria that is "truck friendly", i.e. 12 foot travel lanes, longer access spacing, 35 foot (or larger) curb returns and pavement design that accommodates a larger share of trucks.

Maintenance

Preservation, maintenance and operation are essential to protect the City investment in transportation. The majority of current gas tax revenues are used to maintain the transportation system. With increasing road inventory and the need for greater maintenance of older facilities, protecting and expanding funds for maintenance is critical. A key concept is that pavements deteriorate 40 percent in quality in the first 75 percent of their life. However, there is a rapid acceleration of this deterioration later, so that in the next 12 percent of life, there is another 40 percent drop in quality. A pavement management system can identify pavements before this rapid deterioration starts so that preventative maintenance can be applied. These fixes are generally one-fifth to one-tenth the cost required after a pavement is 80 percent deteriorated.

DKS Associates

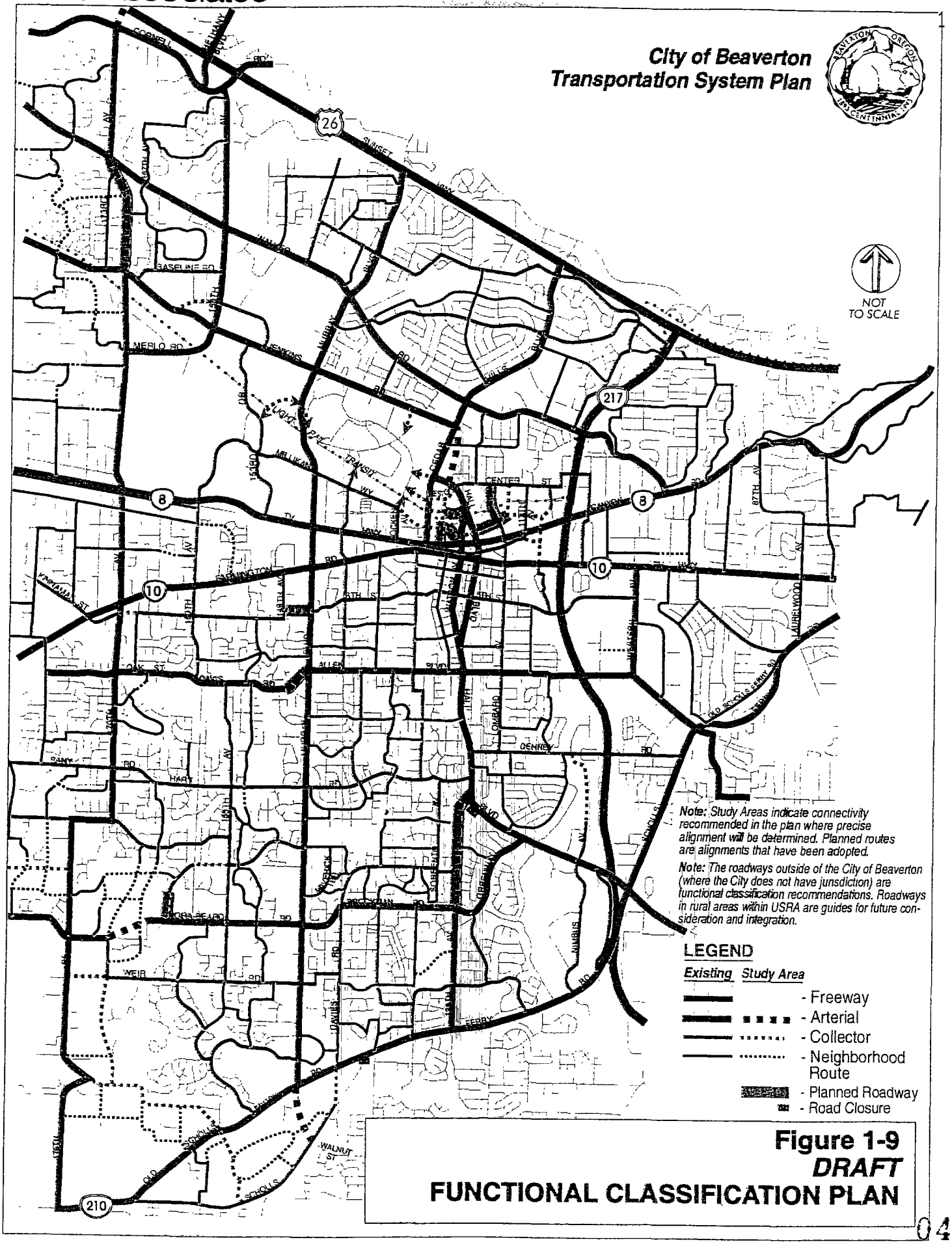


Figure 1-9
DRAFT
FUNCTIONAL CLASSIFICATION PLAN

TRANSPORTATION DEMAND MANAGEMENT

Transportation Demand Management (TDM) is the general term used to describe any action that removes single occupant vehicle trips from the roadway network during peak travel demand periods. The Transportation Planning Rule outlines a goal of reducing vehicle miles traveled (VMT) per capita. TDM measures, applied on a regional basis, can be an effective tool in reducing vehicle miles traveled. The strategies for transportation demand management were identified and explored working with the City's Traffic Commission, TSP Technical Advisory Committee and the public.

State, regional and county policy5 all call for encouraging and promoting transportation demand management. The proposed policy of this plan calls for the City to support TDM. Unlike bicycles, pedestrians and motor vehicles, implementation of this policy does not necessarily require capital infrastructure. In fact, much more of TDM is policy and management rather than concrete and asphalt. Because of this, the recommended TDM plan for Beaverton consists of the following:

- Encourage development that effectively mix land uses to reduce vehicle trip generation.
- Develop consistent conditions for land use approval that require all future employment related land use developments to agree to reduce peak hour trip making, through individual or collective TDM efforts.
- Support continued efforts by Washington County, ODOT, DEQ, Tri-Met and the Westside Transportation Alliance to develop productive TDM measures that reduce VMT and peak hour trips.
- **As** a capital oriented element, coordinate with ODOT and Tri-Met on the development of park- and -ride transit station or freeway interchange locations in Beaverton (these are locations proven to be successful in attracting carpool/transit use).

OTHER MODES

The are four other modes discussed in the TSP: rail, pipeline, air and water. Beaverton has no airfields. There is a heliport at the St. Vincent's Hospital used for life flight. There are not navigable waterways in Beaverton. There are some natural gas pipelines in Beaverton, but no plans were identified for expansion. All low-density rail lines within the vicinity of Beaverton are operated by Portland & Western (P&W), a sister company of Willamette & Pacific (W&P) Railroad and a subsidiary of Genesee & Wyoming Incorporated. Trains operate in the Beaverton area seven days per week at various times throughout the day. The current frequency of train traffic is not anticipated to change. However, the number of cars per train will vary and is expected to increase over time depending on the demand to transfer freight by rail. W&P and P&W are focusing on long-term growth through acquisition of existing trackage to expand existing networks that can aggressively compete with trucks.

5 *Transportation Planning **Rule.*** Section 660-12-035; Regional Transportation Policy, Metro, July 1996, page 1-39; and Washington County Transportation Plan, October 1988, page 30.

FUNDING

Funding **Sources and** Opportunities

There are several potential funding sources for transportation improvements. These are sources which have been used in the past by agencies in Oregon. In most cases, these funding sources are sufficient to fund transportation improvements for local communities. Due to the complexity of today's transportation projects, it is necessary to seek several avenues for funding projects. Unique or hybrid funding of projects generally will include these funding sources, combined in a new package. Table 1-4 summarizes several funding options available for transportation improvements. Examples of funding sources which generally do not provide funding for roadways include: Property Tax General Funds, Car Rental Tax, Transient Lodging Tax, Business Income Tax, Business License Tax and Communication Services Tax.

Within the Portland region, funding for major transportation projects is typically brought to a vote of the public for approval. Specific projects are outlined for use of public funds, such as the Major Streets Transportation Improvement Program (MSTIP) in Washington County or the Westside Light Rail Project. Because of the need to gain public approval for transportation funding, it is important to develop a consensus in the community which supports needed transportation improvements. That is the value of the Transportation System Plan. In most communities, where time is taken to build a consensus regarding a transportation plan, existing funding sources similar to those noted can be packaged together to address funding needs.

COSTS

Order of magnitude cost estimates were developed for the projects identified in the auto, bicycle and pedestrian elements. Costs estimates from the RTP or MSTIP projects in Beaverton were used in this study. Other projects were estimated using general unit costs for transportation improvements. Many of the project costs were been developed by Washington County, Metro or ODOT **for** projects in the RTP. Where the TSP identified the comparable needs, these project costs were utilized. Table 1-5 summarizes the total costs outlined in the TSP. Table 1-6 identifies the known revenue sources. Current transportation revenue for the City of Beaverton can be summarized as noted in Table 1-6. Presuming a constant funding level for 20 years, this would potentially fund less than $300,000,000 of transportation projects (maintenance, operation, construction).[6] There is a substantial gap between the TSP outlined funding needs and the current sources of funding ($380 million = 280-660). The TSP outlines several methods for increasing transportation funding or seeking alternative solutions to better balance transportation costs and revenue.

6 Using the RTP as a guide for regional allocation of funding **for** transportation in Beaverton, the projects listed in the financially constrained RTP network that are in Beaverton total about $215 million.

Table 1-4
Potential Transportation Revenue Sources

Type	Description
System Development Charges (SDC)	SDC's or Traffic Impact Fees have been used in Oregon and throughout the United States. The Cornerstone to development of SDC's involves two principals: 1) there must be a reasonable connection between growth generated by development and the facilities constructed to serve that growth (generally determined by level of service or connectivity); and 2) there must be a general system-wide connection between the fees collected from the development and the benefits development receives. Charges are typically developed based on a measurement of the demand that new development places on the street system and the capital costs required to meet that demand. Washington County has a traffic impact fee (TIF) which was voter approved. SDC's do not require a vote of the public.
Gas Tax	The State, cities and counties provide their basic roadway funding through a tax placed on gasoline. State gas tax is approved legislatively while local gas taxes are approved by voters. State funds are dedicated to roadway construction and maintenance, with one percent allocated to pedestrian and bicycle needs. This tax does not fall under the Measure 5 limits, because it is a pay-as-you-go user tax. Washington County has a one percent gas tax and has considered a recent ballot initiative to increase this tax.
Other Motor Vehicle Fees	The state collects truck weight mile taxes, vehicle registration fees, and license fees. These funds are pooled together with the gas tax in distributing state motor vehicle fees to local agencies. Annual motor vehicle fee allocations to Washington County amount to about $100 million (including gas tax). Washington County is currently considering raising motor vehicle registration by $15 per year.
Street Utility Fees	Certain cities have used street utility fees for maintenance., The fees are typically collected monthly wtth 'water or sewer bills. These funds are not for capacity improvements, but for Supporting local roadway maintenance based upon land use type and trip generation. This frees other revenue sources, for capacity needs. Utility fees can be vulnerable to Measure 5 limitations, unless they include provisions for property owners to reduce or eliminate charges based on actual use.
Exactions	Frontage improvements are common examples of exaction costs passed onto developers. These have been used to build much of Beaverton's local street system. Developers of sites adjacent to unimproved roadway frontage are responsible to provide those roadway improvements. Developers of sites adjacent to improvements identified as SDC projects can be credited the value of their frontage work, which is included in the SDC project-list cost estimate.
Local Improvement Districts (LID)	LIDs provide a means for funding specific improvements that benefit a specific group of property owners. LIDs require owner/voter approval and a specific project definition. Assessments are placed against benefiting properties to pay for improvements. LIDs can be matched against other funds where a project has system wide benefit, beyond benefiting the adjacent properties. Fees are paid through property tax bills.
Special Assessments	A variety of special assessments are available in Oregon to defray costs of sidewalks, curbs, gutters, street lighting, parking and CBD or commercial zone transportation improvements. These assessments would likely fall within the Measure 5 limitations. In Washington County, other examples of transportation assessments include MSTIP (Major Streets Transportation Improvement Program) and the local maintenance property tax levy. Both of these are property tax assessments which have been imposed through votes of the public. A regional example would be the Westside LRT where the local share of funding was voter approved as an addition to property tax.
Driveway Fees	Gresham collects a Public Street Charge and a Driveway Approach Permit Fee. These fees are project specific and vary year to year based upon development permits. These funds are used for city maintenance and operation.
Employment Taxes	Tri-Met collects a tax for transit operations in the Portland region through payroll and self employment taxes. Approximately $120 million are collected annually in the Portland region for transit.
Oregon Special Public Works Fund	The Special Public Works Fund (SPWF) Program was created by the legislature in 1985 as an economic development element of the Oregon Lottery. The program provides grants and loan assistance to eligible municipalities. There has been limited use of these funds on urban arterials. This is commonly used on state highways (a recent example being Immediate Opportunity Funds used for the US 26/Shute interchange associated with Nike)

Table 1-5

Transportation Element		Approximate Cost
Street Improvement Projects:	Currently Funded	$215,720,000
	Unfunded	$362,175,000
Signal Coordination/ITS Systems ($275,000/yr)		$5,500,000
Road Maintenance (assumes 4% per year growth)		$51,000,000
Bicycle Master Plan		$10,730,000
Pedestrian Action Plan		$7,100,000
Pedestrian/School Safety Program ($10,000/yr)		$200,000
Sidewalk Grant Program ($50,000/yr)		$1,000,000
Park-and-ride Expansion (1,000 spaces)		$2,000,000
Neighborhood Traffic Management (Initial Program)		$1,500,000
Neighborhood Traffic Management ($75,000/yr)		$1,500,000
TSP Support Documents (i.e. Design standard update, TSP updates, ...)		$500,000
TDM Support ($50,000/yr)		$1,000,000
TWENTY YEAR TOTAL in 1997 Dollars		$660,175,000

Table 1-6
Estimation of Available Transportation Funding From Existing Sources
1997 Dollars (approximate)

Source	Approximate Annual Revenue
State Motor Vehicle Fees to City	$3,000,000
Beaverton Tax Base Allocated by Signals/NTM	$775,000
County Gas Tax to City	*$250,000*
TIF to City	$1,200,000
Miscellaneous	*$250,000*
MSTIP to City (approximate)	*$2,500,000*
State/Federal Fees use in City (approximate, assumes 35% of allocation used for capital)	*$6,000,000*
Annual TOTAL	**$14,000,000**
20 YEARS OF CURRENT FUNDING	**$280,000,000**

Chapter 2
Goals and Policies

BACKGROUND

These goals and policies have been developed to guide the City's twenty year vision of transportation system needs. They replace the current goals and policies in the Beaverton Comprehensive Plan. State Transportation Pianning Rule requirements adopted since the time that the current City goals were developed calls for a more comprehensive and balanced approach to transportation policy, addressing walking, bicycling, transit, rail, truck and other modes as well as automobile travel.

These goals and policies are a result of widespread citizen participation and technical work by staff and the consultant. Public presentations were made regarding the existing transportation system and future needs based upon City and regional growth in the next twenty years. Using input from the public presentations, goals and policies were developed.

The City of Beaverton Draft TSP Goals and Policies consist of seven goals with related policies organized under each goal. The goals are simple, brief guiding statements which describe a desired end state, and the policies focus on how goals will be met by describing the types actions that will contribute to achieving the goal. Figure **2-1** provides an outline of the relationship between goals, policies, actions and implementation. The existing **City** of Beaverton Objectives and Policies in the Transportation Element of the Comprehensive Plan have been incorporated into these Goals and Policies, reflecting other regional policy from the state, region and adjacent jurisdictions.

Below many of the policies, the italic text represents a detailed description about the intent of the policy. The italics are nat policy and cannot be appealed in land use decisions. The Draft TSP Goals and Policies are linked to mode maps provided in the City **of** Beaverton TSP. The TSP will include master plan maps for automobiles, pedestrians, bicycles, transit and other modes.

From Vision to Action

Beaverton Transportation System Plan

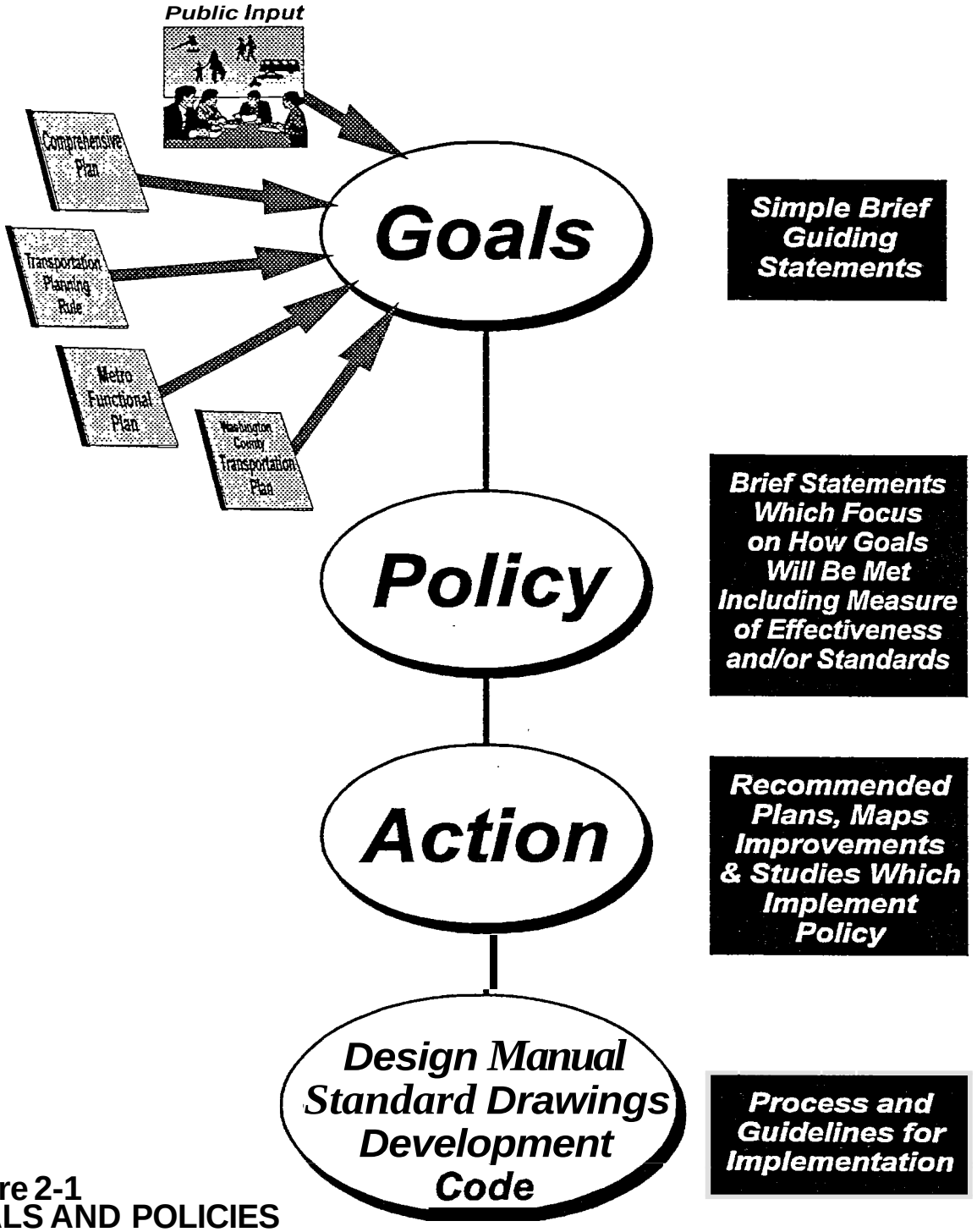


Figure 2-1
GOALS AND POLICIES RELATIONSHIP

Goal 1. Transportation facilities designed and constructed in a manner to enhance Beaverton's livability.

Key Elements: Aesthetics; Environment; Neighborhood Traffic Management, Regional Facilities; Managing Growth.

1. Maintain the livability of Beaverton through proper location and design of transportation facilities.

   Design streets and highways to respect the characteristics of the surrounding land uses, natural features, and other community amenities. Recognizing that the magnitude and scale of capital facilities also affect aesthetics and environmental quality, the City will require design plans and impact analysis for arterial and collector streets within the City. The development review process will reflect the goals of this plan through the Transportation Planning Rule ordinances developed for the City.

2. Consider noise attenuation in the design (including redesign and reconstruction) of arterial streets immediately adjacent to residential development.

3. Locate and design recreation/bicycle pathways so as to balance the needs of human use and enjoyment with resource preservation in areas identified for their Significant Natural Resource values.

   Locate pathways to have the lowest level of impact on a stream or sensitive riparian vegetation. Pathways through natural resource areas and/or significant wildlife habitat will be intended for day use only and will have no provisions for night illumination. If a natural resource is so delicate that any degree of human intrusion will irreparably destroy it, preservation of the resource will take precedence over the proposed path.

4. Meet the appropriate requirements of state and federal resource agencies for wetlands or stream corridors in development of City transportation facilities.

5. Protect neighborhoods from excessive through traffic and travel speeds while providing reasonable access to and from residential areas. Build local, neighborhood and collector streets to minimize speeding.

   Develop and maintain a program of street design standards and criteria for neighborhood traffic management for use in new development and existing neighborhoods. Measures to be developed may include narrower streets, speed humps, traffic circles, curb/sidewalk extensions, curving streets, diverters and/or other measures.

6. Require new commercial development to identify traffic plans for residential streets where increased cut-through traffic may occur.

Where development adds 20 or more through trips in the evening peak hour on a neighborhood route and local street, traffic management plans should be developed to reduce the occurrence of cut-through traffic in residential areas.

Goal 2. A balanced transportation system.

Key Elements: Bike, pedestrian, transit, other modes *(refer to system maps)*

1. Develop and implement public street standards that recognize the multi-purpose nature of the street right-of-way for utility, pedestrian, bicycle, transit, truck, and auto use and recognize these streets as important to community identity as well as providing a needed service.

   Develop and maintain a series of system maps and design standards for motor vehicles, bicycle, pedestrian, transit and truck facilities in Beaverton.

2. Provide connectivity to each area of the City for convenient multi-modal access.

   Require the provision of an adequate local public street system for both residential and non-residential development. Give particular attention to large blocks of commercially developed properties to assure that local circulation has adequate public streets and is not forced to utilize only private parking and driveway areas or the major street systems to conduct local trips. Develop and maintain appropriate on-site loading, parking, and internal circulation standards for private development based upon adopted standards in the City's development code.

3. Develop a safe, complete, attractive and efficient system of pedestrian ways and bicycle ways, including bike lanes, shared roadways, off-street pathways and sidewalks according to the pedestrian and bicycle system maps.

   Use the City of Beaverton Engineering Design Manual Standards in design of facilities. Conform to the design guidelines set forth in the "Guide for Development of New Bicycle Facilities" (current edition) as published by the American Association of State Highway and Transportation Officials (AASHTO) and the Oregon Bicycle Pedestrian Plan adopted by the Oregon Transportation Commission (OTC). Coordinate with Washington County, Metro, ODQT and the Tualatin Hills Park and Recreation District (THPRD). Bicycle and pedestrian facilities should be provided and designed to accommodate the unique requirements of various user groups and trip types (including school trips, commuter trips, neighborhood circulation trips, and recreation trips). Locate pathways to provide the "shortest path" between origins and destinations. Accommodate non-automobile movements specifically by bicyclists and pedestrians within neighborhoods. Sidewalks will continue to be the responsibility of fronting property owners. Maintain the opportunity for citizen groups to fund pathway improvements through the local improvement district process. Continue to recognize the importance of walking and bicycling as a form of transportation and recreation.

4. Design arterial and collector streets to accommodate pads for public transit.

Develop and maintain design standards for transit (shelters, turn radii, major transit stops). The City and Tri-Met will work together to improve transit service in Beaverton and to improve pedestrian facilities leading to bus stop waiting areas, as well as making the waiting areas themselves safe, comfortable, and attractive.

5. When development or redevelopment of land occurs, provide bike and pedestrian facilities that are consistent with standards and policies of this plan.

Goal 3. A safe transportation system.

Key Elements: Design manual/standard drawings, School safety, Maintenance, Access Management, Accident Reduction

1. Improve traffic safety through a comprehensive program of engineering, education and enforcement.

2. Design streets to serve their anticipated function and intended uses as determined by the comprehensive plan.

Develop a functional classification system for Beaverton which meets the City's needs and respects needs of other agencies including (Washington County, ODOT, Tri-Met and Metro).

3. Enhance safety by prioritizing and mitigating high accident locations within the City.

Engineering and construction of facilities will follow standards presented and adopted by the City. City facilities will conform to the Manual of Uniform Traffic Control Devices (MUTCD), as supplemented and adopted by the Oregon Transportation Commission (OTC). Work with Washington County to periodically review traffic accident information in an effort to systematically identify, prioritize and remedy safety problems. Identify roadway sections, bridges and intersections with traffic safety problems and develop a list of projects necessary to eliminate deficiencies. Program and implement safety improvements through the Capital Improvement Program and development review processes. The City will develop an accident record evaluation program working cooperatively with Washington County and ODOT.

4. Establish rights-of-way at the time of site development and officially secure them by dedication of property.

Right-of-way required will be 98 feet for a five lane roadway, 74 feel for a three lane roadway and 60 feet for a two lane roadway; each additional turning lane will require an additional 12 feet of right-of-way.

5. Designate routes to schools for each school and any new residential project.

School district will work with community and City in developingplans.

6. Construct pathways onty where they can be developed with satisfactory design components that address safety, security, maintainability and acceptable pathway use.

Although pathways are encouraged to be separated and distant from major streets for most of their length, they are encouraged to converge at traffic controlled intersectionsfor safe crossing. New construction of pathways along residential rear lot lines will not be encouraged unless no comparable substitute alignment ispossible in the effort to connect common attractors or existing segment links. When pathways do follow rear lot lines, design treatments defined in the Beaverton Bikeway and Pedestrian Facility Construction Standards will befollowed to minimize the impacts toprivate property.

7. Provide satisfactory Ievels of maintenance to the transportation system in order to preserve user safety, facility aesthetics and the credibility of the system as a whole.

Inadequate maintenance levels will result in a rapid depreciation of the community's investment in what is one of the City's most unique recreation and transportation assets.

8. Maintain access management standards for arterial and collector roadways consistent with City, County and State requirements to reduce conflicts between vehicles and trucks, as well as conflicts between vehicles and pedestrians.

Preserve the functional integrity of the motor vehicle system by limiting access per this plan. Require eachparcel of property toprovide and maintain safe access to thepublic street system. No new singlefamily residential driveway will be permitted to have direct access onto an arterial or collector street In residential areas, discourage driveway access onto collector streets; provide access primarily by neighborhood or local streets. Provide non-residential access to arterial and collector streets via routes which do not traverse residential areas. Where access spacing standards cannot be met, consider alternatives such as combining multiple points of access or developing frontage drives and roadways. Use Metro Title 6, Washington County and ODOT Access Management standards as a guide to establish the following access spacing: Arterial, minimum 600feet, maximum 1,000feet; Collector minimum 200feet, maximum 400feet.

9. Ensure adequate access for emergency services vehicles is provided throughout the City.

Develop and maintain a series of guidelines regarding cul-de-sac length and size.

Goal 4. An efficient transportation system that reduces the number of trips and limits congestion.

Key Elements: Transportation Demand Management (TDM), Parking, Level of Service (LOS) standards, Transportation System Management (TSM), Land Use/Development Code

1. Support trip reduction strategies developed regionally, including employment, tourist and recreational trip programs.

   Encourage implementation of travel demand management programs, which reduce the number of single occupant vehicle trips per capita. Shift traffic to off-peak travel hours. Coordinate trip reduction strategies with Washington County, Metro, Westside Transportation Alliance, ODOT, Tri-Met and DEQ. Seek to raise PM peak average vehicle occupancy (AVO) to 1.3 AVO in the evening peak and/or move 50 percent of standard evening peak trip generation outside the peak hour. Educate business groups, employees and citizens about trip reduction strategies and work with business groups, citizens and employees to develop and implement travel demand management programs.

2. Limit the provision of parking to meet regional and state standards.

   Meet Metro Urban Growth Management Functional Plan Title 2 requirements. Establish maximum and minimum parking requirements. Utilize research conducted by DEQ for guidance in determining demand. Reduce parking by ten percent per capita relative to prior parking standards in Beaverton. Minimize impact to neighborhoods.

3. Maintain level of service consistent with regional goals. Reduce traffic congestion and enhance traffic flow through such measures as intersection improvements, intelligent transportation systems and signal synchronization.

   Level of service D, Highway Capacity Manual, Chapter 11 is recommended to balance provision of capacity with level of service and funding. Monitor Washington County's and Metro's current work to develop a regional level of service standard

4. Plan land uses to increase opportunities for multi-purpose trips (trip chaining).

   Multi-stop trips are an effective means of trip reduction. A well planned trip with multiple stops in a compact area is much more efficient than various individual trips. Encourage commercial developments in the City *to use new technologies to assist the public in trip chaining.*

5. Require land use approval for proposals for **new** or improved transportation facilities including identification of potential impacts.

   Meet local, state and federal requirements in implementing transportation facilities.

6. Support mixed-use development.

   Mixing of residential and commercial land uses within compact areas that encourage use of alternative modes of travel (walking, biking and transit) has proven to reduce vehicle trips, particularly near major transit stops. Where projects or collective phases of projects generate more than 1000 peak hour vehicle trips, mixing of land uses must be considered (for example, large retail projects mixed with employment, residential and/or entertainment; large office/industrial uses mixed with services).

7. Improve local transit services to increase transit ridership potential.

   Bus service should be available within a 1/4 mile to all residents in Beaverton. Bus service improvements are needed to meet this policy and other policies recommended in this plan. Establish standards necessary for development adjacent to transit streets.

8. Encourage development of regional high capacity transit, including light rail transit and commuter rail.

Goal 5. Transportation facilities which are accessible *to* all members of the community and reduce trip length.

Key Elements: Americans with Disabilities Act (ADA), Connectivity

1. Construct transportation facilities to meet the requirements of the Americans with Disabilities Act.

2. Develop neighborhood and local connections to provide adequate circulation in and out of the neighborhoods.

   Work toward the eventual connection of streets identified on the plan as funds are available and opportunities arise. As a planning guideline, require streets to have connections every 400 to 600 feet for local and neighborhood streets.

Goal 6. Transportation facilities which provide efficient movement of goods.

Key Elements: Freight, Rail, Air, Hazardous Materials

1. Designated arterial routes and freeway access areas in Beaverton are essential for efficient movement of goods; design these facilities and adjacent land uses to reflect the needs of goods movement.

2. Consider grade separation or gate control for all primary railroad crossings of arterial streets.

3. Meet federal and state safety compliance standards for operation, construction and maintenance of rail system.

   Coordinate with service providers to ensure safety and operational compatibility with surrounding uses.

4. Consider existing railroad and air transportation facilities to be City resources and reflect the needs of these facilities in land use decisions.

   Control land uses in airport noise corridors and limit physical hazards to air impacts.

5. Provide safe routing of hazardous materials consistent with federal guidelines and provide for public involvement in the process.

   Work with federal agencies, the Public Utility Commission, the Oregon Department of Energy, public safety providers and ODOT to assure consistent routes, laws and regulations for the transport of hazardous materials.

Goal 7. Implement the transportation plan by working cooperatively with federal, regional and local governments, private sector and citizens and by creating a stable, flexible financial system.

1. Coordinate transportation projects, policy issues, and development actions with all affected governmental units in the area. Key agencies for coordination include Washington County, ODOT, Tri-Met and Metro as well as adjacent cities (Tigard, Hillsboro and Portland.)

   Maintain plan and policy conformance to the Regional Transportation Plan. Seek compatibility with all adjacent county and Cityjurisdiction plans.

2. Participate in regional growth management policy and work with regional agencies to assure adequate funding of transportation facilities to support those policies.

   Work with Washington Countyjurisdictions to develop a consistent growth management policy as it relates to the requirements of the private sector to make transportation improvements needed to accommodate continued growth in the county.

3. Work with Tri-Met to encourage the development of transit improvements.

4. Monitor and update the transportation element of the comprehensive plan so that issues and opportunities related to change are resolved in a timely manner. Develop and update an annual capital improvements program which establishes the construction and improvement priorities of the City and allocates the appropriate level of funding.

5. Utilize the *System Development Charge/Traffic Impact Fee* as an element of an overall funding program to pay for adding capacity to the collector and arterial street system and make safety improvements caused by increased land use development.

   Base the tax/fees upon the total expected cost of making extra capacity and safety improvements over a twenty year period, allocated back to development on a pro rata formula taking into account relative expected future traffic impact of the development in question..

6. Develop a long-range financial strategy to make needed improvements in the transportation system and support operational and maintenance requirements.

   Work with other units of government in the region. This financial strategy will need to consider the appropriate share of motor vehicle fees, impact fees, property tax Ievies and development contributions to balance needs, costs and revenue. View the process of improving the transportation system as that of a partnership between the public (throughfees and taxes) and private sectors (through exactions and conditions of development), each of whom has appropriate roles in thefinancing of these improvements to meet present and projected needs.

OTHER PLANS

The relationship of the TSP to other regional planning documents can be puzzle of activities and plans. Figure 2-2 summarizes the transportation planning puzzle, identifying where the Beaverton TSP fits within the on-going regional context of planning. Many of the most common planning initiatives are reduced to acronyms, which are summarized below:

TPR - Transportation Planning Rule, Statewide Planning Goal 12 developed by Department of Land Conservation and Development (DLCD) to guide transportation planning in Oregon.

OTP - Oregon Transportation Plan, developed by Oregon Department of Transportation (ODOT) to guide transportation development in the state, mandated federally.

RTP - Regional Transportation Plan, developed by metropolitan planning organizations (MPO) to guide regional transportation investment, required to secure federal funding. In Portland this task is performed by Metro (Metropolitan Service District).

TSP - Transportation System Plan, a requirement of the TPR for cities and counties in Oregon to guide local transportation decisions and investments.

Corridor Plan - ODOT planning documents which focus on transportation corridors to specifically outline needs, modes, strategies and effective investment.

Access Management - An ODOT initiative to address improved safety and performance of state highways through control of access commensurate with facility needs. City and County agencies also have standards to address local facilities.

ITS - Intelligent Transportation Systems, use of advancing technology to improve movement of people and goods safely.

TDM - Transportation Demand Management, an element of TSP's, that is a series of actions to reduce transportation demand during peak times.

ECO - Employee Commute Options, a TDM program required by Department of Environmental Quality (DEQ) of employers of 50 or more **staff** in the urban area to reduce vehicle trips.

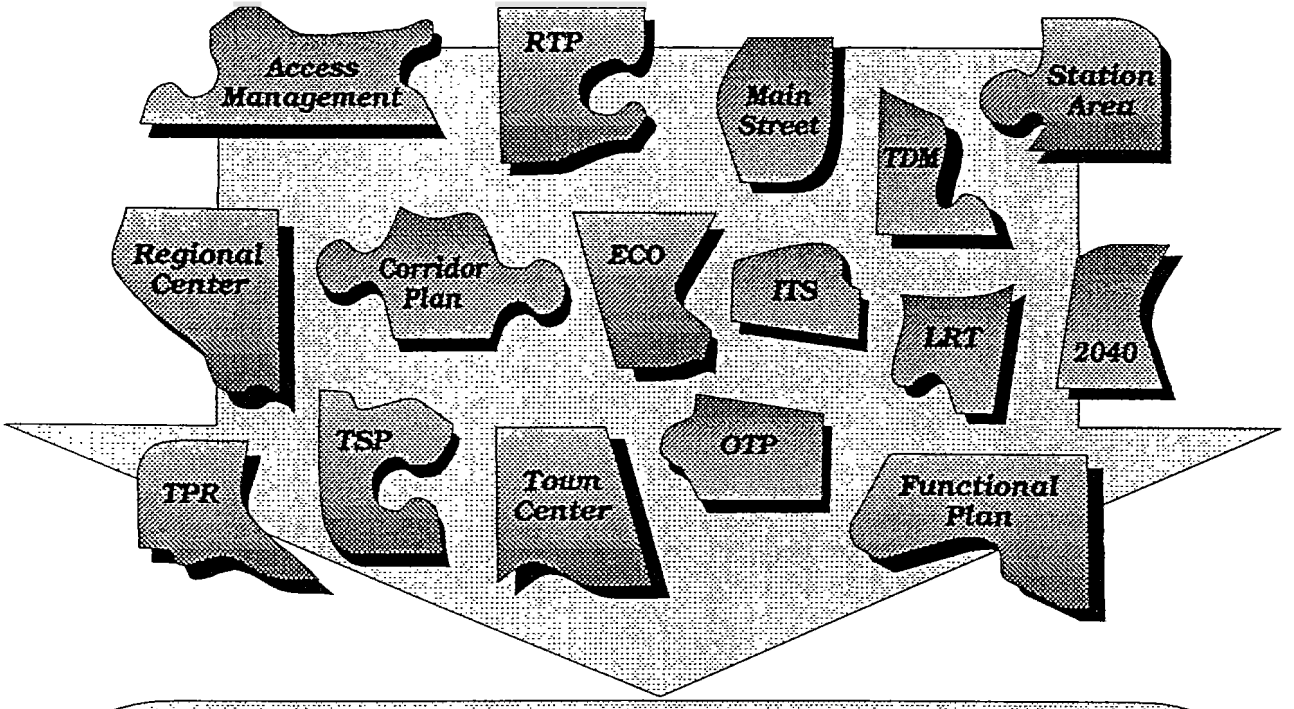
LRT - Light Rail Transit, planned by Metro, designed and operated by Tri-Met, providing a high capacity transit option linking key centers in the region.

Functional Plan - Metro's recent document which outlines criteria for evaluating transportation systems and land use, translating state and regional policy for local use to implement the 2040 planning effort.

2040 - **A** long range effort directed by Metro to explore the choice for growth in the next 50 years, providing performance standards for local government to achieve in meeting the regional growth concept. It defines several areas for growth in land use and transportation:

- Regional Center: Compact centers of employment and housing served by high quality transit. They will become the focus **of** transit and highway improvements.
- **Town** Center: Provide for localized services within a **2-3** mile radius, with community identity.
- Station Areas: Development centered around LRT or high capacity transit, accessible by all modes.
- **Main** Street: Similar to town centers, an area with traditional commercial identity, but smaller in scale, along a street with good transit services

City of Beaverton Transportation Puzzle



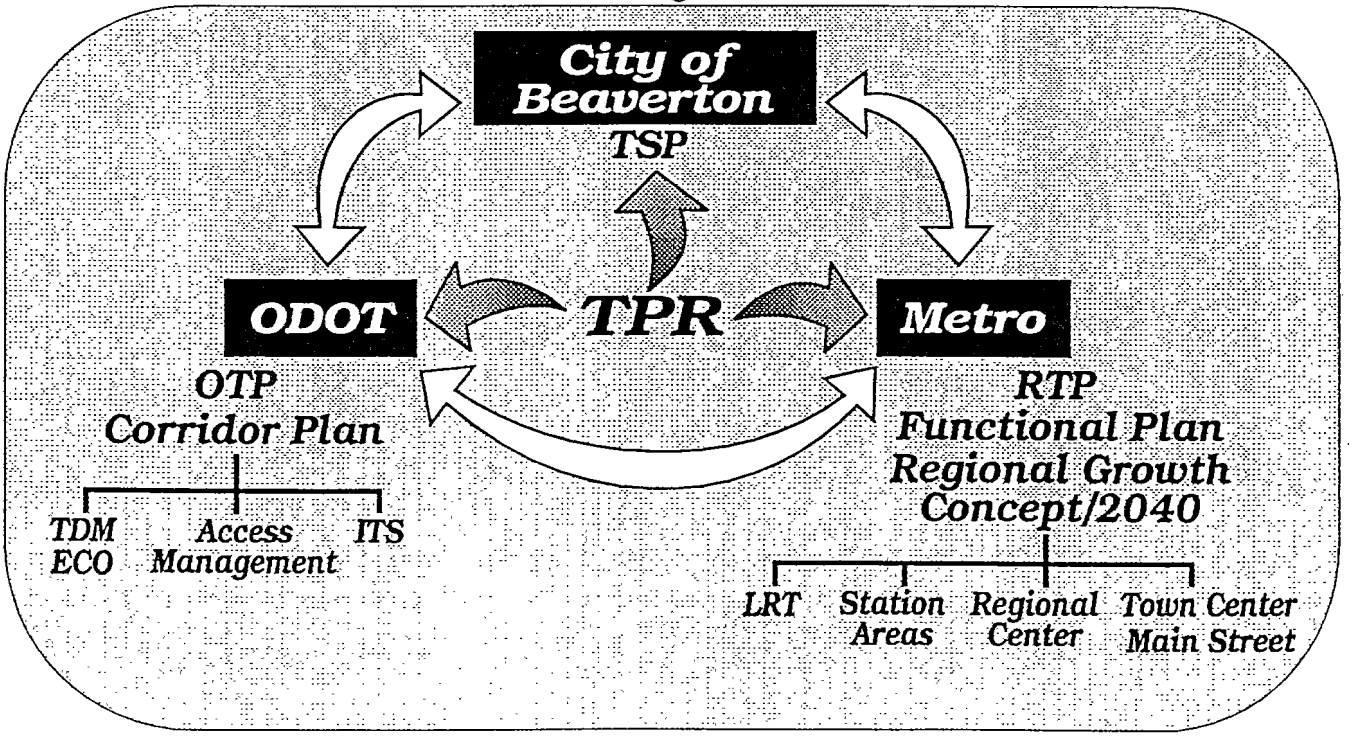


Figure 2-2
RELATIONSHIP OF TSP TO REGIONAL PLANNING

DKS Associates

Chapter 3
Existing Conditions

Existing transportation conditions were evaluated as part of the City of Beaverton Transportation System Plan. This chapter summarizes existing traffic and transportation operation in the City. It considers vehicle traffic, as well as transit, pedestrian, bicycle, truck and other modes. To understand existing travel patterns and conditions, a variety of aspects of the city's transportation system were considered. In the fall of 1996, an inventory of traffic conditions in Beaverton was undertaken to establish a base year for all subsequent analysis. Much of this data .provides a benchmark (basis of comparison) for future assessment of transportation performance in Beaverton relative to desired policies.

The following sections briefly describe existing roadway functions, circulation, traffic speeds and volumes and levels of service in the Beaverton transportation system. Eighty-three study area intersections were selected in review with City of Beaverton staff to evaluate traffic conditions.

STREET NETWORK

The Transportation Planning Rule requires that classification of streets within the City be provided.[1] The classification must be consistent with state and regional transportation plans for continuity between adjacent jurisdictions. The City of Beaverton has an existing street classification system as **part** of its comprehensive plan.[2] The comprehensive plan has been updated several times, most recently with the Downtown Connectivity Plan in June **1997.**

Functional Classification

Roadways have two functions, to provide mobility and to provide access. From a design perspective, these functions can be incompatible since high or continuous speeds are desirable for mobility, while low speeds are more desirable for land access. Arterials emphasize a high level of mobility for through movement; local facilities emphasize the land access function; and collectors offer a balance of both functions.

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1 ***Transportation Planning Rule,*** State of Oregon, Department **of** Land Conservation and Development, Section 660-12-020(2)(b), April, 1995.

2 ***Comprehensive Plan for the City of Beaverton.*** City **of** Beaverton, Map adopted November 28, 1988.

The existing functional classification of streets in Beaverton is represented in the Past Plans and Policies section of the appendix. Any street not designated as either an arterial or collector is considered a local street. Some streets have dual classifications, since their current function changes over their length. Beaverton's functional classification system was reviewed as part of this project and the proposed functional classification system is discussed in Chapter **8:** Motor Vehicles.

Washington **County** roadway classifications are generally consistent with City of Beaverton designations. The only discrepancy between the jurisdictions is Baseline Road which is currently classified as a Major Collector east of 170th Avenue by the City of Beaverton and as a Minor Arterial (interim classification) by Washington County. A table summarizing functional classification of Beaverton streets by other jurisdictions is shown in the Past Plans and Policies section appendix of the report.

ODOT and Metro only classify roads that are considered to be of statewide or regional significance, respectively. These classifications are compatible with Beaverton classifications, although the specific classification names may differ. ODOT and Metro classifications can be found in the *Roadway Functional Classification According to Jurisdiction* table in the Past Plans and Policies section of the appendix of this report. ODOT's classification only applies to the portion of roadways which are state facilities. Figure **3-**1 shows the roadway jurisdiction for operating and maintenance purposes. Because of their more regional or areawide significance, the designation of arterials and collectors by ODOT, Metro and Washington County guides the City in its functional classification.

EXISTING CIRCULATION

The following sections review the performance of various key routes in Beaverton in terms of volumes, capacity, accidents, adjacent land use (including schools), intersection level of service, arterial level of service and general observations. The key routes include US 26 (Sunset Highway), ORE 217, ORE **8** (TV Highway-Canyon Road), ORE 10 (Farmington-Beaverton Hillsdale Highway), ORE 210 (Scholls Ferry), Murray Boulevard, Hall Boulevard, Allen Boulevard, Walker Road, Cedar Hills Boulevard and Jenkins Road. Each route evaluation is organized to provide a description in terms of existing functional classification, number of lanes, existing traffic volumes, accident locations and a summary of PM peak hour conditions. In the following section, the existing functional classification is noted.

Arterial Highways

Sunset Highway **(US 26)** is currently classified by ODOT as a Statewide Highway and as a freeway by adjacent jurisdictions. It serves vehicles traveling between Portland (1-405 to the east) and various destinations in western Oregon to the Oregon coast. The Sunset Highway also serves intrastate travel, in particular vehicles from the east traveling toward the Oregon coast. US 26 serves travel between cities in the Portland Metropolitan area. It is used as a commuter route between Washington County and Portland and various destinations in between. Lastly, US 26 serves some local travel which may occur within Beaverton or between Beaverton and a neighboring city such as Hillsboro or Portland.

City of Beaverton
Transportation System Plan

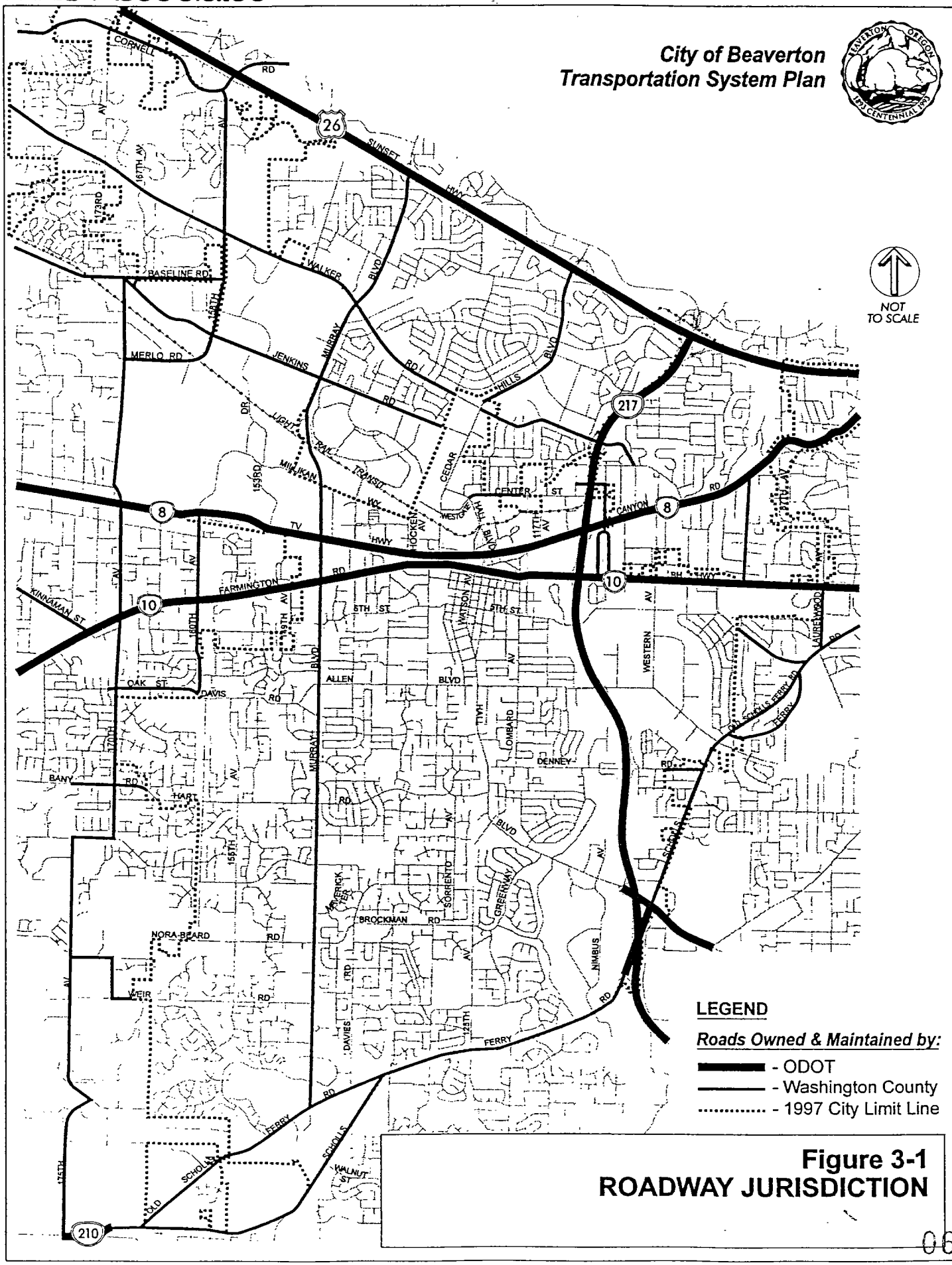


Figure 3-1
ROADWAY JURISDICTION

Oregon 217 (ORE 217) is currently classified by ODOT as a Statewide Highway and as a freeway by the City of Beaverton. It serves vehicles traveling between US 26 to the north, 1-5 to the south and various destinations in Beaverton, Tigard and Portland. ORE 217 serves travel between cities in the Portland Metropolitan area. It is used as a commuter route between Washington County, Portland, cities south of Portland and various destinations in between. ORE 217 serves some local travel which may occur within Beaverton or between Beaverton and a neighboring city or area such as Tigard, Hillsboro, Tualatin or Portland.

Tualatin Valley (TV) Highway/Canyon Road (ORE 8) is currently classified by ODOT as a District Highway. TV Highway is currently classified as a Principal Arterial west of ORE 217 and as a Major Arterial east of ORE 217 by the City of Beaverton. Washington County classifies TV Highway as a principal route, and Metro classifies TV Highway as a Regional Through-Route (Arterial). TV Highway provides direct access from Beaverton to Hillsboro, Aloha, Forest Grove and Portland.

Beaverton-Hillsdale Highway/Farmington Road (ORE 10) is currently classified by ODOT as a District Highway and as a Major Arterial by the City of Beaverton, Washington County and Metro. Beaverton-Hillsdale Highway provides direct access from Beaverton to Portland, Hillsdale and Aloha. In Portland, Beaverton-Hillsdale Highway serves as a Major City Traffic Street (City of Portland), linking to Barbur Boulevard and a number of destinations in Portland.

Scholls Ferry Road (ORE 210) is currently classified by ODOT as a District Highway on the portion of Scholls Ferry Road which is a state facility. Scholls Ferry Road is currently classified as a Major Arterial west of ORE 217 and as a Minor Arterial east of ORE 217 by the City of Beaverton, Washington County and Metro. The City of Tigard classifies Scholls Ferry Road as an arterial, and the City of Portland classifies Scholls Ferry as a Major City Traffic Street. This route provides local access from ORE 217 to much of Beaverton and is used regionally as a link from ORE 217 to US 26 and destinations to both the east and the west.

Arterial Streets

Murray Boulevard is currently classified as a Major Arterial by the City of Beaverton, Washington County and Metro. Murray Boulevard provides local access from US 26 to much of Beaverton and is used regionally as a link from US 26 to ORE 210. Murray Boulevard is a north-south arterial in Beaverton.

Walker Road is currently classified as a Minor Arterial west of Murray Boulevard and as a Major Arterial east of Murray by the City of Beaverton and Washington County. Between Murray Boulevard and ORE 217, Washington County classifies Walker Road as a study area. Walker Road provides local access between Beaverton and Hillsboro.

Cedar Hills Boulevard is currently classified as a Minor Arterial by the City of Beaverton, Washington County and Metro. This route provides local access from US 26 to Beaverton-Hillsdale Highway. It provides access to many residential neighborhoods adjacent to it and commercial areas as well.

Hall Boulevard is currently classified as a Minor Arterial by the City of Beaverton, Washington County and Metro. East of ORE 217, ODOT classifies Hall Boulevard as a District Highway. Hall Boulevard

provides north/south and east/west circulation through Beaverton. It provides access to many local streets and residential neighborhoods adjacent to it. This roadway provides citywide access to local streets from Cedar Hills Boulevard to Scholls Ferry Road and to ORE 217. Hall Boulevard provides a connection between local streets in Beaverton to Tigard and Portland.

Allen Boulevard is currently classified as a Minor Arterial by the City of Beaverton, Washington County and Metro. This roadway connects ORE 217 to Murray Boulevard (to the west) and Scholls Ferry Road-ORE 210 (to the east). Allen Boulevard provides east/west circulation through Beaverton. It provides access to many residential neighborhoods adjacent to it.

Jenkins Road is currently classified as a Minor Arterial by the City of Beaverton, Washington County and Metro. This roadway serves local Beaverton traffic and provides direct access to Nike, Tektronix and light rail transit stations. Jenkins Road is an east-west roadway and connects Cedar Hills Boulevard to Baseline Road.

170th Avenue/Merlo/158th Avenue are currently classified as Minor Arterials by the City of Beaverton, Washington County and Metro. These roadways provide north/south circulation through Beaverton, serve local Beaverton traffic and provide direct access to light rail transit, schools and residential areas.

153rd Avenue is currently classified by the City of Beaverton and Washington County as a Minor Arterial. 153rd Avenue serves local Beaverton traffic and provides direct access to Murray West LRT station. This roadway connects Jenkins Road to TV Highway.

Denney Road is currently classified as a Minor Arterial by the City of Beaverton, Washington County and Metro. This roadway serves local Beaverton traffic, provides east/west circulation and provides direct access to ORE 217. Denney Road connects Hall Boulevard to Scholls Ferry Road (ORE 210).

Brockman/Greenway are currently classified as a Minor Arterials by Washington County and the City of Beaverton. These roadways serve local Beaverton traffic and provide access to many residential neighborhoods adjacent to it. This roadway connects Hall Boulevard to Murray Boulevard.

PAVEMENT CONDITION

The goal of the City of Beaverton's street maintenance program is "to preserve the City's street system, pedestrian pathways and bridges and assure total quality customer service in support of City Council Goals number one, two, three, four, five, seven and eight." The operations department performs preventive maintenance to the street system and responds immediately to emergency situations involving the street surface. Significant projects such as street overlays and seals are outsourced. An increased emphasis has been placed on preventative maintenance for arterial and collector streets due to damage and wear from an unusually wet winter.

Table 3-1 summarizes the street maintenance program for the City of Beaverton. Table 3-2 summarizes the street maintenance program budget.

	FY 1994-95 (Actual)	FY 1995-96 (Actual)	FY 1996-97 (Budgeted)	FY 1997-98 (Proposed)
system	miles	miles	miles	
Bridge maintenance inspections	20 bridges	20 bridges	20 bridges	20 bridges
Square yards of street repairs	13,447	13,935	13,064	13,350
Number of bridge inspections completed	20	20	20	20

Table 3-2
Street Maintenance Budget Summary

Requirements	FY 1994-95 (Actual)	FY 1995-96 (Actual)	FY 1996-97 (Budgeted)	FY 1997-98 (Proposed)	FY 1997-98 (Adopted)
Personal Services	$ 450,599	$ 417,359	$ 452,669	$ 470,847	$ 470,847
Materials and Services	$ 127,319	$ 140,236	$ 185,940	$ 148,650	$ 148,650
Capital Outlay	$ 444,519	$ 618,147	$ 677,311	$ 670,750	$ 670,750
Transfers	$ 373,739	$ 280,803	$ 332,883	$ 445,808	$ 445,808
Total	$1,396,176	$1,456,545	$1,648,803	$1,736,055	$1,736,055

Note FY= Fiscal Year

TRAFFIC SPEED AND VOLUME

Speed

Speed zones on arterials and collectors within the City of Beaverton are summarized in Figure 3-2. Speed zones are set by Oregon's Speed Zone Review Panel. The Speed Zone Review Panel is an independent board who sets speed zones for city streets, county roads and state highways passing through cities. The Speed Zone Review Panel conducts engineering studies and considers many factors such as roadway width, surface, lanes, shoulders, signals, intersections, roadside development, parking, accidents and 85th percentile speed. **A** decision made by the Speed Zone Review Board is not arbitrary or political, and is based on the considerations described above.3

Vehicle speeds on several collector and residential streets are a concern for the community. Residential areas generate the most speeding complaints, and the 25 mph speed zones are violated the most in the City of Beaverton.4

3 *Speed Zoning: Who Decides?,* State Speed Control Board, April, 1992.

4 Telephone conversation **with** Sergeant Steve Wilson, City of Beaverton Police Department, **May** 6, 1997.

City of Beaverton
Transportation System Plan

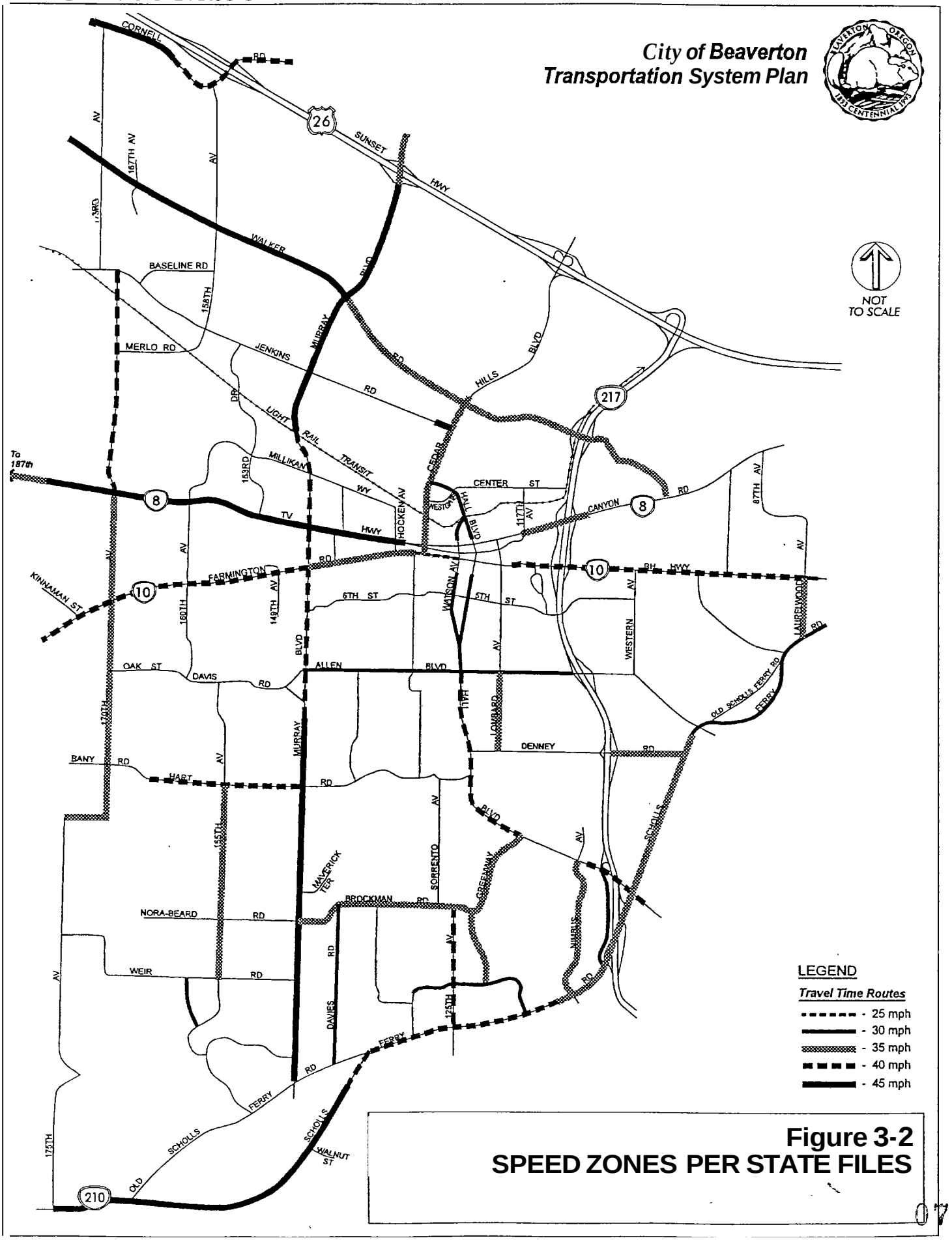


Figure 3-2
SPEED ZONES PER STATE FILES

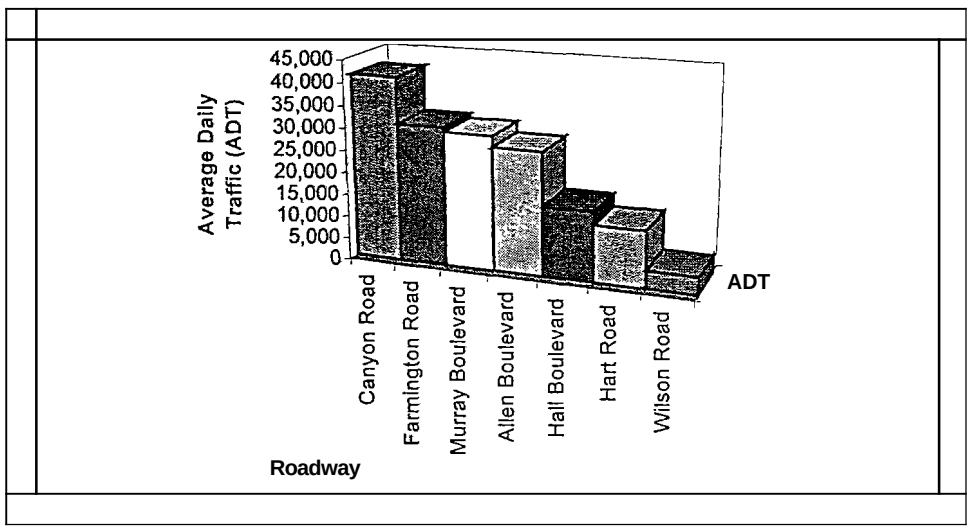
In most cases, speeding becomes very noticeable when it is above 30-35 miles per hour. Speeding can usually be expected on local streets where the streets are wide and straight for long stretches or where downhill grades are extended.

Volume

A complete inventory of peak traffic conditions was performed in the fall of 1996 as part of the Beaverton Transportation System Plan. The traffic counts conducted as part of this inventory provide the basis for analyzing existing problem areas as well as establishing a base condition for future monitoring. Turn movement counts were conducted at **83** intersections during the evening (4-6 PM) peak period to determine intersection operating conditions.

On a typical day, TV Highway is the most heavily traveled street in Beaverton. Near ORE 217, TV Highway (Canyon Road) carries about 41,300 vehicles per day (two-way). Farmington Road carries about 3 1,000 vehicles per day (two-way) near ORE 2 17, Murray Boulevard carries about 30,000 vehicles per day (two-way) near TV Highway and Allen Boulevard carries approximately 27,500 vehicles per day (two-way) near ORE 217. As a comparison, daily traffic on ORE 217 is about 109,000 vehicles per day (two-way) south of the Beaverton-Hillsdale overcrossing.5 Figure 3-3 shows the average daily traffic (ADT) on several routes in Beaverton. Daily and PM peak hour **link** volumes are shown in Figure 3-4.

Figure 3-3
Average Daily Traffic



Traffic data collected over the course of this study illustrates the typical fluctuations of traffic over the course of **a** day. Profiles of daily traffic indicate the period when traffic is greatest (Figures 3-5 and 3-6). The evening peak period is the time when traffic volume is highest (combination of commute, retail and school activities).

5 *1995 Traffic* ***Volume*** *Tables*, Oregon Department of Transportation, Transportation Development Branch, Published May, **1996.**

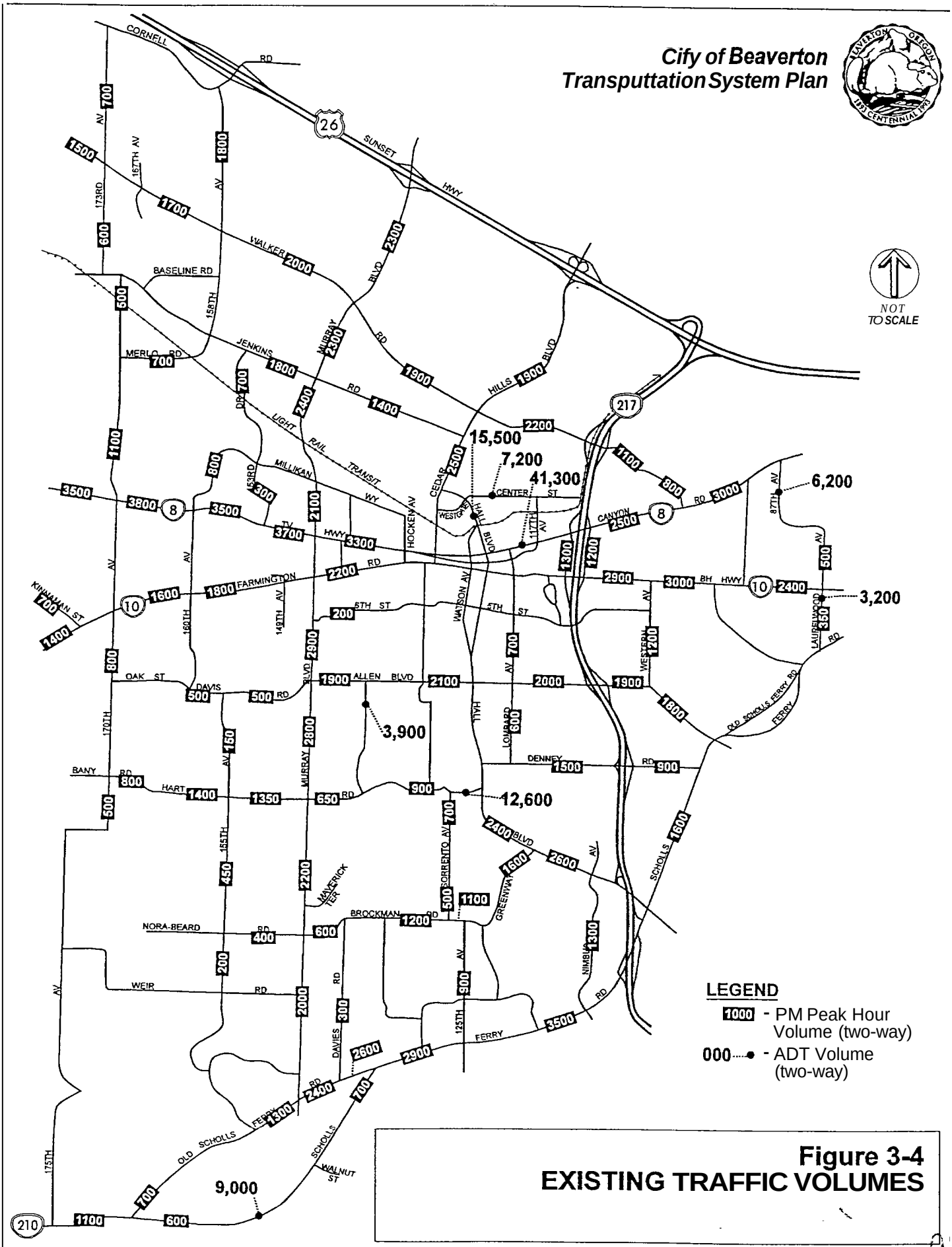
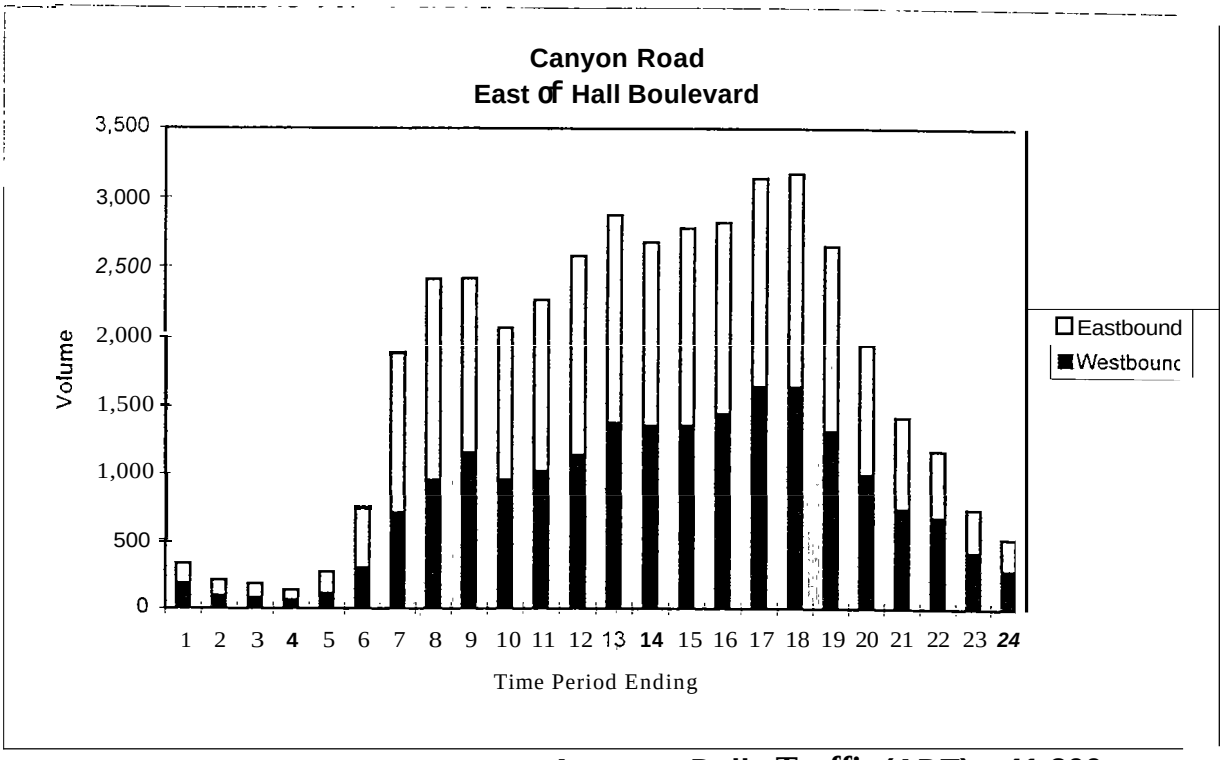
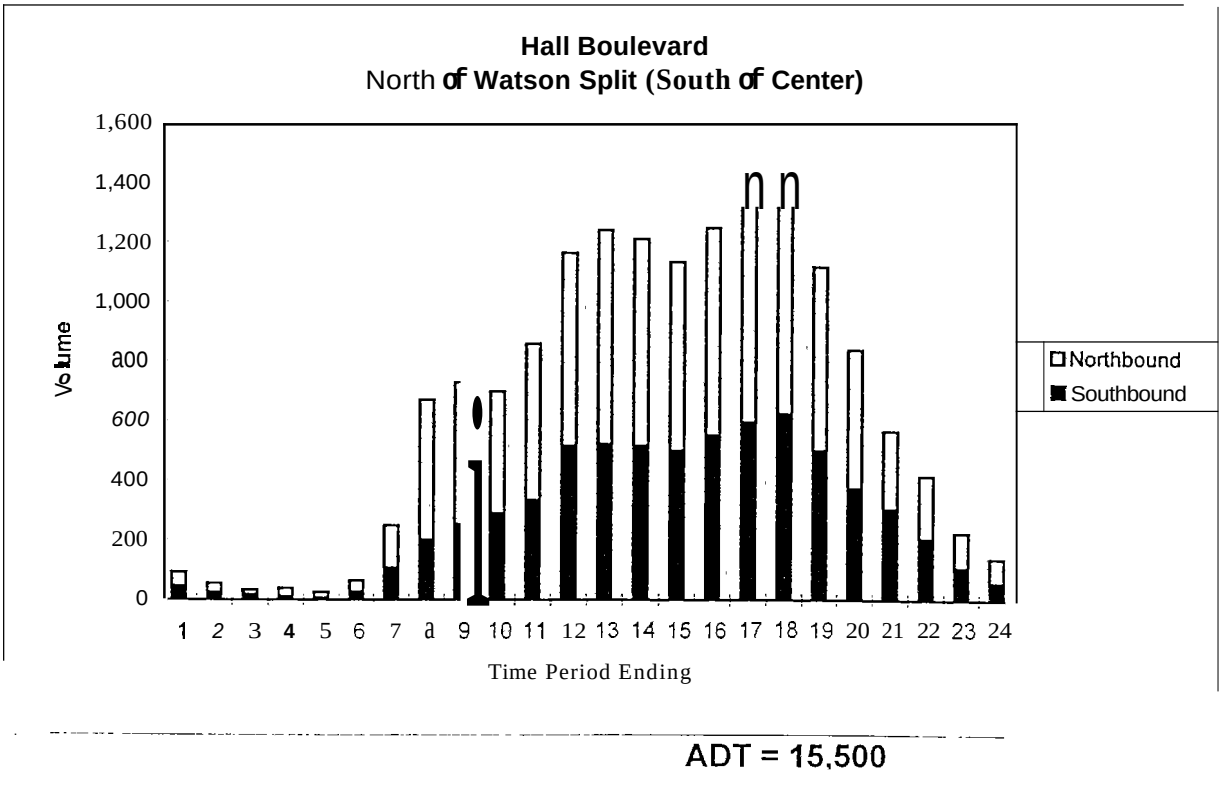


Figure 3-4
EXISTING TRAFFIC VOLUMES

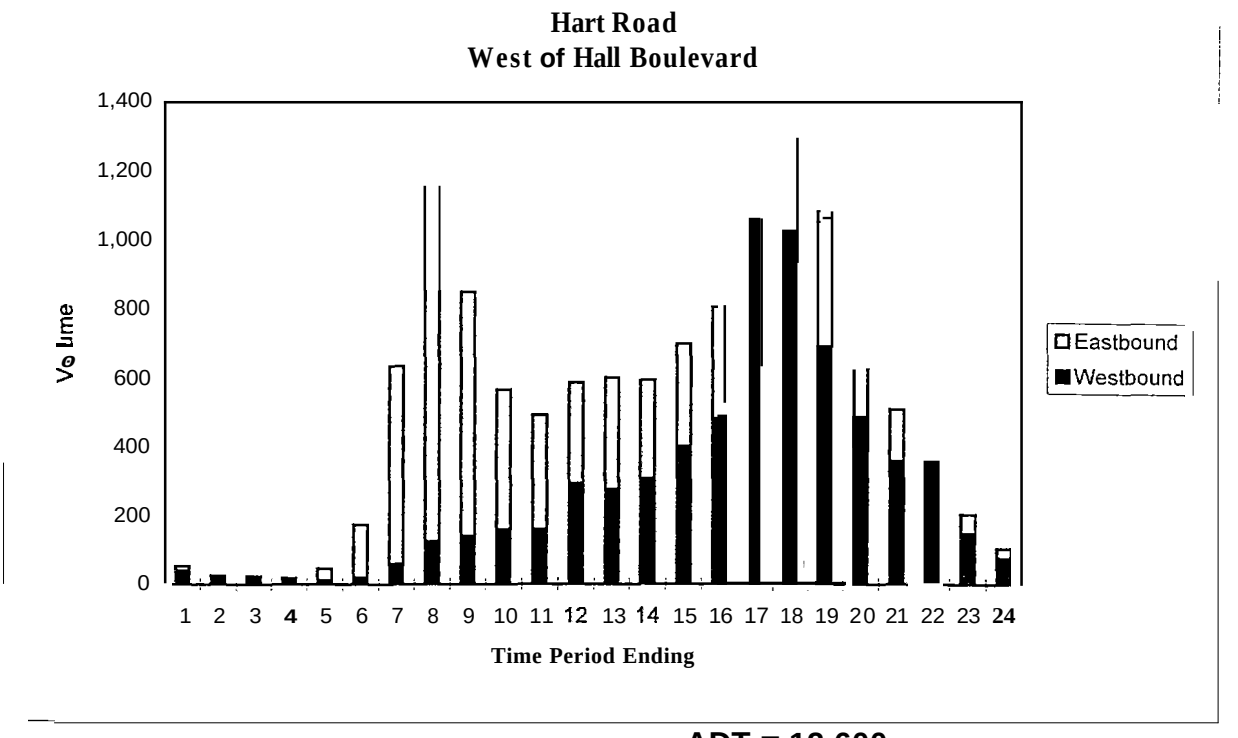


Average Daily Traffic (ADT) = 41,300

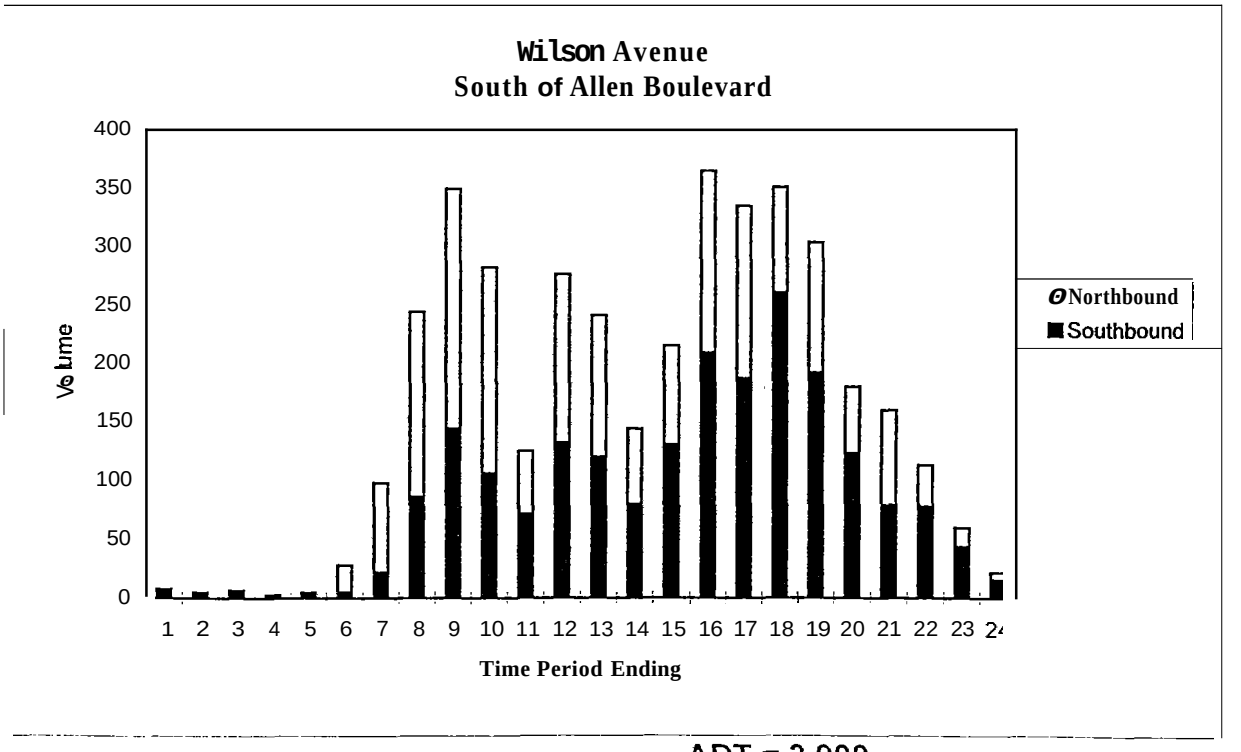


ADT = 15,500

Figure 3-5
Hourly Variations



ADT = 12,600



ADT = 3,900

Figure 3-6
Hourly Variations

TRAVEL TIME RUNS

Travel time is a key measure of transportation service and accessibility in a city. It provides a common reference for comparison between modes and a historical reference in future years. Travel time runs were conducted on several key routes in Beaverton. These travel time runs measured the length of time it took to travel from one end of Beaverton to the other on each key route during the PM peak period (4:00 PM to 6:00 PM) during the week. Four key routes were surveyed:

- Murray Boulevard from Cornell Road to Scholls Ferry Road
- Hall Boulevard/Cedar Hills Boulevard from Barnes Road to Greenburg Road
- Murray Boulevard from Cornell Road to Scholls Ferry Road
- Canyon Road/TV Highway from 87th Avenue to 185th Avenue

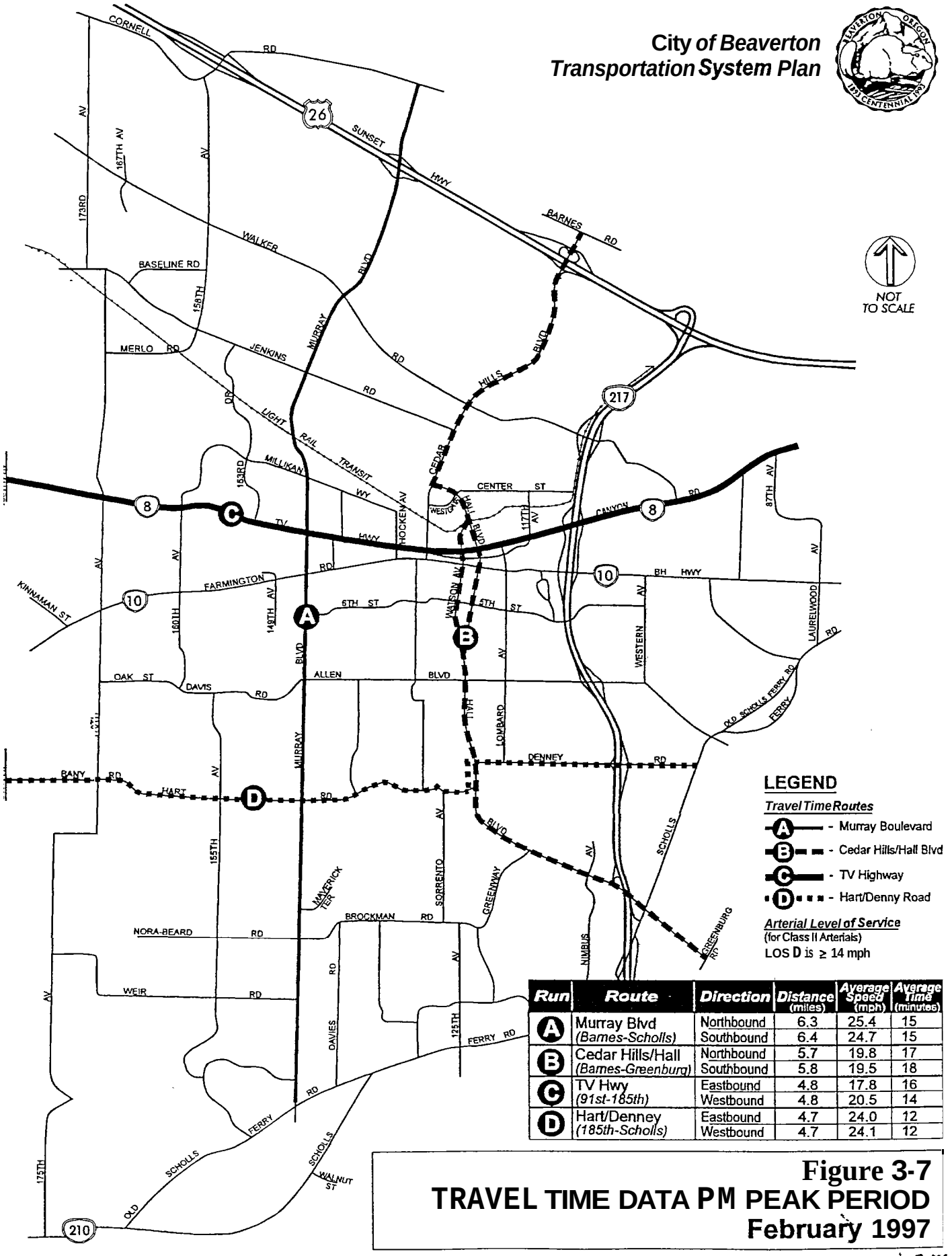
The time periods observed were weekday evening peak period. The results of these travel time runs are shown in Table 3-3 and Figure 3-7. In general, it is possible to get across town in Beaverton (either north/south or east/west) in approximately 12 to 18 minutes. This translates to average speeds of about 20 to 25 miles per hour, including delays at traffic signals and stop signs. Travel time along urban arterials can also be used as a measure of level of service.[6] Compared to capacity analysis, the average travel speed can help identify congested areas.

Table 3-3
Travel Time Surveys

Route	Direction	Distance (miles)	Average Speed (mph)
Murray Boulevard	Northbound	6.3	25.4
(from Barnes to Scholls)	Southbound	6.4	24.7
Cedar Hills/Hall	Northbound	5.7	19.8
(from Barnes to Greenburg)	Southbound	5.8	19.5
TV Highway	Eastbound	4.8	17.8
(from 91st Ave to 185th Ave)	Westbound	4.8	20.5
Hart/Denney	Eastbound	4.7	24.0
(from Scholls to 185th Avenue)	Westbound	4.7	24.1
Arterial level of service D (for a class II arterial)			≥14 MPH

6 *1994 Highway Capacity* **Manual, Special Report 209, Transportation Research Board, Washington D.C., 1994, Chapter 11.**

City of Beaverton
Transportation System Plan



LEGEND

Travel Time Routes

- A - Murray Boulevard
- B - Cedar Hills/Hall Blvd
- C - TV Highway
- D - Hart/Denny Road

Arterial Level of Service
(for Class II Arterials)
LOS **D** is ≥ 14 mph

Run	Route	Direction	Distance (miles)	Average Speed (mph)	Average Time (minutes)
A	Murray Blvd *(Barnes-Scholls)*	Northbound	6.3	25.4	15
		Southbound	6.4	24.7	15
B	Cedar Hills/Hall *(Barnes-Greenburg)*	Northbound	5.7	19.8	17
		Southbound	5.8	19.5	18
C	TV Hwy *(91st-185th)*	Eastbound	4.8	17.8	16
		Westbound	4.8	20.5	14
D	Hart/Denney *(185th-Scholls)*	Eastbound	4.7	24.0	12
		Westbound	4.7	24.1	12

Figure 3-7
TRAVEL TIME DATA PM PEAK PERIOD
February 1997

TRAFFIC CONTROL

Beaverton has approximately 160 signalized intersections (including the Urban Growth Boundary Management Area), with the majority on arterial streets. Figure **3-8** shows the signalized locations and the jurisdiction that operates the traffic signal. Traffic signals are valuable devices for the control of vehicle and pedestrian traffic. Traffic control signals, properly located and operated, can have one or more of the following advantages:

- They provide for the orderly movement of traffic
- On larger roadways where proper physical layouts and control measures are used, they can increase the traffic handling capacity of the intersection
- They reduce the frequency of certain types of accidents, especially right angle type
- Under favorable conditions, they can be coordinated to provide continuous or nearly continuous movement of traffic at a definite speed along a given route
- They permit minor street traffic, vehicular or pedestrian, to enter or cross continuous traffic on the major street

Improper or unwarranted signal installations may cause:

- Excessive delay
- Disobedience of signal indications
- Circuitous travel of alternative routes
- Increased accident frequency, particularly rear-end type

Consequently, it is important that the consideration of a signal installation and the selection of equipment be preceded by a thorough study and based on consistent criteria. These studies identify the need for left turn phasing, lanes and phase type. The justification for the installation of a traffic signal at an intersection for ODOT, Washington County and Beaverton is based upon the warrants stated in the *Manual on Uniform Traffic Control Devices*[7] (MUTCD). The MUTCD has been adopted by the State of Oregon and is used throughout the nation.

The same conditions hold true for installation of stop sign traffic controls. Specific warrants identify conditions which **may** warrant two-way or multi-way stop sign installations. **A** stop sign is not a cure-all and is not a substitute for other traffic control devices. Guidelines **and** warrants for stop sign installations are outlined in the MUTCD.

TRAFFIC LEVELS OF SERVICE

While analysis of traffic flows and functional classification are useful in attempting to reach an understanding of the general nature of traffic in an area, traffic volume alone indicates neither the ability of the street network to carry additional traffic nor the quality of service afforded by the street facilities. For this, the concept of *level of service* has been developed to correlate traffic volume data to subjective descriptions of traffic performance at intersections.

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7 **Manual on** *Uniform Traffic Control Devices for Streets and Highways,* US Department of Transportation, Federal Highway Administration, 1988.

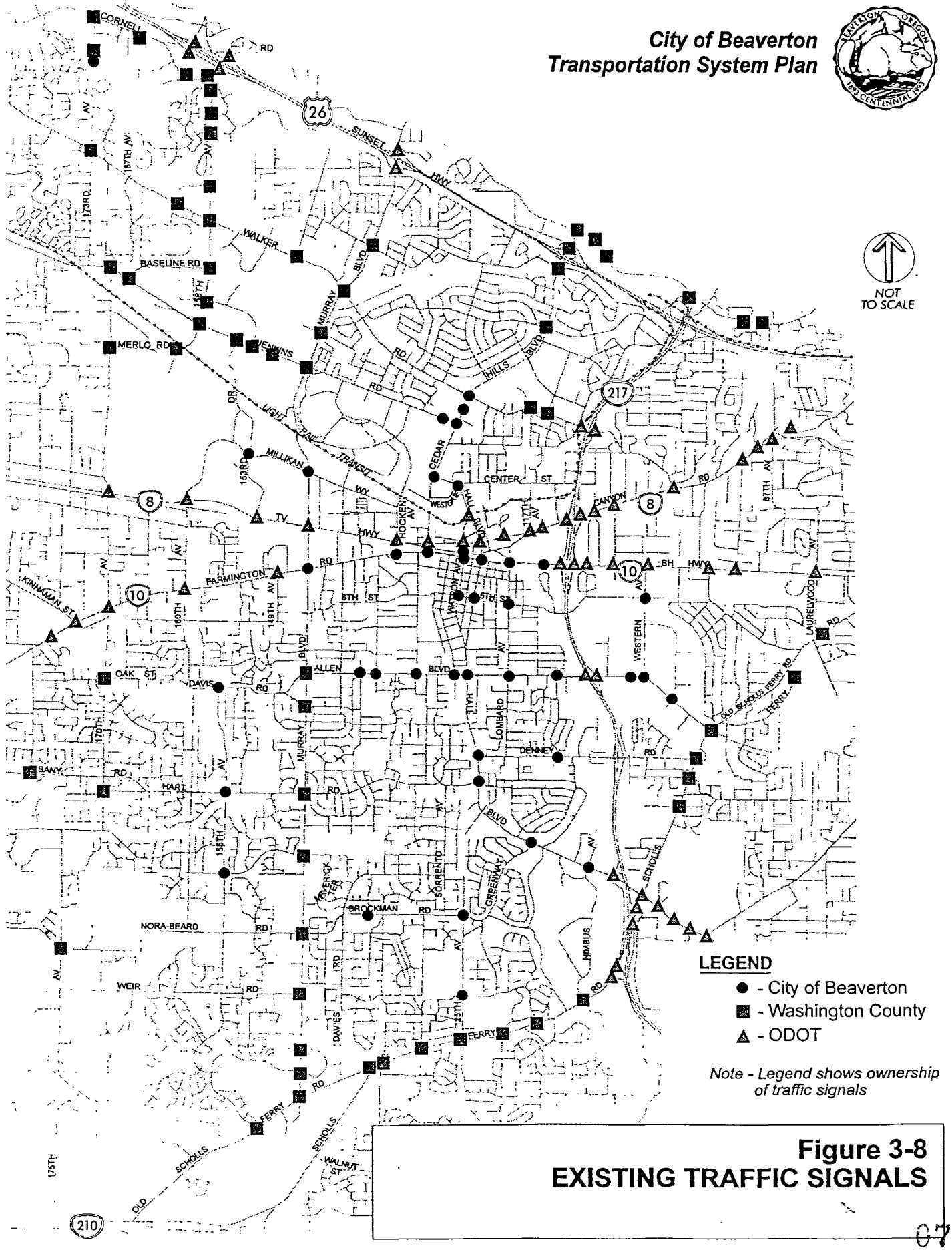


Figure 3-8
EXISTING TRAFFIC SIGNALS

Level of service (LOS) is used as a measure of effectiveness for intersection operation. It is similar to a "report card" rating based upon average vehicle delay. Level of Service A, B and C indicate conditions where traffic moves without significant delays over periods of peak travel demand. Level of service D and E are progressively worse peak hour operating conditions. Level of service F represents conditions where average vehicle delay exceeds 60 seconds per vehicle entering a signalized intersection and demand has exceeded the capacity. This condition is typically evident in long queues and delays. Level of service D or better is generally the accepted standard for signalized intersections in urban conditions. Unsignalized intersections provide levels of service for major and minor street turning movements. For this reason, LOS E and even LOS F can occur for a specific turning movement; however, the majority of traffic may not be delayed (in cases where major street traffic in not required to stop). LOS E or F conditions at unsignalized intersections generally provide a basis to study intersection further to determine availability of acceptable gaps, safety and traffic signal warrants. A summary of the descriptions of level of service for signalized and unsignalized intersections is provided in the Level of Service Descriptions section of the appendix.

Intersection turn movement counts were conducted at the 83 study intersections shown in Figure 3-9 during the evening peak periods to determine existing LOS based on the *1994 Highway Capacity Manual* methodology for signalized and unsignalized intersections.* Traffic counts and level of service calculation sheets are included in the appendix.

Tables 3-4 to 3-7 provide a summary of PM peak hour levels of service for the signalized study intersections in Beaverton. Most intersections in Beaverton operate at level of service D or better, with some exceptions.

Signalized Intersection	Level of Service	Average Delay	Volume/Capacity
Denney Road/Scholls Ferry Road	C	19.1	0.87
Allen Boulevard/Scholls Ferry Road	D	35.7	0.92
Scholls Ferry Road/Hall Boulevard	D	38.4	0.95
Scholls Ferry Road/125th Avenue	D	29.3	0.96
Scholls Ferry Road/Nimbus	D	32.9	0.99
Murray Boulevard/Old Scholls Ferry Road	C	19.7	0.80
Scholls Ferry Road/Old Scholls Ferry Road (east)	B	9.6	0.59
Scholls Ferry Road/ORE 217 SB ramps	D	32.3	0.94
Scholls Ferry Road/ORE 217 NB off-ramp	C	21.0	0.88
Scholls Ferry Road/ORE 217 NB on-ramp	C	19.2	0.72

8 *Highway Capacity Manual. Special Report 209,* Transportation Research Board, Washington D.C., 1994.

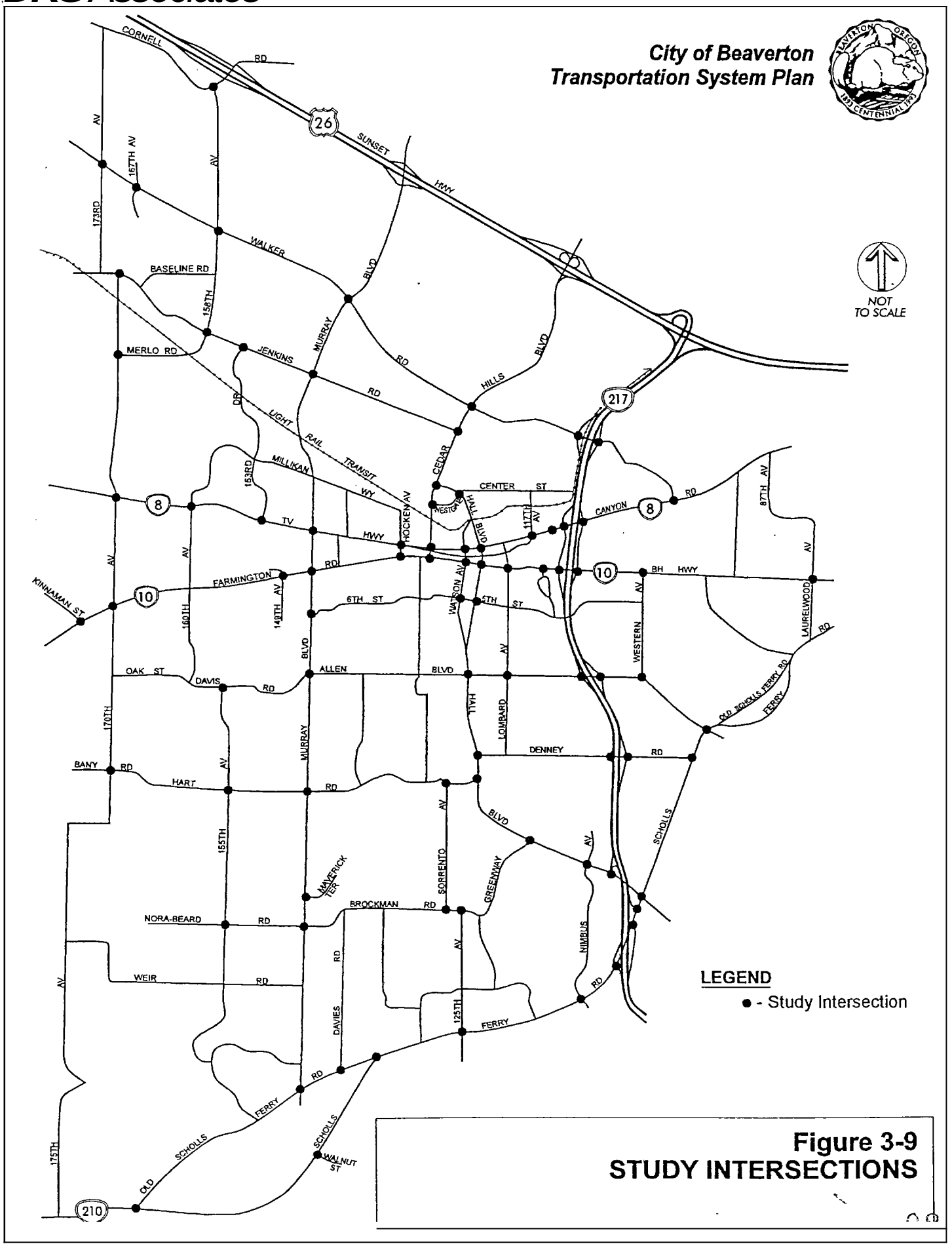


Figure 3-9
STUDY INTERSECTIONS

Table 3-5
Existing PM Peak Hour Intersection Level of Service
Signalized Study Intersections Along TV Highway/Canyon Road

Signalized Intersection	Level of Service	Average	Volume/Capacity
Canyon Road/Broadway-117th Avenue	C	18.1	0.84
Canyon Road/ORE 217 SB ramps	C	17.2	0.80
Canyon Road/ORE 217 NB ramps	C	17.8	0.78
Canyon Road/Hall Boulevard	C	17.1	0.82
Canyon Road/Watson Avenue	B	13.9	0.82
TV Highway/Hocken Avenue	D	34.8	0.98
TV Highway/Murray Boulevard	E	42.1	0.99
Canyon Road/Cedar Hills Boulevard	D	38.5	0.99
Canyon Road/Fred Meyer Access	C	18.1	0.75
TV Highway/153rd Drive	B	6.1	0.77
TV Highway/160th Avenue-Millikan Way	D	27.7	0.94
TV Highway/170th Avenue	D	36.9	0.99
Canyon Road/Walker Road	C	15.7	0.77

Table 3-6
Existing PM Peak Hour Intersection Level of Service
Signalized Study Intersections Along Farmington Road/Beaverton-Hillsdale Highway

Signalized Intersection	Level of Service	Average	Volume/Capacity
Murray Boulevard/Farmington Road	E	50.2	0.99
Farmington Road/Watson Avenue	C	18.7	0.84
Farmington Road/Hall Boulevard	C	18.7	0.88
Farmington Road/Lombard Avenue	C	20.2	0.82
Beaverton-Hillsdale Highway/ORE 217 SB ramps	C	20.3	0.88
Beaverton-Hillsdale Highway/Griffith Drive	B	14.5	0.78
Beaverton-Hillsdale Highway/ORE 217 NB ramps	C	22.0	0.92
Farmington Road/Hocken Avenue	C	17.3	0.91
Farmington Road/Cedar Hills Boulevard	C	16.8	0.88
Farmington Road/149th Avenue	B	7.3	0.81
Farmington Road/170th Avenue	D	31.1	0.92
Kinnaman/Farmington	D	25.8	0.99
Beaverton-Hillsdale Highway/Western Avenue	D	28.7	0.97
Laurelwood Avenue/Beaverton-Hillsdale Highway	B	11.9	0.71

Table 3-7
Existing PM Peak Hour Intersection Level of Service
Signalized Study Intersections

Signalized Intersection	Level of Service	Average	Volume/Capacity
Murray Boulevard/Allen Boulevard	D	26.3	0.88
Hall Boulevard/Allen Boulevard	D	30.3	0.87
Allen Boulevard/Lombard Avenue	C	21.4	0.71
Watson Avenue/5th Street	B	6.5	0.52
Hall Boulevard/5th Avenue	B	8.5	0.67
Allen Boulevard/ORE 217 NB ramps	C	18.2	0.77
Allen Boulevard/ORE 217 SB ramps	C	20.7	0.80
Hall Boulevard/Westgate-Center	C	15.1	0.50
Murray Boulevard/Jenkins Road	D	32.9	0.91
Walker Road/ORE 217 NB ramps	D	35.3	0.99
Walker Road/ORE 217 SB ramps	B	14.0	0.87
Cedar Hills Boulevard/Hall Boulevard	C	22.3	0.81
Cedar Hills Boulevard/Walker Road	D	35.1	0.96
Cedar Hills Boulevard/Jenkins Road	D	25.6	0.89
Cedar Hills Boulevard/Westgate Drive	B	6.4	0.42
Jenkins Road/153rd Drive	C	20.5	0.89
Jenkins Road/158th Avenue	D	30.0	0.91
Merlo Road/170th Avenue	C	16.5	0.73
Baseline Road/170th Avenue	B	10.0	0.44
Walker Road/158th Avenue	D	29.1	0.86
Walker Road/173rd Avenue	C	22.9	0.80
Cornell Road/158th Avenue	C	16.2	0.76
Walker Road/Murray Boulevard	E	40.1	0.93
Allen Boulevard/Western Avenue	C	19.6	0.97
Hall Boulevard/Denney Road	C	17.4	0.83
Hall Boulevard/Hart Road	B	13.3	0.71
Murray Boulevard/Hart Road	D	25.5	0.91
Hart Road/155th Avenue	C	18.1	0.95
Murray Boulevard/Brockman Road	B	14.7	0.55
Brockman Road/125th Avenue	C	23.3	0.95
Hall Boulevard/Greenway	D	33.3	0.99
Hall Boulevard/Nimbus Avenue	D	40.0	0.92
Hall/ORE 217 SB	D	32.2	0.94

Tables 3-8 and 3-9 summarize the capacity analysis for evening peak conditions at ten unsignalized intersections and three all-way-stop controlled intersections in Beaverton. These 13 additional intersections, combined with the signalized intersections mentioned above, represent the 83 key study intersections identified by City staff for analysis in this study.[9] Unsignalized intersections are subject to a separate capacity analysis methodology. Descriptions of level of service for unsignalized and all-way-stop controlled intersections can be found in the technical appendix of this report.

Table 3-8
Existing PM Peak Hour Intersection Level of Service
Unsignalized Study Intersections

Intersection	Level of Service*	Average Delay (sec)
Murray Boulevard/6th Avenue	D/F	>60.0
Walker Road/167th Avenue	B/F	0.8
Davis Road/155th Avenue	A/B	0.6
Denney Road/ORE 217 SB ramps	B/F	4.9
Denney Road/ORE 217 NB ramps	B/F	>60.0
Brockman Road/Sorrento Avenue	B/F	6.4
Murray Boulevard/Maverick Terrace	B/E	0.3
Old Scholls Ferry Road/Davies Road	C/F	> 60.0
Scholls Ferry Road/Old Scholls Ferry (west)	A/C	3.8
Scholls Ferry Road/Walnut Street	A/B	3.3

* Level of service shown is for major street left turn/minor street left turn

Intersection	Level of Service	Average Delay	Volume/Capacity
Hart Road/ 170th Avenue	D	26.4	0.99
Hart Road /Sorrento	C	17.0	0.81
155th/Nora-Beard (Brockman)	A	3.2	0.42

[9] Per Howard Roll, City of Beaverton staff, November 1996.

ACCIDENTS

Accident data was obtained from the City of Beaverton and Washington County. The City of Beaverton ten highest accident locations for 1994 to 1996 are shown in Figure 3-10 and summarized in Table 3-10.

Table **3-10**
Ten Highest Accident Locations **in** Beaverton **(1994 to 1996)**

Rank	Location	Number of Accidents
1	SW Murray Boulevard/SW TV Highway	71
2	SW 158th Avenue/SW Walker Road	56
3	SW Farmington Road/SW Murray Boulevard	48
4	SW Allen Boulevard/SW Murray Boulevard	47
5	SW Hall Boulevard/SW Scholls Ferry Road	40
6	Highway 217/SW Allen Boulevard	36
7	SW Allen Boulevard/SW Menlo Drive	34
8	SW Allen Boulevard/SW Hall Boulevard	29
9	Highway 217/SW Canyon Road	29
10	11635 SW Canyon Road	26

Accident data was obtained from Washington County for the period from 1992 to 1994. This data is collected by the State of Oregon and converted to a Safety Priority Index System (SPIS) number. The SPIS number associated with a given intersection represents only those accidents that took place within or very near that intersection. The SPIS system of accident reporting does not necessarily identify broad areas or roadway links (i.e., a one-half mile segment) where a number of accidents may take place.

The SPIS numbers for each intersection in the Beaverton area of Washington County where accidents have occurred were then ranked from highest (most severe accident location) to lowest (least severe accident location). Table 3-11 summarizes where the ten highest intersections in Beaverton **fell** in the Washington County ranking.

Ranking	Street	Cross Street	Number **of** Accidents **(1992-1994)**	SPIS Number
23	SW Marlow Avenue	SW Park Way	13	56.14
32	NW Butner Road	SW Cedar Hills Blvd	24	53.97
44	SW Birchwood Road	SW 87th Avenue	3	50.74
46	SW Murray Boulevard	SW Walker Road	34	50.21
59	SW Butner-Parkway link	SW Parkway	6	47.87
64	SW Park Way	SW Parkwood Drive	5	47.15
70	SW Reusser Road	SW Rigert Road	4	45.64
74	SW Scholls Ferry Hwy	SW Old Scholls Ferry Rd	8	44.56
76	SW Cedar Hills Boulevard	SW Park Way	17	44.27
77	SW Butner Road	SW 126th Avenue	3	44.14

City of Beaverton
Transportation System Plan

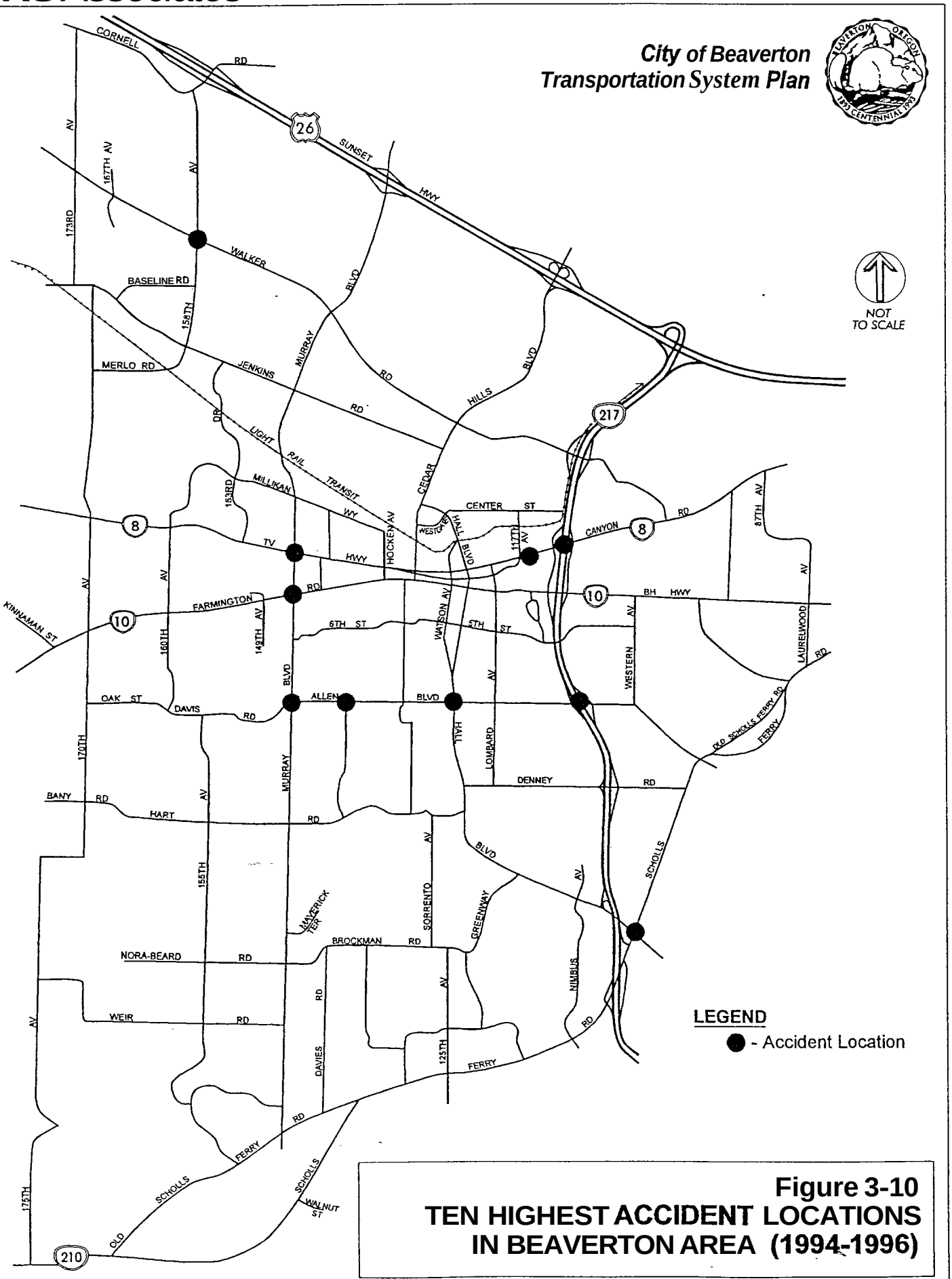


Figure 3-10
TEN HIGHEST ACCIDENT LOCATIONS IN BEAVERTON AREA (1994-1996)

AVERAGE VEHICLE OCCUPANCY

Average vehicle occupancy is a measure of the movement of people on key routes. For Beaverton, the locations of Canyon Road near Lombard Avenue and Hall Boulevard near Allen Boulevard were selected as representative monitoring points for Beaverton vehicle activity. Average vehicle occupancy (AVO) was measured at Canyon Road near Lombard Avenue in Beaverton during the PM peak period (4:00 PM to 6:00 PM)[10] to be **1.25** persons per vehicle, during the AM peak period (7:00 AM to 9:00 AM) to be **1.12** persons per vehicle and during the Saturday midday peak to be **1.62** persons per vehicle, Average vehicle occupancy was measured at Hall Boulevard during the AM peak hour to be **1.14** and during the PM peak hour to be **1.30**. This rate is slightly lower than observed typical ranges for auto occupancy (over all time periods and trip purposes) which range from about 1.31 to 1.54.[11]

Figure 3-11 shows the percentage of vehicles with one, two or greater than two occupants at the survey site.

TRANSIT

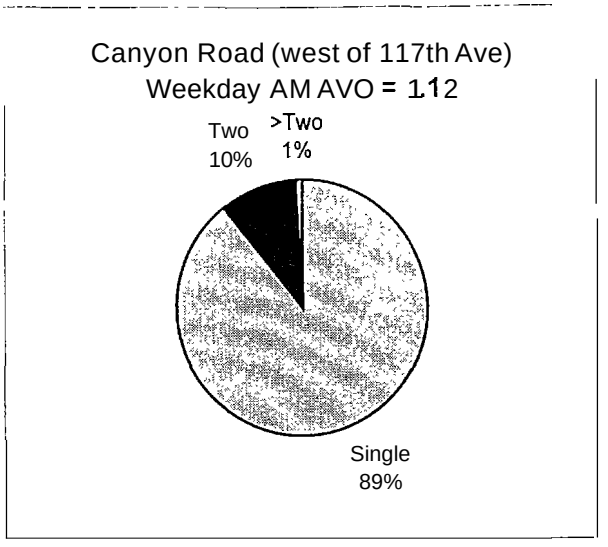
Transit service is provided to Beaverton by the Tri-County Metropolitan Transportation District of Oregon (Tri-Met). There are currently twenty Tri-Met bus routes which serve Beaverton (as of June 1997): East/West Burnside Route 20, Taylors Ferry Road Route 43, Garden Home Route 45, Farmington-185th Route 52, Beaverton-Hillsdale Route 54, Hamilton Route 55, Scholls Ferry Road Route 56, Forest Grove Route 57, Cedar Hills Route 59, Leahy Road Route 60, Marquam Hill Beaverton Route 61X, Murray Boulevard Route 62, Beaverton-Cedar Hill Route 67, Tigard-Tualatin Route 76, Beaverton-Lake Oswego Route 78, SW 198th Avenue Route 88, Rock Creek Route 89, TV Highway Express 91X, South Beaverton Express 92X and Walker Road Express 94X (see Figure 3-12). Table 3-12 provides the service days for the Tri-Met routes serving Beaverton. Table 3-13 provides the number of transit routes for the routes providing service only during the peak hours.[12]

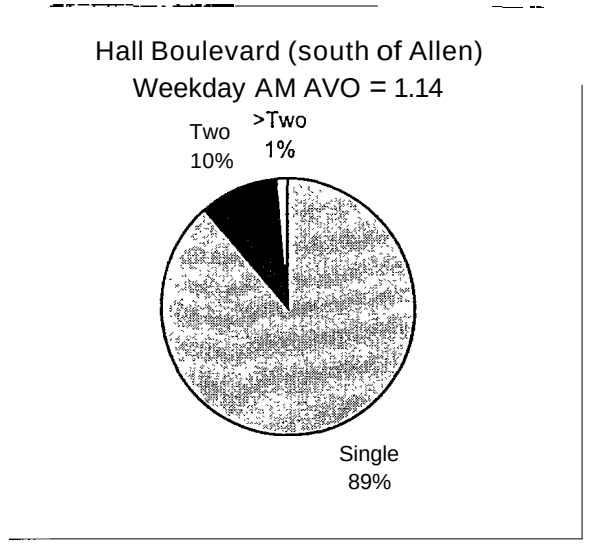
Weekday All Day Tri-Met Routes	Weekday Peak Only Tri-Met Routes	Saturday Tri-Met Routes	Sunday Tri-Met Routes
20, 43, 45, 52, 54, 56, 57, 59, 62, 67, 76, *78*, **88**, ***89***	55, 60, 61X, 91X, 92X, 94X	20, 43, 45, 52, 54, 56, 57, 59, 62, 67, 76, 78	20, 43, 45, 52, 54, 56, 57, 67, 76, 78

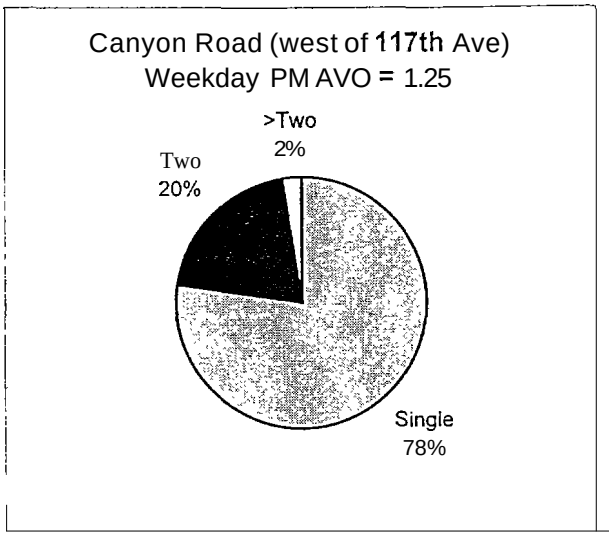
10 Counts performed for DKS Associates on November 19, 21, 23 and December 3-5, 1996.

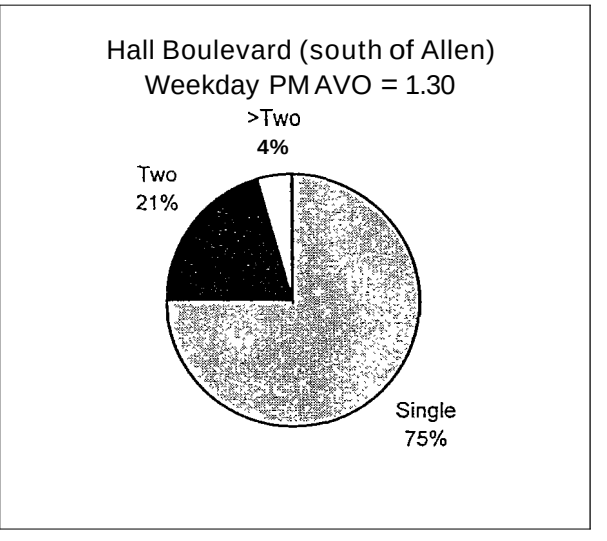
11 ***Calibration and Adjustment of System Planning Models,*** U.S. Department of Transportation and Federal Highway Administration, December, 1990 ***and Quick Response Urban Travel Estimation Techniques*** *and* ***Transferable Parameters: User's Guide,*** NCHRB Report 187, Transportation Research Board, Washington D.C., 1978.

12 **Data** provided by Dennis Grimmer, Tri-Met staff, March *6,* 1997.









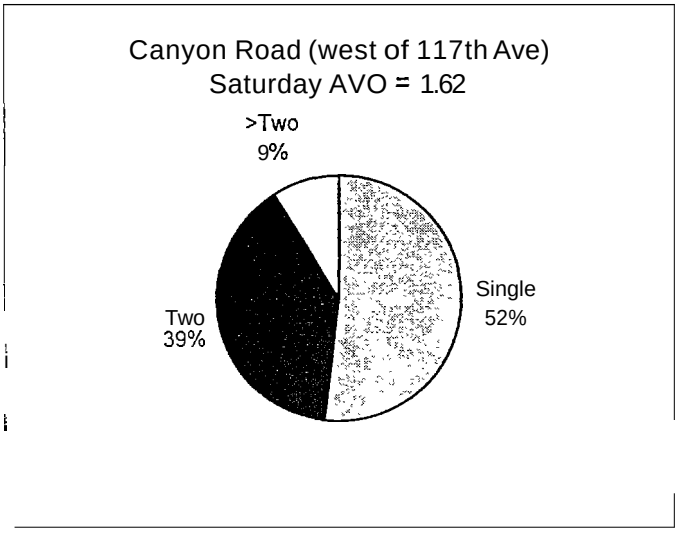


Figure 3-11
Average Vehicle Occupancy (AVO) in Beaverton

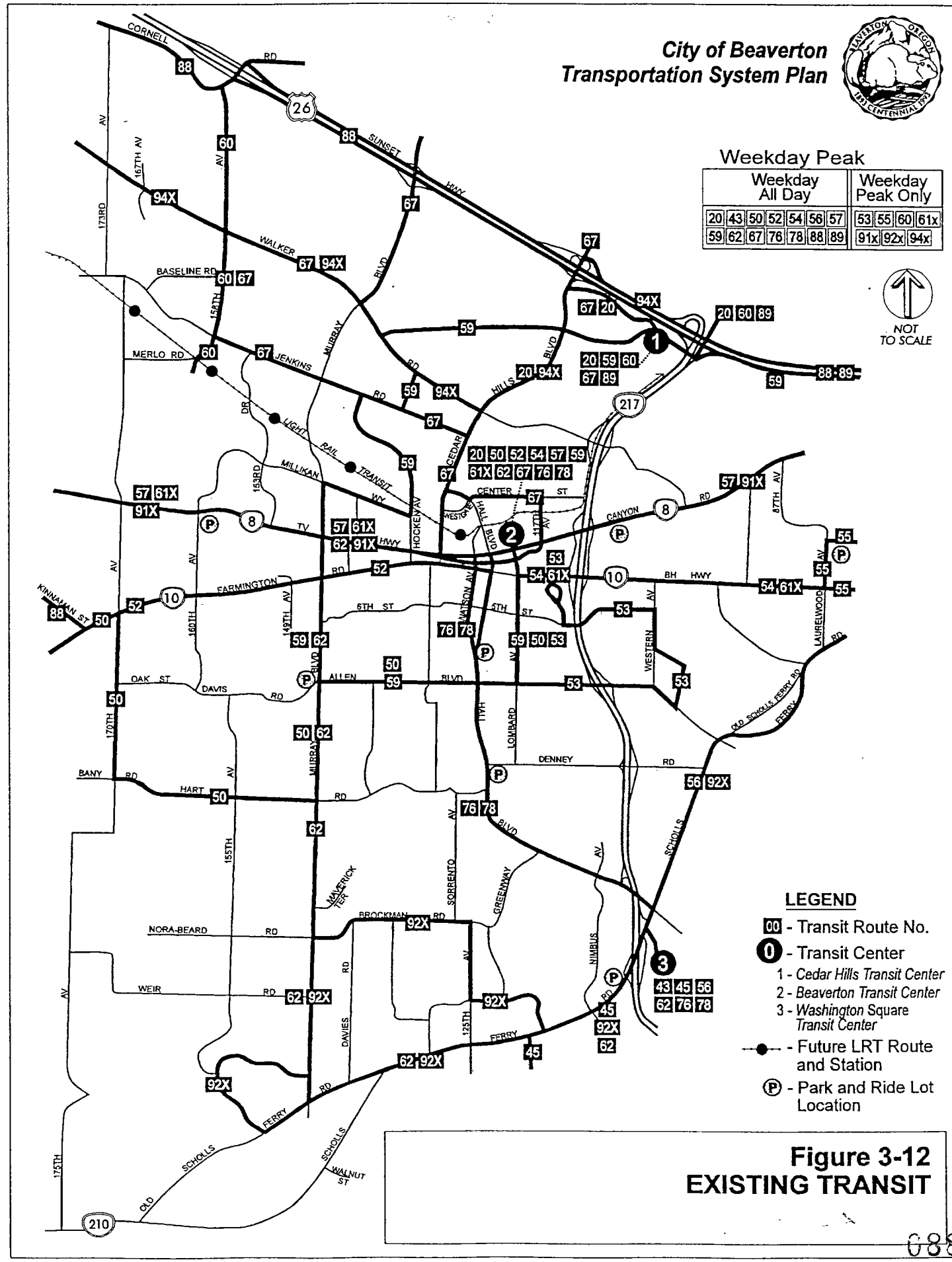


Figure 3-12
EXISTING TRANSIT

Table **3-13**
Transit Routes Providing Service **Only** during the Peak **Hours** in Beaverton

Peak Hour Only Tri-Met Routes	Number of AM peak trips	Number of PM peak trips
Route 55 - Hamilton	7	7
Route 60 - Leahy Road	3	4
Route 61X - Marquam Hill-Beaverton	4	4
Route 91X - TV Highway Express	5	5
Route 92X - South Beaverton Express	12	11
Route 94X - Walker Road Express	10	10

Route 20, East/West Burnside Route, provides service between Cedar Hills Boulevard, the Beaverton Transit Center, Cedar Hills Transit Center and Burnside Road in Portland. Route 52, Farmington-185th Route, provides service between 185th Avenue and Beaverton Transit Center, via Farmington Road. Route **54,** Beaverton-Hillsdale Highway, provides service between the Beaverton Transit Center and Portland via Beaverton-Hillsdale Highway and Barbur Boulevard. Route 56, Scholls Ferry Road, provides service between the Washington Square Transit Center and Portland via Beaverton-Hillsdale Highway and Barbur Boulevard. Route 55, Hamilton, provides weekday peak hour service from Beaverton-Hillsdale Highway at Laurelwood to Portland. Route 59, Cedar Hills, provides service between the Beaverton Transit Center and the Cedar Hills Transit Center and to Portland. Route 60, Leahy Road, provides service between the Merlo Garage, Cedar Hills Transit Center and St. Vincent Hospital. Route 62, Murray Boulevard provides service from the Beaverton Transit Center to Washington Square via TV Highway, Murray Boulevard and Scholls Ferry Road. Route 67, Beaverton Cedar Hills, provides service between the Cedar Hills Transit Center, Merlo Garage and Beaverton Transit Center. Route 76, Beaverton Tualatin, provides service between the Beaverton Transit Center, Washington Square, the Tualatin Park and Ride and Meridian Park Hospital. Route 78, Beaverton-Lake Oswego Route provides service between **the** Beaverton Transit Center, Washington Square, Tigard Transit Center, Portland Community College and Lake Oswego Transit Center.

The 1994 average weekday ridership in Beaverton is provided in Table **3-14.13** The average weekday boarding rides system-wide for Tri-Met routes serving Beaverton for the last three years is shown in Table 3-15.[14]

The City provides input regarding service planning individually to Tri-Met through Tri-Met's Senior, Service Planner responsible for this area and regionally through Washington County. Several meetings were held involving public input to Tri-Met during the transit sessions called Transit Choices for Livability in which Beaverton gave Tri-Met perspectives to improving the transit system.

13 Data provided by Dennis Grimmer, **Tri-Met staff,** November 5, **1996.**

14 Ibid.

Table 3-14
1994 Tri-Met Weekday Ridership in Beaverton

Route	Direction	Boardings	Alightings	Total
20 - Burnside	Westbound	182	461	643
20 - Burnside	Eastbound	420	153	573
52 - Farmington/185th	Westbound	592	270	862
52 - Farmington/185th	Eastbound	193	503	696
54 - Beaverton-Hillsdale	Outbound	187	660	847
54 - Beaverton-Hillsdale	Inbound	639	194	833
56 - Scholls Ferry	Outbound	44	467	511
56 - Scholls Ferry	Inbound	401	99	500
57 - Forest Grove	Outbound	1138	1507	2645
57 - Forest Grove	Inbound	1655	1086	2741
59 - Cedar Hills	Outbound	671	752	1423
59 - Cedar Hills	Inbound	628	522	1150
60 - Leahy Road	Outbound	6	44	50
60 - Leahy Road	Inbound	36	2	38
62 - Murray Boulevard	Southbound	317	329	646
62 - Murray Boulevard	Northbound	357	347	704
67 - Beaverton-Cedar Hills	Southbound	594	589	1183
67 - Beaverton-Cedar Hills	Northbound	516	554	1070
78 - Beaverton-Lake Oswego	Southbound	941	533	1474
78 - Beaverton-Lake Oswego	Northbound	508	929	1437
91X - TV Highway Express	Outbound	10	263	273
91X - TV Highway Express	Inbound	302	7	309
92X - South Beaverton Express	Outbound	11	223	234
92X - South Beaverton Express	Inbound	252	3	255
94X - Walker Road Express	Outbound	7	186	193
94X - Walker Road Express	Inbound	181	5	186

Source: Tri-Met

Route	93-94	94-95	95-96
20 East/West Burnside	4,736	6,121	6,385
52 Farmington-185th	1,582	1,781	1,911
54 Beaverton-Hillsdale	2,203	2,395	2,421
56 Scholls Ferry Road	1,908	2,174	2,256
57 Forest Grove	7,389	8,615	8,525
59 Cedar Hills	1,709	1,716	1,664
60 Leahy Road	141	117	115
62 Murray Boulevard	675	786	791
67 Beaverton-Cedar Hill	1,143	1,324	1,062
76 Tigard-Tualatin	404	610	697
78 Beaverton-Lake Oswego	2,131	2,823	3,190
91X TV HWY Express	786	890	975
92X South Beaverton Express	n/a	608	691
94X Walker Road Express	n/a	441	n/a

The City of Beaverton Development Code[15] defines *a Major Transit Stop* for existing or planned light rail stations, park and ride lots, and transit transfer stations, except for temporary facilities which are within ¼ mile of intense development or uses which are likely to generate a high level of transit trips.[16] Currently, there are several locations in Beaverton that may meet that criteria including the Cedar Hills Transit Center, Beaverton Transit Center and Washington Square. The City of Beaverton Development Code defines *At a major transit stop* is as a parcel that is adjacent to or includes a major transit stop or is located within 200 feet of a major transit stop and defines *Near a major transit stop* as a parcel that is within 300 feet of a major transit stop.

15 *City of Beaverton Development Code, Ordinance 3965,* City of Beaverton, Oregon, November 7, 1996.

16 The City of Beaverton Development Code defines *a Major Transit Stop* as either A) Existing or planned light rail stations, park and ride lots, and transit transfer stations, except for temporary facilities, identified in an acknowledged transportation system plan; or B) Existing stops or other planned stops designated as major transit stops in an acknowledged transportation system plan which have 20 minute service during the weekday commute peak hour and are located within ¼ mile of an area planned and zoned for R-1, R-2, R-3.5 or other residential zoning of comparable densities or zoned for NS, GC, CS, TC, CV and OC.

As of September 1997, Tri-Met added two new bus routes within Beaverton. The buses serving these routes are smaller, neighborhood-sized vehicles. The 50-Hart/170th route links the Aloha Town Center area with the Beaverton Transit Center via 170th, Hart, Murray, Allen and Lombard. The 53-Artic/Allen links the industrial area on Allen Boulevard east of ORE 217 with the Beaverton Transit Center.

BICYCLE

Existing bike lanes, designated bikeways and off-street bike pathways are shown in Figure 3-13. Designated bikeways are those facilities that are as shown in the City of Beaverton Bikeway Plan.[17] The designated bikeway facilities may or may not have future bike lanes.

There is limited connectivity for bicyclists traveling to activity centers in Beaverton. However, there are two primary north/south routes (Murray Boulevard and Hall Boulevard between Washington Square and Farmington Road) and three primary east/west routes (Scholls Ferry Road, Brockman Road and 5th Street) in Beaverton.

Bicycles are permitted on all roadways in the City except for the ORE 217 freeway. Bicycle use in Beaverton is generally for recreational, school and commuting purposes. The City includes lands owned and maintained by the Tualatin Hills Park and Recreation District which provides several off-street bike paths in Beaverton for bicyclists and pedestrians. The Tualatin Hills Park and Recreation District has completed a master plan which includes many proposed trails in Beaverton.

PEDESTRIANS

Figure **3-14** shows existing sidewalks on arterial and collector streets in Beaverton. **A** majority of arterial and collector streets in Beaverton have sidewalks on at least one side of the street. There are some locations where sidewalks are not connected; however, connectivity and pedestrian linkages are relatively good. In addition, besides the facilities that are shown on this map, many residential streets also have sidewalks.

Pedestrian counts were conducted during the evening peak period (4:00 to 6:00 PM) at the study intersections in Beaverton. **A** majority of these intersections had ten or more pedestrians in the PM peak period. The most significant pedestrian movements occur in the Beaverton downtown area on TV Highway, Cedar Hills Boulevard, Farmington Road and Hall Boulevard. Figure 3-15 shows the pedestrian movements at each study intersection during the PM peak period.

Sidewalks at least five feet wide are required in all new development. Existing roadways that do not have sidewalks are being retrofitted where terrain and right-of-way make it economically feasible to do so. All newly-constructed sidewalks include wheelchair ramps at intersections to permit easy ingress/egress for wheelchairs. In addition to paved sidewalks, pedestrian paths are included in many of the City's parks, open spaces and greenways, including the Tualatin Hills Park and Recreation District pathways.

[17] *Bikeway Plan,* City of Beaverton, Oregon, July 28, 1987.

City of Beaverton
Transportation System Plan

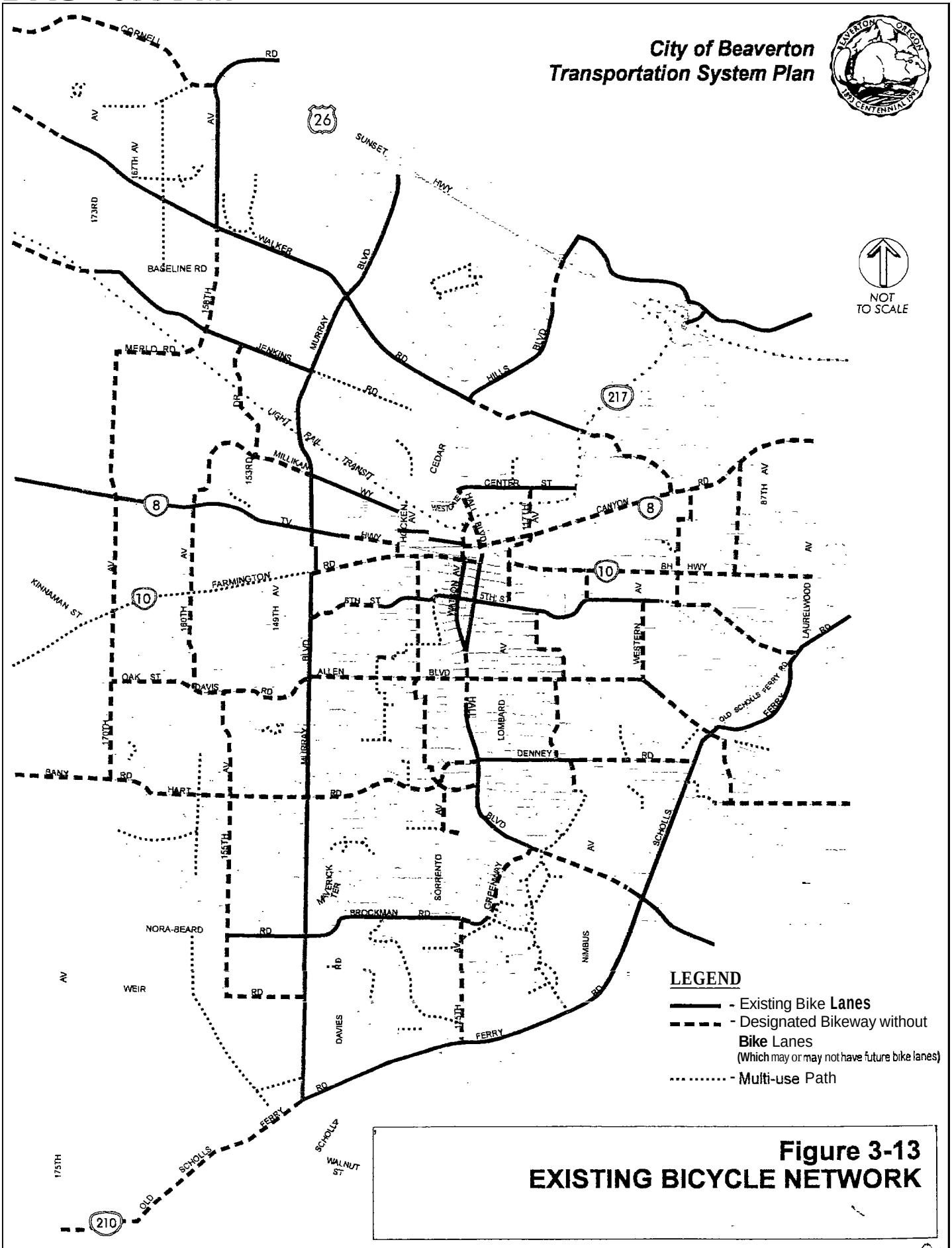


Figure 3-13
EXISTING BICYCLE NETWORK

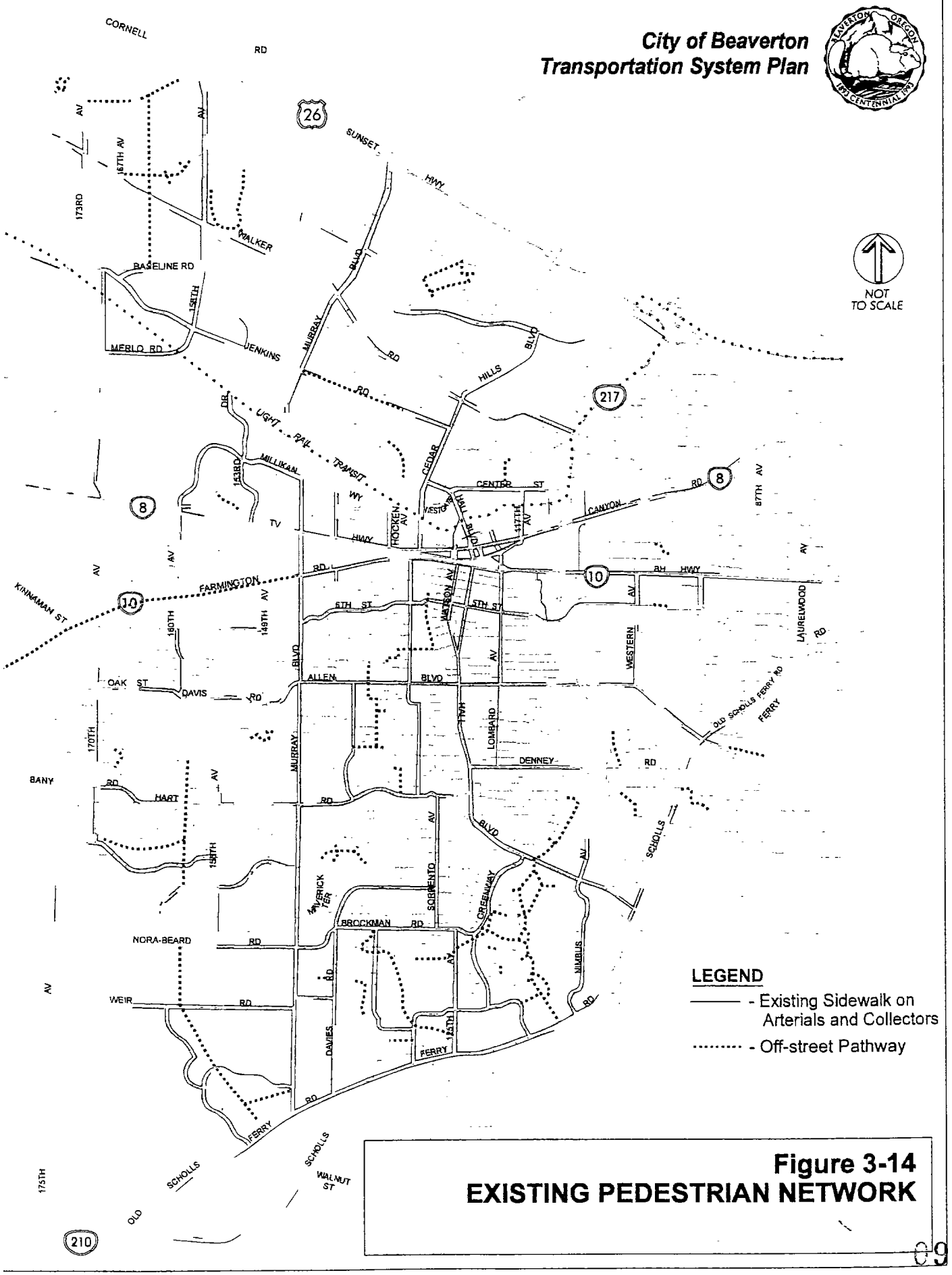
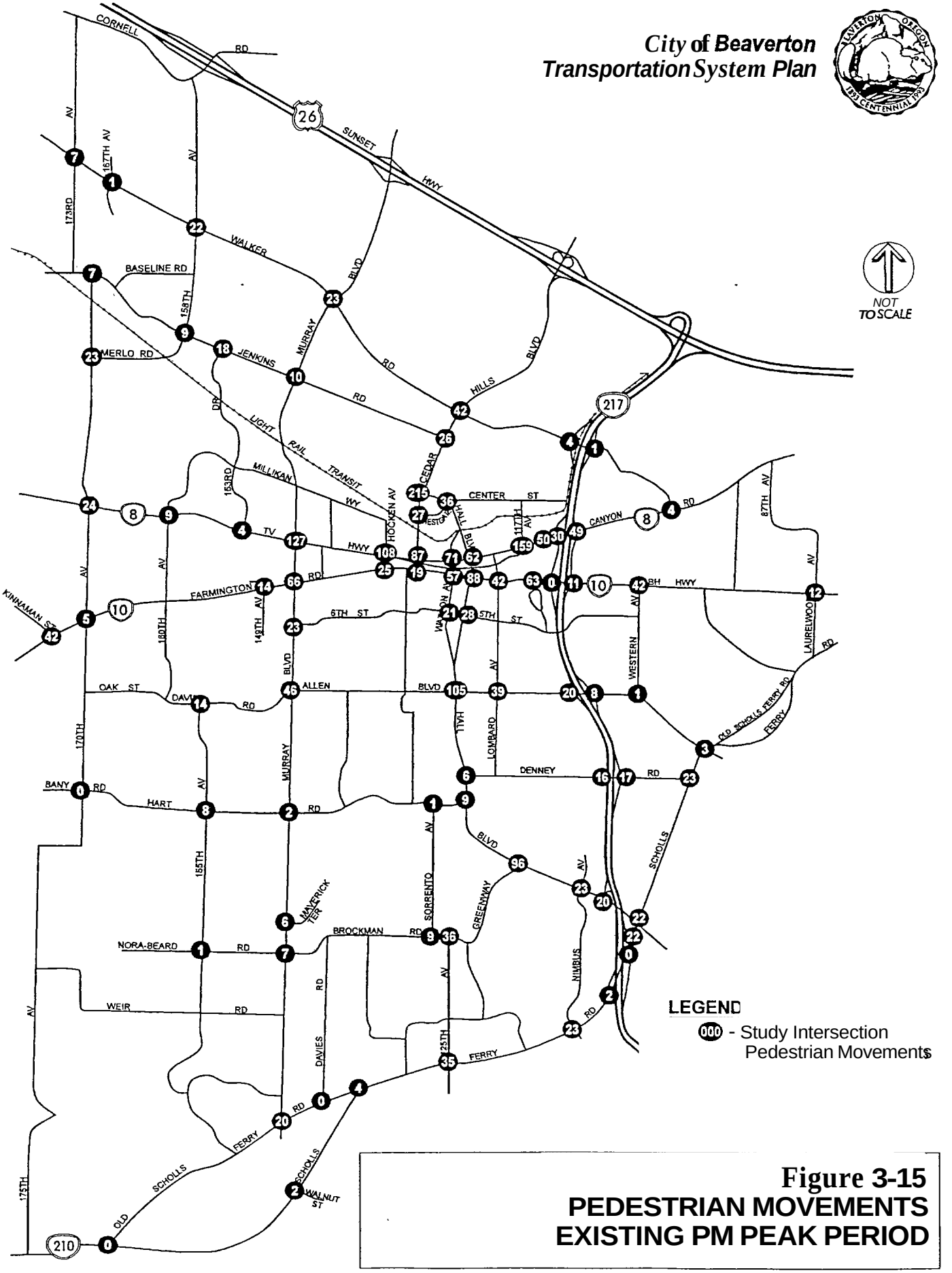


Figure 3-14
EXISTING PEDESTRIAN NETWORK

City of Beaverton
Transportation System Plan



NOT TO SCALE

Figure 3-15
PEDESTRIAN MOVEMENTS
EXISTING PM PEAK PERIOD

TRUCKS

Through freight truck routes that have been identified in the City of Beaverton Development Code are all major arterials except SW Watson and SW Hall Boulevard. Washington County identifies through truck routes on several roadways that have been classified as arterials. They also include Sunset Highway (US 26), Farmington Road (ORE 10), Beaverton-Hillsdale Highway (ORE 10), and Tualatin Valley Highway (ORE 8). This system provides connections with truck routes serving areas inside and outside of Beaverton making efficient truck movement and the delivery of raw materials and finished products possible. These routes are generally found in and serve areas where there is a concentration of commercial and/or industrial land uses. Figure 3-16 shows through freight truck routes within the vicinity of Beaverton according to Washington County.[18] Percentage of truck movements throughout Beaverton are shown in Figure 3-17.

RAIL

All low-density rail lines within the vicinity of Beaverton are operated by Portland & Western (P&W), a sister company of Willamette & Pacific (W&P) Railroad and a subsidiary of Genesee & Wyoming Incorporated. Figure 3-18 shows the existing rail routes and crossing treatments within the boundaries of the City of Beaverton.

In relation to Beaverton, P&W currently has services extending north to Banks, Bendemeer, Hillsboro, Forest Grove and Stimson-Forestex. Services continue south to the Tigard and Tualatin area where rail lines branch to serve areas east to Brooklyn and south to Quinaby and Eugene.[19]

Trains generally operate in the Beaverton area seven days a week. Time of operation can vary, but the approximate number of trains remains constant. Table 3-16 is a list of train origins, destinations, times of operation, and numbers of trains per day.

Origin	Destination	Frequency and Hours of Operation	
		AM	PM
Beaverton (St. Mary's)	Hillsboro Depot	1 train daily Monday – Saturday	1 train **daily** Monday – Saturday
Beaverton (St. Mary's)	Beaverton and points south	8-10 trains daily, 7 days a week, schedule times vary	
Beaverton	Beaverton Drill	None	1 train daily, 5 nights per week Sunday – Friday
Beaverton	GM Lead	1 train daily Monday – Saturday	None

[18] Washington County Transportation Plan, Comprehensive Plan Volume XV, October 1988.

[19] Based on a map **of** the Portland & Western Railroad/Willamette **and** Pacific Railroad received **from** Susan Walsh-Enloe, Portland & Western Railroad, **April** 17, 1997.

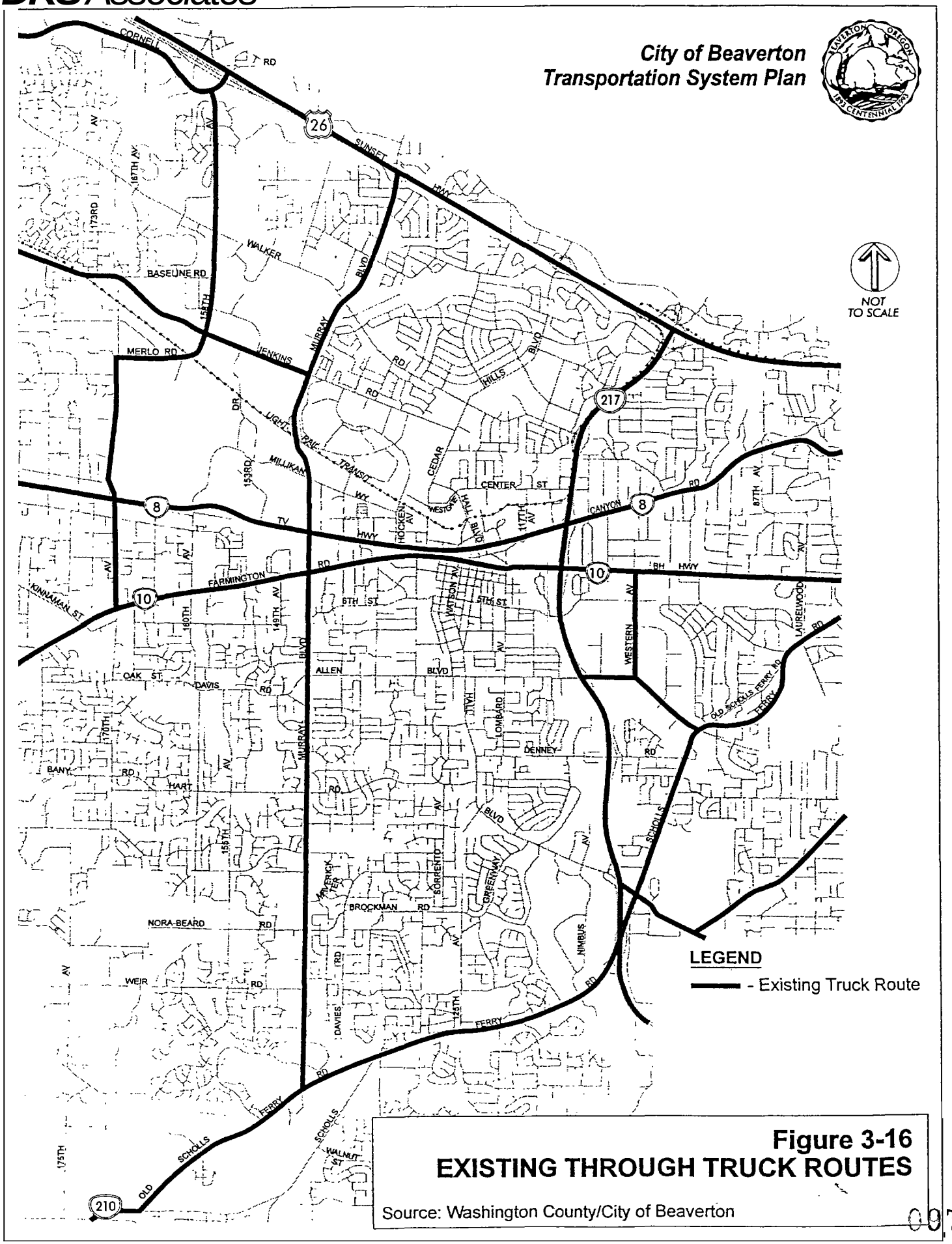


Figure 3-16
EXISTING THROUGH TRUCK ROUTES

Source: Washington County/City of Beaverton

City of Beaverton
Transportation System Plan

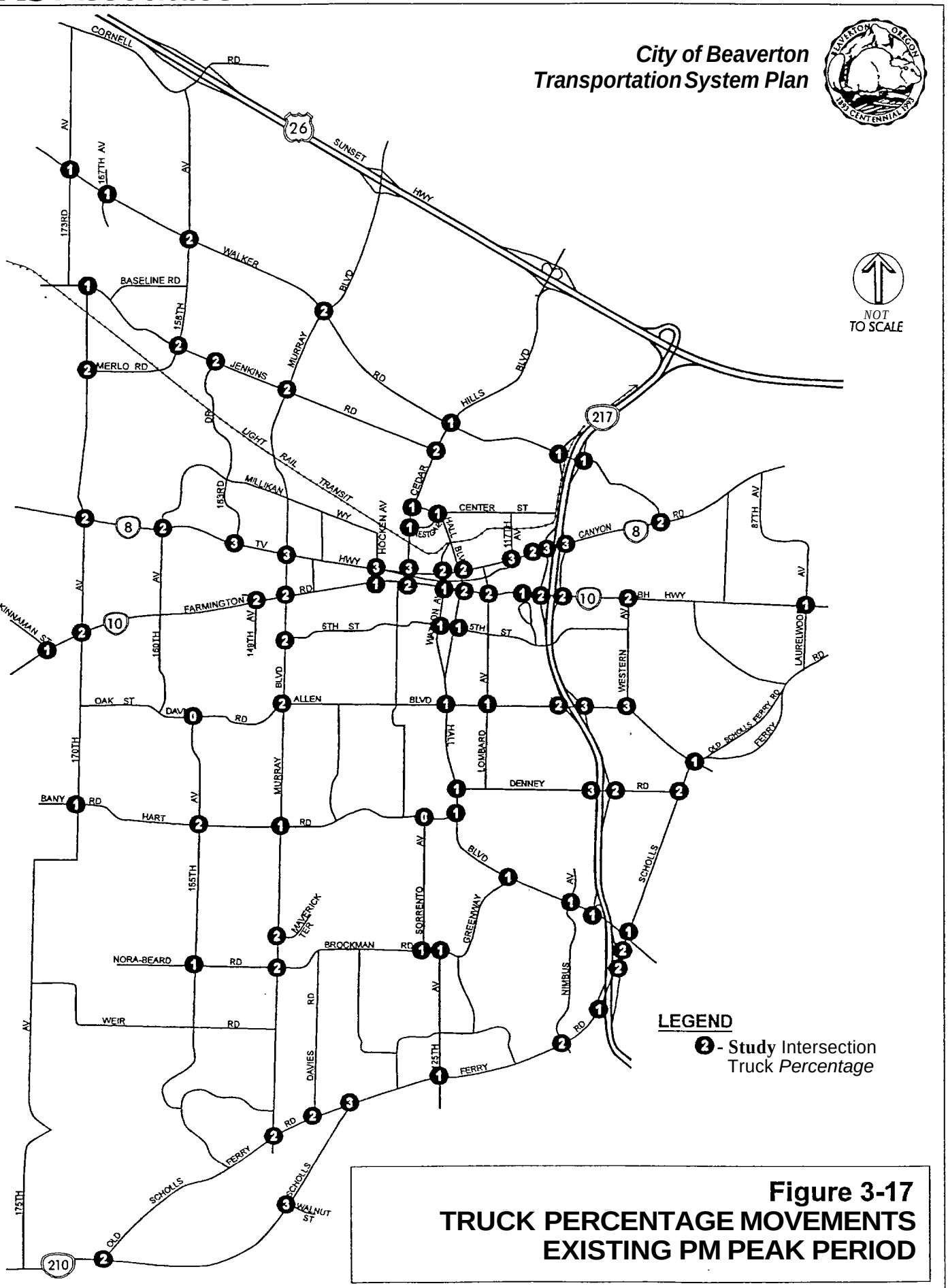


Figure 3-17
TRUCK PERCENTAGE MOVEMENTS
EXISTING PM PEAK PERIOD

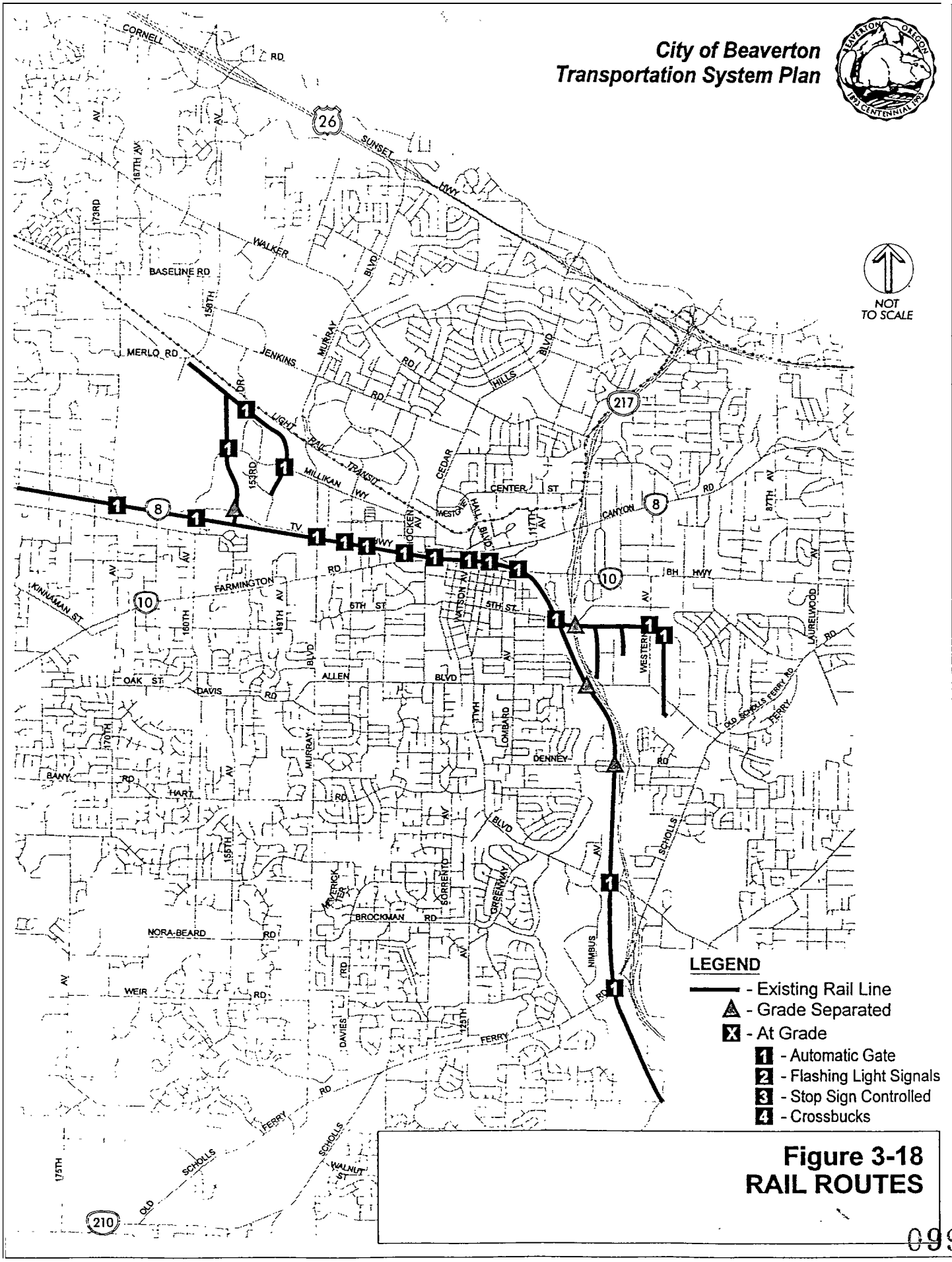


Figure 3-18
RAIL ROUTES

AIR

Saint Vincent Hospital in Beaverton is listed as a heliport by the Oregon Department of Transportation. The heliport facilities include a 40' x 40' runway and one based aircraft.[20] With based aircraft numbering less than three, the facility is not required to maintain a comprehensive plan.[21] The heliport facility supports Life Flight Network and other emergency medical aircraft.

WATER

There are no navigable waterways within the vicinity of the City of Beaverton that supports commercial or recreational use. Therefore, no policies or recommendations in this area of transportation is provided.

PIPELINE

The only major pipeline facilities running through the Beaverton area are high pressure natural gas feeder lines owned and operated by Northwest Natural Gas Company. Figure 3-19 shows the feeder line routes for Beaverton.[22] The feeder lines serving the Beaverton area originate at Sauvie Island. From Beaverton, these lines branch south to Tigard and Sherwood.

PLANNED IMPROVEMENTS

A number of roadway improvements are already planned for the Beaverton area by various agencies. Beaverton SDC refers to projects related to Beaverton's recently adopted System Development Charge Ordinance. Other projects are listed on Beaverton's Capital Improvement Plan (CIP) that are either to be funded by private development or have unknown construction dates.

The Washington County Transportation Capital Improvement Program is a program that evaluates, ranks and schedules transportation capital project needs in Washington County for the next five years.[23] The projects are identified as either committed projects (projects under design or construction at the time of CIP preparation) and uncommitted projects (project submittals which have not been approved for funding). The uncommitted projects are grouped by project category and evaluated using project ranking criteria. The committed projects identified in the program are summarized in Table 3-17 (many of these have recently been completed).

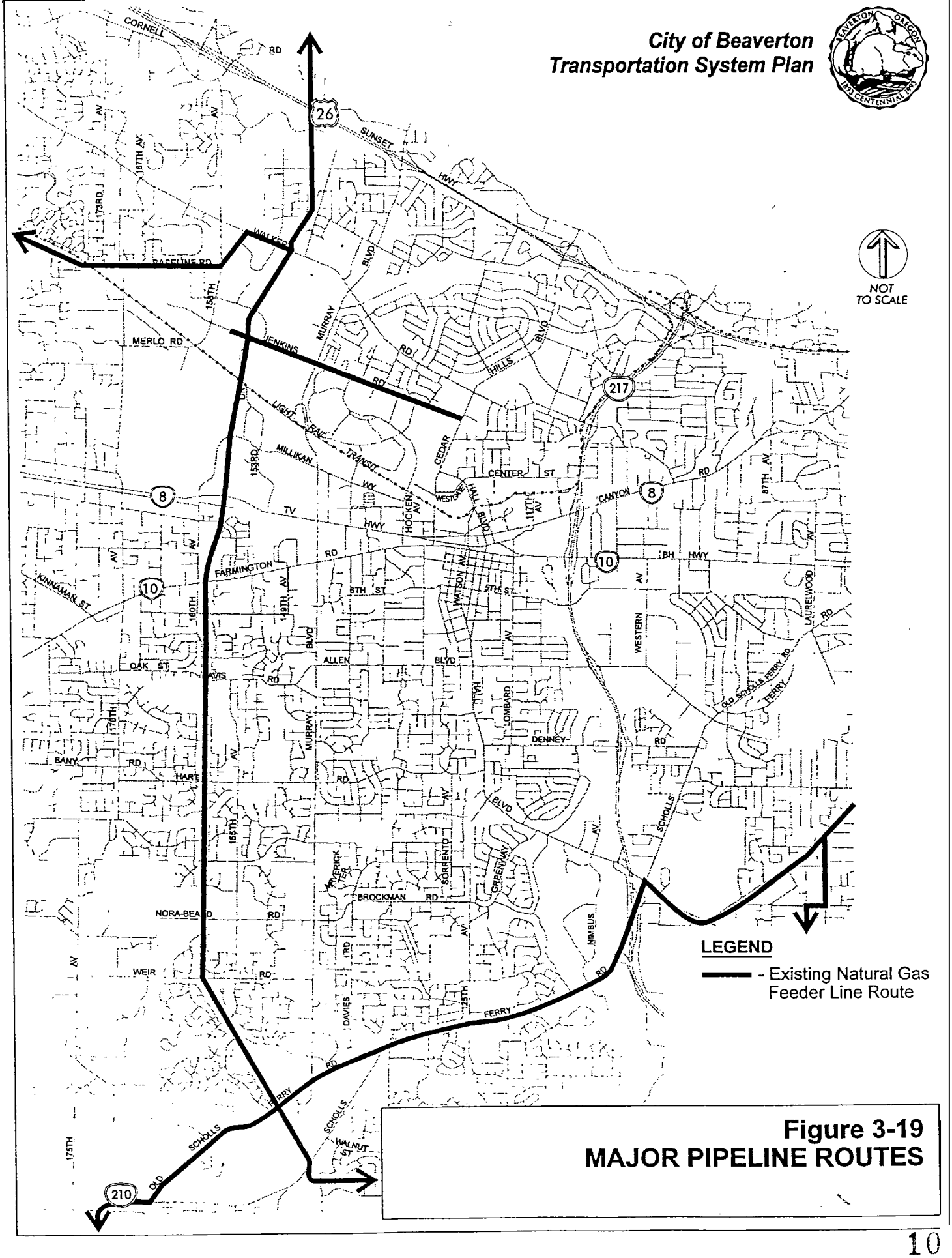
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20 Based on Oregon Aviation Facilities listing obtained from the Oregon Department of Transportation, Thomas Highland, Aeronautics, April 29, 1997.

21 Senate Bill 1113 requires airport facilities with more then three based aircraft in operation since 1994 to maintain a comprehensive plan.

22 Based on the Portland Area Distribution System Map (Dated: October 1996) received from Northwest Natural Gas Company, Engineering Facilities Information System, April 28, 1997.

23 ***Washington County Transportation Capital Improvement Program*** *FY1995/1996-FY 1999/2000*, Washington County, February 1996.


City of Beaverton
Transportation System Plan
NOT TO SCALE
LEGEND
- Existing Natural Gas Feeder Line Route
CORNELL RD
SUNSET HWY
26
WALKER RD
BASELINE RD
MERLO RD
JENKINS RD
MURRAY BLVD
HILLS BLVD
217
MILLIKAN WY
TV HWY
CENTER ST
CANYON RD
8
10
FARMINGTON RD
BH HWY
KINNAMAN ST
OAK ST
ALLEN BLVD
DENNEY RD
BANY RD
HART RD
AVIS RD
BROCKMAN RD
NORA-BEAVERTON RD
WEIR RD
SCHOLLS FERRY RD
OLD SCHOLLS FERRY RD
WALNUT ST
210
Figure 3-19
MAJOR PIPELINE ROUTES

Committed Projects in Washington **County CIP**

Roadway/Intersection	Improvement
Farmington Road	Widen to **4** lanes with continuous center turn lane and bike lanes from Murray Boulevard to 172nd Avenue.
Cedar Hills Boulevard	Complete sidewalks and bike lanes on both sides from Parkway to Butner and extend sidewalk on west side from Parkway to Huntington.
170th Avenue	Widen to 3 lanes with sidewalks and bikeway from Rigert to Blanton, widen to 5 lanes from Blanton to Alexander and add/modify traffic signals.
170th/173rd Avenue	Construct new road and widen existing road to three lanes with sidewalks and bikeway from Baseline Road to Walker Road.
Oak Street	Widen road and add bike and pedestrian facilities from Beaverton city limits to 170th Avenue.
Baseline Road	Widen to 5 lanes from 158th Ave to 170th Ave with bike lanes and sidewalks (Tri-Met) and widen to 5 lanes from 170th Ave to 177th Ave with bike lanes and sidewalks (County).
Scholls Feny Road	Add turn lanes and bike lanes to Scholls Ferry/Old Scholls Ferry from east of the Beaverton city limits to 175th Ave. Realign the Scholls Ferry/Old Scholls Ferry and Scholls Ferry/Beef Bend intersections, adding turn lanes and traffic signals.
Walker Rd/Mayfield Ave intersection	Construct eastbound left **turn** lane, install traffic signal and illumination.

The Statewide Transportation Improvement Program (STIP) is a program schedule for the Oregon Department of Transportation.24 The purpose of the STIP is to schedule funding for Oregon's highest priority transportation projects for the next two years. Table 3-18 lists the projects that are in the STIP, MSTIP and/or RTP fiscally constrained scenario.

24 ***Statewide Transportation Improvement Program*** *1996-1998,* Oregon Department of Transportation, January 1996.

Table 3-18
Programmed Transportation Improvements List

Roadway/Intersection	Improvement	Jurisdiction
Farmington Road	Widen to 5 lanes with bike lanes from 172nd Avenue to 209th.	ODOT
170th Avenue	Widen to 3 lanes with sidewalks and bikeway from Rigert to Blanton to Alexander	Wash Co/ MSTIP
170th/173rd Avenue	Construct new road and widen existing road to three lanes with sidewalks and bikeway from Baseline Road to Walker Road.	Wash Co/ MSTIP
Jenkins: Murray to 158th	Widen to 5 lanes MM	Wash Co.
Jenkins: Cedar Hills to Murray	Widen to 3 lanes MM	Wash Co.
Allen: Menlo to Main	Widen to 5 lanes	City
Davis Road	Widen road and add bike and pedestrian facilities from Allen to 170th Avenue.	City/MSTIP
Scholls Ferry Road	Add turn lanes and bike lanes to Scholls Ferry/Old Scholls Ferry from east of the Beaverton city limits to 175th Ave. Realign the Scholls Ferry/Old Scholls Ferry and Scholls Ferry/Beef Bend intersections, adding turn lanes and traffic signals.	ODOT/ Wash Co
Walker Rd: Murray to 185th	Widen to 5 lanes with bike lanes and sidewalks	Wash Co
Cornell Road: 158th to 185th	Widen to 5 lanes with bike lanes and sidewalks	Wash Co
Lombard: Broadway to Farmington	Realign roadway to align with segment to the north (3 lanes)	City/MSTIP
Lombard: LRT to Center	Extend 3 lane section with sidewalks	City
125 Avenue: Greenway to Hall	Extend 3 lane section with sidewalks	City
6th/Division: Murray to 149th	Extend 2 lane roadway	City
Millikan: Hocken to Cedar Hills	Extend Millikan to the east to connect to Cedar Hills at Henry Street	City/MSTIP
US 26: ORE 217 to Murray	Widen highway to 6 lanes and add braided ramps	ODOT
Canyon Road: 110th to 117th	Provide median access control, relocate traffic signal, add turn lanes	ODOT
ORE 217: US 26 to Canyon	Widen highway and complete ramp work	ODOT
Murray Boulevard Overcrossing	Widen to four lanes Millikan to Terman	Wash Co.
Murray Boulevard: Farmington to Millikan	Traffic signal interconnect	ODOT
Hall at Scholls Ferry	Provide southbound right turn land	ODOT
ORE 217: TV Hwy to 72nd Avenue	Widen freeway and rebuild auxillary lanes	ODOT

Chapter 4
Future Demand and Land Use

This chapter summarizes the methodology used to obtain future year forecasts for various modes in the City of Beaverton.

The transportation improvement plan within Beaverton addresses existing system needs and any additional facilities that will be required to serve future growth. Metro's urban area traffic forecast model was identified as the source for determining future traffic volumes in Beaverton. This traffic forecast model translates assumed land uses into person travel, selects modes and assigns roadway volume projections, These traffic volume projections form the basis for identifying potential roadway deficiencies and for evaluating alternative circulation improvements. This section describes the forecasting process, including key assumptions and the land use scenario developed from the Comprehensive Plan designations and allowed densities. Future change of these land development variables will significantly change the future travel forecast.

PROJECTED LAND USES

Land use is a key factor in developing a functional transportation system. The amount of land that is planned to be developed, the type of land uses and how the land uses are mixed together have a direct relationship to expected demands on the transportation system. Understanding the amount and type of land use is critical to taking actions to maintain or enhance transportation system operation.

Projected land uses were developed for all areas within the urban growth boundary reflecting the Comprehensive Plan and Metro's land use assumptions for year 2015. Complete land use data sets were developed **for** the following conditions:

- Existing 1994 Conditions
- Year 2015 Conditions

Land uses were inventoried throughout Beaverton by Metro. This land use data base includes the number of dwelling units, number of retail employees and number of other employees. Table 4-1 summarizes the land uses for existing conditions and the future scenario. A detailed summary of the land uses for each Transportation Analysis Zone (for both the existing conditions and future scenario) is provided in the appendix.

Table 4-1
Beaverton Land Use Summary

Land Use	1994	2015	Increase	Percent Increase
Households	56,590	88,381	31,791	56%
Retail Employees	18,524	30,195	11,671	63%
Other Employees	71,241	119,675	48,434	68%

Source: Metro

At the existing level of land development, the transportation system operates without significant deficiencies in the study area. As land uses are changed in proportion to each other (i.e., there is a significant increase in retail employment relative to household growth), there will be a shift in the overall operation of the transportation system. Retail land uses generate higher amounts of trips per acre of land than do households and other land uses. The location and design of retail land uses in a community can greatly affect transportation system operation. Additionally, if a community is homogeneous in land use character (i.e., all employment, all residential), the system must support export of trip making. Typically, there should be a mix of residential, commercial, and employment type land uses so that some residents may work and shop locally, reducing the need for residents to travel long distances.

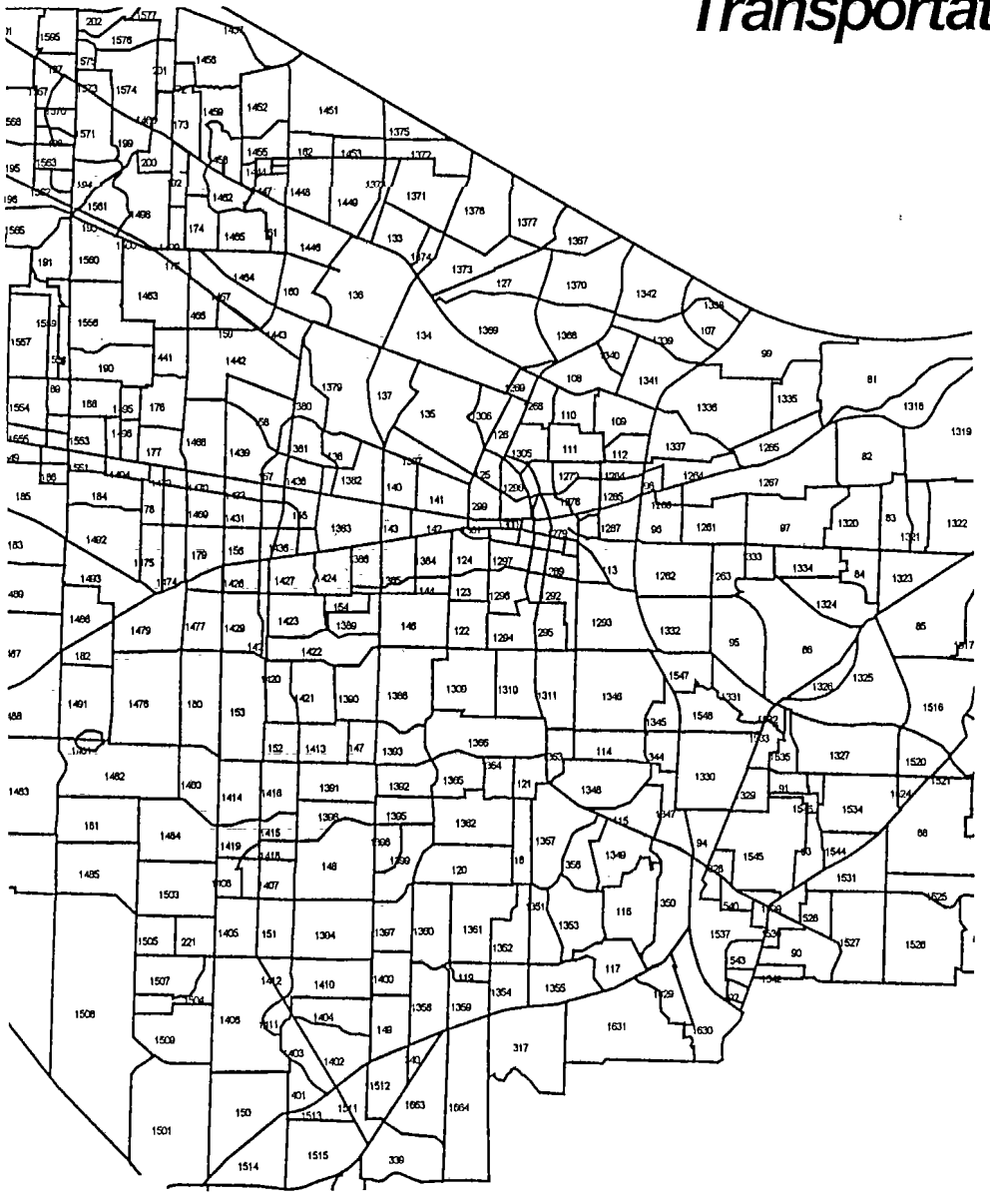
Table 4-1 indicates that significant growth is expected in Beaverton in the coming decades. These land use projections should be monitored to make sure that Beaverton is working to achieve a balance of land use that is compatible with the available transportation system. This TSP balances transportation needs with the forecasted 2015 land uses.

For traffic forecasting, the land use data is stratified into geographical areas called transportation analysis zones (TAZs) which represent the sources of vehicle trip generation. There are 109 Metro TAZs in Beaverton. These 109 TAZs were subdivided, as part of this plan, into 461 TAZs to more specifically represent land use in Beaverton. The disaggregated model zone boundaries are shown in Figure 4-1.

METRO AREA TRAFFIC MODEL

The development of future traffic system needs for Beaverton depends on the ability to accurately forecast travel demand resulting from estimates of future population and employment for the City.

City of Beaverton TSP
Transportation Analysis Zones



LEGEND:

Proposed Disaggregated Zone Boundary

Figure 4-1

The objective of the transportation planning process is to provide the information necessary for making decisions on when and where improvements should be made in the transportation system to meet travel demands.

Metro has developed an urban area travel demand model as part of the Regional Transportation Plan Update process to help identify street and roadway needs. Metro uses EMME/2, a computer based program for transportation planning, to process the large amounts of data for the Portland Metropolitan area. Traffic forecasting can be divided into several distinct but integrated components that represent the logical sequence of travel behavior (Figure 4-2). These components and their general order in the traffic forecasting process follow:

- Trip Generation
- Trip Distribution
- Mode Choice
- Traffic Assignment

The initial roadway network used in the traffic model was the existing streets and roadways. Future land use scenarios were tested and roadway improvements were added to mitigate traffic conditions, using programmed improvements as a starting basis. Forecasts of PM peak hour traffic flows were produced for every major roadway segment within Beaverton. Traffic volumes were projected on all arterials and most collector streets. Some local streets were included in the model, but many are represented by centroid connectors in the model process.

Trip Generation. The trip generation process translates land use quantities (in numbers of dwelling units and retail and other employment) into vehicle trip ends (number of vehicles entering or leaving a TAZ) using trip generation rates established during the model verification process. The Metro trip generation process is elaborate, entailing detailed trip characteristics for various types of housing, retail employment, non-retail employment and special activities. Typically, most traffic impact studies rely on the Institute of Transportation Engineers (ITE) research for analysis.[1] The model process is tailored to variations in travel characteristics and activities in the region, which involve high levels of trip generation and lower levels. For reference, Table 4-2 provides a summary of the evening peak hour trip rates used in the Metro model. These are averaged over a broad area and thus, are different than driveway counts represented by ITE. This data provides a reference for the trip generation process used in the model.

[1] Trip Generation **Manual, 5th** Edition, Institute of **Transportation** Engineers, 1991

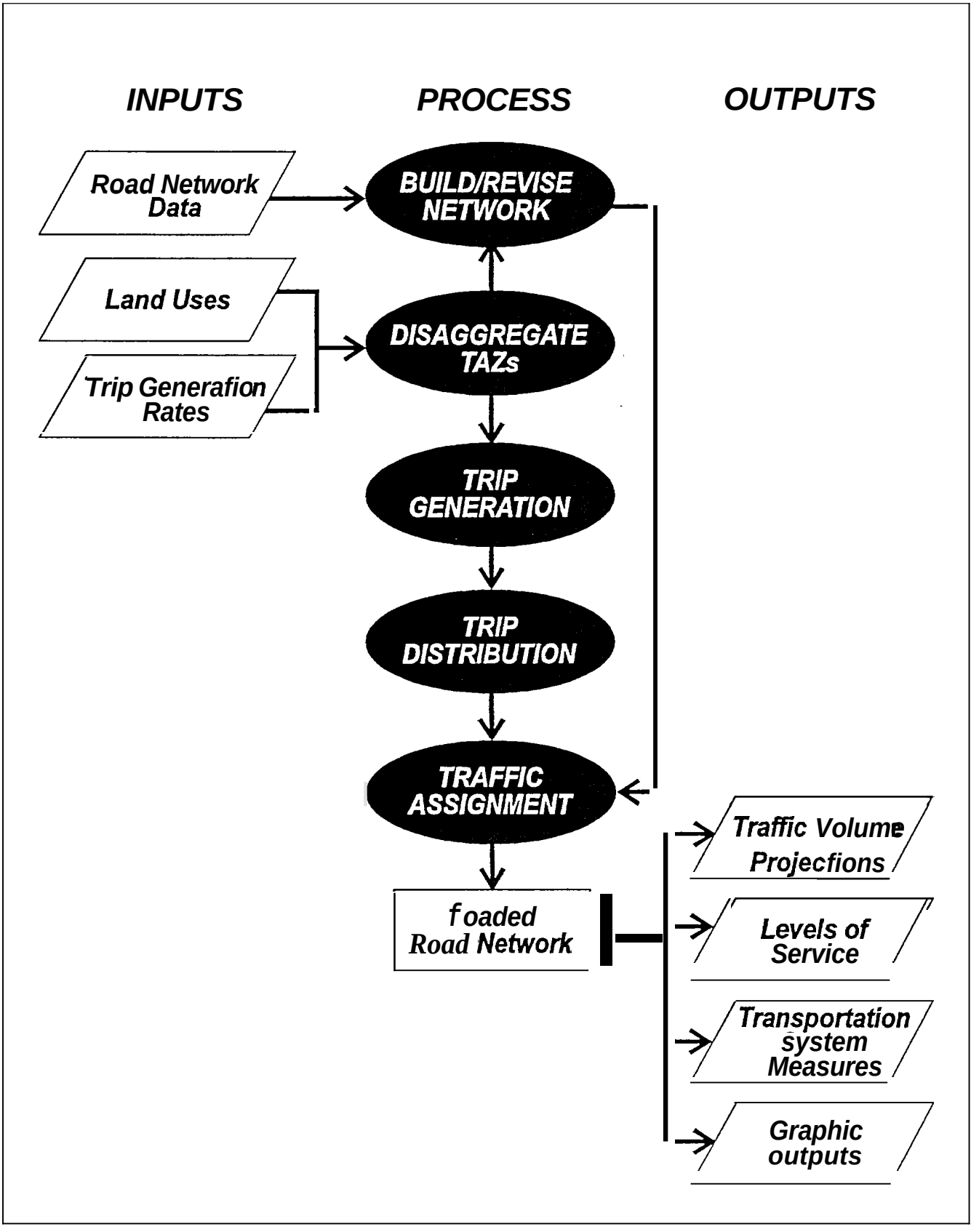


Figure 4-2
MODEL PROCESS

Table 4-2
Approximate Average PM Peak Hour Trip Rates Used in Metro Model

Unit	Average Trip Rate/Unit		
	In	out	Total
Household	0.43	0.19	0.62
Retail Employee	0.78	0.69	1.47
Other Employee	0.07	0.29	0.36

Source: Metro

Table 4-3 illustrates the estimated growth in vehicle trips generated within the Beaverton area (the area shown in Figure 4-1) between 1994 and 2015. It indicates that vehicle trip generation in Beaverton would grow by approximately 51 percent between 1994 and 2015 if the land develops according to Metro's assumptions.

Table 4-3
Existing and Future Projected Trip Generation
PM Peak Hour Vehicle Trips

	1994 Trips	2015 Trips
Beaverton area	97,934	148,070

Source: Metro

Trip Distribution. This step estimates how many trips travel from one zone in the model to any other zone. The distribution is based on the number of trip ends generated in each zone pair, and on factors that relate the likelihood of travel between any two zones to the travel time between the zones. In projecting long-range future traffic volumes, it is important to consider potential changes in regional travel patterns. Although the locations and amounts of traffic generation in Beaverton are essentially a function of future land use in the city, the distribution of trips is influenced by growth in neighboring areas such as Portland and unincorporated areas to the north, south and west of Beaverton. External trips (trips which have either an origin or destination in Beaverton and the other trip end outside Beaverton) and through trips (trips which pass through Beaverton and have neither an origin nor a destination there) were projected using trip distribution patterns based upon census data and traffic counts performed at gateways into the Metro area Urban Growth Boundary (UGB) for calibration.

Mode Choice. This is the step where it is determined how many trips will be by various modes (single-occupant vehicle, transit, carpool, pedestrian, etc.). The 1994 mode splits are incorporated into the base model and adjustments to that mode split may be made for the future scenario, depending on any expected changes in transit or carpool use. These considerations are built into the forecasts used for 2015.

Traffic Assignment. In this process, trips from one zone to another are assigned to specific travel routes in the network, and resulting trip volumes are accumulated on links of the network until all trips are assigned.

Network travel times are updated to reflect the congestion effects of the traffic assigned in each model iteration. Congested travel times are estimated using what are called "volume-delay functions" in EMME/2. There are different forms of volume/delay functions, all of which attempt'to simulate the capacity restraint effect of how travel times increase with increasing traffic volumes. The volume-delay functions take into account the specific characteristics of each roadway link, such as capacity, speed and facility type. This allows the model to reflect conditions somewhat similar to driver behavior.

Different models are actually used for auto assignment versus transit assignment. Various techniques exist for auto assignment, such as all-or-nothing, stochastic, incremental capacity restraint and equilibrium capacity restraint. The EMME/2 package, among others, uses the equilibrium capacity restraint technique, which is considered to produce the most realistic network traffic loading of all the techniques. With this technique, the auto trips are assigned iteratively to the network in such a way that the final traffic loading will closely approximate the true network "equilibrium." Network equilibrium is defined as the condition where no traveler can achieve additional travel time savings by switching routes. Between iterations, network travel times are updated to reflect the congestion effects of the traffic assigned in the previous iteration.

Transit assignment techniques are typically much simpler than auto assignment techniques in that capacity restraint effects are not considered. Transit trips are assigned in an "all-or-nothing" manner in which all of the transit trips between a particular pair of zones are assigned to the same minimum time route based on transit service characteristics such as headway and the number of stops.

Model Verification. The base 1994 modeled traffic volumes were compared against actual traffic counts across screenlines on key arterials and at key intersections. Most arterial traffic volumes were closely replicated, even down to turn movements, by the model based upon detailed calibration. Based on this performance, the model was used for future forecasting and assessment of circulation changes.

MODEL **APPLICATION TO BEAVERTON**

Intersection turn movements were extracted from the model at key intersections for both year 1994 and year 2015 scenarios. These intersection turn movements were not used directly, but the increment of the year 2015 turn movements over the year 1994 turn movements was applied (added) to existing (actual 1996) turn movement counts in Beaverton. Actual turn movement volumes used for future year intersection analysis can be found in the technical appendix for the **TSP.**

Chapter 5
Pedestrians

This chapter summarizes existing and future pedestrian needs in the City of Beaverton, outlines the criteria to be used in evaluating these needs, provides a number of strategies for implementing a pedestrian,plan and recommends a pedestrian plan for the City of Beaverton. The needs, criteria and strategies were identified in working with the City's Traffic Commission and TSP Technical Advisory Committee. These committees and the public provided input regarding the transportation system in Beaverton, specifically exploring pedestrian needs. The methodology used to develop the pedestrian plan combined citizen and staff participation, specific Transportation Planning Rule requirements1 and continuity to the regional pedestrian network?

NEEDS

Sidewalks are provided on many of the arterial and collector roadways (see Figure 3-14) in the City of Beaverton, forming a basic existing pedestrian network. However, there are several gaps in the existing network where the sidewalks are discontinuous along a segment of roadway and the density of pedestrian facilities is not conducive to pedestrian travel. Sidewalks are linear along major streets with few direct, conflict-free access routes to activity centers. Continuity and connectivity are key issues for pedestrians in Beaverton since, generally, if there is a sidewalk available, there will be sufficient capacity. In other words, it is much more important that a continuous sidewalk be available than that it be of a certain size or type.

The most important existing pedestrian needs in Beaverton are direct linkages among various components of the existing pedestrian network, connectivity to the LRT stations and a pedestrian network between key activity centers in Beaverton . This includes safe, convenient crossings of large arterial streets which act as barriers to pedestrian movement. In the future, pedestrian needs will be similar, but there will be additional activity centers that will need to be considered and interconnected.

1 *Transportation Planning* ***Rule,*** **State** of **Oregon,** DLCD, Sections **660-12-020(2)(d)** and **660-12-045-3.**

2 **Interim RTP Pedestrian Plan.**

FACILITIES

Sidewalks should be built to current design standards of the City of Beaverton[3] (at least four feet for minimum width of sidewalks) and in compliance with the Americans with Disabilities Act (at least three feet of unobstructed sidewalk).[4] Wider sidewalks may be constructed in commercial districts or on arterial streets such as Murray Boulevard. Additional pedestrian facilities may include accessways on streets leading to LRT stations, pedestrian districts and pedestrian plazas, as defined in the *Transportation Planning Rule*[5] and the City of Beaverton Development Code[6]:

> Accessway: One or more connections that provide pedestrian and/or bicycle passage either between streets or between a street and a building, school, park, transit stop or other destination.
>
> Pedestrian Connection: **A** continuous, unobstructed, reasonably direct route between two points that is intended and suitable for pedestrian use. Pedestrian connections include but are not limited to sidewalks, walkways, accessways, stairways and pedestrian bridges.
>
> Pedestrian District: A comprehensive plan designation or implementing land use regulations, such as overlay zone, that establish requirements to provide a safe and convenient pedestrian environment in an area planned for a mix of use likely to support a relatively high level of pedestrian activity. Such areas include but are not limited to: lands planned for a mix of commercial or institutional uses near lands planned for medium to high density residential use; or areas with a concentration of employment and retail activity, and which have or could develop a network of streets and accessways which provide convenient pedestrian circulation.
>
> Pedestrian Plaza: **A** small, semi-enclosed area adjoining a sidewalk or a transit stop which provides a place for pedestrians to sit or stand. Plazas connect directly to adjacent sidewalks, walkways, transit stops or buildings.
>
> Reasonably Direct: **A** route that does not involve a significant amount of out-of-direction travel for intended users. Out of direction travel is significant if it is more than 50 percent longer than the straight line between two points.
>
> Walkway: **A** hard surfaced area intended and suitable for use by pedestrians.

These designations will be provided as the TSP is implemented. Any pedestrian districts, for example the downtown area, may be identified in further studies which address pedestrian issues.

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3 *The City of Beaverton* ***Development*** *Code,* City of Beaverton, November 7, 1996

4 *Americans with Disabilities* ***Act,*** Uniform Building Code.

5 *Transportation Planning* ***Rule,*** State of Oregon, Department of Land Conservation and Development, OAR-660-12-005(2, 14 and 15).

6 *The City of Beaverton Development Code,* Ordinance 3965, City of Beaverton, November 7, 1996.

CRITERIA

Beaverton's Traffic Commission, the public and Technical Advisory Committee created and refined a set of goals and policies to guide transportation system development in Beaverton (see Chapter 2). Several of these policies pertain specifically to pedestrian needs:

Goal 2, Policy 1: Develop and implement public street standards that recognize the multi-purpose nature of the street right-of-way for utility, pedestrian, bicycle, transit, truck, and auto use and recognize these streets as important to community identity as well as providing a needed service.

Develop and maintain a series of system maps and design standards for motor vehicles, bicycle, pedestrian, transit and truck facilities in Beaverton.

Goal 2, Policy 2: Provide connectivity to each area of the City for convenient multi-modal access.

Require the provision of an adequate local public street system for both residential and non-residential development. Give particular attention to large blocks of commercially developed properties to assure that local circulation has adequate public streets and is not forced to utilize only private parking and driveway areas or the major street systems to conduct local trips. Develop and maintain appropriate on-site loading, parking, and internal circulation standards for private development based upon adopted standards in the City's development code.

Goal 2, Policy 3: Develop a safe, complete, attractive and efficient system of pedestrian ways and bicycle ways, including bike lanes, shared roadways, off-street pathways and sidewalks according to the pedestrian and bicycle system maps.

Use Appendix I - Beaverton Bikeway and Pedestrian Facility Construction Standards in design of facilities. Conform to the design guidelines set forth in the "Guide for Development of New Bicycle Facilities" (current edition) as published by the American Association of State Highway and Transportation Officials (AASHTO) and the Oregon Bicycle Pedestrian Plan adopted by the Oregon Transportation Commission (OTC) and Tualatin Hills Park and Recreation District (THPRD). Bicycle and pedestrian facilities should be provided and designed to accommodate the unique requirements of various user groups and trip types (including school trips, commuter trips, neighborhood circulation trips, and recreation trips). Locate pathways to provide the "shortest path" between origins and destinations. Accommodate non-automobile movements specifically by bicyclists and pedestrians within neighborhoods. Sidewalks will continue to be the responsibility of fronting property owners. Maintain the opportunity for citizen groups to fund pathway improvements through the local improvement district process. Continue to recognize the importance of walking and bicycling as a form of transportation and recreation.

Goal 2, Policy 5: When development or redevelopment of land occurs, provide bike and pedestrian facilities that are consistent with standards and policies of this plan.

Goal 3, Policy 5: Designate routes to schools for each school and any new residential project.

School district will work with community and City in developing plans.

Goal 3, Policy 6: Construct pathways only where they can be developed with satisfactory design components that address safety, security, maintainability and acceptable pathway use.

Although pathways are encouraged to be separated and distant from major streets for most of their length, they are encouraged to converge at traffic controlled intersections for safe crossing. New construction of pathways along residential rear lot lines will not be encouraged unless no comparable substitute alignment is possible in the effort to connect common attractors or existing segment links. When pathways do follow rear lot lines, design treatments defined in the Beaverton Engineering Design Manual will be followed to minimize the impacts to private property.

Goal 5, Policy 1: Construct transportation facilities to meet the requirements of the Americans with Disabilities Act.

These goals and policies are the criteria that all pedestrian improvements in Beaverton should be compared against to determine if they conform to the intended vision of the City.

STRATEGIES

Several strategies were evaluated by the Traffic Commission and the public for future pedestrian projects in Beaverton. These strategies were aimed at providing the City with priorities to direct its funds toward pedestrian projects that meet the goals and policies of the City:

Strategy 1 - " Connect key pedestrian corridors to schools, parks, recreational uses and activity centers (public facilities, commercial areas, etc.)"

This strategy provides sidewalks leading to activity centers in Beaverton, such as schools and parks, from the overall (1/2 mile) pedestrian network. This strategy provides added safety on routes to popular pedestrian destinations by separating pedestrian flow from auto travel lanes. These routes are also common places that children may walk, providing them safer routes. **A** key element of this strategy is to require all new development to define a reasonably direct, safe pedestrian path to parks, activity centers and schools within one mile of the development site. Reasonably direct is defined in the City of Beaverton Development Code as a route that does not involve a significant amount of out of direction travel. Out of direction travel is significant if it is more than 50 percent longer than the straight line between two points. Any gaps (off-site) will be defined (location and length).

Strategy 2 - " Fill in gaps in the network where some sidewalks exist"

This strategy provides sidewalks which fill in the gaps between existing sidewalks where a significant portion of a pedestrian corridor already exists. This strategy maximizes the use of existing pedestrian facilities to create complete sections of an overall pedestrian network.

Strategy 3 - " Pedestrian corridors to transit stations and stops"

This strategy puts priority on pedestrian connections to locations where transit can be accessed. Sidewalks which link the overall pedestrian network with transit stations or bus stops would be a priority.

Strategy 4 - Signalized Pedestrian Crossings

This strategy focuses on providing pedestrian facilities which enhance the pedestrian's ability to cross major arterial streets that do not have controlled crossing locations. These improvements are likely to be made on streets that have high traffic volumes, multiple lanes and signals that are spaced relatively far apart. Crossing enhancements could include new traffic signals, pedestrian signals, improved pedestrian crossing warning, shortening crossing distances, medians and larger corner sidewalk areas.

Strategy 5 - " Pedestrian corridors that connect neighborhoods"

This strategy puts priority on linking neighborhoods together with pedestrian facilities. This can include walkways **at** the end of cul-de-sacs and direct connections between neighborhoods (avoiding "walled" communities).

Strategy 6 - "One-sided to two-sided sidewalks"

This strategy focuses on construction of pedestrian facilities that provide sidewalks on both sides of the roadway where **a** sidewalk only exists on one side of the roadway. The purpose of this strategy is to allow pedestrians **to walk** on both sides of the roadway.

Strategy 7- " As development occurs, construct sidewalks from developers"

This strategy focuses on construction of pedestrian facilities **as** development occurs using financial funds from the developer. **A** significant emphasis in this strategy is for any new development to define connections/paths to the pedestrian grid.

Strategy 8 - "Pedestrian corridors that commuters might use"

This strategy focuses on providing pedestrian facilities where commuters are likely to go such as local employment centers or leading to transit which provides access to regional employment centers.

Strategy 9 - "Reconstruct All Sidewalks to City of Beaverton Standards"

This strategy focuses on upgrading any substandard sidewalks to current city Standards. Current standards are for four foot sidewalks to meet the City of Beaverton Development Code and **only** three foot sidewalks to meet American Disabilities Act7 requirements. Several sidewalks exist that do not

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'Americans with Disabilities Act, Uniform Building Code.

meet the minimum five foot requirement. Fronting property owners are responsible for sidewalk maintenance where pavement has fallen into disrepair.

Table 5-1 provides an assessment of how each of the strategies meets the requirements of each of the goals and policies.

Table 5-1
Pedestrian Facility Strategies Comparisons

Strategy	Goal-Policy						
	2-1	2-2	2-3	2-5	3-1	3-2	5-1
1. Connect key pedestrian corridors to schools, parks, recreational uses and activity centers (public facilities, commercial areas, etc.)	□	◆	■	□	■	□	□
2. Fill in gaps in network where some sidewalks exist	□	◆	◆	□	□	□	◆
3. Pedestrian corridors to transit stations and stops	□	□	■	□	□	○	□
4. Signalized pedestrian crossings	◆	□	□	□	□	□	■
5. Pedestrian corridors that connect neighborhoods	□	■	■	□	◆	■	□
6. One-sided to two-sided sidewalks	□	◆	◆	□	□	□	◆
7. As development occurs, construct sidewalk from developers	◆	□	□	■	□	□	□
8. Pedestrian corridors that commuters might use	□	◆	◆	□	□	□	*O*
9. Reconstruct all sidewalks to City of Beaverton standards	◆	□	□	□	□	◆	■

○ Does not meet criteria
□ Partially meets criteria
◆ Mostly meets criteria
■ Fully meets criteria

RECOMMENDED PEDESTRIAN FACILITY PLAN

Several strategies were evaluated by the City of Beaverton Traffic Commission and the public for future pedestrian projects in Beaverton. These strategies are aimed at providing the City with priorities to direct its funds toward pedestrian and bicycle projects that meet the goals and policies of the City. The Traffic Commission and the public ranked these strategies for pedestrians, Each commissioner and public participant were assigned a certain number of points that he or she could allocate to each of the strategies according to his or her vision of priorities for the City. The ranking of these strategies follows from most important to least important:

- Connect key pedestrian corridors to schools, parks, recreational uses and activity centers (public facilities, commercial areas, etc.)
- Fill in gaps in the network where some sidewalks exist
- Pedestrian corridors to transit stations and stops
- Signalized pedestrian crossings
- Pedestrian corridors that connect neighborhoods
- One-sided to two-sided sidewalks
- As development occurs, construct sidewalk from developers
- Pedestrian corridors that commuters might use
- Reconstruct all existing substandard sidewalks to City of Beaverton Standards

Based on a review of potential strategies and corresponding needs, City staff and citizens determined overall pedestrian improvement priorities. The City's priorities should be to connect key pedestrian corridors to schools, parks, recreational uses and activity centers; to eliminate gaps in the walkway network; and to provide pedestrian corridors to transit stations and stops. The City should also reconstruct existing intersections that are in need of handicap ramps to improve accessibility for all pedestrians.

Connecting key pedestrian corridors to schools, parks, recreational uses and activity centers (public facilities, commercial areas, etc.) was considered to be the highest priority for pedestrians in Beaverton. The second highest priority for pedestrians in Beaverton was filling in the gaps in the existing network where some sidewalks exist. The third highest priority for pedestrians in Beaverton was to provide pedestrian facilities to transit stations and stops. An action list was developed to focus on these three areas.

The Pedestrian Master Plan (Figure 5-1) is an overall plan and summarizes the desired framework plan to meet local and regional policy. From this Master Plan, a more specific, shorter term, Action Plan was developed which reflects the priority of strategies from the Traffic Commission and public participants and likely land use or transportation action project developments. The Action Plan (Figure 5-2 and Table 5-2) consists of projects that the City should give priority to when funding becomes available. As development occurs, streets are rebuilt and other opportunities (such as grant programs) arise, projects on the Master Plan should be pursued as well.

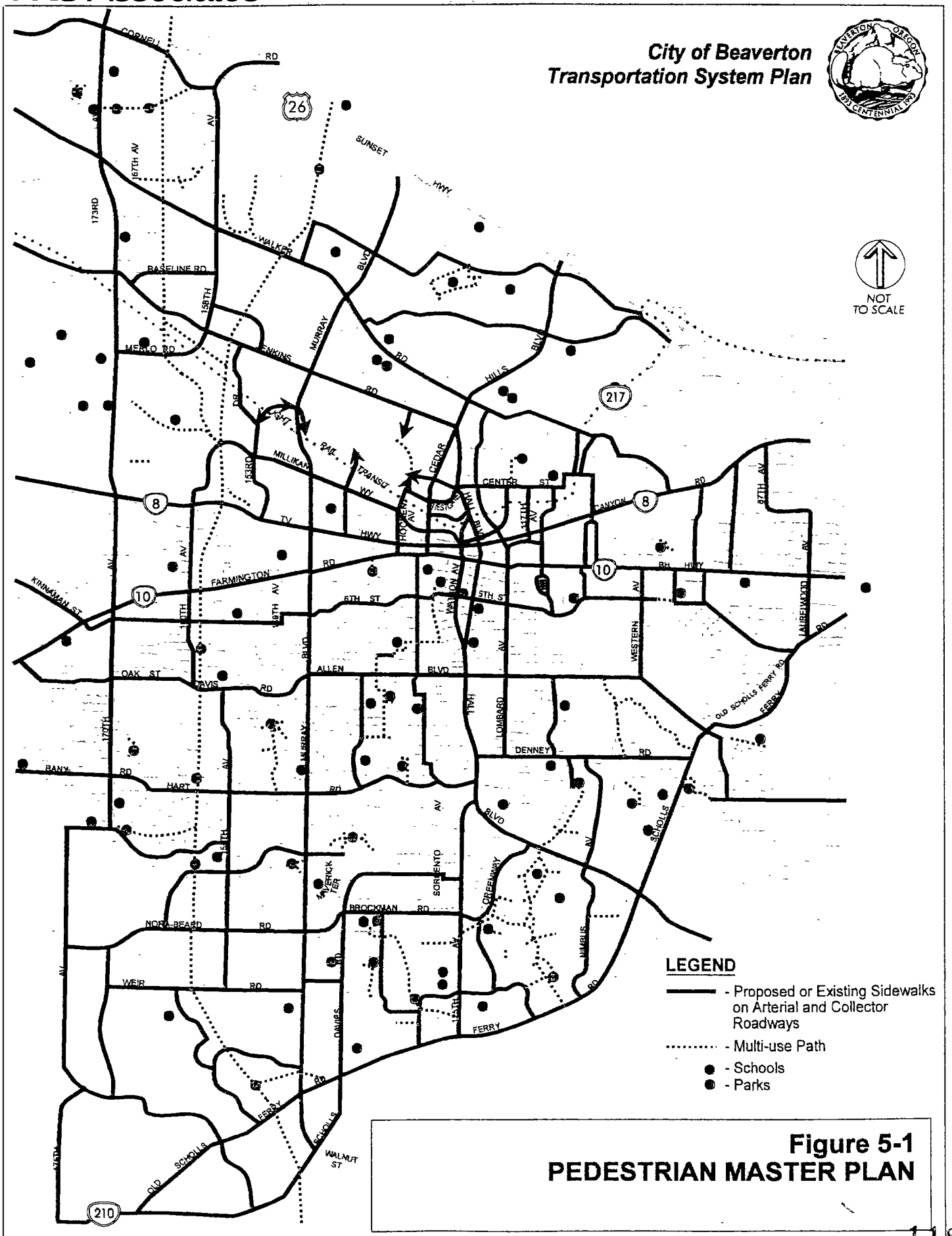


Figure 5-1
PEDESTRIAN MASTER PLAN

City of Beaverton
Transportation System Plan

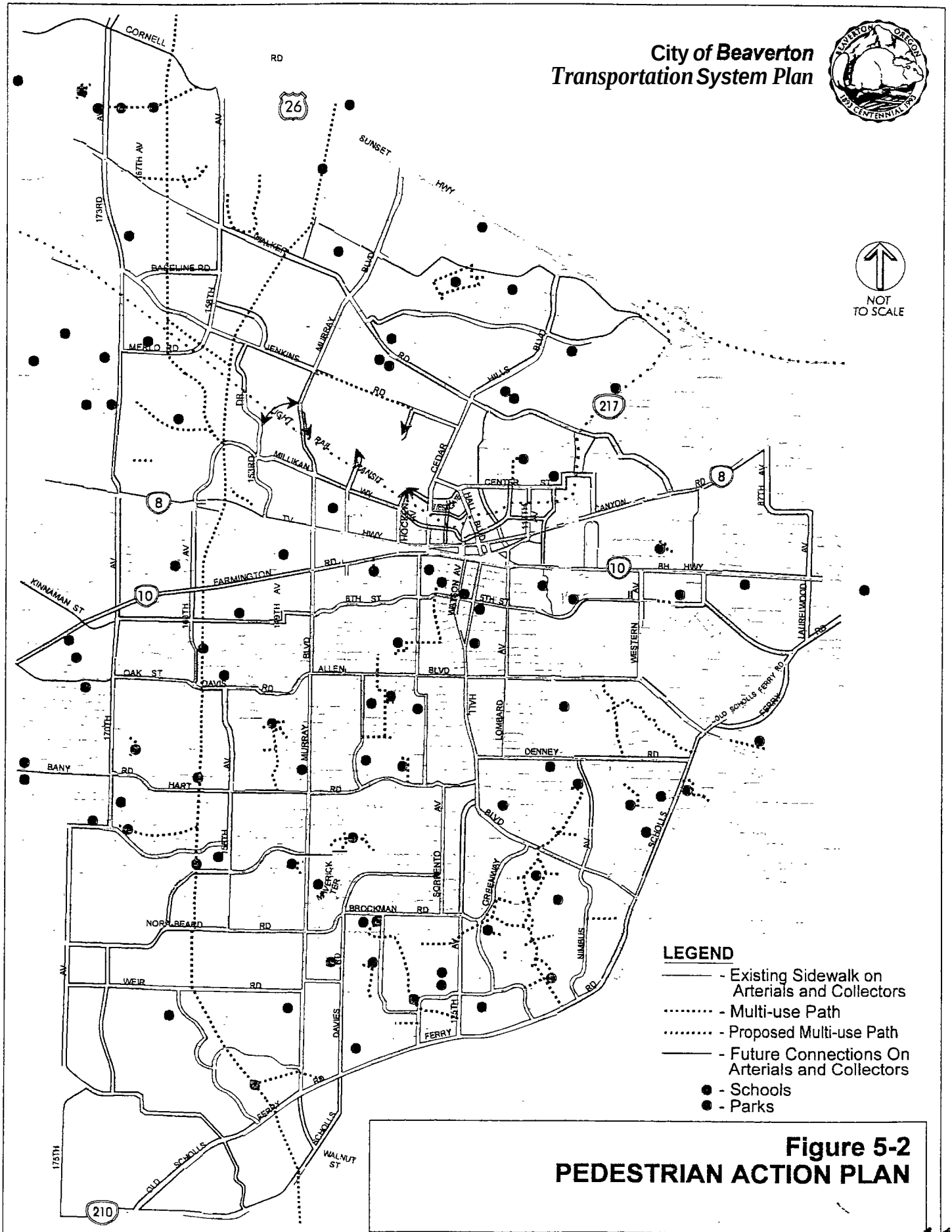


Figure 5-2
PEDESTRIAN ACTION PLAN

POTENTIAL PROJECT LIST

Table 5-2 outlines potential pedestrian projects in Beaverton. The **City,** through its Capital Improvement Program (CIP), joint funding with other agencies (Washington County, Metro) and development approval would implement these projects. The following considerations should be made for each new sidewalk installation:

- Applicable City design and construction standards should be met
- Sidewalks should be a minimum of five feet wide
- Landscape strips should be considered and are encouraged where feasible

Table 5-2
Pedestrian Action Plan Project Priorities

Project	From	To	Approximate cost ($1000's dollars)
Priority: Connect key pedestrian corridors to schools, parks ;recreational uses and activity centers			
155th Avenue	Davies Road	Nora-Beard Road	357
Priority: Fill in gaps in pedestrian network			
Farmington Road/B-H Highway	Hocken Avenue	Erickson Avenue	42
Beaverton-Hillsdale Hwy (north side)	9 1st Avenue	Laurelwood Avenue	64
TV Highway/Canyon Road (gaps on one-side)	170th Avenue	87th Avenue	323
158th Avenue (east side)	Blue Ridge Drive	approx 500 ft south	30
Cedar Hills Boulevard (west side)	Walker Road	Park Way	87
Cedar Hills Boulevard	Park Way	Butner Road	90
Murray Boulevard	Jenkins Road	Millikan Way	270
Denney Road	Nimbus Avenue	Scholls Ferry Road	210
Allen Boulevard (naps)	Western Avenue	Scholls Ferry Road	60
Western Avenue	5th Street	800 feet south of 5th	48
5th Street (south side)	Alger Avenue	Western Avenue	117
6th Street/Division Street	Murray Boulevard	170th Avenue	318
Davies Road (east side)	Scholls Ferry Road	Hiteon Drive	66
Scholls Ferry Road/Old Scholls Ferry Road (gaps)	Scholls/Old Scholls (west end)	Beaverton-Hillsdale Highway	1,650
SW Park Way (gaps).	Walker Road	ORE 217	186
110th Avenue (gap-one side)	Beaverton-Hillsdale Hwy	Canyon Road	30
Priority: Pedestrian corridors to transit stations and stops			
153rd Drive	Jenkins Road	Light Rail Transit	114
Connection Roadway	153rd Avenue	Murray Boulevard	84

Millikan Way	Murray Boulevard	Hocken Avenue	180
160th Avenue	TV Highway	Davis Road	312
117th Avenue	Light Rail Transit	Center Street	30
Downtown Beaverton Connectivity collector roadways	Hocken Avenue/ TV Highway	110th Avenue/ Cabot Street	900
Lombard Avenue	Center Street	Beaverdam Road	60
Jay Street	158th Avenue	Jenkins Road	126
Priority: Construct sidewalks with roadway improvement projects			
125th Avenue	Hall Boulevard	Brockman Road	168
Farmington Road	Murray Boulevard	172nd Avenue	346
Farmington Road	172nd Avenue	185th Avenue	190
Nimbus Avenue	Denney Road	Cirrus Drive	120
Walker Road	ORE 217	Canyon Road	182
Walker Road (gaps)	173rd Avenue	Mayfield Avenue	384
Davies Road	Old Scholls Ferry Road	Scholls Ferry Road	53
Murray Boulevard	Old Scholls Ferry Road	Scholls Ferry Road	96
Millikan Way	Hocken Avenue	Cedar Hills Blvd	50
170th Avenue	Rigert Road	Alexander Street	449
170th Avenue	Alexander Street	Baseline/Jenkins	319
170th/173rd Avenue	Baseline/Jenkins Road	Walker Road	192
173rd Avenue	Walker Road	Cornell Road	206
173rd Avenue	Cornell Road	Bronson Road	4s
Hart Road/Bany Road (gaps)	Murray Boulevard	170th Avenue	206
Hart Road (gaps)	Hall Boulevard	Murray Boulevard	43
Cornell Road (one-side)	158th Avenue	185th Avenue	144
Baseline Road	158th Avenue	166th Avenue	96
Oak Street/Davis Road/Allen (gaps)	Murray Boulevard	170th Avenue	144
Allen Boulevard (gaps)	Alice Lane	Western Avenue	98
Nora-Beard Road	175th Avenue	155th Avenue	245
Weir Road	175th Avenue	160th Avenue	216
175th Avenue-Rigert Road	170th Avenue	ORE 210	658
Merlo Road/158th Avenue (gaps)	Jay Street	Walker Road	53
Jenkins Road	153rd Avenue	Murray Boulevard	98
Hart Road/Bany Road	170th Avenue	185th Avenue	187
SW Beaverton collector roadway	Scholls Ferry Road	175th Avenue	302
SW Beaverton circulation roadway	High Hill Lane	Nora-Beard Road	240
SW Butner Road (one side)	Murray Boulevard	Park Way	258
SW Downing Road (gaps on south side)	Murray Boulevard	Meadow Drive	36
Meadow Drive (one side)	Downing Road	Walker Road	33
Laurelwood Avenue/87th Avenue	Canyon Road	Scholls Ferry Road	378

Jamieson Road	Pinehurst Drive/Cypress	Scholls Ferry Road	180
Cypress Street	Jamieson Road	Elm Avenue	69
Sexton Mountain Drive (gaps)	Maverick Terrace	Nora-Beard Road	258
96th Avenue (one side)	Canyon Road	Beaverton-Hillsdale Highway	78
Pedestrian Action Plan Projects Total Cost:			. $ 12,583

Complementing Land Development Actions

It is important that, as new development occurs, connections or accessways are provided to link the development to the existing pedestrian facilities in as direct a manner as possible. If a development fronts a proposed sidewalk (as shown in the Pedestrian Master Plan), the developer shall be responsible for providing the walkway facility as part of any half-street improvement required for mitigation. It is also very important that residential developments consider the routes that children use to walk to school and provide safe and accessible sidewalks to accommodate these routes.

Safety

In the safety section of Chapter 8 Motor Vehicles, there is discussion regardi9ng improving pedestrian safety through a safe route to school program. These programs have demonstrated benefits in improving safety for school access by children. A program is outlined in Chapter 8.

Chapter 6
Bicycles

This chapter summarizes existing and future facility needs for bicycles in the City of Beaverton. The following sections outline the criteria to be used to evaluate needs, provide a number of strategies for implementing a bicycle plan and recommend a bicycle plan for the City of Beaverton. The needs, criteria and strategies were identified in working with the City's Traffic Commission, TSP Transportation Advisory Committee (TAC) and the Bike Task Force. The Traffic Commission, TAC and Bike Task Force provided input regarding the transportation system in Beaverton, specifically exploring bicycle needs. The methodology used to develop the bicycle plan combined citizen and staff inpuf specific Transportation Planning Rule requirements,[1] and continuity to the regional[2] and county[3] bicycle network.

Metro's *Draft* ***Regional Transportation Plan (RTP)***[4] has identified a Proposed Regional Bicycle System. Metro's definitions of bicycle classifications are provided in the technical appendix. Washington County's *Draft* ***Bikeway*** *Plan*[5] identifies a preferred bikeway network. Table 6-1 summarizes the bicycle route designations of Metro, Washington County and the proposed City Master Plan.

NEEDS

Bikeways are provided on many of the arterial and collector roadways in the City of Beaverton (see Figure **3-13).** There are, however, many segments where bikeways do not exist on the arterial and collector roadway network. Continuity and connectivity are key issues for bicyclists and gaps in the bikeway network cause the most significant problems for bicyclists in Beaverton. Without connectivity of the bicycle system, this mode of travel is severely limited (similar to a road system

[1] ***Transportation*** *Planning* ***Rule,*** State of Oregon, DLCD, Section 660-12-020(2)(d), 660-12-035(3)(e), 660-12-095(3)(b & c).

[2] *Regional* ***Bicycle System Map,*** **Draft** ***3.0,*** Metro, July ***2,*** 1997.

[3] *Draft* ***Bikeway Plan,*** Washington County, June 1995.

[4] *Draft Regional Transportation Plan,* **DRAFT** ***3.0,*** Metro, July 2, 1997.

[5] *Draft* ***Bikeway Plan,*** Washington County, June 1995.

Table 6-1
Bicycle System Designations

Route	City Master Plan	Washington County	Metro Bikeways
East-West			
Walker Road	Lane	County Bike Lane/Shoulder	Community Connector
Jenkins Road	Lane	County Bike Lane/Shoulder	Regional Access
TV Highway/Canyon Road	Lane	ODOT Bike Lane/ Shoulder	Regional Corridor
Farmington/BH Hwy	Lane	ODOT Bike Lane/ Shoulder	Regional Corridor
Allen Boulevard	Lane	City Bikeway	Community Connector
Bany/Hart/Denney	Lane	City Bikeway	Community Connector
Greenway/Brockman/Beard/Nora	Lane	City Bikeway	Community Connector
Scholls Ferry Road	Lane	County Bike Lane/Shoulder	Regional Corridor
North-South			
170th/173rd/174th/175th			
158th/Merlo	Lane	County Bike Lane/Shoulder	Community Connector/ Regional Access
Murray Boulevard	Lane	County Bike Lane/Shoulder	Regional Corridor
Cedar Hills (north of Walker)	Lane	County Bike Lane/Shoulder	Community Connector
Cedar Hills (s/o Walker)	Lane	City Bikeway	Regional Access
Hall/Watson	Lane	City Bikeway	Regional Access/ Regional Comdor
125th Avenue	Lane	City Bikeway	Community Connector
Western Avenue	Lane	City Bikeway	Community Connector

Route	City Master Plan	Preferred County Bikeway Plan
Butner Way	Lane	County Shared Roadway
Park Way	Lane	County Share Roadway
153rd Drive	Bikeway	City Bikeway
Millikan Way	Lane	City Bikeway
Center Street	Lane	City Bikeway
91st Avenue	Lane	County Bike Lane/Shoulder
87th/Laurelwood	Bikeway	County Shared Roadway
160th Avenue	Lane	County Shared Roadway
5th/6th Avenue	Lane	City Bikeway
Jamieson Road	Lane	County Bike Lane/Shoulder
Oak Street	Lane	County Bike Lane/Shoulder
Davis Road	Lane	City Bikeway
Wilson Avenue d/o Allen	Bikeway	City Bikeway
Sorrento Avenue	Bikeway	City Bikeway
Davies Road	Bikeway	City Bikeway
Nimbus Avenue	Lane	City Bikeway
Cascade Boulevard	Bikeway	City Bikeway
Conestoga Drive	Bikeway	City Bikeway
Dowing Drive	Bikeway	City Bikeway

full of cul-de-sacs). The Transportation Planning Rule (TPR) calls for all arterial and collector streets to have bicycle facilities. To meet the TPR requirements and fill-in existing gaps in the existing bicycle system, and action plan that focuses on a framework system should be developed to prioritize bicycle investment.

FACILITIES

Bicycle facilities can generally be categorized as bike lanes, bike routes, off-street bike paths, multi-use paths or bikeways.

- **Bike lanes** are areas within the street right-of-way designated specifically for bicycle use.
- **Bike routes** are streets which are recommended for bicycle use, but do not have a specific area designated within the right-of-way. Bike routes generally share the travel lane with vehicular traffic.
- **Off-street bike paths** are off-street facilities designated for bicycle use.
- **Multi-use paths** are generally off-street routes that can be used by several transportation modes, including bicycles, pedestrians and other non-motorized modes (i.e. skateboards, roller blades, etc.).
- **Bikeway** is used in this report to describe any of the bicycle accommodations described above.

The Beaverton TSP designations focuses on lanes, bikeways and multi-use paths.

CRITERIA

Beaverton's Traffic Commission, the public and the TSP Technical Advisory Committee created a set of goals and policies to guide transportation system development in Beaverton (see Chapter 2). Several of these policies pertain specifically to bicycle needs:

Goal 1, Policy 3: Locate and design recreation/bicycle pathways so as to balance the needs of human use and enjoyment with resource preservation in areas identified for their Significant Natural Resource values.

Locate pathways to have the lowest level of impact on a stream or sensitive riparian vegetation. Pathways through natural resource areas and/or significant wildlife habitat will be intended for day use only and will have no provisions for night illumination. If a natural resource is so delicate that any degree of human intrusion will irreparably destroy it, preservation of the resource will take precedence over the proposed path.

Goal 2, Policy 1: Develop and implement public street standards that recognize the multi-purpose nature of the street right-of-way for utility, pedestrian, bicycle, transit, truck, and auto use and recognize these streets as important to community identity as well as providing a needed service.

Develop and maintain a series of system maps and design standards for motor vehicles, bicycle, pedestrian, transit and truckfacilities in Beaverton.

Goal,2, Policy 2: Provide connectivity to each area of the City for convenient multi-modal access.

Require the provision of an adequate local public street system for. both residential and non-residential development. Give particular attention to large blocks of commercially developed properties to assure that local circulation has adequatepublic streets and is not forced to utilize only private parking and driveway areas or the major street systems to conduct local trips. Develop and maintain appropriate on-site loading, parking, and internal circulation standards for private development based upon adopted standards in the City's development code.

Goal 2, Policy 3: Develop a safe, complete, attractive and efficient system of pedestrian ways and bicycle ways, including bike lanes, shared roadways, off-street pathways and sidewalks according to the pedestrian and bicycle system maps.

Use the Beaverton Engineering Design Manual Standards in design of facilities. Conform to the design guidelines set forth in the "Guidefor Development of New Bicycle Facilities" (current edition) as published by the American Association of State Highway and Transportation Officials (AASHTO) and the Oregon Bicycle Pedestrian Plan adopted by the Oregon Transportation Commission (OTC) and Tualatin Hills Park and Recreation District (THPRD). Bicycle and pedestrian facilities should be provided and designed to accommodate the unique requirements of various user groups and trip types (including school trips, commuter trips, neighborhood circulation trips, and recreation trips). Locate pathways to provide the "shortestpath" between origins and destinations. Accommodate non-automobile movements specifically by bicyclists and pedestrians within neighborhoods. Sidewalks will continue to be the responsibility of fronting property owners. Maintain the opportunity for citizen groups to fund pathway improvements through the local improvement district process. Continue to recognize the importance of walking and bicycling as a form of transportation and recreation.

Goal 2, Policy 5: When development or redevelopment of land occurs, provide bike and pedestrian facilities that are consistent with standards and policies of this plan.

Goal 3, Policv 6: Construct pathways only where they can be developed with satisfactory design components that address safety, security, maintainability and acceptable pathway use.

Although pathways are encouraged to be separated and distant from major streets for most of their length, they are encouraged to converge at traffic controlled intersectionsfor safe crossing. New construction of pathways along residential rear lot lines will not be encouraged unless no comparable substitute alignment is possible in the effort to connect common attractors or existing segment links. When pathways do follow rear lot lines, design treatments defined in the Beaverton Bikeway and Pedestrian Facility Construction Standards will befollowed to minimize the impacts to private property.

These goals and policies are the criteria that all bikeway improvements in Beaverton should be measured against to determine if they conform to the intended direction of the City.

Since bicyclists can generally travel further than pedestrians, connections that lead to regional destinations such as Portland, Hillsboro, Tigard and Washington Square are important. Beaverton's bicycle network should connect to Washington County's, the City of Portland's, the City of Tigard's and the City of Hillsboro's bicycle networks and be consistent with the Regional Bicycle System. Key locations where connections should be made to these other jurisdictions' networks include Walker Road, Cornell Road, Baseline Road, TV Highway (ORE 8), Beaverton-Hillsdale Highway (ORE 10), Scholls Ferry Road and Murray Boulevard.

STRATEGIES

Several strategies were considered for construction of future bikeway facilities in Beaverton. These strategies were studied to provide the City with priorities since it is likely that the available funding will be insufficient to address all of the projects identified in the Bikeway Master Plan.

Strategy 1 - "Connect Key Bicycle Corridors to Schools, Parks, Recreational Uses and Activity Centers (public facilities, commercial areas, etc.)"

This strategy provides bikeway links to schools, parks and activity centers from the arterial/collector bikeway network. This alternative provides added safety to likely bicyclist destinations as well as destinations where children are likely to travel.

Strategy 2 - "Fill in Gaps in the Network where Some Bikeways Exist"

This strategy provides bikeways which fill in the gaps between existing bikeways where a significant portion of a bikeway corridor already exists. This strategy maximizes the use of existing bicycle facilities to create complete sections of an overall bikeway network.

Strategy 3 - "Bicycle Corridors that Connect Neighborhoods"

This alternative puts priority on bikeways for arterials/collectors which link neighborhoods together. Some of these could include paths crossing parks, schools or utility rights-of-way.

Strategy 4 - "Construct Bike Lanes with Roadway Improvement Projects"

This strategy focuses on providing bike lanes on all roadway improvement projects within the City of Beaverton.

Strategy 5 - "Bicycle Corridors that Commuters Might Use"

This strategy focuses on providing bicycle facilities where commuters are likely to go such as local (within Beaverton) or regional (i.e. Hillsboro or downtown Portland) employment centers or leading to transit which provides access to regional employment centers.

Strategy *6* - "Bicycle Corridors Providing Mobility to and within Commercial Areas"

This strategy focuses on provides bikeways to and within retail areas which are popular destinations for both employment and shopping.

Table *6-2* summarizes the strategies in terms of meeting the transportation goals and objectives.

Table **6-2**
Bikeway Facility Strategies Comparisons

strategy	Policies					
	1-3	**2-1**	**2-2**	**2-3**	**2-5**	**3-6**
1. Connect key bicycle corridors to schools, parks, recreational uses and activity centers (public facilities, commercial areas, etc.)	■	□	◆	■	□	□
2. Fill in gaps in the network where some bikeways exist	□	□	□	■	□	□
3. Bicycle corridors that connect neighborhoods	□	□	◆	■	□	□
4. Construct bike lanes with roadway improvement projects	O	□	□	◆	■	□
5. Bicycle corridors that commuters might use	□	□	◆	■	□	□
6. Bicycle corridors providing mobility to and within commercial areas	O	□	■	◆	□	□

O **Does** not meet criteria
□ Partially meets criteria
◆ Mostly meets criteria
■ Fully meets criteria

RECOMMENDED BICYCLE FACILITIES PLAN

The strategies for bicycles that had been evaluated by the Traffic Commission and the public were then ranked. Each commissioner and public participant were assigned a certain number of points that he or she could allocate to each of the strategies according to his or her vision of priorities for the City of Beaverton. The ranking of these strategies follows, from most important to least important:

- Connect key bicycle corridors to schools, parks, recreational uses and activity centers (public facilities, commercial areas, etc.)

- Fill in gaps in the network where some bikeways exist
- Bicycle corridors that connect neighborhoods
- Construct bike lanes with roadway improvement projects
- Bicycle corridors that commuters might use
- Bicycle corridors providing mobility to and within commercial areas

Based on a review of potential strategies and corresponding needs, City staff and citizens determined overall bicycle improvement priorities. Connecting key bicycle corridors to schools, parks, recreational uses and activity centers (public facilities, commercial areas, etc.) was considered to be the highest priority for bicycles in Beaverton. The second highest priority for bicycles in Beaverton was filling in the gaps in the existing network where some sidewalks exist. The bicycle action plan was developed to focus on these two areas.

The Bicycle Master Plan (Figure 6-1) outlines where bicycle facilities will be required in the future. It builds from the state policy from the Transportation Planning Rule that all arterial and collector roads have bike facilities. Additional linkages with lanes or accommodations are outlined to make a complete network. The Bicycle Action Plan (Figure 6-2) consists of projects that the City should give priority to in implementing the Master Plan. The objective of the action plan is to develop a framework bicycle network first and allow attention to move toward infill Master Plan projects second. The Action Plan is consistent with plans developed by Metro, Washington County and the State.6 The bicycle plan will require incremental implementation. As development occurs, streets are rebuilt and other project funding opportunities (such as grant programs) arise, projects on the Master Plan should be integrated into project development. Many of the projects would be elements of multi-modal street improvement projects (i.e. Murray Boulevard extension). The City, through its Capital Improvement Program, joint funding with other agencies (County, Metro and State) and development approval would implement these projects.

Education and enforcement need to be implemented for the safety of bicyclists. This includes bicycle lane only signage and driver education to give motor vehicles an awareness that the bicycle lane is for bicycle use only. Bike lanes need to be maintained on a routine basis which includes cleaning (sweeping) and painting the bike lane lines. Actuated traffic signals on bikeway routes need to accommodate bicycles by installing bicycle loop detectors.

POTENTIAL PROJECT LIST

Table **6-3** outlines potential bicycle action plan projects in Beaverton, and Table **6-4** outlines potential bicycle master plan projects in Beaverton. The master plan projects include the action plan projects listed in Table ***6-3.*** The City, through its Capital Improvement Program (CIP), joint funding with other agencies (County, Metro) and development approval would implement these projects.

6Draft **1995 Interim Federal Regional Transportation Plan, April, 1995, Metro** and Draft **Bikeway** Plan, **Washington County, Oregon, June, 1995.**

City of Beaverton
Transportation System Plan

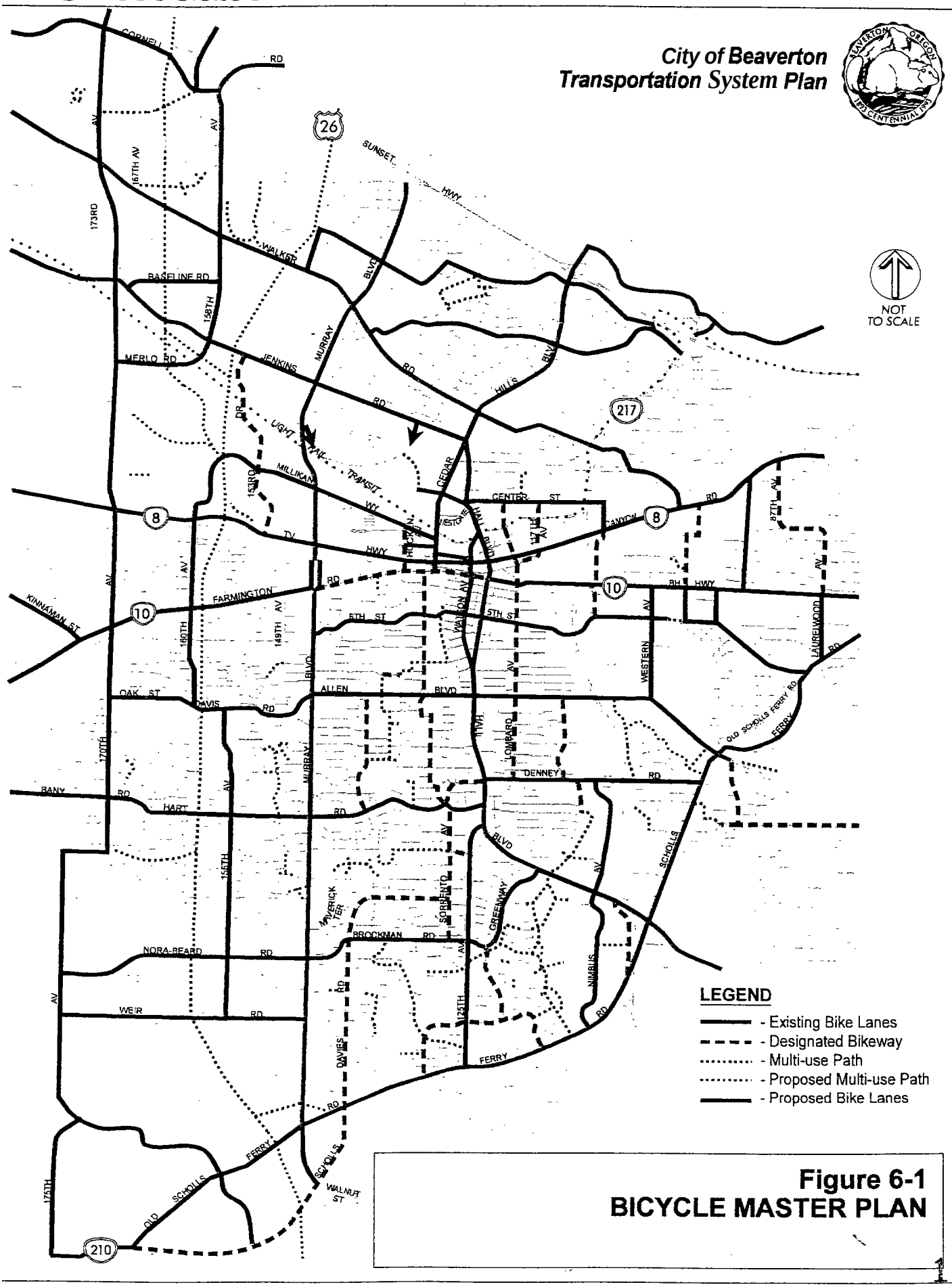


Figure 6-1
BICYCLE MASTER PLAN

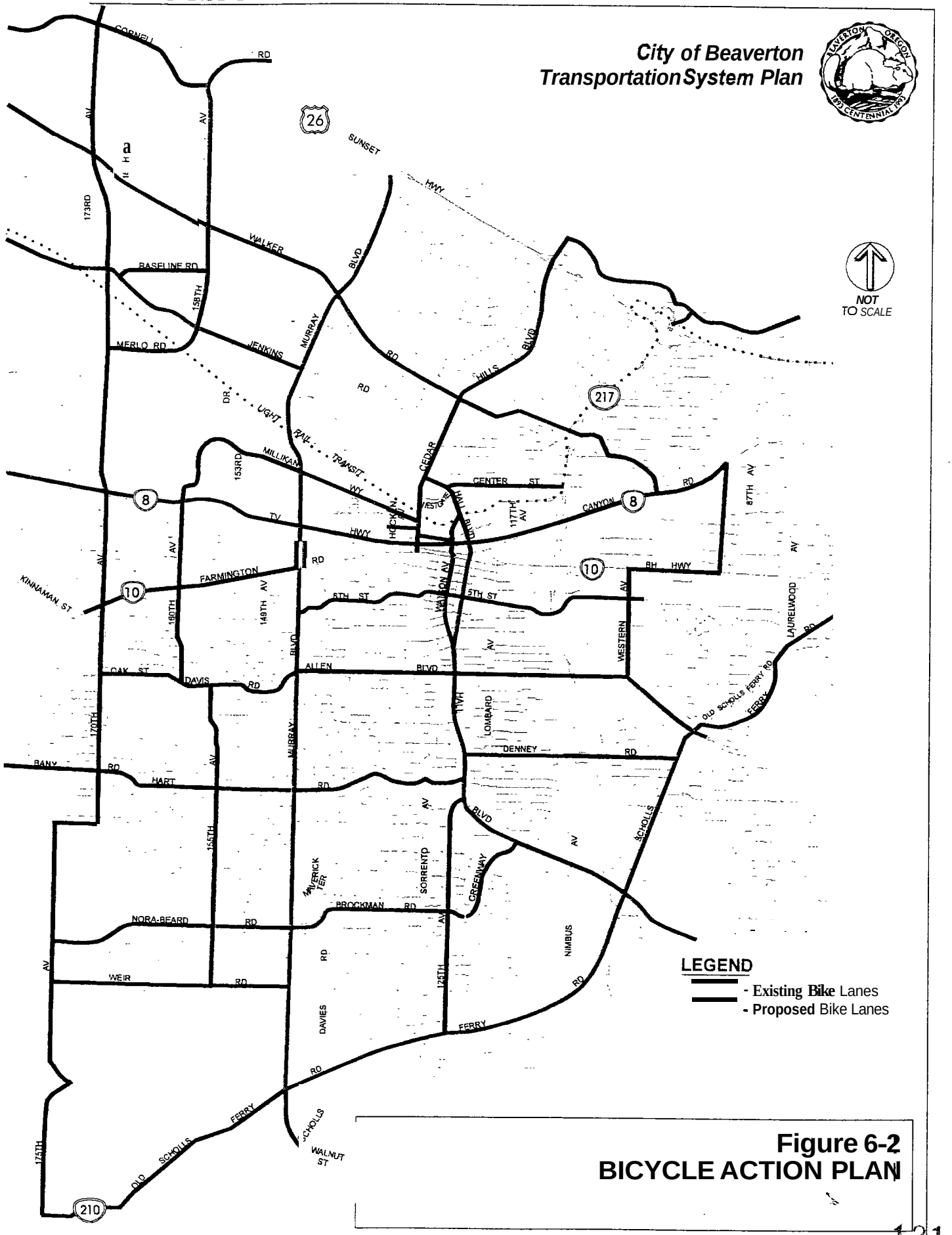


Figure 6-2
BICYCLE ACTION PLAN

Table 6-3
Bicycle Action Plan Project Priorities

Project	From	To	Approximate Cost ($1000's of dollars)
Priority: Connect key bicycle corridors to schools, parks, recreational uses and activity centers			
Greenway Road bike lanes	Hall Boulevard	200 ft east of Downing	214
155th Avenue/Weir Road bike lanes	Davis Road	Murray Boulevard	1,037
Millikan Way/160th bike lanes	Murray Boulevard	TV Highway	454
Millikan Way/160th bike lanes	TV Highway	Davis Road	438
125th Avenue	Scholls Ferry Road	Brockman Road	277
Canyon Road	142nd Avenue	91st Avenue	1142
Priority: Fill in gaps in bicycle network			
Greenway/Brockman bike lanes	125th Avenue	200 ft east of 125th Ave	17
Hall Boulevard bike lanes	Greenway	ORE 217	311
Hall Boulevard bike lanes	12th Street	900 ft south of Allen	134
Hall Boulevard bike lanes	Beaverton-Hillsdale Hwy	Cedar Hills Blvd	68
Watson Avenue bike lanes	Beaverton-Hillsdale Hwy	Hall Boulevard	59
Cedar Hills Boulevard bike lanes	Farmington Road	Walker Road	441
Cedar Hills Boulevard bike lanes	US 26	Foothill Drive	84
6th Street bike lanes	Murray Boulevard	Menlo Drive	210
Murray Boulevard bike lanes (west side of Murray Boulevard)	Farmington Road	approximately 200 ft south of TV Hwy	42
Denney Road bike lanes	Bel Aire Drive	Scholls Ferry Road	319
Allen Boulevard bike lanes	200 ft east of Western	Scholls Ferry Road	193
Western Avenue bike lanes	Beaverton-Hillsdale Hwy	Allen Boulevard	294
Beaverton-Hillsdale Hwy bike lanes	Western Avenue	91st Avenue	235
91st Avenue bike lanes	Beaverton-Hillsdale Hwy	Canyon Road	249
Old Scholls Ferry Road	Murray Boulevard	175th Avenue	781
Priority: Construct bike lanes with roadway improvement projects			
125th Avenue bike lanes	Hall Boulevard	Brockman Road	263
Farmington Road bike lanes	Murray Boulevard	172nd Avenue	540
Farmington Road bike lanes	500 ft east of Lombard	500 ft west of Lombard	75
Walker Road bike lanes	ORE 217	Canyon Road	285
Walker Road bike lanes	Cedar Hills Boulevard	Lynnfield Lane	131
Walker Road bike lanes	178th Avenue	185th Avenue	270
Millikan Way bike lanes	Hocken Avenue	Cedar Hills Blvd	79
170th Avenue bike lanes	Rigert Road	Alexander Street	701
170th/173rd Avenue bike lanes	Baseline Road	Walker Road	300
170th Avenue bike lanes	Alexander Street	Baseline/Jenkins	499
173rd Avenue bike lanes	Walker Road	Cornell Road	323
Hart Road bike lanes	Murray Boulevard	167th Avenue	435
Hart Road bike lanes	Hall Boulevard	Murray Boulevard	450
Hart Road/Bany Road bike lanes	167th Avenue	170th Avenue	60
Cornell Road bike lanes	158th Avenue	185th Avenue	450
Baseline Road bike lanes	158th Avenue	170th Avenue	180
Murray Boulevard bike lanes	Old Scholls Ferry Road	Scholls Ferry Road	150
Oak Street/Davis Road/Allen bike lanes	Murray Boulevard	170th Avenue	420
Allen Boulevard bike lanes	ORE 217	Murray Boulevard	255

Project	From	To	Approximate Cost ($1000's of dollars)
Allen Boulevard bike lanes	ORE 217	200 ft west of Western	94
Nora-Beard Road bike lanes	175" Avenue	155" Avenue	435
Weir Road	175th Avenue	155th Avenue	390
175" Avenue-Rigert Road bike lanes	170th Avenue	ORE 210	1,028
Bicycle Action Plan Projects Total Cost:			$14,813

Table 6-4
Other Bicycle Master Plan Projects

Project	From	To	Approximate Cost (1000's of dollars)
Priority: Bicycle corridors that connect neighborhoods			
SW Park Way bike lanes	Walker Road	ORE 217	714
SW Butner Road bike lanes	Murray Boulevard	Park Way	722
SW Downing Road bike lanes	Murray Boulevard	Meadow Drive	147
Meadow Drive bike lanes	Downing Road	Walker Road	92
Laurelwood Avenue bike lanes	Beaverton-Hillsdale Hwy	Scholls Ferry Road	139
Priority: Construct bike lanes with roadway improvement projects			
Farmington Road bike lanes	172nd Avenue	185" Avenue	296
173rd Avenue bike lanes	Cornell Road	Bronson Road	56
Merlo Road/158th Avenue bike lanes	170' Avenue	Walker Road	503
Jenkins Road bike lanes	Murray Boulevard	Cedar Hills Boulevard	323
New connection roadway bike lanes	Jenkins Road at Cedar Hills Boulevard	Hall Boulevard at Center Street	165
Hart Road/Bany Road bike lanes	170" Avenue	185th Avenue	293
Nimbus Road bike lanes	Hall Boulevard	Denney Road	285
SW Beaverton collector roadway bike lanes	Scholls Ferry Road	175th Avenue	473
Priority: Construct bicycle corridors that commuters might use ***Priority: Corridors providing mobility to and within commercial areas***			
Nimbus Road bike lanes	Scholls Ferry Road	Hall Boulevard	277
Canyon Road bike lanes	91st Avenue	78th Avenue	231
Beaverton-Hillsdale Highway bike lanes	Hall Boulevard	Western Avenue	454
Beaverton-Hillsdale Highway bike lanes	91" Avenue	Scholls Ferry Road	370
Jamieson Road bike lanes	Beaverton-Hillsdale Hwy	Scholls Ferry Road	307
Center Street bike lanes	ORE 217	Canyon Road	181
Other Bicycle Master Plan Projects Total Cost:			$ 6,026

COMPLEMENTING LAND DEVELOPMENT ACTIONS

The Transportation Planning Rule requires that bicycle parking facilities be provided as part of new residential developments of four units or more, new retail, office and institutional developments, and all transit transfer stations and park and ride lots.[7]

It is important that, as new development occurs, connections or accessways are provided to link the development to the existing bicycle and pedestrian facilities in as direct a manner as is reasonable. If a development fronts a proposed bikeway or sidewalk (as shown in the Bicycle or Pedestrian Master Plans), the developer shall be responsible for providing the bikeway or walkway facility as part of any half-street improvement required for mitigation.

[7] Transportation **Planning Rule,** State of Oregon, Department of Land Conservation and Development, **Section** 660-12-045(3)(a).

Chapter 7
Transit

This chapter summarizes existing and future transit needs in the City of Beaverton. The following sections outline the criteria to be used to evaluate needs, provides a number of strategies for implementing a transit plan and recommends a transit plan for the City of Beaverton. The needs, criteria and strategies were identified in working with the City's Traffic Commission, the public and TSP Technical Advisory Committee (TAC). The Traffic Commission, the public and TAC provided input regarding the transportation system in Beaverton, specifically exploring transit needs. The methodology used to develop the transit plan combined citizen and staff input.

NEEDS

The existing bus routes passing through Beaverton are shown in Figure 3-12. Currently, there are 22 routes bus routes which serve Beaverton. Much *of* the existing route structure will be modified *to* access and integrate Light Rail Transit (LRT) service. The future needs include providing service to activity centers that are created by future development, integrating LRT service in Beaverton and moving towards the goal of transit service with a quarter mile of all residents. These activity centers will have significant employment generation and will be destinations for many people.

The City provides input regarding service planning individually to Tri-Met through Tri-Met's Senior Service Planner responsible for this area and regionally to Washington County. Several meetings were held involving public input to Tri-Met during sessions called the Transit Choices for Livability in which Beaverton gave Tri-Met input to improving the transit system. Tri-Met is working on a sketch plan for proposed transit service integrating Westside Light Rail and will have preliminary sketches available for public workshops in the Fall of 1997.[1]

Metro's Draft Regional Transportation Plan (RTP)[2] identifies Walker Road, Murray Boulevard, Canyon Road-Farmington Road, Allen Boulevard and Scholls Ferry Road as part of the *primary transit network* and TV Highway, Beaverton-Hillsdale Highway, Cedar Hills Boulevard and Hall

[1] Based on **fax** transmittal received from Dennis Grimmer, Tri-Met, July 7, 1997.

[2] *Public Transportation System Mop,* Metro, Draft *3.0,* July 1, 1997.

Boulevard as part of the *frequent bus network. Rapid bus services* are identified for ORE 217. These regional bus routes provide the backbone of the transit system and are intended to provide the highest quality service and carry the highest passenger volumes.

CRITERIA

Beaverton's Traffic Commission, the public and Technical Advisory Committee created a set of goals and policies to guide transportation system development in Beaverton. Several of these policies pertain specifically to transit needs:

Goal 2, Policy 1: Develop and implement public street standards that recognize the multi-purpose nature of the street right-of-way for utility, pedestrian, bicycle, transit, truck, and auto use and recognize these streets as important to community identity as well as providing a needed service.

Develop and maintain a series of system maps and design standards for motor vehicles, bicycle, pedestrian, transit and truck facilities in Beaverton.

Goal 2, Policy 4: Design arterial and collector streets to accommodate pads for public transit.

Develop and maintain design standards for transit (shelters, turn radii, major transit stops). The City and Tri-Met will work together to improve transit service in Beaverton and to improve pedestrian facilities leading to bus stop waiting areas, as well as making the waiting areas themselves safe, comfortable, and attractive.

Goal 4, Policy 6: Support mixed-use development.

Mixing of residential and commercial land uses within compact areas that encourage use of alternative modes of travel (walking, biking and transit) has proven to reduce vehicle trips, particularly near major transit stops. Where projects or collective phases of projects generate more than 1000 peak hour vehicle trips, mixing of land uses must be considered (for example, large retail projects mixed with employment, residential and/or entertainment; large office/industrial uses mixed with services).

Goal 4, Policy 7: Improve local transit services to increase transit ridership potential.

Bus service should be available within a 1/4 mile to all residents in Beaverton. Bus service improvements are needed to meet this policy and other policies recommended in this plan. Establish standards necessary for development adjacent to transit streets.

Goal 4, Policy 8: Encourage development of regional high capacity transit, including light rail transit and commuter rail.

Goal 5, Policy 1: Construct transportation facilities to meet the requirements of the Americans with Disabilities **Act.**

Goal 7, Policy 1: Coordinate transportation projects, policy issues, and development actions with all affected governmental units in the area. Key agencies for coordination include Washington County, ODOT, Tri-Met and Metro as well as adjacent cities (Tigard, Hillsboro and Portland.)

Maintain plan and policy conformance to the Regional Transportation Plan. Seek compatibility with all adjacent county and city jurisdiction plans.

Goal 7, Policy 3: Work with Tri-Met to encourage the development of transit improvements.

These goals and policies are the criteria that all transit improvements in Beaverton should be compared against to determine if they conform to the intended vision of the City.

STRATEGIES

Several strategies were developed for the implementation of future transit facilities in Beaverton. These strategies were developed to provide the City with priorities in providing guidance to Tri-Met since it is likely that the available funding will be insufficient to address all of the projects identified in the Transit Master Plan.

Strategy 1 - "Provide direct access to/from Light Rail Transit (MAX) by integration of bus services "

This strategy focuses on providing direct access to Light Rail Transit Stations in Beaverton. Feeder routes to MAX are in keeping with Tri-Met's service objectives for the Westside LRT service. Looping routes would be a potential service which could replace or supplement existing routes.

Strategy 2 - " Provide access to commercial/employment "

This strategy provides access to locations where people either work or choose to do their shopping. Commercial areas in Beaverton might include the Washington Square area and downtown Beaverton.

Strategy 3 - " Provide frequent service often "

This strategy provides frequent transit service at several times during the day.

Strategy 4 - " Provide improved transit amenities "

This strategy provides improved transit amenities along existing and future transit routes (bus shelters, improved lighting, transit pads, etc.)

Strategy 5 - "Provide Express Routes to Regional Employment Centers"

This strategy is aimed at providing service directly from Beaverton to regional employment centers (i.e. downtown Portland) without necessarily using Light Rail Transit. This might include a few stops in Beaverton followed by express service to a regional employment center such as downtown

Portland (one or two stops at park & ride lots near freeway interchanges along the way).

Strategy 6 - " Dial-a-ride demand responsive"

This strategy provides a dial-a-ride demand responsive transit service.

Strategy 7 - "Provide Park and Ride Lots"

This strategy provides park & ride lots at locations where Tri-Met stops or where it is desirable for Tri-Met to stop. A park & ride lot near the freeway could be used in conjunction with an express bus to downtown or a park-and-ride lot near the LRT Stations could be used in conjunction with access to Light Rail Transit or with loop routes. This strategy would include assessment of actual park and ride needs after opening of the Westside LRT in September 1998 to determine how to best serve public demand. While park and ride facilities are commonly associated with transit, there is potential for smaller facilities that also service carpooling and vanpooling (discussed in Chapter 10).

Strategy 8 - "Provide Access to Activity & Service Centers (schools, etc.)"

This strategy focuses on providing transit access to destinations such as shopping centers, hospitals, schools, etc.

Strategy 9- " Provide access to regional town centers/main streets "

This strategy focuses on providing transit services to regional centers/town centers/main streets in Beaverton.

Strategy 10 - " Encourage enhanced local services "

This strategy focuses on improving local transit services in Beaverton, as compared to the regional bus services outlined in the Metro draft RTP Public Transportation System.

Table 7-1 summarizes the strategies in terms of meeting the transportation goals and objectives.

RECOMMENDED TRANSIT PLAN

The strategies that had been developed and ranked by the Traffic Commission, the public and Technical Advisory Committee. Each traffic commissioner and public participant were assigned a certain number of points that he or she could allocate to each of the strategies according to his or her priorities. The ranking of these strategies follows, from most important to least important:

- Provide direct access to/from Light Rail Transit (MAX) by integration of bus services
- Provide access to commercial/employment areas
- Provide frequent service often
- Provide improved transit amenities
- Provide express routes to regional employment centers
- Dial-a-ride demand responsive

- Provide Park and Ride lots
- Provide access to activity and service centers (schools, etc.)
- Provide access to regional town centers/main streets (i.e. Central Beaverton)
- Encourage enhanced local services

Table 7-1
Transit Strategies Comparisons

Strategy	Policies							
	2-1	2-4	4-6	4-7	4-8	5-1	7-1	7-3
1. Provide direct access to/from Light Rail Transit (MAX) by integration of bus services	□	□	□	◆	■	□	□	◆
2. Provide access to commercial/employment areas	□	□	□	◆	◆	□	□	□
3. Provide frequent service often	□	□	□	◆	□	□	□	□
4. Provide improved transit amenities	□	■	□	◆	□	■	□	■
5. Provide express routes to regional employment centers	□	□	□	□	◆	□	□	□
6. Dial-a-Ride demand responsive	□	□	□	□	□	■	□	□
7. Provide Park & Ride Lots	□	◆	□	□	□	□	□	◆
8. Provide access to activity and service centers (schools, etc.)	□	□	□	◆	□	□	□	□
9. Provide access to regional town centers/main streets (ie. Central Beaverton)	□	□	◆	◆	◆	□	□	◆
10. Encourage enhanced local services	□	□	□	■	□	□	□	◆

O Does not meet criteria
□ Partially meets criteria
◆ Mostly meets criteria
■ Fully meets criteria

Tri-Met is working on ideas for proposed transit service in Beaverton integrating Westside Light Rail (LRT) and will have preliminary sketches available for public workshops in the Fall of 1997. Westside LRT service to downtown Beaverton and Hillsboro **will** begin September 1998. Tri-Met will need to redirect bus service in Washington County and create a Westside transit plan through its Westside transit planning process including public workshops in Fall of 1997.[3] The proposed plan for Beaverton (initial sketch plan) should be based on the ideas resulting from the Transit Choices for Livability workshops in Fall 1996 and on the transit strategies prioritized above by the City of Beaverton Traffic Commission. This transit plan integrating Westside LRT should be revised to reflect the ideas from the public workshops planned for Fall 1997.

[3] Based on fax transmittal **received** from Dennis Grimmer, Tri-Met, July 7, 1997.

Tri-Met recently implemented community transit pilot projects in east and southwest Beaverton where no transit service had been available. In east Beaverton, Route 53 serves the industrial area of Beaverton with 3,000 to 5,000 employees, connecting to other Tri-Met service at the Beaverton Transit Center. In Southwest Beaverton, Route 50 connects SW Beaverton with the Beaverton Transit Center.4

Tri-Met's ideas for changing bus lines are summarized in Table 7-2. These changes include more transit centers, bus lines with minor changes, reconfigured bus service and creating opportunities to change bus lines to provide better service to Beaverton.[5] A few opportunities identified by Tri-Met for Beaverton include increasing existing service, extending transit service north of US 26 and creating the new Hart-Bany route. While these ideas match with several strategies outlined in the TSP process, the City and Tri-Met will need to work closely together to best meet the publics needs and demand.

Based upon input received in the TSP process, the City of Beaverton should take the following four actions with regard to public transit:

- Integrate Tri-Met's Planning For Transit6 into land use review processing for sites within 1,000 feet of transit stops. These planning guidelines can assist site designers in making land use more transit friendly. Descriptions are provided of site amenities such as sidewalk linkages, shelters and signage.

- Work with Tri-Met to develop high capacity transit corridors which could include the following corridors: Murray Boulevard (Cedar Mill Transit Center to Tigard Transit Center/Kruse Way); Kinnaman Street/Oak Street/Davis Road/Allen Boulevard (Intel in Aloha to Downtown Portland); Baseline Road/Jenkins Road/Hall Boulevard (Hillsboro to Washington Square); TV Highway/ORE 217 (Hillsboro to Washington Square/Kruse Way); Scholls Ferry Road/Oleson Road (Murray/Scholls Town Center to Garden Home Town Center to Raleigh Hills Town Center to Washington Park LRT).

- Work closely with Tri-Met to achieve improved local transit services/shuttles in Beaverton, linking mixed use centers, LRT, major employers and high density housing. The most critical areas are commercial/employment centers including Nike, Sequent, Tektronix, Washington Square and Downtown Beaverton/Government Center.

- Work with Tri-Met, ODOT and Metro to encourage the development of enhanced transit traveler information systems. For Beaverton this could take the form of:

4 Local Service brochure, Tri-Met, September 1997.

5 Ibid.

6 Planning **and** Design for Transit Handbook, Tri-Met, 1995

Table 7-2
Tri-Met's Ideas for Changing Bus Lines in Washington County [7]

More Transit Centers	
Transit Center	**Location**
Sunset	SW Barnes West of 217
Beaverton	SW Lombard North of Canyon Road
Willow Creek	SW 185th north of Baseline
Hillsboro	1st and Washington
Bus lines with Minor Changes (Lines will be rerouted to connect with transit center)	
Bus Line	**Transit Center**
20	Sunset
52	Willow Creek
54	Beaverton
68	Willow Creek
76/78	Beaverton
Reconfigured Bus Service (Lines reconfigured and MAX will replace bus service on US 26 to and from downtown Portland.	
Bus Line	**Transit Service**
57	Hillsboro, Beaverton
58	Hillsboro, Willow Creek
59	Beaverton . Hillsboro
60	Sunset
88	Willow Creek, Sunset
89	Willow Creek, Sunset
94x	Willow Creek, Sunset
Bus Line	**Opportunities**
62	Connect this line with MAX at Millikan Way Station instead of the Beaverton Transit Center
67	Incorporate this line into other lines with connections to transit centers
91X	Change this line into a Washington County Express between Hillsboro, Beaverton, Washington Square and Tigard.
92X	Revise this South Beaverton line to provide service between Beaverton Transit Center and Washington Square.

1. "Smart bus stops" that can inform the traveler of the time until the next bus, in real time;
2. Kiosks at major activity centers (Washington Square, Downtown Beaverton, Tektronix, etc.) that can provide information regarding highway operating conditions (video of congestion with estimated delays) and the status of public transit that service that center; and
3. Internet service center for transit trip planning and real time position of transit vehicles in Beaverton.

[7] **Data provided by senior transit planning staff, Tri-Met, July** 1997.

Chapter 8
Motor Vehicles

This chapter summarizes needs for the motor vehicle system for both the existing and future conditions in the City of Beaverton. This chapter also outlines the criteria to be used in evaluating needs, provides a number of strategies for implementing automobile and truck plans and recommends automobile and truck plans for the City of Beaverton. The needs, criteria and strategies were identified in working with the City's Traffic Commission, the public and Technical Advisory Committee. The Traffic Commission and public explored automobile and truck needs in the City of Beaverton and provided input about how they would like to see the transportation system in their city develop. The Motor Vehicle modal plan is intended to be consistent with other jurisdictional plans including Metro's *Draft Regional Transportation Plan (RTP)*, Washington County's *Transportation Plan (Comprehensive Plan Volume XV)* and *Draft Bikeway Plan,* and ODOT's *Oregon Transportation Plan* (OTP).

