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

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 polic~~y~~**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 31 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 ofpolicy.
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**~~t~~raffic 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

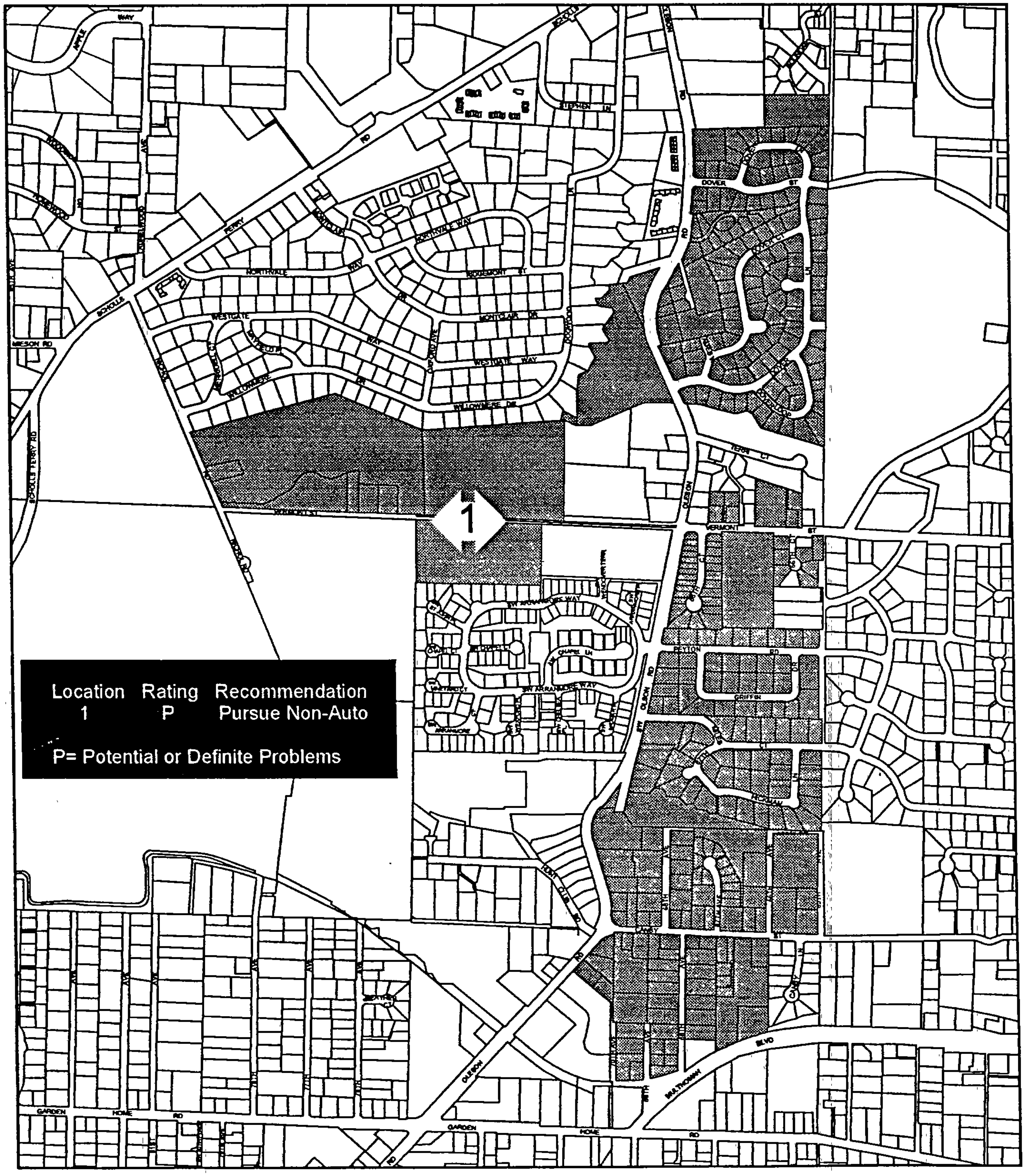
Recommended Changes and Corrections to the Draft 1997 TSP (1198 – 10115198)

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



LOCAL STREET CONNECTIVITY - VERMONT AVENUE

COMMUNITY DEVELOPMENT **DEPARTMENT**

Policy and Research Division

City of Beaverton

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

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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, 1989
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
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Ken Scheet, Beaverton School District
Andy Priebe, THPRD
Eric McMullen, Tualatin Valley Fire and Rescue
Rex Jeffries, Tualatin Valley Fire and Rescue
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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
Summarv

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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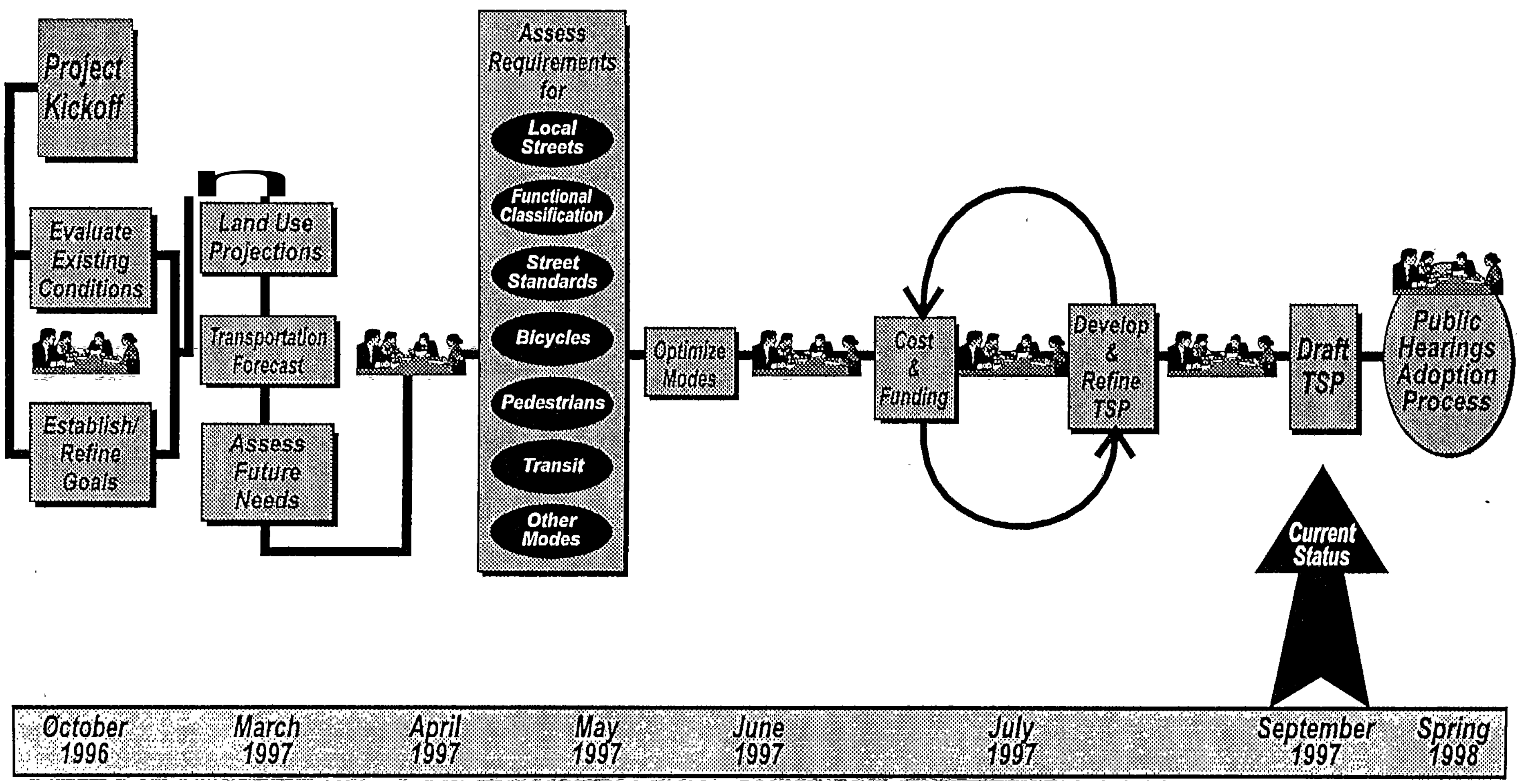
City of Beaverton
Transportation System Plan

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.

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**

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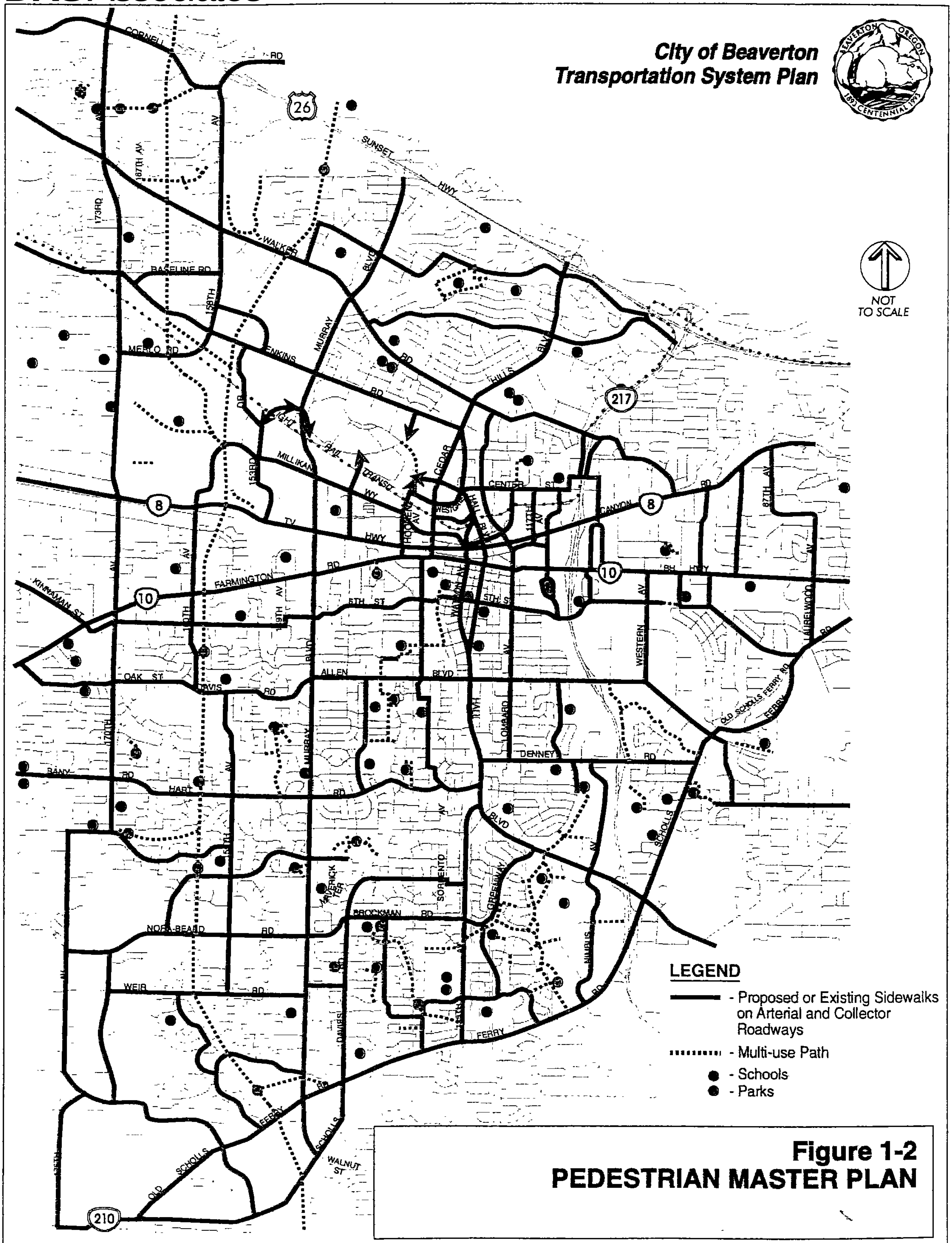

LEGEND

- Proposed or Existing Sidewalks on Arterial and Collector Roadways
- Multi-use Path
- Schools
- Parks

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]d	Nimbus [illegible]	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	Citrus 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**

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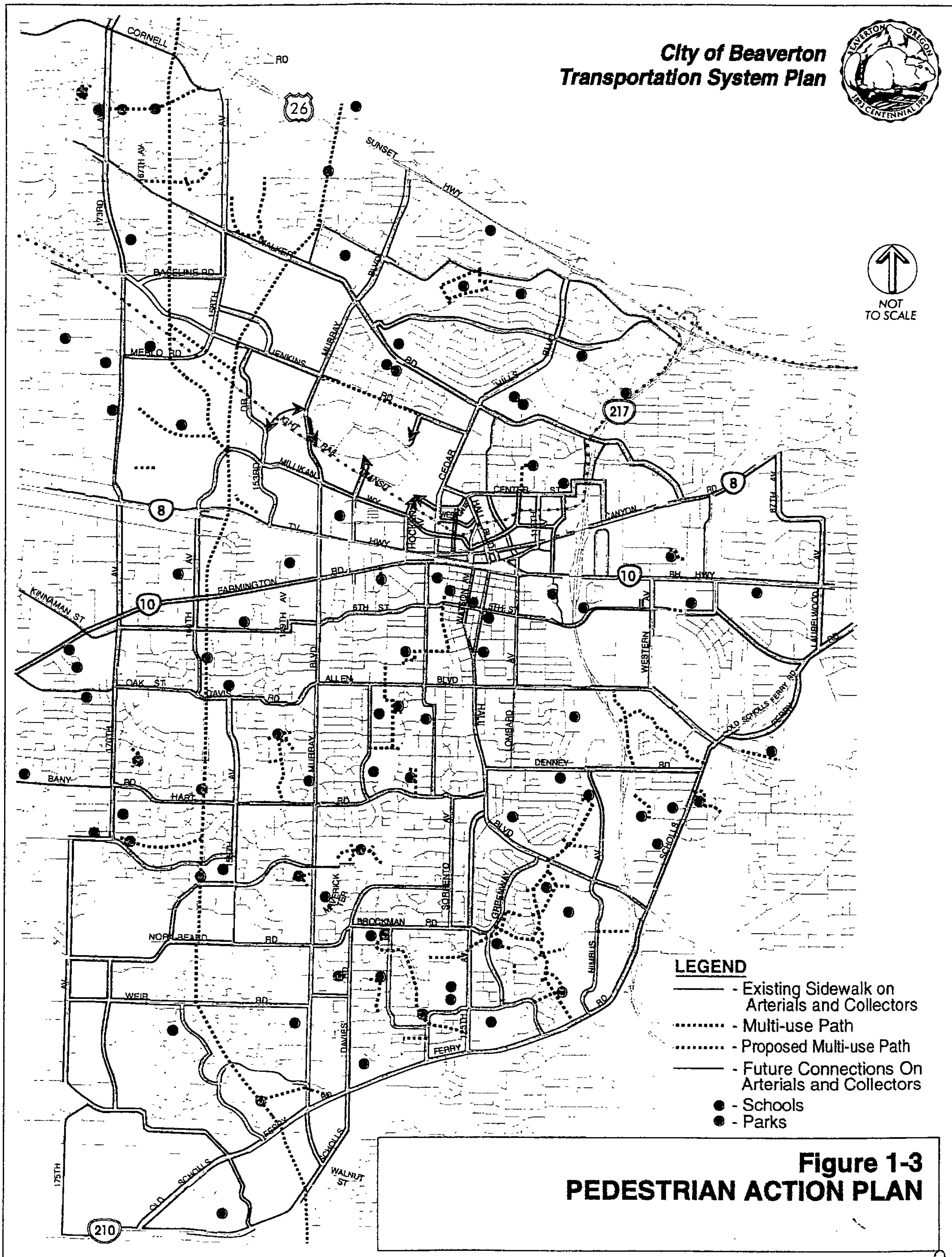

Figure 1-3
PEDESTRIAN ACTION PLAN

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.

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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.

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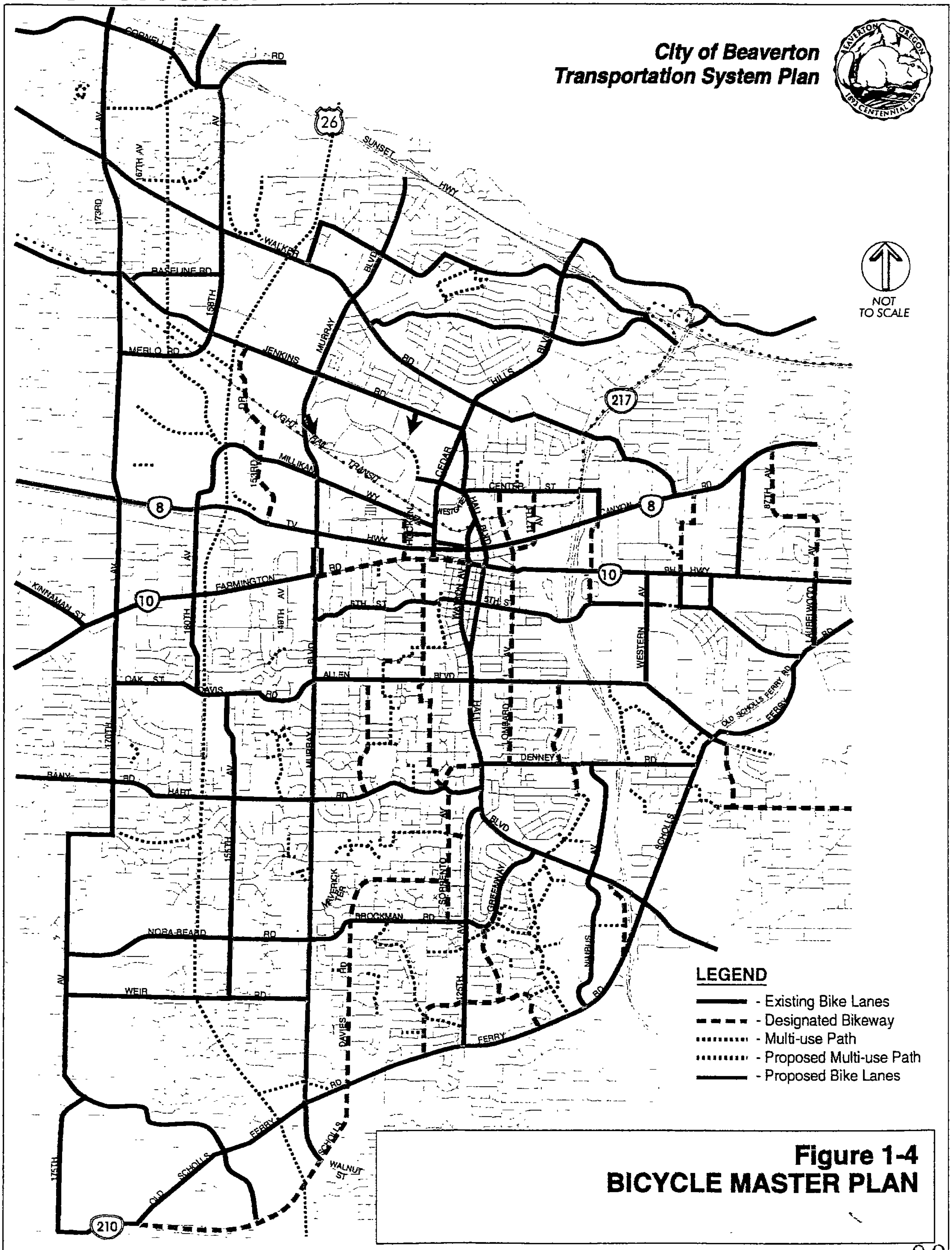

Figure 1-4
BICYCLE MASTER PLAN

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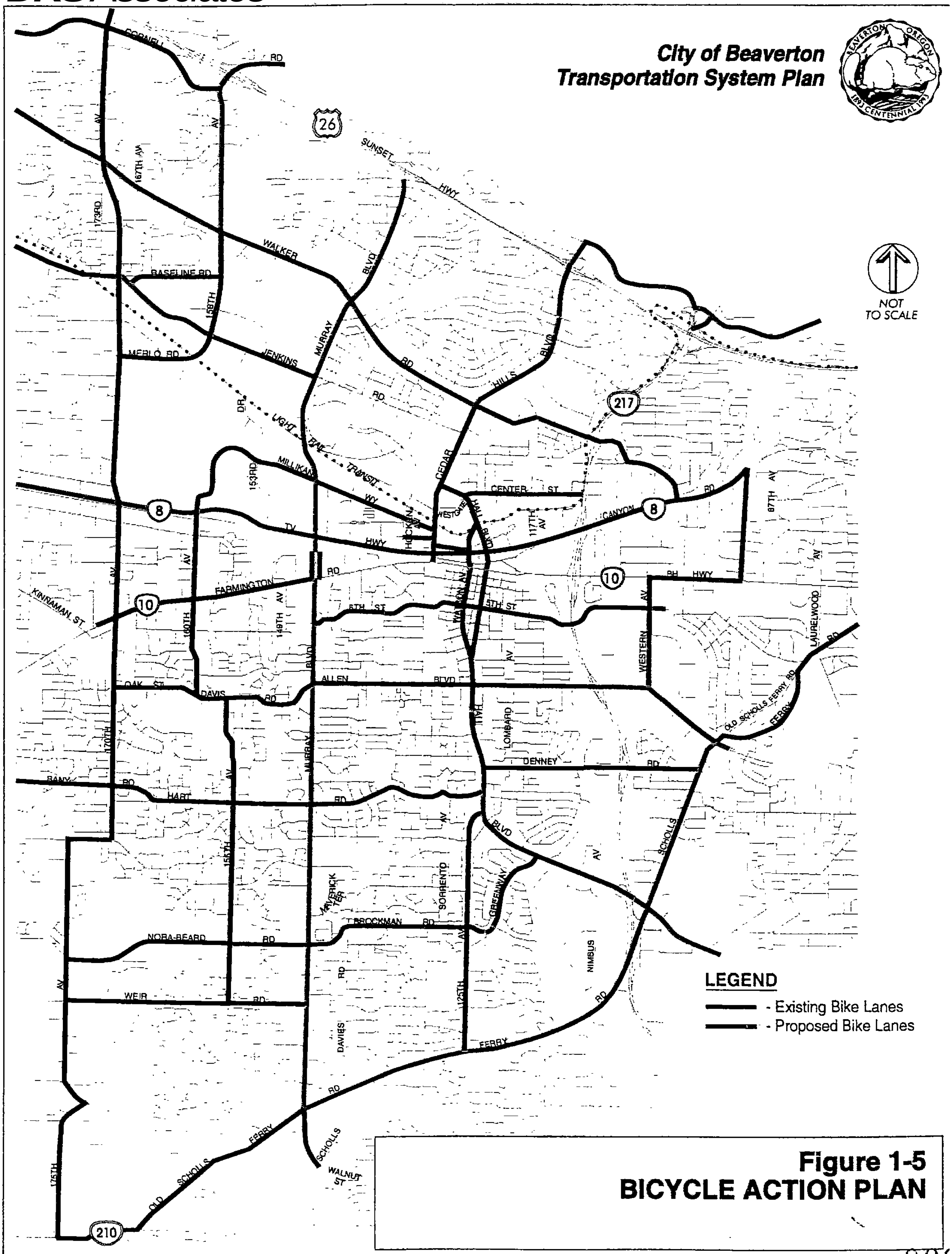

Figure 1-5
BICYCLE ACTION PLAN

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	155^{th} Avenue	435
Weir Road	175'' Avenue	155'' Avenue	390
175^{th} 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.

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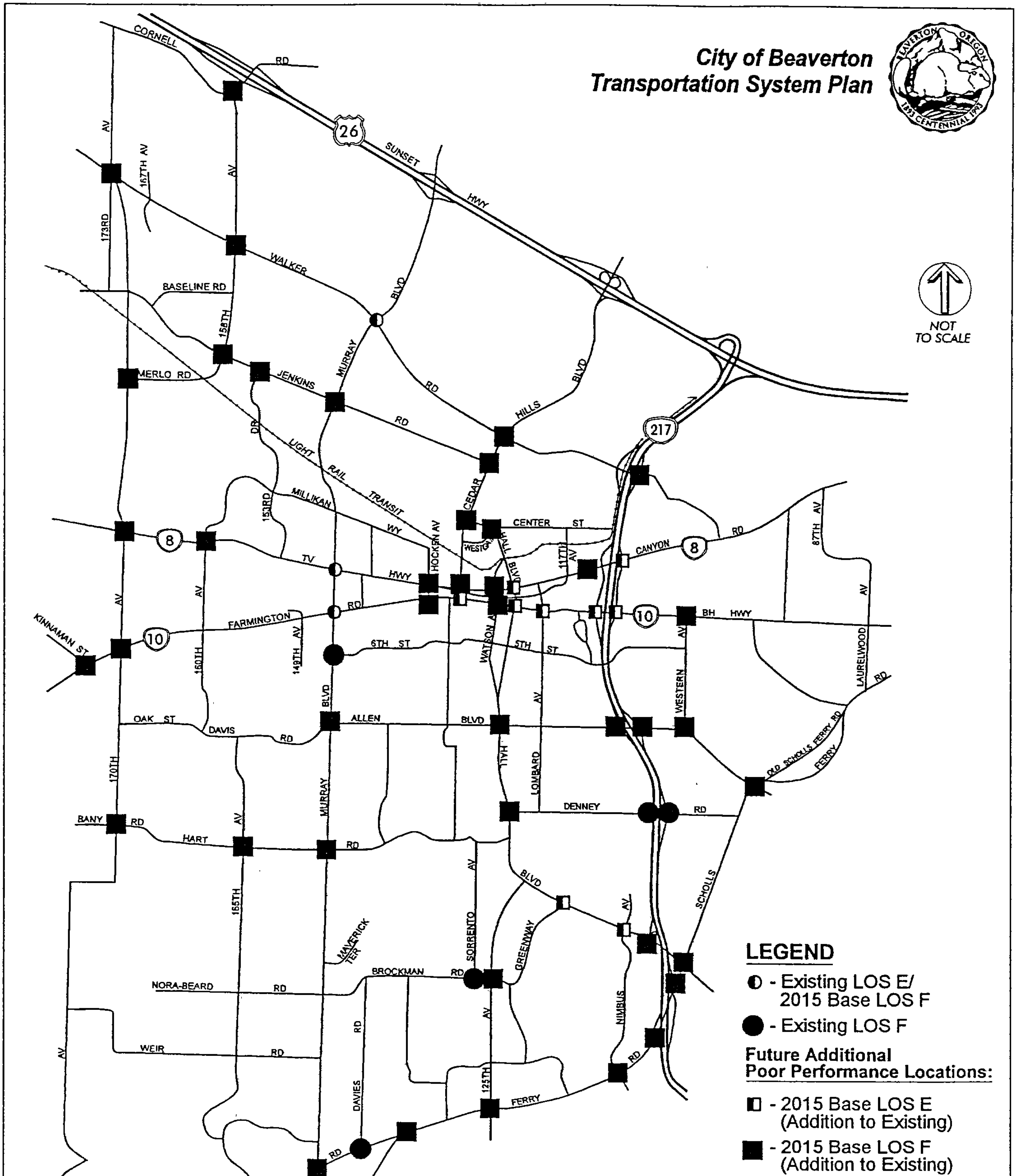

Figure 1-6
INTERSECTION PERFORMANCE EXISTING/FUTURE 2015 WITHOUT STREET IMPROVEMENTS

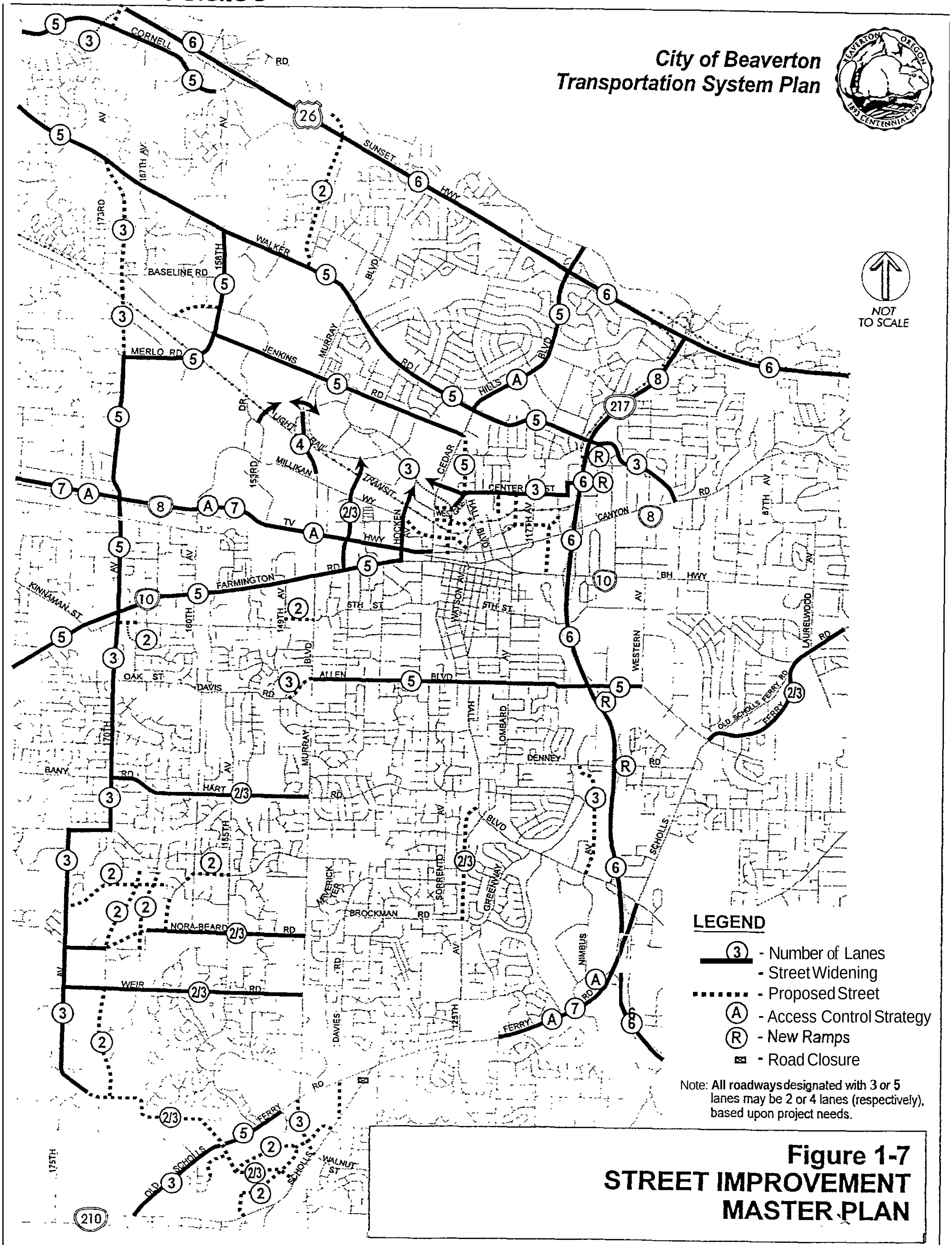

Figure 1-7
STREET IMPROVEMENT MASTER PLAN

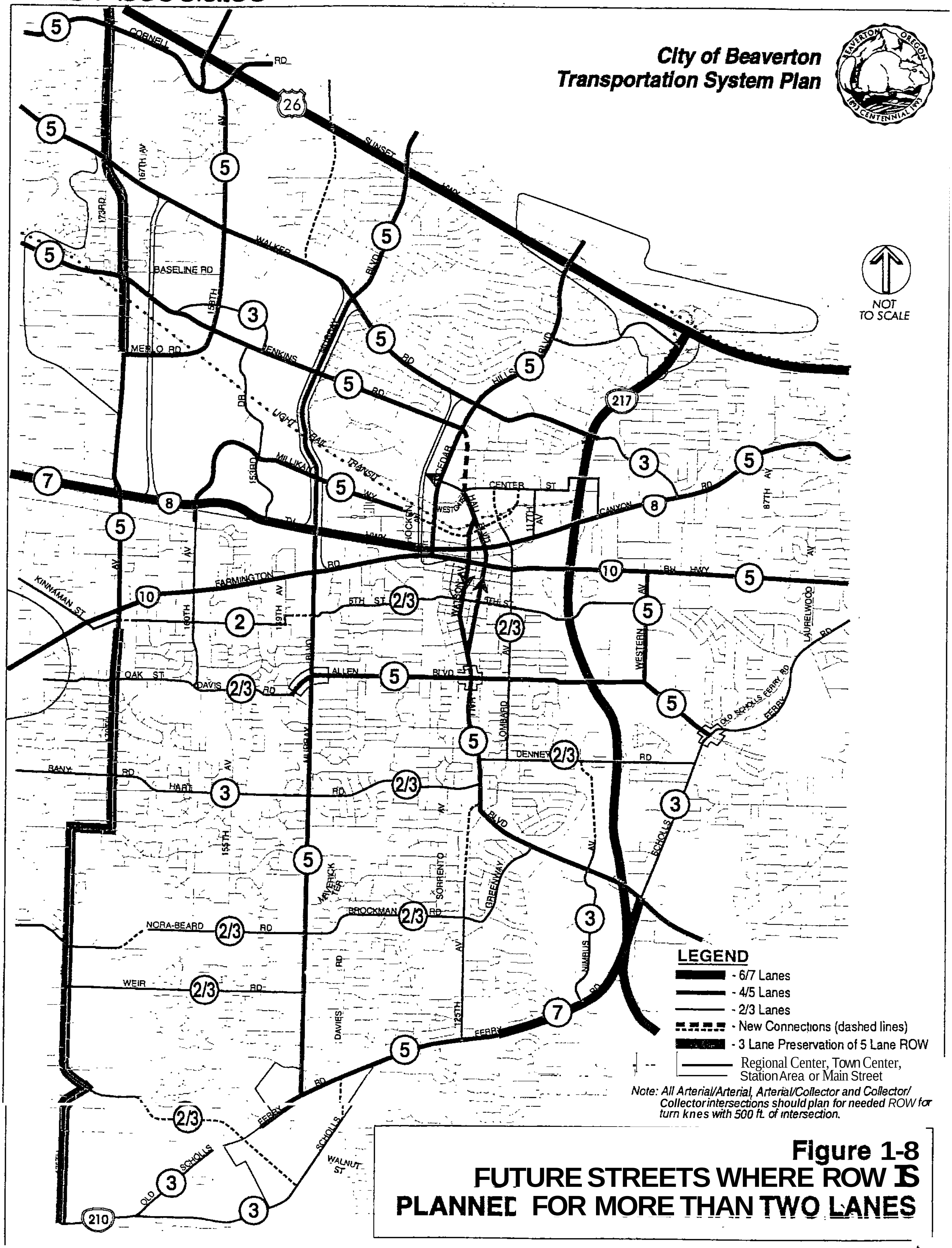

Figure 1-8
FUTURE STREETS WHERE ROW IS PLANNED FOR MORE THAN TWO LANES

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
SUBTOTAL 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 I2 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.

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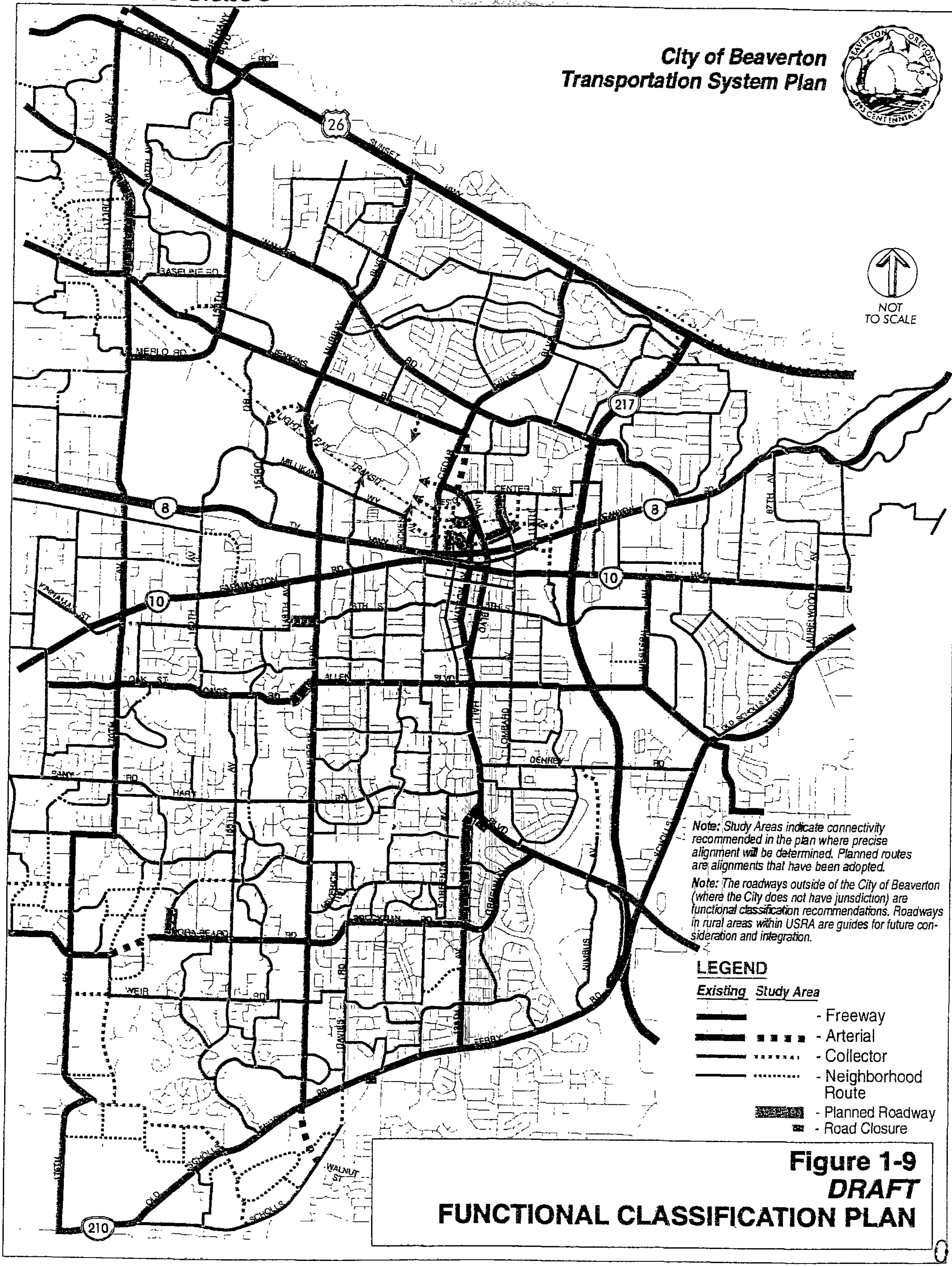

Figure 1-9
DRAFT
FUNCTIONAL CLASSIFICATION PLAN

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 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 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

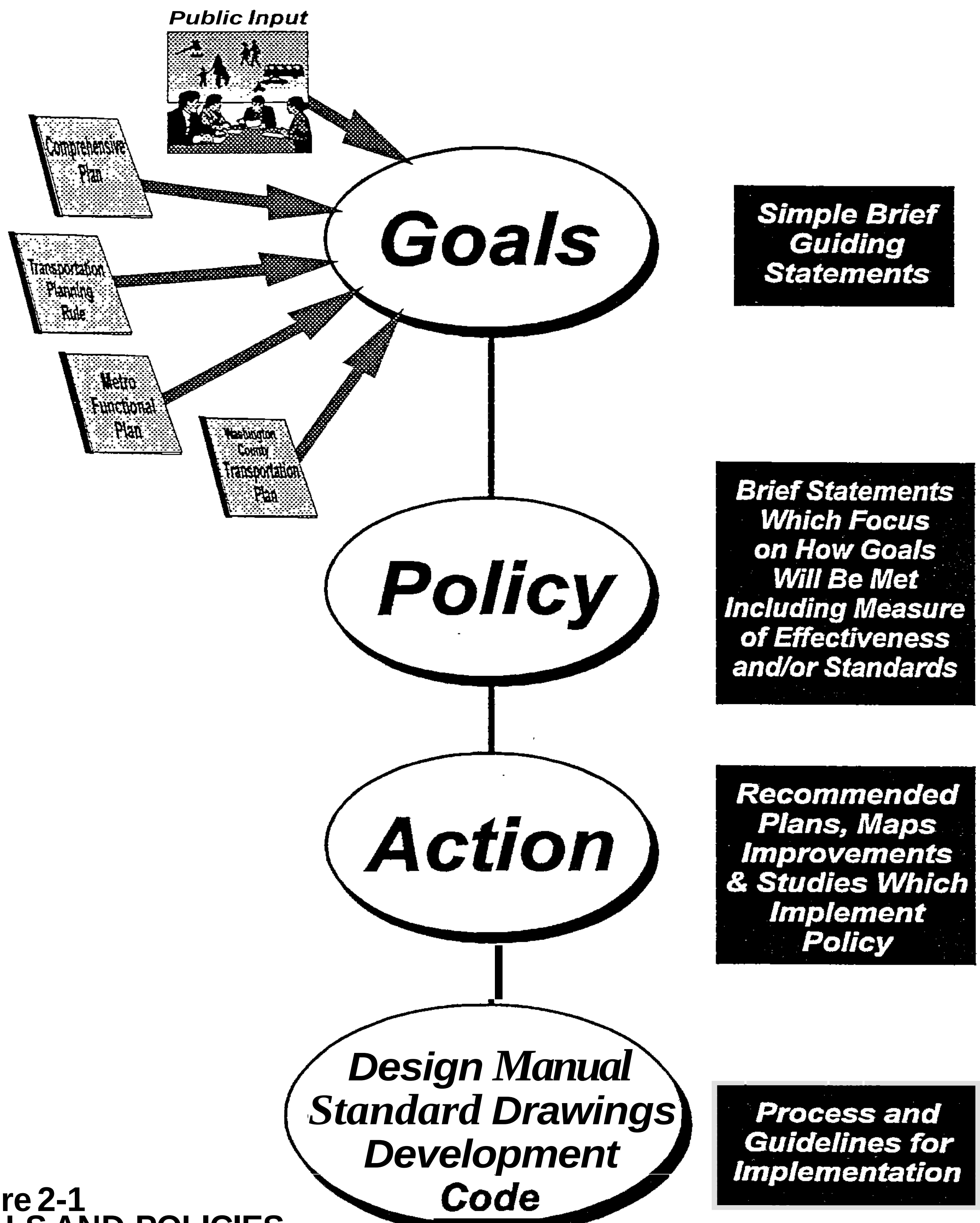

Figure 2-1
GOALS AND POLICIES RELATIONSHIP

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 to provide and maintain safe access to the public 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 City jurisdiction 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 County jurisdictions 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 (through fees and taxes) and private sectors (through exactions and conditions of development), each of whom has appropriate roles in the financing 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

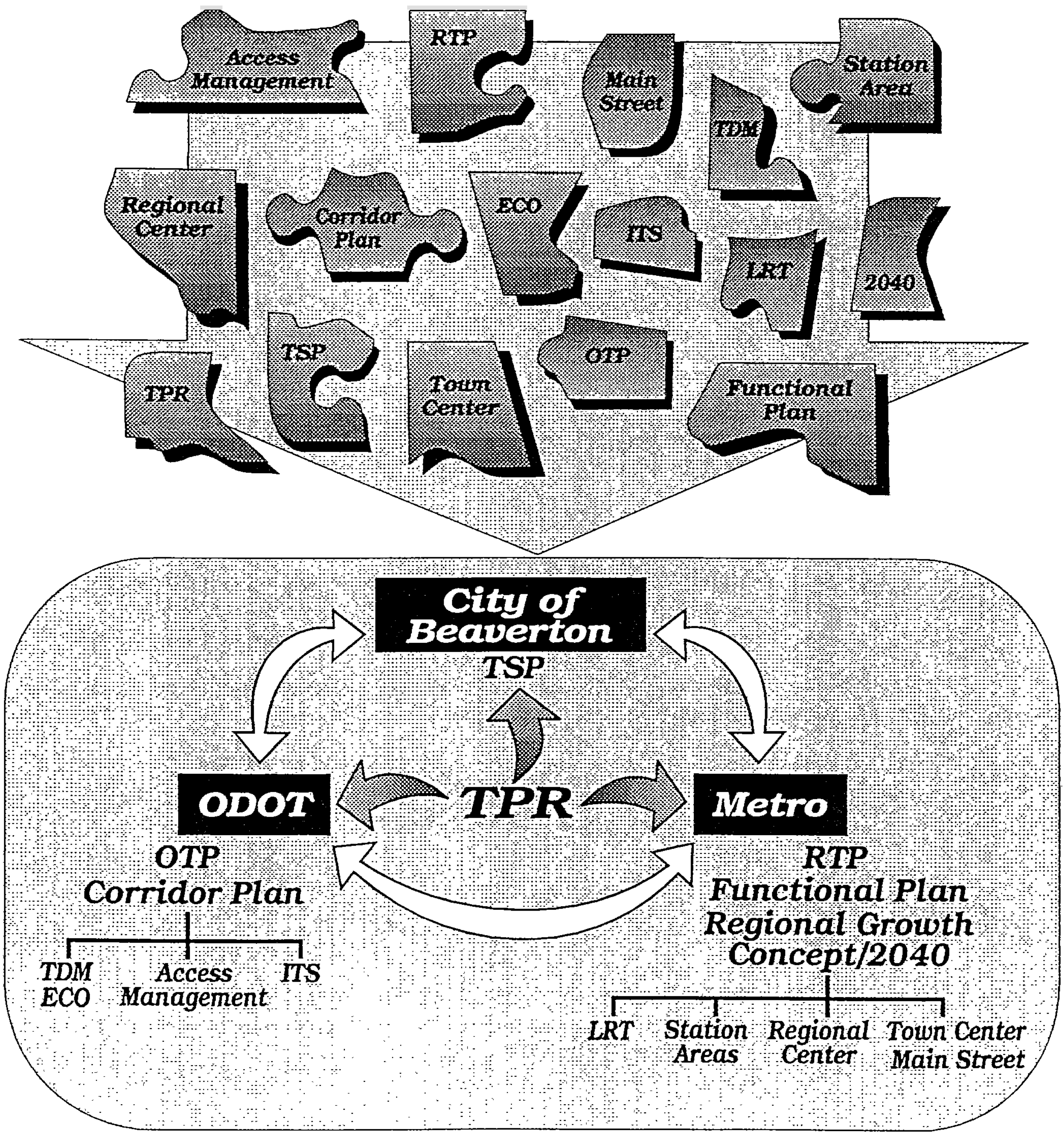

Figure 2-2
RELATIONSHIP OF TSP TO REGIONAL PLANNING

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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.

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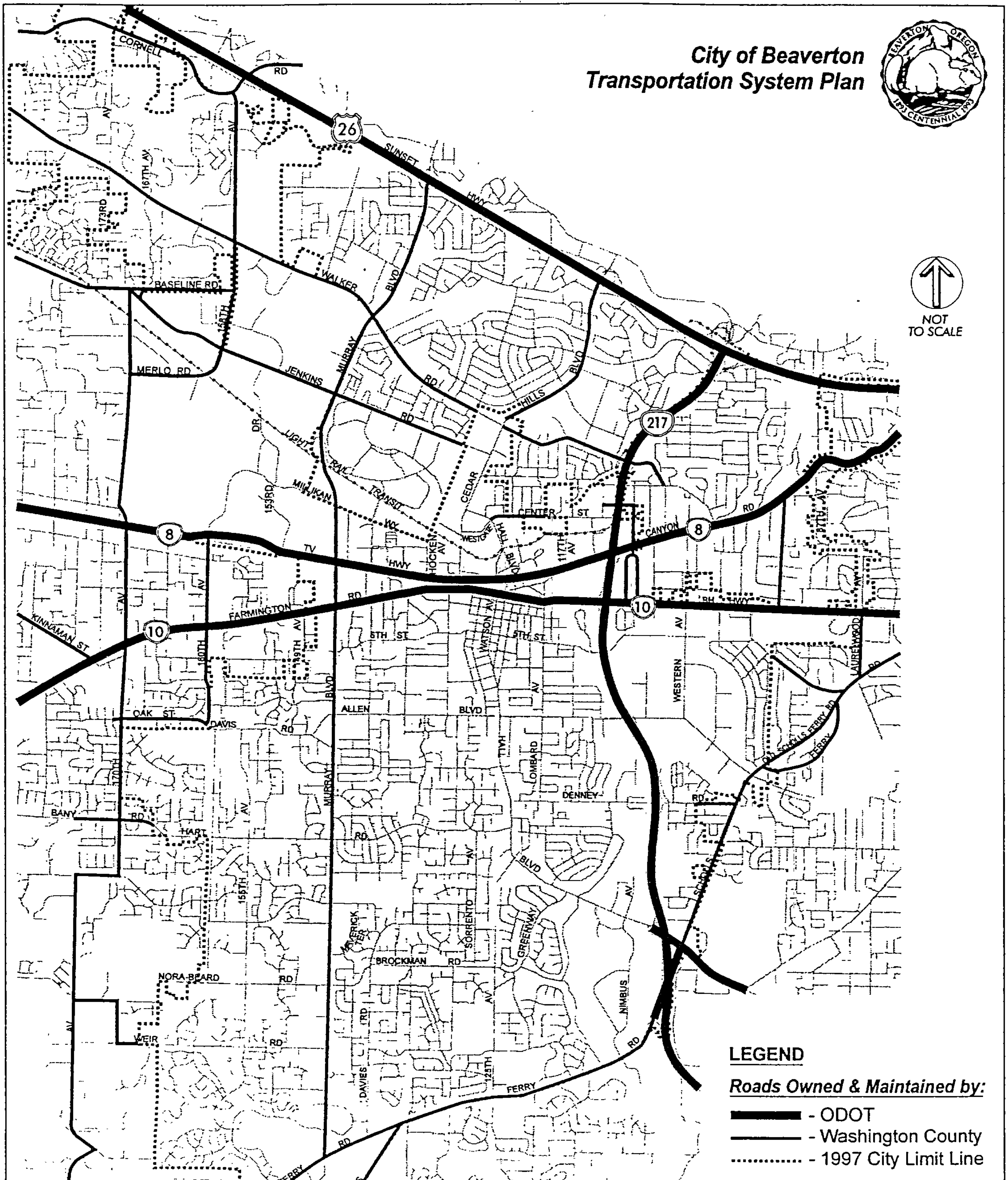


Figure 3-1
ROADWAY JURISDICTION

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 2 17. 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.

