Pendleton Transportation System Plan

To the attention of:
City of Pendleton
34 SE Dorion Avenue
Pendleton, OR 97801
(541) 276-1811

Prepared by:
Kittelson & Associates, Inc.
610 SW Alder, Suite 700
Portland, Oregon 97205
(503) 228-5230

In Association With:
OTAK, Inc.
Pacific Rim Resources

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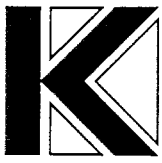

Acknowledgments

The Pendleton Transportation System Plan Advisory Committee members devoted a substantial amount of voluntary time and effort to the Pendleton Transportation System Plan, and their participation was instrumental in the development of the recommendations that are presented in this report. Project team members (including both the consultants and management team) would like to take this opportunity to express their appreciation for the Advisory Committee members' commitment of time, their perceptive questions, their fastidious representation of their constituents, and their valuable suggestions. We believe that the City of Pendleton, Umatilla County, and the Oregon Department of Transportation's future transportation system will be better because of this commitment, and would like to take this opportunity to recognize individually each member of the Advisory Committee:

Doug Flatt, Mid-Columbia Bus Co.

Bob Jenson, Pendleton Airport Commission

Bill Kyte, Pendleton Planning Commission

Carrie Legg, CAPECO

Steve Mohrland, Bicycle Advisory Committee

Steve Taylor, Pendleton City Council

Ken Thompson, Umatilla County Planning Commission

Special recognition should also be given to Mike Hyde, City of Pendleton Planning Director, who served as project manager for the project and ensured that each meeting was well prepared, coordinated, and productive.

MANAGEMENT TEAM

Mike Hyde & Dave Lorenzen
City of Pendleton

Dennis Olson
Umatilla County

John Preston & Terry McArtor
Oregon Department of Transportation

CONSULTING STAFF TEAM

Julia Kuhn & Andy Mortensen
Kittelson & Associates, Inc.

Todd Chase & Scott Keilor
OTAK, Inc.

Stephanie Lawson
Pacific Rim Resources

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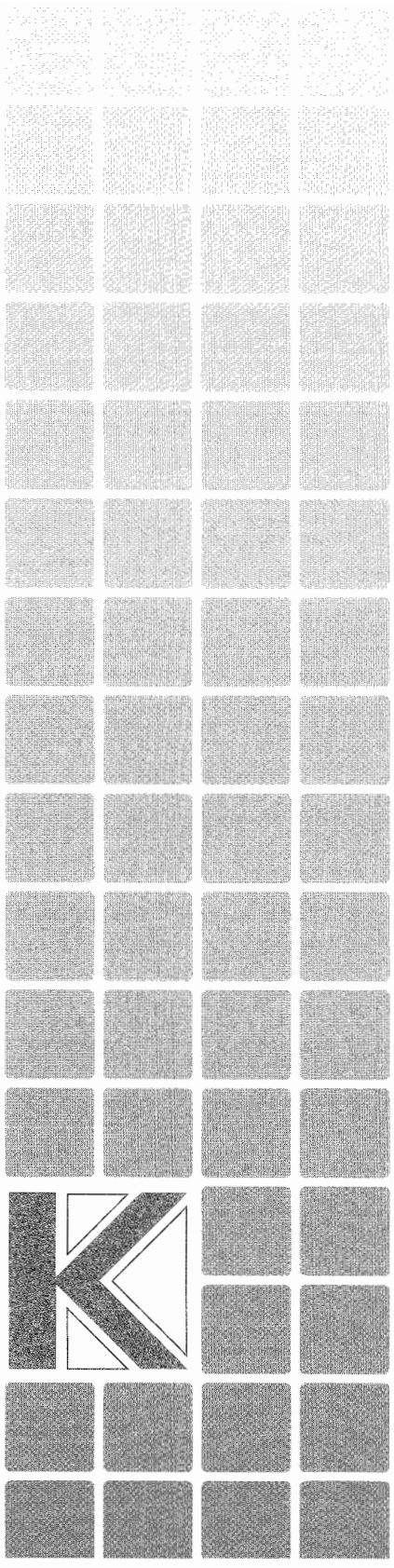


Section 1

Executive Summary

Executive Summary

The Pendleton Transportation System Plan (TSP), a joint venture between the City of Pendleton, Umatilla County, and the Oregon Department of Transportation (ODOT), is a multimodal plan that includes strategies to manage growth and the community's transportation needs during the next twenty years. This plan includes a comprehensive analysis of Pendleton's transportation system and has been prepared in accordance with Oregon Revised Statute 197.712, OAR 660 Division 12 and the Transportation Planning Rule (TPR).

In accordance with the goals of the study, the TSP addresses the provision of a safe, affordable, and accessible transportation system for all users. As such, the plan includes an assessment of the existing transportation system, an evaluation of the impacts of growth on the transportation system, an identification of short-term and long-term improvement projects that are included in the preferred alternative, a transportation financing plan, transportation and land use policy recommendations that can assist the City in implementing the TSP, and a description of the plan's compliance with the TPR.

The future growth potential for the city was identified through discussions with the Management Team and Advisory Committee and based on the City of Pendleton Comprehensive Plan. Future transportation system needs for all users were identified based on a 20-year target population of 19,000 and an employment base of 9,445 jobs. To address those needs, four general strategies were evaluated:

- building new roadways;
- changing the existing land use mix to encourage shorter trips and less dependence on the automobile;
- increased use of alternative modes of travel; and,
- a combination of building roadways, changing land use, and increased reliance on alternative travel modes.

Based on these general strategies, three primary alternatives were formulated and evaluated: the "No Build" Alternative, the "transportation-efficient" land use alternative, and the implementation of the Comprehensive Plan. Additional options were also evaluated to address specific circulation needs in the downtown and in the U.S. 395 corridor. Based on the alternatives analysis and discussions with the Management Team and Advisory Committee, a preferred alternative was selected and a corresponding financial analysis was prepared. The preferred alternative includes a mixture of transportation-efficient land use strategies, enhancement of the existing pedestrian and bicycle system, the reinstatement of a dial-a-ride system, the continued improvement of the rail system and the Eastern Oregon Regional Airport, and improvements to the existing street system. A summary of the individual elements of the preferred alternative is provided below.

Within the urban growth area, an intricate network of bicycle and pedestrian facilities, intracity public transportation services for the transportation disadvantaged, intercity bus service, freight and passenger rail and air service, and bridges and roadways provide mobility to the residents of Pendleton. The historic development of these facilities and services has been shaped by the topography, the construction of Interstate 84 and the railroad, and the values and vision of the residents of the city.

During the last twenty years, the city has continued to place emphasis on the provision of bicycle and pedestrian facilities throughout the urban area. Several segments of the River Parkway, an exclusive pedestrian/bicycle path along the Umatilla River, have been completed and additional segments are included in the current Capital Improvements Program. Additionally, although very few roadways throughout the city have on-street bicycle lanes, the city has been implementing recommendations from the Bicycle System Master Plan to provide on-street bicycle lanes and routes throughout the city.

Sidewalks are provided on many of the collector and arterials streets, especially in the downtown. As areas develop or redevelop, the city should require the installation, improvement, or replacement of sidewalks, as needed, to improve the connectivity of the pedestrian system.

Elite taxi service operates door-to-door transportation services to the transportation disadvantaged on a voucher system. Enhanced demand-responsive and the possibility for new fixed route transit services in the Pendleton urban area should be coordinated with both ODOT and Umatilla County. A clear information dissemination effort should be made by Pendleton and Umatilla County to ensure that all potential users of the programs are aware of their options and to prevent redundancy in the system.

The implementation of a fixed-route system for the general public should continue to be reevaluated until appropriate population and economic conditions prevail. Inter-city bus service, as provided by Greyhound today, should continue to be enhanced to address future needs.

In recognition of the increasing usage and importance of air and rail travel in the future, the continued use of the existing freight (rail) and air passenger service is recommended. Furthermore, ODOT and Amtrak should work together to define and secure high quality passenger service through Pendleton in the corridor currently served by Amtrak's Pioneer Line. This service could include enhanced bus, rail and air passenger service, or any combination thereof.

The frequency of rail freight activity is expected to increase by nearly 50 percent in the next two years. Since all but three of the public roadway crossing of the railroad are currently at-grade, a train passing through the downtown can serve as a barrier to north-south travel. In order to ensure adequate response time for emergency services as well as the minimization of delay to and continued safety of motorists, pedestrians, and bicyclists, the City of Pendleton, as part of the TSP, investigated the feasibility of constructing a new grade-separated crossing of the railroad. The results of this analysis are discussed in a separate report entitled *SW 20th Street Rail Crossing Study* (OTAK and Kittelson & Associates, Inc., 1996).

Because of topographic constraints and the location of Interstate 84, there are only two existing opportunities for access between the areas of Pendleton to the north and south of the freeway: U.S. 395 and Highway 11. The resulting level of cross-town traffic, especially in the vicinity of the Interstate 84 interchange with U.S. 395 makes it very difficult for motorists exiting the freeway to access the downtown. Subsequently, both of the ramp termini operate over capacity today. This problem is further compounded during inclement weather conditions when the upstream signal at the Hailey Avenue/Tutuilla Creek Road/U.S. 395 intersection changes to a flashing yellow indicator on U.S. 395 during icy conditions.

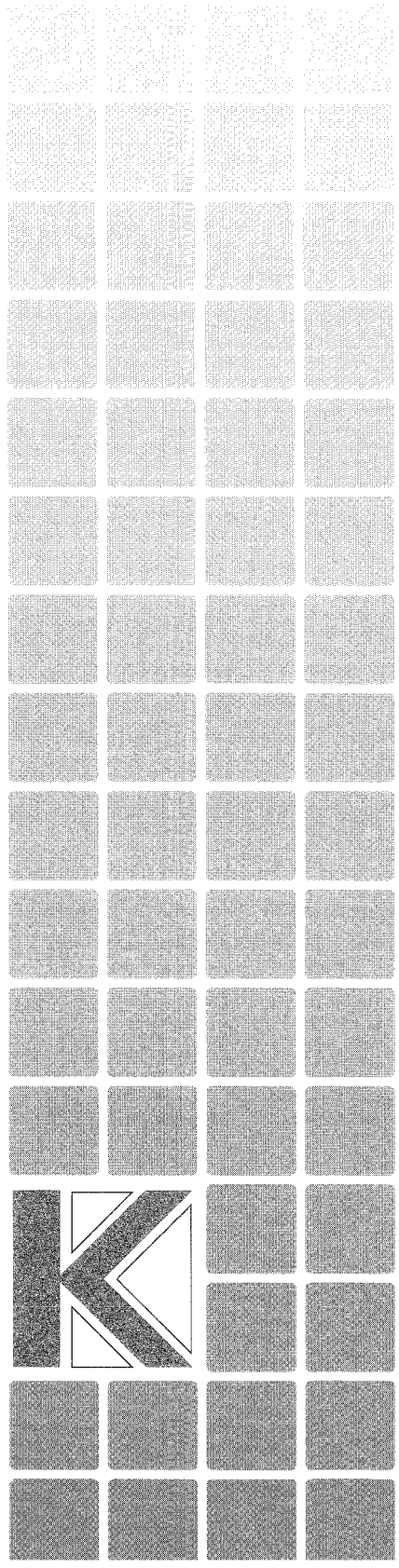
The peak demand on the transportation system occurs annually during the week of the Pendleton Round-Up. Shuttle services and other traffic management measures have been

implemented by the city and provide access and mobility for the city's residents and visitors during this annual event.

Lastly, to safely and efficiently accommodate future vehicular travel in the Pendleton area, a series of improvements to the existing street system were identified. This plan was developed to utilize and enhance the existing facilities, promote the development of the transportation-efficient land use strategies, and attain a balance among all travel modes.

The Draft Pendleton TSP, dated June 14, 1996, was distributed to and reviewed by the general public, City Staff, the TSP Management Team and Advisory Committee, and various ODOT and Oregon Department of Land Conservation Development (DLCD) Staff. Appendix I summarizes all of the written responses to the Draft TSP and identifies where and how the Final TSP addresses revision to the Draft TSP.

Based on the findings of the Pendleton TSP, it is recommended that the City of Pendleton, by 1997, participate with the Oregon Department of Transportation and Umatilla County in the development of their respective transportation system plans to ensure coordinated and consistent policies and plans.



Section 2

Introduction

Introduction

Since 1868 when the original town of Pendleton was platted, the growth and development of the community have been directly tied to the intricate relationship between transportation, land use, and commerce. In earlier years, growth in the Pendleton area was related to the presence of the railroad, agriculture and the timber industries, and the designation of Pendleton as the county seat. Today, Pendleton, located at the confluence of Interstate 84, US 395, US 30, Highway 11, and Highway 37, remains a major hub/transfer point in northeast Oregon.

Since the 1950s/1960s, Interstate 84 has become an increasingly important interstate route for commercial and recreation travel. The attractiveness of the Pendleton urban area as a commercial and service center is expected to continue and, subsequently, the Pendleton urban area has the potential to experience significant growth over the next 20 years. As new employers locate in Pendleton, additional housing and commercial development will occur. This anticipated development will exert pressure on Pendleton to expand the existing ten-square mile urban growth boundary.

Now is a good time for the city to develop a well planned comprehensive transportation system that balances the needs of future land development with a transportation system that serves all users. In the development of a comprehensive Transportation System Plan, the region must also address Oregon's Transportation Planning Rule (TPR), which requires public jurisdictions such as Pendleton to develop:

- a road plan for a network of arterial and collector streets;
- bicycle and pedestrian plans;
- air, rail, water, and pipeline plans;
- a transportation finance plan; and
- policies and land use regulations for implementing the transportation system plan.

In addition, the TPR requires local jurisdictions to adopt land use and subdivision ordinance amendments to protect transportation facilities, and to establish requirements for bicycle facilities between residential, commercial, and employment/institutional areas. This state Rule also requires that local communities coordinate their plans with county and state transportation plans. Beyond the external requirements of the Transportation Planning Rule and related statewide and federal policies, local conditions also point to the need for a system-wide study of the transportation facilities and services, including:

- recent land development proposals, including the proposed 300,000-square foot Pendleton Retail Center, have led to the identification of regional transportation system constraints in the southwest portion of the downtown;
- the number of trains crossing the twelve at-grade crossings of the Union Pacific Railroad tracks in Pendleton is expected to increase from 36 to 53 trains per day in 1997; this could have significant impacts on the mobility of the residents of Pendleton;
- new residential and service-commercial development in the southern portion of the city and the nature of the existing transportation system is generating strong north-south local traffic patterns and is creating concern, especially at school crossings;

- the majority of existing available industrial land in Pendleton is located in the 67-acre Airport Industrial Park; however, limited transportation access is considered as a significant constraint to new development;
- the interim Systems Development Charge ordinance that was recently adopted for the development of the Pendleton Retail Center will assist the city and county in obtaining funding assistance from developers for a portion of off-site facility improvements required with new development; however, a more permanent SDC should be developed and adopted; and
- the existing provision of demand-responsive transit service, using the voucher system and taxi service needs to be reevaluated.

In order to meet the requirements of the TPR and related state and federal policies and to address the local transportation and land use issues, the Pendleton Transportation System Plan was initiated in April 1995. One of the critical steps at the inception of the TSP was the formulation of three local committees to guide the course of the study. The Management Team included representatives from the participating jurisdictions, including the city, Umatilla County, and ODOT, and was responsible for serving as the technical liaison and providing day-to-day direction to the consultant and for providing technical assistance to the Advisory Committee.

The Executive Committee included the Pendleton Mayor, an Umatilla County Commissioner, and the ODOT Region Manager and was kept apprised of the TSP findings by members of the Management Team.

The Advisory Committee, because of their diverse representation of several special interest groups, brought differing perspectives and concerns to the project and served as one of the key conduits for disseminating the information to and soliciting ideas from the public. One of the key functions of the Advisory Committee was to ensure that the development and evaluation of alternatives matched the character, vision, resources, and needs of the community. To accomplish this, a set of goals and objectives were identified to guide the course of the study, as shown below.

Pendleton Transportation System Plan Goals

- Ensure a safe and efficient transportation system allowing access into and through the community for all users, including the transportation disadvantaged.
- Improve personal mobility and access to transportation services by expanding the variety and availability of travel modes throughout the region (i.e., transit, bicycles, walking, air travel, rail and pipeline).
- Improve the movement of goods and delivery of services throughout the region using a variety of travel modes.
- Improve area-wide quality of life by (1) increasing the compatibility of regional transportation system development with existing and future land use patterns and (2) minimizing the impacts of transportation system development on the natural and built environment.
- Ensure adequate capacity for future travel demand on collector and arterial streets and on the local highways to enable economic development in the community.

- Improve the local circulation system to reduce the community's reliance on Interstate 84 and U.S. 395 (Southgate).
- Develop a transportation system that is economical and affordable for the users and for the community to construct and maintain.
- Provide connectivity between transportation options and to locations outside the study area.
- Ensure the integration of adequate bike and pedestrian pathways through the community, particularly to connect schools and activity centers.
- Ensure sustained funding for needed transportation improvement projects.
- Develop recommendations for improving the overall safety and efficiency of transportation system operations by (1) managing access to and development along state-maintained highway corridors; (2) promoting transportation demand management strategies (i.e., car pooling, flexible work hours, telecommuting, etc.); and (3) drafting ordinances to ensure safe and convenient connections between travel modes.
- Provide a transportation system that attracts people to live and work in the area and supports and enhances the local economy, including the recreation and tourism industry.
- Provide adequate mobility and access for emergency services.
- Recommend a Transportation System Plan which is flexible and adaptable to changing future conditions.
- Develop recommendations for ensuring that the Pendleton TSP will be consistent with the goals, policies, and action strategies of the Oregon Transportation Plan, with Statewide Planning Goals, Oregon Benchmarks, the Intermodal Surface Transportation Efficiency Act (ISTEA), the Clean Air Act Amendments (CAAA), and the Americans with Disabilities Act (ADA).

In development of these goals, consideration was given to assure opportunities for active citizen involvement because the Pendleton TSP was developed to reflect the *local* needs of the area's residents. As such, the participating jurisdictions undertook a planning process with a strong commitment to active community participation and agency coordination. The public involvement approach was founded on the following principles:

- provide opportunities for meaningful involvement from all interested parties throughout the duration of the study;
- stress opportunities for two-way communication to ensure that project participants benefit from the analytical work of the project team, and that members of the consulting team are well grounded in local knowledge and values; and
- commit to sound public involvement that should increase both the technical quality of the final product and the chances that a public consensus will coalesce around the project recommendations.

Throughout the TSP process, five mechanisms were used to solicit input and provide information to the public, including open houses, newsletters, scoping interviews, workshops, and briefings with key parties. In addition, regular meetings were held with the Management Team and Advisory Committee to maximize the potential for consensus.

This document was prepared to summarize the results of the public involvement process, analysis of existing conditions and the impact of future growth on the transportation system, and the identification of alternatives that can address local transportation system needs in the urban growth area.

As outlined in **Section 3** of this report, the development of the Pendleton Transportation System Plan began with an assessment of the existing land use and transportation system, and a review of the relevant city, county, state, and federal plans and policies. Transportation issues and community concerns were identified through a series of stakeholder interviews and by the Management Team and Advisory Committees. In addition, an inventory was conducted to develop an understanding of the physical, operational, safety, and travel characteristics of the existing transportation system in the Pendleton urban area.

The study continued with the determination and evaluation of the impacts of local and regional growth on the transportation system, as summarized in **Sections 4 and 5**. The evaluation of a "No Build" Alternative revealed several deficiencies suggesting that the needs of all users of the system would not be met.

Based on the identification of system deficiencies, several alternatives were formulated, considered, and tested that mitigate the identified deficiencies and strengthen and enhance the multimodal transportation system. As discussed in **Section 6**, alternatives were presented to both committees for review, decision, and direction. The impact of each alternative on the participating jurisdictions' relevant plans and policies were examined for potential conflicts to implementation. A preferred alternative was selected that includes a combination of the land use and transportation options that were considered and that meet the goals of the study.

Section 7 discusses the development of a recommended set of design standards that will guide the direction of new facility construction (pedestrian, bicycle, and auto) in the Pendleton urban area. These standards were developed in combination with the evaluation of alternatives and were used in the development of the implementation plan for the preferred alternative.

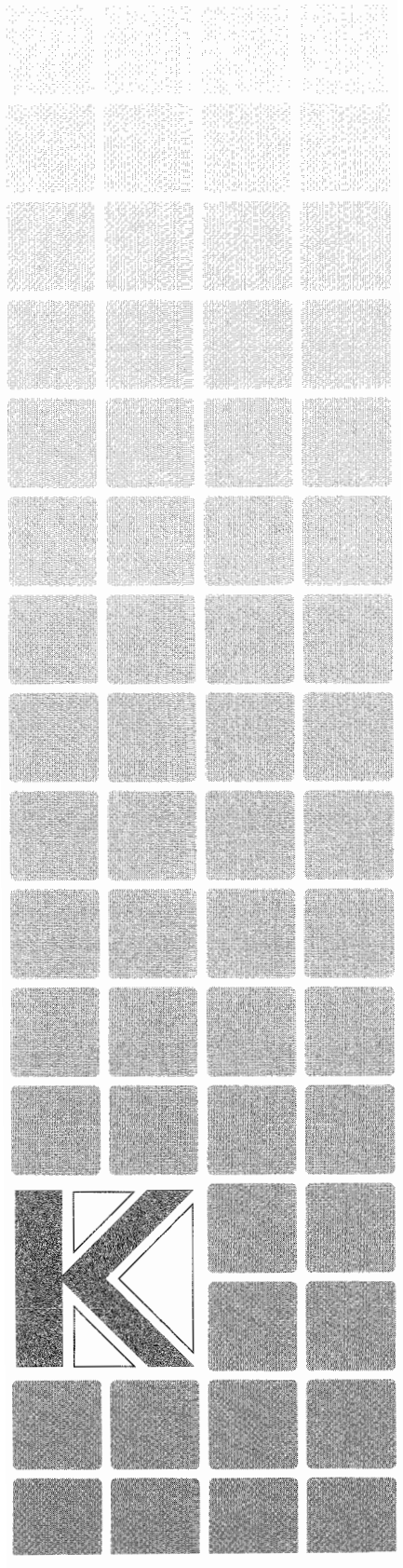
The evaluation of the alternatives concluded with the identification of available funding sources to pay for future transportation system improvements. The cost analysis of the projects and the financing plan for the preferred alternative is summarized in **Section 8**.

Section 9 summarizes the findings and recommendations of the study in the presentation of the individual elements of the Pendleton Transportation System Plan, including a bicycle and pedestrian plan, a public transportation plan, rail, air, water, and pipeline plans, and a street system plan. This section also summarizes the development of an implementation plan that will aid the city in determining the timing and funding of the improvements.

Section 10 includes a series of land use and transportation policy recommendations that can be adopted by the jurisdictions to aid in the implementation of the Transportation System Plan.

A section outlining the requirements of the Transportation Planning Rule (OAR 660 Division 12) and how the city, through the Transportation System Plan, has addressed those requirements in provided in **Section 11**.

The document concludes with a series of technical appendices that serve as supplemental supporting information to the analysis and findings included in Sections 1 - 11.



Section 3

Existing Conditions

Existing Conditions

INTRODUCTION

The development of the Pendleton Transportation System Plan (TSP) began with an assessment of the existing land use and transportation system, and a review of the relevant city, county, state, and federal policies. Transportation issues and community concerns were identified by the Management Team and Advisory Committee and were supplemented with the results of interviews conducted with key stakeholders in the community. In addition, an inventory of the existing transportation system was conducted to develop an understanding of the physical, operational, traffic safety, and travel characteristics of all of the major roadways and the existing bicycle and pedestrian systems in the study area, as well as the existing public transportation system, and rail, air, water, and pipeline systems.

This section of the report provides an overview of the local, regional, state, and federal policies that were reviewed as part of the TSP, a summary of the stakeholder interviews that were conducted at the onset of the project, an analysis of the existing transportation system conditions in the urban area, and an overview of the public involvement process that was conducted concurrently with the system inventory.

POLICY REVIEW

Several local, regional and national plans and policies were reviewed at the onset of the project to ensure that the TSP would be supportive of and integrated with local, regional, state, and federal goals, policies, standards, benchmarks, and other relevant documents.

An overview of the local policies, as they apply to each mode of transportation, is included in the description of the transportation system inventory discussed in this section. Appendix B includes a detailed summary of all of the plans and policies that were reviewed.

STAKEHOLDER INTERVIEWS

In May 1995, stakeholder interviews were conducted with 21 professional, civic, community and business leaders throughout the Pendleton area. Twenty-eight key stakeholders were originally identified by City of Pendleton and Umatilla County staff. Stakeholder interviews for the Highway 395 Corridor Strategy Plan were conducted concurrently with the Pendleton TSP. Where possible, surveys were expanded to accommodate people who could speak to issues for both studies.

Interviewees were asked a series of questions about transportation issues in the Pendleton area. The questions were divided into eight categories, including:

- circulation and congestion;
- bicycle and pedestrian facilities;
- parking;
- financing improvements; and
- safety;
- transit services;
- truck traffic;
- reducing auto dependency.

Overall, no single major issue was identified as a result of the interview process. However, a few specific problems and locations were mentioned frequently by interviewees as dangerous, confusing or poorly designed. The most frequently mentioned problem location was the intersection of Court, Dorion and Westgate and the nearby railroad crossing. This is near the location of the proposed Pendleton Retail Center at the former Harris Pine site. Several of those interviewed expressed concerns about growth in that area and its impact on traffic flow and safety at that intersection. The area is already perceived as being dangerous and difficult to navigate. Other frequently expressed concerns or problem locations included: SE Court Avenue from SE 10th to SE 14th (at the viaduct), the off-ramp from I-84 onto Southgate (US 395), the Melanie Square area, and safety at railroad crossings in general.

A detailed summary of the stakeholder interview results and a list of the community members who were interviewed is provided in Appendix C.

TRANSPORTATION FACILITIES

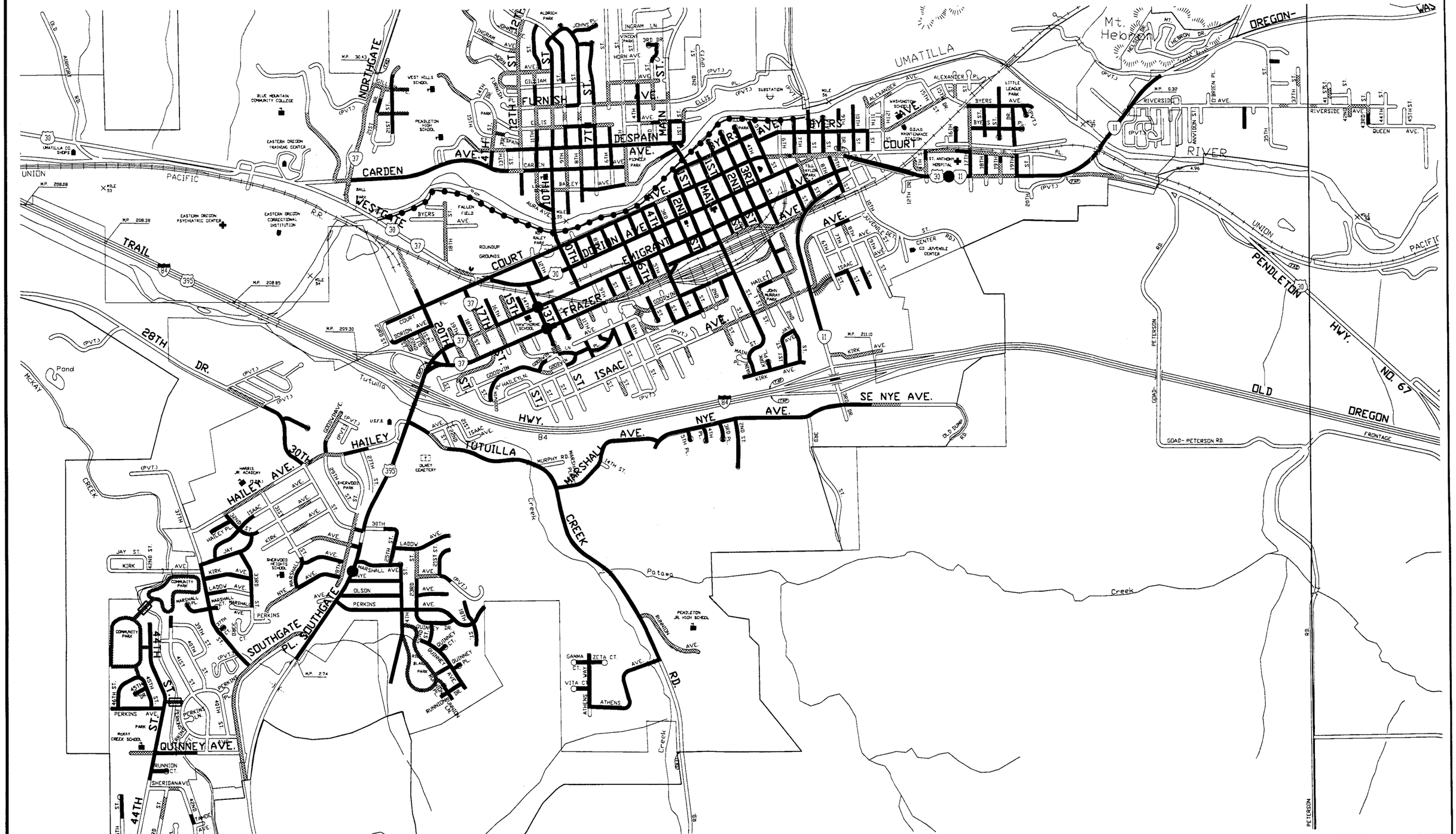
A detailed assessment of the existing transportation system was conducted at the onset of the project. This assessment included an inventory of the existing transportation facilities and services, a summary of existing transportation operations in the urban area, and an evaluation of the existing safety conditions. This assessment also included a review of local plans and policies to evaluate current design standards, planned improvements, and the history of the development of the Pendleton transportation system.

Pedestrian Facilities

The first sidewalks in the City of Pendleton were constructed attached to buildings as boardwalks with wood awnings. In 1922, the city established the first standards for sidewalk construction and required 4' wooden sidewalks adjacent to the property line with a 6' - 10' planting strip constructed between the sidewalk and the curb. In 1960, the current standard for sidewalks was established with the following requirements:

- Sidewalks must be constructed between the curb and the property line in commercial areas.
- In residential and industrial areas, 4' sidewalks must be constructed along collector and minor streets and 5' sidewalks must be constructed along arterial streets. Sidewalks must be constructed adjacent to the curb in industrial areas and within the right-of-way in residential areas.
- Sidewalks must be constructed on both sides of the street as part of new roadway construction, except where there are significant topographic constraints.
- Sidewalks must be maintained by the adjacent property owner.

Today, pedestrian facilities within the study area consist mainly of sidewalks along many of the city's collectors and arterials, as shown in Figure 3-1. In most cases, where sidewalks are present, they are located on both sides of the street. Figure 3-1 also illustrates mid-block walkways, park pathway systems, and stairways that have been erected at various locations throughout the city for use by pedestrians. Pedestrian signals are located at St. Anthony's Hospital on Court Avenue, SW 13th/Emigrant and SW 13th/Frazer, and near the intersection of Nye/U.S. 395; most of the other signalized intersections are equipped with pedestrian call buttons.



LEGEND

- SIDEWALKS ON BOTH SIDES OF STREET
- SIDEWALK ON ONE SIDE OF STREET
- WALKWAYS
- STAIRWAYS
- RIVER PARKWAY
- PEDESTRIAN SIGNALS
- FOOTBRIDGE

CITY OF PENDLETON
TRANSPORTATION SYSTEM PLAN

EXISTING PEDESTRIAN FACILITIES

FIGURE 3-1

OCTOBER 1996

1567SIDE

The city has also constructed portions of the River Parkway, an exclusive pedestrian / bicycle path along the Umatilla River. Between Westgate (at the Umatilla River Bridge) and SW First Street/Byers Avenue, the pathway is paved and improved. Between SW First Street and the little league ball fields, the pathway is graveled. Near term plans for paving this section are being developed. Some of these improvements have been completed.

Additionally, when the City of Pendleton was platted in 1868, the primary mode of transportation, in addition to walking, was the horse. As the city has developed over the last 125 years, the horse has continued to play an important role in the city, especially as part of the Pendleton Round-Up. Although there are no designated bridle paths in the city, a citywide needs survey conducted in 1977- 1978 indicated that nearly half of the people surveyed felt that bridle paths should be an integral part of the Umatilla River Parkway.

Bicycle Facilities

A Bicycle System Master Plan (Mitchell & Nelson Associates, 1981) was developed for the City of Pendleton that identifies a total of 45.1 miles of bicycle lanes, routes, and paths within the urban growth area. As shown in Figure 3-2, exclusive bicycle lanes are currently provided on Southgate, Emigrant Avenue, Frazer Avenue, Westgate (between Northgate and Court Avenue), Northgate, Southgate Place, Quinney Avenue, SW 37th Street, Main Street, SW 2nd, SE 2nd, and Tutuilla Creek Road. Posted bicycle routes are signed on Isaac Avenue (between InterCourt Place and Main Street), Main Street, SW 10th Street, SE 8th Street, Court Avenue, Dorion Avenue and Byers Avenue.

The Oregon Bicycle and Pedestrian Plan (ODOT, 1995) does not include or endorse use of posted "bike routes" and specifies that all roads should be built to accommodate bicyclists. How the functional classification policy accommodates bicycles is, to a great degree, at the discretion of the City of Pendleton. Hence, the Pendleton TSP will differentiate where bicycle and mixed use traffic lanes are appropriate depending on street functional classification and volume.

Public Transportation

In 1981, the city adopted the Public Transportation Development Plan (STRAAM Engineering) which recommended the integration of a fixed route system with 40 minute headways (20 minutes during peak hours), a private taxi service, and a dial-a-ride program. However, the implementation of the plan was postponed because population and economic conditions did not warrant the need for a fixed-route system, and to provide time for the new taxi service to get established. Currently, the city still has not implemented the fixed route system.

The current public transportation services provided in the Pendleton area are summarized in Table 3-1. Most of these services are targeted toward special population groups of the transportation disadvantaged (disabled and senior citizens). Elite Taxi operates door-to-door transportation services to the general public transportation disadvantaged on a voucher system (regular distribution of vouchers is conducted quarterly). The TAP program, discontinued in June 1995, provided demand-responsive service to the transportation disadvantaged in the Pendleton area via a dial-a-ride system. Table D-1 (Appendix D) summarizes the TAP service program over the May 1993-June 1994 time frame. The TAP program carried an average of 507 riders per month.

Table 3-1

Current Public Transportation Services

Operator	Service Area	Clients	Operations Type
Bethpage Mission	City	Developmentally Disabled	Private vehicle
Foster Grandparents/ Senior Companions	County	Low Income Seniors	Private vehicle
City of Pendleton	City City	Taxi/Public[1] Senior Center Van	Taxi-Subscription (voucher) Special Service for Senior Center

[1] Transportation Disadvantaged - annual ridership unknown
General Public - annual ridership year ending June 1995 = 10,390

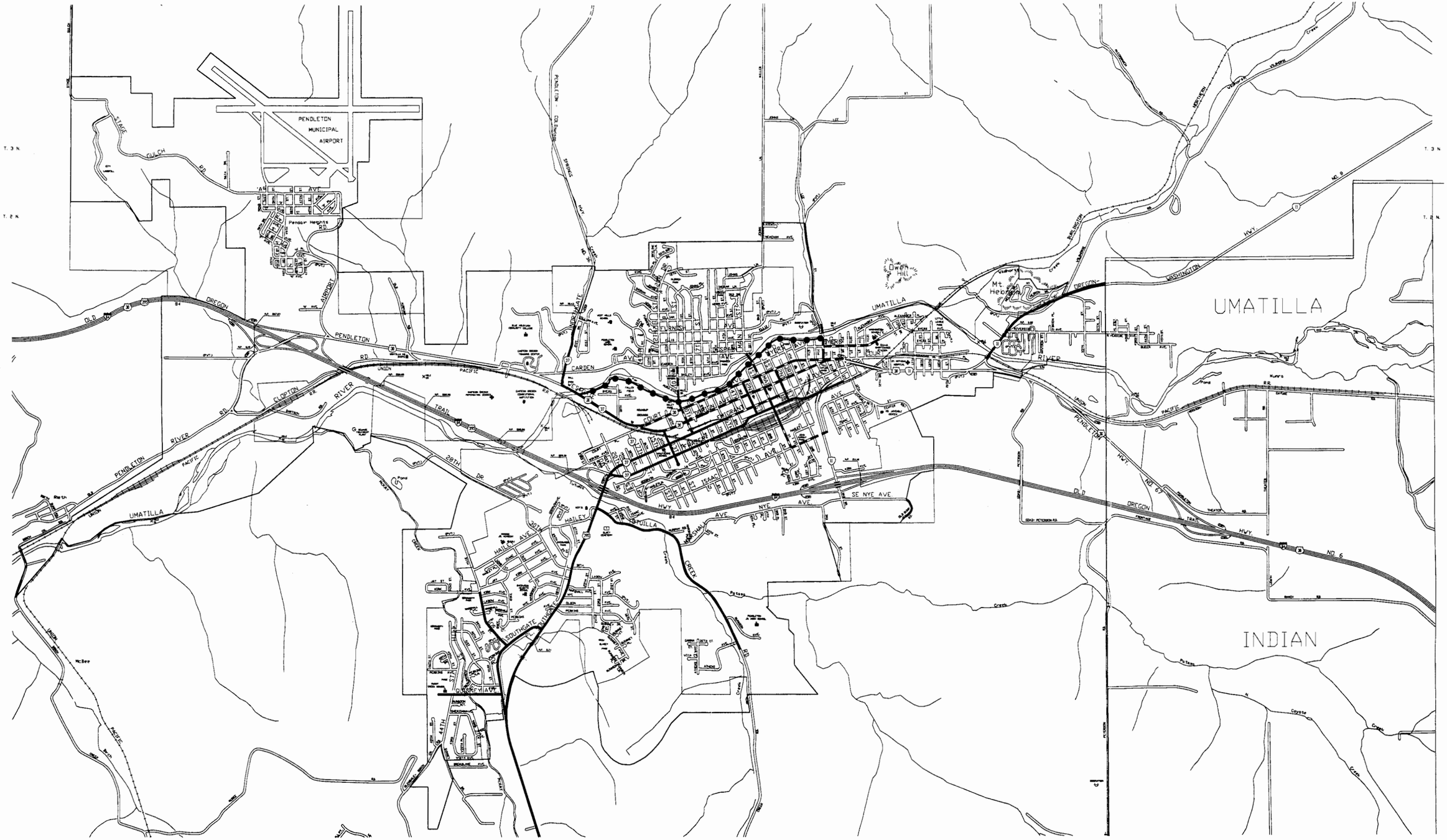
The Pendleton School District, through Mid-Columbia Bus Company, provides school bus service to the Pendleton elementary, middle, and senior high schools.

Inter-city bus service was first provided to the city in 1926 with service between Pendleton and Portland. In 1927, service was expanded to Walla Walla. Today, the Greyhound Bus Company serves Pendleton on a daily schedule. The bus station is located in Downtown Pendleton on Court Avenue. Bus service is available twice a day for both eastbound (La Grande/Baker City/Ontario/Boise/Salt Lake City) and westbound travel (The Dalles/Portland).

Rail

Rail service was first provided to Pendleton in 1882 by Oregon Railway and Navigation Company (now Union Pacific) with a line between Pendleton and Portland. Today, Pendleton is served directly by a Class I line-haul freight railroad - the Union Pacific Railroad. The main line connects Portland and Boise. Union Pacific estimates that approximately 36 trains a day pass through Pendleton; this number is expected to increase to 53 trains per day by 1997. These vary in size up to 7,200 feet in length. Currently, maintenance of the Union Pacific lines in Pendleton is handled out of two offices: tracks in the western portion of Pendleton are maintained by the office at Hinkle Railyards in Hermiston while tracks in the eastern portion of Pendleton are maintained by the office in La Grande.

Passenger rail service in Pendleton is currently provided by the Amtrak Pioneer Line every other day. Trips heading east from Pendleton left on Sunday, Tuesday, and Thursday; while trips heading west departed on Tuesday, Thursday, and Saturday. The Pioneer Line operates between Seattle and Chicago via Portland and Denver. During the drafting of the Pendleton TSP, Amtrak notified the general public of its intent to close the Pioneer Line (tentatively November, 1996) due to budget constraints. Amtrak's criteria for reducing overall system costs included first closing infrequent service lines like the Pioneer. The State of Oregon has worked with Amtrak to secure funding of current service on the Pioneer Line until May 1997, during which time long-term passenger service solutions can be defined in the corridor.



LEGEND

- ON-STREET BIKE LANES
- BIKE ROUTE (POSTED ONLY)
- RIVER PARKWAY

CITY OF PENDLETON
TRANSPORTATION SYSTEM PLAN

EXISTING BICYCLE FACILITIES

FIGURE 3-2

OCTOBER 1996

1567BIKE

Currently, there are twelve public at grade railroad crossings in the Pendleton urban area and three viaducts (two on Highway 11 and one on US 30). In 1977, the number of public railroad crossings in the City of Pendleton was reduced from sixteen. Because of the significant number of at grade crossings in the downtown area and the frequency of rail service, significant delays are experienced by autos, pedestrians, and bicycles several times throughout the day.

Air Transportation

The Pendleton Municipal Airport has played an important role in the development of the city. In 1934, the Pendleton Airport was opened. In 1941, the airport was converted to an US Army Air Base and was used by General Doolittle's Flight Wing as its training site prior to the Tokyo Raid. During the war, several structures were constructed at the airport for supplies, housing, maintenance, recreation, etc. The Federal Government returned control of the airport and all of the associated facilities back to the City of Pendleton in 1949, after the end of World War II with a reversionary clause in the time of war. Some of the buildings constructed during the war are still used today for storage, small businesses, and multi-family housing (although conversations with City of Pendleton staff indicate that the city is trying to phase out use of the buildings for housing purposes). Passenger service at the airport was first provided in 1946 by Empire Airlines. United Airlines served the city during World War II and continued service until 1981 when economic conditions caused the city to lose the major carrier's service.

Today, commuter air service is provided at the Eastern Oregon Regional Airport by Horizon Airlines with seven flights daily between Pendleton, Portland, and Seattle. The smaller 17-passenger Metroliner has been replaced by the 37-passenger Dehaviland Dash 8 on three of the seven daily flights due to steady increases in emplanement numbers. The airfield is also home to 60 locally owned fixed-wing aircraft, four locally owned rotor, and eight CH-47 Chinook helicopters with the Oregon Army Air Guard. The Airport Master Plan is currently being updated by Bucher, Willis, and Ratliff with a late 1996 anticipated completion date.

Water

Although the Umatilla River flows through Pendleton, the river is generally too shallow to allow for effective water transportation. Water transportation is limited to recreational use of the river.

Pipeline

Pipeline transportation in and throughout the study area includes transmission lines for electricity (provided by Pacific Power & Light Company since 1918), cable television and telephone services, as well as pipeline transport of water, sanitary sewer, and a major north-south transmission line for natural gas. In addition, the region currently operates an infrastructure that provides links for electronic communication via telecommuting, satellite communication, etc.

Roadway Facilities

Development of the existing roadway system in the Pendleton urban area has been significantly influenced by the constraints created by the surrounding topography. Furthermore, the state highway system comprises a large part of the main arterials within the urban area.

Within the Pendleton urban area, roadways are classified as either freeway, arterial, collector, or minor.

The primary function of a *freeway* is to provide for "the expeditious movement of large volumes of traffic between, across, around, or through a city, region, or state" and is a divided highway with full-access control.

The primary function of an *arterial* is to provide for the movement of traffic "between areas and across portions of a city or region, direct service to principal generators, and connect to the freeway expressway system." Since the primary function of arterials is the movement of traffic, these roadways are subject to the regulation and control of parking, turning movements, entrances, exits, and curb uses.

The primary function of a *collector* is to provide for the movement of traffic between "arterials, activity centers, and neighborhoods." Collector streets are intended to provide access to abutting land.

The primary function of a *minor* street is to provide access to adjacent lands. Minor streets are not intended to carry through-traffic. A *cul-de-sac* functions as a minor street with a turnaround.

The Comprehensive Plan outlines the construction standards for the roadways that are under the jurisdiction of the city. The standards, shown in Table 3-2, were established in order to accommodate the functional utilization of the roadway.

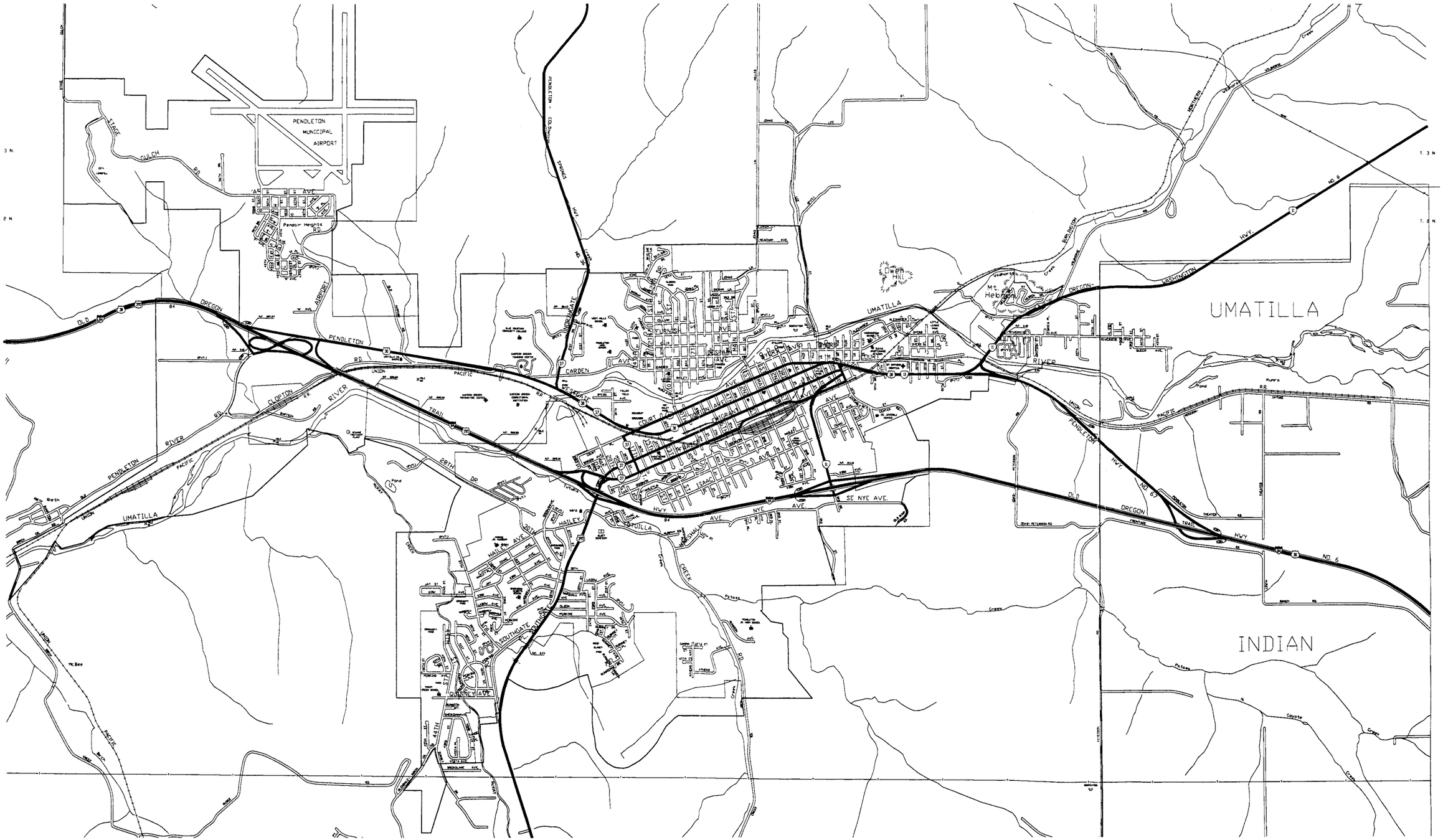
Developers can also make requests to the Planning Commission to improve roadways to standards less than the maximum standards shown in Table 3-2. These deviations are generally allowed if traffic can be accommodated on the requested standard.

According to the Comprehensive Plan, roadways can be improved by developers, federal grants or revenue sharing, bonds, or the formation of local improvement districts.

State Highways

The study area, shown in Figure 3-3, is bounded by the Pendleton Urban Growth Boundary. One federal interstate facility and four state highway facilities provide the primary access to the study area, including:

- Interstate 84 (Old Oregon Trail);
- US 395 (Pendleton-John Day Highway);
- US 30 (Pendleton Highway);
- Highway 11 (Oregon-Washington Highway); and
- Highway 37 (Pendleton-Cold Springs Highway).



LEGEND

——— – STATE HIGHWAY FACILITIES

CITY OF PENDLETON
TRANSPORTATION SYSTEM PLAN

STATE HIGHWAY SYSTEM

FIGURE 3–3

OCTOBER 1996

1567HIWY

Table 3-2

Roadway Cross-Sections

Right-of-Way	Pavement Width	Travel Lanes	Parking Lanes	Planting, Utility, and Sidewalk Areas (Each Side)
		Arterial Streets		
60'	44'	2 - 12'	2 - 10'	8'
80'	44'	2 - 12'	2 - 10'	18'
80'	56'	4 - 12'	1 - 8'	18'
80'	64'	4 - 11'	2 - 10'	8'
100'	80'	5 - 12'	2 - 10'	10'
		Collector Streets		
60'	36'	2 - 10'	2 - 8'	12'
60'	44'	2 - 12'	2 - 10'	8'
80'	44'	2 - 12'	2 - 10'	18'
		Minor Streets		
60'	24'[1]	2 - 12'	None	18'
60'	36'	2 - 10'	2 - 8'	12'
60'	44'[2]	2 - 12'	2 - 10'	8'

1 The pavement width shall only be permissible on dead-end streets with a cul-de-sac and approved by the Planning Commission.

2 Where the street serves partially as a Collector and has been so designated by the Planning Commission and approved by the City Council.

Interstate 84 (Old Oregon Trail) is the major east-west highway in Oregon, linking many of the communities in northeastern Oregon, and providing connections west to Portland and Seattle and east to Idaho and Utah. A total of five miles of the highway lie within the study area. Access from the freeway to the surface street system is provided at four interchanges: the West Pendleton Interchange, the US 395 Interchange, the Highway 11 Interchange, and the East Pendleton Interchange. Throughout the study area, I-84 is a four-lane freeway that carries in excess of 11,000 vehicles per day.

US 395 currently provides a continuous link between Pendleton, John Day, Burns, and Lakeview as well as to California. To the north, US 395, via I-84, provides access to Hermiston and Umatilla as well as to Washington via I-82. Within the Pendleton urban area, US 395 (Southgate) serves the neighborhoods and retail areas in the southern portion of the city. In downtown, US 395 becomes the Emigrant Avenue - Frazer Avenue one-way couplet that terminates at its intersection with US 30. Currently, the US 395 interchanges with I-84 are unsignalized. Within the Pendleton urban area US 395 carries between 4,000 and 20,000 vehicles per day. US 395 is classified by the Oregon Highway Plan as having statewide significance.

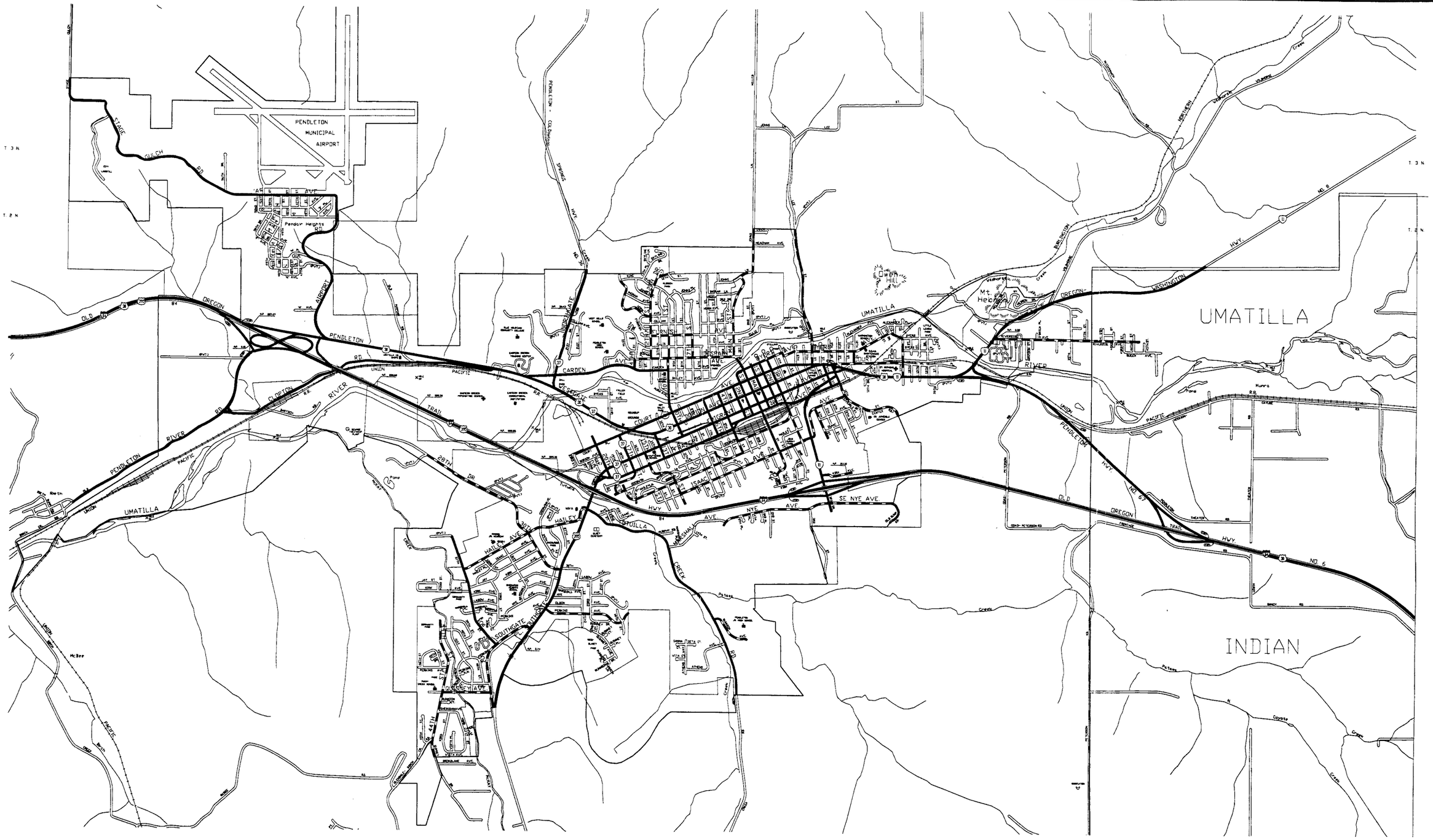
US 30 (Pendleton Highway) serves as one of the primary east-west arterials within the Pendleton urban area. The western terminus of US 30 occurs at a full interchange with I-84. The eastern terminus of US 30 is located at a partial interchange with I-84. Within the Pendleton urban area, US 30 (Westgate and Eastgate) is a two-lane roadway to the east and west of the downtown. In downtown, US 30 becomes a one-way couplet with 2-3 travel lanes in each direction (Court Avenue westbound and Dorion Avenue eastbound). Throughout Pendleton, US 30 provides immediate access to several office, industrial, and retail businesses as well as connection to local city collector and arterial streets. Within the study area, US 30 carries between 6,000 and 15,000 vehicles per day and is classified as having *district* level of importance by the Oregon Highway Plan.

Highway 11 (Oregon-Washington Highway) connects Pendleton to the state of Washington via the community of Milton Freewater. The southern terminus of Highway 11 is located at a diamond interchange at exit 210 on I-84. Highway 11 proceeds northward from I-84 along a limited access facility over the Union Pacific Railroad rail tracks and intersects US 30 at SE 10th Street. US 30 and Highway 11 share the same facility for approximately one-half mile at which point Highway 11 branches to the north towards Washington. The intersection of Highway 11 and US 30 at SE 10th Street is proposed to be realigned during the next five years. Access along Highway 11 is provided to some commercial and industrial users and primarily to city streets. Within the urban growth boundary, Highway 11 is classified as a *statewide* highway by the Oregon Highway Plan and carries in excess of 8,000 vehicles per day.

Highway 37 (Pendleton-Cold Springs Highway) provides access between Pendleton and Highway 730 via the Cold Springs junction. In the study area, the southern terminus of Highway 37 occurs at a full interchange with I-84 at exit 209. Highway 37 is classified as having *district* significance and carries approximately 5,000 vehicles per day. In the approximately two miles through Pendleton, Highway 37 primarily provides access to city streets.

Other Roadways

In addition to the state-maintained facilities, several arterial and collector streets within the Pendleton urban area also serve as key access routes for automobile, pedestrian and bicycle traffic. These facilities are primarily owned and maintained by the City of Pendleton and Umatilla County. Table D-2 (Appendix D) displays the functional classification, jurisdictional responsibility and physical characteristics of the arterial and collector streets in the urban area. In addition, Figure 3-4 illustrates the existing collector and arterial street system within the urban area.



LEGEND

— ARTERIALS

- - - - - - - COLLECTORS

CITY OF PENDLETON
TRANSPORTATION SYSTEM PLAN

EXISTING STREET CLASSIFICATION

FIGURE 3-4

OCTOBER 1996

1567FUNC

Bridges

The Umatilla River has also played a significant role in shaping the existing transportation and land use system in Pendleton. Within the Pendleton urban area, there are 28 existing bridges, five of which are on the federal bridge inventory, including:

- SE 8th Street Bridge (at the Umatilla River);
- Main Street Bridge (at the Umatilla River);
- SW 10th Street Bridge (at the Umatilla River);
- SE Court Place Bridge (over a former millrace); and
- Quinney Avenue Bridge (at McKay Creek).

The SE 8th Street Bridge is scheduled for replacement in 1997. Other crossings of the Umatilla River include: I-84, US 30 / Highway 37, and Highway 11. In addition, the SE Court Place bridge is not currently used as a bridge; however, the existing structure is listed on the Oregon Statewide Inventory of Historic Structures.

Existing Traffic Control

The locations of all of the signalized intersections within the Pendleton Urban Growth Boundary are shown in Figure 3-5. As shown in the figure, all of the traffic signals are located on state maintained facilities with the exception of the traffic signal at the Court Place / SW 20th Street and the Main Street / Byers Avenue intersections. Recently, ODOT has completed a traffic study which indicates that the two traffic signals on 4th Street at Court and Dorian do not presently meet signal warrants. ODOT has forwarded interim recommendations to modify these two signals to flashing amber (Court/Dorian) and flashing red (4th Street). These modifications will be revisited once City offices move to their new location on 4th Street. ODOT has also determined that the intersection of Westgate (US 30) and Northgate (Highway 37) presently meets signal warrants. The remainder of the major street intersections in the urban area are controlled with stop signs.

Existing Arterial and Collector Street Pavement Conditions

Currently, City of Pendleton staff is conducting an inventory of the existing pavement conditions on the arterial and collector street system. Based on the results of this inventory, the city will develop a pavement management system consistent with the development of the TSP to fund and complete improvement projects over the next 20 years.

TRAFFIC OPERATIONS

Manual turning movement counts were conducted at several study area intersections during the weekday p.m. peak hour in May and October 1995. The p.m. peak hour traffic counts were examined for reasonableness and were also compared to previous traffic counts conducted in the area as gleaned from previous traffic studies. Figure 3-6 illustrates the existing (1995) p.m. peak hour volumes on Pendleton's arterial and collector street system. Using these volumes, an operational analysis was conducted at each study area intersection to determine existing levels of service. All level of service analyses described in this study are in accordance with

the procedure described in the *1994 Highway Capacity Manual.* A discussion of the methodology is described in Appendix D. The results of this analysis are provided in Table D-3 (Appendix D). Figure 3-7 depicts intersections as under, near or over capacity during the average weekday p.m. peak hour.

As shown in Figure 3-7 and Table D-3, all of the signalized intersections in the study area are presently operating within acceptable levels of service; however, three unsignalized intersections are presently operating over capacity.

The unsignalized intersection at Court Avenue / Dorion Avenue / Westgate is currently operating at Level of Service "F" during the weekday p.m. peak hour; however, the City of Pendleton is currently evaluating the extension of SW 20th Street to Westgate. This extension, analyzed in Section 6, is expected to provide some relief to this intersection. The other two intersections that are currently operating at Level of Service "F" during the p.m. peak hour are at the Interstate-84 ramp intersections with Southgate (US 395).

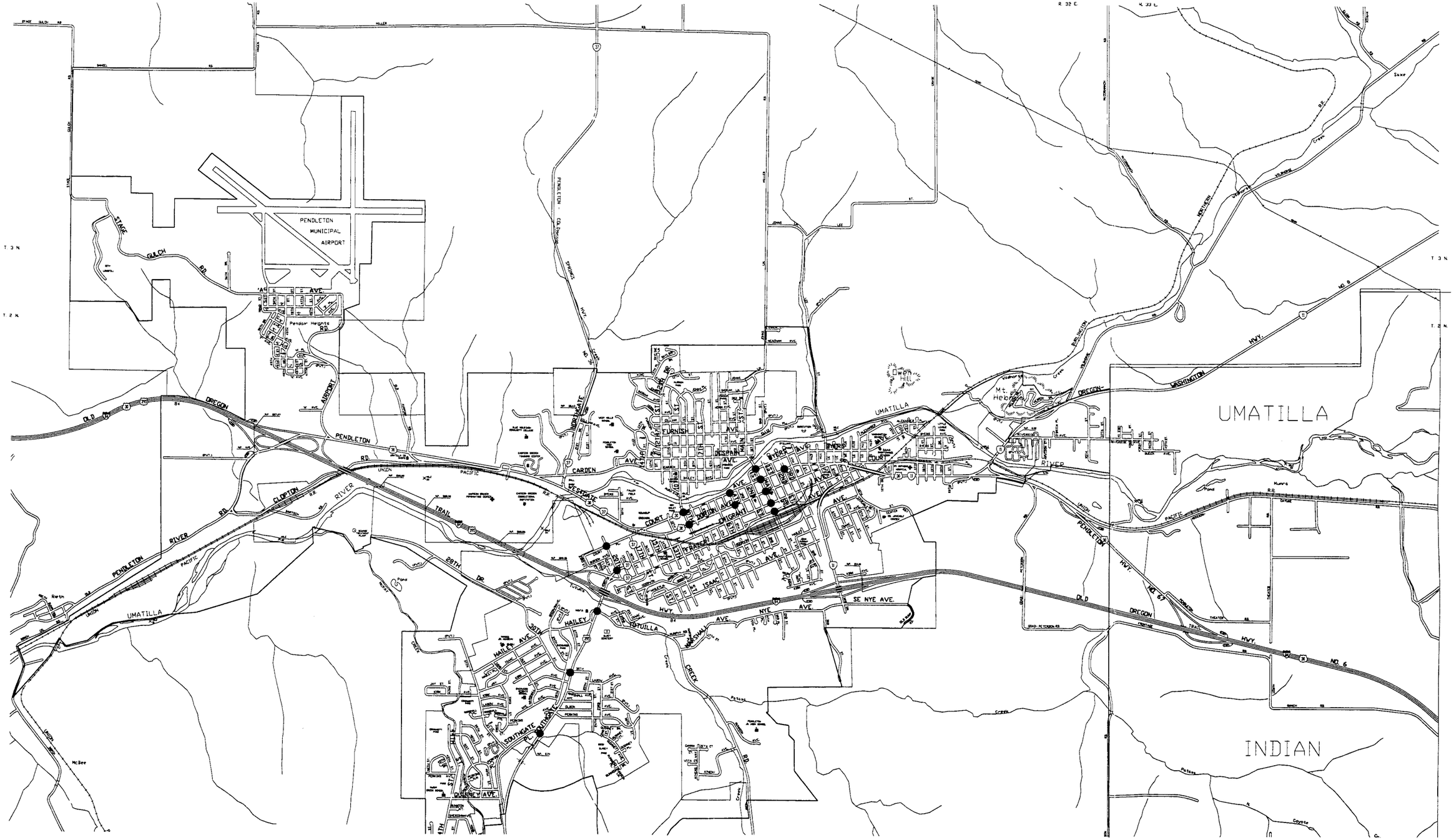
TRAFFIC SAFETY

A summary of the reported accidents on State highway facilities in the study area over a three-year period (January 1992 to December 1994) was assembled from ODOT records and is presented in Appendix D (Tables D-4 and D-5). The accidents reported for intersections and roadway segments are listed by severity (property damage only, injury, or fatality) and type (angle, head-on, rear-end, sideswipe, turning, fixed object, pedestrian and other).

For state highway **intersections**, the accident rate is given in terms of accidents per million entering vehicles (ACC/MEV) and is calculated by dividing the average number of accidents per year by the total entering volume for the year. An accident rate of less than 1.0 accidents per million entering vehicles generally indicates that there are no significant safety problems associated with the intersection. As shown in the Table D-4, there are some intersections that have an accident rate more than 1.0; the cause of these accidents should be examined by ODOT in more detail to determine if physical improvements are needed at the geometry of the intersections. Along roadway **segments**, the total number of accidents is divided by the product of the roadway volume and segment length in miles, and then reported as accidents per million vehicle miles traveled (ACC/MVM). Average accident rates at similar locations in the state of Oregon are approximately 3.69 ACC/MVM for facilities such as US 30, US 395, Highway 11, and Highway 37.

The accident analysis indicated that there were three accidents involving a fatality in the three-year period reviewed. The fatalities occurred at the intersection of Court Place and SW 17th, on US 30 near SE 17th, and on US 395 south of Tutuilla Creek Road. The fatalities on US 30 and US 395 involved pedestrians crossing between intersections. In the fatality at Court Place and SW 17th a car was struck by a train.

As shown in Table D-5, both of the downtown couplets (Court-Dorion and Emigrant-Frazer) exceeded the average rates reported for similar facilities located throughout the state. In the downtown, the state highways serve regional traffic as well as access to local businesses; therefore, the accidents may be attributable to the turning movements associated with vehicles entering and exiting the commercial development along the highways.



LEGEND

● – SIGNAL

CITY OF PENDLETON
TRANSPORTATION SYSTEM PLAN

EXISTING TRAFFIC CONTROL

FIGURE
3–5

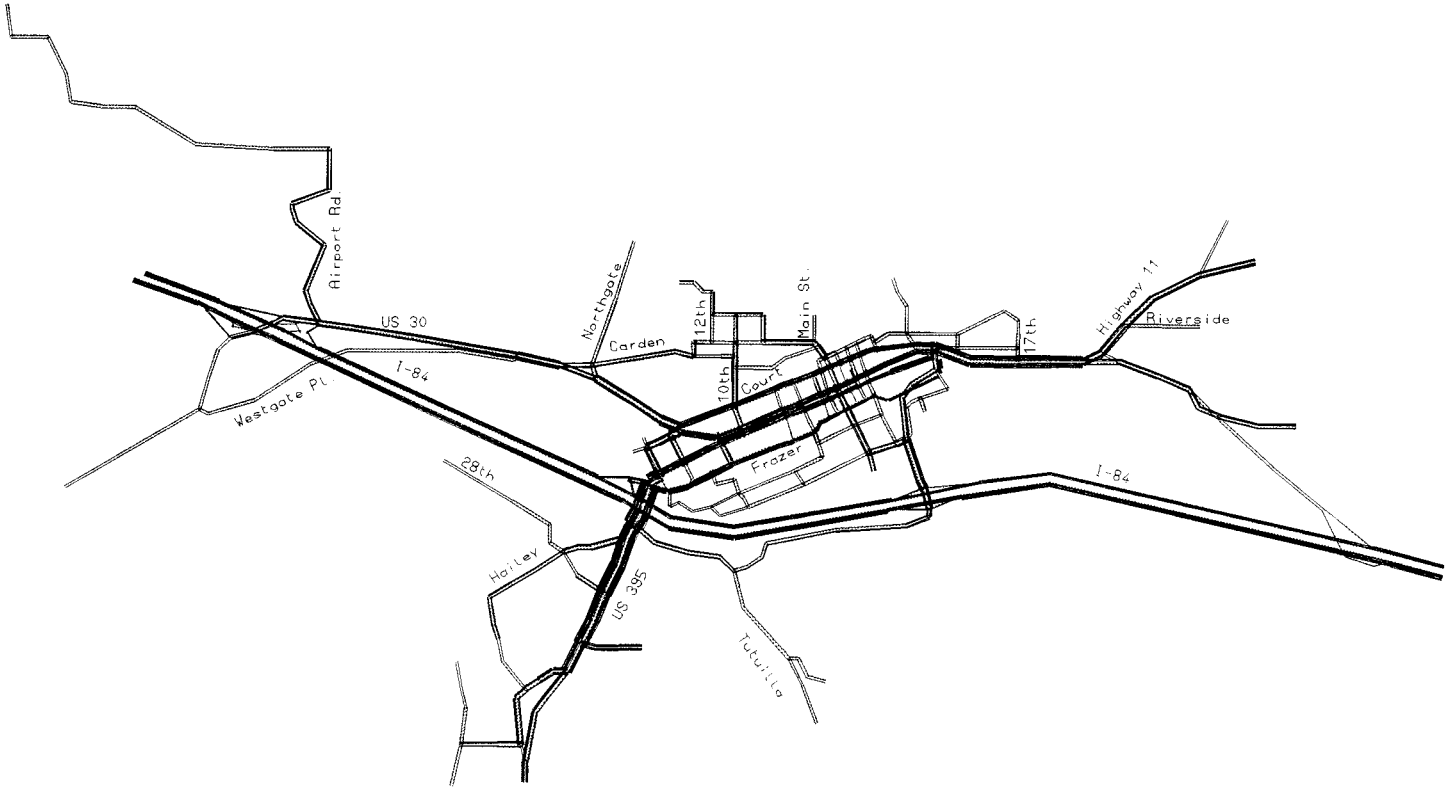
OCTOBER 1996

1567SGNL

AUTO VOLUMES

emme/2

LINKS:
typ=3,100



SCALE: 200

500

1000

1500

2000

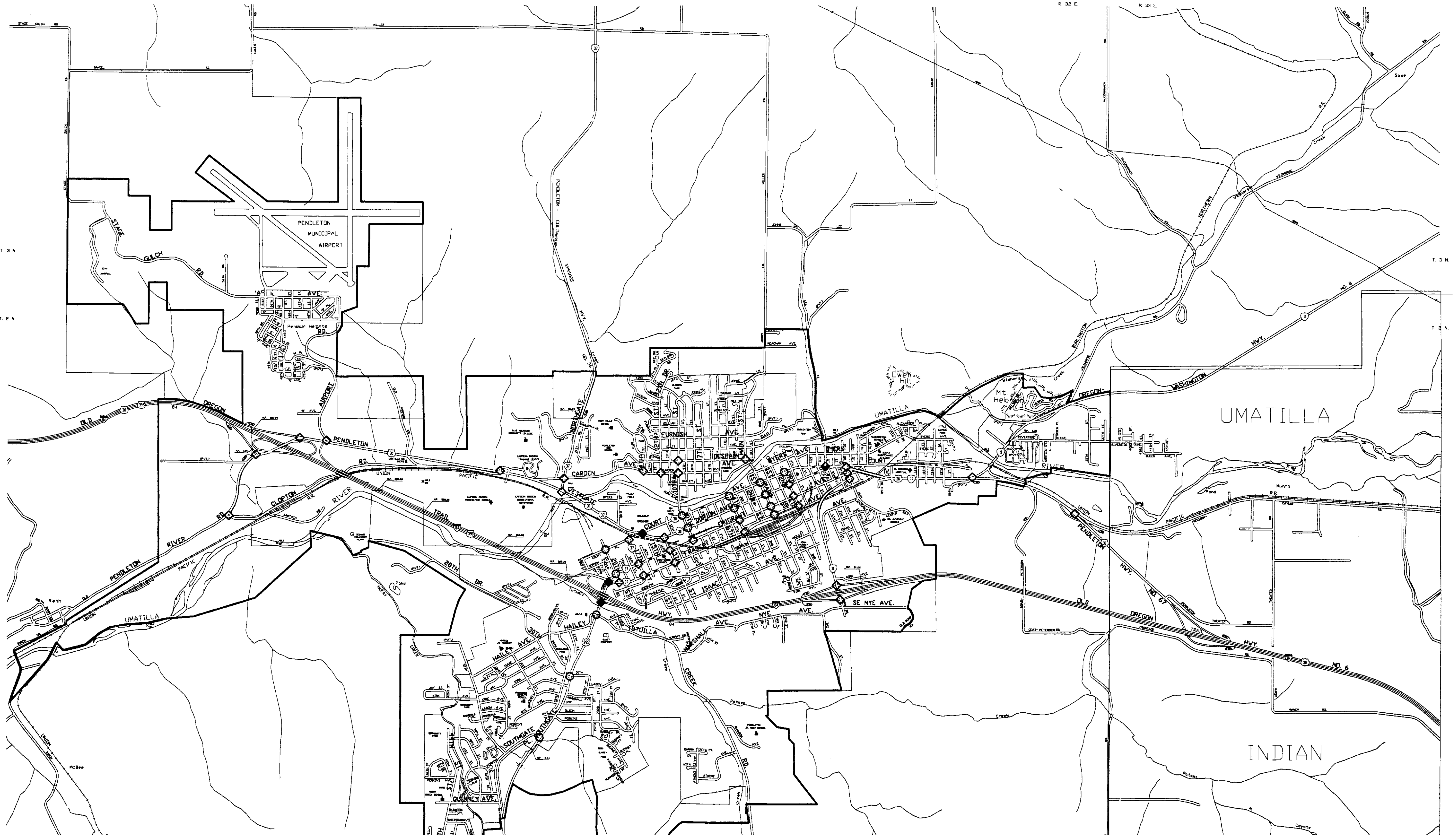
2500

WINDOW:
1 56/-26.95
337.44/224.96

EMME/2 PROJECT: Pendleton TSP
SCENARIO 1: 1995 Existing PMPK Volumes

Figure 3-6. 1995 Existing P.M. Peak Hour Volumes

96-06-14 11:33
MODULE: 6.12
KAINC.....jak



EXISTING LEVEL OF SERVICE

SIGNALIZED		UNSIGNALIZED
○	UNDER	◇
◒	NEAR	◆
●	OVER	◆

CITY OF PENDLETON
TRANSPORTATION SYSTEM PLAN

EXISTING LEVEL OF SERVICE

FIGURE 3-7

OCTOBER 1996

1567CAF

Accident rates on segments of Highway 37, US 30, and US 395 also exceed the statewide average of similar highways. A more detailed safety evaluation should be conducted to determine if the highway design is a contributing factor to these poor conditions.