The motor vehicle element of the TSP involves several elements as shown in Figure 8-1. This chapter is separated into the following ten sections:

- Criteria
- Functional Classification (including summary of cross sections and local street connectivity)
- Circulation and Capacity Needs
- Safety
- Maintenance
- Neighborhood Traffic Management
- Parking
- Access Management
- Transportation System Management/Intelligent Transportation Systems
- Truck Routes

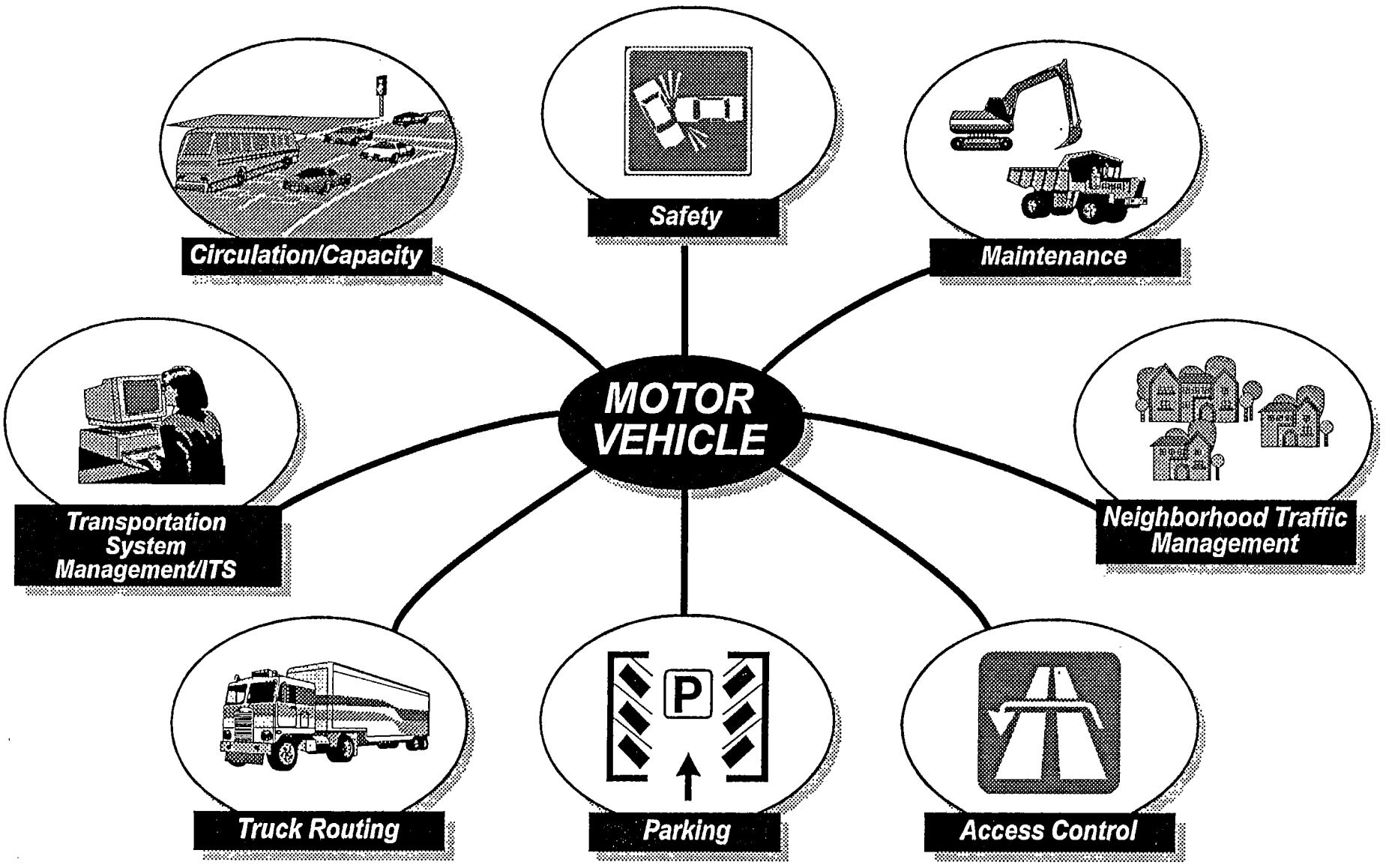


Figure 8-1
VEHICULAR ELEMENTS OF THE STREET PLAN

CRITERIA

Beaverton's Traffic Commission, the public and Technical Advisory Committee created a set of goals and policies to guide transportation system development in Beaverton (see Chapter 2). Many of these goals and policies pertain specifically to motor vehicles. These goals and policies are the criteria that all motor vehicle improvements or changes in Beaverton should be measured against to determine if they conform to the intended direction of the City. The most significant of these criteria is the level of service requirements outlined in Goal 4 Policy 3. These are used to determine adequacy of motor vehicle facilities.

Goal 1, Policy 1: Maintain the livability of Beaverton through proper location and design of transportation facilities.

Goal 1, Policy 2: Include noise attenuation in the design (including redesign and reconstruction) of arterial streets immediately adjacent to residential development.

Goal 1, Policy 5: Protect neighborhoods from excessive through traffic and travel speeds while providing reasonable access to and from residential areas. Build local, neighborhood and collector streets to minimize speeding.

Goal 1, Policy 6: Require new commercial development to identify traffic plans for residential streets where increased cut-through traffic may occur.

Goal 2, Policy 1: Develop and implement public street standards that recognize the multi-purpose nature of the street right-of-way for utility, pedestrian, bicycle, transit, truck, and auto use and recognize these streets as important to community identity as well as providing a needed service.

Goal 2, Policy 2: Provide connectivity to each area of the City for convenient multi-modal access.

Goal 3, Policy 1: Improve traffic safety through a comprehensive program of engineering, education and enforcement.

Goal 3, Policy 2: Design streets to serve their anticipated function and intended uses as determined by the comprehensive plan.

Goal 3, Policy 3: Enhance safety by prioritizing and mitigating high accident locations within the City.

Goal 3, Policy 4: Establish rights-of-way at the time of site development and officially secure them by either an easement or dedication of property.

Goal 3, Policy 5: Designate routes to schools for each school and any new residential project.

Goal 3, Policy 7: Provide satisfactory levels of maintenance to the transportation system in order to preserve user safety, facility aesthetics and the credibility of the system as a whole. Preservation, maintenance and operation requirements should be the first priority of transportation funds.

Goal 3, Policy 8: Maintain access management standards for arterial and collector roadways consistent with City, County and State requirements to reduce conflicts between vehicles and trucks, as well as conflicts between vehicles and pedestrians.

Goal 4, Policy 2: Limit the provision of parking to meet regional and state standards.

Goal 4, Policy 3: Maintain level of service consistent with regional goals. Reduce traffic congestion and enhance traffic flow through such measures as intersection improvements, intelligent transportation systems and signal synchronization.

Goal 4, Policy 4: Plan land uses to increase opportunities for multi-purpose trips (trip chaining).

Goal 4, Policy 5: Require land use approval for proposals for new or improved transportation facilities including identification of potential impacts.

Goal 5, Policy 1: Construct transportation facilities to meet the requirements of the Americans with Disabilities Act.

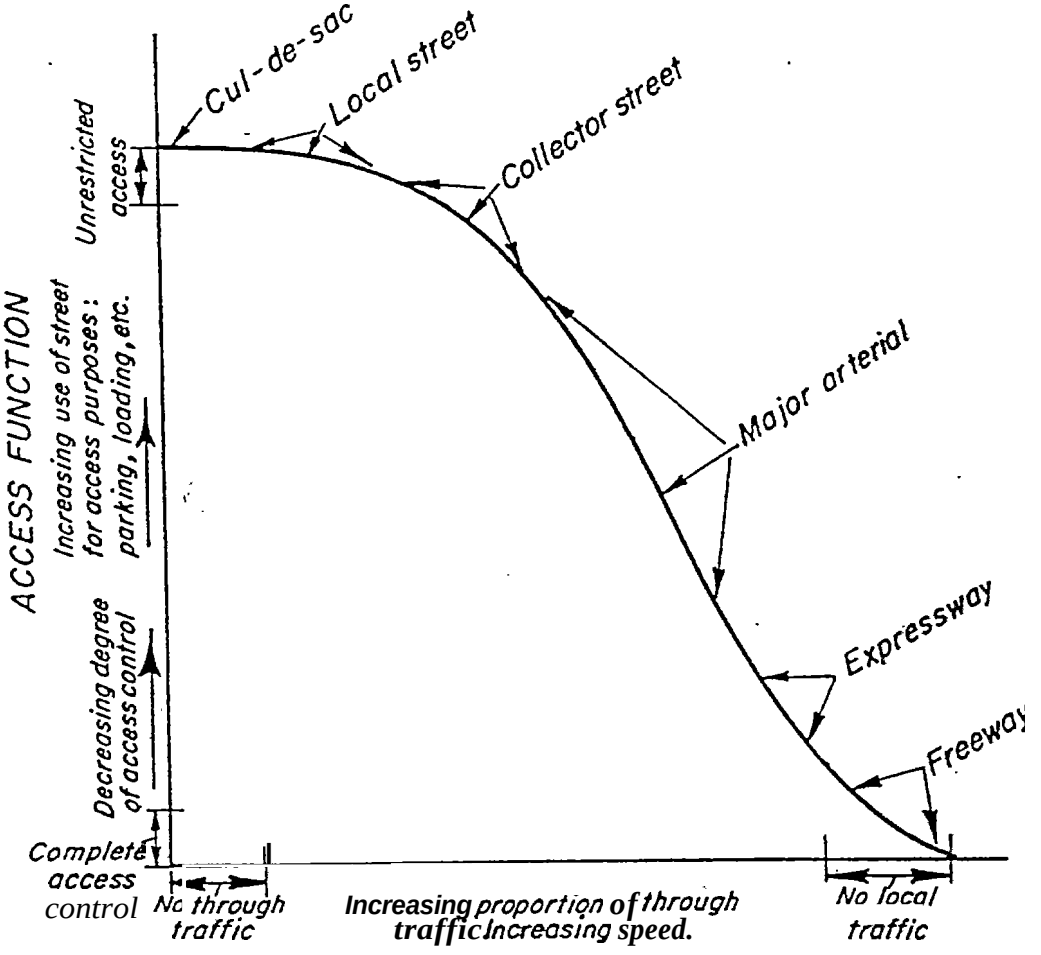
Goal 5. Policy 2: Develop neighborhood and local connections to provide adequate circulation in and out of the neighborhoods.

Goal 6, Policy 1: Designated arterial routes and freeway access areas in Beaverton are essential for efficient movement of goods; design these facilities and adjacent land uses to reflect the needs of goods movement.

FUNCTIONAL CLASSIFICATION

Roadways have two functions, to provide mobility and to provide access. From a design perspective, these functions can be incompatible since high or continuous speeds are desirable for mobility, while low speeds are more desirable for land access. Arterials emphasize a high level of mobility for through movement; local facilities emphasize the land access function; and collectors offer a balance of both functions (Figure 8-2).

Functional classification has commonly been mistaken as a determinate for traffic volume, road size, urban design, land use and various other features which collectively are the elements of a roadway, but not its function. For example, the traffic on a roadway can be more directly related to land uses and because a roadway carries a lot or a little traffic does not necessarily determine its function. The traffic volume, design (including access standards) and size of the roadway are outcomes of function, but do not define function.



Source: University of California, 'Fundamentals of Traffic Engineering' Wolfgang S. Homburger and James H. Kell

Figure 8-2
STREET FUNCTION RELATIONSHIP

Function can be best defined by connectivity. Without connectivity, neither mobility nor access can be served. Roadways that provide the greatest reach of connectivity are the highest level facilities. Arterials can be defined by regional level connectivity. These routes go beyond the city limits in providing connectivity and can be defined into two groups: principal arterials (typically state routes) and arterials. The movement of persons, goods and services depends on an efficient arterial system. Collectors can be defined by citywide or district wide connectivity. These routes span large areas of the city but typically do not extend significantly into adjacent jurisdictions. They are important to city circulation. The past text books on functional classification then define all other routes as local streets, providing the highest level of access to adjoining land uses. These routes do not connect at any significant level.

Recent work in the area of neighborhoods and their specific street needs provides a fourth level of functional classification - neighborhood route. In many past plans, agencies defined a minor collector or a neighborhood collector, however, use of the term collector is not appropriate. Collectors provide citywide or large district connectivity and circulation. There is a level between collector and local streets that is unique due to its level of connectivity. Local streets can be cul-de-sacs or short streets that do not connect to anything.[1] Neighborhood routes are commonly used by residents to circulate out of their neighborhood. They have connections within the neighborhood and between neighborhoods. These routes have neighborhood connectivity, but do not serve as citywide streets. They have been the most sensitive routes to through, speeding traffic due to their residential frontage. Because of their limited level of connectivity they can commonly be used as cut-through routes in lieu of congested or less direct arterials/collectors which are not performing adequately. Cut-through traffic has the highest propensity to speed, creating negative impacts on these neighborhood routes. By designating these routes, a more systematic, citywide program of neighborhood traffic management can be undertaken to protect these sensitive routes.

In the past, traffic volume and roadway size were linked to functional classification. More recently, urban design and land use have also been tied to functional class. Discussions of neo-traditional street grids that eliminate the need for functional class adds another commentary. This tends to become confusing, complicating an essential transportation planning exercise. The planning effort to identify connectivity of routes in Beaverton is essential to preserve and protect future mobility and access, by all modes of travel. In Beaverton, it is not possible to have citywide neo-traditional layout. Past land use decisions, topography and environmental features preclude this[2]. Without defining the varying levels of connectivity now in the TSP, the future impact of the adopted Comprehensive Plan land uses will result in degraded ability to move goods and people (existing and new) in Beaverton, with an outcome of intolerable delays and order of magnitude greater costs to address solutions later

[1] Or in the case of neo-traditional grid systems, extensive redundancy in facilities results in local status to streets that have greater than local connectivity.

[2] While subdivisions or areas of neo-traditional development exist and are possible (even desirable), on the whole, the concept cannot be generically applied to the city in lieu of functional classification.

than sooner. By planning an effective functional classification of Beaverton streets[3], the City can manage public facilities pragmatically and cost effectively.

These classifications do not mean that because a route is an arterial it is large and has lots of traffic. Nor do the definitions dictate that a local street should only be small with little traffic. Identification of connectivity does not dictate land use or demand for the facilities. The demand for streets is directly related to the land use. The highest level connected streets have the greatest potential for higher traffic volumes, but do not have to have high volumes as an outcome, depending upon land uses in the area. Typically, a significant reason for high traffic volumes on surface streets at any point can be related to the level of land use intensity within a mile or two. Many arterials with the highest level of connectivity have only 33 to 67 percent "through traffic". Without the connectivity provided by arterials and collectors, the impact of traffic intruding into neighborhoods and local streets goes up substantially.

If land use is a primary determinate of traffic volumes on streets, then how is it established? In Oregon, land use planning laws require the designation of land uses in the Comprehensive Plan. Beaverton's Comprehensive Plan land uses have been designated for over two decades. These land use designations are very important not only to the City for planning purposes, but to the people that own land in Beaverton. The adopted land uses in Beaverton have been used in this study, working with the Metro regional forecasts for growth in the region for the next 20 years. A regional effort, coordinated by Metro and local agencies, has been undertaken to allocate the determined overall land use in the most beneficial manner for transportation. Without this allocation, greater transportation impacts would occur (wider and more roads than identified in this plan). As discussed in Chapter 11, if the outcome of this TSP is either too many streets or solutions that are viewed to be too expensive, it is possible to reconsider the core assumptions regarding Beaverton's livability - its adopted land uses or its service standards related to congestion. The charge of this TSP (as mandated by State law) is to develop the set of multi-modal transportation improvements to support the Comprehensive Plan land uses. Key to this planning task is the functional classification of streets.

Functional Classification Definitions

The proposed functional classification of streets in Beaverton is represented by Figure 8-3. Any street not designated as either an arterial, collector or neighborhood route is considered a local street.

Principal Arterials are typically freeways and state highways that provide the highest level of connectivity. These highways generally span several jurisdictions and many times have statewide importance (as defined in the ODOT Level of Importance categorization).[4]

[3] Including definition of which routes connect through Beaverton, within Beaverton and which routes serve neighborhood and local level in the city.

[4] *Oregon Highway Plan,* ODOT, 1991, Appendix A.

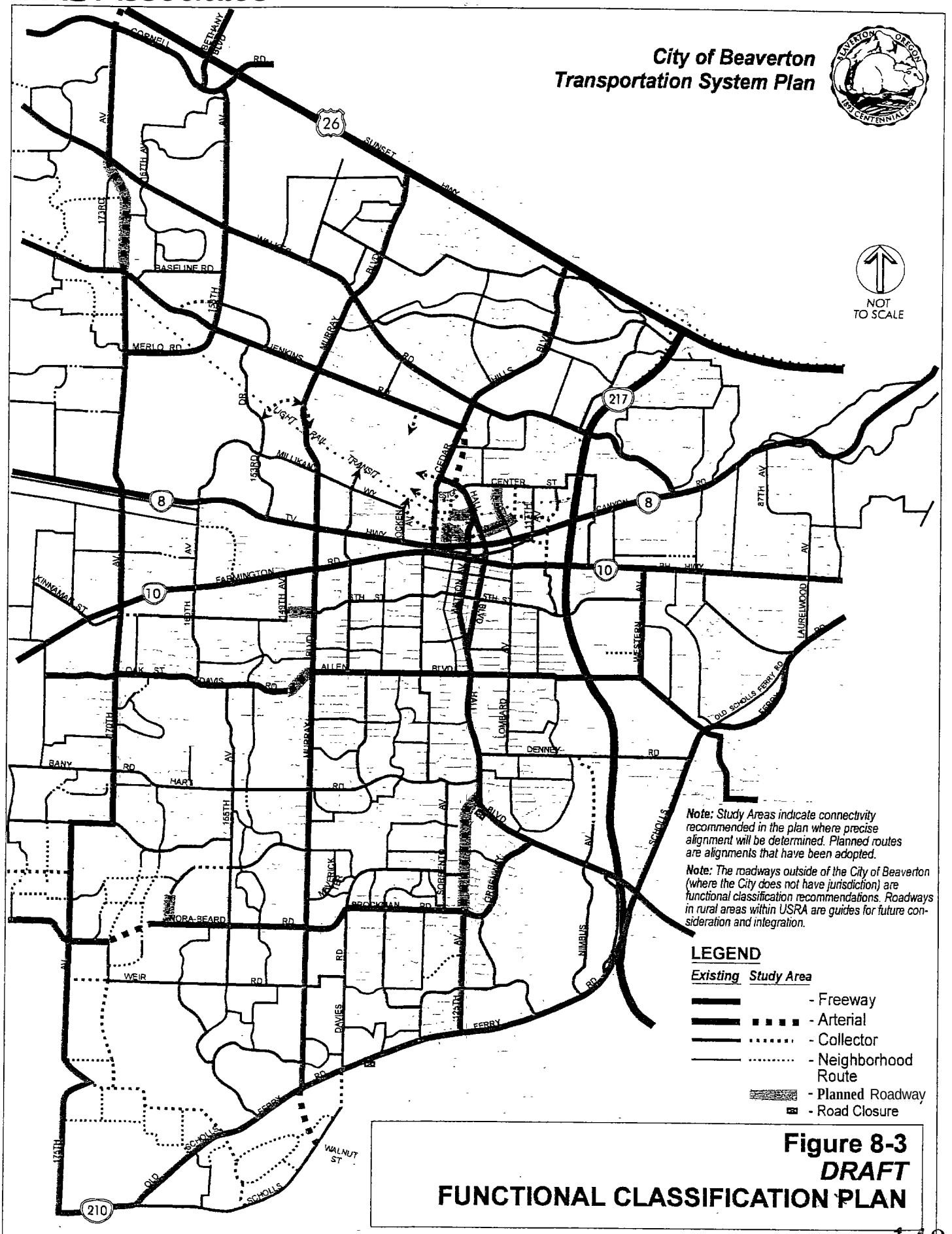


Figure 8-3
DRAFT
FUNCTIONAL CLASSIFICATION PLAN

Arterial streets serve to interconnect and support the principal arterial highway system. These streets link major commercial, residential, industrial and institutional areas. Arterial streets are typically spaced about one mile apart to assure accessibility and reduce the incidence of traffic using collectors or local streets in lieu of a well placed arterial street. Many of these routes connect to cities surrounding Beaverton.

Collector streets provide both access and circulation within residential and commercial/industrial areas. Collectors differ from arterials in that they provide more of a citywide circulation function, do not require as extensive control of access and penetrate residential neighborhoods, distributing trips from the neighborhood and local street system.

Neighborhood routes are usually long relative to local streets and provide connectivity to collectors or arterials. Because neighborhood routes have greater connectivity, they generally have more traffic than local streets and are used by residents in the area to get out of the neighborhood, but do not serve citywide/large area circulation. Traffic from cul-de-sacs and other local streets may drain onto neighborhood routes to gain access to collectors or arterials. Because traffic needs are greater than a local street, certain measures should be considered to retain the neighborhood character and livability of these routes. Measures such as neighborhood traffic management are often appropriate (including devices such as speed humps, traffic circles and other devices - refer to later section in this chapter). However, it should not be construed that neighborhood routes automatically get speed humps. While these routes have special needs, neighborhood traffic management is only one measure, not the only measure.

Local Streets have the sole function of providing access to immediate adjacent land. Service to "through traffic movement" on local streets is deliberately discouraged by design.

Functional Classification Changes

The proposed functional classification differs from the existing approved functional classification. Neighborhood routes were not defined in the existing functional classification. The prior system added major and minor classifications to arterials and collectors. These designations are removed since they define more of the design and demand (which are outcomes of function and land use) of a route, but not its function. The proposed functional classification was developed following detailed review of Beaverton's, Washington County's and Metro's current proposal for functional classification. Table 8-1 summarizes the major differences between the proposed functional classification and the existing designations in Beaverton. This table also outlines the streets which were previously designated collectors that are now identified as neighborhood routes.

Criteria for Determining Changes to Functional Classification

The criteria used to assess connectivity has two components: the extent of connectivity (as defined above) and the frequency of the facility type. Maps can be used to determine regional, city/district and neighborhood connections. The frequency or need for facilities of certain classifications is not routine or easy to package into a single criteria. While planning textbooks call for arterial spacing of a mile, collector spacing of a quarter to a half mile, and neighborhood connections at an eighth to a sixteenth of

Table **8-1**
Proposed Changes to Existing Roadway Classification

Roadway	Roadway Classification According to Jurisdiction		
	City of Beaverton[5]	Washington County[6]	Proposed TSP Functional Classification
Walker Road (Murray to Canyon)	Major Collector	Study area (Murray to 217) Major Collector (east of **217)**	Arterial
170th Avenue	Minor Arterial(Hart-Bany to Merlo) Major Collector (south of Bany & north of Merlo)	Minor Arterial (Rigert to Bseline)	Arterial
173rd Avenue (north of Walker)	Major Collector"	Major Collector	Arterial
175th Ave/Reusser (south of Rigert)	Maior Collector	Maior Collector	Arterial
Davis Road/Oak Street	Major Collector (170th to Murray) Minor Collector (west of 170th Ave)	Major Collector (170th to Murray) Minor Collector (west of 170th)	Arterial
Nora-Beard Road (west of Murray)	Major Collector	Major Collector	Arterial
Murray Boulevard (south of Old Scholls Ferry)	Maior Collector	Collector	Arterial
153rd Drive	Minor Arterial	Minor Arterial	Collector
Millikan Way	Minor Arterial	Minor Arterial	Collector
Denney Road	Minor Arterial	Minor Arterial	Collector
Nimbus Avenue	Minor Arterial	Minor Arterial	Collector
141st Avenue (Allen to Farmington)	Minor Collector	Minor Collector	Collector

5 ***City*** *of Beaverton Functional Classification Plan,* Street Standard Map, adopted November 28, 1988.

6 *Washington County Transportation Plan Comprehensive Plan* ***Volume*** *XV*, October 1988.

Table **8-1** (Continued)
Proposed Changes to Existing Roadway Classification

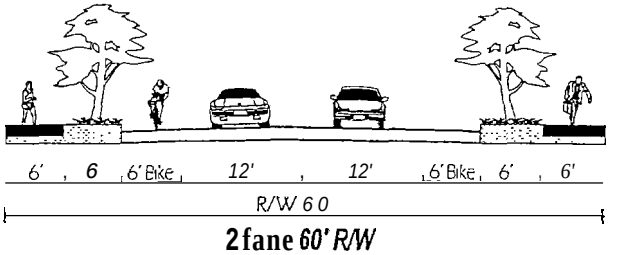
Changes from Collector designation to Neighborhood Route

2nd Street	Alger	Main Avenue
22nd/Whistling	Bel Aire/Hillcrest/Anne	Maverick Terrace
78th Avenue	Berkshire	Mayfield
87th Avenue	Blanton/156th	Old Scholls at Elm
91st Avenue	Canvon Lane	Rita/130th
96th Avenue	Cresmoor/Clifford	Shaw
107th Avenue	Davies e/o 135th	Teal/Otter/136th/Cottontail
149th Avenue (s/o OR10)	Ecole	Turquoise/Emerald
150th/Pioneer/Meadow	Elm/Pinehurst	Village Lane
151st Avenue	Furlong/Devonshire/Foothill	Wier/130th
152nd Avenue	Huntington	Wilshire/Gardenview
155th - Weir-160th	Hvland Way/Valley Avenue	Wilson s/o Hart
160th/Galena	King	
165th Avenue	Linda/Todd/Devonwood	
173rd (s/o Shadv Fir)		

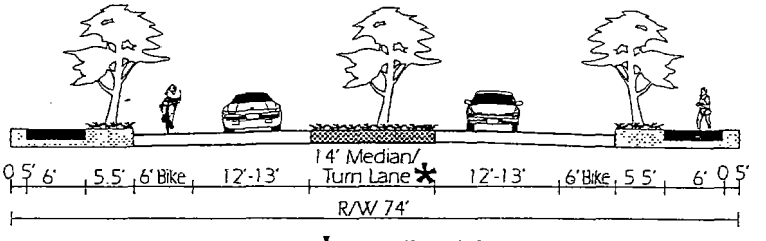
a mile, this does not form the only basis for defining functional classification. Changes in land use, environmental issues or barriers, topographic constraints, and demand for facilities can change the frequency ,forroutes of certain functional classifications- While spacing standards ***can*** be a guide, they must consider other features and potential long term uses in the area (some areas would not experience significant changes in demand, where others will). Linkages to regional centers, town centers and station **areas** are another consideration for addressing frequency of routs of certain functional class. For example, connectivity to these areas are important, where **as** linkages that do not connect any of these areas could be classified **as** lower levels in the functional classification.

Characteristics **of** Streets **for** each Functional **Classification**

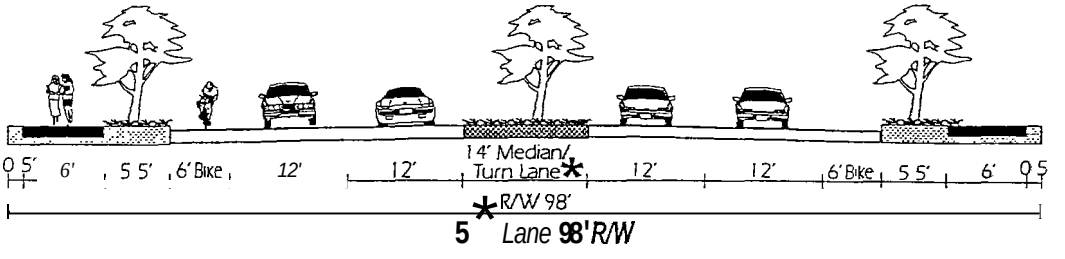
The design characteristics of streets in Beaverton were developed to meet the function and demand for each facility **type.** Because the actual design of roadway ***can*** vary from segment to segment due to adjacent land uses and demands, the objective was to define a system that allows standardization of key characteristics to provide consistency, but also to provide criteria for application that provides some flexibility, while meeting standards. Figures 8-4 to 8-7 depict sample street cross-sections and design criteria for arterials, collectors, neighborhood routes and local streets. Table 8-2 provides a summary of the key street characteristics and how they can be applied on a case by case basis. While these are not entirely consistent with the Metro urban design designations of streets, they provide the best match for the specific needs of Beaverton.



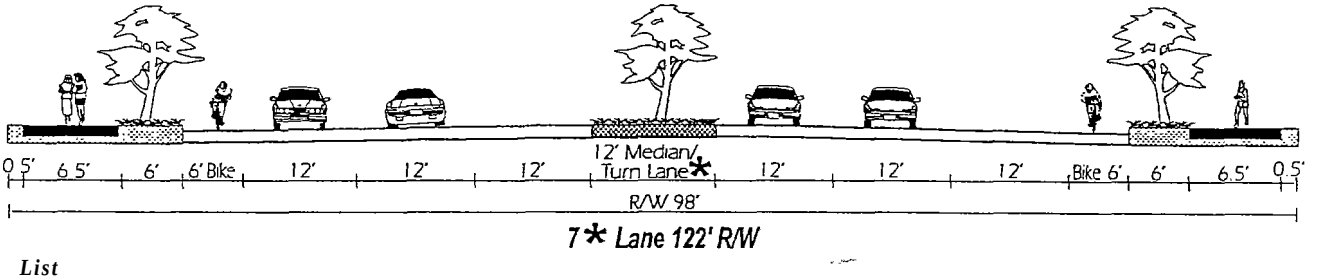
2 fane 60' R/W



3* Lane 74' R/W



5 Lane 98' R/W



7* Lane 122' R/W

List

- 125th Avenue
- 158th/Merlo
- 170th/173rd/175th
- Murray Boulevard
- Cedar Hills Boulevard
- Hall/Watson
- Western Avenue
- Cornell Road
- Walker Road
- Jenkins/Baseline
- Canyon/TV Highway
- Farmington/BH Highway
- Allen/Davies/Oak
- Greenway/Brockman/ Beard/Nora
- Scholls Ferry Road

Notes:

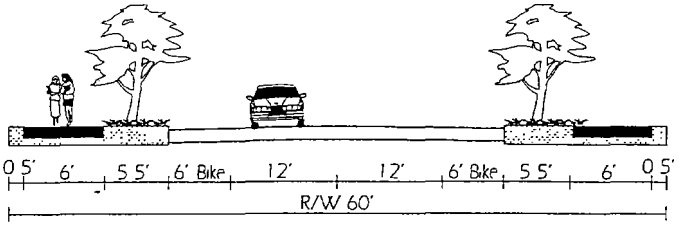
1. Space between curb and median minimum 19' with mountable curb design (to be coordinated with TVFR).
2. Selection of placement of sidewalk and planter specific to application., Cross sections show choices for reference.
3. Width of curb is included in sidewalk or planter strip width when adjacent to street.
4. Samples show the desirable applications given number of lanes plus minimum standards can be applied case by case.
5. Actual width of street and sidewalk area can be adjusted within R/W based on modal priorities and adjacent land use.
6. Typically 6" is provided from R/W line to edge of concrete surface (for maintenance/utilities).

* Note that, where appropriate, the median/lane may not be provided resulting in 2, 4 and 6 lane cross sections. The removal of the center turn lane must consider both safety and pedestrian needs.

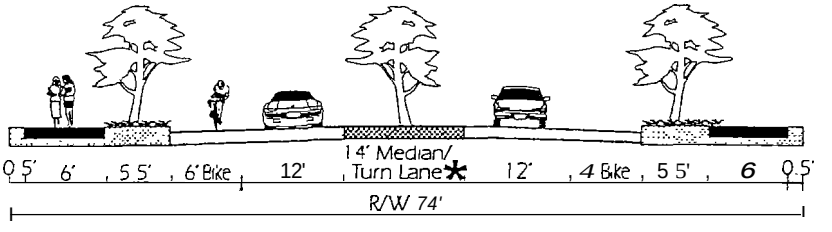
Criteria

Vehicle Lane Widths: (minimum widths)	Truck Route = 12 ft. Bus Route = 12 ft. 11 ft. (12 A. Preferred)
Bicycle Lanes: (minimum widths)	New Construction = 6 it. Reconstruction = 5 to 6 ft.
Sidewalks: (minimum width)	6-8 ft. Consider Curb Extensions on Ped Routes
Landscape Strips:	Preferred
Medians:	5/7 Lane = Required 3 Lane □ Opfional
Neighborhood Traffic Management:	Only under special conditions where route extends 1 to 2 miles or more through residential frontage

Figure 8-4
ARTERIAL
SAMPLE STREET CROSS SECTIONS



2 Lane 60' R/W



3* Lane 74' R/W

List

- Baseline Road
- Jay Street
- Downing Street
- Butner Road
- Parkway
- Marlow/Roxbury
- 5th/6th Street
- 117th Avenue
- 141st Avenue
- 153rd Drive
- 155th Avenue
- 160th Avenue
- Millikan Way
- Kinnaman Street
- Division Street
- Erickson Avenue/130th
- Hocken Avenue
- Center/Cabot/110th
- Henry Street
- Lombard Avenue
- Broadway
- Griffith Drive/114th
- Jamieson Road
- Bany/Hart/Denney
- Wilson Avenue
- Sorrento Avenue
- Rigert Road
- Sexton Mountain Drive
- Davies Road
- Nimbus Avenue
- Teal Boulevard
- Scholis Ferry Road
- Weir Road
- Cascade Avenue
- Conesfoga Drive
- Downing Drive
- Haystack/135th

Notes:

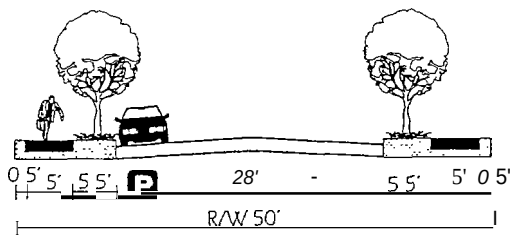
1. Space between curb and median minimum **19'** with mountable curb design (to be coordinated with TVFR).
2. Selection of placement of sidewalk and planter specific to application. Cmss sections show two choices for reference.
3. Width of curb is included in sidewalk orplanfer strip width when adjacent to street
4. Samples show the desirable applications given number of lanes plus minimum standards can be applied case by case.
5. Actual width of street and sidewalk area can be adjusted within R/W based on modalpriorities and adjacent land use.
6. Typically 6" is provided from R/W line to edge of concrete surface (for maintenance/utilities).
7. Encourage use of curb extensions at intersections in commercial areas and on any pedestrian routes.
8. For constrained settings, a three lane cross section can be developed in **44** feet (5 ft. bike lanes, 11 ft. travel lane. 12 ft. turn lane/median)

Criteria

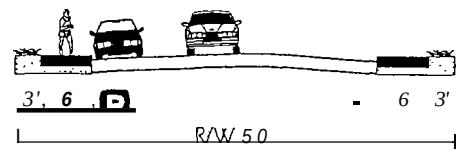
Vehicle Lane Widths: (minimum)	11 ft. Preferred
On Street Parking:	Residential 6 to 8 ft. Commercial
Bicycle Lanes: (minimum widths)	New Construction = 6 ft. Reconstruction = 5 to 6 ft.
Sidewalks: (minimum width)	5 to 7 ft.
Landscape Strips:	Preferred
Medians:	3-Lane = Optional
Neighborhood Traffic Management:	Underspecial conditions

* Note that, where appropriate, the median/lane may not be provided resulting in 2, **4** and 6 lane cross sections. **The** removal of the center **turn** lane must consider both safety and pedestrian needs.

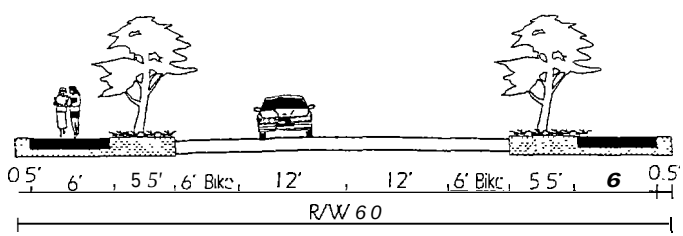
Figure 8-5
COLLECTOR
SAMPLE STREET CROSS SECTIONS



No Parking *on One Side*



With Parking



With Bike *Lanes*

Notes:

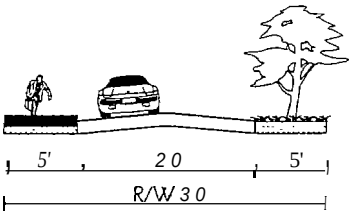
1. *Space between curb and median minimum 19' with mountable curb design (to be coordinated with TVFR).*
2. *Selection ofplacement of sidewalk andplanter specific to application. Cross secfions show two choices for reference.*
3. *Width of curb is included in sidewalk or planter strip width when adjacent to street.*
4. *Samples show the desirable applications given number of lanes plus minimum standards can be applied case by case.*
5. *Actual width of street and sidewalk area can be adjusted within R/W based on modalpriorities and adjacent land use.*
6. *Typically 6" is provided from R/W line to edge of concrete surface (for maintenance/utilities).*
7. *These are guidelines for future neighborhood route development and does not require changes/conversion to existing streets.*

Criteria

Vehicle Lane Widths: (minimum widths)	10 ft.
On-Street Parking	6 to 8 ft.
Curb Extensions for Pedestrians:	Consider on Pedestrian Roufes
Sidewalks: (minimum width)	5 ft.
Landscape Strips:	Preferred
Neighborhood TrafficManagement:	Appropriate when Warranted

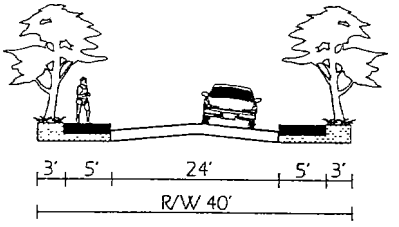
P - *On-street Parking*

Figure 8-6
NEIGHBORHOOD
SAMPLE STREET CROSS SECTIONS



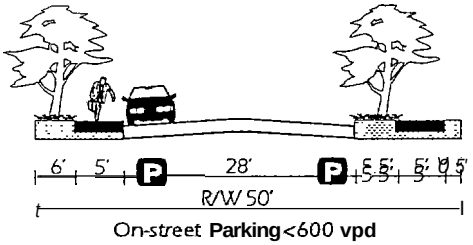
Alley

(No parking)



<250 vpd

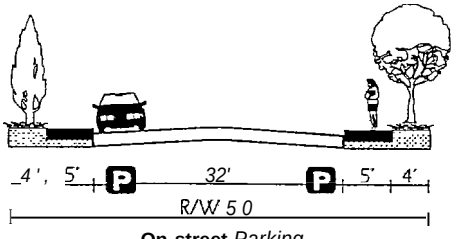
(No parking)



On-street Parking <600 vpd
Oneside On-street Parking >600 **vpd**

<1500 vpd

If parking on both sides, block length not to exceed 300 feel



On-street Parking

>1500 vpd

Notes:

1. *Space between curb and median minimum 19' with mountable curb design (to be coordinated with TVFR).*
2. *Selection of placement of sidewalk and planter specific to application. Cross sections show two choices for reference.*
3. *Width of curb is included in sidewalk or planter strip width when adjacent to street.*
4. *Samples show the desirable applications given number of lanes plus minimum standards can be applied case by case.*
5. *Actual width of street and sidewalk area can be adjusted within R/W based on modal priorities and adjacent land use.*

Criteria

Vehicle Lane Widths: (minimum widths)	*9 to 10 ft.*
On-Street Parking	*6 to 7 ft.*
Sidewalks: (minimum width)	*5 ft.*
Landscape Strips:	*Preferred*
Neighborhood Traffic Management:	*Should not be necessary [under special conditions)*

P - *On-street paking*

<1500 vpd - *Guide for Traffic Volume Per Day (does not require conversion of existing routes)*

Figure 8-7
LOCAL STREET RESIDENTIAL
SAMPLE STREET CROSS SECTIONS

Table 8-2
Proposed Street Characteristics

Vehicle Lane Widths: (minimum widths)	Truck Route = 12 feet Bus Route = 11 feet Arterial = 12 feet Collector = 11 feet Neighborhood = 10 feet Local = 9[7] to 10 feet Turn Lane = 10 feet[8]
On-Street Parking:	Residential = *6* to 8 feet Commercial = 7 to 8 feet
Bicycle **Lanes:** (minimum widths)	New Construction = *6* feet Reconstruction = 5 to *6* feet
Curb Extensions for Pedestrians:	Consider on any Pedestrian Master Plan Route
Sidewalks: (minimum width)	Local = 5 feet[9] Neighborhood = **5** feet[9] Collector = *6* to 8[10] feet Arterial = *6* to 10[10] feet
Landscape Strips:	Residential/Neighborhood = Optional Collector/Arterial = Desirable
Medians:	5-Lane = Required 3-Lane = Optional
Neighborhood Traffic Management:	**Local** = Should not be necessary Neighborhood = Should Consider Collectors = Under Special Conditions Arterials = Only under Special Conditions
Transit:	Arterial/collectors = Appropriate Neighborhood = Only in special circumstances
Turn **Lanes:**	When Warranted[11]
Access Control:	Goal 3, Policy 8

7 **9** foot lanes would only be used in conjunction with on-street parking.

8 Desirable 12 feet for arterial streets and truck routes.

9 *5* foot with landscape strip, *6* foot against curb.

10 Larger sidewalks than minimums should be considered for areas with significant pedestrian volumes. Commercial areas where pedestrian flows **of** over 100 pedestrians an hour are present or forecast, specific analysis should be conducted to size sidewalks appropriately for safe movement.

11 **Turn** lane warrants should be reviewed using Highway Research Record, No. 211, NCHRP Report No. 279 or other updated/superseding reference.

The analysis of capacity and circulation needs for Beaverton outlines several roadway cross sections. The most common are 2, 3 and 5 lanes wide. Where center left turn lanes are identified (3, 5 and 7 lane sections), the actual design of the street may include sections without center turn lanes (2, 4 and 6 lanes sections) or with median treatments, where feasible. The actual treatment will be determined within the design and public process for implementation of each project. The plan outlines requirements which will be used in establishing right-of-way needs for the development review process. The right-of-way (ROW) requirements for arterial, collector and neighborhood routes are 60 feet for the two lane streets (special consideration for 50 foot or narrower ROW will be made for local streets), 74 feet for three lane streets, 98 feet for five lane streets and 122 feet for seven lane streets.

Wherever arterial or collectors cross themselves, planning for additional right-of-way to accommodate turn lanes should be considered within 500 feet of the intersection. Figure 8-8 summarizes the Beaverton streets which are anticipated within the TSP planning horizon to require right-of-way for more than two lanes. The planning level right-of-way needs can be determined utilizing Figure 8-8, Table 8-2 and the lane geometry sketches in the technical appendix. Specific right-of-way needs will need to monitored continuously through the development review process to reflect current needs and conditions (that is to say that more specific detail may become evident in development review which requires other improvements than outlined in this 20 year general planning assessment of street needs).

These cross sections are provided for guiding discussions that will update the City of Beaverton Engineering Design Manual. There is an on-going discussion at a regional level regarding street cross sections. Many of the major streets in Beaverton are maintained and operated by Washington County or ODOT. Metro has designated Regional Street Design in their draft of the RTP[12]. The City of Beaverton will need to coordinate with the regional agencies to assure consistency in cross section planning as the County Transportation Plan and the Metro Regional Transportation Plan move forward.

Connectivity/Local Street Plan

There are a number of locations in Beaverton where, due to the lack of connection points, a majority of neighborhood traffic is funneled onto one single street. This type of street network results in out-of-direction travel for motorists and an imbalance of traffic volumes that impacts residential frontage. By providing connectivity between neighborhoods, out-of-direction travel and vehicle miles traveled (VMT) can be reduced, accessibility between various modes can be enhanced and traffic levels can be balanced out between various streets. Various goals and policies established by this TSP are intended to accomplish these objectives.

In Beaverton, some of these local connections can contribute with other street improvements to mitigate capacity deficiencies by better dispersing traffic. For example, the areas adjacent to 170th and 185th Avenues are benefited by improved connectivity.

12 *Regional Street Design, RTP and 2040 planning, Metro*, Draft 3.0, July 1, 1997.

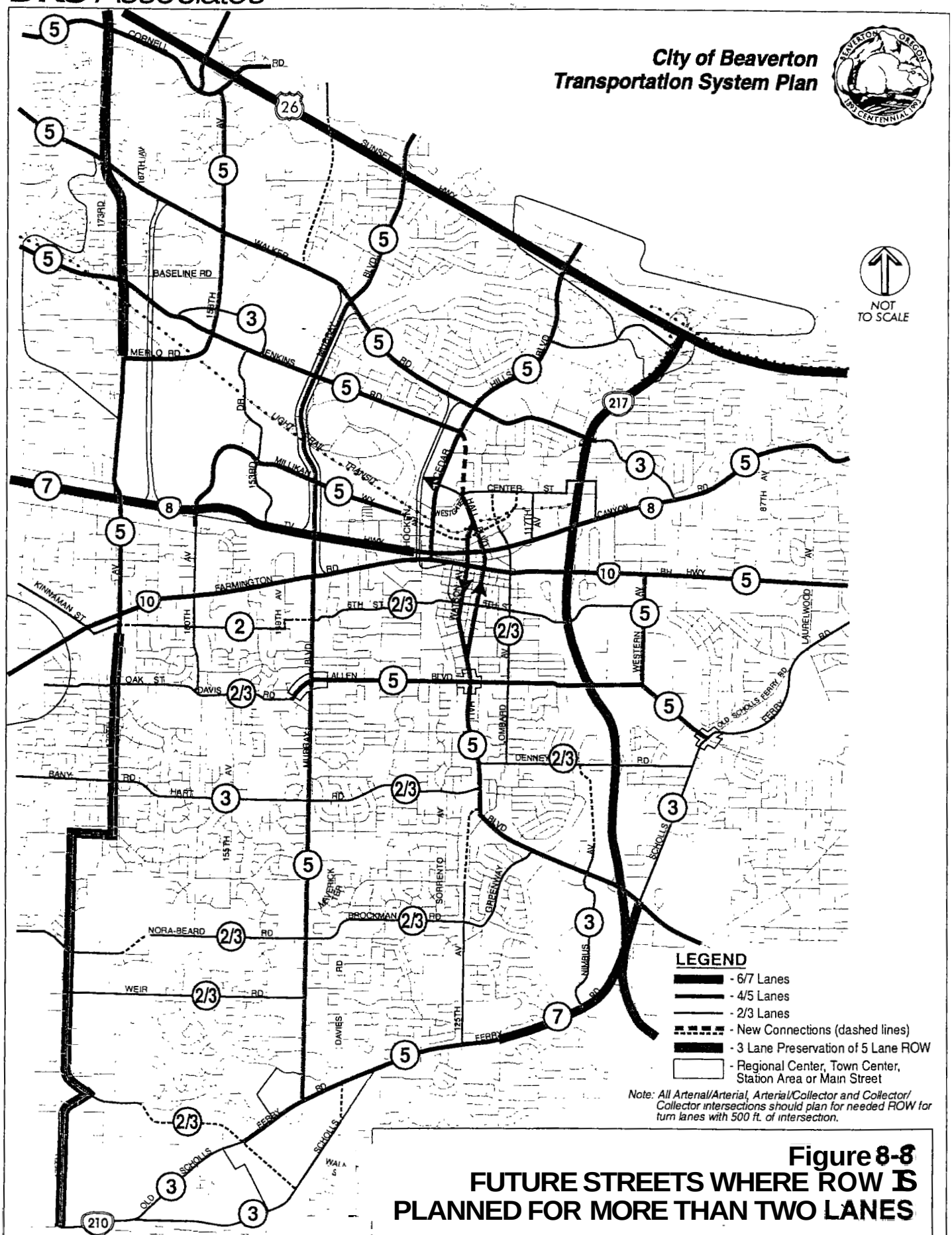


Figure 8-8
FUTURE STREETS WHERE ROW IS PLANNED FOR MORE THAN TWO LANES

Several roadway connections will be needed within neighborhood areas to reduce out of direction travel for vehicles, pedestrians and bicyclists. The proposed Functional Classification map (Figure 8-3) shows several neighborhood routes through currently undeveloped areas to indicate desired connection points and access points to arterial or collector roadways. In most cases, the alignments are not specific and these connections are aimed at reducing potential neighborhood traffic impacts by better balancing traffic flows on neighborhood routes. These local connections shown on Figures 8-9 to 8-20 (representing the City of Beaverton neighborhood districts) are specified as bicycle and pedestrian only connections or as multi-modal connections (including autos). The arrows shown in the figures represent potential connections and thegeneral direction for the placement of the connection. In each case; the specific alignments and design will be better determined upon development review. The criteria used for providing connections follow:

- Every 300 to 500 foot grid for pedestrians and bicycles
- Every 1,000 foot grid for automobiles

To protect existing neighborhoods from potential traffic impacts of extending stub end streets, connector roadways should incorporate neighborhood traffic management into their design and construction. Neighborhood traffic management is described later in this chapter.

The arrows shown on the local connectivity figures indicate priority connections only. Other stub end streets in the City's road network may become cul-de-sacs, extended cul-de-sacs or provide local connections. Connections from these stub end streets could be deemed appropriate and beneficial to the public, as future development occurs. The goal would continue to be improved city connectivity for all modes of transportation.

CIRCULATION AND CAPACITY NEEDS

The capacity and circulation needs in Beaverton were determined for existing and future conditions. The process used for analysis is outlined below, followed by the findings and recommendations. The extent and nature of the street improvements for Beaverton are significant. This section outlines the type of improvements that would be necessary as part of a long range master plan. Phasing of implementation will be necessary since all the improvements cannot be done at once. This will require prioritization of projects and periodic updating to reflect current needs. Most importantly, it should be understood that the improvements outlined in the following section are a guide to managing growth in Beaverton, framing up the types of right-of-way and street needs that will be required as development occurs.

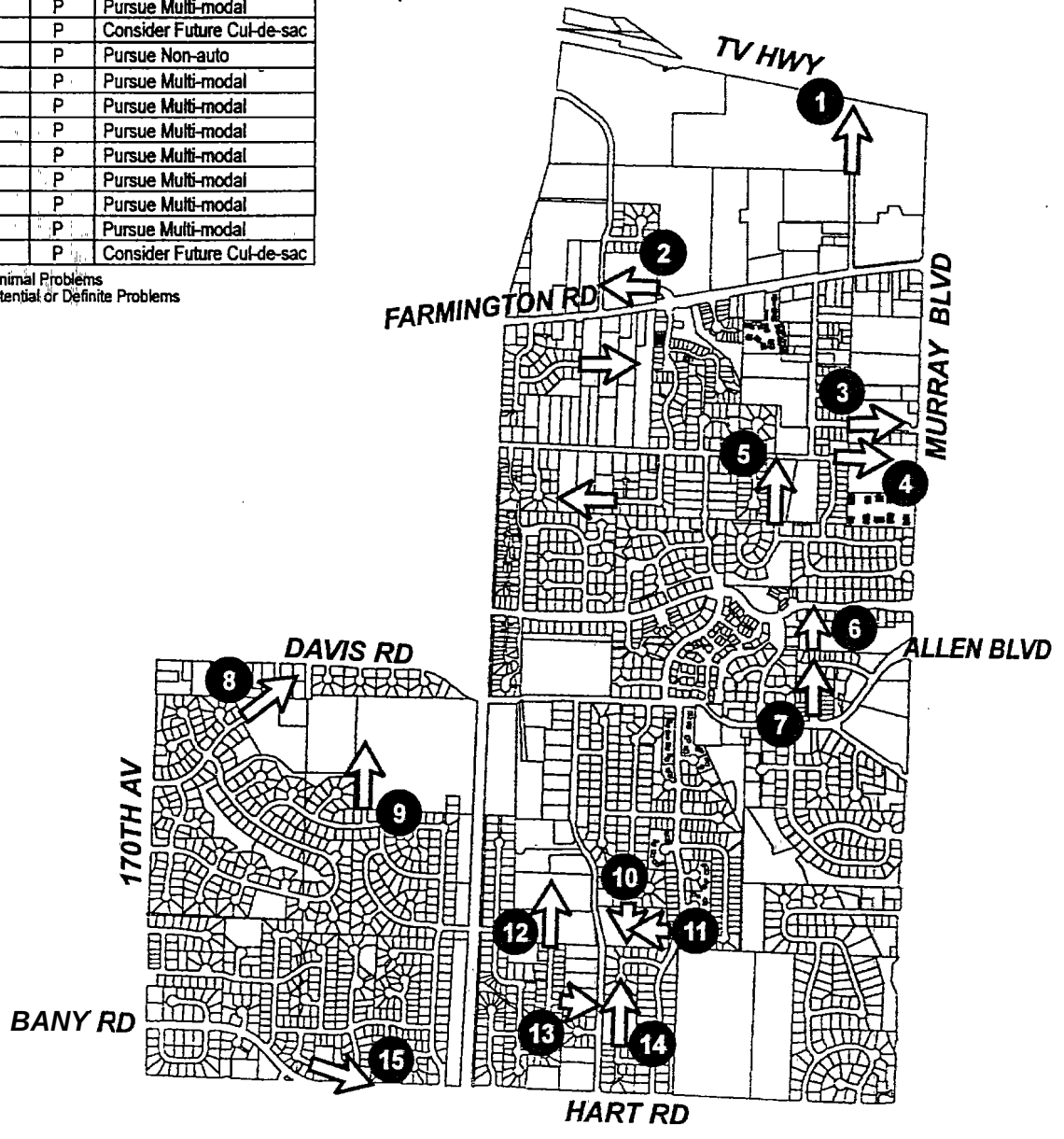
Approach

Existing needs were identified in Chapter 3. Future capacity needs were developed using a detailed travel demand forecast tool, built off the Metro regional travel demand model. This detailed model more accurately reflects access and land use in Beaverton than the regional travel demand model. Evening peak hour traffic volumes were forecast for the future (year 2015) scenario for the Beaverton

NOT TO SCALE

Location	Rating	Recommendation
1	P	Feasibility Constraints
2	M	Pursue Multi-modal
3	P	Pursue Multi-modal
4	P	Feasibility Constraints
5	P	Pursue Multi-modal
6	P	Consider Future Cul-de-sac
7	P	Pursue Non-auto
8	P	Pursue Multi-modal
9	P	Pursue Multi-modal
10	P	Pursue Multi-modal
11	P	Pursue Multi-modal
12	P	Pursue Multi-modal
13	P	Pursue Multi-modal
14	P	Pursue Multi-modal
15	P	Consider Future Cul-de-sac

M = Minimal Problems
P = Potential or Definite Problems



LEGEND

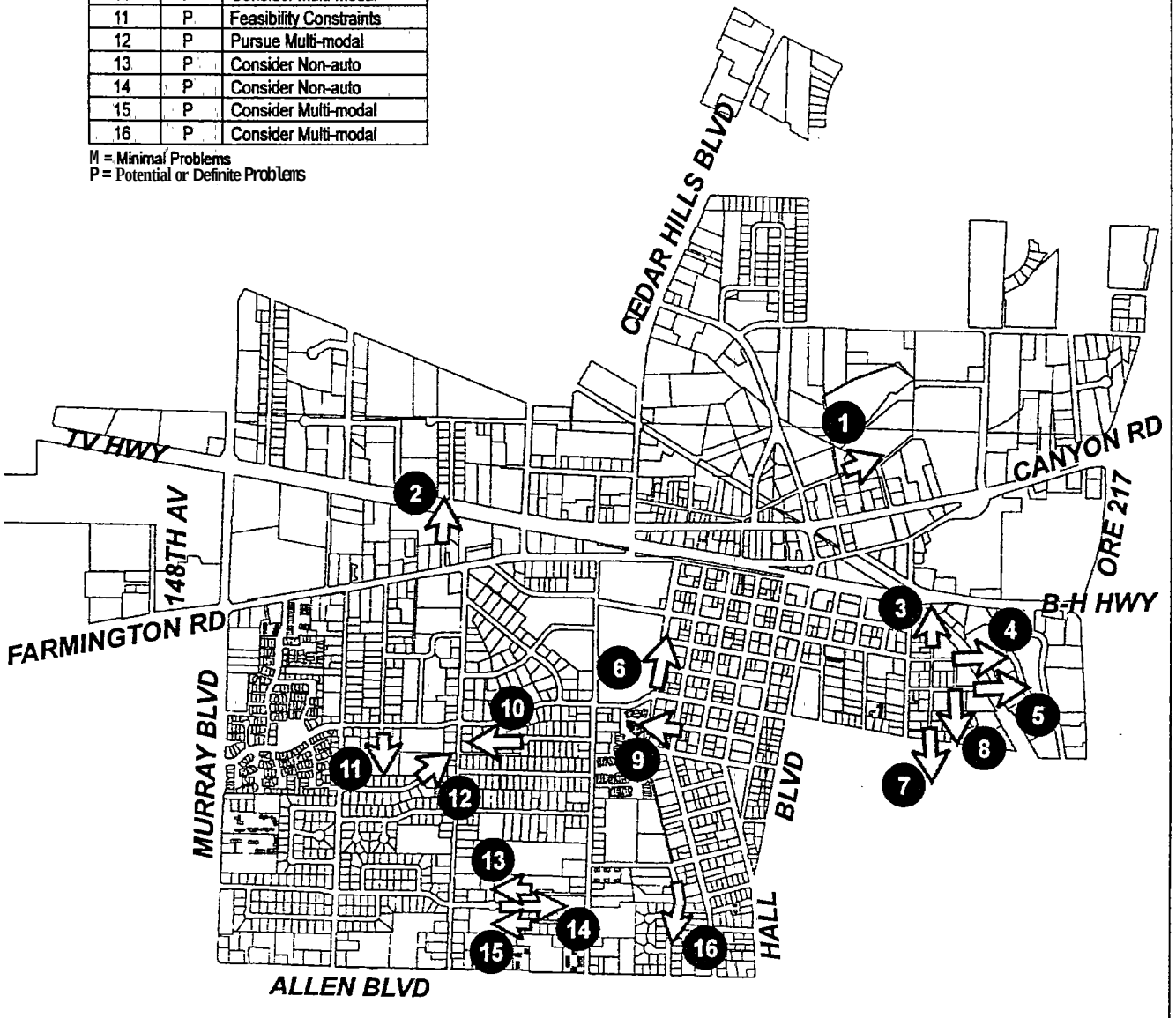
- Potential Connection
- 00 - Street Stub Identification Number

Figure 8-10
LOCAL STREET CONNECTIVITY
West Beaverton

NOT TO SCALE

Location	Rating	Recommendation
1	P	Pursue Multi-modal
2	P	Feasibility Constraints
3	P	Consider Non-auto
4	P	Feasibility Constraints
5	P	Feasibility Constraints
6	P	Pursue Non-auto
7	P	Feasibility Constraints
8	P	Consider Multi-modal
9	P	Consider Multi-modal
10	P	Consider Multi-modal
11	P	Feasibility Constraints
12	P	Pursue Multi-modal
13	P	Consider Non-auto
14	P	Consider Non-auto
15	P	Consider Multi-modal
16	P	Consider Multi-modal

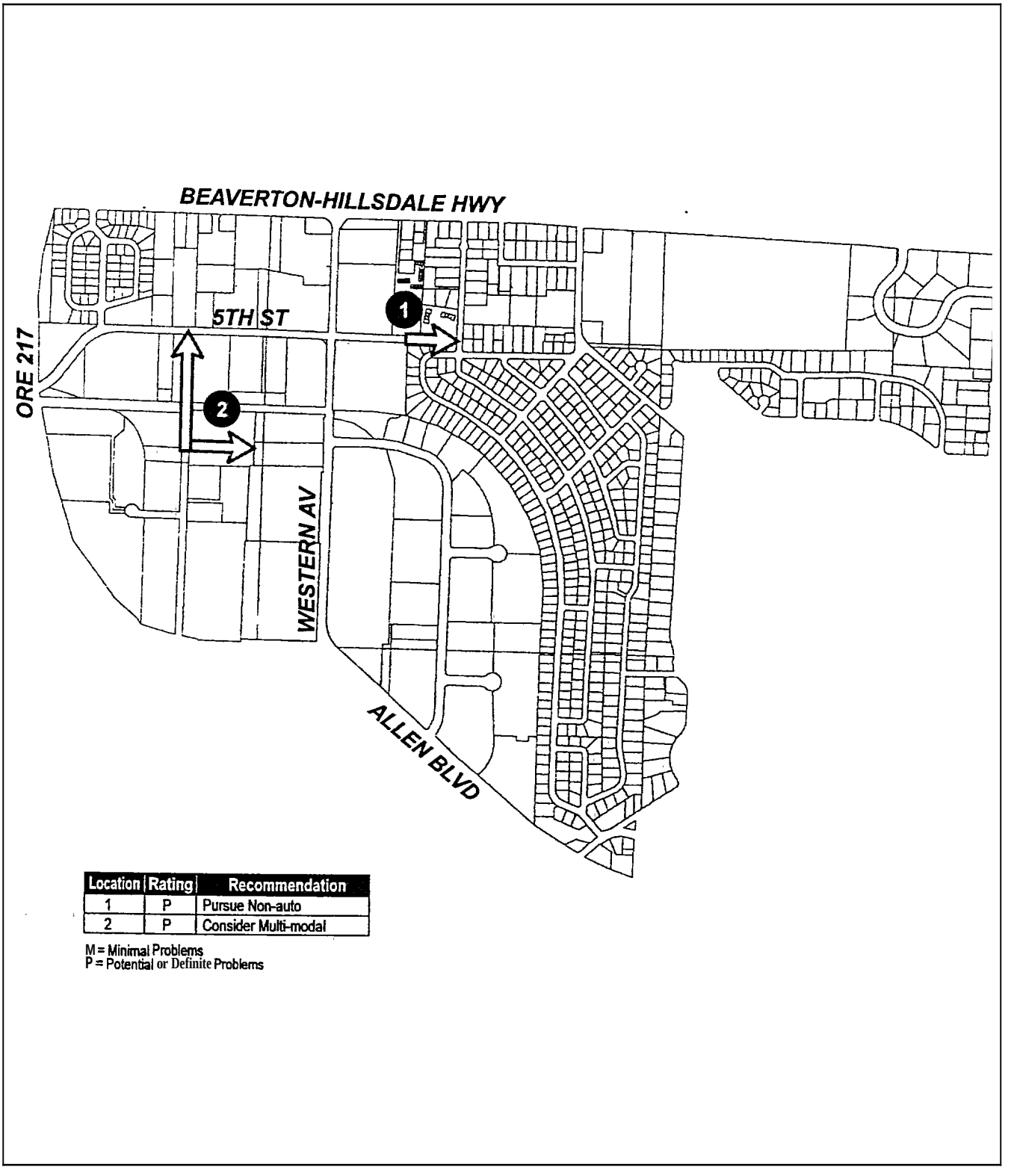
M = Minimal Problems
P = Potential or Definite Problems



LEGEND

- Potential Connection
- 00 - Street Stub Identification Number

Figure 8-31
LOCAL STREET CONNECTIVITY
Central Beav..rton



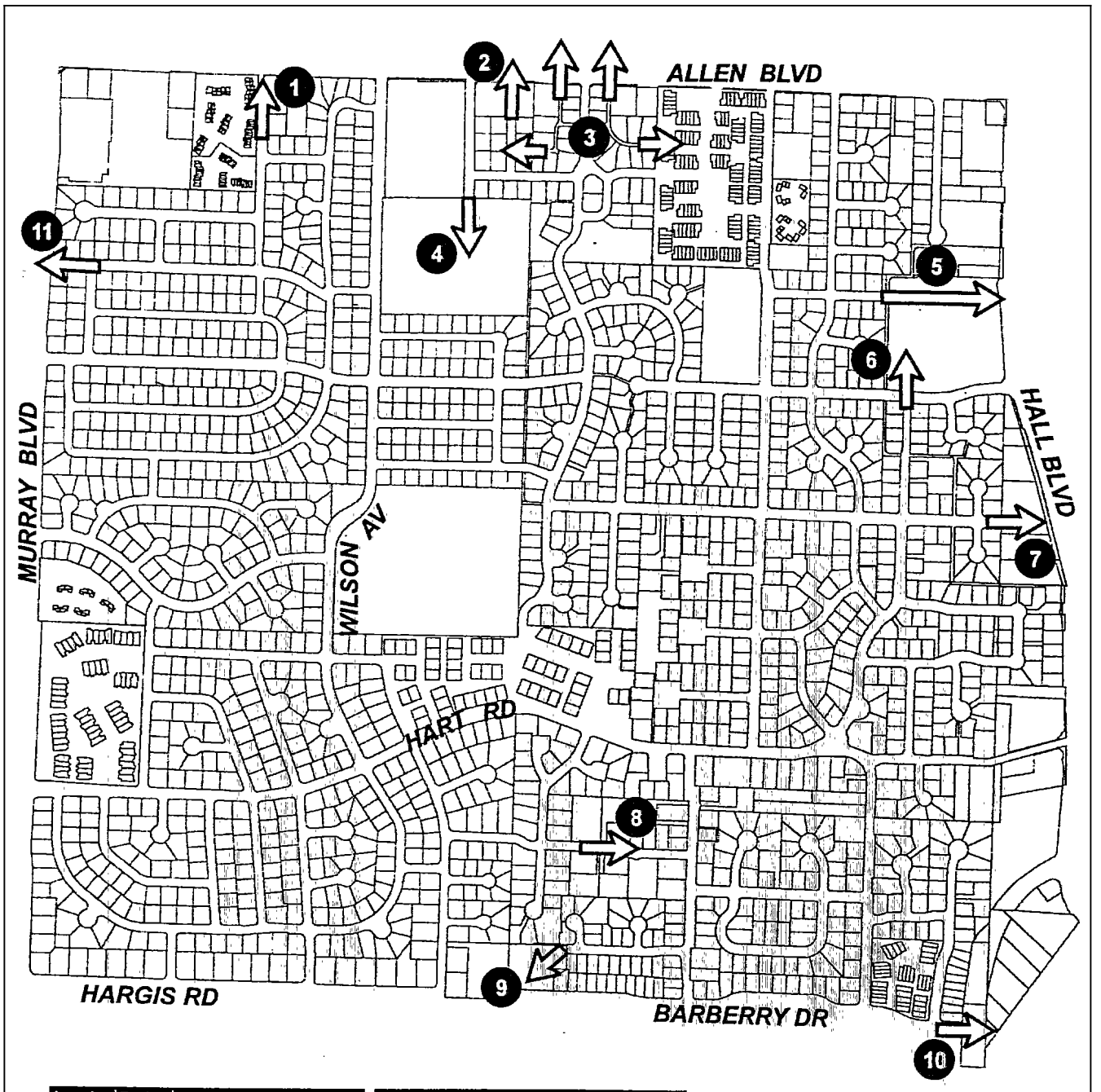
Location	Rating	Recommendation
1	P	Pursue Non-auto
2	P	Consider Multi-modal

M = Minimal Problems
P = Potential or Definite Problems

LEGEND
- Potential Connection
00 - Street Stub Identification Number

Figure 8-12
LOCAL STREET CONNECTIVITY
Ral igh West

NOT TO SCALE



Location	Rating	Recommendation
1	P	Pursue Multi-modal
2	P	Feasibility Constraints
3	P	Consider Non-auto
4	P	Consider Non-auto
5	M	Pursue Multi-modal
6	M	Consider Multi-modal

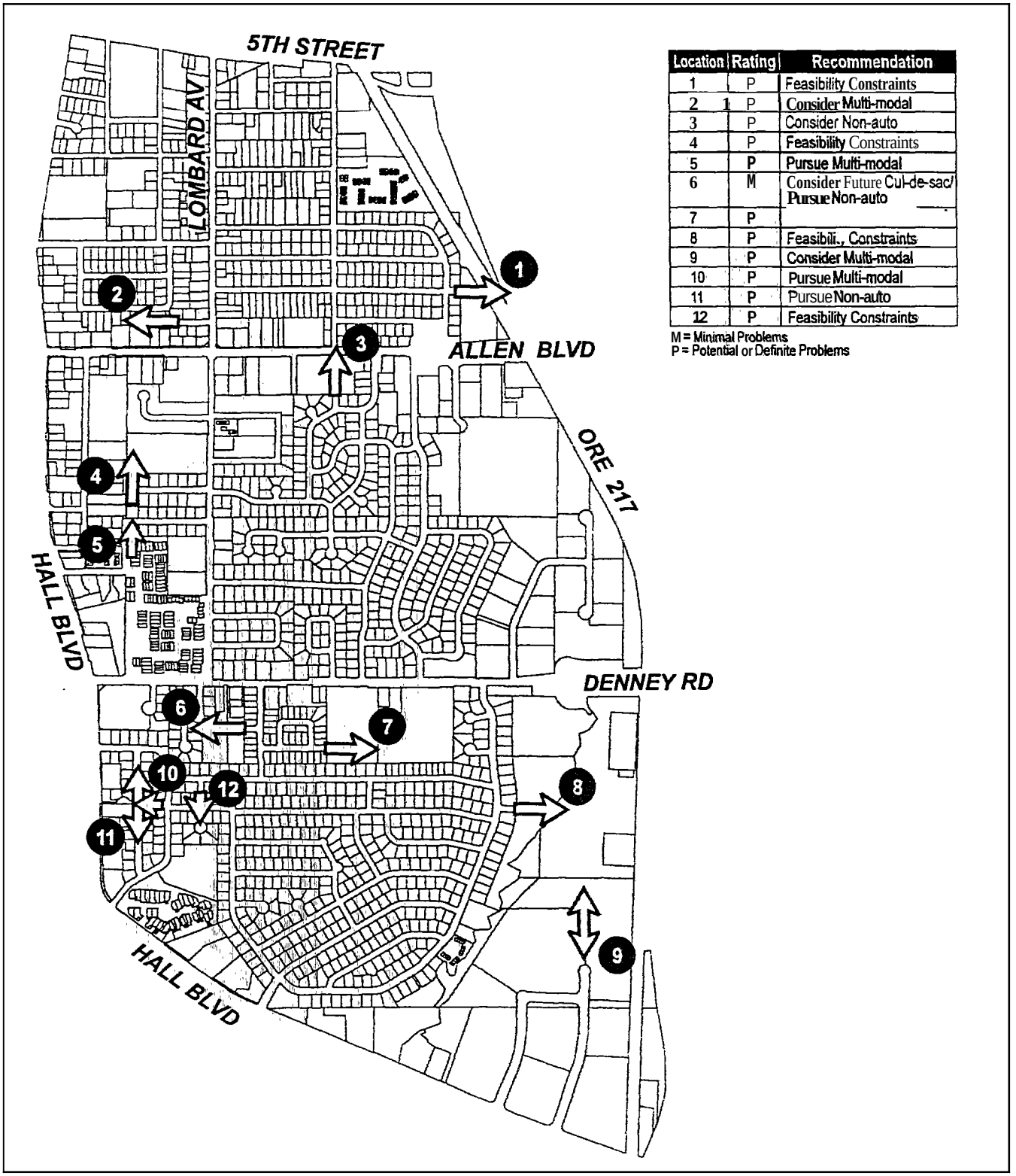
Location	Rating	Recommendation
7	M	Feasibility Constraints
8	P	Pursue Non-auto
9	P	Pursue Multi-modal
10	P	Pursue Multi-modal
11	P	Pursue Multi-modal

M = Minimal Problems
P = Potential or Definite Problems

LEGEND
- Potential Connection
00 - Street Stub identification Number

Figure 8-13
LOCAL STREET CONNECTIVITY
Highland

NOT TO SCALE



Location	Rating	Recommendation
1	P	Feasibility Constraints
2	P	Consider Multi-modal
3	P	Consider Non-auto
4	P	Feasibility Constraints
5	P	Pursue Multi-modal
6	M	Consider Future Cul-de-sac/ Pursue Non-auto
7	P	
8	P	Feasibili., Constraints
9	P	Consider Multi-modal
10	P	Pursue Multi-modal
11	P	Pursue Non-auto
12	P	Feasibility Constraints

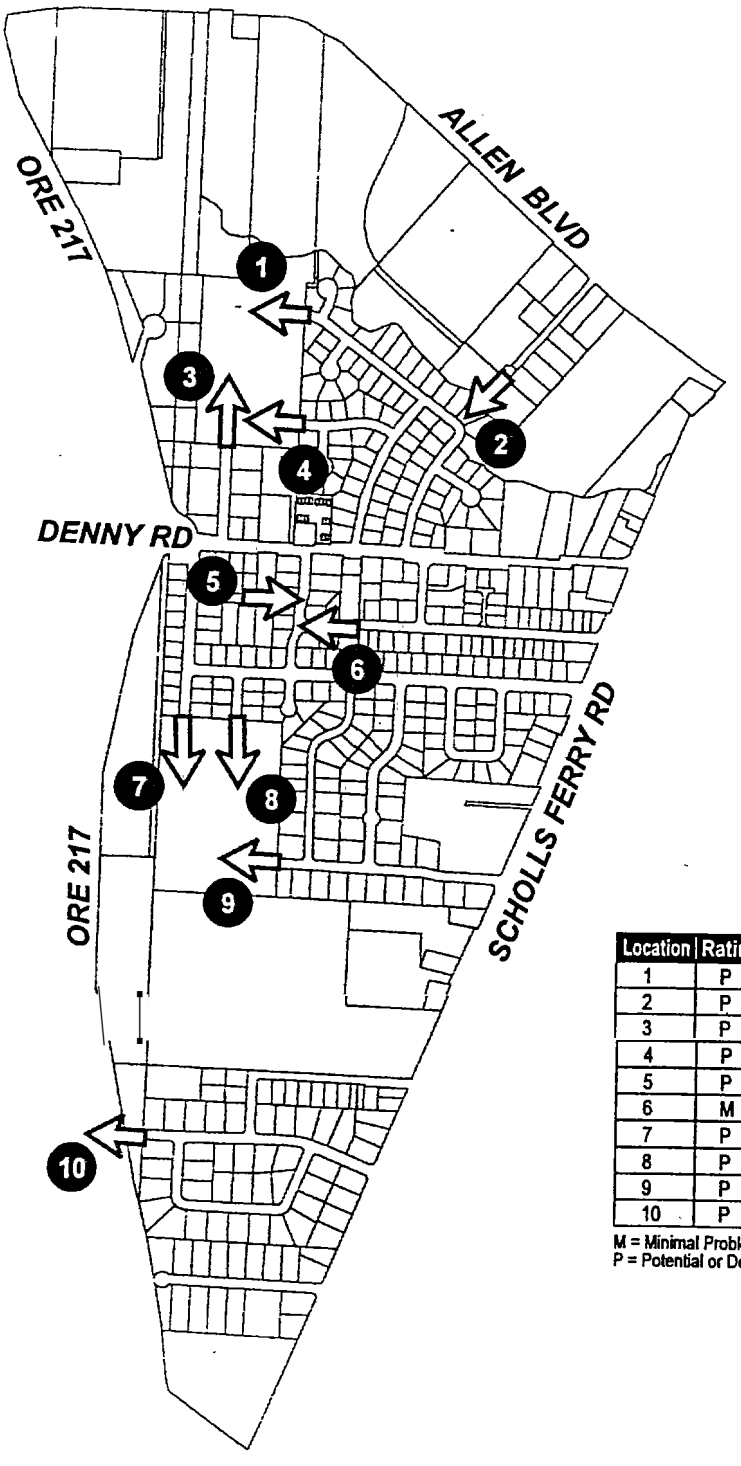
M = Minimal Problems
P = Potential or Definite Problems

LEGEND

- Potential Connection
- 00 - Street Stub Identification Number

Figure 8-14
LOCAL STREET CONNECTIVITY
Vose

NOT TO SCALE



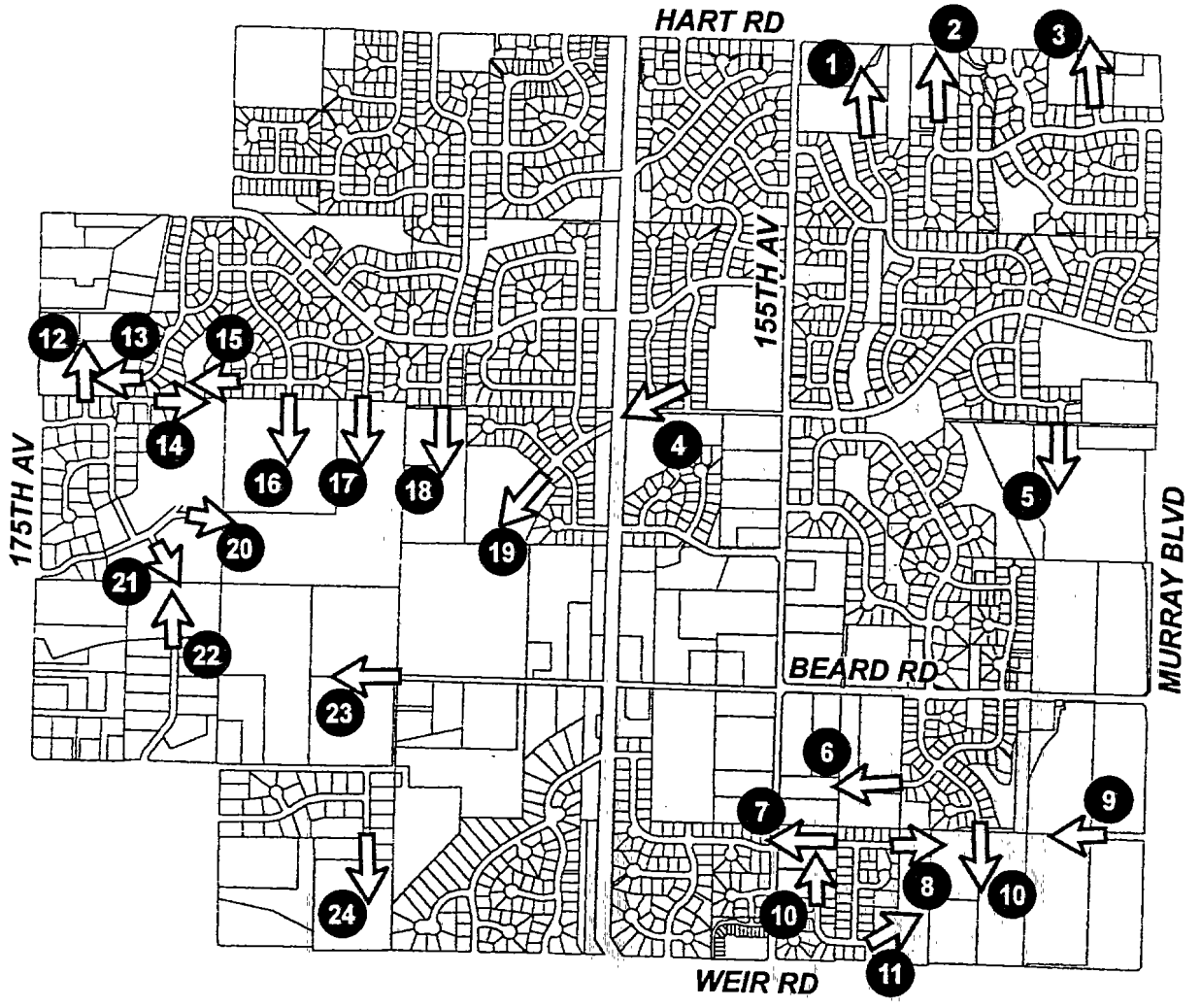
Location	Rating	Recommendation
1	P	Consider Non-auto
2	P	Feasibility Constraints
3	P	Consider Non-auto
4	P	Feasibility Constraints
5	P	Feasibility Constraints
6	M	Consider Multi-modal
7	P	Consider Non-auto
8	P	Consider Non-auto
9	P	Consider Non-auto
10	P	Consider Multi-modal

M = Minimal Problems
P = Potential or Definite Problems

LEGEND
⇦ - potential Connection
00 - Street Stub Identification Number

Figure 8-15
LOCAL STREET CONNECTIVITY
Denney/Whitford

NOT TO SCALE



Location	Rating	Recommendation
1	P	Pursue Multi-modal
2	M	Pursue Multi-modal
3	P	Consider Multi-modal
4	M	Pursue Multi-modal
5	P	Pursue Multi-modal
6	P	Pursue Multi-modal
7	P	Pursue Multi-modal
8	P	Pursue Multi-modal
9	P	Pursue Multi-modal
10	P	Pursue Multi-modal
11	P	Pursue Multi-modal
12	P	Pursue Multi-modal

Location	Rating	Recommendation
13	P	Pursue Multi-modal
14	M	Pursue Multi-modal
15	P	Pursue Multi-modal
16	M	Pursue Multi-modal
17	P	Pursue Multi-modal
18	P	Pursue Multi-modal
19	P	Pursue Multi-modal
20	P	Pursue Multi-modal
21	P	Pursue Multi-modal
22	P	Pursue Multi-modal
23	P	Pursue Multi-modal
24	P	Pursue Multi-modal

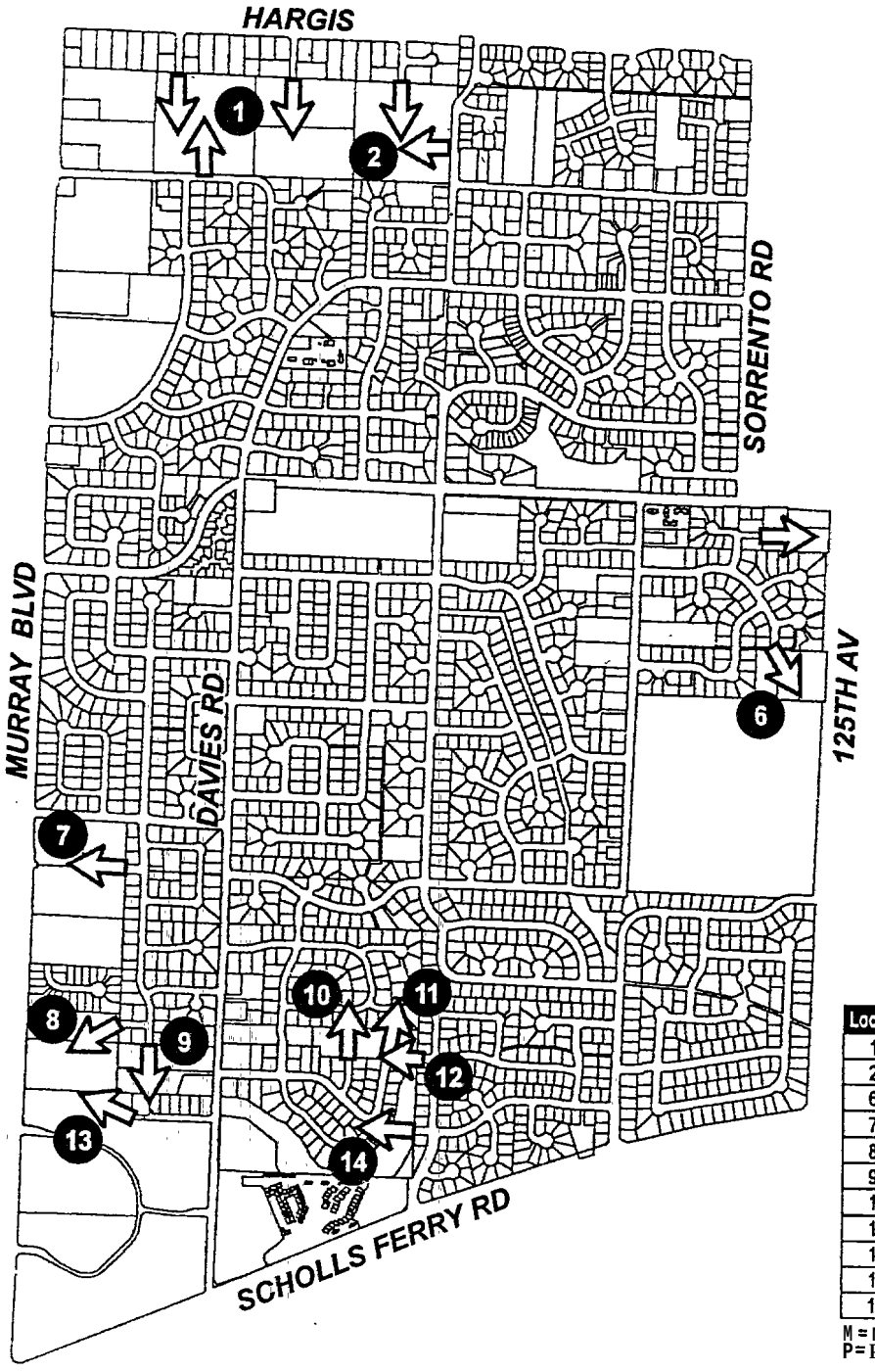
M = Minimal Problems
P = Potential or Definite Problems

LEGEND

- Potential Connection
- 00 - Street Stub Identification Number

Figure 8-16
LOCAL STREET CONNECTIVITY
Sexton Mountain

NOT TO SCALE



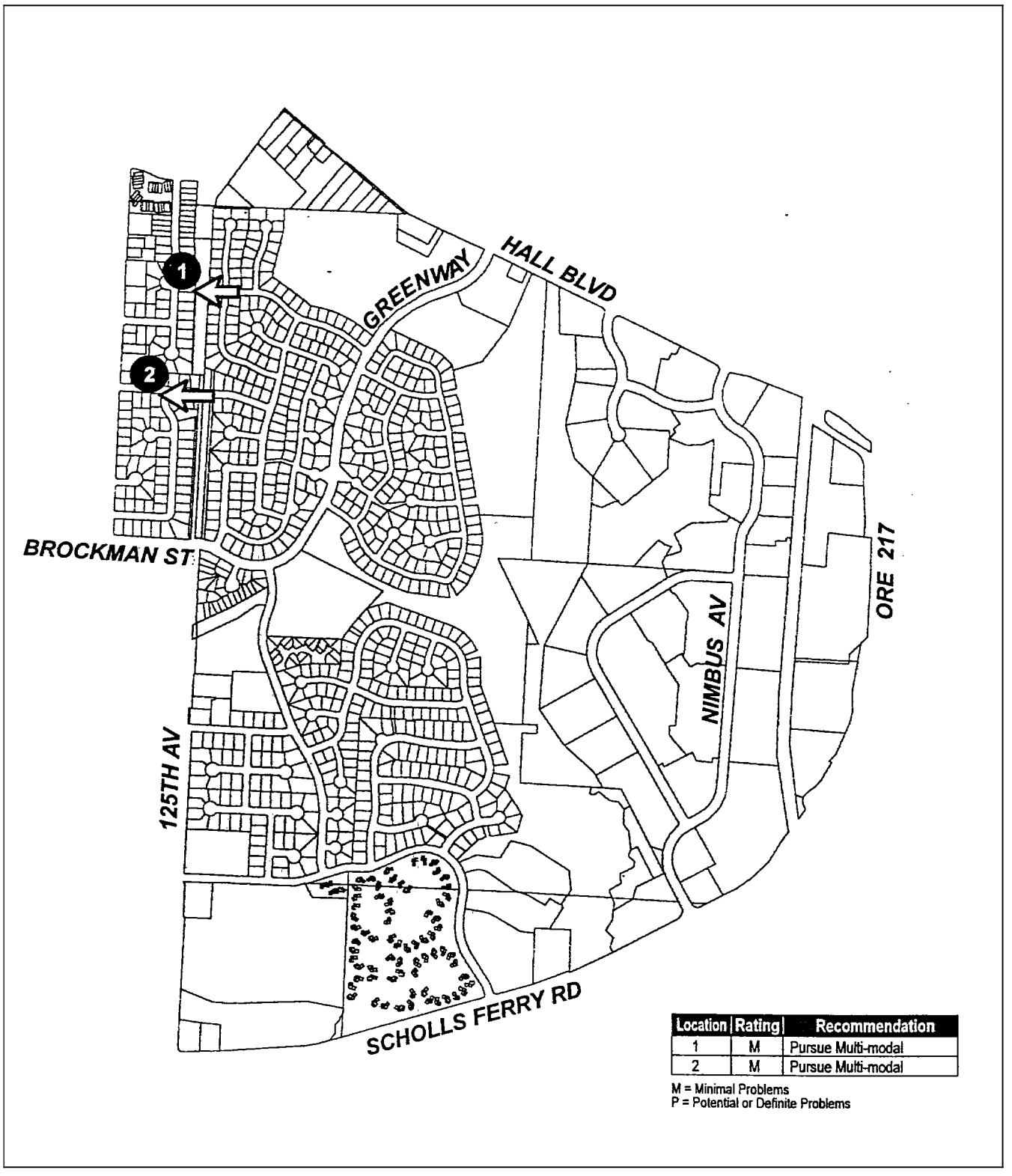
Location	Rating	Recommendation
1	P	Pursue Non-auto
2	P	Pursue Non-auto
6	P	Pursue Multi-modal
7	P	Pursue Multi-modal
8	P	Pursue Multi-modal
9	P	Pursue Multi-modal
10	P	Consider Future Cul-de-sac
11	P	Consider Future Cul-de-sac
12	P	Pursue Non-auto
13	P	Pursue Multi-modal
14	P	Pursue Non-auto

M = Minimal Problems
P = Potential or Definite Problems

LEGEND

- Potential Connection
- 00 - Street Stub Identification Number

Figure 8-17
LOCAL STREET CONNECTIVITY
South B averton



Location	Rating	Recommendation
1	M	Pursue Multi-modal
2	M	Pursue Multi-modal

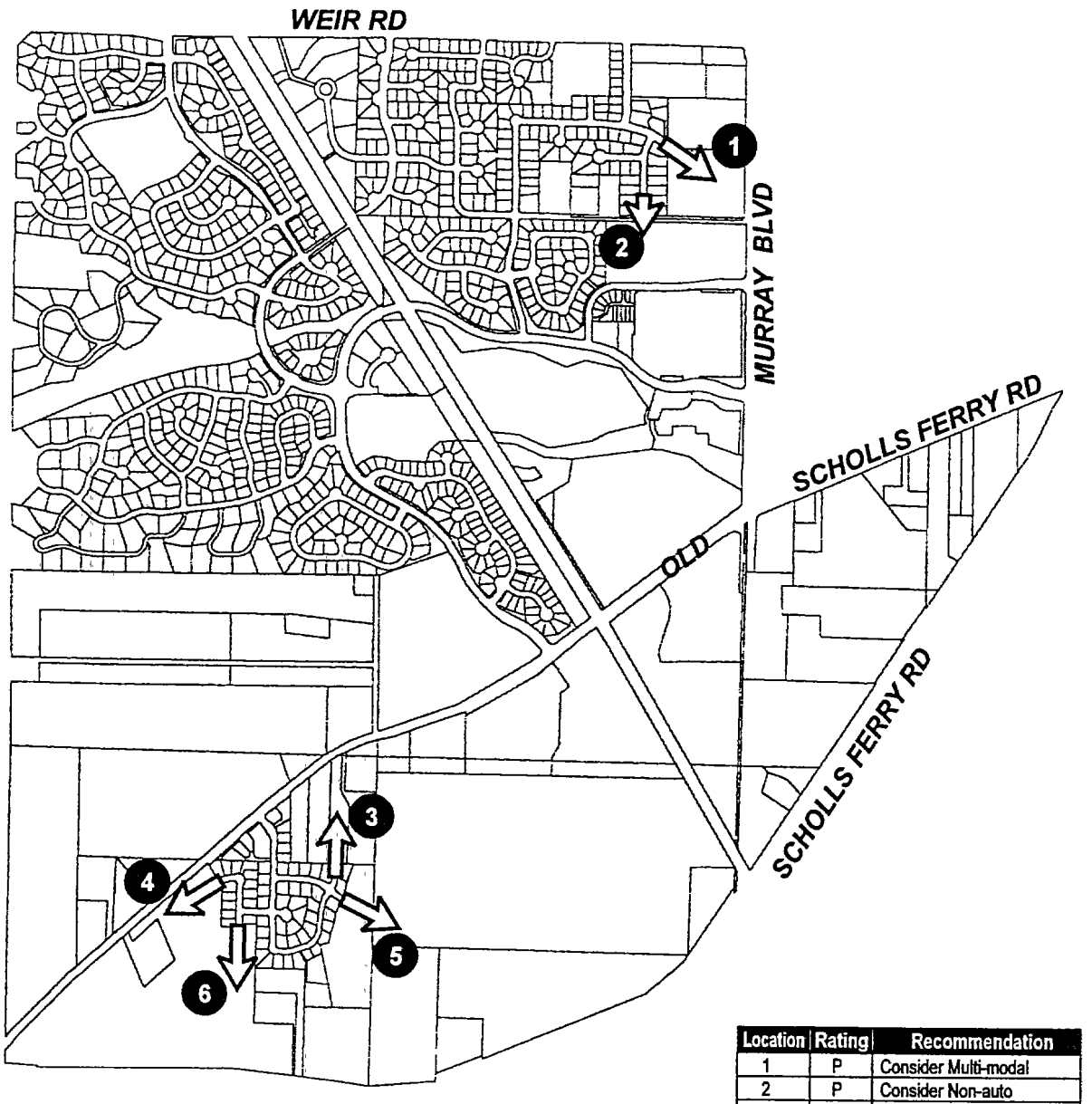
M = Minimal Problems
P = Potential or Definite Problems

LEGEND

- Potential Connection
- 00 - Street Stub Identification Number

Figure 8-18
LOCAL STREET CONNECTIVITY
Greenway

NOT TO SCALE



Location	Rating	Recommendation
1	P	Consider Multi-modal
2	P	Consider Non-auto
3	M	Pursue Multi-modal
4	M	Pursue Multi-modal
5	M	Pursue Multi-modal
6	M	Pursue Multi-modal

M = Minimal Problems
P = Potential or Definite Problems

LEGEND

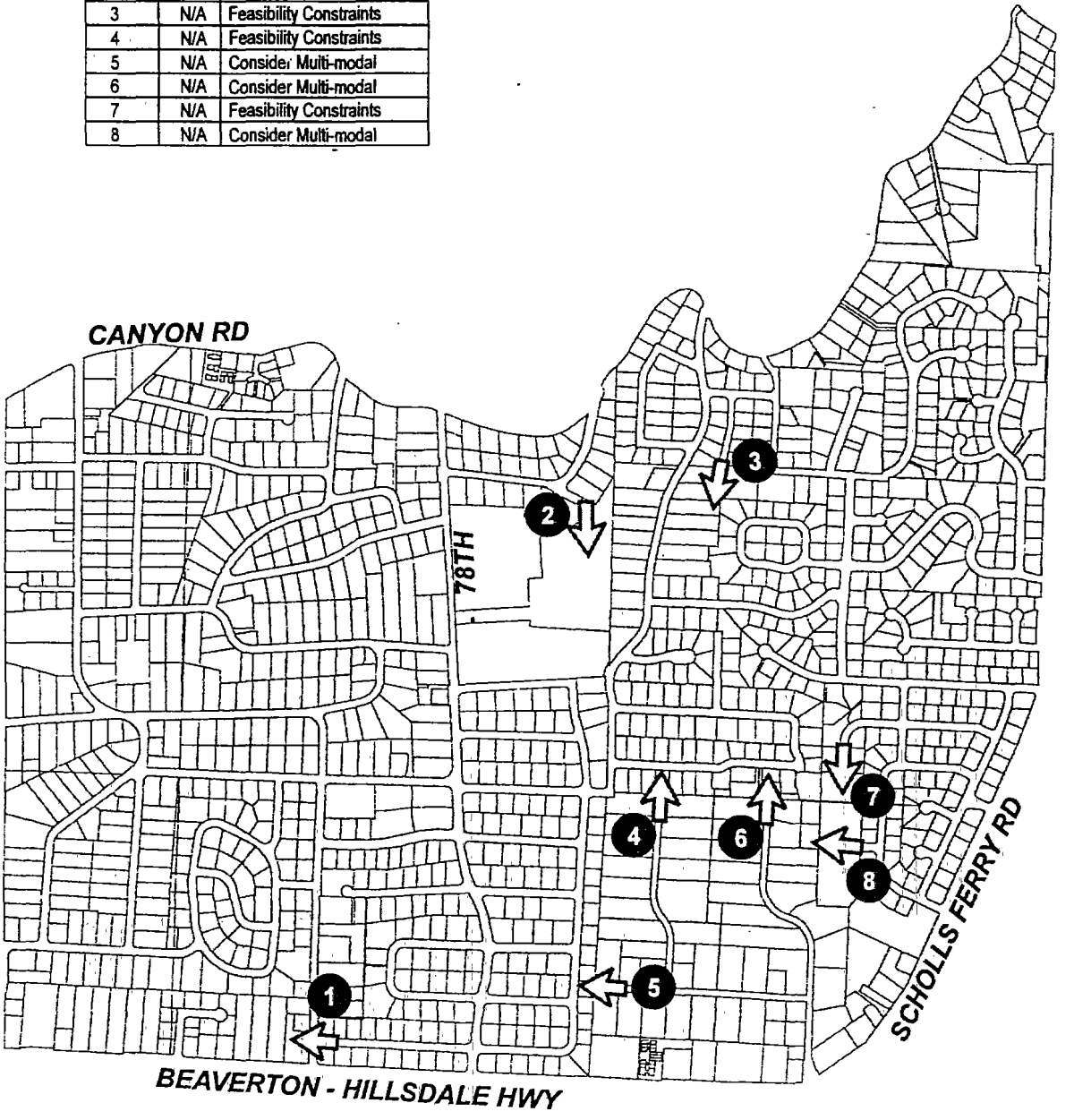
⇦ - Potential Connection

(00) - Street Stub Identification Number

Figure 8-19
LOCAL STREET CONNECTIVITY
Neighbors Southwest

NOT TO SCALE

Location	Rating	Recommendation
1	N/A	Consider Multi-modal
2	N/A	Pursue Non-auto
3	N/A	Feasibility Constraints
4	N/A	Feasibility Constraints
5	N/A	Consider Multi-modal
6	N/A	Consider Multi-modal
7	N/A	Feasibility Constraints
8	N/A	Consider Multi-modal



Note: Connections identified outside the City of Beaverton limits are only recommendations to Washington County.

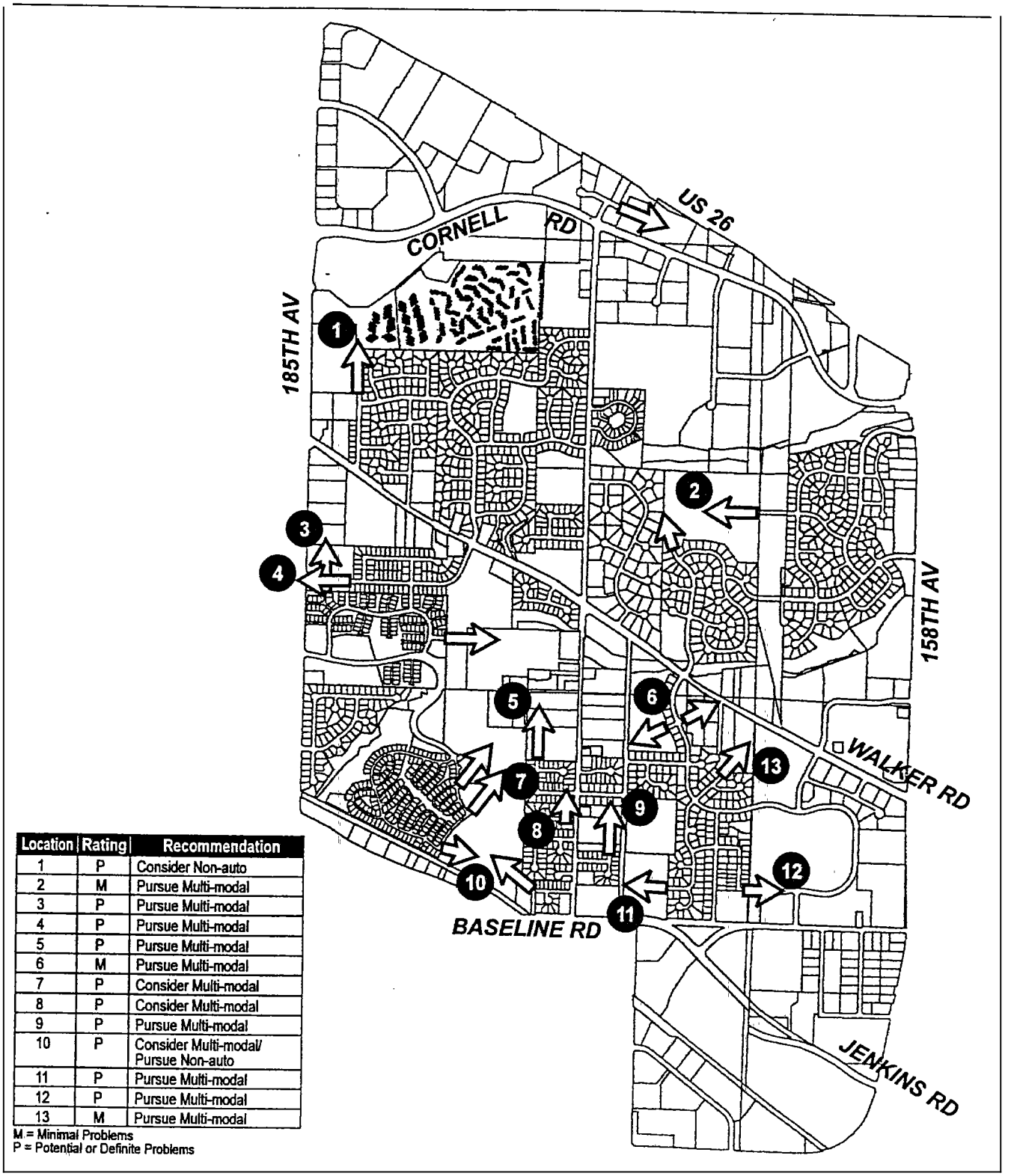
LEGEND

⇦ - Potential Connection

00 - Street Stub Identification Number

Figure 8-20
LOCAL STREET CONNECTIVITY
Raleigh Park

NOT TO SCALE



Location	Rating	Recommendation
1	P	Consider Non-auto
2	M	Pursue Multi-modal
3	P	Pursue Multi-modal
4	P	Pursue Multi-modal
5	P	Pursue Multi-modal
6	M	Pursue Multi-modal
7	P	Consider Multi-modal
8	P	Consider Multi-modal
9	P	Pursue Multi-modal
10	P	Consider Multi-modal/ Pursue Non-auto
11	P	Pursue Multi-modal
12	P	Pursue Multi-modal
13	M	Pursue Multi-modal

M = Minimal Problems
P = Potential or Definite Problems

LEGEND
- Potential Connection
00 - Street Stub Identification Number

Figure 8-9
LOCAL STREET CONNECTIVITY
Triple Creek/Five Oaks

area. This 2015 forecast included the Westside LRT and the highest level of transit service given regional funding constraints[13]. It assumes that Transportation Demand Management (TDM) will occur and that significant shifts to transit will occur (from existing levels at 1 to 3 percent of total person trips to 8 to 15 percent in LRT station areas). The initial 2015 test was performed on a street network similar to today's system (without improvements). Problem areas were identified and alternative improvements were developed to address deficiencies. Performance was evaluated using a three tiered assessment of capacity and operations.

- Demand to capacity ratios were evaluated on roadway segments and conditions where the demand to capacity ratio exceeded 1.0 were studied for potential improvement alternatives.

- Intersection level data were developed for about 80 intersections in Beaverton (based upon staff input, primarily arterial and collector intersections). Alternative improvements were considered where level of service was F or worse. Mitigated levels of service (LOS) were generally brought to the LOS D or E range for the 20 year planning assessment. Demand to capacity ratios of below 1.0 were sought, but mitigation typically was stopped if D/C ratios were slightly above 1.0 and feasibility of further improvement was considered questionable.

- Where improvements beyond the Metro functional plan desire of five lanes became apparent, the system Ievel of service (arterial system rather than one intersection - looks at travel speed on segment usually one to two miles) was initially tested to seek mitigation to LOS D (Chapter 11 of the Highway Capacity Manual).

Assessment of Need

Based upon the evaluation of intersection level of service, over 62 intersections operate at or worse than level of service E in the 2015 evening peak hour with no improvements (Figure 8-21). This compares with 4 intersections operating at these levels today. The impact of future growth would be severe without significant investment in transportation improvements. Travel speeds would be below 5 MPH over long stretches of road (3 to 8 mile segments of roadways) resulting in unmanageable congestion. Poor performance on freeways and arterials would result in substantial impacts (added through traffic) to neighborhood and collector routes. The greatest problem areas can be grouped into the following areas:

- **Lack of east-west capacity.** Virtually every east-west route in Beaverton from Scholls Ferry Road north to Walker Road would be over capacity.

- **Lack of north-south capacity.** ORE 217, Murray Road, Hall Boulevard, Cedar Hills Boulevard and 185th Avenue to the west all experience demands well in excess of capacity.

[13] This system assumes the westside rail and all the feeder bus system that supports it. Other westside bus service is provided also. The system design is essentially that which will be in place when the westside rail opens next year, with better headways. The south/north rail system is also assumed in place for this scenario.

City of Beaverton
Transportation System Plan

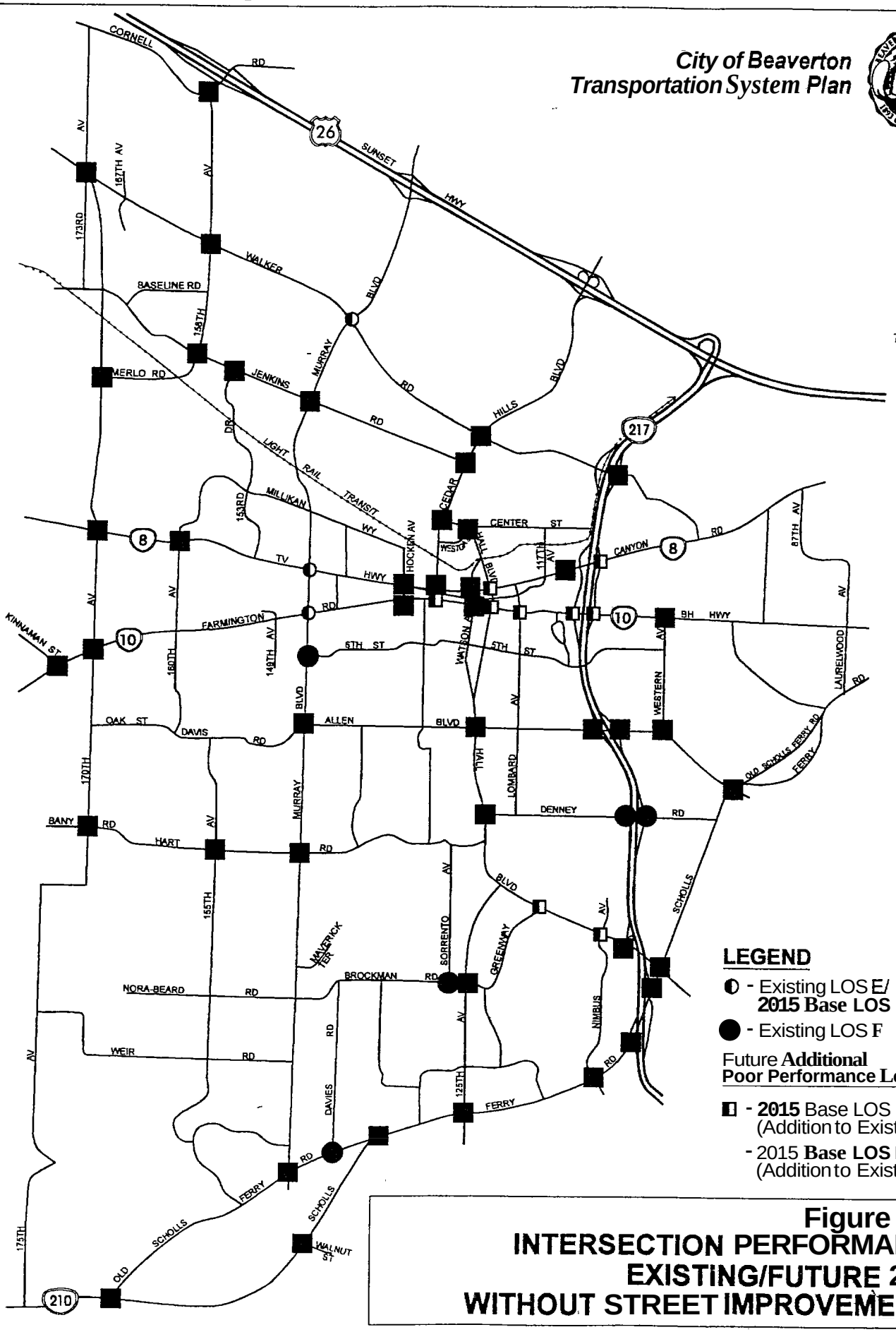


Figure 8-21
INTERSECTION PERFORMANCE
EXISTING/FUTURE 2015
WITHOUT STREET IMPROVEMENTS

- **Lack of freeway crossings results in traffic concentrations at interchanges.** Throughout Beaverton there are few places to cross the freeways except at interchanges (Cabot and Fifth on ORE 217 are examples). This results in interchange areas not only serving high freeways access needs, but through arterial traffic and local circulation. This results in congestion at interchanges.

- **Lack of mainline freeway capacity.** Both US 26 and ORE 217 would be over capacity without widening. This condition exists on ORE 217 over its entire length. On US 26, the imbalance between demand and capacity is most prevalent east of 185th Avenue.

- **Lack of local street system and connectivity.** Areas adjacent to 170th/185th between Farmington and Cornell and the downtown area are the best examples, where all through moving traffic and much of the local access must use the arterials.

- **Lack of intersection turning capacity.** Many intersections 'experience LOS F conditions, not for need of through capacity, but the need for additional right or left turning capacity.

- **Lack of adequate means *to* cross arterials.** Traffic volumes increases are such that the ability to cross or access arterial/collector routes in the future is very difficult. Traffic signal control must be planned to allow adequate control for autos, bikes and pedestrians, while not resulting in disruption caused by placing signals at low priority locations, such as private site driveways, or at locations to close to existing traffic signals.

Recommended Improvement Plan

To address these seven deficiencies, a series of alternatives and strategies were considered. The range of strategies includes:

- **Do nothing:** This results in severe impacts to circulation in Beaverton with delays which would not be tolerable. Extreme land use controls would be required to protect livability.

- **Assume that alternative modes can serve excess demand.** The TSP analysis assumed that these would be developed to their optimal levels. The order of magnitude of trips to be served in 2015 goes well beyond the capacity of the alternative mode systems by themselves, even at their optimal levels. The estimated growth in PM *peak* hour trips (over 50,000) far exceeds the capacity of the alternative modes by themselves to support this demand.

- **Build all the road capacity necessary to achieve level of service D conditions at intersections.** This strategy would result in nearly doubling the cost of the improvements identified in this plan. For example, many five lane cross sections would need to become seven lanes.

- **Pragmatically add capacity to** all **modes, developing a balanced system. Outline the long term configuration of streets to allow development to best accommodate needs.** Allow **LOS E at intersections and maintain system performance measures at LOS D.** This is the strategy that was pursued. It involves significant system improvements, but is the only alternative that balances performance between modes.

The mitigation measures for the street system are outlined in a series of graphics and tables. Figure 8-22 outlines the street improvements, which are summarized in Table 8-3. Figure 8-23 locates the intersections where improvements will be needed and Table **8-4** summarizes the type of improvement identified. Each of the problem areas noted above have been addressed in the following manner:

East-West Capacity: Roadway widenings are outlined for Walker Road (5 lane), Center Street **(3** lane), Jenkins Road (5 lane), Millikan Avenue extension, TV Highway (7 lanes) west of Cedar Hills, Farmington Road (5 lanes), Allen Boulevard *(5* lanes) and Scholls Feny Road (7 lanes). In addition, access control strategies will need to be developed specifically for TV Highway, Scholls Ferry Road and Cedar Hills Boulevard. In each case, capacity is constrained and one strategy (rather than widening) that can be applied is to reduce the number of access points. In doing so, capacity *can* be enhanced 10 to 20 percent. What makes these cases different **from** other routes in Beaverton is that existing access would have to be purchased and/or closed. Access spacing standards and existing access conditions would be adequate on other routes.

North-South Capacity: Roadway improvements include development of the 170th/173rd/175th corridor, Cedar Hills Boulevard (finish 5 lanes), Hall linkage **to** Jenkins, and widening the Murray overcrossing **of** LRT.

Lack of Freeway Crossings: Two new crossings of **US 26** are identified. Crossings were tested at every segment of **US *26*** between interchanges. The two sites which attract the greatest use and mitigate congestion are a crossing of 173rd/174th and a 143rd overcrossing. Other sites did not mitigate congestion problems. The 173rd/174th crossing attracts 15,000 to 20,000 vehicles per day (without any freeway ramps). The 143rd crossing was recommended **by** Washington County **staff** and found to be effective at mitigating problems on Murray Road between Walker Road **and** Cornell Road (the alignment will require significant alternatives analysis and refinement).

Mainline Freeway Capacity. Additional lanes on **US** 26 (six lanes west to 185th) and **ORE** 217 (entire length) are needed to mitigate congestion. Auxiliary lanes will be necessary on both facilities to mitigate impacts of high ramp volumes. Particularly on ORE 217, the close spacing ***of*** interchanges will require extensive mitigation which involves ramp braiding. Closure of freeway access was rejected due to severe impacts to the arterial street system. However, combining access point (particularly Denney and **Allen** or Walker and Cabot) would be recommended to reduce the impact of ramp volumes on mainline freeway operation. Benefit and performance of HOV lanes will need to **be** studied further as the ORE 217 project goes into corridor assessment.

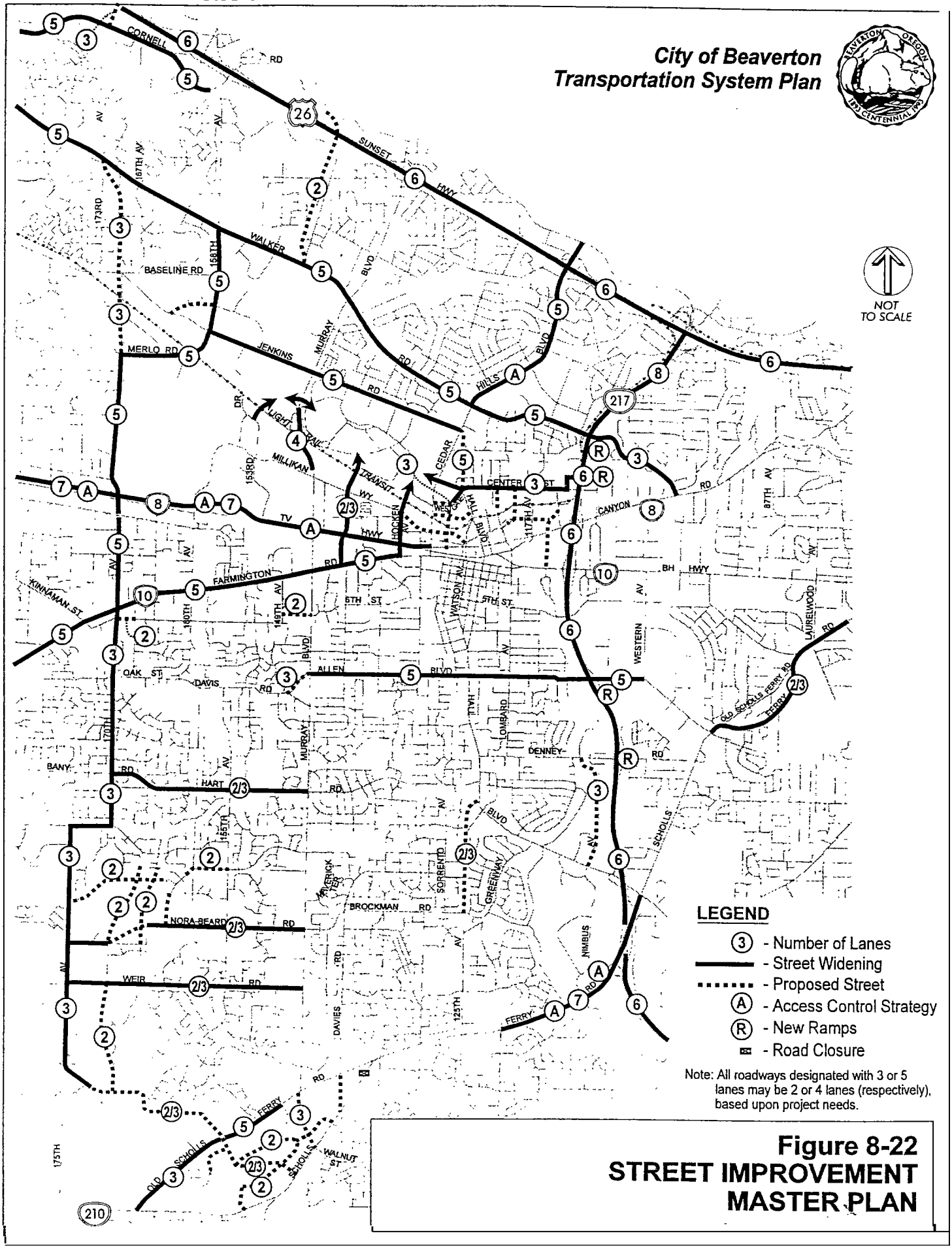


Figure 8-22
STREET IMPROVEMENT MASTER PLAN

Table 8-3
Future Street Improvements

Roadway/Intersection	Improvement	Jurisdiction
Projects Included in the RTP/MSTIP/STIP/CIP Funding Programs		
Farmington Road	Widen to 5 lanes with bike lanes from Murray Boulevard to 173rd Avenue.	ODOT
Farmington Road	Widen to 5 lanes with bike lanes from 173rd to 209th	Wash Co/ODOT
170th Avenue	Widen to 3 lanes with sidewalks and bikeway from Rigert to Blanton to Alexander	Wash Co/MSTIP
170th/173rd Avenue	Construct new road and widen existing road to three lanes with sidewalks and bikeway from Baseline Road to Walker Road.	Wash Co/MSTIP
Jenkins: Murray to 158th	Widen to 5 lanes MM	Wash Co.
Jenkins: Cedar Hills to Murray	Widen to 3 lanes MM	Wash Co.
Allen: Menlo to Main	Widen to 5 lanes	City
Davis Road	Widen road and add bike and pedestrian facilities from Allen to 170th Avenue.	City/MSTIP
Scholls Ferry Road	Add turn lanes and bike lanes to Scholls Ferry/Old Scholls Ferry from east of the Beaverton city limits *to* 175th Ave. Realign the Scholls Ferry/Old Scholls Ferry and Scholls Ferry/Beef Bend intersections, adding turn lanes and traffic signals.	ODOT/Wash Co
Walker Rd: Murray to 185th	Widen to 5 lanes with bike lanes and sidewalks	Wash Co
Cornell Road: 158th to 185th	Widen to 5 lanes with bike lanes and sidewalks	Wash Co
Murray Boulevard Overcrossing	Widen to four lanes Millikan to Terman	Wash Co.
Lombard: Broadway to Farmington	Realign roadway to align with segment to the north (3 lanes)	City/MSTIP
Lombard: LRT to Center	Extend 3 lane section with sidewalks	City
125 Avenue: Greenway to Hall	Extend 3 lane section with sidewalks	City
6th/Division: Murray to 149th	Extend 2 lane roadway	City
Millikan: Hocken to Cedar Hills	Extend Millikan to the east to connect to Cedar Hills at Henry Street	City/MSTIP
US 26: ORE 217 to Murray	Widen highway to 6 lanes and add braided ramps	ODOT
Canyon Road: ORE 217 to 117th	Provide median access control, relocate traffic signal, add turn lanes	ODOT
ORE 217: US 26 to Canyon	Widen highway and complete ramp work	ODOT
ORE 217: Canyon to 72nd	Provide additional travel lane each way and rebuild auxiliary lanes	ODOT
Murray Boulevard: Farmington to Millikan	Traffic signal interconnect	ODOT
Hall Boulevard	Add southbound right turn lane at Scholls Ferry Road	ODOT
Projects NOT included in current funding programs		
170th: Division to Blanton	Widen to 5 lanes/MM	Wash Co
170th: Alexander to Merlo	Widen to 5 lanes/MM	Wash Co

Roadway/Intersection	Improvement	Jurisdiction
170th: Merlo to Baseline	Widen to 3 lanes/MM	Wash Co
173rd: Cornell to Bronson	Build new 2/3 lane roadway with grade separation of US 26 connecting to 174th/MM	Wash Co/ODOT
158th/Merlo: 170th to Walker	Widen to 5 lanes/MM	City
Murray: Old Scholls to Scholls Ferry	Extend 3/5 lane roadway to Walnut/MM	Wash Co
Davies: Old Scholls to Scholls Ferry	Extend 3 lane road south linking to Scholls Ferry/MM - Close Old Scholls Ferry/Scholls Ferry east intersection	City
Cedar Hill Blvd: Walker to US 26	Complete 5 lane roadway/MM/Access Control	Wash Co
143rd/Meadow: Science Park to Walker	Establish a new 2 lane roadway connection, including a grade separation of US 26/MM	Wash Co
Walker Road: Murray to ORE 217	Widen to 5 lanes/MM	Wash Co
Jenkins Road: Murray to Cedar Hills	Widen to 5 lanes/MM	Wash Co
TV Highway: Cedar Hills to 185th	Widen to 7 lanes/MM	ODOT
TV Highway: 117th to Hillsboro	Access Control strategies to improve lane capacities	ODOT
Farmington: Hocken to Murray	Widen to 5 lanes/MM	ODOT/City
Allen: ORE 217 to Western	Widen to 5 lanes/MM	City
Allen: ORE 217 to Murray	Complete 5 lane widening/MM	City
Bany/Hart: 170th to Murray	Improve to 2-3 lanes/MM	Wash Co
Beard/Nora: Murray to 175th	Improve to 2-3 lanes/MM	Wash Co
Weir: Murray to 170th	Improve roadway with 3 lanes/MM	City
Scholls Ferry: Hall to 121st	Widen to 7 lanes including access control measures at unsignalized locations/MM	Wash Co
Hall north of Center	Extend new 5 lane roadway north of Center to connect with Jenkins at Cedar Hills Blvd/MM	City
Center: 114 to Cedar Hills	Widen to 3 lanes/MM	City/Co
Center: Cedar Hills to Karl Braun	Extend public roadway 3 lanes/MM	City
141st: Tek to Farmington	Realign and extend 2/3 lane roadway/MM	City
US 26: 185th to Murray	Widen highway to 6 lanes, install auxiliary lanes as warranted between interchanges	ODOT
US 26: 185th to ORE 217	Interchange ramp improvements	ODOT
Local Streets: Downtown Area	Henry Street, Rose Biggi, 114th/Griffith, Broadway extension and others per Regional Ctr	City
Local Streets: NW Beaverton	185th/Cornell/170th/TV Highway - add local connectivity	City
Local Streets: SW Beaverton	175th/Weir/155th/Sexton Mountain - add local connectivity	City
Local Street: Scholls	Scholls Ferry to 175th north to Alvord - add local and collector connectivity	City

MM - Multi-modal improvement including sidewalks and bicycle lanes

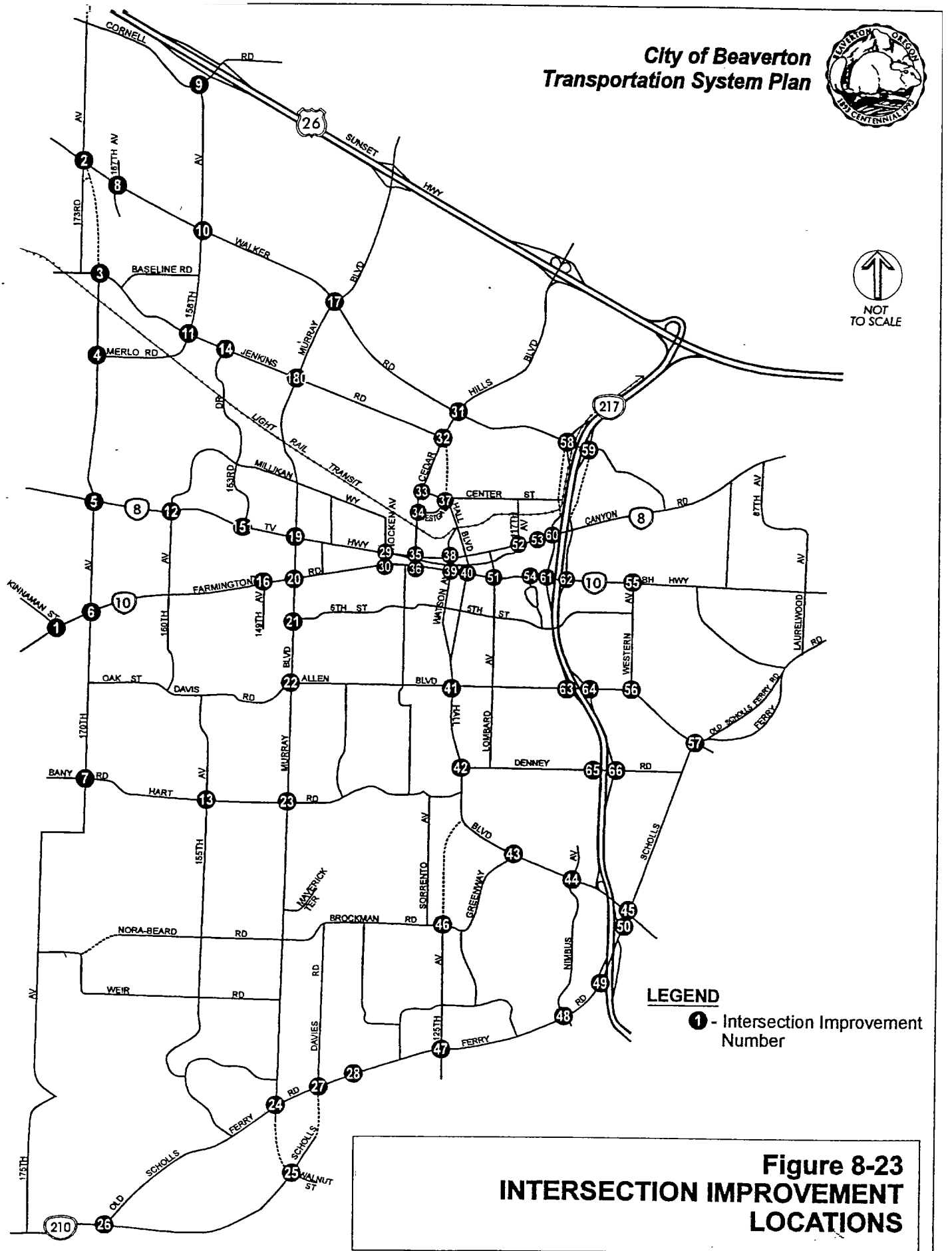


Figure 8-23
INTERSECTION IMPROVEMENT LOCATIONS

Table 8-4
City of Beaverton 2015 Intersection Improvements

Improvement Number	Intersection	Description
1	Kinnaman/Farmington Road	Widen Farmington to 5 lanes; add WB left turn lane; add NB/SB left turn lane; signal phasing modification to NB/SB permitted/protected phasing
2	Walker Road/173rd Avenue	Widen Walker Road to 5 lanes; add EB/WB right turn lanes; NB/SB double left turn lanes
3	Baseline Road/170th Avenue	SB double left turn lanes; signal phasing modification of NB/SB to protected phasing; add WB right turn lane
4	Merlo Road/170th Avenue	Signal phase change to permitted/protected for NB/SB approaches and to protected phasing for EB/WB approaches; add NB right turn lane; add NB, SB, and EB left turn lanes
5	TV Highway/170th Avenue	Widen TV Highway to 7 lanes (3 through lanes each way); widen 170th Avenue to 5 lanes; add SB right turn lane; WB double left turn lanes
6	Fannington Road/170th Avenue	Widen Farmington Road to 5 lanes; add NB left turn lane; add NB through lane and restripe SB for additional through lane (widen 170th Avenue to 5 lanes)
7	Hart-Bany/170th Avenue	Install traffic signal; add NB and SB left turn lanes
8	Walker Road/167th Avenue	Install traffic signal; widen Walker Road to 5 lanes
9	Cornell Road/158th Avenue	Add EB right turn lane
10	Walker Road/158th Avenue	NB/SB double left turn lanes; add EB right turn lane; NB right turn
19	TV Highway/Murray Boulevard	Double left turn lanes on all approaches; add EB/WB right turn lanes; add NB/SB through lane (3 through lanes each way)
20	Murray Boulevard/Farmington Road	Double left turn lanes on all approaches; SB, EB and WB right turn lanes
21	Murray Boulevard/6th Avenue	Install traffic signal; add EB and WB left turn lanes
22	Murray Boulevard/Allen Boulevard	Widen Allen to 5 lanes to Murray (drop additional WB through lane after Murray); add SB right turn lane
23	Murray Boulevard/Hart Road	Signal phase change to permitted/protected phasing for all approaches
24	Murray Boulevard/Old Scholls Ferry Road	Restripe NB, SB and EB approaches; signal phase change to protected phasing on all approaches
25	Murray Boulevard/Scholls Ferry Road/Walnut Street	Install traffic signal; add EB left turn lane; restripe NB approach; construct SB approach with left turn lane

26	Scholls Ferry Road/Old Scholls Ferry Road (west)	Install traffic signal; add southbound right turn lane and restripe existing lane as a left turn lane
27	Old Scholls Ferry Road/Davies Road	Install traffic signal; restripe WB approach; add NB right turn lane; add NB left turn lane
28	Scholls Ferry Road/Old Scholls Ferry Road (east)	Road closure of Scholls Ferry Road
29	TV Highway/Hocken Avenue	Add EB right turn lane; restripe SB approach; widen Hocken to 2 southbound through lanes
30	Farmington Road/Hocken Avenue	Add WB right turn lane; SB double left turn lanes (Hocken carries 2 SB lanes from TV Highway)
31	Cedar Hills Boulevard/Walker Road	Double left turn lanes on all approaches; add EB right turn lane
32	Cedar Hills Boulevard/Jenkins Road	SB and EB double left turn lanes; add SB right turn lane; widen Jenkins to 5 lanes; WB right turn channel; signal modification to EB/WB protected phasing
32	TV Highway/160th Avenue-Millikan	Widen TV Highway to 7 lanes (3 through lanes each way)
33	Cedar Hills Boulevard/ Hall Boulevard	Add NB right turn lane
34	Cedar Hills Boulevard/ Westgate Drive	Add NB left turn lane
35	Canyon Road/ Cedar Hills Boulevard	Widen TV Highway to 7 lanes (3 EB/WB through lanes in each direction; signal modification to protected phasing for all approaches; NB double left turn lanes; add SB left turn lane; add SB right turn lane; add EB/WB right turn lane;
36	Farmington Road/ Cedar Hills Boulevard	SB double left turn lanes (construct SB right turn lane and restripe SB lanes as left turn lanes)
37	Hall Boulevard/Westgate-Center	Realign intersection, signal modification to EB/WB protected/permitted phasing
38	Canyon Road/Watson Avenue	Restripe SB approach (add a SB receiving lane)
39	Farmington Road/Watson Avenue	Add southbound through lane
40	Farmington Road/Hall Boulevard	Restripe NB approach (add NB receiving lane)
41	Hall Boulevard/Allen Boulevard	Add EB and WB right turn lanes; NB and SB double left turn lanes
42	Hall Boulevard/Denney Road	NB/SB signal phasing change to permitted/protected phasing; restripe WB approach
43	Hall Boulevard/Greenway	Signal phase change to permitted/protected phasing for EB and WB approaches
44	Hall Boulevard/Nimbus Avenue	Signal phase change td protected/permitted phasing for NB and SB approaches
45	Scholls Ferry Road/Hall Boulevard	Add double left turn lanes on all approaches; add right turn lanes on all approaches
46	Brockman Road/125th Avenue	Signal phase change to protected/permitted phasing for all approaches; add WB left turn lane; restripe NB and EB approaches; construct SB left turn lane, right turn lane and through lane
47	Scholls Ferry Road/125th Avenue	Widen Scholls Ferry Road to 7 lanes (3 through lanes each way); add SB right turn lane;
48	Scholls Ferry Road/Nimbus Avenue	Widen Scholls Ferry Road to 7 lanes (3 through lanes each way); add NB left turn lane; SB double left turn lanes
49	Scholls Ferry Road/ORE 217 SB ramps	Channelize EB right turn onto ramp and modify signal to allow free movement of EB right turns
50	Scholls Ferry Road/ORE 217 NB on-ramp	Channelize SB right turn onto ramp and modify signal to allow free movement of EB right turns; add WB through lane onto ramp (2 through lanes)
51	Farmington Road/Lombard Avenue	Add NB right turn lane
52	Canyon Road/	Add WB right turn lane; signal modification to NB/SB protected

	Broadway-117th Avenue	phasing
53	Canyon Road/Fred Meyer Access	Add SB left turn lane; signal modification to NB/SB split phasing
54	Beaverton-Hillsdale Highway/ Griffith Drive	Signal phasing modification to NB/SB protected/permitted phasing
55	Beaverton-Hillsdale Highway/Western Avenue	Add EB right turn lane; add WB double left turn lanes; add NB through lane
56	Allen Boulevard/Western Avenue	Add EB left turn lane; EB/WB signal phasing change to permitted/protected phasing
57	Allen Boulevard/Scholls Ferry Road	Widen Allen Boulevard to 5 lanes; restripe WB approach; signal phase change for all approaches to permitted/protected phasing
58	Walker Road/ORE 217 SB ramps	Big cost/bridge deck widening: EB double right turn lanes (add right turn lane); WB through lane
59	Walker Road/ORE 217 NB ramps	Add NB double left *turn* lanes
60	Canyon Road/ORE 217 SB ramps	Add SB left turn lane and restripe SB lanes
61	Beaverton-Hillsdale Highway/ ORE 217 SB ramps	Add SB left turn lane
62	Beaverton-Hillsdale Highway/ ORE 217NB ramps	NB double left turn lanes
63	Allen Boulevard/ORE 217 SB ramps	Add SB right turn lane (double right lanes); EB right turn lane (channel onto ramp, signal modification to allow EB right turn to go with SB left
64	Allen Boulevard/ORE 217 NB ramps	Add WB right turn lane; signal modification to NB/SB split phasing
65	Denney Road/ORE 217 SB ramps	install traffic signal
66	Denney Road/ORE 217 NB ramps	install traffic signal

Local Street System and Connectivity: Four *areas* were noted where local connectivity would result in benefits to both the arterial system and the neighborhood/local system by dispersing traffic (rather than one street with residential frontage experiencing significant impacts). These areas include the downtown regional center, the areas between 170th and 185th Avenues south of Cornell and north of Farmington, areas in southwest Beaverton and the area between Old Scholls Ferry Road and Scholls Ferry Road.

Intersection Turning Capacity: A series of 65 intersection improvements were identified which primarily add turning movement capacity.

Means *to* Cross Arterials (Traffic Signals): To guide future implementation of traffic signals to locations which have the maximum public benefit by serving arterial/collector/neighborhood routes, a framework master plan of traffic signal locations was developed (Figure 8-24). The intent of this plan is to outline desirable locations where future traffic signals would be placed to avoid conflicts with other development site oriented signal placement. To maintain the best opportunity for efficient traffic signal coordination, spacing of up to 1,000 feet should be considered. No traffic signal should be installed unless it meets MUTCD warrants.

The result of these improvements is significant. While level of service E conditions still exisf for the most part the 2015 traffic conditions can be mitigated to the point that mobility *can* be preserved in Beaverton and congestion is manageable. Only 15 intersections operate at LOS E (none at F) (Figure 8-25) compared to over 62 intersections if improvements are not made. The extent of certain street

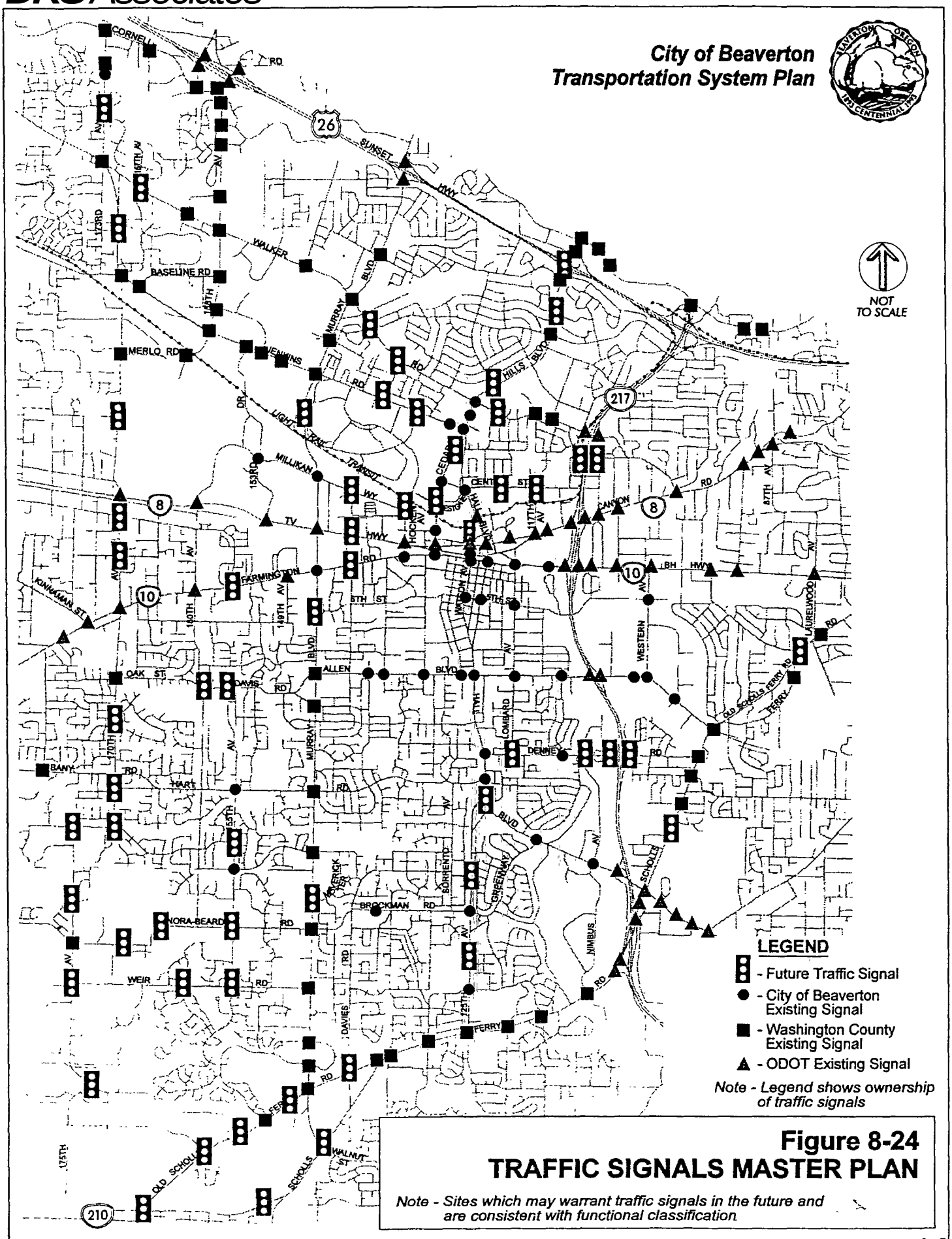


Figure 8-24
TRAFFIC SIGNALS MASTER PLAN

Note - Sites which may warrant traffic signals in the future and are consistent with functional classification

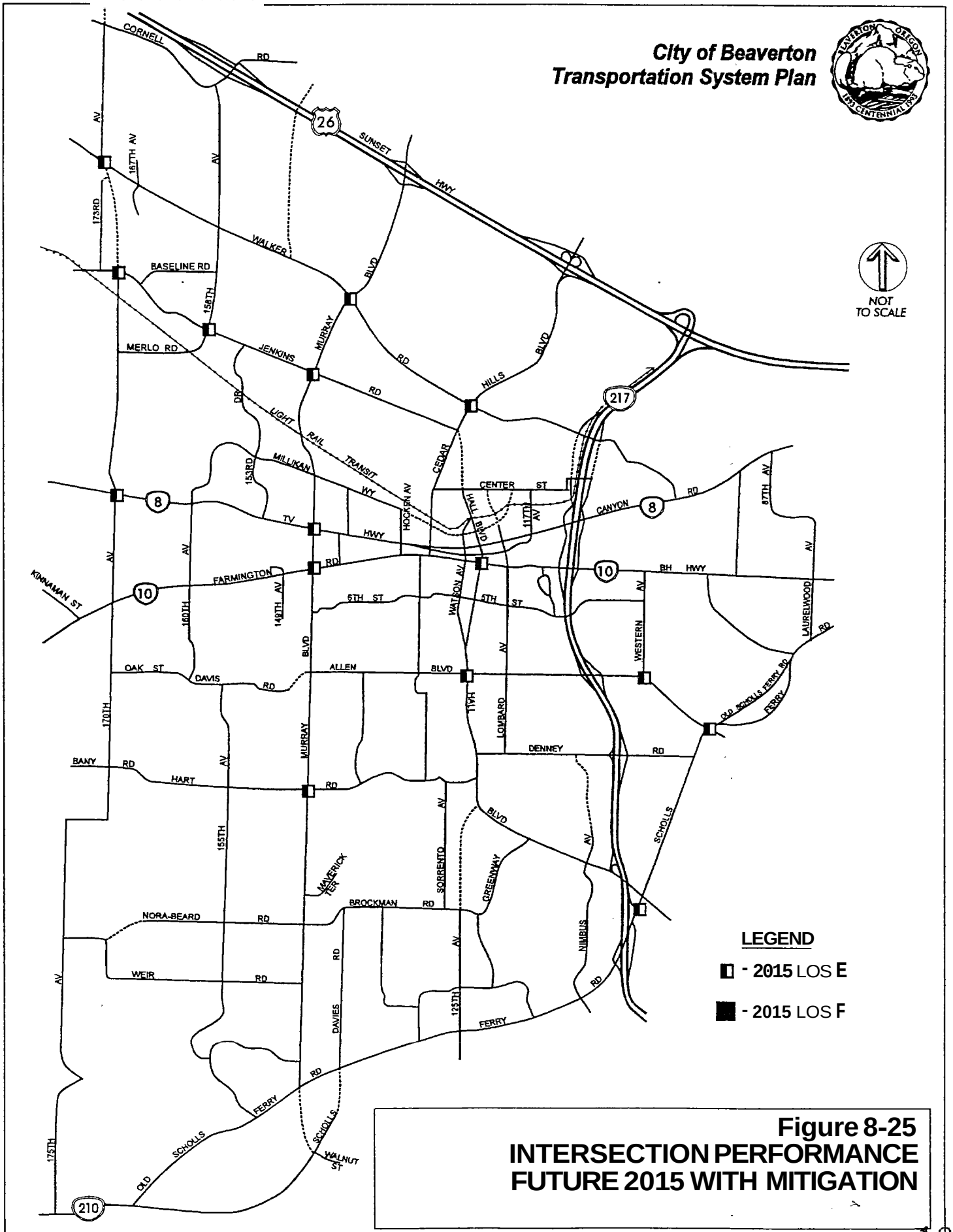


Figure 8-25
INTERSECTION PERFORMANCE
FUTURE 2015 WITH MITIGATION

improvements goes beyond RTP and Functional Plan desires to not have seven lane streets. Scholls Ferry Road was designated in the Washington County Transportation Plan as seven lanes. Canyon/TV Highway has not been designated in prior plans for seven lanes. In both *on* these cases, every transit/TDM oriented strategy should be implemented prior to consideration of seven lane improvements. However, using the travel forecasts for 2015 which include transit and TDM improvements, the analysis indicates that an ultimate seven lane improvement should be planned for in the next 20 years.

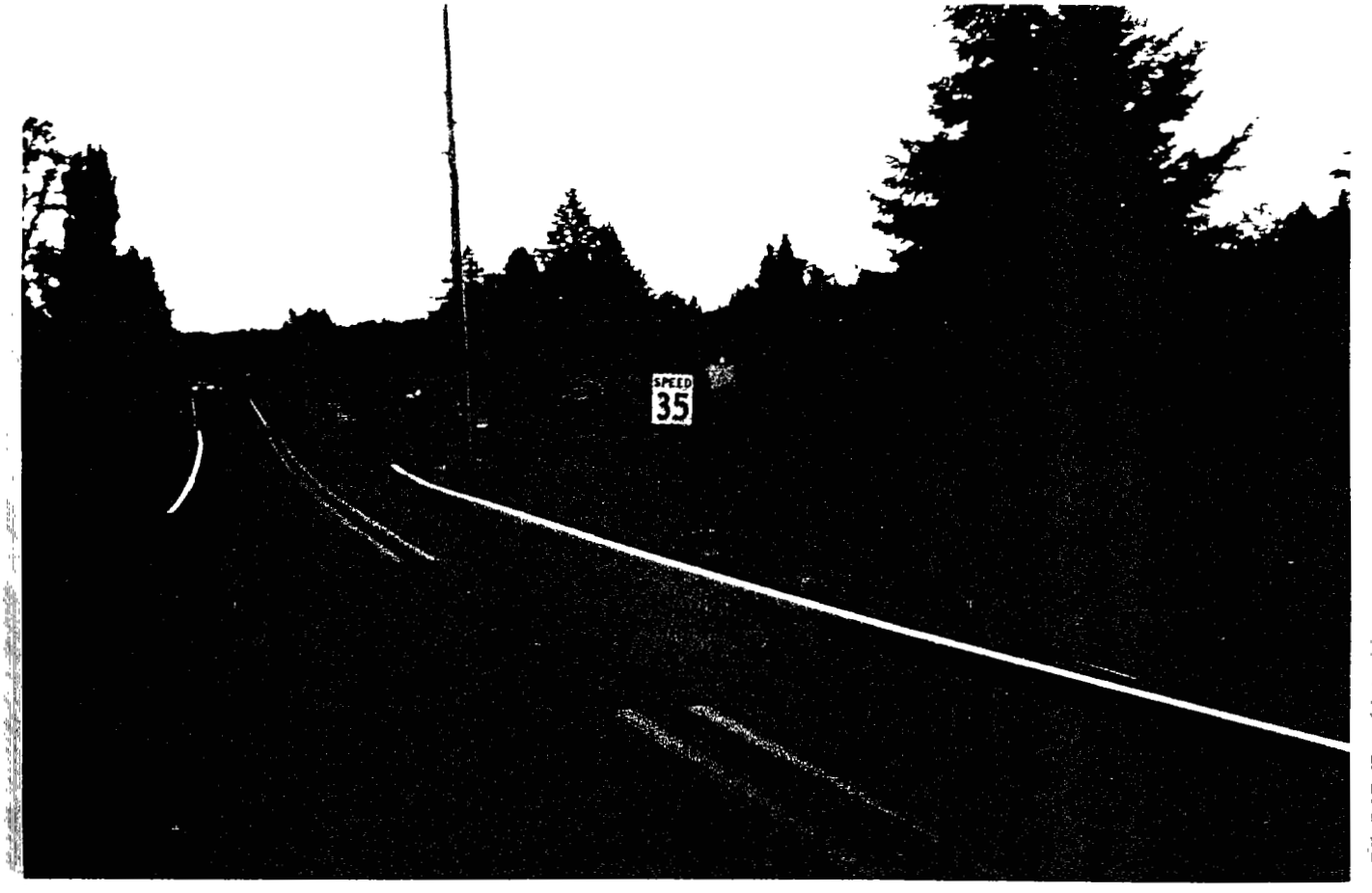
Visual Simulations

The previous sections have focused on the quantitative aspects of the transportation system and its operation. To provide a better understanding of the character of the street improvements that have been discussed, a set of visual simulations were undertaken. Using a computer to simulate hypothetical characteristics of the recommended improvements, a set of illustrations were developed showing existing conditions and changes with the proposed improvements (Figures 8-26 and 8-27). These two photographs provide a comparison of the improvements on 173rd crossing of US *26* and of the proposed three lane section of 170th Avenue north of Bany Road. The roadway locations and characteristics shown in the visual simulation are only approximate in nature and do not reflect the specific character or design intended for the area. The technical appendix provides additional visual simulations for reference (on 170th north of Farmington, Scholls Ferry Road at 121st, ORE 217 at Walker and TV Highway near 170th).

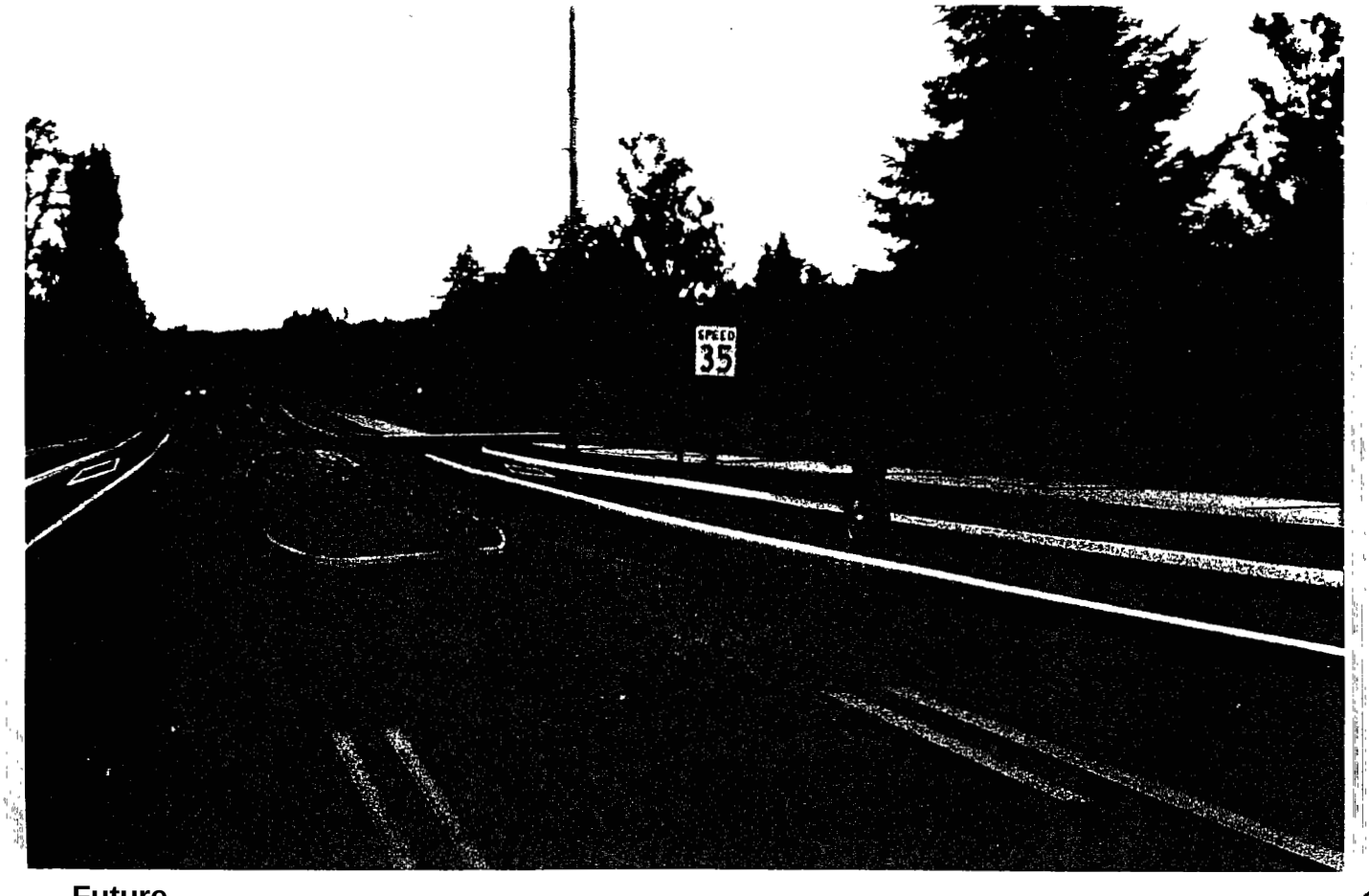
SAFETY

Accident data is difficult to forecast to the future and therefore analysis focuses on the existing information. The City of Beaverton has identified the ten highest accident locations in need of safety improvements based on accident data. The City of Beaverton's ten highest accident locations **for** 1994 to 1996 are shown in Figure 8-28 and summarized in Table 8-5.

Rank	Location	Number of Accidents
1	SW Murray BoulevardSW TV Highway	71
2	SW 158th Avenue/SW Walker Road	56
3	SW Farmington Road/SW Murray Boulevard	48
4	SW Allen Boulevard/SW Murray Boulevard	47
5	SW Hall Boulevard/SW Scholls Ferry Road	40
6	Highway 217/SW Allen Boulevard	36
7	SW Allen Boulevard/SW Menlo Drive	**34**
8	SW Allen Boulevard/SW Hall Boulevard	29
9	Highway 217/SW Canyon Road	29
10	11635 SW Canyon Road	26

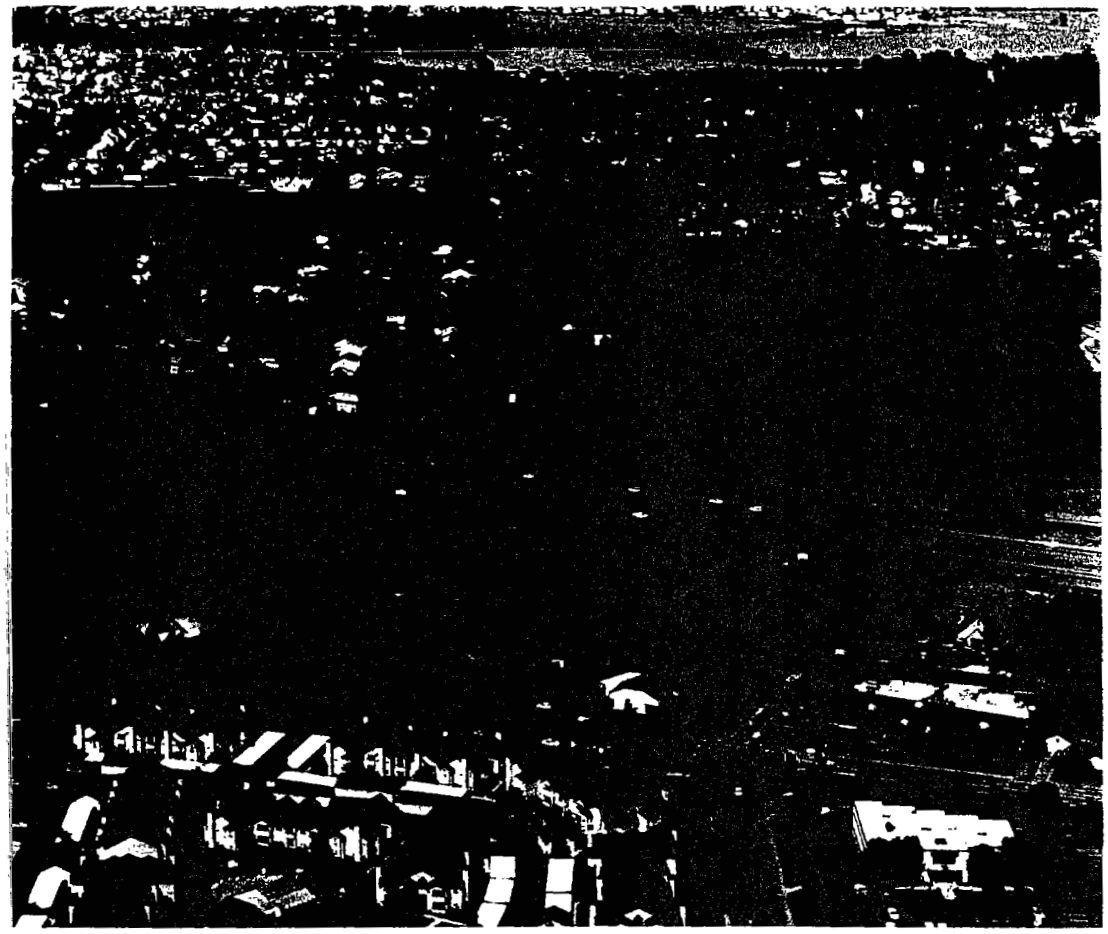


Existing

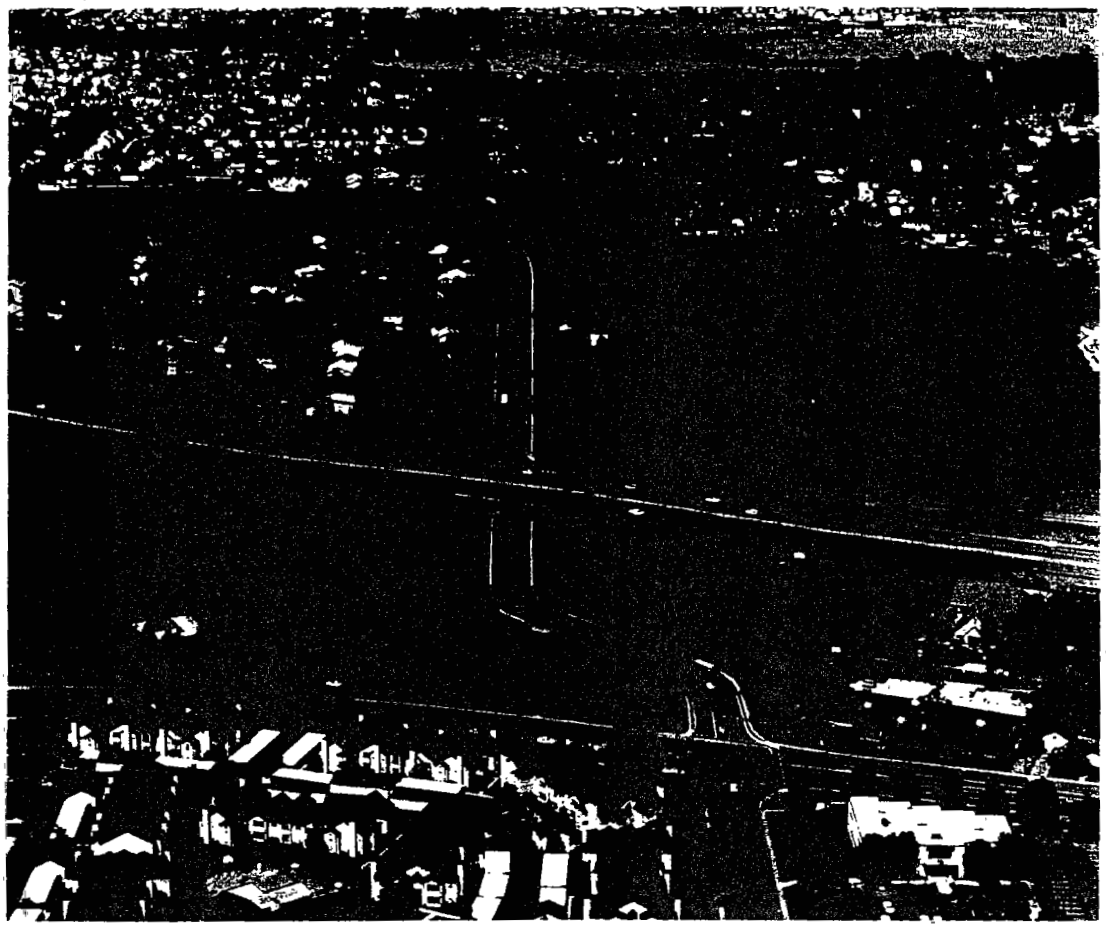


Future

FIGURE 8-26
SW 170th Ave. North of SW Bany Rd.



Existing



Future

FIGURE 8-27
SW 173rd Ave. / SW 174th Awe. at US 26

City of Beaverton
Transportation System Plan

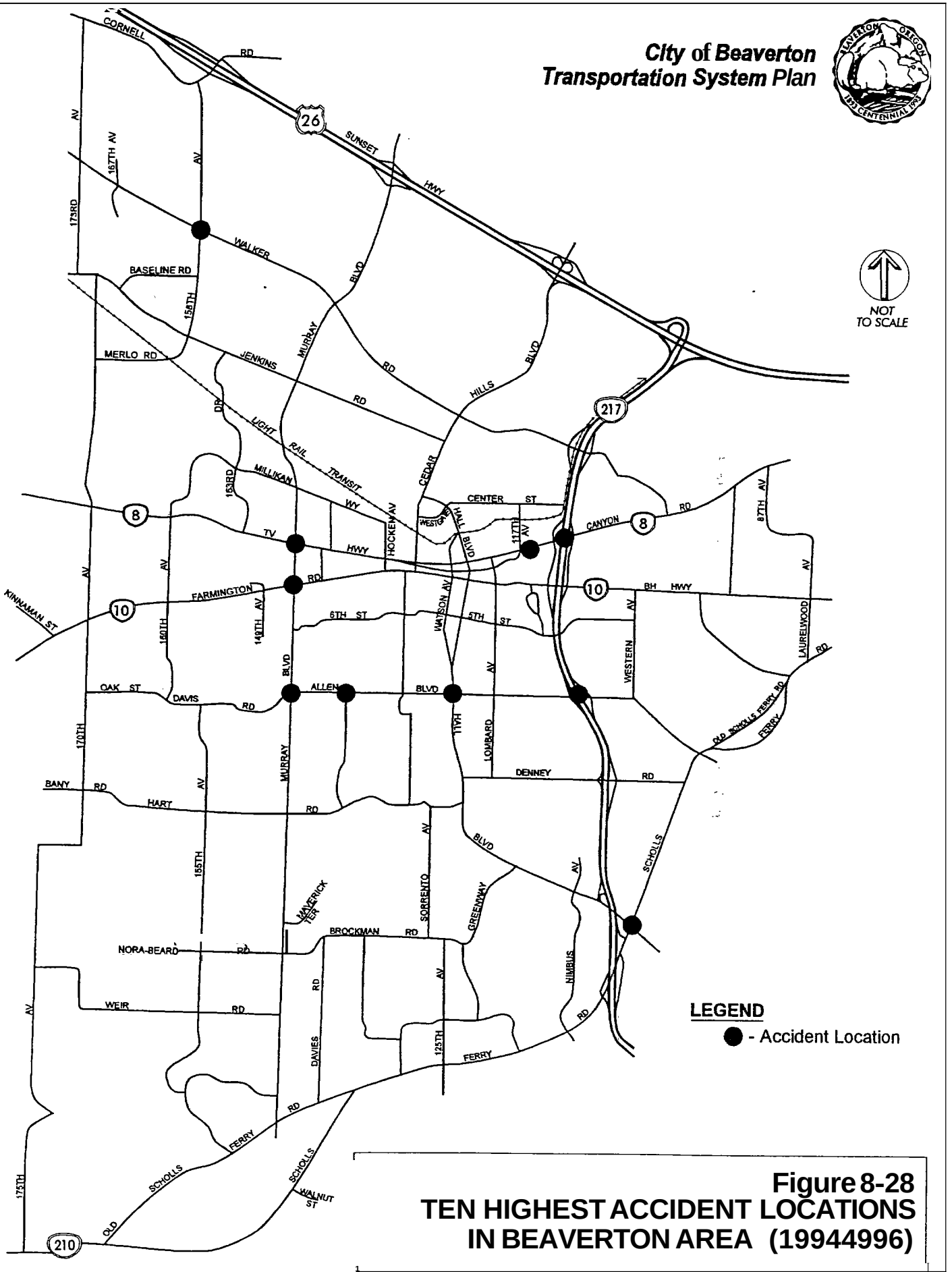


Figure 8-28
TEN HIGHEST ACCIDENT LOCATIONS IN BEAVERTON AREA (19944996)

Everyone of the top ten accident sites is listed for capacity improvements. As the capacity improvements are made, safety enhancements can be incorporated into the design. In the short term, specific action plans should be prepared to address whether beneficial improvements at these locations can be made without affecting future plans.

Several strategies were evaluated for safety by the City of Beaverton Traffic Commission. These strategies aimed at providing the City with priorities that meet the goals and policies of the City. The City of Beaverton Traffic Commission ranked these strategies for safety. Each commissioner and public participant were assigned a certain number of points that he or she could allocate to each of the strategies according to his or her vision of priorities for the City of Beaverton. The ranking of these safety strategies follows from most important to least important:

- Develop a citywide safety priority system which identifies high accident locations, ranks the locations and identifies safety mitigation measures
- Work with other agencies such as Washington County and ODOT to help prioritize and fund safety programs (coordinated approach)
- Address safety issues on an as needed basis
- Continue existing program (received no points)

One future issue with regard to safety involved the decision to go to three lanes from two lanes or five lanes from four lanes. National research has clearly demonstrated the benefits of providing a turning lane when daily traffic volumes exceed 15,000 vehicles per day[14]. While widening the street can commonly be viewed as pedestrian unfriendly, the potential impact of not having a turning lane is that accident rates will increase substantially (11 to 35 percent) on two lane roads compared to three lane roads.

One safety action that can have immediate impact is to condition all land use development projects that require access on city streets to maintain adequate sight distance. This should address all fixed or temporary objects (plants, poles, signs, etc.) that potentially obstruct sight distance. Any property owner, business, agency or utility that places or maintains fixed or temporary objects in the sight distance of vehicles, bicycles or pedestrians should be required to demonstrate that adequate sight distance is provided (per AASHTO).[15]

School safety was an issue raised at several of the public meetings through the development of the TSP. In setting priorities for the pedestrian action plan, school access was given a high priority to improve safety. However, beyond simply building more sidewalks, school safety involves education and planning. Many cities have followed guidelines provided by FHWA and ITE[16]. Implementing plans of this nature has demonstrated accident reduction benefits. However, this type of work requires staffing

14 *Multilane Design Alternatives for Improving Suburban Highways*, TRB NCHRP Report No. 282, March 1986.

15 "*A Policy on Geometric Design of Highways and Streets*", Green Book American Association of State Highway and Transportation Officials, 1994.

16 *Manual of Uniform Traffic Control Devices*, FHWA, 1988: Traffic Control Devices Handbook, FHWA, 1983; A Program for School Crossing Protection, Institute of Transportation Engineers.

and coordination by the School District as well as the City to be effective. As a response to this program, establishing an annual budget (say $10,000 per year) would allow for incremental benefits to be achieve and determine effectiveness in Beaverton, without a major capital program.

MAINTENANCE

Preservation, maintenance and operation are essential to protect the City investment in transportation. The majority of current gas tax-revenues are used to maintain the transportation system. With increasing road inventory and the need for greater maintenance of older facilities, protecting and expanding funds for maintenance is critical.

A Pavement Management Program is a systematic method of organizing and analyzing information about pavement conditions to develop the most cost effective maintenance treatments and strategies. As a management tool, it aids the decision-making process by determining the magnitude of the problem, the optimum way to spend funds for the greatest return on the dollar, and the consequences of not spending money wisely. Beaverton maintains an annual program of pavement management and monitors conditions in setting priorities for overlays, slurry seals and joint sealing. With nearly 180 miles of roadway and 20 bridges to maintain, this is one of the largest transportation expenditures.

A pavement management program can be a major factor in improving performance in an environment of limited revenues. A pavement management program is not and should not be considered the answer to every maintenance question. It is a tool that enables the public works professional to determine the most cost-effective maintenance program. The concept behind a pavement management system is to identify that optimal rehabilitation time and to pinpoint the type of repair which makes the most sense. With a pavement management program, professional judgment is enhanced, not replaced.

The goal of the City of Beaverton's existing street maintenance program is "to preserve the City's street system, pedestrian pathways and bridges, assure total quality customer service in support of City Council Goals". The operations department performs preventive maintenance to the street system and responds immediately to emergency situations involving the street surface. Significant projects such as street overlays and seals are outsourced. An increased emphasis has been placed on preventative maintenance for arterial and collector streets due to damage and wear from unusually wet winters. The City of Beaverton has ordered but has not yet received (as of June 1997) computer software for their pavement management system. Additionally, the City has been retrofitting about 20 to 40 ADA sidewalk ramps per year.

Table 8-6 summarizes the existing street maintenance program for the City of Beaverton. Table 8-7 summarizes the street maintenance program budget.

	FY 1994-95 (Actual)	FY 1995-96 (Actual)	FY 1996-97 (Budgeted)	FY 1997-98 (Proposed)
Preventative maintenance to the street system	175.05 miles	175.05 miles	177.65 miles	177.65 miles
Bridge maintenance inspections	20 bridges	20 bridges	20 bridges	20 bridges
Number of bridge inspections completed	20	20	20	20

Note FY=Fiscal Year

Table 8-7
Street Maintenance Budget Summary[18]

Requirements	FY 1994-95 (Actual)	FY 1995-96 (Actual)	FY 1996-97 (Budgeted)	FY 1997-98 (Proposed)	FY 1997-98 (Adopted)
Personal Services	$ 450,599	$ 417,359	$ 452,669	$ 470,847	$ 470,847
Materials and Services	$ 127,319	$ 140,236	$ 185,940	$ 148,650	$ 148,650
Capital Outlay	$ 444,519	$ 618,147	$ 677,311	$ 670,750	$ 670,750
Transfers	$ 373,739	$ 280,803	$ 332,883	$ 445,808	$ 445,808
Total	$1,396,176	$1,456,545	$1,648,803	$1,736,055	$1,736,055

Note FY=Fiscal Year

A critical concept is that pavements deteriorate 40 percent in quality in the first 75 percent of their life. However, there is a rapid acceleration of this deterioration later, so that in the next 12 percent of life, there is another 40 percent drop in quality. A pavement management system can identify pavements before this rapid deterioration starts so that preventative maintenance can be applied. These fixes are generally one-fifth to one-tenth the cost required after a pavement is 80 percent deteriorated. Figure 8-29 illustrates the pavement life cycle. For this reason, support of gradual increases to the gas tax to support maintenance is critical.

Strategies

Strategy 1- "No maintenance program"

If nothing is done to improve pavement surface condition, the City's ability to maintain its streets will fall far behind its possible resources as the number of paved roads in good condition diminish and the amount of lane miles in need of rehabilitation increase. This strategy did not receive any points by the Traffic Commission.

17 Based on fax received from Pete Davis, City of Beaverton Operations Department, June 26, 1997.

18 Ibid.

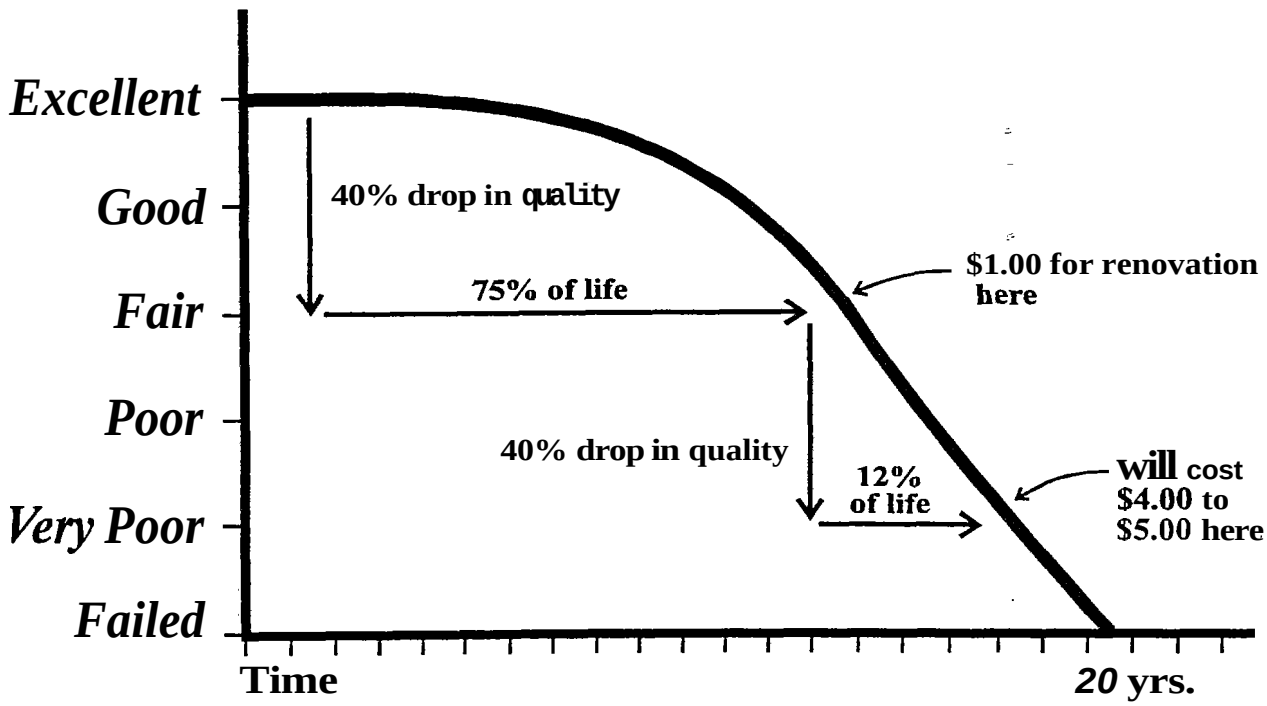


Figure 8-29
PAVEMENT LIFE CYCLE

Strategy 2 - "Maintain at highest level"

A strategy where the pavement condition is maintained at the highest level resulting in high expenditures. Maintenance already consumes the majority of the gas tax fund the City receives and a higher level would deplete these funds and require supplemental revenue. This strategy did not receive any points by the Traffic Commission or public participants.

Strategy 3 - "Maintain roadways using a need based approach which addresses current and future needs as they arise"

A "need based" strategy seeks to address current and future needs as they arise, so that all roads are maintained in good pavement condition.

Strategy 4 - "Maintain roadways using a balanced approach which develops a pavement management system and budget to address needs over a ten year period"

A "balanced" approach addressing pavement management needs in Beaverton would spread estimated expenditures over the next ten years.

These strategies were evaluated for maintenance by the City of Beaverton Traffic Commission. These strategies aimed at providing the City with priorities that meet the goals and policies of the City. The City of Beaverton Traffic Commission and the public ranked these strategies for maintenance. Each commissioner and public participant were assigned a certain number of points that he or she could allocate to each of the strategies according to his or her vision of priorities for the City of Beaverton. The ranking of these maintenance strategies follows from most important to least important:

- Maintain roadways using a balanced approach which develops a pavement management system and budget to address needs over a ten year period (65% of points)
- Maintain roadways using a need based approach which addresses current and future needs as they arise (35% of points)

NEIGHBORHOOD TRAFFIC MANAGEMENT

Neighborhood Traffic Management (NTM) is a term that has been used to describe traffic control devices typically used in residential neighborhoods to slow traffic or possibly reduce the volume of traffic. NTM is descriptively called traffic calming, due to its ability to improve neighborhood livability. Beaverton has been active in testing and implementing NTM measures such as speed humps, chokers, pavement texturing, circles, chicanes, and other elements. The City has no formalized NTM program and has been responding to community group needs on a case by case basis. The following are examples of neighborhood traffic management strategies:

- chokers
- speed humps
- traffic circles
- medians
- landscaping
- curb extensions
- narrow streets
- closing streets
- photo radar
- on-street parking
- selective enforcement
- neighborhood watch
- speed wagon

Typically, NTM can receive a favorable reception by residents adjacent to streets where vehicles travel at speeds above 30 MPH. However, NTM can also be a very contentious issue within and between neighborhoods, being viewed as moving the problem rather than solving it, impacting emergency travel or raising liability issues. A number of streets in Beaverton have been identified in the draft functional classification as neighborhood routes. These streets are typically longer than the average local street and would be appropriate locations for discussion of NTM applications. A wide range of traffic control devices are being tested throughout the region, including such devices as chokers, medians, traffic circles and speed humps. However, no standards have been developed in Beaverton yet. NTM traffic control devices must be tested within the confines of Beaverton before guidelines are developed for implementation criteria and applicability. Also, NTM should be considered in an area wide manner to avoid shift impacts between areas and only be applied where a majority of neighborhood residents agree that it should be done (via petition). Strategies for NTM seek to reduce traffic speeds on neighborhood routes, thereby improving livability in Beaverton. Research of traffic calming measures demonstrates their effectiveness in reducing vehicle speeds. Table 8-8 outlines nationwide research of over 120 agencies in North America.

It is recommended that the City develop a NTM program. This program can build off City experience and success and be used to prioritize implementation and address issues on a systematic basis rather than a reactive basis. Criteria may be established for the appropriate application of NTM in the City. This would address warrants, special conditions for functional classifications other than neighborhood routes and the required public process. Most importantly, the goals and policies of this plan calls for land use development to outline potential impacts to neighborhoods caused by new development in an attempt to have new land uses design NTM features into their plan or as conditions minimizing future problems. Because of the contentious nature of NTM, it is essential to have broad representation of the neighborhdod and area that may be impacted.

The City of Beaverton recently passed a property tax levy that included a three year funding element for neighborhood traffic management/calming and traffic signals. The NTM element of this funding source provides an initial program for the City to build from in establishing a citywide NTM program.

Table **8-8**
NTM Performance

		Speed Reduction (MPH)			Volume Change (ADT)			
Measures	No. of Studies	Low	High	Average	Low	High	Ave.	Public Satisfaction
Speed Humps	262	1	11.3	7.3	0	2922	328	79%
Speed Trailer	63	1.8	5.5	4.2	0	0	0	90%
Diverters	39	-	-	.4	85	3000	1102	72%
Circles	26	2.2	15	5.7	50	2000	280	72%
Enforcement	16	0	2	2	0	0	0	71%
Traffic Watch	85	.5	8.5	3.3	0	0	0	98%
Chokers	32	2.2	4.6	3.3	45	4100	597	79%
Narrow Streets	4	5	7	4.5	0	0	0	83%

SOURCE: Survey of Neighborhood Traffic Management Performance and Results, ITE District 6, by R S. McCourt, July 1977.

PARKING

Parking has typically been a benign transportation issue in the past for Beaverton. New land uses were required to provide the code designated number of parking spaces (or more) to assure there would be no impact to surrounding land uses (overflow parking). These parking ratios were developed based upon past parking demand characteristics of land use type. Most recently, parking has become an element of transportation planning policy through two actions. The adoption of the Transportation Planning Rule in 1991 and updated in December 1995 (sections 660-12-020(2g) and 660-12-045(5c)) and the Metro Functional Plan of November 1996, Title 2. By adopting the minimum and maximum parking ratios outlined in Title 2, the City will be able to address the TPR required reduction in parking spaces per capita over time.

Within the goals and policies for the City **of** Beaverton, Goal 4, Policy 2 addresses these requirements. It states ***"Limit the provision of parking to meet regional and state standards.***

Several strategies were evaluated for future parking by the Traffic Commission and the public. These strategies aimed at providing the City with parking priorities that meet the goals and policies of this plan. Each commissioner and public participant were assigned a certain number of points that he or she could allocate to each of the strategies according to his or her vision of priorities for the City of Beaverton. The ranking of these parking strategies follows from most important to least important:

- Shared parking
- Parking pricing
- Lower parking ratios **for** land uses within ¼ mile of LRT stations

- Parking needs should be reviewed by individual developments at the site plan review stage. Parking provisions should be compared to demand, as identified by ITE or DEQ.[19]
- Maximum Parking Ratios

One of the concerns with parking reduction policies is the impact to adjacent land uses should the vehicle needs of a site exceed the provision of parking. This will require critical site review to provide a balance between the policies to reduce vehicle trip making of new developments and the impacts to property owners.

The City of Beaverton should undertake a study of parking management for its regional center. This assessment should consider the benefits and impacts of parking pricing (including use of parking meters), share use parking and parking provision in areas well served by transit (LRT stations).

ACCESS MANAGEMENT

Access management is important, particularly on high volume roadways, for maintaining traffic flow and mobility. Where local and neighborhood streets function to provide access, collector and arterial streets serve greater traffic volume. Numerous driveways, or street intersections, increase the number of conflicts and potential for accidents and decrease mobility and traffic flow. Beaverton, as with every city, needs a balance of streets which provide access with streets that serve mobility.

Several access management strategies were evaluated and ranked by the Traffic Commission and the public. The ranking of these access management strategies follows from most important to least important:

- Prohibit new single family access to arterials and collectors
- Set new City of Beaverton standards for all routes on new development using maximums and minimums
- Work with land use development applications to consolidate driveways
- Use medians on arterial routes to limit access
- Provide right in, right out driveways where appropriate
- Close and consolidate existing access points within 500 feet of freeway interchanges, as possible
- Allow no new access within 500 feet of freeway interchange ramps
- Limit traffic signals to public streets
- Develop minimum traffic signal spacing on arterials and collectors (e.g., 500 feet minimum; 800-1000 feet desirable)

[19] *Parking Demand,* 2nd Edition, Institute of Transportation Engineers, 1987; and *Peak Parking Space Demand Study,* Oregon Department of Environmental Quality, by JHK & Associates, June 1995.

- Meet ODOT Access Management requirements on state highways (150 feet to 500 feet).
- Meet Washington County requirements on arterials (1,000 feet major/600 feet minor). This strategy did not receive any points.
- Develop City access requirements based on Metro Title 6 (660 feet). This strategy did not receive any points.

Based upon the public and Traffic Commission input the following recommendations are made for access management:

- Incorporate a policy statement regarding prohibition of new single family residential access on arterials and collectors. A design exception process should be outlined that requires mitigation of safety and NTM impacts. This addresses a long standing problem in Beaverton where property owners consume substantial staff time on issues of residential fronting impacts.

- Set standards for access spacing (working with Washington County and ODOT) for arterials (600 foot minimum, 1,000 foot maximum) and collectors (200 foot minimum, 400 foot maximum).

- Recommend that ODOT use Access Management Category 4 for TV Highway and Farmington Road west of Murray Road and Category 5 east of Murray Road.

- Specific access management plans be developed for TV Highway and Cedar Hills Boulevard (north of Walker) to maximize the capacity of the existing facilities and protect their functional integrity.

TRANSPORTATION SYSTEM MANAGEMENT/ INTELLIGENT TRANSPORTATION SYSTEMS

Transportation System Management (TSM) focuses on low cost strategies to enhance operational performance of the transportation system. Measures that can optimize performance of the transportation system include signal improvements, intersection channelization, access management (noted in prior section), HOV lanes, ramp metering, rapid incident response, and programs that smooth transit operation. The most significant measure that can provide tangible benefits to the traveling public is traffic signal coordination and systems. This was the highest ranking strategy from the Traffic Commission. While Beaverton has had success in coordinating traffic signals (Beaverton Hillsdale Highway), there are still areas for improvement. Traffic signal system improvements can reduce the number of stops by 35 percent, delay by 20 to 30 percent, fuel consumption by 12.5 percent and emissions by 10 percent[20]. This can be done without the major cost of roadway widening.

20 *Portland Regionwide Advanced Traffic Management System Plan.* ODOT, by DKS Associates, October 1993.

The City of Beaverton Traffic Commission and the public ranked key TSM/ITS strategies, as noted below:

- Enhance traffic signal systems (areawide control, new technology model 2070 traffic signal controllers, etc.)
- Signal coordination for arterial system
- Bus queue jump lanes
- Transit priority signal systems
- Ramp metering
- High Occupancy Vehicle (HOV) lanes
- One-way streets
- Enhance detection system (video, etc.)

Several of the strategies were elements of an Intelligent Transportation System **(ITS)** plan being implemented regionally by ODOT and participating agencies. ITS focuses on a coordinated, systematic approach toward managing the region's transportation multi-modal infrastructure. ITS is the application of new technologies with proven management techniques to reduce congestion, increase safety, reduce fuel consumption and improve air quality. One element of ITS is Advanced Traffic Management Systems **(ATMS).** ATMS collects, processes and disseminates real-time data on congestion alerting travelers and operating agencies, allowing them to make better transportation decisions. Examples of future ITS applications include routine measures such as "smart" ramp meters, automated vehicle performance (tested recently in San Diego), improved traffic signal systems, improved transit priority options and better trip information prior to making a vehicle trip (condition of roads - weather or congestion, alternative mode options - a current "real time" schedule status, availability/pricing of retail goods). Some of this information will be produced by Beaverton, but most will be developed by ODOT or other ITS partners (private and public). The information will be available to drivers in vehicles, people at home, at work, at events or shopping. The Portland region is just starting to implement **ITS** and the City of Portland and ODOT have already developed their own ITS strategic plan.

One of the transportation system management measures that will have greater impact on peak period travel in the future is ramp metering of **US 26** and ORE 217. ODOT has been ramp metering freeway ramps for these facilities since the early 1990s. This measure has been used to manage overall traffic flow on the freeways and to provide more uniform merge rates at the ramp terminals (to improve safety). The net result of this operation is that vehicles are stored on the freeway on-ramps. While at the initiation of ramp metering vehicle queues could easily be accommodated on the ramps, recently ramps such as the Cornell Road (eastbound) and Beaverton Hillsdale Highway (southbound) ramps have queues reaching back to the arterials. The existing two lane ramp design has been used on each ramp. However, in the future, it may be necessary to consider greater storage areas and other management techniques to effectively manage the freeway flows with ramp metering while not impacting arterial operation by having queues to spill back onto the adjacent streets. The City should work with Washington County and ODOT (particularly as US 26 and ORE 217 are widened and reconstructed) to develop strategies that seek to reduce the impact of ramp metering on adjacent arterial operation. Measures such as added ramp storage, ITS strategies including "smart HOV bypasses" (similar to the Cornell Road ramp), end of queue detection and added arterial turn lane storage approaching ramps should be considered.

As a recommendation of this plan, Beaverton should pursue development of a strategic plan for ITS to proactively identify opportunities to improve system performance and operation. A signal optimization program should be developed city wide for all arterials and collectors. The City should work with ODOT to develop strategies for smart ramp meters.

TRUCKS

Efficient truck movement plays a vital role in the economical movement of raw materials and finished products. The establishment of through truck routes provides for this efficient movement while at the same time maintaining neighborhood livability, public safety and minimizing maintenance costs of the roadway system. To accomplish this, a map of through truck routes in Beaverton has been developed (Figure 8-30). This is aimed at addressing the through movement of trucks, not the local deliveries. The objective of this route designation is to allow these routes to focus on design criteria that is "truck friendly", i.e., 12 foot travel lanes, longer access spacing, 35 foot (or larger) curb returns and pavement design that accommodates a larger share of trucks. Because these routes are through and relate to regional movement, the Metro regional freight system was reviewed. The Draft Regional Transportation Plan[21] includes the following routes in the regional freight system in Beaverton, which are consistent with the city map:

- Sunset Highway (US 26) — Main Roadway Route
- Highway 217 (ORE 217) — Main Roadway Route
- TV Highway (west of ORE 217) — Road Connector
- Farmington Road (between ORE 217 and Cedar Hills Blvd) — Road Connector
- Murray Boulevard (north of TV Highway) — Road Connector
- 158th Avenue (between Cornell Road and Jenkins Road) — Road Connector
- Jenkins Road (between 158th Avenue and Murray) — Road Connector
- Hwy 217 ramps at Allen, Denney, Hall, Scholls Ferry — Road Connector

CRITERIA

Beaverton's Traffic Commission, Technical Advisory Committee and the public created a set of goals and policies to guide trucks and goods movement in Beaverton (see Chapter 2). Several of these policies pertain specifically to trucks. These goals and policies are the criteria that all truck related improvements or changes in Beaverton should be measured against to determine if they conform to the intended vision of the City.

21 *Draft Regional Transportation Plan*, Metro, Draft 2.1, March 22, 1997.

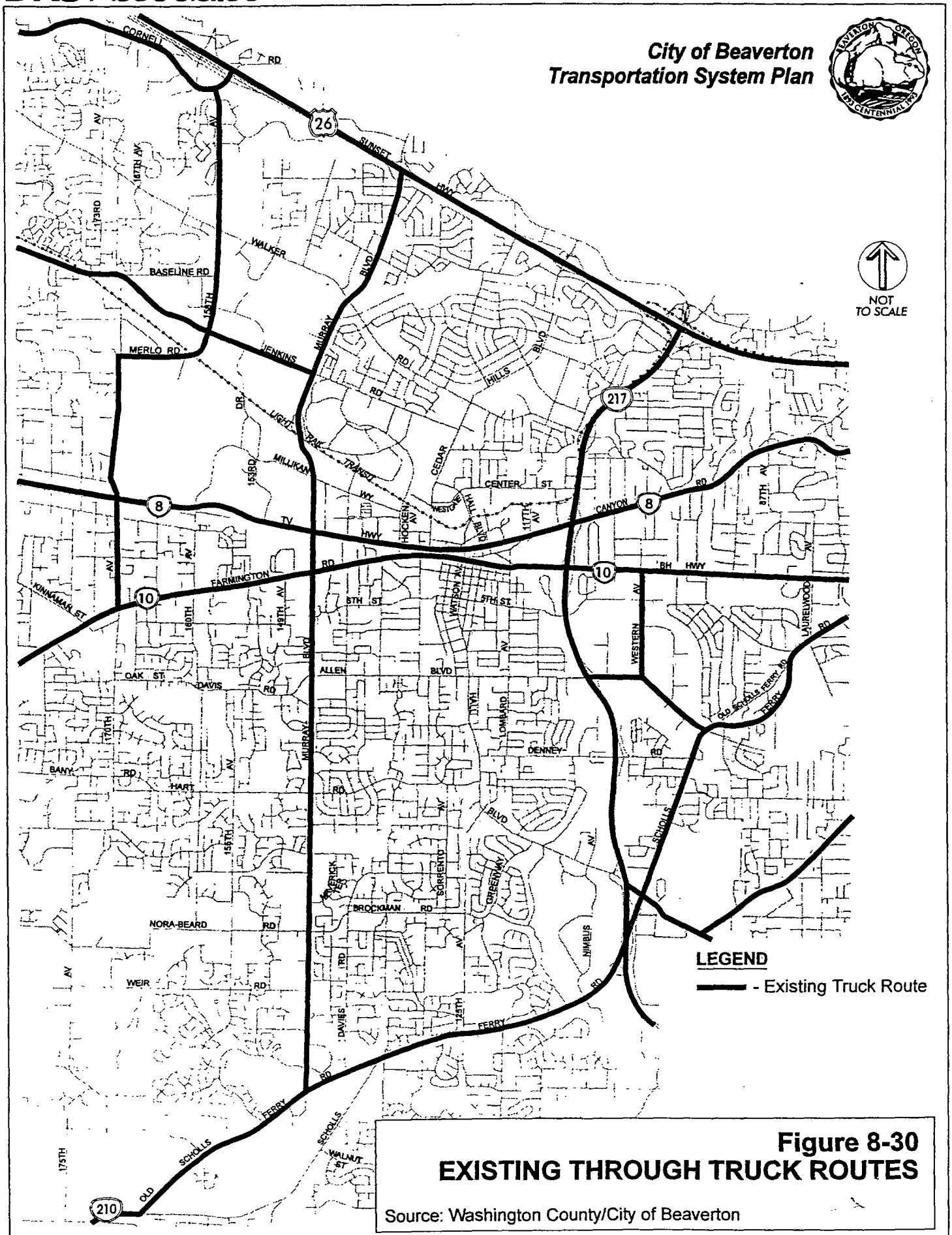


Figure 8-30
EXISTING THROUGH TRUCK ROUTES

Source: Washington County/City of Beaverton

Goal 3, Policy 8: Maintain access management standards for arterial and collector roadways consistent with City, County and State requirements to reduce conflicts between vehicles and trucks, as well as conflicts between vehicles and pedestrians.

Goal 6, Policy 1: Designated arterial routes and freeway access areas in Beaverton are essential for efficient movement of goods; design these facilities and adjacent land uses to reflect the needs of goods movement.

Goal 6, Policy 5: Provide safe routing of hazardous materials consistent with federal guidelines and provide for public involvement in the process.

STRATEGIES

Several strategies were evaluated by the Traffic Commission, Technical Advisory Committee and public for future truck/freight related projects in Beaverton. These strategies are aimed at providing the City with priorities to direct its funds toward truck related projects that meet the goals and policies of the City:

Strategy 1 - "Allow trucks to use all streets in Beaverton for through movement and design streets accordingly"

This strategy did not receive any points by the Traffic Commission or public.

Strategy 2 - "Designate through goods movement and service routes only to arterials"

This strategy focuses trucking activity in Beaverton on the arterial roadways only.

Strategy 3 - "Designate through goods movement as a sub-set of arterials and design to accommodate trucks"

This strategy focuses trucking activity in Beaverton on specified arterial roadways with design accommodations. This was the highest ranking strategy by the Traffic Commission and public participants.

Strategy 4 - "Strategy 3 without design accommodations for trucks"

This strategy focuses trucking activity in Beaverton on specified arterial roadways without design accommodations. This strategy did not receive any points from the Traffic Commission or public.

Strategy 5 - "Strategy 3 with only a selected sub-set of routes with "truck friendly" design accommodations"

This strategy focuses trucking activity in Beaverton on specified arterial roadways with a selected sub-set of routes with "truck friendly" design accommodations. This was the second highest ranking strategy by the Traffic Commission and public.

The map of truck routes is provided for guidance in designing streets in Beaverton. It is recommended that **truck** movement be given special consideration on these routes.

Chapter 9
Other Modes

This chapter summarizes existing and future rail, air, water and pipeline needs in the City of Beaverton.

CRITERIA

Beaverton's Traffic Commission, the public and TSP Technica Advisory Committee developed a set of goals and policies to guide transportation system development in Beaverton (see Chapter 2). Several of these policies relate to the rail and air system needs:

Goal 6, Policy 2: Consider grade separation or gate control for all primary railroad crossings of streets.

Goal 6, Policy 3: Meet federal and state safety compliance standards for operation, construction and maintenance of rail system.

Coordinate with service providers to ensure safety and operational compatibility with surrounding uses.

Goal 6, Policy 4 Consider existing railroad and air transportation facilities to be City resources and reflect the needs of these facilities in land use decisions.

Control land uses in airport noise corridors and limit physical hazards to air impacts.

Goal 6, Policy 5: Provide safe routing of hazardous materials consistent with federal guidelines and provide for public involvement in the process.

Work with federal agencies, the Public Utility Commission, the Oregon Department of Energy, public safety providers and ODOT to assure consistent routes, laws and regulations for the transport of hazardous materials.

RECOMMENDED FACILITIES

Air

Saint Vincent Hospital in Beaverton is listed as a heliport by the Oregon Department of Transportation. The function of this facility is to support emergency medical flights. There are currently no plans for expansion of the heliport facility or an increase in the number of based aircraft. However, Life Flight Network service area expansions are possible.[1]

Rail[2]

All low-density rail lines within the vicinity of Beaverton are operated by Portland & Western (P&W), a sister company of Willamette & Pacific (W&P) Railroad and a subsidiary of Genesee & Wyoming Incorporated.

Trains operate in the Beaverton area seven days per week at various times throughout the day. The current frequency of train traffic is not anticipated to change. However, the number of cars per train will vary and is expected to increase over time depending on the demand to transfer freight by rail.[3]

W&P and P&W are focusing on long-term growth through acquisition of existing trackage to expand existing networks that can aggressively compete with trucks. Part of this growth would be the acquisition of the Cornelius Pass line (north of the Sunset Highway) as well as other line segments in northwestern Oregon (the Burlington Northern/Santa Fe "Oregon Electric Line" between Salem and Eugene and the Port of Tillamook Bay Railroad upon an acceptable agreement between BNSF and W&P/P&W).[4] These acquisitions would help in developing significant new rail traffic and cause rerouting of some existing rail traffic through Beaverton.

Commuter trains operating on existing low-density rail freight line infrastructure is becoming of increasing interest in the Washington and Yamhill County areas. Using this concept as a feeder mechanism for the Tri-Met Westside Light Rail Line is being considered.[5] If commuter rail becomes an option, recreating the old Carlton rail route would create a loop rather than an end point to end point route which is characteristic of most commuter rail systems. Reconstruction of this route is feasible from a financial and engineering perspective and would avoid the need for construction of sidings required for opposing trains, in line signalization, time required for turning and repositioning equipment, and the need for trains to back track over their routes. It would also bring residents in the vicinity of Cornelius, Forest Grove, Gaston, Yamhill, and Carlton into the commuter market.

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1 Based on a telephone conversation with Paula Derr, Administration Liaison for Life Flight Network.

2 Information contained within this section was taken from a letter from Robert Melbo, Willamette and Pacific, December 30, 1996.

3 Fax received from Susan Walsh-Enloe, Portland & Western Railroad, April 17, 1997.

4 Cornelius Pass line information obtained through telephone conversation with Susan Walsh-Enloe , April 17, 1997.

5 The *Inter-Urban Rail Feasibility Study* is examining the feasibility of a commuter rail service from Wilsonville, Oregon to Murray West Light Rail Station in Beaverton.

Unlike larger railroads, local haul railroads such as W&P/P&W are interested in incremental carloads. A recent study by the Oregon Cascades West Council of Governments on the Highway 20/34 Corridor has shown that between Corvallis and Toledo, short-haul rail eliminates 240 to 360 truck trips per day and reduces road surface maintenance by an equivalent 27,000 vehicles. Encouraging movement of certain commodities by rail could help in future highway and maintenance expenses.

Reconstruction of the old Southern Pacific line that connected Hillsboro and McMinnville could create a railroad bypass circumventing the core of Portland, southeast Portland, and Lake Oswego. This route would function as a bypass for rail freight moving through the Portland metro area where congestion wilt increase with more freight and intercity high speed passenger trains. The route would run via Cornelius Pass, Banks, Hillsboro, Carlton, McMinnville and Independence.

Pipeline

The only major pipeline facilities running through the Beaverton area are high pressure natural gas feeder lines owned and operated by Northwest Natural Gas Company. Figure 3-19 shows the feeder line routes for Beaverton.[6] There are no future plans to upgrade or expand the pipeline facilities within the Beaverton area.[7]

Water

There are no navigable waterways within the vicinity of the City of Beaverton that supports commercial or recreational use. Therefore, no policies or recommendations in this area of transportation is provided.

[6] Based on the Portland Area Distribution System Map (Dated: October 1996) received from Northwest Natural Gas Company, Engineering Facilities Information System, April 28, 1997.

[7] Based on telephone conversation with Mike Osterman, Northwest Natural Gas, April 24, 1997.

Chapter 10
Transportation Demand Management

INTRODUCTION

Transportation Demand Management (TDM) is the general term used to describe any action that removes single occupant vehicle trips from the roadway network during peak travel demand periods. The Transportation Planning Rule outlines a goal of reducing vehicle miles traveled (VMT) per capita. TDM measures, applied on a regional basis, can be an effective tool in reducing vehicle miles traveled. The strategies for transportation demand management were identified in working with the City's traffic Commission, the public and TSP Technical Advisory Committee. These committees provided input regarding the transportation system in Beaverton, specifically exploring TDM needs.

BACKGROUND

In 1993, the Oregon Legislature passed a law to help protect the health of Portland area residents from air pollution and to ensure that the area complies with the federal Clean Air Act. The Employee Commute Options (ECO) rules are provisions of the law[1]. The ECO program requires larger employers to provide commute options to encourage employees to reduce auto trips to the work site. It is one of several strategies included in the Ozone Maintenance Plan for the Portland Air Quality Maintenance Area (AQMA) which will be in place until 2006. Employers in the Portland AQMA with more than 50 employees at a work site must provide commute options that have the potential to reduce employee commute auto trips by 10 percent within three years, and maintain the trip reductions through the life of the plan.

TDM can include a wide variety of actions, tailored to the individual needs of employers to achieve trip reduction. Table 10-1 provides a list of several strategies identified in the ECO program. Research has indicated that a comprehensive set of complementary policies implemented over a large

[1] Oregon Administrative Rules Chapter 340, Division 30.

Table **10-1**

Transportation Demand Management Strategies

Strategy	Description	**Potential Trip** Reduction
Telecommuting	Employees perform regular work duties at home, or at a work center closer to home, rather than commuting from home to work. This can be **full** time or on selected work days. This can require computer equipment to be most effective.	82-91% (Full Time) 14-36% (1-2 day/wk)
Compressed Work Week	Schedule where employees work their regular scheduled number of hours in fewer days per week (for example, a **40** hour week in **4** days, or 36 hours in 3 days)	7-9% (9day/80 hr) 16-18% (4/40) **32-36%** (3/36)
Transit Pass Subsidy	For employees who take transit to work on a regular basis, the employer pays for all or part of the cost of a monthly transit **pass.**	19-32% (full subsidy, high transit service) 2-3% (half subsidy, medium transit service)
Cash Out Employee Parking	***An*** employer that has been subsidizing parking (free parking) discontinues the subsidy and charges all employees for parking. **An** amount equivalent to the previous subsidy is then provided to each employee, who then can decide which mode of travel to use (with subsidy above cost of a monthly transit pass, those employees would realize monetary gain).	8-20 % (high transit service available) 5-9 % (medium transit services available) **2-4%** (low transit services available)
Reduced Parking Cost for HOVs	Parking cost charged to employees **are** reduced for high occupancy vehicles (HOV) such as **carpools** and vanpools.	**1-3 %**
Alternative Mode Subsidy	For employees that commute to work by modes other than driving alone, the employer provides a monetary bonus to the employee. Most often, the bonus is provided monthly in the employee's paycheck.	**21-34% (full subsidy of** cost, high alt.modes) **2-4%** (half subsidy of cost,medium alt.modes)
On-Site Services	Provide services a the worksite that are frequently used by the employees of that worksite. Examples include cafes, restaurants, dry cleaners, day care and bank machines.	1-2%
Bicycle Program	Provides support services to those employees that bicycle to work. Examples include, safe/secure bicycle storage, shower facilities and subsidy of commute bicycle purchase.	0-10 %
On-site Rideshare Matching for HOVs	Employees who are interested in carpooling or vanpooling provide information to a transportation coordinator regarding their work hours, availability of a vehicle, and place of residence. The coordinator then matches employees who can reasonably rideshare together.	1-2%

Provide Vanpools	Employees that live near each other are organized into a vanpool for their trip to work. The employer may subsidize the cost of operation and maintaining the van.	15-25% (company provided van with fee) 30-40% (company subsidized van)
Gift/Awards for Alternative Mode Use	Employees are offered the opportunity to receive a gift or an award for using modes other than driving alone.	0-3 %
Provide Buspools	Employees that live near each other or along a specified route are organized into t buspool for their trip to work	3-11 %
Walking Program	Provide support services for those who walk to work. This could include buying walking shoes or providing showers.	0-3 %
Company Cars for Business Travel	Employees are allowed to use company cars for business-related travel during the day.	0-1 %
Guaranteed Ride Home Program	A company owned or leased vehicle or taxi fare is provided in the case of an emergency for employees that use alternative modes.	1-3 %
Time off with Pay for Alternative Mode Use	Employees are offered time off with pay as an incentive to use alternative modes (rather than monetary, bonus, gift or awards)	1-2 %

research geographic area can have an effect on vehicle miles traveled[2]. However,-the emphasis of much of the indicates that these policies go well beyond the low-cost, uncontroversial measures commonly attributed to TDM (such as carpooling, transportation coordinators/associations, priority parking spaces). Elements including parking and congestion pricing, improved services for alternative modes and other market-based measures are needed for TDM to have significant impact on reducing overall vehicle miles traveled.

At the same time, the same research indicates that employee trip reduction programs can be an effective instrument of localized congestion relief[3]. For example, employers can substantially reduce peak hour trips by shifting work schedules, which may not reduce VMT, but can effectively manage congestion. In Wilsonville, a Nike warehouse/distribution site generates 80% less vehicle trips than standard similar uses in the evening peak hour by using employee shifts that are outside the peak

2 *The Potential for Land Use Demand Management Policies to Reduce Automobile Trips,* ODOT, by ECO Northwest, June 1992.

3 *Evaluation of Employee Trip Reduction Programs Based upon California's Experience with Regulation XV,* Institute of Transportation Engineers, Technical Council Committee 6Y-5I, January 1994.

period (4 - 6 PM)[4]. This type of congestion management technique can extend the capacity of transportation facilities.

CRITERIA

Beaverton's Traffic Commission, the public and Technical Advisory Committee created/refined a set of goals and policies to guide transportation system development in Beaverton (see Chapter 2). Several of these policies pertain specifically to transportation demand management:

Goal 4, Policy 1: Support trip reduction strategies developed regionally, including employment, tourist and recreational trip programs.

Encourage implementation of travel demand management program, which reduce the number of single occupant vehicle trips per capita. Shift traffic to of/-peak travel hours. Coordinate trip reduction strategies with Washington County, Metro, Tri-Met, Westside Transportation Alliance, ODOT and DEQ. Seek to raise PM peak average vehicle occupancy (AVO) to 1.3 A VO in the evening peak and/or move 50 percent of standard evening peak trip generation outside the peak hour. Educate business groups, employees and citizens about trip reduction strategies and work with business groups, citizens and employees to develop and implement travel demand management programs.

Goal 4, Policy 2: Limit the provision of parking to meet regional and state standards.

Meet Metro Urban Growth Management Functional Plan Title 2 requirements. Establish maximum and minimum parking requirements. Utilize research conducted by DEQ for guidance in determining demand. Reduce parking by ten percent per capita relative lo prior parking standards in Beaverton. Minimize impact to neighborhoods.

Goal 4, Policy 3: Maintain level of service consistent with regional goals. Reduce traffic congestion and enhance traffic flow through such measures as intersection improvements, intelligent transportation systems and signal synchronization.

Level of service D, Highway Capacity Manual, Chapter 11 is recommended to balance provision of capacity with level of service and funding. Monitor Washington County's current work to develop a regional level of service standard

Goal 4, Policy 4: Plan land uses to increase opportunities for multi-purpose trips (trip chaining).

Multi-stop trips are an effective means of trip reduction. A well planned trip with multiple stops in a compact area is much more efficient than various individual trips. Encourage commercial developments in the City to use new technologies to assist the public in trip chaining

[4] *Nike Parking Lot Expansion* Trip Generation *Study,* City of Wilsonville, by DKS Associates, May 1997.

Goal 4, Policy 6: Support mixed-use development

Mixing of residential and commercial land uses within compact areas that encourage use of alternative modes of travel (walking, biking and transit) has proven to reduce vehicle trips, particularly near major transit stops. Where projects or collective phases of projects generate more than 1000 peak hour vehicle trips, mixing of land uses must be considered (for example, large retail projects mixed with employment, residential and/or entertainment; large office/industrial uses mixed with services).

Goal 4, Policy 6: Improve local transit services to increase transit ridership potential.

Bus service should be available within a 1/4 mile to all residents in Beaverton. Bus service improvements are needed to meet this policy and other policies recommended in this plan. Establish standards necessary for development adjacent to transit streets.

These goals and policies are the criteria that all transportation demand management strategies in Beaverton should be compared against to determine if they conform to the intended vision of the City.

STRATEGIES

Several strategies were evaluated and ranked by the Traffic Commission and the public for transportation demand management in Beaverton. These strategies aimed at providing the City with priorities toward implementing transportation demand management projects that meet the goals and policies of the City. The ranking of the strategies follows from most important to least important:

- Encourage linkage of housing, retail and employment centers
- Provide incentives to take transit and use other modes (i.e., free transit pass)
- Flexible working hours
- Schedule deliveries outside of peak hours
- Coordinate shift changes/staggered work hours
- Telecommuting
- Participate in Westside Transportation Alliance
- Provide information regarding commute options to larger employers
- Work with property owners to install bicycle racks and bicycle amenities

RECOMMENDED PLAN

State, regional and county policy [5] all call for encouraging and promoting transportation demand management. The proposed policy of this plan calls for the city to support TDM. Unlike bicycles, pedestrians and motor vehicles, implementation of this policy does not necessarily require capital

[5] Transportation Planning Rule, Section 660-12-035; Regional Transportation Policy, Metro, July 1996, page 1-39; and Washington County Transportation Plan, October 1988, page 30.

infrastructure. In fact, much more of TDM is policy and management rather than concrete and asphalt. Because of this, the recommended TDM plan for Beaverton consists of the following:

- Encourage development that effectively mix land uses to reduce vehicle trip generation. These plans may include development of linkages (particularly non-auto) that support greater use of alternative modes. Land use density should be higher at transit stations (half mile radius) than elsewhere in the community.

- Develop consistent conditions for land use approval that require all future employment related land use developments to agree to reduce peak hour trip making, through individual or collective TDM efforts. For example, measures which are appropriate for site planning such as close-in parking for carpools, bicycle parking, shower facilities and convenient transit stops should be considered in the design review process.

- Support continued efforts by Washington County, ODOT, DEQ, Tri-Met and the Westside Transportation Alliance to develop productive TDM measures that reduce VMT and peak hour trips. This may require City funding of TDM management to get maximum benefit or results (possibly $25,000 to $75,000 per year).

- As a capital oriented element, coordinate with ODOT and Tri-Met on the development of park-and-ride transit station or freeway interchange locations in Beaverton (these are locations proven to be successful in attracting carpool/transit use. Figure 10-1 shows the current park and ride locations. Expansion of these sites should focus on transit station or freeway interchange locations. Interchange reconstruction projects should be required to identify potential sites for park and ride (even small sites of 50 spaces). Over the next 20 years, a reasonable budget for park and ride expansion might be about $100,000 per year (about 50 spaces a year, assuming pre-existing ROW).

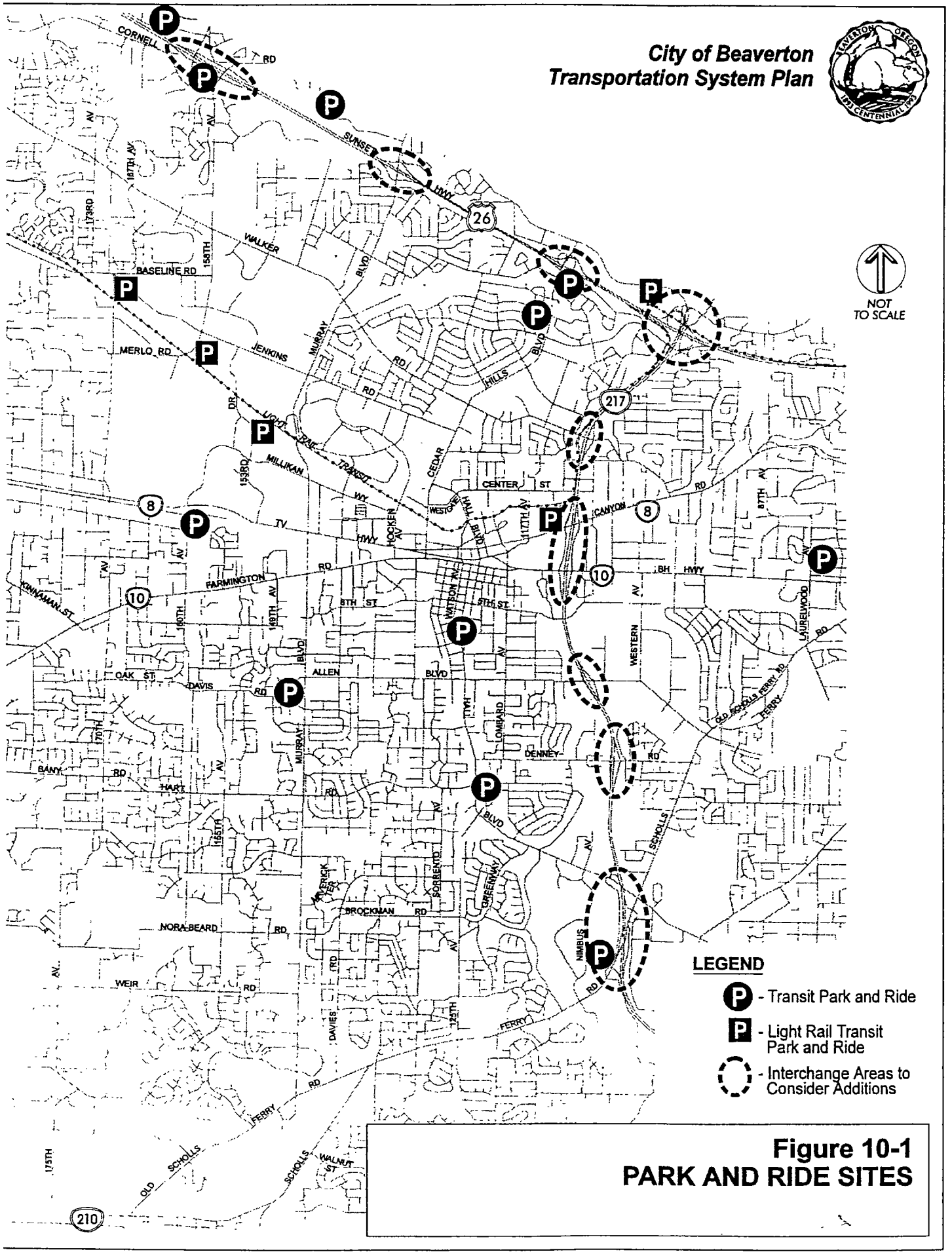


Figure 10-1
PARK AND RIDE SITES

Chapter 11
Funding/Implementation

This chapter outlines the funding sources which can be used to meet the needs of the of transportation system. The costs for the elements of the transportation system plan are outlined and compared to the potential revenue sources. Options are discussed regarding how costs of the plan and revenues can be balanced.

Transportation funding is commonly viewed as a user fee system where the users of the system pay for infrastructure through motor vehicle fees (such as gas tax and registration fees) or transit fares. However, a great share of motor vehicle user fees goes to maintenance, operation and preservation of the system rather than construction of new system capacity. Much of what the public views as new construction is commonly funded (partially or fully) through property tax levies, traffic impact fees and fronting improvements to land development. In Washington County, the Major Streets Transportation Improvement Program (MSTIP) and traffic impact fees (TIF - similar to system development charges - SDC) are key examples.

Motor vehicle fees have become a limited source of funding new transportation system capacity due to many factors

- Gas taxes have been applied on a cents per gallon basis not a real cost percent of true cost basis to the price of gasoline. Increases have not kept pace with cost of transportation needs. The Department of Transportation's Bureau of Transportation Statistics data indicates that in real terms the amount of federal gas tax paid by American households has actually declined by 41 percent from 1965 (when Interstate freeway building was at its peak) to 1995. That occurred with the real dollar gas tax increasing from 4 cents to 18.4 cents in the same time frame (although 4.3 cents per gallon were added for deficit reduction, not transportation in the last ten years).

- Oregon gas tax has not increased since 1992 (currently 24 cents per gallon) and registration fees have been at $15 per vehicle per year for over ten years. Significant new roadway construction, particularly from development, has increased the inventory of roads and maintenance during this time. Additionally, the demands of region-wide growth have increased the need for capacity improvements in the system.

- Significant improvements in fuel economy over the last 15 years have reduced the relationship of user fee to actual use. For example, a passenger car with 12,000 miles of use in a year at 15 miles

per gallon could generate about $350 per year in revenue using current federal, state and county gas tax levels (about 44 cents) compared to less than $200 per year with a current 27 miles per gallon vehicle (a 45 percent reduction).

- The bill is coming due on many roads built 20 years ago in terms of maintenance. In the 1960s, the funds used for maintenance are dwarfed by current maintenance needs. Many of these roads are heavily used and the maintenance activities in the urban area have substantial impact on operation unless work is conducted in off-peak periods, increasing cost to maintain.

FUNDING

Funding Sources and Opportunities

There are several potential funding sources for transportation improvements. These are sources which have been used in the past by agencies in Oregon. In most cases, these funding sources when used collectively are sufficient to fund transportation improvements for local communities. Due to the complexity of today's transportation projects, it is necessary to seek several avenues of funding projects. Unique or hybrid funding of projects generally will include these funding sources, combined in a new package. Table 11-1 summarizes several funding options available for transportation improvements. Examples of funding sources which generally do not provide funding for roadways include: Property Tax General Funds, Car Rental Tax, Transient Lodging Tax, Business Income Tax, Business License Tax and Communication Services Tax.

The federal gas tax is allocated through ISTEA (Intermodal Surface Transportation Efficiency Act). The United States Congress is currently reviewing reauthorization of transportation funding. Federal transportation funds are distributed in the Portland region by Metro (hence the term "regional funds"). ISTEA funds are much more flexible than state gas tax funds, with an emphasis on multi-modal projects. ISTEA funds are allocated through several programs, including the National Highway System (NHS), Surface Transportation Program (STP) and Congestion Management and Air Quality (CMAQ) Improvement Programs. NHS funds focus on the interstate highway system and CMAQ funds are targeted for non-attainment areas.

Within the Portland region, funding for major transportation projects is typically brought to a vote of the public for approval. Specific projects are outlined for use of public funds, such as the Major Streets Transportation Improvement Program (MSTIP) in Washington County or the Westside Light Rail Project. Because of the need to gain public approval for transportation funding, it is important to develop a consensus in the community which supports needed transportation improvements. That is the value of the Transportation System Plan. In most communities, where time is taken to build a consensus regarding a transportation plan, existing funding sources (similar to those noted) can be redefined to meet the needs of the community.

In Beaverton, the new tax base levy included approximately $1 million per year for three years for neighborhood traffic management and traffic signalization. While this is not a secure long-term funding source, it reinforces the public's ability to approve funding when needs are clearly present.

Table 11-1
Potential Transportation Revenue Sources

Type	Description
System Development Charges (SDC)	SDCs or Traffic Impact Fees have been used in Oregon and throughout the United States. The cornerstone to development of SDCs involves two principals: 1) there must be a reasonable connection between growth generated by development and the facilities constructed to serve that growth (generally determined by level of service or connectivity); and 2) there must be a general system-wide connection between the fees collected from the development and the benefits development receives. Charges are typically developed based on a measurement of the demand that new development places on the street system and the capital costs required to meet that demand. Washington County has a traffic impact fee (TIF) which was voter approved. SDCs do not require a vote of the public.
Gas Tax	The State, cities and counties provide their basic roadway funding through a tax placed on gasoline. State gas tax is approved legislatively while local gas taxes are approved by voters. State funds are dedicated to roadway construction and maintenance, with one percent allocated to pedestrian and bicycle needs. This tax does not fall under the Measure 5 limits, because it is a pay-as-you-go user tax. Washington County has a one percent gas tax and has considered a recent ballot initiative to increase this tax in 1997.
Other Motor Vehicle Fees	The state collects truck weight mile taxes, vehicle registration fees, and license fees. These funds are pooled together with the gas tax in distributing state motor vehicle fees to local agencies. Annual motor vehicle fee allocations to Washington County amount to about $100 million (including gas tax). Washington County is currently considering raising motor vehicle registration by $15 per year.
Street Utility Fees	Certain cities have used street utility fees for maintenance. The fees are typically collected monthly with water or Sewer bills. These funds are not for capacity improvements, but for supporting local roadway maintenance based upon land use type and trip generation. This frees other revenue sources for capacity needs. Utility fees can be vulnerable to Measure 5 limitations, unless they include provisions for property owners to reduce or eliminate charges based on actual use.
Exactions	Frontage improvements are common examples of exaction costs passed onto developers. These have been used to build much of Beaverton's local street system. Developers of sites adjacent to unimproved roadway frontage are responsible to provide those roadway improvements. Developers of sites adjacent to improvements identified as SDC projects can be credited the value of their frontage work, which is included in the SDC project-list cost estimate.
Local Improvement Districts (LID)	LIDs provide a means for funding specific improvements that benefit a specific group of property owners'. LIDs require owner/voter approval and a specific project definition. Assessments are placed against benefiting properties to pay for improvements. LIDs can be matched against other funds where a project has system wide benefit, beyond benefiting the adjacent properties. Fees are paid through property tax bills.
Special Assessments	A variety of special assessments are available in Oregon to defray costs of sidewalks, curbs, gutters, street lighting, parking and CBD or commercial zone transportation improvements. These assessments would likely fall within the Measure 5 limitations. In Washington County, other examples of transportation assessments include MSTIP (Major Streets Transportation Improvement Program) and the local maintenance property tax levy. Both of these are property tax assessments which have been imposed through votes of the public. A regional example would be the Westside LRT where the local share of funding was voter approved as an addition to property tax
Driveway Fees	Gresham collects a Public Street Charge and a Driveway Approach Permit Fee. These fees are project specific and vary year to year based upon development permits. These funds are used for city maintenance and operation.
Employment Taxes	Tri-Met collects a tax for transit operations in the Portland region through payroll and self employment taxes. Approximately $120 million are collected annually in the Portland region for transit.
Oregon Special Public Works Fund	The Special Public Works Fund (SPWF) Program was created by the legislature in 1985 as an economic development element of the Oregon Lottery. The program provides grants and loan assistance to eligible municipalities. There has been limited use of these funds on urban arterials. This is commonly used on state highways (a recent example being Immediate Opportunity Funds used for the US 26/Shute interchange associated with Nike)

COSTS

Order of magnitude cost estimates were developed for the projects identified in the auto, bicycle and pedestrian elements. Costs estimates from the RTP or MSTIP projects in Beaverton were used in this study. Other projects were estimated using general unit costs for transportation improvements, but do not reflect the unique project costs that can (on some projects due to right-of-way, environmental mitigation and/or utilities) significantly add to project cost (25 to 75 percent in some cases, due to environmental, utility or right-of-way issues). Development of more detailed project costs can be prepared in the future with more refined financial analysis. Since many of the project overlap elements of various modes, the costs were developed at a project level incorporating all modes, as appropriate, It may be desirable to break project mode elements ,out separately, however, in most cases, there are greater cost efficiencies of undertaking a combined, overall project. Each of these project costs will need further refinement to detail right-of-way requirements and costs associated with special design details as projects are pursued. Table 11-2 summarizes the elements of the plan which were not project specific and how costs will be addressed for these elements.

Tables 11-3, 11-4 and 11-5 summarize the key projects in the TSP by three key groups including:

- Bicycle Improvements
- Pedestrian Improvements
- Motor Vehicle Improvements

Many of the project costs have been developed by Washington County, Metro or ODOT for projects in the RTP. Where the TSP identified the comparable needs, these project costs have been utilized.

Table 11-2
Issues With Non-Auto, Pedestrian and Bicycle Costs

Mode	Issues
Parking	The TSP does not define specific projects. Off-street parking will be provided by private property owners as land develops. Downtown area parking issues will need to be addressed based upon needs, using packaged funding including local and private sources.
Neighborhood Traffic Management	Specific NTM projects are not defined. These projects will be subject to neighborhood consensus, based upon City of Beaverton design criteria. A city NTM program should be developed with criteria and policy adopted by the City Council. Humps/undulations *can* cost $2,000 to $4,000 each and traffic circles *can* cost $3,000 to $8,000 each. A speed trailer can cost about $10,000. Based upon this, a limited program could cost $75,000 per year, depending upon neighborhood needs. If this cost were entirely funded through the city. implementation may lag behind neighborhood needs. If private cost sharing (or matching funds) is established as a criteria for the neighborhoods, the program could become more comprehensive. Value provided by' NTM should be considered by the, City in determining whether to purse non-public funds. It is important that any new development incorporate elements of NTM as part of its on-site design.
Public Transportation	Tri-Met will continue to develop costs for implementing transit related improvements. The City can supplement this by incorporating transit features through development exactions and roadway project design. Developing new transit services in Beaverton similar to the corridor services outlined in the TSP will require Tri-Met to reallocate funding or seek additional sources of operating funds.
Trucks/Freight	Roadway funding will address these needs. Roadway overcrossings of railroads can use special PUC funds set aside for safety improvements to railroad crossings.
Rail	Cost to be addressed and funded by private railroad companies and the state.
Air, Water, Pipeline	Not required by City.
Transportation Demand Management	Requirements of TDM will need to be exacted as conditions of development. Costs could range from $25,000 to $75,000 per year. DEQ will be establishing regional guidelines. Private business will need to support employee trip reduction programs.

Table 11-3
Pedestrian Action Plan Project List

Project	From	To	Approximate Cost ($1000's dollars)
Priority: Connect key pedestrian corridors to schools, parks, recreational uses and activity centers			
155th Avenue	Davies Road	Nora-Beard Road	357
Priority: Fill in gaps in pedestrian network			
Farmington Road/B-H Highway	Hocken Avenue	Erickson Avenue	42
Beaverton-Hillsdale Hwy (north side)	91st Avenue	Laurelwood Avenue	64
TV Highway/Canyon Road (gaps on one-side)	170th Avenue	87th Avenue	323
158th Avenue (east side)	Blue Ridge Drive	approx 500 ft south	30
Cedar Hills Boulevard (west side)	Walker Road	Park Way	87
Cedar Hills Boulevard	Park Way	Butner Road	90
Murray Boulevard	Jenkins Road	Millikan Way	270
Denney Road	Nimbus Avenue	Scholls Ferry Road	210
Allen Boulevard (gaps)	Western Avenue	Scholls Ferry Road	60
Western Avenue	5th Street	800 feet south of 5th	48
5th Street (south side)	Alger Avenue	Western Avenue	117
6th Street/Division Street	Murray Boulevard	170th Avenue	318
Davies Road (east side)	Scholls Ferry Road	Hiteon Drive	66
Scholls Ferry Road/Old Scholls Ferry Road (gaps)	Scholls/Old Scholls (west end)	Beaverton-Hillsdale Highway	1,650
SW Park Way (gaps)	Walker Road	ORE 217	186
110th Avenue (gap-one side)	Beaverton-Hilldale Hwy	Canyon Road	30
Priority: Pedestrian corridors to transit stations and stops			
153rd Drive	Jenkins Road	Light Rail Transit	114
Connection Roadway	153rd Avenue	Murray Boulevard	84
Millikan Way	Murray Boulevarrd	Hocken Avenue	180
160th Avenue	TV Highway	Davis Road	312
117th Avenue	Light Rail Transit	Center Street	30
Downtown Beaverton Connectivity collector roadways	Hocken Avenue/ TV Highway	110th Avenue/ Cabot Street	900
Lombard Avenue	Center Street	Beaverdam Road	60
Jay Street	158th Avenue	Jenkins Road	126
125th Avenue	Hall Boulevard	Brockman Road	168
Farmington Road	Murray Boulevard	172nd Avenue	346
Farmington Road	172nd Avenue	185th Avenue	190
Nimbus Avenue	Denney Road	Cirrus Drive	120

Project	From	To	Approximate Cost ($1000's dollars)
Walker Road	ORE 217	Canyon Road	182
Walker Road (gaps)	173rd Avenue	Mayfield Avenue	384
Davies Road	Old Scholls Ferry Road	Scholls Ferry Road	53
Murray Boulevard	Old Scholls Ferry Road	Scholls Ferry Road	96
Millikan Way	Hocken Avenue	Cedar Hills Blvd	50
170th Avenue	Rigert Road	Alexander Street	449
170th Avenue	Alexander Street	Baseline/Jenkins	319
170th/173rd Avenue	Baseline/Jenkins Road	Walker Road	192
173rd Avenue	Walker Road	Cornell Road	206
173rd Avenue	Cornell Road	Bronson Road	48
Hart Road/Bany Road (gaps)	Murray Boulevard	170th Avenue	206
Hart Road (gaps)	Hall Boulevard	Murray Boulevard	43
Cornell Road (one-side)	158th Avenue	185th Avenue	144
Baseline Road	158th Avenue	166th Avenue	96
Oak Street/Davis Road/Allen (gaps)	Murray Boulevard	170th Avenue	144
Allen Boulevard (gaps)	Alice Lane	Western Avenue	98
Nora-Beard Road	175th Avenue	155th Avenue	245
Weir Road	175th Avenue	160th Avenue	216
175th Avenue-Rigert Road	170th Avenue	ORE 210	658
Merlo Road/158th Avenue (gaps)	Jay Street	Walker Road	53
Jenkins Road	153rd Avenue	Murray Boulevard	98
Hart Road/Bany Road	170th Avenue	185th Avenue	187
SW Beaverton collector roadway	Scholls Ferry Road	175th Avenue	302
SW Beaverton circulation roadway	High Hill Lane	Nora-Beard Road	240
Priority: Pedestrian corridors that connect neighborhoods			
SW Butner Road (one side)	Murray Boulevard	Park Way	258
SW Downing Road (gaps on south side)	Murray Boulevard	Meadow Drive	36
Meadow Drive (one side)	Downing Road	Walker Road	33
Laurelwood Avenue/87th Avenue	Canyon Road	Scholb Ferry Road	378
Jamieson Road	Pinehurst Drive/Cypress	Scholls Ferry Road	180
Cypress Street	Jarnieson Road	Elm Avenue	69
Sexton Mountain Drive (gaps)	Maverick Terrace	Nora-Beard Road	258
96th Avenue (one side)	Canyon Road	Beaverton-Hillsdale Highway	78
Pedestrian Action Plan Projects Total Cost:			**$ 12,583**

Table 11-4
Bicycle Action Plan Project List

Project	From	TO	Approximate cost ($1000's of dollars)
Priority: Connect key bicycle corridors to schools, parks, recreational uses and activity centers			
Greenway Road bike lanes	Hall Boulevard	approx. 200 feet east of Downing	214
155th Avenue/Weir Road bike lanes	Davis Road	Murray Boulevard	1,037
Millikan Way/160th bike lanes	Murray Boulevard	TV Highway	454
Millikan Way/160th bike lanes	TV Highway	Davis Road	438
125th Avenue	Scholls Ferry Road	Brockman Road	277
Canyon Road	142nd Avenue	91st Avenue	1I42
Priority: Fill in gaps in bicycle network			
Greenway/Brockman bike lanes	125th Avenue	approx 200 ft east of 125th Avenue	17
Hall Boulevard bike lanes	Greenway	ORE 217	311
Hall Boulevard bike lanes	12th Street	900 ft south of Allen	134
Hall Boulevard bike lanes	Beaverton-Hillsdale Hwy	Cedar Hills Blvd	68
Watson Avenue bike lanes	Beaverton-Hillsdale Hwy	Hall Boulevard	59
Cedar Hills Boulevard bike lanes	Farmington Road	Walker Road	441
Cedar Hills Boulevard bike lanes	US 26	Foothill Drive	84
6th Street bike lanes	Murray Boulevard	Menlo Drive	210
Murray Boulevard bike lanes (west side of Murray Boulevard)	Farmington Road	approximately 200 ft south of TV Highway	42
Denney Road bike lanes	Bel Aire Drive	Scholls Ferry Road	319
Allen Boulevard bike lanes	approximately 200 ft east of Western Avenue	Scholls Ferry Road	193
Western Avenue bike lanes	Beaverton-Hillsdale Hwy	Allen Boulevard	294
Beaverton-Hillsdale Hwy bike lanes	Western Avenue	91st Avenue	235
91st Avenue bike lanes	Beaverton-Hillsdale Hwy	Canyon Road	249
Old Scholls Ferry Road	Murray Boulevard	175th Avenue	781

Project	From	To	Approximate cost ($1000's of dollars)
Priority: Construct bike lanes with roadway improvement projects			
125th Avenue bike lanes	Hall Boulevard	Brockman Road	263
Farmington Road bike lanes	Murray Boulevard	172nd Avenue	540
Farmington Road bike lanes	approximately 500 ft east of Lombard	approximately 500 ft west of Lombard	75
Walker Road bike lanes	ORE 217	Canyon Road	285
Walker Road bike lanes	Cedar Hills Boulevard	Lynnfield Lane	131
Walker Road bike lanes	178th Avenue	185th Avenue	270
Millikan Way bike lanes	Hocken Avenue	Cedar Hills Blvd	79
170th Avenue bike lanes	Rigert Road	Alexander Street	701
170th/173rd Avenue bike lanes	Baseline Road	Walker Road	300
170th Avenue bike lanes	Alexander Street	Baseline/Jenkins	499
173rd Avenue bike lanes	Walker Road	Cornell Road	323
Hart Road bike lanes	Murray Boulevard	167th Avenue	435
Hart Road bike lanes	Hall Boulevard	Murray Boulevard	450
Hart Road/Bany Road bike lanes	167th Avenue	170th Avenue	60
Cornell Road bike lanes	158th Avenue	185th Avenue	450
Baseline Road bike lanes	158th Avenue	170th Avenue	180
Murray Boulevard bike lanes	Old Scholls Ferry Road	Scholls Ferry Road	150
Oak Street/Davis Road/Allen bike lanes	Murray Boulevard	170th Avenue	420
Allen Boulevard bike lanes	ORE 217	Murray Boulevard	255
Allen Boulevard bike lanes	ORE 217	approximately 200 A west of Western Ave	94
Nora-Beard Road bike lanes	175th Avenue	155th Avenue	435
Weir Road	175th Avenue	155th Avenue	390
175th Avenue-Rigert Road bike lanes	170th Avenue	ORE 210	1,028
Bicycle Action Plan Projects Total Cost:			**$14,813**

Table **11-5**
Motor Vehicle Improvement List

Roadway/Intersection	Improvement	Jurisdiction	cost
Project Included in the **RTP/MSTIP/STIP/CIP** Funding Programs			
Farmington Road	Widen to 5 lanes with bike lanes from Murray Boulevard to 173rd Avenue	Wash Co/ODOT	$ 12,000,000
Farmington Road	Widen to 5 lanes with bike lanes from 173rd to 209th	ODOT	$ 26,288,000
Scholls Ferry Road	Add **turn** lanes/widen/realign Scholls Ferry/Old Scholls Ferry city limits to 175th	ODOT/Wash Co	$ 4,200,000
170th Avenue	Widen to 3 lanes with S/W and B/L Rigert to Blanton to Alexander	Wash Co/MSTIP	$ 12,400,000
170th/173rd Avenue	Construct/widen road to 3 lanes with S/W and B/L Baseline Road to Walker Road	Wash Co/MSTIP	$ 3,100,000
Jenkins: Murrav to 158th	Widen to 5 lanes MM	Wash Co.	$ 1.700.000
Jenkins: Cedar Hills to Murray	Widen to 3 lanes MM	Wash Co.	$ 2,800,000
Walker Rd: **Murrav** to 185th	Widen to 5 lanes with bike lanes and sidewalks	Wash Co	$ 10,800,000
Cornell Road: Bethany to 179th	Widen to **5** lanes **with** bike lanes and sidewalks	Wash Co	$ 3,100,000
Murray Boulevard Overcrossing	Widen to four lanes Millikan to Terman	Wash Co.	$ 4,700,000
Lombard: Broadway to Farmington	Realign roadway to align with segment to the north (3 lanes)	City/MSTIP	$ 1,600,000
Davis Road	Widen road and add bike and pedestrian facilities from Allen to 170th Avenue.	Citv/MSTIP	$ 4,300.000
Lombard: LRT to Center	Extend 3 lane section with sidewalks	City	$ 1,700,000
Allen: Menlo to Main	Widen to 5 lanes	City	$ 3,100,000
125 Avenue: Greenway to Hall	Extend 3 lane section with sidewalks	City	$ 10,000,000
6th/Division: Murray to 149th	Extend 2 lane roadway	City	$ 700,000
Millikan: Hocken to Cedar Hills	Extend Millikan to the ***east*** to connect to Cedar Hills at Henry Street	City/MSTIP	$ 2,700,000
Canyon Road: ORE 217 to 117th	Provide median access control, relocate traffic signal, add **turn** lanes	ODOT	$ 5,950,000
US 26: ORE 217 to Murray	Widen highway to 6 lanes and add braided ramps	ODOT	$ 13,797,000
ORE 217: US 26 to Canyon	Widen highway and complete ramp work	ODOT	$ 30,500,000
ORE 217: TV Hway to 72nd	Widen highway to 6 lanes and provide auxiliary lanes to freeway	ODOT	$ 60,000,000
Hall Boulevard at Scholls Ferry	Provvide southbound right **turn** lane	ODOT	$ 250,000
Murray Boulevard	**Traffic** signal interconnect Farmington to Millikan	ODOT	$ 35,000
SUBTOTAL OF PROJECTS IN FUNDING PROGRAMS			$ 215,720,000
Projects **NOT** included in current funding programs			
US 26: 185th to Murray	Widen highway to 6 lanes, install auxiliary lanes as warranted between interchanges	ODOT	$ 23,700,000
ORE 217: Walker/Cabot/Canyon Braid	Braid ramps between Canyon and Walker/Cabot split diamond	ODOT	$ 20,800,000
ORE 217: Denny/Allen CD		ODOT	$ 8,600,000
TV Highway: Cedar Hills to 185th	Widen to 7 lanes/MM	ODOT	$ 33,200,000
TV Highway: 117th to Hillsboro	Access Control strategies to improve lane capacities	ODOT	$ 15,000,000
Farmington: Hocken to Murray	Widen to **5** lanes/MM	ODOT/City	$ 4,100,000

Table 11-5
Motor Vehicle Improvement List

170th: Division to Blanton	Widen to 5 lanes/MM	Wash Co	$ 2,500,000
170th: Alexander to Merlo	Widen to 5 lanes/MM	Wash Co	$ 2,800,000
170th: Merlo to Baseline	Widen to 3 lanes/MM	Wash Co	$ 2,100,000
173rd: Cornell to Bronson	Build new 2/3 lane roadway with grade separation of US 26 connecting to 174th/MM	Wash Co/ODOT	$ 14,800,000
158th/Merlo: 170th to Walker	Widen to 5 lanes/MM	City	$ 4,000,000
Cedar Hill Blvd: Walker to US 26	Complete 5 lane roadway/MM/Access Control	Wash Co	$ 2,100,000
143rd/Meadow: Science Park - Walker	Establish a new 2 lane roadway connection, including a grade separation of US 26/MM	Wash Co	$ 19,900,000
Walker Road: Murray to ORE 217	Widen to 5 lanes/MM	Wash Co	$ 26,500,000
Jenkins Road: Murray to Cedar Hills	Widen to 5 lanes/MM	Wash Co	$ 3,800,000
Scholls Ferry: Hall to Old Scholls	Widen to 7 lanes/MM	Wash Co	$ 15,300,000
Murray: Old Scholls to Scholls Ferry	Extend Murray south to Walnut as 3 lane road/MM	Wash Co.	$ 3,500,000
Bany/Hart: 170th to Murray	Improve to 2-3 lanes/MM	Wash Co	$ 3,800,000
Beard/Nora: Murray to 175th	Improve to 2-3 lanes/MM	Wash Co	$ 6,600,000
Center: 114 to Cedar Hills	Widen to 3 lanes	City/Co	$ 3,200,000
Allen: ORE 217 to Western	Widen to 5 lanes/MM	City	$ 1,000,000
Allen: ORE 217 to Murray	Complete 5 lane widening/MM	City	$ 5,400,000
Weir: Murray to 175th	Improve roadway with 3 lanes/MM	City	$ 3,700,000
Davies: Old Scholls to Scholls Ferry	Close Scholls at Old Scholls, Extend Davies south to Scholls 3 lanes/MM	City	$ 1,500,000
Hall north of Center	Extend new 5 lane roadway north of Center to connect with Jenkins at Cedar Hills/MM	City	$ 11,000,000
Center: Cedar Hills to Karl Braun	Extend public roadway 3 lanes/MM	City	$ 1,500,000
141st: Tek to Farmington	Realign and extend 2/3 lane roadway/MM	City	$ 2,800,000
Nimbus Avenue: Hall to Denney	Extend 2/3 lane roadway/MM	City	$ 8,300,000
Local Streets: Downtown Area	Henry Street, Rose Biggi, 114th/Griffith, Broadway extension and others per Regional Ctr	City	$ 25,600,000
Local Streets: NW Beaverton	185th/Cornell/170th/TV Highway - add local connectivity	City	$ 4,900,000
Local Streets: SW Beaverton	175th/Weir/155th/Sexton Mountain - add local connectivity	City	$ 3,900,000
Local Street: Scholls	Scholls Ferry to 175th north to Alvord - add local and collector connectivity	City	$ 6,600,000
Intersection Improvements	Addtion of intersection turning lanes	City/County/State	$ 57,175,000
Traffic Signals	Addition of 50 traffic signals per plan	City/County/State	$ 12,500,000
SUBTOTOAL OF PROJECTS NOT IN CURRENT FUNDING PROGRAMS			**$ 362,175,000**

TOTAL OF MOTOR VEHICLE MASTER PLAN		$ **577,895,000**
NOTE: MM - Multi-modal improvement including sidewalks and bicycle lanes		

FINANCING ISSUES

The collective funding requirements of the Beaverton TSP is outlined by mode in Table **11-6.** Based upon current sources of funding, the cost of the needs far exceeds the existing funding over 20 years. It should be noted that elements of the bicycle and pedestrian project lists which are redundant to the street improvement list were deducted to avoid double counting. Some of the difference can be made up by land use development exactions, where unimproved frontage is built to the TSP standards as projects are implemented. **A** rough estimate of the potential value of fronting development exactions is about **$30** to 50 million dollars over **20** years, assuming that all the unimproved frontages of roadway projects (sidewalk plus **18** feet of street) identified in this plan were exactions. This would assume that the fronting improvements would **not** be credited to TIF/SDC revenue which is already included in the existing funding outlook.

Table 11-6
Costs for Beaverton Transportation Plan over 20 years
1997 Dollars

Transportation Element		**Approximate Cost**
Street Improvement Projects*:	Current Funding	$2**15,720,000**
	Unfunded	**$362,175,000**
Signal Coordination/ITS Systems ($275,000/yr)		$5,500,000
Road Maintenance (assumes **4%** per year growth)		**$5 1,000,000**
Bicycle Master Plan		**$10,730,000**
Pedestrian Action Plan		**$7,100,000**
Pedestrian/School Safety Program **($10,000/yr)**		**$200,000**
Sidewalk Grant Program ($50,000/yr)		$1,000,000
Park-and-ride Expansion (1,000 spaces)		$2,000,000
Neighborhood Traffic Management (Initial Program)		$1,500,000
Neighborhood Traffic Management **($75,000/yr)**		**$1,500,000**
TSP Support Documents (i.e., Design standard update ...)		**$750,000**
TDM Support ($50,000/yr)		**$1,000,000**
TWENTY YEAR TOTAL in 1997 Dollars		**$660,175,000**

NOTE: **Many** of these projects include multi-modal elements built with streets, such as bike lanes **and** sidewalks.

The funding sources which can be used for various modes of transportation are summarized in Table 11-7. Historically, funding sources have been developed to support roadways for automobiles. Few funding sources have been allocated to other travel modes. Other travel modes were commonly implemented as an element of a roadway project, if funded at all. While federal gas tax funds are specifically allocated to multi-modal and balanced investments in transportation, other sources of funds cannot (state gas tax). To address these other modes the City will need to specifically allocate funds for a balanced transportation system, while managing the overall needs and revenues.

Table 11-7
Fundable Projects by Source

Source	Bicycle	Pedestrian	Streets	Maintenance	Transit
System Development Charges (SDC)	•	•	✓		
Gas Tax/Motor Vehicle Fees					
STATE	•	•	✓	✓	
FEDERAL	✓	✓	✓	✓	✓
Street Utility Fees				✓	
Exaction's	•	✓	✓		
Local Improvement Districts (LID)	•	•	✓		
Tax Increment Financing					
Special Assessments		•	✓	✓	✓
Fees					
Other Vehicle Fees			✓		
Oregon Special Public Works Fund	•	•	✓		✓
Employee Tax					✓

• Typically as part of roadway project where other modes are incorporated
✓ Used as a primary source of funding

Current transportation revenue for the City of Beaverton can be summarized as noted in Table 11-8. Presuming a constant funding level for 20 years, this would potentially fund nearly $280,000,000 of transportation projects (maintenance, operation, construction). As a comparison to this number, the amount of regional funding allocated to transportation projects in Beaverton, using the RTP constrained funding scenario was added up. Approximately $215 million of transportation projects have been identified in the current funding programs.[1] While these numbers are not exactly the same (the numbers from Table 11-8 include all City and local funding sources), they clearly point out that

[1] Interim Federal Regional Transportation Plan, Metro, July 1995, Table 7-2.

there is a serious shortfall between the cost of the transportation plan and the current funding sources. The transportation plan costs of $660 million are much greater than the best case revenue scenario of **$280** million using existing funding sources. This **$380** million gap generates the need to explore several other concepts:

Table **11-8**
Estimation of Available Transportation Funding From Existing Sources
1997 Dollars (approximate)

Source	Approximate Annual Revenue
State Motor Vehicle Fees to City	**$3,000,000**
County Gas Tax to City	**$250,000**
TIF to City	**$1,200,000**
Beaverton Tax Base Allocation to signals/NTM	$800,000
Miscellaneous	$250,000
MSTIP to City (approximate)	**$2,500,000**
State/Federal Fees use in City (approximate, assuming 35% capital allocation)	$6,000,000
Annual TOTAL	**$14,000,000**
20 YEARS OF CURRENT FUNDING	**$280,000,000**

Reduce the transportation plan costs. This can eliminate funding shortfall by deferring or eliminating projects. While some cost reduction is expected in the normal implementation of transportation projects of this size, to meet the total funding shortfall by this strategy would have impacts. Lower services levels for all modes of transportation, more extensive congestion, and impacts on community livability would be expected. Depending how much of the plan is eliminated (assuming land use forecasts occur), this strategy could significantly impact the economic potential of Beaverton (business relocate, people move out, development does not reach 2015 forecasts). Additionally, by deferring capital costs of significant projects outside of **20** years it can be expected that the same projects will costs multiples of their estimated costs in the short term. The is similar to deferring roadway maintenance and paying **4** to **5** times the cost of the same improvement by waiting years into the future to act. Rising land costs, development of vacant land adjacent to roadways which increasing mitigation requirements and greater public impacts (dealing with hundreds of residents rather than one vacant land property owner) erode transportation dollars, making deferral an unwise choice in managing the public interests.

Build alternative mode projects and eliminate costly road projects. This strategy Is commonly discussed by people as a way to "get people out of their cars". However, the overall future need for transportation in Beaverton results in the majority of people using motor vehicles (single occupant vehicles and carpool/vanpools). This strategy would severely impact bus transit, bicycle and pedestrian travel which all use the same streets as automobiles.

Increase gas tax to meet TSP needs. Gas tax, although assumed to be the major transportation funding element, is one of many sources of funds. It is primarily used to maintain the transportation system, not build new local street system capacity. Presently, state gas tax generates about $3 million

per year in revenue for the city and the county one cent gas tax generates about $260,000 per year to the city. If all the motor vehicle fees of the state, county and city were increased proportionately to by themselves fund the Beaverton transportation shortfall, it would require an increase of over $0.75 per gallon of gasoline. This amount of gas tax increase by itself would not be reasonable today, and points to the fact that funding will need to be from a variety of sources, not just one fee.

Make development pay for all the difference in future transportation needs since they are caused by growth. If all the excess funds were divided by the increment of trips between 1997 and year 2015, an additional $7,200 per evening peak trip would need to be charged to all development on top of all existing fees, taxes and exactions. This would impact the economic development potential of Beaverton since other cities (or states) may not have similar charges. Additionally, many of the transportation projects identified in the TSP serve existing and future users. For example, a roadway connection project with sidewalks and bicycle lanes (such as 170th/173rd/175th Avenues) is beneficial to all system users. This approach would unfairly impose responsibility of TSP implementation on development.

Do **not allow land development unless all transportation needs can be funded.** This concept is known as concurrency. This has been implemented in various forms through level of service code requirement to state laws (Florida and Washington). The examples over the last 15 years of these policies is clear. Funding policy redirects itself to fix capacity problems. Transit, pedestrian, bicycle and other mode facilities are generally not based on capacity but connectivity and access. The outcome in these communities is always larger roads - from Clark County, Washington to Contra Costa County, California to Boward County, Florida. A balanced transportation system is difficult to develop under concurrency assumptions. Outright development moratoria based upon transportation is difficult to impose, given Oregon Comprehensive Planning and property rights. Many communities would make significant sacrifices to have economic conditions as vibrant as Beaverton's. Creating extraordinary conditions for development would impact economic vitality.

Even ODOT has taken positions recently that have opposed rezoning of land if state facilities do not have adequate capacity and funding is not programmed. This is similar to concurrency. It blends assumptions that Comprehensive Plan land uses could be adequately served and that all new/additional vehicle trips are bad for the transportation system. Again, the linkage of concurrency in any form, no matter how simple or appealing, does not produce the most effective or efficient transportation system. This approach defers improvements, increasing their eventual cost of implementation. It is a reactive policy, not a progressive plan to reduce overall transportation system costs.

Use bonds to fund transportation needs: Bonds are commonly used for financing transportation projects (both MSTIP and Westside LRT are property tax levies that have used tax receipts as a way to support use of bonds to fund transportation projects). These bonds would require a vote of the public. This type of program would include a list of transportation projects that would be funded and a general time frame for completion. Because increases to property tax are not generally viewed positively by the public, an extensive public involvement effort would be necessary to coordinate the understanding of need, the extent that the bonds should fund transportation needs and what the actual program elements would include.

In studying various strategies, it is clear a "one size fits all" plan will not succeed. It is recommended that a diversified and pragmatic strategy be developed that reflects political realities, economic needs, community livability and balanced transportation system. Since transportation funding is not controlled locally, it will require steps to be taken at the state, regional, county and city level to be effective and fair. The following steps are necessary to implement the Beaverton TSP.

- Prioritize all transportation projects in Beaverton and integrate the highest ranking projects into the Fiscally Constrained Regional Transportation Plan. This assures that the projects of greatest need have the most secure funding source. Additionally, as conditions change in the future, the need for certain projects may change.

- Funding only a portion of the total twenty year TSP needs would be pragmatic, allowing for changing needs and priorities. Identifying funds for about 67% to 75% of the most expensive element of the TSP (motor vehicle needs) allows for potential policies and programs to reduce, vehicle demand to mature and increase potential dependence on other modes and technology to reduce motor vehicle demand. This would allow funding of project 10 to 15 years out and permit funding increases to occur more timely with needs.

- Given the size of relative gas tax increase to fund transportation improvements in Beaverton, a more diverse source of state and regional funding will be needed. Assuming that funding shortfalls can best be paid by gas tax statewide ignores the fact that the rest of the state may not share Beaverton's or the Portland region's need to fund transportation. Three steps can be taken including:

  Statewide: Support of gradual and incremental increases to state gas tax are made (about $0.06 to $0.10 per gallon each six years (assumes three increases in 20 years). Support statewide collection and increases to truck fees (presently weight-mile tax, diesel tax in other states).

  Regionally: Support increases to motor vehicle registration and air quality surcharges (payable every two years at DEQ check up or upon sale of vehicle based upon actual miles driven). These relate the urban needs and problems.

  County: Update the TIF/SDC to better reflect arterial and collector needs in the county. Credits and fronting improvements will need to be reevaluated, particularly with more and more potential for redevelopment. It can almost be assured that TIF's would need to be increased, given the county wide transportation needs.

- At a city level, consider needed legislative changes to allow broad use of local improvement districts, area SDC's and bond measures to fund elements of the transportation plan. One of the toughest problems for development of concurrency is up front costs. By using improvement districts, costs can be financed over time and paid when the land is generating revenue. Tax increment financing commonly used for redevelopment has nearly been discontinued by public agencies due to tax reduction measures. This means of funding transportation infrastructure

(selling bonds to pay for infrastructure that are paid off by the net income of increased tax revenues due to increased property value) can be very effective in district level master plans or redevelopment. Additionally, unique assessment districts that allow vacant property owners to defer all assessments until resale or development of land could also help reduce property owner concerns of proactively addressing transportation needs before they become more expensive address.

- Another bonding concept, requiring legislative change, would be to bond sidewalk/fronting improvements in already-developed areas with net proceeds tied to the title on the land such that upon transfer or resale the city is paid back, including interest. Current property owners would benefit from the improvements and could pay off the assessment earlier at their discretion. With the current housing market conditions, this has more applicability than when market conditions are slow. The city would need to front and back the bonds and if over the bond life resale/transfer does not occur, the city would be responsible. Given that the great majority of homes change ownership over 20 years, the risks should be minimal. This concept requires further study before testing the application.

- Use exaction process to protect right-of-way needs for twenty years in the future to meet transportation system demands. This *can* reduce the ultimate cost of street improvements. This requires an analysis process (build out assessment or frequent updates) to stay current of future right-of-way needs based upon changing land use (for example, three lanes in 2015 may need to be *5* lanes in 2025).

At a city level, develop funding programs within the City budget (using new motor vehicle fees or other funding sources) to encourage private/public cooperation in funding transportation improvements. This may take several forms and will required more assessment. One example would be establishing a city funding source that can be matched with private funding sources to implement elements of the **TSP.**

APPENDIX A

SUMMARY OF TRANSPORTATION RELATED PAST PLANS AND POLICIES

Appendix A
Past Plans and Policies

Several transportation related reports provide a historical reference for past analysis decision making in the City of Beaverton. In responding to Transportation Planning Rule (TPR) section 660-12-015, applicable state, regional, county and city transportation system policies, plans and standards have been reviewed. Key recommendations and policies of these documents are summarized below:

***Comprehensive Plan for the City of Beaverton,* City of Beaverton, September 11,1988.** The comprehensive plan summarizes objectives for transportation:

- Coordinate transportation projects, policy issues and development actions with all affected governmental units in the area.
- Decrease reliance on street system for many trips by increasing the use of public transit, including constructing a LRT facility, improving transit service in neighborhoods, and making transit safer, more attractive and convenient to users.
- Develop alternatives to building more costly street facilities by affecting factors related to demand, such as attempting to control peak hour traffic volumes, ridesharing and carpooling and encouraging other modes of travel, such as bicycling and walking.
- Establish a partnership between the public and private sectors to effect improvements to the transportation system.

The Western Bypass is identified as the number one road priority in the region and the Westside Light Rail project is identified as the number one transit priority.

The purpose of the circulation portion of this plan is to provide for movement within and through the community. The extension of Lombard from Broadway north to Canyon, connecting with Lombard north of Canyon is included in the plan. The City's objectives and policies for circulation in the community is provided in the plan. The circulation objectives include the following:

- Improve north-south and east-west traffic movement through the city by improving existing arterial and collector streets and developing new ones designated on the plan map.
- Protect neighborhoods from excessive through traffic while providing reasonable access to and from residential streets.
- Reduce traffic congestion and traffic flow through measures such as intersection improvements and signal coordination.
- Decrease reliance on major collector and arterial streets for private driveway access by developing alternative means of access.

- Improve traffic safety through intersection and street improvements where identified as well as other measures such as law enforcement and community education.
- Manage development process to obtain adequate street right-of-way and improvements commensurate with the level and impact of development.
- Provide a classification of streets which establishes the function objectives of each type of roadway.
- Develop and implement public street standards which recognize the multi-purpose nature of street right-of-way for utility, pedestrian, bicycle, transit, truck and auto use, and recognize these streets as important to community identity as well as providing a needed service.
- Develop and maintain appropriate on-site loading, parking and internal circulation standards for private development.
- Develop more specific subarea plans to address the particular circulation and traffic problems of neighborhoods and commercial and industrial areas of the city.
- Maintain the quality of life of the area through proper location and design of transportation facilities.