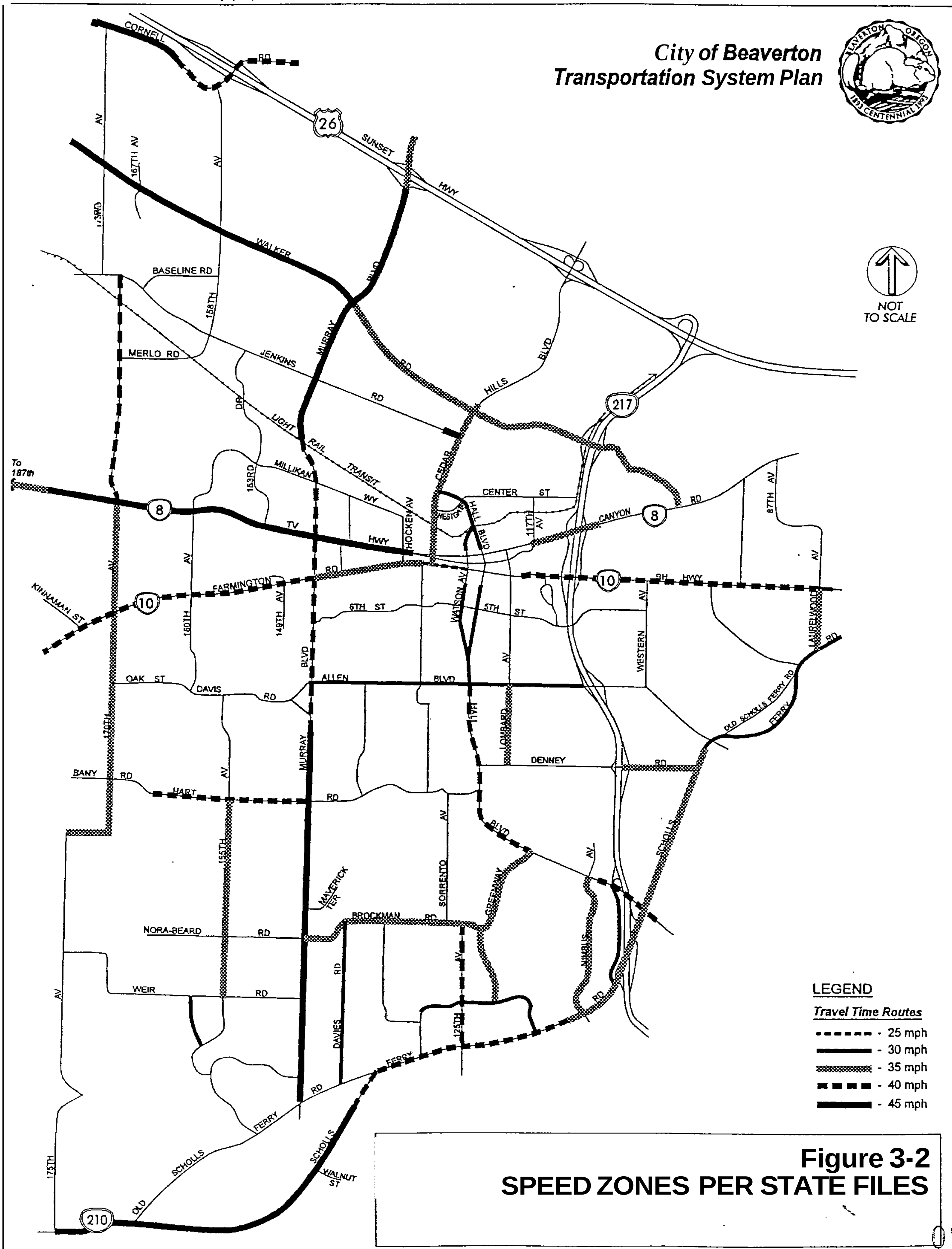


Figure 3-2
SPEED ZONES PER STATE FILES

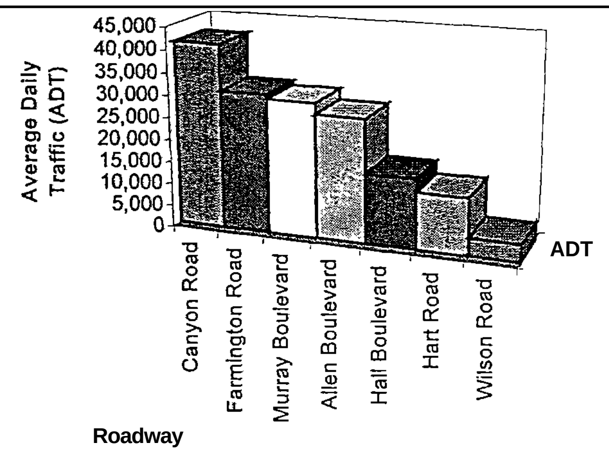
In most cases, speeding becomes very noticeable when it is above 30-35 miles per hour. Speeding can usually be expected on local streets where the streets are wide and straight for long stretches or where downhill grades are extended.

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.**

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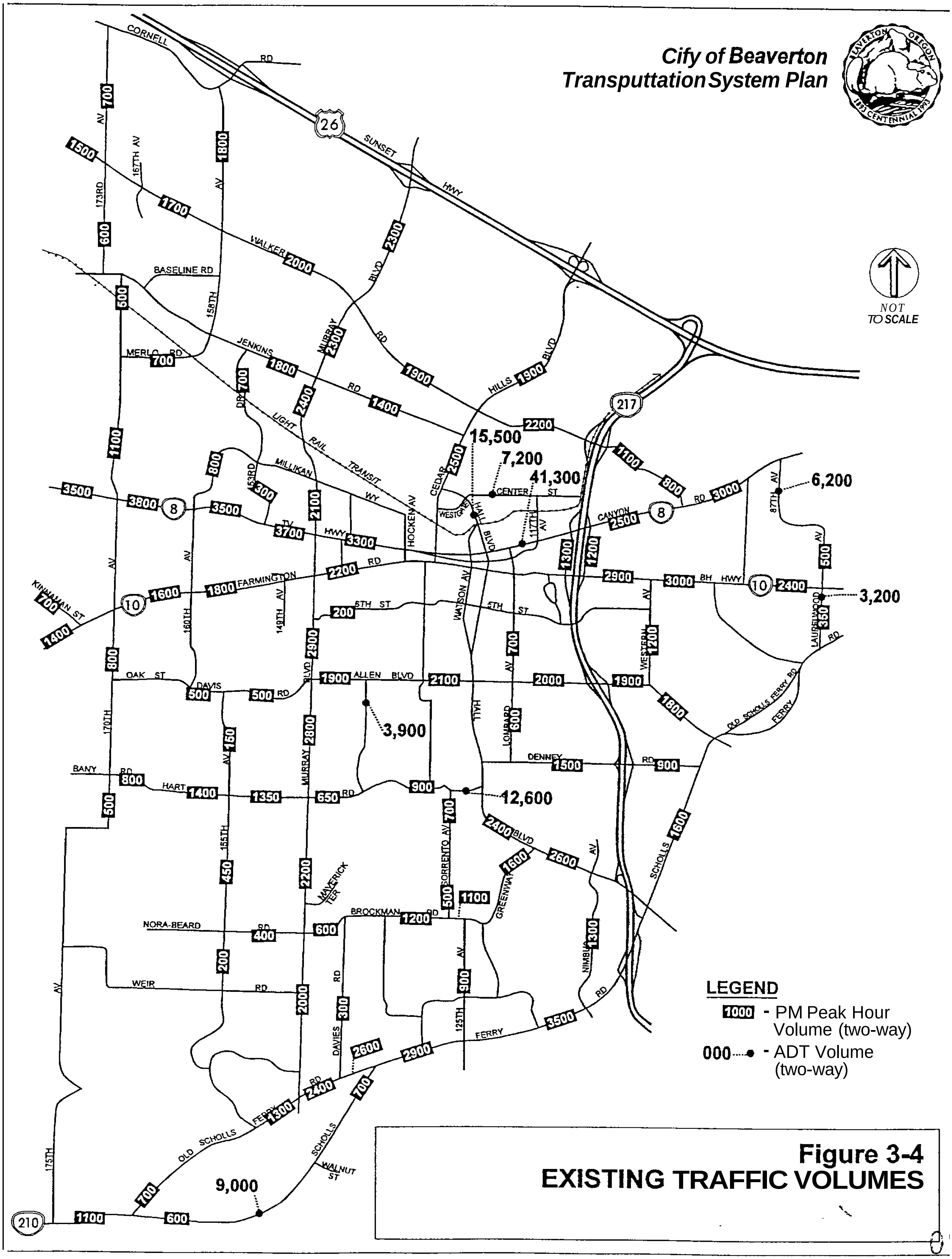
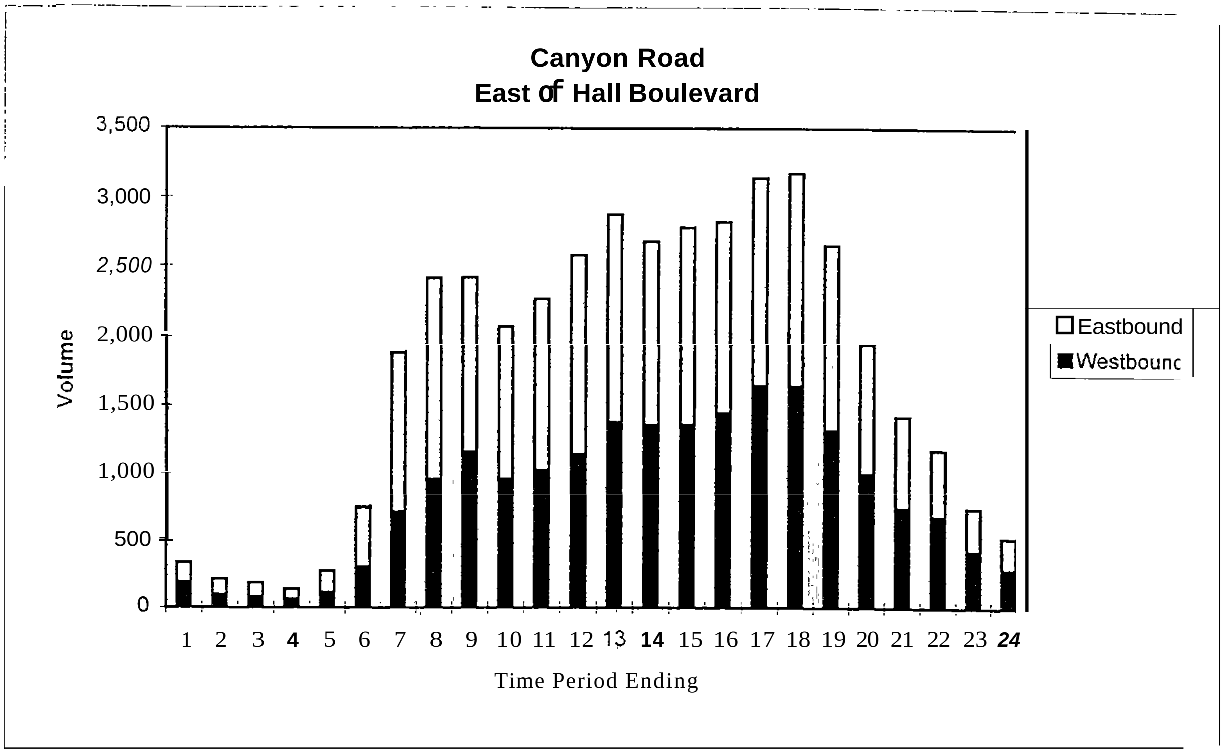
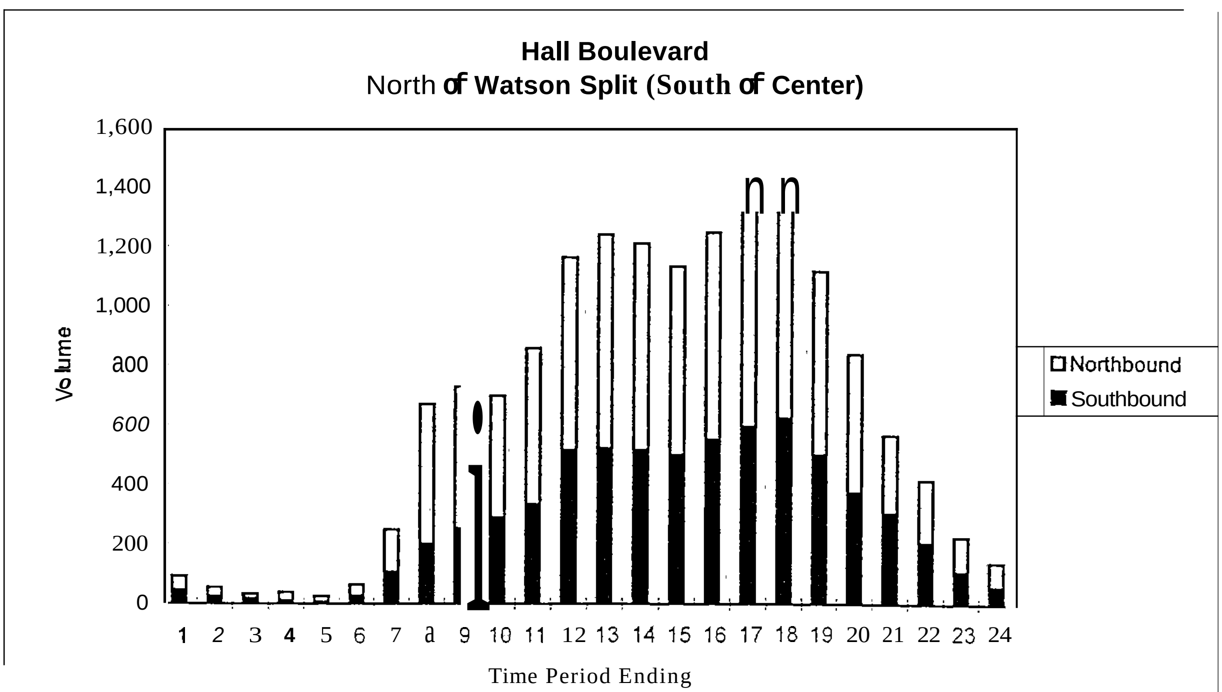


Figure 3-4
EXISTING TRAFFIC VOLUMES

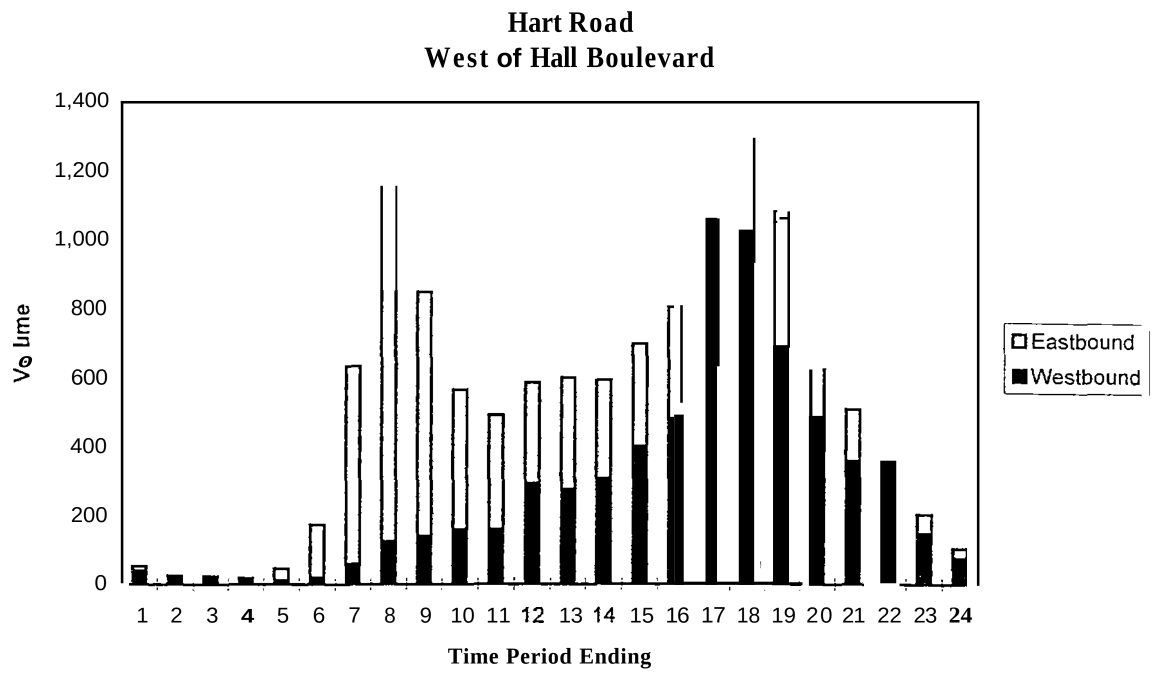


Average Daily Traffic (ADT) = 41,300

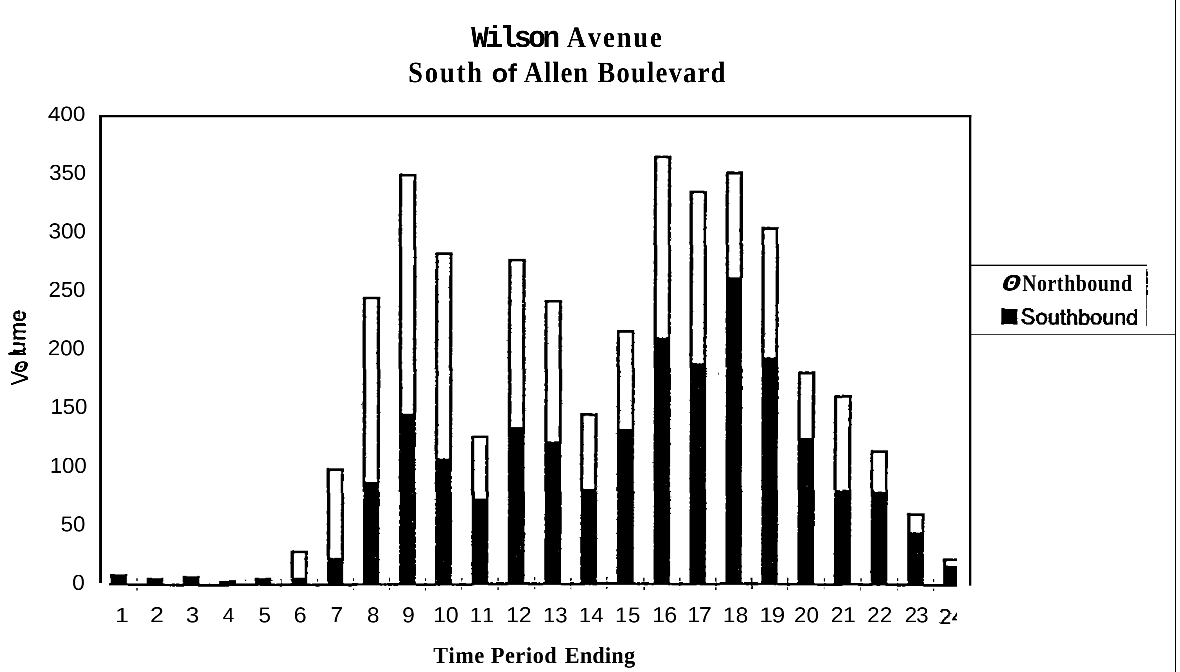


ADT = 15,500

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:

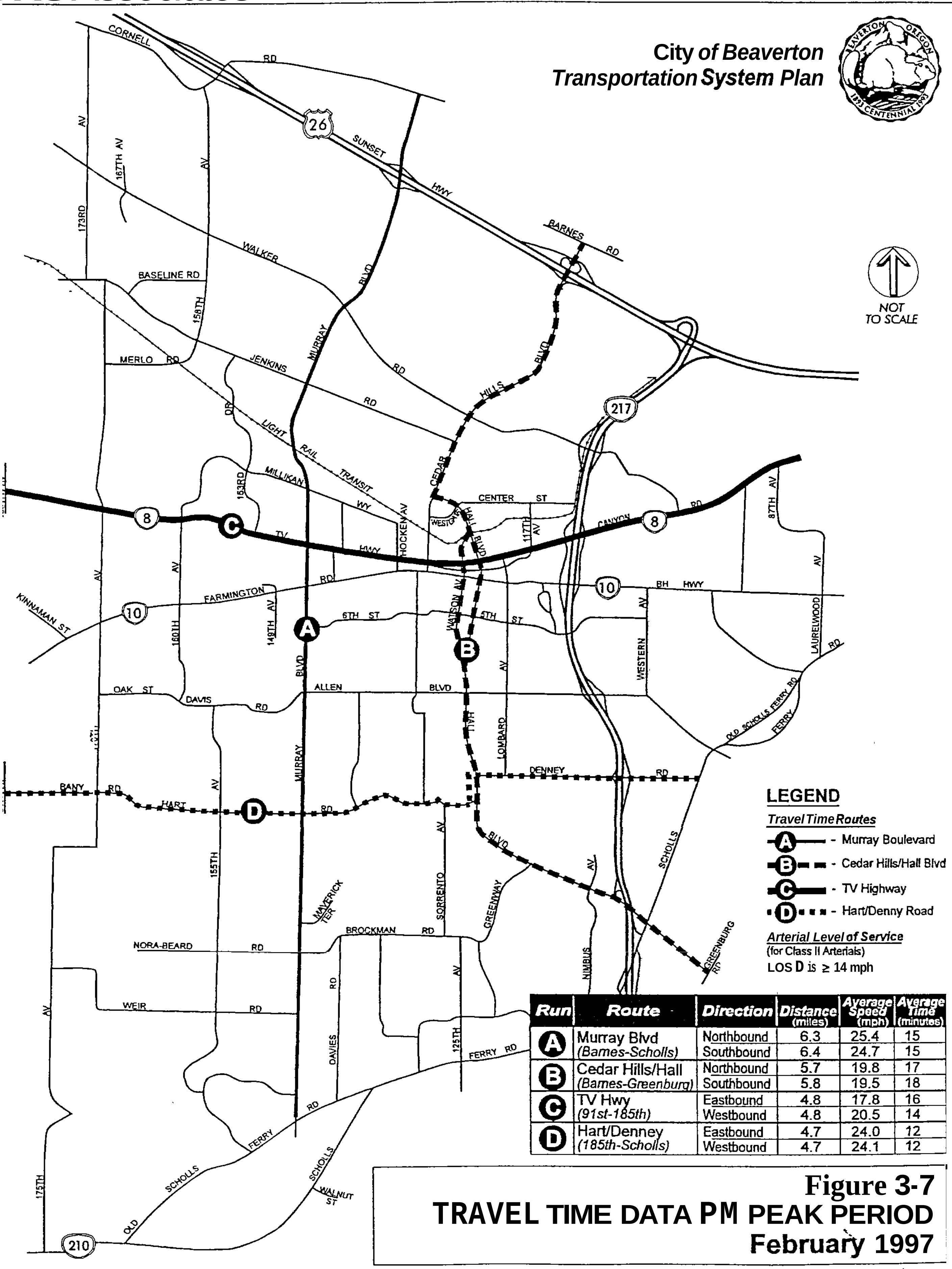
- Murray Boulevard from Cornell Road to Scholls Ferry Road
- Hall Boulevard/Cedar Hills Boulevard from Barnes Road to Greenburg Road
- Murray Boulevard from Cornell Road to Scholls Ferry Road
- Canyon Road/TV Highway from 87th Avenue to 185th Avenue

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.



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.

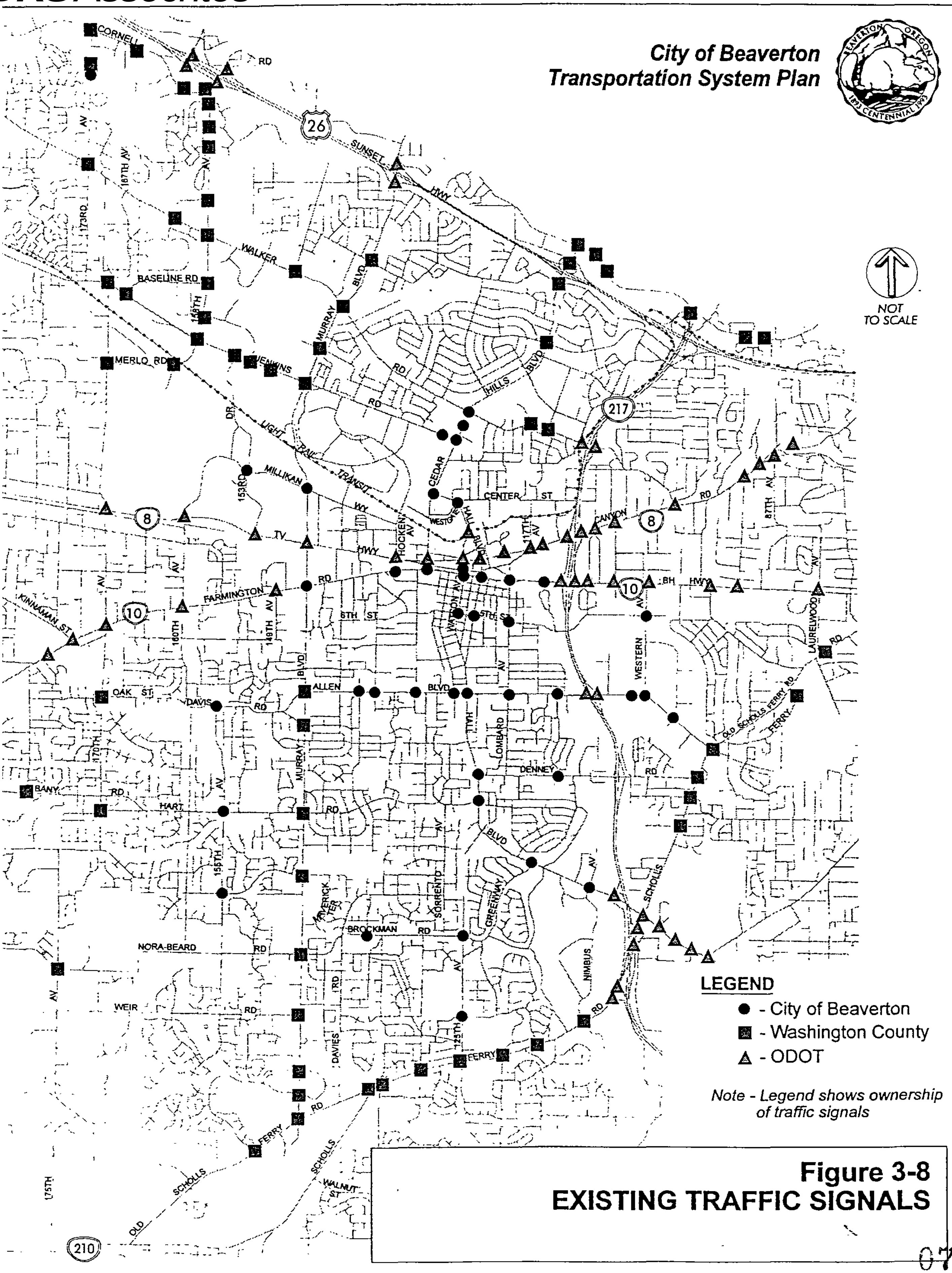

Figure 3-8
EXISTING TRAFFIC SIGNALS

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.

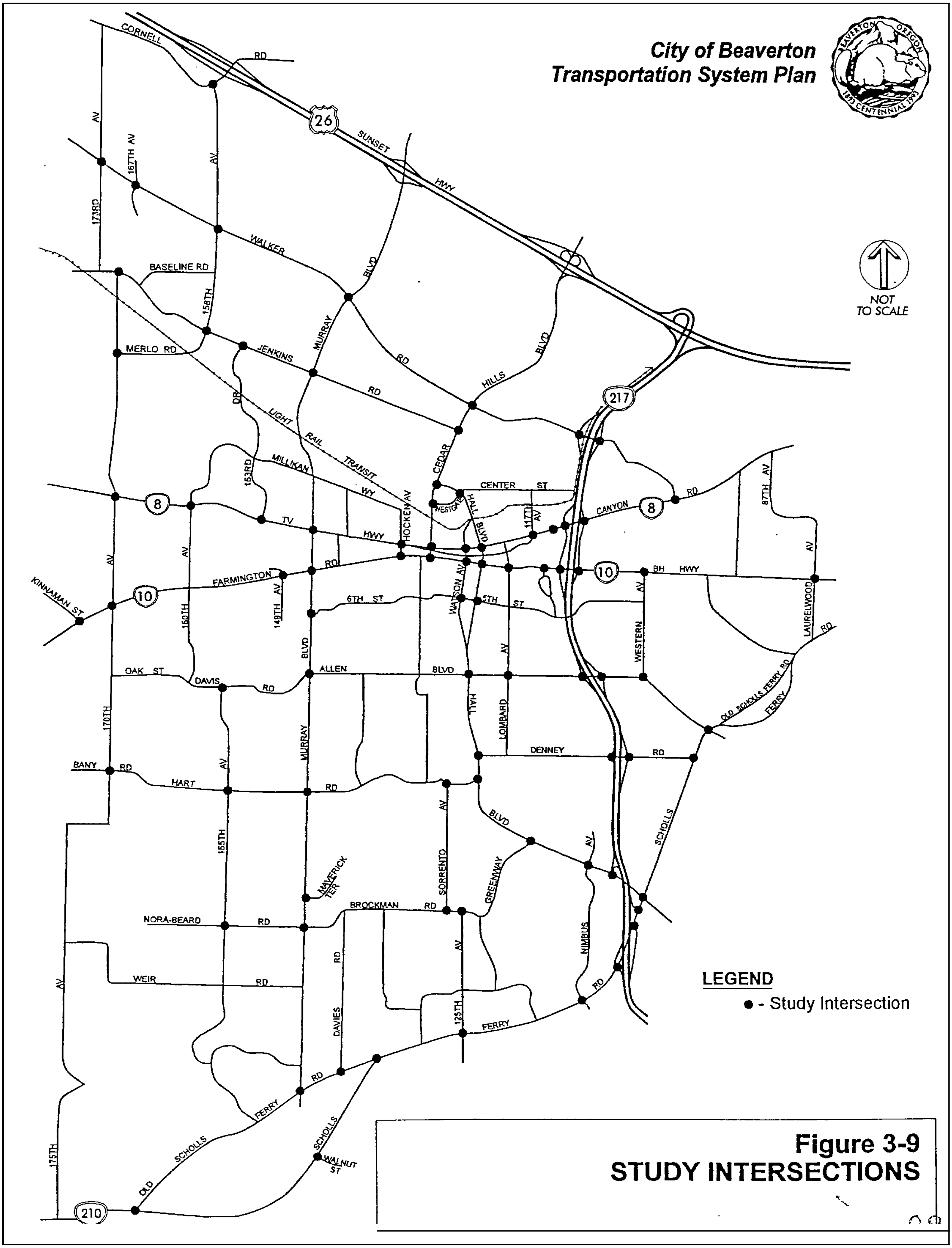

Figure 3-9
STUDY INTERSECTIONS

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

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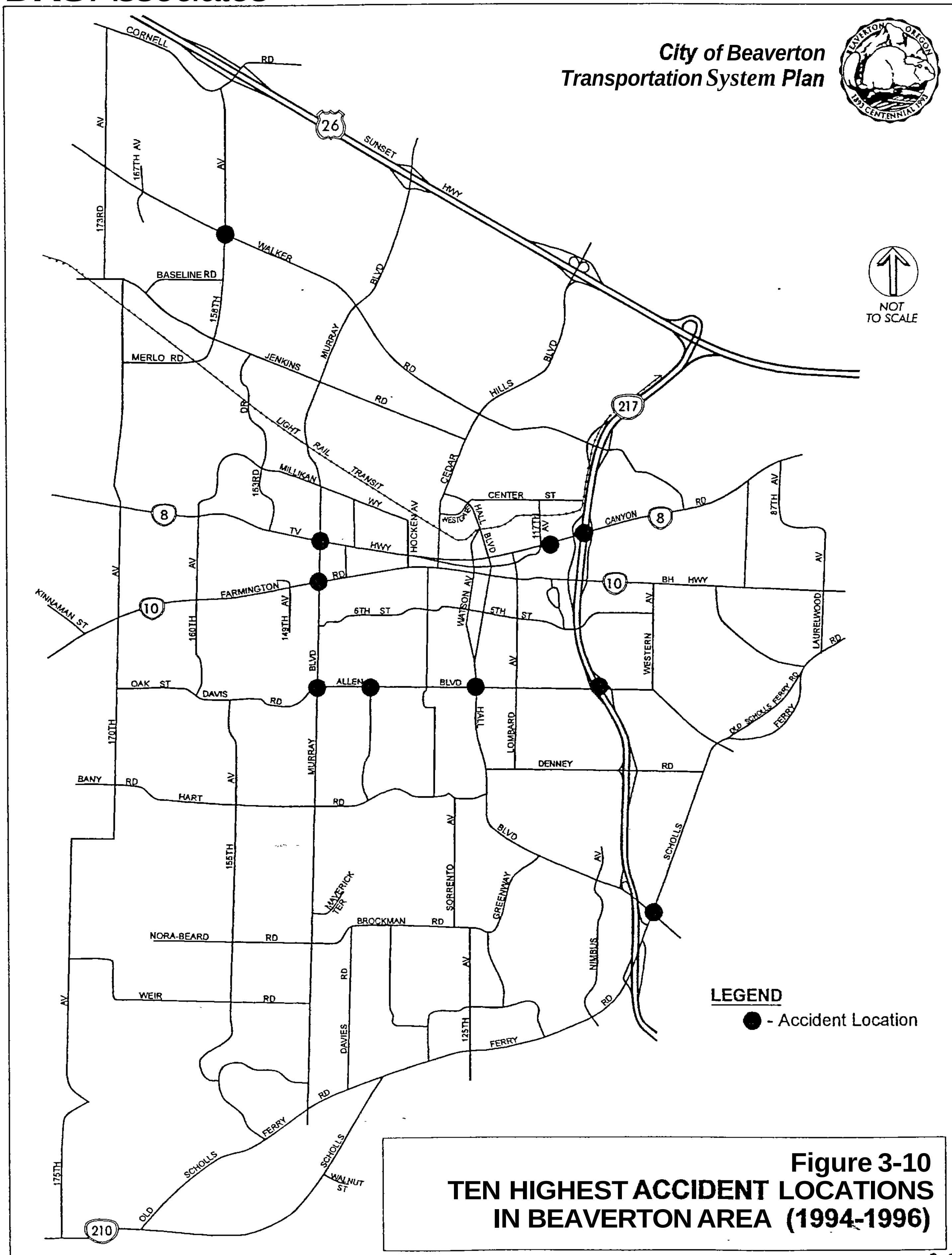


Figure 3-10
TEN HIGHEST ACCIDENT LOCATIONS IN BEAVERTON AREA (1994-1996)

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

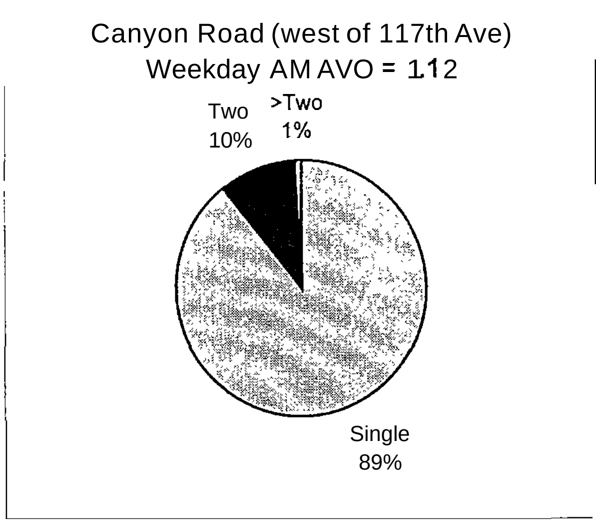
Transit service is provided to Beaverton by the Tri-County Metropolitan Transportation District of Oregon (Tri-Met). There are currently twenty Tri-Met bus routes which serve Beaverton (as of June 1997): East/West Burnside Route 20, Taylors Ferry Road Route 43, Garden Home Route 45, Farmington-185th 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]

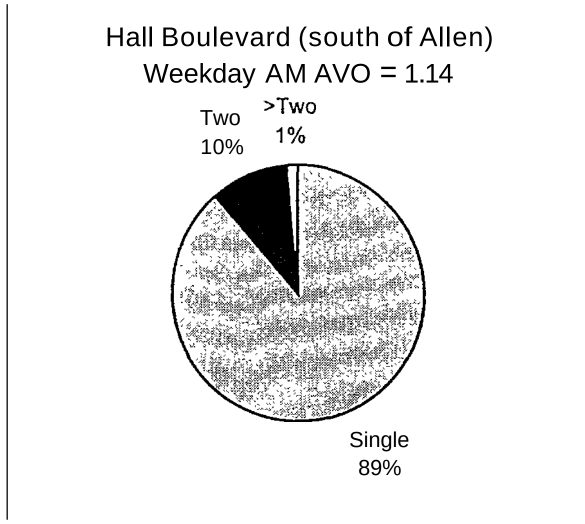
Weekday All Day Tri-Met Routes	**Weekday Peak Only Tri-Met Routes**	**Saturday Tri-Met Routes**	**Sunday Tri-Met Routes**
20, 43, 45, 52, 54, 56, 57, 59, 62, 67, 76, *78*, **88, *89***	55, 60, 61X, 91X, 92X, 94X	20, 43, 45, 52, 54, 56, 57, 59, 62, 67, 76, 78	20, 43, 45, 52, 54, 56, 57, 67, 76, 78

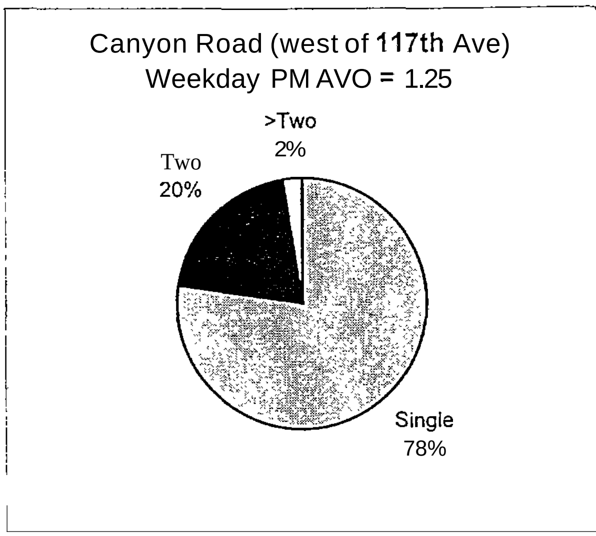
[10] Counts performed for DKS Associates on November 19, 21, 23 and December 3-5, 1996.

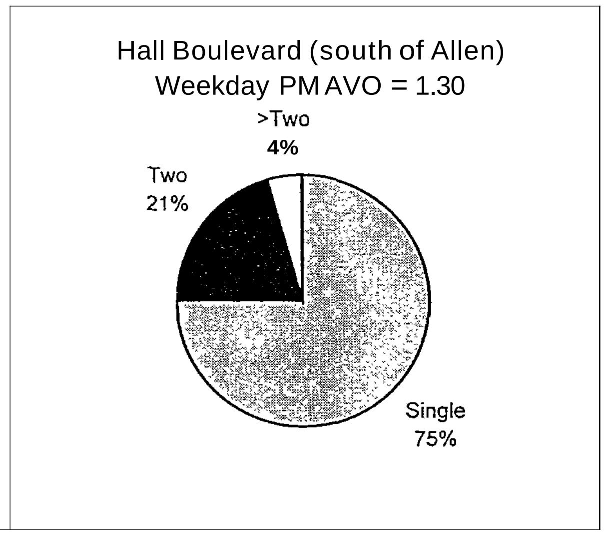
[11] ***Calibration and Adjustment of System Planning Models,*** U.S. Department of Transportation and Federal Highway Administration, December, 1990 ***and Quick Response Urban Travel Estimation Techniques*** *and* ***Transferable Parameters:*** *User's Guide,* NCHRB Report 187, Transportation Research Board, Washington D.C., 1978.

[12] **Data** provided by Dennis Grimmer, Tri-Met staff, March *6,* 1997.









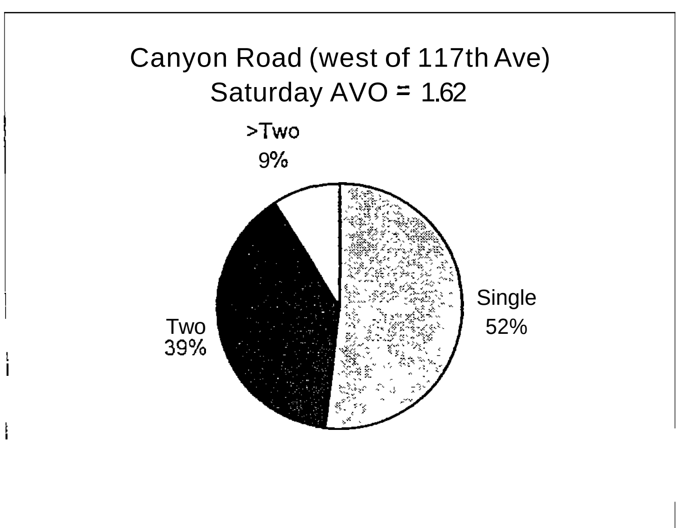


Figure 3-11
Average Vehicle Occupancy (AVO) in Beaverton

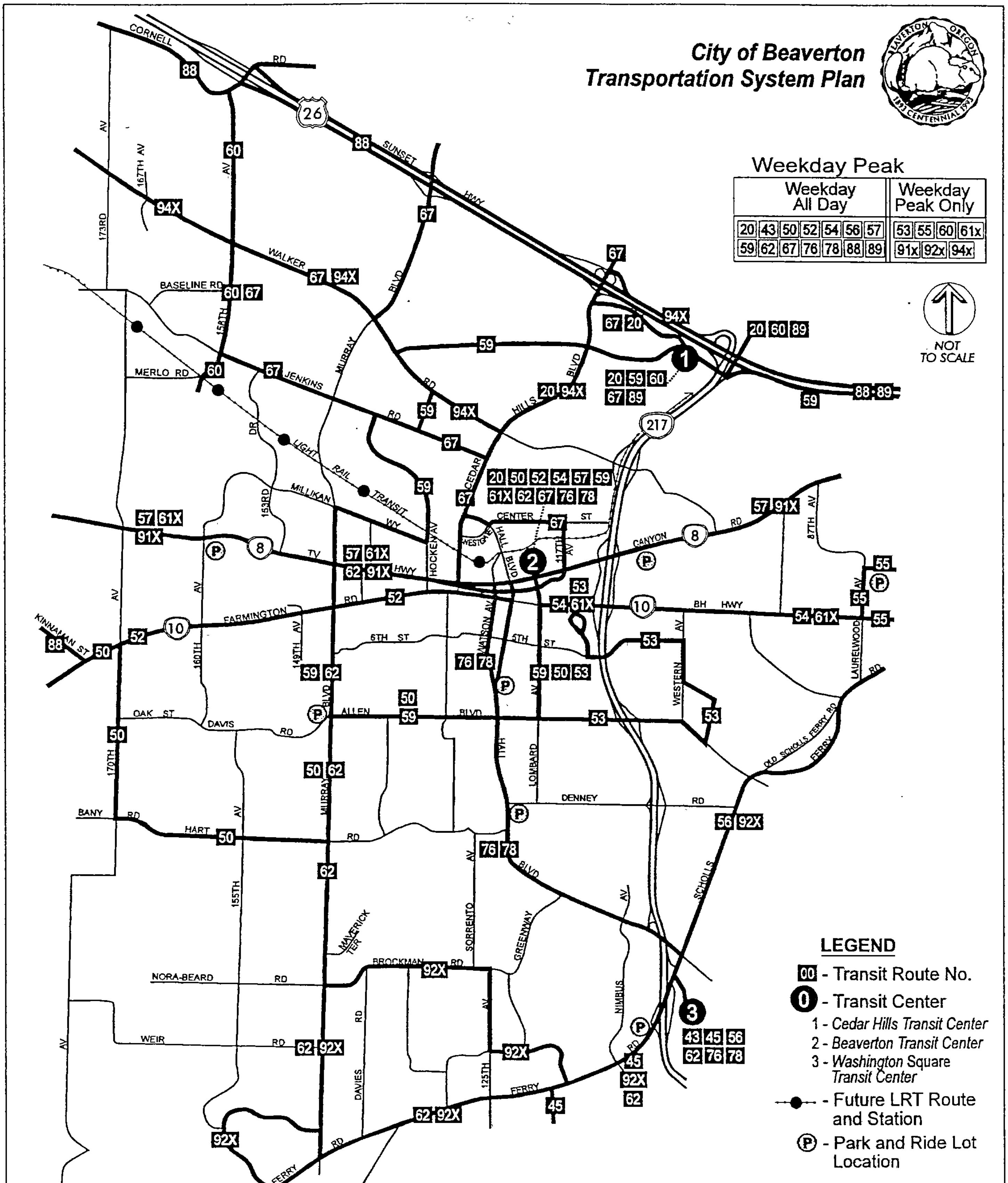


Figure 3-12
EXISTING TRANSIT

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.

DKS Associates

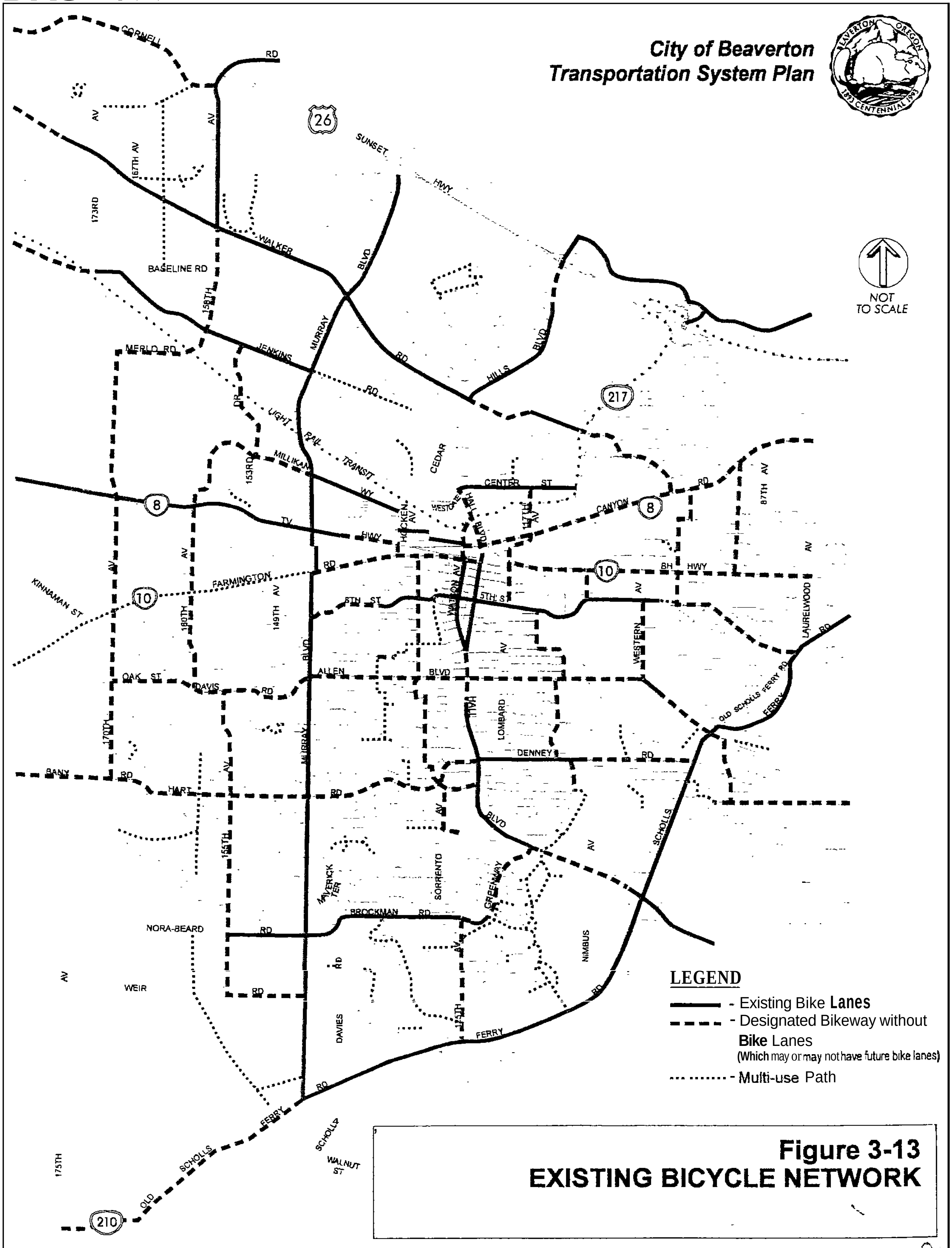


Figure 3-13
EXISTING BICYCLE NETWORK

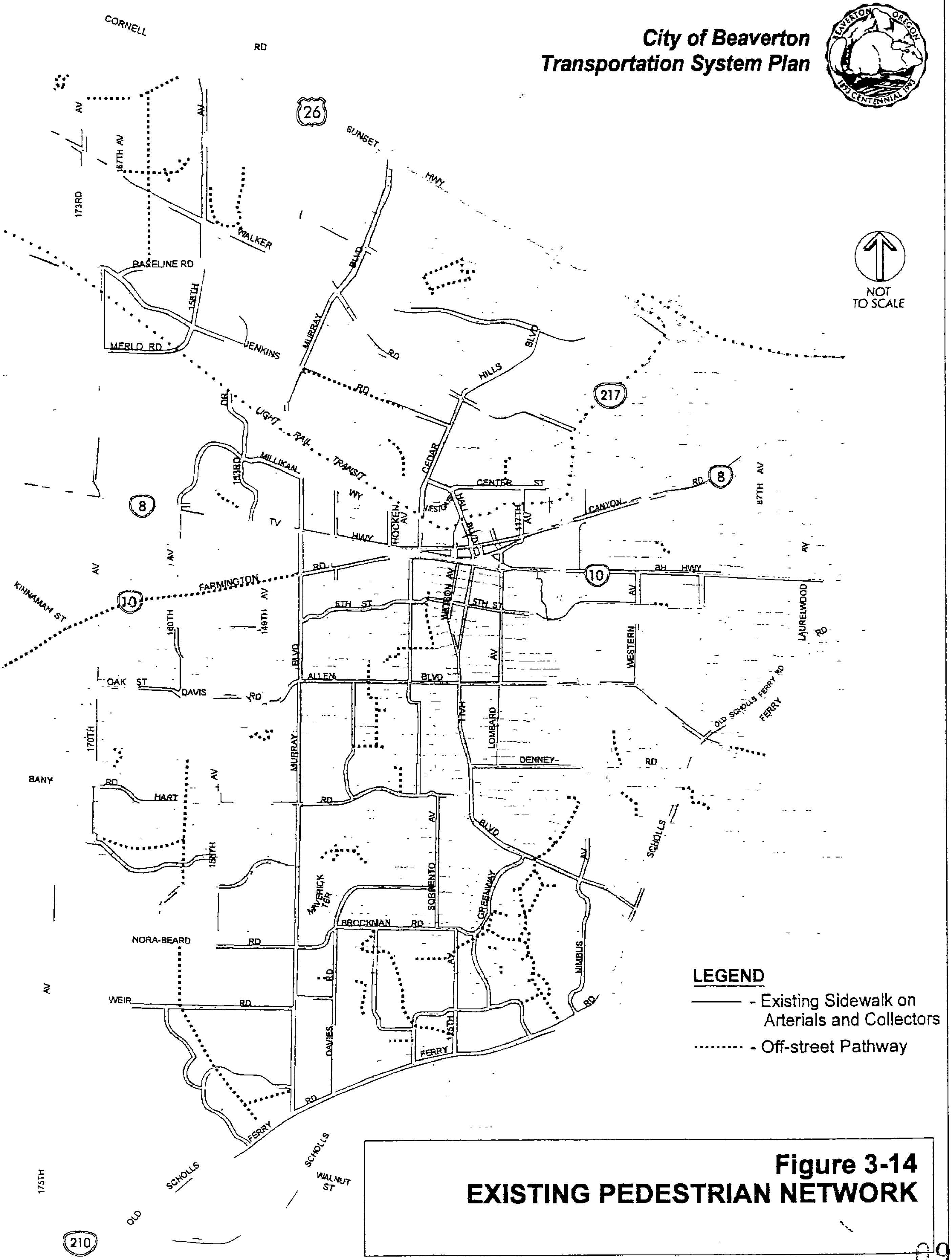


Figure 3-14
EXISTING PEDESTRIAN NETWORK

DKS *Associates*

City of Beaverton
Transportation System Plan

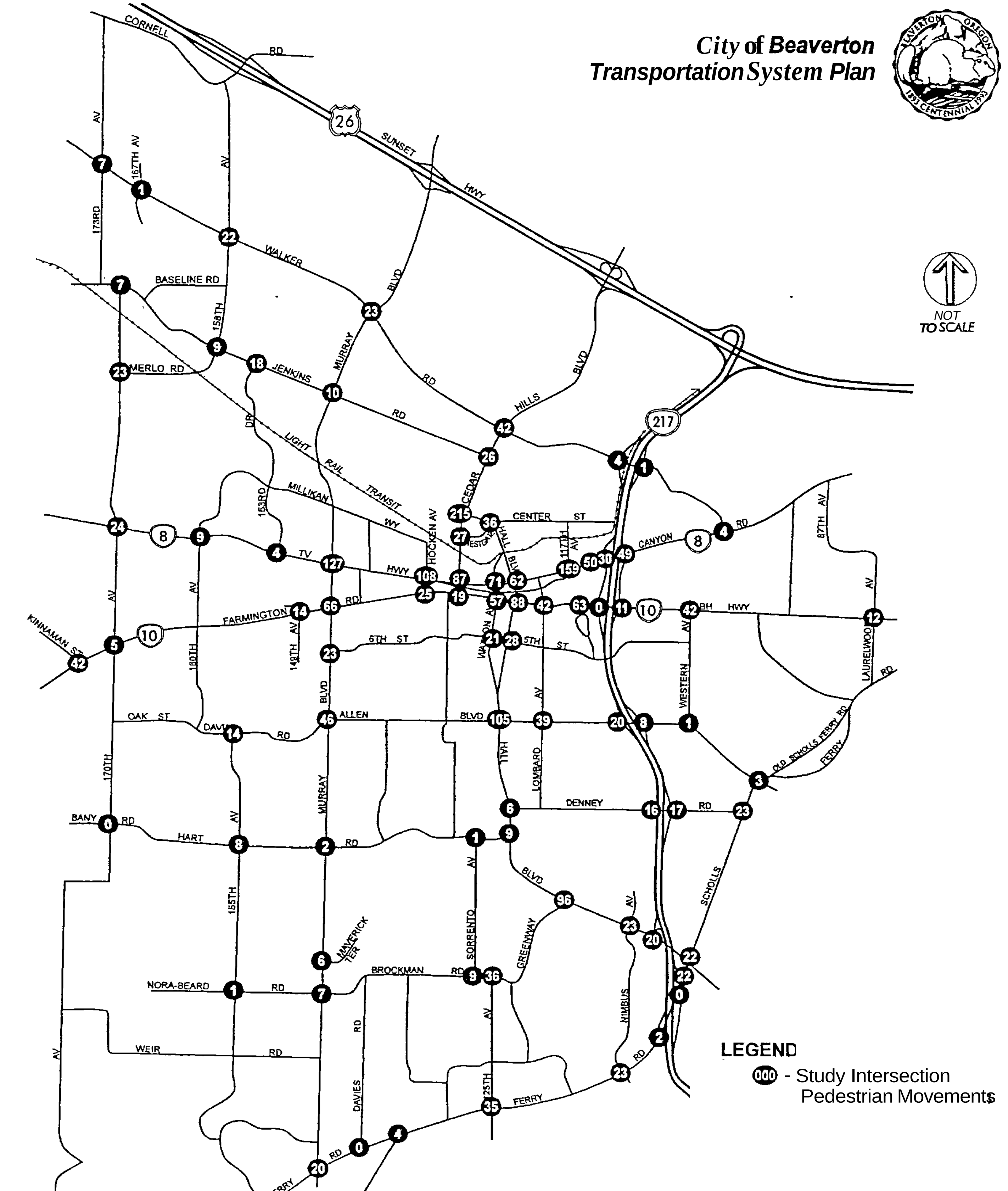


Figure 3-15
PEDESTRIAN MOVEMENTS
EXISTING PM PEAK PERIOD

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.