PUBLIC INVOLVEMENT

Members of the community were given several opportunities to comment and become involved in the project during the evaluation of existing conditions. These opportunities included the following:

- Stakeholder interviews were conducted as described above.
- Newsletter No. 1 was distributed to inform the public of the study process and to summarize the results of the stakeholder interviews.
- Public Open House No. 1 was conducted to provide the general public with an overview of the study process, the existing conditions analysis, and the results of the stakeholder interviews.

CONCLUSIONS

Within the urban growth area, an intricate network of bicycle and pedestrian facilities, intracity public transportation service for the transportation disadvantaged, intercity bus service, freight and passenger rail and air service, and bridges and roadways provide mobility to the residents of Pendleton. The historic development of these facilities and services has been shaped by the topography, the construction of Interstate 84, and the values and vision of the residents of the city.

During the last twenty years, the city has continued to place emphasis on the provision of bicycle and pedestrian facilities throughout the urban area. Several segments of the River Parkway, an exclusive pedestrian/bicycle path along the Umatilla River, have been completed and additional segments are included in the current Capital Improvements Program. Additionally, although very few roadways throughout the city have on-street bicycle lanes, the city has been implementing recommendations from the Bicycle System Master Plan to provide on-street bicycle lanes and routes throughout the city.

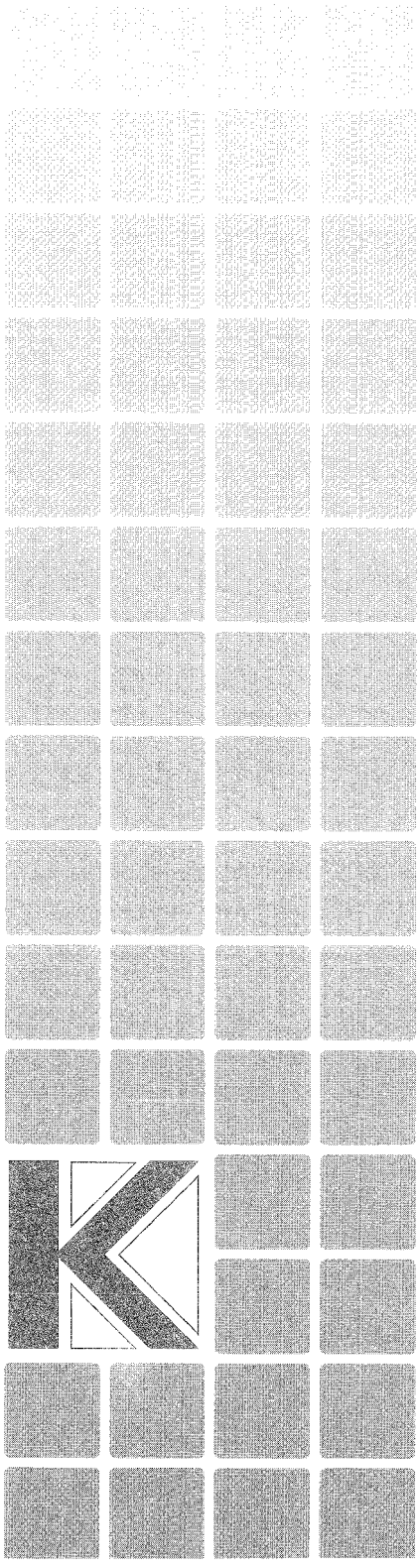
Sidewalks are provided on many of the collector and arterials streets, especially in the downtown. However, a general perception exists among the public that pedestrian crossings of U.S. 395 are limited and a perceived sight distance problem at the traffic signal near the Nye Avenue intersection is considered as an unsafe crossing. Additionally, the Pendleton School District transports children so they do not have to cross U.S. 395 at Nye. Although an analysis of accident history does not support this general conclusion, additional advance signing may be necessary to warn drivers. Additionally, as areas develop or redevelop, the city should require the installation, improvement, or replacement of sidewalks, as needed, to improve the connectivity of the pedestrian system.

Elite taxi service operates door-to-door transportation services to the transportation disadvantaged on a voucher system. The implementation of a fixed-route system for the general public should continue to be postponed until appropriate population and economic conditions prevail. Inter-city bus service, provided by Greyhound, is adequate and should continue to be enhanced in the future.

The frequency of rail freight activity is expected to increase by nearly 50 percent in the next two years. Since all but three of the public roadway crossing of the railroad are currently at-grade, a train passing through the downtown can serve as a barrier to north-south travel. In order to ensure adequate response time for emergency services as well as the minimization of delay to and continued safety of motorists, pedestrians, and bicyclists, the City of Pendleton, as part of the TSP, investigated the feasibility of constructing a new grade-separated crossing of the railroad. The results of this analysis are discussed in a separate report entitled *SW 20th Street Rail Crossing Study* (OTAK and Kittelson & Associates, Inc., 1996).

Because of topographic constraints and the construction of Interstate 84, there are only two existing opportunities for access between the areas of Pendleton to the north and south of the freeway: U.S. 395 and Highway 11. The resulting level of cross-town traffic, especially in the vicinity of the Interstate 84 interchange with U.S. 395 makes it very difficult for motorists exiting the freeway to access the downtown and subsequently both of the ramp termini operate over capacity today. This problem is further compounded during inclement weather conditions when the upstream signal at the Hailey Avenue/Tutuilla Creek Road/U.S. 395 intersection changes to a flashing yellow indicator on U.S. 395 during icy conditions. The unsignalized intersection of Westgate/Court/Dorion also operates unacceptably today. All of the other intersections within the urban area operate at acceptable levels of service during the average weekday.

Lastly, the peak demand on the transportation system occurs annually during the week of the Pendleton Round-Up. Shuttle services and other traffic management measures have been implemented by the city and provide access and mobility for the city's residents and visitors during this annual event.



Section 4

Land Use, Growth, and Travel Demand

Land Use, Growth, and Travel Demand

BACKGROUND

Pendleton historically had its origin adjacent to the Umatilla River on the valley floor area. Subsequently, the community has grown east and west on the valley floor and north and south on the hillsides. In the past thirty years, a major part of the development has occurred to the southwest, into the McKay Creek valley floor area.

The urban growth boundary of the city has essentially been a continuous natural extension of the existing developed areas. In the late 1960s and early 1970s considerable land area was annexed into the city based on pending development plans of owners and/or developers, and lands owned by the city. Much of this land is still vacant and it is anticipated that it will be needed for the future growth of the community's residential, commercial, and industrial uses.

Historically, the type of growth that has occurred in the city has been related to the construction of the rail line and support of lumber, flour, and woolen mills, and canneries, and has been shaped by the Umatilla River and the resultant topography. The downtown developed first as a mix of commercial and higher density residential uses with small-lot single family homes developing on the hillsides to the north and south of downtown and large-lot single family homes developing on the hilltops. Lands to the east of the downtown continued with the development of a mixture of small-lot single family homes, commercial, and industrial areas. Lands in the western portion of the city were traditionally agricultural until the construction of the Pendleton Municipal Airport in the 1930s. The construction of the airport and Interstate 84 heavily influenced the development of industrial properties and aviation-related activities along the Umatilla River and to the north of Interstate 84 west of the downtown. Since the 1960s, much of the development has been occurring in the areas to the south of Interstate 84. Areas immediately adjacent to U.S. 395 and the Highway 11/Interstate 84 interchange have developed as retail and service uses. The remainder of the area is and continues to develop as residential neighborhoods.

FUTURE POPULATION AND EMPLOYMENT GROWTH

According to the Comprehensive Plan, Pendleton was incorporated in 1880 at a time during which the population was estimated at 730. At the time of the city's centennial (1980), the population was estimated at 14,500 which equates to an average annual increase of 18.9 percent, although much of this growth occurred before 1950.

Today, the population of the city is estimated at 15,930 people, with an estimated 6,153 households and 6,971 jobs. A summary of the existing households and employment, summarized in the transportation analysis zone (TAZ) system established for the Pendleton urban area, is provided in Appendix E (Table E-1).

The Comprehensive Plan includes estimates of population for three growth scenarios. These scenarios and associated growth rates are provided in Table 4-1.

Table 4-1

Pendleton Urban Area Population Growth

Scenario	Population	Average Annual Growth Rate	Total Growth Rate
Existing (1995)	15,690 people		
Low Growth	19,000 people	0.96%	21.1%
Medium Growth	20,500 people	1.35%	30.7%
High Growth	26,000 people	2.56%	65.7%

Based on a review of current growth trends and discussions with city staff and the Management Team and Advisory Committee, the low growth scenario was selected for the determination of future transportation system needs.

FUTURE HOUSING

The Comprehensive Plan also includes estimates of growth in housing corresponding to each growth scenario. According to the plan, the low growth scenario corresponds to a 40 percent increase in households (6,153 existing, 8,616 future) during the next twenty years. In the future, the average household size is expected to be approximately 2.28 persons, which is substantially lower than the average size today. Additionally, in the future, it is anticipated that single family and mobile homes will comprise 70 percent of the housing market, while multi-family dwelling units and duplexes will comprise the remaining 30 percent.

The Comprehensive Plan also identifies buildable acreage, by residential zoning type, in six designated sectors within the urban growth area. This information and an analysis of current growth trends were used to allocate new households geographically throughout the urban area. A summary of the total number of households in 2015, by TAZ, is provided in Table E-2 (Appendix E). A comparison of the existing and future households in the six districts is provided in Figure 4-1. An overview of the expected growth in each of the six districts is provided below.

Northwest

Most of the land in the northwest district is zoned industrial and therefore, very little growth in single family or multi-family households is anticipated during the next twenty years. In addition, the City of Pendleton is phasing out the use of abandoned military housing in the vicinity of the airport that is currently being used for multi-family dwelling units.

North

The North Hill area is an established residential neighborhood with primarily single family homes. Growth in single family and multi-family households is expected to occur to the west of NW 12th and to the east of Main Street, with some infill occurring in the established areas.

East

Growth in the east district is expected to occur primarily as small-lot, single family homes. Areas in the east district that may experience the highest growth in households include the neighborhoods to the south of Goodwin Avenue (east of Highway 11) and in the vicinity of Riverside Avenue. The other neighborhoods in the east district may experience slight increases in households related to infill and redevelopment opportunities.

Southeast

Significant growth in multi-family and single family households is expected in the southeast district during the next twenty years. Additional multi-family households are expected along the southern edge of the commercial properties abutting U.S. 395 as well as the tourist commercial properties adjacent to the I-84/Highway 11 interchange. Significant single family growth is expected along the southern portions of Tutuilla Creek Road in the vicinity of the Grecian Heights Planned Unit Development.

Southwest

Over half of the growth in single family households and approximately one-third of the growth in multi-family households in the southwest district is expected to occur just to the south of I-84 along SW 28th Drive. Most of the remaining single-family growth is expected to occur in the areas to the west of SW 44th Street; the remaining multi-family growth is expected along U.S. 395.

Downtown

In the downtown, much of the growth in households is expected to occur as infill, with many of the multi-family units being planned on the second floor of office and retail buildings.

FUTURE EMPLOYMENT

The Pendleton Comprehensive Plan also identifies growth targets for the type and amount of new employment in the urban area. This information is summarized in Table 4-2.

Table 4-2

Pendleton Urban Area: Future Employment, by Type

Zoning Type	Proportion of New Employment	Total Number of New Jobs
Light Industrial	30%	739
Heavy Industrial	10%	245
Aviation	1%	30
Central/Service Commercial	45%	1,094
Tourist Commercial	14%	355
Total		2,463

For travel forecasting purposes, the new jobs were aggregated into 847 new retail and 1,616 new non-retail employees; adding the new jobs to the existing employment equates to approximately 1,763 retail and 2,560 non-retail employees expected in the Pendleton urban area by the year 2015.

The Pendleton Comprehensive Plan identifies the site constraints for several underutilized industrial and commercial sites within the urban area that are more than one acre in size. This information, combined with an analysis of current growth trends, was used to allocate the new jobs geographically throughout the urban growth area. A summary of the total number of jobs in 2015, by TAZ, is provided in Table E-2 (Appendix E). A comparison of the existing and future jobs in the six districts is provided in Figure 4-1. A summary of the expected growth in each of the six districts is provided below.

Northwest

Almost 70 percent of the growth in non-retail jobs in the urban area is expected in the north district. Almost half of this growth is expected in the designated industrial park to the south of U.S. 30 and west of Eastern Oregon Correctional Institution (EOCI). Much of the rest of the growth in non-retail employment is expected in the vicinity of the airport. The majority of the growth in retail employment is expected in the area near the U.S. 30 / I-84 interchange.

North

Very little growth in employment is expected in the north hill area.

East

All of the growth in employment in the east district is expected as non-retail jobs. Most of this growth will occur as service commercial jobs in the vicinity of the Highway 11/I-84 interchange.

Southeast

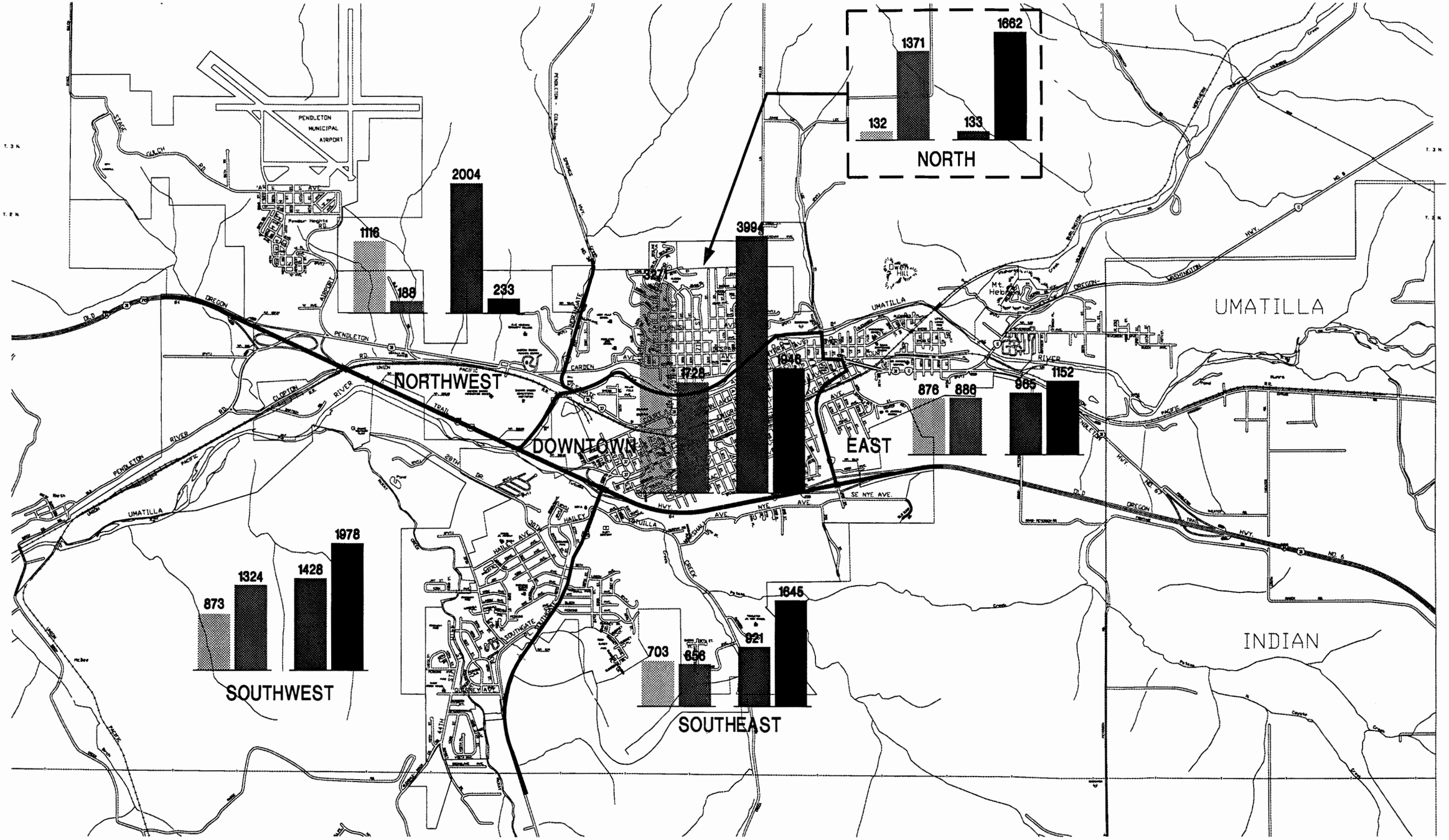
Much of the growth in employment in the southeast district is anticipated to occur as service commercial jobs along U.S. 395 and in the vicinity of the Highway 11/I-84 interchange. Some neighborhood commercial is expected along Tutuilla Creek Road.

Southwest

All of the growth in retail jobs in the southwest district is expected along U.S. 395 in the vicinity of Hailey Avenue. All of the growth in service commercial jobs is expected to occur in the vicinity of Southgate Place and SW 37th.

Downtown

All of the growth in retail employment in the downtown is expected in the buildout of the Pendleton Retail Center (previously the Harris Pine and Louisiana Pacific sites); all of the industrial growth is expected in the vicinity of the industrial park to the west of EOCI. Small increases in service commercial employment are expected throughout the downtown.



CITY OF PENDLETON
TRANSPORTATION SYSTEM PLAN

COMPARISON OF EXISTING AND FUTURE HOUSEHOLDS & EMPLOYMENT

FIGURE 4-1

OCTOBER 1996

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A summary of the total number of households and employment today and in the future is provided in Table 4-3.

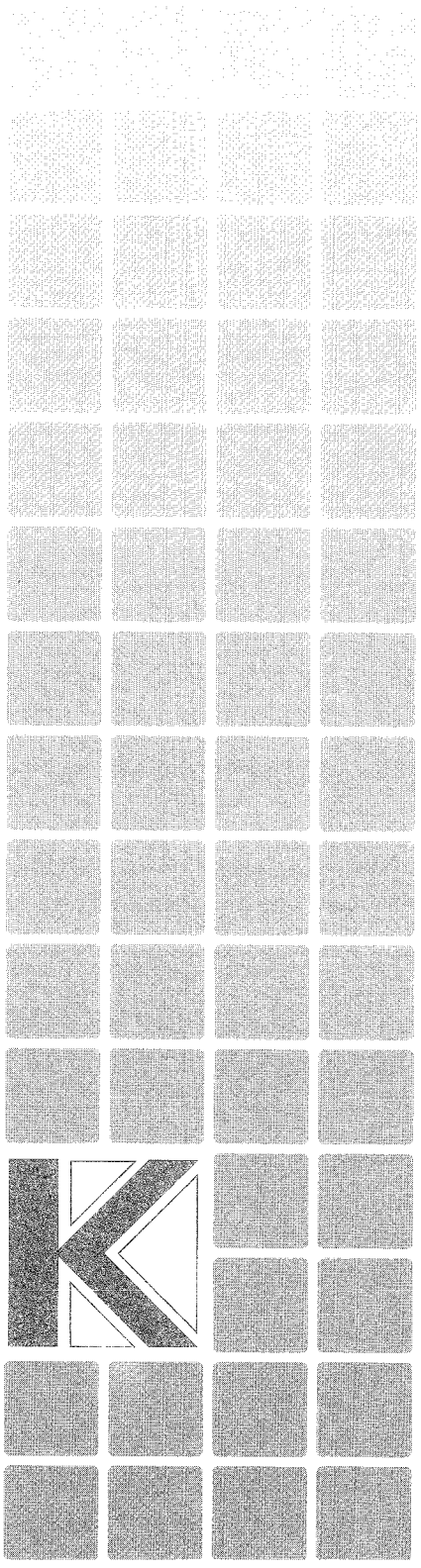
Table 4-3

Pendleton Urban Area: Comparison of Existing and Future Households

	Existing (1995)	Future (2015)	Growth (2015 - 1995)
Employees	6,971 jobs	9,445 jobs	2,474 jobs (35%)
Households	6,153 dwelling units	8,616 dwelling units	2,463 dwelling units (40%)

TRAVEL DEMAND FORECASTING MODEL

To analyze the impacts of the growth in households and employment on the transportation system, a travel demand forecasting model was developed for the Pendleton urban area. A detailed explanation of the calibration of the model to existing p.m. peak hour conditions using the EMME/2 software is included in a supplemental document to the TSP entitled "Pendleton Urban Area Travel Demand Forecasting Model Development." Also included in the document is an explanation of the development of future p.m. peak hour volumes based on the distribution of households and employment to the TAZ system. Figure E-1 (Appendix E) illustrates the TAZ system developed for the construction of the model.



Section 5

Impact of Growth on the Transportation System

Impact of Growth on the Transportation System

INTRODUCTION

This section outlines the regional travel patterns expected as a result of the form, location, and extent of anticipated growth in the Pendleton urban area. The determination of the impacts of the growth and the associated deficiencies were packaged together as a "No Build Alternative" that was used as the basis for developing and evaluating strategies and options for the future transportation system.

The following outlines the impacts that the regional travel and land use patterns will have on each mode of transportation considered in the No Build Alternative.

PEDESTRIAN AND BICYCLE SYSTEM

The adequacy of the existing pedestrian and bicycle system will be significantly affected by the allocation of growth in households and employment throughout the study area. The need for bike lanes does not necessarily depend on traffic volume, but rather on traffic volume and the functional class of street. A summary of the impacts of the growth, at the district level, is summarized below.

Northwest

Primarily heavy industrial and airport and freeway-dependent uses are anticipated to develop in the northwest district. Pedestrian and bicycle travel is not typically associated with these uses and therefore, it is reasonable to assume that the absence of bicycle and pedestrian facilities in the areas to the west of the proposed industrial park and the U.S. 30/I-84 interchange is acceptable. However, better pedestrian and bicycle connectivity is necessary between Blue Mountain Community College and the existing and future households in the downtown and the north districts.

North

Over the last 50 years, the north hill has developed, for the most part, as single family households with some multi-family interspersed throughout. As such, a fairly comprehensive pedestrian system has been maintained, especially in the neighborhoods to the east of NW 12th and to the west of NW 7th. In the future, new homes are expected to develop on the periphery of this core area; therefore, better sidewalk connectivity will be necessary to link the new areas with the older neighborhoods and into the downtown.

In the north hill area, on-street bike lanes exist today only on Northgate. Both the 10th Street and Main Street bridges are signed as bike routes. Although the majority of the roadways in the north hill area do not and probably will not carry the level of vehicle traffic that will necessitate exclusive on-street bike lanes, it is reasonable to expect that the bridges will require bike lanes.

East

Growth in households is expected to occur primarily along Riverside Avenue and south of Goodwin Avenue. Today, sidewalks exist along U.S. 30 and Highway 11 to provide connectivity to the hospital, the downtown, and service commercial along the highways; however, no sidewalks exist along Riverside Avenue, a facility that will connect the new households to Highway 11. Additionally, there are no designated bicycle routes or on-street bicycle lanes to connect the residents in the east district with the downtown.

The development of new households in the area to the south of Goodwin Avenue will require better pedestrian connections to the downtown. Today, no sidewalks exist along SE 10th Street, the primary access between this neighborhood and the downtown. The other pedestrian access to these neighborhoods occurs via Isaac Avenue at Highway 11 at a flashing yellow indicator and via a pedestrian stairway to the east of Highway 11. The anticipated traffic volumes in this neighborhood will not require on-street bicycle lanes.

Southeast

Significant growth in single-family households is expected in the southeast area. The development of multi-family households along U.S. 395 will be complemented by the continued development of retail and service employment in the corridor and will enhance the opportunity for pedestrian and bicycle travel in the southeast. Today, there is an existing network of sidewalks in the area to the east of U.S. 395 that will serve existing and future households.

Significant single-family development is also expected along Tutuilla Creek Road in the vicinity of the Grecian Heights Planned Unit Development. Today, there is a continuous pedestrian and bicycle network to serve the existing residents. New growth that occurs in this area needs to continue the development of the network.

Southwest

The grid of local streets in the southwest district has a limited number of pedestrian facilities. Better connectivity is needed in the existing residential areas and connections will need to be made to new neighborhoods. Efforts should be made to connect the new neighborhoods along SW 28th Drive to the bicycle network on SW 37th Street, Southgate Place, and U.S. 395.

Additionally, as more residential and commercial development occurs in the southeast and southwest districts, care should be taken to ensure safe pedestrian crossing opportunities of U.S. 395.

Downtown

The continued development of the downtown as a mixed use center will continue to enhance the opportunities for pedestrian and bicycle travel. Today, a fairly comprehensive pedestrian and bicycle network exists in the downtown and the mix of uses, such as the use of second floor office and retail buildings as multi-family households, encourages non-auto travel. Connectivity is also provided between the other districts in the urban area.

The future development of the Pendleton Retail Center needs to include internal pedestrian and bicycle connections as well as connections to the surrounding transportation system.

PUBLIC TRANSPORTATION

The continued use of inter-city transit will adequately serve the future growth in Pendleton. However, the continued absence of a dial-a-ride system for the general public for intra-city travel will continue to leave some segments of the population under-served by public transportation. Although it is unlikely that Pendleton will experience population increases during the next twenty years that will support the implementation of a fixed-route transit system, the city will benefit from the coordination and expansion of the demand-responsive system.

RAIL

During the next two years, Union Pacific is anticipating that the level of rail activity in the Pendleton area will increase by more than 50 percent. While the existing rail lines in Pendleton may be adequate to handle this increased demand, additional demand will be placed on the bicycle, pedestrian, and roadway networks. Today, twelve at-grade crossings in the downtown impact local circulation. Increased bicycle, pedestrian, and auto travel and emergency services that result from increases in population combined with increased rail activity will result in additional delay and conflicts in the downtown. The construction of new grade-separated crossings needs to be evaluated.

AIR

Expanding commuter and air freight service will serve the future population of not only the Pendleton urban area, but the six-county region serviced by the Eastern Oregon Regional Airport.

ROADWAY

The impacts of growth on the existing roadway network were determined through the use of a travel demand forecasting model. Based on the distribution of households and employment to the transportation analysis zone (TAZ) system as discussed in Section 4, estimates of future p.m. peak hour volumes were calculated using the travel demand model developed for the Pendleton urban area. Future p.m. peak hour volumes were initially assigned to the existing roadway network to reflect a "No Build" ("Do Nothing") condition. The resulting future p.m. peak hour volumes are shown in Figures 5-1 and 5-2. Additionally, based on the future p.m. peak hour volumes (No Build), an intersection level of service analysis was conducted to identify future roadway deficiencies. The results of this analysis are presented in Figure 5-3 and summarized in Appendix D (Table D-6).

As shown in the figures, in the future, the roadway system will continue to be constrained by the lack of connections between the neighborhoods to the north and to the south of Interstate-84. Significant growth in households in the southeast and southwest districts will continue to compound the need for cross-town travel for employment and shopping opportunities even though some level of additional commercial and service is planned along U.S. 395. Additionally, growth in employment in the northwest district will continue to constrain the Westgate/Court/Dorion intersection, which is the only access to downtown from the employment centers and the Community College to the west.

From a regional perspective, additional connections are needed between the downtown and the industrial area to the west. An additional connection or enhancements to the existing connec-

tions, such as local street connectivity to reduce reliance on U.S. 395, are needed between the downtown and the southwest/southeast districts.

From a microscopic perspective, an intersection level-of-service analysis revealed that several intersections are expected to operate unacceptably in the future, including:

- Court Place / SW 17th Street;
- Emigrant / SW 17th Street;
- Highway 11 / I-84 Eastbound Ramps;
- Highway 11 / U.S. 30;
- U.S. 30 / Airport Road / I-84 Westbound Off-Ramp;
- U.S. 395 / Hailey Avenue / Tutuilla Creek Road;
- U.S. 395 / I-84 Eastbound Ramps;
- U.S. 395 / I-84 Westbound Ramps;
- Westgate / Court / Dorion; and
- Westgate / Northgate.

Only the intersections at Westgate / Court / Dorion, U.S. 395 / I-84 Westbound Ramps, and U.S. 395 / I-84 Eastbound Ramps are operating unacceptably under existing (1995) conditions. Several other intersections in the southwest portion of the downtown (SW 13th - SW 20th) and to the east of downtown are expected to approach capacity in the future (i.e., LOS "D" or "E").

A variety of specific intersection improvements were investigated to address the capacity deficiencies expected under the No Build Alternative. Based on this analysis, it was determined that the following intersections will warrant the installation of a traffic signal under the No Build Alternative: Highway 11/I-84 eastbound, Highway 11/U.S. 30, U.S. 395/I-84 eastbound, U.S. 395/I-84 westbound, Perkins/U.S. 395, and Westgate/Court/Dorion. The traffic operations at the Westgate/Northgate intersection can be improved with the installation of a right-turn lane on Westgate in the westbound direction. The unacceptable conditions at the Hailey Avenue/Tutuilla Creek Road/U.S. 395 intersection can be improved by providing local circulation opportunities in the Southgate area. Additionally, the following intersections will not warrant a traffic signal under the No Build Alternative and will continue to operate unacceptably in the future if no local circulation opportunities are provided in the vicinity of the intersection: Court/SW 17th Street, Emigrant/SW 17th Street, and U.S. 30/Airport Road. At these locations only the side-street left-turn movement is anticipated to operate unacceptably in the future; all other movements at these intersections will operate acceptably.

CONCLUSIONS

Several deficiencies were identified in the existing pedestrian, bicycle, public transportation, rail, and roadway systems in their ability to accommodate existing and future households and employment in the Pendleton urban area. The identification of these deficiencies was used as the basis to formulate and evaluate future transportation system alternatives in Section 6.

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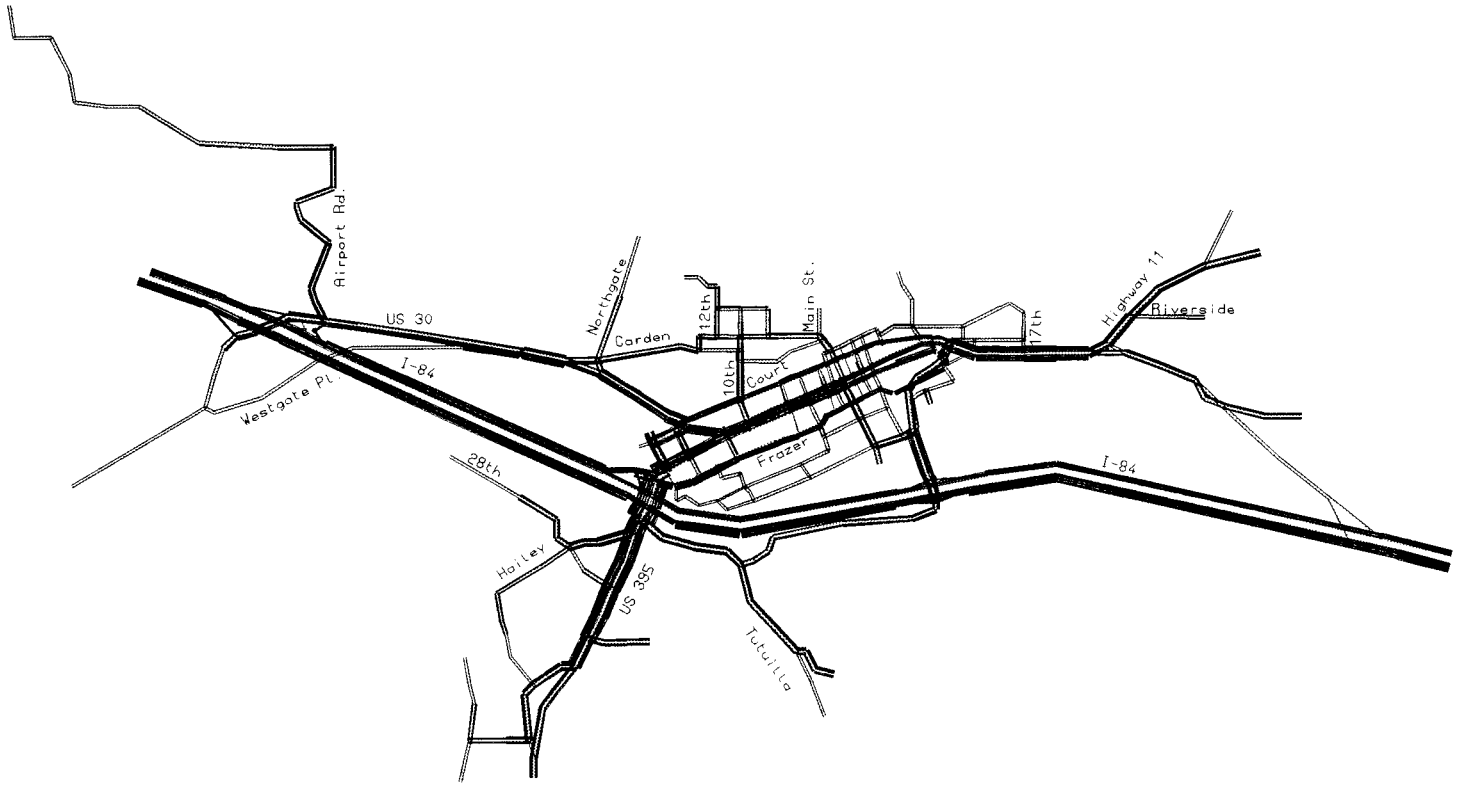

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EMME/2 PROJECT: Pendleton TSP
SCENARIO 3: 2015 PMPK - No Build Alternative

Figure 5-1: 2015 No Build P.M. Peak Hour Volumes

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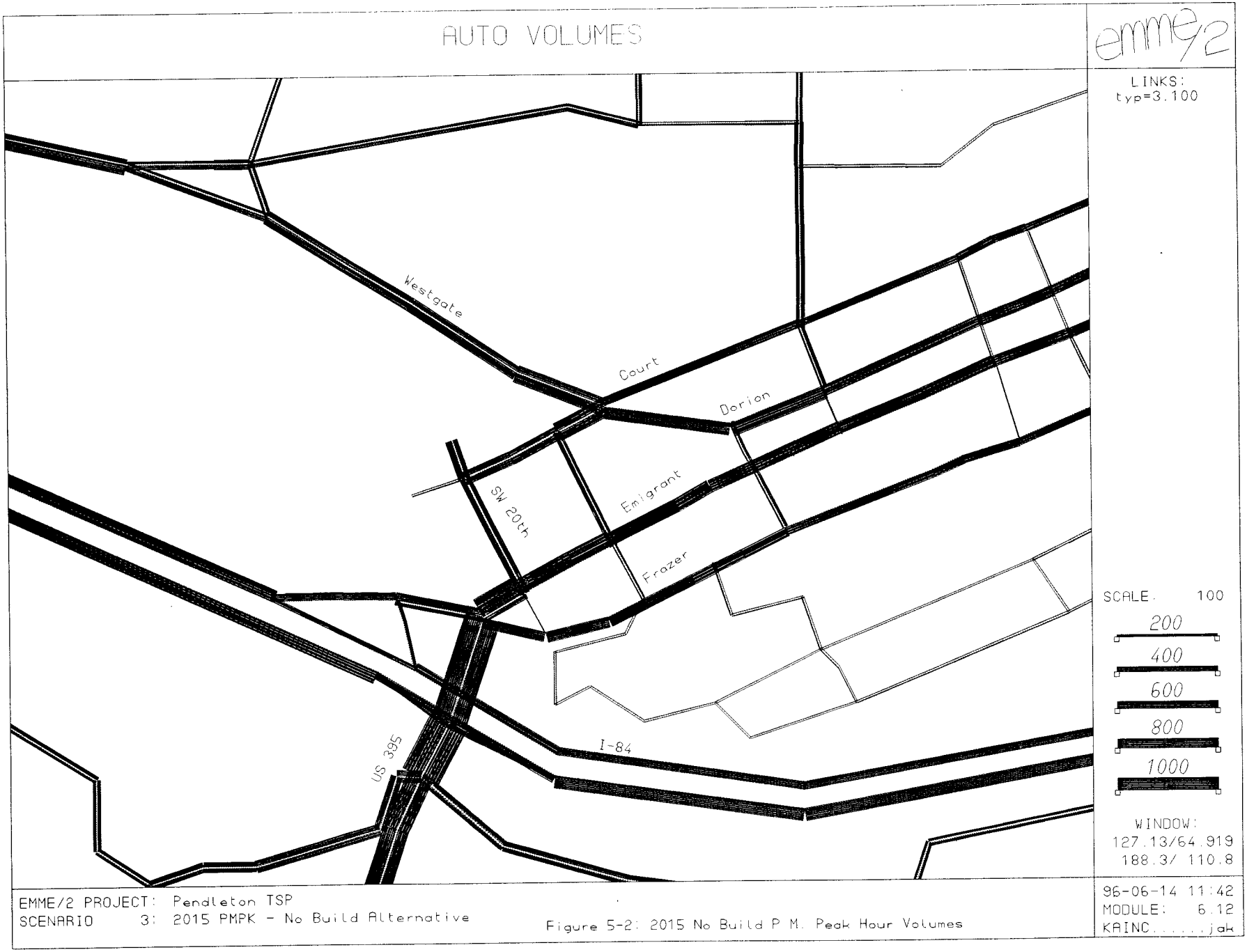
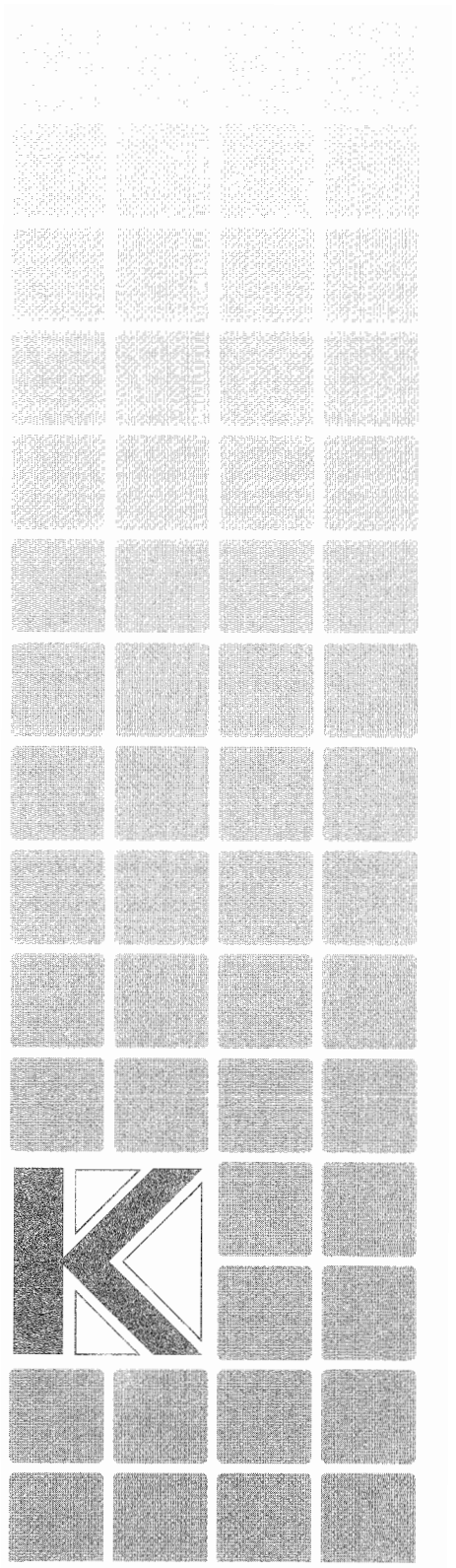


Figure 5-2: 2015 No Build P.M. Peak Hour Volumes



Section 6

Evaluation of Alternatives

Evaluation of Alternatives

INTRODUCTION

As discussed in the preceding chapter, growth in population and employment during the next twenty years will result in the failure of the existing transportation system to accommodate the future demands. The deficiencies identified as part of the "No Build Alternative" in combination with discussions with the Management Team and Advisory Committee led to the consideration and evaluation of a series of alternatives. These alternatives were aimed at mitigating the identified deficiencies and strengthening and enhancing the multimodal transportation system. The alternatives were presented to both committees for review, direction, and decision and were evaluated using the goals and objectives and several measures of effectiveness.

Three primary alternatives were considered and evaluated, including:

- No Build Alternative;
- Transportation-Efficient Land Use Alternative; and
- Implementation of the Comprehensive Plan Improvements.

In addition, several options and strategies for enhanced local circulation within Pendleton were considered and evaluated, including:

- downtown circulation options;
- rail crossing options; and,
- southwest downtown circulation options.

ALTERNATIVE TRANSPORTATION OPTIONS

The evaluation of the No Build Alternative, as discussed in Section 5, led to the identification of several deficiencies in the existing bicycle, pedestrian, and public transportation systems. These deficiencies led to the development of modal plans that were refined through committee review and used as in the development of land use and roadway alternatives. However, due to the simplicity of the travel demand forecasting methodology used in the development of the TSP, only land use and roadway system alternatives were evaluated using the travel demand forecasting model.

In essence, only two alternatives were developed for pedestrian, bicycle, and transit options: the No Build Alternative and the "Recommended" Alternative. The pedestrian, bicycle, and transit recommendations are presented in Section 9 and reflect the mitigation of the deficiencies described in Section 5.

TRANSPORTATION-EFFICIENT LAND USE ALTERNATIVE

As discussed in Section 5, several of the intersections in the west area of downtown Pendleton and in the vicinity of the U.S. 395 interchange ramps (exit 209) will need to be modified in the future to provide acceptable levels of service. In addition, topographic and financial constraints and "quality of life" issues limit the degree to which roadway improvements can be constructed

in the Pendleton urban area over the next twenty years. Therefore, as part of the development of the TSP, a "transportation-efficient" land use alternative was developed and evaluated.

The Transportation Planning Rule identifies several "performance standards" for developing and evaluating a Transportation System Plan. Many of these standards are aimed at reducing auto reliance, providing and encouraging alternative modes and supporting efficient land use development.

Although the provisions of the TPR do not require Pendleton to evaluate the benefits of an alternative land use scenario, a "transportation-efficient" land use alternative has been identified to evaluate the potential benefit from reallocating land use type and densities within the Pendleton urban growth area. This alternative may result in a more efficient transportation system.

By including a transportation-efficient land use alternative in the TSP, the potential reduction in vehicle trips, congestion and roadway improvements can be determined using the travel forecasting model. The additional benefit from improved facilities, access management, local street network connectivity, and enhanced bicycle/pedestrian facilities can also be determined.

Methodology

The intent of the development and analysis of the transportation-efficient land use alternative is to reduce the demand for single-occupancy vehicle travel, thereby improving the efficiency of roadways. The fundamental approach to this alternative land use concept is to develop a pattern of uses that enhance community orientation and provide the greatest potential for local non-auto activity by residents and workers. This can be accomplished by evaluating and modifying several development patterns, such as density, land use mix, jobs/housing balance, and activity concentration.

The methodology used to define a transportation-efficient land use alternative is fairly simple. The population and employment growth forecasts for the transportation efficient land use alternative are consistent with the base case "no-build" alternative. Selected minor adjustments are made to the distribution of base case comprehensive plan year 2015 land use projections, with a goal of developing a better mix of land use and infill opportunities to strive toward a jobs/housing ratio that approaches unity and reduces vehicle miles of travel. Unity indicates the balance achieved as a jurisdiction approaches the statewide metropolitan area jobs/housing ratio of 1.2. The statewide metro and non-metro area balance is 1.15 jobs per housing unit.

In Pendleton, the current ratio of jobs per households is approximately 1.13. The growth in households and employment, as described in the 2015 No Build Alternative (which is premised upon development of the existing comprehensive plan zoning with minor refinements), would result in a jobs/housing ratio to 1.10. While the base case projection approaches unity, there is a major variation in the jobs/housing balance within regional subareas that would result in increased cross-town trips and levels of congestion. For example, the base case jobs/housing ratio in year 2015 is expected to range from 0.07 in the north district (the area to the north of the Umatilla River and to the east of Highway 37) to 33.95 in the northwest district (the area north of Interstate 84 and to the west of Highway 37).

The step-wise methodology used to calculate the transportation-efficient land use alternative is discussed below.

1. *Establish 2015 No Build Assumptions*

   The 2015 base case growth assumptions for jobs and households were established based on discussions with city staff and the Management Team. The growth rates and corresponding household and employment estimates for year 2015 conditions are discussed in Section 4.

2. *Compare Jobs/Housing Ratio and Establish General Objectives for Approaching Unity*

   The existing estimates and future projections for non-retail jobs per households and retail jobs per households were calculated using the base case assumptions determined in Step 1. General objectives for increasing or decreasing retail jobs, non-retail jobs, single-family dwellings, and multi-family dwelling units were established in each subarea with the goal of attaining a jobs/housing balance that approaches unity. The general objectives for creating the transportation-efficient land use alternative are described below.

   - *Downtown:* Increase multi-family households (infill opportunity) over those projected in the 2015 No Build.
   - *East:* Same as No Build.
   - *North:* Increase retail and non-retail employment and decrease single-family households.
   - *Northwest:* Decrease non-retail employment and increase multi-family households.
   - *Southeast:* Increase non-retail employment and decrease single-family households.
   - *Southwest:* Increase non-retail employment and decrease single-family households.

   The ability to achieve a better jobs/housing mix is dictated primarily by available developable lands, infill opportunities and relationship with compatible land use types. A comparison between the No Build and transportation-efficient land use alternatives is provided in Table 6-1.

Table 6-1

Comparison of Jobs/Households Ratio

Employment Type	Downtown	East	North	Northwest	Southeast	Southwest	Total
Existing (1995)							
Retail Employment	0.6	0.2	0.0	0.4	0.4	0.1	0.3
Non-Retail Employment	1.2	0.9	0.1	9.4	0.7	0.6	0.9
Total	1.9	1.1	0.1	9.8	1.1	0.7	1.1
2015 No Build							
Retail Employment	0.9	0.2	0.0	0.9	0.2	0.2	0.3
Non-Retail Employment	1.1	0.7	0.1	33.0	0.4	0.5	0.8
Total	2.0	0.9	0.1	34.0	0.6	0.7	1.1
2015 Transportation-Efficient Land Use Alternative							
Retail Employment	0.8	0.2	0.0	0.2	0.2	0.2	0.3
Non-Retail Employment	1.1	0.7	0.1	7.1	0.5	0.6	0.8
Total	2.0	0.9	0.1	7.4	0.7	0.8	1.1

3. *Analyze Land Use Trade-offs of Approaching Unity*

   Once general objectives for increasing or decreasing jobs and housing for each subarea were established, conversion factors were used to identify the net land area requirement for retail jobs, non-retail jobs, single-family and multi-family housing to allow an analysis of substituting land use types for one another. For example, this analysis assumes the average retail project would accommodate 21.8 jobs per acre, non-retail would incorporate 8.7 jobs per acre, and residential densities would be 5.45 single-family and 9.0 multi-family dwellings per gross acre.

4. *Reconcile Build-out Projections with 2015 No Build Control Totals*

   In cases where the general objectives assume more land intensive development (i.e., more multi-family in lieu of single-family or industrial development), the carrying capacity of the land area in terms of households or jobs may increase beyond the 2015 control totals. For this analysis, any induced carrying capacity that exceeds the 2015 No Build assumptions was assumed to occur beyond year 2015. Hence, the transportation-efficient land use alternative projections for 2015 were reconciled to the 2015 No Build control totals for total jobs and total households.

The key differences between the No Build and the transportation-efficient land use growth projections are shown in Table 6-2.

Table 6-2

Comparison of Household and Employment Estimates

	Downtown	East	North	Northwest	Southeast	Southwest	Total
No Build vs. Existing Land Uses (2015 - 1995)							
Retail Employment	647	0	0	5	24	331	1,007
Non-Retail Employment	73	92	1	883	194	224	1,467
Total Employment	720	92	1	888	218	555	2,474
Single-Family Households	13	251	301	-18	645	534	1,726
Multi-Family Households	205	15	90	-37	344	120	737
Total Households	218	266	391	-55	989	654	2,463
Transportation-Efficient Land Use Alternative vs. Existing Land Uses							
Retail Employment	604	0	34	5	22	309	974
Non-Retail Employment	68	86	32	660	326	329	1,500
Total Employment	672	86	66	664	348	638	2,474
Single-Family Households	13	251	271	-18	548	454	1,519
Multi-Family Households	230	15	90	145	344	120	944
Total Households	243	266	361	128	892	574	2,463
Transportation-Efficient Land Use Alternative vs. 2015 No Build							
Retail Employment	-43	0	34	0	-2	-22	-33
Non-Retail Employment	-5	-6	31	-223	132	105	33
Total Employment	-48	-6	65	-224	130	83	0
Single-Family Households	0	0	-30	0	-97	-80	-207
Multi-Family Households	25	0	0	182	0	0	207
Total Households	25	0	-30	182	-97	-80	0

5. *Allocate Transportation-Efficient Land Use Alternative Projections by TAZ*

The job and housing projections for the subareas were allocated to each TAZ. The allocation of jobs and housing takes into account the base case growth rate assumptions for each TAZ and unique opportunities such as infill development potential and compatibility of existing zoning. The TAZ assumptions for year 2015 are shown in Appendix E.

Estimates for infill and redevelopment in downtown take into account known vacant lands and second level redevelopment opportunities. The infill estimates were preliminarily estimated by the consultant with technical review by the TSP Management Team and Advisory Committee.

6. *Develop Travel Demand Forecasts Using 2015 Transportation-Efficient Land Use Assumptions*

   Travel demand forecasts were developed, using the TAZ input variables calculated in Step 5, in order to identify the relative advantages and disadvantages of implementing transportation-efficient land use concepts.

Comparison to the Base Case

Analysis of the transportation-efficient land use alternative indicated that future development of the city as described in the 2015 No Build alternative would result in an uneven jobs/housing balance within the urban area. The analysis also suggested that additional non-retail jobs could be accommodated if additional multi-family housing is provided in lieu of single-family homes. The No Build assumptions for housing envision the share of multi-family housing increasing slightly to 32 percent of total housing in year 2015 from 30 percent today. The average lot size for new single-family homes is expected to remain fairly constant over the projection period at 8,000 square feet per lot.

The preliminary transportation-efficient land use alternative assumptions are briefly described below by geographic area.

- *Downtown:* Some infill multi-family is assumed.
- *East:* No change relative to our case.
- *North:* A 10 percent reduction in the potential increase in single-family units with a small commercial convenience retail component and a moderate non-retail component would help achieve a slightly improved jobs/housing balance and provide neighborhood residents convenient goods and services.
- *Northwest:* Fewer non-retail employment opportunities and more multi-family housing than that assumed in the No Build.
- *Southeast and Southwest:* A 15 percent reduction in the potential increase in single-family homes with more non-retail employment-generating land uses is assumed.

Evaluation of the Transportation-Efficient Alternative

Future (year 2015) p.m. peak hour volumes were calculated based on the transportation-efficient land use alternative discussed above. Because this alternative includes significant enhancements to the pedestrian, bicycle, and transit systems, as well as alternative land use strategies, modifications were made to the trip length and mode-split model assumptions used to develop the No Build model.

The alternative land use strategies identified provide neighborhood commercial opportunities and a balance of jobs to households in each of the districts; therefore, the trip lengths were modified by trip purpose as shown in Table 6-3.

Table 6-3

Trip Length Reduction by Trip Purpose

Trip Purpose	Trip Length Reduction
"Work Trips" (Home Based Work)	10%
"Shopping/Recreation/Other Trips" (Home Based Other)	30%
"Business-Related Trips" (Non-Home Based)	10%

The mode-split assumptions were also modified because of the benefits provided by the alternative land use strategies. The reductions in the number of single-occupancy vehicle trips by trip length are listed in Table 6-4. No reductions in single-occupancy vehicle trips were made for trips more than 10 miles in length.

The resulting 2015 p.m. peak hour volumes under the Transportation-Efficient Land Use Alternative are shown in Figure 6-1. Figure 6-2 provides a comparison between the Transportation-Efficient Land Use Alternative and 2015 No Build forecasts. As shown in the figure, the implementation of alternative land use strategies provides some relief to the transportation system. Specifically, a 15-20 percent decrease in traffic volumes along the Emigrant-Frazer and Court-Dorion couplets is expected in the downtown as compared to the 2015 No Build. Additionally, the traffic volumes on U.S. 395 in the vicinity of the Interstate 84 ramp termini decrease by approximately 15 percent. Subsequently, the levels of service at the Westgate/Court/Dorion, the Emigrant/SW 17th Street, the Hailey/Tutuilla Creek Road/U.S. 395, and the Court/SW 17th Street intersections are expected to improve as compared to the 2015 No Build.

Table 6-4

Reductions in Vehicle Trips to Account for changes in Mode-Split

Trip Length	Vehicle Trip Reduction by Purpose		
	"Work Trips" (Home-Based Work)	"Shopping/Recreation/Other Trips" (Home-Based Other)	"Business-Related Trips" (Non-Home Based)
Trips Less Than ½ Mile			
Pedestrian	10%	10%	5%
Cycling	10%	10%	5%
Transit	No Reduction	No Reduction	No Reduction
Trips Less Than 2.5 Miles			
Pedestrian	No Reduction	No Reduction	No Reduction
Cycling	5%	5%	5%
Transit	2%	2%	2%
Trips Less Than 10 Miles			
Pedestrian	No Reduction	No Reduction	No Reduction
Cycling	2%	2%	No Reduction
Transit	2%	2%	2%

AUTO VOLUMES

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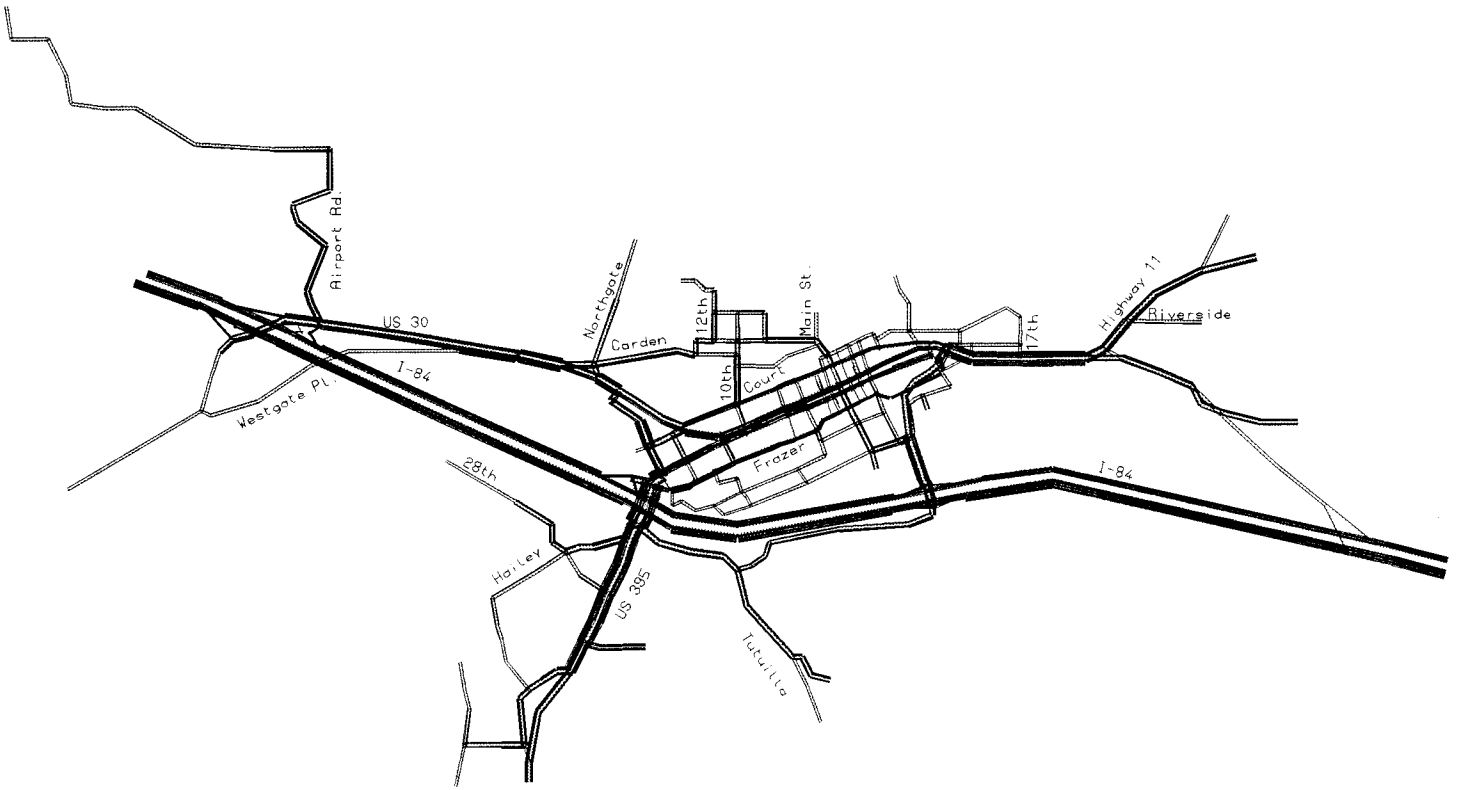

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EMME/2 PROJECT: Pendleton TSP
SCENARIO 10: 2015 TDM Alternative

Figure 6-1: 2015 Transportation-Efficient P.M. Peak Hour Volumes

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AUTO VOLUMES

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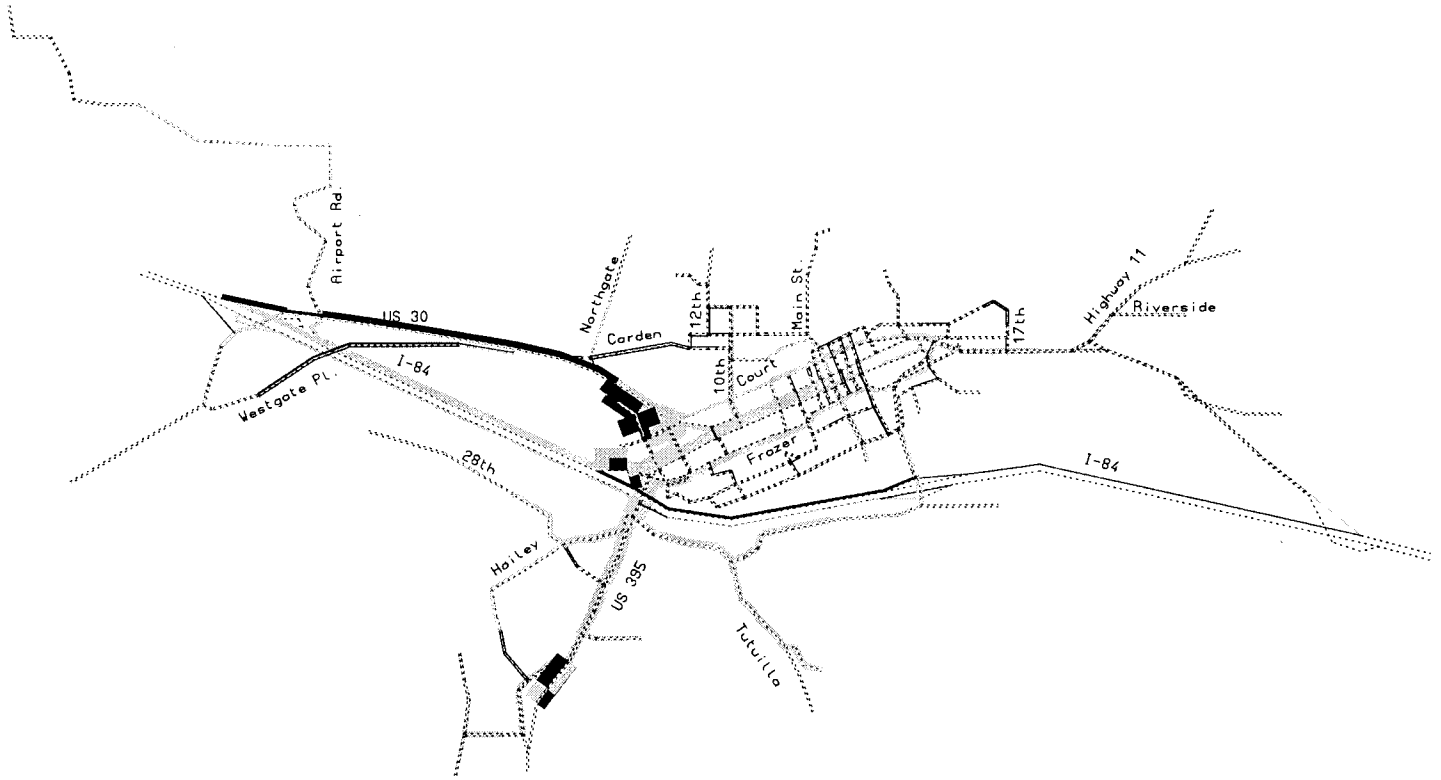

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EMME/2 PROJECT: Pendleton TSP
SCENARIO 10: 2015 TDM Alternative
SCENARIO 3: 2015 PMPK - No Build Alternative

Figure 6-2: Transportation-Efficient Land Use vs. No Build

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Results of Transportation-Efficient Land Use Alternative

The transportation-efficient land use alternative helps in balancing growth within the region and results in a jobs/housing ratio of 1.12. It places greater reliance on accommodating better paying non-retail jobs than retail jobs, but makes important decisions regarding how to provide multi-family development within the northwest by more evenly transferring potential non-retail development from the northwest to other areas of the urban area.

Furthermore, the analysis of the transportation-efficient land use alternative indicates that SW 37th Street (Phases II and III) roadway extension projects outside the UGB can be deferred beyond the 20-year planning horizon. However, these two corridors should be retained and preserved in the Pendleton TSP for eventual and full maturity of the City's street system beyond year 2015.

Other issues

The potential for increased development near the intersection of Goad Road and Interstate 84 was discussed during the preparation of the transportation-efficient land use alternative. A concept for a new grade-separated interchange at this location surfaced during discussions with the TSP Technical Advisory Committee. While this area is currently outside the UGB, this transportation improvement would put pressure on UGB annexation and lead to increased development pressure, particularly commercial retail within the east/southeast subareas.

It is recommended that the soon-to-be-initiated Pendleton Urban Fringe Study evaluate the land use and traffic impacts associated with the Goad Road/1-84 Intersection project, as well as the fiscal costs of extending public infrastructure and services to this and other fringe areas of the UGB.

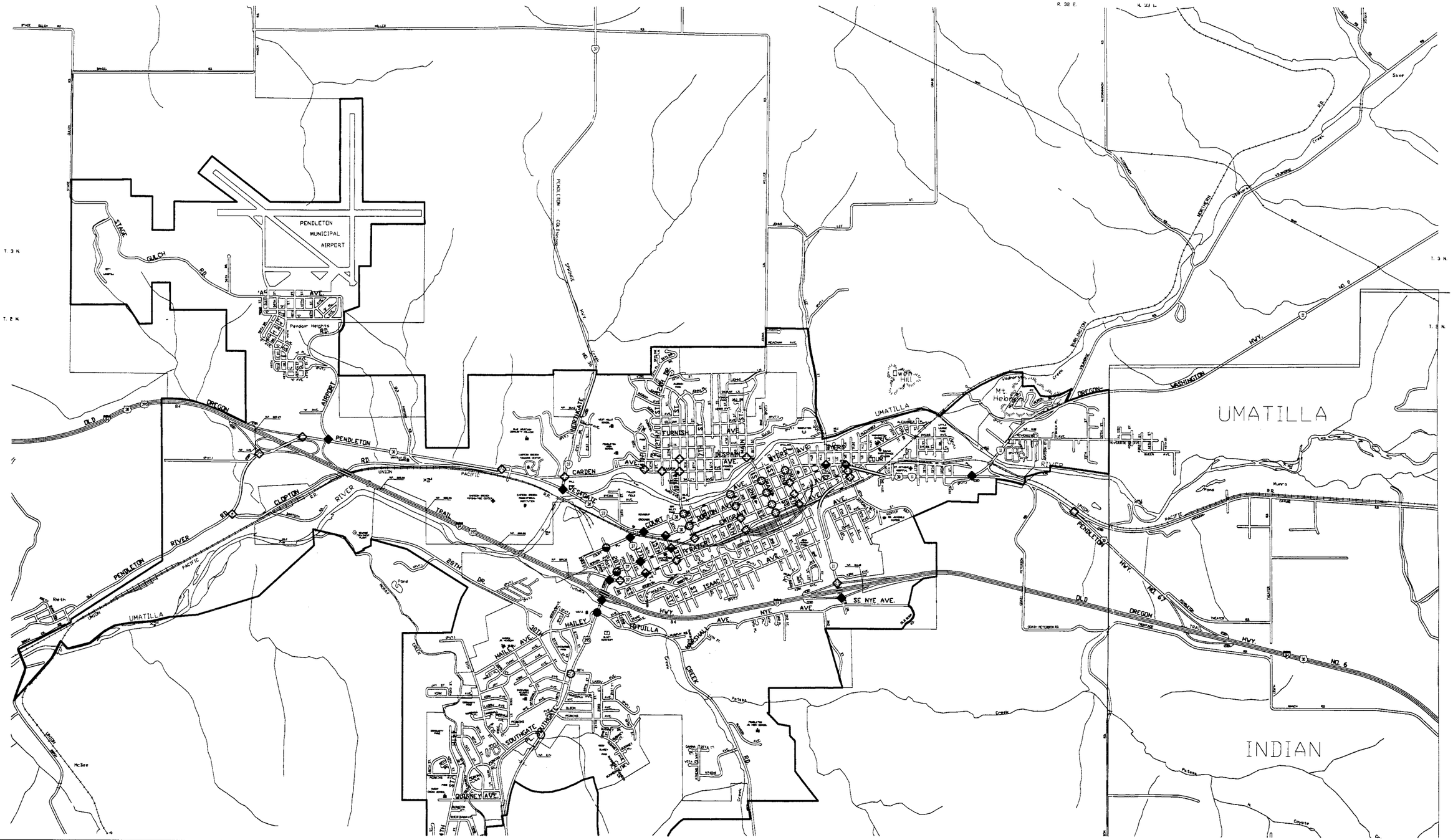
IMPLEMENTATION OF COMPREHENSIVE PLAN IMPROVEMENTS

Several roadway improvements are identified in the City of Pendleton Comprehensive Plan that are intended to serve future capacity deficiencies and address future circulation needs. These improvements are illustrated in Figure 6-3.

As shown in the figure, arterial street system improvements identified in the Comprehensive Plan include:

- extension of SW 20th Street from Court Place to Westgate;
- construction of SW 37th Street between Old Rieth Road and Nye Avenue at the Highway 11/Interstate 84 interchange;
- reconfiguration of the Highway 11/Court Avenue intersection;
- connection to Barnhart Road in the vicinity of the industrial lands near the airport;
- extension of Court Place to the Pendleton Industrial Park; and
- widening Westgate to 3-lanes and replacing the existing bridge at the Umatilla River.

Since portions of the SW 37th Street extension east of Tutuilla Creek Road and in the lower McKay Creek area are located outside of the existing UGB, the need for and the recommended alignment of this roadway should be addressed by future studies.



FUTURE LEVEL OF SERVICE

SIGNALIZED		UNSIGNALIZED
○	UNDER	◇
◒	NEAR	◈
●	OVER	◆

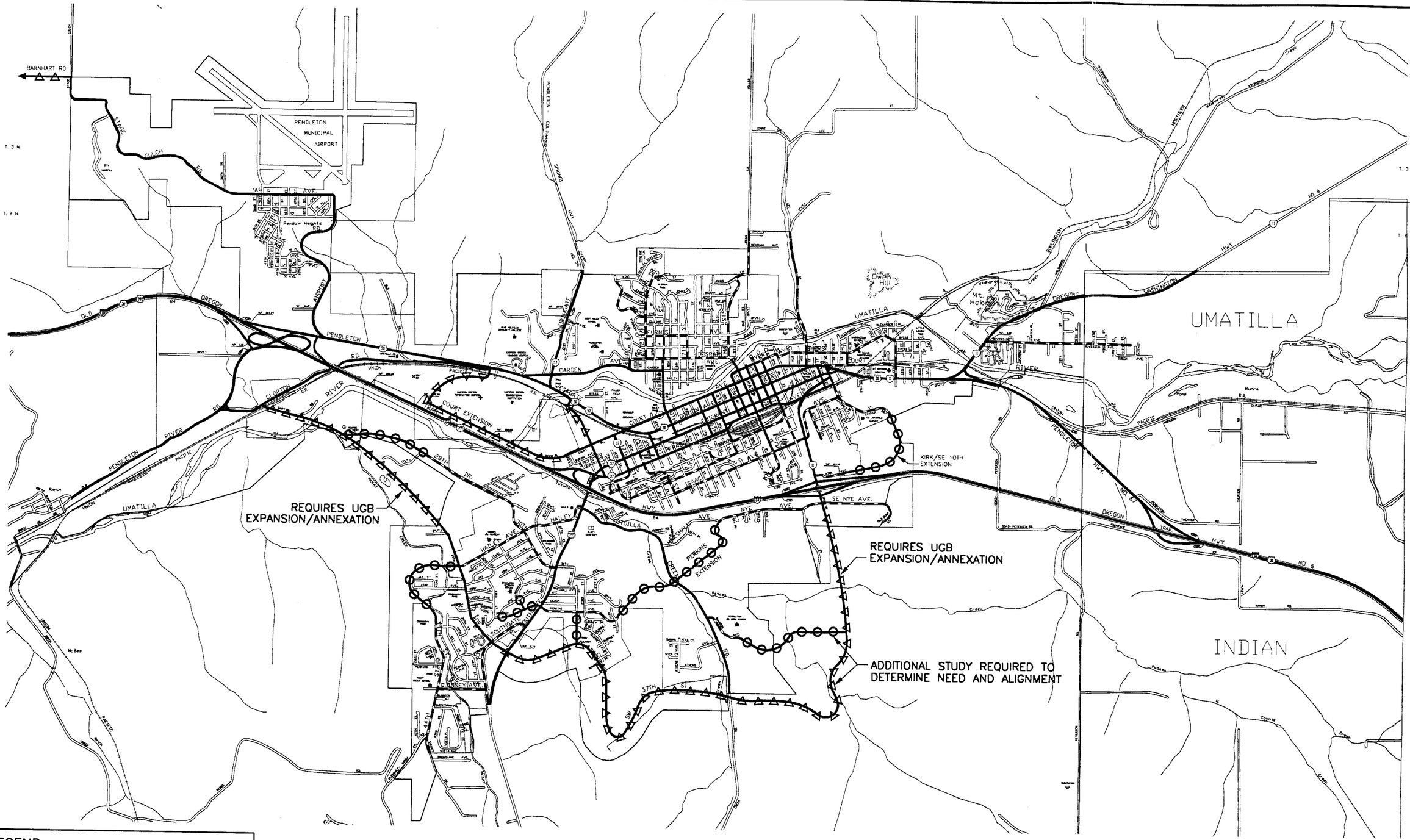
CITY OF PENDLETON
TRANSPORTATION SYSTEM PLAN

FUTURE LEVEL OF SERVICE

FIGURE 5-3

OCTOBER 1996

1567CAP2



LEGEND

- ARTERIALS
- COLLECTORS
- PROPOSED ARTERIALS
- PROPOSED COLLECTORS

CITY OF PENDLETON TRANSPORTATION SYSTEM PLAN

COMPREHENSIVE PLAN IMPROVEMENTS

FIGURE 6-3

OCTOBER 1996

1567FNC4

Several collector street improvements are identified in the Comprehensive Plan, including:

- extension of Perkins Avenue from U.S. 395 to Nye Avenue;
- upgrade and extension of SW Hailey Avenue;
- extension of Runnion Avenue to the SW 37th Street extension (a portion of this project is outside the UGB);
- upgrade of SW 28th Drive and SW 30th Street;
- upgrade of SE Goodwin Avenue between Highway 11 and SE 10th Street; and
- extension of SE Kirk Avenue to SE 10th Street.

A comparison between the traffic volumes expected under the No Build Alternative and the Comprehensive Plan Alternative is shown in Figure 6-4. As shown in the figure, the combination of roadway improvements west of downtown significantly reduces the travel demand on Westgate both to the east and west of Northgate. In addition, the roadway improvements to the west of Southgate significantly reduce the travel demand on Southgate Place. Furthermore, the construction of the SW 37th Street extension provides an additional access into the southern portions of the city.

Table 6-5 summarizes the comparison of the No-Build and Comprehensive Plan Alternatives. The table specifies the future traffic volume relief that the Comprehensive Plan parallel street sytem provides to Highway 395. Together, these street improvements reduce future Highway 395 traffic by 11%.