The plan defines each roadway functional classification and the corresponding system design criteria. The following are the roadway classification categories: principal routes, major arterials, minor arterials, collectors and local streets. The functional classification plan street standard map for the City of Beaverton is attached (Figure 1).

The plan recommends the City to establish a neighborhood traffic management program to address residential neighborhood issues such as excessive through traffic. The plan identifies the City's existing policies regarding residential streets in the community and residential street standards.

The plan includes a section on transit facilities and services which provides location and performance criteria for transit centers, park-and-ride lots and light rail transit stations. The plan identifies the City's objectives and policies regarding transit facilities and services in the community.

The plan provides a comprehensive system for bicycle and pedestrian movements through the community. The plan identifies the City's objectives and policies regarding bikeway and pedestrian facilities in the community. Bicycle and pedestrian facilities are categorized by roadway functional classification.

The downtown development plan chapter of the comprehensive plan includes 1) design and development objectives, 2) downtown framework establishing the type and location of desired land uses, the network of roads, pedestrian and transit (LRT) facilities and the design concept for integrating these uses, **3)** localized policies and **4)** an implementation program. An east-west arterial should be designed to provide better access to downtown business and employment rather than for use by through traffic.

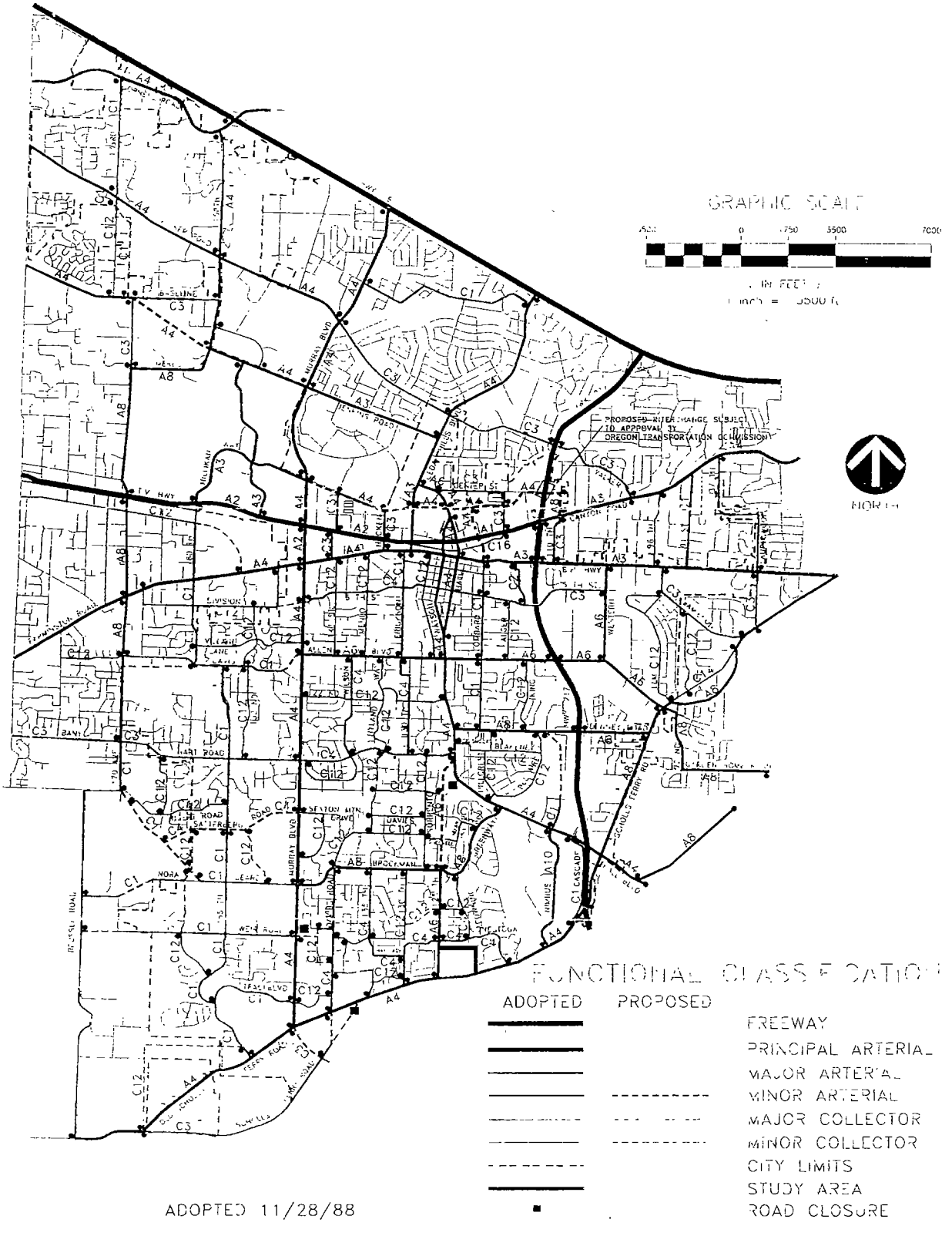
CITY OF BEAVERTON

FUNCTIONAL CLASSIFICATION PLAN

PLATE 5

STREET STANDARD MAP

PLATE *8*



ADOPTED 11/28/88

EXHIBIT D

***Development Code of the City of Beaverton - Ordinance 2050,* City of Beaverton, September 1995 (date of printing).** The purpose of the ordinance is to implement the comprehensive plan. Two of the objectives of the ordinance focus on lessening congestion of streets and facilitating adequate provisions for essential urban services such as transportation and streets. The ordinance includes chapters for design review, off-street parking and loading, land divisions and transportation facilities. The transportation facilities chapter establishes standards and performance requirements for all streets and other transportation facilities constructed or reconstructed within the City of Beaverton. An objective of the design review process to prevent undue traffic congestion and pedestrian hazards. The land divisions chapter establishes procedures and standards for the division of lands within the City of Beaverton.

***Review of Existing and Proposed Plans Relative to the Downtown CBD Memorandum,* Matt Grady, September 20,1996.** This memorandum provides a consolidated summary of existing and proposed plans that impact and control downtown development. The following six plans were examined and compared in this document: The City of Beaverton Comprehensive Plan (the Downtown Development Plan), The City of Beaverton Development Code, Proposed Metro Function Plan–Phase I, Proposed Multiple Use Section and Proposed Central Beaverton Downtown District.

***Washington County Transportation Plan Comprehensive Plan Volume XV,* October 1988.** The Transportation Plan is one element of the Comprehensive Plan and establishes policies and strategies designed to meet existing and future travel needs based on projected population and employment growth through year 2005. The Plan describes how system improvements should be made under three funding scenarios. The general policies of the Transportation Plan follow which apply to all aspects of the Plan:

- Mobility Policy: to provide a transportation system that maximizes the mobility of Washington County residences and businesses.
- Efficiency Policy: to seek the greatest efficiency of movement possible for Washington County residents and businesses, in terms of travel time and distance, and efficient management of the transportation system.
- Safety Policy: to maintain and improve transportation system safety.
- Equity Policy: to ensure the cost of transportation facilities and services are borne by those who benefit from them.
- Environmental Policy: to limit and mitigate adverse environmental impacts associated with traffic and transportation system development through facilities design and system management.

The plan includes several policies which establish direction for specific components of the transportation system and for system implementation and funding. The plan provides a roadway functional classification system map.

***Washington County Transportation Capital Improvement Program FYI 995/1996-FY 1999/2000*, Washington County, February 1996.** This program evaluates, ranks and schedules transportation capital project needs in Washington County for the next five years. The purpose of the CIP is to:

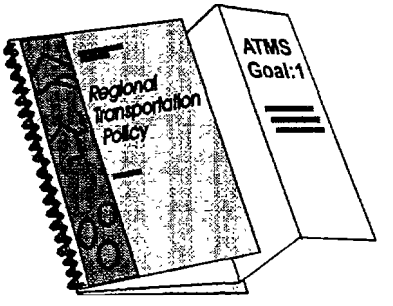
- Evaluate capital project needs identified in the Transportation Plan for implementation over the coming five-year period.

- Encourage and guide the efficient allocation of scarce financial resources among a multitude of transportation needs.
- Involve and inform the public and neighboring political jurisdictions **of** transportation decisions.

The projects are identified as either committed projects (projects under design or construction at the time of CIP preparation) and uncommitted projects (project submittals which have net been approved for funding). The uncommitted projects are grouped by project category and evaluated using project ranking criteria. The committed projects identified in the program are summarized in Table 1.

Roadway/Intersection	Improvement
Farmington Road	Widen to **4** lanes with continuous center turn lane and bike lanes from Murray Boulevard to 172nd Avenue.
Cedar Hills Boulevard	Complete sidewalks and bike lanes on both sides from Parkway to Butner and extend sidewalk on west side from Parkway to Huntington.
170" Avenue	Widen to 3 lanes with sidewalks and bikeway from Rigert to Blanton, widen to **5** lanes from Blanton to Alexander and add/modify traffic signals.
170th/173rd Avenue	Construct new road and widen existing road to three lanes with sidewalks and bikeway from Baseline Road to Walker Road.
Oak Street	Widen road and add bike and pedestrian facilities from Beaverton City Limits to **170"** Avenue.
Baseline Road	Widen **to 5** lanes from **158"** Ave to **170"** Ave with bike lanes and sidewalks (Tri-Met) and widen to **5** lanes from **170"** Ave to **177"** Ave with bike lanes and sidewalks (County).
Scholls Ferry Road	Add turn lanes and bike lanes to Scholls Ferry/Old Scholls Ferry from east of the Beaverton city limits to **175"** Ave. Realign the Scholls Ferry/Old Scholls Ferry and Scholls Ferry/Beef Bend intersections, adding turn lanes and traffic signals.
Walker Rd/Mayfield Ave intersection	Construct eastbound left turn lane, install traffic signal and illumination.

Regional Transportation Policy*, Metro, July 25,1996.** This is the updated ***Regional Transportation Plan policies which is driven **by** requirements contained in the state Transportation Planning Rule (TPR) and the need to support the Region 2040 Growth Concept with a multi-modal, balanced transportation system. This document provides the policy context and framework for transportation system planning required under the state TPR for cities and counties. The overall goal of the RTP is to develop a safe, efficient and cost-effective transportation system that serves the region's current and future travel needs and implement the **2040** Growth Concept while recognizing the financial constraints and environmental impacts associated with that system. The guiding principals of the plan include public involvement, accessibility and mobility, system cost, timing and prioritization of system improvements and environmental, economical and social impacts.



***Interim Federal Regional Transportation Plan*, Metro, April 1995.** The purpose of the federal regional transportation plan (RTP) is to develop a transportation system what provides adequate levels of accessibility to a growing region at the same time recognizing the financial constraints and environmental impacts associated with that system. This document is intended to meet the requirements of the federal Intennodal Transportation Efficiency Act (ISTEA) of 1991, the Clean Air Act Amendments (CAAA) of 1990, and the Americans with Disabilities Act (ADA) of 1991. This report includes a roadway functional classification map, freight network map, primary transit network map, proposed regional bicycle network map and a proposed national highway system map. The RTP recommends transportation improvements to the year 2015.

***Oregon Transportation Plan*, Oregon, 1992.** The Oregon Transportation Plan (OTP) sets the general direction for transportation development statewide for the next twenty years. The purpose of the plan is to guide development of a safe, convenient and efficient transportation system that promotes economic prosperity and livability. The OTP contains two elements: Policy and Systems. The OTP provides overall direction for allocating resources and coordinating modes of transportation. It also reviews the relationship of transportation to land use, economic development, the environment, and energy use. Key aspects of the OTP focus on a transportation system that is balanced, efficient, accessible, environmentally responsible, has connectivity among places and modes and carriers, **is** safe and financially stable.

***Transportation Planning Rule*, Oregon Administrative Rules *(OAR)* 660-12.** The adoption of the Transportation Planning Rule (TPR) in May 1991, (updated in April 1995) mandates comprehensive transportation planning for cities in Oregon. The TPR defines the specific requirements for a transportation system plan. The areas of analysis addressed in the TPR for a transportation system plan include the following:

1. Roadway capacity and level of service.
2. Transit capacity and capacity utilization.
3. Bicycle and pedestrian system capacity.
4. Adjustment of turning movement volumes produced by travel demand forecasting models.
5. Estimation of future transportation needs (person travel), reflecting:

    - population and employment forecasts consistent with comprehensive plans
    - effects of measures to reduce reliance on the automobile
    - increased residential, commercial, and retail development densities
    - location of neighborhood shopping centers near residential areas
    - better balance between jobs and housing within subareas
    - maximum parking limits for office and institutional developments
    - appropriate levels of transportation facilities to serve land uses identified in transportation plans
    - increases in average automobile occupancy
    - increases in modal shares of non-automobile modes
    - effects **of** TDM programs and rearranged land uses on the number and length of automobile trips per capita

- effects of land use and subdivision regulations to increase non-auto tripmaking

6. Estimation of future goods movement needs.
7. Access management.

***Statewide Transportation Improvement Program 1996-1998*, Oregon Department of Transportation, January 1996.** This document, referred to as the STIP, is a program schedule for the Oregon Department of Transportation. The purpose of the STIP is to schedule funding for Oregon's highest priority transportation projects for the next two years. The projects listed in the STIP that are relevant to Beaverton follow:

- Widen US 26 (Sunset Highway) to six lanes from Murray to Highway 217 and add braided ramps WB from Hwy 217.
- Add third lane EB on US 26 (Sunset Highway) from Beaverton/Tigard Hwy to Camelot interchange.
- Widen, relocate signal and raise median on OR-8 (TV Highway) from SW 117th Avenue to SW 110th Avenue.
- Replace curbs and sidewalks, construct handicap ramps, and overlay roadway/bike lanes on TV Highway from 160th Avenue to 117th Avenue.
- Widen TV Highway at Esplanade Center, move bus stop and add shelter pad.
- Widen to four lanes with a continuous left turn lane on Farmington (OR-10) from 209th Avenue to 172nd Avenue.
- Widen to four lanes with a continuous left turn lane on Farmington (OR-10) from 172nd Avenue to Murray Blvd.
- Realign Scholls (ORE 210) at Beef Bend Road to include safe horizontal and vertical alignment and add left turn channelization.
- Widen highway and structure and complete ramp work on OR-217 from Sunset Highway to TV Highway.
- Construct additional travel lanes and auxiliary lanes on OR-217 from TV Highway to 72nd interchange.
- Widen ORE 217 NB off-ramp at Scholls for left turn lane.
- Widen NW Quadrant of Beaverton/Tualatin Highway at Locust to allow for restriping, reposition signal heads and recut loop detectors.
- Construct access between the Beaverton Central LRT station and surrounding street network at Mill Street/Henry Avenue.
- Widen Allen Boulevard to 66' curb to curb and add center left turn lane from 141st Avenue to Menlo Avenue.
- Widen and restripe to accommodate left turn lane and reconfigure signals at Allen Boulevard/Western Avenue.
- Widen Cornell Road to five lanes between 185th Avenue and 158th Avenue.
- Widen 112th Avenue to 3 lanes and extend to Cedar Hills.
- Construct left turn lane on ORE 219 at Grabel Road.
- Reconstruct ORE 219 including structures from Farrnington Road to Scholls.

Bike/Pedestrian Elements:

- Construct bikeway on Beaverton-Tualatin Highway from Pacific Highway to SW McDonald Street.
- Construct left turn refuge on Beaverton/Tualatin Highway at Washington Drive.
- Construct bikeway on Beaverton/Tualatin Highway from Lower Boones Ferry Road to Martinazzi Avenue.
- Murray South Signal Interconnect- interconnect signals from Farmington Road to Millikan Avenue.
- Provide sidewalks and bike lanes on both sides of Cedar Hills Boulevard (ORE 217 ped/bike fund)
- Extend Fanno Creek Bikepath from Denny Road to Allen Boulevard.
- Acquire and develop final section of abandoned right of way of Oregon Electric RR to create pedestrian/bike way system.

***Draft Bikeway Plan*, Washington County, June 1995.** The bikeway plan includes a draft preferred alternative bikeway network. The plan consists of the following elements:

- Background information which forms the basis for plan development. The bikeway planning process, relevant laws and regulations, the existing and committed bikeway network, current design standards, maintenance and safety are discussed.
- Plan development which discusses the public participation process, policy and implementing strategies, the development of bikeway network development and the preferred bikeway network.
- Plan implementation which discusses funding sources, revenue projections and plan implementation.
- Appendixes which include listing of existing and committed urban bike lanes/shoulders, inventory of major collectors and arterials and inventory of pathways/trailways within the Tualatin Hills Park and Recreation District.

***Western Bypass Study ODOT*, Parsons Brinckerhoff Quade & Douglas, Inc., August 1994.** This study provides a corridor-level environmental analysis of the north/south transportation problems in eastern Washington County and evaluates five alternatives. The study found that the current transportation system will not provide an adequate level of service to accommodate expected growth demands. The performance characteristics of a package of improvements would fall between those of the Transportation System Management alternative and the Arterial Expansion Alternative. Funding constraints has required ODOT to cut over $400 million in projects from the STIP, including $150 million in the Portland metropolitan area. The Oregon Transportation Commission has reaffirmed its philosophy to preserve and maintain the existing transportation systems as its top priority. ODOT is prepared to take the following actions:

- Halt further work on the rural portion of the Bypass.
- Bring the Western Bypass Study to closure.
- Utilize work completed to satisfy the requirements of a Major Investment Study as indicated by ISTEA.

- Take immediate steps necessary to relieve congestion and safety problems in ORE 217 Corridor with an additional travel lane in each direction on ORE 217. Additional improvements in the ORE 217 corridor will be needed.
- Consideration should be given to I-5 to ORE 99W connection, other arterial improvements and rural road improvements.

***Western Bypass Study Draft Recommended Alternative,* ODOT by Parsons Brinckerhoff Quade & Douglas, Inc., September 1995.** The draft recommended alternative includes components from the five alternatives analyzed in the 'Western Bypass Study. The draft recommended alternative is a package of roadway capacity improvements, transit improvements, transportation demand management programs and bicycle and pedestrian facilities. These roadway improvements include:

- 36 local and state roadway projects from the No-Build Alternative (many are already built).
- **48** local and state roadway projects form the TSM alternative, many of which are either funded or built.
- Four roadway projects from other alternatives include: 1) Widen Scholls Ferry Road to seven lanes between 121st Avenue and ORE 217, 2) Improve intersections on Murray Boulevard at Allen and TV Highway, 3) Widen ORE 99W to six lanes between Commercial Street and Durham Road and upgrade ORE 99W to a limited access highway between Durham Road and Six Corners, **4)** Build a new four-lane, limited access expressway from I-5 to ORE 99W with interchanges at Tualatin/Sherwood-Edy Road and ramps at I-5/I-205 and ORE 99W.

The draft recommendation includes an continuous north-south bicycle route that would use:

- Existing bicycle lanes on Murray Boulevard (ORE 26 to Scholls Ferry Road).
- New bicycle lanes on a Murray Boulevard connection (ORE 99W to Scholls Ferry).
- New bicycle lanes on ORE 99W to a new expressway.
- New bicycle lanes on a new expressway (I-5 to ORE 99W).

***SW Davis Road and 155th Avenue Transportation Engineering Study,* Lancaster Engineering and Access Engineering, July 20,1995.** This transportation study analyzed SW Davis Road and 155th Avenue in Beaverton. The following improvements were recommended in this study:

- An eastbound right turn lane on Davis Road at 160th.
- A traffic signal is warranted at Davis (Oak) and 170th. Left turn lanes are warranted on 170th at Davis.
- The existing pedestrian crossing traffic signal on Davis at 155th should be relocated or revised when Davis road is reconstructed.
- A traffic signal, an eastbound right turn lane, a northbound right turn lane, and left turn lanes on Hart at 155th are required to accommodate projected traffic at an acceptable level of service.
- A traffic signal at 155th and Beard is warranted by year 2020.

Canyon Road/Farmington Road One-Way Couplet, City of Beaverton, by DKS Associates, May **1992.** This study provides a traffic operations assessment of the one-way couplet alternatives developed by the City of Beaverton. The key findings of the analysis include:

- The one-way couplet alternatives can provide added capacity to serve future traffic demands, if enough lanes are incorporated into the one-way geometry of Canyon Road and Farmington/Beaverton-Hillsdale.
- To accommodate traffic at acceptable levels of service, Canyon Road and Farmington Road would need to be five lane roadways and triple turn lanes would be needed.
- Peak hour traffic queues would extend over the railroad grade crossings creating a safety hazard.
- The disadvantages of one-way circulation on Canyon Road and Farmington/Beaverton-Hillsdale are significant (to business, transit, access, VMT, etc.) and would likely outweigh the operational benefits.

Canyon Road Corridor Study, ODOT, February **1992.** This Metropolitan Area Corridor Strategies (MACS) study performed by ODOT (at the request of the City of Beaverton in 1990) was aimed at evaluating current conditions on Canyon Road, analyzing the benefits of the East-West Arterial to Canyon Road, and identifying improvements necessary for Canyon Road to maintain an adequate carrying capacity. The study was conducted to be consistent with Beaverton's Downtown Plan and incorporate planned improvements to US 26 and ORE 217 as well at the extension of MAX to Washington County (Westside Light Rail Transit - LRT). The findings indicate that simply widening Canyon Road to six lanes will be inadequate in solving future congestion problems along the corridor. Provision of an East-West Arterial, with access to ORE 217 would effectively disperse traffic in the Beaverton core area, reducing traffic on Canyon Road. The effectiveness of the East-West Arterial is dependent on access to ORE 217. However, to assure Canyon Road operates efficiently in the future, an access management plan would need to be developed with the widening of Canyon Road, reducing the number of driveway/intersections and installing a median.

SW Farmington Road, SW 209th Avenue-SW Murray Boulevard Transportation Traffic and Safety Reporf, ODOT, by DKS Associates, February **1990.** The ODOT improvement program for Farmington Road between 209th Avenue and Murray Boulevard includes widening of Farmington Road to accommodate additional lanes and intersection improvements along the corridor. This report summarizes the traffic-related factors affecting project design and traffic impacts within the project corridor area and was used for environmental clearance. The 2015 build alternatives met the following objectives of the study: improve level of service, improve safety on the route, conform to Washington County's Transportation Plan and provide safe access for vehicles entering or leaving properties. The no-build alternative did not meet any of the study objectives.

Canyon Road Study Phase 11-A, City of Beaverton, by Robert Conradt, June **1988.** This report evaluated 14 alternatives for solving traffic problems on Canyon Road. Three alternatives were recommended for further consideration which included widening of Canyon Road and developing a new parallel street north of Canyon Road. Plans which only improve Canyon Road or widen Walker Road were eliminated. Critical intersections were identified as TV Highway at Murray Boulevard and Canyon Road and Cedar Hills. Traffic conditions were assessed in 1985 and 2005 under various alternatives. Widening

of Canyon Road nearly solves the projected traffic problem. The effectiveness of any alternative is sensitive to the arrangement of the ORE 217 ramps. An added east-west street can help disperse the traffic and reduce volumes on parallel street.

***Beaverton Creek Master Plan,* Kittelson and Associates, Inc., March 20,1996.** This study analyzed the traffic impacts of the Beaverton Creek Transit Oriented Development (TOD), a high-density mixed use development. The intersection of SW Murray Boulevard and SW Jenkins Road currently operates at an unacceptable level of service (LOS F). The suggested mitigation is adding right turn pockets on the southbound and westbound approaches, overlapping their phases with left turn movements from the adjacent roads. The following summarizes the results of the 2010 traffic analysis (without Beaverton Creek TOD):

- All intersections and roadways will require improvements to maintain acceptable levels of service. The improvements include: SW Jenkins Road to be widened to a five lane roadway, SW Millikan Road to be widened to a four lane road, SW 153rd Drive requires two-way left turn lane or left turn pockets in vicinity of 154th Terrace and main access to LRT park and ride lot and SW Murray Boulevard needs to be a six lane roadway in the vicinities of Jenkins Road and Millikan Way (at least four lanes, possibly six, required over LRT right-of-way).
- Signal warrants met at 154th Terrace/153rd Drive and South park and ride lot access road onto 153rd Drive.
- Dual left turn lanes are required at the signalized locations of Murray Boulevard/Jenkins Road northbound and southbound, Millikan Way/Murray Boulevard northbound and southbound and Millikan Way/153rd Drive southbound.

The following summarizes the results of the analysis of year 2010 conditions with Beaverton Creek TOD (includes mitigation measures for year 2010 conditions):

- Murray Boulevard needs to be a six lane roadway in the vicinity of the proposed northeast site access road.
- Signal warrants also met at Murray Boulevard/northeast site access roads and 153rd Drive/northwest site access roads.
- Dual left turn lanes also required at Jenkins Road/Murray Boulevard eastbound and westbound approaches and Jenkins Road/153rd Drive northbound.
- Separate right turn pockets are required at the Millikan Way/153rd Drive intersection in the eastbound and westbound approaches.

***Beaverton/170th Avenue Park-and-Ride Station Impact Study,* DKS Associates, October 27,1994.** This study identified future year traffic volume impacts within the Waterhouse South neighborhood with the Westside LRT system . The following summarizes the results of this analysis:

- Maintain neighborhood traffic measures in place today. Future traffic volumes would exceed the desired limit established by the City of Beaverton along SW Estuary Drive, SW 166th Avenue, SW 167th Avenue and SW Schendel Avenue.

- Monitor traffic volumes on neighborhood streets following 170th LRT station opening. If the desired traffic limit has been exceeded, then alternative measures (described in the report) for SW 166th Avenue should be considered.
- Construction of a north/south road between Walker Road and Baseline Road along 173rd Avenue/170th Avenue alignment would result in lower traffic volumes in the neighborhood and has beneficial effects on neighborhood circulation without producing negative impacts at other locations. This improvement should be strongly considered.
- Signal timing improvements along Baseline Road and SW 158th Avenue would reduce the existing and future delay along these roadways and thus, reduce the incentive for vehicles to use the Waterhouse neighborhood.

The ***Transportation Planning*** Rule requires that classification of streets within the City be provided.[1] The classification must be consistent with state and regional transportation plans for continuity between adjacent jurisdictions. The City of Beaverton Comprehensive Plan, Washington County Comprehensive plan, Metro Regional Transportation Plan and ODOT guide functional classification. Table 1 summarizes the relationships between the plans. Figure 1 provides a cross reference to the City of Beaverton roadway classification summarized in the tables.

[1] *Transportation Planning Rule*, **State of Oregon, Department of Land Conservation and Development, Section 660-12-020(2)(b), April 1995.**

Roadway	Roadway Classification According to Jurisdiction					
	City of Beaverton[2]	Tigard'	Portland'	Washington Co[5]	Metro[6]	ODOT
US 26 (Sunset Hwy)	Freeway		Reg. Trafficway	Freeway	Reg. Through-Rte (Freeway)	Statewide
ORE 217	Freeway	Arterial		Freeway	Reg. Through-Rte (Freeway)	Statewide
ORE 8 (TV Hwy)	Principal Arterial			Principal Route	Reg. Through-Rte (Arterial)	District
ORE 8 (Canyon Rd)	Major Arterial			Major Arterial	Multi-Modal Art (Major)	District
ORE 10(Farmington/BH)	Major Arterial		Maj City Traffic St	Major Arterial	Multi-Modal Art (Major)	District
ORE 210 (Scholls Ferry)	Major Arterial Minor Arterial (east of 217)	Arterial	Maj City Traffic St	Major Arterial Minor Arterial (east of 217)	Multi-Modal Art (Major) (Minor)-east of ORE 217	District
Murray Boulevard	Major Arterial			Major Arterial	Multi-Modal Art (Major)	
Cornell Road	Major Arterial			Major Arterial	Multi-Modal Art (Major)	
Walker Road	Minor Arterial (west of Murray) Major Collector (east of Murray)			Minor Arterial (west of Murray) Major Collector (east of 217)	Local Street	
Cedar Hills Boulevard	Minor Arterial			Minor Arterial	Multi-Modal Art (Minor)	
Baseline Road	Minor Arterial (west of 170th) Major Collector (east of 170th)			Minor Arterial	Multi-Modal Art (Minor)	
Jenkins Road	Minor Arterial			Minor Arterial	Multi-Modal Art (Minor)	
170th/Merlo/158thAve	Minor Arterial			Minor Arterial	Multi-Modal Art (Minor)	
153rd Avenue	Minor Arterial			Minor Arterial		
Millikan Way	Minor Arterial			Minor Arterial	Local Street	
Hall Boulevard	Minor Arterial	Arterial		Minor Arterial	Multi-Modal Art (Minor)	District (e. of 217)
Watson	Minor Arterial			Minor Arterial	Mti-Modal Art (Min.)-n.of TV	
Allen Boulevard	Minor Arterial			Minor Arterial	Multi-Modal Art (Minor)	
Denney Road	Minor Arterial			Minor Arterial	Multi-Modal Art (Minor)	
Greenway/Brockman	Minor Arterial			Minor Arterial		
125th Avenue	Minor Arterial			Minor Arterial	Local Street	
Western Avenue	Minor Arterial			Minor Arterial	Multi-Modal Art (Minor)	
Nimbus Avenue	Minor Arterial			Minor Arterial		
Lombard	Minor Arterial (north of TV) Major Collector (south of TV)			Major Collector	Local Street	

[2] ***City of Beaverton Functional Classification Plan,*** Street Standard Map, adopted November 28, 1988.

[3] ***City of Tigard Comprehensive Plan TransportationMap,*** adopted June 11, 1991.

[4] ***City of Portland Comprehensive Plan,*** Transportation Element, October 23, 1992.

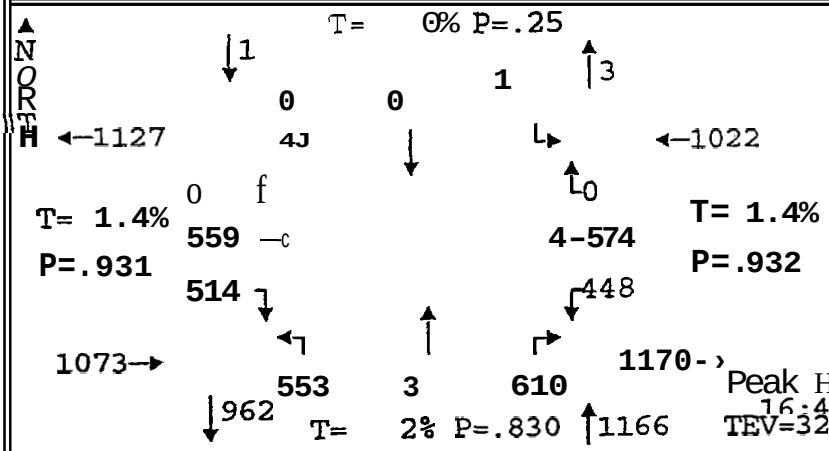
[5] ***Washington County Transportation Plan Comprehensive Plan Volume XV,*** October 1988.

[6] ***Interim Federal Regional TransportationPlan,*** Metro, April 1995.

APPENDIX B

TRAFFIC COUNTS

INTERSECTION TURN MOVEMENT COUNT SUMMARY REPORT
158TH AVENUE AT CORNELL ROAD (Composite)



DATE OF COUNT: **01/11/96**
DAY OF WEEK: Thu
TIME **STARTED:** 16:00
TIME ENDED: 18:00

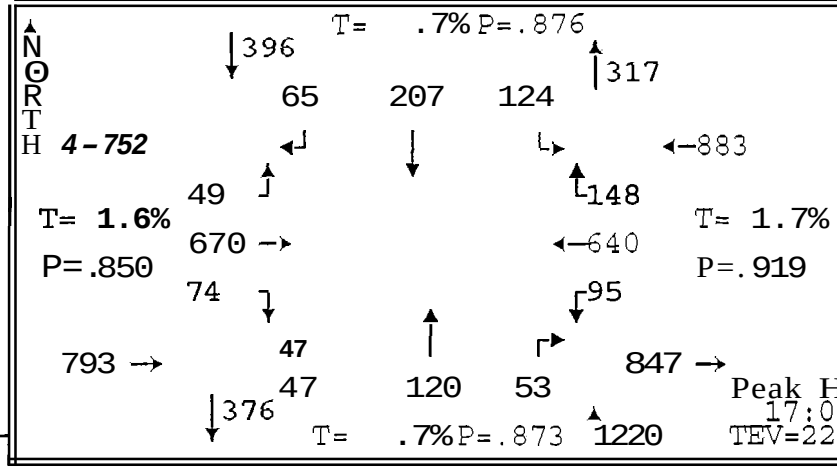
TEV=TOTAL **ENTRY VOLUME**
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

Traffic smithy
Traffic Survey **Service**

TIME PERIOD FROM - TO	EAST BOUND ↓	EAST BOUND →	EAST BOUND ↑	SOUTH BOUND ↵	SOUTH BOUND ↓	SOUTH BOUND ↳	NORTH BOUND ↰	NORTH BOUND ↑	NORTH BOUND ↱	WEST BOUND ↓	WEST BOUND ←	WEST BOUND ↑	ALL
16:00-16:05	39	64	0	0	0	0	27	0	40	36	56	0	262
16:05-16:10	39	45	0	0	0	0	34	0	33	38	46	0	235
16:10-16:15	55	41	0	0	0	0	28	0	4s	33	45	0	247
16:15-16:20	46	37	0	0	0	0	33	0	48	26	37	0	227
16:20-16:25	49	37	0	0	0	0	47	0	47	55	31	0	266
16:25-16:30	26	33	0	0	0	0	34	0	53	22	46	0	214
16:30-16:35	38	35	0	0	0	0	29	0	44	21	41	0	208
16:35-16:40	46	48	0	0	0	0	34	0	43	56	38	0	265
16:40-16:45	41	32	0	0	0	0	33	0	55	32	36	0	229
16:45-16:50	53	.39	0	0	0	0	41	0	52	50	46	0	289
16:50-16:55	55	53	0	0	0	0	35	3	36	23	50	0	255
16:55-17:00	49	28	0	0	0	0	39	0	42	39	49	0	246
17:00-17:05	35	68	0	0	0	0	56	0	55	41	48	0	303
17:05-17:10	39	46	0	0	0	0	55	0	70	31	38	0	279
17:10-17:15	48	48	0	0	0	0	55	0	60	38	SO	0	299
17:15-17:20	42	45	0	0	0	0	40	0	63	42	44	0	276
17:20-17:25	42	50	0	0	0	1	56	0	56	33	50	0	288
17:25-17:30	29	49	0	0	0	0	53	0	36	40	58	0	265
17:30-17:35	38	43	0	0	0	0	43	0	56	40	47	0	267
17:35-17:40	43	58	0	0	0	0	47	0	29	31	58	0	266
17:40-17:45	30	43	0	0	0	0	44	0	38	28	45	0	228
17:45-17:50	36	37	0	0	0	0	54	0	54	40	58	0	279
17:50-17:55	40	39	0	0	0	0	44	1	52	28	53	0	257
17:55-18:00	32	44	0	0	0	0	35	0	49	28	34	0	222
Total Survey	990	1062	0	0	0	1	996	4	1156	859	1104	0	6172
PHF	.82	.86	0	0	0	.25	.83	.25	.79	.93	.88	0	.925
% Trucks	1	1.7	0	0	0	0	.5	0	3.3	1.3	1.4	0	1.6
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	
Peds	0	0	0	0	0	0	0	1	0	0	0	0	
Hourly Totals													
16:00-17:00	536	492	0	0	0	0	414	3	538	439	521	0	2943
16:15-17:15	525	504	0	0	0	0	491	3	605	442	510	0	3080
16:30-17:30	517	541	0	0	0	1	526	3	612	454	548	0	3202
16:45-17:45	503	570	0	0	0	1	564	3	593	444	583	0	3261
17:00-18:00	454	570	0	0	0	1	582	1	618	420	583	0	3229

INTERSECTION TURN **MOVEMENT** COUNT **SUMMARY** REPORT
WALKER ROAD AT 173RD AVENUE

12361



DATE OF COUNT: 12/11/96
DAY OF WEEK: Wed
TIME STARTED: 16:00
TIME ENDED: 18:00

TEV=TOTAL ENTRY **VOLUME**
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

Peak Hour
17:00-18:00

Traffic Smithy
Traffic Survey Service

16:00-16:05	3	37	3	6	12	2	2	9	3	6	31	9	123
16:05-16:10	5	37	3	4	12	7	2	14	1	4	33	7	129
16:10-16:15	3	40	2	6	21	13	3	11	1	8	37	9	154
16:15-16:20	4	55	2	4	14	12	5	6	3	5	39	8	157
16:20-16:25	8	37	2	7	20	8	1	14	5	5	53	13	173
16:25-16:30	4	33	2	2	7	9	5	8	1	8	53	11	143
16:30-16:35	2	33	5	1	19	12	0	17	3	8	35	6	141
16:35-16:40	6	47	7	6	24	11	7	12	6	10	43	11	190
16:40-16:45	6	57	6	5	13	6	7	6	1	8	45	17	177
16:45-16:50	7	49	1	2	14	14	2	9	7	7	44	14	170
16:50-16:55	2	44	1	10	17	15	0	13	6	6	54	15	183
16:55-17:00	11	52	0	6	15	8	1	13	2	3	51	7	169
17:00-17:05	7	54	1	8	16	7	3	5	1	11	68	11	192
17:05-17:10	3	49	9	3	20	11	5	18	7	7	45	14	191
17:10-17:15	10	84	6	3	11	7	3	9	1	6	59	17	216
17:15-17:20	4	66	1	8	18	9	2	8	4	8	49	11	188
17:20-17:25	4	53	5	7	26	13	7	10	6	10	43	10	194
17:25-17:30	10	54	3	6	12	14	3	6	4	11	63	9	195
17:30-17:35	5	55	3	1	19	8	2	16	6	4	50	13	182
17:35-17:40	6	55	3	6	23	14	3	13	3	7	37	12	182
17:40-17:45	8	57	3	8	9	15	8	5	7	7	63	11	201
17:45-17:50	4	58	3	4	19	7	1	6	8	6	54	15	185
17:50-17:55	10	51	8	4	11	6	7	9	6	8	62	14	196
17:55-18:00	3	34	4	7	23	13	3	15	0	10	47	11	170
Total Survey	135	1191	83	124	395	241	82	252	92	173	1158	275	4201
PHF	.84	.83	.77	.77	.91	.84	.73	.86	.63	.82	.89	.88	.956
% Trucks	2.2	1.4	2.4	1.6	.8	0	1.2	.8	0	1.2	2	.7	1.4
Stopped Buses	0	0	0	0	0	0	0	0	0	0	2	0	
Peds	0	0	0	0	2	0	0	5	0	0	0	0	
Hourly Totals													
16:00-17:00	61	521	34	59	188	117	35	132	39	78	518	127	1909
16:15-17:15	70	594	42	57	190	120	39	130	43	84	589	144	2102
16:30-17:30	72	642	45	65	205	127	40	126	48	95	599	142	2206
16:45-17:45	77	672	36	68	200	135	39	125	54	87	626	144	2263
17:00-18:00	74	670	49	65	207	124	47	120	53	95	640	148	2292

12241

↓47 T= 0% P=.607 ↑17 16:40-17:40 TEV=1836

Traffic Smithy
Traffic Survey Service

	↓					↳		↑					
16:00-16:05	2	65	1	1	1	2	2	0	2	1	63	1	141
16:05-16:10	4	71	3	1	1	2	0	1	0	0	52	3	138
16:10-16:15	1	64	4	5	0	2	0	1	4	1	54	1	137
16:15-16:20	0	65	4	1	0	3	0	1	3	0	58	0	135
16:20-16:25	1	58	1	0	0	1	1	0	4	1	51	4	122
16:25-16:30	1	79	2	1	1	4	1	0	2	0	63	4	158
16:30-16:35	1	59	2	1	0	1	0	0	1	0	64	1	130
16:35-16:40	1	75	2	0	0	1	1	0	0	1	70	1	152
16:40-16:45	3	93	6	3	0	2	1	0	0	0	59	2	169
16:45-16:50	4	77	1	1	0	0	2	0	1	1	82	0	169
16:50-16:55	2	55	0	2	0	2	1	0	0	0	72	1	135
16:55-17:00	2	68	2	1	0	0	1	0	0	1	70	2	147
17:00-17:05	1	56	1	0	0	0	2	0	1	0	66	0	127
17:05-17:10	2	65	0	0	0	0	0	1	2	1	77	0	148
17:10-17:15	2	89	2	1	0	1	0	0	1	2	77	1	176
17:15-17:20	3	69	4	1	1	0	0	0	0	2	78	1	159
17:20-17:25	1	72	2	1	0	2	1	0	0	4	66	3	152
17:25-17:30	2	58	1	0	0	0	1	1	0	2	69	2	136
17:30-17:35	4	61	4	0	0	1	0	0	1	1	78	4	154
17:35-17:40	4	81	3	3	0	0	0	0	0	2	69	2	164
17:40-17:45	3	62	4	2	0	0	0	0	2	1	64	1	139
17:45-17:50	1	46	4	1	0	2	1	0	1	1	71	2	130
17:50-17:55	3	56	2	1	0	0	0	0	3	4	71	2	142
17:55-18:00	0	56	1	1	0	1	1	0	2	2	68	2	134
Total Survey	48	1600	56	28	4	27	16	5	30	28	1612	40	3494
PHF	.75	.92	.81	.54	.25	.5	.56	.5	.38	.5	.93	.5	.942
% Trucks	0	1.7	0	0	0	3.7	0	0	0	3.6	1.1	0	1.3
Stopped Buses	0	0	0	0	0	0	0	0	0	0	3	0	
Peds	0	0	0	0	1	0	0	0	0	0	0	0	
Hourly Totals													
16:00-17:00	22	829	28	17	3	20	10	3	17	6	758	20	1733
16:15-17:15	20	839	23	11	1	15	10	2	15	7	809	16	1768
16:30-17:30	24	836	23	11	1	9	10	2	6	14	850	14	1800
16:45-17:45	30	813	24	12	1	6	8	2	8	17	868	17	1806
17:00-18:00	26	771	28	11	1	7	6	2	13	22	854	20	1761

INTERSECTION TURN MOVEMENT COUNT SUMMARY REPORT
WALKER ROAD AT 158TH AVENUE

12326

T= 1.1% P=.919

NORTH 3

11052 | 704

79 595 378

←887 ↵ | 4 4→870

DATE OF COUNT: 12/05/96
DAY OF WEEK: Thu
TIME STARTED: 16:00
TIME ENDED: 18:00

859 | 815

T= 4% P=.893

17:00-18:00

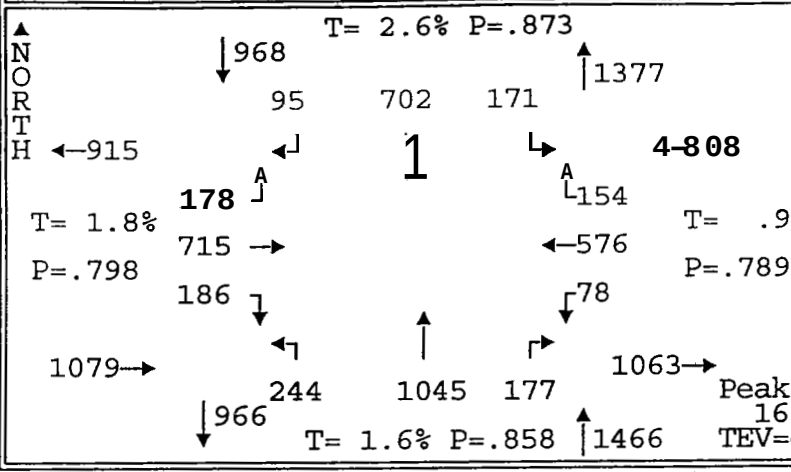
TEV=3515

Traffic Smithy
Traffic Survey Service

TIME PERIOD FROM - To	EAST BOUND ↓	EAST BOUND →	EAST BOUND ↑	SOUTH BOUND ↵	SOUTH BOUND ↓	SOUTH BOUND ↳	NORTH BOUND ↰	NORTH BOUND ↑	NORTH BOUND ↱	WEST BOUND ↓	WEST BOUND ←	WEST BOUND A	ALL
16:00-16:05	15	56	4	7	45	22	19	29	3	9	36	12	257
16:05-16:10	10	32	10	1	39	30	24	42	4	20	35	13	260
16:10-16:15	18	52	2	4	42	21	14	40	9	10	61	20	293
16:15-16:20	14	58	8	2	62	31	8	28	8	7	34	11	271
16:20-16:25	19	36	6	8	54	32	17	34	9	12	43	24	294
16:25-16:30	12	40	8	0	61	31	12	30	13	7	52	24	290
16:30-16:35	10	37	5	1	33	29	9	41	8	13	43	11	240
16:35-16:40	11	56	6	7	51	30	16	32	3	11	36	10	269
16:40-16:45	17	55	6	2	52	28	16	31	11	16	44	10	288
16:45-16:50	12	43	1	5	38	15	13	25	12	12	68	18	262
16:50-16:55	13	40	3	5	60	37	19	30	7	17	49	17	297
16:55-17:00	13	56	9	5	45	25	21	32	7	12	38	16	279
17:00-17:05	18	33	2	4	47	21	16	38	16	10	56	23	284
17:05-17:10	14	49	3	8	44	25	22	46	5	13	32	12	273
17:10-17:15	18	55	3	10	51	34	21	28	6	10	37	14	287
17:15-17:20	10	47	9	9	51	34	22	41	5	11	51	12	302
17:20-17:25	12	64	0	4	48	27	21	39	10	19	53	25	322
17:25-17:30	6	41	8	3	67	37	20	43	10	3	28	18	284
17:30-17:35	13	57	4	5	39	32	18	28	9	8	44	17	274
17:35-17:40	15	61	2	8	46	27	27	38	11	12	50	11	308
17:40-17:45	9	41	7	10	43	35	30	39	8	9	59	8	298
17:45-17:50	11	39	3	10	54	42	16	48	11	5	37	14	290
17:50-17:55	13	54	8	6	60	26	16	29	9	12	44	22	299
17:55-18:00	5	40	4	2	45	38	20	43	6	8	68	15	294
Total Survey	308	1142	121	126	1177	709	437	854	200	266	1098	377	6815
PHF	.72	.88	.74	.71	.9	.89	.83	.92	.88	.75	.91	.8	.964
% Trucks	1.3	1	1.7	0	1.4	1	.7	5.5	5	2.3	.7	.3	1.7
Stopped Buses	0	1	0	0	0	0	0	3	0	0	0	0	
Peds	0	7	0	0	0	0	0	5	0	0	10	0	
Hourly Totals													
16:00-17:00	164	561	68	47	582	331	188	394	94	146	539	186	3300
16:15-17:15	171	558	60	57	598	338	190	395	105	140	532	190	3334
16:30-17:30	154	576	55	63	587	342	216	426	100	147	535	186	3387
16:45-17:45	153	587	51	76	579	349	250	427	106	136	565	191	3470
17:00-18:00	144	581	53	79	595	378	249	460	106	120	559	191	3515

INTERSECTION TURN MOVEMENT COUNT SUMMARY REPORT
WALKER ROAD AT MURRAY BOULEVARD

12261



DATE OF COUNT: 11/21/96
DAY OF WEEK: Thu
TIME STARTED: 16:00
TIME ENDED: 18:00

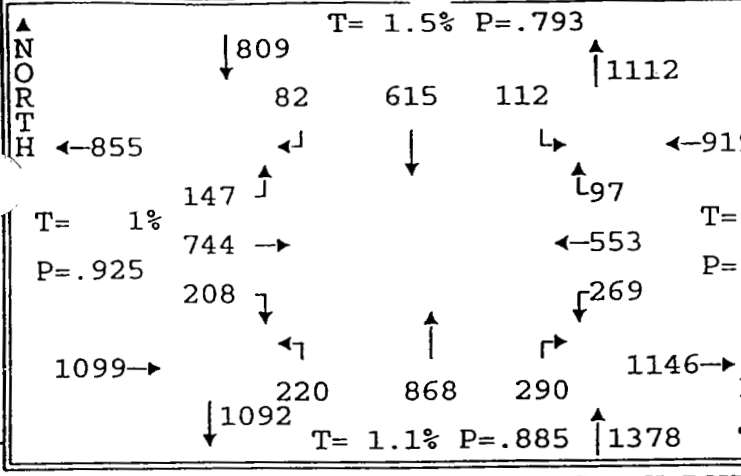
TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

Peak Hour
16:55-17:55
TEV=4321

Traffic Smithy
Traffic Survey Service

TIME PERIOD FROM - TO	EAST BOUND ↓	EAST BOUND →	EAST BOUND ↑	SOUTH BOUND ↵	SOUTH BOUND ↓	SOUTH BOUND ↳	NORTH BOUND ↰	NORTH BOUND ↑	NORTH BOUND ↱	WEST BOUND ↓	WEST BOUND ←	WEST BOUND ↑	ALL
16:00-16:05	20	50	10	10	71	17	9	55	11	9	39	10	311
16:05-16:10	15	37	8	11	63	17	12	87	19	8	28	12	317
16:10-16:15	18	65	10	5	64	18	14	66	13	7	54	9	343
16:15-16:20	11	55	8	15	76	10	20	71	12	9	36	9	332
16:20-16:25	17	57	8	13	75	9	17	58	10	4	38	13	319
16:25-16:30	19	36	15	8	58	9	19	68	12	13	47	15	319
16:30-16:35	14	38	12	15	80	12	22	80	8	5	42	6	334
16:35-16:40	14	49	18	5	48	7	19	54	14	7	52	15	302
16:40-16:45	23	56	17	13	70	18	12	69	10	6	38	9	341
16:45-16:50	12	59	13	8	64	16	18	79	12	5	43	10	339
16:50-16:55	8	35	11	12	59	5	12	08	16	8	38	12	304
16:55-17:00	15	57	10	14	81	11	24	74	13	6	34	9	348
17:00-17:05	18	63	13	6	59	17	6	68	9	4	51	12	326
17:05-17:10	17	68	11	7	68	14	22	73	5	5	38	16	344
17:10-17:15	10	45	14	4	54	16	6	112	15	8	46	14	344
17:15-17:20	26	80	26	14	67	14	17	70	14	4	43	8	383
17:20-17:25	19	59	10	7	60	18	17	123	17	7	67	16	420
17:25-17:30	26	72	20	6	52	10	30	66	18	9	45	16	370
17:30-17:35	17	48	6	9	36	11	35	113	8	7	70	19	379
17:35-17:40	12	71	26	5	63	11	13	70	15	6	30	12	334
17:40-17:45	5	45	13	6	49	17	30	90	20	9	51	14	349
17:45-17:50	9	61	21	7	68	19	24	94	20	5	45	8	381
17:50-17:55	12	46	8	10	45	13	20	92	23	8	56	10	343
17:55-18:00	8	61	22	7	44	14	21	70	16	6	45	13	327
Total Survey	365	1313	330	217	1474	323	439	1890	330	165	1076	287	8209
PHF	.65	.85	.74	.88	.84	.87	.74	.86	.7	.85	.79	.75	.920
% Trucks	1.4	1.2	4.5	2.8	3	.6	.2	2.1	3	1.8	1	0	1.3
Stopped Buses	0	0	0	0	3	0	0	0					
Peds	0	7	0	1	0	0	0	2	0	0	13	0	
Hourly Totals													
16:00-17:00	186	594	140	129	809	149	198	849	150	87	489	129	3909
16:15-17:15	178	618	150	120	792	144	197	894	136	80	503	140	3952
16:30-17:30	202	681	175	111	762	158	205	956	151	74	537	143	4155
16:45-17:45	185	702	173	98	712	160	230	1026	162	78	556	158	4240
17:00-18:00	179	719	190	88	665	174	241	1041	180	78	587	158	4300

INTERSECTION #16
CEDAR HILL BOULEVARD AT WALKER ROAD (COMPOSITE)



DATE OF COUNT: 07/18&24/96
DAY OF WEEK: T+W
TIME STARTED: 16:01
TIME ENDED: 18:01

TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

Peak Hour
16:56-17:56
TEV=4205

Traffic Smithy
Traffic Survey Service

TIME PERIOD FROM - TO	EAST BOUND ↓	EAST BOUND →	EAST BOUND ↑	SOUTH BOUND ↲	SOUTH BOUND ↓	SOUTH BOUND ↳	NORTH BOUND ←┐	NORTH BOUND ↑	NORTH BOUND ┌→	WEST BOUND ↓	WEST BOUND ←	WEST BOUND ↑	ALL
16:01-16:06	11	32	9	6	40	8	11	43	17	16	22	8	223
16:06-16:11	6	52	13	4	38	13	14	62	21	19	45	15	302
16:11-16:16	15	50	9	1	40	11	21	40	16	17	33	7	260
16:16-16:21	10	50	7	5	52	11	14	44	41	16	23	15	288
16:21-16:26	14	30	12	5	42	9	8	63	25	17	35	10	270
16:26-16:31	12	35	14	10	49	10	16	43	15	17	28	4	253
16:31-16:36	11	54	12	4	52	5	16	78	10	28	46	7	323
16:36-16:41	13	53	10	5	47	10	15	73	23	18	40	7	314
16:41-16:46	9	47	9	11	42	6	13	69	28	28	40	6	308
16:46-16:51	21	77	5	4	57	7	21	68	19	30	61	6	376
16:51-16:56	18	35	11	3	40	6	23	64	21	13	46	3	283
16:56-17:01	16	66	17	7	56	8	17	69	23	23	47	6	355
17:01-17:06	14	48	8	5	45	11	13	61	10	26	43	7	291
17:06-17:11	27	45	15	8	38	7	19	72	19	19	42	11	322
17:11-17:16	20	70	14	1	51	5	20	75	17	25	47	11	356
17:16-17:21	16	70	9	7	49	13	23	87	31	19	49	9	382
17:21-17:26	15	61	11	5	48	8	23	76	26	24	49	3	349
17:26-17:31	15	61	13	18	71	11	14	72	26	32	54	15	402
17:31-17:36	19	75	11	4	50	7	23	48	14	17	37	6	311
17:36-17:41	14	67	14	8	69	17	13	95	25	18	39	8	387
17:41-17:46	13	67	17	5	42	9	25	69	36	23	54	8	368
17:46-17:51	19	59	10	12	61	10	12	81	33	27	50	6	380
17:51-17:56	20	55	8	2	35	6	18	63	30	16	42	7	301
17:56-18:01	14	44	7	6	52	15	6	64	37	26	29	3	302
Total Survey	362	1303	265	146	1166	223	398	1579	563	514	1001	188	7706
PHF	.84	.89	.88	.68	.81	.78	.83	.88	.87	.91	.90	.78	.92
% Trucks	1	1	1	1	1	1	1	1	1	1	1	0	1
Stopped Buses	0	0	0	0	1		0	2	0				
Peds	1	10	0	0	13	0	0	14	0	0	4	0	
Hourly Totals													
16:01-17:01	156	581	128	65	555	104	189	716	259	242	466	94	3555
16:16-17:16	185	610	134	68	571	95	195	779	251	260	498	93	3739
16:31-17:31	195	687	134	78	596	97	217	864	253	285	564	91	4061
16:46-17:46	208	742	145	75	616	109	234	856	267	269	568	93	4182
17:01-18:01	206	722	137	81	611	119	209	863	304	272	535	94	4153

WALKER ROAD AT HIGHWAY 217 SOUTHBOUND RAMPS

NORTH

T= 1% P=.800

426 ↓ ↑ 3

270 11 145

9

844 ↓ 0 0 ↑ 0

T= 0% P=0.

DATE OF COUNT: 07/30/96
DAY OF WEEK: Tue
TIME STARTED: 16:00
TIME ENDED: 18:00

17:00-18:00
TEV=2582

Traffic Smithy
Traffic Survey Service

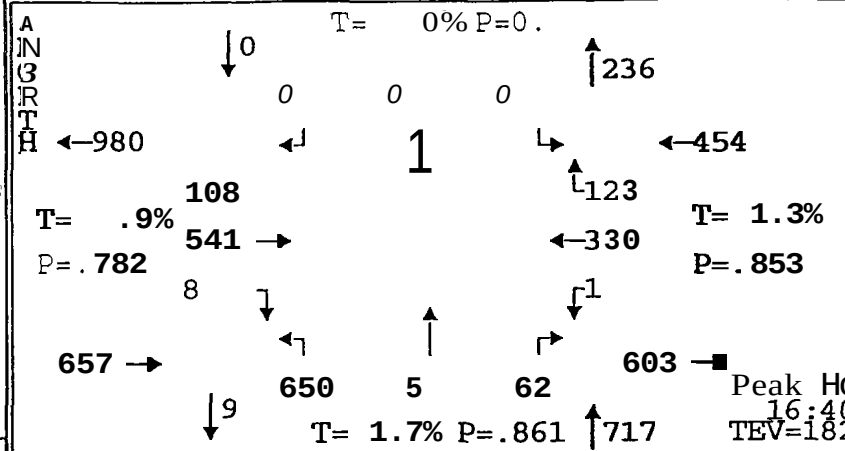
TF

16:00-16:05	61	23	0	14	0	13	0	0	0	0	49	0	160
16:05-16:10	45	27	0	14	1	15	0	0	0	1	61	0	164
16:10-16:15	68	35	0	13	1	8	0	0	0	3	65	0	193
16:15-16:20	68	37	0	11	0	a	0	0	0	4	73	0	201
16:20-16:25	56	33	0	18	0	8	0	0	0	7	59	0	181
16:25-16:30	48	33	0	12	0	13	0	0	0	0	67	0	173
16:30-16:35	43	30	0	15	0	11	0	0	3	3	77	0	179
16:35-16:40	55	31	0	9	1	14	0	0	0	5	68	0	183
16:40-16:45	67	27	0	22	2	12	0	0	0	4	69	0	203
16:45-16:50	60	47	0	10	0	11	0	0	0	2	67	0	197
16:50-16:55	60	34	0	11	0	10	0	0	0	3	75	0	193
16:55-17:00	49	39	0	13	1	a	0	0	0	3	66	0	179
17:00-17:05	51	40	0	18	0	5	0	0	0	5	68	0	187
17:05-17:10	68	30	0	13	0	9	0	0	0	5	55	0	180
17:10-17:15	68	58	0	28	0	12	0	0	0	3	78	0	247
17:15-17:20	49	36	0	17	2	11	0	0	0	4	83	1	203
17:20-17:25	65	35	0	22	0	7	0	0	0	2	60	2	193
17:25-17:30	83	42	0	20	0	14	0	0	0	1	70	0	230
17:30-17:35	66	45	0	26	0	9	0	0	0	5	78	0	229
17:35-17:40	64	33	0	19	2	17	0	0	0	3	67	0	205
17:40-17:45	77	36	0	28	0	14	0	0	0	1	62	0	218
17:45-17:50	69	45	0	32	2	14	0	0	0	2	64	0	228
17:50-17:55	67	44	0	22	2	11	0	0	0	5	88	0	239
17:55-18:00	67	37	0	25	3	22	0	0	0	3	66	0	223

Total Survey	1474	877	0	432	17	276	0	0	0	74	1635	3	4781
PHF	.93	.93	0	.82	.39	.77	0	0	0	.75	.95	.25	.939
% Trucks	1.4	1.3	0	1.2	5.9	.4	0	0	0	2.7	1.6	0	1.4
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	
Peds	0	1	0	0	0	0	0	0	0	0	3	0	

Hourly Totals													
16:00-17:00	680	396	0	162	6	131	0	0	0	35	796	0	2206
16:15-17:15	693	439	0	180	4	121	0	0	0	44	822	0	2303
16:30-17:30	**718**	**449**	**0**	**198**	**6**	**124**	**0**	0	0	40	836	3	2374
16:45-17:45	760	475	0	**225**	**5**	**127**	**0**	**0**	0	**37**	**829**	3	**2461**
17:00-18:00	**794**	**481**	**0**	270	**11**	145	0	**0**	0	39	a39	3	**2582**

WALKER ROAD AT HIGHWAY 217 NORTHBOUND RAMPS



DATE OF COUNT: 07/31/96
DAY OF WEEK: Wed
TIME STARTED: 16:00
TIME ENDED: 18:00

TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

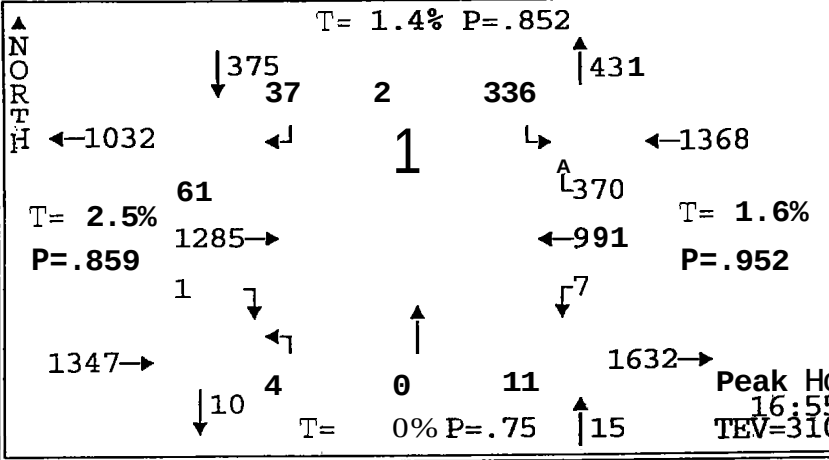
Peak Hour
16:40-17:40

Traffic Smithy
Traffic Survey Service

TIME PERIOD FROM - TO	EAST BOUND ↓	EAST BOUND →	EAST BOUND ↑	SOUTH BOUND ↵	SOUTH BOUND 1	SOUTH BOUND ↳	NORTH BOUND ↰	NORTH BOUND i	WEST BOUND ↱	WEST BOUND ↓	WEST BOUND ←	WEST BOUND ↑	ALL
16:00-16:05	0	22	5	0	0	0	51	0	3	0	20	11	112
16:05-16:10	0	40	9	0	0	0	36	0	3	0	19	14	121
16:10-16:15	0	23	4	0	0	0	56	0	3	0	20	14	120
16:15-16:20	0	39	5	0	0	0	59	0	1	0	21	12	137
16:20-16:25	0	47	12	0	0	0	37	0	4	0	30	17	147
16:25-16:30	0	36	8	0	0	0	32	0	3	0	25	7	111
16:30-16:35	0	48	3	0	0	0	57	0	3	0	27	8	146
16:35-16:40	0	22	8	0	0	0	47	1	5	0	28	7	118
16:40-16:45	0	75	14	0	0	0	53	0	9	0	18	11	180
16:45-16:50	6	55	7	0	0	0	63	2	3	0	42	5	183
16:50-16:55	1	40	12	0	0	0	72	0	6	0	39	12	182
16:55-17:00	0	43	10	0	0	0	47	0	8	0	27	8	143
17:00-17:05	0	31	9	0	0	0	48	0	4	0	22	17	131
17:05-17:10	1	40	6	0	0	0	54	0	5	1	23	12	142
17:10-17:15	0	28	10	0	0	0	50	2	4	0	28	9	131
17:15-17:20	0	48	7	0	0	0	49	0	3	0	34	10	151
17:20-17:25	0	55	4	0	0	0	42	0	8	0	24	16	149
17:25-17:30	0	57	8	0	0	0	55	0	0	0	28	11	159
17:30-17:35	0	33	10	0	0	0	58	0	10	0	19	8	138
17:35-17:40	0	36	11	0	0	0	59	1	2	0	26	4	139
17:40-17:45	0	45	10	0	0	0	48	0	4	0	17	10	134
17:45-17:50	0	45	7	0	0	0	37	0	9	0	25	13	136
17:50-17:55	0	38	13	0	0	0	55	0	8	0	18	10	142
17:55-18:00	0	34	11	0	0	0	40	0	3	0	20	10	118
Total Survey	8	980	203	0	0	0	1205	6	111	1	600	256	3370
PHF	.29	.8	.82	0	0	0	.86	.63	.86	.25	.76	.81	.838
% Trucks	0	.9	1	0	0	0	1.7	0	1.8	0	.7	2.7	1.3
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	
Peds	0	1	0	0	0	0	0	0	0	0	0	0	
Hourly Totals													
16:00-17:00	7	490	97	0	0	0	610	3	51	0	316	126	1700
16:15-17:15	8	504	104	0	0	0	619	5	55	1	330	125	1751
16:30-17:30	8	542	98	0	0	0	637	5	58	1	340	126	1815
16:45-17:45	8	511	104	0	0	0	645	5	57	1	329	122	1782
17:00-18:00	1	490	106	0	0	0	595	3	60	1	284	130	1670

INTERSECTION TURN MOVEMENT COUNT SUMMARY REPORT
WALKER ROAD AND CANYON ROAD

12316



DATE OF COUNT: 12/04/96
DAY OF WEEK: Wed
TIME STARTED: 16:00
TIME ENDED: 18:00

TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

Peak Hour
16:55-17:55
TEV=3105

Traffic Smithy
Traffic Survey Service

TIME PERIOD FROM - TO	EAST BOUND ↓	EAST BOUND →	EAST BOUND ↑	SOUTH BOUND ↵	SOUTH BOUND 1	SOUTH BOUND ↳	NORTH BOUND ↰	NORTH BOUND ↑	NORTH BOUND A	WEST BOUND ↓	WEST BOUND ←	WEST BOUND L	ALL
16:00-16:05	0	88	9	4	0	25	1	0	1	0	59	32	219
16:05-16:10	0	88	8	4	0	26	0	0	1	0	78	23	228
16:10-16:15	0	91	3	1	0	27	0	0	0	0	62	33	217
16:15-16:20	0	97	3	5	2	23	0	0	0	0	62	39	231
16:20-16:25	0	85	4	2	1	26	0	0	1	1	90	18	228
16:25-16:30	0	81	7	5	0	36	0	0	1	1	78	27	236
16:30-16:35	0	116	7	4	0	26	0	0	1	1	86	38	279
16:35-16:40	0	88	8	3	1	28	1	1	2	0	76	28	236
16:40-16:45	0	97	2	4	0	22	0	0	1	0	68	22	216
16:45-16:50	0	79	3	0	0	34	0	0	2	2	88	30	238
16:50-16:55	0	86	3	1	0	33	1	0	2	1	72	28	227
16:55-17:00	0	99	4	0	0	26	0	0	1	1	97	38	266
17:00-17:05	0	84	4	5	0	30	1	0	0	1	80	36	241
17:05-17:10	0	114	6	4	0	21	0	0	1	0	73	33	252
17:10-17:15	0	124	6	4	0	28	0	0	0	2	101	33	298
17:15-17:20	0	113	6	3	1	35	1	0	1	0	73	39	272
17:20-17:25	1	139	3	1	0	23	1	0	1	1	91	18	279
17:25-17:30	0	115	5	2	0	28	0	0	0	0	73	29	252
17:30-17:35	0	83	8	5	1	22	1	0	2	0	74	25	221
17:35-17:40	0	101	7	1	0	25	0	0	2	0	72	33	241
17:40-17:45	0	92	4	3	0	39	0	0	0	0	75	27	240
17:45-17:50	0	110	2	4	0	33	0	0	1	2	90	29	271
17:50-17:55	0	111	6	5	0	26	0	0	2	0	92	30	272
17:55-18:00	0	78	4	3	0	38	0	0	1	3	75	23	225
Total Survey	1	2359	122	73	6	680	7	1	24	16	1885	711	5885
PHF	.25	.85	.76	.71	.5	.86	.5	0	.69	.58	.93	.86	.914
%Trucks	0	2.5	.8	2.7	0	1.3	0	0	0	0	2	.4	1.9
Stopped Buses	0	1	0	0	0	0	0	0	0	0	0	0	
Peds	0	0	0	0	0	0	0	0	0	0	4	0	
Hourly Totals													
16:00-17:00	0	1095	61	33	4	332	3	1	13	7	916	356	2821
16:15-17:15	0	1150	57	37	4	333	3	1	12	10	971	370	2943
16:30-17:30	1	1254	57	31	2	334	5	1	12	9	978	372	3056
16:45-17:45	1	1229	59	29	2	344	5	0	12	8	969	369	3027
17:00-18:00	1	1264	61	40	2	348	4	0	11	9	969	355	3064

N

↓202 T= .6% P=.837 ↑248 16:30-17:30 TEV=1784

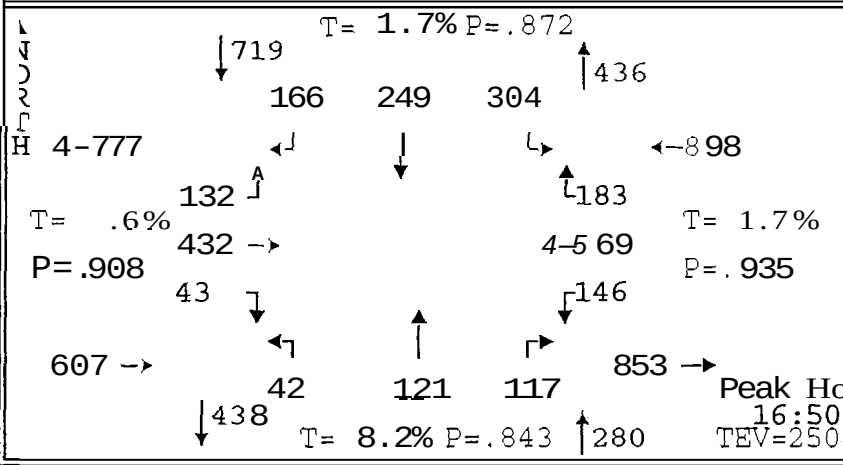
Traffic Smithy
Traffic Survey Service

T:
Fl

	↓				↳		↑						
5:00-16:05	20	33	0	0	0	0	9	0	2	2	43	0	109
5:05-16:10	15	52	0	1	0	1	17	0	1	3	60	0	150
16:10-16:15	10	41	2	0	0	0	11	0	1	2	49	2	118
16:15-16:20	a	30	0	2	0	1	16	0	11	3	63	0	134
16:20-16:25	23	31	0	2	0	0	19	0	4	4	52	1	136
16:25-16:30	24	44	1	0	0	0	17	0	5	4	55	0	150
16:30-16:35	15	44	0	0	1	0	21	0	4	3	63	3	154
16:35-16:40	10	45	0	1	0	0	18	0	4	0	61	0	139
16:40-16:45	11	35	1	0	0	0	18	0	4	5	68	3	145
16:45-16:50	19	39	2	2	0	1	11	0	5	6	64	0	149
16:50-16:55	6	36	1	1	0	1	18	0	6	7	66	0	142
16:55-17:00	17	41	0	0	0	1	10	0	2	3	72	4	150
17:00-17:05	12	27	1	1	0	1	17	0	4	3	61	1	128
17:05-17:10	11	41	0	0	0	1	23	1	3	5	54	0	139
17:10-17:15	13	34	1	0	0	0	20	2	4	2	86	0	162
17:15-17:20	11	45	5	1	0	0	20	0	1	2	66	2	153
17:20-17:25	10	44	2	0	1	0	17	0	3	8	77	1	163
17:25-17:30	15	41	1	0	0	1	10	1	1	6	82	2	160
17:30-17:35	15	43	1	0	0	0	22	0	3	3	64	1	152
17:35-17:40	11	33	0	2	0	0	21	0	3	2	57	5	134
17:40-17:45	11	33	1	0	0	0	9	0	3	2	77	0	136
17:45-17:50	17	32	0	0	0	0	12	1	3	1	68	2	136
17:50-17:55	8	21	0	0	0	1	8	0	2	1	33	1	75
17:55-18:00	12	38	0	3	0	0	17	0	2	2	69	4	147
Total Survey	324	903	19	16	2	9	381	5	81	79	1510	32	3361
PHF	.89	.91	.44	.5	.5	.5	.81	.33	.68	.69	.9	.67	.933
% Trucks	2.2	.8	0	0	0	0	.5	0	1.2	1.3	.3	0	.7
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	
Peds	0	2	0	0	2	0	0	1	0	0	2	0	
Hourly Totals													
16:00-17:00	178	471	7	9	1	5	185	0	49	42	716	13	1676
16:15-17:15	169	447	7	9	1	6	208	3	56	45	765	12	1728
16:30-17:30	150	472	14	6	2	6	203	4	41	50	820	16	1784
16:45-17:45	151	457	15	7	1	6	198	4	38	49	826	16	1768
17:00-18:00	146	432	12	7	1	4	196	5	32	37	794	19	1685

INTERSECTION TURN MOVEMENT COUNT SUMMARY REPORT
158TH AVENUE AT JENKINS ROAD

12300



DATE OF COUNT: 12/03/96
DAY OF WEEK: Tue
TIME STARTED: 16:00
TIME ENDED: 18:00

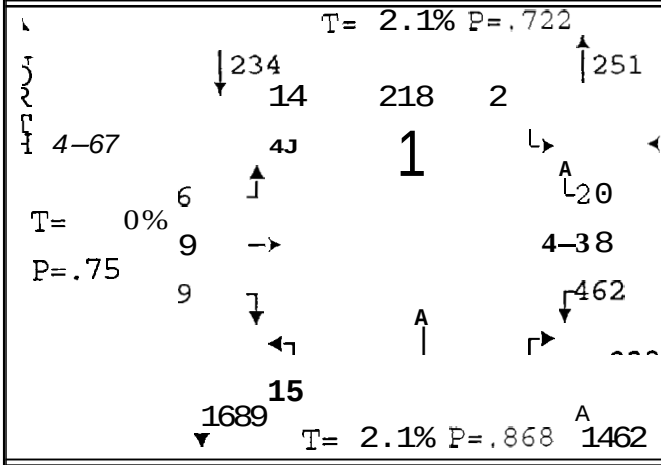
TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

Traffic Smithy
Traffic Survey Service

16:00-16:05	3	39	7	6	12	17	3	9	7	15	45	12	175
16:05-16:10	6	34	14	9	18	25	3	18	11	8	47	11	204
16:10-16:15	7	51	10	9	19	17	2	5	9	12	44	13	198
16:15-16:20	2	35	13	16	20	19	6	15	21	6	39	14	206
16:20-16:25	4	33	12	13	11	26	2	11	9	13	53	8	195
16:25-16:30	7	30	12	12	23	34	6	17	9	7	46	15	218
16:30-16:35	3	38	8	7	21	17	1	15	16	11	57	10	204
16:35-16:40	7	24	9	18	18	22	5	23	11	17	51	4	209
16:40-16:45	3	38	13	7	18	29	3	12	8	12	44	12	199
16:45-16:50	5	33	9	7	17	25	3	9	7	17	47	15	194
16:50-16:55	5	32	6	11	21	17	1	11	16	7	54	19	200
16:55-17:00	2	47	14	9	24	24	6	3	11	9	39	18	206
17:00-17:05	5	42	11	18	20	15	2	16	11	10	56	10	216
17:05-17:10	2	30	10	7	26	24	8	15	9	12	35	14	192
17:10-17:15	3	31	9	12	24	32	5	10	7	12	46	16	207
17:15-17:20	6	43	11	20	19	25	6	8	8	11	47	27	231
17:20-17:25	3	34	15	19	12	23	2	11	11	16	50	15	211
17:25-17:30	3	40	12	14	20	35	2	11	7	8	40	8	200
17:30-17:35	6	39	10	19	21	30	2	4	3	11	53	18	216
17:35-17:40	4	37	13	16	26	25	3	7	7	14	54	13	219
17:40-17:45	1	30	9	12	10	19	2	15	19	14	55	8	194
17:45-17:50	3	27	12	9	26	35	3	10	8	22	40	17	212
17:50-17:55	4	37	5	10	18	16	1	12	5	11	62	14	195
17:55-18:00	2	35	9	13	25	26	2	11	7	7	41	13	191
Total Survey	96	859	253	293	469	577	79	278	237	282	1145	324	4892
PHF	.83	.89	.87	.78	.89	.84	.55	.74	.77	.73	.88	.79	.964
% Trucks	2.1	.6	0	0	3.2	1.4	0	13.7	4.6	6	.7	1.5	2.2
Stopped Buses	0	0	0	0	0	0	0	0	0	0	1	0	
Peds	0	1	0	0	2	0	0	1	0	0	5	0	
Hourly Totals													
16:00-17:00	54	434	127	124	222	272	41	148	135	134	566	151	2408
16:15-17:15	48	413	126	137	243	284	48	157	135	133	567	155	2446
16:30-17:30	47	432	127	149	240	288	44	144	122	142	566	168	2469
16:45-17:45	45	438	129	164	240	294	42	120	116	141	576	181	2486
17:00-18:00	42	425	126	169	247	305	38	130	102	148	57.9	173	2484

INTERSECTION TURN MOVEMENT COUNT SUMMARY REPORT
MERLO ROAD AT 170TH AVENUE

12227



DATE OF COUNT: 11/14/96
DAY OF WEEK: Wed
TIME STARTED: 16:00
TIME ENDED: 18:00

TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

Traffic Smithy
Traffic Survey Service

6:00-16:05	1	1	0	0	14	10	0	14	18	30	3	1	92
6:05-16:10	2	0	0	0	13	0	0	19	26	25	1	1	87
6:10-16:15	1	2	0	1	17	0	3	9	15	31	2	2	83
6:15-16:20	0	2	0	0	16	1	0	18	16	26	1	3	83
6:20-16:25	0	3	0	0	12	1	2	14	14	25	0	0	71
6:25-16:30	0	0	0	1	10	0	0	18	11	28	2	1	71
6:30-16:35	0	0	1	5	12	4	0	15	20	24	2	5	88
6:35-16:40	1	1	0	1	13	1	3	17	11	40	1	2	91
6:40-16:45	1	0	1	0	18	2	0	12	5	32	1	1	73
6:45-16:50	2	1	1	2	12	0	1	21	17	35	3	4	99
6:50-16:55	2	1	0	0	11	2	1	13	12	24	0	2	68
6:55-17:00	1	1	0	1	15	0	0	17	16	42	1	2	96
7:00-17:05	1	0	0	0	23	1	0	20	18	43	3	3	112
7:05-17:10	1	1	0	3	27	0	1	17	17	48	0	3	118
7:10-17:15	0	1	0	0	22	0	0	12	17	42	1	1	96
7:15-17:20	0	2	0	1	28	0	0	29	23	37	2	2	124
7:20-17:25	1	0	2	1	18	0	1	18	21	30	1	0	93
7:25-17:30	0	0	0	0	12	0	1	18	17	30	11	3	92
7:30-17:35	0	2	1	2	18	0	5	14	12	29	3	0	86
7:35-17:40	1	0	1	2	22	0	1	21	17	40	4	1	110
7:40-17:45	1	0	1	0	10	0	2	21	21	33	2	3	94
7:45-17:50	2	1	0	1	11	0	3	23	24	41	6	1	113
7:50-17:55	1	1	1	3	12	1	1	15	19	47	4	1	106
7:55-18:00	1	0	1	2	14	1	4	19	14	20	2	4	82
Total Survey	20	20	10	26	380	24	29	414	401	802	56	46	222t
PHF	.56	.56	.5	.88	.71	.5	.47	.87	.87	.87	.53	.63	.91
% Trucks	0	0	0	0	1.8	8.3	0	2.4	0	1.0	0	4.3	1.8
Stopped Buses	0	0	0	0	0	0	0	0					
Peds	0	3	0	0	6	0	0	4	0	0	10	0	
Hourly Totals													
16:00-17:00	11	12	3	11	163	21	10	187	181	362	17	24	100
16:15-17:15	9	11	3	13	191	12	8	194	174	409	15	27	106
16:30-17:30	10	8	5	14	211	10	8	209	194	427	26	28	115
16:45-17:45	10	9	6	12	218	3	13	221	208	433	31	24	118
17:00-18:00	9	8	7	15	217	3	19	227	220	440	39	22	122

INTERSECTION TURN MOVEMENT COUNT SUMMARY REPORT
JENKINS ROAD AT 153RD DRIVE

11574



Traffic Smithy
Traffic Survey Service

16:00-16:05	12	38	0	0	0	0	14	0	9	10	58	0	141
16:05-16:10	7	47	0	0	0	0	10	0	10	9	58	0	141
16:10-16:15	11	66	0	0	0	0	8	0	9	7	57	0	158
16:15-16:20	6	42	0	0	0	0	10	0	5	13	38	0	114
16:20-16:25	11	48	0	0	0	0	8	0	10	5	61	0	143
16 25-16:30	12	45	0	0	0	0	15	0	17	8	44	0	141
16 30-16:35	9	66	0	0	0	0	15	0	22	14	73	0	199
16 35-16:40	13	52	0	0	0	0	17	1	11	21	61	0	176
16 40-16:45	16	67	0	0	0	0	15	0	19	9	49	0	175
16 45-16:50	19	58	0	0	0	0	25	4	8	8	52	0	174
16 50-16:55	10	60	0	0	0	0	10	0	11	13	71	0	175
16 55-17:00	5	57	0	0	0	0	21	0	19	12	52	0	166
17:00-17:05	15	50	0	0	0	0	15	0	13	10	50	0	153
17:05-17:10	20	45	0	0	0	0	20	0	14	16	62	0	177
17:10-17:15	15	66	0	0	0	0	11	0	12	20	58	0	182
17:15-17:20	22	59	0	0	0	0	7	0	12	19	56	0	175
17:20-17:25	23	59	0	0	0	0	12	0	6	18	65	0	183
17:25-17:30	23	59	0	0	0	0	14	0	17	14	46	0	173
17:30-17:35	26	62	0	0	0	0	19	0	12	15	63	0	197
17:35-17:40	15	66	0	0	0	0	15	0	7	23	52	0	178
17:40-17:45	16	60	0	0	0	0	15	0	13	12	63	0	179
17:45-17:50	17	52	0	0	0	0	12	0	7	13	55	0	156
17:50-17:55	11	40	0	0	0	0	11	0	6	7	61	0	136
17:55-18:00	9	47	0	0	0	0	6	0	6	9	77	0	154
Total Survey	343	1311	0	0	0	0	325	5	275	305	1382	0	3946
PHF	.73	.93	0	0	0	0	.82	.25	.78	.79	.96	0	.953
% Trucks	1.7	1.8	0	0	0	0	2.2	0	1.8	1	1.3	0	1.6
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	
Peds	0	2	0	0	1	0	0	9	0	0	6	0	
Hourly Totals													
16:00-17:00	131	646	0	0	0	0	168	5	150	129	674	0	1903
16:15-17:15	151	656	0	0	0	0	182	5	161	149	671	0	1975
16:30-17:30	190	698	0	0	0	0	182	5	164	174	695	0	2108
16:45-17:45	209	701	0	0	0	0	184	4	144	180	690	0	2112
17:00-18:00	212	665	0	0	0	0	157	0	125	176	708	0	2043

INTERSECTION TURN MOVEMENT COUNT SUMMARY REPORT

JENKINS ROAD AT MURRAY BOULEVARD

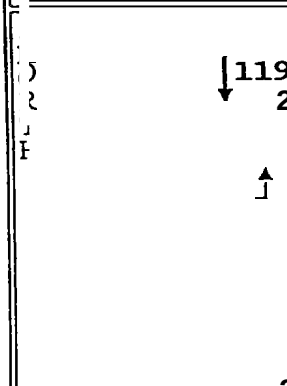
12265

1174 T= 2.2% P=.942 11240 16:50-17:50 TEV=3988

Traffic Smithy
Traffic Survey Service

16:00-16 05	30	34	5	13	76	6	18	58	7	3	28	12	290
16:05-16 10	29	28	9	19	76	17	16	58	6	7	38	13	316
16:10-16 15	27	37	14	21	55	14	27	75	7	3	32	14	326
16:15-16 20	35	46	13	16	67	14	13	54	4	4	38	11	315
16:20-16 25	32	36	4	8	65	11	22	88	5	6	37	10	324
16:25-16 30	28	32	13	22	91	4	26	71	4	4	25	9	329
16:30-16 35	23	40	8	11	61	9	18	60	9	5	31	16	291
16:35-16 40	27	28	13	11	80	18	22	79	13	5	37	11	344
16:40-16:45	19	41	20	11	70	11	16	61	8	12	28	15	312
16:45-16:50	21	42	16	15	59	11	26	64	8	2	28	20	312
16:50-16:55	26	49	7	14	61	12	19	76	12	7	39	16	338
16:55-17:00	29	40	11	12	64	18	28	60	8	3	39	11	323
17:00-17:05	24	39	14	10	90	13	17	64	6	1	28	11	317
17:05-17:10	24	37	5	6	49	10	23	92	6	14	27	8	301
17:10-17:15	27	45	17	15	75	17	32	61	9	7	41	18	364
17:15-17:20	27	46	10	7	54	12	23	75	8	5	40	17	324
17:20-17:25	23	33	10	5	51	16	22	77	4	9	35	17	302
17:25-17:30	27	43	9	18	78	15	34	51	8	4	43	23	353
17:30-17:35	32	52	5	12	51	13	29	69	9	4	28	10	314
17:35-17:40	41	46	9	16	63	12	26	79	7	10	27	13	349
17:40-17:45	28	38	16	19	74	22	19	62	8	9	42	10	347
17:45-17:50	23	64	14	11	55	15	28	81	8	5	42	10	356
17:50-17:55	22	36	12	13	61	19	21	46	5	7	32	12	286
17:55-18:00	28	35	6	17	56	18	32	71	5	6	37	9	320
Total Survey	652	967	260	322	1582	327	557	1632	174	142	822	316	7753
PHF	.82	.9	.81	.77	.89	.89	.84	.93	.89	.75	.91	.72	.947
% Trucks	2.3	1.2	3.1	3.1	2.8	1.5	2.2	2.1	2.9	2.1	1.1	2.2	2.1
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	
Peds	0	1	0	0	3	0	0	1	0	0	5	0	
Hourly Totals													
16:00-17:00	326	453	133	173	825	145	251	804	91	61	400	158	3820
16:15-17:15	315	475	141	151	832	148	262	830	92	70	398	156	3870
16:30-17:30	297	483	140	135	792	162	280	820	99	74	416	183	3881
16:45-17:45	329	510	129	149	769	171	298	830	93	75	417	174	3944
17:00-18:00	326	514	127	149	757	182	306	828	83	81	422	158	3933

CEDAR HILLS BOULEVARD AT JENKINS ROAD



DATE OF COUNT: 07/11/96
DAY OF WEEK: Thu
TIME STARTED: 16:00
TIME ENDED: 18:05

16:55-17:55

Traffic Smithy
Traffic Survey Service

16:00-16:05	34	0	32	16	66	0	21	66	0	0	0	0	235
16:05-16:10	15	3	33	20	64	0	9	65	0	1	0	0	210
16:10-16:15	26	0	36	20	63	0	14	59	0	2	0	0	220
16:15-16:20	26	0	38	11	73	0	16	62	1	0	0	0	227
16:20-16:25	37	1	26	11	78	0	14	66	1	0	1	0	235
16:25-16:30	26	1	35	11	93	0	24	75	0	3	0	0	268
16:30-16:35	23	0	28	18	69	0	21	64	0	1	1	0	225
16:35-16:40	33	0	43	15	82	0	21	87	0	1	0	0	282
16:40-16:45	32	1	44	15	86	0	23	61	1	0	0	1	264
16:45-16:50	31	0	36	22	89	1	19	70	0	2	0	0	270
16:50-16:55	22	0	28	5	93	1	13	67	0	0	2	0	231
16:55-17:00	30	1	39	24	64	1	25	78	0	2	0	0	264
17:00-17:05	27	0	34	25	90	0	21	80	0	1	1	0	279
17:05-17:10	33	0	40	19	76	0	19	75	0	1	0	0	263
17:10-17:15	42	0	58	19	85	0	16	66	0	0	1	0	287
17:15-17:20	30	0	41	27	71	0	12	80	0	0	1	0	262
17:20-17:25	38	0	43	14	80	0	23	65	0	0	0	0	263
17:25-17:30	34	0	45	17	82	0	19	62	1	1	0	0	261
17:30-17:35	38	0	50	18	84	0	14	54	3	0	3	0	264
17:35-17:40	39	1	48	11	83	0	16	73	0	2	0	0	273
17:40-17:45	44	0	49	17	97	1	16	56	0	1	1	0	282
17:45-17:50	36	0	41	11	87	1	23	68	0	3	1	0	271
17:50-17:55	28	0	32	22	72	0	18	72	0	2	0	0	246
17:55-18:00	16	0	30	14	98	0	16	68	1	0	1	0	244
18:00-18:05	27	0	32	13	78	1	20	67	0	0	0	1	235
Total Survey	767	8	961	415	2003	6	453	1706	8	23	13	2	6365
PHF	.87	.5	.88	.82	.91	.38	.85	.89	.25	.54	.5	0	.96
% Trucks	1.7	0	.5	1.7	1.5	0	3.5	1.8	0	0	0	0	1.7
Stopped Buses	0	0	0	0	2	0	0	5	0	0	0	0	
Peds	0	15	0	0	2	0	0	0	0	0	9	0	
Hourly Totals													
16:00-17:00	335	7	418	188	920	3	220	820	3	12	4	1	2931
16:15-17:15	362	4	449	195	978	3	232	851	3	11	6	1	3095
16:30-17:30	375	2	479	220	967	3	232	855	2	9	6	1	3151
16:45-17:45	408	2	511	218	994	4	213	826	4	10	9	0	3199
17:00-18:00	405	1	511	214	1005	2	213	819	5	11	9	0	3195

CEDAR HILLS BOULEVARD

T= 1.2% P=.940

1384 ↓ 69 893 422 ↑ 1268

DATE OF COUNT: 07/16&17/96
DAY OF WEEK: T+W
TIME STARTED: 16:00
TIME ENDED: 18:00

109
1165 ↓ T= 1.7% P=.930 ↑ 1640

16:35-17:35 TEV=3359

Traffic Smithy
Traffic Survey Service

	↑	↵	↓									
16:00-16:0	12	13	7	6	44	26	9	29	4	6	18	55	229
16:05-16:1	14	12	13	9	63	27	6	37	4	13	10	60	268
16:10-16:1	11	15	6	6	60	43	10	35	7	5	18	43	259
16:15-16:2	14	16	10	5	63	34	3	40	3	1	14	69	272
16:20-16 25	17	10	8	6	56	31	14	46	2	6	16	48	260
16:25-16 30	18	5	10	5	61	25	11	40	3	7	16	66	267
16:30-16 35	11	11	12	2	64	41	16	51	7	5	10	42	272
16:35-16 40	20	7	13	9	81	24	9	46	6	7	10	49	281
6:40-16 45	12	10	8	3	60	41	7	36	3	5	24	55	264
6:45-16 50	7	5	10	8	82	30	7	34	5	7	18	56	269
6:50-16 55	16	6	11	2	76	27	8	29	4	10	11	49	249
16:55-17 00	12	5	4	5	75	47	12	42	4	10	7	47	270
17:00-17 05	7	15	11	5	77	23	11	40	2	12	8	54	265
17:05-17 10	12	8	8	10	90	36	9	41	8	12	10	70	314
17:10-17:1	12	13	14	7	70	38	8	34	8	18	17	59	298
17:15-17:2	9	4	6	5	69	43	7	47	1	10	12	64	277
17:20-17:2	22	13	5	5	66	41	12	45	8	9	14	63	303
17:25-17:3	18	14	9	5	70	38	9	38	3	5	19	62	290
17:30-17:3	13	7	7	5	77	34	10	41	6	7	11	61	279
17:35-17:4	16	17	12	6	50	43	13	40	3	9	11	53	273
17:40-17:4	6	9	8	5	59	45	13	32	4	3	8	63	255
17:45-17:5	11	8	12	6	64	43	13	42	3	8	15	59	284
17:50-17:5	10	11	8	3	70	40	13	35	7	3	11	39	25C
17:55-18:0	14	17	6	5	62	38	10	32	5	8	3	56	256
Total Survey	314	251	218	133	1609	858	240	932	110	186	311	1342	650
PHF	.75	.74	.8	.78	.92	.86	.85	.91	.81	.67	.76	.89	.94
% Trucks	1	0	1.8	.8	1.3	0	0	2	1.8	0	1	.8	1.
Stopped Buses	0	0	0	0	4					0	.3		
Peds	0	51	0	0	39	0	0	36	0	0	86	3	
Hourly Totals													
16:00-17:00	164	**115**	112	66	785	396	112	465	52	82	172	639	316
16:15-17:15	158	111	119	67	855	397	115	479	55	100	161	664	328
16:30-17:30	158	111	111	66	880	429	115	483	59	110	160	670	335
16:45-17:45	150	116	105	68	861	445	119	463	56	112	146	701	334
17:00-18:00	150	136	106	67	824	462	128	467	58	104	139	703	334

INTERSECTION TURN MOVEMENT COUNT SUMMARY REPORT
CEDAR HILLS BOULEVARD AT WESTGATE

11834

T= .8% P=.888

1027 ↓ 1 — 985 — 41 — ↑ 636

2 — 578 — 78 — ↓ 1032

DATE OF COUNT: 09/19/96
DAY OF WEEK: Thu
TIME STARTED: 16:00
TIME ENDED: 18:00

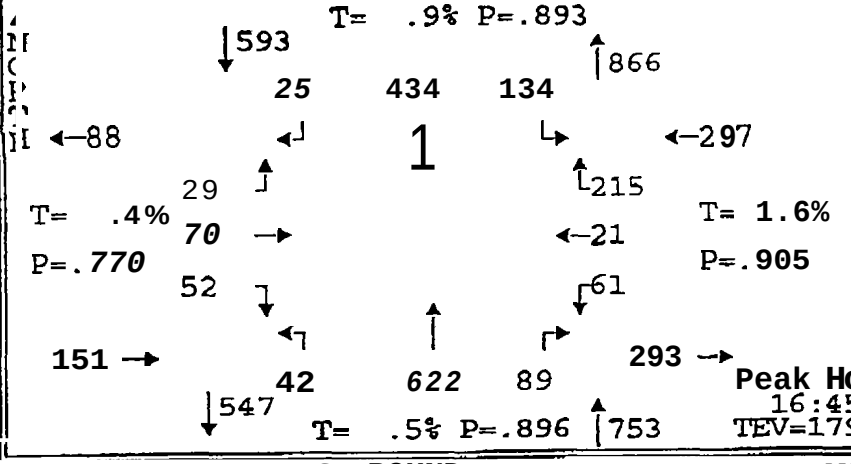
16:45-17:45

Traffic Smithy
Traffic Survey Service

16:00-16:05	0	0	0	0	82	5	0	33	5	3	0	3	131
16:05-16:10	0	0	0	0	73	4	0	45	4	3	0	2	131
16:10-16:15	0	0	0	0	69	4	0	37	2	0	0	4	116
16:15-16:20	0	0	0	0	72	3	0	48.	a	1	0	4	136
16:20-16:25	0	0	0	0	71	0	0	46	4	2	0	4	129
16:25-16:30	0	0	0	0	87	0	0	39	0	0	0	3	129
16:30-16:35	0	0	0	0	68	1	0	57	2	1	0	3	132
16:35-16:40	0	0	0	0	86	4	0	47	3	2	0	4	146
16:40-16:45	0	0	0	0	55	2	0	45	2	3	0	3	110
16:45-16:50	0	0	0	0	78	3	0	53	4	1	0	0	139
16:50-16:55	0	0	0	0	70	1	1	56	4	1	0	4	137
16:55-17:00	0	0	0	0	82	4	0	43	4	6	0	4	143
17:00-17:05	0	0	0	0	70	3	0	42	6	8	0	9	138
17:05-17:10	0	0	0	0	81	6	0	53	11	9	0	7	167
17:10-17:15	0	0	0	0	94	2	0	49	9	8	0	15	177
17:15-17:20	0	0	0	0	70	1	0	42	9	2	0	1	125
17:20-17:25	0	0	0	0	100	6	0	48	3	2	0	4	163
17:25-17:30	0	0	0	1	93	2	0	54	10	3	0	2	165
17:30-17:35	0	0	0	0	80	7	0	46	2	2	0	2	139
17:35-17:40	0	0	0	0	07	4	1	43	7	1	0	5	148
17:40-17:45	0	0	0	0	80	2	0	49	9	4	0	5	149
17:45-17:50	0	0	0	0	76	3	0	38	3	3	0	2	125
17:50-17:55	0	0	0	0	81	1	0	45	2	4	0	3	136
17:55-18:00	0	0	0	0	87	3	0	58	2	4	0	3	157
Total Survey	0	0	0	1	1892	71	2	1118	115	73	0	96	3361
PHF	0	0	0	.25	.9	.68	.5	.95	.67	.47	0	.47	.928
% Trucks	0	0	0	0	.8	0	0	1.8	1.7	1.4	0	0	1..
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	
Peds	0	0	0	0	0	0	0	16	0	0	11	0	
Kourly Totals													
16:00-17:00	0	0	0	0	893	31	1	551	42	23	0	38	157
16:15-17:15	0	0	0	0	914	29	1	580	57	42	0	60	168
16:30-17:30	0	0	0	1	947	35	1	589	67	46	0	S6	174
16:45-17:45	0	0	0	1	985	41	2	578	78	47	0	58	179
17:00-18:00	0	0	0	1	999	40	1	567	73	50	0	58	178

INTERSECTION TURN MOVEMENT COUNT SUMMARY REPORT
HALL BOULEVARD AT CENTER STREET/WESTGATE DRIVE

11835



DATE OF COUNT: 09/19/96
DAY OF WEEK: Thu
TIME STARTED: 16:10
TIME ENDED: 18:10

TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

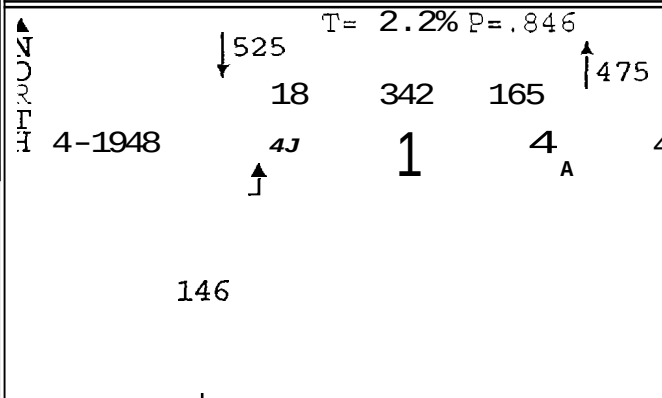
Peak Hour
16:45-17:45
TEV=1794

Traffic smithy
Traffic Survey Service

TIME PERIOD FROM - To	EAST BOUND ↓	EAST BOUND →	EAST BOUND ↑	SOUTH BOUND ↵	SOUTH BOUND 1	SOUTH BOUND ↳	NORTH BOUND ↰	NORTH BOUND ↑	NORTH BOUND ↱	WEST BOUND ↓	WEST BOUND ←	WEST BOUND ↑	ALL
16:10-16:15	2	1	1	1	35	7	1	56	1	5	8	13	131
16:15-16:20	10	3	1	0	23	7	0	59	3	7	3	14	130
16:20-16:25	5	4	1	0	41	12	4	54	5	1	1	10	138
16:25-16:30	0	3	4	3	37	5	2	67	3	7	2	23	156
16:30-16:35	1	1	1	0	33	6	3	43	4	6	1	19	118
16:35-16:40	1	3	3	2	33	12	1	45	4	4	2	9	119
16:40-16:45	7	7	1	2	38	11	5	48	12	4	1	14	150
16:45-16:50	1	3	4	3	42	12	1	40	11	4	1	18	140
16:50-16:55	1	6	4	4	29	8	6	59	6	7	1	15	146
16:55-17:00	7	7	3	3	28	3	4	69	7	5	2	13	155
17:00-17:05	4	11	2	1	28	10	4	44	11	5	3	16	139
17:05-17:10	5	6	4	0	44	16	7	49	6	7	2	23	169
17:10-17:15	7	8	1	2	29	11	4	66	7	4	1	12	152
17:15-17:20	3	1	1	1	34	10	2	49	10	8	2	23	144
17:20-17:25	5	9	2	6	38	10	1	38	2	5	2	18	136
17:25-17:30	4	3	0	0	45	9	4	60	10	5	4	13	157
17:30-17:35	6	5	2	3	43	12	3	37	7	4	0	27	149
17:35-17:40	6	6	3	2	35	13	0	54	8	4	3	19	153
17:40-17:45	3	5	3	0	39	16	6	57	4	3	0	18	154
17:45-17:50	2	1	1	3	38	12	4	45	6	3	1	17	133
17:50-17:55	2	4	2	1	39	6	3	46	3	6	2	16	130
17:55-18:00	4	1	3	3	35	15	2	40	7	5	1	16	132
18:00-18:05	5	2	1	1	25	12	4	33	9	3	0	16	111
18:05-18:10	3	4	0	0	25	10	3	53	5	1	1	20	125
Total Survey	94	104	48	41	836	249	74	1211	151	113	44	402	3367
PHF	.81	.7	.66	.63	.86	.82	.7	.9	.89	.8	.66	.84	.964
% Trucks	0	0	2.1	0	5	2.4	1.4	4	7	9	2.3	1.0	8
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	
Peds	0	4	0	0	9	0	0	18	0	0	5	0	
Hourly Totals													
16:10-17:10	44	55	29	19	411	113	38	633	73	62	27	187	1693
16:25-17:25	42	65	30	27	413	118	40	617	83	66	20	203	1724
16:40-17:40	56	72	27	27	433	129	41	613	97	62	22	211	1790
16:55-17:55	54	66	24	22	440	132	42	614	81	59	22	215	1771
17:10-18:10	50	49	19	22	425	136	36	578	78	51	17	215	1676

INTERSECTION TURN MOVEMENT COUNT SUMMARY REPORT
TUALATIN VALLEY HIGHWAY AT 170TH AVENUE

12328



DATE OF COUNT: 11/21/96
DAY OF WEEK: Thu
TIME STARTED: 16:00
TIME ENDED: 18:00

Traffic Smithy
Traffic Survey Service

TIME PERIOD FROM - TO	EAST BOUND 7	→	↱	SOUTH BOUND ↲	↓	↳	NORTH BOUND ↰	↑	↱	WEST BOUND ↓	←	A L	ALL
16:00-16:05	9	105	3	2	20	17	13	11	8	7	109	12	316
16:05-16:10	7	101	13	1	31	11	10	16	5	20	125	15	355
16:10-16:15	8	85	9	1	29	18	11	17	5	14	130	13	340
16:15-16:20	10	118	8	3	25	11	4	14	3	14	148	18	376
16:20-16:25	7	83	2	3	26	9	8	16	4	18	137	17	330
16:25-16:30	8	98	5	0	30	24	5	14	7	15	129	14	349
16:30-16:35	11	88	4	2	34	15	6	19	3	28	138	16	364
16:35-16:40	11	93	11	3	21	18	10	6	4	20	130	21	348
16:40-16:45	15	116	5	0	26	11	4	14	4	17	134	4	350
16:45-16:50	12	84	6	1	28	11	7	12	9	22	116	14	322
16:50-16:55	13	107	12	2	25	8	5	21	8	10	125	18	354
16:55-17:00	13	113	3	1	22	7	6	15	4	22	139	28	373
17:00-17:05	11	106	6	0	24	18	9	5	5	16	140	25	365
17:05-17:10	15	103	5	1	37	10	8	11	10	22	129	14	365
17:10-17:15	9	132	9	1	16	13	3	12	8	22	142	23	390
17:15-17:20	6	108	3	1	23	12	9	10	2	23	174	21	392
17:20-17:25	16	96	6	1	27	11	5	11	1	24	190	28	416
17:25-17:30	17	113	2	0	30	17	11	10	3	24	148	20	395
17:30-17:35	9	106	9	2	27	14	9	14	2	31	144	28	395
17:35-17:40	7	129	8	0	29	14	8	9	8	48	158	16	434
17:40-17:45	18	115	7	1	29	12	4	15	5	27	159	32	424
17:45-17:50	14	98	5	2	23	16	9	13	3	24	148	21	376
17:50-17:55	10	111	10	1	37	10	11	13	6	22	145	20	396
17:55-18:00	14	93	15	8	40	18	6	7	3	22	161	12	399
Total Survey	270	2501	166	37	659	325	181	305	120	512	3398	450	8924
PHF	.87	.94	.71	.41	.86	.92	.82	.79	.61	.72	.9	.86	.947
% Trucks	2.2	3.3	2.4	8.1	1.8	2.2	1.1	1.6	3.3	1.2	2.1	1.8	2.3
Stopped Buses	0	3	0	0	0	0	0	0	0	0	0	0	
Peds	0	4	0	0	13	0	0	1	0	0	6	0	
Hourly Totals													
16:00-17:00	124	1191	81	19	317	160	89	175	64	207	1560	190	4177
16:15-17:15	135	1241	76	17	314	155	75	159	69	226	1607	212	4286
16:30-17:30	149	1259	72	13	313	151	83	146	61	250	1705	232	4434
16:45-17:45	146	1312	76	11	317	147	84	145	65	2911764		267	4625
17:00-18:00	146	1310	85	18	342	165	92	130	56	305	1838	260	4747

INTERSECTION TURN MOVEMENT COUNT **SUMMARY REPORT**
TUALATIN **VALLEY HIGHWAY** AT MILIKAN WAY

12262

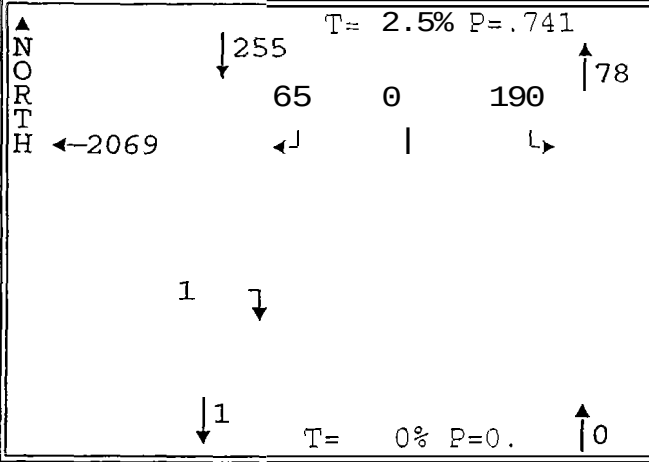
↓622 T= .9% P=.826 A ↑291 16:50-17:50 TEV=4423

Traffic Smithy
Traffic Survey Service

5:00-16:05	6	100	1	15	16	2	10	5	5	12	81	1	254
5:05-16:10	11	147	3	18	18	3	6	4	5	7	150	2	374
16:10-16:15	8	73	3	21	22	4	12	9	8	11	133	3	307
16:15-16:20	14	127	0	15	15	3	2	2	9	15	130	3	335
16:20-16:25	4	85	3	12	27	2	8	8	5	18	133	1	306
16:25-16:30	12	97	2	15	14	2	6	7	7	3	150	1	316
16:30-16:35	11	97	1	23	21	7	8	7	5	11	140	0	331
16:35-16:40	8	122	2	17	27	3	6	3	12	16	87	0	303
16:40-16:45	4	90	4	13	16	2	4	3	9	13	169	0	327
16:45-16:50	4	93	2	17	12	4	6	7	9	14	124	3	295
16:50-16:55	11	100	3	23	15	1	13	13	17	12	156	1	365
16:55-17:00	11	107	5	17	17	1	3	5	10	10	145	2	333
17:00-17:05	7	100	6	20	27	0	7	12	8	23	138	1	349
17:05-17:10	6	116	7	32	22	2	9	5	10	18	158	1	386
17:10-17:15	14	97	4	26	24	3	14	3	6	13	170	0	374
17:15-17:20	15	112	3	36	39	0	6	6	11	14	112	1	355
17:20-17:25	7	108	4	27	19	1	9	10	7	8	181	0	381
17:25-17:30	9	105	2	36	33	4	14	4	12	13	128	1	361
17:30-17:35	21	141	5	27	31	2	6	3	9	20	122	0	387
17:35-17:40	9	120	3	28	26	0	9	6	5	13	178	0	397
17:40-17:45	9	112	1	37	26	2	3	4	12	11	163	0	380
17:45-17:50	16	100	1	30	34	6	8	4	8	19	129	0	355
17:50-17:55	12	80	5	11	15	1	7	9	11	9	164	1	325
17:55-18:00	11	108	4	25	27	2	5	5	15	14	107	1	324
Total Survey	240	2537	74	541	543	57	181	144	215	317	3348	23	8220
PHF	.87	.88	.61	.86	.86	.69	.84	.63	.82	.81	.95	.44	.949
% Trucks	1.3	3	2.7	1.3	.4	0	.6	1.4	.9	.9	2.2	0	2.1
Stopped Buses	0	0	0	0	0	0	0	0	0	0	17	0	
Peds	0	0	0	1	4	0	0	0	0	0	4	0	
Hourly Totals													
16:00-17:00	104	1238	29	206	220	34	84	73	101	142	1598	17	3846
16:15-17:15	106	1231	39	230	237	30	86	75	107	166	1700	13	4020
16:30-17:30	107	1247	43	287	272	28	99	78	116	165	1708	10	4160
16:45-17:45	123	1311	45	326	291	20	99	78	116	169	1775	10	4363
17:00-18:00	136	1299	45	335	323	23	97	71	114	175	1750	6	4374

INTERSECTION TURN MOVEMENT COUNT SUMMARY REPORT
TUALATIN HIGHWAY AT 153RD DRIVE

\\ 3%



DATE OF COUNT: 07/09/96
DAY OF WEEK: Tue
TIME STARTED: 16:32
TIME ENDED: 18:32

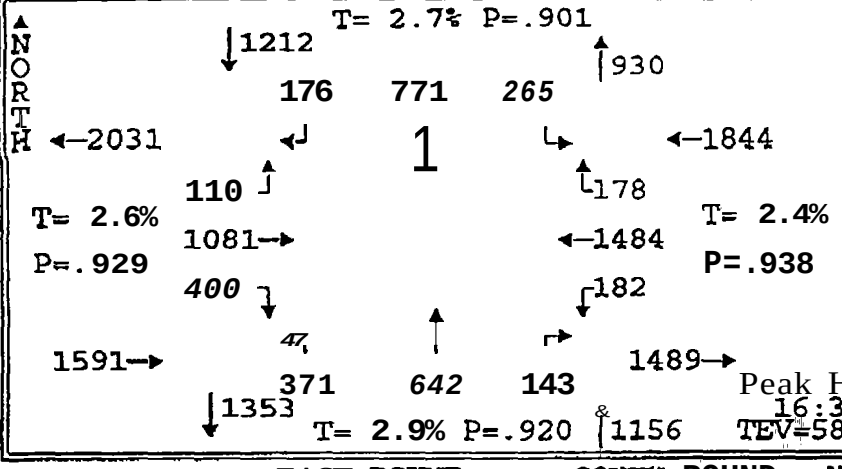
17:02-18:02
TEV=3838

Traffic Smithy
Traffic Survey Service

TIME PERIOD FROM - TO	EAST BOUND 7	→	↑	SOUTH BOUND ↵	↓	↳	NORTH BOUND ↰	↑	↱	WEST BOUND ↓	←	↥	ALL
16:32-16:37	0	91	17	6	0	4	0	0	0	0	67	18	203
16:37-16:42	0	83	12	15	1	24	0	0	0	0	90	14	239
16:42-16:47	0	54	6	4	0	8	0	0	0	0	106	9	187
16:47-16:52	0	129	9	8	0	18	0	0	0	0	98	10	272
16:52-16:57	0	133	1	7	0	22	0	0	0	0	155	3	321
16:57-17:02	0	108	2	5	0	12	0	0	0	0	137	2	266
17:02-17:07	0	145	3	5	0	21	0	0	0	0	184	8	366
17:07-17:12	0	103	2	3	0	19	0	0	0	0	153	11	291
17:12-17:17	0	129	1	14	0	22	0	0	0	0	173	1	340
17:17-17:22	0	126	2	5	0	23	0	0	0	0	153	5	314
17:22-17:27	0	126	3	4	0	14	0	0	0	0	207	8	362
17:27-17:32	**1**	137	2	2	0	19	0	0	0	0	152	4	317
17:32-17:37	0	**91**	2	12	0	18	0	0	0	0	155	3	281
17:37-17:42	0	132	1	6	0	14	0	0	0	0	176	4	333
17:42-17:47	0	138	2	4	0	9	0	**0**	0	0	183	4	340
17:47-17:52	0	110	0	3	0	**16**	**0**	0	0	0	150	2	281
17:52-17:57	0	149	1	2	0	7	**0**	0	0	0	177	5	341
17:57-18:02	0	114	2	5	0	8	0	0	0	0	141	2	272
18:02-18:07	0	**89**	1	1	0	11	0	0	0	0	129	1	232
18:07-18:12	0	**101**	1	3	0	6	0	0	0	0	174	3	288
18:12-18:17	0	**96**	0	3	0	12	0	0	0	0	114	1	226
18:17-18:22	0	**119**	**1**	0	0	4	0	0	0	0	171	0	295
18:22-18:27	0	112	**1**	1	0	8	0	0	0	0	145	3	270
18:27-18:32	0	89	**1**	2	0	3	**0**	0	0	0	103	0	198
Total Survey	1	2704	73	120	1	322	0	0	0	0	3493	121	6835
PHF	.25	.94	.75	.71	0	.74	0	0	0	**0**	**.94**	.71	.944
% Trucks	0	2.8	0	.8	0	3.1	0	0	0	0	2.3	7.4	2.6
Stopped Buses	0	0	0	0	0	0	0	0	0	0	2	0	
Peds	0	0	0	0	2	1	0	0	0	0	**1**	0	
Hourly Totals													
16:32-17:32	1	1364	60	78	1	206	0	0	0	0	1675	93	3478
16:47-17:47	1	1497	30	75	0	211	0	0	0	0	1926	63	3803
17:02-18:02	1	1500	21	65	0	**190**	0	**0**	**0**	0	2004	57	3838
17:17-18:17	1	1409	17	50	0	157	0	0	0	0	1911	42	3587
17:32-18:32	0	1340	13	42	0	116	0	0	0	0	1818	28	3357

INTERSECTION TURN MOVEMENT COUNT SUMMARY REPORT
TUALATIN-VALLEY HIGHWAY AT MURRAY BOULEVARD

11836



DATE OF COUNT: 09/19/96
DAY OF WEEK: Thu
TIME STARTED: 15:58
TIME ENDED: 17:58

TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

Peak Hour
16:38-17:38
TEV=5803

Traffic smithy
Traffic Survey Service

TIME PERIOD FROM - TO	EAST BOUND ↓	EAST BOUND →	EAST BOUND ↑	SOUTH BOUND ↵	SOUTH BOUND ↓	SOUTH BOUND ↳	NORTH BOUND ↰	NORTH BOUND ↑	NORTH BOUND ↱	WEST BOUND ↓	WEST BOUND ←	WEST BOUND ↑	ALL
15:58-16:03	26	47	8	7	76	17	31	64	11	12	91	15	405
16:03-16:08	34	82	4	13	58	13	17	36	7	22	99	16	401
16:08-16:13	40	86	4	11	64	36	38	46	18	11	110	19	483
16:13-16:18	24	56	7	12	57	14	26	63	16	18	124	15	432
16:18-16:23	30	93	8	11	46	14	25	31	13	8	124	13	416
16:23-16:28	42	101	13	11	52	20	27	43	10	18	115	8	468
16:28-16:33	34	60	11	11	83	15	43	59	19	14	95	13	457
16:33-16:38	21	73	12	10	56	23	27	48	13	19	123	15	440
16:38-16:43	39	114	2	17	42	21	27	47	15	14	136	20	494
16:43-16:48	28	75	7	20	68	15	41	52	12	15	112	16	461
16:48-16:53	29	75	12	22	67	11	24	57	9	21	94	2	423
16:53-16:58	36	101	5	12	57	22	27	38	14	11	143	20	486
16:58-17:03	31	94	10	18	65	17	41	56	14	11	110	22	489
17:03-17:08	37	80	15	10	63	22	29	76	19	26	108	12	497
17:08-17:13	39	105	17	16	60	23	24	34	7	15	174	13	527
17:13-17:18	26	88	5	6	70	32	39	58	6	8	115	13	466
17:18-17:23	22	76	5	13	80	25	27	75	15	21	112	9	480
17:23-17:28	46	109	12	9	63	20	26	46	5	11	165	18	530
17:28-17:33	37	96	8	25	66	35	37	32	10	14	106	25	491
17:33-17:38	30	68	12	8	70	22	29	71	17	15	109	8	459
17:38-17:43	33	103	14	14	50	18	30	38	11	13	144	16	484
17:43-17:48	31	102	8	12	40	24	21	45	13	9	127	11	443
17:48-17:53	23	64	10	3	69	32	45	38	14	20	105	12	435
17:53-17:58	24	61	11	5	66	16	27	65	15	20	107	12	429
Total Survey	762	2009	220	296	1488	515	728	1218	303	366	2848	343	11098
PHF	.88	.96	.65	.75	.9	.83	.96	.9	.76	.88	.93	.82	.958
% Trucks	1.3	2.9	3.6	2.4	2.6	3.1	1.9	2.9	5.3	3.3	2.3	2.9	2.7
Stopped Buses	0	6	0	0	0	0	0	1	0	0	0	0	
Peds	0	12	0	0	72	0	0	23	1	0	20	0	
Hourly Totals													
15:58-16:58	383	963	93	157	726	229	353	584	157	183	1366	172	5366
16:13-17:13	390	1027	119	170	716	225	361	604	161	190	1458	169	5590
16:28-17:28	388	1050	113	164	774	246	375	646	148	186	1487	173	5750
16:43-17:43	394	1070	122	173	779	262	374	633	139	181	1492	174	5793
16:58-17:58	379	1046	127	139	762	286	375	634	146	183	1482	171	5730

INTERSECTION TURN MOVEMENT COUNT SUMMARY REPORT

TUALATIN VALLEY HIGHWAY AT HOCKEN AVENUE

T= 2.3% P=.872

677 ↓ 123 359 195 ↑ 278

DATE OF COUNT: 10/09/96
M-T-W-TH-F-S-SU: Wed
TIME STARTED: 16:00
TIME ENDED: 18:00

171 100 39

661 ↓ T= 1.7% P=.815 ↑ 310

16:55-17:55 TEV=415

Traffic Smithy
Traffic Survey Service

16:00-16:05	15	93	15	13	18	9	8	4	3	6	108	4	296
16:05-16:10	11	70	2	6	19	10	6	10	5	10	122	8	279
16:10-16:15	16	93	5	11	27	7	12	7	4	6	113	4	305
16:15-16:20	20	93	8	7	22	9	11	15	3	9	109	1	307
16:20-16:25	16	87	2	14	22	5	10	14	2	7	109	2	290
16:25-16:30	13	100	5	6	19	11	8	2	3	3	104	3	277
16:30-16:35	12	109	11	13	21	12	13	5	0	4	103	1	304
16:35-16:40	13	76	7	14	18	16	14	12	5	7	109	5	295
16:40-16:45	12	88	10	8	18	10	11	12	3	4	132	3	311
16:45-16:50	25	106	11	12	25	6	10	11	2	9	135	2	354
16:50-16:55	14	81	13	8	15	16	15	3	0	9	120	3	297
16:55-17:00	15	104	10	13	32	9	18	10	5	9	122	8	355
17:00-17:05	12	108	16	7	25	7	12	8	1	4	115	2	317
17:05-17:10	16	92	5	13	32	11	12	11	4	4	86	8	294
17:10-17:15	18	107	10	9	29	23	18	10	3	7	126	6	366
17:15-17:20	19	105	11	14	34	24	20	14	3	4	119	4	371
17:20-17:25	22	105	12	13	26	22	13	9	1	4	127	6	36C
17:25-17:30	24	107	13	11	26	21	21	7	6	4	123	5	36E
17:30-17:35	12	94	10	12	33	19	15	10	5	8	131	0	345
17:35-17:40	23	92	9	8	30	17	10	6	2	5	131		335
17:40-17:45	23	87	15	7	33	15	17	6	1	5	130	4	343
17:45-17:50	21	106	7	11	31	18	9	5	5	6	136	1	35t
17:50-17:55	27	109	12	5	28	9	6	4	3	10	127	2	342
17:55-18:00	19	100	10	5	28	9	11	8	3	14	125	4	33t
Total Survey	418	2312	229	240	611	315	300	203	72	158	2862	88	780
PHF	.82	.96	.9	.81	.93	.71	.79	.71	.75	.83	.93	.67	.94
% Trucks	1	2.7	3.1	2.1	1.5	4.1	2.3	1.5	0	1.9	3.2	9.1	2.
Stopped Buses	0	6	0	0	0								
Peds	0	8	0	0	58	0	0	21	0	0	21	0	
Hourly Totals													
16:00-17:00	182	1100	99	125	256	120	136	105	35	83	1386	44	367
16:15-17:15	186	1151	108	124	278	135	152	113	31	76	1370	44	376
16:30-17:30	223	1188	135	127	340	177	177	112	33	72	1465	50	419
16:45-17:45	232	1188	130	125	301	190	181	105	33	69	1417	53	3903
17:00-18:00	236	1212	130	115	355	195	164	98	37	75	1476	44	4137

CEDAR

ENTRY

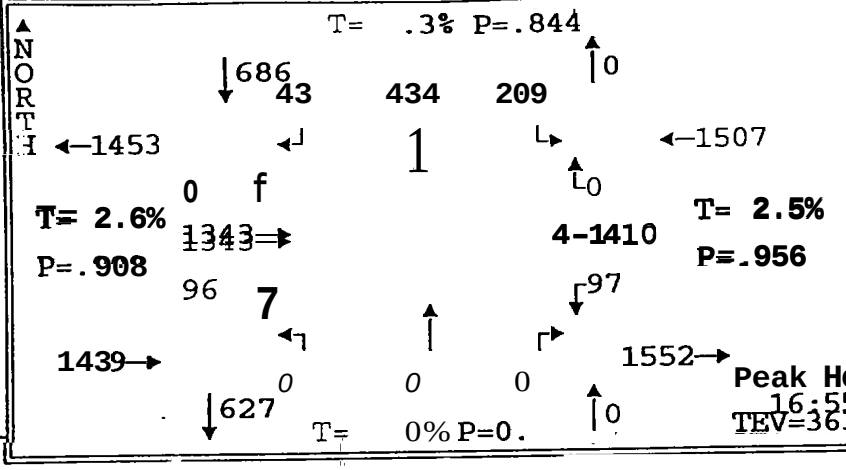
169 217 60

16:50-17:50

Traffic **Smithy**

TIME PERIOD FROM - TO	EAST BOUND ↓	EAST BOUND →	EAST BOUND ↑	SOUTH BOUND ↵	SOUTH BOUND ↓	SOUTH BOUND	NORTH BOUND ↰	NORTH BOUND ■	NORTH BOUND ↱	WEST BOUND ↓	WEST BOUND ←	WEST BOUND ↑	ALL
16:00-16:05	3	69	0	14	40	13	7	14	3	0	78	11	252
16:05-16:10	1	86	0	14	30	13	14	17	1	0	119	10	305
16:10-16:15	0	97	0	15	38	11	16	14	3	0	102	9	305
16:15-16:20	2	89	0	19	28	14	14	16	4	0	114	14	314
16:20-16:25	5	86	0	11	35	13	10	23	6	0	122	12	323
16:25-16:30	2	89	0	28	29	15	6	24	5	0	111	14	323
16:30-16:35	6	91	0	18	36	16	10	13	6	0	109	13	318
16:35-16:40	1	114	0	16	37	14	7	27	6	0	118	8	348
16:40-16:45	4	109	0	11	42	18	8	16	3	0	132	13	356
16:45-16:50	3	89	0	11	37	16	18	19	3	0	105	15	316
16:50-16:55	4	108	0	14	39	20	15	10	4	0	104	18	336
16:55-17:00	3	109	0	16	54	14	8	18	2	0	96	9	329
17:00-17:05	2	93	0	24	43	16	12	24	5	0	96	19	334
17:05-17:10	5	116	0	9	38	15	14	16	3	0	114	12	342
17:10-17:15	6	108	0	15	43	19	20	10	4	0	128	3	356
17:15-17:20	1	113	0	12	45	16	11	27	6	0	98	12	341
17:20-17:25	3	99	0	14	47	11	20	17	8	0	104	9	332
17:25-17:30	4	102	0	8	48	15	13	19	6	0	109	9	333
17:30-17:35	0	93	0	12	34	22	14	20	5	0	92	14	306
17:35-17:40	2	107	0	15	42	15	12	12	6	0	122	11	344
17:40-17:45	3	94	0	10	47	15	12	22	5	0	105	10	323
17:45-17:50	0	127	0	12	49	21	18	22	6	0	118	12	385
17:50-17:55	1	102	0	21	38	17	12	22	6	0	93	10	322
17:55-18:00	0	91	0	14	27	15	13	17	4	0	108	9	298
Total Survey	61	2381	0	353	946	374	304	439	110	0	2597	276	7841
PHF	.63	.94	0	.75	.94	.96	.83	.86	.75	0	.93	.75	.969
% Trucks	3.3	3.9	0	1.1	1.3	3.2	.7	.9	0	0	3.4	4.3	2.9
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	
Peds	0	14	0	0	7	0	0	28	0	0	37	1	
Hourly Totals													
16:00-17:00	34	1136	0	187	445	177	133	211	46	0	1310	146	3825
16:15-17:15	43	1201	0	192	461	190	142	216	51	0	1349	150	3995
16:30-17:30	42	1251	0	168	509	190	156	216	56	0	1313	140	4041
16:45-17:45	36	1231	0	160	517	194	169	214	57	0	1273	141	3992
17:00-18:00	27	1245	0	166	501	197	171	228	64	0	1287	130	4016

TUALATIN-VALLEY HIGHWAY AT WATSON AVENUE



DATE OF COUNT: 08/07/96
DAY OF WEEK: Wed
TIME STARTED: 16:00
TIME ENDED: 18:00

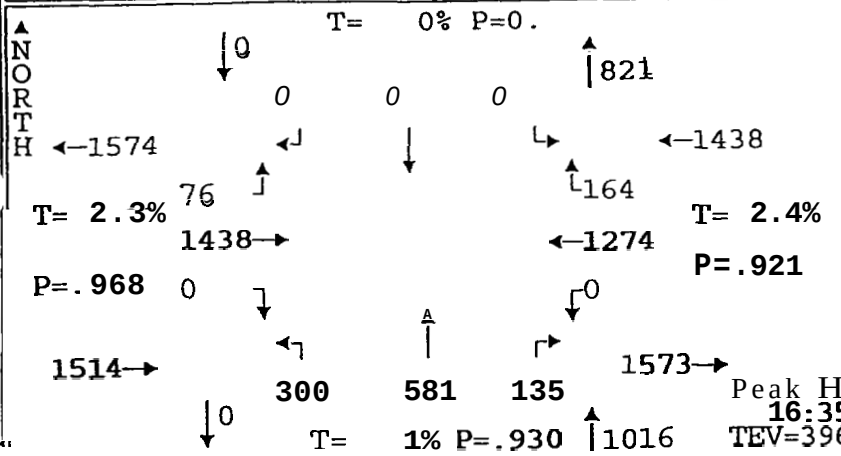
TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

Peak Hour
16:55-17:55
TEV=3632

Traffic Smithy
Traffic Survey Service

TIME PERIOD FROM - TO	EAST BOUND 7			SOUTH BOUND			NORTH BOUND			WEST BOUND 4			ALL
16:00-16:05	6	92	0	7	35	20	0	0	0	8	107	0	275
16:05-16:10	6	100	0	4	29	13	0	0	0	8	119	0	279
16:10-16:15	5	89	0	6	26	15	0	0	0	11	101	0	253
16:15-16:20	9	81	0	6	24	28	0	0	0	3	101	0	252
16:20-16:25	7	96	0	2	32	18	0	0	0	7	115	0	277
16:25-16:30	9	105	0	6	34	18	0	0	0	6	89	0	267
16:30-16:35	3	102	0	3	30	18	0	0	0	10	140	0	306
16:35-16:40	10	97	0	1	29	11	0	0	0	13	113	0	274
16:40-16:45	6	95	0	4	32	15	0	0	0	4	121	0	277
16:45-16:50	1	101	0	3	30	25	0	0	0	13	139	0	312
16:50-16:55	2	102	0	4	30	16	0	0	0	11	84	0	249
16:55-17:00	10	91	0	1	29	20	0	0	0	4	130	0	285
17:00-17:05	12	103	0	8	42	17	0	0	0	12	114	0	308
17:05-17:10	6	126	0	4	38	19	0	0	0	12	122	0	327
17:10-17:15	9	128	0	5	48	22	0	0	0	7	124	0	343
17:15-17:20	8	119	0	3	41	18	0	0	0	11	118	0	318
17:20-17:25	9	113	0	2	35	23	0	0	0	10	113	0	305
17:25-17:30	6	104	0	4	38	21	0	0	0	7	126	0	306
17:30-17:35	5	101	0	2	30	11	0	0	0	9	111	0	269
17:35-17:40	11	118	0	7	37	13	0	0	0	8	118	0	312
17:40-17:45	12	99	0	3	34	16	0	0	0	6	99	0	269
17:45-17:50	4	108	0	3	36	24	0	0	0	8	109	0	292
17:50-17:55	4	133	0	1	26	5	0	0	0	3	126	0	298
17:55-18:00	5	95	0	2	31	13	0	0	0	8	107	0	261
Total Survey	165	2498	0	91	796	419	0	0	0	199	2746	0	6914
PHF	.86	.9	0	.63	.85	.83	0	0	0	.78	.96	0	.919
% Trucks	1.8	2.6	0	0	.1	.7	0	0	0	5	2.4	0	2.1
Stopped Buses	0	13	0	0	0	0	0	0	0	0	5	0	
Peds	0	20	0	0	23	0	0	8	0	0	20	0	
Hourly Totals													
16:00-17:00	74	1151	0	47	360	217	0	0	0	98	1359	0	3306
16:15-17:15	84	1227	0	47	398	227	0	0	0	102	1392	0	3471
16:30-17:30	82	1281	0	42	422	225	0	0	0	114	1444	0	3610
16:45-17:45	91	1305	0	46	432	221	0	0	0	110	1398	0	3603
17:00-18:00	91	1347	0	44	436	202	0	0	0	101	1387	0	3608

TUALATIN HIGHWAY AT HALL BOULEVARD



DATE OF COUNT: 07/17/96
DAY OF WEEK: Wed
TIME STARTED: 16:00
TIME ENDED: 18:00

TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

Peak Hour
16:35-17:35
TEV=3968

Traffic Smithy
Traffic Survey Service

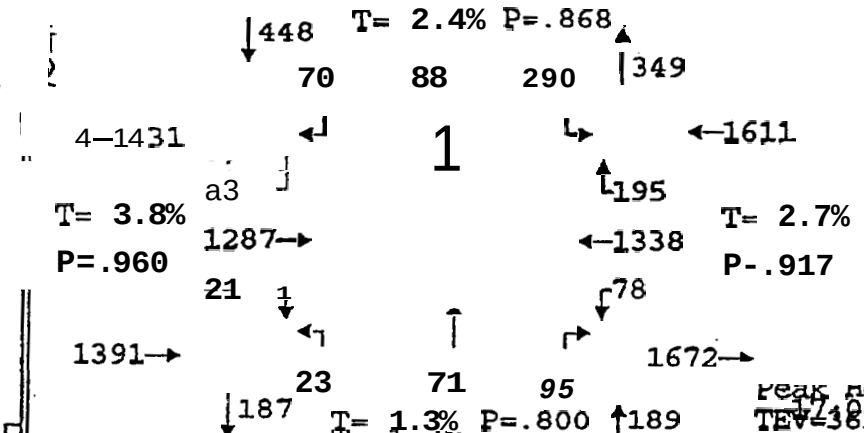
TIME PERIOD FROM - TO	7	←	↑	↰	↓	↳	↰	↑	↱	↓	←	↑	ALL
16:00-16:05	0	143	4	0	0	0	23	39	7	0	123	18	357
16:05-16:10	0	122	5	0	0	0	35	49	13	0	85	15	324
16:10-16:15	0	98	4	0	0	0	24	33	15	0	113	24	311
16:15-16:20	0	111	5	0	0	0	22	43	6	0	94	24	305
16:20-16:25	0	127	3	0	0	0	18	46	11	0	113	17	335
16:25-16:30	0	97	5	0	0	0	21	27	16	0	114	19	299
16:30-16:35	0	104	3	0	0	0	26	48	8	0	96	5	290
16:35-16:40	0	115	8	0	0	0	22	62	11	0	113	22	353
16:40-16:45	0	139	3	0	0	0	20	42	11	0	114	12	341
16:45-16:50	0	111	10	0	0	0	30	52	14	0	79	15	311
16:50-16:55	0	119	8	0	0	0	34	47	18	0	108	15	349
16:55-17:00	0	126	9	0	0	0	24	46	8	0	108	8	329
17:00-17:05	0	125	4	0	0	0	18	41	15	0	106	16	325
17:05-17:10	0	122	5	0	0	0	35	64	14	0	94	15	349
17:10-17:15	0	119	6	0	0	0	26	37	8	0	96	19	311
17:15-17:20	0	106	2	0	0	0	27	53	7	0	98	10	303
17:20-17:25	0	117	5	0	0	0	24	42	10	0	119	a	325
17:25-17:30	0	116	6	0	0	0	15	42	9	0	139	15	342
17:30-17:35	0	123	10	0	0	0	25	53	10	0	100	9	330
17:35-17:40	2	118	7	0	0	0	17	48	12	0	104	13	321
17:40-17:45	0	111	9	0	0	0	18	40	11	0	101	13	303
17:45-17:50	0	139	7	0	0	0	14	21	15	0	140	6	342
17:50-17:55	1	131	6	0	0	0	21	43	13	0	110	13	338
17:55-18:00	0	129	4	0	0	0	29	37	8	0	87	14	308
Total	3	2868	138	0	0	0	568	1055	270	0	2554	345	7801
PHF	0	.96	.7	0	0	0	.85	.93	.78	0	.89	.82	.987
% Trucks	0	2.4	.7	0	0	0	1.6	0	3.7	0	2.7	.6	2
Stopped Buses	0	1	0	0	0	0	0	0	0	0	2	0	
Peds	0	9	0	0	7	0	0	29	0	0	17	0	

Hourly Totals

16:00-17:00	0	1412	67	0	0	0	299	534	138	0	1260	194	3904
16:15-17:15	0	1415	69	0	0	0	296	555	140	0	1235	187	3897
16:30-17:30	0	1419	69	0	0	0	301	576	133	0	1270	160	3928
16:45-17:45	2	1413	81	0	0	0	293	565	136	0	1252	156	3898
17:00-18:00	3	1456	71	0	0	0	269	521	132	0	1294	151	3897

FROM : TRAFFIC SMITHY

INTERSECTION MOVEMENT COUNT SUMMARY REPORT
ON ROAD AT BROADWAY AND 117TH AVENUE



DATE OF COUNT: 10/09/96
DAY OF WEEK: Wed
TIME STARTED: 16:00
TIME ENDED: 18:00

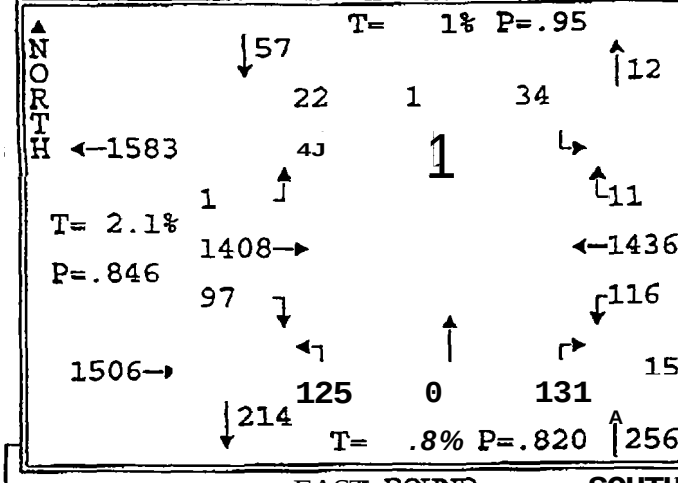
TEV=TOTAL ENTRY VOLUME
T=% TRUCKS BY APPROACH
P=PHF BY APPROACH

Peak Hour 17:00-18:00
TEV=3639

Traffic smithy Traffic Survey Service

TIME PERIOD FROM - TO	EAST BOUND ↓	EAST BOUND →	EAST BOUND ↑	SOUTHBOUND ↲	SOUTHBOUND ↓	SOUTHBOUND ↳	NORTH BOUND ↰	NORTH BOUND ↑	NORTH BOUND ↱	WEST BOUND ↓	WEST BOUND ←	WEST BOUND ↑	LL
6:00-16:05	1	95	6	4	9	25	3	5	8	1	116	17	290
6:05-16:10	1	81	4	7	10	19	1	5	6	3	98	24	259
6:10-16:15	1	103	4	4	6	14	1	9	6	2	107	18	276
6:15-16:20	0	90	4	4	7	30	1	3	8	8	101	23	279
6:20-16:25	2	101	6	6	11	17	3	6	15	6	100	13	284
6:25-16:30	1	86	2	3	5	17	1	7	13	9	86	13	243
6:30-16:35	2	85	7	7	11	19	3	5	11	2	101	15	268
6:35-16:40	0	110	4	5	5	16	3	4	12	9	117	21	306
6:40-16:45	0	110	4	7	10	21	5	8	8	9	80	23	285
6:45-16:50	3	86	3	8	9	21	1	6	12	5	112	18	279
6:50-16:55	1	93	4	7	8	16	0	6	5	9	126	11	286
6:55-17:00	2	98	9	7	3	17	2	1	8	4	106	18	275
7:00-17:05	4	107	9	6	8	29	1	4	6	11	112	34	315
7:05-17:10	1	104	6	4	12	31	2	13	4	6	124	15	322
7:10-17:15	4	117	1	3	7	29	2	4	8	9	120	19	323
7:15-17:20	0	106	11	11	8	18	4	8	9	6	124	16	321
7:20-17:25	3	102	3	9	4	21	2	5	9	5	105	14	282
7:25-17:30	1	125	5	5	4	28	0	6	2	6	108	15	304
7:30-17:35	1	118	4	4	9	30	2	3	4	9	95	20	299
7:35-17:40	0	92	8	8	8	22	1	5	12	7	114	15	292
7:40-17:45	2	90	11	4	8	20	1	9	13	2	111	13	292
7:45-17:50	1	93	6	5	6	17	2	4	12	6	107	13	275
7:50-17:55	2	105	8	7	5	21	4	6	8	6	105	19	296
7:55-18:00	2	120	11	4	9	24	0	4	8	6	113	22	323
Total Survey	35	2425	139	138	178	522	48	135	207	145	2588	409	696
PHF	.58	.93	.83	.84	.84	.84	.75	.75	.84	.75	.91	.91	.949
% Trucks	0	3.8	6.5	5.1	3.4	1.3	0	1.5	1.4	.7	3.1	.7	11
Stopped Buses	0	1	0	0	2	0	a	0	0	0	0	0	3
Peds	0	47	..	..	94	0	0	4	0	0	14	0	
Hourly Totals													
16:00-17:00	14	1138	56	68	90	232	25	64	112	67	1250	214	3330
16:15-17:15	20	1187	58	66	82	262	26	66	110	87	1285	203	3463
16:30-17:30	21	1243	66	79	85	266	27	69	94	86	1335	199	3564
16:45-17:45	22	1246	74	76	a4	282	20	69	92	78	1357	188	3588
17:00-18:00	21	1287	83	70	88	290	23	71	95	78	1338	195	3639
17:00-18:00	21	1287	83	70	88	290	23	71	95	78	1338	195	3639

INTERSECTION TURN MOVEMENT COUNT SUMMARY REPORT
FRED MEYER ACCESS AT CANYON ROAD



DATE OF COUNT: 10/08/96
DAY OF WEEK: Tue
TIME STARTED: 16:00
TIME ENDED: 18:00

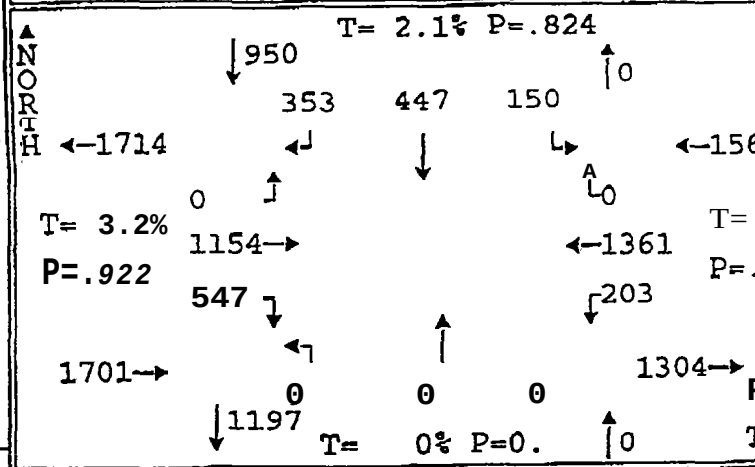
TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

Traffic Smithy
Traffic Survey Service

TIME PERIOD FROM - TO	EAST BOUND ↓	EAST BOUND →	SOUTH BOUND ↑	SOUTH BOUND ↲	SOUTH BOUND ↓	SOUTH BOUND ↳	NORTH BOUND ↰	NORTH BOUND ↑	NORTH BOUND ↱	WEST BOUND →	WEST BOUND ←	WEST BOUND ↳	ALL
16:00-16:05	3	113	0	0	0	5	13	0	12	a	115	0	269
16:05-16:10	6	94	1	4	0	2	13	0	9	14	93	0	236
16:10-16:15	8	106	0	0	0	2	10	0	9	7	97	0	239
16:15-16:20	14	110	0	0	0	1	S	0	12	3	115	0	260
16:20-16:25	6	126	1	2	0	0	10	0	13	17	109	1	285
16:25-16:30	10	117	0	2	0	0	12	0	9	10	101	1	262
16:30-16:35	7	112	0	0	0	0	9	0	6	10	116	0	260
16:35-16:40	13	86	0	2	0	3	16	0	15	9	112	3	259
16:40-16:45	9	128	0	2	1	3	14	0	9	8	125	0	299
16:45-16:50	10	98	1	0	0	4	10	0	7	a	127	1	266
16:50-16:55	5	115	0	1	0	3	10	0	12	14	114	1	275
16:55-17:00	8	103	0	3	0	3	13	0	6	9	120	1	266
17:00-17:05	6	69	0	3	0	0	2	0	7	9	110	1	207
17:05-17:10	11	114	0	5	0	1	13	0	9	10	130	0	293
17:10-17:15	14	122	0	2	0	3	15	0	12	5	100	2	275
17:15-17:20	7	117	0	0	0	4	12	0	15	9	119	1	284
17:20-17:25	4	120	0	0	0	4	10	0	14	6	131	0	289
17:25-17:30	a	148	0	2	0	4	6	0	12	14	123	2	319
17:30-17:35	12	138	0	0	0	3	7	0	7	13	115	1	296
17:35-17:40	3	136	0	4	0	2	13	0	21	11	122	1	313
17:40-17:45	10	115	0	0	1	6	17	0	9	12	121	0	291
17:45-17:50	10	122	0	2	0	0	14	0	11	11	102	0	272
17:50-17:55	11	111	0	2	0	6	11	0	7	13	108	0	269
17:55-18:00	10	111	0	0	0	0	13	0	5	11	120	0	270
Total Survey	205	2731	3	36	2	59	268	0	248	241	2745	16	6554
HF	.76	.83	.25	.5	.25	.71	.78	0	.8	.7[illegible]	[illegible]	.69	.911
Trucks	1	2.2	0	2.8	0	0	.7	0	.8	[illegible]	[illegible]	0	1.[illegible]
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	
Peds	0	18	0	0	22	0	2	2	2	0	4	0	
Hourly Totals													
16:00-17:00	99	1308	3	16	1	26	135	0	119	117	1344	8	3176
16:15-17:15	113	1300	2	22	1	21	129	0	117	112	1379	11	3207
16:30-17:30	102	1332	1	20	1	32	130	0	124	131	1427	12	3292
16:45-17:45	98	1395	1	20	1	37	128	0	131	120	1432	11	3374
17:00-18:00	106	1423	0	20	1	33	133	0	129	124	1401	a	3378

11952 new

INTERSECTION TURN MOVEMENT COUNT SUMMARY REPORT
HIGHWAY 217 SOUTHBBOUND AT CANYON ROAD



DATE OF COUNT: 10/08/96
DAY OF WEEK: Tue
TIME STARTED: 16:00
TIME ENDED: 18:00

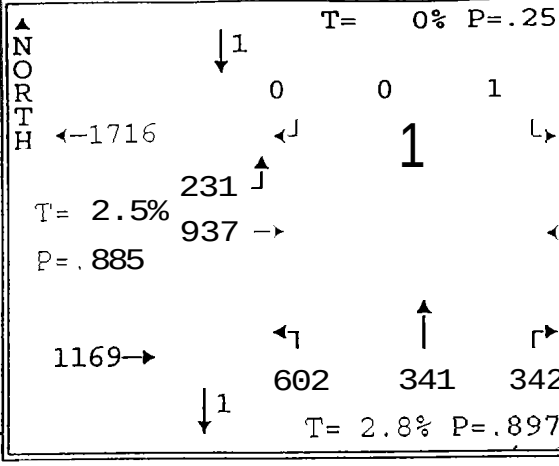
TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

Peak Hour
17:00-18:00
TEV=4215

Traffic Smithy
Traffic Survey Service

TIME PERIOD FROM - TO	EAST BOUND 7	→	↱	SOUTH BOUND ↲	↓	↳	NORTH BOUND ↰	↑	↱	WEST BOUND ↴	←	↖	ALL
16:00-16:05	38	103	0	34	29	8	0	0	0	21	105	0	338
16:05-16:10	41	68	0	27	35	17	0	0	0	15	104	0	307
16:10-16:15	44	94	0	27	21	a	0	0	0	14	129	0	337
16:15-16:20	45	79	0	35	26	12	0	0	0	24	101	0	322
16:20-16:25	43	89	0	23	25	11	0	0	0	13	108	0	312
16:25-16:30	40	98	0	19	28	16	0	0	0	10	97	0	308
16:30-16:35	46	94	0	28	20	13	0	0	0	20	106	0	327
16:35-16:40	42	91	1	38	23	13	0	0	0	22	123	0	353
16:40-16:45	44	07	0	34	26	15	0	0	0	18	75	0	299
16:45-16:50	57	87	0	34	13	17	0	0	0	25	118	0	351
16:50-16:55	39	77	0	29	27	a	0	0	0	20	132	0	332
16:55-17:00	50	89	0	26	27	7	0	0	0	12	101	0	312
17:00-17:05	34	02	0	26	25	14	0	0	0	29	118	0	328
17:05-17:10	44	83	0	31	37	4	0	0	0	16	130	0	345
17:10-17:15	48	113	0	21	42	4	0	0	0	17	127	0	372
17:15-17:20	41	111	0	24	28	7	0	0	0	23	131	0	365
17:20-17:25	41	89	0	27	41	8	0	0	0	13	95	0	314
17:25-17:30	48	118	0	36	49	18	0	0	0	11	110	0	390
17:30-17:35	47	109	0	20	33	19	0	0	0	17	107	0	352
17:35-17:40	40	99	0	28	26	11	0	0	0	18	109	0	331
17:40-17:45	49	106	0	36	30	17	0	0	0	16	121	0	375
17:45-17:50	49	84	0	36	45	22	0	0	0	12	97	0	345
17:50-17:55	61	85	0	36	46	12	0	0	0	17	101	0	358
17:55-18:00	45	75	0	32	45	14	0	0	0	14	115	0	340
Total Survey	1076	2210	1	707	747	295	0	0	0	417	2660	0	8113
PHF	.86	.88	0	.82	.82	.74	0	0	0	.82	.88	0	.973
% Trucks	4.2	2.7	0	1.8	2.3	2	0	0	0	3.4	3.3	0	3
Stopped Buses	0	0	0	0	0	0	0	0	0	0	3	0	
Peds	0	9	0	0	1	0	0	2	0	0	18	0	
Hourly Totals													
16:00-17:00	529	1056	1	354	300	145	0	0	0	214	1299	0	3898
16:15-17:15	532	1069	1	344	319	134	0	0	0	226	1336	0	3961
16:30-17:30	534	1121	1	354	358	128	0	0	0	226	1366	0	4088
16:45-17:45	538	1163					0	0	0	217	1399	0	4167
17:00-18:00	547	1154	0	388	447	150	0	0	0	203	1361	0	4215

INTERSECTION TURN MOVEMENT COUNT SUMMARY REPORT
CANYON ROAD AT HIGHWAY 217 NORTHBOUND RAMPS 11397



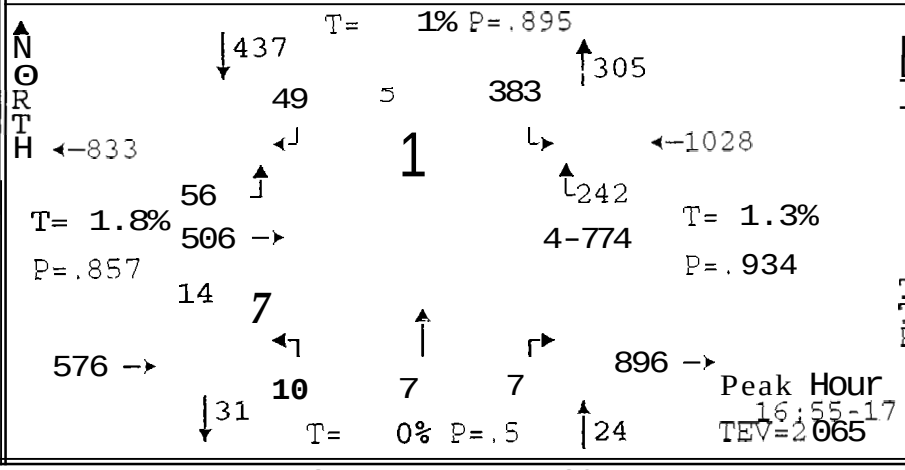
DATE OF COUNT: 07/16/96
DAY OF WEEK: Tue
TIME STARTED: 16:00
TIME ENDED: 18:00

TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

Traffic Smithy
Traffic Survey Service

TIME PERIOD FROM - TO	EAST BOUND			SOUTH BOUND			NORTH BOUND			WEST BOUND			ALL
15:00-16:05	0	a7	21	0	0	0	44	27	27	0	71	18	295
16:05-16:10	0	72	28	0	0	0	43	24	22	0	97	16	302
15:10-16:15	0	81	14	0	0	0	52	26	32	0	114	11	330
15:15-16:20	0	66	28	0	0	0	54	50	27	0	87	10	322
16:20-16:25	1	87	19	0	0	0	50	14	25	0	104	14	314
16:25-16:30	0	73	12	0	0	0	67	42	29	0	79	9	311
15:30-16:35	0	60	17	0	0	0	42	26	35	0	98	11	289
16:35-16:40	0	84	22	0	0	1	34	18	25	0	92	10	286
16:40-16:45	0	91	25	0	0	0	51	32	21	0	84	15	319
16:45-16:50	0	90	18	0	0	0	57	31	30	0	100	10	336
16:50-16:55	0	71	22	0	0	0	50	23	27	0	78	15	286
16:55-17:00	0	a7	11	0	0	0	49	16	30	0	80	15	288
17:00-17:05	0	86	24	0	0	0	43	24	29	0	93	15	314
17:05-17:10	0	61	19	0	0	0	53	39	32	0	105	20	329
17:10-17:15	0	76	10	0	0	0	38	32	31	0	79	13	279
17:15-17:20	0	53	11	0	0	0	63	30	23	0	96	19	295
17:20-17:25	0	62	11	0	0	0	43	35	32	0	92	11	286
17:25-17:30	0	83	16	0	0	0	49	27	31	0	101	13	320
17:30-17:35	0	53	13	0	0	0	51	18	22	0	82	6	245
17:35-17:40	0	61	12	0	0	0	38	29	28	0	82	15	265
17:40-17:45	0	94	16	0	0	0	41	25	21	0	88	14	299
17:45-17:50	0	103	21	0	0	0	48	28	29	0	91	15	335
17:50-17:55	0	99	25	0	0	0	49	25	25	0	81	14	318
1755-18:00	0	91	23	0	0	0	50	33	36	0	94	17	344
Total Survey	1	1871	438	0	0	11159	674	669	0	2168	326	7307	
PHF	.25	.88	.89	0	0	.25	.88	.8	.94	0	.91	.78	.963
% Trucks	0	2.6	2.1	0	0	0	4	1.5	1.9	0	3.1	2.1	2.7
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	
Peds	0	22	0	0	0	0	0	9	0	0	18	0	
Hourly Totals													
16:00-17:00	1	949	237	0	0	1	593	329	330	0	1084	154	3678
16:15-17:15	1	932	227	0	0	1	588	347	341	0	1079	157	3673
16:30-17:30	0	904	206	0	0	1	572	333	346	0	1098	167	3627
16:45-17:45	0	877	183	0	0	0	575	329	336	0	1076	166	3542
17:00-18:00	0	922	201	0	0	0	566	345	339	0	1084	172	3629

INTERSECTION TURN MOVEMENT COUNT SUMMARY REPORT
K I N " @ FARMINGTON



DATE OF COUNT: 04/03/96
DAY OF WEEK: Wed
TIME STARTED: 16:00
TIME ENDED: 18:00

TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

Traffic Smithy
Traffic Survey Service

TIME PERIOD FROM - TO	EAST BOUND ↓	EAST BOUND →	EAST BOUND ↑	SOUTH BOUND ↲	SOUTH BOUND ↓	SOUTH BOUND ↳	NORTH BOUND ↰	NORTH BOUND ↑	NORTH BOUND ↱	WEST BOUND ↓	WEST BOUND ←	WEST BOUND ↑	ALL
16:00-16:05	2	43	3	5	0	20	1	1	2	1	69	12	159
16:05-16:10	0	49	4	6	0	27	0	0	2	1	57	22	168
16:10-16:15	2	40	3	1	0	23	2	1	0	0	70	21	163
16:15-16:20	0	57	4	4	0	28	0	1	3	0	60	19	175
16:20-16:25	0	56	0	1	1	29	0	0	1	2	66	13	169
16:25-16:30	1	48	2	2	0	23	0	0	4	3	65	16	164
16:30-16:35	0	37	4	4	0	25	1	0	1	0	67	16	155
16:35-16:40	2	48	0	3	2	25	0	0	1	2	70	21	174
16:40-16:45	2	38	4	1	0	27	0	0	0	1	60	18	151
16:45-16:50	0	35	2	2	1	26	1	1	0	0	67	23	158
16:50-16:55	0	34	3	2	2	33	1	0	1	1	56	26	159
16:55-17:00	1	41	6	7	0	29	1	0	0	3	64	25	177
17:00-17:05	0	43	7	5	1	22	2	1	0	0	63	27	171
17:05-17:10	1	42	3	4	0	25	5	2	1	0	76	15	174
17:10-17:15	0	47	8	3	0	33	0	0	0	1	63	22	177
17:15-17:20	0	39	9	3	0	49	0	0	0	2	43	19	164
17:20-17:25	1	33	2	1	1	32	0	0	1	1	75	17	164
17:25-17:30	6	40	3	5	1	25	2	2	1	1	71	25	182
17:30-17:35	1	53	4	5	0	47	0	0	1	2	63	19	195
17:35-17:40	2	53	6	5	1	26	0	0	0	0	69	25	187
17:40-17:45	0	29	4	6	1	31	0	0	1	0	62	19	153
17:45-17:50	1	36	0	2	0	42	0	0	1	1	58	15	156
17:50-17:55	1	50	4	3	0	22	0	2	1	1	67	14	165
17:55-18:00	0	36	6	1	2	22	1	1	1	0	68	13	151
Total Survey	23	1027	91	81	13	691	17	12	22	23	1549	462	4011
PHF	.39	.87	.7	.77	.63	.84	.31	.58	.58	.75	.93	.88	.915
% Trucks	0	1.9	0	3.7	0	.7	0	0	0	0	1.4	1.1	1.4
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	
Peds	0	26	0	0	3	0	0	2	0	0	11	0	
Hourly Totals													
16:00-17:00	10	526	35	38	6	315	7	4	14	14	771	232	1972
16:15-17:15	7	526	43	38	7	325	11	5	11	13	777	241	2004
16:30-17:30	13	477	51	40	8	351	13	6	6	12	775	254	2006
16:45-17:45	12	489	57	48	8	378	12	6	6	11	772	262	2061
17:00-18:00	13	501	56	43	7	376	10	8	8	9	770	230	2039

1232c

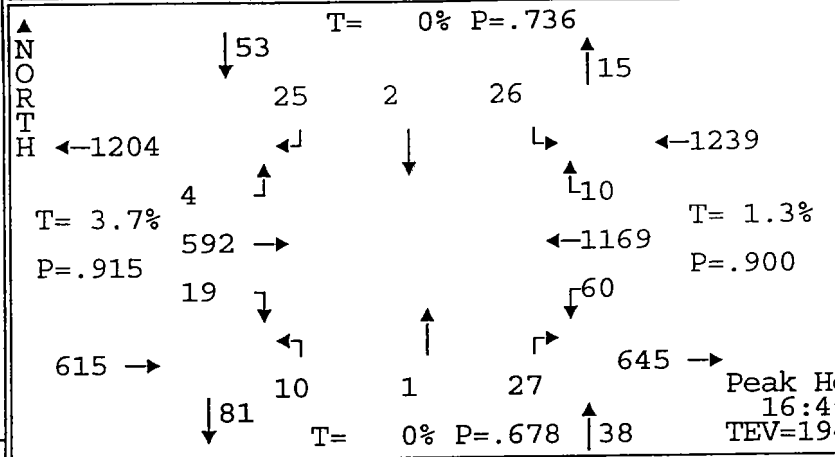
581 ↓ ↑ 1234 16:25-17:25
T= 1.5% P=.801 TEV=2471

Traffic Smithy
Traffic Survey Service

	↓				↳			↰		↑			
16:00-16:05	11	44	2	8	11	8	12	13	10	4	54	3	180
16:05-16:10	6	37	8	9	18	12	6	13	14	4	40	4	171
16:10-16:15	13	55	7	6	26	3	3	3	9	3	72	1	201
16:15-16:20	10	43	3	7	21	5	11	21	14	7	60	6	208
16:20-16:25	5	42	1	9	26	2	5	9	5	8	65	3	180
16:25-16:30	9	49	5	5	27	4	5	10	7	3	75	6	205
16:30-16:35	9	40	2	14	24	2	5	8	5	7	92	3	211
16:35-16:40	13	52	0	15	21	2	11	16	3	10	66	5	214
16:40-16:45	16	57	2	13	25	2	5	10	9	2	87	5	233
16:45-16:50	13	65	3	7	18	3	7	10	2	12	69	8	217
16:50-16:55	12	47	3	10	34	1	2	6	5	11	58	5	194
16:55-17:00	18	58	2	9	25	3	7	11	2	2	60	2	199
17:00-17:05	22	42	0	12	13	3	2	11	4	12	65	9	195
17:05-17:10	13	44	2	7	20	3	7	14	3	5	77	2	197
17:10-17:15	15	38	1	13	33	3	1	11	6	11	45	7	184
17:15-17:20	21	53	6	11	33	2	1	6	4	7	65	3	212
17:20-17:25	22	53	0	9	36	6	3	10	5	7	52	7	210
17:25-17:30	10	27	3	7	40	9	5	10	8	16	50	8	193
17:30-17:35	18	60	0	7	23	3	3	13	6	8	63	9	213
17:35-17:40	12	55	4	12	34	2	3	12	8	10	56	5	213
17:40-17:45	15	52	4	6	33	1	2	9	5	15	62	7	211
17:45-17:50	13	56	4	11	25	0	3	9	3	8	66	5	203
17:50-17:55	13	44	4	15	39	2	3	13	6	10	41	2	192
17:55-18:00	26	63	1	7	18	2	3	12	7	9	76	6	230
Total Survey	335	1176	67	229	623	83	115	260	150	191	1516	121	4866
PHF	.79	.86	.72	.74	.76	.77	.61	.85	.81	.79	.83	.86	.93(
% Trucks	.3	2.9	1.5	.4	1.3	2.4	.9	.8	3.3	1	.9	.8	1.5
Stopped Buses	0	1	0	0	1	0	0	0	0	0	4	0	
Peds	0	1	0	0	2	0	0	0	0	0	2	0	
Hourly Totals													
16:00-17:00	135	589	38	112	276	47	79	130	85	73	798	51	241
16:15-17:15	155	577	24	121	287	33	68	137	65	90	819	61	243
16:30-17:30	184	576	24	127	322	39	56	123	56	102	786	64	245
16:45-17:45	191	594	28	110	342	39	43	123	58	116	722	72	243
17:00-18:00	200	587	29	117	347	36	36	130	65	118	718	70	245

INTERSECTION TURN MOVEMENT COUNT SUMMARY REPORT
FARMINGTON ROAD AT 149TH AVENUE

12242



DATE OF COUNT: 11/18/96
DAY OF WEEK: Mon
TIME STARTED: 16:00
TIME ENDED: 18:00

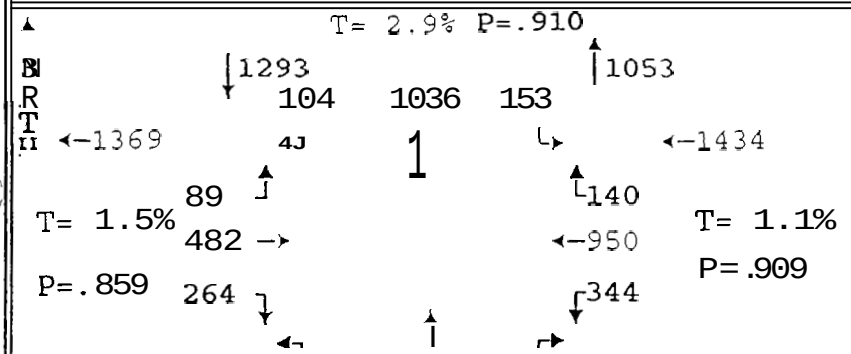
TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

Peak Hour
16:40-17:40
TEV=1945

Traffic Smithy
Traffic Survey Service

TIME PERIOD FROM - TO	EAST BOUND ↓	EAST BOUND →	SOUTH BOUND ↑	SOUTH BOUND ↲	SOUTH BOUND ↓	SOUTH BOUND ↳	NORTH BOUND ↰	NORTH BOUND ↑	NORTH BOUND ↱	WEST BOUND ↓	WEST BOUND ←	WEST BOUND ↑	ALL
16:00-16:05	1	55	1	2	2	3	0	2	3	6	65	1	141
16:05-16:10	2	49	1	4	3	4	0	0	1	4	90	2	160
16:10-16:15	1	61	0	2	0	5	0	1	0	3	84	2	159
16:15-16:20	5	53	3	4	0	1	0	1	4	3	87	1	162
16:20-16:25	0	58	0	4	0	6	0	0	5	2	75	1	151
16:25-16:30	0	69	0	0	0	4	0	0	5	4	91	0	173
16:30-16:35	1	56	1	1	0	0	1	0	4	4	76	0	144
16:35-16:40	1	58	0	3	1	3	1	0	2	4	85	2	160
16:40-16:45	0	43	1	4	0	5	2	0	0	4	108	0	167
16:45-16:50	3	55	0	4	0	3	2	0	4	3	92	2	168
16:50-16:55	0	55	0	1	0	1	3	0	3	3	98	1	165
16:55-17:00	1	53	1	4	0	1	0	0	1	8	110	0	179
17:00-17:05	2	48	0	0	1	2	1	0	4	3	86	1	148
17:05-17:10	1	53	0	3	0	4	0	0	3	9	89	0	162
17:10-17:15	1	44	1	0	0	1	0	0	2	3	102	0	154
17:15-17:20	1	50	0	3	0	4	0	0	1	5	86	1	151
17:20-17:25	2	44	0	0	0	0	1	0	3	2	77	2	131
17:25-17:30	3	50	1	2	0	1	0	0	0	10	115	0	182
17:30-17:35	1	47	0	2	1	1	1	1	3	4	108	2	171
17:35-17:40	4	50	0	2	0	3	0	0	3	6	98	1	167
17:40-17:45	2	28	0	7	1	0	0	0	6	7	79	1	131
17:45-17:50	0	42	1	5	2	3	1	0	4	7	96	2	163
17:50-17:55	1	48	0	7	1	1	0	1	2	4	105	2	172
17:55-18:00	1	48	0	2	1	3	1	0	2	2	84	0	144
Total Survey	34	1217	11	66	13	59	14	6	65	110	2186	24	3805
PHF	.59	.91	1	.69	.5	.72	.36	.25	.75	.75	.91	.63	.935
% Trucks	**0**	3.9	**0**	*0*	*0*	0	*0*	**0**	0	1.8	1.2	0	2
Stopped Buses	**0**	4	**0**	*0*	*0*	0	*0*	**0**	*0*	0	4	*0*	
Peds	**0**	10	**0**	*0*	*0*	0	*0*	**3**	*0*	*0*	1	*0*	
Hourly Totals													
16:00-17:00	15	665	8	33	6	36	9	4	32	48	1061	12	1929
16:15-17:15	15	645	7	28	2	31	10	1	37	50	1099	8	1933
16:30-17:30	16	609	5	25	2	25	11	0	27	58	1124	9	1911
16:45-17:45	21	577	3	28	3	21	8	1	33	63	1140	11	1909
17:00-18:00	19	552	3	33	7	23	5	2	33	62	1125	12	1876

FARMINGTON ROAD AT MURRAY BOULEVARD (COMPOSITE)



DATE OF COUNT: 07/18/96
DAY OF WEEK: Thu
TIME STARTED: 16:00
TIME ENDED: 18:00

TEV=TOTAL ENTRY **VOLUME**
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

16:50-17:50

Traffic Smithy
Traffic Survey Service

16:00-16:05	10	29	11	19	79	19	20	55	15	16	48	19	340
16:05-16:10	18	41	5	8	63	8	26	65	10	16	67	17	344
16:10-16:15	16	40	6	11	68	16	31	61	11	19	60	14	353
16:15-16:20	15	46	4	8	85	18	29	64	12	20	55	12	368
16:20-16:25	15	49	10	12	84	0	22	73	9	16	65	17	372
16:25-16:30	10	21	9	6	77	22	21	62	15	16	47	8	314
16:30-16:35	22	50	5	12	73	22	37	60	11	20	64	14	390
16:35-16:40	15	49	7	4	52	19	23	54	11	34	78	17	363
16:40-16:45	19	51	4	11	91	7	24	95	10	33	81	14	440
16:45-16:50	15	40	8	7	95	24	26	56	15	19	72	10	387
16:50-16:55	20	46	6	12	86	8	29	70	19	29	55	8	388
16:55-17:00	17	39	12	7	87	18	20	48	10	16	77	12	363
17:00-17:05	25	33	6	12	102	18	33	77	10	11	70	10	407
17:05-17:10	10	41	5	6	63	8	36	54	8	30	83	10	354
17:10-17:15	21	40	8	12	84	4	15	66	9	40	94	18	411
17:15-17:20	15	2s	8	14	102	20	37	96	12	26	65	8	428
17:20-17:25	26	38	6	6	98	15	33	76	12	32	90	12	444
17:25-17:30	24	31	11	3	66	14	28	38	13	41	78	14	361
1.730-17:35	21	49	9	12	83	2	19	79	9	22	77	12	394
1.735-17:40	24	34	6	6	95	13	31	87	12	21	62	8	399
17:40-17:45	33	56	1	2	79	21	17	50	9	31	117	14	43a
17:45-17:50	28	50	11	12	91	12	17	83	18	45	82	14	463
17:50-17:55	20	22	12	6	98	12	31	72	18	19	54	15	379
17:55-18:00	12	30	2	9	69	5	35	69	13	26	80	11	361
Total Survey	451	950	172	217	1970	325	640	1610	291	598	1721	308	925:
PHF	.78	.86	.86	.81	.91	.78	.8	.87	.9	.87	.91	.92	.93(
% Trucks	1.6	1.4	2.3	1.8	2.9	3.4	1.9	3.2	.7	.2	1.1	3.0	2.1
Stopped Buses	0	2	0	0	1	0	0	1	0	0	1	2	
Peds	0	24	0	0	18	0	0	16	0	0	7	1	
Sourly Totals													
16:00-17:00	192	501	87	117	940	181	308	763	148	254	769	162	442
16:15-17:15	204	505	84	109	979	168	315	779	139	284	841	150	455
16:30-17:30	229	483	86	106	999	177	341	790	140	331	907	147	473
16:45-17:45	251	472	86	99	1040	165	324	797	138	318	940	136	476
17:00-18:00	259	449	85	100	1030	144	332	847	143	344	952	146	483

NORTH

1 1

0 0

1 T= 0% P=0. 0 16:45-17:45 TEV=3173

Traffic Smithy
Traffic Survey Service

T:
Fl

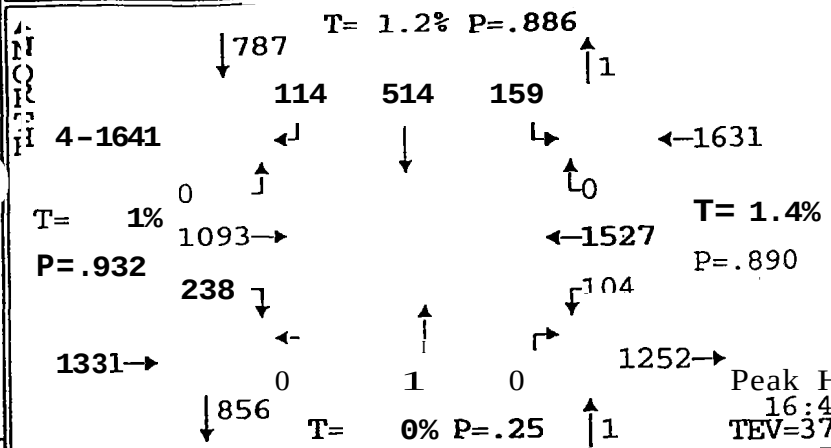
16:30-16:35	0	61	4	18	0	31	0	0	0	0	94	19	227
16:35-16:40	0	77	3	11	0	21	0	0	0	0	115	18	245
16:40-16:45	0	60	5	13	0	30	0	0	0	0	118	18	244
16:45-16:50	0	82	7	12	0	35	0	0	0	0	113	18	267
16:50-16:55	0	70	6	9	0	31	0	0	0	0	116	23	255
16:55-17:00	0	60	3	8	0	34	0	0	0	0	96	20	221
17:00-17:05	0	65	5	18	0	23	0	0	0	0	118	26	255
17:05-17:10	0	65	4	23	0	19	0	0	0	0	112	34	257
17:10-17:15	0	58	5	15	0	41	0	0	0	0	114	36	269
17:15-17:20	0	73	6	22	0	38	0	0	0	0	130	25	294
17:20-17:25	1	66	4	15	0	37	0	0	0	0	115	20	258
17:25-17:30	0	56	6	14	0	37	0	0	0	0	140	22	275
17:30-17:35	0	46	8	18	0	40	0	0	0	0	138	22	272
17:35-17:40	0	77	3	18	0	37	0	0	0	0	128	13	276
17:40-17:45	0	64	4	17	0	32	0	0	0	0	141	16	274
17:45-17:50	0	43	4	23	0	34	0	0	0	0	101	18	223
17:50-17:55	0	91	3	12	0	29	0	0	0	0	98	17	250
17:55-18:00	0	65	5	16	0	31	0	0	0	0	105	15	237
18:00-18:05	0	53	0	20	1	21	0	0	0	0	107	13	215
18:05-18:10	0	77	3	14	0	25	0	0	0	0	104	17	240
18:10-18:15	0	51	6	13	0	21	0	0	0	0	90	12	193
18:15-18:20	0	56	3	9	0	16	0	0	0	0	74	9	167
18:20-18:25	0	72	6	16	0	19	0	0	0	0	79	10	202
18:25-18:30	0	75	1	10	0	19	0	0	0	0	101	10	216

Total Survey	1	1563	104	364	1	701	0	0	0	0	2647	451	5832
PHF	.25	.92	.85	.79	0	.87	0	0	0	0	.9	.72	.959
% Trucks	0	1.4	1.9	.8	100	.9	0	0	0	0	1.6	1.1	1.4
Stopped Buses	0	1	0	0	0	0	0	0	0	0	0	0	
Peds	0	0	0	0	16	0	0	2	0	0	7	0	

Hourly Totals													
16:30-17:30	1	793	58	170	0	377	0	0	0	0	1381	279	3061
16:45-17:45	1	782	61	189	0	404	0	0	0	0	1461	275	3171
17:00-18:00	1	769	57	211	0	398	0	0	0	0	1440	264	3140
17:15-18:15	1	762	52	202	1	382	0	0	0	0	1397	210	3007
17:30-18:30	0	770	46	186	1	324	0	0	0	0	1266	172	2765

↓0	T= 0% P=0.	↑0	16:45-17:45 TEV=3628	Traffic Smithy Traffic Survey Service

T: Fl					↓		↳		↰		↑			
16:00-16:05	0	77	12	24	0	34	0	0	0	0	61	14	222
16:05-16:10	0	90	14	24	0	15	0	0	0	0	114	21	278
16:10-16:15	0	95	10	19	0	33	0	0	0	0	92	13	262
16:15-16:20	0	84	12	17	0	18	0	0	0	0	85	13	229
16:20-16:25	0	88	15	17	0	14	0	0	0	0	97	27	258
16:25-16:30	0	92	15	22	0	24	0	0	0	0	122	18	293
16:30-16:35	0	79	21	24	0	28	0	0	0	0	97	19	268
16:35-16:40	0	73	13	29	0	33	0	0	0	0	117	12	277
16:40-16:45	0	82	16	23	0	30	0	0	0	0	104	29	284
16:45-16:50	0	105	16	18	0	28	0	0	0	0	117	24	308
16:50-16:55	0	105	19	27	0	27	0	0	0	0	117	34	329
16:55-17:00	0	88	18	27	0	29	0	0	0	0	109	21	292
17:00-17:05	0	95	17	20	0	21	0	0	0	0	121	12	286
17:05-17:10	0	82	16	16	0	26	0	0	0	0	110	16	266
17:10-17:15	0	93	15	23	0	24	0	0	0	0	114	17	286
17:15-17:20	0	90	23	25	0	27	0	0	0	0	134	15	314
17:20-17:25	0	75	11	20	0	26	0	0	0	0	156	22	310
17:25-17:30	0	103	18	24	0	38	0	0	0	0	127	32	342
17:30-17:35	0	85	17	35	0	36	0	0	0	0	133	15	321
17:35-17:40	0	74	14	19	0	30	0	0	0	0	131	16	284
17:40-17:45	0	91	13	21	0	41	0	0	0	0	106	18	290
17:45-17:50	0	68	17	30	0	21	0	0	0	0	106	24	266
17:50-17:55	0	101	14	21	0	25	0	0	0	0	110	14	285
17:55-18:00	0	89	20	25	0	32	0	0	0	0	103	15	284
Total Survey	0	2104	376	550	0	660	0	0	0	0	2683	461	6834
PHF	0	.91	.91	.87	0	.82	0	0	0	0	.88	.77	.932
% Trucks	0	1.9	.8	.7	0	1.2	0	0	0	0	2.1	.7	1.7
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	
Peds	0	0	0	0	4	0	0	13	0	0	2	0	
Hourly Totals													
16:00-17:00	0	1058	181	271	0	313	0	0	0	0	1232	245	3300
16:15-17:15	0	1066	193	263	0	302	0	0	0	0	1310	242	3376
16:30-17:30	0	1070	203	276	0	337	0	0	0	0	1423	253	3562
16:45-17:45	0	1086	197	275	0	353	0	0	0	0	1475	242	3628
17:00-18:00	0	1046	195	279	0	347	0	0	0	0	1451	216	3534



DATE OF COUNT: 07/17/96
DAY OF WEEK: Wed
TIME STARTED: 16:00
TIME ENDED: 18:00

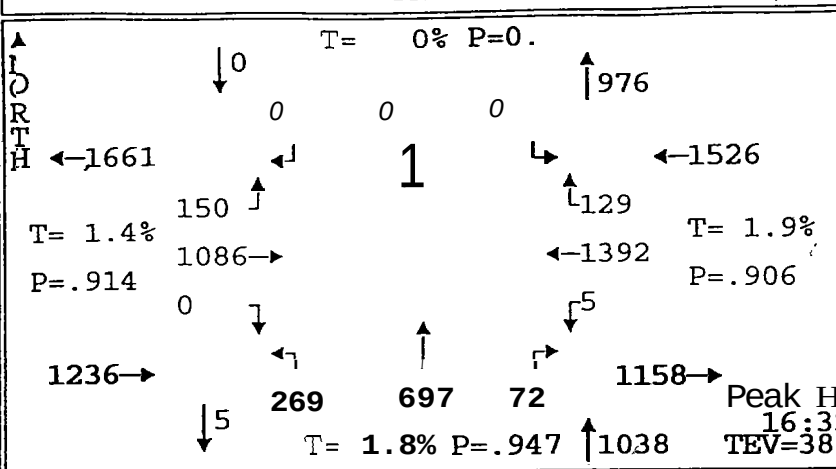
TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

Peak Hour
16:40-17:40
TEV=3750

Traffic Smithy
Traffic Survey Service

TIME PERIOD FROM - To	EAST BOUND ↓	EAST BOUND →	EAST BOUND ↑	SOUTH BOUND ↵	SOUTH BOUND ↓	SOUTH BOUND ↳	NORTH BOUND ↰	NORTH BOUND ↑	NORTH BOUND ↱	WEST BOUND ↓	WEST BOUND ←	WEST BOUND ▲	ALL
16:00-16:05	14	91	0	2	39	18	0	0	0	8	69	0	241
16:05-16:10	17	107	0	6	28	15	0	0	0	10	116	0	299
16:10-16:15	20	95	0	2	37	12	0	0	0	10	101	0	277
16:15-16:20	15	93	0	7	38	18	0	0	0	9	88	0	268
16:20-16:25	14	79	0	6	33	16	0	0	0	4	96	0	248
16:25-16:30	12	80	0	6	46	20	0	0	0	10	115	0	289
16:30-16:35	24	86	0	4	42	20	0	0	0	10	113	0	299
16:35-16:40	20	85	0	11	40	11	0	0	0	6	122	0	295
16:40-16:45	18	108	0	11	35	11	0	0	0	10	112	0	305
16:45-16:50	13	92	0	14	28	16	0	0	0	10	112	0	285
16:50-16:55	30	90	0	10	36	12	0	0	0	8	141	0	327
16:55-17:00	12	73	0	4	43	14	0	0	0	9	123	0	278
17:00-17:05	23	86	0	5	45	13	0	0	0	6	121	0	299
17:05-17:10	18	107	0	8	35	13	0	0	0	5	133	0	319
17:10-17:15	22	95	0	13	45	16	0	0	0	11	106	0	308
17:15-17:20	28	87	0	9	50	6	0	1	0	9	146	0	336
17:20-17:25	19	86	0	3	55	17	0	0	0	10	145	0	335
17:25-17:30	14	91	0	10	48	10	0	0	0	9	139	0	321
17:30-17:35	21	90	0	15	52	12	0	0	0	8	130	0	328
17:35-17:40	20	88	0	12	42	19	0	0	0	9	119	0	309
17:40-17:45	19	84	0	11	40	16	0	0	0	8	106	0	284
17:45-17:50	15	85	0	8	48	11	0	0	0	10	103	0	280
17:50-17:55	12	76	0	14	42	17	0	0	0	9	106	0	276
17:55-18:00	20	80	0	9	42	13	0	0	0	8	102	0	274
Total Survey	440	2134	0	200	989	346	0	1	0	206	2764	0	708C
PHF	.86	.94	0	.77	.83	.95	0	.25	0	.87	.89	0	.945
% Trucks	0	1.2	0	.5	1.5	.9	0	0	0	0	1.6	0	1.2
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	
Peds	0	15	0	0	25	0	0	17	0	0	0	0	
Hourly Totals													
16:00-17:00	209	1079	0	83	445	183	0	0	0	104	1308	0	341
16:15-17:15	221	1074	0	99	466	180	0	0	0	98	1382	0	352
16:30-17:30	241	1086	0	102	502	159	0	1	0	103	1513	0	370
16:45-17:45	239	1069	0	114	519	164	0	1	0	102	1521	0	372
17:00-18:00	231	1055	0	117	544	163	0	1	0	102	1456	0	366

FARMINGTON ROAD AT HALL BOULEVARD



DATE OF COUNT: 07/18/96
DAY OF WEEK: Thu
TIME STARTED: 16:00
TIME ENDED: 18:00

TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

Peak Hour
16:35-17:35

Traffic **Smithy**
Traffic Survey Service

TIME PERIOD FROM - TO	EAST BOUND ↓	EAST BOUND →	EAST BOUND ↑	SOUTH BOUND ↵	SOUTH BOUND ↓	SOUTH BOUND ↳	NORTH BOUND ↰	NORTH BOUND ↑	NORTH BOUND ↱	WEST BOUND ↓	WEST BOUND ←	WEST BOUND ↑	ALL
16:00-16:05	0	84	11	0	0	0	14	44	9	0	88	10	260
16:05-16:10	0	96	10	0	0	0	18	69	9	0	89	8	299
16:10-16:15	0	87	13	0	0	0	17	42	10	0	87	13	269
16:15-16:20	0	88	5	0	0	0	24	44	9	0	98	13	281
16:20-16:25	0	94	11	0	0	0	18	45	14	0	110	14	306
16:25-16:30	0	101	9	0	0	0	15	51	7	0	104	11	298
16:30-16:35	0	82	12	0	0	0	23	58	4	0	110	7	296
16:35-16:40	0	96	14	0	0	0	25	58	10	0	122	10	335
16:40-16:45	0	109	15	0	0	0	16	48	8	4	119	10	329
16:45-16:50	0	92	12	0	0	0	28	65	7	1	100	14	319
16:50-16:55	0	89	8	0	0	0	31	58	5	0	116	9	316
16:55-17:00	0	101	16	0	0	0	22	51	7	0	100	12	309
17:00-17:05	0	81	13	0	0	0	15	62	4	0	90	18	291
17:05-17:10	0	98	21	0	0	0	23	48	4	0	130	7	331
17:10-17:15	0	87	11	0	0	0	26	56	7	0	133	11	331
17:15-17:20	0	94	10	0	0	0	26	62	5	0	130	10	337
17:20-17:25	0	80	9	0	0	0	13	67	4	0	122	11	306
17:25-17:30	0	83	9	0	0	0	24	64	9	0	95	8	292
17:30-17:35	0	76	12	0	0	0	20	58	2	0	127	9	304
17:35-17:40	0	91	9	0	0	0	21	56	6	0	118	15	316
17:40-17:45	0	73	5	0	0	0	20	37	9	0	111	14	269
17:45-17:50	0	101	10	0	0	0	20	44	9	0	125	5	314
17:50-17:55	0	119	12	0	0	0	15	34	8	0	96	6	290
17:55-18:00	0	a3	12	0	0	0	12	41	7	0	110	6	271
Total Survey	0	2185	269	0	0	0	486	1262	173	5	2638	251	7269
PHF	0	.91	.75	0	0	0	.83	.9	.72	.25	.89	.83	.950
% Trucks	0	1.5	.7	0	0	0	2.1	1.8	.6	0	2	0	1.7
Capped Buses	0	21	0	0	23	0	0	34	0	0	10	0	

Hourly Totals													
16:00-17:00	0	1119	136	0	0	0	251	633	99	5	1243	131	3617
16:15-17:15	0	1118	147	0	0	0	266	644	86	5	1340	136	3742
16:30-17:30	0	1092	150	0	0	0	272	697	74	5	1375	127	3792
16:45-17:45	0	1045	135	0	0	0	269	684	69	1	1380	138	3721
17:00-18:00	0	1066	133	0	0	0	235	629	74	0	1395	120	3652

FARMINGTON ROAD AT LOMBARD AVENUE

T= 3.2% P=.857

398 ↓ 74 217 107 ↑ 383

147 ↓

470 ↓ 65 177 98 ↑ 1340

T= 1.2% P=.894 TEV=3638

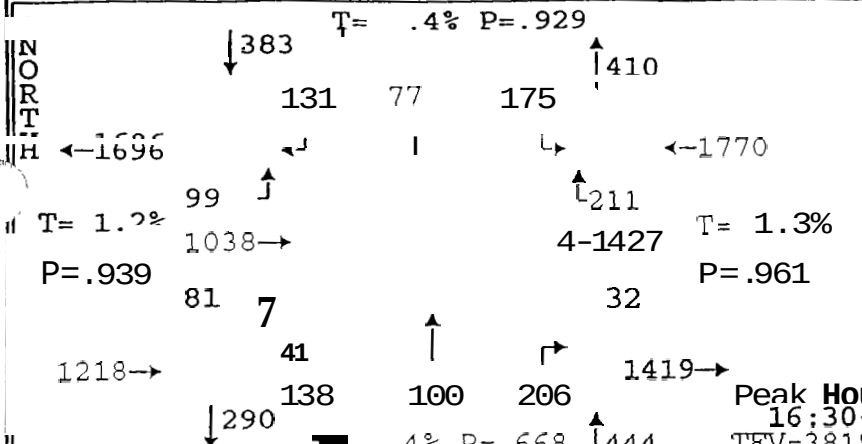
DATE OF COUNT: 07/25/96
DAY OF WEEK: Thu
TIME STARTED: 16:00
TIME ENDED: 18:00

16:55-17:55

Traffic Smithy
Traffic Survey Service

	↳	↰	↑									
16:00-16:05	5	82	8	6	19	9	3	8	7	11	108	11	277
16:05-16:10	6	88	6	6	22	8	5	18	4	16	98	12	289
16:10-16:15	4	92	7	4	25	11	3	19	13	9	98	18	303
16:15-16:20	10	94	3	5	15	12	4	14	4	16	101	11	289
16:20-16:25	12	85	6	6	14	12	5	18	2	11	89	14	274
16:25-16:30	6	90	5	7	27	13	3	9	8	14	105	19	306
16:30-16:35	11	67	4	6	22	10	7	19	3	14	104	7	274
16:35-16:40	10	98	3	11	19	14	10	20	9	7	110	16	327
16:40-16:45	9	89	7	5	22	20	3	18	8	13	95	17	306
16:45-16:50	6	73	8	3	17	9	7	13	7	11	109	10	273
16:50-16:55	7	90	8	6	8	7	10	16	12	12	93	15	284
16:55-17:00	8	80	11	9	7	9	2	7	4	13	114	12	276
17:00-17:05	7	83	6	7	23	12	5	17	10	7	118	13	308
17:05-17:10	7	84	4	8	28	10	4	18	5	14	129	7	318
17:10-17:15	9	97	9	6	19	3	5	8	13	14	129	14	326
17:15-17:20	10	82	2	6	22	9	5	17	11	10	124	16	314
17:20-17:25	8	91	5	4	15	4	5	16	6	17	129	13	313
17:25-17:30	10	85	7	10	16	12	8	15	10	7	113	13	306
17:30-17:35	8	75	11	3	12	8	6	21	5	10	104	7	270
17:35-17:40	10	93	4	7	14	13	7	16	6	11	110	16	307
17:40-17:45	10	88	5	6	19	11	9	16	9	12	113	14	312
17:45-17:50	14	67	0	4	20	8	3	12	12	16	122	10	288
17:50-17:55	5	93	2	4	22	8	6	14	7	16	118	5	300
17:55-18:00	9	80	3	6	23	9	2	7	6	9	104	10	268
Total Survey	201	2046	134	145	450	241	127	356	181	290	2637	300	7108
PHF	.78	.94	.72	.77	.78	.81	.74	.83	.82	.84	.93	.81	.948
% Trucks	1.5	1.3	3.7	6.2	2.4	2.9	.8	1.4	1.1	.3	1.0	.2	1.1
Stopped Buses	0	0	0	0	0	0	0	0					
Peds	0	11	0	0	0	0	0	27	0	0	4	0	
Hourly Totals													
16:00-17:00	94	1028	76	74	217	134	62	179	81	147	1224	162	3478
16:15-17:15	102	1030	74	79	221	131	65	177	85	146	1296	155	3561
16:30-17:30	102	1019	74	81	218	119	71	184	98	139	1367	153	3625
16:45-17:45	100	1021	80	75	200	107	73	180	98	138	1385	150	3607
17:00-18:00	107	1018	58	71	233	107	65	177	100	143	1413	138	3630

FARMINGTON ROAD AT GRIFFITH DRIVE



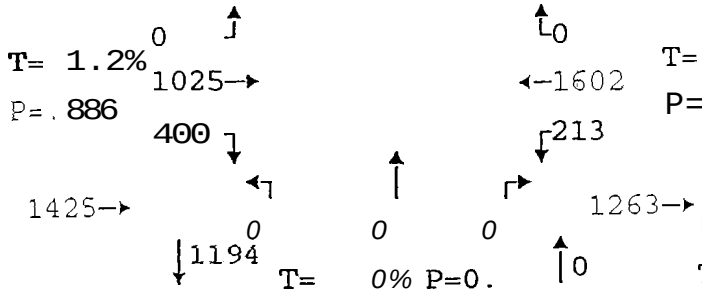
DATE OF COUNT: 07/17/96
DAY OF WEEK: Wed
TIME STARTED: 16:00
TIME ENDED: 18:00

TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

Peak Hour 16:30-17:30

Traffic Smithy
Traffic Survey Service

TIME PERIOD FROM - TO	EAST BOUND ↓	EAST BOUND →	EAST BOUND ↑	SOUTH BOUND ↵	SOUTH BOUND ↓	SOUTH BOUND ↳	NORTH BOUND ↰	NORTH BOUND ↑	NORTH BOUND ↱	WEST BOUND ↓	WEST BOUND ←	WEST BOUND ↑	ALL
16:00-16:05	6	89	5	7	9	20	16	6	11	12	117	17	315
16:05-16:10	8	98	8	5	7	18	11	3	12	11	96	14	291
16:10-16:15	5	85	6	17	10	16	9	6	11	10	104	21	300
16:15-16:20	7	74	12	11	4	12	13	7	8	11	97	21	277
16:20-16:25	3	91	5	11	7	19	12	6	9	14	134	12	323
16:25-16:30	9	100	3	15	10	13	10	5	3	7	100	24	299
16:30-16:35	11	84	5	9	8	14	13	12	22	8	137	16	339
16:35-16:40	7	82	11	10	7	10	10	9	12	12	120	17	307
16:40-16:45	8	92	9	13	9	20	12	6	10	13	97	23	312
16:45-16:50	10	90	15	12	3	11	17	7	12	18	120	13	328
16:50-16:55	5	77	2	17	10	7	9	3	15	13	126	15	299
16:55-17:00	6	84	6	11	5	20	10	6	11	9	115	25	308
17:00-17:05	5	91	8	7	3	15	17	8	32	9	104	11	310
17:05-17:10	7	88	7	10	6	17	14	12	34	14	116	22	347
17:10-17:15	1	83	10	7	6	13	11	14	24	6	121	10	306
17:15-17:20	4	96	8	11	9	17	14	9	12	9	133	14	336
17:20-17:25	5	83	7	10	8	20	6	9	11	12	130	21	322
17:25-17:30	12	88	11	14	3	11	5	5	11	9	108	24	301
17:30-17:35	8	85	10	17	10	21	5	5	16	12	104	19	312
17:35-17:40	8	76	4	7	6	15	7	7	22	9	95	13	265
17:40-17:45	7	83	4	8	3	13	9	5	11	9	106	14	272
17:45-17:50	6	67	10	10	5	14	10	3	15	12	113	14	279
17:50-17:55	6	74	2	14	6	18	5	7	18	7	105	12	274
17:55-18:00	8	88	6	13	5	11	4	2	8	12	114	16	287
16:45-17:45	78	1024	92	131	72	180	124	90	211	129	1378	201	3710
17:00-18:00	77	1002	87	128	70	185	107	86	214	120	1349	190	3615



TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

Peak Hour
16:40-17:40
TEV=4221

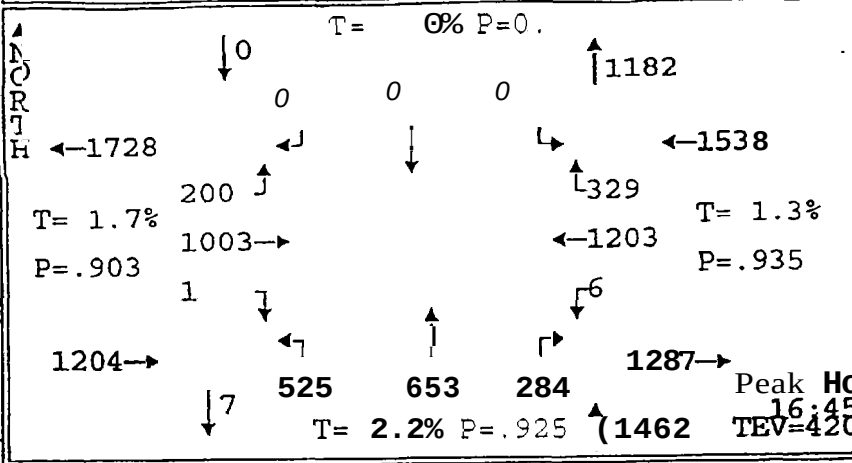
Traffic Smithy
Traffic Survey Service

IME PERIOD ROM - TO	↓	→	↑	↓	↓	↳	←	↑	↱	↓	←	↑	ALL
6:00-16:05	39	70	0	18	51	24	0	0	0	9	123	0	334
6:05-16:10	30	72	0	24	52	24	0	0	0	14	145	0	361
6:10-16:15	32	63	0	19	44	17	0	0	0	18	122	1	316
6:15-16:20	35	80	0	13	59	22	0	0	0	15	132	0	356
6:20-16:25	34	72	0	18	41	18	0	0	0	5	122	0	310
6:25-16:30	28	61	0	20	52	9	0	0	0	17	116	0	303
6:30-16:35	21	79	0	22	63	20	0	0	0	14	104	0	323
6:35-16:40	22	80	0	14	43	15	0	0	0	27	110	0	311
6:40-16:45	31	95	0	13	49	19	0	0	0	16	142	0	365
6:45-16:50	37	68	0	13	55	20	0	0	0	22	135	0	350
6:50-16:55	30	71	0	11	46	20	0	0	0	19	114	0	311
6:55-17:00	38	87	0	15	60	17	0	0	0	19	132	0	368
7:00-17:05	34	81	0	14	44	20	0	0	0	17	132	0	342
7:05-17:10	45	113	0	13	51	18	0	0	0	16	132	0	388
7:10-17:15	37	89	0	12	34	29	0	0	0	12	146	0	359
7:15-17:20	30	88	0	14	51	21	0	0	0	24	148	0	376
7:20-17:25	28	98	0	10	38	24	0	0	0	24	133	0	355
7:25-17:30	31	71	0	8	52	15	0	0	0	12	122	0	311
7:30-17:35	34	77	0	17	48	20	0	0	0	15	137	0	348
7:35-17:40	25	87	0	22	53	15	0	0	0	17	129	0	348
7:40-17:45	30	88	0	15	58	16	0	0	0	14	123	0	344
7:45-17:50	22	82	0	12	48	28	0	0	0	11	118	0	321
7:50-17:55	34	57	0	15	54	17	0	0	0	14	95	0	286
7:55-18:00	25	66	0	17	37	22	0	0	0	18	115	0	300
Total Survey	752	1895	0	369	1183	470	0	0	0	389	3027	1	8086
PHF	.85	.88	0	.86	.9	.8	0	0	0	.89	.94	0	.93
% Trucks	2.1	.8	0	1.4	4.4	3.8	0	0	0	1.3	1.2	0	1.1
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	
Peds	0	0	0	0	0	0	0	0	0	0	0	0	
Hourly Totals													
16:00-17:00	377	898	0	200	615	225	0	0	0	195	1497	1	4008
16:15-17:15	392	976	0	178	597	227	0	0	0	199	1517	0	4086
16:30-17:30	384	1020	0	159	586	238	0	0	0	222	1550	0	4159
16:45-17:45	399	1018	0	164	590	235	0	0	0	211	1583	0	4200
17:00-18:00	375	997	0	169	568	245	0	0	0	194	1530	0	4078

-RUM : TRAFFIC SMITHY ... PHONE NO. : 9859430000

INTERSECTION TURN MOVEMENT COUNT SUMMARY REPORT
HIGHWAY 10 AT HIGHWAY 217 NORTHBOUND RAMPS

11386



DATE OF COUNT: 07/11/96
DAY OF WEEK: Thu
TIME STARTED: 16:00
TIME ENDED: 18:00

TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

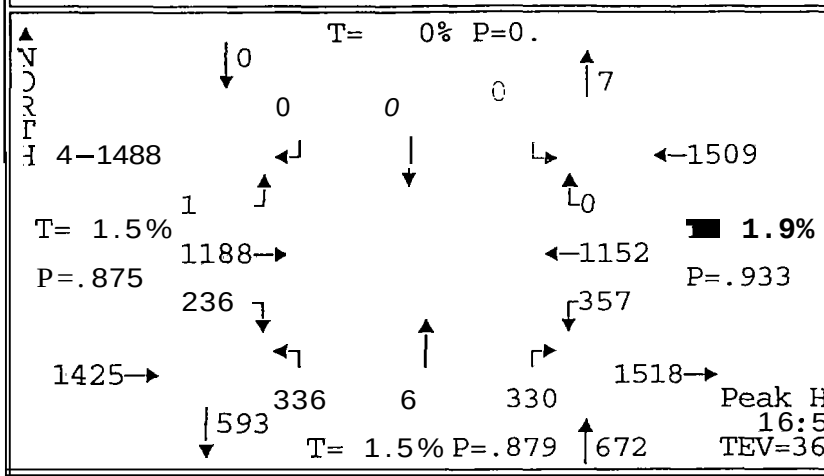
Peak Hour 16:45-17:45
TEV=4204

Traffic Smithy
Traffic Survey Service

TIME PERIOD FROM - TO	EAST BOUND ↓	EAST BOUND →	EAST BOUND ↑	SOUTH BOUND ↲	SOUTH BOUND ↓	SOUTH BOUND ↳	NORTH BOUND ↰	NORTH BOUND ↑	NORTH BOUND ↱	WEST BOUND ↓	WEST BOUND ←	WEST BOUND ↑	ALL
16:00-16:05	a	64	14	0	0	0	40	64	19	0	75	22	306
16:05-16:10	0	85	16	0	0	0	47	39	26	1	73	29	316
16:10-16:15	0	88	12	0	0	0	41	39	2s	0	81	28	314
16:15-16:20	0	70	17	0	0	0	43	58	26	0	88	27	329
16:20-16:25	0	67	10	0	0	0	45	53	24	0	74	19	292
16:25-16:30	1	82	7	0	0	0	50	42	13	0	96	21	312
16:30-16:35	0	71	17	0	0	0	46	54	24	0	89	26	327
16:35-16:40	0	72	17	0	0	0	33	56	29	0	98	28	333
16:40-16:45	0	70	17	0	0	0	31	55	30	1	86	34	324
16:45-16:50	0	90	18	0	0	0	51	55	24	0	103	24	365
16:50-16:55	0	76	8	0	0	0	41	55	33	0	98	25	336
16:55-17:00	0	67	9	0	0	0	50	58	28	0	116	22	350
17:00-17:05	0	83	20	0	0	0	30	47	29	0	91	24	324
17:05-17:10	0	86	22	0	0	0	50	59	14	5	92	30	358
17:10-17:15	0	85	26	0	0	0	44	55	16	0	100	24	35a
17:15-17:20	0	98	15	0	0	0	53	63	23	0	91	33	376
17:20-17:25	0	92	17	0	0	0	29	47	27	0	120	31	363
17:25-17:30	0	89	19	0	0	0	44	42	24	0	105	31	354
17:30-17:35	0	80	21	0	0	0	45	55	28	0	86	29	344
17:35-17:40	0	73	12	0	0	0	36	65	11	1	109	25	332
17:40-17:45	1	84	13	0	0	0	52	52	27	0	92	31	352
17:45-17:50	0	98	5	0	0	0	38	59	32	0	104	18	354
17:50-17:55	0	69	21	0	0	0	27	41	23	0	108	28	317
17:55-18:00	0	80	15	0	0	0	48	46	26	0	91	30	336
Total Suwey	10	1919	368	0	0	0	1014	1259	581	a	2266	639	8064
PHF	.2s	.9	.74	0	0	0	.89	.92	.79	.3	.95	.87	.961
% Trucks	0	1.8	1.4	0	0	0	1.6	2.8	2.1	0	1.1	2.3	1.8
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	
Peds	0	1	0	0	1	0	0	1	0	0	7	1	
Hourly Totals													
16:00-17:00	9	902	162	0	0	0	518	628	301	2	1077	305	3904
16:15-17:15	1	919	188	0	0	0	514	647	290	6	1131	304	4000
16:30-17:30	0	979	205	0	0	0	502	646	301	6	1189	332	4160
16:45-17:45	1	1003	200	0	0	0	525	653	284	6	1203	329	4204
17:00-18:00	1	1017	206	0	0	0	496	631	280	6	1189	334	4160

INTERSECTION TURN MOVEMENT COUNT SUMMARY REPORT
BEAVERTON HILLSDALE HIGHWAY AT WESTERN AVENUE

12301



DATE OF COUNT: 12/03/96
DAY OF WEEK: Tue
TIME STARTED: 16:00
TIME ENDED: 18:00

TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

Traffic Smithy
Traffic Survey Service

TIME PERIOD FROM - TO	EAST BOUND 7	→	⌋	SOUTH BOUND ↵	↓	↳	NORTH BOUND ↰	↑	↱	WEST BOUND ↓	←	↰	ALL
16:00-16:05	16	98	0	0	0	0	41	0	27	31	88	0	301
16:05-16:10	24	106	0	0	0	0	31	0	23	18	82	0	284
16:10-16:15	19	92	0	0	0	1	27	0	23	18	89	0	269
16:15-16:20	15	102	0	0	0	0	21	0	20	31	108	0	297
16:20-16:25	15	101	0	0	0	0	34	0	29	20	108	1	308
16:25-16:30	20	76	1	0	0	0	14	0	32	27	73	0	243
16:30-16:35	23	89	0	0	0	0	16	0	24	20	61	0	233
16:35-16:40	20	a5	0	0	0	0	34	0	25	25	99	0	288
16:40-16:45	16	96	0	0	0	0	20	0	32	17	84	0	265
16:45-16:50	21	90	0	0	0	0	25	1	38	19	88	0	282
16:50-16:55	12	100	0	0	0	0	25	0	22	30	72	0	261
16:55-17:00	15	87	0	0	0	0	40	2	31	34	94	0	303
17:00-17:05	16	70	1	0	0	0	29	1	23	26	89	0	255
17:05-17:10	21	78	0	0	0	0	33	0	32	32	89	0	285
17:10-17:15	23	120	0	0	0	0	32	0	24	34	110	0	343
17:15-17:20	18	79	0	0	0	0	26	1	19	23	114	0	280
17:20-17:25	22	119	0	0	0	0	31	0	29	30	93	0	324
17:25-17:30	16	90	0	0	0	0	18	0	34	25	86	0	269
17:30-17:35	20	101	0	0	0	0	17	0	30	22	86	0	276
17:35-17:40	19	103	0	0	0	0	29	2	33	42	91	0	319
17:40-17:45	20	99	0	0	0	0	34	0	29	27	88	0	297
17:45-17:50	21	124	0	0	0	0	22	0	25	33	117	0	342
17:50-17:55	25	118	0	0	0	0	25	0	21	29	95	0	313
17:55-18 00	14	100	0	0	0	0	15	1	30	24	83	0	267
Total Survey	451	2323	2	0	0	1	639	8	655	637	2187	1	6904
PHF	.89	.87	.25	0	0	0	.82	.5	.85	.88	.91	0	.941
% Trucks	3.5	1.1	0	0	0	0	1.7	0	1.2	3.6	1.5	0	1.7
Stopped Buses	0	0	0	0	0	0	0	0	0	0	5	0	
Peds	0	12	0	0	0	0	0	29	1	0	0	0	
Hourly Totals													
16:00-17:00	216	1122	1	0	0	1	328	3	326	290	1046	1	3334
16:15-17:15	217	1094	2	0	0	0	323	4	332	315	1075	1	3363
16:30-17:30	223	1103	1	0	0	0	329	5	333	315	1079	0	3388
16:45-17:45	223	1136	1	0	0	0	339	7	344	344	1100	0	3494
17:00-18:00	235	1201.	1	0	0	0	311	5	329	347	1141	0	357c

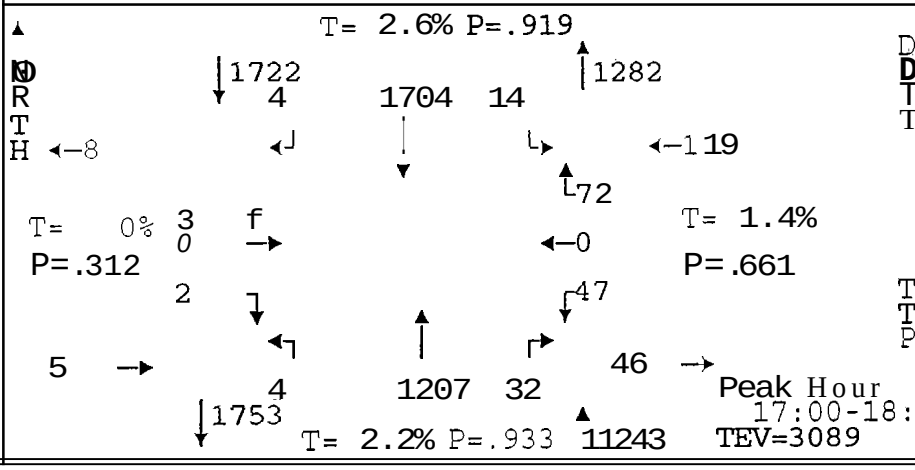
64
162 T= 1.3% P=.823 191 16:35-17:35 TEV=2973

Traffic Smithy
Traffic Survey Service

6:00-16:05	8	90	3	1	3	13	4	5	7	2	88	9	233
6:05-16:10	4	97	4	1	5	16	9	4	2	2	97	16	257
6:10-16:15	7	95	2	2	5	11	8	8	5	3	99	6	251
6:15-16:20	3	115	1	5	9	15	9	4	3	5	85	9	263
6:20-16:25	5	93	2	0	2	20	2	4	5	4	89	10	236
6:25-16:30	6	96	2	1	5	9	2	7	3	3	78	15	227
6:30-16:35	6	84	2	6	5	11	5	8	7	4	88	9	235
6:35-16:40	5	99	0	5	10	13	6	9	7	1	92	6	253
6:40-16:45	6	89	2	2	6	17	7	5	7	3	76	17	237
6:45-16:50	4	107	4	3	6	16	1	6	2	1	96	10	256
6:50-16:55	4	98	2	7	5	14	8	12	3	1	89	7	250
6:55-17:00	5	96	1	3	3	17	6	10	1	5	99	15	261
7:00-17:05	7	80	3	4	5	16	5	6	7	4	83	14	234
7:05-17:10	4	89	4	3	6	12	7	6	2	1	107	14	255
7:10-17:15	9	104	3	3	5	10	5	5	1	4	89	9	247
7:15-17:20	0	86	3	0	6	12	4	4	6	1	89	18	229
7:20-17:25	5	101	2	1	7	12	7	7	2	1	96	8	249
7:25-17:30	9	82	1	6	3	17	5	7	5	2	93	11	241
7:30-17:35	9	91	4	5	4	10	3	3	4	5	111	12	261
7:35-17:40	5	104	0	3	2	22	8	3	4	0	91	7	249
7:40-17:45	5	79	4	6	10	9	3	8	7	2	98	9	240
7:45-17:50	6	85	2	4	3	16	5	8	4	5	101	3	242
7:50-17:55	3	99	2	2	3	24	4	4	2	0	89	8	240
7:55-18:00	4	109	2	2	7	17	11	10	2	4	98	8	274
Total Survey	129	2268	55	75	125	349	134	153	98	63	2221	250	5920
PHF	.73	.93	.73	.75	.75	.88	.84	.71	.73	.73	.93	.82	.969
Trucks	0	5	0	4	8	3	0	2.6	1	0	9	4	7
Stopped Buses	0	2	0	0	0	0	0	0	0	0	2	0	
Peds	0	6	0	0	1	0	0	3	0	0	0	0	
Hourly Totals													
6:00-17:00	63	1159	25	36	64	172	67	82	52	34	1076	129	2959
6:15-17:15	64	1150	26	42	67	170	63	82	48	36	1071	135	2954
6:30-17:30	64	1115	27	43	67	167	66	85	50	28	1097	138	2947
6:45-17:45	66	1117	31	44	62	167	62	77	44	27	1141	134	2972
7:00-18:00	66	1109	30	39	61	177	67	71	46	29	1145	121	2961

INTERSECTION TURN MOVEMENT COUNT SUMMARY REPORT
MURRAY BOULEVARD AT 6TH STREET

12264



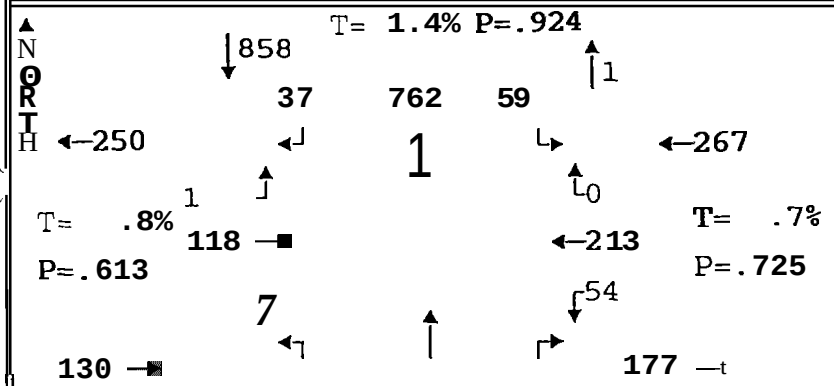
DATE OF COUNT: 11/21/96
DAY OF WEEK: Thu
TIME STARTED: 16:00
TIME ENDED: 18:00

TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

Traffic Smithy
Traffic Survey Service

TIME PERIOD FROM - TO	EAST BOUND ↓	EAST BOUND →	EAST BOUND f	SOUTH BOUND ↵	SOUTH BOUND ↓	SOUTH BOUND ↳	NORTH BOUND ↰	NORTH BOUND ↑	WEST BOUND ↱	WEST BOUND ↓	WEST BOUND ←	WEST BOUND ↰	ALL
16:00-16:05	1	0	0	2	132	2	0	89	3	3	0	5	237
16:05-16:10	0	0	0	1	104	2	0	88	1	1	0	4	201
16:10-16:15	0	0	1	0	120	0	0	109	2	4	0	2	238
16:15-16:20	0	0	0	2	146	5	0	99	1	2	0	13	268
16:20-16:25	0	0	0	0	123	3	0	119	3	0	0	7	255
16:25-16:30	0	0	0	2	108	2	0	93	3	0	0	6	214
16:30-16:35	2	0	0	0	141	0	0	82	0	0	0	3	228
16:35-16:40	0	0	0	0	132	0	0	86	1	1	0	5	225
16:40-16:45	0	0	0	1	102	3	0	93	4	8	0	10	221
16:45-16:50	0	0	0	0	131	4	0	116	2	6	1	7	267
16:50-16:55	0	0	0	0	156	3	0	120	3	3	0	4	289
16:55-17:00	0	0	0	0	118	0	0	99	1	2	0	2	222
17:00-17:05	0	0	0	1	108	1	1	102	6	1	0	3	223
17:05-17:10	0	0	0	0	153	2	1	101	6	3	0	5	271
17:10-17:15	0	0	0	0	154	0	0	113	3	5	0	8	283
17:15-17:20	0	0	1	0	156	3	1	93	1	3	0	6	264
17:20-17:25	1	0	1	0	147	0	0	113	2	5	0	8	277
17:25-17:30	1	0	0	1	114	0	0	78	2	7	0	10	213
17:30-17:35	0	0	0	0	162	3	0	85	2	7	0	8	267
17:35-17:40	0	0	0	0	143	2	0	112	0	2	0	7	266
17:40-17:45	0	0	0	1	106	1	0	108	0	5	0	7	228
17:45-17:50	0	0	0	1	155	1	0	88	4	1	0	5	255
17:50-17:55	0	0	0	0	145	0	0	105	5	3	0	2	260
17:55-18:00	0	0	1	0	161	1	1	109	1	5	0	3	282
Total Survey	5	0	4	12	3217	38	4	2400	56	77	1	140	5954
PHF	.25	0	.38	.5	.92	.58	.5	.95	.53	.62	0	.69	.937
% Trucks	0	0	0	8.3	2.6	2.6	0	2.2	0	0	0	2.1	2.4
Stopped Buses	*0*	*0*	*0*	*0*	1	0	0	**1**	*0*	*0*	0	0	
Peds	0	2	0	0	11	*0*	*0*	**10**	0	*0*	0	0	
Hourly Totals													
16:00-17:00	3	0	1	a	1513	24	0	1193	24	30	1	68	2865
16:15-17:15	2	0	0	6	1572	23	2	1223	33	31	1	73	2966
16:30-17:30	4	0	2	3	1612	16	3	1196	31	44	1	71	2983
16:45-17:45	2	0	2	3	1648	19	3	1240	28	49	1	75	3070
17:00-18:00	2	0	3	4	1704	14	4	1207	32	47	0	72	3089

WATSON AVENUE AT 5TH STREET



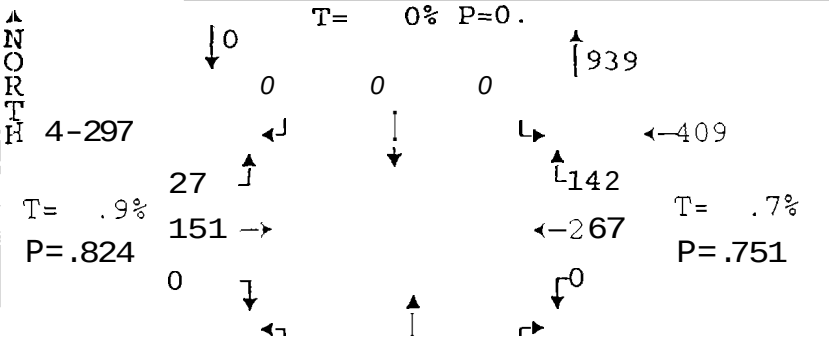
DATE OF COUNT: 07/25/96
DAY OF WEEK: Thu
TIME STARTED: 16:00
TIME ENDED: 18:00

TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

16:00-16:05	1	13	0	3	43	4	0	0	0	4	17	0	85
16:05-16:10	3	7	0	1	48	10	0	0	0	2	13	0	84
16:10-16:15	0	6	0	1	72	3	0	0	0	3	9	0	94
16:15-16:20	1	11	0	4	44	3	0	0	0	1	16	0	80
16:20-16:25	1	8	0	1	43	4	0	0	0	7	6	0	70
16:25-16:30	0	8	0	11	61	5	0	0	0	1	7	0	93
16:30-16:35	1	34	0	2	45	6	0	0	0	5	12	0	105
16:35-16:40	0	14	0	1	82	4	0	0	0	1	18	0	120
16:40-16:45	1	3	0	2	62	6	0	0	0	7	16	0	97
16:45-16:50	2	10	0	4	59	4	0	0	0	3	7	0	89
16:50-16:55	0	5	0	4	56	5	0	0	0	3	13	0	86
16:55-17:00	3	5	0	3	66	4	0	0	0	2	27	0	110
17:00-17:05	0	6	0	4	64	2	0	0	0	6	8	0	90
17:05-17:10	1	9	0	5	63	8	0	0	0	6	35	0	127
17:10-17:15	0	13	1	6	54	5	0	0	0	8	20	0	107
17:15-17:20	1	5	0	2	66	7	0	0	0	3	20	0	104
17:20-17:25	0	6	0	3	74	6	0	0	0	7	29	0	125
17:25-17:30	2	8	0	1	71	2	0	0	0	3	8	0	95
17:30-17:35	0	5	0	3	52	5	0	0	0	2	19	0	86
17:35-17:40	0	2	0	4	59	2	0	0	0	8	17	0	92
17:40-17:45	4	8	0	6	51	7	0	0	0	1	18	0	95
17:45-17:50	1	9	0	3	61	8	0	0	0	2	11	0	95
17:50-17:55	0	10	0	1	65	5	0	0	0	1	18	0	100
17:55-18:00	1	12	0	1	51	4	0	0	0	2	8	0	79
Total Survey	**23**	**217**	**1**	**76**	**1412**	**119**	**0**	**0**	**0**	**88**	**372**	**0**	**2308**
PHF	.55	.58	.25	.62	.9	.74	0	0	0	.68	.71	0	.928
% Trucks	0	.9	0	0	1.5	1.7	0	0	0	2.3	.3	0	1.2
Stopped Buses	0	0	0	0	1	0	0	0	0	0	1	0	
Peds	0	6	0	0	6	0	0	2	0	0	7	0	
Hourly Totals													
16:00-17:00	13	124	0	37	681	58	0	0	0	39	161	0	1113
16:15-17:15	10	126	1	47	699	56	0	0	0	50	185	0	1174
16:30-17:30	11	118	1	37	762	59	0	0	0	54	213	0	1255
16:45-17:45	13	82	1	45	735	57	0	0	0	52	221	0	1206
17:00-18:00	10	93	1	39	731	61	0	0	0	49	211	0	1195

INTERSECTION TURN MOVEMENT COUNT SUMMARY REPORT

SW HALL AT SW 5TH AVENUE



DATE OF COUNT: 07/16/96
DAY OF WEEK: Tue
TIME STARTED: 16:00
TIME ENDED: 18:00

TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

Traffic Smithy
Traffic Survey Service

16:00-16:05	0	13	3	0	0	0	0	43	3	0	13	6	81
16:05-16:10	0	7	0	0	0	0	0	53	2	0	16	7	85
16:10-16:15	0	10	1	0	0	0	5	76	2	0	11	7	112
16:15-16:20	0	14	0	0	1	0	2	54	4	0	18	6	99
16:20-16:25	0	12	2	0	0	0	3	39	2	0	14	10	82
16:25-16:30	0	9	1	0	0	0	0	63	1	0	13	11	98
16:30-16:35	0	8	3	0	0	0	0	54	4	0	11	0	80
16:35-16:40	0	13	2	0	0	0	1	68	1	0	15	21	121
16:40-16:45	0	17	2	0	0	0	0	76	3	0	13	14	125
16:45-16:50	0	12	3	0	0	0	3	65	3	0	23	15	124
16:50-16:55	0	18	2	0	0	0	3	61	3	0	6	9	102
16:55-17:00	0	16	0	0	0	0	3	64	5	0	15	10	113
17:00-17:05	0	10	1	0	0	0	4	58	4	0	17	10	104
17:05-17:10	0	8	5	0	0	0	2	42	5	0	32	17	111
17:10-17:15	0	20	3	0	0	0	3	76	2	0	28	12	144
17:15-17:20	0	11	2	0	0	0	3	82	2	0	40	7	147
17:20-17:25	0	10	1	0	0	0	3	68	0	0	22	9	113
17:25-17:30	0	7	3	0	0	0	3	56	2	0	27	9	107
17:30-17:35	0	9	3	0	0	0	2	54	1	0	29	9	107
17:35-37:40	0	5	4	0	0	0	2	60	4	0	36	3	114
17:40-17:45	0	15	1	0	0	0	2	37	1	0	32	11	99
17:45-17:50	0	12	0	0	0	0	7	53	2	0	20	11	105
17:50-17:55	0	18	2	0	0	0	5	35	2	0	19	4	85
17:55-18:00	0	8	2	0	0	0	2	47	1	0	9	8	77
Total Survey	0	282	46	0	1	0	58	1384	59	0	479	226	2535
PHF	0	.8	.68	0	0	0	.75	.85	.55	0	.67	.71	.877
% Trucks	0	1.1	0	0	0	0	0	1.4	5.1	0	.6	.9	1.2
Stopped Buses	0	1	0	0	0	0	0	1	0	0	0	0	
Peds	0	5	0	0	1	0	0	14	0	0	8	0	
Hourly Totals													
16:00-17:00	0	149	19	0	1	0	20	716	33	0	168	116	1222
16:15-17:15	0	157	24	0	1	0	24	720	37	0	205	135	1303
16:30-17:30	0	150	27	0	0	0	28	770	34	0	249	133	1391
16:45-17:45	0	141	28	0	0	0	33	723	32	0	307	121	1389
17:00-18:00	0	133	27	0	0	0	38	668	26	0	311	110	1311

INTERSECTION TURN MOVEMENT COUNT SUMMARY REPORT
DAVIS AVENUE AT 155TH AVENUE

12248

T= 0% P=.642

NORTH

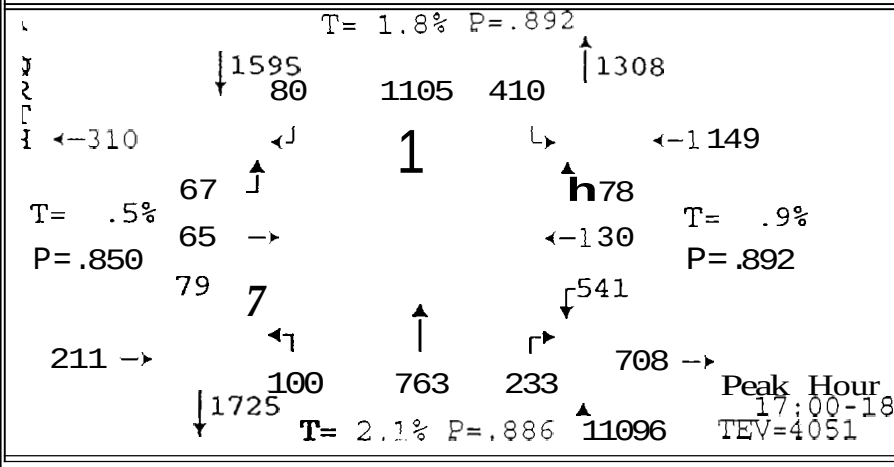
18 ↓ | ↑ 13

4 0 14

DATE OF COUNT: 11/20/96
DAY OF WEEK: Wed
TIME STARTED: 16:00
TIME ENDED: 18:00

16:00-16:05	1	8	0	0	0	5	0	0	1	2	12	1	30
16:05-16:10	2	13	0	1	0	1	0	0	0	0	7	0	24
16:10-16:15	5	8	0	0	0	2	2	0	2	2	6	1	28
16:15-16:20	2	10	1	0	0	2	0	0	3	2	13	0	33
16:20-16:25	4	6	1	1	0	0	0	0	1	1	17	0	31
16:25-16:30	3	5	0	0	0	0	0	0	0	2	14	0	24
16:30-16:35	3	12	1	0	0	1	1	0	3	1	14	0	36
16:35-16:40	6	9	1	0	0	3	1	0	0	0	13	0	33
16:40-16:45	2	9	0	0	0	0	1	0	2	3	12	1	30
16:45-16:50	1	16	0	1	0	0	2	0	0	1	16	1	38
16:50-16:55	6	9	0	0	0	1	2	0	1	3	15	0	37
16:55-17:00	2	15	0	1	0	1	1	0	0	1	27	0	48
17:00-17:05	2	19	0	0	0	0	4	0	1	1	14	1	42
17:05-17:10	2	10	0	0	0	3	3	0	0	4	29	0	51
17:10-17:15	4	8	0	0	0	0	0	0	1	1	12	0	26
17:15-17:20	9	8	0	0	0	1	1	0	1	1	21	1	43
17:20-17:25	10	12	1	0	0	1	0	0	2	5	13	3	47
17:25-17:30	5	13	1	1	0	3	2	0	1	3	29	0	58
17:30-17:35	2	22	1	1	0	1	4	0	1	2	17	0	51
17:35-17:40	9	17	1	1	0	0	0	0	3	4	19	0	54
17:40-17:45	6	15	0	0	0	2	3	0	1	3	19	1	50
17:45-17:50	7	15	0	0	0	1	0	0	0	2	23	0	48
17:50-17:55	8	12	0	0	0	1	3	0	1	3	18	3	49
17:55-18:00	9	14	0	0	0	1	1	0	1	2	17	0	45
Total Survey	110	285	8	7	0	30	31	0	26	49	397	13	956
PHF	.69	.77	.33	.33	0	.7	.66	0	.6	.75	.86	.56	.869
% Trucks	0	1.1	0	0	0	0	0	0	0	0	0	0	.3
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	
Peds	0	1	0	0	0	0	0	11	0	0	2	0	
Hourly Totals													
16:00-17:00	37	120	4	4	0	16	10	0	13	18	166	4	392
16:15-17:15	37	128	4	3	0	11	15	0	12	20	196	3	429
16:30-17:30	52	140	4	3	0	14	18	0	12	24	215	7	489
16:45-17:45	58	164	4	5	0	13	22	0	12	29	231	7	545
17:00-18:00	73	165	4	3	0	14	21	0	13	31	231	9	564

INTERSECTION TURN MOVEMENT SUMMARY
MURRAY BOULEVARD AT ALLEN BOULEVARD (COMPOSITE) 11405



DAY OF WEEK: TH
DATE: 11/16&18/96
TIME STARTED: 16:00
TIME ENDED: 18:00

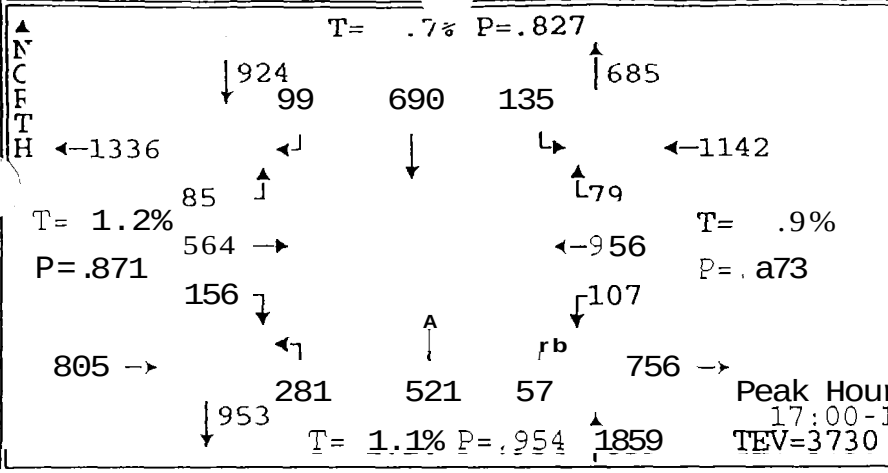
TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

Peak Hour 17:00-18:00

Traffic Smithy
Traffic Survey Service

TIME PERIOD FROM - TO	EAST BOUND ↓	EAST BOUND →	EAST BOUND ↑	SOUTH BOUND ↙	SOUTH BOUND ↓	SOUTH BOUND ↘	NORTH BOUND ↖	NORTH BOUND ↑	NORTH BOUND ↗	WEST BOUND ↓	WEST BOUND ←	WEST BOUND ↑	ALL
16:00-16:05	3	6	3	6	77	26	7	62	25	26	2	31	274
16:05-16:10	9	7	9	3	39	48	6	49	21	42	10	24	267
16:10-16:15	7	3	3	5	99	17	4	74	21	25	7	36	301
16:15-16:20	1	10	4	6	44	34	4	43	21	34	10	49	260
16:20-16:25	3	7	5	7	102	20	7	48	17	28	6	35	285
16:25-16:30	2	10	9	13	47	37	5	57	23	51	9	39	302
16:30-16:35	4	8	3	0	78	29	4	40	22	26	9	36	259
16:35-16:40	5	7	5	5	76	29	7	61	20	31	9	31	286
16:40-16:45	3	4	1	7	98	36	3	59	20	30	7	51	319
16:45-16:50	4	6	9	8	58	35	11	56	28	45	5	45	310
16:50-16:55	9	3	2	6	108	46	12	55	20	41	6	50	358
16:55-17:00	8	6	0	4	73	31	3	62	26	45	5	45	312
17:00-17:05	7	7	6	1	61	42	7	69	17	31	4	36	288
17:05-17:10	3	5	3	9	101	28	6	58	15	51	7	46	332
17:10-17:15	7	7	1	3	68	24	6	51	15	50	7	44	283
17:15-17:20	6	2	7	6	116	27	10	87	15	34	3	36	349
17:20-17:25	8	7	8	6	69	36	9	56	15	59	18	38	329
17:25-17:30	4	1	3	13	137	33	8	76	24	44	4	37	384
17:30-17:35	7	6	9	10	74	35	5	46	22	46	11	38	309
17:35-17:40	4	6	6	3	91	33	9	55	22	34	17	46	326
17:40-17:45	9	9	6	9	88	25	6	64	23	55	22	43	359
17:45-17:50	5	3	4	5	98	60	9	67	25	54	11	40	381
17:50-17:55	4	5	6	6	108	31	10	82	23	38	11	37	361
17:55-18:00	15	7	8	9	94	36	15	52	17	45	15	37	350
Total Survey	137	142	120	154	2004	798	173	1429	497	965	215	950	7584
PHF	.82	.77	.8	.69	.86	.81	.74	.87	.82	.91	.65	.93	.919
% Trucks	.7	0	.8	.6	2	1.5	0	2.4	2	.5	.5	1.5	1.6
Stopped Buses	0	0	0	0	0	0	0	0	0	0	2	0	
Peds	0	8	0	0	9	0	0	25	0	0	4	0	
Hourly Totals													
16:00-17:00	58	77	53	74	899	388	73	666	264	424	85	472	3533
16:15-17:15	56	80	48	73	914	391	75	659	244	463	84	507	3594
16:30-17:30	68	63	48	72	1043	396	86	730	237	487	84	495	3809
16:45-17:45	76	65	60	82	1044	395	92	735	242	535	109	504	3939
17:00-18:00	79	65	67	80	1105	410	100	763	233	541	130	478	4051

HALL BOULEVARD AT ALLEN BOULEVARD (CO[illegible])



DATE OF COUNT: 07/23&24/96
DAY OF WEEK: T+W
TIME STARTED: 16:00
TIME ENDED: 18:00

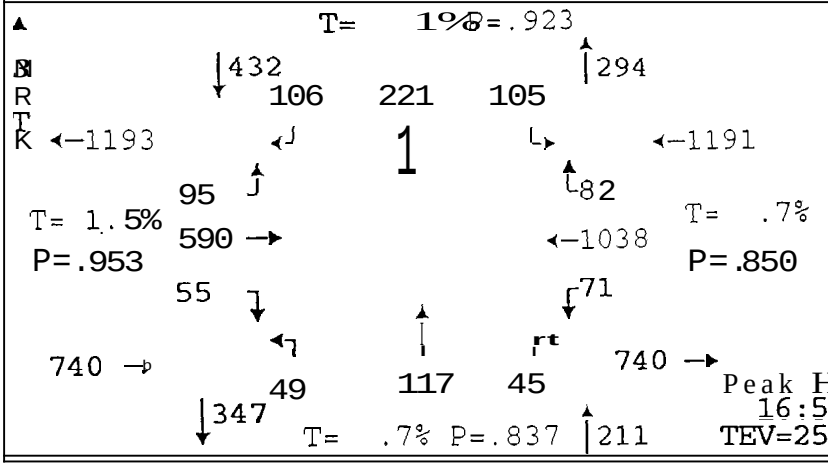
TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

Peak Hour
17:00-18:00

Traffic Smithy
Traffic Survey Service

TIME PERIOD FROM - TO	EAST BOUND ↓	EAST BOUND →	EAST BOUND ↑	SOUTH BOUND ↵	SOUTH BOUND ↓	SOUTH BOUND ↳	NORTH BOUND ↰	NORTH BOUND ↑	WEST BOUND ↱	WEST BOUND ↓	WEST BOUND ←	WEST BOUND ↑	ALL
16:00-16:05	7	44	9	10	33	10	13	29	3	9	69	11	247
16:05-16:10	13	45	14	5	38	7	26	59	6	9	49	3	274
16:10-16:15	9	42	10	5	36	11	20	54	5	12	69	10	283
16:15-16:20	14	54	8	5	50	17	24	64	6	4	54	10	310
16:20-16:25	13	43	3	4	36	9	18	48	8	14	77	6	279
16:25-16:30	12	36	5	6	41	10	13	19	2	11	61	9	225
16:30-16:35	13	48	8	11	47	7	18	37	4	13	76	10	292
16:35-16:40	10	44	7	3	38	8	19	56	5	12	60	6	268
16:40-16:45	11	53	9	9	34	5	29	47	8	7	85	10	307
16:45-16:50	10	54	7	10	50	13	16	52	5	8	68	7	300
16:50-16:55	13	42	10	5	28	10	21	48	1	8	69	11	266
16:55-17:00	7	52	8	13	59	11	13	36	4	8	46	3	260
17:00-17:05	11	40	3	3	24	4	20	46	6	6	76	10	249
17:05-17:10	13	42	11	18	85	14	18	41	4	7	60	6	319
17:10-17:15	15	52	5	7	42	9	33	45	4	11	93	9	325
17:15-17:20	5	56	10	4	83	17	16	48	2	8	73	9	331
17:20-17:25	16	46	4	6	42	3	24	51	2	10	82	6	292
17:25-17:30	14	28	4	12	77	18	19	37	7	8	70	2	296
17:30-17:35	13	55	4	5	43	13	22	45	8	10	99	6	323
17:35-17:40	14	37	14	9	65	16	31	43	5	9	77	6	326
17:40-17:45	13	43	6	6	36	8	27	39	5	11	104	5	303
17:45-17:50	8	60	5	13	87	12	23	46	0	13	57	7	331
17:50-17:55	20	55	9	6	38	8	27	38	6	8	93	5	313
17:55-18:00	14	50	10	10	68	13	21	42	8	6	72	8	322
Total Survey	288	1121	183	185	1180	253	511	1070	114	222	1739	175	7041
PHF	.91	.85	.82	.85	.82	.72	.87	.9	.71	.81	.85	.79	.956
Trucks	1.4	1.3	0	0	.7	1.6	.4	1.6	0	0	1	1.1	1
Topped Buses	0	2	0	0	0	0	0	2	0	0	1	0	
Peds	0	50	0	0	11	0	0	33	0	0	11	0	
Hourly Totals													
16:00-17:00	132	557	98	86	490	118	230	549	57	115	783	96	3311
16:15-17:15	142	560	84	94	534	117	242	539	57	109	825	97	3400
16:30-17:30	138	557	86	101	609	119	246	544	52	106	858	89	3505
16:45-17:45	144	547	86	98	634	136	260	531	53	104	917	80	3590
17:00-18:00	156	564	85	99	690	135	281	521	57	107	956	79	3730

ALLEN BOULEVARD AT LOMBARD AVENUE



DATE OF COUNT: 07/11/96
DAY OF WEEK: Thu
TIME STARTED: 16:00
TIME ENDED: 18:00

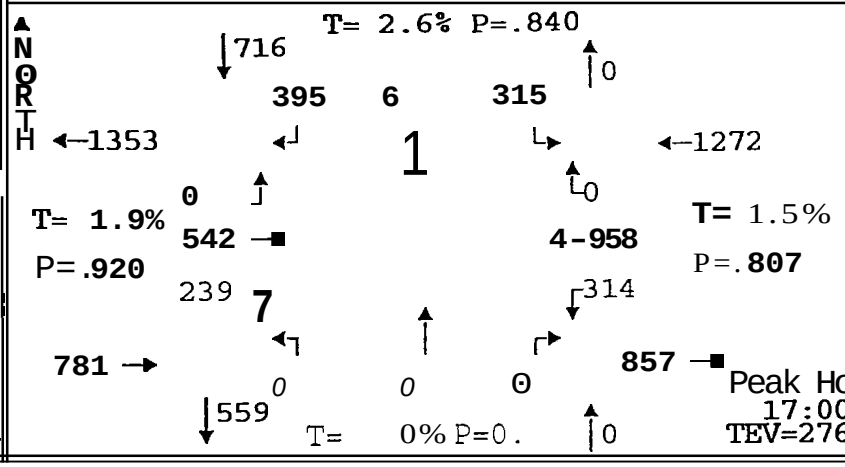
TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

Peak Hour
16:55-17:55
TEV=2574

Traffic Smithy
Traffic Survey Service

TIME PERIOD FROM - TO	↓	→	↑	↲	↓	↳	↰	↑	↱	↓	←	└	ALL
6:00-16:05	4	49	8	9	19	4	3	9	6	6	74	4	195
6:05-16:10	2	46	7	3	22	9	3	6	1	5	75	6	185
6:10-16:15	10	51	2	7	8	5	2	12	9	7	81	7	201
6:15-16:20	3	45	4	10	12	7	6	2	1	2	59	5	156
6:20-16:25	3	52	3	13	13	7	5	26	1	6	96	9	234
6:25-16:30	2	55	7	7	11	9	6	14	2	6	57	9	185
6:30-16:35	6	38	7	9	8	6	5	17	3	7	89	7	202
6:35-16:40	3	41	12	9	16	12	5	11	3	9	76	7	204
6:40-16:45	6	44	7	7	19	5	5	13	3	9	103	10	231
6:45-16:50	5	55	6	12	13	9	3	9	1	3	92	7	215
6:50-16:55	3	41	10	12	9	7	3	10	2	7	75	6	185
6:55-17:00	3	64	15	5	24	4	6	9	2	4	69	4	209
7:00-17:05	5	44	4	8	17	10	1	15	1	5	93	8	211
7:05-17:10	3	48	6	13	14	14	4	2	5	7	76	9	201
7:10-17:15	6	53	7	14	14	5	3	8	6	4	100	11	231
7:15-17:20	6	56	8	8	17	14	10	7	4	4	77	4	215
7:20-17:25	5	50	3	7	29	7	4	7	6	7	79	4	208
7:25-17:30	6	38	9	8	17	10	4	5	1	7	73	7	185
7:30-17:35	4	41	8	9	15	7	4	20	1	11	111	7	238
7:35-17:40	6	52	8	2	22	8	2	6	5	1	87	6	205
7:40-17:45	4	47	6	11	21	6	3	10	5	10	107	10	240
7:45-17:50	3	55	12	10	18	13	6	10	5	3	82	4	221
7:50-17:55	4	42	9	11	13	7	2	18	4	8	84	8	210
7:55-18:00	3	52	8	9	15	7	5	10	1	8	53	8	179
Total Survey	105	1159	176	213	386	192	100	256	78	146	1968	167	4946
PHF	.81	.93	.88	.76	.88	.8	.68	.77	.7	.71	.85	.73	.941
% Trucks	1	1.6	1.7	1.9	.5	1	0	1.0	2.6	0	1.0	1.6	
Stopped Buses	**0**	**0**	**0**	**0**	3	0	0						
Peds	**0**	8	**0**	0	11	0	0	**11**	0	0	9	0	
Hourly **Totals**													
16:00-17:00	50	581	88	103	174	84	52	138	34	71	946	81	2402
16:15-17:15	48	580	88	119	170	95	52	136	30	69	985	92	2464
16:30-17:30	57	572	94	112	197	103	53	113	37	73	1002	84	2497
16:45-17:45	56	589	90	109	212	101	47	108	39	70	1039	83	2543
17:00-18:00	55	578	88	110	212	108	48	118	44	75	1022	86	2544

ALLEN BOULEVARD AT HIGHWAY 21 / SOUTHBOUND RAMPS (COMPOSITE)



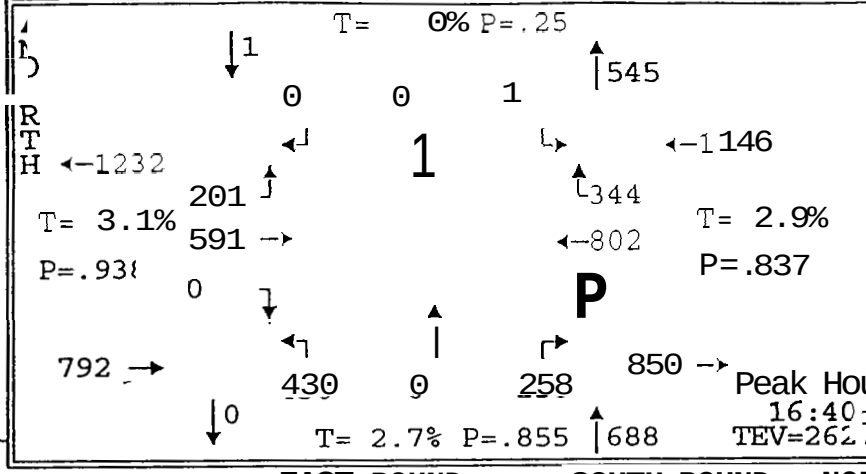
DATE OF COUNT: 08/1&6/96
DAY OF WEEK: TH+TU
TIME STARTED: 16:00
TIME ENDED: 18:00

TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

Traffic Smithy
Traffic Survey Service

TIME PERIOD FROM - TO	EAST BOUND 7 →		↑	SOUTH BOUND ↓	1	↳	NORTH BOUND ↰	↑		WEST BOUND ↓	←	ALL	ALL
16:00-16:05	26	29	0	20	0	16	0	0	0	17	53	1	162
16:05-16:10	30	46	0	28	0	20	0	0	0	33	71	0	228
16:10-16:15	20	39	0	30	0	13	0	0	0	28	67	0	197
16:15-16:20	25	51	0	30	1	26	0	0	0	26	61	0	220
16:20-16:25	24	48	0	29	0	26	0	0	0	27	65	0	219
16:25-16:30	27	46	0	26	0	29	0	0	0	27	72	0	227
16:30-16:35	26	46	0	25	1	22	0	0	0	27	68	0	215
16:35-16:40	13	43	0	32	1	11	0	0	0	37	78	0	215
16:40-16:45	28	40	0	29	1	26	0	0	0	30	77	0	231
16:45-16:50	16	38	0	29	2	18	0	0	0	22	73	0	138
16:50-16:55	19	37	0	32	0	27	0	0	0	19	84	0	218
16:55-17:00	19	38	0	38	0	28	0	0	0	20	66	0	209
17:00-17:05	14	41	0	24	0	28	0	0	0	33	83	0	223
17:05-17:10	28	55	0	19	0	20	0	0	0	29	100	0	251
17:10-17:15	15	49	0	30	0	19	0	0	0	30	101	0	244
17:15-17:20	22	43	0	30	1	20	0	0	0	47	87	0	250
17:20-17:25	26	41	0	42	0	23	0	0	0	25	70	0	227
17:25-17:30	14	40	0	42	1	22	0	0	0	20	80	0	219
17:30-17:35	20	34	0	27	3	30	0	0	0	22	58	0	194
17:35-17:40	16	49	0	38	0	33	0	0	0	25	72	0	233
17:40-17:45	17	55	0	38	0	33	0	0	0	22	80	0	245
17:45-17:50	18	56	0	41	1	29	0	0	0	14	77	0	236
17:50-17:55	25	38	0	35	0	34		0	0	21	77	0	230
17:55-18:00	24	41	0	29	0	24	0	0	0	26	73	0	217
Total Survey	512	1043	0	743	12	577	0	0	0	627	1793	1	5308
PHF	.89	.85	0	.84	.38	.82	0	0	0	.74	.83	0	.929
% Trucks	2.7	1.5	0	.9	0	4.7	0	0	0	4.1	.6	0	1.9
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	
Peds	0	0	0	0	0	0	0	0	0	0	20	0	
Hourly **Totals**													
16:00-17:00	273	501	0	348	6	262	0	0	0	313	835	1	2539
16:15-17:15	254	532	0	343	6	280	0	0	0	327	928	0	2670
16:30-17:30	240	511	0	372	7	264	0	0	0	339	967	0	2700
16:45-17:45	226	520	0	389	7	301	0	0	0	314	954	0	2711
17:00-18:00	239	542	0	395	6	315	0	0	0	314	958	0	2769

ALLEN BOULEVARD AT HIGHWAY 217 NORTHBOUND RAMPS



DATE OF COUNT: 07/25/96
DAY OF WEEK: Thu
TIME STARTED: 16:00
TIME ENDED: 18:00

TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

Peak Hour
16:40-17:40
TEV=2627

Traffic Smithy
Traffic Survey Service

TIME PERIOD FROM - TO	EAST BOUND ↓	EAST BOUND →	SOUTH BOUND ↑	SOUTH BOUND ↵	SOUTH BOUND ↓	NORTH BOUND ↳	NORTH BOUND ↰	NORTH BOUND ↑	WEST BOUND ↱	WEST BOUND ↓	WEST BOUND ←	WEST BOUND ↑	ALL
16:00-16:05	0	53	13	0	0	0	35	1	16	0	52	12	182
16:05-16:10	0	42	11	0	0	0	35	0	16	0	59	23	186
16:10-16:15	0	62	24	0	0	0	26	0	18	0	59	30	219
16:15-16:20	0	44	8	0	0	0	19	0	19	0	66	36	192
16:20-16:25	0	63	12	0	0	0	31	0	20	0	55	26	207
16:25-16:30	0	56	17	0	0	0	40	0	24	0	60	33	230
16:30-16:35	0	49	17	0	0	0	31	0	20	0	59	26	202
16:35-16:40	0	40	11	0	0	0	22	0	22	0	73	29	197
16:40-16:45	0	50	23	0	0	0	24	0	17	0	61	35	210
16:45-16:50	0	38	21	0	0	0	37	0	14	0	54	33	197
16:50-16:55	0	56	20	0	0	0	39	0	21	0	58	29	223
16:55-17:00	0	47	10	0	0	0	37	0	14	0	56	20	184
17:00-17:05	0	46	14	0	0	1	35	0	21	0	62	23	202
17:05-17:10	0	37	17	0	0	0	40	0	24	0	9'3	38	249
17:10-17:15	0	49	17	0	0	0	28	0	29	0	66	36	225
17:15-17:20	0	48	14	0	0	0	53	0	27	0	82	27	251
17:20-17:25	0	62	12	0	0	0	34	0	23	0	70	22	223
17:25-17:30	0	62	11	0	0	0	35	0	16	0	66	22	212
17:30-17:35	0	42	22	0	0	0	41	0	23	0	71	30	229
17:35-17:40	0	54	20	0	0	0	27	0	29	0	63	29	222
17:40-17:45	0	44	32	0	0	0	31	0	20	0	53	24	204
17:45-17:50	0	44	21	0	0	0	31	0	21	0	42	25	184
17:50-17:55	0	60	14	0	0	0	28	1	18	0	40	20	181
17:55-18:00	0	54	23	0	0	0	29	0	18	0	55	21	200
Total Survey	0	1202	404	0	0	1	788	2	490	0	1475	649	5011
PHF	0	.86	.79	0	0	.25	.88	0	.81	0	.83	.85	.905
% Trucks	0	3.7	1	0	0	0	1.4	0	4.9	0	2.2	4.5	2.9
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	
Peds	0	0	0	0	0	0	0	0	0	0	8	0	
Hourly Totals													
16:00-17:00	0	600	187	0	0	0	376	1	221	0	712	332	2429
16:15-17:15	0	575	187	0	0	1	383	0	245	0	763	364	2518
16:30-17:30	0	504	187	0	0	1	415	0	248	0	800	340	2575
16:45-17:45	0	585	210	0	0	1	437	0	261	0	794	333	2621
17:00-18:00	0	602	217	0	0	1	412	1	269	0	763	317	2582

12249

0 0

0 T= 0% P=0. 0 17:00-18:00 TEV=2356

Traffic Smithy
Traffic *Survey* Service

5:00-16:05	0	41	16	20	0	22	0	0	0	0	35	13	147
5:05-16:10	0	41	22	25	0	18	0	0	0	0	69	17	192
5:10-16:15	0	43	21	33	0	27	0	0	0	0	46	14	184
5:15-16:20	0	52	20	23	0	24	0	0	0	0	54	24	197
5:20-16:25	0	47	27	22	0	21	0	0	0	0	24	17	158
5:25-16:30	0	54	13	16	0	25	0	0	0	0	44	13	165
5:30-16:35	0	63	13	27	0	28	0	0	0	0	46	20	197
5:35-16:40	0	59	27	33	0	22	0	0	0	0	57	27	225
5:40-16:45	0	36	24	42	0	27	0	0	0	0	40	16	185
5:45-16:50	0	38	21	26	0	29	0	0	0	0	55	16	185
5:50-16:55	0	40	27	25	0	15	0	0	0	0	48	13	168
5:55-17:00	0	48	14	24	0	28	0	0	0	0	40	18	172
7:00-17:05	0	53	14	30	0	31	0	0	0	0	42	18	188
7:05-17:10	0	52	20	41	0	34	0	0	0	0	59	13	219
7:10-17:15	0	47	18	33	0	42	0	0	0	0	69	28	237
7:15-17:20	0	49	14	33	0	26	0	0	0	0	62	16	200
7:20-17:25	0	48	16	25	0	26	0	0	0	0	56	26	197
7:25-17:30	0	42	15	24	0	31	0	0	0	0	49	19	180
7:30-17:35	0	47	19	32	0	33	0	0	0	0	49	19	199
7:35-17:40	0	43	18	24	0	31	0	0	0	0	50	20	186
7:40-17:45	0	64	25	35	0	31	0	0	0	0	33	24	212
7:45-17:50	0	43	14	29	0	31	0	0	0	0	44	19	180
7:50-17:55	0	46	14	23	0	27	0	0	0	0	44	17	171
7:55-18:00	0	47	25	27	0	35	0	0	0	0	40	13	187
otal Survey	0	1143	457	672	0	664	0	0	0	0	1155	440	4531
HF	0	.94	.85	.83	0	.88	0	0	0	0	.79	.83	.897
Trucks	0	1.8	5.5	4.5	0	.5	0	0	0	0	3.1	.2	2.6
topped Buses	0	0	0	0	0	0	0	0	0	0	0	0	
eds	0	0	0	0	0	0	0	0	0	0	1	0	
ourly **Totals**													
6:00-17:00	0	562	245	316	0	286	0	0	0	0	558	208	2175
6:15-17:15	0	589	238	342	0	326	0	0	0	0	578	223	2298
6:30-17:30	0	575	223	363	0	339	0	0	0	0	623	230	2351
6:45-17:45	0	571	221	352	0	357	0	0	0	0	612	230	2343
7:00-18:00	0	581	212	356	0	378	0	0	0	0	597	232	2356

INTERSECTION TURN MOVEMENT COUNT SUMMARY REPORT
SCHOLLS FERRY ROAD AT ALLEN BOULEVARD

12330

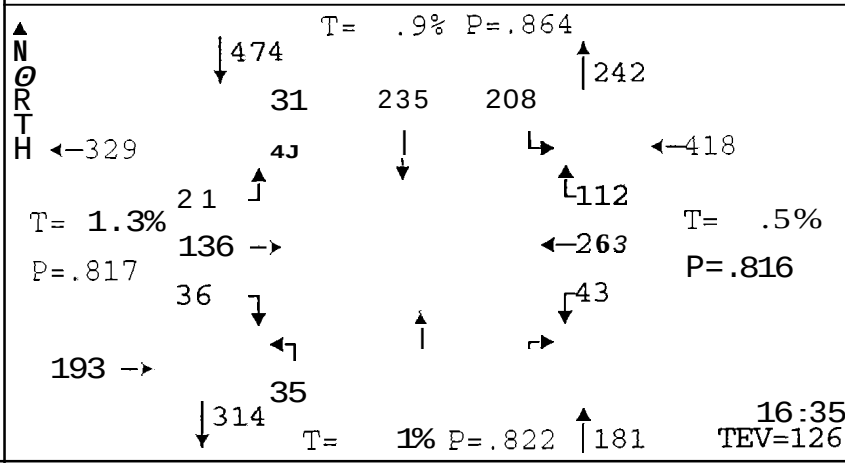
919 T= 1.7% P=.876 A 1747 16:30-17:30 TEV=3347

Traffic Smithy
Traffic Survey Service

						↳	↰	↑					
16:00-16:05	2	27	9	6	49	18	2	28	4	9	45	23	222
16:05-16:10	2	36	6	5	61	11	0	32	11	11	41	27	243
16:10-16:15	2	31	5	3	66	15	1	53	12	15	42	25	270
16:15-16:20	3	29	6	3	68	15	1	43	13	9	28	22	240
16:20-16:25	3	32	16	8	47	10	2	34	12	10	44	29	247
16:25-16:30	0	30	16	4	58	12	2	31	17	19	52	14	255
16:30-16:35	1	30	15	8	57	15	1	43	14	20	56	49	309
16:35-16:40	2	33	14	1	60	4	2	41	9	27	50	29	272
16:40-16:45	1	27	15	6	66	13	1	49	13	15	33	22	261
16:45-16:50	6	43	11	7	63	15	4	57	15	15	53	12	301
16:50-16:55	4	43	20	7	44	16	1	47	15	21	47	35	300
16:55-17:00	4	29	12	10	57	9	4	46	13	22	37	17	260
17:00-17:05	2	33	17	8	46	16	3	35	10	30	49	18	267
17:05-17:10	2	29	13	4	65	12	0	53	11	10	39	39	277
17:10-17:15	7	38	21	6	35	19	4	32	11	24	51	32	280
17:15-17:20	6	38	14	17	42	9	1	50	18	20	45	25	285
17:20-17:25	7	32	17	13	53	6	6	48	9	22	36	17	266
17:25-17:30	4	21	10	28	49	7	4	61	16	10	51	8	269
17:30-17:35	4	30	15	4	61	14	0	47	6	18	50	20	269
17:35-17:40	7	32	21	7	59	4	2	40	12	18	51	8	261
17:40-17:45	8	27	16	9	39	9	2	50	13	15	51	9	248
17:45-17:50	3	26	16	8	52	8	6	35	11	14	45	19	243
17:50-17:55	7	30	9	5	44	7	7	28	9	21	49	20	236
17:55-18:00	2	44	18	4	45	10	4	32	3	7	52	19	240
Total Swey	89	770	332	181	1286	274	60	1015	277	402	1097	538	6321
PHF	.58	.86	.86	.5	.84	.75	.7	.80	.9	.81	.98	.76	.970
% Trucks	0	1.4	.3	.6	.9	.7	0	1.4	3.2	.5	.8	1.3	1.1
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	
Peds	0	0	0	0	1	0	0	1	0	0	1	0	
Hourly Totals													
16:00-17:00	30	390	145	68	696	153	21	504	148	193	528	304	3180
16:15-17:15	35	396	176	72	666	156	25	511	153	222	539	318	3265
16:30-17:30	46	396	179	115	637	141	31	562	154	236	547	303	3347
16:45-17:45	61	395	187	120	613	136	31	566	149	225	560	240	3283
17:00-18:00	59	380	187	113	590	121	39	511	129	209	569	234	3143