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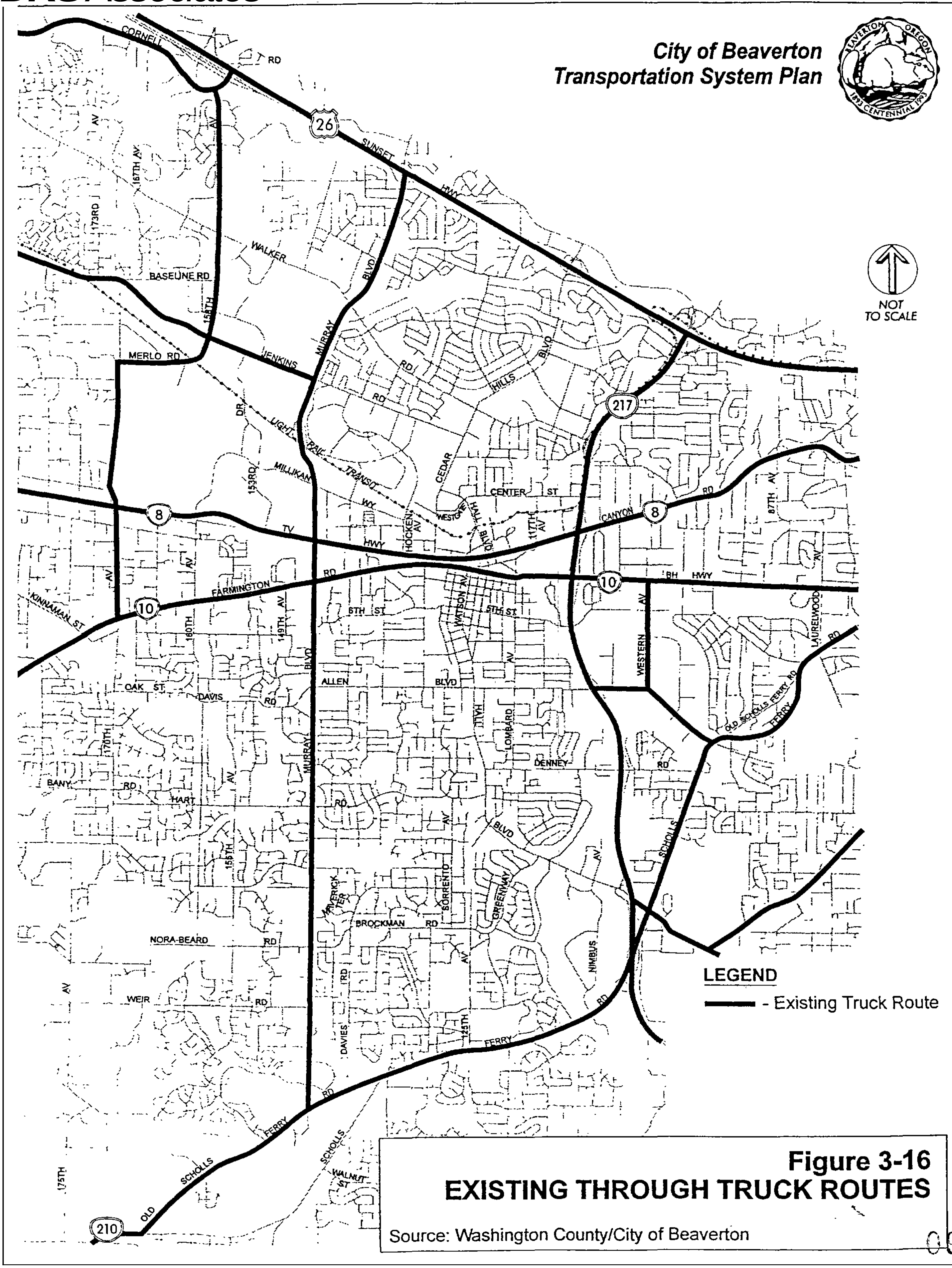

Figure 3-16
EXISTING THROUGH TRUCK ROUTES

Source: Washington County/City of Beaverton

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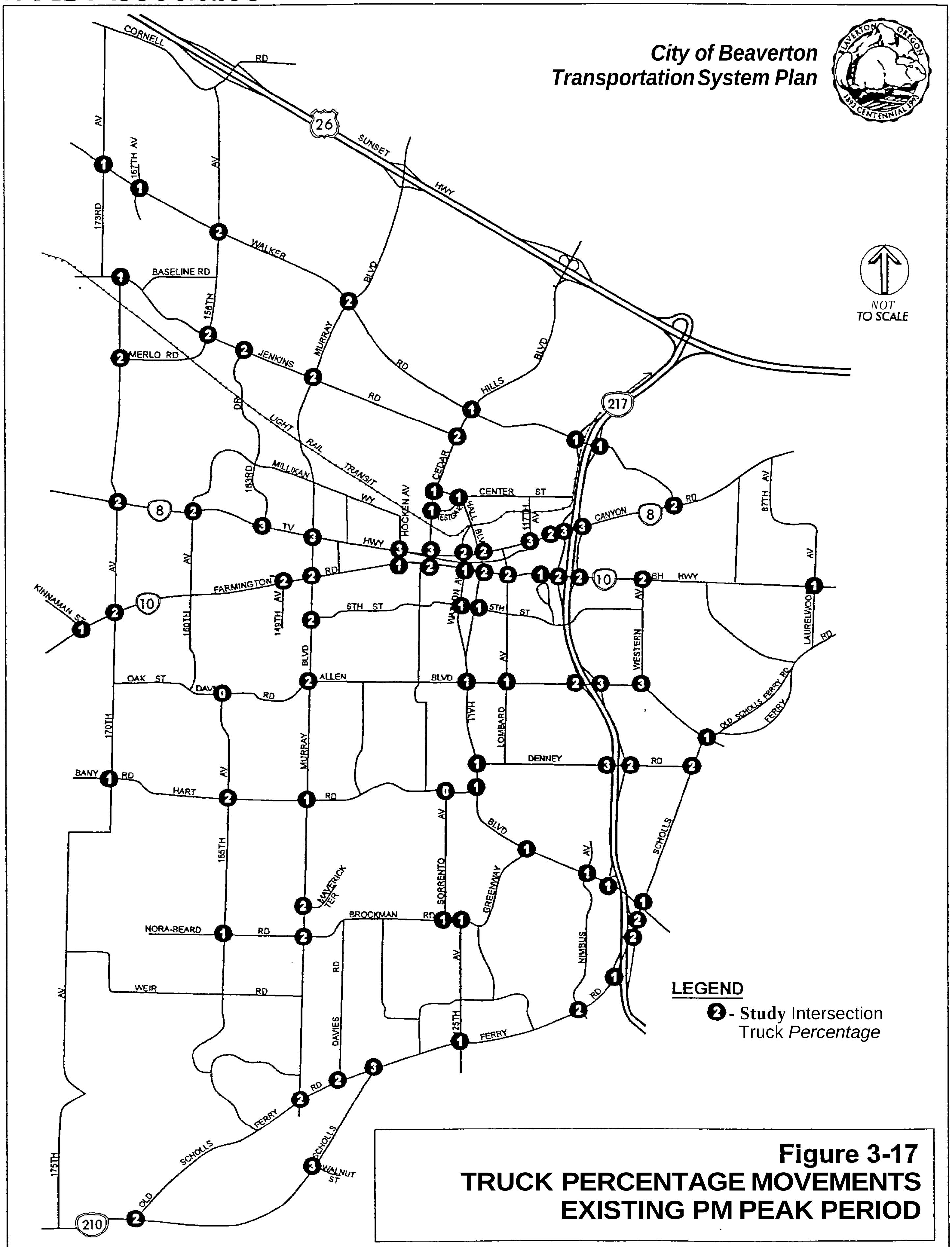

City of Beaverton
Transportation System Plan

LEGEND

❷ - Study Intersection Truck *Percentage*

Figure 3-17
TRUCK PERCENTAGE MOVEMENTS
EXISTING PM PEAK PERIOD

DKS Associates

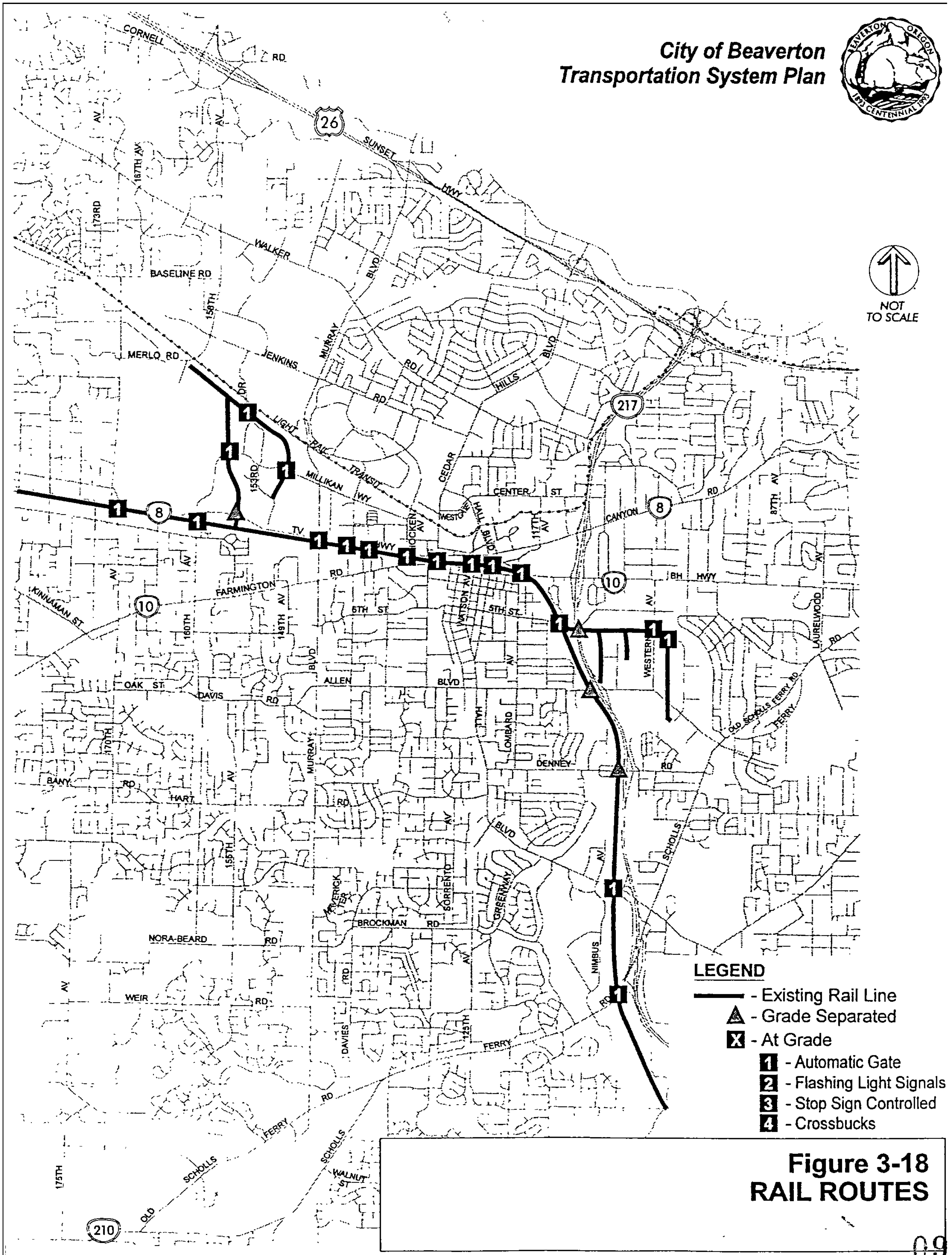

Figure 3-18
RAIL ROUTES

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).

---

[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.

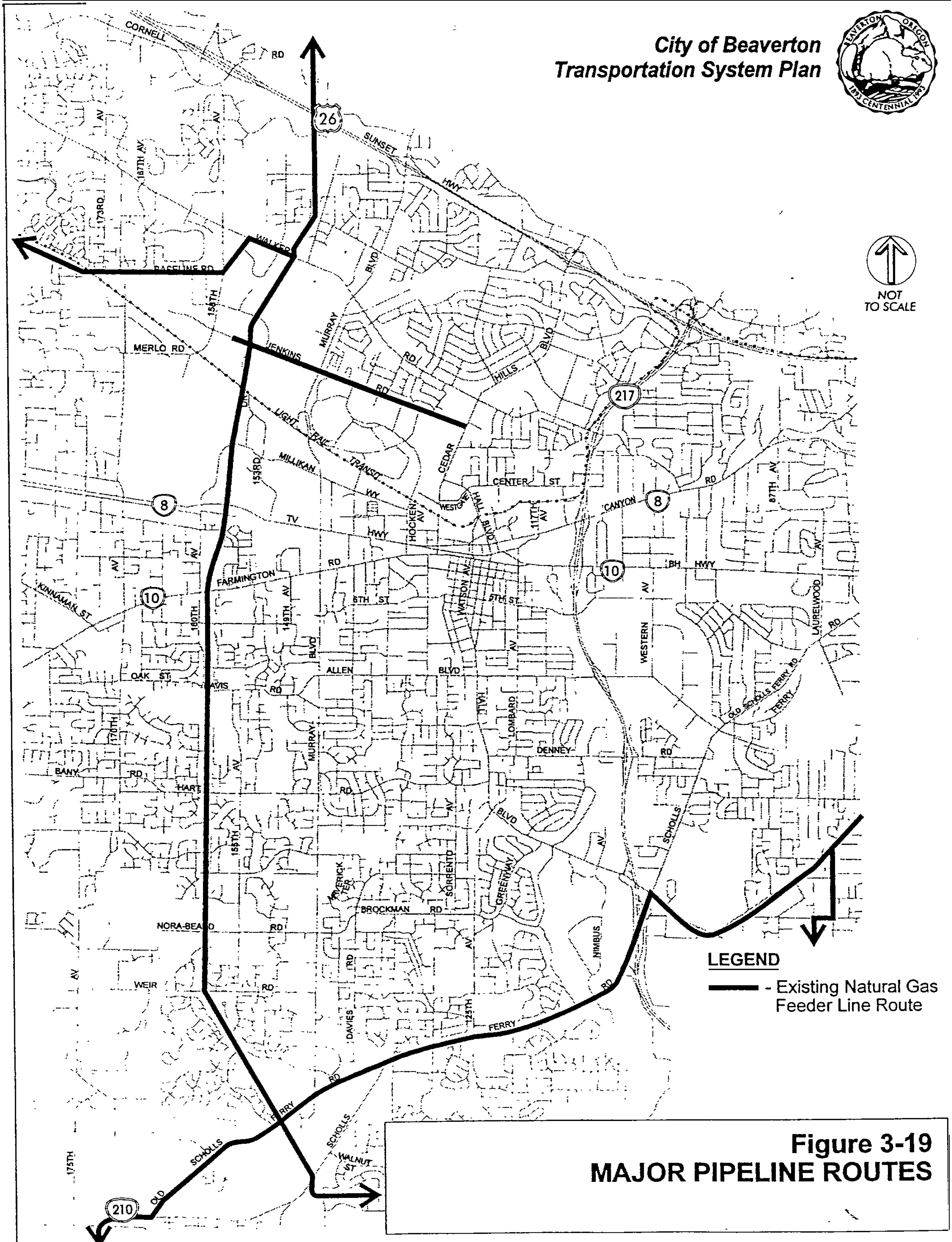

Figure 3-19
MAJOR PIPELINE ROUTES

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.

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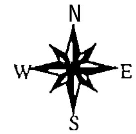
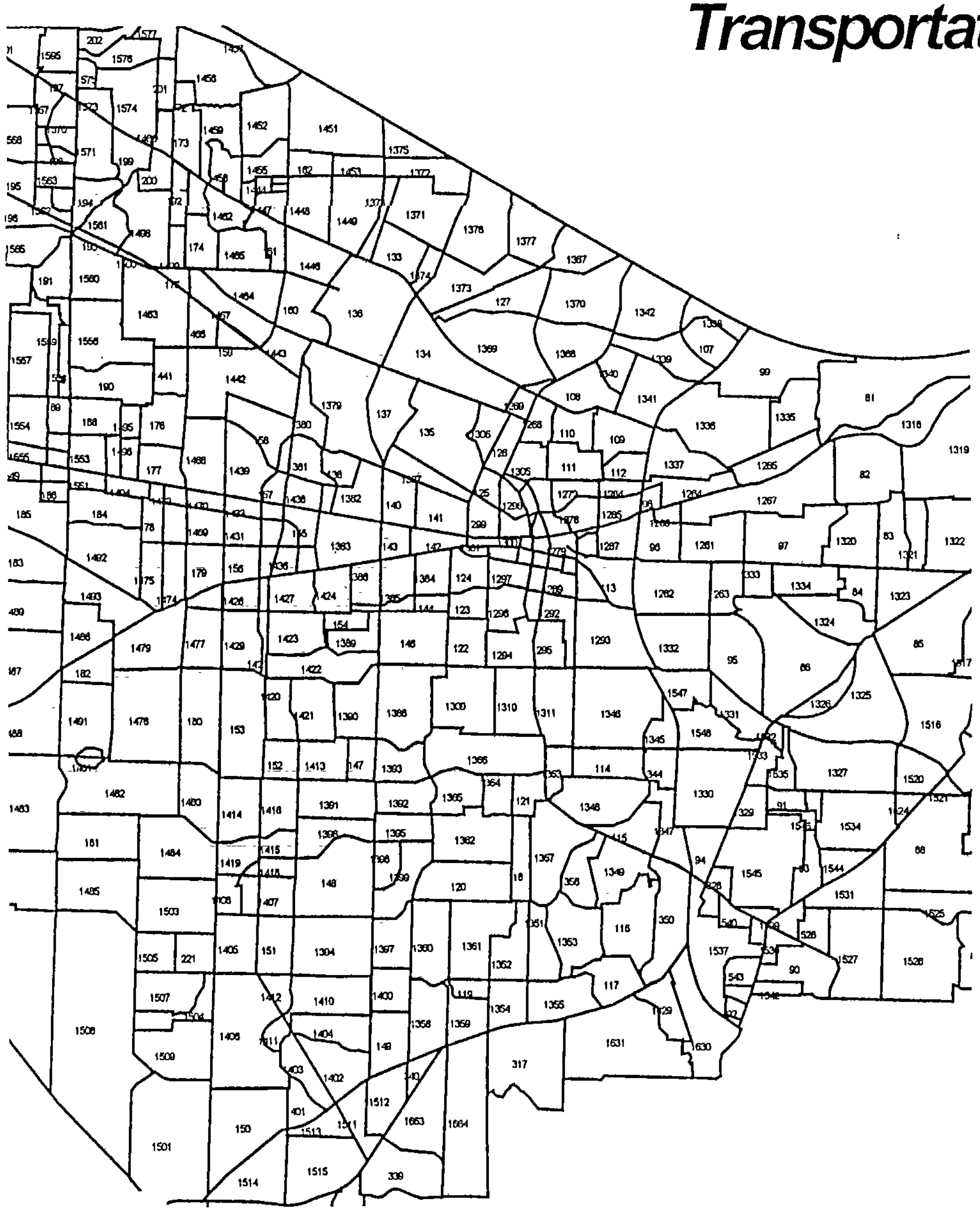
City of Beaverton TSP
Transportation Analysis Zones





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

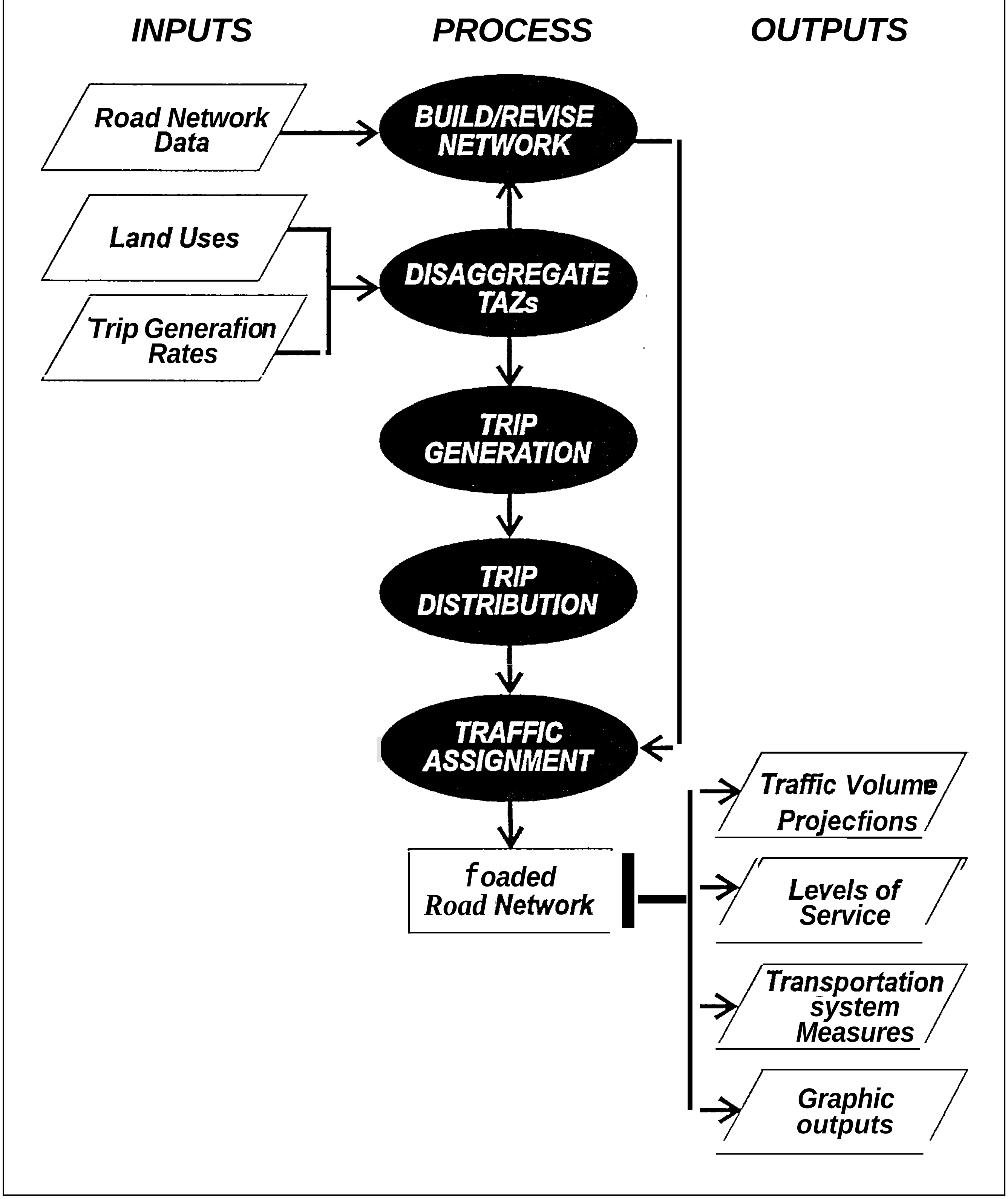


Figure 4-2
MODEL PROCESS

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	I.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 requirements[1] 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.

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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.

---

[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). Locale 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

'*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.

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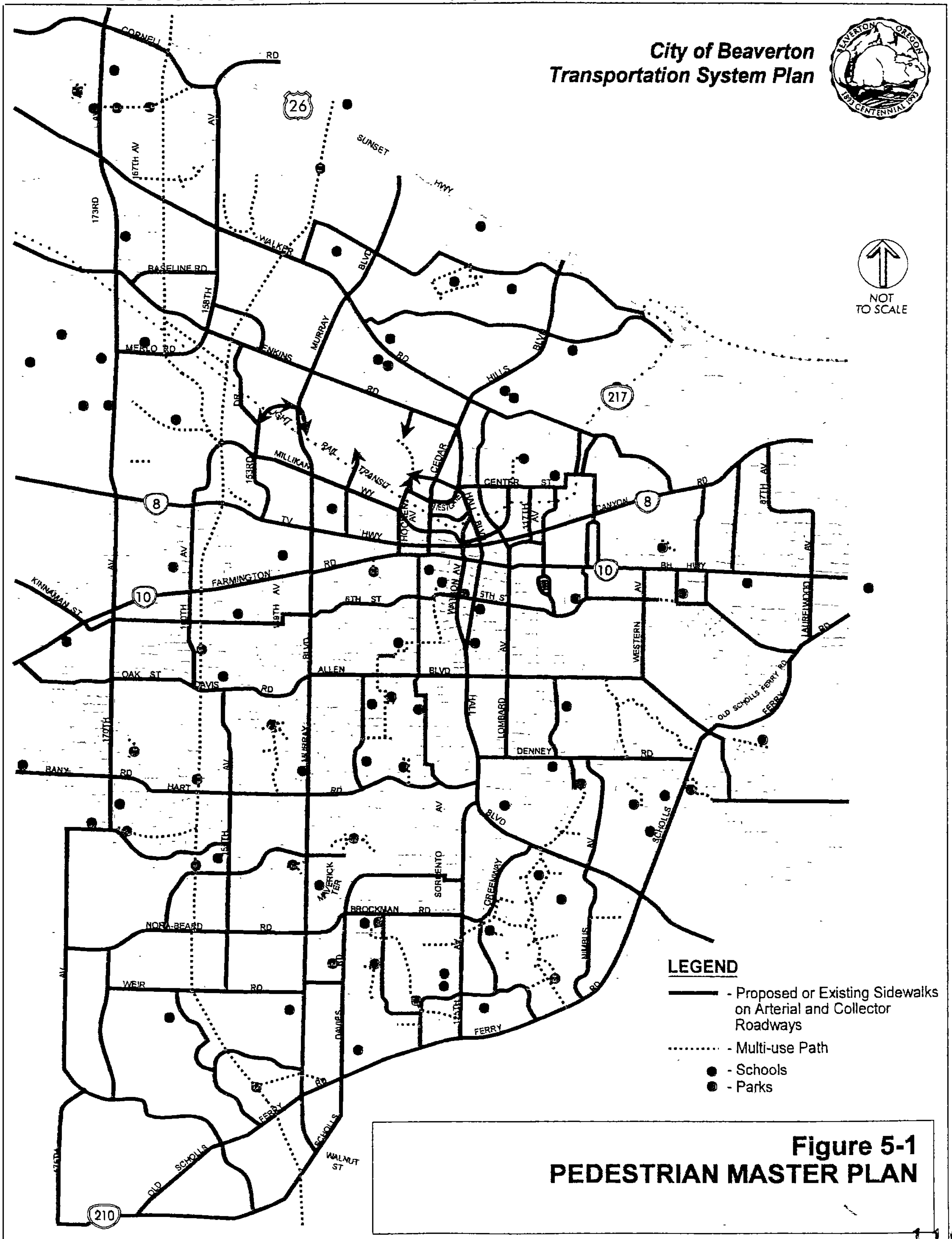

Figure 5-1
PEDESTRIAN MASTER PLAN

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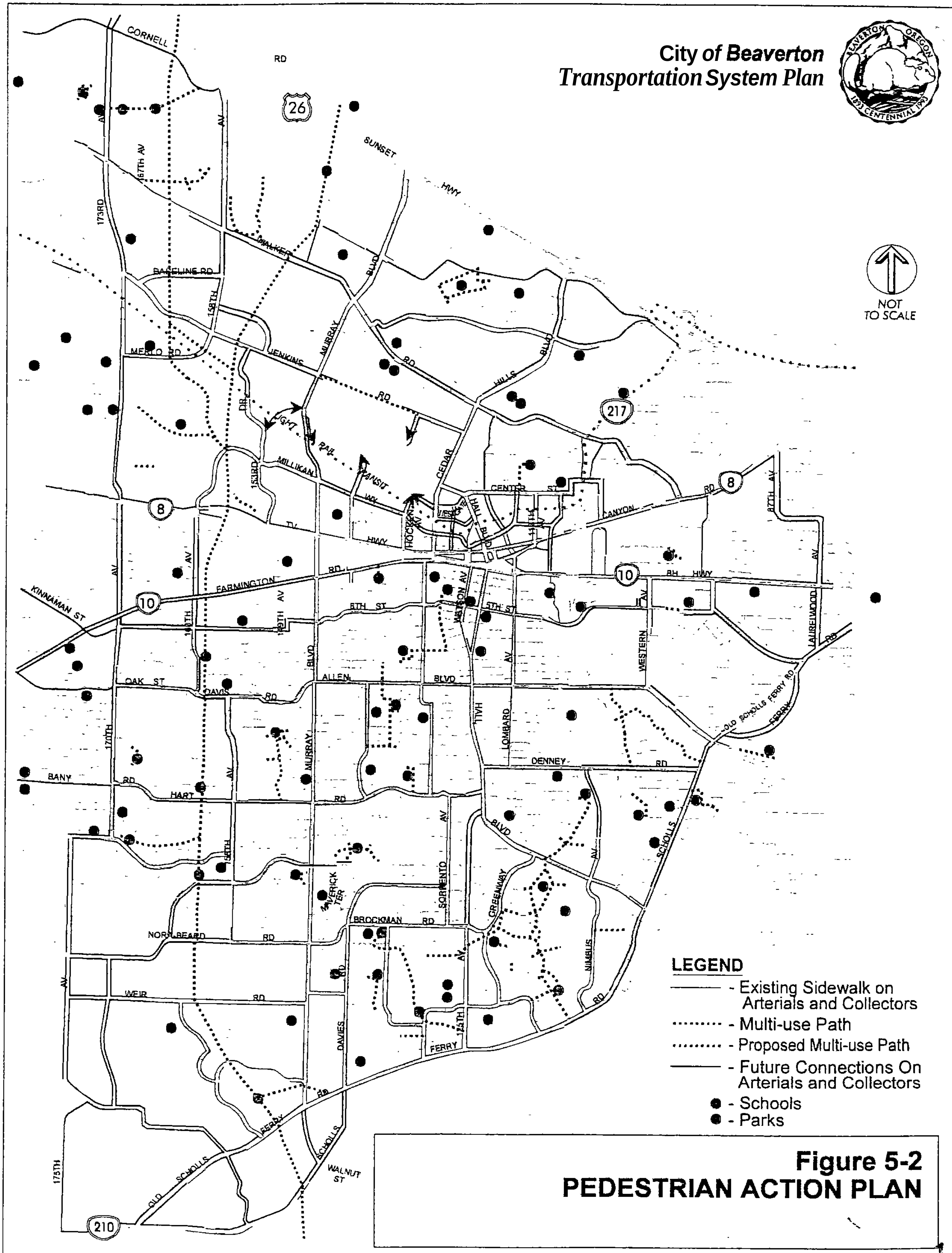

Figure 5-2
PEDESTRIAN ACTION PLAN

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 (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-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

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[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 s/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 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 the 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) 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 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 Bikeway and Pedestrian Facility Construction Standards will be followed 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.

[6] Draft **1995 Interim Federal Regional Transportation Plan, April, 1995, Metro** and Draft **Bikeway** Plan, **Washington County, Oregon, June, 1995.**

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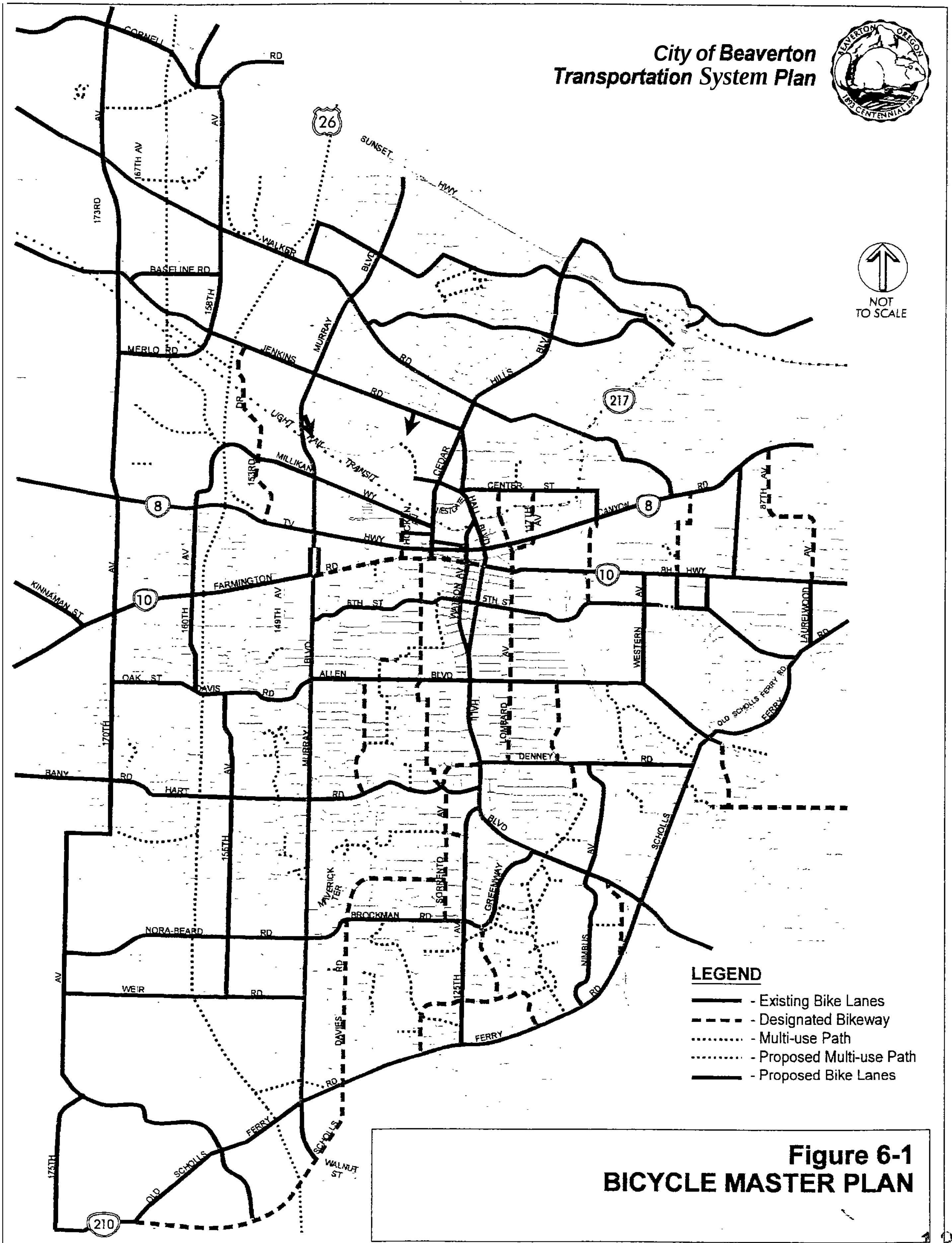

Figure 6-1
BICYCLE MASTER PLAN

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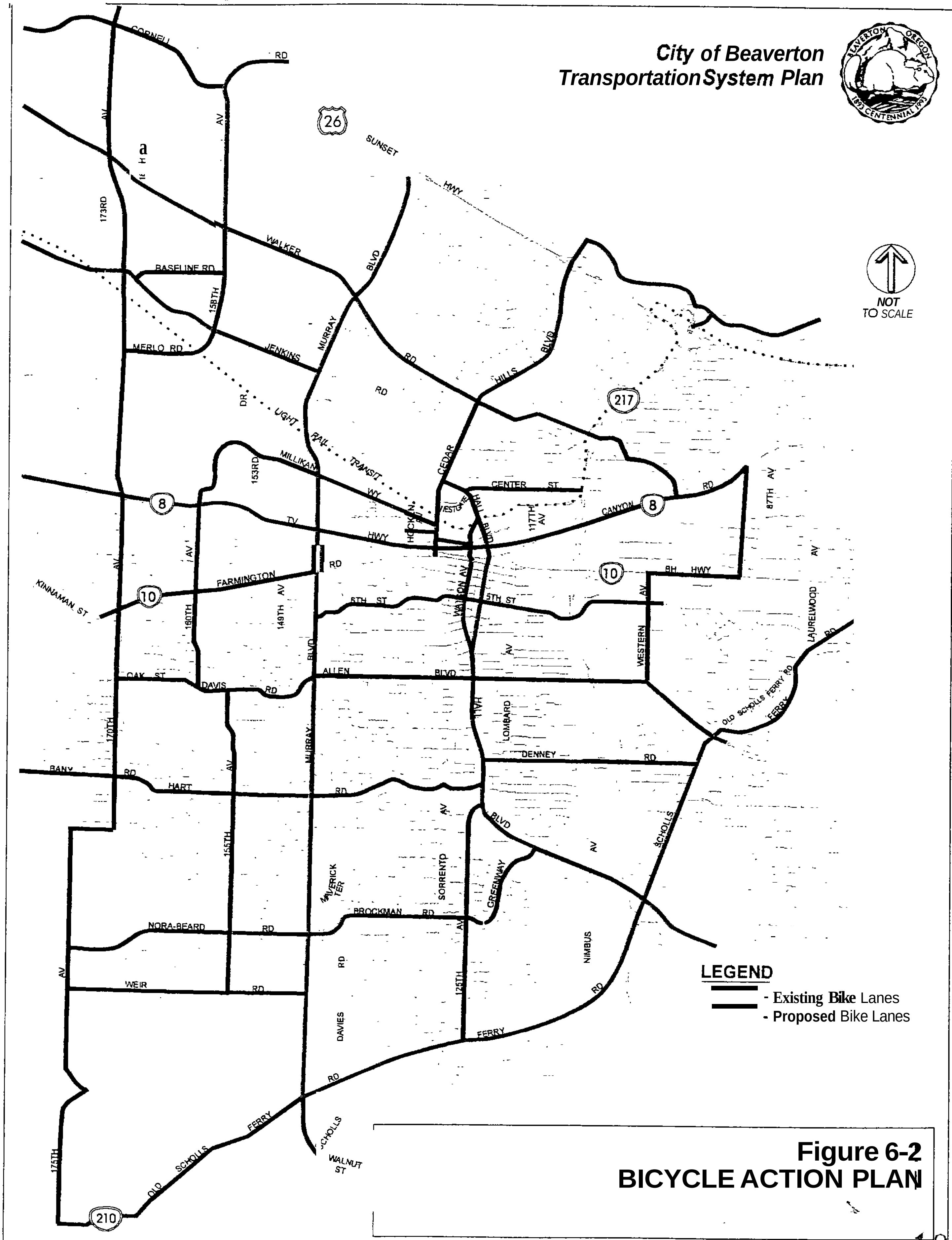

Figure 6-2
BICYCLE ACTION PLAN

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/Barry 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 114 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 Transit[6] 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:

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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

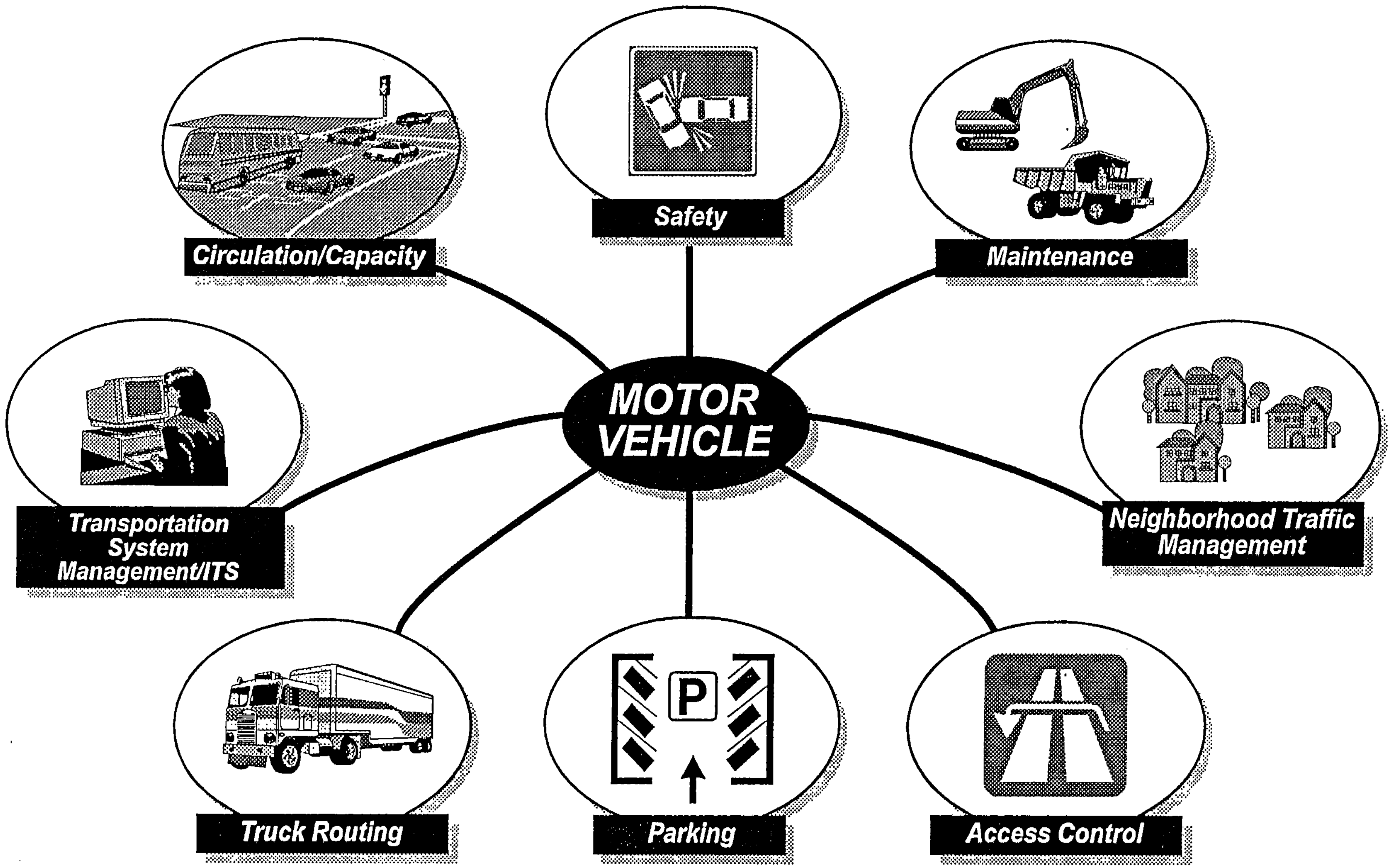


Figure 8-1
VEHICULAR ELEMENTS OF THE STREET PLAN

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, Policv 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, Policv 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, Policv 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, Policv 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.

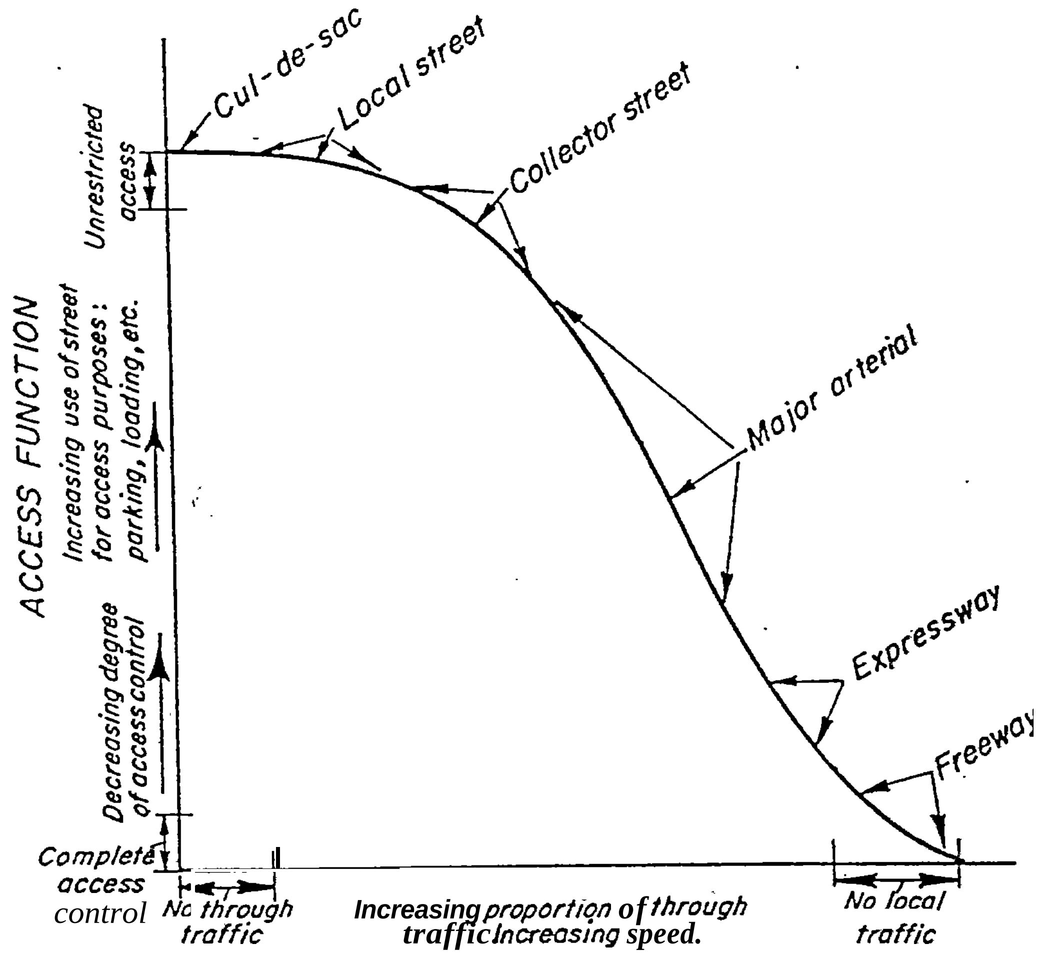
Goal 5. Policy 2: Develop neighborhood and local connections to provide adequate circulation in and out of the neighborhoods.

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.

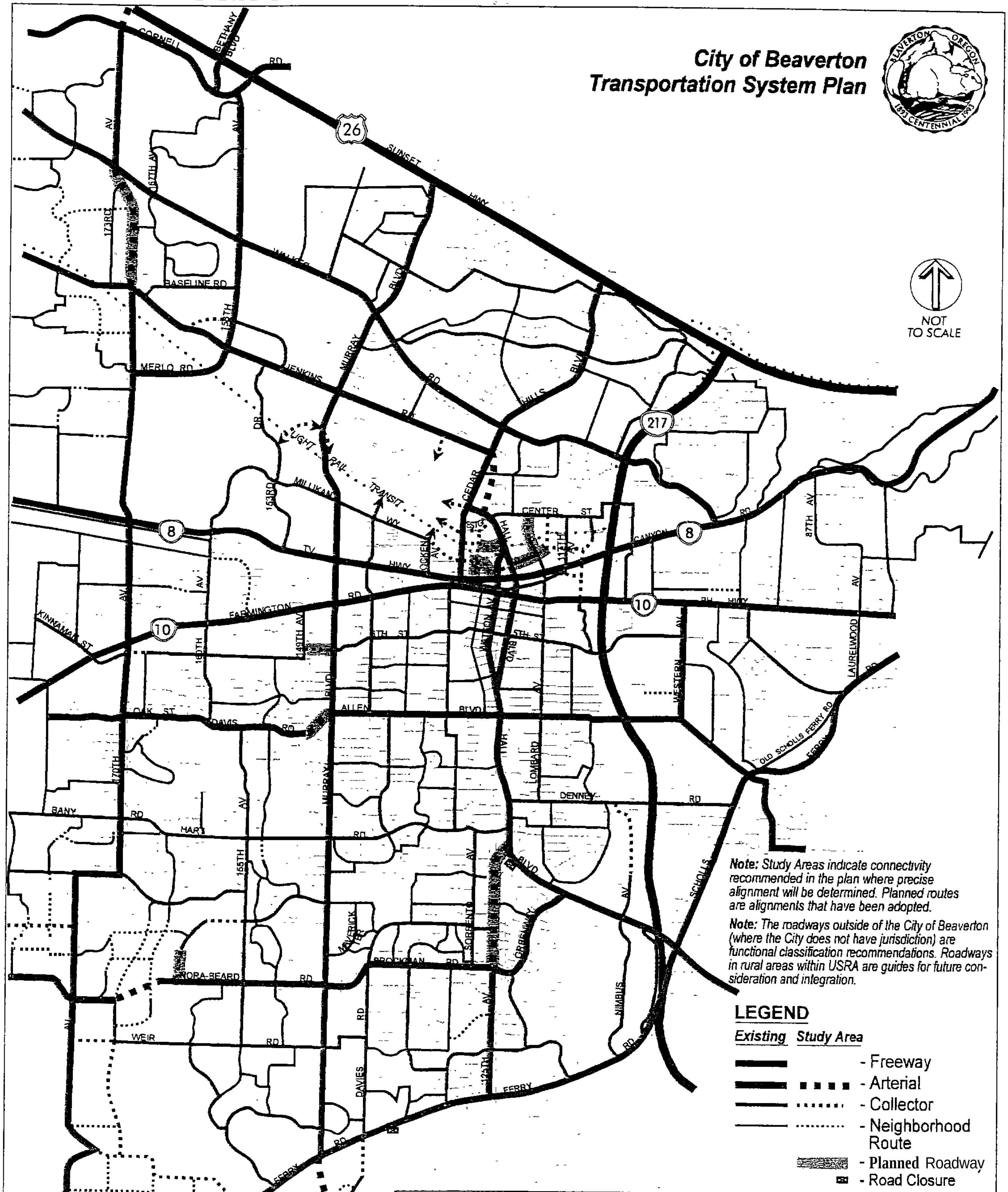


Figure 8-3
DRAFT
FUNCTIONAL CLASSIFICATION PLAN

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
170^{th} Avenue	Minor Arterial(Hart-Bany to Merlo) Major Collector (south of Bany & north of Merlo)	Minor Arterial (Rigert to Bseline)	Arterial
173^{rd} Avenue (north of Walker)	Major Collector	Major Collector	Arterial
175^{th} Ave/Reusser (south of Rigert)	Major Collector	Major Collector	Arterial
Davis Road/Oak Street	Major Collector (170^{th} to Murray) Minor Collector (west of 170^{th} Ave)	Major Collector (170^{th} to Murray) Minor Collector (west of 170^{th})	Arterial
Nora-Beard Road (west of Murray)	Major Collector	Major Collector	Arterial
Murray Boulevard (south of Old Scholls Ferry)	Major Collector	Collector	Arterial
153^{rd} 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
141^{st} 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 Wav/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 ,for routes 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.