Table 6-5

Year 2015 P.M. Peak Hour Traffic
(Both Directions)

Alternative	Street Section			
	Highway 395 South of I-84	SW 37th Street Extension South of Nye	Clopton Road South of I-84	Pendleton River Road South of I-84
No-Build	3190	NA	110	360
Comprehensive Plan	2900	265	130	365
Difference (%)	-290 (-11%)	265	20	5

NA = Not Applicable

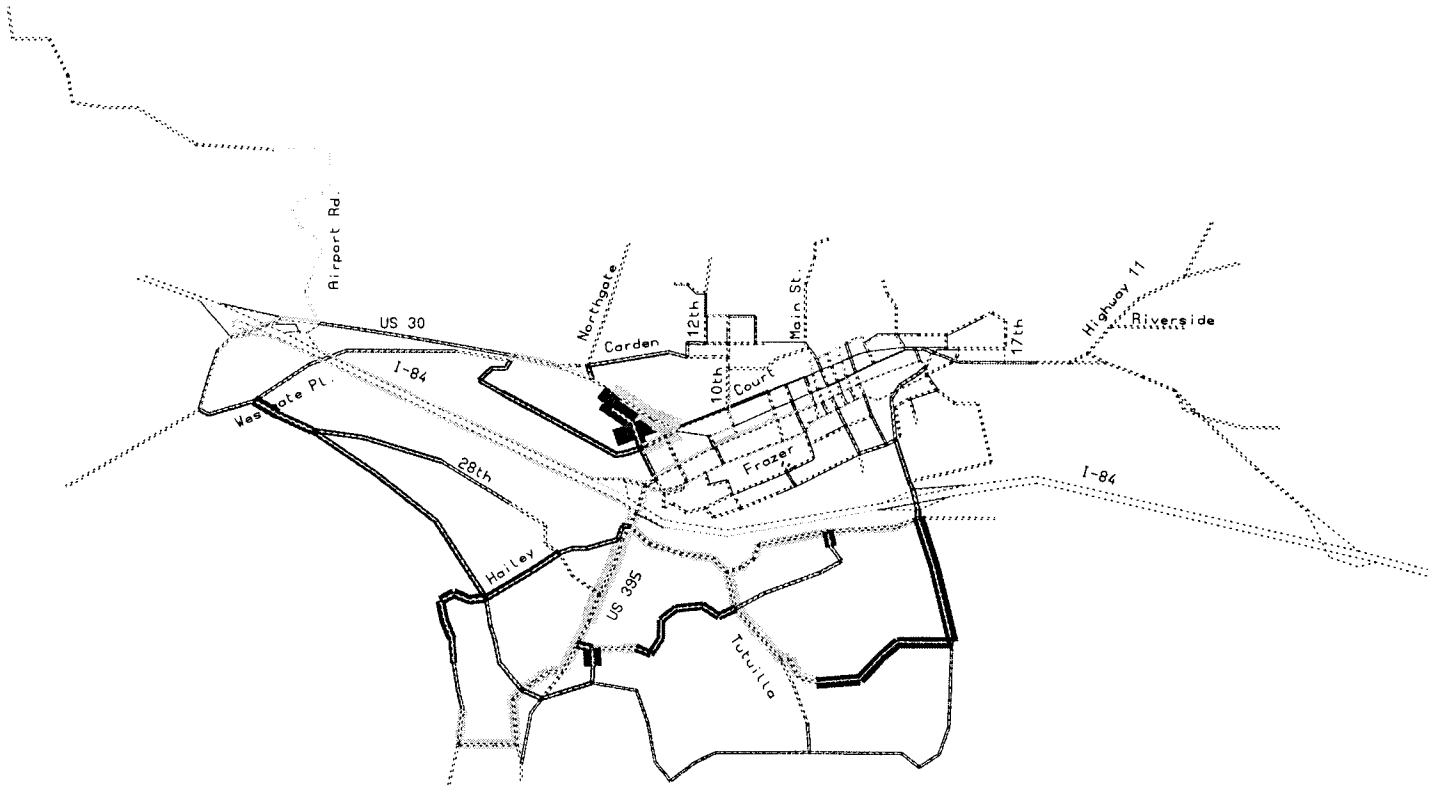
Even with the construction of the roadway improvements identified in the Comprehensive Plan, several of the intersections throughout the study area will need to be improved in the future to restore operations to acceptable levels of service. Minor geometric improvements, such as the addition of a right- or left-turn lane, will need to be constructed at the following signalized intersections:

- Court Place/SW 20th Street;
- Emigrant Avenue/SW 20th Street; and
- U.S. 395/Hailey Avenue/Tutuilla Creek Road.

AUTO VOLUMES

DIFFERENCE SCENARIO 8 - SCENARIO 3

emme/2



DIFF: 8- 3

LINKS:
typ=3.100

SCALE: 50

200

-400

600

-800

1000

WINDOW:
1.56/-26.95
337.44/224.96

EMME/2 PROJECT: Pendleton TSP
SCENARIO 8: 2015 Comprehensive Plan Improvements
SCENARIO 3: 2015 PMPK - No Build Alternative

Figure 6-4: Comprehensive Plan vs. No Build

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MODULE: 6.13
KAINC.....jak

Under the Comprehensive Plan Alternative, traffic signals will be warranted at the following locations:

- Court Place/SW 17th Street;
- Highway 11/Interstate 84 (eastbound);
- Highway 11/U.S. 30;
- U.S. 30/Airport Road;
- U.S. 395/Interstate 84 westbound ramps;
- U.S. 395/Interstate 84 eastbound ramps;
- Perkins/U.S. 395; and
- Westgate/Court/Dorion.

Additionally, the installation of a right-turn lane on Westgate westbound at the Northgate intersection will restore operations to an acceptable level of service in the future. Ultimately, however, operations at this intersection will warrant the need for a traffic signal.

COMPARISON OF THE ALTERNATIVES

In addition to the level-of-service, two quantitative measures of effectiveness, vehicle miles traveled (VMT) and vehicle hours traveled (VHT), were analyzed to evaluate and compare the alternatives. A comparison of the per capita VMT and VHT for each of the alternatives is shown in Table 6-6.

Table 6-6

Comparison of Per Capita VHT and VMT

Alternative	Vehicle Miles Traveled (Per Person)	Vehicle Hours Traveled (Per Person)
Existing (1995)	14.1	0.4
2015 No Build Alternative	16.9	0.5
2015 Comprehensive Plan	16.7	0.5
2015 Transportation-Efficient Land Use Alternative	15.6	0.4

As shown in Table 6-6, there is a 20 percent increase in per capita VMT between the existing conditions and the future No Build Alternative. With the implementation of the transportation-efficient land use strategies, per capita VMT decreases 8 percent from the future No Build Alternative. The construction of new roadways, without any transportation-efficient land use strategies, provides a minimal reduction in VMT from the No Build Alternative.

The implementation of transportation-efficient land use strategies also results in reductions in per capita VHT when compared to the No Build Alternative. The per capita VHT for the Transportation-Efficient Land Use Alternative is approximately 20 percent less than the per capita VHT of the No Build Alternative.

LOCAL CIRCULATION OPTIONS

In addition to the analysis of the three primary alternatives, several options were evaluated that may improve circulation in Pendleton. Many of these options focused on the mitigation of existing capacity deficiencies in the southwest part of the downtown. A discussion of the various options that were considered and evaluated is provided below.

DOWNTOWN CIRCULATION OPTIONS

Today, one-way traffic operations are maintained on Court, Dorion, Emigrant, and Frazer Avenues. Based on discussions with the Management Team and Advisory Committee, two downtown circulation options were considered to assess traffic circulation in the downtown Pendleton area. General traffic circulation concepts, objectives, and the relative advantages and disadvantages of a one-way and two-way option were identified and are listed below.

Downtown Circulation Option No. 1: Existing One-Way Couplet

Option No. 1 retains the existing one-way street circulation pattern on Court, Dorion, Frazer and Emigrant Avenues. The general objective of Option No. 1 is to minimize transportation system improvement costs and traffic circulation disruption. In addition, spot improvements to capacity and safety can be accomplished.

The advantages associated with retaining the existing one-way couplet system in the downtown include:

- likely to be the lowest implementation cost option;
- one-way couplet separates directional highway traffic causing less impact per street;
- two stage east-west crossing of couplet with stop control is easier and safer for local pedestrian and vehicular traffic than single street highway options;
- delays the need for signalization (if needed) compared to a single street two-way option;
- fewer conflicting turning movements per intersection;
- minimal reorientation or new signage; and
- minimal parking impacts.

The disadvantages of retaining the existing one-way couplet system include:

- increasing traffic on couplet "isolates" intermediate businesses; and,
- retains some out-of-direction travel and requires more turning movements than a two-way system.

Downtown Circulation Option No. 2: Revert to Two-Way Traffic

Option No. 2 reverts the current one-way traffic circulation pattern to two-way operations on Court, Dorion, Frazer and Emigrant Avenues. Option No. 2 concentrates through highway traffic onto two of the four existing one-way streets.

The advantages of modifying the circulation system to revert to two-way operations on the couplets include:

- removes through traffic on two of the four streets, enabling redevelopment as a "traffic calmed" street integrated with the downtown core; and,
- reduces out-of-direction circulation of downtown traffic.

The disadvantages associated with this option include:

- increased traffic on two of the four streets forms a barrier to east-west pedestrian and vehicular movements, probably requiring additional traffic signals;
- may require lane additions on two of the four streets to accommodate greater travel demand; and,
- on-street parking would be eliminated on at least one side of the street on two of the four arterials.

Summary of Downtown Circulation Options

The Advisory Committee and Management Team reviewed and discussed each of the two options. Based on a qualitative review of each, the Committees felt one-way traffic operations should be maintained on Court, Dorion, Emigrant, and Frazer Avenues in the downtown. Therefore, one-way traffic operations in the downtown were included in all of the other circulation options considered and tested for the Pendleton area.

RAIL CROSSING OPTIONS

In the future, the average number of trains that travel through Pendleton on an average day is expected to increase from 36 to 53 trains. This increase in train activity will place additional pressure on several roadways and intersections in the downtown that are operating near or over capacity today. As part of the development of the TSP, several options were investigated that can provide relief to the existing rail crossings and adjacent intersections, including: the extension of SW 20th Street, the closure of the Court Place rail crossing, and the modification of the Court Place rail crossing.

Rail Crossing Option No. 1: SW 20th Street Extension

The first option investigated was the extension of SW 20th Street from its current terminus at Court Place to Westgate. This option includes the construction of an additional rail crossing that would serve to relieve the demand at the Court Place rail crossing near the Westgate/Court/Dorion intersection. This improvement would also provide circulation benefits in the western portion of the downtown. The safety and operational benefits that can be derived from constructing a grade-separated rail crossing at SW 20th Street are discussed in detail in the *"SW 20th Street Rail Crossing Study"* (OTAK, Kittelson & Associates, 1996).

A comparison between the roadway volumes in the SW 20th Street Extension Option and the No Build Alternative in the western portion of the downtown is provided in Figure 6-5. As shown in the figure, a 25-percent decrease (from the No Build Alternative) in roadway volumes is expected on Westgate between SW 20th Street and the Westgate/Court/Dorion intersection.

In addition, a 15-percent decrease in the entering volumes at the Westgate/Court/Dorion intersection is expected with the extension of SW 20th Street. SW 20th Street is anticipated to carry approximately 5,000 vehicles per day.

The SW 20th Street Extension Option is not anticipated to relieve the congested conditions expected under the No Build Alternative at the following intersections in the downtown:

- U.S. 395/Interstate 84 (westbound) ramp termini; and
- Westgate/Court/Dorion.

These intersections are expected to continue to operate unacceptably in the future if no specific intersection mitigation measures are implemented.

In the downtown, assuming SW 20th Street is extended to Westgate, intersection operations are expected to *improve* from the No Build conditions at the following locations:

- Court Place/SW 17th;
- Court Place/SW 20th;
- Emigrant Avenue/SW 17th; and
- Emigrant Avenue/SW 20th.

Under 2015 conditions with the extension of SW 20th Street, a traffic signal will be warranted at the U.S. 395/I-84 westbound and the Westgate/Court/Dorion intersections. Traffic signals are *also* warranted at these intersections under No Build Alternative conditions. With the installation of traffic signals, the U.S. 395/I-84 and the Westgate/Court/Dorion intersections will be restored to acceptable levels of service in the future. The results of the operational analysis for the SW 20th Street Extension Option are shown in Appendix D (Table D-7). In the short-term, a traffic signal is not warranted at the SW 20th Street/Westgate intersection; however, operations at this intersection will ultimately warrant the need for a traffic signal.

Overall, the extension of SW 20th Street will provide regional circulation benefits in the downtown and will provide relief to congested conditions on Westgate, Emigrant, and Court Place; however, like the No Build Alternative, traffic signals will be warranted at the U.S. 395/I-84 westbound and the Westgate/Court/Dorion intersections.

Rail Crossing Option No. 2: Modified Court Place Rail Crossing

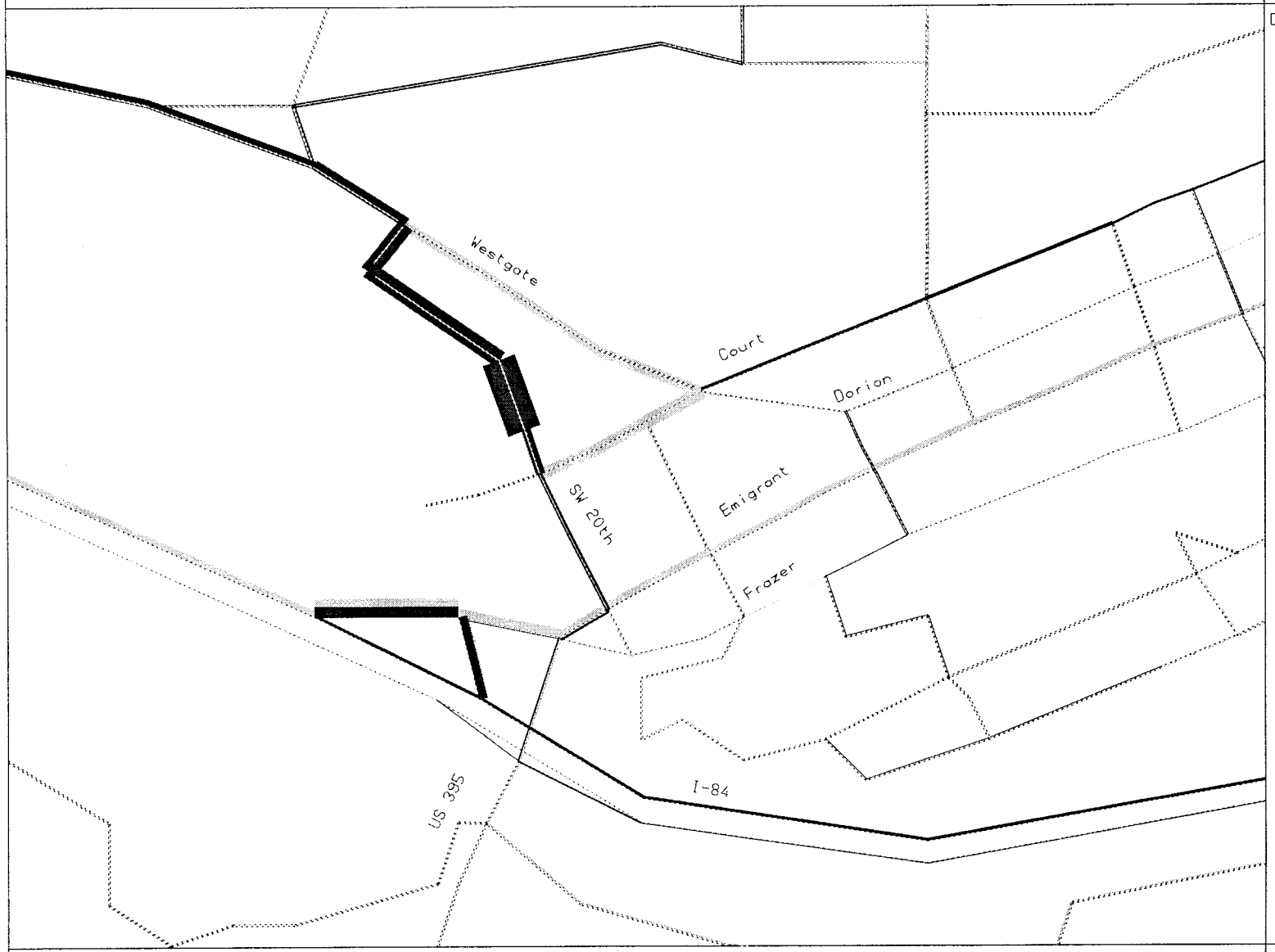
The modification of the Court Place rail crossing is another option that was evaluated to provide potential relief to the existing rail crossings and adjacent intersections. This option would need to be implemented in conjunction with the SW 20th Street extension.

The potential extension of SW 20th Street will provide an alternative for motorists to travel between the downtown and Westgate without having to travel through the Westgate/Court/Dorion intersection; therefore, the feasibility of prohibiting turning movements between Court Place and Westgate was evaluated from a traffic operations and circulation standpoint. To implement this option, right-turns would be prohibited on Westgate and left-turns would be prohibited on Court Place.

A comparison of the roadway volumes between the Modified Court Place Rail Crossing Option and the No Build Alternative in the vicinity of SW 20th Street is shown in Figure 6-6.

AUTO VOLUMES

DIFFERENCE SCENARIO 4 - SCENARIO 3



emme/2

DIFF: 4- 3

LINKS:
typ=3,100

SCALE: 50

200
-400
600
-800
1000

WINDOW:
127.13/64.919
188.3/ 110.8

EMME/2 PROJECT: Pendleton TSP
SCENARIO 4: 2015 PMPK - 20th Street Extension
SCENARIO 3: 2015 PMPK - No Build Alternative

Figure 6-5: SW 20th Street Extension vs. No Build

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MODULE: 6.13
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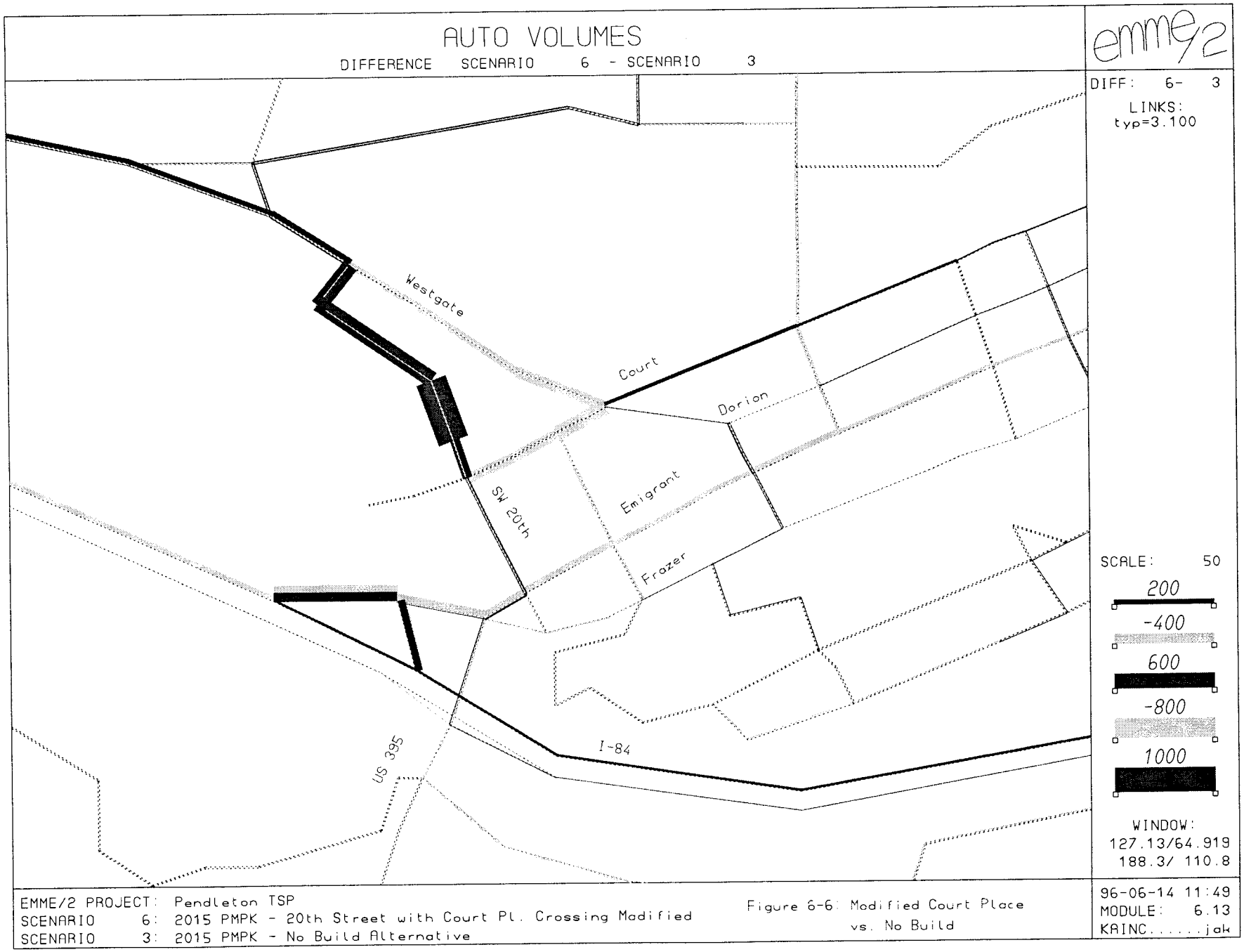


Figure 6-6: Modified Court Place vs. No Build

As shown in the figure, with the prohibition of turning movements between Westgate and Court Place, SW 20th Street is expected to carry approximately 6,000 vehicles per day, which is only a slight increase from the daily volumes expected under the SW 20th Street Extension Option.

The Modified Court Place Rail Crossing Option is *not* expected to relieve the congested conditions expected under the No Build Alternative at the following intersections in downtown:

- U.S. 395/Interstate 84 (westbound) ramp termini;
- Westgate/Court/Dorion; and
- Emigrant/SW 20th Street.

These intersections are expected to continue to operate unacceptably in the future if no specific intersection improvements are implemented. In addition, although the level of service at the SW 17th Street/Emigrant intersection is expected to improve slightly with modifications on Court Place, the intersection is still anticipated to operate near capacity under the Modified Court Place Rail Crossing Option.

Intersection operations are expected to improve under this option from the No Build conditions at the following locations in downtown:

- Court Place/SW 20th Street; and
- Court Place/SW 17th Street.

Potential intersection improvements were investigated that could restore intersection operations to acceptable levels at the U.S. 395/Interstate 84 (westbound) ramp termini, the Westgate/Court/Dorion, and the Emigrant/SW 20th Street intersections. Based on this analysis, it was determined that, if no other mitigation measures are implemented, dual left-turn lanes will be required on Emigrant in the eastbound direction. To accomplish this, SW 20th Street will need to be widened to five lanes.

In addition, under this option, traffic signals will be warranted at the U.S. 395/Interstate 84 (westbound) ramp termini and the Westgate/Court/Dorion intersections. The resulting level of service analysis is shown in Appendix D (Table D-7).

The Modified Court Place Rail Crossing Option does not relieve the need for intersection improvements at the Westgate/Court/Dorion intersection; however, it does provide some relief to the congestion expected on Westgate, Court Place, and Emigrant under the No Build Alternative.

Rail Crossing Option No. 3: Court Place Rail Crossing Closure

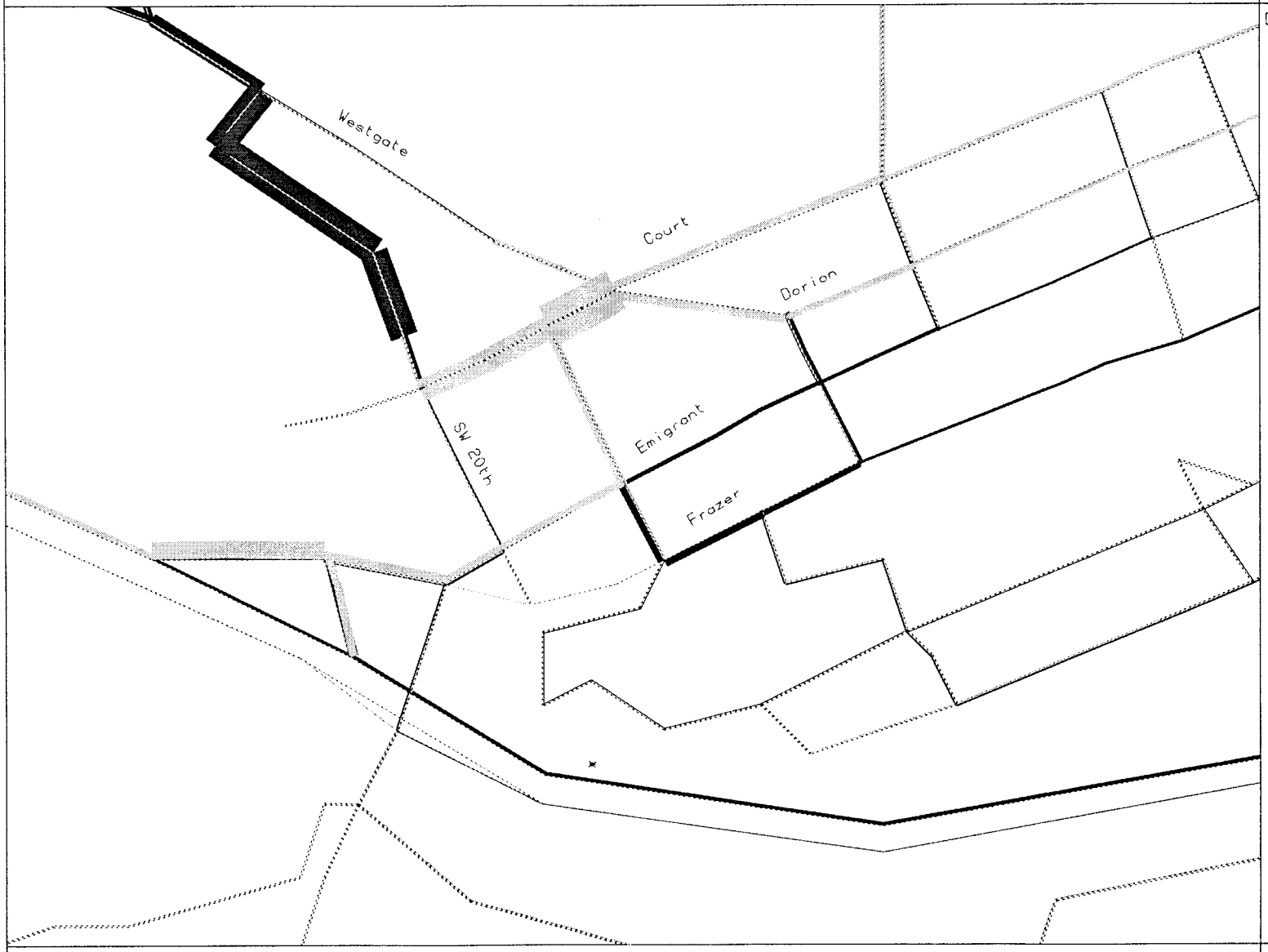
In addition to investigating the impacts of restricting turning movements between Westgate and Court Place at the Westgate/Court/Dorion intersection, the impacts of completely closing the Court Place rail crossing were investigated. For the purposes of this analysis, it was assumed that this option will also be implemented in conjunction with the extension of SW 20th Street to Westgate.

A comparison of the roadway volumes between the Court Place Rail Crossing Closure Option and the No Build Alternative in the vicinity of SW 20th Street is shown in Figure 6-7.

AUTO VOLUMES

DIFFERENCE SCENARIO 5 - SCENARIO 3

emme/2



DIFF: 5- 3

LINKS:
typ=3.100

SCALE: 50

200
-400
600
-800
1000

WINDOW:
136.05/65.191
187.3/103.63

EMME/2 PROJECT: Pendleton TSP
SCENARIO 5: 2015 PMPK - 20th Street with Court Place Crossing Closed
SCENARIO 3: 2015 PMPK - No Build Alternative

Figure 6-7: Court Place Closed vs. No Build

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As shown in the figure, with the closure of the Court Place crossing, SW 20th Street is expected to carry approximately 9,000 vehicles per day which equates to almost a doubling of the daily volumes that are expected in the SW 20th Street Extension Option. Subsequently, the traffic volumes on Westgate, and the Court-Dorion couplet are expected to decrease by as much as 35-percent from the No Build Alternative.

With the closure of the Court Place crossing, intersection operations would significantly *improve* as compared to the No Build Alternative at the following intersections:

- Court Place/SW 17th Street;
- Court Place/SW 20th Street; and
- Westgate/Court/Dorion.

All of these intersections are expected to operate at Level of Service "B" or better.

Under this option, the following intersections will continue to operate unacceptably in the future if no intersection improvements are implemented:

- Emigrant/SW 17th Street;
- Emigrant/SW 20th Street; and
- U.S. 395/I-84 (westbound) ramp termini.

Several mitigation measures were investigated to improve operations at these intersections. At the Emigrant/SW 20th intersection, dual left-turn lanes will be warranted on the eastbound approach of Emigrant if no other mitigation measures are implemented. Subsequently, SW 20th will need to be widened to five lanes. Under this option, traffic signals will be warranted at the Emigrant/SW 17th and the U.S. 395/I-84 (westbound) ramp termini intersections. With the implementation of these mitigation measures, all of the intersections in the western portion of the downtown will be restored to acceptable levels of service, as shown in Appendix D (Table D-7).

Although the closing of the Court Place rail crossing will eliminate the need to improve the Westgate/Court/Dorion intersection, the closure will significantly alter the circulation patterns in the downtown. Therefore, the feasibility of closing the crossing should be evaluated not only from a traffic operations and safety perspective, but also from a downtown/economic development perspective.

SOUTHWEST DOWNTOWN CIRCULATION OPTIONS

Improvements to the existing transportation system in the Pendleton urban area are constrained by the limited number of feasible crossings opportunities of the Umatilla River and Interstate 84. Currently, only Highway 11 and U.S. 395 provide connections between the southern and northern portions of the city. Additionally, many of the households and businesses in the south part of the city access the downtown via U.S. 395. Subsequently, there is a very high volume of traffic on U.S. 395 in the vicinity of the I-84 interchange ramps making it difficult for motorists exiting I-84 to access U.S. 395, Emigrant, and Frazer, and for motorists to turn left from U.S. 395 onto the I-84 ramps. Therefore, several options were investigated to evaluate the feasibility of improving traffic operations and circulation in the vicinity of the existing interchange ramps.

Southwest Downtown Circulation Option No. 1A: Modification of the Interchange

One of the measures investigated to improve operations at the ramp existing interchange locations was the modification of the I-84 (westbound) interchange with U.S. 395. Currently, the I-84 westbound ramps tie into the Pendleton roadway system at the intersection of U.S. 395, Emigrant, and Frazer. Therefore, the feasibility of modifying the interchange to include a connection to Court Place in addition to the U.S. 395/Emigrant/Frazer intersection was evaluated. Under this option, motorists who wish to travel south on U.S. 395 or use the Emigrant/Frazer couplet to access the downtown would access the city street system at the existing ramp termini; motorists who wish to access the Court/Dorion couplet or areas to the north and west of the downtown would travel on an added connection to Court Place. This improvement would also be constructed in conjunction with the SW 20th Street extension and therefore, could potentially be designated as a more direct route for Highway 37.

A comparison of the resulting traffic volumes under this option with the No Build Alternative is provided in Figure 6-8. As shown in the figure, a 35-percent decrease in traffic volumes on Westgate between Northgate and Court is expected with the additional access the Interstate 84 at Court Place. Additionally, a 35-percent decrease in traffic volumes is also expected on U.S. 30 west of Northgate. Under the No Build Alternative, several of the motorists in the northwest portions of downtown and in the area to the north of downtown are using U.S. 30 to access Interstate 84 because of the congested conditions that are expected to occur in the vicinity of the U.S. 395 ramp termini. With the additional access to the Interstate at Court Place via the modification of the U.S. 395 ramps, several of the motorists who are currently using U.S. 30 to access Interstate 84 will be able to access Interstate 84 at Court Place instead.

Both the SW 17th Street and SW 20th Street intersections with Court Place are expected to operate at improved levels of service as compared to the No Build Alternative.

Intersections in the downtown that will need to be improved to operate acceptably in the future if the U.S. 395 interchange is modified are:

- Emigrant/SW 17th Street;
- Emigrant/SW 20th Street;
- U.S. 395/Interstate 84 (westbound) ramps; and
- Westgate/Court/Dorion.

Several mitigation measures were investigated to improve operations at these intersections. At the Emigrant/SW 20th Street intersection, dual left-turn lanes will be warranted on the eastbound approach of Emigrant, if no other mitigation measures are implemented. Subsequently, SW 20th Street will need to be widened to five lanes. Under this option, traffic signals will be warranted at the Emigrant/SW 17th Street, Westgate/Court/Dorion, and the U.S. 395/I-84 (westbound) ramp termini intersections. With the implementation of these mitigation measures, all of the intersections in the western portion of the downtown will be restored to acceptable levels of service, as shown in Appendix D (Table D-7).

The modified U.S. 395 interchange will provide circulation benefits in the downtown by better distributing the interstate traffic destined for Pendleton to the one-way couplet system and to the Southgate area; however, intersection modifications will still be necessary at several of the locations that were identified in the No Build Alternative.

AUTO VOLUMES

DIFFERENCE SCENARIO 7 - SCENARIO 3

emme/2

DIFF: 7- 3

LINKS:
typ=3.100

SCALE: 50

200

-400

600

-800

1000

WINDOW:
127.13/64.919
188.3/ 110.8

EMME/2 PROJECT: Pendleton TSP
SCENARIO 7: 2015 PMPK with Modified US 395 Interchange at I-84 (WB)
SCENARIO 3: 2015 PMPK - No Build Alternative

Figure 6-8: Modified Interchange vs. No Build

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MODULE: 6.13
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As part of the feasibility analysis for this option, a preliminary estimate of construction costs was prepared. Modification of the interchange would require the widening of the existing I-84 bridge over U.S. 395 and the existing I-84 bridge over the Umatilla River in addition to the new ramp construction. These improvements would require significant construction costs (in excess of $5-7 million). During the next twenty years, opportunities for significant construction projects will be constrained by the lack of funding sources. There are a number of other projects that will provide a greater level of regional capacity and circulation benefits in Pendleton that are needed in the short-term and will likely cost less than the interchange modification; therefore, it was determined that the modification of the U.S. 395/I-84 interchange is not feasible at this time.Southwest Downtown Circulation Option No. 1B: Modification of the Interchange

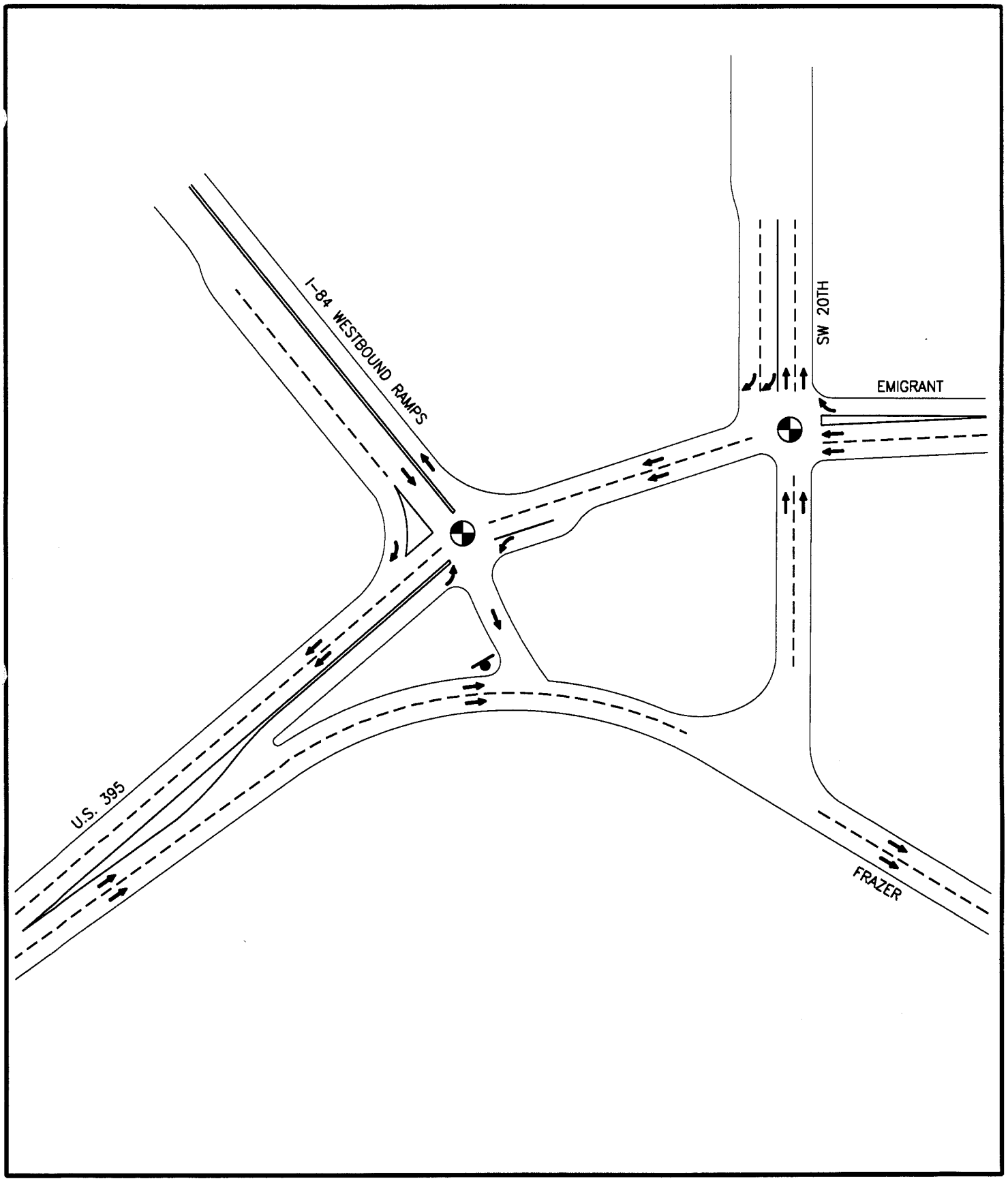
Another interchange modification was considered when options were formulated to improve the circulation in the southwest part of Downtown. This option included the use of the SW 17th Street connection to Frazer Avenue via Goodwin Avenue as an alternative interchange ramp as well as the continued use of the existing ramps. The objective of this interchange modification was to provide an alternative route for motorists wishing to access the downtown via the U.S. 395 ramps. Before the travel demand was approximated, a preliminary cost-benefit analysis was constructed. Based on this analysis and discussions with the Management Team and Advisory Committee, it was determined that the option was constrained by topography and related grade issues, quality of life issues for residents on the south hill, and overall cost of the project; therefore, no further analysis was conducted and this option was discarded.

Southwest Downtown Circulation Option No. 2: Surface Street Modifications

As part of the TSP alternatives analysis, improvement measures to mitigate the existing deficiencies at the U.S. 395/Interstate 84 ramp termini were investigated and evaluated, including signalization of the intersections, reconfiguration of the interchange, and implementation of alternative land use concepts aimed at reducing the travel demand in the vicinity of the interchange by minimizing cross-town travel. According to ODOT, signalization of the ramp termini intersections is undesirable and is not consistent with signal spacing policy. The feasibility of modifying the interchange ramps is discussed in the previous section.

Implementation of alternative land use concepts that could reduce travel demand in the vicinity of the interchange was also evaluated. Although this option provides enhanced bicycle and pedestrian opportunities and relief to the roadway system, the U.S. 395/Interstate 84 ramp termini intersections are still projected to operate unacceptably in the future.

Since all of the alternatives identify the need to improve the ramp termini intersections, a third option was evaluated that specifically addresses the U.S. 395/ Interstate 84 westbound ramp termini intersection. This option includes the reconfiguration of the intersection of U.S. 395 and the Interstate 84 westbound ramp termini, and the Frazer/SW 20th Street, and the Emigrant/SW 20th Street intersections. These modifications will result in one-way traffic operations on Emigrant Avenue and on SW 20th Street south of Emigrant. The proposed intersection modifications and subsequent rerouting of traffic are illustrated in Figure 6-9.



LEGEND

STOP SIGN

SIGNAL

PROPOSED U.S. 395/INTERSTATE 84 INTERSECTION MODIFICATION

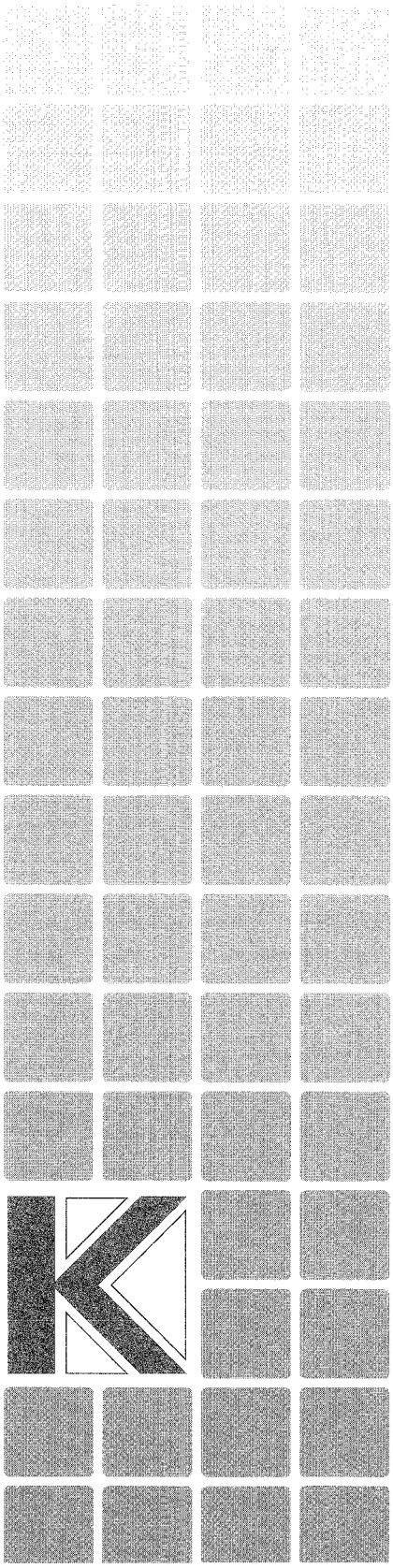
TRANSPORTATION SYSTEM PLAN PENDLETON, OREGON OCTOBER 1996	FIGURE 6-9

1567F15A

As shown in the figure, the intersection modifications and rerouting of traffic would reduce the number of conflicting vehicles at the ramp termini intersection. These improvements and associated signing and roadway striping could be made at minimal construction costs.

An analysis of the resultant level of service at these intersections revealed that the Emigrant/SW 20th Street and Frazer/SW 20th Street intersections will operate acceptably in the future with the proposed modifications. As an unsignalized intersection, the U.S. 395/Interstate 84 westbound ramp termini intersections will continue to operate unacceptably. However, signalization of the U.S. 395/Interstate 84 westbound ramp termini will restore operations to an acceptable level of service. Additionally, coordination between the traffic signals at SW 20th/Emigrant, U.S. 395/Interstate 84 westbound ramp termini, and Hailey Avenue/Tutuilla Creek/U.S. 395 intersections may provide sufficient gaps in the traffic on U.S. 395 that will enable vehicles on the Interstate 84 eastbound ramp to enter the major traffic flow in a safe and efficient manner.

Since the surface street improvements associated with this option provide regional capacity and circulation benefits and can be implemented at minimal construction costs, the city of Pendleton should implement these improvements to mitigate deficiencies in the vicinity of the U.S. 395 interchange ramp termini.



Section 7

Recommended Design Standards

Recommended Design Standards

INTRODUCTION

It is necessary to adopt design standards to allow for a safe and efficient transportation system for all modes of travel. Because of functional differences, a wide array of design standards are used for the many different types of highway facilities. For example, freeways are designed to allow the maximization of traffic movement while local/minor streets try to maximize access to the transportation system. Within a functional class, design standards may vary with the type of terrain, type of traffic to be served, and whether it is an urban or rural roadway. Design standards should be used as guidelines in the development of new streets and in the reconstruction of existing roads.

RECOMMENDED FUNCTIONAL CLASSIFICATION

All roads in the urban area are presently classified by the City of Pendleton in order to group similar roadways and streets based on their intended use, access, and mobility. The existing functional classified system was shown in Figure 3-4. As the urban area continues to develop, the functional classification system should be reviewed and updated as necessary. In the immediate future, no changes are recommended.

ROADWAY DESIGN STANDARDS

Suggested design standards for access on the roadway system have been developed to maximize the safety and efficiency of the entire transportation system. The suggested roadway design standards are to be used as a guideline for the development of future roadway facilities within the Pendleton urban area. As the urban area continues to develop, there may be the need to provide some flexibility in the road design standard, especially on minor streets, assuming that the collector and arterial street system is functioning properly. The purpose of a flexible design standard is to accommodate development needs within the city in a consistent manner, but also allow for individual consideration of unique issues such as, but not limited to, land access, non-auto travel modes, right-of-way constraints, terrain, vegetation and building orientation.

If local traffic conditions arise that conflict with adopted roadway design and policies, the city should review ongoing research regarding roadway design and adopt new or improved design features when available, and if applicable to local standards. Further, there are provisions which could be added to the development code to produce the desired flexibility. For example, the City of Portland has established and adopted traffic control measures to identify and deal with problems related to safety, travel speed and travel volume on local streets. These measures are generally policy-oriented, but they allow the City to test and implement traffic control devices sought to achieve stated goals and policies (i.e., routing through-traffic from local streets onto arterials through such measures as speed "humps" and turning circles.)

Roadway design standards are based on the functional and operational characteristics of streets, including traffic volume, capacity, and operating speed. Standards are necessary to ensure consistency of facilities as the city develops. The existing roadway design standards for the City of Pendleton are shown in Table 7-1. As shown in the table, the standards do not specifically include provisions for bikelanes or median turn lanes.

Table 7-1

Roadway Cross-Sections

Right-of-Way	Pavement Width	Travel Lanes	Parking Lanes	Planting, Utility, and Sidewalk Areas (Each Side)
		Arterial Streets		
60'	44'	2 - 12'	2 - 10'	8'
80'	44'	2 - 12'	2 - 10'	18'
80'	56'	4 - 12'	1 - 8'	18'
80'	64'	4 - 11'	2 - 10'	8'
100'	80'	5 - 12'	2 - 10'	10'
		Collector Streets		
60'	36'	2 - 10'	2 - 8'	12'
60'	44'	2 - 12'	2 - 10'	8'
80'	44'	2 - 12'	2 - 10'	18'
		Minor Streets		
60'	24'[1]	2 - 12'	None	18'
60'	36'	2 - 10'	2 - 8'	12'
60'	44'[2]	2 - 12'	2 - 10'	8'

1 The pavement width shall only be permissible on dead-end streets with a cul-de-sac and approved by the Planning Commission.

2 Where the street serves partially as a Collector and has been so designated by the Planning Commission and approved by the City Council.

Table 7-2 lists the recommended roadway standards for the Pendleton urban area. These recommended standards have been developed to promote the use of all transportation modes, rather than relying primarily on the automobile. The result is some reduction in travel lane width, overall pavement width, and right-of-way width as compared with existing street standards in some cases as well as specific provisions for on-street bicycle lanes and median turn lanes. It should be noted that on State controlled roadways within the City, the State's roadway design standards are to be applied.

Proposed construction standards are discussed in Section 10.

Table 7-2

Recommended Roadway Cross-Section Standards

Class	ADT Volumes	Speed	# and Width of Travel Lanes	Median Turn Lane	Bike Lanes?	Parking?	Paved Width	Side-walks	Planting Utility Area	R.O.W.	Minimum Private Access Spacing[1]
2-3-Lane Arterial	10,000 - 16,000	30-45	2-12'	14'[2]	2-5'[3]	2-10'[2]	34'-58'	5'-8'	3'-10'	50'-80'	150'-300'
5-Lane Arterial	16,000	30-45	4-12'	14'	2-5'[3]	no	48'-72'	5'-8'	3'-10'	90'-100'	300-500'
Collector	4,000-10,000	25-35	2 - 10-12'	12[2]	2-5'[3]	2-8'-10'[2]	24'-56'	5'-8'	3'-10'	60'-80'	75'-150'
Minor	5,000	20-30	2 - 10-12'	12[2]	no	2 - 8'-10'[2]	24'-44'	5'	3'-13'	40' - 60'	None

All measurements in feet

1) see Chapter 10 for exceptions

2) Optional, not required

3) Optional only if not included in the Pendleton Bicycle Master Plan

Sidewalks

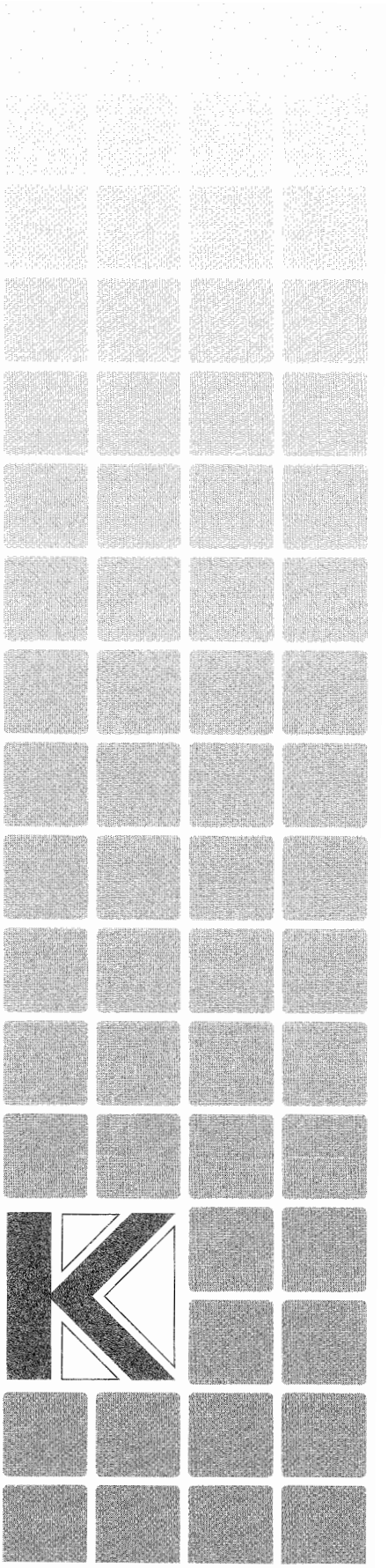
Sidewalks should generally be constructed to a five-foot minimum width on arterial and collector streets except in commercial areas where they should be a minimum of eight feet where a planting strip is provided between the sidewalk and the street, or eighteen feet (from curb to property line) if no planting strip is provided. On cul-de-sacs, five-foot wide sidewalks may be provided on one side of the street only.

CONCLUSION

Furthermore, research and implementation of street design standards and traffic "calming" devices used to control traffic on local streets have shown some success outside the United States. As a minimum, there are five important references that should be used to assist in road design. These include:

- *Roadside Design Guide* by the American Association of State Highway Transportation Official (AASHTO).
- *A Policy on Geometric Design of Highways and Streets 1990* by American Association of State Highway Transportation Officials.
- *Residential Streets - Second Edition* by the American Society of Civil Engineers (ASE), National Association of Home Builders and the Urban Land Institute (ULI).
- *Residential Street Design and Traffic Control* by the Institute of Transportation Engineers (ITE).
- *Highway Design Manual 1993* (ODOT)

Further, for streets designated as Collector or minor, the City engineer is given the latitude to consider street design modifications to preserve trees. In conclusion, consideration of such policies as these will help the City to allow flexibility in the design of roads but still maintain a standard set of design parameters.



Section 8

Cost, Financial Analysis and Implementation Strategy

Cost, Financial Analysis, and Implementation Strategy

INTRODUCTION

To meet the requirements of the Transportation Planning Rule, the Pendleton Transportation System Plan (TSP) must have a transportation financing program that includes the following:

- a list of planned transportation facilities and major improvements;
- a general estimate of the timing of planned facilities and improvements;
- determination of rough conceptual capital cost estimates; and
- a discussion of existing and potential financing sources.

This section provides a summary of the above items, with supporting technical information on costs included in Appendix F. The list of projects, cost estimates and funding sources has been reviewed and refined using input provided from the TSP Management Team and Advisory Committee.

It should be noted that the preliminary capital cost estimates identified in this section are for planning level analysis only. The costs were derived assuming unit price factors for each improvement, as indicated in Appendix F. All costs exclude land acquisition or special environmental impact mitigation requirements, and are stated in constant 1996 dollars.

PLANNED FACILITIES AND IMPROVEMENTS

Previous analyses of existing transportation conditions, land use/development projections, and future transportation/traffic conditions were used to identify specific roadway, intersection and pedestrian/bikeway projects that would address congestion and safety issues within the urban growth boundary.

Project priorities have been identified in three categories. "Short-term" projects include the highest priority improvements and are assumed to occur over years 1-5. The next priority is titled "As Development Occurs" includes projects to be constructed in conjunction with local private development projects most likely between years 5-15. The last priority is labeled "long-term," which includes projects to be constructed beyond year 15 of TSP implementation.

Table 8-1 summarizes the roadway capital improvements identified in the TSP. The short-term projects include five roadway projects with a preliminary cost estimate of $5.6 million. The most costly roadway improvement is the $4.2 million SW 20th Street extension railcrossing project which is needed to address rail crossing safety and address capacity and circulation deficiencies.

Additional short-term projects indicated on Table 8-2 include 12 intersection improvements, with a preliminary cost estimate totaling $8.3 million. The Highway 11/SE 10th Street "viaduct" project is by far the most expensive near term improvement with a preliminary capital cost estimate at $7.6 million. The total cost for constructing the short-term roadway/intersection projects is estimated to be on the order of $13.9 million.

In addition to the short-term projects, there are 14 roadway projects and four intersection projects identified for implementation "as development occurs". These Priority 2 projects are

projected to cost a total of $16.6 million, as indicated on Tables 8-1 and 8-2. There are also seven potential long-term projects identified on Table 8-1, estimated to cost in excess of $9.0 million.

The need for longer term projects will depend greatly on the ability of Pendleton to implement transportation efficient land use ordinances, guide future development, and to construct adequate pedestrian/bicycle connections. Near-term construction of targeted roadway and intersection improvements, combined with enhanced access management and local taxi/transit service will also reduce the need for cost intensive transportation improvements in the long term.

Table 8-1

Roadway Capital Improvements

Project Name	Beginning	End	Type of Improvement	Capital Cost
Short Term (Priority 1)				
SW 20th Street Upgrade	Emigrant	Court	Capacity	$285,000
Westgate Upgrade - Phase 1	Prison	Interstate 84	Capacity	$282,000
SW 20th Street Extension	Court Place	Westgate	Capacity/Circulation	$4,200,000
SE 8th Street Bridge	Bridge	-----	Capacity/Safety	$655,000
Southgate Place Upgrade	Quinney	US 395	Capacity/Safety	$176,000
Subtotal - Priority 1				**$5,598,000**
"As Development Occurs" (Priority 2)				
SW 28th Drive Upgrade	City Limits	SW 37th Street Extension	Circulation	$1,346,000
SW 44th Upgrade	Quinney	North Terminus	Circulation	$530,000
Perkins Avenue - Phase 1	SW 33rd	US 395	Circulation	$502,000
SE Kirk Avenue Extension	Highway 11	SE 10th	Circulation	$1,121,000
SE 10th Street Upgrade	Frazer	SE Kirk	Circulation	$681,000
Perkins Avenue - Phase 2	US 395	Nye Avenue	Circulation	$2,282,000
SE Nye Avenue Extension	Nye Avenue	UGB	Circulation	$521,000
SW 37th Street Extension - Phase 1	SW Hailey	Bartsch Road	Circulation	$3,287,000
SW Court Loop	SW 23rd	Industrial Park Arterial	Circulation	$1,023,000
Industrial Park Arterial	Guerden Homes	Court Loop	Circulation	$4,352,000
Haily Avenue Upgrade	SW 29th	SW 37th	Circulation	$361,000
Subtotal - Priority 2				**$16,006,000**

Table 8-1 (cont.)

Roadway Capital Improvements

Project Name	Beginning	End	Type of Imnprovement	Capital Cost
Long Term (Priority 3)				
Westgate Upgrade (5-lanes)	Court	Interstate 84	Capacity	$3,999,000
SW Isaac Upgrade	SW 6th	SW 13th	Circulation	$374,000
Riverside	Highway 11	UGB	Circulation	$1,073,000
Clopton Road Upgrade	Rieth Road	Westgate	Circulation	$1,628,000
SE Goodwin Upgrade	SE 8th	SE 10th	Circulation	$150,000
Hailey Avenue Extension	SW 37th	SW 44th	Circulation	$1,803,000
Subtotal - Priority 3				**$9,027,000**
TOTAL				**$30,631,000**

* Not determined at this time.
Source: Otak, Inc. based on detailed costs provided in Appendix F.

Table 8-2

Intersection Capital Improvements

Project Name	Improvement Description	Priority	Included in CIP?	Capital Cost
Short-Term (Priority 1)				
US 395 Intersection Improvements:				
• US 395/I-84 WB	Traffic Signal	Capacity	Yes	$150,000
• Emigrant/SW 20th	Signal Modification/ Geometric Improvements	Capacity	Yes	$50,000
• Emigrant/Frazer/I-84 WB Ramps	Geometric Improvements	Capacity	Yes	$50,000
• Frazer/SW 20th	Geometric Improvements	Capacity	Yes	*
Highway 11/SE 10th (Viaduct)	Geometric Improvements	Capacity	No	$7,557,000
Westgate/Court/Dorion	Geometric Improvements	Capacity	No	**
Court/SW 17th	Traffic Signal	Capacity	Yes	$150,000
Emigrant/SW 17th	Traffic Signal	Capacity	Yes	$150,000
Frazer/SW 17th	Traffic Signal	Capacity	Yes	$150,000
Subtotal - Priority 1 (short term)				**$8,257,000**

Table 8-2

Intersection Capital Improvements

Project Name	Improvement Description	Priority	Included in CIP?	Capital Cost
"As Development Occurs" (Priority 2)				
Highway 11/US 30	Traffic Signal	Capacity	Yes	$150,000
Highway 11/I-84 EB	Traffic Signal	Capacity	No	$150,000
US 30/Airport Road	Traffic Signal	Capacity	No	$150,000
Westgate/Northgate	Traffic Signal	Capacity	Yes	$150,000
Subtotal - As Development Occurs				$600,000
TOTAL				**$8,857,000**

* Cost included in Emigrant/SW 20th Street project.

** Cost not determined at this time.

Source: Kittelson & Associates and Otak, Inc. CIP project cost estimates used on designated projects.

While all of the roadway improvements on major collector and arterial streets would be designed to accommodate pedestrians and bicycles, additional pedestrian and bikeway facilities are also incorporated into the TSP. As indicated on Table 8-3, there are several bike lanes or mixed traffic facilities that have been identified by the Pendleton Bicycle System Master Plan and incorporated into the TSP.

Since most of the mixed traffic bicycle facilties require only map designation, there are no to little capital costs. Bicycle lanes and pathways, such as the Umatilla River Parkway may require more costly grading, paving and/or widening. The preliminary capital cost estimate for the bicycle lanes and River Parkway extension is on the order of $620,000.

Table 8-3

Bicycle System Capital Improvements

Project Name/ Location	Facility	Beginning	End	Capital Cost Estimate
NORTH				
NW 4th	Mixed Traffic	Furnish	John's Lane	*
NW 7th	Mixed Traffic	Carden	King	*
NW Furnish/8th/Gilliam	Mixed Traffic	NW 12th	NW 4th	*
NW 3rd	Mixed Traffic	Furnish	Gilliam	*
NW 12th	Mixed Traffic	Carden	End	*
NW King/Horn	Mixed Traffic	NW 7th	NW 12th	*
NW 14th/NW 15th/Ellis	Mixed Traffic	Carden	End	*
NE 8th	Mixed Traffic	Umatilla River	UGB	*
DOWNTOWN				
SW 20th	Lane	US 30	Frazer	**
SW 7th	Mixed Traffic	Goodwin	Isaac	*
SW 4th	Mixed Traffic	Court	Hailey	*
South Main Street	Lane	Frazer	Isaac	$92,000
Highway 11	Lane	Nye Avenue	SE 10th	*
SE 8th/Hailey/SE 9th	Mixed Traffic	Goodwin	End	*
SE Goodwin/Hailey	Mixed Traffic	Main	SW 20th	*
Emigrant	Lane	SW 4th	SE 10th	*
SW Nye	Mixed Traffic	Tutuilla Creek Rd.	Highway 11	*
SE Goodwin	Mixed Traffic	Main	SE 3rd	*
River Parkway	Path	Byers Avenue	Highway 11	$250,000
EAST				
SE Byers	Mixed Traffic	SW 1st	Umatilla River	*
Highway 11	Lane	US 30	UGB	$100,000
SE 17th	Mixed Traffic	Court Place	Byers Avenue	*
US 30	Mixed Traffic	SE 20th	Highway 11	*
SE Kirk	Mixed Traffic	Highway 11	SE 10th	**
SE 10th	Mixed Traffic	Frazer	SE Kirk	**
SE Goodwin	Mixed Traffic	SE 6th	SE 10th	**
Court Place	Lane	SE 12th	SE 20th	
SE 20th	Lane	Court Place	US 30	
Riverside	Mixed Traffic	Highway 11	UGB	**

Table 8-3 (cont.)

Bicycle System Capital Improvements

Project Name/ Location	Facility	Beginning	End	Capital Cost Estimate
SOUTHWEST				
SW 28th Drive	Mixed Traffic	SW 30th	SW 37th	**
SW 37th	Lane	Southgate Place	Clopton Road	$178,000
SW 44th	Mixed Traffic	Quinney Avenue	Hailey	*
SW Jay	Mixed Traffic	SW 37th	SW 31st	*
SW 31st	Mixed Traffic	Hailey Avenue	SW Nye Avenue	*
SW Nye	Mixed Traffic	SW 31st	US 395	*
SW 30th	Mixed Traffic	SW 28th Drive	US 395	*
Hailey	Lane	SW 29th	US 395	**
SW Perkins	Mixed Traffic	US 395	End	*
SW Quinney	Mixed Traffic	SW 44th	Southgate Place	*
SW Nye	Mixed Traffic	SW 23rd	Hospital	*
SW 30th/Ladow	Mixed Traffic	US 395	Perkins	*
NORTHWEST				
Industrial Park Arterial	Mixed Traffic	Court Loop	US 30	**
Westgate	Lane	I-84	Court Place	**
Court Loop	Mixed Traffic	Industrial Park Arterial	Court Place	**
Nye Avenue	Mixed Traffic	Tutuilla Creek Road	SE 3rd	*
TOTAL COST ESTIMATE				**$620,000**

* Cost associated with signage and maintenance only.

** Project to be completed and funded in conjunction with roadway improvement.

Source: Pendleton Bicycle System Master Plan, updated list and costs by Kittelson & Associates and Otak, Inc.

A summary of potential pedestrian facilities and connections is indicated on Table 8-4. In 18 of the 71 identified pedestrian projects, sidewalks and related curbs and gutters would be constructed with planned roadway improvements. The remaining pedestrian projects are estimated to cost approximately $4.4 million, and may also be constructed as development occurs or in conjunction with street improvements. Cost estimates range from $13,000 for short one-block sidewalk connections to $412,000 to construct sidewalks and drainage improvements along Airport Road.

Table 8-4

Pedestrian System Improvements

Project Name/ Location	Beginning	End	Included in Roadway Project	Capital Cost Estimate
NORTHWEST DISTRICT				
Airport Road	Westgate	Airport	No	$412,000
Court Loop	Court Place	Industrial Park Arterial	Court Loop	*
Westgate	Interstate 84	Northgate	Westgate Upgrade	*
Industrial Park Arterial	Court Loop	US 30	Industrial Park Arterial	*
Clopton Road	Rieth Road	Westgate	Clopton Road Upgrade	*
NORTH DISTRICT				
Carden Avenue	Westgate	Northgate	No	$79,000
Carden Avenue	NW 13th	NW 12th	No	$13,000
NW 12th	Carden	Despain	No	$35,000
NW 12th	Despain	King	No	$101,000
NW 12th	King	End	No	$88,000
Furnish	NW 8th	NW 7th	No	$26,000
Furnish	NW 7th	Main	No	$57,000
Furnish	NW 12th	NW 11th	No	$26,000
Furnish	NW 11th	NW 9th	No	$22,000
Despain Avenue	NW 14th	NW 13th	No	$13,000
NW 7th	Ellis	Furnish	No	$18,000
Main	Ellis	End	No	$237,000
Horn	NW 12th	King Avenue	No	$132,000
DOWNTOWN				
Westgate	Northgate	Court	Westgate	
Court	SW 3rd	SW 2nd	No	$13,000
Court	SE 4th	SE 10th	No	$66,000
Dorion	SW 19th	Court	No	$13,000
Emigrant	SW 9th	SW 16th	No	$35,000
Frazer	Main Street	SW 4th	No	$61,000
Frazer	Emigrant	SE 10th	No	$114,000
SW 20th	Frazer	Dorion	No	$18,000
SW 17th	Frazer	Court Place	No	$57,000

Table 8-4 (cont.)

Pedestrian System Improvements

Project Name/ Location	Beginning	End	Included in Roadway Project	Capital Cost Estimate
DOWNTOWN (cont.)				
SE 10th	Frazer	Court	No	$61,000
Court Place/Highway 11	Jay (approx)	Nye Avenue	No	$123,000
Goodwin/SW 4th	Main Street	SE 3rd	No	$70,000
Hailey/SW 19th	SW 17th	SW 5th	No	$351,000
Isaac	SW 15th	SW 2nd	SW Isaac Upgrade	*
Isaac	SW 2nd	SE 6th	No	$114,000
SW 17th	Frazer	Hailey	No	$48,000
SW 15th/SW 13th	Frazer	End	No	$149,000
SE 3rd	Hailey	Isaac	No	$18,000
SE 6th	Goodwin	End	No	$61,000
SE 8th	Umatilla River	End	No	$184,000
EAST				
US 30	SE 17th	SE 20th	No	$44,000
Highway 11	Private Rd	UGB	No	$123,000
Byers	SE 11th	SE 12th	No	$26,000
Byers	SE 12th	SE 15th	No	$61,000
Byers	SE 15th	SE 17th	No	$44,000
SE 12th	Court	Byers	No	$35,000
SE 17th	Court	Byers	No	$35,000
Court	SE 10th	SE 14th	No	$114,000
Court	SE 14th	SE 16th	No	$26,000
Court	SE 17th	SE 20th	No	$48,000
Riverside	Highway 11	UGB	Riverside Upgrade	*
Goodwin	SE 6th	SE 8th	No	$44,000
Goodwin	SE 9th	SE 10th	Goodwin Upgrade/ Extension	*
SE 10th	Frazer	End	SE 10th St. Extension	*
Kirk Avenue	Highway 11	End	SE Kirk Ave. Extension	*

Table 8-4 (cont.)

Pedestrian System Improvements

Project Name/ Location	Beginning	End	Included in Roadway Project	Capital Cost Estimate
SOUTHWEST				
US 395	Southgate Place	UGB	No	$237,000
US 395	SW 30th	Ladow	No	$26,000
SW 37th	Jay	End	SW 37th St. Extension	*
SW 44th	Quinney	UGB (South)	No	$132,000
Quinney	SW 41st	Southgate Place	No	$61,000
Southgate Place	US 395 (North)	US 395 (South)	Southgate Place	*
SW 30th	SW 28th (South)	Hailey Avenue	No	$140,000
SW 28th Drive	Private Road	End	SW 28th Dr. Upgrade	•
Hailey Avenue	US 395	SW 27th	Hailey Ave Upgrade	*
Hailey Avenue	SW 28th	SW 30th	Hailey Ave Upgrade	•
Hailey Avenue	SW 30th	SW 31st	Hailey Ave Upgrade	*
Hailey Avenue	SW 31st	SW 32nd	Hailey Ave Upgrade	•
Hailey Avenue	SW 32nd	SW 37th	Hailey Ave Upgrade	*
SW 18th	Parkway	Carden	No	$285,000
SOUTHEAST				
Tutuilla Creek Road	SW 22nd	SW 21st	No	$18,000
Tutuilla Creek Road	US 395	Hailey	No	$123,000
Nye Avenue	SE 6th (approx)	SE 9th (approx)	Nye/Patawa Extension	•
TOTAL COST ESTIMATE				**$4,437,000**

• Cost included in roadway project.

Source: Kittelson & Associates and Otak, Inc.

TRANSPORTATION FINANCING AND FUNDING OVERVIEW

In the following discussion of financing and funding sources, financing is distinguished separately from funding. Funding describes methods that generate revenue for transportation projects. Funding usually relates to how governments collect money, such as collecting property taxes, user fees and systems development charges, or selling goods and services.

Financing refers to how projects are paid for over time. Transportation projects are often paid for using a combination of funding and financing. For example, funding may be derived from federal/state and local sources with the local funding source used to finance the local share over time. In this instance, an improvement could be funded with state funds matched by a local general obligation bond issue (financing) secured by property taxes (funding). The local share could also be funded through general fund appropriations on a pay-as-you-go basis.

Funding for transportation improvement projects typically is derived from three sources: federal, state, and local governments. A description of the funding sources from each of those three categories follows. In some cases, funds may come from one level of government (such as federal) to be spent by another level of government (i.e., state).

For each of the funding alternatives listed below, there is a brief description, a listing of the existing application (i.e., who is presently using this method), and a short discussion of the potential for implementing the alternative. No effort has been made to screen the list based upon their political or legal feasibility. The intent is to provide an overview of a number of alternative revenue sources. It may also be that some of the funding mechanisms have been, or are more typically dedicated to, maintenance or street repair rather than capital improvements. The decision on how the funds are spent is ultimately a policy issue to be decided by the City Council and/or local constituency.

Federal Funding Mechanisms

Intermodal Surface Transportation Efficiency Act (ISTEA)

Description: In 1991, Congress passed and the President signed the Intermodal Surface Transportation Efficiency Act (ISTEA). The act emphasizes flexibility in funding transportation solutions and establishes a series of funding categories for implementation. Funding through the ISTEA Act is targeted to improvements, which demonstrate beneficial impacts toward implementing a region's transportation systems plan, enhance the multi-modal nature of the transportation system, and meet local land use, economic, and environmental goals. Previously, federal aid funding was targeted to highways based upon their function or classification (i.e., Federal Aid Primary and Secondary funds were targeted to those roads on designated FAP or FAS routes).

Funding categories created by ISTEA are intended to provide an area with more discretion in allocating federal transportation funds to projects from highway improvements to transit improvements, management systems, and non-vehicular modes such as bicycle and pedestrian improvements.

Existing Application: Transportation improvement projects within Pendleton are potentially eligible for funding through a number of categories under the ISTEA Act. These categories include:

- National Highway System (NHS): Highways in this category include all Interstate routes and major urban and rural principal arterials. I-84, U.S. 395 and Oregon Highway 11 are identified as routes on the National Highway System.
- Surface Transportation Program (STP): Funding through this category may be used on any roads (including NHS) that are not functionally classified as local or rural minor collectors. These roads are now collectively referred to as Federal-aid routes. Transit capital improvement projects are also eligible for funding through this category.
- Congestion Management and Air Quality Improvement Program: Pendleton is considered to be in "attainment" national ambient air quality standards, and as such is not eligible for CMAQ funding.
- National Scenic Byways Program: A National Scenic Byways Program was established in ISTEA to provide assistance to states in preserving and enhancing the scenic, cultural, historic, archaeological and recreational resources of selected corridors. Priority funding will go to projects that protect the corridor as well as increase tourism, demonstrate strong local commitment to implementing plans, serve as models to other states, and which are in multi-state corridors where states submit joint applications.

Community Development Block Grants (CDBG)

Description: The Federal Department of Housing and Urban Development has a program known as the Community Development Block Grant Program (CDBG). Cities receive funds based upon a formula which includes their size and other demographics including income levels and housing standards. CDBG funds can also be used for emerging public works needs.

Potential: The City of Pendleton has used CDBG funds for the Domestic Violence Building and Housing rehabilitation and for street improvements on Hailey Avenue between SW 29th and SW 30th Streets for a 48 unit affordable housing (new construction) project. In practice, this program is limited to sections of the city with low to moderate income residents. It may be a source of street reconstruction funds, but will not be a factor in new road construction for capacity building.

Miscellaneous Federal Revenue Sources

Description: Other miscellaneous federal and state revenue sources are applicable to local capital improvements. Examples include:

- Federal Aviation Administration (FAA)--which collects a tax on all domestic commercial airline flight tickets sold in the United States. These tax receipts are used to assist locally operated airports in improving facilities through FAA's Airport Improvement Program through a 90% grant, 10% local match for projects directly affecting aviation activities.
- Federal Economic Development Administration (EDA)--provides annual grant funding on a competitive basis for public works improvements that directly generate or retain jobs in local communities. These funds can be used for local utilities and transportation facilities that serve new development sites.
- Land and Water Conservation Fund (LWCF)--grants are available through State of Oregon for parks development. Funds require a 50 percent or better local match.

Existing Application: Pendleton has benefited from FAA grant funding for improvements to the Eastern Oregon Regional Airport in the past and is currently using these funds for the current remodeling project and parking lot improvements underway. Approximately $265,000 in EDA funds were used for improvements to 'A' Avenue and NW 56th Drive near the airport and industrial parcels in the 1980s. LWCF funds have been used for River Parkway improvements as well as other park-related infrastructure in the city.

Potential: Both FAA and EDA funds are difficult to obtain, but could be considered for targeted improvements to the airport and industrial sites.

State Funding Mechanisms

State Motor Vehicle Fund

Description: The State of Oregon collects the following fuel and vehicle fees for the State Motor Vehicle Fund:

State Gas Tax	$0.24 per gallon
Vehicle Registration Fee	$15.00 per year

In addition, a weight-mile tax is assessed on freight carriers to reflect their use of state highways. The revenue from the fund is used by ODOT and distributed to cities and counties throughout the state.

Existing Application: Both ODOT Region 5 and the City of Pendleton receive funds from the State Motor Vehicle Fund. The City of Pendleton's policy is to dedicate this resource to street maintenance activities.

ODOT uses their allocation from the State Motor Vehicle Fund for maintenance and capital purposes. The State Transportation Improvement Program (STIP) describes the capital projects to be funded by ODOT. Umatilla County and the City of Pendleton typically use its allocation for street maintenance.

The state distributes 15.57 percent of the State Motor Vehicle Fund to cities and 24.38 percent to counties based on a per capita rate (cities) and share of vehicle registration (counties). The remaining amount in the State Motor Vehicle Fund is used to maintain and enhance the state highway system. The state of Oregon operates a grant program available to cities for bicycle-related transportation system improvements and 1 percent of the fuel tax returned to cities and counties is designated for bike paths and lanes.

Potential: As population, the number of registered vehicles and fuel sales increase, the total revenue from the State Motor Vehicle Fund will rise. However, if the fees (tax per gallon) stay at current levels, there will be a reduction in buying power due to inflation. The last two legislatures considered, but did not pass, recommendations for increases in both the state gas tax and vehicle registration fees.

Special Public Works Funds (SPWF) and Immediate Opportunity Funds (IOF) — Lottery Program

Description: The State of Oregon through the Economic Development Department (OEDD) provides grants and loans to local government to construct, improve and repair public infrastructures in order to support local economic development and create new jobs.

Existing Application: SPWF (administered by OEDD) and IOF (administered by ODOT) funds have been used in Pendleton for improvements relating to Guerden Homes, a major employer. IOF helped fund the widening of a section of Westgate and realignment of Old Rieth Road at Westgate. SPWF helped extend the first phase of the industrial park arterial from Guerden Homes to Westgate (see Table 8-1).

Potential: SPWF and IOF funds are limited to those situations in which it can be documented that the project will contribute to economic development of a community and the creation of family wage jobs. The potential must be evaluated on a case by case basis to determine if a particular project might be eligible for funding under this program. From a practical standpoint, these funding requirements make it fairly limited in their potential.

Toll Roads or Bridges

Description: Certain streets or bridges could be built as toll facilities charging a fee per use.