INTERSECTION TURN MOVEMENT COUNT SUMMARY REPORT
170TH AVENUE AT HART-BANY ROAD

12303



DATE OF COUNT: 12/03/96
DAY OF-WEEK: Tue
TIME STARTED: 16:00
TIME ENDED: 18:00

TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

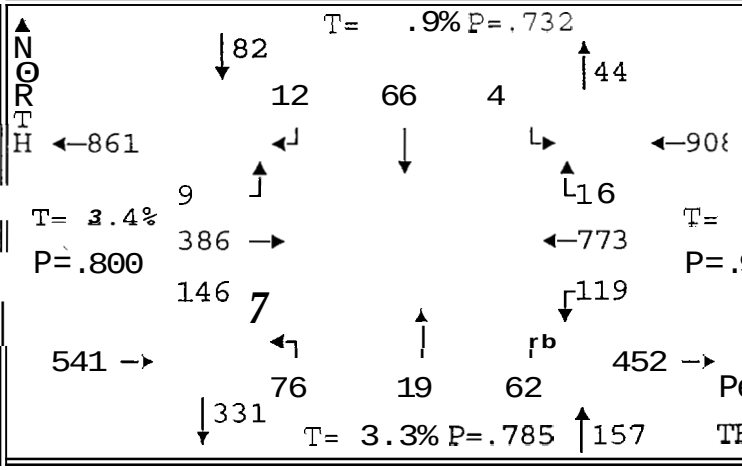
16:35-17:35
TEV=1266

Traffic Smithy
Traffic Survey Service

TIME PERIOD FROM - TO	EAST BOUND ↓	EAST BOUND →	EAST BOUND ↑	SOUTH BOUND ↵	SOUTH BOUND ↓	SOUTH BOUND ↳	NORTH BOUND ↰	NORTH BOUND ↑	NORTH BOUND ↱	WEST BOUND ↓	WEST BOUND ←	WEST BOUND ↑	ALL
6:00-16:05	1	19	3	0	14	9	3	**10**	3	3	17	10	92
6:05-16:10	2	17	2	4	17	6	1	14	6	3	16	14	102
6:10-16:15	2	15	2	1	13	19	3	9	7	2	25	9	107
6:15-16:20	C	13	**1**	1	20	15	4	8	5	3	24	17	**111**
6:20-16:25	0	18	1	3	20	20	5	13	4	3	8	7	102
6:25-16:30	3	15	1	3	14	13	3	12	5	**1**	28	15	113
6:30-16:35	3	**12**	0	4	19	18	4	8	3	2	21	11	105
6:35-16:40	4	17	4	5	13	9	3	7	4	3	16	6	91
6:40-16:45	3	9	3	4	14	12	6	16	**1**	8	23	7	106
6:45-16:50	1	16	2	0	20	11	5	**10**	2	2	22	**10**	101
6:50-16:55	4	**11**	**1**	**1**	19	19	0	5	4	3	18	**15**	**100**
6:55-17:00	4	17	2	**1**	**18**	25	0	4	**1**	2	14	6	94
7:00-17:05	2	**11**	0	2	15	**18**	5	10	2	**3**	24	10	102
7:05-17:10	4	8	0	9	22	20	3	**10**	**1**	4	11	9	101
7:10-17:15	3	17	3	0	20	19	3	9	4	**1**	29	5	113
7:15-17:20	0	11	1	**1**	20	20	3	7	1	5	36	9	114
7:20-17:25	**1**	8	**1**	3	28	18	0	9	11	4	22	15	120
7:25-17:30	6	5	1	**3**	22	20	4	**13**	2	4	20	13	113
7:30-17:35	4	6	3	2	24	17	3	**9**	4	4	28	7	**111**
7:35-17:40	3	7	2	0	5	8	0	2	0	**1**	35	4	67
7:40-17:45	**1**	**9**	0	6	14	17	2	11	4	7	10	10	**91**
7:45-17:50	3	5	2	2	18	13	4	11	1	6	14	4	83
7:50-17:55	2	7	1	3	14	16	6	**10**	5	8	13	12	97
7:55-18:00	3	6	**1**	2	15	14	4	**10**	5	4	10	**10**	84
Total Survey	59	279	37	60	418	376	74	227	85	86	484	235	242C
PHF	a2	.77	.58	.65	.79	.83	.63	.83	.54	.83	.76	.76	.91
% Trucks	1.7	**1.1**	2.7	0	1.7	.3	0	1.8	0	1.2	.4	.4	.9
Stopped **Buses**	0	*0*	0	0	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	
Peds	*0*	0	*0*	*0*	*0*	*0*	*0*	0	*0*	*0*	*0*	*0*	
Hourly Totals													
6:00-17:00	27	179	22	27	201	176	37	116	45	35	232	127	1224
6:15-17:15	31	164	18	33	214	199	41	112	36	35	238	118	1239
6:30-17:**30**	35	142	18	33	230	209	36	108	36	41	256	116	1260
6:45-17:45	33	126	16	28	227	212	28	99	36	40	269	113	1227
7:00-18:00	32	100	**15**	33	217	200	37	**111**	40	51	252	108	1196

INTERSECTION TURN MOVEMENT COUNT SUMMARY REPORT
HART BOULEVARD AT 155TH AVENUE

(1252)



DATE OF COUNT: 11/20/9(
DAY OF WEEK: Wed
TIME STARTED: 16:00
TIME ENDED: 18:00

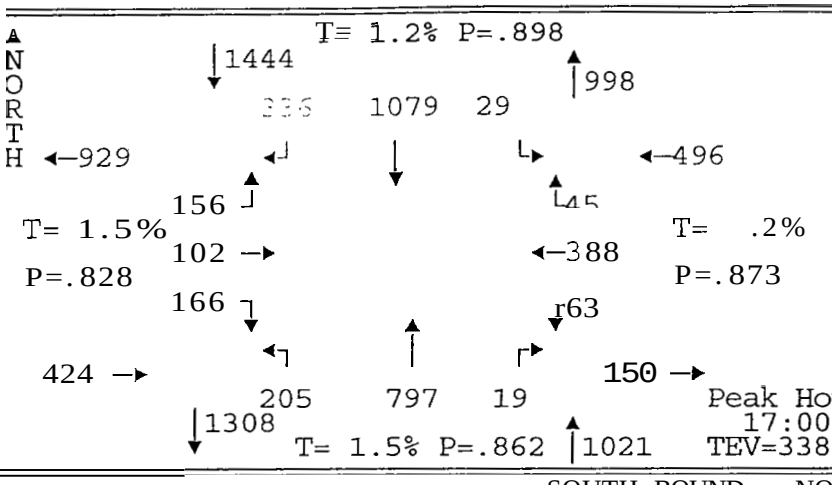
TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

Peak Hour
17:00-18:00
TEV=1688

Traffic Smithy
Traffic Survey Service

TIME PERIOD FROM - TO	7	→	↑	↵	↓	↳	↰	|	↱	⌜	←	⌞	ALL
16:00-16:05	8	26	0	1	1	0	11	2	6	7	41	0	103
16:05-16:10	5	26	0	0	2	0	4	0	5	12	45	0	99
16:10-16:15	6	43	0	1	0	0	9	1	8	10	41	1	120
16:15-16:20	7	35	1	0	3	0	4	0	4	5	41	0	100
16:20-16:25	9	29	0	1	2	0	1	0	7	3	50	0	102
16:25-16:30	13	32	0	1	0	1	7	1	3	8	41	0	107
16:30-16:35	7	30	1	0	6	1	12	2	8	7	62	3	139
16:35-16:40	12	30	0	0	3	0	5	0	6	4	46	1	107
16:40-16:45	9	41	1	1	1	0	4	0	3	10	64	1	135
16:45-16:50	6	39	2	0	3	0	10	1	8	9	37	1	116
16:50-16:55	11	37	0	1	3	0	4	1	4	6	58	0	125
16:55-17:00	9	29	0	0	2	1	3	1	5	10	47	1	108
17:00-17:05	19	29	3	0	0	0	5	3	7	8	64	1	139
17:05-17:10	9	26	1	0	2	0	8	0	2	7	50	1	106
17:10-17:15	7	39	0	0	5	0	3	1	9	8	55	2	129
17:15-17:20	8	37	0	0	6	0	1	1	2	9	63	0	127
17:20-17:25	10	27	1	4	4	1	4	4	9	16	74	2	156
17:25-17:30	11	22	2	4	5	2	7	2	4	9	73	3	144
17:30-17:35	22	39	0	0	3	1	10	1	8	9	57	4	154
17:35-17:40	9	35	1	0	7	0	8	1	9	12	66	1	149
17:40-17:45	16	47	0	1	9	0	8	2	3	11	76	0	173
17:45-17:50	16	26	0	1	5	0	10	1	4	10	68	1	142
17:50-17:55	10	28	1	2	9	0	7	0	3	10	61	1	132
17:55-18:00	9	31	0	0	11	0	5	3	2	10	66	0	137
Total Survey	248	783	14	18	92	7	150	28	129	210	1346	24	3049
PHF	.78	.8	.56	.38	.66	.25	.73	.68	.74	.88	.92	.44	.886
% Trucks	2.4	2.3	7.1	0	1.1	0	2.7	7.1	3.1	1.4	.6	4.2	1.6
Stopped Buses	**0**	**0**	*0*	*0*	*0*	*0*	*0*	*0*	0	0	0	*0*	
Peds	**0**	**1**	**0**	*0*	1	*0*	0	2	0	0	4	*0*	

INTERSECTION TURN MOVEMENT COUNT SUMMARY REPORT
HART ROAD AT MURRAY BOULEVARD



DATE OF COUNT: 01/24/96
DAY OF WEEK: Wed
TIME STARTED: 16:00
TIME ENDED: 18:00

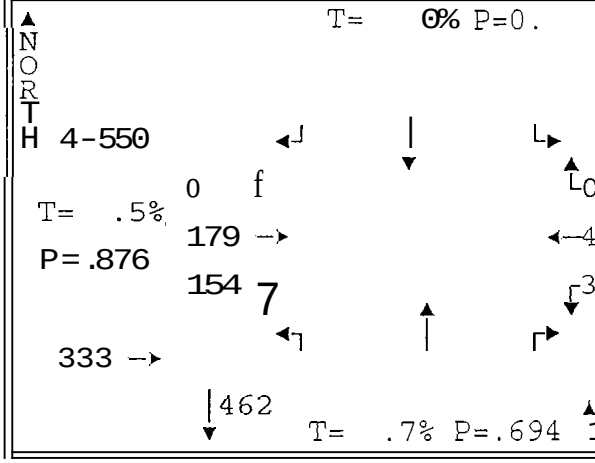
TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

Peak Hour
17:00-18:00
TEV=3385

Traffic Smithy
Traffic Survey Service

TIME PERIOD FROM - TO	EAST BOUND ↓	EAST BOUND →	EAST BOUND ↑	SOUTH BOUND ↵	SOUTH BOUND ↓	SOUTH BOUND ↳	NORTH BOUND ↰	NORTH BOUND ↑	WEST BOUND ↱	WEST BOUND ↓	WEST BOUND ←	WEST BOUND ↑	ALL
6:00-16:05	4	20	21	14	51	3	9	46	3	4	23	2	200
6:05-16:10	13	6	20	16	75	3	5	63	2	2	13	4	222
6 10-16:15	11	15	17	17	57	4	17	49	3	3	20	4	217
6 15-16:20	9	14	11	17	78	3	a	60	1	3	20	1	225
6 20-16:25	13	13	22	23	49	0	13	47	4	4	23	3	214
6 25-16:30	15	4	14	19	a3	5	12	60	3	3	29	6	253
6 30-16:35	11	13	17	28	54	3	19	45	0	3	25	9	227
6 35-16 40	14	15	15	23	102	3	12	72	2	1	23	6	288
6 40-16 45	12	10	18	34	71	4	12	42	0	9	33	9	254
6 45-16 50	11	6	8	27	97	2	5	65	0	0	19	12	252
6 50-16 55	9	15	11	23	73	7	12	61	2	5	37	2	257
6 55-17 00	9	8	19	22	79	2	9	77	3	4	18	7	257
7.00-17.05	6	12	7	22	85	1	20	72	1	2	37	7	272
7:05-17:10	16	11	11	22	89	7	10	50	1	2	22	5	246
7:10-17:15	8	5	11	22	66	3	20	40	3	6	37	2	223
7:15-17:20	14	9	12	22	107	4	13	99	0	9	29	4	322
7:20-17:25	15	3	16	29	88	0	20	55	1	8	43	3	281
7:25-17:30	10	5	15	40	106	2	13	66	1	10	35	1	304
7:30-17:35	12	9	7	41	94	2	19	77	2	3	33	2	301
7:35-17:40	18	9	16	17	95	1	15	92	3	2	37	4	309
7:40-17:45	10	11	18	32	66	2	22	63	3	6	25	1	259
7:45-17:50	24	5	9	30	101	3	15	73	3	5	33	5	306
7:50-17:55	18	14	16	33	91	3	22	56	0	2	22	4	281
7:55-18:00	15	9	18	26	91	1	16	54	1	8	35	7	281
Total Survey	297	241	349	599	1948	68	338	1484	42	104	671	110	6251
PHF	.73	.85	.91	.76	.9	.52	.87	.85	.53	.58	.87	.7	.925
% Trucks	.3	.8	2.9	.3	1.5	0	.3	1.5	9.5	0	.1	.9	1.2
Stopped Buses	0	0	0	0	4	0	0	2	0	0	0		
Peds	0	0	0	0	0	0	0	1	0	0	1	0	
Hourly Totals													
16:00-17:00	131	139	193	263	869	39	133	687	23	41	283	65	2866
16:15-17:15	133	126	164	282	926	40	152	691	20	42	323	69	296E
16:30-17:30	135	112	160	314	1017	38	165	744	14	59	358	67	3183
16:45-17:45	138	103	151	319	1045	33	178	817	20	57	372	50	3283
17:00-18:00	166	102	156	336	1079	29	205	797	19	63	388	45	338E

INTERSECTION TURN MOVEMENT COUNT SUMMARY REPORT
HART ROAD AT SORRENTO ROAD



DATE OF COUNT: 01/24/96
DAY OF WEEK: Wed
TIME STARTED: 16:00
TIME ENDED: 18:00

TEV-TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

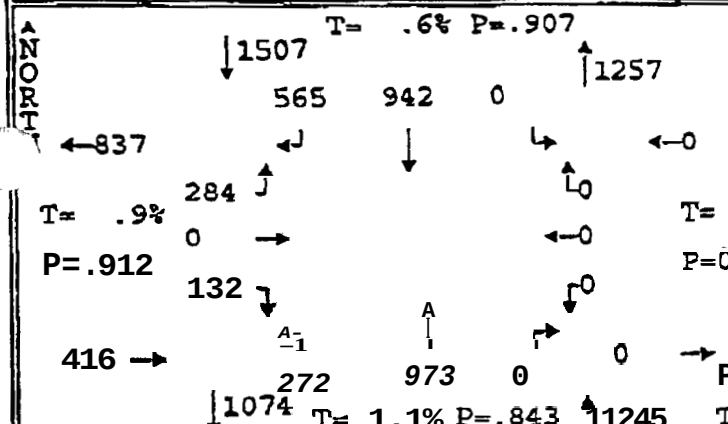
16:55-17:55

Traffic Smithy
Traffic Survey Service

IME PERIOD ROM - TO	EAST BOUND 7	→	↑	SOUTH BOUND ↵	↓	↳	NORTH BOUND ↰	↑	↱	WEST BOUND ↓	←	↖	ALL
6:00-16:05	5	**16**	0	0	0	0	7	0	5	14	23	0	70
6:05-16:10	0	14	0	0	0	0	5	0	12	18	28	0	77
6:10-16:15	8	17	0	0	0	0	5	0	16	**13**	32	0	91
6:15-16:20	10	15	0	0	0	0	5	0	12	15	25	0	82
6:20-16:25	12	17	0	0	0	0	7	0	**11**	19	34	0	100
6:25-16:30	4	12	0	0	0	0	5	0	9	19	36	0	85
6:30-16:35	18	15	0	0	0	0	12	0	13	26	22	0	106
6:35-16:40	14	17	0	0	0	0	9	0	9	20	40	0	109
6:40-16:45	10	13	0	0	0	0	**5**	0	8	26	29	0	91
6:45-16:50	15	**10**	0	0	0	0	5	0	15	30	34	0	**109**
6:50-16:55	9	20	0	0	0	0	9	0	10	30	31	0	109
6:55-17:00	9	12	0	0	0	0	6	0	**10**	30	39	0	106
7:00-17:05	15	**10**	0	0	0	0	5	0	8	24	41	0	103
7:05-17:10	14	15	0	0	0	0	6	0	13	30	41	0	119
7:10-17:15	**10**	**16**	0	0	0	0	7	0	**10**	31	37	0	111
7:15-17:20	9	14	0	0	0	0	8	0	8	24	46	0	109
7:20-17:25	26	12	0	0	0	0	6	0	11	22	40	0	117
7:25-17:30	12	14	0	0	0	0	9	0	9	30	36	0	110
7:30-17:35	**10**	8	0	0	0	0	4	0	9	20	46	0	97
7:35-17 :40	17	15	0	0	0	0	8	0	16	29	35	0	120
7:40-17:45	13	24	0	0	0	0	13	0	20	24	32	0	126
7:45-17:50	**5**	20	0	0	0	0	**12**	0	15	21	35	0	108
7:50-17:55	14	19	0	0	0	0	8	0	18	23	30	0	112
7:55-18:00	12	9	0	0	0	0	8	0	14	31	28	0	102
otal Survey	271	354	0	0	0	0	174	0	281	569	820	0	2469
HF	.8	.71	0	0	0	0	.7	0	.69	**.91**	.92	0	.944
Trucks	0	.8	0	0	0	0	.6	0	.7	0	.2	0	.3
topped Buses	0	0	0	0	0	0	0	0	0	0	0	0	
eds	0	0	0	0	0	0	1	0	0	0	0	0	
ourly Totals													
6:00-17:00	114	178	0	0	0	0	80	0	**130**	260	373	0	1135
6:15-17:15	140	172	0	0	0	0	81	0	128	300	409	0	1230
6:30-17:30	161	168	0	0	0	0	87	0	124	323	436	0	1299
6:45-17:45	**159**	170	0	0	0	0	86	0	**13.9**	324	458	0	1336
7:00-18:00	157	**176**	0	0	0	0	94	0	**151**	309	447	0	1334

INTERSECTION TURN MOVEMENT COUNT SUMMARY REPORT
HART ROAD AT HALL BOULEVARD

1916



DATE OF COUNT: 10/01/96
DAY OF WEEK: Tue
TIME STARTED: 16:00
TIME ENDED: 18:00

TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

Peak Hour
16:55-17:55

Traffic Smithy
Traffic Survey Service

TIME PERIOD FROM - TO	EAST BOUND ↓	EAST BOUND →	EAST BOUND ↑	SOUTHBOUND ↵	SOUTHBOUND ↓	SOUTHBOUND ↳	NORTH BOUND ↰	NORTH BOUND ↑	WESTBOUND ↱	WESTBOUND ↓	WESTBOUND ←	t	ALL
16:00-16:05	8	0	15	32	48	0	18	73	0	0	0	0	194
16:05-16:10	13	0	21	29	44	0	17	89	0	0	0	0	213
16:10-16:15	8	0	22	43	48	0	23	52	0	0	0	0	196
16:15-16:20	6	0	17	35	65	0	20	73	0	0	0	0	216
16:20-16:25	3	0	25	40	58	0	12	51	0	0	0	0	193
16:25-16:30	8	0	13	27	52	0	18	62	0	0	0	0	180
16:30-16:35	7	0	20	37	62	0	19	70	0	0	0	0	215
16:35-16:40	6	0	26	54	48	0	31	79	0	0	0	0	244
16:40-16:45	7	0	20	46	65	0	29	a4	0	0	0	0	251
16:45-16:50	5	0	15	49	67	0	9	80	0	0	0	0	22s
16:50-16:55	4	0	17	42	74	0	21	70	0	0	0	0	228
16:55-17:00	7	0	24	40	73	0	16	82	0	0	0	0	242
17:00-17:05	6	0	16	51	79	0	23	90	0	0	0	0	265
17:05-17:10	15	0	24	41	72	0	41	104	0	0	0	0	297
17:10-17:15	12	0	27	56	94	0	14	86	0	0	0	0	289
17:15-17:20	10	0	25	39	76	0	33	91	0	0	0	0	274
17:20-17:25	13	0	24	34	74	0	15	73	0	0	0	0	233
17:25-17:30	8	0	17	56	65	0	32	77	0	0	0	0	255
17:30-17:35	7	0	31	54	87	0	21	84	0	0	0	0	284
17:35-17:40	17	0	26	45	a7	0	12	58	0	0	0	0	24[illegible]
17:40-17:45	8	0	25	51	91	0	26	81	0	0	0	0	282
17:45-17:50	11	0	25	44	47	0	26	80	0	0	0	0	233
17:50-17:55	18	0	20	54	97	0	13	67	0	0	0	0	265
17:55-18:00	11	0	22	47	67	0	23	48	0	0	0	0	21E
Total survey	222	0	517	1046	1640	0	512	1804	0	0	0	0	5741
PHF	.89	0	.87	.91	.89	0	.77	.87	0	0	0	0	.92(
% Trucks	0	0	1.4	.1	.0	0	.4	1.3	0	0	0	0	.8
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	
Peds	0	3	0	0	6	0	0	0	0	0	0	0	
Hourly Totals													
16:00-17:00	86	0	235	474	704	0	233	865	0	0	0	0	259[illegible]
16:15-17:15	90	0	244	518	809	0	253	931	0	0	0	0	284[illegible]
16:30-17:30	100	0	255	545	849	0	283	986	0	0	0	0	301[illegible]
16:45-17:45	112	0	271	558	939	0	263	976	0	0	0	0	311[illegible]
17:00-18:00	136	0	282	572	936	0	279	939	0	0	0	0	314[illegible]

INTERSECTION TURN MOVEMENT COUNT SUMMARY REPORT
DENNY ROAD AT HALL BOULEVARD

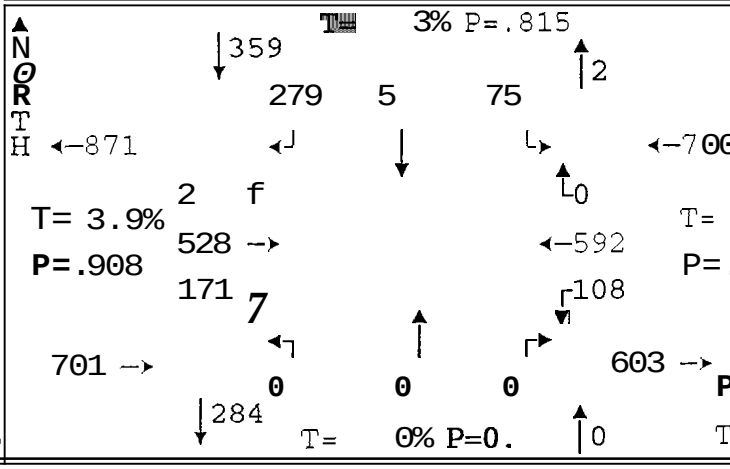
1594 T= 1.4% P=.882 11444 TEV=3384 16:35-17:35

Traffic Smithy
Traffic Survey Service

L6:00-16:05	0	0	0	0	56	12	0	42	29	51	0	23	213
16:05-16:10	0	0	0	0	72	12	0	84	30	32	0	17	247
16:10-16:15	0	0	0	0	69	6	0	81	39	32	0	17	244
16:15-16:20	0	0	0	0	47	10	0	65	36	42	0	13	213
L6:20-16:25	0	0	0	0	76	10	0	71	25	38	0	13	233
L6:25-16:30	0	0	0	0	47	15	0	58	31	45	0	18	214
16:30-16:35	0	0	0	0	58	7	0	60	28	57	0	20	230
16:35-16:40	0	0	0	0	80	16	0	76	28	45	0	19	264
16:40-16:45	0	0	0	0	81	12	0	80	45	52	0	13	283
16:45-16:50	0	0	0	0	79	7	0	72	31	56	0	14	259
16:50-16:55	0	0	0	0	78	12	0	70	56	43	0	21	280
16:55-17:00	0	0	0	0	84	9	0	78	39	45	0	14	269
17:00-17:05	0	0	0	0	86	11	0	84	37	47	0	20	285
17:05-17:10	0	0	0	0	95	12	0	56	27	63	0	23	276
17:10-17:15	0	0	0	0	96	11	0	110	42	48	0	16	323
17:15-17:20	0	0	0	0	76	11	0	73	45	55	0	20	280
17:20-17:25	0	0	0	0	86	16	0	106	33	49	0	17	307
17:25-17:30	0	0	0	0	96	12	0	97	41	33	0	12	291
17:30-17:35	0	0	0	0	62	10	0	78	40	59	0	18	267
17:35-17:40	0	0	0	0	91	10	1	53	31	53	0	23	262
17:40-17:45	0	0	0	0	78	18	0	68	33	36	0	16	249
17:45-17:50	0	0	0	0	71	12	0	68	29	48	0	22	250
17:50-17:55	0	0	0	0	76	10	0	67	42	48	0	15	258
17:55-18:00	0	0	0	0	60	7	0	59	44	45	1	24	240
Total Survey	0	0	0	0	1800	268	1	1756	861	1122	1	428	6237
PHF	0	0	0	0	.9	.89	0	.85	.88	.9	0	.88	.929
% Trucks	0	0	0	0	.8	.7	0	.9	2.3	.1	0	.2	.9
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	
Peds	0	0	0	0	0	0	0	3	0	0	3	0	
Hourly Totals													
16:00-17:00	0	0	0	0	827	128	0	837	417	538	0	202	2949
							0	880	425	581	0	204	3129
16:15-16:35	0	0	0	0	907	132	0	962	452	593	0	209	3341
16:30-17:30	0	0	0	0	995	136	1	945	455	587	0	214	3341
16:45-17:45	0	0	0	0	1007	139	1	919	444	584	1	226	3288
17:00-18:00	0	0	0	0	973	140							

INTERSECTION TURN MOVEMENT COUNT SUMMARY REPORT
DENNEY ROAD AT HIGHWAY 217 SOUTHBOUND RAMPS

12229



DATE OF COUNT: 11/14/96
DAY OF WEEK: Thu
TIME STARTED: 16:00
TIME ENDED: 18:00

TEV=TOTAL **ENTRY** VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

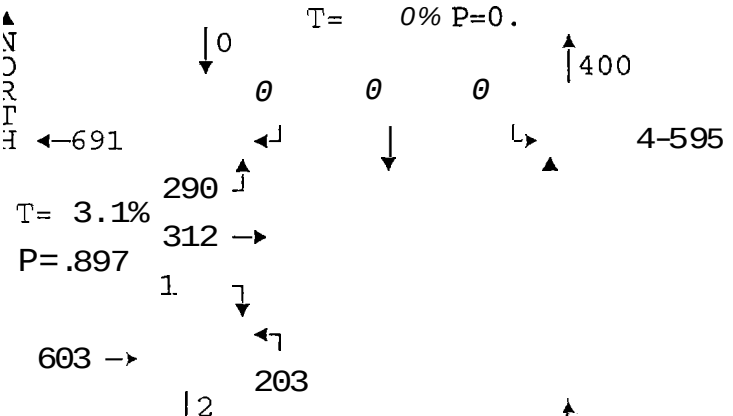
Peak Hour
16:20-17:20
TEV=1760

Traffic Smithy
Traffic Survey Service

16:00-16:05	9	43	0	16	2	9	0	0	0	7	44	0	130
16:05-16:10	11	32	0	18	2	7	0	0	0	6	37	0	113
16:10-16:15	18	35	0	22	0	10	0	0	0	7	47	0	139
16:15-16:20	16	50	0	13	0	6	0	0	0	11	27	0	123
16:20-16:25	13	37	0	20	2	12	0	0	0	7	44	0	135
16:25-16:30	14	50	0	36	0	9	0	0	0	11	46	0	166
16:30-16:35	7	41	0	24	0	7	0	0	0	9	47	0	135
16:35-16:40	21	50	0	15	0	10	0	0	0	8	54	0	158
16:40-16:45	14	43	0	30	0	5	0	0	0	11	46	0	149
16:45-16:50	13	43	0	24	0	4	0	0	0	9	31	0	124
16:50-16:55	11	38	0	11	0	2	0	0	0	7	58	0	127
16:55-17:00	18	41	0	22	0	4	0	0	0	14	42	0	141
17:00-17:05	13	43	1	30	0	9	0	0	0	5	52	0	153
17:05-17:10	18	56	0	21	0	3	0	0	0	11	60	0	169
17:10-17:15	14	48	0	23	1	6	0	0	0	11	51	0	154
17:15-17:20	15	38	1	23	2	4	0	0	0	5	61	0	149
17:20-17:25	13	54	0	11	0	3	0	0	0	5	46	0	132
17:25-17:30	12	42	0	11	1	3	0	0	0	5	39	0	113
17:30-17:35	15	42	0	7	2	2	0	0	0	11	51	0	130
17:35-17:40	10	47	0	22	1	4	0	0	0	5	53	0	142
17:40-17:45	14	28	1	20	1	3	0	0	0	8	56	0	131
17:45-17:50	10	34	0	15	0	5	0	0	0	11	50	0	125
17:50-17:55	12	34	0	8	0	8	0	0	0	13	57	0	132
17:55-18:00	9	29	0	27	3	2	0	0	0	4	50	2	126
Total Survey	320	998	3	469	17	137	0	0	0	201	1149	2	3296
PHF	.87	.9	.5	.87	.42	.67	0	0	0	.9	.86	0	.924
% Trucks	4.7	3.7	0	3.2	0	2.9	0	0	0	2	1.3	0	2.7
Stopped Buses	0	0	0	0	0	0	0	0	0	0	1	0	
Peds	0	4	0	0	0	0	0	0	0	0	12	0	
Hourly Totals													
16:00-17:00	165	503	0	251	6	85	0	0	0	107	523	0	1640
16:15-17:15	172	540	1	269	4	77	0	0	0	114	558	0	1734
16:30-17:30	169	537	2	245	4	60	0	0	0	100	587	0	1704
16:45-17:45	166	520	3	225	8	47	0	0	0	96	600	0	1665
17:00-18:00	155	495	3	218	11	52	0	0	0	94	626	2	1656

INTERSECTION TURN MOVEMENT COUNT SUMMARY REPORT
DENNEY ROAD AT HIGHWAY 217 NORTHBOUND RAMPS

12228

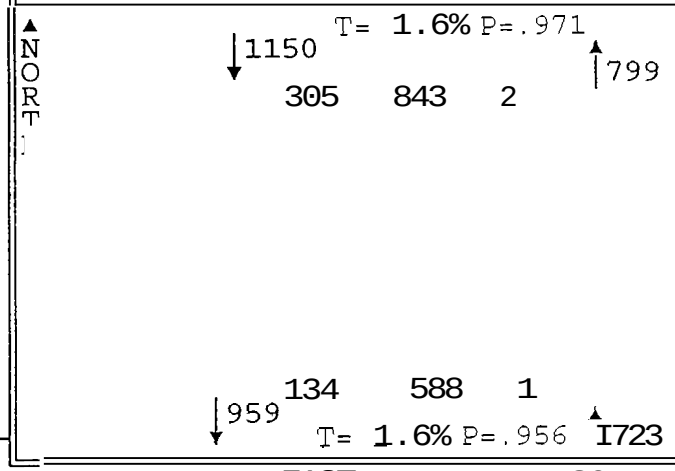


DATE OF COUNT: 11/14/96
DAY OF WEEK: Thu
TIME STARTED: 16:00
TIME ENDED: 18:00

Traffic Smithy
Traffic Survey Service

TIME PERIOD FROM - TO	↓	→	↑	↵	1	↳	↰	↑	↱	↓	←	↑	ALL
16:00-16:05	0	24	21	0	0	0	24	0	6	0	28	4	107
16:05-16:10	0	21	22	0	0	0	15	1	10	0	27	7	103
16:10-16:15	0	24	21	0	0	0	23	0	5	0	26	11	110
16:15-16:20	0	31	29	0	0	0	17	0	12	0	25	7	121
16:20-16:25	0	27	18	0	0	0	28	0	6	0	24	10	113
16:25-16:30	0	43	17	0	0	0	19	0	6	0	43	7	135
16:30-16:35	0	30	19	0	0	0	14	0	6	0	49	a	126
16:35-16:40	0	23	30	0	0	0	21	0	14	0	34	4	126
16:40-16:45	0	22	23	0	0	0	16	0	9	0	31	10	111
16:45-16:50	0	20	29	0	0	0	15	0	9	0	33	8	114
16:50-16:55	0	21	20	0	0	0	18	0	12	0	45	8	124
16:55-17:00	0	14	25	0	0	0	18	0	9	0	34	11	111
17:00-17:05	1	33	23	0	0	0	13	0	10	0	44	12	136
17:05-17:10	0	25	29	0	0	0	10	3	20	0	61	15	163
17:10-17:15	0	28	29	0	0	0	13	0	18	1	44	9	142
17:15-17:20	0	28	16	0	0	0	26	1	10	0	40	9	130
17:20-17:25	0	25	30	0	0	0	20	0	10	0	30	5	120
17:25-17:30	0	19	19	0	0	0	20	1	15	0	34	12	120
17:30-17:35	0	25	25	0	0	0	16	0	14	0	40	7	127
17:35-17:40	0	21	26	0	0	0	25	0	16	0	39	4	131
17:40-17:45	0	22	16	0	0	0	22	0	5	0	45	7	117
17:45-17:50	0	17	22	0	0	0	22	0	9	0	36	9	115
17:50-17:55	0	16	20	0	0	0	25	0	6	0	47	4	118
17:55-18:00	0	13	16	0	0	0	16	0	10	0	35	10	100
Total Survey	1	572	545	0	0	0	456	6	247	1	894	198	292C
PHF	.25	.81	.88	0	0	0	.86	.25	.69	.25	.82	.7	.871
% Trucks	0	1.2	5.1	0	0	0	2	0	.8	0	1	3	2.1
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	
Peds	0	6	1	0	0	0	0	3	0	0	7	0	
Hourly Totals													
16:00-17:00	0	300	274	0	0	0	228	1	104	0	399	95	1401
16:15-17:15	1	317	291	0	0	0	202	3	131	1	467	109	1522
16:30-17:30	1	288	292	0	0	0	204	5	142	1	479	111	1521
16:45-17:45	1	281	287	0	0	0	216	5	148	1	489	107	153
17:00-18:00	1	272	271	0	0	0	228	5	143	1	495	103	151

INTERSECTION TURN MOVEMENT COUNT SUMMARY REPORT
DENNEY ROAD AT SCHOLLS FERRY ROAD

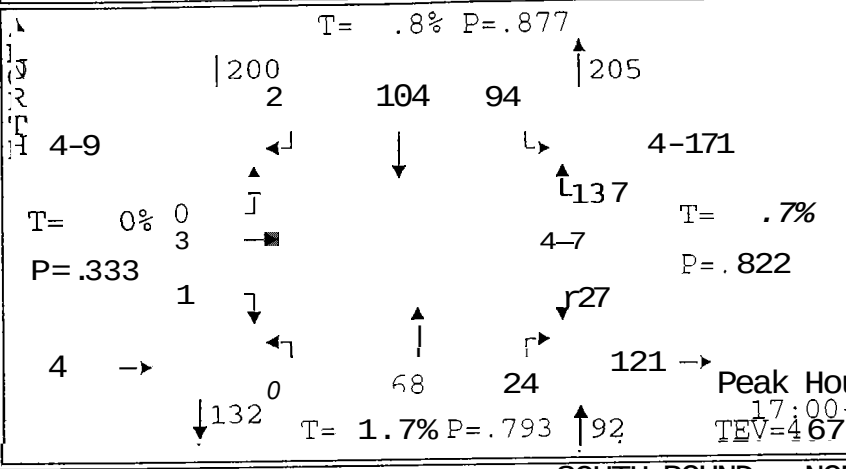


DATE OF COUNT: 12/12/96
DAY OF WEEK: Thu
TIME STARTED: 16:00
TIME ENDED: 18:00

Traffic Smithy
Traffic Survey Service

TIME PERIOD FROM - TO	EAST BOUND ↓	EAST BOUND →	EAST BOUND ↑	SOUTH BOUND ↵	SOUTH BOUND 1	SOUTH BOUND ↳	NORTH BOUND ↰	NORTH BOUND ↑	WEST BOUND ↱	WEST BOUND ↓	WEST BOUND ←	WEST BOUND ↑	ALL
.6:00-16:05	10	1	15	24	56	0	7	61	0	0	0	0	174
.6:05-16:10	6	0	12	19	50	0	13	55	4	1	0	0	160
.6:10-16:15	7	0	13	19	55	2	21	61	0	0	0	0	178
.6 15-16:20	10	0	14	16	54	0	17	53	0	0	0	0	164
.6 20-16:25	9	0	23	19	58	1	13	49	0	0	1	0	173
.6 25-16:30	11	0	7	25	86	0	7	52	0	0	0	0	188
.6 30-16:35	11	0	28	26	**64**	1	11	44	0	0	0	0	185
.6 35-16:40	11	2	18	28	57	0	15	51	0	0	1	0	183
.6 40-16:45	6	0	12	22	74	1	9	47	1	0	0	0	172
.6 45-16:50	13	1	21	31	71	0	11	53	0	0	1	0	202
.6 50-16:55	9	1	10	24	66	0	5	57	0	0	1	0	173
.6 55-17:00	9	**1**	19	16	76	0	16	47	0	0	0	0	184
.7 00-17:05	10	0	22	30	66	0	16	43	0	0	1	0	188
.7 05-17:10	7	0	12	32	76	0	8	57	0	0	0	0	192
.7:10-17:15	10	0	16	23	65	0	14	39	0	0	0	0	167
.7:15-17:20	11	0	26	25	***70***	0	8	36	0	0	0	0	176
.7:20-17:25	8	**1**	**19**	23	72	0	14	62	0	0	0	**1**	200
.7:25-17:30	7	1	15	27	62	0	**11**	48	0	0	0	1	172
.7:30-17:35	4	0	15	30	77	1	8	50	0	0	0	0	185
.7:35-17:40	5	0	24	31	63	0	10	38	0	0	0	0	171
.7:40-17:45	16	0	18	22	69	0	6	52	0	0	0	0	**183**
.7:45-17:50	11	0	21	**29**	60	0	9	54	0	0	0	0	184
.7:50-17:55	9	**1**	18	28	64	0	6	51	0	0	0	0	177
.7:55-18:00	13	0	13	25	64	0	11	51	0	0	0	0	177
Total Survey	223	9	411	594	1575	6	266	1211	5	1	5	2	430E
?HF	.88	.5	.86	.9	.97	.25	.84	.94	.25	0	.5	.25	.97?
% Trucks	1.3	0	1	1.9	1.5	0	1.5	1.5	20	0	0	0	1.5
Stopped Buses	0	0	0	0	1	0	0	0	0	0	0	0	
Peds	0	1	0	0	15	0	0	6	0	0	1	0	
Hourly Totals													
16:00-17:00	112	6	192	269	767	5	145	630	5	**1**	4	0	2136
16:15-17:15	116	5	202	292	813	3	142	592	1	0	5	0	2171
16:30-17:30	112	7	218	307	819	2	138	584	1	0	4	2	2194
16:45-17:45	109	5	217	314	833	1	127	582	0	0	3	2	2193
17:00,-1800	111	3	219	325	808	1	121	581	0	0	1	2	2172

INTERSECTION TURN MOVEMENT COUNT SUMMARY REPORT
NORA ROAD/BEARD ROAD AT SW 155TH AVENUE



DATE OF COUNT: 01/31/96
DAY OF WEEK: Wed
TIME STARTED: 16:00
TIME ENDED: 18:00

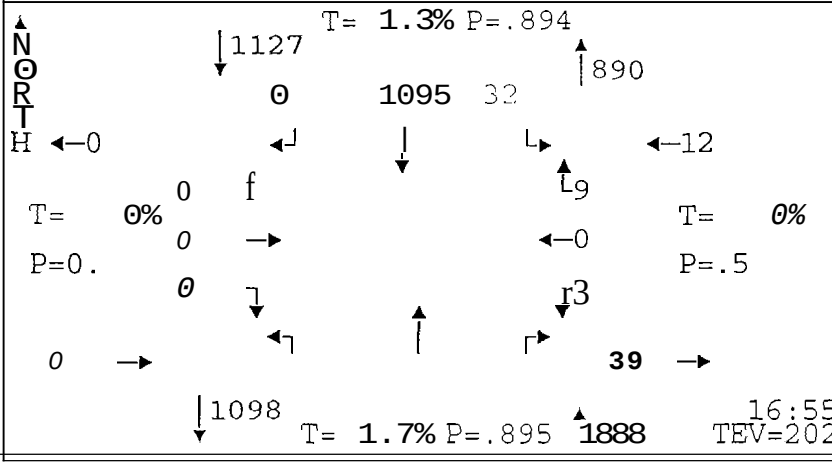
TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

Peak Hour
17:00-18:00

Traffic Smithy
Traffic Survey Service

TIME PERIOD FROM - TO	EAST BOUND ↰	EAST BOUND →	SOUTH BOUND ↱	SOUTH BOUND ↲	SOUTH BOUND ↓	NORTH BOUND ↳	NORTH BOUND ↰	NORTH BOUND ↑	WEST BOUND ↱	WEST BOUND ↓	WEST BOUND ←	WEST BOUND ↳	ALL
16:00-16:05	0	0	0	0	10	14	0	8	1	3	0	7	43
16:05-16:10	0	0	0	0	8	13	0	2	2	2	1	10	38
16:10-16:15	0	0	0	0	4	11	0	6	0	3	0	3	27
16:15-16:20	0	0	0	0	3	9	0	9	2	2	0	7	32
16:20-16:25	0	0	0	0	5	8	0	5	2	1	1	10	32
16:25-16:30	1	0	0	0	7	5	0	5	1	0	0	1	20
16:30-16:35	0	1	0	0	7	8	0	8	1	1	0	3	29
16:35-16:40	0	0	0	0	9	7	0	8	0	5	1	5	35
16:40-16:45	0	0	1	0	7	7	0	6	1	2	1	6	31
16:45-16:50	0	0	0	0	11	4	0	3	4	5	0	9	36
16:50-16:55	0	0	0	0	6	6	0	2	1	3	0	7	25
16:55-17:00	0	0	0	0	4	7	0	6	0	2	0	13	32
17:00-17:05	0	0	0	1	7	9	0	2	4	0	1	6	30
17:05-17:10	0	0	0	0	9	8	0	5	1	3	0	14	40
17:10-17:15	0	0	0	0	11	9	0	3	1	0	0	17	41
17:15-17:20	0	1	0	0	7	7	0	8	1	2	0	9	35
17:20-17:25	0	0	0	0	13	8	0	7	0	2	1	10	41
17:25-17:30	0	0	0	0	9	8	0	7	2	1	0	13	40
17:30-17:35	0	0	0	0	8	11	0	5	4	4	2	13	47
17:35-17:40	0	0	0	0	8	6	0	6	1	0	0	10	31
17:40-17:45	0	1	0	0	6	7	0	7	2	5	1	11	40
17:45-17:50	0	0	0	0	3	11	0	11	2	5	0	12	44
17:50-17:55	1	1	0	1	10	5	0	4	3	4	2	12	43
17:55-18:00	0	0	0	0	13	5	0	3	3	1	0	10	35
Total Survey	2	4	1	2	185	193	0	136	39	56	11	218	847
PHF	.25	.38	0	.5	.84	.87	0	.71	.75	.48	.58	.86	.912
% Trucks	0	0	0	0	1.1	.5	0	1.5	2.6	0	0	.9	.9
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	
Peds	0	0	0	0	1	0	0	0	0	0	0	0	
Hourly Totals													
16:00-17:00	1	1	1	0	81	99	0	68	15	29	4	81	380
16:15-17:15	1	1	1	1	86	87	0	62	18	24	4	98	383
16:30-17:30	0	2	1	1	100	88	0	65	16	26	4	112	415
16:45-17:45	0	2	0	1	99	90	0	61	21	27	5	132	438
17:00-18:00	1	3	0	2	104	94	0	68	24	27	7	137	467

INTERSECTION TURN MOVEMENT COUNT SUMMARY REPORT
MAVERICK TERRACE AT MURRAY BOULEVARD



DATE OF COUNT: 01/25/96
DAY OF WEEK: Thu
TIME STARTED: 16:00
TIME ENDED: 18:00

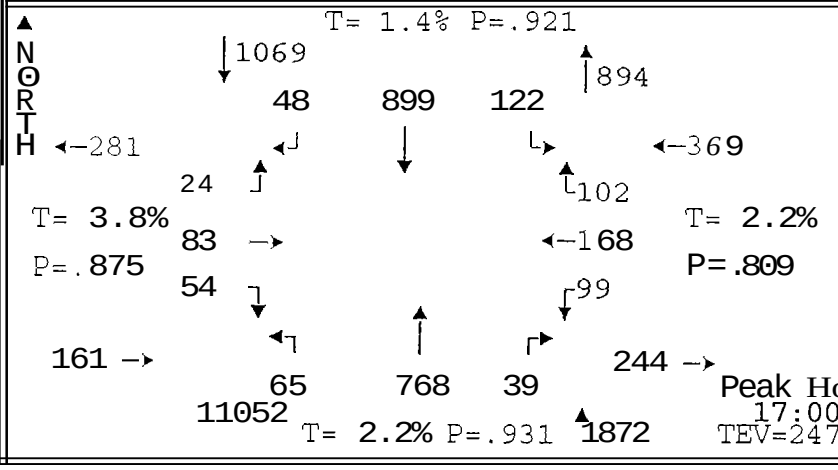
TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

16:55-17:55

Traffic Smithy
Traffic Survey Service

TIME PERIOD FROM - TO	EAST BOUND ↰	EAST BOUND →	EAST BOUND ↱	SOUTH BOUND ↰	SOUTH BOUND ↓	SOUTH BOUND ↳	NORTH BOUND ↰	NORTH BOUND ↑	NORTH BOUND ↱	WEST BOUND ↰	WEST BOUND ←	WEST BOUND ↳	ALL
16:00-16:05	0	0	0	0	58	3	0	55	0	2	0	0	118
16:05-16:10	0	0	0	0	85	4	0	76	0	0	0	0	165
16:10-16:15	0	0	0	0	75	1	0	61	1	1	0	2	141
16:15-16:20	0	0	0	0	77	2	0	58	1	0	0	2	140
16:20-16:25	0	0	0	0	82	3	0	72	2	0	0	1	160
16:25-16:30	0	0	0	0	91	4	0	65	0	0	0	2	162
16:30-16:35	0	0	0	0	63	1	0	74	4	0	0	1	143
16:35-16:40	0	0	0	0	71	2	0	63	0	0	0	1	137
16:40-16:45	0	0	0	0	100	0	0	61	0	1	0	1	163
16:45-16:50	0	0	0	0	98	4	0	63	3	0	0	0	168
16:50-16:55	0	0	0	0	89	1	0	61	1	1	0	1	154
16:55-17:00	0	0	0	0	100	5	0	68	1	0	0	0	174
17:00-17:05	0	0	0	0	81	3	0	61	0	0	0	1	146
17:05-17:10	0	0	0	0	102	4	0	83	0	0	0	1	190
17:10-17:15	0	0	0	0	83	2	0	80	0	1	0	2	168
17:15-17:20	0	0	0	0	119	5	0	85	0	0	0	2	211
17:20-17:25	0	0	0	0	85	0	0	70	0	0	0	0	155
17:25-17:30	0	0	0	0	82	0	0	72	0	1	0	2	157
17:30-17:35	0	0	0	0	90	3	0	76	1	0	0	0	170
17:35-17:40	0	0	0	0	75	3	0	64	2	1	0	1	146
17:40-17:45	0	0	0	0	76	2	0	78	1	0	0	0	157
17:45-17:50	0	0	0	0	92	3	0	70	1	0	0	0	166
17:50-17:55	0	0	0	0	110	2	0	74	1	0	0	0	187
17:55-18:00	0	0	0	0	74	6	1	63	0	0	0	0	144
Total Survey	0	0	0	0	2058	63	1	1653	19	8	0	20	3822
PHF	0	0	0	0	.9	.67	0	.89	.44	.38	0	.45	.890
% Trucks	0	0	0	0	1.4	0	0	1.8	0	0	0	0	1.5
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	
Peds	0	0	0	0	2	0	0	4	0	0	0	0	
Hourly Totals													
16:00-17:00	0	0	0	0	989	30	0	777	13	5	0	11	1825
16:15-17:15	0	0	0	0	1037	31	0	809	12	3	0	13	1905
16:30-17:30	0	0	0	0	1073	27	0	841	9	4	0	12	1966
16:45-17:45	0	0	0	0	1080	32	0	861	9	4	0	10	1996
17:00-18:00	0	0	0	0	1069	33	1	876	6	3	0	9	1997

INTERSECTION TURN MOVEMENT COUNT SUMMARY REPORT
MURRAY BOULELVARD AT BEARD ROAD/BROCKMAN ROAD



DATE OF COUNT: 01/25/96
DAY OF WEEK: Thu
TIME STARTED: 16:00
TIME ENDED: 18:00

TEV=TOTAL *ENTRY* VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

Peak Hour
17:00-18:00

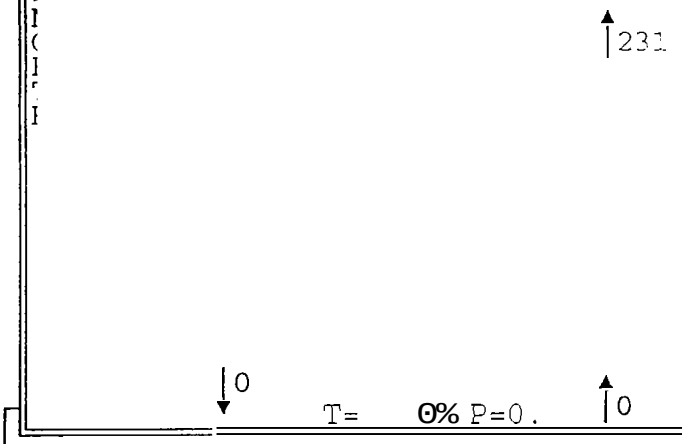
Traffic Smithy
Traffic Survey Service

TIME PERIOD FROM - TO	EAST BOUND ↓	EAST BOUND →	EAST BOUND ↑	SOUTH BOUND ↲	SOUTH BOUND ↓	SOUTH BOUND ↳	NORTH BOUND ↰	NORTH BOUND ↑	NORTH BOUND ↱	WEST BOUND ↓	WEST BOUND ←	WEST BOUND ↑	ALL
16:00-16:05	3	6	1	2	43	7	5	54	5	5	12	7	150
16:05-16:10	3	3	7	3	55	6	6	58	7	9	7	10	174
16:10-16:15	3	4	4	3	79	13	10	40	4	4	9	8	181
16:15-16:20	2	9	2	4	80	9	2	46	4	6	15	9	188
16:20-16:25	4	9	2	2	49	4	7	70	3	10	8	8	176
16:25-16:30	4	9	1	3	63	11	3	44	4	4	11	7	164
16:30-16:35	8	5	2	2	82	10	7	72	4	7	9	12	220
16:35-16:40	5	5	1	3	71	9	5	54	3	7	12	8	183
16:40-16:45	7	7	4	3	69	9	2	41	2	10	11	9	174
16:45-16:50	4	7	3	4	90	**11**	2	57	3	6	11	9	207
16:50-16:55	2	3	3	2	75	13	4	53	3	11	16	7	192
16:55-17:00	6	5	2	4	90	7	5	56	**1**	6	6	10	198
17:00-17:05	3	7	2	**1**	62	7	5	53	4	**10**	13	**10**	177
17:05-17:10	6	8	0	7	77	20	*6*	62	3	**4**	14	12	**219**
17:10-17:15	6	6	0	4	78	8	**1**	55	4	5	8	**15**	**190**
17:15-17:20	1	3	0	5	70	12	8	80	4	**11**	21	**11**	226
17:20-17:25	7	**10**	2	5	95	**13**	1	66	2	11	11	14	237
17:25-17:30	0	8	3	5	57	7	4	67	**1**	11	20	4	187
17:30-17:35	6	8	0	1	99	8	6	68	4	10	14	6	230
17:35-17:40	3	7	4	3	67	9	7	**51**	4	**10**	19	7	191
17:40-17:45	5	8	3	4	70	8	9	69	5	6	7	6	200
17:45-17:50	5	5	3	2	66	13	6	74	1	7	23	2	207
17:55-18:00	7	5	3	7	81	6	**3**	65	4	6	12		

Total Survey	105	155	56	83	1745	231	123	1413	82	184	295	206	4678
PHF	.79	.8	.6	.75	.9	.76	.68	.9	.75	.75	.79	.64	.944
% Trucks	2.9	5.2	1.8	0	1.5	.9	1.6	2.1	3.7	4.3	1	1.9	1.9
Stopped Buses	0	0	0	0	3	0	0	2	0	0	1	0	
Peds	0	2	0	0	2	0	0	1	0	0	2	0	

Hourly Totals													
16:00-17:00	51	72	32	35	846	109	58	645	43	85	127	104	2207
16:15-17:15	57	80	22	39	886	118	49	663	38	86	134	116	2288
16:30-17:30	55	74	22	45	916	126	50	716	34	99	152	121	2410
16:45-17:45	49	80	22	45	930	123	58	737	38	101	160	111	2454
17:00-18:00	54	83	24	48	899	122	65	768	39	99	168	102	2471

INTERSECTION TURN MOVEMENT COUNT SUMMARY REPORT
BROCKMAN ROAD AT SORRENTO ROAD



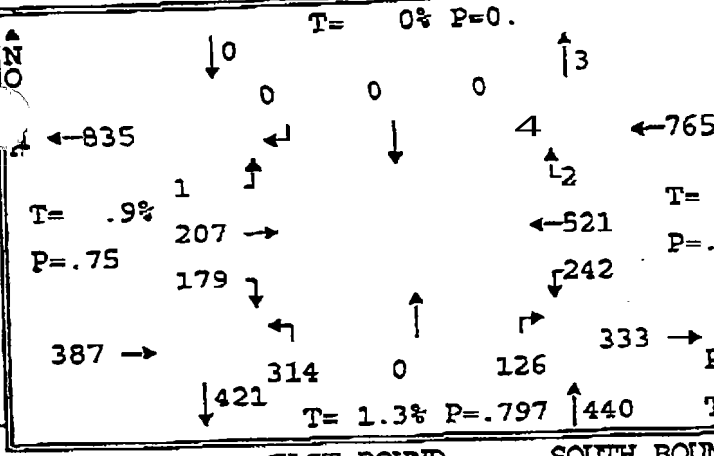
17:00-18:00
TEV=1444

Traffic Smithy
Traffic Survey Service

T:
Fl

16:00-16:05	0	15	5	11	0	11	0	0	0	0	44	8	94
16:05-16:10	0	22	8	10	0	12	0	0	0	0	36	9	97
16:10-16:15	0	21	6	9	0	8	0	0	0	0	44	11	99
16:15-16:20	0	20	7	9	0	12	0	0	0	0	37	13	98
16:20-16:25	0	27	4	7	0	6	0	0	0	1	50	10	105
16:25-16:30	0	29	6	7	0	8	0	0	0	0	39	14	103
16:30-16:35	0	11	10	15	2	8	0	0	0	0	31	9	86
16:35-16:40	0	32	5	12	0	8	0	0	0	0	54	19	130
16:40-16:45	0	16	3	18	0	8	0	0	0	0	53	11	109
16:45-16:50	0	30	5	9	0	9	0	0	0	0	44	12	109
16:50-16:55	0	22	6	11	0	12	0	0	0	0	34	16	101
6:55-17:00	0	21	3	10	1	11	0	0	0	0	55	16	117
7:00-17:05	0	21	7	7	0	11	0	0	0	0	51	15	112
7:05-17:10	0	21	4	16	0	6	0	0	0	0	46	17	110
7:10-17:15	0	17	2	10	0	6	0	0	0	0	54	10	99
7:15-17:20	0	21	2	13	0	12	0	0	0	0	55	18	121
7:20-17:25	0	23	3	13	0	11	0	0	0	0	70	15	135
7:25-17:30	0	36	6	16	0	12	0	0	0	0	60	12	142
7:30-17:35	0	19	5	16	0	5	0	0	0	0	50	16	111
7:35-17:40	0	16	4	11	0	10	0	0	0	0	64	9	114
7:40-17:45	0	19	6	11	0	4	0	0	0	0	72	22	134
7:45-17:50	0	22	7	6	0	15	0	0	0	0	56	14	120
7:50-17:55	0	23	4	9	0	14	0	0	0	0	50	10	110
7:55-18:00	0	36	10	12	0	14	0	0	0	0	51	13	136
otal Survey	0	540	128	268	3	233	0	0	0	1	1200	319	2692
HF	0	,85	.71	.78	0	.7	0	0	0	0	.88	.91	.907
Trucks	0	.6	1.6	0	0	1.3	0	0	0	0	.7	.6	.7
topped Buses	0	0	0	0	0	0	0	0	0	0	0	0	
eds	0	5	0	0	2	0	0	1	0	0	1	0	
ourly Totals													
6:00-17:00	0	266	68	128	3	113	0	0	0	1	521	148	1248
6:15-17:15	0	267	62	131	3	105	0	0	0	1	548	162	1275
6:30-17:30	0	271	56	150	3	114	0	0	0	0	607	170	1371
6:45-17:45	0	266	53	143	1	109	0	0	0	0	655	178	1405
7:00-18:00	0	274	60	140	0	120	0	0	0	0	679	171	1444

INTERSECTION TURN MOVEMENT COUNT SUMMARY REPORT
125TH AVENUE AT BROCKMAN ROAD



DATE OF COUNT: 10/01/96
DAY OF WEEK: Tue
TIME STARTED: 16:00
TIME ENDED: 18:00

TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

Peak Hour
17:00-18:00
TEV=1592

Traffic Smithy
Traffic Survey Service

TIME PERIOD FROM - TO	EAST BOUND ↓	EAST BOUND →	EAST BOUND ↑	SOUTH BOUND ↵	SOUTH BOUND ↓	SOUTH BOUND ↳	NORTH BOUND ←┐	NORTH BOUND ↑	NORTH BOUND ┌→	WEST BOUND ↓┌	WEST BOUND ←	WEST BOUND ↑└	ALL
16:00-16:05	8	21	0	0	0	0	14	0	16	14	20	0	93
16:05-16:10	9	18	0	0	0	0	13	0	5	16	36	0	97
16:10-16:15	8	14	0	0	0	0	20	0	5	10	38	0	95
16:15-16:20	11	15	0	0	0	0	14	0	4	14	33	1	92
16:20-16:25	10	11	0	0	0	6	13	0	6	5	17	0	68
16:25-16:30	8	10	0	0	0	0	8	0	9	9	20	0	64
16:30-16:35	19	19	0	0	0	0	20	0	12	15	24	0	109
16:35-16:40	6	15	0	0	0	0	19	0	5	13	36	2	96
16:40-16:45	9	14	0	0	0	0	18	0	3	9	36	0	89
16:45-16:50	17	10	0	0	0	0	15	0	9	18	30	0	99
16:50-16:55	6	6	0	0	0	0	20	0	6	17	36	0	91
16:55-17:00	18	21	0	0	0	0	5	0	4	14	23	2	87
17:00-17:05	7	15	1	0	0	0	11	0	5	11	39	0	89
17:05-17:10	11	5	0	0	0	0	23	0	8	14	40	0	101
17:10-17:15	22	19	0	0	0	0	24	0	13	20	36	0	134
17:15-17:20	12	16	0	0	0	0	31	0	17	30	45	0	151
17:20-17:25	8	17	0	0	0	0	40	0	13	21	49	0	148
17:25-17:30	10	9	0	0	0	0	22	0	11	19	55	0	126
17:30-17:35	17	19	0	0	0	0	22	0	9	15	30	0	112
17:35-17:40	15	23	0	0	0	0	28	0	7	34	33	0	140
17:40-17:45	21	11	0	0	0	0	31	0	10	22	45	0	140
17:45-17:50	20	22	0	0	0	0	18	0	15	14	56	2	147
17:50-17:55	20	28	0	0	0	0	35	0	7	22	51	0	163
17:55-18:00	16	23	0	0	0	0	29	0	11	20	42	0	141
Total Survey	308	381	1	0	0	6	493	0	210	396	870	7	2672
PHF	.73	.71	.25	0	0	0	.83	0	.73	.85	.86	.25	.882
% Trucks	.6	1	0	0	0	0	1.4	0	1	.5	0	0	.6
Stopped Buses	0	1	0	0	0	0	0	2s	0	1	1	0	
Peds		9	0	0	0								
Hourly Totals						6	179	0	84	154	349	5	1080
16:00-17:00	129	174	0	0	0	6	190	0	84	159	370	5	1119
16:15-17:15	144	160	1	0	0	0	248	0	106	201	449	4	1320
16:30-17:30	145	166	1	0	0	0	314	0	112	225	461	2	1418
16:45-17:45	164	171	1	0	0	0	314	0	126	242	481	2	1592
17:00-18:00	179	207	1	0	0								

INTERSECTION TURN MOVEMENT COUNT SUMMARY REPORT
HALL BOULEVARD AT GREENWAY

1016

T= 0% P=.666

56 ↓ 4 46 6 ↑ 56

DATE OF COUNT: 10/01/96
DAY OF WEEK: Tue
TIME STARTED: 16:00
TIME ENDED: 18:00

255 1 227
1337

16:55-17:55

Traffic Smithy

SOUTH

WEST

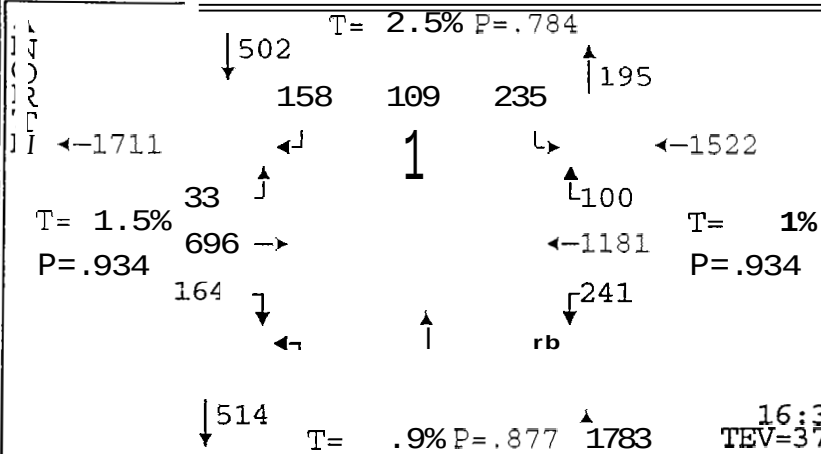
16:00-16:05	24	41	0	0	0	0	23	0	26	29	73	0	216
16:05-16:10	26	43	0	0	0	0	18	1	25	34	85	0	232
16:10-16:15	20	33	0	0	0	0	13	0	10	44	98	0	218
16:15-16:20	15	50	0	0	0	0	19	0	10	31	72	0	197
16:20-16:25	23	33	1	0	0	0	22	0	13	30	56	2	180
16:25-16:30	18	49	0	1	0	1	25	0	16	28	57	1	196
16:30-16:35	19	39	0	1	0	0	20	0	22	36	59	0	196
16:35-16:40	30	36	0	0	0	0	20	0	23	42	88	1	240
16:40-16:45	26	36	0	0	2	0	22	0	19	41	100	1	247
16:45-16:50	29	43	0	0	0	0	25	0	14	32	70	0	213
16:50-16:55	43	44	2	0	1	0	28	0	13	56	71	0	258
16:55-17:00	28	49	0	0	0	1	21	0	26	48	71	0	244
17:00-17:05	35	34	0	0	0	0	20	0	14	40	79	0	222
17:05-17:10	37	53	0	0	1	0	9	0	17	52	129	1	299
17:10-17:15	44	57	0	2	2	1	25	0	22	40	126	2	321
17:15-17:20	44	45	0	1	5	1	29	0	12	54	99	11	301
17:20-17:25	34	56	1	0	8	1	16	0	22	58	90	6	292
17:25-17:30	54	44	0	1	2	0	21	0	20	38	95	4	279
17:30-17:35	36	41	0	0	6	0	27	0	13	59	86	3	271
17:35-17:40	53	27	0	0	5	0	14	0	20	59	94	8	280
17:40-17:45	52	57	2	0	7	1	22	0	27	37	66	5	276
17:45-17:50	43	55	0	0	4	0	28	0	19	53	72	5	279
17:50-17:55	46	49	0	0	6	1	23	1	15	47	98	7	293
17:55-18:00	31	34	0	0	4	0	29	0	21	45	59	1	224
Total Survey	810	1048	6	6	53	7	519	2	439	1033	1993	58	597
PHF	.85	.88	.38	.33	.64	.5	.87	.25	.86	.94	.78	.63	.91
% Trucks	.2	1.5	0	0	0	0	1	0	1.6	.7	.8	0	
Stopped Buses	0	6	0	0	0	0	0	0	0	0	19	1	
Peds	0	36	2	0	8	0	1	29	0	0			

Hourly Totals

16:00-17:00	301	496	3	2	3	2	256	1	217	451	900	5	263
16:15-17:15	347	523	3	4	6	3	256	0	209	476	978	a	281
16:30-17:30	423	536	3	5	21	4	256	0	224	537	1077	26	312
16:45-17:45	489	550	5	4	37	5	257	0	220	573	1076	40	326
				4	50	5	263	1	222	582	1093	53	33

INTERSECTION TURN MOVEMENT COUNT SUMMARY REPORT
HALL BOULEVARD AT NIMBUS AVENUE

12263



DATE OF COUNT: 11/21/96
DAY OF WEEK: Thu
TIME STARTED: 16:00
TIME ENDED: 18:00

TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

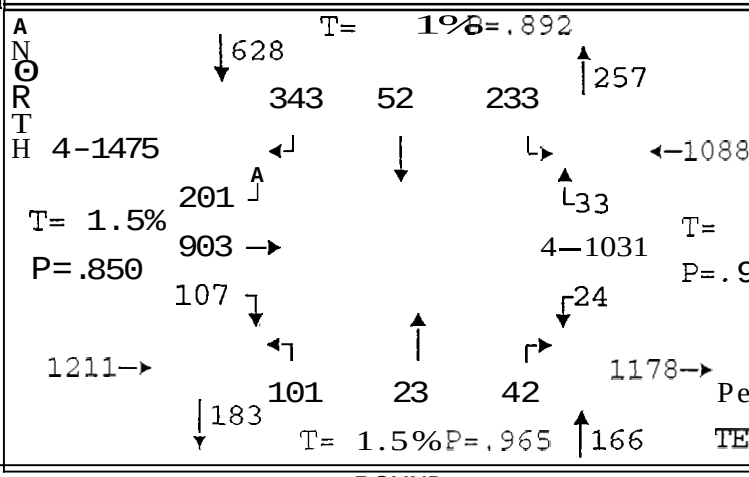
16:30-17:30

Traffic Smithy
Traffic Survey Service

16:00-16:05	9	58	4	6	14	22	19	2	26	23	73	13	269
16:05-16:10	15	54	0	9	5	10	24	4	41	16	68	8	254
16:10-16:15	13	40	3	9	4	8	24	4	17	21	100	9	252
16:15-16:20	15	49	0	6	3	14	16	3	19	3	73	7	214
16:20-16:25	13	44	1	5	5	8	32	3	14	15	103	10	253
16:25-16:30	12	54	1	1	0	**10**	21	1	21	19	85	8	233
16:30-16:35	16	72	1	10	6	19	32	5	28	22	87	7	305
16:35-16:40	17	50	3	12	16	20	34	3	37	17	93	21	323
16:40-16:45	9	63	4	6	**10**	31	29	5	36	23	86	13	315
16:45-16:50	18	72	3	6	7	25	37	5	17	20	99	5	314
16:50-16:55	15	47	3	15	7	30	33	6	28	21	70	12	287
16:55-17:00	12	65	2	7	9	14	22	3	31	**10**	137	11	323
17:00-17:05	**10**	60	**1**	16	14	24	34	8	29	19	96	5	316
17:05-17:10	15	68	2	32	13	18	26	12	33	17	92	5	333
17:10-17:15	**10**	**51**	2	16	7	20	41	11	29	19	113	6	325
17:15-17:20	15	40	5	14	9	7	33	3	28	33	**109**	7	303
17:20-17:25	16	57	2	14	5	15	28	1	30	23	93	4	288
17:25-17:30	**11**	51	5	**10**	6	12	23	0	23	17	106	4	268
17:30-17:35	**11**	62	1	**10**	4	16	25	5	21	20	104	6	285
17:35-17:40	9	59	2	5	7	15	35	0	28	27	93	**1**	281
17:40-17:45	21	63	0	6	4	**14**	27	**1**	16	**11**	107	6	276
17:45-17:50	**10**	66	0	3	**4**	**10**	27	2	27	18	97	5	269
17:50-17:55	19	59	3	6	2	5	22	5	18	30	90	**10**	269
17:55-18:00	**13**	74	2	2	2	5	20	3	18	20	98	6	263
Total Survey	324	1378	50	226	163	372	664	95	615	470	2272	189	6818
PHF	.91	.9	.69	.62	.76	.68	.91	.5	.86	.8	.91	.61	.949
% Trucks	0	1.8	2	2.2	2.5	2.7	.8	5.3	.3	1.1	.7	4.8	1.3
Stopped Buses	0	7	0	0	0	0	0	0	0	0	7	0	
Peds	1	11	0	0	0	0	0	11	0	0	0	0	
Hourly Totals													
16:00-17:00	164	668	25	92	86	211	323	44	315	216	1074	124	3342
16:15-17:15	162	695	23	132	97	233	357	65	322	211	1134	110	3541
16:30-17:30	164	696	33	158	109	235	372	62	349	241	1181	**100**	370C
16:45-17:45	163	695	28	151	92	210	364	55	313	237	1219	72	3595
17:00-18:00	160	710	25	134	77	161	341	51	300	254	1198	65	3476

INTERSECTION TURN MOVEMENT COUNT SUMMARY REPORT
HALL BOULEVARD AT HIGWAY 217 SOUTHBOUND RAMPS

12230



DATE OF COUNT: 11/14/97
DAY OF WEEK: Thu
TIME STARTED: 16:00
TIME ENDED: 18:00

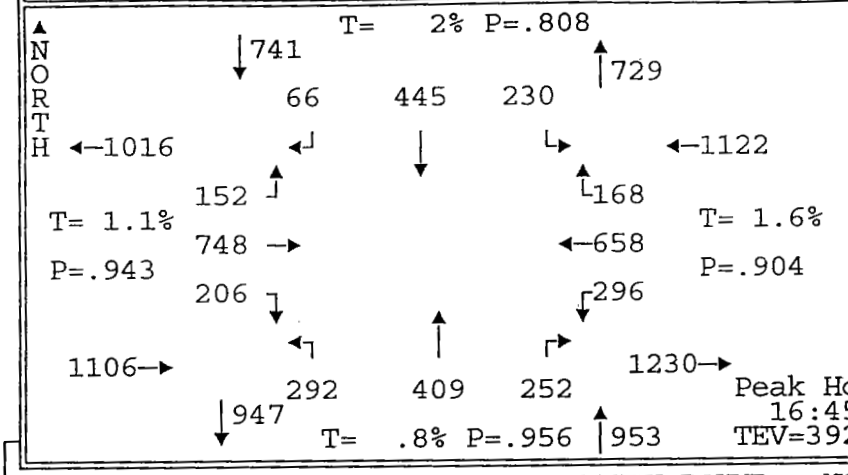
TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

Traffic Smithy
Traffic Survey Service

TIME PERIOD FROM - TO	EAST BOUND ↓	EAST BOUND —	EAST BOUND ↑	SOUTH BOUND ↙	SOUTH BOUND ↓	SOUTH BOUND ↘	NORTH BOUND ↖	NORTH BOUND ↑	NORTH BOUND ↗	WEST BOUND ↓	WEST BOUND —	WEST BOUND ↑	ALL
16:00-16:05	4	86	11	23	3	12	7	1	9	2	84	6	248
16:05-16:10	5	71	17	18	2	27	14	1	13	1	65	4	238
16:10-16:15	6	68	11	31	1	27	13	2	6	4	72	2	243
16:15-16:20	5	57	22	**16**	2	17	10	3	3	3	70	2	210
16:20-16:25	2	74	16	26	7	24	7	2	5	3	73	5	244
16:25-16:30	5	63	12	31	2	19	4	1	5	3	80	7	232
16:30-16:35	8	56	15	34	6	25	8	2	1	2	62	3	222
16:35-16:40	16	77	12	31	2	25	**8**	4	8	0	89	1	273
16:40-16:45	3	96	20	33	3	18	8	3	1	0	93	5	283
16:45-16:50	8	92	14	25	4	16	2	2	6	5	79	5	258
16:50-16:55	11	90	22	30	2	21	10	2	2	4	88	0	282
16:55-17:00	10	73	22	26	2	14	12	1	4	2	85	2	253
17:00-17:05	9	59	11	30	4	14	9	0	2	2	85	1	226
17:05-17:10	4	69	21	23	5	26	9	3	3	5	77	2	247
17:10-17:15	14	67	14	31	4	20	9	5	2	1	73	3	243
17:15-17:20	8	60	8	33	9	25	5	0	5	1	**101**	5	260
17:20-17:25	6	55	23	26	7	19	11	2	2	2	78	1	232
17:25-17:30	13	82	21	26	6	13	12	1	2	0	77	5	258
17:30-17:35	5	83	13	29	4	22	6	0	5	2	106	3	278
17:35-17:40	12	81	23	17	8	10	9	2	1	3	90	1	257
17:40-17:45	3	71	24	23	4	14	5	0	2	2	106	3	257
17:45-17:50	8	77	14	16	9	7	**13**	1	5	2	97	3	252
17:50-17:55	7	76	11	27	4	23	4	1	4	2	90	4	253
17:55-18:00	9	81	16	29	6	11	**7**	1	2	3	76	5	246
Total Survey	181	1764	393	634	106	449	202	40	98	54	1996	78	5995
PHF	.89	.81	.87	.95	.59	.82	.81	.64	.7	.55	.99	.75	.939
% Trucks	.6	1.5	1.5	1.6	.9	.2	2	2.5	0	0	.8	0	1.1
Stopped Buses	0	2	0	0	0	*0*	*0*	*0*	*0*	0	0	0	
Peds	0	14	0	0	4	0	0	0	0	0	2	*0*	
Hourly Totals													
16:00-17:00	83	903	194	324	36	245	103	24	63	29	940	42	2986
16:15-17:15	95	873	201	336	43	239	96	28	42	30	954	36	2973
16:30-17:30	110	876	203	348	54	236	103	25	38	24	987	33	3037
16:45-17:45	103	882	216	319	59	214	99	18	36	29	1045	31	3051
17:00-18:00	98	861	199	310	70	204	99	16	35	25	1056	36	3009

INTERSECTION TURN MOVEMENT COUNT SUMMARY REPORT
HALL BOULEVARD AT SCHOLLS FERRY ROAD (COMBINED)

12257



DATE OF COUNT: 11/20/96
DAY OF WEEK: Wed
TIME STARTED: 16:00
TIME ENDED: 18:00

TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

Peak Hour
16:45-17:45
TEV=3922

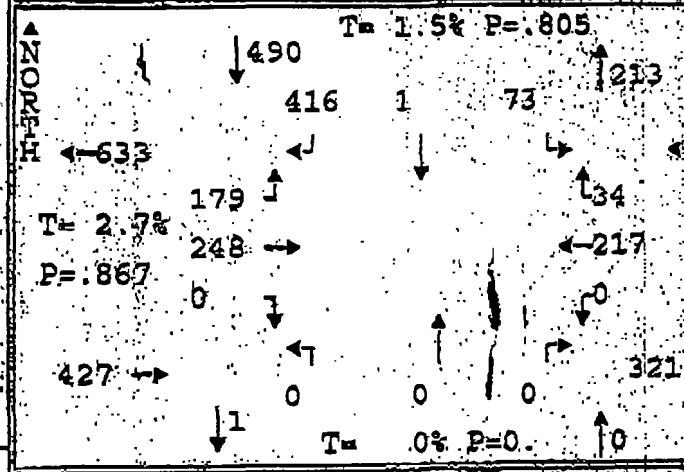
Traffic Smithy
Traffic Survey Service

TIME PERIOD FROM - TO	EAST BOUND ↓	EAST BOUND →	EAST BOUND ↑	SOUTH BOUND ↵	SOUTH BOUND ↓	SOUTH BOUND ↳	NORTH BOUND ↰	NORTH BOUND ↑	NORTH BOUND ↱	WEST BOUND ↓	WEST BOUND ←	WEST BOUND ↑	ALL
16:00-16:05	23	67	11	8	37	26	22	30	18	18	32	19	311
16:05-16:10	14	54	15	6	20	12	24	22	22	26	50	17	282
16:10-16:15	24	54	9	8	38	25	27	36	13	24	44	8	310
16:15-16:20	25	69	9	7	35	21	27	43	12	19	46	13	326
16:20-16:25	22	56	10	12	17	16	22	27	17	20	34	15	268
16:25-16:30	14	57	11	14	36	15	21	45	22	15	52	19	321
16:30-16:35	25	67	2	3	44	15	28	31	24	23	43	15	320
16:35-16:40	20	60	11	7	34	26	22	33	19	19	44	13	308
16:40-16:45	13	57	15	5	29	22	32	42	23	18	42	27	325
16:45-16:50	19	66	7	7	39	15	20	38	17	33	55	17	333
16:50-16:55	17	68	15	5	37	25	18	38	17	20	46	9	315
16:55-17:00	10	46	13	8	24	23	29	41	26	21	56	10	307
17:00-17:05	24	62	7	4	32	13	29	25	16	26	50	16	304
17:05-17:10	13	60	19	2	30	20	19	34	22	24	47	9	299
17:10-17:15	17	63	11	4	46	19	25	34	27	23	89	14	372
17:15-17:20	19	63	15	5	57	17	22	28	20	30	49	25	350
17:20-17:25	18	46	15	12	44	25	20	41	23	21	44	8	317
17:25-17:30	22	64	15	7	41	16	28	25	22	25	56	18	339
17:30-17:35	17	84	12	2	28	18	23	31	20	29	48	8	320
17:35-17:40	12	52	14	1	28	20	27	38	16	18	43	18	287
17:40-17:45	18	74	9	9	39	19	32	36	26	26	75	16	379
17:45-17:50	13	64	13	10	32	15	25	25	22	31	52	11	313
17:50-17:55	18	67	13	16	43	18	26	47	26	16	34	5	329
17:55-18:00	18	47	5	6	15	20	21	37	20	22	45	11	267

Total Survey	435	1467	276	168	825	461	589	827	490	547	1176	341	7602
PHF	.87	.89	.84	.69	.76	.91	.89	.87	.9	.96	.88	.82	.943
% Trucks	1.6	1.1	.7	1.8	2.8	.7	.5	1.1	.6	2.4	1.3	1.8	1.4
Stopped Buses	0	2	0	0	1	0	0	4	0	0	0	0	
Peds	0	2	0	0	12	0	0	5	0	0	3	0	

Hourly Totals													
16:00-17:00	226	721	128	90	390	241	292	426	230	256	544	182	3726
16:15-17:15	219	731	130	78	403	230	292	431	242	261	604	177	3798
16:30-17:30	217	722	145	69	457	236	292	410	256	283	621	181	3889
16:45-17:45	206	748	152	66	445	230	292	409	252	296	658	168	3922
17:00-18:00	209	746	148	70	435	220	297	401	260	291	632	**159**	3076

INTERSECTION TURN MOVEMENT COUNT SUMMARY REPORT
SCHOLLS FERRY ROAD AT OLD SCHOLLS FERRY ROAD (WEST)



DATE OF COUNT: 02/01/96
DAY OF WEEK: Thu
TIME STARTED: 16:30
TIME ENDED: 18:30

TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

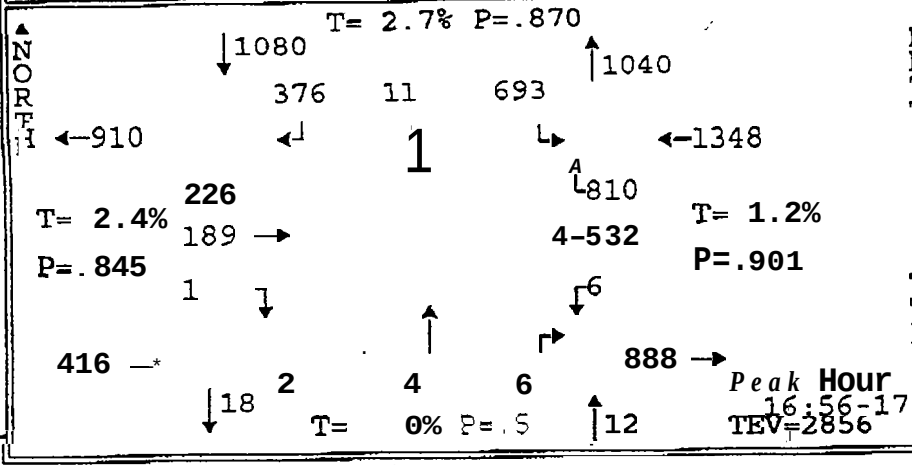
Peak Hour
17:10-18:10
TEV=1168

Traffic Smithy
Traffic Survey Service

TIME PERIOD FROM - TO	EAST BOUND ↓	EAST BOUND →	EAST BOUND ↑	SOUTH BOUND ↵	SOUTH BOUND ↓	NORTH BOUND ↳	NORTH BOUND ↰	NORTH BOUND ↑	WEST BOUND ↱	WEST BOUND ↓	WEST BOUND ←	WEST BOUND ↳	ALL
16:30-16:35	0	11	21	22	0	2	0	0	0	0	16	3	75
16:35-16:40	0	16	10	27	0	1	0	0	0	0	23	7	84
16:40-16:45	0	11	19	43	0	2	0	0	0	0	21	2	98
16:45-16:50	0	18	10	38	0	2	0	0	0	0	19	6	93
16:50-16:55	0	12	16	37	0	5	0	0	0	0	11	2	83
16:55-17:00	0	15	9	23	0	4	0	0	0	0	6	2	59
17:00-17:05	0	19	12	31	0	3	0	0	0	0	8	6	79
17:05-17:10	0	18	11	22	0	2	0	0	0	0	8	5	66
17:10-17:15	0	23	11	48	0	3	0	0	0	0	11	1	97
17:15-17:20	0	17	13	41	0	3	0	0	0	0	8	3	85
17:20-17:25	0	14	12	34	0	2	0	0	0	0	7	2	71
17:25-17:30	0	20	15	54	0	13	0	0	0	0	12	2	116
17:30-17:35	0	22	26	35	0	6	0	0	0	0	16	3	108
17:35-17:40	0	20	15	36	0	8	0	0	0	0	20	4	103
17:40-17:45	0	14	19	30	0	6	0	0	0	0	9	1	79
17:45-17:50	0	22	10	38	0	10	0	0	0	0	14	3	97
17:50-17:55	0	24	7	23	0	9	0	0	0	0	13	6	82
17:55-18:00	0	23	24	26	0	3	0	0	0	0	16	9	101
18:00-18:05	0	16	16	26	0	6	0	0	0	0	9	2	75
18:05-18:10	0	33	11	25	0	4	0	0	0	0	12	2	87
18:10-18:15	0	18	8	30	0	9	0	0	0	0	8	3	76
18:15-18:20	0	19	16	28	0	6	0	0	0	0	17	2	88
18:20-18:25	0	19	11	15	0	4	0	0	0	0	11	6	66
18:25-18:30	0	12	9	21	0	3	0	0	0	0	7	4	56
Total Survey	0	436	331	753	1	116	0	0	0	0	405	62	2104
PHF	0	.86	.75	.81	.25	.68	0	0	0	0	.94	.71	.92
% Trucks	0	2.5	3	1.3	0	2.6	0	0	0	0	2	0	2
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	0
Peds	0	0	0	0	0	0	0	0	0	0	0	0	0
Hourly Totals													
16:30-17:30	0	194	159	420	0	42	0	0	0	0	223	24	1062
16:45-17:45	0	212	169	429	0	57	0	0	0	0	222	29	1135
17:00-18:00	0	236	175	418	1	68	0	0	0	0	219	45	1163
17:15-18:15	0	243	176	398	1	79	0	0	0	0	204	44	1145
17:30-18:30	0	242	172	333	1	74	0	0	0	0	182	38	1042

INTERSECTION TURN MOVEMENT COUNT SUMMARY REPORT
SCHOLLS FERRY ROAD AT MURRAY BOULEVARD

11363



DATE OF COUNT: 07/10/96
DAY OF WEEK: Wed
TIME STARTED: 16:01
TIME ENDED: 18:01

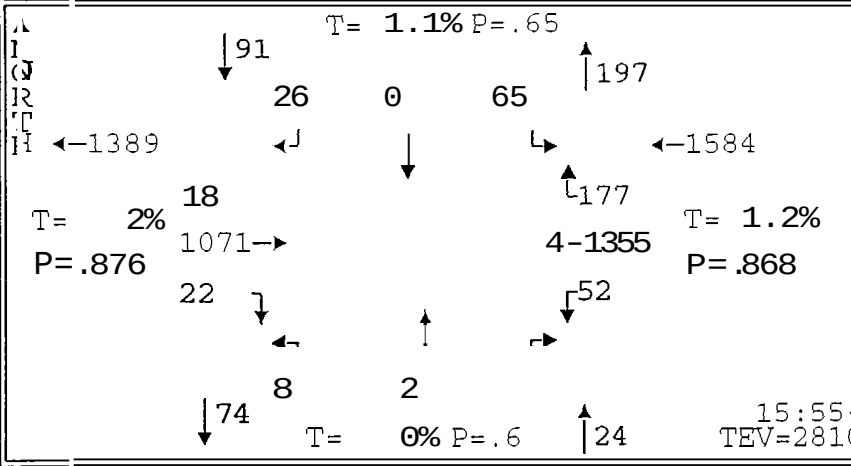
TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

Traffic Smithy
Traffic Survey Service

TIME PERIOD FROM - TO	EAST BOUND ↴	EAST BOUND →	EAST BOUND ↱	SOUTH BOUND ↲	SOUTH BOUND ↓	SOUTH BOUND ↳	NORTH BOUND ↰	NORTH BOUND ↑	NORTH BOUND ↱	WEST BOUND ↴	WEST BOUND ←	WEST BOUND ↳	ALL
16:01-16:06	0	25	21	29	0	39	0	0	0	0	25	50	189
16:06-16:11	0	17	11	18	0	32	0	0	1	1	41	56	177
16:11-15:16	0	17	11	34	0	59	0	0	0	0	54	42	217
16:16-16:21	1	28	17	13	0	40	0	1	0	0	27	49	176
16:21-16:26	0	17	23	28	0	52	0	0	0	0	42	54	216
16:26-16:31	0	21	19	18	0	64	1	0	2	0	19	52	196
16:31-16:36	0	17	18	31	0	72	0	0	0	0	29	55	222
16:36-16:41	0	22	21	20	1	47	1	1	0	0	28	47	188
16:41-16:46	0	12	8	31	0	53	0	0	1	1	34	83	223
16:46-16:51	0	22	20	31	0	61	0	0	1	0	43	73	251
16:51-16:56	0	20	16	29	1	58	0	0	1	0	25	63	213
16:56-17:01	0	8	19	36	0	73	0	0	0	1	41	65	243
17:01-17:06	0	18	24	22	1	45	0	0	0	0	36	54	200
17:06-17:11	0	10	22	41	1	57	0	1	2	1	42	60	237
17:11-17:16	1	14	17	22	0	51	0	1	1	0	50	66	223
17:16-17:21	0	18	20	28	0	54	0	0	0	0	52	72	244
17:21-17:26	0	10	12	21	1	50	0	0	0	0	50	84	228
17:26-17:31	0	17	18	35	0	80	0	0	0	0	44	52	216
17:31-17:36	0	19	20	39	1	82	0	1	0	0	37	75	274
17:36-17:41	0	21	28	28	0	43	0	0	0	0	46	65	231
17:41-17:46	0	18	9	35	3	79	0	1	0	0	37	72	254
17:46-17:51	0	22	15	25	4	50	1	0	2	4	53	78	254
17:51-17:56	0	14	22	44	0	59	1	0	1	0	44	67	252
17:56-18:01	0	13	13	24	1	51	0	2	0	0	36	55	195
Total Survey	2	420	424	682	14	1321	4	8	12	8	935	1489	5319
PHF	.25	.77	.86	.9	.39	.85	.25	.5	.5	.38	.88	.91	.939
% Trucks	0	3.1	1.7	2.8	0	2.7	0	0	0	0	1.1	1.3	
Stopped Buses	0	0	0	0	0	0	0			0	0	0	
Peds	0	12	0	0	2	0	0	4	0	0	2	0	
Hourly Totals 16:01-17:01	1	226	204	318	2	650	2	2	6	3	408	689	2511
16:16-17:16	2	209	224	322	4	673	2	4	8	3	416	721	2583
16:31-17:31	1	188	215	347	5	671	1	3	6	3	474	774	2688
16:46-17:46	1	195	225	367	8	703	0	4	5	2	503	801	2814
17:01-18:01	1	194	220	364	12	671	2	6	6	5	527	800	2803

INTERSECTION TURN MOVEMENT COUNT SUMMARY REPORT
OLD SCHOLLS FERRY ROAD AT DAVIES ROAD

12318



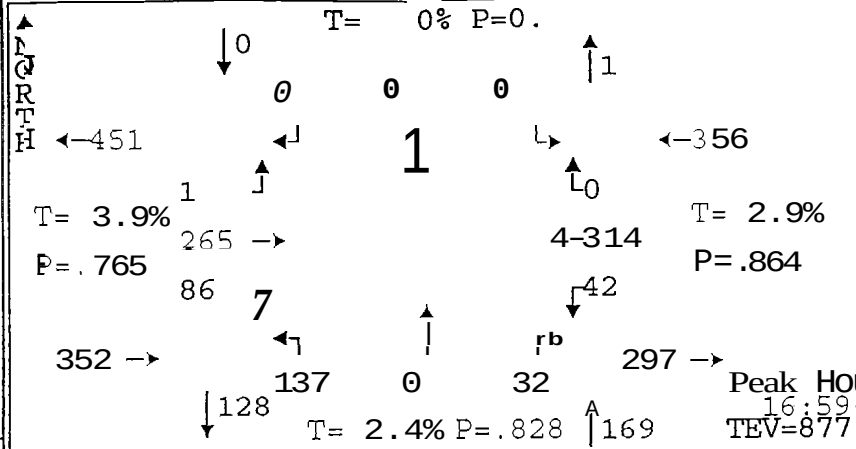
DATE OF COUNT: 12/04/96
DAY OF WEEK: Wed
TIME STARTED: 15:00
TIME ENDED: 17:00

TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

15:55-16:55

Traffic Smithy
Traffic Survey Service

5:00-15:05	0	78	1	0	0	8	0	0	0	2	94	5	188
5:05-15:10	2	88	1	2	0	5	1	0	1	0	112	14	226
5:10-15:15	1	80	1	1	0	3	0	0	1	0	90	4	181
5:15-15:20	1	67	1	0	0	3	0	0	1	1	87	6	167
5:20-15:25	0	88	2	2	0	6	0	0	1	3	86	13	201
5:25-15:30	4	58	1	0	0	8	1	0	1	2	85	8	168
5:30-15:35	1	89	4	0	0	3	1	0	0	4	83	10	195
5:35-15:40	1	61	3	0	0	3	0	0	1	2	70	15	156
5:40-15:45	2	81	0	4	0	2	1	0	0	0	95	10	195
15:45-15:50	1	82	3	2	0	4	0	0	1	4	83	7	187
15:50-15:55	0	57	0	1	1	7	0	0	1	3	94	15	179
15:55-16:00	2	100	0	2	0	4	0	0	0	4	109	16	237
16:00-16:05	2	71	1	4	0	7	0	0	1	1	85	9	181
16:05-16:10	2	109	0	0	0	3	0	0	2	0	117	19	252
16:10-16:15	0	104	4	2	0	5	1	0	0	9	121	13	259
16:15-16:20	0	96	2	1	0	1	0	1	2	1	110	23	237
16:20-16:25	5	90	2	2	0	3	2	0	2	7	129	13	255
16:25-16:30	2	75	3	2	0	6	1	0	2	1	72	7	171
16:30-16:35	1	85	1	3	0	3	0	0	1	5	139	20	258
16:35-16:40	3	81	0	4	0	11	1	0	1	6	120	14	241
16:40-16:45	1	91	2	2	0	9	1	1	2	7	133	12	261
16:45-16:50	2	89	1	4	0	5	1	0	1	8	124	17	252
15:50-16:55	2	80	2	0	0	8	1	0	0	3	96	14	206
16:55-17:00	1	56	0	5	0	13	0	0	3	6	119	19	222
otal Survey	36	1956	35	43	1	130	12	2	25	79	2453	303	507E
HF	.69	.87	.56	.65	0	.65	.67	.5	.58	.62	.86	.8	.924
Trucks	0	2.1	0	0	0	1.5	0	0	0	0	1.2	1.7	1.5
topped Buses	0	3	0	0	0	0	0	0	0	0	1	0	
eds	0	0	0	0	0	0	0	0	0	0	0	0	
ourly Totals													
5:00-16:00	15	929	17	14	1	56	4	0	8	25	1088	123	228(
5:15-16:15	16	967	19	17	1	55	4	0	9	33	1115	141	237:
5:30-16:30	18	1015	22	20	1	48	6	1	12	36	1168	157	250
5:45-16:45	19	1041	18	25	1	63	6	2	15	48	1312	168	271
6:00-17:00	21	1027	18	29	0	74	8	2	17	54	1365	180	279



DATE OF COUNT: 08/06/96
DAY OF WEEK: Tue
TIME STARTED: 15:59
TIME ENDED: 17:59

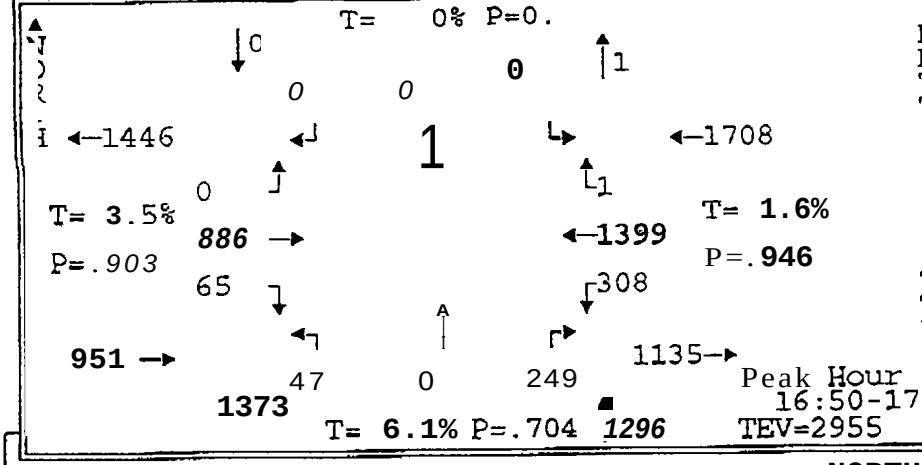
TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

Peak Hour
16:59-17:59

Traffic Smithy
Traffic Survey Service

TIME PERIOD FROM - TO	EAST BOUND 7	→	↱	SOUTH BOUND ↲	↓	↳	NORTH BOUND ↰	↑	↱	WEST BOUND ↓	←	↰	ALL
15:59-16:04	9	22	0	0	0	0	11	0	1	4	20	0	67
16:04-16:09	8	17	0	0	0	0	8	0	4	0	15	0	52
16:09-16:14	3	20	0	0	0	0	12	0	2	2	28	0	67
16:14-16:19	6	25	0	0	0	0	12	0	3	2	22	0	70
16:19-16:24	7	15	0	0	0	0	6	0	0	1	28	0	57
16:24-16:29	4	13	0	0	0	0	3	0	2	2	14	0	38
16:29-16:34	3	25	0	0	0	0	8	0	2	2	23	0	63
16:34-16:39	3	27	0	0	0	0	9	0	1	2	14	0	56
16:39-16:44	5	18	0	0	0	0	2	0	7	2	34	0	68
16:44-16:49	3	17	0	0	0	0	6	0	4	3	17	0	50
16:49-16:54	5	24	0	0	0	0	9	0	3	2	35	0	78
16:54-16:59	6	11	0	0	0	0	13	0	0	7	19	0	56
16:59-17:04	4	20	1	0	0	0	8	0	1	1	24	0	59
17:04-17:09	6	18	0	0	0	0	10	0	3	2	23	0	62
17:09-17:14	6	20	0	0	0	0	5	0	0	2	38	0	71
17:14-17:19	7	15	0	0	0	0	19	0	7	2	21	0	71
17:19-17:24	5	24	0	0	0	0	13	0	1	5	32	0	80
17:24-17:29	7	21	0	0	0	0	9	0	1	3	18	0	59
17:29-17:34	12	25	0	0	0	0	17	0	2	8	29	0	93
17:34-17:39	9	23	0	0	0	0	11	0	2	4	22	0	71
17:39-17:44	13	33	0	0	0	0	8	0	1	5	35	0	95
17:44-17:49	6	25	0	0	0	0	12	0	5	4	17	0	69
17:49-17:54	5	19	0	0	0	0	13	0	6	2	35	0	80
17:54-17:59	6	22	0	0	0	0	12	0	3	4	20	0	67
Total Survey	148	499	1	0	0	0	236	0	61	71	583	0	1599
PHF	.63	.82	.25	0	0	0	.84	0	.57	.62	.86	0	.846
% Trucks	1.4	4.6	0	0	0	0	3	0	0	2.8	2.9	0	3.2
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	
Peds	0	2	0	0	0	0	0	0	0	0	0	0	
Hourly Totals													
15:59-16:59	62	234	0	0	0	0	99	0	29	29	269	0	722
16:14-17:14	58	233			0	0	91	0	26	28	291	0	726
16:29-17:29	60	240	1	0	0	0	111	0	30	33	298	0	773
16:44-17:44	83	251	1	0	0	0	128	0	25	44	313	0	845
16:59-17:59	86	265	1	0	0	0	137	0	32	42	314	0	877

INTERSECTION TURN MOVEMENT COUNT SUMMARY REPORT
SCHOLLS FERRY ROAD AT OLD SCHOLLS FERRY ROAD (EAST) 1361



DATE OF COUNT: 07/10/96
DAY OF WEEK: Wed
TIME STARTED: 16:00
TIME ENDED: 18:00

TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

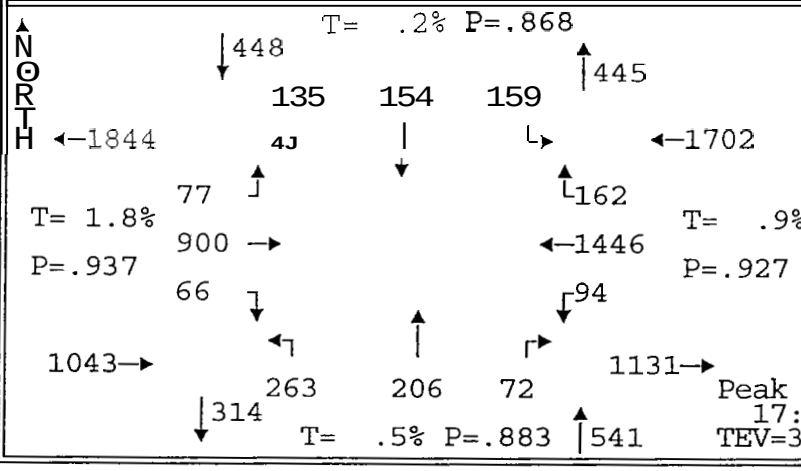
Peak Hour 16:50-17:50
TEV=2955

Traffic Smithy
Traffic Survey Service

TIME PERIOD FROM - TO	EAST BOUND ↓	EAST BOUND →	SOUTH BOUND ↑	SOUTH BOUND ←	SOUTH BOUND ↓	SOUTH BOUND →	NORTH BOUND ←	NORTH BOUND ↑	NORTH BOUND →	WEST BOUND ↓	WEST BOUND —	WEST BOUND ↑	ALL
16:00-16:05	2	74	0	0	0	0	1	0	18	21	92	0	208
16:05-16:10	5	59	0	0	0	0	2	0	16	24	91	0	197
16:10-16:15	2	83	0	0	0	0	3	0	9	26	94	1	218
16:15-16:20	2	70	0	0	0	0	0	0	18	20	79	0	189
16:20-16:25	3	68	0	0	0	0	5	0	19	18	92	0	205
16:25-16:30	1	99	0	0	0	0	2	0	14	32	79	0	227
16:30-16:35	5	87	0	0	0	0	3	0	7	19	84	0	205
16:35-16:40	0	63	0	0	0	0	9	0	24	29	92	0	217
16:40-16:45	3	81	0	0	0	0	4	0	10	33	108	0	239
16:45-16:50	1	79	0	0	0	0	4	0	22	21	124	0	251
16:50-16:55	2	81	0	0	0	0	2	0	22	33	109	0	249
16:55-17:00	11	79	0	0	0	0	3	0	18	19	96	0	226
17:00-17:05	5	55	0	0	0	0	7	0	15	36	123	0	241
17:05-17:10	7	77	0	0	0	0	2	0	13	23	105	0	227
17:10-17:15	6	63	0	0	0	0	4	0	13	21	127	0	234
17:15-17:20	7	57	0	0	0	0	7	0	20	24	109	0	224
17:20-17:25	8	64	0	0	0	0	1	0	16	23	132	1	245
17:25-17:30	4	70	0	0	0	0	3	0	21	34	111	0	243
17:30-17:35	7	85	0	0	0	0	4	0	25	27	104	0	252
17:35-17:40	7	80	0	0	0	0	6	0	43	19	121	0	276
17:40-17:45	1	80	0	0	0	0	7	0	20	31	123	0	262
17:45-17:50	0	95	0	0	0	0	1	0	23	18	139	0	276
17:50-17:55	6	64	0	0	0	0	1	0	29	38	106	0	244
17:55-18:00	2	72	0	0	0	0	6	0	19	31	99	0	229
Total Survey	97	1785	0	0	0	0	87	0	454	620	2539	2	5584
PHF	.71	.87	0	0	0	0	.69	0	.7	.88	.91	.25	.907
Trucks	6.2	3.3	0	0	0	0	8	0	5.7	2.9	1.3	0	2.7
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	
Peds	0	3	0	0	0	0	0	0	0	0	1	0	
Hourly Totals													
16:00-17:00	37	923	0	0	0	0	38	0	197	295	1140	1	2631
16:15-17:15	46	902	0	0	0	0	45	0	195	304	1218	0	2710
16:30-17:30	59	856	0	0	0	0	49	0	201	315	1320	1	2801
16:45-17:45	66	870	0	0	0	0	50	0	248	311	1384	1	2930
17:00-18:00	60	862	0	0	0	0	49	0	257	325	1399	1	2953

INTERSECTION TURN MOVEMENT COUNT SUMMARY REPORT
SCHOLLS FERRY ROAD AT 125TH AVENUE

12319



DATE OF COUNT: 12/04/96
DAY OF WEEK: Wed
TIME STARTED: 16:00
TIME ENDED: 18:00

TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

Peak Hour
17:00-18:00
TEV=3734

Traffic Smithy
Traffic Survey Service

TIME PERIOD FROM - TO	EAST BOUND ↓	EAST BOUND →	EAST BOUND ↑	SOUTH BOUND ↵	SOUTH BOUND ↓	SOUTH BOUND ↳	NORTH BOUND ↰	NORTH BOUND ↑	NORTH BOUND ↱	WEST BOUND ↓	WEST BOUND ←	WEST BOUND ↑	ALL
16:00-16:05	12	64	6	12	15	21	13	17	7	8	72	12	259
16:05-16:10	4	88	7	3	2	12	9	7	6	7	123	12	280
16:10-16:15	4	61	6	14	13	17	14	18	4	13	76	16	256
16:15-16:20	3	69	9	7	8	15	11	10	7	7	94	17	257
16:20-16:25	3	56	7	15	6	12	13	8	5	11	92	20	248
16:25-16:30	7	89	2	11	14	10	14	7	5	7	90	7	263
16:30-16:35	1	77	8	7	4	10	10	13	9	9	103	15	266
16:35-16:40	4	56	7	5	11	12	21	13	7	13	100	19	268
16:40-16:45	8	81	7	8	6	7	11	9	4	7	90	16	254
16:45-16:50	4	75	6	9	13	18	24	14	8	12	90	19	292
16:50-16:55	6	78	8	11	11	18	21	18	7	6	95	12	291
16:55-17:00	7	83	3	12	10	14	10	7	6	8	119	15	294
17:00-17:05	5	61	7	12	14	14	22	16	10	4	103	7	275
17:05-17:10	8	78	9	8	14	14	22	10	6	6	131	12	318
17:10-17:15	3	73	6	6	11	21	19	13	3	13	121	13	302
17:15-17:20	6	74	3	8	18	9	22	30	7	8	115	19	319
17:20-17:25	3	69	9	20	16	8	27	23	5	10	103	10	303
17:25-17:30	2	66	7	7	15	14	13	21	5	11	102	17	280
17:30-17:35	7	88	8	13	8	10	22	18	2	6	152	17	351
17:35-17:40	5	75	4	11	6	21	30	10	8	8	133	13	324
17:40-17:45	8	76	7	20	20	15	22	23	9	3	101	15	319
17:45-17:50	6	84	5	11	9	10	15	13	8	8	149	15	333
17:50-17:55	6	68	6	14	14	16	26	17	3	10	102	15	297
17:55-18:00	7	88	6	5	9	7	23	12	6	7	134	9	313
Total Survey	129	1777	153	249	267	325	434	347	147	202	2590	342	6962
PHF	.a3	.94	3:a	.75	.79	.81	.89	.7	.72	.76	.93	.86	.939
% Trucks	.d	1.7	3:3	0	.7	0	.5	0	2	0	1	0	1
Stopped Buses	0	3	0	0	0	0	0	0	0	0	2	0	
Peds	0	10	0	0	4	0	0	16	0	0	5	0	
Hourly Totals													
16:00-17:00	63	a77	76	114	113	166	171	141	75	108	1144	180	3228
16:15-17:15	59	876	79	111	122	165	198	138	77	103	1228	172	3328
16:30-17:30	57	871	a0	113	143	159	222	187	77	107	1272	174	3462
16:45-17:45	64	896	77	137	156	176	254	203	76	95	1365	169	3668
17:00-18:00	66	900	77	135	154	159	263	206	72	94	1446	162	3734

188 T= .6% P=.690 1392 TEV=4514 17:00-18:00

Traffic Smithy
Traffic Survey Service

16:00-16:05	7	115	13	31	4	36	6	0	8	10	113	20	363
16:05-16:10	6	77	15	46	6	57	12	7	9	10	94	8	347
16:10-16:15	5	120	10	15	4	47	5	2	14	5	133	12	372
16:15-16:20	4	83	17	26	9	41	14	5	4	8	103	20	334
16:20-16:25	5	83	7	25	4	51	7	6	8	11	101	13	321
16:25-16:30	5	102	7	27	4	21	4	1	9	7	126	19	332
16:30-16:35	4	88	6	47	5	39	5	7	24	11	105	10	351
16:35-16:40	3	97	18	40	3	44	8	9	18	4	144	13	401
16:40-16:45	3	104	12	46	3	52	11	3	13	7	104	14	372
16:45-16:50	11	87	9	40	8	68	7	4	16	12	99	16	377
16:50-16:55	7	100	9	34	5	37	9	3	12	8	127	6	357
16:55-17:00	1	98	7	38	5	48	7	5	10	6	99	11	335
17:00-17:05	7	88	12	50	4	45	17	4	32	6	111	6	382
17:05-17:10	5	93	13	51	7	50	19	5	23	7	109	10	392
17:10-17:15	6	106	8	36	1	53	10	6	26	9	102	11	374
17:15-17:20	5	94	7	45	3	54	9	3	25	5	106	6	362
17:20-17:25	1	108	6	42	1	45	5	0	17	4	149	7	385
17:25-17:30	9	84	5	42	3	52	11	3	23	4	**111**	9	356
17:30-17:35	5	83	15	47	6	56	11	3	16	7	108	9	366
17:35-17:40	5	124	9	36	1	47	6	2	13	5	148	5	401
17:40-17:45	6	103	7	45	2	56	9	2	17	8	**109**	3	367
17:45-17:50	9	87	14	37	8	65	17	3	12	9	106	7	374
17:50-17:55	5	115	13	42	3	50	8	2	13	6	131	5	393
17:55-18:00	7	115	7	33	1	29	8	1	**11**	8	139	3	362

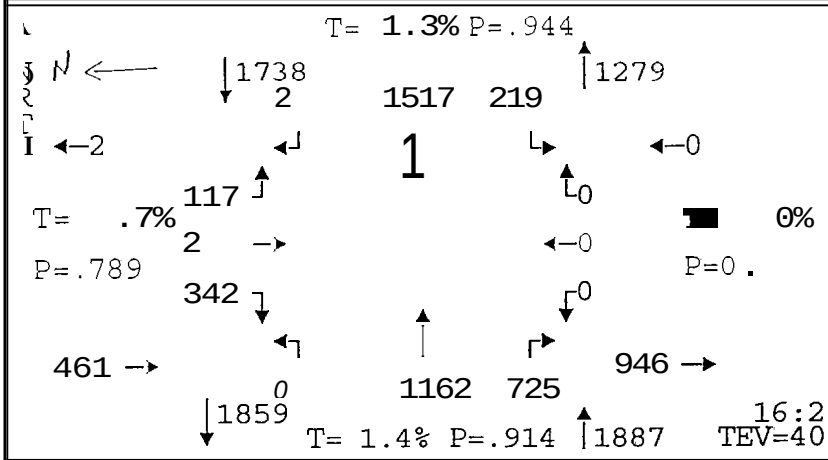
.

Total Survey	131	2354	246	921	100	1143	225	86	373	177	2777	243	8776
PHF	.83	.95	.85	.92	.77	.88	.71	.57	.7	.85	.95	.75	.983
% Trucks	0	2.5	.4	1.3	2	.5	.4	1.2	.5	1.7	1.5	2.1	1.5
Stopped Buses	0	0	0	0	0	0	0	0	0	0	8	0	
Peds	0	8	0	2	8	0	0	4	0	0	1	0	

Hourly Totals													
16:00-17:00	61	1154	130	415	60	541	95	52	145	99	1348	162	4262
16:15-17:15	61	1129	125	460	58	549	118	58	195	96	1330	149	4328
16:30-17:30	62	1147	112	511	48	587	118	52	239	83	1366	119	4444
16:45-17:45	68	1168	107	50.6	46	611	120	40	230	81	1378	99	4454
17:00-18:00	70	1200	116	506	40	602	130	34	228	78	1429	81	4514

INTERSECTION TURN MOVEMENT COUNT SUMMARY REPORT
SCHOLLS FERRY ROAD AT HIGHWAY 217 SOUTHBOUND RAMPS

12317



DATE OF COUNT: 12/04/96
DAY OF WEEK: Wed
TIME STARTED: 16:00
TIME ENDED: 18:00

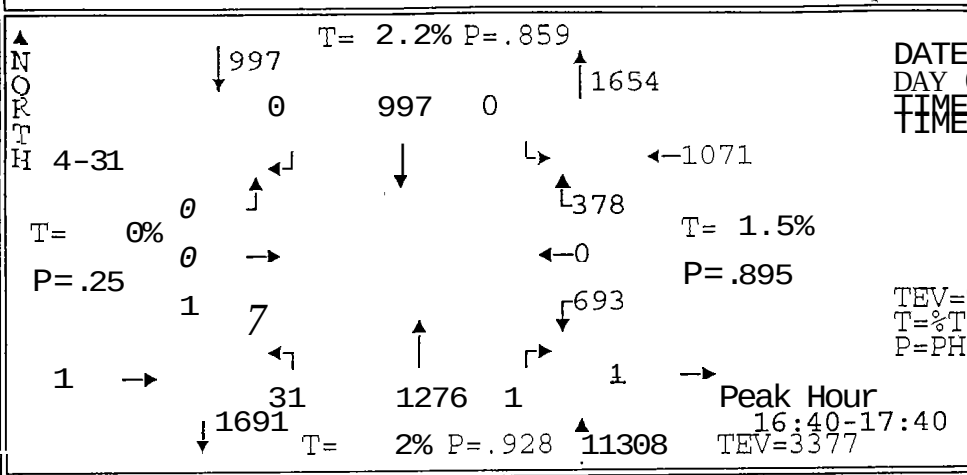
TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

Traffic Smithy
Traffic Survey Service

TIME PERIOD FROM - TO	EAST BOUND ↓	EAST BOUND →	EAST BOUND ↑	SOUTH BOUND ↵	SOUTH BOUND ↓	SOUTH BOUND ↳	NORTH BOUND ↰	NORTH BOUND ↑	NORTH BOUND ↱	WEST BOUND ↓	WEST BOUND ←	WEST BOUND ↑	ALL
16:00-16:05	31	0	11	0	105	16	0	105	49	0	0	0	317
16:05-16:10	30	0	7	0	a5	14	0	112	59	0	0	0	307
16:10-16:15	24	0	15	0	125	32	0	a7	52	0	0	0	335
16 15-16:20	37	0	10	0	100	13	0	a3	61	0	0	0	304
16 20-16:25	39	0	11	0	115	24	0	113	38	0	0	0	340
16 25-16:30	38	0	7	0	100	20	0	113	55	0	0	0	333
16 30-16:35	42	0	9	2	125	18	0	73	61	0	0	0	330
16 35-16:40	24	0	6	0	119	14	0	81	76	0	0	0	320
16 40-16:45	37	1	6	0	134	15	0	116	72	0	0	0	381
16 45-16:50	27	0	9	0	144	20	0	107	64	0	0	0	371
16 50-16:55	28	0	14	0	128	19	0	78	39	0	0	0	306
16 55-17:00	23	0	9	0	124	12	0	a0	73	0	0	0	321
17 00-17:05	38	0	10	0	146	15	0	133	48	0	0	0	390
17 05-17:10	24	0	13	0	129	25	0	81	65	0	0	0	337
17:10-17:15	12	1	15	0	121	23	0	96	63	0	0	0	331
17:15-17:20	10	0	8	0	132	14	0	91	71	0	0	0	326
17:20-17:25	17	4	6	0	101	16	0	100	54	0	0	0	298
17:25-17:30	28	0	6	0	150	10	0	73	52	0	0	0	319
17:30-17:35	32	0	14	0	136	17	0	97	48	0	0	0	344
17:35-17:40	24	0	5	0	108	18	0	a7	59	0	0	0	301
17:40-17:45	22	1	9	0	100	22	0	128	79	0	0	0	361
17:45-17:50	30	2	15	1	135	12	0	94	65	0	0	0	354
17:50-17:55	42	1	10	0	100	12	0	95	63	0	0	0	323
17:55-18:00	35	0	9	0	139	21	0	88	52	0	0	0	344
Total Survey	694	10	234	3	2901	422	0	2311	1418	0	0	0	7993
PHF	.72	.5	.77	.25	.93	.a7	0	.94	.a5	0	0	0	.952
% Trucks	1	0	0	0	1.3	1.4	0	1.6	1	0	0	0	1.3
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	
Feds	1	0	0	0	0	0	0	1	0	0	0	0	
Hourly Totals													
16:00-17:00	380	1	114	2	1404	217	0	1148	699	0	0	0	396
16:15-17:15	369	2	119	2	1485	218	0	1154	715	0	0	0	4064
16:30-17:30	310	6	111	2	1553	201	0	1109	738	0	0	0	403(
16:45-17:45	285	6	118	0	1519	211	0	1151	715	0	0	0	400E
17:00-18:00	314	9	120	1	1497	205	0	1163	719	0	0	0	402E

INTERSECTION TURN MOVEMENT COUNT SUMMARY REPORT
SCHOLLS FERRY ROAD AT HIGHWAY 217 NORTHBOUND OFFRAMP

12252



DATE OF COUNT: 11/14/96
DAY OF WEEK: Thu
TIME STARTED: 16:00
TIME ENDED: 18:00

TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

Peak Hour
16:40-17:40

Traffic Smithy
Traffic Survey Service

TIME PERIOD FROM - TO	EAST BOUND ↰	EAST BOUND →	EAST BOUND ↱	SOUTH BOUND ↰	SOUTH BOUND ↓	SOUTH BOUND ↳	NORTH BOUND ↰	NORTH BOUND ↑	NORTH BOUND ↱	WEST BOUND ↓	WEST BOUND ←	WEST BOUND ↳	ALL
16:00-16:05	0	0	0	0	75	0	0	85	0	51	0	27	238
16:05-16:10	0	0	0	0	70	0	0	81	0	46	0	35	232
16:10-16:15	0	0	0	0	82	0	0	102	0	44	0	20	248
16:15-16:20	0	0	0	0	71	0	0	87	0	47	0	32	237
16:20-16:25	0	0	0	0	74	0	0	81	0	56	0	33	244
16:25-16:30	0	0	0	0	77	0	0	74	0	54	0	29	234
16:30-16:35	0	0	0	0	82	0	0	100	0	45	0	41	268
16:35-16:40	0	0	0	0	70	0	0	87	0	56	0	38	251
16:40-16:45	0	0	0	0	75	0	0	115	0	48	0	30	268
16:45-16:50	0	0	0	0	104	0	28	89	0	67	0	30	318
16:50-16:55	0	0	0	0	89	0	1	119	0	60	0	32	301
16:55-17:00	0	0	0	0	97	0	1	114	0	51	0	36	299
17:00-17:05	0	0	0	0	84	0	0	82	0	54	0	32	252
17:05-17:10	0	0	0	0	84	0	1	113	1	70	0	31	300
17:10-17:15	0	0	0	0	88	0	0	118	0	72	0	29	307
17:15-17:20	1	0	0	0	83	0	0	103	0	65	0	32	284
17:20-17:25	0	0	0	0	80	0	0	125	0	56	0	31	292
17:25-17:30	0	0	0	0	75	0	0	84	0	41	0	24	224
17:30-17:35	0	0	0	0	73	0	0	108	0	52	0	39	272
17:35-17:40	0	0	0	0	65	0	0	106	0	57	0	32	260
17:40-17:45	0	0	0	0	76	0	0	**105**	0	46	0	29	256
17:45-17:50	0	0	0	0	68	0	0	**104**	0	55	0	43	270
17:50-17:55	0	0	0	0	66	0	0	109	0	49	0	45	269
17:55-18:00	0	0	0	0	61	0	0	94	0	40	0	45	240
Total Survey	1	0	0	0	1869	0	31	2385	1	1282	0	795	6364
PHF	.25	0	0	0	.86	0	.26	.92	.25	.84	0	.95	.91
Trucks	0	0	0	0	2.2	0	0	2	0	2	0	.6	1.9
topped Buses	0	0	0	0	0	0	0	0	0	0	0	0	
eds	0	0	0	0	0	0	0	0	0	0	0	0	
Hourly Totals													
16:00-17:00	0	0	0	0	966	0	30	1134	0	625	0	383	3138
16:15-17:15	0	0	0	0	995	0	31	1179	1	680	0	393	3279
16:30-17:30	1	0	0	0	1011	0	31	1249	1	685	0	386	3364
16:45-17:45	1	0	0	0	998	0	31	1266	1	691	0	377	3365
17:00-18:00	1	0	0	0	903	0	1	1251	1	657	0	412	3226

377 744 0

1051 T= 1.5% P=.921 1121 16:35-17:35 TEV=3150

Traffic Smithy
Traffic Survey Service

6:00-16:05	0	0	0	32	61	0	27	51	0	25	31	23	250
6:05-16:10	0	0	0	25	49	0	37	50	0	24	36	18	239
6 10-16:15	0	0	0	33	59	0	42	68	0	30	21	30	283
6 15-16:20	0	0	0	28	62	0	22	62	0	34	20	28	256
6 20-16:25	0	0	0	24	68	0	21	63	0	21	29	21	247
6 25-16:30	0	0	0	16	49	0	23	56	0	30	31	22	227
6 30-16:35	0	0	0	27	47	0	32	74	0	29	21	23	253
6 35-16:40	0	0	0	29	70	0	37	68	0	23	24	24	275
6 40-16:45	0	0	0	30	39	0	43	63	0	28	31	29	263
6 45-16:50	0	0	0	20	75	0	34	59	0	29	32	25	274
6 50-16:55	0	0	0	29	74	0	30	52	0	22	23	37	267
6 55-17:00	0	0	0	33	42	0	29	67	0	33	31	21	256
7 00-17:05	0	0	0	16	83	0	22	48	0	24	36	22	251
7:05-17:10	0	0	0	21	65	0	31	64	0	25	28	27	261
7:10-17:15	0	0	0	29	57	0	26	66	0	25	43	27	273
7:15-17:20	0	0	0	37	62	0	39	72	0	26	18	20	274
7:20-17:25	0	0	0	26	65	0	33	62	0	24	26	20	256
7:25-17:30	0	0	0	24	54	0	35	45	0	29	30	24	241
7:30-17:35	0	0	0	25	54	0	18	78	0	23	25	36	259
7:35-17:40	0	0	0	16	60	0	43	72	0	11	24	26	252
7:40-17:45	0	0	0	27	55	0	34	63	0	20	29	19	247
7:45-17:50	0	0	0	20	69	0	32	90	0	19	17	20	267
7:50-17:55	0	0	0	20	61	0	28	74	0	19	29	22	253
7:55-18:00	0	0	0	38	48	0	36	74	0	19	25	20	260
Total Survey	0	0	0	625	1428	0	754	1541	0	592	660	584	6184
PHF	0	0	0	.87	.9	0	.83	.92	0	.93	.81	.86	.969
Trucks	0	0	0	2.2	1.9	0	2.9	.8	0	1.7	.6	1.2	1.6
Stopped Buses	0	0	0	0	5	0	0	0	0	0	0	0	
Peds	0	4	0	0	8	0	0	3	0	0	6	1	
Hourly Totals													
6:00-17:00	0	0	0	326	695	0	377	733	0	328	330	301	3090
6:15-17:15	0	0	0	302	731	0	350	742	0	323	349	306	3102
6:30-17:30	0	0	0	321	733	0	391	740	0	317	343	299	3144
6:45-17:45	0	0	0	303	746	0	374	748	0	291	345	304	3111
7:00-18:00	0	0	0	299	733	0	377	308	0	264	330	283	3094

APPENDIX C
VOLUME SURVEYS

ROADWAY TRAFFIC *SURVEY*

Date: 12/4/96
Day of Week: WEDNESDAY

Traffic Smithy
Traffic Survey Service

Hour of Day	:00-:05	:05-:10	:10-:15	:15-:20	:20-:25	:25-:30	:30-:35	:35-:40	:40-:45	:45-:50	:50-:55	:55-:00	Hour Tot.
00-01	**16**	18	18	20	9	20	16	13	10	18	9	12	179
01-02	13	9	9	8	11	11	14	9	4	11	15	7	121
02-03	12	11	13	7	4	13	10	5	5	4	8	4	96
03-04	4	5	6	6	4	4	2	9	9	7	8	4	68
04-05	4	0	11	4	3	5	6	10	9	11	7	9	79
05-06	9	10	7	25	17	18	24	24	30	40	52	34	290
06-07	34	30	41	58	44	61	43	61	64	84	49	67	636
07-08	67	55	84	73	92	94	71	71	93	87	102	109	998
08-09	78	88	78	81	68	68	101	84	78	82	75	60	941
09-10	86	68	87	68	70	69	68	70	87	79	71	61	884
10-11	70	70	71	79	69	89	61	75	83	91	83	88	929
11-12	102	82	100	74	77	102	81	a4	96	88	90	89	1065
12-13	97	96	77	105	96	98	107	99	104	132	120	93	1224
13-14	95	106	85	103	91	91	96	74	97	96	89	110	1133
14-15	117	84	103	102	99	101	89	101	95	94	83	103	1171
15-16	88	104	103	101	109	111	99	113	106	122	104	105	1265
16-17	127	108	102	110	117	115	123	130	123	109	116	111	1391
17-18	109	124	117	107	102	117	99	102	113	125	101	136	1352
18-19	115	98	95	127	95	84	104	66	77	84	75	75	1095
19-20	91	87	85	92	63	77	64	78	69	82	61	71	920
20-21	51	72	68	47	58	68	53	61	61	44	56	71	710
21-22	62	59	57	60	45	49	52	48	58	55	42	55	642
22-23	60	36	41	43	39	44	40	38	32	23	27	30	453
23-24	29	31	32	33	35	18	19	16	14	26	20	16	289

Daily Total: 17931

AM Peak Hour (11:00-12:00) 1065 — 5.94 % of Daily Total

PM Peak Hour (16:15-17:15) 1404 — 7.83 % of Daily Total

4th Highest Hour (12:00-13:00)1224 — 6.83 % of Daily Total

8th Highest Hour (11:00-12:00)1065 — 5.94 % of Daily Total

Day of Week: THURSDAY

Traffic Smithy
Traffic Survey Service

	22	22	23	19	15	14	8	16	14	7	12	8	180
	13	12	13	6	8	11	9	7	4	10	8	10	111
	5	10	15	8	4	6	10	9	4	10	4	3	88
	2	5	5	5	5	1	6	4	8	2	2	7	52
	5	8	4	5	2	4	6	5	7	7	14	15	82
	10	9	12	17	13	17	21	28	40	35	51	49	302
	35	40	47	55	56	43	54	61	69	60	67	74	661
	60	64	83	72	88	96	79	76	102	108	92	121	1041
	83	88	82	62	86	88	74	74	73	64	67	82	923
	76	60	70	69	58	77	69	77	86	68	74	77	861
	76	73	71	79	78	83	96	82	71	81	82	77	949
	92	82	82	99	90	88	94	103	93	101	93	100	1117
	100	100	113	115	107	85	115	111	95	121	109	120	1291
	113	111	113	114	113	108	122	101	117	114	94	114	1334
	117	101	94	119	106	104	121	113	94	104	79	90	1242
	92	100	107	119	101	117	130	97	114	114'	113	120	1324
	138	114	118	133	128	100	128	115	116	129	121	98	1438
17-18	123	132	110	127	119	116	107	128	109	117	124	99	1411
18-19	107	103	90	95	93	109	101	112	111	113	82	112	1228
19-20	112	85	76	92	66	84	76	55	78	76	69	66	935
20-21	67	54	61	59	57	64	62	53	65	53	62	68	725
21-22	56	51	61	58	53	63	54	46	61	52	49	40	644
22-23	62	52	34	40	39	36	40	38	35	32	31	21	460
23-24	33	41	26	33	22	24	34	20	19	13	18	16	299

Daily Total: 18698

AM Peak Hour (11:00-12:00) 1117 — 5.97 % of Daily Total

PM Peak Hour (15:55-16:55) 1460 — 7.81 % of Daily Total

4th Highest Hour (15:00-16:00)1324 — 7.08 % of Daily Total

8th Highest Hour (11:00-12:00)1117 — 5.97 % of Daily Total

ROADWAY TRAFFIC SURVEY

Day of Week: WEDNESDAY

Traffic Smithy
Traffic Survey Service

00-01	11	11	13	10	6	10	5	9	11	11	6	17	120
01-02	7	7	12	2	10	11	9	4	9	8	17	10	106
02-03	3	11	8	6	7	11	5	3	9	9	5	10	87
03-04	6	6	11	1	6	8	7	4	12	8	7	8	84
04-05	8	12	6	17	6	6	17	23	18	11	16	19	159
05-06	13	16	36	28	29	48	38	56	41	50	47	51	453
06-07	53	94	70	81	86	116	94	94	122	123	125	102	1160
07-08	114	123	141	125	139	101	131	98	130	109	103	38	1402
08-09	107	111	120	119	111	103	95	109	102	91	99	83	1250
09-10	92	72	80	83	109	74	79	96	79	75	112	74	1025
10-11	112	96	59	94	86	65	103	104	79	117	108	61	1084
11-12	95	100	104	100	105	103	105	125	90	127	107	113	1274
12-13	107	113	112	107	112	105	114	112	109	100	109	81	1281
13-14	92	87	86	119	111	93	98	98	83	106	97	106	1176
14-15	99	108	106	103	99	94	104	109	121	111	117	87	1258
[illegible]-16	109	103	108	136	117	100	106	117	100	117	107	91	1311
[illegible]-17	109	111	113	104	120	110	109	122	106	114	113	116	1347
17-18	130	109	119	118	124	118	112	121	131	123	105	88	1398
18-19	116	110	115	102	108	72	106	98	73	79	78	67	1124
19-20	77	84	69	89	69	59	85	60	71	56	45	42	806
20-21	55	54	57	67	56	47	55	44	41	57	46	37	616
21-22	53	45	43	45	38	48	40	58	44	31	33	33	511
22-23	31	25	31	33	34	28	17	19	23	22	20	28	311
23-24	12	21	30	17	15	17	19	13	15	18	16	14	207

Daily Total: 19550

AM Peak Hour (06:45-07:45)	1452	7.43 % of Daily Total
PM Peak Hour (16:50-17:50)	1434	7.34 % of Daily Total
4th Highest Hour (15:00-16:00)	1311	6.71 % of Daily Total
8th Highest Hour (08:00-09:00)	1250	6.39 % of Daily Total

ROADWAY TRAFFIC SURVEY

Roadway: CANYON ROAD
Location: 300' East of Hall Boulevard
Direction: EAST BOUND
Date: 12/5/96
Week: THURSDAY

Traffic Smithy
Traffic Survey Service

	:00-:05	:05-:10	:10-:15	:15-:23	:20-:25	:25-:30	:30-:35	:35-:40	:40-:45	:45-:50	:50-:55	:55-:00	Hour Tot.
	15	12	17	15	14	19	11	12	20	11	11	4	161
	10	13	6	6	3	9	10	a	8	a	15	11	107
	11	17	4	10	4	10	3	2	7	a	a	5	89
	4	7	5	10	4	5	5	4	10	12	10	7	83
	8	9	10	8	5	14	6	18	24	15	16	17	150
	14	21	21	29	30	42	27	57	39	36	52	61	429
	65	71	80	88	96	77	96	118	102	113	133	103	1142
	106	137	120	107	119	131	124	113	109	104	107	106	1383
	102	117	108	92	99	92	89	106	90	85	112	87	1179
	87	73	54	98	98	67	107	78	75	87	98	76	998
	78	101	88	113	105	109	86	93	91	94	114	80	1152
	122	112	107	114	103	106	127	117	129	129	118	123	1407
	118	120	142	119	120	114	116	142	109	122	123	114	1459
	104	124	107	112	122	122	121	112	104	107	108	100	1343
	119	110	86	125	123	116	123	120	109	128	118	89	1366
	111	121	105	117	115	113	106	111	122	105	118	112	1356
	137	129	131	109	103	125	130	114	122	106	133	101	1440
	114	133	130	121	113	108	114	123	142	131	126	99	1454
18-19	95	137	104	120	108	100	117	106	105	99	93	88	1272
19-20	111	78	85	93	95	62	79	82	53	92	77	46	953
20-21	81	52	54	58	53	52	59	35	47	48	37	42	618
21-22	57	52	37	48	38	35	53	37	39	31	27	35	489
22-23	34	34	23	30	27	28	20	16	25	30	24	14	305
23-24	19	19	27	20	18	11	12	14	24	16	21	11	212

Daily Total: 20547

AM Peak Hour (06:45-07:45)	1415	6.89 % of Daily Total
PM Peak Hour (16:50-17:50)	1463	7.12 % of Daily Total
4th Highest Hour (11:00-12:00)	1407	6.85 % of Daily Total
8th Highest Hour (13:00-14:00)	1343	6.54 % of Daily Total

Day of Week: WEDNESDAY

Traffic Smithy
Traffic Survey Service

Hour of Day	:00-:05	:05-:10	:10-:15	:15-:20	:20-:25	:25-:30	:30-:35	:35-:40	:40-:45	:45-:50	:50-:55	:55-:00	Hour Tot.
00-01	15	10	16	26	12	12	19	8	16	12	7	11	164
01-02	3	6	17	6	11	4	10	9	7	8	9	4	94
02-03	15	6	6	8	9	5	4	9	12	6	9	4	93
03-04	4	1	6	4	3	1	5	4	4	3	6	12	53
04-05	6	4	8	4	1	7	6	11	7	8	13	13	88
05-06	8	12	12	9	14	16	22	33	43	53	43	36	301
06-07	41	47	39	52	49	65	49	62	60	66	74	72	676
07-08	52	80	68	70	89	86	77	100	93	100	95	143	1053
08-09	93	127	87	74	76	88	92	96	78	80	81	90	1062
09-10	65	62	95	72	73	74	81	65	98	85	73	88	931
10-11	72	76	78	72	64	92	89	87	99	103	84	89	1005
11-12	95	85	101	79	71	104	95	98	92	109	89	104	1122
12-13	118	106	115	113	120	99	107	111	110	112	94	124	1329
13-14	108	122	115	111	118	126	131	126	117	113	86	115	1388
24-15	119	102	114	110	97	118	122	94	110	115	100	106	1307
[illegible]-16	95	118	104	100	101	113	96	109	126	113	126	105	1306
[illegible]-17	121	95	150	119	126	124	114	111	128	153	116	139	1496
17-18	136	146	125	123	123	122	108	85	106	126	102	117	1419
18-19	99	105	138	99	107	110	94	114	93	91	99	105	1254
19-20	82	67	77	76	72	64	72	61	86	62	72	72	863
20-21	70	53	65	55	61	77	67	51	55	49	46	66	715
21-22	55	49	59	82	67	68	62	65	74	54	34	39	708
22-23	43	49	34	45	30	19	33'	28	37	20	45	38	421
23-24	42	22	44	24	18	16	18	30	16	16	22	22	290

Daily Total: 19138

AM Peak Hour (07:35-08:35) 1168 — 6.1 % of Daily Total

PM Peak Hour (16:10-17:10) 1562 — 8.16 % of Daily Total

4th Highest Hour (12:00-13:00)1329 — 6.94 % of Daily Total

8th Highest Hour (11:00-12:00)1122 — 5.86 % of Daily Total

Day of Week: THURSDAY

Traffic Smithy
Traffic Survey Service

Hour of Day	:00-:05	:05-:10	:10-:15	:15-:20	:20-:25	:25-:30	:30-:35	:35-:40	:40-:45	:45-:50	:50-:55	:55-:00	Hour Tot.
00-01	27	16	16	22	12	20	25	6	11	9	14	7	185
02-02	6	15	7	8	6	8	11	6	10	7	3	8	95
04-03	7	7	7	9	10	8	2	7	6	6	6	6	81
08-04	4	9	8	1	4	3	4	7	8	1	8	7	64
04-05	6	14	4	9	6	6	2	14	11	13	12	14	111
05-06	13	15	14	15	18	21	20	28	27	43	33	50	297
06-07	34	38	52	68	55	48	50	67	80	64	53	94	703
07-08	63	67	82	70	77	83	68	90	86	89	93	77	945
04-09	106	103	105	101	80	116	94	83	88	80	90	98	1144
09-10	84	71	79	86	72	81	71	66	75	69	90	100	944
10-11	62	72	83	88	91	106	66	88	99	79	69	106	1009
11-12	81	81	104	100	82	86	111	89	100	97	76	120	1127
12-13	118	112	114	116	101	110	126	103	120	123	105	112	1360
13-14	104	109	102	118	98	110	110	108	125	115	101	140	1340
14-15	123	107	121	110	97	115	124	90	93	138	119	104	1341
-16	119	121	106	92	107	142	120	104	131	89	147	149	1427
-17	135	135	164	127	128	119	146	133	123	137	149	129	1625
17-18	131	147	153	124	109	150	156	130	125	136	105	160	1626
18-19	91	123	126	133	109	113	103	90	118	97	105	94	1302
19-20	86	79	87	83	102	83	68	84	86	80	71	76	985
41-21	77	63	60	63	48	56	65	69	71	44	49	69	734
2l-22	49	74	63	60	34	69	47	60	65	47	54	48	670
22-23	44	39	43	54	42	32	25	35	27	26	26	22	415
23-24	25	35	30	25	21	31	28	13	17	13	32	13	283

Daily Total: 19813

AM Peak Hour (08:00-09:00) 1144 — 5.77 % of Daily Total

PM Peak Hour (15:55-16:55) 1645 — 8.3 % of Daily Total

4th Highest Hour (12:00-13:00) 1360 — 6.86 % of Daily Total

8th Highest Hour (08:00-09:00) 1144 — 5.77 % of Daily Total

ROADWAY TRAFFIC SURVEY

Direction: WEST BOUND
Date: 11/15/96
Day of Week: FRIDAY

Traffic Smithy
Traffic Survey Service

Hour of Day	:00-:05	:05-:10	:10-:15	:15-:20	:20-:25	:25-:30	:30-:35	:35-:40	:40-:45	:45-:50	:50-:55	:55-:00	Hour Tot.
00-01	19	13	12	20	20	16	14	7	9	18	11	7	166
01-02	14	3	9	17	9	13	11	10	6	6	5	12	115
02-03	2	15	11	12	11	6	9	10	9	5	12	5	107
03-04	9	4	10	4	5	5	2	12	1	5	5	4	66
04-05	9	2	5	4	8	6	7	12	10	14	19	9	105
05-06	14	7	9	9	23	23	20	32	35	39	27	36	274
06-07	40	36	47	49	51	55	68	57	74	62	86	83	708
07-08	60	62	85	72	86	99	86	108	96	89	98	113	1054
08-09	84	86	79	98	97	95	77	73	98	65	86	91	1029
09-10	80	78	67	66	64	78	71	66	68	94	77	85	894
10-11	82	74	89	62	91	82	82	86	87	94	94	110	1033
11-12	96	100	94	98	86	122	128	89	95	110	96	115	1229
12-13	119	86	109	121	80	105	135	131	128	147	115	116	1392
13-14	140	108	127	134	116	117	143	92	106	135	110	135	1463
14-15	124	113	121	153	112	104	125	132	125	139	120	117	1485
15-16	123	140	92	132	144	136	126	116	118	146	134	140	1547
16-17	138	148	149	140	158	150	156	138	127	137	131	126	1698
17-18	137	137	126	142	104	133	147	155	161	140	143	145	1670
18-19	151	138	144	134	122	131	126	116	122	103	112	125	1524
19-20	111	120	103	108	97	119	89	91	99	77	103	93	1210
20-21	90	78	75	86	75	84	74	58	70	51	63	75	879
21-22	69	70	79	67	66	63	58	68	69	76	52	68	805
22-23	56	52	59	70	57	61	52	57	46	46	49	47	652
23-24	68	32	52	48	42	42	50	39	37	45	37	38	530

Daily Total: 21635

AM Peak Hour (11:00-12:00)	1229	5.68 % of Daily Total
PM Peak Hour (15:45-16:45)	1724	7.97 % of Daily Total
4th Highest Hour (18:00-19:00)	1524	7.04 % of Daily Total
8th Highest Hour (11:00-12:00)	1229	5.68 % of Daily Total

ROADWAY TRAFFIC SURVEY

dway: CANYON ROAD
ation: 500' East of Hall Boulevard
Direction: WEST BOUND
Date: 11/16/96
Day of Week: **SATURDAY**

Traffic Smithy
Traffic Survey Service

Hour of Day	:00-:05	:05-:10	:10-:15	:15-:20	:20-:25	:25-:30	:30-:35	:35-:40	:40-:45	:45-:50	:50-:55	:55-:00	Hour Tot.
00-01	32	39	31	45	28	19	27	24	27	18	12	15	317
01-02	20	22	14	22	15	16	24	19	17	12	18	20	219
02-03	15	14	21	12	10	15	14	14	4	12	19	14	164
03-04	9	10	5	12	7	8	3	5	5	7	9	7	87
04-05	7	7	4	7	9	7	9	8	3	6	6	10	83
05-06	14	6	**9**	13	**9**	4	7	9	17	14	13	20	135
06-07	6	15	18	14	13	17	18	20	16	17	35	24	213
07-08	16	26	23	20	26	32	28	34	47	27	36	37	352
08-09	44	44	48	35	42	43	41	63	50	51	59	71	591
09-10	58	62	53	51	56	62	61	54	76	58	66	87	744
10-11	84	73	98	95	80	108	78	76	99	88	92	96	1067
11-12	98	89	99	123	**103**	97	93	102	123	**139**	105	114	1285
12-13	117	122	129	120	113	136	130	119	115	116	101	121	1439
13-14	133	127	103	101	126	102	121	119	107	117	108	123	1387
14-15	131	140	130	123	124	123	126	106	117	119	89	139	1467
-16	114	143	113	126	137	122	134	139	154	120	104	121	1527
-17	103	112	124	120	129	129	122	126	149	137	152	119	1522
17-18	132	139	131	126	119	118	100	106	95	96	95	105	1362
14-19	77	107	102	106	114	107	86	79	116	92	85	93	1164
19-20	86	82	88	63	62	101	98	55	88	65	49	77	914
20-21	58	87	67	62	56	70	77	56	59	49	47	50	738
21-22	63	47	55	52	51	49	65	40	39	41	35	56	593
22-23	52	38	49	46	55	47	41	40	35	56	33	33	525
23-24	34	38	37	40	28	32	26	28	21	28	27	21	360

Daily Total: 18255

AM Peak Hour (11:00-12:00) 1285 — 7.04 % of Daily Total
PM Peak Hour (16:20-17:20) 1591 — 8.72 % of Daily Total
4th Highest Hour (12:00-13:00)1439 — 7.88 % of Daily Total
8th Highest Hour (18:00-19:00)1164 — 6.38 % of Daily Total

Day of Week: SUNDAY

Traffic Smithy
Traffic Survey Service

							23	19	17	20	21	6	268
							18	5	10	5	11	13	142
							7	15	8	9	17	6	138
							7	6	7	8	5	7	82
							5	8	4	7	5	1	66
							8	6	6	5	9	12	72
							9	12	9	10	16	7	114
							18	19	22	21	22	20	203
							20	24	20	24	23	33	271
							48	43	58	49	56	37	464
							60	53	69	59	64	66	680
							76	70	75	78	77	93	893
							103	88	94	101	95	100	1121
							108	103	126	110	112	118	1348
							121	119	118	126	112	90	1423
							113	105	105	122	101	133	1385
							83	106	104	95	94	100	1225
17-18	140	109	102	92	92	105	76	78	111	81	78	104	1168
18-19	89	89	100	08	72	86	64	68	77	67	73	64	937
19-20	74	72	72	47	50	69	54	56	56	49	44	44	687
20-21	49	30	52	45	47	44	43	42	52	41	36	44	525
21-22	30	33	44	34	28	38	35	36	33	21	39	31	402
22-23	35	26	34	37	28	31	22	19	22	10	25	13	302
23-24	18	29	24	25	15	16	22	13	13	12	14	9	210

Daily Total: 14126

AM Peak Hour (11:00-12:00)	893	6.32 % of Daily Total
PM Peak Hour (13:55-14:55)	1451	10.27% of Daily Total
4th Highest Hour (16:00-17:00	11225	8.67 % of Daily Total
8th Highest Hour (11:00-12:00)	893	6.32 % of Daily Total

Day of Week: WEDNESDAY

Traffic Smithy
Traffic Survey Service

Hour													
00-01	12	4	**13**	9	**6**	**9**	**7**	8	14	7	10	5	104
01-02	12	10	14	5	8	7	**6**	4	5	3	8	7	89
02-03	4	**3**	**6**	8	2	**9**	15	5	10	8	4	11	85
03-04	**6**	4	8	9	5	10	8	6	5	**6**	5	5	77
04-05	14	5	3	9	9	3	5	13	21	25	18	13	138
05-06	21	17	17	36	42	35	38	52	58	54	58	53	481
06-07	64	60	83	99	94	80	86	119	93	129	113	114	1134
07-08	105	118	135	158	140	132	134	119	113	139	ill	108	1512
08-09	114	101	94	109	87	104	93	105	115	100	111	81	1214
09-10	87	73	67	85	82	83	101	78	72	99	88	83	998
10-11	97	92	88	99	97	95	86	95	106	96	120	91	1162
11-12	122	95	102	134	114	113	107	128	109	136	118	106	1384
12-13	124	130	136	123	135	109	133	110	123	115	108	113	1459
13-14	95	120	109	119	107	128	131	128	122	111	102	100	1372
14-15	122	121	114	119	79	120	113	117	128	120	99	94	1346
15-16	97	104	113	126	109	104	103	121	124	121	120	117	1359
16-17	119	128	137	130	136	122	132	135	117	128	141	112	1537
17-18	129	132	136	141	136	134	116	132	111	132	128	131	1558
18-19	116	122	86	125	105	94	119	89	83	**106**	72	92	1209
19-20	104	65	84	76	56	89	74	61	44	64	59	72	848
20-21	53	42	58	60	35	70	47	55	69	43	38	35	605
21-22	45	43	44	34	38	39	27	32	46	28	34	18	428
22-23	32	33	26	25	52	28	24	27	22	26	20	15	330
23-24	27	18	20	12	13	15	20	14	19	25	15	13	211

Daily Total: 20640

AM Peak Hour	(07:05-08:05)	1521	7.37 % of Daily Total
PM Peak Hour	(16:30-17:30)	1573	7.62 % of Daily Total
4th Highest Hour	(12:00-13:00)	1459	7.07 % of Daily Total
8th Highest Hour	(14:00-15:00)	1346	6.52 % of Daily Total

ROADWAY TRAFFIC SURVEY

Roadway: CANYON ROAD
Location: 300' East of Hall Boulevard
Direction: EAST BOUND
Date: 11/14/96
Day of Week: THURSDAY

Traffic Smithy
Traffic Survey Service

Hour of Day	:00-:05	:05-:10	:10-:15	:15-:20	:20-:25	:25-:30	:30-:35	:35-:40	:40-:45	:45-:50	:50-:55	:55-:00	Hour Tot.
00-01	13	10	10	15	12	17	8	10	11	13	13	12	144
01-02	14	10	11	7	11	11	7	10	6	10	8	11	116
02-03	14	14	7	9	6	7	10	5	7	5	7	9	100
03-04	6	4	6	5	5	4	10	2	5	7	10	10	74
04-05	7	5	12	12	15	13	5	14	28	9	25	14	159
05-06	20	11	15	23	43	46	47	38	62	40	56	46	447
06-07	49	91	93	92	102	88	88	97	113	132	123	105	1173
07-08	122	133	111	119	140	132	129	112	129	130	101	108	1466
08-09	135	114	111	115	113	99	90	100	106	121	94	73	1271
09-10	88	84	86	92	81	98	117	84	81	102	104	99	1116
10-11	96	104	101	91	98	93	114	99	125	119	96	115	1251
11-12	102	110	118	121	121	113	109	121	132	132	123	150	1452
12-13	133	122	114	161	138	112	122	113	121	122	132	125	1515
13-14	133	103	105	128	101	119	102	108	105	117	105	112	1338
14-15	131	123	105	136	132	111	123	109	110	139	121	99	1439
15-16	103	105	109	125	124	109	105	114	122	136	119	121	1392
16-17	129	103	125	121	137	122	139	122	134	119	132	132	1515
17-18	130	124	135	131	137	132	128	142	121	120	126	124	1550
18-19	133	142	123	138	111	123	119	85	93	123	82	78	1350
19-20	83	82	93	84	69	105	76	57	76	69	77	73	944
20-21	48	77	55	57	42	61	47	62	67	55	49	48	668
21-22	53	48	51	42	53	49	38	24	41	32	27	32	490
22-23	40	40	21	30	17	29	28	25	22	18	22	26	318
23-24	25	26	26	18	25	22	12	15	17	18	13	15	232

Daily Total: 21520

AM Peak Hour (06:45-07:45)	1487	6.91 %	of Daily Total
PM Peak Hour (16:40-17:40)	1576	7.32 %	of Daily Total
4th Highest Hour (07:00-08:00	11466	6.81 %	of Daily Total
8th Highest Hour (18:00-19:00	11350	6.27 %	of Daily Total

Day of Week: FRIDAY

Traffic Smithy
Traffic Survey Service

00-01	17	14	20	14	10	17	10	9	13	11	13	6	154
01-02	5	13	16	5	9	7	11	11	14	6	5	8	110
02-03	7	4	13	10	6	12	4	5	7	6	10	4	88
03-04	13	8	6	2	4	4	7	4	3	9	13	7	80
04-05	15	8	5	5	9	12	22	29	23	22	18	15	183
05-06	9	25	27	24	38	43	37	42	45	36	41	48	415
06-07	78	81	58	113	80	77	74	106	101	140	119	99	1126
07-08	136	130	100	139	122	129	126	118	123	134	115	107	1479
08-09	109	90	82	127	104	100	116	81	117	97	86	79	1188
09-10	77	66	73	100	95	94	93	93	98	93	115	93	1090
10-11	111	114	95	95	96	120	129	100	110	120	101	106	1297
11-12	129	111	126	116	125	126	147	123	125	133	136	128	1525
12-13	119	130	143	134	127	121	150	131	119	121	115	137	1547
13-14	127	88	126	131	123	109	96	128	113	144	121	118	1424
14-15	114	114	110	138	131	137	110	132	128	147	132	114	1507
15-16	107	139	149	130	136	147	138	115	141	131	140	116	1589
16-17	138	126	139	133	147	138	122	135	145	117	130	142	1612
17-18	129	133	123	132	121	146	128	127	145	134	130	127	1575
18-19	143	126	120	128	121	131	146	117	132	114	103	101	1482
19-20	149	113	109	115	89	91	120	112	98	93	84	78	1251
20-21	82	82	88	58	57	84	59	74	66	71	58	67	846
21-22	62	67	66	50	57	63	63	44	57	45	50	50	674
22-23	65	51	61	76	51	57	59	38	33	28	41	40	600
23-24	30	35	38	27	23	24	20	36	26	21	19	26	325

Daily Total: 23167

AM Peak Hour (11:00-12:00)	1525	6.58 % of Daily Total
PM Peak Hour (15:05-16:05)	1620	6.99 % of Daily Total
4th Highest Hour (12:00-13:00)	1547	6.68 % of Daily Total
8th Highest Hour (07:00-08:00)	1479	6.38 % of Daily Total

ROADWAY TRAFFIC SURVEY

dway: CANYON ROAD
ation: 300' East of Hall Boulevard
Direction: EAST BOUND
Date: 11/16/96
Day of Week: SATURDAY

Traffic Smithy
Traffic Survey Service

Hour of Day	:00-:05	:05-:10	:10-:15	:15-:20	:20-:25	:25-:30	:30-:35	:35-:40	:40-:45	:45-:50	:50-:55	:55-:00	Hour Tot.
00-01	32	25	21	11	20	17	18	16	21	20	10	15	226
01-02	18	16	14	9	5	9	13	14	14	8	13	22	155
02-03	21	16	8	17	9	11	19	7	11	2	5	7	133
03-04	10	6	6	7	7	2	8	7	5	7	7	16	88
04-05	3	10	11	7	9	10	10	7	11	13	11	9	111
05-06	12	14	17	12	15	17	24	26	22	31	14	13	217
96-07	13	31	22	25	25	23	26	25	42	38	34	28	332
07-08	27	39	35	50	44	50	34	42	57	41	56	61	536
08-09	49	41	50	52	56	66	64	71	71	78	66	55	719
09-10	93	80	74	74	57	69	81	102	98	105	106	87	1026
10-11	112	93	100	95	93	111	121	92	112	121	99	135	1284
11-12	121	103	124	107	129	146	130	145	142	144	147	152	1590
12-13	140	136	139	149	154	153	140	140	130	133	108	142	1664
13-14	152	150	117	114	145	135	109	138	110	123	120	102	1515
14-15	71	132	143	129	107	108	107	97	96	99	108	118	1315
-16	116	133	112	133	84	106	131	118	109	116	120	122	1400
-17	108	114	134	118	126	111	127	111	119	125	107	130	1430
17-18	130	125	107	125	119	122	106	99	110	123	103	105	1374
88-19	105	83	92	97	86	99	109	98	68	100	67	93	1097
9-20	80	66	69	79	70	86	75	64	88	81	67	59	884
$0-21	51	53	62	46	48	53	50	55	46	39	53	49	605
21-22	45	44	40	44	40	39	36	45	40	24	34	44	475
22-23	50	37	31	35	43	26	38	33	49	36	24	27	429
b3-24	22	27	32	41	23	24	27	19	20	21	17	29	302

Daily Total: 18907

AM Peak Hour (11:00-12:00) 1590 — 8.41 % of Daily Total
PM Peak Hour (12:10-13:10) 1690 — 8.94 % of Daily Total
4th Highest Hour (16:00-17:00)1430 — 7.56 % of Daily Total
8th Highest Hour (10:00-11:00)1284 — 6.79 % of Daily Total

Day of Week: WEDNESDAY

Traffic Smithy
Traffic Survey Service

00-01	9	0	2	3	2	5	1	0	2	0	1	1	26
01-02	3	1	1	1	0	0	0	0	2	1	3	2	14
02-03	0	2	0	2	2	1	0	0	1	2	0	6	16
03-04	2	2	0	0	0	0	1	1	0	0	1	1	8
04-05	0	0	0	0	0	1	1	1	0	0	1	0	4
05-06	1	4	2	2	1	3	0	2	1	3	4	5	28
06-07	5	2	2	3	11	6	3	10	7	8	7	14	78
07-08	8	6	14	11	10	16	23	25	20	13	18	20	184
08-09	24	17	19	20	22	17	12	28	20	18	17	22	236
69-10	26	28	18	21	23	25	19	28	18	20	21	26	273
10-11	16	27	38	16	37	31	38	31	29	33	35	32	363
11-12	24	36	29	38	39	28	36	45	40	37	31	40	423
12-13	29	53	36	27	51	37	38	40	36	38	41	48	474
13-14	38	46	43	44	38	45	39	54	49	38	42	49	525
14-15	35	36	38	41	44	50	36	38	43	42	41	43	487
	28	48	36	39	30	32	36	36	50	35	36	41	447
	29	39	48	43	37	48	33	57	44	50	44	48	520
	56	47	34	41	44	52	28	44	47	41	37	42	513
78-19	40	46	38	35	27	47	43	32	36	27	37	31	439
19-20	25	29	32	26	35	35	34	36	25	14	25	23	339
20-21	15	24	23	28	28	20	22	23	24	23	20	15	265
21-22	15	19	14	17	20	11	11	12	23	8	6	12	168
82-23	11	5	10	4	9	7	2	7	8	5	6	3	77
23-24	6	6	3	4	6	5	5	2	3	3	7	5	55

Daily Total: 5962

AM Peak Hour (11:00-12:00)	423	7.09 % of Daily Total
PM Peak Hour (16:10-17:10)	555	9.31 % of Daily Total
4th Highest Hour (14:00-15:00)	487	8.17 % of Daily Total
8th Highest Hour (11:00-12:00)	423	7.09 % of Daily Total

ROADWAY TRAFFIC SURVEY

Day of Week: THURSDAY

Traffic Smithy
Traffic Survey Service

00-01	0	5	2	3	7	2	1	1	4	0	1	2	28
01-02	1	2	2	0	1	3	0	1	2	2	0	1	15
02-03	2	0	2	2	1	1	0	1	1	*0*	*5*	0	15
03-04	0	1	2	0	0	0	*0*	0	1	0	2	0	*6*
04-05	0	0	*0*	1	*0*	**1**	*0*	*0*	**1**	1	0	1	5
05-06	1	4	0	2	0	6	1	2	2	8	6	4	36
06-07	7	0	4	6	5	1	10	7	10	16	11	6	83
07-08	10	11	7	15	16	16	12	22	26	21	33	21	210
08-09	27	27	12	19	19	14	19	23	15	22	34	12	243
09-10	19	20	22	20	21	19	22	19	18	17	24	21	242
10-11	20	18	33	30	22	27	22	26	30	34	35	41	338
11-12	27	52	33	34	40	43	48	33	53	44	34	44	485
12-13	48	52	*53*	57	56	51	29	38	56	43	49	54	586
13-14	43	49	59	41	44	46	51	46	46	43	56	40	564
14-15	42	43	50	45	39	63	57	40	52	35	43	42	551
[illegible]-16	43	44	43	48	36	47	34	51	39	42	58	39	524
[illegible]-17	52	51	46	38	36	43	50	49	43	54	52	52	566
17-18	52	52	54	34	47	39	54	45	37	48	59	40	561
18-19	41	48	47	35	29	41	42	51	30	33	25	38	460
19-20	27	34	33	28	42	38	23	29	34	29	27	24	368
20-21	20	28	19	21	17	27	27	22	21	25	21	21	269
28-22	19	11	11	14	15	15	18	19	19	11	14	10	176
28-23	6	13	11	7	2	3	4	4	5	9	7	3	74
23-24	5	7	7	4	2	4	5	2	2	5	1	4	48

Daily Total: 6453

AM Peak Hour (11:00-12:00) 485 — 7.52 % of Daily Total

PM Peak Hour (12:00-13:00) 586 — 9.08 % of Daily Total

4th Highest Hour (17:00-18:00)561 — 8.69 % of Daily Total

8th Highest Hour (18:00-19:00)460 — 7.13 % of Daily Total

ROADWAY TRAFFIC SURVEY

Roadway: HALL BOULEVARD
Location: At Watson Road Split
Direction: SOUTH BOUND
Date: 12/6/96
Day of Week: FRIDAY

Traffic Smithy
Traffic Survey Service

Hour of Day	:00-:05	:05-:10	:10-:15	:15-:20	:20-:25	:25-:30	:30-:35	:35-:40	:40-:45	:45-:50	:50-:55	:55-:00	Hour Tot.
00-01	1	2	4	4	3	2	3	6	2	4	2	3	36
01-02	2	3	2	2	0	2	3	1	1	0	1	4	21
02-03	0	1	0	1	0	0	2	1	0	0	1	2	8
03-04	1	0	0	1	1	0	0	0	0	2	0	1	6
04-05	1	1	1	0	0	0	0	1	0	0	6	0	10
05-06	1	2	1	2	2	0	5	1	2	5	9	5	35
06-07	5	3	4	2	6	7	10	9	8	5	14	12	85
07-08	7	14	8	15	13	16	17	18	22	15	15	14	174
08-09	22	23	12	23	15	14	26	17	14	23	12	17	218
09-10	15	20	16	28	24	15	24	38	30	27	23	34	294
10-11	26	28	41	26	35	31	22	36	39	43	38	35	400
11-12	29	43	44	36	53	4	0	0	0	0	0	0	209
12-13	0	0	0	0	0	0	0	0	0	0	0	0	0
13-14													
14-15													
15-16													
16-17													
17-18													
18-19													
19-20													
20-21													
21-22													
22-23													
23-24													

Daily Total:
AM Peak Hour ( ) % of Daily Total
PM Peak Hour ( ) % of Daily Total
4th Highest Hour ( ) % of Daily Total
8th Highest Hour ( ) % of Daily Total

Location: HALL

Cross Street: At WATSON RD SPLIT

DIRECTION ☐West Bound ☐East Bound ☒North Bound ☐South Bound
☐Combined West and East Bound ☐Combined North and South Bound
☐In Bound ☐Out Bound

Survey Type: (VOL) SP CL GP

Start Day: S M (T) W T F S

End Day: S M T W T (F) S

Survey By: ____

Start Date: 12-3-96

Map# 625 / B-2 Grid#

POSTED SPEED 25 ○ 30 ○ 35 ○ 40 ○ 45 ○ 50 ○ 55 ○ OTHER ○ _____ NONE ○

☒ ☐ ☐
☒
☒

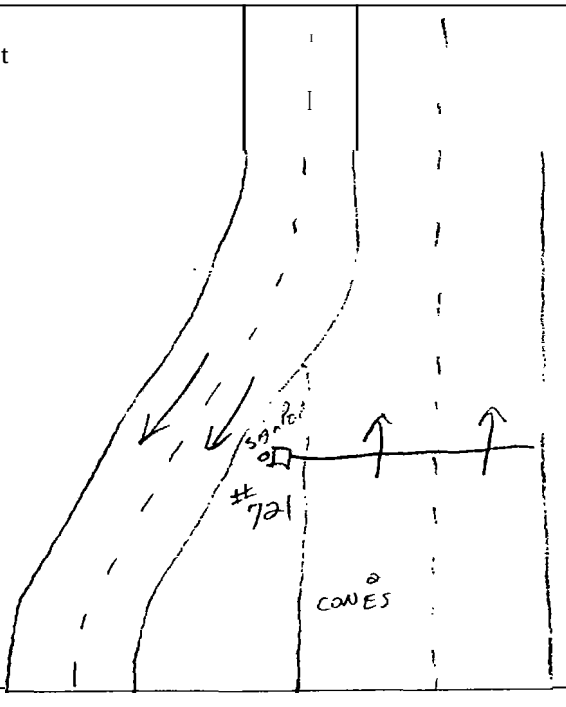
Counter
Type TM
No. 721

Observed
TT2
(N)

Data Dump
Date
Time
File Name

Data Dump
Date
rime
File Name

Sketch Layout



North

late
rime

Data Dump
Date
rime

Data Dump
Date
Time
File Name
6HWNB21

TT2
(N)

B Level
6.19

Road Tube Survey
Traffic Smithy
1225 NW MURRAY BLVD.
PORTLAND, OR 97229 (503) 641-6333

ROADWAY TRAFFIC SURVEY

Day of Week: TUESDAY

Traffic Smithy
Traffic Survey Service

	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	C	0	3	0	0	0
	0	0	0	0	0	0	0	0	0	0	0	0	0
	6	35	31	44	31	30	30	33	40	43	33	39	395
	37	33	30	47	58	42	40	40	41	47	50	66	531
	47	50	71	63	46	56	56	60	50	67	52	63	681
	70	69	88	61	53	78	49	54	67	65	72	61	787
	71	52	80	56	46	53	66	52	67	61	49	74	727
	66	64	70	55	71	55	45	54	56	62	61	57	716
	58	74	59	54	51	62	59	66	68	62	66	70	749
	56	69	63	66	61	57	74	61	74	65	59	83	788
17-18	74	83	54	79	69	69	68	56	70	64	54	68	808
18-19	39	47	58	40	.57	54	33	40	43	34	47	57	549
19-20	38	30	42	44	38	35	30	34	36	26	32	31	416
20-21	23	24	35	35	20	24	14	19	26	25	12	21	278
21-22	20	16	24	21	18	21	9	14	15	18	21	11	208
22-23	13	17	11	11	6	14	7	5	a	7	7	12	118
23-24	8	6	7	8	1	6	5	3	5	8	7	4	68

Daily Total:
AM Peak Hour ( ) % of Daily Total
PM Peak Hour ( ) % of Daily Total
4th Highest Hour ( ) % of Daily Total
8th Highest Hour ( ) % of Daily Total

Day of Week: WEDNESDAY

Traffic Smithy
Traffic Survey Service

00-01	2	1	5	4	0	6	3	1	2	9	0	1	34
01-02	5	3	1	5	3	0	1	1	1	1	3	2	26
02-03	0	1	1	2	1	2	3	1	2	2	1	1	17
03-04	0	2	3	1	1	1	0	0	2	1	3	2	16
04-05	2	2	7	1	0	0	1	2	2	1	2	1	21
05-06	4	3	3	4	4	0	7	7	1	1	8	9	51
06-07	1	6	7	3	11	3	8	17	11	21	14	16	118
07-08	28	13	26	31	28	29	46	29	46	45	39	48	408
08-09	53	46	30	39	49	36	41	33	31	28	34	34	454
09-10	39	27	38	42	23	25	34	39	31	45	31	45	419
10-11	36	40	38	47	42	46	34	38	56	62	35	40	514
11-12	39	42	39	46	40	44	36	46	77	59	55	73	596
12-13	55	52	49	47	54	69	57	56	61	57	53	60	670
13-14	50	50	52	53	45	67	54	50	49	53	53	54	630
14-15	58	46	45	55	57	52	51	53	50	52	34	36	593
15-16	53	48	54	61	41	51	61	47	52	50	51	59	628
16-17	55	52	55	55	56	46	60	66	57	50	65	53	670
17-18	66	58	73	58	65	45	69	41	70	43	56	61	705
18-19	43	44	56	35	51	65	38	48	55	48	56	39	578
19-20	36	38	61	32	24	37	29	40	30	26	33	32	418
20-21	31	32	34	20	30	23	24	20	21	21	18	24	298
21-22	14	29	24	19	27	19	19	13	9	13	8	14	208
22-23	20	21	15	20	8	12	1	11	8	8	2	8	134
23-24	7	5	9	8	5	3	6	3	7	7	9	3	72

Daily Total: **8278**

AM Peak Hour (11:00-12:00) **596** 7.2 % **of** Daily Total

PM Peak Hour (16:35-17:35) **725** **8.76** % **of** Daily Total

4th Highest Hour (13:00-14:00)630 **7.61** % **of** Daily Total

8th Highest Hour (18:00-19:00)578 **6.98** % **of** Daily Total

ROADWAY TRAFFIC SURVEY

Roadway: HALL BOULEVARD
Location: At Watson Road Split
Direction: NORTH BOUND
Date: 12/5/96
Day of Week: THURSDAY

	:00-:05	:05-:10	:10-:15	:15-:20	:20-:25	:25-:30	:30-:35	:35-:40	:40-:45	:45-:50	:50-:55	:55-:00	Hour Tot.
	7	4	4	3	3	5	4	8	1	3	1	3	46
	0	3	3	2	2	2	4	5	2	2	6	0	31
	2	2	3	3	5	1	2	1	1	2	3	1	26
	2	1	2	0	3	0	1	1	1	1	1	3	16
	1	1	1	3	1	2	0	2	6	1	4	2	24
	1	5	3	3	3	0	5	5	5	5	3	6	44
	5	7	12	7	8	9	8	13	16	15	26	25	151
	33	15	30	37	24	24	43	33	38	54	41	48	420
	52	46	33	39	39	35	35	36	42	34	31	33	455
	43	32	25	23	28	43	40	21	49	42	34	33	413
	37	40	33	29	42	34	52	44	39	46	38	53	487
	41	54	55	51	49	62	60	53	55	55	60	59	654
	70	64	60	63	55	69	56	70	74	61	58	72	772
	56	56	82	53	63	55	51	51	71	60	54	60	712
	58	46	69	45	59	57	49	58	75	57	65	46	684
	62	47	65	51	60	57	57	63	57	65	54	54	692
	69	59	51	69	64	61	74	62	60	61	67	73	770
	69	72	72	71	53	73	79	70	75	65	44	53	796
18-19	58	51	52	46	51	60	34	55	55	34	46	56	598
19-20	33	40	36	47	35	38	41	25	41	40	34	41	451
20-21	28	18	24	39	25	32	25	26	25	21	19	15	297
21-22	26	18	26	16	13	12	17	11	14	16	17	16	202
22-23	14	16	16	13	9	10	6	11	12	12	5	4	128
23-24	11	8	4	12	8	7	10	7	8	4	4	3	86

Daily Total: 8955
AM Peak Hour (11:00-12:00) 654 — 7.3 % of Daily Total
PM Peak Hour (16:50-17:50) 839 — 9.37 % of Daily Total
4th Highest Hour (13:00-14:00)712 — 7.95 % of Daily Total
8th Highest Hour (18:00-19:00)598 — 6.68 % of Daily Total

ROADWAY TRAFFIC SURVEY

adway: HALL **BOULEVARD**
cation: At **Watson Road Split**
Direction: **SOUTH BOUND**
Date: 11/13/96
bay *of* Week: WEDNESDAY

Traffic Smithy
Traffic Survey Service

Hour of Day	:00-:05	:05-:10	:10-:15	:15-:20	:20-:25	:25-:30	:30-:35	:35-:40	:40-:45	:45-:50	:50-:55	:55-:00	Hour Tot.
00-01	1	0	2	3	7	0	4	3	1	2	3	1	27
01-02	0	4	2	1	1	1	0	0	2	2	8	0	21
02-03	0	0	0	3	1	0	2	0	0	0	0	0	6
03-04	2	1	2	5	0	1	1	1	1	1	2	0	17
04-05	0	1	1	0	1	0	2	2	0	2	2	1	12
05-06	0	0	5	0	2	3	1	4	4	0	4	4	27
06-07	3	9	6	4	3	5	5	12	5	11	15	15	93
07-08	18	15	13	11	25	19	16	20	28	31	12	28	236
08-09	16	24	24	20	18	24	16	19	17	23	18	23	242
09-10	21	20	22	22	21	27	22	21	19	20	23	18	256
10-11	27	31	34	40	29	28	20	31	47	33	36	33	389
11-12	39	41	40	44	28	35	41	39	23	50	39	36	455
12-13	49	53	39	46	48	45	41	43	37	30	41	48	520
13-14	27	37	40	32	57	50	41	40	33	53	46	44	500
14-15	45	42	53	32	49	41	48	54	40	56	49	37	546
15-16	41	36	49	39	44	41	41	61	35	38	41	41	507
16-17	50	44	55	44	38	64	66	50	60	56	48	34	609
17-18	61	61	73	45	53	54	52	38	61	50	48	56	652
18-19	35	42	40	46	30	26	49	40	49	44	36	32	469
19-20	31	33	29	26	24	24	29	26	24	31	31	23	331
20-21	25	17	11	23	17	19	15	22	16	15	12	10	202
21-22	21	19	22	15	14	9	5	11	12	12	6	10	156
22-23	11	4	8	11	6	4	8	8	10	6	6	4	86
23-24	8	0	1	3	4	5	7	2	3	3	10	5	51

Daily Total: 6410

AM **Peak Hour** (10:40-11:40)	456	7.11 % **of Daily Total**
PM Peak Hour (16:25-17:25)	671	10.47% **of Daily Total**
4th Highest Hour (12:00-13:00)	520	8.11 % **of Daily Total**
8th Highest Hour (11:00-12:00)	455	**7.1 % of Daily Total**

ROADWAY **TRAFFIC SURVEY**

Location: At Watson Road Split
Direction: SOUTH BOUND
Date: 11/14/96
Day of Week: THURSDAY

Traffic Smithy
Traffic Survey Service

Four Hour	:00-:05	:05-:10	:10-:15	:15-:20	:20-:25	:25-:30	:30-:35	:35-:40	:40-:45	:45-:50	:50-:55	:55-:00	Hour Tot.
	4	5	1	1	2	9	5	3	5	6	1	3	45
	4	0	3	3	0	2	3	0	1	4	1	4	25
	5	2	1	0	0	2	0	2	3	0	1	2	18
	0	2	1	0	2	0	1	0	1	0	4	0	11
	3	0	0	0	0	2	1	0	0	0	0	0	6
	1	2	4	1	1	2	2	3	2	3	1	5	27
	5	4	8	4	9	6	9	10	12	17	17	6	107
	8	16	16	14	12	21	16	12	31	18	17	20	201
	28	22	21	21	18	24	28	23	20	16	14	18	253
	20	13	21	28	24	25	28	24	21	26	33	25	288
	29	12	19	33	27	27	31	32	40	37	25	22	334
	38	42	35	38	43	38	37	55	44	48	58	40	516
	50	38	33	44	39	42	45	33	49	52	49	47	521
	51	46	41	48	45	40	31	40	33	36	53	52	516
	4a	43	53	49	31	42	48	35	38	41	42	30	500
	45	37	37	44	47	54	65	36	51	44	48	44	552
	50	55	46	47	50	40	59	53	51	49	48	48	596
17-18	44	47	61	60	47	42	50	59	55	68	36	55	624
18-19	39	46	46	55	44	35	43	37	41	46	30	39	501
19-20	44	21	29	43	34	28	41	23	34	24	24	29	374
20-21	36	19	28	17	19	20	25	32	32	34	25	16	303
21-22	31	16	20	25	26	13	11	14	18	17	8	5	204
22-23	19	12	8	13	6	11	2	6	14	5	6	6	108
	9	2	2	7	2	7	3	5	6	4	2	9	58

Daily Total: 6688

AM Peak Hour (11:00-12:00)	516	7.72 % of Daily Total
PM Peak Hour (16:50-17:50)	629	9.4 % of Daily Total
4th Highest Hour (12:00-13:00)	521	7.79 % of Daily Total
8th Highest Hour (14:00-15:00)	500	7.48 % of Daily Total

Day of Week: FRIDAY

Traffic Smithy
Traffic Survey Service

													40
													16
													16
													10
													6
													37
													98
													229
													247
													278
													399
													547
													587
													595
													569
													630
16-17	53	63	57	47	59	53	49	51	37	54	78	42	643
17-18	39	67	67	72	52	48	56	64	56	75	58	64	718
18-19	44	72	58	58	49	39	47	37	41	37	47	44	573
19-20	51	46	46	30	40	56	63	31	22	59	39	48	531
20-21	43	32	33	31	35	29	46	23	32	29	30	28	391
21-22	24	24	21	33	32	21	30	20	14	15	16	14	264
22-23	36	13	18	20	17	11	27	18	15	14	18	12	219
23-24	12	15	10	7	5	9	8	10	4	15	6	10	111

Daily Total: 7754

AM Peak Hour (11:00-12:00) 547 — 7.05 % of Daily Total
PM Peak Hour (17:10-18:10) 728 — 9.39 % of Daily Total
4th Highest Hour (13:00-14:00) 595 — 7.67 % of Daily Total
8th Highest Hour (11:00-12:00) 547 — 7.05 % of Daily Total

ROADWAY TRAFFIC SURVEY

Roadway: HALL BOULEVARD
Location: At Watson Road **Split**
Direction: SOUTH BOUND
Date: 11/16/96
Day of Week: SATURDAY

Hour of Day	:00-:05	:05-:10	:10-:15	:15-:20	:20-:25	:25-:30	:30-:35	:35-:40	:40-:45	:45-:50	:50-:55	:55-:00	Hour Tot.
00-01	4	8	6	5	9	6	3	2	9	9	1	3	65
01-02	11	2	1	4	4	4	1	5	6	4	2	4	48
02-03	4	2	1	1	1	4	0	1	0	1	3	4	22
03-04	1	1	0	1	0	3	0	0	2	2	2	0	12
04-05	0	3	1	0	0	5	1	0	2	0	1	1	14
05-06.	1	1	0	4	0	0	3	4	4	4	7	2	30
06-07	2	3	1	0	4	1	2	0	5	4	9	4	35
07-08	4	4	4	4	9	5	2	11	3	6	11	12	75
08-09	8	S	9	11	11	8	12	11	21	10	20	12	138
09-10	16	22	27	24	19	19	36	35	33	25	29	44	329
10-11	34	23	37	45	45	48	40	58	49	40	43	34	496
11-12	55	47	41	47	58	43	54	54	61	60	59	38	617
12-13	52	63	56	52	61	48	53	52	49	56	66	46	654
13-14	49	50	42	60	57	45	53	52	46	59	48	55	616
14-15	49	47	57	66	59	48	61	48	55	52	48	65	655
15-16	59	45	57	56	49	56	59	43	59	63	55	63	664
16-17	41	53	45	35	32	54	55	51	72	55	59	56	608
17-18	47	49	50	59	47	42	49	43	45	44	40	44	559
18-19	45	39	30	34	56	39	39	34	37	25	24	52	454
19-20	44	36	29	34	27	53	46	28	29	41	37	23	427
20-21	24	30	19	22	19	23	24	17	6	23	24	26	257
21-22	19	20	17	17	15	19	22	18	16	12	7	12	194
22-23	27	22	15	22	22	8	7	10	8	9	7	9	166
23-24	5	5	6	9	6	4	4	12	13	13	7	9	93

Daily Total: 7228

AM Peak Hour (11:00-12:00)	617	8.54 % of Daily Total
PM Peak Hour (14:55-15:55)	666	9.21 % of Daily Total
4th Highest Hour (11:00-12:00)	617	8.54 % of Daily Total
8th Highest Hour (10:00-11:00)	496	6.86 % of Daily Total

ROADWAY TRAFFIC SURVEY

Day of Week: SUNDAY

Traffic Smithy
Traffic Survey Service

of Day	:05	:10	:15	:20	:25	:30	:35	:40	:45	:50	:55	:00	Tot.
	11	6	3	0	5	4	8	4	7	9	1	2	60
	5	6	7	0	4	3	2	4	0	5	1	1	38
	0	2	1	3	1	1	2	0	2	2	1	0	15
	3	0	1	1	0	0	0	1	0	1	0	2	9
	0	0	2	0	0	0	0	0	0	2	0	0	4
	0	0	1	3	0	0	3	2	4	0	3	2	18
	0	0	0	1	3	1	4	2	0	1	0	1	13
	3	2	7	2	2	5	3	4	1	6	4	6	45
	3	2	3	7	3	7	3	6	16	6	11	14	81
	6	12	16	8	18	11	23	8	15	21	24	24	186
	27	20	25	19	23	23	25	26	20	31	39	26	304
	44	36	38	43	40	28	43	45	35	41	39	34	466
	43	48	29	39	32	50	44	40	51	62	43	39	520
	63	35	49	48	47	33	55	53	48	51	43	35	560
	37	51	61	49	33	50	53	36	40	41	33	56	540
	39	56	45	41	45	62	52	46	41	40	56	32	555
	40	33	44	54	39	40	39	37	33	44	60	40	503
17-18	26	34	26	38	50	39	37	25	22	24	35	33	389
18-19	30	37	15	16	41	27	27	21	19	33	17	15	298
18-20	19	22	22	15	14	30	17	25	17	14	21	10	226
20-21	18	12	14	15	11	7	13	7	7	16	12	10	142
2L-22	7	6	13	11	14	10	7	5	5	5	4	3	90
22-23	8	9	4	5	8	7	4	3	5	4	4	1	62
23-24	3	0	5	1	5	3	2	3	6	1	2	1	32

Daily Total: 5156

AM Peak Hour (11:00-12:00)	466	9.04 % of Daily Total
PM Peak Hour (14:55-15:55)	579	11.23% of Daily Total
4th Highest Hour (12:00-13:00)	520	10.09% of Daily Total
8th Highest Hour (10:00-11:00)	304	5.9 % of Daily Total

Day of Week: WEDNESDAY

Traffic Smithy
Traffic Survey Service

'00-01	2	3	4	4	5	0	2	5	3	1	3	1	33
01-02	0	2	4	3	2	3	4	2	4	3	0	0	27
02-03	3	7	1	2	5	1	0	2	1	1	4	0	27
03-04	0	1	1	5	1	0	0	2	4	5	2	0	21
04-05	0	2	2	2	0	0	3	3	2	5	4	2	25
05-06	1	3	1	4	2	3	4	10	6	3	4	7	48
06-07	6	7	7	3	10	10	14	17	20	14	17	29	154
07-08	17	21	25	29	29	41	36	32	40	54	48	52	424
08-09	38	43	41	22	40	47	40	49	37	34	43	42	476
09-10	23	36	27	37	28	34	30	40	26	42	46	59	428
10-11	46	31	35	37	37	34	37	45	58	42	44	47	493
11-12	46	36	42	52	41	48	50	49	53	49	43	62	571
12-13	59	54	54	68	51	80	61	58	54	57	55	48	699
13-14	63	64	54	50	65	56	56	55	67	44	44	54	672
14-15	47	61	56	60	48	63	65	62	48	37	71	62	680
15-16	39	53	46	59	47	68	45	56	45	51	64	60	633
16-17	45	53	46	57	70	61	64	49	56	79	70	71	721
17-18	68	70	71	64	72	55	49	77	42	60	55	51	734
18-19	62	38	58	47	36	58	41	44	43	32	53	41	553
19-20	46	35	30	38	27	36	34	20	40	31	30	25	392
20-21	31	34	31	28	26	19	21	22	21	14	24	20	291
21-22	17	20	14	22	19	14	20	23	22	15	18	10	214
22-23	17	15	11	14	7	7	5	10	9	8	10	5	118
23-24	11	5	6	8	10	6	7	11	6	6	3	3	82

Daily Total: 8516

AM Peak Hour (11:00-12:00)	571	6.71 % of Daily Total
PM Peak Hour (16:40-17:40)	802	9.42 % of Daily Total
4th Highest Hour (14:00-15:00)	680	7.98 % of Daily Total
8th Highest Hour (18:00-19:00)	553	6.49 % of Daily Total

Day of Week: THURSDAY

Traffic Smithy
Traffic Survey Service

00-01	9	3	1	6	3	6	4	1	1	3	7	3	47
01-02	4	3	0	1	1	6	1	1	4	3	1	5	30
02-03	0	0	2	1	1	4	1	2	1	2	2	0	16
03-04	4	0	3	2	1	3	2	5	4	2	1	1	28
04-05	0	1	0	5	2	1	1	1	1	3	3	2	20
05-06	0	2	6	4	1	3	3	3	3	3	4	6	38
06-07	7	9	7	9	6	6	10	9	20	20	9	29	141
b7-08	22	28	31	28	28	38	36	39	46	53	61	59	469
08-09	50	37	52	37	38	53	42	38	29	28	33	40	477
09-10	33	30	31	46	38	35	26	33	30	34	42	32	410
10-11	38	37	43	45	53	34	39	44	49	38	52	53	525
11-12	51	43	68	47	49	51	55	48	61	62	56	57	648
12-13	61	61	66	59	49	71	65	61	51	53	59	64	720
13-14	65	49	74	60	58	72	52	55	56	43	56	55	695
14-15	59	54	61	47	39	54	51	48	70	48	45	58	634
[illegible]-16	55	63	55	42	73	58	62	64	58	59	52	55	696
[illegible]-17	65	52	76	86	71	52	80	52	62	84	70	80	830
17-18	74	63	71	67	64	83	83	65	69	57	55	65	816
18-19	51	63	40	57	57	46	54	45	54	33	54	64	618
19-20	46	48	51	41	38	43	32	33	33	26	36	39	466
20-21	24	25	30	21	25	29	20	20	23	17	14	16	264
21-22	14	27	25	14	14	20	9	19	23	20	16	11	212
22-23	15	12	12	9	12	15	10	11	5	9	0	8	118
23-24	6	8	7	8	6	11	3	6	7	4	8	7	81

Daily Total: 8999

AM Peak Hour (11:00-12:00)	648	7.2 % of Daily Total
PM Peak Hour (16:45-17:45)	873	9.7 % of Daily Total
4th Highest Hour (15:00-16:00)	696	7.73 % of Daily Total
8th Highest Hour (18:00-19:00)	618	6.87 % of Daily Total

Day of **Week:** FRIDAY

Traffic Smithy
Traffic Survey Service

09-10													
10-11													
11-12													
12-13													
13-14													
21-22	26	18	25	35	20	23	19	19	33	26	20	22	286
22-23	15	32	24	39	17	19	16	18	8	17	20	9	234

Daily Total: 10288

AM Peak **Hour** (11:00-12:00) 741	7.2	% of Daily Total
PM Peak **Hour** (16:30-17:30) 926	9	% **of** Daily Total
4th Highest **Hour** (15:00-16:00)789	7.67	% of Daily Total
8th Highest Hour (18:00-19:00)732	7.12	% of Daily Total

ROADWAY TRAFFIC SURVEY

Day of Week: SATURDAY

Traffic Smithy
Traffic Survey Service

Hour of Day	:00-:05	:05-:10	:10-:15	:15-:20	:20-:25	:25-:30	:30-:35	:35-:40	:40-:45	:45-:50	:50-:55	:55-:00	Hour Tot.
00-01	9	9	2	7	5	7	10	3	8	0	0	9	69
01-02	5	7	5	8	5	4	2	3	3	6	3	8	59
02-03	5	1	2	4	5	5	4	3	3	6	1	8	47
03-04	0	3	5	3	1	4	2	0	3	0	0	2	23
04-05	1	0	1	1	1	0	0	4	1	0	a	1	12
05-06	2	3	2	5	2	3	2	1	4	3	0	2	29
06-07	6	3	6	1	10	2	5	8	3	3	7	6	60
07-08	4	4	7	7	4	2	9	8	7	12	17	14	95
08-09	14	13	14	8	12	25	14	18	38	45	15	31	247
09-10	34	22	37	30	42	41	42	22	53	48	44	53	468
10-11	36	56	54	46	52	61	59	45	63	67	57	59	655
31-12	56	58	51	56	42	71	57	54	67	68	65	81	726
12-13	56	66	71	68	61	62	61	59	66	70	79	67	786
13-14	71	61	73	78	69	73	66	75	63	82	70	71	852
14-15	71	72	74	78	59	52	72	76	87	55	69	88	853
-16	73	64	77	60	83	78	78	70	78	67	72	72	872
-17	57	71	75	57	54	74	63	75	77	84	85	72	844
17-18	71	64	69	56	67	69	53	31	63	58	54	61	716
18-19	63	58	55	53	53	52	35	62	49	23	49	42	594
19-20	48	32	43	22	43	40	44	37	31	32	28	22	422
20-21	17	39	30	19	20	17	23	20	15	19	22	14	255
21-22	21	24	17	19	21	16	11	17	20	13	23	20	222
22-23	12	12	12	18	9	18	7	17	8	8	12	8	141
23-24	17	5	13	9	11	19	8	9	8	12	9	8	128

Daily Total: 9175

AM Peak Hour (11:00-12:00) 726 — 7.91 % of **Daily Total**

PM Peak **Hour** (14:55-15:55) 888 — 9.68 % of Daily Total

4th Highest Hour (16:00-17:00)844 — 9.2 % of Daily Total

8th Highest Hour (10:00-11:00)655 — 7.14 % of Daily Total

ROADWAY TRAFFIC SURVEY

Day of Week: SUNDAY

Traffic Smithy
Traffic Survey Service

Hour of Day	:00-:05	:05-:10	:10-:15	:15-:20	:20-:25	:25-:30	:30-:35	:35-:40	:40-:45	:45-:50	:50-:55	:55-:00	Hour Tot.
00-01	4	10	3	8	3	11	8	2	9	2	6	4	70
01-02	2	1	7	4	3	2	8	3	3	3	3	4	43
02-03	4	6	1	3	3	3	2	3	3	1	1	4	34
03-04	0	5	0	4	3	1	2	0	3	7	0	0	25
04-05	2	1	1	0	0	1	1	4	1	1	1	1	14
05-06	1	0	4	5	2	3	1	2	1	0	1	2	22
06-07	5	3	4	3	3	3	4	1	2	4	6	5	43
07-08	0	7	3	4	5	4	3	6	7	12	12	9	72
08-09	8	11	8	5	18	10	13	17	8	12	13	13	136
09-10	17	15	25	26	21	29	23	17	22	26	22	40	283
10-11	30	25	27	34	35	36	25	31	31	31	43	31	379
11-12	38	35	54	37	57	32	52	41	58	40	59	54	557
12-13	47	34	53	46	54	54	50	56	54	57	47	59	611
13-14	57	69	61	55	53	75	41	55	58	56	56	59	695
14-15	52	74	70	45	80	61	81	54	46	84	51	59	757
15-16	SO	56	63	65	61	58	58	63	51	56	62	41	684
16-17	61	50	51	64	50	45	51	48	33	41	55	48	597
17-18	56	39	45	45	43	48	40	46	36	31	34	37	500
18-19	30	32	38	27	28	35	34	13	25	31	21	6	320
19-20	21	20	23	24	24	20	22	21	26	8	16	16	241
20-21	15	21	17	10	16	9	15	10	15	12	10	17	167
21-22	15	7	15	14	13	13	12	8	12	2	11	11	133
22-23	6	7	13	9	12	a	1	4	11	8	5	2	86
29-24	5	15	8	6	4	8	8	7	8	7	8	0	a4

Daily Total: 6553

AM Peak Hour (11:00-12:00)	557	8.5 % of Daily Total
PM Peak Hour (13:50-14:50)	762	11.63% of Daily Total
4th Highest Hour (12:00-13:00)	611	9.32 % of Daily Total
8th Highest Hour (10:00-11:00)	379	5.78 % of Daily Total

Day of Week: WEDNESDAY

Traffic Smithy
Traffic Survey Service

of Day	:05	:10	:15	:20	:25	:30	:35	:40	:45	:50	:55	:00	Tot.
	3	1	3	1	2	2	2	3	2	7	2	1	29
	2	2	0	1	3	3	3	1	1	1	1	0	18
	1	1	2	0	1	2	2	1	0	0	2	0	12
	0	2	0	1	1	1	1	0	1	0	0	0	7
	2	1	1	1	1	0	2	0	3	1	0	0	12
	2	0	0	1	0	1	2	2	3	1	1	6	19
	2	2	8	6	4	2	5	0	4	5	10	6	54
	11	15	9	7	13	7	6	10	13	10	11	14	126
	11	10	14	11	15	17	12	16	8	14	14	13	155
	15	13	17	14	10	9	13	20	9	7	14	6	147
	12	19	11	15	19	12	26	10	10	15	12	18	179
	19	20	12	22	24	22	8	27	21	26	19	28	248
	34	29	40	18	32	43	17	24	30	25	20	17	329
	30	30	27	28	17	24	23	22	31	26	29	25	312
	30	25	28	35	56	22	26	26	29	33	24	30	364
	39	38	40	42	27	40	42	45	48	46	36	43	486
	51	52	54	63	65	49	58	64	77	52	63	48	696
17-18	70	72	80	77	85	84	78	67	62	63	67	70	875
18-19	72	75	58	54	57	50	35	41	50	48	45	45	630
19-20	41	44	31	41	25	28	31	36	32	27	26	30	392
20-21	28	23	40	28	31	22	25	21	26	25	22	25	316
21-22	29	32	37	24	35	29	20	21	25	18	24	15	309
22-23	10	19	8	22	13	8	9	10	4	8	7	7	125
23-24	5	6	12	2	4	7	3	6	5	4	7	5	66

Daily Total: 5906

AM Peak Hour (11:00-12:00) 248 — 4.2 % of Daily Total

PM Peak Hour (17:10-18:10) 880 — 14.9 % of Daily Total

4th Highest Hour (15:00-16:00)486 — 8.23 % of Daily Total

8th Highest Hour (20:00-21:00)316 — 5.35 % of Daily Total

ROADWAY TRAFFIC SURVEY

dway: HART ROAD
ation: 500' West of Hall Boulevard
Direction: WEST BOUND
Date: 11/14/96
Day of Week: THURSDAY

Traffic Smithy
Traffic Survey Service

Hour of Day	:00-:05	:05-:10	:10-:15	:15-:20	:20-:25	:25-:30	:30-:35	:35-:40	:40-:45	:45-:50	:50-:55	:55-:00	Hour Tot.
00-01	7	1	1	2	7	4	2	4	6	0	0	6	4c
01-02	1	1	3	3	1	2	0	1	3	0	4	0	19
02-03	0	2	2	0	2	0	1	1	1	1	3	1	14
03-04	1	0	1	0	1	0	0	2	1	2	1	2	11
04-05	0	2	0	1	1	2	1	1	2	1	1	0	12
05-06	1	1	3	4	0	1	2	3	2	0	2	1	20
06-07	1	0	2	12	5	5	6	2	2	6	11	7	59
07-08	8	12	8	14	5	6	6	7	8	19	17	15	125
08-09	13	12	9	11	10	7	12	15	17	11	15	9	141
09-10	11	10	15	22	20	5	19	11	13	12	11	11	160
10-11	10	12	16	11	13	14	14	7	12	23	15	13	160
11-12	20	17	23	25	28	23	17	23	26	30	35	27	294
12-13	21	22	31	27	27	16	20	26	21	18	24	23	276
13-14	29	22	31	29	22	25	22	27	31	20	23	26	307
14-15	21	26	22	50	45	29	24	38	36	33	42	35	401
15-16	35	22	40	48	40	39	38	48	37	41	48	46	482
16-17	49	61	64	45	48	58	58	69	67	66	63	57	705
17-18	72	77	86	85	58	78	82	91	71	87	85	73	94s
18-19	62	53	66	65	71	57	66	71	44	38	54	38	685
19-20	38	40	33	27	36	34	32	26	24	32	24	33	379
20-21	29	29	31	28	31	31	31	24	37	27	23	37	358
21-22	30	29	38	33	35	27	31	36	25	23	22	26	355
22-23	20	18	10	21	10	12	12	11	12	6	7	9	148
23-24	10	12	10	7	8	4	6	5	4	4	4	3	77

Daily Total: 6173

AM Peak Hour (11:00-12:00) 294 — 4.76 % of Daily Total
PM Peak Hour (17:00-18:00) 945 — 15.31% of Daily Total
4th Highest Hour (15:00-16:00)482 — 7.81 % of Daily Total
8th Highest Hour (21:00-22:00)355 — 5.75 % of Daily Total

ROADWAY **TRAFFIC** *SURVEY*

dway: HART ROAD
ation: 500' West of Hall Boulevard
Direction: WEST BOUND
Date: 11/15/96
Day of Week: FRIDAY

Traffic Smithy

Hour of Day	:00-:05	:05-:10	:10-:15	:15-:20	:20-:25	:25-:30	:30-:35	:35-:40	:40-:45	:45-:50	:50-:55	:55-:00	Hour Tot.
00-01	7	2	3	4	5	3	1	0	1	0	3	0	29
01-02	0	7	1	4	0	3	0	3	1	3	1	0	23
02-03	3	2	3	3	1	3	1	1	3	2	2	0	24
03-04	1	1	1	0	1	1	0	0	0	0	0	0	5
04-05	2	0	1	0	0	1	1	2	1	1	0	1	10
05-06	1	0	2	1	0	1	0	4	1	1	1	4	16
06-07	3	0	4	6	7	5	3	2	2	6	6	8	52
07-08	8	10	6	10	9	8	9	12	12	8	10	20	122
08-09	18	10	10	12	6	15	14	9	9	13	15	13	144
09-10	19	11	15	10	18	11	10	23	9	20	16	18	180
10-11	19	13	17	17	16	18	11	11	14	16	20	20	192
11-12	9	24	25	16	19	22	28	24	27	30	20	32	276
12-13	25	28	29	25	32	20	32	21	22	21	28	25	308
13-14	28	21	26	33	30	38	25	17	22	35	19	19	313
14-15	27	29	30	29	40	49	46	38	34	35	41	42	440
-16	43	50	42	33	33	44	32	57	54	36	64	46	534
-17	60	58	62	51	54	66	79	67	68	65	70	68	768
17-18	63	71	68	88	75	62	74	85	72	77	69	62	866
18-19	52	63	65	61	52	47	49	46	43	32	44	35	589
19-20	36	37	40	30	24	31	37	31	31	32	28	32	389
20-21	25	31	24	32	23	22	21	24	23	30	29	17	301
21-22	19	30	29	33	28	21	29	20	21	25	16	18	289
22-23	28	21	30	33	19	27	16	18	16	15	19	17	259
23-24	25	22	18	13	22	17	19	10	9	13	15	15	198

Daily Total: 6327

AM Peak Hour (11:00-12:00) 276 — 4.36 % of Daily Total
PM Peak Hour (16:50-17:50) 873 — 13.8 % of Daily Total
4th Highest Hour (15:00-16:00)534 — 8.44 % of Daily Total
8th Highest Hour (12:00-13:00)308 — 4.87 % of Daily Total

ROADWAY TRAFFIC SURVEY

adway: HART ROAD
ation: 500' West of Hall Boulevard
Direction: WEST BOUND
Date: 11/16/96
Day of Week: SATURDAY

Traffic Smithy
Traffic Survey Service

Hour of Day	:00-:05	:05-:10	:10-:15	:15-:20	:20-:25	:25-:30	:30-:35	:35-:40	:40-:45	:45-:50	:50-:55	:55-:00	Hour Tot.
00-01	11	10	18	6	10	8	7	9	3	1	7	7	97
01-02	3	4	7	2	4	3	1	1	4	1	5	3	38
02-03	7	4	2	2	5	2	4	1	1	3	0	3	34
03-04	1	3	0	2	1	1	0	2	3	1	2	0	16
04-05	2	1	0	0	1	2	0	1	2	0	2	4	15
05-06	2	2	0	0	0	1	0	1	3	1	1	0	11
06-07	0	2	0	0	0	1	1	1	3	1	0	3	12
07-08	1	0	1	2	3	3	4	3	9	2	8	5	41
08-09	4	10	4	a	6	11	7	16	18	16	7	15	122
09-10	15	10	a	13	11	16	12	21	18	21	14	16	175
10-11	24	18	11	26	25	22	36	19	30	25	24	38	298
11-12	31	29	27	41	25	29	39	40	46	34	33	29	403
12-13	41	46	53	32	35	26	28	26	44	29	34	27	421
13-14	44	43	30	38	37	33	34	40	42	46	34	40	461
14-15	40	42	41	43	27	33	35	49	44	25	37	59	475
-16	41	29	61	26	42	36	38	44	51	47	40	44	499
-17	62	42	49	53	45	42	38	29	47	55	41	35	538
17-18	50	44	47	51	40	46	38	40	25	27	24	47	479
18-19	32	40	22	40	39	43	36	24	28	30	33	25	392
19-20	27	26	34	33	12	32	30	26	26	16	23	20	305
20-21	26	31	27	18	17	25	26	16	20	24	17	22	269
21-22	10	18	20	16	13	18	17	27	19	21	24	20	223
P2-23	23	15	20	23	16	18	17	21	19	11	13	6	202
23-24	17	16	19	16	11	18	9	6	13	14	9	13	161

Daily Total: 5687

AM Peak Hour (10:55-11:55)	412	7.24 % of Daily Total
PM Peak Hour (15:35-16:35)	557	9.79 % of Daily Total
4th Highest Hour (14:00-15:00)	475	8.35 % of Daily Total
8th Highest Hour (18:00-19:00)	392	6.89 % of Daily Total

Day of Week: SUNDAY

Traffic Smithy
Traffic Survey Service

00-01	11	12	7	12	11	6	2	7	4	6	7	7	92
01-02	7	1	5	6	2	**3**	**6**	0	2	4	**3**	**3**	42
02-03	2	**4**	**3**	**3**	**5**	**5**	**3**	2	1	**0**	3	**3**	34
03-04	0	7	**0**	3	2	0	3	2	2	1	0	1	21
04-05	2	0	1	1	2	1	1	1	0	2	1	0	12
05-06	**0**	1	0	0	0	0	1	0	1	2	1	2	8
06-07	**3**	2	0	**0**	1	1	2	2	1	1	1	1	15
Q7-08	2	1	0	0	1	2	1	3	3	1	5	2	21
08-09	4	3	1	3	8	8	6	7	9	6	6	4	65
09-10	2	0	7	8	9	11	14	12	16	6	5	9	99
10-11	14	17	11	10	14	13	13	11	13	18	15	18	164
11-12	26	22	17	26	30	23	35	25	33	23	30	29	319
12-13	23	24	23	32	32	31	38	39	35	28	36	30	372
13-14	36	34	35	30	43	20	34	26	34	47	39	34	412
14-15	38	30	29	28	41	45	29	34	34	32	48	23	411
-16	38	36	30	36	45	30	35	42	46	45	41	56	480
-17	27	57	48	45	31	47	50	38	28	38	46	44	499
17-18	45	23	36	35	24	37	37	33	37	30	22	26	385
18-19	27	32	21	22	24	23	33	29	32	30	25	16	314
19-20	23	21	30	21	19	21	22	18	25	12	21	17	250
20-21	22	16	21	21	16	20	13	20	24	18	23	13	227
21-22	25	10	10	15	19	13	9	16	5	14	15	13	164
22-23	12	14	16	9	4	11	4	8	3	6	4	6	97
23-24	5	2	4	1	3	4	1	7	4	2	7	2	42

Daily Total: 4545

AM Peak Hour (11:00-12:00) 319 — 7.02 % of Daily Total

PM Peak Hour (15:35-16:35) 535 — 11.77% of Daily Total

4th Highest Hour (14:00-15:00)411 — 9.04 % of Daily Total

8th Highest Hour (18:00-19:00)314 — 6.91 % of Daily Total

ROADWAY TRAFFIC SURVEY

adway:

Direction:

day of Week: WEDNESDAY

Traffic Smithy
Traffic Survey Service

Hour of Day	:05	:10	:15	:20	:25	:30	:35	:40	:45	:50	:55	:00	Tot.
00-01	1	3	2	0	1	0	0	1	0	1	1	2	12
01-02	2	0	1	0	0	0	0	0	0	0	1	0	4
02-03	1	1	0	1	0	0	0	1	0	0	1	0	5
03-04	0	0	2	1	1	1	1	1	0	0	0	1	8
04-05	0	1	5	1	0	1	5	1	3	3	3	5	28
05-06	4	4	10	11	11	13	12	17	15	21	32	25	175
06-07	33	29	31	42	32	46	53	52	59	66	71	76	590
07-08	55	70	79	86	97	82	91	93	99	93	99	88	1032
08-09	64	71	59	72	63	49	80	70	55	63	47	49	742
09-10	37	34	41	27	34	30	29	31	31	29	35	34	392
10-11	25	39	23	17	24	23	17	21	21	23	20	20	273
11-12	21	26	26	19	29	18	27	24	14	31	29	15	279
12-13	25	21	27	24	37	29	17	27	37	24	31	26	325
13-14	24	22	33	28	30	23	17	32	18	29	23	29	308
'1415	34	21	20	25	31	28	13	24	32	30	35	30	323
	24	30	23	18	35	19	17	14	19	32	28	20	279
-17	28	27	27	38	41	19	33	35	27	16	30	40	361
17-18	20	32	31	34	24	32	38	29	30	28	18	26	342
18-19	31	25	28	30	31	26	30	36	39	34	35	25	370
19-20	25	20	25	21	25	27	12	8	11	19	12	15	220
20-21	19	9	15	11	8	6	7	7	14	8	8	4	116
21-22	6	9	7	10	7	10	13	5	9	7	3	7	93
22-23	3	6	5	5	5	6	3	9	4	2	2	0	50
23-24	8	4	1	0	0	1	3	1	1	3	4	0	26

Daily Total: 6353

AM Peak Hour (07:10-08:10) 1042 — 16.4 % of Daily Total

PM Peak Hour (17:55-18:55) 371 — 5.84 % of Daily Total

4th Highest Hour (09:00-01:00) 392 — 6.17 % of Daily Total

8th Highest Hour (12:00-13:00) 325 — 5.12 % of Daily Total

ROADWAY TRAFFIC SURVEY

Roadway: HART ROAD
Location: 500' West of Ball Boulevard
Direction: EAST BOUND
Date: 11/14/96
Day of Week: THURSDAY

Traffic Smithy
Traffic Survey Service

Hour of Day	:00-:05	:05-:10	:10-:15	:15-:20	:20-:25	:25-:30	:30-:35	:35-:40	:40-:45	:45-:50	:50-:55	:55-:00	Hour Tot.
00-01	2	0	3	0	1	0	0	1	3	2	1	1	14
01-02	1	1	1	0	1	0	0	0	2	1	0	0	7
02-03	0	0	1	1	0	0	2	3	2	0	1	0	10
03-04	0	3	1	0	0	1	0	1	0	1	0	1	8
04-05	0	2	2	1	0	0	1	5	10	2	6	5	34
05-06	7	5	6	7	11	13	13	16	18	22	19	17	154
06-07	25	29	35	39	40	48	46	67	57	72	56	62	576
07-08	62	82	82	86	98	87	76	75	79	93	94	114	1028
08-09	85	67	71	69	68	53	60	51	46	55	34	49	708
09-10	42	45	27	45	28	38	22	29	42	27	30	31	406
10-11	31	27	30	24	26	34	20	22	23	34	33	28	332
11-12	26	22	27	24	25	30	22	28	31	26	21	10	292
12-13	30	25	21	26	25	26	27	19	24	32	48	22	325
13-14	16	24	27	19	29	24	36	21	24	28	16	23	287
14-15	23	27	29	15	24	22	23	22	26	36	27	24	298
15-16	25	19	26	28	27	34	33	30	23	28	21	29	323
16-17	31	28	34	27	33	24	22	26	41	37	28	23	354
17-18	28	28	23	35	39	32	24	31	24	23	24	36	347
18-19	26	28	32	36	32	41	31	22	42	30	40	34	394
19-20	28	28	30	31	18	19	17	16	16	13	19	12	247
20-21	19	5	14	11	12	17	10	18	9	17	8	11	151
21-22	10	8	10	4	6	10	6	11	8	5	6	7	91
22-23	3	8	5	3	8	8	0	4	5	5	4	2	55
23-24	1	0	5	4	2	3	3	3	3	1	1	2	28

Daily Total: 6469

AM Peak Hour (07:05-08:05)	1051	16.25% of Daily Total
PM Peak Hour (18:10-19:10)	396	6.12 % of Daily Total
4th Highest Hour (09:00-01:00)	406	6.28 % of Daily Total
8th Highest Hour (10:00-11:00)	332	5.13 % of Daily Total

Day of Week: FRIDAY

Traffic Smithy
Traffic Survey Service

00-01	3	0	0	1	1	0	0	2	2	1	0	1	11
01-02	1	1	2	0	2	0	0	0	1	1	1	0	9
02-03	0	0	1	1	1	1	2	1	0	0	1	1	9
03-04	0	1	1	0	1	0	0	0	0	0	1	0	4
04-05	3	1	1	2	1	0	2	5	3	3	3	4	28
05-06	4	10	8	5	16	7	15	10	17	28	18	29	167
06-07	29	35	38	28	41	46	44	58	54	58	60	61	552
07-08	65	73	87	94	81	86	71	87	76	90	91	90	991
08-09	70	70	54	77	58	69	67	50	64	45	56	51	731
09-10	43	40	39	45	34	32	32	31	26	35	36	21	414
10-11	25	25	24	22	28	22	27	20	33	26	31	30	313
11-12	17	29	28	23	21	34	31	25	38	35	34	25	340
12-13	33	22	31	27	23	24	27	32	25	28	32	23	327
13-14	29	31	18	36	29	22	35	31	29	18	37	20	335
14-15	20	25	20	27	28	29	26	17	40	34	31	30	327
15-16	21	29	26	28	28	28	21	25	35	31	25	34	331
16-17	34	38	34	18	28	24	24	30	38	39	23	33	363
17-18	29	31	50	31	34	36	18	25	29	22	31	29	365
18-19	35	34	28	41	46	35	28	39	35	40	33	41	435
19-20	26	29	35	25	29	25	18	17	24	21	19	19	287
2q-21	16	19	22	15	9	10	11	12	12	8	7	9	150
23-22	0	5	8	13	4	13	13	9	6	3	18	11	103
22-23	11	3	6	14	9	16	9	8	6	6	3	12	103
23-24	2	4	4	4	9	5	6	7	6	4	10	8	69

Daily Total: 6764

AM Peak Hour (07:05-08:05)	996	14.73% of Daily Total
PM Peak Hour (18:00-19:00)	435	6.43 % of Daily Total
4th Highest Hour (18:00-19:00)	435	6.43 % of Daily Total
8th Highest Hour (11:00-12:00)	340	5.03 % of Daily Total

ROADWAY **TRAFFIC** SURVEY

Roadway: HART ROAD
Location: 500' West of Hall Boulevard
Direction: EAST BOUND
Date: 11/16/96
Day of Week: SATURDAY

Traffic Smithy
Traffic Survey Service

Hour of Day	:00-:05	:05-:10	:10-:15	:15-:20	:20-:25	:25-:30	:30-:35	:35-:40	:40-:45	:45-:50	:50-:55	:55-:00	Hour Tot.
00-01	1	6	4	2	3	2	1	2	3	1	2	5	32
01-02	1	1	1	0	0	1	1	0	0	3	1	1	10
02-03	3	0	0	3	3	2	0	3	0	1	0	2	17
03-04	0	1	1	0	0	0	1	1	0	0	0	0	4
04-05	1	0	1	1	1	0	0	3	2	1	2	1	13
05-06	2	0	3	7	2	5	4	12	3	6	5	4	53
06-07	4	8	6	9	2	10	8	13	15	14	18	11	118
07-08	13	7	8	7	16	18	20	22	33	20	26	20	210
08-09	25	14	26	27	33	34	28	37	55	43	45	38	405
09-10	25	28	32	45	31	42	48	49	46	55	56	44	501
10-11	43	44	44	35	38	50	33	47	40	47	49	44	514
11-12	46	35	44	40	57	39	42	42	48	37	43	44	517
12-13	38	35	41	33	30	45	41	47	38	38	44	35	465
13-14	55	33	38	49	48	40	31	40	41	42	36	29	482
14-15	35	38	27	33	34	33	36	39	24	28	35	41	403
15-16	34	27	36	34	40	26	34	32	43	24	42	23	395
16-17	19	29	38	27	47	33	34	32	29	37	42	41	408
17-18	32	31	30	33	31	29	25	27	36	26	42	29	371
18-19	33	35	23	28	21	21	18	22	24	35	26	15	301
19-20	25	20	15	19	31	12	20	19	16	19	14	13	223
20-21	15	18	11	6	11	7	11	14	6	4	11	7	121
21-22	9	9	20	9	8	9	7	11	13	12	10	6	123
22-23	11	6	8	16	11	9	7	11	8	9	6	3	105
23-24	3	3	4	7	12	3	5	3	6	8	5	7	66

Daily Total: 5857

AM Peak Hour (09:30-01:30)	552	9.42 % of Daily Total
PM Peak Hour (12:25-13:25)	511	8.72 % of Daily Total
4th Highest Hour (13:00-14:00)	482	8.23 % of Daily Total
8th Highest Hour (14:00-15:00)	403	6.88 % of Daily Total

Day of Week: SUNDAY

Traffic Smithy
Traffic Survey Service

Hour of Day	:00-:05	:05-:10	:10-:15	:15-:20	:20-:25	:25-:30	:30-:35	:35-:40	:40-:45	:45-:50	:50-:55	:55-:00	Hour Tot.
00-01	5	5	2	2	9	4	3	2	1	0	3	1	37
01-02	4	3	3	3	1	1	0	2	2	1	0	1	21
02-03	2	1	0	1	0	2	1	1	3	0	1	2	14
03-04	1	1	1	0	0	1	0	0	1	2	0	0	7
04-05	0	0	0	0	3	1	2	4	0	0	0	1	11
05-06	4	1	2	0	2	1	3	2	3	2	1	5	26
06-07	2	4	4	0	2	1	7	6	7	12	11	9	65
07-08	7	9	4	5	14	10	7	11	7	14	17	16	121
08-09	14	12	17	15	15	18	17	20	22	30	25	31	236
09-10	21	29	29	29	38	42	25	26	33	31	44	34	381
10-11	26	24	37	32	35	32	30	40	28	44	35	32	395
11-12	42	22	16	29	35	42	31	32	27	39	47	38	400
12-13	34	30	50	40	39	32	40	37	26	46	44	33	451
13-14	48	39	40	36	46	26	37	34	44	26	31	39	446
14-15	40	31	33	47	30	31	36	30	32	28	42	37	417
15-16	23	30	35	29	38	37	29	45	34	43	31	25	399
16-17	25	32	30	34	37	27	42	30	35	26	34	27	379
17-18	23	25	30	30	27	17	25	25	24	27	25	29	307
18-19	22	19	16	21	16	22	27	17	28	20	17	27	252
19-20	24	22	18	21	8	11	6	10	12	16	9	9	166
20-21	7	9	13	13	10	8	5	10	9	6	7	5	102
21-22	7	8	6	3	5	2	6	4	4	4	5	3	57
22-23	4	5	6	10	3	5	6	2	2	1	0	0	44
23-24	4	5	2	2	4	2	7	5	2	2	1	2	38

Daily **Total:** 4772

AM **Peak** Hour (10:05-11:05) 411 — 8.61 % of **Daily Total**

PM Peak Hour (12:10-13:10) 474 — 9.93 % **of Daily Total**

4th Highest Hour (11:00-12:00)400 — 8.38 % **of Daily Total**

8th Highest Hour (16:00-17:00)379 — 7.94 % of **Daily** Total

Direction: NORTH BOUND
Date: 11/12/96
Day of Week: WEDNESDAY

Traffic Smithy
Traffic Survey Service

Hour of Day	:00-:05	:05-:10	:10-:15	:15-:20	:20-:25	:25-:30	:30-:35	:35-:40	:40-:45	:45-:50	:50-:55	:55-:00	Hour Tot.
00-01	0	0	1	0	1	0	0	0	1	0	0	0	3
01-02	0	0	0	0	0	0	1	0	0	0	0	0	1
02-03	0	0	0	0	0	2	0	0	0	0	0	0	2
03-04	0	0	0	0	0	0	0	0	0	0	1	0	1
04-05	0	0	0	0	0	1	1	0	0	1	0	0	3
05-06	0	3	0	3	2	2	3	2	2	3	3	0	23
06-07	3	7	3	3	5	4	7	4	13	7	8	12	76
07-08	13	18	23	14	10	15	13	8	10	17	5	12	158
08-09	14	15	21	21	26	19	19	19	8	11	16	16	205
09-10	27	29	37	26	7	7	6	7	10	6	7	7	176
10-11	2	5	6	3	3	5	7	1	6	5	7	4	54
11-12	8	14	9	9	8	11	14	27	20	9	9	6	144
12-13	10	20	23	8	6	5	8	7	9	12	8	5	121
13-14	7	3	6	6	3	6	4	9	3	5	8	4	64
14-15	7	10	7	5	9	6	8	2	13	2	6	10	85
15-16	5	19	6	3	20	10	8	5	27	29	13	10	155
16-17	12	9	12	11	21	16	8	7	17	13	16	5	147
17-18	9	5	10	6	9	8	8	8	5	13	3	6	90
18-19	14	5	7	8	13	11	10	9	13	8	9	4	111
19-20	3	3	3	5	8	4	5	7	3	5	7	4	57
20-21	7	14	17	9	5	4	2	0	5	8	4	6	81
21-22	5	6	3	4	2	3	1	6	2	2	0	1	35
22-23	1	1	4	1	1	1	1	1	1	2	1	1	16
23-24	0	0	1	1	1	1	0	1	0	0	0	1	6

Daily Total: 1814

***AM* Peak Hour** (08:20-09:20) 253 — 13.95% of Daily Total

PM Peak Hour (15:40-16:40) 175 — 9.65 % of Daily Total

4th Highest Hour (15:00-16:00) 155 — 8.54 % of Daily Total

8th Highest Hour (18:00-19:00) 111 — 6.12 % of Daily Total

ROADWAY TRAFFIC SURVEY

Day of Week: THURSDAY

Traffic Smithy
Traffic Survey Service

Hour of Day	:00-:05	:05-:10	:10-:15	:15-:20	:20-:25	:25-:30	:30-:35	:35-:40	:40-:45	:45-:50	:50-:55	:55-:00	Hour Tot.
	1	0	0	0	0	0	1	0	0	0	0	1	3
	0	1	1	0	0	0	0	0	0	0	0	0	2
	0	0	0	0	0	0	0	0	0	0	0	0	0
	2	0	0	0	0	0	0	0	0	0	0	0	2
	0	0	0	0	1	0	0	0	2	1	0	0	4
	1	2	1	1	2	1	2	1	1	2	0	0	14
	7	3	7	7	8	8	7	6	6	5	5	10	79
	7	16	24	14	8	8	12	13	13	17	14	15	161
	14	13	27	27	25	28	18	21	13	8	17	17	228
	26	34	29	25	10	5	8	9	9	7	6	5	173
	5	7	8	4	4	3	5	5	5	2	4	8	60
	5	11	5	9	5	5	6	14	18	7	3	4	92
	11	4	8	6	4	10	10	9	9	7	11	8	97
	6	7	1	5	5	3	8	7	12	3	5	3	65
	9	13	6	3	1	8	1	6	17	13	13	9	99
	10	11	17	11	23	16	13	9	30	24	18	10	192
	6	10	11	17	10	6	6	10	15	13	4	6	114
17-18	10	10	4	11	5	9	10	1	9	4	10	12	95
18-19	5	3	6	8	3	6	4	6	3	16	4	7	71
19-20	6	7	7	9	5	2	7	3	7	4	1	7	65
	10	9	8	4	5	2	1	2	2	3	4	1	51
21-22	11	15	7	11	8	3	2	0	0	2	2	0	61
22-23	3	1	1	1	1	0	1	1	0	1	1	0	11
23-24	2	2	0	0	0	0	0	0	0	0	1	3	8

Daily Total: 1747

AM Peak Hour	(08:15-09:15) 263	15.05% of Daily Total
PM Peak Hour	(15:00-16:00) 192	10.99% of Daily Total
4th Highest Hour	(07:00-08:00)161	9.22 % of Daily Total
8th Highest Hour	(17:00-18:00)95	5.44 % of Daily Total

ROADWAY TRAFFIC SURVEY

Roadway: **WILSON AVENUE**
Location: 250' **S. of Allen Boulevard**
Direction: **NORTH BOUND**
Date: 11/14/96
Day **of Week: FRIDAY**

Traffic Smithy
Traffic Survey Service

Hour of Day	:00-**:05**	:05-:10	:10-:15	:15-:20	:20-:25	:25-:30	:30-:35	:35-:40	:40-:45	:45-:50	:50-:55	:55-:00	**Hour Tot.**
00-01	0	1	0	0	0	0	0	1	2	0	0	0	4
01-02	0	0	0	2	0	1	0	2	0	0	0	0	5
02-03	0	1	0	0	0	0	0	0	0	0	0	0	1
03-04	0	1	0	0	0	0	0	0	0	0	0	1	2
04-05	0	0	0	0	0	1	1	0	0	1	0	0	3
05-06	0	1	2.	1	4	2	5	1	1	4	0	1	22
06-07	8	6	2	2	8	3	10	6	8	5	12	8	78
07-08	8	17	26	16	4	10	7	9	10	13	3	17	140
08-09	14	12	23	18	34	32	18	16	11	14	13	16	221
09-10	10	19	32	25	13	8	8	5	5	8	4	4	141
10-11	5	7	8	5	2	6	8	5	9	6	6	5	72
11-12	11	14	11	20	32	25	9	8	3	3	5	8	149
12-13	4	10	4	5	6	7	6	12	10	8	5	4	81
13-14	4	5	11	5	5	8	4	5	5	5	8	3	68
14-15	6	5	12	8	15	5	7	7	26	14	10	11	126
15-16	10	14	19	10	12	8	5	8	30	30	14	16	176
16-17	17	7	12	11	6	9	9	6	11	11	8	11	118
17-18	9	5	6	7	8	7	9	3	4	6	15	15	94
18-19	12	11	5	6	10	6	6	8	9	13	8	10	104
19-20	7	3	10	13	8	8	13	17	7	7	6	3	102
20-21	3	10	1	7	4	2	7	7	7	0	0	3	51
21-22	4	1	0	3	1	1	2	1	2	4	4	2	25
22-23	8	6	1	2	9	2	1	3	2	2	9	6	51
23-24	7	7	3	2	2	6	2	4	0	0	1	1	35

Daily Total: 1869

***AM* Peak Hour** (08:20-09:20)	240	12.84% ***of* Daily Total**
PM Peak Hour (15:05-16:05)	183	9.79 **% of Daily Total**
4th Highest Hour (09:00-01:00)	141	7.54 **% of Daily Total**
8th Highest Hour (18:00-19:00)	104	5.56 **% of Daily Total**

ROADWAY TRAFFIC SURVEY

Day of Week: SATURDAY

Traffic Smithy
Traffic Survey Service

Daily Total: **1196**

AM Peak Hour (11:00-12:00) 169	14.13%	of Daily Total
PM Peak Hour (12:25-13:25) 144	12.04%	of Daily Total
4th Highest Hour (12:00-13:00)97	8.11 %	of Daily Total
8th Highest Hour (08:00-09:00)73	6.1 %	of Daily Total

ROADWAY TRAFFIC SURVEY

Roadway: WILSON AVENUE
Location: 250' S. of Allen Boulevard
Direction: NORTH BOUND
Date: 11/16/96
day of Week: SUNDAY

Traffic Smithy
Traffic Survey Service

Hour of Day	:00-:05	:05-:10	:10-:15	:15-:20	:20-:25	:25-:30	:30-:35	:35-:40	:40-:45	:45-:50	:50-:55	:55-:00	Hour Tot.
00-01	0	0	1	0	0	0	0	2	1	0	0	0	4
01-02	0	0	0	0	0	0	0	0	0	2	0	0	2
02-03	0	1	0	1	0	0	1	0	0	0	0	0	3
03-04	0	0	0	0	0	0	0	0	0	0	0	0	0
04-05	0	0	0	0	0	0	0	1	0	1	0	1	3
05-06	0	0	0	1	1	0	0	1	0	0	0	0	3
06-07	1	0	0	0	0	0	1	3	0	0	2	0	7
07-08	0	1	1	7	1	2	1	1	7	3	2	3	29
08-09	5	3	6	3	5	5	4	6	7	7	8	10	69
09-10	10	6	10	3	8	11	7	10	4	4	6	7	86
10-11	4	7	6	12	3	5	2	13	12	31	30	22	147
11-12	19	20	21	9	10	4	7	17	17	13	6	8	151
12-13	12	13	4	6	6	6	13	13	11	34	20	26	164
13-14	24	21	11	8	3	10	4	6	5	5	9	9	115
14-15	4	7	11	5	5	9	9	5	4	7	3	7	76
15-16	6	9	6	13	6	5	2	4	3	7	11	0	72
16-17	5	8	5	6	3	3	5	6	8	4	5	10	68
17-18	4	4	8	8	9	5	6	7	8	2	4	2	67
18-19	3	4	5	2	5	3	5	6	3	2	7	2	47
19-20	6	12	16	8	9	5	0	2	5	6	2	1	72
20-21	3	3	6	5	3	1	4	2	1	0	3	0	31
21-22	0	0	2	1	4	1	0	0	1	1	1	2	13
22-23	1	2	0	1	2	0	0	0	0	0	1	0	7
23-24	2	0	0	1	0	0	0	0	0	0	0	0	3

Daily Total: 1239

AM Peak Hour (10:45-11:45)	207	16.71% of Daily Total
PM Peak Hour (12:30-13:30)	194	15.66% of Daily Total
4th Highest Hour (13:00-14:00)	115	9.28 % of Daily Total
8th Highest Hour (19:00-20:00)	72	5.81 % of Daily Total

Day of Week: WEDNESDAY

Traffic Smithy
Traffic Survey Service

of Day	:05	:10	:15	:20	:25	:30	:35	:40	:45	:50	:55	:00	Tot.
00-01	1	0	0	0	0	2	0	0	1	0	0	1	5
01-02	0	1	1	0	0	1	0	0	0	0	0	1	4
02-03	0	2	1	0	1	0	0	1	0	0	0	0	5
03-04	0	0	0	0	0	0	0	0	0	1	0	1	2
04-05	0	0	0	0	0	0	1	0	1	0	0	0	2
05-06	2	0	1	1	0	0	0	0	0	1	0	0	5
06-07	3	0	1	1	4	2	0	2	2	2	4	1	22
07-08	3	4	7	6	5	7	1	9	8	12	15	9	86
08-09	20	7	10	15	15	8	11	6	8	9	14	21	144
09-10	22	18	12	20	2	3	2	5	7	4	4	7	106
10-11	4	10	2	6	5	4	2	11	9	6	5	7	71
11-12	7	8	11	8	10	11	13	10	13	9	16	16	132
12-13	17	14	9	4	10	12	3	12	10	13	6	10	120
13-14	5	4	7	6	11	9	8	7	6	6	7	4	80
14-15	7	9	9	18	15	8	11	12	7	8	14	12	130
15-16	14	14	12	17	18	22	28	22	15	10	17	20	209
16-17	13	18	17	12	15	12	10	19	16	17	20	18	187
17-18	18	18	18	18	18	32	21	20	22	28	22	25	260
18-19	22	16	18	23	13	23	15	10	12	11	13	16	192
19-20	14	12	9	15	10	7	7	12	8	7	10	12	123
20-21	10	6	9	5	4	7	8	5	3	6	7	9	79
21-22	9	6	5	6	8	10	5	4	6	5	7	7	78
22-23	4	9	0	3	5	4	6	4	3	4	0	2	44
23-24	2	1	0	4	0	1	1	0	1	2	1	3	16

Daily Total: 2102

AM Peak Hour (08:20-09:20)	164	7.8 % of Daily Total
PM Peak Hour (17:20-18:20)	267	12.7 % of Daily Total
4th Highest Hour (16:00-17:00)	187	8.9 % of Daily Total
8th Highest Hour (19:00-20:00)	123	5.85 % of Daily Total

ROADWAY TRAFFIC SURVEY

Roadway: WILSON AVENUE
Location: 100' S. of Allen Boulevard
Direction: SOUTH BOUND
Date: 11/14/96
Day of Week: THURSDAY

Traffic Smithy

Hour of Day	:00-:05	:05-:10	:10-:15	:15-:20	:20-:25	:25-:30	:30-:35	:35-:40	:40-:45	:45-:50	:50-:55	:55-:00	Hour Tot.
	0	2	3	1	0	0	0	0	0	0	0	1	7
	0	1	0	0	0	0	1	0	0	0	0	0	2
	0	1	0	1	0	0	0	0	0	0	0	0	2
	1	2	0	0	1	0	0	0	0	0	1	0	5
	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	1	0	0	0	0	0	1	0	2	0	4
	1	1	2	1	5	0	2	0	3	1	2	0	18
	2	5	3	3	5	3	3	7	6	8	8	8	61
	12	7	9	14	16	17	6	10	5	12	11	21	140
	19	14	12	9	9	5	6	7	3	3	6	8	101
	1	4	6	3	7	2	6	5	5	7	4	5	55
	9	8	7	9	13	8	12	10	8	6	8	7	105
	5	4	17	5	9	12	6	12	15	12	5	7	109
	7	10	8	7	5	3	7	7	7	10	7	5	83
	11	5	10	18	18	9	11	14	10	12	16	15	149
	12	22	15	23	15	15	19	18	17	15	7	12	190
	12	11	16	22	10	20	19	17	19	11	12	11	180
17-18	16	12	19	23	21	24	19	14	18	22	21	13	222
18-19	30	16	16.	11	9	20	13	18	11	8	18	14	184
19-20	13	14	8	14	8	10	14	8	12	8	8	10	127
20-21	13	12	5	9	6	7	5	11	5	7	10	6	96
21-22	6	7	4	5	5	7	7	2	11	9	4	3	70
22-23	6	1	1	0	0	3	6	5	2	0	2	2	28
23-24	2	1	2	0	0	1	3	2	3	2	0	2	18

Daily Total: 1956

AM Peak Hour (08:15-09:15)	157	8.03 % of Daily Total
PM Peak Hour (17:10-18:10)	240	12.27% of Daily Total
4th Highest Hour (16:00-17:00)	180	9.2 % of Daily Total
8th Highest Hour (12:00-13:00)	109	5.57 % of Daily Total

Day of Week: FRIDAY

Traffic Smithy
Traffic Survey Service

	:00-:05	:05-:10	:10-:15	:15-:20	:20-:25	:25-:30	:30-:35	:35-:40	:40-:45	:45-:50	:50-:55	:55-:00	Hour Tot.
	0	1	0	0	0	0	1	0	2	3	0	1	8
	2	0	0	1	3	0	0	0	1	1	0	0	8
	2	1	2	0	0	0	1	0	0	0	0	0	6
	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	1	0	0	0	0	0	1
	0	1	1	0	0	0	0	0	0	0	0	1	3
	0	4	0	1	3	4	3	2	1	5	3	7	33
	0	3	4	5	10	4	8	11	5	12	6	10	78
	19	8	18	25	18	15	16	9	5	14	9	17	173
	19	21	19	16	6	5	7	9	8	5	7	10	132
	3	4	6	7	5	2	9	5	10	7	8	7	73
	7	11	8	8	7	6	5	9	8	8	3	10	90
	8	8	6	5	4	10	15	9	9	8	8	10	100
	9	8	7	6	8	10	8	10	5	5	11	7	94
	6	10	9	19	21	16	16	14	11	18	6	13	159
	24	17	13	18	15	20	35	19	17	13	16	12	219
	9	17	18	15	21	16	15	21	18	20	14	12	196
17-18	15	24	16	25	25	22	19	27	22	20	21	24	260
18-19	24	19	21	25	17	10	17	20	15	12	16	20	216
19-20	11	16	5	11	13	11	11	11	7	11	8	8	123
20-21	15	9	8	7	14	6	8	10	8	5	7	8	105
21-22	6	7	4	15	4	8	8	5	3	4	6	4	74
22-23	5	9	3	16	9	7	10	2	9	8	5	5	88
23-24	4	4	6	3	2	2	3	1	1	3	4	5	38

Daily Total: 2277
AM Peak **Hour** (08:15-09:15) 187 — 8.21 % of **Daily** Total
PM Peak **Hour** (17:20-18:20) 269 — 11.81% of **Daily** Total
4th Highest **Hour** (16:00-17:00)196 — 8.61 % of **Daily** Total
8th **Highest Hour** (19:00-20:00)123 — 5.4 % of **Daily** Total

ROADWAY TRAFFIC SURVEY

Roadway: WILSON AVENUE
Location: 100' S. of Allen Boulevard
Direction: SOUTH BOUND
Date: 11/16/96
Day of Week: SATURDAY

Traffic Smithy
Traffic Survey Service

Hour of Day	:00-:05	:05-:10	:10-:15	:15-:20	:20-:25	:25-:30	:30-:35	:35-:40	:40-:45	:45-:50	:50-:55	:55-:00	Hour Tot.
	3	3	4	3	1	0	2	1	0	2	1	2	22
	1	1	0	1	2	0	3	1	0	1	0	0	10
	2	0	3	1	0	1	0	3	0	0	0	0	10
	0	0	2	2	0	0	0	0	0	0	0	0	4
	0	0	2	0	0	0	0	0	0	1	0	1	4
	0	0	0	0	0	0	0	0	3	0	0	1	**4**
	0	1	0	1	0	0	0	0	0	2	0	0	4
	1	2	0	0	1	2	1	0	0	1	**1**	2	11
	2	1	6	8	3	5	7	12	10	15	11	12	92
	14	19	4	11	7	7	**10**	6	6	6	5	12	107
	14	16	14	16	12	**16**	**9**	14	14	13	12	12	162
	11	13	9	12	11	0	0	0	0	0	0	0	56
	0	0	0	0	0	0	0	0	0	**1**	0	0	1
	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	**0**	0	0
	0	0	0	0	0	0	**0**	'5	11	11	**8**	**16**	51
	11	20	14	13	10	9	**4**	13	11	12	12	**14**	143
17-18	10	15	19	13	17	11	8	11	11	5	**11**	**11**	142
18-19	13	12	9	9	15	7	**9**	8	13	10	12	7	124
19-20	13	9'	6	10	7	6	9	4	7	1	5	2	79
20-21	3	4	5	6	7	6	6	9	6	7	4	1	64
21-22	4	4	5	3	9	6	2	2	6	2	8	1	52
22-23	2	6	2	3	6	4	3	**5**	6	1	5	3	**46**
23-24	4	4	4	3	3	2	1	2	0	2	3	3	31

Daily Total: 1219

AM Peak Hour (10:00-11:00)	162	13.29% of Daily Total
PM Peak Hour (16:35-17:35)	155	12.72% of Daily Total
4th Highest Hour (18:00-19:00)	124	10.17% of Daily Total
8th Highest Hour (20:00-21:00)	64	5.25 % of Daily Total

ROADWAY TRAFFIC SURVEY

Roadway: WILSON AVENUE
Location: 100' S. of Allen Boulevard
Direction: SOUTH BOUND
Date: 11/17/96
Day of Week: SUNDAY

Traffic Smithy
Traffic Survey Service

1

Hour of Day	:00-:05	:05-:10	:10-:15	:15-:20	:20-:25	:25-:30	:30-:35	:35-:40	:40-:45	:45-:50	:50-:55	:55-:00	Hour Tot.
00-01	3	0	0	2	1	1	3	2	3	2	1	0	18
01;-02	0	0	3	2	1	0	1	0	1	1	1	1	11
02-03	0	1	1	0	1	2	3	1	0	0	0	0	9
03-04	0	1	0	1	1	1	0	0	0	0	0	0	4
04-05	0	0	0	0	0	0	0	0	0	0	0	0	0
05-06	0	0	0	0	0	1	0	0	0	1	1	0	3
06-07	0	0	0	0	0	0	0	1	0	0	0	1	2
07-08	0	0	1	0	1	0	2	1	0	1	1	0	7
08-09	3	2	6	5	7	8	11	11	8	12	20	21	114
09-10	17	16	4	7	5	5	3	2	5	3	2	5	74
10-11	3	4	3	5	7	7	2	11	6	11	14	21	94
11-12	12	12	8	6	7	9	7	14	11	6	6	5	103
12-13	4	11	13	11	6	5	11	14	11	2	16	13	117
13-14	15	11	9	8	7	8	6	10	9	5	6	11	109
14-15	12	4	5	11	14	8	10	8	8	11	12	10	113
15-16	8	12	8	7	12	6	10	9	'9	13	15	12	121
16-17	14	12	4	9	10	14	8	11	13	14	8	16	133
17-18	11	13	10	10	5	13	10	7	18	10	7	19	133
18-19	12	7	13	8	5	9	9	8	3	2	3	10	89
19-20	5	6	5	2	5	3	4	7	4	10	8	6	65
20-21	3	1	2	4	2	7	0	4	8	6	6	5	48
21-22	1	4	5	2	4	4	1	3	4	4	3	4	39
22-23	2	3	4	2	5	3	5	2	0	1	3	0	30
23-24	0	1	0	0	2	2	1	0	0	0	3	1	10

AM Peak Hour (08:20-09:20)	142	9.82 % of Daily Total
PM Peak Hour (16:20-17:20)	138	9.54 % of Daily Total
4th Highest Hour (12:00-13:00)	117	8.09 % of Daily Total
8th Highest Hour (11:00-12:00)	103	7.12 % of Daily Total

ROADWAY SPEED SURVEY

Roadway: SW SCHOLLS-FERRY **ROAD** Date: **7/11/96**
Location: 100 Ft West Of Morse Gravel Driveway Day of Week: THURSDAY
Direction: EAST BOUND Weather Condition: Non Rain
Posted Speed: **45** MPH

Traffic Smithy
Traffic Survey Service

Time of Day	Volume	SPEED <16	16-20	20-24	24-28	28-32	32-36	36-40	40-44	44-48	48-52	52-56	56-60	>60	P85	% Over Posted
00:00-01:00	12	0	0	0	0	0	0	2	2	1	3	2	1	1	--	67
01:00-02:00	8	0	0	0	0	0	0	2	0	1	2	1	2	0	--	75
02:00-03:00	7	0	0	0	0	0	0	0	2	1	1	1	1	0	--	67
03:00-04:00	6	0	0	0	0	0	0	0	2	0	2	2	0	0	--	67
04:00-05:00	24	0	0	0	0	0	0	0	4	6	9	2	3	0	55	75
05:00-06:00	143	0	0	0	0	0	4	11	20	41	46	14	5	1	52	68
06:00-07:00	408	0	0	0	0	0	1	34	63	137	123	33	12	0	51	67
07:00-08:00	629	5	6	2	0	2	22	68	151	213	139	18	0	1	50	51
08:00-09:00	403	0	1	0	2	3	15	47	79	147	88	18	1	1	50	54
09:00-10:00	335	0	0	1	6	6	12	70	76	93	43	19	7	0	50	42
10:00-11:00	285	0	0	0	1	1	22	48	66	83	54	3	3	0	49	43
11:00-12:00	294	0	2	1	3	9	27	69	74	73	32	3	0	0	48	31
12:00-13:00	300	0	0	1	5	5	26	63	84	63	40	8	4	1	49	33
13:00-14:00	280	2	1	1	6	9	18	67	67	69	32	3	1	0	48	32
14:00-15:00	260	0	1	1	0	9	18	52	56	76	40	4	2	0	49	40
15:00-16:00	258	0	0	0	4	5	18	47	68	62	43	5	3	1	49	38
16:00-17:00	304	0	0	0	3	3	9	54	76	100	43	14	0	0	49	44
17:00-18:00	336	0	1	0	0	3	16	60	95	93	55	11	2	0	49	41
18:00-19:00	361	0	0	0	0	3	17	44	83	138	57	13	4	1	49	50
19:00-20:00	208	0	0	0	0	1	8	42	52	55	34	16	0	0	50	44
20:00-21:00	168	0	0	0	0	1	14	28	47	49	19	6	3	0	49	39
21:00-22:00	139	0	0	0	1	1	11	37	34	33	20	2	0	0	48	34
22:00-23:00	89	0	0	0	1	1	6	13	28	23	12	2	3	0	49	38
23:00-24:00	35	0	0	0	0	1	2	5	7	11	7	0	2	0	50	49
TOTAL		7	12	7	32	63	266	863	1236	1568	944	200	59	7		
% by Group		0	0	0	1	1	5	16	23	30	18	4	1	0		
% Equal or Less		0	0	0	1	2	7	24	47	77	95	99	100	100		

Daily Traffic **5292**
AM Peak Hour (**7:00- 8:00**) **629** **11.89% of** Daily Total
PM **Peak** Hour **(18:00-19:00) 361** **6.82% of** Daily Total
4th Highest Hour (18:00-19:00) **361** **6.82%** of Daily Total
8th Highest Hour (12:00-13:00) 300 **5.67%** of Daily Total

Observations Over Posted Speed %
Observations +10mph Over %

Pace (- MPH) %

P50- P70- **P85- 50** P90-

P85=85th Percentile

ROADWAY SPEED SURVEY

Roadway: SW SCHOLLS-FERRY ROAD
Location: 125 Ft West Of Morse Gravel Driveway
Direction: WEST BOUND
Posted Speed: 45 MPH

Date: 7/11/96
Day of Week: THURSDAY
Weather Condition: Non Rain

Traffic Smithy
Traffic Survey Service

00:00-01:00	33	0	0	0	0	0	1	4	5	10	6	3	3	1	55	64
01:00-02:00	17	0	0	0	0	0	0	2	3	4	6	1	1	0	--	65
02:00-03:00	5	0	0	0	0	0	0	0	0	0	3	1	0	1	--	100
03:00-04:00	4	0	0	0	0	0	0	0	2	0	1	1	0	0	--	50
04:00-05:00	3	0	0	0	0	0	0	3	0	0	0	0	0	0	--	0
05:00-06:00	23	0	0	0	0	0	2	1	3	5	9	3	0	0	52	70
06:00-07:00	95	0	0	0	0	0	0	14	21	29	20	8	3	0	51	56
07:00-08:00	182	0	0	0	1	0	9	30	52	51	26	10	2	0	50	42
08:00-09:00	176	0	0	1	0	7	11	36	55	35	26	5	0	0	49	32
09:00-10:00	164	0	0	1	0	1	9	34	37	43	33	5	0	1	50	43
10:00-11:00	145	0	0	1	0	1	8	39	44	32	14	2	4	0	48	30
11:00-12:00	177	0	0	1	5	7	13	37	59	39	14	2	0	0	47	25
12:00-13:00	202	0	0	0	3	6	18	48	62	41	18	1	1	0	47	26
13:00-14:00	203	0	0	0	1	5	7	37	63	63	22	4	1	0	48	36
14:00-15:00	213	0	0	0	1	3	11	37	46	75	35	4	1	0	49	45
15:00-16:00	251	0	0	0	0	2	9	61	47	82	46	3	0	0	49	44
16:00-17:00	355	0	0	0	1	0	6	39	98	135	60	10	4	1	49	50
17:00-18:00	435	0	0	0	1	1	5	48	118	168	76	13	2	2	49	50
18:00-19:00	364	0	1	0	0	0	7	30	75	145	90	12	4	0	50	59
19:00-20:00	197	0	0	0	0	1	5	20	48	63	40	13	6	1	51	54
20:00-21:00	183	0	0	0	1	2	8	27	49	57	26	10	2	0	50	45
21:00-22:00	182	0	0	3	1	1	4	31	40	52	37	11	1	1	50	49
22:00-23:00	109	1	0	0	1	0	1	10	27	38	27	3	0	1	50	54
23:00-24:00	45	0	0	0	0	0	2	4	7	11	11	6	2	2	54	64
TOTAL		1	1	7	16	37	136	592	961	1178	646	131	37	11		
% by Group		0	0	0	0	1	4	16	26	31	17	3	1	0		
% Equal or Less		0	0	0	1	2	5	21	47	78	95	99	100	100		

Daily Traffic 3763
AM Peak Hour (7:00- 8:00) 182 4.84% of Daily Total
PM Peak Hour (17:00-18:00) 435 11.56% of Daily Total
4th Highest Hour (15:00-16:00) 251 6.67% of Daily Total
8th Highest Hour (19:00-20:00) 197 5.24% of Daily Total

99

P85=85th Percentile

Center Street Traffic Volume

Aug-97

Hour Ending	Eastbound	Westbound	Total	
1AM	29	36	65	
2	19	21	40	
3	16	8	24	
4	7	9	16	
5	12	8	20	
6	25	27	52	
7	71	62	133	
8	109	109	218	
9	115	123	238	
10	118	114	232	
11	169	148	317	
12 Noon	250	206	456	
1PM	285	291	576	4th
2	288	298	586	3rd
3	229	274	503	6th
4	255	293	548	5th
5	302	320	622	2nd
6	332	314	646	1st
7	259	233	492	7th
8	212	254	466	8th
9	193	211	404	
10	134	114	248	
11	89	88	177	
12 Mid	49	60	109	
TOTAL	3,567	3,621	7,188	

x:/projects/1997/P97097/xl/center.xls
8/27/97 14:38
DKS Associates

ROADWAY TRAFFIC SURVEY

Roadway: CENTER STREET
Location: 125' WEST OF 122ND AVENUE
Direction: EAST BOUND
Date: 8/21/97
Day of Week: THURSDAY
Axl s per Vehicles: 2

Traffic Smithy
Traffic Survey Service

Hour of Day	:00-:05	:05-:10	:lo-:15	:15-:20	:20-:25	:25-:30	:30-:3s	:35-:40	:40-:45	:45-:50	:50-:55	:55-:00	Hour Tot.
00-01	5	0	1	3	4	2	1	4	2	3	4	0	29
01-02	1	1	0	2	1	1	3	3	1	2	2	2	19
02-03	3	4	1	2	0	0	1	1	3	0	0	1	16
03-04	1	0	0	0	1	0	0	1	2	0	1	1	7
04-05	0	0	0	0	1	1	0	1	1	1	6	1	12
05-06	1	0	2	3	0	3	3	0	2	4	1	6	25
06-07	3	4	1	6	11	3	4	6	8	8	9	8	71
07-08	10	7	11	12	5	6	6	10	9	12	12	9	109
08-09	7	5	8	6	14	14	6	7	13	8	38	9	115
09-10	7	8	8	13	11	11	6	19	13	6	7	9	118
10-11	15	12	11	15	13	10	21	8	6	25	12	21	169
11-12	16	16	19	24	15	29	25	16	25	23	24	18	250
12-13	19	26	27	24	24	20	24	17	17	25	30	32	285
13-14	20	24	29	16	24	23	25	27	31	25	16	28	288
14-15	18	19	17	12	21	21	19	22	27	11	17	25	229
15-16	10	23	20	26	30	22	15	19	20	22	27	21	255
16-17	30	28	22	25	22	20	28	28	25	27	23	24	302
17-18	23	36	36	30	29	24	27	26	31	25	18	27	332
18-19	22	22	26	29	24	27	25	12	18	14	25	15	259
19-20	23	12	18	18	19	22	18	11	17	16	16	22	212
20-21	13	17	9	17	12	21	11	20	20	12	21	20	193
21-22	16	19	13	8	9	18	5	12	13	4	7	10	134
22-23	9	7	8	13	4	3	6	9	12	9	6	3	89
23-24	6	5	2	3	2	3	5	3	4	5	6	5	49

Daily Total: 3567

AM Peak Hour (10:55-11:55)	253	7.09 % of Daily Total
PM Peak Hour (16:45-17:45)	336	9.42 % of Daily Total
4th Highest Hour (12:00-13:00)	285	7.99 % of Daily Total
6th Highest Hour (14:00-15:00)	229	6.42 % of Daily Total

ROADWAY TRAFFIC SURVE

Roadway: CENTER STREET
Location: 125' WEST OF 122ND AVENUE
Direction: WEST BOUND
Date: 8/21/97
Day of Week: THURSDAY
Axles per Vehicles: 2

Traffic Smithy
Traffic Survey Service

Hour of Day	:00-:05	:05-:10	:lo-:15	:15-:20	:20-:25	:25-:30	:30-:35	:35-:40	:40-:45	145-:SO	:50-:55	:55-:00	Hour Tot.
00-01	4	2	3	7	3	1	3	3	3	3	1	3	36
01-02	2	2	4	1	2	2	2	1	2	1	0	2	21
02-03	1	2	1	1	1	1	0	I	0	0	0	0	8
03-04	4	1	0	0	1	0	1	1	1	0	0	0	9
04-05	0	0	0	0	0	0	0	2	1	0	1	4	8
05-06	3	1	0	1	4	3	1	1	2	2	6	3	27
06-07	1	4	5	1	4	6	7	3	12	2	13	4	62
07-08	4	9	4	8	7	10	6	9	13	12	16	11	109
08-09	6	9	9	10	9	9	8	9	9	13	12	20	123
09-10	10	8	6	7	7	9	7	12	10	14	16	a	114
10-11	8	9	10	16	15	9	20	7	9	18	12	15	148
11-12	a	19	18	12	21	14	17	21	19	28	15	14	206
12-13	19	19	19	26	30	18	20	23	24	29	32	32	291
13-14	30	25	25	16	25	18	20	I9	40	25	28	27	296
14-15	24	23	21	23	20	21	20	17	18	30	34	23	274
15-16	27	21	20	23	25	20	15	39	28	23	19	33	293
16-17	30	26	2s	28	24	19	37	18	17	38	24	32	320
17-18	27	21	35	25	36	26	27	27	31	25	11	23	314
18-19	18	24	16	22	26	19	16	18	19	20	14	21	233
19-20	16	28	27	24	25	23	17	18	17	21	14	24	254
20-21	15	20	12	20	21	14	17	16	24	15	25	12	211
21-22	14	10	8	14	10	6	7	12	8	a	9	8	114
22-23	7	6	13	7	10	10	5	10	7	6	3	4	88
23-24	9	7	1	4	7	5	5	7	6	3	3	3	60

Daily Total: 3621
AM Peak Hour (10:55-11:55) 203 — 5.72 % of Daily Total
PM Peak Hour (16:45-17:45) 349 — 9.64 % of Daily Total
4th Highest Hour (15:00-16:00)293 — 8.09 % of Daily Total
8th Highest Hour (18:00-19:00)233 — 6.43 % of Daily Total

ROADWAY TRAFFIC SURVEY

Location; 80' SOUTH OF CABOT STREET
Direction: NORTH BOUND
Date: 8/21/97
Day of Week: THURSDAY
Axles per Vehicles: 2

Traffic Smithy
Traffic Survey Service

Hour of Day	:00-:05	:05-:10	:10-15	:15-:20	:20-:25	:25-:30	:30-:35	:35-:40	:40-:45	:45-:50	:50-:55	:55-:00	Hour Tot.
00-01	1	0	0	1	0	1	0	0	0	0	1	0	4
01-02	1	0	0	1	0	0	0	0	0	0	0	0	2
02-03	0	0	0	0	0	0	0	0	0	0	0	0	0
03-04	0	0	0	0	0	0	0	0	0	0	0	0	0
04-05	1	0	0	0	0	0	0	0	0	0	0	0	1
05-06	0	0	0	0	0	0	0	3	0	0	0	0	3
06-07	0	0	0	0	1	a	0	0	0	0	0	2	3
07-08	2	2	1	0'	1	0	0	0	0	2	2	1	11
08-09	0	0	1	0	1	1	0	3	1	0	0	0	7
09-10	0	0	1	0	0	1	1	2	1	0	0	7	13
10-11	0	0	2	0	3	1	0	2	2	3	1	0	14
11-12	2	0	0	2	1	0	1	0	1	0	0	2	9
12-13	0	6	5	3	1	0	0	0	3	2	3	5	28
13-14	2	2	0	2	3	3	2	1	1	1	0	3	20
14-15	3	1	2	3	0	6	1	0	3	3	0	1	23
15-16	1	3	2	1	1	0	1	1	1	4	1	0	16
16-17	3	1	0	7	5	2	3	3	3	1	2	4	34
17-18	3	4	3	10	2	3	2	4	2	2	2	4	41
18-19	0	3	2	1	2	3	5	1	1	1	3	I	23
19-20	2	1	1	2	1	3	1	3	3	3	1	2	23
20-21	1	0	2	2	0	4	1	0	1	4	1	4	20
21-22	0	2	2	0	1	1	1	2	0	0	2	0	11
22-23	2	1	4	0	0	0	1	0	2	1	2	0	13
23-24	0	0	0	0	0	0	2	1	2	2	0	0	7

Daily Total: 326

AM Peak Hour (09:55-01:55)	21	6.44 % of Daily Total
PM Peak Hour (16:20-17:20)	43	13.19% of Daily Total
4th Highest Hour (14:00-15:00)	23	7.06 % of Daily Total
8th Highest Hour (20:00-21:00)	20	6.13 % of Daily Total

ROADWAY TRAFFIC SURVEY

Direction: SOUTH BOUND
Date: 8/21/97
Day of Week: THURSDAY
Axles per Vehicles: 2

Traffic Smithy
Traffic Survey Service

Hour of Day	:00-:05	:05-:10	:10-:15	:15-:20	:20-:25	:25-:30	:30-:35	:35-:40	:40-:45	:45-:50	:50-:55	:55-:00	Hour Tot.
00-01	1	0	0	0	0	0	0	0	1	1	0	0	3
01-02	2	0	0	1	0	0	0	0	0	0	0	0	3
02-03	0	0	0	0	0	0	0	0	0	0	0	0	0
03-04	0	0	0	0	0	0	0	0	0	0	0	0	0
04-05	0	0	0	0	0	0	0	0	0	0	0	0	0
05-06	0	0	0	0	0	0	0	1	0	0	1	0	2
06-07	0	0	1	0	1	1	1	0	1	0	1	1	7
07-08	2	0	1	3	0	0	0	0	1	3	0	1	11
08-09	0	3	2	1	2	2	0	0	1	2	0	2	15
09-10	0	1	0	2	1	2	0	1	2	3	1	2	15
10-11	0	1	1	1	3	0	1	0	0	1	1	1	10
11-12	1	2	1	1	1	1	0	1	0	0	1	1	10
12-13	1	3	1	2	1	1	0	2	0	3	5	2	21
13-14	2	4	0	1	0	2	3	1	0	2	3	3	21
14-15	3	1	3	6	1	3	0	0	7	4	2	1	31
15-16	1	3	2	0	4	1	2	1	4	2	2	1	23
16-17	1	0	3	3	5	1	3	4	5	1	0	1	27
17-18	1	2	2	2	4	3	3	7	2	2	0	2	30
18-19	2	4	3	3	5	1	2	2	1	2	1	1	27
19-20	2	2	2	2	1	5	2	1	2	3	4	1	27
20-21	5	2	3	0	0	1	0	2	3	3	0	2	21
21-22	1	1	0	0	1	2	0	1	3	0	3	0	12
22-23	2	2	5	0	0	0	2	0	2	0	3	0	16
23-24	0	1	0	1	1	1	1	0	1	1	0	0	7

Daily Total: 339
AM Peak Hour (09:25-01:25) 17 — 5.01 % of Daily Total
PM Peak Hour (17:25-18:25) 36 — 10.62% of Daily Total
4th Highest Hour (18:00-19:00)27 — 7.96 % of Daily Total
8th Highest Hour (13:00-14:00)21 — 6.19 % of Daily Total

APPENDIX D

VEHICLE OCCUPANCY SURVEYS

OCCUPANCY SURVEY

CANYON ROAD, WEST OF SW 117TH AVENUE, EASTBOUND (11/23/96)

Time Period	Driver Only	Two Persons	Three Persons	Four Persons	>Four Persons	Total Vehicles	Total Persons	Occupancy Rate
12:00 12:15	232	162	23	15	6	438	721	1.65
12:15 12:30	195	188	30	13	8	434	761	1.75
12:30 12:45	225	162	23	12	2	424	678	1.60
12:45 13:00	190	170	35	14	4	413	715	1.73
13:00 13:15	173	151	27	13	3	367	626	1.71
13:15 13:30	150	132	24	13	2	321	550	1.71
13:30 13:45	152	153	21	9	2	337	569	1.69
13:45 14:00	147	157	24	7	3	338	579	1.71
TOTALS	1464	1275	207	96	30	3072	5199	1.69
OCCUPANCY RATE			1.69 Persons/Vehicles					

OCCUPANCYSURVEY

CANYON ROAD, WEST OF SW 117TH AVENUE, WESTBOUND (11/23/96)

Time Period	Driver Only	Two Persons	Three Persons	Four Persons	>Four Persons	Total Vehicles	Total Persons	Occupancy Rate
12:00 12:15	205	3	17	8	3	236	312	1.32
12:15 12:30	215	155	20	10	2	402	637	1.58
12:30 12:45	188	145	18	3	0	354	544	1.54
12:45 13:00	213	152	15	3	2	385	586	1.52
13:00 13:15	209	144	9	6	1	369	554	1.50
13:15 13:30	189	162	19	11	4	385	638	1.66
13:30 13:45	174	126	11	4	1	316	481	1.52
13:45 14:00	168	150	17	1	1	337	529	1.57
TOTALS	1561	1037	126	46	14	2784	4281	1.54
OCCUPANCY RATE			1.54 Persons/Vehicles					

OCCUPANCY SURVEY

HALL BOULEVARD, SOUTH OF ALLEN BOULEVARD, SOUTHBOUND (1214196)

Time Period	Driver Only	Two Persons	Three Persons	Four Persons	>Four Persons	Total Vehicles	Total Persons	Occupancy Rate
16:00 16:15	154	34	6	0	0	194	240	1.24
16:15 16:30	152	42	3	0	0	197	245	1.24
16:30 16:45	186	43	3	0	0	232	281	1.21
16:45 17:00	192	38	8	0	0	238	292	1.23
17:00 17:15	223	55	8	1	0	287	36	1.26
17:15 17:30	216	38	4	1	0	259	308	1.19
17:30 17:45	186	65	1	2	0	254	327	1.29
17:45 18:00	185	57	2	0	0	244	305	1.25
TOTALS	1494	372	35	4	0	1905	2359	1.24
OCCUPANCY RATE				1.24 Persons/Vehicles				

Note: Due to light conditions, the technician could not count the occupancy levels in 15 cars.