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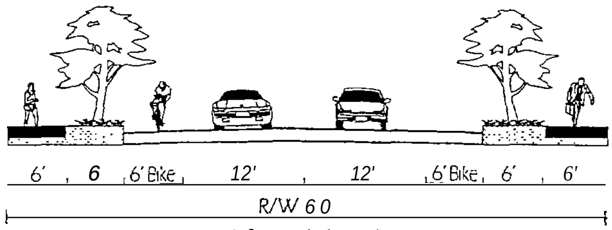
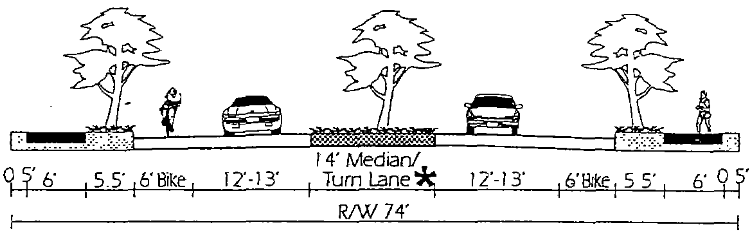
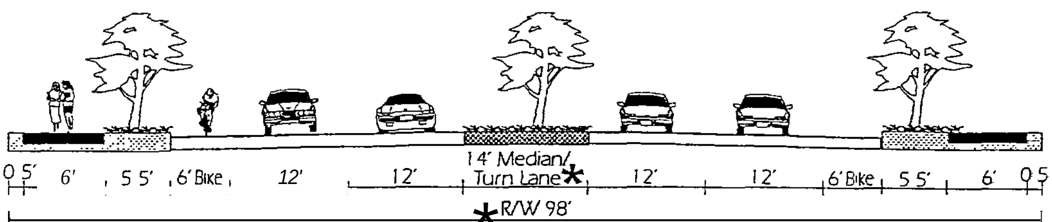
City of Beaverton
Transportation System Plan



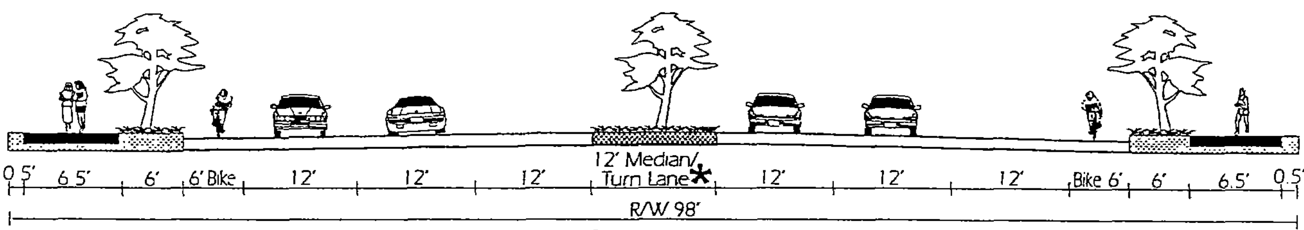
2fane 60' R/W



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:

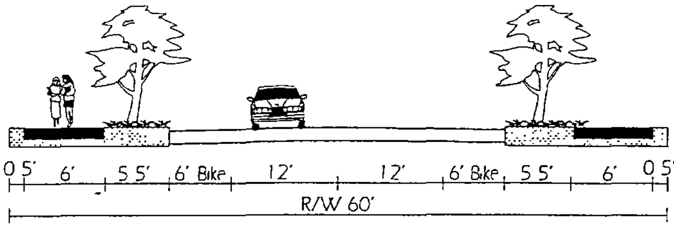
1. Space between curb and median minimum 19' with mountable curb design (to be coordinated with TVFR).
2. Selection of placement of sidewalk and planter specific to application., Cross sections show choices for reference.
3. Width of curb is included in sidewalk or planter strip width when adjacent to 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.

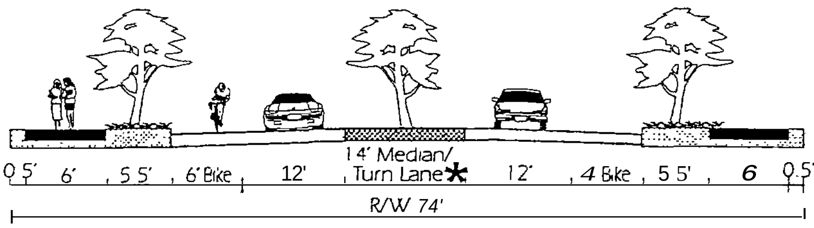
Criteria

Vehicle Lane Widths: (minimum widths)	Truck Route = 12 ft. Bus Roufe = 72 ft. 11 ft. (12 ft. Preferred)
Bicycle Lanes: (minimum widths)	New Construction = 6 ft. 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
- Barry/Hart/Denney
- Wilson Avenue
- Sorrento Avenue
- Rigert Road
- Sexton Mountain Drive
- Davies Road
- Nimbus Avenue
- Teal Boulevard
- Scholls Ferry Road
- Weir Road
- Cascade Avenue
- Conestoga Drive
- Downing Drive
- Haystack/135th

Notes:

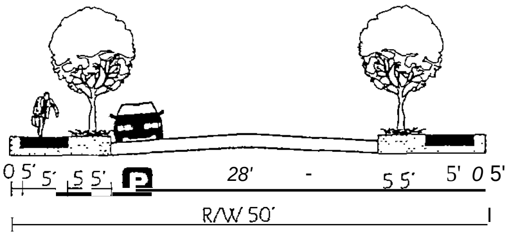
1. Space between curb and median minimum **19'** with mountable curb design (to be coordinated with TVFR).
2. Selection of placement of sidewalk and planter specific to application. Cross sections show two choices for reference.
3. Width **of** curb is included in sidewalk or planter strip width when 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.
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

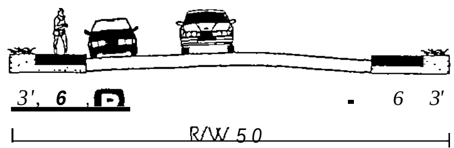
Vehicle Lane Widths: (minimum)	11 ft. Preferred
On Street Parking:	Residential 6 to 8 ft. Commercial
Bicycle Lanes: (minimum widths)	New Construction = 6 ft. Reconstruction = 5 to 6 ft.
Sidewalks: (minimum width)	5 to 7 ft.
Landscape Strips:	Preferred
Medians:	3-Lane = Optional
Neighborhood Traffic Management:	Under special 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.

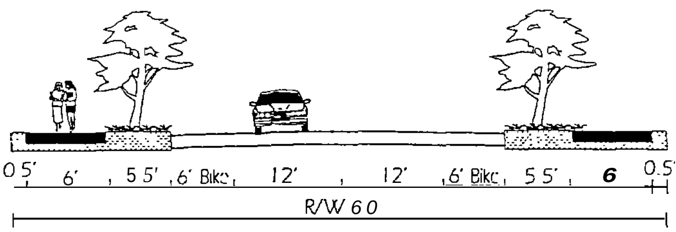
Figure 8-5
COLLECTOR
SAMPLE STREET CROSS SECTIONS



No Parking *on One Side*



With Parking



With **Bike** *Lanes*

Notes:

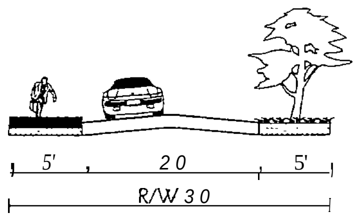
1. *Space between curb and median minimum 19' with mountable curb design (to be coordinated with TVFR).*
2. *Selection ofplacement of sidewalk andplanter specific to application. Cross secfions show two choices for reference.*
3. *Width of curb is included in sidewalk or planter strip width when adjacent 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

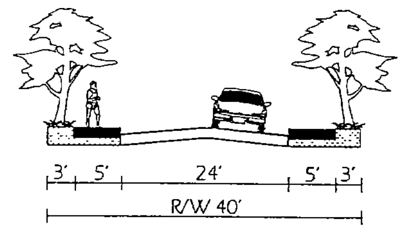
Vehicle Lane Widths: (minimum widths)	*10 ft.*
On-Street Parking	*6 to 8 ft.*
Curb Extensions for Pedestrians:	*Consider on Pedestrian Roufes*
Sidewalks: (minimum width)	*5 ft.*
Landscape Strips:	*Preferred*
Neighborhood TrafficManagement:	*Appropriate when Warranted*

P - *On-street Parking*

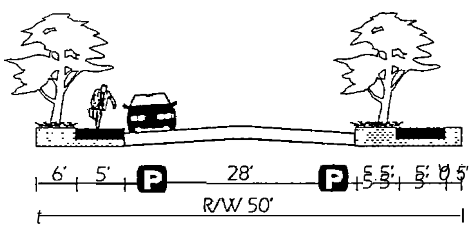
Figure *8-6*
NEIGHBORHOOD
SAMPLE STREET CROSS SECTIONS



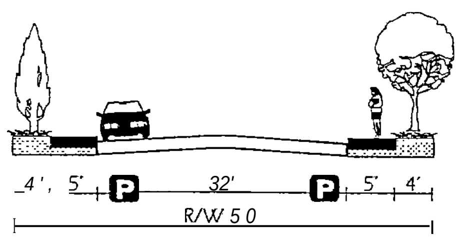
Alley
(No parking)



<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-streetpaking*
<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 feet8
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! Neighborhood = **5** feet' 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.**

DKS *Associates*

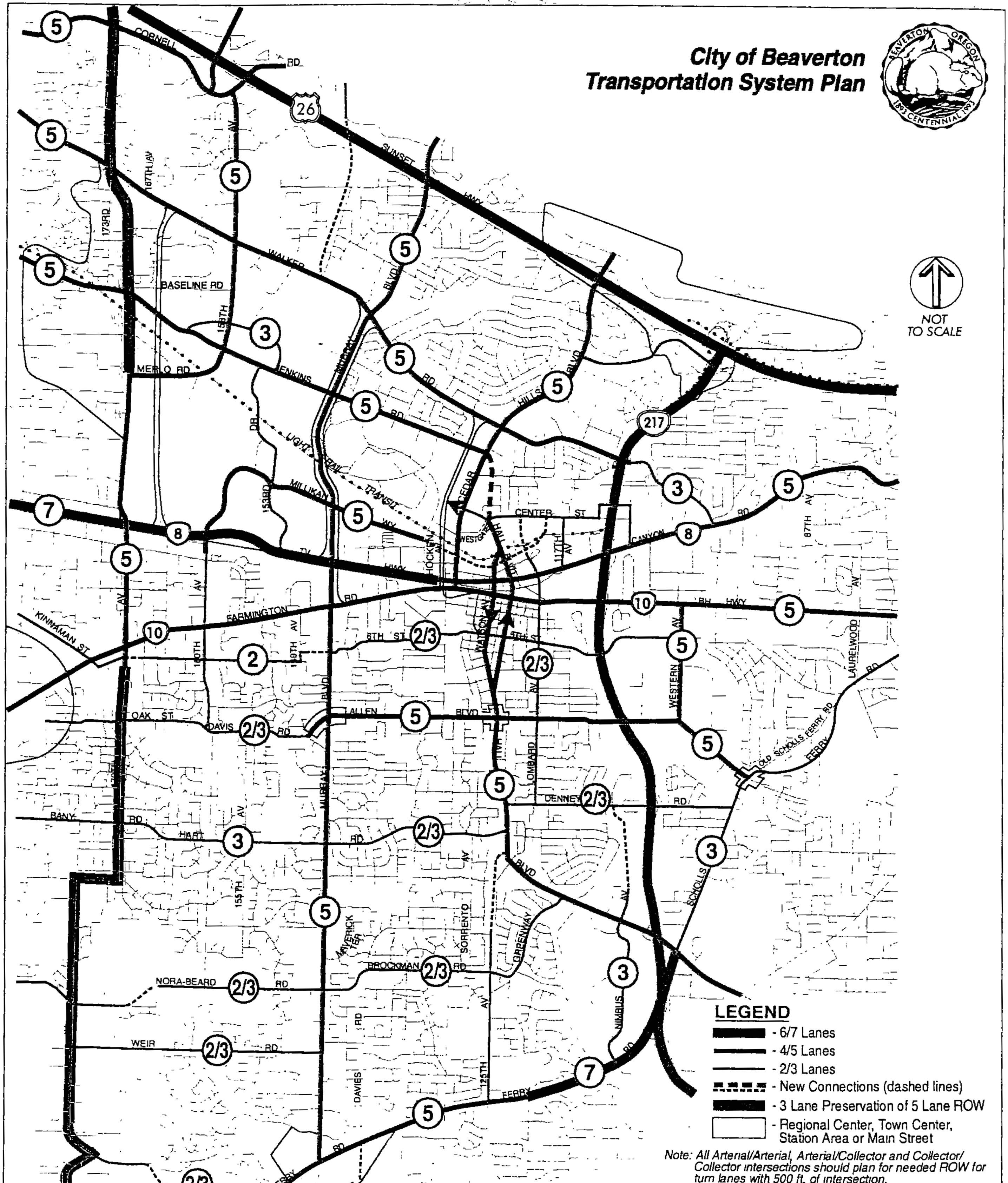


Figure 8-8
FUTURE STREETS WHERE ROW IS PLANNED FOR MORE THAN TWO LANES

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.

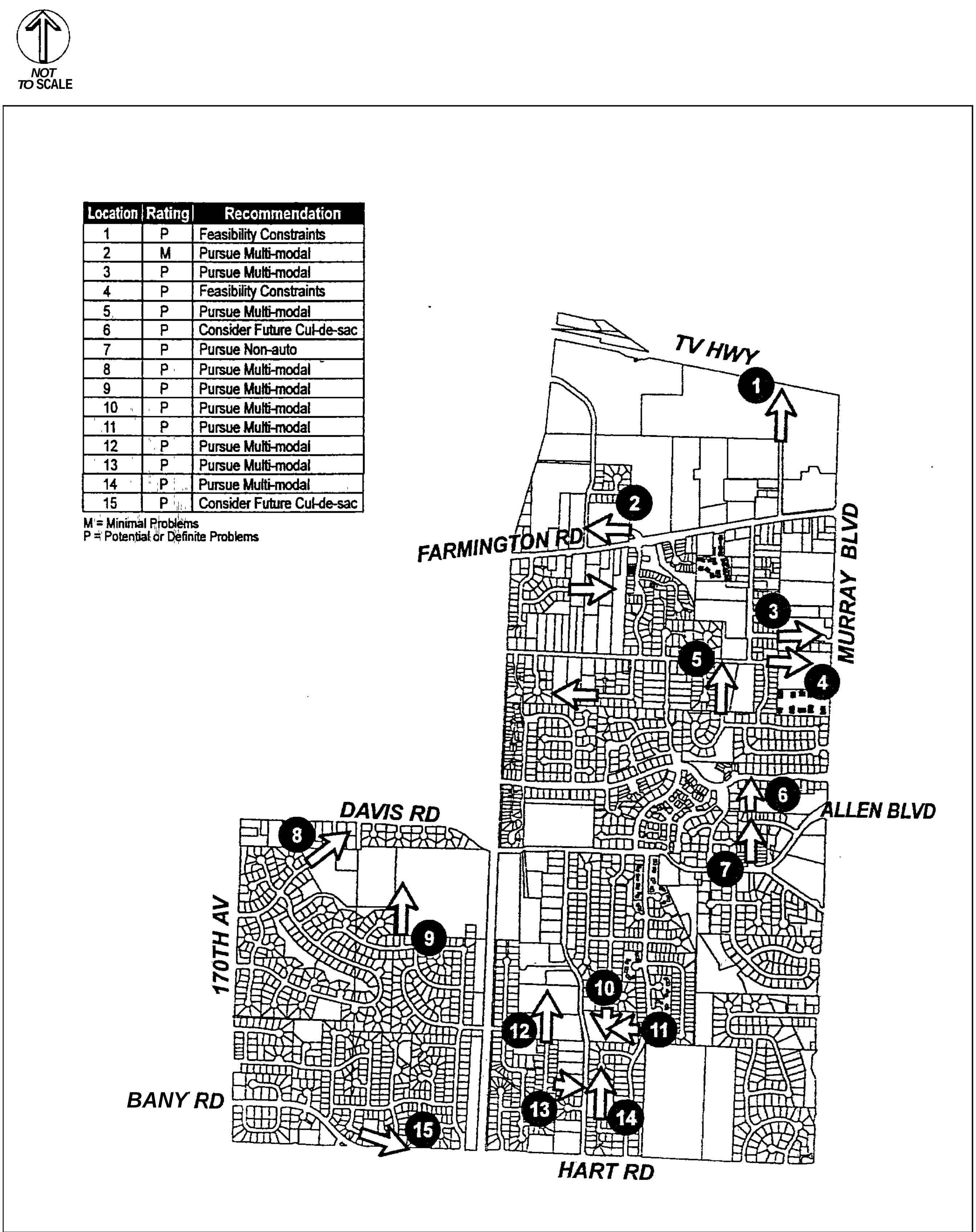
Approach

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

DKS Associates

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

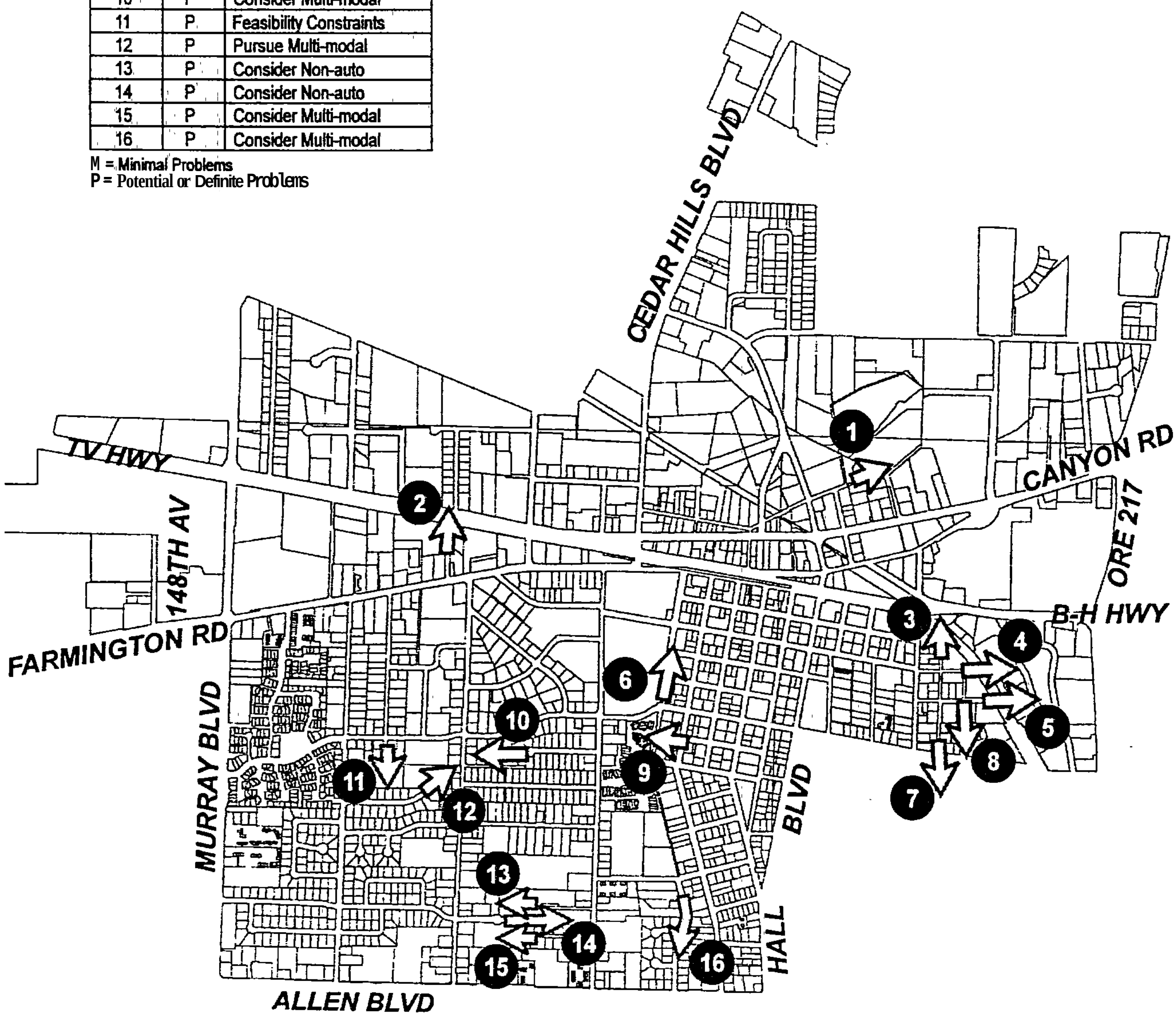
Figure 8-10
LOCAL STREET CONNECTIVITY
West Beaverton

DKS Associates

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



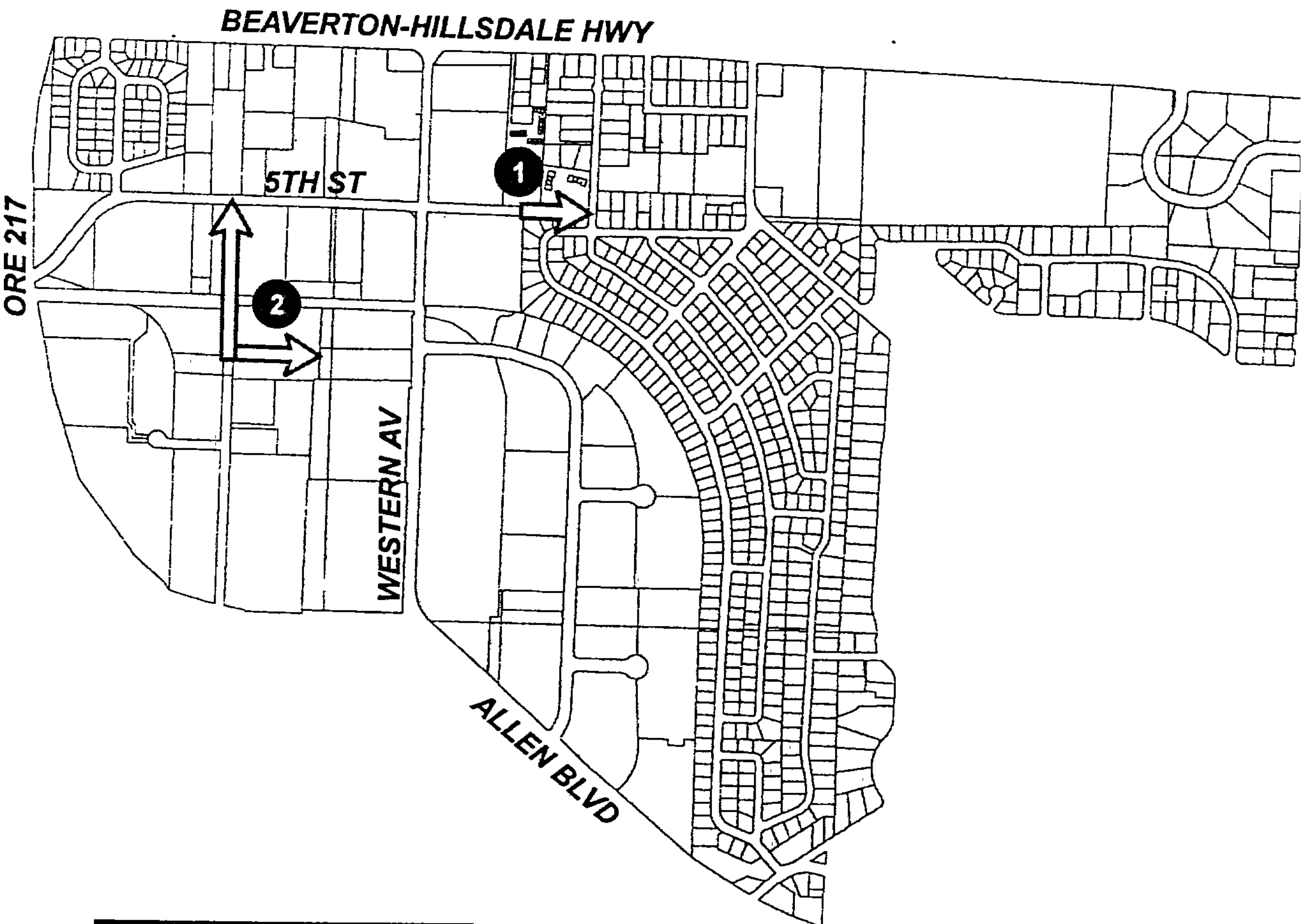
LEGEND

- Potential Connection

00 - Street Stub Identification Number

Figure 8-31
LOCAL STREET CONNECTIVITY
Central Beav..rton

NOT TO SCALE

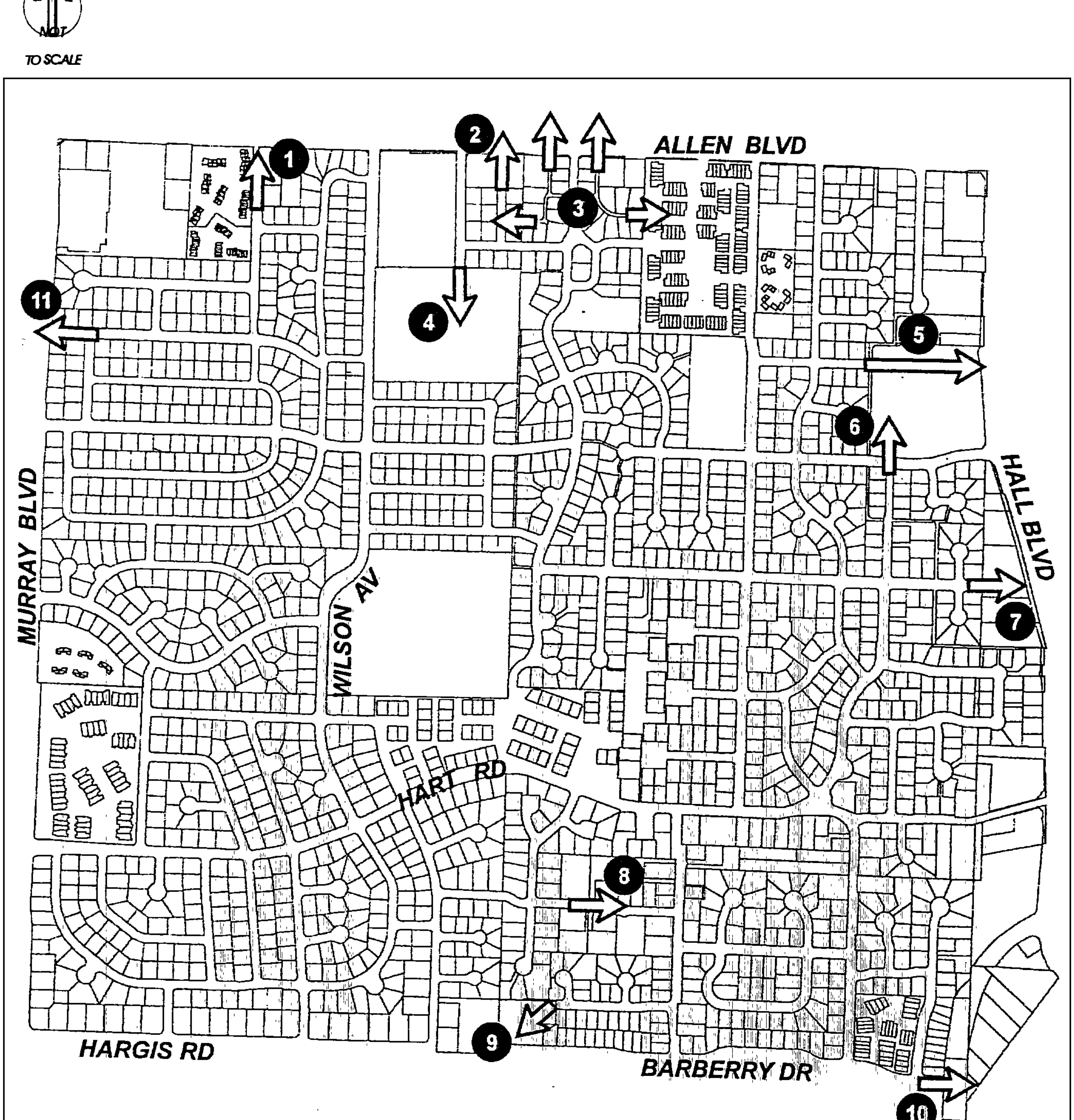


Location	Rating	Recommendation
1	P	Pursue Non-auto
2	P	Consider Multi-modal

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



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

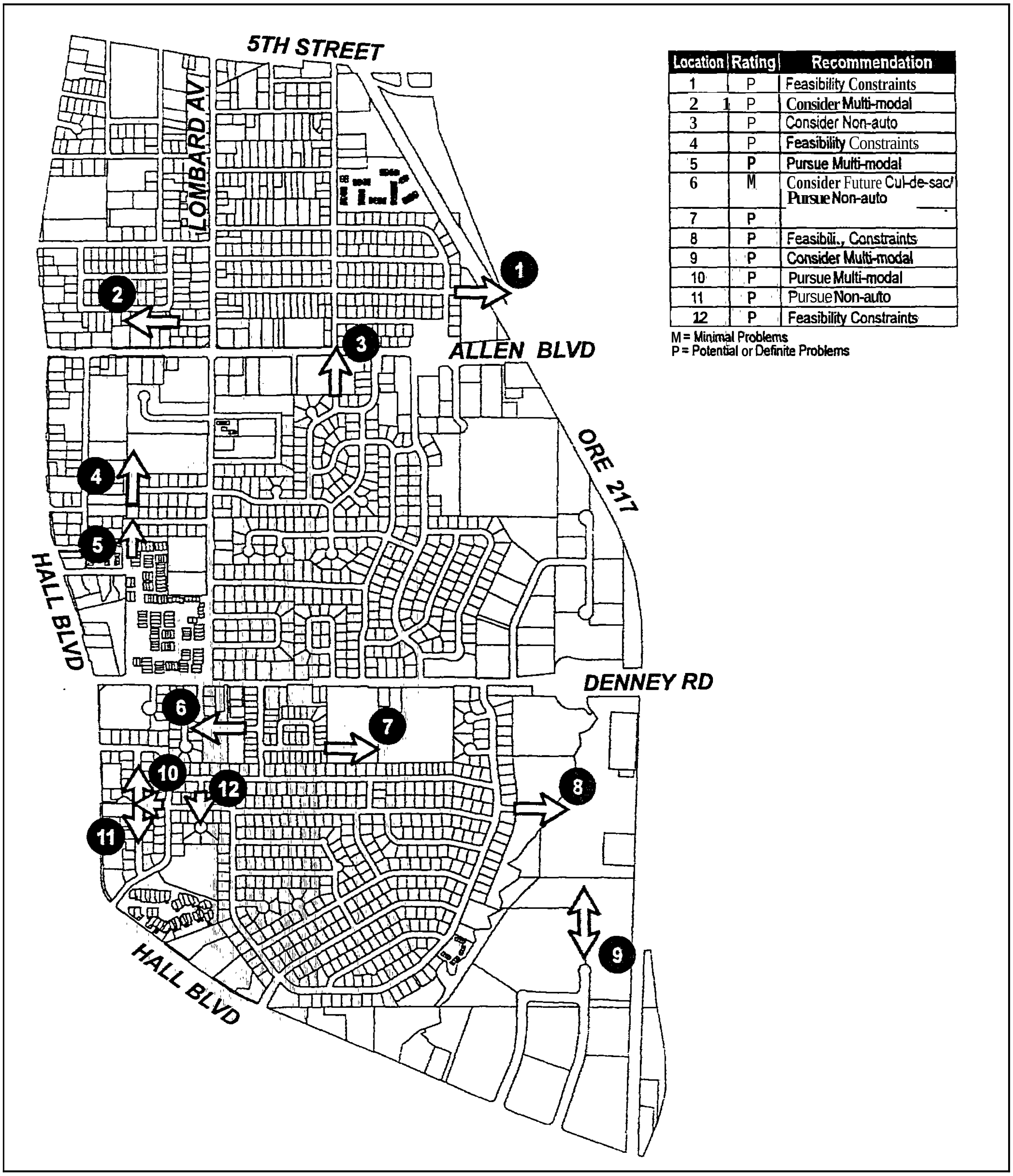
Location	Rating	Recommendation
7	M	Feasibility Constraints
8	P	Pursue Non-auto
9	P	Pursue Multi-modal
10	P	Pursue Multi-modal
11	P	Pursue Multi-modal

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 1	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

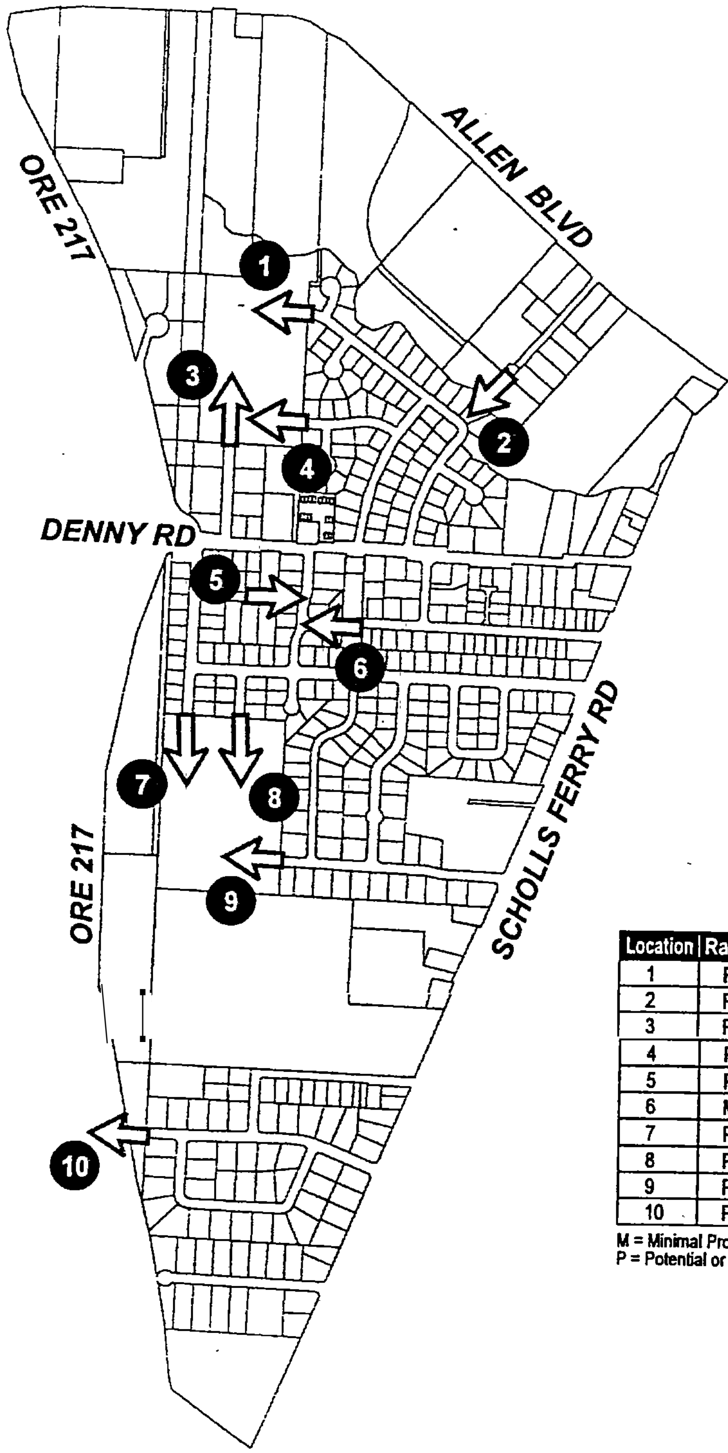
LEGEND

- Potential Connection

00 - Street Stub Identification Number

Figure 8-14
LOCAL STREET CONNECTIVITY
Vose

NOT TO SCALE



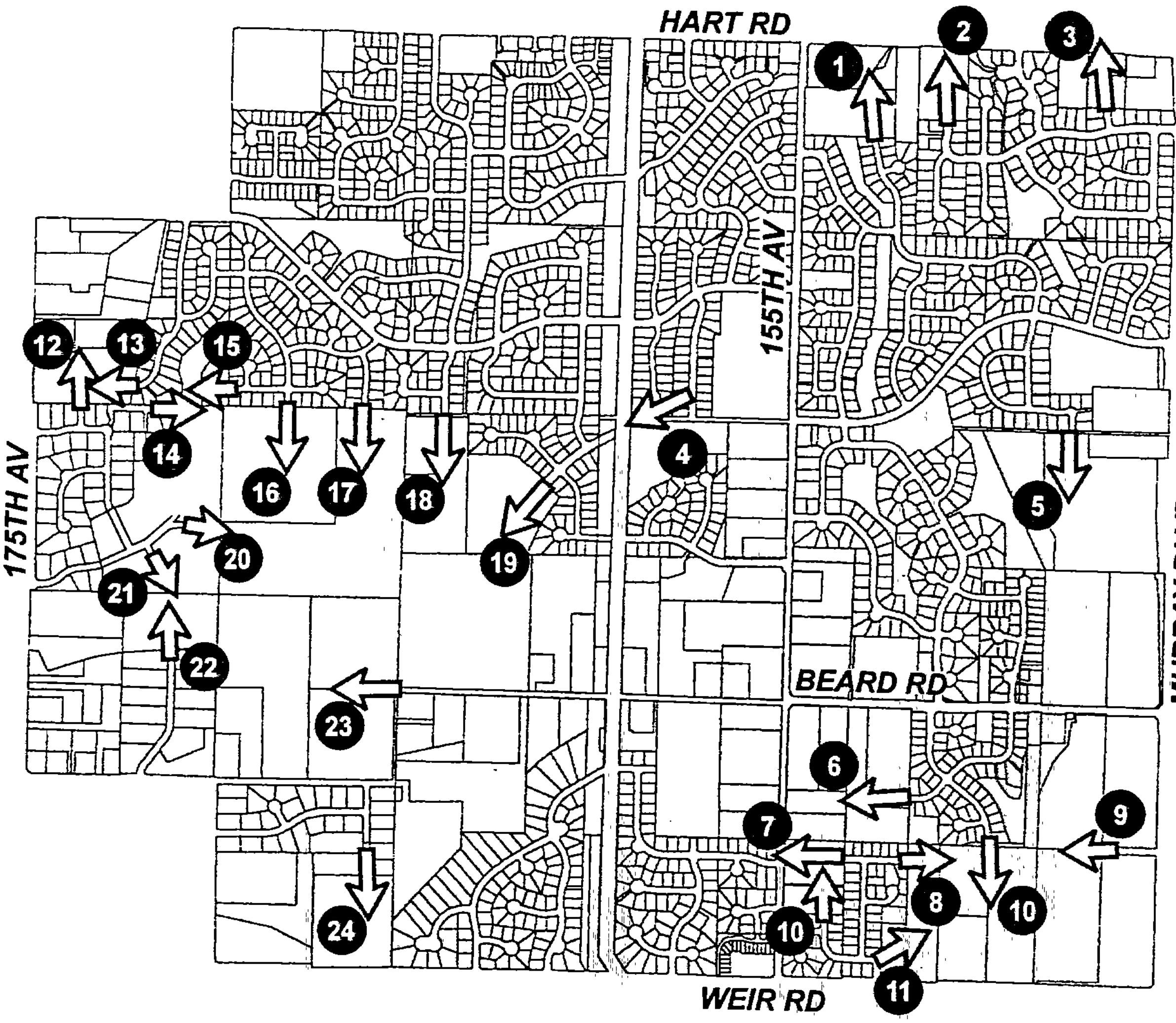
Location	Rating	Recommendation
1	P	Consider Non-auto
2	P	Feasibility Constraints
3	P	Consider Non-auto
4	P	Feasibility Constraints
5	P	Feasibility Constraints
6	M	Consider Multi-modal
7	P	Consider Non-auto
8	P	Consider Non-auto
9	P	Consider Non-auto
10	P	Consider Multi-modal

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

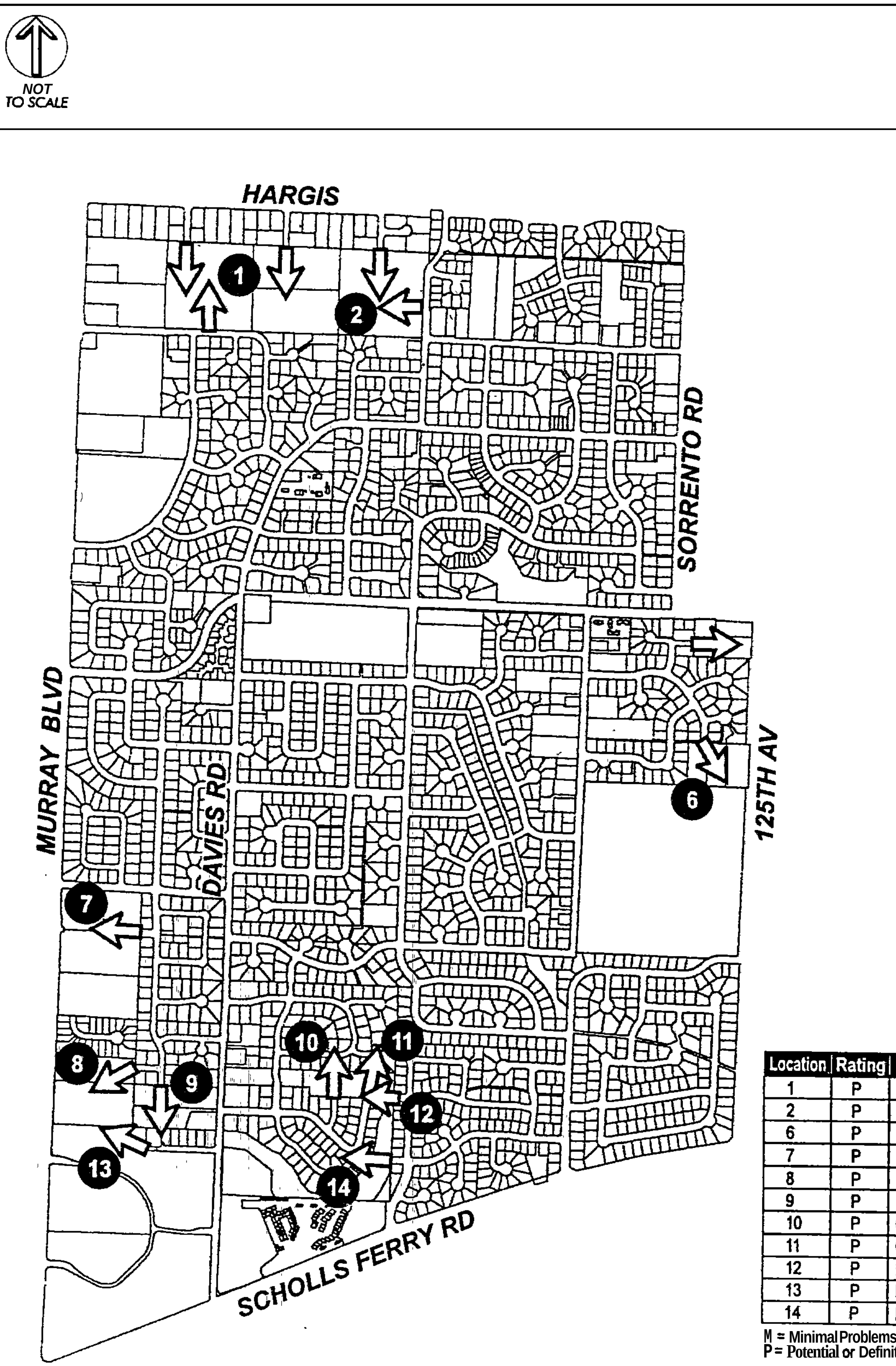
M = Minimal Problems
P = Potential or Definite Problems

LEGEND

- Potential Connection

00 - Street Stub Identification Number

Figure 8-16
LOCAL STREET CONNECTIVITY
Sexton Mountain



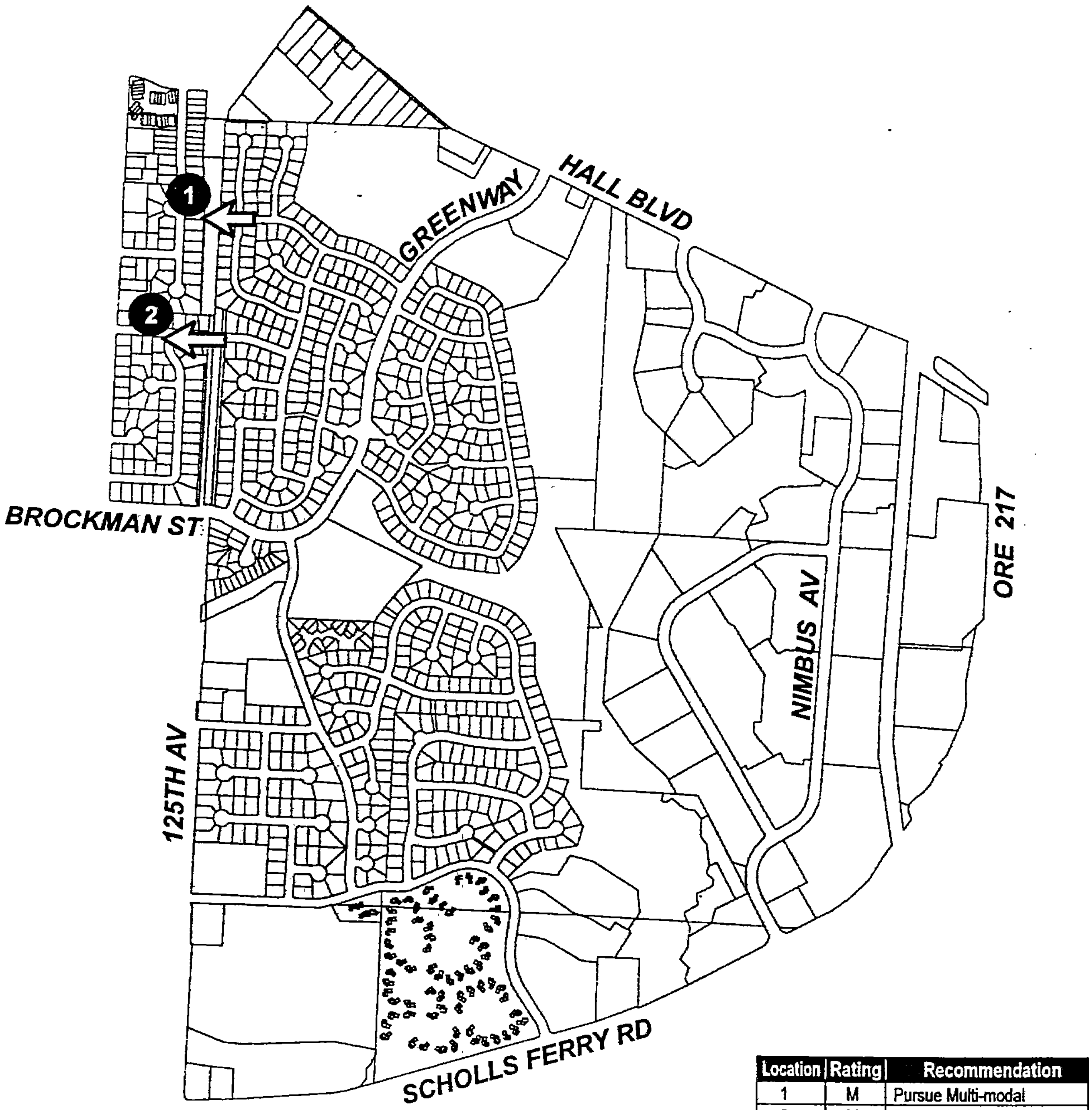
Location	Rating	Recommendation
1	P	Pursue Non-auto
2	P	Pursue Non-auto
6	P	Pursue Multi-modal
7	P	Pursue Multi-modal
8	P	Pursue Multi-modal
9	P	Pursue Multi-modal
10	P	Consider Future Cul-de-sac
11	P	Consider Future Cul-de-sac
12	P	Pursue Non-auto
13	P	Pursue Multi-modal
14	P	Pursue Non-auto