Existing Application: There are presently in Oregon, several ferries crossing the Willamette River that charges a toll. The bridge over the Columbia River at Hood River is also a toll bridge. The bridge over the Columbia River at Astoria was a toll bridge until recently when bonds to pay for the bridge were paid off and the tolls were discontinued. The Oregon Revised Statutes provide the opportunity for ODOT to build toll bridges to connect state highways and improve safety and capacity. The statutes also provide the opportunity for the development of "private" toll bridges. Recent legislation known as Senate Bill 626 has enabled toll roads on a limited basis and a state tollway and public/private initiative's study is evaluating potential statewide application to projects (including the "Newberg bypass" and the Tualatin-Sherwood Highway Connector).

Potential: Not expected to be a potential source of funding on state or local routes through the Pendleton urban area within the 20-year planning horizon. However, beyond the 20-year time frame, new electronic tolling technology may be in place to make this source of funding practical.

Transportation Equity Fund

In a special 1995 session, the legislature passed a bill, SB 1156, that provided for state funding of Portland's South/North light rail project. It also created a $375 million "Transportation Equity Fund" that can be used for "essential transportation projects" outside the metro area. An updated version of this bill went to the voters in November 1996 and failed.

Local Funding Mechanisms

The following programs are used by cities in the funding of transportation improvements.

General Obligation Bonds (G.O. Bonds)

Description: Bonds are sold by a municipal government to fund transportation (or other types of) improvements, and are repaid with property tax revenue generated by that local government. Voters must approve G.O. Bond sales.

Existing Application: Cities all over the state use this method to finance the construction of transportation improvements. For smaller jurisdictions, the cost of issuing bonds vs. the amount which they can reasonably issue creates a problem. Underwriting costs can become a high percentage of the total cost for smaller issues. According to a representative of the League of Oregon Cities, the State is considering developing a "Bond Pool" for smaller jurisdictions. By pooling together several small bond issues, they will be able to achieve an economy of scale and lower costs. G.O. bonds fall outside of the limitations of Ballot Measure 5, but require voter approval.

Potential: Within the limitations outlined above, G.O. bonding will be an alternative for funding transportation improvements.

Serial Levy/Property Taxes Within the Limit of Ballot Measure 5

Description: Local property tax revenue (city or county) could be used to fund transportation improvements through a serial bond levy.

Existing Application: Revenue from property taxes ends up in the local government general fund where it is used for a variety of uses. Precedents for the use of property taxes as a source of funding for transportation capital improvements can be found throughout the state. However, with the limitations resulting from Measure 5, use of property taxes for transportation capital improvements will continue to compete with other general government services under the funding limitation set by Measure 5 for general government services.

Potential: The potential for increased funding from property tax revenue is limited by Ballot Measure 5 and by competition from other users who draw funds from the general fund; it is not a practical source for financing major street improvements.

Revenue Bonds

Description: Revenue Bonds are those bonds sold by a city and repaid with "revenue" from an enterprise fund which has a steady revenue stream such as a water or sewer fund. The bonds are typically sold to fund improvements in the system which is producing the revenue.

Existing Application: Revenue Bonds is a common means to fund large high cost capital improvements which have a long useful life. A sewage treatment plant is a good example where the high construction cost over a short period makes it difficult to pay for from operating funds, yet a long term revenue stream from sewer revenues makes the sale of bonds a viable alternative which spreads the cost of the facility improvement over a long period of time.

In 1989 the City of Independence sold revenue bonds to fund street improvements with vehicle fuel tax revenues pledged as the method of repayment.

Potential: The City could sell revenue bonds with any one of several revenue streams (i.e., fuel tax revenues of which are in place now) pledged to repay the bonds. The bond underwriters will look at the reliability of the revenue stream when rating the bonds and assigning an interest rate.

Transportation System Development Charges (SDC)

Description: A transportation system development charge (SDC) or traffic impact fee is a sliding fee which is charged all new development to pay for transportation improvements which will be needed as a result of the development. The fee is normally based upon the number of vehicle trips generated by the development. Credits are often given for "qualified" improvements made by a developer to an adjacent arterial or collector street which would reduce the SDC charge.

Existing Application: Pendleton now uses transportation system development charges (or traffic impact fees) on the Harris-Pine Mill site to defray the cost of transportation facilities.

Potential: The systems development charge or traffic impact fee in Pendleton could generate a significant amount of new funding to be used for transportation projects. Given potential development levels, the existing traffic impact fee in Pendleton could generate $150,000 to $300,000 per year.

Local Vehicle Fuel Tax

Description: The City of Pendleton or Umatilla County could implement a local gas tax that would be in addition to the state gas tax it currently receives.

Existing Application: Five jurisdictions within Oregon have a local gas tax - the City of Woodburn ($0.01/gallon), Washington Co. ($0.01/gallon), Tillamook ($0.015/gallon), The Dalles ($0.01/gallon), and Multnomah Co. ($0.03/gallon). The local gas taxes have raised the following amounts:

Woodburn	$115,000 (1995/96)
Tillamook	$106,000 (1995/96)

The Dalles	$329,000 (1995/96)
Multnomah County	$6,925,000 (1995/96)
Washington County	$1,660,095 (1995/96)

The Washington County gas tax is shared with cities within the County on a per capita basis. The cities of Tillamook and The Dalles are responsible for collection of their local gas tax. The remaining jurisdictions rely upon the State Department of Motor Vehicles for collection and distribution. The State charges an administrative fee for collection.

Potential: A one cent per gallon fuel tax within the City of Pendleton would generate an estimated $142,000 per year based on rough estimates of fuel sales.

The existing fuel tax revenue received from the State Motor Vehicle Fund is used for street maintenance. If a local tax were added, the first priority for funding would be the pavement management system, which stresses preventive maintenance of street surfaces.

Local Vehicle Registration Fee

Description: Like a local gas tax, the City of Pendleton and/or Umatilla County could implement a local vehicle registration fee. This would operate similarly to the existing statewide vehicle registration fee.

Existing Application: There are presently no cities or counties in Oregon that charge a local registration fee. This option has been discussed by Marion County in the past with the decision made not to pursue it. The Portland Metropolitan region is discussing this option as a potential source of funding for an Arterial Streets Program.

Potential: Statewide, the number of vehicles registered is 2,558,000, vs. a statewide population of 2,979,000. This yields a ratio of .86 vehicles per person. If this ratio is applied to Pendleton, the estimated number of vehicles in the city would be 22,740. Based upon that number of vehicles, a registration fee of $10.00 would generate $227,400 on an annual basis.

Collection of a local vehicle registration fee might be accomplished through the State of Oregon Department of Motor Vehicles. It is likely that the state would charge an administrative fee to recover the administrative costs of collecting and distributing a local fee.

Local Street Utility/User Fee

Description: The principal behind a street utility or user fee is that a street is a utility used by the citizens and businesses of a city just like a water pipe or a sewer that supplies a connection to a home or business. A fee would be assessed by the city to all businesses and households for use of city streets based upon the amount of use.

Existing Application: This fee is not being used in Pendleton but is in La Grande, where it is raising approximately $70,000 dollars a year, through a $4.00 monthly fee charged on residential water meter bills. The revenue generated by the fee used for operations and maintenance of the street system. The City of Medford implemented their street utility fee in 1991 and the City of Roseburg presently has a similar fee for

storm water charges which they use for operations and maintenance as well as capital construction of storm drainage facilities.

Potential: The City of Pendleton has the authority to implement, by local ordinance, local option user fees. The revenue from the fees could be used to pay for capital projects or ongoing roadway maintenance. A preliminary analysis based on a $4.00 monthly surcharge on city water meter invoices is expected to generate over $280,000 annually for the Pendleton water district service area by year 2005.

Local Improvement District (LID)

Description: Through a local improvement district (LID), a street or other transportation improvement is built and the adjacent benefited (i.e., local) properties are assessed a fee to pay for the improvement.

Existing Application: LID programs have wide application, for financing new streets, sidewalks, water/sewer or other public works projects. The LID method is used primarily for local or collector roads, although arterials have been built using LID funds in certain jurisdictions. Pendleton is now in the process of leveraging up to $200,000 in annual sidewalk improvements by using $25,000 set aside for use as a financial incentive to encourage property owners to construct/replace sidewalks adjacent to their property.

Potential: Changes to the former "Bancroft Bond" process caused by Measure 5 have made LID financing more difficult. It does, however, continue to offer a good mechanism for funding projects, whether related to new development or for improvements that benefit already-developed areas. Pendleton has been successful in budgeting LID matching funds for city contributions to new sidewalk projects.

Business License Fee

Description: Pendleton, like many cities around the state, charges license fees based upon any one of a number of measures of business activity including gross sales, net sales, gross payroll, net income, or number of employees.

Existing Application: License fees in Pendleton are based on size and location of employers. Businesses with less than five employees are charged $50 (in town) and $80 (out of town) per year. Maximum in-town charges are $500 per business.

The City of Portland has a business license fee of 2.2 percent of adjusted net income which generates over $21 million per year which goes into the city general fund.

Potential: This kind of fee is often perceived as a "stick" rather than a "carrot" and may not be supported from an economic and business development standpoint. In Pendleton, the current license fee is essentially maxed out.

Governor's Transportation Initiative

The Regional Advisory Committee (RAC) for eastern Oregon was formed as part of the Governor's Transportation Initiative. The charge from the Governor to the regional advisory committee was to identify:

- Gaps in state, regional and local transportation systems and services that are most likely to impair livability and economic opportunity in their areas;
- Actions that can be taken within the framework of the existing resources to help close the gaps; and
- How much in additional resources, if any, are needed to close remaining gaps and who should be responsible for providing them.

The process involved defining the priority transportation needs and unfunded gaps necessary to meet key livability and economic opportunity objectives. The committee considered a wide range of actions to reduce the unfunded gap within existing resources through improvements in efficiency of the transportation system and the agencies that deliver transportation services. Finding and recommendations of the Committee will be presented in Fall/Winter 1996.

Regional and Local Funding Environment

Three of the short-term projects identified in the Pendleton TSP are programmed in the ODOT Statewide Transportation Improvement Program (STIP) and the City's Capital Improvements Program (CIP). It should be noted that a project identified on the STIP or CIP is not guaranteed funding during the targeted year. However, these local and regional capital programs determine project priorities and timing, and their STIP/CIP identification is usually required to qualify for federal/state/local funding.

As indicated below in Table 8-5, the current ODOT Region 5 STIP includes $6.8 million for the Highway 11/SE 10th Street (viaduct) project, with funding beginning in year 1999. Also, included in the STIP is $655,000 for the 8th Street Bridge replacement and $134,000 for the River Parkway pedestrian underpass at SW 10th Street.

Table 8-5

ODOT Region 5 STIP

Project Name/Location	Description	Year	Cost
Highway 11/SE 10th St - Eastgate (viaduct) US 30 @ M.P. 3.8 - 4.6	widen road to 4 lanes, reconstruct curbs and sidewalks	1999	$6,836,000
River Parkway Underpass West 10th Street	construct underpass tying pedestrian paths together	1996	$134,000
Umatilla River (8th Street) Bridge #590111 8th Street	replace bridge structure	1998	$655,000

Source: Oregon Department of Transportation, Statewide Transportation Improvements Program, 1

Highway construction and maintenance continue to be ODOT's highest priority for expenditures. Federal initiatives to reduce congestion and improve air quality encourage alternative transportation systems, but operating expenses for these systems remain high and are not yet able to provide the same level of transportation flexibility and choice. Barring dramatic changes in the price of fuel, significant changes in transportation policy are not expected.

ODOT's current funding position defines the context in which the bulk of federal and state funding would apply to local projects. Findings include:

- ODOT currently spends 77 percent of its $1.3 billion biennium budget on transportation development, system operations, maintenance, and construction projects.
- As federal funding for new transportation construction declines and motor vehicle fuel tax receipts are eroded by inflation, ODOT anticipates its role will shift away from project construction to preservation and maintenance of the State and Federal highway system.
- ODOT estimates that only one "large" construction project (greater than $5 million) and five "small" $1 million or fewer projects will occur in ODOT Region 5 every five years.
- Pendleton's ability to leverage State and Federal funding will depend on the need and type of projects selected, total project cost, public support, consistency with State/local planning objectives, and level of local participation in funding the project.

A reconciliation of the STIP and CIP is needed as projects advance to near term construction. As indicated in Table 8-6, the near-term (5 year) improvements identified in Pendleton's CIP include $9.5 million for eight projects. The two unfunded projects in the CIP include the SW 20th Street extension and Barnhart Road projects with an estimated cost of $6.7 million. These projects could be funded with a mix of state and local government funds and private contributions.

Table 8-6

Pendleton CIP

Summary of Street Projects	1996-97	1997-98	1998-99	1999-00	2000-01	Total
Street Overlay	$200,000	$185,000	$160,000	$145,000	$130,000	$820,000
Bicycle Lane and Route Improvement	$32,000	$21,000	$21,000	$21,000	$21,000	$116,000
SE 8th Bridge Replacement	$80,000	$575,000				$655,000
Westgate Improvement Project	$209,000					$209,000
Sidewalk Program	$192,000	$192,000				$384,000
SW Pendleton Retail Transportation Project	$95,000	$100,000		$200,000	$250,000	$645,000
Widening and Extension of SW 20th				$420,000	$3,780,000	$4,200,000
Barnhart Road				$190,000	$2,310,000	$2,500,000
TOTAL	**$808,000**	**$1,073,000**	**$181,000**	**$976,000**	**$6,491,000**	**$9,529,000**

Source: Pendleton Capital Improvements Program

The City of Pendleton uses several financing/funding options for capital improvement projects and transportation system maintenance. As indicated in Table 8-7, existing sources of funding for transportation improvements and facilities primarily are derived from: street funds (state motor vehicle tax transfer payments); general obligation bonds, state bike funds/grants, developer system development charges (traffic impact fees), local improvement districts (LIDs); and other miscellaneous county, state and federal funds.

Table 8-7

Existing Funding Sources

Funding Source	1996-97	1997-98	1998-99	1999-00	2000-01	Total
Local Donations/Grants	$20,000	$1,900				$21,900
County/State/Federal Funds	$116,100	$546,250	$87,490			$749,840
G.O. Bonds/Grants/Bequest/GF	$3,418,000					$3,418,000
Geodc Loan	$150,000					$150,000
General Fund/Grants	$360,275	$159,250	$84,250	$36,950	$231,250	$871,975
Engineering Staff	$11,500					$11,500
Immediate Opportunity Fund	$141,200					$141,200
Regional Strategies	$2,000					$2,000
Sewer Fund	$121,100	$117,250	$51,250	$51,250	$51,250	$392,100
Water Fund	$155,100	$141,250	$121,250	$121,250	$121,250	$660,100
Water Capital Reserve	$120,000	$250,000				$370,000
Fire Capital Reserve	$309,000	$30,000	$182,000		$268,000	$789,000
Street Fund	$258,300	$240,000	$161,250	$146,250	$131,250	$937,050
Airport Fund		$40,000	$5,000	$49,000	$22,500	$116,500
FAA Grant		$630,000	$45,000	$441,000	$202,500	$1,318,500
City Loan		$200,000				$200,000
Library Trust Fund	$50,000	$9,000		$2,700	$6,500	$68,200
State Bike Fund/Grant	$32,000	$21,000	$21,000	$21,000	$21,000	$116,000
GF/Water/Sewer	$19,000	$10,000	$10,000	$10,000	$10,000	$59,000
Senior Transportation/General				$40,000		$40,000
LID	$167,000	$167,000				$334,000
ODOT/City Fund		$100,000		$160,000	$40,000	$300,000
LWCF Fund	$49,375					$49,375
Developer Fund	$95,000			$40,000	$210,000	$345,000
To Be Determined				$610,000	$6,090,000	$6,700,000
TOTAL	**$5,594,950**	**$2,662,900**	**$768,490**	**$1,729,400**	**$7,405,500**	**$18,161,240**

Since the current CIP identifies $6.7 million in unfunded projects, new funding sources for the City of Pendleton need to be considered if TSP projects are to be implemented. Potential funding sources must take into account several factors including: State law and City Charter limitations; political considerations; intergovernmental participation; and economic and fiscal impacts.

Future funding sources within the city are expected to include the existing programs indicated in the CIP, as shown on Table 8-7. The traditional G.O. Bond issue was identified by the TSP management and technical committees as the most likely means of generating the bulk of local funding for local transportation improvements. In addition to these sources of funding, a preliminary analysis was conducted to determine the revenue generating potential of a local gas tax, local vehicle registration fee, street utility/user fees, and the Transportation Equity Fund.

Potential new funding resources such as a local gas tax, citywide SDC, and others have surfaced as possible means to generate revenue over and above traditional General Obligation bond levies or pay-as-you-go general fund appropriations. The order of magnitude funding that could be derived from potential sources is identified in Table 8-8. These and other funding options should be considered during implementation of the TSP as projects are prioritized and selected for construction.

Table 8-8

Potential Funding Sources

Selected Potential Local Funding Options	Estimated Revenue
General Obligation Bond	varies
Local Fuel Tax (@ $0.01 per gallon)	$142,000 per year [1]
Local Vehicle Registration Fee (@ $10 per vehicle)	$227,400 per year [2]
System Development Charge/Traffic Impact Fee	$100,000+ per year [3]
Transportation Equity Fund	$2,200,000 total [4]
Local Street User/Utility Fees	$280,000+ per year [5]
Other (General Funds, CDBG, etc.)	Less than $100,000 per year

1 Based on 26,400 residents at 0.86 cars per resident; average of 17,500 miles driven per year at 20 mpg fuel efficiency.

2 Based on 22,700 registered vehicles.

3 Preliminary estimate based on current local SDC formula.

4 Preliminary estimate based on $375 million statewide allocation.

5 Based on estimate of 6,000 water meters in city service district in year 2005, monthly charge per meter of $4.00. Note, currently there are 5,400 meters within service area.

Source: Preliminary estimates by Otak, Inc.

DRAFT IMPLEMENTATION STRATEGY

The City of Pendleton has used a variety of means for funding transportation improvements in the past. For the past decade the City has funded its transportation improvement projects through bond measures, private development funds, LIDs, and grants and state/federal funding through ODOT's Transportation Improvement Program process. As federal state and funding sources become more competitive, the city will likely need to formalize, adopt, and implement additional local funding mechanisms.

It is recommended that the City continue to use bonding to fund a portion of needed roadway improvement costs for projects of community-wide value that are identified in the Pendleton TSP. Other forms of financing will likely need to be applied in the city, such as single or combination usage of local improvement districts, systems development charges (SDC), and utility fees. Further examination of the appropriate application and acceptability of these funding mechanisms will need to be assessed by the City of Pendleton and incorporated in the TSP.

To investigate potential funding opportunities for all projects within the city, three optional decision packages were investigated. These decision packages include varying levels of SDC funding for the following Priority 1 projects: SW 20th Street Upgrade and Extension, Westgate Upgrade (Phases I and II), SE 8th Street Bridge replacement, Southgate Place Upgrade, Barnhart Road extension, improvements associated with the Highway 11 viaduct project, and miscellaneous traffic signal installations and intersection geometric design improvements, as described in Sections 8 and 9. The decision packages are described below and summarized in Table 8-9 (refer to Appendix F for Detailed Costs).

Option A SDC to fund *25 percent* of the SW 20th Street Extension, 100 percent of the SW 20th Street Upgrade, 20 percent of the Southgate Place Upgrade, 30 percent of the Westgate Upgrade, and 100 percent of the new traffic signals, traffic signal modifications, and geometric improvements at intersections.

Option B SDC to fund *50 percent* of the SW 20th Street Extension, 100 percent of the SW 20th Street Upgrade, 20 percent of the Southgate Place Upgrade, 30 percent of the Westgate Upgrade, and 100 percent of the new traffic signals, traffic signal modifications, and geometric improvements at intersections.

Option C SDC to fund *50 percent* of the SW 20th Street Extension, 100 percent of the SW 20th Street Upgrade, 20 percent of the Southgate Place Upgrade, and *75 percent* of the new traffic signals, traffic signal modifications, and geometric improvements at intersections. Under Option C, SDC funds would not be used to pay for the Westgate Upgrade.

In Table 8-9, the costs required to construct Priority 1 street improvements and 20-year intersection improvements have been apportioned between bonds, SDC, "other" and ODOT. Each of the 3 options would result in a different dollar amount to be funded through the SDC, with different levels of charges for development within the City. Based on a preliminary review of the three options, Option C is recommended.

Recommendations

Several issues are recommended for further consideration, including:

- The projects defined as short-term, as shown in Table 8-9, will be paid for by some combination of local and state/federal funding sources. All other long-term projects will require significant participation from the city to match possible state funding;
- Oregon Department of Transportation's STIP update should include the construction of the SW 20th Street extension by year 2002;
- The SDC options should be further studied by the city, particularly the local match portion of the SW 20th Street Extension (See Example Pendleton SDC Methodology Report, Kittelson & Associates, Inc., 1996); and
- If the Pendleton CIP does not include sufficient funding for pedestrian and bicycle improvements, a utility fee or other funding source should be implemented to supplement maintenance funds and to reallocate additional funding to bicycle and pedestrian improvements.

SW 20th Street Extension

The Pendleton TSP Implementation Strategy identifies the need for the SW 20th Street Extension project by year 2002. The timing of the SW 20th Street Extension is based on balancing the anticipated state and local funding support and capacity projected in the next ten years with the region's transportation improvement priorities. This project has community-wide benefit as a traffic safety and circulation improvement. The SW 20th Street Extension project is also a capacity improvement serving future growth for the entire UGB within the next 20 years, including further development of the Louisiana-Pacific (L-P) site.

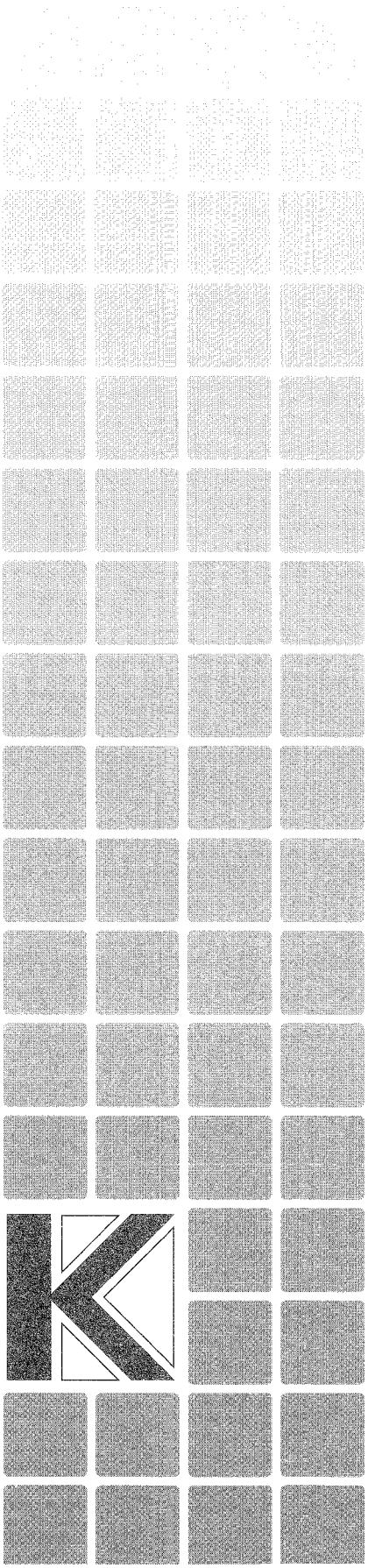
The TSP does not determine the direct nexus between anticipated growth (including further development of the L-P site) and the need for the 20th Street Extension capacity improvement. This nexus will need to be defined as part of the L-P site development planning and review process. It is possible that full development of the L-P site alone may not exceed the current street system capacity before the anticipated completion of 20th Street Extension. The Emigrant/Frazer one-way couplet extension and signalization of the Highway 395/I-84 Westbound Ramps will also extend the lifetime of the current street system capacity. These factors will need to be accounted for as part of the L-P site development planning and review process.

Table 8-9
Project Funding Options
(see Appendix F for detailed costs)

DECISION-MAKING OPTIONS	TOTAL COST	FUNDING SOURCE					FUNDING ALLOCATION				
			City of Pendleton					City of Pendleton			
		ODOT	Bonding	SDC	"Other"	New Development [2]	ODOT	Bonding	SDC	"Other"	New Development
A.											
Short-Term Street Improvements (Priority One)											
1. SW 20th Street Upgrade	$285,000			100%					$285,000		
2. Westgate Upgrade (Phase 1)	$282,000	100%					$282,000				
3. SW 20th Street Extension [3]	$4,200,000	20%-50%	30%-50%	10%-40%	10% [4]		$1,050,000	$1,680,000	$1,050,000	$420,000	
4. SE 8th Street Bridge	$655,000	100%					$655,000				
5. Southgate Place	$176,000		80%	20%				$140,800	$35,200		
6. Highway 11 Viaduct [5]	$7,557,000	100%					$7,557,000				
Long-Term Street Improvements [1]											
1. Westgate Upgrade	$3,999,000	50%	20%	30%			$1,999,500	$799,800	$1,199,700		
2. All others	$21,034,000	10%			25%	65%	$2,103,400			$5,258,500	$13,672,100
Short- and Long-Term Intersection Improvements	$1,300,000			100%					$1,300,000		
Short-Term Ped/Bike Improvements	$1,733,000	25%			75%		$433,250			$1,299,750	
Long-Term Pedestrian Improvements	$3,324,000				55%	45%				$1,828,200	$1,495,800
Subtotal	**$44,545,000**						**$14,080,150**	**$2,620,600**	**$3,869,900**	**$8,806,450**	**$15,167,900**
B.											
Short-Term Street Improvements (Priority One)											
1. SW 20th Street Upgrade	$285,000			100%					$285,000		
2. Westgate Upgrade (Phase 1)	$282,000	100%					$282,000				
3. SW 20th Street Extension [3]	$4,200,000	20%-50%	30%-50%	10%-40%	10% [4]		$630,000	$1,050,000	$2,100,000	$420,000	
4. SE 8th Street Bridge	$655,000	100%					$655,000				
5. Southgate Place	$176,000		80%	20%				$140,800	$35,200		
6. Highway 11 Viaduct [5]	$7,557,000	100%					$7,557,000				
Long-Term Street Improvements [1]											
1. Westgate Upgrade	$3,999,000	50%	20%	30%			$1,999,500	$799,800	$1,199,700		
2. All others	$21,034,000	10%			25%	65%	$2,103,400			$5,258,500	$13,672,100
Short- and Long-Term Intersection Improvements	$1,300,000			100%					$1,300,000		
Short-Term Ped/Bike Improvements	$1,733,000	25%			75%		$433,250			$1,299,750	
Long-Term Pedestrian Improvements	$3,324,000				55%	45%				$1,828,200	$1,495,800
Subtotal	**$44,545,000**						**$13,660,150**	**$1,990,600**	**$4,919,900**	**$8,806,450**	**$15,167,900**
C.											
Short-Term Street Improvements (Priority One)											
1. SW 20th Street Upgrade	$285,000			100%					$285,000		
2. Westgate Upgrade (Phase 1)	$282,000	100%					$282,000				
3. SW 20th Street Extension [3]	$4,200,000	20%-50%	30%-50%	10%-40%	10% [4]		$630,000	$1,050,000	$2,100,000	$420,000	
4. SE 8th Street Bridge	$655,000	100%					$655,000				
5. Southgate Place	$176,000		80%	20%				$140,800	$35,200		
6. Highway 11 Viaduct [5]	$7,557,000	100%					$7,557,000				
Long-Term Street Improvements [1]											
1. Westgate Upgrade	$3,999,000	50%	50%				$1,999,500	$1,999,500			
2. All others	$21,034,000	10%			25%	65%	$2,103,400			$5,258,500	$13,672,100
Short- and Long-Term Intersection Improvements	$1,300,000		25%	75%				$325,000	$975,000		
Short-Term Ped/Bike Improvements	$1,733,000	25%			75%		$433,250			$1,299,750	
Long-Term Pedestrian Improvements	$3,324,000				55%	45%				$1,828,200	$1,495,800
Subtotal	**$44,545,000**						**$13,660,150**	**$3,515,300**	**$3,395,200**	**$8,806,450**	**$15,167,900**

[1] For the purposes of including all "capacity" related improvement projects to compare and contrast possible SDC funding options, the long-term Westgate Upgrade project was included in the decision-making options.
[2] Street improvements that are expected to be constructed as new development occurs.
[3] Cost allocation will vary based on availability of funding and final project consideration -allocation assumptions assume mid-point costs.
[4] Other sources could include private rail carrier contribution.
[5] Highway 11 Viaduct project included in State Transportation Improvement Program (STIP).

Source: Kittelson & Associates, Inc.



Section 9

Transportation System Plan

Transportation System Plan

INTRODUCTION

The findings of the alternatives analysis were presented at a Public Open House and at meetings with the Management Team and Advisory Committee. Substantial consideration was given to the advantages and disadvantages offered by each alternative as well as the feasibility of implementation. On the basis of the alternatives evaluation (summarized in Section 6) and the funding study (summarized in Section 8), a series of recommendations were selected as the Preferred Alternative and forwarded as the individual elements of the Transportation System Plan. This section identifies and prioritizes the projects associated with each element of the plan and provides an overall implementation plan. The following elements are included in the preferred alternative:

- land use strategies;
- pedestrian plan;
- bicycle plan;
- public transportation plan;
- rail plan;
- air plan;
- water plan;
- pipeline plan; and
- street plan.

Recommended land use and transportation policies that can assist the City of Pendleton in implementing the preferred alternative are presented in Section 10.

LAND USE STRATEGIES

The evaluation of the transportation-efficient land use alternative (Section 6) was undertaken to investigate the causal relationships and impacts between land use, transportation system management (TSM), transportation demand management (TDM), alternative mode use and roadway improvement needs in Pendleton. While this land use evaluation exercise undertaken by the City of Pendleton exceeds the requirements of the TPR, a number of policy and project recommendations are a direct result of the added study. These policy and project recommendations are embodied in the TSP.

Transportation-efficient land use strategies should be implemented that include the provision of neighborhood commercial opportunities, especially in the Southgate area. The fundamental objective of these strategies is to develop a pattern of land uses that will enhance community orientation and provide the greatest potential for local non-auto activity by residents and workers. The implementation of these strategies may also provide relief to the constrained U.S. 395/Interstate 84 interchange ramp termini intersections.

More specifically, the analysis of the transportation-efficient land use alternative indicates that SW 37th Street (Phases II and III) roadway extension projects outside the UGB can be deferred beyond the 20-year planning horizon.

PEDESTRIAN PLAN

Sidewalk improvements were identified as part of the future transportation network for Pendleton that establish a continuous system throughout the urban area and provide opportunities for non-auto trip making. The provision of safe and convenient travel for pedestrians is an essential element in the creation of vibrant neighborhoods, commercial areas, and the downtown.

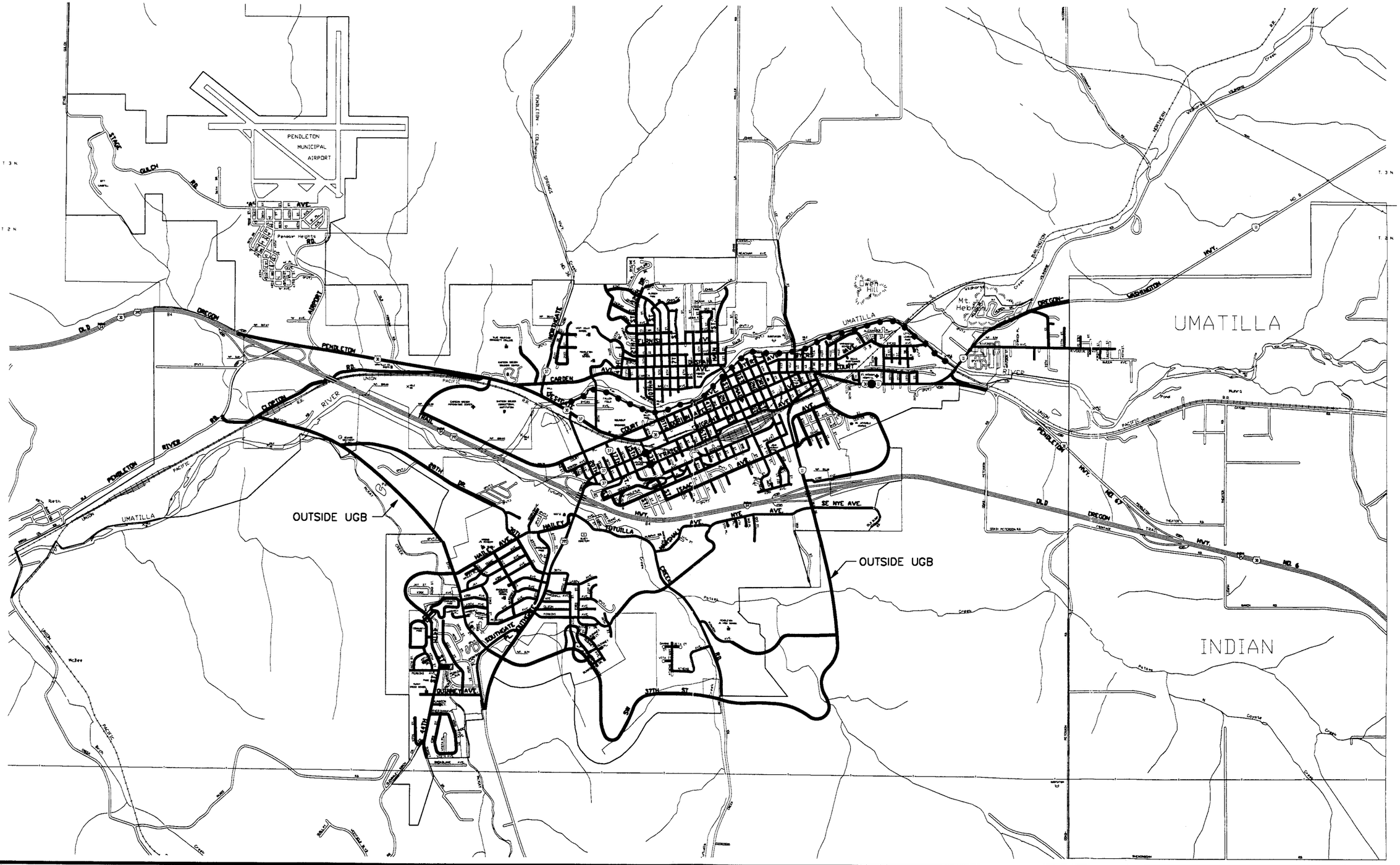
Figure 9-1 presents the recommended pedestrian plan for the City of Pendleton. The plan includes specific recommendations for the continued development of the River Parkway and the establishment of a continuous sidewalk system that connects all existing and proposed future pedestrian generators, such as schools, parks, the downtown, neighborhood commercial areas, the library, etc.

The improvement of the existing system should be focused on the provision of sidewalk connectivity in the area to the west of U.S. 395 and south of Interstate 84. Today, this area is primarily developed as single-family homes; many of the minor streets in these neighborhoods do not include sidewalks. Specific emphasis should be placed on the provision of sidewalks on all of the streets in this neighborhood to provide safe and convenient connections to the community park and the three schools and to the commercial areas along U.S. 395.

Improvements to the existing system are also necessary in the south hill neighborhood, directly to the south of downtown as well as the neighborhoods along Riverside Avenue. Although connections are provided between the neighborhoods and the downtown, little or no connectivity is provided within the neighborhoods.

Future improvements are necessary to provide connections to all new residential and commercial developments and to continue the development of the River Parkway, a pedestrian and bicycle path along the Umatilla River. This can be accomplished by the provision of internal pedestrian connections within the new developments as well as the provision of connections to the existing pedestrian system. Specific emphasis should also be placed on the provision of pedestrian connections within the future Pendleton Retail Center (a proposed mixed use development at the southwest end of downtown) as well as to the downtown and to the River Parkway.

Current design standards for the City of Pendleton require minimum sidewalk widths of 5' along arterial streets and 4' along collector and minor streets. In addition, the Oregon Bicycle and Pedestrian Plan (ODOT 1995) recommends a minimum 6 foot sidewalk regardless of street size and functional classification. However, a thorough discussion on sidewalk widths was conducted with City Staff, the Management Team, and the Transportation Advisory Committee. It was the unanimous recommendation that a 5 foot sidewalk be the standard for city streets. Hence, the current standards should be modified to reflect a minimum width of 5' along all roadways in order to provide a safe pedestrian environment within the city. This revised city standard is consistent with the requirements of the American's with Disabilities Act (ADA).



LEGEND

- PEDESTRIAN FACILITIES
- RIVER PARKWAY
- PEDESTRIAN SIGNALS
- FOOTBRIDGE
- STAIRWAYS

CITY OF PENDLETON
TRANSPORTATION SYSTEM PLAN

RECOMMENDED PEDESTRIAN PLAN

FIGURE 9-1

OCTOBER 1996

1567SID2

Planning level costs estimates, as discussed in Section 8, were prepared for projects that are necessary for the provision of sidewalks on both sides of existing collector and arterial streets and the provision of a continuous sidewalk system in the downtown. The provision of sidewalks along future collector and arterial streets is included in the cost of the roadway projects. The total cost of improvements to the existing pedestrian system is estimated at $4,437,000 which includes the new 18th Street-Umatilla River pedestrican/bicycle bridge.

BICYCLE PLAN

The Transportation Planning Rule requires local bicycle and pedestrian plans to comply with the Oregon Transportation Plan. In 1981, the City of Pendleton completed its Bicycle System Master Plan, a program that provides the blue print for development of the city's bikeway system. The following purposes are identified in the bicycle plan. While these purposes predate the Oregon Transportation Plan, they are nonetheless consistent with the OTP:

- To assure that future improvements in Pendleton's road system provide space for bicycles where needed;
- To identify low cost improvements for bicycling on existing streets and off-street routes;
- To suggest ways to meet bicyclists' needs for safe and secure parking; and
- To develop a safety education program.

The Pendleton Transportation System Plan embodies the recommendations of the Bicycle Master Plan, which includes the arterial and collector street projects shown in Figure 9-2. These recommendations include the provision of on-street bicycle lanes and mixed traffic routes identified to provide connections between major bicycle generators (i.e., schools, parks, commercial centers, the downtown, etc.) and residential areas. The bicycle plan recommendations also include the continued development of the River Parkway, an off-street recreational pedestrian and bicycle path.

In the short-term, special emphasis should be placed on the continuation of a bicycle lane on Emigrant to the east of SW 6th, the provision of a bicycle lane on Court Place to the east of SE 10th Street, and the provision of bicycle lanes on Highway 11.

PUBLIC TRANSPORTATION PLAN

The following transit strategies should be implemented to address the needs of the transportation-disadvantaged (i.e., the elderly, disabled, children, and those who do not own or have access to a car) and provide an added level of service to the general public while remaining within the constraints of reasonable funding and resources.

Demand-Responsive Transit

Currently, demand-responsive transit services in Pendleton are provided by Elite Taxi. These services are provided through a voucher system as door-to-door operations for the transportation-disadvantaged. Dial-a-ride service, funded via a demonstration grant from the state through the Transportation Assistance Program (TAP), was discontinued in June 1995 when no additional funding was identified to sustain the services. The City of Pendleton should apply

to ODOT for Community Transportation Grants to secure funding for new vans and operations assistance to provide dial-a-ride service to the Pendleton area. The continuation of the subsidized taxi services currently by Elite Taxi is also recommended until such time when dial-a ride van service can be provided. Additionally, it is recommended that a clear information dissemination effort be made by the city and the county to ensure that all potential users of the programs are aware of their options and to prevent redundancy in the system.

It is also recommended that the city coordinate with Umatilla County to evaluate the need for further service and develop a service plan to meet future needs.

Fixed-Route Local Service

In 1981, the city adopted the Public Transportation Development Plan (STRAAM Engineering) which recommended the integration of a fixed-route system with 40-minute headways (20 minutes during peak hours), a private taxi service, and a dial-a-ride program. However, the implementation of the plan was postponed because population and economic conditions did not warrant the need for a fixed-route system, and to provide time for the new taxi service to get established. Currently, the city still has not implemented the fixed-route system.

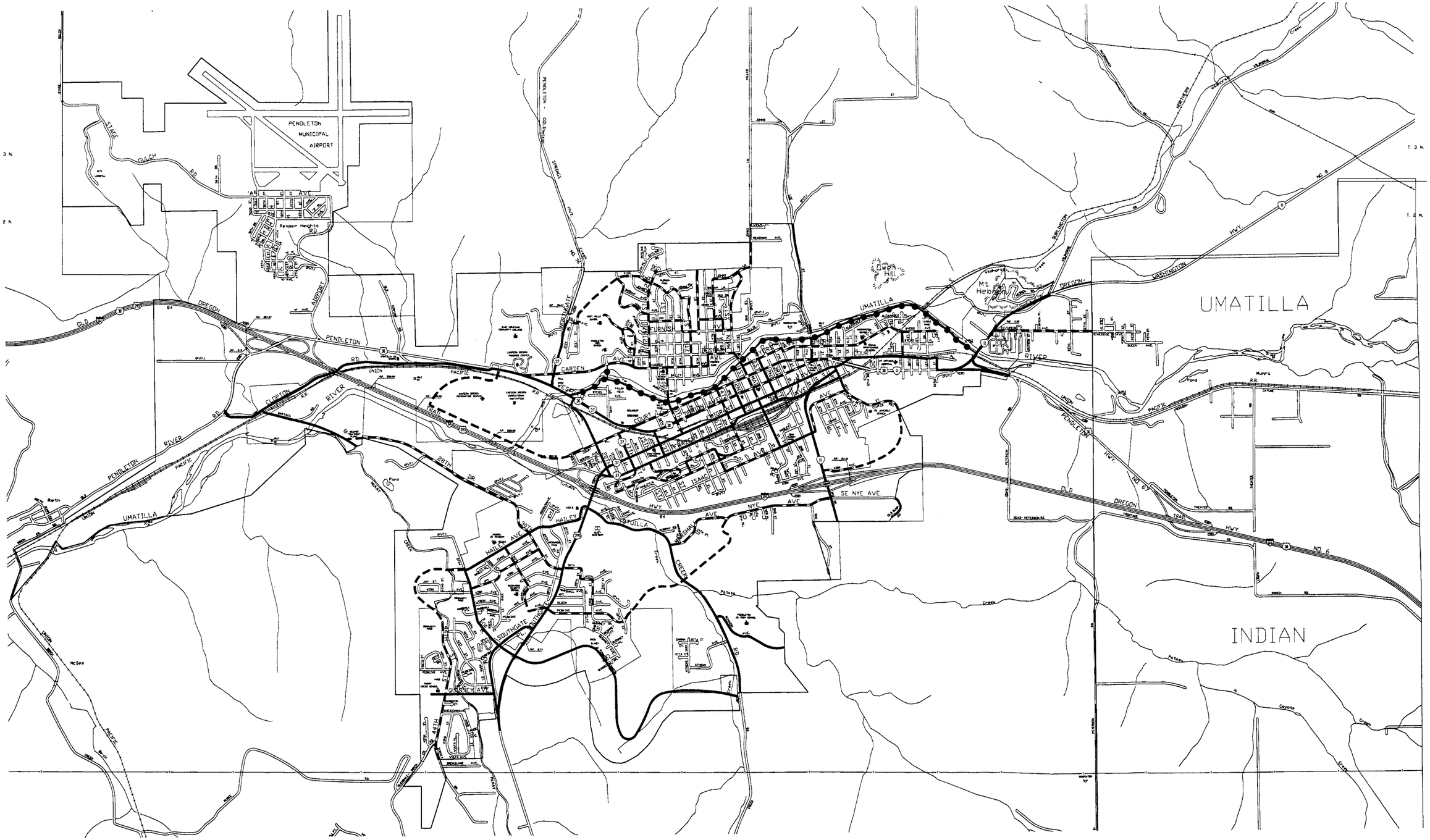
A population of 19,500 (2015 Comprehensive Plan projected population) would generally be considered too small to justify a fixed-route transit system. However, the City of Woodburn currently operates a single route service for a population of approximately 15,000 and has plans to expand service in the future. The success of such a service hinges on the population density of the service area and economic and demographic characteristics of the market. Transit riders generally come from lower income residents and those under 16 and over 60 years of age. Additionally, it is acknowledged that the role of transit in a small urban area is primarily a policy issue and is not likely to be economically self sustaining. While under many circumstances a local transit service may not be considered for communities such as Pendleton, in light of the increased urban densities and transportation-efficient development concepts addressed in the alternatives analysis, the city needs to continue to evaluate the need for fixed-route transit service during the next twenty years.

Recommendations

Should Pendleton embark on a more aggressive policy and action to endorse a greater role for public transportation within the City the following steps should be taken:

1. Provide for a greater coordination of senior and disabled transportation services (may even include coordination with Umatilla County-wide services).

2. Apply to the State of Oregon (ODOT) Community Transportation Grant Program (CTGP) to provide demand-response service and service expansion to add general public ridership. This program provides grant funding assistance for the purchase of capital equipment and annual operations and can be treated as seed money to leverage other funding sources. This measure should be taken to enhance demand-responsive transportation regardless of the City's intent to add general public services (like fixed-route bus transit).



LEGEND

- ON-STREET BIKE LANES
- MIXED TRAFFIC
- BIKE PATH

CITY OF PENDLETON
TRANSPORTATION SYSTEM PLAN

RECOMMENDED BICYCLE PLAN

FIGURE 9-2

OCTOBER 1996

1567BIK2

3. As service increases the City of Pendleton may vote on and approve some form of local funding source (like a property tax levy) to provide local funding support for demand-responsive and general public transit operations in addition to fare box revenues.

4. With an established local funding resource Pendleton could form a local transit district under Oregon law. This transit district would qualify Pendleton for in-lieu mass transit tax funds which are based on the local State employee payroll (which may be significant). This resource can provide additional revenues for transit operations.

5. The city currently receives $9,000 from the Federal Small City and Rural transportation fund. We understand that it is no longer called Section 18, but do not know what the new terminology is. We use these funds to help with the subsidized taxi ticket program. We have to apply for these funds annually and there is no guarantee that this level of funding will continue to be available.

6. The city received about $30,000 in Special Transportation (STF) funds from the cigarette tax in the current fiscal year. These funds have been used for the subsidized taxi ticket program. We apply to the country annually for funding. The funding availability changes as society increases or decreases the consumption of cigarettes.

   The city has obtained an Oil Overcharge Settlement Grant. We are in the second year of a three year, $30,000 grant from this program, which funds the operation and maintenance of the van that transports senior citizens to and from the Pendleton Senior Center and to other locations. There were only two funding cycles for this program, so long term funding is not available.

   The city has applied for a CT (Community Transportation Grant) from ODOT. We are on the region ODOT list for a new handicapped accessible van to be funded in 1999. This van will be owned by the city and operated by the taxi provider.

These measures will need to be implemented through coordination with ODOT, particularly with respect to the Community Transportation Grant Program which requires a fairly stringent grant application time frame. The next application process will begin in 1998. In all, the nature of providing public transportation services in a small city like Pendleton is an onerous responsibility. The City should coordinate with both Umatilla County and ODOT in the establishment of any new or expanded public transportation services during the development and the consideration of Umatilla Country's Transportation System Plan.

Long Distance and Intercity Transit

The service provided by Greyhound is regarded as a benefit to the community and should be supported by the City. Care should also be taken to ensure adequate connections between the intercity bus services, Amtrak, and the airport.

RAIL PLAN

Today, Pendleton is served directly by the Union Pacific Railroad, a Class I line-haul freight railroad, with connections to Portland and Boise. Currently, passenger rail service is provided

by the Amtrak Pioneer Line every other day, with connections between Seattle and Chicago via Portland and Denver.

The Pendleton Transportation System Plan recognizes the increasing usage and importance of rail travel in the future and encourages the continued use of the existing facilities for freight service. The Pendleton City Council recently formed a committee to focus on Amtrak and UPRR issues. Through this committee, the city, ODOT, Amtrak, and other Oregon communities should work together to define and secure high quality passenger service through Pendleton in the corridor currently served by Amtrak's Pioneer Line. This service could include enhanced bus, rail and air passenger service, or any combination therof.

In addition, Union Pacific estimates that currently approximately 36 trains a day pass through Pendleton; this number is expected to increase to 53 trains per day by 1997. Currently, there are twelve public at-grade railroad crossings in the Pendleton urban area, two viaducts (Highway 11 and US 30), and one undercrossing (Highway 11). In 1977, the number of public railroad crossings in the City of Pendleton was reduced from sixteen. To minimize the potential for delays experienced by autos, emergency vehicles, pedestrians, and bicyclists in the downtown caused by the increase in rail activity, SW 20th Street should be extended to Westgate with an undercrossing of the rail tracks.

AIR PLAN

Today, commuter air service is provided at the Eastern Oregon Regional Airport by Horizon Airlines with service between Pendleton, Portland, and Seattle. The airfield is also home to 60 locally owned fixed-wing aircraft, 4 rotor, and 8 CH-47 Chinook helicopters with the Oregon Army Air Guard. The air plan for the TSP recognizes the increasing usage and importance of air travel in the future and encourages the implementation of the recommendations from the Airport Master Plan (currently being updated by Bucher, Willis, and Ratliff).

PIPELINE PLAN

Currently, pipeline transportation in and throughout Pendleton includes transmission lines for electricity, cable television and telephone services, as well as pipeline transport of water, sanitary sewer, and a major north-south transmission line for natural gas.

The city also operates an infrastructure that provides links for electronic communication via telecommuting and satellite communications. The next century promises to be one in which information access will help define continued success and economic vitality. Such access is not only important to the continued economic vitality of the region, but it can also have a significant effect on transportation, air quality, and infrastructure investment decisions that will need to be made by the community. The City of Pendleton should continue to enhance the electronic communication opportunities afforded to its citizens and businesses; these opportunities relate to the overall quality of life that can be provided, the potential for an improved and more diversified economic base, and enhanced health and education-related benefits.

WATER PLAN

Although the Umatilla River flows through Pendleton, the river is generally too shallow to allow for effective water transportation. Water transportation is limited to recreational use of

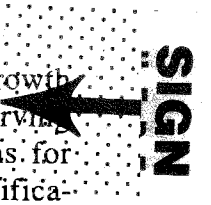
the river. The water plan for the TSP encourages the continued use of the Ports of Umatilla and Portland.

STREET PLAN

The recommended street plan, illustrated in Figure 9-3, identifies arterial and collector street improvements that are necessary to safely and efficiently accommodate future vehicular travel in the Pendleton urban area. This plan is a mixture of the alternatives presented in Section 6 and includes the continued usage and improvement of the existing system as well as future projects needed to accommodate future growth in the urban area. Improvements to the existing system are identified as serving capacity or local circulation needs; future roadway projects are identified as serving capacity, local circulation or future development needs. The street system has been developed to utilize and enhance existing facilities wherever possible, promote the full development of the TDM land use concept, and attain a balance among all travel modes. The identified improvements and planning level cost estimates are described below.

In addition, as described in Section 6, the downtown circulation patterns were examined to assess the adequacy of the one-way traffic operations along Court, Dorion, Emigrant, and Frazer Avenues. On the basis of this analysis and ensuing discussions, the Advisory Committee and Management Team recommended the continuation of the one-way street system in the downtown.

New Roadways



The following describes the future roadway projects that are necessary to serve future growth in the urban area. These improvements, illustrated in Figure 9-4, are described as serving capacity, local circulation, or future development needs and include recommendations for associated travel lanes, bicycle and pedestrian facilities, and appropriate functional classification. Detailed engineering analyses will be required to determine specific environmental impacts, vertical and horizontal alignment, and final construction costs when Pendleton begins the planning and design of each facility. Additional studies, beyond the Transportation System Plan, will need to be conducted to determine the need for all new roadways identified outside of the UGB, such as phases II and III of the SW 37th Street extension.

Arterials

New arterial street projects are described below. Parking should be prohibited on all new arterials in the Pendleton urban area. Suggested access control measures for new arterials are discussed in Section 10.

SW 20th Street Extension

SW 20th Street should be extended as a 5-lane arterial street from its current terminus to Westgate. As discussed in the *SW 20th Street Rail Crossing Study* (Otak and Kittelson & Associates, Inc., 1996), this improvement should be constructed with the provision of sidewalks and bike lanes and the prohibition of parking. This extension requires an additional crossing of the Union Pacific; to limit the delay experienced by motorists, emergency vehicles, bicyclists, and pedestrians in the downtown, a

grade-separated crossing should be constructed. Planning level costs for the SW 20th Street extension are estimated at $4,200,000.

The extension of SW 20th Street will address existing and future capacity and circulation needs by providing additional access to the downtown from the west and thereby relieving the Westgate/Court/Dorion intersection.

Additionally, it is also recommended that the routing of Highway 37, south of the Westgate/Northgate intersection SW 20th Street, should be redesignated to SW 20th Street as it provides a more direct route to the U.S. 395/Interstate 84 interchange.

SW 37th Street Extension - Phase I

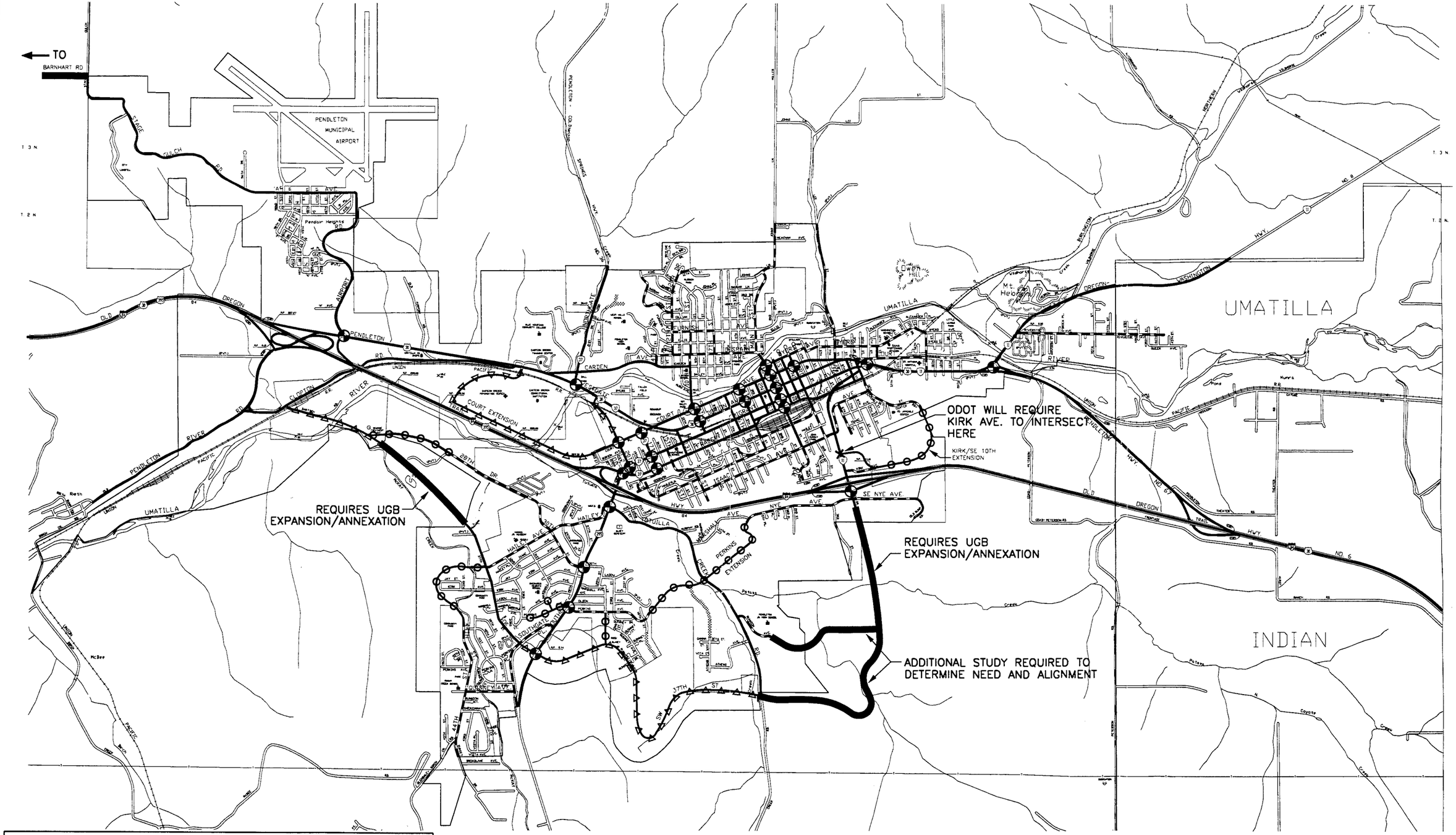
To accommodate future development in the southwest, SW 37th Street should be extended as a 3-lane arterial from its current terminus north of Hailey Avenue to Bartsch Road. A portion of SW 37th Street is outside the UGB and should be completed following UGB expansion. Phase I will provide continuous connection between 28th Drive and Bartsch Road. Sidewalks and bike lanes should be included and parking should be prohibited. The extension of SW 37th Street will also require a new crossing of the Umatilla River. Planning level costs associated with the extension are estimated at $3,287,000.

Since the extension of SW 37th Street provides an alternative route to the airport and to Interstate 84 from the southwest, the extension may also serve as a future alternative to travel on U.S. 395 and may specifically provide relief to the U.S. 395/Interstate 84 interchange.

Court Place Extension/Industrial Park Arterial

Court Place should be extended to the proposed Industrial Park Arterial to provide an additional connection to U.S. 30. This extension and the Industrial Park arterial should be constructed as a 3-lane arterial with sidewalks and bike lanes and the prohibition of parking and will require an additional crossing of the Umatilla River and the Union Pacific Railroad.

The Court Place extension and Industrial Park Arterial will serve future development needs and will provide an additional access into the downtown from the industrial area to the west and the airport. Planning level costs associated with the two projects are estimated at $5,375,000. This project, because of its expense, should be studied further to determine the full benefit and cost. At such time this project may be defered beyond year 2015.



LEGEND

- ARTERIALS
- COLLECTORS
- PROPOSED ARTERIALS
- PROPOSED COLLECTORS
- POSSIBLE FUTURE ARTERIALS/CORRIDOR PRESERVATION
- TRAFFIC SIGNALS
- RECENTLY COMPLETED LOCAL STREETS

CITY OF PENDLETON
TRANSPORTATION SYSTEM PLAN

RECOMMENDED STREET PLAN

FIGURE 9-3

OCTOBER 1996

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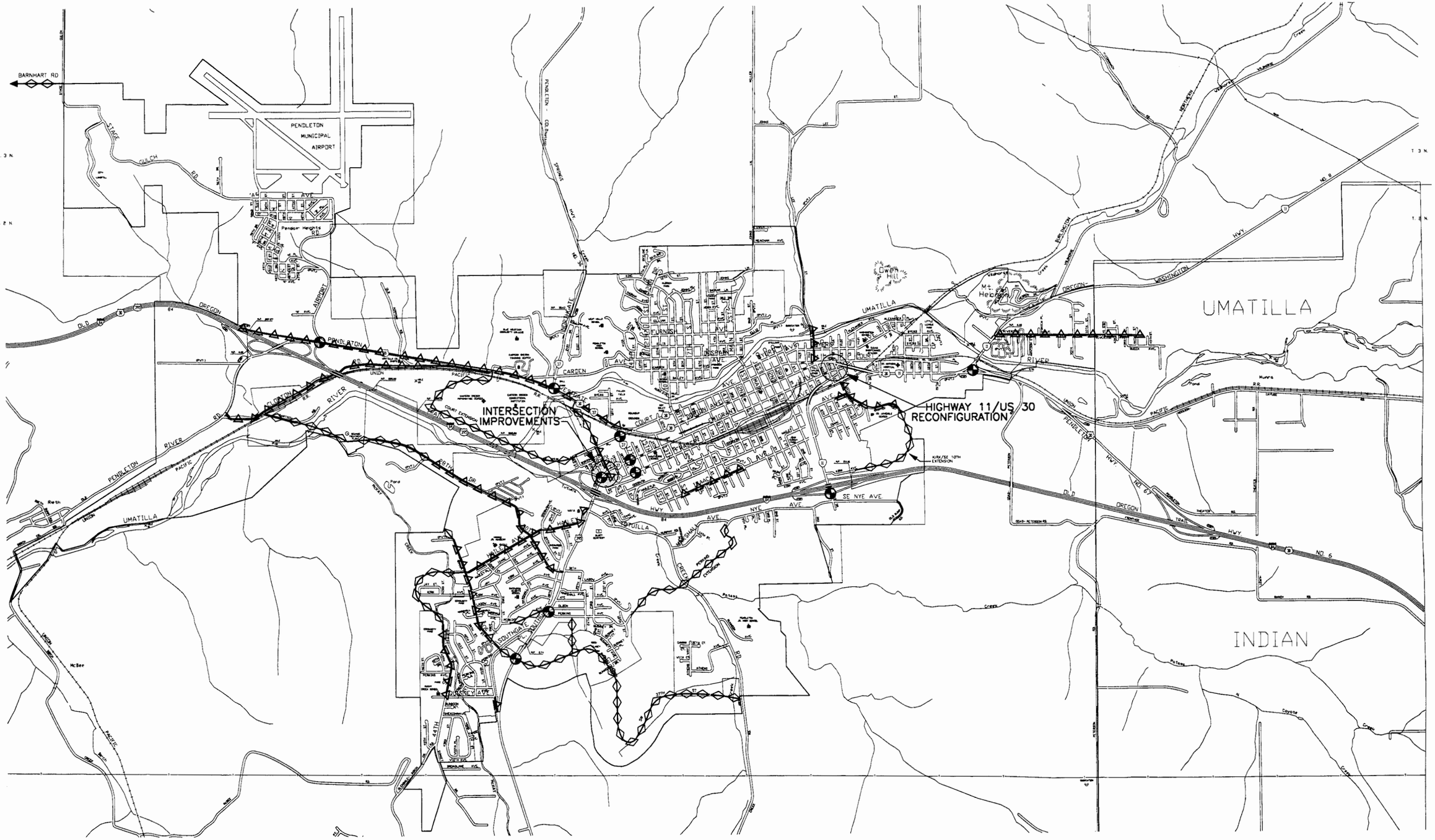


LEGEND

- NEW ROADWAYS
- ROADWAY UPGRADES
- NEW TRAFFIC SIGNALS

CITY OF PENDLETON
TRANSPORTATION SYSTEM PLAN

FUTURE ROADWAY PROJECTS

FIGURE 9-4

OCTOBER 1996

1567FNC2

Collectors

New collector street projects are described below. Parking should be prohibited on all new collector streets in the urban area.

Perkins Avenue Extension

Perkins Avenue should be extended in two phases. The first phase will address existing circulation needs and will provide a connection between the southeast and southwest neighborhoods. This phase should include the extension of Perkins Avenue between SW 33rd Street and U.S. 395. The second phase will accommodate future development needs and will address local circulation issues in the southeast neighborhoods. The second phase should be constructed from the current terminus of Perkins Avenue to Nye Avenue. Both phases will provide circulation alternatives to travel on U.S. 395.

Both phases of the Perkins Avenue extension should be constructed as a 3-lane collector street with sidewalks on both sides. Planning level costs associated with Phase I of the Perkins Avenue extension are estimated at $502,000 planning level costs for Phase II are estimated at $2,282,000.

SW 28th Drive Extension

SW 28th Drive should be extended as a two-lane collector street with sidewalks from its current terminus to the proposed extension of SW 37th Street. The extension of SW 28th Drive, estimated at $594,000, will serve future circulation needs and will serve as an alternative to U.S. 395.

Hailey Avenue Extension

To address future circulation needs in the southwest neighborhoods, SW Hailey Avenue should be extended from its current terminus at SW 37th Street to SW 44th Street. This extension should be constructed as a 2-lane collector street with sidewalks on both sides. Planning level costs associated with this extension and a new bridge are estimated at $1,803,000.

SE Kirk Avenue Extension

To accommodate future circulation needs, SE Kirk Avenue should be extended from Highway 11 to SE 10th Street. ODOT will require re-alignment of the SE Kirk Avenue connection to Highway 11 approximately 200 feet north of the current intersection. This extension should be constructed as a 2-lane collector with sidewalks and should be designated as a bicycle route. Planning level costs associated with this extension are estimated at $1,121,000.

SE Nye Avenue Extension

To accommodate future development needs, SE Nye Avenue should be extended from its current terminus to the UGB. This extension should be constructed as a 3-lane collector with sidewalks. Planning level costs associated with this extension are estimated at $521,000.

Improvements to Existing Roadways

The following improvements to the existing roadway system are recommended to accommodate capacity and circulation needs. In many instances, the improvements are warranted by the need to provide pedestrian and bicycle facilities on the roadway.

Arterials

The following identifies improvements to the existing arterial street system.

SW 20th Street Upgrade

Concurrently with the SW 20th Street extension project, SW 20th Street should be widened to five-lanes between Emigrant Avenue and Court Place. This widening should include the provision of bicycle lanes and sidewalks and the prohibition of parking.

The upgrade of SW 20th Street, estimated at $285,000, will serve future capacity and circulation needs in southwest downtown.

Westgate Upgrade

In the short-term, Westgate should be upgraded to a 3-lane arterial street with sidewalks and on-street bicycle lanes. Parking should be prohibited along Westgate. In the long-term Westgate should be widened to a 5-lane facility with sidewalks and bicycle lanes.

These improvements will warrant the need to widen the existing bridge over the Umatilla River. The upgrade of Westgate, estimated at $282,000 for the 3-lane upgrade and $4,000,000 for the 5-lane upgrade, will serve future roadway capacity needs and future bicycle and pedestrian circulation needs.

Clopton Road

Clopton Road should be upgraded to a 3-lane arterial with sidewalks and on-street bicycle lanes. This upgrade, identified to serve future circulation needs, is estimated at $1,628,000.

Collectors

Improvements to the existing collector street system are identified below.

SE 8th Street Bridge

The Oregon Department of Transportation has prioritized the SE 8th Street bridge to be replaced during the 1997-1998 fiscal year. The bridge will be constructed to 2-lane collector standards with sidewalks and will be posted as a bicycle route. The bridge replacement, estimated at $655,000, will serve future circulation and safety needs.

SW 44th Street Upgrade

To address existing circulation needs in the southwest neighborhoods, SW 44th Street should be upgraded as a 2-lane collector street with sidewalks. As part of this upgrade, SW 44th Street should be designated as a bicycle route. Planning level costs associated with this upgrade are estimated at $530,000.

Hailey Avenue Upgrade

To address existing circulation needs in the southwest neighborhoods, SW Hailey Avenue should be upgraded as a 3-lane collector from SW 37th Street to SW 29th Street. This extension should be constructed with sidewalks and should be designated as a bicycle route. Planning level costs associated with this upgrade are estimated at $361,000.

SW 28th Drive and SW 30th Street Upgrades

Another improvement needed to address existing circulation needs in the southwest neighborhoods is the upgrade of SW 28th Drive and SW 30th Street. These upgrades should be constructed as 2-lane collector streets with the provision of sidewalks and should be designated as bicycle routes. Planning level costs associated with this upgrade are estimated at $752,000.

SE Goodwin Avenue Upgrade

SE Goodwin Avenue should be upgraded as a 2-lane collector street with sidewalks from SE 8th to SE 10th. This upgrade, estimated to cost $150,000, will serve existing and future circulation needs.

SE 10th Street Upgrade

SE 10th Street should be upgraded to 2-lane collector standards with sidewalks from Frazer Avenue to its current terminus and should be designated as a bicycle route. Planning level costs associated with this upgrade are estimated at $681,000.

The SE 10th Street upgrade will serve existing and future circulation needs and will provide an improved connection into the downtown from the adjacent neighborhoods.

Riverside Avenue Upgrade

To accommodate existing and future circulation needs, Riverside Avenue should be upgraded as a 2-lane collector street with sidewalks. The designation of Riverside Avenue as a bicycle route should also be made in conjunction with this upgrade. Planning level costs associated with this upgrade are estimated at $1,073,000.

Southgate Place

Southgate Place, south of Quinney Avenue, should be upgraded to a 2-lane collector facility with sidewalks and bicycle lanes. This improvement will address existing safety and capacity needs. Planning level costs associated with this upgrade are estimated at $176,000.

SW Isaac Upgrade

SW Isaac should be upgraded between SW 6th and SW 13th to address existing and future bicycle and pedestrian circulation needs. Planning level costs associated with this upgrade are estimated at $374,000.

Corridor Preservation and Coordination

The analysis of transportation and land use alternatives identified a number of roadway connections and corridors that will be needed beyond the twenty-year planning horizon. These projects are listed below.

SW 37th Street - Phases II and III

The remainder of the SW 37th Street extension, a proposed 3-lane roadway, should be constructed in phases: from Southgate Place to Tutuilla Creek Road, and from Tutuilla Creek Road to Nye Avenue. Sidewalks and bicycle lanes should be included and parking should be prohibited in both phases. The second phase will require a crossing of Tutuilla Creek; the third phase will require a crossing of Patawa Creek. Planning level costs were not estimated for this project.

Like the first phase of the SW 37th Street extension, the second and third phases will serve as alternative to U.S. 395 and may provide future relief to the U.S. 395/Interstate 84 interchange. SW 37th Street will also serve as a better connection between the southwest and southeast neighborhoods.

Barnhart Road Extension

The extension of a truck route from "A" Avenue to Barnhart Road just north of the I-84 Barnhart Road interchange, approximately 5 miles to the west of Pendleton, has been identified by the city as an improvement related to the economic vitality and continued development of the industrial lands surrounding the airport. The current design of the U.S. 30/Interstate 84 interchange and the grade of Interstate 84 and Airport Road make it difficult for trucks to access the industrial lands surrounding

the airport, especially during inclement weather. The steepness of the grade on Interstate 84 and Airport Road also make it costly for loaded trucks to access the area. While this improvement is outside of the urban growth boundary, the recommended street plan recognizes the extension as *a* needed economic improvement for the city and a long-term roadway project essential to the transportation growth of the area. Planning level costs associated with Barnhart Road are estimated at $2,500,000.

SW Runnion Avenue Extension

SW Runnion Avenue should be extended as a 2-lane collector street from its current terminus at Sunridge Middle School to the proposed SW 37th Street extension. The provision of sidewalks should be included in this project. SW Runnion Avenue should also be designated as a bicycle route. Most of this project is outside the UGB. Planning level costs associated with this extension are estimated at $1,571,000.

Intersection Improvements

Collector and arterial street improvements were identified as part of the street plan to address local and regional circulation needs and regional capacity needs. Intersection improvements have been identified as part of the TSP to address specific capacity needs, both today and in the future. These intersection improvements have been identified as required geometric improvements and new traffic signal installations and are described below.

Geometric Modifications

Several improvements were identified that require modifications to the geometric design of existing intersections. These improvements are described below.

Modification of the Court Place Rail Crossing

To provide relief to the Westgate/Court/Dorion intersection, travel between Westgate and Court Place should be prohibited. All other movements at this intersection will be maintained. Since the SW 20th Street extension provides an alternative route into the downtown from the west, this intersection improvement can be implemented to increase the capacity of the intersection. This improvement will require channelization improvements along Court Place to omit the left-turn lane and along Westgate to omit the right-turn lane. Planning level costs were not estimated for this improvement.

Surface Street Improvements along U.S. 395, Emigrant, and Frazer

To address existing capacity deficiencies in the vicinity of the U.S. 395/Interstate 84 interchange, the U.S. 395/Interstate 84 westbound ramp termini, the Frazer/SW 20th Street, and the Emigrant/SW 20th Street intersections should be reconfigured. These modifications will result in one-way traffic operations on Emigrant Avenue and on SW 20th south of Emigrant. The proposed intersection modifications and subsequent rerouting of traffic are illustrated in Figure 6-9.

As shown in the figure, the intersection modifications and rerouting of traffic would reduce the number of conflicting vehicles at the ramp termini intersection.

This improvement should be made in conjunction with the signalization of the U.S. 395/Interstate 84 westbound ramp termini. Additionally, coordination should be implemented between the traffic signals at SW 20th/Emigrant, U.S. 395/Interstate 84 westbound ramp termini, and Hailey Avenue/Tutuilla Creek/U.S. 395 intersections. This coordination will provide for improved traffic flows through this corridor and may provide sufficient gaps in the traffic on U.S. 395 that will enable vehicles on the Interstate 84 eastbound ramp to enter the major traffic flow in a safe and efficient manner.

These improvements and associated signing and roadway striping improvements are estimated at $250,000.

Modification of the Highway 11/Court Avenue/SE 10th Intersection

The reconfiguration of the Highway 11/Court Avenue/SE 10th intersection and associated roadway improvements were detailed in the *10th Street - Eastgate Pendleton Highway Environmental Assessment* (Anderson Perry & Associates, Inc., 1994). These improvements will serve existing capacity, safety, and circulation needs. Planning level costs associated with these improvements are estimated at $7,557,000.

Traffic Signal Improvements

Several intersections were identified that will likely require the installation of a traffic signal as traffic volumes increase. These intersections should be monitored to determine when growth will warrant the need for the signal. The estimated cost for these traffic signals is $150,000 each for a total of $1,500,000 for ten new signals. These locations include:

- Court Place/SW 17th Street;
- Perkins/U.S. 395;
- SW 37th Street/U.S. 395;
- U.S. 395/I-84 westbound;
- Emigrant Avenue/SW 17th Street;
- Frazer Avenue/SW 17th Street;
- Highway 11/U.S. 30;
- Highway 11/Interstate 84 Eastbound;
- U.S. 30/Airport Road; and
- Westgate/Northgate.

Installation of traffic signals at the Perkins and SW 37th Street intersections with U.S. 395 will warrant the need for the removal of the existing traffic signal at the Southgate Place/U.S. 395 intersection, and the removal of pedestrian signal at Nye.

Several intersections will likely require the traffic signal modifications to accommodate identified intersection and/or roadway improvements, including:

- Court Place/SW 20th Street; and
- Emigrant/SW 20th Street.

The total costs of the traffic signal modifications are included in the roadway projects.

Signal Systems Management

In addition to the identified roadway, pedestrian, bicycle, and intersection improvements, another strategy that can be implemented to improve the efficiency of the transportation system is the implementation of a signal systems management program.

Traffic signals are an important part of the transportation system, affecting both the capacity and the level of service the system is able to offer to all modes of travel. Currently, the Pendleton area is served by 15 signalized intersections (see Figure 3-5).

Just as individual road segments must be planned, designed, operated, and maintained within the context of an overall transportation system, the same system-wide perspective should be applied to the traffic signals that serve the Pendleton area. Significant capacity and level-of-service benefits can be obtained through the planning, design, operation, and maintenance of the traffic signal system, as discussed below.