OCCUPANCY SURVEY

HALL BOULEVARD, SOUTH OF ALLEN BOULEVARD, NORTHBOUND (12/5/96)

Time Period	Driver Only	Two Persons	Three Persons	Four Persons	>Four Persons	Total Vehicles	Total Persons	Occupancy Rate
16:00 16:15	186	67	111	1	0	365	657	1.80
16:15 16:30	179	54	4	2	0	239	307	1.28
16:30 16:45	196	53	7	0	0	256	323	1.26
16:45 17:00	190	66	4	1	0	261	338	1.30
17:00 17:15	240	49	2	3	0	294	356	1.21
17:15 17:30	191	58	1	2	0	252	318	1.26
17:30 17:45	176	45	2	1	0	224	276	1.23
17:45 18:00	180	83	0	0	0	263	346	1.32
TOTALS	1538	475	131	10	0	2154	2921	1.36
OCCUPANCY RATE			1.36 Persons/Vehicles					

OCCUPANCYSURVEY

Street: HALL BOULEVARD
Location: South of Allen Boulevard, Southbound
Date: November 19th, 1996 (Tuesday)

Time Period	Driver Only	Two Persons	Three Persons	Four Persons	>Four Persons	Total Vehicles	Total Persons	Occupancy Rate
7:00 - 7:15	127	5	11	0	0	143	170	1.19
7:15 - 7:30	205	25	0	0	0	230	255	1.11
7:30 - 7:45	209	15	0	0	0	224	239	1.07
7:45 - 8:00	318	12	0	0	0	330	342	1.04
8:00 - 8:15	232	14	0	0	0	246	260	1.06
8:15 - 8:30	177	20	0	0	0	197	217	1.10
8:30 - 8:45	146	12	0	0	0	158	170	1.08
8:45 - 9:00	115	10	0	0	0	125	135	1.08
TOTALS	1529	113	11	0	0	1653	1788	1.08
OCCUPANCY RATE			1.08 Persons/Vehicles					

OCCUPANCY SURVEY

Street: HALL BOULEVARD
Location: South of Allen Boulevard, Northbound
Date: November 19th, 1996 (Tuesday)

Time Period	Driver Only	Two Persons	Three Persons	Four Persons	>Four Persons	Total Vehicles	Total Persons	Occupancy Rate
7:00 - 7:15	78	15	0	0	0	93	108	1.16
7:15 - 7:30	69	13	0	0	0	82	95	1.16
7:30 - 7:45	111	23	0	1	0	135	161	1.19
7:45 - 8:00	119	16	0	1	0	136	155	1.14
8:00 - 8:15	120	14	1	0	0	135	151	1.12
8:15 - 8:30	132	20	0	0	0	152	172	1.13
8:30 - 8:45	94	16	11	0	0	121	159	1.31
8:45 - 9:00	112	28	11	0	0	151	201	1.33
TOTALS	835	145	23	2	0	1005	1202	1.20
OCCUPANCY RATE				1.20 Persons/Vehicles				

OCCUPANCY SURVEY

CANYON ROAD, BETWEEN 117TH AND LOMBARD AVENUE, EASTBOUND (12/4/96)

Time Period	Driver Only	Two Persons	Three Persons	Four Persons	>Four Persons	Total Vehicles	Total Persons	Occupancy Rate
16:00 16:15	265	118	27	0	0	410	582	1.42
16:15 16:30	252	44	8	1	1	306	374	1.22
16:30 16:45	261	60	6	2	0	329	407	1.24
16:45 17:00	319	48	4	3	0	374	439	1.17
17:00 17:15	280	67	7	1	0	355	439	1.24
17:15 17:30	276	73	7	2	1	359	457	1.27
17:30 17:45	275	59	15	5	3	357	476	1.33
17:45 18:00	241	60	10	0	0	311	391	1.26
TOTALS	2169	529	84	14	5	2801	3565	1.27
OCCUPANCY RATE			1.27 Persons/Vehicles					

OCCUPANCY SURVEY

CANYON ROAD (BETWEEN LOMBARD & 117) 12/11/96

Time Period	Driver Only	Two Persons	Three Persons	Four Persons	>Four Persons	Total Vehicles	Total Persons	Occupancy Rate
16:00 16:15	280	75	1	3		359	445	1.24
16:15 16:30	259	61	5	2		327	404	1.24
16:30 16:45	245	63	6	2		316	397	1.26
16:45 17:00	274	76	1	0		351	429	1.22
17:00 17:15	274	78	2	1		355	440	1.24
17:15 17:30	294	67	2	0		363	434	1.20
17:30 17:45	245	82	3	2		332	426	1.28
17:45 18:00	266	79	7	1		353	449	1.27
TOTALS	2137	581	27	11	0	2756	3424	1.24
OCCUPANCY RATE			1.24 Persons/Vehicles					

OCCUPANCY SURVEY

CANYON ROAD, BETWEEN 117TH AND LOMBARD AVENUE, EASTBOUND (12/3/96)

Time Period	Driver Only	Two Persons	Three Persons	Four Persons	>Four Persons	Total Vehicles	Total Persons	Occupancy Rate
7:00 7:15	342	21	0	0	0	363	384	1.06
7:15 7:30	355	24	1	1	0	381	410	1.08
7:30 7:45	293	28	0	0	0	321	349	1.09
7:45 8:00	331	32	4	1	0	368	411	1.12
8:00 8:15	230	25	1	0	0	256	283	1.11
8:15 8:30	254	44	4	0	0	302	354	1.17
8:30 8:45	282	22	1	0	0	305	329	1.08
8:45 9:00	235	31	1	0	0	267	300	1.12
TOTALS	2322	227	12	2	0	2563	2820	1.10
OCCUPANCY RATE				1.10 Persons/Vehicles				

OCCUPANCY SURVEY

CANYON ROAD, BETWEEN 117TH AVENUE AND LOMBARD AVENUE, WESTBOUND (11/21/96)

Time Period	Driver Only	Two Persons	Three Persons	Four Persons	>Four Persons	Total Vehicles	Total Persons	Occupancy Rate
7:00 7:15	160	27	3	0	0	190	223	1.17
7:15 7:30	207	23	4	0	0	234	265	1.13
7:30 7:45	230	30	1	0	0	261	293	1.12
7:45 8:00	300	22	6	2	0	330	370	1.12
8:00 8:15	239	23	4	1	0	267	301	1.13
8:15 8:30	199	29	0	0	1	229	263	1.15
8:30 8:45	189	30	1	1	0	221	256	1.16
8:45 9:00	214	26	0	1	0	241	270	1.12
TOTALS	1738	210	19	6	1	1973	2241	1.14
OCCUPANCY RATE			1.14 Persons/Vehicles					

Note: Due to light conditions, the technician could not count the occupancy levels in 18 cars.

APPENDIX E

LEVEL OF SERVICE DESCRIPTIONS

TRAFFIC LEVELS OF SERVICE

Analysis of traffic volumes is useful in understanding the general nature of traffic in an area, but by itself indicates neither the ability of the street network to carry additional traffic nor the quality of service afforded by the street facilities. For this, the concept of ***level of service*** has been developed to subjectively describe traffic performance. Level of service can be measured at intersections and along key roadway segments.

Level of service categories are similar to report card ratings for traffic performance. Intersections are typically the controlling bottlenecks of traffic flow and the ability of a roadway system to carry traffic efficiently is generally diminished in their vicinities. Levels of Service A, B and C indicate conditions where traffic moves without significant delays over periods of peak travel demand. Level of service **D** and E are progressively worse peak hour operating conditions and F conditions represent where demand exceeds the capacity of an intersection. Most urban communities set level of service D **as** the minimum acceptable level of service for peak hour operation and plan for level **of** service C or better for all other times of the day. The ***Highway Capacity Manual*** provides level of service calculation methodology for **both** intersections and arterials.[1] The following three sections provide interpretations of the analysis approaches.

---

[1] *1994 Highway Capacity Manual,* **Special Report 209, Transportation Research Board, Washington D.C., 1994, Chapters 9, 10, 11.**

SIGNALIZED INTERSECTIONS

For signalized intersections, level of service is evaluated based upon average vehicle delay experienced by vehicles entering an intersection. As delay increases, the level of service decreases. Calculations for signalized and unsignalized intersections are different due to the variation in traffic control. The ***1994 Highway Capacity Manual*** provides the basis for these calculations.

Level of Service Definitions
Signalized Intersections

Level of Service	Vehicle Delay (secs.)	Description
A	≤5.00	Free Flow/Insignificant Delays: No approach phase is fully utilized by traffic and no vehicle waits longer than one red indication. Most vehicles do not stop at all. Progression is extremely favorable and most vehicles arrive during the green phase.
B	5.1-15.0	Stable Operation/Minimal Delays: An occasional approach phase is fully utilized. Many drivers begin to feel somewhat restricted within platoons of vehicles. This level generally occurs with good progression, short cycle lengths, or both.
C	15.1-25.0	Stable Operation/Acceptable Delays: Major approach phases fully utilized. Most drivers feel somewhat restricted. Higher delays may result from fair progression, longer cycle lengths, or both. Individual cycle failures may begin to appear at this level. and the number of vehicles stopping is significant.
D	25.1-40.0	Approaching Unstable/Tolerable Delays: The influence of congestion becomes more noticeabie. Drivers may have to wait through more than one red signal indication. Longer delays may result from some combination of unfavorable progression, long cycle lengths, or high vlc ratios. The proportion of vehicles not stopping declines. and individual cycle failures are noticeable.
E	40.1-60.0	Unstable Operation/Significant Delays: Volumes at or near capacity. Vehicles may wait though several signal cycles. Long queues form upstream from intersection. These high delay values generally indicate poor progression, long cycle lengths. and high v/c ratios. Individual cycle failures are a frequent occurrence.
F	≥60.0	Forced Flow/Excessive Delays: Represents jammed conditions. Queues may block upstream intersections. This level occurs when arrival flow rates exceed intersection capacity, and is considered to be unacceptable to most drivers. Poor progression, long cycle lengths, and vlc ratios approaching 1.0 may contribute to these high delay levels.

Source: *Highway Capacity Manual*, Transportation Research Board. Special Report No.209 (Third Edition). Washington D.C.. 1994.

UNSIGNALIZED INTERSECTIONS (Two-way Stop Controlled)

Unsignalized intersection level of service is reported for the major street and minor street (generally, left turn movements). The method assesses available and critical gaps in the traffic stream which make it possible for side street traffic to enter the main street flow. The *1994 Highway Capacity* Manual describes the detailed methodology. It is not unusual for an intersection to experience level of service E or F conditions for the minor street left turn movement. It should be understood that, often, a poor level of service is experienced by only a few vehicles and the intersection as a whole operates acceptably.

Unsignalized intersection levels of service are described in the following table.

Level of Service Definitions
Unsignalized Intersections

Level of Service	Expected Delay	Avg Total Delay (Sec/Veh)
A	Little or no delay	≤ 5.0
B	Short traffic delay	5.1-10.0
C	Average traffic delays	10.1-20.0
D	Long traffic delays	20.1-30.0
E	Very long traffic delays	30.1-45.0
F	Extreme delays potentially affecting other traffic movements in the intersection	> 45

Source: *Highway Capacity Manual*, Special Report 209 (Third Edition), Transportation Research Board Washington, D.C., 1994.

ALL-WAY STOP CONTROLLED INTERSECTIONS

Unsignalized intersections and all-way stop controlled intersections are each subject to a separate capacity analysis methodology. All-way stop controlled intersection operations are reported by leg of the intersection. This method was developed by Dr. Michael Kyte of the University of Idaho.[2]

This method calculates a delay value for each approach to the intersection. The following table describes the amount of delay associated with each level of service.

Delay (Seconds)	Level of Service
≤ 5	A
6 - 10	B
11 - 20	
21 -30	D
31 -45	E
> 45	F

[2] *Transportation Research Circular #373*, Transportation Research Board.

APPENDIX F

LEVEL OF SERVICE CALCULATIONS

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Beaverton Transportation System Plan
Existing Traffic Conditions
PM Peak Hour

Impact Analysis Report
Level Of Service

Intersection	Base LOS	Base Del/ Veh	Base V/ C	Future LOS	Future Del/ Veh	Future V/ C	Change in
# 1 Murray Blvd/Allen Blvd	D	26.3	0.884	D	26.3	0.884	+ 0.000 D/V
# 13 Murray Boulevard/6th Avenue	F	126.9	0.000	F	126.9	0.000	+ 0.000 V/C
# 22 Hall Blvd/Allen Blvd	D	30.3	0.871	D	30.3	0.871	+ 0.000 D/V
# 23 Allen Blvd/Lombard Ave	C	21.4	0,711	C	21.4	0.711	+ 0.000 D/V
# 26 Watson Ave/5th St	B	6.5	0.516	B	6.5	0.516	+ 0.000 D/V
# 28 Hall Boulevard/5th Avenue	B	8.5	0.671	B	8.5	0.671	+ 0.000 D/V
# 33 Murray Blvd/Farmington Rd	E	50.2	0.999	E	50.2	0.999	+ 0.000 D/V
# 34 Farmington Road/Watson Avenue	C	18.7	0.844	C	18.7	0.844	+ 0.000 D/V
# 35 Farmington/Hall Boulevard	C	18.7	0.881	C	18.7	0.881	+ 0.000 D/V
# 37 Farmington Road/Lombard Avenue	C	20.2	0.815	C	20.2	0.815	+ 0.000 D/V
# 41 Allen Blvd/ORE 217 NB ramps	C	18.2	0.767	C	18.2	0.767	+ 0.000 D/Y
# 44 Allen Blvd/ORE 217 SB ramps	C	20.7	0.799	C	20.7	0.799	+ 0.000 D/V
# 53 BH Hwy/ORE 217 SB ramps	C	20.3	0.876	C	20.3	0.876	+ 0.000 D/V
# 54 BH Hwy/Griffith Drive	B	14.5	0.780	B	14.5	0.780	+ 0.000 D/V
# 59 BH Hwy/ORE 217 NB ramps	C	22.0	0.922	C	22.0	0.922	+ 0.000 D/V
# 66 Canyon Road/Broadway-117th Ave	C	18.1	0.842	C	18.1	0.842	+ 0.000 D/V
# 67 Canyon Road/ORE 217 SB ramps	C	17.2	0.803	C	17.2	0.803	+ 0.000 D/V
# 69 Canyon Road/ORE 217 NB ramps	C	17.8	0.779	C	17.8	0.779	+ 0.000 D/V
# 76 Canyon Road/Hall Boulevard	C	17.1	0.822	C	17.1	0.822	+ 0.000 D/V
# 81 Canyon Road/Watson Avenue	B	13.9	0.822	B	13.9	0.822	+ 0.000 D/V
# 86 TV Hwy/Hocken Avenue	D	34.8	0.981	D	34.8	0.981	+ 0.000 D/V
# 87 Farmington Road/Hocken Avenue	C	17.3	0.912	C	17.3	0.912	+ 0.000 D/V
# 90 TV Hwy/Murray Boulevard	E	42.1	0.985	E	42.1	0.985	+ 0.000 D/V

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Beaverton Transportdtion System Plan
Existing Traffic Conditions
PM Peak Hour

Intersection	Base LOS	Base Del/ Veh	Base V/ C	Future LOS	Future Del/ Veh	Future V/ C	Change in
#101 Hall Blvd/Westgate-Center	C	15.1	0.501	C	15.1	0.501	+ 0.000 D/V
#108 Murray Boulevard/Jenkins Road	D	32.9	0.909	D	32.9	0.909	+ 0.000 D/V
#113 Walker Road/ORE 217 NB ramps	D	35.3	0.986	D	35.3	0.986	+ 0.000 D/V
#117 Walker Road/ORE 217 SB ramps	B	14.0	0.865	B	14.0	0.865	+ 0.000 D/V
#125 Cedar Hills Blvd/Hall Blvd	C	22.3	0.811	C	22.3	0.811	+ 0.000 D/V
#126 Cedar Hills Boulevard/Walker R	D	35.1	0.962	D	35.1	0.962	+ 0.000 D/V
#127 Cedar Hills Boulevard/Jenkins	D	25.6	0.888	D	25.6	0.888	+ 0.000 D/V
#130 Farmington Road/Cedar Hills Bo	C	16.8	0.883	C	16.8	0.883	+ 0.000 D/V
#131 Canyon Road/Cedar Hills Boulev	D	38.5	0.999	D	38.5	0.999	+ 0.000 D/V
#133 Canyon Rd./Fred Meyer Access	C	18.1	0.754	C	18.1	0.754	+ 0.000 D/V
#162 Cedar Hills Blvd/Westgate Driv	B	6.4	0.421	B	6.4	0.421	+ 0.000 D/V
#169 Farmington Road/149th Avenue	B	7.3	0.809	B	7.3	0.809	+ 0.000 D/V
#170 TV Highway/153rd Drive	B	6.1	0.768	B	6.1	0.768	+ 0.000 D/V
#171 TV Highway/160th Avenue-Millik	D	27.7	0.936	D	27.7	0.936	+ 0.000 D/V
#174 Jenkins Road/153rd Drive	C	20.5	0.893	C	20.5	0.893	+ 0.000 D/V
#175 Jenkins Road/158th Avenue	D	30.0	0.914	D	30.0	0.914	+ 0.000 D/V
#176 Farmington Road/170th Avenue	D	31.1	0.922	D	31.1	0.922	+ 0.000 D/V
#177 TV Highway/170th Avenue	D	36.9	0.991	D	36.9	0.991	+ 0.000 D/V
#179 Merlo Road/170th Avenue	C	16.5	0.727	C	16.5	0.727	+ 0.000 D/V
#180 Baseline Road/170th Avenue	B	10.0	0.439	B	10.0	0.439	+ 0.000 D/V
#186 Walker Road/158th Avenue	D	29.1	0.857	D	29.1	0.857	+ 0.000 D/V
#187 Walker Road/167th Avenue	F	0.8	0.000	F	0.8	0.000	+ 0.000 v/c
#188 Walker Road/173rd Avenue	C	22.9	0.798	C	22.9	0.798	+ 0.000 D/V
#191 Cornell Road/158th Avenue	C	16.2	0.764	C	16.2	0.764	+ 0.000 D/V
#192 Walker Road/Murray Boulevard	E	40.1	0.932	E	40.1	0.932	+ 0.000 D/V

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Beaverton Transportation System Plan
Existing Traffic Conditions
PM Peak Hour

Intersection	Base LOS	Base Del/ Veh	Base V/ C	Future LOS	Future Del/ Veh	Future V/ C	Change in
#193 Kinnaman/Farmington	D	25.8	0.986	D	25.B	0.986	+ 0.000 D/V
#194 Davis Road/155th Avenue	B	0.6	0.000	B	0.6	0.000	+ 0.000 v/c
#198 Canyon Road/Walker Road	C	15.7	0.773	C	15.7	0.773	+ 0.000 D/V
#199 Beaverton-Hillsdale Hwy/Wester	D	28.7	0.973	D	28.7	0.973	+ 0.000 D/V
#200 Allen Boulevard/Western Avenue	C	19.6	0.971	C	19.6	0.971	+ 0.000 D/V
#202 Laurelwood Avenue/Beaverton-Hi	B	11.9	0.708	B	11.9	0.708	+ 0.000 D/V
#203 Hall Boulevard/Denney Road	C	17.4	0.833	C	17.4	0.833	+ 0.000 D/V
#205 Denney Road/Hwy 217 SB ramps	F	4.9	0.000	F	4.9	0.000	+ 0.000 v/c
#207 Denney Road/Hwy 217 NB ramps	F	294.3	0.000	F	294.3	0.000	+ 0.000 v/c
#214 Denney Road/Scholls Ferry Road	C	19.1	0.867	C	19.1	0.867	+ 0.000 D/V
#215 Allen Boulevard/Scholls Ferry	D	35.7	0.918	D	35.7	0.918	+ 0.000 D/V
#218 Hall Boulevard/Hart Road	B	13.3	0.709	B	13.3	0.709	+ 0.000 D/V
#219 Murray Boulevard/Hart Road	D	25.5	0.913	D	25.5	0.913	+ 0.000 D/V
#220 Hart Road/155th Avenue	C	18.1	0.946	C	18.1	0.946	+ 0.000 D/V
#221 Hart-Bany/170th Avenue	D	26.4	0.993	D	26.4	0.993	+ 0.000 V/C
#222 Hart Road/Sorrento Avenue	C	17.0	0.805	C	17.0	0.805	+ 0.000 v/c
#223 Brockman Road/Sorrento Avenue	F	6.4	0.000	F	6.4	0.000	+ 0.000 V/C
#224 Murray Boulevard/Brockman Road	B	14.7	0.551	B	14.7	0.551	+ 0.000 D/V
#225 Murray Boulevard/Maverick Terr	E	0.3	0.000	E	0.3	0.000	+ 0.000 v/c
#226 155th Avenue/Nora-Beard (Brock	A	3.2	0.416	A	3.2	0.416	+ 0.000 v/c
#227 Brockman Road/125th Avenue	C	23.3	0.945	C	23.3	0.945	+ 0.000 D/V
#229 Hall Boulevard/Greenway	D	33.3	0.996	D	33.3	0.996	+ 0.000 D/V
#230 Hall Boulevard/Nimbus Avenue	D	40.0	0.916	D	40.0	0.916	+ 0.000 D/V
#232 Scholls Ferry Road/Hall Boulev	D	38.4	0.953	D	38.4	0.953	+ 0.000 D/V

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Beaverton Transportation System Plan
Existing Traffic Conditions
PM Peak Hour

Intersection	Base LOS	Base Del/ Vrh	Base V/ C	Future LOS	Future Del/ Veh	Future V/ C	Change in
#236 Scholls Ferry Road/125th Avenu	D	29.3	0.961	D	29.3	0.961	+ 0.000 D/V
#237 Scholls Ferry Road/Nimbus Aven	D	32.9	0.991	D	32.9	0.991	+ 0.000 D/V
#238 Murray Boulevard/Old Scholls F	C	19.7	0.795	C	19.7	0.795	+ 0.000 D/V
#239 Old Scholls Ferry Road/Davies	F	OVRFL	0.000	F	OVRFL	0.000	+ 0.000 v/c
#241 Scholls Ferry/Old Scholls Ferr	B	9.6	0.586	B	9.6	0.586	+ 0.000 D/V
#243 Scholls Ferry/Old Scholls Ferr	C	3.8	0.000	C	3.8	0.000	+ 0.000 v/c
#244 Scholls Ferry Road/Walnut Stre	C	3 3	0.000	C	3.3	0.000	+ 0.000 v/c
#250 Hall Boulevard/Hwy 217 SB ramp	D	32.3	0.938	D	32.3	0.938	+ 0.000 D/V
#259 Scholls Ferry/Hwy 217 SB ramps	C	21.0	0.882	C	21.0	0.882	+ 0.000 D/V
#277 Scholls Ferry/Hwy 217 NB off-r	C	18.9	0.889	C	18.9	0.889	+ 0.000 D/V
#278 Scholls Ferry/Hwy 217 NB on-ra	C	19.2	0.723	C	19.2	0.723	+ 0.000 D/V

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Beaverton Transportation System Plan
Existing Traffic Conditions
PM Peak Hour

Level Of Service Computation Report
1994 HCM Operations Method (Base Volume Alternative)

Intersection #1 Murray Blvd/Allen Blvd

Cycle (sec):	120			Critical Vol./Cap. (X):			0.884										
Loss Time (sec):	16 (Y+R = 4 sec)			Average Delay (sec/veh):			26.3										
Optimal Cycle:	121			Level Of Service:			D										
Approach:	North Bound			South Bound			East Bound			West Bound							
Movement:	L	T	R	L	T	R	L	T	R	L	T	R					
Control:	Protected			Protected			Prot+Permit			Prot+Permit							
Rights:	Ovl			Include			Ovl			Ovl							
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0					
Lanes:	1	0	2	0	1	2	0	1	1	0	1	0	1	0	1	0	1
Volume Module:																	
Base Vol:	100	763	233	410	1105	80	67	65	79	541	130	478					
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00					
Initial Bse:	100	763	233	410	1105	80	67	65	79	541	130	478					
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00					
PHF Adj:	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92					
PHF Volume:	109	830	254	446	1202	87	73	71	86	589	141	520					
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0					
Reduced Vol:	109	830	254	446	1202	87	73	71	86	589	141	520					
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00					
MLF Adj:	1.00	1.05	1.00	1.03	1.05	1.05	1.00	1.00	1.00	1.00	1.00	1.00					
Final Vol.:	109	872	254	460	1263	91	73	71	86	589	141	520					
Saturation Flow Module:																	
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900					
Adjustment:	0.93	1.06	0.83	0.93	1.06	0.97	0.86	0.99	0.84	0.85	0.99	0.84					
Lanes:	1.00	2.00	1.00	2.00	1.85	0.15	1.00	1.00	1.00	1.00	1.00	1.00					
Final Sat.:	1770	4044	1583	3539	3745	270	1635	1881	1599	1624	1881	1599					
Capacity Analysis Module:																	
Vol/Sat:	0.06	0.22	0.16	0.13	0.34	0.34	0.04	0.04	0.05	0.36	0.07	0.33					
Crit Moves:	****				****			****		****							
Green/Cycle:	0.07	0.28	0.65	0.17	0.38	0.38	0.09	0.04	0.11	0.45	0.37	0.54					
Volume/Cap:	0.88	0.77	0.25	0.77	0.88	0.88	0.50	0.88	0.48	0.81	0.20	0.60					
Level Of Service Module:																	
Delay/Veh:	68.5	27.7	5.5	34.8	27.1	27.1	35.8	80.1	33.8	22.4	16.7	13.1					
user DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00					
AdjDel/Veh:	68.5	27.7	5.5	34.8	27.1	27.1	35.8	80.1	33.8	22.4	16.7	13.1					
Queue:	5	28	3	16	42	4	4	4	3	21	3	12					

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Beaverton Transportation System Plan
Existing Traffic Conditions
PM Peak Hour

Level Of Service Computation Report
1994 HCM Unsignalized Method (Base Volume Alternative)

Intersection #13 Murray Boulevard/6th Avenue

Average Delay (sec/veh):	126.9									Worst Case Level Of Service:			F				
Approach:	North Bound			South Bound			East Bound			West Bound							
Movement:	L	T	R	L	T	R	L	T	R	L	T	R					
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign							
Rights:	Include			Include			Include			Include							
Lanes:	1	0	1	1	0	1	0	1	1	0	0	0	1	0	0	0	1	1	0	0
Volume Module:																				
Base Vol:	4	1207	32	14	1704	4	3	0	2	47	0	72								
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00								
Initial Bse:	4	1207	32	14	1704	4	3	0	2	47	0	72								
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00								
PHF Adj:	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94								
PHF Volume:	4	1288	34	15	1819	4	3	0	2	50	0	77								
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0								
Final Vol.:	4	1288	34	15	1819	4	3	0	2	50	0	77								
Adjusted Volume Module:																				
Grade:	0%			0%			0%			0%										
I Cycle/Cars:	0.00	0.98		0.00	0.97		xxxx	xxxx		0.00	0.99									
I Truck/Comb:	0.02	0.00		0.03	0.00		xxxx	xxxx		0.01	0.00									
PCE Adj:	xxxx	1.00	1.00	xxxx	1.00	1.00	1.10	1.10	1.10	xxxx	xxxx	xxxxx								
Cycl/Car PCE:	0.50	1.00		0.50	1.00		xxxx	xxxx		0.50	1.00									
Trck/Cmb PCE:	1.50	2.00		1.50	2.00		xxxx	xxxx		1.50	2.00									
Adj Vol.:	4	1288	34	15	1819	4	4	0	2	50	0	77								
Critical Gap Module:																				
MoveUp Time:	2.1	xxxx	xxxxx	2.1	xxxx	xxxxx	3.4	xxxx	2.6	3.4	xxxx	2.6								
Critical Gp:	5.5	xxxx	xxxxx	5.5	xxxx	xxxxx	7.0	xxxx	5.5	7.0	xxxx	5.5								
Capacity Module:																				
Cnflict Vol:	1823	xxxx	xxxxx	1322	xxxx	xxxxx	3128	xxxx	911	3143	xxxx	661								
Potent Cap.:	180	xxxx	xxxxx	334	xxxx	xxxxx	11	xxxx	478	10	xxxx	640								
Adj Cap:	1.00	xxxx	xxxxx	1.00	xxxx	xxxxx	0.83	xxxx	1.00	0.94	xxxx	1.00								
Move Cap.:	180	xxxx	xxxxx	334	xxxx	xxxxx	9	xxxx	478	10	xxxx	640								
Level Of Service Module:																				
Stopped Del:	20.5	xxxx	xxxxx	11.3	xxxx	xxxxx	606.0	xxxx	7.6	8243	xxxx	6.4								
LOS by Move:	D	*	*	C	*	*	*	*	*	*	*	*								
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT								
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	15	xxxxx	xxxx	24	xxxxx								
Shrd StpDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	377	xxxxx	xxxxx	7987	xxxxx								
Shared LOS:	*	*	*	*	*	*	*	F	*	*	F	*								
ApproachDel:	0.1			0.1			366.6			3259.6										

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Beaverton Transportation System Plan
Existing Traffic Conditions
PM Peak Hour

Level Of Service Computation Report
1994 HCM Operations Method (Base Volume Alternative)

Intersection #22 Hall Blvd/Allen Blvd

Cycle (sec):	120	Critical Vol./Cap. (X):	0.871	
Loss Time (sec):	16 (Y+R = 4 sec)	Average Delay (sec/veh):	30.3	
Optimal Cycle:	116	Level Of Service:	D	

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0	1	1	0	1	0	1	1	0	1	0	1	1	0	1	0	1	1	0
Volume Module:																				
Base Vol:	281	521	57	135	690	99	85	564	156	107	956	79
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	281	521	57	135	690	99	85	564	156	107	956	79
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
PHF Volume:	294	545	60	141	722	104	89	590	163	112	1000	83
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	294	545	60	141	722	104	89	590	163	112	1000	83
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.05	1.05	1.00	1.05	1.05	1.00	1.05	1.05	1.00	1.05	1.05
Final Vol.:	294	572	63	141	758	109	89	619	171	112	1050	87
Saturation Flow Module:																				
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.94	0.98	0.98	0.94	0.97	0.97	0.94	0.96	0.96	0.94	0.98	0.98
Lanes:	1.00	1.80	0.20	1.00	1.75	0.25	1.00	1.57	0.43	1.00	1.85	0.15
Final Sat.:	1787	3355	370	1787	3224	464	1787	2860	790	1787	3440	285
Capacity Analysis Module:																				
Vol/Sat:	0.16	0.17	0.17	0.08	0.24	0.24	0.05	0.22	0.22	0.06	0.31	0.31
Crit Moves:	****				tttt		tttt				tttt	
Green/Cycle:	0.19	0.31	0.31	0.15	0.27	0.27	0.06	0.32	0.32	0.09	0.35	0.35
Volume/Cap:	0.87	0.54	0.54	0.54	0.87	0.87	0.87	0.68	0.68	0.68	0.87	0.87
Level Of Service Module:																				
Delay/Veh:	45.2	22.4	22.4	32.6	33.0	33.0	70.6	24.3	24.3	41.6	28.3	28.3
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	45.2	22.4	22.4	32.6	33.0	33.0	70.6	24.3	24.3	41.6	28.3	28.3
Queue:	11	16	2	5	26	5	4	19	5	4	3	5	4

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Beaverton Transportation System Plan
Existing Traffic Conditions
PM Peak Hour

Level Of Service Computation Report
1994 HCM Operations Method (Base Volume Alternative)

Intersection #23 Allen Blvd/Lombard Ave

Cycle (sec):	120	Critical Vol./Cap. (X):	0.711	
Loss Time (sec):	16 (Y+R = 4 sec)	Average Delay (sec/veh):	21.4	
Optimal Cycle:	74	Level Of Service:	C	

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0	0	1	0	1	0	0	1	0	1	0	1	1	0	1	0	1	1	0
Volume Module:																				
Base Vol:	49	117	45	105	221	106	95	590	55	71	1038	82
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	49	117	45	105	221	106	95	590	55	71	1038	82
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
PHF Volume:	52	124	48	111	235	113	101	626	58	75	1102	87
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	52	124	48	111	235	113	101	626	58	75	1102	87
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.05	1.05	1.00	1.05	1.05
Final Vol.:	52	124	48	111	235	113	101	658	61	75	1157	91
Saturation Flow Module:																				
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.94	0.95	0.95	0.94	0.94	0.94	0.93	0.97	0.97	0.94	0.98	0.98
Lanes:	1.00	0.72	0.28	1.00	0.68	0.32	1.00	1.83	0.17	1.00	1.85	0.15
Final Sat.:	1787	1302	504	1787	1207	580	1770	3375	313	1787	3453	272
Capacity Analysis Module:																				
Vol/Sat:	0.03	0.10	0.10	0.06	0.19	0.19	0.06	0.19	0.19	0.04	0.34	0.34
Crit Moves:	tttt				tttt		tttt				****	
Green/Cycle:	0.04	0.19	0.19	0.12	0.27	0.27	0.08	0.45	0.45	0.10	0.47	0.47
Volume/Cap:	0.71	0.50	0.50	0.50	0.71	0.71	0.71	0.43	0.43	0.43	0.71	0.71
Level Of Service Module:																				
Delay/Veh:	54.2	29.0	29.0	33.2	28.7	28.7	44.8	14.5	14.5	34.0	17.2	17.2
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	54.2	29.0	29.0	33.2	28.7	28.7	44.8	14.5	14.5	34.0	17.2	17.2
Queue:	2	4	2	4	8	4	4	15	1	2	31	3

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Beaverton Transportation System Plan
Existing Traffic Conditions
PM Peak Hour

Level Of Service Computation Report
1994 HCM Operations Method (Base Volume Alternative)

Intersection #26 Watson Ave/5th St

Cycle (sec):	50	Critical Vol./Cap. (X):	0.516
Loss Time (sec):	8 (Y+R = 4 sec)	Average Delay (sec/veh)	6.5
Optimal Cycle:	30	Level Of Service:	B

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	0	0	0	1	0	1	0	0	0	1	0	0	0	1	0	0	0
Volume Module:												
Base Vol:	0	0	0	59	762	37	0	118	11	54	213	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	59	762	37	0	118	11	54	213	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
PHF Volume:	0	0	0	64	821	40	0	127	12	58	230	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	64	821	40	0	127	12	58	230	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.05	1.05	1.05	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	0	0	0	67	862	42	0	127	12	58	230	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	0.97	0.97	0.97	1.00	0.88	0.88	0.89	0.89	1.00
Lanes:	0.00	0.00	0.00	0.14	1.77	0.09	0.00	0.91	0.09	0.20	0.80	0.00
Final Sat.:	0	0	0	254	3274	160	0	1530	145	341	1352	0
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.26	0.26	0.26	0.00	0.08	0.08	0.17	0.17	0.00
Crit Moves:					****						****	
Green/Cycle:	0.00	0.00	0.00	0.51	0.51	0.51	0.00	0.33	0.33	0.33	0.33	0.00
Volume/Cap:	0.00	0.00	0.00	0.52	0.52	0.52	0.00	0.25	0.25	0.52	0.52	0.00
Level Of Service Module:												
Delay/Veh:	0.0	0.0	0.0	5.5	5.5	5.5	0.0	8.0	8.0	9.4	9.4	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	5.5	5.5	5.5	0.0	8.0	8.0	9.4	9.4	0.0
Queue:	0	0	0	1	8	1	0	1	0	1	3	0

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Beaverton Transportation System Plan
Existing Traffic Conditions
PM Peak Hour

Level Of Service Computation Report
1994 HCM Operations Method (Base Volume Alternative)

Intersection #28 Hall Boulevard/5th Avenue

Cycle (sec):	50	Critical Vol./Cap. (X):	0.671
Loss Time (sec):	8 (Y+R = 4 sec)	Average Delay (sec/veh)	8.5
Optimal Cycle:	39	Level Of Service:	B

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	1	0	1	0	0	0	0	0	0	1	0	0	0	0	1	0	0
Volume Module:												
Base Vol:	30	770	31	0	0	0	27	151	0	0	267	142
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	30	770	31	0	0	0	27	151	0	0	267	142
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
PHF Volume:	34	878	35	0	0	0	31	172	0	0	304	162
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	34	878	35	0	0	0	31	172	0	0	304	162
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.05	1.05	1.05	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	36	922	37	0	0	0	31	172	0	0	304	162
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.96	0.96	0.96	1.00	1.00	1.00	0.80	0.80	1.00	1.00	0.84	0.84
Lanes:	0.07	1.86	0.07	0.00	0.00	0.00	0.15	0.85	0.00	0.00	1.00	
Final Sat.:	132	3383	136	0	0	0	233	1291	0	0	1065	536
Capacity Analysis Module:												
Vol/Sat:	0.27	0.27	0.27	0.00	0.00	0.00	0.13	0.13	0.00	0.00	0.29	0.29
Crit Moves:		****									****	
Green/Cycle:	0.41	0.41	0.41	0.00	0.00	0.00	0.43	0.43	0.00	0.00	0.43	0.43
Volume/Cap:	0.67	0.67	0.67	0.00	0.00	0.00	0.31	0.31	0.00	0.00	0.67	0.67
Level Of Service Module:												
Delay/Veh:	8.7	8.7	8.7	0.0	0.0	0.0	6.1	6.1	0.0	0.0	9.1	9.1
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	8.7	8.7	8.7	0.0	0.0	0.0	6.1	6.1	0.0	0.0	9.1	9.1
Queue:	1	11	1	0	0	0	0	2	0	0	4	2

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Beaverton Transportation System Plan
Existing Traffic Conditions
PM Peak Hour

Level Of Service Computation Report
1994 HCM Operations Method (Base Volume Alternative)

Intersection #33 Murray Blvd/Farmington Rd

Cycle (sec): 160 Critical Vol./Cap. (X): 0.999
Loss Time (sec): 16 (Y+R = 4 sec) Average Delay (sec/veh): 50.2
Optimal Cycle: 180 Level Of Service: E

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0	1	1	0	1	0	1	1	0	1	0	1	0	1	1	0	1	0	1	1	0
Volume Module:												
Base Vol:	315	824	141	153	1036	104	89	482	264	344	950	140
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	315	824	141	153	1036	104	89	482	264	344	950	140
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
PHF Volume:	336	878	150	163	1104	111	95	514	281	367	1013	149
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	336	878	150	163	1104	111	95	514	281	367	1013	149
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.05	1.05	1.00	1.05	1.05	1.00	1.05	1.05	1.00	1.05	1.05
Final Vol.:	336	922	158	163	1160	116	95	540	296	367	1063	157
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.99	1.07	1.02	0.99	1.07	1.03	1.00	1.06	0.99	1.01	1.07	1.04
Lanes:	1.00	1.69	0.31	1.00	1.81	0.19	1.00	1.26	0.74	1.00	1.74	0.26
Final Sat.:	1875	3445	590	1875	3683	368	1893	2532	1388	1912	3529	521
Capacity Analysis Module:												
Vol/Sat:	0.18	0.27	0.27	0.09	0.31	0.31	0.05	0.21	0.21	0.19	0.30	0.30
Crit Moves:	****				****			****		****		
Green/Cycle:	0.18	0.37	0.37	0.12	0.32	0.32	0.06	0.21	0.21	0.19	0.35	0.35
Volume/Cap:	1.00	0.72	0.72	0.72	1.00	1.00	0.87	1.00	1.00	1.00	0.87	0.87
Level Of Service Module:												
Delay/Veh:	79.9	28.9	28.9	50.7	54.6	54.6	80.3	64.4	64.4	77.7	35.8	35.8
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	79.9	28.9	28.9	50.7	54.6	54.6	80.3	64.4	64.4	77.7	35.8	35.8
Queue:	19	36	7	8	60	8	5	30	17	21	46	8

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Beaverton Transportation System Plan
Existing Traffic Conditions
PM Peak Hour

Level Of Service Computation Report
1994 HCM Operations Method (Base Volume Alternative)

Intersection #34 Farmington Road/Watson Avenue

Cycle (sec): 100 Critical Vol./Cap. (X): 0.844
Loss Time (sec): 16 (Y+R = 4 sec) Average Delay (sec/veh) 18.7
Optimal Cycle: 97 Level Of Service: C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	0	0	0	0	0	0	1	0	1	0	0	0	1	1	0	1	0	1	1	0
Volume Module:												
Base Vol:	0	0	0	159	514	114	0	1093	238	104	1527	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	159	514	114	0	1093	238	104	1527	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
PHF Volume:	0	0	0	168	544	121	0	1157	252	110	1616	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	168	544	121	0	1157	252	110	1616	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.05	1.05	1.05	1.00	1.05	1.05	1.00	1.05	1.05
Final Vol.:	0	0	0	177	571	127	0	1214	264	110	1697	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	0.95	0.95	0.95	1.00	0.96	0.96	0.94	0.99	1.00
Lanes:	0.00	0.00	0.00	0.40	1.31	0.29	0.00	1.64	0.36	1.00	2.00	0.00
Final Sat.:	0	0	0	731	2358	524	0	2998	652	1787	3762	0
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.24	0.24	0.24	0.00	0.40	0.40	0.06	0.45	0.00
Crit Moves:					****			****		****		
Green/Cycle:	0.00	0.00	0.00	0.29	0.29	0.29	0.00	0.48	0.48	0.07	0.55	0.00
Volume/Cap:	0.00	0.00	0.00	0.84	0.84	0.84	0.00	0.84	0.84	0.84	0.82	0.00
Level Of Service Module:												
Delay/Veh:	0.0	0.0	0.0	26.2	26.2	26.2	0.0	17.5	17.5	54.4	13.6	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	26.2	26.2	26.2	0.0	17.5	17.5	54.4	13.6	0.0
Queue:	0	0	0	6	17	5	0	31	8	4	40	0

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Beaverton Transportation System Plan
Existing Traffic Conditions
PM Peak Hour

Level Of Service Computation Report
1994 HCM Operations Method (Base Volume Alternative)

Intersection #35 Farmington/Hall Boulevard

Cycle (sec):	100	Critical Vol./Cap. (X):	0.881
Loss Time (sec):	12 (Y+R = 4 sec)	Average Delay (sec/veh)	18.7
Optimal Cycle:	101	Level Of Service:	C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0	1	1	0	0	0	0	0	0	1	0	2	0	0	0	0	1	1	0
Volume Module:																				
Base Vol:	269	697	72	0	0	0	150	1086	0	0	1392	129
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	269	697	72	0	0	0	150	1086	0	0	1392	129
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	283	734	76	0	0	0	158	1143	0	0	1465	136
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	283	734	76	0	0	0	158	1143	0	0	1465	136
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.05	1.05	1.00	1.00	1.00	1.00	1.05	1.00	1.00	1.05	1.05
Final Vol.:	283	770	80	0	0	0	158	1200	0	0	1539	143
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.97	0.97	0.97	1.00	1.00	1.00	0.94	0.99	1.00	1.00	0.97	0.97
Lanes:	1.00	1.81	0.19	0.00	0.00	0.00	1.00	2.00	0.00	0.00	1.83	0.17
Final Sat.:	1844	3341	347	0	0	0	1787	3762	0	0	3375	314
Capacity Analysis Module:												
Vol/Sat:	0.15	0.23	0.23	0.00	0.00	0.00	0.09	0.32	0.00	0.00	0.46	0.46
Crit Moves:		****					****				****	
Green/Cycle:	0.26	0.26	0.26	0.00	0.00	0.00	0.10	0.62	0.00	0.00	0.52	0.52
Volume/Cap:	0.59	0.88	0.88	0.00	0.00	0.00	0.88	0.52	0.00	0.00	0.88	0.88
Level Of Service Module:												
Delay/Veh:	22.2	29.6	29.6	0.0	0.0	0.0	53.5	7.1	0.0	0.0	17.5	17.5
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	22.2	29.6	29.6	0.0	0.0	0.0	53.5	7.1	0.0	0.0	17.5	17.5
Queue:	7	23	3	0	0	0	6	19	0	0	40	5

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Beaverton Transportation System Plan
Existing Traffic Conditions
PM Peak Hour

Level Of Service Computation Report
1994 HCM Operations Method (Base Volume Alternative)

Intersection #37 Farmington Road/Lombard Avenue

Cycle (sec):	100	Critical Vol./Cap. (X):	0.815
Loss Time (sec):	16 (Y+R = 4 sec)	Average Delay (sec/veh):	20.2
Optimal Cycle:	90	Level Of Service:	C

Approach:	North Bound			South Bound			East Bound				West Bound			
Movement:	L	T	R	L	T	R	L	T	R		L	T	R	
Control:	Protected			Protected			Protected				Protected			
Rights:	Include			Include			Ovl				Ovl			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0	0	1	0	1	0	0	1	0	1	0	2	0	1	1	0	2	0	1
Volume Module:																				
Base Vol:	65	177	98	107	217	74	66	1018	106	147	1423	140
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	65	177	98	107	217	74	66	1018	106	147	1423	140
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	68	187	103	113	229	78	70	1073	112	155	1499	148
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	68	187	103	113	229	78	70	1073	112	155	1499	148
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.05	1.00	1.00	1.05	1.00
Final Vol.:	68	187	103	113	229	78	70	1126	112	155	1574	148
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.94	0.94	0.94	0.92	0.93	0.93	0.94	0.99	0.83	0.94	0.99	0.84
Lanes:	1.00	0.64	0.36	1.00	0.75	0.25	1.00	2.00	1.00	1.00	2.00	1.00
Final Sat.:	1787	1152	635	1752	1321	450	1787	3762	1580	1787	3762	1599
Capacity Analysis Module:												
Vol/Sat:	0.04	0.16	0.16	0.06	0.17	0.17	0.04	0.30	0.07	0.09	0.42	0.09
Crit Moves:		****			****			****				****		
Green/Cycle:	0.05	0.20	0.20	0.08	0.23	0.23	0.05	0.44	0.49	0.13	0.51	0.59
Volume/Cap:	0.76	0.81	0.81	0.81	0.76	0.76	0.81	0.69	0.15	0.69	0.81	0.16
Level Of Service Module:												
Delay/Veh:	50.2	34.0	34.0	49.1	28.9	28.9	58.7	15.6	9.2	32.7	15.1	5.9
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	50.2	34.0	34.0	49.1	28.9	28.9	58.7	15.6	9.2	32.7	15.1	5.9
Queue:	3	6	4	4	7	3	3	26	2	5	38	2

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Beaverton Transportation System Plan
Existing Traffic Conditions
PM Peak Hour

Level .Of Service Computation Report
1994 HCM Operations Method (Base Volume Alternative)

Intersection #41 Allen Blvd/ORE 217 NB ramps

Cycle (sec):	110	Critical Vol./Cap. (X):	0.767
Loss Time (sec):	12 (Y+R = 4 sec)	Average Delay (sec/veh):	18.2
Optimal Cycle:	72	Level Of Service:	C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Protected			Protected		
Rights:	Ovl			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	1	0	0	1	0	0	0	0	0	1	0	2	0	0	0	0	1	1	0
Volume Module:												
Base Vol:	430	0	258	0	0	0	201	591	0	0	802	344
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	430	0	258	0	0	0	201	591	0	0	802	344
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
PHF Volume:	475	0	285	0	0	0	222	653	0	0	886	380
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	475	0	285	0	0	0	222	653	0	0	886	380
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.05	1.05	1.00	1.00	1.00	1.00	1.00	1.05	1.00	1.00	1.05	1.05
Final Vol.:	499	0	285	0	0	0	222	686	0	0	930	399
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.83	1.00	1.00	1.00	0.92	0.97	1.00	1.00	0.93	0.93
Lanes:	2.00	0.00	1.00	0.00	0.00	0.00	1.00	2.00	0.00	0.00	1.40	0.60
Final Sat.:	3505	0	1568	0	0	0	1752	3689	0	0	2478	1063
Capacity Analysis Module:												
Vol/Sat:	0.14	0.00	0.18	0.00	0.00	0.00	0.13	0.19	0.00	0.00	0.38	0.38
Crit Moves:			tttt				tttt				tttt	
Green/Cycle:	0.24	0.00	0.24	0.00	0.00	0.00	0.17	0.65	0.00	0.00	0.49	0.49
Volume/Cap:	0.60	0.00	0.77	0.00	0.00	0.00	0.77	0.28	0.00	0.00	0.77	0.77
Level Of Service Module:												
Delay/Veh:	25.0	0.0	31.7	0.0	0.0	0.0	36.3	5.2	0.0	0.0	16.4	16.4
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	25.0	0.0	31.7	0.0	0.0	0.0	36.3	5.2	0.0	0.0	16.4	16.4
Queue:	14	0	9	0	0	0	7	9	0	0	24	11

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Beaverton Transportation System Plan
Existing Traffic Conditions
PM Peak Hour

Level Of Service Computation Report
1994 HCM Operations Method (Base Volume Alternative)

Intersection #44 Allen Blvd/ORE 217 SB ramps

Cycle (sec):	110	Critical Vol./Cap. (X):	0.799
Loss Time (sec):	12 (Y+R = 4 sec)	Average Delay (sec/veh)	20.7
Optimal Cycle:	79	Level Of Service:	C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Protected			Protected		
Rights:	Include			Ovl			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	0	0	0	0	0	0	1	0	0	1	0	0	1	1	0	1	0	2	0	0
Volume Module:												
Base Vol:	0	0	0	315	6	395	0	542	239	314	958	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	315	6	395	0	542	239	314	958	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0 93	0.93
PHF Volume:	0	0	0	339	6	425	0	583	257	338	1031	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	339	6	425	0	583	257	338	1031	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.05	1.05	1.00	1.05	1.00
Final Vol.:	0	0	0	339	6	425	0	613	270	338	1083	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	0.83	0.83	0.83	1.00	0.93	0.93	0.93	0.98	1.00
Lanes:	0.00	0.00	0.00	0.98	0.02	1.00	0.00	1.39	0.61	1.00	2.00	0.00
Final Sat.:	0	0	0	1541	27	1568	0	2457	1082	1770	3725	0
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.22	0.22	0.27	0.00	0.25	0.25	0.19	0.29	0.00
Crit Moves:						tttt		tttt		tttt		
Green/Cycle:	0.00	0.00	0.00	0.34	0.34	0.34	0.00	0.31	0.31	0.24	0.55	0.00
Volume/Cap:	0.00	0.00	0.00	0.65	0.65	0.80	0.00	0.80	0.80	0.80	0.53	0.00
Level Of Service Module:												
Delay/Veh:	0.0	0.0	0.0	21.8	21.8	27.1	0.0	25.4	25.4	32.6	10.3	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	21.8	21.8	27.1	0.0	25.4	25.4	32.6	10.3	0.0
Queue:	0	0	0	9	0	13	0	18	9	11	21	0

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Beaverton Transportation System Plan
Existing Traffic Conditions
PM Peak Hour

Level Of Service Computation Report
1994 HCM Operations Method (Base Volume Alternative)

Intersection #53 BH Hwy/OR8 217 SB ramps

Cycle (sec): 100 critical Vol./Cap. (X): 0.876
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 20.3
Optimal Cycle: 100 Level Of Service: C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	0	1! 0	0	0	1	0	0	2	0	1	1	0	2	0	0
Volume Module:																
Base Vol:	0	0	0	238	581	162	0	1025	400	213	1602	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	238	581	162	0	1025	400	213	1602	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
PHF Volume:	0	0	0	253	619	173	0	1092	426	227	1706	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	253	619	173	0	1092	426	227	1706	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.05	1.05	1.00	1.00	1.05	1.00	1.00	1.05	1.00
Final Vol.:	0	0	0	266	650	173	0	1146	426	227	1791	0
Saturation Flow Module:																
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	0.82	0.82	0.82	1.00	0.99	0.84	0.94	0.99	1.00
Lanes:	0.00	1.00	0.00	0.58	1.42	1.00	0.00	2.00	1.00	1.00	2.00	0.00
Final Sat.:	0	1900	0	902	2204	1553	0	3762	1599	1787	3762	0
Capacity Analysis Module:																
Vol/Sat:	0.00	0.00	0.00	0.29	0.29	0.11	0.00	0.30	0.27	0.13	0.48	0.00
Crit Moves:				tttt			tttt				tttt	
Green/Cycle:	0.00	0.00	0.00	0.34	0.34	0.34	0.00	0.38	0.38	0.16	0.54	0.00
Volume/Cap:	0.00	0.00	0.00	0.88	0.88	0.33	0.00	0.79	0.69	0.79	0.88	0.00
Level Of Service Module:																
Delay/Veh:	0.0	0.0	0.0	26.2	26.2	16.1	0.0	19.9	19.1	35.8	16.2	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	26.2	26.2	16.1	0.0	19.9	19.1	35.8	16.2	0.0
Queue:	0	0	0	9	19	4	0	29	10	7	46	0

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Beaverton Transportation System Plan
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Level Of Service Computation Report
1994 HCM Operations Method (Base Volume Alternative)

Intersection #54 BH Hwy/Griffith Drive

Cycle (sec): 100 Critical Vol./Cap. (X): 0.780
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh) 14.5
Optimal Cycle: 73 Level Of Service: B

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Protected			Protected		
Rights:	Ovl			Ovl			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0	1	0	1	1	0	1	0	1	1	0	1	0	1	1	0
Volume Module:																
Base Vol:	138	100	206	175	77	131	99	1038	81	132	1427	211
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	138	100	206	175	77	131	99	1038	81	132	1427	211
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	*1.00*	1.00	1.00	1.00
PHF Adj:	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
PHF Volume:	143	104	214	182	80	136	103	1077	84	137	1480	219
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	143	104	214	182	80	136	103	1077	84	137	1480	219
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	'1.00	1.00	1.05	1.05	1.00	1.05	1.05
Final Vol.:	143	104	214	182	80	136	103	1131	88	137	1554	230
Saturation Flow Module:																
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.74	1.00	0.84	0.66	1.00	0.84	0.94	0.98	0.98	0.94	0.97	0.97
Lanes:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.86	0.14	1.00	1.74	0.26
Final Sat.:	1406	1900	1596	1254	1900	1596	1787	3456	269	1787	3212	475
Capacity Analysis Module:																
Vol/Sat:	0.10	0.05	0.13	0.15	0.04	0.09	0.06	0.33	0.33	0.08	0.48	0.48
Crit Moves:				tttt			tttt				****	
Green/Cycle:	0.19	0.19	0.32	0.19	0.19	0.26	0.07	0.56	0.56	0.13	0.62	0.62
Volume/Cap:	0.55	0.29	0.42	0.78	0.23	0.33	0.78	0.58	0.58	0.58	0.78	0.78
Level Of Service Module:																
Delay/Veh:	25.7	22.8	17.7	35.5	22.4	19.5	46.1	9.5	9.5	29.0	10.3	10.3
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	25.7	22.8	17.7	35.5	22.4	19.5	46.1	9.5	9.5	29.0	10.3	10.3
Queue:	4	3	5	6	2	3	4	21	2	4	33	6

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Beaverton Transportation System Plan
Existing Traffic Conditions
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Level Of Service Computation Report
1994 HCM Operations Method (Base Volume Alternative)

Intersection #59 BH Hwy/OR8 217 NB ramps

Cycle (sec):	100	critical Vol./Cap. (X):	0.922
Loss Time (sec):	12 (Y+R = 4 sec)	Average Delay (sec/veh):	22.0
Optimal Cycle:	121	Level Of Service:	C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Ovl			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0	2 0 1	0	0	0 0 0	1	0	2 0 0	0	0	2 0 1
Volume Module:												
Base Vol:	525	653	284	0	0	0	200	1003	0	0	1203	329
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	525	653	284	0	0	0	200	1003	0	0	1203	329
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
PHF Volume:	546	680	296	0	0	0	208	1044	0	0	1252	342
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	546	680	296	0	0	0	208	1044	0	0	1252	342
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.05	1.00	1.00	1.00	1.00	1.00	1.05	1.00	1.00	1.05	1.00
Final Vol.:	546	713	296	0	0	0	208	1096	0	0	1314	342
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.83	0.98	0.83	1.00	1.00	1.00	0.93	0.98	1.00	1.00	0.99	0.84
Lanes:	1.00	2.00	1.00	0.00	0.00	0.00	1.00	2.00	0.00	0.00	2.00	1.00
Final Sat.:	1583	3725	1583	0	0	0	1770	3725	0	0	3762	1599
Capacity Analysis Module:												
Vol/Sat:	0.34	0.19	0.19	0.00	0.00	0.00	0.12	0.29	0.00	0.00	0.35	0.21
Crit Moves:	****						tttt				****	
Green/Cycle:	0.37	0.37	0.37	0.00	0.00	0.00	0.13	0.51	0.00	0.00	0.38	0.38
Volume/Cap:	0.92	0.51	0.50	0.00	0.00	0.00	0.92	0.58	0.00	0.00	0.92	0.56
Level Of Service Module:												
Delay/Veh:	33.8	15.9	16.2	0.0	0.0	0.0	55.8	11.5	0.0	0.0	26.6	16.8
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	33.8	15.9	16.2	0.0	0.0	0.0	55.8	11.5	0.0	0.0	26.6	16.8
Queue:	18	15	6	0	0	0	8	22	0	0	39	8

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Beaverton Transportation System Plan
Existing Traffic Conditions
PM Peak Hour

Level Of Service Computation Report
1994 HCM Operations Method (Base Volume Alternative)

Intersection #66 Canyon Road/Broadway-117t: Avenue

cycle (sec):	100	Critical Vol./Cap. (X):	0.842
Loss Time (sec):	16 (Y+R = 4 sec)	Average Delay (sec/veh):	18.1
Optimal Cycle:	97	Level Of Service:	C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Protected			Protected		
Rights:	Ovl			Include			Ovl			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0	1 0 1	2	0	0 1 0	1	0	2 0 1	1	0	1 1 0
Volume Module:												
Base Vol:	23	71	95	290	88	70	83	1287	21	78	1338	195
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	23	71	95	290	88	70	83	1287	21	78	1338	195
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
PHF Volume:	24	75	101	308	94	74	88	1368	22	83	1422	207
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	24	75	101	308	94	74	88	1368	22	83	1422	207
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.03	1.00	1.00	1.00	1.05	1.00	1.00	1.05	1.05
Final Vol.:	24	75	101	317	94	74	88	1436	22	83	1493	218
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.94	0.99	0.83	0.79	0.90	0.90	0.91	0.84	0.82	0.92	0.87	0.94
Lanes:	1.00	1.00	1.00	2.00	0.56	0.44	1.00	2.00	1.00	1.00	1.76	0.24
Final Sat.:	1787	1881	1580	3000	959	155	1736	3200	1553	1752	2920	426
Capacity Analysis Module:												
Vol/Sat:	0.01	0.04	0.06	0.11	0.10	0.10	0.05	0.45	0.01	0.05	0.51	0.51
Crit Moves:		tttt		****			tttt				tttt	
Green/Cycle:	0.05	0.05	0.11	0.13	0.13	0.13	0.06	0.60	0.65	0.06	0.61	0.61
Volume/Cap:	0.28	0.84	0.58	0.84	0.78	0.78	0.84	0.74	0.02	0.74	0.84	0.84
Level Of Service Module:												
Delay/Veh:	30.2	62.7	30.6	38.5	38.7	38.7	58.8	10.3	4.0	44.9	12.6	12.6
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	30.2	62.7	30.6	38.5	38.7	38.7	58.8	10.3	4.0	44.9	12.6	12.6
Queue:	1	3	3	10	3	3	4	29	0	3	35	6

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Beaverton Transportation System Plan
Existing Traffic Conditions
PM Peak Hour

Level Of Service Computation Report
1994 HCM Operations Method (Base Volume Alternative)

Intersection #67 Canyon Road/OR8 217 SB ramps

Cycle (sec):	100		Critical Vol./Cap. (X):		0.803
Loss Time (sec):	12 (Y+R = 4 sec)		Average Delay (sec/veh)		17.2
Optimal Cycle:	78		Level Of Service:		C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Protected			Protected		
Rights:	Include			Ovl			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	0 0	0 0	0	1 1	0 1	0	0 2	0 1	1	0 2	0 0
Volume Module:												
Base Vol:	0	0	0	150	447	353	0	1154	547	203	1361	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	150	447	353	0	1154	547	203	1361	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
PHF Volume:	0	0	0	154	459	363	0	1186	562	209	1399	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	154	459	363	0	1186	562	209	1399	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.05	1.05	1.00	1.00	1.05	1.00	1.00	1.05	1.00
Final Vol.:	0	0	0	162	482	363	0	1245	562	209	1469	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	0.82	0.82	0.83	1.00	1.00	0.83	0.92	1.00	1.00
Lanes:	0.00	0.00	0.00	0.50	1.50	1.00	0.00	2.00	1.00	1.00	2.00	0.00
Final Sat.:	0	0	0	787	2342	1583	0	3800	1568	1752	3800	0
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.21	0.21	0.23	0.00	0.33	0.36	0.12	0.39	0.00
Crit Moves:						****			****	****		
Green/Cycle:	0.00	0.00	0.00	0.29	0.29	0.29	0.00	0.45	0.45	0.15	0.59	0.00
Volume/Cap:	0.00	0.00	0.00	0.72	0.72	0.80	0.00	0.73	0.80	0.80	0.65	0.00
Level Of Service Module:												
Delay/Veh:	0.0	0.0	0.0	22.8	22.8	28.4	0.0	15.9	20.2	37.8	9.1	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	22.8	22.8	28.4	0.0	15.9	20.2	37.8	9.1	0.0
Queue:	0	0	0	5	13	10	0	29	15	7	27	0

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Beaverton Transportation System Plan
Existing Traffic Conditions
PM Peak Hour

Level Of Service Computation Report
1994 HCM Operations Method (Base Volume Alternative)

Intersection #69 Canyon Road/OR8 217 NB ramps

Cycle (sec):	100		Critical Vol./Cap. (X):		0.779
Loss Time (sec):	12 (Y+R = 4 sec)		Average Delay (sec/veh)		17.8
Optimal Cycle:	73		Level Of Service:		C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Protected			Protected		
Rights:	Ovl			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	1 1	0 1	0	0 0	0 0	1	0 2	0 0	0	0 2	0 1
Volume Module:												
Base Vol:	602	341	342	0	0	0	231	937	0	0	1114	155
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	602	341	342	0	0	0	231	937	0	0	1114	155
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
PHF Volume:	625	354	355	0	0	0	240	973	0	0	1157	161
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	625	354	355	0	0	0	240	973	0	0	1157	161
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.05	1.00	1.00	1.00	1.00	1.00	1.00	1.05	1.00	1.00	1.05	1.00
Final Vol.:	656	354	355	0	0	0	240	1022	0	0	1215	161
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.82	0.97	0.82	1.00	1.00	1.00	0.92	1.00	1.00	1.00	1.00	0.83
Lanes:	2.00	1.00	1.00	0.00	0.00	0.00	1.00	2.00	0.00	0.00	2.00	1.00
Final Sat.:	3099	1845	1550	0	0	0	1752	3800	0	0	3800	1568
Capacity Analysis Module:												
Vol/Sat:	0.21	0.19	0.23	0.00	0.00	0.00	0.14	0.27	0.00	0.00	0.32	0.10
Crit Moves:			****				****				****	
Green/Cycle:	0.29	0.29	0.29	0.00	0.00	0.00	0.18	0.59	0.00	0.00	0.41	0.41
Volume/Cap:	0.72	0.65	0.78	0.00	0.00	0.00	0.78	0.46	0.00	0.00	0.78	0.25
Level Of Service Module:												
Delay/Veh:	21.7	20.6	26.7	0.0	0.0	0.0	33.6	7.7	0.0	0.0	18.3	12.6
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	21.7	20.6	26.7	0.0	0.0	0.0	33.6	7.7	0.0	0.0	18.3	12.6
Queue:	17	9	10	0	0	0	7	16	0	0	30	3

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Beaverton Transportation System Plan
Existing Traffic Conditions
PM Peak Hour

Level Of Service Computation Report
1994 HCM Operations Method (Base Volume Alternative)

Intersection #76 Canyon Road/Hall Boulevard

Cycle (sec): 100 Critical Vol./Cap. (X): 0.822
Loss Time (sec): 16 (Y+R = 4 sec) Average Delay (sec/veh): 17.1
Optimal Cycle: 92 Level Of Service: C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	1	1	1	0	0	0	0	0	1	0	1	1	0	0	0	1	1	0	1	0	2	0	0
Volume Module:																								
Base Vol:	300	581	135	0	0	0	76	1438	0	0	1274	164												
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00												
Initial Bse:	300	581	135	0	0	0	76	1438	0	0	1274	164												
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00												
PHF Adj:	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99												
PHF Volume:	304	589	137	0	0	0	77	1457	0	0	1291	166												
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0												
Reduced Vol:	304	589	137	0	0	0	77	1457	0	0	1291	166												
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00												
MLF Adj:	1.00	1.05	1.05	1.00	1.00	1.00	1.00	1.05	1.05	1.00	1.05	1.05												
Final vol.:	304	618	144	0	0	0	77	1530	0	0	1355	174												
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900												
Adjustment:	0.96	0.96	0.96	1.00	1.00	1.00	0.93	0.84	1.00	1.00	0.88	0.96												
Lanes:	0.86	1.74	0.40	0.00	0.00	0.00	1.00	2.00	0.00	0.00	1.79	0.21												
Final Sat.:	1561	3174	739	0	0	0	1770	3201	0	0	2998	385												
Capacity Analysis Module:												
Vol/Sat:	0.19	0.19	0.19	0.00	0.00	0.00	0.04	0.48	0.00	0.00	0.45	0.45												
Crit Moves:		****					****				****													
Green/Cycle:	0.24	0.24	0.24	0.00	0.00	0.00	0.05	0.60	0.00	0.00	0.55	0.55												
Volume/Cap:	0.82	0.82	0.82	0.00	0.00	0.00	0.82	0.79	0.00	0.00	0.82	0.82												
Level Of Service Module:												
Delay/Veh:	26.4	26.4	26.4	0.0	0.0	0.0	57.9	11.4	0.0	0.0	14.1	14.1												
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00												
AdjDel/Veh:	26.4	26.4	26.4	0.0	0.0	0.0	57.9	11.4	0.0	0.0	14.1	14.1												
Queue:	9	18	5	0	0	0	3	33	0	0	32	5												

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Beaverton Transportation System Plan
Existing Traffic Conditions
PM Peak Hour

Level Of Service Computation Report
1994 HCM Operations Method (Base Volume Alternative)

Intersection #81 Canyon Road/Watson Avenue

Cycle (sec): 100 Critical Vol./Cap. (X): 0.822
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 13.9
Optimal Cycle: 82 Level Of Service: B

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	0	0	0	0	1	1	0	1	0	0	0	1	1	0	1	0	2	0	0
Volume Module:																								
Base Vol:	0	0	0	209	434	43	0	1343	96	97	1410	0												
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00												
Initial Bse:	0	0	0	209	434	43	0	1343	96	97	1410	0												
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00												
PHF Adj:	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92												
PHF Volume:	0	0	0	227	472	47	0	1461	104	106	1534	0												
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0												
Reduced Vol:	0	0	0	227	472	47	0	1461	104	106	1534	0												
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00												
MLF Adj:	1.00	1.00	1.00	1.10	1.10	1.10	1.00	1.05	1.05	1.00	1.05	1.00												
Final Vol.:	0	0	0	250	519	51	0	1534	110	106	1611	0												
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900												
Adjustment:	1.00	1.00	1.00	0.98	0.98	0.98	1.00	0.84	0.96	0.92	0.88	1.00												
Lanes:	0.00	0.00	0.00	1.00	1.82	0.18	0.00	1.88	0.12	1.00	2.00	0.00												
Final Sat.:	0	0	0	1862	3391	333	0	3011	216	1752	3350	0												
capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.13	0.15	0.15	0.00	0.51	0.51	0.06	0.48	0.00												
Crit Moves:						****		****		****														
Green/Cycle:	0.00	0.00	0.00	0.19	0.19	0.19	0.00	0.62	0.62	0.07	0.69	0.00												
Volume/Cap:	0.00	0.00	0.00	0.72	0.82	0.82	0.00	0.82	0.82	0.82	0.69	0.00												
Level Of Service Module:												
Delay/Veh:	0.0	0.0	0.0	26.3	29.2	29.2	0.0	11.6	11.6	51.4	6.5	0.0												
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00												
AdjDel/Veh:	0.0	0.0	0.0	26.3	29.2	29.2	0.0	11.6	11.6	51.4	6.5	0.0												
Queue:	0	0	0	7	15	2	0	34	3	4	27	0												

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Beaverton Transportation System Plan
Existing Traffic Conditions
PM Peak Hour

Level Of Service Computation Report
1994 HCM Operations Method (Base Volume Alternative)

Intersection #86 TV Hwy/Hocken Avenue

Cycle (sec):	120	Critical Vol./Cap. (X):	0.981
Loss Time (sec):	16 (Y+R = 4 sec)	Average Delay (sec/veh)	34.8
Optimal Cycle:	180	Level Of Service:	D

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:		Include			Ovl			Include			Include	
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0	0 1	0	1	0 1	0 1	0	1 1	0	1	0 1 1 0
Volume Module:												
Base Vol:	171	100	39	195	359	123	130	1216	232	70	1473	48
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	171	100	39	195	359	123	130	1216	232	70	1473	48
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
HP Adj:	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
PHF Volume:	181	106	41	206	380	130	138	1287	246	74	1559	51
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	181	106	41	206	380	130	138	1287	246	74	1559	51
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.05	1.05	1.00	1.05	1.05
Final Vol.:	181	106	41	206	380	130	138	1351	258	74	1637	53
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.93	0.95	0.94	0.93	1.02	0.83	0.92	0.94	0.94	0.92	0.94	0.96
Lanes:	1.00	0.72	0.28	1.00	1.00	1.00	1.00	1.68	0.32	1.00	1.94	0.06
Final Sat.:	1770	1296	501	1770	1946	1583	1752	3005	574	1752	3454	112
Capacity Analysis Module:												
Vol/Sat:	0.10	0.08	0.08	0.12	0.20	0.08	0.08	0.45	0.45	0.04	0.47	0.41
Crit Moves:	****				****		****				****	
Green/Cycle:	0.10	0.13	0.13	0.18	0.20	0.28	0.08	0.51	0.51	0.05	0.48	0.48
Volume/Cap:	0.98	0.65	0.65	0.65	0.98	0.29	0.98	0.87	0.87	0.87	0.98	0.98
Level Of Service Module:												
Delay/Veh:	80.1	36.9	36.9	33.0	61.4	22.0	88.1	20.1	20.1	76.0	32.7	32.7
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	80.1	36.9	36.9	33.0	61.4	22.0	88.1	20.1	20.1	76.0	32.7	32.7
Queue:	9	4	2	7	17	3	7	42	9	4	62	3

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Beaverton Transportation System Plan
Existing Traffic Conditions
PM Peak Hour

Level Of Service Computation Report
1994 HCM Operations Method (Base Volume Alternative)

Intersection #87 Farmington Road/Hocken Avenue

Cycle (sec):	100	Critical Vol./Cap. (X):	0.912
Loss Time (sec):	12 (Y+R = 4 sec)	Average Delay (sec/veh)	17.3
Optimal Cycle:	116	Level Of Service:	C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Protected			Protected		
Rights:		Include			Include			Include			Include	
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	0	0 0 0	1	0	1 1 0 0	1	0	2 0 0	0	0	1 1 0
Volume Modul												
Base Vol:	0	0	0	404	0	189	61	782	0	0	1461	275
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	404	0	189	61	782	0	0	1461	275
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
PHF Volume:	0	0	0	421	0	197	64	815	0	0	1523	287
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	421	0	197	64	815	0	0	1523	287
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.05	1.00	1.00	1.00	1.05	1.00	1.00	1.05	1.05
Final Vol.:	0	0	0	442	0	197	64	856	0	0	1600	301
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	0.91	1.00	0.91	0.94	0.99	1.00	1.00	0.95	0.95
Lanes:	0.00	0.00	0.00	1.53	0.00	0.47	1.00	2.00	0.00	0.00	1.68	0.32
Final Sat.:	0	0	0	2650	0	817	1787	3762	0	0	3042	572
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.17	0.00	0.24	0.04	0.23	0.00	0.00	0.53	0.53
Crit Moves:						****	****				****	
Green/Cycle:	0.00	0.00	0.00	0.26	0.00	0.26	0.04	0.62	0.00	0.00	0.58	0.58
Volume/Cap:	0.00	0.00	0.00	0.63	0.00	0.91	0.91	0.37	0.00	0.00	0.91	0.91
Level Of Service Module:												
Delay/Veh:	0.0	0.0	0.0	21.9	0.0	34.8	85.2	6.2	0.0	0.0	17.1	17.1
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	21.9	0.0	34.8	85.2	6.2	0.0	0.0	17.1	17.1
Queue:	0	0	0	11	0	7	3	12	0	0	43	10

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Beaverton Transportation System Plan
Existing Traffic Conditions
PM Peak Hour

Level Of Service Computation Report
1994 HCM Operations Method (Base Volume Alternative)

Intersection #90 TV Hwy/Murray Boulevard

Cycle (sec): 120 Critical Vol./Cap. (X): 0.985
Loss Time (sec): 16 (Y+R = 4 sec) Average Delay (sec/veh): 42.1
Optimal Cycle: 180 Level Of Service: E

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Ovl			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0	1	1	0	1	0	2	0	1	1	0	2	1	0	1	0	2	1	0
Volume Module:																				
Base Vol:	371	642	143	265	771	176	110	1081	400	182	1484	178
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	371	642	143	265	771	176	110	1081	400	182	1484	178
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
PHF Volume:	387	670	149	277	805	184	115	1128	418	190	1549	186
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	387	670	149	277	805	184	115	1128	418	190	1549	186
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.05	1.05	1.00	1.05	1.00	1.00	1.10	1.10	1.00	1.10	1.10
Final Vol.:	387	704	157	277	845	184	115	1241	459	190	1704	204
Saturation Flow Module:																				
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.06	0.94	0.92	1.06	0.82	0.92	0.95	0.93	0.93	0.95	0.96
Lanes:	1.00	1.60	0.40	1.00	2.00	1.00	1.00	2.18	0.82	1.00	2.68	0.32
Final Sat.:	1752	3227	720	1752	4040	1550	1752	3925	1452	1770	4829	578
Capacity Analysis Module:																				
Vol/Sat:	0.22	0.22	0.22	0.16	0.21	0.12	0.07	0.32	0.32	0.11	0.35	0.35
Crit Moves:	****				****			****			****									
Green/Cycle:	0.22	0.25	0.25	0.18	0.21	0.28	0.07	0.32	0.32	0.11	0.36	0.36
Volume/Cap:	0.98	0.86	0.86	0.86	0.98	0.42	0.97	0.98	0.98	0.98	0.97	0.97
Level Of Service Module:																				
Delay/Veh:	61.1	33.2	33.2	44.9	50.7	23.2	91.3	39.8	39.8	79.9	35.2	35.2
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	61.1	33.2	33.2	44.9	50.7	23.2	91.3	39.8	39.8	79.9	35.2	35.2
Queue:	17	24	6	11	34	5	6	49	20	9	63	10

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Beaverton Transportation System Plan
Existing Traffic Conditions
PM Peak Hour

Level Of Service Computation Report
1994 HCM Operations Method (Base Volume Alternative)

Intersection #101 Hall Blvd/Westgate-Center

Cycle (sec): 100 Critical Vol./Cap. (X): 0.501
Loss Time (sec): 12 (Y+R = 4 sec) Average Relay (sec/veh) 15.1
Optimal Cycle: 41 Level Of Service: C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0	1	1	0	1	0	1	1	0	1	0	0	1	0	1	0	0	1	0
Volume Module:																				
Base Vol:	42	622	89	134	434	25	29	70	52	61	21	215
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	42	622	89	134	434	25	29	70	52	61	21	215
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
PHF Volume:	44	645	92	139	450	26	30	73	54	63	22	223
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	44	645	92	139	450	26	30	73	54	63	22	223
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.05	1.05	1.00	1.05	1.05	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	44	677	97	139	473	27	30	73	54	63	22	223
Saturation Flow Module:																				
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.94	0.97	0.97	0.94	0.98	0.98	0.36	0.94	0.94	0.62	0.84	0.84
Lanes:	1.00	1.75	0.25	1.00	1.89	0.11	1.00	0.57	0.43	1.00	0.09	0.91
Final Sat.:	1787	3225	462	1787	3524	201	684	1027	759	1174	144	1458
Capacity Analysis Module:																				
Vol/Sat:	0.02	0.21	0.21	0.08	0.13	0.13	0.04	0.07	0.07	0.05	0.15	0.15
Crit Moves:		****		****							****	
Green/Cycle:	0.09	0.42	0.42	0.16	0.49	0.49	0.31	0.31	0.31	0.31	0.31	0.31
Volume/Cap:	0.28	0.50	0.50	0.50	0.28	0.28	0.14	0.23	0.23	0.18	0.50	0.50
Level Of Service Module:																				
Delay/Veh:	27.7	14.0	14.0	26.2	9.9	9.9	16.3	16.8	16.8	16.5	19.1	19.1
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	27.7	14.0	14.0	26.2	9.9	9.9	16.3	16.8	16.8	16.5	19.1	19.1
Queue:	1	14	2	4	8	0	1	2	1	1	1	5

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Beaverton Transportation System Plan
Existing Traffic Conditions
PM Peak Hour

Level Of Service Computation Report
1994 HCM Operation6 Method (Base Volume Alternative)

Intersection #108 Murray Boulevard/Jenkins Road

Cycle (sec): 120 Critical Vol./Cap. (X): 0.909
Loss Time (sec): 16 (Y+R = 4 sec) Average Delay (sec/veh) 32.9
Optimal Cycle: 134 Level Of Service: D

Approach:	North Bound			south Bound			East Bound			nest Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Ovl			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0	1	1	0	1	0	1	1	0	1	0
Volume Module:												
Base Vol:	300	847	93	175	765	145	127	532	331	78	431	164
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	300	847	93	175	765	145	127	532	331	78	431	164
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	317	894	98	185	808	153	134	562	350	82	455	173
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	317	894	98	185	808	153	134	562	350	82	455	173
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.05	1.05	1.00	1.05	1.05	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	317	939	103	185	848	161	134	562	350	82	455	173
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.93	1.04	0.97	0.92	1.03	0.95	0.93	0.98	0.83	0.93	0.98	0.83
Lanes:	1.00	1.79	0.21	1.00	1.66	0.34	1.00	1.00	1.00	1.00	1.00	1.00
Final Sat.:	1770	3543	389	1752	3253	618	1770	1863	1583	1770	1863	1583
Capacity Analysis Module:												
Vol/Sat:	0.18	0.27	0.27	0.11	0.26	0.26	0.08	0.30	0.22	0.05	0.24	0.11
Crit Moves:	****				tttt			****		tttt		
Green/Cycle:	0.20	0.35	0.35	0.14	0.29	0.29	0.09	0.33	0.53	0.05	0.29	0.29
Volume/Cap:	0.91	0.77	0.77	0.77	0.91	0.91	0.84	0.91	0.42	0.91	0.84	0.37
Level Of Service Module:												
Delay/Veh:	49.4	24.4	24.4	41.4	34.6	34.6	55.0	37.3	11.2	82.5	33.3	22.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	49.4	24.4	24.4	41.4	34.6	34.6	55.0	37.3	11.2	82.5	33.3	22.0
Queue:	13	29	4	7	30	7	6	21	7	4	16	5

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Beaverton Transportation System Plan
Existing Traffic Conditions
PM Peak Hour

Level Of Service Computation Report
1994 HCM Operations Method (Base Volume Alternative)

Intersection #113 Walker Road/ORE 217 NB ramps

Cycle (sec): 80 Critical Vol./Cap. (X): 0.986
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 35.3
Optimal Cycle: 141 Level Of Service: D

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	1	0	0	1	0	0	0	0	0	0	0
Volume Module:												
Base Vol:	650	5	62	0	0	0	108	541	0	0	330	123
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	650	5	62	0	0	0	108	541	0	0	330	123
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
PHF Volume:	722	6	69	0	0	0	120	601	0	0	367	137
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	722	6	69	0	0	0	120	601	0	0	367	137
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	722	6	69	0	0	0	120	601	0	0	367	137
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.83	0.83	0.83	1.00	1.00	1.00	0.94	0.99	1.00	1.00	0.85	0.85
Lanes:	0.99	0.01	1.00	0.00	0.00	0.00	1.00	1.00	0.00	0.00	0.73	0.27
Final Sat.:	1570	13	1583	0	0	0	1787	1881	0	0	1178	440
Capacity Analysis Module:												
Vol/Sat:	0.46	0.46	0.04	0.00	0.00	0.00	0.07	0.32	0.00	0.00	0.31	0.31
Crit Moves:		****					****				tttt	
Green/Cycle:	0.47	0.47	0.47	0.00	0.00	0.00	0.07	0.38	0.00	0.00	0.32	0.32
Volume/Cap:	0.99	0.99	0.09	0.00	0.00	0.00	0.99	0.83	0.00	0.00	0.99	0.99
Level Of Service Module:												
Delay/Veh:	36.1	36.1	7.7	0.0	0.0	0.0	62.4	20.2	0.0	0.0	45.0	45.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	36.1	36.1	7.7	0.0	0.0	0.0	82.4	20.2	0.0	0.0	45.0	45.0
Queue:	22	1	1	0	0	0	5	14	0	0	12	6

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Beaverton Transportation System Plan
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Level Of Service Computation Report
1994 HCM Operations Method (Base Volume Alternative)

Intersection #117 Walker Road/OR8 217 SB ramps

Cycle (sec):	80	Critical Vol./Cap. (X):	0.865
Loss Time (sec):	12 (Y+R = 4 sec)	Average Delay (sec/veh):	14.0
Optimal Cycle:	86	Level Of Service:	B

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Protected			Protected		
Rights:		Include			Include			Include			Include	
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	0 0	0 0	0	1 0	0 1	0	0 1	0 1	1	0 0	1 0
Volume Module:												
Base Vol:	0	0	0	145	11	270	0	481	794	39	839	3
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	145	11	270	0	481	794	39	839	3
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
PHF Volume:	0	0	0	155	12	289	0	514	849	42	897	3
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	155	12	289	0	514	849	42	897	3
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	0	0	0	155	12	289	0	514	849	42	897	3
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	0.84	0.84	0.84	1.00	0.99	0.84	0.93	0.98	0.98
Lanes:	0.00	0.00	0.00	0.93	0.07	1.00	0.00	1.00	1.00	1.00	0.99	0.01
Final Sat.:	0	0	0	1484	115	1599	0	1881	1599	1770	1857	6
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.10	0.10	0.18	0.00	0.27	0.53	0.02	0.48	0.48
Crit Moves:						****			****	****		
Green/Cycle:	0.00	0.00	0.00	0.21	0.21	0.21	0.00	0.61	0.61	0.03	0.64	0.64
Volume/Cap:	0.00	0.00	0.00	0.50	0.50	0.87	0.00	0.45	0.87	0.87	0.75	0.75
Level Of Service Module:												
Delay/Veh:	0.0	0.0	0.0	19.1	19.1	33.9	0.0	5.5	14.0	78.9	8.4	8.4
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	19.1	19.1	33.9	0.0	5.5	14.0	78.9	8.4	8.4
Queue:	0	0	0	3	0	8	0	6	18	2	15	0

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Beaverton Transportation System Plan
Existing Traffic Conditions
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Level Of Service Computation Report
1994 HCM Operations Method (Base Volume Alternative)

Intersection #12$ Cedar Hills Blvd/Hall Blvd

Cycle (sec):	100	Critical Vol./Cap. (X):	0.811
Loss Time (sec):	16 (Y+R = 4 sec)	Average Delay (sec/veh):	22.3
Optimal Cycle:	89	Level Of Service:	C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:		Include			Include			Include			Ovl	
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0 1	1 0	1	0 1	1 0	1	0 1	1 0	1	0 1	0 1
Volume Module:												
Base Vol:	109	473	58	422	893	69	106	107	160	112	161	689
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	109	473	58	422	893	69	106	107	160	112	161	689
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
PHF Volume:	115	501	61	447	946	73	112	113	169	119	171	730
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	115	501	61	447	946	73	112	113	169	119	171	730
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.05	1.05	1.00	1.05	1.05	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	115	526	65	447	993	77	112	113	169	119	171	730
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.93	0.96	0.96	0.94	0.98	0.98	0.94	0.99	0.84	0.94	0.99	0.84
Lanes:	1.00	1.78	0.22	1.00	1.86	0.14	1.00	1.00	1.00	1.00	1.00	1.00
Final Sat.:	1770	3249	402	1787	3457	268	1787	1881	1599	1787	1881	1599
Capacity Analysis Module:												
Vol/Sat:	0.06	0.16	0.16	0.25	0.29	0.29	0.06	0.06	0.11	0.07	0.09	0.46
Crit Moves:		****		****			****					****
Green/Cycle:	0.09	0.20	0.20	0.31	0.41	0.41	0.08	0.20	0.20	0.13	0.25	0.56
Volume/Cap:	0.69	0.81	0.81	0.81	0.69	0.69	0.81	0.30	0.52	0.52	0.36	0.81
Level Of Service Module:												
Delay/Veh:	36.2	21.5	29.5	26.8	16.5	16.5	48.8	21.8	23.6	28.0	19.9	15.3
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	36.2	29.5	29.5	26.8	16.5	16.5	48.8	21.8	23.6	28.0	19.9	15.3
Queue:	4	15	3	13	23	2	4	3	4	3	4	18

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Beaverton Transportation System Plan
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Level Of Service Computation Report
1994 HCM Operations Method (Base Volume Alternative)

Intersection #126 Cedar Hills Boulevard/Walker Road

Cycle (sec): 100 Critical Vol./Cap. (X): 0.962
Loss Time (sec): 16 (Y+R = 4 sec) Average Delay (sec/veh): 35.1
Optimal Cycle: 148 Level Of Service: D

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0	2	0	1	1	0	1	1	0	1	0	1	1	0	1	0	1	1	0
Volume Module:																				
Base Vol:	220	868	290	112	615	82	147	744	208	269	553	97
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	220	868	290	112	615	82	147	744	208	269	553	97
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
PHF Volume:	238	937	313	121	664	89	159	803	225	290	597	105
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	238	937	313	121	664	89	159	803	225	290	597	105
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.05	1.00	1.00	1.05	1.05	1.00	1.05	1.05	1.00	1.05	1.05
Final Vol.:	238	984	313	121	697	93	159	844	236	290	627	110
Saturation Flow Module:																				
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.94	0.99	0.84	0.93	0.96	0.96	0.94	0.96	0.96	0.94	0.97	0.97
Lanes:	1.00	2.00	1.00	1.00	1.76	0.24	1.00	1.56	0.44	1.00	1.70	0.30
Final Sat.:	1787	3762	1599	1770	3221	430	1787	2852	797	1787	3137	550
Capacity Analysis Module:																				
Vol/Sat:	0.13	0.26	0.20	0.07	0.22	0.22	0.09	0.30	0.30	0.16	0.20	0.20
Crit Moves:	****				****			****			****									
Green/Cycle:	0.14	0.29	0.29	0.08	0.23	0.23	0.15	0.31	0.31	0.17	0.33	0.33
Volume/Cap:	0.96	0.91	0.68	0.91	0.96	0.96	0.61	0.96	0.96	0.96	0.61	0.61
Level Of Service Module:																				
Delay/Veh:	61.9	30.1	23.1	65.3	41.4	41.4	28.6	35.5	35.5	57.2	18.8	18.8
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	61.9	30.1	23.1	65.3	41.4	41.4	28.6	35.5	35.5	57.2	18.8	18.8
Queue:	10	29	8	5	24	5	4	28	9	11	15	3

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Beaverton Transportation System Plan
Existing Traffic Conditions
PM Peak Hour

Level Of Service Computation Report
1994 HCM Operations Method (Base Volume Alternative)

Intersection #127 Cedar Hills Boulevard/Jenkins Road

Cycle (sec): 120 Critical Vol./Cap. (X): 0.888
Loss Time (sec): 16 (Y+R = 4 sec) Average Delay (sec/veh) 25.6
Optimal Cycle: 123 Level Of Service: D

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Split Phase			Split Phase		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0	1	1	0	1	0	1	1	0	1	1	0	0	1	0	1	0	0	0
Volume Module:																				
Base Vol:	222	829	4	3	971	224	520	2	419	13	8	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	222	829	4	3	971	224	520	2	419	13	8	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
PHF Volume:	229	856	4	3	1002	231	537	2	432	13	8	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	229	856	4	3	1002	231	537	2	432	13	8	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.05	1.05	1.00	1.05	1.05	1.05	1.05	1.00	1.00	1.00	1.00
Final Vol.:	229	898	4	3	1052	243	563	2	432	13	8	0
Saturation Flow Module:																				
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.93	0.98	0.98	0.93	0.95	0.95	0.94	0.94	0.84	0.97	0.97	1.00
Lanes:	1.00	1.99	0.01	1.00	1.62	0.38	1.99	0.01	1.00	0.62	0.38	0.00
Final Sat.:	1770	3709	17	1770	2936	678	3562	13	1599	1141	702	0
Capacity Analysis Module:																				
Vol/Sat:	0.13	0.24	0.24	0.00	0.36	0.36	0.16	0.16	0.27	0.01	0.01	0.00
Crit Moves:	****				****				****	****										
Green/Cycle:	0.15	0.55	0.55	0.00	0.40	0.40	0.30	0.30	0.30	0.01	0.01	0.00
Volume/Cap:	0.89	0.44	0.44	0.44	0.89	0.89	0.52	0.52	0.89	0.89	0.89	0.00
Level Of Service Module:																				
Delay/Veh:	52.6	10.7	10.7	59.3	26.5	26.5	22.6	22.6	38.3	129.6	130	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	52.6	10.7	10.7	59.3	26.5	26.5	22.6	22.6	38.3	129.6	130	0.0
Queue:	9	18	0	0	35	9	16	0	16	1	1	0

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Beaverton Transportation System Plan
Existing Traffic Conditions
PM Peak Hour

Level Of Service Computation Report
1994 HCM Operations Method (Base Volume Alternative)

Intersection #130 Farmington Road/Cedar Hills Boulevard

Cycle (sec): 100 Critical Vol./Cap. (X): 0.883
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 16.8
Optimal Cycle: 102 Level Of Service: C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Protected			Protected		
Rights:	Include			Ovl			Include			Ovl		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	0	0	0	1	0	0	0	1	1	0	2	0	0	0	0	2	0	1
Volume Module:																			
Base Vol:	0	0	0	353	0	275	197	1086	0	0	1475	242							
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00							
Initial Bse:	0	0	0	353	0	275	197	1086	0	0	1475	242							
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00							
PHF Adj:	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93							
PHF Volume:	0	0	0	379	0	295	211	1165	0	0	1583	260							
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0							
Reduced Vol:	0	0	0	379	0	295	211	1165	0	0	1583	260							
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00							
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.05	1.00	1.00	1.05	1.00							
Final Vol.:	0	0	0	379	0	295	211	1223	0	0	1662	260							
Saturation Flow Module:																			
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900							
Adjustment:	1.00	1.00	1.00	0.94	1.00	0.84	0.93	0.98	1.00	1.00	0.98	0.83							
Lanes:	0.00	0.00	0.00	1.00	0.00	1.00	1.00	2.00	0.00	0.00	2.00	1.00							
Final Sat.:	0	0	0	1787	0	1599	1770	3725	0	0	3725	1583							
Capacity Anaiysis Module:																			
Vol/Sat:	0.00	0.00	0.00	0.21	0.00	0.18	0.12	0.33	0.00	0.00	0.45	0.16							
Crit Moves:				****			****				****								
Green/Cycle:	0.00	0.00	0.00	0.24	0.00	0.38	0.13	0.64	0.00	0.00	0.50	0.75							
Volume/Cap:	0.00	0.00	0.00	0.88	0.00	0.49	0.88	0.51	0.00	0.00	0.88	0.22							
Level Of Service Module:																			
Delay/Veh:	0.0	0.0	0.0	37.1	0.0	16.0	48.1	6.4	0.0	0.0	18.2	2.5							
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00							
AdjDel/Veh:	0.0	0.0	0.0	37.1	0.0	16.0	48.1	6.4	0.0	0.0	18.2	2.5							
Queue:	0	0	0	12	0	6	8	18	0	0	44	2							

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Beaverton Transpprtation System Plan
Existing Traffic Conditions
PM Peak Hour

Level Of Service Computation Report
1994 HCM Operations Method (Base Volume Alternative)

Intersection #131 Canyon Road/Cedar Hills Boulevard

Cycle (sec): 100 Critical Vol./Cap. (X): 0.999
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh) 38.5
Optimal Cycle: 180 Level Of Service: D

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	1	0	1	0	0	1	0	1	0	0	0	1	1	0	0	0	2	0	1
Volume Module:																			
Base Vol:	169	217	60	199	529	161	0	1269	33	0	1286	138							
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00							
Initial Bse:	169	217	60	199	529	161	0	1269	33	0	1286	138							
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00							
PHF Adj:	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97							
PHF Volume:	174	224	62	205	545	166	0	1308	34	0	1326	142							
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0							
Reduced Vol:	174	224	62	205	545	166	0	1308	34	0	1326	142							
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00							
MLF Adj:	1.00	1.00	1.00	1.05	1.05	1.05	1.00	1.05	1.05	1.00	1.05	1.00							
Final Vol.:	174	224	62	215	573	174	0	1374	36	0	1392	142							
Saturation Flow Module:																			
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900							
Adjustment:	0.84	0.85	0.85	0.84	0.84	0.84	0.89	0.86	0.86	0.89	0.86	0.73							
Lanes:	0.76	0.97	0.27	0.45	1.19	0.36	0.00	1.95	0.05	0.00	2.00	1.00							
Final Sat.:	1211	1559	432	712	1897	576	0	3169	83	0	3283	1395							
Capacity Analysis Module:																			
Vol/Sat:	0.14	0.14	0.14	0.30	0.30	0.30	0.00	0.43	0.43	0.00	0.42	0.10							
Crit Moves:	****				****			****											
Green/Cycle:	0.14	0.14	0.14	0.30	0.30	0.30	0.00	0.43	0.43	0.00	0.43	0.43							
Volume/Cap:	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.98	0.23							
Level Of Service Module:																			
Delay/Veh:	59.7	59.7	59.7	44.7	44.7	44.7	0.0	36.5	36.5	0.0	31.9	11.6							
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00							
AdjDel/Veh:	59.7	59.7	59.7	44.7	44.7	44.7	0.0	36.5	36.5	0.0	31.9	11.6							
Queue:	8	10	4	10	22	8	0	47	2	0	45	2							

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Beaverton Transportation System Plan
Existing Traffic Conditions
PM Peak Hour

Level Of Service Computation Report
1994 HCM Operations Method (Base Volume Alternative)

Intersection #133 Canyon Rd./Fred Meyer Access

Cycle (sec): 100 Critical Vol./Cap. (X): 0.754
Loss Time (sec): 16 (Y+R = 4 sec) Average Delay (sec/veh): 18.1
Optimal Cycle: 17 Level Of Service: C

Approach:	North Bound						South Bound						East Bound						West Bound					
Movement:	L	-	T	-	R		L	-	T	-	R		L	-	T	-	R		L	-	T	-	R	
Control:	Permitted						Permitted						Protected						Protected					
Rights:	Include						Include						Include						Include					
Min. Green:	0		22		0		0		22		0		0		0		0		0		0		0	
Lanes:	1	0	0	1	0		0	0	1!	0	0		1	0	2	0	1		1	0	1	1	0	
Volume Module:																								
Base Vol:	125	0		131			34		1		22		1		1408		97		116		1436		11	
Growth Adj:	1.00	1.00		1.00			1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00	
Initial Bse:	125	0		131			34		1		22		1		1408		97		116		1436		11	
User Adj:	1.00	1.00		1.00			1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00	
PHF Adj:	0.91	0.91		0.91			0.91		0.91		0.91		0.91		0.91		0.91		0.91		0.91		0.91	
PHF Volume:	137	0		144			37		1		24		1		1546		106		127		1576		12	
Reduct Vol:	0	0		0			0		0		0		0		0		0		0		0		0	
Reduced Vol:	137	0		144			37		1		24		1		1546		106		127		1576		12	
PCE Adj:	1.00	1.00		1.00			1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00	
MLF Adj:	1.00	1.00		1.00			1.00		1.00		1.00		1.00		1.05		1.00		1.00		1.05		1.05	
Final Vol.:	137	0		144			37		1		24		1		1623		106		127		1655		13	
Saturation Flow Module:																								
Sat/Lane:	1900	1900		1900			1900		1900		1900		1900		1900		1900		1900		1900		1900	
Adjustment:	0.77	1.00		0.84			0.60		0.60		0.60		0.93		0.84		0.83		0.93		0.88		0.98	
Lanes:	1.00	0.00		1.00			0.60		0.01		0.39		1.00		2.00		1.00		1.00		1.99		0.01	
Final Sat.:	1467	0		1599			679		18		440		1770		3201		1583		1770		3327		26	
Capacity Analysis Module:																								
Vol/Sat:	0.09	0.00		0.09			0.05		0.05		0.05		0.00		0.51		0.07		0.07		0.50		0.50	
Crit Moves:									****						****				****					
Green/Cycle:	0.22	0.00		0.22			0.22		0.22		0.22		0.00		0.54		0.54		0.08		0.62		0.62	
Volume/Cap:	0.42	0.00		0.41			0.25		0.25		0.25		0.80		0.93		0.12		0.93		0.80		0.80	
Level Of Service Module:																								
Delay/Veh:	22.2	0.0		22.0			20.9		20.9		20.9		369.7		20.9		7.2		70.6		11.0		11.0	
User DelAdj:	1.00	1.00		1.00			1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00	
AdjDel/Veh:	22.2	0.0		22.0			20.9		20.9		20.9		369.7		20.9		7.2		70.6		11.0		11.0	
Queue:	3	0		3			1		0		1		0		46		1		6		36		1	

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Beaverton Transportation System Plan
Existing Traffic Conditions
PM Peak Hour

Level Of Service Computation Report
1994 HCM Operations Method (Base Volume Alternative)

Intersection #162 Cedar Hills Blvd/Westgate Drive

Cycle (sec): 100 Critical Vol./Cap. (X): 0.421
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 6.4
Optimal Cycle: 36 Level Of Service: B

Approach:	North Bound						South Bound						East Bound						West Bound					
Movement:	L	-	T	-	R		L	-	T	-	R		L	-	T	-	R		L	-	T	-	R	
Control:	Protected						Protected						Split Phase						Split Phase					
Rights:	Include						Include						Include						Include					
Min. Green:	0		0		0		0		0		0		0		0		0		0		0		0	
Lanes:	0	0	1	1	0		1	0	2	0	0		0	0	0	0	0		0	0	1!	0	0	
Volume Module:																								
Base Vol:	0	578		78			41	985		0			0		0		0		47		0		58	
Growth Adj:	1.00	1.00		1.00			1.00	1.00		1.00			1.00		1.00		1.00		1.00		1.00		1.00	
Initial Bse:	0	578		78			41	985		0			0		0		0		47		0		58	
User Adj:	1.00	1.00		1.00			1.00	1.00		1.00			1.00		1.00		1.00		1.00		1.00		1.00	
PHF Adj:	0.93	0.93		0.93			0.93	0.93		0.93			0.93		0.93		0.93		0.93		0.93		0.93	
PHF Volume:	0	623		84			44	1061		0			0		0		0		51		0		63	
Reduct Vol:	0	0		0			0	0		0			0		0		0		0		0		0	
Reduced Vol:	0	623		84			44	1061		0			0		0		0		51		0		63	
PCE Adj:	1.00	1.00		1.00			1.00	1.00		1.00			1.00		1.00		1.00		1.00		1.00		1.00	
MLF Adj:	1.00	1.05		1.05			1.00	1.05		1.00			1.00		1.00		1.00		1.00		1.00		1.00	
Final Vol.:	0	654		88			44	1114		0			0		0		0		51		0		63	
Saturation Flow Module:																								
Sat/Lane:	1900	1900		1900			1900	1900		1900			1900		1900		1900		1900		1900		1900	
Adjustment:	1.00	0.96		0.96			0.94	0.99		1.00			1.00		1.00		1.00		0.81		1.00		0.81	
Lanes:	0.00	1.76		0.24			1.00	2.00		0.00			0.00		0.00		0.00		0.45		0.00		0.55	
Final Sat.:	0	3218		433			1787	3762		0			0		0		0		685		0		846	
Capacity Analysis Module:																								
Vol/Sat:	0.00	0.20		0.20			0.02	0.30		0.00			0.00		0.00		0.00		0.07		0.00		0.07	
Crit Moves:	****							****															****	
Green/Cycle:	0.00	0.63		0.63			0.08	0.70		0.00			0.00		0.00		0.00		0.18		0.00		0.18	
Volume/Cap:	0.00	0.32		0.32			0.32	0.42		0.00			0.00		0.00		0.00		0.42		0.00		0.42	
Level Of Service Module:																								
Delay/Veh:	0.0	5.7		5.7			28.8	4.1		0.0			0.0		0.0		0.0		24.3		0.0		24.3	
User DelAdj:	1.00	1.00		1.00			1.00	1.00		1.00			1.00		1.00		1.00		1.00		1.00		1.00	
AdjDel/Veh:	0.0	5.7		5.7			28.8	4.1		0.0			0.0		0.0		0.0		24.3		0.0		24.3	
Queue:	0	9		1			1	13		0			0		0		0		1		0		2	

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Beaverton Transportation System Plan
Existing Traffic Conditions
PM Peak Hour

Level Of Service Computation Report
1994 HCM Operations Method (Base Volume Alternative)

Intersection #169 Farmington Road/149th Avenue

Cycle (sec):	90	Critical Vol./Cap. (X):	0.809
Loss Time (sec):	12 (Y+R = 4 sec)	Average Delay (sec/veh):	7.3
Optimal Cycle:	76	Level Of Service:	B

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	0	1! 0	0	0	1	0	0	1	0	0	1
Volume Module:												
Base Vol:	10	1	27	26	2	25	4	592	19	60	1169	10
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	10	1	27	26	2	25	4	592	19	60	1169	10
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
PHF Volume:	11	1	29	28	2	27	4	633	20	64	1250	11
Reduce Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	11	1	29	28	2	27	4	633	20	64	1250	11
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	11	1	29	28	2	27	4	633	20	64	1250	11
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.75	0.75	0.75	1.00	1.00	0.85	0.91	0.96	0.96	0.94	0.99	0.99
Lanes:	0.27	0.02	0.71	0.93	0.07	1.00	1.00	0.97	0.03	1.00	0.99	0.01
Final Sat.:	383	35	1011	1773	127	1615	1736	1771	56	1787	1865	16
Capacity Analysis Module:												
Vol/Sat:	0.03	0.03	0.03	0.02	0.02	0.02	0.00	0.36	0.36	0.04	0.67	0.67
Crit Moves:		****					****				****	
Green/Cycle:	0.04	0.04	0.04	0.04	0.04	0.04	0.00	0.76	0.76	0.08	0.83	0.83
Volume/Cap:	0.81	0.81	0.81	0.45	0.45	0.47	0.81	0.47	0.47	0.47	0.81	0.81
Level Of Service Module:												
Delay/Veh:	67.4	67.4	67.4	30.5	30.5	31.8	192.0	2.9	2.9	27.7	4.9	4.9
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	67.4	67.4	67.4	30.5	30.5	31.8	192.0	2.9	2.9	27.7	4.9	4.9
Queue:	1	0	1	1	0	1	0	6	0	2	18	1

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Beaverton Transportation System Plan
Existing Traffic Conditions
PM Peak Hour

Level Of Service Computation Report
1994 HCM Operations Method (Base Volume Alternative)

Intersection #170 TV Highway/153rd Drive

Cycle (sec):	100	Critical Vol./Cap. (X):	0.768
Loss Time (sec):	12 (Y+R = 4 sec)	Average Delay (sec/veh):	6.1
Optimal Cycle:	70	Level Of Service:	B

Approach:	North Bound			South Bound			East Bound				West Bound			
Movement:	L	T	R	L	T	R	L	T	R		L	T	R	
Control:	Split Phase			Split Phase			Protected				Protected			
Rights:	Include			Ovl			Include				Ovl			
Min. Green:	0	0	0	0	0	0	0	0	0	0	00	20	0	10
Lanes:	0	0	0	0	0	2	0	0	0	1	1	0	1	1	0	
Volume Module:																
Base Vol:	0	0	0	190	0	65	21	1500	0	0	2004	57				
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Initial Bse:	0	0	0	190	0	65	21	1500	0	0	2004	57				
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Adj:	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94				
PHF Volume:	0	0	0	201	0	69	22	1589	0	0	2123	60				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0				
Reduced Vol:	0	0	0	201	0	69	22	1589	0	0	2123	60				
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
MLF Adj:	1.00	1.00	1.00	1.03	1.00	1.00	1.00	1.05	1.05	1.00	1.05	1.00				
Final Vol.:	0	0	0	207	0	69	22	1668	0	0	2229	60				
Saturation Flow Module:																
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900				
Adjustment:	1.00	1.00	1.00	0.92	1.00	0.83	0.92	0.97	1.00	1.00	0.97	0.83				
Lanes:	0.00	0.00	0.00	2.00	0.00	1.00	1.00	2.00	0.00	0.00	2.00	1.00				
Final Sat.:	0	0	0	3505	0	1568	1752	3689	0	0	3689	1568				
Capacity Analysis Module:																
Vol/Sat:	0.00	0.00	0.00	0.06	0.00	0.04	0.01	0.45	0.00	0.00	0.60	0.04				
Crit Moves:				****			****				****					
Green/Cycle:	0.00	0.00	0.00	0.08	0.00	0.09	0.02	0.80	0.00	0.00	0.79	0.86				
Volume/Cap:	0.00	0.00	0.00	0.77	0.00	0.47	0.77	0.56	0.00	0.00	0.77	0.04				
Level Of Service Module:																
Delay/Veh:	0.0	0.0	0.0	37.7	0.0	29.6	78.9	2.5	0.0	0.0	4.6	0.6				
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
AdjDel/Veh:	0.0	0.0	0.0	37.7	0.0	29.6	78.9	2.5	0.0	0.0	4.6	0.6				
Queue:	0	0	0	6	0	2	1	17	0	0	34	0				

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Beaverton Transportation System Plan
Existing Traffic Conditions
PM Peak Hour

Level Of Service Computation Report
1994 HCM Operations Method (Base Volume Alternative)

Intersection #171 TV Highway/160th Avenue-Millikan Way

Cycle (sec): 120 Critical Vol./Cap. (XI: 0.936
Loss Time (sec): 16 (Y+R = 4 sec) Average Delay (sec/veh): 27.7
Optimal Cycle: 150 Level Of Service: D

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Ovl			Ovl			Ovl			Ovl		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0 1	0 1	1	0 1	0 1	1	0 2	0 1	1	0 2	0 1
Volume Module:												
Base Vol:	101	75	115	22	313	339	44	1318	135	174	1780	7
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	101	75	115	22	313	339	44	1318	135	174	1780	7
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	106	79	121	23	330	357	46	1389	142	183	1876	7
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	106	79	121	23	330	357	46	1389	142	183	1876	7
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.05	1.00	1.00	1.05	1.00
Final Vol.:	106	79	121	23	330	357	46	1458	142	183	1969	7
Saturation F ow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.94	0.99	0.84	0.94	0.99	0.84	0.92	0.97	0.83	0.93	0.98	0.83
Lanes:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	1.00	1.00	2.00	1.00
Final Sat.:	1787	1881	1599	1787	1881	1599	1752	3689	1568	1770	3725	1583
Capacity Analysis Module:												
Vol/Sat:	0.06	0.04	0.08	0.01	0.18	0.22	0.03	0.40	0.09	0.10	0.53	0.00
Crit Moves:	****					****	****				****	
Green/Cycle:	0.06	0.23	0.36	0.04	0.21	0.24	0.03	0.47	0.53	0.12	0.56	0.60
Volume/Cap:	0.94	0.18	0.21	0.32	0.83	0.94	0.94	0.84	0.17	0.84	0.94	0.01
Level Of Service Module:												
Delay/Veh:	82.4	23.8	17.4	37.1	39.1	50.8	112.1	20.8	9.3	49.9	21.9	6.1
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	82.4	23.8	17.4	37.1	39.1	50.8	112.1	20.8	9.3	49.9	21.9	6.1
Queue:	5	2	3	1	12	15	3	44	2	7	65	0

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Beaverton Transportation System Plan
Existing Traffic Conditions
PM Peak Hour

Level Of Service Computation Report
1994 HCM Operations Method (Base Volume Alternative)

Intersection #174 Jenkins Road/153rd Drive

Cycle (sec): 120 Critical Vol./Cap. (X): 0.893
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 20.5
Optimal Cycle: 116 Level Of Service: C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Protected			Protected		
Rights:	Ovl			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0 0	0 1	0	0 0	0 0	0	0 0	1 0	1	0 1	0 0
Volume Module:												
Base Vol:	184	0	144	0	0	0	0	701	209	180	690	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	184	0	144	0	0	0	0	701	209	180	690	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	193	0	151	0	0	0	0	736	219	189	724	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	193	0	151	0	0	0	0	736	219	189	724	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	193	0	151	0	0	0	0	736	219	189	724	0
Saturation Plow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.93	1.00	0.83	1.00	1.00	1.00	1.00	0.85	0.85	0.94	0.99	1.00
Lanes:	1.00	0.00	1.00	0.00	0.00	0.00	0.00	0.77	0.23	1.00	1.00	0.00
Final Sat.:	1770	0	1583	0	0	0	0	1249	372	1787	1881	0
Capacity Analysis Module:												
Vol/Sat:	0.11	0.00	0.10	0.00	0.00	0.00	0.00	0.59	0.59	0.11	0.38	0.00
Crit Moves:	****							****		****		
Green/Cycle:	0.12	0.00	0.24	0.00	0.00	0.00	0.00	0.66	0.66	0.12	0.78	0.00
Volume/Cap:	0.89	0.00	0.40	0.00	0.00	0.00	0.00	0.89	0.89	0.89	0.49	0.00
Level Of Service Module:												
Delay/Veh:	57.3	0.0	25.1	0.0	0.0	0.0	0.0	17.9	17.9	57.8	3.3	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	57.3	0.0	25.1	0.0	0.0	0.0	0.0	17.9	17.9	57.8	3.3	0.0
Queue:	8	0	4	0	0	0	0	23	8	8	9	0

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Beaverton Transportation System Plan
Existing Traffic Conditions
PM Peak Hour

Level Of Service Computation Report
1994 HCM Operations Method (Base Volume Alternative)

Intersection #175 Jenkins Road/158th Avenue

Cycle (sec): 100 Critical Vol./Cap. (X): 0.914
Loss Time (sec): 16 (Y+R = 4 sec) Average Delay (sec/veh): 30.0
Optimal Cycle: 122 Level Of Service: D

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Ovl			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0 1	1	0	1	0 1	0 1	1	0	1	0 0	1	0
Volume Module:												
Base Vol:	42	121	117	304	249	166	132	432	43	146	569	183
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	42	121	117	304	249	166	132	432	43	146	569	183
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
PHF Volume:	44	126	121	315	258	172	137	448	45	151	590	190
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	44	126	121	315	258	172	137	448	45	151	590	190
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.05	1.05	1.00	1.00	1.00	1.00	1.05	1.05	1.00	1.00	1.00
Final Vol.:	44	132	127	315	258	172	137	471	47	151	590	190
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.90	0.89	0.89	0.93	0.98	0.83	0.94	0.98	0.98	0.93	0.94	0.94
Lanes:	1.00	1.02	0.98	1.00	1.00	1.00	1.00	1.82	0.18	1.00	0.76	0.24
Final Sat.:	1719	1715	1650	1770	1863	1583	1787	3387	338	1770	1353	436
Capacity Analysis Module:												
Vol/Sat:	0.03	0.08	0.08	0.18	0.14	0.11	0.08	0.14	0.14	0.09	0.44	0.44
Crit Moves:		tttt		****			tttt				****	
Green/Cycle:	0.04	0.08	0.08	0.19	0.24	0.32	0.08	0.35	0.35	0.21	0.48	0.48
Volume/Cap:	0.59	0.91	0.91	0.91	0.59	0.34	0.91	0.40	0.40	0.40	0.91	0.91
Level Of Service Module:												
Delay/Veh:	38.2	52.0	52.0	45.3	23.4	17.0	63.8	16.1	16.1	22.2	25.9	25.9
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	38.2	52.0	52.0	45.3	23.4	17.0	63.8	16.1	16.1	22.2	25.9	25.9
Queue:	1	5	5	11	7	4	6	10	1	4	18	7

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Beaverton Transportation System Plan
Existing Traffic Conditions
PM Peak Hour

Level Of Service Computation Report
1994 HCM Operations Method (Base Volume Alternative)

Intersection #176 Farmington Road/170th Avenue

Cycle (sec): 120 Critical Vol./Cap. (X): 0.922
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 31.1
Optimal Cycle: 134 Level Of Service: D

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	0 1	0	0	0	0 1	0	1	0	1	0	1	0
Volume Module:												
Base Vol:	56	123	55	34	309	125	26	598	183	89	811	62
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	56	123	55	34	309	125	26	598	183	89	811	62
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
PHF Volume:	60	132	59	37	332	134	28	643	197	96	872	67
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	60	132	59	37	332	134	28	643	197	96	872	67
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	60	132	59	37	332	134	28	643	197	96	872	67
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.43	0.43	0.43	0.88	0.88	0.84	0.93	0.95	0.95	0.94	0.98	0.98
Lanes:	0.24	0.53	0.23	0.10	0.90	1.00	1.00	0.77	0.23	1.00	0.93	0.07
Final Sat.:	194	426	190	168	1506	1599	1770	1383	424	1787	1729	133
Capacity Analysis Module:												
Vol/Sat:	0.31	0.31	0.31	0.22	0.22	0.08	0.02	0.46	0.46	0.05	0.50	0.50
Crit Moves:		tttt					****				****	
Green/Cycle:	0.34	0.34	0.34	0.34	0.34	0.34	0.02	0.51	0.51	0.06	0.55	0.55
Volume/Cap:	0.92	0.92	0.92	0.66	0.66	0.25	0.92	0.92	0.92	0.92	0.92	0.92
Level Of Service Module:												
Delay/Veh:	49.4	49.4	49.4	23.9	23.9	18.7	129.7	27.9	27.9	80.7	25.7	25.7
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	49.4	49.4	49.4	23.9	23.9	18.7	129.7	27.9	27.9	80.7	25.7	25.7
Queue:	3	6	3	1	10	3	2	23	8	5	30	4

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Beaverton Transportation System Plan
Existing Traffic Conditions
PM Peak Hour

Level Of Service Computation Report
1994 HCM Operations Method (Base Volume Alternative)

Intersection #177 TV Highway/170th Avenue

Cycle (sec):	120	critical Vol./Cap. (X):	0.991
Loss Time (sec):	16 (Y+R = 4 sec)	Average Delay (sec/veh):	36.9
Optimal Cycle:	180	Level Of Service:	D

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Ovl			Ovl		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0	0 1	0	1	0 0 1	0	1	0 2	0	1	0 2 0 1
Volume Module:												
Base Vol:	92	130	56	165	342	18	85	1310	146	305	1838	260
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	92	130	56	165	342	18	85	1310	146	305	1838	260
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	97	137	59	174	361	19	90	1383	154	322	1941	275
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	97	137	59	174	361	19	90	1383	154	322	1941	275
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.05	1.00	1.00	1.05	1.00
Final Vol.:	97	137	59	174	361	19	90	1452	154	322	2038	275
Saturation F ow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.93	0.94	0.94	0.93	0.97	0.97	0.92	0.97	0.83	0.93	0.98	0.83
Lanes:	1.00	0.70	0.30	1.00	0.95	0.05	1.00	2.00	1.00	1.00	2.00	1.00
Final Sat.:	1770	1250	538	1770	1752	92	1752	3689	1568	1770	3725	1583
Capacity Analysis Module:												
Vol/Sat:	0.05	0.11	0.11	0.10	0.21	0.21	0.05	0.39	0.10	0.18	0.55	0.17
Crit Moves:	****				****		****				****	
Green/Cycle:	0.06	0.14	0.14	0.12	0.21	0.21	0.05	0.41	0.47	0.19	0.55	0.68
Volume/Cap:	0.99	0.79	0.79	0.79	0.99	0.99	0.99	0.95	0.21	0.95	0.99	0.26
Level Of Service Module:												
Delay/Veh:	103.6	42.9	42.9	44.7	63.8	63.8	106.4	32.1	12.2	57.9	30.8	4.9
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	103.6	42.9	42.9	44.7	63.8	63.8	106.4	32.1	12.2	57.9	30.8	4.9
Queue:	6	5	3	7	16	2	5	52	3	14	77	4

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Beaverton Transportation System Plan
Existing Traffic Conditions
PM Peak Hour

Level Of Service Computation Report
1994 HCM Operations Method (Base Volume Alternative)

Intersection #179 Merlo Road/170th Avenue

Cycle (sec):	90	Critical Vol./Cap. (X):	0.727
Loss Time (sec):	12 (Y+R = 4 sec)	Average Delay (sec/veh):	16.5
Optimal Cycle:	62	Level Of Service:	C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	0	1! 0	0	0	1! 0	0	0	1! 0	0	1	0 0 1 0
Volume Module:												
Base Vol:	15	225	222	2	218	14	6	9	9	462	38	20
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bee:	15	225	222	2	218	14	6	9	9	462	38	20
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
PHF Volume:	16	245	242	2	238	15	7	10	10	504	41	22
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	16	245	242	2	238	15	7	10	10	504	41	22
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	16	245	242	2	238	15	7	10	10	504	41	22
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.81	0.81	0.81	0.86	0.86	0.86	0.72	0.72	0.72	0.94	0.94	0.94
Lanes:	0.03	0.49	0.48	0.01	0.93	0.06	0.26	0.37	0.37	1.00	0.65	0.35
Final Sat.:	49	747	738	13	1532	97	356	508	508	1787	1163	624
Capacity Analysis Module:												
Vol/Sat:	0.33	0.33	0.33	0.16	0.16	0.16	0.02	0.02	0.02	0.28	0.04	0.04
Crit Moves:		****						****		****		
Green/Cycle:	0.46	0.46	0.46	0.46	0.46	0.46	0.02	0.02	0.02	0.39	0.41	0.41
Volume/Cap:	0.72	0.72	0.72	0.34	0.34	0.34	0.83	0.83	0.83	0.73	0.09	0.09
Level Of Service Module:												
Delay/Veh:	15.3	15 3	15.3	10.3	10.3	10.3	86.9	86.9	86.9	17.9	10.4	10.4
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	15.3	15.3	15.3	10.3	10.3	10.3	86.9	86.9	86.9	17.9	10.4	10.4
Queue:	1	6	6	0	4	0	1	1	1	11	1	0

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Beaverton Transportation System Plan
Existing Traffic Conditions
PM Peak Hour

Level Of Service Computation Report
1994 HCM Operations Method (Base Volume Alternative)

Intersection #180 Baseline Road/170th Avenue

Cycle (sec): 90 Critical Vol./Cap. (X): 0.439
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 10.0
Optimal Cycle: 37 Level Of Service: B

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0	0	1	0	1	0	0	1	0	1	1	0	1	0	1	1	0
Volume Module:												
Base Vol:	203	4	41	6	2	6	14	472	150	50	820	16
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	203	4	41	6	2	6	14	472	150	50	820	16
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
PHF Volume:	218	4	44	6	2	6	15	506	161	54	879	17
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	218	4	44	6	2	6	15	506	161	54	879	17
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.05	1.05	1.00	1.05	1.05
Final Vol.:	218	4	44	6	2	6	15	531	169	54	923	18
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.85	0.85	0.81	0.89	0.89	0.94	0.95	0.95	0.95	1.00	1.00
Lanes:	1.00	0.08	0.92	1.00	0.25	0.75	1.00	1.52	0.48	1.00	1.96	0.04
Final Sat.:	1750	135	1483	1539	423	1268	1787	2740	872	1805	3727	73
Capacity Analysis Module:												
Vol/Sat:	0.12	0.03	0.03	0.00	0.00	0.00	0.01	0.19	0.19	0.03	0.25	0.25
Crit Moves:	****						tttt				****	
Green/Cycle:	0.28	0.28	0.28	0.28	0.28	0.28	0.02	0.50	0.50	0.08	0.56	0.56
Volume/Cap:	0.44	0.10	0.10	0.01	0.02	0.02	0.44	0.38	0.38	0.38	0.44	0.44
Level Of Service Module:												
Delay/Veh:	17.5	15.4	15.4	15.0	15.0	15.0	33.6	8.9	8.9	26.4	7.4	7.4
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	17.5	15.4	15.4	15.0	15.0	15.0	33.6	8.9	8.9	26.4	7.4	7.4
Queue:	5	0	1	0	0	0	0	8	3	1	13	0

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Beaverton Transportation System Plan
Existing Traffic Conditions
PM Peak Hour

Level Of Service Computation Report
1994 HCM Operations Method (Base Volume Alternative)

Intersection #186 Walker Road/158th Avenue

Cycle (sec): 110 Critical Vol./Cap. (X): 0,857
Loss Time (sec): 16 (Y+R = 4 sec) Average Delay (sec/veh) 29.1
Optimal Cycle: 106 Level Of Service: D

Approach:	North Bound			South Bound			East Bound			L West T Bound R		
Movement:	L	T	R	L	T	R	L	T	R			
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Ovl		
Min. Green:	0	0	0	0	0	0	0	0	0	1	00	10 0 10
Lanes:	1	0	1	1	0	1	0	1	1	0	1	0	1	1	0			
Volume Module:												
Base Vol:	249	460	106	378	595	79	53	581	144	120	559	191
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	249	460	106	378	595	79	53	581	144	120	559	191
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
PHF Volume:	258	477	110	392	617	82	55	603	149	124	580	198
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	258	477	110	392	617	82	55	603	149	124	580	198
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.05	1.05	1.00	1.05	1.05	1.00	1.05	1.05	1.00	1.00	1.00
Final Vol.:	258	501	115	392	648	86	55	633	157	124	580	198
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.91	0.93	0.93	0.94	0.97	0.97	0.94	0.96	0.96	0.94	0.99	0.84
Lanes:	1.00	1.63	0.37	1.00	1.77	0.23	1.00	1.60	0.40	1.00	1.00	1.00
Final Sat.:	1736	2883	662	1787	3255	432	1787	2924	725	1787	1881	1599
Capacity Analysis Module:												
Vol/Sat:	0.15	0.17	0.17	0.22	0.20	0.20	0.03	0.22	0.22	0.07	0.31	0.12
Crit Moves:		tttt		tttt			tttt				tttt	
Green/Cycle:	0.20	0.20	0.20	0.26	0.26	0.26	0.04	0.30	0.30	0.10	0.36	0.62
Volume/Cap:	0.76	0.86	0.86	0.86	0.76	0.76	0.86	0.72	0.72	0.72	0.86	0.20
Level Of Service Module:												
Delay/Veh:	33.4	34.4	34.4	35.5	26.6	26.6	77.3	23.9	23.9	40.4	28.5	6.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	33.4	34.4	34.4	35.5	26.6	26.6	77.3	23.9	23.9	40.4	28.5	6.0
Queue:	8	17	5	13	19	3	3	18	5	4	18	3

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Beaverton Transportation System Plan
Existing Traffic Conditions
PM Peak Hour

Level Of Service Computation Report
1994 HCM Unsignalized Method (Base Volume Alternative)

Intersection #187 Walker Road/167th Avenue

Average Delay (sec/veh): 0.8 Worst case Level Of Service: F

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	- T	- R		L	- T	- R		L	- T	- R		L	- T	- R	
Control:	stop Sign				Stop Sign				Uncontrolled				Uncontrolled			
Rights:	Include				Include				Include				Include			
Lanes:	1	0	0	1 0	0	0	1! 0	0	1	0	0	1 0	1	0	0	1 0
Volume Module:																
Base Vol:	9	2	6		8	1	13		26	844	30		16	863	18	
Growth Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Initial Bse:	9	2	6		8	1	13		26	844	30		16	863	18	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	0.94	0.94	0.94		0.94	0.94	0.94		0.94	0.94	0.94		0.94	0.94	0.94	
PHF Volume:	10	2	6		8	1	14		28	896	32		17	916	19	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Final Vol.:	10	2	6		8	1	14		28	896	32		17	916	19	
Adjusted Volume Module:																
Grade:	0%				0%				0%				0%			
% Cycle/Cars:	xxxx	xxxx			0.00	0.98			0.00	0.98			0.00	0.99		
% Truck/Comb:	xxxx	xxxx			0.02	0.00			0.02	0.00			0.01	0.00		
PCE Adj:	1.10	1.10	1.10		xxxx	xxxx	xxxxx		xxxx	1.00	1.00		xxxx	1.00	1.00	
Cycl/Car PCE:	xxxx	xxxx			0.50	1.00			0.50	1.00			0.50	1.00		
Trck/Cmb PCE:	xxxx	xxxx			1.50	2.00			1.50	2.00			1.50	2.00		
Adj Vol.:	11	2	7		9	1	14		28	896	32		17	916	19	
Critical Gap Module:																
MoveUp Time:	3.4	3.3	2.6		3.4	3.3	2.6		2.1	xxxx	xxxxx		2.1	xxxx	xxxxx	
Critical Gp:	6.5	6.0	5.5		6.5	6.0	5.5		5.0	xxxx	xxxxx		5.0	xxxx	xxxxx	
Capacity Module:																
Cnflict Vol:	1890	1892	912		1886	1898	926		935	xxxx	xxxxx		928	xxxx	xxxxx	
Potent Cap.:	85	111	478		86	110	470		614	xxxx	xxxxx		619	xxxx	xxxxx	
Adj Cap:	0.91	0.93	1.00		0.92	0.93	1.00		1.00	xxxx	xxxxx		1.00	xxxx	xxxxx	
Move cap.:	78	103	478		78	102	470		614	xxxx	xxxxx		619	xxxx	xxxxx	
Level Of Service Module:																
Stopped Del:	52.9	35.7	7.6		51.5	35.6	7.9		6.1	xxxx	xxxxx		6.0	xxxx	xxxxx	
LOS by Move:	F	•	•		*	*	*		B	*	*		B	*	*	
Movement:	LT -	LTR -	RT		LT -	LTR -	RT		LT -	LTR -	RT		LT -	LTR -	RT	
Shared cap.:	xxxx	xxxx	250		xxxx	158	xxxxx		xxxx	xxxx	xxxxx		xxxx	xxxx	xxxxx	
Shrd StpDel:	xxxxx	xxxx	14.9		xxxxx	26.8	xxxxx		xxxxx	xxxx	xxxxx		xxxxx	xxxx	xxxxx	
Shared LOS:	*	*	C		*	D	*		*	*	*		*	*	*	
ApproachDel:		34.9				25.0				0.2				0.1		

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Beaverton Transportation System Plan
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Level Of Service Computation Report
1994 HCM Operations Method (Base Volume Alternative)

Intersection #188 Walker Road/173rd Avenue

Cycle (sec): 100 Critical Vol./cap. (X): 0.798
Loss Time (sec): 16 (Y+R = 4 sec) Average Delay (sec/veh): 22.9
Optimal Cycle: 86 Level Of Service: C

Approach:	North Bound					South Bound					East Bound					West Bound				
Movement:	L	- T	- R			L	- T	- R			L	- T	- R			L	- T	- R		
Control:	Protected					Protected					Protected					Protected				
Rights:	Include					Include					Include					Include				
Min. Green:	0	0	0			0	0	0			0	0	0			0	0	0		
Lanes:	1	0	0	1	0	i	0	0	i	0	1	0	0	1	0	1	0	0	1	0
Volume Module:																				
Base Vol:	47	120	53			124	207	65			49	670	74			95	640	148		
Growth Adj:	1.00	1.00	1.00			1.00	1.00	1.00			1.00	1.00	1.00			1.00	1.00	1.00		
Initial Bse:	47	120	53			124	207	65			49	670	74			95	640	148		
User Adj:	1.00	1.00	1.00			1.00	1.00	1.00			1.00	1.00	1.00			1.00	1.00	1.00		
PHF Adj:	0.96	0.96	0.96			0.96	0.96	0.96			0.96	0.96	0.96			0.96	0.96	0.96		
PHF Volume:	49	126	55			130	217	68			51	701	77			99	669	155		
Reduct Vol:	0	0	0			0	0	0			0	0	0			0	0	0		
Reduced Vol:	49	126	55			130	217	68			51	701	77			99	669	155		
PCE Adj:	1.00	1.00	1.00			1.00	1.00	1.00			1.00	1.00	1.00			1.00	1.00	1.00		
MLF Adj:	1.00	1.00	1.00			1.00	1.00	1.00			1.00	1.00	1.00			1.00	1.00	1.00		
Final Vol.:	49	126	55			130	217	68			51	701	77			99	669	155		
Saturation Flow Module:																				
Sat/Lane:	1900	1900	1900			1900	1900	1900			1900	1900	1900			1900	1900	1900		
Adjustment:	0.94	0.95	0.95			0.94	0.95	0.95			0.93	0.97	0.97			0.93	0.95	0.95		
Lanes:	1.00	0.70	0.30			1.00	0.76	0.24			1.00	0.90	0.10			1.00	0.81	0.19		
Final Sat.:	1787	1257	549			1787	1375	431			1770	1662	183			1770	1467	340		
Capacity Analysis Module:																				
Vol/Sat:	0.03	0.10	0.10			0.07	0.16	0.16			0.03	0.42	0.42			0.06	0.46	0.46		
Crit Moves:	****						****				****						****			
Green/Cycle:	0.03	0.13	0.13			0.10	0.20	0.20			0.04	0.54	0.54			0.07	0.57	0.57		
Volume/Cap:	0.80	0.74	0.74			0.74	0.80	0.80			0.80	0.79	0.79			0.79	0.80	0.80		
Level Of Service Module:																				
Delay/Veh:	63.6	34.8	34.8			38.9	32.9	32.9			62.6	15.0	15.0			47.5	14.0	14.0		
User DelAdj:	1.00	1.00	1.00			1.00	1.00	1.00			1.00	1.00	1.00			1.00	1.00	1.00		
AdjDel/Veh:	63.6	34.8	34.8			38.9	32.9	32.9			62.6	15.0	15.0			47.5	14.0	14.0		
Queue:	2	4	2			4	7	3			2	17	2			4	16	4		

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Beaverton Transportation System Plan
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Level Of Service Computation Report
1994 HCM Operations Method (Base Volume Alternative)

Intersection #191 Cornell Road/158th Avenue

Cycle (sec): 90 Critical Vol./Cap. (X): 0.764
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 16.2
Optimal Cycle: 67 Level Of Service: C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase Ovl			Split Phase			Protected			Protected		
Rights:				Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	2	0	0	0	2	0	0	0	0	0	0	1	1	0	2	0	1	0	0
Volume Module:												
Base Vol:	553	0	610	0	0	0	0	559	514	448	574	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	553	0	610	0	0	0	0	559	514	448	574	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
PHF Volume:	598	0	659	0	0	0	0	604	556	484	621	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	598	0	659	0	0	0	0	604	556	484	621	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.03	1.00	1.13	1.00	1.00	1.00	1.00	1.05	1.05	1.03	1.00	1.00
Final Vol.:	616	0	745	0	0	0	0	635	583	499	621	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.93	1.00	0.83	1.00	1.00	1.00	1.00	0.92	0.92	0.94	0.99	1.00
Lanes:	2.00	0.00	2.00	0.00	0.00	0.00	0.00	1.04	0.96	2.00	1.00	0.00
Final Sat.:	3539	0	3167	0	0	0	0	1824	1675	3574	1881	0
Capacity Analysis Module:												
Vol/Sat:	0.17	0.00	0.24	0.00	0.00	0.00	0.00	0.35	0.35	0.14	0.33	0.00
Crit Moves:	****							****		****		
Green/Cycle:	0.23	0.00	0.41	0.00	0.00	0.00	0.00	0.46	0.46	0.18	0.64	0.00
Volume/Cap:	0.76	0.00	0.57	0.00	0.00	0.00	0.00	0.76	0.76	0.76	0.52	0.00
Level Of Service Module:												
Delay/Veh:	24.0	0.0	13.7	0.0	0.0	0.0	0.0	14.8	14.8	26.3	6.0	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	24.0	0.0	13.7	0.0	0.0	0.0	0.0	14.8	14.8	26.3	6.0	0.0
Queue:	15	0	15	0	0	0	0	14	13	13	9	0

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Beaverton Transportation System Plan
Existing Traffic Conditions
PM Peak Hour

Level Of Service Computation Report
1994 HCM Operations Method (Base Volume Alternative)

Intersection #192 Walker Road/Murray Boulevard

Cycle (sec): 140 Critical Vol./Cap. (X): 0.932
Loss Time (sec): 16 (Y+R = 4 sec) Average Delay (sec/veh): 40.1
Optimal Cycle: 163 Level Of Service: E

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0	1	1	0	1	0	1	1	0	1	0	1	1	0	1	0	1	1	0
Volume Module:																				
Base Vol:	244	1045	177	171	702	95	178	715	186	78	576	154
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	244	1045	177	171	702	95	178	715	186	78	576	154
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
PHF Volume:	265	1136	192	186	763	103	193	777	202	85	626	167
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	265	1136	192	186	763	103	193	777	202	85	626	167
PCB Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.05	1.05	1.00	1.05	1.05	1.00	1.05	1.05	1.00	1.05	1.05
Final Vol.:	265	1193	202	186	801	108	193	816	212	85	657	176
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.93	0.96	0.96	0.92	0.95	0.95	0.93	0.95	0.95	0.94	0.96	0.96
Lanes:	1.00	1.71	0.29	1.00	1.76	0.24	1.00	1.59	0.41	1.00	1.58	0.42
Final Sat.:	1770	3122	529	1752	3186	430	1770	2868	745	1787	2878	771
Capacity Analysis Module:												
Vol/Sat:	0.15	0.38	0.38	0.11	0.25	0.25	0.11	0.28	0.28	0.05	0.23	0.23
Crit Moves:		****		****			****				****	
Green/Cycle:	0.20	0.41	0.41	0.11	0.33	0.33	0.12	0.31	0.31	0.05	0.24	0.24
Volume/Cap:	0.77	0.93	0.93	0.93	0.77	0.77	0.93	0.92	0.92	0.92	0.93	0.93
Level Of Service Module:												
Delay/Veh:	41.1	33.4	33.4	71.8	29.4	29.4	71.0	38.6	38.6	89.9	45.1	45.1
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	41.1	33.4	33.4	71.8	29.4	29.4	71.0	38.6	38.6	89.9	45.1	45.1
Queue:	11	48	10	9	29	5	10	34	10	5	29	9

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Beaverton Transportation System Plan
Existing Traffic Conditions
PM Peak Hour

Level Of Service Computation Report
i994 HCM Operations Method (Base Volume Alternative)

Intersection #193 Kinnaman/Farmington

Cycle (sec): 120 Critical Vol./Cap. (X): 0.986
Loss Time (sec): 8 (Y+R = 4 sec) Average Delay (sec/veh): 25.8
Optimal Cycle: 180 Level Of Service: D

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	0	1! 0	0	0	1	0	0	1	0	0	1
Volume Module:												
Base Vol:	10	7	7	383	5	49	56	506	14	12	774	242
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	10	7	7	383	5	49	56	506	14	12	774	242
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
PHF Volume:	11	8	8	419	5	54	61	553	15	13	846	264
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	11	8	8	419	5	54	61	553	15	13	846	264
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	11	8	8	419	5	54	61	553	15	13	846	264
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.56	0.56	0.56	0.84	0.84	0.84	0.05	0.98	0.98	0.19	0.95	0.95
Lanes:	0.41	0.29	0.30	0.99	0.01	1.00	1.00	0.97	0.03	1.00	0.76	0.24
Final Sat.:	433	315	315	1580	19	1599	93	1814	49	357	1376	430
Capacity Analysis Module:												
Vol/Sat:	0.03	0.03	0.03	0.27	0.27	0.03	0.65	0.30	0.30	0.04	0.61	0.61
Crit Moves:					tttt		tttt					
Green/Cycle:	0.27	0.27	0.27	0.27	0.27	0.27	0.66	0.66	0.66	0.66	0.66	0.66
Volume/Cap:	0.09	0.09	0.09	0.99	0.99	0.13	0.99	0.46	0.46	0.05	0.93	0.93
Level Of Service Module:												
Delay/Veh:	21.3	21.3	21.3	58.1	58.1	21.4	95.2	6.5	6.5	4.5	20.1	20.1
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	21.3	21.3	21.3	58.1	58.1	21.4	95.2	6.5	6.5	4.5	20.1	20.1
Queue:	0	0	0	19	1	1	4	9	0	0	28	10

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Beaverton Transportation System Plan
Existing Traffic Conditions
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Level Of Service Computation Report
1994 HCM Unsignalized Method (Base Volume Alternative)

Intersection #194 Davis Road/155th Avenue

Average Delay (sec/veh): 0.6 Worst Case Level Of Service: B

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	T	R		L	T	R		L	T	R		L	T	R	
Control:	Stop Sign				Stop Sign				Uncontrolled				Uncontrolled			
Rights:	Include				Include				Include				Include			
Lanes:	0	0	1	1 0	0	0	0	0	0	0	0	1	0	0	1	0
Volume Module:																
Base Vol:	21	0	12		0	0	0		0	166	66		30	241	0	
Growth Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Initial Bse:	21	0	12		0	0	0		0	166	66		30	241	0	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	0.87	0.87	0.87		0.87	0.87	0.87		0.87	0.87	0.87		0.87	0.87	0.87	
PHF Volume:	24	0	14		0	0	0		0	191	76		35	277	0	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Final Vol.:	24	0	14		0	0	0		0	191	76		35	277	0	
Adjusted Volume Module:																
Grade:	0%				0%				0%				0%			
% Cycle/Cars:	xxxx	xxxx			xxxx	xxxx			0.00	0.99			xxxx	xxxx		
% Truck/Comb:	xxxx	xxxx			xxxx	xxxx			0.01	0.00			xxxx	xxxx		
PCE Adj:	1.10	1.10	1.10		1.10	1.10	1.10		xxxx	1.00	1.00		1.10	1.00	1.00	
Cycl/Car PCE:	xxxx	xxxx			xxxx	xxxx			0.50	1.00			xxxx	xxxx		
Trck/Cmb PCE:	xxxx	xxxx			xxxx	xxxx			1.50	2.00			xxxx	xxxx		
Adj Vol.:	27	0	15		0	0	0		0	191	76		38	277	0	
Critical Gap Module:																
MoveUp Time:	3.4	xxxx	2.6		xxxxx	xxxx	xxxxx		xxxxx	xxxx	xxxxx		2.1	xxxx	xxxxx	
Critical Gp:	6.5	xxxx	5.5		xxxxx	xxxx	xxxxx		xxxxx	xxxx	xxxxx		5.0	xxxx	xxxxx	
Capacity Module:																
Cnflict Vol:	541	xxxx	229		xxxx	xxxx	xxxxx		xxxx	xxxx	xxxxx		267	xxxx	xxxxx	
Potent Cap.:	515	xxxx	1060		xxxx	xxxx	xxxxx		xxxx	xxxx	xxxxx		1279	xxxx	xxxxx	
Adj Cap:	0.96	xxxx	1.00		xxxx	xxxx	xxxxx		xxxx	xxxx	xxxxx		1.00	xxxx	xxxxx	
Move Cap.:	497	xxxx	1060		xxxx	xxxx	xxxxx		xxxx	xxxx	xxxxx		1279	xxxx	xxxxx	
Level Of Service Module:																
Stopped Del:	7.6	xxxx	3.4		xxxxx	xxxx	xxxxx		xxxxx	xxxx	xxxxx		2.9	xxxx	xxxxx	
LOS by Move:	*	*	*		*	*	*		*	*	*		A	*	*	
Movement:	LT	-	LTR	- RT	LT	-	LTR	- RT	LT	-	LTR	- RT	LT	-	LTR	- RT
Shared Cap.:	xxxx	616	xxxxx		xxxx	xxxx	xxxxx		xxxx	xxxx	xxxxx		xxxx	xxxx	xxxxx	
Shrd StpDel:	xxxxx	6.2	xxxxx		xxxxx	xxxx	xxxxx		xxxxx	xxxx	xxxxx		xxxxx	xxxx	xxxxx	
Shared LOS:	*	B	*		*	*	*		*	*	*		*	*	*	
ApproachDel:	6.1				0.0				0.0				0.3			

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Beaverton Transportation System Plan
Existing Traffic Conditions
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Level Of Service Computation Report
1994 HCM Operations Method (Base Volume Alternative)

Intersection #198 Canyon Road/Walker Road

Cycle (sec):	100	Critical Vol./Cap. (X):	0.773
Loss Time (sec):	12 (Y+R = 4 sec)	Average Delay (sec/veh)	15.7
Optimal Cycle:	71	Level Of Service:	C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	0	1	1	0	0	0	0	1!	0	0	
Volume Module:												
Base Vol:	4	0	11	336	2	37	61	1285	1	7	991	370
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	4	0	11	336	2	37	61	1285	1	7	991	370
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
PHF Volume:	4	0	12	368	2	40	67	1406	1	8	1084	405
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	4	0	12	368	2	40	67	1406	1	8	1084	405
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.05	1.05	1.00	1.05	1.00
Final Vol.:	4	0	12	368	2	40	67	1476	1	8	1138	405
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.68	1.00	0.68	0.78	0.78	0.78	0.92	0.97	0.97	0.93	0.98	0.83
Lanes:	0.25	0.00	0.75	0.90	0.01	0.09	1.00	1.99	0.01	1.00	2.00	1.00
Final Sat.:	323	0	969	1337	7	145	1752	3687	2	1770	3725	1583
Capacity Analysis Module:												
Vol/Sat:	0.01	0.00	0.01	0.28	0.28	0.28	0.04	0.40	0.40	0.00	0.31	0.26
Crit Moves:					****			****		****		
Green/Cycle:	0.36	0.00	0.36	0.36	0.36	0.36	0.06	0.52	0.52	0.01	0.47	0.47
Volume/Cap:	0.03	0.00	0.03	0.77	0.77	0.77	0.66	0.77	0.77	0.77	0.66	0.55
Level Of Service Module:												
Delay/Veh:	13.6	0.0	13.6	23.3	23.3	23.3	39.2	13.9	13.9	123.9	13.9	13.1
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	13.6	0.0	13.6	23.3	23.3	23.3	39.2	13.9	13.9	123.9	13.9	13.1
Queue:	0	0	0	10	0	2	2	34	0	1	25	8

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Beaverton Transportation System Plan
Existing Traffic Conditions
PM Peak Hour

Level Of Service Computation Report
1994 HCM Operations Method (Base Volume Alternative)

Intersection #199 Beaverton-Hillsdale Hwy/Western Avenue

Cycle (sec):	120	Critical Vol./Cap. (X):	0.973
Loss Time (sec):	12 (Y+R = 4 sec)	Average Delay (sec/veh)	28.7
Optimal Cycle:	180	Level Of Service:	D

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Protected			...Protected...		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	1	00	20
Lanes:	0	1	0	1	0	0	0	0	0	0	0	0
Volume Module:												
Base Vol:	336	0	330	0	0	0	0	1188	236	357	1152	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	336	0	330	0	0	0	0	1188	236	357	1152	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
PHF Volume:	357	0	351	0	0	0	0	1262	251	379	1224	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	357	0	351	0	0	0	0	1262	251	379	1224	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.05	1.05	1.00	1.05	1.00
Final Vol.:	357	0	351	0	0	0	0	1326	263	379	1285	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.93	1.00	0.83	1.00	1.00	1.00	1.00	0.95	0.95	0.93	0.98	1.00
Lanes:	1.00	0.00	1.00	0.00	0.00	0.00	0.00	1.67	0.33	1.00	2.00	0.00
Final Sat.:	1770	0	1583	0	0	0	0	3016	598	1770	3725	0
Capacity Analysis Module:												
Vol/Sat:	0.20	0.00	0.22	0.00	0.00	0.00	0.00	0.44	0.44	0.21	0.34	0.00
Crit Moves:			****					****		****		
Green/Cycle:	0.23	0.00	0.23	0.00	0.00	0.00	0.00	0.45	0.45	0.22	0.67	0.00
Volume/Cap:	0.89	0.00	0.97	0.00	0.00	0.00	0.00	0.97	0.97	0.97	0.51	0.00
Level Of Service Module:												
Delay/Veh:	37.2	0.0	49.6	0.0	0.0	0.0	0.0	32.9	32.9	58.6	6.5	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	37.2	0.0	49.6	0.0	0.0	0.0	0.0	32.9	32.9	58.6	6.5	0.0
Queue:	14	0	15	0	0	0	0	50	12	17	22	0

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Beaverton Transportation System Plan
Existing Traffic Conditions
PM Peak Hour

Level Of Service Computation Report
1994 HCM Operations Method (Base Volume Alternative)

Intersection #200 Allen Boulevard/Western Avenue

Cycle (sec): 100 Critical Vol./Cap. (X): 0.971
Loss Time (sec): 8 (Y+R = 4 sec) Average Delay (sec/veh): 19.6
Optimal Cycle: 161 Level Of Service: C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	0	0	1	0	0	1	0	1	1	0	0
Volume Module:												
Base Vol:	0	0	0	378	0	356	212	581	0	0	597	232
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	378	0	356	212	581	0	0	597	232
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
PHF Volume:	0	0	0	421	0	397	236	648	0	0	666	259
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	421	0	397	236	648	0	0	666	259
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.05	1.00
Final Vol.:	0	0	0	421	0	397	236	648	0	0	699	259
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	0.92	1.00	0.83	0.19	0.97	1.00	1.00	0.98	0.83
Lanes:	0.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	0.00	0.00	2.00	1.00
Final Sat.:	0	0	0	1752	0	1568	369	1845	0	0	3725	1583
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.24	0.00	0.25	0.64	0.35	0.00	0.00	0.19	0.16
Crit Moves:						****	****					
Green/Cycle:	0.00	0.00	0.00	0.26	0.00	0.26	0.66	0.66	0.00	0.00	0.66	0.66
Volume/Cap:	0.00	0.00	0.00	0.92	0.00	0.97	0.97	0.53	0.00	0.00	0.28	0.25
Level of Service Module:												
Delay/Veh:	0.0	0.0	0.0	40.4	0.0	50.9	27.4	6.1	0.0	0.0	4.6	4.5
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	40.4	0.0	50.9	27.4	6.1	0.0	0.0	4.6	4.5
Queue:	0	0	0	14	0	15	9	10	0	0	8	3

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Beaverton Transportation System Plan
Existing Traffic Conditions
PM Peak Hour

Level Of Service Computation Report
1994 HCM Operations Method (Base Volume Alternative)

Intersection #202 Laurelwood Avenue/Beaverton-Hillsdale Hwy

Cycle (sec): 90 Critical Vol./Cap. (X): 0.708
Loss Time (sec): 8 (Y+R = 4 sec) Average Delay (sec/veh): 11.9
Optimal Cycle: 49 Level Of Service: B

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	0	1!	0	0	0	1!	0	0	1	0	1	1	0	1	0	1	1	0
Volume Module:																			
Base Vol:	64	80	47	166	66	42	29	1122	67	29	1120	141
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	64	80	47	166	66	42	29	1122	67	29	1120	141
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
PHF Volume:	66	83	49	171	68	43	30	1158	69	30	1156	146
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	66	83	49	171	68	43	30	1158	69	30	1156	146
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.05	1.05	1.00	1.05	1.05
Final Vol.:	66	83	49	171	68	43	30	1216	73	30	1214	153
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.65	0.65	0.65	0.54	0.54	0.54	0.08	0.98	0.98	0.08	0.97	0.97
Lanes:	0.33	0.42	0.25	0.61	0.24	0.15	1.00	1.89	0.11	1.00	1.78	0.22
Final Sat.:	409	515	304	622	247	157	150	3514	211	150	3274	413
Capacity Analysis Module:												
Vol/Sat:	0.16	0.16	0.16	0.27	0.27	0.27	0.20	0.35	0.35	0.20	0.37	0.37
Crit Moves:					****						****	
Green/Cycle:	0.39	0.39	0.39	0.39	0.39	0.39	0.52	0.52	0.52	0.52	0.52	0.52
Volume/Cap:	0.42	0.42	0.42	0.71	0.71	0.71	0.38	0.66	0.66	0.38	0.71	0.71
Level Of Service Module:												
Delay/Veh:	13.3	13.3	13.3	19.0	19.0	19.0	9.7	10.7	10.7	9.7	11.4	11.4
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	13.3	13.3	13.3	19.0	19.0	19.0	9.7	10.7	10.7	9.7	11.4	11.4
Queue:	1	2	1	4	2	1	0	23	2	0	24	3

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B av rt⊙n Transportation Sy∃tem Pl n
Exis ing Traffic Co di⊆ions
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Level Of Service Computation Report
1994 HCM Operations Method (Base Volume Alternative)

Intersection #203 Hall Boulevard/Denney Road

Cycle (sec): 100 Critical Vol./Cap. (X): 0.833
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 17.4
Optimal Cycle: 85 Level Of Service: C

Approach:	North Bound						South Bound						East Bound						West Bound					
Movement:	L	-	T	-	R		L	-	T	-	R		L	-	T	-	R		L	-	T	-	R	
Control:	Protected						Protected						Split Phase						Split Phase					
Rights:			Ovl						Include						Include						Ovl			
Min. Green:	0		0		0		0		0		0		0		0		0		0		0		0	
Lanes:	0	0	2	0	1		1	0	2	0	0		0	0	0	0	0		1	0	0	0	1	
Volume Module:																								
Base Vol:	0	980		464	139	399		0		0	0		535		0	207								
Growth Adj:	1.00	1.00		1.00	1.00	1.00		1.00		1.00	1.00		1.00		1.00	1.00								
Initial Bse:	0	980		464	139	999		0		0	0		535		0	207								
User Adj:	1.00	1.00		1.00	1.00	1.00		1.00		1.00	1.00		1.00		1.00	1.00								
PHF Adj:	0.93	0.93		0.93	0.93	0.93		0.93		0.93	0.93		0.93		0.93	0.93								
PHF Volume:	0	1055		499	150	1075		0		0	0		640		0	223								
Reduct Vol:	0	0		0	0	0		0		0	0		0		0	0								
Reduced Vol:	0	1055		499	150	1075		0		0	0		640		0	223								
PCE Adj:	1.00	1.00		1.00	1.00	1.00		1.00		1.00	1.00		1.00		1.00	1.00								
MLF Adj:	1.00	1.05		1.00	1.00	1.05		1.00		1.00	1.00		1.00		1.00	1.00								
Final Vol.:	0	1108		499	150	1129		0		0	0		640		0	223								
Saturation Flow Module:																								
Sat/Lane:	1900	1900		1900	1900	1900		1900		1900	1900		1900		1900	1900								
Adjustment:	1.00	0.99		0.84	0.94	0.99		1.00		1.00	1.00		1.00		0.95	1.00								
Lanes:	0.00	2.00		1.00	1.00	2.00		0.00		0.00	0.00		0.00		1.00	0.00								
Final Sat.:	0	3762		1599	1787	3762		0		0	0		1805		0	1615								
Capacity Analysis Module:																								
Vol/Sat:	0.00	0.29		0.31	0.08	0.30		0.00		0.00	0.00		0.35		0.00	0.14								
Crit Moves:		****			****								**	*										
Green/Cycle:	0.00	0.35		0.78	0.10	0.45		0.00		0.00	0.00		0.43		0.00	0.53								
Volume/Cap:	0.00	0.83		0.40	0.83	0.66		0.00		0.00	0.00		0.83		0.00	0.26								
Level Of Service Module:																								
Delay/Veh:	0.0	22.5		2.4	46.8	14.4		0.0		0.0	0.0		22.0		0.0	8.4								
User DelAdj:	1.00	1.00		1.00	1.00	1.00		1.00		1.00	1.00		1.00		1.00	1.00								
AdjDel/Veh:	0.0	22.5		2.4	46.8	14.4		0.0		0.0	0.0		22.0		0.0	8.4								
Queue:	0	30		5	5	25		0		0	0		1		0	3								

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Beaverton Transportation System Plan
Existing Traffic Conditions
PM Peak Hour

Level Of Service Computatio⊃ Report
1934 HCM Unsignalized Method (Base V⊃lume Alternative)

Intersection #7⊙5 Denney Road/Hwy 217 SB ramps

Avorage Delay (sec/veh): 4.9 Worst Case Level Of Service: F

Approach:	North Bound						South Bound						East Bound						West Bound					
Movement:	L	-	T	-	R		L	-	T	-	R		L	-	T	-	R		L	-	T	-	R	
Control:	Stop Sign						Stop Sign						Uncontrolled						Uncontrolled					
Rights:			Include						Include						Include						Include			
Lanes:	0	0	0	0	0		0	1	0	0	1		0	0	0	1	0		1	0	1	0	0	
Volume Module:																								
Base Vol:	0	0		0	75	5		279		0	528		171		108	532		0						
Growth Adj:	1.00	1.00		1.00	1.00	1.00		1.00		1.00	1.00		1.00		1.00	1.00		1.00						
Initial Bse:	0	0		0	75	5		279		0	528		171		108	532		0						
User Adj:	1.00	1.00		1.00	1.00	1.00		1.00		1.00	1.00		1.00		1.00	1.00		1.00						
PHF Adj:	0.92	0.92		0.92	0.92	0.92		0.92		0.92	0.92		0.92		0.92	0.92		0.92						
PHF Volume:	0	0		0	81	5		302		0	571		185		117	641		0						
Reduct Vol:	0	0		0	0	0		0		0	0		0		0	0		0						
Final Vol.:	0	0		0	81	5		302		0	571		185		117	641		0						
Adjusted Volume Module:																								
Grade:		0%						o%						o%						o				
% Cycle/Cars:	xxxx	xxxx			0.00	⊙.97				0.00	0.9≤				0.00	■0.93								
% Truck/Comb:	xxxx	xxxx			0.03	⊙.00				0.04	0.0⊙				0.01	0.0⊙								
PCE Adj:	1.10	1.10	1.10		xxxx	xxxx	xxxxx			xxxx	1.0⊙	1.00			xxxx	1.00	1.0⊙							
Cycl/Car PCE:	xxxx	xxxx			0.50	1.00				0.50	1.00				0.50	1.00								
Trck/Cmb PCE:	xxxx	xxxx			1.50	2.00				1.50	2.00				1.50	2.00								
Adj Vol.:	0	0		0	82	5		306		0	571		185		117	641		0						
Critical Gap Module:																								
MoveUp Time:	xxxxx	xxxx	xxxxx		3.4	3.3		2.6		xxxxx	xxxx	xxxxx			2.1	xxxx	xxxxx							
Critical Gp:	xxxxx	xxxx	xxxxx		6.5	6.0		5.5		xxxxx	xxxx	xxxxx			5.0	xxxx	xxxxx							
Capacity Module:																								
Cnflict Vol:	xxxx	xxxx	xxxxx		1422	1514		641		xxxx	xxxx	xxxxx			756	xxxx	xxxxx							
Potent Cap.:	xxxx	xxxx	xxxxx		159	175		656		xxxx	xxxx	xxxxx			747	xxxx	xxxxx							
Adj Cap:	xxxx	xxxx	xxxxx		0.84	0.84		1.00		xxxx	xxxx	xxxxx			1.00	xxxx	xxxxx							
Move Cap.:	xxxx	xxxx	xxxxx		134	148		656		xxxx	xxxx	xxxxx			747	xxxx	xxxxx							
Level Of Service Module:																								
Stopped Del:	xxxxx	xxxx	xxxxx		65.9	25.3		10.2		xxxxx	xxxx	xxxxx			5.7	xxxx	xxxxx							
LOS by Move:	*	*	*		*	*		C		*	*	*			B	*	*							
Movement:	LT	-	LTR	-	RT		LT	-	LTR	-	RT		LT	-	LTR	-	RT		LT	-	LTR	-	RT	
Shared Cap.:	xxxx	xxxx	xxxxx		135	xxxx	xxxxx			xxxx	xxxx	xxxxx			xxxx	xxxx	xxxxx							
Shrd StpDel:	xxxxx	xxxx	xxxxx		71.4	xxxx	xxxxx			xxxxx	xxxx	xxxxx			xxxxx	xxxx	xxxxx							
Shared LOS:	*	*	*		F	*	*			*	*	*			*	*	*							
ApproachDel:		0.0				22.0					0.0					0.9								

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Beaverton Transportation System Plan
Existing Traffic Conditions
PM Peak Hour

Level Of Service Computation Report
1994 HCM Unsignalized Method (Base Volume Alternative)

Intersection #207 Denney Road/Hwy 217 NB ramps

Average Delay (sec/veh): 294.3 Worst Case Level Of Service: F

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 1	0	0 1	0	0	0 0	1	0 1	0 0	0	0	0 1 0
Volume Module:												
Base Vol:	203	4	133	0	0	0	290	312	0	0	488	106
Growth Adj:	1.00 1.00	1.00		1.00 1.00	1.00		1.00 1.00	1.00		1.00 1.00	1.00	
Initial Bse:	203	4	133	0	0	0	290	312	0	0	488	106
User Adj:	1.00 1.00	1.00		1.00 1.00	1.00		1.00 1.00	1.00		1.00 1.00	1.00	
PHF Adj:	0.87 0.87	0.87		0.87 0.87	0.87		0.87 0.87	0.87		0.87 0.87	0.87	
PHF Volume:	233	5	153	0	0	0	333	358	0	0	560	122
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	233	5	153	0	0	0	333	358	0	0	560	122
Adjusted Volume Module:												
Grade:	0%			0%			0%			0%		
% Cycle/Cars:	0.00	0.98		xxxx	xxxx		0.00	0.97		0.00	0.99	
% Truck/Comb:	0.02	0.00		xxxx	xxxx		0.03	0.00		0.01	0.00	
PCE Adj:	xxxx xxxx	xxxxx		1.10 1.10	1.10		xxxx 1.00	1.00		xxxx 1.00	1.00	
Cycl/Car PCE:	0.50	1.00		xxxx	xxxx		0.50	1.00		0.50	1.00	
Trck/Cmb PCE:	1.50	2.00		xxxx	xxxx		1.50	2.00		1.50	2.00	
Adj Vol.:	235	5	154	0	0	0	338	358	0	0	560	122
Critical Gap Module:												
MoveUp Time:	3.4	3.3	2.6	xxxxx	xxxx	xxxxx	2.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Critical Gp:	6.5	6.0	5.5	xxxxx	xxxx	xxxxx	5.0	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	1312	1373	358	xxxx	xxxx	xxxxx	682	xxxx	xxxxx	xxxx	xxxx	xxxxx
Potent Cap.:	184	208	912	xxxx	xxxx	xxxxx	811	xxxx	xxxxx	xxxx	xxxx	xxxxx
Adj Cap:	0.58	0.58	1.00	xxxx	xxxx	xxxxx	1.00	xxxx	xxxxx	xxxx	xxxx	xxxxx
Move Cap.:	107	121	912	xxxx	xxxx	xxxxx	811	xxxx	xxxxx	xxxx	xxxx	xxxxx
Level Of Service Module:												
Stopped Del:	2201	30.9	4.7	xxxxx	xxxx	xxxxx	7.5	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	A	*	*	*	B	*	*	*	*	*
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	108	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Shrd StpDel:	2268	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	F	*	*	*	*	*	*	*	*	*	*	*
ApproachDel:	1316.4			0.0			3.7			0.0		

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Beaverton Transportation System Plan
Existing Traffic Condition6
PM Peak Hour

Level Of Service Computation Report
1994 HCM Operations Method (Base Volume Alternative)

Intersection #214 Denney Road/Scholls Ferry Road

Cycle (sec): 100 Critical Vol./Cap. (X): 0.867
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh) 19.1
Optimal Cycle: 96 Level Of Service: C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1 0	0	1 0	1	0	1 0	1	0	1 0	0	0	0 1 0
Volume Module:												
Base Vol:	134	588	1	2	843	305	210	6	116	0	4	1
Growth Adj:	1.00 1.00	1.00		1.00 1.00	1.00		1.00 1.00	1.00		1.00 1.00	1.00	
Initial Bse:	134	588	1	2	843	305	210	6	116	0	4	1
User Adj:	1.00 1.00	1.00		1.00 1.00	1.00		1.00 1.00	1.00		1.00 1.00	1.00	
PHF Adj:	0.98 0.98	0.98		0.98 0.98	0.98		0.98 0.98	0.98		0.98 0.98	0.98	
PHF Volume:	137	601	1	2	861	312	215	6	118	0	4	1
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	137	601	1	2	861	312	215	6	118	0	4	1
PCE Adj:	1.00 1.00	1.00		1.00 1.00	1.00		1.00 1.00	1.00		1.00 1.00	1.00	
MLF Adj:	1.00 1.00	1.00		1.00 1.00	1.00		1.00 1.00	1.00		1.00 1.00	1.00	
Final vol.:	137	601	1	2	861	312	215	6	118	0	4	1
Saturation Flow Module:												
Sat/Lane:	1900 1900	1900		1900 1900	1900		1900 1900	1900		1900 1900	1900	
Adjustment:	0.93 0.98	0.98		0.93 0.98	0.83		0.80 0.80	0.80		1.00 0.87	0.87	
Lanes:	1.00 0.99	0.01		1.00 1.00	1.00		0.63 0.02	0.35		0.00 0.80	0.20	
Final Sat.:	1770 1860	3		1770 1863	1583		963	27	529	0 1322	331	
Capacity Analysis Module:												
Vol/Sat:	0.08 0.32	0.32		0.00 0.46	0.20		0.22 0.22	0.22		0.00 0.00	0.00	
Crit Moves:	****			****			****					
Green/Cycle:	0.09 0.62	0.62		0.00 0.53	0.53		0.26 0.26	0.26		0.00 0.26	0.26	
Volume/Cap:	0.87 0.52	0.52		0.52 0.87	0.37		0.87 0.87	0.87		0.00 0.01	0.01	
Level Of Service Module:												
Delay/Veh:	53.9	7.2	7.2	82.4 18.9	8.9		35.6 35.6	35.6		0.0 17.9	f7.9	
User DelAdj:	1.00 1.00	1.00		1.00 1.00	1.00		1.00 1.00	1.00		1.00 1.00	1.00	
AdjDel/Veh:	53.9	7.2	7.2	82.4 18.9	8.9		35.6 35.6	35.6		0.0 17.9	17.9	
Queue:	5	10	0	0	23	5	7	1	4	0	0	0

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Beaverton Transportation System Plan
Existing Traffic Conditions
PM Peak Hour

Level of Service Computation Report
1994 HCM Operations Method (Base Volume Alternative)

Intersection #215 Allen Boulevard/Scholls Ferry Road

Cycle (sec): 120 Critical Vol./Cap. (X): 0.918
Loss Time (sec): 16 (Y+R = 4 sec) Average Delay (sec/veh): 35.7
Optimal Cycle: 139 Level Of Service: D

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Ov1			Ovl			Include			Ovl		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0	1	0	1	1	0	1	0	1	0	1
Volume Module:												
Base Vol:	31	562	154	141	637	115	179	396	46	236	547	303
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	31	562	154	141	637	115	179	396	46	236	547	303
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
PHF Volume:	32	579	159	145	657	119	185	408	47	243	564	312
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	32	579	159	145	657	119	185	408	47	243	564	312
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	32	579	159	145	657	119	185	408	47	243	564	312
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.93	0.98	0.83	0.94	0.99	0.84	0.94	0.98	0.98	0.94	0.99	0.84
Lanes:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.90	0.10	1.00	1.00	1.00
Final Sat.:	1770	1863	1583	1787	1881	1599	1787	1670	192	1787	1881	1599
Capacity Analysis Module:												
Vol/Sat:	0.02	0.31	0.10	0.08	0.35	0.07	0.10	0.24	0.24	0.14	0.30	0.20
Crit Moves:		****			****			****			****	
Green/Cycle:	0.02	0.34	0.50	0.09	0.41	0.52	0.11	0.28	0.28	0.16	0.33	0.42
Volume/Cap:	0.86	0.92	0.20	0.92	0.86	0.14	0.92	0.87	0.87	0.87	0.92	0.47
Level Of Service Module:												
Delay/Veh:	99.8	37.9	11.0	69.1	27.9	9.7	63.1	36.3	36.3	48.0	38.6	16.9
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	99.8	37.9	11.0	69.1	27.9	9.7	63.1	36.3	36.3	48.0	38.6	16.9
Queue:	2	22	3	7	22	2	8	15	2	10	21	8

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Beaverton Transportation System Plan
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PM Peak Hour

Level Of Service Computation Report
1994 HCM Operations Method (Base Volume Alternative)

Intersection #218 Hall Boulevard/Hart Road

Cycle (sec): 100 Critical Vol./Cap. (X): 0.709
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 13.3
Optimal Cycle: 61 Level Of Service: B

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Split Phase			Split Phase		
Rights:	Include			Ovl			Ovl			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0	2	0	0	0	0	2	0	1	1	0
Volume Module:												
Base Vol:	272	973	0	0	942	565	284	0	132	0	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	272	973	0	0	942	565	284	0	132	0	0	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
PHF Volume:	296	1058	0	0	1024	614	309	0	143	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	296	1058	0	0	1024	614	309	0	143	0	0	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.05	1.00	1.00	1.05	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	296	1110	0	0	1075	614	309	0	143	0	0	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.94	0.99	1.00	1.00	0.99	0.84	0.94	1.00	0.84	1.00	1.00	1.00
Lanes:	1.00	2.00	0.00	0.00	2.00	1.00	1.00	0.00	1.00	0.00	0.00	0.00
Final Sat.:	1787	3762	0	0	3762	1599	1787	0	1599	0	0	0
Capacity Analysis Module:												
Vol/Sat:	0.17	0.30	0.00	0.00	0.29	0.38	0.17	0.00	0.09	0.00	0.00	0.00
Crit Moves:	****				****		****					
Green/Cycle:	0.23	0.64	0.00	0.00	0.40	0.65	0.24	0.00	0.48	0.00	0.00	0.00
Volume/Cap:	0.71	0.46	0.00	0.00	0.71	0.59	0.71	0.00	0.19	0.00	0.00	0.00
Level Of Service Module:												
Delay/Veh:	26.5	6.2	0.0	0.0	17.2	7.2	26.0	0.0	9.7	0.0	0.0	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	26.5	6.2	0.0	0.0	17.2	7.2	26.0	0.0	9.7	0.0	0.0	0.0
Queue:	8	16	0	0	26	10	8	0	2	0	0	0

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Beaverton Transportation System Plan
Existing Traffic Conditions
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Level Of Service Computation Report
1994 HCM Operations Method (Base Volume Alternative)

Intersection #219 Murray Boulevard/Hart Road

Cycle (sec):	100		Critical Vol./Cap. (X):		0.913
Loss Time (sec):	16 (Y+R = 4 sec)		Average Delay (sec/veh)		25.5
Optimal Cycle:	122		Level Of Service:		D

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Ovl			Ovl			Ovl		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0	1	1	0	1	0	2	0	1	1	0	1	1	0	1	1	0	1	0	1
Volume Module:																					
Base Vol:	205	797	19	29	1079	336	156	102	166	63	388	45
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	205	797	19	29	1079	336	156	102	166	63	388	45
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
PHF Volume:	222	862	21	31	1166	363	169	110	179	68	419	49
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	222	862	21	31	1166	363	169	110	179	68	419	49
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.05	1.05	1.00	1.05	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	222	905	22	31	1225	363	169	110	179	68	419	49
Saturation Flow Module:																					
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.93	0.98	0.98	0.94	0.99	0.84	0.93	0.98	0.83	0.95	1.00	0.85
Lanes:	1.00	1.95	0.05	1.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Sat.:	1770	3637	88	1787	3762	1599	1770	1863	1583	1805	1900	1615
Capacity Analysis Module:																					
Vol/Sat:	0.13	0.25	0.25	0.02	0.33	0.23	0.10	0.06	0.11	0.04	0.22	0.03
Crit Moves:	****				tttt		tttt				****	
Green/Cycle:	0.14	0.46	0.46	0.03	0.36	0.46	0.10	0.26	0.40	0.09	0.24	0.27
Volume/Cap:	0.91	0.54	0.54	0.54	0.91	0.49	0.91	0.23	0.28	0.44	0.91	0.11
Level Of Service Module:																					
Delay/Veh:	52.5	12.7	12.7	37.9	26.9	12.6	58.5	18.9	13.3	29.3	39.9	17.6
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	52.5	12.7	12.7	37.9	26.9	12.6	58.5	18.9	13.3	29.3	39.9	17.6
Queue:	8	18	1	1	36	7	7	2	3	2	14	1

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Beaverton Transportation System Plan
Existing Traffic Conditions
PM Peak Hour

Level Of Service Computation Report
1994 HCM Operations Method (Base Volume Alternative)

Intersection #220 Hart Road/155th Avenue

Cycle (sec):	100		Critical Vol./Cap. (X):		0.946
Loss Time (sec):	8 (Y+R = 4 sec)		Average Delay (sec/veh):		18.1
Optimal Cycle:	133		Level Of Service:		C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	0	1!	0	0	0	0	1!	0	0	0	1!	0	0	1	1	0	0	1	0	0
Volume Module:																					
Base Vol:	76	19	62	4	66	12	9	386	146	119	773	16
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	76	19	62	4	66	12	9	386	146	119	773	16
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
PHF Volume:	86	21	70	5	74	14	10	436	165	134	872	18
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	86	21	70	5	74	14	10	436	165	134	872	18
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	86	21	70	5	74	14	10	436	165	134	872	18
Saturation Flow Module:																					
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.63	0.63	0.63	0.85	0.85	0.85	0.77	0.77	0.77	0.53	0.80	0.53
Lanes:	0.49	0.12	0.39	0.05	0.80	0.15	0.02	0.71	0.27	0.18	0.80	0.02
Final Sat.:	579	141	471	87	1291	244	24	1040	394	186	1208	25
Capacity Analysis Module:																					
Vol/Sat:	0.15	0.15	0.15	0.06	0.06	0.06	0.42	0.42	0.42	0.72	0.72	0.72
Crit Moves:		tttt									tttt	
Green/Cycle:	0.16	0.16	0.16	0.16	0.16	0.16	0.76	0.76	0.76	0.76	0.76	0.76
Volume/Cap:	0.95	0.95	0.95	0.37	0.37	0.37	0.55	0.55	0.55	0.95	0.95	0.95
Level Of Service Module:																					
Delay/Veh:	63.4	63.4	63.4	24.8	24.8	24.8	3.6	3.6	3.6	18.3	18.3	18.3
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	63.4	63.4	63.4	24.8	24.8	24.8	3.6	3.6	3.6	18.3	18.3	18.3
Queue:	4	2	4	0	2	0	0	5	2	5	25	1

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Beaverton Transportation System Plan
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PM Peak Hour

Level Of Service Computation Report
1994 HCM 4-Way Stop Method (Base Volume Alternative)

****

Intersection #221 Hart-Bany/170th Avenue

****

Cycle (sec): 1 critical Vol./Cap. (X): 0.993
Loss Time (sec): 0 Average Delay (sec/veh): 26.4
Optimal Cycle: 0 Level Of Service: D

****

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Lanes:	0	0	1! 0	0	0	1! 0	0	0	1! 0	0	0	1! 0
Volume Module:												
Base Vol:	35	109	37	208	235	31	21	136	36	43	263	112
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	35	109	37	208	235	31	21	136	36	43	263	112
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
PHF Volume:	38	120	41	228	258	34	23	149	39	47	288	123
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	38	120	41	228	258	34	23	149	39	47	288	123
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	38	120	41	228	258	34	23	149	39	47	288	123
Saturation Flow Module:												
Sat/Lane:	428	428	428	599	599	599	426	426	426	461	461	461
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.19	0.60	0.21	0.44	0.50	0.06	0.11	0.71	0.18	0.10	0.63	0.27
Final Sat.:	82	258	88	263	297	39	46	301	79	47	290	124
Capacity Analysis Module:												
Vol/Sat:	0.46	0.46	0.46	0.87	0.87	0.87	0.50	0.50	0.50	0.99	0.99	0.99
Crit Moves:		****				****			****			****
Level Of Service Module:												
Delay/Veh:	5.9	5.9	5.9	27.1	27.1	27.1	6.6	6.6	6.6	43.6	43.6	43.6
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	5.9	5.9	5.9	27.1	27.1	27.1	6.6	6.6	6.6	43.6	43.6	43.6
LOS by Move:	B	B	B	D	D	D	B	B	B	E	E	E

****

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Beaverton Transportation System Plan
Existing Traffic Conditions
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Level Of Service Computation Report
1994 HCM 4-Way Stop Method (Base Volume Alternative)

****

Intersection #222 Hart Road/Sorrento Avenue

****

Cycle (sec): 1 Critical Vol./Cap. (X): 0.805
Loss Time (sec): 12 Average Delay (sec/veh): 17.0
Optimal Cycle: 0 Level Of Service: C

****

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Lanes:	0	0	1! 0	0	0	0	0	0	0	1	0	0
Volume Module:												
Base Vol:	92	0	147	0	0	0	0	179	154	308	458	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	92	0	147	0	0	0	0	179	154	308	458	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
PHF Volume:	97	0	156	0	0	0	0	190	163	326	485	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	97	0	156	0	0	0	0	190	163	326	485	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	97	0	156	0	0	0	0	190	163	326	485	0
Saturation Flow Module:												
Sat/Lane:	337	337	337	0	0	0	698	698	698	1008	1008	1008
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.38	0.00	0.62	0.00	0.00	0.00	0.00	0.54	0.46	0.40	0.60	0.00
Final Sat.:	129	0	208	0	0	0	0	376	322	405	603	0
Capacity Analysis Module:												
Vol/Sat:	0.75	0.00	0.75	0.00	0.00	0.00	0.00	0.51	0.51	0.80	0.80	0.00
Crit Moves:	****					****			****		****	
Level Of Service Module:												
Delay/Veh:	17.3	0.0	17.3	0.0	0.0	0.0	0.0	6.8	6.8	21.3	21.3	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	17.3	0.0	17.3	0.0	0.0	0.0	0.0	6.8	6.8	21.3	21.3	0.0
LOS by Move:	C	*	C	*	*	*	*	B	B	D	D	*

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Beaverton Transportation System Plan
Existing Traffic Conditions
PM Peak Hour

Level Of Service Computation Report
1994 HCM Unsignalized Method (Base Volume Alternative)

Intersection #223 Brockman Road/Sorrento Avenue

Average Delay (sec/veh): 6.4 Worst Case Level Of Service: F

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 0	0	0 0	1	0	0 0 1	1	0	1 0 0	0	0	0 1 0
Volume Module:												
Base Vol:	0	0	0	120	0	140	60	274	0	0	679	171
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	120	0	140	60	274	0	0	679	171
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
PHF Volume:	0	0	0	132	0	154	66	302	0	0	749	189
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	0	0	0	132	0	154	66	302	0	0	749	189
Adjusted Volume Module:												
Grade:	0%			0%			0%			0%		
% Cycle/Cars:	xxxx	xxxx		0.00	0.99		0.00	0.99		0.00	0.99	
% Truck/Comb:	xxxx	xxxx		0.01	0.00		0.01	0.00		0.01	0.00	
PCE Adj:	1.10	1.10	1.10	xxxx	xxxx	xxxxx	xxxx	1.00	1.00	xxxx	1.00	1.00
Cycl/Car PCE:	xxxx	xxxx		0.50	1.00		0.50	1.00		0.50	1.00	
Trck/Cmb PCE:	xxxx	xxxx		1.50	2.00		1.50	2.00		1.50	2.00	
Adj Vol.:	0	0	0	133	0	155	66	302	0	0	749	189
Critical Gap Module:												
MoveUp Time:	xxxxx	xxxx	xxxxx	3.4	xxxx	2.6	2.1	Xxxx	xxxxx	xxxxx	xxxx	xxxxx
Critical Gp:	xxxxx	xxxx	xxxxx	6.5	xxxx	5.5	5.0	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	1211	xxxx	843	937	xxxx	xxxxx	xxxx	xxxx	xxxxx
Potent Cap.:	xxxx	xxxx	xxxxx	211	xxxx	518	613	xxxx	xxxxx	xxxx	xxxx	xxxxx
Adj Cap:	xxxx	xxxx	xxxxx	0.89	xxxx	1.00	1.00	xxxx	xxxxx	xxxx	xxxx	xxxxx
Move cap.:	xxxx	xxxx	xxxxx	188	xxxx	518	613	xxxx	xxxxx	xxxx	xxxx	xxxxx
Level Of Service Module:												
Stopped Del:	xxxxx	xxxx	xxxxx	61.5	xxxx	9.9	6.6	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	F	*	B	B	*	*	*	*	*
Movement:	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Shrd StpDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	*
ApproachDel:	0.0			33.7			1.2			0.0		

Beaverton Transportation System Plan
Existing Traffic Conditions
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Level Of Service Computation Report
1994 HCM Operations Method (Base Volume Alternative)

Intersection #224 Murray Boulevard/Brockman Road

Cycle (sec): 100 Critical Vol./Cap. (X): 0.551
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 14.7
Optimal Cycle: 44 Level Of Service: B

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	T	R		L	T	R		L	T	R		L	T	R	
Control:	Protected				Protected				Permitted				Permitted			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0	
Lanes:	1	0	1	1	0	1	0	1	1	0	0	1	0	0	1	0
Volume Module:																
Base Vol:	65	768	39	122	899	48	24	83	54	99	168	102				
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Initial Bse:	65	768	39	122	899	48	24	83	54	99	168	102				
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Adj:	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94				
PHF Volume:	69	814	41	129	952	51	25	88	57	105	178	108				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0				
Reduced Vol:	69	814	41	129	952	51	25	88	57	105	178	108				
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
MLF Adj:	1.00	1.05	1.05	1.00	1.05	1.05	1.00	1.00	1.00	1.00	1.00	1.00				
Final Vol.:	69	854	43	129	1000	53	25	88	57	105	178	108				
Saturation Flow Module:																
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900				
Adjustment:	0.93	0.97	0.97	0.94	0.98	0.98	0.27	0.90	0.90	0.57	0.92	0.92				
Lanes:	1.00	1.90	0.10	1.00	1.90	0.10	1.00	0.61	0.39	1.00	0.62	0.38				
Final Sat.:	1770	3511	177	1787	3537	187	512	1042	675	1080	1090	661				
Capacity Analysis Module:																
Vol/Sat:	0.04	0.24	0.24	0.07	0.28	0.28	0.05	0.08	0.08	0.10	0.16	0.16				
Crit Moves:	****				****						****					
Green/Cycle:	0.07	0.45	0.45	0.13	0.51	0.51	0.30	0.30	0.30	0.30	0.30	0.30				
Volume/Cap:	0.55	0.54	0.54	0.54	0.55	0.55	0.16	0.28	0.28	0.33	0.55	0.55				
Level Of Service Module:																
Delay/Veh:	32.8	13.2	13.2	28.0	11.0	11.0	16.9	17.6	17.6	17.9	20.1	20.1				
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
AdjDel/Veh:	32.8	13.2	13.2	28.0	11.0	11.0	16.9	17.6	17.6	17.9	20.1	20.1				
Queue:	2	17	1	4	19	1	1	2	1	2	4	3				

Beaverton Transportation System Plan
Existing Traffic Conditions
PM Peak Hour

Level Of Service Computation Report
1994 HCM Unsignalized Method (Base Volume Alternative)

Intersection #225 Murray Boulevard/Maverick Terrace

Average Delay (sec/veh): 0.3 worst Case Level Of Service: E

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Lanes:	1	0 1	1 0	1	0 2	0 0	0	0 1	1 0 0	0	0 1	1 0 0
Volume Module:												
Base Vol:	0	881	7	32	1095	0	0	0	0	3	0	9
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	881	7	32	1095	0	0	0	0	3	0	9
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
PHF Volume:	0	990	8	36	1230	0	0	0	0	3	0	10
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	0	990	8	36	1230	0	0	0	0	3	0	10
Adjusted Volume Module:												
Grade:	0%			0%			0%			0%		
% Cycle/Cars:	0.00	0.98		0.00	0.99		xxxx	xxxx		xxxx	xxxx	
% Truck/Comb:	0.02	0.00		0.01	0.00		xxxx	xxxx		xxxx	xxxx	
PCE Adj:	xxxx	1.00	1.00	xxxx	1.00	1.00	1.10	1.10	1.10	1.10	1.10	1.10
Cycl/Car PCE:	0.50	1.00		0.50	1.00		xxxx	xxxx		xxxx	xxxx	
Trck/Cmb PCE:	1.50	2.00		1.50	2.00		xxxx	xxxx		xxxx	xxxx	
Adj Vol.:	0	990	8	36	1230	0	0	0	0	4	0	1 1
Critical Gap Module:												
MoveUp Time:	xxxxx	xxxx	xxxxx	2.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	3.4	xxxx	2.6
Critical Gp:	xxxxx	xxxx	xxxxx	5.5	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.0	xxxx	5.5
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	998	xxxx	xxxxx	xxxx	xxxx	xxxxx	2260	xxxx	499
Potent Cap.:	xxxx	xxxx	xxxxx	499	xxxx	xxxxx	xxxx	xxxx	xxxxx	38	xxxx	774
Adj Cap:	xxxx	xxxx	xxxxx	1.00	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.93	xxxx	1.00
Move Cap.:	xxxx	xxxx	xxxxx	499	xxxx	xxxxx	xxxx	xxxx	xxxxx	35	xxxx	774
Level Of Service Module:												
Stopped Del:	xxxxx	xxxx	xxxxx	7.8	xxxx	xxxxx	xxxxx	xxxx	xxxxx	112.9	xxxx	4.7
LOS by Move:	*	*	*	B	*	*	*	*	*	*	*	*
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	124	xxxxx
Shrd StpDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	32.6	xxxxx
Shared LOS:	*	*	*	*	*	*	*	*	*	*	E	*
ApproachDel:	0.0			0.2			0.0			31.8		

Beaverton Transportation System Plan
Existing Traffic Conditions
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Level Of Service Computation Report
1994 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #226 155th Avenue/Nora-Beard (Brockman)

Cycle (sec): 1 Critical Vol./Cap. (X): 0.416
Loss Time (sec): 0 Average Delay (sec/veh): 3.2
Optimal Cycle: 0 Level Of Service: A

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Lanes:	0	0 0	1 0	0	0 1!	0 0	0	0 0	1 0 0	0	0 1!	0 0
Volume Module:												
Base Vol:	0	68	24	94	104	2	0	3	1	27	7	137
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	68	24	94	104	2	0	3	1	27	7	137
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
PHF Volume:	0	75	26	103	114	2	0	3	1	30	8	150
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	75	26	103	114	2	0	3	1	30	8	150
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	0	75	26	103	114	2	0	3	1	30	8	150
Saturation Flow Module:												
Sat/Lane:	648	648	648	909	909	909	408	408	408	452	452	452
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.00	0.74	0.26	0.47	0.52	0.01	0.00	0.75	0.25	0.16	0.04	0.80
Final Sat.:	0	481	167	428	473	8	0	306	102	72	19	361
Capacity Analysis Module:												
Vol/Sat:	0.00	0.16	0.16	0.24	0.24	0.24	0.00	0.01	0.01	0.42	0.42	0.42
Crit Moves:			****		****				****	****		
Level Of Service Module:												
Delay/Veh:	0.0	1.8	1.8	2.5	2.5	2.5	0.0	1.0	1.0	4.9	4.9	4.9
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	1.8	1.8	2.5	2.5	2.5	0.0	1.0	1.0	4.9	4.9	4.9
LOS by Move:	*	A	A	A	A	A	*	A	A	A	A	A

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Level Of Service Computation Report
1994 HCM Operations Method (Base Volume Alternative)

Intersection #227 Brockman Road/125th Avenue

Cycle (sec): 100 Critical Vol./Cap. (X): 0.945
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 23.3
Optimal Cycle: 135 Level Of Service: C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0	0	0	1	0	0	0	0	0	1	0	0	1	0	1	0	1	0	0	0	0
Volume Module:												
Base Vol:	314	0	126	0	0	0	0	207	179	242	521	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	314	0	126	0	0	0	0	207	179	242	521	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
PHF Volume:	356	0	143	0	0	0	0	235	203	274	591	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	356	0	143	0	0	0	0	235	203	274	591	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	356	0	143	0	0	0	0	235	203	274	591	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.94	1.00	0.84	1.00	1.00	1.00	1.00	0.99	0.84	0.72	0.72	1.00
Lanes:	1.00	0.00	1.00	0.00	0.00	0.00	0.00	1.00	1.00	0.32	0.68	0.00
Final Sat.:	1787	0	1599	0	0	0	0	1881	1599	433	935	0
Capacity Analysis Module:												
Vol/Sat:	0.20	0.00	0.09	0.00	0.00	0.00	0.00	0.12	0.13	0.63	0.63	0.00
Crit Moves:	****										****	
Green/Cycle:	0.21	0.00	0.21	0.00	0.00	0.00	0.00	0.67	0.67	0.67	0.67	0.00
Volume/Cap:	0.94	0.00	0.42	0.00	0.00	0.00	0.00	0.19	0.19	0.94	0.94	0.00
Level Of Service Module:												
Delay/Veh:	48.7	0.0	22.6	0.0	0.0	0.0	0.0	4.0	4.1	22.7	22.7	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	48.7	0.0	22.6	0.0	0.0	0.0	0.0	4.0	4.1	22.7	22.7	0.0
Queue:	13	0	4	0	0	0	0	2	2	10	19	0

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Level Of Service Computation Report
1994 HCM Operations Method. (Base Volume Alternative)

Intersection #229 Hall Boulevard/Greenway

Cycle (sec): 120 Critical Vol./Cap. (X): 0.996
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 33.3
Optimal Cycle: 180 Level Of Service: D

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0	0	1	0	0	0	1	1	0	0	1	0	1	1	0	1	0	1	1	0
Volume Module:												
Base Vol:	255	1	227	6	46	4	3	567	506	585	1105	52
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	255	1	227	6	46	4	3	567	506	585	1105	52
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
PHF Volume:	280	1	249	7	50	4	3	622	555	642	1213	57
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	280	1	249	7	50	4	3	622	555	642	1213	57
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.05	1.05	1.00	1.05	1.05
Final Vol.:	280	1	249	7	50	4	3	654	583	642	1274	60
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.80	0.84	0.84	0.82	0.82	0.82	0.94	0.92	0.92	0.94	0.98	0.98
Lanes:	1.00	0.01	0.99	0.11	0.82	0.07	1.00	1.06	0.94	1.00	1.91	0.09
Final Sat.:	1524	6	1593	179	1275	102	1787	1850	1649	1787	3557	168
Capacity Analysis Module:												
Vol/Sat:	0.18	0.16	0.16	0.04	0.04	0.04	0.00	0.35	0.35	0.36	0.36	0.36
Crit Moves:	****							****		****		
Green/Cycle:	0.18	0.18	0.18	0.18	0.18	0.18	0.00	0.35	0.35	0.36	0.71	0.71
Volume/Cap:	1.00	0.85	0.85	0.21	0.21	0.21	0.50	1.00	1.00	1.00	0.50	0.50
Level Of Service Module:												
Delay/Veh:	71.8	44.3	44.3	26.9	26.9	26.9	72.1	43.7	43.7	51.1	5.1	5.1
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	71.8	44.3	44.3	26.9	26.9	26.9	72.1	43.7	43.7	51.1	5.1	5.1
Queue:	13	0	9	0	1	0	0	28	25	27	19	1

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Level Of Service Computation Report
1994 HCM Operations Method (Base Volume Alternative)

Intersection #230 Hall Boulevard/Nimbus Avenue

Cycle (sec): 140 Critical Vol./Cap. (X): 0.916
Loss Time (sec): 16 (Y+R = 4 sec) Average Delay (sec/veh): 40.0
Optimal Cycle: 151 Level Of Service: D

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0	0 1	0	1	0 0 1	0	1	0 1 1	0	1	0 2 0 1
Volume Module:												
Base Vol:	372	62	349	235	109	158	33	696	164	241	1181	100
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	372	62	349	235	109	158	33	696	164	241	1181	100
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	392	65	368	248	115	166	35	733	173	254	1244	105
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	392	65	368	248	115	166	35	733	173	254	1244	105
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.05	1.05	1.00	1.05	1.00
Final Vol.:	392	65	368	248	115	166	35	770	181	254	1307	105
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.94	0.86	0.86	0.92	0.88	0.88	0.93	0.95	0.95	0.94	0.99	0.84
Lanes:	1.00	0.15	0.85	1.00	0.41	0.59	1.00	1.62	0.38	1.00	2.00	1.00
Final Sat.:	1787	246	1391	1752	687	992	1770	2926	688	1787	3762	1599
Capacity Analysis Module:												
Vol/Sat:	0.22	0.26	0.26	0.14	0.17	0.17	0.02	0.26	0.26	0.14	0.35	0.07
Crit Moves:		****		****				****		****		
Green/Cycle:	0.25	0.29	0.29	0.15	0.19	0.19	0.02	0.29	0.29	0.16	0.42	0.42
Volume/Cap:	0.87	0.92	0.92	0.92	0.87	0.87	0.83	0.92	0.92	0.92	0.83	0.16
Level Of Service Module:												
Delay/Veh:	44.3	47.2	47.2	61.4	50.8	50.8	93.6	40.1	40.1	61.0	26.2	16.4
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	44.3	47.2	47.2	61.4	50.8	50.8	93.6	40.1	40.1	61.0	26.2	16.4
Queue:	17	4	16	12	6	8	2	32	9	12	47	3

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Beaverton Transportation System Plan
Existing Traffic Conditions
PM Peak Hour

Level Of Service Computation Report
1994 HCM Operations Method (Base Volume Alternative)

Intersection #232 Scholls Ferry Road/Hall Boulevard

Cycle (sec): 110 Critical Vol./Cap. (X): 0.953
Loss Time (sec): 16 (Y+R = 4 sec) Average Delay (sec/veh): 38.4
Optimal Cycle: 153 Level Of Service: D

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0	1 1	0	1	0 1 1	0	1	0 1 1	0	1	0 1 1 0
Volume Module:												
Base Vol:	292	409	252	230	445	66	152	748	206	296	658	168
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	292	409	252	230	445	66	152	748	206	296	658	168
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
PHF Volume:	310	434	267	244	472	70	161	793	218	314	698	178
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	310	434	267	244	472	70	161	793	218	314	698	178
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.05	1.05	1.00	1.05	1.05	1.00	1.05	1.05	1.00	1.05	1.05
Final Vol.:	310	455	281	244	495	73	161	833	229	314	733	187
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.94	0.93	0.93	0.93	0.96	0.96	0.94	0.96	0.96	0.93	0.95	0.95
Lanes:	1.00	1.24	0.76	1.00	1.74	0.26	1.00	1.57	0.43	1.00	1.59	0.41
Final Sat.:	1787	2186	1350	1770	3182	469	1787	2863	787	1770	2879	735
Capacity Analysis Module:												
Vol/Sat:	0.17	0.21	0.21	0.14	0.16	0.16	0.09	0.29	0.29	0.18	0.25	0.25
Crit Moves:		****		****				****		****		
Green/Cycle:	0.19	0.22	0.22	0.14	0.17	0.17	0.13	0.31	0.31	0.19	0.36	0.36
Volume/Cap:	0.91	0.95	0.95	0.95	0.91	0.91	0.70	0.95	0.95	0.95	0.70	0.70
Level Of Service Module:												
Delay/Veh:	46.9	43.3	43.3	61.8	40.9	40.9	35.9	36.6	36.6	55.8	20.5	20.5
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	46.9	43.3	43.3	61.8	40.9	40.9	35.9	36.6	36.6	55.8	20.5	20.5
Queue:	12	17	12	10	17	4	5	30	10	13	20	5

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Beaverton Transportation System Plan
Existing Traffic Conditions
PM Peak Hour

Level Of Service Computation Report
1994 HCM Operations Method (Base Volume Alternative)

Intersection #236 Scholls Ferry Road/125th Avenue

Cycle (sec):	100	Critical Vol./Cap. (X):	0.961
Loss Time (sec):	16 (Y+R = 4 sec)	Average Delay (sec/veh)	29.3
Optimal Cycle:	147	Level Of Service:	D

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:		Ovl			Include			Include			Ovl	
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0 1	0 1	1	0 0	1 0	1	0 1	1 0	1	0 2	0 1
Volume Module:												
Base Vol:	263	206	72	159	154	135	77	900	66	94	1446	162
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	263	206	72	159	154	135	77	900	66	94	1446	162
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
PHF Volume:	280	219	77	169	164	144	82	958	70	100	1540	173
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	280	219	77	169	164	144	82	958	70	100	1540	173
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.05	1.05	1.00	1.05	1.00
Final Vol.:	280	219	77	169	164	144	82	1006	74	100	1617	173
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.94	0.99	0.84	0.95	0.93	0.93	0.93	0.97	0.97	0.94	0.99	0.84
Lanes:	1.00	1.00	1.00	1.00	0.53	0.47	1.00	1.86	0.14	1.00	2.00	1.00
Final Sat.:	1787	1881	1599	1805	941	826	1770	3436	253	1787	3762	1599
Capacity Analysis Module:												
Vol/Sat:	0.16	0.12	0.05	0.09	0.17	0.17	0.05	0.29	0.29	0.06	0.43	0.11
Crit Moves:	****				tttt		****				tttt	
Green/Cycle:	0.16	0.19	0.27	0.15	0.18	0.18	0.05	0.42	0.42	0.08	0.45	0.60
Volume/Cap:	0.96	0.61	0.18	0.61	0.96	0.96	0.96	0.70	0.70	0.70	0.96	0.18
Level Of Service Module:												
Delay/Veh:	57.8	26.1	18.1	28.3	55.5	55.5	92.5	16.6	16.6	38.6	27.5	5.8
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	57.8	26.1	18.1	28.3	55.5	55.5	92.5	16.6	16.6	38.6	27.5	5.8
Queue:	11	6	2	5	7	6	4	24	2	3	50	2

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Beaverton Transportation System Plan
Existing Traffic Conditions
PM Peak Hour

Level Of Service Computation Report
1994 HCM Operations Method (Base Volume Alternative)

Intersection #237 Scholls Ferry Road/Nimbus Avenue

Cycle (sec):	100	Critical Vol./Cap. (X):	0.991
Loss Time (sec):	16 (Y+R = 4 sec)	Average Delay (sec/veh):	32.9
optimal Cycle:	169	Level Of Service:	D

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Protected			Protected		
Rights:		Ovl			Ovl			Ovl			Ovl	
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	1 0	0 1	1	1 0	0 1	1	0 2	0 1	1	0 2	0 1
Volume Module:												
Base Vol:	130	34	228	602	40	506	116	1200	70	78	1429	81
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	130	34	228	602	40	506	116	1200	70	78	1429	81
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
PHF Volume:	132	35	232	612	41	515	118	1221	71	79	1454	82
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	132	35	232	612	41	515	118	1221	71	79	1454	82
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.05	1.05	1.00	1.00	1.05	1.00	1.00	1.05	1.00
Final Vol.:	132	35	232	643	43	515	118	1282	71	79	1526	82
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.95	0.84	0.95	0.95	0.84	0.93	0.98	0.83	0.93	0.98	0.83
Lanes:	0.79	0.21	1.00	1.87	0.13	1.00	1.00	2.00	1.00	1.00	2.00	1.00
Final Sat.:	1427	378	1599	3385	226	,1599	1770	3725	1583	1770	3725	1583
Capacity Analysis Module:												
Vol/Sat:	0.09	0.09	0.15	0.19	0.19	0.32	0.07	0.34	0.04	0.04	0.41	0.05
Crit Moves:			****			tttt	tttt				tttt	
Green/Cycle:	0.10	0.10	0.16	0.26	0.26	0.33	0.07	0.43	0.53	0.06	0.41	0.67
Volume/Cap:	0.91	0.91	0.93	0.74	0.74	0.99	0.99	0.81	0.09	0.81	0.99	0.08
Level Of Service Module:												
Delay/Veh:	58.6	58 6	53.7	24.1	24.1	49.8	90.5	18.5	7.6	55.0	34.5	3.7
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	58.6	58.6	53.7	24.1	24.1	49.8	90.5	18.5	7.6	55.0	34.5	3.7
Queue:	5	2	9	17	2	20	6	32	1	3	51	1

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Beaverton Transportation System Plan
Existing Traffic Conditions
PM Peak Hour

Level Of Service Computation Report
1994 HCM Operations Method (Base Volume Alternative)

Intersection #238 Murray Boulevard/Old Scholls Ferry Road

Cycle (sec): 110 Critical Vol./Cap. (X): 0.795
Loss Time (sec): 16 (Y+R = 4 sec) Average Delay (sec/veh): 19.7
Optimal Cycle: 89 Level Of Service: C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Split Phase			Split Phase		
Rights:	Include			Ovl			Ovl			Ovl		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0	1 1	0	1 1	1 0	1	0	2 0	1	1 0	2 0 1
Volume Module:												
Base Vol:	2	4	6	693	11	376	226	189	1	6	532	810
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	2	4	6	693	11	376	226	189	1	6	532	810
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
PHF Volume:	2	4	6	738	12	400	241	201	1	6	567	863
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	2	4	6	738	12	400	241	201	1	6	567	863
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.05	1.00	1.00	1.00	1.05	1.00	1.00	1.05	1.00
Final Vol.:	2	4	6	775	12	400	241	211	1	6	595	863
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	1.00	0.85	0.92	0.97	0.83	0.93	0.98	0.83	0.94	0.99	0.84
Lanes:	1.00	1.00	1.00	2.00	1.00	1.00	1.00	2.00	1.00	1.00	2.00	1.00
Final Sat.:	1805	1900	1615	3505	1845	1568	1770	3725	1583	1787	3762	1599
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.22	0.01	0.26	0.14	0.06	0.00	0.00	0.16	0.54
Crit Moves:			****	****			****					****
Green/Cycle:	0.00	0.00	0.00	0.28	0.28	0.45	0.17	0.17	0.18	0.40	0.40	0.68
Volume/Cap:	0.24	0.45	0.80	0.80	0.02	0.57	0.80	0.33	0.00	0.01	0.39	0.80
Level Of Service Module:												
Delay/Veh:	37.7	43.8	125.3	27.0	18.6	15.3	37.5	26.0	24.1	12.8	15.3	10.9
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	37.7	43.8	125.3	27.0	18.6	15.3	37.5	26.0	24.1	12.8	15.3	10.9
Queue:	0	0	1	23	0	9	8	6	0	0	13	20

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Beaverton Transportation System Plan
Existing Traffic Conditions
PM Peak Hour

Level Of Service Computation Report
1994 HCM Unsignalized Method (Base Volume Alternative)

Intersection #239 Old Scholls Ferry Road/Davies Road

Average Delay (sec/veh): OVERFLOW Worst Case Level Of Service: F

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0	0	1! 0	0	1	0	0	1	1	0	0	1
Volume Module:												
Base Vol:	8	2	14	65	0	26	18	1071	22	52	1355	177
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	8	2	14	65	0	26	18	1071	22	52	1355	177
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
PHF Volume:	9	2	15	70	0	28	19	1159	24	56	1466	192
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	9	2	15	70	0	28	19	1159	24	56	1466	192
Adjusted Volume Module:												
Grade:	0%			04			0%			0%		
% Cycle/Cars:	xxxx	xxxx		0.00	0.99		0.00	0.98		0.00	0.99	
4 Truck/Comb:	xxxx	xxxx		0.01	0.00		0.02	0.00				
PCE Adj:	1.10	1.10	1.10	xxxx	xxxx	xxxxx	xxxx	1.00	1.00	xxxx	1.00	1.00
Cycl/Car PCE:	xxxx	xxxx		0.50	1.00		0.50	1.00		0.50	1.00	
Trck/Cmb PCE:	xxxx	xxxx		1.50	2.00		1.50	2.00		1.50	2.00	
Adj Vol.:	10	2	17	71	0	28	20	1159	24	57	1466	192
Critical Gap Module:												
MoveUp Time:	3.4	3.3	2.6	3.4	xxxx	2.6	2.1	xxxx	xxxxx	2.1	xxxx	xxxxx
Critical Gp:	7.0	6.5	5.5	7.0	xxxx	5.5	5.5	xxxx	xxxxx	5.5	xxxx	xxxxx
Capacity Module:												
Cnflict vol:	2713	2905	591	2702	xxxx	733	1658	xxxx	xxxxx	1183	xxxx	xxxxx
Potent Cap.:	20	22	694	20	xxxx	589	221	xxxx	xxxxx	397	xxxx	xxxxx
Adj Cap:	0.00	0.00	1.00	0.00	xxxx	1.00	1.00	xxxx	xxxxx	1.00	xxxx	xxxxx
Move Cap.:	0	0	694	0	xxxx	589	221	xxxx	xxxxx	397	xxxx	xxxxx
Level Of Service Module:												
Stopped Del:	xxxxx	xxxx	5.3	xxxxx	xxxx	6.4	17.9	xxxx	xxxxx	10.6	xxxx	xxxxx
LOS by Move:	•	•	*	F	*	*	C	*	*	C	*	*
Movement:	LT - LTR - RT			LT - LTR - RT			LT - LTR - RT			LT - LTR - RT		
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Shrd StpDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	•	F	*	*	*	F	*	*	*	*	*	*
ApproachDel:	xxxxxx			xxxxxx			0.3			0.3		

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Beaverton Transportation System Plan
Existing Traffic Conditions
PM Peak Hour

Level Of Service Computation Report
1994 HCM Operations Method (Base Volume Alternative)

Intersection #241 Scholls Ferry/Old Scholls Ferry (east)

Cycle (sec): 120 Critical Vol./Cap. (X): 0.586
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 9.6
Optimal Cycle: 48 Level Of Service: 8

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Protected			Protected		
Rights:	Ovl			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0	0	0	1	0	0	0	0	0	0	1	1	0	1	0	2	0	0
Volume Module:																			
Base Vol:	47	0	249	0	0	0	0	886	65	308	1399	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	47	0	249	0	0	0	0	886	65	308	1399	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
PHF Volume:	52	0	275	0	0	0	0	977	72	340	1542	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	52	0	275	0	0	0	0	977	72	340	1542	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.05	1.05	1.00	1.05	1.00
Final Vol.:	52	0	275	0	0	0	0	1026	75	340	1620	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.90	1.00	0.80	1.00	1.00	1.00	1.00	0.95	0.95	0.93	0.98	1.00
Lanes:	1.00	0.00	1.00	0.00	0.00	0.00	0.00	1.86	0.14	1.00	2.00	0.00
Final Sat.:	1703	0	1524	0	0	0	0	3371	246	1770	3725	0
Capacity Analysis Module:												
Vol/Sat:	0.03	0.00	0.18	0.00	0.00	0.00	0.00	0.30	0.30	0.19	0.43	0.00
Crit Moves:	****							tttt		****		
Green/Cycle:	0.05	0.00	0.38	0.00	0.00	0.00	0.00	0.52	0.52	0.33	0.85	0.00
Volume/Cap:	0.59	0.00	0.47	0.00	0.00	0.00	0.00	0.59	0.59	0.59	0.51	0.00
Level Of Service Module:												
Delay/Veh:	42.6	0.0	18.6	0.0	0.0	0.0	0.0	13.2	13.2	22.8	1.7	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	42.6	0.0	18.6	0.0	0.0	0.0	0.0	13.2	13.2	22.8	1.7	0.0
Queue:	2	0	7	0	0	0	0	24	2	10	15	0

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Beaverton Transportation System Plan
Existing Traffic Conditions
PM Peak Hour

Level Of Service Computation Report
1994 HCM Unsignalized Method (Base Volume Alternative)

Intersection #243 Scholls Ferry/Old Scholls Ferry (west)

Average Delay (sec/veh): 3.8 Worst Case Level Of Service: C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0	0	0	0	0	0	0	0	1!	0	0	1	0	0	0	0	1	0	1
Volume Module:																			
Base Vol:	0	0	0	73	0	416	179	248	0	0	217	34
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	73	0	416	179	248	0	0	217	34
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
PHF Volume:	0	0	0	85	0	483	208	288	0	0	252	39
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	0	0	0	85	0	483	208	288	0	0	252	39
Adjusted Volume Module:												
Grade:	0%			0%			0%			0%		
% Cycle/Cars:	xxxx	xxxx		0.00	0.98		0.00	0.97		0.00	0.98	
% Truck/Comb:	xxxx	xxxx		0.02	0.00		0.03	0.00		0.02	0.00	
PCE Adj:	1.10	1.10	1.10	xxxx	xxxx	xxxxx	xxxx	1.00	1.00	xxxx	1.00	1.00
Cycl/Car PCE:	xxxx	xxxx		0.50	1.00		0.50	1.00		0.50	1.00	
Trck/Cmb PCE:	xxxx	xxxx		1.50	2.00		1.50	2.00		1.50	2.00	
Adj Vol.:	0	0	0	86	0	488	211	288	0	0	252	39
Critical Gap Module:												
MoveUp Time:	xxxxx	xxxx	xxxxx	3.4	xxxx	2.6	2.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx
critical Gp:	xxxxx	xxxx	xxxxx	6.5	xxxx	5.5	5.0	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	748	xxxx	252	292	xxxx	xxxxx	xxxx	xxxx	xxxxx
Potent Cap.:	xxxx	xxxx	xxxxx	391	xxxx	1032	1245	xxxx	xxxxx	xxxx	xxxx	xxxxx
Adj Cap:	xxxx	xxxx	xxxxx	0.83	xxxx	1.00	1.00	xxxx	xxxxx	xxxx	xxxx	xxxxx
Move cap.:	xxxx	xxxx	xxxxx	324	xxxx	1032	1245	xxxx	xxxxx	xxxx	xxxx	xxxxx
Level Of Service Module:												
Stopped Del:	xxxxx	xxxx	xxxxx	15.0	xxxx	6.6	3.5	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	A	*	*	*	*	*
Movement:	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	778	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Shrd StpDel:	xxxxx	xxxx	xxxxx	xxxxx	16.8	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	C	*	*	*	*	*	*	*
ApproachDel:	0.0			7.8			1.5			0.0		

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Beaverton Transportation System Plan
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Level Of Service Computation Report
1994 HCM Unsignalized Method (Base Volume Alternative)

Intersection #244 Scholls Ferry Road/Walnut Street

Average Delay (sec/veh): 3.3 worst Case Level Of Service: C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	1	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	1	0	1	0	1	0	0
Volume Module:																							
Base Vol:	137	0	32	0	0	0	0	265	86	42	314	0											
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00											
Initial Bse:	137	0	32	0	0	0	0	265	86	42	314	0											
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00											
PHF Adj:	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85											
PHF Volume:	162	0	38	0	0	0	0	313	102	50	371	0											
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0											
Final Vol.:	162	0	38	0	0	0	0	313	102	50	371	0											
Adjusted Volume Module:																							
Grade:	0%			0%			0%			0%													
% Cycle/Cars:	0.00	0.98		xxxx	xxxx		0.00	0.96		0.00	0.97												
% Truck/Comb:	0.02	0.00		xxxx	xxxx		0.04	0.00		0.03	0.00												
PCE Adj:	xxxx	xxxx	xxxxx	1.10	1.10	1.10	xxxx	1.00	1.00	xxxx	1.00	1.00											
Cycl/Car PCE:	0.50	1.00		xxxx	xxxx		0.50	1.00		0.50	1.00												
Trck/Cmb PCE:	1.50	2.00		xxxx	xxxx		1.50	2.00		1.50	2.00												
Adj Vol.:	164	0	38	0	0	0	0	313	102	50	371	0											
Critical Gap Module:																							
MoveUp Time:	3.4	xxxx	2.6	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	2.1	xxxx	xxxxx											
Critical Gp:	6.5	xxxx	5.5	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	5.0	xxxx	xxxxx											
Capacity Module:																							
Cnflict Vol:	785	xxxx	364	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	415	xxxx	xxxxx											
Potent Cap.:	372	xxxx	905	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	1007	xxxx	xxxxx											
Adj Cap:	0.95	xxxx	1.00	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	1.00	xxxx	xxxxx											
Move Cap.:	355	xxxx	905	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	1087	xxxx	xxxxx											
Level Of Service Module:																							
Stopped Del:	18.6	xxxx	4.1	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	3.5	xxxx	xxxxx											
LOS by Move:	C	*	A	*	*	*	*	*	*	A	*	*											
Movement:	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT											
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx											
Shrd StpDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx											
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	*											
ApproachDel:	15.9			0.0			0.0			0.4													

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Beaverton Transportation System Plan
Existing Traffic Conditions
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Level Of Service Computation Report
1994 HCM Operations Method (Base Volume Alternative)

Intersection #250 Hall Boulevard/Hwy 217 SB ramps-Cascade Avenue

Cycle (sec): 120 Critical Vol./Cap. (X): 0.938
Loss Time (sec): 16 (Y+R = 4 sec) Average Delay (sec/veh): 32.3
Optimal Cycle: 152 Level Of Service: D

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Protected			Protected		
Rights:	Ovl			Include			Include			Ovl		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0	1	0	1	1	0	1!	0	0	1	0	1	1	0	1	0	2	0	1
Volume Module:																							
Base Vol:	101	23	42	233	52	343	201	903	107	24	1031	33											
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00											
Initial Bse:	101	23	42	233	52	343	201	903	107	24	1031	33											
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00											
PHF Adj:	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94											
PHF Volume:	108	24	45	248	55	365	214	962	114	26	1098	35											
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0											
Reduced Vol:	108	24	45	248	55	365	214	962	114	26	1098	35											
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00											
MLF Adj:	1.00	1.00	1.00	1.05	1.00	1.00	1.00	1.05	1.05	1.00	1.05	1.00											
Final Vol.:	108	24	45	261	55	365	214	1010	120	26	1153	35											
Saturation Flow Module:																							
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900											
Adjustment:	0.93	0.98	0.83	0.89	0.89	0.89	0.93	0.96	0.96	0.94	0.99	0.84											
Lanes:	1.00	1.00	1.00	1.24	0.10	0.66	1.00	1.79	0.21	1.00	2.00	1.00											
Final Sat.:	1770	1863	1583	2098	169	1125	1770	3263	388	1787	3762	1599											
Capacity Analysis Module:																							
Vol/Sat:	0.06	0.01	0.03	0.12	0.32	0.32	0.12	0.31	0.31	0.01	0.31	0.02											
Crit Moves:	****				****		****				****												
Green/Cycle:	0.07	0.07	0.09	0.35	0.35	0.35	0.13	0.44	0.44	0.02	0.33	0.67											
Volume/Cap:	0.94	0.20	0.33	0.36	0.94	0.94	0.94	0.71	0.71	0.71	0.94	0.03											
Level Of Service Module:																							
Delay/Veh:	82.4	34.4	33.9	19.0	38.9	38.9	64.2	19.0	19.0	67.5	35.2	4.2											
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00											
AdjDel/Veh:	82.4	34.4	33.9	19.0	38.9	38.9	64.2	19.0	19.0	67.5	35.2	4.2											
Queue:	6	1	1	7	3	15	10	28	4	1	42	0											

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Level Of Service Computation Report
1994 HCM Oparations Method (Base Volume Alternative)

Intersection #259 Scholls Ferry/Hwy 217 SB ramps

Cycle (sec): 120 Critical Vol./Cap. (X): 0.882
Loss Time (sec): 16 (Y+R = 4 sec) Average Delay (sec/veh): 21.0
Optimal Cycle: 121 Level Of service: C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Protected			Protected		
Rights:		Include			Ovl			Ovl			Include	
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	0	0	0	1	0	0	1	1	1	0	2
Volume Module:												
Base Vol:	0	0	0	117	2	342	0	1162	725	219	1517	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	117	2	342	0	1162	725	219	1517	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	0	0	0	123	2	359	0	1221	762	230	1593	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	123	2	359	0	1221	762	230	1593	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.10	1.10	1.00	1.05	1.00
Final Vol.:	0	0	0	123	2	359	0	1343	838	230	1673	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	0.84	0.84	0.84	1.00	0.93	0.93	0.94	0.99	1.00
Lanes:	0.00	0.00	0.00	0.98	0.02	1.00	0.00	1.85	1.15	1.00	2.00	0.00
Final Sat.:	0	0	0	1573	26	1599	0	3267	2038	1787	3762	0
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.08	0.08	0.22	0.00	0.41	0.41	0.13	0.44	0.00
Crit Moves:						tttt		tttt		****		
Green/Cycle:	0.00	0.00	0.00	0.25	0.25	0.25	0.00	0.47	0.47	0.15	0.61	0.00
Volume/Cap:	0.00	0.00	0.00	0.31	0.31	0.88	0.00	0.88	0.88	0.88	0.73	0.00
Level Of Service Module:												
Delay/Veh:	0.0	0.0	0.0	23.5	23.5	41.6	0.0	21.7	21.7	51.7	11.3	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	23.5	23.5	41.6	0.0	21.7	21.7	51.7	11.3	0.0
Queue:	0	0	0	3	0	14	0	43	28	9	40	0

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Level Of Service Computation Report
1994 HCM Operations Method (Base Volume Alternative)

Intersection #277 Scholls Ferry/Hwy 217 NB off-ramp

Cycle (sec): 100 Critical Vol./cap. (X): 0.889
Loss Time (sec): 8 (Y+R = 4 sec) Average Delay (sec/veh): 18.9
Optimal Cycle: 94 Level Of Service: C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Split Phase			Split Phase		
Rights:		Include			Include			Include			Include	
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	0	2	0	0	0	0	0	2	0	0	0
Volume Module:												
Base Vol:	0	1276	0	0	997	0	0	0	0	693	0	378
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	1276	0	0	997	0	0	0	0	693	0	378
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
PHF Volume:	0	1388	0	0	1085	0	0	0	0	754	0	411
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	1388	0	0	1085	0	0	0	0	754	0	411
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.05	1.00	1.00	1.05	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	0	1458	0	0	1139	0	0	0	0	754	0	411
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	0.98	1.00	1.00	0.98	1.00	1.00	1.00	1.00	0.93	1.00	0.83
Lanes:	0.00	2.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00	1.00	0.00	1.00
Final Sat.:	0	3725	0	0	3725	0	0	0	0	1770	0	1583
Capacity Analysis Module:												
Vol/Sat:	0.00	0.39	0.00	0.00	0.31	0.00	0.00	0.00	0.00	0.43	0.00	0.26
Crit Moves:		tttt								tttt		
Green/Cycle:	0.00	0.44	0.00	0.00	0.44	0.00	0.00	0.00	0.00	0.48	0.00	0.48
Volume/Cap:	0.00	0.89	0.00	0.00	0.69	0.00	0.00	0.00	0.00	0.89	0.00	0.54
Level Of Service Module:												
Delay/Veh:	0.0	21.2	0.0	0.0	15.5	0.0	0.0	0.0	0.0	23.4	0.0	12.4
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	21.2	0.0	0.0	15.5	0.0	0.0	0.0	0.0	23.4	0.0	12.4
Queue:	0	40	0	0	26	0	0	0	0	21	0	8

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Level Of Service Computation Report
1994 HCM Operations Method (Base Volume Alternative)

Intersection #278 Scholls Ferry/Hwy 217 NB on-ramp

Cycle (sec): 100 Critical Vol./Cap. (X): 0.723
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 19.2
Optimal Cycle: 63 Level Of Service: C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Split Phase			Split Phase		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0 2	0 0	0	0 2	0 1	0	0 0	0 0	1	0 1	0 1
Volume Module:												
Base Vol:	377	744	0	0	740	319	0	0	0	311	347	312
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	377	744	0	0	740	319	0	0	0	311	347	312
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.97	0.97	0.97	0.97	0.97	0.91	0.97	0.97	0.97	0.97	0.97	0.97
PHF Volume:	389	768	0	0	764	329	0	0	0	321	358	322
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	389	76A	0	0	764	329	0	0	0	321	358	322
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.05	1.00	1.00	1.05	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	389	806	0	0	802	329	0	0	0	321	358	322
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.93	0.98	1.00	1.00	0.98	0.83	1.00	1.00	1.00	0.84	0.99	0.84
Lanes:	1.00	2.00	0.00	0.00	2.00	1.00	0.00	0.00	0.00	1.00	1.00	1.00
Final Sat.:	1770	3725	0	0	3725	1583	0	0	0	1599	1881	1599
Capacity Analysis Module:												
Vol/Sat:	0.22	0.22	0.00	0.00	0.22	0.21	0.00	0.00	0.00	0.20	0.19	0.20
Crit Moves:	****				****							****
Green/Cycle:	0.30	0.60	0.00	0.00	0.30	0.30	0.00	0.00	0.00	0.28	0.28	0.28
Volume/Cap:	0.72	0.36	0.00	0.00	0.72	0.70	0.00	0.00	0.00	0.72	0.68	0.72
Level Of Service Module:												
Delay/Veh:	23.4	6.6	0.0	0.0	22.0	23.2	0.0	0.0	0.0	24.9	23.3	25.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	23.4	6.6	0.0	0.0	22.0	23.2	0.0	0.0	0.0	24.9	23.3	25.0
Queue:	10	11	0	0	21	9	0	0	0	9	9	9

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Beaverton Transportation System Plan
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Impact Analysis Report
Level Of Service

Intersection	Base LOS	Del/ Veh	V/ C	Future LOS	Del/ Veh	V/ C	Change in
# 1 Murray Blvd/Allen Blvd	F	149.2	1.334	F	149.2	1.334	+ 0.000 D/V
# 13 Murray Boulevard/6th Avenue	F	OVRFL	0.000	F	OVRFL	0.000	+ 0.000 v/c
# 22 Hall Blvd/Allen Blvd	F	73.7	1.101	F	73.7	1.101	+ 0.000 D/V
# 23 Allen Blvd/Lombard Ave	D	25.8	0.833	D	25.8	0.833	+ 0.000 D/V
# 26 Watson Ave/5th St	B	10.7	0.800	B	10.7	0.800	+ 0.000 D/V
# 28 Hall Boulevard/5th Avenue	C	15.9	0.910	C	15.9	0.910	+ 0.000 D/V
# 33 Murray Blvd/Farmington Rd	F	201.7	1.342	F	201.7	1.342	+ 0.000 D/V
# 34 Farmington Road/Watson Avenue	F	67.3	1.137	F	67.3	1.137	+ 0.000 D/V
# 35 Farmington/Hall Boulevard	E	52.9	1.102	E	52.9	1.102	+ 0.000 D/V
# 37 Farmington Road/Lombard Avenue	E	47.3	1.039	E	47.3	1.039	+ 0.000 D/V
# 41 Allen Blvd/ORE 217 NB ramps	F	71.2	1.147	F	71.2	1.147	+ 0.000 D/V
# 44 Allen Blvd/ORE 217 SB ramps	F	214.0	1.430	F	214.0	1.430	+ 0.000 D/V
# 53 BH Hwy/ORE 217 SB ramps	E	40.7	1.089	E	40.7	1.089	+ 0.000 D/V
# 54 BH Hwy/Griffith Drive	C	17.2	0.865	C	17.2	0.865	+ 0.000 D/V
# 59 BH Hwy/ORE 217 NB ramps	E	54.7	1.139	E	54.7	1.139	+ 0.000 D/V
# 66 Canyon Road/Broadway-117th Ave	D	36.9	1.028	D	36.9	1.028	+ 0.000 D/V
# 67 Canyon Road/ORE 217 SB ramps	D	37.5	1.050	D	37.5	1.050	+ 0.000 D/V
# 69 Canyon Road/ORE 217 NB ramps	E	48.2	1.105	E	48.2	1.105	+ 0.000 D/V
# 76 canyon Road/Hall Boulevard	E	42.1	1.050	E	42.1	1.050	+ 0.000 D/V
# 81 Canyon Road/Watson Avenue	F	73.1	1.176	F	73.1	1.176	+ 0.000 D/V
# 86 TV Hwy/Hocken Avenue	F	261.4	1.410	F	261.4	1.410	+ 0.000 D/V
# 87 Farmington Road/Hocken Avenue	F	194.9	1.398	F	194.9	1.398	+ 0.000 D/V
# 90 TV Hwy/Murray Boulevard	F	214.0	1.413	F	214.0	1.413	+ 0.000 D/V

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Beaverton Transportation System Plan
2015 BASE Traffic Conditions (existing geometry)
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Intersection	Base LOS	Del/ Veh	V/ C	Future LOS	Del/ Veh	V/ C	Change in
#101 Hall Blvd/Westgate-Center	F	235.5	1.464	F	235.5	1.464	+ 0.000 D/V
#108 Murray Boulevard/Jenkins Road	F	805.2	1.962	F	805.2	1.962	+ 0.000 D/V
#113 Walker Road/ORE 217 NB ramps	F	135.6	1.269	F	135.6	1.269	+ 0.000 D/V
#117 Walker Road/ORE 217 SB ramps	D	29.3	1.029	D	29.3	1.029	+ 0.000 D/V
#125 Cedar Hills Blvd/Hall Blvd	F	68.6	1.150	F	68.6	1.150	+ 0.000 D/V
#126 Cedar Hills Boulevard/Walker R	F	166.8	1.335	F	166.8	1.335	+ 0.000 D/V
#127 Cedar Hills Boulevard/Jenkins	F	147.9	1.330	F	147.9	1.330	+ 0.000 D/V
#130 Farmington Road/Cedar Hills Bo	E	48.0	1.117	E	48.0	1.117	+ 0.000 D/V
#131 Canyon Road/Cedar Hills Boulev	F	OVRFL	1.922	F	OVRFL	1.922	+ 0.000 D/V
#133 Canyon Rd./Fred Meyer Access	F	609.0	1.710	F	609.0	1.710	+ 0.000 D/V
#162 Cedar Hills Blvd/Westgate Driv	C	17.8	0.878	C	17.8	0.878	+ 0.000 D/V
#169 Farmington Road/149th Avenue	F	61.3	1.141	F	61.3	1.141	+ 0.000 D/V
#170 TV Highway/153rd Drive	B	11.6	0.879	B	11.6	0.879	+ 0.000 D/V
#171 TV Highway/160th Avenue-Millik	F	152.7	1.361	F	152.7	1.361	+ 0.000 D/V
#174 Jenkins Road/153rd Drive	F	OVRFL	2.085	F	OVRFL	2.085	+ 0.000 D/V
#175 Jenkins Road/158th Avenue	F	OVRFL	2.282	F	OVRFL	2.282	+ 0.000 D/V
#176 Farmington Road/170th Avenue	F	OVRFL	2.569	F	OVRFL	2.569	+ 0.000 D/V
#177 TV Highway/170th Avenue	F	183.7	1.358	F	183.7	1.358	+ 0.000 D/V
#179 Merlo Road/170th Avenue	F	74.9	1.125	F	74.9	1.125	+ 0.000 D/V
#180 Baseline Road/170th Avenue	D	28.0	0.969	D	28.0	0.969	+ 0.000 D/V
#186 Walker Road/158th Avenue	F	203.7	1.384	F	203.7	1.384	+ 0.000 D/V
#187 Walker Road/167th Avenue	F	35.2	0.000	F	35.2	0.000	+ 0.000 v/c
#188 Walker Road/173rd Avenue	F	347.7	1.562	F	347.7	1.562	+ 0.000 D/V
#191 Cornell Road/158th Avenue	F	244.9	1.516	F	244.9	1.516	+ 0.000 D/V
#192 Walker Road/Murray Boulevard	F	276.8	1.440	F	276.8	1.440	+ 0.000 D/V

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Beaverton Traneportation System Plan
2015 BASE Traffic Conditions (existing geometry)
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Intersection	Base LOS	Del/ Veh	V/ C	Future LOS	Del/ Veh	V/ C	Change in
#193 Kinnaman/Farmington	F	402.1	1.612	F	402.1	1.612	+ 0.000 D/V
#194 Davis Road/155th Avenue	C	1.0	0.000	C	1.0	0.000	+ 0.000 v/c
#198 Canyon Road/Walker Road	C	23.6	0.924	C	23.6	0.924	+ 0.000 D/V
#199 Beaverton-Hillsdale Hwy/Wester	F	161.7	1.340	F	161.7	1.340	+ 0.000 D/V
#200 Allen Boulevard/Western Avenue	F	OVRFL	3.032	F	OVRFL	3.032	+ 0.000 D/V
#202 Laurelwood Avenue/Beaverton-Hi	D	29.8	1.252	D	29.8	1.252	+ 0.000 D/V
#203 Hall Boulevard/Denney Road	F	69.5	1.174	F	69.5	1.174	+ 0.000 D/V
#205 Denney Road/Hwy 217 SB ramps	F	25.6	0.000	F	25.6	0.000	+ 0.000 v/c
#207 Denney Road/Hwy 217 NB ramps	F	900.6	0.000	F	900.6	0.000	+ 0.000 v/c
#214 Denney Road/Scholls Ferry Road	D	29.0	0.981	D	29.0	0.981	+ 0.000 D/V
#215 Allen Boulevard/Scholls Ferry	F	89.4	1.169	F	89.4	1.169	+ 0.000 D/V
#218 Hall Boulevard/Hart Road	C	17.1	0.932	C	17.1	0.932	+ 0.000 D/V
#219 Murray Boulevard/Hart Road	F	106.3	1.258	F	106.3	1.258	+ 0.000 D/V
#220 Hart Road/155th Avenue	F	538.8	1.751	F	538.8	1.751	+ 0.000 D/V
#221 Hart-Bany/170th Avenue	F	154.5	1.446	F	154.5	1.446	+ 0.000 v/c
#222 Hart Road/Sorrento Avenue	C	14.9	0.795	C	14.9	0.795	+ 0.000 v/c
#223 Brockman Road/Sorrento Avenue	F	4.9	0.000	F	4.9	0.000	+ 0.000 v/c
#224 Murray Boulevard/Brockman Road	D	34.4	1.015	D	34.4	1.015	+ 0.000 D/V
#225 Murray Boulevard/Maverick Terr	F	6.3	0.000	F	6.3	0.000	+ 0.000 v/c
#226 155th Avenue/Nora-Beard (Brock	C	18.2	0.905	C	18.2	0.905	+ 0.000 v/c
#227 Brockman Road/125th Avenue	F	OVRFL	2.092	F	OVRFL	2.092	+ 0.000 D/V
#229 Hall Boulevard/Greenway	E	59.5	1.125	E	59.5	1.125	+ 0.000 D/V
#230 Hall Boulevard/Nimbus Avenue	E	50.5	1.020	E	50.5	1.020	+ 0.000 D/V
#232 Scholls Ferry Road/Hall Boulev	F	151.1	1.319	F	151.1	1.319	+ 0.000 D/V

Beaverton Transportation System Plan
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Intersection	Base LOS	Del/ Veh	V/ C	Future LOS	Del/ Veh	V/ C	Change in
#236 Scholls Ferry Road/125th Avenu	F	280.7	1.514	F	280.7	1.514	+ 0.000 D/V
#237 Scholls Ferry Road/Nimbus Aven	F	74.3	1.167	F	74.3	1.167	+ 0.000 D/V
#238 Murray Boulevard/Old Scholls F	F	69.1	1.105	F	69.1	1.105	+ 0.000 D/V
#239 Old Scholls Ferry Road/Davies	F	OVRFL	0.000	F	OVRFL	0.000	+ 0.000 v/c
#241 Scholls Ferry/Old Scholls Ferr	C	17.1	0.933	C	17.1	0.933	+ 0.000 D/V
#243 Scholls Ferry/Old Scholls Ferr	F	370.8	0.000	F	370.8	0.000	+ 0.000 v/c
#244 Scholls Ferry Road/Walnut Stre	F	OVRFL	0.000	F	OVRFL	0.000	+ 0.000 v/c
#250 Hall Boulevard/Hwy 217 SB ramp	F	64.3	1.122	F	64.3	1.122	+ 0.000 D/V
#259 Scholls Ferry/Hwy 217 SB ramps	F	73.3	1.148	F	73.3	1.148	+ 0.000 D/V
#277 Scholls Ferry/Hwy 217 NB off-r	C	22.1	0.908	C	22.1	0.908	+ 0.000 D/V
#278 Scholls Ferry/Hwy 217 NB on-ra	F	451.1	1.766	F	451.1	1.766	+ 0.000 D/V

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Beaverton Transportation System Plan
2015 BASE Traffic Conditions (existing geometry)
PM Peak Hour

Level Of Service Computation Report
1994 HCM Operations Method (Base Volume Alternative)

Intersection #1 Murray Blvd/Allen Blvd

cycle (sec): 120 Critical Vol./Cap. (X): 1.334
Loss Time (sec): 16 (Y+R = 4 sec) Average Delay (sec/veh): 149.2
Optimal Cycle: 180 Level Of Service: F

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Prot+Permit			Prot+Permit		
Rights:	Ovl			Include			Ovl			Ovl		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0 2	0 1	2	0 1	1 0	1	0 1	0 1	1	0 1	0 1
Volume Module:												
Base Vol:	145	1063	194	410	1495	339	190	342	113	**206**	766	524
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	145	1063	194	410	1495	339	190	342	113	206	766	524
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
PHF Volume:	158	1157	211	446	1627	369	207	372	123	224	834	570
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	158	1157	211	446	1627	369	207	372	123	224	834	570
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.05	1.00	1.03	1.05	1.05	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	158	1215	211	460	1708	387	207	372	123	224	834	570
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.93	1.06	0.83	0.93	1.04	0.95	0.34	0.99	0.84	0.41	0.99	0.84
Lanes:	1.00	2.00	1.00	2.00	**1.60**	0.40	1.00	1.00	1.00	1.00	1.00	1.00
Final Sat.:	1770	4044	1583	3539	3171	719	639	1881	1599	783	1881	1599
Capacity Analysis Module:												
Vol/Sat:	0.09	0.30	0.13	0.13	0.54	0.54	0.32	0.20	0.08	0.29	0.44	**0.36**
Crit Moves:	****				****		****				****	
Green/Cycle:	0.07	0.32	0.48	0.14	0.39	0.39	0.33	0.25	0.32	0.44	0.32	0.46
Volume/Cap:	1.37	0.94	0.28	0.94	1.37	1.37	0.97	0.79	0.24	0.65	1.37	0.77
Level Of Service Module:												
Delay/Veh:	341.7	35.2	12.2	52.1	270	269.6	58.1	33.3	19.8	19.1	281	20.9
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	341.7	35.2	12.2	52.1	270	269.6	58.1	33.3	19.8	19.1	281	20.9
Queue:	18	44	4	19	186	45	23	13	3	8	90	17

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Beaverton Transportation System Plan
2015 BASE Traffic Conditions (existing geometry)
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Level Of Service Computation Report
1994 HCM Unsignalized Method (Base Volume Alternative)

Intersection #13 Murray Boulevard/8th Avenue

Average Delay (sec/veh): OVERFLOW Worst Case Level Of Service: F

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Lanes:	1	0 1	1 0	1	0 1	1 0	0	0 1!	0 0	0	0 1!	0 0
Volume Module:												
Base Vol:	159	1501	42	21	2214	12	5	53	107	47	255	72
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	**1.00**	**1.00**	**1.00**	**1.00**	1.00	1.00
Initial Bse:	159	1501	42	21	2214	12	5	53	107	47	255	72
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	**1.00**	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.94	0.94	0.94	0.94	0.94	0.94	0.95	0.95	0.97	0.91	0.94	0.97
PHF Volume:	170	1602	45	22	2363	13						
Reduct Vol:	0	0	0	**0**	**0**	**0**	**0**	**0**	0	0	0	0
Final vol.:	170	1602	45				5	57	114	50	272	77
Adjusted Volume Module:												
Grade:		0%			0%			0%			0%	
% Cycle/Cars:	0.00	0.98		0.00	0.97		**xxxx**	**xxxx**		0.00	0.99	
% Truck/Comb:	0.02	**0.00**		0.03	0.00		**xxxx**	**xxxx**		**0.01**	**0.00**	
PCE Adj:	**xxxx**	1.00	**1.00**	**xxxx**	1.00	**1.00**	**1.10**	**1.10**	**1.10**	**xxxx**	**xxxx**	**xxxxx**
Cycl/Car PCE:	0.50	**1.00**		0.50	1.00		**xxxx**	**xxxx**		0.50	1.00	
Trck/Cmb PCE:	1.50	2.00		1.50	2.00		**xxxx**	**xxxx**		1.50	2.00	
Adj Vol.:	171	1602	45	23	2363	13	**6**	62	126	50	274	77
Critical Gap Module:												
MoveUp Time:	2.1	**xxx**	**xxxxx**	2.1	**xxxx**	**xxxxx**	3.4	3.3	2.6	3.4	3.3	2.6
Critical Gp:	5.5	**xxxx**	**xxxxx**	5.5	**xxxx**	**xxxxx**	7.0	6.5	5.5	7.0	6.5	5.5
Capacity Module:												
Cnflict Vol:	2376	**xxxx**	**xxxxx**	1647	**xxxx**	**xxxxx**	4299	4208	1188	4208	4192	823
Potent Cap.:	91	**xxxx**	**xxxxx**	224	**xxxx**	**xxxxx**	2	4	346	2	4	530
Adj Cap:	**1.00**	**xxxx**	**xxxxx**	1.00	**xxxx**	**xxxxx**	0.00	0.00	1.00	**0.00**	**0.00**	1.00
Move Cnp.:	91	**xxxx**	**xxxxx**	224	**xxxx**	**xxxxx**	0	0	346	0	0	530
Level Of Service Module:												
Stopped Del:	1680	**xxxx**	**xxxxx**	17.9	**xxxx**	**xxxxx**	**xxxxx**	**xxxx**	15.5	**xxxxx**	**xxxx**	7.9
LOS by Move:	F	*	*	C	*	*	*	*	*	*	*	*
Movement:	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT
Shared Cap.:	**xxxx**	**xxxx**	**xxxxx**	**xxxx**	**xxxx**	**xxxxx**	**xxxx**	**xxxx**	**xxxxx**	**xxxx**	**xxxx**	**xxxxx**
Shrd StpDel:	**xxxxx**	**xxxx**	**xxxxx**	**xxxxx**	**xxxx**	**xxxxx**	**xxxxx**	**xxxx**	**xxxxx**	**xxxxx**	**xxxx**	**xxxxx**
Shared LOS:	*	*	*	*	*	*	*	F	*	*	F	*
ApproachDel:	158.3			**0.2**			**xxxxxx**			**xxxxxx**		

Beaverton Transportation System Plan
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Level Of Service Computation Report
1994 HCM Operations Method (Base Volume Alternative)

Intersection #22 Hall Blvd/Allen Blvd

Cycle (sec): 120 Critical Vol./Cap. (X): 1.101
Loss Time (sec): 16 (Y+R = 4 sec) Average Delay (sec/veh): 73.7
Optimal Cycle: 180 Level Of Service: F

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0	1	1	0	1	0	1	1	0	1	0	1	0	1	1	0	1	0	1	1	0
Volume Module:												
Base Vol:	430	750	64	328	932	101	99	748	156	198	1067	84
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	430	750	64	328	932	101	99	748	156	198	1067	84
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
PHF Volume:	450	785	67	343	975	106	104	782	163	207	1116	88
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	450	785	67	343	975	106	104	782	163	207	1116	88
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.05	1.05	1.00	1.05	1.05	1.00	1.05	1.05	1.00	1.05	1.05
Final Vol.:	450	824	70	343	1024	111	104	822	171	207	1172	92
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.94	0.98	0.98	0.94	0.98	0.98	0.94	0.96	0.96	0.94	0.98	0.98
Lanes:	1.00	1.84	0.16	1.00	1.80	0.20	1.00	1.66	0.34	1.00	1.85	0.15
Final Sat.:	1787	3433	292	1787	3360	364	1787	3021	628	1787	3454	271
Capacity Analysis Module:												
Vol/Sat:	0.25	0.24	0.24	0.19	0.30	0.30	0.06	0.27	0.27	0.12	0.34	0.34
Crit Moves:	****				****		****				****	
Green/Cycle:	0.23	0.28	0.28	0.22	0.28	0.28	0.05	0.25	0.25	0.11	0.31	0.31
Volume/Cap:	1.10	0.85	0.85	0.85	1.10	1.10	1.10	1.07	1.07	1.07	1.10	1.10
Level Of Service Module:												
Delay/Veh:	99.4	31.4	31.4	40.1	83.8	83.8	150.8	74.7	74.7	110.8	81.4	81.4
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	99.4	31.4	31.4	40.1	83.8	83.8	150.8	74.7	74.7	110.8	81.4	81.4
Queue:	26	28	3	13	55	8	7	41	11	12	62	7

Beaverton Transportation System Plan
2015 BASE Traffic Conditions (existing geometry)
PM Peak Hour

Level Of Service Computation Report
1994 HCM Operations Method (Base Volume Alternative)

Intersection #23 Allen Blvd/Lombard Ave

Cycle (sec): 120 Critical Vol./Cap. (X): 0.833
Loss Time (sec): 16 (Y+R = 4 sec) Average Delay (sec/veh): 25.8
Optimal Cycle: 102 Level Of Service: D

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0	0	1	0	1	0	0	1	0	1	0	1	1	0	1	0	1	1	0	1	0
Volume Module:												
Base Vol:	53	182	121	119	269	126	95	920	127	114	1222	109
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	53	182	121	119	269	126	95	920	127	114	1222	109
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
PHF Volume:	56	193	128	126	286	134	101	977	135	121	1297	116
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	56	193	128	126	286	134	101	977	135	121	1297	116
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.05	1.05	1.00	1.05	1.05
Final Vol.:	56	193	128	126	286	134	101	1025	142	121	1362	121
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.94	0.93	0.93	0.94	0.94	0.94	0.93	0.96	0.96	0.94	0.98	0.98
Lanes:	1.00	0.60	0.40	1.00	0.68	0.32	1.00	1.76	0.24	1.00	1.84	0.16
Final Sat.:	1787	1063	705	1787	1217	570	1770	3207	444	1787	3421	304
Capacity Analysis Module:												
Vol/Sat:	0.03	0.18	0.18	0.07	0.24	0.24	0.06	0.32	0.32	0.07	0.40	0.40
Crit Moves:	****				****		****				****	
Green/Cycle:	0.04	0.23	0.23	0.09	0.28	0.28	0.07	0.45	0.45	0.10	0.48	0.48
Volume/Cap:	0.83	0.79	0.79	0.79	0.83	0.83	0.83	0.71	0.71	0.71	0.83	0.83
Level Of Service Module:												
Delay/Veh:	74.0	34.9	34.9	49.6	34.0	34.0	60.1	18.2	18.2	42.5	20.1	20.1
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	74.0	34.9	34.9	49.6	34.0	34.0	60.1	18.2	18.2	42.5	20.1	20.1
Queue:	3	7	5	5	10	5	4	28	4	4	41	5

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Beaverton Transportation System Plan
2015 BASE Traffic Conditions (existing geometry)
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Level Of Service Computation Report
1994 HCM Operations Method (Base Volume Alternative)

Intersection #26 Watson Ave/5th St

Cycle (sec): 50 Critical Vol./Cap. (X): 0.800
Loss Time (sec): 8 (Y+R = 4 sec) Average Delay (sec/veh) 10.7
Optimal Cycle: 52 Level Of Service: B

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	0	0	0	0	1	0	1	0	0	0	0	1	0	0	1	0	0	0
Volume Module:												
Base Vol:	0	0	0	140	1011	71	0	221	155	65	371	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	140	1011	71	0	221	155	65	371	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
PHF Volume:	0	0	0	151	1089	77	0	238	167	70	400	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	151	1089	77	0	238	167	70	400	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.05	1.05	1.05	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	0	0	0	158	1144	80	0	238	167	70	400	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	0.97	0.97	0.97	1.00	0.83	0.63	0.83	0.83	1.00
Lanes:	0.00	0.00	0.00	0.23	1.65	0.12	0.00	0.59	0.41	0.15	0.85	0.00
Final Sat.:	0	0	0	422	3052	213	0	929	652	235	1345	0
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.37	0.37	0.37	0.00	0.26	0.26	0.30	0.30	0.00
Crit Moves:					****						****	
Green/Cycle:	0.00	0.00	0.00	0.47	0.47	0.47	0.00	0.37	0.37	0.37	0.37	0.00
Volume/Cap:	0.00	0.00	0.00	0.80	0.80	0.80	0.00	0.69	0.69	0.80	0.80	0.00
Level Of Service Module:												
Delay/Veh:	0.0	0.0	0.0	9.3	9.3	9.3	0.0	11.0	11.0	14.5	14.5	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	9.3	9.3	9.3	0.0	11.0	11.0	14.5	14.5	0.0
Queue:	0	0	0	3	15	2	0	3	2	2	6	0

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Beaverton Transportation System Plan
2015 BASE Traffic Conditions (existing geometry)
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Level Of Service Computation Report
1994 HCM Operations Method (Base Volume Alternative)

Intersection #28 Hall Boulevard/5th Avenue

Cycle (sec): 50 Critical Vol./Cap. (X): 0.910
Loss Time (sec): 8 (Y+R = 4 sec) Average Delay (sec/veh): 15.9
Optimal Cycle: 73 Level Of Service: C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	1	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0
Volume Module:												
Base Vol:	79	942	47	0	0	0	57	325	0	0	409	179
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	79	942	47	0	0	0	57	325	0	0	409	179
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
PHF Volume:	90	1074	54	0	0	0	65	371	0	0	466	204
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	90	1074	54	0	0	0	65	371	0	0	466	204
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.05	1.05	1.05	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	95	1128	56	0	0	0	65	371	0	0	466	204
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.96	0.96	0.96	1.00	1.00	1.00	0.68	0.68	1.00	1.00	0.85	0.85
Lanes:	0.15	1.76	0.09	0.00	0.00	0.00	0.15	0.85	0.00	0.00	0.70	0.30
Final Sat.:	271	3220	160	0	0	0	194	1105	0	0	1125	493
Capacity Analysis Module:												
Vol/Sat:	0.35	0.35	0.35	0.00	0.00	0.00	0.34	0.34	0.00	0.00	0.41	0.41
Crit Moves:		****									****	
Green/Cycle:	0.38	0.38	0.38	0.00	0.00	0.00	0.46	0.46	0.00	0.00	0.46	0.46
Volume/Cap:	0.91	0.91	0.91	0.00	0.00	0.00	0.74	0.74	0.00	0.00	0.91	0.91
Level Of Service Module:												
Delay/Veh:	16.0	16.0	16.0	0.0	0.0	0.0	10.6	10.6	0.0	0.0	19.2	19.2
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	16.0	16.0	16.0	0.0	0.0	0.0	10.6	10.6	0.0	0.0	19.2	19.2
Queue:	3	18	2	0	0	0	1	5	0	0	9	5

Beaverton Transportation System Plan
2015 BASE Traffic Conditions (existing geometry)
PM Peak Hour

Level Of Service Computation Report
1994 HCM Operations Method (Base Volume Alternative)

Intersection #33 Murray Blvd/Farmington Rd

Cycle (sec): 160 Critical Vol./Cap. (X): 1.342
Loss Time (sec): 16 (Y+R = 4 sec) Average Delay (sec/veh) 201.7
Optimal Cycle: 180 Level Of Service: F

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0	1	1	0	1	0	1	1	0	1	0	1	1	0	1	0	1	1	0
Volume Module:																				
Base Vol:	315	1115	167	180	1664	309	202	660	264	344	1128	165
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	315	1115	167	180	1664	309	202	660	264	344	1128	165
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
PHF Volume:	336	1189	178	192	1774	329	215	704	281	367	1203	176
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	336	1189	178	192	1774	329	215	704	281	367	1203	176
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.05	1.05	1.00	1.05	1.05	1.00	1.05	1.05	1.00	1.05	1.05
Final Vol.:	336	1248	187	192	1863	346	215	739	296	367	1263	185
Saturation Flow Module:																				
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.99	1.07	1.02	0.99	1.05	1.01	1.00	1.07	1.00	1.01	1.07	1.04
Lanes:	1.00	1.73	0.27	1.00	1.68	0.32	1.00	1.40	0.60	1.00	1.74	0.26
Final Sat.:	1875	3512	526	1875	3339	620	1893	2843	1139	1912	3533	517
Capacity Analysis Module:																				
Vol/Sat:	0.18	0.36	0.36	0.10	0.56	0.56	0.11	0.26	0.26	0.19	0.36	0.36
Crit Moves:	****				****		****				****	
Green/Cycle:	0.13	0.43	0.43	0.12	0.42	0.42	0.08	0.20	0.20	0.15	0.27	0.27
Volume/Cap:	1.34	0.83	0.83	1.34	1.34	1.34	1.29	1.29	1.29	1.34	1.34
Level Of Service Module:																				
Delay/Veh:	292.1	29.0	29.0	59.5	250	249.5	10.4	218	218.3	39.5	260	260.2
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	292.1	29.0	29.0	59.5	250	249.5	310.4	218	218.3	39.5	260	260.2
Queue:	38	51	9	10	220	43	25	73	31	37	140	23

Beaverton Transportation System Plan
2015 BASE Traffic Conditions (existing geometry)
PM Peak Hour

Level Of Service Computation Report
1994 HCM Operations Method (Base Volume Alternative)

Intersection #34 Farmington Road/Watson Avenue

Cycle (sec): 100 Critical Vol./Cap. (X): 1.137
Loss Time (sec): 16 (Y+R = 4 sec) Average Delay (sec/veh) 67.3
Optimal Cycle: 180 Level Of Service: F

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	0	0	0	0	0	1	0	1	0	0	0	1	1	0	1	0	1	1	0
Volume Module:																				
Base Vol:	0	0	0	159	764	177	0	1386	407	104	1793	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	159	764	177	0	1386	407	104	1793	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
PHF Volume:	0	0	0	168	808	187	0	1467	431	110	1897	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	168	808	187	0	1467	431	110	1897	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.05	1.05	1.05	1.00	1.05	1.05	1.00	1.05	1.05
Final Vol.:	0	0	0	177	849	197	0	1540	452	110	1992	0
Saturation Flow Module:																				
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	0.94	0.94	0.94	1.00	0.95	0.95	0.94	0.99	1.00
Lanes:	0.00	0.00	0.00	0.29	1.39	0.32	0.00	1.55	0.45	1.00	2.00	0.00
Final Sat.:	0	0	0	518	2483	576	0	2792	820	1787	3762	0
Capacity Analysis Module:																				
Vol/Sat:	0.00	0.00	0.00	0.34	0.34	0.34	0.00	0.55	0.55	0.06	0.53	0.00
Crit Moves:						****		****			****	
Green/Cycle:	0.00	0.00	0.00	0.30	0.30	0.30	0.00	0.49	0.49	0.05	0.54	0.00
Volume/Cap:	0.00	0.00	0.00	1.14	1.14	1.14	0.00	1.14	1.14	1.14	0.98	0.00
Level Of Service Module:																				
Delay/Veh:	0.0	0.0	0.0	95.4	95.4	95.4	0.0	85.4	85.4	162.9	26.5	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	95.4	95.4	95.4	0.0	85.4	85.4	162.9	26.5	0.0
Queue:	0	0	0	12	46	13	0	84	27	8	63	0

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Beaverton Transportation System Plan
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Level Of Service Computation Report
1994 HCM Operations Method (Base Volume Alternative)

Intersection #35 Farmington/Hall Boulevard

Cycle (sec): 100 Critical Vol./Cap. (X): 1.102
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 52.9
Optimal Cycle: 180 Level Of Service: E

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Protected			Protected		
Rights:		Include			Include			Include			Include	
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0 1	1	0	0 0	0 0	1	0 2	0	0	0 1	1 0
Volume Module:												
Base Vol:	400	953	161	0	0	0	184	1304	0	0	1501	231
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	400	953	161	0	0	0	184	1304	0	0	1501	231
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	421	1003	169	0	0	0	194	1373	0	0	1580	243
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	421	1003	169	0	0	0	194	1373	0	0	1580	243
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.05	1.05	1.00	1.00	1.00	1.00	1.05	1.00	1.00	1.05	1.05
Final Vol.:	421	1053	178	0	0	0	194	1441	0	0	1659	255
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.96	0.96	0.96	1.00	1.00	1.00	0.94	0.99	1.00	1.00	0.96	0.96
Lanes:	1.00	1.71	0.29	0.00	0.00	0.00	1.00	2.00	0.00	0.00	1.73	0.27
Final Sat.:	1825	3123	528	0	0	0	1787	3762	0	0	3165	486
Capacity Analysis Module:												
Vol/Sat:	0.23	0.34	0.34	0.00	0.00	0.00	0.11	0.38	0.00	0.00	0.52	0.52
Crit Moves:			****				****				****	
Green/Cycle:	0.31	0.31	0.31	0.00	0.00	0.00	0.10	0.57	0.00	0.00	0.48	0.48
Volume/Cap:	0.75	1.10	1.10	0.00	0.00	0.00	1.10	0.67	0.00	0.00	1.10	1.10
Level Of Service Module:												
Delay/Veh:	24.2	78.0	78.0	0.0	0.0	0.0	120.5	10.1	0.0	0.0	68.6	68.6
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	24.2	78.0	78.0	0.0	0.0	0.0	120.5	10.1	0.0	0.0	68.6	68.6
Queue:	11	50	11	0	0	0	11	28	0	0	79	15

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Beaverton Transportation System Plan
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Level Of Service Compytation Report
1994 HCM Operations Method (Base Volume Alternative)

Intersection #37 Farmington Road/Lombard Avenue

Cycle (sec): 100 Critical Vol./Cap. (X): 1.039
Loss Time (sec): 16 (Y+R = 4 sec) Average Delay (sec/veh): 47.3
Optimal Cycle: 180 Level Of Service: E

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:		Include			Include			Ovl			Ovl	
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0 0	1	0	1 0	0 1	1	0 2	0	1	1 0	2 0 1
Volume Module:												
Base Vol:	155	286	98	252	362	83	75	1213	198	191	1542	231
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	155	286	98	252	362	83	75	1213	198	191	1542	231
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	163	301	103	266	381	87	79	1278	209	201	1625	243
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	163	301	103	266	381	87	79	1278	209	201	1625	243
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.05	1.00	1.00	1.05	1.00
Final Vol.:	163	301	103	266	381	87	79	1342	209	201	1706	243
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.94	0.95	0.95	0.92	0.94	0.94	0.94	0.99	0.83	0.94	0.99	0.84
Lanes:	1.00	0.75	0.25	1.00	0.81	0.19	1.00	2.00	1.00	1.00	2.00	1.00
Final Sat.:	1787	1346	460	1752	1457	333	1787	3762	1580	1787	3762	1599
Capacity Analysis Module:												
Vol/Sat:	0.09	0.22	0.22	0.15	0.26	0.26	0.04	0.36	0.13	0.11	0.45	0.15
Crit Moves:		****		****			****				****	
Green/Cycle:	0.09	0.22	0.22	0.15	0.27	0.27	0.04	0.36	0.46	0.11	0.44	0.58
Volume/Cap:	0.98	1.04	1.04	1.04	0.98	0.98	1.04	0.98	0.29	0.98	1.04	0.26
Level Of Service Module:												
Delay/Veh:	76.0	72.1	72.1	83.2	49.6	49.6	126.0	35.1	11.0	71.2	45.8	6.7
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	76.0	72.1	72.1	83.2	49.6	49.6	126.0	35.1	11.0	71.2	45.8	6.7
Queue:	7	14	6	13	15	4	5	44	4	9	65	3

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Beaverton Transportation System Plan
2015 BASE Traffic Conditions (existing geometry)
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Level Of Service Computation Report
1994 HCM operations Method (Base Volume Alternative)

Intersection #41 Allen Blvd/ORE 217 NB ramps

Cycle (sec):	110	Critical Vol./Cap. (X):	1.147
Loss Time (sec):	12 (Y+R = 4 sec)	Average Delay (sec/veh)	71.2
Optimal Cycle:	180	Level Of Service:	F

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Ovl			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	1	0	0	1	0	0	0	0	0	0	0
Volume Module:												
Base Vol:	682	0	372	0	0	0	337	876	0	0	1142	513
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	682	0	372	0	0	0	337	876	0	0	1142	513
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
PHF Volume:	754	0	411	0	0	0	372	968	0	0	1262	567
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	754	0	411	0	0	0	372	968	0	0	1262	567
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.05	1.05	1.00	1.00	1.00	1.00	1.00	1.05	1.00	1.00	1.05	1.05
Final Vol.:	791	0	411	0	0	0	372	1016	0	0	1325	595
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.83	1.00	1.00	1.00	0.92	0.97	1.00	1.00	0.92	0.92
Lanes:	2.00	0.00	1.00	0.00	0.00	0.00	1.00	2.00	0.00	0.00	1.38	0.62
Final Sat.:	3505	0	1568	0	0	0	1752	3689	0	0	2419	1086
Capacity Analysis Module:												
Vol/Sat:	0.23	0.00	0.26	0.00	0.00	0.00	0.21	0.28	0.00	0.00	0.55	0.55
Crit Moves:			tttt				****				tttt	
Green/Cycle:	0.23	0.00	0.23	0.00	0.00	0.00	0.19	0.66	0.00	0.00	0.48	0.48
Volume/Cap:	0.99	0.00	1.15	0.00	0.00	0.00	1.15	0.42	0.00	0.00	1.15	1.15
Level Of Service Module:												
Delay/Veh:	49.1	0.0	122.5	0.0	0.0	0.0	126.3	5.7	0.0	0.0	93.3	93.3
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	49.1	0.0	122.5	0.0	0.0	0.0	126.3	5.7	0.0	0.0	93.3	93.3
Queue:	30	0	25	0	0	0	23	15	0	0	79	37

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Beaverton Transportation System Plan
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Level Of Service Computation Report
1994 HCM Operations Method (Base Volume Alternative)

Intersection #44 Allen Blvd/ORE 217 SB ramps

Cycle (sec):	110	Critical Vol./Cap. (X):	1.430
Loss Time (sec):	12 (Y+R = 4 sec)	Average Delay (sec/veh):	214.0
Optimal Cycle:	180	Level Of Service:	F

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Protected			Protected		
Rights:	Include			Ovl			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	0	0	0	0	0	0	1	0	0	1	0
Volume Module:												
Base Vol:	0	0	0	425	6	676	0	854	599	560	1303	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	425	6	676	0	854	599	560	1303	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
PHF Volume:	0	0	0	457	6	728	0	919	645	603	1403	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	457	6	728	0	919	645	603	1403	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.05	1.05	1.00	1.05	1.00
Final Vol.:	0	0	0	457	6	728	0	919	645	603	1403	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	0.83	0.83	0.83	1.00	0.92	0.92	0.93	0.98	1.00
Lanes:	0.00	0.00	0.00	0.99	0.01	1.00	0.00	1.18	0.82	1.00	2.00	0.00
Final Sat.:	0	0	0	1548	20	1568	0	2058	1444	1770	3725	0
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.30	0.30	0.46	0.00	0.47	0.47	0.34	0.40	0.00
Crit Moves:						tttt		****		tttt		
Green/Cycle:	0.00	0.00	0.00	0.32	0.32	0.32	0.00	0.33	0.33	0.24	0.57	0.00
Volume/Cap:	0.00	0.00	0.00	0.91	0.91	1.43	0.00	1.43	1.43	1.43	0.70	0.00
Level Of Service Module:												
Delay/Veh:	0.0	0.0	0.0	37.5	37.5	345.6	0.0	336	336.0	352.1	11.8	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	37.5	37.5	345.6	0.0	336	336.0	352.1	11.8	0.0
Queue:	0	0	0	16	1	87	0	115	81	71	33	0

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Beaverton Transportation System Plan
2015 BASE Traffic Conditions (existing geometry)
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Level Of Service Computation Report
1994 HCM Operations Method (Base Volume Alternative)