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

NOT
m SCALE



Location	Rating	Recommendation
1	M	Pursue Multi-modal
2	M	Pursue Multi-modal

M = Minimal Problems
P = Potential or Definite Problems

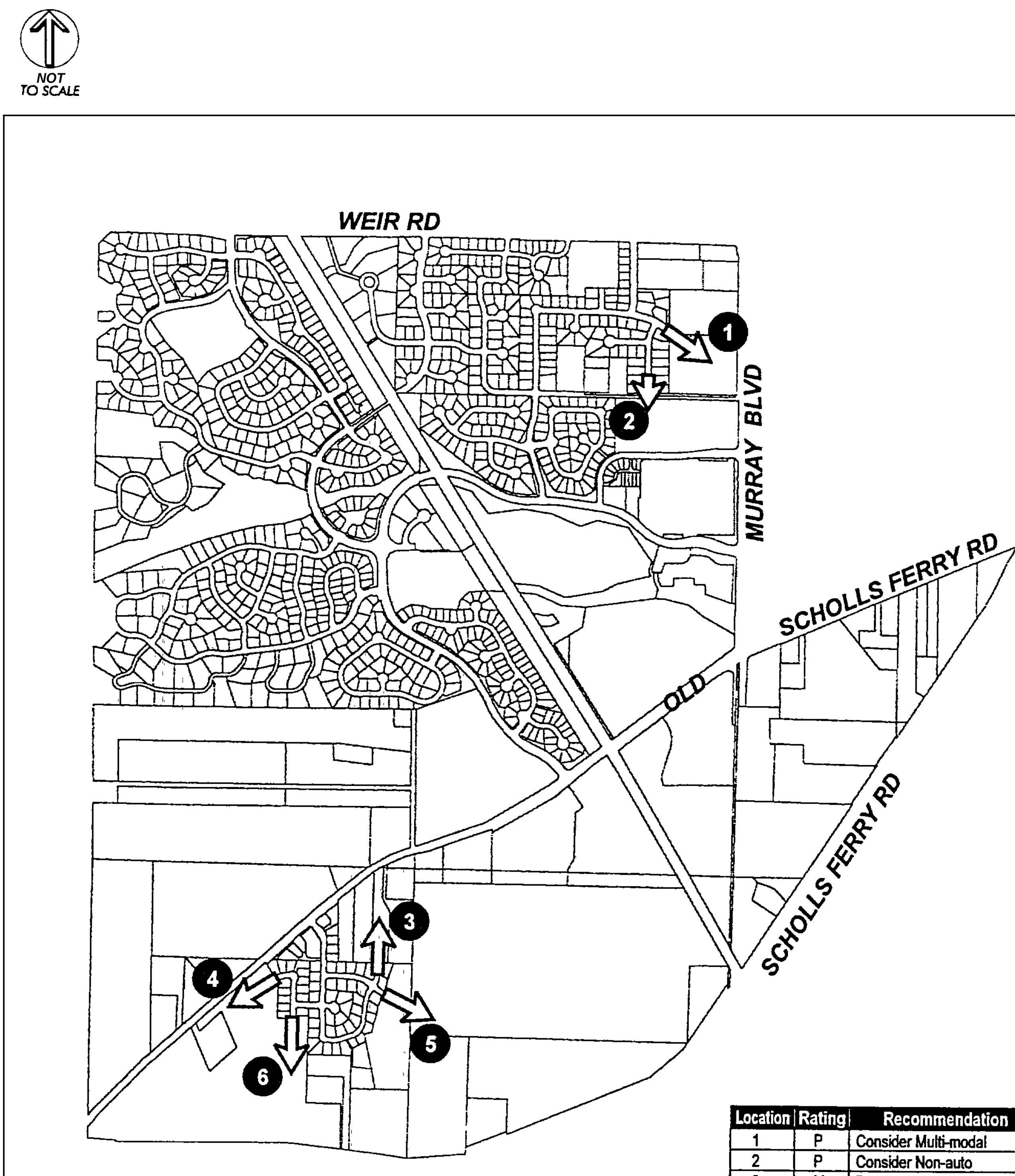
LEGEND

- Potential Connection

00 - Street Stub Identification Number

Figure 8-18
LOCAL STREET CONNECTIVITY
Greenway

DKS Associates



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

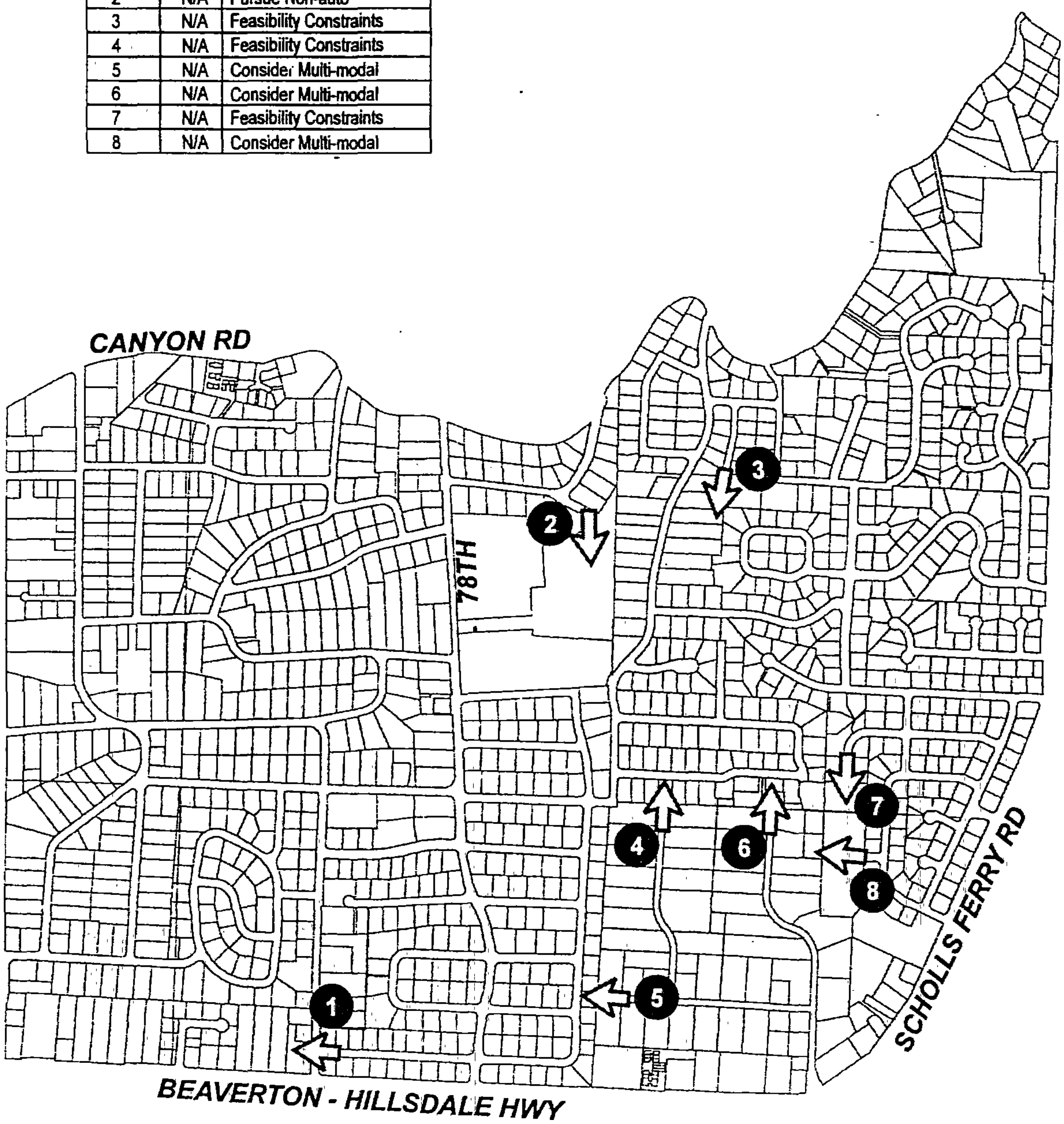
LEGEND
- Potential Connection
00 - Street Stub Identification Number

Figure 8-19
LOCAL STREET CONNECTIVITY
Neighbors Southwest

DKS *Associates*

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



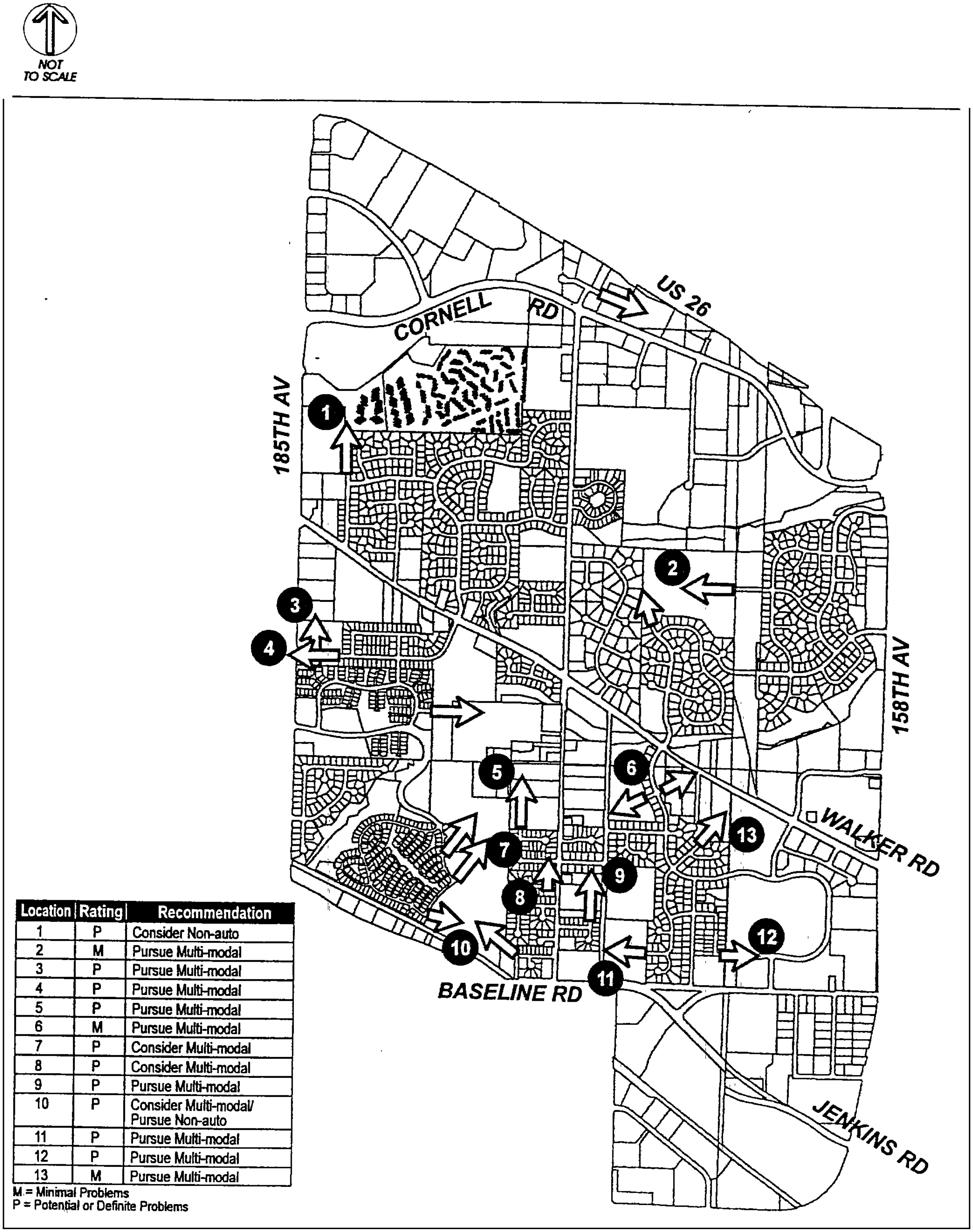
Note: Connections identified outside the City of Beaverton limits
are only recommendations to Washington County.

LEGEND

- Potential Connection

00 - Street Stub Identification Number

Figure 8-20
LOCAL STREET CONNECTIVITY
Raleigh Park



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 level 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.

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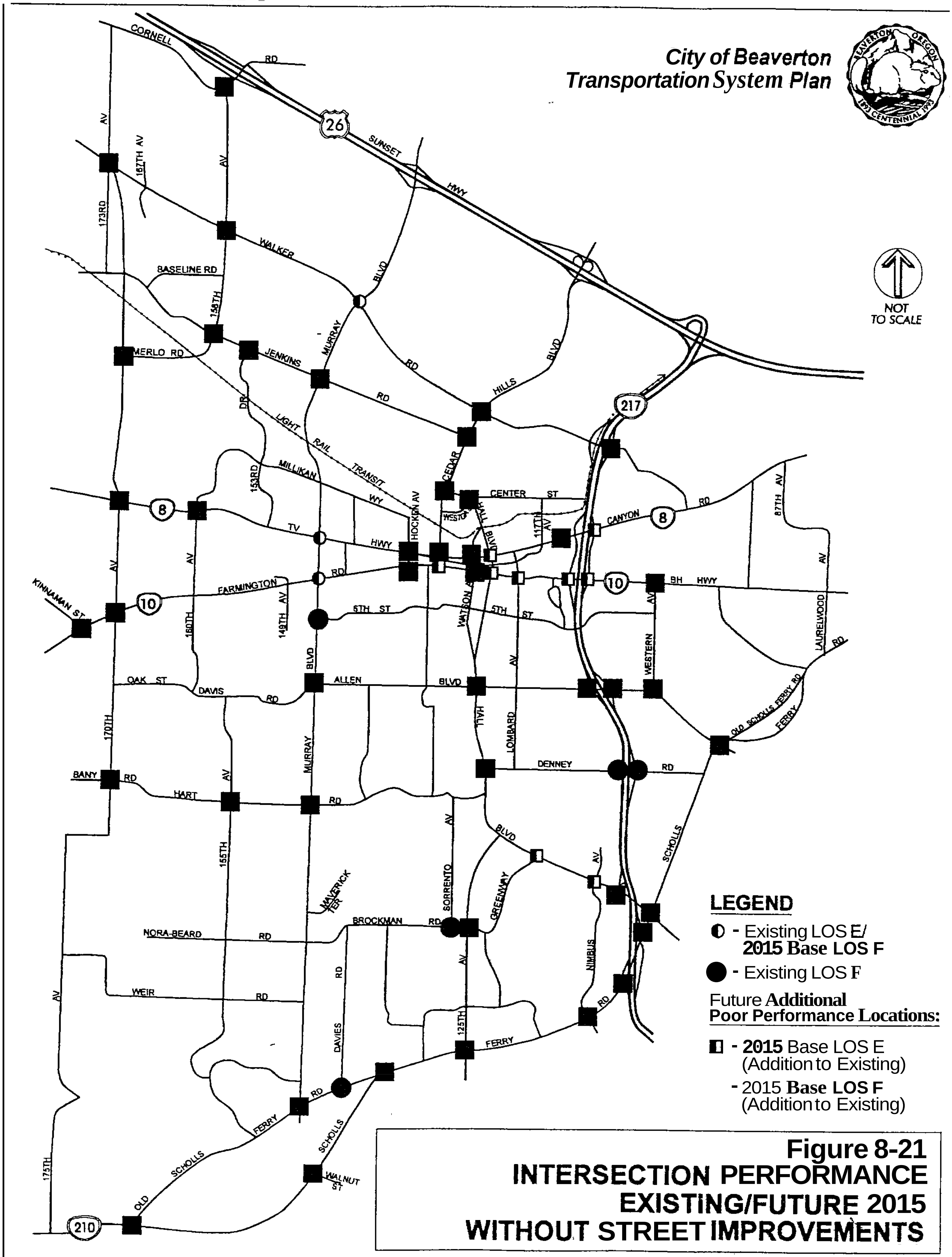
[13] This system assumes the westside rail and all the feeder bus system that supports it. Other westside bus service is provided **also.** The system design is essentially that which will be in place when the westside rail opens next year, with better headways. The south/north **rail** system is also assumed in place **for** this scenario.



LEGEND

- ◐ - Existing LOS E/ **2015 Base LOS F**
- ● - Existing LOS F

Future **Additional**
Poor Performance Locations:

- ◧ - **2015** Base LOS E (Addition to Existing)
- ■ - 2015 **Base LOS F** (Addition to Existing)

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 2 17 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.

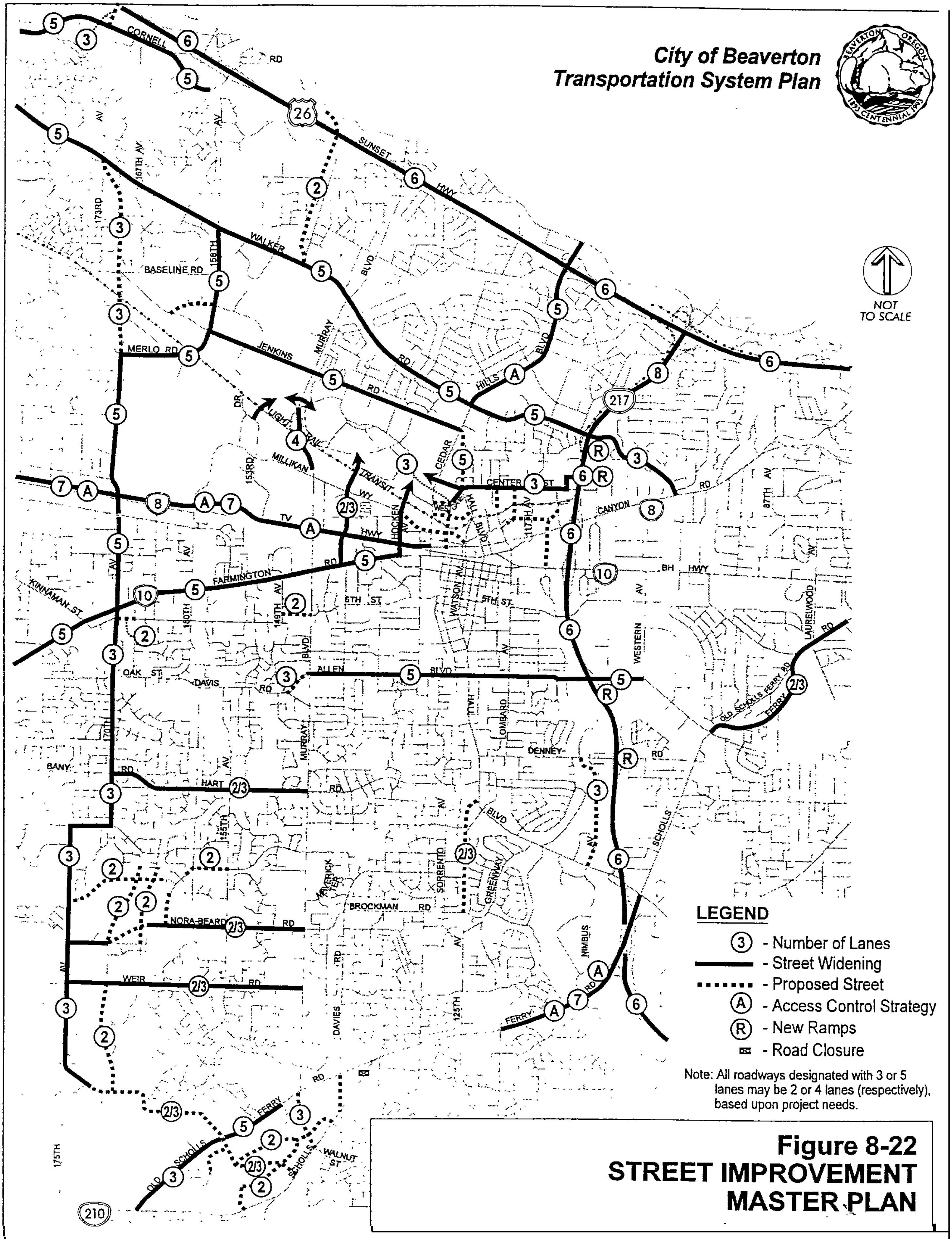


Figure 8-22
STREET IMPROVEMENT MASTER PLAN

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

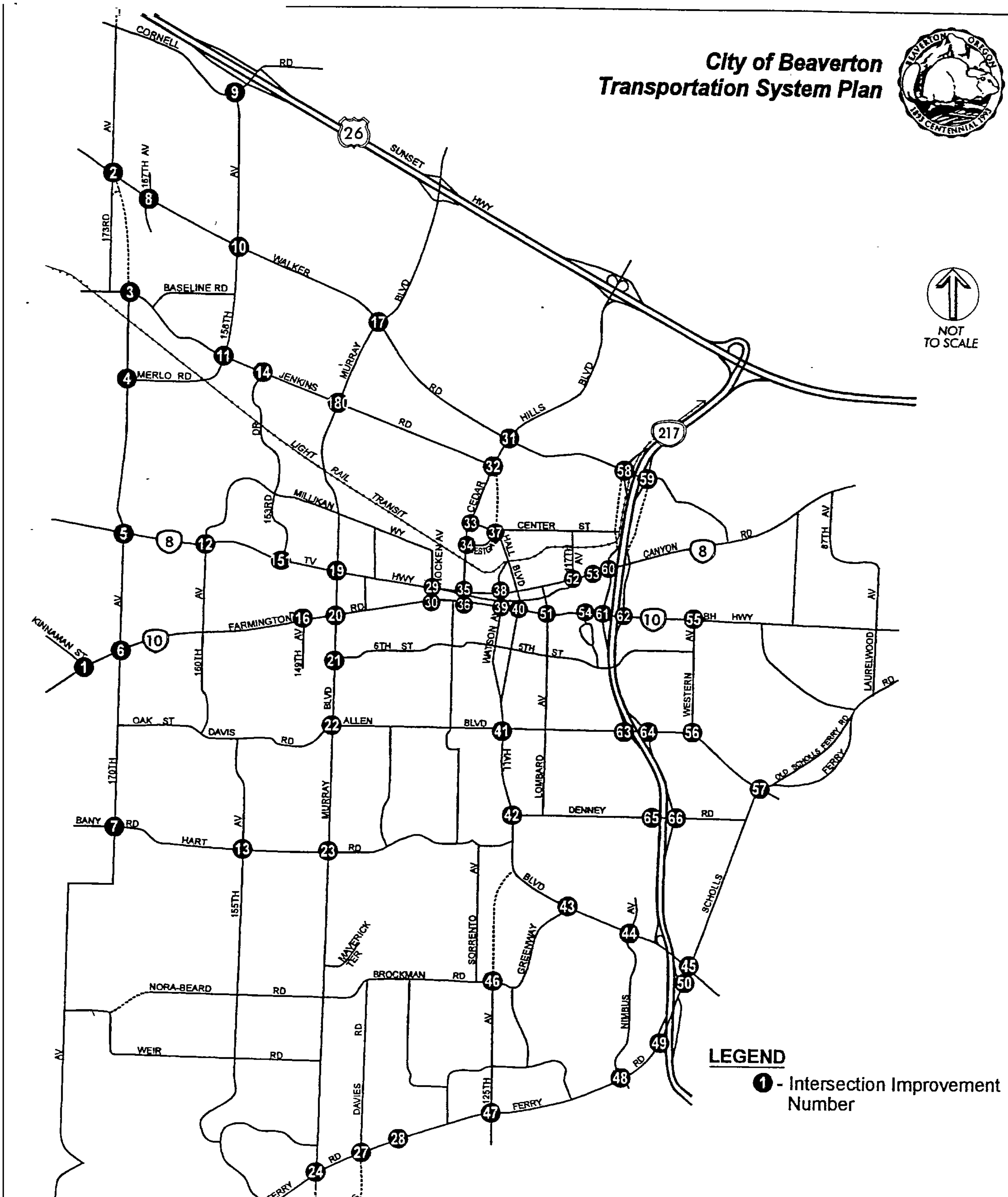


Figure 8-23
INTERSECTION IMPROVEMENT LOCATIONS

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 to 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-]17th 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 **2 17** 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

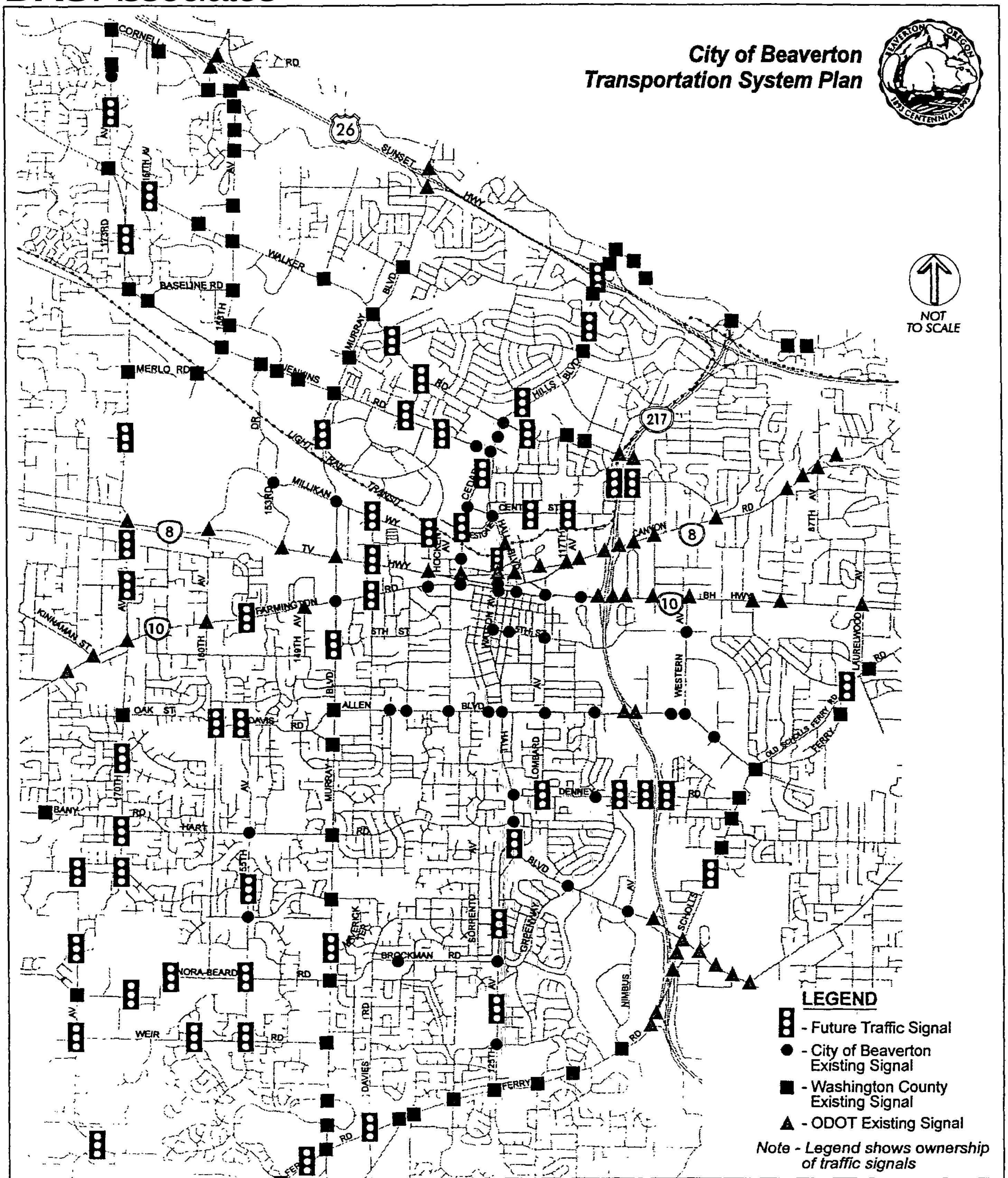


Figure 8-24
TRAFFIC SIGNALS MASTER PLAN

Note - Sites which may warrant traffic signals in the future and are consistent with functional classification

DKS Associates

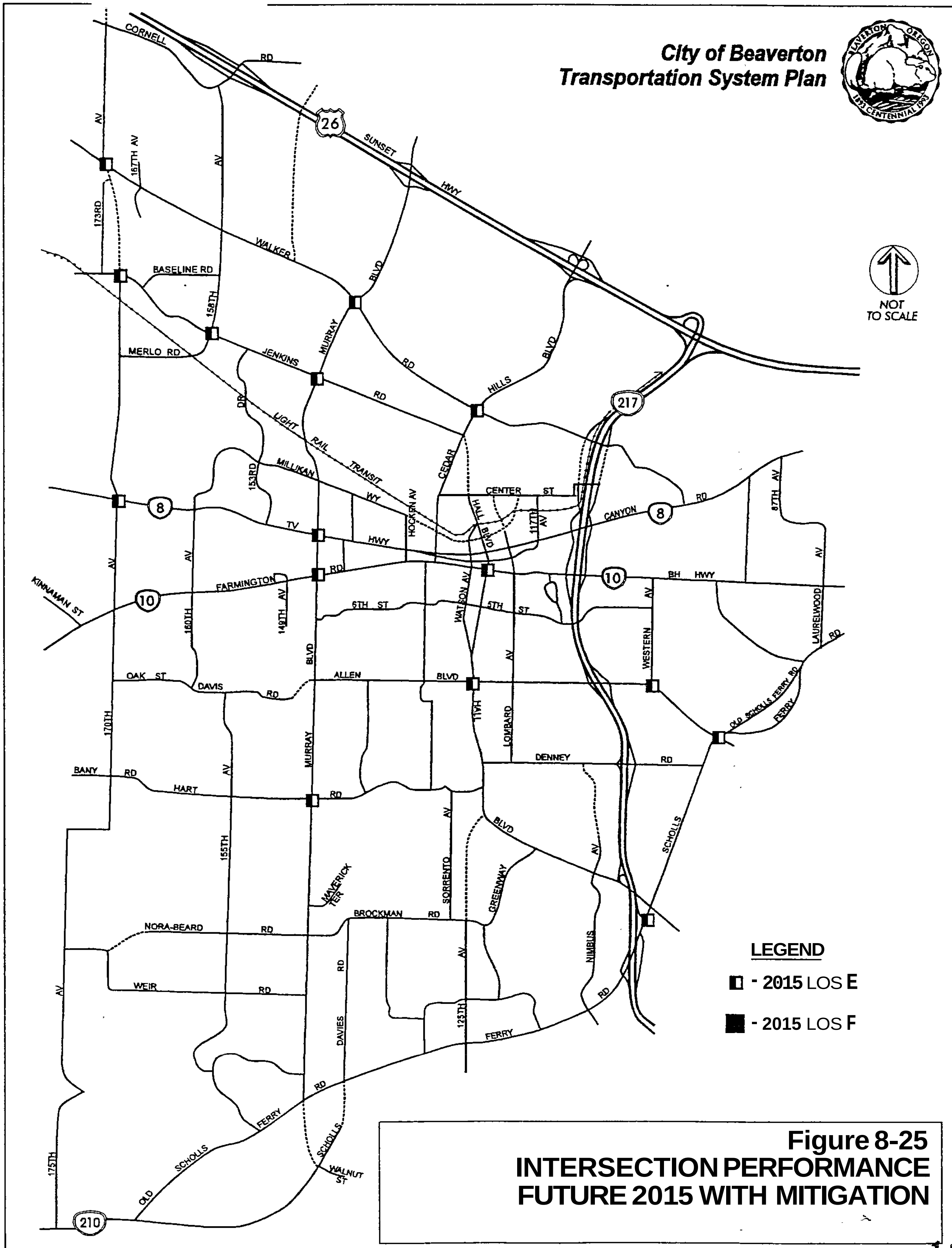


Figure 8-25
INTERSECTION PERFORMANCE
FUTURE 2015 WITH MITIGATION

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.

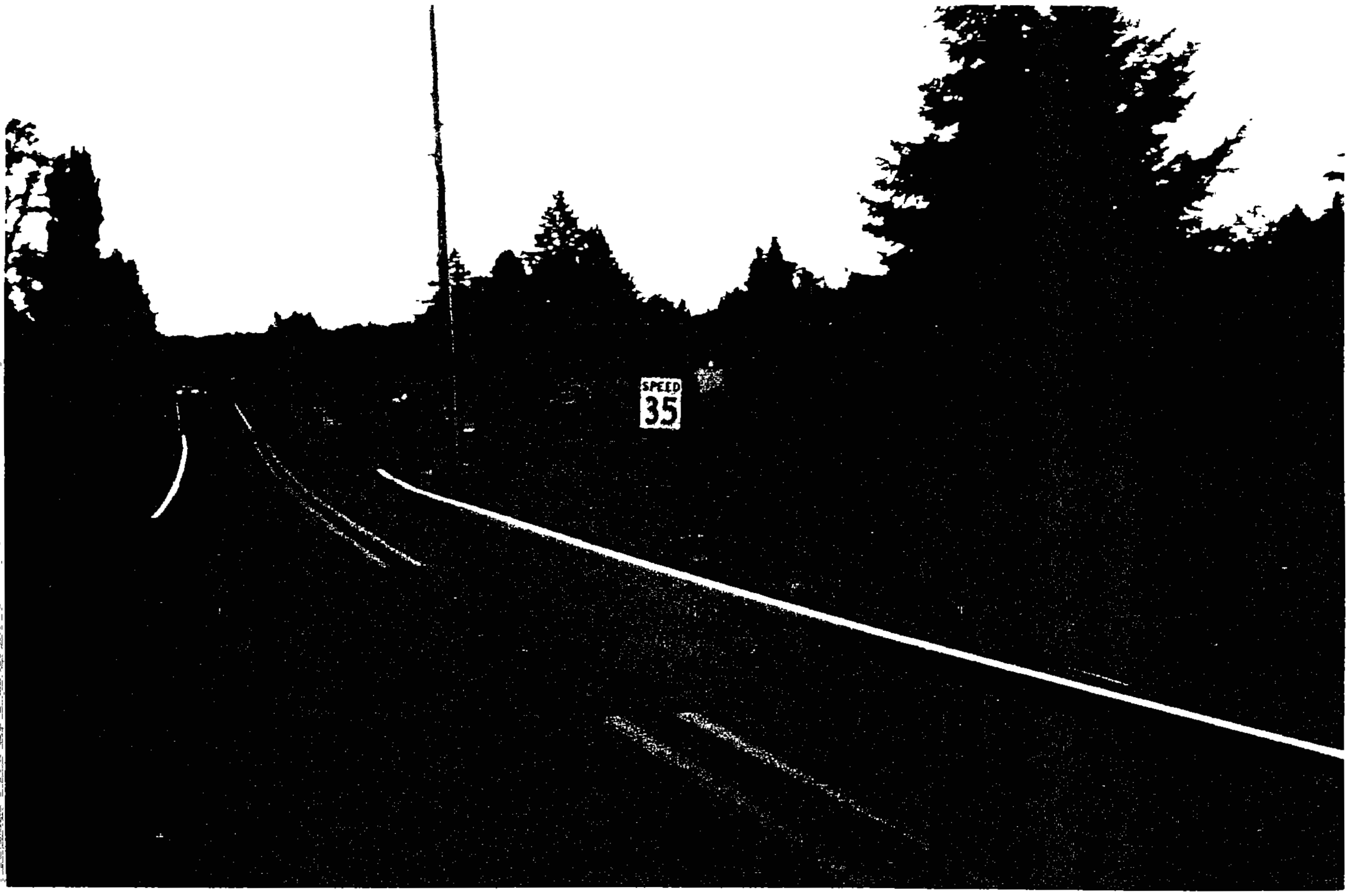
Visual Simulations

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).

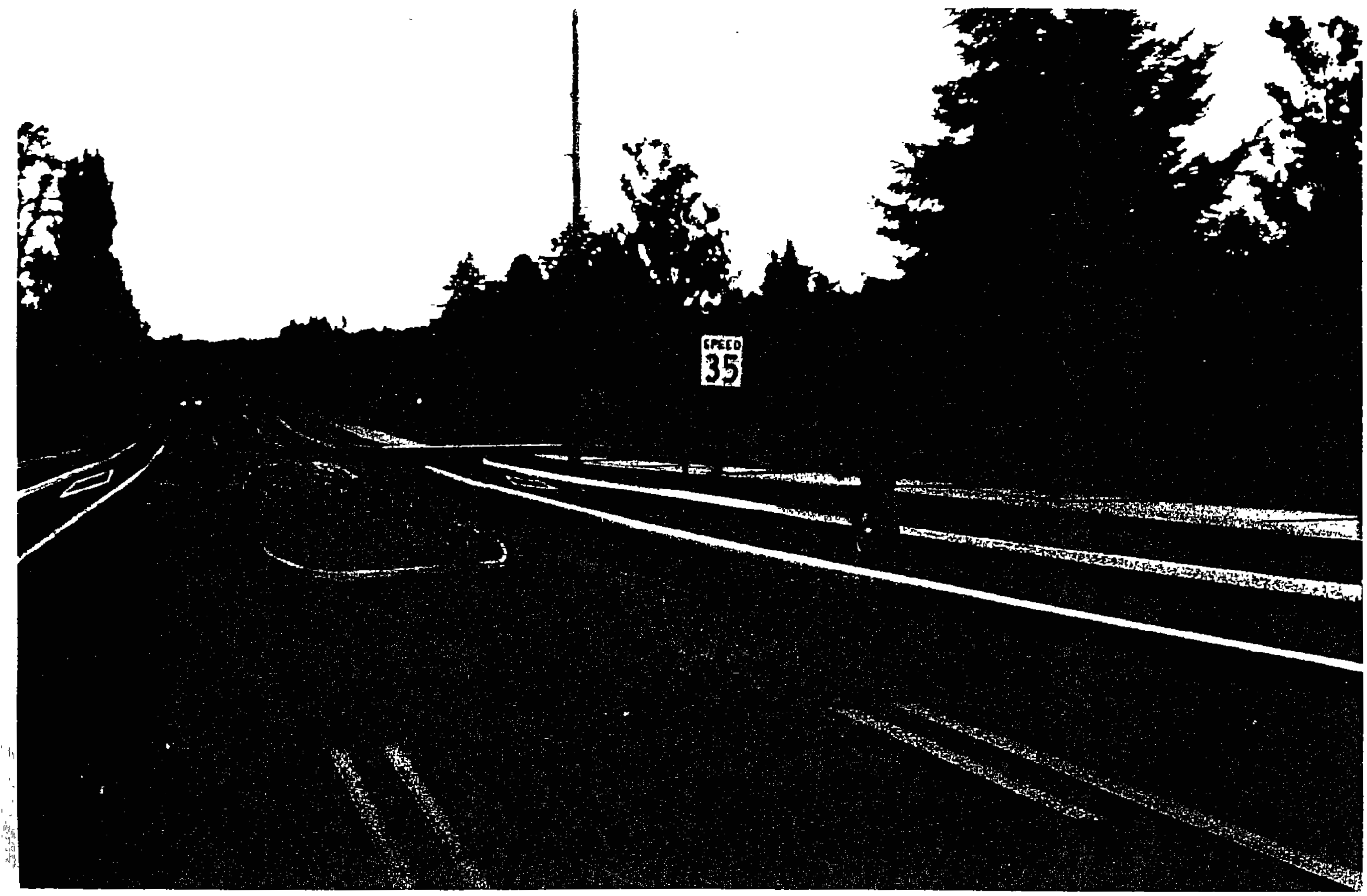
SAFETY

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

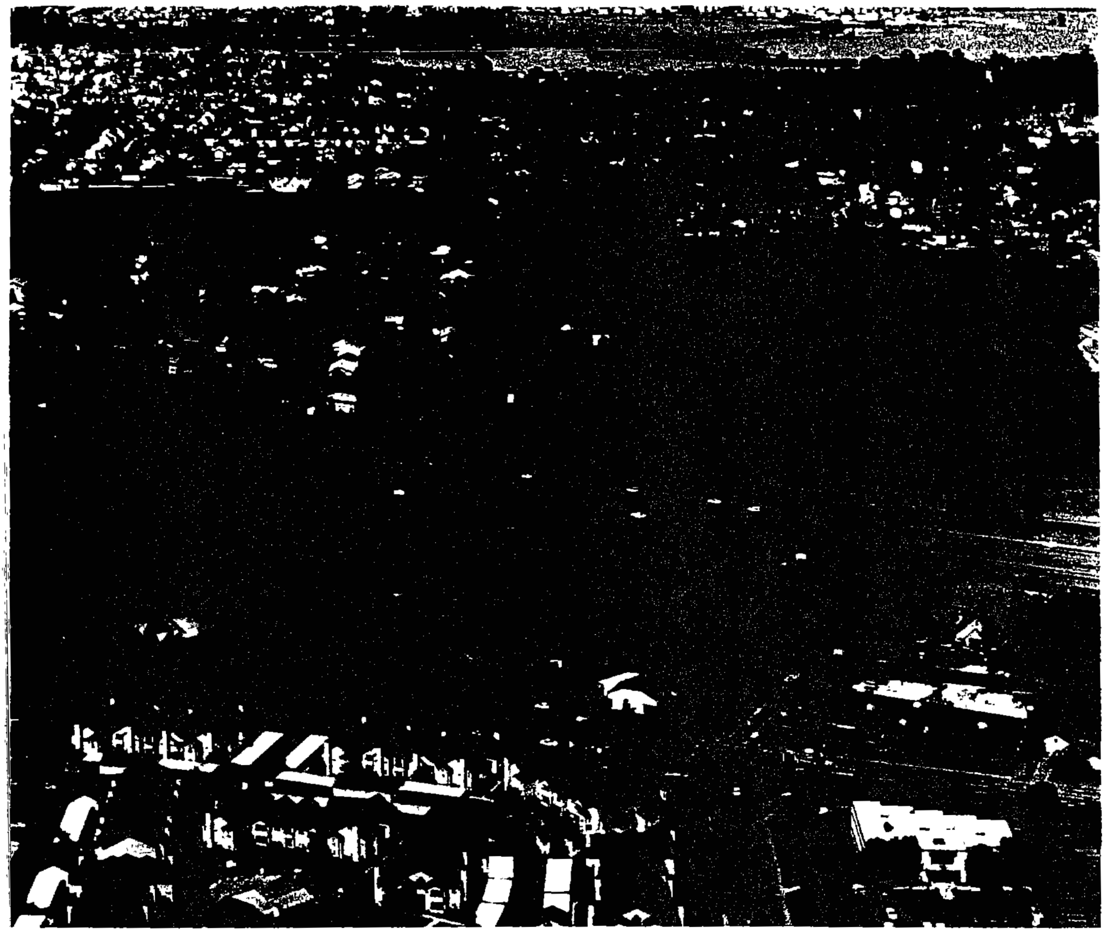


Existing

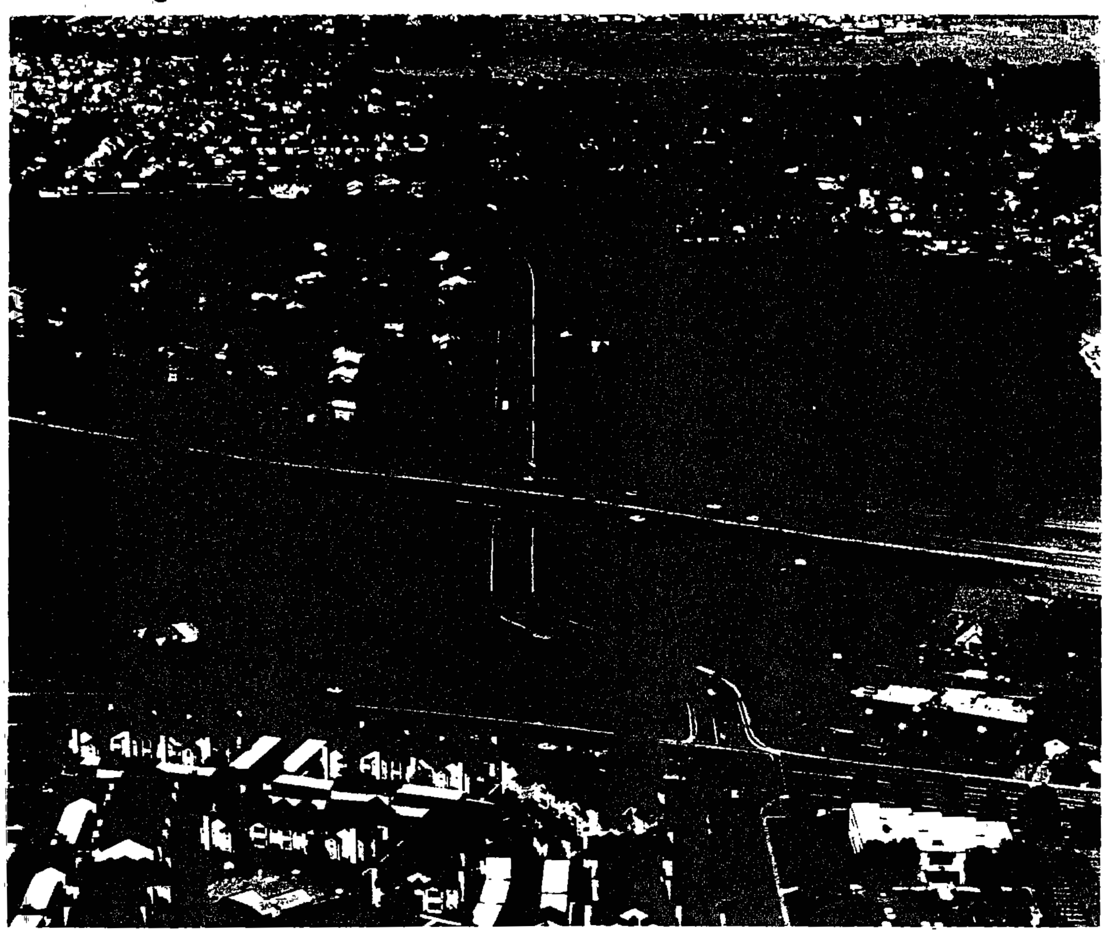


Future

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

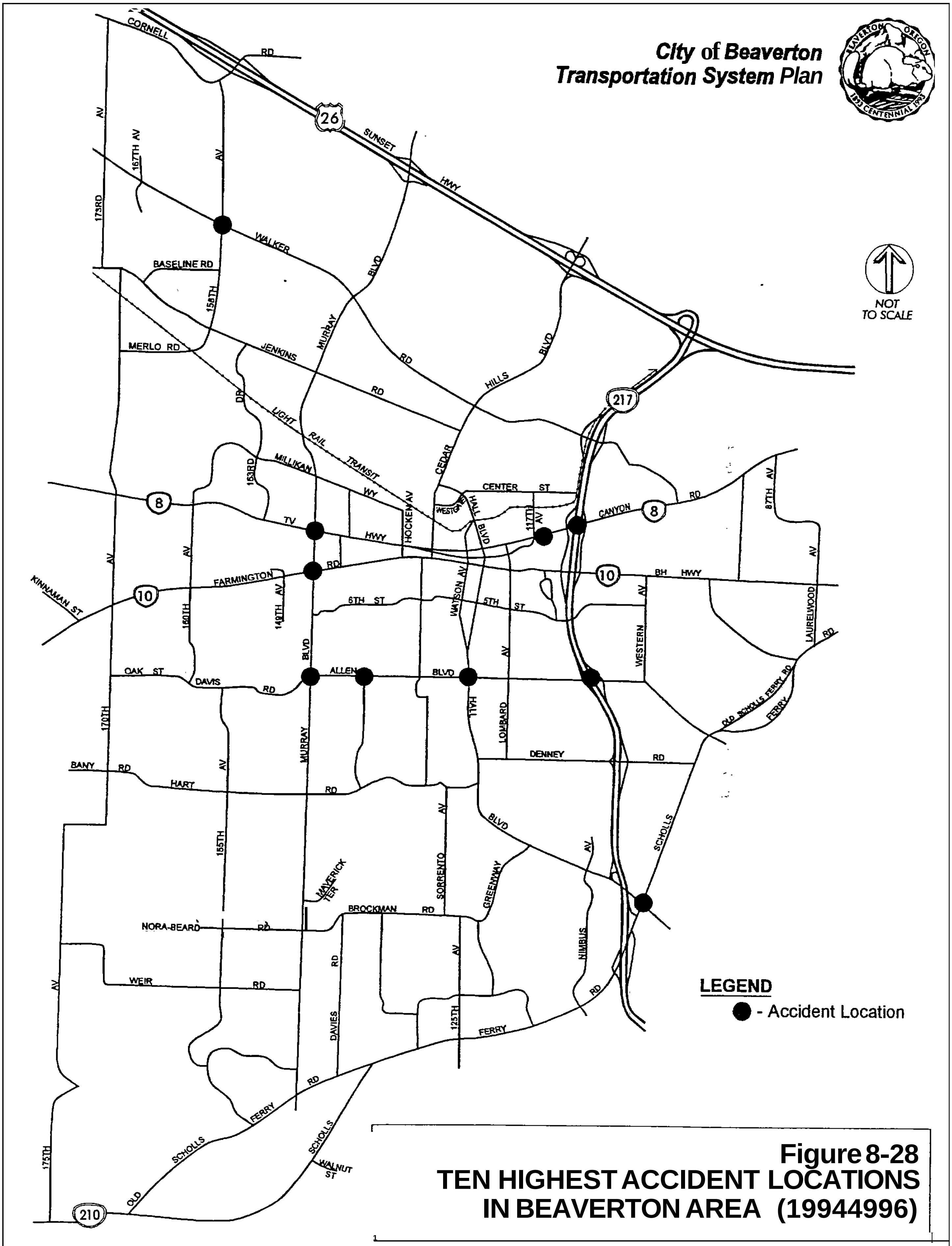


Figure 8-28
TEN HIGHEST ACCIDENT LOCATIONS IN BEAVERTON AREA (19944996)

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.

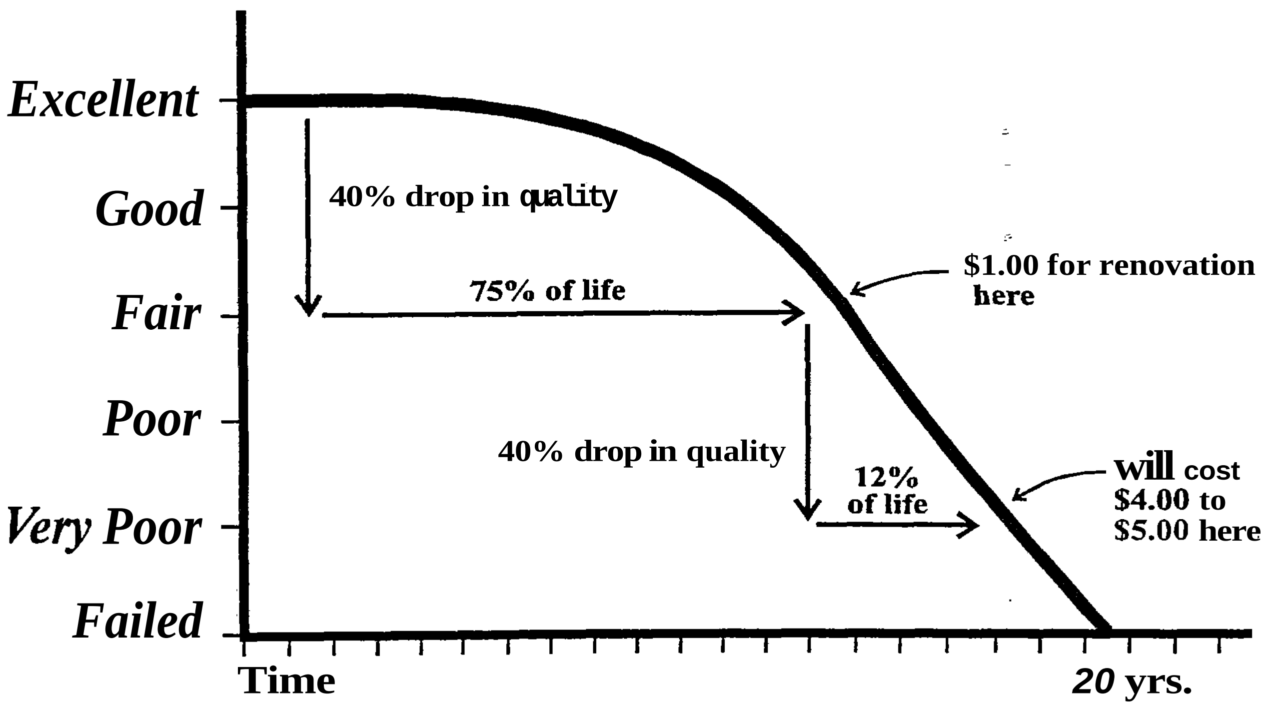


Figure 8-29
PAVEMENT LIFE CYCLE

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

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- 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.