Planning. No new traffic signal should be installed without first evaluating likely upstream and downstream effects. Signals in proximity to one another can have a significant adverse or positive effect on the capacity and quality of service provided by the entire roadway, depending on the particular situation. To determine these effects, area transportation authorities should require an analysis of installation warrants as well as a quantitative analysis of the effects of such an installation on overall progression characteristics.

Design. When new traffic signals are installed, they should be interconnected with all adjacent traffic signals as soon as possible. Hard wire probably will be the most desirable form of interconnect in the majority of installations, but this may change over time and should be evaluated separately at each proposed installation. With the possible exception of the Court/Dorion couplet, all new and upgraded signalized intersections should be equipped with an eight-phase controller capable of operating in a fully-actuated mode; this will provide system operators with maximum flexibility to adapt operations at each intersection to changing traffic circulation patterns.

Operation. Transportation authorities should be aggressive in testing and implementing innovative signal timing and operating strategies as appropriate, and also in implementing coordinated arterial signal systems (Court, Dorion, and U.S. 395 are all prime candidates for such treatment). Additionally, signal timing and phasing parameters should be reviewed regularly (at least every three to five years) at each signalized intersection. Multiple timing plans should be developed to accommodate, at a minimum, weekday peak hour, weekday off-peak, and weekend traffic flow conditions. Consideration should be given to late-night flashing operation of arterial signals, and to the use of both permitted-only and protected-permitted left-turn phasing.

Maintenance. Regular preventive maintenance, together with prompt identification and correction of occasional signal system failures will substantially enhance both the safety and operational effectiveness of the signal system.

The feasibility of installing and operating an area wide computerized traffic signal control system should be considered. Improvements in computers, communication systems, and traffic signal control technology have made such systems a reasonable and effective option for similarly sized communities. Significant operation and maintenance benefits of a traffic signal system have been clearly and repeatedly documented in other communities. In addition, such systems can actually enhance interagency coordination and communication regarding operating and maintenance issues.

IMPLEMENTATION PLAN

The implementation plan for the transportation system improvements was developed on the basis of the needs assessment and the financial analyses. The implementation plan for pedestrian, bicycle, and roadway improvements has been staged to spread infrastructure investment over the twenty-year life of the plan.

The following identifies short-term (0-10 years) and long-term (10-20 years) projects for the Pendleton urban area as well as those that should be implemented "as development occurs." As development occurs throughout the Pendleton area, the prioritization of these improvements will need to be continually reexamined to ensure local circulation and capacity needs are addressed.

Short-term Improvements (0-10 years)

Pedestrian Improvements (Refer to Table 8-4 for description of project)

- Carden Avenue
- Court Avenue
- Dorion Avenue
- Emigrant Avenue
- Frazer Avenue
- Highway 11/InterCourt Avenue
- SE 10th Street
- SW 17th Street
- SW 20th Street
- SW 18th Street (Umatilla River Crossing)

  Total = $1,113,000

Bicycle Improvements (Refer to Table 8-3 for description of project)

- Emigrant Avenue
- South Main Street
- SW 20th Street (cost included in roadway improvement)
- Westgate (cost included in roadway improvement)
- SE Goodwin/SE Isaac Avenue (minimal costs associated with signage and maintenance)
- River Parkway
- SE Byers Avenue (minimal costs associated with signage and maintenance)
- SE 17th Street (minimal costs associated with signage and maintenance)
- U.S. 30 (minimal costs associated with signage and maintenance)
- SE Court Place
- Highway 11

  Total = $620,000

New Roadway Projects

- SW 20th Street Extension

  Total = $4,376,000

Roadway Upgrades

- SW 20th Street
- Westgate - Phase I
- SE 8th Street Bridge
- Southgate Place

  Total = $1,222,000

Intersection Improvements

- Westgate/Court/Dorion (cost not determined at this time)
- Surface Street Improvements along U.S. 395, Emigrant, and Frazer
- Highway 11/SE 10th

  Total = $7,657,000

Traffic Signals

- U.S. 395/I-84 WB
- Court Place/SW 17th Street
- Emigrant/SW 17th Street
- Frazer/SW 17th Street

  Total = $600,000

Total Short-Term Projects = $15,588,000

As Development Occurs

Pedestrian Improvements

- Airport Road
- Horn Avenue
- Main Street
- Nye Avenue (costs included in roadway project)
- SE 10th Street (costs included in roadway project)
- SE 3rd Street
- SE 6th Street
- SE 8th Street
- SE Kirk Avenue (costs included in roadway project)
- SW 28th Drive (costs included in roadway project)
- SW 30th Street
- SW 37th Street (costs included in roadway project)
- SW 44th Street (costs included in roadway project)
- Tutuilla Creek Road

Total = $1,457,000

Bicycle Improvements

- Industrial Park Arterial (cost included in roadway improvement)
- Court Loop (cost included in roadway improvement)
- SW 44th Street (cost included in roadway improvement)
- SW 30th (minimal costs associated with signage and maintenance)
- SW Perkins (cost included in roadway improvement)
- SW 28th Drive (cost included in roadway improvement)
- SW 37th Street (cost included in roadway improvement)

Total = $0

New Roadway Projects

- SW 28th Drive Extension
- Perkins Avenue Extension - Phase I
- Perkins Avenue Extension - Phase II

- SE Kirk Avenue Extension
- Nye Avenue Extension
- SW 37th Street Extension - Phase I
- SW Court Loop
- Industrial Park Arterial

  Total = $13,682,000

Roadway Upgrades

- SW 28th Drive/SW 30th Street
- SW 44th Street
- SE 10th Street
- Haily Avenue

  Total = $2,324,000

Traffic Signals

- Highway 11/U.S. 30
- Highway 11/I-84 EB
- U.S. 30/Airport Road
- Westgate/Northgate

  Total = $600,000

Public Transportation

- Enhanced Demand-Response Service
- Possible Fixed-Route (General Public) Service
- Total cost not determined at this time.

Total "As Development Occurs" Projects = $18,063,000

Long-term Improvements

Pedestrian Improvements

- Byers Avenue
- Carden Avenue
- Despain Avenue
- Furnish Avenue
- Goodwin Avenue
- Hailey Avenue (costs included in roadway project)
- Isaac Avenue (costs included in roadway project)
- Highway 11
- Old Rieth Road (costs included in roadway project)
- Quinney Avenue
- Riverside Avenue (costs included in roadway project)
- US 30
- US 395
- Westgate (costs included in roadway project)
- NW 7th Street
- NW 10th Street
- NW 12th Street
- SE 12th Street
- SE 17th Street
- SW 4th Street
- SW 15th/13th Street
- SW 17th Street
- SW 19th Street

Total = $1,867,000

Bicycle Improvements

- NW 4th (minimal costs associated with signage and maintenance)
- NW 7th (minimal costs associated with signage and maintenance)
- NW Furnish/8th/Gilliam (minimal costs associated with signage and maintenance)

- NW 3rd (minimal costs associated with signage and maintenance)
- NW 12th (minimal costs associated with signage and maintenance)
- NW King/Horn (minimal costs associated with signage and maintenance)
- NW 14th/15th/Ellis (minimal costs associated with signage and maintenance)
- NE 8th (minimal costs associated with signage and maintenance)
- SW 7th (minimal costs associated with signage and maintenance)
- SW 4th (minimal costs associated with signage and maintenance)
- SE 8th/Hailey/9th (minimal costs associated with signage and maintenance)
- SE Goodwin Avenue (minimal costs associated with signage and maintenance)
- SW Jay (minimal costs associated with signage and maintenance)
- Hailey Avenue (minimal costs associated with signage and maintenance)
- SW 31st (minimal costs associated with signage and maintenance)
- SW Nye Avenue (minimal costs associated with signage and maintenance)
- SW 30th/Ladow (minimal costs associated with signage and maintenance)
- SE Nye Avenue (minimal costs associated with signage and maintenance)

  Total = $0

New Roadway Projects

- Hailey Avenue

  Total = $1,803,000

Roadway Upgrades

- Westgate - Phase II
- SW Isaac Avenue
- Riverside Avenue
- Clopton Road
- SE Goodwin Avenue

  Total = $7,224,000

Total Long-Term Projects = $10,894,000

Implementation of the Recommended Pedestrian, Bicycle, and Street Plans should be based on the following review process:

- Preliminary assessment by the City Engineer on the actual roadway/path alignment, existing development patterns, and funding constraints.
- City coordinated public involvement with affected property owners.
- Coordination with ODOT, where applicable.

Implementation Strategy

The Transportation Planning Rule sets forth requirements to ensure that local transportation system plans are implemented at the local level. To comply with ORS 197.015 Statewide Planning Goal 12 Transportation, and OAR Chapter 660, Division 12 The Transportation Planning Rule (as amended), the City of Pendleton is to complete and adopt the Pendleton TSP and implementing measures by May 8, 1997.

The following is a step-wise approach to implementing the Pendleton TSP, as outlined in ORS 660-12-045.

1. *Adopt Final Transportation System Plan*

   Following a minimum of 45-days for public review and comment on the draft TSP, and with input provided by the Planning Commission and City Council, a final TSP shall be created for subsequent adoption by the City. Implementing land use ordinances may be extracted from the final TSP and adopted at a later date during steps two and three.

2. *Amend City of Pendleton Land Use Regulations*

   The City must review and update its Comprehensive Plan and Land Use Ordinance to comply with the TPR. Appendix B outlines areas of TPR compliance and the adequacy of the plan and ordinances in meeting the rule. In general, Pendleton's existing plan and ordinances contain TPR-supportive policies and regulations. However, some new policies and amendments are required to support transportation-efficient development.

   Appendix G is designed to give the City "detailed direction" for the required code update and should be used by staff to formulate specific land use regulation language. To assure appropriate land use review standards, the city will need to conduct a public hearing process and customize new local regulations that work for Pendleton.

   The TPR outlines the following possible exceptions for certain activities that will not necessarily be subject to new land use regulations:

   - Operation, maintenance, and repair of existing transportation facilities identified in the TSP;
   - Dedication of right-of-way and construction of facilities and improvements that are consistent with clear and objective dimensional standards;
   - Resource Uses (i.e., forest and active farming) permitted outright under ORS 215.213(1)(m) through (p) and ORS 215(1)(k) through (n); and
   - Changes in the frequency of transit, rail and airport services.

3. *Adopt Land Use Regulations that Protect Transportation Facilities*

The TPR requires that land use and subdivision regulations be consistent with federal and state requirements in order to protect transportation facilities for their identified function. Potential ordinance language has been developed in Appendix G to address the following TPR-required regulations:

- Access control measures;
- Standards to protect future operation of roads, transit ways and corridors;
- Measures to protect public use airports (i.e., land use controls in airport noise corridors and height limits);
- ODOT notification and coordinated review of land uses that may impact transportation facilities;
- A process for applying conditions to proposals in order to minimize impacts to transportation facilities; and
- Regulations to assure that changes to codes, densities and design standards are consistent with the functions, capacities and levels-of-service for those facilities identified within the TSP.

4. *Encourage Use of Alternative Modes of Transportation*

The TPR requires that new development standards be adopted to encourage bicycle and pedestrian travel. The following regulations must be considered when building new standards from the recommendations found in Appendix G.

- Bicycle parking facilities for new multi-family residences of four or more units;
- Convenient bicycle and pedestrian access from new shopping, planned developments, subdivisions and industrial parks to adjacent neighborhoods;
- Sidewalks along arterial and collector streets, except for freeways;
- In developing a bicycle and pedestrian plan, identify improvements to facilitate bicycle and pedestrian trips to meet local travel needs in developed areas; and
- Assure more direct, convenient and safer bicycle and pedestrian access (i.e., walkways between cul-de-sacs, walkways between buildings, and direct access between adjacent uses).

5. *Adopt New Local Street Standards*

Local governments must develop their own standards for the creation of streets and accessways that are consistent with the TPR objectives. Standards may control the spacing of streets or accessways and may limit excessive out-of-direction travel. Appendix G provides recommended ordinance language that will assist the city in developing street standards. Streets and accessways need not be required under one of the following conditions:

- Physical or topographic conditions make a street or accessway impracticable;

- Redevelopment to accommodate a street or accessway now or in the future is precluded by existing buildings or other development;
- Where the street or accessway would violate the provisions of an easement, lease, covenant, restriction or other agreement existing as of May 1, 1995 which precludes the street or accessway connection; and
- Where conditions of development approval require off-site improvements they shall include facilities that accommodate pedestrian and bicycle travel

Standards must also be developed to ensure that street and accessway pavement widths and total rights-of-way are minimized consistent with the operational needs of the facility.

Excessive local street widths should be reduced to:

- Reduce the cost of construction;
- Increase urban land use efficiency;
- Provide for emergency vehicle access while discouraging inappropriate traffic volumes and speeds; and
- Safely accommodate bicycles and pedestrians.

6. Coordinate public transportation system needs with ODOT and Umatilla County and investigate possible state funding support for expanded demand-responsive service for elderly and handicapped.

7. *Identify Local Funding Options*

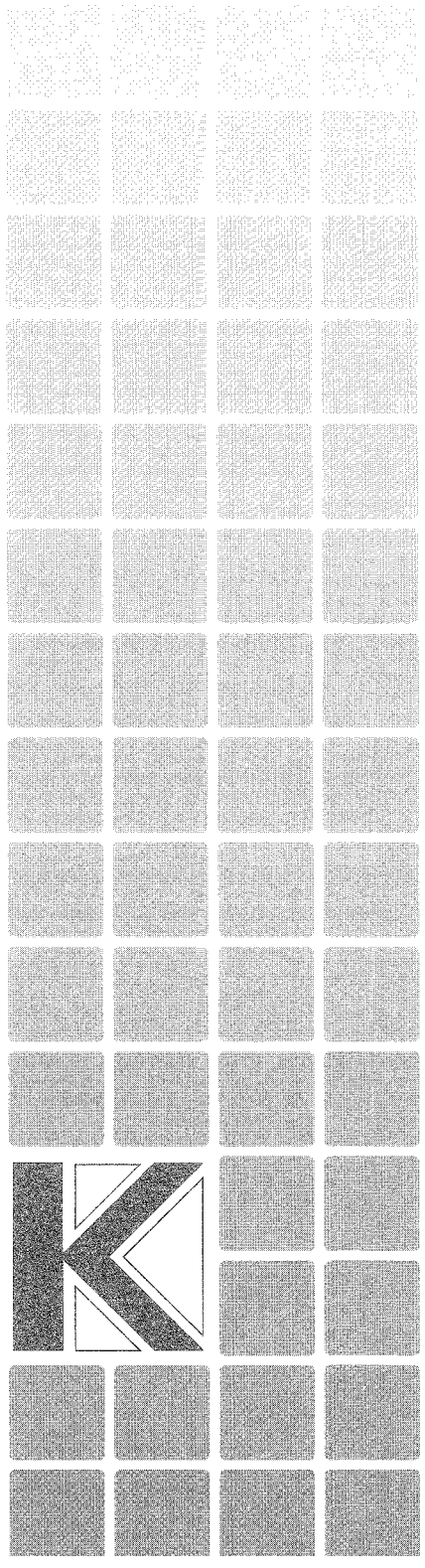
The TSP identifies local transportation facility improvements, costs and general timing/priorities over the 20-year planning horizon. With the level of federal, state and local funding for transportation improvements decreasing, local governments must strive to create a cost-efficient transportation system. Compliance with the TPR and implementation of the TSP is intended to result in an affordable and efficient transportation network. The City of Pendleton will need to work closely with Umatilla County to establish local revenue sources to maintain and enhance the transportation network within the urban area. Section 8 of the TSP identifies potential funding options to be considered as the city and county develop and maintain the transportation network.

8. *Monitor and Measure TSP Implementation Effectiveness*

   The City should monitor its progress in meeting TPR objectives using benchmarks that are relatively easy to measure and update. Selected benchmarks should be identified with emphasis on readily available secondary data (i.e., US Census) and/or primary data (i.e., resident opinion surveys). Typical benchmarks include: land use density; modal share of commute trips by alternative modes; parking ratios; air quality; lane miles of congestion; and resident opinions regarding general livability and accessability within the UGB.

9. *Update the TSP during each Periodic Review*

   Following initial compliance, the TSP must be updated during each scheduled periodic review.



Section 10

Recommended Transportation and Land Use Policies

Recommended Transportation and Land Use Policies

INTRODUCTION

As the City of Pendleton continues to develop, the collector/arterial street system will become more heavily used and relied upon for a variety of travel needs. As such, it will become increasingly important to manage access on the existing and future collector/arterial street system as new development occurs. Experience throughout the United States has shown that a well-managed access plan for a street system can:

1. Minimize the number of potential conflicts among all users of the street system, and hence provide safer and more efficient traffic operation, and
2. Minimize local cost for transportation improvements needed to provide additional capacity and/or access improvements along unmanaged roads.

RECOMMENDED ACCESS MANAGEMENT PLAN

One of the objectives of the Pendleton Transportation System Plan is to develop an access management plan that maintains and enhances the integrity (capacity, safety, and level-of-service) of the area's highways and arterials. To accomplish this, an access management policy and implementation plan must be developed that will control access to and operation of these roadways over the 20-year planning horizon (1995-2015). The Pendleton Transportation System Plan will serve as the land use and transportation plan; access management strategies and review policies and procedures, which will guide future development and growth within the city, will complement the plan. The plan defines how the highways and arterials will function in and maintain or improve the existing system over the next 20 years. The recommended access management plan is consistent with the current Oregon Highway Plan and National Highway System (NHS).

The recommended access management plan for arterials and highways within Pendleton focuses on three specific areas:

1. future land use actions and review policy,
2. traffic impact study requirements,
3. Comprehensive Plan Land Use ordinance modifications.

Each of these specific strategies is discussed in greater detail in the remainder of this section. *It should be noted that existing developments and accesses on the area highways and arterials will not be affected by the recommended Access management Plan until either a land use action is proposed, a safety or capacity deficiency is identified that requires specific mitigation, or a major construction project is begun on the roadway.*

Future Land Use Actions and Review Policy

Future land use actions (zone changes, comprehensive plan amendments, redevelopment, and/or new development) will be required to meet the 1991 Oregon Highway Plan Level of Importance (LOI) and Access management policies and standards. Within urban or urbanizing areas, a new development will need to maintain either a 300-500 foot (*Category 4 highways and 5-lane arterials*) or 150-300 foot (*Category 5 highways and 3-lane arterials*) spacing (centerline-to-centerline) between either existing private or public access points on both sides of the roadway and to the north and south of the proposed access point. Proposed land use actions that do not comply with the designated access spacing policy will be required to apply for an access variance from the City of Pendleton and/or ODOT. In addition, according to the 1991 OHP, the impact in traffic generation from proposed land uses must allow a LOS of "C" to be maintained for *Category 4* segments and a LOS of "D" to be maintained for *Category 5* segments within the development's influence area along the highway. The influence area is defined as the area in which the average daily traffic is increased by 10 percent or more by a single development, or 500 feet in each direction from the property-line of the development (whichever is greater). Suggested construction standards for access on all roadways within the City of Pendleton roadway system are listed in Table 10-1.

Access variances may be provided to parcels whose frontage, topography, or location would otherwise preclude issuance of a conforming access point. Access variances will include a condition that requires the land owner to work in cooperation with adjacent land owners to provide either joint access points, front and rear crossover easements, or a rear-access upon future redevelopment. An approved access variance will provide the parcel with a *conditional access permit.* The conditional access permit will remain valid until a neighboring (adjacent or across the roadway) piece of property goes through a land use action or alternative access is provided. ODOT and/or the City of Pendleton will then have the right to either relocate the conditional access driveway to align with an opposing driveway, eliminate the access and provide crossover access, or consolidate the access with an adjacent parcel. Using this process, all driveways and roadways along the highway/arterial will eventually comply with the access spacing policy set for that particular segment of roadway as development and redevelopment occurs in the study area. Figure 10-1 is an illustration of how the conditional access policy and process would bring existing and future accesses into access spacing compliance over time.

Table 10-2 shows the sequence of land use actions and condition process by which the city of Pendleton and ODOT can meet the access management guidelines set forth by the 1991 Oregon Highway Plan.

It should be noted that not every parcel can or should be accessed through the process illustrated in Figure 10-1 and described in Table 10-2. The topography of the parcel, type of proposed use or adjoining use, and/or frontage may preclude a development from using consolidated or crossover access points (i.e., consolidating access for a fast-food restaurant and a concrete pre-mix facility would be inappropriate). The cost of these access improvements described in Table 10-2 and illustrated in Figure 10-1 should be borne by private development as redevelopment occurs.

Table 10-1
Suggested Street Design Standards

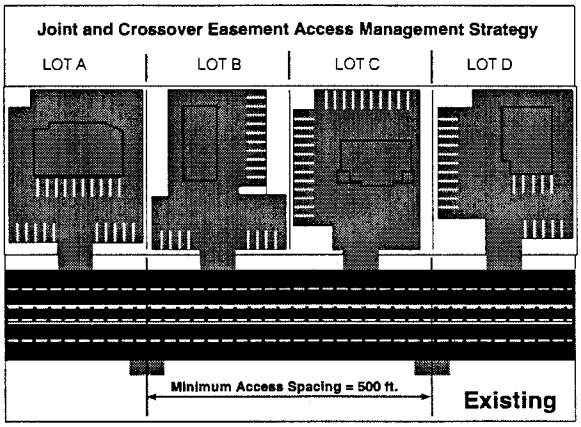
Functional Classification	System Spacing	Design / Posted Speed (MPH)	Horizontal Alignment	Vertical Alignment	Traffic Control	Street Lighting	Access Management			
							Minimum Spacing	Residential Use	Commercial Uses	Industrial Uses
5-Lane Arterial	1-2 Miles	45 / 35-45	Min. centerline radius: 650 ft.	Max. slope: 6% Min. sight distance: 350 ft.	1. Placement/ design of traffic control devises as warranted by MUTCD. 2. Min. signal spacing: 1/4 mile - 1/3 mile recommended	1. Mounting height: 25-30 ft. 2. Brightness: 22,000 lumens sodium vapor (200 watts)	300-500 feet	No direct access	1. Shared access driveways are encouraged. 2. Left-hand turn lanes determined through review.	1. Shared access driveways are encouraged. 2. Left-hand turn lanes determined through review.
3-Lane Arterial	1 Mile	40 / 30-40	Min. centerline radius: 560 ft.	Max. slope: 6% Min. sight distance: 350 ft.	1. Placement/ design of traffic control devises as warranted by MUTCD. 2. Min. signal spacing: 1/4 mile	1. Mounting height: 25-30 ft. 2. Brightness: 22,000 lumens sodium vapor (250 watts)	150-300 feet	1. Shared access driveways are encouraged.	1. Shared access driveways are encouraged. 2. Left-hand turn lanes determined through review.	1. Shared access driveways are encouraged. 2. Left-hand turn lanes determined through review.
Collector	1/4 - 1/2 Miles	30 / 25-30	Min. centerline radius: 300 ft.	Max. slope: 8% Min. sight distance: 200 ft.	Placement/ design of traffic control devises as warranted by MUTCD.	1. Mounting height: 35-40 ft. 2. Brightness: 9,500 lumens sodium vapor (100 watts)	75-100 feet		1. Max of one 45 ft. wide curb cut per 200 ft. of frontage or fraction thereof.	1. Max of one 45 ft. wide curb cut per 200 ft. of frontage or fraction thereof.
Minor	Min. 400 feet between local streets	25 / 25	Min. centerline radius: 200 ft.	Max slope: 12% Min. sight distance: 150 ft.	Placement/ design of traffic control devises as warranted by MUTCD.	1. Mounting height: 35-40 ft. 2. Brightness: 5,800 lumens sodium vapor (70 watts)	None	Curb cut min. 45 ft. to curb return.	Curb cut min. 50 ft. to curb return.	No direct access.

Table 10-2

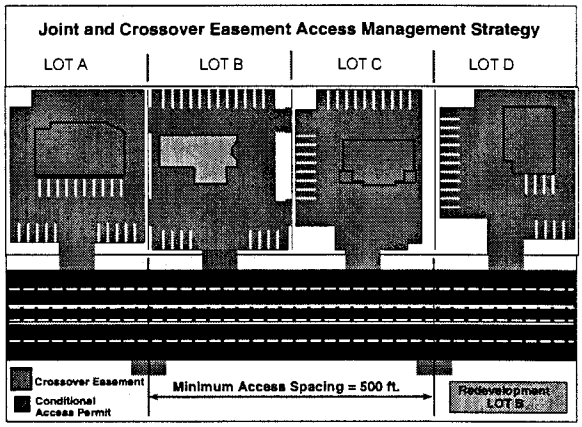
Access Management Example

Step	Process
1	*EXISTING* - Currently Lots A, B, C, and D have site-access driveways that neither meet the access spacing criteria of 500 feet nor align with driveways or access points on the opposite side of the roadway. *Under these conditions motorists are put into situations of potential conflict (conflicting left turns) with opposing traffic. Additionally, the number of side-street (or site-access driveway) intersections decreases the operation and safety of the highway/arterial.*
2	*REDEVELOPMENT OF LOT B* - At the time that Lot B redevelops, the local jurisdiction would review the proposed site plan and make recommendations to ensure that the site could promote future crossover or consolidated access. Next, the local jurisdiction would issue conditional permits for the development to provide crossover easements with Lots A and C, and the City of Pendleton and/or ODOT would grant a conditional access permit to the lot. *After evaluating the land use action, the participating jurisdiction would determine that Lot B does not have either alternative access, nor can an access point be aligned with an opposing access point, nor can the available lot frontage provide an access point that meets the access spacing criteria set forth for this segment of roadway.*
3	*REDEVELOPMENT OF LOT A* - At the time Lot A redevelops, the City of Pendleton and ODOT would undertake the same review process as with the redevelopment of Lot B (see Step 2); however, under this scenario ODOT and the City of Pendleton would use the previously obtained cross-over easement at LOT B to consolidate the access points of Lots A and B. ODOT and/or the city would then relocate the conditional access of Lot B to align with the opposing access point and provide safe and efficient access to both Lots A and B. *The consolidation of site-access driveways for Lots A and B will not only reduce the number of driveways accessing the roadway, but will also eliminate the conflicting left-turn movements on the highway/arterial by the alignment with the opposing access point.*
4	*REDEVELOPMENT OF LOT D* - The redevelopment of Lot D will be handled in the same manner as the redevelopment of Lot B (see Step 2).
5	*REDEVELOPMENT OF LOT C* - The redevelopment of Lot C will be reviewed once again to ensure that the site will accommodate cross-over and/or consolidated access. Using the crossover agreements with Lots B and D, Lot C would share a consolidated access point with Lot D and will also have alternative frontage access via the shared site-access driveway of Lots A and B. *By using the crossover agreement and conditional access permit process, the City of Pendleton and ODOT will be able to eliminate another access point and provide the alignment with the opposing access points.*
6	*COMPLETE* - After Lots A, B, C, and D redevelop over time, the number of access points will be reduced and aligned, and the remaining access points will meet the appropriate access management standard.

Proposed Access Management Strategy



Step 1



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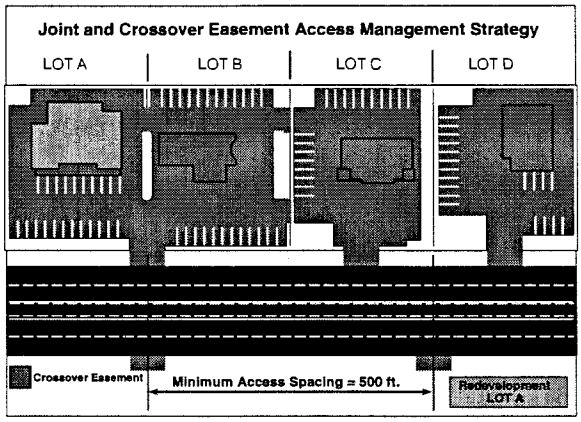

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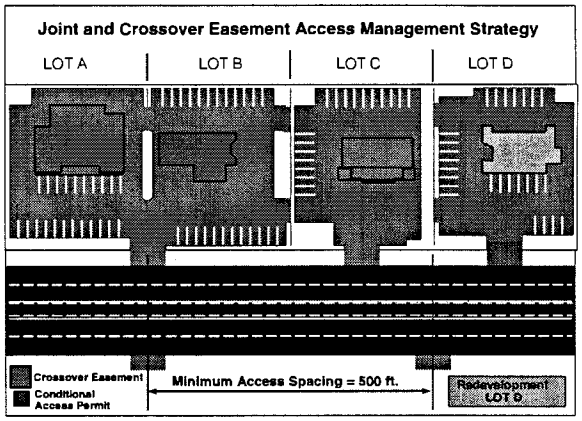

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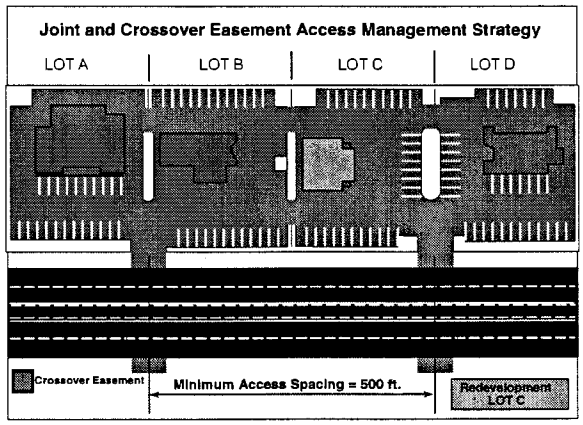

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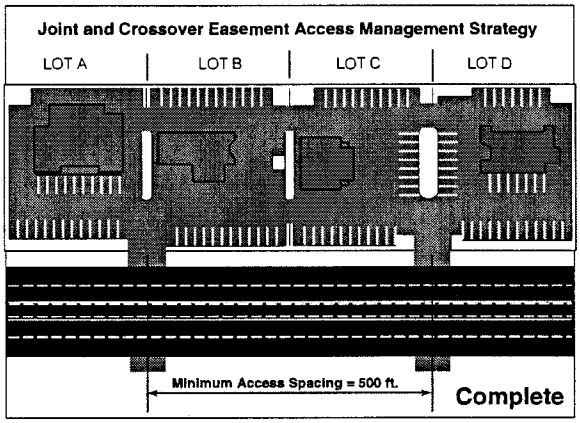


Step 6

Figure 10-1

EXAMPLES OF CROSSOVER AND CONDITIONAL ACCESS POLICY/PROCESS

Review Policy and Procedure

To provide an efficient process for implementing the recommended access management plan, a detailed review procedure is recommended, as described below.

All land use actions that either propose direct or indirect access to a state highway or an arterial will need to provide the appropriate governing jurisdiction (*Umatilla County and/or City of Pendleton)* with the information outlined below. The governing jurisdiction will then inform ODOT of the intended land use action and provide pertinent review material. These guidelines are intended to ensure that developments do not negatively impact the operation and/or safety of the roadway.

A) Applicants must submit a preliminary site plan for review to the appropriate jurisdiction (*City of Pendleton and/or Umatilla County*), prior to receiving an access or zoning permit. At a minimum, the site plan shall illustrate:

1) The location of existing access point(s) on both sides of the road within 500 feet in each direction for *Category 4* segments or *5-lane arterials* and 300 feet for *Category 5* segments and *3-lane arterials;*

2) Distances to neighboring constructed public access points, median openings, traffic signals, intersections, and other transportation features on both sides of the property (*this should include the section of roadway between the nearest upstream and downstream collector*);

3) Number and direction of site-access driveway lanes to be constructed, as well as an internal signing and striping plan;

4) All planned transportation features on the state highway/arterial (such as auxiliary lanes, signals, etc.);

5) Trip generation data or appropriate traffic studies (See the following section for the state's traffic impact study requirement thresholds);

6) Parking and internal circulation plan;

7) Plat map showing property lines, right-of-way, and ownership of abutting properties;

8) A detailed description and justification of any requested access variances;

B) Proposed land use actions, new developments, and/or redevelopment will need to provide traffic impact studies to the respective local reviewing jurisdiction(s) and ODOT

if the proposed use:

1) directly accesses a state highway; **or**

2) requires a comprehensive plan ammendment; **or**

3) there is a recognized traffic safety or operations deficiency in the vicinity of the proposed land use action;

and the proposed use exceeds the thresholds defined as:

- Trip Generation Threshold - 50 newly generated vehicle trips (inbound and outbound during the adjacent street peak hour; **or**

- Mitigation Threshold - installation of any traffic control device and/or construction of geometric improvements that will affect the progression or operation of traffic traveling on, entering, or exiting the (state) highway; **or**
- Heavy Vehicle Trip Generation Threshold - 20 newly generated heavy vehicle trips (inbound and outbound) during the day.

A traffic study will not be required of a proposed land use action **if** it is an allowed outright or conditional use **and** it does not exceed the thresholds defined above.

ODOT, after consultation with the City, will be responsible for determining if the aforementioned conditions and thresholds are met thereby determining the need for a traffic impact study. All traffic impact studies will need to be prepared by a registered professional engineer in accordance with ODOT's development review guidelines

Jurisdiction Review Items

To provide a thorough land use application review, it is recommended that each jurisdiction use the following criteria in reviewing an application.

A) Subdivision and site plan review shall address the following access considerations:

1) Is the road system designed to meet the projected traffic demand at full build-out and are the functional roadway classification standard consistent with the proposed use?

2) Is access properly placed in relation to sight distance (i.e., does the driveway location meet both intersection and stopping sight distance requirements), driveway spacing, and other related considerations, including opportunities for joint or crossover access? Are entry roads clearly visible from the adjacent highway/arterial?

3) Is the frontage for dwelling units on interior residential access streets rather than major roadways?

4) Is traffic movement within the site provided without having to use the peripheral road network?

5) Does the road system provide adequate access to buildings for residents, visitors, deliveries, emergency vehicles, and garbage collection?

6) Does the pedestrian path system link buildings with parking areas, entrances to the development, open space, and recreational and other community facilities (i.e., address the requirements of the Transportation Planning Rule)?

7) Does the site plan provide for potential future crossover or consolidated access, and/or alternative access?

Standards for Reviewing Access Variances

Access variances will be reviewed by the City of Pendleton and/or the Oregon Department of Transportation for proposed driveways that do not meet the recommended access spacing criteria. Variances may be allowed under the following conditions:

1) The parcel's highway frontage, topography, or location would otherwise preclude issuance of a conforming access point.

2) Alternative access (crossover easement, shared, side-street, and/or rear access) is not available to a parcel.

An approved access variance will provide the parcel with a *conditional access permit.* The conditional access permit will remain valid until a neighboring (adjacent or across the highway/arterial) piece of property goes through land use action or alternative access is provided. ODOT and/or the city will then have the right to either relocate the conditional access driveway to align with an opposing driveway, eliminate the access and provide crossover access, or consolidate the access with an adjacent parcel. The cost of these access improvements should be borne by private development as redevelopment occurs.

Recommended conditions of Approval and Necessary Improvements to Evaluate

As part of every land use action, the City of Pendleton and ODOT will be required to evaluate the potential need of conditioning a development with the following items in order to maintain the existing operation and safety of existing facilities and provide the necessary right-of-way and improvements to develop the future planned transportation system.

1) *Crossover easement agreements* will be required on all compatible parcels (topography, access, and land use) to facilitate future access between adjoining parcels.

2) *Conditional access permits* will be issued on new developments which have proposed access points that do not meet the designated access spacing policy and/or have the ability to align with opposing access driveways.

3) *Right-of-way dedications* will be required to facilitate the future planned roadway system in the vicinity of the proposed development.

4) *Half-street improvements* (sidewalks, curb and gutter, bike lanes/paths, and/or travel lanes) should be provided along site frontages which do not have full build-out improvements in place at the time of development.

TRAFFIC IMPACT STUDY REQUIREMENTS

The following is a summary of the Oregon State Highway minimum requirements for a traffic report. ODOT views these as the minimum considerations to be dealt with by Professional Traffic Engineering Consultants in their analysis of traffic impacts resulting from new developments adjacent to state highways.

1. The analysis shall include alternates other than what the developer originally submits as a proposal for access to state highways, city streets, and county roads.

2. The analysis of alternate access proposals shall include:

   a. Existing daily and appropriate design peak hour counts, by traffic movements, at intersections which would be affected by traffic generated by the development (use traffic flow diagrams).

b. Projected daily and appropriate design peak hour volumes for these same intersections and at the proposed access points after completion of the development. If the development is to be constructed in phases, projected traffic volumes at the completion of each phase should be determined.

c. Trip Generation shall be calculated using the Institute of Transportation Engineers' manual "TRIP GENERATION - 5th Edition" or other, more current, and/or applicable information.

d. A determination of the need for a traffic signal based on warrants in the "Manual on Uniform Traffic Control Devices."

3. The recommendations made in the report should be specific and shall be based on a minimum level of service "D" when the development is in full service. As an example, if a traffic signal is recommended, the recommendations should include the type of traffic signal control and what movements should be signalized. If a storage lane for right turns or left turns is needed, the recommendations should include the amount of storage needed. If several intersections are involved for signalization, and an interconnect system is considered, specific analysis should be made concerning progression of traffic between intersections.

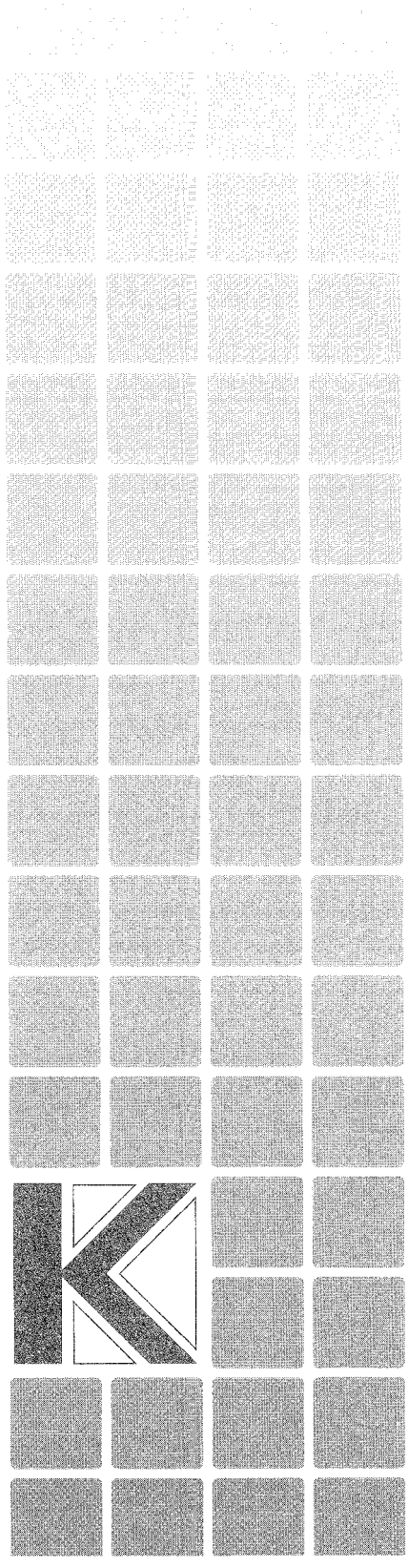
4. The internal circulation of parking lots must be analyzed to the extent that it can be determined whether the points of access will operate properly.

5. The report shall include an analysis of the impacts to neighboring driveway access points and adjacent streets affected by the proposed new development driveways.

6. The report should include a discussion of bike and pedestrian usage and the availability of mass transit to serve the development.

COMPREHENSIVE PLAN LAND USE ORDINANCES

Detailed modifications to the Comprehensive Plan Land Use Ordinances are provided in Appendix G. Appendix G identifies those recommended policies that address the TPR requirements for the extension and connection of minor streets and pedestrian connections.



Section 11

Transportation Planning Rule Compliance

Transportation Planning Rule Compliance

INTRODUCTION

In April 1991, the Land Conservation and Development Commission (LCDC), with the concurrence of the Oregon Department of Transportation (ODOT), adopted the Transportation Planning Rule (TPR), OAR 660 Division 12. The TPR requires local jurisdictions to prepare and adopt a Transportation System Plan (TSP) by May 1996. Outlined below is a list of recommendations (designated by italics) and requirements for a TSP for an Urban Area with a population between 2,500 and 25,000, and how each of those were addressed in the Pendleton TSP.

DEVELOPMENT OF A TRANSPORTATION SYSTEM PLAN

TPR Recommendations/Requirements	Pendleton TSP Compliance
Public and Interagency Involvement	
• Establish Advisory Committees.	A project Management Team and an Advisory Committee were established at the outset of the project. Membership on the Management Team included members of the city, Umatilla County, and ODOT staff. Membership on the Advisory Committee included representatives from the public and various interest groups.
• Develop informational material.	A newsletter was developed as a communication tool for use throughout the planning process. Two newsletter issues were published and 300 copies were distributed via direct mail to a list of interested stakeholders and by placing them at strategic locations within the community (such as the City Hall, library, schools, and various retail establishments).
• Schedule informational meetings, review meetings and public hearings throughout the planning process. Involve the community.	A total of three public informational meetings were held throughout the planning process. The meetings were advertised by direct mail to interested parties, distribution of the newsletter, and through the local news media.
• Coordinate Plan with other agencies.	Coordination with local government agencies was accomplished by adding them to the project mailing list, individual project briefings/meetings, and participation on the project Management Team and Advisory Committee.

Review Existing Plans, Policies, Standards, and Laws

• *Review and evaluate existing comprehensive plan.*	The following plans were reviewed as part of the development of the TSP: *1991 Oregon Highway Plan,* (June 1991); *City of Pendleton Comprehensive Plan,* (May 1990); *Statewide Transportation Improvement Program* (1995 - 1998); *City of Pendleton Bicycle Master Plan* (August 1981); *City of Pendleton Public Facilities Plan* (April 1990); and *Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA).*
• *Land use analysis - existing land use/vacant lands inventory.*	Development of the forecast of transportation needs was based on population and employment numbers obtained from the Comprehensive Plan for Pendleton.
• *Review existing ordinances - zoning, subdivision, engineering standards.*	Existing City Ordinances and City of Pendleton Public Facilities Standards were reviewed for adequacy in the development of the Pendleton TSP.
• *Review existing significant transportation studies.*	Significant transportation studies reviewed as part of the Pendleton TSP include the above mentioned comprehensive plans and their associated transportation elements, the *Oregon Transportation Plan,* (September 1992), *Oregon Bicycle Plan,* (April 1992), *Oregon Rail Passenger Policy and Plan,* (1993), *1980 General Plan of Highway and Street Improvements* (October 1973); *SW Pendleton Traffic Safety Plan* (January 1979); and *Pendleton Urban Area Public Transportation Development Plan* (1981) as well as those documents previously listed.
• *Review existing capital improvements programs/public facilities plans.*	The City of Pendleton, Umatilla County, and the State of Oregon CIP's were reviewed as part of the TSP development.
• Americans with Disabilities Act requirements.	The ADA requirements were reviewed and acknowledged as part of the TSP development.

Inventory Existing Transportation System

• Street system (number of lanes, lane widths, traffic volumes, level of service, traffic signal location and jurisdiction, pavement conditions, structure locations and conditions, functional classification and jurisdiction, *truck routes, number and location of accesses, safety, substandard geometry).*	An inventory of the existing street network, traffic volumes, traffic control devices, accident history, and levels of service is provided in Section 3 of the TSP.
• Bicycle ways (type, location, width, condition, *ownership/jurisdiction).*	A summary of the existing bicycle route system is given in Section 3.
• Pedestrian ways (location, width, condition, *ownership/jurisdiction).*	An inventory of existing sidewalks along collector and arterial streets, mid-block pathways, and park walkways is listed in Section 3.
• Public Transportation Services (transit ridership, routes, frequency, stops, fleet, intercity bus, special transit services).	A summary of the existing public transportation services is presented in Section 3.
• Intermodal and private connections.	No significant intermodal and private carrier transportation services and/or connections are found within the Pendleton UGB.
• Air transportation.	A summary of existing air (passenger and cargo) service is provided in Section 3.
• Freight rail transportation.	A summary of freight rail transportation services is provided in Section 3.
• Water transportation.	A summary of water transportation services is provided in Section 3.
• Pipeline transportation.	A summary of pipeline transportation services is provided in Section 3.
• *Environmental constraints*	Within the Pendleton UGB there are no significant environmental constraints affecting the development and general conclusions of the TSP.
• Existing population and employment.	As outlined in Section 4 of the TSP, the current population in the City of Pendleton is approximately 15,930 (1995); the employment is approximately 6,971.

Determine Transportation Needs

• Forecast population and employment	Population and employment forecasts were developed by the project team and City of Pendleton staff based on the Comprehensive Land Use Plan. These forecasts were also reviewed by the Management Team and Advisory Committee.
• Determination of transportation capacity needs.	Future p.m. peak hour traffic assignments were developed using the EMME/2 travel demand forecasting computer program based on population and employment forecasts spatially distributed within the study area in a discreet number of transportation analysis zones. Operational analyses were conducted on critical roadway segments using p.m. peak hour level of service volume thresholds to determine the levels of service, deficiencies and improvement needs under future conditions.
• Other roadway needs (safety, bridges, reconstruction, operation/maintenance).	Improvements aimed at addressing circulation and safety deficiencies are summarized in Sections 6 and 9.
• Freight transportation needs.	The recommended TSP in Section 9 will provide for adequate freight movement by rail and highway.
• Public transportation needs (special transportation needs, general public transit needs).	The transit plan recommended Section 9 will provide adequate public transit facilities and services.
• Bikeway needs.	Future bicycle and pedestrian improvements are to be made within the UGB, both as part of the roadway network and as separate facilities, to provide cyclists and pedestrians with full accessibility to Pendleton's Collector/Arterial street system.

Develop and Evaluate Alternatives

• Update community goals and objectives.	Goals were established as part of the TSP development (see Section 2).
• Establish evaluation criteria.	Evaluation criteria was established as part of the TSP development (see Section 6).

• Develop and evaluate alternatives (no-build system, all build alternatives, transportation system management, transit alternative/feasibility, improvements/additions to roadway system, land use alternatives, combination alternatives).	Section 6 identified three transportation system alternatives to assess the long-term transportation needs including: 1) No Build ("Do-Nothing") Alternative, 2) Transportation-Efficient Land Use Alternative, and 3) Implementation of the Comprehensive Plan Improvements. Three options aimed at addressing specific circulation and capacity needs in the downtown were also discussed in Section 6. A combination of the alternatives was chosen (See Section 9) to mitigate the future capacity deficiencies and to address future circulation needs. VMT reduction requirement is not applicable to Pendleton(see OAR 660-12-035(4)(a) - (c). However, the recommended transportation system improvements will very likely result in less reliance on the auto and a net reduction in VMT/capita by providing more direct connections within the community and less reliance on U.S. 395 for travel and circulation.
Produce a Transportation System Plan	
• Transportation goals, objectives and policies.	Specific recommendations regarding transportation goals and policies are outlined in Sections 9 and 10.
• Streets plan element (functional street classification and design standards, proposed facility improvements, access management plan, truck plan, safety improvements).	The streets plan element is outlined in Section 9, and shown in Figure 9-3.
• Public transportation element (transit route service, transit facilities, special transit services, intercity bus and passenger rail).	The public transportation element is outlined in Section 9.
• Bikeway system element.	The bicycle plan is outlined in Section 9 and illustrated in Figure 9-2.
• Pedestrian system element.	The pedestrian plan is outlined in Section 9 and illustrated in Figure 9-1.
• Airport element (land use compatibility, future improvements, accessibility/connections/conflicts with other modes).	The airport element is outlined in Section 9.

• Freight rail element (terminals, safety).	The rail element is outlined in Section 9.
• Water transportation element (terminals).	Since the Umatilla River is unnavigable for shipping purposes, water transportation service for Pendleton is provided by the Ports of Portland and Umatilla.
• Transportation System Management element (TSM).	TSM element not applicable per OAR 660-12-020(2)(f) and (g). Access Management Strategies for Pendleton are outlined in Section 10.
• Transportation Demand Management element (TDM).	TDM element not applicable per OAR 660-12-020(2)(f) and (g). However, the alternatives analysis included the evaluation of transportation-efficient land use. The implementation of these strategies was forwarded as one of the elements of the recommended TSP.

IMPLEMENTATION OF A TRANSPORTATION SYSTEM PLAN

Plan Review and Coordination

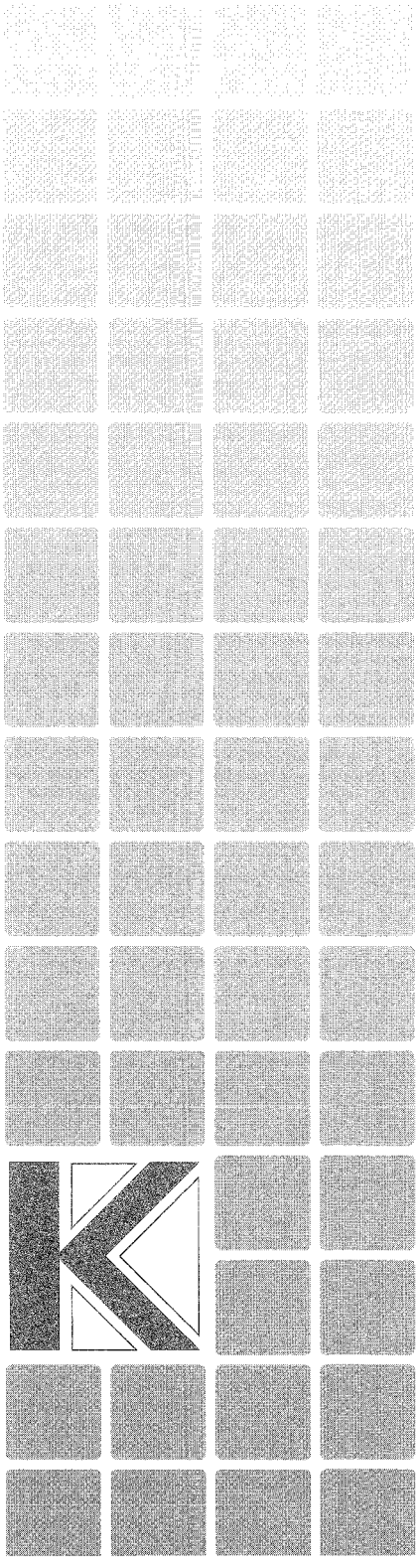
• Consistent with ODOT and other applicable plans.	*To follow.* See Appendix I

Adoption

• Is it adopted?	*To follow.* Scheduled for adoption in January 1997.

Implementation

• Ordinances (facilities, services and improvements; land use or subdivision regulations).	Recommended ordinance language modifications are included in Appendix G. The proposed TSP is not intended to fully comply with Section 045 of the TPR. Subsequent Comprehensive Plan and ordinance ammendments will be adopted by the City at a later date that will constitute compliance with this section of the TPR.
• Transportation financing/capital improvements program.	The transportation finance plan is summarized in Section 8.



Appendix A

Glossary of Terms

Glossary of Terms

This glossary has been compiled to provide additional clarification on the transportation and land use terms used in this report.

Access

A means of approach to provide vehicular or pedestrian entrance or exit to a property. This may not necessarily include all movements.

Access Classification

A ranking system for roadways used to determine the appropriate degree of access management. Factors considered include functional classification, the appropriate local government's adopted plan for the roadway, subdivision of abutting properties, and existing level of access control.

Access Connection

Any driveway, street, turnout or other means of providing for the movement of vehicles to or from the public roadway system.

Access Management

The process of providing and managing access to land development while preserving the regional flow of traffic in terms of safety, capacity, and speed.

Access Spacing

The distance between access locations, measured from the closest edge of pavement of the first access to the closest edge of pavement of the second access along the edge (either side) of the traveled way.

Accessway

A walkway that provides pedestrian and or bicycle passsage either between streets or from a street to a building or other destination such as a school, park, or transit stop. Accessways generally include a walkway and additional land on either side of the walkway, often in the form of an easement or right-of-way, to provide clearance and separation between the walkway and adjacent uses. Accessways through parking lots are generally physically separated from adjacent vehicle parking or parallel vehicle traffic by curbs or similar devices and include landscaping, trees and lighting. Where accessways cross driveways, they are generally raised, paved or marked in a manner which provides convenient access for pedestrians.

Arterial

This classification of roadway provides for through traffic movement between areas and across the city with direct access to abutting property. It is subject to required control of entrances, exits, and curb use.

Average Car Occupancy (ACO)

The average number of persons in a typical car under prevailing traffic conditions. ACO rates typically vary significantly according to the type of trip being made. Thus, ACO rates associated with home-to-work travel are usually much lower than ACO rates associated with recreational travel.

Buildout

A condition in which the maximum allowed land use intensity exists (or is assumed to exist) on every available land parcel within the study area.

Bus

A heavy vehicle involved in the transportation of groups of people on a for-hire, charter, or franchised transit basis. Buses are further categorized as intercity or local transit buses. Intercity buses operate in a traffic stream without making stops to pick up or discharge passengers on a subject roadway facility. Local transit buses make such stops within the confines of the subject roadway facility.

Capacity

The maximum hourly rate at which persons or vehicles can reasonably be expected to traverse a point or uniform section of a lane or roadway during a given time period under prevailing roadway, traffic, and control conditions.

Centroid

The simulation of the transportation analysis zones in an area-wide zone structure in the travel model simulation network. The centroids are connected to the simulation network by "centroid connectors" These centroid connectors represent the aggregate local street system that connect the zonal land uses to the collector-arterial simulation network.

Channelization

The use of physical barriers or pavement markings to force or encourage vehicles to travel in prescribed paths.

Collector

This classification of roadway provides for traffic movement between major arterials and local streets, with direct access to abutting property.

Conditional Access

An access granted to a parcel that will be relocated or eliminated at the time alternative access is provided.

Control Conditions

The types and specific design of control devices and traffic regulations present on a given facility. The location, type, and timing of traffic signals are critical control conditions affecting capacity. Other important controls include STOP and YIELD signs, lane use restrictions, turn restrictions, and similar measures.

Corner Clearance

The distance from an intersection of a public or private road to the nearest access connection, measured from the closest edge of the pavement or curb of the intersecting road to the closest edge of the pavement or curb of the connection along the traveled way.

Corridor Overlay Zone

Special requirements added onto existing land development requirements along designated portions of a public thoroughfare.

Cross Access

A service drive providing vehicular access between two or more contiguous sites so the driver need not enter the public street system.

Crossover Easement (Access)

A legal agreement that allows for access to one parcel through the access of another.

Deed

A legal document conveying ownership of real property.

Delay

The time lost while traffic is impeded by some element over which the driver has no control.

Demand Management

Actions which are designed to change travel behavior in order to improve performance of transportation facilities and to reduce need for additional road capacity. Methods may include but are not limited to the use of alternative modes, ride-sharing and vanpool programs, and trip-reduction ordinances.

Directional Distribution

The directional split of traffic during the peak or design hour, commonly expressed as percent in the peak and off-peak flow directions.

Diverging

The dividing of a single stream of traffic into two or more separate streams.

Directional Median Opening

An opening in a restrictive median that provides for specific movements and physically restricts other movements. Directional median openings for two opposing left or "U-turn" movements along a road segment are considered one directional median opening.

Easement

A grant of one or more property rights by a property owner to or for use by the public or another person or entity.

External Station

The representation of a major port of entry or exit to the study area in the travel model simulation network.

Facility Type

Roadway facilities are generally classified into one of two categories: 1) *Uninterrupted flow facilities* have no fixed elements, such as traffic signals, external to the traffic stream that cause interruptions to traffic flow. Traffic flow conditions are the result of interactions among vehicles in the traffic stream, and between vehicles and the geometric and environmental characteristics of the roadway. 2) *Interrupted flow facilities* have fixed elements causing periodic interruptions to traffic flow. Such elements include traffic signals, stop signs, and other types of controls. These devices cause traffic to periodically stop (or significantly slow) irrespective of how much traffic exists.

Fixed-Route Transit

Fixed route transit is the technical term used to describe what typically is thought of a "bus route". Fixed route transit operates on a defined, published route with a described schedule. In comparison, *demand-responsive transit* operates within a defined area responding to the call of the transit rider;

"dial-a-ride" is an example of demand-responsive transit service and taxis are a private-sector example of demand-responsive transit.

Flow Rate

The equivalent hourly rate at which vehicles pass over a given point or section of a lane or roadway during a given time interval less than one hour, usually 15 minutes.

Frontage Road

A public or private drive that generally parallels a public street between the right-of-way and the front building setback line. The frontage road provides access to private properties while separating them from the arterial street.

Full Median Opening

An opening in a restrictive median that allows all turning movements from the roadway and the intersecting road or access connection.

Functional Classification

A system used to group public roadways into classes according to their purpose in moving vehicles and providing access.

Grade Separation

A crossing of two highways, or a highway and a railroad, at different vertical levels. This may include an *overpass*, in which the subject facility passes over an intersecting highway or railroad; and an *underpass*, in which the subject facility passes under an intersecting highway or railroad.

High-Capacity Transit (HCT)

Transit system capable of moving large numbers of passengers per each hour of operation in the peak direction. Typical HCT's include exclusive busways, light- and heavy-rail systems and commuter-rail systems.

Interchange

A system of interconnecting roadways in conjunction with one or more grade separations, providing for the movement of traffic between two or more roadways on different levels.

Intersection

The general area where two or more highways join or cross, within which are included the roadway and roadside facilities for traffic movements in that area.

Joint Access (or Shared Access)

A driveway connecting two or more contiguous sites to the public street system.

Lot

A parcel, tract, or area of land with boundaries that have been established by some legal instrument. A lot is recognized as a separate legal entity for purposes of transfer of title, has frontage on a public or private street, and complies with the dimensional requirements of property codes.

Lot Frontage

That portion of a lot extending along a street right-of-way line.

Land Use

The type of activity associated with a specific geographic area. Land use categories can be broad (e.g., residential, retail, office, industrial, and recreational) or they can be very specific (e.g., single family residential, convenience market, or elementary school). In order to estimate trip generation characteristics for a specific geographic area, it is necessary to know both the type and intensity of land use (e.g., single family residential land use at a development intensity of eight units per acre).

Level of Service

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 and convenience, and safety. Six levels of service are defined with letter designations, from A to F. Level of service A represents the best operation conditions and level of service F the worst. Level of Service D represents the level that is normally considered, for signalized intersections, near the minimum acceptable for an urban area, level of service E represents operating conditions at or near the capacity level, and level of service F is used to define forced or breakdown flow conditions. See appendix for full definitions of level of service.

Local Street

This classification of roadway provides for direct access to abutting land and for local traffic movement.

Merging

The converging of two or more separate streams of traffic into a single stream.

Modal Split

The allocation of travel between modes of transportation (i.e. passenger cars, bus, pedestrian, bicycle).

Mode

The means by which travel is accomplished. Alternative modes of travel include walking, bicycling, auto, bus, and light rail.

Nonrestrictive Median

A median or painted centerline that does not provide a physical barrier between traffic traveling in opposite directions or turning left, including continuous center turn lanes and undivided roads.

Passenger Car Equivalence

The representation of larger vehicles, such as trucks and buses, as equal to a quantity of passenger cars for use in level of service and capacity analyses. The magnitude of the equivalency is dependent upon vehicle size and weight, vehicle operating characteristics, vehicle speeds, and roadway characteristics such as grade.

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. On developed parcels, pedestrian connections are generally hard surfaced. In parks and natural areas, pedestrian connections may be soft-surfaced pathways. On undeveloped parcels and parcels intended for redevelopment, pedestrian connections may also include rights of way or easements for future pedestrian improvements.

Ramp

A length of roadway providing an exclusive connection between two highway facilities.

Recreational Vehicle

A heavy vehicle, operated by a private motorist, and involved in the transport of recreational equipment or facilities.

Ridesharing

A broad category of transit which involves increasing the *ACO* for small capacity vehicles (2 through 20 passenger capacity) through matching passengers with similar travel requirements with drivers who regularly make trips matching those requirements. Ridesharing includes carpooling (a driver and one or more passengers in a automobile) and vanpooling (a driver and 7 or more passengers in a passenger van or mini-bus).

Right-of-Way

A publicly-owned strip of land within which the entire road facility (including travel lanes, medians, shoulders, sidewalks, planting areas, bicycle lanes, and utility easements) must reside. The right-of-way is usually defined in feet, and it is not necessary that the paved roadway be centered within this strip of lane.

Roadway Conditions

The geometric characteristics of the street or highway, including: the type of facility and its development environment, the number of lanes (by direction), lane and shoulder widths, lateral clearances, design speed, and horizontal and vertical alignments.

Service Flow Rate

The maximum hourly rate at which persons or vehicles can reasonably be expected to traverse a point or uniform section of a lane or roadway during a given time period under prevailing roadway, traffic, and control conditions while maintaining a designated level of service. As to capacity, the service flow rate is generally taken for a 15-minute time period.

Speed

A rate of motion expressed as distance per unit time, generally as miles per hour or kilometers per hour. In characterizing the speed of a traffic stream, some representative value must be used, as there is generally a broad distribution of individual speeds that may be observed in the traffic stream. The speed measure that is normally used in this regard is *average speed.* Average travel speed is computed by dividing the length of the highway or street segment under consideration by the average travel time of vehicles traversing the segment.

Traffic Analysis Zone

A geographic area that is relatively homogeneous with respect to the type of land use activities that exist or are allowed. Taken together, traffic analysis zones define all land area within the study area. The boundaries of traffic analysis zones can be defined somewhat arbitrarily. However, they are usually similar in size to one another, and they are typically not bisected by significant roadways or transportation barriers (e.g., rivers or lakes). In a traffic analysis zone, an area of aggregate land uses is identified for the purpose of determining trip generation in a travel forecasting model. Zones group together a number of housing units or employees (by type) in an area instead of single trip generators (one dwelling unit, an office building, shopping center, etc.).

Traffic Conditions

The characteristics of the traffic stream using the facility. This is defined by the distribution of vehicle types in the traffic stream, the amount and distribution of traffic in available lanes of a facility, and the directional distribution of traffic.

Traffic Control Device

A sign, signal, marking or other device placed on or adjacent to a street or highway by authority of a public body or official having jurisdiction to regulate, warn, or guide traffic.

Transfer Facilities

Places and structures designed to facilitate the transfer of persons from one mode of travel to another or, in the case of bus transfer facilities, from one bus to another. Thus, park-and-ride lots are usually located adjacent to transfer facilities so as to minimize the total walking distance involved in transferring from one travel mode to another.

Travel Demand Forecasting

The practice of predicting the future demand for travel on a particular physical transportation system. To be useful, these forecasts must incorporate estimates of the *amount* of travel that will occur (i.e., the trip generation potential), the *distribution* of that travel (i.e., the ultimate destination of each generated trip), and the *mode* by which the travel occurs (i.e., auto, bus, light rail, or walking/bicycling).

Trip Assignment

The allocation of all travel between a particular origin and a particular destination to the alternative available travel routes. Usually, trip assignment procedures attempt to assign traffic to the most direct route between a specific origin and destination pair that minimizes total travel time and avoids significant congestion.

Trip Distribution

The allocation of generated trips among all possible destinations.

Trip Assignment

The allocation of all travel between a particular origin and a particular destination to the alternative available travel routes. Usually, trip assignment procedures attempt to assign traffic to the most direct route between a specific origin and destination pair that minimizes total travel time and avoids significant congestion.

Trip End

A one-way vehicular movement between a single origin and a single destination. Thus, for example, a round trip between home and a shopping center would consist of two trip ends: one trip end is defined by the vehicular travel from home to the shopping center, and the other trip end is defined by the vehicular travel from the shopping center to home.

Trip Generation

The number of vehicle trip ends produced by a specific type and intensity of land use. Normally, trip generation characteristics are estimated on a daily and/or a peak hour basis.

Trucks (Heavy Vehicles)

Any vehicle with more than four tires on the roadway that is not otherwise classified as a recreational vehicle or a bus.

Urban Growth Boundary (UGB)

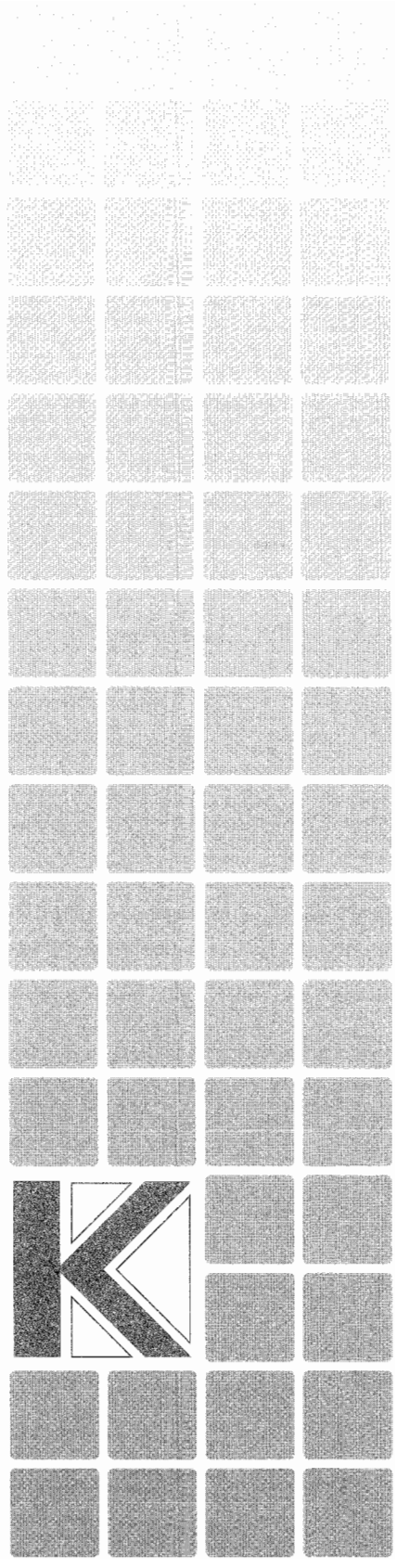
The politically-defined boundary around a metropolitan area outside of which no urban activities may occur. It is intended that the UGB be defined so as to accommodate all projected population and employment growth within a twenty-year planning horizon. A formal process has been established for periodically reviewing and updating the UGB so that it accurately reflects projected population and employment growth.

Volume

The total number of vehicles that pass over a given point or section of a lane or roadway during a given time interval; volumes may be expressed in terms of annual, daily, hourly, or sub-hourly periods.

Weaving

The crossing of two or more traffic streams traveling in the same general direction along a significant length of highway, without the aid of traffic control devices. Weaving areas are formed when a merge area is closely followed by a diverge area, or when an on-ramp is closely followed by an off-ramp and the two are joined by an auxiliary lane.



Appendix B

Plans and Policies Review

Plans and Policies Review

1991 OREGON HIGHWAY PLAN

The 1991 Oregon Highway Plan (OHP) is a policy and strategies document that serves as the highway element of the Oregon Transportation Plan (OTP). In order to prioritize the funding and construction of future transportation system improvements for the state highway system, the OHP has outlined four strategies, including:

- Level of Importance Policy
- Access Management Policy
- Policy on Improving and Maintaining the Access Oregon Highways (AOH) System
- Policy for Truck Load Restrictions on the State Highway System

Level of Importance Policy

The Level of Importance Policy (LOI) establishes a classification system for the state highway system based on "Level of Importance" for management and funding purposes. Under the LOI policy, each of the state highways is classified as having either Interstate, Statewide, Regional, or District Significance. Operational Level of Service standards are provided for each of the categories of highways for each type of area the highway travels through (i.e., Urban parts of metropolitan areas, urban parts of other cities, urbanizing areas and rural development centers, and rural areas).

The LOI Policy defines the primary function of an **Interstate** highway as providing "connections and links to major cities, regions of the state, and other states." The management objective of an Interstate highway is to "provide safe and efficient high-speed continuous-flow operation in urban and rural areas."

The primary function of a **Statewide** highway is to provide "connections and links to larger urban areas, ports, and major recreation areas that are not directly served by interstate highways." The management objective of a statewide highway is to "provide for safe and efficient high-speed continuous-flow operation in rural areas and high to moderate-speed operations with limited interruptions of flow in urban and urbanizing areas."

The primary function of a **Regional** highway is to provide "connections and links to areas within regions of the state, between small urbanized areas and larger population centers, and to higher level facilities." The management objective of a regional highway is to "provide for safe and efficient high-speed continuous-flow operation in rural areas, except where there are significant environmental constraints, and moderate to low-speed operation in urban and urbanizing areas with moderate interruptions to flow." Unlike interstate and statewide highways, the secondary function of a regional highway is to serve land uses in the vicinity of the highway.

The primary function of a **District** highway is to "serve local traffic and land uses." The management objective of a district highway is to "provide for safe and efficient moderate to high-speed continuous-flow operation in rural areas reflecting the surrounding environment,

and moderate to low-speed operation in urban and urbanizing areas with a moderate to high level of interruptions to flow."

Table 1 presents the 1991 Oregon Highway Plan classification of each of the state highways that are located within the Pendleton urban growth boundary.

Table B-1

State Highway Classification
Pendleton Urban Area

State Facility	Level of Importance
Interstate 84	Interstate
U.S. 395 (Southgate)	Statewide
Highway 11	Statewide
Highway 37 (Northgate, Westgate, 17th, Emigrant, Frazer)	District
U.S. 30 (Westgate, Court, Dorion)	District

The Level of Service Standards for each of the statewide highways in Pendleton are shown in Table 2. Future transportation system improvements to the statewide highway system recommended by the Pendleton Transportation System Plan will be required to meet or exceed the standards shown in Table 2 under year 2015 conditions.

Table B-2

Level of Service Standards: Pendleton Urban Area

Level of Importance	Urban Area[1]	Urbanizing Areas[2]
Regional (I-84)	C	C
Statewide (U.S. 395, Highway 11)	C	C
Regional (not applicable)	D	C
District (Highway 37, U.S. 30)	D	D

Note:

1 An urban area is considered by the OHP as an area within an urban growth boundary (UGB) that is generally developed at urban intensities as allowed by the comprehensive plan.

2 An urbanizing area is considered by the OHP as an area within an UGB that is undeveloped or developing.

Access Management Policy

The Access Management Policy includes standards established to ensure that all state highways will "continue to function safely and efficiently consistent with the Level of Importance Policy." Under the Access Management Policy, all of the state highways are divided into 6 categories with corresponding recommendations for access treatment, intersection spacing, signal spacing, and median control depending on the Level of Importance classification and the area type (i.e., urban or rural). Table 3 presents the Access Management Classification System.

Table B-3

Access Management Classification System

Category	Access Type	LOI (1)	Urban/ Rural	Intersection				Signal Spacing (4)	Median Control
				Public Road		Private Drive (3)			
				Type (2)	Spacing	Type	Spacing		
1	Full Control (Freeway)	Interstate/ Statewide	U	Interchange	2-3 miles	None	NA	None	Full
			R	Interchange	3-8 miles	None	NA	None	Full
2	Full Control (Expressway)	Statewide	U	At grade/Intch	½-2 miles	None	NA	½-2 miles	Full
			R	At grade/Intch	1-5 miles	None	NA	None (5)	Full
3	Limited Control (Expressway)	Statewide	U	At grade/Intch	½-1 miles	Rt. Turns	800 feet	½-1 mile	Partial
			R	At grade/Intch	1-3 miles	Rt. Turns	1,200 feet	None (5)	Partial (6)
4	Limited Control	Statewide/ Regional	U	At grade/Intch	1/4 mile	Lt./Rt. Turns	500 feet	½ mile	Partial/None (7)
			R	At grade/Intch	1 mile	Lt./Rt.Turns	1,200 ft.	None (5)	Partial/None (7)
5	Partial Control	Regional/ District	U	At grade	1/4 mile	Lt./Rt.Turns	300 ft.	1/4 mile	None
			R	At grade	½ mile	Lt./Rt.Turns	500 ft.	½ mile	None
6	Partial Control	District	U	At grade	500 feet	Lt./Rt.Turns	150 feet	1/4 mile	None
			R	At grade	1/4 mile	Lt./Rt.Turns	300 feet	½ mile	None

Notes:

1 The Level of Importance (LOI) to which the Access Category will generally correspond. In cases where the access category is higher than the Level of Importance calls for, existing levels of access control will not be reduced.

2 The basic intersection design options are as listed. Special treatments may be considered in other than category 1. These include partial interchanges, jughandles, etc. The decision on design should be based on function of the highway, traffic engineering, cost-effectiveness and need to protect the highway. Interchanges must conform to the interchange policy.

3 Generally, no signals will be allowed at private access points on statewide and regional highways. If warrants are met, alternatives to signals should be investigated, including median closing. Spacing between private access points is to be determined by acceleration needs to achieve 70 percent of facility operating speed. Allowed moves and spacing requirements may be more restrictive than those shown to optimize capacity and safety.

4 Generally, signals should be spaced to minimize delay and disruptions to through traffic. Signals may be spaced at intervals closer than those shown to optimize capacity and safety.

5 In some instances, signals may need to be installed. Prior to deciding on a signal, other alternatives should be examined. The design should minimize the effect of the signal on through traffic by establishing spacing to optimize progression. Long-range plans for the facility should be directed at ways to eliminate the need for the signal in the future.

6 Partial median control will allow some well-defined and channelized breaks in the physical median barrier. These can be allowed between intersections if no deterioration of highway operation will result.

7 Use of physical median barrier can be interspersed with segments of continuous left-turn lane or, if demand is light, no median at all.

As shown in Table 3, there are two possible categories for statewide and district highways. According the implementation of the OHP, there is some flexibility in the categorization of the state highways under the Access Management Policy. The Access Management Policy does not contain a listing of all of the state highways by category type.

Current travel characteristics on Highway 11 are more indicative of and consistent with the OHP District rather than Statewide Level of Importance (LOI) classification with regards to Access Management criteria for public road and private driveway spacing and traffic control. The Pendleton TSP will evaluate the appropriateness of the OHP Access Management classification of all state highways within the Pendleton urban area based on the level and type of future traffic demand.

Policy on Improving and Maintaining the Access Oregon Highways System

According to the OHP, the goal of the Access Oregon Highways System (AOH) is to "provide for the economic growth of Oregon by moving through traffic safely and efficiently through

and between geographic and major economic areas within Oregon, between Oregon and adjacent states, and to and through major metropolitan areas". None of the state highways within Pendleton are classified by the OHP as an Access Oregon Highway.

Policy for Truck Load Restrictions on the State Highway System

This policy identifies 26 segments of highways throughout the state that need to be modernized in order to provide for increased continuous operation of heavy vehicles. None of the state highways within Pendleton are included in this policy.

INTERMODAL SURFACE TRANSPORTATION EFFICIENCY ACT OF 1991 (ISTEA)

ISTEA sets maximum funding levels for federal-aid highway and transit programs through the fiscal year 1997. The funding levels set by ISTEA can be reduced by congress each year as part of the appropriation process. Funding levels are proposed to increase significantly in later years of the act. Urban areas are guaranteed a larger portion of the federal transportation dollars and will play a stronger role in determining on which transportation projects the money will be spent. This specifically applies to the MPO areas (areas with populations greater than 50,000 as appointed by the Governor).