Intersection #53 BH Hwy/ORE 217 SB ramps

Cycle (sec): 100 Critical Vol./Cap. (X): 1.089
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 40.7
Optimal Cycle: 180 Level Of Service: E

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	0 1	1 0	0	1	1 0	1	0 0	2 0	1	0	2 0 0
Volume Module:												
Base Vol:	0	0	0	238	728	225	0	1025	726	213	1780	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	238	728	225	0	1025	726	213	1780	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
PHF Volume:	0	0	0	253	775	240	0	1092	773	227	1896	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	253	775	240	0	1092	773	227	1896	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.05	1.05	1.00	1.00	1.05	1.00	1.00	1.05	1.00
Final Vol.:	0	0	0	266	814	240	0	1146	773	227	1990	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	0.82	0.82	0.82	1.00	0.99	0.84	0.94	0.99	1.00
Lanes:	0.00	1.00	0.00	0.49	1.51	1.00	0.00	2.00	1.00	1.00	2.00	0.00
Final Sat.:	0	1900	0	765	2341	1553	0	3762	1599	1787	3762	0
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.35	0.35	0.15	0.00	0.30	0.48	0.13	0.53	0.00
Crit Moves:					****				****	****		
Green/Cycle:	0.00	0.00	0.00	0.32	0.32	0.32	0.00	0.44	0.44	0.12	0.56	0.00
Volume/Cap:	0.00	0.00	0.00	1.09	1.09	0.48	0.00	0.69	1.09	1.09	0.94	0.00
Level Of Service Module:												
Delay/Veh:	0.0	0.0	0.0	72.9	72.9	18.3	0.0	15.2	73.1	108.8	20.2	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	72.9	72.9	18.3	0.0	15.2	73.1	108.8	20.2	0.0
Queue:	0	0	0	14	38	5	0	26	37	12	57	0

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Beaverton Transportation System Plan
2015 BASE Traffic Conditions (existing geometry)
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Level Of Service Computation Report
1994 HCM Operations Method (Base Volume Alternative)

Intersection #54 BH Hwy/Griffith Drive

Cycle (sec): 100 Critical Vol./Cap. (X): 0.865
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 17.2
Optimal Cycle: 95 Level Of Service: C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Protected			Protected		
Rights:	Ovl			Ovl			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0 1	0 1	1	0 1	0 1	1	0 1	1 0	1	0	1 1 0
Volume Module:												
Base Vol:	203	104	206	175	77	131	99	1416	81	161	1663	211
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	203	104	206	175	77	131	99	1416	81	161	1663	211
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
PHF Volume:	211	108	214	182	80	136	103	1469	84	167	1725	219
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	211	108	214	182	80	136	103	1469	84	167	1725	219
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.05	1.05	1.00	1.05	1.05
Final Vol.:	211	108	214	182	80	136	103	1542	88	167	1811	230
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.74	1.00	0.84	0.64	1.00	0.84	0.94	0.98	0.98	0.94	0.97	0.97
Lanes:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.89	0.11	1.00	1.77	0.23
Final Sat.:	1406	1900	1596	1216	1900	1596	1787	3524	201	1787	3272	416
Capacity Analysis Module:												
Vol/Sat:	0.15	0.06	0.13	0.15	0.04	0.09	0.06	0.44	0.44	0.09	0.55	0.55
Crit Moves:	****						****				****	
Green/Cycle:	0.17	0.17	0.30	0.17	0.17	0.24	0.07	0.58	0.58	0.12	0.64	0.64
Volume/Cap:	0.87	0.33	0.45	0.86	0.24	0.35	0.87	0.75	0.75	0.75	0.87	0.87
Level Of Service Module:												
Delay/Veh:	43.9	23.6	18.9	45.7	23.1	20.6	59.9	11.1	11.1	36.3	12.0	12.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	43.9	23.6	18.9	45.7	23.1	20.6	59.9	11.1	11.1	36.3	12.0	12.0
Queue:	7	3	5	6	2	3	4	33	2	5	43	7

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2015 BASE Traffic Conditions (existing geometry)
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Level Of Service Computation Report
1994 HCM Operations Method (Base Volume Alternative)

Intersection #59 BH Hwy/ORE 217 NB ramps

Cycle (sec): 100 Critical Vol./Cap. (X): 1.139
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 54.7
Optimal Cycle: 180 Level Of Service: E

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:		Ovl			Include			Include			Include	
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0 2	0 1	0	0 0	0 0	1	0 2	0 0	0	0 2	0 1
Volume Module:												
Base Vol:	815	884	284	0	0	0	200	1003	0	0	1203	329
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	815	884	284	0	0	0	200	1003	0	0	1203	329
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
PHF Volume:	848	920	296	0	0	0	208	1044	0	0	1252	342
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	848	920	296	0	0	0	208	1044	0	0	1252	342
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.05	1.00	1.00	1.00	1.00	1.00	1.05	1.00	1.00	1.05	1.00
Final Vol.:	848	966	296	0	0	0	208	1096	0	0	1314	342
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.83	0.98	0.83	1.00	1.00	1.00	0.93	0.98	1.00	1.00	0.99	0.84
Lanes:	1.00	2.00	1.00	0.00	0.00	0.00	1.00	2.00	0.00	0.00	2.00	1.00
Final Sat.:	1583	3725	1583	0	0	0	1770	3725	0	0	3762	1599
Capacity Analysis Module:												
Vol/Sat:	0.54	0.26	0.19	0.00	0.00	0.00	0.12	0.29	0.00	0.00	0.35	0.21
Crit Moves:	****						****				****	
Green/Cycle:	0.47	0.47	0.47	0.00	0.00	0.00	0.10	0.41	0.00	0.00	0.31	0.31
Volume/Cap:	1.14	0.55	0.40	0.00	0.00	0.00	1.14	0.72	0.00	0.00	1.14	0.70
Level Of Service Module:												
Delay/Veh:	95.3	12.5	11.3	0.0	0.0	0.0	137.7	17.1	0.0	0.0	95.7	22.7
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	95.3	12.5	11.3	0.0	0.0	0.0	137.7	17.1	0.0	0.0	95.7	22.7
Queue:	48	19	5	n	o	0	13	26	0	0	69	9

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Beaverton Transportation System Plan
2015 BASE Traffic Conditions (existing geometry)
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Level Of Service Computation Report
1994 HCM Operations Method (Base Volume Alternative)

Intersection #66 Canyon Road/Broadway-117th Avenue

Cycle (sec): 100 Critical Vol./Cap. (X): 1.028
Loss Time (sec): 16 (Y+R = 4 sec) Average Delay (sec/veh): 36.9
Optimal Cycle: 180 Level Of Service: D

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Protected			Protected		
Rights:		Ovl			Include			Ovl			Include	
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0 1	0 1	2	0 0	1 0	1	0 2	0 1	1	0 1	1 0
Volume Module:												
Base Vol:	23	71	262	290	88	70	83	1639	21	241	1549	195
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	23	71	262	290	88	70	83	1639	21	241	1549	195
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
PHF Volume:	24	75	278	308	94	74	88	1742	22	256	1646	207
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	24	75	278	308	94	74	88	1742	22	256	1646	207
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.03	1.00	1.00	1.00	1.05	1.00	1.00	1.05	1.05
Final Vol.:	24	75	278	317	94	74	88	1829	22	256	1728	218
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.94	0.99	0.83	0.79	0.90	0.90	0.91	0.84	0.82	0.92	0.88	0.95
Lanes:	1.00	1.00	1.00	2.00	0.56	0.44	1.00	2.00	1.00	1.00	1.79	0.21
Final Sat.:	1787	1881	1580	3000	959	755	1736	3200	1553	1752	2999	378
Capacity Analysis Module:												
Vol/Sat:	0.01	0.04	0.18	0.11	0.10	0.10	0.05	0.57	0.01	0.15	0.58	0.58
Crit Moves:		****		****				****		****		
Green/Cycle:	0.04	0.04	0.18	0.10	0.10	0.10	0.06	0.56	0.60	0.14	0.64	0.64
Volume/Cap:	0.35	1.03	0.97	1.03	0.95	0.95	0.90	1.03	0.02	1.03	0.90	0.90
Level Of Service Module:												
Delay/Veh:	31.5	123	60.2	76.5	68.3	68.3	71.3	37.6	5.4	79.9	13.7	13.7
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	31.5	123	60.2	76.5	68.3	68.3	71.3	37.6	5.4	79.9	13.7	13.7
Queue:	1	5	11	14	5	4	4	68	0	12	44	7

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Beaverton Transportation System Plan
2015 BASE Traffic Conditions (existing geometry)
PM Peak Hour

Level Of Service Computation Report
1994 HCM Operations Method (Base Volume Alternative)

Intersection #67 Canyon Road/ORB 217 SB ramps

Cycle (sec): 100 Critical Vol./Cap. (X): 1.050
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 37.5
Optimal Cycle: 180 Level Of Service: D

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Protected			Protected		
Rights:	Include			Ovl			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	0	0	0	1	1	0	1	0	0	2	0	1	1	0	2	0	0
Volume Module:												
Base Vol:	0	0	0	468	447	528	0	1478	573	274	1417	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	468	447	528	0	1478	573	274	1417	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
PHF Volume:	0	0	0	481	459	543	0	1519	589	282	1456	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	481	459	543	0	1519	589	282	1456	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.05	1.00	1.00	1.05	1.00
Final Vol.:	0	0	0	481	459	543	0	1595	589	282	1529	0
saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	0.82	0.98	0.83	1.00	1.00	0.83	0.92	1.00	1.00
Lanes:	0.00	0.00	0.00	1.00	1.00	1.00	0.00	2.00	1.00	1.00	2.00	0.00
Final sat.:	0	0	0	1565	1863	1583	0	3800	1568	1752	3800	0
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.31	0.25	0.34	0.00	0.42	0.38	0.16	0.40	0.00
Crit Moves:						****		****		****		
Green/Cycle:	0.00	0.00	0.00	0.33	0.33	0.33	0.00	0.40	0.40	0.15	0.55	0.00
Volume/Cap:	0.00	0.00	0.00	0.94	0.75	1.05	0.00	1.05	0.94	1.05	0.73	0.00
Level Of Service Module:												
Delay/Veh:	0.0	0.0	0.0	32.9	21.3	66.8	0.0	51.0	34.8	85.3	11.7	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	32.9	21.3	66.8	0.0	51.0	34.8	85.3	11.7	0.0
Queue:	0	0	0	16	12	24	0	63	19	14	32	0

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Beaverton Transportation System Plan
2015 BASE Traffic Conditions (existing geometry)
PM Peak Hour

Level Of Service Computation Report
1994 HCM Operations Method (Base Volume Alternative)

Intersection #69 Canyon Road/ORB 217 NB ramps

Cycle (sec): 100 Critical Vol./Cap. (X): 1.105
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 48.2
Optimal Cycle: 180 Level Of Service: E

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Protected			Protected		
Rights:	Ovl			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	1	1	0	1	0	0	0	0	0	1	0	2	0	0	0	0	2	0	1
Volume Module:												
Base Vol:	647	341	483	0	0	0	516	1294	0	0	1195	444
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	647	341	483	0	0	0	516	1294	0	0	1195	444
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
PHF Volume:	672	354	502	0	0	0	536	1344	0	0	1241	461
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	672	354	502	0	0	0	536	1344	0	0	1241	461
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.05	1.00	1.00	1.00	1.00	1.00	1.00	1.05	1.00	1.00	1.05	1.00
Final Vol.:	705	354	502	0	0	0	536	1411	0	0	1303	461
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.82	0.97	0.82	1.00	1.00	1.00	0.92	1.00	1.00	1.00	1.00	0.83
Lanes:	2.00	1.00	1.00	0.00	0.00	0.00	1.00	2.00	0.00	0.00	2.00	1.00
Final Sat.:	3099	1845	1550	0	0	0	1752	3800	0	0	3800	1568
Capacity Analysis Module:												
Vol/Sat:	0.23	0.19	0.32	0.00	0.00	0.00	0.31	0.37	0.00	0.00	0.34	0.29
Crit Moves:			****				****				****	
Green/Cycle:	0.29	0.29	0.29	0.00	0.00	0.00	0.28	0.59	0.00	0.00	0.31	0.31
Volume/Cap:	0.78	0.65	1.11	0.00	0.00	0.00	1.11	0.63	0.00	0.00	1.11	0.95
Levei Of Service Module:												
Delay/Veh:	22.9	20 7	92.4	0.0	0.0	0.0	91.7	9.2	0.0	0.0	78.7	42.3
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	22.9	20.7	92.4	0.0	0.0	0.0	91.7	9.2	0.0	0.0	78.7	42.3
Queue:	19	9	26	0	0	0	27	26	0	0	62	16

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Beaverton Transportation System Plan
2015 BASE Traffic Conditions (existing geometry)
PM Peak Hour

Level Of Service Computation Report
1994 HCM Operations Method (Base Volume Alternative)

Intersection #76 Canyon Road/Hall Boulevard

Cycle (sec): 100 Critical Vol./Cap. (X): 1.050
Loss Time (sec): 16 (Y+R = 4 sec) Average Delay (sec/veh): 42.1
Optimal Cycle: 180 Level Of Service: E

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	1	1	1	0	0	0	0	0	1	0	1	1	0	0	0	1	1	0
Volume Module:																			
Base Vol:	548	623	189	0	0	0	96	1729	0	0	1431	181
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	548	623	189	0	0	0	96	1729	0	0	1431	181
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
PHF Volume:	555	631	191	0	0	0	97	1752	0	0	1450	183
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	555	631	191	0	0	0	97	1752	0	0	1450	183
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.05	1.05	1.00	1.00	1.00	1.00	1.05	1.05	1.00	1.05	1.05
Final Vol.:	555	663	201	0	0	0	97	1839	0	0	1522	193
Saturation Flow Module:																			
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.95	0.95	1.00	1.00	1.00	0.93	0.84	1.00	1.00	0.88	0.96
Lanes:	1.00	1.53	0.47	0.00	0.00	0.00	1.00	2.00	0.00	0.00	1.79	0.21
Final Sat.:	1806	2772	840	0	0	0	1770	3201	0	0	3002	381
Capacity Analysis Module:																			
Vol/Sat:	0.31	0.24	0.24	0.00	0.00	0.00	0.05	0.57	0.00	0.00	0.51	0.51
Crit Moves:	****							****			****								
Green/Cycle:	0.29	0.29	0.29	0.00	0.00	0.00	0.05	0.55	0.00	0.00	0.49	0.49
Volume/Cap:	1.05	0.82	0.82	0.00	0.00	0.00	1.03	1.05	0.00	0.00	1.03	1.03
Level Of Service Module:																			
Delay/Veh:	55.6	23.5	23.5	0.0	0.0	0.0	111.6	45.1	0.0	0.0	39.9	39.9
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	55.6	23.5	23.5	0.0	0.0	0.0	111.6	45.1	0.0	0.0	39.9	39.9
Queue:	24	18	6	0	0	0	5	74	0	0	57	10

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Beaverton Transportation System Plan
2015 BASE Traffic Conditions (existing geometry)
PM Peak Hour

Level Of Service Computation Report
1994 HCM Operations Method (Base Volume Alternative)

Intersection #81 Canyon Road/Watson Avenue

Cycle (sec): 100 Critical Vol./Cap. (X): 1.176
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh) 73.1
Optimal Cycle: 180 Level Of Service: F

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	0	0	0	0	1	1	0	1	0	0	0	1	1	0	1	0	2	0	0
Volume Module:																			
Base Vol:	0	0	0	209	635	131	0	1671	148	249	1665	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	209	635	131	0	1671	148	249	1665	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
PHF Volume:	0	0	0	227	691	143	0	1818	161	271	1812	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	227	691	143	0	1818	161	271	1812	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.05	1.05	1.00	1.05	1.05	1.00	1.05	1.00
Final Vol.:	0	0	0	227	726	150	0	1909	169	271	1902	0
Saturation Flow Module:																			
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	0.97	0.97	0.97	1.00	0.84	0.96	0.92	0.88	1.00
Lanes:	0.00	0.00	0.00	1.00	1.66	0.34	0.00	1.86	0.14	1.00	2.00	0.00
Final Sat.:	0	0	0	1843	3055	631	0	2970	263	1752	3350	0
Capacity Analysis Module:																			
Vol/Sat:	0.00	0.00	0.00	0.12	0.24	0.24	0.00	0.64	0.64	0.15	0.57	0.00
Crit Moves:					****			****			****								
Green/Cycle:	0.00	0.00	0.00	0.20	0.20	0.20	0.00	0.55	0.55	0.13	0.68	0.00
Volume/Cap:	0.00	0.00	0.00	0.61	1.18	1.18	0.00	1.18	1.18	1.18	0.84	0.00
Level Of service Module:																			
Delay/Veh:	0.0	0.0	0.0	23.9	122	122.1	0.0	106	105.7	150.6	9.8	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	23.9	122	122.1	0.0	106	105.7	150.6	9.8	0.0
Queue:	0	0	0	6	44	11	0	121	13	18	41	0

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Beaverton Transportation System Plan
2015 BASE Traffic Conditions (existing geometry)
PM Peak Hour

Level Of Service Computation Report
1994 HCM Operations Method (Base Volume Alternative)

Intersection #86 TV Hwy/Hocken Avenue

Cycle (sec): 100 Critical Vol./Cap. (X): 1.410
Loss Time (sec): 16 (Y+R = 4 sec) Average Delay (sec/veh) 261.4
Optimal Cycle: 180 Level Of Service: F

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Ovl			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0	0	1	0	1	0	1	0	1	1	0
Volume Module:												
Base Vol:	288	203	223	248	542	123	143	1363	579	91	1813	196
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	288	203	223	248	542	123	143	1363	579	91	1813	196
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
PHF Volume:	305	215	236	262	574	130	151	1442	613	96	1919	207
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	305	215	236	262	574	130	151	1442	613	96	1919	207
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.05	1.05	1.00	1.05	1.05
Final Vol.:	305	215	236	262	574	130	151	1514	643	96	2014	218
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.93	0.91	0.90	0.93	1.02	0.83	0.92	0.92	0.92	0.92	0.93	0.95
Lanes:	1.00	0.48	0.52	1.00	1.00	1.00	1.00	1.40	0.60	1.00	1.81	0.19
Final Sat.:	1770	820	900	1770	1946	1583	1752	2460	1045	1752	3190	345
Capacity Analysis Module:												
Vol/Sat:	0.17	0.26	0.26	0.15	0.29	0.08	0.09	0.62	0.62	0.05	0.63	0.63
Crit Moves:	****				****		****				****	
Green/Cycle:	0.12	0.21	0.21	0.12	0.21	0.27	0.06	0.47	0.47	0.04	0.45	0.45
Volume/Cap:	1.41	1.24	1.24	1.24	1.41	0.30	1.41	1.32	1.32	1.32	1.41	1.41
Level Of Service Module:												
Delay/Veh:	349.3	177	177.4	194.8	330	18.9	383.5	214	213.9	313.9	306	306.2
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	349.3	177	177.4	194.8	330	18.9	383.5	214	213.9	313.9	306	306.2
Queue:	34	17	19	20	63	3	18	141	62	10	233	28

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Beaverton Transportation System Plan
2015 BASE Traffic Conditions (existing geometry)
PM Peak Hour

Level Of Service Computation Report
1994 HCM Operations Method (Base Volume Alternative)

Intersection #87 Farmington Road/Hocken Avenue

Cycle (sec): 100 Critical Vol./Cap. (X): 1.398
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 194.9
Optimal Cycle: 180 Level Of Service: F

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	0	0	0	0	1	0	1	0	0	0	1	1	0
Volume Module:												
Base Vol:	0	0	0	870	0	274	268	852	0	0	1638	472
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	870	0	274	268	852	0	0	1638	472
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
PHF Volume:	0	0	0	907	0	286	279	888	0	0	1708	492
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	907	0	286	279	888	0	0	1708	492
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.05	1.00	1.00	1.00	1.05	1.00	1.00	1.05	1.05
Final Vol.:	0	0	0	953	0	286	279	933	0	0	1793	517
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	0.92	1.00	0.92	0.94	0.99	1.00	1.00	0.95	0.95
Lanes:	0.00	0.00	0.00	1.62	0.00	0.38	1.00	2.00	0.00	0.00	2.65	0.35
Final Sat.:	0	0	0	2846	0	657	1787	3762	0	0	4805	895
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.33	0.00	0.44	0.16	0.25	0.00	0.00	0.64	0.64
Crit Moves:						tttt	tttt				****	
Green/Cycle:	0.00	0.00	0.00	0.31	0.00	0.31	0.11	0.57	0.00	0.00	0.46	0.46
Volume/Cap:	0.00	0.00	0.00	1.08	0.00	1.40	1.40	0.44	0.00	0.00	1.40	1.40
Level Of Service Module:												
Delay/Veh:	0.0	0.0	0.0	66.2	0.0	302.2	339.6	8.1	0.0	0.0	293	292.8
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	66.2	0.0	302.2	339.6	8.1	0.0	0.0	293	292.8
Queue:	0	0	0	42	0	33	31	15	0	0	203	61

Beaverton Transportation System Plan
2015 BASE Traffic Conditions (existing geometry)
PM Peak Hour

Level Of Service Computation Report
1994 HCM Operations Method (Base Volume Alternative)

Intersection #90 TV Hwy/Murray Boulevard

Cycle (sec): 120 Critical Vol./Cap. (X): 1.413
Loss Time (sec): 16 (Y+R = 4 sec) Average Delay (sec/veh): 214.0
Optimal Cycle: 180 Level Of Service: F

Approach:	North Bound						South Bound						East Bound						West Bound					
Movement:	L	-	T	-	R		L	-	T	-	R		L	-	T	-	R		L	-	T	-	R	
Control:	Protected						Protected						Protected						Protected					
Rights:	Include						Ovl						Include						Include					
Min. Green:	0	0	0				0	0	0				0	0	0				0	0	0			
Lanes:	1	0	1	1	0		1	0	2	0	1		1	0	2	1	0		1	0	2	1	0	
Volume Module:																								
Base Vol:	371	1076	220				265	1461	176				110	1484	580				275	1675	178			
Growth Adj:	1.00	1.00	1.00				1.00	1.00	1.00				1.00	1.00	1.00				1.00	1.00	1.00			
Initial Bse:	371	1076	220				265	1461	176				110	1484	580				275	1675	178			
User Adj:	1.00	1.00	1.00				1.00	1.00	1.00				1.00	1.00	1.00				1.00	1.00	1.00			
PHF Adj:	0.96	0.96	0.96				0.96	0.96	0.96				0.96	0.96	0.96				0.96	0.96	0.96			
PHF Volume:	387	1123	230				277	1525	184				115	1549	605				287	1748	186			
Reduct Vol:	0	0	0				0	0	0				0	0	0				0	0	0			
Reduced Vol:	387	1123	230				277	1525	184				115	1549	605				287	1748	186			
PCE Adj:	1.00	1.00	1.00				1.00	1.00	1.00				1.00	1.00	1.00				1.00	1.00	1.00			
MLF Adj:	1.00	1.05	1.05				1.00	1.05	1.00				1.00	1.10	1.10				1.00	1.10	1.10			
Final Vol.:	387	1179	241				277	1601	184				115	1704	666				287	1923	204			
Saturation Flow Module:																								
Sat/Lane:	1900	1900	1900				1900	1900	1900				1900	1900	1900				1900	1900	1900			
Adjustment:	0.92	1.06	0.94				0.92	1.06	0.82				0.92	0.94	0.92				0.93	0.95	0.96			
Lanes:	1.00	1.63	0.37				1.00	2.00	1.00				1.00	2.15	0.85				1.00	2.72	0.28			
Final Sat.:	1752	3282	671				1752	4040	1550				1752	3825	1495				1770	4888	519			
Capacity Analysis Module:																								
Vol/Sat:	0.22	0.36	0.36				0.16	0.40	0.12				0.07	0.45	0.45				0.16	0.39	0.39			
Crit Moves:	****							****						****					****					
Green/Cycle:	0.16	0.30	0.30				0.13	0.28	0.34				0.06	0.32	0.32				0.11	0.37	0.37			
Volume/Cap:	1.41	1.18	1.18				1.18	1.41	0.35				1.07	1.41	1.41				1.41	1.07	1.07			
Level Of Service Module:																								
Delay/Veh:	349.4	126	126.0				160.8	322	19.2				129.3	318	317.6				360.6	60.4	60.4			
User DelAdj:	1.00	1.00	1.00				1.00	1.00	1.00				1.00	1.00	1.00				1.00	1.00	1.00			
AdjDel/Veh:	349.4	126	126.0				160.8	322	19.2				129.3	318	317.6				360.6	60.4	60.4			
Queue:	45	79	18				20	184	5				7	198	79				34	91	12			

Beaverton Transportation System Plan
2015 BASE Traffic Conditions (existing geometry)
PM Peak Hour

Level Of Service Computation Report
1994 HCM Operations Method (Base Volume Alternative)

Intersection #101 Hall Blvd/Westgate-Center

Cycle (sec): 100 Critical Vol./Cap. (X): 1.464
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 235.5
Optimal Cycle: 180 Level Of Service: F

Approach:	North Bound						South Bound						East Bound						West Bound					
Movement:	L	-	T	-	R		L	-	T	-	R		L	-	T	-	R		L	-	T	-	R	
Control:	Protected						Protected						Permitted						Permitted					
Rights:	Include						Include						Include						Include					
Min. Green:	0	0	0				0	0	0				0	0	0				0	0	0			
Lanes:	1	0	1	1	0		1	0	1	1	0		1	0	0	1	0		1	0	0	1	0	
Volume Module:																								
Base Vol:	809	708	89				327	644	25				29	206	799				61	151	430			
Growth Adj:	1.00	1.00	1.00				1.00	1.00	1.00				1.00	1.00	1.00				1.00	1.00	1.00			
Initial Bse:	809	708	89				327	644	25				29	206	799				61	151	430			
User Adj:	1.00	1.00	1.00				1.00	1.00	1.00				1.00	1.00	1.00				1.00	1.00	1.00			
PHF Adj:	0.96	0.96	0.96				0.96	0.96	0.96				0.96	0.96	0.96				0.96	0.96	0.96			
PHF Volume:	839	734	92				339	668	26				30	214	829				63	157	446			
Reduct Vol:	0	0	0				0	0	0				0	0	0				0	0	0			
Reduced Vol:	839	734	92				339	668	26				30	214	829				63	157	446			
PCE Adj:	1.00	1.00	1.00				1.00	1.00	1.00				1.00	1.00	1.00				1.00	1.00	1.00			
MLF Adj:	1.00	1.05	1.05				1.00	1.05	1.05				1.00	1.00	1.00				1.00	1.00	1.00			
Final Vol.:	839	731	97				339	701	27				30	214	829				63	157	446			
Saturation Flow Module:																								
Sat/Lane:	1900	1900	1900				1900	1900	1900				1900	1900	1900				1900	1900	1900			
Adjustment:	0.94	0.97	0.97				0.94	0.98	0.98				0.09	0.88	0.88				0.09	0.87	0.87			
Lanes:	1.00	1.78	0.22				1.00	1.93	0.07				1.00	0.21	0.79				1.00	0.26	0.74			
Final Sat.:	1787	3275	412				1787	3587	138				171	343	1329				168	432	1226			
Capacity Analysis Module:																								
Vol/Sat:	0.47	0.24	0.24				0.19	0.20	0.20				0.18	0.62	0.62				0.38	0.36	0.36			
Crit Moves:	****							****						****										
Green/Cycle:	0.32	0.25	0.25				0.20	0.13	0.13				0.43	0.43	0.43				0.43	0.43	0.43			
Volume/Cap:	1.46	0.94	0.94				0.94	1.46	1.46				0.41	1.46	1.46				0.88	0.85	0.85			
Level Of Service Module:																								
Delay/Veh:	382.2	35.6	35.6				48.0	391	390.5				15.0	376	375.9				63.1	23.7	23.7			
User DelAdj:	1.00	1.00	1.00				1.00	1.00	1.00				1.00	1.00	1.00				1.00	1.00	1.00			
AdjDel/Veh:	382.2	35.6	35.6				48.0	391	390.5				15.0	376	375.9				63.1	23.7	23.7			
Queue:	104	25	4				12	84	5				1	30	109				3	5	13			

Beaverton Transportation System Plan
2015 BASE Traffic Conditions (existing geometry)
PM Peak Hour

Level Of Service Computation Report
1994 HCM Operations Method (Base Volume Alternative)

Intersection #108 Murray Boulevard/Jenkins Road

Cycle (sec): 120 Critical Vol./Cap. (X): 1.962
Loss Time (sec): 16 (Y+R = 4 sec) Average Delay (sec/veh): 805.2
Optimal Cycle: 180 Level Of Service: F

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Ovl			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0	1	1	0	1	0	1	0	1	0	1
Volume Module:												
Base Vol:	766	1285	250	276	1466	459	391	860	741	173	782	231
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	766	1285	250	276	1466	459	391	860	741	173	782	231
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	809	1357	264	291	1548	485	413	908	782	183	826	244
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	809	1357	264	291	1548	485	413	908	782	183	826	244
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.05	1.05	1.00	1.05	1.05	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	809	1425	277	291	1625	509	413	908	782	183	826	244
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.93	1.03	0.96	0.92	1.01	0.93	0.93	0.98	0.83	0.93	0.98	0.83
Lanes:	1.00	1.65	0.35	1.00	1.49	0.51	1.00	1.00	1.00	1.00	1.00	1.00
Final Sat.:	1770	3244	631	1752	2868	898	1770	1863	1583	1770	1863	1583
Capacity Analysis Module:												
Vol/Sat:	0.46	0.44	0.44	0.17	0.57	0.57	0.23	0.49	0.49	0.10	0.44	0.15
Crit Moves:	****				****		****				****	
Green/Cycle:	0.23	0.38	0.38	0.14	0.29	0.29	0.12	0.29	0.52	0.06	0.23	0.23
Volume/Cap:	1.96	1.16	1.16	1.16	1.96	1.96	1.96	1.71	0.95	1.73	1.96	0.68
Level Of Service Module:												
Delay/Veh:	1337	107	107.0	144.1	1319	1319	1366	762	33.1	879.4	1337	31.1
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	1337	107	107.0	144.1	1319	1319	1366	762	33.1	879.4	1337	31.1
Queue:	233	90	20	20	476	152	117	183	29	39	237	8

Beaverton Transportation System Plan
2015 BASE Traffic Conditions (existing geometry)
PM Peak Hour

Level Of Service Computation Report
1994 HCM Operations Method (Base Volume Alternative)

Intersection #113 Walker Road/ORE 217 NB ramps

Cycle (sec): 80 Critical Vol./Cap. (X): 1.269
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 135.6
Optimal Cycle: 180 Level Of Service: F

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	1	0	0	1	0	0	0	0	1	0	1
Volume Module:												
Base Vol:	766	7	65	0	0	0	142	710	0	0	340	296
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	766	7	65	0	0	0	142	710	0	0	340	296
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
PHF Volume:	851	8	72	0	0	0	158	789	0	0	378	329
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	851	8	72	0	0	0	158	789	0	0	378	329
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	851	8	72	0	0	0	158	789	0	0	378	329
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.83	0.83	0.83	1.00	1.00	1.00	0.94	0.99	1.00	1.00	0.83	0.83
Lanes:	0.99	0.01	1.00	0.00	0.00	0.00	1.00	1.00	0.00	0.00	0.53	0.47
Final Sat.:	1569	15	1583	0	0	0	1787	1881	0	0	845	735
Capacity Analysis Module:												
Vol/Sat:	0.54	0.54	0.05	0.00	0.00	0.00	0.09	0.42	0.00	0.00	0.45	0.45
Crit Moves:		****					****				****	
Green/Cycle:	0.43	0.43	0.43	0.00	0.00	0.00	0.07	0.42	0.00	0.00	0.35	0.35
Volume/Cap:	1.27	1.27	0.11	0.00	0.00	0.00	1.27	0.99	0.00	0.00	1.27	1.27
Level Of Service Module:												
Delay/Veh:	178.6	179	8.9	0.0	0.0	0.0	233.9	37.8	0.0	0.0	183	183.3
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	178.6	179	8.9	0.0	0.0	0.0	233.9	37.8	0.0	0.0	183	183.3
Queue:	63	2	1	0	0	0	13	24	0	0	29	26

Beaverton Transportation System Plan
2015 BASE Traffic Conditions (existing geometry)
PM Peak Hour

Level Of Service Computation Report
1994 HCM Operations Method (Base Volume Alternative)

Intersection #117 Walker Road/ORE 217 SB ramps

Cycle (sec): 80 critical Vol./Cap. (X): 1.029
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 29.3
Optimal Cycle: 180 Level Of Service: D

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	0	0	0	0	0 1	0	0	1	0	1	0
Volume Module:												
Base Vol:	0	0	0	271	11	341	0	558	931	39	965	3
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	271	11	341	0	558	931	39	965	3
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
PHF Volume:	0	0	0	290	12	365	0	597	996	42	1032	3
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	290	12	365	0	597	996	42	1032	3
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	0	0	0	290	12	365	0	597	996	42	1032	3
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	0.84	0.84	0.84	1.00	0.99	0.84	0.93	0.98	0.98
Lanes:	0.00	0.00	0.00	0.96	0.04	1.00	0.00	1.00	1.00	1.00	0.99	0.01
Final Sat.:	0	0	0	1535	64	1599	0	1881	1599	1770	1857	5
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.19	0.19	0.23	0.00	0.32	0.62	0.02	0.56	0.56
Crit Moves:						****			****	****		
Green/Cycle:	0.00	0.00	0.00	0.22	0.22	0.22	0.00	0.61	0.61	0.02	0.63	0.63
Volume/Cap:	0.00	0.00	0.00	0.85	0.85	1.03	0.00	0.52	1.03	1.03	0.88	0.88
Level Of Service Module:												
Delay/Veh:	0.0	0.0	0.0	31.5	31.5	65.3	0.0	6.3	40.1	47.2	14.0	14.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	31.5	31.5	65.3	0.0	6.3	40.1	47.2	14.0	14.0
Queue:	0	0	0	8	1	14	0	8	34	3	22	0

Beaverton Transportation System Plan
2015 BASE Traffic Conditions (existing geometry)
PM Peak Hour

Level Of Service Computation Report
1994 HCM Operations Method (Base Volume Alternative)

Intersection #125 Cedar Hills Blvd/Hall Blvd

Cycle (sec): 100 Critical Vol./Cap. (X): 1.150
Loss Time (sec): 16 (Y+R = 4 sec) Average Delay (sec/veh) 68.6
Optimal Cycle: 180 Level Of Service: F

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Ovl		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0	1	1	0	1	0	1	1	0	1	0	1	0	1	0	1	0	1	0	1	0
Volume Module:																						
Base Vol:	109	692	67	840	1241	69	106	107	160	125	161	1018
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	109	692	67	840	1241	69	106	107	160	125	161	1018
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
PHF Volume:	115	733	71	890	1315	73	112	113	169	132	171	1078
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	115	733	71	890	1315	73	112	113	169	132	171	1078
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.05	1.05	1.00	1.05	1.05	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	115	770	75	890	1380	77	112	113	169	132	171	1078
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.93	0.97	0.97	0.94	0.98	0.98	0.94	0.99	0.84	0.94	0.99	0.84
Lanes:	1.00	1.82	0.18	1.00	1.89	0.11	1.00	1.00	1.00	1.00	1.00	1.00
Final Sat.:	1770	3361	327	1787	3528	197	1787	1881	1599	1787	1881	1599
Capacity Analysis Module:												
Vol/Sat:	0.06	0.23	0.23	0.50	0.39	0.39	0.06	0.06	0.11	0.07	0.09	0.67
Crit Moves:		****			****		****					****
Green/Cycle:	0.09	0.20	0.20	0.43	0.54	0.54	0.05	0.12	0.12	0.09	0.15	0.59
Volume/Cap:	0.72	1.15	1.15	1.15	0.72	0.72	1.15	0.49	0.86	0.86	0.59	1.15
Level Of Service Module:												
Delay/Veh:	38.4	110	110.0	101.8	12.0	12.0	70.0	27.0	42.2	54.3	27.8	94.6
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	38.4	110	110.0	101.8	12.0	12.0	170.0	27.0	42.2	54.3	27.8	94.6
Queue:	4	43	6	51	29	2	8	3	6	5	5	66

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Beaverton Transportation System Plan
2015 BASE Traffic Conditions (existing geometry)
PM Peak Hour

Level Of Service Computation Report
1994 HCM Operations Method (Base Volume Alternative)

Intersection #126 Cedar Hills Boulevard/Walker Road

Cycle (sec): 100 critical Vol./Cap. (X): 1.335
Loss Time (sec): 16 (Y+R = 4 sec) Average Delay (sec/veh): 166.8
Optimal Cycle: 180 Level Of Service: F

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0 2	0 1	1	0 1	1 0	1	0 1	1 0	1	0 1	1 0
Volume Module:												
Base Vol:	220	1561	343	200	1142	105	215	911	208	300	669	228
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	220	1561	343	200	1142	105	215	911	208	300	669	228
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
PHF Volume:	238	1686	370	216	1233	113	232	984	225	324	722	246
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	238	1686	370	216	1233	113	232	984	225	324	722	246
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.05	1.00	1.00	1.05	1.05	1.00	1.05	1.05	1.00	1.05	1.05
Final Vol.:	238	1770	370	216	1295	119	232	1033	236	324	759	259
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.94	0.99	0.84	0.93	0.97	0.97	0.94	0.96	0.96	0.94	0.95	0.95
Lanes:	1.00	2.00	1.00	1.00	1.83	0.17	1.00	1.63	0.37	1.00	1.49	0.51
Final Sat.:	1787	3762	1599	1770	3378	310	1787	2971	679	1787	2693	919
Capacity Analysis Module:												
Vol/Sat:	0.13	0.47	0.23	0.12	0.38	0.38	0.13	0.35	0.35	0.18	0.28	0.28
Crit Moves:		****		****				****		****		
Green/Cycle:	0.11	0.35	0.35	0.09	0.33	0.33	0.12	0.26	0.26	0.14	0.27	0.27
Volume/Cap:	1.16	1.34	0.66	1.34	1.16	1.16	1.04	1.34	1.34	1.34	1.04	1.04
Level Of Service Module:												
Delay/Veh:	147.6	235	19.6	285.2	108	108.3	87.0	240	240.5	269.3	56.2	56.2
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	147.6	235	19.6	285.2	108	108.3	87.0	240	240.5	269.3	56.2	56.2
Queue:	16	163	9	21	74	9	11	94	24	31	31	12

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Beaverton Transportation System Plan
2015 BASE Traffic Conditions (existing geometry)
PM Peak Hour

Level Of Service Computation Report
1994 HCM Operations Method (Base Volume Alternative)

Intersection #127 Cedar Hills Boulevard/Jenkins Road

Cycle (sec): 120 Critical Vol./Cap. (X): 1.330
Loss Time (sec): 16 (Y+R = 4 sec) Average Delay (sec/veh): 147.9
Optimal Cycle: 180 Level Of Service: F

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Split Phase			Split Phase		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0 1	1 0	1	0 1	1 0	1	1 0	0 1	0	1 0	0 0
Volume Module:												
Base Vol:	356	1029	4	3	1207	469	952	2	660	13	8	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	356	1029	4	3	1207	469	952	2	660	13	8	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	*1.00*	1.00	1.00	1.00	1.00	1.00
PHF **Adj**:	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
PHF Volume:	367	1062	4	3	1246	484	982	2	681	13	8	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	367	1062	4	3	1246	484	982	2	681	13	8	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.05	1.05	1.00	1.05	1.05	1.05	1.05	1.00	1.00	1.00	1.00
Final Vol.:	367	1115	4	3	1308	508	1032	2	681	13	8	0
Saturation F ow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.93	0.98	0.98	0.93	0.94	0.94	0.94	0.94	0.84	0.97	0.97	1.00
Lanes:	1.00	1.99	0.01	1.00	1.44	0.56	1.99	0.01	1.00	0.62	0.38	0.00
Final Sat.:	1770	3712	13	1770	2576	1000	3567	7	1599	1141	702	0
Capacity **m a** ysis Module:												
Vol/Sat:	0.21	0.30	0.30	0.00	0.51	0.51	0.29	0.29	0.43	0.01	0.01	0.00
Crit Moves:	****				****				****	****		
Green/Cycle:	0.16	0.53	0.53	0.00	0.38	0.38	0.32	0.32	0.32	0.01	0.01	0.00
Volume/Cap:	1.33	0.56	0.56	0.56	1.33	1.33	0.90	0.90	1.33	1.33	1.33	0.00
Level Of Service Module:												
Delay/Veh:	265.4	12.3	12.3	89.4	233	232.7	32.5	32.5	245.8	508.4	508	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	265.4	12.3	12.3	89.4	233	232.7	32.5	32.5	245.8	508.4	508	0.0
Queue:	36	25	0	0	130	52	36	0	67	2	2	0

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Beaverton Transportation System Plan
2015 BASE Traffic Conditions (existing geometry)
PM Peak Hour

Level Of Service Computation Report
1994 HCM Operations Method (Base Volume Alternative)

Intersection #130 Farmington Road/Cedar Hills Boulevard

Cycle (sec): 100 Critical Vol./Cap. (X): 1.117
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 48.0
Optimal Cycle: 180 Level Of Service: E

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Protected			Protected		
Rights:	Include			Ovl			Include			Ovl		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	0	0	1	0	0	1	0	2	0	0	1
Volume Module:												
Base Vol:	0	0	0	558	0	508	263	1497	0	0	1614	473
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	558	0	508	263	1497	0	0	1614	473
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
PHF Volume:	0	0	0	599	0	545	282	1606	0	0	1732	508
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	599	0	545	282	1606	0	0	1732	508
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.05	1.00	1.00	1.05	1.00
Final Vol.:	0	0	0	599	0	545	282	1687	0	0	1818	508
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	0.94	1.00	0.84	0.93	0.98	1.00	1.00	0.98	0.83
Lanes:	0.00	0.00	0.00	1.00	0.00	1.00	1.00	2.00	0.00	0.00	2.00	1.00
Final Sat.:	0	0	0	1787	0	1599	1770	3725	0	0	3725	1583
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.34	0.00	0.34	0.16	0.45	0.00	0.00	0.49	0.32
Crit Moves:				tttt			tttt				tttt	
Green/Cycle:	0.00	0.00	0.00	0.30	0.00	0.44	0.14	0.58	0.00	0.00	0.44	0.74
Volume/Cap:	0.00	0.00	0.00	1.12	0.00	0.77	1.12	0.78	0.00	0.00	1.12	0.44
Level Of Service Module:												
Delay/Veh:	0.0	0.0	0.0	94.4	0.0	18.8	115.4	11.8	0.0	0.0	77.1	3.5
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	94.4	0.0	18.8	115.4	11.8	0.0	0.0	77.1	3.5
Queue:	0	0	0	31	0	14	16	37	0	0	90	6

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Beaverton Transportation System Plan
2015 BASE Traffic Conditions (existing geometry)
PM Peak Hour

Level Of Service Computation Report
1994 HCM Operations Method (Base Volume Alternative)

Intersection #131 Canyon Road/Cedar Hills Boulevard

Cycle (sec): 100 Critical Vol./Cap. (X): 1.922
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh) 1089.9
Optimal Cycle: 180 Level Of Service: F

Approach:	North Bound			South Bound			East Bound			L West T Bound R		
Movement:	L	T	R	L	T	R	L	T	R			
Control:	Split Phase			Split Phase			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	1	0	1	0	0	1	0	1	0	1	1
Volume Module:												
Base Vol:	305	411	74	369	821	278	104	1464	169	100	1573	251
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	305	411	74	369	821	278	104	1464	169	100	1573	251
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
PHF Volume:	314	424	76	380	846	287	107	1509	174	103	1622	259
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	314	424	76	380	846	287	107	1509	174	103	1622	259
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.05	1.05	1.05	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	314	424	76	399	889	301	107	1509	174	103	1622	259
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.84	0.85	0.85	0.84	0.84	0.84	0.07	0.84	0.84	0.07	0.86	0.73
Lanes:	0.78	1.03	0.19	0.50	1.12	0.38	0.87	1.01	0.12	0.89	1.11	1.00
Final Sat.:	1243	1678	301	800	1781	603	114	1606	185	116	1830	1395
Capacity Analysis Module:												
Vol/Sat:	0.25	0.25	0.25	0.50	0.50	0.50	0.94	0.94	0.94	0.89	0.89	0.19
Crit Moves:			****			tttt		tttt				
Green/Cycle:	0.13	0.13	0.13	0.26	0.26	0.26	0.49	0.49	0.49	0.49	0.49	0.49
Volume/Cap:	1.92	1.92	1.92	1.92	1.92	1.92	1.92	1.92	1.92	1.81	1.81	0.38
Level Of Service Module;												
Delay/Veh:	1230	1230	1230	1214	1214	1214	1206	1206	1206	50.9	951	10.5
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	1230	1230	1230	1214	1214	1214	1206	1206	1206	950.9	951	10.5
Queue:	83	111	23	108	237	83	52	691	83	35	504	5

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Beaverton Transportation System Plan
2015 BASE Traffic Conditions (existing geometry)
PM Peak Hour

Level Of Service Computation Report
1994 HCM Operations Method (Base Volume Alternative)

Intersection #133 Canyon Rd./Fred Meyer Access

Cycle (sec): 120 Critical Vol./Cap. (X): 1.710
Loss Time (sec): 16 (Y+R = 4 sec) Average Delay (sec/veh): 609.0
Optimal Cycle: 180 Level Of Service: F

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Protected			Protected		
Rights:	Include			Include			Ovl			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0	0	1	0	0	0	1	1	0	0	1	0	2	0	1	1	0	1	1	0
Volume Module:																					
Base Vol:	185	40	131	375	25	100	100	1888	116	116	1751	400
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	185	40	131	375	25	100	100	1888	116	116	1751	400
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
PHF Volume:	203	44	144	412	27	110	110	2072	127	127	1922	439
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	203	44	144	412	27	110	110	2072	127	127	1922	439
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.05	1.00	1.00	1.05	1.05
Final Vol.:	203	44	144	412	27	110	110	2176	127	127	2018	461
Saturation Flow Module:																					
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.53	0.87	0.87	0.43	0.43	0.43	0.93	0.84	0.83	0.93	0.86	0.95
Lanes:	1.00	0.23	0.77	0.75	0.05	0.20	1.00	2.00	1.00	1.00	1.66	0.34
Final Sat.:	1016	387	1268	614	40	164	1770	3201	1583	1770	2696	616
Capacity Analysis Module:																					
Vol/Sat:	0.20	0.11	0.11	0.67	0.67	0.67	0.06	0.68	0.08	0.07	0.75	0.75
Crit Moves:					****			****				****			
Green/Cycle:	0.39	0.39	0.39	0.39	0.39	0.39	0.04	0.43	0.43	0.05	0.44	0.44
Volume/Cap:	0.51	0.29	0.29	1.71	1.71	1.71	1.71	1.59	0.19	1.59	1.71	1.71
Level Of Service Module:																					
Delay/Veh:	18.8	16.2	16.2	770.1	770	770.1	883.2	537	13.8	644.0	746	745.9
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	18.8	16.2	16.2	770.1	770	770.1	883.2	537	13.8	644.0	746	745.9
Queue:	5	1	3	91	8	26	23	385	3	22	460	108

Beaverton Transportation System Plan
2015 BASE Traffic Conditions (existing geometry)
PM Peak Hour

Level Of Service Computation Report
1994 HCM Operations Method (Base Volume Alternative)

Intersection #162 Cedar Hills Blvd/Westgate Drive

Cycle (sec): 100 Critical Vol./Cap. (X): 0.878
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 17.8
Optimal Cycle: 100 Level Of Service: C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Split Phase			Split Phase		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	1	0	1	0	1	0	1	1	0	0	0	1	1	0	0	0	1	1	0	0
Volume Module:																					
Base Vol:	10	705	166	41	1254	13	13	10	22	51	11	58
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	10	705	166	41	1254	13	13	10	22	51	11	58
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
PHF Volume:	11	760	179	44	1351	14	14	11	24	55	12	63
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	11	760	179	44	1351	14	14	11	24	55	12	63
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.05	1.05	1.05	1.00	1.05	1.05	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	11	798	188	44	1419	15	14	11	24	55	12	63
Saturation Flow Module:																					
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.95	0.95	0.94	0.99	0.99	0.82	0.82	0.82	0.82	0.82	0.82
Lanes:	0.02	1.60	0.38	1.00	1.98	0.02	0.29	0.22	0.49	0.42	0.09	0.49
Final Sat.:	40	2892	681	1787	3723	39	446	350	765	655	143	750
Capacity Analysis Module:																					
Vol/Sat:	0.28	0.28	0.28	0.02	0.38	0.38	0.03	0.03	0.03	0.08	0.08	0.08
Crit Moves:	****				****			****			tttt	
Green/Cycle:	0.31	0.69	0.69	0.06	0.43	0.43	0.04	0.04	0.04	0.10	0.10	0.10
Volume/Cap:	0.88	0.40	0.40	0.40	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Level Of Service Module:																					
Delay/Veh:	26.7	4.4	4.4	30.5	20.9	20.9	83.5	83.5	83.5	56.7	56.7	56.7
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	26.7	4.4	4.4	30.5	20.9	20.9	83.5	83.5	83.5	56.7	56.7	56.7
Queue:	1	16	2	1	38	1	1	1	1	3	1	3

Beaverton Transportation System Plan
2015 BASE Traffic Conditions (existing geometry)
PM Peak Hour

Level Of Service Computation Report
1994 HCM operations Method (Base Volume Alternative)

Intersection #169 Farmington Road/149th Avenue

Cycle (sec): 90 Critical Vol./Cap. (X): 1.141
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 61.3
Optimal Cycle: 180 Level Of Service: F

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	0	1! 0	0	0	1	0	1	0	0	1	0
Volume Module:												
Base Vol:	12	15	27	86	15	85	60	810	25	60	1459	80
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	12	15	27	86	15	85	60	810	25	60	1459	80
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
PHF Volume:	13	16	29	92	16	91	64	866	27	64	1560	86
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	13	16	29	92	16	91	64	866	27	64	1560	86
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	13	16	29	92	16	91	64	866	27	64	1560	86
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.53	0.53	0.53	0.83	0.83	0.85	0.91	0.96	0.96	0.94	0.98	0.98
Lanes:	0.22	0.28	0.50	0.85	0.15	1.00	1.00	0.97	0.03	1.00	0.95	0.05
Final Sat.:	226	278	505	1343	234	1615	1736	1772	55	1787	1765	97
Capacity Analysis Module:												
Vol/Sat:	0.06	0.06	0.06	0.07	0.07	0.06	0.04	0.49	0.49	0.04	0.88	0.88
Crit Moves:					tttt		tttt				tttt	
Green/Cycle:	0.06	0.06	0.06	0.06	0.06	0.06	0.03	0.75	0.75	0.06	0.77	0.77
Volume/Cap:	0.96	0.96	0.96	1.14	1.14	0.94	1.14	0.65	0.65	0.65	1.14	1.14
Level Of Service Module:												
Delay/Veh:	100.7	101	100.7	163.2	163	78.7	192.5	4.3	4.3	36.3	79.1	79.1
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	100.7	101	100.7	163.2	163	78.7	192.5	4.3	4.3	36.3	79.1	79.1
Queue:	1	1	2	7	2	4	5	11	1	2	112	8

Beaverton Transportation System Plan
2015 BASE Traffic Conditions (existing geometry)
PM Peak Hour

Level Of Service Computation Report
1994 HCM Operations Method (Base Volume Alternative)

Intersection #170 TV Highway/153rd Drive

Cycle (sec): 103 Critical Vol./Cap. (X): 0.879
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh) 11.6
Optimal Cycle: 101 Level Of Service: B

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Protected			Protected		
Rights:	Include			Ovl			Include			Ovl		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	0	0	0	0	2	0	0 .	0	1	0	1
Volume Module:												
Base Vol:	0	0	0	438	0	65	38	1713	0	0	2037	192
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	438	0	65	38	1713	0	0	2037	192
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
PHF Volume:	0	0	0	464	0	69	40	1815	0	0	2158	203
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	464	0	69	40	1815	0	0	2158	203
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.03	1.00	1.00	1.00	1.05	1.05	1.00	1.05	1.00
Final Vol.:	0	0	0	478	0	69	40	1905	0	0	2266	203
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	0.92	1.00	0.83	0.92	0.97	1.00	1.00	0.97	0.83
Lanes:	0.00	0.00	0.00	2.00	0.00	1.00	1.00	2.00	0.00	0.00	2.00	1.00
Final Sat.:	0	0	0	3505	0	1568	1752	3689	0	0	3689	1568
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.14	0.00	0.04	0.02	0.52	0.00	0.00	0.61	0.13
Crit Moves:				****			tttt				tttt	
Green/Cycle:	0.00	0.00	0.00	0.16	0.00	0.18	0.03	0.72	0.00	0.00	0.70	0.85
Volume/Cap:	0.00	0.00	0.00	0.88	0.00	0.24	0.88	0.71	0.00	0.00	0.88	0.15
Level Of Service Module:												
Delay/Veh:	0.0	0.0	0.0	37.4	0.0	22.7	91.2	5.7	0.0	0.0	10.4	0.8
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	37.4	0.0	22.7	91.2	5.7	0.0	0.0	10.4	0.8
Queue:	0	0	0	15	0	2	2	31	0	0	52	1

Beaverton Transportation System Plan
2015 BASE Traffic Conditions (existing geometry)
PM Peak Hour

Level Of Service Computation Report
1994 HCM Operations Method (Base Volume Alternative)

Intersection #171 TV Highway/160th Avenue-Millikan Way

Cycle (sec): 120 Critical Vol./Cap. (X): 1.361
Loss Time (sec): 16 (Y+R = 4 sec) Average Delay (sec/veh) 152.7
Optimal Cycle: 180 Level Of Service: F

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Ovl			Ovl			Ovl			Ovl		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1 0	1	0 1	1 0	1	0 1	1 0	2	0 1	1 0	2	0 1
Volume Module:												
Base Vol:	104	257	119	110	622	625	390	1455	135	174	1803	68
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	104	257	119	110	622	625	390	1455	135	174	1803	68
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	110	271	125	116	655	659	411	1533	142	183	1900	72
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	110	271	125	116	655	659	411	1533	142	183	1900	72
PCB Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.05	1.00	1.00	1.05	1.00
Final Vol.:	110	271	125	116	655	659	411	1610	142	183	1995	72
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.94	0.99	0.84	0.94	0.99	0.84	0.92	0.97	0.83	0.93	0.98	0.83
Lanes:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	1.00	1.00	2.00	1.00
Final Sat.:	1787	1881	1599	1787	1881	1599	1752	3689	1568	1770	3725	1583
Capacity Analysis Module:												
Vol/Sat:	0.06	0.14	0.08	0.06	0.35	0.41	0.23	0.44	0.09	0.10	0.54	0.05
Crit Moves:	****				tttt		****				tttt	
Green/Cycle:	0.05	0.21	0.32	0.09	0.26	0.43	0.17	0.46	0.50	0.11	0.39	0.49
Volume/Cap:	1.36	0.69	0.25	0.69	1.36	0.96	1.36	0.95	0.18	0.95	1.36	0.09
Level Of Service Module:												
Delay/Veh:	355.6	32.1	19.7	41.9	279	40.4	292.2	29.7	10.6	72.2	262	10.7
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	355.6	32.1	19.7	41.9	279	40.4	292.2	29.7	10.6	72.2	262	10.7
Queue:	13	9	3	4	68	26	43	57	3	9	213	1

Beaverton Transportation System Plan
2015 BASE Traffic Conditions (existing geometry)
PM Peak Hour

Level Of Service Computation Report
1994 HCM Operations Method (Base Volume Alternative)

Intersection #174 Jenkins Road/153rd Drive

Cycle (sec): 120 Critical Vol./Cap. (X): 2.085
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 1044.7
Optimal Cycle: 180 Level Of Service: F

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Protected			Protected		
Rights:	Ovl			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1 0	0	0 1	0 0	0	0 0	0 0	0	1 0	1 0	1	0 0
Volume Module:												
Base Vol:	402	0	293	0	0	0	0	1725	498	337	1826	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	402	0	293	0	0	0	0	1725	498	337	1826	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	422	0	307	0	0	0	0	1810	523	354	1916	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	422	0	307	0	0	0	0	1810	523	354	1916	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	422	0	307	0	0	0	0	1810	523	354	1916	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.93	1.00	0.83	1.00	1.00	1.00	1.00	0.85	0.85	0.94	0.99	1.00
Lanes:	1.00	0.00	1.00	0.00	0.00	0.00	0.00	0.78	0.22	1.00	1.00	0.00
Final Sat.:	1770	0	1583	0	0	0	0	1257	363	1787	1881	0
Capacity Analysis Module:												
Vol/Sat:	0.24	0.00	0.19	0.00	0.00	0.00	0.00	1.44	1.44	0.20	1.02	0.00
Crit Moves:	****							tttt		tttt		
Green/Cycle:	0.11	0.00	0.21	0.00	0.00	0.00	0.00	0.69	0.69	0.10	0.79	0.00
Volume/Cap:	2.08	0.00	0.93	0.00	0.00	0.00	0.00	2.08	2.08	2.08	1.30	0.00
Level Of Service Module:												
Delay/Veh:	1720	0.0	52.3	0.0	0.0	0.0	0.0	1653	1653	1731	187	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	1720	0.0	52.3	0.0	0.0	0.0	0.0	1653	1653	1731	187	0.0
Queue:	140	0	13	0	0	0	0	xxxx	xxxxx	117	XXXX	0

Beaverton Transportation System Plan
2015 BASE Traffic Conditions (existing geometry)
PM Peak Hour

Level Of Service Computation Report
1994 HCM Operations Method (Base Volume Alternative)

Intersection #175 Jenkins Road/158th Avenue

Cycle (sec): 100 Critical Vol./Cap. (X): 2.282
Loss Time (sec): 16 (Y+R = 4 sec) Average Delay (sec/veh): 1417.9
Optimal Cycle: 180 Level Of Service: F

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Ovl			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0	1	1	0	1	0	1	0	1	0	1	1	0	1	0	0	1	0
Volume Module:																			
Base Vol:	52	221	232	764	356	232	175	1166	54	206	1404	660
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	52	221	232	764	356	232	175	1166	54	206	1404	660
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
PHF Volume:	54	229	241	793	369	241	182	1210	56	214	1456	685
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	54	229	241	793	369	241	182	1210	56	214	1456	685
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.05	1.05	1.00	1.00	1.00
Final Vol.:	54	229	241	793	369	241	182	1270	59	214	1456	685
Saturation Flow Module:																			
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.90	0.95	0.81	0.93	0.98	0.83	0.94	0.98	0.98	0.93	0.93	0.93
Lanes:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.91	0.09	1.00	0.68	0.32
Final Sat.:	1719	1810	1538	1770	1863	1583	1787	3559	165	1770	1203	566
Capacity Analysis Module:																			
Vol/Sat:	0.03	0.13	0.16	0.45	0.20	0.15	0.10	0.36	0.36	0.12	1.21	1.21
Crit Moves:			****	****			tttt				tttt	
Green/Cycle:	0.04	0.07	0.07	0.20	0.23	0.27	0.04	0.43	0.43	0.15	0.53	0.53
Volume/Cap:	0.87	1.84	2.28	2.28	0.87	0.56	2.28	0.83	0.83	0.83	2.28	2.28
Level Of Service Module:																			
Delay/Veh:	77.1	1059	2399	2371	35.7	21.3	2490	19.1	19.1	40.5	2337	2337
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	77.1	1059	2399	2371	35.7	21.3	2490	19.1	19.1	40.5	2337	2337
Queue:	3	55	100	326	12	6	76	33	2	7	XXXX	xxxxx

Beaverton Transportation System Plan
2015 BASE Traffic Conditions (existing geometry)
PM Peak Hour

Level Of Service Computation Report
1994 HCM Operations Method (Base Volume Alternative)

Intersection #176 Farmington Road/170th Avenue

Cycle (sec): 120 Critical Vol./Cap. (X): 2.569
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 2836.4
Optimal Cycle: 180 Level Of Service: F

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	0	1	0	0	0	1	0	0	1	1	0	0	1	0	0	1	0
Volume Module:																			
Base Vol:	145	258	108	45	486	395	113	957	316	112	1247	87
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	145	258	108	45	486	395	113	957	316	112	1247	87
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
PHF Volume:	156	277	116	48	523	425	122	1029	340	120	1341	94
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	156	277	116	48	523	425	122	1029	340	120	1341	94
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	156	277	116	48	523	425	122	1029	340	120	1341	94
Saturation Flow Module:																			
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.20	0.20	0.20	0.68	0.68	0.84	0.93	0.94	0.94	0.94	0.98	0.98
Lanes:	0.28	0.51	0.21	0.08	0.92	1.00	1.00	0.75	0.25	1.00	0.93	0.07
Final Sat.:	106	188	79	109	1189	1599	1770	1344	444	1787	1740	122
Capacity Analysis Module:																			
Vol/Sat:	1.47	1.47	1.47	0.44	0.44	0.27	0.07	0.77	0.77	0.07	0.77	0.77
Crit Moves:		****					****				****	
Green/Cycle:	0.57	0.57	0.57	0.57	0.57	0.57	0.03	0.30	0.30	0.03	0.30	0.30
Volume/Cap:	2.57	2.57	2.57	0.77	0.77	0.46	2.57	2.55	2.55	2.55	2.57	2.57
Level Of Service Module:																			
Delay/Veh:	3670	3670	3670	16.0	16.0	9.9	3913	3535	3535	3808	3638	3638
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	3670	3670	3670	16.0	16.0	9.9	3913	3535	3535	3808	3638	3638
Queue:	XXXX	XXXX	XXXXX	2	14	8	71	615	207	68	818	62

Beaverton Transportation System Plan
2015 BASE Traffic Conditions (existing geometry)
PM Peak Hour

Level Of Service Computation Report
1994 HCM Operations Method (Base Volume Alternative)

Intersection #177 TV Highway/170th Avenue

Cycle (sec): 120 Critical Vol./Cap. (X): 1.358
Loss Time (sec): 16 (Y+R = 4 sec) Average Delay (sec/veh) 183.7
Optimal Cycle: 180 Level Of Service: F

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Ovl			Ovl		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0	0 1	0	1	0 0 1	0	1	0 2 0 1	1	0	2 0 1
Volume Module:												
Base Vol:	208	349	95	327	655	18	85	1491	353	374	1838	538
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	208	349	95	327	655	18	85	1491	353	374	1838	538
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	220	369	100	345	692	19	90	1574	373	395	1941	568
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	220	369	100	345	692	19	90	1574	373	395	1941	568
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.05	1.00	1.00	1.05	1.00
Final Vol.:	220	369	100	345	692	19	90	1653	373	395	2038	568
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.93	0.95	0.95	0.93	0.98	0.98	0.92	0.97	0.83	0.93	0.98	0.83
Lanes:	1.00	0.79	0.21	1.00	0.97	0.03	1.00	2.00	1.00	1.00	2.00	1.00
Final Sat.:	1770	1422	385	1770	1813	50	1752	3689	1568	1770	3725	1583
Capacity Analysis Module:												
Vol/Sat:	0.12	0.26	0.26	0.19	0.38	0.38	0.05	0.45	0.24	0.22	0.55	0.36
Crit Moves:	tttt				tttt			****		tttt		
Green/Cycle:	0.09	0.21	0.21	0.16	0.28	0.28	0.04	0.33	0.42	0.16	0.45	0.61
Volume/Cap:	1.36	1.22	1.22	1.22	1.36	1.36	1.21	1.36	0.56	1.36	1.21	0.59
Level Of Service Module:												
Delay/Veh:	313.2	168	168.4	177.6	274	273.9	230.8	262	17.9	290.7	135	9.8
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	313.2	168	168.4	177.6	274	273.9	230.8	262	17.9	290.7	135	9.8
Queue:	24	29	9	27	72	3	8	171	10	41	151	12

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Beaverton Transportation System Plan
2015 BASE Traffic Conditions (existing geometry)
PM Peak Hour

Level Of Service Computation Report
1994 HCM Operations Method (Base Volume Alternative)

Intersection #179 Merlo Road/170th Avenue

Cycle (sec): 90 Critical Vol./Cap. (X): 1.125
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh) 74.9
Optimal Cycle: 180 Level Of Service: F

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	0	1! 0	0	0	1! 0	0	0	1! 0	1	0	0 1 0
Volume Module:												
Base Vol:	15	305	393	25	350	14	20	30	50	618	38	86
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	15	305	393	25	350	14	20	30	50	618	38	86
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
PHF Volume:	16	333	429	27	382	15	22	33	55	674	41	94
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	16	333	429	27	382	15	22	33	55	674	41	94
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	16	333	429	27	382	15	22	33	55	674	41	94
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.80	0.80	0.80	0.66	0.66	0.66	0.69	0.69	0.69	0.94	0.89	0.89
Lanes:	0.02	0.43	0.55	0.06	0.90	0.04	0.20	0.30	0.50	1.00	0.30	0.70
Final Sat.:	31	649	835	80	1135	45	262	393	654	1787	514	1179
Capacity Analysis Module:												
Vol/Sat:	0.51	0.51	0.51	0.34	0.34	0.34	0.08	0.08	0.08	0.38	0.08	0.08
Crit Moves:		****								tttt		
Green/Cycle:	0.46	0.46	0.46	0.46	0.46	0.46	0.07	0.07	0.07	0.33	0.40	0.40
Volume/Cap:	1.10	1.10	1.10	0.72	0.72	0.72	1.25	1.25	1.25	1.13	0.20	0.20
Level Of Service Module:												
Delay/Veh:	77.6	77.6	77.6	15.6	15.6	15.6	240.0	240	240.0	94.8	11.3	11.3
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	77.6	77.6	77.6	15.6	15.6	15.6	240.0	240	240.0	94.8	11.3	11.3
Queue:	2	18	22	1	8	1	3	4	6	34	1	2

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Beaverton Transportation System Plan
2015 BASE Traffic Conditions (existing geometry)
PM Peak Hour

Level Of Service Computation Report
1994 HCM Operations Method (Base Volume Alternative)

Intersection #180 Baseline Road/170th Avenue

Cycle (sec): 90 Critical Vol./Cap. (X): 0.969
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 28.0
Optimal Cycle: 142 Level Of Service: D

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0	0 1	0	1	0 0 1	0	1	0 1 1	0	1	0 1 1
Volume Module:												
Base Vol:	203	167	134	118	126	14	26	1168	178	237	1556	218
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	203	167	134	118	126	14	26	1168	178	237	1556	218
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
PHF Volume:	218	179	144	126	135	15	28	1252	191	254	1668	234
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	218	179	144	126	135	15	28	1252	191	254	1668	234
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.05	1.05	1.00	1.05	1.05
Final Vol.:	218	179	144	126	135	15	28	1314	200	254	1751	245
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.57	0.92	0.92	0.23	0.99	0.99	0.94	0.97	0.97	0.95	0.98	0.98
Lanes:	1.00	0.55	0.45	1.00	0.90	0.10	1.00	1.74	0.26	1.00	1.75	0.25
Final sat.:	1091	970	780	437	1693	188	1787	3200	487	1805	3267	457
Capacity Analysis Module:												
Vol/Sat:	0.20	0.18	0.18	0.29	0.08	0.08	0.02	0.41	0.41	0.14	0.54	0.54
Crit Moves:				****			****				****	
Green/Cycle:	0.30	0.30	0.30	0.30	0.30	0.30	0.02	0.42	0.42	0.15	0.55	0.55
Volume/Cap:	0.67	0.62	0.62	0.97	0.27	0.27	0.97	0.97	0.97	0.97	0.97	0.97
Level Of Service Module:												
Delay/Veh:	21.6	19.2	19.2	71.5	15.7	15.7	142.7	28.2	28.2	59.4	22.5	22.5
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	21.6	19.2	19.2	71.5	15.7	15.7	142.7	28.2	28.2	59.4	22.5	22.5
Queue:	5	4	3	6	3	0	2	38	8	10	49	9

Beaverton Transportation System Plan
2015 BASE Traffic Conditions (existing geometry)
PM Peak Hour

Level Of Service Computation Report
1994 HCM Operations Method (Base Volume Alternative)

Intersection #186 Walker Road/158th Avenue

Cycle (sec): 110 Critical Vol./Cap. (X): 1.384
Loss Time (sec): 16 (Y+R = 4 sec) Average Delay (sec/veh): 203.7
Optimal Cycle: 180 Level Of Service: F

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Ovl		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0	1 1 0	1	0	1 1 0	1	0	1 1 0	1	0	1 0 1
Volume Module:												
Base Vol:	433	1104	106	692	1311	86	68	764	231	120	684	407
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	433	1104	106	692	1311	86	68	764	231	120	684	407
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
PHF Volume:	449	1145	110	718	1360	89	71	793	240	124	710	422
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	449	1145	110	718	1360	89	71	793	240	124	710	422
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.05	1.05	1.00	1.05	1.05	1.00	1.05	1.05	1.00	1.00	1.00
Final Vol.:	449	1202	115	718	1428	94	71	832	252	124	710	422
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.91	0.95	0.95	0.94	0.98	0.98	0.94	0.96	0.96	0.94	0.99	0.84
Lanes:	1.00	1.83	0.17	1.00	1.88	0.12	1.00	1.54	0.46	1.00	1.00	1.00
Final Sat.:	1736	3301	316	1787	3495	230	1787	2801	848	1787	1881	1599
Capacity Analysis Module:												
Vol/Sat:	0.26	0.36	0.36	0.40	0.41	0.41	0.04	0.30	0.30	0.07	0.38	0.26
Crit Moves:		****		****			****				****	
Green/Cycle:	0.21	0.26	0.26	0.29	0.34	0.34	0.03	0.24	0.24	0.06	0.27	0.56
Volume/Cap:	1.21	1.38	1.38	1.38	1.21	1.21	1.38	1.22	1.22	1.22	1.38	0.47
Level Of Service Module:												
Delay/Veh:	157.2	291	290.7	297.3	136	136.0	414.4	149	149.0	213.4	298	9.5
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	157.2	291	290.7	297.3	136	136.0	414.4	149	149.0	213.4	298	9.5
Queue:	32	126	14	77	97	8	9	58	20	10	76	8

Beaverton Transportation System Plan
2015 BASE Traffic Conditions (existing geometry)
PM Peak Hour

Level Of Service Computation Report
1994 HCM Unsignalized Method (Base Volume Alternative)

Intersection #187 Walker Road/167th Avenue

Average Delay (sec/veh): 35.2 Worst Case Level Of Service: F

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	1 0	0	1 0	0	0	1! 0	0	1 0	0 1	0	1 0	0 1 0
Volume Module:												
Base Vol:	14	2	12	28	1	79	111	1278	34	17	1252	59
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	*1.00*	1.00	*1.00*	1.00	1.00	1.00
Initial Bse:	14	2	12	28	1	79	111	1278	34	17	1252	59
User Adj:	1.00	1.00	1.00	1.00	*1.00*	*1.00*	1.00	*1.00*	*1.00*	1.00	1.00	1.00
PHF Adj:	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
PHF Volume:	15	2	13	30	1	84	118	1357	36	18	1329	63
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	15	2	13	30	1	84	118	1357	36	18	1329	63
Adjusted Volume Module:												
Grade:	0%			0%			0%			01		
% Cycle/Cars:	xxxx	xxxx		0.00	0.98		0.00	0.98		0.00	0.99	
% Truck/Comb:	xxxx	xxxx		0.02	0.00		0.02	0.00		0.01	0.00	
PCE Adj:	1.10	1.10	1.10	xxxx	xxxx	xxxxx	xxxx	1.00	1.00	xxxx	1.00	1.00
Cycl/Car PCE:	xxxx	xxxx		0.50	1.00		0.50	1.00		0.50	1.00	
Trck/Cmb PCE:	xxxx	xxxx		1.50	2.00		1.50	2.00		1.50	2.00	
Adj Vol.:	16	2	14	30	1	85	119	1357	36	18	1329	63
Critical Gap Module:												
MoveUp Time:	3.4	3.3	2.6	3.4	3.3	2.6	2.1	xxxx	xxxxx	2.1	xxxx	xxxxx
Critical Gp:	6.5	6.0	5.5	6.5	6.0	5.5	5.0	xxxx	xxxxx	5.0	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	2913	2902	1375	2878	2889	1360	1392	xxxx	xxxxx	1393	xxxx	xxxxx
Potent Cap.:	22	33	278	23	33	283	372	xxxx	xxxxx	372	xxxx	xxxxx
Adj Cap:	0.49	0.65	1.00	0.63	0.65	1.00	1.00	xxxx	xxxxx	1.00	xxxx	xxxxx
Move Cap.:	11	21	278	14	22	283	372	xxxx	xxxxx	372	xxxx	xxxxx
Level Of Service Module:												
Stopped Del:	1674	189	13.5	2544	176	18.0	14.1	xxxx	xxxxx	10.2	xxxx	xxxxx
LOS by Move:	F	*	*	*	*	*	C	*	*	C	*	*
Movement:	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT
Shared Cap.:	xxxx	xxxx	102	xxxx	48	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Shrd StpDel:	xxxx	xxxx	41.4	xxxxx	2716	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	E	*	F	*	*	*	*	*	*	*
ApproachDel:	856.2			674.5			1.1			0.1		

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Beaverton Transportation System Plan
2015 BASE Traffic Conditions (existing geometry)
PM Peak Hour

Level Of Service computation Report
1994 HCM Operations Method (Base Volume Alternative)

Intersection #188 Walker Road/173rd Avenue

Cycle (sec): 100 Critical Vol./Cap. (X): 1.562
Loss Time (sec): 16 (Y+R = 4 sec) Average Delay (sec/veh) 347.7
Optimal Cycle: 180 Level Of Service: F

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1 0	0	1 0	*1 0*	*0*	*1 0*	1 0	0	1 0	1 0	0	1 0
Volume Module:												
Base Vol:	208	183	123	124	336	124	65	1121	299	171	1026	148
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	*1.00*	*1.00*	1.00	1.00	1.00
Initial Bse:	208	183	123	124	336	124	65	1121	299	171	1026	148
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
PHF Volume:	218	191	129	130	351	130	68	1173	313	179	1073	155
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	218	191	129	130	351	130	68	1173	313	179	1073	155
PCE Adj:	1.00	1.00	1.00	1.00	1.00	*1.00*	*1.00*	1.00	*1.00*	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	*1.00*	*1.00*	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final vol.:	218	191	129	130	351	130	68	1173	313	179	1073	155
Saturation F ow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.94	0.93	0.93	0.94	0.95	0.95	0.93	0.95	0.95	0.93	0.96	0.96
Lanes:	1.00	0.60	0.40	1.00	0.73	0.27	1.00	0.79	0.21	1.00	0.87	0.13
Final Sat.:	1787	1055	713	1787	1318	488	1770	1426	381	1770	1595	230
Capacity Analysis Module:												
Vol/Sat:	0.12	0.18	0.18	0.07	0.27	0.27	0.04	0.82	0.82	0.10	0.67	0.67
Crit Moves:	****				****			****		****		
Green/Cycle:	0.08	0.18	0.18	0.07	0.17	0.17	0.03	0.53	0.53	0.06	0.56	0.56
Volume/Cap:	1.56	1.02	1.02	1.02	1.56	1.56	1.20	1.56	1.56	1.56	1.20	1.20
Delay/Veh:	563.6	71.5	71.5	98.2	530	529.6	236.4	499	499.1	575.5	126	126.1
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	*1.00*	*1.00*	*1.00*	1.00	1.00	1.00
AdjDel/Veh:	563.6	71.5	71.5	98.2	530	529.6	236.4	499	499.1	575.5	126	126.1
Queue:	33	9	7	7	53	21	6	219	61	28	77	13

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Beaverton Transportation System Plan
2015 BASE Traffic Conditions (existing geometry)
PM Peak Hour

Level Of Service Computation Report
1994 HCM Operations Method (Base Volume Alternative)

Intersection #191 Cornell Road/158th Avenue

Cycle (sec): 90 Critical Vol./Cap. (X): 1.516
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh) 244.9
Optimal Cycle: 180 Level Of Service: F

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase Ovl			Split Phase Include			Protected Include			Protected Include		
Rights:												
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	2	0	0	0	2	0	0	0	0	0	0	2	0	1	1	0	2	0	1	0	0
Volume Module:																					
Base Vol:	995	0	1128	0	0	0	0	861	1101	824	936	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	995	0	1128	0	0	0	0	861	1101	824	936	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
PHF Volume:	1076	0	1219	0	0	0	0	931	1190	891	1012	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	1076	0	1219	0	0	0	0	931	1190	891	1012	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.03	1.00	1.13	1.00	1.00	1.00	1.00	1.00	1.00	1.03	1.00	1.00
Final Vol.:	1106	0	1378	0	0	0	0	931	1190	918	1012	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.93	1.00	0.83	1.00	1.00	1.00	1.00	0.99	0.84	0.94	0.99	1.00
Lanes:	2.00	0.00	2.00	0.00	0.00	0.00	0.00	1.00	1.00	2.00	1.00	0.00
Final Sat.:	3539	0	3167	0	0	0	0	1881	1599	3574	1881	0
Capacity Analysis Module:												
Vol/Sat:	0.31	0.00	0.44	0.00	0.00	0.00	0.00	0.49	0.74	0.26	0.54	0.00
Crit Moves:	****								****	****		
Green/Cycle:	0.21	0.00	0.38	0.00	0.00	0.00	0.00	0.49	0.49	0.17	0.66	0.00
Volume/Cap:	1.52	0.00	1.16	0.00	0.00	0.00	0.00	1.01	1.52	1.52	0.81	0.00
Level Of Service Module:												
Delay/Veh:	446.2	0.0	101.4	0.0	0.0	0.0	0.0	31.7	432.1	149.7	10.3	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	446.2	0.0	101.4	0.0	0.0	0.0	0.0	31.7	432.1	449.7	10.3	0.0
Queue:	144	0	74	0	0	0	0	32	179	119	20	0

Beaverton Transportation System Plan
2015 BASE Traffic Conditions (existing geometry)
PM Peak Hour

Level Of Service Computation Report
1994 HCM Operations Method (Base Volume Alternative)

Intersection #192 Walker Road/Murray Boulevard

Cycle (sec): 140 Critical Vol./Cap. (X): 1.440
Loss Time (sec): 16 (Y+R = 4 sec) Average Delay (sec/veh): 276.8
Optimal Cycle: 180 Level Of Service: F

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected Include			Protected Include			Protected Include			Protected Include		
Rights:												
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0	1	1	0	1	0	1	1	0	1	0	1	1	0	1	0	1	1	0
Volume Modul												
Base Vol:	244	1831	269	192	1501	217	379	755	186	198	700	154
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	244	1831	269	192	1501	217	379	755	186	198	700	154
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.32	0.92
PHF Volume:	265	1990	292	209	1632	236	412	821	202	215	761	167
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	265	1990	292	209	1632	236	412	821	202	215	761	167
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.05	1.05	1.00	1.05	1.05	1.00	1.05	1.05	1.00	1.05	1.05
Final Vol.:	265	2090	307	209	1713	248	412	862	212	215	799	176
Saturation F	ow Module:											
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.93	0.96	0.96	0.92	0.95	0.95	0.93	0.95	0.95	0.94	0.96	0.96
Lanes:	1.00	1.74	0.26	1.00	1.75	0.25	1.00	1.61	0.39	1.00	1.64	0.36
Final Sat.:	1770	3183	468	1752	3158	457	1770	2900	713	1787	2991	659
Capacity Ana	ysis Module:											
Vol/Sat:	0.15	0.66	0.66	0.12	0.54	0.54	0.23	0.30	0.30	0.12	0.27	0.27
Crit Moves:		****		****			****				****	
Green/Cycle:	0.12	0.46	0.46	0.08	0.42	0.42	0.16	0.25	0.25	0.10	0.19	0.19
Volume/Cap:	1.29	1.44	1.44	1.44	1.29	1.29	1.44	1.20	1.20	1.20	1.44	1.44
Level Of Service Module:												
Delay/Veh:	242.9	346	346.3	12.7	195	195.5	384.0	147	147.5	88.0	366	366.3
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	242.9	346	346.3	412.7	195	195.5	384.0	147	147.5	188.0	366	366.3
Queue:	26	298	46	28	166	26	53	66	18	18	101	24

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Beaverton Transportation System Plan
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Level Of Service Computation Report
1994 HCM Operations Method (Base Volume Alternative)

Intersection #193 Kinnaman/Farmington

Cycle (sec):	120		Critical Vol./Cap. (X):	1.612	
Loss Time (sec):	8 (Y+R = 4 sec)		Average Delay (sec/veh)	402.1	
Optimal Cycle:	180		Level Of Service:	F	

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	0	1! 0	0	0	1	1	0	0	1	0	0
Volume Module:												
Base Vol:	10	7	7	592	5	83	71	876	14	12	1385	426
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	10	7	7	592	5	83	71	876	14	12	1385	426
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
PHF Volume:	11	8	8	647	5	91	78	957	15	13	1514	466
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	11	8	8	647	5	91	78	957	15	13	1514	466
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	11	8	8	647	5	91	78	957	15	13	1514	466
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.43	0.43	0.43	0.84	0.84	0.84	0.10	0.98	0.98	0.05	0.95	0.95
Lanes:	0.41	0.29	0.30	0.99	0.01	1.00	1.00	0.98	0.02	1.00	0.76	0.24
Final Sat.:	333	242	242	1587	12	1599	186	1834	29	94	1381	425
Capacity Analysis Module:												
Vol/Sat:	0.03	0.03	0.03	0.41	0.41	0.06	0.42	0.52	0.52	0.14	1.10	1.10
Crit Moves:					****						****	
Green/Cycle:	0.25	0.25	0.25	0.25	0.25	0.25	0.68	0.68	0.68	0.68	0.68	0.68
Volume/Cap:	0.13	0.13	0.13	1.61	1.61	0.22	0.62	0.77	0.77	0.20	1.61	1.61
Level Of Service Module:												
Delay/Veh:	22.4	22.4	22.4	601.0	601	23.0	12.7	10.3	10.3	4.8	570	569.6
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	22.4	22.4	22.4	601.0	601	23.0	12.7	10.3	10.3	4.8	570	569.6
Queue:	0	0	0	110	2	2	2	22	1	0	xxxx	xxxxx

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Beaverton Transportation System Plan
2015 BASE Traffic Conditions (existing geometry)
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Level Of Service Computation Report
1994 HCM Unsignalized Method (Base Volume Alternative)

Intersection #194 Davis Road/155th Avenue

Average Delay (sec/veh):	1.0	Worst Case Level Of Service:	C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0	0	1! 0	0	0	0	0	0	0	0	1	0	0	1	0	0	0
Volume Module:																	
Base Vol:	39	0	18	0	0	0	0	270	121	46	396	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	39	0	18	0	0	0	0	270	121	46	396	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
PHF Volume:	45	0	21	0	0	0	0	311	139	53	456	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	45	0	21	0	0	0	0	311	139	53	456	0
Adjusted Volume Module:												
Grade:	0%			0%			0%			0%		
I Cycle/Cars:	xxxx	xxxx		xxxx	xxxx		0.00	0.99		xxxx	xxxx	
I Truck/Comb:	xxxx	xxxx		xxxx	xxxx		0.01	0.00		xxxx	xxxx	
PCE Adj:	1.10	1.10	1.10	1.10	1.10	1.10	xxxx	1.00	1.00	1.10	1.00	1.00
Cycl/Car PCE:	xxxx	xxxx		xxxx	xxxx		0.50	1.00		xxxx	xxxx	
Trck/Cmb PCE:	xxxx	xxxx		xxxx	xxxx		1.50	2.00		xxxx	xxxx	
Adj Vol.:	49	0	23	0	0	0	0	311	139	58	456	0
Critical Gap Module:												
MoveUp Time:	3.4	xxxx	2.6	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	2.1	xxxx	xxxxx
Critical Gp:	6.5	xxxx	5.5	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	5.0	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	889	xxxx	380	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	450	xxxx	xxxxx
Potent Cap.:	324	xxxx	888	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	1046	xxxx	xxxxx
Adj Cap:	0.92	xxxx	1.00	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	1.00	xxxx	xxxxx
Move Cap.:	299	xxxx	888	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	1046	xxxx	xxxxx
Level Of Service Module:												
Stopped Del:	14.2	xxxx	4.1	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	3.6	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	*	*	*	A	*	*
Movement:	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT
Shared Cap.:	xxxx	378	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Shrd StpDel:	xxxxx	11.5	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	C	*	*	*	*	*	*	*	*	*	*
ApproachDel:	11.0			0.0			0.0			0.4		

Beaverton Transportation System Plan
2015 BASE Traffic Conditions (existing geometry)
PM Peak Hour

Level Of Service Computation Report
1994 HCM Operations Method (Base Volume Alternative)

Intersection #198 Canyon Road/Walker Road

Cycle (sec): 100 Critical Vol./Cap. (X): 0.924
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh) 23.6
Optimal Cycle: 122 Level Of Service: C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	0	1! 0	0	0	1! 0	0	1	0	1	1	0'
Volume Module:												
Base Vol:	4	0	11	471	2	46	84	1373	1	7	1044	417
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	4	0	11	471	2	46	84	1373	1	7	1044	417
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
PHF Volume:	4	0	12	515	2	50	92	1502	1	8	1142	456
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	4	0	12	515	2	50	92	1502	1	8	1142	456
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.05	1.05	1.00	1.05	1.00
Final Vol.:	4	0	12	515	2	50	92	1577	1	8	1199	456
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.64	1.00	0.64	0.78	0.78	0.78	0.92	0.97	0.97	0.93	0.98	0.83
Lanes:	0.25	0.00	0.75	0.91	0.01	0.08	1.00	1.99	0.01	1.00	2.00	1.00
Final Sat.:	304	0	912	1353	5	131	1752	3687	2	1770	3725	1583
Capacity Analysis Module:												
Vol/Sat:	0.01	0.00	0.01	0.38	0.38	0.38	0.05	0.43	0.43	0.00	0.32	0.29
Crit Moves:					****			****		****		
Green/Cycle:	0.41	0.00	0.41	0.41	0.41	0.41	0.07	0.46	0.46	0.00	0.40	0.40
Volume/Cap:	0.03	0.00	0.03	0.92	0.92	0.92	0.80	0.92	0.92	0.92	0.80	0.72
Level Of Service Module:												
Delay/Veh:	11.3	0.0	11.3	32.3	32.3	32.3	50.7	22.8	22.8	213.9	19.3	18.9
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	11.3	0.0	11.3	32.3	32.3	32.3	50.7	22.8	22.8	213.9	19.3	18.9
Queue:	0	0	0	17	0	3	3	45	0	1	31	11

Beaverton Transportation System Plan
2015 BASE Traffic Conditions (existing geometry)
PM Peak Hour

Level Of Service Computation Report
1994 HCM Operations Method (Base Volume Alternative)

Intersection #199 Beaverton-Hillsdale Hwy/Western Avenue

Cycle (sec): 120 Critical Vol./Cap. (X): 1.340
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 161.7
Optimal Cycle: 180 Level Of Service: F

Approach:	North Round			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	1	0 1	0	0	0 0	0	1	1 0	1	0	2 0
Volume Module:												
Base Vol:	367	0	519	0	0	0	0	1337	292	590	1211	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	367	0	519	0	0	0	0	1337	292	590	1211	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
PHF Volume:	390	0	552	0	0	0	0	1421	310	627	1287	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	390	0	552	0	0	0	0	1421	310	627	1287	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.05	1.05	1.00	1.05	1.00
Final Vol.:	390	0	552	0	0	0	0	1492	326	627	1351	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.93	1.00	0.83	1.00	1.00	1.00	1.00	0.95	0.95	0.93	0.98	1.00
Lanes:	1.00	0.00	1.00	0.00	0.00	0.00	0.00	1.64	0.36	1.00	2.00	0.00
Final Sat.:	1770	0	1583	0	0	0	0	2966	648	1770	3725	0
Capacity Analysis Module:												
Vol/Sat:	0.22	0.00	0.35	0.00	0.00	0.00	0.00	0.50	0.50	0.35	0.36	0.00
Crit Moves:			****					****		****		
Green/Cycle:	0.26	0.00	0.26	0.00	0.00	0.00	0.00	0.38	0.38	0.26	0.64	0.00
Volume/Cap:	0.85	0.00	1.34	0.00	0.00	0.00	0.00	1.34	1.34	1.34	0.57	0.00
Level Of Service Module:												
Delay/Veh:	31.6	0.0	253.1	0.0	0.0	0.0	0.0	242	242.5	259.0	8.1	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	31.6	0.0	253.1	0.0	0.0	0.0	0.0	242	242.5	259.0	8.1	0.0
Queue:	14	0	56	0	0	0	0	151	35	63	26	0

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Beaverton Transportation System Plan
2015 BASE Traffic Conditions (existing geometry)
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Level Of Service Computation Report
1994 HCM Operations Method (Base Volume Alternative)

Intersection #200 Allen Boulevard/Western Avenue

Cycle (sec): 100 Critical Vol./Cap. (X): 3.032
Loss Time (sec): 8 (Y+R = 4 sec) Average Delay (sec/veh): 2279.8
Optimal Cycle: 180 Level Of Service: F

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	0	0	1	0	0	1	0	1	0	0	1
Volume Module:												
Base Vol:	0	0	0	468	0	707	416	766	0	0	728	300
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	468	0	707	416	766	0	0	728	300
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
PHF Volume:	0	0	0	522	0	788	464	854	0	0	812	334
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	522	0	788	464	854	0	0	812	334
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.05	1.00
Final Vol.:	0	0	0	522	0	788	464	854	0	0	852	334
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	0.92	1.00	0.83	0.11	0.97	1.00	1.00	0.98	0.83
Lanes:	0.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	0.00	0.00	2.00	1.00
Final Sat.:	0	0	0	1752	0	1568	203	1845	0	0	3725	1583
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.30	0.00	0.50	2.29	0.46	0.00	0.00	0.23	0.21
Crit Moves:						****	****					
Green/Cycle:	0.00	0.00	0.00	0.17	0.00	0.17	0.75	0.75	0.00	0.00	0.75	0.75
Volume/Cap:	0.00	0.00	0.00	1.80	0.00	3.03	3.03	0.61	0.00	0.00	0.30	0.28
Level Of Service Module:												
Delay/Veh:	0.0	0.0	0.0	950.8	0.0	6561	6513	4.0	0.0	0.0	2.5	2.5
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	950.8	0.0	6561	6513	4.0	0.0	0.0	2.5	2.5
Queue:	0	0	0	114	0	650	XXXX	11	0	0	8	3

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Beaverton Transportation System Plan
2015 BASE Traffic Conditions (existing geometry)
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Level Of Service Computation Report
1994 HCM Operations Method (Base Volume Alternative)

Intersection #202 Laurelwood Avenue/Beaverton-Hillsdale Hwy

Cycle (sec): 90 Critical Vol./Cap. (X): 1.252
Loss Time (sec): 8 (Y+R = 4 sec) Average Delay (sec/veh): 29.8
Optimal Cycle: 180 Level Of Service: D

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	0	1	1	0	0	0	0	1!	0	0	1	0	1	1	0	1	0	1	1	0
Volume Module:																					
Base Vol:	64	103	85	181	76	43	32	1339	106	99	1219	172
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	64	103	85	181	76	43	32	1339	106	99	1219	172
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
PHF Volume:	66	106	88	187	78	44	33	1382	109	102	1258	178
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	66	106	88	187	78	44	33	1382	109	102	1258	178
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.05	1.05	1.00	1.05	1.05
Final Vol.:	66	106	88	187	78	44	33	1451	115	102	1321	186
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.67	0.67	0.67	0.44	0.44	0.44	0.07	0.98	0.98	0.07	0.97	0.97
Lanes:	0.25	0.41	0.34	0.61	0.25	0.14	1.00	1.85	0.15	1.00	1.75	0.25
Final Sat.:	325	522	433	511	213	120	132	3451	274	132	3232	455
Capacity Analysis Module:												
Vol/Sat:	0.20	0.20	0.20	0.37	0.37	0.37	0.25	0.42	0.42	0.77	0.41	0.41
Crit Moves:					****					****		
Green/Cycle:	0.29	0.29	0.29	0.29	0.29	0.29	0.62	0.62	0.62	0.62	0.62	0.62
Volume/Cap:	0.70	0.70	0.70	1.25	1.25	1.25	0.41	0.68	0.68	1.25	0.66	0.66
Level Of Service Module:												
Delay/Veh:	22.1	22.1	22.1	191.9	192	191.9	7.4	7.9	7.9	230.1	7.7	7.7
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	22.1	22.1	22.1	191.9	192	191.9	7.4	7.9	7.9	230.1	7.7	7.7
Queue:	2	3	2	15	7	5	0	24	2	11	22	3

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Beaverton Transportation System Plan
2015 BASE Traffic Conditions (existing geometry)
PM Peak Hour

Level Of Service Computation Report
1994 HCM Operations Method (Base Volume Alternative)

Intersection #203 Hall Boulevard/Denney Road

Cycle (sec): 100 Critical Vol./Cap. (X): 1.174
Lo88 Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 69.5
Optimal Cycle: 180 Level Of Service: F

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Split Phase			Split Phase		
Rights:	Ovl			Include			Include			Ovl		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	0	2	0	1	1	0	2	0	0	0	0	0	0	1	0	0	0	0	1
Volume Module:												
Base Vol:	0	1268	653	152	1277	0	0	0	0	940	0	277
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	1268	653	152	1277	0	0	0	0	940	0	277
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
PHF Volume:	0	1365	703	164	1375	0	0	0	0	1012	0	298
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	1365	703	164	1375	0	0	0	0	1012	0	298
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.05	1.00	1.00	1.05	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	0	1433	703	164	1443	0	0	0	0	1012	0	298
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	0.99	0.84	0.94	0.99	1.00	1.00	1.00	1.00	0.95	1.00	0.85
Lanes:	0.00	2.00	1.00	1.00	2.00	0.00	0.00	0.00	0.00	1.00	0.00	1.00
Final Sat.:	0	3762	1599	1787	3762	0	0	0	0	1805	0	1615
Capacity Analysis Module:												
Vol/Sat:	0.00	0.38	0.44	0.09	0.38	0.00	0.00	0.00	0.00	0.56	0.00	0.18
Crit Moves:		tttt		****						tttt		
Green/Cycle:	0.00	0.32	0.80	0.08	0.40	0.00	0.00	0.00	0.00	0.48	0.00	0.56
Volume/Cap:	0.00	1.17	0.55	1.17	0.95	0.00	0.00	0.00	0.00	1.17	0.00	0.33
Level Of Service Module:												
Delay/Veh:	0.0	114	2.7	168.2	28.7	0.0	0.0	0.0	0.0	112.9	0.0	7.9
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	114	2.7	168.2	28.7	0.0	0.0	0.0	0.0	112.9	0.0	7.9
Queue:	0	84	7	12	44	0	0	0	0	63	0	5

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Beaverton Transportation System Plan
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Level Of Service Computation Report
1994 HCM Unsignalized Method (Base Volume Alternative)

Intersection #205 Denney Road/Hwy 217 SB ramps

Average Delay (sec/veh): 25.6 Worst Case Level Of Service: F

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0	0	0	0	0	0	0	1	0	0	1	0	0	0	1	0	1	0	1	0
Volume Module:												
Base Vol:	0	0	0	90	5	518	0	619	171	176	592	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	90	5	518	0	619	171	176	592	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
PHF Volume:	0	0	0	97	5	561	0	670	185	190	641	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	0	0	0	97	5	561	0	670	185	190	641	0
Adiusted Volume Module:												
Grade:	0%			0%			0%			0%		
% Cycle/Cars:	xxxx	xxxx		0.00	0.97		0.00	0.96		0.00	0.99	
% Truck/Comb:	xxxx	xxxx		0.03	0.00		0.04	0.00		0.01	0.00	
PCE Adj:	1.10	1.10	1.10	xxxx	xxxx	xxxxx	xxxx	1.00	1.00	xxxx	1.00	1.00
Cycl/Car PCE:	xxxx	xxxx		0.50	1.00		0.50	1.00		0.50	1.00	
Trck/Cmb PCE:	xxxx	xxxx		1.50	2.00		1.50	2.00		1.50	2.00	
Adj Vol.:	0	0	0	99	5	569	0	670	185	191	641	0
Critical Gap Module:												
MoveUp Time:	xxxxx	xxxx	xxxxx	3.4	3.3	2.6	xxxxx	xxxx	xxxxx	2.1	xxxx	xxxxx
Critical Gp:	xxxxx	xxxx	xxxxx	6.5	6.0	5.5	xxxxx	xxxx	xxxxx	5.0	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	1594	1686	641	xxxx	xxxx	xxxxx	855	xxxx	xxxxx
Potent cap.:	xxxx	xxxx	xxxxx	126	142	656	xxxx	xxxx	xxxxx	671	xxxx	xxxxx
Adj Cap:	xxxx	xxxx	xxxxx	0.71	0.71	1.00	xxxx	xxxx	xxxxx	1.00	xxxx	xxxxx
Move Cap.:	xxxx	xxxx	xxxxx	90	102	656	xxxx	xxxx	xxxxx	671	xxxx	xxxxx
Level Of Service Module:												
Stopped Del:	xxxxx	xxxx	xxxxx	396.2	37.4	34.6	xxxxx	xxxx	xxxxx	7.5	xxxx	xxxxx
LOS by Move:	*	*	*	f	f	E	*	*	*	B	*	*
Movement:	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT
Shared Cap.:	xxxx	xxxx	xxxxx	91	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Shrd StpDel:	xxxxx	xxxx	xxxxx	464.6	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	F	f	*	*	*	*	*	*	f
ApproachDel:	0.0			87.7			0.0			1.7		

Beaverton Transportation System Plan
2015 BASE Traffic Conditions (existing geometry)
PM Peak Hour

Level Of Service Computation Report
1994 HCM Unsignalized Method (Base Volume Alternative)

Intersection #207 Denney Road/Hwy 217 NB ramps

Average Delay (sec/veh): 900.6 Worst Case Level Of Service: F

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 1	0	0 1	0 0	1! 0	0	1 0	1	0 0	0 0	0	1 0
Volume Module:												
Base Vol:	222	4	191	0	0	0	408	312	0	0	531	126
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	222	4	191	0	0	0	408	312	0	0	531	126
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
PHF Volume:	255	5	219	0	0	0	468	358	0	0	610	145
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	255	5	219	0	0	0	468	358	0	0	610	145
Adjusted Volume Module:												
Grade:	0%			0t			0%			0t		
% Cycle/Cars:	0.00	0.98		xxxx	xxxx		0.00	0.97		0.00	0.99	
t Truck/Comb:	0.02	0.00		xxxx	xxxx		0.03	0.00		0.01	0.00	
PCE Adj:	xxxx	xxxx	xxxxx	1.10	1.10	1.10	xxxx	1.00	1.00	xxxx	1.00	1.00
Cycl/Car PCE:	0.50	1.00		xxxx	xxxx		0.50	1.00		0.50	1.00	
Trck/Cmb PCE:	1.50	2.00		xxxx	xxxx		1.50	2.00		1.50	2.00	
Adj Vol.:	257	5	221	0	0	0	475	358	0	0	610	145
Critical Gap Module:												
MoveUp Time:	3.4	3.3	2.6	xxxxx	xxxx	xxxxx	2.1	xxxx	xxxxx	Xxxxx	xxxx	xxxxx
Critical Gp:	6.5	6.0	5.5	xxxxx	xxxx	xxxxx	5.0	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	1509	1581	358	xxxx	xxxx	xxxxx	754	xxxx	xxxxx	xxxx	xxxx	xxxxx
Potent Cap.:	142	161	912	xxxx	xxxx	xxxxx	749	Xxxx	xxxxx	xxxx	xxxx	xxxxx
Adj Cap:	0.37	0.37	1.00	xxxx	xxxx	xxxxx	1.00	xxxx	xxxxx	xxxx	xxxx	xxxxx
Move Cap.:	52	59	912	xxxx	xxxx	xxxxx	749	xxxx	xxxxx	xxxx	xxxx	xxxxx
Level Of Service Module:												
Stopped Del:	7218	66.1	5.2	xxxxx	xxxx	xxxxx	12.7	Xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	•	*	B	*	*	*	C	*	*	*	*	*
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	52	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Shrd StpDel:	7357	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	Xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	F	*	•	*	*	*	*	*	*	*	*	*
ApproachDel:	3845.5			0.0			7.3			0.0		

Beaverton Transportation System Plan
2015 BASE Traffic Conditions (existing geometry)
PM Peak Hour

Level Of Service Computation Report
1994 HCM Operations Method (Base Volume Alternative)

Intersection #214 Denney Road/Scholls Perry Road

Cycle (sec): 100 Critical Vol./Cap. (X): 0.981
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 29.0
Optimal Cycle: 166 Level Of Service: D

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Permitted			Permitted		
Right8:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1 0	0	1 0	1	0	1	0 1	0	1	0 0	0	1 0
Volume Module:												
Base Vol:	167	730	1	2	933	347	242	6	131	0	4	1
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	167	730	1	2	933	347	242	6	131	0	4	1
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
PHF Volume:	171	746	1	2	953	354	247	6	134	0	4	1
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	171	746	1	2	953	354	247	6	134	0	4	1
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	171	746	1	2	953	354	247	6	134	0	4	1
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.93	0.98	0.98	0.93	0.98	0.83	0.80	0.80	0.80	1.00	0.87	0.87
Lanes:	1.00	0.99	0.01	1.00	1.00	1.00	0.64	0.01	0.35	0.00	0.80	0.20
Final Sat.:	1770	1860	2	1770	1863	1583	970	24	526	0	1322	331
Capacity Analysis Module:												
Vol/Sat:	0.10	0.40	0.40	0.00	0.51	0.22	0.25	0.25	0.25	0.00	0.00	0.00
Crit Moves:	****				****			****				
Green/Cycle:	0.10	0.62	0.62	0.00	0.52	0.52	0.26	0.26	0.26	0.00	0.26	0.26
Volume/Cap:	0.98	0.65	0.65	0.65	0.98	0.43	0.98	0.98	0.98	0.00	0.01	0.01
Level Of Service Module:												
Delay/Veh:	75.9	8.8	8.8	142.5	33.3	9.7	53.9	53.9	53.9	0.0	17.8	17.8
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	75.9	8.8	8.8	142.5	33.3	9.7	53.9	53.9	53.9	0.0	17.8	17.8
Queue:	8	14	0	0	32	6	10	1	6	0	0	0

Beaverton Transportation System Plan
2015 BASE Traffic Conditions (existing geometry)
PM Peak Hour

Level Of Service Computation Report
1994 HCM Operations Method (Base Volume Alternative)

Intersection #215 Allen Boulevard/Scholls Ferry Road

Cycle (sec): 120 Critical Vol./Cap. (X): 1.169
Loss Time (sec): 16 (Y+R = 4 sec) Average Delay (sec/veh): 89.4
Optimal Cycle: 180 Level Of Service: F

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:		Ovl			Ovl			Include			Ovl	
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0	1	0	1	1	0	1	0	1	0	1	0	1	0	1	0	1
Volume Module:												
Base Vol:	62	718	154	147	720	145	201	609	82	249	654	308
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	62	718	154	147	720	145	201	609	82	249	654	308
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
PHF Volume:	64	740	159	152	742	149	207	628	85	257	674	318
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	64	740	159	152	742	149	207	628	85	257	674	318
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	64	740	159	152	742	149	207	628	85	257	674	318
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.93	0.98	0.83	0.94	0.99	0.84	0.94	0.97	0.97	0.94	0.99	0.84
Lanes:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.88	0.12	1.00	1.00	1.00
Final Sat.:	1770	1863	1583	1787	1881	1599	1787	1624	220	1787	1881	1599
Capacity Analysis Module:												
Vol/Sat:	0.04	0.40	0.10	0.09	0.39	0.09	0.12	0.39	0.39	0.14	0.36	0.20
Crit Moves:		****			****			****			****	
Green/Cycle:	0.03	0.34	0.46	0.07	0.38	0.49	0.11	0.33	0.33	0.12	0.34	0.42
Volume/Cap:	1.04	1.17	0.22	1.17	1.04	0.19	1.04	1.17	1.17	1.17	1.04	0.48
Level Of Service Module:												
Delay/Veh:	144.2	122	12.5	173.9	62.3	11.2	98.3	123	123.2	153.5	65.3	16.9
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	144.2	122	12.5	173.9	62.3	11.2	98.3	123	123.2	153.5	65.3	16.9
Queue:	5	49	3	12	35	3	12	42	7	18	32	8

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Beaverton Transportation System Plan
2015 BASE Traffic Conditions (existing geometry)
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Level Of Service Computation Report
1994 HCM Operations Method (Base Volume Alternative)

Intersection #218 Hall Boulevard/Hart Road

Cycle (sec): 100 Critical Vol./Cap. (X): 0.932
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 17.1
Optimal Cycle: 127 Level Of Service: C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Split Phase			Split Phase		
Rights:		Include			Ovl			Ovl			Include	
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0	2	0	0	0	0	2	0	1	1	0	0	0	1	0	0	0	0	0
Volume Module:												
Base Vol:	272	1479	0	0	1588	565	284	0	132	0	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	272	1479	0	0	1588	565	284	0	132	0	0	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
PHF Volume:	296	1608	0	0	1726	614	309	0	143	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	296	1608	0	0	1726	614	309	0	143	0	0	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.05	1.00	1.00	1.05	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	296	1688	0	0	1812	614	309	0	143	0	0	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.94	0.99	1.00	1.00	0.99	0.84	0.94	1.00	0.84	1.00	1.00	1.00
Lanes:	1.00	2.00	0.00	0.00	2.00	1.00	1.00	0.00	1.00	0.00	0.00	0.00
Final Sat.:	1787	3762	0	0	3762	1599	1787	0	1599	0	0	0
Capacity Analysis Module:												
Vol/Sat:	0.17	0.45	0.00	0.00	0.48	0.38	0.17	0.00	0.09	0.00	0.00	0.00
Crit Moves:	****				****		****					
Green/Cycle:	0.18	0.69	0.00	0.00	0.52	0.70	0.19	0.00	0.36	0.00	0.00	0.00
Volume/Cap:	0.93	0.65	0.00	0.00	0.93	0.55	0.93	0.00	0.25	0.00	0.00	0.00
Level Of Service Module:												
Delay/Veh:	50.1	5.9	0.0	0.0	21.0	5.1	49.2	0.0	14.4	0.0	0.0	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	50.1	5.9	0.0	0.0	21.0	5.1	49.2	0.0	14.4	0.0	0.0	0.0
Queue:	11	26	0	0	51	8	11	0	3	0	0	0

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Level Of Service Computation Report
1994 HCM Operations Method (Base Volume Alternative)

Intersection #219 Murray Boulevard/Hart Road

Cycle (sec): 100 Critical Vol./Cap. (X): 1.258
Loss Time (sec): 16 (Y+R = 4 sec) Average Delay (sec/veh) 106.3
Optimal Cycle: 180 Level Of Service: F

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Ovl			Ovl			Ovl		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0	1	1	0	1	0	2	0	1	1	0	1	0	1	0	1	0	1	0	1	0	1	0
Volume Module:												
Base Vol:	205	1229	48	29	1792	336	174	139	195	102	500	45
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	205	1229	48	29	1792	336	174	139	195	102	500	45
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
PHF Volume:	222	1329	52	31	1937	363	188	150	211	110	541	49
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	222	1329	52	31	1937	363	188	150	211	110	541	49
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.05	1.05	1.00	1.05	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	222	1395	54	31	2034	363	188	150	211	110	541	49
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.93	0.97	0.97	0.94	0.99	0.84	0.93	0.98	0.83	0.95	1.00	0.85
Lanes:	1.00	1.93	0.07	1.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Sat.:	1770	3551	137	1787	3762	1599	1770	1863	1583	1805	1900	1615
Capacity Analysis Module:												
Vol/Sat:	0.13	0.39	0.39	0.02	0.54	0.23	0.11	0.08	0.13	0.06	0.28	0.03
Crit Moves:	****				tttt		tttt				tttt	
Green/Cycle:	0.10	0.51	0.51	0.02	0.43	0.51	0.08	0.21	0.31	0.10	0.23	0.25
Volume/Cap:	1.26	0.78	0.78	0.78	1.26	0.44	1.26	0.38	0.43	0.63	1.26	0.12
Level Of Service Module:												
Delay/Veh:	216.4	14.4	14.4	70.4	166	10.1	223.3	22.0	18.0	32.7	188	18.8
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	216.4	14.4	14.4	70.4	166	10.1	223.3	22.0	18.0	32.7	188	18.8
Queue:	18	32	2	1	157	6	16	4	5	3	42	1

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Beaverton Transportation System Plan
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Level Of Service Computation Report
1994 HCM Operations Met-hod (Base Volume Alternative)

Intersection #220 Hart Road/155th Avenue

Cycle (sec): 100 Critical Vol./Cap. (X): 1.751
Loss Time (sec): 8 (Y+R = 4 sec) Average Delay (sec/veh): 538.8
Optimal Cycle: 180 Level Of Service: F

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	0	1!	0	0	0	0	1!	0	0	0	0	1!	0	0	0	1!	0	0	0	1!	0	0
Volume Module:												
Base Vol:	93	48	108	22	104	14	9	409	148	245	773	16
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	93	48	108	22	104	14	9	409	148	245	773	16
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
PHF Volume:	105	54	122	25	117	16	10	462	167	277	872	18
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	105	54	122	25	117	16	10	462	167	277	872	18
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	105	54	122	25	117	16	10	462	167	277	872	18
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.52	0.52	0.52	0.75	0.75	0.75	0.77	0.77	0.77	0.35	0.52	0.35
Lanes:	0.37	0.19	0.44	0.16	0.74	0.10	0.02	0.72	0.26	0.32	0.66	0.02
Final Sat.:	371	191	431	225	1054	144	23	1054	381	209	657	14
Capacity Analysis Module:												
Vol/Sat:	0.28	0.28	0.28	0.11	0.11	0.11	0.44	0.44	0.44	1.33	1.33	1.33
Crit Moves:		****									****	
Green/Cycle:	0.16	0.16	0.16	0.16	0.16	0.16	0.76	0.76	0.76	0.76	0.76	0.76
Volume/Cap:	1.75	1.75	1.75	0.69	0.69	0.69	0.58	0.58	0.58	1.75	1.75	1.75
Level Of Service Module:												
Delay/Veh:	880.4	880	880.4	31.1	31.1	31.1	3.9	3.9	3.9	818.2	818	818.2
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	880.4	880	880.4	31.1	31.1	31.1	3.9	3.9	3.9	818.2	818	818.2
Queue:	24	13	27	1	4	1	0	6	2	xxxx	xxxx	xxxxx

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Level Of Service Computation Report
1994 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #221 Hart-Bany/170th Avenue

Cycle (sec):	1	Critical Vol./Cap. (X):	1.46
Loss Time (sec):	0	Average Delay (sec/veh)	15.5
Optimal Cycle:	0	Level Of Service:	F

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Lanes:	0 0	1! 0	0	0 0	1! 0	0	0 0	1 1 0	0	0 0	1! 0	0
Volume Module:												
Base Vol:	38	331	42	232	541	129	63	160	48	43	297	148
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	38	331	42	232	541	129	63	160	48	43	297	148
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
PHF Volume:	42	363	46	254	593	141	69	175	53	47	326	162
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	42	363	46	254	593	141	69	175	53	47	326	162
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	42	363	46	254	593	141	69	175	53	47	326	162
Saturation Flow Module:												
Sat/Lane:	590	590	590	702	702	702	407	407	407	370	370	370
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lane6:	0.09	0.81	0.10	0.26	0.60	0.14	0.23	0.59	0.18	0.09	0.61	0.30
Final Sat.:	55	475	60	180	421	100	95	240	73	33	225	112
Capacity Analysis Module:												
Vol/Sat:	0.76	0.76	0.76	1.41	1.41	1.41	0.73	0.73	0.73	1.45	1.45	1.45
Crit Moves:		****				****	****					****
Level Of Service Module:												
Delay/Veh:	18.3	18.3	18.3	210.2	210	210.2	16.0	16.0	16.0	243.4	243	243.4
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	18.3	18.3	18.3	210.2	210	210.2	16.0	16.0	16.0	243.4	243	243.4
LOS by Move:	C	C	C	F	F	F	C	C	C	F	F	F

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Beaverton Transportation System Plan
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Level Of Service Computation Report
1994 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #222 Hart Road/Sorrento Avenue

Cycle (sec):	1	Critical Vol./Cap. (X):	0.795
Loss Time (sec):	12	Average Delay (sec/veh)	14.9
Optimal Cycle:	0	Level Of Service:	C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Lanes:	0 0	1 1	0 0	0 0	0 0	0 0	0 0	0 1	0	0 1	0 0	0
Volume Module:												
Base Vol:	86	0	77	0	0	0	0	172	142	174	546	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	86	0	77	0	0	0	0	172	142	174	546	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
PHF Volume:	91	0	82	0	0	0	0	182	150	184	578	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	91	0	82	0	0	0	0	182	150	184	578	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	91	0	82	0	0	0	0	182	150	184	578	0
Saturation Flow Module:												
Sat/Lane:	327	327	327	0	0	0	694	694	694	959	959	959
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.53	0.00	0.47	0.00	0.00	0.00	0.00	0.55	0.45	0.24	0.76	0.00
Final Sat.:	172	0	155	0	0	0	0	380	314	232	727	0
Capacity Analysis Module:												
Vol/Sat:	0.53	0.00	0.53	0.00	0.00	0.00	0.00	0.48	0.48	0.79	0.79	0.00
Crit Moves:			****			****			****	****		
Level Of Service Module:												
Delay/Veh:	7.5	0.0	7.5	0.0	0.0	0.0	0.0	6.2	6.2	20.5	20.5	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	7.5	0.0	7.5	0.0	0.0	0.0	0.0	6.2	6.2	20.5	20.5	0.0
LOS by Move:	B	*	B	*	*	*	*	B	B	D	D	*

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Beaverton Transportation System Plan
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Level Of Service Computation Report
1994 HCM Unsignalized Method (Base Volume Alternative)

Intersection #223 Brockman Road/Sorrento Avenue

Average Delay (sec/veh): 4.9 Worst Case Level Of Service: F

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0	0	0 0 0	1	0	0 0 1	1	0	1 0 0	0	0	0 1 0
Volume Module:												
Base Vol:	0	0	0	75	0	101	16	445	0	0	940	105
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	75	0	101	16	445	0	0	940	105
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
PHF Volume:	0	0	0	83	0	111	18	491	0	0	1036	116
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	0	0	0	83	0	111	18	491	0	0	1036	116
Adjusted Volume Module:												
Grade:	0%			0%			0%			0%		
Cycle/Cars:	xxxx	xxxx		0.00	0.99		0.00	0.99		0.00	0.99	
Truck/Comb:	xxxx	xxxx		0.01	0.00		0.01	0.00		0.01	0.00	
PCE Adj:	1.10	1.10	1.10	xxxx	xxxx	xxxxx	xxxx	1.00	1.00	xxxx	1.00	1.00
Cycl/Car PCE:	xxxx	xxxx		0.50	1.00		0.50	1.00		0.50	1.00	
Trck/Cmb PCE:	xxxx	xxxx		1.50	2.00		1.50	2.00		1.50	2.00	
Adj Vol.:	0	0	0	83	0	112	18	491	0	0	1036	116
Critical Gap Module:												
MoveUp Time:	xxxxx	xxxx	xxxxx	3.4	xxxx	2.6	2.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Critical Gp:	xxxxx	xxxx	xxxxx	6.5	xxxx	5.5	5.0	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	1603	xxxx	1094	1152	xxxx	xxxxx	xxxx	xxxx	xxxxx
Potent Cap.:	xxxx	xxxx	xxxxx	125	xxxx	386	484	xxxx	xxxxx	xxxx	xxxx	xxxxx
Adj Cap:	xxxx	xxxx	xxxxx	0.96	xxxx	1.00	1.00	xxxx	xxxxx	xxxx	xxxx	xxxxx
Move Cap.:	xxxx	xxxx	xxxxx	120	xxxx	386	484	xxxx	xxxxx	xxxx	xxxx	xxxxx
Level Of Service Module:												
Stopped Del:	xxxxx	xxxx	xxxxx	89.2	xxxx	13.1	7.7	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	F	*	C	B	*	*	*	*	*
Movement:	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Shrd StpDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	*
ApproachDel:	0.0			45.5			0.3			0.0		

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Level Of Service Computation Report
1994 HCM Operations Method (Base Volume Alternative)

Intersection #224 Murray Boulevard/Brockman Road

Cycle (sec): 100 Critical Vol./Cap. (X): 1.015
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 34.4
Optimal Cycle: 180 Level Of Service: D

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0	1 1 0	1	0	1 1 0	1	0	0 1 0	1	0	0 1 0
Volume Module:												
Base Vol:	105	1199	113	124	1456	130	53	208	82	176	459	101
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	105	1199	113	124	1456	130	53	208	82	176	459	101
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
PHF Volume:	111	1270	120	131	1542	138	56	220	87	186	486	107
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	111	1270	120	131	1542	138	56	220	87	186	486	107
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.05	1.05	1.00	1.05	1.05	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	111	1334	126	131	1619	145	56	220	87	186	486	107
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.93	0.97	0.97	0.94	0.98	0.98	0.11	0.92	0.92	0.27	0.95	0.95
Lanes:	1.00	1.83	0.17	1.00	1.84	0.16	1.00	0.72	0.28	1.00	0.82	0.18
Final Sat.:	1770	3370	318	1787	3419	306	201	1257	497	522	1481	326
Capacity Analysis Module:												
Vol/Sat:	0.06	0.40	0.40	0.07	0.47	0.47	0.28	0.18	0.18	0.36	0.33	0.33
Crit Moves:	****				****					****		
Green/Cycle:	0.06	0.45	0.45	0.08	0.47	0.47	0.35	0.35	0.35	0.35	0.35	0.35
Volume/Cap:	1.01	0.89	0.89	0.89	1.01	1.01	0.79	0.50	0.50	1.01	0.93	0.93
Level Of Service Module:												
Delay/Veh:	101.6	21.0	21.0	59.0	37.3	37.3	47.6	17.0	17.0	76.6	35.4	35.4
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	101.6	21.0	21.0	59.0	37.3	37.3	47.6	17.0	17.0	76.6	35.4	35.4
Queue:	6	37	5	5	58	7	2	5	2	9	16	5

Beaverton Transportation System Plan
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Level Of Service Computation Report
1994 HCM Unsignalized Method (Base Volume Alternative)

Intersection #225 Murray Boulevard/Maverick Terrace

Average Delay (sec/veh): 6.3 Worst Case Level Of Service: F

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Lanes:	1 0 1	1 0		1 0 2	0 0		0 0 1!	0 0		0 0 1!	0 0	
Volume Module:												
Base Vol:	0	1336	12	32	1733	0	0	0	0	7	0	9
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	1336	12	32	1733	0	0	0	0	7	0	9
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
PHF Volume:	0	1501	13	36	1947	0	0	0	0	8	0	10
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	0	1501	13	36	1947	0	0	0	0	8	0	10
Adjusted Volume Module:												
Grade:	0%			0%			0%			0%		
% Cycle/Cars:	0.00	0.98		0.00	0.99		xxxx	xxxx		xxxx	xxxx	
% Truck/Comb:	0.02	0.00		0.01	0.00		xxxx	xxxx		xxxx	xxxx	
PCE Adj:	xxxx	1.00	1.00	xxxx	1.00	1.00	1.10	1.10	1.10	1.10	1.10	1.10
Cycl/Car PCE:	0.50	1.00		0.50	1.00		xxxx	xxxx		xxxx	xxxx	
Trck/Cmb PCE:	1.50	2.00		1.50	2.00		xxxx	xxxx		xxxx	xxxx	
Adj Vol.:	0	1501	13	36	1947	0	0	0	0	9	0	11
Critical Gap Module:												
MoveUp Time:	xxxxx	xxxx	xxxxx	2.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	3.4	xxxx	2.6
Critical Gp:	xxxxx	xxxx	xxxxx	5.5	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.0	xxxx	5.5
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	1515	xxxx	xxxxx	xxxx	xxxx	xxxxx	3491	xxxx	757
Potent Cap.:	xxxx	xxxx	xxxxx	264	xxxx	xxxxx	xxxx	xxxx	xxxxx	6	xxxx	572
Adj Cap:	xxxx	xxxx	xxxxx	1.00	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.86	xxxx	1.00
Move Cap.:	xxxx	xxxx	xxxxx	264	xxxx	xxxxx	xxxx	xxxx	Mxxx	5	xxxx	572
Level Of Service Module:												
Stopped Del:	xxxxx	xxxx	xxxxx	15.8	xxxx	xxxxx	xxxxx	xxxx	xxxxx	2493	xxxx	6.4
LOS by Move:	*	*	*	C	*	*	*	*	*	*	*	*
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	12	xxxxx
Shrd StpDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	1730	xxxxx
Shared LOS:	*	*	*	*	*	*	*	*	*	*	F	*
ApproachDel:	0.0			0.3			0.0			1094.2		

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Level Of Service Computation Report
1994 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #226 155th Avenue/Nora-Beard (Brockman)

Cycle (sec):	1	Critical Vol./Cap. (X):	0.905
Loss Time (sec):	0	Average Delay (sec/veh)	18.2
Optimal Cycle:	0	Level Of Service:	C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Lanes:	0 0 1!	0	0	0 0 1!	0	0	0 0 1!	0	0	0 0 1!	0	0
Volume Module:												
Base Vol:	1	90	45	111	154	15	7	97	2	74	257	172
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	1	90	45	111	154	15	7	97	2	74	257	172
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
PHF Volume:	1	99	49	122	169	16	8	106	2	81	282	189
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	1	99	49	122	169	16	8	106	2	81	282	189
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	1	99	49	122	169	16	8	106	2	81	282	189
Saturation Flow Module:												
Sat/Lane:	362	362	362	576	576	576	534	534	534	610	610	610
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.01	0.66	0.33	0.40	0.55	0.05	0.07	0.91	0.02	0.15	0.51	0.34
Final Sat.:	2	241	119	229	317	30	37	488	9	90	312	209
Capacity Analysis Module:												
Vol/Sat:	0.41	0.41	0.41	0.53	0.53	0.53	0.22	0.22	0.22	0.90	0.90	0.90
Crit Moves:			****			****			****			****
Level Of Service Module:												
Delay/Veh:	4.8	4.8	4.8	7.6	7.6	7.6	2.3	2.3	2.3	31.1	31.1	31.1
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	4.8	4.8	4.8	7.6	7.6	7.6	2.3	2.3	2.3	31.1	31.1	31.1
LOS by Move:	A	A	A	B	B	B	A	A	A	E	E	E

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Level Of Service Computation Report
1994 HCM Operations Method (Base Volume Alternative)

Intersection #227 Brockman Road/125th Avenue

Cycle (sec): 100 Critical Vol./Cap. (X): 2.092
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 1419.6
Optimal Cycle: 180 Level Of Service: F

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	1	0	1	0	0	0	1!	0	0	0	1
Volume Module:												
Base Vol:	244	326	68	41	378	167	155	223	134	173	645	48
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	244	326	68	41	378	167	155	223	134	173	645	48
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
PHF Volume:	277	370	77	46	429	189	176	253	152	196	731	54
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	277	370	77	46	429	189	176	253	152	196	731	54
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	277	370	77	46	429	189	176	253	152	196	731	54
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.94	0.96	0.96	0.86	0.86	0.86	0.27	0.27	0.84	0.42	0.42	0.42
Lanes:	0.78	1.01	0.21	0.07	0.65	0.28	0.41	0.59	1.00	0.20	0.75	0.05
Final Sat.:	1385	1850	385	113	1056	465	208	300	1599	159	592	44
Capacity Analysis Module:												
Vol/Sat:	0.20	0.20	0.20	0.41	0.41	0.41	0.84	0.84	0.10	1.23	1.23	1.23
Crit Moves:			****		****						****	
Green/Cycle:	0.10	0.10	0.10	0.19	0.19	0.19	0.59	0.59	0.59	0.59	0.59	0.59
Volume/Cap:	2.09	2.09	2.09	2.09	2.09	2.09	1.43	1.43	0.16	2.09	2.09	2.09
Level Of Service Module:												
Delay/Veh:	1715	1715	1715	1714	1714	1714	347.6	348	6.0	1690	1690	1690
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	1715	1715	1715	1714	1714	1714	347.6	348	6.0	1690	1690	1690
Queue:	92	121	28	18	143	65	29	41	2	XXXX	XXXX	XXXXX

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Level Of Service Computation Report
1994 HCM Operations Method (Base Volume Alternative)

Intersection #229 Hall Boulevard/Greenway

Cycle (sec): 120 Critical Vol./Cap. (X): 1.125
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 59.5
Optimal Cycle: 180 Level Of Service: E

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0	0	1	0	0	0	1!	0	0	1	0
Volume Module:												
Base Vol:	146	1	299	6	46	4	3	567	386	808	1279	52
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	146	1	299	6	46	4	3	567	386	808	1279	52
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
PHF Volume:	160	1	328	7	50	4	3	622	424	887	1404	57
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	160	1	328	7	50	4	3	622	424	887	1404	57
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.05	1.05	1.00	1.05	1.05
Final Vol.:	160	1	328	7	50	4	3	654	445	887	1474	60
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.80	0.84	0.84	0.60	0.60	0.60	0.94	0.93	0.93	0.94	0.98	0.98
Lanes:	1.00	0.01	0.99	0.11	0.82	0.07	1.00	1.19	0.81	1.00	1.92	0.08
Final Sat.:	1524	5	1594	130	929	74	1787	2105	1432	1787	3579	146
Capacity Analysis Module:												
Vol/Sat:	0.11	0.21	0.21	0.05	0.05	0.05	0.00	0.31	0.31	0.50	0.41	0.41
Crit Moves:		****						****		****		
Green/Cycle:	0.18	0.18	0.18	0.18	0.18	0.18	0.00	0.28	0.28	0.44	0.71	0.71
Volume/Cap:	0.57	1.13	1.13	0.29	0.29	0.29	0.58	1.13	1.13	1.13	0.58	0.58
Level Of Service Module:												
Delay/Veh:	31.0	120	120.1	27.6	27.6	27.6	94.6	96.0	96.0	92.2	5.6	5.6
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	31.0	120	120.1	27.6	27.6	27.6	94.6	96.0	96.0	92.2	5.6	5.6
Queue:	5	0	21	0	1	0	0	39	27	53	24	1

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Level Of Service Computation Report
1994 HCM Operations Method (Base Volume Alternative)

Intersection #230 Hall Boulevard/Nimbus Avenue

Cycle (sec): 120 Critical Vol./Cap. (X): 1.020
Loss Time (sec): 16 (Y+R = 4 sec) Average Delay (sec/veh): 50.5
Optimal Cycle: 180 Level Of Service: E

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0	0	1	0	1	0	0	1	0	1	0	1	1	0	1	0	2	0	1
Volume Module:												
Base Vol:	448	62	349	235	109	158	33	696	194	241	1472	100
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	448	62	349	235	109	158	33	696	194	241	1472	100
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	472	65	368	248	115	166	35	733	204	254	1551	105
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	472	65	368	248	115	166	35	733	204	254	1551	105
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.05	1.05	1.00	1.05	1.00
Final Vol.:	472	65	368	248	115	166	35	770	215	254	1629	105
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.94	0.86	0.86	0.92	0.88	0.88	0.93	0.95	0.95	0.94	0.99	0.84
Lanes:	1.00	0.15	0.85	1.00	0.41	0.59	1.00	1.56	0.44	1.00	2.00	1.00
Final Sat.:	1787	246	1391	1752	687	992	1770	2825	789	1787	3762	1599
Capacity Analysis Module:												
Vol/Sat:	0.26	0.26	0.26	0.14	0.17	0.17	0.02	0.27	0.21	0.14	0.43	0.07
Crit Moves:	****				****		tttt				****	
Green/Cycle:	0.26	0.28	0.28	0.15	0.16	0.16	0.02	0.29	0.29	0.15	0.42	0.42
Volume/Cap:	1.02	0.96	0.96	0.96	1.02	1.02	1.02	0.93	0.93	0.93	1.02	0.15
Level Of Service Module:												
Delay/Veh:	66.4	51.4	51.4	65.9	80.1	80.1	166.0	37.4	37.4	59.4	44.5	13.8
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	66.4	51.4	51.4	65.9	80.1	80.1	166.0	37.4	37.4	59.4	44.5	13.8
Queue:	22	4	16	11	7	9	3	29	9	11	68	2

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Beaverton Transportation System Plan
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Level Of Service Computation Report
1994 HCM Operations Method (Base Volume Alternative)

Intersection #232 Scholls Ferry Road/Hall Boulevard

Cycle (sec): 110 Critical Vol./Cap. (X): 1.319
Loss Time (sec): 16 (Y+R = 4 sec) Average Delay (sec/veh): 151.1
Optimal Cycle: 180 Level Of Service: F

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0	1	1	0	1	0	1	1	0	1	0	1	1	0	1	0	1	1	0
Volume Modul												
Base Vol:	549	537	252	230	532	143	208	934	323	344	678	168
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	549	537	252	230	532	143	208	934	323	344	678	168
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
PHF Volume:	582	569	267	244	564	152	221	990	343	365	719	178
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	582	569	267	244	564	152	221	990	343	365	719	178
PCB Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.05	1.05	1.00	1.05	1.05	1.00	1.05	1.05	1.00	1.05	1.05
Final Vol.:	582	598	281	244	592	159	221	1040	360	365	755	187
Saturation F	ow Module:											
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.94	0.94	0.94	0.93	0.95	0.95	0.94	0.95	0.95	0.93	0.95	0.95
Lanes:	1.00	1.36	0.64	1.00	1.58	0.42	1.00	1.49	0.51	1.00	1.60	0.40
Final Sat.:	1787	2432	1143	1770	2849	765	1787	2683	929	1770	2896	717
Capacity Ana	ysis Module:											
Vol/Sat:	0.33	0.25	0.25	0.14	0.21	0.21	0.12	0.39	0.39	0.21	0.26	0.26
Crit Moves:	tttt				tttt			tttt			tttt	
Green/Cycle:	0.25	0.26	0.26	0.15	0.16	0.16	0.14	0.29	0.29	0.16	0.31	0.31
Volume/Cap:	1.32	0.95	0.95	0.95	1.32	1.32	0.85	1.32	1.32	1.32	0.85	0.85
Level Of Ser	ice Module:											
Delay/Veh:	239.4	39.4	39.4	60.9	238	238.3	45.5	226	226.3	253.2	27.9	27.9
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	239.4	39.4	39.4	60.9	238	238.3	45.5	226	226.3	253.2	27.9	27.9
Queue:	54	22	11	10	54	16	8	95	35	34	24	7

Beaverton Transportation System Plan
2015 BASE Traffic Conditions (existing geometry)
PM Peak Hour

Level Of Service Computation Report
1994 HCM Operations Method (Base Volume Alternative)

Intersection #236 Scholls Ferry Road/125th Avenue

Cycle (sec): 100 Critical Vol./Cap. (X): 1.514
Loss Time (sec): 16 (Y+R = 4 sec) Average Delay (sec/veh): 280.7
Optimal Cycle: 180 Level of Service: F

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:		Ovl			Include			Include			Ovl	
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0 1	0 1	1	0 0	1 0	1	0 1	1 0	1	0 2	0 1
Volume Module:												
Base Vol:	306	214	72	160	173	403	234	1220	93	94	1986	162
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	306	214	72	160	173	403	234	1220	93	94	1986	162
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
PHF Volume:	326	228	77	170	184	429	249	1299	99	100	2115	173
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	326	228	77	170	184	429	249	1299	99	100	2115	173
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.05	1.05	1.00	1.05	1.00
Final Vol.:	326	228	77	170	184	429	249	1364	104	100	2221	173
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.94	0.99	0.84	0.95	0.90	0.90	0.93	0.97	0.97	0.94	0.99	0.84
Lanes:	1.00	1.00	1.00	1.00	0.30	0.70	1.00	1.86	0.14	1.00	2.00	1.00
Final Sat.:	1787	1881	1599	1805	513	1197	1770	3427	261	1787	3762	1599
Capacity Analysis Module:												
Vol/Sat:	0.18	0.12	0.05	0.09	0.36	0.36	0.14	0.40	0.40	0.06	0.59	0.11
Crit Moves:	****				tttt		tttt				tttt	
Green/Cycle:	0.12	0.20	0.26	0.16	0.24	0.24	0.09	0.42	0.42	0.06	0.39	0.55
Volume/Cap:	1.51	0.60	0.18	0.60	1.51	1.51	1.51	0.94	0.94	0.94	1.51	0.20
Level Of Service Module:												
Delay/Veh:	475.9	25.4	18.6	28.0	454	454.5	487.8	26.3	26.3	79.4	434	7.5
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	475.9	25.4	18.6	28.0	454	454.5	487.8	26.3	26.3	79.4	434	7.5
Queue:	45	6	2	5	27	59	35	41	5	5	311	2

Beaverton Transportation System Plan
2015 BASE Traffic Conditions (existing geometry)
PM Peak Hour

Level Of Service Computation Report
1994 HCM Operations Method (Base Volume Alternative)

Intersection #237 Scholls Ferry Road/Nimbus Avenue

Cycle (sec): 120 Critical Vol./Cap. (X): 1.167
Loss Time (sec): 16 (Y+R = 4 sec) Average Delay (sec/veh): 74.3
Optimal Cycle: 180 Level Of Service: F

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Protected			Protected		
Rights:		Ovl			Ovl			Ovl			Ovl	
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	1 0	0 1	1	1 0	0 1	1	0 2	0 1	1	0 2	0 1
Volume Module:												
Base Vol:	140	34	233	614	45	581	118	1376	74	78	1876	94
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	140	34	233	614	45	581	118	1376	74	78	1876	94
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
PHF Volume:	142	35	237	625	46	591	120	1400	75	79	1908	96
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	142	35	237	625	46	591	120	1400	75	79	1908	96
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.05	1.05	1.00	1.00	1.05	1.00	1.00	1.05	1.00
Final Vol.:	142	35	237	656	48	591	120	1470	75	79	2004	96
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.95	0.84	0.95	0.95	0.84	0.93	0.98	0.83	0.93	0.98	0.83
Lanes:	0.80	0.20	1.00	1.86	0.14	1.00	1.00	2.00	1.00	1.00	2.00	1.00
Final Sat.:	1449	357	1599	3366	246	1599	1770	3725	1583	1770	3725	1583
Capacity Analysis Module:												
Vol/Sat:	0.10	0.10	0.15	0.19	0.19	0.37	0.07	0.39	0.05	0.04	0.54	0.06
Crit Moves:			****			tttt	****				tttt	
Green/Cycle:	0.09	0.09	0.14	0.26	0.26	0.32	0.06	0.47	0.56	0.05	0.46	0.72
Volume/Cap:	1.10	1.10	1.05	0.75	0.75	1.17	1.17	0.85	0.09	0.85	1.17	0.08
Level Of Service Module:												
Delay/Veh:	130.6	131	94.6	28.9	28.9	125.6	183.5	21.1	8.1	68.2	106	3.2
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	130.6	131	94.6	28.9	28.9	125.6	183.5	21.1	8.1	68.2	106	3.2
Queue:	10	3	13	21	2	39	10	45	1	4	131	1

Beaverton Transportation System Plan
2015 BASE Traffic Conditions (existing geometry)
PM Peak Hour

Level Of Service Computation Report
1994 HCM Operations Method (Base Volume Alternative)

Intersection #238 Murray Boulevard/Old Scholls Ferry Road

Cycle (sec): 110 Critical Vol./Cap. (X): 1.105
Loss Time (sec): 16 (Y+R = 4 sec) Average Delay (sec/veh) 69.1
Optimal Cycle: 180 Level Of Service: F

Approach:	North Bound						South Bound						East Bound						West Bound					
Movement:	L	-	T	-	R		L	-	T	-	R		L	-	T	-	R		L	-	T	-	R	
Control:	Split Phase						Split Phase						Split Phase						Split Phase					
Rights:	Include						Ovl						Ovl						Ovl					
Min. Green:	0	0	0				0	0	0				0	0	0				0	0	0			
Lanes:	1	0	1	1	0		1	1	0	1			1	0	2	0	1		1	0	2	0	1	
Volume Module:																								
Base Vol:	98	594		30			606	493		613			387	402		56			43	1016		693		
Grnwth Adj:	1.00	1.00		1.00			1.00	1.00		1.00			1.00	1.00		1.00			1.00	1.00		1.00		
Initial Bse:	98	594		30			606	493		613			387	402		56			43	1016		693		
User Adj:	1.00	1.00		1.00			1.00	1.00		1.00			1.00	1.00		1.00			1.00	1.00		1.00		
PHF Adj:	0.94	0.94		0.94			0.94	0.94		0.94			0.94	0.94		0.94			0.94	0.94		0.94		
PHF Volume:	104	633		32			645	525		653			412	428		60			46	1082		738		
Reduct Vol:	0	0		0			0	0		0			0	0		0			0	0		0		
Reduced Vol:	104	633		32			645	525		653			412	428		60			46	1082		738		
PCE Adj:	1.00	1.00		1.00			1.00	1.00		1.00			1.00	1.00		1.00			1.00	1.00		1.00		
MLF Adj:	1.00	1.05		1.05			1.05	1.00		1.00			1.00	1.05		1.00			1.00	1.05		1.00		
Final Vol.:	104	664		34			678	525		653			412	450		60			46	1136		738		
Saturation Flow Module:																								
Sat/Lane:	1900	1900		1900			1900	1900		1900			1900	1900		1900			1900	1900		1900		
Adjustment:	0.95	0.99		0.99			0.92	0.97		0.83			0.93	0.98		0.83			0.94	0.99		0.84		
Lanes:	1.00	1.90		0.10			1.73	1.27		1.00			1.00	2.00		1.00			1.00	2.00		1.00		
Final Sat.:	1805	3579		183			3029	2346		1568			1770	3725		1583			1787	3762		1599		
Capacity Analysis Module:																								
Vol/Sat:	0.06	0.19		0.19			0.22	0.22		0.42			0.23	0.12		0.04			0.03	0.30		0.46		
Crit Moves:		****						****					****							****				
Green/Cycle:	0.17	0.17		0.17			0.20	0.20		0.41			0.21	0.21		0.38			0.27	0.27		0.48		
Volume/Cap:	0.34	1.10		1.10			1.10	1.10		1.01			1.10	0.57		0.10			0.09	1.10		0.97		
Level Of Service Module:																								
Delay/Veh:	26.4	93.4		93.4			85.3	85.3		49.9			01.2	25.9		14.3			19.3	83.4		37.0		
User DelAdj:	1.00	1.00		1.00			1.00	1.00		1.00			1.00	1.00		1.00			1.00	1.00		1.00		
AdjDel/Veh:	26.4	93.4		93.4			85.3	85.3		49.9			101.2	25.9		14.3			19.3	83.4		37.0		
Queue:	3	35		3			36	28		27			23	13		1			1	58		27		

Beaverton Transportation System Plan
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Level Of Service Computation Report
1994 HCM Unsignalized Method (Base Volume Alternative)

Intersection #239 Old Scholls Ferry Road/Davies Road

Average Delay (sec/veh): OVERFLOW Worst Case Level Of Service: F

Approach:	North Bound						South Bound						East Bound						West Bound					
Movement:	L	-	T	-	R		L	-	T	-	R		L	-	T	-	R		L	-	T	-	R	
Control:	Stop Sign						Stop Sign						Uncontrolled						Uncontrolled					
Rights:	Include						Include						Include						Include					
Lanes:	0	0	1	0	0		1	0	0	1	0		1	0	1	1	0		0	1	1	0	1	
Volume Module:																								
Base Vol:	127	22		366			65	22		32			20	1124		187			548	1670		177		
Growth Adj:	1.00	1.00		1.00			1.00	1.00		1.00			1.00	1.00		1.00			1.00	1.00		1.00		
Initial Bse:	127	22		366			65	22		32			20	1124		187			548	1670		177		
User Adj:	1.00	1.00		1.00			1.00	1.00		1.00			1.00	1.00		1.00			1.00	1.00		1.00		
PHF Adj:	0.92	0.92		0.92			0.92	0.92		0.92			0.92	0.92		0.92			0.92	0.92		0.92		
PHF Volume:	137	24		396			70	24		35			22	1216		202			593	1807		192		
Reduct Vol:	0	0		0			0	0		0			0	0		0			0	0		0		
Final Vol.:	137	24		396			70	24		35			22	1216		202			593	1807		192		
Adjusted Volume Module:																								
Grade:		0%						0%						0%						0%				
% Cycle/Cars:	xxxx	xxxx					0.00	0.99					0.00	0.98					0.00	0.99				
% Truck/Comb:	xxxx	xxxx					0.01	0.00					0.02	0.00					0.01	0.00				
PCE Adj:	1.10	1.10		1.10			xxxx	xxxx		xxxxx			xxxx	1.00		1.00			xxxx	1.00		1.00		
Cycl/Car PCE:	xxxx	xxxx					0.50	1.00					0.50	1.00					0.50	1.00				
Trck/Cmb PCE:	xxxx	xxxx					1.50	2.00					1.50	2.00					1.50	2.00				
Adj Vol.:	151	26		436			71	24		35			22	1216		202			596	1807		192		
Critical Gap Module:																								
MoveUp Time:	3.4	3.3		2.6			3.4	3.3		2.6			2.1	xxxx		xxxxx			2.1	xxxx		xxxxx		
Critical Gp:	7.0	6.5		5.5			7.0	6.5		5.5			5.5	xxxx		xxxxx			5.5	xxxx		xxxxx		
Capacity Module:																								
Cnflict Vol:	3752	3931		709			3650	3841		904			1999	xxxx		xxxxx			1419	xxxx		xxxxx		
Potent Cap.:	4	5		605			5	6		482			145	xxxx		xxxxx			297	xxxx		xxxxx		
Adj Cap:	1.49	5.68		1.00			0.26	5.68		1.00			1.00	xxxx		xxxxx			1.00	xxxx		xxxxx		
Move Cap.:	6	31		605			1	35		482			145	xxxx		xxxxx			297	xxxx		xxxxx		
Level Of Service Module:																								
Stopped Del:	38748	358		17.0			xxxxx	271		8.0			29.2	xxxx		xxxxx			1833	xxxx		xxxxx		
LOS by Move:	*	*		*			F	*		*			D	*		*			F	*		*		
Movement:	LT	-	LTR	-	RT		LT	-	LTR	-	RT		LT	-	LTR	-	RT		LT	-	LTR	-	RT	
Shared Cap.:	xxxx	24		xxxxx			xxxx	xxxx		78			xxxx	xxxx		xxxxx			xxxx	xxxx		xxxxx		
Shrd StpDel:	xxxxx	xxxx		xxxxx			xxxxx	xxxx		158.0			xxxxx	xxxx		xxxxx			xxxxx	xxxx		xxxxx		
Shared LOS:	*	F		*			*	*		F			*	*		*			*	*		*		
ApproachDel:	9582.7						xxxxxx						0.4						421.1					

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Level Of Service Computation Report
1994 HCM Operations Method (Base Volume Alternative)

Intersection #241 Scholls Ferry/Old Scholls Ferry (east)

Cycle (sec): 120 Critical Vol./Cap. (X): 0.933
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 17.1
Optimal Cycle: 142 Level Of Service: C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Protected			Protected		
Rights:	Ovl			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0	0	0	1	0	0	0	0	1	1	0
Volume Module:												
Base Vol:	47	0	249	0	0	0	0	950	65	308	1405	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	47	0	249	0	0	0	0	950	65	308	1405	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
PHF Volume:	52	0	275	0	0	0	0	1047	72	340	1549	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	52	0	275	0	0	0	0	1047	72	340	1549	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.05	1.05
Final Vol.:	52	0	275	0	0	0	0	1047	72	340	1627	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.94	1.00	0.80	1.00	1.00	1.00	1.00	0.95	0.95	0.93	0.98	1.00
Lanes:	1.00	0.00	1.00	0.00	0.00	1.00	1.00	0.94	0.06	1.00	2.00	0.00
Final Sat.:	1792	0	1524	0	0	1900	1900	1692	116	1770	3725	0
Capacity Analysis Module:												
Vol/Sat:	0.03	0.00	0.18	0.00	0.00	0.00	0.00	0.62	0.62	0.19	0.44	0.00
Crit Moves:	****							****		****		
Green/Cycle:	0.03	0.00	0.24	0.00	0.00	0.00	0.00	0.66	0.66	0.21	0.87	0.00
Volume/Cap:	0.93	0.00	0.76	0.00	0.00	0.00	0.00	0.93	0.93	0.93	0.50	0.00
Level Of Service Module:												
Delay/Veh:	106.0	0.0	33.8	0.0	0.0	0.0	0.0	21.1	21.1	52.3	1.3	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	106.0	0.0	33.8	0.0	0.0	0.0	0.0	21.1	21.1	52.3	1.3	0.0
Queue:	3	0	9	0	0	0	0	35	4	14	13	0

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Level Of Service Computation Report
1994 HCM Unsignalized Method (Base Volume Alternative)

Intersection #243 Scholls Ferry/Old Scholls Ferry (west)

Average Delay (sec/veh): 370.8 Worst Case Level Of Service: F

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include						Include		
Lanes:	0	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	0	0	0	0	1	0	1
Volume Module:																								
Base Vol:	0	0	0	300	0	346	131	453	0	0	458	584												
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00												
Initial Bse:	0	0	0	300	0	346	131	453	0	0	458	584												
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00												
PHF Adj:	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86												
PHF Volume:	0	0	0	348	0	402	152	526	0	0	532	678												
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0												
Final Vol.:	0	0	0	348	0	402	152	526	0	0	532	678												
Adjusted Volume Module:																								
Grade:	0%			0%			0%			0%		
Cycle/Cars:	xxxx	xxxx		0.00	0.98		0.00	0.97		0.00	0.98	
Truck/Comb:	xxxx	xxxx		0.02	0.00		0.03	0.00		0.02	0.00	
PCE Adj:	1.10	1.10	1.10	xxxx	xxxx	xxxxx	xxxx	1.00	1.00	xxxx	1.00	1.00
Cycl/Car PCE:	xxxx	xxxx		0.50	1.00		0.50	1.00		0.50	1.00	
Trck/Cmb PCE:	xxxx	xxxx		1.50	2.00		1.50	2.00		1.50	2.00	
Adj Vol.:	0	0	0	352	0	406	154	526	0	0	532	678												
Critical Gap Module:																								
MoveUp Time:	xxxxx	xxxx	xxxxx	3.4	xxxx	2.6	2.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx												
Critical Gp:	xxxxx	xxxx	xxxxx	6.5	xxxx	5.5	5.0	xxxx	xxxxx	xxxxx	xxxx	xxxxx												
Capacity Module:																								
Cnflict Vol:	xxxx	xxxx	xxxxx	1210	xxxx	532	1210	xxxx	xxxxx	xxxx	xxxx	xxxxx												
Potent Cap.:	xxxx	xxxx	xxxxx	211	xxxx	744	454	xxxx	xxxxx	xxxx	xxxx	xxxxx												
Adj Cap:	xxxx	xxxx	xxxxx	0.66	xxxx	1.00	1.00	xxxx	xxxxx	xxxx	xxxx	xxxxx												
Move Cap.:	xxxx	xxxx	xxxxx	139	xxxx	744	454	xxxx	xxxxx	xxxx	xxxx	xxxxx												
Level Of Service Module:																								
Stopped Del:	xxxxx	xxxx	xxxxx	2774	xxxx	10.5	11.9	xxxx	xxxxx	xxxxx	xxxx	xxxxx												
LOS by Move:	*	*	*	*	*	*	C	*	*	*	*	*												
Movement:	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT												
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	247	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx												
Shrd StpDel:	xxxxx	xxxx	xxxxx	xxxxx	3713	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx												
Shared LOS:	*	*	*	*	F	*	*	*	*	*	*	*												
ApproachDel:	0.0			1293.7			2.7			0.0		

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Level Of Service Computation Report
1994 HCM Unsignalized Method (Base Volume Alternative)

Intersection #244 Scholls Ferry Road/Walnut Street

Average Delay (sec/veh): OVERFLOW Worst Case Level Of Service: F

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 1	0	1 0	0 0	1	1 0 0	0 0	1	1 0 0	1 0	0	1 0
Volume Module:												
Base Vol:	231	492	24	1	341	148	175	506	141	75	638	1
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	231	492	24	1	341	148	175	506	141	75	638	1
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
PHF Volume:	273	582	28	1	403	175	207	598	167	89	754	1
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	273	582	28	1	403	175	207	598	167	89	754	1
Adjusted Volume Module:												
Grade:	0%			0%			0%			0%		
% Cycle/Cars:	0.00	0.98		xxxx	xxxx		0.00	0.96		0.00	0.97	
% Truck/Comb:	0.02	0.00		xxxx	xxxx		0.04	0.00		0.03	0.00	
PCE Adj:	xxxx	xxxx	xxxxx	1.10	1.10	1.10	xxxx	1.00	1.00	xxxx	1.00	1.00
Cycl/Car PCE:	0.50	1.00		xxxx	xxxx		0.50	1.00		0.50	1.00	
Trck/Cmb PCE:	1.50	2.00		xxxx	xxxx		1.50	2.00		1.50	2.00	
Adj Vol.:	276	587	29	1	443	192	211	598	167	90	754	1
Critical Gap Module:												
MoveUp Time:	3.4	3.3	2.6	3.4	3.3	2.6	2.1	xxxx	xxxxx	2.1	xxxx	xxxxx
Critical Gp:	6.5	6.0	5.5	6.5	6.0	5.5	5.0	xxxx	Xxxxx	5.0	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	2021	1732	681	2037	1815	755	755	xxxx	xxxxx	765	Xxxx	xxxxx
Potent Cap.:	72	135	625	70	122	574	748	xxxx	xxxxx	741	xxxx	xxxxx
Adj Cap:	0.00	0.43	1.00	0.00	0.43	1.00	1.00	xxxx	Xxxxx	1.00	xxxx	Xxxxx
Move cap.:	0	58	625	0	52	574	748	xxxx	xxxxx	741	xxxx	xxxxx
Level Of Service Module:												
Stopped Del:	xxxxx	xxxx	6.0	xxxxx	xxxx	9.0	6.6	xxxx	xxxxx	5.5	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	B	*	*	B	*	*
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	xxxx	60	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Shrd StpDel:	xxxxx	xxxx	16577	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	Xxxxx	xxxx	xxxxx
Shared LOS:	F	*	F	*	*	*	*	*	*	*	*	*
ApproachDel:	xxxxxx			xxxxxx			1.4			0.6		

Beaverton Transportation System Plan
2015 BASE Traffic Conditions (existing geometry)
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Level Of Service Computation Report
1994 HCM operations Method (Base Volume Alternative)

Intersection #250 Hall Boulevard/Hwy 217 SB ramps-Cascade Avenue

Cycle (sec): 120 Critical Vol./Cap. (X): 1.122
Loss Time (sec): 16 (Y+R = 4 sec) Average Delay (sec/veh): 64.3
Optimal Cycle: 180 Level Of Service: F

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Protected			Protected		
Rights:	Ovl			Include			Include			Ovl		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1 0	1	0 1	1 0	1	1 0 0	1 0	1	1 0	1 0	2	0 1
Volume Modul												
Base Vol:	101	23	137	396	79	343	201	903	114	45	1343	33
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	101	23	137	396	79	343	201	903	114	45	1343	33
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
PHF Volume:	108	24	146	422	84	365	214	962	121	48	1430	35
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	108	24	146	422	84	365	214	962	121	48	1430	35
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.05	1.00	1.00	1.00	1.05	1.05	1.00	1.05	1.00
Final Vol.:	108	24	146	443	84	365	214	1010	127	48	1502	35
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.93	0.98	0.83	0.91	0.91	0.91	0.93	0.96	0.96	0.94	0.99	0.84
Lanes:	1.00	1.00	1.00	1.33	0.13	0.54	1.00	1.78	0.22	1.00	2.00	1.00
Final Sat.:	1770	1863	1583	2305	217	943	1770	3243	408	1787	3762	1599
Capacity Analysis Module:												
Vol/Sat:	0.06	0.01	0.09	0.19	0.39	0.39	0.12	0.31	0.31	0.03	0.40	0.02
Crit Moves:			****			****	****				****	
Green/Cycle:	0.06	0.06	0.10	0.34	0.34	0.34	0.11	0.43	0.43	0.04	0.36	0.70
Volume/Cap:	1.05	0.22	0.97	0.56	1.12	1.12	1.12	0.73	0.73	0.73	1.12	0.03
Level Of Service Module:												
Delay/Veh:	122.7	35.0	82.6	20.9	94.1	94.1	133.1	19.7	19.7	58.2	88.2	3.6
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	122.7	35.0	82.6	20.9	94.1	94.1	133.1	19.7	19.7	58.2	88.2	3.6
Queue:	7	1	7	12	7	23	14	29	4	2	84	0

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Level Of Service Computation Report
1994 HCM Operations Method (Base Volume Alternative)

Intersection #259 Scholls Ferry/Hwy 217 SB ramps

Cycle (sec):	120	critical Vol./Cap. (X):	1.148
Loss Time (sec):	16 (Y+R = 4 sec)	Average Delay (sec/veh):	73.3
Optimal Cycle:	180	Level Of Service:	F

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Protected			Protected		
Rights:	Include			Ovl			Ovl			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	0	0	0	1	0	0	1	1	1	0	2
Volume Module:												
Base Vol:	0	0	0	117	2	587	0	1181	879	273	1647	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	117	2	587	0	1181	879	273	1647	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	0	0	0	123	2	617	0	1241	923	287	1730	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	123	2	617	0	1241	923	287	1730	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.10	1.10	1.00	1.05	1.00
Final Vol.:	0	0	0	123	2	617	0	1365	1016	287	1817	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	0.84	0.84	0.84	1.00	0.93	0.93	0.94	0.99	1.00
Lanes:	0.00	0.00	0.00	0.98	0.02	1.00	0.00	1.72	1.28	1.00	2.00	0.00
Final Sat.:	0	0	0	1573	26	1599	0	3041	2264	1787	3762	0
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.08	0.08	0.39	0.00	0.45	0.45	0.16	0.48	0.00
Crit Moves:						****		****		****		
Green/Cycle:	0.00	0.00	0.00	0.34	0.34	0.34	0.00	0.39	0.39	0.14	0.53	0.00
Volume/Cap:	0.00	0.00	0.00	0.23	0.23	1.15	0.00	1.15	1.15	1.15	0.91	0.00
Level Of Service Module:												
Delay/Veh:	0.0	0.0	0.0	18.6	18.6	113.7	0.0	97.6	97.6	137.7	21.4	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	18.6	18.6	113.7	0.0	97.6	97.6	137.7	21.4	0.0
Queue:	0	0	0	3	0	39	0	84	63	19	58	0

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Level Of Service Computation Report
1994 HCM Operations Method (Base Volume Alternative)

Intersection #277 Scholls Ferry/Hwy 217 NB off-ramp

Cycle (sec):	100	Critical Vol./Cap. (X):	0.908
Loss Time (sec):	8 (Y+R = 4 sec)	Average Delay (sec/veh)	22.1
Optimal Cycle:	105	Level Of Service:	C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Split Phase			Split Phase		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	2	0	0	2	0	0	0	0	1	0	0
Volume Module:												
Base Vol:	0	1295	0	0	1199	0	0	0	0	693	0	638
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	1295	0	0	1199	0	0	0	0	693	0	638
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
PHF Volume:	0	1409	0	0	1305	0	0	0	0	754	0	694
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	1409	0	0	1305	0	0	0	0	754	0	694
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.05	1.00	1.00	1.05	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	0	1480	0	0	1370	0	0	0	0	754	0	694
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	0.98	1.00	1.00	0.98	1.00	1.00	1.00	1.00	0.93	1.00	0.83
Lanes:	0.00	2.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00	1.00	0.00	1.00
Final Sat.:	0	3725	0	0	3725	0	0	0	0	1770	0	1583
Capacity Analysis Module:												
Vol/Sat:	0.00	0.40	0.00	0.00	0.37	0.00	0.00	0.00	0.00	0.43	0.00	0.44
Crit Moves:		****										****
Green/Cycle:	0.00	0.44	0.00	0.00	0.44	0.00	0.00	0.00	0.00	0.48	0.00	0.48
Volume/Cap:	0.00	0.91	0.00	0.00	0.84	0.00	0.00	0.00	0.00	0.88	0.00	0.91
Level Of Service Module:												
Delay/Veh:	0.0	22.7	0.0	0.0	19.1	0.0	0.0	0.0	0.0	22.7	0.0	25.9
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	22.7	0.0	0.0	19.1	0.0	0.0	0.0	0.0	22.7	0.0	25.9
Queue:	0	42	0	0	36	0	0	0	0	21	0	21

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Level Of Service Computation Report
1994 HCM Operations Method (Base Volume Alternative)

Intersection #278 Scholls Ferry/Hwy 217 NB on-ramp

Cycle (sec):	100	Critical Vol./Cap. (X):	1.766
Loss Time (sec):	12 (Y+R = 4 sec)	Average Delay (sec/veh):	451.1
Optimal Cycle:	180	Level Of Service:	F

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Split Phase			Split Phase		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0 2	0 0	0	0 2	0 1	0	0 0	0 0	1	0 1	0 1
Volume Module:												
Base Vol:	750	970	0	0	772	970	0	0	0	311	884	365
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	750	970	0	0	772	970	0	0	0	311	884	365
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
PHF Volume:	774	1001	0	0	797	1001	0	0	0	321	912	377
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	774	1001	0	0	797	1001	0	0	0	321	912	377
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.05	1.00	1.00	1.05	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	774	1051	0	0	837	1001	0	0	0	321	912	377
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.93	0.98	1.00	1.00	0.98	0.83	1.00	1.00	1.00	0.84	0.99	0.84
Lanes:	1.00	2.00	0.00	0.00	2.00	1.00	0.00	0.00	0.00	1.00	1.00	1.00
Final Sat.:	1770	3725	0	0	3725	1583	0	0	0	1599	1881	1599
Capacity Analysis Module:												
Vol/Sat:	0.44	0.28	0.00	0.00	0.22	0.63	0.00	0.00	0.00	0.20	0.48	0.24
Crit Moves:	****					****					****	
Green/Cycle:	0.25	0.61	0.00	0.00	0.36	0.36	0.00	0.00	0.00	0.27	0.27	0.27
Volume/Cap:	1.77	0.47	0.00	0.00	0.63	1.77	0.00	0.00	0.00	0.73	1.77	0.86
Level Of Service Module:												
Delay/Veh:	873.7	7.1	0.0	0.0	17.9	865.2	0.0	0.0	0.0	25.5	870	33.1
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	873.7	7.1	0.0	0.0	17.9	865.2	0.0	0.0	0.0	25.5	870	33.1
Queue:	163	16	0	0	20	221	0	0	0	9	194	12

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Beaverton Transportation System Plan
2015 ENHANCED Traffic Conditions MITIGATION
PM Peak Hour (phf=0.95 - 1.0)

Impact Analysis Report
Level Of Service

Intersection	Base LOS	Del/Veh	V/C	Future LOS	Del/Veh	V/C	Change in D/V
# 1 Murray Blvd/Allen Blvd	D	33.2	0.977	D	33.2	0.977	+ 0.000
# 13 Murray Boulevard/6th Avenue	C	18.4	0.953	C	18.4	0.953	+ 0.000
# 22 Hall Blvd/Allen Blvd	E	40.1	0.987	E	40.1	0.987	+ 0.000
# 23 Allen Blvd/Lombard Ave	D	30.6	0.894	D	30.6	0.894	+ 0.000
# 26 Watson Ave/5th St	B	7.2	0.657	B	7.2	0.657	+ 0.000
# 28 Hall Boulevard/5th Avenue	B	9.4	0.763	B	9.4	0.763	+ 0.000
# 33 Murray Blvd/Farmington Rd	E	51.2	1.049	E	51.2	1.049	+ 0.000
# 34 Farmington Road/Watson Avenue	D	27.3	0.962	D	27.3	0.962	+ 0.000
# 35 Farmington/Hall Boulevard	E	58.9	1.102	E	58.9	1.102	+ 0.000
# 37 Farmington Road/Lombard Avenue	D	32.7	0.965	D	32.7	0.965	+ 0.000
# 41 Allen Blvd/ORE 217 NB ramps	D	28.8	0.967	D	28.8	0.967	+ 0.000
# 44 Allen Blvd/ORE 217 SB ramps	D	33.1	0.967	D	33.1	0.967	+ 0.000
# 53 BH Hwy/ORE 217 SB ramps	C	21.0	0.918	C	***21.0***	0.918	+ 0.000
# 54 BH Hwy/Griffith Drive	C	18.0	0.886	C	18.0	0.886	+ 0.000
# 59 BH Hwy/ORE 217 NB ramps	C	24.3	0.872	C	24.3	0.872	+ 0.000
# 66 Canyon **Road/Broadway-117th** Ave	D	27.1	0.916	D	27.1	0.916	+ 0.000
# 67 Canyon Road/ORE 217 SB ramps	D	29.0	0.928	D	29.0	0.928	+ 0.000
# 69 Canyon Road/ORE 217 NB ramps	C	24.3	0.863	C	24.3	0.863	+ 0.000
# 76 Canyon Road/Hall Boulevard	D	34.5	0.993	D	34.5	0.993	+ 0.000
# 81 Canyon Road/Watson Avenue	D	35.7	1.019	D	35.7	1.019	+ 0.000
# 86 TV Hwy/Hocken Avenue	D	35.9	0.991	D	35.9	0.991	+ 0.000
# 87 Farmington Road/Hocken Avenue	D	34.6	0.997	D	34.6	0.997	+ 0.000
# 90 TV Hwy/Murray Boulevard	E	40.3	1.037	E	40.3	1.037	+ 0.000

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Beaverton Transportation System Plan
2015 ENHANCED Traffic Conditions MITIGATION
PM Peak Hour (phf=0.95 - 1.0)

Intersection	Base LOS	Del/Veh	V/C	Future LOS	Del/Veh	V/C	Change in D/V
#101 Hall Blvd/Westgate-Center	D	31.7	0.902	D	31.7	0.902	+ 0.000
#108 Murray Boulevard/Jenkins Road	E	53.4	1.066	E	53.4	1.066	+ 0.000
#113 Walker Road/ORE 217 NB ramps	D	32.4	0.947	D	32.4	0.947	+ 0.000
#117 Walker Road/ORE 217 SB ramps	D	27.3	0.935	D	27.3	0.935	+ 0.000
#125 Cedar Hills Blvd/Hall Blvd	D	39.8	0.985	D	39.8	0.985	+ 0.000
#126 Cedar Hills Boulevard/Walker R	E	55.9	1.079	E	55.9	1.079	+ 0.000
#127 Cedar Hills Boulevard/Jenkins	D	29.2	0.896	D	29.2	0.896	+ 0.000
#130 Farmington Road/Cedar Hills Bo	D	26.8	0.971	D	26.8	0.971	+ 0.000
#131 Canyon Road/Cedar Hills Boulev	D	36.3	0.994	D	36.3	0.994	+ 0.000
#133 Canyon Rd./Fred Meyer Access	D	32.1	0.962	D	32.1	0.962	+ 0.000
#162 Cedar Hills Blvd/Westgate Driv	B	10.4	0.800	B	10.4	0.800	+ 0.000
#169 Farmington Road/149th Avenue	B	10.4	0.858	B	10.4	0.858	+ 0.000
#170 TV Highway/153rd Drive	B	9.7	0.782	B	9.7	0.782	+ 0.000
#171 TV Highway/160th Avenue-Millik	D	35.1	0.995	D	35.1	0.995	+ 0.000
#174 Jenkins Road/153rd Drive	C	17.5	0.910	C	17.5	0.910	+ 0.000
#175 Jenkins Road/158th Avenue	D	30.6	0.881	D	30.6	0.881	+ 0.000
#176 Farmington Road/170th Avenue	D	39.9	0.983	D	39.9	0.983	+ 0.000
#177 TV Highway/170th Avenue	E	53.7	1.071	E	53.7	1.071	+ 0.000
#179 Merlo Road/170th Avenue	C	23.5	0.871	C	23.5	0.871	+ 0.000
#180 Baseline Road/170th Avenue	E	46.8	0.995	E	46.8	0.995	+ 0.000
#186 Walker Road/158th Avenue	E	42.5	1.020	E	42.5	1.020	+ 0.000
#187 Walker Road/167th Avenue	B	10.5	0.602	B	10.5	0.602	+ 0.000
#188 Walker Road/173rd Avenue	E	51.3	1.034	E	51.3	1.034	+ 0.000
#191 Cornell Road/158th Avenue	C	20.1	0.858	C	20.1	0.858	+ 0.000
#192 Walker Road/Murray Boulevard	E	**43.2**	0.998	E	43.2	0.998	+ 0.000

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Beaverton Transportation System Plan
2015 ENHANCEC Traffic Conditions MITIGATION
PM Peak Hour (phf=0.95 - 1.0)

Intersection	Base LOS	Del/ Veh	V/ C	Future LOS	Del/ Veh	V/ C	Change in
#193 Kinnaman/Farmington	D	25.2	0.958	D	25.2	0.958	+ 0.000 D/V
#194 Davis Road/155th Avenue	A	3.6	0.337	A	3.6	0.337	+ 0.000 D/V
#198 Canyon Road/Walker Road	C	23.8	0.872	C	23.8	0.872	+ 0.000 D/V
#199 Beaverton-Hillsdale Hwy/Wester	C	22.3	0.889	C	22.3	0.889	+ 0.000 D/V
#200 Allen Boulevard/Western Avenue	E	47.8	0.784	E	47.8	0.784	+ 0.000 D/V
#202 Laurelwood Avenue/Beaverton-Hi	C	16.6	0.857	C	16.6	0.857	+ 0.000 D/V
#203 Hall Boulevard/Denney Road	C	19.7	0.934	C	19.7	0.934	t 0.000 D/V
#205 Denney Road/Hwy 217 SB ramps	C	16.7	0.550	C	16.7	0.550	+ 0.000 D/V
#207 Denney Road/Hwy 217 NB ramps	B	14.2	0.702	B	14.2	0.702	+ 0.000 D/V
#214 Denney Road/Scholls Ferry Road	C	21.1	0.914	C	21.1	0.914	t 0.000 D/V
#215 Allen Boulevard/Scholls Ferry	E	44.2	0.984	E	44.2	0.984	+ 0,000 D/V
#218 Hall Boulevard/Hart Road	C	17.9	0.927	C	17.9	0.927	+ 0.000 D/V
#219 Murray Boulevard/Hart Road	E	41.7	1.016	E	41.7	1.016	+ 0.000 D/V
#220 Hart Road/155th Avenue	B	10.8	0.634	B	10.8	0.634	+ 0.000 D/V
#221 Hart-Bany/170th Avenue	B	13.6	0.769	B	13.6	0.769	+ 0.000 D/V
#222 Hart Road/Sorrento Avenue	C	10.0	0.681	C	10.0	0.681	+ 0.000 v/c
#224 Murray Boulevard/Brockman Road	C	23.8	0.891	C	23.8	0.891	t 0.000 D/V
#225 Murray Boulevard/Maverick Terr	A	1.9	0.581	A	1.9	0.581	+ 0.000 D/V
#226 155th Avenue/Nora-Beard (Brock	C	12.2	0.787	C	12.2	0.787	+ 0.000 V/C
#227 Brockman Road/125th Avenue	D	27.0	0.869	D	27.0	0.869	+ 0.000 D/V
#229 Hall Boulevard/Greenway	D	26.0	0.974	D	26.0	0.974	+ 0.000 D/V
#230 Hall Boulevard/Nimbus Avenue	D	35.3	0.946	D	35.3	0.946	+ 0,000 D/V
#232 Scholls Ferry Road/Hall Boulev	D	38.7	0.975	D	38.7	0.975	+ 0.000 D/V
#236 Scholls Ferry Road/125th Avenu	D	36.8	0.992	D	36.8	0.992	+ 0.000 D/V

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Beaverton Transportation System Plan
2015 ENHANCED Traffic Conditions MITIGATION
PM Peak Hour (phf=0.95 - 1.0)

Intersection	Base LOS	Del/ Veh	V/ C	Future LOS	Del/ Veh	V/ C	Change in
#237 Scholls Ferry Road/Nimbus Aven	D	31.2	0.941	D	31.2	0.941	+ 0.000 D/V
#238 Murray Boulevard/Old Scholls F	D	34.3	0.948	D	34.3	0.948	+ 0.000 D/V
#239 Old Scholls Ferry Road/Davies	C	18.0	0.892	C	18.0	0.892	+ 0.000 D/V
#243 Scholls Ferry/Old Scholls Ferr	C	24.2	0.910	C	24.2	0.910	+ 0.000 D/V
#244 Scholls Ferry Road/Walnut Stre	D	30.6	0.935	D	30.6	0.935	+ 0.000 D/V
#250 Hall Boulevard/Hwy 217 SB ramp	D	39.9	0.991	D	39.9	0.991	+ 0.000 D/V
#259 Scholls Ferry/Hwy 217 SB ramps	D	37.4	0.974	D	37.4	0.974	+ 0.000 D/V
#277 Scholls Ferry/Hwy 217 NB off-r	D	38.2	1.001	D	38.2	1.001	+ 0.000 D/V
#278 Scholls Ferry/Hwy 217 NB on-ra	E	56.2	1.073	E	56.2	1,073	+ 0.000 D/V

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Beaverton Transportation System Plan
2015 ENHANCED Traffic Conditions MITIGATION
PM Peak Hour (phf=0.95 - 1.0)

Level Of Service Computation Report
1994 HCM Operations Method (Base Volume Alternative)

Intersection #1 Murray Blvd/Allen Blvd

Cycle (sec): 120 Critical Vol./Cap.(X): 0.977
Loss Time (sec): 16 (Y+R = 4 sec) Average Delay (sec/veh): 33.2
Optimal Cycle: 180 Level Of Service: D

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Prot+Permit			Prot+Permit		
Rights:	Ov1			Ovl			Ov1			Ovl		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0 2	0 1	2	0 2	0 1	1	0 1	0 1	1	0 2	0 1
Volume Module:												
Base Vol:	142	1120	242	330	1474	312	193	301	112	331	632	546
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	142	1120	242	330	1474	312	193	301	112	331	632	546
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	149	1179	255	347	1552	328	203	317	118	348	665	575
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	149	1179	255	347	1552	328	203	317	118	348	665	575
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.05	1.00	1.03	1.05	1.00	1.00	1.00	1.00	1.00	1.05	1.00
Final Vol.:	149	1238	255	358	1629	328	203	317	118	348	699	575
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.93	1.06	0.83	0.93	1.07	0.83	0.49	0.99	0.84	0.54	0.99	0.84
Lanes:	1.00	2.00	1.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	2.00	1.00
Final Sat.:	1770	4044	1583	3539	4081	1583	926	1881	1599	1033	3762	1599
Capacity Analysis Module:												
Vol/Sat:	0.08	0.31	0.16	0.10	0.40	0.21	0.22	0.17	0.07	0.34	0.19	0.36
Crit Moves:	****				tttt			****		****		
Green/Cycle:	0.09	0.37	0.57	0.12	0.40	0.52	0.29	0.17	0.26	0.41	0.26	0.38
Volume/Cap:	0.99	0.83	0.28	0.83	0.99	0.40	0.76	0.96	0.28	0.82	0.71	0.94
Level Of Service Module:												
Delay/Veh:	87.8	25.3	8.6	42.3	37.3	11.5	30.8	61.2	23.0	28.2	27.6	39.1
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	87.8	25.3	8.6	42.3	37.3	11.5	30.8	61.2	23.0	28.2	27.6	39.1
Queue:	8	39	4	13	62	7	10	14	3	15	22	22

Beaverton Transportation System Plan
2015 ENHANCED Traffic Conditions MITIGATION
PM Peak Hour (phf=0.95 - 1.0)

Level Of Service Computation Report
1994 HCM Operations Method (Base Volume Alternative)

Intersection #13 Murray Boulevard/6th Avenue

Cycle (sec): 120 Critical Vol./Cap. (X): 0.953
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 18.4
Optimal Cycle: 160 Level Of Service: C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0 1	1 0	1	0 1	1 0	1	0 0	1 0	1	0 0	1 0
Volume Module:												
Base Vol:	204	1555	37	17	2126	31	6	8	43	79	116	72
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	204	1555	37	17	2126	31	6	8	43	79	116	72
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	215	1637	39	18	2238	33	6	8	45	83	122	76
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	215	1637	39	18	2238	33	6	8	45	83	122	76
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.05	1.05	1.00	1.05	1.05	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	215	1719	41	18	2350	34	6	8	45	83	122	76
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	1.00	1.00	0.95	1.00	1.00	0.29	0.87	0.87	0.80	0.94	0.94
Lanes:	1.00	1.95	0.05	1.00	1.97	0.03	1.00	0.15	0.85	1.00	0.62	0.38
Final Sat.:	1805	3711	89	1805	3746	54	551	250	1403	1520	1100	686
Capacity Analysis Module:												
Vol/Sat:	0.12	0.46	0.46	0.01	0.63	0.63	0.01	0.03	0.03	0.05	0.11	0.11
Crit Moves:	****				****						****	
Green/Cycle:	0.13	0.77	0.77	0.02	0.66	0.66	0.12	0.12	0.12	0.12	0.12	0.12
Volume/Cap:	0.95	0.60	0.60	0.60	0.95	0.95	0.09	0.28	0.28	0.47	0.95	0.95
Level Of Service Module:												
Delay/Veh:	67.7	4.2	4.2	56.6	19.0	19.0	30.6	31.5	31.5	33.5	69.8	69.8
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	67.7	4.2	4.2	56.6	19.0	19.0	30.6	31.5	31.5	33.5	69.8	69.8
Queue:	10	25	1	1	78	2	0	0	1	3	6	4

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Beaverton Transportation System Plan
2015 ENHANCED Traffic Conditions MITIGATION
PM Peak Hour (phf=0.95 - 1.0)

Level Of Service Computation Report
1994 HCM Operations Method (Base Volume Alternative)

Intersection #26 Watson Ave/5th St

Cycle (sec): 50 Critical Vol./Cap. (X): 0.657
Loss Time (sec): 8 (Y+R = 4 sec) Average Delay (sec/veh): 7.2
Optimal Cycle: 38 Level Of Service: B

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	0	0	0	0	0	1	0	1	0	0	0	0	1	0	0	1	0	0	0
Volume Module:												
Base Vol:	0	0	0	113	1088	42	0	92	128	63	200	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	113	1088	42	0	92	128	63	200	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
PHF Volume:	0	0	0	122	1172	45	0	99	138	68	216	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	122	1172	45	0	99	138	68	216	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.05	1.05	1.05	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	0	0	0	128	1231	48	0	99	138	68	216	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	0.99	0.99	0.99	1.00	0.81	0.81	0.84	0.84	1.00
Lanes:	0.00	0.00	0.00	0.18	1.75	0.07	0.00	0.42	0.58	0.24	0.76	0.00
Final Sat.:	0	0	0	342	3292	128	0	644	898	383	1216	0
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.37	0.37	0.37	0.00	0.15	0.15	0.18	0.18	0.00
Crit Moves:					tttt						tttt	
Green/Cycle:	0.00	0.00	0.00	0.57	0.57	0.57	0.00	0.27	0.27	0.27	0.27	0.00
Volume/Cap:	0.00	0.00	0.00	0.66	0.66	0.66	0.00	0.57	0.57	0.66	0.66	0.00
Level Of Service Module:												
Delay/Veh:	0.0	0.0	0.0	5.3	5.3	5.3	0.0	11.5	11.5	13.0	13.0	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	5.3	5.3	5.3	0.0	11.5	11.5	13.0	13.0	0.0
Queue:	0	0	0	2	12	1	0	1	2	1	3	0

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Beaverton Transportation System Plan
2015 ENHANCED Traffic Conditions MITIGATION
PM Peak Hour (phf=0.95 - 1.0)

Level Of Service Computation Report
1994 HCM Operations Method (Base Volume Alternative)

Intersection #28 Hall Boulevard/5th Avenue

Cycle (sec): 50 Critical Vol./Cap. (X): 0.763
Loss Time (sec): 8 (Y+R = 4 sec) Average Delay (sec/veh): 9.4
Optimal Cycle: 48 Level Of Service: B

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	1	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0
Volume Module:												
Base Vol:	53	1008	50	0	0	0	21	206	0	0	265	128
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	53	1008	50	0	0	0	21	206	0	0	265	128
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
PHF Volume:	60	1149	57	0	0	0	24	235	0	0	302	146
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	60	1149	57	0	0	0	24	235	0	0	302	146
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.05	1.05	1.05	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	63	1207	60	0	0	0	24	235	0	0	302	146
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.96	0.96	0.96	1.00	1.00	1.00	0.87	0.87	1.00	1.00	0.85	0.85
Lanes:	0.09	1.82	0.09	0.00	0.00	0.00	0.09	0.91	0.00	0.00	0.67	0.33
Final Sat.:	173	3314	165	0	0	0	153	1502	0	0	1091	527
Capacity Analysis Module:												
Vol/Sat:	0.36	0.36	0.36	0.00	0.00	0.00	0.16	0.16	0.00	0.00	0.28	0.28
Crit Moves:		tttt									****	
Green/Cycle:	0.48	0.48	0.48	0.00	0.00	0.00	0.36	0.36	0.00	0.00	0.36	0.36
Volume/Cap:	0.76	0.76	0.76	0.00	0.00	0.00	0.43	0.43	0.00	0.00	0.76	0.76
Level Of Service Module:												
Delay/Veh:	8.4	8.4	8.4	0.0	0.0	0.0	8.1	8.1	0.0	0.0	13.1	13.1
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	8.4	8.4	8.4	0.0	0.0	0.0	8.1	8.1	0.0	0.0	13.1	13.1
Queue:	1	15	1	0	0	0	0	3	0	0	5	3

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Beaverton Transportation System Plan
2015 ENHANCED Traffic Conditions MITIGATION
PM Peak Hour (phf=0.95 - 1.0)

Level Of Service Computation Report
1994 HCM Operations Method (Base Volume Alternative)

Intersection #33 Murray Blvd/Farmington Rd

Cycle (sec): 160 Critical Vol./Cap. (X): 1.049
Loss Time (sec): 16 (Y+R = 4 sec) Average Delay (sec/veh): 51.2
Optimal Cycle: 180 Level Of Service: E

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Ovl			Ovl			Ovl		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	2	0 1	1 0	2	0 2	0 1	2	0 2	0 1	2	0 2	0 1
Volume Module:												
Base Vol:	313	1132	214	124	1486	475	207	797	341	380	1481	107
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	313	1132	214	124	1486	475	207	791	341	380	1481	107
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	329	1192	225	131	1564	500	218	839	359	400	1559	113
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	329	1192	225	131	1564	500	218	839	359	400	1559	113
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.03	1.05	1.05	1.03	1.05	1.00	1.03	1.05	1.00	1.03	1.05	1.00
Final Vol.:	339	1251	237	134	1642	500	224	881	359	412	1637	113
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.99	1.07	1.02	0.99	1.08	0.87	1.00	1.13	0.88	1.01	1.09	0.89
Lanes:	2.00	1.67	0.33	2.00	2.00	1.00	2.00	2.00	1.00	2.00	2.00	1.00
Final Sat.:	3750	3391	642	3750	4107	1658	3787	4279	1674	3824	4149	1691
Capacity Analysis Module:												
Vol/Sat:	0.09	0.37	0.37	0.04	0.40	0.30	0.06	0.21	0.21	0.11	0.39	0.07
Crit Moves:	****				tttt		****				****	
Green/Cycle:	0.09	0.43	0.43	0.04	0.38	0.44	0.06	0.29	0.37	0.14	0.38	0.42
Volume/Cap:	1.05	0.87	0.87	0.87	1.05	0.69	1.05	0.72	0.57	0.74	1.05	0.16
Level Of Service Module:												
Delay/Veh:	100.8	30.5	30.5	74.4	63.0	25.3	112.2	34.4	26.7	46.1	63.3	18.8
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	100.8	30.5	30.5	74.4	63.0	25.3	112.2	34.4	26.7	46.1	63.3	18.8
Queue:	21	53	11	7	93	18	15	36	13	18	92	3

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Beaverton Transportation System Plan
2015 ENHANCED Traffic Conditions MITIGATION
PM Peak Hour (phf=0.95 - 1.0)

Level Of Service Computation Report
1994 HCM Operations Method (Base Volume Alternative)

Intersection #34 Farmington Road/Watson Avenue

Cycle (sec): 120 Critical Vol./Cap. (X): 0.962
Loss Time (sec): 16 (Y+R = 4 sec) Average Delay (sec/veh): 27.3
Optimal Cycle: 171 Level Of Service: D

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	0 0	0 0	0	1 1	1 0	0	0 1	1 0	1	0 1	1 0
Volume Module:												
Base Vol:	0	0	0	180	877	123	0	1415	304	108	1825	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	180	877	123	0	1415	304	108	1825	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	0	0	0	189	923	129	0	1489	320	114	1921	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	189	923	129	0	1489	320	114	1921	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.10	1.10	1.10	1.00	1.05	1.05	1.00	1.05	1.05
Final Vol.:	0	0	0	208	1015	142	0	1564	336	114	2017	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	0.96	0.96	0.96	1.00	0.96	0.96	0.94	0.99	1.00
Lanes:	0.00	0.00	0.00	0.46	2.23	0.31	0.00	1.65	0.35	1.00	2.00	0.00
Final Sat.:	0	0	0	834	4071	570	0	3004	645	1787	3762	0
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.25	0.25	0.25	0.00	0.52	0.52	0.06	0.54	0.00
Crit Moves:						tttt		tttt		****		
Green/Cycle:	0.00	0.00	0.00	0.26	0.26	0.26	0.00	0.54	0.54	0.07	0.61	0.00
Volume/Cap:	0.00	0.00	0.00	0.96	0.96	0.96	0.00	0.96	0.96	0.96	0.88	0.00
Level Of Service Module:												
Delay/Veh:	0.0	0.0	0.0	40.0	40.0	40.0	0.0	26.3	26.3	88.0	16.1	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	40.0	40.0	40.0	0.0	26.3	26.3	88.0	16.1	0.0
Queue:	0	0	0	10	39	7	0	56	14	6	60	0

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Beaverton Transportation System Plan
2015 ENHANCED Traffic Conditions MITIGATION
PM Peak Hour (phf=0.95 - 1.0)

Level Of Service Computation Report
1994 HCM Operations Method (Base Volume Alternative)

Intersection #35 Farmington/Hall Boulevard

Cycle (sec):	120			Critical Vol./Cap. (X):			1.102										
Loss Time (sec):	12	(Y+R =	4	sec)	Average Delay (sec/veh):		58.9										
Optimal Cycle:	180				Level Of Service:		E										
Approach:	North Bound				South Bound				East Bound				West Bound				
Movement:	L	- T	- R		L	- T	- R		L	- T	- R		L	- T	- R		
Control:	Split Phase				Split Phase				Protected				Protected				
Rights:	Include				Include				Include				Include				
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0		
Lanes:	0	1	1	1	0	0	0	0	0	0	1	0	2	0	0	0	0	1	1	0
Volume Module:																	
Base Vol:	358	1029	113		0	0	0		188	1350	0		0	1581	282		
Growth Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		
Initial Bse:	358	1029	113		0	0	0		188	1350	0		0	1581	282		
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		
PHF Adj:	0.95	0.95	0.95		0.95	0.95	0.95		0.95	0.95	0.95		0.95	0.95	0.95		
PHF Volume:	377	1083	119		0	0	0		198	1421	0		0	1664	297		
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0		
Reduced Vol:	377	1083	119		0	0	0		198	1421	0		0	1664	297		
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		
MLF Adj:	1.10	1.10	1.10		1.00	1.00	1.00		1.00	1.05	1.00		1.00	1.05	1.05		
Final Vol.:	415	1191	131		0	0	0		198	1492	0		0	1747	312		
Saturation Flow Module:																	
Sat/Lane:	1900	1900	1900		1900	1900	1900		1900	1900	1900		1900	1900	1900		
Adjustment:	0.96	0.96	0.96		1.00	1.00	1.00		0.94	0.99	1.00		1.00	0.96	0.96		
Lanes:	0.72	2.06	0.22		0.00	0.00	0.00		1.00	2.00	0.00		0.00	1.70	0.30		
Final Sat.:	1309	3755	413		0	0	0		1787	3762	0		0	3098	553		
Capacity Analysis Module:																	
Vol/Sat:	0.32	0.32	0.32		0.00	0.00	0.00		0.11	0.40	0.00		0.00	0.56	0.56		
Crit Moves:			tttt						tttt					tttt			
Green/Cycle:	0.29	0.29	0.29		0.00	0.00	0.00		0.10	0.61	0.00		0.00	0.51	0.51		
Volume/Cap:	1.10	1.10	1.10		0.00	0.00	0.00		1.10	0.65	0.00		0.00	1.10	1.10		
Level Of Service Module:																	
Delay/Veh:	80.0	80.0	80.0		0.0	0.0	0.0		125.6	10.1	0.0		0.0	70.0	70.0		
User DelAdj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		
AdjDel/Veh:	80.0	80.0	80.0		0.0	0.0	0.0		125.6	10.1	0.0		0.0	70.0	70.0		
Queue:	24	63	9		0	0	0		13	32	0		0	95	20		

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Beaverton Transportation System Plan
2015 ENHANCED Traffic Conditions MITIGATION
PM Peak Hour (phf=0.95 - 1.0)

Level Of Service Computation Report
1994 HCM Operation6 Method (Base Volume Alternative)

Intersection #37 Farmington Road/Lombard Avenue

Cycle (sec):	120			Critical Vol./Cap. (X):			0.965										
Loss Time (sec):	16	(Y+R =	4	sec)	Average Delay (sec/veh):		32.7										
Optimal Cycle:	173				Level Of Service:		D										
Approach:	North Bound				South Bound				East Bound				West Bound				
Movement:	L	- T	- R		L	- T	- R		L	- T	- R		L	- T	- R		
Control:	Protected				Protected				Protected				Protected				
Rights:	Ovl				Include				Ovl				Ovl				
Min. Green:	0	0	0		0	0	0		0	0	0		1	00	20	0	10
Lanes:	1	0	1	0	1	1	0	0	1	0	2	0	1				
Volume Module:																	
Base Vol:	152	173	113		193	305	53		68	1173	242		255	1694	136		
Growth Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		
Initial Bse:	152	173	113		193	305	53		68	1173	242		255	1694	136		
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		
PHF Adj:	0.95	0.95	0.95		0.95	0.95	0.95		0.95	0.95	0.95		0.95	0.95	0.95		
PHF Volume:	160	182	119		203	321	56		72	1235	255		268	1783	143		
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0		
Reduced Vol:	160	182	119		203	321	56		72	1235	255		268	1783	143		
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.05	1.00		1.00	1.05	1.00		
Final Vol.:	160	182	119		203	321	56		72	1296	255		268	1872	143		
Saturation Flow Module:																	
Sat/Lane:	1900	1900	1900		1900	1900	1900		1900	1900	1900		1900	1900	1900		
Adjustment:	0.94	0.99	0.84		0.92	0.95	0.95		0.94	0.99	0.83		0.94	0.99	0.84		
Lanes:	1.00	1.00	1.00		1.00	0.85	0.15		1.00	2.00	1.00		1.00	2.00	1.00		
Final Sat.:	1787	1881	1599		1752	1539	269		1787	3762	1580		1787	3762	1599		
Capacity Analysis Module:																	
Vol/Sat:	0.09	0.10	0.07		0.12	0.21	0.21		0.04	0.34	0.16		0.15	0.50	0.09		
Crit Moves:	****					****			tttt					tttt			
Green/Cycle:	0.09	0.14	0.31		0.17	0.22	0.22		0.04	0.39	0.48		0.17	0.52	0.68		
Volume/Cap:	0.96	0.69	0.24		0.69	0.96	0.96		0.96	0.89	0.34		0.89	0.96	0.13		
Level Of Service Module:																	
Delay/Veh:	78.7	36.7	20.0		34.8	56.9	56.9		104.8	27.1	12.5		49.3	27.8	4.2		
User DelAdj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		
AdjDel/Veh:	78.7	36.7	20.0		34.8	56.9	56.9		104.8	27.1	12.5		49.3	27.8	4.2		
Queue:	8	6	3		7	14	3		4	43	5		11	67	2		

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Beaverton Transportation System Plan
2015 ENHANCED Traffic Conditions MITIGATION
PM Peak Hour (phf=0.95 - 1.0)

Level Of Service Computation Report
1994 HCM Operations Method (Base Volume Alternative)

Intersection #41 Allen Blvd/ORE 217 NB ramps

Cycle (sec): 110 Critical Vol./Cap. (X): 0,967
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 28.8
Optimal Cycle: 165 Level Of Service: D

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Protected			Protected		
Rights:	ov1			Include			Include			ov1		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	1	0	0	1	0	0	0	0	0	1	0	2	0	0	0	0	2	0	1
Volume Module:																				
Base Vol:	572	0	339	0	0	0	415	828	0	0	1283	428
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	572	0	339	0	0	0	415	828	0	0	1283	428
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	602	0	357	0	0	0	437	872	0	0	1351	451
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	602	0	357	0	0	0	437	872	0	0	1351	451
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.05	1.05	1.00	1.00	1.00	1.00	1.00	1.05	1.00	1.00	1.05	1.00
Final Vol.:	632	0	357	0	0	0	437	915	0	0	1418	451
Saturation Flow Module:																				
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.83	1.00	1.00	1.00	0.92	0.97	1.00	1.00	0.97	0.83
Lanes:	2.00	0.00	1.00	0.00	0.00	0.00	1.00	2.00	0.00	0.00	2.00	1.00
Final Sat.:	3505	0	1568	0	0	0	1752	3689	0	0	3689	1568
Capacity Anaiysis Module:																				
Vol/Sat:	0.18	0.00	0.23	0.00	0.00	0.00	0.25	0.25	0.00	0.00	0.38	0.29
Crit Moves:			****				tttt				tttt	
Green/Cycle:	0.24	0.00	0.24	0.00	0.00	0.00	0.26	0.66	0.00	0.00	0.40	0.40
Volume/Cap:	0.77	0.00	0.97	0.00	0.00	0.00	0.97	0.38	0.00	0.00	0.97	0.72
Level Of Service Module:																				
Delay/Veh:	28.4	0.0	55.1	0.0	0.0	0.0	51.1	5.7	0.0	0.0	33.0	21.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	28.4	0.0	55.1	0.0	0.0	0.0	51.1	5.7	0.0	0.0	33.0	21.0
Queue:	19	0	15	0	0	0	17	13	0	0	49	12

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Beaverton Transportation System Plan
2015 ENHANCED Traffic Conditions MITIGATION
PM Peak Hour (phf=0.95 - 1.0)

Level Of Service Computation Report
1994 HCM Operations Method (Base Volume Alternative)

Intersection #44 Allen Blvd/ORE 217 SB ramps

Cycle (sec): 120 Critical Vol./Cap. (X): 0.967
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh) 33.1
Optimal Cycle: 176 Level Of Service: D

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Protected			Protected		
Rights:	Include			Ovl			Ignore			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	0	0	0	0	0	1	0	0	2	0	0	2	0	1	1	0	2	0	0
Volume Module:																				
Base Vol:	0	0	0	401	6	726	0	907	581	548	1347	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Initial Bse:	0	0	0	401	6	726	0	907	0	548	1347	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.00	0.95	0.95	0.95
PHF Volume:	0	0	0	422	6	764	0	955	0	577	1418	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0				0	955	0	577	1418	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.13	1.00	1.05	0.00	1.00	1.05	1.00
Final Vol.:	0	0	0	422	6	864	0	1002	0	577	1489	0
Saturation Flow Module:																				
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	0.83	0.83	0.83	1.00	0.98	1.00	0.93	0.98	1.00
Lanes:	0.00	0.00	0.00	0.99	0.01	2.00	0.00	2.00	1.00	1.00	2.00	0.00
Final Sat.:	0	0	0	1546	22	3136	0	3725	1900	1770	3725	0
Capacity Analysis Module:																				
Vol/Sat:	0.00	0.00	0.00	0.27	0.27	0.28	0.00	0.27	0.00	0.33	0.40	0.00
Crit Moves:						****		tttt		tttt		
Green/Cycle:	0.00	0.00	0.00	0.28	0.28	0.28	0.00	0.28	0.00	0.54	0.62	0.00
Volume/Cap:	0.00	0.00	0.00	0.96	0.96	0.97	0.00	0.97	0.00	0.97	0.65	0.00
Level Of Service Module:																				
Delay/Veh:	0.0	0.0	0.0	50.8	50.8	44.0	0.0	42.8	0.0	46.6	10.0	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	50.8	50.8	44.0	0.0	42.8	0.0	46.6	10.0	0.0
Queue:	0	0	0	18	1	34	0	39	0	24	32	0

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Beaverton Transportation System Plan
2015 ENHANCED Traffic Conditions MITIGATION
PM Peak Hour (phf-0.95 - 1.0)

Level Of Service Computation Report
1994 HCM Operations Method (Base Volume Alternative)

Intersection #53 BH Hwy/ORE 217 SB ramps

Cycle (sec): 120 Critical Vol./Cap. (X): 0.918
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 21.0
Optimal Cycle: 131 Level Of Service: C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Protected			Protected		
Rights:		Include			Include			Include			Include	
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	0	0	1	0	2	0	1	0	0	2	0	1	1	0	2	0	0
Volume Module:												
Base Vol:	0	0	0	240	714	418	0	1175	524	90	1848	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	240	714	418	0	1175	524	90	1848	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	0	0	0	253	752	440	0	1237	552	95	1945	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	253	752	440	0	1237	552	95	1945	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.05	1.00	1.00	1.05	1.00	1.00	1.05	1.00
Final Vol.:	0	0	0	253	789	440	0	1299	552	95	2043	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	0.82	0.96	0.82	1.00	0.99	0.84	0.94	0.99	1.00
Lanes:	0.00	0.00	0.00	1.00	2.00	1.00	0.00	2.00	1.00	1.00	2.00	0.00
Final Sat.:	0	0	0	1553	3654	1553	0	3762	1599	1787	3762	0
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.16	0.22	0.28	0.00	0.35	0.35	0.05	0.54	0.00
Crit Moves:						tttt	tttt				tttt	
Green/Cycle:	0.00	0.00	0.00	0.31	0.31	0.31	0.00	0.51	0.51	0.08	0.59	0.00
Volume/Cap:	0.00	0.00	0.00	0.53	0.70	0.92	0.00	0.67	0.67	0.67	0.92	0.00
Level of Service Module:												
Delay/Veh:	0.0	0.0	0.0	23.0	25.0	42.1	0.0	14.7	15.6	42.7	19.0	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	23.0	25.0	42.1	0.0	14.7	15.6	42.7	19.0	0.0
Queue:	0	0	0	7	24	17	0	33	14	3	65	0

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Beaverton Transportation System Plan
2015 ENHANCED Traffic Conditions MITIGATION
PM Peak Hour (phf=0.95 - 1.0)

Level Of Service Computation Report
1994 HCM Operations Method (Base Volume Alternative)

Intersection #54 BH Hwy/Griffith Drive

Cycle (sec): 100 Critical Vol./Cap. (X): 0.886
Loss Time (sec): 16 (Y+R = 4 sec) Average Delay (sec/veh) 18.0
Optimal Cycle: 111 Level Of Service: C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Prot+Permit			Prot+Permit			Protected			Protected		
Rights:		Ovl			Ovl			Include			Ovl	
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0	1	0	1	1	0	1	0	1	1	0	1	0	2	0	1
Volume Module:												
Base Vol:	133	147	155	186	94	95	35	1403	99	137	1855	302
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	133	147	155	186	94	95	35	1403	99	137	1855	302
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
PHF Volume:	138	152	161	193	98	99	36	1455	103	142	1924	313
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	138	152	161	193	98	99	36	1455	103	142	1924	313
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.05	1.05	1.00	1.05	1.00
Final vol.:	138	152	161	193	98	99	36	1528	108	142	2020	313
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.80	1.00	0.84	0.62	1.00	0.84	0.94	0.98	0.98	0.94	0.99	0.83
Lanes:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.87	0.13	1.00	2.00	1.00
Final Sat.:	1523	1900	1596	1171	1900	1596	1787	3479	246	1787	3762	1580
Capacity Analysis Module:												
Vol/Sat:	0.09	0.08	0.10	0.16	0.05	0.06	0.02	0.44	0.44	0.08	0.54	0.20
Crit Moves:		tttt		tttt			tttt				****	
Green/Cycle:	0.21	0.09	0.19	0.25	0.09	0.12	0.02	0.53	0.53	0.10	0.61	0.73
Volume/Cap:	0.44	0.89	0.54	0.66	0.55	0.53	0.89	0.82	0.82	0.82	0.89	0.27
Level Of Service Module:												
Delay/Veh:	22.7	55.5	25.3	24.2	30.5	29.0	97.6	14.7	14.7	46.6	14.1	3.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	22.7	55.5	25.3	24.2	30.5	29.0	97.6	14.7	14.7	46.6	14.1	3.0
Queue:	4	6	4	7	3	3	2	37	4	5	50	3

Beaverton Transportation System Plan
2015 ENHANCED Traffic Conditions MITIGATION
PM Peak Hour (phf-0.95 - 1.0)

Level Of Service Computation Report
1994 HCM Operations Method (Base Volume Alternative)

Intersection #59 BH Hwy/OR8 217 NB ramps

Cycle (sec):	120			Critical Vol./Cap. (X):			0.872										
Loss Time (sec):	12 (Y+R = 4 sec)			Average Delay (sec/veh):			24.3										
Optimal Cycle:	106			Level Of Service:			C										
Approach:	North Bound			South Bound			East Bound			West Bound							
Movement:	L	T	R	L	T	R	L	T	R	L	T	R					
Control:	Protected			Protected			Protected			Protected							
Rights:	Ovl			Include			Include			Include							
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0					
Lanes:	2	0	2	0	1	0	0	0	0	0	1	0	2	0	0	0	0
Volume Module:																	
Base Vol:	746	807	237	0	0	0	304	1052	0	0	1217	463					
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00					
Initial Bse:	746	807	237	0	0	0	304	1052	0	0	1217	463					
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00					
PHF Adj:	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96					
PHF Volume:	776	840	247	0	0	0	316	1095	0	0	1266	482					
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0					
Reduced Vol:	776	840	247	0	0	0	316	1095	0	0	1266	482					
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00					
MLF Adj:	1.03	1.05	1.00	1.00	1.00	1.00	1.00	1.05	1.00	1.00	1.05	1.00					
Final Vol.:	800	882	247	0	0	0	316	1149	0	0	1330	482					
Saturation Flow Module:																	
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900					
Adjustment:	0.83	0.98	0.83	1.00	1.00	1.00	0.93	0.98	1.00	1.00	0.99	0.84					
Lanes:	2.00	2.00	1.00	0.00	0.00	0.00	1.00	2.00	0.00	0.00	2.00	1.00					
Final Sat.:	3167	3725	1583	0	0	0	1770	3725	0	0	3762	1599					
Capacity Analysis Module:																	
Vol/Sat:	0.25	0.24	0.16	0.00	0.00	0.00	0.18	0.31	0.00	0.00	0.35	0.30					
Crit Moves:	****						****				****						
Green/Cycle:	0.29	0.29	0.29	0.00	0.00	0.00	0.20	0.61	0.00	0.00	0.41	0.41					
Volume/Cap:	0.87	0.82	0.54	0.00	0.00	0.00	0.87	0.51	0.00	0.00	0.87	0.74					
Level Of Service Module:																	
Delay/Veh:	32.7	29.1	24.2	0.0	0.0	0.0	43.8	8.7	0.0	0.0	25.4	22.8					
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00					
AdjDel/Veh:	32.7	29.1	24.2	0.0	0.0	0.0	43.8	8.7	0.0	0.0	25.4	22.8					
Queue:	28	29	7	0	0	0	12	22	0	0	43	14					

Beaverton Transportation System Plan
2015 ENHANCED Traffic Conditions MITIGATION
PM Peak Hour (phf-0.95 - 1.0)

Level Of Service Computation Report
1994 HCM Operations Method (Base Volume Alternative)

Intersection #66 Canyon Road/Broadway-117th Avenue

Cycle (sec):	120			Critical Vol./Cap. (X):			0.916										
Loss Time (sec):	16 (Y+R = 4 sec)			Average Delay (sec/veh):			27.1										
Optimal Cycle:	138			Level Of Service:			D										
Approach:	North Bound			South Bound			East Bound			West Bound							
Movement:	L	T	R	L	T	R	L	T	R	L	T	R					
Control:	Protected			Protected			Protected			Protected							
Rights:	Ovl			Include			Ovl			Include							
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0					
Lanes:	1	0	1	0	1	2	0	0	1	0	1	0	2	0	1	1	0
Volume Module:																	
Base Vol:	23	136	67	249	149	193	204	1418	21	51	1366	116					
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00					
Initial Bse:	23	136	67	249	149	193	204	1418	21	51	1366	116					
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00					
PHP Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95					
PHF Volume:	24	143	71	262	157	203	215	1493	22	54	1438	122					
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0					
Reduced Vol:	24	143	71	262	157	203	215	1493	22	54	1438	122					
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00					
MLF Adj:	1.00	1.00	1.00	1.03	1.00	1.00	1.00	1.05	1.00	1.00	1.05	1.00					
Final Vol.:	24	143	71	270	157	203	215	1567	22	54	1510	122					
Saturation Flow Module:																	
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900					
Adjustment:	0.94	0.99	0.83	0.79	0.88	0.88	0.91	0.84	0.82	0.92	0.90	0.79					
Lanes:	1.00	1.00	1.00	2.00	0.44	0.56	1.00	2.00	1.00	1.00	2.00	1.00					
Final Sat.:	1787	1881	1580	3000	731	945	1752	3418	1494								
Capacity Analysis Module:																	
Vol/Sat:	0.01	0.08	0.04	0.09	0.21	0.21	0.12	0.49	0.01	0.03	0.44	0.08					
Crit Moves:	****				****		****				****						
Green/Cycle:	0.01	0.11	0.15	0.14	0.23	0.23	0.14	0.58	0.60	0.04	0.48	0.48					
Volume/Cap:	0.92	0.67	0.30	0.67	0.92	0.92	0.92	0.84	0.02	0.84	0.92	0.17					
Level Of Service Module:																	
Delay/Veh:	135.2	38.1	29.5	34.7	47.3	47.3	59.2	16.0	6.4	77.4	24.7	11.3					
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00					
AdjDel/Veh:	135.2	38.1	29.5	34.7	47.3	47.3	59.2	16.0	6.4	77.4	24.7	11.3					
Queue:	2	5	2	9	7	9	9	45	0	3	50	2					

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Beaverton Transportation System Plan
2015 ENHANCED Traffic Conditions MITIGATION
PM Peak Hour (phf=0.95 - 1.0)

Level Of Service Computation Report
1994 HCM Operations Method (Base Volume Alternative)

Intersection #67 Canyon Road/ORB 217 SB ramps

Cycle (sec): 120 Critical vol./Cap. (X): 0.928
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 29.0
Optimal Cycle: 138 Level Of Service: D

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Protected			Protected		
Rights:	Include			Ovl			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	0	0	1	0	1	0	0	2	0	1	
Volume Module:												
Base Vol:	0	0	0	439	560	596	0	1266	553	362	1190	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	439	560	596	0	1266	553	362	1190	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
PHF Volume:	0	0	0	451	576	613	0	1301	568	372	1223	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	451	576	613	0	1301	568	372	1223	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.10	1.10	1.00	1.05	1.00	1.00	1.05	1.00
Final Vol.:	0	0	0	451	633	674	0	1366	568	372	1284	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	0.90	0.90	0.90	1.00	1.00	0.83	0.92	1.00	1.00
Lanes:	0.00	0.00	0.00	1.00	1.45	1.55	0.00	2.00	1.00	1.00	2.00	0.00
Final Sat.:	0	0	0	1714	2490	2651	0	3800	1568	1752	3800	0
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.26	0.25	0.25	0.00	0.36	0.36	0.21	0.34	0.00
Crit Moves:				****				****		****		
Green/Cycle:	0.00	0.00	0.00	0.28	0.28	0.28	0.00	0.39	0.39	0.23	0.62	0.00
Volume/Cap:	0.00	0.00	0.00	0.93	0.90	0.90	0.00	0.93	0.93	0.93	0.55	0.00
Level Of Service Module:												
Delay/Veh:	0.0	0.0	0.0	44.4	32.2	32.2	0.0	30.4	38.6	49.1	8.8	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	44.4	32.2	32.2	0.0	30.4	38.6	49.1	8.8	0.0
Queue:	0	0	0	18	23	24	0	48	22	15	25	0

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Beaverton Transportation System Plan
2015 ENHANCED Traffic Conditions MITIGATION
PM Peak Hour (phf-0.95 - 1.0)

Level Of Service Computation Report
1994 HCM Operations Method (Base Volume Alternative)

Intersection #69 Canyon Road/ORB 217 NB ramps

Cycle (sec): 120 Critical Vol./Cap. (X): 0,863
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 24.3
Optimal Cycle: 102 Level Of Service: C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Protected			Protected		
Rights:	Ovl			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	1	1	0	1	0	0	0	0	0	1	0	2	0	0	0	0	2	0	1
Volume Module:												
Base Vol:	662	518	452	0	0	0	296	1274	0	0	1042	353
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	662	518	452	0	0	0	296	1274	0	0	1042	353
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
PHF Volume:	687	538	469	0	0	0	307	1323	0	0	1082	367
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	687	538	469	0	0	0	307	1323	0	0	1082	367
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.10	1.10	1.00	1.00	1.00	1.00	1.00	1.05	1.00	1.00	1.05	1.00
Final Vol.:	756	592	469	0	0	0	307	1389	0	0	1136	367
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.82	0.82	0.82	1.00	1.00	1.00	0.92	1.00	1.00	1.00	1.00	0.83
Lanes:	1.68	1.32	1.00	0.00	0.00	0.00	1.00	2.00	0.00	0.00	2.00	1.00
Final Sat.:	2607	2041	1550	0	0	0	1752	3800	0	0	3800	1568
Capacity Analysis Module:												
Vol/Sat:	0.29	0.29	0.30	0.00	0.00	0.00	0.18	0.37	0.00	0.00	0.30	0.23
Crit Moves:			****				****				****	
Green/Cycle:	0.35	0.35	0.35	0.00	0.00	0.00	0.20	0.55	0.00	0.00	0.35	0.35
Volume/Cap:	0.83	0.83	0.86	0.00	0.00	0.00	0.86	0.67	0.00	0.00	0.86	0.68
Level Of Service Module:												
Delay/Veh:	25.6	25.6	32.9	0.0	0.0	0.0	43.1	13.0	0.0	0.0	28.0	23.9
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	25.6	25.6	32.9	0.0	0.0	0.0	43.1	13.0	0.0	0.0	28.0	23.9
Queue:	25	19	16	0	0	0	13	33	0	0	37	11

Beaverton Transportation System Plan
2015 ENHANCED Traffic Conditions MITIGATION
PM Peak Hour (phf=0.95 - 1.0)

Level Of Service Computation Report
1994 HCM Operations Method (Base Volume Alternative)

Intersection #76 Canyon Road/Hall Boulevard

Cycle (sec): 140 Critical Vol./Cap. (X): 0.993
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 34.5
Optimal Cycle: 180 Level Of Service: D

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	1	1	1	0	0	0	0	0	1	0	1	1	1	0	0	0	1	1	0
Volume Module:												
Base Vol:	282	1064	150	0	0	0	80	1807	0	0	1300	277
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	282	1064	150	0	0	0	80	1807	0	0	1300	277
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
PHF Volume:	286	1078	152	0	0	0	81	1831	0	0	1317	281
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	286	1078	152	0	0	0	81	1831	0	0	1317	281
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.10	1.10	1.10	1.00	1.00	1.00	1.00	1.05	1.05	1.00	1.05	1.05
Final Vol.:	314	1186	167	0	0	0	81	1922	0	0	1383	295
Saturation F	ow Module:											
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.95	0.95	1.00	1.00	1.00	0.93	0.84	1.00	1.00	0.87	0.95
Lanes:	0.57	2.13	0.30	0.00	0.00	0.00	1.00	2.00	0.00	0.00	1.67	0.33
Final Sat.:	1021	3856	543	0	0	0	1770	3201	0	0	2774	592
Capacity Analysis Module:												
Vol/Sat:	0.31	0.31	0.31	0.00	0.00	0.00	0.05	0.60	0.00	0.00	0.50	0.50
Crit Moves:			tttt					****		tttt		
Green/Cycle:	0.31	0.31	0.31	0.00	0.00	0.00	0.05	0.60	0.00	0.00	0.55	0.55
Volume/Cap:	0.99	0.99	0.99	0.00	0.00	0.00	0.90	0.99	0.00	0.00	0.90	0.90
Level Of Service Module:												
Delay/Veh:	46.6	46.6	46.6	0.0	0.0	0.0	86.6	32.0	0.0	0.0	22.6	22.6
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	46.6	46.6	46.6	0.0	0.0	0.0	86.6	32.0	0.0	0.0	22.6	22.6
Queue:	16	54	10	0	0	0	5	84	0	0	51	12

Beaverton Transportation System Plan
2015 ENHANCED Traffic Conditions MITIGATION
PM Peak Hour (phf=0.95 - 1.0)

Level Of Service Computation Report
1994 HCM Operations Method (Base Volume Alternative)

Intersection #81 Canyon Road/Watson Avenue

Cycle (sec): 120 Critical Vol./Cap. (X): 1.019
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh) 35.7
Optimal Cycle: 180 Level Of Service: D

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Protected			Protected		
Rights:	Include			Include			Include			Inc1ude		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	0	0	0	0	0	0	1	1	1	0	0	0	1	1	0	1	0	2	0	0
Volume Module:												
Base Vol:	0	0	0	277	1060	162	0	1584	42	77	1439	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	277	1060	162	0	1584	42	77	1439	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	*1.00*
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	0	0	0	292	1116	171	0	1667	44	81	1515	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	292	1116	171	0	1667	44	81	1515	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.10	1.10	1.10	1.00	1.05	1.05	1.00	1.05	1.00
Final Vol.:	0	0	0	321	1227	188	0	1751	46	81	1590	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	0.96	0.96	0.96	1.00	0.85	0.97	0.92	0.88	1.00
Lanes:	0.00	0.00	0.00	0.55	2.13	0.32	0.00	1.95	0.05	1.00	2.00	0.00
Final Sat.:	0	0	0	1012	3869	593	0	3160	83	1752	3350	0
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.32	0.32	0.32	0.00	0.55	0.55	0.05	0.47	0.00
Crit Moves:						tttt		tttt		tttt		
Green/Cycle:	0.00	0.00	0.00	0.31	0.31	0.31	0.00	0.54	0.54	0.05	0.59	0.00
Volume/Cap:	0.00	0.00	0.00	1.02	1.02	1.02	0.00	1.02	1.02	1.02	0.81	0.00
Level Of Service Module:												
Delay/Veh:	0.0	0.0	0.0	48.1	48.1	48.1	0.0	38.8	38.8	122.0	14.3	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	48.1	48.1	48.1	0.0	38.8	38.8	122.0	14.3	0.0
Queue:	0	0	0	16	52	10	0	73	3	5	43	0

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Beaverton Transportation System Plan
2015 ENHANCED Traffic Conditions MITIGATION
PM Peak Hour (phf=0.95 - 1.0)

Level Of Service Computation Report
1994 HCM Operations Method (Base Volume Alternative)

Intersection #86 TV Hwy/Hocken Avenue

Cycle (sec): 140 Critical Vol./Cap. (X): 0.991
Loss Time (sec): 16 (Y+R = 4 sec) Average Delay (sec/veh): 35.9
Optimal Cycle: 180 Level Of Service: D

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:		Include			Include			Ovl			Include	
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0	0 1	0	1	0 1	1	0	1	0	2	0 1
Volume Module:												
Bas? Vol:	93	161	115	57	589	163	192	1681	169	42	2228	34
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	93	161	115	57	589	163	192	1681	169	42	2228	34
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	98	169	121	60	620	172	202	1769	178	44	2345	36
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	98	169	121	60	620	172	202	1769	178	44	2345	36
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.05	1.05	1.00	1.05	1.00	1.00	1.10	1.10
Final Vol.:	98	169	121	60	651	180	202	1858	178	44	2580	39
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.93	0.92	0.91	0.93	0.99	0.95	0.92	0.97	0.82	0.92	0.95	0.97
Lanes:	1.00	0.58	0.42	1.00	1.55	0.45	1.00	2.00	1.00	1.00	2.96	0.04
Final Sat.:	1770	1013	?26	1770	2929	810	1752	3689	1550	1752	5320	80
Capacity Analysis Module:												
Vol/Sat:	0.06	0.17	0.17	0.03	0.22	0.22	0.12	0.50	0.11	0.03	0.48	0.48
Crit Moves:	****				****		****				****	
Green/Cycle:	0.06	0.23	0.23	0.05	0.22	0.22	0.12	0.58	0.63	0.03	0.49	0.49
Volume/Cap:	0.99	0.72	0.72	0.72	0.99	0.99	0.99	0.87	0.18	0.87	0.99	0.99
Level Of Service Module:												
Delay/Veh:	109.2	36.0	36.0	58.7	56.9	56.9	85.8	19.4	6.9	98.4	34.6	34.6
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	109.2	36.0	36.0	58.7	56.9	56.9	85.8	19.4	6.9	98.4	34.6	34.6
Queue:	6	7	5	3	31	10	11	64	3	3	111	3

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Beaverton Transportation System Plan
2015 ENHANCED Traffic Conditions MITIGATION
PM Peak Hour (phf=0.95 - 1.0)

Level Of Service Computation Report
1994 HCM Operations Method (Base Volume Alternative)

Intersection #87 Farmington Road/Hocken Avenue

Cycle (sec): 140 Critical Vol./Cap. (X): 0.997
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh) 34.6
Optimal Cycle: 180 Level Of Service: D

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Protected			Protected		
Rights:		Include			Include			Include			Include	
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	0	0 0	0	2	0 0	1	0	2	0	0	0 2	0 1
Volume Module:												
Base Vol:	0	0	0	328	0	404	269	920	0	0	1671	126
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	328	0	404	269	920	0	0	1671	126
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
PHF Volume:	0	0	0	342	0	421	281	959	0	0	1742	131
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	342	0	421	281	959	0	0	1742	131
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.03	1.00	1.00	1.00	1.05	1.00	1.00	1.05	1.00
Final Vol.:	0	0	0	352	0	421	281	1007	0	0	1830	131
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	0.94	1.00	0.84	0.94	0.99	1.00	1.00	0.98	0.82
Lanes:	0.00	0.00	0.00	2.00	0.00	1.00	1.00	2.00	0.00	0.00	2.00	1.00
Final Sat.:	0	0	0	3574	0	1599	1787	3762	0	0	3725	1565
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.10	0.00	0.26	0.16	0.27	0.00	0.00	0.49	0.08
Crit Moves:						****	****				****	
Green/Cycle:	0.00	0.00	0.00	0.26	0.00	0.26	0.16	0.65	0.00	0.00	0.49	0.49
Volume/Cap:	0.00	0.00	0.00	0.37	0.00	1.00	1.00	0.41	0.00	0.00	1.00	0.11
Level Of Service Module:												
Delay/Veh:	0.0	0.0	0.0	27.3	0.0	66.2	78.5	7.6	0.0	0.0	38.5	12.7
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	27.3	0.0	66.2	78.5	7.6	0.0	0.0	38.5	12.7
Queue:	0	0	0	11	0	21	15	19	0	0	81	3

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Beaverton Transportation System Plan
2015 ENHANCED Traffic Conditions MITIGATION
PM Peak Hour (phf=0.95 - 1.0)

Level Of Service Computation Report
1994 HCM Operations Method (Base Volume Alternative)

Intersection #90 TV Hwy/Murray Boulevard

Cycle (sec):	120	Critical Vol./Cap. (X):	1.037		
Loss Time (sec):	16 (Y+R = 4 sec)	Average Delay (sec/veh)	40.3		
Optimal Cycle:	180	Level Of Service:	E		

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			protected			Protected		
Rights:	Include			Ovl			Ovl			Ovl		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	2	0 2	1 0	2	0 3	0 1	2	0 3	0 1	2	0 3	0 1
Volume Module:												
Base Vol:	453	932	164	293	1395	180	191	1650	549	225	2060	246
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	453	932	164	293	1395	180	191	1650	549	225	2060	246
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	477	981	173	308	1468	189	201	1737	578	237	2168	259
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	477	981	173	308	1468	189	201	1737	578	237	2168	259
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.03	1.10	1.10	1.03	1.10	1.00	1.03	1.10	1.00	1.03	1.10	1.00
Final Vol.:	491	1079	190	318	1615	189	207	1911	578	244	2385	259
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustmebt:	0.92	1.07	0.95	0.92	1.06	0.82	0.92	0.99	0.82	0.93	0.97	0.80
Lanes:	2.00	2.50	0.50	2.00	3.00	1.00	2.00	3.00	1.00	2.00	3.00	1.00
Final Sat.:	3505	5107	899	3505	6060	1550	3505	5626	1550	3539	5509	1527
Capacity Analysis Module:												
Vol/Sat:	0.14	0.21	0.21	0.09	0.27	0.12	0.06	0.34	0.37	0.07	0.43	0.17
Crit Moves:	****				****		****				****	
Green/Cycle:	0.14	0.27	0.21	0.12	0.26	0.31	0.06	0.40	0.54	0.07	0.42	0.54
Volume/Cap:	1.04	0.77	0.77	0.77	1.04	0.39	1.04	0.85	0.70	0.93	1.04	0.32
Level Of Service Module:												
Delay/Veh:	75.8	27.5	27.5	39.1	56.0	21.0	97.4	23.4	15.1	62.6	46.6	10.2
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	75.8	27.5	27.5	39.1	56.0	21.0	97.4	23.4	15.1	62.6	46.6	10.2
Queue:	24	34	7	11	70	5	11	60	15	11	102	5

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Beaverton Transportation System Plan
2015 ENHANCED Traffic Conditions MITIGATION
PM Peak Hour (phf=0.95 - 1.0)

Level Of Service Computation Report
1994 HCM Operations Method (Base Volume Alternative)

Intersection #101 Hall Blvd/Westgate-Center

Cycle (sec):	120	Critical Vol./Cap. (X):	0.902		
Loss Time (sec):	16 (Y+R = 4 sec)	Average Delay (sec/veh)	31.7		
Optimal Cycle:	130	Level Of Service:	D		

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Prot+Permit			Prot+Permit		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0 1	1 0	1	0 1	1 0	1	0 0	1 0	1	0 0	1 0
Volume Module:												
Base Vol:	180	924	29	234	752	10	10	279	331	14	326	248
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	180	924	29	234	752	10	10	279	331	14	326	248
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
PHF Volume:	187	959	30	243	780	10	10	289	343	15	338	257
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	187	959	30	243	780	10	10	289	343	15	338	257
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.05	1.05	1.00	1.05	1.05	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	187	1006	32	243	819	11	10	289	343	15	338	257
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.94	0.99	0.99	0.94	0.99	0.99	0.10	0.92	0.92	0.09	0.92	0.92
Lanes:	1.00	1.94	0.06	1.00	1.97	0.03	1.00	0.46	0.54	1.00	0.57	0.43
Final Sat.:	1787	3646	116	1787	3713	50	185	799	949	177	995	756
Capacity Analysis Module:												
Vol/Sat:	0.10	0.28	0.28	0.14	0.22	0.22	0.05	0.36	0.36	0.08	0.34	0.34
Crit Moves:		tttt		****				****		****		
Green/Cycle:	0.15	0.31	0.31	0.15	0.31	0.31	0.41	0.40	0.40	0.44	0.40	0.40
Volume/Cap:	0.71	0.90	0.90	0.90	0.71	0.71	0.13	0.90	0.90	0.19	0.84	0.84
Level Of Service Module:												
Delay/Veh:	37.4	33.0	33.0	54.0	25.2	25.2	16.4	32.5	32.5	16.4	27.2	27.2
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	37.4	33.0	33.0	54.0	25.2	25.2	16.4	32.5	32.5	16.4	27.2	27.2
Queue:	7	35	2	10	25	1	1	11	13	1	12	9

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Beaverton Transportation System Plan
2015 ENHANCED Traffic Conditions MITIGATION
PM Peak Hour (phf=0.95 - 1.0)

Level Of Service Computation Report
1994 HCM Operations Method (Base Volume Alternative)

Intersection #108 Murray Boulevard/Jenkins Road

Cycle (sec): 120 Critical Vol./Cap. (X): 1.066
Loss Time (sec): 16 (Y+R = 4 sec) Average Delay (sec/veh): 53.4
Optimal Cycle: 180 Level Of Service: E

Approach:	North Bound						South Bound						East Bound						West Bound					
Movement:	L	-	T	-	R		L	-	T	-	R		L	-	T	-	R		L	-	T	-	R	
Control:	Protected						Protected						Protected						Protected					
Rights:			Ovl						Ovl						Ovl						Ovl			
Min. Green:	0		0		0		0		0		0		0		0		0		0		0		0	
Lanes:	2	0	2	0	1		2	0	2	0	1		1	0	2	0	1		1	0	2	0	1	
Volume Module:																								
Base Vol:	358	1088		159			360	1156		264			226	967		437			221	1215		365		
Growth Adj:	1.00	1.00		1.00			1.00	1.00		1.00			1.00	1.00		1.00			1.00	1.00		1.00		
Initial Bse:	358	1088		159			360	1156		264			226	967		437			221	1215		365		
User Adj:	1.00	1.00		1.00			1.00	1.00		1.00			1.00	1.00		1.00			1.00	1.00		1.00		
PHF Adj:	0.95	0.95		0.95			0.95	0.95		0.95			0.95	0.95		0.95			0.95	0.95		0.95		
PHF Volume:	377	1145		167			379	1217		278			238	1018		460			233	1279		384		
Reduct Vol:	0	0		0			0	0		0			0	0		0			0	0		0		
Reduced Vol:	377	1145		167			379	1217		278			238	1018		460			233	1279		384		
PCE Adj:	1.00	1.00		1.00			1.00	1.00		1.00			1.00	1.00		1.00			1.00	1.00		1.00		
MLF Adj:	1.03	1.05		1.00			1.03	1.05		1.00			1.00	1.05		1.00			1.00	1.05		1.00		
Final vol.:	388	1203		167			390	1278		278			238	1069		460			233	1343		384		
Saturation Flow Module:																								
Sat/Lane:	1900	1900		1900			1900	1900		1900			1900	1900		1900			1900	1900		1900		
Adjustment:	0.93	1.05		0.83			0.92	1.05		0.83			0.93	0.98		0.83			0.93	0.98		0.83		
Lanes:	2.00	2.00		1.00			2.00	2.00		1.00			1.00	2.00		1.00			1.00	2.00		1.00		
Final Sat.:	3539	4001		1583			3505	4003		1568			1770	3725		1583			1770	3725		1583		
Capacity Analysis Module:																								
Vol/Sat:	0.11	0.30		0.11			0.11	0.32		0.18			0.13	0.29		0.29			0.13	0.36		0.24		
Crit Moves:	****							tttt					tttt							tttt				
Green/Cycle:	0.10	0.29		0.44			0.11	0.30		0.43			0.13	0.32		0.42			0.14	0.34		0.45		
Volume/Cap:	1.07	1.02		0.24			1.02	1.07		0.42			1.07	0.90		0.69			0.91	1.07		0.54		
Level Of Service Module:																								
Delay/Veh:	92.3	53.6		13.7			76.7	66.9		15.8			102.7	31.9		20.3			56.1	64.9		16.3		
User DelAdj:	1.00	1.00		1.00			1.00	1.00		1.00			1.00	1.00		1.00			1.00	1.00		1.00		
AdjDel/Veh:	92.3	53.6		13.7			76.7	66.9		15.8			102.7	31.9		20.3			56.1	64.9		16.3		
Queue:	21	52		4			19	61		7			14	37		13			10	64		10		

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Beaverton Transportation System Plan
2015 ENHANCED Traffic Conditions MITIGATION
PM Peak Hour (phf=0.95 - 1.0)

Level Of Service Computation Report
1994 HCM Operations Method (Base Volume Alternative)

Intersection #113 Walker Road/ORE 217 NB ramps

Cycle (sec): 120 Critical Vol./Cap. (X): 0.947
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh) 32.4
Optimal Cycle: 154 Level Of Service: D

Approach:	North Bound						South Bound						East Bound						West Bound					
Movement:	L	-	T	-	R		L	-	T	-	R		L	-	T	-	R		L	-	T	-	R	
Control:	Split Phase						Split Phase						Protected						Protected					
Rights:			Include						Include						Include						Include			
Min. Green:	0		0		0		0		0		0		0		0		0		0		0		0	
Lanes:	2	0	0	1	0		0	0	0	0	0		1	0	1	0	0		0	0	0	1	0	
Volume Module:																								
Base Vol:	1067	380		70			0	0		0			275	664		0			0	447		133		
Growth Adj:	1.00	1.00		1.00			1.00	1.00		1.00			1.00	1.00		1.00			1.00	1.00		1.00		
Initial Bse:	1067	380		70			0	0		0			275	664		0			0	447		133		
User Adj:	1.00	1.00		1.00			1.00	1.00		1.00			1.00	1.00		1.00			1.00	1.00		1.00		
PHF Adj:	0.95	0.95		0.95			0.95	0.95		0.95			0.95	0.95		0.95			0.95	0.95		0.95		
PHF Volume:	1123	400		74			0	0		0			289	699		0			0	471		140		
Reduct Vol:	0	0		0			0	0		0			0	0		0			0	0		0		
Reduced Vol:	1123	400		74			0	0		0			289	699		0			0	471		140		
PCE Adj:	1.00	1.00		1.00			1.00	1.00		1.00			1.00	1.00		1.00			1.00	1.00		1.00		
MLF Adj:	1.03	1.00		1.00			1.00	1.00		1.00			1.00	1.00		1.00			1.00	1.00		1.00		
Final Vol.:	1157	400		74			0	0		0			289	699		0			0	471		140		
Saturation Flow Module:																								
Sat/Lane:	1900	1900		1900			1900	1900		1900			1900	1900		1900			1900	1900		1900		
Adjustment:	0.96	0.96		0.96			1.00	1.00		1.00			0.94	0.99		1.00			1.00	0.86		0.86		
Lanes:	2.00	0.84		0.16			0.00	0.00		0.00			1.00	1.00		0.00			0.00	0.77		0.23		
Final Sat.:	3651	1540		285			0	0		0			1787	1881		0			0	1262		375		
Capacity Analysis Module:																								
Vol/Sat:	0.32	0.26		0.26			0.00	0.00		0.00			0.16	0.37		0.00			0.00	0.37		0.37		
Crit Moves:	****												tttt							****				
Green/Cycle:	0.33	0.33		0.33			0.00	0.00		0.00			0.17	0.57		0.00			0.00	0.39		0.39		
Volume/Cap:	0.95	0.78		0.78			0.00	0.00		0.00			0.95	0.66		0.00			0.00	0.95		0.95		
Level Of Service Module:																								
Delay/Veh:	36.0	27.5		27.5			0.0	0.0		0.0			59.0	12.7		0.0			0.0	39.6		39.6		
User DelAdj:	1.00	1.00		1.00			1.00	1.00		1.00			1.00	1.00		1.00			1.00	1.00		1.00		
AdjDel/Veh:	36.0	27.5		27.5			0.0	0.0		0.0			59.0	12.7		0.0			0.0	39.6		39.6		
Queue:	42	13		3			0	0		0			13	17		0			0	19		7		

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Beaverton Transportation System Plan
2015 ENHANCED Traffic Conditions MITIGATION
PM Peak Hour (phf=0.95 - 1.0)

Level Of Service Computation Report
1994 HCM Operations Method (Base Volume Alternative)

Intersection #117 Walker Road/ORE 217 SB ramps

Cycle (sec): 120 Critical Vol./Cap. (X): 0.935
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 27.3
Optimal Cycle: 144 Level Of Service: D

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Protected			Protected		
Rights:		Include			Include			Include			Include	
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	0 0	0 0	0	1 0	0 1	0	0 1	0 2	1	0 1	1 0
Volume Module:												
Base Vol:	0	0	0	193	369	572	0	722	1175	47	1366	3
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	193	369	572	0	722	1175	47	1366	3
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	0	0	0	203	388	602	0	760	1237	49	1438	3
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	203	388	602	0	760	1237	49	1438	3
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLP Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.13	1.00	1.05	1.05
Final Vol.:	0	0	0	203	388	602	0	760	1398	49	1510	3
saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	0.84	0.84	0.84	1.00	0.99	0.84	0.93	0.98	0.98
Lanes:	0.00	0.00	0.00	0.34	0.66	1.00	0.00	1.00	2.00	1.00	1.99	0.01
Final Sat.:	0	0	0	549	1050	1599	0	1881	3198	1770	3718	7
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.37	0.37	0.38	0.00	0.40	0.44	0.03	0.41	0.41
Crit Moves:						****			****	****		
Green/Cycle:	0.00	0.00	0.00	0.40	0.40	0.40	0.00	0.47	0.47	0.03	0.50	0.50
Volume/Cap:	0.00	0.00	0.00	0.92	0.92	0.93	0.00	0.86	0.93	0.93	0.82	0.82
Level Of Service Module:												
Delay/Veh:	0.0	0.0	0.0	35.0	35.0	37.4	0.0	24.7	27.7	109.0	18.6	18.6
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	35.0	35.0	37.4	0.0	24.7	27.7	109.0	18.6	18.6
Queue:	0	0	0	9	15	23	0	25	49	3	44	0

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Beaverton Transportation System Plan
2015 ENHANCED Traffic Conditions MITIGATION
PM Peak Hour (phf=0.95 - 1.0)

Level Of Service Computation Report
1994 HCM Operations Method (Base Volume Alternative)

Intersection #125 Cedar Hills Blvd/Hall Blvd

Cycle (sec): 120 Critical Vol./Cap. (X): 0.985
Loss Time (sec): 16 (Y+R = 4 sec) Average Delay (sec/veh): 39.8
Optimal Cycle: 180 Level Of Service: D

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Ovl			Include			Include			Ovl		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0 2	0 1	1	0 1	1 0	1	0 1	1 0	1	0 1	0 1
Volume Module:												
Base Vol:	184	624	212	187	1097	71	106	613	241	231	518	221
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	184	624	212	187	1097	71	106	613	241	231	518	221
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	194	657	223	197	1155	75	112	645	254	243	545	233
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	194	657	223	197	1155	75	112	645	254	243	545	233
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.05	1.00	1.00	1.05	1.05	1.00	1.05	1.05	1.00	1.00	1.00
Final Vol.:	194	690	223	197	1212	78	112	678	266	243	545	233
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.93	0.98	0.83	0.94	0.98	0.98	0.94	0.95	0.95	0.94	0.99	0.84
Lanes:	1.00	2.00	1.00	1.00	1.88	0.12	1.00	1.44	0.56	1.00	1.00	1.00
Final Sat.:	1770	3725	1583	1787	3500	225	1787	2594	1018	1787	1881	1599
Capacity Analysis Module:												
Vol/Sat:	0.11	0.19	0.14	0.11	0.35	0.35	0.06	0.26	0.26	0.14	0.29	0.15
Crit Moves:	****				****			****		****		
Green/Cycle:	0.11	0.29	0.43	0.17	0.35	0.35	0.07	0.27	0.27	0.14	0.33	0.50
Volume/Cap:	0.98	0.64	0.33	0.64	0.98	0.98	0.87	0.98	0.98	0.98	0.87	0.29
Level Of Service Module:												
Delay/Veh:	79.3	24.9	14.8	32.8	40.9	40.9	65.5	47.4	47.4	73.2	33.5	11.2
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	79.3	24.9	14.8	32.8	40.9	40.9	65.5	47.4	47.4	73.2	33.5	11.2
Queue:	10	20	5	6	47	5	5	28	13	12	19	5

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Beaverton Transportation System Plan
2015 ENHANCED Traffic Conditions MITIGATION
PM Peak Hour (phf=0.95 - 1.0)

Level Of Service Computation Report
1994 HCM Operations Method (Base Volume Alternative)

Intersection #126 Cedar Hills Boulevard/Walker Road

Cycle (sec): 120 Critical Vol./Cap. (X): 1.079
Loss Time (sec): 16 (Y+R = 4 sec) Average Delay (sec/veh): 55.9
Optimal Cycle: 180 Level Of Service: E

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Ovl			Include			Ovl			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	2	0	2	0	1	2	0	1	1	0	2	0	2	0	1	2	0	1	1	0
Volume Module:																				
Base Vol:	412	1437	482	115	1089	98	188	1130	384	566	1006	162								
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00								
Initial Bse:	412	1437	482	115	1089	98	188	1130	384	566	1006	162								
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00								
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00								
PHF Volume:	412	1437	482	115	1089	98	188	1130	384	566	1006	162								
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0								
Reduced Vol:	412	1437	482	115	1089	98	188	1130	384	566	1006	162								
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00								
MLF Adj:	1.03	1.05	1.00	1.03	1.05	1.05	1.03	1.05	1.00	1.03	1.05	1.05								
Final Vol.:	424	1509	482	118	1143	103	194	1187	384	583	1056	170								
Saturation Flow Module:																				
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900								
Adjustment:	0.94	0.99	0.84	0.93	0.97	0.97	0.94	0.99	0.84	0.94	0.97	0.97								
Lanes:	2.00	2.00	1.00	2.00	1.83	0.17	2.00	2.00	1.00	2.00	1.72	0.28								
Final Sat.:	3574	3762	1599	3539	3383	305	3574	3762	1599	3574	3176	511								
Capacity Analysis Module:																				
Vol/Sat:	0.12	0.40	0.30	0.03	0.34	0.34	0.05	0.32	0.24	0.16	0.33	0.33								
Crit Moves:	****				****			****		****										
Green/Cycle:	0.11	0.39	0.54	0.03	0.31	0.31	0.06	0.29	0.40	0.15	0.38	0.38								
Volume/Cap:	1.08	1.03	0.56	1.03	1.08	1.08	0.87	1.08	0.60	1.08	0.87	0.87								
Level Of Service Module:																				
Delay/Veh:	95.5	48.4	12.3	111.5	71.8	71.8	56.2	73.1	19.3	88.1	26.7	26.7								
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00								
AdjDel/Veh:	95.5	48.4	12.3	111.5	71.8	71.8	56.2	73.1	19.3	88.1	26.7	26.7								
Queue:	23	64	11	7	57	7	8	59	10	30	35	7								

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Beaverton Transportation System Plan
2015 ENHANCED Traffic Conditions MITIGATION
PM Peak Hour (phf=0.95 - 1.0)

Level Of Service Computation Report
1994 HCM Operations Method (Base Volume Alternative)

Intersection #127 Cedar Hills Boulevard/Jenkins Road

Cycle (sec): 120 Critical Vol./Cap. (X): 0.896
Loss Time (sec): 16 (Y+R = 4 sec) Average Delay (sec/veh): 29.2
Optimal Cycle: 127 Level Of Service: D

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Ovl			Include			Ignore		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0	1	1	0	2	0	2	0	1	2	0	1	1	0	1	0	2	0	1
Volume Module:																				
Base Vol:	59	350	15	816	533	601	980	463	280	13	465	947								
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00								
Initial Bse:	59	350	15	816	533	601	980	463	280	13	465	0								
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00								
PHF Adj:	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.00								
PHF Volume:	61	361	15	842	550	620	1011	478	289	13	480	0								
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0								
Reduced Vol:	61	361	15	842	550	620	1011	478	289	13	480	0								
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00								
MLF Adj:	1.00	1.05	1.05	1.03	1.05	1.00	1.03	1.05	1.05	1.00	1.05	0.00								
Final Vol.:	61	379	16	867	578	620	1042	502	303	13	504	0								
Saturation Flow Module:																				
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900								
Adjustment:	0.93	0.97	0.97	0.93	0.98	0.83	0.94	0.93	0.93	0.95	1.00	1.00								
Lanes:	1.00	1.92	0.08	2.00	2.00	1.00	2.00	1.25	0.75	1.00	2.00	1.00								
Final Sat.:	1770	3539	149	3539	3725	1583	3574	2205	1331	1805	3800	1900								
Capacity Analysis Module:																				
Vol/Sat:	0.03	0.11	0.11	0.24	0.16	0.39	0.29	0.23	0.23	0.01	0.13	0.00								
Crit Moves:		****			****			****				****								
Green/Cycle:	0.03	0.12	0.12	0.27	0.36	0.69	0.33	0.46	0.46	0.01	0.15	0.00								
Volume/Cap:	1.08	0.90	0.90	0.90	0.43	0.57	0.90	0.50	0.50	0.50	0.90	0.00								
Level Of Service Module:																				
Delay/Veh:	168.7	48.1	48.1	34.9	18.9	6.8	31.5	14.9	14.9	48.2	44.4	0.0								
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00								
AdjDel/Veh:	168.7	48.1	48.1	34.9	18.9	6.8	31.5	14.9	14.9	48.2	44.4	0.0								
Queue:	5	15	1	31	15	11	36	12	7	1	19	0								

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Beaverton Transportation System Plan
2015 ENHANCED Traffic Conditions MITIGATION
PM Peak Hour (phf=0.95 - 1.0)

Level Of Service Computation Report
1994 HCM Operations Method (Base Volume Alternative)

Intersection #130 Farmington Road/Cedar Hills Boulevard

Cycle (sec): 120 Critical Vol./Cap. (X): 0.971
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh) 26.8
Optimal Cycle: 180 Level Of Service: D

Approach:	North Bound						South Bound						East Bound						West Bound					
Movement:	L	-	T	-	R		L	-	T	-	R		L	-	T	-	R		L	-	T	-	R	
Control:	Split Phase						Split Phase						Protected						Protected					
Rights:	Include						Ovl						Include						Ovl					
Min. Green:	0	0	0				0	0	0				0	0	0				0	0	0			
Lanes:	0	0	0	0	0		2	0	0	0	1		1	0	2	0	0		0	0	2	0	1	
Volume Module:																								
Base Vol:	0	0	0				998	0	500				315	1009	0				0	1293	786			
Growth Adj:	1.00	1.00	1.00				1.00	1.00	1.00				1.00	1.00	1.00				1.00	1.00	1.00			
Initial Bse:	0	0	0				998	0	500				315	1009	0				0	1293	786			
User Adj:	1.00	1.00	1.00				1.00	1.00	1.00				1.00	1.00	1.00				1.00	1.00	1.00			
PHF Adj:	0.95	0.95	0.95				0.95	0.95	0.95				0.95	0.95	0.95				0.95	0.95	0.95			
PHF Volume:	0	0	0				1051	0	526				332	1062	0				0	1361	827			
Reduct Vol:	0	0	0				0	0	0				0	0	0				0	0	0			
Reduced Vol:	0	0	0				1051	0	526				332	1062	0				0	1361	827			
PCE Adj:	1.00	1.00	1.00				1.00	1.00	1.00				1.00	1.00	1.00				1.00	1.00	1.00			
MLF Adj:	1.00	1.00	1.00				1.03	1.00	1.00				1.00	1.05	1.00				1.00	1.05	1.00			
Final Vol.:	0	0	0				1082	0	526				332	1115	0				0	1429	827			
Saturation Flow Module:																								
Sat/Lane:	1900	1900	1900				1900	1900	1900				1900	1900	1900				1900	1900	1900			
Adjustment:	1.00	1.00	1.00				0.94	1.00	0.84				0.93	0.98	1.00				1.00	0.98	0.83			
Lanes:	0.00	0.00	0.00				2.00	0.00	1.00				1.00	2.00	0.00				0.00	2.00	1.00			
Final Sat.:	0	0	0				3574	0	1599				1770	3725	0				0	3725	1583			
Capacity Analysis Module:																								
Vol/Sat:	0.00	0.00	0.00				0.30	0.00	0.33				0.19	0.30	0.00				0.00	0.38	0.52			
Crit Moves:							****						****							****				
Green/Cycle:	0.00	0.00	0.00				0.31	0.00	0.50				0.19	0.59	0.00				0.00	0.40	0.71			
Volume/Cap:	0.00	0.00	0.00				0.97	0.00	0.65				0.97	0.51	0.00				0.00	0.97	0.74			
Level Of Service Module:																								
Delay/Veh:	0.0	0.0	0.0				41.4	0.0	15.5				61.4	9.5	0.0				0.0	35.7	8.8			
User DelAdj:	1.00	1.00	1.00				1.00	1.00	1.00				1.00	1.00	1.00				1.00	1.00	1.00			
AdjDel/Veh:	0.0	0.0	0.0				41.4	0.0	15.5				61.4	9.5	0.0				0.0	35.7	8.8			
Queue:	0	0	0				42	0	13				15	22	0				0	53	18			

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Beaverton Transportation System Plan
2015 ENHANCED Traffic Conditions MITIGATION
PM Peak Hour (phf=0.95 - 1.0)

Level Of Service Computation Report
1994 HCM Operations Method (Base Volume Alternative)

Intersection #131 Canyon Road/Cedar Hills Boulevard

Cycle (sec): 120 Critical Vol./Cap. (X): 0.994
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 36.3
Optimal Cycle: 180 Level Of Service: D

Approach:	North Bound						South Bound						East Bound						West Bound					
Movement:	L	-	T	-	R		L	-	T	-	R		L	-	T	-	R		L	-	T	-	R	
Control:	Protected						Protected						Protected						Protected					
Rights:	Include						Ovl						Ovl						Include					
Min. Green:	0	0	0				0	0	0				0	0	0				0	0	0			
Lanes:	2	0	1	1	0		1	0	2	0	1		1	0	3	0	1		1	0	2	1	0	
Volume Module:																								
Base Vol:	647	170	224				147	712	218				3	1373	375				164	1442	77			
Growth Adj:	1.00	1.00	1.00				1.00	1.00	1.00				1.00	1.00	1.00				1.00	1.00	1.00			
Initial Bse:	647	170	224				147	712	218				3	1373	375				164	1442	77			
User Adj:	1.00	1.00	1.00				1.00	1.00	1.00				1.00	1.00	1.00				1.00	1.00	1.00			
PHF Adj:	0.95	0.95	0.95				0.95	0.95	0.95				0.95	0.95	0.95				0.95	0.95	0.95			
PHF Volume:	681	179	236				155	749	229				3	1445	395				173	1518	81			
Reduct Vol:	0	0	0				0	0	0				0	0	0				0	0	0			
Reduced Vol:	681	179	236				155	749	229				3	1445	395				173	1518	81			
PCE Adj:	1.00	1.00	1.00				1.00	1.00	1.00				1.00	1.00	1.00				1.00	1.00	1.00			
MLF Adj:	1.03	1.00	1.00				1.00	1.05	1.00				1.00	1.10	1.00				1.00	1.10	1.10			
Final Vol.:	701	179	236				155	787	229				3	1590	395				173	1670	89			
Saturation Flow Module:																								
Sat/Lane:	1900	1900	1900				1900	1900	1900				1900	1900	1900				1900	1900	1900			
Adjustment:	0.84	0.88	0.73				0.83	0.87	0.73				0.81	0.86	0.72				0.82	0.86	0.86			
Lanes:	2.00	1.00	1.00				1.00	2.00	1.00				1.00	3.00	1.00				1.00	2.85	0.15			
Final Sat.:	3181	1674	1390				1575	3316	1393				1545	4878	1366				1560	4629	247			
Capacity Analysis Module:																								
Vol/Sat:	0.22	0.11	0.17				0.10	0.24	0.16				0.00	0.33	0.29				0.11	0.36	0.36			
Crit Moves:	****							****						****					****					
Green/Cycle:	0.22	0.29	0.29				0.17	0.24	0.24				0.00	0.33	0.55				0.11	0.44	0.44			
Volume/Cap:	0.99	0.37	0.58				0.58	0.99	0.68				0.83	0.99	0.53				0.99	0.83	0.83			
Level Of Service Module:																								
Delay/Veh:	54.8	21.9	24.3				32.0	52.7	30.5				243.5	42.0	11.6				85.1	21.2	21.2			
User DelAdj:	1.00	1.00	1.00				1.00	1.00	1.00				1.00	1.00	1.00				1.00	1.00	1.00			
AdjDel/Veh:	54.8	21.9	24.3				32.0	52.7	30.5				243.5	42.0	11.6				85.1	21.2	21.2			
Queue:	30	5	7				5	33	7				0	62	8				9	51	4			

Beaverton Transportation System Plan
2015 ENHANCED Traffic Conditions MITIGATION
PM Peak Hour (phf=0.95 - 1.0)

Level Of Service Computation Report
1994 HCM Operations Method (Base Volume Alternative)

Intersection #133 Canyon Rd./Fred Meyer Access

Cycle (sec): 120 Critical Vol./Cap. (X): 0.962
Loss Time (sec): 16 (Y+R = 4 sec) Average Delay (sec/veh) 32.1
Optimal Cycle: 170 Level Of Service: D

Approach:	North Bound						South Bound						East Bound						West Bound					
Movement:	L	-	T	-	R		L	-	T	-	R		L	-	T	-	R		L	-	T	-	R	
Control:	Split Phase						Split Phase						Protected						Protected					
Rights:	Include						Include						Include						Include					
Min. Green:	0	0	0				0	0	0				0	0	0				0	0	0			
Lanes:	1	0	0	1	0		1	0	1	1	0	0	1	0	2	1	0		1	0	2	1	0	
Volume Module:																								
Base Vol:	200	41	200				383	22	95				90	1482	150				100	1417	433			
Growth Adj:	1.00	1.00	1.00				1.00	1.00	1.00				1.00	1.00	1.00				1.00	1.00	1.00			
Initial Bse:	200	41	200				383	22	95				90	1482	150				100	1417	433			
User Adj:	1.00	1.00	1.00				1.00	1.00	1.00				1.00	1.00	1.00				1.00	1.00	1.00			
PHF Adj:	0.95	0.95	0.95				0.95	0.95	0.95				0.95	0.95	0.95				0.95	0.95	0.95			
PHF Volume:	211	43	211				403	23	100				95	1560	158				105	1492	456			
Reduct Vol:	0	0	0				0	0	0				0	0	0				0	0	0			
Reduced Vol:	211	43	211				403	23	100				95	1560	158				105	1492	456			
PCE Adj:	1.00	1.00	1.00				1.00	1.00	1.00				1.00	1.00	1.00				1.00	1.00	1.00			
MLF Adj:	1.00	1.00	1.00				1.05	1.00	1.00				1.00	1.10	1.10				1.00	1.10	1.10			
Final Vol.:	211	43	211				423	23	100				95	1716	174				105	1641	501			
Saturation Flow Module:																								
Sat/Lane:	1900	1900	1900				1900	1900	1900				1900	1900	1900				1900	1900	1900			
Adjustment:	0.94	0.86	0.86				0.92	0.92	0.92				0.93	0.83	0.97				0.93	0.85	0.94			
Lanes:	1.00	0.17	0.83				1.63	0.07	0.30				1.00	2.76	0.24				1.00	2.35	0.65			
Final Sat.:	1787	277	1360				2859	120	524				1770	4372	443				1770	3785	1156			
Capacity Analysis Module:																								
Vol/Sat:	0.12	0.16	0.16				0.15	0.19	0.19				0.05	0.39	0.39				0.06	0.43	0.43			
Crit Moves:		tttt						****						tttt						****				
Green/Cycle:	0.16	0.16	0.16				0.20	0.20	0.20				0.06	0.44	0.44				0.07	0.45	0.45			
Volume/Cap:	0.73	0.96	0.96				0.74	0.96	0.96				0.96	0.89	0.89				0.89	0.96	0.96			
Level Of Service Module:																								
Delay/Veh:	37.1	65.2	65.2				32.1	51.7	51.7				93.8	23.8	23.8				71.2	29.1	29.1			
User DelAdj:	1.00	1.00	1.00				1.00	1.00	1.00				1.00	1.00	1.00				1.00	1.00	1.00			
AdjDel/Veh:	37.1	65.2	65.2				32.1	51.7	51.7				93.8	23.8	23.8				71.2	29.1	29.1			
Queue:	7	3	10				14	2	5				5	56	7				5	59	20			

Beaverton Transportation System Plan
2015 ENHANCED Traffic Conditions MITIGATION
PM Peak Hour (phf=0.95 - 1.0)

Level Of Service Computation Report
1994 HCM Operations Method (Base Volume Alternative)

Intersection #162 Cedar Hills Blvd/Westgate Drive

Cycle (sec): 120 Critical Vol./Cap. (X): 0.800
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 10.4
Optimal Cycle: 81 Level Of Service: B

Approach:	North Bound						South Bound						East Bound						West Bound					
Movement:	L	-	T	-	R		L	-	T	-	R		L	-	T	-	R		L	-	T	-	R	
Control:	Protected						Protected						Permitted						Permitted					
Rights:	Include						Include						Include						Include					
Min. Green:	0	0	0				0	0	0				0	0	0				0	0	0			
Lanes:	1	0	0	1	0		1	0	1	1	0		0	0	1!	0	0		0	0	1!	0	0	
Volume Module:																								
Base Vol:	17	955	40				41	1334	119				84	10	13				20	10	58			
Growth Adj:	1.00	1.00	1.00				1.00	1.00	1.00				1.00	1.00	1.00				1.00	1.00	1.00			
Initial Bse:	17	955	40				41	1334	119				84	10	13				20	10	58			
User Adj:	1.00	1.00	1.00				1.00	1.00	1.00				1.00	1.00	1.00				1.00	1.00	1.00			
PHF Adj:	0.93	0.93	0.93				0.93	0.93	0.93				0.93	0.93	0.93				0.93	0.93	0.93			
PHF Volume:	18	1029	43				44	1438	128				91	11	14				22	11	63			
Reduct Vol:	0	0	0				0	0	0				0	0	0				0	0	0			
Reduced Vol:	18	1029	43				44	1438	128				91	11	14				22	11	63			
PCE Adj:	1.00	1.00	1.00				1.00	1.00	1.00				1.00	1.00	1.00				1.00	1.00	1.00			
MLF Adj:	1.00	1.00	1.00				1.00	1.05	1.05				1.00	1.00	1.00				1.00	1.00	1.00			
Final Vol.:	18	1029	43				44	1509	135				91	11	14				22	11	63			
Saturation Flow Module:																								
Sat/Lane:	1900	1900	1900				1900	1900	1900				1900	1900	1900				1900	1900	1900			
Adjustment:	0.93	0.97	0.97				0.94	0.98	0.98				0.54	0.54	0.54				0.73	0.73	0.73			
Lanes:	1.00	0.96	0.04				1.00	1.84	0.16				0.79	0.09	0.12				0.23	0.11	0.66			
Final Sat.:	1770	1770	74				1787	3419	306				800	97	123				318	159	910			
Capacity Analysis Module:																								
Vol/Sat:	0.01	0.58	0.58				0.02	0.44	0.44				0.11	0.11	0.11				0.07	0.07	0.07			
Crit Moves:		tttt						****						tttt										
Green/Cycle:	0.02	0.73	0.73				0.03	0.74	0.74				0.14	0.14	0.14				0.14	0.14	0.14			
Volume/Cap:	0.60	0.80	0.80				0.80	0.60	0.60				0.80	0.80	0.80				0.49	0.49	0.49			
Level Of Service Module:																								
Delay/Veh:	55.5	9.4	9.4				72.9	4.9	4.9				49.6	49.6	49.6				32.2	32.2	32.2			
User DelAdj:	1.00	1.00	1.00				1.00	1.00	1.00				1.00	1.00	1.00				1.00	1.00	1.00			
AdjDel/Veh:	55.5	9.4	9.4				72.9	4.9	4.9				49.6	49.6	49.6				32.2	32.2	32.2			
Queue:	1	24	2				2	24	2				4	1	1				1	0	2			

Beaverton Transportation System Plan
2015 ENHANCED Traffic Conditions MITIGATION
PM Peak Hour (phf=0.95 - 1.0)

Level Of Service Computation Report
1994 HCM Operations Method (Base Volume Alternative)

Intersection #169 Farmington Road/149th Avenue

Cycle (sec): 120 Critical Vol./Cap. (X): 0.858
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 10.4
Optimal Cycle: 100 Level Of Service: B

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	0	1!	0	0	0	1	0	1	1	0	1	0	1	1	0
Volume Module:												
Base Vol:	12	15	25	86	15	85	60	1023	26	ZS	2149	80
Growth Adj:	1.00	1.00	1,00	1.00	1.00	1,00	1,00	1,00	1.00	1,00	1.00	1.00
Initial Bse:	12	15	25	86	15	85	60	1023	26	ZS	2149	80
User Adj:	1.00	1.00	1,00	1.00	1.00	1.00	1,00	1.00	1,00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0,95	0,95	0,95	0.95	0,95	0,95	0,95	0,95	0,95	0.95
PHF Volume:	13	16	26	91	16	89	63	1077	27	26	2262	84
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	13	16	26	91	16	89	63	1077	27	26	2262	84
PCE Adj:	1.00	1.00	1.00	1,00	1.00	1,00	1.00	1.00	1,00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1,00	1.00	1.00	1.05	1.05	1.00	1.05	1.05
Final Vol.:	13	16	26	91	16	89	63	1131	29	26	2375	88
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	I900	1900	1900
Adjustment:	0.71	0.71	0.71	0.75	0.75	0.85	0.91	0.96	0.96	0.94	0,98	0,98
Lanes:	0.24	0.29	0.47	0.85	0.15	1.00	1.00	1.95	0.05	1.00	1.93	0,07
Final Sat.:	317	390	634	1212	213	1615	1736	3563	91	1787	3592	133
Capacity Analysis Module:												
Vol/Sat:	0.04	0.04	0.04	0.08	0.08	0.06	0.04	0.32	0.32	0.01	0.66	0.66
Crit Moves:					****		****				****	
Green/Cycle:	0.09	0.09	0.09	0.09	0.09	0.09	0.04	0.78	0.78	0.04	0.77	0.77
Volume/Cap:	0.47	0.47	0.47	0.86	0.86	0.63	0.86	0.41	0.41	0.41	0.86	0.86
Level Of Service Module:												
Delay/Veh:	35.8	35.8	35.8	62.9	62.9	40.1	76.9	2.9	2.9	38.9	8.1	8.1
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	35.8	35.8	35.8	62.9	62.9	40.1	76.9	2.9	2.9	38.9	8.1	8.1
Queue:	0	1	1	4	1	3	3	12	0	1	56	3

Beaverton Transportation System Plan
2015 ENHANCED Traffic Conditions MITIGATION
PM Peak Hour (phf=0.95 - 1.0)