DKS Associates

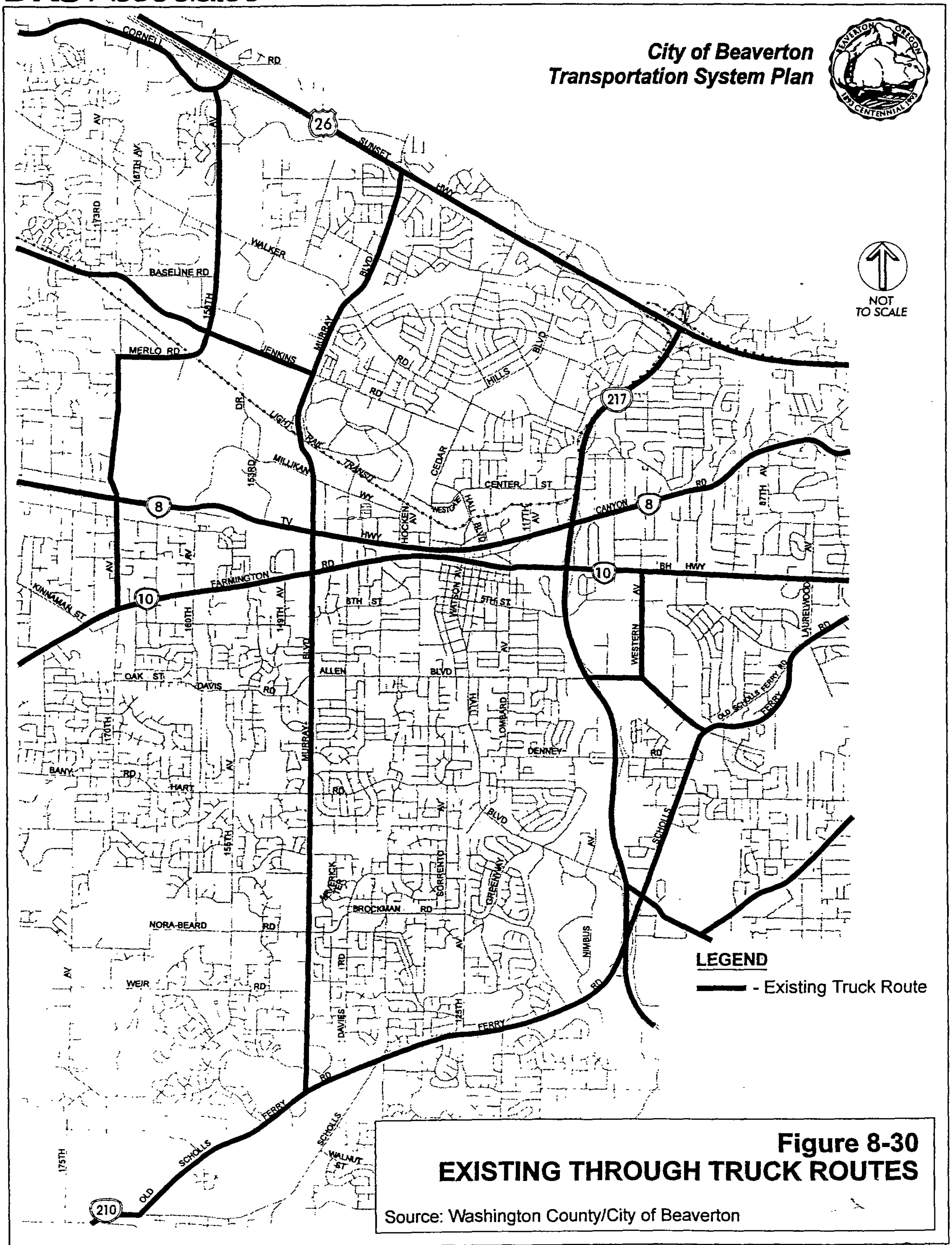

Figure 8-30
EXISTING THROUGH TRUCK ROUTES

Source: Washington County/City of Beaverton

<u>Goal 3, Policy **8:**</u> 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.

<u>Goal 6, Policy 1</u>: 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.

<u>Goal 6, Policy *5:*</u> 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 Cornmission, 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-5**1, 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.

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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).

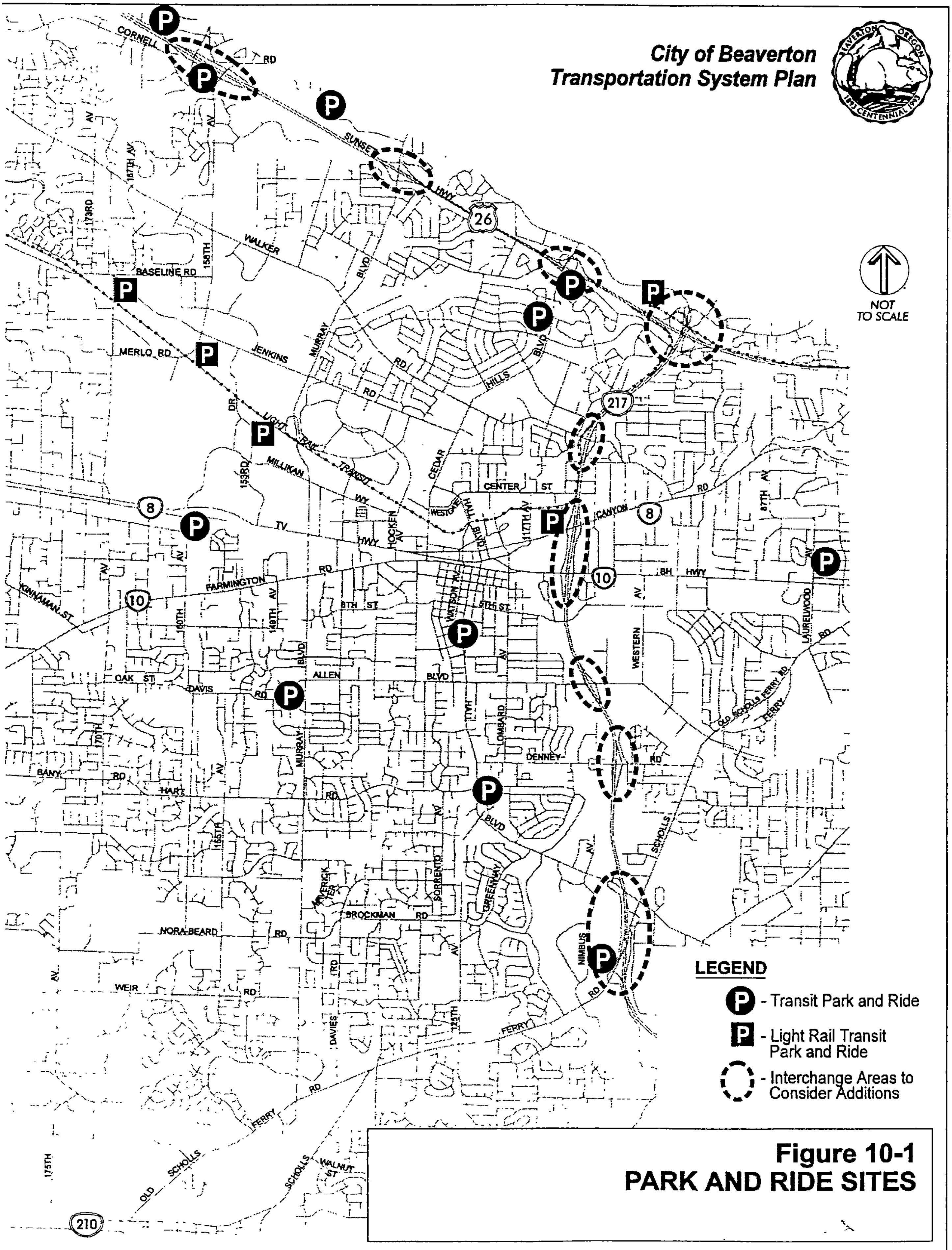


Figure 10-1
PARK AND RIDE SITES

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: I) 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			
155^{th} 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^{st} Avenue	Laurelwood Avenue	64
TV Highway/Canyon Road (gaps on one-side)	170^{th} Avenue	87^{th} Avenue	323
158^{th} 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	5^{th} Street	800 feet south of 5^{th}	48
5th Street (south side)	Alger Avenue	Western Avenue	117
6^{th} Street/Division Street	Murray Boulevard	170^{th} 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^{th} Avenue (gap-one side)	Beaverton-Hilldale Hwy	Canyon Road	30
Priority: Pedtstrian corridors to transit stations and stops			
153^{rd} Drive	Jenkins Road	Light Rail Transit	114
Connection Roadway	153^{rd} Avenue	Murray Boulevard	84
Millikan Way	Murray Boulevarrd	Hocken Avenue	180
160th Avenue	TV Highway	Davis Road	312
117^{th} Avenue	Light Rail Transit	Center Street	30
Downtown Beaverton Connectivity collector roadways	Hocken Avenue/ TV Highway	110^{th} 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	172^{nd} Avenue	346
Farmington Road	172^{nd} 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	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

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	$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 ...)		$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.

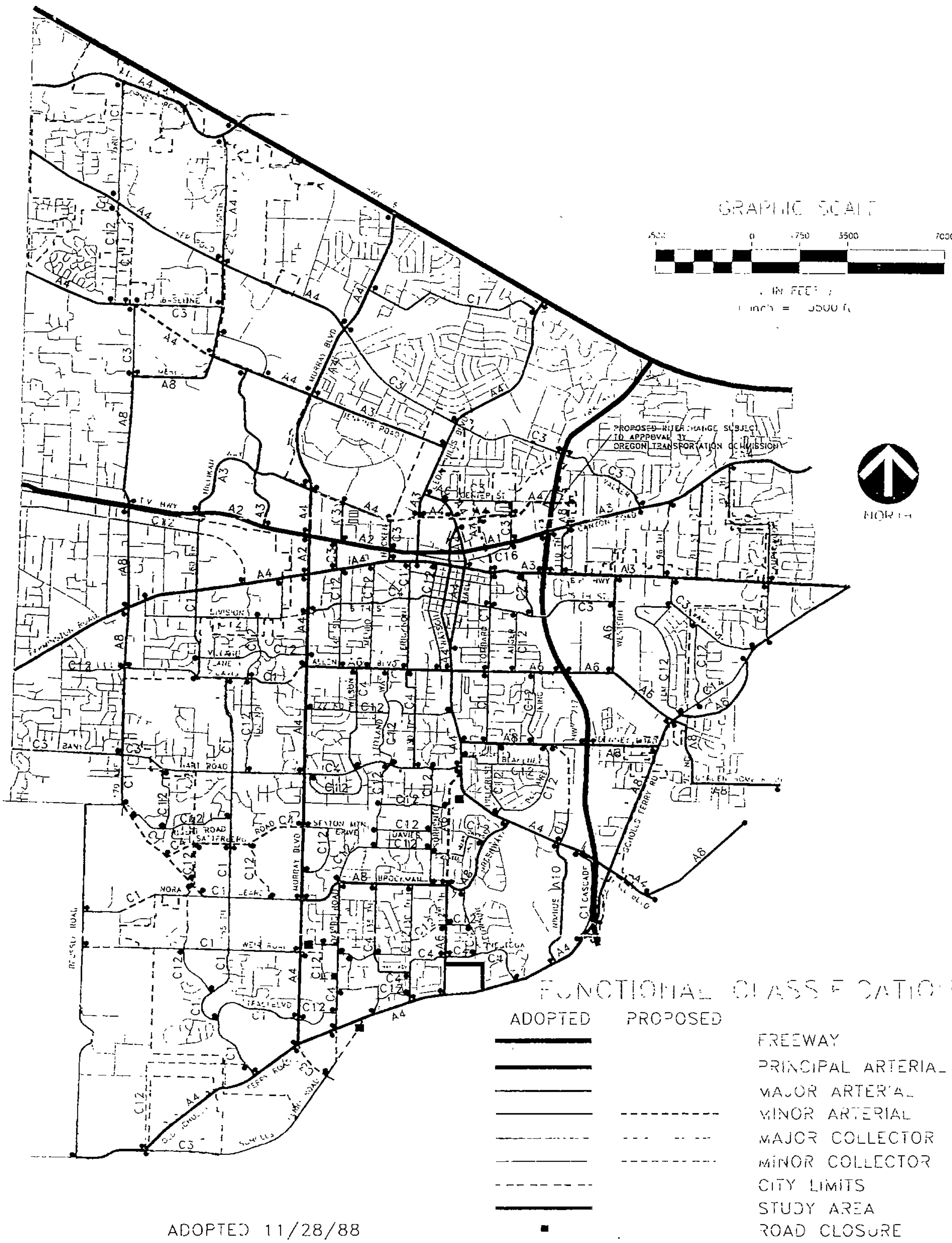
CITY OF BEAVERTON

FUNCTIONAL CLASSIFICATION PLAN

PLATE 5

STREET STANDARD MAP

PLATE *8*



***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:

- <u>Mobility Policy</u>: to provide a transportation system that maximizes the mobility of Washington County residences and businesses.
- <u>Efficiency Policy</u>: 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.
- <u>Safety Policy</u>: to maintain and improve transportation system safety.
- <u>Equity Policy</u>: to ensure the cost of transportation facilities and services are borne by those who benefit from them.
- <u>Environmental Policy</u>: 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.

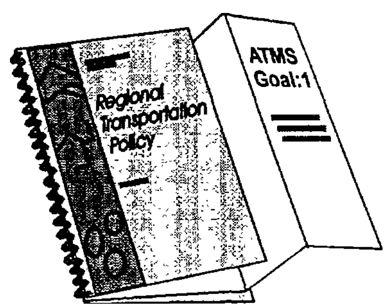
***Washington County Transportation Capital Improvement Program FY1995/1996-FY 1999/2000,* Washington County, February 1996.** This program evaluates, ranks and schedules transportation capital project needs in Washington County for the next five years. The purpose of the CIP is to:

- 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 1-5 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 1-5 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 (1-5 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.

S W Farmington Road, S W 209th Avenue-S W 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[3]	Portland[4]	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	Lccal 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)

NORTH

T= 0% P=.25

1 3

0 0 1

←1127 43 ←1022

0 f 0

T= 1.4% 559 4-574 T= 1.4%

P=.931 P=.932

514 448

1073→ 1170→

553 3 610

962 1166

T= 2% P=.830

Peak Hour 16:40-17:40

TEV=3262

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 ↴	→	↑	SOUTH BOUND ↲	↓	↳	NORTH 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	294:
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

N O R T H 4-752

T= .7% P=.876

396 | 317

65 207 124

883

49 | 148

T= 1.6% P=.850

670 | 640

T= 1.7% P=.919

74 | 95

793 | 47 | 847

47 120 53

376

T= .7% P=.873 1220

Peak Hour 17:00-18:00

TEV=2292

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

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	a	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

N
3
R
T
H ←887

T= 1.1% P=.919

11052

↑704

79 595 378

4 4-870

DATE OF COUNT: 12/05/96
DAY OF WEEK: Thu
TIME STARTED: 16:00
TIME ENDED: 18:00

859 T= 4% P=.893 ↑815

17:00-18:00
TEV=3515

Traffic Smithy
Traffic Survey Service

TIME PERIOD FROM - To	EAST BOUND			SOUTH BOUND			NORTH BOUND			WEST BOUND			ALL
	R	→	L	R	↓	L	L	↑	R	R	←	L	
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

NORTH

T= 2.6% P=.873

968 ↓ | 1377 ↑

95 | 702 | 171

←915 | 1 | 4-808

178 | 154

T= 1.8% P=.798 | T= .9% P=.789

715 → | ←576

186 | 78

1079→ | 1063→

244 | 1045 | 177

966 ↓ | 1466 ↑

T= 1.6% P=.858

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			SOUTH BOUND			NORTH 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	820[illegible]
PHF	.65	.85	.74	.88	.84	.87	.74	.86	.7	.85	.79	.75	.92[illegible]
% Trucks	1.4	1.2	4.5	2.8	3	.6	.2	2.1	.[illegible]	1.[illegible]	[illegible]	0	[illegible]
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

CEDAR HI[illegible] BOULEVARD AT WALKER ROAD ([illegible]MPOSITE)

NORTH

T= 1.5% P=.793

809 | 1112
82 | 615 | 112
855 | 919
147 | 97
T= 1% P=.925 | T= 1% P=.904
744 | 553
208 | 269
1099 | 1146
220 | 868 | 290
1092 | 1378
T= 1.1% P=.885

Peak Hour 16:56-17:56
TEV=4205

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

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	302
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	7708
PHF / % Trucks	.83 / 1.4	.89 / .8	.83 / 1.8	.68 / 4.1	.81 / 1.1	.78 / 1.8	.83	.89 / 1.5	.77	.9 / .0	.91 / 1.0	.78 / 0	.92 / 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 OAD AT HIGHWAY 217 SOUTHBOUN

NORTH

426 T= 1% P=.800 3

270 11 145

DATE OF COUNT: 07/30/96
DAY OF WEEK: Tue
TIME STARTED: 16:00
TIME ENDED: 18:00

9

844 0 0 0
T= 0% P=0.

17:00-18:00
TEV=2582

Traffic Smithy
Traffic Survey Service

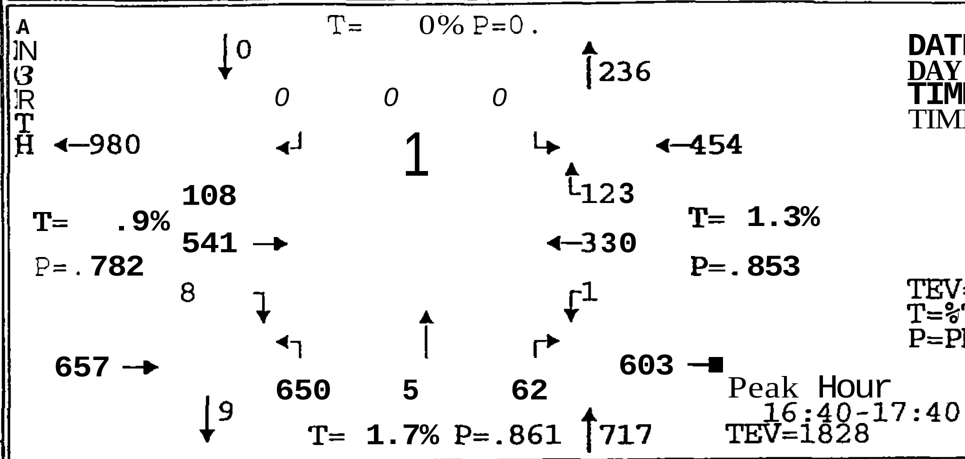
TF

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	478
PHF	.93	.93	0	.82	.39	.77	0	0	0	.75	.95	.25	.93
% Trucks	1.4	1.3	0	1.2	5.9	.4	0	0	0	2.7	1.6	0	1.
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

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	NORTH 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	a	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	a	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	337C
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	170(
16:15-17:15	8	504	104	0	0	0	619	5	55	1	330	125	1751
16:30-17:30	a	542	98	0	0	0	637	5	58	1	340	126	181[illegible]
16:45-17:45	8	511	104	0	0	0	645	5	57	1	329	122	178[illegible]
17:00-18:00	1	490	106	0	0	0	595	3	60	1	284	130	167(

INTERSECTION TURN MOVEMENT COUNT SUMMARY REPORT
WALKER ROAD AND CANYON ROAD

123116

NORTH

T= 1.4% P=.852

375   37   2   336   431

1032   1   1368

370

61

T= 2.5%   1285   991   T= 1.6%

P=.859   P=.952

1   7

1347   1632

4   0   11

10   T= 0% P=.75   15

Peak Hour
16:55-17:55
TEV=3105

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			SOUTH BOUND			NORTH BOUND			WEST BOUND			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
FI

16:00-16:05	20	33	0	0	0	0	9	0	2	2	43	0	109
16:05-16:10	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

NORTH

T= 1.7% P=.872

719 436

166 249 304

4-777 ←8 98

132 183

T= .6% T= 1.7%

432 → 4-5 69

P=.908 P=.935

43 146

607 → 853 →

42 121 117

438 T= 8.2% P=.843 280

Peak Hour 16:50-17:50

TEV=2504

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

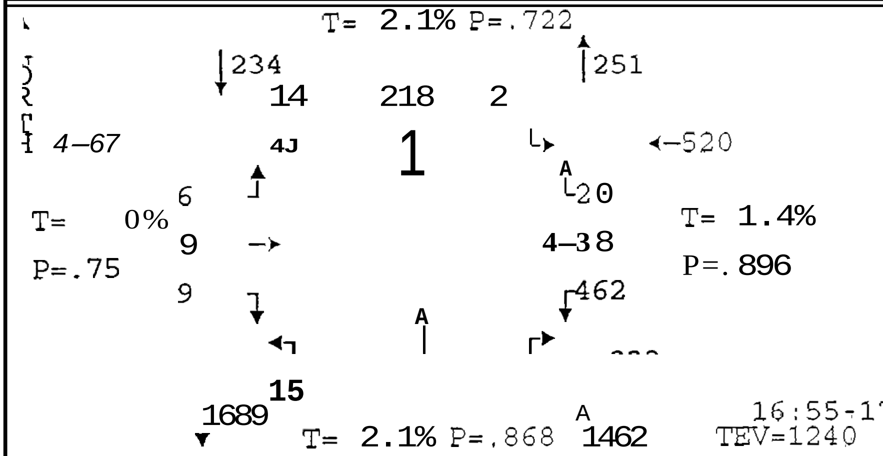
16:00-16:05	3	39	7	6	12	17	3	9	7	15	45	12	175
16:05-16 10	6	34	14	9	18	25	3	18	11	8	47	11	204
16:10-16 15	7	51	10	9	19	17	2	5	9	12	44	13	198
16:15-16 20	2	35	13	16	20	19	6	15	21	6	39	14	206
16:20-16 25	4	33	12	13	11	26	2	11	9	13	53	8	195
16:25-16 30	7	30	12	12	23	34	6	17	9	7	46	15	218
16:30-16 35	3	38	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	3	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	3	110
.7:40-17:45	1	0	1	0	10	0	2	21	21	33	2	1	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	2	1.0	0	4.8	1.[illegible]
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[illegible]
16:15-17:15	9	11	3	13	191	12	8	194	174	409	15	27	106[illegible]
16:30-17:30	10	8	5	14	211	10	8	209	194	427	26	28	115[illegible]
16:45-17:45	10	9	6	12	218	3	13	221	208	433	31	24	118[illegible]
17:00-18:00	9	8	7	15	217	3	19	227	220	440	39	22	122[illegible]

JENKINS ROAD AT 153RD DRIVE

11574

4

180

184 4

389

T= 2% P=.813

A

1332

16:45-17:45

TEV=2112

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

L6:00-16 05	30	34	5	13	76	6	18	58	7	3	28	12	290
L6:05-16 10	29	28	9	19	76	17	16	58	6	7	38	13	316
L6:10-16 15	27	37	14	21	55	14	27	75	7	3	32	14	326
L6:15-16 20	35	46	13	16	67	14	13	54	4	4	38	11	315
L6:20-16 25	32	36	4	8	65	11	22	88	5	6	37	10	324
L6:25-16 30	28	32	13	22	91	4	26	71	4	4	25	9	329
L6:30-16 35	23	40	8	11	61	9	18	60	9	5	31	16	291
L6:35-16 40	27	28	13	11	80	18	22	79	13	5	37	11	344
L6:40-16:45	19	41	20	11	70	11	16	61	8	12	28	15	312
L6:45-16:50	21	42	16	15	59	11	26	64	8	2	28	20	312
L6:50-16:55	26	49	7	14	61	12	19	76	12	7	39	16	338
L6:55-17:00	29	40	11	12	64	18	28	60	8	3	39	11	323
L7:00-17:05	24	39	14	10	90	13	17	64	6	1	28	11	317
L7:05-17:10	24	37	5	6	49	10	23	92	6	14	27	8	301
L7:10-17:15	27	45	17	15	75	17	32	61	9	7	41	18	364
L7:15-17:20	27	46	10	7	54	12	23	75	8	5	40	17	324
L7:20-17:25	23	33	10	5	51	16	22	77	4	9	35	17	302
L7:25-17:30	27	43	9	18	78	15	34	51	8	4	43	23	353
L7:30-17:35	32	52	5	12	51	13	29	69	9	4	28	10	314
L7:35-17:40	41	46	9	16	63	12	26	79	7	10	27	13	349
L7:40-17:45	28	38	16	19	74	22	19	62	8	9	42	10	347
L7:45-17:50	23	64	14	11	55	15	28	81	8	5	42	10	356
L7:50-17:55	22	36	12	13	61	19	21	46	5	7	32	12	286
L7:55-18:00	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	

Kourly 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

T= 1.5% P=.953

1198 11349

224 971 3

DATE OF COUNT: 07/11/96
DAY OF WEEK: Thu
TIME STARTED: 16:00
TIME ENDED: 18:05

222 829 4

1403

T= 2% P=.885 1055

16:55-17:55
TEV=3215

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	636
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	1.6	0	0	0	0	1.
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

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

16:00-16:05	12	13	7	6	44	26	9	29	4	6	18	55	229
16:05-16:10	14	12	13	9	63	27	6	37	4	13	10	60	268
16:10-16:15	11	15	6	6	60	43	10	35	7	5	18	43	259
16:15-16:20	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
16:40-16 45	12	10	8	3	60	41	7	36	3	5	24	55	264
16:45-16 50	7	5	10	8	82	30	7	34	5	7	18	56	269
16:50-16 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
17:10-17:15	12	13	14	7	70	38	8	34	8	18	17	59	298
17:15-17:20	9	4	6	5	69	43	7	47	1	10	12	64	277
17:20-17:25	22	13	5	5	66	41	12	45	8	9	14	63	303
17:25-17:30	18	14	9	5	70	38	9	38	3	5	19	62	290
17:30-17:35	13	7	7	5	77	34	10	41	6	7	11	61	279
17:35-17:40	16	17	12	6	50	43	13	40	3	9	11	53	273
17:40-17:45	6	9	8	5	59	45	13	32	4	3	8	63	255
17:45-17:50	11	8	12	6	64	43	13	42	3	8	15	59	284
17:50-17:55	10	11	8	3	70	40	13	35	7	3	11	39	250
17:55-18:00	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	.3	.8	1.
Stopped Buses	0	0	0	0	4								
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 636

1 985 41

DATE OF COUNT: 09/19/96
DAY OF WEEK: Thu
TIME STARTED: 16:00
TIME ENDED: 18:00

2 578 78

1032

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	1.0	1.0	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	16	0	0	11	0	
Hourly 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

T= .9% P=.893

593 ↓ ↑ 866

25 434 134

←88 ↲ 1 ↳ ←297

29 ↑ ↑ 215

T= .4% 70 → ←21 T= 1.6%

P=.770 P=.905

52 ↓ ↓ 61

↰ ↑ ↱

151 → 293 →

42 622 89

547 ↓ ↑ 753

T= .5% P=.896

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 ↓	→	↑	SOUTH BOUND ↲	1	↳	NORTH BOUND ↰	↑	↱	WEST BOUND ↓	4—	↑	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	I	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	S	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		
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

NORTH

T= 2.2% P=.846

525   475

18   342   165

4-1948   4J   1   4 A   4-2403

146

793

T= 1.8% P=.879   I278

17:00-18:00
TEV=4747

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			SOUTH BOUND			NORTH BOUND			WEST BOUND			ALL
	7	→	↑	↲	↓	↳	↰	↑	↱	↓	←	A L	
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	291	1764	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

I

622 T= .9% P=.826 291 16:50-17:50 TEV=4423

Traffic Smithy
Traffic Survey Service

T:
FI

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%

N O R T H

T= 2.5% P=.741

↓255 ↑78

65 0 190

←2069 ↲ | ↳ 4-2061

1 ↴

↓1 ↑0

T= 0% P=0.

17:02-18:02
TEV=3838

DATE OF COUNT: 07/09/96
DAY OF WEEK: Tue
TIME STARTED: 16:32
TIME ENDED: 18:32

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

NORTH

↓1212 T= 2.7% P=.901 ↑930

176 771 265

←2031 1 ←1844

110 178

T= 2.6% 1081→ ←1484 T= 2.4%

P=.929 400 182 P=.938

47

1591→ 1489→

371 642 143

↓1353 T= 2.9% P=.920 ↑1156

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 ↴	→	↰	SOUTH ROUND ↵	↓	↳	NORTH 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	4'5	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	1109
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.t
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

1H6/

T= 2.3% P=.872

677 ↓ 123 359 195 ↑278

DATE OF COUNT: 10/09/96
DAY OF WEEK: 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	S	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	202	1188	139	135	301	177	177	112	33	69	1417	53	[illegible]
16:45-17:45	223	1188	135	127	340	190	181	105	33	72	1465	50	[illegible]
17:00-18:00	236	1212	130	115	355	195	164	98	37	75	1476	44	4137

CEDAR

ENTRY

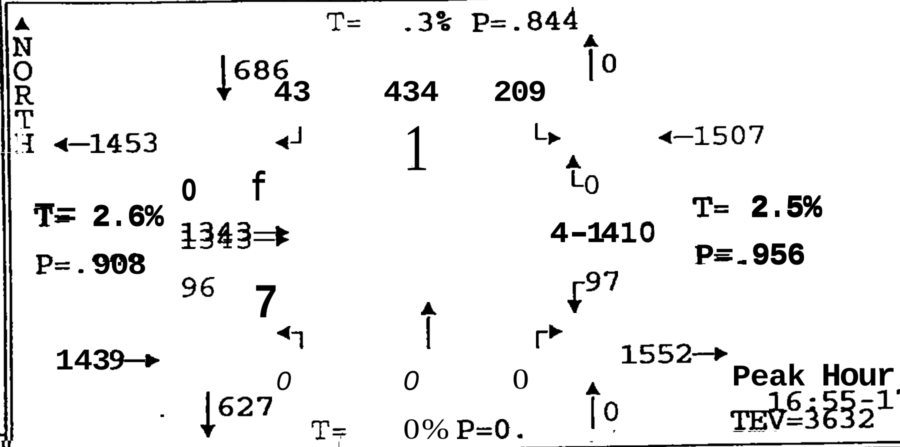
169 217 60

16:50-17:50

Traffic **Smithy**

TIME PERIOD FROM - To	EAST BOUND			SOUTH BOUND			NORTH 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	.96
% 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

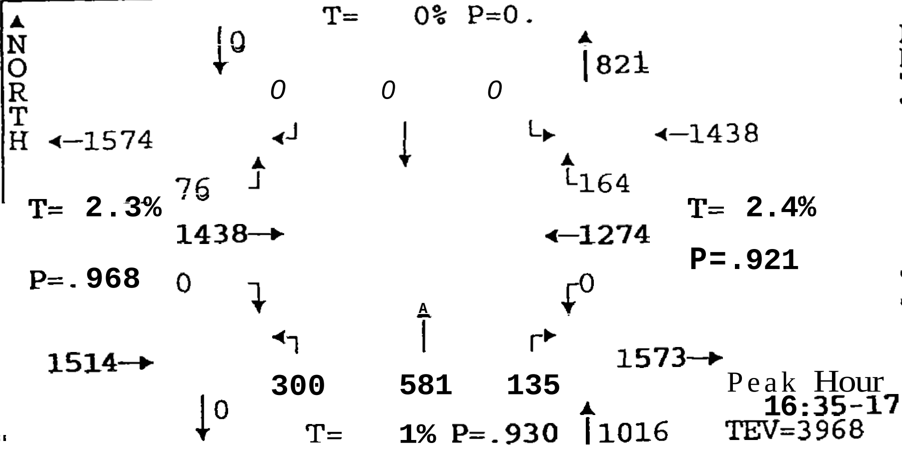
Traffic Smithy
Traffic Survey Service

TIME PERIOD FROM - TO	EAST BOUND 7	→	↑	SOUTH BOUND ↲	↓	↳	NORTH BOUND ↰	↑		WEST BOUND ↓	←	↑	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	2.61

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.:
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	330[illegible]
16:15-17:15	84	1227	0	47	398	227	0	0	0	102	1392	0	347[illegible]
16:30-17:30	82	1281	0	42	422	225	0	0	0	114	1444	0	361[illegible]
16:45-17:45	91	1305	0	46	432	221	0	0	0	110	1398	0	360
17:00-18:00	91	1347	0	44	436	202	0	0	0	101	1387	0	360

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	—t									4—		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	C	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 Survey	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

448 T= 2.4% P=.868 349

70 88 290

4—1431 1 ←1611

a3 195

T= 3.8% 1287→ ←1338 T= 2.7%

P=.960 P-.917

21 1 78

1391→ 1672→

23 71 95

187 T= 1.3% P=.800 189

Peak Hour 17:00-18:00

TEV=3639

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

Traffic smithy
Traffic Survey Service

TIME PERIOD FROM - TO	EAST BOUND			SOUTHBOUND			NORTH BOUND			WESTBOUND			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	2	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	5	5	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	5	21	1	5	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	3	4	6	11	112	34	313
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	5	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	272
7:50-17:55	2	105	8	7	5	21	4	6	8	6	105	19	295
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	.7	.81	.81	.72	.71	.64	.75	.91	.9	.949
% Trucks	0	3.8	6.5	5.1	3.4	1.3	0	1.5	1.4	.7	3.1		113
Stopped Buses	0	1	0	0	2	0	a	0	0	0	0	0	
Peds	0	47	0	0	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	92	262	26	66	110	87	1285	203	3461
16:30-17:30	21	1243	66	79	85	266	27	69	94	80	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

INTERS TION TURN MOVEMENT COUNT SUM RY REPORT
FRED MEYER ACCESS AT CANYON ROAD

119

NORTH

T= 1% P=.95

57 12

22 1 34

←1583 4J 1 ←1563

1 11

T= 2.1% T= 2%

1408→ ←1436

P=.846 P=.964

97 116

1506→ 1573→

125 0 131

214 256

T= .8% P=.820

Peak Hour
16:40-17:40
TEV=3382

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 →	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	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

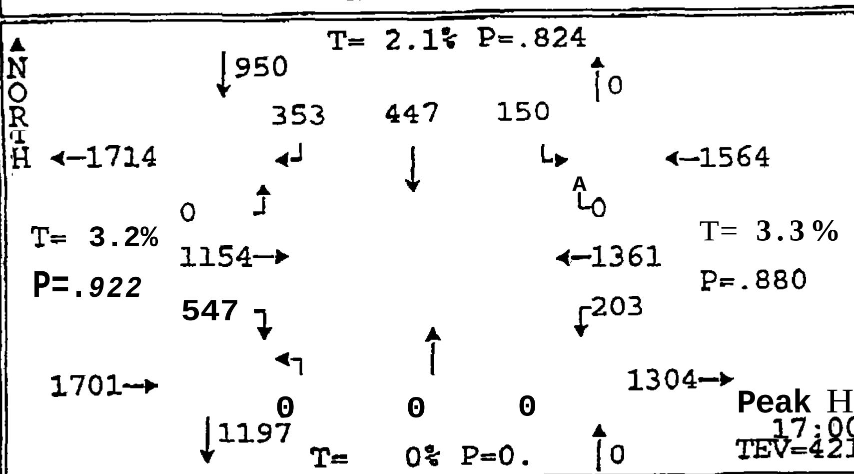
otal Survey	205	2731	3	36	2	59	268	0	248	241	2745	16	6554
HF	.76	.83	.25	.5	.25	.71	.78	0	.8	.76	.96	.69	.911
Trucks	1	2.2	0	2.8	0	0	.7	0	.8			0	1.9
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	
Peds	0	18	0	0	22	0	2	2	2	0	4	0	

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

ROM : TRAFFIC SMITHY PHONE NO. : 5036438866 OCT. 10 1996 02:34PM P3

INTERSECTION TURN MOVEMENT COUNT SUMMARY REPORT
HIGHWAY 217 SOUTHBBOUND AT CANYON ROAD

11952 new



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	353	447	150	0	0	0	203	1361	0	4215

INTERSECTION TURN MOVEMENT COUNT SUMMARY REPORT
CANYON ROAD AT HIGHWAY 217 NORTHBOUND RAMPS 11397

NORTH

T= 0% P=.25
1
727
0 0 1
←1716
1
4-1269
231
155
T= 2.5%
937 →
←1114
T= 3%
P=.885
P=.933
0
1169→
1280→
602 341 342
1
T= 2.8% P=.897 11285

Peak Hour 16:10-17:10
TEV=3724

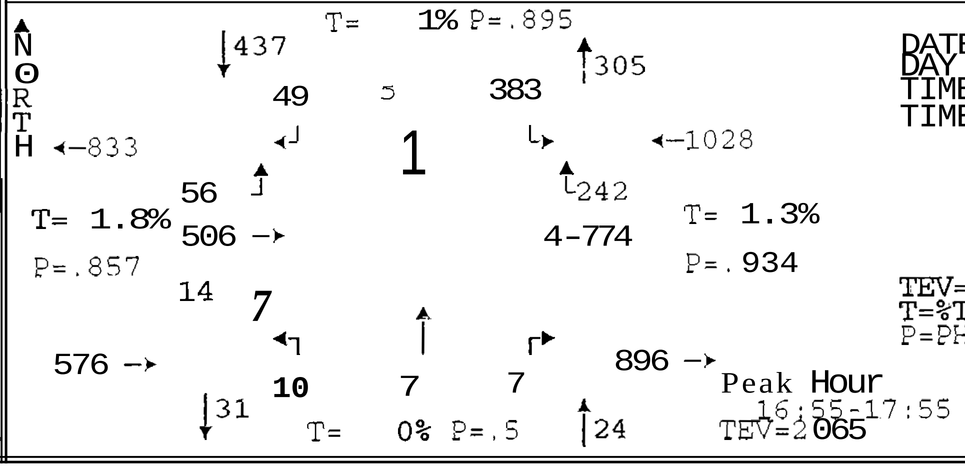
DATE OF COUNT: 07/16/96
DAY OF WEEK: Tue
TIME STARTED: 16:00
TIME ENDED: 18:00

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	1	1159	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 ↴	→	↰	SOUTH BOUND ↲	↓	↳	NORTH 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 T= 1.5% P=.801 ▲1234 16:25-17:25 TEV=2471

Traffic Smithy
Traffic Survey Service

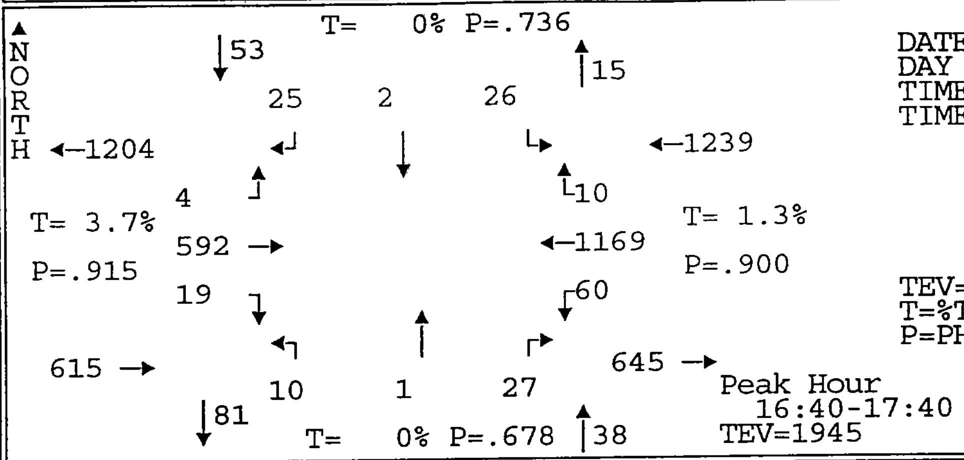
16:00-16:05	11	44	2	8	11	8	12	13	10	4	54	3	180
16:05-16:10	6	37	8	9	18	12	6	13	14	4	40	4	171
16:10-16:15	13	55	7	6	26	3	3	3	9	3	72	1	201
16:15-16:20	10	43	3	7	21	5	11	21	14	7	60	6	208
16:20-16:25	5	42	1	9	26	2	5	9	5	8	65	3	180
16:25-16:30	9	49	5	5	27	4	5	10	7	3	75	6	205
16:30-16:35	9	40	2	14	24	2	5	8	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[illegible]
% 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[illegible]
16:15-17:15	155	577	24	121	287	33	68	137	65	90	819	61	243[illegible]
16:30-17:30	184	576	24	127	322	39	56	123	56	102	786	64	245[illegible]
16:45-17:45	191	594	28	110	342	39	43	123	58	116	722	72	243[illegible]
17:00-18:00	200	587	29	117	347	36	36	130	65	118	718	70	245[illegible]

12242

INTERSECTION TURN MOVEMENT COUNT SUMMARY REPORT
FARMINGTON ROAD AT 149TH AVENUE



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

Traffic Smithy
Traffic Survey Service

TIME PERIOD FROM - TO	EAST BOUND			SOUTH BOUND			NORTH 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)

T= 2.9% P=.910

DATE OF COUNT: 07/18/96
DAY OF WEEK: Thu
TIME STARTED: 16:00
TIME ENDED: 18:00

N
R
T
H

1293 ↓ ↑ 1053

104 1036 153

←1369 4J 1 ←1434

89 140

T= 1.5% T= 1.1%

482 → ←950

P=.859 P=.909

264 344

TEV=TOTAL ENTRY **VOLUME**
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

11644 11280 16:50-17:50
T= 2.6% P=.898 TEV=4842

Traffic Smithy
Traffic Survey Service

T
F

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
17:30-17:35	21	49	9	12	83	2	19	79	9	22	77	12	394
17:35-17:40	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.:
Stopped Buses	0	2	0	0	1			1	0	0	1	2	
Peds	0	24	0	0	18	0	0	16	0	0	7	1	

Hourly 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

1

1

0 0

1

T= 0% P=0.

0

16:45-17:45

TEV=3173

Traffic Smithy
Traffic Survey Service

T:
FI

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	583[illegible]
PHF	.25	.92	.85	.79	0	.87	0	0	0	0	.9	.72	.95[illegible]
% Trucks	0	1.4	1.9	.8	100	.9	0	0	0	0	1.6	1.1	1.[illegible]
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	306[illegible]
16:45-17:45	1	782	61	189	0	404	0	0	0	0	1461	275	317[illegible]
17:00-18:00	1	769	57	211	0	398	0	0	0	0	1440	264	314[illegible]
17:15-18:15	1	762	52	202	1	382	0	0	0	0	1397	210	300[illegible]
17:30-18:30	0	770	46	186	1	324	0	0	0	0	1266	172	276[illegible]

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
7:40-17:45	0	91	13	21	0	41	0	0	0	0	106	18	290
7:45-17:50	0	68	17	30	0	21	0	0	0	0	106	24	266
7:50-17:55	0	101	14	21	0	25	0	0	0	0	110	14	285
7:55-18:00	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

T= 1.2% P=.886

787 114 514 159 1

4-1641 ←1631

0 0

T= 1% T= 1.4%

1093→ ←1527

P=.932 P=.890

238 104

1331→ 1252→

0 1 0

856 T= 0% P=.25 1

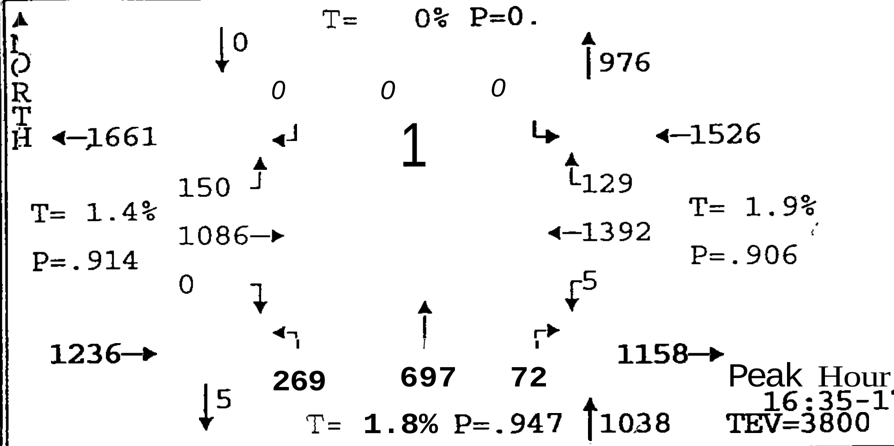
Peak Hour 16:40-17:40
TEV=3750

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
	↓	→	↑	↵	↓	↳	↰	|	↱	↓	←		
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
5:35-16:40	20	85	0	11	40	11	0	0	0	6	122	0	295
5:40-16:45	18	108	0	11	35	11	0	0	0	10	112	0	305
5:45-16:50	13	92	0	14	28	16	0	0	0	10	112	0	285
5:50-16:55	30	90	0	10	36	12	0	0	0	8	141	0	327
5:55-17:00	12	73	0	4	43	14	0	0	0	9	123	0	278
7:00-17:05	23	86	0	5	45	13	0	0	0	6	121	0	299
7:05-17:10	18	107	0	8	35	13	0	0	0	5	133	0	319
7:10-17:15	22	95	0	13	45	16	0	0	0	11	106	0	308
7:15-17:20	28	87	0	9	50	6	0	1	0	9	146	0	336
7:20-17:25	19	86	0	3	55	17	0	0	0	10	145	0	335
7:25-17:30	14	91	0	10	48	10	0	0	0	9	139	0	321
7:30-17:35	21	90	0	15	52	12	0	0	0	8	130	0	328
7:35-17:40	20	88	0	12	42	19	0	0	0	9	119	0	309
7:40-17:45	19	84	0	11	40	16	0	0	0	8	106	0	284
7:45-17:50	15	85	0	8	48	11	0	0	0	10	103	0	280
7:50-17:55	12	76	0	14	42	17	0	0	0	9	106	0	276
7:55-18:00	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	.94
% 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



Peak Hour 16:35-17:35
TEV=3800

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

Traffic Smithy
Traffic Survey Service

TIME PERIOD FROM - TO	EAST BOUND			SOUTH BOUND			NORTH 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
6:35-16:40	0	96	14	0	0	0	25	58	10	0	122	10	335
6:40-16:45	0	109	15	0	0	0	16	48	8	4	119	10	329
6:45-16:50	0	92	12	0	0	0	28	65	7	1	100	14	319
6:50-16:55	0	89	8	0	0	0	31	58	5	0	116	9	316
6:55-17:00	0	101	16	0	0	0	22	51	7	0	100	12	309
7:00-17:05	0	81	13	0	0	0	15	62	4	0	90	18	291
7:05-17:10	0	98	21	0	0	0	23	48	4	0	130	7	331
7:10-17:15	0	87	11	0	0	0	26	56	7	0	133	11	331
7:15-17:20	0	94	10	0	0	0	26	62	5	0	130	10	337
7:20-17:25	0	80	9	0	0	0	13	67	4	0	122	11	306
7:25-17:30	0	83	9	0	0	0	24	64	9	0	95	8	292
7:30-17:35	0	76	12	0	0	0	20	58	2	0	127	9	304
7:35-17:40	0	91	9	0	0	0	21	56	6	0	118	15	316
7:40-17:45	0	73	5	0	0	0	20	37	9	0	111	14	269
7:45-17:50	0	101	10	0	0	0	20	44	9	0	125	5	314
7:50-17:55	0	119	12	0	0	0	15	34	8	0	96	6	290
7:55-18:00	0	a3	12	0	0	0	12	41	7	0	110	6	271
otal Survey	0	2185	269	0	0	0	486	1262	173	5	2638	251	7269
HF	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
Stopped Buses			0	0	0	0	0	0	0	0	0	0	
Peds	0 0	21 0	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
6:15-17:15	0	1118	147	0	0	0	266	644	86	5	1340	136	3742
6:30-17:30	0	1092	150	0	0	0	272	697	74	5	1375	127	3792
6:45-17:45	0	1045	135	0	0	0	269	684	69	1	1380	138	3721
7:00-18:00	0	1066	133	0	0	0	235	629	74	0	1395	120	3652

FARMINGTON ROAD AT LOMBARD AVENUE

T= 3.2% P=.857

398 | 383

74 | 217 | 107

DATE OF COUNT: 07/25/96
DAY OF WEEK: Thu
TIME STARTED: 16:00
TIME ENDED: 18:00

147

65 | 177 | 98

470

T= 1.2% P=.894 1340

16:55-17:55
TEV=3638

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	a	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	1.0	.0	1.0	[illegible]	1.[illegible]
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	360'
17:00-18:00	107	1018	58	71	233	107	65	177	100	143	1413	138	3630

T= .4% P=.929

NORTH

383 | 410

131 77 175

←1696 | ←1770

99 | 211

T= 1.2% | 1038→ | 4-1427 | T= 1.3%

P=.939 | P=.961

81 | 7 | 32

41

1218→ | 1419→

138 100 206

290 | 444

[redacted] .4% P=.668 | TEV=3815

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			SOUTH BOUND			NORTH 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	a	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

T= 1.2%
P=.886
0
1025→
400
1425→
1194

←1602
213
T= 1.2%
P=.931

0 0 0
1263→
0
T= 0% P=0.

Peak Hour
16:40-17:40
TEV=4221

TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

Traffic Smithy
Traffic Survey **Service**

IME PERIOD ROM - TO				4J							4—		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

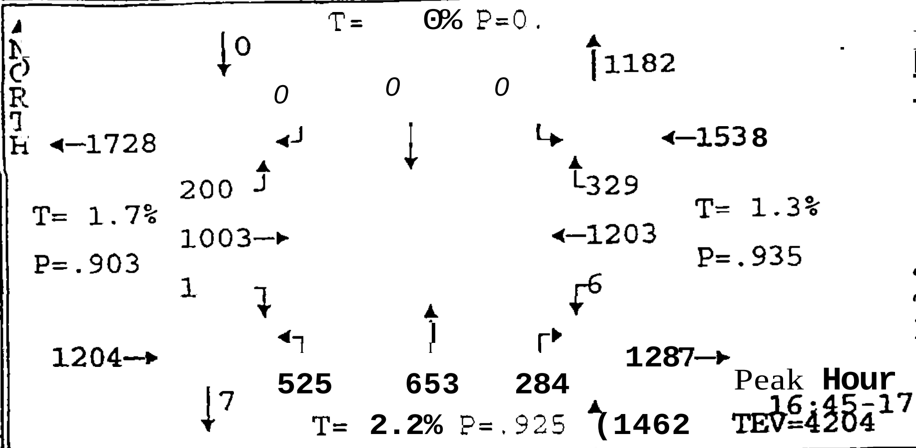
Total Survey	752	1895	0	369	1183	470	0	0	0	389	3027	1	808(
?HF	.85	.88	0	.86	.9	.8	0	0	0	.89	.94	0	.93(
% Trucks	2.1	.8	0	1.4	4.4	3.8	0	0	0	1.3	1.2	0	1.1
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	
Peds	0	0	0	0	0	0	0	0	0	0	0	0	

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

FROM : TRAFFIC SMITHY ... PHONE NO. : ...