For the Pendleton area, the prioritization of projects and funding will not change significantly from past practice in that local priorities must compete with statewide priorities and needs.

The major programs funded under ISTEA that apply to the Pendleton area include:

- National Highway System: The interstate system and other major highways. In Oregon, these other major highways are those routes designated in the Oregon Highway Plan as routes with "statewide" significance (this includes I-84).
- Surface Transportation Program: Funds under this program can be used for any transportation project on any road except those classified as a local or rural minor collector. The act sets aside 10 percent of this fund for safety improvements, 10 percent for transportation enhancement activities, 50 percent to be distributed to areas within the state based upon the state's relative share of population between urbanized areas over 200,000 population and other areas, and the remaining 30 percent available to use in any area of the state.
- Bridge Program: Provides for inspection, maintenance, rehabilitation or replacement of bridges on any highway system.
- Safety: As stated above, 10 percent of the Surface Transportation Program fund is set aside for safety projects.

Although there are a number of other programs funded by ISTEA, such as Congestion Mitigation, IVHS, and Mass Transit, these programs would not apply to the Pendleton area. Transit funding is possible under the National Highway System Program which allows up to 50 percent of the funds in this program to be shifted to transit projects at the state's discretion. Also, ISTEA places restrictions on the program funds that would benefit the single-occupant vehicle. These restrictions apply primarily to the MPO areas and in clean air non-attainment areas. As such, they would generally not be considered when identifying future transportation projects for the Pendleton area.

In order for any project needed to balance the transportation requirements with the land use, a thorough description of the project, benefits, estimated cost and alternatives must be prepared for each project in order to compete with the statewide needs. In addition, the potential funding sources must be identified for each project. The Pendleton Transportation System Plan will identify needed projects over the 20-year planning horizon and satisfy the requirements of ISTEA in terms of identifying alternatives, benefits, costs, and funding sources for the recommended projects.

OREGON TRANSPORTATION PLAN

The Oregon Transportation Plan (OTP) contains a policy element which defines the goals, policies and actions for the state over the next forty years. It offers direction to the coordination of transportation modes and the relationship of transportation to land use, economic development, the environment and energy use. It also addresses the coordination of transportation with federal, state, regional and local plans.

The second part of the OTP defines the system element of the plan. It identifies a coordinated multimodal transportation system, a network of facilities and services for all modes of travel including air, rail, highway, bikeway, pedestrian, public transit, pipeline waterways, and marine transportation.

The OTP was adopted by the transportation commission on September 15, 1992. The financing program and legislation needed to implement the plan was submitted to the 1993 legislature; however, the financing plan failed to gain the support of the legislature at that time.

The goals and policies stated in the plan define a balanced and efficient transportation system which promotes accessibility to all potential users.

Purpose Statement

The purpose of the Oregon Transportation Plan is to guide the development of a safe, convenient and efficient system which promotes economic prosperity and livability for all Oregonians.

The goals of the Oregon Transportation Plan are:

GOAL 1 — Characteristics of the System

To enhance Oregon's comparative economic advantage and quality of life by the provision of a transportation system with the following characteristics:

- balance
- efficiency
- accessibility
- environmental responsibility
- connectivity among places
- connectivity among modes and carriers
- safety
- financial stability

GOAL 2 — Livability

To develop a multimodal transportation system that provides access to the entire state, supports acknowledged comprehensive land use plans, is sensitive to regional differences, and supports livability in urban and rural areas.

GOAL 3 — Economic Development

To promote the expansion and diversity of Oregon's economy through the efficient and effective movement of goods, services and passengers in a safe, energy efficient and environmentally sound manner.

GOAL 4 — Implementation

To implement the Transportation Plan by creating a stable but flexible financing system, by using good management practices, by supporting transportation research and technology, and by working cooperatively with federal, regional and local governments, Indian tribal governments, and the private sector and citizens.

With respect to Pendleton, the Oregon Transportation Plan identifies specific transportation system improvements to meet goals 1-4, including:

- Direct Connections between intercity bus, rail, airport, and local transit services
- Publicly control of all bus passenger terminals to ensure all carriers have access to the terminals under open access terms
- Air service connections to Portland and/or other West Coast hubs
- Establishment of Intelligent Vehicle Highway Systems on I-84

The OTP defines the minimum level of service for commercial airports and recognizes that the standard generally has been met within the state but leaves some more sparsely populated areas without commercial air service. The plan states that these areas should have access to air/taxi services. The plan further defines that air service connection between Portland and other west coast hubs and other areas of Oregon should be provided whenever commercially viable (three round trip planes per day of 19 passengers as a minimum measure of commercial viability) or whenever intercity air connections are more economical than providing operating assistance to other modes. It defines these areas as Astoria, Eugene, Newport, Coos Bay/North Bend, Roseburg, Bend/Redmond, Medford, Klamath Falls, and *Pendleton*.

The OTP is part of an ongoing transportation planning process within the Oregon Department of Transportation. Oregon Revised Statute 184.168(1) requires state agencies to use the OTP to guide and coordinate transportation activities.

The Oregon Transportation Plan and the supporting modal plans must comply with the state agency coordination program and the state-wide planning goals. The Land Conservation and Development Commission's Transportation Planning Rule which implements Goal 12 (transportation) requires ODOT to identify a system of transportation facilities and services adequate to meet identified state transportation needs to prepare a transportation system plan. The OTP, including the policy and system elements and adopted modal and facility plans, is intended to meet the requirements for the state TSP.

TRANSPORTATION PLANNING RULE

The Transportation Planning Rule (OAR Chapter 660, Division 12) requires adoption of transportation plans by local governments and amendment of land use regulations to implement the plans. A primary objective of the required amendments is to make new development more pedestrian and transit friendly.

This section of the report introduces proposed land use ordinance concepts designed to bring the City of Pendleton's land development ordinances into compliance with the rule. State-mandated land use regulations are cited and methods to satisfy those requirements are suggested as part of the Pendleton Transportation System Plan. Report sections address the Transportation Planning Rule and the structure of the local land use plans and ordinances. Issues identified by the Transportation Planning Rule are described and recommendations for changes to the local plans and ordinances are suggested.

Sources used to prepare this report include recommendations of the American Planning Association (APA) Transportation Rule Working Group, the Oregon Department of Transportation's (ODOT) Best Management Practices manual (August 1992 draft), and the ODOT's 1991 Oregon Highway Plan.

REQUIREMENTS OF THE TRANSPORTATION PLANNING RULE

The Transportation Planning Rule was adopted by the Land Conservation and Development Commission (LCDC) in April 1991. Amendments to the rule in 1993 and 1995 resulted in a time extension to May 1996 for metropolitan planning organizations (MPOs) and to May 1997 for non-MPOs to develop implementing ordinances. In May 1995, the urban portions of the Transportation Planning Rule were amended to update and clarify the rule's provisions for local streets, connectivity, and building orientation.

The rule requires each city and county to adopt a Transportation System Plan and implementing regulations. It also requires ODOT and regional metropolitan planning organizations to adopt Transportation System Plans. For urban areas of 2,500 to 25,000 people the plans must address the following elements:

- a determination of transportation needs;
- a road plan for a network of arterials and collectors;
- a public transportation plan;
- a bicycle and pedestrian plan;
- an air, rail, water and pipeline transportation plan;
- a transportation financing program; and
- policies and land use regulations for implementing the transportation system plan.

This report focuses on the policies and land use regulations for implementing the transportation system plan, as noted in the final item above. Section 660-12-045 of the Transportation Planning Rule sets forth issues that must be addressed to implement a transportation system plan. Key issues are discussed below.

A. Protection of Transportation Facilities and Corridors

The Transportation Planning Rule requires that local governments adopt land use or subdivision ordinance regulations to protect transportation facilities, corridors, and sites for their identified functions. The regulations are required to include:

- access control measures;
- standards to protect future operations of roads;
- measures to protect public use airports by controlling adjacent uses and limiting physical hazards to air navigation;
- a process for coordinated review of future land use decisions affecting transportation facilities, corridors, and sites;
- a process for applying conditions to development proposals;
- a process for providing notice to public agencies; and
- regulations assuring that land use designations, densities, and design standards are consistent with transportation system capacity.

B. Land Use and Subdivision Regulations

The Transportation Planning Rule also requires local governments to adopt land use and subdivision regulations for the following:

- bicycle parking for new multi-family, commercial, and institutional development;
- sidewalks and bikeways that provide safe and convenient access within new development and from it to nearby residential areas, transit stops, and activities centers; and
- internal pedestrian connections provided in new office parks and commercial developments.

C. Improvements for Bicycle and Pedestrian Travel

Identification of improvements to facilitate bicycle and pedestrian travel in developed areas are required, including:

- improvements providing direct, convenient, and safe bicycle and pedestrian travel within and between residential areas and activity centers.

COMPREHENSIVE PLAN AND ORDINANCE STRUCTURE

The City of Pendleton uses both a zoning ordinance and a subdivision ordinance to implement its comprehensive plan and review land development proposals. There are separate site plan review standards per zone for the review of new multi-family, commercial, institutional and industrial uses. In some cases site plan determinations are made administratively, others go to the Planning Commission. There is no overall site plan review section.

Transportation-related issues in the Pendleton Comprehensive Plan, and relevant sections of the Umatilla County Comprehensive Plan are initially addressed below. This discussion is

followed by a description of the zoning ordinance structure, and finally the land division processes. A general description of the suitability of the format and structure of the plans and ordinances for addressing Transportation Planning Rule requirements is provided.

A. Pendleton Comprehensive Plan

The plan is divided into three parts: Part I provides technical information and findings, Part II gives objectives and policies, and Part III is a bibliography. The plan considers a full range of transportation facilities in Part I, where the need for everything from pedestrian connections to aviation land is established. There are extensive projections for population and land use designations. The Transportation Element of Part II contains policies related to various modes of transportation. Standards are given for collector and arterial streets, however no bicycle lane standards are included. The Plan allows some flexibility in street widths, where justification is given to support reductions. Future policies for parking and county road upgrades are envisioned. The City has a specific policy aimed at the development and maintenance of a bicycle system. The policies have not been updated to comply with the Transportation Planning Rule.

B. Umatilla County Comprehensive Plan

Chapter XV of Umatilla County's plan provides county-wide policies related to transportation. Several of these policies impact or interface with Pendleton's transportation system directly. Many of the county's 25 policies hinge on the creation of a cooperative city/county transportation master plan. The findings and policies are logically organized to protect air, rail and road systems and to promote compatible land use around these systems. The findings also support cooperative approaches between city, county and state on road planning and maintenance issues.

C. Zoning Ordinance Format

The zoning ordinance sets out separate review criteria for conditional uses (Section 132) and variances (Section 139), but sets up site plan review standards per zone. For example, Sections 100 to 104 describe the Planning Commission's site plan review process for a Planned Unit Development. Alternatively, Section 35.D.6. requires a site plan for development of multi-family housing in the "C-1" zone, without a distinct procedural section given for a site plan review. The development review procedure for permitted commercial and industrial uses lacks clarity where needed to identify opportunities for transit and pedestrian friendly development.

D. Land Subdivision Procedures

Article IV of the City's subdivision ordinance allows the Planning Director to approve minor partitions administratively. Major partitions and subdivisions are reviewed at public hearings before the Planning Commission, for tentative and final plat approval stages. The criteria under which subdivisions are approved require some interpretation and discretion.

E. Suitability Of Structure

The Transportation Planning Rule requires that cities and counties reduce reliance on the automobile and promote alternative modes such as pedestrian, bicycle and transit travel. The rule requires that local development ordinances be consistent with the objectives of the rule. Generally, this has required that new standards and policies be added to local ordinances to assure that new development and new facilities are pedestrian, bicycle and transit friendly.

In some communities, new standards have been developed to address street widths, sidewalks, connections between buildings and developments, and other similar design related concepts. These concepts are implemented through design or site plan review standards and through subdivision and partitioning standards. The City of Pendleton has a plan and ordinance structure that is supportive of many of the Transportation Planning Rule directives. Rule compliance can be achieved through new and modified standards to be implemented by: (1) modifications to the development review procedures in the City's zoning ordinance, and (2) use of the present subdivision review procedure.

RECOMMENDATIONS - GENERAL ISSUES

The following sections address the specific requirements of the Transportation Planning Rule. Each section provides a statement of the relevant issues, background information, and a recommendation.

A. Issue: Incorporation of New Standards in Development Codes/Ordinances

RULE REQUIREMENT: OAR 660-12-045 (1) - (3)

BACKGROUND/OPTIONS: To meet the requirements of the transportation planning rule, new standards need to be added and existing standards need to be modified. Other minor procedural changes also need to be added. Options for compliance are addressed below.

1. City of Pendleton Plans and Ordinances

A new Section 123 under Article XVIII, "Miscellaneous Provision for all Zones" should be added to outline a site plan review procedure. Minor site plans can be under an administrative review subsection provided the criteria are clear and objective. This new section will provide the mechanism to assist in the implementation of new and modified standards within the zoning ordinance. New and modified standards will also need to be added to the subdivision ordinance. The City and County comprehensive plans currently provide a good policy base for Transportation Planning Rule compliance, however, a specific policy should be added to state the jurisdiction's intent to implement the rule.

RECOMMENDATION: The standards within Pendleton's plan and ordinances should be modified. New separate sections addressing the Transportation Planning Rule should be adopted.

B. Issue: General Applicability For Development Review - When To Apply Standards

BACKGROUND/OPTIONS: Application of the new standards in the development review process is a key issue. The Transportation Planning Rule requires certain improvements for new commercial, institutional, and multi-family uses. It is clear that any new standards apply to new development, but applicability for redevelopment or remodeling is more complicated. In Pendleton, Ordinance No. 3481 is used to trigger development standards where certain changes to the property occur. This same ordinance can be used to ensure that TPR standards are met when established levels of expansion and reconstruction occur.

In Pendleton, an expansion of more than 15% of the property's assessed value for multiple family, commercial, public/institutional or industrial uses will require that all present development standards be met. Current compliance is also required for a change in occupancy as defined under the Uniform Building Code. It may also be helpful for Pendleton to establish an additional "trigger" that is tied to the expansion of the building or site. Other Oregon cities have used figures from 10% to 50% of site value or area of improvements as the threshold for requiring full site compliance.

Many communities often defer required street or sidewalk improvements through a waiver of remonstrance, which commits the owner/developer to future participation in a local improvement district. This procedure, while common, results in improvements that only are implemented over a very long time frame. By requiring certain improvements in the short term, the City of Pendleton can begin to make the community more pedestrian and bicycle friendly. Priority should be given to improved pedestrian access, bicycle access, and bicycle parking.

In summary, options for addressing applicability include:

1. Only new development must comply.
2. All redevelopment must fully comply.
3. Redevelopment must meet selected standards.
4. Redevelopment over 50% of assessed value must fully comply.
5. Redevelopment under 50% of assessed value must provide a percentage of the permit value toward transportation improvements.

RECOMMENDATION: Clarify within a new site plan review section of the City's zoning ordinance that standards apply to all new and substantially remodeled or enlarged development. Coordinate threshold requirements for expansion and redevelopment with local Ordinance No. 3481 to ensure consistency.

RECOMMENDATIONS - PROTECTION OF TRANSPORTATION FACILITIES AND CORRIDORS, AND SITES.

A. Issue: Access Control Measures and Standards to Protect System Operation and Airports

RULE REQUIREMENTS: OAR 660-12-045 (2) (a-c)

BACKGROUND/OPTIONS: Access control is a critical component of maintaining operation of the transportation system. ODOT manages access control on State Highways. Currently, ODOT relies on ORS 374.310(3) and OAR 734-50-030(2) and -065 to manage access. Guidelines for access are provided in the Access Management Classification System of the 1991 Oregon Highway Plan.

Under the highway plan, Highway 11, U.S. Highways 30 and 395, and Interstate Highway 84 are considered as Statewide facilities with limited access control (Category 3 and 4). Depending on the location and specific classification along each highway, public road intersections must be separated by one-quarter to one mile.

The City of Pendleton Zoning Ordinance and Comprehensive Plan do not include access standards that specifically address intersection spacing. Policy 1.A.1., Part II of the City's comprehensive plan (Comprehensive Plan, page 60) states, in part "...Freeways have full access control.". As the transportation system plan is developed, specific access spacing standards for arterial and collector streets should be established for Pendleton. These standards may depend on local circumstances and may require some degree of flexibility in application.

Another method of maintaining operation of the local transportation system is by obtaining adequate right-of-way for future improvements. The city accepts dedicated right-of-way as part of the subdivision and partition process. The standards for right-of-way dedication are listed in Policies 1.B. through 1.D., Part II of the City's comprehensive plan and in Section 31 of the City's subdivision ordinance. In addition to the subdivision and partition process, right-of-way dedications should be required as part of the development review process.

The City has airport protection zoning. Article 10 of the Zoning Ordinance and Chapter XV, Policy 18 of the county's comprehensive plan address airport issues.

RECOMMENDATION: Develop local access spacing standards as part of the transportation plan. Apply the standards as guidelines that are part of the subdivision and site review process. Include the guidelines in the City's development ordinances. Amend Pendleton's Zoning Ordinance to allow the city to require right-of-way dedication as part of its development review processes.

B. Issue: Coordinated Review with Notice to Agencies/Ability to Condition

RULE REQUIREMENTS: OAR 660-12-045 (1)(c) and (2) (d-f)

BACKGROUND/OPTIONS: The Transportation Planning Rule requires coordination and consolidation of local decisions regarding transportation facilities, services, and improvements. The rule is intended to require a clear process for decisions related to new or improved facilities, and consolidation of local government decisions into a single process when multiple jurisdictions are involved.

A joint management agreement between the City of Pendleton and Umatilla County was entered into in March, 1983 providing that the County would adopt the City's Comprehensive Plan, zoning, and subdivision ordinances for areas within the City's urban growth area. The agreement establishes a process by which the City is responsible for administering the plan and ordinance provisions, including the review of development actions, but only after the City has provided the County with notice of the proposal and the County has made comments and recommendations on the proposal.

City staff regularly refers land development proposals along state highways to ODOT for review and comment prior to final action. City procedures for site plan review, partitioning and subdivisions do not formally require any notice to ODOT.

RECOMMENDATION: Amend the City of Pendleton Zoning and Subdivision Ordinances (and include in future site plan review code amendment) to require notice to ODOT for land use actions and development actions which may affect a transportation facility or corridor.

RECOMMENDATIONS - LAND USE AND SUBDIVISION REGULATIONS

A. Issue: Bicycle Parking for Multi-Family, Commercial and Institutional Development

RULE REQUIREMENTS: OAR 660-12-045 (3)(a).

BACKGROUND/OPTIONS: Bicycle parking requirements can either be tied directly to the number of automobile parking spaces or to building size or use, as Pendleton does. Modifications to the Pendleton Zoning Ordinance, Section 119 should consider the following key issues.

1. Applicability

   The rule requires parking for new multi-family development with four residential units and new retail, office and institutional uses. Pendleton's Zoning Ordinance, Section 119 gives required bicycle parking spaces for certain uses. These standards should be reviewed and amended for compliance with the Transportation Planning Rule. For example, bicycle parking should be required for high schools and colleges in addition to the present standards for elementary and junior high schools. The new site plan review section can ensure that all new developments meet standards for bicycle parking.

2. Number and Type

   Some jurisdictions provide standards for both short and long term bicycle parking. This results in relatively complex standards. Standards may be applied as a percentage of auto parking. Typical ranges include 5% (Portland) to 20% (Ashland), with a minimum number. Other jurisdictions set bicycle parking standards in a ratio with building square footage or based upon the number of certain facilities (i.e. In Pendleton: one bicycle space per 4,000 square feet of commercial retail floor area).

3. Location

The location of a bicycle parking facility influences how often it is used. Typical standards include:

- within 50 feet of main entrance;
- closer to the entrance than the nearest auto space;
- direct access to the right-of-way; and
- dispersed bicycle parking for multiple entrances.

4. Amenities

Amenities also influence how often a facility is used. Amenity standards should specify the type of rack to be provided and whether racks are lighted and openly visible. In addition standards should address typical covered parking standards including:

- covered bicycle parking when auto parking is covered;
- covering 20%, if more than 10 spaces are required.

RECOMMENDATION: Include bicycle parking location and amenities standards as part of Section 119 of the Pendleton Zoning Ordinance. Use the concepts listed above to expand on the existing building size/use standards, or revise the method to tie the number of spaces generally to 5% of auto parking as a ratio. Reduce this ratio for land extensive uses and increase the ratio for uses such as schools and certain community recreation facilities.

B. Issue: Sidewalks and Bikeways that Provide Safe and Convenient Access Within and from New Development to Nearby Residential Areas, Transit Stops, and Activities Centers

RULE REQUIREMENTS: OAR 660-12-045 (3)(b)

BACKGROUND/OPTIONS: A primary purpose of the Transportation Planning Rule is to reduce reliance on automobiles and make other forms of transportation, such as walking and bicycling, more accessible. To do so, the rule requires sidewalks and bikeways on arterials and collectors, and separate access ways, where appropriate.

1. Sidewalks

Many developed areas within the Pendleton urban area do not have sidewalks. Although the Transportation Planning Rule requires sidewalks only on collectors and arterials, provision of sidewalks on all streets, including local streets, would further enhance opportunities for walking. With this requirement, it is assumed that older neighborhoods without sidewalks eventually will participate in local improvement districts to provide the facilities.

Section 31 of the Pendleton Subdivision and Partitioning Ordinance sets forth the level of improvement for streets and sidewalks in the urban area. Table 1 lists widths of 8 feet to 18 feet for planting, utility and sidewalk (each side) for all street types. Local Ordinance 3481 requires sidewalk placement or agreement to participate in a

Local Improvement District for future sidewalk placement (if a curb is not present) at the time a property is improved or built.

The APA Transportation Rule Working Group recommended sidewalks on both sides of all streets. The Working Group recommended that sidewalks range from a five-foot width for a setback residential sidewalk on a local street to a ten-foot width for a commercial curbed sidewalk on an arterial.

To enhance pedestrian safety and comfort, sidewalks should be set back from the curb. This orientation is not always appropriate within the downtown core or where existing right-of-ways restrain widths. However, separation of the sidewalk and curb should be a goal for new subdivisions and Planned Unit Developments.

The timing and placement of sidewalks can be an issue. Typically, from the Public Works Department perspective it is easier to maintain a sidewalk where it is adjacent to the curb. This is primarily because the tree roots can grow under the sidewalk from the intervening planting strip and cause sidewalk or utility damage. It is important to select street trees that minimize damage and to give ample width for the planting strip.

It may be appropriate to be flexible where topography dictates that sidewalks will only fit or be safe on one side. Ordinance 3481, should set out criteria to assist the City Manager in making these "waiver" decisions. Perhaps there are two types of concerns in considering adjustments: one being technical (topographic or engineering) related, and the second being for very limited local access streets where traffic is either very low or alternative, mid-block pedestrian ways replace the need for sidewalks to occur on both sides of the street. It is important to both meet the TPR objectives and customize compliance to meet local needs.

2. Bikeways

The rule requires bikeways on arterials and collectors. Bikeways should meet minimum American Association of State Highway Officials (AASHTO) standards and the standards of the 1995 Oregon Bicycle and Pedestrian Plan. To provide five-foot to six-foot-wide bikeways, right-of-way standards should be adjusted where on street parking is desired. As the local transportation system plan is completed, it will be appropriate to identify bikeways on certain local streets. Appropriate right-of-way dedication will be needed on those streets.

The Pendleton Zoning Ordinance does not require bikeways, but states that if proposed they must meet standards set by the Public Works Director. The Bicycle Master Plan does require and identify locations for bicycle facilities. The standards of the local specifications should be cross-referenced with the 1995 Oregon Bicycle and Pedestrian Plan, and adjusted as needed for consistency with state standards.

3. Connections/Accessways

Street connections and accessways between developments are important links that promote, rather than prevent, bicycling and walking. One way to create these connections is to limit the use of cul-de-sacs and to require new streets to connect with existing streets. Currently, the City of Pendleton has a 400 foot limit on the length of cul-de-sacs. Part I of the comprehensive plan discusses the need for

pedestrian access, and mid-block connections are generally discussed in the subdivision ordinance.

Changes suggested to local development ordinances include:

- requiring a future street plan for land within 400 feet on subdivision submittal requirements (add to Section 7.D. of the subdivision ordinance);
- limiting or preventing use of cul-de-sacs and restrict cul-de-sac length (amend Section 31 of the subdivision ordinance), except as needed to protect arterials (allowance under Section 28.C.2.);
- providing accessways at a minimum of 600-foot intervals (add to Section 31 and/or Section 43 of the subdivision ordinance); and
- require accessways to be a minimum of 15 feet wide with a 10-foot-wide paved surface (add to Section 31 of the subdivision ordinance).

4. Block and Street Spacing

   Block length and spacing between streets influences maneuverability through a neighborhood. Generally, shorter blocks provide easier access. Currently, the subdivision ordinance sets a minimum block length of 800 feet on arterial streets (Section 31.N.2.).

RECOMMENDATIONS: Continue to provide sidewalks on both sides of all streets consistent with the APA Working Group recommendations. Develop clear standards to allow exceptions for sidewalk on one side of the street, due to technological, topographic, or alternative compliance conditions. Use the new standards in place of or in addition to City Manager waiver provisions. Clarify standards (with graphics) to ensure minimum 5 foot wide sidewalks, and separate from roadway where feasible. Develop bikeways consistent with AASHTO and Oregon Bicycle Plan standards. Limit cul-de-sac use and develop new standards for block length and accessways, as noted above. Incorporate changes into the development ordinances.

C. Issue: Internal Pedestrian Connections - Walkway Connections Within Commercial and Office Park Development

RULE REQUIREMENTS: OAR 660-12-045 (3)(d)

BACKGROUND/OPTIONS: The rule requires provision of internal pedestrian connections in new office parks and commercial developments. Methods for meeting this requirement include:

1. At least one sidewalk connection between abutting developments should be provided.
2. Walkways should be provided to the street for every 300 feet of frontage.
3. Connections should all be direct and driveway crossings minimized.
4. Connections should be linked to the internal circulation of the building.
5. Walkways should be at least five feet wide and should be raised, have curbing, or have different paving material when crossing driveways.

RECOMMENDATION: Amend the Pendleton Zoning Ordinance, Articles VI, VII and VIII incorporating the design standards noted above. A new section addressing pedestrian improvement standards should be added. Similar standards should be included within the site plan review section proposed for Article XVIII. Develop design standards for mid-block access ways that will both protect adjacent properties and pedestrians (i.e. lighting and screening, etc.).

RECOMMENDATION - IMPROVEMENTS

A. Issue: Improvements to Facilitate Bicycle and Pedestrian Travel

RULE REQUIREMENT: OAR 660-12-45 (6)

BACKGROUND/OPTIONS: The Transportation Planning Rule requires identification of improvements to facilitate bicycle and pedestrian travel in developed areas. Improvements should provide more direct, convenient, and safe bicycle and pedestrian travel within and between residential areas and activity centers.

Specific improvements should be part of a Transportation System Plan. The standards discussed above will help facilitate development of improvements. One method that has been used in other jurisdictions to create more pedestrian friendly streets is to narrow street width along local streets. Narrowing street width has the effect of slowing traffic and creating a more compact and efficient development pattern. Slower speeds reduce conflicts with bicycles operating within a shared roadway. The narrower pavement width allows additional space within the excess right-of-way to separate the sidewalk from the curb. Currently, the required local street width for Pendleton is 36 feet (Section 31 of the City Subdivision Ordinance). Typical widths for narrower pedestrian friendly streets range from 24 to 32 feet in width. Pendleton allows narrower streets, generally 32 feet, to be requested during the tentative plan stage.

RECOMMENDATION: Include the Pendleton Bicycle Master Plan as part of the Transportation System Plan. Consider reducing the minimum required local street widths where bicycles use a shared roadway. Encourage sidewalk separation from the curb, and require separate mid-block access ways where feasible.

Local Policies

STANDARD SPECIFICATIONS FOR THE CITY OF PENDLETON

The Standard Specifications document includes standards for the construction of new streets and sidewalks within Pendleton. Table 4 identifies the standards for the construction of new streets.

Table B-4

Construction Standards: New Street

Roadway Classification	Minimum Pavement Width	Minimum Right-of-Way Width	Maximum Allowable Grade
Arterial	44'	60'	8%
Collector	36'	60'	12%
Minor	36'	60'	15%

In addition, all new cul-de-sacs are to have a maximum length of 400' (from the center line of the roadway to the center line of the cul-de-sac), an 80' minimum diameter for pavement width and a 90' minimum diameter for right-of-way.

New sidewalks in residential and industrial areas are to be constructed with a 4' width along collector and minor streets and a 5' width along arterials. New sidewalks in commercial areas should be constructed between the curb and gutter and the property line.

As part of the development of the TSP, the potential for providing flexibility in the pavement width requirements of a minor street will be evaluated. In addition, the TSP will include recommendations for increasing the required width of sidewalks in residential and industrial neighborhoods from 4' to 5' along collector streets.

CITY OF PENDLETON CAPITAL IMPROVEMENT PROGRAM (1995 - 2000)

Each project identified in the Capital Improvement Program (CIP) is classified into one of eleven categories, based on project type. The potential funding sources and the fiscal year in which the project should be implemented is also identified. The following types of projects are identified in the CIP:

- Airport
- Fire
- Ambulance
- City Manager
- Finance
- Parks, Recreation, and Cemetery
- Sewer
- Water
- Streets
- Engineering
- Library

The projects that are applicable to the TSP include those found in Airport, City Manager, Parks, Recreation, and Cemetery, and Streets.

Airport

Several improvements are identified for the airport over the next 5 years. The improvements implemented during fiscal years 1997/98 - 1999/2000 are to be determined following the completion of the Airport Master Plan. Specific highlights of the projects designated for fiscal years 1994/95 - 1996/97, as they relate to transportation, include the provisions for enhanced handicapped access at the airport.

City Manager

Several community enhancement projects are identified within the City Manager's CIP list; one project is relevant to the Transportation System Plan efforts. During fiscal year 1995/96, the city is planning to begin "planning, designing, and implementing a local communications network based upon a public-private-nonprofit partnership". This may provide additional telecommuting opportunities as well as provide an information / data transfer link to other communities.

Parks, Recreation, and Cemetery

The CIP identifies improvements as part of the River Parkway Project Phases IV and V that will increase the availability of off-street paths for pedestrians and cyclists. The CIP also identifies sidewalk improvements at Til Taylor Park and Brownfield Park as well as outdoor lighting and parking improvements at McKay Neighborhood Park. All of these projects will provide improvements to the existing pedestrian and bicycle system in Pendleton and will enhance the access for handicapped users of the parks.

Streets

The CIP targets an annual operating and maintenance budget of approximately $200,000 to maintain the existing street system within the city, including overlay, sealing, storm sewer, and major construction of city streets. In addition, the CIP identifies an annual budget of approximately $21,000 to maintain the existing bicycle facilities and to implement the remainder of the improvements identified in the Bicycle Master Plan (Mitchell & Nelson, 1981), including additional bicycle lanes and bicycle parking. The CIP also identifies five specific roadway improvement projects as outlined below:

- The 8th Street Bridge is scheduled to be replaced as a collector facility in Fiscal Year 1997/98. This bridge replacement has been identified to serve future development on the North Hill.
- The Westgate Improvement Project includes widening Westgate to provide an additional westbound lane from the Industrial Park access at EOCI to the I-84 interchange, improving access road turning radiuses, and providing an acceleration lane for eastbound traffic at the intersection. This improvement project is expected to be completed during Fiscal Year 1995/96.
- The SW 20th Street improvement project will include the widening of SW 20th Street to five lanes from Emigrant to 200' North of Court and extending SW 20th Street to

Westgate. The extension project will include the construction of an at-grade or a grade-separated rail crossing.

- The SW 37th Street and SW Hailey Avenue Improvement project includes the widening of these streets to collector street standards (44' pavement width) with bicycles lanes, curbs, gutters, and sidewalks. During Fiscal Year 1997/98, SW 37th Street will be improved between SW Hailey Avenue and SW Kirk and SW Hailey Avenue will be improved between SW 29th Street and SW 37th Street.
- The Barnhart Road Improvement Project will include the construction of a second access to the Pendleton Airport Industrial Park via exit 202 on I-84. This project, scheduled for Fiscal Years 1998/99 and 1999/2000, is intended to enhance the development of the Industrial Park and to provide an alternative to the Airport Road access that will be easier for trucks to negotiate.

All of the street improvement projects will provide enhanced access to destinations and safer facilities for all users of the transportation system.

CITY OF PENDLETON COMPREHENSIVE PLAN

The City of Pendleton Comprehensive Plan, adopted on January 27, 1983 and updated on May 1, 1990, was developed to address two primary objectives:

> "To meet the requirements of ORS 197 and subsequent State of Oregon Land Conservation and Development Commission nineteen (19) goals."
>
> "To develop workable policies to guide the City's development and growth."

The Comprehensive Plan was developed based on Constantinos A. Doxiados' theory of Ekistics. This theory states that every human settlement is comprised of five basic elements: Man, Nature, Society, Shells, and Networks. Accordingly, the Comprehensive Plan is divided into five major sections corresponding to the five basic elements of human settlement. The issues relevant to the development of a Transportation System Plan are addressed in Section III (Society) and Section V (Networks).

Society

According to the Comprehensive Plan, the city was incorporated in 1880 at a time during which the population was estimated at 730. At the time of the city's centennial (1980), the population was estimated at 14,500 which equates to an average annual increase of 18.9 percent. By 1988, it was estimated that the city represented approximately 25 percent of Umatilla County's population. The Comprehensive Plan also provides estimates of 2010 population based on low, medium, and high growth trends. According to the growth estimates, the city's population is expected to be between 19,000 and 26,000 by the year 2010.

Networks

The Network portion of the Comprehensive Plan addresses transportation, utilities, and communication. The transportation section deals with the following modes of transportation: sidewalks, horse, bicycles, roadways, taxi, bus, truck, railroads, and airport.

Sidewalks

The first sidewalks in the City of Pendleton were constructed attached to buildings as boardwalks with wood awnings. In 1922, the city established the first standards for sidewalk construction and required 4' wooden sidewalks adjacent to the property line with a 6' - 10' planting strip constructed between the sidewalk and the curb. In 1960, the current standard for sidewalks was established with the following requirements:

- Sidewalks must be constructed between the curb and the property line in commercial areas.
- In residential and industrial areas, 4' sidewalks must be constructed along collector and minor streets and 5' sidewalks must be constructed along arterial streets. Sidewalks must be constructed adjacent to the curb in industrial areas and within the right-of-way in residential areas.
- Sidewalks must be constructed on both sides of the street as part of new roadway construction except where there are significant topographic constraints.
- Sidewalks must be maintained by the adjacent property owner.

Although the current standards were established in 1960, there are several areas within the city that have been developed without sidewalks.

Horse

When the City of Pendleton was platted in 1868, the primary mode of transportation, in addition to walking, was the horse. As the city has developed over the last 125 years, the horse has continued to play an important role in the city, especially as part of the Pendleton Round-Up. Although there are no designated bridle paths in the city, a city-wide needs survey conducted in 1977- 1978 indicated that nearly half of the people surveyed felt that bridle paths should be an integral part of the Umatilla River Parkway.

Bicycles

The first bicycle route in the City of Pendleton was designated in 1979 along the shoulder of US 395 (Southgate) for about 4 miles. A citywide needs survey conducted in 1977/1978 indicated that 80 percent of those surveyed felt that the development of bicycles routes throughout the city was an important safety improvement. In 1981, Mitchell & Nelson Associates developed a Bicycle System Master Plan for the City of Pendleton that designated a total of 45.1 miles of bicycle lanes, routes, and paths within the urban growth area. As of 1988, the city had constructed a total of 17.5 miles of the 45.1 mile system. During the last 7 years, the city has continued construction of bike paths, lanes, and routes throughout the city.

Roadways

Within the Pendleton urban area, roadways are classified as either freeway, arterial, collector, or minor.

The primary function of a *freeway* is to provide for "the expeditious movement of large volumes of traffic between, across, around, or through a city, region, or state" and is a divided highway with full-access controlled.

The primary function of an *arterial* is to provide for the movement of traffic "between areas and across portions of a city or region, direct service to principal generators, and connect to the freeway expressway system". Since the primary function of arterials is the movement of traffic, these roadways are subject to the regulation and control of parking, turning movements, entrances, exits, and curb uses.

The primary function of a *collector* is to provide for the movement of traffic between "arterials, activity centers, and neighborhoods. Collector streets are intended to provide access to abutting land.

The primary function of a *minor* street is to provide access to adjacent lands. Minor streets are not intended to carry through-traffic. A *cul-de-sac* functions as a minor street with a turn-around.

The City of Pendleton contains five roadways that are under federal or state jurisdiction, including: I-84, US 395, US 30, Highway 11, and Highway 37. Umatilla County has jurisdiction over several roadways within the city. Generally these roadways are in areas that have been annexed by the city and all are substandard.

The Comprehensive Plan outlines the construction standards for the roadways that are under the jurisdiction of the city. The standards, shown in Table 5, were established in order to accommodate the functional utilization of the roadway

Table B-5

Roadway Cross-Sections

Right-of-Way	Pavement Width	Travel Lanes	Parking Lanes	Planting, Utility, and Sidewalk Areas (Each Side)
		Arterial Streets		
60'	44'	2 - 12'	2 - 10'	8'
80'	44'	2 - 12'	2 - 10'	18'
80'	56'	4 - 12'	1 - 8'	18'
80'	64'	4 - 11'	2 - 10'	8'
100'	80'	5 - 12'	2 - 10'	10'
		Collector Streets		
60'	36'	2 - 10'	2 - 8'	12'
60'	44'	2 - 12'	2 - 10'	8'
80'	44'	2 - 12'	2 - 10'	18'
		Minor Streets		
60'	24'[1]	2 - 12'	None	18'
60'	36'	2 - 10'	2 - 8'	12'
60'	44'[2]	2 - 12'	2 - 10'	8'

1 The pavement width shall only be permissible on dead-end streets with a cul-de-sac and approved by the Planning Commission.

2 Where the street serves partially as a Collector and has been so designated by the Planning Commission and approved by the City Council.

As shown in the table, currently there are no provisions for center turn lanes or parking restrictions on collector streets. The roadway standards for collector, arterial, and minor streets will be evaluated as part of the development of the TSP.

According to the Comprehensive Plan, roadways can be improved by subdivisions, federal grants or revenue sharing, bonds, or the formation of local improvement districts.

The Comprehensive Plan also contains a list of transportation improvement projects that are outlined in the Public Facilities Plan.

Bridges

The waterways in the vicinity of the City of Pendleton include the Umatilla River, Tutuilla Creek, McKay Creek, McKay Reservoir

Six primary bridges have been constructed in the City of Pendleton: Main Street Bridge, Tenth Street Bridge, Eighth Street Bridge, the Highway 11 bridge, the Highway 30 bridge, and the McKay Creek / Quinney Avenue bridge.

Taxi

According to the Comprehensive Plan, the city has been served by one taxi cab company since the late 1950's. Senior Citizens are provided with a reduced rate through city subsidies.

Bus

In 1926, the City of Pendleton was provided with it's first bus service by Columbia System with a route between Pendleton and Portland. In 1927, service was expanded to Walla Walla by Up Stage, Inc. Both companies were bought by the present Greyhound Company which still serves the city today. According to the Comprehensive Plan, Greyhound provides bus service between Pendleton and Portland three times a day, between Pendleton and Boise / Salt Lake City three times a day, and between Pendleton and Walla Walla / Lewiston / Spokane once a day.

In 1981, the city adopted the Public Transportation Development Plan (STRAAM Engineering) which recommended the integration of a fixed route system with 40 minute headways (20 minutes during peak hours), a private taxi service, and a dial-a-ride program. However, the implementation of the plan was postponed because of the current economic conditions and to provide time for the new taxi service to get established. The city has yet to implement the fixed route system intended to serve people of all ages. According to the Comprehensive Plan, the East Central Oregon Association of Counties , through its Area Agency on Aging, provides fixed route weekday service (four hours per day) to people over the age of 60. The bus is primarily used to provide people with access to activities and meals at the Pendleton Senior Center.

Truck

According to the Comprehensive Plan, the City of Pendleton is served by three truck package hauling lines (ANR Freight Systems, Inc., Eastern Oregon Fast Freight, Inc., and United Parcel Service), two independent trucking firms (Markle Truck Line and Caldwell Trucking) and two moving companies (Larsen Transfer [United Van Lines] and Pendleton Transfer [Atlas Van Lines]).

Railroads

Rail service was first provided to Pendleton in 1882 by Oregon Railway and Navigation Company (now Union Pacific) with a line between Pendleton and Portland. Today, freight service is provided by Union. Passenger Service is provided by AMTRAK between Pendleton and Salt Lake City / Boise and between Pendleton and Seattle / Portland. In 1977, the number of public railroad crossings in the City of Pendleton was reduced from sixteen to twelve.

Airport

The Pendleton Municipal Airport has played an important role in the development of the city. In 1934, the Pendleton Airport was opened. In 1941, the airport was converted to a US Army Air Base and was used by General Doolittle's Flight Wing as its training site prior to the Tokyo Raid. During the war, several structures were constructed at the airport for supplies, housing,

maintenance, recreation, etc.. The Federal Government returned control of the airport and all of the associated facilities back to the City of Pendleton in 1949, after the end of World War II with a reversionary clause in the time of war. Some of the buildings constructed during the war are still used today for storage, small businesses, and multi-family housing (conversations with current City of Pendleton staff indicate that the city is trying to phase out use of the buildings for housing purposes). Passenger service at the airport was first provided in 1946 by Empire Airlines. United Airlines served the city during World War II and continued service until 1981 when economics caused the city to lose the major carrier's service. Today, commuter service is provided between Pendleton and Portland, Walla Walla, Pasco, and Seattle by Horizon Airlines. According to the Comprehensive Plan, the airfield is also home base of approximately 60 locally owned aircraft, one full service fixed base operator (FBO), one multi-service FBO, one single-service FBO, and two crop dusting services.

Pipeline

According to the Comprehensive Plan, electricity has been provided to the City of Pendleton by Pacific Power & Light Company since 1918; currently, natural gas is provided to the city by Cascade Natural Gas Corporation. The Bonneville Power Administration supplements power to Pacific Power & Light Company and provides power to the Umatilla Electric Co-op which serves the surrounding rural areas.

Other

The Comprehensive Plan also identifies the location of all Neighborhood Activity Centers (i.e., parks and elementary/junior high schools), Tourist Activities (i.e., the Pendleton Round-Up, the Pendleton Woolen Mills, the Vert Museum, etc.), and Special Recreation Areas (i.e., Blue Mountain Community College, Pendleton High School / Municipal Pool, Babe Ruth Field, the River Parkway, McKay Reservoir, etc.). This information will be especially helpful in the assessment of the existing and future pedestrian and bicycle facilities in addition to the assessment of the vehicular access to these areas.

PUBLIC FACILITIES PLAN

The Pendleton Public Facilities Plan, adopted on April 17, 1990, was developed in attempts to identify future infrastructure needs associated with the following long-term pressures:

- An expected population of 20,500 in the year 2010.
- A moderate rate of housing growth.
- New industrial developments near Eastern Oregon Correctional Institution, the airport, and along Old Rieth Road.
- New commercial developments in the downtown, Indian Hill, the Southgate area, and in the Melanie Square Area.
- Air National Guard growth and the possible return of jet air service.
- Future expansion of industry within the Eastern Oregon Correctional Institution (EOCI) that may lead to an expansion of EOCI to accommodate a larger inmate population.

- Further development of "Tourist Trade" and the Pendleton Convention Center.

The composition of housing assumed in the development of the Public Facilities Plan was 60 percent single-family, 6.5 percent duplexes, 23.5 percent multi-family, and 10 percent manufactured housing; the assumed composition of employment was: 74 percent commercial (central and service), 24 percent tourist oriented, and 2 percent aviation oriented.

The Public Facilities Plan provides the same definition of arterial, collector, and minor streets that is provided in the Comprehensive Plan. The Public Facilities Plan also provides a comprehensive inventory of the freeway, arterial and collector street system in Pendleton. The inventory includes the pavement condition, approximate roadway capacity, right-of-way width and pavement width and identifies what the pavement and right-of-way width should be if the existing roadway is sub-standard.

The Public Facilities Plan also provides an inventory of the primary function, pedestrian walkways, pavement condition, deficiencies, responsible jurisdiction, and the waterway the bridge spans over for each of 28 existing bridges (six of which are on the Federal Bridge Inventory) within the City of Pendleton. The Public Facilities Plan also identifies seven bridges that are proposed within the city.

The Public Facilities Plan also identifies the following providers of mass transit in the Pendleton area: Pendleton Taxi Service, the Senior Citizen Taxi Program, the ECOAC Senior Citizen Bus Service, the Pendleton Bus Company (school bus service), hotel shuttle buses for the Tapadera Inn and the Red Lion Inn, Greyhound. It also identifies the following intercity public transportation providers: Greyhound, Pendleton Bus Company Charters, Horizon Airlines, local charter aircraft services, and AMTRAK.

The Public Facilities Plan also identifies funding sources for new roadways, collectors, bridges, mass transit, and the airport.

Finally, the Public Facilities Plan identifies several existing and long-term deficiencies that need to be addressed, many of which center around necessary improvements to Southgate, Court, Dorion, SW 20th, and Westgate, necessary bridge improvements, necessary pedestrian and bicycle improvements and necessary improvements to the access to industrial parks near the airport and the EOCI. The Public Facilities Plan also iterates the long-term goal of the city to complete an arterial loop around the city that is intended to provide better connection between the different areas of the city

1980 GENERAL PLAN OF HIGHWAY AND STREET IMPROVEMENTS

The 1980 General Plan of Highway and Street Improvements was developed for the City of Pendleton by ODOT in 1973. The plan summarizes the results of an origin-destination survey conducted at five locations near the urban growth boundary along US 30, US 395, Highway 11, and Highway 37. Based on the results of the origin-destination survey and forecasts of future (1980) travel in the city, the plan recommended widening projects along Court Avenue, Westgate Avenue, US 395, Hailey, the Highway 11 bridge, the Main Street bridge and the 10th Street bridge. Currently, the improvements on the Main Street bridge, Highway 11, US 395, Hailey Avenue, and the 10th Street bridge have been implemented.

SW PENDLETON TRAFFIC SAFETY PLAN

In the late 1970's, the frequency of motor vehicle accidents in southwest Pendleton significantly increased from previous years; therefore, the SW Pendleton Traffic Safety Plan was completed to identify existing and future capacity and safety deficiencies and corresponding mitigation measures. According to the plan, the most critical areas in southwest Pendleton from a safety and capacity standpoint were the intersection of Westgate / Court / Dorion Avenues and the intersection of SW 20th Street and Emigrant Avenue. The Traffic Safety Plan also outlines an implementation schedule corresponding to a desired year 2000 roadway system. One of the primary recommendations of the plan, in addition to improvements at the two critical intersections, was the development of a loop road connecting the southwest and southeast neighborhoods with the intersection of Northgate / Westgate. Currently, the arterial loop road has not been constructed.

PENDLETON URBAN AREA PUBLIC TRANSPORTATION DEVELOPMENT PLAN

The objective of the Pendleton Urban Area Public Transportation Development Plan (STRAAM ENGINEERS, 1981) was to develop a public transit plan to serve the Pendleton urban area. The transit plan recommended a fixed route transit system with 40 minute headways (20 minutes during the peak hours), a new taxi service, and integrating the senior bus on a dial-a-ride basis with the taxi dispatch system. However, because of economic conditions the City of Pendleton has not implemented the recommendations of the study. The feasibility of integrating the senior bus and the taxi dispatch system will be re-examined during the development of the TSP.

PENDLETON RETAIL CENTER LONG-RANGE TRAFFIC IMPACT ANALYSIS

The Pendleton Retail Center Long-Range Traffic Impact Analysis (Kittelson & Associates, Inc., 1993) was conducted to assess the impacts associated with the redevelopment of the Harris-Pine Mill Site located in the northwest corner of the SW 20th Street / Court Avenue intersection. The report provides a comparison of existing and future transportation system needs under the existing industrial zoning and the full development of the proposed retail center. According to the analysis summarized in the report, in order to accommodate the full build-out of the retail center in 2015, the following improvements should be made to the surrounding transportation system:

- Additional travel lanes are needed on the Emigrant Avenue / Frazer Avenue one-way couplet from the I-84 westbound ramps east past SW 20th Street.
- A seven-lane cross-section on US 395 will be needed between Hailey Avenue and the I-84 westbound ramps.
- Traffic Signals will be warranted at the Emigrant/Frazer Avenue One-Way Couplet / 17th Street intersection and the US 30 / Cold Springs Highway intersection.

To accommodate full build-out of the retail center, the following improvements should also be made:

- SW 20th Street should be five lanes between Dorion and Court Avenues

- Traffic signals will be warranted at the intersection of Frazer Avenue and the I-84 westbound ramps and at the intersection of Highway 395 and the I-84 eastbound ramps.

The findings of the Retail Center Traffic Impact Analysis will be reviewed as part of the development of the recommendations for the SW 20th Street extension.

BICYCLE SYSTEM MASTER PLAN

The City of Pendleton Bicycle System Master Plan was developed in 1981 (Mitchell & Nelson Associates) to identify future bicycle paths, lanes, and routes as well as to identify ways to provide safe and secure bicycle parking throughout the city and to develop a safety education program. The master plan identifies 0.7 miles of bicycle paths, 2.0 miles of long-range bicycle paths, 17 miles of on-street bicycle lanes, 2.7 miles of long-range bicycle lanes, 18.4 miles of bicycle routes, and 4.3 miles of long-range bicycle routes for a total system of 45.1 miles of bicycle facilities within Pendleton. Long-range facilities are to be made as a part of new roadway construction.

As part of the development of the Pendleton TSP, the Bicycle System Master Plan will be reviewed to ensure that existing and future bicycle facilities will adequately serve cyclists in the City of Pendleton through the year 2015.

PENDLETON URBAN AREA COORDINATED TRANSPORTATION FOR THE ELDERLY AND DISABLED STUDY

This study was conducted by Eastern Oregon State College (1990) to determine the transportation needs of the elderly and disabled in the City of Pendleton. According to the study, the following improvements are needed:

- A policy-making group should be established to develop, test, and operate a coordinated elderly and disabled transportation service.
- A plan should be developed that integrates the senior bus on an advance registration basis with the taxi dispatch system.
- An advance reservation system should be provided using a multiple-origin to multiple-destination service pattern for the elderly and disabled. This would provide weekday service to the Pendleton Senior Center, service to shopping two days a week, service to medical facilities two days a week, and periodic service to community events.
- The feasibility of providing service for the disabled to job sites should be investigated.
- The city should seek funding from external sources to implement a trial cooperative transportation program.
- A drivers' training program should be provided based on a service standard agreed to by all participating agencies.

The current transportation services for the elderly and the disabled will be examined as part of the development of the TSP.

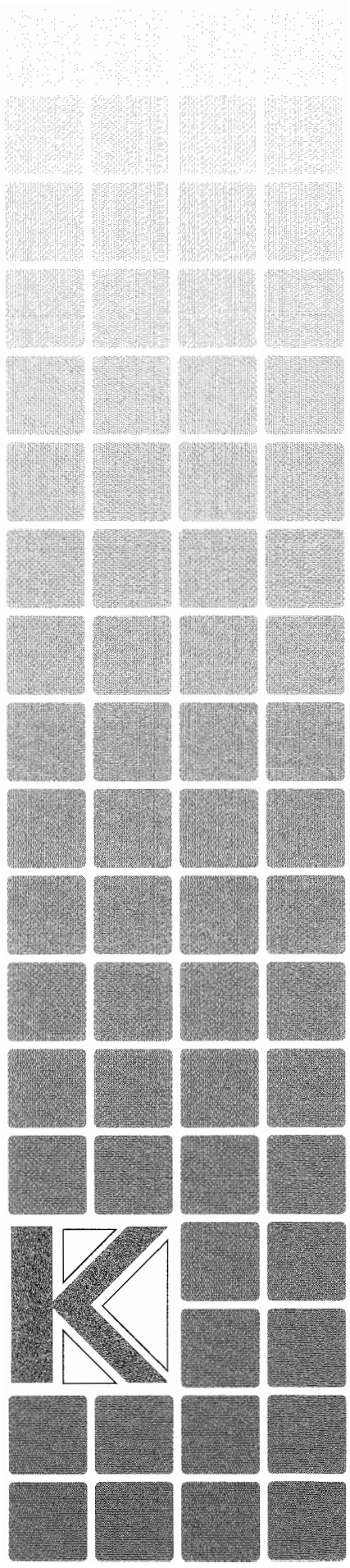
VISION QUEST '94

Vision Quest '94 (PacifiCorp Economic Development Department, 1994) includes recommendations regarding "the approach and direction that should be taken in the future cultivation of [Pendleton]." The vision statement encompasses Arts / Entertainment, Economic Development, Education, Family and Quality of Life, Health Care, Heritage and Diversity, and Public Services and Government.

The recommendations made to improve the transportation system in Pendleton included:

- Off-ramp access for the Pendleton Industrial Park
- Barnhart Road truck route
- Multi-level parking on the backside of City Hall
- Increased use of and improvements to the airport
- Improvements to the existing taxi service
- Shuttles to the airport, convention center, downtown, and the gaming facility
- Completion of the River Parkway
- Improved accessibility for all users of public facilities
- Improved rail crossings

The recommendations made as part of the Pendleton Transportation System Plan will be compared to the Vision Statement to ensure that the technical and policy decisions of the TSP are consistent with the future goals of the community.



Appendix C

Stakeholder Interviews

Stakeholder Interviews

INTRODUCTION

In May 1995, stakeholder interviews were conducted with 21 professional, civic, community and business leaders throughout the Pendleton area. Twenty-eight key stakeholders were originally identified by City of Pendleton and Umatilla County staff. Stakeholder interviews for the Highway 395 Corridor Strategy Plan were conducted concurrently with the Pendleton TSP. Where possible, surveys were expanded to accommodate people who could speak to issues for both studies.

Interviewees were asked a series of questions about transportation issues in the Pendleton area. The questions were divided into eight categories, including:

- Circulation and Congestion
- Safety
- Bicycle and Pedestrian Facilities
- Transit Services
- Parking
- Truck Traffic
- Financing Improvements
- Reducing Auto Dependency.

OVERALL FINDINGS

Overall, no single major issue was identified as a result of the interview process. However, a few specific problems and locations were mentioned frequently by interviewees as dangerous, confusing or poorly designed. The most frequently mentioned problem location was the intersection of Court, Dorion and Westgate and the nearby railroad crossing. This is near the location of a proposed retail development at the former Harris Pine site. Several of those interviewed expressed concerns about growth in that area and how it would impact traffic flow and safety at that intersection. The area is already perceived as being dangerous and difficult to navigate. Other frequently expressed concerns or problem locations included: SE Court Avenue from SE 10th to SE 14th (at the viaduct) near Union Pacific, the off ramp from I-84 onto Southgate (Highway 395), the Melanie Square area, and safety at railroad crossings in general.

TRAFFIC FLOW AND CONGESTION

Seven questions were asked about circulation and congestion problems in the city. The first question asked about problems with local versus through traffic. Most respondents considered local traffic to present the biggest problem, saying that I-84 allowed most of the through traffic to by-pass the city. A few respondents felt that both through traffic and local traffic are problematic in the city; one person thought that much of the through traffic is on Southgate (Highway 395).

The second question asked the stakeholders to identify the most difficult congestion points in the city. The most frequently mentioned area was the intersection of Court, Dorion and Westgate and the nearby railroad crossing. Other frequently mentioned locations included: the off ramp from I-84 onto Southgate (Highway 395), SE Court Avenue from SE 10th to SE 14th (at the viaduct) near Union Pacific, the Melanie Square area, and railroad crossings in general. Three of those interviewed mentioned potential problems in the industrial area off Barnhart Road. The development of Guerdon Homes and the expansion of the Eastern Oregon Correctional Institute are both expected to increase traffic in the industrial area. Other locations that are thought to be difficult or dangerous congestion points in the city include: the intersection of Court and 20th, Westgate, especially during shift changes, and the intersection of Southgate and Tutuilla Road especially during inclement weather conditions.

One respondent felt that the most important issue for the plan to address was the re-routing of Highway 395 through Pendleton. The respondent felt that, in order to alleviate through traffic problems on Southgate, the highway should be moved to the west, using a bridge over the railroad tracks south of the John Deere facility and reconnecting near McKay Dam.

The third and fourth questions asked if there are locations either inside or outside the city which are difficult to get to. Most respondents said no to both questions. A few people felt that the North Hill and Melanie Square areas are difficult to reach. Other problematic areas mentioned include: the Sherwood area, the Pendleton Convention Center, and the Pendleton Woolen Mills. Some respondents felt that better timing of the traffic signals would allow for a smoother traffic flow on Court and Dorion. One person felt downtown was difficult to get to. Several people mentioned that the one-way streets through the downtown make it confusing for newcomers and visitors to Pendleton.

The fifth question asked what improvements should be made to improve traffic flow during special events such as the Pendleton Round Up. Most of those interviewed said that little could be done and that, since the Round Up occurs only once a year, it was something the community could live with. One respondent said that as time goes on, streets will need to be widened to accommodate traffic flows for both regular use and special events. Another respondent said that improved railroad crossings, including another under or over-pass, would help alleviate traffic problems. More parking and better signing (including both directional and facility signs) are needed to smooth the traffic flow during the event. One person said the one-way streets made it easier to get around during the Round-up.

The sixth question asked about the potential impacts of new development, such as the proposed retail development at the former Harris Pine site or the Wildhorse Gaming Resort. Most of the respondents mentioned existing traffic problems near the former Harris Pine site and were concerned about the impact of the extra burden created by retail development. The Harris Pine site is located near the intersection of Court, Dorion and Westgate near an at-grade railroad crossing. Most respondents said that they expected I-84 to handle the majority of the traffic for the Wildhorse Gaming Resort.

The final question about traffic flow and congestion asked how railroad crossings and I-84 impact traffic in Pendleton and where improvements are needed to remedy those problems. Again the most frequently mentioned site was the at-grade railroad crossing near the intersection of Court, Dorion and Westgate. Several people said that an over or under-crossing is needed at this location. One person recommended the extension of SW 20th as a through street and said that connecting SW 20th to Westgate with an under- or over-crossing is proposed in

the long-range plan. Other locations mentioned include the poorly surfaced railroad crossing near Melanie Square and the Frazer/Emigrant crossing, which is disruptive to traffic flow.

Many of the stakeholders felt that rail crossings are a major problem in the city. The railroad tracks divide the city of Pendleton and not only are trains frequent, but the process of switching engines results in blocked crossings in the downtown area several times each day. In addition, at least one respondent said that problems with the railroad crossings are not always handled quickly. After one of his drivers had sat at crossing for 15 minutes with no train, and phone calls to the railroad and police yielded no response, one of the stakeholders said he drove to the crossing and lifted the crossing arm by hand.

Most respondents said that I-84 posed no problems in Pendleton but a few mentioned the problems at the on/off ramps at Southgate. The area is perceived as being confusing and dangerous. There are also some peak hour traffic problems which might be remedied with a traffic signal at the westbound exit from I-84 onto Westgate.

SAFETY

Three questions were asked about safety. The first two questions asked what safety problems the plan should address and where traffic accidents usually happen. Again the majority of respondents noted the intersection of Court, Dorion and Westgate and the nearby railroad tracks. This intersection is considered confusing and unsafe and the location of the railroad tracks in the area further compounds the safety and circulation problems. Many of those interviewed recommended the addition of an over- or under-crossing for the railroad to help alleviate some of the problems. The viaduct on the east end of town was the next most frequently mentioned safety problem; many respondents felt that better signing could help alleviate the confusion and resultant safety problem.

One, multi-part question asked about through traffic in neighborhoods and how that problem might best be addressed. With few exceptions, most respondents said that they were not aware of through traffic as being problematic in neighborhoods. However, some respondents mentioned the area near McKay school, Quinney Avenue in the Rice Addition, and streets intersecting Furnish Avenue in the North Hill area where people often do not observe the yield signs (to avoid stopping on hills) or travel too fast as problematic areas. One respondent referenced several streets that are designed with a wide pavement width to facilitate traffic flow; however in neighborhoods, the associated traffic flow and associated speeds presents a potential safety problem. The streets identified include: NW 10th and 12th Streets, SW 37th, SW Marshal, NW Carden, NW Despain, and SW Hailey.

An additional, two-part question was asked about traffic calming. Most of those interviewed felt that traffic calming was useful. A few of those interviewed mentioned specific streets where traffic calming might be effective such as: Furnish Street; SW Quinney near the school (4000 to 4400 block); 10th Street; SW Perkins Avenue; NW 4th, 5th and 12th Streets; Despain; in the downtown residential areas; and near all schools. A few of those interviewed felt that traffic calming in general was an unnecessary impediment to traffic.

BICYCLE AND PEDESTRIAN FACILITIES

Three questions were asked about bicycle and pedestrian facilities. The first two questions dealt with the adequacy and use of existing bicycle and pedestrian facilities and the third dealt with locations where improvements might increase their use. Most respondents felt that the existing facilities were adequate and well used by the community. One respondent said that additional bike parking facilities are needed around shopping and business areas.

TRANSIT SERVICES

Three questions were asked about transit services. The first two questions dealt with the adequacy of existing services and the need for service expansions. No public transit service is available for the general population; only a private taxi service is in operation. While many of those interviewed felt that the population base, winter weather conditions, and independent spirit of people in Pendleton could not support a public transit system, others felt that additional services are needed. One of the stakeholders felt that a Dial-A-Ride style service is needed to serve the general population as well as the elderly and disabled. Another stakeholder suggested a fixed route bus line which would primarily serve the North Hill residential area and downtown businesses. Another stakeholder felt a shuttle to serve tourists and shoppers, perhaps in conjunction with the Wildhorse Gaming Resort could be useful in Pendleton.

The third question dealt with special transportation needs, such as services for the elderly and disabled. The city and county contract with Elite Taxi Service to provide transportation for the elderly and disabled through the use of a city/county owned handicapped equipped van. Rides are allotted to qualified applicants on a quarterly basis depending on the number of applicants and the funds available. Participants receive a set number of vouchers for rides. Each voucher or ticket plus $1.50 allows the participant to get one, one-way ride anywhere in the Pendleton Urban Growth Area. The van is also used by the senior center five days each week to bring seniors to a meal site for lunch. Most respondents said they were not very familiar with services provided to the elderly and disabled, but believed that transportation services were adequate.

PARKING

Interviewees were asked if there were parking problems in the city and what methods should be used to remedy those problems. Several respondents said parking is a problem in downtown Pendleton. The problem is believed to be a result of people over-extending the allotted times and downtown employees parking on the street. Interviewees suggested putting in meters or lots and prohibiting the employees of downtown businesses from parking on the street. Other respondents felt that parking is not a problem as it is usually available with one block of people's destinations.

TRUCK TRAFFIC

One question was asked about problems with truck traffic on city streets. The majority of respondents felt that trucks are not a problem. Most trucks pass through the area using I-84 and only trucks making local deliveries or pick-ups use city streets. There is some through truck traffic on Southgate (Highway 395).

Two of those interviewed expressed concerns about the industrial area west of the airport. The area is growing quickly and several new companies and jobs are locating there. Another access road, in addition to the existing Barnhart Road, will be needed to alleviate the anticipated congestion for both trucks and cars.

FINANCING

Stakeholders were asked about the financing of and financial responsibility for new transportation system improvements identified by the Transportation System Plan.

When asked who should be financially responsible for transportation system improvements, most of those interviewed responded that a combination of sources would be appropriate. Listed below is the frequency of responses regarding who should pay for new transportation system improvements:

- Users - 8 responses
- Developers - 5 responses
- Unspecified Combination - 2 responses
- General Public - 4 responses
- State and Local Government - 2 responses

When asked how the improvements should be financed, most of those interviewed said a combination of sources would be appropriate. Following is the frequency of responses regarding financing sources:

- User Fees or Gas Tax - 9 responses
- Lottery Dollars - 1 response
- System Development Charges - 4 responses
- Revenue Bonds - 3 responses
- General Obligations Bonds - 5 responses
- State Highway Funds - 1 response
- State Bicycle Funds - 1 response
- Retail Sales Tax - 1 response
- Unspecified Combination of Sources - 1 response

REDUCING AUTO DEPENDENCY

Finally, interviewees were asked to suggest the forms of transportation that would be most appropriate as the region grows and the best ways to reduce auto dependency. Most interviewees said that because of the rural nature of the area and the inclement weather, private vehicles will probably continue to be the primary mode of transportation. A few of those interviewed encouraged further discussion of some type of public transit system to serve the Pendleton area.

Following is a list of the interview questions, a list of the interest group categories from which representatives were sought, the names of those interviewed, and a summary of the problem locations noted by interviewees. In addition, the results of a survey sent to several members of the community following the first Open House for the Transportation System Plan in order to gain additional insight about the problems and opportunities for Pendleton's transportation future are also included.

Stakeholder Interview Questions

1. Do you have any questions about the Pendleton Transportation System Plan?
2. What streets in the Pendleton area do you travel most frequently?
3. Within the city, what general transportation needs or issues should this plan address? Why?

Traffic Flow and Congestion

4. Are through traffic or local traffic movements the biggest problems in the city?

   Through ____ Local ____ Both ___

Comments:

5. Are there particular **traffic circulation and congestion** problems that the plan should address?

   Yes ____ No ____ Don't Know _____

5A. Where are the most difficult **congestion** points in the city? *List street names and intersections.*

6. Are there areas and destinations *within the city* that are especially difficult to get to?

   Yes ____ No ____ Don't Know _____

Examples:

7. Are there destinations *outside the city*, that are hard to get to from the city?

   Yes ____ No ____ Don't Know _____

   Examples:

8. Are there problems caused by special events, such as the Pendleton Round-up, that could be better handled with improvements to the street system or traffic flow?

8A. Do you anticipate any traffic flow and congestion problems associated with new development projects such as the Wildhorse Gaming Resort or the proposed retail development at the former Harris Pine site?

9. How do RR crossings and Interstate 84 impact traffic in Pendleton? Where are more crossings needed to connect the two sides of the city?

Safety

10. Are there particular **safety problems** that you think the plan should address?

    Yes ____ No ____ Don't Know _____

Examples — *Conflicts between cars, bikes and pedestrians? Locations? Causes?*

11. Where do you think **traffic accidents** usually happen or are a potential risk? Intersections? Highways? What do you think the reasons are for accidents at these locations — signals, sight distance, signing, access problems, etc.?

12. Is through traffic in neighborhoods a problem?

Yes ____ No ____ Don't Know _____

12A. Which neighborhoods? What streets? What are the particular concerns?

12B. How do you think these might be addressed?

13. The Oregon Transportation Planning Rule intends to encourage the use of alternative modes and reduce the number of vehicle miles traveled. One of the recommended ways to achieve this is through "traffic calming" which helps make streets more friendly for use by pedestrians and bicyclists rather than using streets simply to store and move cars quickly. This can be achieved by delineating parking along the street to narrow traffic area, pedestrian refuges or islands, curb extensions and speed bumps. These techniques are most often used on residential streets rather than major collectors or arterials.

13A. How do you feel about the use of techniques such as these?

13B. Are there some streets in Pendleton you would recommend for traffic calming measures such as those mentioned above?

Bicycle and Pedestrian Facilities

14. Do you feel there are adequate facilities for **bicycles and pedestrians** in the Pendleton area?

Yes ____ No ____ Don't Know _____

Examples:

14A. Are the existing bike and pedestrian facilities used?

Yes ____ No ____ Don't Know _____

Examples:

14B. Are there specific locations where improvements would increase the likelihood that people would bike or walk to destinations?

Are sidewalks on one side of the street rather than both adequate?

Yes ____ No ____ Don't Know _____

Locations:

Transit Services

15. Are public transit service, facilities, or equipment improvements or expansions needed?

Yes ____ No ____ Don't Know _____

Types of improvements and to serve whom?

16. Do you feel that **special transportation services,** such as services for the elderly or handicapped are adequate for the Pendleton urban area?

Yes ____ No ____ Don't Know _____

Comments. *If No, where are improvements needed?*

16A. Is school transportation service safe and adequate? buses, walking, driving?

Parking

17. Are there **parking** problems in the city?

Yes ____ No ____ Don't Know _____Sometimes _____

Where and when do these problems occur? What are the reasons for these problems? Are there peak times or seasonal problems?

17A. What solutions do you think would be most effective?
parking lots and structures, meters, park and ride shuttles, other?

Comments:

Truck Traffic

18. Are trucks and other heavy vehicles a problem on the streets of the city?

Yes ____ No ____ Don't Know _____

Where do these problems occur? What kinds of problems — noise, vibrations, speeding? Are they a hazard or do they cause traffic problems?

Reducing Auto Dependency.

19. As the city and the region grow, what forms of transportation do you feel would be most appropriate to serve the new growth and the region in general? (Comments regarding: Auto, Transit, Bikes, Pedestrians, Rail, Intercity Bus, Air, and Other)

20. In the Pendleton area, what would be the best ways to **reduce auto dependency** as the region grows?

Financing Improvements

21. If this plan recommends new improvements to the transportation system:

21A. What methods should be used to pay for improvements? *System development charges, user fees, gas tax, revenue bonds, general obligation bonds, some combination*

21B. Who should pay? —*Users, general public, developers/builders, combination?*

22. Of the various issues we have discussed, which do you think are the most important for the plan to address? Why?

23. Is there anyone else with whom you think we should discuss these transportation issues?

24. What is the best way to notify people in your community about upcoming events and open houses?

List of Interviewees

Darry Gemmel, Indian Hill Investment

Ed Balsiger, Pendleton Grain Growers

Dave Thompson, Allstate Forest Products

George Baldwin, Superintendent, Eastern Oregon Correctional Institute

Diane Semler, Horizon Airlines

Joni Hammond, Department of Environmental Quality

Marilyn Cripe, Air Quality Commission

Ron Esselstyn, local citizen and marathon runner

Ron Bunch, US Postal Service, Route Supervisor

Gene Stutzman, CAPECO

Dick Hopper, Fire Chief, City of Pendleton

Jerry Odman, Director of Public Works, City of Pendleton

Rod Johlke, Elite Taxi

Jim Whitney, Whitney and Associates

Wes Grilley, Pendleton Convention Center

David Nelson, farmer

Paul Rice, Jr., Round Up Association

Paul Gerola, Economic Development Director, City of Pendleton

Nenia Henderson, Melanie Square Merchants Association and Michaelangelos

Polly Johnson, Southgate Merchants Association and Burger King

Rose Donnelly, The Pedalers Place

Interviewed For Highway 395 Corridor Strategy

Sgt. John Collins, Oregon State Police, Pendleton

Al Meunier, Pendleton School Administrator

Hal Phillips, Umatilla County Road Department

Frank Odgard, Ukiah School

Brian Cole, Oregon Economic Development Department, Umatilla County

Ron Danials, Blue Mountain Community College

Bob Quaempts, Oregon Employment Division

Morris Lankford, Pilot Rock School District

Unable To Reach For Interview

Barb Campbell, St. Anthonys Hospital

Byron Grow, Port of Umatilla

Paul Grimm, Larsen Transfer

Tony Flagg, Pendleton Flour Mills

Regina Troupe, Chamber of Commerce

SPECIFIC PROBLEM LOCATIONS AND FREQUENCY OF RESPONSE

- The intersection of Court, Dorion and Westgate and the nearby railroad crossing (just east of the Harris Pine Site near the Dairy Queen) - 13 Responses
- SE Court Avenue from SE 10th to SE 14th (at the viaduct) - 4 Responses
- The on and off ramps to I-84 at Southgate (Hwy. 395) (steep grade/cross traffic) - 4 Responses
- Melanie Square area problems: Court Place and 20th (3 blks. west of RR tracks on 17th); 20th and Frazer to Emigrant; Southgate to Frazer, and Melanie Square and Hwy. 395 (Southgate, near I-84) - 4 Responses
- Additional access street/truck route to airport industrial area besides Barnhart Road - 3 Responses
- Railroad crossings in general - 2 Responses
- From Hwy. 11 or Mission (old 30) Highways from the east onto Court at SE 20th, confusing Y intersection/merge pattern - 2 Responses
- Old Hwy. 30/Westgate congestion caused by existing and new businesses (during shift changes) - 2 Responses
- Southgate and Tutuilla Rd. near Hailey (inclement weather problems) - 2 Responses
- North bound on Southgate it is dangerous to make a left hand turn into the McKay subdivision. A turn lane is needed. - 1 Response
- School crossing problem on Southgate (near grocery outlet) - 1 Response
- School crossing problem on SW Emigrant at 13th (not well marked) - 1 Response
- Highway 37 near Blue Mountain Community College - 1 Response
- Create an alternative access to Pendleton JR High (now only Tutuilla Rd.) - 1 Response
- SE 2nd and Court Streets; (poor visibility move light from 3rd or get another) - 1 Response
- From St. Anthony hospital onto Court Place near RR tracks; poor visibility due to parked cars (SE 14th at east end of viaduct) - 1 Response
- I 84 and Hwy. 11 connection (exit 210 onto freeway) - 1 Response
- Confluence of SE Dorion, SE Emigrant, and SE Frazer - 1 Response
- SW 12th and Dorion (poor sight distance, congestion near Albertsons) - 1 Response

- Emigrant and Dorion: Time lights to help traffic flow - 1 Response
- North bound on SW 1st Street crossing Emigrant; poor visibility - 1 Response
- SW 12th and Frazer; poor visibility due to parked cars - 1 Response
- Emigrant from Downtown (peak hour congestion) - 1 Response
- Alternative RR crossing (under or overpass) on west side of town. - 1 Response
- RR crossing at SE 3rd and Frazer (switch engines block traffic) - 1 Response
- Rieth Road, narrow - 1 Response

Questionnaire Results

The first Open House for the Pendleton Transportation System Plan was conducted on June 14, 1995. The Exit Questionnaire prepared for the Open House was sent out to several business, professional, and neighborhood groups in the community in order to gain additional insight about the problems and opportunities for Pendleton's transportation future. Following are the paraphrased responses of those surveyed.

1. Within the city of Pendleton, what one general transportation need or issue do you think it is most important for this plan to address? Why?