Level Of Service Computation Report
1994 HCM Operations Method (Base Volume Alternative)

Intersection #170 TV Highway/153rd Drive

Cycle (sec): 120 Critical Vol./Cap. (X): 0.782
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 9.7
Optimal Cycle: 77 Level Of Service: B

Approach:	North Bound			South Bound			East Bound				West Bound			
Movement:	L	T	R	L	T	R	L	T	R		L	T	R	
Control:	Split Phase			Split Phase			Protected				Protected			
Rights:	Include			Ovl			Include				Ovl			
Min. Green:	0	0	0	0	0	0	0	0	0		0	0	0	
Lanes:	0	0	0	0	0	2	0	0	0	1	1	0	2	1	0	0	0	3	0	1
Volume Module:														
Base Vol:	0	0	0	431	0	67	36	1983	0		0	2622	76	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1,00		1.00	1.00	1.00	
Initial Bse:	0	0	0	431	0	67	36	1983	0		0	2622	76	
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1,00	1.00		1,00	1,00	1.00	
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0,95	0.95	0.95		0.95	0.95	0.95	
PHF Volume:	0	0	0	454	0	71	38	2087	0		0	2760	80	
Reduct Vol:	0	0	0	0	0	0	0	0	0		0	0	0	
Reduced Vol:	0	0	0	454	0	71	38	2087	0		0	2760	80	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1,00		1,00	1,00	1,00	
MLF Adj:	1.00	1.00	1.00	1.03	1.00	1.00	1.00	1.10	1.10		1.00	1.10	1,00	
Final Vol.:	0	0	0	467	0	71	38	2296	0		0	3036	80	
Saturation Flow Module:														
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900		1900	1900	1900	
Adjustment:	1,00	1,00	1.00	0.92	1,00	0.83	0.92	0,97	1,00		1.00	0.97	0.83	
Lanes:	0.00	0.00	0.00	2.00	0.00	1,00	1.00	3.00	0.00		0.00	3.00	1,00	
Final Sat.:	0	0	0	3505	0	1568	1752	5534	0		0	5534	1568	
Capacity Analysis Module:														
Vol/Sat:	0.00	0.00	0.00	0.13	0.00	0.05	0.02	0.41	0.00		0.00	0.55	0.05	
Crit Moves:				****			****							
Green/Cycle:	0.00	0.00	0.00	0.17	0.00	0.20	0.03	0,73	0.00		0.00	0.70	0.87	
Volume/Cap:	0.00	0.00	0.00	0.78	0.00	0.23	0.78	0.57	0.00		0.00	0.78	0.06	
Level Of Service Module:														
Delay/Veh:	0.0	0.0	0.0	35.4	0.0	26.2	72.8	5.0	0.0		0.0	8.4	0.7	
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	
AdjDel/Veh:	0.0	0.0	0.0	35.4	0.0	26.2	72.8	5.0	0.0		0.0	8.4	0.7	
Queue:	0	0	0	16	0	2	2	36	0		0	68	0	

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Beaverton Transportation System Plan
2015 ENHANCED Traffic Conditions MITIGATION
PM Peak Hour (phf=0.95 - 1.0)

Level Of Service Computation Report
1994 HCM Operations Method (Base Volume Alternative)

Intersection #171 TV Highway/160th Avenue-Millikan Way

Cycle (sec): 140 Critical Vol./Cap. (X): 0.995
Loss Time (sec): 16 (Y+R = 4 sec) Average Delay (sec/veh) 35.1
Optimal Cycle: 180 Level Of Service: D

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:		Ovl			Ovl			Ovl			Ovl	
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0	1 0 1	1	0	1 0 1	1	0	3 0 1	1	0	3 0 1
Volume Module:												
Base Vol:	241	180	143	153	251	431	196	1657	307	120	2424	89
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	241	180	143	153	251	431	196	1657	307	120	2424	89
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	241	180	143	153	251	431	196	1657	307	120	2424	89
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	241	180	143	153	251	431	196	1657	307	120	2424	89
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.10	1.00	1.00	1.10	1.00
Final Vol.:	241	180	143	153	251	431	196	1823	307	120	2666	89
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.94	0.99	0.84	0.94	0.99	0.84	0.92	0.97	0.83	0.93	0.98	0.83
Lanes:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	3.00	1.00	1.00	3.00	1.00
Final Sat.:	1787	1881	1599	1787	1881	1599	1752	5534	1568	1770	5588	1583
Capacity Analysis Module:												
Vol/Sat:	0.13	0.10	0.09	0.09	0.13	0.27	0.11	0.33	0.20	0.07	0.48	0.06
Crit Moves:	****					****	****				****	
Green/Cycle:	0.14	0.16	0.26	0.14	0.16	0.27	0.11	0.49	0.63	0.10	0.48	0.62
Volume/Cap:	1.00	0.62	0.35	0.62	0.84	1.00	1.00	0.67	0.31	0.67	1.00	0.09
Level Of Service Module:												
Delay/Veh:	82.2	38.4	27.7	39.9	50.1	65.0	88.0	18.0	7.9	45.5	35.9	7.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	82.2	38.4	27.7	39.9	50.1	65.0	88.0	18.0	7.9	45.5	35.9	7.0
Queue:	13	7	5	6	11	22	11	54	6	5	115	1

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Beaverton Transportation System Plan
2015 ENHANCED Traffic Conditions MITIGATION
PM Peak Hour (phfs0.95 - 1.0)

Level Of Service Computation Report
1994 HCM Operations Method (Base Volume Alternative)

Intersection #174 Jenkins Road/153rd Drive

Cycle (sec): 120 Critical Vol./Cap. (X): 0.910
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh) 17.5
Optimal Cycle: 126 Level Of Service: C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Protected			Protected		
Rights:		Ovl			Include			Include			Include	
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0	0 0 1	0	0	0 0 0	0	0	1 1 0	1	0	2 0 0
Volume Module:												
Base Vol:	262	0	193	0	0	0	0	1434	350	204	1611	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	262	0	193	0	0	0	0	1434	350	204	1611	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	275	0	203	0	0	0	0	1505	367	214	1690.	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	275	0	203	0	0	0	0	1505	367	214	1690	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.05	1.05	1.00	1.05	1.00
Final Vol.:	275	0	203	0	0	0	0	1580	386	214	1775	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.93	1.00	0.83	1.00	1.00	1.00	1.00	0.95	0.95	0.94	0.99	1.00
Lanes:	1.00	0.00	1.00	0.00	0.00	0.00	0.00	1.61	0.39	1.00	2.00	0.00
Final Sat.:	1770	0	1583	0	0	0	0	2904	710	1787	3762	0
Capacity Analysis Module:												
Vol/Sat:	0.16	0.00	0.13	0.00	0.00	0.00	0.00	0.54	0.54	0.12	0.47	0.00
Crit Moves:	****							****		****		
Green/Cycle:	0.17	0.00	0.30	0.00	0.00	0.00	0.00	0.60	0.60	0.13	0.73	0.00
Volume/Cap:	0.91	0.00	0.42	0.00	0.00	0.00	0.00	0.91	0.91	0.91	0.65	0.00
Level Of Service Module:												
Delay/Veh:	52.7	0.0	22.0	0.0	0.0	0.0	0.0	18.3	18.3	58.3	5.8	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	52.7	0.0	22.0	0.0	0.0	0.0	0.0	18.3	18.3	58.3	5.8	0.0
Queue:	11	0	5	0	0	0	0	50	14	9	31	0

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Beaverton Transportation System Plan
2015 ENHANCED Traffic Conditions MITIGATION
PM Peak Hour (phf=0.95 - 1.0)

Level Of service Computation Report
1994 HCM Operations Method (Base Volume Alternative)

Intersection #175 Jenkins Road/158th Avenue

Cycle (sec): 120 Critical Vol./Cap. (X): 0.881
Loss Time (sec): 16 (Y+R = 4 sec) Average Delay (sec/veh): 30.6
optimal Cycle: 120 Level Of Service: D

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Ovl			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0	2	0	1	1	0	1	1	0	2	0	1	1	0
Volume Module:															
Base Vol:	52	216	384	342	459	136	119	982	58	625	1062	172
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	52	216	384	342	459	136	119	982	58	625	1062	172
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
PHF Volume:	54	224	398	355	476	141	123	1019	60	648	1102	178
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	54	224	398	355	476	141	123	1019	60	648	1102	178
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.05	1.00	1.00	1.05	1.05	1.00	1.05	1.05	1.03	1.05	1.05
Final Vol.:	54	235	398	355	500	148	123	1070	63	668	1157	187
Saturation Flow Module:															
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.90	0.95	0.81	0.93	0.95	0.95	0.94	0.98	0.98	0.93	0.96	0.96
Lanes:	1.00	2.00	1.00	1.00	1.54	0.46	1.00	1.89	0.11	2.00	1.72	0.28
Final Sat.:	1719	3619	1538	1770	2788	825	1787	3518	207	3539	3143	508
Capacity Analysis Module:															
Vol/Sat:	0.03	0.06	0.26	0.20	0.18	0.18	0.07	0.30	0.30	0.19	0.37	0.37
Crit Moves:			****	****				****		****		
Green/Cycle:	0.05	0.08	0.29	0.23	0.26	0.26	0.09	0.35	0.35	0.21	0.47	0.47
Volume/Cap:	0.69	0.82	0.88	0.88	0.69	0.69	0.78	0.88	0.88	0.88	0.78	0.78
Level Of Service Module:															
Delay/Veh:	50.6	46.4	38.7	42.7	27.2	27.2	49.1	29.2	29.2	37.8	18.8	18.8
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	50.6	46.4	38.7	42.7	27.2	27.2	49.1	29.2	29.2	37.8	18.8	18.8
Queue:	2	9	15	13	15	5	5	36	3	24	33	6

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Beaverton Transportation System Plan
2015 ENHANCED Traffic Conditione MITIGATION
PM Peak Hour (phf=0.95 - 1.0)

Level Of Service Computation Report
1994 HCM Operations Method (Base Volume Alternative)

Intersection #176 Farmington Road/170th Avenue

Cycle (sec): 120 Critical Vol./Cap. (X): 0.983
Loss Time (sec): 16 (Y+R = 4 sec) Average Delay (sec/veh) 39.9
Optimal Cycle: 180 Level Of Service: D

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permit+Prot			Permit+Prot			Permit+Prot			Permit+Prot		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0	1	1	0	1	0	1	1	0	1	0	1	1	0
Volume Modul															
Base Vol:	75	309	184	52	598	350	137	957	168	330	1418	85
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	75	309	184	52	598	350	137	957	168	330	1418	85
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	79	325	194	55	629	368	144	1007	177	347	1493	89
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	79	325	194	55	629	368	144	1007	177	347	1493	89
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.05	1.05	1.00	1.05	1.05	1.00	1.05	1.05	1.00	1.05	1.05
Final Vol.:	79	342	203	55	661	387	144	1058	186	347	1567	94
Saturation Flow Module:															
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.31	0.92	0.92	0.40	0.93	0.93	0.32	0.96	0.96	0.45	0.98	0.98
Lanes:	1.00	1.26	0.74	1.00	1.26	0.74	1.00	1.70	0.30	1.00	1.89	0.11
Final Sat.:	588	2198	1304	768	2231	1306	617	3105	546	847	3514	211
Capacity Analysis Module:															
Vol/Sat:	0.13	0.16	0.16	0.07	0.30	0.30	0.23	0.34	0.34	0.41	0.45	0.45
Crit Moves:	****						****			****		
Green/Cycle:	0.37	0.28	0.28	0.38	0.30	0.30	0.46	0.34	0.34	0.57	0.45	0.45
Volume/Cap:	0.36	0.55	0.55	0.19	1.00	1.00	0.51	1.02	1.02	0.72	1.00	1.00
Level Of Service Module:															
Delay/Veh:	31.4	24.0	24.0	20.9	49.1	49.1	1.2	49.5	49.5	29.1	38.9	38.9
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	31.4	24.0	24.0	20.9	49.1	49.1	1.2	49.5	49.5	29.1	38.9	38.9
Queue:	3	10	6	2	29	18	5	45	10	12	62	6

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Beaverton Transportation System Plan
2015 ENHANCED Traffic Conditions MITIGATION
PM Peak Hour (phf=0.95 - 1.0)

Level Of Service Computation Report
1994 HCM Operations Method (Base Volume Alternative)

Intersection #177 TV Highway/170th Avenue

Cycle (sec): 120 Critical Vol./Cap. (X): 1.071
Loss Time (sec): 16 (Y+R = 4 sec) Average Delay (sec/veh): 53.7
Optimal Cycle: 180 Level Of Service: E

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Ovl			ov1			Ovl		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0 1	1 0	1	0 2	0 1	1	0 3	0 1	2	0 3	0 1
Volume Module:												
Base Vol:	167	387	81	369	902	106	192	1745	166	480	2409	426
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	167	387	81	369	902	106	192	1745	166	480	2409	426
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	167	387	81	369	902	106	192	1745	166	480	2409	426
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	167	387	81	369	902	106	192	1745	166	480	2409	426
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.05	1.05	1.00	1.05	1.00	1.00	1.10	1.00	1.03	1.10	1.00
Final Vol.:	167	406	85	369	947	106	192	1920	166	494	2650	426
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.93	0.95	0.95	0.93	0.98	0.83	0.92	0.97	0.83	0.93	0.98	0.83
Lanes:	1.00	1.65	0.35	1.00	2.00	1.00	1.00	3.00	1.00	2.00	3.00	1.00
Final Sat.:	1770	2988	626	1770	3725	1583	1752	5534	1568	3539	5588	1583
Capacity Analysis Module:												
Vol/Sat:	0.09	0.14	0.14	0.21	0.25	0.07	0.11	0.35	0.11	0.14	0.47	0.27
Crit Moves:		****		****			****				****	
Green/Cycle:	0.09	0.13	0.13	0.19	0.23	0.34	0.10	0.39	0.48	0.16	0.44	0.64
Volume/Cap:	1.08	1.07	1.07	1.07	1.08	0.20	1.07	0.89	0.22	0.89	1.07	0.42
Level Of Service Module:												
Delay/Veh:	122.7	88.8	88.8	91.7	80.1	18.3	111.8	26.0	11.9	43.9	57.4	7.1
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	122.7	88.8	88.8	91.7	80.1	18.3	111.8	26.0	11.9	43.9	57.4	7.1
Queue:	10	22	6	20	48	3	11	63	3	19	126	7

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Beaverton Transportation System Plan
2015 ENHANCED Traffic Conditions MITIGATION
PM Peak Hour (phf=0.95 - 1.0)

Level Of Service Computation Report
1994 HCM Operations Method (Base Volume Alternative)

Intersection #179 Merlo Road/170th Avenue

Cycle (sec): 120 Critical Vol./Cap. (X): 0.871
Loss Time (sec): 16 (Y+R = 4 sec) Average Delay (sec/veh): 23.5
Optimal Cycle: 120 Level Of Service: C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permit+Prot			Permit+Prot			Protected			Protected		
Rights:	Ovl			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0 1	0 1	1	0 0	1 0	1	0 0	1 0	2	0 0	1 0
Volume Module:												
Base Vol:	15	571	503	20	693	14	20	30	50	1011	38	20
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	15	571	503	20	693	14	20	30	50	1011	38	20
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	16	601	529	21	729	15	21	32	53	1064	40	21
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	16	601	529	21	729	15	21	32	53	1064	40	21
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.03	1.00	1.00
Final Vol.:	16	601	529	21	729	15	21	32	53	1096	40	21
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.15	0.98	0.83	0.16	0.98	0.98	0.95	0.91	0.91	0.94	0.94	0.94
Lanes:	1.00	1.00	1.00	1.00	0.98	0.02	1.00	0.38	0.62	2.00	0.66	0.34
Final Sat.:	284	1863	1583	300	1825	38	1805	651	1078	3574	1172	615
Capacity Analysis Module:												
Vol/Sat:	0.06	0.32	0.33	0.07	0.40	0.40	0.01	0.05	0.05	0.31	0.03	0.03
Crit Moves:	****				****			****		****		
Green/Cycle:	0.49	0.45	0.80	0.50	0.45	0.45	0.10	0.06	0.06	0.35	0.30	0.30
Volume/Cap:	0.11	0.72	0.42	0.14	0.88	0.88	0.11	0.88	0.88	0.88	0.11	0.11
Level Of Service Module:												
Delay/Veh:	29.5	19.6	2.6	23.3	27.0	27.0	31.6	74.3	74.3	29.3	19.6	19.6
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	29.5	19.6	2.6	23.3	27.0	27.0	31.6	74.3	74.3	29.3	19.6	19.6
Queue:	1	17	5	1	24	1	1	2	3	37	1	1

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Beaverton Transportation System Plan
2015 ENHANCED Traffic Conditions MITIGATION
PM Peak Hour (phf=0.95 - 1.0)

Level Of Service Computation Report
1994 HCM Operations Method (Base Volume Alternative)

Intersection #180 Baseline Road/170th Avenue

Cycle (sec): 120 Critical Vol./Cap. (X): 0.995
Loss Time (sec): 16 (Y+R = 4 sec) Average Delay (sec/veh): 46.8
Optimal Cycle: 180 Level Of Service: E

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Ovl		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0	0 1	0	2	0 0 1	0	1	0 1 1	0	1	0 2 0 1
Volume Module:												
Base Vol:	150	568	88	437	612	28	81	888	129	174	1217	497
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	150	568	88	437	612	28	81	888	329	174	1217	497
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	150	568	88	437	612	28	81	888	129	174	1217	497
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	150	568	88	437	612	28	81	888	129	174	1217	497
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.03	1.00	1.00	1.00	1.05	1.05	1.00	1.05	1.00
Final Vol.:	150	568	88	450	612	28	81	932	135	174	1278	497
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.94	0.97	0.97	0.95	0.99	0.99	0.94	0.97	0.97	0.95	1.00	0.85
Lanes:	1.00	0.87	0.13	2.00	0.96	0.04	1.00	1.75	0.25	1.00	2.00	1.00
Final Sat.:	1787	1596	247	3610	1799	82	1787	3221	467	1805	3800	1615
Capacity Analysis Module:												
Vol/Sat:	0.08	0.36	0.36	0.12	0.34	0.34	0.05	0.29	0.29	0.10	0.34	0.31
Crit Moves:		****		****			****				****	
Green/Cycle:	0.10	0.36	0.36	0.13	0.39	0.39	0.05	0.29	0.29	0.10	0.34	0.46
Volume/Cap:	0.88	0.99	0.99	0.99	0.88	0.88	0.99	1.01	1.01	1.01	0.99	0.66
Level Of Service Module:												
Delay/Veh:	59.9	50.5	50.5	65.1	30.4	30.4	111.8	50.1	50.1	89.4	43.8	17.7
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	59.9	50.5	50.5	65.1	30.4	30.4	111.8	50.1	50.1	89.4	43.8	17.7
Queue:	6	25	5	20	21	2	5	39	7	9	51	13

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Beaverton Transportation System Plan
2015 ENHANCED Traffic Conditions MITIGATION
PM Peak Hour (phf=0.95 - 1.0)

Level Of Service Computation Report
1994 HCM Operations Method (Base Volume Alternative)

Intersection #186 Walker Road/158th Avenue

Cycle (sec): 120 Critical Vol./Cap. (X): 1.020
Loss Time (sec): 16 (Y+R = 4 sec) Average Delay (sec/veh): 42.5
Optimal Cycle: 180 Level Of Service: E

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Permit+Prot			Permit+Prot		
Rights:	Ovl			Include			Ovl			Ovl		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	2	0	2 0 1	2	0	1 1 0	1	0	2 0 1	1	0	2 0 1
Volume Module:												
Base Vol:	333	783	258	469	1025	105	76	1096	135	326	1082	147
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	333	783	258	469	1025	105	76	1096	135	326	1082	147
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	333	783	258	469	1025	105	76	1096	135	326	1082	147
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	333	783	258	469	1025	105	76	1096	135	326	1082	147
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.03	1.05	1.00	1.03	1.05	1.05	1.00	1.05	1.00	1.00	1.05	1.00
Final Vol.:	343	822	258	483	1076	110	76	1151	135	326	1136	147
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.91	0.96	0.82	0.94	0.98	0.98	0.31	0.99	0.84	0.46	0.99	0.84
Lanes:	2.00	2.00	1.00	2.00	1.81	0.19	1.00	2.00	1.00	1.00	2.00	1.00
Final Sat.:	3471	3654	1553	3574	3379	345	587	3762	1599	867	3762	1599
Capacity Analysis Module:												
Vol/Sat:	0.10	0.22	0.17	0.14	0.32	0.32	0.13	0.31	0.08	0.38	0.30	0.09
Crit Moves:	****				tttt		****			****		
Green/Cycle:	0.09	0.25	0.42	0.15	0.30	0.30	0.38	0.29	0.39	0.50	0.41	0.56
Volume/Cap:	1.04	0.90	0.39	0.90	1.04	1.04	0.34	1.04	0.22	0.75	0.74	0.16
Level Of Service Module:												
Delay/Veh:	87.0	36.8	15.6	45.5	59.9	59.9	30.7	60.7	15.9	4.9	20.7	8.3
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	87.0	36.8	15.6	45.5	59.9	59.9	30.7	60.7	15.9	4.9	20.7	8.3
Queue:	18	29	6	18	49	7	2	52	3	12	33	2

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Beaverton Transportation System Plan
2015 ENHANCED Traffic Conditions MITIGATION
PM Peak How (phf=0.95 - 1.0)

Level Of Service Computation Report
1994 HCM Operations Method (Base Volume Alternative)

Intersection #187 Walker Road/167th Avenue

Cycle (sec): 120 Critical Vol./Cap. (X): 0.602
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 10.5
Optimal Cycle: 50 Level Of Service: B

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0	0	1	0	0	0	1	1	0	0	1	0	1	1	0
Volume Module:																
Base Vol:	28	4	37	30	4	66	116	1335	66	97	1260	69
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	28	4	31	30	4	66	116	1335	66	97	1260	69
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	29	4	39	32	4	69	122	1405	69	102	1326	73
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	29	4	39	32	4	69	122	1405	69	102	1326	73
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.05	1.05	1.00	1.05	1.05
Final Vol.:	29	4	39	32	4	69	122	1476	73	102	1393	76
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.84	0.86	0.86	0.75	0.75	0.75	0.95	0.99	0.99	0.95	0.99	0.99
Lanes:	1.00	0.09	0.91	0.30	0.04	0.66	1.00	1.91	0.09	1.00	1.90	0.10
Final Sat.:	1596	152	1482	436	55	941	1805	3585	177	1805	3567	195
Capacity Analysis Module:												
Vol/Sat:	0.02	0.03	0.03	0.07	0.07	0.07	0.07	0.41	0.41	0.06	0.39	0.39
Crit Moves:					****			****		****		
Green/Cycle:	0.12	0.12	0.12	0.12	0.12	0.12	0.11	0.68	0.68	0.09	0.66	0.66
Volume/Cap:	0.15	0.22	0.22	0.60	0.60	0.60	0.59	0.60	0.60	0.60	0.59	0.59
Level Of Service Module:												
Delay/Veh:	30.5	30.8	30.8	36.3	36.3	36.3	35.7	6.9	6.9	37.9	7.5	7.5
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	30.5	30.8	30.8	36.3	36.3	36.3	35.7	6.9	6.9	37.9	7.5	1.5
Queue:	1	0	1	1	0	2	4	27	2	4	26	2

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Beaverton Transportation System Plan
2015 ENHANCED Traffic Conditions MITIGATION
PM Peak Hour (phf=0.95 - 1.0)

Level Of Service Computation Report
1994 HCM Operations Method (Base Volume Alternative)

Intersection #188 Walker Road/173rd Avenue

Cycle (sec): 140 Critical Vol./Cap. (X): 1.034
Loss Time (sec): 16 (Y+R = 4 sec) Average Delay (sec/veh): 51.3
Optimal Cycle: 180 Level Of Service: E

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Ovl			Ovl			Ovl			Ovl		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	2	0	1	0	1	2	0	1	0	1	1	0	2	0	1	1	0	2	0	1
Volume Module:																				
Base Vol:	433	707	119	350	831	196	153	1004	542	117	856	386
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	433	707	119	350	831	196	153	1004	542	117	856	386
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	433	707	119	350	831	196	153	1004	542	117	856	386
Reduct Vol	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vo :	433	707	119	350	831	196	153	1004	542	117	856	386
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.03	1.00	1.00	1.03	1.00	1.00	1.00	1.05	1.00	1.00	1.05	1.00
Final Vol.:	446	707	119	361	831	196	153	1054	542	117	899	386
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment	0.94	0.99	0.84	0.94	0.99	0.84	0.93	0.98	0.83	0.93	0.98	0.83
Lanes:	2.00	1.00	1.00	2.00	1.00	1.00	1.00	2.00	1.00	1.00	2.00	1.00
Final Sat.:	3574	1881	1599	3574	1881	1599	1770	3725	1583	1770	3725	1583
Capacity Analysis Module:												
Vol/Sat:	0.12	0.38	0.07	0.10	0.44	0.12	0.09	0.28	0.34	0.07	0.24	0.24
Crit Moves:	****				****			****		****		
Green/Cycle:	0.12	0.43	0.50	0.12	0.43	0.52	0.09	0.27	0.39	0.06	0.25	0.37
Volume/Cap:	1.03	0.87	0.15	0.87	1.03	0.24	0.98	1.03	0.87	1.03	0.97	0.67
Level Of Service Module:												
Delay/Veh:	82.7	30.5	12.4	51.7	59.4	12.1	90.0	63.4	34.0	119.5	50.0	26.1
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	82.7	30.5	12.4	51.7	59.4	12.1	90.0	63.4	34.0	119.5	50.0	26.1
Queue:	24	27	3	16	43	4	9	53	21	8	40	13

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Beaverton Transportation System Plan
2015 ENHANCED Traffic Conditions MITIGATION
PM Peak Hour (phf=0.95 - 1.0)

Level Of Service Computation Report
1994 HCM Operations Method (Base Volume Alternative)

Intersection #191 Cornell Road/158th Avenue

Cycle (sec): 120 critical Vol./Cap. (X): 0.858
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 20.1
Optimal Cycle: 100 Level Of Service: C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Protected			Protected		
Rights:	Ovl			Include			ov1			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	2	0	0	0	2	0	0	0	0	0	0	2	0	1	2	0	2	0	0
Volume Module:																			
Base Vol:	660	0	904	0	0	0	0	972	628	937	974	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	660	0	904	0	0	0	0	972	628	937	974	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	695	0	952	0	0	0	0	1023	661	986	1025	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	695	0	952	0	0	0	0	1023	661	986	1025	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.03	1.00	1.13	1.00	1.00	1.00	1.00	1.05	1.00	1.03	1.05	1.00
Final Vol.:	716	0	1075	0	0	0	0	1074	661	1016	1077	0
Saturation Flow Module:																			
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.93	1.00	0.83	1.00	1.00	1.00	1.00	0.99	0.84	0.94	0.99	1.00
Lanes:	2.00	0.00	2.00	0.00	0.00	0.00	0.00	2.00	1.00	2.00	2.00	0.00
Final Sat.:	3539	0	3167	0	0	0	0	3762	1599	3574	3762	0
Capacity Analysis Module:																			
Vol/Sat:	0.20	0.00	0.34	0.00	0.00	0.00	0.00	0.29	0.41	0.28	0.29	0.00
Crit Moves:	****							tttt		tttt		
Green/Cycle:	0.24	0.00	0.57	0.00	0.00	0.00	0.00	0.33	0.57	0.33	0.66	0.00
Volume/Cap:	0.86	0.00	0.60	0.00	0.00	0.00	0.00	0.86	0.73	0.86	0.43	0.00
Level Of Service Module:																			
Delay/Veh:	34.6	0.0	11.4	0.0	0.0	0.0	0.0	28.5	14.4	28.8	6.2	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	34.6	0.0	11.4	0.0	0.0	0.0	0.0	28.5	14.4	28.8	6.2	0.0
Queue:	25	0	24	0	0	0	0	35	17	34	17	0

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Beaverton Transportation System Plan
2015 ENHANCED Traffic Conditions MITIGATION
PM Peak Hour (phf=0.95 - 1.0)

Level Of Service Computation Report
1994 HCM Operations Method (Base Volume Alternative)

Intersection #192 Walker Road/Murray Boulevard

Cycle (sec): 150 Critical Vol./Cap. (X): 0.998
Loss Time (sec): 16 (Y+R = 4 sec) Average Delay (sec/veh): 43.2
Optimal Cycle: 180 Level Of Service: E

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Ovl			Ovl			Ovl			Ovl		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	2	0	2	0	1	2	0	2	0	1	2	0	2	0	1	2	0	2	0	1
Volume Module:																			
Base Vol:	285	1460	390	267	1177	168	181	1059	315	356	1133	233
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	285	1460	390	267	1177	168	181	1059	315	356	1133	233
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	285	1460	390	267	1177	168	181	1059	315	356	1133	233
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	285	1460	390	267	1177	168	181	1059	315	356	1133	233
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.03	1.05	1.00	1.03	1.05	1.00	1.03	1.05	1.00	1.03	1.05	1.00
Final Vol.:	294	1533	390	275	1236	168	186	1112	315	367	1190	233
Saturation Flow Module:																			
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.93	0.98	0.83	0.92	0.97	0.83	0.93	0.98	0.83	0.94	0.99	0.84
Lanes:	2.00	2.00	1.00	2.00	2.00	1.00	2.00	2.00	1.00	2.00	2.00	1.00
Final Sat.:	3539	3725	1583	3505	3689	1568	3539	3725	1583	3574	3762	1599
Capacity Analysis Module:																			
Vol/Sat:	0.08	0.41	0.25	0.08	0.34	0.11	0.05	0.30	0.20	0.10	0.32	0.15
Crit Moves:		****		****				****		****		
Green/Cycle:	0.10	0.41	0.52	0.08	0.39	0.45	0.06	0.30	0.40	0.10	0.34	0.42
Volume/Cap:	0.85	1.00	0.48	1.00	0.85	0.24	0.92	1.00	0.50	1.00	0.92	0.34
Level Of Service Module:																			
Delay/Veh:	55.5	45.5	15.4	85.6	30.4	16.4	74.3	54.1	22.6	78.9	38.0	19.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	55.5	45.5	15.4	85.6	30.4	16.4	74.3	54.1	22.6	78.9	38.0	19.0
Queue:	14	73	11	16	49	4	10	54	10	20	51	7

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Beaverton Transportation System Plan
2015 ENHANCED Traffic Conditions MITIGATION
PM Peak Hour (phf=0.95 - 1.0)

Level Of Service Computation Report
1994 HCM Operations Method (Base Volume Alternative)

Intersection #193 Kinnaman/Farmington

Cycle (sec): 120 Critical Vol./Cap. (X): 0.958
Loss Time (sec): 16 (Y+R = 4 sec) Average Delay (sec/veh): 25.2
Optimal Cycle: 178 Level Of Service: D

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permit+Prot			Permit+Prot			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0	0 1	0	1	0 0 1	0	1	0 1 1	0	1	0 1 1 0
Volume Module:												
Base Vol:	10	7	7	461	5	78	66	884	14	12	1492	249
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	10	7	7	461	5	78	66	884	14	12	1492	249
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	11	7	7	485	5	82	69	931	15	13	1571	262
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	11	7	7	485	5	82	69	931	15	13	1571	262
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.05	1.05	1.00	1.05	1.05
Final Vol.:	11	7	7	485	5	82	69	977	15	13	1649	275
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.93	0.93	0.94	0.85	0.85	0.93	0.98	0.98	0.94	0.97	0.97
Lanes:	1.00	0.50	0.50	1.00	0.06	0.94	1.00	1.97	0.03	1.00	1.71	0.29
Final Sat.:	1814	884	884	1789	93	1525	1770	3669	56	1787	3160	527
Capacity Analysis Module:												
Vol/Sat:	0.01	0.01	0.01	0.27	0.05	0.05	0.04	0.27	0.27	0.01	0.52	0.52
Crit Moves:				****			****				****	
Green/Cycle:	0.08	0.01	0.01	0.33	0.26	0.26	0.04	0.56	0.56	0.02	0.54	0.54
Volume/Cap:	0.07	0.97	0.97	0.81	0.21	0.21	0.97	0.47	0.47	0.47	0.97	0.97
Level Of Service Module:												
Delay/Veh:	32.9	202	202.0	29.6	22.5	22.5	108.2	10.2	10.2	46.2	27.5	27.5
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	32.9	202	202.0	29.6	22.5	22.5	108.2	10.2	10.2	46.2	27.5	27.5
Queue:	0	1	1	17	0	2	4	19	0	1	60	12

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Beaverton Transportation System Plan
2015 ENHANCED Traffic Conditions MITIGATION
PM Peak Hour (phf=0.95 - 1.0)

Level Of Service Computation Report
1994 HCM Operations Method (Base Volume Alternative)

Intersection #194 Davis Road/155th Avenue

Cycle (sec): 90 Critical Vol./Cap. (X): 0.337
Loss Time (sec): 8 (Y+R = 4 sec) Average Delay (sec/veh): 3.6
Optimal Cycle: 25 Level Of Service: A

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	0	1 1 0	0	0	0 0 0	0	0	1 0	0	1	0 0 0
Volume Module:												
Base Vol:	39	0	18	0	0	0	0	217	152	46	216	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	39	0	18	0	0	0	0	217	152	46	216	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
PHF Volume:	45	0	21	0	0	0	0	249	175	53	248	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	45	0	21	0	0	0	0	249	175	53	248	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	45	0	21	0	0	0	0	249	175	53	248	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.83	1.00	0.83	1.00	1.00	1.00	1.00	0.84	0.84	0.77	0.77	1.00
Lanes:	0.68	0.00	0.32	0.00	0.00	0.00	0.00	0.59	0.41	0.18	0.82	0.00
Final Sat.:	1081	0	504	0	0	0	0	937	659	258	1205	0
Capacity Analysis Module:												
Vol/Sat:	0.04	0.00	0.04	0.00	0.00	0.00	0.00	0.27	0.27	0.21	0.21	0.00
Crit Moves:	****							****				
Green/Cycle:	0.12	0.00	0.12	0.00	0.00	0.00	0.00	0.79	0.79	0.79	0.79	0.00
Volume/Cap:	0.34	0.00	0.34	0.00	0.00	0.00	0.00	0.34	0.34	0.26	0.26	0.00
Level Of Service Module:												
Delay/Veh:	23.7	0.0	23.7	0.0	0.0	0.0	0.0	1.8	1.8	1.7	1.7	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	23.7	0.0	23.7	0.0	0.0	0.0	0.0	1.8	1.8	1.7	1.7	0.0
Queue:	1	0	1	0	0	0	0	2	1	0	2	0

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Beaverton Transportation System Plan
2015 ENHANCED Traffic Conditions MITIGATION
PM Peak Hour (phf=0.95 - 1.0)

Level Of Service Computation Report
1994 HCM Operations Method (Base volume Alternative)

Intersection #198 Canyon Road/Walker Road

Cycle (sec): 120 Critical Vol./Cap. (X): 0.872
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 23.8
Optimal Cycle: 106 Level Of Service: C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	0	1! 0	0	0	1	1	0	0	1	0	1
Volume Module:												
Base Vol:	4	0	11	462	2	38	75	1308	1	7	846	477
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	4	0	11	462	2	38	75	1308	1	7	846	477
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
PHF Volume:	4	0	12	505	2	42	82	1431	1	8	926	522
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	4	0	12	505	2	42	82	1431	1	8	926	522
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.05	1.05	1.00	1.05	1.00
Final Vol.:	4	0	12	505	2	42	82	1503	1	8	972	522
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.64	1.00	0.64	0.78	0.78	0.78	0.92	0.97	0.97	0.93	0.98	0.83
Lanes:	0.25	0.00	0.75	0.92	0.01	0.07	1.00	1.99	0.01	1.00	2.00	1.00
Final Sat.:	304	0	912	1355	5	113	1752	3687	2	1770	3725	1583
Capacity Analysis Module:												
Vol/Sat:	0.01	0.00	0.01	0.37	0.37	0.37	0.05	0.41	0.41	0.00	0.26	0.33
Crit Moves:					tttt			tttt		tttt		
Green/Cycle:	0.43	0.00	0.43	0.43	0.43	0.43	0.06	0.47	0.47	0.01	0.41	0.41
Volume/Cap:	0.03	0.00	0.03	0.87	0.87	0.87	0.80	0.87	0.87	0.87	0.63	0.80
Level Of Service Module:												
Delay/Veh:	12.9	0.0	12.9	29.3	29.3	29.3	58.3	22.3	22.3	184.8	18.6	24.6
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	12.9	0.0	12.9	29.3	29.3	29.3	58.3	22.3	22.3	184.8	18.6	24.6
Queue:	0	0	0	17	0	2	4	47	0	1	26	16

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Beaverton Transportation System Plan
2015 ENHANCED Traffic Conditions MITIGATION
PM Peak Hour (phf=0.95 - 1.0)

Level Of Service Computation Report
1994 HCM Operations Method (Base Volume Alternative)

Intersection #199 Beaverton-Hillsdale Hwy/Western Avenue

Cycle (sec): 120 Critical Vol./Cap. (X): 0.889
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh) 22.3
Optimal Cycle: 114 Level Of Service: C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Protected			Protected		
Rights:	Include			Include			Ovl			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	1	1! 1	0	0	0	0	0	2	0	1	2	0	2	0	0
Volume Module:																
Base Vol:	501	0	530	0	0	0	0	1377	464	678	1247	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	501	0	530	0	0	0	0	1377	464	678	1247	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	501	0	530	0	0	0	0	1377	464	678	1247	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	501	0	530	0	0	0	0	1377	464	678	1247	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.05	1.05	1.05	1.00	1.00	1.00	1.00	1.05	1.00	1.03	1.05	1.00
Final Vol.:	526	0	557	0	0	0	0	1446	464	698	1309	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.88	1.00	0.88	1.00	1.00	1.00	1.00	0.98	0.83	0.93	0.98	1.00
Lanes:	1.46	0.00	1.54	0.00	0.00	0.00	0.00	2.00	1.00	2.00	2.00	0.00
Final Sat.:	2447	0	2591	0	0	0	0	3725	1583	3539	3725	0
Capacity Analysis Module:												
Vol/Sat:	0.21	0.00	0.21	0.00	0.00	0.00	0.00	0.39	0.29	0.20	0.35	0.00
Crit Moves:	****							tttt		tttt		
Green/Cycle:	0.24	0.00	0.24	0.00	0.00	0.00	0.00	0.44	0.68	0.22	0.66	0.00
Volume/Cap:	0.89	0.00	0.89	0.00	0.00	0.00	0.00	0.89	0.43	0.89	0.53	0.00
Level Of Service Module:												
Delay/Veh:	34.4	0.0	34.4	0.0	0.0	0.0	0.0	24.8	5.9	37.9	7.2	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	34.4	0.0	34.4	0.0	0.0	0.0	0.0	24.8	5.9	37.9	7.2	0.0
Queue:	19	0	20	0	0	0	0	47	7	25	23	0

Beaverton Transportation System Plan
2015 ENHANCED Traffic Conditions MITIGATION
PM Peak Hour (phf=0.95 - 1.0)

Level Of Service Computation Report
1994 HCM Operations Method (Base Volume Alternative)

Intersection #200 Allen Boulevard/Western Avenue

Cycle (sec): 120 critical Vol./Cap. (X): 0.784
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh) 47.8
Optimal Cycle: 180 Level Of Service: E

Approach:	North Bound			South Round			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Permit+Prot			Permit+Prot		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	0	0	1	0	0	1	0	2	0	2	1
Volume Module:												
Bas : Vol:	0	0	0	500	0	816	353	748	0	0	678	355
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	500	0	816	353	748	0	0	678	355
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	0	0	0	526	0	859	372	787	0	0	714	374
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	526	0	859	372	787	0	0	714	374
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.05	1.00	1.00	1.05	1.00
Final Vol.:	0	0	0	526	0	859	372	827	0	0	749	374
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	0.92	1.00	0.83	0.56	0.97	1.00	1.00	0.98	0.83
Lanes:	0.00	0.00	0.00	1.00	0.00	1.00	1.00	2.00	0.00	0.00	2.00	1.00
Final sat.:	0	0	0	1752	0	1568	1066	3689	0	0	3725	1583
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.30	0.00	0.55	0.35	0.22	0.00	0.00	0.20	0.24
Crit Moves:				****			****					
Green/Cycle:	0.00	0.00	0.00	0.49	0.00	0.49	0.46	0.41	0.00	0.00	0.21	0.21
Volume/Cap:	0.00	0.00	0.00	0.61	0.00	1.11	0.77	0.55	0.00	0.00	0.94	1.11
Level Of Service Module:												
Delay/Veh:	0.0	0.0	0.0	15.0	0.0	81.5	30.6	18.0	0.0	0.0	44.1	106.8
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	15.0	0.0	81.5	30.6	18.0	0.0	0.0	44.1	106.8
Queue:	0	0	0	13	0	49	14	21	0	0	29	22

Beaverton Transportation System Plan
2015 ENHANCED Traffic Conditions MITIGATION
PM Peak Hour (phf=0.95 - 1.0)

Level Of Service Computation Report
1994 HCM Operations Method (Base Volume Alternative)

Intersection #202 Laurelwood Avenue/Beaverton-Hillsdale Hwy

Cycle (sec): 90 Critical Vol./Cap. (X): 0.857
Loss Time (sec): 8 (Y+R = 4 sec) Average Delay (sec/veh): 16.6
Optimal Cycle: 79 Level Of Service: C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	0	1!	0	0	0	1	0	1	1	0	1	0	1	1	0
Volume Module:												
Base Vol:	95	97	69	189	72	43	32	1324	100	57	1232	211
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	95	97	69	189	72	43	32	1324	100	57	1232	211
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
PHF Volume:	98	100	71	195	74	44	33	1366	103	59	1271	218
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	98	100	71	195	74	44	33	1366	103	59	1271	218
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.05	1.05	1.00	1.05	1.05
Final Vol.:	98	100	71	195	74	44	33	1435	108	59	1335	229
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.59	0.59	0.59	0.46	0.46	0.46	0.09	0.98	0.98	0.09	0.97	0.97
Lanes:	0.36	0.38	0.26	0.62	0.24	0.14	1.00	1.86	0.14	1.00	1.71	0.29
Final Sat.:	407	415	295	547	207	123	169	3464	261	169	3147	540
Capacity Analysis Module:												
Vol/Sat:	0.24	0.24	0.24	0.36	0.36	0.36	0.19	0.41	0.41	0.35	0.42	0.42
Crit Moves:					****						****	
Green/Cycle:	0.42	0.42	0.42	0.42	0.42	0.42	0.49	0.49	0.49	0.49	0.49	0.49
Volume/Cap:	0.58	0.58	0.58	0.86	0.86	0.86	0.39	0.84	0.84	0.70	0.86	0.86
Level Of Service Module:												
Delay/Veh:	14.4	14.4	14.4	27.8	27.8	27.8	10.8	15.2	15.2	26.4	16.0	16.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	14.4	14.4	14.4	27.8	27.8	27.8	10.8	15.2	15.2	26.4	16.0	16.0
Queue:	2	2	2	6	3	2	1	33	3	2	31	7

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Beaverton Transportation System Plan
2015 ENHANCED Traffic Conditions MITIGATION
PM Peak Hour (phf=0.95 - 1.0)

Level Of Service Computation Report
1994 HCM Operations Method (Base Volume Alternative)

Intersection #203 Hall Boulevard/Denney Road

Cycle (sec): 120 Critical Vol./Cap. (X): 0.934
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 19.7
Optimal Cycle: 115 Level Of Service: C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permit+Prot			Permit+Prot			Split Phase			Split Phase		
Rights:	Ovl			Include			Include			Ovl		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	0	2	0	1	1	0	2	0	0	0	0	0	0	0	1	0	2	0	0
Volume Module:												
Base Vol:	0	1343	625	149	1397	0	0	0	0	860	0	211
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	*1.00*	1.00	1.00	1.00
Initial Bse:	0	1343	625	149	1397	0	0	0	0	860	0	211
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	0	1414	658	157	1471	0	0	0	0	905	0	222
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	1414	658	157	1471	0	0	0	0	905	0	222
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.05	1.00	1.00	1.05	1.00	1.00	1.00	1.00	1.05	1.00	1.00
Final Vol.:	0	1484	658	157	1544	0	0	0	0	951	0	222
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	0.99	0.84	0.29	0.99	1.00	1.00	1.00	1.00	0.93	1.00	0.93
Lanes:	0.00	2.00	1.00	1.00	2.00	0.00	0.00	0.00	0.00	1.68	0.00	0.32
Final Sat.:	0	3762	1599	555	3762	0	0	0	0	2975	0	563
Capacity Analysis Module:												
Vol/Sat:	0.00	0.39	0.41	0.28	0.41	0.00	0.00	0.00	0.00	0.32	0.00	0.39
Crit Moves:				****						****		
Green/Cycle:	0.00	0.44	0.80	0.59	0.54	0.00	0.00	0.00	0.00	0.36	0.00	0.46
Volume/Cap:	0.00	0.89	0.51	0.48	0.76	0.00	0.00	0.00	0.00	0.89	0.00	0.86
Level Of Service Module:												
Delay/Veh:	0.0	24.5	2.9	28.1	15.0	0.0	0.0	0.0	0.0	29.2	0.0	23.1
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	24.5	2.9	28.1	15.0	0.0	0.0	0.0	0.0	29.2	0.0	23.1
Queue:	0	48	8	5	41	0	0	0	0	33	0	8

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Beaverton Transportation System Plan
2015 ENHANCED Traffic Conditions MITIGATION
PM Peak Hour (phf=0.95 - 1.0)

Level Of Service Computation Report
1994 HCM Operation6 Method (Base Volume Alternative)

Intersection #205 Denney Road/Hwy 217 SB ramps

Cycle (sec): 120 Critical Vol./Cap. (X): 0.550
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 16.7
Optimal Cycle: 74 Level Of Service: C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Permit+Prot			Permit+Prot		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	0	0	0	0	0	0	1	0	0	1	0	0	0	1	0	1	0	0
Volume Module:												
Base Vol:	0	0	0	85	5	331	0	484	166	68	516	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	85	5	331	0	484	166	68	516	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
PHF Volume:	0	0	0	92	5	358	0	524	180	74	558	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	92	5	358	0	524	180	74	558	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	0	0	0	92	5	358	0	524	180	74	558	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	0.85	0.85	0.85	1.00	0.86	0.86	0.45	1.00	1.00
Lanes:	0.00	0.00	0.00	0.95	0.05	1.00	0.00	0.74	0.26	1.00	1.00	0.00
Final Sat.:	0	0	0	1532	83	1615	0	1216	418	851	1900	0
Capacity m a ysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.06	0.06	0.22	0.00	0.43	0.43	0.09	0.29	0.00
Crit Moves:				****				****		****		
Green/Cycle:	0.00	0.00	0.00	0.29	0.29	0.29	0.00	0.56	0.56	0.65	0.61	0.00
Volume/Cap:	0.00	0.00	0.00	0.21	0.21	0.77	0.00	0.77	0.77	0.13	0.48	0.00
Level Of Ser ice Module:												
Delay/Veh:	0.0	0.0	0.0	21.0	21.0	30.6	0.0	16.1	16.1	11.0	8.5	0.0
User DelAdj:	1.00	1.00	1.00	*1.00*	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	21.0	21.0	30.6	0.0	16.1	16.1	11.0	8.5	0.0
Queue:	0	0	0	2	0	12	0	14	5	2	10	0

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Beaverton Transportation System Plan
2015 ENHANCED Traffic Conditions MITIGATION
PM Peak Hour (phf=0.95 - 1.0)

Level Of Service Computation Report
1994 HCM Operations Method (Base Volume Alternative)

Intersection #207 Denney Road/Hwy 217 NB ramps

Cycle (sec): 120 Critical Vol./Cap. (X): 0.702
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 14.2
Optimal Cycle: 69 Level Of Service: B

Approach:	North Bound						South Bound						East Bound						West Bound					
Movement:	L	-	T	-	R		L	-	T	-	R		L	-	T	-	R		L	-	T	-	R	
Control:	Split Phase						split Phase						Permit+Prot						Permit+Prot					
Rights:			Include						Include						Include						Include			
Min. Green:	0	0		0		0	0	0		0		0	0	0		0		0	0	0		0		0
Lanes:	0	1	0	0	1		0	0	0	0	0		1	0	1	0	0		0	0	0	1	0	
Volume Module:																								
Base Vol:	132	4		28		0	0		0				281	299		0			0	437		128		
Growth Adj:	1.00	1.00		1.00		1.00	1.00		1.00				1.00	1.00		1.00			1.00	1.00		1.00		
Initial Bse:	132	4		28		0	0		0				281	299		0			0	437		128		
User Adj:	1.00	1.00		1.00		1.00	1.00		1.00				1.00	1.00		1.00			1.00	1.00		1.00		
PHF Adj:	0.87	0.87		0.87		0.87	0.87		0.87				0.87	0.87		0.87			0.87	0.87		0.87		
PHF Volume:	152	5		32		0	0		0				323	343		0			0	502		147		
Reduct Vol:	0	0		0		0	0		0				0	0		0			0	0		0		
Reduced Vol:	152	5		32		0	0		0				323	343		0			0	502		147		
PCE Adj:	1.00	1.00		1.00		1.00	1.00		1.00				1.00	1.00		1.00			1.00	1.00		1.00		
MLF Adj:	1.00	1.00		1.00		1.00	1.00		1.00				1.00	1.00		1.00			1.00	1.00		1.00		
Final Vol.:	152	5		32		0	0		0				323	343		0			0	502		147		
Saturation Flow Module:																								
Sat/Lane:	1900	1900		1900		1900	1900		1900				1900	1900		1900			1900	1900		1900		
Adjustment:	0.85	0.85		0.85		1.00	1.00		1.00				0.58	1.00		1.00			1.00	0.87		0.87		
Lanes:	0.97	0.03		1.00		0.00	0.00		0.00				1.00	1.00		0.00			0.00	0.77		0.23		
Final Sat.:	1564	51		1615		0	0		0				1101	1900		0			0	1279		374		
Capacity Analysis Module:																								
Vol/Sat:	0.10	0.10		0.02		0.00	0.00		0.00				0.29	0.18		0.00			0.00	0.39		0.39		
Crit Moves:	****												****							****				
Green/Cycle:	0.13	0.13		0.13		0.00	0.00		0.00				0.80	0.77		0.00			0.00	0.53		0.53		
Volume/Cap:	0.74	0.74		0.15		0.00	0.00		0.00				0.37	0.23		0.00			0.00	0.74		0.74		
Level Of Service Module:																								
Delay/Veh:	41.3	41.3		29.9		0.0	0.0		0.0				7.2	2.5		0.0			0.0	16.6		16.6		
User DelAdj:	1.00	1.00		1.00		1.00	1.00		1.00				1.00	1.00		1.00			1.00	1.00		1.00		
AdjDel/Veh:	41.3	41.3		29.9		0.0	0.0		0.0				7.2	2.5		0.0			0.0	16.6		16.6		
Queue:	6	0		1		0	0		0				10	3		0			0	14		4		

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Beaverton Transportation System Plan
2015 ENHANCED Traffic Conditions MITIGATION
PM Peak Hour (phf=0.95 - 1.0)

Level Of Service Computation Report
1994 HCM Operations Method (Base Volume Alternative)

Intersection #214 Denney Road/Scholls Ferry Road

Cycle (sec): 120 Critical Vol./Cap. (X): 0.914
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 21.1
Optimal Cycle: 129 Level Of Service: C

Approach:	North Bound						South Bound						East Bound						West Bound					
Movement:	L	-	T	-	R		L	-	T	-	R		L	-	T	-	R		L	-	T	-	R	
Control:	Protected						Protected						Permitted						Permitted					
Rights:			Include						Include						Include						Include			
Min. Green:	0	0		0		0	0	0		0		0	0	0		0		0	0	0		0		0
Lanes:	1	0	0	1	0		1	0	1	0	1		0	0	1	0	0		0	0	0	1	0	
Volume Module:																								
Base Vol:	168	964		1		2	1015		300				113	6		132			0	4		1		
Growth Adj:	1.00	1.00		1.00		1.00	1.00		1.00				1.00	1.00		1.00			1.00	1.00		1.00		
Initial Bse:	168	964		1		2	1015		300				113	6		132			0	4		1		
User Adj:	1.00	1.00		1.00		1.00	1.00		1.00				1.00	1.00		1.00			1.00	1.00		1.00		
PHF Adj:	0.98	0.98		0.98		0.98	0.98		0.98				0.98	0.98		0.98			0.98	0.98		0.98		
PHF Volume:	172	985		1		2	1037		306				115	6		135			0	4		1		
Reduct Vol:	0	0		0		0	0		0				0	0		0			0	0		0		
Reduced Vol:	172	985		1		2	1037		306				115	6		135			0	4		1		
PCE Adj:	1.00	1.00		1.00		1.00	1.00		1.00				1.00	1.00		1.00			1.00	1.00		1.00		
MLF Adj:	1.00	1.00		1.00		1.00	1.00		1.00				1.00	1.00		1.00			1.00	1.00		1.00		
Final Vol.:	172	985		1		2	1037		306				115	6		135			0	4		1		
Saturation Flow Module:																								
Sat/Lane:	1900	1900		1900		1900	1900		1900				1900	1900		1900			1900	1900		1900		
Adjustment:	0.93	0.98		0.98		0.93	0.98		0.83				0.80	0.80		0.80			1.00	0.87		0.87		
Lanes:	1.00	0.99		0.01		1.00	1.00		1.00				0.45	0.02		0.53			0.00	0.80		0.20		
Final Sat.:	1770	1861		2		1770	1863		1583				680	35		799			0	1322		331		
Capacity Analysis Module:																								
Vol/Sat:	0.10	0.53		0.53		0.00	0.56		0.19				0.17	0.17		0.17			0.00	0.00		0.00		
Crit Moves:	****						****							****										
Green/Cycle:	0.11	0.71		0.71		0.00	0.61		0.61				0.18	0.18		0.18			0.00	0.18		0.18		
Volume/Cap:	0.91	0.74		0.74		0.74	0.91		0.32				0.91	0.91		0.91			0.00	0.02		0.02		
Level Of Service Module:																								
Delay/Veh:	64.1	8.3		8.3		215.3	21.6		7.4				53.9	53.9		53.9			0.0	25.8		25.8		
User DelAdj:	1.00	1.00		1.00		1.00	1.00		1.00				1.00	1.00		1.00			1.00	1.00		1.00		
AdjDel/Veh:	64.1	8.3		8.3		215.3	21.6		7.4				53.9	53.9		53.9			0.0	25.8		25.8		
Queue:	8	21		0		0	34		5				6	1		6			0	0		0		

Beaverton Transportation System Plan
2015 ENHANCED Traffic Conditions MITIGATION
PM Peak Hour (phf=0.95 - 1.0)

Level Of Service Computation Report
1994 HCM Operations Method (Base Volume Alternative)

Intersection #215 Allen Boulevard/Scholls Ferry Road

Cycle (sec): 120 Critical Vol./Cap. (X): 0.984
Loss Time (sec): 16 (Y+R = 4 sec) Average Delay (sec/veh) 44.2
Optimal Cycle: 180 Level Of Service: E

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permit+Prot			Permit+Prot			Permit+Prot			Permit+Prot		
Rights:	Ovl			Ovl			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0 1	0 1	1	0 1	0 1	1	0 1	1 0	1	0 1	1 0
Volume Module:												
Base Vol:	140	751	147	143	717	106	202	602	145	224	654	308
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	140	751	147	143	717	106	202	602	145	224	654	308
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
PHF Volume:	144	774	152	147	739	109	208	621	149	231	674	318
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	144	774	152	147	739	109	208	621	149	231	674	318
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.05	1.05	1.00	1.05	1.05
Final Vol.:	144	774	152	147	739	109	208	652	157	231	708	333
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.27	0.98	0.83	0.27	0.99	0.84	0.43	0.96	0.96	0.47	0.94	0.94
Lanes:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.61	0.39	1.00	1.36	0.64
Final Sat.:	521	1863	1583	519	1881	1559	821	2941	708	895	2431	1143
Capacity Analysis Module:												
Vol/Sat:	0.28	0.42	0.10	0.28	0.39	0.07	0.25	0.22	0.22	0.26	0.29	0.29
Crit Moves:	****			tttt			tttt				****	
Green/Cycle:	0.51	0.40	0.54	0.51	0.39	0.51	0.39	0.25	0.25	0.42	0.28	0.28
Volume/Cap:	0.54	1.04	0.18	0.56	1.00	0.13	0.65	0.90	0.90	0.61	1.04	1.04
Level Of Service Module:												
Delay/Veh:	32.7	61.4	9.0	2.0	47.7	10.2	3.1	36.8	36.8	29.4	62.3	62.3
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	32.7	61.4	9.0	2.0	47.7	10.2	3.1	36.8	36.8	29.4	62.3	62.3
Queue:	5	37	3	5	31	2	8	24	7	8	34	17

Beaverton Transportation System Plan
2015 ENHANCED Traffic Conditions MITIGATION
PM Peak Hour (phf=0.95 - 1.0)

Level Of Service Computation Report
1994 HCM Operations Method (Base Volume Alternative)

Intersection #218 Hall Boulevard/Hart Road

Cycle (sec): 120 Critical Vol./Cap. (X): 0.927
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh) 17.9
Optimal Cycle: 138 Level Of Service: C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Split Phase			Split Phase		
Rights:	Include			Ovl			Ovl			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0 2	0 0	0	0 2	0 1	1	0 0	0 1	0	0 0	0 0
Volume Module:												
Base Vol:	255	1550	0	0	1695	498	271	0	121	0	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	255	1550	0	0	1695	498	271	0	121	0	0	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
PHF Volume:	277	1685	0	0	1842	541	295	0	132	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	277	1685	0	0	1842	541	295	0	132	0	0	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.05	1.00	1.00	1.05	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	277	1769	0	0	1935	541	295	0	132	0	0	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.94	0.99	1.00	1.00	0.99	0.84	0.94	1.00	0.84	1.00	1.00	1.00
Lanes:	1.00	2.00	0.00	0.00	2.00	1.00	1.00	0.00	1.00	0.00	0.00	0.00
Final Sat.:	1787	3762	0	0	3762	1599	1787	0	1599	0	0	0
Capacity Analysis Module:												
Vol/Sat:	0.15	0.47	0.00	0.00	0.51	0.34	0.17	0.00	0.08	0.00	0.00	0.00
Crit Moves:	****				tttt		tttt					
Green/Cycle:	0.17	0.12	0.00	0.00	0.55	0.73	0.10	0.00	0.35	0.00	0.00	0.00
Volume/Cap:	0.93	0.65	0.00	0.00	0.93	0.46	0.93	0.00	0.24	0.00	0.00	0.00
Level Of Service Module:												
Delay/Veh:	55.8	6.1	0.0	0.0	21.6	4.4	54.4	0.0	18.2	0.0	0.0	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	55.8	6.1	0.0	0.0	21.6	4.4	54.4	0.0	18.2	0.0	0.0	0.0
Queue:	12	31	0	0	63	7	12	0	3	0	0	0

Beaverton Transportation System Plan
2015 ENHANCED Traffic Conditions MITIGATION
PM Peak Hour (phf=0.95 - 1.0)

Level Of Service Computation Report
1994 HCM Operations Method (Base Volume Alternative)

Intersection #219 Murray Boulevard/Hart Road

Cycle (sec):	120	Critical Vol./Cap. (X):	1.016
Loss Time (sec):	16 (Y+R = 4 sec)	Average Delay (sec/veh):	41.7
Optimal Cycle:	180	Level Of Service:	E

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permit+Prot			Permit+Prot			Permit+Prot			Permit+Prot		
Rights:	Include			Ovl			Ovl			Ovl		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1 0	1	1 0	1 0	2	0 1	1 0	1	0 1	1 0	1	0 1
Volume Module:												
Base Vol:	224	1358	48	30	1900	304	156	120	181	109	389	38
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	224	1358	48	30	1900	304	156	120	181	109	389	38
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	224	1358	48	30	1900	304	156	120	181	109	389	38
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	224	1358	48	30	1900	304	156	120	181	109	389	38
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.05	1.05	1.00	1.05	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	224	1426	50	30	1995	304	156	120	181	109	389	38
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.28	0.98	0.98	0.18	0.99	0.84	0.50	0.98	0.83	0.76	1.00	0.85
Lanes:	1.00	1.93	0.07	1.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Sat.:	536	3599	126	336	3762	1599	944	1863	1583	1444	1900	1615
Capacity Analysis Module:												
Vol/Sat:	0.42	0.40	0.40	0.09	0.53	0.19	0.17	0.06	0.11	0.08	0.20	0.02
Crit Moves:	****						****				****	
Green/Cycle:	0.64	0.58	0.58	0.55	0.48	0.56	0.30	0.17	0.29	0.31	0.19	0.21
Volume/Cap:	0.65	0.69	0.69	0.16	1.10	0.34	0.55	0.37	0.39	0.24	1.10	0.11
Level Of Service Module:												
Delay/Veh:	3.0	12.3	12.3	21.3	68.4	9.2	1.8	28.5	22.3	21.0	102	24.7
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	3.0	12.3	12.3	21.3	68.4	9.2	1.8	28.5	22.3	21.0	102	24.7
Queue:	8	34	2	1	105	5	6	4	5	3	22	1

Beaverton Transportation System Plan
2015 ENHANCED Traffic Conditions MITIGATION
PM Peak Hour (phf=0.95 - 1.0)

Level Of Service Computation Report
1994 HCM Operations Method (Base Volume Alternative)

Intersection #220 Hart Road/159th Avenue

Cycle (sec):	100	Critical Vol./Cap. (X):	0.634
Loss Time (sec):	8 (Y+R = 4 sec)	Average Delay (sec/veh):	10.8
Optimal Cycle:	41	Level Of Service:	B

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0 0	1!	0 0	0 0	1!	0 0	0 0	1	1 0	1 0	0	0 1
Volume Module:												
Base Vol:	84	32	99	31	126	12	7	357	148	205	693	8
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	84	32	99	31	126	12	7	357	148	205	693	8
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	88	34	104	33	133	13	7	376	156	216	729	8
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	88	34	104	33	133	13	7	376	156	216	729	8
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	88	34	104	33	133	13	7	376	156	216	729	8
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.62	0.62	0.62	0.78	0.78	0.78	0.81	0.81	0.81	0.37	0.99	0.99
Lanes:	0.39	0.15	0.46	0.18	0.75	0.07	0.01	0.70	0.29	1.00	0.99	0.01
Final Sat.:	459	177	542	272	1095	107	20	1073	445	696	1861	20
Capacity Analysis Module:												
Vol/Sat:	0.19	0.19	0.19	0.12	0.12	0.12	0.35	0.35	0.35	0.31	0.39	0.39
Crit Moves:		****									****	
Green/Cycle:	0.30	0.30	0.30	0.30	0.30	0.30	0.62	0.62	0.62	0.62	0.62	0.62
Volume/Cap:	0.63	0.63	0.63	0.40	0.40	0.40	0.57	0.57	0.57	0.50	0.63	0.63
Level Of Service Module:												
Delay/Veh:	22.0	22.0	22.0	18.2	18.2	18.2	7.9	7.9	7.9	7.7	8.6	8.6
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	22.0	22.0	22.0	18.2	18.2	18.2	7.9	7.9	7.9	7.7	8.6	8.6
Queue:	2	1	3	1	3	0	0	6	3	3	13	0

Beaverton Transportation System Plan
2015 ENHANCED Traffic Conditions MITIGATION
PM Peak Hour (phf=0.95 - 1.0)

Level Of Service Computation Report
1994 HCM Operations Method (Base Volume Alternative)

Intersection #221 Hart-Bany/170th Avenue

Cycle (sec): 90 Critical Vol./Cap. (X): 0.769
Loss Time (sec): 8 (Y+R = 4 sec) Average Delay (sec/veh): 13.6
Optimal Cycle: 57 Level Of Service: B

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0	0 1	0	1	0 0 1	0	0	1! 0	0	0	1! 0 0
Volume Module:												
Base Vol:	36	336	38	203	649	122	62	153	42	35	243	100
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	36	336	38	203	649	122	62	153	42	35	243	100
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	38	354	40	214	683	128	65	161	44	37	256	105
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	38	354	40	214	683	128	65	161	44	37	256	105
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	38	354	40	214	683	128	65	161	44	37	256	105
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.08	0.99	0.99	0.34	0.98	0.98	0.62	0.62	0.62	0.79	0.79	0.79
Lanes:	1.00	0.90	0.10	1.00	0.84	0.16	0.24	0.60	0.16	0.09	0.65	0.26
Final Sat.:	152	1690	191	646	1568	294	282	698	191	140	967	397
Capacity Analysis Module:												
Vol/Sat:	0.25	0.21	0.21	0.33	0.44	0.44	0.23	0.23	0.23	0.26	0.26	0.26
Crit Moves:					****						tttt	
Green/Cycle:	0.57	0.57	0.57	0.57	0.57	0.57	0.34	0.34	0.34	0.34	0.34	0.34
Volume/Cap:	0.44	0.37	0.37	0.58	0.77	0.77	0.67	0.67	0.67	0.77	0.77	0.77
Level Of Service Module:												
Delay/Veh:	9.6	7.0	7.0	9.9	12.1	12.1	19.2	19.2	19.2	21.8	21.8	21.8
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	9.6	7.0	7.0	9.9	12.1	12.1	19.2	19.2	19.2	21.8	21.8	21.8
Queue:	1	5	1	4	14	3	2	4	1	1	7	3

Beaverton Transportation System Plan
2015 ENHANCED Traffic Conditions MITIGATION
PM Peak Hour (phf=0.95 - 1.0)

Level Of Service Computation Report
1994 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #222 Hart Road/Sorrento Avenue

Cycle (sec): 1 Critical Vol./Cap. (X): 0.681
Loss Time (sec): 12 Average Delay (sec/veh): 10.0
Optimal Cycle: 0 Level Of Service: C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Lanes:	0	0	1! 0 0	0	0	0 0 0	0	0	0 1 0	0	1	0 0 0
Volume Module:												
Base Vol:	73	0	77	0	0	0	0	144	141	146	487	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	73	0	77	0	0	0	0	144	141	146	487	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
PHF Volume:	77	0	82	0	0	0	0	153	149	155	516	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	77	0	82	0	0	0	0	153	149	155	516	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	77	0	82	0	0	0	0	153	149	155	516	0
Saturation Flow Module:												
Sat/Lane:	339	339	339	0	0	0	721	721	721	986	986	986
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.48	0.00	0.52	0.00	0.00	0.00	0.00	0.51	0.49	0.23	0.77	0.00
Final Sat.:	164	0	175	0	0	0	0	365	356	228	758	0
Capacity Analysis Module:												
Vol/Sat:	0.47	0.00	0.47	0.00	0.00	0.00	0.00	0.42	0.42	0.68	0.68	0.00
Crit Moves:			tttt			****			tttt	tttt		
Level Of Service Module:												
Delay/Veh:	5.9	0.0	5.9	0.0	0.0	0.0	0.0	4.9	4.9	13.3	13.3	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	5.9	0.0	5.9	0.0	0.0	0.0	0.0	4.9	4.9	13.3	13.3	0.0
LOS by Move:	B	*	B	*	*	*	*	A	A	C	C	*

Beaverton Transportation System Plan
2015 ENHANCED Traffic Conditions MITIGATION
PM Peak Hour (phf=0.95 - 1.0)

Level Of Service Computation Report
1994 HCM Operations Method (Base Volume Alternative)

Intersection #224 Murray Boulevard/Brockman Road

Cycle (sec):	120			Critical Vol./Cap. (X):			0.891						
Loss Time (sec):	12 (Y+R = 4 sec)			Average Delay (sec/veh)			23.8						
Optimal Cycle:	115			Level Of Service:			C						

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0	1	1	0	1	0	1	1	0	1	0	0	1	0	1	0	0
Volume Module:																		
Base Vol:	106	1229	69	96	1496	75	36	204	81	115	440	37
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	106	1229	69	96	1496	75	36	204	81	115	440	37
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	112	1294	73	101	1575	79	38	215	85	121	463	39
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	112	1294	73	101	1575	79	38	215	85	121	463	39
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.05	1.05	1.00	1.05	1.05	1.00	1.00	1.00	1.00	1.00	1.00
Final vol.:	112	1358	76	101	1653	83	38	215	85	121	463	39
Saturation Flow Module:																		
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.93	0.97	0 97	0.94	0.98	0.98	0.11	0.92	0.92	0.25	0.97	0.97
Lanes:	1.00	1.89	0.11	1.00	1.90	0.10	1.00	0.72	0.28	1.00	0.92	0.08
Final Sat.:	1770	3493	195	1787	3547	178	201	1257	497	484	1701	143
Capacity Analysis Module:																		
Vol/Sat:	0.06	0.39	0.39	0.06	0.47	0.47	0.19	0.17	0.17	0.25	0.27	0.27
Crit Moves:	****				****						****	
Green/Cycle:	0.07	0.52	0.52	0.08	0.52	0.52	0,31	0.31	0.31	0.31	0.31	0.31
Volume/Cap:	0.89	0.75	0.75	0.75	0.89	0.89	0.62	0.56	0.56	0.82	0.89	0.89
Level Of Service Module:																		
Delay/Veh:	69.3	15.9	15.9	48.6	20.5	20.5	34.5	23.6	23.6	44.1	37.2	37.2
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	69.3	15.9	15.9	48.6	20.5	20.5	34.5	23.6	23.6	44.1	37.2	37.2
Queue:	5	36	3	4	52	4	1	6	3	5	17	2

Beaverton Transportation System Plan
2015 ENHANCED Traffic Conditions MITIGATION
PM Peak Hour (phf=0.95 - 1.0)

Level Of Service Computation Report
1994 HCM Operations Method (Base Volume Alternative)

Intersection #225 Murray Boulevard/Maverick Terrace

Cycle (sec):	90			Critical Vol./Cap. (X):			0.581						
Loss Time (sec):	12 (Y+R = 4 sec)			Average Delay (sec/veh):			1.9						
Optimal Cycle:	46			Level Of Service:			A						

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Prot+Permit			Prot+Permit			Split Phase			Split Phase		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	0	1	1	0	1	0	2	0	0	0	0	0	0	0	0	1	1	0	0
Volume Module:																		
Base Vol:	0	1284	12	35	1690	0	0	0	0	7	0	10
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	1284	12	35	1690	0	0	0	0			
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	0	1352	13	37	1779	0	0	0	0	7	0	11
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	1352	13	37	1779	0	0	0	0	7	0	11
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.05	1.05	1.00	1.05	1.00	1.00	1.00	1.00			
Final Vol.:	0	1419	13	37	1868	0	0	0	0			
Saturation Flow Module:																		
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	0.14	1.00	1.00	1.00	1.00	1.00	0.80	1.00	0.80
Lanes:	0.00	1.98	0.02	1.00	2.00	0.00	0.00	0.00	0.00	0.39	0.00	0.61
Final Sat.:	0	3766	34	275	3800	0	0	0	0	594	0	933
Capacity Analysis Module:																		
Vol/Sat:	0.00	0.38	0.38	0.13	0.49	0.00	0.00	0.00	0.00	0.01	0.00	0.01
Crit Moves:	****				****						****	
Green/Cycle:	0.00	0.80	0.80	0.89	0.85	0.00	0.00	0.00	0.00	0.02	0.00	0.02
Volume/Cap:	0.00	0.47	0.47	0.15	0,58	0,00	0.00	0.00	0.00	0.58	0.00	0.58
Level Of Service Module:																		
Delay/Veh:	0.0	1.9	1.9	1.0	1.5	0.0	0.0	0.0	0.0	44.0	0.0	44.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	1.9	1.9	1.0	1.5	0.0	0.0	0.0	0.0	44.0	0.0	44.0
Queue:	0	11	0	1	14	0	0	0	0	0	0	0

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Beaverton Transportation System Plan
2015 ENHANCED Traffic Conditions MITIGATION
PM Peak Hour (phf=0.95 - 1.0)

Level of Service Computation Report
1994 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #226 155th Avenue/Nora-Beard (Brockman)

Cycle (sec): 1 Critical Vol./Cap. (X): 0.787
Loss Time (sec): 0 Average Delay (sec/veh): 12.2
Optimal Cycle: 0 Level Of Service: C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Lanes:	0	0	1! 0	0	0	1! 0	0	0	1! 0	0	0	1! 0
Volume Module:												
Base Vol:	2	66	39	105	118	10	7	89	3	72	212	157
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	2	66	39	105	118	10	7	89	3	72	212	157
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
PHF Volume:	2	72	43	115	129	11	8	98	3	79	232	172
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	2	72	43	115	129	11	8	98	3	79	232	172
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	2	72	43	115	129	11	8	98	3	79	232	172
Saturation Flow Module:												
Sat/Lane:	325	325	325	562	562	562	534	534	534	614	614	614
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.02	0.61	0.37	0.45	0.51	0.04	0.07	0.90	0.03	0.16	0.48	0.36
Final Sat.:	6	200	119	253	284	24	39	480	15	100	295	219
Capacity Analysis Module:												
Vol/Sat:	0.36	0.36	0.36	0.45	0.45	0.45	0.20	0.20	0.20	0.79	0.79	0.79
Crit Moves:			****						****			****
Level Of Service Module:												
Delay/Veh:	3.9	3.9	3.9	5.6	5.6	5.6	2.2	2.2	2.2	19.9	19.9	19.9
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	3.9	3.9	3.9	5.6	5.6	5.6	2.2	2.2	2.2	19.9	19.9	19.9
LOS by Move:	A	A	A	B	B	B	A	A	A	C	C	C

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Beaverton Transportation System Plan
2015 ENHANCED Traffic Conditions MITIGATION
PM Peak Hour (phf=0.95 - 1.0)

Level Of Service Computation Report
1994 HCM Operations Method (Base Volume Alternative)

Intersection #227 Brockman Road/125th Avenue

Cycle (sec): 120 Critical Vol./Cap.(X): 0.869
Loss Time (sec): 16 (Y+R = 4 sec) Average Delay (sec/veh) 27.0
Optimal Cycle: 115 Level Of Service: D

Approach:	North Bound					South Bound					East Bound					West Bound				
Movement:	L	T	-	-	R	L	T	-	-	R	L	T	-	-	R	L	T	-	-	R
Control:	Prot+Permit					Prot+Permit					Prot+Permit					Prot+Permit				
Rights:	Include					Include					Include					Include				
Min. Green:	0	0	0			0	0	0			0	0	0			0	0	0		
Lanes:	1	0	0	1	0	1	0	1	0	1	1	0	0	1	0	1	0	0	1	0
Volume Module:																				
Base Vol:	228	332		63		51	375		246		111	210		123		162	520		92	
Growth Adj:	1.00	1.00		1.00		1.00	1.00		1.00		1.00	1.00		1.00		1.00	1.00		1.00	
Initial Bse:	228	332		63		51	375		246		111	210		123		162	520		92	
User Adj:	1.00	1.00		1.00		1.00	1.00		1.00		1.00	1.00		1.00		1.00	1.00		1.00	
PHF Adj:	0.95	0.95		0.95		0.95	0.95		0.95		0.95	0.95		0.95		0.95	0.95		0.95	
PHF Volume:	240	349		66		54	395		259		117	221		129		171	547		97	
Reduct Vol:	0	0		0		0	0		0		0	0		0		0	0		0	
Reduced Vol:	240	349		66		54	395		259		117	221		129		171	547		97	
PCE Adj:	1.00	1.00		1.00		1.00	1.00		1.00		1.00	1.00		1.00		1.00	1.00		1.00	
MLF Adj:	1.00	1.00		1.00		1.00	1.00		1.00		1.00	1.00		1.00		1.00	1.00		1.00	
Final Vol.:	240	349		66		54	395		259		117	221		129		171	547		97	
Saturation Flow Module:																				
Sat/Lane:	1900	1900		1900		1900	1900		1900		1900	1900		1900		1900	1900		1900	
Adjustment:	0.42	0.97		0.97		0.27	1.00		0.85		0.26	0.93		0.93		0.41	0.98		0.98	
Lanes:	1.00	0.84		0.16		1.00	1.00		1.00		1.00	0.63		0.37		1.00	0.85		0.15	
Final Sat.:	793	1550		293		514	1900		1615		499	1117		652		788	1582		280	
Capacity Analysis Module:																				
Vol/Sat:	0.30	0.23		0.23		0.11	0.21		0.16		0.23	0.20		0.20		0.22	0.35		0.35	
Crit Moves:	****						****				****						****			
Green/Cycle:	0.43	0.35		0.35		0.29	0.24		0.24		0.40	0.32		0.32		0.51	0.40		0.40	
Volume/Cap:	0.71	0.65		0.65		0.37	0.87		0.67		0.59	0.62		0.62		0.43	0.87		0.87	
Level Of Service Module:																				
Delay/Veh:	22.1	22.9		22.9		22.2	39.8		29.8		22.2	23.8		23.8		12.3	29.2		29.2	
User DelAdj:	1.00	1.00		1.00		1.00	1.00		1.00		1.00	1.00		1.00		1.00	1.00		1.00	
AdjDel/Veh:	22.1	22.9		22.9		22.2	39.8		29.8		22.2	23.8		23.8		12.3	29.2		29.2	
Queue:	9	10		2		2	15		8		5	7		4		6	19		4	

Beaverton Transportation System Plan
2015 ENHANCED Traffic Conditions MITIGATION
PM Peak Hour (phf=0.95 - 1.0)

Level Of Service Computation Report
1994 HCM Operations Method (Base Volume Alternative)

Intersection #229 Hall Boulevard/Greenway

Cycle (sec): 120 Critical Vol./Cap. (X): 0.974
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 26.0
Optimal Cycle: 180 Level Of Service: D

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permit+Prot			Permit+Prot		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0	0 1	0	0	1! 0	0	1	0 1	1	0	
Volume Module:												
Base Vol:	147	1	282	6	46	4	3	643	395	641	1305	52
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	147	1	282	6	46	4	3	643	395	641	1305	52
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	155	1	297	6	48	4	3	677	416	675	1374	55
Reduct Vol	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vo	155	1	297	6	48	4	3	677	416	675	1374	55
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.05	1.05	1.00	1.05	1.05
Final Vol.	155	1	297	6	48	4	3	711	437	675	1442	57
Saturation F	ow Module:											
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment	0.78	0.84	0.84	0.77	0.77	0.77	0.22	0.93	0.93	0.58	0.98	0.98
Lanes:	1.00	0.01	0.99	0.10	0.83	0.07	1.00	1.24	0.76	1.00	1.92	0.08
Final Sat.:	1486	5	1594	152	1218	101	412	2190	1346	1098	3583	142
Capacity Analysis Module:												
Vol/Sat:	0.10	0.19	0.19	0.04	0.04	0.04	0.01	0.32	0.32	0.61	0.40	0.40
Crit Moves:		****								****		
Green/Cycle:	0.19	0.19	0.19	0.19	0.19	0.19	0.38	0.33	0.33	0.76	0.71	0.71
Volume/Cap:	0.55	0.99	0.99	0.21	0.21	0.21	0.02	0.99	0.99	0.81	0.57	0.57
Level Of Service Module:												
Delay/Veh:	30.3	67.9	67.9	26.6	26.6	26.6	23.6	43.5	43.5	21.7	5.7	5.7
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	30.3	67.9	67.9	26.6	26.6	26.6	23.6	43.5	43.5	21.7	5.7	5.7
Queue:	5	0	14	0	1	0	0	30	19	23	24	1

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Beaverton Transportation System Plan
2015 ENHANCED Traffic Conditions MITIGATION
PM Peak Hour (phf=0.95 - 1.0)

Level Of Service Computation Report
1994 HCM Operations Method (Base Volume Alternative)

Intersection #230 Hall Boulevard/Nimbus Avenue

Cycle (sec): 120 Critical Vol./Cap. (X): 0.946
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 35.3
Optimal Cycle: 153 Level Of Service: D

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Prot+Permit			Prot+Permit			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0	0 1	0	1	0 0	1	0	1 1	0	2	0 1
Volume Module:												
Base Vol:	448	62	341	235	109	158	33	709	196	242	1309	100
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	448	62	341	235	109	158	33	709	196	242	1309	100
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	472	65	359	247	115	166	35	746	206	255	1378	105
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	472	65	359	247	115	166	35	746	206	255	1378	105
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.05	1.05	1.00	1.05	1.00
Final Vol.:	472	65	359	247	115	166	35	784	217	255	1447	105
Saturation F	ow Module:											
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.61	0.86	0.86	0.53	0.88	0.88	0.93	0.95	0.95	0.94	0.99	0.84
Lanes:	1.00	0.15	0.85	1.00	0.41	0.59	1.00	1.57	0.43	1.00	2.00	1.00
Final Sat.:	1167	251	1386	1016	687	992	1770	2830	783	1787	3762	1599
Capacity Analysis Module:												
Vol/Sat:	0.40	0.26	0.26	0.24	0.17	0.17	0.02	0.28	0.28	0.14	0.38	0.07
Crit Moves:	****				****			****		****		
Green/Cycle:	0.48	0.30	0.30	0.34	0.18	0.18	0.02	0.29	0.29	0.15	0.42	0.42
Volume/Cap:	0.84	0.88	0.88	0.72	0.95	0.95	0.91	0.95	0.95	0.95	0.91	0.16
Level Of Service Module:												
Delay/Veh:	27.0	37.5	37.5	24.7	59.1	59.1	114.5	38.7	38.7	61.8	27.1	13.9
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	27.0	37.5	37.5	24.7	59.1	59.1	114.5	38.7	38.7	61.8	27.1	13.9
Queue:	19	3	13	10	6	8	2	30	10	11	49	2

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Beaverton Transportation System Plan
2015 ENHANCED Traffic Conditions MITIGATION
PM Peak Hour (phf-0.95 - 1.0)

Level Of Service Computation Report
1994 HCM Operations Method (Base Volume Alternative)

Intersection #232 Scholls Ferry Road/Hall Boulevard

Cycle (sec): 120 Critical Vol./Cap. (X): 0.975
Loss Time (sec): 16 (Y+R = 4 sec) Average Delay (sec/veh): 38.7
Optimal Cycle: 180 Level Of Service: D

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Ovl			Ovl			Ovl			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	2	0	2	0	1	2	0	2	0	1	2	0	2	0	1	2	0	2	0	1
Volume Module:																				
Base Vol:	540	673	406	354	639	35	226	1024	215	624	815	291								
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00								
Initial Bse:	540	673	406	354	639	35	226	1024	215	624	815	291								
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00								
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95								
PHF Volume:	568	708	427	373	673	37	238	1078	226	657	858	306								
Reduct Vol	0	0	0	0	0	0	0	0	0	0	0	0								
Reduced Vo	568	708	427	373	673	37	238	1078	226	657	858	306								
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00								
MLF Adj:	1.03	1.05	1.00	1.03	1.05	1.00	1.03	1.05	1.00	1.03	1.05	1.00								
Final Vol.	585	744	427	384	706	37	245	1132	226	677	901	306								
Saturation F	ow Module:																			
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900								
Adjustment	0.94	0.99	0.84	0.93	0.98	0.83	0.94	0.99	0.84	0.93	0.98	0.83								
Lanes:	2.00	2.00	1.00	2.00	2.00	1.00	2.00	2.00	1.00	2.00	2.00	1.00								
Final Sat.:	3574	3762	1599	3539	3725	1583	3574	3762	1599	3539	3725	1583								
Capacity Ana	ysis Module:																			
Vol/Sat:	0.16	0.20	0.27	0.11	0.19	0.02	0.07	0.30	0.14	0.19	0.24	0.19								
Crit Moves:	****				****			****		****										
Green/Cycle:	0.17	0.26	0.45	0.10	0.19	0.31	0.11	0.31	0.48	0.20	0.39	0.39								
Volume/Cap:	0.98	0.77	0.59	1.04	0.98	0.08	0.62	0.98	0.30	0.98	0.62	0.49								
Level Of Ser	ice Module:																			
Delay/Veh:	54.9	29.3	16.7	81.6	51.5	19.1	34.9	42.0	12.4	51.9	19.4	18.2								
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00								
AdjDel/Veh:	54.9	29.3	16.7	81.6	51.5	19.1	34.9	42.0	12.4	51.9	19.4	18.2								
Queue:	24	24	11	19	29	1	8	44	5	20	24	8								

Beaverton Transportation System Plan
2015 ENHANCED Traffic Conditions MITIGATION
PM Peak Hour (phf=0.95 - 1.0)

Level Of Service Computation Report
1994 HCM Operations Method (Base Volume Alternative)

Intersection #236 Scholls Ferry Road/125th Avenue

Cycle (sec): 140 Critical Vol./Cap. (X): 0.992
Loss Time (sec): 16 (Y+R = 4 sec) Average Delay (sec/veh): 36.8
Optimal Cycle: 180 Level Of Service: D

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Ovl			Ovl			Include			Ovl		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0	1	0	1	1	0	1	0	1	1	0	2	1	0	1	0	3	0	1
Volume Module:																				
Base Vol:	304	213	143	135	173	404	242	1248	92	120	2350	199								
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00								
Initial Bse:	304	213	143	135	173	404	242	1248	92	120	2350	199								
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00								
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00								
PHF Volume:	304	213	143	135	173	404	242	1248	92	120	2350	199								
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0								
Reduced Vol:	304	213	143	135	173	404	242	1248	92	120	2350	199								
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00								
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.10	1.10	1.00	1.10	1.00								
Final Vol.:	304	213	143	135	173	404	242	1373	101	120	2585	199								
Saturation Flow Module:																				
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900								
Adjustment:	0.94	0.99	0.84	0.95	1.00	0.85	0.93	0.97	0.97	0.94	0.99	0.84								
Lanes:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.79	0.21	1.00	3.00	1.00								
Final Sat.:	1787	1881	1599	1805	1900	1615	1770	5153	379	1787	5644	1599								
Capacity Analysis Module:																				
Vol/Sat:	0.17	0.11	0.09	0.07	0.09	0.25	0.14	0.27	0.27	0.07	0.46	0.12								
Crit Moves:	****					****	****				****									
Green/Cycle:	0.17	0.17	0.29	0.11	0.11	0.25	0.14	0.48	0.48	0.12	0.46	0.58								
Volume/Cap:	0.99	0.66	0.31	0.66	0.80	0.99	0.99	0.56	0.56	0.56	0.99	0.22								
Level Of Service Module:																				
Delay/Veh:	74.7	38.3	24.9	43.5	51.4	65.9	80.9	16.9	16.9	39.8	36.1	9.3								
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00								
AdjDel/Veh:	74.7	38.3	24.9	43.5	51.4	65.9	80.9	16.9	16.9	39.8	36.1	9.3								
Queue:	16	8	4	5	8	20	13	38	3	5	111	4								

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Beaverton Transportation System Plan
2015 ENHANCED Traffic Conditions MITIGATION
PM Peak Hour (phf=0.95 - 1.0)

Level Of Service Computation Report
1994 HCM Operations Method (Base Volume Alternative)

Intersection #237 Scholls Ferry Road/Nimbus Avenue

Cycle (sec): 120 Critical Vol./Cap. (X): 0.941
Loss Time (sec): 16 (Y+R = 4 sec) Average Delay (sec/veh): 31.2
Optimal Cycle: 154 Level Of Service: E

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Ovl			Ovl			Ovl			Ovl		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0 1	0 1	2	0 0	1 1	1	0 3	0 1	1	0 3	0 1
Volume Module:												
Base Vol:	143	34	231	628	44	575	120	1496	76	77	2083	90
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	143	34	231	628	44	575	120	1496	76	77	2083	90
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
PHF Volume:	145	35	235	639	45	585	122	1522	77	78	2343	92
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	145	35	235	639	45	585	122	1522	77	78	2343	92
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.03	1.05	1.05	1.00	1.10	1.00	1.00	1.10	1.00
Final Vol.:	145	35	235	658	47	614	122	1674	77	78	2577	92
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.94	0.99	0.84	0.94	0.85	0.85	0.93	0.98	0.83	0.93	0.98	0.83
Lanes:	1.00	1.00	1.00	2.00	0.14	1.86	1.00	3.00	1.00	1.00	3.00	1.00
Final Sat.:	1787	1881	1599	3574	230	3096	1770	5588	1583	1770	5588	1583
Capacity Analysis Module:												
Vol/Sat:	0.08	0.02	0.15	0.18	0.20	0.20	0.07	0.30	0.05	0.04	0.46	0.06
Crit Moves:	****				****		****				****	
Green/Cycle:	0.09	0.13	0.21	0.17	0.22	0.29	0.07	0.49	0.58	0.07	0.49	0.66
Volume/Cap:	0.94	0.14	0.71	1.09	0.94	0.70	0.94	0.61	0.08	0.61	0.94	0.09
Level Of Service Module:												
Delay/Veh:	74.9	29.6	33.3	90.9	45.0	26.2	79.7	14.6	7.3	40.6	24.2	4.8
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	74.9	29.6	33.3	90.9	45.0	26.2	79.7	14.6	7.3	40.6	24.2	4.8
Queue:	7	1	8	35	3	19	6	41	1	3	87	1

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Beaverton Transportation System Plan
2015 ENHANCED Traffic Conditions MITIGATION
PM Peak Hour (phf=0.95 - 1.0)

Level Of Service Computation Report
1994 HCM Operations Method (Base Volume Alternative)

Intersection #238 Murray Boulevard/Old Scholls Ferry Road

Cycle (sec): 120 Critical Vol./Cap. (X): 0.948
Loss Time (sec): 16 (Y+R = 4 sec) Average Delay (sec/veh): 34.3
Optimal Cycle: 159 Level Of Service: D

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Ovl			Include			Ovl		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0 1	1 0	2	0 1	0 1	2	0 1	1 0	1	0 2	0 1
Volume Module:												
Base Vol:	31	559	32	622	509	571	385	199	23	56	1151	739
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	31	559	32	622	509	571	385	399	23	56	1151	739
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	33	588	34	655	536	601	405	415	24	59	1212	778
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	33	588	34	655	536	601	405	415	24	59	1212	778
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.05	1.05	1.03	1.00	1.00	1.03	1.05	1.05	1.00	1.05	1.00
Final Vol.:	33	618	35	674	536	601	417	435	25	59	1272	778
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.99	0.99	0.92	0.97	0.83	0.93	0.97	0.97	0.94	0.99	0.84
Lanes:	1.00	1.89	0.11	2.00	1.00	1.00	2.00	1.89	0.11	1.00	2.00	1.00
Final Sat.:	1805	3560	202	3505	1845	1568	3539	3488	200	1787	3762	1599
Capacity Analysis Module:												
Vol/Sat:	0.02	0.17	0.17	0.19	0.29	0.38	0.12	0.12	0.12	0.03	0.34	0.49
Crit Moves:		****		****			****				****	
Green/Cycle:	0.02	0.18	0.18	0.20	0.37	0.49	0.12	0.38	0.38	0.10	0.36	0.56
Volume/Cap:	1.04	0.95	0.95	0.95	0.79	0.78	0.95	0.33	0.33	0.33	0.95	0.87
Level Of Service Module:												
Delay/Veh:	181.7	47.7	47.7	46.6	26.1	19.7	55.6	17.1	17.1	32.8	34.6	21.2
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	181.7	47.7	47.7	46.6	26.1	19.7	55.6	17.1	17.1	32.8	34.6	21.2
Queue:	3	24	2	26	17	17	17	10	1	2	46	24

Beaverton Transportation System Plan
2015 ENHANCED Traffic Conditions MITIGATION
PM Peak Hour (phf=0.95 - 1.0)

Level Of Service Computation Report
1994 HCM Operations Method (Base Volume Alternative)

Intersection #239 Old Scholls Ferry Road/Davies Road

Cycle (sec):	120	Critical Vol./Cap. (X):	0.892
Loss Time (sec):	12 (Y+R = 4 sec)	Average Delay (sec/veh)	18.0
Optimal Cycle:	116	Level Of Service:	C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Protected			Protected		
Rights:	Ovl			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0 1	0 1	1	0 0	1 0	1	0 1	1 0	1	0 1	1 0
Volume Module:												
Base Vol:	127	21	367	66	20	31	24	1128	189	556	1865	183
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	127	21	367	66	20	31	24	1128	189	556	1865	183
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	134	22	386	69	21	33	25	1187	199	585	1963	193
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	134	22	386	69	21	33	25	1187	199	585	1963	193
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.05	1.05	1.00	1.05	1.05
Final Vol.:	134	22	386	69	21	33	25	1247	209	585	2061	202
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.80	1.00	0.85	0.88	0.91	0.91	0.95	0.98	0.98	0.95	0.99	0.99
Lanes:	1.00	1.00	1.00	1.00	0.39	0.61	1.00	1.71	0.29	1.00	1.82	0.18
Final Sat.:	1520	1900	1615	1672	672	1057	1805	3189	535	1805	3426	336
Capacity Analysis Module:												
Vol/Sat:	0.09	0.01	0.24	0.04	0.03	0.03	0.01	0.39	0.39	0.32	0.60	0.60
Crit Moves:	****							****		****		
Green/Cycle:	0.10	0.10	0.46	0.10	0.10	0.10	0.02	0.44	0.44	0.36	0.78	0.78
Volume/Cap:	0.89	0.17	0.52	0.42	0.32	0.32	0.77	0.89	0.89	0.89	0.77	0.77
Level Of Service Module:												
Delay/Veh:	64.7	31.9	15.3	33.9	32.9	32.9	81.3	24.9	24.9	33.6	5.5	5.5
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	64.7	31.9	15.3	33.9	32.9	32.9	81.3	24.9	24.9	33.6	5.5	5.5
Queue:	6	1	9	2	1	1	1	41	8	21	38	4

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Beaverton Transportation System Plan
2015 ENHANCED Traffic Conditions MITIGATION
PM Peak Hour (phf=0.95 - 1.0)

Level Of Service Computation Report
1994 HCM Operations Method (Base Volume Alternative)

Intersection #243 Scholls Ferry/Old Scholls Ferry (west)

Cycle (sec):	120	Critical Vol./Cap. (X):	0.910
Loss Time (sec):	12 (Y+R = 4 sec)	Average Delay (sec/veh):	24.2
Optimal Cycle:	126	Level Of Service:	C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	0 0	0 0	1	0 0	0 1	1	0 0	0 0	0	1 0	1 0
Volume Module:												
Base Vol:	0	0	0	306	0	346	131	460	0	0	501	793
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	306	0	346	131	460	0	0	501	793
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	0	0	0	322	0	364	138	484	0	0	527	835
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	322	0	364	138	484	0	0	527	835
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	0	0	0	322	0	364	138	484	0	0	527	835
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	0.95	1.00	0.85	0.95	1.00	1.00	1.00	1.00	0.85
Lanes:	0.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00
Final Sat.:	0	0	0	1805	0	1615	1805	1900	0	0	1900	1615
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.18	0.00	0.23	0.08	0.25	0.00	0.00	0.28	0.52
Crit Moves:						****	****					****
Green/Cycle:	0.00	0.00	0.00	0.25	0.00	0.25	0.08	0.65	0.00	0.00	0.57	0.57
Volume/Cap:	0.00	0.00	0.00	0.72	0.00	0.91	0.91	0.39	0.00	0.00	0.49	0.91
Level Of Service Module:												
Delay/Veh:	0.0	0.0	0.0	30.5	0.0	45.6	68.5	6.4	0.0	0.0	10.3	24.2
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	30.5	0.0	45.6	68.5	6.4	0.0	0.0	10.3	24.2
Queue:	0	0	0	10	0	14	6	8	0	0	11	28

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corrected table

Beaverton Transportation System Plan
2015 ENHANCED Traffic Conditions MITIGATION
PM Peak Hour (phf=0.95 - 1.0)

Level Of Service Computation Report
1994 HCM Operations Method (Base Volume Alternative)

Intersection #239 Old Scholls Ferry Road/Davies Road

Cycle (sec): 140 Critical Vol./Cap. (X): 0.999
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 26.5
Optimal Cycle: 180 Level Of Service: D

Approach:	North Bound						South Bound						East Bound						West Bound					
Movement:	L	-	T	-	R		L	-	T	-	R		L	-	T	-	R		L	-	T	-	R	
Control:	Permitted						Permitted						Protected						Protected					
Rights:	Ovl						Include						Include						Include					
Min. Green:	0	0	0	0	0		0	0	0	0	0		0	0	0	0	*0*		0	0	0	0	0	
Lanes:	1	0	1	0	1		1	'	0	0	1	0	1	0	1	1	0		1	0	1	1	0	
Volume Module:																								
Base Vol:	80	21	579				66	20	31				24	1128	124				840	1865	183			
Growth Adj:	1.00	1.00	1.00				1.00	1.00	1.00				1.00	1.00	1.00				1.00	1.00	1.00			
Initial Bse:	80	21	579				66	20	31				24	1128	124				840	1865	183			
User Adj:	1.00	1.00	1.00				1.00	1.00	1.00				1.00	1.00	1.00				1.00	1.00	1.00			
PHF Adj:	0.95	0.95	0.95				0.95	0.95	0.95				0.95	0.95	0.95				0.95	0.95	0.95			
PHF Volume:	84	22	609				69	21	33				25	1187	131				884	1963	193			
Reduct Vol:	0	0	0				0	0	0				0	0	0				0	0	0			
Reduced Vol:	84	22	609				69	21	33				25	1187	131				884	1963	193			
PCE Adj:	1.00	1.00	1.00				1.00	1.00	1.00				1.00	1.00	1.00				1.00	1.00	1.00			
MLF Adj:	1.00	1.00	1.00				1.00	1.00	1.00				1.00	1.05	1.05				1.00	1.05	1.05			
Final Vol.:	84	22	609				69	21	33				25	1247	137				884	2061	202			
Saturation Flow Module:																								
Sat/Lane:	1900	1900	1900				1900	1900	1900				1900	1900	1900				1900	1900	1900			
Adjustment:	0.79	1.00	0.85				0.88	0.91	0.91				0.95	0.99	0.99				0.95	0.99	0.99			
Lanes:	1.00	1.00	1.00				1.00	0.39	0.61				1.00	1.80	0.20				1.00	1.82	0.18			
Final Sat.:	1501	1900	1615				1672	672	1057				1805	3390	372				1805	3426	336			
Capacity Analysis Module:																								
Vol/Sat:	0.06	0.01	0.38				0.04	0.03	0.03				0.01	0.37	0.37				0.49	0.60	0.60			
Crit Moves:	****													****					****					
Green/Cycle:	0.06	0.06	0.55				0.06	0.06	0.06				0.02	0.37	0.37				0.49	0.84	0.84			
Volume/Cap:	1.00	0.21	0.69				0.74	0.56	0.56				0.72	1.00	1.00				1.00	0.72	0.72			
Level Of Service Module:																								
Delay/Veh:	117.9	40.9	16.6				58.8	46.7	46.7				75.8	47.0	47.0				46.1	3.5	3.5			
User DelAdj:	1.00	1.00	1.00				1.00	1.00	1.00				1.00	1.00	1.00				1.00	1.00	1.00			
AdjDel/Veh:	117.9	40.9	16.6				58.8	46.7	46.7				75.8	47.0	47.0				46.1	3.5	3.5			
Queue:	6	1	18				3	1	1				1	57	8				42	33	4			

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Beaverton Transportation System Plan
2015 ENHANCED Traffic Conditions MITIGATION
PM Peak Hour (phf=0.95 - 1.0)

Level Of Service Computation Report
1994 HCM Operations Method (Base Volume Alternative)

Intersection #243 Scholls Ferry/Old Scholls Ferry (west)

Cycle (sec): 120 Critical Vol./Cap. (X): 0.654
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 10.9
Optimal Cycle: 55 Level Of Service: B

Approach:	North Bound						South Bound						East Bound						West Bound					
Movement:	L	-	T	-	R		L	-	T	-	R		L	-	T	-	R		L	-	T	-	R	
Control:	Split Phase						Split Phase						Protected						Protected					
Rights:	Include						Include						Include						Include					
Min. Green:	0	0	0	0	0		0	0	0	0	0		*0*	*0*	0	0	0		0	0	0	0	0	
Lanes:	0	0	1	!	0	0	0	0	0	0	0	0	0	0	0	1	0		1	0	0	1	0	
Volume Module:																								
Base Vol:	137	0	29				0	0	0				0	373	296				66	769	0			
Growth Adj:	1.00	1.00	1.00				1.00	1.00	1.00				1.00	1.00	1.00				1.00	1.00	1.00			
Initial Bse:	137	0	29				0	0	0				0	373	296				66	769	0			
User Adj:	1.00	1.00	1.00				1.00	1.00	1.00				1.00	1.00	1.00				1.00	1.00	1.00			
PHF Adj:	0.95	0.95	0.95				0.95	0.95	0.95				0.95	0.95	0.95				0.95	0.95	0.95			
PHF Volume:	144	0	31				0	0	0				0	393	312				69	809	0			
Reduct Vol:	0	0	0				0	0	0				0	0	0				0	0	0			
Reduced Vol:	144	0	31				0	0	0				0	393	312				69	809	0			
PCE Adj:	1.00	1.00	1.00				1.00	1.00	1.00				1.00	1.00	1.00				1.00	1.00	1.00			
MLF Adj:	1.00	1.00	1.00				1.00	1.00	1.00				1.00	1.00	1.00				1.00	1.00	1.00			
Final Vol.:	144	0	31				0	0	0				0	393	312				69	809	0			
Saturation Flow Module:																								
Sat/Lane:	1900	1900	1900				1900	1900	1900				1900	1900	1900				1900	1900	1900			
Adjustment:	0.84	1.00	0.84				1.00	1.00	1.00				1.00	0.84	0.84				0.95	1.00	1.00			
Lanes:	0.82	0.00	0.18				0.00	0.00	0.00				0.00	0.56	0.44				1.00	1.00	0.00			
Final Sat.:	1321	0	284				0	0	0				0	890	706				1805	1900	0			
Capacity Analysis Module:																								
Vol/Sat:	0.11	0.00	0.11				0.00	0.00	0.00				0.00	0.44	0.44				0.04	0.43	0.00			
Crit Moves:	****													tttt					tttt					
Green/Cycle:	0.17	0.00	0.17				0.00	0.00	0.00				0.00	0.67	0.67				0.06	0.73	0.00			
Volume/Cap:	0.65	0.00	0.65				0.00	0.00	0.00				0.00	0.65	0.65				0.65	0.58	0.00			
Level Of Service Module:																								
Delay/Veh:	34.1	0.0	34.1				0.0	0.0	0.0				0.0	8.4	8.4				44.8	5.3	0.0			
User DelAdj:	1.00	1.00	1.00				1.00	1.00	1.00				1.00	1.00	1.00				1.00	1.00	1.00			
AdjDel/Veh:	34.1	0.0	34.1				0.0	0.0	0.0				0.0	8.4	8.4				44.8	5.3	0.0			
Queue:	5	0	1				0	0	0				0	8	6				3	13	0			

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Beaverton Transportation System Plan
2015 ENHANCED Traffic Conditions MITIGATION
PM Peak Hour (phf=0.95 - 1.0)

Level Of Service Computation Report
1994 HCM Operations Method (Base Volume Alternative)

Intersection #244 Scholls Ferry Road/Walnut Street

Cycle (sec): 120 Critical Vol./Cap. (X): 0.935
Loss Time (sec): 16 (Y+R = 4 sec) Average Delay (sec/veh): 30.6
Optimal Cycle: 142 Level Of Service: D

Approach:	North Bound						South Bound						East Bound						West Bound					
Movement:	L	-	T	-	R		L	-	T	-	R		L	-	T	-	R		L	-	T	-	R	
Control:	Permit+Prot						Permit+Prot						Prot+Permit						Prot+Permit					
Rights:	Include						Include						Include'						Include					
Min. Green:	0	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	0	0	0	0	
Lanes:	1	0	0	1	0		1	0	0	1	0		1	0	0	1	0		1	0	0	1	0	
Volume Module:																								
Base Vol:	175	423	31		5	330	123		103	502	153		77	677	5									
Growth Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00									
Initial Bse:	175	423	31		5	330	123		103	502	153		77	677	5									
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00									
PHF Adj:	0.95	0.95	0.95		0.95	0.95	0.95		0.95	0.95	0.95		0.95	0.95	0.95									
PHF Volume:	184	445	33		5	347	129		108	528	161		81	713	5									
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0									
Reduced Vol:	184	445	33		5	347	129		108	528	161		81	713	5									
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00									
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00									
Final Vol.:	184	445	33		5	347	129		108	528	161		81	713	5									
Saturation Flow Module:																								
Sat/Lane:	1900	1900	1900		1900	1900	1900		1900	1900	1900		1900	1900	1900									
Adjustment:	0.41	0.99	0.99		0.24	0.96	0.96		0.18	0.97	0.97		0.18	1.00	1.00									
Lanes:	1.00	0.93	0.07		1.00	0.73	0.27		1.00	0.77	0.23		1.00	0.99	0.01									
Final Sat.:	784	1751	130		457	1330	494		348	1412	431		337	1887	13									
Capacity Analysis Module:																								
Vol/Sat:	0.23	0.25	0.25		0.01	0.26	0.26		0.31	0.37	0.37		0.24	0.38	0.38									
Crit Moves:	****								****					****										
Green/Cycle:	0.44	0.39	0.39		0.33	0.28	0.28		0.52	0.42	0.42		0.46	0.41	0.41									
Volume/Cap:	0.54	0.65	0.65		0.03	0.92	0.92		0.60	0.88	0.88		0.52	0.92	0.92									
Level Of Service Module:																								
Delay/Veh:	29.2	20.9	20.9		27.9	43.2	43.2		20.1	28.9	28.9		18.7	33.8	33.8									
User DelAdj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00									
AdjDel/Veh:	29.2	20.9	20.9		27.9	43.2	43.2		20.1	28.9	28.9		18.7	33.8	33.8									
Queue:	6	13	1		0	14	6		5	18	7		4	26	1									

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Beaverton Transportation System Plan
2015 ENHANCED Traffic Conditions MITIGATION
PM Peak Hour (phf=0.95 - 1.0)

Level Of Service Computation Report
1994 HCM Operations Method (Base Volume Alternative)

Intersection #250 Hall Boulevard/Hwy 217 SB ramps-Cascade Avenue

Cycle (sec): 140 Critical Vol./Cap. (X): 0.991
Loss Time (sec): 16 (Y+R = 4 sec) Average Delay (sec/veh): 39.9
Optimal Cycle: 180 Level Of Service: D

Approach:	North Bound						South Bound						East Bound						West Bound					
Movement:	L	-	T	-	R		L	-	T	-	R		L	-	T	-	R		L	-	T	-	R	
Control:	Split Phase						Split Phase						Protected						Protected					
Rights:	Ovl						Include						Include						Ovl					
Min. Green:	0	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	0	0	0	0	
Lanes:	1	0	1	0	1		1	0	1!	0	0		1	0	1	1	0		1	0	2	0	1	
Volume Module:																								
Base Vol:	80	23	140		435	85	223		201	905	117		113	1321	33									
Growth Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00									
Initial Bse:	80	23	140		435	85	223		201	905	117		113	1321	33									
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00									
PHF Adj:	0.95	0.95	0.95		0.95	0.95	0.95		0.95	0.95	0.95		0.95	0.95	0.95									
PHF Volume:	84	24	147		458	89	235		212	953	123		119	1391	35									
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0									
Reduced Vol:	84	24	147		458	89	235		212	953	123		119	1391	35									
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00									
MLF Adj:	1.00	1.00	1.00		1.05	1.00	1.00		1.00	1.05	1.05		1.00	1.05	1.00									
Final Vol.:	84	24	147		481	89	235		212	1000	129		119	1460	35									
Saturation Flow Module:																								
Sat/Lane:	1900	1900	1900		1900	1900	1900		1900	1900	1900		1900	1900	1900									
Adjustment:	0.93	0.98	0.83		0.92	0.92	0.92		0.93	0.96	0.96		0.94	0.99	0.84									
Lanes:	1.00	1.00	1.00		1.42	0.16	0.42		1.00	1.77	0.23		1.00	2.00	1.00									
Final Sat.:	1770	1863	1583		2498	276	729		1770	3234	417		1787	3762	1599									
Capacity Anaiysis Module:																								
Vol/Sat:	0.05	0.01	0.09		0.19	0.32	0.32		0.12	0.31	0.31		0.07	0.39	0.02									
Crit Moves:	****					****			****					****										
Green/Cycle:	0.05	0.05	0.14		0.33	0.33	0.33		0.12	0.42	0.42		0.09	0.39	0.72									
Volume/Cap:	0.99	0.27	0.67		0.59	0.99	0.99		0.99	0.73	0.73		0.73	0.99	0.03									
Level Of Service Module:																								
Delay/Veh:	114.9	41.9	42.2		26.0	52.6	52.6		84.4	23.2	23.2		50.5	43.5	3.7									
User DelAdj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00									
AdjDel/Veh:	114.9	41.9	42.2		26.0	52.6	52.6		84.4	23.2	23.2		50.5	43.5	3.7									
Queue:	5	1	6		16	6	13		12	33	5		5	65	0									

Beaverton Transportation System Plan
2015 ENHANCED Traffic Conditions MITIGATION
PM Peak Hour (phf=0.95 - 1.0)

Level Of Service Computation Report
1994 HCM Operations Method (Base Volume Alternative)

Intersection #259 Scholls Ferry/Hwy 217 SB ramps

Cycle (sec): 140 Critical Vol./Cap. (X): 0.974
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 37.4
Optimal Cycle: 180 Level Of Service: D

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Protected			Protected		
Rights:	Include			Ovl			Ignore			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	0	0	0	0	1	0	0	1	1	0	2	0	0
Volume Module:														
Base Vol:	0	0	0	117	2	589	0	1296	893	287	1804	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Initial Bse:	0	0	0	117	2	589	0	1296	0	287	1804	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
PHF Volume:	0	0	0	117	2	589	0	1296	0	287	1804	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	117	2	589	0	1296	0	287	1804	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.05	0.00	1.00	1.05	1.00
Final Vol.:	0	0	0	117	2	589	0	1361	0	287	1894	0
Saturation Flow Module:														
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	0.84	0.84	0.84	1.00	0.99	1.00	0.94	0.99	1.00
Lanes:	0.00	0.00	0.00	0.98	0.02	1.00	0.00	2.00	1.00	1.00	2.00	0.00
Final Sat.:	0	0	0	1572	27	1599	0	3762	1900	1787	3762	0
Capacity Analysis Module:														
Vol/Sat:	0.00	0.00	0.00	0.07	0.07	0.37	0.00	0.36	0.00	0.16	0.50	0.00
Crit Moves:						****		****		tttt		
Green/Cycle:	0.00	0.00	0.00	0.38	0.38	0.38	0.00	0.37	0.00	0.16	0.54	0.00
Volume/Cap:	0.00	0.00	0.00	0.20	0.20	0.97	0.00	0.97	0.00	0.97	0.94	0.00
Level Of Service Module:														
Delay/Veh:	0.0	0.0	0.0	18.9	18.9	50.1	0.0	41.6	0.0	71.3	26.4	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	18.9	18.9	50.1	0.0	41.6	0.0	71.3	26.4	0.0
Queue:	0	0	0	3	0	27	0	59	0	15	74	0

Beaverton Transportation System Plan
2015 ENHANCED Traffic Conditions MITIGATION
PM Peak Hour (phf=0.95 - 1.0)

Level Of Service Computation Report
1994 HCM Operations Method (Base Volume Alternative)

Intersection #277 Scholls Ferry/Hwy 217 NB off-ramp

Cycle (sec): 140 Critical Vol./Cap. (X): 1.001
Loss Time (sec): 8 (Y+R = 4 sec) Average Delay (sec/veh): 38.2
Optimal Cycle: 180 Level Of Service: D

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Split Phase			Split Phase		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	0	2	0	0	0	0	2	0	0	0	0	0	0	1	0	0	0	1
Volume Module:														
Base Vol:	0	1410	0	0	1458	0	0	0	0	656	0	769
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	1410	0	0	1458	0	0	0	0	656	0	769
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	0	1484	0	0	1535	0	0	0	0	691	0	809
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	1484	0	0	1535	0	0	0	0	691	0	809
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.05	1.00	1.00	1.05	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	0	1558	0	0	1611	0	0	0	0	691	0	809
Saturation Flow Module:														
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	0.98	1.00	1.00	0.98	1.00	1.00	1.00	1.00	0.93	1.00	0.83
Lanes:	0.00	2.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00	1.00	0.00	1.00
Final Sat.:	0	3725	0	0	3725	0	0	0	0	1770	0	1583
Capacity Analysis Module:														
Vol/Sat:	0.00	0.42	0.00	0.00	0.43	0.00	0.00	0.00	0.00	0.39	0.00	0.51
Crit Moves:					****							****
Green/Cycle:	0.00	0.43	0.00	0.00	0.43	0.00	0.00	0.00	0.00	0.51	0.00	0.51
Volume/Cap:	0.00	0.97	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.76	0.00	1.00
Level Of Service Module:														
Delay/Veh:	0.0	36.5	0.0	0.0	43.0	0.0	0.0	0.0	0.0	20.5	0.0	46.6
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	36.5	0.0	0.0	43.0	0.0	0.0	0.0	0.0	20.5	0.0	46.6
Queue:	0	66	0	0	73	0	0	0	0	22	0	39

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Beaverton Transportation System Plan
2015 ENHANCED Traffic Conditions MITIGATION
PM Peak Hour (phf=0.95 - 1.0)

Level Of Service Computation Report
1994 HCM Operations Method (Base Volume Alternative)

Intersection #278 Scholls Ferry/Hwy 217 NB on-ramp

Cycle (sec):	140	Critical Vol./Cap. (X):	1.073
Loss Time (sec)	12 (Y+R = 4 sec)	Average Delay (sec/veh)	56.2
Optimal Cycle:	180	Level of Service:	E

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Split Phase			Split Phase		
Rights:	Include			Ignore			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0 2	0 0	0	0 2	0 1	0	0 0	0 0	1	0 2	0 1
Volume Module:												
Base Vol:	803	1327	0	0	1074	928	0	0	0	311	803	345
Growth Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	803	1327	0	0	1074	0	0	0	0	311	803	345
User Adj:	1.00	1.00	*1.00*	1.00	1.00	0.00	1.00	*1.00*	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	803	1327	0	0	1074	0	0	0	0	311	803	345
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	803	1327	0	0	1074	0	0	0	0	311	803	345
PCE Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.05	1.00	1.00	1.05	0.00	1.00	1.00	1.00	1.00	1.05	1.00
Final Vol.:	803	1393	0	0	1128	0	0	0	0	311	843	345
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.93	0.98	1 00	1.00	0.98	1.00	1.00	1.00	1.00	0.84	0.99	0.84
Lanes:	1.00	2.00	0.00	0.00	2.00	1.00	0.00	0.00	0.00	1.00	2.00	1.00
Final Sat.:	1770	3725	0	0	3725	1900	0	0	0	1599	3762	1599
Capacity Analysis Module:												
Vol/Sat:	0.45	0.37	0.00	0.00	0.30	0.00	0.00	0.00	0.00	0.19	0.22	0.22
Crit Moves:	****				****						****	
Green/Cycle:	0.42	0.71	0.00	0.00	0.28	0.00	0.00	0.00	0.00	0.21	0.21	0.21
Volume/Cap:	1.07	0.53	0.00	0.00	1.07	0.00	0.00	0.00	0.00	0.93	1.07	1.03
Level Of Service Module:												
Delay/Veh:	73.9	6.4	0.0	0.0	76.1	0.0	0.0	0.0	0.0	58.1	83.0	83.3
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	73.9	6.4	0.0	0.0	76.1	0.0	0.0	0.0	0.0	58.1	83.0	83.3
Queue:	46	26	0	0	62	0	0	0	0	15	47	19

Traffix 6.8.1511 (c) 1995 Dowling Assoc. Licensed to DKS Associates, Portland

APPENDIX G
COMPUTER SIMULATION PHOTOGRAPHS



FIGURE A-1
ORE 217 at SW Walker Road - Existing



FIGURE A-2
ORE 217 at SW Walker Road - Future

FIGURE A-3
SW 173rd Ave. / SW 174th Ave. at US 26 - Existing

FIGURE A-4
SW 173rd Ave. / SW 174th Ave. at US 26 - Future

FIGURE A-5
SW 170th Ave. North of SW Bany Rd. - Existing

FIGURE A-6
SW 170th Ave. North of SW Bany Ave. - Future

FIGURE A-7
SW 170th Ave. North of SW Farmington Rd. - Existing

FIGURE A-8
SW 170th Ave. North of SW Farmington Rd. - Future

FIGURE A-9
SW TV Hwy. West of SW 170th Ave. - Existing

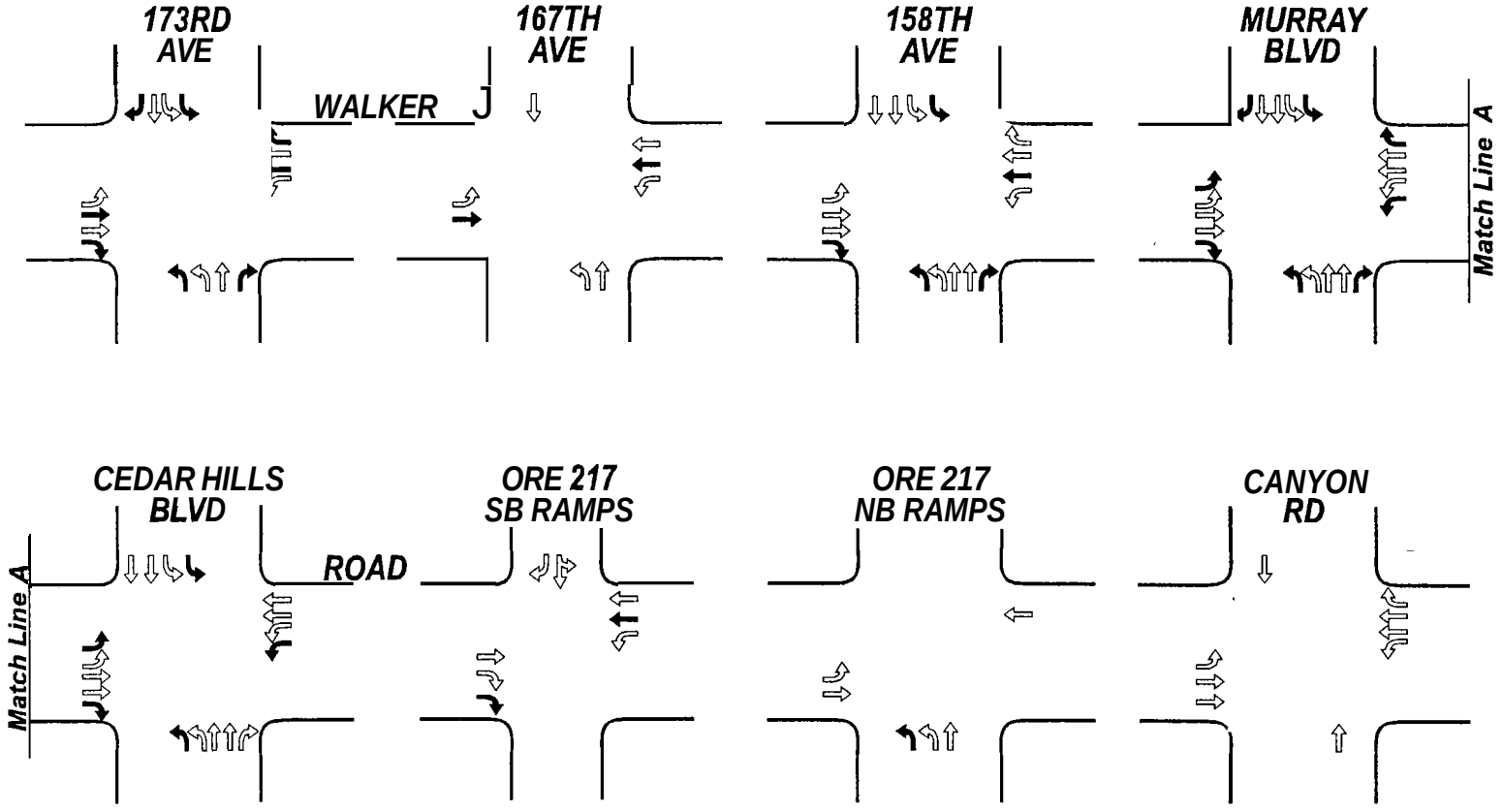
FIGURE A-10
SW TV Hwy. West of SW 170th Ave. - Future

FIGURE A-11
SW Scholls Ferry Rd. East of SW 125th Ave. - Existing

FIGURE A-12
SW Scholls Ferry Rd. East of SW 125th Ave. - Future

APPENDIX H

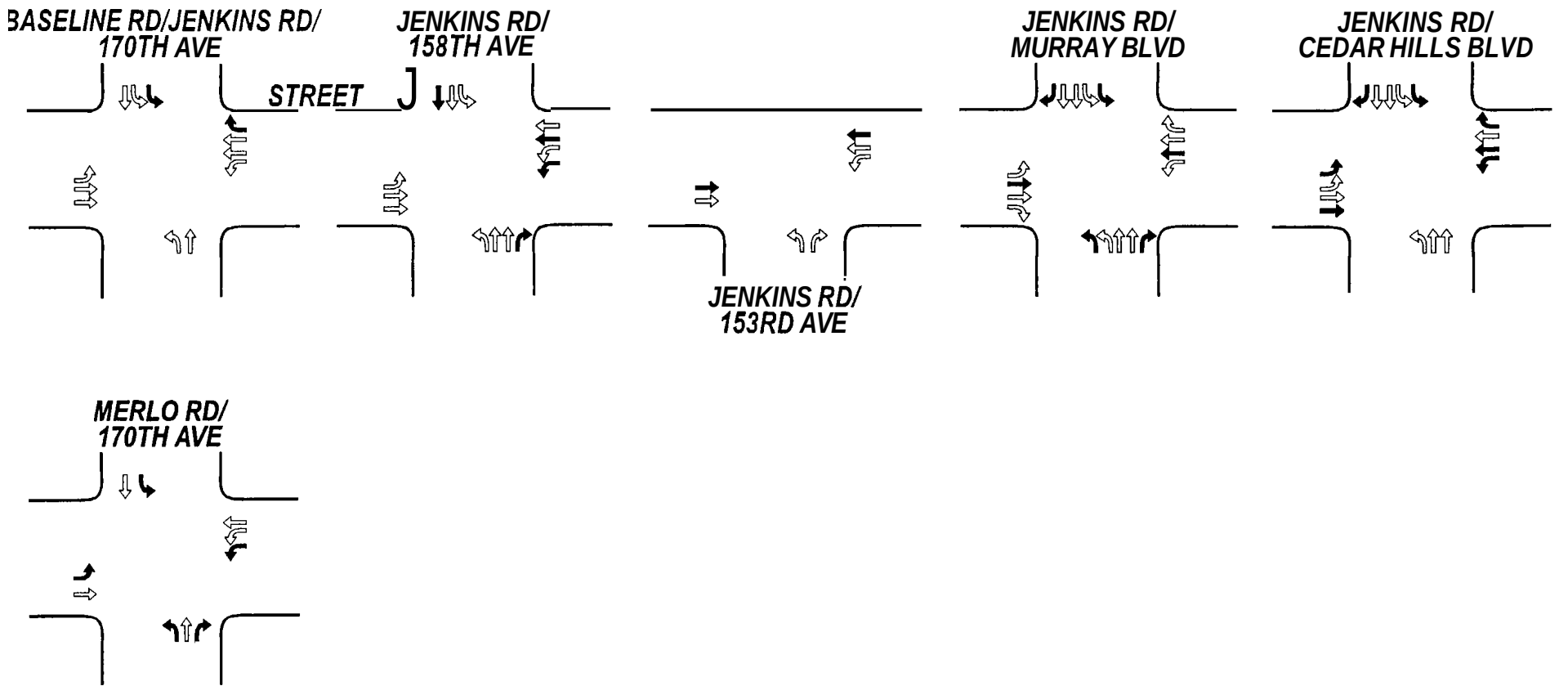
INTERSECTION IMPROVEMENT GRAPHICS



LEGEND

- Existing Lane Configuration
- Proposed Lane Configuration

WALKER ROAD
EXISTING/PROPOSED LANE CONFIGURATION



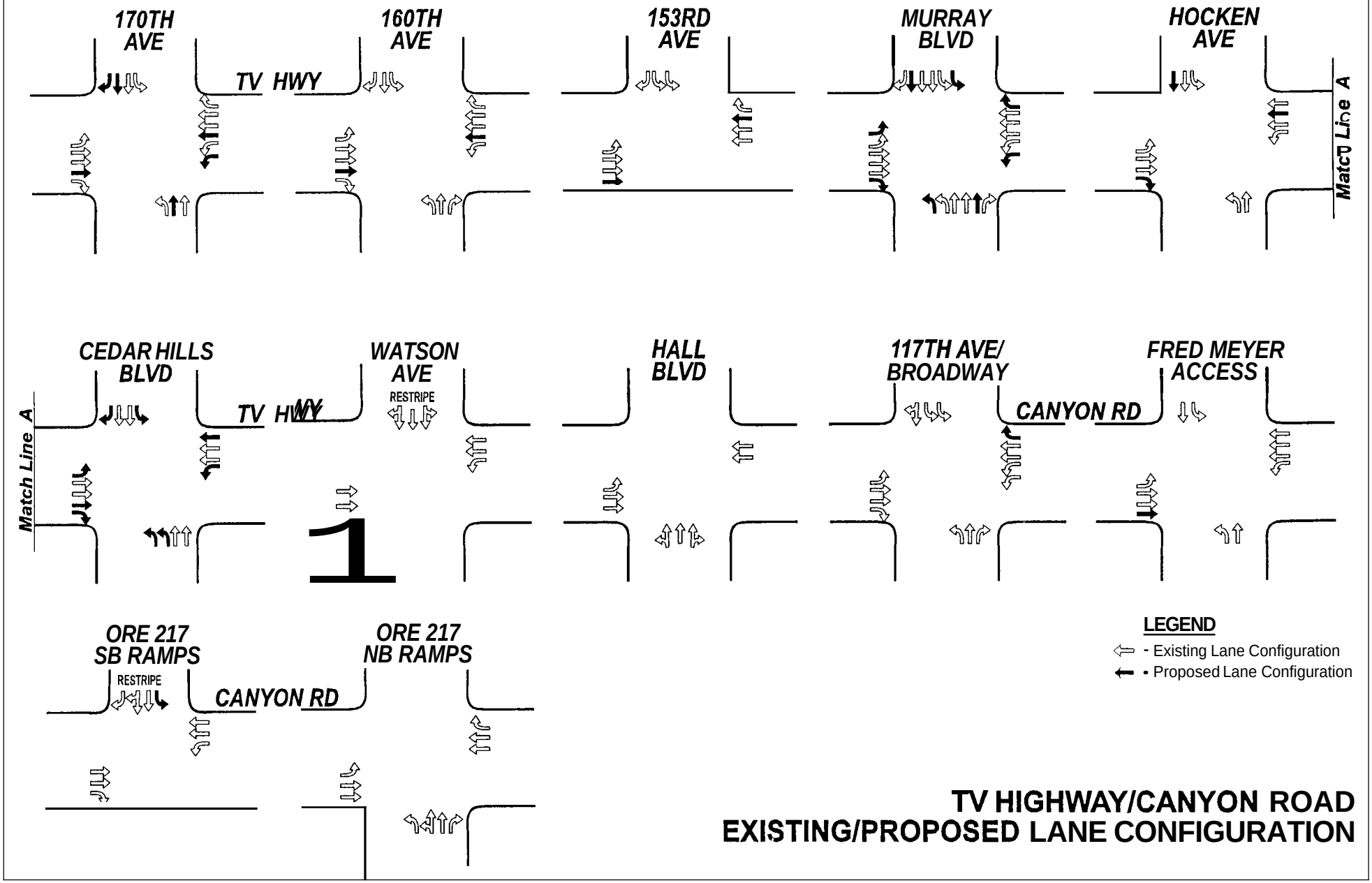
LEGEND

⇦ - Existing Lane Configuration

⇦ - Proposed Lane Configuration

JENKINS ROAD/MERLO ROAD
EXISTING/PROPOSED LANE CONFIGURATION

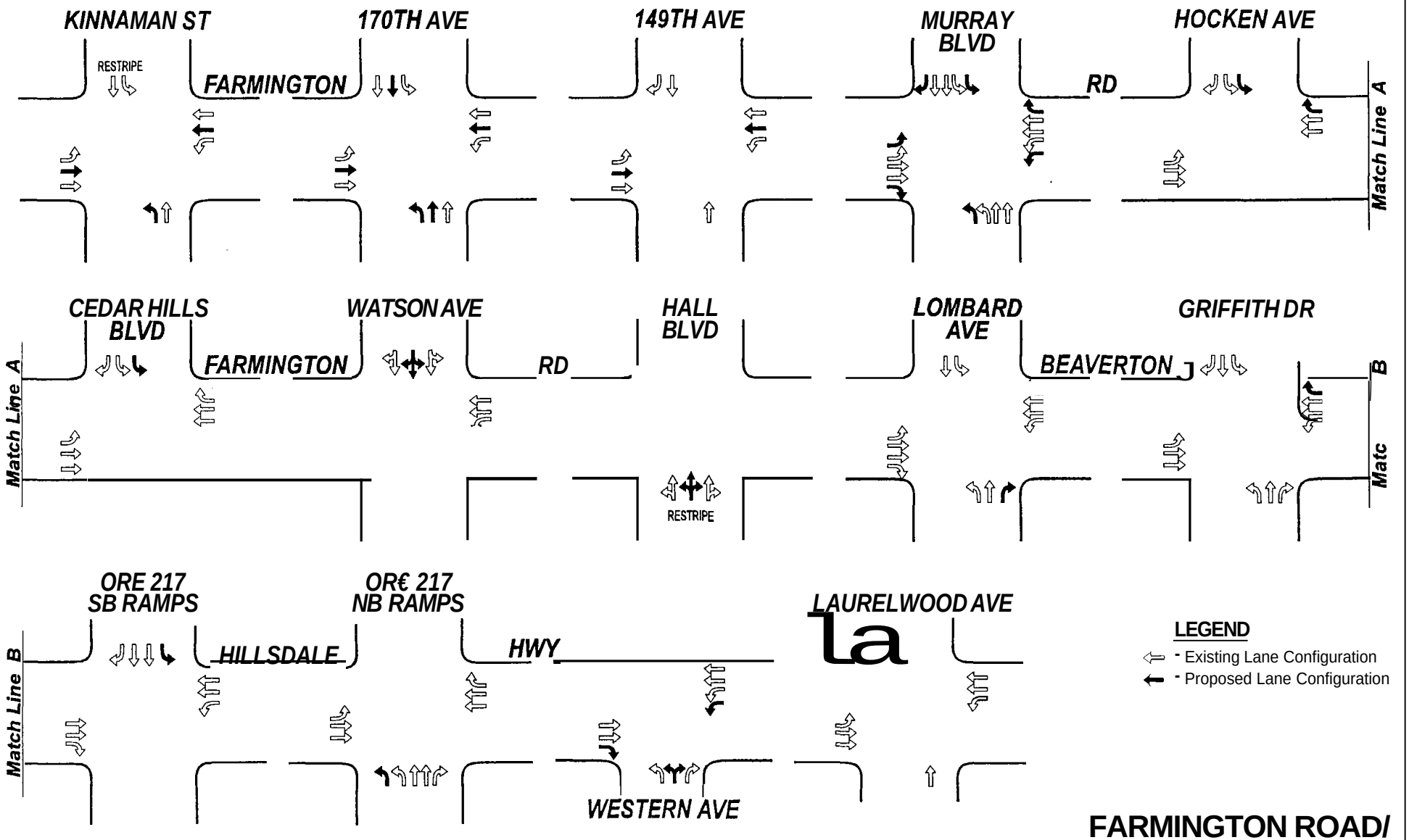
City of Beaverton
Transportation System Plan



TV HIGHWAY/CANYON ROAD
EXISTING/PROPOSED LANE CONFIGURATION

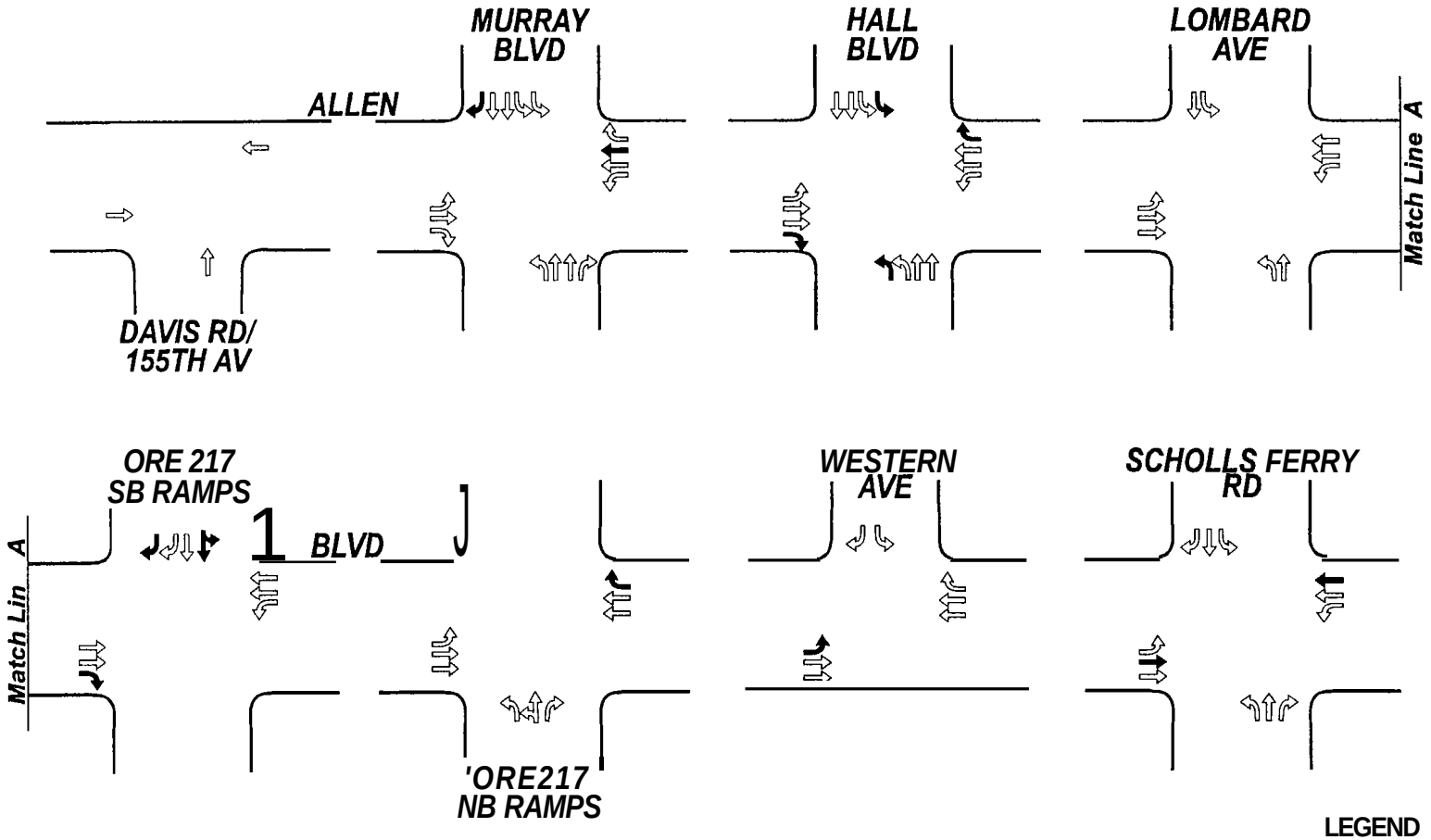
DKS Associates

City of Beaverton
Transportation System Plan

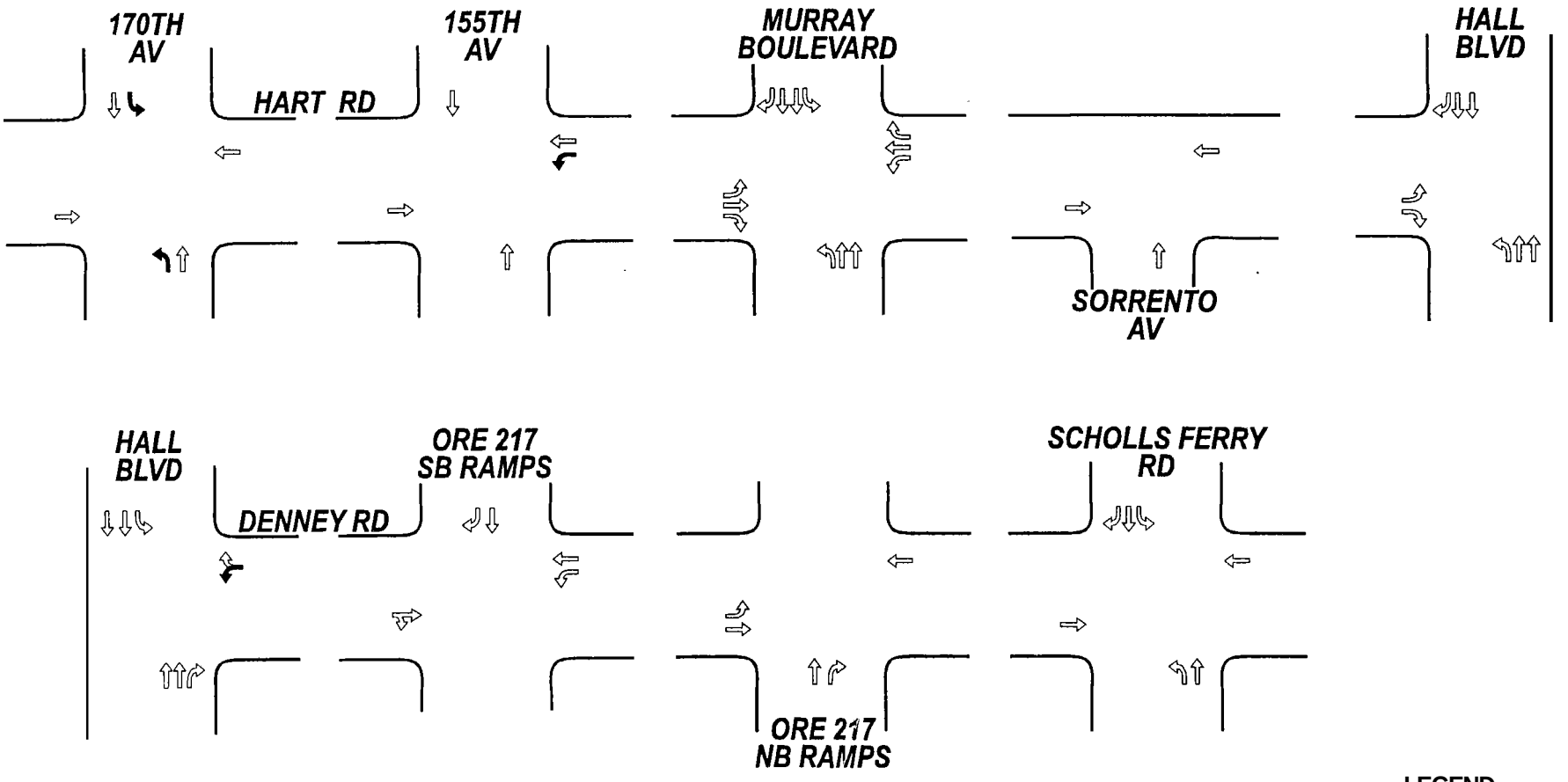


FARMINGTON ROAD/ BEAVERTON HILLSDALE HWY. EXISTING/PROPOSED LANE CONFIGURATION

City of Beaverton
Transportation System Plan



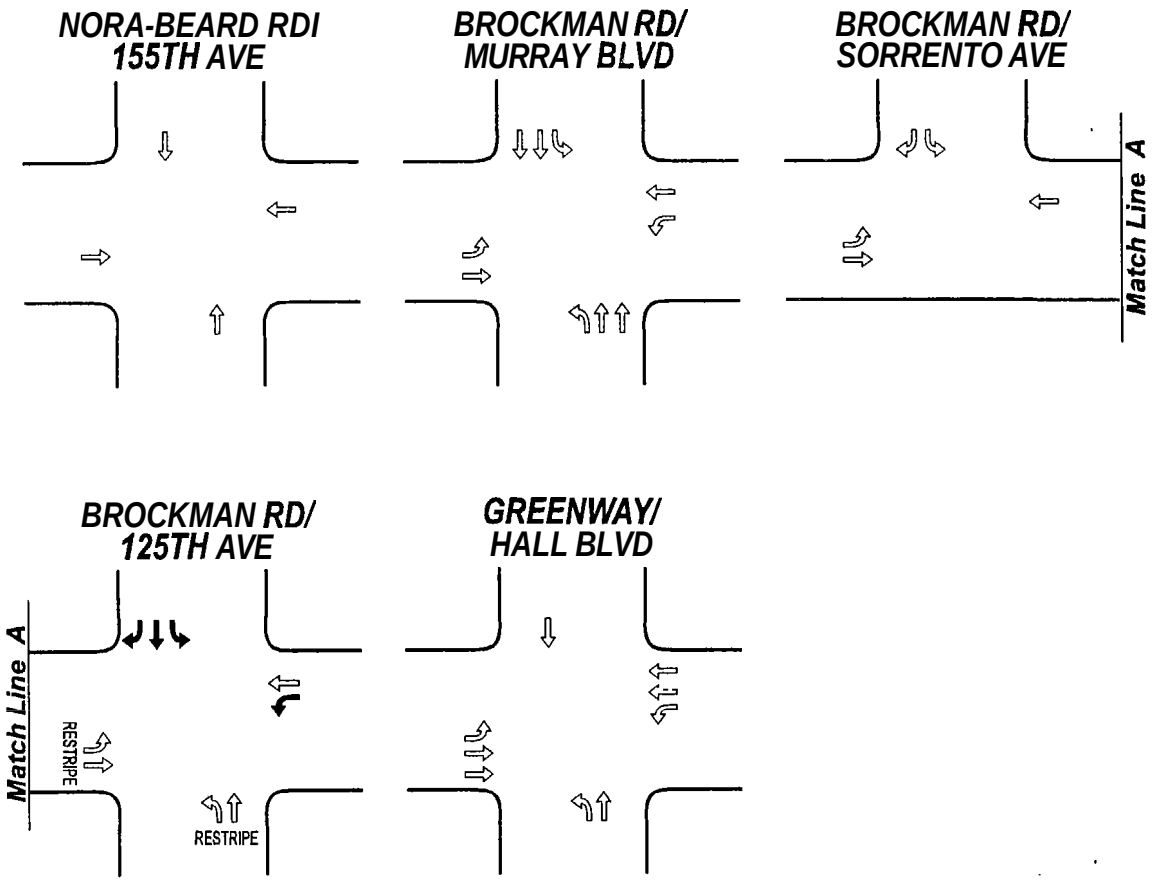
ALLEN BOULEVARD
EXISTING/PROPOSED LANE CONFIGURATION



LEGEND

- Existing Lane Configuration
- Proposed Lane Configuration

HART/DENNEY ROAD
EXISTING/PROPOSED LANE CONFIGURATION



LEGEND

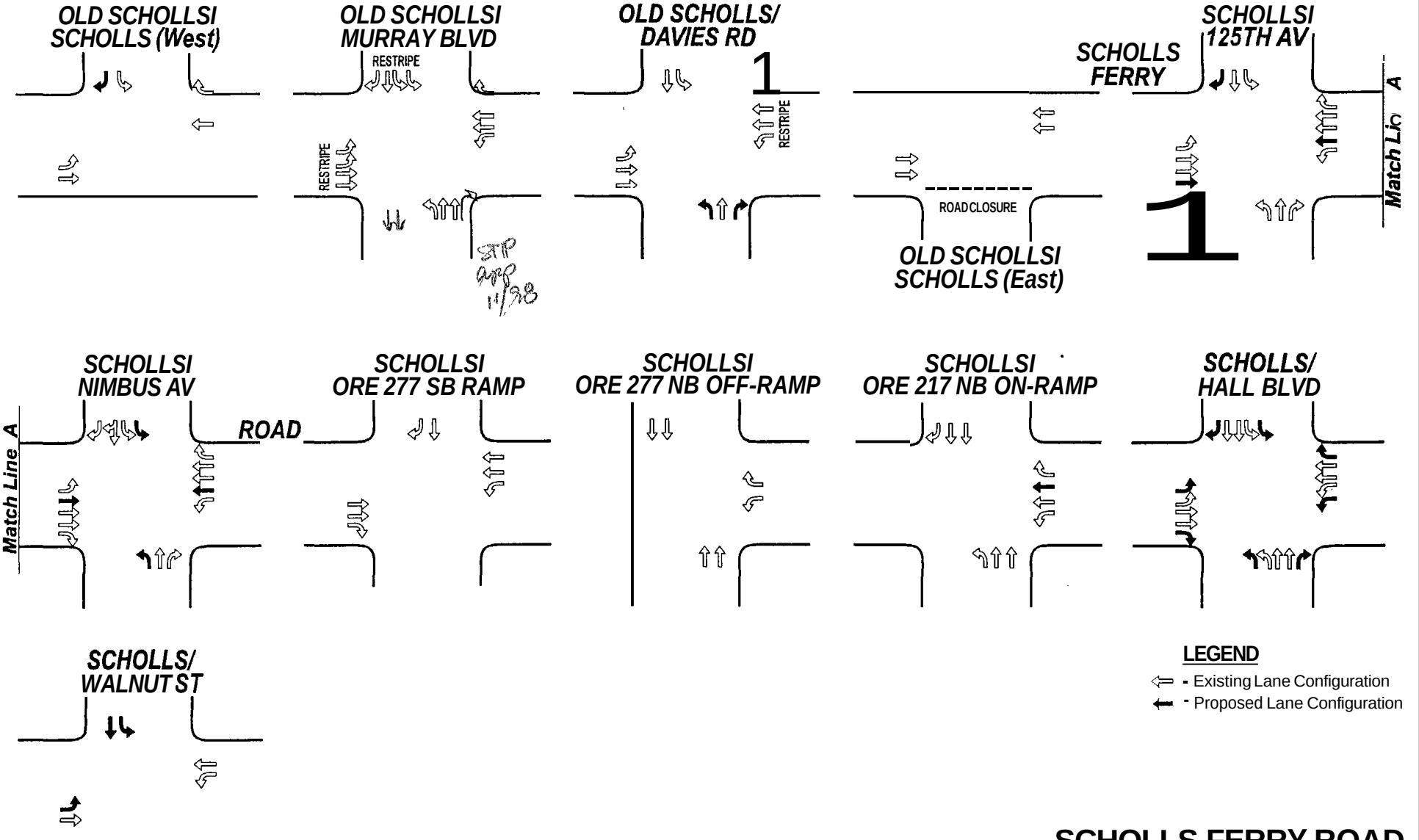
⇦ - Existing Lane configuration

⬅ - Proposed Lane Configuration

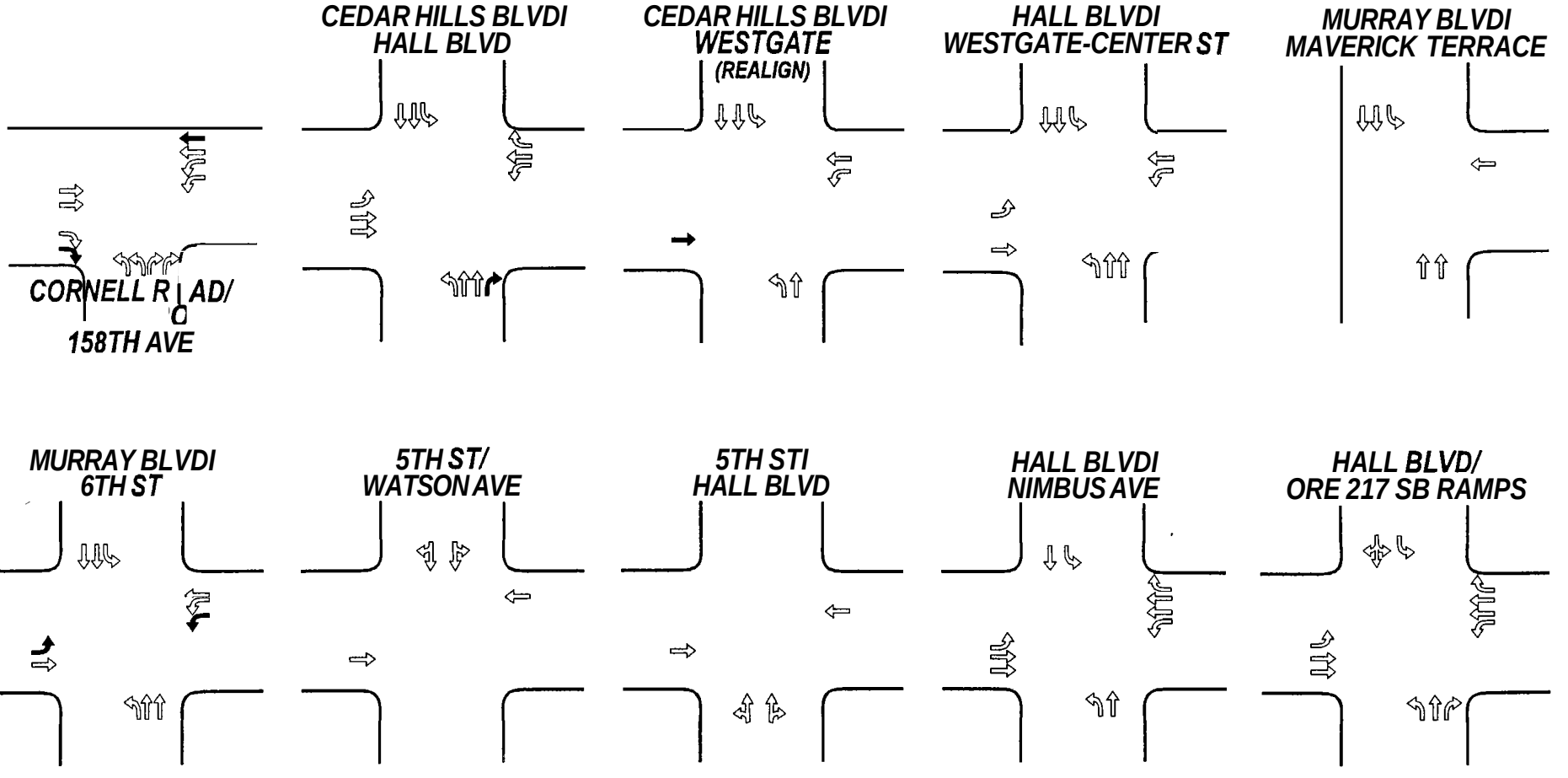
NORA BEARD ROAD/BROCKMAN ROAD/GREENWAY EXISTING/PROPOSED LANE CONFIGURATION

DKS Associates

City of Beaverton
Transportation System Plan



SCHOLLS FERRY ROAD
EXISTING/PROPOSED LANE CONFIGURATION



OTHER INTERSECTIONS
EXISTING/PROPOSED LANE CONFIGURATION

APPENDIX I

METRO LAND USE **DATA**

BEAVERTON LAND USE DATA (FROM METRO)

METRO TAZ	NEWTAZ	HH94	HH15	HH15-HH94	RETAIL94	RETAIL15	RET15-RET94	OTHER94	OTHER15	OTH15-OTH94
32	32	25	65	40	9	8	-1	52	60	9
39	39	117	248	130	145	185	40	180	298	118
81	81	693	799	107	40	40	0	419	546	127
82	82	222	276	53	1	2	1	32	78	46
83	83	169	175	6	1	1	0	14	16	2
84	84	27	82	55	142	171	29	252	395	143
85	85	592	644	52	60	65	5	599	855	256
86	86	553	601	48	3	3	0	73	114	41
87	87	218	296	79	3	9	6	10	42	32
88	88	743	900	156	60	76	16	136	225	89
89	89	191	217	26	0	0	0	17	23	6
90	90	299	409	111	3	4	1	261	489	228
91	91	66	68	3	2	2	0	3	3	1
92	92	0	9	9	143	207	64	273	519	246
93	93	123	155	32	12	17	5	18	33	15
94	94	114	199	84	5	9	4	258	580	322
95	95	61	166	105	44	58	14	647	1,140	493
96	96	39	154	115	336	318	-18	1,531	1,895	364
97	97	335	400	65	49	54	5	430	618	188
98	98	0	3	3	113	100	-13	85	98	13
99	99	324	348	24	4	3	0	294	337	42
107	107	151	219	68	47	72	25	595	1,197	602
108	108	34	94	59	15	30	15	93	230	137
109	109	232	242	9	0	0	0	5	43	38
110	110	150	182	32	2	0	-2	2	0	-2
111	111	160	198	38	7	48	42	4	43	39
112	112	59	59	1	33	33	0	6	9	2
113	113	12	93	81	217	174	-43	1,719	1,802	83
114	114	138	170	33	5	4	0	167	212	45
115	115	23	23	0	50	39	-11	1,139	1,173	34
116	116	0	0	0	100	81	-19	934	980	46
117	117	249	262	13	77	95	18	196	316	120
118	118	189	202	12	0	0	0	4	4	1
119	119	56	53	-2	0	0	0	10	10	0
120	120	378	383	5	7	6	-1	20	24	4
121	121	114	143	29	1	3	2	5	18	14
122	122	238	242	3	1	2	0	18	24	7
123	123	80	88	8	0	0	0	30	50	20
124	124	54	141	87	9	18	9	34	88	53
125	125	0	8	8	123	160	37	189	323	134
126	126	6	10	4	774	658	-116	927	1,041	114
127	127	175	169	-6	0	0	0	9	10	1
133	133	391	391	0	20	15	-5	420	425	5
134	134	744	745	1	0	0	0	33	3,063	3,030
135	135	51	51	-1	3	7	4	507	1,410	903
136	136	32	47	14	108	3,254	3,145	2,460	447	-2,013
137	137	25	44	19	0	0	0	3,392	3,403	11
138	138	0	106	1061	0	0	0	32	390	358

TAZ = TRANSPORTATIONANALYSIS ZONE
HH = HOUSEHOLD, RET = RETAIL EMPLOYMENT.OTH = OTHER EMPLOYMENT
94 = 1994
15 = 2015

BEAVERTON LAND USE DATA (FROM METRO)

METRO TAZ	NEWTAZ	HH94	HH15	HH15-HH94	RETAIL94	RETAIL15	RET15-RET94	OTHER94	OTHER15	OTH15-OTH94
139	139	0	0	0	5	4	-1	13	14	1
140	140	31	815	784	1	1	0	830	1,112	282
141	141	405	905	499	250	313	63	139	228	89
142	142	146	276	130	90	82	-8	521	620	99
143	143	181	346	165	94	143	49	177	351	175
144	144	95	100	4	1	1	0	7	6	-1
145	145	75	75	0	0	0	0	43	43	0
146	146	591	619	27	159	205	46	182	307	125
147	147	77	83	6	1	2	0	4	6	3
148	148	152	608	456	6	10	4	179	445	266
149	149	425	461	36	0	0	0	43	58	15
150	150	30	886	856	3	50	47	13	337	323
151	151	69	211	142	0	1	1	3	17	14
152	152	87	102	15	1	2	1	7	15	8
153	153	223	329	107	2	3	1	18	43	25
154	154	99	102	3	0	0	0	3	4	1
155	155	61	210	148	0	0	0	1	35	34
156	156	72	208	136	0	0	0	1	49	48
157	157	19	19	0	0	93	93	0	124	124
158	158	0	20	20		35	35		240	240
159	159	0	0	0	0	0	0	452	455	3
160	160	0	71	71	30	205	175	109	791	682
161	161	17	93	76	0	23	23	0	125	125
162	162	1	103	102	0	12	12	0	328	328
172	172	9	9	0	0	0	0	8	8	0
173	173	112	148	36	0	0	0	15	19	4
174	174	60	244	184	0	0	0	31	80	49
175	175	9	97	88	0	1	0	63	160	98
176	176	216	722	506	0	0	0	8	130	122
177	177	135	308	173	37	94	57	378	1,253	875
178	178	50	102	51	4	14	9	13	53	40
179	179	109	164	56	0	0	0	4	44	40
180	180	210	327	117	9	24	15	10	42	32
181	181	68	310	241	0	0	0	4	43	39
182	182	61	224	163	21	139	118	18	156	138
183	183	213	226	13	2	2	0	8	13	5
184	184	140	218	78	0	0	0	29	166	137
186	186	31	49	18	10	12	2	76	125	48
187	187	22	28	6	51	74	23	76	143	67
188	188	103	186	83	10	17	7	16	35	19
189	189	41	74	33	2	9	7	0	3	2
190	190	141	345	204	0	0	0	33	129	96
191	191	144	169	25	24	22	-2	55	64	10
192	192	24	168	143	0	0	0	5	38	32
193	193	2	20	19	1	1	1	20	23	3
194	194	127	132	4	5	10	5	9	24	15
195	195	4	1	-2	6	13	6	6	16	10
196	196	212	273	61	0	0	0	26	74	48

HH = HOUSEHOLD, RET = RETAIL EMPLOYMENT, O M = OTHER EMPLOYMENT
94 = 1994
15 = 2015

BEAVERTON LAND USE DATA (FROM METRO)

METRO TAZ	NEWTAZ	HH94	HH15	HH15-HH94	RETAIL94	RETAIL15	RET15-RET94	OTHER94	OTHER15	OTH15-OTH94
197	197	0	0	0	7	21	14	27	94	67
198	198	0	9	9		16	16		111	111
199	199	87	223	136	0	16	16	0	21	21
200	200	56	226	170	0	0	0	15	37	22
201	201	106	106	0	0	0	0	7	8	1
202	202	191	191	0	0	0	0	14	48	33
203	203	0	3	3	253	303	50	185	275	90
211	211	2	78	76		18	18		123	123
221	221	33	53	20	1	2	1	15	32	17
317	317	683	705	22	161	141	-19	955	1,096	142
339	339	66	254	188	1	2	2	11	46	35
340	340	239	309	69	0	2	2	0	139	139
96	1261	340	381	41	212	185	-27	967	1,104	137
96	1262	107	193	86	354	315	-39	1,659	1,933	275
96	1263	91	155	64	150	153	3	690	922	232
98	1264	103	138	35	222	237	16	167	233	66
98	1265	103	166	63	129	203	74	97	200	103
98	1266	12	34	21	59	81	22	44	79	35
98	1267	308	432	123	246	336	90	195	344	150
110	1268	85	159	74	120	130	10	116	164	48
110	1269	4	362	358	128	418	291	123	528	405
111	1270	1	8	8	104	106	2	73	98	25
111	1271	99	133	34	271	332	61	185	298	113
111	1272	270	430	160	9	488	479	6	437	431
111	1273	0	3	3	54	50	-4	37	45	8
111	1274	0	13	13	114	139	24	78	124	46
111	1275	14	47	33	229	281	52	156	252	96
111	1276	104	111	7	399	380	-19	272	341	69
111	1277	0	6	6	36	59	23	25	53	28
111	1278	6	28	21	114	141	27	78	126	49
111	1279	5	141	136	236	406	170	170	354	184
111	1280	12	25	13	78	93	14	53	83	30
111	1281	4	21	17	78	95	17	53	85	32
111	1282	5	29	24	72	64	-8	49	57	8
113	1283	1	268	268	31	33	2	242	342	100
112	1284	281	292	11	41	156	116	8	41	33
112	1285	24	81	57	376	972	596	75	253	179
112	1286	0	2	2	202	201	0	40	52	12
112	1287	1	8	7	672	695	22	134	181	47
113	1288	10	72	62	33	29	-4	262	305	43
113	1289	76	550	474	29	39	10	230	406	176
113	1290	97	413	316	60	58	-1	472	604	132
113	1291	26	31	6	4	3	-1	32	34	2
113	1292	175	339	164	13	16	3	105	170	66
113	1293	512	1,305	792	35	52	17	278	544	266
122	1294	456	491	35	6	9	3	73	152	79
122	1295	207	231	23	7	8	2	84	141	57
123	1296	216	220	4	0	0	0	35	39	4

TAZ = TRANSPORTATION ANALYSIS ZONE
HH = HOUSEHOLD. RET = RETAIL EMPLOYMENT, OTH = OTHER EMPLOYMENT
94 = 1994
15 = 2015

BEAVERTON LAND USE DATA (FROM METRO)

METRO TAZ	NEWTAZ	HH94	HH15	HH15-HH94	RETAIL94	RETAIL15	RET15-RET94	OTHER94	OTHER15	OTH15-OTH94
124	1297	54	114	60	25	68	43	96	336	240
125	1298	0	21	21	131	391	260	202	787	585
125	1299	52	57	5	187	222	35	287	446	160
125	1300	11	26	15	120	253	133	185	510	325
125	1301	1	4	3	46	57	11	71	115	44
125	1302	68	73	5	3	14	11	4	28	24
125	1303	5	16	11	22	39	16	34	78	44
126	1304	5	4	-1	79	114	36	94	180	86
126	1305	247	246	0	302	367	65	356	567	211
135	1306	16	15	0	1	8	7	116	1,541	1,425
135	1307	0	0	0	2	5	2	174	702	528
111	1308	1	10	9	36	64	28	25	58	33
122	1309	593	584	-9	13	10	-3	163	168	5
122	1310	245	263	18	18	16	-2	224	260	36
122	1311	599	658	59	24	26	2	305	435	130
32	1312	25	32	7	8	6	-2	49	52	3
32	1313	38	56	18	74	58	-16	450	471	21
32	1314	18	37	19	6	5	-1	37	42	5
32	1315	15	53	38	4	4	0	27	36	9
39	1316	32	120	88	5	19	14	6	31	25
39	1317	13	47	35	2	8	6	3	13	10
81	1318	195	269	73	17	18	2	179	261	81
82	1319	646	730	84	10	12	2	111	150	39
83	1320	158	218	60	14	18	3	182	291	109
83	1321	77	78	2	0	0	0	4	5	1
83	1322	284	399	114	72	131	59	144	337	193
84	1323	289	469	180	579	684	105	1,006	1,553	547
86	1324	135	162	27	0	1	0	17	35	18
86	1325	134	170	36	16	15	-1	852	1,005	153
86	1326	42	78	36	0	2	2	28	169	141
91	1327	291	408	117	14	33	18	15	47	31
93	1328	203	235	31	29	74	45	43	145	101
94	1329	118	123	5	0	1	0	9	13	4
94	1330	329	369	40	9	8	-2	464	489	25
95	1331	28	85	56	19	26	8	278	518	240
95	1332	0	39	39	65	57	-8	961	1,123	161
97	1333	86	88	2	12	11	-2	107	120	13
97	1334	14	19	5	142	114	-28	1,231	1,302	71
99	1335	113	124	10	0	0	0	20	33	13
99	1336	356	383	27	1	1	0	59	109	51
99	1337	144	157	12	1	1	0	88	110	21
107	1338	55	108	52	25	51	26	317	861	544
108	1339	133	137	4	11	9	-2	76	80	5
108	1340	16	76	60	0	6	5	3	51	48
108	1341	154	229	75	2	8	6	17	73	56
108	1342	229	265	36	6	13	7	39	112	73
110	1343	11	113	102	29	97	68	28	123	95
114	1344	15	15	0	6	5	-1	208	212	4

TAZ = TRANSPORTATION ANALYSIS ZONE
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94 = 1994
15 = 2015

BEAVERTON LAND USE DATA (FROM METRO)

METRO TAZ	NEWTAZ	HH94	HH15	HH15-HH94	RETAIL94	RETAIL15	RET15-RET94	OTHER94	OTHER15	OTH15-OTH94
114	1345	29	33	4	8	7	-1	269	313	44
114	1346	735	773	37	16	19	2	583	895	312
115	1347	10	18	7	37	29	-8	904	944	41
115	1348	464	469	5	12	14	2	271	424	152
116	1349	4	4	0	42	32	-9	498	507	9
116	1350	0	0	0	306	299	-7	3,572	4,574	1,002
117	1351	516	516	0	68	55	-12	171	183	12
117	1352	52	59	7	20	25	4	51	81	30
117	1353	258	257	0	49	40	-9	123	132	9
117	1354	159	169	10	5	6	2	12	21	9
117	1355	322	331	9	2	2	1	4	7	3
118	1356	212	212	0	7	5	-2	98	95	-3
118	1357	631	799	168	1	5	4	12	110	98
119	1358	230	276	46	0	0	0	33	98	65
119	1359	148	158	10	0	0	0	27	31	4
120	1360	229	231	1	10	8	-2	29	31	2
120	1361	314	334	20	7	10	3	20	38	18
120	1362	256	343	87	6	22	16	18	83	65
121	1363	105	124	19	1	3	2	4	21	18
121	1364	108	108	0	1	1	0	5	6	1
121	1365	188	199	11	2	2	1	9	15	6
121	1366	349	381	32	22	22	0	122	155	33
127	1367	136	141	5	1	0	-1	23	39	16
127	1368	272	268	-4	1	0	-1	15	17	2
127	1369	494	543	48	14	6	-8	240	363	124
127	1370	459	468	10	2	0	-2	38	51	13
133	1371	312	333	21	2	2	0	49	62	13
133	1372	92	113	20	3	3	1	55	94	40
133	1373	134	159	25	2	2	0	40	58	18
133	1374	162	187	25	1	1	0	20	40	20
133	1375	12	45	33	4	10	5	93	272	179
133	1376	360	368	8	6	4	-1	119	126	7
133	1377	197	198	0	1	1	0	28	28	0
133	1378	56	90	34	0	1	1	7	29	22
137	1379	0	1,082	1,082	0	11	10	44	696	652
137	1380	0	140	140	0	0	0	947	1,026	79
138	1381	0	125	125	0	0	0	11	384	373
139	1382	5	8	3	172	289	117	448	1,002	554
143	1383	107	306	200	46	61	15	87	151	63
144	1384	332	397	64	11	17	6	55	114	59
145	1385	301	353	53	1	1	0	160	199	39
145	1386	252	295	43	1	1	0	182	217	35
145	1387	51	56	5	0	0	0	27	28	1
146	1388	502	507	6	249	246	-3	286	369	82
146	1389	176	179	3	3	5	2	4	9	5
146	1390	166	185	20	72	75	3	85	117	32
147	1391	133	202	69	2	11	9	7	45	39
147	1392	167	169	1	2	2	0	7	8	1

TAZ = TRANSWORTATION ANALYSIS ZONE
HH = HOUSEHOLD, RET = RETAIL EMPLOYMENT, OTH = OTHER EMPLOYMENT
94 = 1994
15 = ,2015

BEAVERTON LAND **USE DATA** (FROM METRO)

METRO TAZ	NEWTAZ	HH94	HH15	HH15-HH94	RETAIL94	RETAIL15	RET15-RET94	OTHER94	OTHER15	OTH15-OTH94
147	1393	192	192	0	1	1	0	4	4	0
148	1394	247	486	239	0	1	1	17	58	41
148	1395	61	87	26	0	0	0	7	14	7
148	1396	119	238	118	0	0	0	9	41	32
148	1397	196	205	9	0	0	0	14	19	5
148	1398	80	128	48	0	0	0	8	25	17
148	1399	212	227	14	0	0	0	18	24	6
149	1400	69	141	72	0	0	0	19	63	44
150	1401	62	90	29	2	2	0	9	11	2
150	1402	97	137	40	44	41	-3	226	277	51
150	1403	102	125	23	1	3	2	7	24	17
150	1404	404	419	15	107	85	-22	548	575	27
151	1405	66	164	98	0	1	1	8	28	19
151	1406	407	561	154	1	2	1	19	44	24
151	1407	31	122	91	0	1	0	2	13	11
151	1408	5	106	102	0	0	0	0	12	12
151	1409	3	57	54	0	1	1	0	13	13
151	1410	187	243	56	1	1	0	14	27	12
151	1411	17	20	3		0	0		2	2
151	1412	33	78	46	0	0	0	1	7	6
152	1413	55	88	33	1	2	2	4	22	18
152	1414	185	184	-2	2	2	0	17	18	1
152	1415	72	77	5	12	10	-2	92	97	5
152	1416	158	165	7	1	1	0	10	12	2
152	1417	2	10	8		2	2		11	11
152	1418	19	36	17	0	1	1	1	10	9
152	1419	50	91	41	1	3	2	5	30	25
153	1420	39	125	87	0	0	0	4	26	22
153	1421	437	459	22	0	0	0	8	10	2
153	1422	162	181	20	67	88	21	137	289	152
154	1423	248	273	25	0	0	0	21	21	1
154	1424	188	228	40	0	0	0	6	25	19
154	1425	23	23	0	0	0	0	1	0	0
154	1426	49	103	54	0	0	0	5	37	33
154	1427	169	287	118	0	0	0	10	64	54
154	1428	19	22	3	0	0	0	2	13	12
154	1429	245	251	6	0	0	0	11	9	-2
155	1430	6	36	30	0	0	0	1	12	12
155	1431	104	116	12	0	0	0	4	6	2
155	1432	14	46	32	0	0	0	1	6	5
155	1433	91	114	24	0	0	0	2	8	6
155	1434	15	57	42	0	0	0	1	18	17
156	1435	74	94	20	0	0	0	6	36	30
156	1436	195	210	15	0	0	0	0	10	10
156	1437	15	58	43	0	0	0	0	15	15
157	1438	0	3	3	0	0	0	0	0	0
157	1439	107	105	-1	0	195	195	0	259	259
158	1440	0	17	17		44	44		302	302

TAZ = TRANSPORTATION ANALYSIS ZONE
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94 = 1994
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BEAVERTON LAND **USE DATA** (FROM METRO)

METRO TAZ	NEWTAZ	HH94	HH15	HH15-HH94	RETAIL94	RETAIL15	RET15-RET94	OTHER94	OTHER15	OTH15-OTH94
159	1441	110	109	-1	0	0	0	477	478	1
159	1442	7	0	-7	0	0	0	1,340	1,910	570
160	1443	0	25	25	18	64	47	75	324	249
161	1444	20	20	0	1	1	0	3	4	0
161	1445	10	11	1	9	7	-2	38	41	3
161	1446	31	80	49	144	130	-14	598	716	118
161	1447	68	71	3	310	246	-64	1,287	1,355	68
161	1448	24	22	-2			0			0
161	1449	125	162	38	37	32	-6	157	176	20
161	1450	3	5	1	13	11	-2	55	61	6
162	1451	21	348	326	81	98	17	1,707	2,688	982
162	1452	197	271	74	11	12	1	241	337	97
162	1453	14	60	46	1	1	0	16	32	15
162	1454	20	21	0	0	0	0	7	8	0
162	1455	101	102	1	1	1	0	23	23	0
172	1456	34	173	140	57	57	1	981	1,302	322
172	1457	6	247	240	28	47	19	487	1,078	590
173	1458	79	142	63	0	0	0	3	14	12
173	1459	63	444	381	0	0	0	5	52	47
173	1460	29	34	5	0	0	0	8	9	0
174	1461	12	182	171	0	0	0	0	36	36
174	1462	98	320	222	0	2	2	2	64	63
175	1463	157	880	722	0	1	1	19	308	289
175	1464	22	124	102	163	177	14	558	807	249
175	1465	208	336	129	0	1	0	12	118	105
175	1466	11	140	129	0	1	0	131	297	165
175	1467	4	182	178	49	111	62	173	542	369
177	1468	292	289	-3	1	1	0	11	12	1
178	1469	128	179	50	6	13	7	17	52	34
178	1470	20	37	17	35	32	-3	104	122	18
178	1471	40	46	6	1	2	1	4	8	5
178	1472	23	29	5	26	25	-1	77	95	19
178	1473	64	71	8	5	5	0	15	18	4
179	1474	70	143	73	0	0	0	12	54	41
179	1475	60	122	63	0	0	0	3	42	39
180	1476	650	687	37	26	25	-1	24	36	12
180	1477	157	176	19	2	1	-1	6	13	7
180	1478	35	60	25	0	0	0	2	17	15
180	1479	237	327	90	187	213	26	111	208	98
181	1480	199	254	54	0	0	0	63	71	8
181	1481	13	13	0	0	0	0	23	23	0
181	1482	283	658	374	0	0	0	49	112	62
181	1483	219	436	217	0	0	0	14	52	38
181	1484	132	481	349	0	0	0	5	68	63
181	1485	94	251	158	1	3	2	17	54	37
182	1486	278	367	89	23	69	46	20	77	58
182	1487	461	614	153	92	126	34	78	141	63
182	1488	317	586	269	27	86	59	23	96	73

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BEAVERTON LAND **USE DATA** (FROM **METRO)**

METRO TAZ	NEWTAZ	HH94	HH15	HH15-HH94	RETAIL94	RETAIL15	RET15-RET94	OTHER94	OTHER15	OTH15-OTH94
182	1489	275	297	23	64	54	-11	61	73	12
182	1490	10	10	0	1	0	0	2	2	0
182	1491	343	371	28	19	20	1	17	23	6
183	1492	266	389	123	4	9	4	46	166	120
183	1493	216	326	110	5	23	18	86	532	447
184	1494	237	293	56	0	0	0	1	23	23
188	1495	47	117	70	1	5	4	1	10	9
188	1496	45	84	39	19	28	9	31	61	30
188	1497	40	52	12	19	19	0	31	41	10
192	1498	365	731	365	0	0	0	30	110	80
192	1499	13	128	115	0	0	0	3	37	33
192	1500	5	7	2	0	0	0	18	18	0
221	1501	22	182	159	0	6	6	0	108	108
221	1502	100	170	70	0	2	2	0	59	59
221	1503	49	130	81	1	4	3	20	76	57
221	1504	15	35	20	0	1	1	0	11	11
221	1505	9	27	18	6	6	0	91	115	24
221	1506	48	43	-5	0	0	0	0	3	3
221	1507	12	46	34	0	1	1	0	26	26
221	1508	31	26	-5	0	0	0	0	3	3
221	1509	14	59	45	0	2	2	0	32	32
93	1510	15	69	54	66	136	70	99	267	168
340	1511	61	194	133	0	2	2	0	104	104
340	1512	207	374	167	0	6	6	0	331	330
340	1513	45	130	84	0	0	0	0	24	24
340	1514	26	503	476	0	3	3	0	167	167
340	1515	33	178	145	1	5	4	41	298	257
87	1516	360	452	92	19	24	5	82	134	52
87	1517	94	116	23	0	1	0	1	4	3
87	1518	249	331	82	6	18	12	24	95	71
87	1519	110	139	29	1	1	1	3	7	4
88	1520	72	133	60	18	35	17	40	105	64
88	1521	51	65	15	5	14	9	11	41	30
88	1522	41	55	15	1	2	1	3	7	3
88	1523	144	167	23	7	7	0	15	21	5
88	1524	40	79	39	7	27	19	17	79	63
88	1525	119	192	73	15	17	3	34	52	19
89	1526	364	517	153	0	0	0	39	91	53
90	1527	412	487	75	1	1	0	87	104	17
90	1528	92	130	37	0	0	0	12	22	10
90	1529	92	154	62	2	2	0	172	217	46
90	1530	54	146	92	5	5	0	496	653	157
90	1531	183	384	202	1	1	0	86	136	50
91	1532	69	73	4	10	12	2	11	17	6
91	1533	50	52	2	1	1	0	26	30	4
91	1534	298	349	51	29	40	11	31	57	26
91	1535	61	72	11	2	7	4	3	10	7
91	1536	26	32	6	1	2	1	1	3	2

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BEAVERTON LAND USE DATA (FROM METRO)

METRO TAZ	NEWTAZ	HH94	HH15	HH15-HH94	RETAIL94	RETAIL15	RET15-RET94	OTHER94	OTHER15	OTH15-OTH94
92	1537	8	115	106	1,406	2,064	658	2,686	5,167	2,481
92	1538	97	103	6	153	149	-4	292	373	81
92	1539	0	0	0	164	142	-23	314	355	40
92	1540	25	44	19	316	418	102	604	1,048	444
92	1541	6	20	14	78	143	65	149	357	208
92	1542	30	42	12	152	186	35	290	467	177
92	1543	1	3	2	52	57	6	99	144	45
93	1544	86	144	58	4	12	8	6	23	17
93	1545	5	16	11	16	14	-2	23	26	3
94	1546	28	28	0	0	0	0	14	15	1
95	1547	0	25	25	58	49	-8	850	965	115
95	1548	258	276	17	4	4	-1	218	242	25
185	1549	24	44	19	9	9	0	46	62	16
186	1550	37	59	23	2	5	3	17	51	34
186	1551	87	103	16	5	5	0	44	56	12
187	1552	1	2	1	54	50	-4	77	90	14
188	1553	58	67	9	136	153	17	204	297	93
189	1554	69	243	174	10	43	33	2	13	11
189	1555	17	56	39	146	186	40	34	56	22
190	1556	265	462	197	0	0	0	30	100	70
190	1557	151	446	294	0	0	0	48	165	117
190	1558	32	99	67	0	0	0	7	36	29
190	1559	63	105	42	0	0	0	12	22	10
191	1560	156	503	347	11	449	438	24	1,305	1,281
193	1561	192	282	91	1	1	0	30	50	20
195	1562	0	0	0	42	48	6	40	62	21
195	1563	0	4	4	14	142	128	13	181	167
195	1564	0	0	0	41	31	-11	39	39	0
196	1565	227	253	26	0	0	0	43	78	35
197	1566	0	0	0	0	54	54	1	225	224
197	1567	0	3	2	4	94	89	14	390	376
197	1568	0	0	0	7	13	6	23	51	28
197	1569	0	4	4	0	42	42	1	177	175
198	1570	0	22	21	41	57	15	163	289	126
198	1571	256	521	265	6	66	60	18	289	271
198	1572	0	83	83	16	118	102	64	603	539
198	1573	73	149	76	50	91	41	198	464	267
201	1574	327	350	24	0	4	4	7	64	57
201	1575	53	56	3	0	0	0	45	51	6
202	1576	171	171	0	0	0	0	2	5	3
202	1577	149	151	2	1	1	0	13	19	6
203	1578	0	0	0	166	324	159	105	274	168
203	1579	2	1	-1	38	461	423	24	388	364
210	1580	2	2	0	1	15	14	3	71	68
210	1581	0	6	6		10	10		71	71
210	1582	2	2	0		8	8		57	57
210	1583	0	0	0	40	33	-7	151	161	10
210	1584	6	5	-1	0	15	15	0	72	71

TAZ = TRANSPORTATION ANALYSIS ZONE
HH = HOUSEHOLD, RET = RETAIL EMPLOYMENT, OTH = OTHER EMPLOYMENT
94 = 1994
15 = 2015

BEAVERTON LAND USE DATA (FROM METRO)

METRO TAZ	NEWTAZ	HH94	HH15	HH15-HH94	RETAIL94	RETAIL15	RET15-RET94	OTHER94	OTHER15	OTH15-OTH94
210	1585	22	20	-2	3	52	50	11	255	244
210	1586	14	12	-2	1	58	57	4	283	279
210	1587	4	3	-1		40	40		271	271
210	1588	0	6	6	2	48	46	7	234	227
210	1589	19	17	-1	5	41	36	19	201	182
210	1590	16	21	5	20	16	-4	74	78	4
210	1591	36	35	-1	1	2	1	10	17	7
210	1592	19	16	-2	0	56	56	0	274	274
211	1593	5	130	124		5	5		31	31
211	1594	56	193	138	380	481	101	285	476	191
211	1595	7	191	184	187	280	93	140	280	139
211	1596	0	66	66	4	67	62	3	66	63
211	1597	1	30	29		6	6		41	41
211	1598	15	100	85	5	54	49	7	121	115
211	1599	69	86	17	14	16	2	12	20	8
211	1600	7	218	211	11	70	60	8	70	62
211	1601	17	319	302	14	93	79	18	146	128
211	1602	3	192	189	0	240	240	0	238	237
211	1603	0	34	34		9	9		59	59
211	1604	6	116	110	42	1371	95	32	1361	104
316	1629	0	6	6	73	72	-1	312	368	56
316	1630	29	27	-1	131	218	87	377	830	453
317	1631	635	689	54	89	74	-15	529	573	44
338	1661	15	106	92	0	0	0	3	13	10
338	1662	127	466	339	0	0	0	4	45	41
339	1663	526	689	163	2	4	2	32	81	48
339	1664	379	522	143	4	4	1	56	86	30
403	1679	21	349	328	0	1	1	1	69	68
TOTALS		**56,590**	**88,381**	**31,791**	**18,524**	**30,195**	**11,671**	**71,241**	**119,675**	**48,434**

TAZ = TRANSPORTATIONANALYSIS ZONE
HH = HOUSEHOLD, RET = RETAIL EMPLOYMENT, OTH = OTHER EMPLOYMENT
94 = 1994
15 = 2015

APPENDIX J

STRATEGIES EVALUATION SCORING

Potential Strategies for Sidewalk Improvement Priorities

Evaluated by City of Beaverton Traffic Commission

Strategy	Importance		
	Score	Percentage	Rank
Fill in gaps in the network where some sidewalks exist	28	23%	2
Pedestrian corridors that connect neighborhoods	11	9%	5
Connect key pedestrian corridors to schools, parks, recreational uses and activity centers (public facilities, commercial areas, etc.)	33	28%	1
Reconstruct all existing substandard sidewalks to City of Beaverton Standards	1	1%	9
Pedestrian corridors that commuters might use	5	4%	7
Pedestrian corridors to transit stations and stops	17	14%	3
Signalized pedestrian crossings	14	12%	4
As development occurs, construct sidewalk from developers	5	4%	7
One-side to two-sided	6	5%	6

Potential Strategies for Bikeway Improvement Priorities

Evaluated by City of Beaverton Traffic Commission

Strategy	Importance		
	Score	Percentage	Rank
Fill in gaps in the network where some bikeways exist	42	29%	2
Bicycle corridors that connect neighborhoods	24	17%	3
Connect key bicycle corridors to schools, parks, recreational uses and activity centers (public facilities, commercial areas, etc.)	47	33%	1
Bicycle corridors providing mobility to and within commercial areas	5	3%	6
Bicycle corridors that commuters might use	6	4%	5
Construct bike lanes with roadway improvement projects	20	14%	4

Potential Strategies for Transit Improvement Priorities

Evaluated by City of Beaverton Traffic Commission

Strategy	Importance		
	Score	Percentage	Rank
Provide access to commercial/employment areas	16	13%	2'
Provide access to activity and service centers (schools, etc.)	10	8%	7
Provide express routes to regional employment centers	12	10%	4
Provide access to regional town centers/main streets	9	7%	9
Encourage enhanced local services	8	6%	10
Provide Park and Ride lots	10	8%	7
Provide improved transit amenities	12	10%	4
Provide direct access to/from Light Rail Transit *(MAX)* by integration of bus services	22	18%	1
Provide frequent service often	13	11%	3
Dial-a-ride demand responsive	11	9%	6

Potential Strategies for Truck/Freight Circulation

Evaluated by City of Beaverton Traffic Commission

Strategy	Importance		
	Score	Percentage	Rank
1. Allow trucks to use all streets in Beaverton for through movement and design streets accordingly	0	0	
2. Designate through goods movement and service routes only to arterials	**23**	**20%**	**3**
3. Designate through goods movement routes as a sub-set of arterials and design to accommodate trucks	**69**	***59%***	**1**
4. Number **3** above without design accommodations for trucks	0	0	
5. Number **3** above with only a selected sub-set of routes with "truck-friendly" design accommodations	**24**	**21%**	2

Potential Strategies €or Ma ntenance

Evaluated by City of Beaverton Tra ffic Commission

Strategy	Importance		
	Score	Percentage	Rank
No maintenance program	0	0	
Maintain at highest level	0	0	
Maintain roadways using a need based approach which addresses current and future needs as they arise	17	35%	2
Maintain roadways using a balanced approach which develops a pavement management system and budget to address needs over a ten year period	32	65%	1

Potential Strategies for Safety

Evaluated by City of Beaverton Traffic Commission

Strategy	Importance		
	Score	Percentage	Rank
Continue existing program	0	0	
Address citywide safety issues on an as needed basis	4	9%	3
Work with other agencies such as Washington County and ODOT to help prioritize and fund safety programs (coordinated approach)	11	24%	2
Develop a citywide safety priority system which identifies high accident locations, ranks the locations and identifies safety mitigation measures	30	67%	1

Potential Strategies for Access Management Priorities

Evaluated by City of Beaverton Traffic Commission

Strategy	Importance		
	Score	Percentage	Rank
Meet ODOT Access Management requirements on state highways (150 feet to 500 feet). Meet Washington County requirements on arterials (1,000 feet major/600 feet minor).	4	6%	5
Develop city access requirements based on Metro Title 6 (660 feet)	12	20%	3
Set new City of Beaverton standards for all routes on new development using maximums	11	18%	4
Work with land use development applications to consolidate driveways	20	33%	1
Prohibit new single family access to arterials and collectors	0	0	
Use medians on arterial routes to limit access	14	23%	2
Allow no new access within 500 feet of freeway interchange ramps			
Limit signals to public streets			
Right-in, right-out			
Close and consolidate exiting access points within 500 feet of freeway interchanges, as possible			
Develop minimum traffic signal spacing on arterials and collectors (e.g. 500 feet minimum/800-1000 feet desirable)			

Potential Strategies for Parking Priorities

Evaluated by City of Beaverton Traffic Commission

Strategy	Importance		
	Score	Percentage	Rank
Maximum Parking Ratios	4	6%	5
Lower parking ratios for land uses within 1/4 mile of LRT stations	12	20%	3
Parking needs should be reviewed by individual developments at the site plan review stage. Parking provisions should be compared to demand, as identified by ITE or DEQ	11	18%	4
Shared parking	20	33%	1
Transportation Planning Rule (TPR) requirements to reduce spaces by 10% per capita	0	0	
Parking Pricing	14	23%	2

Potential Strategies for Transportation Demand Management

Evaluated by City of **Beaverton Traffic** Commission

Strategy	Importance		
	Score	Percentage	Rank
Flexible working hours	9	14%	3
Coordinate shift changes/staggered hours	8	12%	4
Telecommuting	5	8%	6
Work with property owners to install bicycle	3	5%	9
Work with property owners to place parking	0	0	
Provide information regarding commute	4	6%	8
Encourage linkage of housing, retail and	13	20%	1
Provide incentives to take transit and use	10	15%	2
Schedule deliveries outside of peak hours	8	12%	4
Focus demand management in districts (i.e.	0	0	
Participate in Westside Transportation	5	8%	
Provide City staff support to Beaverton TDM	0	0	
Congestion pricing	0	0	

Potential Strategies for Transportation System Management/ Intelligent Transportation Systems

Evaluated by City of Beaverton Traffic Commission

Strategy	Importance		
	Score	Percentage	Rank
Signal coordination for arterial system	12	18%	2
Transit priority signal systems	8	12%	4
Ramp metering	6	9%	5
HOV Lanes	5	8%	6
Bus queue jump lanes	11	17%	3
One-way streets	5	8%	6
Traveler information systems for Beaverton arterials (changeable message signs, etc.)	0	0	
Enhance detection systems (video, etc.)	4	6%	8
Enhance traffic signal systems (areawide control, model 2070, etc.)	14	22%	1
Signing- guide signs	0	0	

APPENDIX K

METRO CLASSIFICATION DEFINITIONS

METRO

Chapter 1 Glossary

Accessibility - The ability to move easily from one mode of transportation to another mode or to a given land use destination. This is determined by the spatial distribution of potential destinations, the ease of reaching each destination and the magnitude, quality and character of the activities found there. The less that travel costs in time and money, the more places that can be reached within a certain budget, the greater the accessibility. Accessibility is governed by both land use patterns and the number of travel alternatives provided by the transportation system.

Access Management - The principles, laws and techniques used to control access off and onto streets, roads and highways from roads and driveways. One of the primary purposes of controlling access is to reduce conflicts between motor vehicles, pedestrians and bicyclists. Examples of access management include limiting or consolidating driveways, selectively prohibiting left turn movements at and between intersections and using physical controls such as signals and raised medians.

Air Quality Conformity - This term refers to the Clean Air Act Amendments of 1990 which require the metropolitan region to document with computer modeling that regionally significant transportation projects, if built, would result in (1) automotive emissions lower than those estimated to have occurred in 1990; (2) lower emissions than would result without building the project; and (3) total emissions lower than the "mobile source budget" adopted in the regional air quality maintenance plan.

Alternative Transportation Mode - This term refers to all passenger modes of travel except for single occupancy vehicle, including bicycling walking, public transportation, carpooling and vanpooling.

Advanced Traffic Management System (ATMS) - This term refers to traffic management techniques that use computer processing and communications technologies to optimize performance of motor vehicle, freight and public transportation systems. ATMS is a subset of Intelligent Transportation System (ITS) technologies and must be addressed as one of the sixteen ISTEA planning factors.

Americans With Disabilities Act (ADA) of 1990 - Civil rights legislation enacted by the US. Congress that mandates the development of a plan to address discrimination and equal opportunity for disabled persons in employment, transportation, public accommodation, public services and telecommunications. Tri-Met's ADA transportation plan outlined the requirements of the ADA as applied to Tri-Met services, the defiaenaes of the existing services when compared to the requirements of the new Act and the remedial measures necessary to bring Tri-Met and the region into compliance with the Act. Metro, as the region's Metropolitan Planning Organization (MPO) is required to review Tri-Met's ADA Paratransit Plan annually and certify that the plan conforms to the Regional Transportation Plan. Without this certification, Tri-Met cannot be found to be in compliance with the ADA. ADA also affects the design of pedestrian facilities being constructed by local governments.

Bicycle - A vehicle having two tandem wheels, a minimum of 14" in diameter, propelled solely by human power, upon which a person or persons may ride. A three-wheeled adult tricycle is considered a bicycle. In Oregon, a bicycle is legally defined as a vehicle. Bicyclists have the same right to the roadways and

Congestion Pricing - A transportation management tool which applies market pricing principles to roadway use. This tool involves the use of user surcharges or tolls on congested facilities during peak traffic periods. The theory of peak period pricing suggests that charging drivers per mile of travel during the congested times of the day will relieve traffic congestion by discouraging some vehicle trips and shifting others to alternative modes, facilities, destinations or times of travel.

Density Bonus - This term refers to allowing developers to build at higher densities than stated in local zoning code. This incentive is designed to promote more compact development, reduce trip lengths and promote alternative modes of travel.

Employee Commute Options (ECO) Rule - The ECO Rule is part of House Bill 2214 which was adopted by the 1992 Legislature. The Rule directs the Department of Environmental Quality to institute an employee trip reduction program. The Rule is designed to reduce 10 to 20 percent of commuter trips for all businesses that employ 50 or more persons at a single site.

Freight Intermodal Facility - An intercity facility where freight is transferred between two or more modes (e.g., truck to rail, rail to ship, truck to air, etc.)

Functional Plan - A limited purpose multi-jurisdictional plan for an area or activity having significant district-wide impact upon the orderly and responsible development of the metropolitan area that serves as a guideline for local comprehensive plans consistent with ORS 268.390.

Greater Metropolitan Region - Defined as the greater area surrounding and including Metro's jurisdictional area, including parts of Multnomah, Clackamas and Washington counties a5 well as urban areas in Marion, Columbia and Yamhill counties (see "Metropolitan Region").

Growth Concept - A concept for the long-term growth management of our region, stating the preferred form of the regional growth and development, including if, where, and how much the urban growth boundary should be expanded, what densities should characterize different areas, and which areas should be protected as open space.

High Occupancy Vehicle (HOV) - This term refers to vehicles that are carrying two or more persons, including the driver. An HOV could be a transit bus, vanpool, carpool or any other vehicle that meets the minimum occupancy requirements of the specific facility. In practice, only vehicles with two or three or more persons would be able to use a designated "HOV" travel lane.

Intermodal Facility - A transportation element that accommodates and interconnects different modes of transportation and serves the statewide, interstate and international movement of people and goods. See also passenger intermodal facility and freight intermodal facility definitions.

Intermodal Surface Transportation Efficiency Act (ISTEA) of 1991 - The federal highway/public transportation funding reauthorization which among other features funds the national highway system and gives states and local governments more flexibility in making transportation decisions. The Act places significant emphasis on broadening public participation in the transportation planning process to include key stakeholders, including the business community, community groups, transit operators, other governmental agencies and those who have been traditionally underserved by the transportation system. Among other things, the Act requires the metropolitan area planning process to consider such issues as land use planning, energy conservation, intermodal connectivity and enhancement of transit service. Finally, the Act integrates transportation planning with achievement of the air quality conformity requirements embodied in the Clean Air Act Amendments of 1990 and State air quality plans.

Mot r Vehicle Level of Service (LOS) - A qualitative measure describing operational conditions within a traffic stream, and their perception by motorists and/or passengers. A level of service definition generally describes these conditions in terms of such factors as speed and travel time, freedom to maneuver, traffic interruptions, comfort, convenience and safety. An LOS rating of "A" through "F" describes the traffic flow on streets and highways and at intersections. The following table describes general traffic flow characteristics for each level of service on a street or highway:

LOS	Traffic Flow Characteristics
A	Virtually free flow; completely unimpeded
B	Stable flow with slight delays; reasonably unimpeded
C	Stable flow with delays; less freedom to maneuver
D	High density but stable flow
E	Operating conditions at or near capacity; unstable flow
F	Forced flow, breakdown conditions
Greater than F	Demand exceeds roadway capacity, limiting volume than can be carried and forcing excess demand onto parallel routes and extending the peak period

Source: 1985. Highway Capacity Manual (A through F descriptions)
Metro (>F Description)

Multi-use Path - A path that is physically separated from motor vehicle traffic by an open space or barrier and is either within the highway right-of-way or within an independent right-of-way, used by bicyclists, pedestrians, joggers, skaters and other non-motorized travelers.

Neighbor City -Nearby incorporated cities with separate urban areas from the Metro urban area, but connected to the metropolitan area by major highways. Neighbor aties include Sandy, Estacada, Canby, Newberg, North Plains and Scappoose.

Oregon Bicycle and Pedestrian Plan - An element of the Oregon Transportation Plan, this plan offers the general principles and policies that ODOT follows to provide bikeways and walkways along state highways. This plan also provides guidance to cities and counties, as well as other organizations and private citizens, in establishing bicycle and pedestrian facilities on local transportation systems.

Oregon's Statewide Planning Goals - The 19 goals which provide a foundation for the state's land use planning program. The 19 goals can be grouped into four broad categories: land use, resource management, economic development, and citizen involvement. Locally adopted comprehensive plans and regional transportation plans must be consistent with the statewide planning goals.

Oregon Transportation Plan (OTP) - The State's official statewide, intermodal transportation plan that will set priorities and state policy in Oregon for the next 40 years. The plan, developed by the Oregon Department of Transportation through the statewide transportation planning process, responds to federal ISTEA requirements (see above) and Oregon's Transportation Planning Rule (TPR - see below).

Park-and-Ride - A mode of travel, usually associated with movements between work and home, that involves use of a private auto on one portion of the trip and a transit vehicle (i.e., a bus or a light rail vehicle) on another portion of the trip. Thus, a park-and-ride trip could consist of an auto trip from home to a parking lot, and transfer at that point to a bus in order to complete the trip to work.

Parking Cash-Out - This term refers to a transportation demand management strategy where the market value of a parking space is offered to an employee by the employer. The employee can either spend the money for a parking space, or pocket it and then use an alternative mode to travel to work. Measures such as parking cash-out provide disincentives for commuting by single occupancy vehicles.

Telecommute - This term refers to a transportation demand management strategy whereby an individual substitutes working at home for commuting to a work site on either a part-time or full-time basis.

Traffic Calming - A transportation system management technique that aims to prevent inappropriate through-traffic and reduce motor vehicle travel speeds on a particular roadway. Traditionally, this technique has been applied to local residential streets and collectors and may include speed bumps, curb extensions, planted median strips or rounds and narrowed travel lanes.

Transit - For purposes of the RTP, this term refers to publicly-funded and managed transportation services and programs within the urban area, including light rail, regional rapid bus, frequent bus, primary bus, secondary bus, mini-bus, paratransit and park-and-ride.

Transit Level of Service - The comfort, safety, convenience and utility of transportation service, measured differently for various types of transportation systems.

Transit-Oriented Development - A mix of residential, retail and office uses and a supporting network of roads, bicycle and pedestrian ways focused on a major transit stop designed to support a high level of transit use. Key features indude: a mixed use center and high residential density.

Transportation Demand Management (TDM) - Actions, *such* as ridesharing and vanpool programs, the use of alternative modes, and trip-reduction ordinances, which *are* designed to change travel behavior in order to improve performance of transportation facilities and to reduce need for additional road capaaty.

Transportation Disadvantaged/Persons Potentially Underserved by the Transportation System - Those individuals who have difficulty in obtaining transportation because of their age, income, physical or mental disability.

Transportation Management Area (TMA) - *As* defined in federal regulations, this term refers to "an urbanized area with population over 200,000" and "applies to the entire metropolitan planning area." *All* locations must meet certain standards and non-attainment TMA's must meet additional planning requirements.

Transportation Planning Rule (TPR) - The implementing rule of statewide land use planning goal (#12) dealing with transportation, as adopted by the State Land Conservation and Development Commission (LCDC - see above). Among its many provisions, the Rule includes requirements to preserve rural lands, reduce vehicle miles traveled (VMT) per capita by *20%* in the next 30 years, reduce parking spaces and to improve alternative transportation systems.

Transportation Policy Alternatives Committee (TPAC) - Senior staff-level policy committee which reports and makes policy recommendations to JPACT *(see* above). TPAC's membership includes technical staff from the same governments and agencies as JPACT, plus representatives of the Federal Highway Administration and the Southwest Washington Regional Transportation Council (SWRTC - *see* above); there are also *six* citizen representatives appointed by the Metro Council *(see* above).

Transportation System Management (TSM) - Strategies and techniques for increasing the efficiency, safety, capacity or level of service of a transportation facility without major new capital improvements. This may include signal improvements, intersection channelization, access management, HOV lanes, ramp metering, incident response, targeted trafficenforcement and programs that smooth transit operations.

Transportation System Plan (TSP) - A plan for one or more transportation facilities that are planned, developed, operated and maintained in a coordinated manner to supply continuity of movement between modes, and within and between geographic and jurisdictional areas.

METRO

Chapter I Acronyms

ADA	Americans with Disabilities Act
ATMS	Advanced Traffic Management System
CBD	Central Business District
FHWA	Federal Highway Administration
FTA	Federal Transit Administration (formerly UMTA)
FY	Fiscal Year
HCT	High Capacity Transit
HOV	High-Occupancy Vehicle
ISTEA	Intermodal Surface Transportation Efficiency Act of 1991 (Federal)
JPACT	Joint Policy Advisory Committee on Transportation (Regional)
LCDC	Land Conservation and Development Commission (State)
LRT	Light Rail Transit (MAX)
MCCI	Metro Council for Citizen Involvement
MPAC	Metro Policy Advisory Committee
MPO	Metropolitan Planning Organization (Metro)
MTIP	Metropolitian Transportation Improvement Program
NHS	National Highway System
OAR	Oregon Administrative Rules
ODOT	Oregon Department of Transportation (State)
ORS	Oregon Revised Statutes
R.O.W.	Right of Way
RTP	Regional Transportation Plan (Metro)
RUGGO	Regional Urban Growth Goals and Objectives
SOV	Single-Occupancy Vehicle
TPAC	Transportation Policy Alternatives Committee (Regional)
TPR	Transportation Planning Rule (State)
Tri-Met	Tri-County Metropolitan Transportation District
TSM	Transportation System Management
UGB	Urban Growth Boundary
USDOT	US. Department of Transportation
VMT	Vehicle Miles Traveled

During the past several years, the region has experienced unprecedented growth – a trend that is predicted to continue in the 2015 regional forecast. Subsequently, a significant amount of urbanization is likely to occur while local jurisdictions are in the process of adopting local ordinances that implement the 2040 Growth Concept. Therefore, the phasing of RTP projects and programs will reflect this period of transition, with project identification and selection increasingly tied to implementation of the growth concept.

The RTP includes three implementation scenarios based on varying financial assumptions. The "preferred" system (Chapter 5) includes an optimal package of regional transportation projects and programs that best addresses the region's needs over the 20-year plan period. The "constrained" system (Chapter 7) is limited to those improvements to the regional transportation system that can be made by projecting existing revenue sources for the plan period, and does not adequqtely meet the region's 20-year needs. The "strategic" system (Chapter 8) includes a mix of regional projects and programs from both the preferred and financially constrained systems. The strategic system represents the minimum set of actions needed to adequately serve the region's 20-year transportation needs, and thus establishes a target for additional funding.

Environmental, Economic & Social Impacts

Transportation systems have a significant effect on the physical and socioeconomic characteristics of the areas they serve. As such, transportation planning must consider larger regional and community goals and values, such as protection of the environment, the regional economy and the quality of life that area residents presently enjoy.

The RTP measures economic and quality of life impacts of the proposed system by evaluating key indicators, such as job and retail service accessibility, economic benefits to the community and transportation for the traditionally undeserved, including low income and minority households and the disabled. Other key system indicators include reduction in VMT's, travel times, travel speeds, congestion, energy costs, protection of natural resources and air quality impacts. RTP objectives are sometimes in conflict, so each transportation project or program must be evaluated in terms of relative tradeoffs, and how it best achieves an overall balance between those conflicting goals.

D. Urban Form And Land Use

Regional Urban Growth Goals and Objectives

The Regional Urban Growth Goals and Objectives (RUGGOs) were adopted in 1991 in response to direction by the Oregon Legislature to develop regional land use goals and objectives that would replace those adopted by the Columbia Region Association of Governments. The RUGGOs establish a process for coordinating planning in the metropolitan area in an effort to preserve regional livability. The RUGGOs also provide a policy framework for guiding Metro's regional planning program, including development of functional plans and management of the region's urban growth boundary.

In 1992, the region's voters approved a charter for Metro that formally gave responsibility for regional land use planning to the agency, and requires adoption of a Regional Framework Plan that integrates land use, transportation and other regional planning mandates. In late 1995, the Metro Council adopted the 2040 Growth Concept, a document that serves as the first step in developing the framework plan. Like the RUGGOs, the growth concept is not a final plan for the region, but rather, is *a starting* point for developing the Regional Framework Plan, which will be a mare focused vision for the future growth and development of this region The growth concept includes a series of regional measures intended to accelerate both development of the framework plan elements and local implementation of growth concept principles. The 1996 Regional Transportation Plan serves as a functional plan and will be the transportation element of the Regional Framework Plan.

While the 2040 Growth Concept is primarily a land use framework, the success of the concept, in large part, hinges on regional transportation policy. 'Thefollowing are the 2040 Growth Concept land use components and a description of their associated transportation elements. The land use components are grouped according to their relative significance in the region:

Primary Components

The central city, regional centers, industrial areas and intermodal facilities are centerpieces of the 2040 Growth Concept, and form the geographic framework for more locally oriented components of the plan. Thus, implementation of the overall growth concept is largely dependent on the success of these primary components. For this reason, these components are the focus of 2040 Growth Concept implementation poliaes and infrastructure investments.

- Central City and Regional Centers
  Portland's central city already forms the hub of the regional economy. Regional centers in suburban locales such as Gresham, Beaverton and Hillsboro are envisioned in the 2040 Growth Concept as complementary centers of regional economic activity. These areas have the region's highest development densities, the most diverse mix of land uses and the greatest concentration of commerce, offices and cultural amenities. They are the most accessible areas in the region by both auto and public transportation, and have very pedestrian-oriented streets.

  In the 2040 Growth Concept, the central aty is highly accessible by a highquality public transportation system, multi-modal street network and a regional freeway system of through-routes. Light rail lines radiate from the central city, connecting to each regional center. The street system within the central city is designed to encourage public transportation, bicycle and pedestrian travel, but also accommodate auto and freight movement. Of special importance are the bridges that connect the east and west sides of the central city, and serve as critical links in the regional system.

  Regional centers also feature a highquality radial transit system serving their individual trade areas and connecting to other centers, as well as light rail connections to the central city. In addition, a fully improved network of multi-modal streets tie regional centers to surrounding neighborhoods and nearby town centers, while regional through-routes will be designed to connect regional centers with one another and points outside the region. The

street design within regional centers encourages public transportation, bicycle and pedestrian travel while also accommodating automobile and freight movement.

- Industrial Areas and Intermodal Facilities
  Industrial areas serve as "sanctuaries" for long-term industrial activity. These areas are primarily served by a network of major street connections to both the regional freeway system and intermodal facilities. Many industrial areas are also served by freight rail, and have good access to intermodal facilities. Freight intermodal facilities, including air and marine terminals, freight railyards and common carrier truck terminals are an area of regional concern. Access to these areas is centered on rail, the regional freeway system, public transportation, bikeways and key roadway connections. While industrial activities often benefit from roadway improvements largely aimed at auto travel, there are roadway needs unique to freight movement.that are critical to the continued vitality of industrial areas and intermodal facilities.

Secondary Components

While more locally oriented than the primary components of the 2040 Growth Concept, town centers, station communities, main streets and corridors are significant centers of urban activity. Because of their density and pedestrian-oriented design, they play a key role in promoting public transportation, bicycling and walking as viable travel alternatives to the automobile, as well as conveniently close services for surrounding neighborhoods. As such, these secondary components are an important part of the region's strategy for achieving state goals for reducing per-capita automobile travel.

- **Station Communities**
  Station communities are located along light rail corridors and feature a high-quality pedestrian and bicycle environment. These communities are designed around the transportation system to best benefit from the public infrastructure. While they include some local services and employment, they are mostly residential developments that are oriented toward the central city, regional centers and other areas that *can* be accessed by rail for most services and employment.

- Town Centers and Main Streets
  Town Centers function as local activity areas that provide close access to a full range of local retail and service offerings within a few miles of most residents. While town centers will not compete with regional centers in scale or economic diversity, they will offer some specialty attractions of regional interest. Though the *character* of these centers varies greatly, *each* will function as strong business and avic communities with excellent multi-modal arterial street access and high quality public transportation with strong connections to regional centers and other major destinations. Main streets feature mixed-use, storefront style development that serve the same urban function as town centers, but are located in a *linear* pattern along a limited number of bus corridors. Main streets feature street designs that emphasize pedestrian, public transportation and bicycle travel.

- *Corridors*
  Comdors will not be as intensively planned as station communities, but similarly emphasize a highquality bicycle and pedestrian environment and convenient access to public transportation. Transportation improvements in corridors will focus on nodes of activity – often at major street intersections – where transit and pedestrian improvements are especially important. Comdors can include auto-oriented land uses *between* nodes of activity, but such uses are carefully planned to preserve the pedestrian orientation and scale of the overall corridor design.

Other* Urban *Components

Some components of the 2040 Growth Concept are primarily of local significance, mcluding employment centers and neighborhoods. Urban activities m these areas often impact the regional transportation system, but are best addressed through the local planning process.

- Employment Centers
  Employment centers *allow* mixed commercial and industrial uses, including some residential development. These areas are primarily served by a network of arterial connections to both the regional freeway system and intermodal facilities. Some employment centers are also served by freight rail. Employment centers are often located near industrial areas, and thus may benefit from freight improvements primarily directed toward industrial areas and intermodal facilities.

- Neighborhoods
  In recent decades, the newest neighborhoods have become the mast congested largely due to a lack of street connections. A lack of street connections discourages walking and bicycling for local trips in these areas, and forces local auto trips onto the regional multi-modal arterial network. The 2040 Growth Concept envisions master street plans in all areas to increase the number of local street connections to the regional roadway network However, new connections must be designed to discourage through-travel on local neighborhood streets.

***Exurban* Components**

- Urban **Reserves**
  These reserves, which are currently located outside the UGB, *are* relatively undeveloped, with limited transportation facilities. Urban reserves are intended to accommodate future growth and will eventually require multi-modal access to the rest of the region. Because they may be added to the urban area during the 20-year RTP planning period, they are included in the RTP functional classification scheme (Chapter 4). General street and public transportation planning is completed prior to urbanization as part of the RTP process, and based on specific 2040 Growth Concept land use policies for these areas.. *Once* urban reserves are brought within the UGB, more detailed transportation system planning at the regional and local level *occurs* in conjunction with detailed land use planning.

- Rural Reserves
  These largely undeveloped reserves are also located outside the UGB, and have very limited transportation facilities. Roadways in these areas are intended to serve rural industry and

needs, and urban travel on these routes is accommodated with designs that are sensitive to their basic rural function. Rural reserves will be protected from urbanization for the foreseeable future through state statutes and administrative rules, county land use ordinances, intergovernmental agreements and by limiting rural access to urban through-routes whenever possible. Urban-to-urban travel is generally discouraged on most rural routes, with exceptions identified in this plan.

- Neighboring Cities and Green Corridors
  Neighboring cities are separated from the main urban area by rural reserves, but *are* connected to regional centers within the metropolitan area by limited-access green corridor transportation routes. Green corridor routes will include bicycle and public transportation service to neighboring cities. Neighboring cities will be encouraged, through intergovernmental agreements, to balance jobs and households in order to limit travel demand on these connectors. The region also has an interest in maintaining reasonable levels of through-travel on major routes that pass through neighbor cities and function as freight corridors. Growth of neighboring cities will ultimately affect through-travel and could create a need for bypass routes. Such impacts will also be addressed through coordination with *county* and state agencies, as *well* as individual neighboring cities.

E. Transportation System Design

Systemwide Goals and Objectives

The overall goal of the RTP is to develop a safe, efficient and cost-effective transportation system that serves the region's current and future travel needs and implements the 2040 Growth Concept while also recognizing the financial constraints and environmental impacts associated with that system. The remainder of this section: (1) presents the systemwide goals and objectives of this Plan; (2) defines adequate accessibility, mobility and safety and the types of fiscal and environmental constraints that must be addressed; and (3) details the criteria against which the performance of the system will be measured.

System Goal 1: Implement a transportation system that serves the region's current And future travel needs and implements the 2040 Growth Concept.

1. Objective: Provide the highest levels of access by multiple modes to, between and within the central city, regional centers, intermodal facilities and industrial areas.'

2. Objective: Provide high levels of access by multiple modes to, between and within station communities, town centers, main *streets* and corridors.

3. Objective: Provide access by multiple modes to, between and within areas in the region not identified above.

• Metro will develop performance measures and standards related to levels of access as part of the RTP system development phase and Chapter 1 will be updated as necessary.

4. Objective: Consider safety, right-of-way, environmental, storm water management and topographic constraints, while satisfying the general intent of the regional street design concepts.

Goal 3: Manage the regional street system to achieve the access and mobility needs of the 2040 land use components.

1. **Objective:** Provide for through travel on major routes that connect major regional destinations.

2. Objective: Provide access from local areas to nearby regional or community-scale activity centers.

Regional Street Design Concepts

The regional street design concepts *are* intended to serve multiple modes of travel in a manner that supports the specific needs of the 2040 land use components. The street design concepts fall into five broad classifications:

- Throughways that emphasize motor vehicle travel and connect major activity centers;
- *Boulevards* that serve major centers of urban activity and emphasize public transportation, bicycle and pedestrian travel while balancing the many travel demands of intensely developed areas;
- *Streets* that serve transit comdors, main streets and neighborhoods with designs that integrate many modes of travel and provide easy pedestrian, bicycle and public transportation travel;
- *Roads* that are traffic oriented; with designs that integrate all modes but primarily serve motor vehicles; and
- *Local streets* that complement the regional system by serving neighborhoods and carrying local traffic.

These design concepts apply to the regional system as it relates to specific 2040 Growth Concept land use components. Figure 1.1 provides a chart of regional street design classifications for roadways that serve a given 2040 land use. The most appropriate street design classification for roadways that serve a given land use is indicated with a solid square(s). Following Figure 1.1 is a detailed description of the purpose and design emphasis of each design type.

Figure 11
Regional Street Design Classifications and the 2040 Growth Concept

Regional Street Design Classifications		Primary Components			Secondary Components				Other Urban Components			
		Central City	Regional Centers	Industrial Areas	Station Communities	Town Centers	Main Streets	Corridors	Employment Areas	Inner Neighborhood	Outer Neighborhood	Exurban Areas
Throughways	Freeway	■	■	■	■	■	8	.	■	■	■	■
	Highway	■	■	■	■	■	■	■	■	■	■	■
Boulevards	Regional Boulevard	■	■	□	■	■	■**	□	□	□	□	
	Community Boulevard	■	■	□	■	■	■**	□	□	□	□	
Streets	Regional Street	□	□	□	□	□	■	■	□	■	■	
	Community Street	□	□	□	□	□	■	■	□	■	■	
Roads	Urban Road			■					■			
	Rural Road											■

■ *Most appropriate street design classification*

□ *Appropriate street design classification in transition areas*

** *Main Streets feature Boulevard designs along key segments and at major intersections*

Throughways

The purpose of these facilities is to connect major activity centers within the region, including the central city, regional centers, industrial areas and intermodal facilities to one another and to points outside the region. Throughways are divided into limited access Freeway designs where all intersections have separated grades, and Highways that include a mix of separate and at-grade intersections.

Both Freeways and Highways are designed to provide high speed travel for longer motor vehicle trips throughout the region, are primary freight routes and serve all 2040 Growth Concept land use components. In addition to facility designs that promote mobility, Throughways may also benefit from access management and Advanced Traffic Management System (ATMS) techniques. These facilities may *carry* transit through-service, with supporting amenities limited to transit stations. These facilities may also incorporate transit-priority design treatment where appropriate, and may incorporate light rail or other high-capacity transit.

Freeways

Freeways usually consist of four to six vehicle travel lanes, with additional lanes in some situations. They are completely divided, with no left turn lanes. Freeway designs have few street connections, and they always occur at separated grades with access controlled by ramps. There is no driveway access to Freeways or buildings oriented toward these facilities, and only emergency parking is allowed. Freeway designs do not include pedestrian amenities, with the exception of improved crossings on overpasses and access ramps. Bikeways designed in conjunction with Freeway improvements usually follow parallel routes.

Highways

Highways usually consist of four to six vehicle travel lanes, with additional lanes in some situations. Highway designs have few street connections, and they may occur at same-grade or on separate grades. Highways are usually divided with a median, but also have left turn lanes where at-grade intersections exist. There are few driveways on Highways, and buildings are not oriented toward these facilities. On-street parking is usually prohibited in Highway designs, but may exist in some locations. Highway designs include striped bikeways and sidewalks with optional buffering. Improved pedestrian crossings are located on overpasses, underpasses and at same-grade intersections.

Boulevards

Boulevards are designed with special amenities that promote pedestrian, bicycle and public transportation travel in the districts they serve. Boulevards serve the multi-modal needs of the region's most intensely developed activity centers, including the central city, regional centers, station communities, town centers and some main streets. As such, these facilities may benefit from access management, traffic calming and ATMS techniques that reinforce pedestrian, bicycle and public transportation travel. Boulevards are divided into regional and community scale designs.

Regional Boulevards

Regional Boulevards mix a significant amount of motor vehicle traffic with public transportation, bicycle and pedestrian travel where dense development is oriented toward the street. These designs feature low to moderate vehicle speeds and usually include four vehicle lanes. Additional lanes or one-way couplets may be included in some situations. Regional Boulevards have many street connections and some driveways, although combined driveways are preferable. These facilities may include on-street parking when possible. The center median serves as a pedestrian refuge and allows for left turn movements at intersections.

Regional Boulevards are designed to be transit-oriented, with high-quality service and substantial transit amenities at stops and station areas. Pedestrian improvements are substantial on boulevards, including broad sidewalks, pedestrian buffering, special street lighting and crossings at all intersections with special crossing amenities at major

intersections. These facilities have bike lanes or wide outside lanes where bike lanes are not physically possible, or are shared roadways where motor vehicle speeds are low. They also serve as primary freight routes, and may include loading facilities within the street design.

Community *Boulevards*

Community Boulevards mix motor vehicle traffic with public transportation, bicycle and pedestrian travel where dense development is oriented toward the street. These facilities are designed for low motor vehicle speeds and usually include four vehicle lanes and on-street parking. Fewer vehicle lanes may be appropriate in some situations, particularly when necessary to provide on-street parking. Community Boulevards have many street connections and some driveways, although combined driveways are preferable. Where appropriate, center medians offer a pedestrian refuge and allow for left turn movements at intersections.

Community Boulevards are designed to be transit-oriented, with high quality service that is supported by substantial transit amenities at stops and station areas. Pedestrian improvements are also substantial, including broad sidewalks, pedestrian buffering, special street lighting and crossings at all intersections with special *crossing* amenities at major intersections. Community Boulevards have striped or shared bikeways and some on-street parking. These facilities also serve as secondary freight routes, and may include loading facilities within the street design.

Streets

Streets are designed with amenities that promote pedestrian, bicycle and public transportation travel in the districts they serve, particularly where development densities warrant special transit and pedestrian design consideration. Streets serve the multi-modal needs of the region's comdors, neighborhoods and some main streets. As such, these facilities may benefit from access management, traffic calming and ATMS techniques that enhance pedestrian, bicycle and public transportation travel, while providing appropriate vehicle mobility. Streets are divided into regional and community scale designs.

Regional Streets

Regional Streets are designed to carry significant vehicle traffic while also providing for public transportation, bicycle and pedestrian travel. These facilities serve a development pattern that ranges from low density residential neighborhoods to more densely developed comdors and main streets, where buildings are often oriented toward the street at major intersections and transit stops. Regional Street designs accommodate moderate motor vehicle speeds and usually include four vehicle lanes. Additional motor vehicle lanes may be appropriate in some situations. These facilities have some to many street connections, depending on the district they are serving. Regional Streets have few driveways that are combined whenever possible. On-street parking may be included, and a center median serves as a pedestrian refuge and allows for left turn movements at intersections.

These facilities are designed to be transitoriented, with highquality service and substantial transit amenities at stops and station areas. Although less substantial than in Boulevard designs, pedestrian improvements are important along Regional Streets, including sidewalks that are buffered from motor vehicle travel, crossings at all intersections and special crossing amenities at major intersections. Regional Streets have bike lanes or wide outside lanes where bike lanes are not physically possible, or are shared roadways where motor vehicle speeds are low. They also serve as primary freight routes, and may include loading facilities within the street design, where appropriate.

Community Streets

Community Streets are designed to carry vehicle traffic while providing for public transportation, bicycle and pedestrian travel. These facilities serve low density residential neighborhoods as well as more densely developed corridors and main streets, where buildings are often oriented toward the street at main intersections and transit stops. Community Street designs allow for moderate motor vehicle speeds and usually include four motor vehicle lanes and on-street parking. However, fewer travel lanes may be appropriate when necessary to provide for on-street parking. These facilities have same to many street connections, depending on the 2040 Growth Concept land-use components they serve. Community Streets have few driveways that are shared when possible. A center median serves as a pedestrian refuge and allows for left turn movements at intersections.

Community Streets are transitoriented in design, with transit amenities at stops and station areas. Although less substantial than in Boulevard designs, pedestrian improvements are important on Community Streets, including sidewalks that are buffered from motor vehicle travel, crossings at all intersections and special crossing features at major intersections. Community Streets have striped or shared bikeways. These facilities also serve as secondary freight routes, and may include loading facilities within the street design, where appropriate.

Roads

Roads are traffic-oriented designs that provide motor vehicle mobility in the 2040 Growth Concept land use components they serve and accommodate a minimal amount of pedestrian and public transportation travel. These facilities may benefit from access management and ATMS techniques. Roads serve the travel needs of the region's low density industrial and employment areas as well as rural areas located outside the urban growth boundary (UGB). Roads are, therefore, divided into urban and rural designs.

Urban *Roads*

These facilities are designed to carry significant motor vehicle traffic while providing for some public transportation, bicycle and pedestrian travel. Urban Roads serve low density industrial areas, intermodal facilities and employment centers where buildings are less oriented toward the street. These facilities also serve new urban areas (UGB additions) where plans for urban land use and infrastructure are not complete. Urban Roads are designed to accommodate moderate vehicle speeds and usually include four motor vehicle lanes, although additional lanes may be appropriate in some situations. These designs have some

street connections, but few driveways. Urban Roads rarely include on-street parking, and a center median primarily serves to optimize motor vehicle travel and to allow for left turn movements at intersections.

Urban Roads serve as primary freight routes, and often include special design treatments to improve freight mobility. These facilities are designed for transit through-service, with limited amenities at transit stops. Sidewalks are included in Urban Road designs, although buffering is optional. Pedestrian crossings are included at intersections. Urban Roads have striped bikeways.

Rural *Roads*

Rural roads are designed to carry rural traffic while accommodating limited public transportation, bicycle and pedestrian travel. In some cases rural roads serve to connect urban traffic to throughways. Rural roads serve urban reserves, rural reserves and green corridors, were development is widely scattered and usually located away from the road. These facilities are designed to allow moderate motor vehicle speeds and usually consist of two to four motor vehicle lanes, with occasional auxiliary lanes appropriate in some situations. Rural Roads have some street connections and few driveways. On-street parking occurs on an unimproved shoulder, and is usually discouraged. These facilities may include center turn lanes, where appropriate.

Rural Roads serve as primary freight routes and often provide important farm-to-market connections. Special design treatments to improve freight mobility are therefore important in these designs. Rural Roads rarely Serve public transportation, but may include limited amenities at rural transit stops where transit service does exist. Bicycles and pedestrians share a common striped shoulder on these facilities, and improved pedestrian crossings occur only in unique situations (such as rural schools or commercial districts).

Local Street Design

Local streets serve the immediate travel needs of the region at the neighborhood level. These facilities are multi-modal, and are designed to serve most short automobile, bicycle and pedestrian trips. They generally do not carry freight in residential areas, but are important to freight movement in industrial and commercial areas. Local streets may serve as transit routes in some situations. Local street designs include many connections with other streets, and bicycle and pedestrian connections where topography or development patterns prevent full street extensions.

The design of local street systems is generally beyond the scope of the RTP. However, the aggregate effect of local street design impacts the effectivenessof the regional system when local travel is restricted by a lack of connecting routes, and local trips are forced onto regional facilities. The following connectivity prinaples should guide future development of local street designs:

reasonable levels of mobility on the region's main throughways. Therefore, regional congestion standards and other regional system performance measures are tailored to reinforce the specific development needs of the individual 2040 Growth Concept land use components.

Regional Motor Vehicle System

The motor vehicle system provides access to the central city, regional centers, industrial areas and intermodal facilities, with an emphasis on mobility between these destinations. These goals and objectives recognize the need to accommodate a variety of trip types on the regional motor vehicle system that include personal errands, commuting to work or school, commerce, freight movement and public transportation. In general, this plan recognizes there would be a higher degree of mobility during the midday from the peak-hour.

Traditionally, the automobile has been the dominant form of passenger travel, and much of the region's roadway system has been designed to accommodate growing automobile demands. In addition, the motor vehicle system also plays an important role in the movement of freight, providing the backbone for commerce in the region. The motor vehicle system also serves the bus element of the regional public transportation system (which carries the largest share of public transportation riders). Finally, motorcycles and mopeds also use the motor vehicle system, and provide more fuel-efficient alternatives to automobile travel. Although motorcycles and mopeds are governed by the same traffic laws as other motor vehicles, they have special parking and security needs.

Although focused on motor vehicle travel, the system described in this section is multi-modal, with design criteria intended to Serve motor vehicle mobility needs, while reinforcing the urban form of the 2040 Growth Concept. While the motor vehicle system usually serves bicycle and pedestrian travel, the system is designed to limit impacts of motor vehicles on pedestrian and transit-oriented districts.

Regional Motor Vehicle System Goals and *Objectives*

Goal 1: Provide a regional motor vehicle system of arterials and collectors that connect the central city, regional centers, industrial areas and intermodal facilities, and other regional destinations, and provide regional mobility.

1. Objective: Maintain a system of principal *arterials* for long distance, high speed, interstate, inter-region and intra-region travel.

2. Objective: Maintain an appropriate level of mobility on the motor vehicle system during periods of *peak* demand.

3. Objective: Maintain an appropriate level of mobility on the motor vehicle system during off-peak periods of demand.

4. Objective: Provide an adequate system of local and collector streets that supports the regional system.

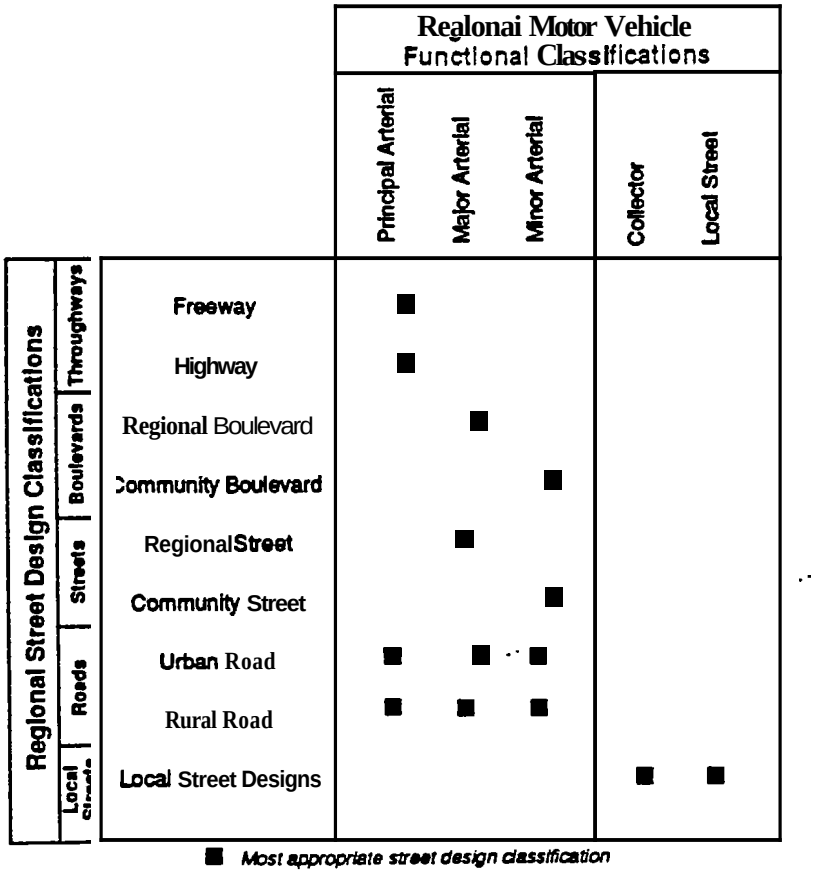
5. **Objective:** Develop improved measures of traffic generation and parking patterns for regional centers, town centers, station communities and main streets.

6. **Objective:** Develop improved measures of freight movement as defined in the 2040 Growth Concept.

Regional Motor Vehicle Classification System

The motor vehicle system includes principal arterials, major *arterials* and minor arterials and collectors of regional significance. These routes are designated on the motor vehicle system map in Chapter 4. Local comprehensive plans also include additional minor arterials, collectors and local streets. Figure 1.2 provides a *chart* of the regional motor vehicle functional classifications and their relationship to the regional street design classifications. The most appropriate street design classification for roadways that Serve a given functional classification is indicated with a solid square(s). Following Figure 1.2 is a detailed description of the regional functional classification categories.

Figure 1.2
Relationship Between Regional Street Design and Motor Vehicle Classifications



The following are the regional functional classification categories:

Principal Arterials: These facilities form the backbone of the motor vehicle network. Motor vehicle trips entering and leaving the urban area follow these routes, as well as those destined for the central city, regional centers, industrial areas or intermodal facilities. These routes also form the primary connection between neighbor cities and the urban area. Principal arterials serve as major freight routes, with an emphasis on mobility. These routes fall within regional freeway, highway and road design principles.

Principal Arterial System Design Criteria:

- Principal arterials should provide an integrated system that is continuous throughout the urbanized area and also provide for statewide continuity of the rural arterial system.

- The principal arterial system should serve the central aty, regional centers, industrial areas and intermodal facilities, and should connect key freight routes within the region to points outside the region.

- A principal arterial should provide direct service: (1) from each entry point to each exit point or (2) from each entry point to the central city. If more than one route is available, the most direct route will be designated as the principal arterial when it supports the planned urban form.

Major Arterials: These facilities serve as primary links to the principal arterial system. Major arterials, in combination with principal arterials, are intended to provide general mobility for travel within the region. Motor vehicle trips between the central city, regional centers, industrial areas and intermodal facilities should occur on these routes. Major arterials serve as freight routes, with an emphasis on mobility. These routes fall within regional boulevard, regional street, urban road and rural road design principles.

Major *Arterial System* Design Criteria:

- Major arterials should provide motor vehicle connections between the central city, regional centers, industrial areas and intermodal facilities and connect to the principal arterial system. If more than one route is available, the more direct route will be designated when it supports the planned urban form.

- Major arterials should serve as primary connections to principal arterials, and also connect to other arterials, collectors and local streets, where appropriate.

- Freight movement should not be restricted on the principal arterial network.

- The principal and major *arterial* systems in total should comprise 5-10 percent of the motor vehicle system and carry 40-65 percent of the total vehicle miles traveled.*

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* Metro will test the "system percentage" design criteria as part of the RTP system dwelopment phase to verify their appropriateness.

Minor Arterials: The minor arterial system complements and supports the principal and major arterial systems, but is primarily oriented toward motor vehicle travel at the community level connecting town centers, corridors, main streets and neighborhoods. As such, minor arterials usually serve shorter trips than principal and major arterials, and therefore must balance mobility and accessibility demands. Minor arterials may serve as freight routes, providing both access and mobility. These routes fall within community boulevard, community street, urban road and rural road design prinaples.

Minor *Arterial* System *Design Criteria*:

- Minor arterials generally connect town centers, corridors, main streets and neighborhoods to the nearby regional centers or other major destinations.

- Minor arterials should connect to major arterials, collectors, local streets and some principal arterials, where appropriate.

- The principal, major and minor arterial system should comprise 15-25 percent of the motor vehicle system and carry 65-80 percent of the total vehicle miles traveled.*

Collectors: While come collectors are of regional significance, most of the collector system operates at the community level to provide local connections to the minor and major arterial systems. As such, collectors carry fewer motor vehicles than arterials, with reduced travel speeds. However, an adequate collector system is needed to serve these local motor vehicle travel needs. Collectors may serve as freight access routes, providing local connections to the arterial network. Collectors fall within the plan's local street design principles.

Collector System *Design* Criteria:

- Collectors should connect neighborhoods to nearby centers, corridors, station areas, main streets and other nearby destinations.

- Collectors should connect to minor and major arterials and other collectors, as well as local streets.

- The collector system should comprise 5-10 percent of the motor vehicle system and carry 5-10 percent of the total vehicle miles traveled.*

Local Streets: The local street system is used throughout the region to provide for local circulation and access. However, arterials in the region's newest neighborhoods are often the most congested due to a lack of local street connections. The lack of local street connections forces local auto trips onto the prinapal and major arterial network, resulting in significant congestion on many suburban arterials. These routes fall within the plan's local street design principles.

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* Metro will test the "system percentage" design criteria as part of the RTP system development phase to verify their appropriateness.

Local **Street System** ***Design Criteria:***

- Local streets should connect neighborhoods, provide local circulation and give access to adjacent centers, corridors, station **areas** and main **streets.**

- The local street system should be designed to serve local, low speed motor vehicle travel with closely interconnected local streets intersecting **at** no more **than 660-foot** intervals. Closed local street systems ***are*** appropriate only where topography, environmental or infill limitations **exist.** Local streets should connect to major and minor arterials and collectors at a density of **8-20** connections **per** mile.

- Direct freight **access** ***on*** the local residential street system should be discouraged.

- **Local** streets should comprise 65-80 percent of the motor vehicle system **and** ***carry*** **10-30** percent of the total vehicle miles traveled.,

Regional Public Transportation System

The regional public transportation system **is** a key component in providing access to the region's most important activity centers, and for 25 years **has** been the centerpiece to the region's strategies for improving air quality and reducing reliance ***on*** the automobile **as** a mode of travel. Since the construction of the transit mall in the early 1970s, peak-hour transit ridership to downtown Portland has **grown** to more **than** 40% of work trips, and the system **has** expanded to include light rail transit.

In 1994, the region's residents overwhelmingly approved funds to extend light **rail as** part of the South/North transit project. Public transportation service is **also** prominent in Metro's 2040 Growth Concept, such that key elements of the concept, including regional centers, town centers, corridors, main streets and station communities, ***are*** strongly oriented toward **existing** and planned public transportation. The overarching goal of the public transportation system **within** the context of the 2040 Growth Concept is to provide an appropriate level of access to regional activities **for** everyone residing **within** the Urban Growth Boundary (UGB).

Public transportation should serve the entire urban area, and the hierarchy of service **types** described in **this** section define what level of service is appropriate for specific **areas.** The public transportation section is divided into **two** parts. The first defines **the** regional public transportation system components that are the **basis** for implementing the **2040 Growth** Concept. The second **section** provides specific **goals** and objectives for implementing the appropriate level and type of public transportation service for ***each*** **2040** Growth Concept **land** use designation.

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* **Metro will test the "system percentage" design criteria as part of the RTP system development phase to verify their appropriateness.**

Regional Public Transportation System Components

The following public transportation system components establish a network that serves the needs of individual 2040 land use components. This system serves as the framework for consistency among plans of local jurisdictions and Tri-Met Underlying this network of fast and frequent service is a secondary network of local bus, park-and-ride and demand responsive type Service that provide local public transportation. Specific elements of the secondary network will be developed by Tri-Met and local jurisdictions. Tri-Met is the primary public transportation provider for the metropolitan region and is committed to providing the appropriate level of service to achieve regional objectives and to implement the 2040 Growth Concept. However, the RTP recognizes providers other than Tri-Met to serve special transportation needs. while this is not required in the RTP, Metro is committed to helping coordinate agreements to address special needs as they arise. Such special needs may include private, public/private partnerships, or public actions, as appropriate. The following sections present a description of the modes that comprise the regional public transportation system (primary and secondary), the principal 2040 Growth Concept land uses (primary and secondary) served by each mode, and facility design guidelines to provide an appropriate operating environment and level of pedestrian and bicycle accessibility.

Primary Transit Network

The Primary Transit Network (PTN) is a long range transit network designed to serve the growth patterns adopted in the 2040 Growth Concept. The PTN supports intensification of specific land uses identified in the growth concept by providing convenient transit access and improved transit service connectivity. The PTN consists of four major transit modes (e.g., Light Rail Transit (LRT), Regional Rapid Bus, Frequent Bus and primary bus service) that operate at frequenaes of 15 minutes or less all day. Specific modes of the PTN will target service to primary land use components of the 2040 Growth Concept including central aty, regional centers, industrial areas and intermodal facilities (includes the Portland International Airport). Some secondary land-use components comprised of station communities, town centers, main streets and comdors will also be served by the PTN. Any transit trip between two points in the central city, regional centers, town centers, main streets, stations areas or comdors can be completed on the PTN. The functional and operational characteristics of the PTN's major transit modes are described below.

Light Rail Transit

Light rail transit (LRT) is a high speed and high capaaty service that operates on a fixed guideway within an exclusive right-of-way (to the extent possible) that connect the central city with regional centers. LRT also serves existing regional public attractions such as avic stadium, the convention center, and the Rose Garden), and station communities (secondary land use component) LRT service runs at least every 10 minutes during the weekday and weekend midday base periods, operates at higher speed outside of the CBD and makes very few stops. A high level of passenger amenities are provided at transit stations and station communities including schedule information, ticket machines, lighting, benches, shelters, bicycle parking and commercial services. The speed and schedule reliability of LRT can be maintained by the provision of signal preemption at grade crossings and/or intersections.

Regional Rapid *Bus*

Regional Rapid Bus provides high frequency, high speed service along major transit routes with limited stops. This service is a high-quality bus that emulates LRT service in speed, frequency and comfort. A high level of transit amenities are provided at major transit stops and at station communities. Regional Rapid Bus passenger amenities include schedule information, ticket machines, lighting, benches, covered bus shelters and bicycle parking.

Frequent Bus

Frequent Bus provides high frequency local service along major transit routes with frequent stops. This services include a high level of transit preferential treatments and passenger amenities along the route such as covered bus shelters, *curb* extensions, reserved bus lanes, lighting, median stations and/or signal preemption.

Primary *Bus*

Primary bus service is provided on most major urban streets. This type of bus service operates with maximum frequencies of 15 minutes with conventional stop spacing along the route. Transit preferential treatments and passenger amenities such as covered bus shelters, lighting, signal preemption and curb extensions are appropriate at high ridership locations.

Secondary Transit Network (STN)

The secondary transit network is comprised of secondary bus, mini-bus, paratransit and park-and-ride service. Secondary service is focused more on accessibility, frequency of service along the route and coverage to a wide range of land use options rather than on speed between two points. Secondary transit is designed as an alternative to the single-occupant vehicle by providing frequent, reliable service. Secondary bus service generally is designed to serve travel with one trip end occurring within a secondary land use component.

Secondary Bus

Secondary bus lines provide coverage and access to primary and secondary land use components. Secondary bus service runs as often as every 30 minutes on weekdays. Weekend *service* is provided as demand warrants.

Minibus

These services provide coverage in lower density areas by providing transit connections to primary, and secondary land use components. Minibus services, which may range from fixed route to purely demand responsive including dial-a-ride, employer shuttles and bus pools, provide at least a 60 minute response time *on* weekdays. Weekend *service* is provided as demand warrants.

Paratransit

Paratransit service is defined as non-fixed route service that serves speaal transit markets, including "ADA service throughout the greater metro region.

Park-and-Ride

Park-and-ride facilities provide convenient auto access to regional trunk route service for areas not directly served by transit. Bicycle and pedestrian access as well as parking and storage accommodations for bicyclists are considered in the siting process of new park-and-ride facilities. In addition, the need for a complementary relationship between park-and-ride facilities and regional and local land use goals exists and requires periodic evaluation over time for continued appropriateness.

Other Public Transportation Options

Other public transportation options may serve certain destinations in the metropolitan area. These services include commuter rail- and streetcars.

Interurban Public Transportation

The federal ISTEA has identified interurban travel and passenger "intermodal" facilities (e.g., bus and train stations) as a new element of regional transportation planning. The following interurban components are important to the regional transportation system:

Passenger Rail

Inter-city high-speed rail is part of the state transportation system and will eventually extend from the Willamette Valley north to British Columbia. Amtrak already provides service south to California and east to the rest of the continental United States. These systems should be integrated with other public transportation services within the metropolitan region with connections to passenger intermodal facilities. High-speed rail needs to be complemented by urban transit systems within the region.

Inter-city Bus

Intercity bus connects points within the region to nearby destinations, including neighboring cities, recreational activities and tourist destinations. Several private inter–city bus services are currently provided in the region.

Passenger Intermodal Facilities

Passenger intermodal facilities serve as the hub for various passenger modes and the transfer point between modes. These facilities are closely interconnected with urban public transportation service and highly accessible by all modes. They include Portland International Airport, Union Station and intercity bus stations.

4. Objective: As appropriate, consider providing secondary bus or other public transportation alternatives to serve outlying regional destinations.

Goal 4 Continue to develop fixed-route service and complementary paratransit services which comply with the Americans with Disabilities Act of 1990 (ADA).

1. Objective: Provide service to persons determined to be eligible for ADA paratransit that is comparable with service provided on the fixed route system.

2. Objective: Continue to work with local jurisdictions to make public transportation stops and walkway approaches accessible.

Goal 5: Continue efforts to maintain transit as the safest forms of motorized transportation in the region.

1. Objective: Improve the existing level of safe public transportation operations.

2, Objective: Reduce the number of avoidable accidents involving transit vehicles.

3. Objective: Improve the existing level of passenger safety and security on public transportation.

Goal 6: Expand the amount of information available about public transportation to allow more people to use the system.

1. Objective: Increase awareness of public transportation and how to use it through expanded education and public information media and easy to understand schedule infoxmation and format.

2. Objective: Improve the system for receiving and responding to feedback from public transportation users.

3. Objective: Explore new technologies to improve the availability of schedule, route, transfer and other service information.

Goal 7: Continue efforts to make public transportation an environmentally friendly form of motorized transportation.

1. Objective: Continue to reduce the amount of air pollutants and noise generated by public transportation vehicles.

Regional Freight System

Developing and adopting the Regional Freight Network and associated system goals and objectives acknowledges that the movement of goods *and services* makes a significant contribution to the region's economy and wealth, and that it contributes to our quality of life. The

region's relative number of jobs in transportation and wholesale trade exceeds the national average. The regional economy has historically, and continues to be closely tied to the transportation and distribution sectors. This trend is projected to increase. Freight volume is projected (by the 2040 Commodity Flow Analysis) to grow two to three times by 2040 - a rate faster than population growth.

The significant growth in freight projected by the 2040 Commodity Flow Analysis indicates the need to make available adequate land for expansion of intermodal facilities, manufacturing, wholesale and distribution activities, and to continue maintaining and enhancing the freight transportation network. The 2040 Land Use Scenario identifies industrial sanctuaries for distribution and manufacturing activities; the RTP freight network identifies the transportation infrastructure and intermodal facilities that serve these land uses and commodities flowing through the region to national and international markets. The following goals and objectives direct the region's planning and investment in the freight transportation system.

Regional Freight System Goals and *Objectives*

Goal 1: Provide efficient, cost-effective and safe movement of freight in and through the region.

1. Objective: Maintain a reasonable and reliable travel (transit) time for moving freight through the region in freight transportation corridors.

   - Freight Operation (such as weigh-in-motion, automated truck counts, enhanced signal timing on freight connectors)

   - Where appropriate, consider improvements that are dedicated to freight travel only

2. Objective: - Consider the movement of freight when conducting multi-modal transportation studies, as identified in the RTP of local transportation system plans (TSPs).

3. Objective: Work with the private sector, local jurisdictions, ODOT and other public agencies to:

   - develop the regional Intermodal Management System (IMS) and Congestion Management system (CMS);

   - monitor the efficiency of freight movements on the regional transportation network;

   - identify existing and future freight mobility problems and opportunities; and

   - reduce inefficiencies or conflicts on the freight network

4. Objective: Coordinate public policies to reduce or eliminate conflicts between current and future land uses, transportation uses and freight mobility needs, including those relating to:

- hazardous materials movement.

2. Objective: Identify and monitor potential safety problems on the freight network

- Collect and analyze acadent data related to the freight network using the IMS data base.

Regional Bicycle System

The bicycle is an important component in the region's strategy to provide a multi-modal transportation system. The 2040 growth concept focuses growth in the central city and regional centers, station communities, *town* centers and main streets. One way to meet the region'stravel needs is to provide greater opportunity to use bicycles for shorter trips.

The regional bikeway system identifies a network of bikeways throughout the region that provide for bicyclist mobility between and accessibility to and *within* the central city, regional centers and town centers. A complementary system of on-street regional bikeway corridors, regional multi-use trails and local bikeways is proposed to provide a continuous network. In addition to major bikeway corridors that create a network of regional through routes, the system provides accessibility to and within regional and town centers. Metro's 1994 travel behavior survey found that places in the region with good street continuity, ease of street crossing and gentle topography experience more than a three percent bicycle mode share, while lower density areas experience around one percent bicycle mode share. A greater understanding of bicycle travel is still needed, and development of a regional bicycle forecasting model is underway. Implementation of the regional bicycle plan element of the RTP will provide for consistently designed, safe and convenient routes for *bicyclists* between jurisdictions and to major attractions throughout the region, will work toward increasing the modal share of bicycle trips, and will encourage bicyclists and motorists to share the road safely.

Regional *Bicycle* System *Goals and Objectives*

Goal 1: Provide a continuous regional network of safe and convenient bikeways integrated with other transportation modes and local bikeway systems.

1. Objective: Integrate the efforts of the state, counties and aties in the region to develop a convenient, safe, accessible and appealing regional system of bikeways.

2. Objective: Ensure that the regionalbikeway system functions as part of the overall transportation system.

Goal 2: Increase the modal share of bicycle trips.

1. Objective: Develop and update a system of regional bikeways that connect activity centers as identified in the 2040 Growth Concept and the Regional Framework Plan .

2. **Objective:** Promote increased bicycle use for all travel purposes.

3. **Objective:** Coordinate with Tri-Met to ensure improved bicycle access and parking facilitiesat existing and future LRT stations, transit centers and park-and-ride locations.

4. **Objective:** Develop travel-demand forecasting for bicycle- use and integrate with regional transportation planning.

Goal 3: Ensure that all transportation **projects include bicycle facilities using established design** standards appropriate **to regional land use and** street **classifications.**

1. **Objective:** Ensure that bikeway projects, bicycle parking and other end-of-trip facilities are designed using established Standards, and that bikeways **are** connected with **other jurisdictions** and the regional bikeway **network**

2. **Objective:** Ensure that jurisdictions implement bikeways in accordance with established design standards.

3. **Objective: Ensure** integration of multi-use paths with on-street bikeways using established design standards.

5. **Objective:** Provide appropriate short and long term bicycle parking and other end-of-trip facilities at regional activity centers through the use of established design standards.

Goal **4: Encourage bicyclists and** motorists **to share the road safely.**

1. **Objective:** Coordinate regional **efforts** to promote safe use of roadways by bicyclists and motorists through a public awareness program.

2. **Objective:** Expand upon local traffic education programs to provide region wide coverage and actively distribute safety information to local **jurisdictions,** law enforcement agenaes, **schools** and community organizations that **informs** and educates bicyclists, pedestrians and motorists.

3. **Objective:** Reduce the rate of bicycle-related accidents in the region.

4. **Objective:** Identify and improve high-frequency bicycle-related accident locations.

R gional Pedestrian System

By providing dedicated space for those ***on*** foot or **using** mobility devices, pedestrian facilities **are** recognized **as** an important incentive that promotes **walking as** a mode of travel. Throughout **this** document, the term "walking" should **be** interpreted to include traveling on foot **as** well as those pedestrians using mobility aids, such **as** wheelchairs. **Walking** for short **distances** is an attractive option for most people when safe and convenient pedestrian facilities are available. Combined with adequate sidewalks and **curb** ramps, **amenities** such **as** benches, ***curb*** extensions,

marked street crossings, landscaping and wide planting strips make walking an attractive and convenient mode of travel. The focus of the regional pedestrian system is identifying areas of high, or potentially high, pedestrian activity in order to target infrastructure improvements that can be made with regional funds.

A well connected, high-quality pedestrian environment facilitates walking trips by providing safe and convenient access to pedestrian destinations within a short distance. Public transportation use is enhanced by pedestrian improvements, especially those facilities that connect stations or bus stops to surrounding areas or that provide safe and attractive waiting areas. Improving walkway connections between office and commercial districts and surrounding neighborhoods provides opportunities for residents to walk to work, shopping or to run personal errands. This reduces the need to bring an automobile to work and enhances public transportation and carpooling as commute options. An integrated pedestrian system supports and links every other element of the regional transportation system and complements the region's urban form and growth management goals.

Regional Pedestrian System Goals and Objectives

Goal 1: Increase walking for short trips and improve access to the region's public transportation system through pedestrian improvements and changes in land use patterns, designs and densities.

1. Objective: Increase the walk mode share for short trips, including walking to public transportation, near and within the central city, regional centers, town centers, main streets, corridors and LRT station communities.

2. Objective: Improve walkway networks serving transit centers, stations and stops.

Goal 2: Make the pedestrian environment safe, convenient, attractive and accessible for all users.

1. Objective: Complete pedestrian facilities (i.e., sidewalks, street crossings, curb ramps) needed to provide safe and convenient pedestrian access to and within the central city, regional centers, town centers, main streets, corridors and to the region's public transportation network.

2. Objective: Improve street amenities (e.g., landscaping, pedestrian-scale street lighting, benches and shelters) affecting the pedestrian and transit user near and within the central city, regional centers, town centers, main streets, corridors and the primary transit network

Goal 3: Provide for pedestrian access, appropriate to existing and planned land uses, street classification and public transportation, as a part of all transportation projects.

1. Objective: Focus priority among regionally funded pedestrian projects on those projects which are most likely to increase pedestrian travel, improve the quality of the pedestrian

COMPREHENSIVE PLAN FOR THE CITY OF BEAVERTON

VOLUME V: COMMUNITY PLANS



Downtown Beaverton Regional Center

Community Plan

Downtown Beaverton Regional Center
Community Plan Index

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Comprehensive Plan Land Use Map 9
Zoning Map 10
Functional Classification Map.....11
Major Pedestrian Route Map 12
Significant Natural Resources Map.....13
Historic Resources Map.....14

Maps found in the Comprehensive Plan and the Development Code provide the basis for the mapped figures referenced in Community Plans. The Community Plan figures provide an expanded view of selected Comprehensive Plan and Development Code maps with a focus on a specific geographical area of the City. Community Plan figures include views of the Comprehensive Plan Land Use Map, the Transportation Functional Classification Map, the Significant Natural Resources Map, the Historic Resources map, the Development Code Zoning Map and Major Pedestrian Route Map. Amendments to these figures follow procedures specified within the document in which they are located. Community Plan figures will be administratively updated as amendments to the Comprehensive Plan and Development Code maps are adopted.

Downtown Beaverton Regional Center

Community Plan Context

The Downtown Beaverton Regional Center Community Plan is one of a number of City planning documents. These documents, when viewed in total, comprise the City's Comprehensive Plan. The intent of this context statement is to explore the relationship between this document and the other documents comprising the Comprehensive Plan.

The Downtown Beaverton Regional Center Community Plan applies to the area generally bordered to the east by Highway 217, to the south by 5th Street, to the west by Hocken and to the north by Center and Hall Streets. The Regional Center includes two of several light rail station areas in Beaverton, namely the Beaverton Central and Beaverton Transit stations. Additionally, the Downtown Regional Center includes a Historic District that is listed on the National Register of Historic Places. This Community Plan describes policies and action statements specific to this particular geographic location. Fully understanding the Community Plan also requires review of the Comprehensive Plan for the general policies applicable to the City as a whole and the Beaverton Development Code and Engineering Design Standards.

The following documents comprise the City's Comprehensive Plan:

Volume I - City of Beaverton Comprehensive Plan
Volume II - Comprehensive Plan Background and Supporting Documents
Volume III - Statewide Planning Goal 5 Inventory Documents
Volume IV - Transportation System Plan
Volume V - Community Plans

The City of Beaverton Comprehensive Plan is a policy document that serves as a policy framework for the other volumes of the Plan. Volume I, therefore, addresses the broad range of comprehensive planning and development issues with action statements to guide implementation of the policy directives.

Volume II - the Comprehensive Plan Background and Supporting Documents provides the demographic and economic data and forecasts for the City's Comprehensive Plan. It should be noted that these documents provide information supporting and guiding the development of the policy framework, however, the data is a snapshot in time and cannot be relied upon for future decision making without researching the data to ensure that conditions have not changed. Metro, the regional governing body in the Portland Metropolitan Area, provides much of the data informing the City's Comprehensive Plan policy making. Policies and regulations in Metro Functional Plans also direct some City policy decisions and regulations.

Volume III - Statewide Planning Goal 5 Inventory Documents includes the background and supporting documents, mapping and findings for the City's response to Statewide Planning Goal 5. The documents include the following:

Significant Natural Resource Area Inventories

This document inventories applicable Statewide Planning Goal 5 resource areas and identifies "Significant" resources.

Historic Resources Inventory

This document identifies the City's Historic Resources, provides data regarding building typology, historical context, condition, and any significant events in Beaverton's history related to the building. Photographs are also included in the inventory. As an additional component to the City's historic resources, the City adopted a list of historic trees through the Historic Resource Review Committee, Planning Commission and City Council.

Volume IV - Transportation System Plan implements regional goals and policies and plans multimodal improvements for a 20 year period.

Volume V - Community Plans describe policies and action statements and map designations specific to a particular geographic location.

The City of Beaverton Development Code implements the policy directives of Volumes I and V of the Comprehensive Plan. The Development Code includes the procedural framework for land use decisions, including zoning district information, allowed uses, density and dimensional requirements, public facility requirements, land division requirements and standards for land development.

Community Plan Goal 1: Promote the Downtown Beaverton Regional Center as "Downtown" Beaverton and create and maintain a positive image for the Downtown area.

Policies:

a) Plan for and develop public improvements identifying and distinguishing "Downtown" Beaverton.

Action 1: *Clearly identify the City's downtown through a community involvement process to foster civic pride and create a definition of "downtown" agreed to by the community.*

Action 2: *Conduct a project with neighborhood, community, civic and educational groups to identify key locations for civic features within the Beaverton Regional Center and to create design standards for or actual designs for the civic features. Aforementioned groups could include the Beaverton School District, Portland Community College Rock Creek Campus, Beaverton Arts Commission, and Neighborhood Association Committees, Beaverton Chamber of Commerce and other similar groups.*

Action 3: *Establish downtown gateways on Canyon Road at Highway 217, Canyon Road and Hocken Avenue, Beaverton-Hillsdale Highway and Highway 217, and Farmington and Hocken Avenue, and other areas as identified through a community process to both define the limits of downtown and establish the initial image of the area.*

Action 4: *Coordinate a comprehensive design plan for Canyon Road, Beaverton-Hillsdale Highway, and Farmington Road to implement Boulevard Design concepts with the Oregon Department of Transportation, Washington County Department of Land Use and Transportation, and adjacent property owners. Roadway design, signage, integrated street trees and furniture in concert with development design and siting should emphasize the function and importance of this route in conveying a favorable impression of downtown.*

b) Buildings along the downtown segments of Canyon Road, Beaverton-Hillsdale Highway, Farmington Road, and other Major Pedestrian Routes shall be located close to the right-of-way to help create a well-defined streetscape. West of

Hocken along the Tualatin Valley Highway, a more open, less well-defined appearance is acceptable to more clearly delineate the downtown core from the adjoining areas.

c) Within the Beaverton National Historic District, listed on the National Register of Historic Places, new construction shall be limited to two story structures. New construction within the District shall use architectural forms, details, and materials which borrow from the original architecture of the area, but do not necessarily replicate the historic architecture and design.

Action 1: *The City shall carefully evaluate older parts of Downtown to promote rehabilitation or redevelopment, as appropriate.*

d) Limit new construction, with the exception of the Beaverton National Historic District, to multi-story structures.

Community Plan Goal 2: Create a Regional Center in Downtown Beaverton that is a focus for commerce, high density housing, and civic activities.

Policies:

a) Development in the Downtown Beaverton Regional Center shall be designed to create a distinct Beaverton downtown.

Action 1: *Adopt and apply land use regulations promoting Beaverton's downtown both as distinct from the rest of the community and from other jurisdictions in the region.*

Action 2: *Adopt incentives for new development in the Beaverton Regional Center that foster creation of a Downtown Beaverton as a distinct destination with a sense of place. Incentives could include public investments such as public art, parking enforcement, street furniture, and density bonuses.*

b) Encourage new office development in Downtown Beaverton in order to:

- *revitalize downtown;*
- *provide more jobs in proximity to residential areas,*
- *reduce trip lengths, which in turn reduces fuel consumption; and*
- *make transit services more feasible as an alternative to the automobile with concentrated employment opportunities.*

Action 1: *Designate the downtown as a redevelopment area to enable the City*

to take a proactive role in the development of downtown.

c) Locate major activity areas of Downtown around public plazas, which will complement the street spaces and provide for a location for public gatherings.