INTERS ION TURN MOVEMENT COUNT SUM Y REPORT
HIGHWAY 10 AT HIGHWAY 217 NORTHBOUND RAMPS

11386



Peak Hour
16:45-17:45
TEV=4204

DATE OF COUNT: 07/11/96
DAY OF WEEK: Thu
TIME STARTED: 16:00
TIME ENDED: 18:00

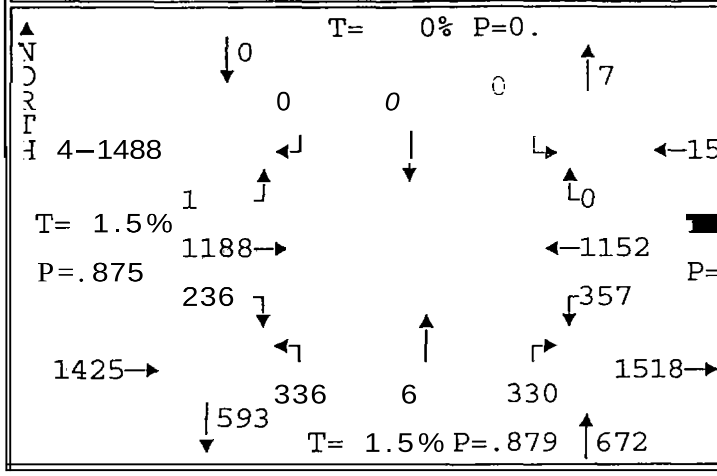
TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

Traffic Smithy
Traffic Survey Service

TIME PERIOD FROM - TO	EAST BOUND			SOUTH BOUND			NORTH 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

Peak Hour
16:55-17:55
TEV=3606

Traffic Smithy
Traffic Survey Service

TIME PERIOD FROM - TO	*EAST* BOUND			SOUTH BOUND			NORTH BOUND			WEST BOUND			ALL
	7	→	↑	↲	↓	↳	↰	↑	↱	↓	←	↑	
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

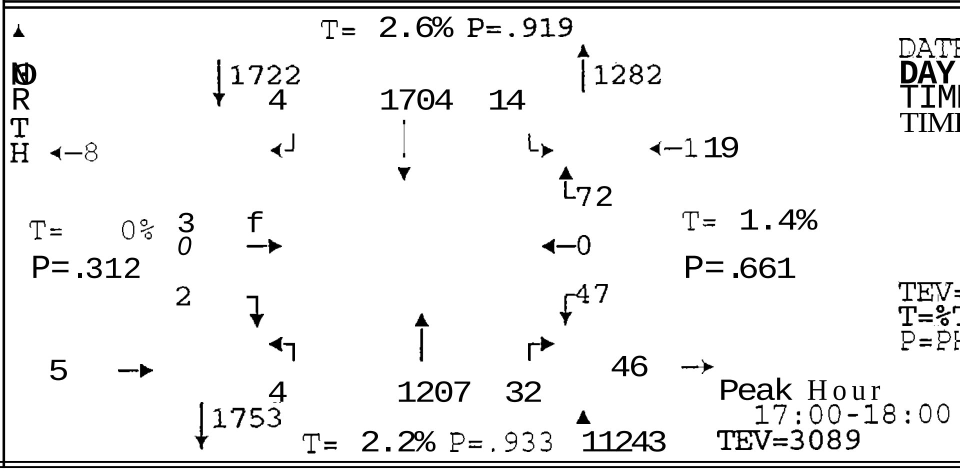
64 | 162 | T= 1.3% P=.823 | 191 | 16:35-17:35 TEV=2973

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
otal Survey	129	2268	55	75	125	349	134	153	98	63	2221	250	592C
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
topped Buses	0	2	0	0	0	0	0	0	0	0	2	0	
eds	0	6	0	0	1	0	0	3	0	0	0	0	
ourly 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



Peak Hour
17:00-18:00
TEV=3089

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 ↴	→	f	SOUTH BOUND ↲	↓	↳	NORTH 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	8	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

N
O
R
T
H

T= 1.4% P=.924

858 ↓ 1 ↑

37 762 59

←250 1 ←267

1 0

T= .8% T= .7%

118 → ←213

P=.613 P=.725

7 54

130 → 177

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

NORTH

T= 0% P=0.

0

939

0 0 0

4-297

409

27

142

T= .9%

P=.824

151

267

T= .7%

P=.751

0

0

T= 1.5% P=.869

831

0

16:35-17:35

TEV=1418

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	i	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	a	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	130[illegible]
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	138[illegible]
17:00-18:00	0	133	27	0	0	0	38	668	26	0	311	110	131[illegible]

INTERSECTION TURN MOVEMENT COUNT SUMMARY REPORT
DAVIS AVENUE AT 155TH AVENUE

12248

NORT

T= 0% P=.642

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 COUNT SUMMARY REPORT
MURRAY BOULEVARD AT ALLEN BOULEVARD (COMPOSITE) 11400

T= 1.8% P=.892

1595 80 1105 410 1308

←310 ←1149

1

67 78

T= .5% T= .9%

65 → ←130

P=.850 P=.892

79 541

7

211 → 708 →

100 763 233

1725 T= 2.1% P=.886 11096

Peak Hour 17:00-18:00 TEV=4051

DAY OF COUNT: TH/16&18/96

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
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	a	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	353[illegible]
16:15-17:15	56	80	48	73	914	391	75	659	244	463	84	507	359[illegible]
16:30-17:30	68	63	48	72	1043	396	86	730	237	487	84	495	380[illegible]
16:45-17:45	76	65	60	82	1044	395	92	735	242	535	109	504	393[illegible]
17:00-18:00	79	65	67	80	1105	410	100	763	233	541	130	478	405[illegible]

HALL BOU ͞EVARD AT ALLEN BOULEVARD (CO OSITE)

NORTH

T= .7% P=.827

924 ↓ 685 ↑

99 690 135

←1336 ←1142

85 79

T= 1.2%

P=.871

564 → ←956

T= .9%

P= a73

156 107

805 → 756 →

281 521 57

953 ↓ 1859 ↑

T= 1.1% P=.954

Peak Hour
17:00-18:00
TEV=3730

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

Traffic Smithy
Traffic Survey Service

TIME PERIOD	EAST BOUND			SOUTH BOUND			NORTH BOUND			WEST BOUND			
ROM - TO	↓	→	↑	↲	↓	↳	↰	↑	↱	↓	←	↑	ALL
5:00-16:05	7	44	9	10	33	10	13	29	3	9	69	11	247
5:05-16:10	13	45	14	5	38	7	26	59	6	9	49	3	274
5:10-16:15	9	42	10	5	36	11	20	54	5	12	69	10	283
5:15-16:20	14	54	8	5	50	17	24	64	6	4	54	10	310
5:20-16:25	13	43	3	4	36	9	18	48	8	14	77	6	279
5:25-16:30	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	a	19	56	5	12	60	6	268
16:40-16:45	11	53	9	9	34	5	29	47	a	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
7:05-17:10	13	42	11	18	85	14	18	41	4	7	60	6	319
7:10-17:15	15	52	5	7	42	9	33	45	4	11	93	9	325
7:15-17:20	5	56	10	4	83	17	16	48	2	a	73	9	331
7:20-17:25	16	46	4	6	42	3	24	51	2	10	82	6	292
7:25-17:30	14	28	4	12	77	18	19	37	7	8	70	2	296
7:30-17:35	13	55	4	5	43	13	22	45	8	10	99	6	323
7:35-17:40	14	37	14	9	65	16	31	43	5	9	77	6	326
7:40-17:45	13	43	6	6	36	8	27	39	5	11	104	5	303
7:45-17:50	8	60	5	13	87	12	23	46	0	13	57	7	331
7:50-17:55	20	55	9	6	38	8	27	38	6	8	93	5	313
7:55-18:00	14	50	10	10	68	13	21	42	8	6	72	8	322
otal Survey	288	1121	183	185	1180	253	511	1070	114	222	1739	175	7041
HF	.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	
eds	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	340(
16:30-17:30	138	557	86	101	609	119	246	544	52	106	858	89	350(
16:45-17:45	144	547	86	98	634	136	260	531	53	104	917	80	359(
17:00-18:00	156	564	85	99	690	135	281	521	57	107	956	79	373(

N O R T H

T= 1% P=.923

432 ↓ 294 ↑

106 221 105

←1193 ↲ **1** ↳ ←1191

95 ⤴ ↰ 82

T= 1.5% T= .7%

590 → ←1038

P=.953 P=.850

55 ↴ ↱ 71

↰ ↑ ↱

740 → 740 →

49 117 45

347 ↓ ↑ 211

T= .7% P=.837

Peak Hour 16:55-17:55

TEV=2574

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

Traffic Smithy
Traffic Survey Service

IME PERIOD OM - 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	.0	2.0	0	.0	.0	
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 217 SOUTHBOUND RAMPS (COMPOSITE)

NORTH

716 | T= 2.6% P=.840 | 0

395 6 315

1353 | 1 | 1272

0 | 0

T= 1.9% P=.920 | 542 | 4-958 | T= 1.5% P=.807

239 | 7 | 314

781 | 857

0 0 0

559 | T= 0% P=0. | 0

Peak Hour 17:00-18:00 TEV=2769

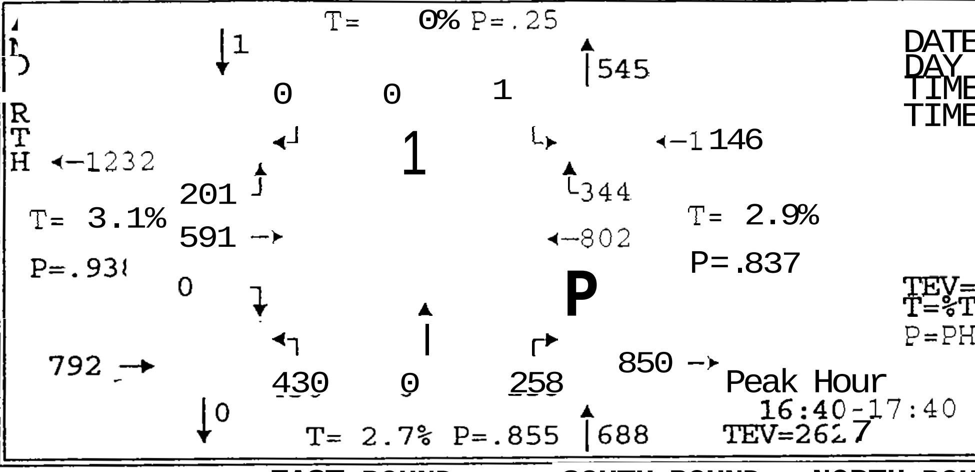
DATE OF COUNT: 08/1&6/96
DAY OF WEEK: TH+TU
TIME STARTED: 16:00
TIME ENDED: 18:00

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 ↓	4—	A L	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

Traffic Smithy
Traffic Survey Service

TIME PERIOD FROM - TO	EAST BOUND			SOUTH BOUND			NORTH 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

:00-16:05	0	41	16	20	0	22	0	0	0	0	35	13	147
:05-16:10	0	41	22	25	0	18	0	0	0	0	69	17	192
:10-16:15	0	43	21	33	0	27	0	0	0	0	46	14	184
:15-16:20	0	52	20	23	0	24	0	0	0	0	54	24	197
:20-16:25	0	47	27	22	0	21	0	0	0	0	24	17	158
:25-16:30	0	54	13	16	0	25	0	0	0	0	44	13	165
:30-16:35	0	63	13	27	0	28	0	0	0	0	46	20	197
:35-16:40	0	59	27	33	0	22	0	0	0	0	57	27	225
:40-16:45	0	36	24	42	0	27	0	0	0	0	40	16	185
:45-16:50	0	38	21	26	0	29	0	0	0	0	55	16	185
:50-16:55	0	40	27	25	0	15	0	0	0	0	48	13	168
: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	2296
6:30-17:30	0	575	223	363	0	339	0	0	0	0	623	230	235:
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

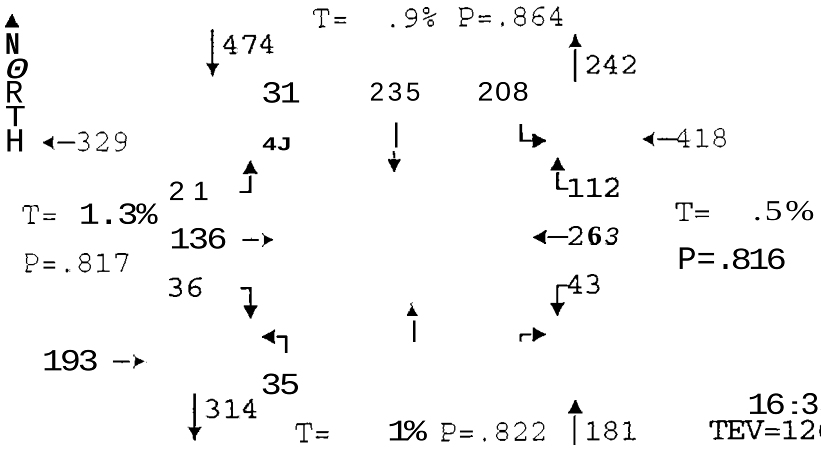
						↳	↰	↑					
16:00-16:05	2	27	9	6	49	18	2	28	4	9	45	23	222
16:05-16:10	2	36	6	5	61	11	0	32	11	11	41	27	243
16:10-16:15	2	31	5	3	66	15	1	53	12	15	42	25	270
16:15-16:20	3	29	6	3	68	15	1	43	13	9	28	22	240
16:20-16:25	3	32	16	8	47	10	2	34	12	10	44	29	247
16:25-16:30	0	30	16	4	58	12	2	31	17	19	52	14	255
16:30-16:35	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

Traffic Smithy
Traffic Survey Service

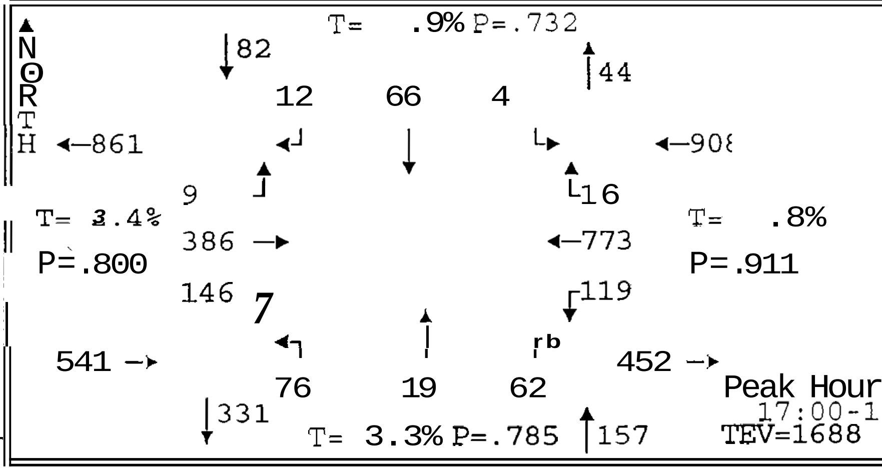
IME PERIOD ROM - TO	EAST BOUND ↴	→	↱	SOUTH BOUND ↲	↓	↳	NORTH BOUND ↰	↑	↱	WEST BOUND ↓	←	↑	ALL
6:00-16:05	1	19	3	0	14	9	3	10	3	3	17	10	92
6:05-16:10	2	17	2	4	17	6	1	14	6	3	16	14	102
6:10-16:15	2	15	2	1	13	19	3	9	7	2	25	9	107
6:15-16:20	C	13	1	1	20	15	4	8	5	3	24	17	111
6:20-16:25	0	18	1	3	20	20	5	13	4	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

otal Survey	59	279	37	60	418	376	74	227	85	86	484	235	242C
HF	a2	.77	.58	.65	.79	.83	.63	.83	.54	.83	.76	.76	.912
Trucks	1.7	1.1	2.7	0	1.7	.3	0	1.8	0	1.2	.4	.4	.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	

ourly 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	122'
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

12250



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

NORTH

T= 1.2% P=.898

1444 ↓ ↑ 998

336 1079 29

←929 ←496

156 45

T= 1.5% T= .2%

102 → ←388

P=.828 P=.873

166 63

424 → 150 →

205 797 19

1308 ↓ ↑ 1021

T= 1.5% P=.862

Peak Hour
17:00-18:00
TEV=3385

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

Traffic Smithy
Traffic Survey Service

IME PERIOD ROM - TO	EAST BOUND ↓	→	↑	SOUTH BOUND ↲	↓	↳	NORTH 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
'otal Survey	297	241	349	599	1948	68	338	1484	42	104	671	110	6251
'HF	.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
'topped Buses	0	0	0	0	4	0	0	2	0	0	0		
'eds	0	0	0	0	0	0	0	1	0	0	1	0	
Iourly Totals													
I6:00-17:00	131	139	193	263	869	39	133	687	23	41	283	65	2866
I6:15-17:15	133	126	164	282	926	40	152	691	20	42	323	69	296E
L6:30-17:30	135	112	160	314	1017	38	165	744	14	59	358	67	3183
I6:45-17:45	138	103	151	319	1045	33	178	817	20	57	372	50	3283
I7:00-18:00	166	102	156	336	1079	29	205	797	19	63	388	45	338E

INTERSECTION TURN MOVEMENT COUNT SUMMARY REPORT
HART ROAD AT SORRENTO ROAD

NORTH

T= 0% P=0.

DATE OF COUNT: 01/24/96
DAY OF WEEK: Wed
TIME STARTED: 16:00
TIME ENDED: 18:00

4-550 ↵ ↓ ↳ 4-766

0 f ↑ 0

T= .5% T= .1%

179 → ← 458

P=.876 P=.916

154 7 ↓ 308

↰ ↑ ↱

333 → 326 →

↓ 462

T= .7% P=.694 ↑ 1239

16:55-17:55
TEV=1338

TEV-TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

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

1914

NORTH

T= .6% P=.907

1507 1257

565 942 0

837 0

284

T= .9% 0 0 T= 0%

P=.912 0 P=0.

132 0

416 0

272 973 0

1074 T= 1.1% P=.843 1245

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
TEV=3168

Traffic Smithy
Traffic Survey Service

TIME PERIOD FROM - TO	EAST BOUND ↴	EAST BOUND →	EAST BOUND ↰	SOUTHBOUND ↲	SOUTHBOUND ↓	SOUTHBOUND ↳	NORTH BOUND ↰	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	245
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	.920
% Trucks	0	0	1.4	.1	[illegible]	0	.4	1.3	0	0	0	0	.8
Stopped Buses	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
16:15-17:15	90	0	244	518	809	0	253	931	0	0	0	0	284
16:30-17:30	100	0	255	545	849	0	283	986	0	0	0	0	301
16:45-17:45	112	0	271	558	939	0	263	976	0	0		0	311
17:00-18:00	136	0	282	572	936	0	279	939	0	0	0	0	314

INTERSECTION TURN MOVEMENT COUNT SUMMARY REPORT
DENNY ROAD AT HALL BOULEVARD

1594 T= 1.4% P=.882 11444 16:35-17:35 TEV=3384

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	.92[illegible]
% Trucks	0	0	0	0	.8	.7	0	.9	2.3	.1	0	.2	.[illegible]
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	294[illegible]
16:15-17:15	0	0	0	0	907	132	0	880	425	581	0	204	312[illegible]
16:30-17:30	0	0	0	0	995	136	0	962	452	593	0	209	334[illegible]
16:45-17:45	0	0	0	0	1007	139	1	945	455	587	0	214	3341
17:00-18:00	0	0	0	0	973	140	1	919	444	584	1	226	328[illegible]

INTERSECTION TURN MOVEMENT COUNT SUMMARY REPORT
DENNEY ROAD AT HIGHWAY 217 SOUTHBOUND RAMPS 12229

N
O
R
T
H

T= 3% P=.815

359 | 2

279 5 75

871 700

2 f

T= 3.9%
P=.908

528 | 592

171 7 | 108

T= 1.4%
P=.879

701 | 603

0 0 0

284 | 0

T= 0% P=0.

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	a	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	164C
16:15-17:15	172	540	1	269			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	a	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

NORTH

T= 0% P=0.

0

400

0 0 0

←691

4-595

290

T= 3.1%
P=.897

312 →

1

603 →

203

2

T= .6% P=.841

340

16:25-17:25
TEV=1538

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	8	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	2920
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	1539
17:00-18:00	1	272	271	0	0	0	228	5	143	1	495	103	1519

INTERSECTION TURN MOVEMENT COUNT SUMMARY REPORT
DENNEY ROAD AT SCHOLLS FERRY ROAD

NORTH

T= 1.6% P=.971

1150 799

305 843 2

DATE OF COUNT: 12/12/96
DAY OF WEEK: Thu
TIME STARTED: 16:00
TIME ENDED: 18:00

134 588 1

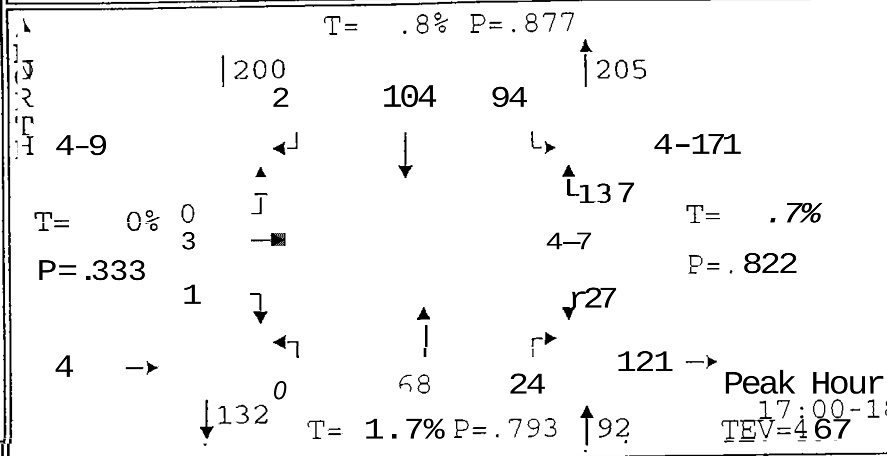
959 T= 1.6% P=.956 I723

16:25-17:25
TEV=2210

Traffic **Smithy**
Traffic Survey Service

TIME PERIOD FROM - TO	EAST BOUND			SOUTH BOUND			NORTH 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	.979
% 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



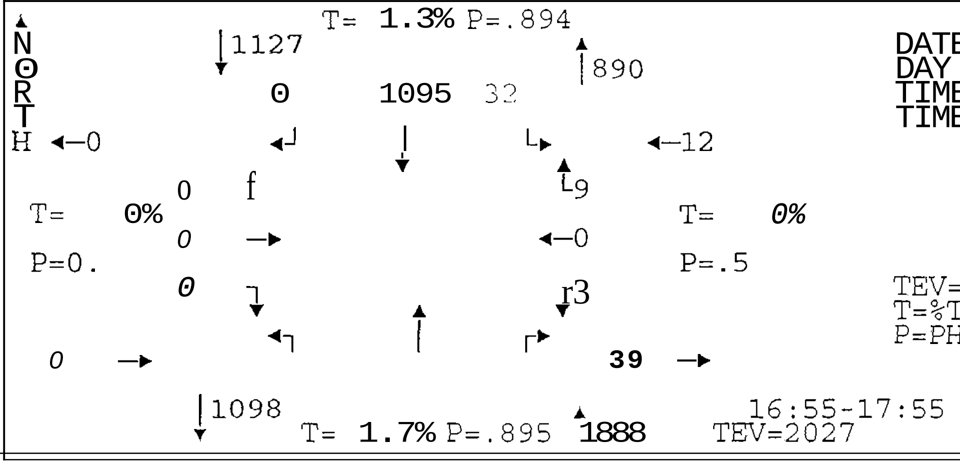
DATE OF COUNT: 01/31/96
DAY OF WEEK: Wed
TIME STARTED: 16:00
TIME ENDED: 18:00

TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

Traffic Smithy
Traffic Survey Service

TIME PERIOD FROM - TO	EAST BOUND			SOUTH BOUND			NORTH 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

Traffic Smithy
Traffic Survey Service

TIME PERIOD FROM - TO	EAST BOUND			SOUTH BOUND			NORTH BOUND			WEST BOUND			ALL
	↓	→	↑	4J	↓	L▸	◂┐	↑	┌▸	↓	4—	↑	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	10'73	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

NORTH

T= 1.4% P=.921

1069 ↓ ↑ 894

48 899 122

←281 ←369

24 102

T= 3.8% 83 → ←168 T= 2.2%

P=.875 54 99 P=.809

161 → 244 →

65 768 39

11052 T= 2.2% P=.931 1872

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
TEV=2471

Traffic Smithy
Traffic Survey Service

TIME PERIOD FROM - TO	EAST BOUND			SOUTH BOUND			NORTH 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

231

0

T= 0% P=0.

0

17:00-18:00
TEV=1444

Traffic Smithy
Traffic Survey Service

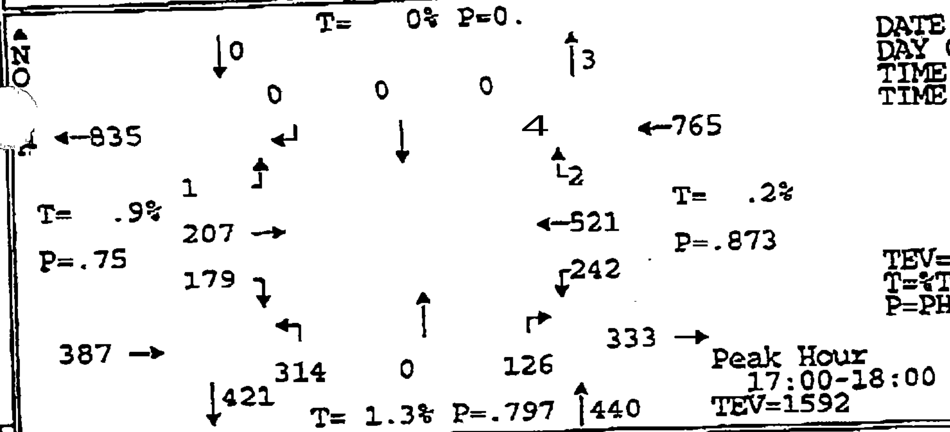
T:
FI

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
: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

Traffic Smithy
Traffic Survey Service

TIME PERIOD FROM - TO	EAST BOUND ↴	→	↰	SOUTH BOUND ↲	↓	↳	NORTH 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	a	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	16[illegible]
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	0	.6	0	0	.6
Stopped Buses	0	1	0	0	0	0	0	0	0	1	1	0	
Peds	0	9	0	0	0	0	0	2s	0				
Hourly Totals 16:00-17:00	129	174	0	0	0	6	179	0	84	154	349	5	1080
16:15-17:15	144	160	1	0	0	6	190	0	84	159	370	5	1119
16:30-17:30	145	166	1	0	0	0	248	0	106	201	449	4	1320
16:45-17:45	164	171	1	0	0	0	272	0	112	235	461	2	1418
17:00-18:00	179	207	1	0	0	0	314	0	126	242	521	2	1592

INTERSECTION TURN MOVEMENT COUNT SUMMARY REPORT
HALL BOULEVARD AT GREENWAY

11916

T= 0% P=.666

NO

56 ↓ 56 ↑

4 46 6

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

T: FI			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	.68	.91
% Trucks	.2	1.5	0	0	0	0	1	0	1.0	.0	.8	0	
Stopped Buses	0	6	0	0	0	0	0	0					
Peds	0	36	2	0	8	0	1	29	0	0	19	1	
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	313
16:45-17:45	489	550	5	4	37	5	257	0	220	573	1076	40	325
				4	50	5	263	1	222	582	1093	53	33[illegible]

INTERSECTION TURN MOVEMENT COUNT SUMMARY REPORT
HALL BOULEVARD AT NIMBUS AVENUE

12263

T= 2.5% P=.784

502 | 195

158 109 235

←1711 | 1 | ←1522

33 | 100

T= 1.5% | T= 1%

696 → | ←1181

P=.934 | P=.934

164 | 241

rb

514 | 1783

T= .9% P=.877

16:30-17:30
TEV=3700

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

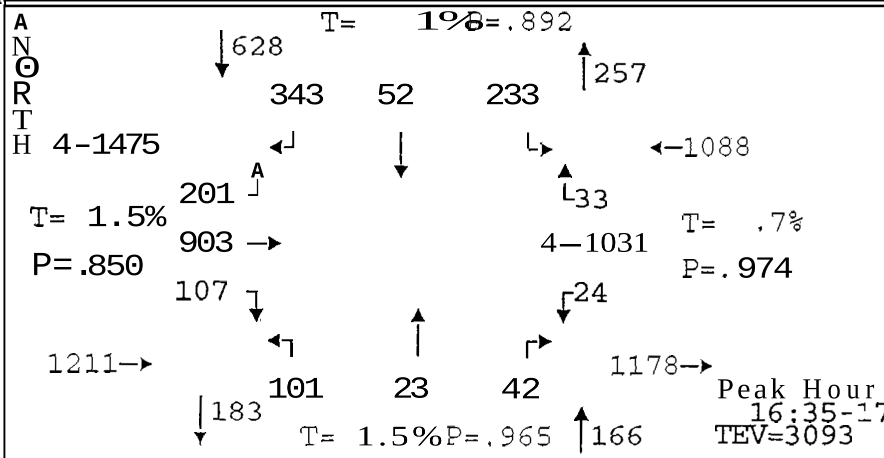
Traffic Smithy
Traffic Survey Service

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	5	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

Peak Hour
16:35-17:35
TEV=3093

Traffic Smithy
Traffic Survey Service

TIME PERIOD FROM - TO	EAST BOUND			SOUTH BOUND			NORTH 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

NORTH

T= 2% P=.808
741 (southbound exit) 729 (southbound entry)
66 445 230

1016 (westbound exit) 1122 (westbound entry)

T= 1.1% P=.943
152
748
206
1106

168
658
296
T= 1.6% P=.904
1230

292 409 252
947 T= .8% P=.956 953

Peak Hour 16:45-17:45
TEV=3922

DATE OF COUNT: 11/20/96
DAY OF WEEK: Wed
TIME STARTED: 16:00
TIME ENDED: 18:00

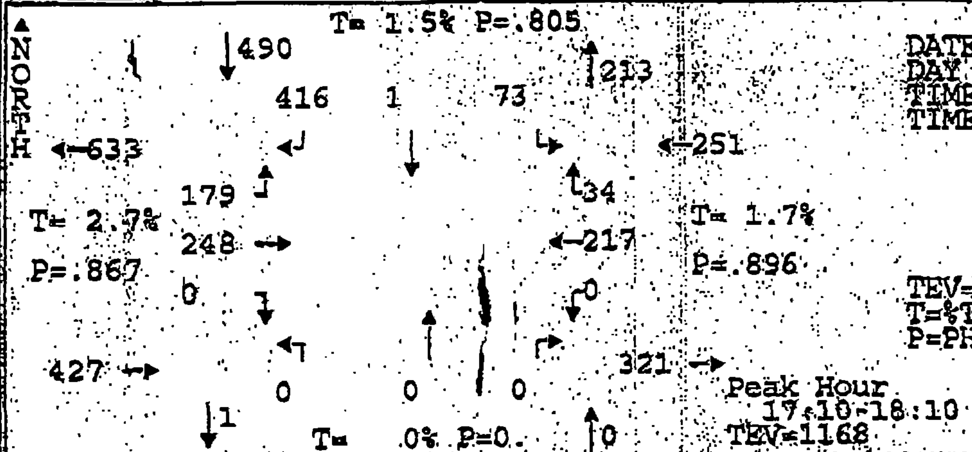
TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

Traffic Smithy
Traffic Survey Service

TIME PERIOD FROM - TO	EAST BOUND			SOUTH BOUND			NORTH 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

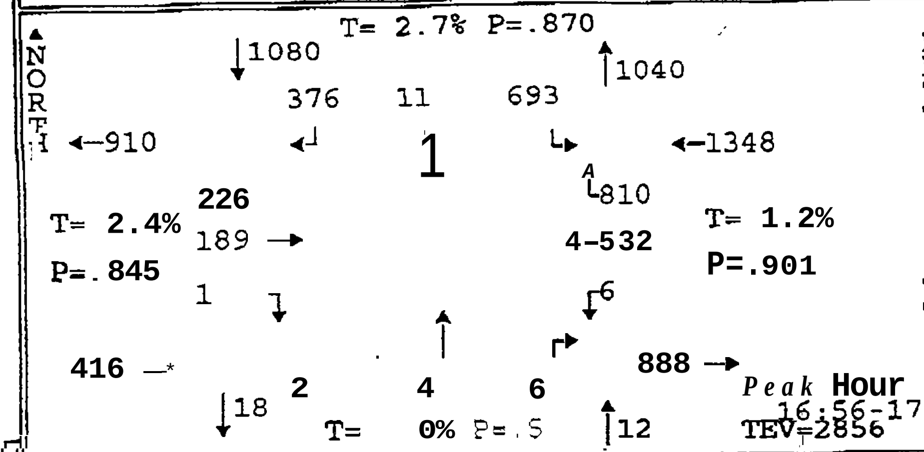
Traffic Smithy
Traffic Survey Service

TIME PERIOD FROM - TO	EAST BOUND			SOUTH BOUND			NORTH BOUND			WEST BOUND			ALL
16:30-16:35	0	11	21	22	0	2	0	0	0	0	16	1	73
16:35-16:40	0	16	10	27	0	1	0	0	0	0	23	2	79
16:40-16:45	0	11	19	43	0	2	0	0	0	0	17	3	95
16:45-16:50	0	18	10	38	0	2	0	0	0	0	21	2	91
16:50-16:55	0	12	16	37	0	5	0	0	0	0	19	1	90
16:55-17:00	0	15	9	23	0	4	0	0	0	0	16	2	69
17:00-17:05	0	19	12	31	0	3	0	0	0	0	8	1	74
17:05-17:10	0	18	11	22	0	2	0	0	0	0	25	1	79
17:10-17:15	0	23	11	48	0	3	0	0	0	0	21	3	109
17:15-17:20	0	17	13	41	0	3	0	0	0	0	18	3	95
17:20-17:25	0	14	12	34	0	2	0	0	0	0	17	1	80
17:25-17:30	0	20	15	54	0	13	0	0	0	0	22	4	128
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	19	1	89
17:45-17:50	0	22	10	38	1	10	0	0	0	0	14	1	96
17:50-17:55	0	24	7	23	0	9	0	0	0	0	23	5	91
17:55-18:00	0	23	24	26	0	3	0	0	0	0	16	5	97
18:00-18:05	0	16	16	26	0	6	0	0	0	0	19	2	85
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	[illegible]
% 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	
Peds	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	26	1115
17:00-18:00	0	236	175	418	1	68	0	0	0	0	219	32	1149
17:15-18:15	0	243	176	398	1	79	0	0	0	0	204	34	1135
17:30-18:30	0	242	172	333	1	74	0	0	0	0	182	38	1042

FROM : TRAFFIC SMITHY PHONE NO. : 5036436666 JUL. 15 1996

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

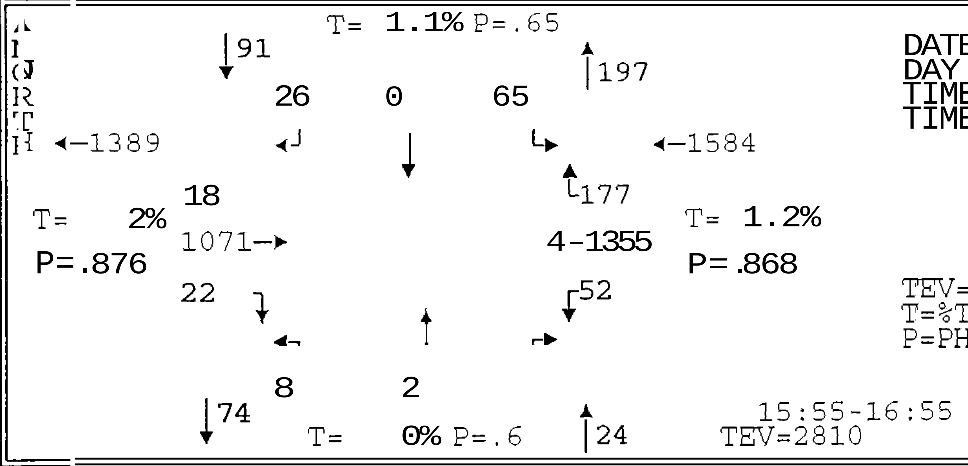
TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

Traffic Smithy
Traffic Survey Service

TIME PERIOD FROM - TO	EAST BOUND			SOUTH BOUND			NORTH 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	SO	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	a	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	2
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	2514
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	2683
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

12318

INTERSECTION TURN MOVEMENT COUNT SUMMARY REPORT
OLD SCHOLLS FERRY ROAD AT DAVIES ROAD



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

Traffic Smithy
Traffic Survey Service

T:
FI

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
16:50-16:55	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.[illegible]
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[illegible]
5:15-16:15	16	967	19	17	1	55	4	0	9	33	1115	141	237[illegible]
5:30-16:30	18	1015	22	20	1	48	6	1	12	36	1168	157	250[illegible]
5:45-16:45	19	1041	18	25	1	63	6	2	15	48	1312	168	271[illegible]
6:00-17:00	21	1027	18	29	0	74	8	2	17	54	1365	180	279[illegible]

S( )LLS FERRY ROAD AT WALNUT ST

NORTH

T= 0% P=0.

0 0 0 | 0 | 1

←451 | 1 | ←356

1 | 0

T= 3.9% | T= 2.9%

P=.765 | P=.864

265 → | 314 ←

86 | 7 | 42

352 → | 297 →

137 0 32

128 | 169

T= 2.4% P=.828

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
TEV=877

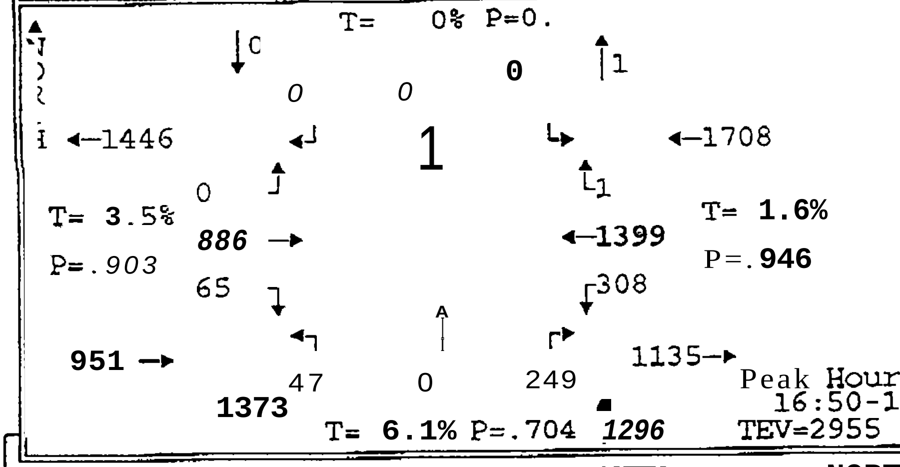
Traffic Smithy
Traffic Survey Service

TIME PERIOD FROM - TO	EAST BOUND			SOUTH BOUND			NORTH BOUND			WEST BOUND			ALL
	7	→	↑	↲	↓	↳	↰	↑	↱	↓	←	↑	
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	72[illegible]
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



Peak Hour
16:50-17:50
TEV=2955

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

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	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

12319

INTERSECTION TURN MOVEMENT COUNT SUMMARY REPORT
SCHOLLS FERRY ROAD AT 125TH AVENUE

NORTH

T= .2% P=.868

448 445

135 154 159

1844 1702

4J

77 162

T= 1.8% T= .9%

900 1446

P=.937 P=.927

66 94

1043 1131

263 206 72

314 541

T= .5% P=.883

Peak Hour
17:00-18:00
TEV=3734

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			SOUTH BOUND			NORTH 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	.a	.75	.79	.81	.89	.7	.72	.76	.93	.86	.939
% Trucks	.a	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

17:00-18:00

TEV=4514

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

T= 1.3% P=.944

N ←

1738 | 2 | 1517 | 219 | 1279

←2 | 1 | ←0

117 | 0

T= .7% | [redacted] 0%

2 → | ←0

P=.789 | P=0.

342 | 0

461 → | 946 →

0 | 1162 | 725

1859 | T= 1.4% P=.914 | 1887

16:20-17:20 TEV=4086

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

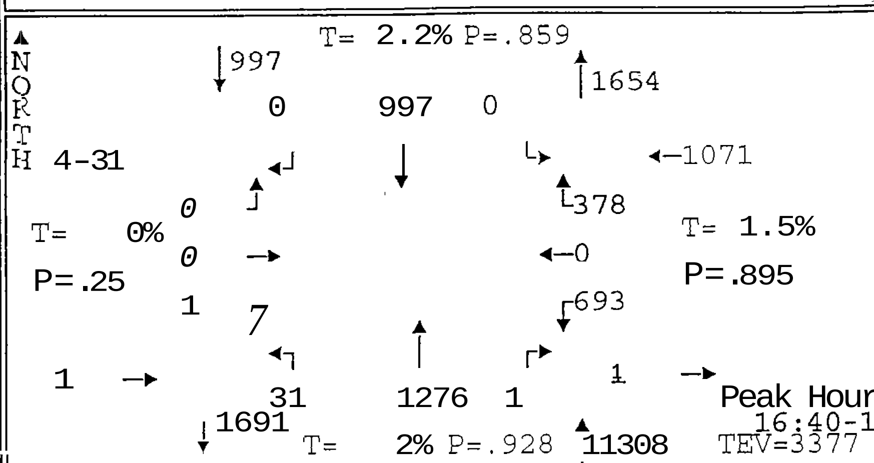
Traffic Smithy
Traffic Survey Service

TIME PERIOD FROM - TO	EAST BOUND			SOUTH BOUND			NORTH 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	3965
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 12232



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

Traffic Smithy
Traffic Survey Service

TIME PERIOD FROM - TO	EAST BOUND			SOUTH BOUND			NORTH BOUND			WEST BOUND			ALL
:00-16:05	0	0	0	0	75	0	0	85	0	51	0	27	238
:05-16:10	0	0	0	0	70	0	0	81	0	46	0	35	232
:10-16:15	0	0	0	0	82	0	0	102	0	44	0	20	248
:15-16:20	0	0	0	0	71	0	0	87	0	47	0	32	237
:20-16:25	0	0	0	0	74	0	0	81	0	56	0	33	244
:25-16:30	0	0	0	0	77	0	0	74	0	54	0	29	234
:30-16:35	0	0	0	0	82	0	0	100	0	45	0	41	268
:35-16:40	0	0	0	0	70	0	0	87	0	56	0	38	251
:40-16:45	0	0	0	0	75	0	0	115	0	48	0	30	268
:45-16:50	0	0	0	0	104	0	28	89	0	67	0	30	318
: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
7:45-17:50	0	0	0	0	68	0	0	104	0	55	0	43	270
7:50-17:55	0	0	0	0	66	0	0	109	0	49	0	45	269
7:55-18:00	0	0	0	0	61	0	0	94	0	40	0	45	240
otal Survey	1	0	0	0	1869	0	31	2385	1	1282	0	795	6364
HF	.25	0	0	0	.86	0	.26	.92	.25	.84	0	.95	.919
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	
ourly Totals													
6:00-17:00	0	0	0	0	966	0	30	1134	0	625	0	383	3138
6:15-17:15	0	0	0	0	995	0	31	1179	1	680	0	393	3279
6:30-17:30	1	0	0	0	1011	0	31	1249	1	685	0	386	3364
6:45-17:45	1	0	0	0	998	0	31	1266	1	691	0	377	3365
7:00-18:00	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
5 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
otal Survey	0	0	0	625	1428	0	754	1541	0	592	660	584	6184
HF	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
topped Buses	0	0	0	0	5	0	0	0	0	0	0	0	
eds	0	4	0	0	8	0	0	3	0	0	6	1	
ourly 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*

Traffic Smithy
Traffic Survey Service

Date: 12/4/96
Day of Week: WEDNESDAY

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
[illegible]-16	88	104	103	101	109	111	99	113	106	122	104	105	1265
[illegible]-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
15-16	109	103	108	136	117	100	106	117	100	117	107	91	1311
16-17	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

Roadway: CANYON ROAD
Location: 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
15-16	114	143	113	126	137	122	134	139	154	120	104	121	1527
16-17	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
[illegible]16	107	139	149	130	136	147	138	115	141	131	140	116	1589
[illegible]-17	138	126	139	133	147	138	122	135	145	117	130	142	1612
[illegible]-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

Roadway: CANYON ROAD
Location: 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

Data Dump

Date

Time

File Name

Observed

TT2

N

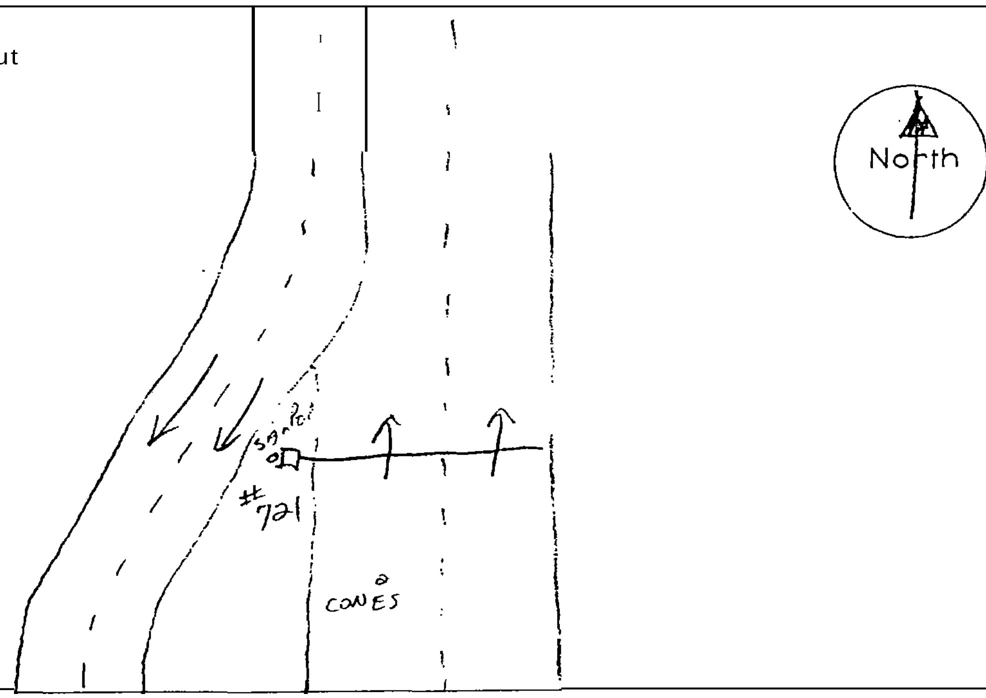
Data Dump

Date

Time

File Name

Sketch Layout



Date

Time

Data Dump

Date

Time

Data Dump

Date 12-6-96

Time 11:26:21

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.
G0-01	1	0	2	3	7	0	4	3	1	2	3	1	27
61-02	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
94-05	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
-16	41	36	49	39	44	41	41	61	35	38	41	41	507
-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	a	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**

ation: At Watson Road Split
Direction: SOUTH BOUND
Cate: 11/14/96
Cay of Week: THURSDAY

Traffic Smithy
Traffic Survey Service

Four cf 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.
	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
28-19	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
1-17	53	63	57	47	59	53	49	51	37	54	78	42	643
i7-18	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
120-21	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
-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	a	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
-16	55	63	55	42	73	58	62	64	58	59	52	55	696
-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
[illegible]-16	73	64	77	60	83	78	78	70	78	67	72	72	872
[illegible]-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
[illegible]-16	SO	56	63	65	61	58	58	63	51	56	62	41	684
5-17	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

Roadway: HART ROAD
Location: 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*

Roadway: HART ROAD
Location: 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
15-16	43	50	42	33	33	44	32	57	54	36	64	46	534
16-17	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

Roadway: HART ROAD
Location: 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	:lo- :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
15-16	41	29	61	26	42	36	38	44	51	47	40	44	499
16-17	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
22-23	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
4-16	25	19	26	28	27	34	33	30	23	28	21	29	323
-17	31	28	34	27	33	24	22	26	41	37	28	23	354
-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
G3-04	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
	5	19	6	3	20	10	8	5	27	29	13	10	155
-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**
Location: 100 Ft West Of Morse Gravel Driveway
Direction: EAST BOUND
Posted Speed: **45** MPH
Weather Condition: Non Rain
Date: **7/11/96**
Day of Week: THURSDAY

Traffic Smithy
Traffic Survey Service

Time of Day	Volume	<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		

P85=85th Percentile

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-

ROADWAY SPEED SURVEY

Roadway: SW SCHOLLS-FERRY ROAD
Location: 125 Ft West Of Morse Gravel Driveway
Direction: WEST BOUND
Weather Condition: Non Rain
Posted Speed: 45 MPH

Date: 7/11/96
Day of Week: THURSDAY

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		

99

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

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	i2	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-I9	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- :OS	: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	I	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	S	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 Nighest 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[illegible]	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

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

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			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 11 0 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%		
% 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.:	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:	****				****		****				****	
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	35	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:	****				****		****				****	
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 0			0 1 0 1 0			0 0 0 1 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			0 1 0 0 0			0 0 0 1 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	[illegible]	[illegible]
Final Sat.:	132	3383	136	0	0	0	233	1291	0	[illegible]	[illegible]	[illegible]
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 1 0	1 0 1 1 0

	NB L	NB T	NB R	SB L	SB T	SB R	EB L	EB T	EB R	WB L	WB T	WB R
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 Include
Rights:	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

	NB L	NB T	NB R	SB L	SB T	SB R	EB L	EB T	EB R	WB L	WB T	WB R
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

	NB L	NB T	NB R	SB L	SB T	SB R	EB L	EB T	EB R	WB L	WB T	WB R
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
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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
Lanes:	1 0 0 1 0	1 0 0 1 0	1 0 2 0 1	1 0 2 0 1

	NB L	NB T	NB R	SB L	SB T	SB R	EB L	EB T	EB R	WB L	WB T	WB R
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 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/ORE 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	1	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:				****			****				****	
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
Existing Traffic Conditions
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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	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:				****			****				****	
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
PM Peak Hour

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):	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:	****						****				****	
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-117th 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:		****		****			****				****	
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/ORE 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/ORE 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 0			1 0 1 1 0			0 0 1 1 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			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 Include		
Rights:	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 1 0 1			1 0 1 0 1		
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			1 0 1 0 0			0 0 0 1 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
Existing Traffic Conditions
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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): 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
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): 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
Existing Traffic Conditions
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): 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 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 Analysis 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
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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			1 0 0 1 0			1 0 0 1 0		
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 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 0.04 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 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 0.77 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  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:        ****        ****              ****                    ****
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  1  0  0  1    1  0  0  1  0    1  0  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:        ****                          ****                    ****
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   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 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 0.97 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  0  1! 0  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 Bse:   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 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:	****						****				****	
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			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	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
                          Existing Traffic Conditions
                                 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):         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   1  0  0  1  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
Existing Traffic Conditions
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):	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			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 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
            1994 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    1  0  0  1  0    1  0  0  1  0
------------|---------------||---------------||---------------||---------------|
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:                         ****       ****
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
                                PM Peak Hour
-------------------------------------------------------------------------------
                      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  0  1  0    0  1  0  0  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
                                     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):        0.773
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       1 0 1 1 0        1 0 2 0 1
------------|---------------||---------------||---------------|---------------|
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
------------|---------------||---------------||---------------|...Protected...|
Control:       Split Phase      Split Phase       Protected
Rights:          Include          Include          Include          Include
Min. Green:    0     0     0    0     0     0    0     0     0    1 00  20 0 00
Lanes:         0 1 0 1 0        0 0 0 0 0        0 0 1 1 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 0 0			1 0 0 0 1			0 1 1 0 0			0 0 2 0 1		
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 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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Beaverton Transportation System Plan
Existing Traffic Conditions
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):	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	999	0	0	0	0	595	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	1.00
Initial Bse:	0	980	464	139	999	0	0	0	0	595	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	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	1055	499	150	1075	0	0	0	0	640	0	223
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	1055	499	150	1075	0	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	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	1108	499	150	1129	0	0	0	0	640	0	223
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	0.29	0.31	0.08	0.30	0.00	0.00	0.00	0.00	0. 5	0.00	0.14
Crit Moves:		****		****						***		
Green/Cycle:	0.00	0.35	0.78	0.10	0.45	0.00	0.00	0.00	0.00	0. 4	0.00	0.53
Volume/Cap:	0.00	0.83	0.40	0.83	0.66	0.00	0.00	0.00	0.00	0. 8	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	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. 0	1.00	1.00
AdjDel/Veh:	0.0	22.5	2.4	46.8	14.4	0.0	0.0	0.0	0.0	22.0	0.0	8.4
Queue:	0	30	5	5	25	0	0	0	0	7	0	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 #205 Denney Road/Hwy 217 SB ramps

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	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	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	75	5	279	0	528	171	108	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	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%			0%			0%			0%	
% Cycle/Cars:	xxxx	xxxx		0.00	0.97		0.00	0.95		0.00	0.93	
% 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	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 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 0 1 0 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	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:	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:	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	0 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
Existing Traffic Conditions
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	0 0	1			
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
PM Peak Hour

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 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 0	1!	0 0	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
Existing Traffic Conditions
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 0 1! 0 0			0 0 1! 0 0			0 0 1! 0 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
PM Peak Hour