- More bicycle paths are needed in town. The river Parkway needs to be completed.
- The I-84 / Highway 395 interchange.
- Uncontrolled intersections in town and overgrown trees/shrubs obstructing view of oncoming traffic is a problem, particularly on North Hill.
- An intercity bus company; the traffic problem at SW Court and Hwy. 395 (near King's Table).
- Over-crossings are needed at railroad crossings on SW Emigrant and Frazer.
- An inner-city bus service would be helpful. The layout of Pendleton with different residential areas connected by fairly busy streets makes bicycle and pedestrian travel impractical for cross-town visits. Youth, the elderly and those without cars should have a bus as an alternative.
- The railroad tracks dominate Pendleton, causing congestion and give us little in return. Could the tracks be elevated or moved to the freeway?
- Assuming that the railroad cannot be moved - then solving issues around Safeway and ingress-egress problems at the new shopping center is the most important transportation issue.
- The intersection for the access road to Melanie Square from downtown on Court/Westgate is dangerous and should be addressed.
- The area around Melanie Square and Safeway, including the railroad crossing at SW Court Place is probably the area that needs the most immediate attention. This area will only get worse with the addition of the proposed shopping center at the old Harris Pine Mill site. The railroad crossing is a major bottleneck during high traffic periods and major events at the Round-Up Grounds and Convention Center. This whole area is poorly designed and constructed and is an accident waiting to happen.

2. Are there particular **traffic circulation and congestion** problems that the plan should address?

Yes: 7 Responses

No: 3 Responses

No Response: 0

Where are they? *Please list street names and intersections.*

- It's almost impossible to safely turn left off of the freeway off-ramp at the Denny's exit during rush hour (7:30 to 8:00 AM and 4:00 to 5:30 PM)
- At the I-84 / Highway 395 interchange, re-route the westbound traffic to SW 17th.
- Congestion at SW Court and Hwy. 395.
- Congestion at the railroad crossings on SW Court.
- Everywhere the railroad tracks intersect with city streets (such as at the Dairy Queen).
- Traffic from SE Court (two-way section at Southgate and Hailey) is difficult to enter at peak travel times. It is important to plan to avoid congestion in the area around Wilcox and Southgate.
- The access road to Melanie Square from downtown on Court/Westgate.
- Melanie Square and Safeway, including the railroad crossing at SW Court Place, the viaduct where SE Court and SE Dorion join, Southgate Hill, and Westgate (as industrial area develops).

3. Are there problems caused by **special events**, such as the Pendleton Round-up, that could be better handled with improvements to the street system or traffic flow?

Yes: 4 Responses

No: 4 Responses

No Response: 2

- I think they do a great job at Round-Up.
- I think the city does a great job with special events.
- Street parking is needed near the Round Up grounds.
- When the BMCC, the high school, and the junior highs are closed the parking lots could be used with shuttle buses.
- It is difficult to exit when there are major events at P.C.C. However Round-up is only a problem once a year.
- We manage just fine!
- Melanie Square and Safeway, including the railroad crossing at SW Court Place.

4. How do **RR crossings** impact traffic in Pendleton? Are more crossings or improved crossings needed? Where?

- On SW 20th and on SW Frazer.
- Continued improvements to pave over crossings. Railroad crossings impact my business dramatically when trains are stalled for long periods (at crossings).
- An under or over-crossing is needed on SW Court.
- Overcrossings are needed.

- Railroad crossings impose only a minor delay and should be viewed as a slight aggravation, not a problem.
- The fewer number of times the cars and trains have to interact the safer the streets will be. In the old days we needed the tracks in town, why can't we move them out now?
- Railroad crossings cause delays. A concrete tress is needed at all crossings.
- Railroad crossings slow traffic down - possibly for the better.
- Railroad crossings are a major concern. Most crossings are better than they used to be, but there is a problem with the lack of timely maintenance by the railroads. The only area where an additional crossing is needed is in the Melanie Square area off SE Court. An under-crossing should be constructed at the north end of SW 20th which would allow traffic from Northgate and Westgate to avoid the bottleneck in front of the Convention Center. The city should investigate the possibility of available state and federal moneys.

5. Do you feel there are adequate facilities for **bicycles and pedestrians** in the Pendleton area?

Yes: 6 Responses

No: 3 Responses

No Response: 1

Are there specific locations where improvements would increase the likelihood that people would bike or walk to destinations? *Please list street names or locations!*

- Hwy. 395 east side is unsafe for pedestrians walking across the freeway entrance just past Denny's.
- A bike path on Southgate (north and south).
- The bike and pedestrian facilities are adequate but there needs to be an alternative (bus service) for people who can't bike or walk or don't have autos.
- If we want to encourage people to bike and walk then there are not enough facilities. However there is a need for improvement and enforcement of bike safety. There could be an incentive program for people to bike or walk to their destinations like a coupon for a free beverage, free delivery from stores or even a "buck off your water bill" (Battle Creek, MI). We could have closed (to through auto traffic) pedestrian malls like they have in Germany and Battle Creek, MI.
- Tutuilla Creek and extension of Umatilla River walkways are needed improvements.
- The paving of the Parkway should be completed all the way to the Ken Melton Little League park. A logical extension of the east terminus of the paved Parkway is to utilize the abandoned Union Pacific railroad right-of-way. There is also an opportunity to tie this in with the (proposed) undercrossing on SW 20th.

6. Are **public transit** service, facilities, or equipment improvements or expansions needed?

Yes: 5 Responses

No: 4 Responses

No Response: 1

- Many older people cannot drive.
- There needs to be a bus service for people who can't bike or walk or don't have autos.
- Expansion is not needed because of volunteers and volunteer organizations.
- Pendleton is not big enough to support a transit system. However, as the population ages, there may be a need to provide transportation for the elderly.

What is needed for the following groups? Why?

Elderly or disabled

- More low cost transportation for shopping, etc. is needed.
- Public transit service.
- As the population ages, there may be a need to provide transportation for the elderly.

Youth

- no comments on transit for youth

Everyone

- Once the Casino and culture center are running, bus transportation to and from the reservation would be good.
- Bike paths (as needed).
- Dial-a-ride for everyone.

Other

- Round-Up and tournaments: The city does a great job using buses and shuttles during these increased traffic events.

7. Are there **parking** problems in Pendleton? Where and what should be done?

Yes: 6 Responses

No: 2 Responses

No Response: 2

- A parking lot is needed closer to Main and Court Streets downtown.
- Enforce the two hour parking limit in the downtown area.
- Parking is a problem in the downtown area (Main Street). It is very inconvenient to shop there. An employee parking lot is needed and older buildings could be renovated to provide multi-level covered parking.
- Parking is needed for the Round-up on and off street and downtown (because of employees of downtown businesses).

- Level several blocks near downtown for parking lots.
- There is too much pavement now, we need to save our limited green space. More pavement makes it hotter in the summer and more snow to plow in the winter. We could decrease the number of off-street spaces businesses and offices are required to provide.
- Employees of downtown business need to be prevented from using customer parking.
- The new City Hall and Library project will help solve some of the parking problem in downtown. In addition, better signing is needed to direct visitors to the Depot parking lot and employees of downtown businesses should be encouraged to use the Depot lot as well.

8. As the city and the region grow, what forms of transportation do you feel would be most appropriate to serve new growth and the region in general? *Check all that you feel should be considered.*

Mode, Comments

Transit: Van service. (5 Responses)

Auto: Personal cars will dominate transportation. (4 Responses)

Bikes: This is trendy. Provide the infrastructure to allow the use of alternative modes like bicycling. (4 Responses)

Pedestrians: The River Parkway under the 10th St. Bridge. This is trendy. Local newspapers could write human interest stories about the benefits of biking and walking. (4 Responses)

Intercity bus: To Hermiston on weekdays. (4 Responses)

Air: Continued growth/expansion of service. Air service may be doomed. (4 Responses)

Rail: Amtrak (2 Responses)

Other: Continue taxi service. Major employers could encourage car pooling. (2 Responses)

9. If this plan recommends new improvements to the transportation system; what methods should be used to pay for improvements? *Check all that you feel should be considered.*

System development charges *(tied to new development and paid for by developers)* (**7** Responses)

User fees such as gas tax (**6** Responses)

General obligation bonds *(repayment is tied to a general revenue source, like a property tax)* (**6** Responses)

Revenue bonds *(repayment is tied to a specific stream of revenue, like a gas tax or auto registration)* (**7** Responses)

Other? *please explain:* (**4** Responses)

Foundations (River Parkway).

All options should be considered including user fees.

Attach a user fee to the RV dump station (if we do not already have one).

All sources of revenue should be considered

10. Was this open house interesting and useful in gaining a better understanding of the Pendleton Transportation System Plan process?

This question is not applicable to the mail survey.

11. Would you like to receive more information on this planning effort?

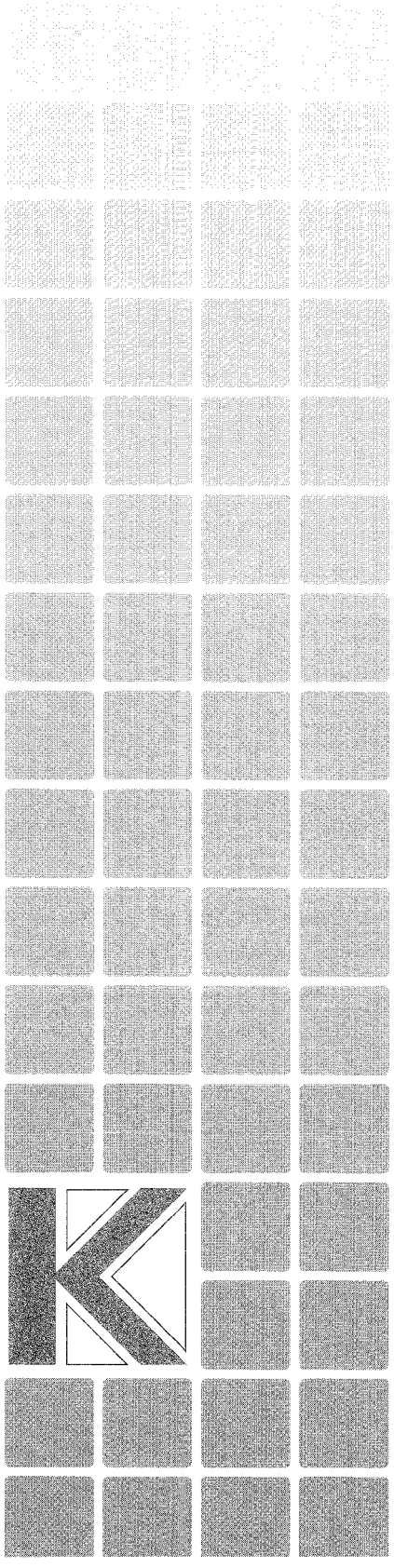
Yes: 7 Responses

No: 0 Responses

No Response: 3

12. Any other comments or suggestions?

- I'd love to see the River Parkway loop around, with the north side natural vegetation kept intact.
- NW 12th and Despain needs a median or a guardrail placed on the NW side of the street.
- Thanks for asking my opinion.



Appendix D

Transportation Network Summary

Table D-1

TAP Historic Service Summary

Service Summary	1993 May - June	1993 July - Sept	1993 Oct - Dec	1994 Jan - Mar	1994 April - June	TOTAL	AVERAGES
Total Miles	2,832	3,525	5,178	5,065	4,582	21,182	4,236
Total Hours	336	504	496	472	512	2,320	464
Total # of Trips	1,304	2,398	2,961	2,893	2,918	12,474	2,495
Total # of Passengers	715	1,357	1,694	1,684	1,658	7,106	1,421
Total Revenue	21,885	21,170	20,507	12,780	12,734	89,077	17,815
Total Expense	21,885	13,101	14,635	11,087	34,830	85,504	17,102
Service Statistics							
Cost per Mile (F/A)	7.73	3.72	2.83	2.19	5.42	4.04	4.38
Cost per Hour (F/B)	65.14	26.00	29.51	23.49	48.50	36.87	38.53
Cost per Trip (F/C)	16.78	5.46	4.94	3.83	8.51	6.86	7.90
Cost per Passenger (F/D)	30.61	9.65	8.64	6.58	14.99	12.04	13.75
Operating Ratio	-	1.61	1.40	1.15	0.51	1.04	0.93
Passengers per Hour (D/B)	2.13	2.69	3.42	3.57	3.23	3.06	3.01
Trips per Mile (C/A)	0.46	0.68	0.57	0.57	0.64	0.59	0.58

1 Costs increased during the 5th and final quarter due to agency fixed costs associated with running the program that were not expensed until the final quarter and a $4,779.06 vehicle repair bill.

Table D-2

Functional Classification and Physical Characteristics
Pendleton Urban Area Arterial and Collector Street System

Roadway	Section	Travel Lanes	Bike Lanes	Side Walks
Arterial Streets				
"A" Avenue	Airport Road to Barnhart Road	2	No	No
Airport Road	Westgate to Airport Terminal	2	No	No
Byers Avenue	SW 1st Street to SE 3rd Street	2	No	Both Sides
Carden Avenue	Westgate to NW 10th Street	2	No	Partial
Court Place	SW 23rd Street to Westgate	2	No	Both Sides
Court Avenue	SE 8th Street to Westgate	2	Bike Route	Both Sides
Court Avenue	SE 8th Street to Eastgate	2	Bike Route	Partial
Dorion Avenue	SW Court Avenue to SE Court Avenue	2	Bike Route	Both Sides
Eastgate (U.S. 30)	Highway 11 to Mission Road (UGB)	2	No	Partial
Emigrant Avenue	SE Court Avenue to US 395	2	Partial	Both Sides
Frazer Avenue	U.S. 395 to SE 10th Street	2	Yes	Partial
Intercourt Place (Highway 11)	SE 10th Street to SE Nye Avenue	2-4	No	Partial
Interstate 84	West UGB to East UGB	4	No	No
Isaac Avenue	Main Street to Intercourt Place	2	No	Partial
Main Street	Despain Avenue to Isaac Avenue	2-4	Partial	Both Sides
Marshall Avenue	Tutuilla Creek Road to Nye Avenue	2	No	Both Sides
Northgate	Westgate to North UGB	2	Partial	Partial
Old Rieth Road	Westgate to Reith Road	2	No	No
Rieth Road	I-84 to West UGB	2	No	No
Southgate (U.S. 395)	SW Emigrant to South UGB	4	Yes	Partial
Highway 11	Eastgate to UGB	2-4	No	Partial
Tutuilla Creek Road	Southgate to UGB	2	Yes	Both Sides
Westgate (U.S. 30)	I-84 to SW Court Avenue/SW Dorion Avenue	2	Partial	Partial
SE 1st Street	Byers Avenue to Frazer Avenue	2	No	Both Sides
SE 2nd Street	Byers Avenue to Frazer Avenue	2	No	Both Sides
SE 3rd Street	Byers Avenue to Goodwin Avenue	2	No	Both Sides
SE 3rd Place	Nye Avenue to Dead End	2	No	Both Sides

Table D-2 (cont.)

Roadway	Section	Travel Lanes	Bike Lanes	Side Walks
SE 9th Street	Court Avenue to Frazer Avenue	2	No	Both Sides
SE 10th Street	Court Avenue to Frazer Avenue	2	No	No
SW 1st Street	Byers Avenue to Frazer Avenue	2	No	Both Sides
SW 2nd Street	Court Avenue to Frazer Avenue	2	No	Both Sides
SW 4th Street	Court Avenue to Goodwin Avenue	2	No	Both Sides
SW 6th Street	Court Avenue to Frazer Avenue	2	No	Both Sides
NW/SW 10th Street	Carden Avenue to Emigrant Avenue	2	Bike Route	Both Sides
SW 13th Street	Dorion Avenue to Frazer Avenue	2	Bike Route	Both Sides
SW 17th Street	Court Avenue to Frazer Avenue	2	No	Partial
SW 20th Street	Court Place to Frazer Avenue	2	No	Partial
SW 37th Street	Dead End to Southgate Place	2	Partial	Partial
Collector Streets				
Byers Avenue	SE 3rd Street to SE 17th Street	2	Bike Route	Partial
County Road 237	NW Johns/N Main to UGB	2	No	Partial
County Road 333 (Lee Street)	NE 8th Street Bridge to UGB	2	No	No
County Road 506 (SW 28th Drive)	SW 30th to Private Road	2	No	No
Court Place	SE Court Avenue to SE 23rd Street	2	No	Partial
Despain Avenue	NW 14th Street to N Main Street	2	No	Partial
Furnish Avenue	NW 12th Street to NW 7th Street	2	No	Both Sides
Frazer Place	SW 17th Street to SW 20th Street	2	No	Partial
Goodwin Avenue	SW 20th Street to SW 19th Street	2	No	Partial
Goodwin Avenue	SW 4th Street to SE 3rd Street	2	No	No
Goodwin Avenue	SE 6th Street to SE 10th Street	2	No	Partial
Hailey Avenue	SW 19th Street to SW 4th Street	2	No	Partial
Hailey Avenue	Southgate to SW 37th Street	2	No	Partial
Horn Avenue	NW 12th Street to Dead End	2	No	Partial
Isaac Avenue	SW 13th Street to Main Street	2	No	Partial
Isaac Avenue	Highway 11 to SE 10th Street	2	No	Partial

Table D-2 (cont.)

Roadway	Section	Travel Lanes	Bike Lanes	Side Walks
Kirk Avenue	Intercourt Place to Dead End	2	No	Both Sides
Main Street	Isaac Avenue to Kirk avenue	2	No	Partial
Main Street	Despain Avenue to Horn Avenue	2	No	No
Nye Avenue	UGB to Marshall Avenue	2	No	Both Sides
Perkins Avenue	U.S. 395 to Dead End	2	No	Both Sides
Quinney Avenue	Montee Drive to SW 44th Street	2	Yes	Partial
Riverside Avenue	Highway 11 to UGB	2	No	Partial
Southgate Place	U.S. 395 (South) to U.S. 395 (North)	2	Partial	Partial
NW 7th Street	Despain Avenue to Furnish Avenue	2	No	Partial
NW 10th Street	Carden Avenue to Furnish Avenue	2	No	Partial
NW 12th Street/Drive	Carden Avenue to Despain Avenue	2	No	Both Sides
NW 14th Street	Carden Avenue to Dead End	2	No	Partial
SE 3rd Street	Goodwin Avenue to Isaac Avenue	2	No	Partial
SE 6th Street	Goodwin Avenue to Isaac Avenue	2	No	Partial
SE 8th Street	Court Avenue to Lee Street	2	Bike Route	Partial
SE 12th Street	Byers Avenue to Court Place	2	No	Partial
SE 17th Street	Byers Avenue to Court Avenue	2	No	Both Sides
SW 4th Street	Goodwin Avenue to Hailey Avenue	2	No	No
SW 13th Street	Goodwin Avenue to Isaac Avenue	2	No	Partial
SW 15th Street	Emigrant Avenue to Goodwin Avenue	2	No	No
SW 19th Street	Goodwin Avenue to Hailey Avenue	2	No	Partial
SW 20th Street	Frazer Avenue to Goodwin Avenue	2	No	Partial
SW 30th Street	U.S. 395 to SW 28th Drive	2	No	Partial
SW 44th Street	UGB to Dead End (Community Park)	2	No	Partial

Table D-3

Existing Level of Service

Intersection	Signalized/All-Way Stop Control			Unsignalized		
	V/C	Delay (sec.)	LOS	Critical Approach	Average Delay (sec.)	LOS
Carden/NW 10th Street[2]	0.77	8.3	B			
Carden/NW 12th Street				SB-LR	4.1	A
Carden/NW 14th Street				SB-LR	4.0	A
Carden/Northgate				WB-LTR	6.5	B
Court Avenue/SE 3rd Street	0.31	6.7	B			
Court Avenue/SE 8th Street				SB-L	24.9	D
Court Avenue/SE 10th Street				NB-TL	19.2	C
Court Avenue/SW 4th Street	0.32	1.3	A			
Court Avenue/SW 10th Street	0.57	14.1	B			
Court Place/SW 17th Street				NB-L	18.5	C
Court Place/SW 20th Street	0.48	19.0	C			
Court Avenue/Main Street	0.37	9.2	B			
Despain/NW 10th Street				WB-LTR	5.6	B
Despain/Main Street				WB-TL	7.8	B
Dorion Avenue/SE 3rd Street				SB-TL	13.0	C
Dorion Avenue/SW 4th Street	0.34	3.8	A			
Dorion Avenue/SW 10th Street	0.42	4.5	A			
Dorion Avenue/SW 13th Street				NB-R	6.1	B
Dorion Avenue/Main Street	0.39	9.6	B			
Emigrant Avenue/SE 3rd Street				NB-TL	7.5	B
Emigrant Avenue/SE 10th Street				EB-TL	5.8	B
Emigrant Avenue/SW 4th Street				NB-TL	11.6	C
Emigrant Avenue/SW 10th Street				SB-R	4.9	A
Emigrant Avenue/SW 13th Street				NB-TL	18.4	C
Emigrant Avenue/SW 17th Street				NB-TL	17.8	C
Emigrant Avenue/SW 20th Street	0.70	18.9	C			
Emigrant Avenue/Main Street	0.29	10.1	B			
Frazer Avenue/SE 3rd Street				SB-TL	5.7	B
Frazer Avenue/SW 4th Street				SB-L	9.7	B
Frazer Avenue/SW 13th Street				SB-TL	12.8	C

Table D-3 (Continued)

Intersection	Signalized/All-Way Stop Control			Unsignalized		
	V/C	Delay (sec.)	LOS	Critical Approach	Average Delay (sec.)	LOS
Frazer Avenue/SW 17th Street				SB-TL	11.8	C
Frazer Avenue/SW 20th Street				SB-L	9.5	B
Frazer Avenue/Main Street	0.27	9.6	B			
Highway 11/SE 10th Street				EB-L	5.6	B
Highway 11/I-84 EB				EB-LR	13.0	C
Highway 11/I-84 WB				WB-LR	8.7	B
Highway 11/U.S. 30				SB-L	17.1	C
Main Street/Byers	0.33	6.5	B			
Old Mission Road/U.S. 30				SB-R	3.3	A
River Road/Old Rieth Road				WB-L	3.9	A
U.S. 30/I-84 WB Off/Airport Road				SB-L	7.4	B
U.S. 30/I-84 EB				EB-L	4.4	A
U.S. 30/Old Rieth Road				NB-LR	4.4	A
U.S. 395/SW 30th Street	0.38	7.4	B			
U.S. 395/Southgate Place	0.46	8.9	B			
U.S. 395/Hailey-Tutuilla	0.67	16.6	C			
U.S. 395/I-84 EB				EB-TL	> 45	F
U.S. 395/I-84 WB				EB-TL	> 45	F
Westgate Place/Court-Dorion				EB-L	> 45	F
Westgate Place/Northgate				SB-L	14.5	C

1 L = Left, TL = Through/Left, TR = Through/Right, R = Right,
NB = Northbound, SB = Southbound, EB = Eastbound, WB = Westbound

2 All-Way Stop Controlled Intersection

Accident Summary
Intersections

Intersection	Total Accidents	Accident Severity			Accident Type								
		Fatalities	Injuries	PDO	Rear End	Turn	Angle	Fixed Obj.	Head-On	PED.	SS	Other	Acc/MEV
Airport Rd. & NW H PL	1			1				1					0.23
Airport Rd. & Westgate	2		2			2							0.40
Athens Ave. & Athens Way	1		1								1		0.68
Aura Ave. & NW 10th	2			2	1	1							0.28
Bailey Ave. & NW 5th	1			1				1					0.68
Bailey Ave. & NW 6th	1			1		1							0.68
Bailey Ave. & NW 9th	1		1				1						0.68
Bailey Ave. & NW 10th	5			5	1	3						1	0.62
Birch Cr. Rd. & SW 45th	2		1	1				1				1	1.37
Byers Ave. & S Main	4			4	1	2						1	0.42
Byers Ave. & SE 1st	2			2		1	1						0.39
Byers Ave. & SE 2nd	5			5		1	2					2	0.98
Byers Ave. & SE 3rd	2		2				2						0.46
Byers Ave. & SE 4th	2			2			1				1		0.55
Byers Ave. & SE 5th	1			1		1							0.40
Byers Ave. & SE 6th	1		1							1			0.46
Byers Ave. & SE 7th	2			2							2		0.91
Byers Ave. & SE 9th DR	1			1								1	0.46
Byers Ave. & SE 10th	1			1		1							0.39
Byers Ave. & SE 15th DR	1			1								1	0.34
Byers Ave. & SE 16th	1			1		1							0.34
Byers PL & SE 19th	1			1								1	0.68
Carden Ave. & NW 6th	1			1								1	0.34
Carden Ave. & NW 9th	2			2							1	1	0.68
Carden Ave. & NW 10th	4		2	2	3		1						0.44
Carden Ave. & NW 11th	2			2								2	0.68
Carden Ave. & NW 12th	4			4	1	1	2						0.96
Carden Ave. & NW 14th	1		1			1							0.29
Carden Ave. & NW 17th	1		1		1								0.33
Carden Ave. & Northgate	1			1		1							0.13
Carden Ave. & Westgate	1			1	1								0.17
Court Ave. & S Main	5			5							1	4	0.31
Court Ave. & SE 1st	4		1	3	1	1						2	0.41
Court Ave. & SE 2nd	2		1	1	1	1							0.20
Court Ave. & SE 3rd	2			2		1					1		0.17
Court Ave. & SE 4th	1			1		1							0.09
Court Ave. & SE 5th	1			1								1	0.09
Court Ave. & SE 9th	2			2	1							1	0.12
Court Ave. & SE 10th	4		1	3	2						1	1	0.19
Court Ave. & SE 15th	1			1		1							0.06
Court Ave. & SE 17th	3		1	2	1	1						1	0.18
Court Ave. & SE 18th	1			1		1							0.06

Accident Summary
Intersections

Intersection	Total Accidents	Accident Severity			Accident Type								
		Fatalities	Injuries	PDO	Rear End	Turn	Angle	Fixed Obj.	Head-On	PED.	SS	Other	Acc/MEV
Court Ave. & SE Court PL	1			1	1								0.09
Court Ave. & SW 1st	5		1	4		2					2	1	0.43
Court Ave. & SW 3rd	1			1		1							0.10
Court Ave. & SW 10th	8		1	7	5					1	1	1	0.42
Court PL & SE 11th	1			1	1								0.17
Court PL & SE 12th	2		1	1	1							1	0.68
Court PL & SE 17th	1			1	1								0.46
Court PL & SE 18th	1		1		1								0.68
Court PL & SE 20th	3			3		2	1						2.05
Court PL & SW 17th	12	1	4	7	4	6		1				1	0.72
Court PL & SW 20th	6			6		4						2	0.53
Despain Ave. & NE 1st	1			1		1							0.68
Despain Ave. & NW 4th	2			2	1						1		0.34
Despain Ave. & NW 5th	3			3	1			1				1	0.51
Despain Ave. & NW 6th	1		1				1						0.17
Despain Ave. & NW 7th	2		2		1						1		0.34
Despain Ave. & NW 8th	4		1	3			4						0.68
Despain Ave. & NW 9th	2		1	1		1	1						0.34
Despain Ave. & NW 10th	4			4		1	2					1	0.62
Despain Ave. & NW 11th	1		1				1						0.07
Despain Ave. & NW 12th	4			4	1		1				2		0.27
Despain Ave. & NW 14th	1			1		1							0.14
Dorion Ave. & S Main	2		1	1	1						1		0.12
Dorion Ave. & SE 1st	1			1		1							0.09
Dorion Ave. & SE 2nd	1			1					1				0.09
Dorion Ave. & SE 5th	1			1								1	0.11
Dorion Ave. & SE Court	1		1								1		0.06
Dorion Ave. & SW 1st	4		1	3		3		1					0.37
Dorion Ave. & SW 8th	1			1								1	0.09
Dorion Ave. & SW 10th	1			1								1	0.06
Dorion Ave. & SW 13th	3		1	2	2							1	0.19
Dorion Ave. & SW 20th	2			2		2							0.26
Ellis Ave. & N Main	1			1		1							0.68
Ellis Ave. & NW 5th	2		1	1	1						1		1.37
Ellis Ave. & NW 7th	1		1				1						0.68
Ellis Ave. & NW 8th	2			2			2						1.37
Ellis Ave. & NW 9th	2			2		1	1						1.37
Ellis Ave. & NW 11th	1			1			1						0.68
Emigrant Ave. & S Main	1			1							1		0.07
Emigrant Ave. & SE 11th	1			1				1					0.46
Emigrant Ave. & SW 1st	1			1	1								0.10
Emigrant Ave. & SW 4th	1			1		1							0.08

Accident Summary
Intersections

Intersection	Total Accidents	Accident Severity			Accident Type								
		Fatalities	Injuries	PDO	Rear End	Turn	Angle	Fixed Obj.	Head-On	PED.	SS	Other	Acc/MEV
Emigrant Ave. & SW 13th	2			2		1						1	0.13
Emigrant Ave. & SW 15th	2			2							1	1	0.14
Emigrant Ave. & SW 16th	1			1								1	0.08
Emigrant Ave. & SW 17th	2			2	1		1						0.12
Emigrant Ave. & SW 18th	1		1									1	0.16
Emigrant Ave. & SW 19th	1			1								1	0.08
Emigrant Ave. & SW 20th	2			2	1	1							0.08
F Ave. & NW 49th	1			1			1						1.71
Frazer Ave. & S Main	2			2							2		0.16
Frazer Ave. & SE 2nd	1			1								1	0.20
Frazer Ave. & SE 3rd	1		1									1	0.18
Frazer Ave. & SE 6th	1			1	1								0.27
Frazer Ave. & SW 1st	1			1								1	0.13
Frazer Ave. & SW 4th	1		1									1	0.10
Frazer Ave. & SW 12th	1			1					1				0.12
Frazer Ave. & SW 13th	2			2		1						1	0.18
Frazer Ave. & SW 15th	3		2	1							2	1	0.27
Frazer Ave. & SW 16th	1		1								1		0.10
Frazer Ave. & SW 17th	2		1	1	1							1	0.18
Furnish Ave. & NW 3rd	1		1		1								0.68
Furnish Ave. & NW 4th	2			2	1		1						1.37
Furnish Ave. & NW 5th	2			2			1		1				1.37
Furnish Ave. & NW 6th	2		1	1	1							1	1.37
Furnish Ave. & NW 7th	2			2			1					1	1.37
Furnish Ave. & NW 8th	2		2		1		1						1.37
Furnish Ave. & NW 9th	3		1	2			3						2.05
Furnish Ave. & NW 12th	1			1			1						0.68
Gilliam Ave. & NW 4th	1			1								1	0.68
Gilliam Ave. & NW 6th	1			1								1	0.68
Gilliam Ave. & NW 8th	1			1			1						0.68
Gilliam Ave. & NW 9th	1		1				1						0.68
Gilliam Ave. & NW 10th	2		1	1			2						0.78
Gilliam Ave. & NW 21th	1			1								1	0.68
Goodwin Ave. & S Main	8		5	3			6		1		1		2.74
Goodwin Ave. & SE 3rd	1		1				1						0.68
Goodwin Ave. & SE 6th	1			1		1							0.68
Goodwin Ave. & SE 11th	1			1			1						0.68
Goodwin Ave. & SW 4th	1			1								1	0.46
Goodwin Ave. & SW 7th	1			1		1							0.68
Goodwin Ave. & SW 8th	1			1							1		0.68
Goodwin Ave. & SW 12th	1			1			1						0.68
Goodwin LN & SW 13th	1			1		1							0.68

Accident Summary
Intersections

Intersection	Total Accidents	Accident Severity			Accident Type								
		Fatalities	Injuries	PDO	Rear End	Turn	Angle	Fixed Obj.	Head-On	PED.	SS	Other	Acc/MEV
Goodwin PL & SW 13th	2			2					1			1	1.37
Hailey Ave. & SE 1st	1		1		1								0.68
Hailey Ave. & SE 3rd	1			1		1							0.68
Hailey Ave. & SE 7th	1		1				1						0.68
Hailey Ave. & SE 8th	3		1	2			3						2.05
Hailey Ave. & SE 9th	1			1	1								0.68
Hailey Ave. & SW 5th	1			1		1							0.68
Hailey Ave. & SW 11th	3			3		2			1				2.05
Hailey Ave. & SW 13th	1			1			1						0.68
Hailey Ave. & SW 15th	1			1	1								0.68
Hailey Ave & SW 16th St.	1			1		1							0.68
Hailey Ave. & SW 17th	1			1								1	0.68
Hailey Ave. & SW 27th	2		1	1	1	1							0.27
Hailey Ave. & SW 28th	4		1	3	2	2							0.48
Hailey Ave. & SW 29th	1			1		1							0.15
Hailey Ave. & SW 31st	1			1								1	0.16
Hailey Ave. & SW 37th	2			2		1		1					0.34
Horn Ave. & NW 12th	4			4		1	1				1	1	2.74
Ingram Ave. & NW 5th	1			1				1					0.68
Ingram LN & NW 4th	1			1			1						0.68
Isaac Ave. & S Main	2			2			1	1					0.68
Isaac Ave. & SE 1st	1			1								1	0.39
Isaac Ave. & SE 3rd	3		1	2		1	1				1		1.37
Isaac Ave. & SE 6th	2			2		1						1	1.37
Isaac Ave. & SE 8th	2		1	1			1					1	1.37
Isaac Ave. & SW 1st	1			1								1	0.68
Isaac Ave. & SW 8th	1			1				1					0.68
Jay Ave. & SW 31st	1			1								1	0.68
King Ave. & NW 12th	1			1				1					0.68
Kirk Ave. & SE 1st	1		1									1	0.68
Kirk Ave. & SW 37th	2		1	1		1	1						1.37
Ladow Ave. & SW 25th	1			1		1							0.68
Ladow Ave. & SW 28th	2		1	1		1	1						1.37
Ladow Ave. & SW 33rd	1			1								1	0.68
Marshall Ave. & SW Marshall PL	1			1					1				0.68
Marshall Ave. & SW Nye Ave.	5		1	4	1	2			1			1	3.42
Marshall Ave. & Tutuilla Cr. Rd.	5			5			1	4					1.96
Marshall PL & SW 37th	1			1		1							0.34
Montee DR & SW 37th	1		1			1							0.08
Montee DR & Southgate	1			1								1	0.08
Nye Ave. & SW 2nd	1			1		1							0.68
Nye Ave. & SW 24th	1			1								1	0.68

Accident Summary
Intersections

Intersection	Total Accidents	Accident Severity			Accident Type								
		Fatalities	Injuries	PDO	Rear End	Turn	Angle	Fixed Obj.	Head-On	PED.	SS	Other	Acc/MEV
Nye Ave. & SW 28th	1			1								1	0.68
Nye Ave. & Southgate	1			1								1	0.05
Olsen Ave. & SW 23rd	1			1		1							0.68
Perkins Ave. & SW 41st	1			1			1						0.68
Perkins Ave. & SW 44th	1		1					1					0.68
Quinney Ave. & Southgate PL	1			1		1							0.08
Quinney Ave. & SW 22nd	1		1					1					0.68
Quinney Ave. & SW 44th	1		1							1			0.27
Tutuilla Cr. Rd.- Hailey & Southgate	11		2	9		2			3		6		0.30
7th ST & NW 8th	1		1						1				0.68
28th ST & SW 29th	1			1		1							0.68
28th ST & SW 30th	2		1	1	1		1						1.37
39th ST & SW 40th	1			1		1							0.68
Totals	339	1	75	263	54	85	64	18	12	3	35	69	0.31

Note:

PDO = Property Damage Only

Ped. = Pedestrian

Fixed Obj. = Fixed Object

SS = Side-swipe

Accident Summary
State Highways

Highway	Roadway Section	Total Accidents	Accident Severity			Accident Type								
			Fatalities	Injuries	PDO	Angle	Head-on	Turn	Rear-end	Fixed Obj.	Ped.	SS	Other	Acc/MVM
Interstate 5	MP 209.17 to 211.35	19	0	3	16	0	0	4	3	3	2	2	5	0.50
Highway 11	Highway 11 - SE Isaac	1	0	1	0	0	0	0	1	0	0	0	0	0.39
	SE Isaac - US 30	5	0	2	3	2	0	0	1	2	0	0	0	2.20
	US 30 - Highway 11	5	0	2	3	0	0	2	2	1	0	0	0	1.11
	Highway 11 - UGB	2	0	1	1	1	0	1	0	0	0	0	0	0.20
	Total	13	0	6	7	3	0	3	4	3	0	0	0	0.66
Highway 37	UGB - US 30	11	0	5	6	7	0	2	1	1	0	0	0	16.03
US 30	I-84 - Highway 37	11	0	4	7	3	0	4	4	0	0	0	0	2.10
	Highway 37 - Dorion	9	0	3	6	0	0	5	3	0	0	1	0	1.57
	Dorion - SW 10th St.	33	0	2	31	5	0	16	5	0	0	5	2	7.61
	SW 10th St. - Main St.	46	0	12	34	10	0	9	7	0	3	8	9	7.14
	Main St. - SE 8th	62	0	20	42	19	0	17	15	0	1	6	4	14.80
	Court - SW 10th St.	24	0	9	15	6	0	6	9	1	0	1	1	6.63
	SW 10th St. - Main St.	45	0	11	34	6	0	19	18	0	0	2	0	7.86
	Main St. - SE 8th St.	37	0	11	26	7	0	10	13	0	0	3	4	9.82
	SE 8th - Highway 11	18	1	7	10	0	0	4	10	0	3	0	1	1.24
	Highway 11 - Interstate 84	1	0	1	0	0	0	0	1	0	0	0	0	0.17
	Total	286	1	80	205	56	0	90	85	1	7	26	21	4.35
US 395	US 30 - Main St. (Frazer)	40	0	8	32	24	0	11	1	0	0	2	2	9.29
	Main St. - SW Emigrant	74	0	18	56	23	1	31	9	0	2	6	2	7.24
	US 30 - Main St. (Emigrant)	11	0	2	9	1	0	3	1	2	0	2	2	3.49
	Main St. - SW Frazer	41	0	7	34	11	0	20	5	1	0	3	1	4.09
	SW Emigrant - Tutuilla Cr. Rd.	20	0	5	15	1	1	6	12	0	0	0	0	4.03
	Tutuilla Cr. Rd. - UGB	78	1	28	49	8	0	35	24	0	3	6	2	2.54
	Total	264	1	68	195	68	2	106	52	3	5	19	9	4.07

Note:
PDO = Property Damage Only
Fixed Obj. = Fixed Object
Ped. = Pedestrian

Table D-6

Future Level of Service

Intersection	Signalized/All-Way Stop Control			Unsignalized		
	V/C	Delay (sec.)	LOS	Critical Approach	Average Delay (sec.)	LOS
Carden/NW 10th Street[2]	0.94	12.8	C			
Carden/NW 12th Street				NB-LTR	5.1	B
Carden/NW 14th Street				SB-LR	3.8	A
Carden/Northgate				EB-LT	12.8	C
Court Avenue/SE 3rd Street	0.32	7.3	B			
Court Avenue/SE 8th Street				SB-LT	34.5	E
Court Avenue/Highway 11	0.78	17.6	C			
Court Avenue/SW 4th Street	0.33	2.2	A			
Court Avenue/SW 10th Street	0.61	14.6	B			
Court Place/SW 17th Street				NB-L	> 45	F
Court Place/SW 20th Street	0.85	26.8	D			
Court Avenue/Main Street	0.40	9.5	B			
Despain/NW 10th Street				WB-LTR	8.3	B
Despain/Main Street				EB-TR	7.8	B
Dorion Avenue/SE 3rd Street				SB-TL	18.1	C
Dorion Avenue/SW 4th Street	0.43	3.7	A			
Dorion Avenue/SW 10th Street	0.54	4.2	A			
Dorion Avenue/SW 13th Street				NB-R	10.2	C
Dorion Avenue/Main Street	0.45	9.7	B			
Emigrant Avenue/SE 3rd Street				NB-TL	11.4	C
Emigrant Avenue/SW 4th Street				NB-TL	17.2	C
Emigrant Avenue/SW 10th Street				SB-R	5.7	B
Emigrant Avenue/SW 13th Street				NB-LT	41.9	E
Emigrant Avenue/SW 17th Street				NB-TL	> 45	F
Emigrant Avenue/SW 20th Street	0.93	30.5	D			
Emigrant Avenue/Main Street	0.34	10.5	B			
Frazer Avenue/SE 3rd Street				SB-TL	6.5	B
Frazer Avenue/SW 4th Street				SB-L	11.4	C
Frazer Avenue/SW 13th Street				SB-LT	18.1	C

Table D-6 (Continued)

Intersection	Signalized/All-Way Stop Control			Unsignalized		
	V/C	Delay (sec.)	LOS	Critical Approach	Average Delay (sec.)	LOS
Frazer Avenue/SW 17th Street				SB-TL	22.4	D
Frazer Avenue/SW 20th Street				SB-L	13.8	C
Frazer Avenue/Main Street	0.29	10.2	B			
Highway 11/SE 10th/9th Street				WB-L	21.7	D
Highway 11/I-84 EB				EB-LR	> 45	F
Highway 11/I-84 WB				WB-LR	19.3	C
Highway 11/U.S. 30				SB-L	> 45	F
Main Street/Byers	0.35	6.9	B			
Old Mission Road/U.S. 30				SB-R	3.6	A
River Road/Old Rieth Road				WB-L	4.2	A
SW 30th / U.S. 395	0.5	9.2	B			
Southgate Place/U.S. 395	0.59	10.2	B			
U.S. 30/I-84 WB Off/Airport Road				NB-LR	> 45	F
U.S. 30/I-84 EB				EB-L	10.2	C
U.S. 30/Old Rieth Road				NB-LR	15.5	C
U.S. 395/Hailey-Tutuilla	1.01	47.6	E/F			
U.S. 395/I-84 EB				EB-TL	> 45	F
U.S. 395/I-84 WB				EB-TL	> 45	F
Westgate Place/Court-Dorion				WB-L	> 45	F
Westgate Place/Northgate				SB-L	> 45	F

1 L = Left, TL = Through/Left, TR = Through/Right, R = Right,
NB = Northbound, SB = Southbound, EB = Eastbound, WB = Westbound

2 All-Way Stop Controlled Intersection

Table D-7

Future Level of Service - Downtown Intersections

Intersection	Signalized/All-Way Stop Control			Unsignalized		
	V/C	Delay (sec.)	LOS	Critical Approach	Delay (sec.)	LOS
SW 20th Street Extension Alternative						
Court Place/SW 17th Street				NB-L	21.3	D
Court Place/SW 20th Street	0.58	19.7	C			
Emigrant Avenue/SW 17th Street				NB-TL	25.4	D
Emigrant Avenue/SW 20th Street	0.81	22.3	C			
U.S. 395/I-84 WB	0.75	10.7	B			
Westgate Place/Court-Dorion	0.55	7.2	B			
Westgate Place/SW 20th Street	0.46	6.5	B			
Court Place Rail Crossing Modified						
Court Place/SW 17th Street				NB-L	24.6	D
Court Place/SW 20th Street	0.72	17.1	C			
Emigrant Avenue/SW 17th Street				NB-TL	38.2	E
Emigrant Avenue/SW 20th Street	0.95	32.9	D			
U.S. 395/I-84 WB	0.83	12.9	B			
Westgate Place/Court-Dorion	0.73	9.9	B			
Westgate Place/SW 20th Street	0.62	8.2	B			
Court Place Rail Crossing Closed						
Court Place/SW 17th Street				NB-L	4.0	A
Court Place/SW 20th Street	0.42	6.1	B			
Emigrant Avenue/SW 17th Street	0.59	5.5	B			
Emigrant Avenue/SW 20th Street	0.94	22.3	C			
U.S. 395/I-84 WB	0.84	13.2	B			
Westgate Place/Court-Dorion				WB-L	9.7	B
Westgate Place/SW 20th Street	0.65	8.6	B			

Table D-7 (Continued)

Future Level of Service - Downtown Intersections

Intersection	Signalized/All-Way Stop Control			Unsignalized		
	V/C	Delay (sec.)	LOS	Critical Approach	Delay (sec.)	LOS
US 395/I-84 WB Ramp Modified						
Court Place/SW 17th Street				NB-L	23.0	D
Court Place/SW 20th Street	0.61	15.2	C			
Emigrant Avenue/SW 17th Street				NB-TL	> 45	F
Emigrant Avenue/SW 20th Street	0.90	26.5	D			
U.S. 395/I-84 WB	0.83	12.9	B			
Westgate Place/Court-Dorion	0.70	9.1	B			
Westgate Place/SW 20th Street	0.50	6.5	B			

1 L = Left, TL = Through/Left, TR = Through/Right, R = Right,
NB = Northbound, SB = Southbound, EB = Eastbound, WB = Westbound

Table D-8

Future Level of Service - Comprehensive Plan Improvements

Intersection	Signalized/All-Way Stop Control			Unsignalized		
	V/C	Delay (sec.)	LOS	Critical Approach	Average Delay (sec.)	LOS
Carden/NW 10th Street[2]	0.84	9.8	B			
Carden/NW 12th Street				NB-LTR	5.1	B
Carden/NW 14th Street				SB-LR	4.4	A
Carden/Northgate				WB-LTR	13.0	C
Court Avenue/SE 3rd Street	0.28	7.4	B			
Court Avenue/SE 8th Street				SB-LT	32.8	E
Court Avenue/SE 10th Street	0.77	17.1	C			
Court Avenue/SW 4th Street	0.32	2.1	A			
Court Avenue/SW 10th Street	0.61	14.8	B			
Court Place/SW 17th Street	0.55	5.1	B			
Court Place/SW 20th Street	0.58	15.7	C			
Court Avenue/Main Street	0.39	9.5	B			
Despain/NW 10th Street				WB-LTR	7.6	B
Despain/Main Street				EB-TR	7.5	B
Dorion Avenue/SE 3rd Street				SB-TL	13.0	C
Dorion Avenue/SW 4th Street	0.39	3.8	A			
Dorion Avenue/SW 10th Street	0.50	4.3	A			
Dorion Avenue/SW 13th Street				NB-R	7.6	B
Dorion Avenue/Main Street	0.35	9.8	B			
Emigrant Avenue/SE 3rd Street				NB-TL	10.3	C
Emigrant Avenue/SE 10th Street				WB-TR	7.4	B
Emigrant Avenue/SW 4th Street				NB-TL	19.2	C
Emigrant Avenue/SW 10th Street				SB-R	5.7	B
Emigrant Avenue/SW 13th Street				NB-LT	34.1	E
Emigrant Avenue/SW 17th Street				NB-TL	> 45	F
Emigrant Avenue/SW 20th Street	0.86	24.2	C			
Emigrant Avenue/Main Street	0.40	10.4	B			
Frazer Avenue/SE 3rd Street				SB-TL	7.1	B
Frazer Avenue/SW 4th Street				SB-L	12.6	C
Frazer Avenue/SW 13th Street				SB-LT	12.6	C

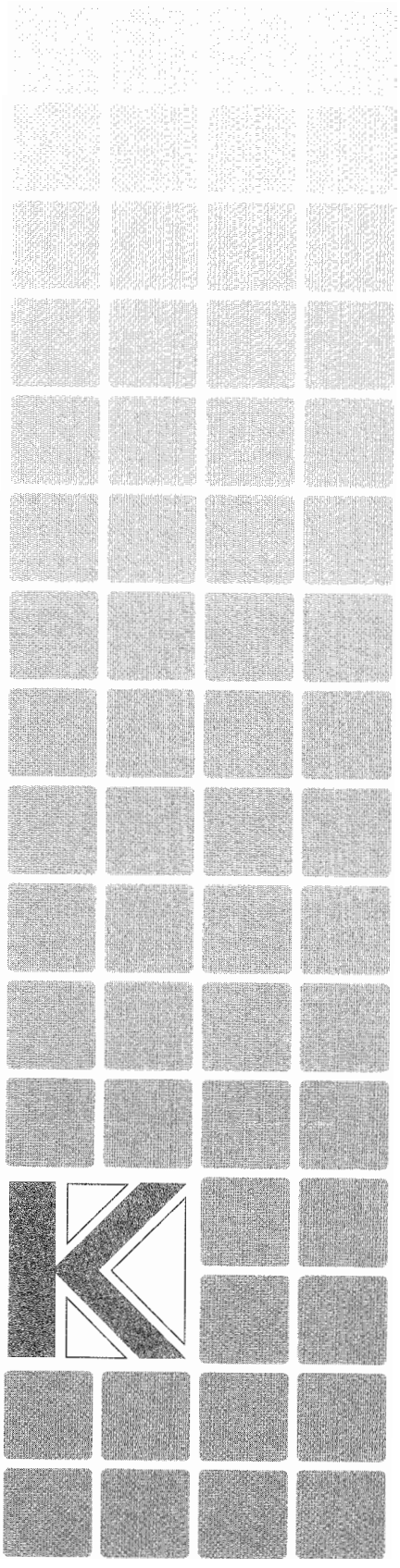
Table D-8 (Continued)

Future Level of Service - Comprehensive Plan Improvements

Intersection	Signalized/All-Way Stop Control			Unsignalized		
	V/C	Delay (sec.)	LOS	Critical Approach	Average Delay (sec.)	LOS
Frazer Avenue/SW 17th Street				SB-TL	15.6	C
Frazer Avenue/SW 20th Street				SB-L	11.2	C
Frazer Avenue/Main Street	0.33	9.9	B			
Highway 11/SE 10th Street				WB-LT	24.3	D
Highway 11/I-84 EB	0.55	6.1	B			
Highway 11/I-84 WB				WB-LR	23.9	D
Highway 11/U.S. 30	0.80	20.7	C			
Main Street/Byers	0.32	5.3	B			
Old Mission Road/U.S. 30				SB-R	3.6	A
River Road/Old Rieth Road				WB-L	4.5	A
SW 30th / U.S. 395	0.41	9.6	B			
Southgate Place/U.S. 395	0.40	8.6	B			
U.S. 30/I-84 WB Off/Airport Road				NB-LR	20.7	D
U.S. 30/I-84 EB				EB-L	8.9	B
U.S. 30/Old Rieth Road				NB-LR	10.4	C
U.S. 395/Hailey-Tutuilla	0.93	33.2	D			
U.S. 395/I-84 EB	0.71	11.0	B			
U.S. 395/I-84 WB				EB-TL	> 45	F
Westgate/SW 20th	0.65	8.1	B			
Westgate Place/Court-Dorion	0.79	10.6	B			
Westgate Place/Northgate				SB-L	14.4	C

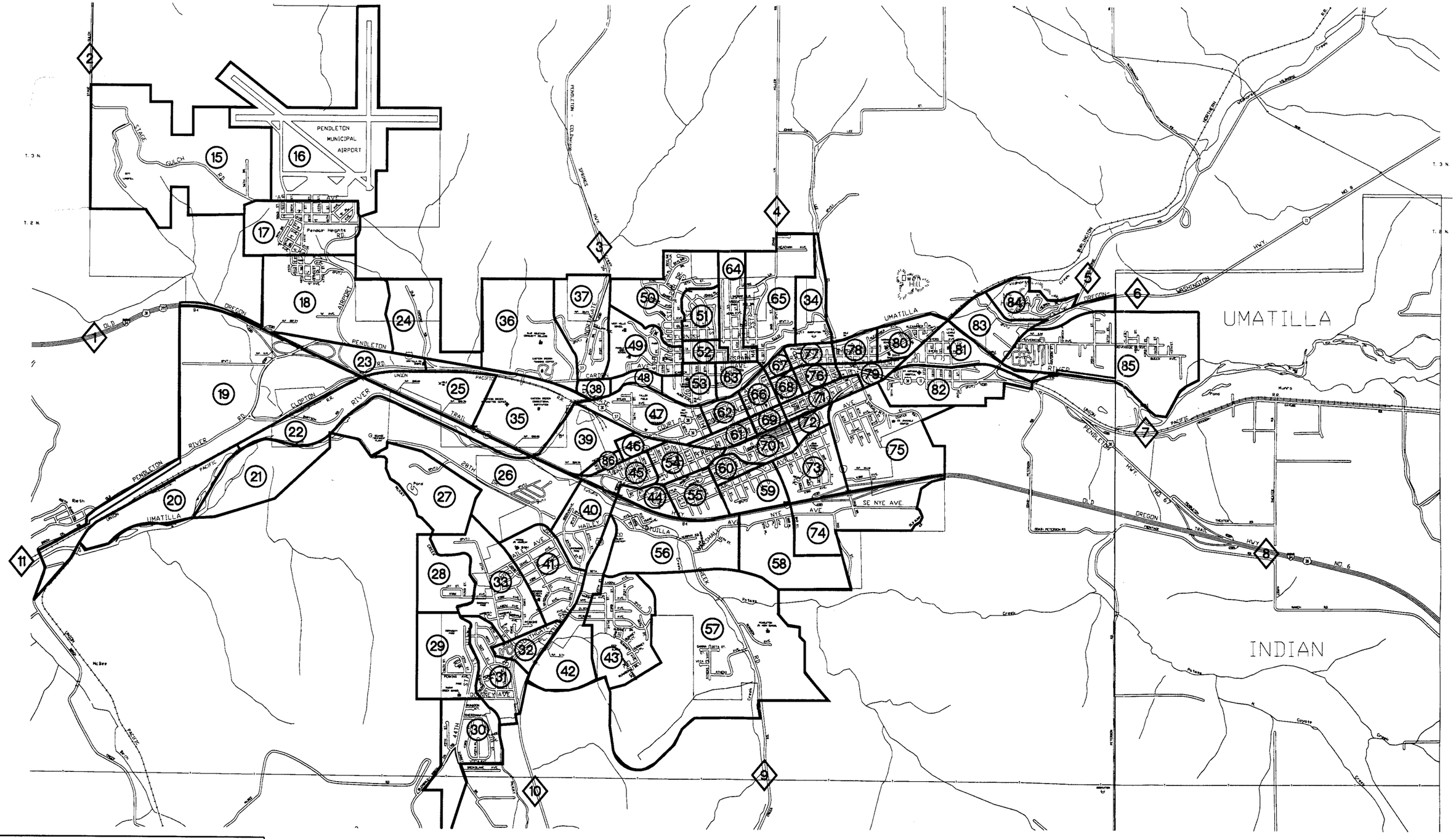
1 L = Left, TL = Through/Left, TR = Through/Right, R = Right,
NB = Northbound, SB = Southbound, EB = Eastbound, WB = Westbound

2 All-Way Stop Controlled Intersection



Appendix E

Land Use Data



LEGEND

- (X) EXTERNAL STATION
- (X) TRANSPORTATION ANALYSIS ZONES

CITY OF PENDLETON
TRANSPORTATION SYSTEM PLAN

TRANSPORTATION ANALYSIS ZONES

FIGURE 1

OCTOBER 1996

1567TAZ

TABLE E-1
1995 LAND USE
CITY OF PENDLETON

TAZ	EMPLOYEES			HOUSEHOLDS	
	TOTAL	RETAIL	NON-RETAIL	SINGLE-FAMILY	MULTI-FAMILY
1	0	0	0	0	0
2	0	0	0	0	0
3	0	0	0	0	0
4	0	0	0	0	0
5	0	0	0	0	0
6	0	0	0	0	0
7	0	0	0	0	0
8	0	0	0	0	0
9	0	0	0	0	0
10	0	0	0	0	0
11	0	0	0	0	0
12	0	0	0	0	0
13	0	0	0	0	0
14	0	0	0	0	0
15	42	0	42	0	0
16	74	14	60	2	0
17	110	4	106	15	25
18	80	14	66	1	12
19	5	5	0	2	0
20	0	0	0	0	0
21	0	0	0	0	0
22	420	0	420	0	0
23	87	14	73	0	0
24	8	0	8	6	2
25	0	0	0	0	0
26	15	0	15	43	175
27	0	0	0	3	0
28	0	0	0	23	0
29	29	0	29	88	0
30	8	4	4	61	2
31	17	4	13	155	0
32	42	38	4	53	0
33	46	4	42	211	56
34	0	0	0	14	0
35	457	0	457	0	0
36	257	3	254	1	50
37	1	0	1	45	29
38	0	0	0	0	0
39	6	6	0	0	0
40	162	43	119	71	63
41	129	35	94	258	60
42	219	117	102	0	0
43	104	0	104	256	107
44	0	0	0	52	0
45	97	49	48	64	24
46	139	107	32	6	0

TABLE E-1
1995 LAND USE
CITY OF PENDLETON

TAZ	EMPLOYEES			HOUSEHOLDS	
	TOTAL	RETAIL	NON-RETAIL	SINGLE-FAMILY	MULTI-FAMILY
47	264	215	49	37	10
48	0	0	0	2	22
49	90	0	90	92	93
50	0	0	0	161	27
51	0	0	0	194	9
52	0	0	0	90	17
53	20	0	20	121	103
54	161	34	127	111	20
55	4	0	4	116	5
56	105	39	66	89	3
57	84	8	76	71	0
58	0	0	0	70	60
59	19	4	15	104	10
60	0	0	0	77	18
61	87	20	67	60	45
62	99	35	64	68	58
63	0	0	0	55	72
64	8	4	4	192	12
65	14	0	14	69	26
66	363	119	244	28	112
67	276	25	251	2	6
68	411	156	255	1	4
69	225	110	115	6	25
70	4	0	4	114	51
71	486	83	403	26	92
72	27	4	23	34	10
73	145	0	145	147	50
74	191	111	80	0	0
75	28	0	28	133	45
76	375	82	293	20	37
77	14	6	8	43	35
78	4	0	4	96	87
79	93	12	81	52	12
80	178	0	178	55	6
81	31	4	27	120	8
82	437	75	362	76	45
83	40	13	27	3	0
84	19	0	19	53	0
85	46	9	37	93	2
86	69	65	4	0	0
TOTAL	6971	1694	5277	4311	1842

TABLE E-2
2015 LAND USE
CITY OF PENDLETON

TAZ	EMPLOYEES			HOUSEHOLDS	
	TOTAL	RETAIL	NON-RETAIL	SINGLE-FAMILY	MULTI-FAMILY
1	0	0	0	0	0
2	0	0	0	0	0
3	0	0	0	0	0
4	0	0	0	0	0
5	0	0	0	0	0
6	0	0	0	0	0
7	0	0	0	0	0
8	0	0	0	0	0
9	0	0	0	0	0
10	0	0	0	0	0
11	0	0	0	0	0
12	0	0	0	0	0
13	0	0	0	0	0
14	0	0	0	0	0
15	196	0	196	0	0
16	110	14	96	0	0
17	136	4	132	0	0
18	213	19	194	0	0
19	377	257	120	2	0
20	0	0	0	0	0
21	0	0	0	0	0
22	420	0	420	0	0
23	94	14	80	0	0
24	10	0	10	6	2
25	510	0	510	0	0
26	15	0	15	383	215
27	0	0	0	3	0
28	0	0	0	71	0
29	34	0	34	146	0
30	8	4	4	71	2
31	36	4	32	155	40
32	104	38	66	53	20
33	46	4	42	241	56
34	0	0	0	44	0
35	477	0	477	0	0
36	257	3	254	1	50
37	1	0	1	95	79
38	0	0	0	0	0
39	653	653	0	0	50
40	241	122	119	119	83
41	147	35	112	258	60
42	319	117	202	0	100
43	104	0	104	318	182
44	0	0	0	57	0
45	100	49	51	64	64
46	142	107	35	6	0

TABLE E-2
2015 LAND USE
CITY OF PENDLETON

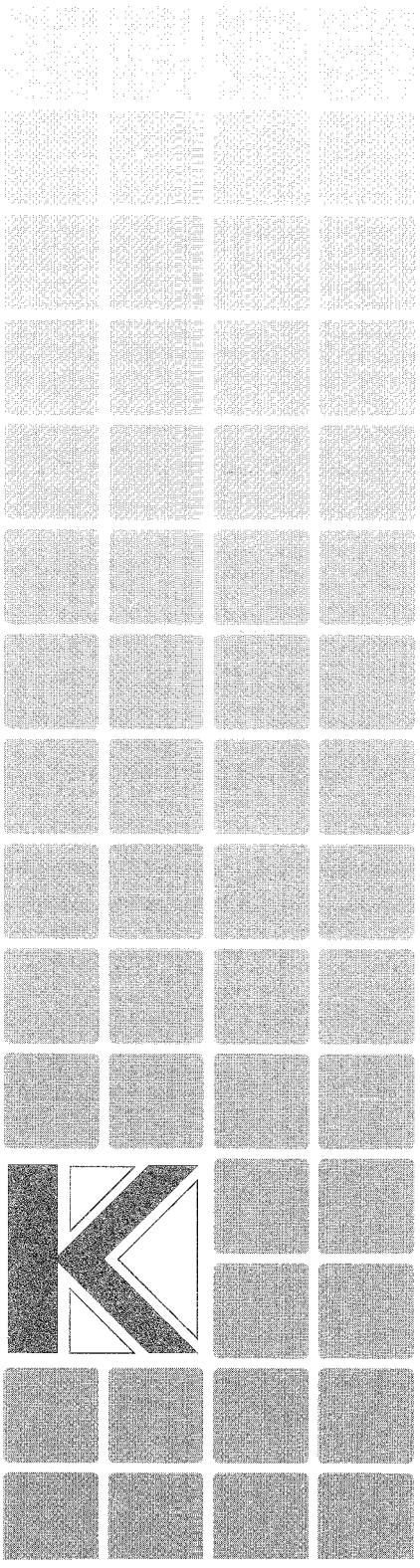
TAZ	EMPLOYEES			HOUSEHOLDS	
	TOTAL	RETAIL	NON-RETAIL	SINGLE-FAMILY	MULTI-FAMILY
47	269	215	54	10	0
48	0	0	0	17	37
49	105	0	105	104	93
50	0	0	0	230	27
51	0	0	0	194	9
52	0	0	0	90	17
53	20	0	20	121	103
54	164	34	130	111	40
55	4	0	4	121	5
56	115	46	69	139	28
57	102	8	94	504	72
58	0	0	0	170	132
59	19	4	15	114	10
60	0	0	0	77	18
61	92	20	72	60	45
62	118	35	83	68	78
63	0	0	0	55	72
64	8	4	4	242	12
65	0	0	0	144	51
66	366	119	247	28	132
67	279	25	254	2	6
68	414	156	258	1	4
69	228	110	118	6	25
70	6	0	6	114	61
71	494	83	411	26	112
72	29	4	25	34	20
73	145	0	145	167	75
74	281	128	153	0	0
75	81	0	81	211	50
76	383	82	301	20	37
77	17	6	11	43	35
78	4	0	4	96	87
79	96	12	84	52	12
80	185	0	185	55	6
81	31	4	27	145	13
82	446	75	371	96	45
83	46	13	33	3	0
84	27	0	27	73	0
85	49	9	40	201	7
86	72	65	7	0	0
TOTAL	9445	2701	6744	6037	2579

TABLE E-3
2015 TRANSPORTATION-EFFICIENT LAND USE
CITY OF PENDLETON

TAZ	EMPLOYEES			HOUSEHOLDS	
	TOTAL	RETAIL	NON-RETAIL	SINGLE-FAMI	MULTI-FAMIL
1	0	0	0	0	0
2	0	0	0	0	0
3	0	0	0	0	0
4	0	0	0	0	0
5	0	0	0	0	0
6	0	0	0	0	0
7	0	0	0	0	0
8	0	0	0	0	0
9	0	0	0	0	0
10	0	0	0	0	0
11	0	0	0	0	0
12	0	0	0	0	0
13	0	0	0	0	0
14	0	0	0	0	0
15	157	0	157	0	19
16	101	14	87	0	4
17	129	4	125	0	53
18	180	19	162	0	40
19	416	240	176	2	0
20	0	0	0	0	0
21	0	0	0	0	0
22	420	0	420	0	0
23	92	14	78	0	1
24	9	0	9	6	2
25	381	0	381	0	63
26	15	0	15	335	215
27	0	0	0	0	0
28	0	0	0	64	0
29	36	0	36	137	0
30	8	4	4	69	2
31	45	4	41	155	40
32	133	38	95	53	20
33	46	4	42	236	56
34	0	0	0	41	0
35	472	0	472	0	2
36	257	3	254	1	50
37	20	19	1	90	79
38	0	0	0	0	0
39	610	610	0	0	55
40	236	117	119	112	83
41	155	35	120	258	60
42	387	117	270	0	100
43	104	0	104	309	182
44	0	0	0	55	0
45	100	49	51	64	68
46	142	107	35	6	0

TABLE E-3
2015 TRANSPORTATION-EFFICIENT LAND USE
CITY OF PENDLETON

TAZ	EMPLOYEES			HOUSEHOLDS	
	TOTAL	RETAIL	NON-RETAIL	SINGLE-FAMI	MULTI-FAMIL
47	269	215	54	24	5
48	6	6	0	16	37
49	129	0	129	103	93
50	0	0	0	223	27
51	0	0	0	194	9
52	0	0	0	90	17
53	20	0	20	121	103
54	164	34	130	111	42
55	4	0	4	119	5
56	117	46	71	131	28
57	114	8	106	439	72
58	0	0	0	155	132
59	19	4	15	111	10
60	0	0	0	77	18
61	92	20	72	60	45
62	117	35	82	68	80
63	0	0	0	55	72
64	8	4	4	237	12
65	16	9	7	137	51
66	366	119	247	28	134
67	279	25	254	2	6
68	414	156	258	1	4
69	228	110	118	6	25
70	6	0	6	114	62
71	493	83	410	26	114
72	29	4	25	34	21
73	145	0	145	160	77
74	329	127	202	0	0
75	77	0	77	211	50
76	382	82	300	20	37
77	17	6	11	43	35
78	4	0	4	96	87
79	96	12	84	52	12
80	185	0	185	55	6
81	31	4	27	145	13
82	445	75	370	96	45
83	46	13	33	3	0
84	26	0	26	73	0
85	49	9	40	201	7
86	72	65	7	0	0
TOTAL	9445	2668	6777	5830	2786



Appendix F

Detailed Cost Analysis

Roadway Improvements Preliminary Capital Cost Estimates

Project Name	Facility	Beginning	End	Length	Travel lanes	Side-walks?	Bike Lanes?	Parking?	Pave. Width	Sidewalk Width	Total Width	Pavement @ $40/SY	Sidewalk @ $31/LF	Drainage at $40/LF	Bridge @ $125/SF	Paint stripes @ $1/stripe/LF	Mobe & traf controll @ 18%	TOTAL * 1.20% for contingency
Southgate Place Upgrade	Collector	Quinney	US 395	700	3	Yes	Yes	No	46	10	56	$49,778	$43,400	$28,000		$2,800	$22,316	$176,000
SW 20th St. Extension	Arterial	Court Place	Westgate		5	Yes	Yes	No	70	10	80							$4,200,000
Westgate Upgrade -Phase 1	Arterial	Prison	Interstate 84	6100	3	No	Yes	No	48	0	48							$282,000
SE 8th St. Bridge	Collector	Bridge	-----	350	2	Yes	Yes	No	34	10	44							$655,000
SW 20th St. Upgrade	Arterial	Emigrant	Court	900	5	Yes	Yes	No	70	10	80	$104,000	$55,800	$36,000		$5,400	$36,216	$285,000
SE Kirk Avenue Extension	Collector	Terminus	SE 10th	2800	2	Yes	No	Yes	40	10	50	$497,778	$173,600	$112,000	*	$8,400	$142,520	$1,121,000
SW 28th Drive Extension	Collector	Terminus	SW 37th Extension	2000	2	Yes	No	No	24	10	34	$213,333	$124,000	$80,000	*	$2,000	$75,480	$594,000
Nye/Patawa Extension	Collector	Nye Ave.	UGB	2100	3	Yes	No	No	36	10	46	$149,333	$130,200	$84,000	*	$4,200	$66,192	$521,000
Perkins Avenue - Phase 2	Collector	Southgate	Nye Ave.	9100	3	Yes	Yes	No	46	10	56	$647,111	$564,200	$364,000		$36,400	$290,108	$2,282,000
Perkins Avenue - Phase 1	Collector	SW 33rd	Southgate	2000	3	Yes	Yes	No	46	10	56	$142,222	$124,000	$80,000		$8,000	$63,760	$502,000
SW 37th St. Ext. - Phase 1	Arterial	SW Hailey	Old Rieth Road	4578	3	Yes	Yes	No	46	10	56	$935,947	$283,836	$183,120	$900,000	$18,312	$417,819	$3,287,000
Industrial Park Arterial	Arterial	Westgate	Court Loop	2200	3	Yes	Yes	No	46	10	56	$215,111	$136,400	$88,000	$2,625,000	$8,800	$553,196	$4,352,000
SW Court Loop	Arterial	SW 23rd	Industrial Park Arterial	4800	3	Yes	Yes	No	46	10	56	$213,333	$297,600	$192,000	*	$19,200	$129,984	$1,023,000
SE 10th St. Upgrade	Collector	Frazer	SE Kirk	1700	2	Yes	No	Yes	40	10	50	$302,222	$105,400	$68,000	*	$5,100	$86,530	$681,000
SW 28th Drive Upgrade	Collector	City limits	Barts Rd./Bridge	4400	2	Yes	No	No	24	10	34	$78,222	$272,800	$176,000	*	$4,400	$95,656	$752,000
SW 44th Upgrade	Collector	Quinney	North terminus	2300	2	Yes	Yes	No	34	10	44	$132,889	$142,600	$92,000		$6,900	$67,390	$530,000
Hailey Avenue Upgrade	Collector	SW 29th	SW 37th	1600	3	Yes	Yes	No	46	10	56	$85,333	$99,200	$64,000		$6,400	$45,888	$361,000
Hailey Avenue Extension	Collector	SW 37th	SW 44th	3800	2	Yes	Yes	No	34	10	44	$574,222	$235,600	$152,000	$300,000	$11,400	$229,180	$1,803,000
SE Goodwin Upgrade	Collector	SE 8th	SE 10th	600	2	Yes	No	Yes	40	10	50	$42,667	$37,200	$24,000	*	$1,800	$19,020	$150,000
Clopton Upgrade	Arterial	Rieth Road	Westgate	8800	3	Yes	No	No	36	10	46	$234,667	$545,600	$352,000		$17,600	$206,976	$1,628,000
Riverside	Collector	Highway 11	NE 35th	4000	2	Yes	No	Yes	40	10	50	$337,778	$248,000	$160,000	*	$12,000	$136,400	$1,073,000
SW Isaac Upgrade	Collector	SW 6th	SW 13th	1500	2	Yes	No	Yes	40	10	50	$106,667	$93,000	$60,000	*	$4,500	$47,550	$374,000
Westgate Upgrade - Phase 2	Arterial	Court	Interstate 84	10900	5	Yes	Yes	No	70	10	80	$1,647,111	$675,800	$436,000	*	$65,400	$508,376	$3,999,000
																* Not determined at this time		
TOTAL																		**$30,631,000**

Intersection Improvements
Preliminary Capital Cost Estimates

Project Name	Improvement Description	COST
Court/SW 17th	Traffic Signal	$150,000
US 30/Airport Road	Traffic Signal	$150,000
US 395/I-84 WB	Traffic Signal	$150,000
Highway 11/US 30	Traffic Signal	$150,000
Highway 11/I-84 EB	Traffic Signal	$150,000
Emigrant/SW 17th	Traffic Signal	$150,000
Frazer/SW 17th	Traffic Signal	$150,000
Frazer/SW 20th	Traffic Signal	*
Westgate/Northgate	Traffic Signal	$150,000
Emigrant/SW 20th	Traffic Signal Mod.	$50,000
Emigrant/Frazer/I-84 WB Ramps	Geometric	$50,000
I-84 WB Ramp at U.S. 395	Widen	*
Westgate/Court/Dorion	Geometric	*
Hwy 11 Viaduct		$7,557,000
Total		**$8,857,000**

Bicycle Facilities Improvements
Preliminary Capital Cost Estimates

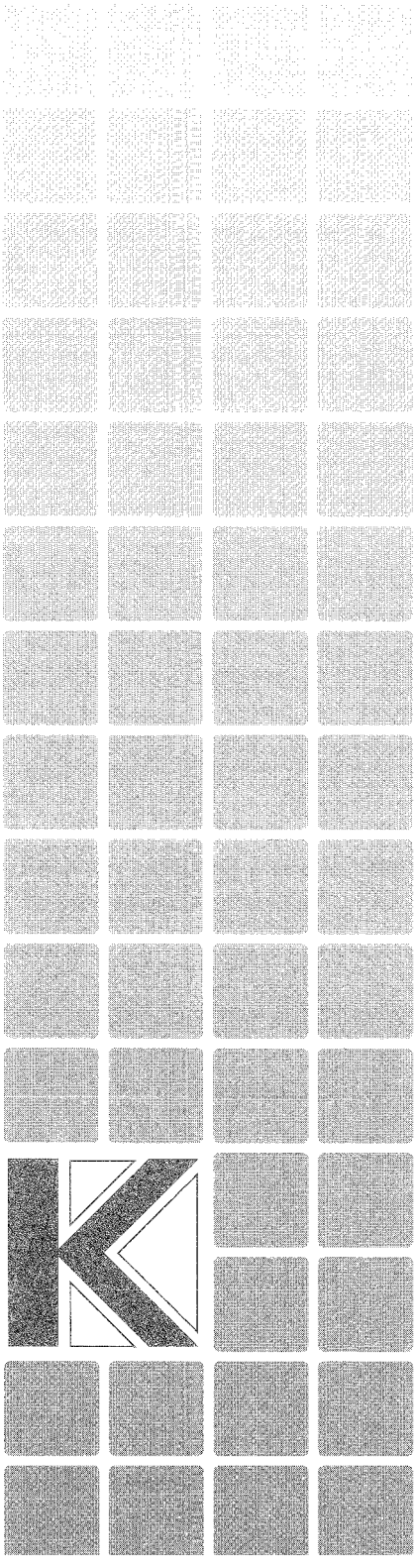
Project Name	Facility	Beginning	End	Length (ft.)	Included in Roadway Project?	Pavement @ $40/SY	Paint stripes @ $1/stripe/LF	Mobe & traf controll @ 18%	TOTAL * 1.20% for contingency	
			NORTH							
W 4th	Route	Furnish	John's Lane	2800	No	$124,444	$5,600	$23,408	*	
NW 7th	Route	Carden	King	2100	No	$93,333	$4,200	$17,556	*	
NW Furnish/8th/Gilliam	Route	NW 12th	NW 4th	2700	No	$120,000	$5,400	$22,572	*	
NW 3rd	Route	Furnish	Gilliam	900	No	$40,000	$1,800	$7,524	*	
NW King/Horn	Route	NW 7th	NW 12th	5200	No	$231,111	$10,400	$43,472	*	
NW 14th/NW 15th/Ellis	Route	Carden	End	3900	No	$173,333	$7,800	$32,604	*	
NE 8th	Route	Umatilla River	UGB	2100	No	$93,333	$4,200	$17,556	*	
	DOWNTOWN									
SW 10th	Route	Carden	Dorion	1900	No	$84,444	$3,800	$15,884	*	
SW 7th	Route	Goodwin	Isaac	900	No	$40,000	$1,800	$7,524	*	
South Main Street	Lane	Frazer	Isaac							$92,000
Highway 11/Intercourt Place	Lane	Nye Avenue	SE 10th	4800	Intersection Widening	$213,333	$9,600	$40,128	**	
SE 8th/Hailey/SE 9th	Route	Goodwin	End	4600	No	$204,444	$9,200	$38,456	*	
Nye Ave.	Route	Tutuilla Creek Rd	Highway 11	5300	No	$235,556	$10,600	$44,308	*	
SE Goodwin	Route	Main	SE 3rd	5900	No	$262,222	$11,800	$49,324	*	
River Parkway	Path	SE 8th Ave.	Highway 11	8600	No, but STIP funded.					$250,000
	EAST									
SE Byers	Route	SW 1st	Umatilla River	7000	No	$311,111	$14,000	$58,520	*	
Highway 11	Lane	U.S. 30	UGB	5300	Intersection Widening	$235,556	$10,600	$44,308		$100,000
SE 17th	Route	Court Place	Byers Avenue	800	No	$35,556	$1,600	$6,688	*	
U.S. 30	Route	SE 20th	Highway 11	1300	Intersection Widening	$57,778	$2,600	$10,868	*	
	SOUTHWEST									
SW 37th	Lane	Southgate Place	Hailey Avenue	2700	Intersection Widening	$120,000	$5,400	$22,572		$178,000
SW 44th	Route	Quinney Avenue	End	2300	SW 44th Upgrade					*
SW Jay	Route	SW 37th	SW 31st	1700	No		$3,400	$14,212		*
SW 31st	Route	Hailey Avenue	SW Nye Ave	2100	No	$93,333	$4,200	$17,556		*
Nye Ave.	Route	SW 31st	U.S. 395	1000	No		$2,000	$360		*
SW 30th	Route	SW 28th Avenue	U.S. 395	3000	No	$75,556	$6,000	$14,680		*
SW Perkins	Route	U.S. 395	End	3100	Perkins Ave Extension					*
SW Quinney	Route	SW 44th	Southgate Pl	1500	No	$66,667	$3,000	$12,540		*
Nye Ave.	Route	SW 23rd	Hospital	600	No	$26,667	$1,200	$5,016		*
SW 30th/Ladow	Route	U.S. 395	Perkins	2300	No	$102,222	$4,600	$19,228		*
								Total		**$620,000**

* costs of signage and maintenance only.
** be completed and funded in conjuction with roadway improvement.