Action 1: *Develop, adopt and apply land use regulations requiring new development to reserve a small percentage of developable area for common open space such as plazas or wider sidewalks allowing space for outdoor gathering.*

d) Uses fronting plazas shall be pedestrian oriented and of a type that will activate, as well as benefit from, the plaza area. Such uses include, but are not limited to restaurants, bakeries, or florist shops.

e) Encourage increased development of close in, multi-family housing in Downtown.

Community Plan Goal 3: Provide multi-modal connections within downtown and between downtown and other parts of the community.

Policies:

a) Connect the Beaverton Central and Beaverton Transit light rail station areas to designated pedestrian routes providing pedestrian serving retail streets and plazas.

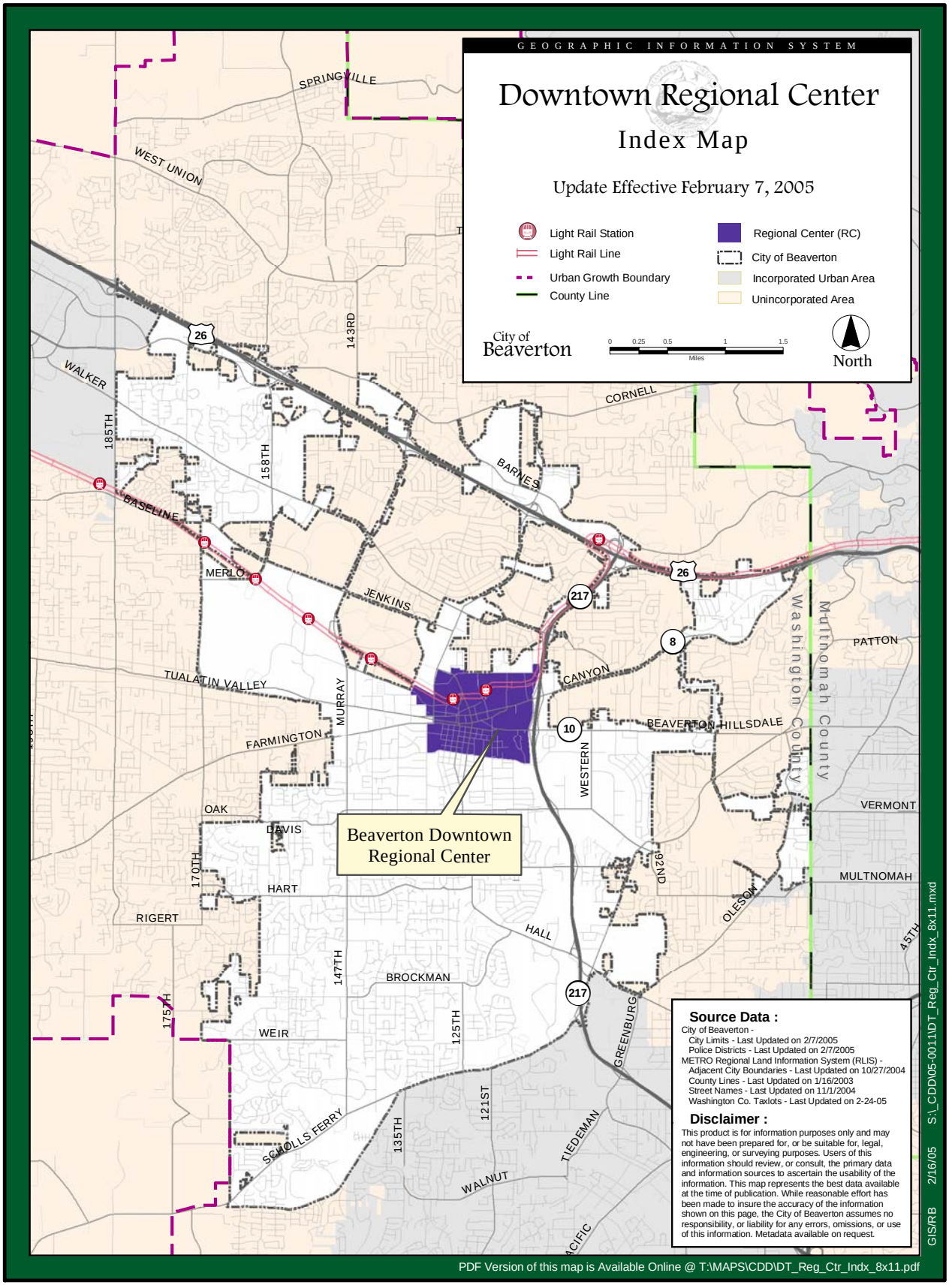
Action 1: *Improve pedestrian routes across Canyon Road to the southern areas of the Regional Center.*

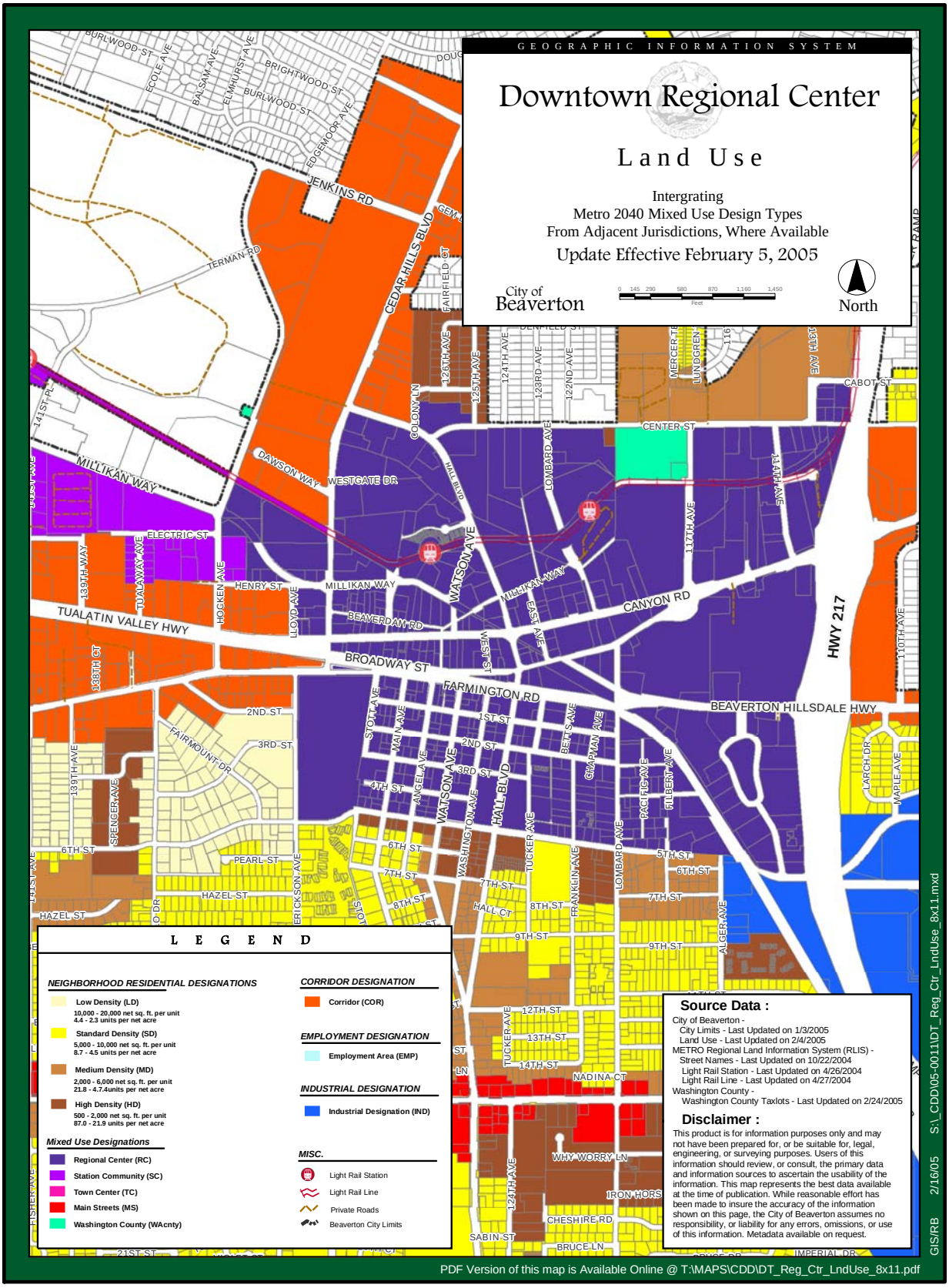
Action 2: *Develop a long-term strategy to promote public transit and improve the pedestrian experience in Downtown Beaverton through signage, public information, street furniture inviting to pedestrians, and other strategies to increase pedestrian traffic in Downtown.*

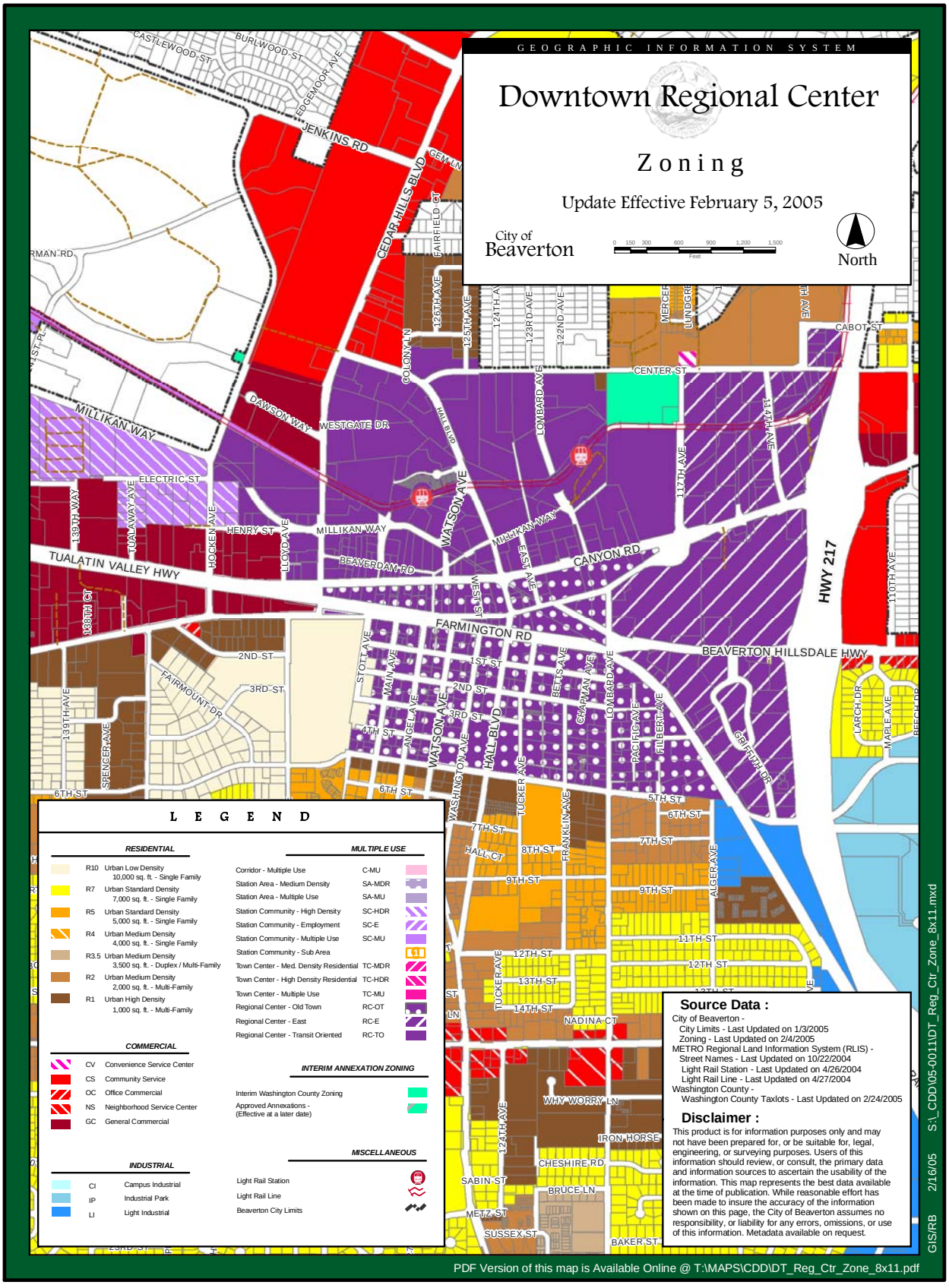
b) Develop a pedestrian, bicycle, open space network in the Regional Center. Use corridors along Beaverton Creek and its tributaries as routes for bicycle and pedestrian travel.

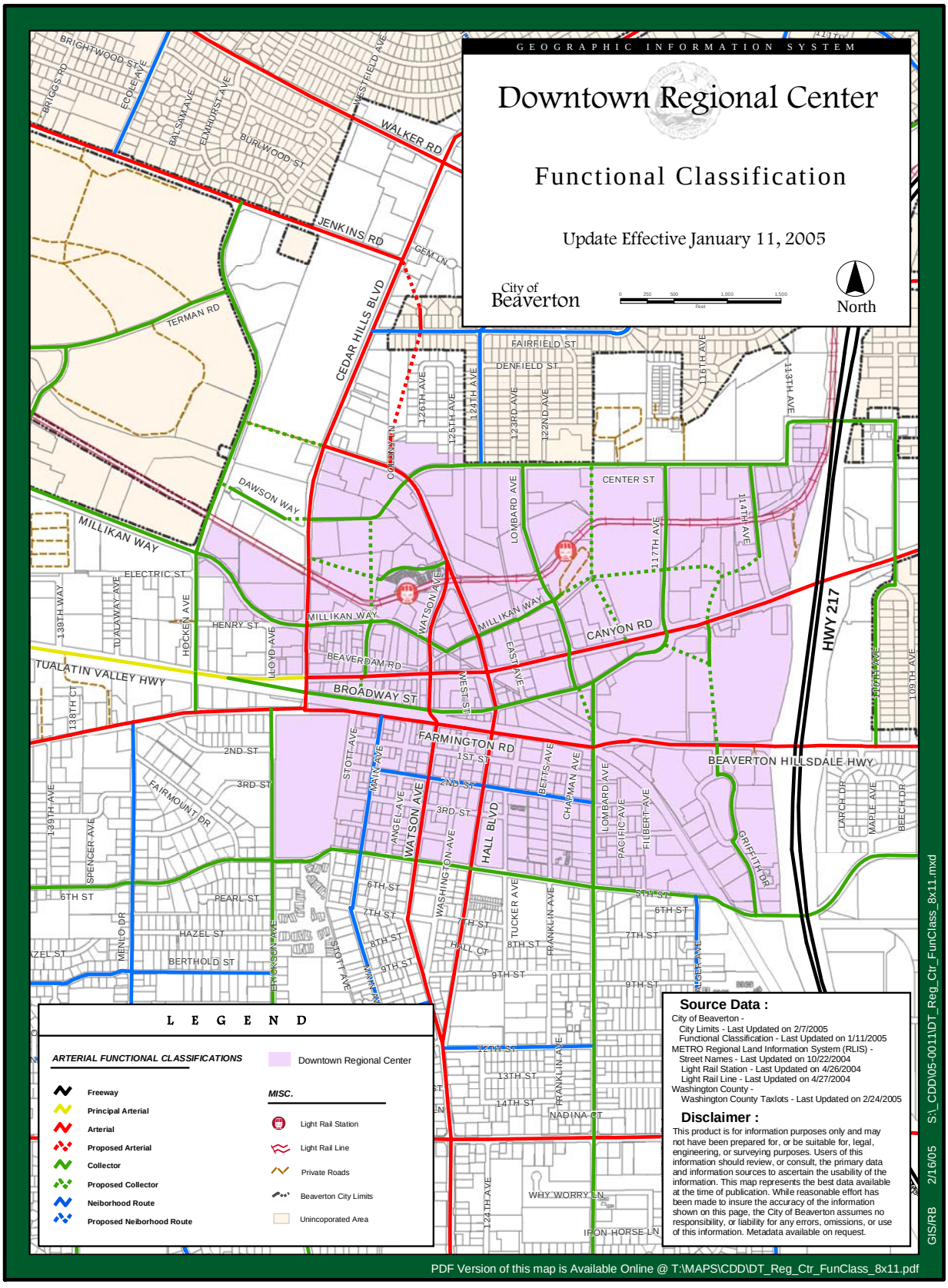
Action 1: *Adopt and apply land use regulations requiring pedestrian and bicycle connectivity in the Regional Center.*

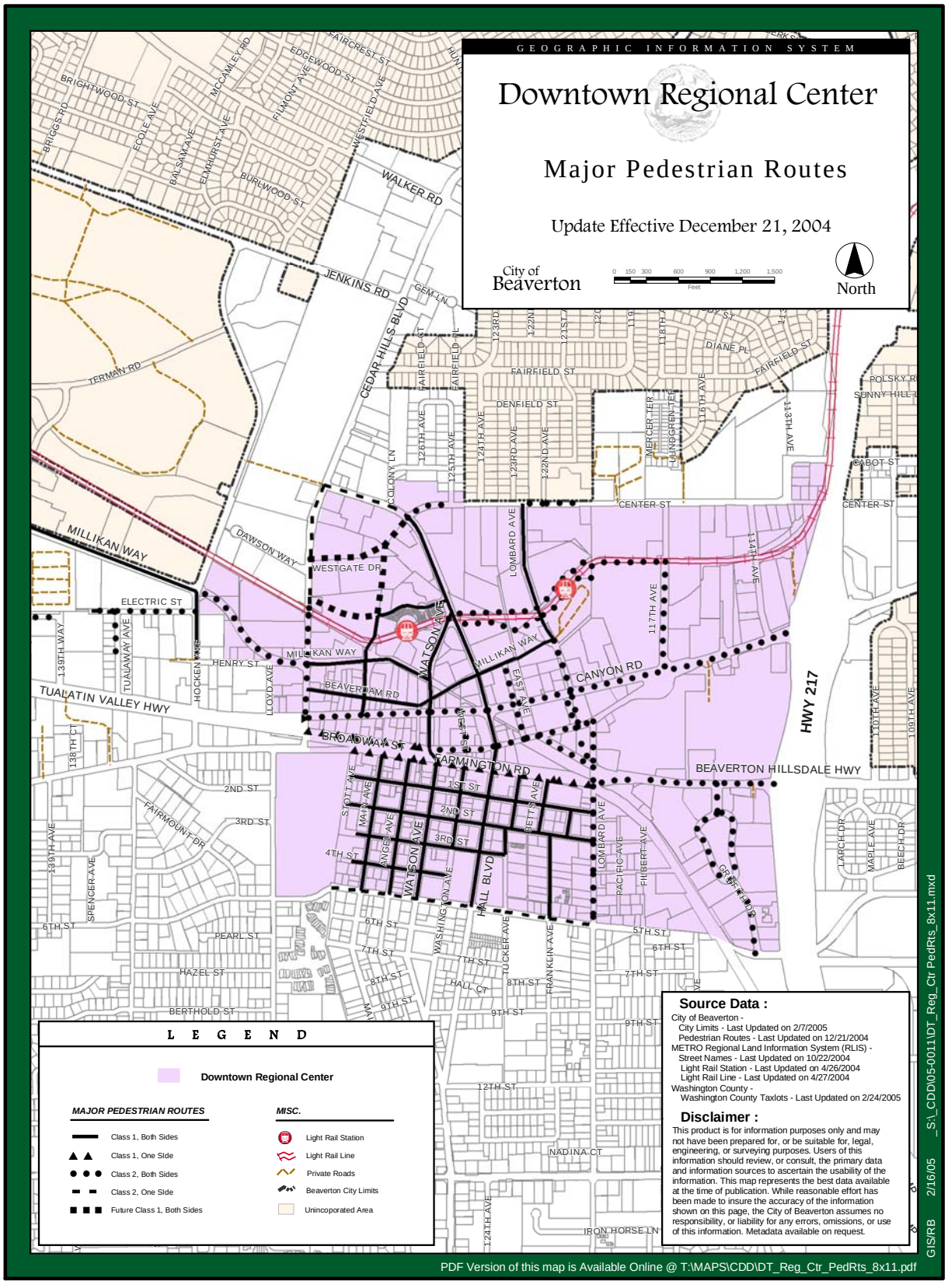
Action 2: *Adopt and apply land use regulations providing incentives for open space dedication, such as increased density or reduced landscaping requirements.*


GEOGRAPHIC INFORMATION SYSTEM
Downtown Regional Center
Index Map
Update Effective February 7, 2005
Light Rail Station
Light Rail Line
Urban Growth Boundary
County Line
Regional Center (RC)
City of Beaverton
Incorporated Urban Area
Unincorporated Area
City of Beaverton
0 0.25 0.5 1 1.5
Miles
North
SPRINGVILLE
WEST UNION
WALKER
185TH
143RD
158TH
CORNELL
BARNES
BASELINE
MERLO
JENKINS
TUALATIN VALLEY
MURRAY
FARMINGTON
CANYON
BEAVERTON HILLSDALE
WESTERN
PATTON
Washington County
Multnomah County
VERMONT
MULTNOMAH
OAK
DAVIS
HART
RIGERT
170TH
147TH
BROCKMAN
HALL
OLESON
192ND
45TH
175TH
WEIR
125TH
GREENBURG
SCHOLLS FERRY
135TH
121ST
TIEDEMAN
WALNUT
26
217
8
10
Beaverton Downtown Regional Center
Source Data :
City of Beaverton -
City Limits - Last Updated on 2/7/2005
Police Districts - Last Updated on 2/7/2005
METRO Regional Land Information System (RLIS) -
Adjacent City Boundaries - Last Updated on 10/27/2004
County Lines - Last Updated on 1/16/2003
Street Names - Last Updated on 11/1/2004
Washington Co. Taxlots - Last Updated on 2-24-05
Disclaimer :
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PDF Version of this map is Available Online @ T:\MAPS\CDD\DT_Reg_Ctr_Indx_8x11.pdf


GEOGRAPHIC INFORMATION SYSTEM
Downtown Regional Center
Land Use
Intergrating
Metro 2040 Mixed Use Design Types
From Adjacent Jurisdictions, Where Available
Update Effective February 5, 2005
City of Beaverton
North
LEGEND
NEIGHBORHOOD RESIDENTIAL DESIGNATIONS
Low Density (LD)
10,000 - 20,000 net sq. ft. per unit
4.4 - 2.3 units per net acre
Standard Density (SD)
5,000 - 10,000 net sq. ft. per unit
8.7 - 4.5 units per net acre
Medium Density (MD)
2,000 - 6,000 net sq. ft. per unit
21.8 - 4.7units per net acre
High Density (HD)
500 - 2,000 net sq. ft. per unit
87.0 - 21.9 units per net acre
Mixed Use Designations
Regional Center (RC)
Station Community (SC)
Town Center (TC)
Main Streets (MS)
Washington County (WAcnty)
CORRIDOR DESIGNATION
Corridor (COR)
EMPLOYMENT DESIGNATION
Employment Area (EMP)
INDUSTRIAL DESIGNATION
Industrial Designation (IND)
MISC.
Light Rail Station
Light Rail Line
Private Roads
Beaverton City Limits
Source Data :
City of Beaverton -
City Limits - Last Updated on 1/3/2005
Land Use - Last Updated on 2/4/2005
METRO Regional Land Information System (RLIS) -
Street Names - Last Updated on 10/22/2004
Light Rail Station - Last Updated on 4/26/2004
Light Rail Line - Last Updated on 4/27/2004
Washington County -
Washington County Taxlots - Last Updated on 2/24/2005
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GIS/RB 2/16/05 S:_CDD\05-0011\DT_Reg_Ctr_LndUse_8x11.mxd


GEOGRAPHIC INFORMATION SYSTEM
Downtown Regional Center
Zoning
Update Effective February 5, 2005
City of Beaverton
0 150 300 600 900 1,200 1,500
Feet
North
L E G E N D
RESIDENTIAL
R10 Urban Low Density 10,000 sq. ft. - Single Family
R7 Urban Standard Density 7,000 sq. ft. - Single Family
R5 Urban Standard Density 5,000 sq. ft. - Single Family
R4 Urban Medium Density 4,000 sq. ft. - Single Family
R3.5 Urban Medium Density 3,500 sq. ft. - Duplex / Multi-Family
R2 Urban Medium Density 2,000 sq. ft. - Multi-Family
R1 Urban High Density 1,000 sq. ft. - Multi-Family
COMMERCIAL
CV Convenience Service Center
CS Community Service
OC Office Commercial
NS Neighborhood Service Center
GC General Commercial
INDUSTRIAL
CI Campus Industrial
IP Industrial Park
LI Light Industrial
MULTIPLE USE
Corridor - Multiple Use C-MU
Station Area - Medium Density SA-MDR
Station Area - Multiple Use SA-MU
Station Community - High Density SC-HDR
Station Community - Employment SC-E
Station Community - Multiple Use SC-MU
Station Community - Sub Area
Town Center - Med. Density Residential TC-MDR
Town Center - High Density Residential TC-HDR
Town Center - Multiple Use TC-MU
Regional Center - Old Town RC-OT
Regional Center - East RC-E
Regional Center - Transit Oriented RC-TO
INTERIM ANNEXATION ZONING
Interim Washington County Zoning
Approved Annexations - (Effective at a later date)
MISCELLANEOUS
Light Rail Station
Light Rail Line
Beaverton City Limits
Source Data :
City of Beaverton -
City Limits - Last Updated on 1/3/2005
Zoning - Last Updated on 2/4/2005
METRO Regional Land Information System (RLIS) -
Street Names - Last Updated on 10/22/2004
Light Rail Station - Last Updated on 4/26/2004
Light Rail Line - Last Updated on 4/27/2004
Washington County -
Washington County Taxlots - Last Updated on 2/24/2005
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GIS/RB 2/16/05 S:_CDD\05-0011DT_Reg_Ctr_Zone_8x11.mxd
PDF Version of this map is Available Online @ T:\MAPS\CDD\DT_Reg_Ctr_Zone_8x11.pdf


GEOGRAPHIC INFORMATION SYSTEM
Downtown Regional Center
Functional Classification
Update Effective January 11, 2005
City of Beaverton
North
LEGEND
ARTERIAL FUNCTIONAL CLASSIFICATIONS
Freeway
Principal Arterial
Arterial
Proposed Arterial
Collector
Proposed Collector
Neiborhood Route
Proposed Neiborhood Route
Downtown Regional Center
MISC.
Light Rail Station
Light Rail Line
Private Roads
Beaverton City Limits
Unincoporated Area
Source Data :
City of Beaverton -
City Limits - Last Updated on 2/7/2005
Functional Classification - Last Updated on 1/11/2005
METRO Regional Land Information System (RLIS) -
Street Names - Last Updated on 10/22/2004
Light Rail Station - Last Updated on 4/26/2004
Light Rail Line - Last Updated on 4/27/2004
Washington County -
Washington County TaxIots - Last Updated on 2/24/2005
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GEOGRAPHIC INFORMATION SYSTEM
Downtown Regional Center
Major Pedestrian Routes
Update Effective December 21, 2004
City of Beaverton
North
LEGEND
Downtown Regional Center
MAJOR PEDESTRIAN ROUTES
Class 1, Both Sides
Class 1, One Side
Class 2, Both Sides
Class 2, One Side
Future Class 1, Both Sides
MISC.
Light Rail Station
Light Rail Line
Private Roads
Beaverton City Limits
Unincorporated Area
Source Data :
City of Beaverton -
City Limits - Last Updated on 2/7/2005
Pedestrian Routes - Last Updated on 12/21/2004
METRO Regional Land Information System (RLIS) -
Street Names - Last Updated on 10/22/2004
Light Rail Station - Last Updated on 4/26/2004
Light Rail Line - Last Updated on 4/27/2004
Washington County -
Washington County Taxlots - Last Updated on 2/24/2005
Disclaimer :
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PDF Version of this map is Available Online @ T:\MAPS\CDD\DT_Reg_Ctr_PedRts_8x11.pdf
GIS/RB 2/16/05 _S:_CDD\05-0011\DT_Reg_Ctr PedRts_8x11.mxd

Significant Natural Resource Map and Historic Resources Map are unavailable at present.

GEOGRAPHIC INFORMATION SYSTEM

Downtown Regional Center

Index Map

September 2000

Scale 1" = 3250'

2000 0 2000 Feet

City of Beaverton

North

LEGEND

MIXED USE DESIGNATIONS

- Regional Center (RC)
- Unincorporated areas expected to annex to Beaverton within the Regional Center area

MISC.

- Light Rail Stop
- Light Rail Line
- Urban Growth Boundary
- County Line
- Beaverton City Limits

Regional Center

Aloha

Beaverton

UNION RD

US 26

143RD AVE

158TH AVE

185TH AVE

WALKER RD

MERLO RD

JENKINS RD

CORNELL

BARNES RD

HILLS RD

CANYON

HWY 8

FERRY RD

SCHOLLS FERRY RD

FARMINGTON

DAVIS RD

ALLEN BLVD

DENNEY

HART RD

170TH AVE

BLVD

HWY 217

GARDEN

HALL BLVD

OLESON

MURRAY BLVD

BROCKMAN ST

WEIR RD

175TH AVE

125TH AVE

121ST AVE

135TH AVE

TIEDMAN AVE

GREENBURG RD

62ND AV

WALNUT ST

TESSEL

City of Beaverton staff identified boundaries of adopted or proposed mixed use design types including Regional Centers, Station Communities, and Town Centers, where they are available from other jurisdictions. Additional information may be added to this map as data is available from other jurisdictions. Inner and Outer Neighborhoods, Corridors and Main Streets, generally, are not available from the other jurisdictions at present.

SOURCES:

METRO's Regional Land Information System (RLIS) - Current as of May 2000
City of Beaverton Community Development Department - Current as of April 2000
Washington County Taxation and Assessment - Current as of June 2000

NOTES:

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TSS/DH 09/08/00 S:/comp&landuse_map/icpa_landuse.apr

GEOGRAPHIC INFORMATION SYSTEM

Downtown Regional Center

Beaverton Land Use Map

Integrating

Metro 2040 Mixed Use Design Types

From Adjacent Jurisdictions, Where Available

April 2003

Scale 1" = 700'

100 0 100 200 300 Feet

City of Beaverton

North

LEGEND

NEIGHBORHOOD RESIDENTIAL DESIGNATIONS

- Low Density (LD) — 10,000 - 20,000 net sq. ft. per unit; 4.4 - 2.3 units per net acre
- Standard Density (SD) — 5,000 - 10,000 net sq. ft. per unit; 8.7 - 4.5 units per net acre
- Medium Density (MD) — 2,000 - 5,000 net sq. ft. per unit; 21.8 - 7.4 units per net acre
- High Density (HD) — 500 - 2000 net sq. ft. per unit; 87.0 - 21.9 units per net acre

MIXED USE DESIGNATIONS

- Regional Center (RC)
- Station Community (SC)
- Town Center (TC)
- Main Streets- (MS)

Other Jurisdiction Designations

- Regional Center Designation
- Station Community Designation
- Town Center Designation

CORRIDOR DESIGNATION

- Corridor-(COR)

EMPLOYMENT DESIGNATION

- Employment Area- (EMP)

INDUSTRIAL DESIGNATION

- Industrial Area- (IND)

MISC.

- Light Rail Stop
- Light Rail Line
- Urban Growth Boundary
- County Line
- Beaverton City Limits
- Future Annexations
- Other Jurisdictions

City of Beaverton staff identified boundaries of adopted or proposed mixed use design types including Regional Centers, Station Communities, and Town Centers, where they are available from other jurisdictions. Additional information may be added to this map as data is available from other jurisdictions. Inner and Outer Neighborhoods, Corridors and Main Streets, generally, are not available from the other jurisdictions at present.

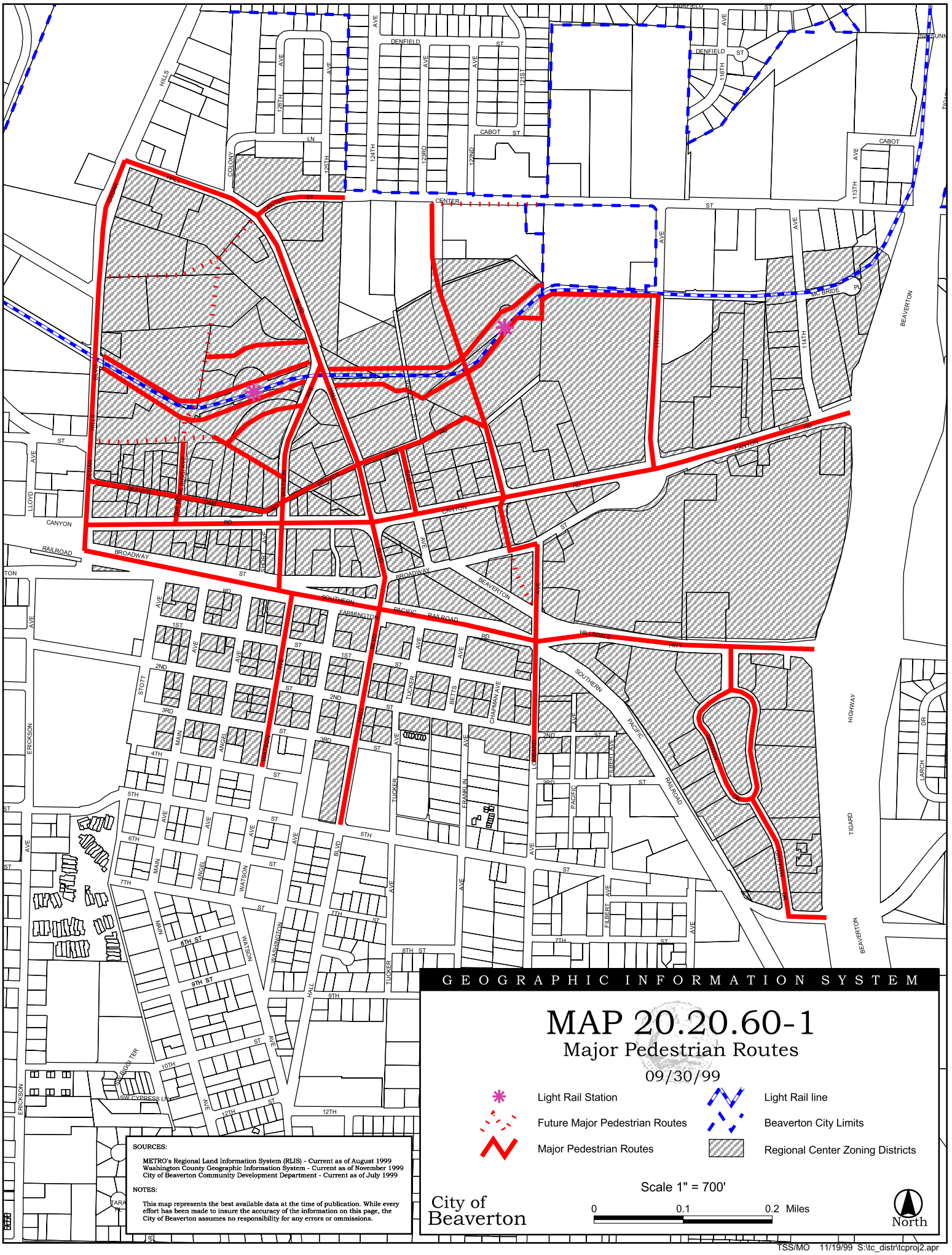
SOURCES:

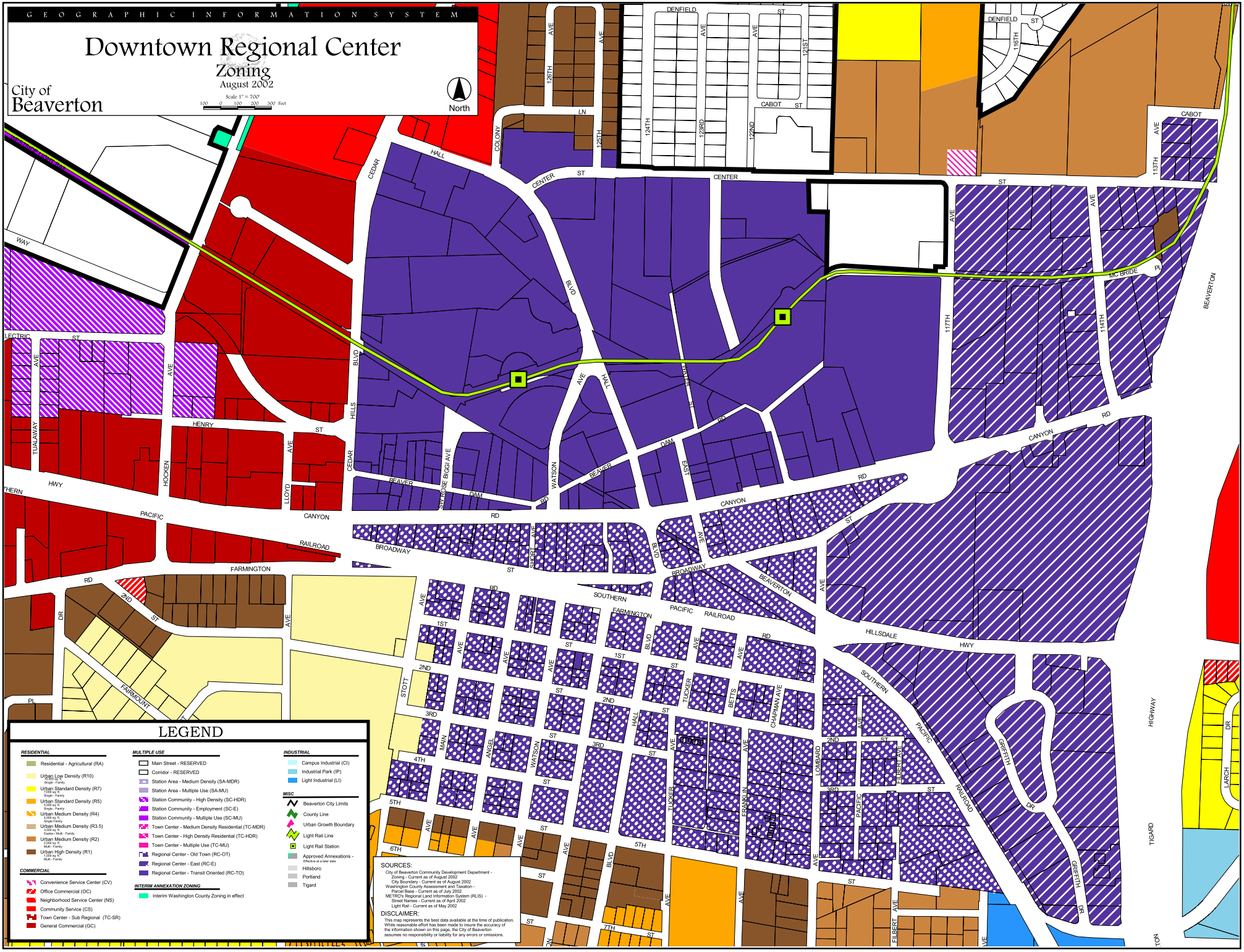
METRO's Regional Land Information System (RLIS) - Current as of October 2002
City of Beaverton Community Development Department - Current as of April 2003
Washington County Taxation and Assessment - Current as of January 2003

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TSS/DH 09/12/00 S:\comp&landuse_map\lcpa_landuse.apr


GEOGRAPHIC INFORMATION SYSTEM
MAP 20.20.60-1
Major Pedestrian Routes
09/30/99
Light Rail Station
Future Major Pedestrian Routes
Major Pedestrian Routes
Light Rail line
Beaverton City Limits
Regional Center Zoning Districts
SOURCES:
METRO's Regional Land Information System (RLIS) - Current as of August 1999
Washington County Geographic Information System - Current as of November 1999
City of Beaverton Community Development Department - Current as of July 1999
NOTES:
This map represents the best available data at the time of publication. While every effort has been made to insure the accuracy of the information on this page, the City of Beaverton assumes no responsibility for any errors or ommissions.
City of Beaverton
Scale 1" = 700'
0
0.1
0.2 Miles
North
TSS/MO 11/19/99 S:\tc_distr\tcproj2.apr


GEOGRAPHIC INFORMATION SYSTEM
Downtown Regional Center
Zoning
August 2002
City of
Beaverton
Scale 1" = 700'
100 0 100 200 300 Feet
North
LEGEND
RESIDENTIAL
Residential - Agricultural (RA)
Urban Low Density (R10) 10,000 sq. ft. Single - Family
Urban Standard Density (R7) 7,000 sq. ft. Single - Family
Urban Standard Density (R5) 5,000 sq. ft. Single - Family
Urban Medium Density (R4) 4,000 sq. ft. Single-Family
Urban Medium Density (R3.5) 3,000 sq. ft. Duplex / Multi - Family
Urban Medium Density (R2) 2,000 sq. ft. Multi - Family
Urban High Density (R1) 1,000 sq. ft. Multi - Family
COMMERCIAL
Convenience Service Center (CV)
Office Commercial (OC)
Neighborhood Service Center (NS)
Community Service (CS)
Town Center - Sub Regional (TC-SR)
General Commercial (GC)
MULTIPLE USE
Main Street - RESERVED
Corridor - RESERVED
Station Area - Medium Density (SA-MDR)
Station Area - Multiple Use (SA-MU)
Station Community - High Density (SC-HDR)
Station Community - Employment (SC-E)
Station Community - Multiple Use (SC-MU)
Town Center - Medium Density Residential (TC-MDR)
Town Center - High Density Residential (TC-HDR)
Town Center - Multiple Use (TC-MU)
Regional Center - Old Town (RC-OT)
Regional Center - East (RC-E)
Regional Center - Transit Oriented (RC-TO)
INTERIM ANNEXATION ZONING
Interim Washington County Zoning in effect
INDUSTRIAL
Campus Industrial (CI)
Industrial Park (IP)
Light Industrial (LI)
MISC
Beaverton City Limits
County Line
Urban Growth Boundary
Light Rail Line
Light Rail Station
Approved Annexations - Effective at a later date
Hillsboro
Portland
Tigard
SOURCES:
City of Beaverton Community Development Department - Zoning - Current as of August 2002
City Boundary - Current as of August 2002
Washington County Assessment and Taxation - Parcel Base - Current as of July 2002
METRO's Regional Land Information System (RLIS) - Street Names - Current as of April 2002
Light Rail - Current as of May 2002
DISCLAIMER:
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GIS/TH 7/22/2002 S:\compklanduse_map\clpa_zone.apr

Beaverton Creek Station Community

Community Plan

Beaverton Creek Station Community
Community Plan Index

Pg. #

Community Plan Context..... 3
Plan Text..... 5
Index Map..... 7
Comprehensive Plan Land Use Map 8
Zoning Map 9
Functional Classification Map.....10
Major Pedestrian Route Map 11
Significant Natural Resources Map.....12

Maps found in the Comprehensive Plan and the Development Code provide the basis for the mapped figures referenced in Community Plans. The Community Plan figures provide an expanded view of selected Comprehensive Plan and Development Code maps with a focus on a specific geographical area of the City. Community Plan figures include views of the Comprehensive Plan Land Use Map, the Transportation Functional Classification Map, the Significant Natural Resources Map, the Historic Resources map, the Development Code Zoning Map and Major Pedestrian Route Map. Amendments to these figures follow procedures specified within the document in which they are located. Community Plan figures will be administratively updated as amendments to the Comprehensive Plan and Development Code maps are adopted.

Beaverton Creek Station Community

Community Plan Context

The Beaverton Creek Station Community Community Plan is one of a number of City planning documents. These documents, when viewed in total, comprise the City's Comprehensive Plan. The intent of this context statement is to explore the relationship between this document and the other documents comprising the Comprehensive Plan.

The Beaverton Creek Station Community Community Plan applies to the area bordered by S.W. Jenkins Road to the north, S.W. Murray Boulevard and the railroad spur to the east, S.W. Millikan Boulevard to the south, and S.W. 153rd Drive to the west. This Community Plan includes one of several light rail station areas in Beaverton. This Community Plan describes policies and action statements specific to this particular geographic location. Fully understanding the Community Plan also requires review of the Comprehensive Plan for the general policies applicable to the City as a whole and the Beaverton Development Code and Engineering Design Standards.

The following documents comprise the City's Comprehensive Plan:

Volume I - City of Beaverton Comprehensive Plan
Volume II - Comprehensive Plan Background and Supporting Documents
Volume III - Statewide Planning Goal 5 Inventory Documents
Volume IV - Transportation System Plan
Volume V - Community Plans

The City of Beaverton Comprehensive Plan is a policy document that serves as a policy framework for the other volumes of the Plan. Volume I, therefore, addresses the broad range of comprehensive planning and development issues with action statements to guide implementation of the policy directives.

Volume II - the Comprehensive Plan Background and Supporting Documents provides the demographic and economic data and forecasts for the City's Comprehensive Plan. It should be noted that these documents provide information supporting and guiding the development of the policy framework, however, the data is a snapshot in time and cannot be relied upon for future decision making without researching the data to ensure that conditions have not changed. Metro, the regional governing body in the Portland Metropolitan Area, provides much of the data informing the City's Comprehensive Plan policy making. Policies and regulations in Metro Functional Plans also direct some City policy decisions and regulations.

Volume III - Statewide Planning Goal 5 Inventory Documents includes the background and supporting documents, mapping and findings for the City's response to Statewide

Planning Goal 5. The documents include the following:

Significant Natural Resource Area Inventories

This document inventories applicable Statewide Planning Goal 5 resource areas and identifies "Significant" resources.

Historic Resources Inventory

This document identifies the City's Historic Resources, provides data regarding building typology, historical context, condition, and any significant events in Beaverton's history related to the building. Photographs are also included in the inventory. As an additional component to the City's historic resources, the City adopted a list of historic trees through the Historic Resource Review Committee, Planning Commission and City Council.

Volume IV - Transportation System Plan implements regional goals and policies and plans multimodal improvements for a 20 year period.

Volume V - Community Plans describe policies and action statements and map designations specific to a particular geographic location.

The City of Beaverton Development Code implements the policy directives of Volumes I and V of the Comprehensive Plan. The Development Code includes the procedural framework for land use decisions, including zoning district information, allowed uses, density and dimensional requirements, public facility requirements, land division requirements and standards for land development.

Beaverton Creek Station Community Plan Text

Community Plan Goal 1: Develop the Beaverton Creek Station Community to support light rail ridership, foster a sense of community, and respect the natural features adjacent to and within the Station Community.

Policies:

a) Regulate new development in Station Communities and Station Areas to provide increased densities and employment to support a high level of transit service.

Action 1: *In the Beaverton Creek Station Community, adopt and apply land use regulations that require development at a required minimum density of 24 dwelling units per net acre (du/acre). Residential uses shall be at a required minimum density of 30 dwelling units per net acre within 400 feet of the light rail station platform.*

Action 2: *In the Beaverton Creek Station Community, adopt and apply land use regulations that require non-residential and multiple use development at a minimum floor-area ratio (FAR) of 0.5. Uses shall be at a required minimum FAR of 0.6 within 400 feet of the light rail station platform.*

Action 3: *Adopt and apply land use regulations that require a minimum of 750 dwelling units within the Beaverton Creek Station Community.*

Action 4: *Within the Beaverton Creek Station Community adopt land use regulations that provide for public access to the light rail station platform from and across Murray Boulevard to the Tektronix Campus (Map 1S1 09, Tax Lot # 700). Provide for public access to the LRT Station platform from and across Jenkins Road to NIKE World Headquarters (Map 1S1 5D, Tax Lot # 400). Provide for private or public access between S.W. 153rd Drive and the light rail station platform. Access for pedestrians from Jenkins Road to the light rail station platform shall be direct to achieve a clear line of sight and the shortest walking distance.*

Action 5: *Require residential development at a minimum density of 20 dwelling units per net acre (du/acre), within the Beaverton Creek Station Community zoned as Station Area.*

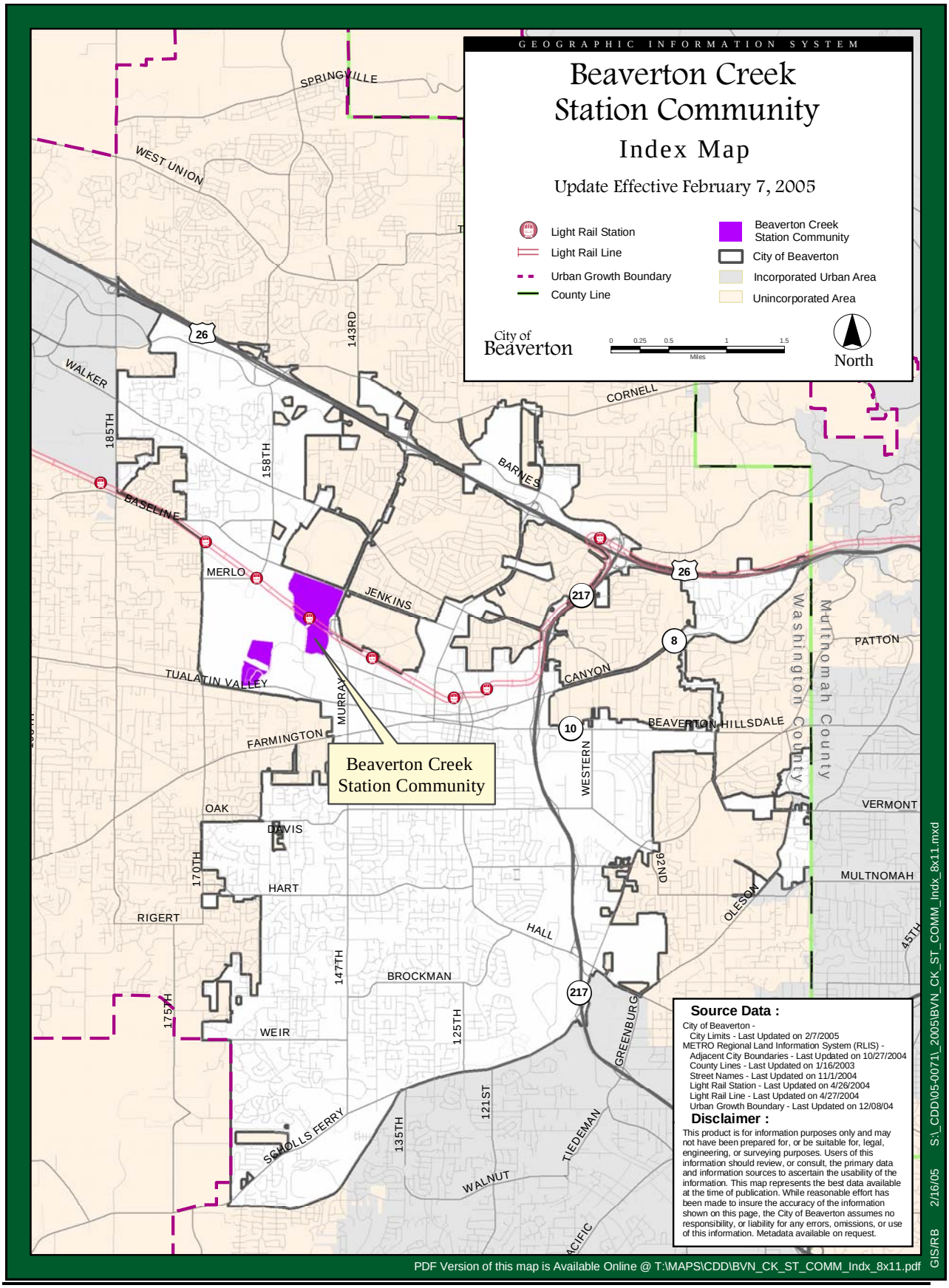
Action 6: *Require non-residential and multiple use development at a minimum floor-area ratio (FAR) of 0.35 within the Beaverton Creek Station Community zoned as Station Area.*

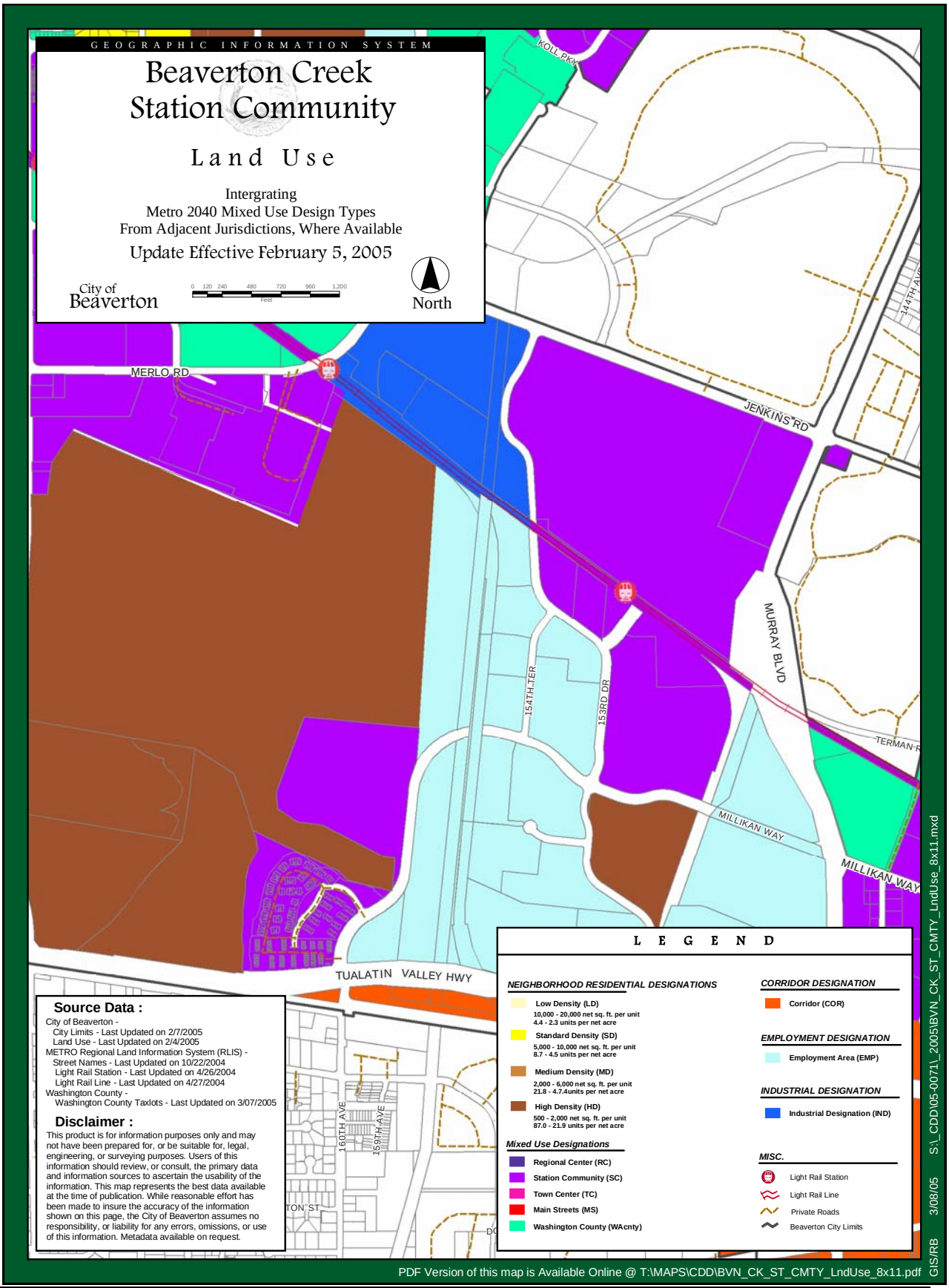
b) The grove of trees north of the light rail tracks in the Beaverton Creek Station Community has been identified as a Significant Grove of Trees. Protect clusters of significant trees within the Significant Grove of Trees.

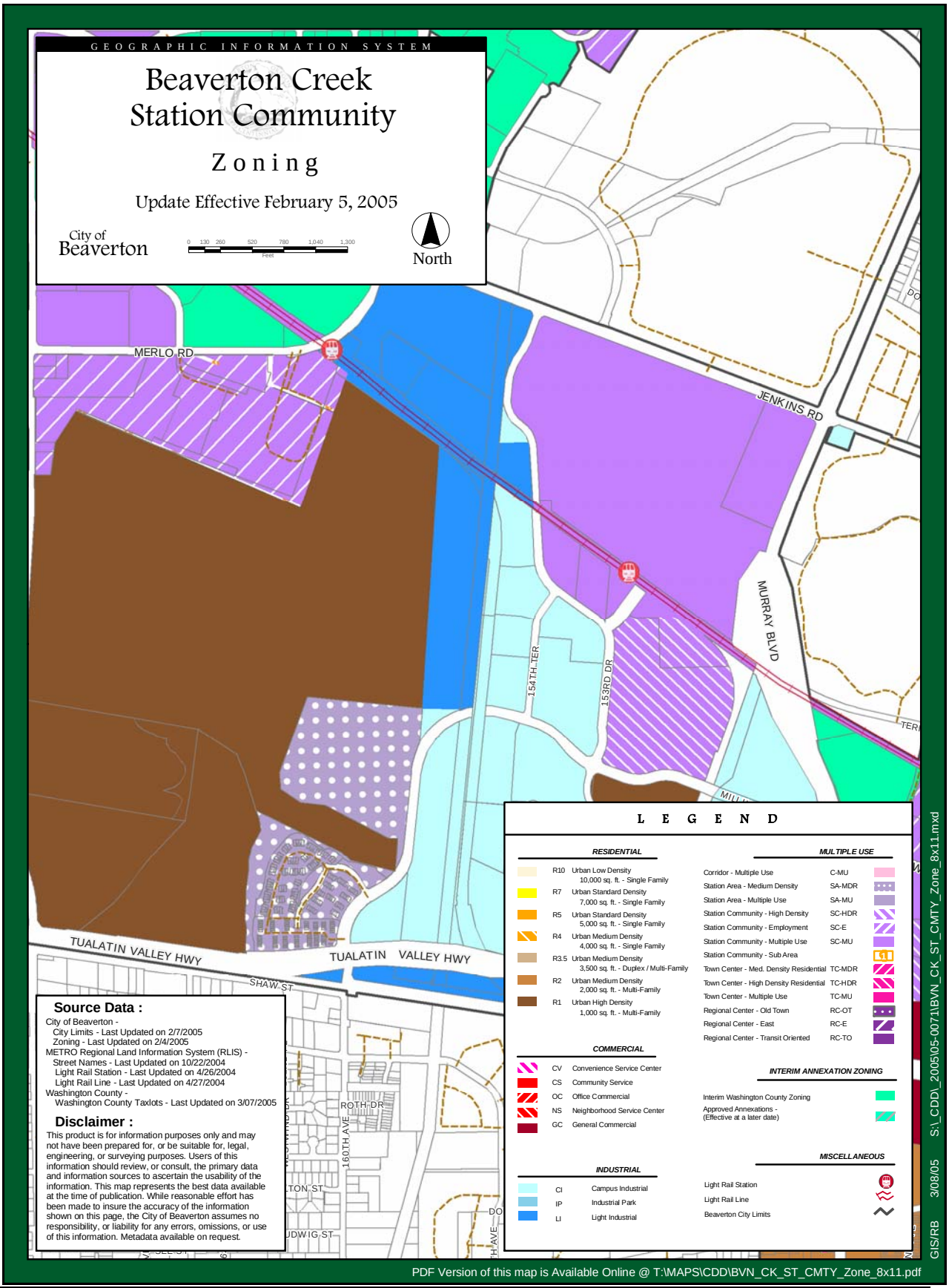
c) Within the Beaverton Creek Station Community, protected clusters of trees shall include specimens and groups of grand fir, Douglas fir, Oregon white oak, ponderosa pine, western red cedar and Oregon ash.

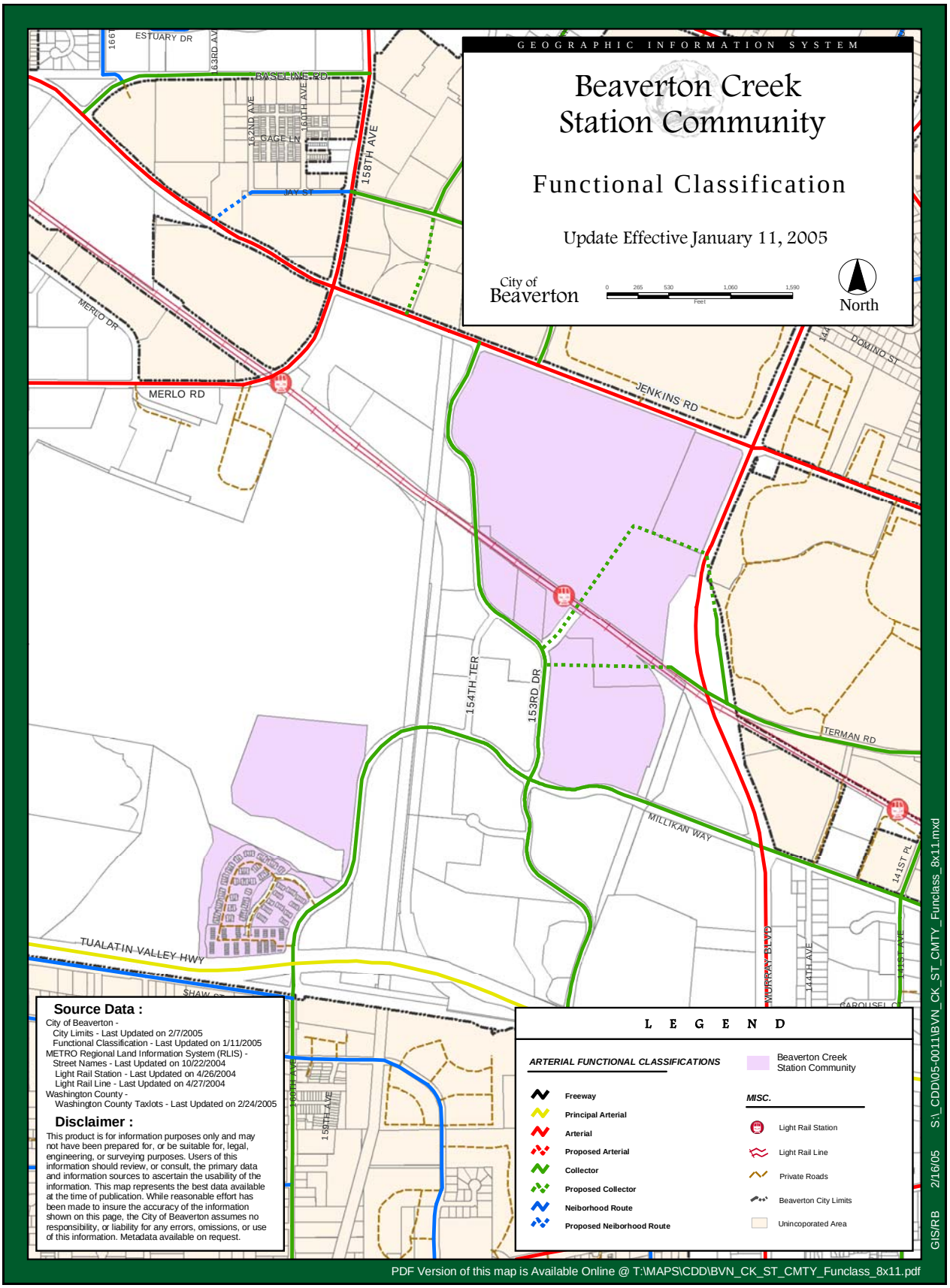
d) Areas identified as Significant Natural Resource exist near the Beaverton Creek Station Community along Beaverton Creek, Cedar Mill Creek and at the THPRD Nature Park.

e) Within the Beaverton Creek Station Community, protect trees and wetlands which will maintain hydrologic and wildlife relationships to these Significant Natural Resource areas.


GEOGRAPHIC INFORMATION SYSTEM
Beaverton Creek
Station Community
Index Map
Update Effective February 7, 2005
Light Rail Station
Light Rail Line
Urban Growth Boundary
County Line
Beaverton Creek Station Community
City of Beaverton
Incorporated Urban Area
Unincorporated Area
City of Beaverton
0 0.25 0.5 1 1.5
Miles
North
Beaverton Creek Station Community
SPRINGVILLE
WEST UNION
WALKER
185TH
158TH
143RD
CORNELL
BARNES
BASELINE
MERLO
JENKINS
TUALATIN VALLEY
MURRAY
FARMINGTON
CANYON
BEAVERTON HILLSDALE
WESTERN
PATTON
Washington County
Multnomah County
VERMONT
MULTNOMAH
OAK
DAVIS
170TH
HART
RIGERT
147TH
BROCKMAN
HALL
OLESON
82ND
45TH
175TH
WEIR
125TH
GREENBURG
SCHOLLS FERRY
135TH
121ST
TIEDEMAN
WALNUT
PACIFIC
26
217
8
10
Source Data :
City of Beaverton -
City Limits - Last Updated on 2/7/2005
METRO Regional Land Information System (RLIS) -
Adjacent City Boundaries - Last Updated on 10/27/2004
County Lines - Last Updated on 1/16/2003
Street Names - Last Updated on 11/1/2004
Light Rail Station - Last Updated on 4/26/2004
Light Rail Line - Last Updated on 4/27/2004
Urban Growth Boundary - Last Updated on 12/08/04
Disclaimer :
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PDF Version of this map is Available Online @ T:\MAPS\CDD\BVN_CK_ST_COMM_Indx_8x11.pdf
GIS/RB 2/16/05 S:_CDD\05-00711_2005\BVN_CK_ST_COMM_Indx_8x11.mxd


GEOGRAPHIC INFORMATION SYSTEM
Beaverton Creek
Station Community
Land Use
Intergrating
Metro 2040 Mixed Use Design Types
From Adjacent Jurisdictions, Where Available
Update Effective February 5, 2005
City of Beaverton
0 120 240 480 720 960 1,200
Feet
North
MERLO RD
JENKINS RD
MURRAY BLVD
154TH TER
153RD DR
MILLIKAN WAY
TUALATIN VALLEY HWY
160TH AVE
159TH AVE
144TH AVE
Source Data :
City of Beaverton -
City Limits - Last Updated on 2/7/2005
Land Use - Last Updated on 2/4/2005
METRO Regional Land Information System (RLIS) -
Street Names - Last Updated on 10/22/2004
Light Rail Station - Last Updated on 4/26/2004
Light Rail Line - Last Updated on 4/27/2004
Washington County -
Washington County Taxlots - Last Updated on 3/07/2005
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LEGEND
NEIGHBORHOOD RESIDENTIAL DESIGNATIONS
Low Density (LD)
10,000 - 20,000 net sq. ft. per unit
4.4 - 2.3 units per net acre
Standard Density (SD)
5,000 - 10,000 net sq. ft. per unit
8.7 - 4.5 units per net acre
Medium Density (MD)
2,000 - 6,000 net sq. ft. per unit
21.8 - 4.7.4units per net acre
High Density (HD)
500 - 2,000 net sq. ft. per unit
87.0 - 21.9 units per net acre
Mixed Use Designations
Regional Center (RC)
Station Community (SC)
Town Center (TC)
Main Streets (MS)
Washington County (WAcnty)
CORRIDOR DESIGNATION
Corridor (COR)
EMPLOYMENT DESIGNATION
Employment Area (EMP)
INDUSTRIAL DESIGNATION
Industrial Designation (IND)
MISC.
Light Rail Station
Light Rail Line
Private Roads
Beaverton City Limits
PDF Version of this map is Available Online @ T:\MAPS\CDD\BVN_CK_ST_CMTY_LndUse_8x11.pdf
GIS/RB 3/08/05 S:_CDD\05-0071_2005\BVN_CK_ST_CMTY_LndUse_8x11.mxd


GEOGRAPHIC INFORMATION SYSTEM
Beaverton Creek
Station Community
Zoning
Update Effective February 5, 2005
City of
Beaverton
0 130 260 520 780 1,040 1,300
Feet
North
MERLO RD
JENKINS RD
MURRAY BLVD
154TH TER
153RD DR
TUALATIN VALLEY HWY
TUALATIN VALLEY HWY
SHAW ST
ROTH DR
160TH AVE
LEGEND
RESIDENTIAL
R10 Urban Low Density 10,000 sq. ft. - Single Family
R7 Urban Standard Density 7,000 sq. ft. - Single Family
R5 Urban Standard Density 5,000 sq. ft. - Single Family
R4 Urban Medium Density 4,000 sq. ft. - Single Family
R3.5 Urban Medium Density 3,500 sq. ft. - Duplex / Multi-Family
R2 Urban Medium Density 2,000 sq. ft. - Multi-Family
R1 Urban High Density 1,000 sq. ft. - Multi-Family
COMMERCIAL
CV Convenience Service Center
CS Community Service
OC Office Commercial
NS Neighborhood Service Center
GC General Commercial
INDUSTRIAL
CI Campus Industrial
IP Industrial Park
LI Light Industrial
MULTIPLE USE
Corridor - Multiple Use C-MU
Station Area - Medium Density SA-MDR
Station Area - Multiple Use SA-MU
Station Community - High Density SC-HDR
Station Community - Employment SC-E
Station Community - Multiple Use SC-MU
Station Community - Sub Area
Town Center - Med. Density Residential TC-MDR
Town Center - High Density Residential TC-HDR
Town Center - Multiple Use TC-MU
Regional Center - Old Town RC-OT
Regional Center - East RC-E
Regional Center - Transit Oriented RC-TO
INTERIM ANNEXATION ZONING
Interim Washington County Zoning
Approved Annexations - (Effective at a later date)
MISCELLANEOUS
Light Rail Station
Light Rail Line
Beaverton City Limits
Source Data :
City of Beaverton -
City Limits - Last Updated on 2/7/2005
Zoning - Last Updated on 2/4/2005
METRO Regional Land Information System (RLIS) -
Street Names - Last Updated on 10/22/2004
Light Rail Station - Last Updated on 4/26/2004
Light Rail Line - Last Updated on 4/27/2004
Washington County -
Washington County Taxlots - Last Updated on 3/07/2005
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GIS/RB 3/08/05 S:_CDD_2005\05-0071\BVN_CK_ST_CMTY_Zone_8x11.mxd
PDF Version of this map is Available Online @ T:\MAPS\CDD\BVN_CK_ST_CMTY_Zone_8x11.pdf

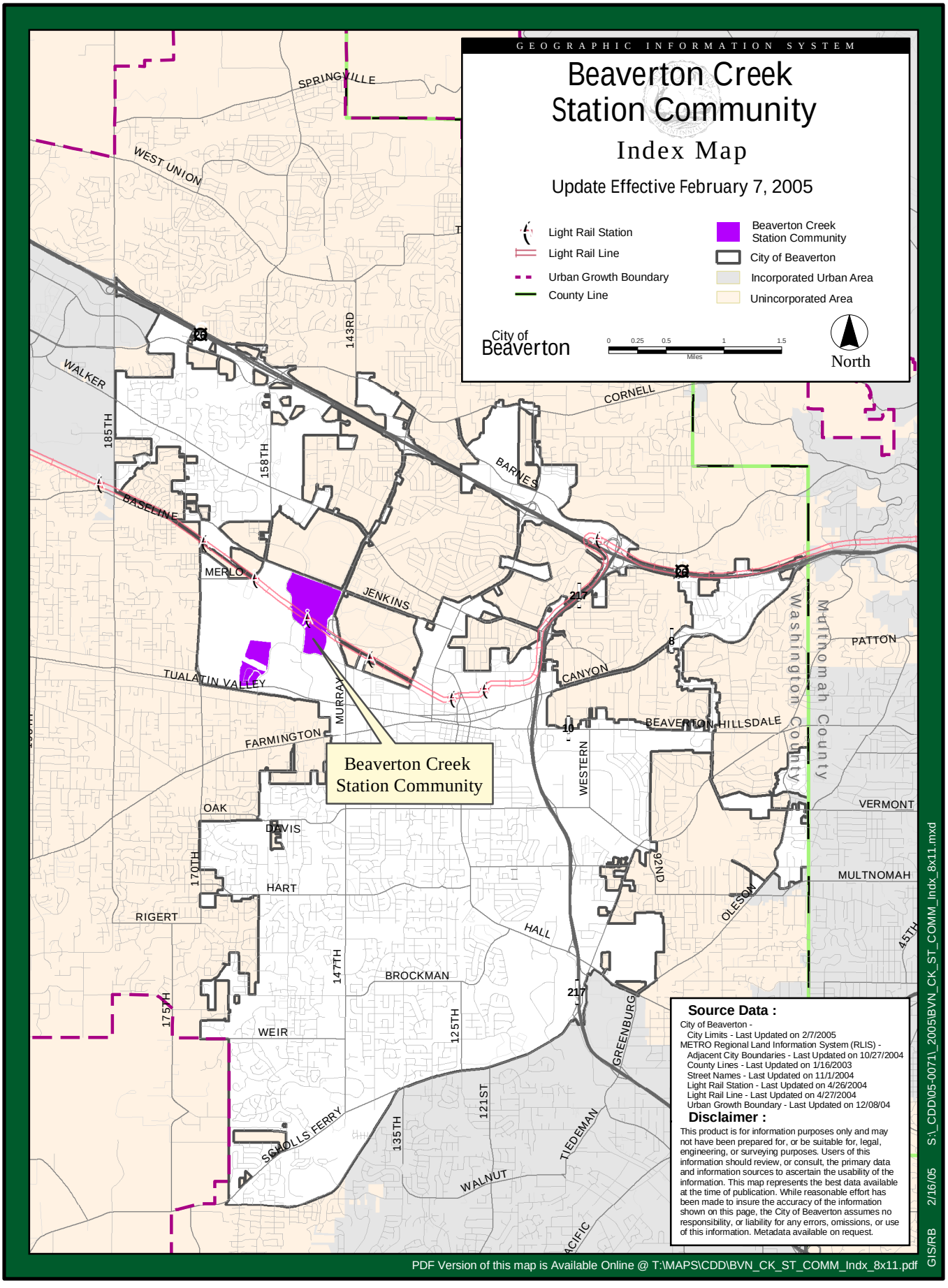

GEOGRAPHIC INFORMATION SYSTEM
Beaverton Creek
Station Community
Functional Classification
Update Effective January 11, 2005
City of
Beaverton
0 265 530 1,060 1,590
Feet
North
ESTUARY DR
163RD AVE
BASELINE RD
162ND AVE
160TH AVE
GAGE LN
JAY ST
158TH AVE
MERLO DR
MERLO RD
JENKINS RD
DOMINO ST
154TH TER
153RD DR
TERMAN RD
MILLIKAN WAY
141ST PL
TUALATIN VALLEY HWY
SHAW ST
160TH AVE
159TH AVE
MURRAY BLVD
144TH AVE
CAROUSEL CT
Source Data :
City of Beaverton -
City Limits - Last Updated on 2/7/2005
Functional Classification - Last Updated on 1/11/2005
METRO Regional Land Information System (RLIS) -
Street Names - Last Updated on 10/22/2004
Light Rail Station - Last Updated on 4/26/2004
Light Rail Line - Last Updated on 4/27/2004
Washington County -
Washington County Taxlots - Last Updated on 2/24/2005
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L E G E N D
ARTERIAL FUNCTIONAL CLASSIFICATIONS
Freeway
Principal Arterial
Arterial
Proposed Arterial
Collector
Proposed Collector
Neiborhood Route
Proposed Neiborhood Route
Beaverton Creek Station Community
MISC.
Light Rail Station
Light Rail Line
Private Roads
Beaverton City Limits
Unincoporated Area
GIS/RB 2/16/05 S:_CDD\05-0011\BVN_CK_ST_CMTY_Funclass_8x11.mxd
PDF Version of this map is Available Online @ T:\MAPS\CDD\BVN_CK_ST_CMTY_Funclass_8x11.pdf

Map Unavailable at Present - Development Code Text Amendment is necessary to convert the text of the Comprehensive Plan into a map and link the Development Code references to the Development Code Major Pedestrian Route Map. (See note in Comprehensive Plan

Major Pedestrian Route Map

Map Unavailable at Present

Significant Natural Resources Map



Source Data :

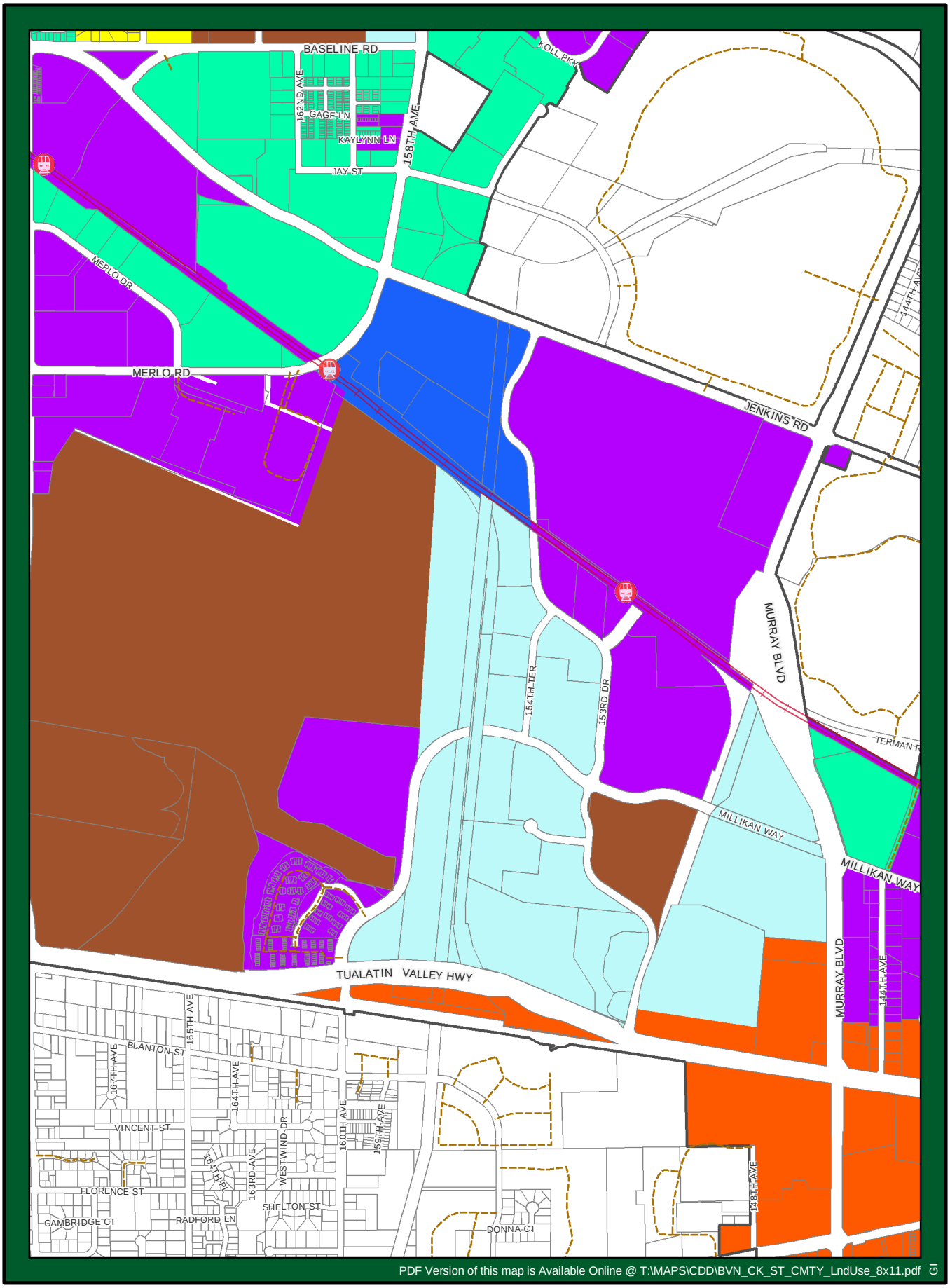
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Light Rail Station - Last Updated on 4/26/2004
Light Rail Line - Last Updated on 4/27/2004
Urban Growth Boundary - Last Updated on 12/08/04

Disclaimer :

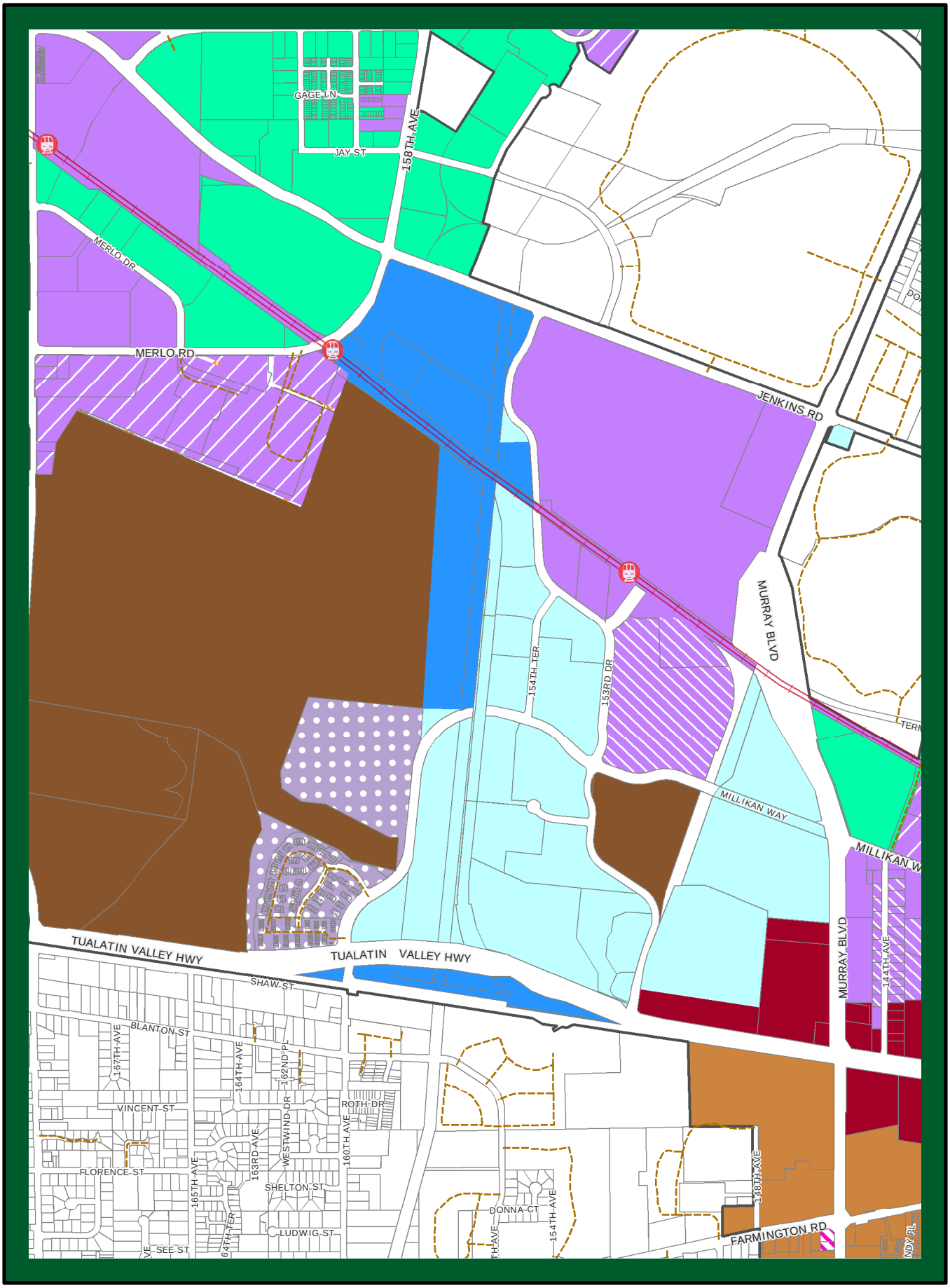
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GIS/RB 2/16/05 S:_CDD\05-0071_2005\BVN_CK_ST_COMM_Indx_8x11.mxd



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GAGE LN
JAY ST
158TH AVE
MERLO DR
MERLO RD
JENKINS RD
MURRAY BLVD
154TH TER
153RD DR
MILLIKAN WAY
TUALATIN VALLEY HWY
SHAW ST
BLANTON ST
167TH AVE
VINCENT ST
FLORENCE ST
165TH AVE
SEE ST
164TH TER
LUDWIG ST
163RD AVE
SHELTON ST
WESTWIND DR
162ND PL
164TH AVE
ROTH DR
160TH AVE
DONNA CT
154TH AVE
148TH AVE
FARMINGTON RD
144TH AVE

Merlo Station Community

Community Plan

Merlo Station Community

Community Plan Index

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ZONING MAP 14

FUNCTIONAL CLASSIFICATION MAP 15

MAJOR PEDESTRIAN ROUTE MAP 16

SIGNIFICANT NATURAL RESOURCES MAP 17

Maps found in the Comprehensive Plan and the Development Code provide the basis for the mapped figures referenced in Community Plans. The Community Plan figures provide an expanded view of selected Comprehensive Plan and Development Code maps with a focus on a specific geographical area of the City. Community Plan figures include views of the Comprehensive Plan Land Use Map, the Transportation Functional Classification Map, the Significant Natural Resources Map, the Historic Resources map, the Development Code Zoning Map and Major Pedestrian Route Map. Amendments to these figures follow procedures specified within the document in which they are located. Community Plan figures will be administratively updated as amendments to the Comprehensive Plan and Development Code maps are adopted.

Merlo Station Community
Community Plan Context

The Merlo Station Area Community Plan is one of a number of City planning documents. These documents, when viewed in total, comprise the City's Comprehensive Plan. The intent of this context statement is to explore the relationship between this document and the other documents comprising the Comprehensive Plan.

The Merlo Station Area Community Plan applies to the area bordered by SW Merlo Road to the north, SW 170th Avenue to the west, and the Tualatin Hills Park and Recreation District (THPRD) Nature Park to the south and east. The Plan includes the Merlo Light Rail Station, one of several light rail station areas in Beaverton. This Community Plan describes policies and action statements specific to this particular geographic location. Fully understanding the Community Plan also requires review of the Comprehensive Plan for the general policies applicable to the City as a whole, as well as the Beaverton Development Code and Engineering Design Standards.

The following documents comprise the City's Comprehensive Plan:

Volume I - City of Beaverton Comprehensive Plan
Volume II - Comprehensive Plan Background and Supporting Documents
Volume III - Statewide Planning Goal 5 Inventory Documents
Volume IV - Transportation System Plan
Volume V - Community Plans

Volume I – The City of Beaverton Comprehensive Plan - is a policy document that serves as a policy framework for the other volumes of the Plan. Volume I, therefore, addresses the broad range of comprehensive planning and development issues with action statements to guide implementation of the policy directives.

Volume II – The Comprehensive Plan Background and Supporting Documents - provides the demographic and economic data and forecasts for the City's Comprehensive Plan. It should be noted that these documents provide information supporting and guiding the development of the policy framework, however, the data is a snapshot in time and cannot be relied upon for future decision making without researching the data to ensure that conditions have not changed. Metro, the regional governing body in the Portland Metropolitan area, provides much of the data informing the City's Comprehensive plan policy making. Policies and regulations in the Metro Functional Plans also direct some City policy decisions and regulations.

Volume III – Statewide Planning Goal 5 Inventory Documents - includes the background and supporting documents, mapping and findings for the City's response to Statewide Planning Goal 5. The documents include the following:

Significant Natural Resource Area Inventories
: This document includes inventories of applicable Statewide Planning Goal 5 resource areas and identifies "significant" resources.

Historic Resources Inventory

This document identifies the City's Historic Resources, provides data regarding the building typology, historical context, condition, and any significant events in Beaverton's history related to the building. Photographs are also included in the inventory. As an additional component to the City's historic resources, the City adopted a list of historic trees through the Historic Resource Review Committee, Planning Commission and City Council.

Volume IV – Transportation System Plan – implements regional goals and policies and plans multimodal improvements for a 20 year period.

Volume V – Community Plans – describe policies and action statements and map designations specific to particular geographic locations.

The City of Beaverton Development Code implements the policy directives of Volumes I and V of the Comprehensive Plan. The Development Code includes the procedural framework for land use decisions, including zoning district information, allowed uses, density and dimensional requirements, public facility requirements, land division requirements and standards for land development.

Merlo Station Community

Community Plan Text

Community Plan Goal 1: Develop the Merlo Station Community to support light rail ridership by increasing the intensity of the adjacent land uses while recognizing the current land uses and the land and building investments already made by the property owners within the community plan area.

Policies:

a) Regulate new development in the Merlo Station Community to support a high level of transit service as the area redevelops, while allowing existing uses to continue without restrictions.

Action 1: *Adopt and apply standards that will reduce the likelihood that new non-transit supportive land uses will be established, but will allow the current land uses to continue without becoming non-conforming uses.*

Action 2: *Adopt and apply land use regulations that restrict some non-transit supportive land uses, such as mini-storage facilities, salvage yards and heavy equipment sales, while allowing the continuance of existing industrial activities.*

b) Encourage major property owners in the area to work cooperatively to reduce the amount of land devoted to parking lots and other low intensity uses.

Action 1: *Encourage TriMet, Beaverton School District, Clean Water Services, and Verizon to create a master plan for the use of their properties that will reduce the land devoted to equipment, vehicle storage, parking spaces and low intensity buildings.*

Action 2 *Encourage the use of a Planned Unit Development for Master Plans that propose to phase development.*

c) Within the Merlo Station Area, adopt a goal of an average of 45 employees per acre, or 2160 employees in this 48-acre area.

Action 1: *Within the Merlo Station Area, adopt and apply land use regulations that require new development to meet minimum floor area ratios, ranging from 0.35 to 0.5 within specific mapped areas of the Community Plan.*

Action 2: *Within appropriate areas of the Merlo Station Community, adopt and apply land use regulations that establish minimum building heights, maximum number of parking spaces, and similar regulations. The regulations would provide the opportunity for development closest to the transit station and Merlo Road to develop as a transit-oriented employment area.*

Community Plan Goal 2: Respect the natural features adjacent to the Merlo Station Area by protecting the Tualatin Hills Nature Park (Nature Park) from negative impacts associated with the adjacent industrial and commercial development.

Policies:

a) Regulate new development in the Merlo Station Area to minimize the impacts of lighting, noise, and storm water run-off on the Nature Park.

Action 1: *Apply performance standards to development in the Community Plan area that reduce the impacts of lighting, noise, vibration and other potentially negative occurrences on the Nature Park.*

Action 2: *Apply storm water quality and quantify standards to any new development so that storm water runoff from buildings and parking lots within the study area does not negatively affect the water quality or hydrology of the Nature Park.*

Action 3: *Limit use of the 30-foot wide Palmer Street right-of-way for landscaping and storm water facilities, even if the City vacates it.*

Action 4: *Encourage TriMet and the Unified Sewerage Agency to improve storm water runoff quality entering Cedar Mill Creek by constructing a water quality facility within the Merlo Station Area.*

Community Plan Goal 3: Guide land development within the Merlo Station Area so that it encourages pedestrian, bicycle and transit travel.

Policies:

a) Regulate new development in the Merlo Station area so that it becomes more pedestrian and bicycle “friendly”.

Action 1: *Improve the safety and attractiveness of the pedestrian and bicycle facilities along SW Merlo Road and SW 170th Avenue leading to the Merlo Light Rail Station to encourage walking and bicycling to and from the transit station.*

Action 2: *Construct a pedestrian/bicycle trail from the Merlo Station to the PGE Operations site along the east side of the railroad tracks adjacent to the Merlo Station Area. Since this trail crosses wetlands, construct the trail in a manner that minimizes negative impacts to the wetlands.*

Action 3*: Develop and apply standards that will require multi-use path connections between adjoining parking lots or land uses so that pedestrians and bicyclists can move easily and conveniently between buildings and other land uses within the Merlo Station Area, except where security concerns require limited access.*

Action 4: *Designate SW Merlo Road as a Major Pedestrian Route, and apply the Major Pedestrian Route standards to new development to encourage safe, convenient, and pleasant pedestrian and bicycle travel.*

These standards include, but are not limited to requiring building locations within 10 feet of the sidewalk, requiring 50% of the street frontage to be occupied by buildings rather than parking lots, and requiring that a minimum of 50% of the first floor wall on the side of a building facing the street be windows and doorways, and requiring that a primary building entrance face the street.

Action 5: *Develop and apply standards that allow limited retail use within the areas close to the transit station and the pedestrian street.*

Intensive areas of specialty retail shops and activities, and amenities such as benches, kiosks, plazas, public art, and outdoor cafes create an appealing pedestrian environment.

Community Plan Goal 4: Improve the public roads adjacent to the Merlo Station Area for vehicular, pedestrian and bicycle safety and convenience.

Policies:

a) Support the Transportation System Plans of the City, County and Region.

Action 1: *In compliance with both the City and County regulations, prepare an access management plan for SW Merlo Road and SW 170th Avenue to substantiate the access points identified in the Merlo Station Area Plan Technical Reports as shown on the Transportation Circulation Concept Plan (Figure 2).*

Action 2: *Incorporate the local street plan substantiated under Action 1 into the City Transportation System Plan.*

Action 3: *Reduce the number of private driveways onto both SW 170th Avenue and SW Merlo Road by creating new internal streets and requiring new development to take its access off these streets.*

Action 4: *When warrants are met, plan for a new signalized intersection at SW Merlo Road and SW Merlo Drive that will become the main access for the TriMet maintenance area and the Beaverton School District administrative building.*

b) Designate and develop SW Merlo Road and SW 170th Avenue in a manner that is appropriate for an area near a light rail station, where increased pedestrian and bicycle travel is expected.

Action 1: *Encourage Washington County to adopt a boulevard standard for streets that serve light rail station areas, and apply this standard to SW Merlo Road. This standard should include bicycle and pedestrian facilities, street trees and other landscaping, pedestrian scale lighting, pedestrian scale signage, and pedestrian amenities such as benches. The street design should not include parking on either side, but should include a landscaped center median. Acknowledging SW Merlo Road is an arterial road planned for heavy traffic volumes, ensure its design balances its pedestrian and transit orientation with its planned function as a five-lane arterial road.*

Action 2: *Develop and apply standards for SW 170th Avenue that encourage pedestrian and bicycle travel, including sidewalks and multi-use paths.*

c) Provide safe crossings of arterials for pedestrians and bicyclists.

Action 1: *Improve the existing signalized intersection at SW 170th Avenue and SW Merlo Road.*

Action 2: *When warrants are met, provide a signalized pedestrian crossing at SW Merlo Road and SW Merlo Drive.*

Action 3: *If the existing signalized entrance into the TriMet maintenance area is moved, retain a pedestrian crossing at SW Merlo Road near the transit station.*

Community Plan Goal 5: Retain and enhance the aesthetic qualities of the Merlo Station Area.

Policy

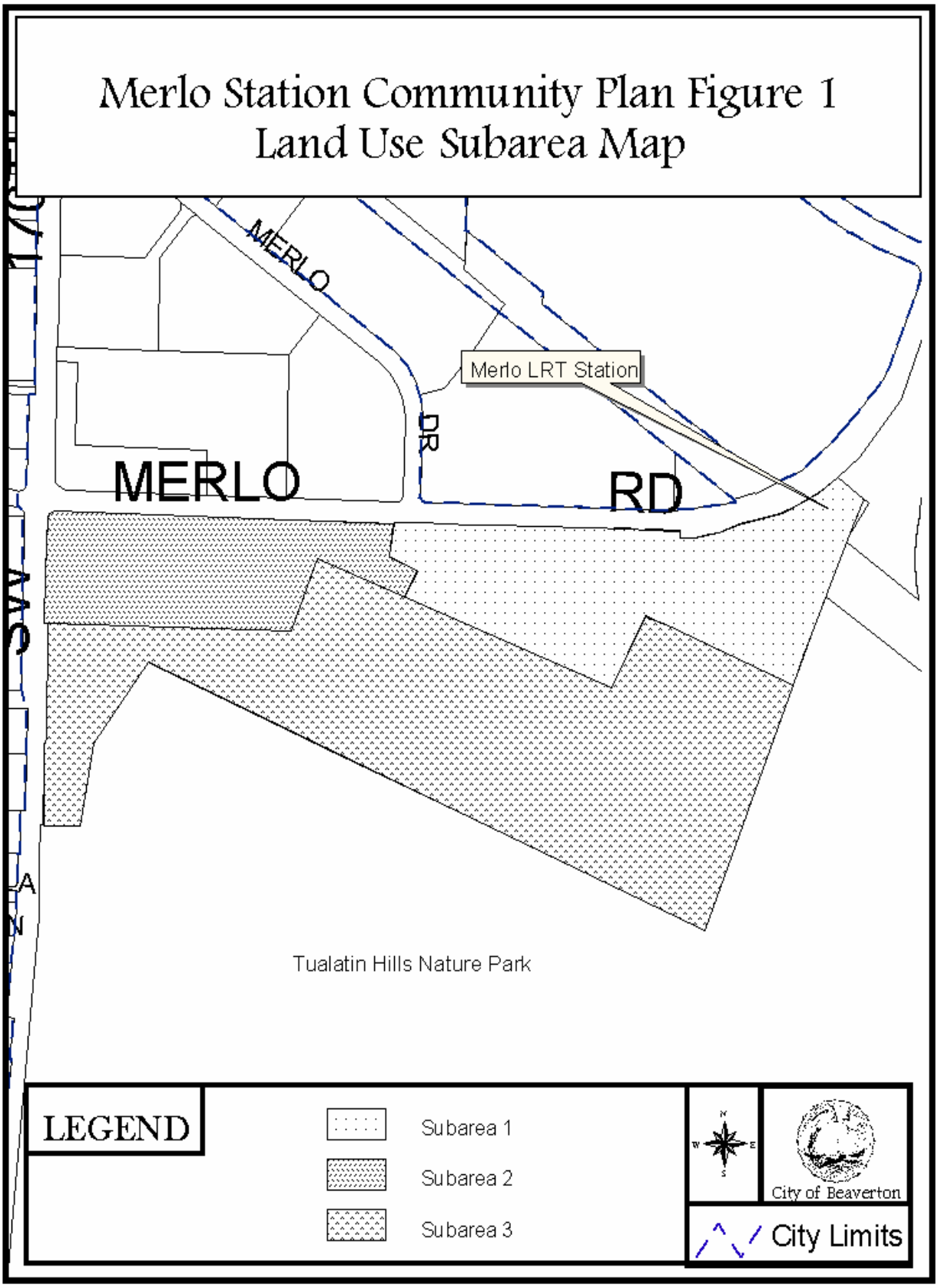
a). The Merlo Station Area, and particularly SW Merlo Road, is characterized by trees, a limited number of signs, signs that are monument style rather than pole style, a limited number of driveways (particularly on the north side of SW Merlo

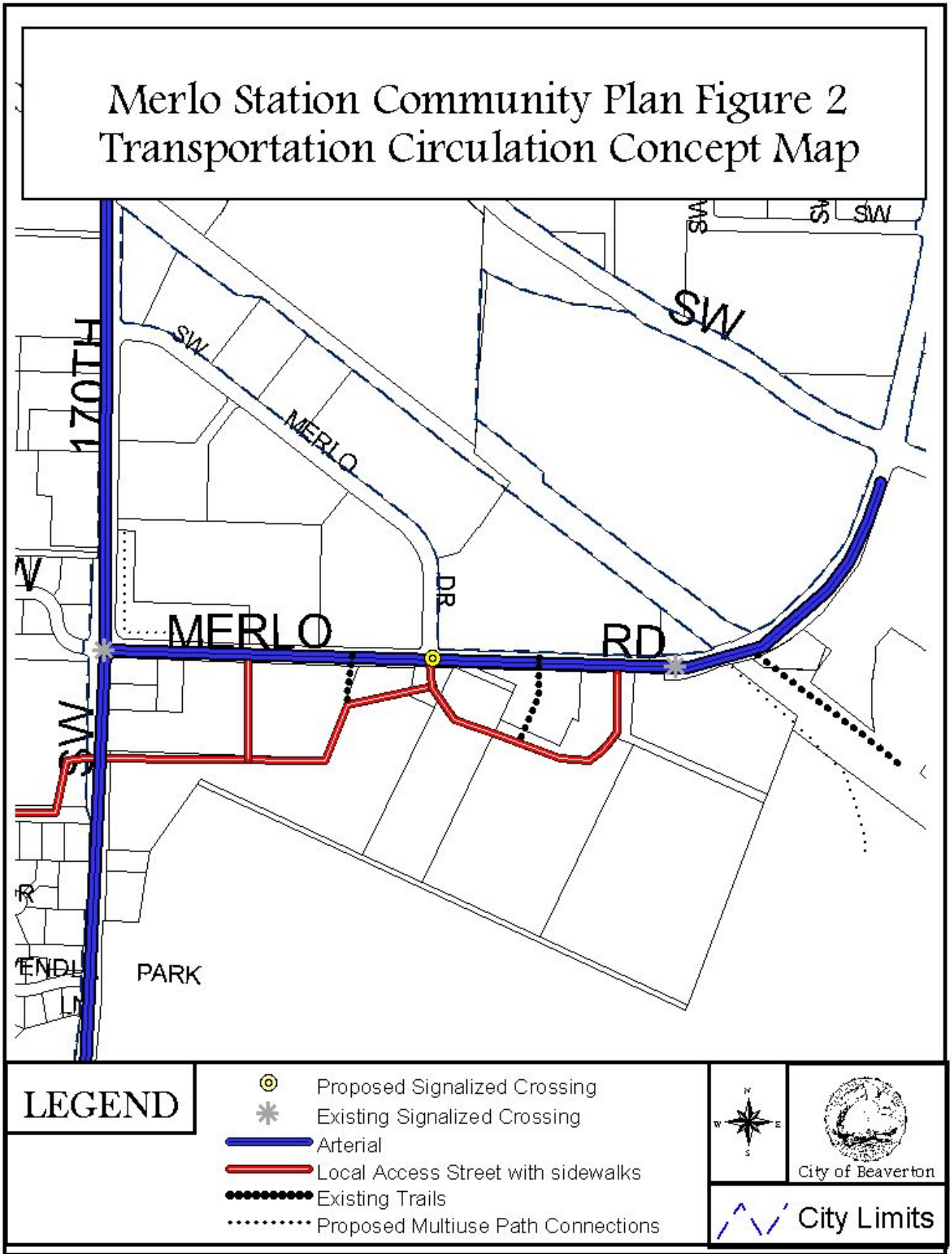
Road) and landscaping around some of the buildings. This aesthetic character should be retained as development and street widening occurs.

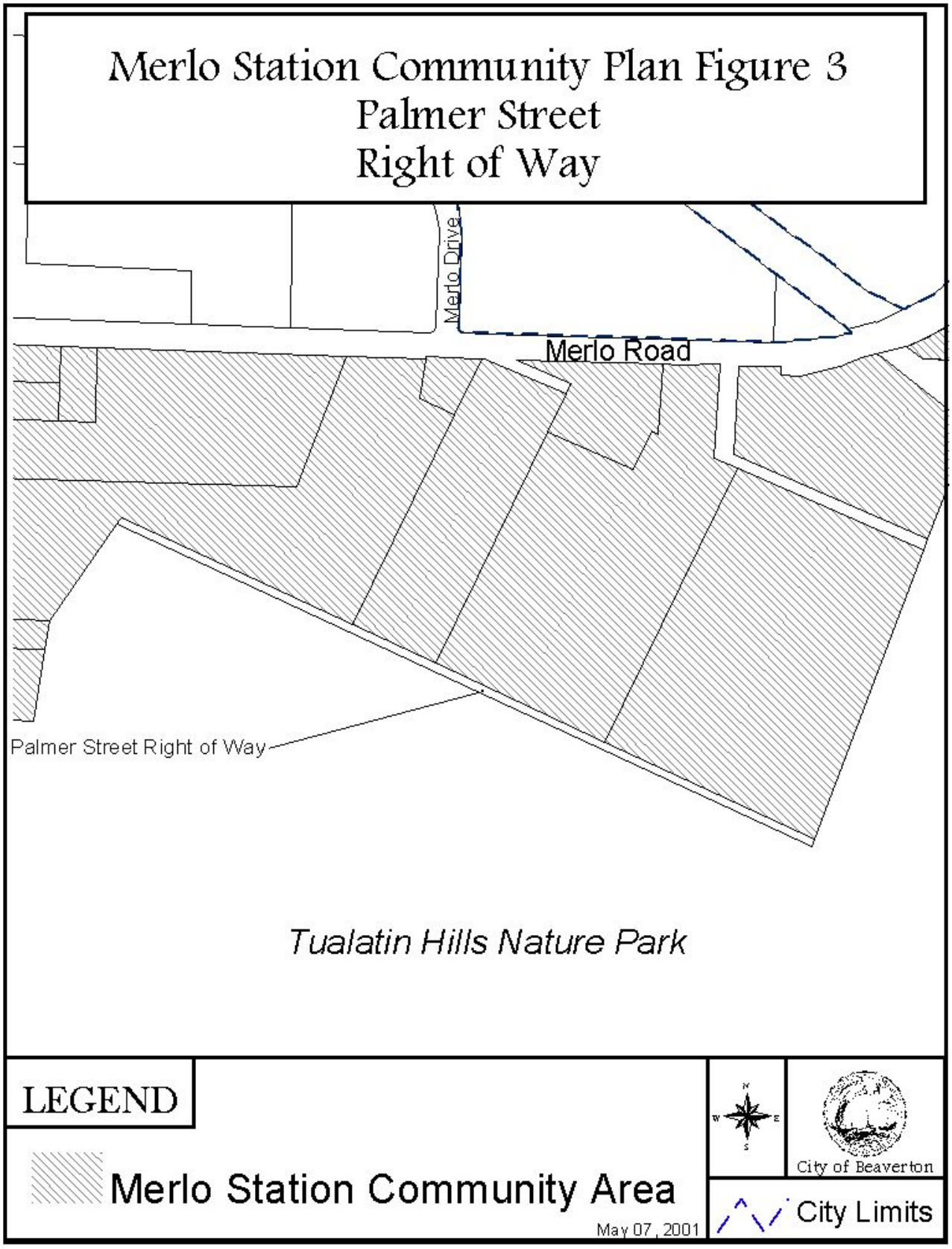
Action 1: *Adopt and apply sign standards for this area that restricts pole signs, and limits the number and size of freestanding signs.*

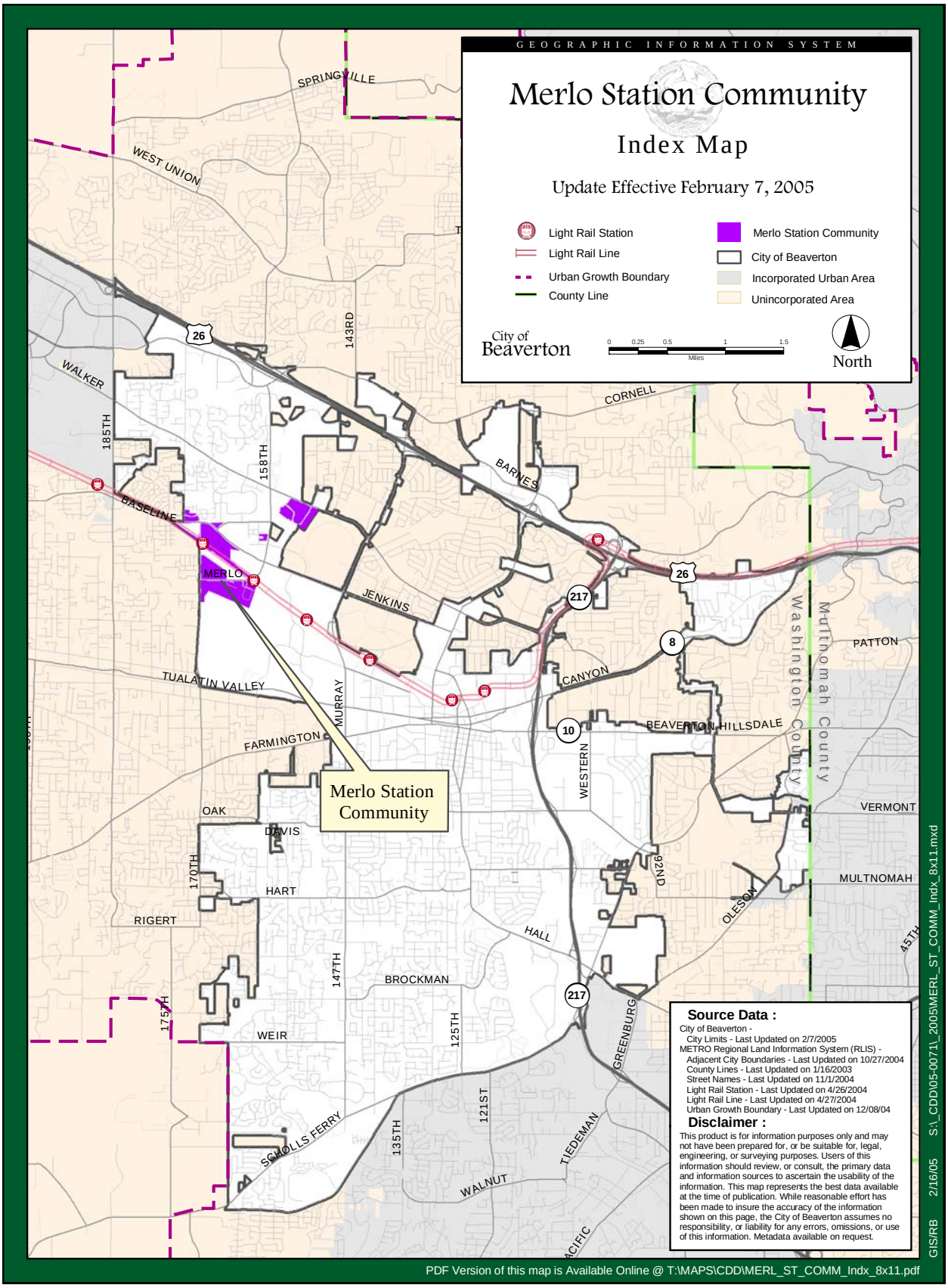
Action 2: *Adopt and apply standards for parking lot landscaping, and landscaping between the sidewalks and the parking lots or buildings, that will mitigate loss of trees and landscaping due to development and road widening.*

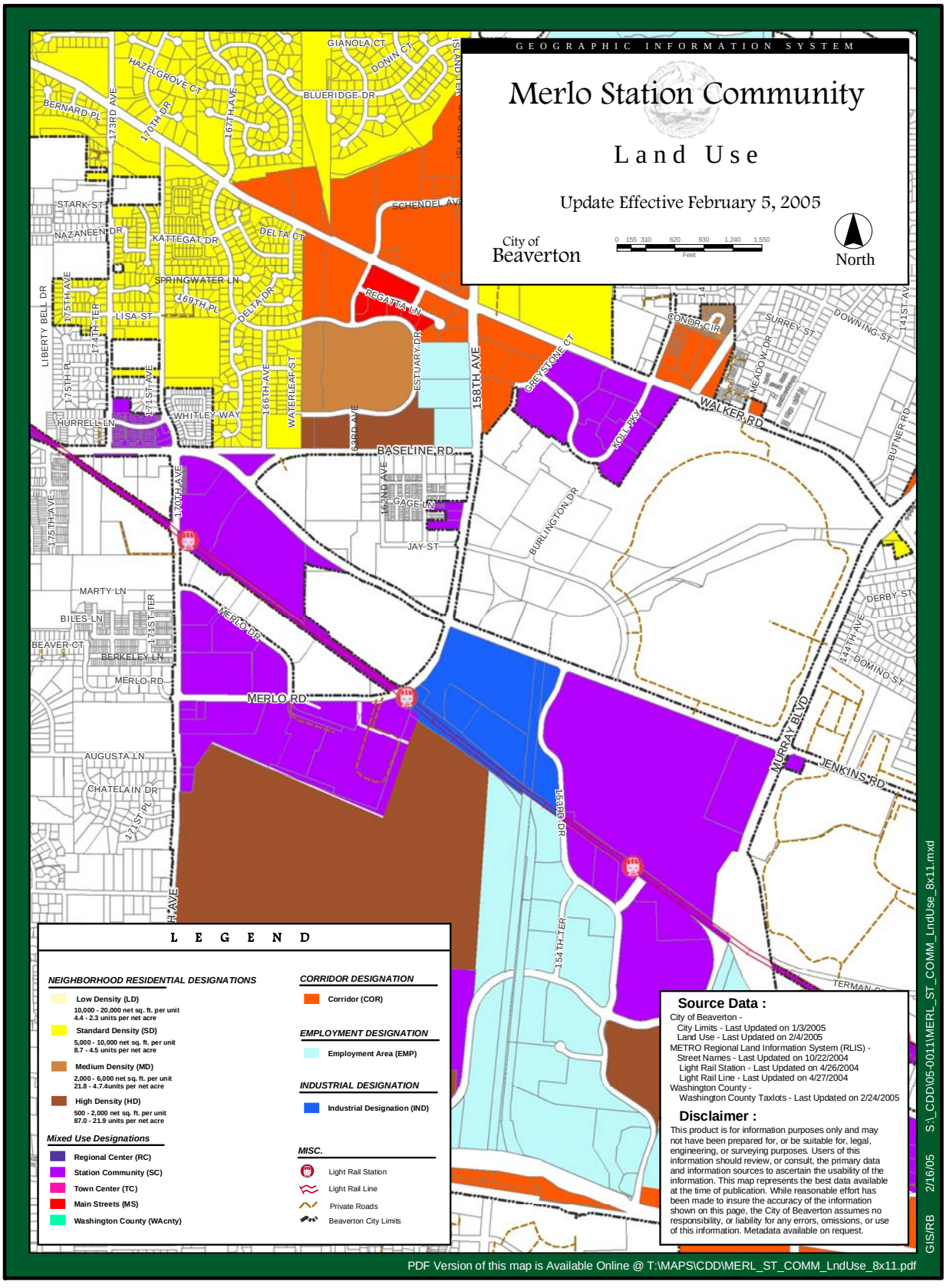
Action 3: *Encourage PGE to donate its 0.4-acre stand of fir trees on the north side of SW Merlo Road as a public park, or otherwise commit to keep it in its natural state as an amenity to the area.*

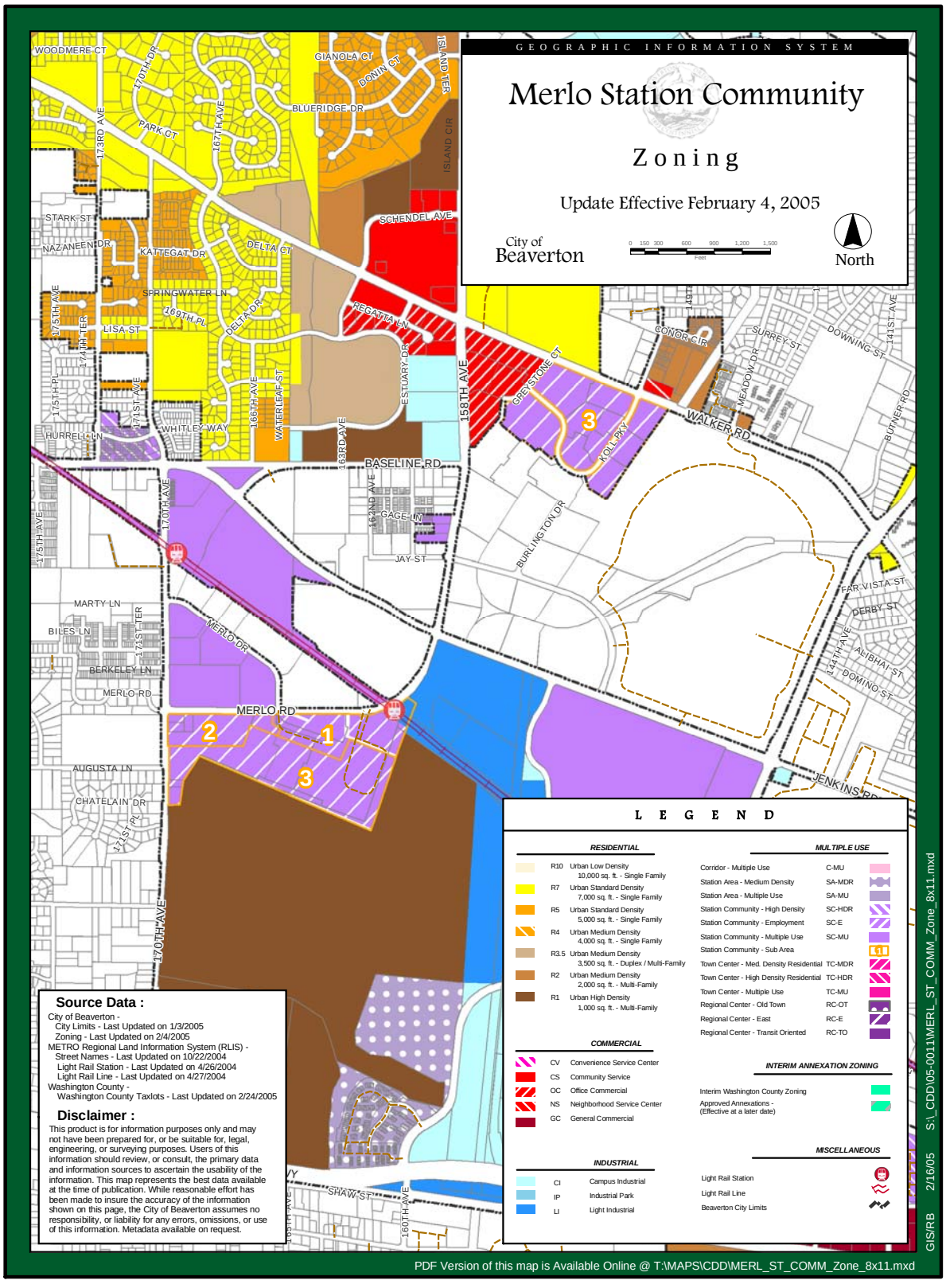

Merlo Station Community Plan Figure 1
Land Use Subarea Map
MERLO
Merlo LRT Station
DR
MERLO
RD
Tualatin Hills Nature Park
LEGEND
Subarea 1
Subarea 2
Subarea 3
City of Beaverton
City Limits

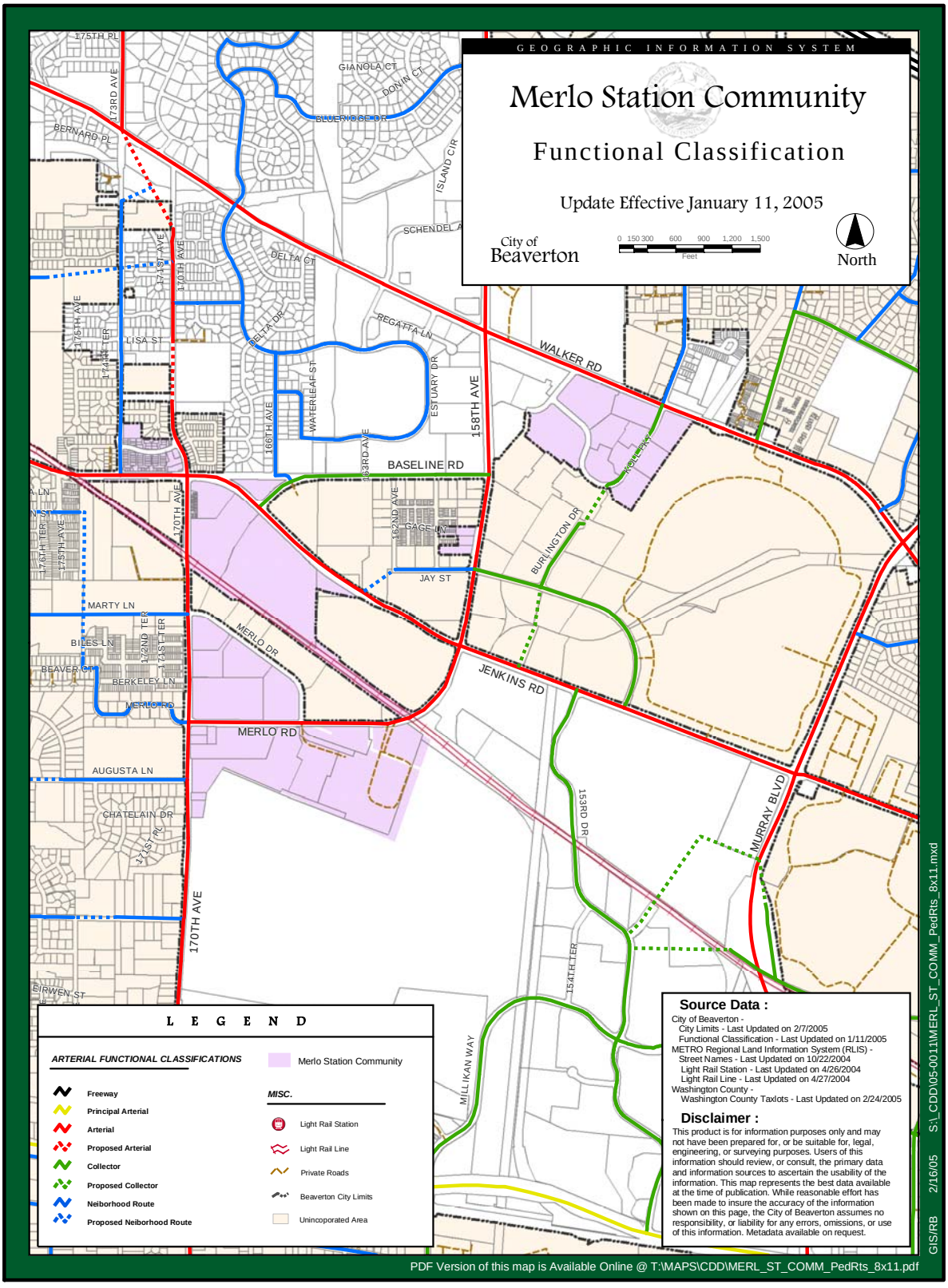

Merlo Station Community Plan Figure 2
Transportation Circulation Concept Map
SW
MERLO
DR
RD
170TH
PARK
LEGEND
Proposed Signalized Crossing
Existing Signalized Crossing
Arterial
Local Access Street with sidewalks
Existing Trails
Proposed Multiuse Path Connections
City of Beaverton
City Limits

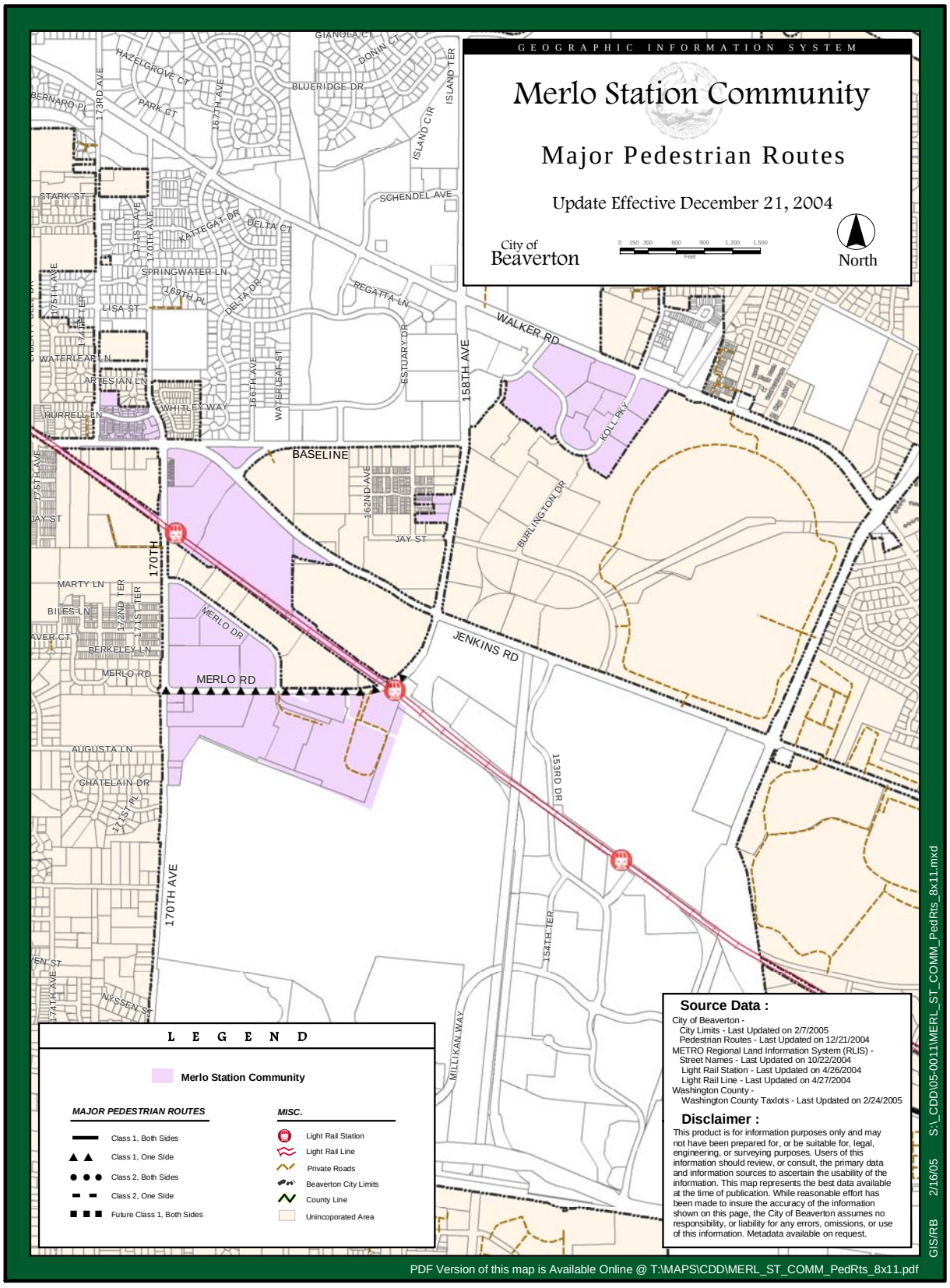

Merlo Station Community Plan Figure 3
Palmer Street
Right of Way
Merlo Drive
Merlo Road
Palmer Street Right of Way
Tualatin Hills Nature Park
LEGEND
Merlo Station Community Area
May 07, 2001
City of Beaverton
City Limits


GEOGRAPHIC INFORMATION SYSTEM
Merlo Station Community
Index Map
Update Effective February 7, 2005
Light Rail Station
Light Rail Line
Urban Growth Boundary
County Line
Merlo Station Community
City of Beaverton
Incorporated Urban Area
Unincorporated Area
City of Beaverton
0 0.25 0.5 1 1.5
Miles
North
SPRINGVILLE
WEST UNION
WALKER
185TH
143RD
158TH
CORNELL
BARNES
BASELINE
MERLO
JENKINS
TUALATIN VALLEY
MURRAY
FARMINGTON
CANYON
BEAVERTON HILLSDALE
WESTERN
Washington County
Multnomah County
PATTON
VERMONT
MULTNOMAH
OLESON
92ND
45TH
Merlo Station Community
OAK
DAVIS
170TH
HART
RIGERT
HALL
147TH
BROCKMAN
175TH
WEIR
125TH
GREENBURG
SCHOLLS FERRY
135TH
121ST
TIEDEMAN
WALNUT
26
217
8
10
Source Data :
City of Beaverton -
City Limits - Last Updated on 2/7/2005
METRO Regional Land Information System (RLIS) -
Adjacent City Boundaries - Last Updated on 10/27/2004
County Lines - Last Updated on 1/16/2003
Street Names - Last Updated on 11/1/2004
Light Rail Station - Last Updated on 4/26/2004
Light Rail Line - Last Updated on 4/27/2004
Urban Growth Boundary - Last Updated on 12/08/04
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GIS/RB 2/16/05 S:_CDD\05-0071_2005\MERL_ST_COMM_Indx_8x11.mxd


GEOGRAPHIC INFORMATION SYSTEM
Merlo Station Community
Land Use
Update Effective February 5, 2005
City of Beaverton
0 155 310 620 930 1,240 1,550
Feet
North
LEGEND
NEIGHBORHOOD RESIDENTIAL DESIGNATIONS
Low Density (LD)
10,000 - 20,000 net sq. ft. per unit
4.4 - 2.3 units per net acre
Standard Density (SD)
5,000 - 10,000 net sq. ft. per unit
8.7 - 4.5 units per net acre
Medium Density (MD)
2,000 - 6,000 net sq. ft. per unit
21.8 - 4.7.4units per net acre
High Density (HD)
500 - 2,000 net sq. ft. per unit
87.0 - 21.9 units per net acre
Mixed Use Designations
Regional Center (RC)
Station Community (SC)
Town Center (TC)
Main Streets (MS)
Washington County (WAcnty)
CORRIDOR DESIGNATION
Corridor (COR)
EMPLOYMENT DESIGNATION
Employment Area (EMP)
INDUSTRIAL DESIGNATION
Industrial Designation (IND)
MISC.
Light Rail Station
Light Rail Line
Private Roads
Beaverton City Limits
Source Data :
City of Beaverton -
City Limits - Last Updated on 1/3/2005
Land Use - Last Updated on 2/4/2005
METRO Regional Land Information System (RLIS) -
Street Names - Last Updated on 10/22/2004
Light Rail Station - Last Updated on 4/26/2004
Light Rail Line - Last Updated on 4/27/2004
Washington County -
Washington County Taxlots - Last Updated on 2/24/2005
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GIS/RB 2/16/05 S:_CDD\05-0011\MERL_ST_COMM_LndUse_8x11.mxd
PDF Version of this map is Available Online @ T:\MAPS\CDD\MERL_ST_COMM_LndUse_8x11.pdf
GIANOLA CT
DONIN CT
BLUERIDGE DR
HAZELGROVE CT
BERNARD PL
173RD AVE
170TH DR
167TH AVE
STARK ST
NAZANEEN DR
KATTEGAT DR
DELTA CT
SPRINGWATER LN
169TH PL
DELTA DR
LISA ST
LIBERTY BELL DR
175TH AVE
174TH TER
175TH PL
171ST AVE
HURRELL LN
WHITLEY WAY
166TH AVE
WATERLEAF ST
SCHENDEL AVE
REGATTA LN
ESTUARY DR
158TH AVE
GREYSTONE CT
CONNOR CIR
SURREY ST
DOWNING ST
141ST AV
MEADOW DR
WALKER RD
BUTNER RD
KOLL PKY
BASELINE RD
160TH AVE
162ND AVE
GAGE LN
JAY ST
BURLINGTON DR
170TH AVE
175TH AVE
MARTY LN
BILES LN
171ST TER
BEAVER CT
BERKELEY LN
MERLO RD
MERLO DR
DERBY ST
144TH AVE
DOMINO ST
MURRAY BLVD
JENKINS RD
AUGUSTA LN
CHATELAIN DR
171ST PL
158TH DR
154TH TER
TERMAN RD

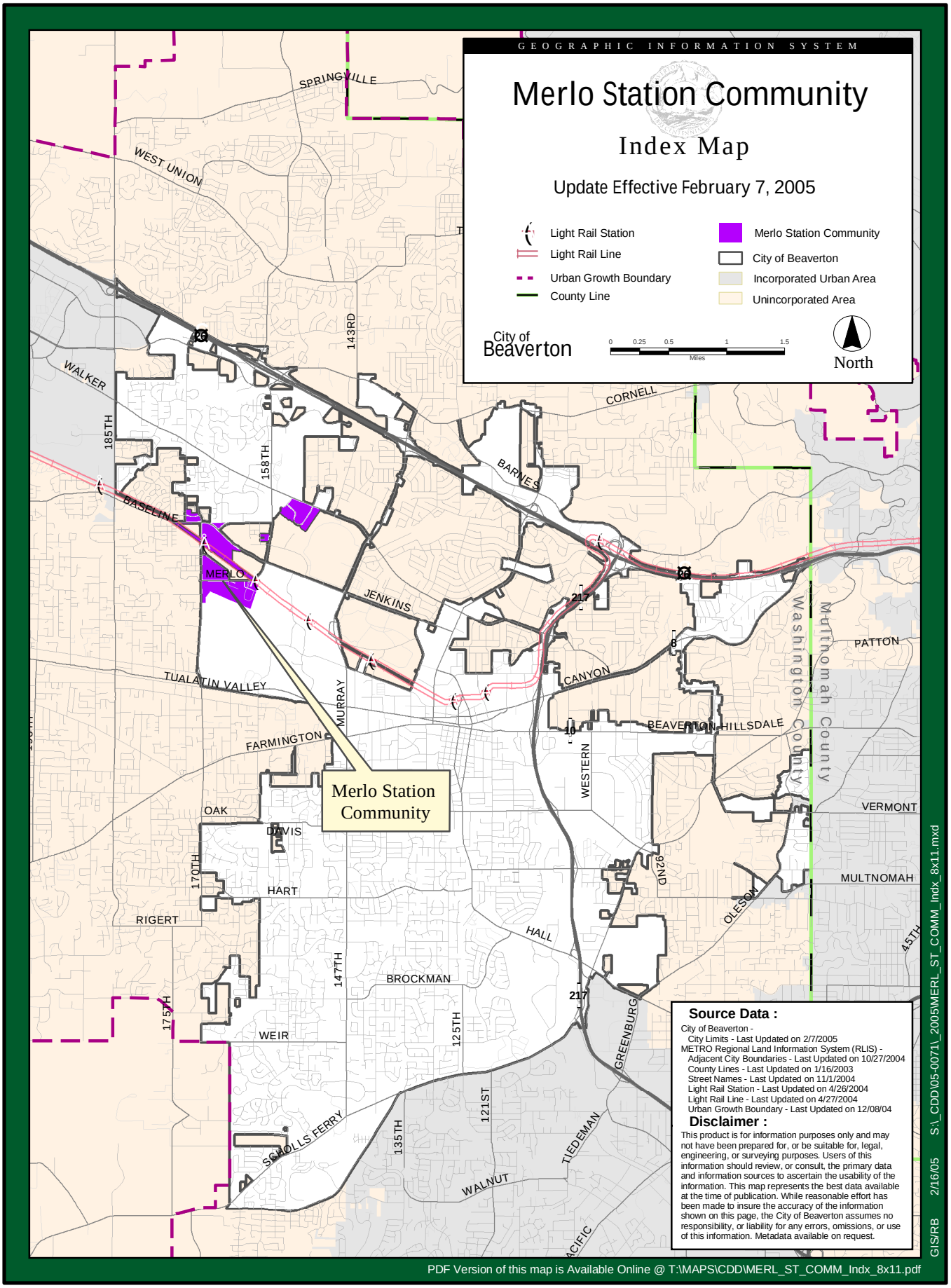

GEOGRAPHIC INFORMATION SYSTEM
Merlo Station Community
Zoning
Update Effective February 4, 2005
City of Beaverton
North
WOODMERE CT
GIANOLA CT
DONIN CT
ISLAND TER
ISLAND CIR
BLUERIDGE DR
173RD AVE
170TH DR
PARK CT
167TH AVE
STARK ST
NAZANEEN DR
KATTEGAT DR
DELTA CT
SCHENDEL AVE
SPRINGWATER LN
169TH PL
DELTA DR
REGATTA LN
175TH AVE
LISA ST
174TH TER
175TH PL
171ST AVE
WHITLEY WAY
HURRELL LN
166TH AVE
WATERLEAF ST
ESTUARY DR
163RD AVE
158TH AVE
BASELINE RD
GREYSTONE CT
CONOR CIR
SURREY ST
MEADOW DR
DOWNING ST
141ST AVE
BURNETT RD
WALKER RD
KOLL PKY
170TH AVE
162ND AVE
GAGE LN
JAY ST
BURLINGTON DR
175TH AVE
MARTY LN
BILES LN
171ST TER
MERLO DR
BERKELEY LN
MERLO RD
AUGUSTA LN
CHATELAIN DR
171ST PL
170TH AVE
FAR VISTA ST
DERBY ST
144TH AVE
ALIBHAI ST
DOMINO ST
JENKINS RD
SHAW ST
160TH AVE
1
2
3
LEGEND
RESIDENTIAL
R10 Urban Low Density 10,000 sq. ft. - Single Family
R7 Urban Standard Density 7,000 sq. ft. - Single Family
R5 Urban Standard Density 5,000 sq. ft. - Single Family
R4 Urban Medium Density 4,000 sq. ft. - Single Family
R3.5 Urban Medium Density 3,500 sq. ft. - Duplex / Multi-Family
R2 Urban Medium Density 2,000 sq. ft. - Multi-Family
R1 Urban High Density 1,000 sq. ft. - Multi-Family
COMMERCIAL
CV Convenience Service Center
CS Community Service
OC Office Commercial
NS Neighborhood Service Center
GC General Commercial
INDUSTRIAL
CI Campus Industrial
IP Industrial Park
LI Light Industrial
MULTIPLE USE
Corridor - Multiple Use C-MU
Station Area - Medium Density SA-MDR
Station Area - Multiple Use SA-MU
Station Community - High Density SC-HDR
Station Community - Employment SC-E
Station Community - Multiple Use SC-MU
Station Community - Sub Area
Town Center - Med. Density Residential TC-MDR
Town Center - High Density Residential TC-HDR
Town Center - Multiple Use TC-MU
Regional Center - Old Town RC-OT
Regional Center - East RC-E
Regional Center - Transit Oriented RC-TO
INTERIM ANNEXATION ZONING
Interim Washington County Zoning
Approved Annexations - (Effective at a later date)
MISCELLANEOUS
Light Rail Station
Light Rail Line
Beaverton City Limits
Source Data :
City of Beaverton -
City Limits - Last Updated on 1/3/2005
Zoning - Last Updated on 2/4/2005
METRO Regional Land Information System (RLIS) -
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Washington County -
Washington County Taxlots - Last Updated on 2/24/2005
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GIS/RB 2/16/05 S:_CDD\05-0011MERL_ST_COMM_Zone_8x11.mxd

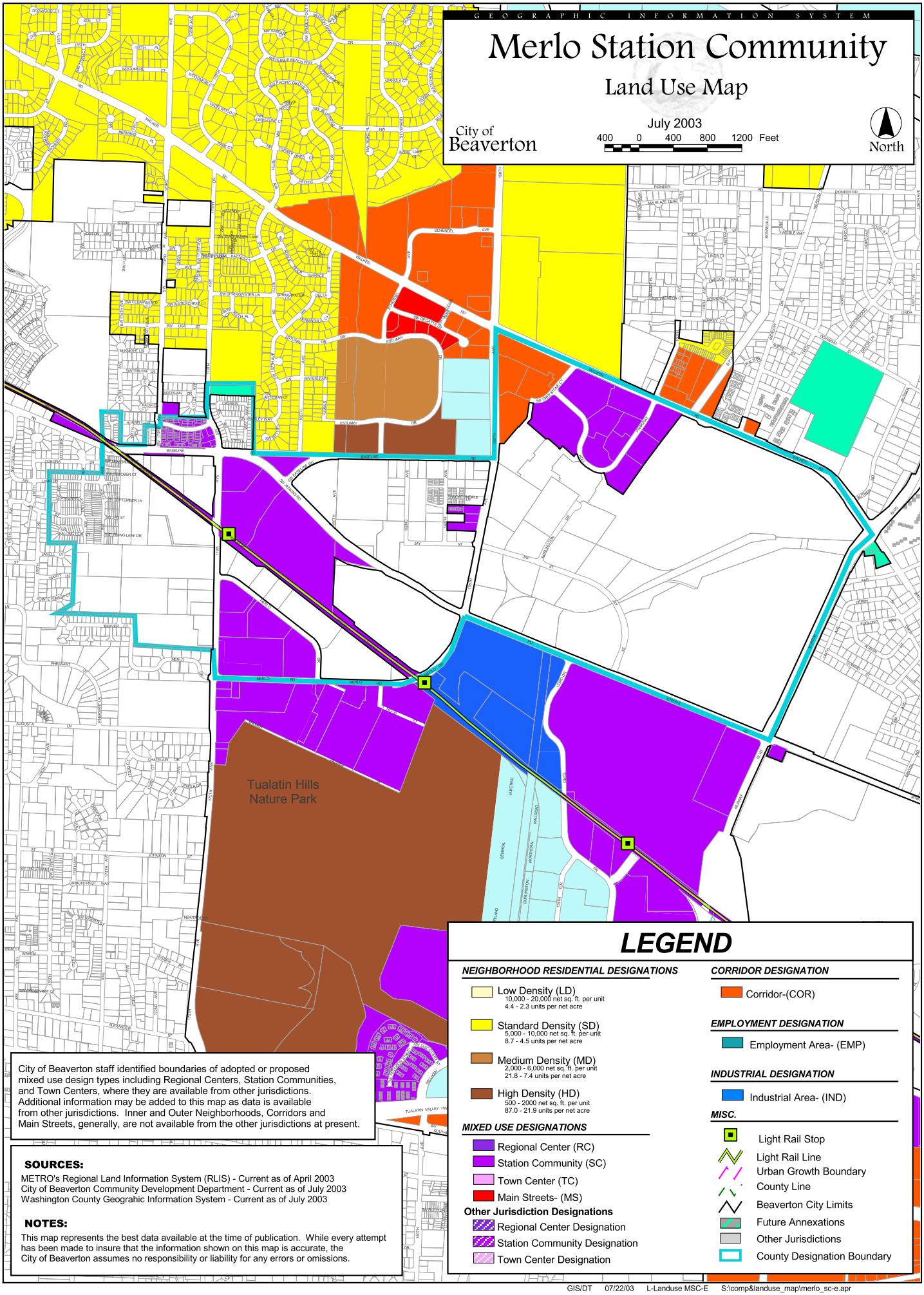

GEOGRAPHIC INFORMATION SYSTEM
Merlo Station Community
Functional Classification
Update Effective January 11, 2005
City of Beaverton
0 150 300 600 900 1,200 1,500
Feet
North
WALKER RD
BASELINE RD
JENKINS RD
MERLO RD
158TH AVE
170TH AVE
MURRAY BLVD
153RD DR
154TH TER
MILLIKAN WAY
JAY ST
MARTY LN
BILES LN
BEAVER CT
BERKELEY LN
AUGUSTA LN
CHATELAIN DR
BIRWEN ST
LISA ST
DELTA CT
DELTA DR
REGATTA LN
ESTUARY DR
WATERLEAF ST
GIANOLA CT
DONIM CT
BLUERIDGE DR
ISLAND CIR
BERNARD PL
175TH PL
173RD AVE
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170TH AVE
166TH AVE
163RD AVE
162ND AVE
175TH AVE
174TH TER
176TH TER
172ND TER
171ST TER
GAGE LN
KOLL PKY
BURLINGTON DR
MERLO DR
LEGEND
ARTERIAL FUNCTIONAL CLASSIFICATIONS
Freeway
Principal Arterial
Arterial
Proposed Arterial
Collector
Proposed Collector
Neiborhood Route
Proposed Neiborhood Route
Merlo Station Community
MISC.
Light Rail Station
Light Rail Line
Private Roads
Beaverton City Limits
Unincoporated Area
Source Data :
City of Beaverton -
City Limits - Last Updated on 2/7/2005
Functional Classification - Last Updated on 1/11/2005
METRO Regional Land Information System (RLIS) -
Street Names - Last Updated on 10/22/2004
Light Rail Station - Last Updated on 4/26/2004
Light Rail Line - Last Updated on 4/27/2004
Washington County -
Washington County Taxlots - Last Updated on 2/24/2005
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GIS/RB 2/16/05 S:_CDD\05-0011\MERL_ST_COMM_PedRts_8x11.mxd
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GEOGRAPHIC INFORMATION SYSTEM
Merlo Station Community
Major Pedestrian Routes
Update Effective December 21, 2004
City of Beaverton
North
WALKER RD
BASELINE
MERLO RD
JENKINS RD
158TH AVE
170TH AVE
153RD DR
154TH TER
SCHENDEL AVE
BLUERIDGE DR
SPRINGWATER LN
REGATTA LN
ESTUARY DR
DELTA DR
DELTA CT
WATERLEAF ST
WHITLEY WAY
ARTESIAN LN
HURRELL LN
LISA ST
STARK ST
JAY ST
MARTY LN
BILES LN
BERKELEY LN
AUGUSTA LN
GHATELAIN DR
MILLIKAN WAY
NYSSEN ST
BURLINGTON DR
KOLL PKY
MERLO DR
L E G E N D
Merlo Station Community
MAJOR PEDESTRIAN ROUTES
Class 1, Both Sides
Class 1, One Side
Class 2, Both Sides
Class 2, One Side
Future Class 1, Both Sides
MISC.
Light Rail Station
Light Rail Line
Private Roads
Beaverton City Limits
County Line
Unincorporated Area
Source Data :
City of Beaverton -
City Limits - Last Updated on 2/7/2005
Pedestrian Routes - Last Updated on 12/21/2004
METRO Regional Land Information System (RLIS) -
Street Names - Last Updated on 10/22/2004
Light Rail Station - Last Updated on 4/26/2004
Light Rail Line - Last Updated on 4/27/2004
Washington County -
Washington County Taxlots - Last Updated on 2/24/2005
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GIS/RB 2/16/05 S:_CDD\05-0011\MERL_ST_COMM_PedRts_8x11.mxd
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Significant Natural Resources Map

(Map not available at present)


GEOGRAPHIC INFORMATION SYSTEM
Merlo Station Community
Index Map
Update Effective February 7, 2005
Light Rail Station
Light Rail Line
Urban Growth Boundary
County Line
Merlo Station Community
City of Beaverton
Incorporated Urban Area
Unincorporated Area
City of Beaverton
0 0.25 0.5 1 1.5
Miles
North
SPRINGVILLE
WEST UNION
WALKER
185TH
143RD
158TH
CORNELL
BARNES
BASELINE
MERLO
JENKINS
TUALATIN VALLEY
MURRAY
FARMINGTON
Merlo Station Community
OAK
DAVIS
170TH
HART
RIGERT
147TH
BROCKMAN
175TH
WEIR
125TH
HALL
SCHOLLS FERRY
135TH
121ST
WALNUT
TIEDEMAN
GREENBURG
WESTERN
CANYON
BEAVERTON-HILLSDALE
PATTON
Washington County
Multnomah County
VERMONT
92ND
MULTNOMAH
OLESON
45TH
217
26
10
8
Source Data :
City of Beaverton -
City Limits - Last Updated on 2/7/2005
METRO Regional Land Information System (RLIS) -
Adjacent City Boundaries - Last Updated on 10/27/2004
County Lines - Last Updated on 1/16/2003
Street Names - Last Updated on 11/1/2004
Light Rail Station - Last Updated on 4/26/2004
Light Rail Line - Last Updated on 4/27/2004
Urban Growth Boundary - Last Updated on 12/08/04
Disclaimer :
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GIS/RB 2/16/05 S:_CDD\05-0071_2005\MERL_ST_COMM_Indx_8x11.mxd


GEOGRAPHIC INFORMATION SYSTEM
Merlo Station Community
Land Use Map
City of Beaverton
July 2003
400 0 400 800 1200 Feet
North
Tualatin Hills Nature Park
LEGEND
NEIGHBORHOOD RESIDENTIAL DESIGNATIONS
Low Density (LD)
10,000 - 20,000 net sq. ft. per unit
4.4 - 2.3 units per net acre
Standard Density (SD)
5,000 - 10,000 net sq. ft. per unit
8.7 - 4.5 units per net acre
Medium Density (MD)
2,000 - 6,000 net sq. ft. per unit
21.8 - 7.4 units per net acre
High Density (HD)
500 - 2000 net sq. ft. per unit
87.0 - 21.9 units per net acre
MIXED USE DESIGNATIONS
Regional Center (RC)
Station Community (SC)
Town Center (TC)
Main Streets- (MS)
Other Jurisdiction Designations
Regional Center Designation
Station Community Designation
Town Center Designation
CORRIDOR DESIGNATION
Corridor-(COR)
EMPLOYMENT DESIGNATION
Employment Area- (EMP)
INDUSTRIAL DESIGNATION
Industrial Area- (IND)
MISC.
Light Rail Stop
Light Rail Line
Urban Growth Boundary
County Line
Beaverton City Limits
Future Annexations
Other Jurisdictions
County Designation Boundary
City of Beaverton staff identified boundaries of adopted or proposed mixed use design types including Regional Centers, Station Communities, and Town Centers, where they are available from other jurisdictions. Additional information may be added to this map as data is available from other jurisdictions. Inner and Outer Neighborhoods, Corridors and Main Streets, generally, are not available from the other jurisdictions at present.
SOURCES:
METRO's Regional Land Information System (RLIS) - Current as of April 2003
City of Beaverton Community Development Department - Current as of July 2003
Washington County Geograhic Information System - Current as of July 2003
NOTES:
This map represents the best data available at the time of publication. While every attempt has been made to insure that the information shown on this map is accurate, the City of Beaverton assumes no responsibility or liability for any errors or omissions.
GIS/DT 07/22/03 L-Landuse MSC-E S:\comp&landuse_map\merlo_sc-e.apr

GEOGRAPHIC INFORMATION SYSTEM

Merlo Station Community

Zoning

July 2003

City of Beaverton

400 0 400 800 1200 Feet

North

Tualatin Hills Nature Park

LEGEND

RESIDENTIAL

- Residential - Agricultural (RA)
- Urban Low Density (R10) 10,000 sq. ft. Single - Family
- Urban Standard Density (R7) 7,000 sq. ft. Single - Family
- Urban Standard Density (R5) 5,000 sq. ft. Single - Family
- Urban Medium Density (R4) 4,000 sq. ft. Single Family
- Urban Medium Density (R3.5) 3,500 sq. ft. Duplex / Multi - Family
- Urban Medium Density (R2) 2,000 sq. ft. Multi - Family
- Urban High Density (R1) 1,000 sq. ft. Multi - Family

COMMERCIAL

- Convenience Service Center (CV)
- Office Commercial (OC)
- Neighborhood Service Center (NS)
- Community Service (CS)
- General Commercial (GC)
- Town Center - Sub Regional (SR)

MULTIPLE USE

- Main Street - RESERVED
- Corridor - RESERVED
- Station Area - Medium Density (SA-MDR)
- Station Area - Multiple Use (SA-MU)
- Station Community - High Density (SC-HDR)
- Station Community - Multiple Use (SC-MU)
- Station Community - Employment (SC-E)
- Town Center - Medium Density Residential (TC-MDR)
- Town Center - High Density Residential (TC-HDR)
- Town Center - Multiple Use (TC-MU)
- Regional Center - East End (RC-E)
- Regional Center - Old Town (RC-OT)
- Regional Center - Transit Oriented (RC-TO)

INDUSTRIAL

- Campus Industrial (CI)
- Industrial Park (IP)
- Light Industrial (LI)

INTERIM ANNEXATION ZONING

- Interim Washington County Zoning in effect

MISC

- Beaverton City Limits
- County Line
- Urban Growth Boundary
- Light Rail Line
- Light Rail Station
- Approved Annexations - Effective at a later date
- Hillsboro
- Portland
- Tigard
- County Designation Bndy

NOTES:

City of Beaverton staff identified boundaries of adopted or proposed mixed use design types including Regional Centers, Station Communities, and Town Centers, where they are available from other jurisdictions. Additional information may be added to this map as data is available from other jurisdictions. Inner and Outer Neighborhoods, Corridors and Main Streets, generally, are not available from the other jurisdictions at present.

SOURCES:

City of Beaverton Community Development Department -
- Zoning - Current as of July 2003
- City Limits - Current as of July 2003

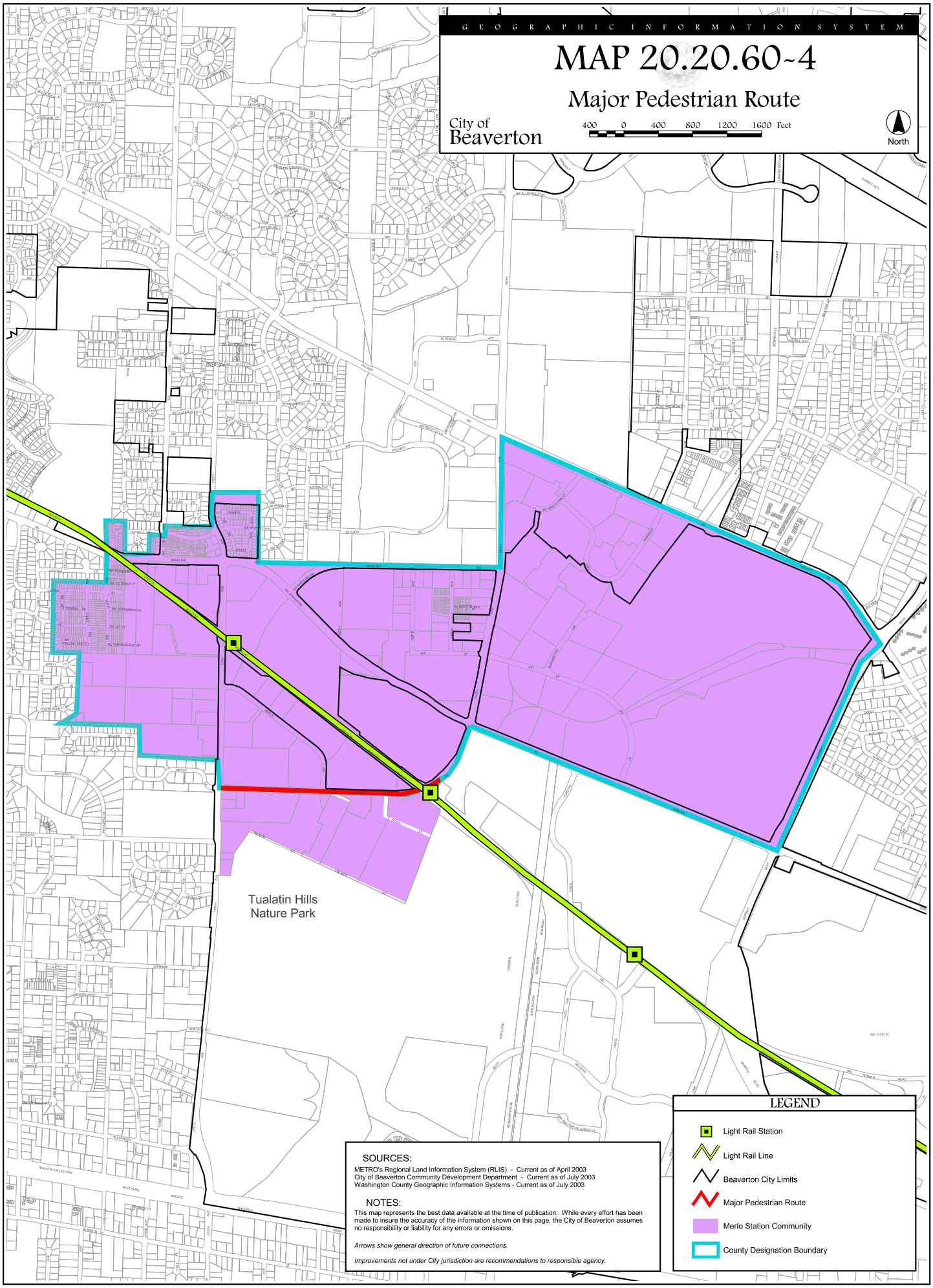
Washington County Geograhic Information System -
- Taxlots - Current as of July 2003

METRO Regional Land Information System (RLIS) -
- Street Names - Current as of April 2003

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GIS/DT 07/22/03 L-Zone MSC-E S:\comp&landuse_map\merlo_sc-e.apr


GEOGRAPHIC INFORMATION SYSTEM
MAP 20.20.60-4
Major Pedestrian Route
City of Beaverton
400 0 400 800 1200 1600 Feet
North
Tualatin Hills Nature Park
SOURCES:
METRO's Regional Land Information System (RLIS) - Current as of April 2003
City of Beaverton Community Development Department - Current as of July 2003
Washington County Geographic Information Systems - Current as of July 2003
NOTES:
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Arrows show general direction of future connections.
Improvements not under City jurisdiction are recommendations to responsible agency.
LEGEND
Light Rail Station
Light Rail Line
Beaverton City Limits
Major Pedestrian Route
Merlo Station Community
County Designation Boundary
GIS/DT 07/22/03 L_Merlo Station Maj Ped Route S:\comp&landuse_map\indiv_functclass.apr

South Tektronix Station Community

Community Plan

South Tektronix Station Community

Community Plan Index

Pg. #

Community Plan Context..... 3
Plan Text..... 5
Index Map..... 7
Comprehensive Plan Land Use Map 8
Zoning Map 9
Functional Classification Map.....10
Major Pedestrian Route Map 11
Significant Natural Resources Map.....12

Maps found in the Comprehensive Plan and the Development Code provide the basis for the mapped figures referenced in Community Plans. The Community Plan figures provide an expanded view of selected Comprehensive Plan and Development Code maps with a focus on a specific geographical area of the City. Community Plan figures include views of the Comprehensive Plan Land Use Map, the Transportation Functional Classification Map, the Significant Natural Resources Map, the Historic Resources map, the Development Code Zoning Map and Major Pedestrian Route Map. Amendments to these figures follow procedures specified within the document in which they are located. Community Plan figures will be administratively updated as amendments to the Comprehensive Plan and Development Code maps are adopted.

South Tektronix Station Community

Community Plan Context

The South Tektronix Station Community Community Plan is one of a number of City planning documents. These documents, when viewed in total, comprise the City's Comprehensive Plan. The intent of this context statement is to explore the relationship between this document and the other documents comprising the Comprehensive Plan.

The South Tektronix Station Community Community Plan applies to the area generally north of the Tualatin Valley Highway, west of SW Cedar Hills Boulevard, south of SW Millikan Way and east of SW Murray Boulevard. This Community Plan includes one of several light rail station areas in Beaverton. This Community Plan describes policies and action statements specific to this particular geographic location. Fully understanding the Community Plan also requires review of the Comprehensive Plan for the general policies applicable to the City as a whole and the Beaverton Development Code and Engineering Design Standards.

The following documents comprise the City's Comprehensive Plan:

Volume I - City of Beaverton Comprehensive Plan
Volume II - Comprehensive Plan Background and Supporting Documents
Volume III - Statewide Planning Goal 5 Inventory Documents
Volume IV - Transportation System Plan
Volume V - Community Plans

The City of Beaverton Comprehensive Plan is a policy document that serves as a policy framework for the other volumes of the Plan. Volume I, therefore, addresses the broad range of comprehensive planning and development issues with action statements to guide implementation of the policy directives.

Volume II - the Comprehensive Plan Background and Supporting Documents provides the demographic and economic data and forecasts for the City's Comprehensive Plan. It should be noted that these documents provide information supporting and guiding the development of the policy framework, however, the data is a snapshot in time and cannot be relied upon for future decision making without researching the data to ensure that conditions have not changed. Metro, the regional governing body in the Portland Metropolitan Area, provides much of the data informing the City's Comprehensive Plan policy making. Policies and regulations in Metro Functional Plans also direct some City policy decisions and regulations.

Volume III - Statewide Planning Goal 5 Inventory Documents includes the background and supporting documents, mapping and findings for the City's response to Statewide

Planning Goal 5. The documents include the following:

Significant Natural Resource Area Inventories

This document inventories applicable Statewide Planning Goal 5 resource areas and identifies "Significant" resources.

Historic Resources Inventory

This document identifies the City's Historic Resources, provides data regarding building typology, historical context, condition, and any significant events in Beaverton's history related to the building. Photographs are also included in the inventory. As an additional component to the City's historic resources, the City adopted a list of historic trees through the Historic Resource Review Committee, Planning Commission and City Council.

Volume IV - Transportation System Plan implements regional goals and policies and plans multimodal improvements for a 20 year period.
Volume V - Community Plans describe policies and action statements and map designations specific to a particular geographic location.

The City of Beaverton Development Code implements the policy directives of Volumes I and V of the Comprehensive Plan. The Development Code includes the procedural framework for land use decisions, including zoning district information, allowed uses, density and dimensional requirements, public facility requirements, land division requirements and standards for land development.

Community Plan Goal 1: Develop the South Tektronix Station Community to support light rail ridership, foster a sense of community, and respect the natural features adjacent to and within the Station Community.

Policies:

a) Regulate new development in Station Communities and Station Areas to provide increased densities and employment to support a high level of transit service.

b) Encourage opportunities to promote land assembly for high density redevelopment projects.

c) Encourage development of various housing types, providing at least the minimum residential density as established by the development code, with land assembly, infill, and redevelopment projects

d) Encourage and look for relocation opportunities for non-conforming, non-transit oriented businesses to locate outside this area.

e) Encourage developers to implement an affordable housing strategy. Redevelopment to high density mixed use housing could include a percentage of low-income housing units for a fixed time period, a density bonus program, inclusionary housing or other methods suggested by the Metro Urban Growth Management Functional Plan Title 7 Affordable Housing.

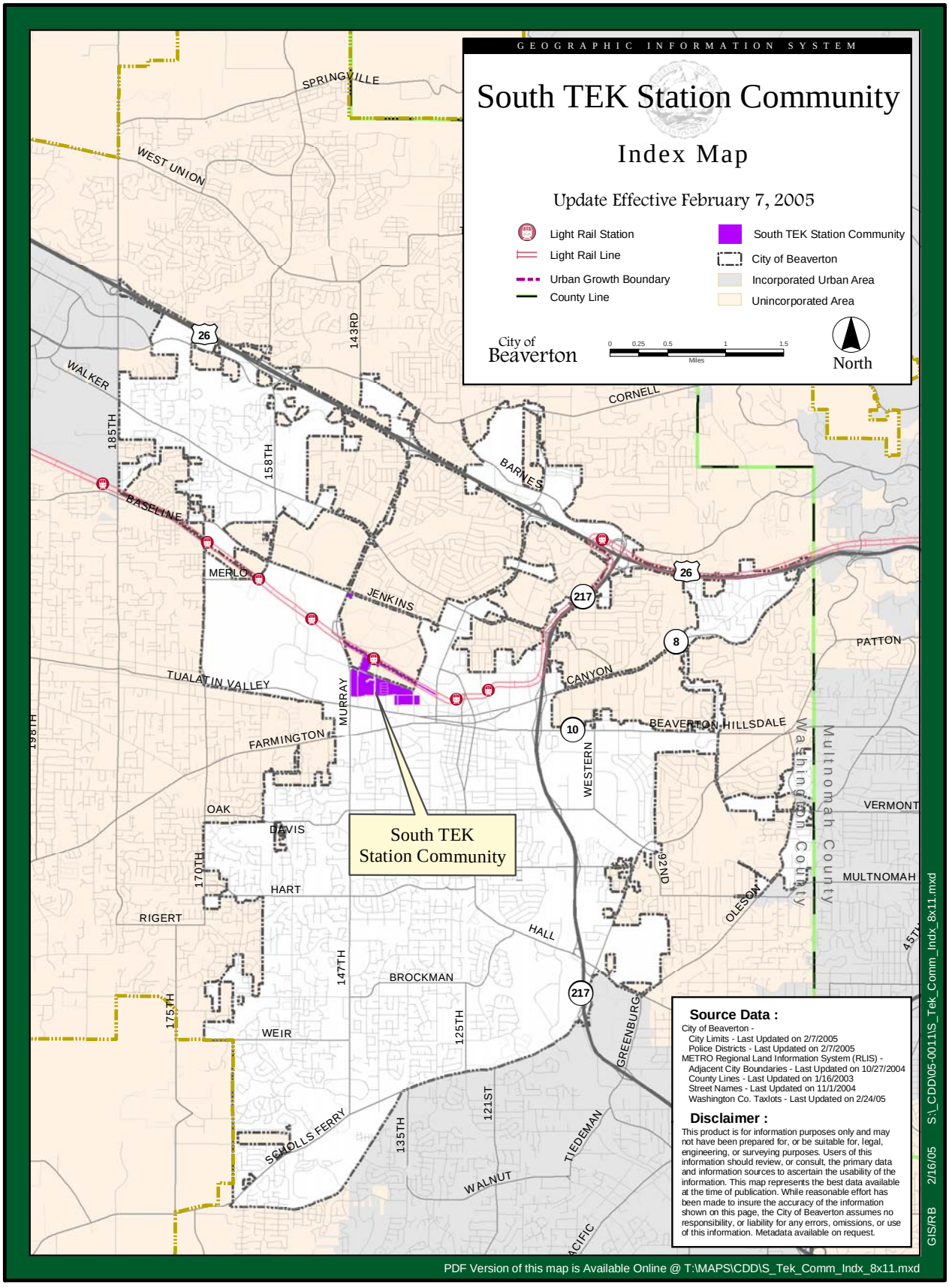
f) Support para-transit service in the South Tektronix Community. Encourage programs provided by the Transportation Management Association that may include expansion of services from the Tektronix Campus. Para-transit is defined as transportation services that operate vehicles in a curb to curb, demand/response mode. Examples include buses, jitneys, taxis and vans.

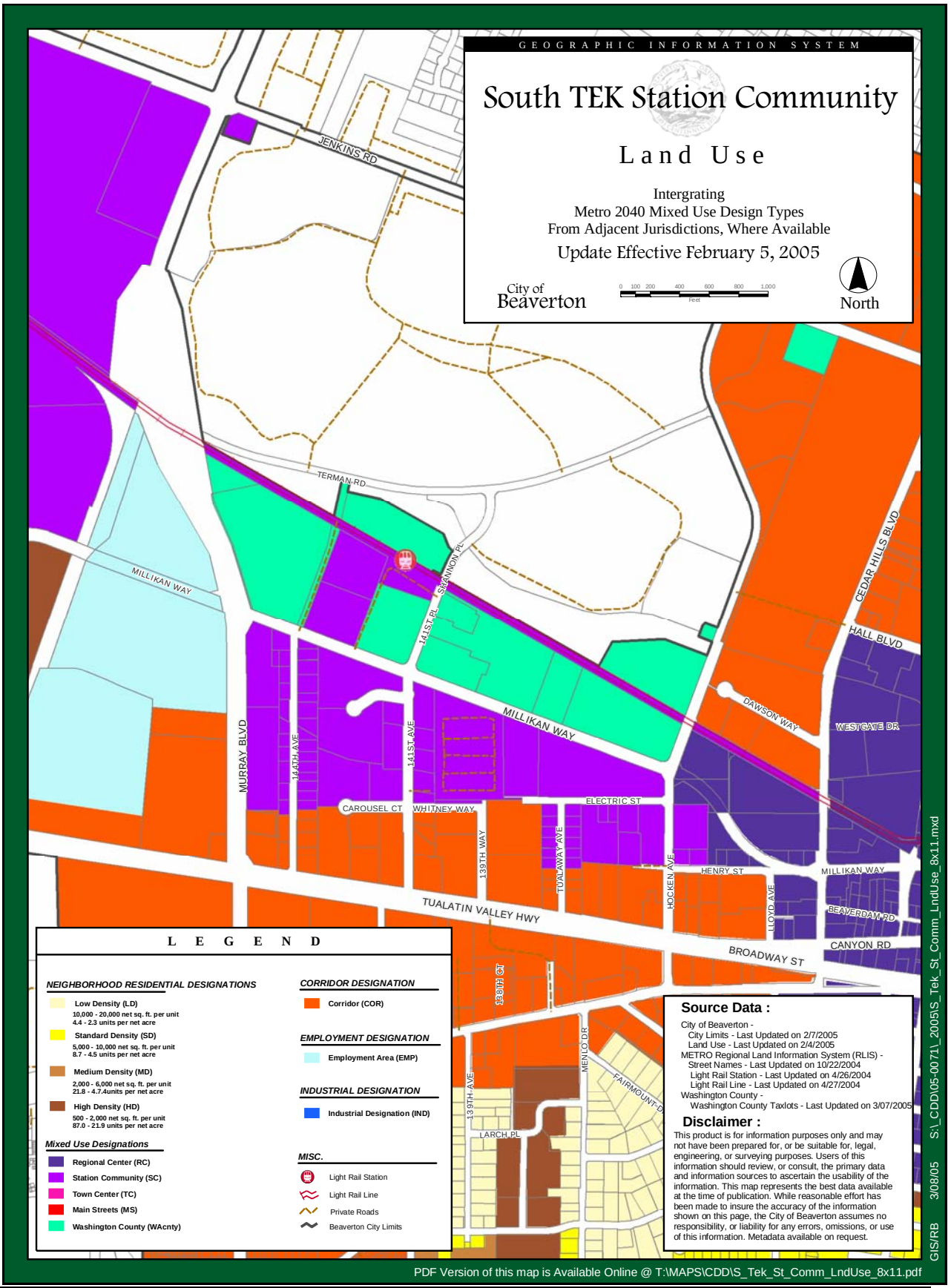
g) Encourage development strategies that will add green spaces and public spaces.

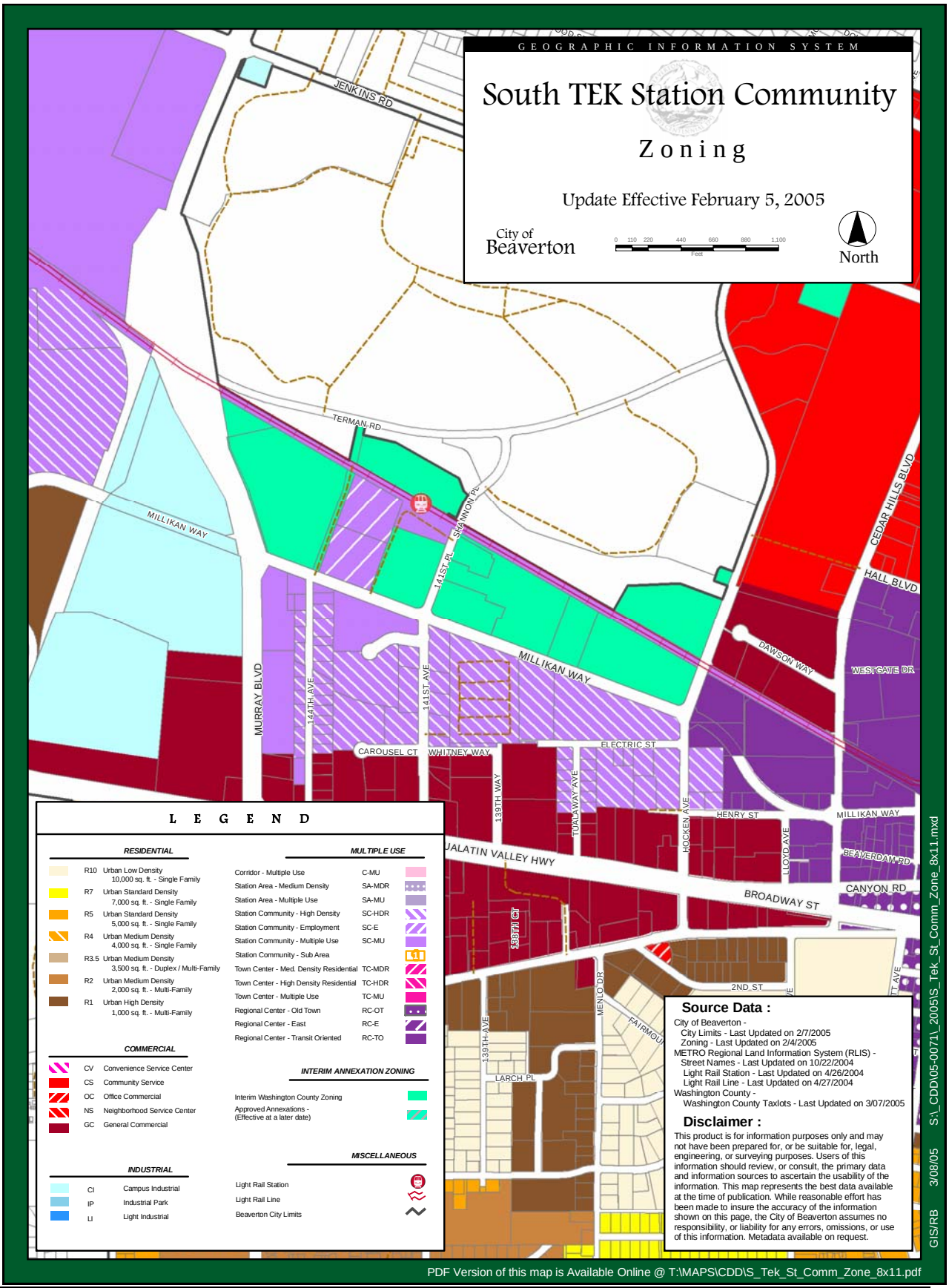
h) Encourage day-lighting of the south fork of Beaverton Creek provided it is found

feasible by City engineering standards and a certified wetland specialist determines that the adjoining significant wetland west of Murray Boulevard will not be negatively impacted.

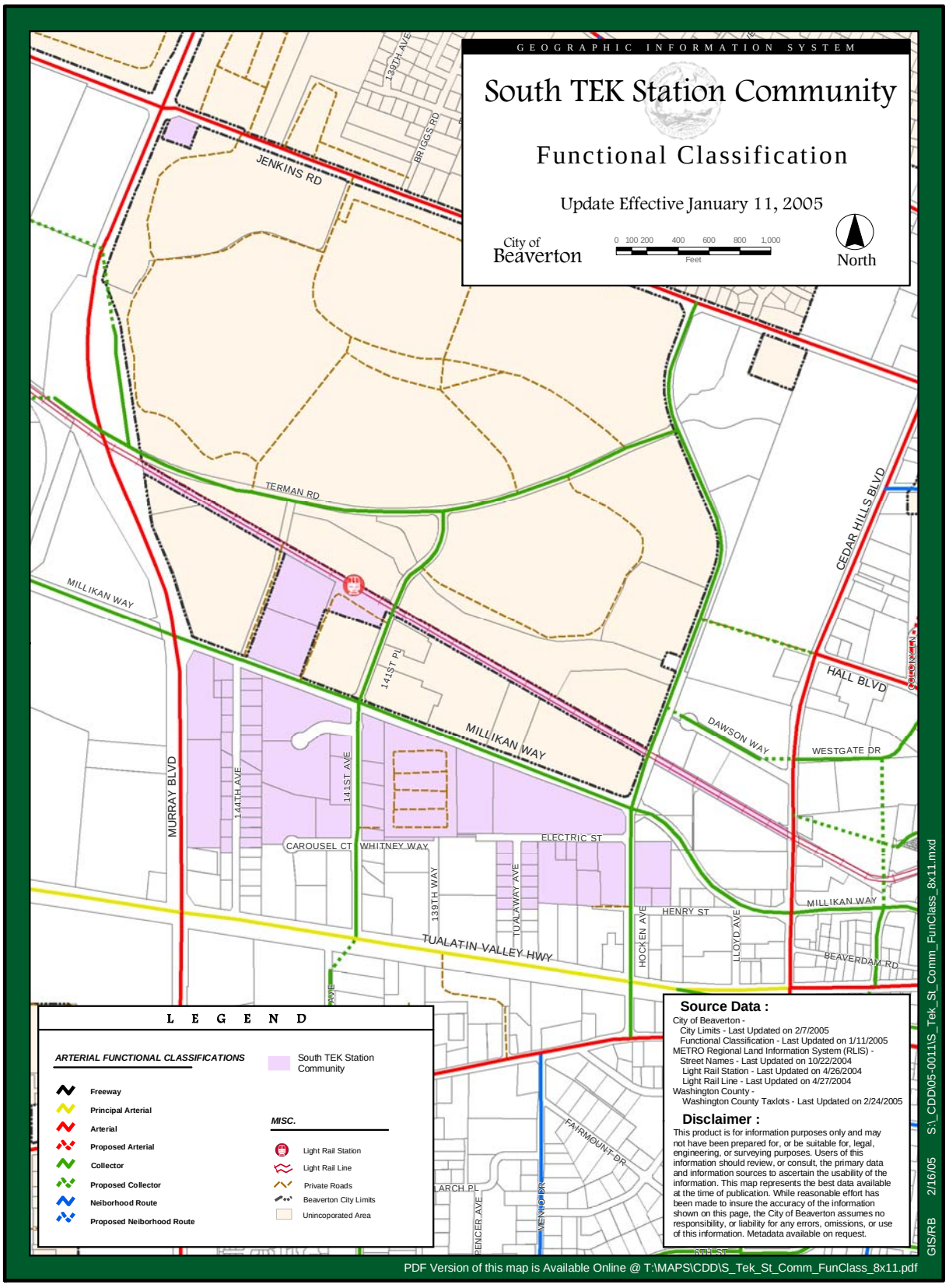
i) Support development of a pedestrian route from Willow Creek Park west across Murray Boulevard connecting the Park with other open space, parks and pedestrian paths, should day-lighting a significant portion of the South Fork of Beaverton Creek occur.

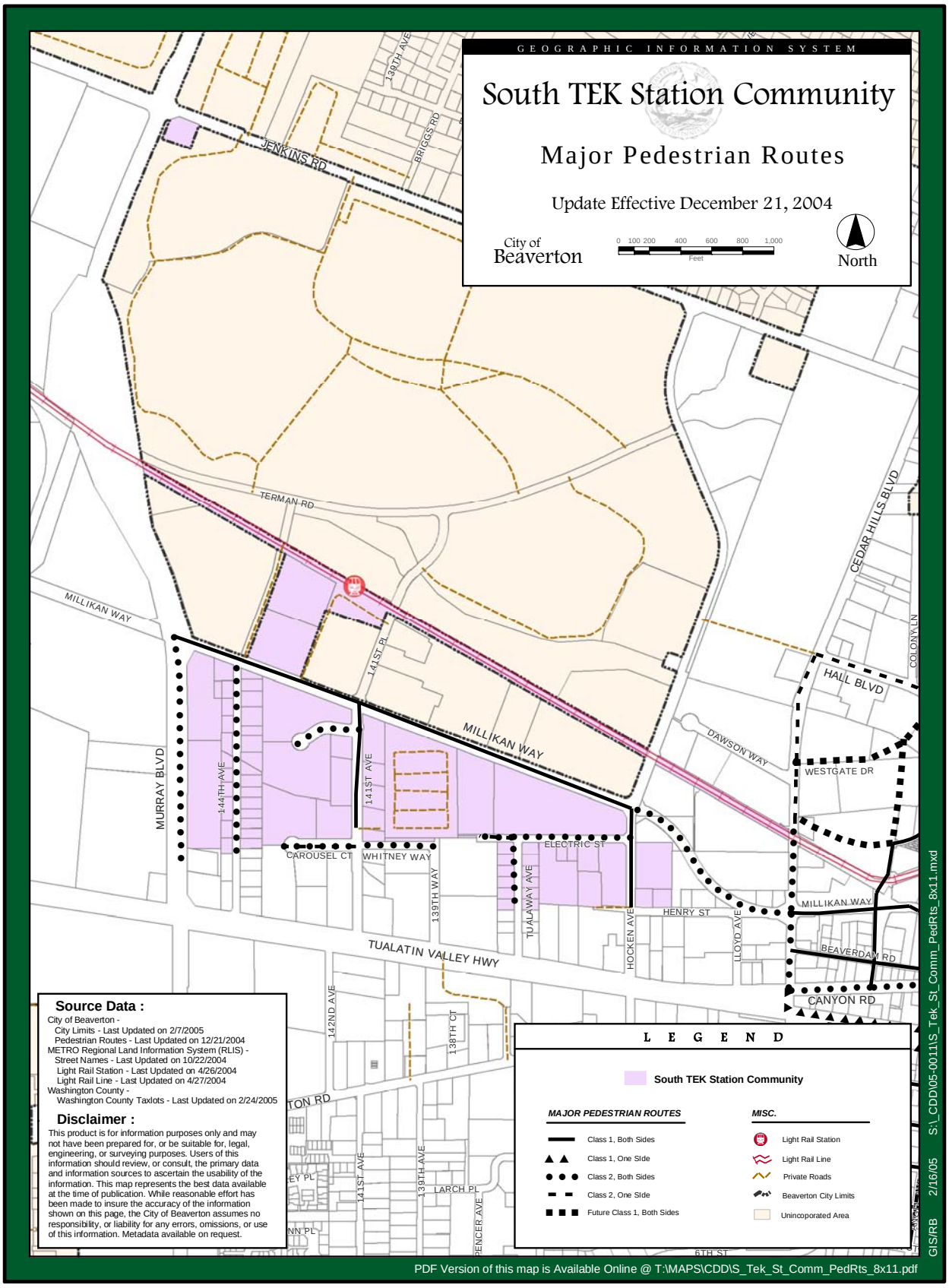

GEOGRAPHIC INFORMATION SYSTEM
South TEK Station Community
Index Map
Update Effective February 7, 2005
Light Rail Station
Light Rail Line
Urban Growth Boundary
County Line
South TEK Station Community
City of Beaverton
Incorporated Urban Area
Unincorporated Area
City of Beaverton
0 0.25 0.5 1 1.5
Miles
North
SPRINGVILLE
WEST UNION
WALKER
CORNELL
BARNES
BASELINE
MERLO
JENKINS
TUALATIN VALLEY
FARMINGTON
CANYON
BEAVERTON HILLSDALE
PATTON
WESTERN
VERMONT
MULTNOMAH
OAK
DAVIS
HART
RIGERT
HALL
BROCKMAN
WEIR
SCHOLLS FERRY
WALNUT
TIEDEMAN
GREENBURG
OLESON
Washington County
Multnomah County
185TH
158TH
143RD
198TH
170TH
147TH
175TH
125TH
135TH
121ST
92ND
45TH
MURRAY
26
217
8
10
South TEK
Station Community
Source Data :
City of Beaverton -
City Limits - Last Updated on 2/7/2005
Police Districts - Last Updated on 2/7/2005
METRO Regional Land Information System (RLIS) -
Adjacent City Boundaries - Last Updated on 10/27/2004
County Lines - Last Updated on 1/16/2003
Street Names - Last Updated on 11/1/2004
Washington Co. Taxlots - Last Updated on 2/24/05
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GIS/RB 2/16/05 S:_CDD\05-0011\S_Tek_Comm_Indx_8x11.mxd
PDF Version of this map is Available Online @ T:\MAPS\CDD\S_Tek_Comm_Indx_8x11.mxd


GEOGRAPHIC INFORMATION SYSTEM
South TEK Station Community
Land Use
Intergrating
Metro 2040 Mixed Use Design Types
From Adjacent Jurisdictions, Where Available
Update Effective February 5, 2005
City of Beaverton
0 100 200 400 600 800 1,000
Feet
North
JENKINS RD
TERMAN RD
MILLIKAN WAY
SHANNON PL
141ST PL
CEDAR HILLS BLVD
HALL BLVD
DAWSON WAY
WESTGATE DR
MURRAY BLVD
147TH AVE
141ST AVE
CAROUSEL CT
WHITNEY WAY
ELECTRIC ST
139TH WAY
TUALAWAY AVE
HOCKEN AVE
HENRY ST
LLOYD AVE
BEAVERDAM RD
CANYON RD
TUALATIN VALLEY HWY
BROADWAY ST
139TH CT
MENLO DR
FAIRMOUNT D
139TH AVE
LARCH PL
LEGEND
NEIGHBORHOOD RESIDENTIAL DESIGNATIONS
Low Density (LD)
10,000 - 20,000 net sq. ft. per unit
4.4 - 2.3 units per net acre
Standard Density (SD)
5,000 - 10,000 net sq. ft. per unit
8.7 - 4.5 units per net acre
Medium Density (MD)
2,000 - 6,000 net sq. ft. per unit
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500 - 2,000 net sq. ft. per unit
87.0 - 21.9 units per net acre
Mixed Use Designations
Regional Center (RC)
Station Community (SC)
Town Center (TC)
Main Streets (MS)
Washington County (WAcnty)
CORRIDOR DESIGNATION
Corridor (COR)
EMPLOYMENT DESIGNATION
Employment Area (EMP)
INDUSTRIAL DESIGNATION
Industrial Designation (IND)
MISC.
Light Rail Station
Light Rail Line
Private Roads
Beaverton City Limits
Source Data :
City of Beaverton -
City Limits - Last Updated on 2/7/2005
Land Use - Last Updated on 2/4/2005
METRO Regional Land Information System (RLIS) -
Street Names - Last Updated on 10/22/2004
Light Rail Station - Last Updated on 4/26/2004
Light Rail Line - Last Updated on 4/27/2004
Washington County -
Washington County Taxlots - Last Updated on 3/07/2005
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GIS/RB 3/08/05 S:_CDD\05-00711_2005\S_Tek_St_Comm_LndUse_8x11.mxd



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GEOGRAPHIC INFORMATION SYSTEM
South TEK Station Community
Functional Classification
Update Effective January 11, 2005
City of Beaverton
0 100 200 400 600 800 1,000
Feet
North
JENKINS RD
BRIGGS RD
139TH AVE
TERMAN RD
MILLIKAN WAY
141ST PL
CEDAR HILLS BLVD
HALL BLVD
DAWSON WAY
WESTGATE DR
MURRAY BLVD
144TH AVE
141ST AVE
CAROUSEL CT
WHITNEY WAY
ELECTRIC ST
139TH WAY
TUALATIN VALLEY WAY
HENRY ST
HOCKEN AVE
LLOYD AVE
BEAVERDAM RD
FAIRMOUNT DR
LARCH PL
SPENCER AVE
MENLO DR
L E G E N D
ARTERIAL FUNCTIONAL CLASSIFICATIONS
Freeway
Principal Arterial
Arterial
Proposed Arterial
Collector
Proposed Collector
Neiborhood Route
Proposed Neiborhood Route
South TEK Station Community
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Light Rail Station
Light Rail Line
Private Roads
Beaverton City Limits
Unincoporated Area
Source Data :
City of Beaverton -
City Limits - Last Updated on 2/7/2005
Functional Classification - Last Updated on 1/11/2005
METRO Regional Land Information System (RLIS) -
Street Names - Last Updated on 10/22/2004
Light Rail Station - Last Updated on 4/26/2004
Light Rail Line - Last Updated on 4/27/2004
Washington County -
Washington County Taxlots - Last Updated on 2/24/2005
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GIS/RB 2/16/05 S:_CDD\05-0011\S_Tek_St_Comm_FunClass_8x11.mxd
PDF Version of this map is Available Online @ T:\MAPS\CDD\S_Tek_St_Comm_FunClass_8x11.pdf


GEOGRAPHIC INFORMATION SYSTEM
South TEK Station Community
Major Pedestrian Routes
Update Effective December 21, 2004
City of Beaverton
0 100 200 400 600 800 1,000
Feet
North
JENKINS RD
139TH AVE
BRIGGS RD
TERMAN RD
MILLIKAN WAY
141ST PL
CEDAR HILLS BLVD
COLONY LN
HALL BLVD
DAWSON WAY
WESTGATE DR
MURRAY BLVD
144TH AVE
141ST AVE
CAROUSEL CT
WHITNEY WAY
139TH WAY
ELECTRIC ST
TUALAWAY AVE
HENRY ST
HOCKEN AVE
LLOYD AVE
BEAVERDAM RD
CANYON RD
TUALATIN VALLEY HWY
142ND AVE
138TH CT
138TH AVE
LARCH PL
SPENCER AVE
6TH ST
Source Data :
City of Beaverton -
City Limits - Last Updated on 2/7/2005
Pedestrian Routes - Last Updated on 12/21/2004
METRO Regional Land Information System (RLIS) -
Street Names - Last Updated on 10/22/2004
Light Rail Station - Last Updated on 4/26/2004
Light Rail Line - Last Updated on 4/27/2004
Washington County -
Washington County Taxlots - Last Updated on 2/24/2005
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LEGEND
South TEK Station Community
MAJOR PEDESTRIAN ROUTES
Class 1, Both Sides
Class 1, One SIde
Class 2, Both Sides
Class 2, One SIde
Future Class 1, Both Sides
MISC.
Light Rail Station
Light Rail Line
Private Roads
Beaverton City Limits
Unincoporated Area
GIS/RB 2/16/05 S:_CDD\05-00111S_Tek_St_Comm_PedRts_8x11.mxd
PDF Version of this map is Available Online @ T:\MAPS\CDD\S_Tek_St_Comm_PedRts_8x11.pdf

Map Unavailable at Present

Significant Natural Resources Map

GEOGRAPHIC INFORMATION SYSTEM

South Tek Station Community
Index Map

September 2000

Scale 1" = 3250'

2000 0 2000 Feet

City of Beaverton

North

LEGEND

MIXED USE DESIGNATIONS

- Station Community (SC)
- Unincorporated areas expected to annex to Beaverton within the Regional Center area

MISC.

- Light Rail Stop
- Light Rail Line
- Urban Growth Boundary
- County Line
- Beaverton City Limits

South Tektronix Station Community

UNION RD
US 26
143RD AVE
WALKER RD
158TH AVE
185TH AVE
CORNELL
BARNES RD
MERLO RD
JENKINS RD
HILLS RD
CEDAR HILLS
CANYON RD
HWY 8
Aloha
Beaverton
FARMINGTON
DAVIS RD
170TH AVE
BLVD
ALLEN BLVD
DENNEY
HART RD
HWY 217
GARDEN
HALL BLVD
OLESON RD
SCHOLLS FERRY RD
SHATTUCK
BROCKMAN ST
MURRAY BLVD
WEIR RD
175TH AVE
125TH AVE
121ST AVE
135TH AVE
WALNUT ST
TIEDMAN AVE
GREENBURG RD
62ND AVE
LESSER

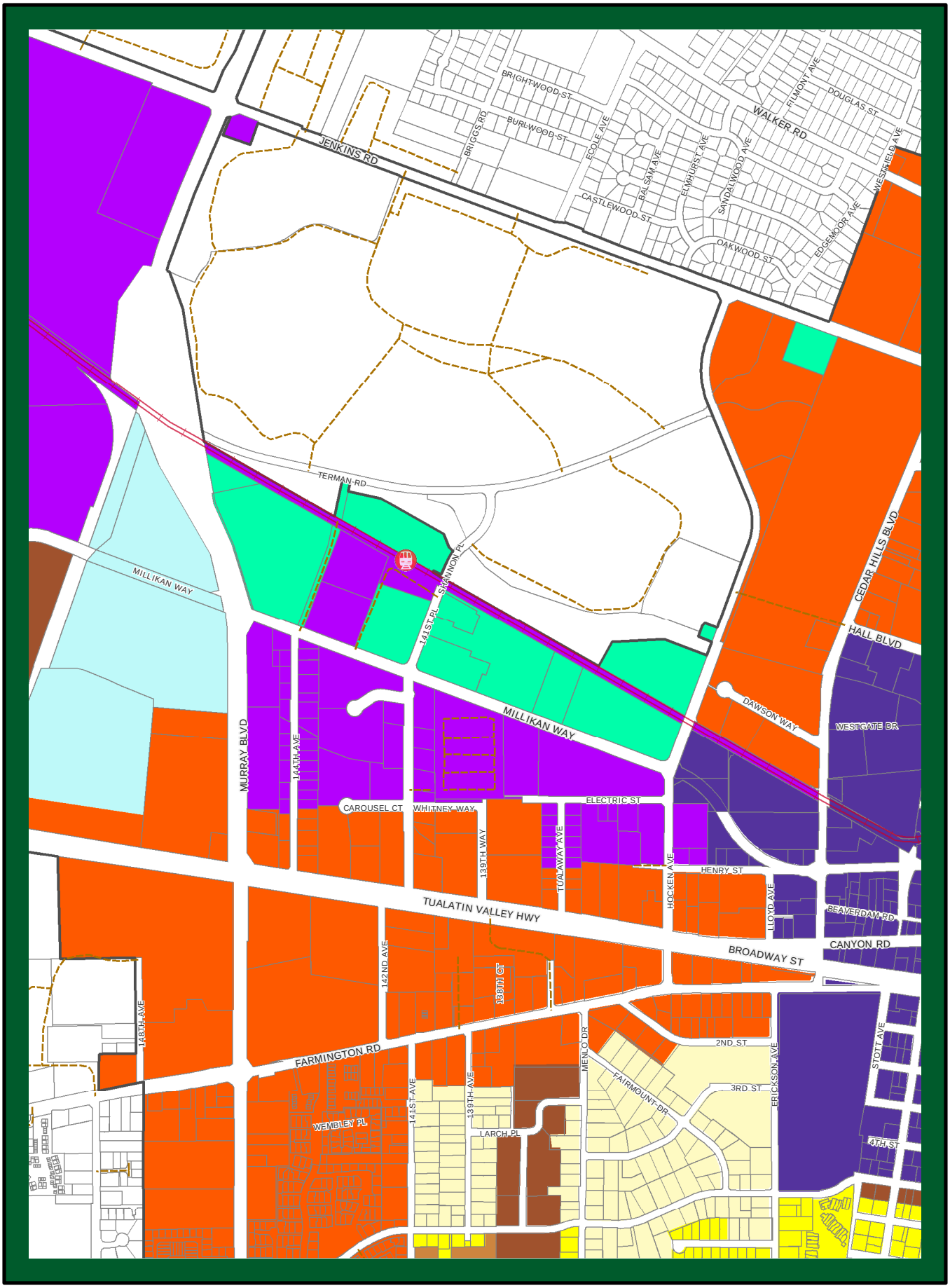
City of Beaverton staff identified boundaries of adopted or proposed mixed use design types including Regional Centers, Station Communities, and Town Centers, where they are available from other jurisdictions. Additional information may be added to this map as data is available from other jurisdictions. Inner and Outer Neighborhoods, Corridors and Main Streets, generally, are not available from the other jurisdictions at present.

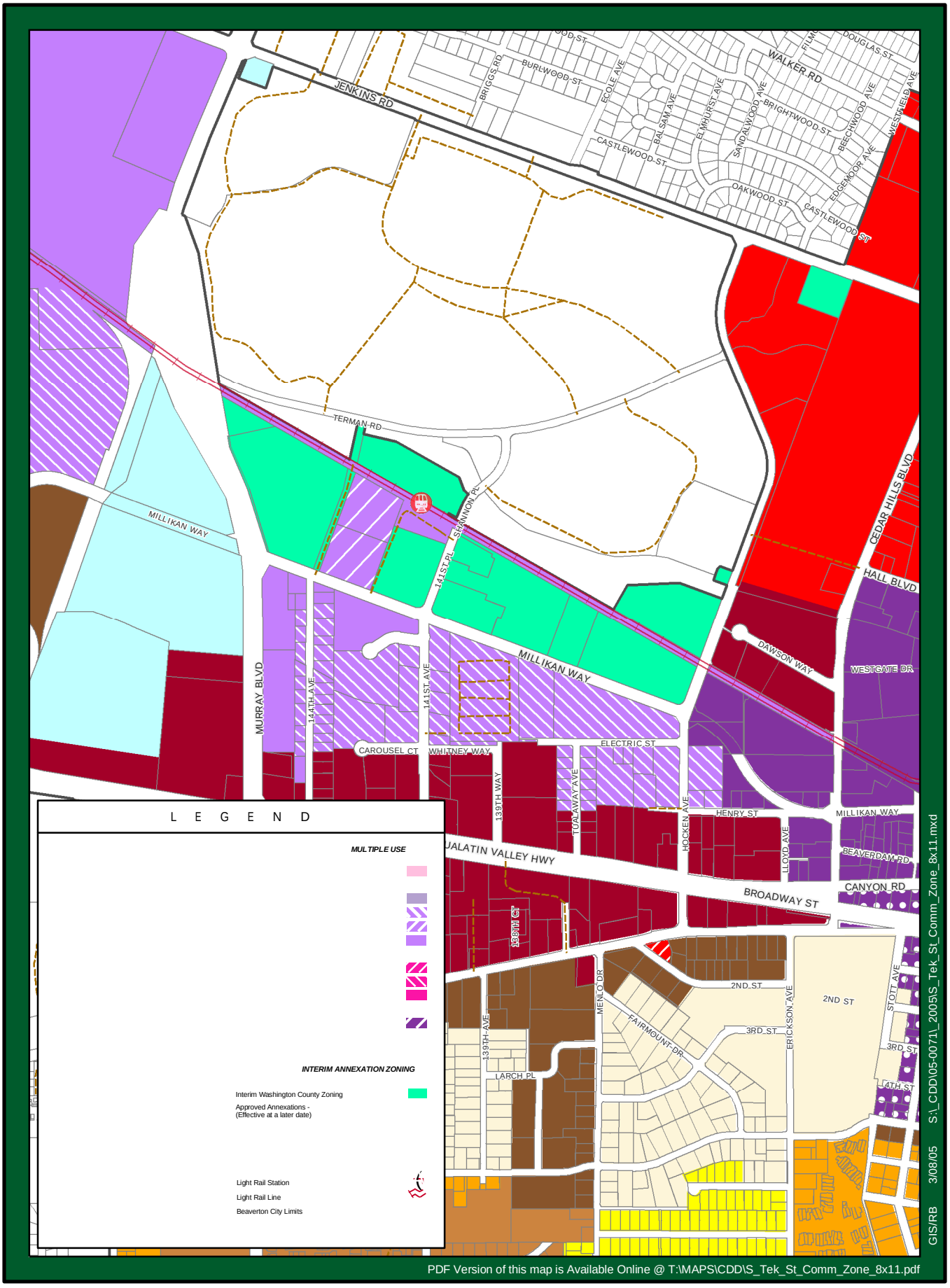
SOURCES:

METRO's Regional Land Information System (RLIS) - Current as of May 2000
City of Beaverton Community Development Department - Current as of April 2000
Washington County Taxation and Assessment - Current as of June 2000

NOTES:

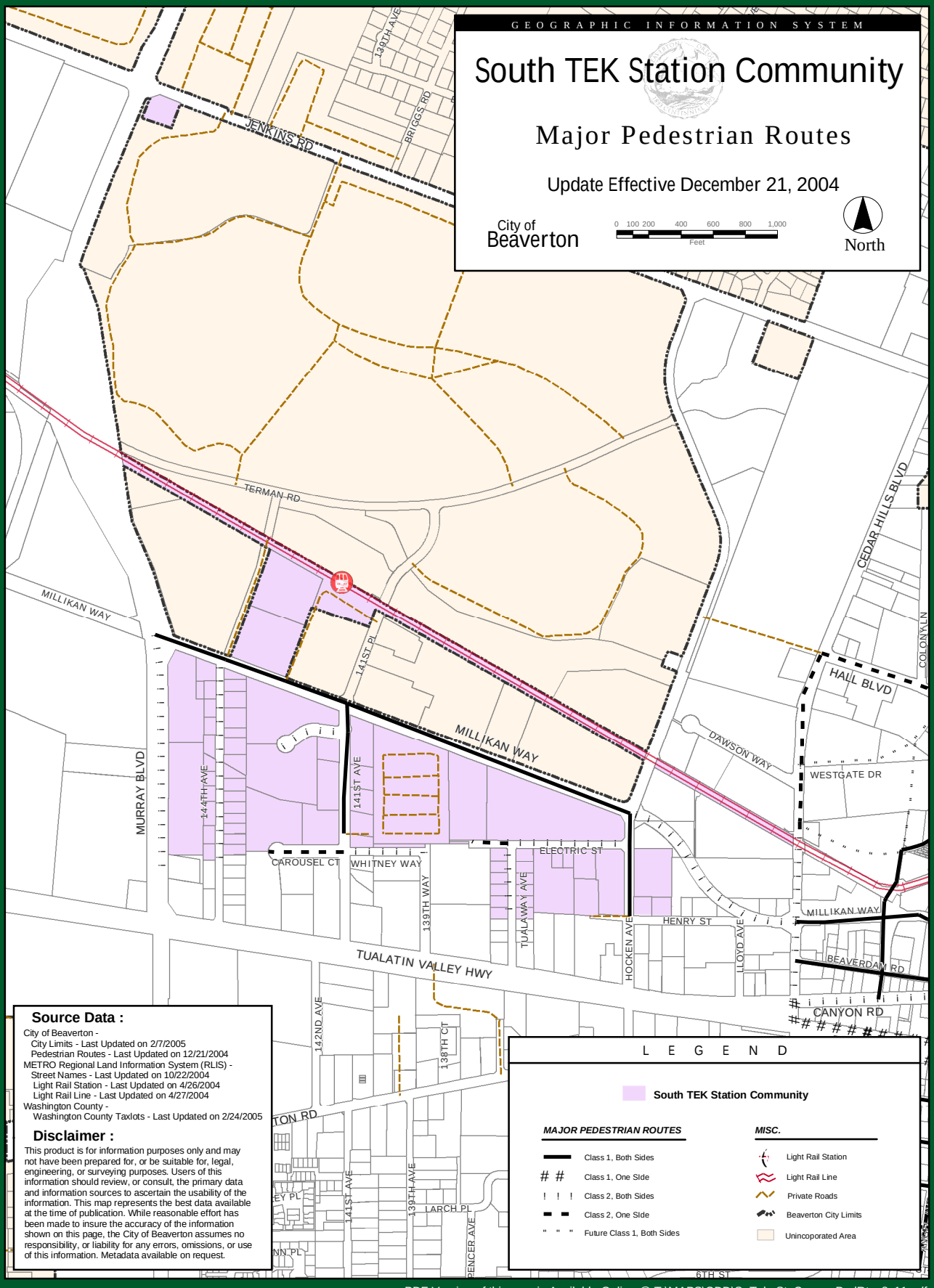
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JENKINS RD
BRIGHTWOOD ST
BRIGGS RD
BURLWOOD ST
ECOLE AVE
BALSAM AVE
ELMHURST AVE
SANDALWOOD AVE
CASTLEWOOD ST
OAKWOOD ST
EDGEMOOR AVE
WESTFIELD AVE
FLAMONT AVE
DOUGLAS ST
WALKER RD
TERMAN RD
SHANNON PL
141ST PL
MILLIKAN WAY
CEDAR HILLS BLVD
HALL BLVD
DAWSON WAY
WESTGATE DR
MURRAY BLVD
144TH AVE
CAROUSEL CT
WHITNEY WAY
ELECTRIC ST
139TH WAY
TUALAWAY AVE
HOCKEN AVE
HENRY ST
LLOYD AVE
BEAVERDAM RD
TUALATIN VALLEY HWY
BROADWAY ST
CANYON RD
142ND AVE
138TH CT
148TH AVE
FARMINGTON RD
MENLO DR
2ND ST
3RD ST
4TH ST
ERICKSON AVE
STOTT AVE
FAIRMOUNT DR
141ST AVE
139TH AVE
WEMBLEY PL
LARCH PL



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GIS/RB 3/08/05 S:_CDD\05-0071_2005\S_Tek_St_Comm_Zone_8x11.mxd


GEOGRAPHIC INFORMATION SYSTEM
South TEK Station Community
Major Pedestrian Routes
Update Effective December 21, 2004
City of Beaverton
0 100 200 400 600 800 1,000
Feet
North
JENKINS RD
139TH AVE
BRIGGS RD
TERMAN RD
MILLIKAN WAY
141ST PL
CEDAR HILLS BLVD
COLONY LN
HALL BLVD
DAWSON WAY
WESTGATE DR
MURRAY BLVD
144TH AVE
141ST AVE
CAROUSEL CT
WHITNEY WAY
ELECTRIC ST
139TH WAY
TUALAWAY AVE
HENRY ST
HOCKEN AVE
LLOYD AVE
BEAVERDAM RD
TUALATIN VALLEY HWY
142ND AVE
138TH CT
CANYON RD
LARCH PL
PENCER AVE
6TH ST
Source Data :
City of Beaverton -
City Limits - Last Updated on 2/7/2005
Pedestrian Routes - Last Updated on 12/21/2004
METRO Regional Land Information System (RLIS) -
Street Names - Last Updated on 10/22/2004
Light Rail Station - Last Updated on 4/26/2004
Light Rail Line - Last Updated on 4/27/2004
Washington County -
Washington County Taxlots - Last Updated on 2/24/2005
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LEGEND
South TEK Station Community
MAJOR PEDESTRIAN ROUTES
Class 1, Both Sides
Class 1, One Side
Class 2, Both Sides
Class 2, One Side
Future Class 1, Both Sides
MISC.
Light Rail Station
Light Rail Line
Private Roads
Beaverton City Limits
Unincoporated Area
GIS/RB 2/16/05 S:_CDD\05-00111\S_Tek_St_Comm_PedRts_8x11.mxd
PDF Version of this map is Available Online @ T:\MAPS\CDD\S_Tek_St_Comm_PedRts_8x11.pdf

Murray Scholls Town Center

Community Plan

Murray Scholls Town Center
Community Plan Index

Pg. #

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Comprehensive Plan Land Use Map 8
Zoning Map 9
Functional Classification Map.....10
Major Pedestrian Route Map 11
Significant Natural Resources Map.....12

Maps found in the Comprehensive Plan and the Development Code provide the basis for the mapped figures referenced in Community Plans. The Community Plan figures provide an expanded view of selected Comprehensive Plan and Development Code maps with a focus on a specific geographical area of the City. Community Plan figures include views of the Comprehensive Plan Land Use Map, the Transportation Functional Classification Map, the Significant Natural Resources Map, the Historic Resources map, the Development Code Zoning Map and Major Pedestrian Route Map. Amendments to these figures follow procedures specified within the document in which they are located. Community Plan figures will be administratively updated as amendments to the Comprehensive Plan and Development Code maps are adopted.

Murray Scholls Town Center

Community Plan Context

The Murray Scholls Town Center Community Plan is one of a number of City planning documents. These documents, when viewed in total, comprise the City's Comprehensive Plan. The intent of this context statement is to explore the relationship between this document and the other documents comprising the Comprehensive Plan.

The Murray Scholls Town Center is located in south western Beaverton primarily between Scholls Ferry Road and Barrows Road. This Community Plan describes policies and action statements specific to this particular geographic location. Fully understanding the Community Plan also requires review of the Comprehensive Plan for the general policies applicable to the City as a whole and the Beaverton Development Code and Engineering Design Standards.

The following documents comprise the City's Comprehensive Plan:

Volume I - City of Beaverton Comprehensive Plan
Volume II - Comprehensive Plan Background and Supporting Documents
Volume III - Statewide Planning Goal 5 Inventory Documents
Volume IV - Transportation System Plan
Volume V - Community Plans

The City of Beaverton Comprehensive Plan is a policy document that serves as a policy framework for the other volumes of the Plan. Volume I, therefore, addresses the broad range of comprehensive planning and development issues with action statements to guide implementation of the policy directives.

Volume II - the Comprehensive Plan Background and Supporting Documents provides the demographic and economic data and forecasts for the City's Comprehensive Plan. It should be noted that these documents provide information supporting and guiding the development of the policy framework, however, the data is a snapshot in time and cannot be relied upon for future decision making without researching the data to ensure that conditions have not changed. Metro, the regional governing body in the Portland Metropolitan Area, provides much of the data informing the City's Comprehensive Plan policy making. Policies and regulations in Metro Functional Plans also direct some City policy decisions and regulations.

Volume III - Statewide Planning Goal 5 Inventory Documents includes the background and supporting documents, mapping and findings for the City's response to Statewide Planning Goal 5. The documents include the following:

Significant Natural Resource Area Inventories

This document inventories applicable Statewide Planning Goal 5 resource areas and identifies "Significant" resources.

Historic Resources Inventory

This document identifies the City's Historic Resources, provides data regarding building typology, historical context, condition, and any significant events in Beaverton's history related to the building. Photographs are also included in the inventory. As an additional component to the City's historic resources, the City adopted a list of historic trees through the Historic Resource Review Committee, Planning Commission and City Council.

Volume IV - Transportation System Plan implements regional goals and policies and plans multimodal improvements for a 20 year period.

Volume V - Community Plans describe policies and action statements and map designations specific to a particular geographic location.

The City of Beaverton Development Code implements the policy directives of Volumes I and V of the Comprehensive Plan. The Development Code includes the procedural framework for land use decisions, including zoning district information, allowed uses, density and dimensional requirements, public facility requiremetns, land division requirements and standards for land development.

Community Plan Goal 1: Promote development of the Murray Scholls Town Center in a manner incorporating the unique characteristics of its location, topography, and natural features, and reinforcing the its relationship to its natural and man-made surroundings.

Policies:

a) Regulate new development in Town Centers so it is urban in scale with adequate urban public facilities, yet sub regional in focus.

Action 1: *Adopt land use regulations that will result in construction of a minimum of 1,050 dwelling units within the Murray Scholls Town Center.*

Action 2*: Adopt land use regulations limiting the maximum number of dwelling units allowed in the Murray Scholls Town Center to 2,500 units until such time that adequate public facilities exist to support additional dwelling units. Development over the 2,500-unit limit shall demonstrate that adequate public facilities exist to support those units above 2,500. Public facilities considered shall include, but not be limited to, transportation, sewer, water and storm facilities.*

Action 3: *Provide restrictions on uses and floor area that limit retail and service uses to sub-regional level attractors. Sub-regional level attractors are those uses, due to size and scale, that are not likely to detrimentally compete with regional shopping facilities.*

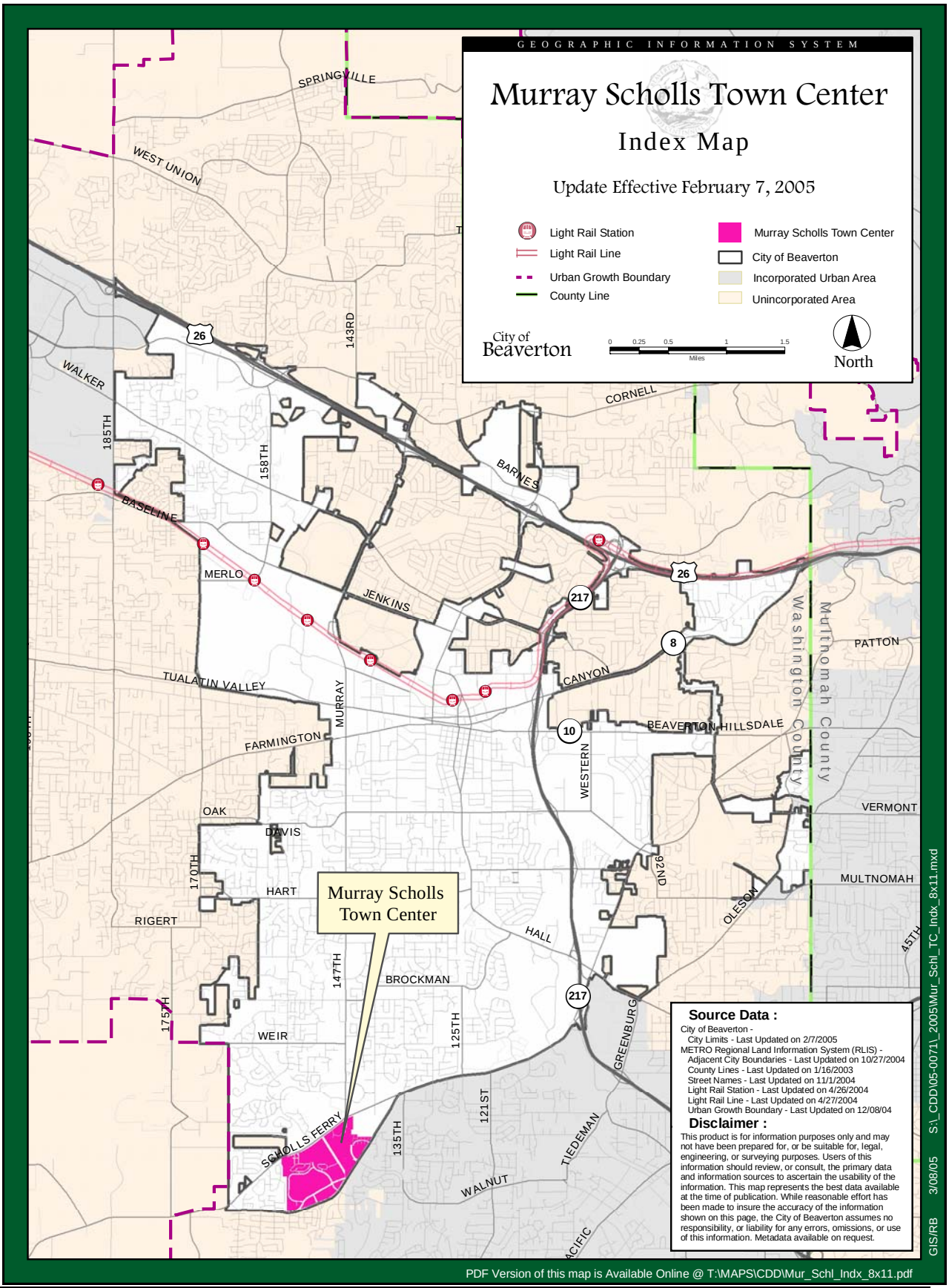
Action 4: *Adopt land use regulations requiring a Planned Unit Development (and subsequent Design Review Application) be submitted and approved for all properties under single, contiguous ownership, demonstrating consistency with the policies in this section and section 3.5.*

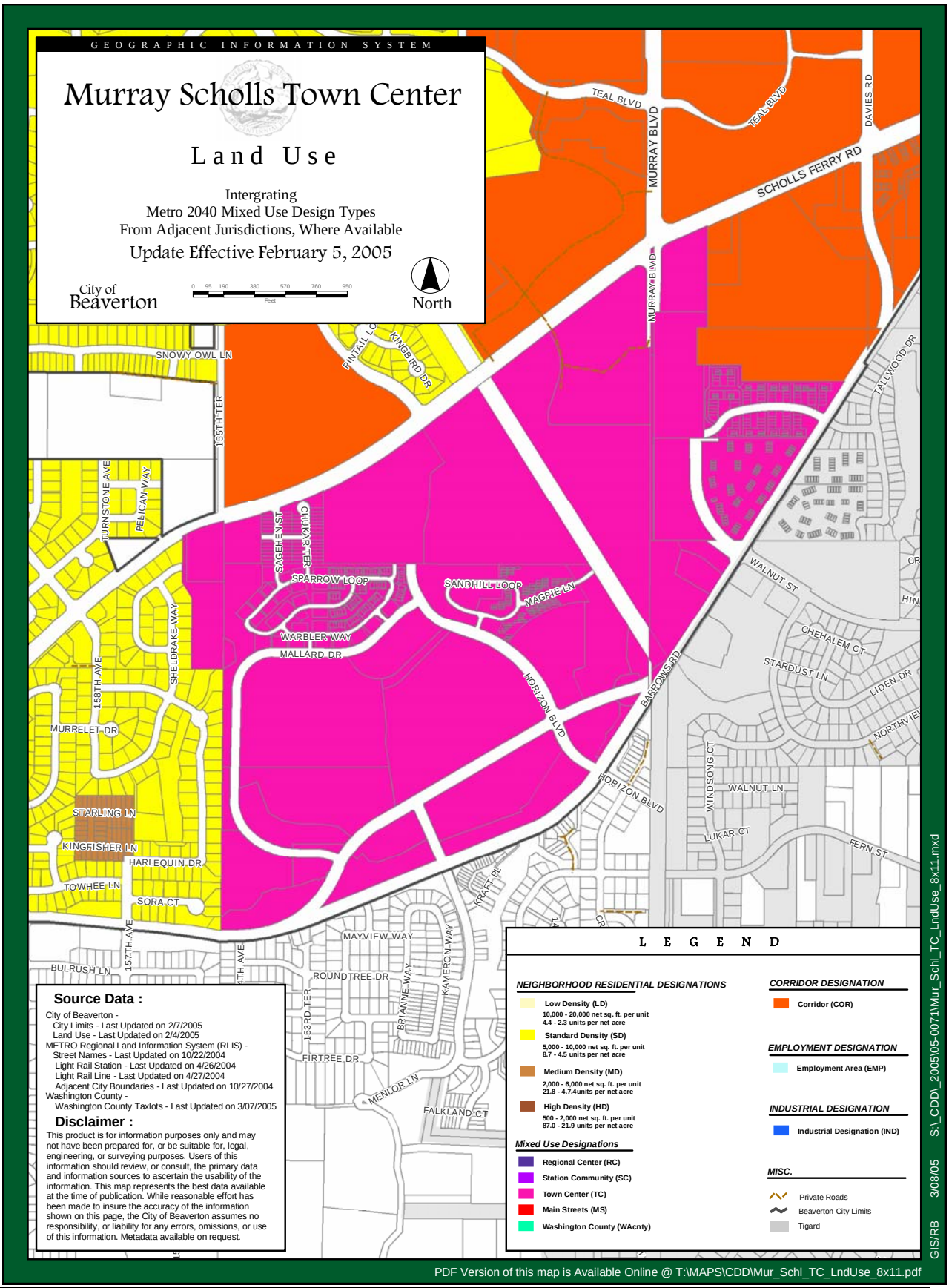
b) Minimize impacts to existing development.

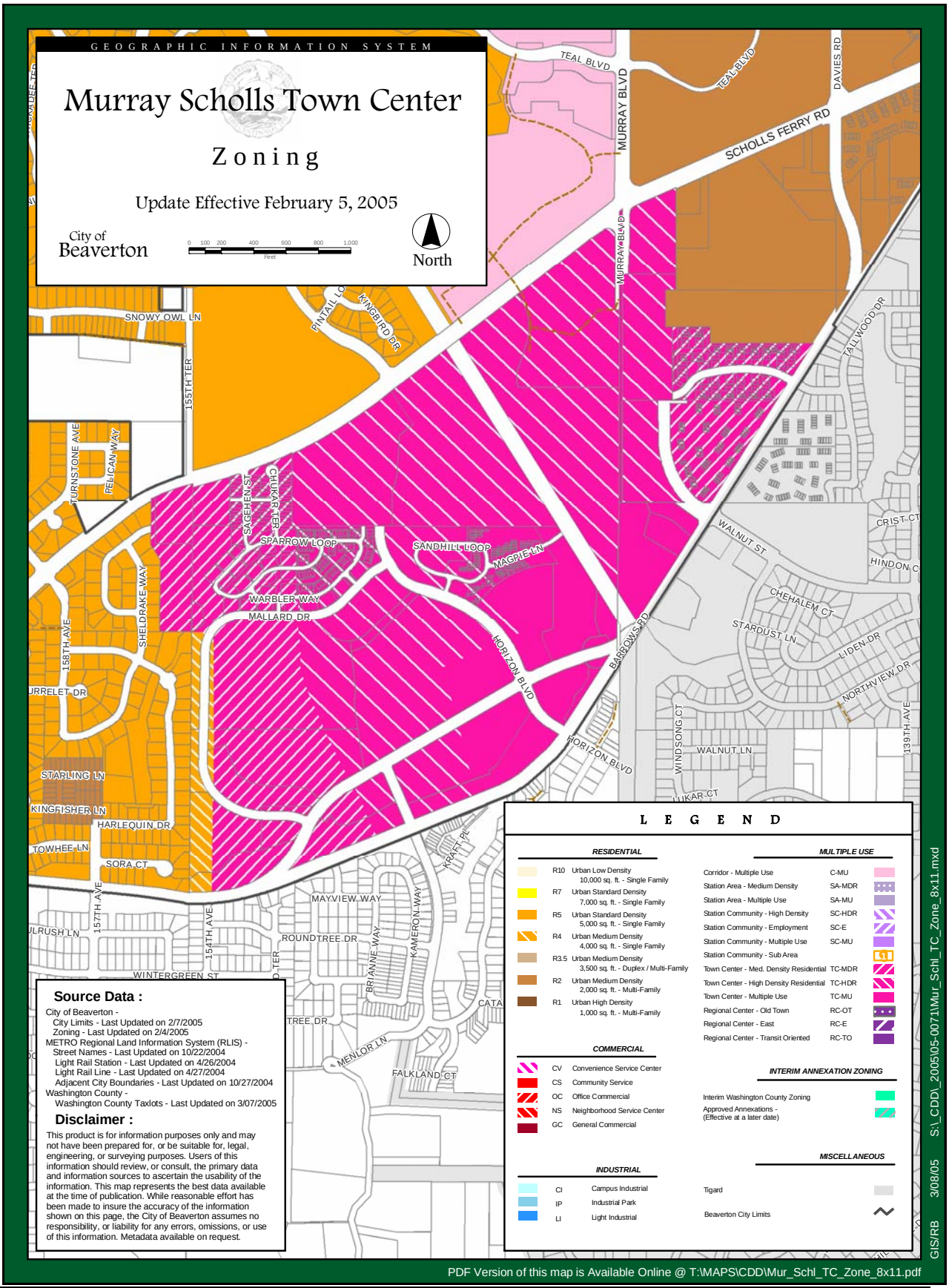
c) Provide amenities that will knit together the town center and surrounding enclaves of housing.

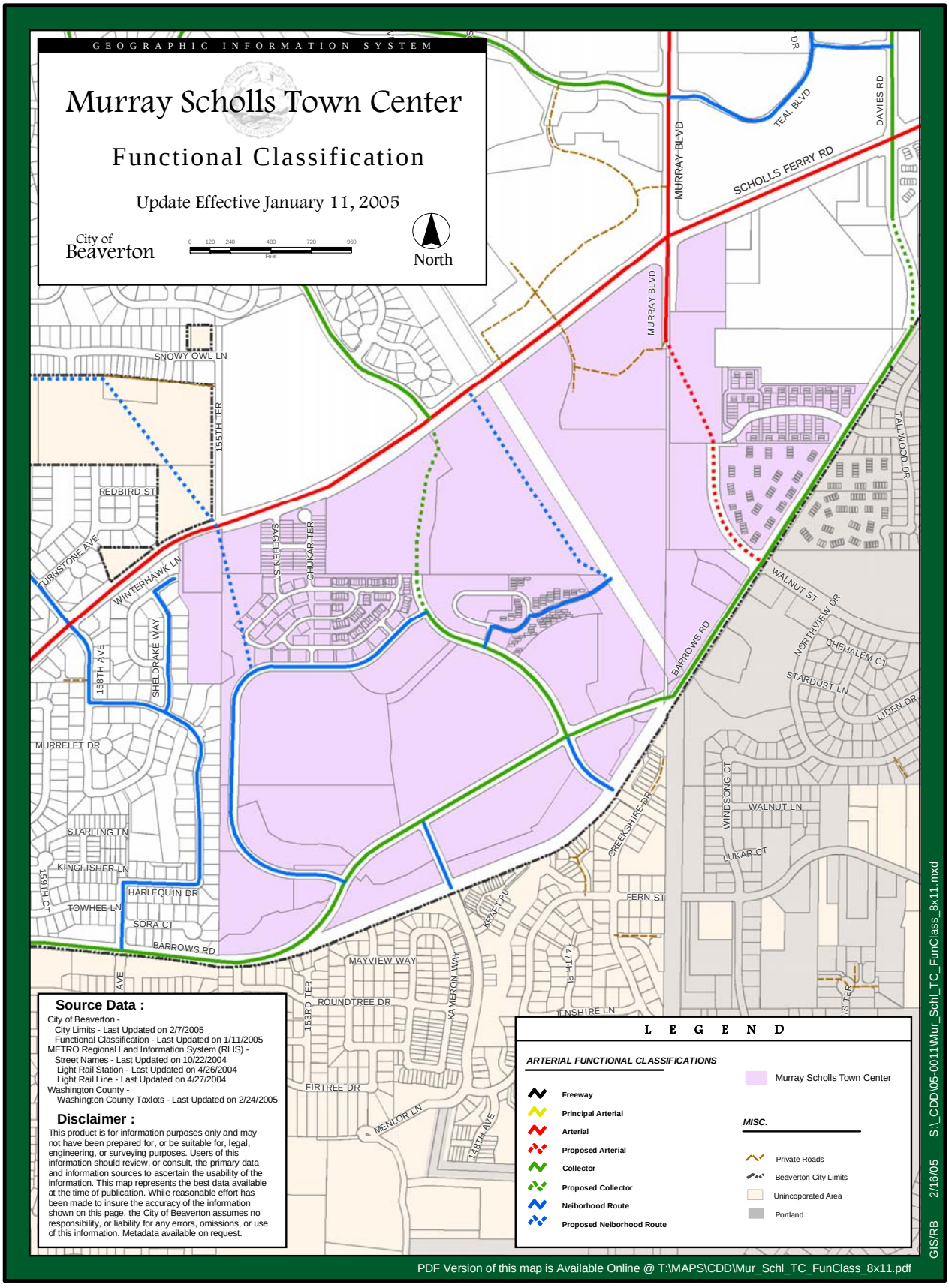
d) Promote the protection of view from public places.

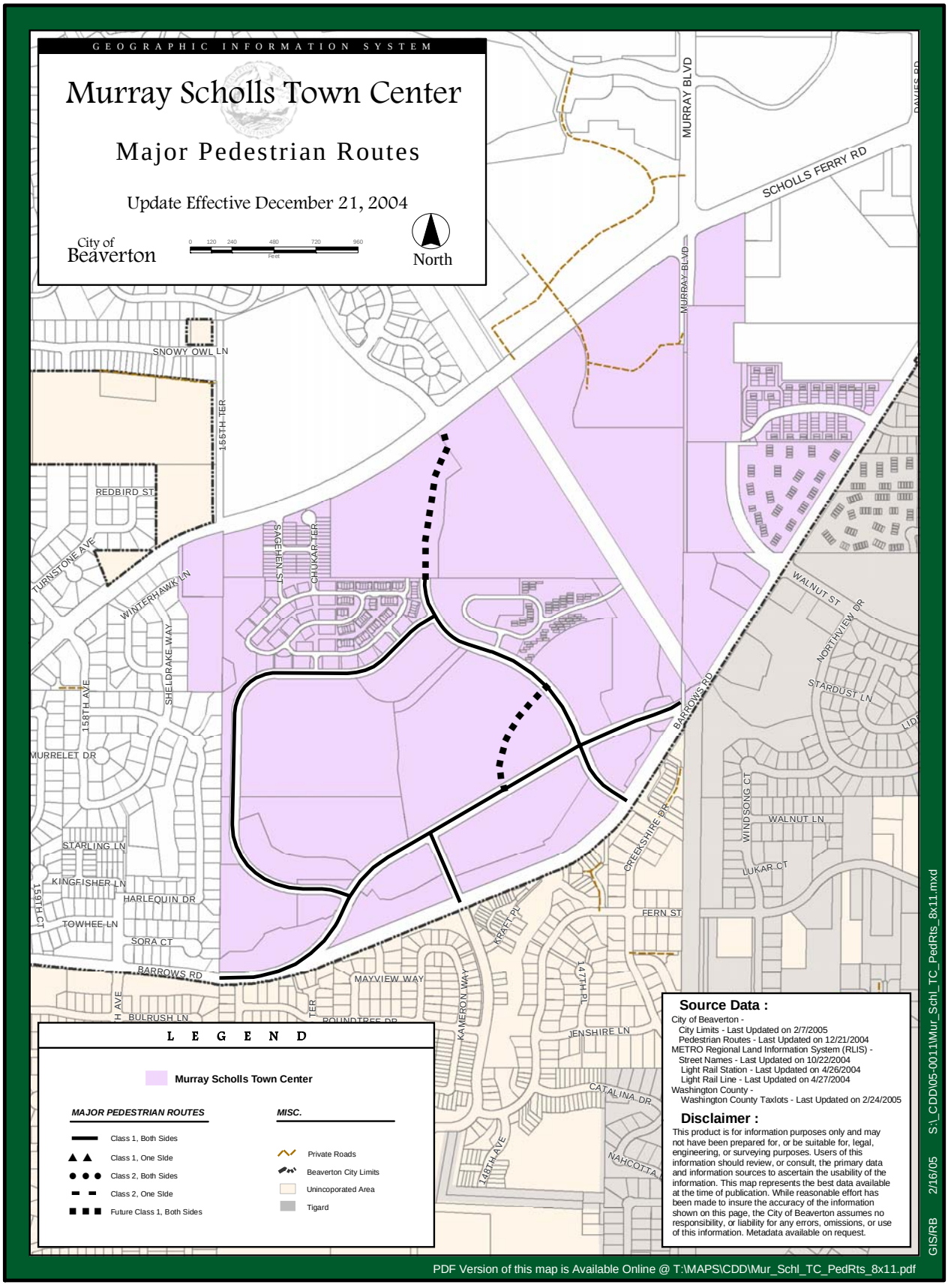
e) Restore Summer Creek to its natural hydrologic condition, prior to any artificial hydrologic controls.


GEOGRAPHIC INFORMATION SYSTEM
Murray Scholls Town Center
Index Map
Update Effective February 7, 2005
Light Rail Station
Light Rail Line
Urban Growth Boundary
County Line
Murray Scholls Town Center
City of Beaverton
Incorporated Urban Area
Unincorporated Area
City of Beaverton
0 0.25 0.5 1 1.5
Miles
North
SPRINGVILLE
WEST UNION
WALKER
185TH
158TH
143RD
BASELINE
MERLO
JENKINS
BARNES
CORNELL
26
217
8
10
CANYON
TUALATIN VALLEY
MURRAY
FARMINGTON
BEAVERTON HILLSDALE
WESTERN
PATTON
Washington County
Multnomah County
VERMONT
MULTNOMAH
OAK
DAVIS
170TH
HART
RIGERT
Murray Scholls Town Center
147TH
BROCKMAN
HALL
82ND
OLESON
45TH
175TH
WEIR
125TH
GREENBURG
SCHOLLS FERRY
135TH
121ST
TIEDEMAN
WALNUT
PACIFIC
Source Data :
City of Beaverton -
City Limits - Last Updated on 2/7/2005
METRO Regional Land Information System (RLIS) -
Adjacent City Boundaries - Last Updated on 10/27/2004
County Lines - Last Updated on 1/16/2003
Street Names - Last Updated on 11/1/2004
Light Rail Station - Last Updated on 4/26/2004
Light Rail Line - Last Updated on 4/27/2004
Urban Growth Boundary - Last Updated on 12/08/04
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GIS/RB 3/08/05 S:_CDD\05-0071_2005\Mur_Schl_TC_Indx_8x11.mxd


GEOGRAPHIC INFORMATION SYSTEM
Murray Scholls Town Center
Land Use
Intergrating
Metro 2040 Mixed Use Design Types
From Adjacent Jurisdictions, Where Available
Update Effective February 5, 2005
City of Beaverton
North
Source Data :
City of Beaverton -
City Limits - Last Updated on 2/7/2005
Land Use - Last Updated on 2/4/2005
METRO Regional Land Information System (RLIS) -
Street Names - Last Updated on 4/26/2004
Light Rail Station - Last Updated on 4/26/2004
Light Rail Line - Last Updated on 4/27/2004
Adjacent City Boundaries - Last Updated on 10/27/2004
Washington County -
Washington County Taxlots - Last Updated on 3/07/2005
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LEGEND
NEIGHBORHOOD RESIDENTIAL DESIGNATIONS
Low Density (LD)
10,000 - 20,000 net sq. ft. per unit
4.4 - 2.3 units per net acre
Standard Density (SD)
5,000 - 10,000 net sq. ft. per unit
8.7 - 4.5 units per net acre
Medium Density (MD)
2,000 - 6,000 net sq. ft. per unit
21.8 - 4.7.4units per net acre
High Density (HD)
500 - 2,000 net sq. ft. per unit
87.0 - 21.9 units per net acre
Mixed Use Designations
Regional Center (RC)
Station Community (SC)
Town Center (TC)
Main Streets (MS)
Washington County (WAcnty)
CORRIDOR DESIGNATION
Corridor (COR)
EMPLOYMENT DESIGNATION
Employment Area (EMP)
INDUSTRIAL DESIGNATION
Industrial Designation (IND)
MISC.
Private Roads
Beaverton City Limits
Tigard
TEAL BLVD
MURRAY BLVD
SCHOLLS FERRY RD
DAVIES RD
SNOWY OWL LN
155TH TER
PINTAIL LP
KINGBIRD DR
TALLWOOD DR
TURNSTONE AVE
PELICAN WAY
SAGEHEN ST
CHUKAR TER
SPARROW LOOP
SANDHILL LOOP
MAGPIE LN
WALNUT ST
CHEHALEM CT
STARDUST LN
LIDEN DR
WARBLER WAY
MALLARD DR
SHELDRAKE WAY
158TH AVE
MURRELET DR
HORIZON BLVD
BARROWS RD
WINDSONG CT
WALNUT LN
LUKAR CT
FERN ST
STARLING LN
KINGFISHER LN
HARLEQUIN DR
TOWHEE LN
SORA CT
157TH AVE
BULRUSH LN
MAYVIEW WAY
ROUNDTREE DR
KAMERON WAY
KRAFT PL
153RD TER
BRIANNE WAY
FIRTREE DR
MENLOR LN
FALKLAND CT
PDF Version of this map is Available Online @ T:\MAPS\CDD\Mur_Schl_TC_LndUse_8x11.pdf
GIS/RB 3/08/05 S:_CDD_2005\05-0071\Mur_Schl_TC_LndUse_8x11.mxd

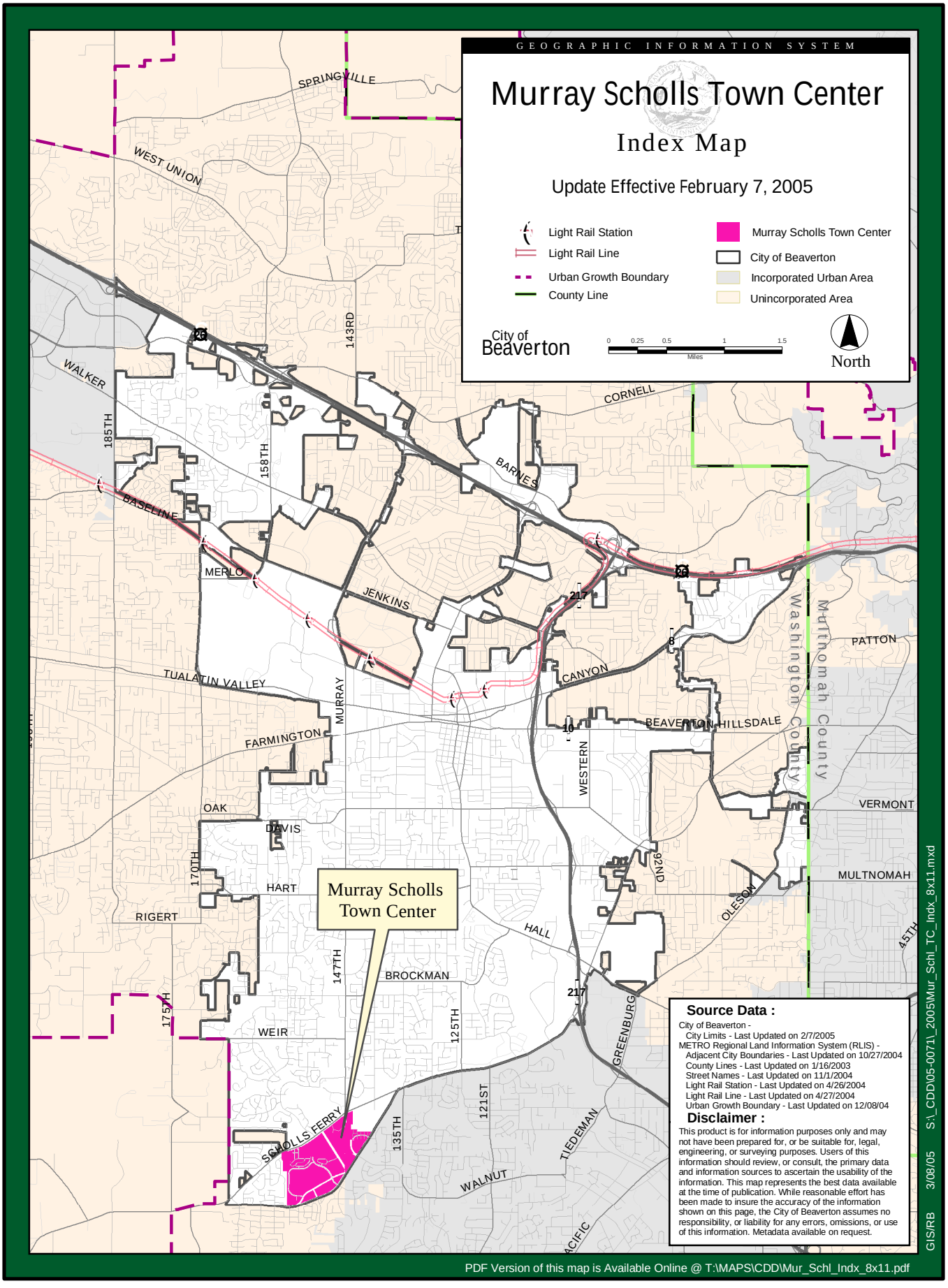

GEOGRAPHIC INFORMATION SYSTEM
Murray Scholls Town Center
Zoning
Update Effective February 5, 2005
City of Beaverton
0 100 200 400 600 800 1,000
Feet
North
TEAL BLVD
MURRAY BLVD
SCHOLLS FERRY RD
DAVIES RD
SNOWY OWL LN
KINGBIRD DR
PINTAIL LO
155TH TER
TURNSTONE AVE
PELICAN WAY
CHINOOK TER
SAGEHEN ST
SPARROW LOOP
SANDHILL LOOP
MAGPIE LN
WARBLER WAY
MALLARD DR
SHELDRAKE WAY
158TH AVE
URRELET DR
STARLING LN
KINGFISHER LN
HARLEQUIN DR
TOWHEE LN
SORA CT
157TH AVE
ULRUSH LN
154TH AVE
MAYVIEW WAY
ROUNDTREE DR
BRIANNE WAY
KAMERON WAY
WINTERGREEN ST
TREE DR
MENLOR LN
FALKLAND CT
KRAFT PL
HORIZON BLVD
BARROWS RD
WALNUT ST
CRIST CT
HINDON C
CHEHALEM CT
STARDUST LN
LIDEN DR
NORTHVIEW DR
139TH AVE
WINDSONG CT
WALNUT LN
TALLWOOD DR
LEGEND
RESIDENTIAL
R10 Urban Low Density 10,000 sq. ft. - Single Family
R7 Urban Standard Density 7,000 sq. ft. - Single Family
R5 Urban Standard Density 5,000 sq. ft. - Single Family
R4 Urban Medium Density 4,000 sq. ft. - Single Family
R3.5 Urban Medium Density 3,500 sq. ft. - Duplex / Multi-Family
R2 Urban Medium Density 2,000 sq. ft. - Multi-Family
R1 Urban High Density 1,000 sq. ft. - Multi-Family
COMMERCIAL
CV Convenience Service Center
CS Community Service
OC Office Commercial
NS Neighborhood Service Center
GC General Commercial
INDUSTRIAL
CI Campus Industrial
IP Industrial Park
LI Light Industrial
MULTIPLE USE
Corridor - Multiple Use C-MU
Station Area - Medium Density SA-MDR
Station Area - Multiple Use SA-MU
Station Community - High Density SC-HDR
Station Community - Employment SC-E
Station Community - Multiple Use SC-MU
Station Community - Sub Area
Town Center - Med. Density Residential TC-MDR
Town Center - High Density Residential TC-HDR
Town Center - Multiple Use TC-MU
Regional Center - Old Town RC-OT
Regional Center - East RC-E
Regional Center - Transit Oriented RC-TO
INTERIM ANNEXATION ZONING
Interim Washington County Zoning
Approved Annexations - (Effective at a later date)
MISCELLANEOUS
Tigard
Beaverton City Limits
Source Data :
City of Beaverton -
City Limits - Last Updated on 2/7/2005
Zoning - Last Updated on 2/4/2005
METRO Regional Land Information System (RLIS) -
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GIS/RB 3/08/05 S:_CDD_2005\05-0071\Mur_Schl_TC_Zone_8x11.mxd

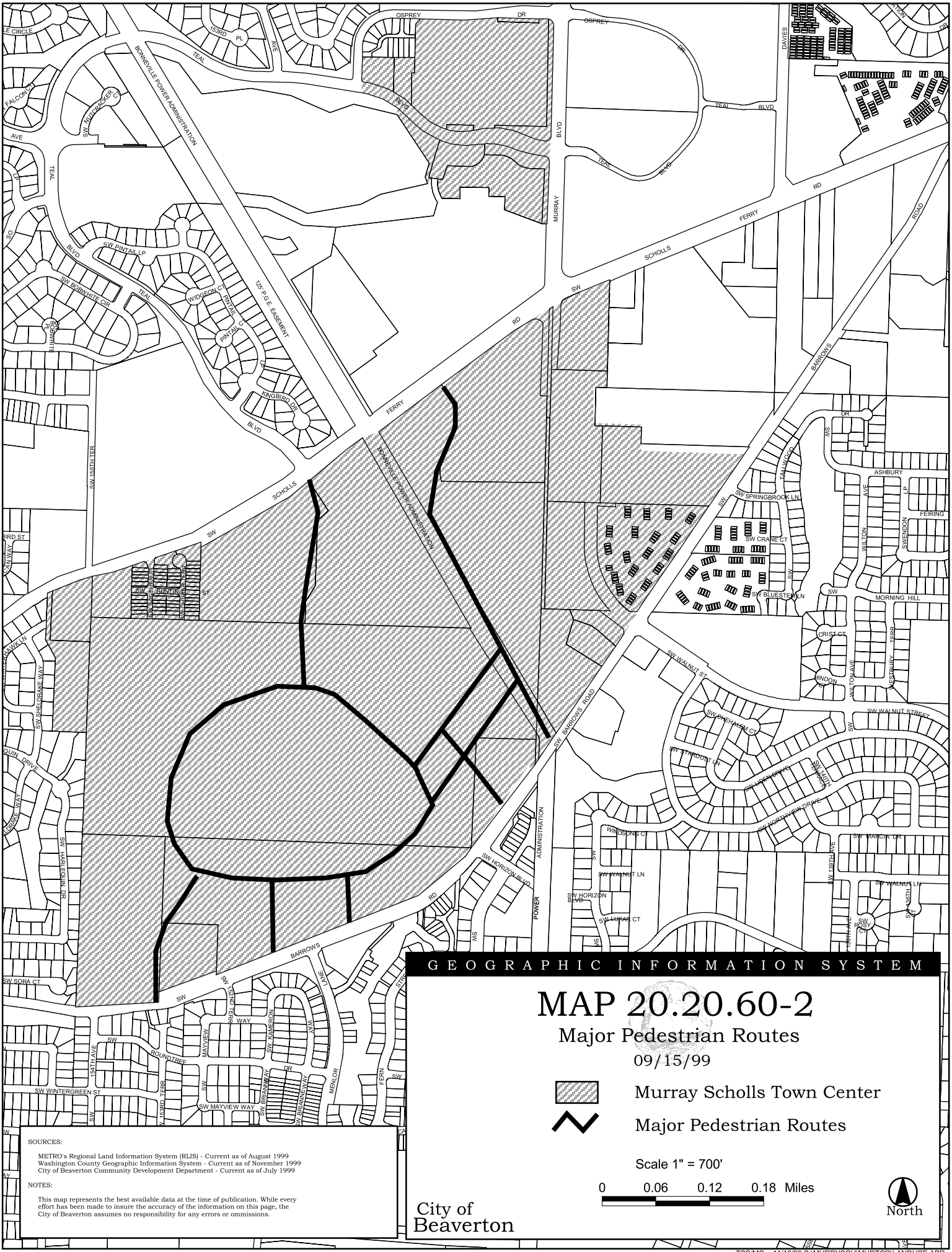

GEOGRAPHIC INFORMATION SYSTEM
Murray Scholls Town Center
Functional Classification
Update Effective January 11, 2005
City of Beaverton
0 120 240 480 720 960 Feet
North
SCHOLLS FERRY RD
MURRAY BLVD
TEAL BLVD
DAVIES RD
SNOWY OWL LN
155TH TER
REDBIRD ST
TURNSTONE AVE
WINTERHAWK LN
SHELDRAKE WAY
158TH AVE
SAGEHEN ST
CHUKAR TER
TALLWOOD DR
WALNUT ST
NORTHVIEW DR
CHEHALEM CT
STARDUST LN
LIDEN DR
BARROWS RD
MURRELET DR
STARLING LN
KINGFISHER LN
159TH CT
HARLEQUIN DR
TOWHEE LN
SORA CT
WINDSONG CT
WALNUT LN
LUKAR CT
CREEKSHIRE DR
FERN ST
KRAFT PL
147TH PL
MAYVIEW WAY
KAMERON WAY
153RD TER
ROUNDTREE DR
FIRTREE DR
MENLOR LN
148TH AVE
Source Data :
City of Beaverton -
City Limits - Last Updated on 2/7/2005
Functional Classification - Last Updated on 1/11/2005
METRO Regional Land Information System (RLIS) -
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Light Rail Station - Last Updated on 4/26/2004
Light Rail Line - Last Updated on 4/27/2004
Washington County -
Washington County Taxlots - Last Updated on 2/24/2005
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L E G E N D
ARTERIAL FUNCTIONAL CLASSIFICATIONS
Freeway
Principal Arterial
Arterial
Proposed Arterial
Collector
Proposed Collector
Neiborhood Route
Proposed Neiborhood Route
Murray Scholls Town Center
MISC.
Private Roads
Beaverton City Limits
Unincoporated Area
Portland
GIS/RB 2/16/05 S:_CDD\05-0011\Mur_Schl_TC_FunClass_8x11.mxd
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GEOGRAPHIC INFORMATION SYSTEM
Murray Scholls Town Center
Major Pedestrian Routes
Update Effective December 21, 2004
City of Beaverton
0 120 240 480 720 960
Feet
North
MURRAY BLVD
SCHOLLS FERRY RD
DAVIES RD
SNOWY OWL LN
165TH TER
REDBIRD ST
TURNSTONE AVE
WINTERHAWK LN
SAGEHEN ST
CHUKAR TER
SHELDRAKE WAY
158TH AVE
MURRELET DR
STARLING LN
KINGFISHER LN
159TH CT
HARLEQUIN DR
TOWHEE LN
SORA CT
BARROWS RD
BULRUSH LN
ROUNDTREE DR
MAYVIEW WAY
KAMERON WAY
KRAFT PL
147TH PL
JENSHIRE LN
CATALINA DR
148TH AVE
NAHCOTTA
FERN ST
GREENSHIRE DR
WINDSONG CT
WALNUT LN
LUKAR CT
WALNUT ST
NORTHVIEW DR
STARDUST LN
LEGEND
Murray Scholls Town Center
MAJOR PEDESTRIAN ROUTES
Class 1, Both Sides
Class 1, One Side
Class 2, Both Sides
Class 2, One Side
Future Class 1, Both Sides
MISC.
Private Roads
Beaverton City Limits
Unincorporated Area
Tigard
Source Data :
City of Beaverton -
City Limits - Last Updated on 2/7/2005
Pedestrian Routes - Last Updated on 12/21/2004
METRO Regional Land Information System (RLIS) -
Street Names - Last Updated on 10/22/2004
Light Rail Station - Last Updated on 4/26/2004
Light Rail Line - Last Updated on 4/27/2004
Washington County -
Washington County Taxlots - Last Updated on 2/24/2005
Disclaimer :
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Map Unavailable at Present

Significant Natural Resources Map


GEOGRAPHIC INFORMATION SYSTEM
Murray Scholls Town Center
Index Map
Update Effective February 7, 2005
Light Rail Station
Light Rail Line
Urban Growth Boundary
County Line
Murray Scholls Town Center
City of Beaverton
Incorporated Urban Area
Unincorporated Area
City of Beaverton
0 0.25 0.5 1 1.5
Miles
North
SPRINGVILLE
WEST UNION
WALKER
185TH
143RD
158TH
CORNELL
BARNES
BASELINE
MERLO
JENKINS
217
26
8
PATTON
Washington County
Multnomah County
TUALATIN VALLEY
MURRAY
CANYON
10
BEAVERTON-HILLSDALE
FARMINGTON
WESTERN
VERMONT
OAK
DAVIS
170TH
HART
92ND
MULTNOMAH
RIGERT
Murray Scholls Town Center
OLESON
HALL
45TH
147TH
BROCKMAN
175TH
WEIR
125TH
GREENBURG
SCHOLLS FERRY
135TH
121ST
TIEDEMAN
WALNUT
PACIFIC
Source Data :
City of Beaverton -
City Limits - Last Updated on 2/7/2005
METRO Regional Land Information System (RLIS) -
Adjacent City Boundaries - Last Updated on 10/27/2004
County Lines - Last Updated on 1/16/2003
Street Names - Last Updated on 11/1/2004
Light Rail Station - Last Updated on 4/26/2004
Light Rail Line - Last Updated on 4/27/2004
Urban Growth Boundary - Last Updated on 12/08/04
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GEOGRAPHIC INFORMATION SYSTEM

MAP 20.20.60-2

Major Pedestrian Routes

09/15/99

Murray Scholls Town Center

Major Pedestrian Routes

Scale 1" = 700'

0 0.06 0.12 0.18 Miles

North

City of Beaverton

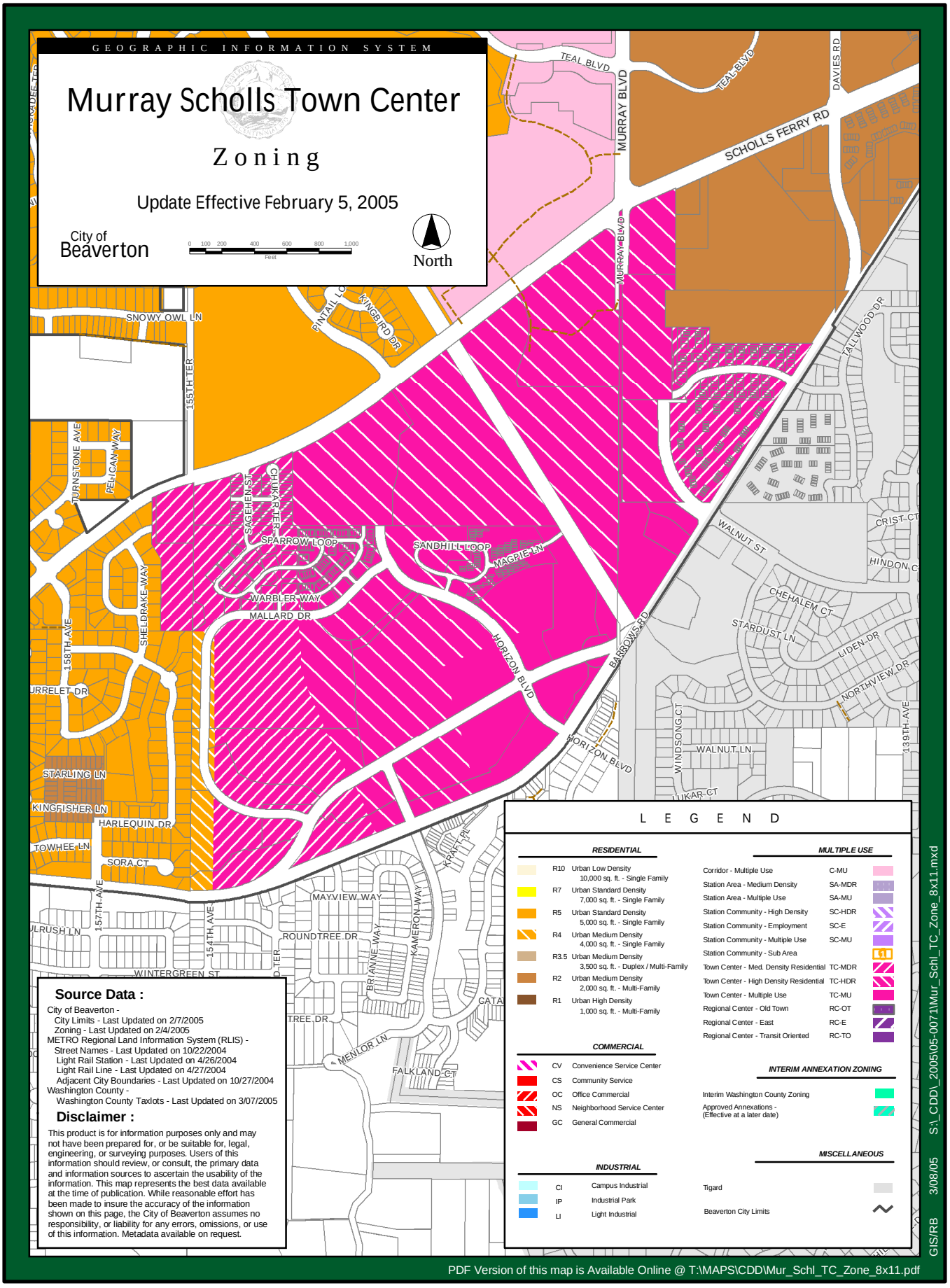
SOURCES:

METRO's Regional Land Information System (RLIS) - Current as of August 1999
Washington County Geographic Information System - Current as of November 1999
City of Beaverton Community Development Department - Current as of July 1999

NOTES:

This map represents the best available data at the time of publication. While every effort has been made to insure the accuracy of the information on this page, the City of Beaverton assumes no responsibility for any errors or ommissions.

TSS/MO 11/18/99 S:\MURRYSCH\MURTCR\LANDUSE.APR



Source Data :

City of Beaverton -
- City Limits - Last Updated on 2/7/2005
- Zoning - Last Updated on 2/4/2005

METRO Regional Land Information System (RLIS) -
- Street Names - Last Updated on 10/22/2004
- Light Rail Station - Last Updated on 4/26/2004
- Light Rail Line - Last Updated on 4/27/2004
- Adjacent City Boundaries - Last Updated on 10/27/2004

Washington County -
- Washington County Taxlots - Last Updated on 3/07/2005

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L E G E N D

RESIDENTIAL

R10	Urban Low Density	10,000 sq. ft. - Single Family
R7	Urban Standard Density	7,000 sq. ft. - Single Family
R5	Urban Standard Density	5,000 sq. ft. - Single Family
R4	Urban Medium Density	4,000 sq. ft. - Single Family
R3.5	Urban Medium Density	3,500 sq. ft. - Duplex / Multi-Family
R2	Urban Medium Density	2,000 sq. ft. - Multi-Family
R1	Urban High Density	1,000 sq. ft. - Multi-Family

COMMERCIAL

CV	Convenience Service Center
CS	Community Service
OC	Office Commercial
NS	Neighborhood Service Center
GC	General Commercial

INDUSTRIAL

CI	Campus Industrial
IP	Industrial Park
LI	Light Industrial

MULTIPLE USE

Corridor - Multiple Use	C-MU
Station Area - Medium Density	SA-MDR
Station Area - Multiple Use	SA-MU
Station Community - High Density	SC-HDR
Station Community - Employment	SC-E
Station Community - Multiple Use	SC-MU
Station Community - Sub Area	
Town Center - Med. Density Residential	TC-MDR
Town Center - High Density Residential	TC-HDR
Town Center - Multiple Use	TC-MU
Regional Center - Old Town	RC-OT
Regional Center - East	RC-E
Regional Center - Transit Oriented	RC-TO

INTERIM ANNEXATION ZONING

Interim Washington County Zoning	
Approved Annexations - (Effective at a later date)	

MISCELLANEOUS

Tigard	
Beaverton City Limits	

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