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			0 0 0 1 0			0 1 0 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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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	

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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			1 0 0 1 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

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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): 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 1 1 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		

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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 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			0 0 1 0 1			0 1 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 Include		
Rights:	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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Beaverton Transportation System Plan
Existing Traffic Conditions
PM Peak Hour

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		
	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				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			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 0			1 0 1 1 0			0 1 1 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	
% 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
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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):        0.586
Loss Time (sec):       12 (Y+R = 4 sec) Average Delay (sec/veh):      9.6
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        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:      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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                        Existing Traffic Conditions
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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):    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  1! 0  0   1  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
```

Beaverton Transportation System Plan
Existing Traffic Conditions
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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			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		

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 Operations 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 0	0 1 0 0 1	0 0 1 1 1	1 0 2 0 0
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:		**** (R)	**** (T)	**** (L)
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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Beaverton Transportation System Plan
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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 2 0 0	0 0 0 0 0	1 0 0 0 1
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:	**** (T)			**** (L)
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

Beaverton Transportation System Plan
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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	768	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	Base Del/Veh	Base V/C	Future LOS	Future Del/Veh	Future 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	Base Del/Veh	Base V/C	Future LOS	Future Del/Veh	Future 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
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Intersection	Base LOS	Base Del/Veh	Base V/C	Future LOS	Future Del/Veh	Future 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

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Beaverton Transportation System Plan
2015 BASE Traffic Conditions (existing geometry)
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Intersection	Base LOS	Base Del/Veh	Base V/C	Future LOS	Future Del/Veh	Future 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
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Level Of Service Computation Report
1994 HCM Unsignalized Method (Base Volume Alternative)

Intersection #13 Murray Boulevard/6th 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	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
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
				22	2363	13						
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	xxxx	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 Cap.:	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		

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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 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

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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 #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		
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)
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): 0.800
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			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			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

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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 #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	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

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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 #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

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 #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 0			1 0 2 0 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

Beaverton Transportation System Plan
2015 BASE Traffic Conditions (existing geometry)
PM Peak Hour

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 0			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)
                               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):         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   1  0  2  0  0   0  0  1  1  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:            ****                  ****                  ****
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
              2015 BASE Traffic Conditions (existing geometry)
                               PM Peak Hour
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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  1  0  0  1   0  0  1  1  0   1  0  2  0  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  ...
------------|---------------||---------------||---------------||---------------|
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:                            ****       ****        ****
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)
PM Peak Hour

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			0 1 1 0 1			0 0 2 0 1			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)
PM Peak Hour

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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                    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 #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    0    0    13   26    0     0   69    9
********************************************************************************
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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 #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/ORE 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 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

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/ORE 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
Level 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

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 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

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	1 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)
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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 1	0 0	1 0	2 0	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	2865	0845
Final Sat.:	0	0	0	2846	0	657	1787	3762	0			
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)
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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
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

Movement:	L	T	R	L	T	R	L	T	R	L	T	R
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)
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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
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

Movement:	L	T	R	L	T	R	L	T	R	L	T	R
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

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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 #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 1 0			1 0 1 0 1			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

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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 0			1 0 1 0 0			0 0 0 1 0		
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

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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 #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 0 1 0 1			1 0 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

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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 #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 1 0			1 0 1 0 1		
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

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

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 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	0.94	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 Analysis 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  0  0    1  0  0  0  1    1  0  2  0  0    0  0  2  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:                    ****              ****                    ****
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       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  1  0  1  0    0  1  1  0  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:              ****              ****        ****
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			Bast 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 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	10	2	1	38	1	1	1	1	3	1	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 #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  0  1    1  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:                         ****        ****                    ****
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
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....................................................................................
                      Beaverton Transportation System Plan
              2015 BASE Traffic Conditions (existing geometry)
                                 PM Peak Hour
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                      Level Of Service Computation Report
            1994 HCM Operations Method (Base Volume Alternative)
************************************************************************************
Interssction #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    1  0  1  1  0    0  0  2  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:                   ****              ****                    ****
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
************************************************************************************
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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 #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:	****				****		****				****	
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

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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 #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	19'00
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:	****							****		****		
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			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:			****	****			****				****	
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			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

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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 #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:	****				****			****		****		
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 0 1! 0 0			0 0 1! 0 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:		****								****		
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

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 0		
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
In tial 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

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             2015 BASE Traffic Conditions (existing geometry)
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                   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%               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.:     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:xxxxx 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
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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):        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 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 0.95 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
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
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			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 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			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:	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 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	1.74	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 Analysis 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
           2015 BASE Traffic Conditions (existing geometry)
                            PM Peak Hour
.......................................................................
                  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  0  0  1    1  0  0  1  0    1  0  0  1  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)
                            PM Peak Hour
-----------------------------------------------------------------------
                  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  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
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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 #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 0	1!	0 0	1 0	1	1 0	1 0	2	0 1
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

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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 #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 0	0 0	1	1 0	1 0	2	0 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

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 #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 0 0			1 0 0 0 1			0 1 1 0 0			0 0 2 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

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 #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 0			1 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
2015 BASE Traffic Conditions (existing geometry)
PM Peak Hour

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 1 0 0 1			0 0 0 1 0			1 0 1 0 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:	*	*	*	*	*	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	*	*	*	*	*	*	*	*
ApproachDel:	0.0			87.7			0.0			1.7		

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                    Beaverton Transportation System Plan
              2015 BASE Traffic Conditions (existing geometry)
                                PM Peak Hour
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                      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%               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.:      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

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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 #214 Denney Road/Scholls Ferry 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
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  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
*******************************************************************************

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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 #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			1 0 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)
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): 0.932
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	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

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 #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	1 0	1 0	1
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:	****				****		****				****	
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

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 #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 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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Beaverton Transportation System Plan
2015 BASE Traffic Conditions (existing geometry)
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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
Lanes:	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
2015 BASE Traffic Conditions (existing geometry)
PM Peak Hour

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 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	*

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 #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		

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 #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

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                    Beaverton Transportation System Plan
              2015 BASE Traffic Conditions (existing geometry)
                               PM Peak Hour
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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       nest 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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                    Beaverton Transportation System Plan
              2015 BASE Traffic Conditions ,(existing geometry)
                               PM Peak Hour
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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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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 #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	0 0	1	0 0	1!	0 0
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

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 #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	1 1	0	1 0	1 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

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 #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:	****				****		****				****	
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

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 #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 Module:												
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
PCE Adj:	1.00	1.00	1.00	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 Flow 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 Analysis 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:	****				****			****		****		
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 Service 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	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
2015 BASE Traffic Conditions (existing geometry)
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 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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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 #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 0 1 0			1 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			Include		
Lanes:	0 0 0 0 0			0 0 1 1 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	*	F	*	*	*	*	*	*	*
ApproachDel:	xxxxxx			xxxxxx			1.4			0.6		

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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 0			0 1 0 0 1			0 0 1 1 1			1 0 2 0 0		
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 0 2 0 0			0 0 2 0 0			0 0 0 0 0			1 0 0 0 1		
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	Base Del/Veh	Base V/C	Future LOS	Future Del/Veh	Future V/C	Change in
# 1 Murray Blvd/Allen Blvd	D	33.2	0.977	D	33.2	0.977	+ 0.000 D/V
# 13 Murray Boulevard/6th Avenue	C	18.4	0.953	C	18.4	0.953	+ 0.000 D/V
# 22 Hall Blvd/Allen Blvd	E	40.1	0.987	E	40.1	0.987	+ 0.000 D/V
# 23 Allen Blvd/Lombard Ave	D	30.6	0.894	D	30.6	0.894	+ 0.000 D/V
# 26 Watson Ave/5th St	B	7.2	0.657	B	7.2	0.657	+ 0.000 D/V
# 28 Hall Boulevard/5th Avenue	B	9.4	0.763	B	9.4	0.763	+ 0.000 D/V
# 33 Murray Blvd/Farmington Rd	E	51.2	1.049	E	51.2	1.049	+ 0.000 D/V
# 34 Farmington Road/Watson Avenue	D	27.3	0.962	D	27.3	0.962	+ 0.000 D/V
# 35 Farmington/Hall Boulevard	E	58.9	1.102	E	58.9	1.102	+ 0.000 D/V
# 37 Farmington Road/Lombard Avenue	D	32.7	0.965	D	32.7	0.965	+ 0.000 D/V
# 41 Allen Blvd/ORE 217 NB ramps	D	28.8	0.967	D	28.8	0.967	+ 0.000 D/V
# 44 Allen Blvd/ORE 217 SB ramps	D	33.1	0.967	D	33.1	0.967	+ 0.000 D/V
# 53 BH Hwy/ORE 217 SB ramps	C	21.0	0.918	C	21.0	0.918	+ 0.000 D/V
# 54 BH Hwy/Griffith Drive	C	18.0	0.886	C	18.0	0.886	+ 0.000 D/V
# 59 BH Hwy/ORE 217 NB ramps	C	24.3	0.872	C	24.3	0.872	+ 0.000 D/V
# 66 Canyon Road/Broadway-117th Ave	D	27.1	0.916	D	27.1	0.916	+ 0.000 D/V
# 67 Canyon Road/ORE 217 SB ramps	D	29.0	0.928	D	29.0	0.928	+ 0.000 D/V
# 69 Canyon Road/ORE 217 NB ramps	C	24.3	0.863	C	24.3	0.863	+ 0.000 D/V
# 76 Canyon Road/Hall Boulevard	D	34.5	0.993	D	34.5	0.993	+ 0.000 D/V
# 81 Canyon Road/Watson Avenue	D	35.7	1.019	D	35.7	1.019	+ 0.000 D/V
# 86 TV Hwy/Hocken Avenue	D	35.9	0.991	D	35.9	0.991	+ 0.000 D/V
# 87 Farmington Road/Hocken Avenue	D	34.6	0.997	D	34.6	0.997	+ 0.000 D/V
# 90 TV Hwy/Murray Boulevard	E	40.3	1.037	E	40.3	1.037	+ 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	Base Del/Veh	Base V/C	Future LOS	Future Del/Veh	Future V/C	Change in
#101 Hall Blvd/Westgate-Center	D	31.7	0.902	D	31.7	0.902	+ 0.000 D/V
#108 Murray Boulevard/Jenkins Road	E	53.4	1.066	E	53.4	1.066	+ 0.000 D/V
#113 Walker Road/ORE 217 NB ramps	D	32.4	0.947	D	32.4	0.947	+ 0.000 D/V
#117 Walker Road/ORE 217 SB ramps	D	27.3	0.935	D	27.3	0.935	+ 0.000 D/V
#125 Cedar Hills Blvd/Hall Blvd	D	39.8	0.985	D	39.8	0.985	+ 0.000 D/V
#126 Cedar Hills Boulevard/Walker R	E	55.9	1.079	E	55.9	1.079	+ 0.000 D/V
#127 Cedar Hills Boulevard/Jenkins	D	29.2	0.896	D	29.2	0.896	+ 0.000 D/V
#130 Farmington Road/Cedar Hills Bo	D	26.8	0.971	D	26.8	0.971	+ 0.000 D/V
#131 Canyon Road/Cedar Hills Boulev	D	36.3	0.994	D	36.3	0.994	+ 0.000 D/V
#133 Canyon Rd./Fred Meyer Access	D	32.1	0.962	D	32.1	0.962	+ 0.000 D/V
#162 Cedar Hills Blvd/Westgate Driv	B	10.4	0.800	B	10.4	0.800	+ 0.000 D/V
#169 Farmington Road/149th Avenue	B	10.4	0.858	B	10.4	0.858	+ 0.000 D/V
#170 TV Highway/153rd Drive	B	9.7	0.782	B	9.7	0.782	+ 0.000 D/V
#171 TV Highway/160th Avenue-Millik	D	35.1	0.995	D	35.1	0.995	+ 0.000 D/V
#174 Jenkins Road/153rd Drive	C	17.5	0.910	C	17.5	0.910	+ 0.000 D/V
#175 Jenkins Road/158th Avenue	D	30.6	0.881	D	30.6	0.881	+ 0.000 D/V
#176 Farmington Road/170th Avenue	D	39.9	0.983	D	39.9	0.983	+ 0.000 D/V
#177 TV Highway/170th Avenue	E	53.7	1.071	E	53.7	1.071	+ 0.000 D/V
#179 Merlo Road/170th Avenue	C	23.5	0.871	C	23.5	0.871	+ 0.000 D/V
#180 Baseline Road/170th Avenue	E	46.8	0.995	E	46.8	0.995	+ 0.000 D/V
#186 Walker Road/158th Avenue	E	42.5	1.020	E	42.5	1.020	+ 0.000 D/V
#187 Walker Road/167th Avenue	B	10.5	0.602	B	10.5	0.602	+ 0.000 D/V
#188 Walker Road/173rd Avenue	E	51.3	1.034	E	51.3	1.034	+ 0.000 D/V
#191 Cornell Road/158th Avenue	C	20.1	0.858	C	20.1	0.858	+ 0.000 D/V
#192 Walker Road/Murray Boulevard	E	43.2	0.998	E	43.2	0.998	+ 0.000 D/V

Beaverton Transportation System Plan
2015 ENHANCEC Traffic Conditions MITIGATION
PM Peak Hour (phf=0.95 - 1.0)

Intersection	Base LOS	Base Del/ Veh	Base V/ C	Future LOS	Future Del/ Veh	Future 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

Beaverton Transportation System Plan
2015 ENHANCED Traffic Conditions MITIGATION
PM Peak Hour (phf=0.95 - 1.0)

Intersection	Base LOS	Base Del/ Veh	Base V/ C	Future LOS	Future Del/ Veh	Future 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:	****				****			****		****		
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

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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 #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

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:					****						****	
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

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	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:		****									****	
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

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	0.31	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

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:			****				****				****	
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	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:	****				****		****				****	
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 Analysis 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:			****				****				****	
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	1422	1.06	1764	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:						****		****		****		
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 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:						****	****				****	
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 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:		****		****			****				****	
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/ORE 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 2 0 1		
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:	****						tttt				tttt	
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 2 0 1		
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	[illegible]	[illegible]	[illegible]	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:	****				tttt		tttt				tttt	
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/ORE 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 0 0			1 0 1 1 1			0 0 2 0 1			1 0 2 0 0		
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:				****				****		tttt		
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/ORE 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		
	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:			tttt				****				****	
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	12	22	0	0	27	11

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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 #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 0			1 0 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 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	0.87	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:			****					****		****		
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			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	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:						****		****		****		
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

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			1 0 2 1 0		
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

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 0 1			1 0 2 0 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

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

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

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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 #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	0.63	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:		****			****		****				****	
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

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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 #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:		****		****				****				
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 0 1			1 0 1 1 0			1 0 1 1 0		
Volume Module:												
Base Vol:	12	15	25	86	15	85	60	1023	26	25	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	25	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	1900	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			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			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			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:	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	1.47
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:	****				****		****			****		
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

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			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

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			ovl			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 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:	****							****		****		
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	D	0	0	0	0
Lanes:	0 0 1 1 0 0			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 0 1 1 0 0			1 0 1 1 0			1 0 2 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:					****			****		****		
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 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:	****							****		****		
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

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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 #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 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	1 0 0 0 1	1 0 2 0 0	0 0 2 0 1

	NB L	NB T	NB R	SB L	SB T	SB R	EB L	EB T	EB R	WB L	WB T	WB R
Volume Module:												
Base 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

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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 #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 0 1! 0 0	1 0 1 1 0	1 0 1 1 0

	NB L	NB T	NB R	SB L	SB T	SB R	EB L	EB T	EB R	WB L	WB T	WB R
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 1 1 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 1 0 0 1			0 0 0 1 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
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
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

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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 #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:	****			****			****				****	
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

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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 #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	[illegible]	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:	****				****		****					
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/155th 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 0 110 0			1 0 0 1 0		
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

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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 #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 0	1!	0 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

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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 #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	*

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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 #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 1 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

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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 #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 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	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 0	1!	0 0	0 0	1!	0 0	0 0	1!	0 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

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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 #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  0  1!  0  0   1  0  1  1  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 Flow 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  0  1  1  0   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 Flow 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 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	0.98	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 Analysis 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 Service 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

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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 #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: 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	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	2303	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	2303	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	589	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	589	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	3006	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	394	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	394	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

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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 #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 1 0 0			0 0 1 0 1		
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

Corrected table

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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 #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
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
Lanes:	0 0 1! 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

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
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

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
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 Analysis 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

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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 #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			0 1 0 0 1			0 0 1 1 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

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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 #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 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

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

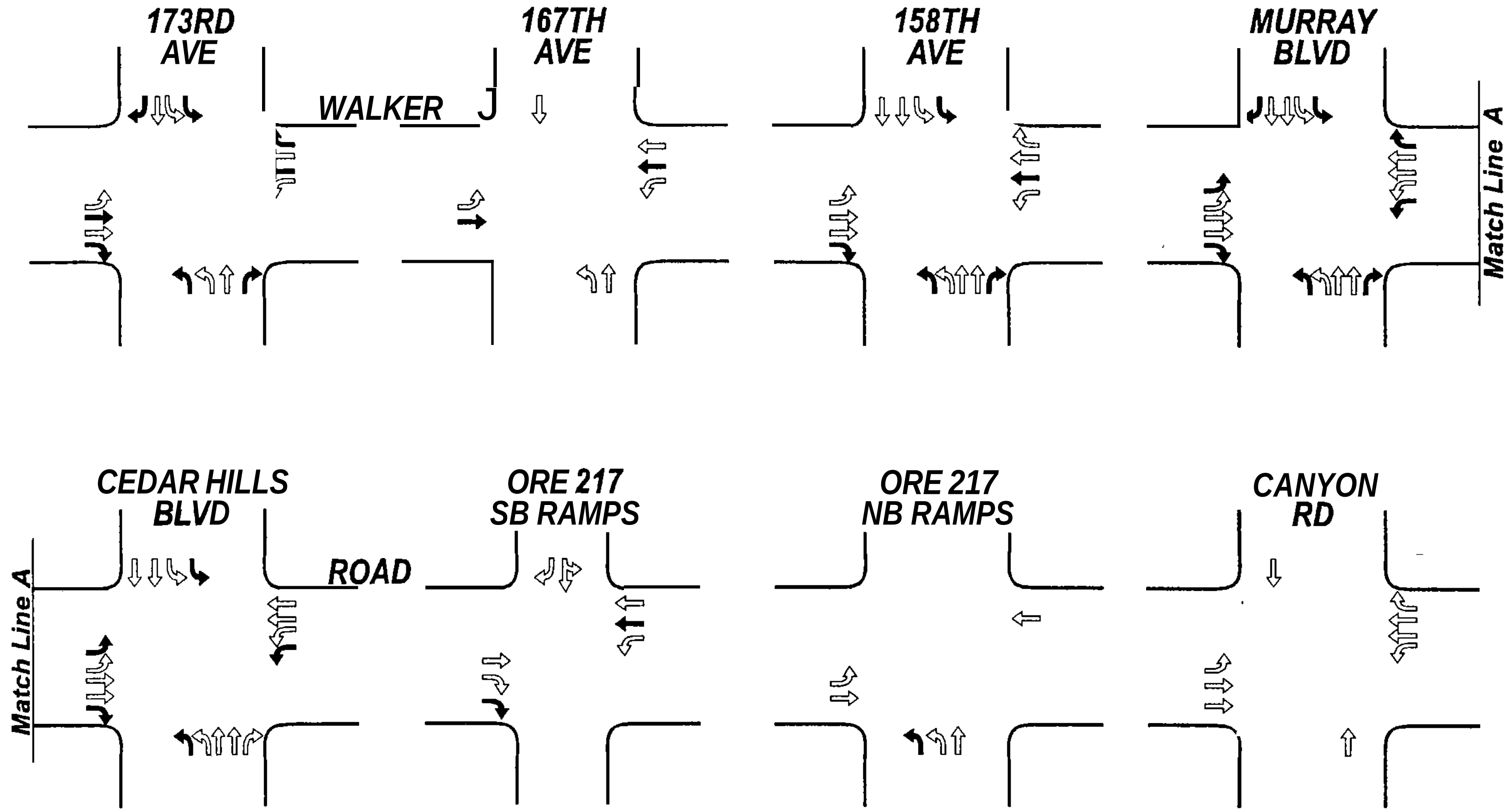
FIGURE A-12
SW Scholls Ferry Rd. East of SW 125th Ave. - Future

APPENDIX H

INTERSECTION IMPROVEMENT GRAPHICS

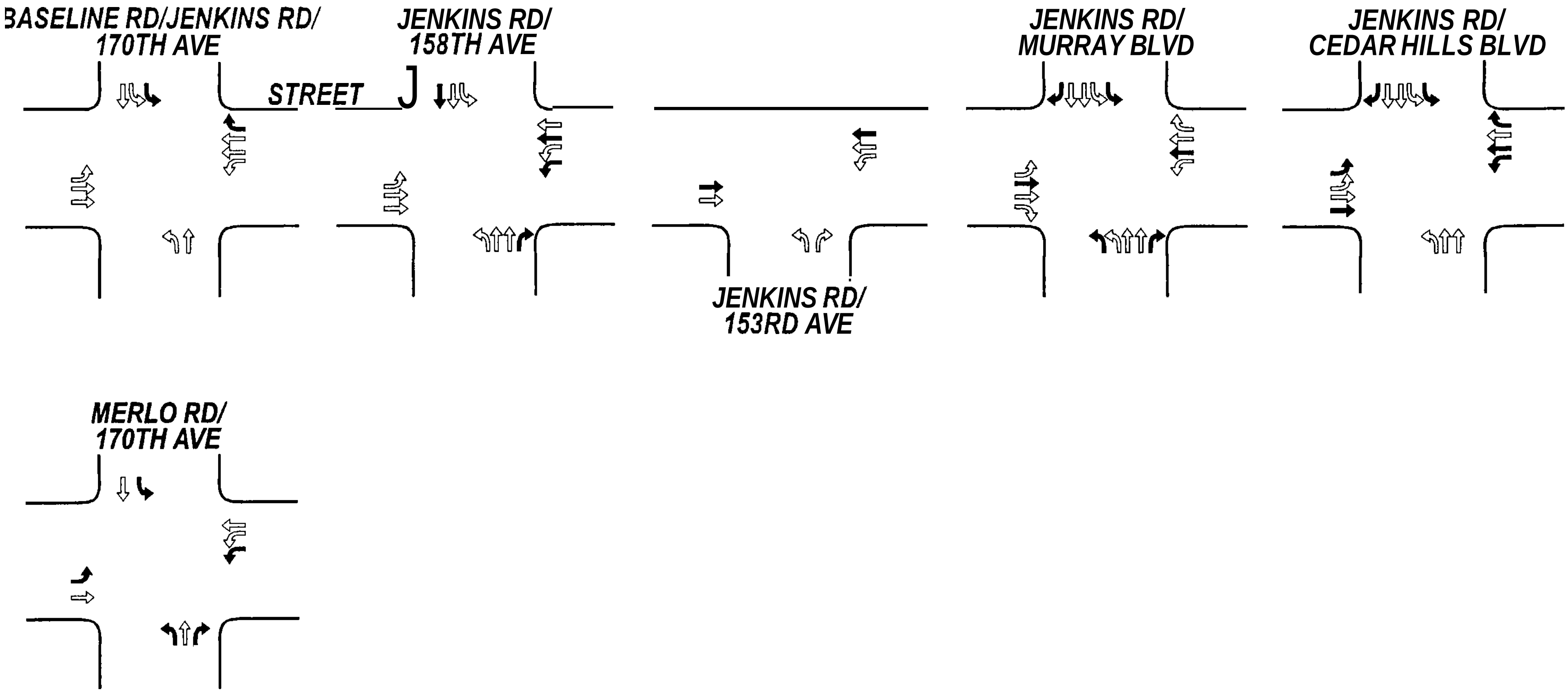
DKS Associates

City of Beaverton
Transportation System Plan



LEGEND
- Existing Lane Configuration
- Proposed Lane Configuration

WALKER ROAD
EXISTING/PROPOSED LANE CONFIGURATION

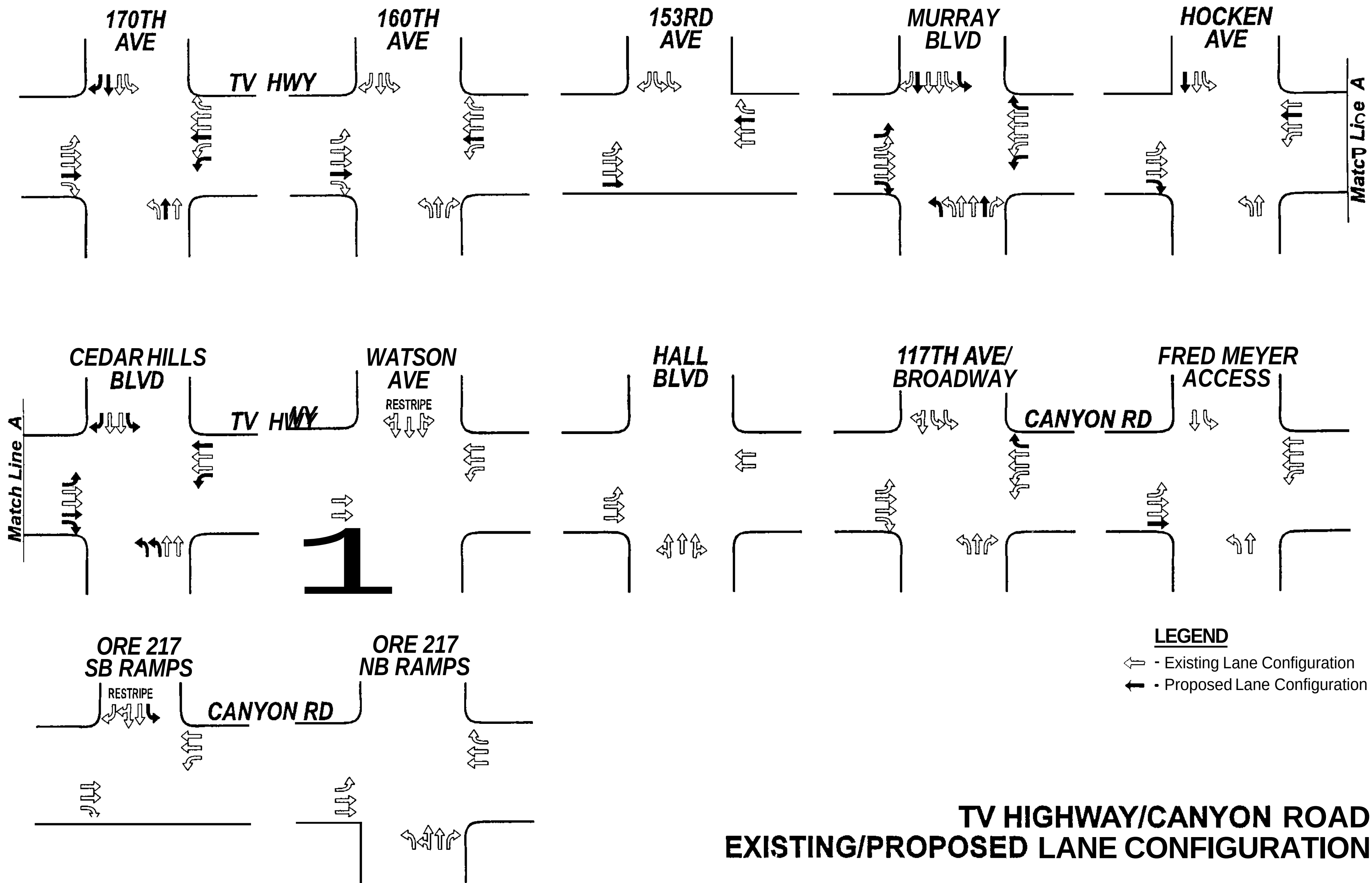


LEGEND

- Existing Lane Configuration
- Proposed Lane Configuration

JENKINS ROAD/MERLO ROAD
EXISTING/PROPOSED LANE CONFIGURATION

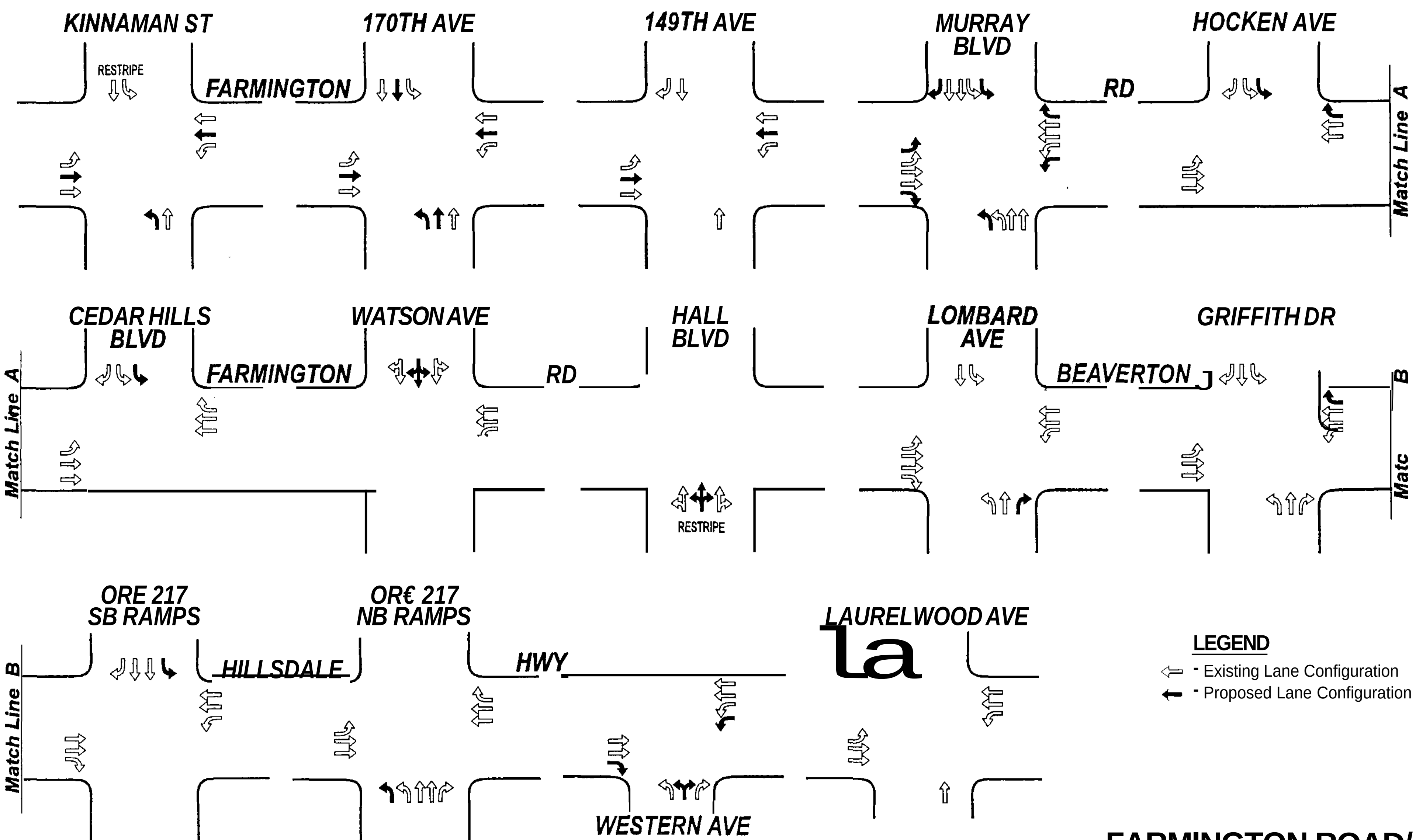
City of Beaverton
Transportation System Plan



TV HIGHWAY/CANYON ROAD
EXISTING/PROPOSED LANE CONFIGURATION

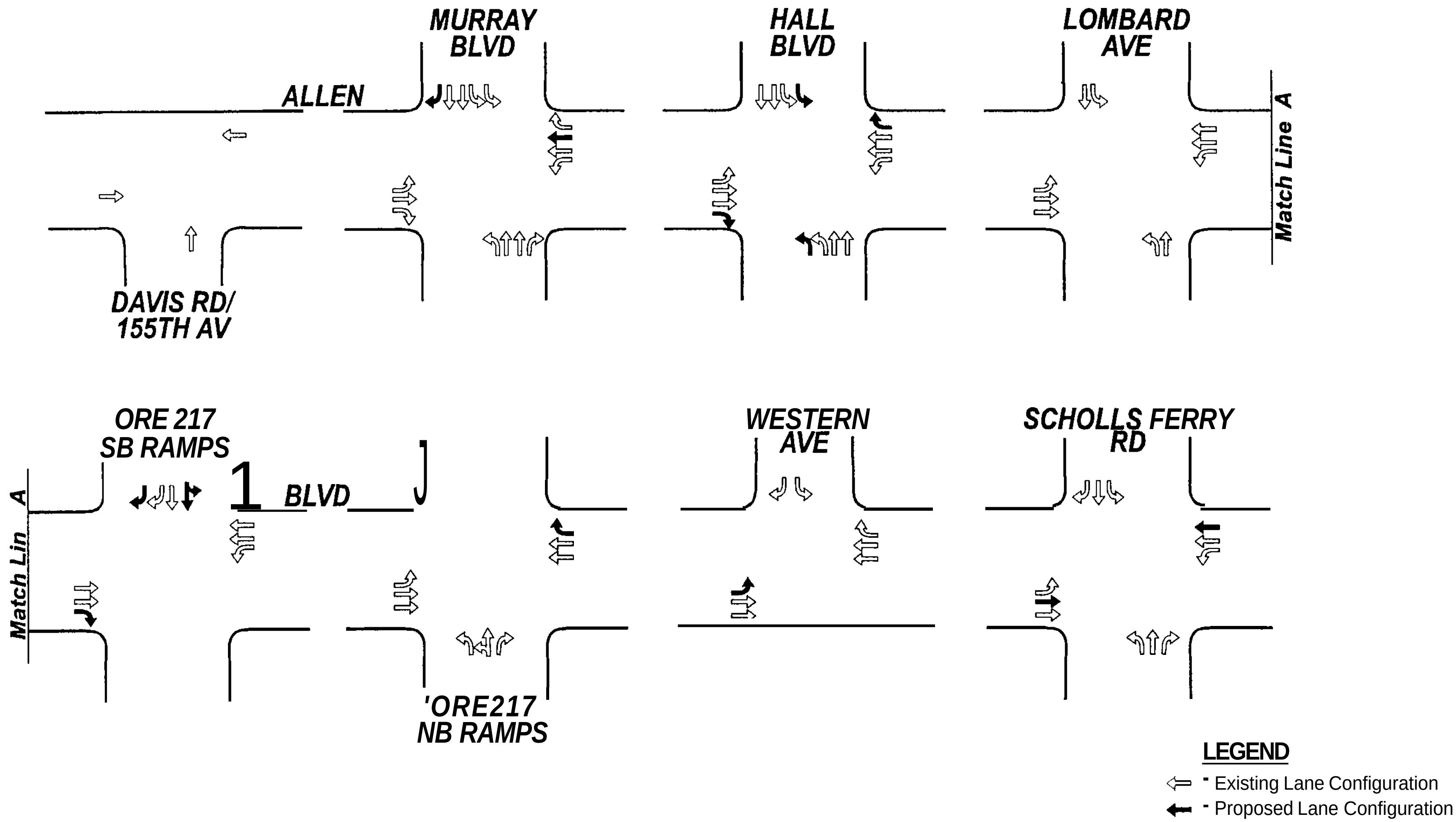
DKS Associates

City of Beaverton
Transportation System Plan



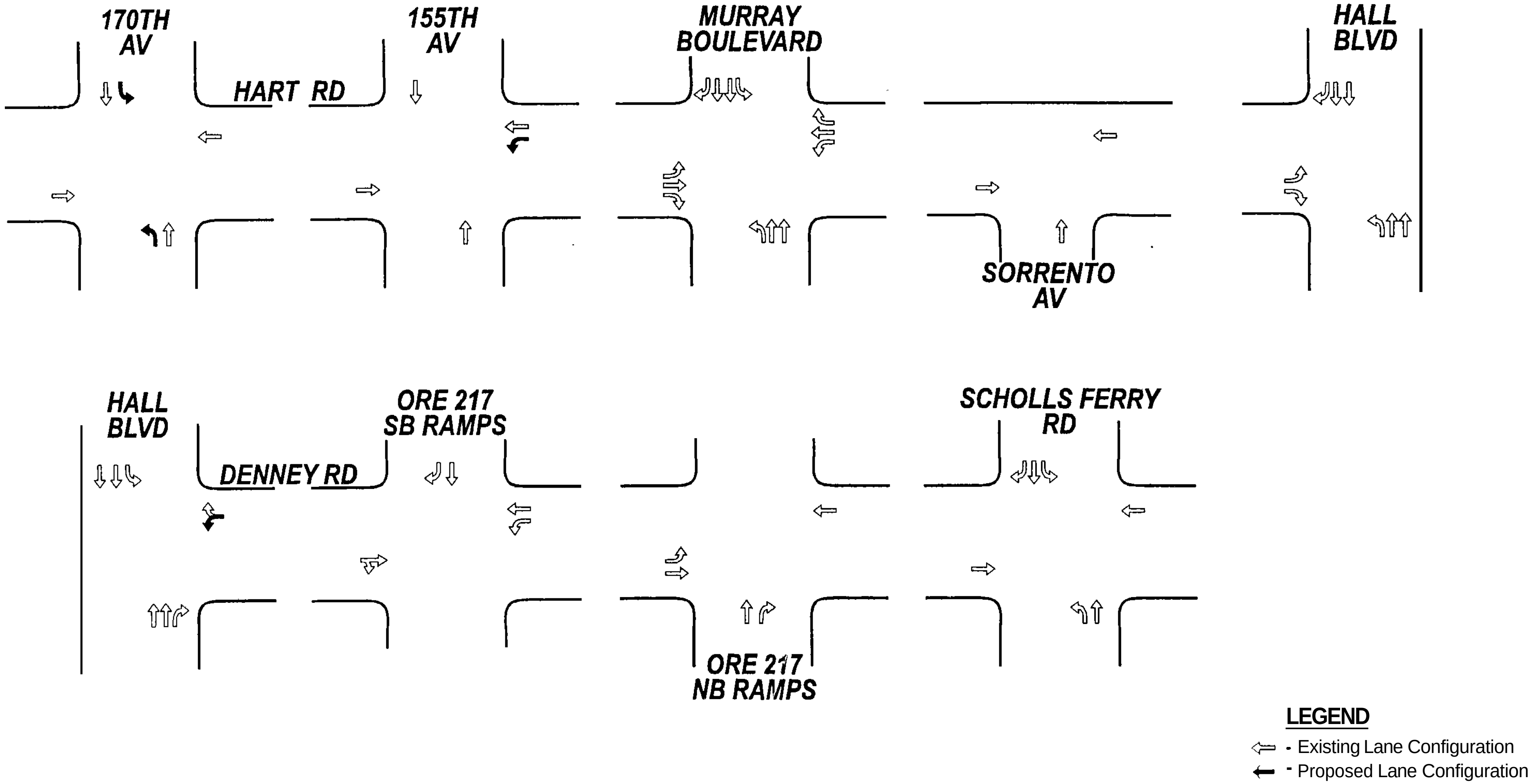
FARMINGTON ROAD/
BEAVERTON HILLSDALE HWY.
EXISTING/PROPOSED LANE CONFIGURATION

City of Beaverton
Transportation System Plan



ALLEN BOULEVARD EXISTING/PROPOSED LANE CONFIGURATION

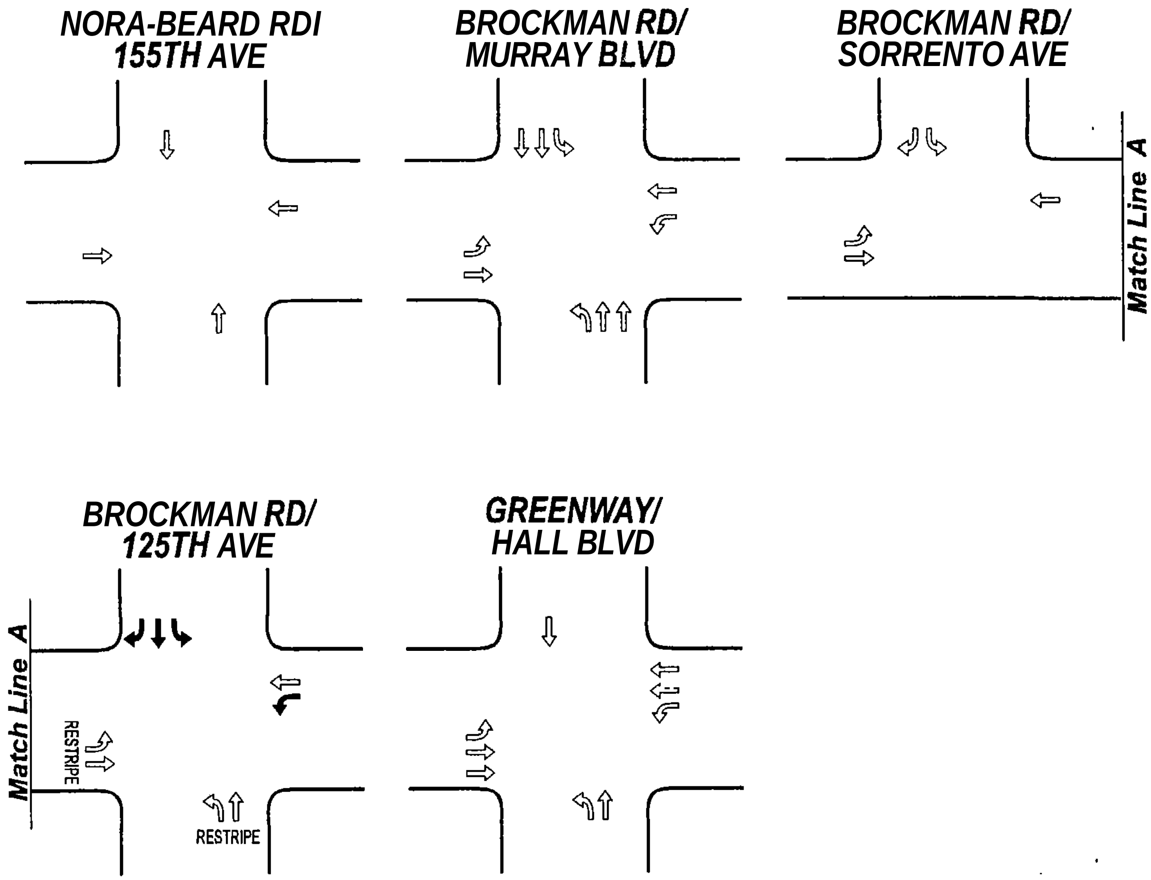
City of Beaverton
Transportation System Plan



HART/DENNEY ROAD EXISTING/PROPOSED LANE CONFIGURATION

DKS Associates

City of Beaverton
Transportation System Plan



LEGEND

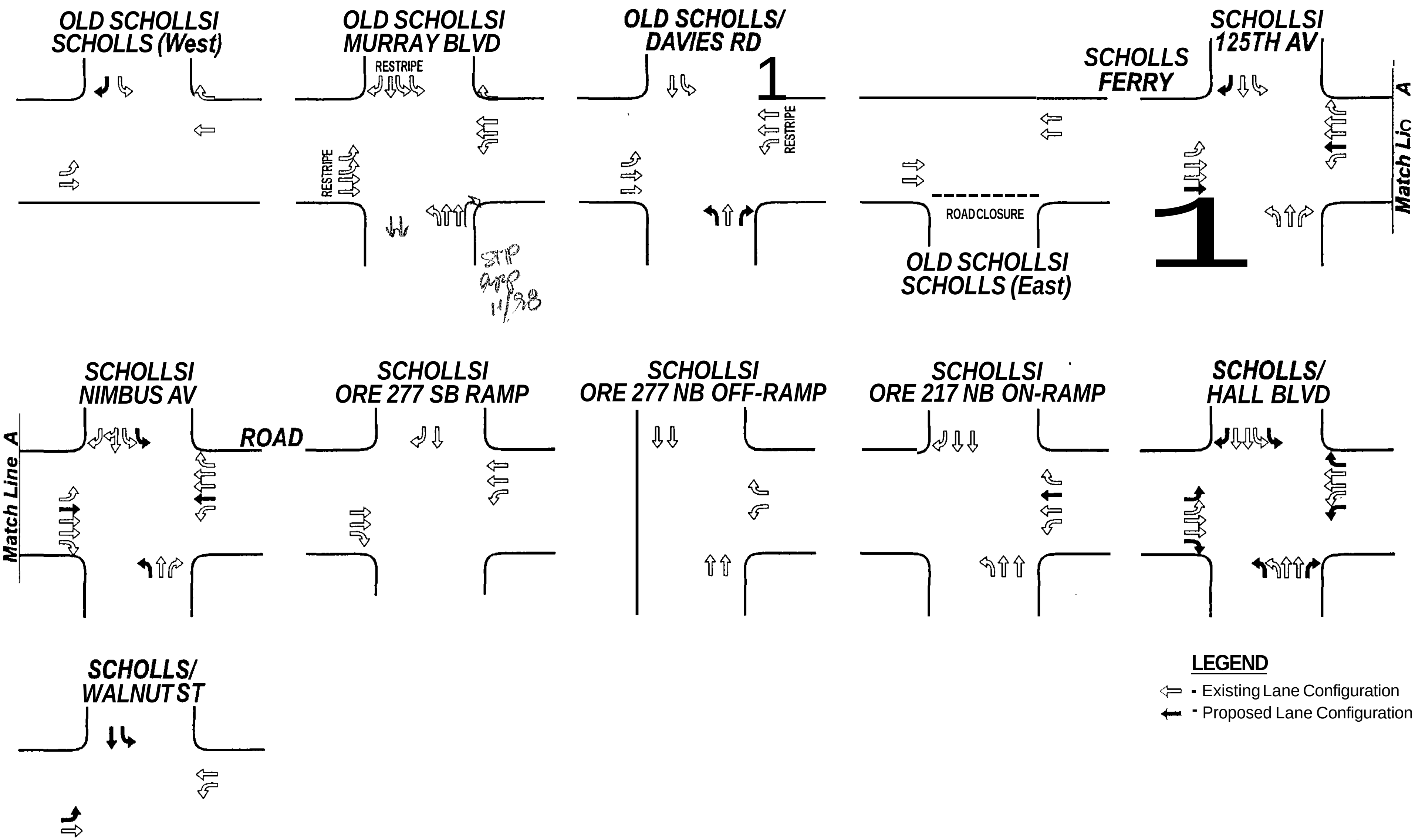
⇦ - Existing Lane configuration

⬅ - Proposed Lane Configuration

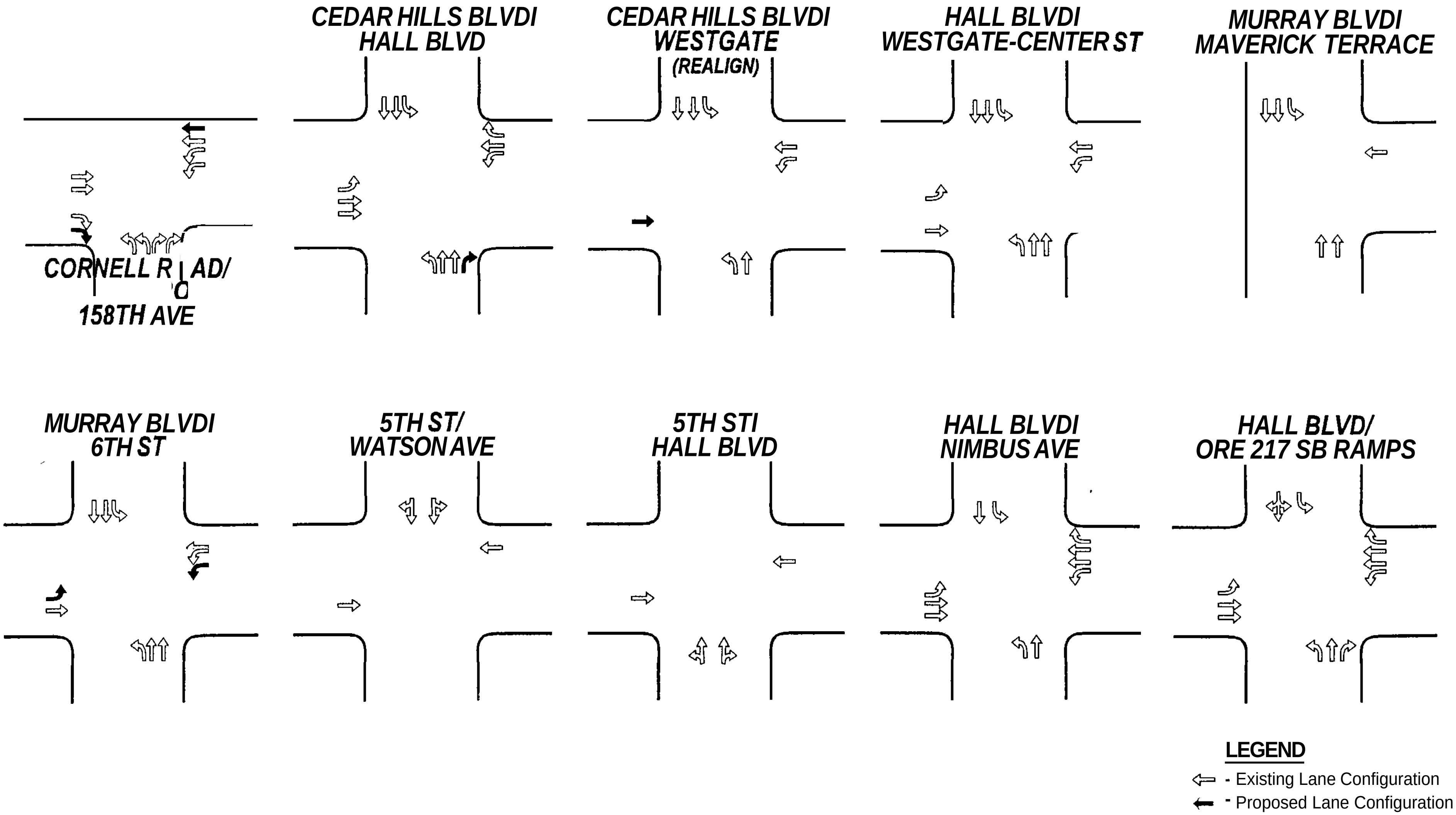
NORA BEARD ROAD/BROCKMAN ROAD/GREENWAY EXISTING/PROPOSED LANE CONFIGURATION

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**

rsm is gettin' me the combos

BEAVERTON LAND USE DATA (FROM METRO)

aggregate micro zones then compare

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, OM = OTHER EMPLOYMENT
94 = 1994
15 = 2015

BEAVERTON LAND USE DATA (FROM METRO)

METROTAZ	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
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
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
15 = 2015

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

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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
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	137	95	32	136	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**

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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 'fic 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 traffic enforcement 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 ▮ 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	U.S. 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 gods.

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. 'The following 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:

Primay 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 rail yards 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 civic 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 aties 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 tum 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 indude 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 effectiveness of 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

Regional Street Design Classifications		Principal Arterial	Major Arterial	Minor Arterial	Collector	Local Street
Throughways	Freeway	■				
Throughways	Highway	■				
Boulevards	Regional Boulevard		■			
Boulevards	Community Boulevard			■		
Streets	Regional Street		■			
Streets	Community Street			■		
Roads	Urban Road	■	■	■		
Roads	Rural Road	■	■	■		
Local Streets	Local Street Designs				■	■

Column group heading: Regional Motor Vehicle Functional Classifications

■ *Most appropriate street design classification*

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.*

*** 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.

• 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.

* **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.

Primy *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.

Secondny 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 DMS 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's travel 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 regional bikeway 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 facilities at 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 wellconnected, 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