Pedestrian Facilities Improvements
Preliminary Capital Cost Estimates

Priority	Project Name	Facility	Beginning	End	Existing Sidewalks?	Length (ft.)	Improvement	Included in Roadway Project?	Sidewalk @ $31/LF	Drainage at $20/LF	Mobe & traf controll @ 18%	TOTAL * 1.20% for contingency
					Northwest District							
	"A" Ave	Arterial	UGB	Airport Road	No	10700	Both Sides	"A" Avenue				*
	Airport Road	Arterial	Westgate	"A" Avenue	No	5700	One	No	$176,700	$114,000	$52,326	$412,0
	Westgate	Arterial	Interstate 84	Northgate	No	8300	Both Sides	Westgate Upgrade				*
	Clopton Road	Arterial	Rieth Road	Westgate	No	8800	Both Sides	Clopton Upgrade				*
					North District							
	Carden Avenue	Arterial	Westgate	Northgate	No	900	Both	No	55800		$10,044	$79,000
	Carden Avenue	Arterial	NW 13th	NW 12th	Partial	300	One	No	$9,300		$1,674	$13,000
	NW 12th	Collector	Carden	Despain	No	400	Both	No	$24,800		$4,464	$35,000
	NW 12th	Collector	Despain	King	Partial	2300	One	No	71300		$12,834	$101,000
	NW 12th	Collector	King	End	No	1000	Both	No	$62,000		$11,160	$88,000
	Furnish	Collector	NW 8th	NW 7th	No	300	Both	No	$18,600		$3,348	$26,000
	Furnish	Collector	NW 7th	Main	Partial	1300	One	No	$40,300		$7,254	$57,000
	Furnish	Collector	NW 12th	NW 11th	No	300	Both	No	$18,600		$3,348	$26,000
	Furnish	Collector	NW 11th	NW 9th	Partial	500	One	No	$15,500		$2,790	$22,000
	Despain Avenue	Collector	NW 14th	NW 13th	Partial	300	One	No	$9,300		$1,674	$13,000
	NW 7th	Collector	Ellis	Furnish	Partial	400	One	No	$12,400		$2,232	$18,000
	Main	Collector	Ellis	End	No	2700	Both	No	$167,400		$30,132	$237,000
	Horn	Collector	NW 12th	King Avenue	Partial	1500	Both	No	$93,000		$16,740	$132,000
				Downtown								
	Westgate	Arterial	Northgate	Court	No	2700	Both	Westgate Upgrade				*
	Court	Arterial	SW 3rd	SW 2nd	Partial	300	One	No	$9,300		$1,674	$13,000
	Court	Arterial	SE 4th	SE 10th	Partial	1500	One	No	$46,500		$8,370	$66,000
	Dorion	Arterial	SE 7th	Court	Partial	300	One	No	$9,300		$1,674	$13,000
	Emigrant	Arterial	SW 19th	SW 16th	Partial	800	One	No	$24,800		$4,464	$35,000
	Frazer	Arterial	SW 9th	SW 4th	Partial	1400	One	No	$43,400		$7,812	$61,000
	Frazer	Arterial	Main Street	SE 10th	Partial	2600	One	No	$80,600		$14,508	$114,000
	SW 20th	Arterial	Emigrant	Dorion	Partial	400	One	No	$12,400		$2,232	$18,000
	SW 17th	Arterial	Frazer	Court Place	Partial	1300	One	No	$40,300		$7,254	$57,000
	SE 10th	Arterial	Frazer	Court	No	700	Both	No	$43,400		$7,812	$61,000
	Intercourt/Highway 11	Arterial	Jay (Approx)	Nye Avenue	No	1400	Both	No	$86,800		$15,624	$123,000
	Goodwin/SW 4th	Collector	Main Street	SE 3rd	No	800	Both	No	$49,600		$8,928	$70,000
	Hailey/SW 19th	Collector	SW 17th	SW 5th	No	4000	Both	No	$248,000		$44,640	$351,000
	Isaac	Collector	SW 15th	SW 2nd	No	3300	Both	SW Isaac Upgrade				*
	Isaac	Collector	SW 2nd	SE 6th	Partial	2600	One	No	$80,600		$14,508	$114,000
	SW 17th	Collector	Frazer	Hailey	Partial	1100	One	No	$34,100		$6,138	$48,000
	SW 15th/SW 13th	Collector	Frazer	End	No	1700	Both	No	$105,400		$18,972	$149,000
	SE 3rd	Collector	Hailey	Isaac	Partial	400	One	No	$12,400		$2,232	$18,000
	SE 6th	Collector	Goodwin	End	No	700	Both	No	$43,400		$7,812	$61,000
	SE 8th	Collector	Umatilla River	End	No	2100	Both	No	$130,200		$23,436	$184,000
					EAST							
	U.S. 30	Arterial	SE 17th	SE 20th	Partial	1000	One	No	31000		$5,580	$44,000
	Highway 11	Arterial	Private Road	UGB	No	2800	One	No	86800		$15,624	$123,0
	Byers	Collector	SE 11th	SE 12th	No	300	Both	No	18600		$3,348	$2
	Byers	Collector	SE 12th	SE 15th	Partial	1400	One	No	43400		$7,812	$61,
	Byers	Collector	SE 15th	SE 17th	No	500	Both	No	31000		$5,580	$44,000
	SE 12th	Collector	Court	Byers	No	400	Both	No	24800		$4,464	$35,000
	SE 17th	Collector	Court	Byers	Partial	800	One	No	$24,800		$4,464	$35,000
	Court	Collector	SE 10th	SE 14th	No	1300	Both	No	$80,600		$14,508	$114,000
	Court	Collector	SE 14th	SE 16th	Partial	600	One	No	$18,600		$3,348	$26,000
	Court	Collector	SE 17th	SE 20th	Partial	1100	One	No	$34,100		$6,138	$48,000
	Riverside	Collector	Highway 11	UGB	No	2700	Both	Riverside Upgrade				*
	Goodwin	Collector	SE 6th	SE 8th	No	500	Both	No	$31,000		$5,580	$44,000
	Goodwin	Collector	SE 9th	SE 10th	No	300	Both	Goodwin Upgrade				*
	SE 10th	Collector	Frazer	End	No	1300	Both	SE 10th St. Upgrade				*
	Kirk Avenue	Collector	Highway 11	End	Partial	1100	One	SE Kirk Avenue				*
					SOUTHWEST							
	U.S. 395	Arterial	Southgate Pl.	UGB	No	2700	Both	No	167400		$30,132	$237,000
	U.S. 395	Arterial	SW 30th	Lidow Ave.	No	300	Both	No	18600		$3,348	$26,000
	SW 37th	Arterial	Jay	End	No	2000	Both	SW 37th St. Extension				*
	SW 44th	Collector	Quinney	UGB	No	1500	Both	No	93000		$16,740	$132,000
	Quinney	Collector	SW 41st	Southgate Place	No	700	Both	No	43400		$7,812	$61,000
	Southgate Place/Montee	Collector	U.S. 395	U.S. 395	Partial	3500	One	Southgate Pl. Upgrade				*
	SW 30th	Collector	SW 28th	Hailey Ave.	No	1600	Both	No	99200		$17,856	$140,000
	SW 28th Drive	Collector	Private Road	End	No	3300	Both	SW 28th Ave. Upgrade				*
	Hailey Avenue	Collector	U.S. 395	SW 27th	No	1200	Both	Hailey Ave. Upgrade				*
	Hailey Avenue	Collector	SW 28th	SW 30th	Partial	800	One	Hailey Ave. Upgrade				*
	Hailey Avenue	Collector	SW 30th	SW 31st	No	1000	Both	Hailey Ave. Upgrade				*
	Hailey Avenue	Collector	SW 31st	SW 32nd	Partial	800	One	Hailey Ave. Upgrade				*
	Hailey Avenue	Collector	SW 32nd	SW 37th	No	800	Both	Hailey Ave. Upgrade				*
1	SW 18th	Collector	Parkway	Carden	No			No				$285,000
					SOUTHEAST							
	Tutuilla Creek Road	Arterial	SW 22nd	SW 21st	Partial	400	One	No	12400		$2,232	$18,000
	Tutuilla Creek Road	Arterial	US 395	Hailey Ave.	No	1400	Both	No	86800		$15,624	$123,000
	Nye Avenue	Collector	SE 6th (Approximate)	SE 9th (Approximate)	Partial	1100	One	Nye/Patawa Extension				*
	Runnion Avenue	Collector	Tutuilla Creek Road	Terminus	Partial	1400	One	Runnion Ave. Extension				*
											TOTAL	$4,437,000

* Paid for under road improvements



Appendix G

Recommended Ordinance Modifications

Recommended Ordinance Modifications

INTRODUCTION

The following are preliminary recommended amendments to portions of the City of Pendleton Comprehensive Plan, Zoning and Subdivision Ordinances to help implement the Transportation System Plan.

The recommendations below provide "detailed direction" for the code amendments - final language will be refined and developed by city staff and adopted by City Council prior to May 1997 TPR compliance deadlines. The city might consider additional model ordinances found in ODOT's Transportation System Planning Guidelines and the Oregon Chapter American Planning Associations Recommendations for Pedestrian, Bicycle, and Transit Development Ordinances. Specific language is provided in a few cases. "TSP" refers to the Pendleton Transportation System Plan. "TPR" refers to the Oregon Transportation Planning Rule.

1. CITY OF PENDLETON COMPREHENSIVE PLAN

Transportation Plan Policies

A. Add a column under tables for arterial and collector streets (Policy 1.B. and 1.C.; Comprehensive Plan, Page 62) that gives bicycle lane widths per the Oregon Bicycle Plan and Pendleton Bicycle System Plan. Add supportive narrative as Policy 1.E: "Bicycle Lanes. (1) It will be the policy of the City of Pendleton to require bicycle lanes or routes on all new arterial and collector streets as identified on the Recommended Bicycle Plan (Figure 9-2) and Recommended Street Plan (Figure 9-3)." This language is responsive to TPR requirements and will further detail the intent of Policy 12 (Comprehensive Plan, Page 70).

B. Add a Policy 20: "Transportation Planning Rule. It will be the policy of the City of Pendleton to implement the requirements of the Oregon Transportation Rule to create a more transit, bicycle and pedestrian friendly environment."

C. Add a Policy 21: "Connectivity. It is the policy of the City of Pendleton to provide a well-connected street system; to encourage pedestrian connections between business and residential areas; and to consolidate commercial and industrial vehicular access ways where feasible."

2. CITY OF PENDLETON ZONING ORDINANCE

Design Standards

A. Site Plan Review. Add a Section 123: "Site Plan Review". This section should clarify that development or site plan review standards apply to all permitted development types. This section can be split into different review types, including administrative reviews. Relevant standards within the ordinance can be cited and procedures set forth to ensure compliance. Clarify that enlargement or redevelopment of more than 50% of a property's assessed value must meet full development standards. Cross reference and incorporate Ordinance No. 3481, which directs the timing of improvements. Include authority for the City to require additional right-of-way as

part of the development review process. Require coordination of review and compliance with ODOT for all new and modified public and private accessways to Highways 11, 30, 37, 395, and I-84.

Access Management. Within the site plan review section develop language to ensure access management control and reduce noncomplying accesses. Language should be developed to state that all reasonable alternatives to reduce the number of accesses and avoid new noncomplying accesses will be explored during development review. Noncomplying accesses should be defined as those which do not meet state standards. New compliance methods to be explored include but are not limited to: closure, relocation and consolidation of access; right-in/right-out driveways; crossover easements; and use of local streets, alleys and frontage roads. Consider a workshop format with ODOT, private land owners and City officials to discuss the perceived taking of land for rights-of-way and/or limiting access to adjacent highways. On all collector and arterial streets, ODOT and the City of Pendleton will adopt access management policies identified in Section 10, and enforce compliance during design review.

B. Internal Pedestrian Connections.

Pendleton

Add a new Section 124 "office parks and commercial centers" to provide for TPR-required internal pedestrian connections in new office parks and commercial developments. Consider the following standards:

1. At least one sidewalk connection between abutting developments shall be provided.
2. Walkways shall be provided to the street for every 300 feet of developed frontage.
3. Walkways shall be direct and driveway crossings minimized.
4. Walkways shall be linked to the internal circulation of the building.
5. Walkways shall be at least five feet wide and shall be raised, have curbing, or have different paving material when crossing driveways.

C. Connections/Accessways.

Also, within Section 124, consider adding standards similar to those found in Section 14.07 (G) of the new Island City Development Code listed below.

Island City Development Code, Section 14.07 (G):

(2) "On-site walkways shall connect with walkways, sidewalks, bike paths, alleyways and other bicycle or pedestrian connections on adjacent properties used or planned for commercial, multi-family, institutional or park use." This will cover multi-modal needs.

(4) "Pedestrian connections [other than via the street system] shall be identified." This standard requires that alternatives, such as lateral site connections be identified in addition to or alternative to street connections.

(5) "The development application shall designate these connections on the proposed site plan or findings shall be submitted demonstrating that the connection is not feasible." This language clearly puts the compliance responsibility on the applicant.

(6) Requires that right-of-way be provided for required walkways.

(7) States that accessways shall provide minimum out-of-direction travel.

(9) Requires that accessways be lighted.

(12) Requires pedestrian-scale lighting for safe nighttime use.

(13) States that stairs or ramps may be needed to provide a direct route. Where this is the principal access to the building, ADA compliance is required.

D. Authority. For clarity, Section 123 should be limited to the conformity and procedural provisions. A new section, 124 (titled "Applicability") is recommended. The new section will state that the Site Plan Review section may be applied to all development types. This will provide clear legal authority to apply the standards to all types of development permits, whether ministerial, administrative, or as determined at a hearing. Cross reference and/or incorporate Ordinance No. 3481, which "triggers" compliance timing for redevelopment.

E. ODOT Notice. Add to Section 161 "Notice and Conduct of Hearings" a requirement that ODOT be notified of all actions that may impact a state transportation facility or corridor.

F. Bicycle standards. Amend Section 119 to clarify and add bicycle parking standards within ranges similar to the following:

Amount of bicycle parking required:

1. Single family detached - none
2. Multi-family residential (four units or more) - one space per unit
3. Commercial uses - 5% of required vehicle parking
4. Civic uses (e.g., library, city hall) - 20% of required vehicle parking
5. Pre-school/Kindergarten - 10% of required vehicle parking

   Elementary, Middle and High School - eight spaces per classroom

   College - eight spaces per classroom plus 10% of vehicular parking

Standards:

1. Safe, convenient pedestrian access shall connect the bicycle parking to the main entrance of the principle use on the site. Bike racks shall be reasonably close to the main entrance of the building.
2. If located within parking lots, streets or driveways, bicycle parking shall be separated by curbs or other barriers.
3. Curb cuts are required to provide safe and convenient access.

4. If more than 10 spaces are required, at least 20% of required bicycle parking shall be covered, except for in parks and the downtown area.

G. Parking Reductions. Add a Section 119.H. "Parking Reductions". Suggested language to govern automobile parking reductions is:

"The number of vehicular spaces required in Section 119.A through 119.G. may be reduced by up to 10% if one of the following is demonstrated to the satisfaction of the Planning Director or Planning Commission:

- Residential densities greater than nine units per gross acre (limit to no less than one space per unit for multi-family structures).
- Pedestrian facilities not strictly required by the code are provided (e.g., wide sidewalks, plazas, benches)."

H. Traffic Impact Study. A new Section 125 is recommended to provide the city with authority to require transportation impact studies in order to determine impacts, improvements and modifications to the design standards.

Suggested language is:

"Transportation impact studies may be required by the city engineer to assist the city to evaluate the impact of development proposals, determine reasonable and prudent transportation facility improvements, and justify modifications to the design standards of this chapter. Such studies will be prepared in accordance with the following:

1. A proposal establishing the scope of the transportation impact study shall be coordinated with, and agreed to, by the city engineer. The study requirements shall reflect the magnitude of the project in accordance with accepted transportation planning and engineering practices. Such studies shall be prepared by a licensed professional civil or traffic engineer.
2. If the study identifies level-of-service conditions less than the minimum standards established in the Pendleton Transportation System Plan, improvements and funding strategies mitigating the problem shall be considered as part of the land use decision for the proposal."

(Source: Corvallis Land Development Code, Section 4.0.70(a), edited.)

3. CITY OF PENDLETON SUBDIVISION AND PARTITIONING ORDINANCE

A. Connectivity. A requirement should be added to Section 7 to implement the connectivity principle recommended within the comprehensive plan. This could fit well within tentative plan requirements. One such statement recently developed in the Sandy town plan is stated as follows:

"...The pattern of streets should be connected to: (1) provide safe and convenient options for cars, bikes and pedestrians; (2) create a logical, recognizable pattern of circulation; and (3) spread traffic over many streets so that key streets are not overburdened..."

B. Connections/Accessways.

Limiting the use of cul-de-sacs and the provision of new streets are both effective ways to promote pedestrian and bicycle access. Cul-de-sac limitations are discussed later in this section. The following code revisions are recommended to ensure the provision of new streets and accessways:

Add a Section 7(P) "Future Street Plan" that states "All subdivision applications shall include a future street plan for lands within 400 feet of the proposed subdivision boundary." If the subdivision is approved, the future street plan is intended as a guide to future adjacent development. Such plans are generally not binding on adjacent land owners, unless a specific plan process is undergone and agreed to by the property owners. This standard should require that the future street plan include all adjacent lands or future phases is which the owner has an interest.

Add a Section 43(F) requiring a pedestrian accessway for every 600-feet of block length.

Amend Section 43(E) to require 15-foot wide walkway easements and a 10-foot wide paved surface.

C. Street Design. Amend Section 31.D. to allow narrower rights-of-way for minor streets serving a small number of parcels or limited in access. A comprehensive plan amendment is recommended to facilitate the current practice of allowing flexibility in street widths (Table 1 narrative). Minor Street widths of 28 to 32-feet are common in Oregon. For example, Island City has adopted a new 28-foot minor street standard.

D. Cul-de-sac Limitations. Section 31.N should be revised to give limitations on the use of cul-de-sacs and dead end streets, except where necessary to control access to a restricted access highway, an arterial, or due to demonstrated topographic or environmental constraints. Blocks should also be limited generally to 600 feet in length, except for 800' on arterials, with a maximum perimeter length of 1400 to 1800 feet. Also, consider a requirement for mid-block pedestrian accessways when blocks exceed these limits (add as Section 43.F).

4. OTHER SOURCES REVIEWED

The following sources were reviewed with no amendments recommended at this time.

A few notations about supportive programs relative to the transportation system are given.

a. City of Pendleton Capital Improvements Program

There are a number of street improvements planned with bicycle routes. There are also specific projects outlined under the Bicycle System Master Plan. This plan identifies 19.7 miles of bicycle lanes and 22.7 miles of bicycle routes, in addition to informational brochures and bicycle facilities. The plan is about 65 percent complete.

b. Standards and Specifications for the City of Pendleton

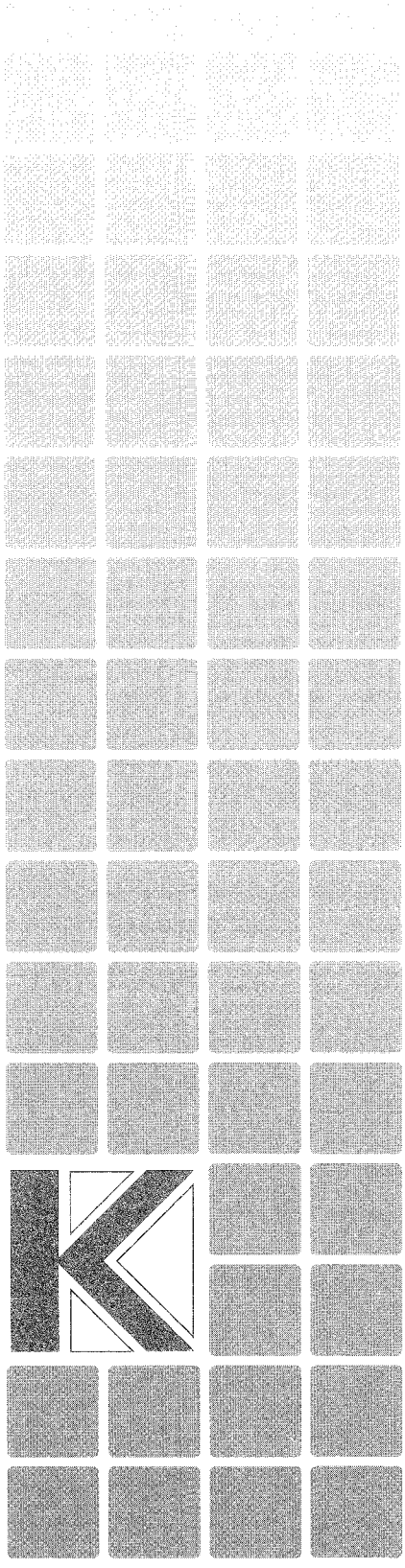
Technical street construction standards are given.

c. Bicycle System Master Plan, City of Pendleton, Oregon, 1981

This is a very comprehensive plan, but needs to be reviewed for consistency with the Oregon Bicycle Plan. Look at cross sections for quick comparisons. In the Pendleton plan, a minimum 4' curb side bicycle lane is recommended, while the Oregon plan recommends 5', with 4' wide bicycle lanes only with open shoulder roads (no curbs).

d. Ordinance No. 3481, "Developer Improvements Ordinance"

This ordinance is very useful in determining when a property must be brought up to standard. There are several places, such as the new site plan review section, where this ordinance should be cross referenced and/or incorporate into the development codes.



Appendix H

Advisory Committee/ Management Team Meeting Minutes

TRANSPORTATION ADVISORY COMMITTEE MEETING MINUTES
FEBRUARY 15, 1995

A meeting of the Transportation Advisory Committee of the City of Pendleton was held on February 15, 1995 at 7:00 PM in the old City Hall Council Chambers. The following members were present: Carrie Legg, Steve Mohrland, Bob Jenson, Bill Kyte, Doug Flatt and Ken Thompson. Steve Taylor was excused. Management Committee members present were Roger Olson, Dennis Olson and Mike Hyde.

Mr. Hyde, Pendleton Planning Director, welcomed those present and thanked them for their willingness to serve the city on this committee. Each member introduced themselves and stated what aspect of transportation in Pendleton they are involved with. Ms. Legg represents CAPECO, which provided senior and disabled transportation services. Mr. Mohrland is a member of the city bicycle committee. Mr. Jenson is a representative of the Airport Commission. Mr. Kyte is chairman of the city planning commission. Mr. Flatt is the owner of Mid Columbia Bus Company and Pendleton Bus Company. Mr. Thompson is a member of the county planning commission. Dennis Olson is the county planning director and Roger Olson is the district ODOT manager.

Mr. Hyde gave the committee some background on the Transportation Planning Rule and the requirement for development of a Transportation System Plan (TSP). He noted that ODOT has agreed to pay 75% of the cost of the TSP, up to $100,000. The city will be responsible for the other 25% and plans to provide most of that in the form of services versus cash.

Mr. Hyde asked the committee to think about election of a chair and vice chair as that will be on the agenda for the next meeting.

Mr. Hyde noted the purpose of this meeting is to compare scores that each member has assigned to the two consultant teams based on their proposals and how they meet the scope of work set forth in the request for proposals. If there is a clear choice, the committee can recommend a consultant team to the city council tonight. If there is no clear choice, or if the committee feels it would be helpful in reaching a decision, the two teams could be invited to Pendleton for an interview in the next couple of weeks.

ODOT had provided the city with a list of nine pre-qualified consultant teams. City staff narrowed the list to the three that had teamed with Kittelson Engineering, since Kittelson has done a lot of transportation engineering work in the Pendleton area in the past few years for two major commercial development proposals. Of the three teams; two decided to make proposals (OTAK and W & H Pacific).

Mr. Hyde noted that Steve Taylor, the City Council representative on the committee, was unable to attend. However, he did provide

staff with a copy of his rating sheet. He gave OTAK a four point edge overall, with OTAK getting a higher score in the criteria of Project Understanding and Local Knowledge and Cost and W & H Pacific receiving a higher score in the Firms' Capabilities category. He wondered if OTAK could get a little over-extended with several projects going on in this region already.

Mr. Thompson indicated that he rated OTAK higher by nine points. He noted that it may be important to have an interview process to provide an assurance that the consultant can do a good job. The Regional Strategies committee he serves on had an experience recently which made them regret not interviewing the consultant first.

Roger Olson stated that he has dealt with both consultant teams and feels that either one would do a good job for Pendleton. He felt an interview would show the committee how the individual members of the team relate to groups of people. He gave a slight edge to OTAK given the greater participation by Kittelson Engineering on their team and because of the greater emphasis on citizen involvement with Pacific Rim Resources.

Mr. Flatt felt that they are both good proposals. He gave the edge to OTAK based on their knowledge of the local area (they are doing several projects in this area now), more intense community involvement plan, lower cost and greater involvement by Kittelson.

Dennis Olson felt that the OTAK proposal was more thorough and provided for more citizen involvement in the process. He also liked the fact that they have been more active in Eastern Oregon projects.

Mr. Hyde stated that he gave OTAK an edge of 7 points. He rated them higher than W & H Pacific in the areas of project approach due to the emphasis on community involvement with the Pacific Rim group. He also scored them higher due to their familiarity with the area, since they are involved with ODOT in four other transportation planning projects in this region now. This led to a lower project cost for Pendleton due to combining of trips. He also noted that the OTAK proposal provided 874 hours to Kittelson and 356 hours to OTAK personnel. W & H Pacific provided 508 hours to Kittelson and 948 hours to themselves.

Mr. Kyte indicated that the OTAK team provided a better presentation; however, he felt that, in an effort to show knowledge of local problems, they may have offered some potential solutions without the benefit of citizen input. He liked the fact that W&H Pacific put emphasis on the problems caused by the railroad bisecting the city. He had no clear choice to recommend.

Mr. Mohrland noted that the criteria of cost and public involvement favored OTAK.

Mr. Jenson did not receive his mailing of the consultant proposals and scoring sheet.

Ms. Legg rated OTAK higher. She noted that OTAK has done TSP's for six similar sized cities. She felt that W & H Pacific did not address the scope of work as well as OTAK did.

The Committee discussed the necessity of having a specialist look at the rail portion of the transportation system. Mr. Hyde noted that the scope of work requires the consultant to look at existing and proposed rail services. The selected consultant will need to look at the impact of railroad lines on the vehicle transportation network.

The committee also discussed the need to bring the consultant teams to Pendleton for an interview. Roger Olson wondered if such an effort would change our minds. Mr. Hyde added since Kittelson plays a major role in each team and since there appears to be a consensus in the scoring in favor of OTAK, the need for interviews may be lessened.

Mr. Jenson said that based on the discussion, he would move to recommend to the City Council that the city negotiate a contract with OTAK, Inc. to prepare the Transportation System Plan. The contract should ensure that Pendleton's at-grade railroad crossing problems are addressed during the course of the study. He also wanted to make it clear that the consultants should avoid pre-conceived notions and let the public participation process produce potential solutions to our transportation problems.

The motion was seconded by Mr. Thompson and carried unanimously.

The next meeting will be called after the consultant is under contract and is ready to begin the process. City staff will contact the committee to determine what dates/times are most convenient.

MEETING SUMMARY, TSP MANAGEMENT COMMITTEE
SEPTEMBER 20, 1995

A meeting of the Management Committee for the Pendleton Transportation System Plan was held at 3:00 PM on September 20, 1995, with the following members in attendance: Dennis Olson, Umatilla County Planning Director, Terry McArtor, District ODOT, Mike Hyde, Pendleton Planning Director and John Preston, Region ODOT Planner. Also present were: Teresa Penninger of Region 5 ODOT, Andy Mortensen and Julie Kuhn of Kittelson and Associates, Todd Chase and Scott Keillor of OTAK and John Taylor.

Mr. Mortensen updated the committee on where the TSP project stands. He indicated that the project is about 1 to 1 1/2 months behind schedule. Technical memorandum #2 (Stakeholder Interviews) is complete and #1 (Existing Plan and Policy Review) is drafted. The traffic model will be completed in the next two weeks. Kittelson needs to work with the city to determine levels of development projected in the UGB and finalize the origin and destination assumptions of the model.

Technical memorandum #3, which inventories the existing transportation system, will be complete in the next three weeks.

Mr. Mortensen walked the committee through Sections 1 of Tech Memo #1 regarding local, state and federal policies. Mr. Keillor did the same for those sections relating to the Transportation Planning Rule requirements.

The committee briefly discussed some of the issues that will likely arise during the TSP process.

The next meeting was scheduled for 9:00 AM on October 25, 1995.

The meeting adjourned at 5:00 PM.

MEETING SUMMARY, TSP TRANSPORTATION ADVISORY COMMITTEE MEETING
SEPTEMBER 20, 1995

A meeting of the Transportation Advisory Committee for the Pendleton Transportation System Plan was held at 7:00 PM on September 20, 1995, with the following members present: Bill Kyte, Pendleton Planning Commission, Steve Mohrland, Bicycle Committee, Doug Flatt, Mid Columbia Bus Co., Bob Jenson, Airport Commission and Steve Taylor, City Council. Members not present were: Carrie Legg of CAPECO and Ken Thompson of the Umatilla County Planning Commission. Also present were: Andy Mortensen and Julie Kuhn of Kittelson and Associates, Scott Keillor of OTAK, Mike Hyde, Planning Director, Larry Lehman, City Manager, Pete Wells, City Attorney, and John Taylor.

After introductions, Mr. Mortensen, the project manager, outlined the roles that Kittelson and Associates, OTAK and Pacific Rim Resources staff are playing in the development of the TSP.

Mr. Mortensen explained that the project is behind schedule and that technical memo #1 is being revised and technical memo #3 will be available in advance of the next scheduled meeting.

Mr. Mortensen outlined the process of developing the TSP which will ultimately require Planning Commission and City Council action amending the Comprehensive Plan and land use ordinances. He summarized the local, state and federal policies within technical memo #1.

Mr. Keillor summarized the analysis within technical memo #1 comparing local codes with the requirements of the Transportation Planning Rule (TPR). He noted that the chapter provided to the committee is in draft form and that city staff had provided comments on the draft earlier in the day. Issues regarding connectivity of streets, mid-block pedestrian walkways, sidewalk design, bicycle facilities and site plan review will need to be addressed by the TSP.

During discussion, Mr. Hyde noted that the TPR will require the city to change the way it does business with respect to design of transportation features. This process will not be easy as some of the changes may not be politically popular.

Mr. Taylor asked how the city would pay for the transportation improvements necessary to serve development within the urban growth boundary. Mr. Mortensen answered that Chapter 7 of the TSP will set forth options for financing. These will include such things as traffic impact fees, local improvement districts, gas taxes, general obligation bonds, etc...

Mr. Flatt asked if the TSP would recognize developments occurring on the Umatilla Indian Reservation east of Pendleton. Mr. Mortensen indicated that the plan will try to build in the transportation impacts of development on the reservation. Mr. Hyde will provide information for that purpose.

Mr. Flatt also spoke of Pendleton's lack of flat industrial land and mentioned a proposal to install ramps on the Goad Road overpass on I-84 between exits 210 and 212.

Mr. Jenson noted the problem with the pedestrian crossing on US 395 near SW Nye Avenue. Mr. Flatt informed the committee that the school district is now busing students around this area due to the level of concern expressed. Mr. Hyde noted the city plans for traffic and pedestrian signals on US 395 at SW 37th Street and SW Perkins Avenue. This would allow removal of the signal at Nye.

Mr. Mohrland asked about housing growth in the Tutuilla Creek and SW Hailey areas. Mr. Hyde showed the committee where this growth is occurring. The traffic model being developed takes into account not only the location of existing homes and employment centers, but the location of future development within the UGB.

Mr. Mortensen spoke of how the traffic model can be used and modified to suit future needs.

Mr. Taylor asked about the role of DLCD in mandating this TSP requirement on local governments. Mr. Hyde responded that ODOT and DLCD are involved and that as state taxpayers, we should be encouraged as the process is designed to reduce the costs of building transportation improvements in the long term. He also noted that the state is paying 75 percent of the costs associated with this planning effort.

Mr. Jenson asked if the traffic model will consider the increased train traffic anticipated in Pendleton in the future. Mr. Mortensen advised that Kittelson has the data available to build this into the model. He noted the importance of the SW 20th Street extension project, where an underpass of the railroad would help relieve congestion at other locations.

Mr. Lehman spoke favorably of the TSP process, noting that it will provide more certainty for developers. He also noted that the study will determine if the one way street system in downtown Pendleton is really the best way to utilize these streets.

Mr. Mortensen noted that the next meeting has been tentatively been scheduled for October 25, 1995 at 7:00 PM. He asked the committee to consider if it wanted to operate as a formal committee in the future, with a chairman and Robert's Rules of Order in effect, or would it prefer to be a more informal group whereby discussion could be less structured and consensus be reached versus formal votes. This decision would need to be made on October 25th.

The meeting adjourned at 9:30 PM.

MEETING SUMMARY, TSP MANAGEMENT COMMITTEE
NOVEMBER 15, 1995

A meeting of the Management Committee for the Pendleton Transportation System Plan was held at 3:00 PM on November 15, 1995 at City Hall. Members present were: Dennis Olson, Terry McArtor, John Preston and Mike Hyde. Also present was Andy Mortensen of Kittelson and Associates.

A summary of the September 20, 1995 meeting was distributed. Mr. Mortensen distributed revised copies of Tech Memo #1.

Mr. Mortensen discussed the findings in Tech Memo #3, which inventories the existing transportation system. This memo contains a table that lists the arterial and collector streets, the number of travel lanes and whether they have bike and pedestrian facilities. The memo also shows the existing level of service at several major street intersections. Only three intersections were found to be over capacity at this time (both I-84 off ramp intersections with US 395, and Court-Dorion-Westgate intersection).

Appendix C of Tech Memo 3 contains a table showing the accident history of several major street intersections in Pendleton. The city will be able to utilize this table to address safety issues on the street system. There have been three fatalities during the 1992 through 1994 calendar years. Two were pedestrians being struck by autos and one was an auto-train accident at SW Court.

The committee made comments regarding such issues as signalized pedestrian crossings, Umatilla River parkway bike/pedestrian path, Community Park bike/pedestrian path and the status of public transportation providers (Table 2).

Mr. Olson suggested that the plan include a map of streets that have been designated as critical for evacuation in the event of an emergency or disaster.

Mr. Mortensen reported on his discussions with ODOT and DLCD representatives regarding the calibration of the traffic model. It appears that an understanding has been reached so the study can proceed with assurance that the methodology will not be called into question later in the process.

Mr. Mortensen spoke regarding how the national average trip data compares to what appears to be occurring in Pendleton. To make the model work, the number of trips per day needed to be adjusted upward about 35 percent for Pendleton compared to the national average. In other words, a single family household in Pendleton generates about 13.6 trips per day versus 10 trips per day for the national average.

Mr. Mortensen asked that the next meeting of the committee be scheduled for 3:00 PM on December 20, 1995. At that time, the committee will look at future traffic volume forecasts and system needs if the city develops as set forth in the comprehensive plan.

The meeting adjourned at 4:50 PM.

MEETING SUMMARY, TSP TECHNICAL ADVISORY COMMITTEE
NOVEMBER 15, 1995

A meeting of the Technical Advisory Committee for the Pendleton Transportation System Plan was held at 7:00 PM on November 15, 1995 at City Hall. Members present were Carrie Legg, Bill Kyte, Steve Taylor and Ken Thompson. Also present were Mike Hyde and Andy Mortensen of Kittelson and Associates.

A summary of the September 20, 1995 meeting was distributed. Mr. Mortensen distributed revised copies of Tech Memo #1.

After introductions, Mr. Mortensen led the committee through the contents of Tech Memo #3. Table 1 of this memo is an inventory of the arterial and collector streets within the Pendleton Urban Growth Boundary. The table inventories the number of travel lanes, whether sidewalks exist on one or both sides and whether bicycle lanes or signed routes exist.

During the discussion of the inventory, Mr. Kyte noted the experience of the Planning Commission in evaluating developments that have requested reduced street widths and reduction of sidewalk standards. Mr. Mortensen noted that the goal of the Transportation Planning Rule is to reduce dependency on the automobile and this means the city will need to consider policy and ordinance amendments to require sidewalks on both sides of all streets unless special circumstances warrant another treatment.

While mention was made of public transportation options available in Pendleton, it was noted that the Greyhound Bus station is in a cramped location and that it would be nice to relocate it to a more spacious location, such as near the airport terminal.

The committee discussed the feasibility of providing some type of public transit system for residents, especially for senior and disabled and on routes that would serve major employers. Mr. Mortensen mentioned the 1982 study done by the city and suggested that the Executive Summary of the report be provided to the committee members.

Financing public transportation can not be done by fares alone. One product of the TSP is a finance plan that will likely include a traffic impact fee. It is possible to encourage new businesses to provide transportation services to employees by offering them reductions in the traffic impact fee they would normally have to pay.

The committee discussed the level of service findings of the tech memo and talked about how the extension of SW 20th Street under the railroad tracks to Westgate would help.

Mr. Mortensen explained how the traffic model was established and how local traffic counts and negotiations with ODOT and DLCD have resulted in model calibrations that can be used to predict future traffic conditions. It is estimated that trip generation in Pendleton is about 35% higher than the national average given Pendleton's climate, topography and lack of public transportation.

Thus, the average single family dwelling unit in Pendleton is expected to generate 13.6 trips per day versus the national average of 10 trips per day.

Mr. Mortensen noted that the next several weeks will be spent looking at the future development of the Pendleton urban growth boundary and what impacts the expected growth will have on the transportation system. The next meeting of the committee has been scheduled for 7:00 PM on December 20, 1995.

The meeting adjourned at 8:50 PM.

TRANSPORTATION MANAGEMENT COMMITTEE MEETING
FEBRUARY 28, 1996

A meeting of the Management Committee for the Pendleton Transportation System Plan was held at 3:00 PM on February 28, 1996 at the City Hall Council Chambers. Attending were: Todd Chase of OTAK, Andy Mortensen and Julie Kuhn of Kittelson and Associates, John Preston of Region 5 ODOT, Terry McArtor of District 12 ODOT and Mike Hyde, Planning Director.

The meeting was called to order and the agenda was outlined by Mr. Mortensen.

Ms. Kuhn briefed the committee on working paper #1. She explained how Kittelson has adjusted the vehicle counts taken by the city to calibrate the traffic model. They have attempted to arrive at realistic trip rates since Pendleton does not fit the national average.

Ms. Kuhn also went through the population and employment forecasts in technical memo #4. She explained how Kittelson worked with city staff to arrive at these projections.

Ms. Kuhn then presented the future travel forecast model, which is based on a filling of the urban growth boundary with no improvements to the transportation system. Figure 3 of the report shows which intersections will operate with poor levels of service if this were to occur. One "critical movement" at each intersection often causes the problem.

Mr. Mortensen indicated that the Alternatives Analysis (Chapter 5) of the study would wait until there is agreement on study methodology. Kittelson is in communication with DLCD and ODOT to determine how they will expect the study to address "transportation efficient land use," "transportation demand management" and alternate modes. He expected this to be resolved within a week or two or the study would need to proceed using methods Kittelson feels are most appropriate.

Mr. Preston advised that if Kittelson performs per the approved scope of work, there should be no problems.

Mr. Chase advised the committee of the status of the SW 20th Street extension study. He indicated that an underpass will cost about $4.0 million while an at-grade crossing would cost about $1.5 million. These cost estimates are based on UPRR bridge costs; however, ODOT bridge estimates are lower.

Mr. Chase outlined some of the benefits of a SW 20th Street extension. For example, it would improve the levels of service at the intersections of SW 17th at Court and Emigrant.

It was noted that the PUC and UPRR are not likely to allow a new at-grade crossing unless an existing at-grade crossing is closed. In response to a question, Mr. Mortensen advised against closing the SW 13th Street crossing as it provides a good route to get from Dorion to Frazer since SW 10th Street does not extend past Emigrant.

Mr. McArtor asked if it would be possible to eliminate some turning movements at the Court/Dorion/Westgate intersection? Mr. Mortensen answered that it may be possible to close the eastbound Court Place left turn and the right turn from eastbound Westgate.

Mr. Chase summarized the benefits of a SW 20th Street extension project. There would be construction benefits, regional benefits from better alignment of state routes, a reduction in maintenance investment in other state facilities, a reduction in accident rates, a reduction in traffic on some streets and at some problem intersections and a reduction in vehicle movement delays. These benefits will need to be taken into account while assembling a funding package for the project.

Mr. Mortensen advised that SW 20th Street is probably the best location available for an underpass.

Mr. Hyde updated the committee on the Pendleton Retail Center project.

The committee established it's meeting schedule for the remainder of the study. Meetings are scheduled for April 17th and May 22nd. The Planning Commission and City Council will receive a draft plan in early June and hold a joint public hearing to consider adoption of the TSP on June 25th.

TRANSPORTATION ADVISORY COMMITTEE MEETING
FEBRUARY 28, 1996

A meeting of the Advisory Committee for the Pendleton Transportation System Plan was held at 7:00 PM on February 28, 1996 at the City Hall Council Chambers. Attending were: Steve Mohrland, Bill Kyte, Carrie Legg, Ken Thompson and Steve Taylor. Also present were: Todd Chase of OTAK, Andy Mortensen and Julie Kuhn of Kittelson and Associates, Dave Lorenzen, City Engineer and Mike Hyde, Planning Director.

The meeting was called to order and the agenda was outlined by Mr. Mortensen.

Ms. Kuhn briefed the committee on the year 2015 population and employment forecasts in technical memo #4. She explained how Kittelson worked with city staff to arrive at these projections.

Ms. Kuhn then presented the future travel forecast model, which is based on a filling of the urban growth boundary with no improvements to the transportation system. Figure 3 of the report shows which intersections will operate with poor levels of service if this were to occur. One "critical movement" at each intersection often causes the problem.

Mr. Mohrland questioned if the "low growth" forecast was indeed reasonable for Pendleton. Mr. Hyde noted that the "low growth" projection actually provides for substantial growth as shown in the report.

Mr. Mortensen spoke to the committee about delays the project has experience. He indicated that the Alternatives Analysis (Chapter 5) of the study would wait until there is agreement on study methodology. Kittelson is in communication with DLCD and ODOT to determine how they will expect the study to address "transportation efficient land use," "transportation demand management" and alternate modes. He expected this to be resolved within a week or two or the study would need to proceed using methods Kittelson feels are most appropriate.

Mr. Mortensen felt that the alternatives analysis should be ready for the next meeting, on April 17th. In that analysis, for instance, they will be able to compare the base case (filling of the urban growth boundary with no transportation system improvements) to see if improved transportation networks (such as bicycle) will enable the city to delay certain street or signalization improvement projects.

Mr. Mortensen advised the committee that the city should have a draft TSP to focus on by the meeting of May 22nd. Cost estimates and time frames for improvements will be included. After the TAC has completed its review, the document would be forwarded to the Planning Commission and City Council for review and possible adoption.

Mr. Chase advised the committee of the status of the SW 20th Street extension study. He indicated that an underpass will cost about $4.0 million while an at-grade crossing would cost about $1.5 million. These cost estimates are based on UPRR bridge costs; however, ODOT bridge estimates are lower.

Mr. Chase outlined some of the benefits of a SW 20th Street extension. For example, it would improve the levels of service at the intersections of SW 17th at Court and Emigrant. About 15% to 20% of the traffic could be removed from the Court/Dorion/Westgate intersection.

It was noted that the PUC and UPRR are not likely to allow a new at-grade crossing unless an existing at-grade crossing is closed.

Mr. Chase summarized the other benefits of a SW 20th Street extension project. There would be construction benefits, regional benefits from better alignment of state routes, a reduction in maintenance investment in other state facilities, a reduction in accident rates, a reduction in traffic on some streets and at some problem intersections and a reduction in vehicle movement delays. There would also be benefits to the movement of emergency vehicles from the fire station on SW Court to the south side of town.

These benefits will need to be taken into account while assembling a funding package for the project. The city should lobby ODOT to get this project included in the state transportation improvement program (STIP).

Mr. Chase recommends that the SW 20th Street project be funded roughly half locally and half by the state. This would mean the city would need to raise about $2.0 million for the project.

Mr. Kyte wondered if the city would need to trade the Eastgate viaduct project to get an underpass funded at SW 20th Street. The consensus was that both projects are needed.

Mr. Taylor asked if the Westgate highway bridge is scheduled for replacement. Mr. Lorenzen indicated that the state rates bridges for future replacement. NE 8th Street bridge is next on the list. If traffic conditions warrant, the Westgate bridge may make the list in the future.

If response to a question from Mr. Mohrland, it was indicated that SW 20th Street would intersect with Westgate between the Pacific Pride fueling station and the bridge.

Mr. Mohrland expressed concern that inflation will continue to drive up the cost of an underpass.

Mr. Taylor made note of the bonds being taken to the voters in the near future for a new county jail, city parks and recreation facilities and BMCC. It may be difficult for voters to continue passing such bonds for such projects.

The committee discussed other funding sources, such as transportation system development charges, which were assessed on the Harris Pine property and could be a city wide requirement in the future.

The committee established it's meeting schedule for the remainder of the study. Meetings are scheduled for April 17th and May 22nd. The Planning Commission and City Council will receive a draft plan in early June and hold a joint public hearing to consider adoption of the TSP on June 25th.

The meeting adjourned.

TRANSPORTATION SYSTEM PLAN MANAGEMENT COMMITTEE MEETING
APRIL 17, 1996

A Pendleton Transportation System Plan Management Committee meeting was held at 3:00 PM on April 17, 1996 at the Pendleton City Hall Council Chambers. The following members were present: Dennis Olson, John Preston and Mike Hyde. Also present were Larry Lehman, City Manager, Dave Lorenzen, City Engineer, Andy Mortensen and Julie Kuhn of Kittelson and Associates and Scott Keillor of OTAK.

The meeting was called to order and Mr. Mortensen went through the agenda for the meeting. He noted that the committee would be reviewing alternatives as set forth in Tech Memo #5 and that next month, a list of recommended projects with cost estimates would be available. A financial plan is also being developed. A draft TSP should be ready in June.

Mr. Mortensen covered the findings of several of the EMME 2 traffic model runs included in Tech Memo #5. Maps show the comparison of existing peak volumes compared to what will exist under a no build alternative assuming development within the UGB as predicted by the comprehensive plan and no street improvements other than the Eastgate project currently in the STIP.

A second map indicated what the impacts would be if all of the future major streets envisioned by the comprehensive plan are constructed compared to the year 2015 no build scenario. It was noted that construction of these streets relieves some of the pressure on Southgate. The impacts of a SW 20th Street extension on Westgate were also depicted.

Mr. Preston noted that construction of comprehensive plan improvements would slightly reduce the increase in traffic on I-84 as more trips could be completed without using the freeway for local traffic. He also restated the challenge to reducing traffic on Southgate due to the obstacles posed by I-84 and topography of the area.

Mrs. Kuhn advised the committee of the need to change some of the figure identification numbers in the draft tech memo #5 to match the text.

Mr. Preston wondered if the TSP will be providing more information regarding shifting the focus from building roadways to transportation demand management programs. He indicated that ODOT prefers to avoid costly projects resulting from the TSP process.

Mr. Mortensen advised that the TSP can recommend that certain size employers use transportation demand management programs. Mr. Preston indicated that ODOT is still attempting to find funding to establish some type of regional TDM coordinator. Mr. Hyde advocated for this as it is unlikely that individual cities will have the resources to run an effective TDM program.

Mrs. Kuhn led the discussion on the alternatives analysis. The impacts of the proposed SW 20th Street underpass extension to Westgate were reviewed, as were the impacts of modifying or closing the Court Place railroad crossing.

Mr. Lehman asked if the consultants had given serious consideration to the possibility of converting Pendleton's one-way couplets back to two-way streets. Mr. Mortensen answered that the draft TSP will address this question. Typically, two-way streets have lower levels of service, larger critical volume movements, more traffic signals and require removal of on-street parking to accommodate left turn lanes.

Mrs. Kuhn also noted the findings of an alternative that would have reconfigured the US 395/I-84 interchange at exit 209. This would have routed the westbound off-ramp to the SW Court Place area and provided an on-ramp from Court. However, this project would require one new bridge and the modification of two others to meet federal interstate standards, which makes the alternative very expensive. The benefits of reducing traffic near SW 20th and Emigrant may not be offset by these costs.

In response to a question from Mr. Hyde, Mr. Mortensen answered that the traffic model does not show a traffic signal being needed at the intersection of Northgate and Westgate. This is contrary to the

findings of the Pendleton Retail Center study, which was completed prior to the development of the traffic model being used in the TSP.

Mr. Preston asked if the consultants had considered trying to route US 395 to a different I-84 interchange. Mr. Mortensen mentioned that there was some local interest in developing the Goad Road overpass area in the future. Perhaps that would be an alternative intersection for 395. Mr. Hyde also noted some local interest in providing transportation infrastructure connecting US 395 with the Airport junction at exit 207. These alternatives are very costly.

Mr. Olson commented on the need for better connections between US 395 and the west side of McKay Creek.

Mr. Keillor briefed the committee on the land use alternatives chapter being developed by OTAK. The recommendations will be plugged in to the model to show what impact alternate land use patterns can have on the street system. In general, Pendleton has a good mixture of uses, but it may be able to be improved to cut down on cross town trips. Providing residential opportunities in proximity to commercial and industrial employment is the goal.

Mr. Preston applauded the effort being made in this area even though Pendleton is not technically required by the TPR to do this.

Mr. Mortensen noted that ODOT is conducting a study in several small cities around the state, including Pendleton, which will survey household vehicular trip generation. Survey respondents will track all of their trip movements over a given period of time. Such data, once available, will help confirm whether the traffic model being used for Pendleton includes reasonable assumptions.

The next meeting was scheduled for 11:00 AM on May 22, 1996.

TRANSPORTATION SYSTEM PLAN TECHNICAL ADVISORY COMMITTEE MEETING
APRIL 17, 1996

A Pendleton Transportation System Plan Technical Advisory Committee meeting was held at 7:00 PM on April 17, 1996 at the Pendleton City Hall Council Chambers. The following members were present: Carrie Legg, Bill Kyte, Bob Jensen, Ken Thompson, Steve Mohrland and Doug Flatt. Also present were: John Taylor, Andy Mortensen and Julie Kuhn of Kittelson and Associates, Scott Keillor of OTAK, and Mike Hyde.

The meeting was called to order and introductions were made.

Mr. Mortensen went through the agenda for the meeting. He noted that the committee would be reviewing alternatives as set forth in Tech Memo #5 and that next month, a list of recommended projects with cost estimates would be available. A financial plan is also being developed. A draft TSP should be ready in June.

Mr. Mortensen covered the findings of several of the EMME 2 traffic model runs included in Tech Memo #5. Maps show the comparison of existing peak volumes compared to what will exist under a no build alternative assuming development within the UGB as predicted by the comprehensive plan and no street improvements other than the Eastgate project currently in the STIP.

A second map indicated what the impacts would be if all of the future major streets envisioned by the comprehensive plan are constructed compared to the year 2015 no build scenario. It was noted that construction of these streets relieves some of the pressure on Southgate. The impacts of a SW 20th Street extension on Westgate were also depicted.

Mr. Mortensen led the discussion on the alternatives analysis. The impacts of the proposed SW 20th Street underpass extension to Westgate were reviewed, as were the impacts of modifying or closing the Court Place railroad crossing. Mr. Mortensen promised to have a copy of the final report on the extension of SW 20th Street available to the committee by the next meeting.

Mr. Thompson questioned the impact of a Court Place railroad crossing closure on nearby businesses. Mr. Mortensen noted that closure of the left turn movement from eastbound Court to Westgate and the right turn from eastbound Westgate to Court would be the most feasible to pursue if SW 20th Street were extended. Closure of the crossing would indeed have more impacts on the business community.

Mr. Mortensen also noted the findings of an alternative that would have reconfigured the US 395/I-84 interchange at exit 209. This would have routed the westbound off-ramp to the SW Court Place area and provided an on-ramp from Court. However, this project would require one new bridge and the modification of two others to meet federal interstate standards, which makes the alternative very expensive. The benefits of reducing traffic near SW 20th and Emigrant may not be offset by these costs.

Mr. Flatt expressed hope that this study would make solid recommendations regarding projects that could be done to improve traffic conditions. There was discussion regarding other improvements that could be made in the area of SW 20th and Emigrant. These go back to the Pendleton Retail Center study. They involve a reconfiguration of the intersection to eliminate left turns from eastbound Emigrant to northbound 20th. This would require vehicles to use SW Frazer to access SW 20th. This would make the SW 20th and Emigrant intersection more efficient. Gaps could be created by signal timing and prohibition of free right turns at 20th and Emigrant to improve conditions on Southgate at the I-84 ramps. The TSP can address these alternatives for ODOT and the city to consider.

Mr. Mortensen noted that if the left turns from Emigrant to SW 20th are continued, an additional left turn lane will be needed. Also, SW 20th Street will need to be widened to five lanes.

Mr. Flatt commented on some of the major streets called for in the comprehensive plan. He hoped that the grade from the Tutuilla valley to Indian Hills could be lessened with these new streets. Mr. Hyde noted that the construction of these streets will occur as surrounding lands are developed. City grade standards for collector and arterial streets will be followed where possible.

Mr. Flatt wondered if the proposed extension of SW Court into the Pendleton Industrial Park was feasible. Mr. Hyde commented that in addition to requiring a new bridge, the road may have to be built in the excess freeway right of way due to the proposed acquisition of land in the area for expansion of EOCI southward.

Mr. Keillor briefed the committee on the land use alternatives chapter being developed by OTAK. The recommendations will be plugged in to the model to show what impact alternate land use patterns can have on the street system. In general, Pendleton has a good mixture of uses, but it may be able to be improved to cut down on cross town trips. Providing residential opportunities in proximity to commercial and industrial employment is the goal.

Mr. Thompson inquired about the availability of funds for transportation demand management. Mr. Mortensen emphasized that TDM programs need a follow up person to help businesses operate van pool, flex hours, and other TDM methods. In absence of a transit system, TDM will need to be addressed. The region ODOT office is looking into the possibility of funding a position to assist cities in the region implement TDM projects.

Mr. Thompson noted the lack of dollars on the state level to fund needed transportation projects. Mr. Flatt urged the consultants not to write an unfundable plan. Mr. Mortensen said the plan would include both short and long range recommendations for solutions to problems. Regarding funding, the next meeting will include a discussion of project costs and the variety of possible funding sources. This will include such sources as system development charges, road user fees, local or regional gas taxes, Immediate Opportunity Fund, the downstate transfer associated with Portland light rail, and other various sources.

The next meeting was scheduled for 7:00 PM on May 22, 1996.

TRANSPORTATION SYSTEM PLAN MANAGEMENT COMMITTEE MEETING
MAY 22, 1996

A Pendleton Transportation System Plan Management Committee meeting was held at 11:00 AM on May 22, 1996 at Pendleton City Hall. The following persons were present: John Preston of Region 5 ODOT, Terry McArtor of District 12 ODOT, Dave Lorenzen, Pendleton City Engineer, Mike Hyde, Pendleton Planning Director, Todd Chase of OTAK, Inc. and Andy Mortensen of Kittelson and Associates.

The meeting was called to order and Mr. Mortensen covered the meeting agenda.

Mr. Chase led the committee on a discussion of Technical Memorandum No. 6, "Evaluation of Land Use and Transportation Demand Management Strategies." He explained the process whereby they looked at the land use pattern with the build-out of the current comprehensive plan and attempted to balance the households to jobs ratio within the various sectors of the community. This analysis is not required by the Transportation Planning Rule for cities of Pendleton's size; however, the findings can still be applied by the city to improve traffic conditions. The findings recommend a decrease in the projected number of single family housing units in the south side of the city and an increase in commercial and industrial uses in those sectors. The findings also call for more multi-family housing in suitable locations in the northwest portions of the city (west of state highway 37).

Mr. Chase explained the suggested re-allocation of jobs and households as set forth in the study tables and indicated that the upcoming urban growth boundary study would be a good opportunity to take this concept toward implementation.

Mr. Mortensen explained how transportation efficient land use patterns affect the street system. He covered how the traffic model was re-calibrated to reduce trip lengths and provide for increased use of alternate modes of travel as more people live closer to shopping and employment opportunities. The result in that many identified improvements to the street system may be postponed or not needed at all, depending on the success of the city in implementing these transportation efficient land use recommendations.

Mr. Preston suggested some items of clarification that could be added to the memo to make it more understandable for the general public. He also recommended that some of the assumptions made to re-calibrate the model be justified.

Mr. Preston noted that the Sandy, Oregon plan prepared by Kittelson has been pointed to at ODOT meetings as a good example of what ODOT is looking for in these planning efforts. Mr. Mortensen indicated that the Pendleton plan will use the same principles.

Mr. Chase covered the next work product, a draft financing plan. He noted that the Transportation Planning Rule requires four things be included in this portion of the plan: a list of planned transportation facilities and major improvements, a general estimate of the timing of planned facilities and improvements, a determination of rough conceptual capital cost estimates and a discussion of existing and potential funding sources.

The lists of planned roadway, bicycle and pedestrian projects were reviewed.

Mr. Preston mentioned that ODOT did not want to see long lists of costly projects come out of these plans. Mr. Mortensen indicated that this level of detail is needed so the city can adequately analyze funding alternatives.

Mr. Preston asked how the city would prioritize the listed improvements. Mr. Lorenzen explained that the city's Capital Improvements Program (CIP) process does this.

Mr. Chase noted that the bicycle projects cost estimates have been dramatically reduced from the draft report as the bicycle routes typically require only signage. Discussions with city staff have also resulted in the reduction of the pedestrian projects.

Mr. Chase noted that the city's CIP identifies a funding gap of about $6.7 million over the next five years. Funding sources that could be used to fill this gap were listed. They include a local gas tax, a local vehicle registration fee, a systems development charge, state transportation equity funds from the light rail project, general obligation bonds and street user fees.

The committee agreed that with gasoline prices increasing recently, a local fuel tax would not be likely. The governor's transportation initiative may result in some help, perhaps in the form of an increase in the state gas tax or vehicle registration fees. General obligation bonds for a new county jail and recreation facilities were just passed in Pendleton, so additional bonds may be difficult to pass at this time. User fees could be similar to the city's fire equipment charge that appears on the monthly utility bills.

Mr. Mortensen noted that Kittelson has worked with several Oregon cities in evaluating transportation funding alternatives. He will provide some sample materials to the city.

Mr. Mortensen informed the committee that the average cost of a traffic signal has increased from the $100,000 range to the $150,000 to $180,000 range according to recent information.

Mr. Mortensen discussed the findings of Working Paper #4. The first portion of the report sets forth a recommended modification of the US 395/Interstate 84 intersection. The modification would remove the left turn lane from eastbound Emigrant to northbound SW 20th Street. SW 20th Street would become one-way northbound between Frazer and Emigrant. A traffic signal would eventually be needed at the westbound off ramp intersection with Southgate.

Those present felt that the proposal warrants further discussion.

The second portion of the working paper sets forth the advantages and disadvantages of maintaining the existing one-way couplets versus returning to two-way streets in the downtown area. The committee agreed that the advantages of a one-way street system far outweigh the disadvantages.

The next meeting of the committee is scheduled for June 25, 1996, at which time the final draft will be available for review. A public meeting regarding the plan will also be held during that trip to Pendleton.

TRANSPORTATION SYSTEM PLAN TECHNICAL ADVISORY COMMITTEE MEETING
MAY 22, 1996

A Pendleton Transportation System Plan Technical Advisory Committee meeting was held at 7:00 PM on May 22, 1996 at Pendleton City Hall. The following members were present: Steve Mohrland, Bill Kyte, Steve Taylor, Bob Jenson and Ken Thompson. Members not present: Doug Flatt and Carrie Legg. Also present were Mike Hyde, Pendleton Planning Director, Todd Chase of OTAK, Inc., Andy Mortensen of Kittelson and Associates and John Taylor.

The meeting was called to order and Mr. Mortensen covered the meeting agenda. He informed the committee that at the next meeting, the final draft plan would be presented.

Mr. Chase led the committee on a discussion of Technical Memorandum No. 6, "Evaluation of Land Use and Transportation Demand Management Strategies." He explained the process whereby they looked at the land use pattern with the build-out of the current comprehensive plan and attempted to balance the households to jobs ratio within the various sectors of the community. This analysis is not required by the Transportation Planning Rule for cities of Pendleton's size; however, the findings can still be applied by the city to improve traffic conditions. The findings recommend a decrease in the projected number of single family housing units in the south side of the city and an increase in commercial and industrial uses in those sectors. The findings also call for more multi-family housing in suitable locations in the northwest portions of the city (west of state highway 37).

Mr. Chase explained the suggested re-allocation of jobs and households as set forth in the study tables and indicated that the upcoming urban growth boundary study would be a good opportunity to take this concept toward implementation.

Mr. Jenson and Mr. Taylor expressed concern with the reduction in single family dwellings and increase in multi-family dwellings called for in the strategy. They were concerned that multi-family dwellings in the northwest portion of the city not be located so as to impact the operations of the Eastern Oregon Regional Airport.

In response to these concerns it was noted that the comprehensive plan calls for a large increase in single family housing units and the proposed strategy just decreases the increase slightly. Pendleton is already encouraging housing near employment opportunities as multi-family dwellings are permitted in the commercial zones. The exact location of increased multi-family dwellings in the northwest section needs to be analyzed taking into account the airport, topography and other factors.

Mr. Mortensen explained how transportation efficient land use patterns affect the street system. He covered how the traffic model was re-calibrated to reduce trip lengths and provide for increased use of alternate modes of travel as more people live closer to shopping and employment opportunities. The result in that many identified improvements to the street system may be postponed or not needed at all, depending on the success of the city in implementing these transportation efficient land use recommendations.

Mr. Taylor saw the connection between good transportation demand management planning and reduction of costs to the city to provide street improvements. Mr. Mortensen noted that good transportation planning should help the city be more competitive in its quest for outside funding for projects.

Mr. Chase covered the next work product, a draft financing plan. He noted that the Transportation Planning Rule requires four things be included in this portion of the plan: a list of planned transportation facilities and major improvements, a general estimate of the timing of planned facilities and improvements, a determination of rough conceptual capital cost estimates and a discussion of existing and potential funding sources.

The lists of planned roadway, bicycle and pedestrian projects were reviewed.

It was noted that ODOT feels it can fund very few large projects in Region 5. More local dollars helps speed up projects. This will be very important for projects like the SW 20th Street extension.

Mr. Mortensen noted for the committee that the average cost of a new traffic signal has increased in the past few years from about $100,000 to the $150,000 to $180,000 range.

Mr. Chase stated that the bicycle projects cost estimates have been dramatically reduced from $6.459 million in the draft report to about $1.0 million as the bicycle routes typically require only signage. Discussions with city staff have also resulted in the reduction of the pedestrian projects from about $6.46 million to about $4.0 million.

Mr. Chase noted that the city's CIP identifies a funding gap of about $6.7 million over the next five years. Most of this can be attributed to two projects: the Barnhart Road access to the Airport and the SW 20th Street extension. Funding sources that could be used to fill this gap were listed. They include a local gas tax, a local vehicle registration fee, a systems development charge, state transportation equity funds from the light rail project, general obligation bonds and street user fees.

Mr. Chase and Mr. Mortensen advised the committee that local gas taxes are in place in The Dalles, Washington County and Multnomah County. Local vehicle registration fees have not been used so far. Many are waiting for the governor's transportation initiative to come up with new funding sources for the state.

Systems Development Charges (SDC's) were discussed. They can take many forms, but state law requires equity and a specific process must be followed to enact them. They can be viewed as a deterrent to development or as a way of requiring developers to pay for the improvements that are needed to accommodate the traffic they generate.

Mr. John Taylor stated that the developers of the Harris Pine site shopping center were willing to pay a system development charge. Those developers recognized the increase in traffic the development would cause. Mr. Taylor felt any local SDC needs to be fair and equitable and be paid by all types of development.

Mr. Steve Taylor noted the irony of the city charging systems development charges on one hand while offering enterprise zone incentives to new businesses. During discussion of this point, it was noted that some cities will provide reductions of SDC's to such developments as new affordable housing and recruited industry.

The transportation equity fund associated with the light rail project is too uncertain at this time to count on.

Mr. Kyte expressed doubt that Pendletonians will substantially increase the amount of walking and biking that they do to go to work, shop, etc... Mr. Mortensen responded that as new street projects are completed and as the river parkway continues to develop, small increases in bicycle and pedestrian transportation should occur. Mr. Chase concurred that the plan paints an optimistic scenario which will take time to become reality.

Mr. Mortensen discussed the findings of Working Paper #4. The first portion of the report sets forth a recommended modification of the US 395/Interstate 84 intersection. The modification would remove the left turn lane from eastbound Emigrant to northbound SW 20th Street. SW 20th Street would become one-way northbound between Frazer and Emigrant. A traffic signal would eventually be needed at the westbound off ramp intersection with Southgate.

Those present felt that the proposal warrants further discussion.

The second portion of the working paper sets forth the advantages and disadvantages of maintaining the existing one-way couplets versus returning to two-way streets in the downtown area. The committee agreed that the advantages of a one-way street system far outweigh the disadvantages.

The next meeting of the committee is scheduled for June 25, 1996, at which time the final draft will be available for review. A public meeting regarding the plan will also be held during that trip to Pendleton.

PENDLETON TRANSPORTATION SYSTEM PLAN
OPEN HOUSE #2

An open house to allow citizen review and comment on the draft Pendleton Transportation System Plan (TSP) was held at 7:00 PM on June 24, 1996 at the Pendleton Convention Center. The following citizens were in attendance: John Taylor, Carolyn and Carl Anderson, Rob Wesselman, John Struve, Bill and Maxine Haines, Wes Grilley, Gary Ward, H. Gale Marshall, Steven Stewart and Bill Kyte. Others present were Julia Kuhn of Kittelson and Associates, Todd Chase of OTAK, Inc. and Mike Hyde, Planning Director. There were no members of the news media present.

After everyone had an opportunity to view maps portraying the recommended bicycle, pedestrian and street projects, Mr. Hyde welcomed those present and introduced the members of the consultant team. He asked that comments on the draft plan be provided tonight or in advance of the anticipated Planning Commission/City Council work session on the plan scheduled for late July.

Mr. Chase and Ms. Kuhn gave an overview of the process by which the draft TSP has been generated. In response to a question from Mr. Grilley, it was explained that the transportation system was analyzed using a computer model that predicts traffic conditions based on anticipated growth of the city within the urban growth boundary, given estimates of the numbers of trips per day generated by various land uses.

Mr. Grilley noted that he is currently participating in an ODOT survey of his household's transportation modes and frequencies. Mr. Hyde explained that the results of this survey will be tested against the data used in the traffic model to see if the estimates used for Pendleton are valid.

In response to a question from Mr. Marshall, it was explained that the TSP is a 20 year plan, which will need to be updated as conditions warrant or during the periodic review of the comprehensive plan (every 5 to 7 years).

After completion of the questions from the audience, the consultant team charted comments from each individual. Among the comments received were:

1. The city should be working with Horizon Airlines to provide more affordable service to and from the Portland area.

2. The SW 37th Street (southern loop arterial) should tie in to the Goad Road overpass area versus the SE 3rd Drive area at Indian Hills, as indicated in the plan.

3. Planning should go beyond the 20 year time line to identify longer term projects.

CITY OF PENDLETON CITY COUNCIL AND PLANNING COMMISSION PUBLIC MEETING AGENDA

January 27, 1997
New City Hall Council Chambers
501 SW Emigrant Ave. 2nd Floor
7:00 P.M.

1. **CALL TO ORDER AND INTRODUCTIONS**

2. **SCHEDULED MATTERS**

   A. PUBLIC HEARING AND DISCUSSION REGARDING THE FINAL DRAFT OF THE PENDLETON TRANSPORTATION SYSTEM PLAN

   B. FIRST READING OF ORDINANCE NO. 3556 ADOPTING THE PENDLETON TRANSPORTATION SYSTEM PLAN.

3. **SCHEDULE DATE FOR CONTINUATION OF THE PUBLIC HEARING AND SECOND READING OF ORDINANCE NO. 3556.**

4. **ADJOURNMENT**

ORDINANCE NO. 3556

AN ORDINANCE ADOPTING A TRANSPORTATION SYSTEM PLAN FOR THE CITY OF PENDLETON IN ACCORDANCE WITH THE OREGON TRANSPORTATION PLANNING RULE (OAR 660-12)

WHEREAS, the Oregon Legislature adopted law that was implemented by Oregon Administrative Rules at Chapter 660, Division 12; and

WHEREAS, said administrative rule requires cities to adopt a transportation system plan (TSP); and

WHEREAS, the City of Pendleton intends to comply with OAR 660-12 and has formed a Management Committee and Technical Advisory Committee to oversee the development of the TSP; and

WHEREAS, the City of Pendleton, with support from the Oregon Department of Transportation and Oregon Department of Land Conservation and Development, has hired the consulting firms of Otak, Inc. and Kittelson and Associates to prepare the TSP; and

WHEREAS, said consultants have worked with city staff and the two committees since May of 1995 in the preparation of the TSP; and

WHEREAS, the public has been afforded an opportunity to review and comment on the TSP.

NOW, THEREFORE, THE CITY OF PENDLETON ORDAINS AS FOLLOWS:

SECTION 1. The transportation system plan prepared for the City of Pendleton, dated December 26, 1996, is hereby adopted in accordance with OAR 660-12.

SECTION 2. Upon adoption of this transportation system plan, city staff is directed to draft and process ordinances to amend the city comprehensive plan and implementation ordinances to ensure the timely implementation of the transportation system plan.

PASSED BY A MAJORITY OF THE COUNCIL MEMBERS PRESENT AND APPROVED BY THE MAYOR

_____, 1997.

APPROVED:_____
MAYOR

ATTEST:_____
CITY RECORDER

APPROVED AS TO FORM:_____
CITY ATTORNEY

PENDLETON TRANSPORTATION SYSTEM PLAN

January 1997

UMATILLA COUNTY PLANNING DEPARTMENT

Draft Transportation System Plan (TSP)

Addresses City Growth

The Pendleton Transportation System Plan (TSP), a joint venture between the City of Pendleton, Umatilla County, and the Oregon Department of Transportation (ODOT), is a multimodal plan that includes strategies to manage growth and the community's transportation needs during the next twenty years. This plan includes a comprehensive analysis of Pendleton's transportion system and has been prepared in accordance with Oregon Revised Statute 197.712, OAR 660 Division 12 and the Transportation Planning Rule (TPR).

In accordance with the goals of the study, the TSP addesses the provision of a safe, affordable, and accessible transportation system for all users. As such, the plan includes an assessment of the existing transportationsystem, and evaluation of the impacts of growth on the transportation system, and identification of short-term and long-term improvement projects that are included in the preferred alternative, a transportation financing plan, transportation and land use policy recommendations that can assist the City in implementing the TSP, and a description of the plan's compliance with the TPR.

Public Hearing

The Pendleton City Council and Planning Commission will hold the first of two public hearings of the Draft Transportation System Plan (TSP) on **January 27,1997**. Copies of the Draft TSP are available at the Pendleton Public Library. You are invited to attend these hearings to learn more about the TSP.

Date: January 27, 1997
Time: 7:00 - 9:00 p.m.

Place: Pendleton City Hall Council Chambers
500 SW Dorion Avenue

For More Information Contact

Mike Hyde, Planning Director, City of Pendleton
500 SW Dorion, Pendleton, Oregon 97801, (541) 966-0204

Technical Advisory Committee

A Technical Advisory Committee participated in the shaping and review of the Pendleton TSP. Members of the TAC are listed below.

Steve Taylor
Pendleton City Council

Ken Thompson
Umatilla County Planning Commission

Bill Kyte
City of Pendleton Planning Commission

Bob Jenson
Airport Commission

Steve Mohrland
Bicycle Advisory Committee

Carrie Legg
Senior and Disabled Transportation

Doug Flatt
Private Transportation Provider

This Public Information Bulletin was prepared in cooperation with the City of Pendleton.

City of Pendleton
500 SW Dorion Avenue
Pendleton, OR 97801

4. The plan should indicate future traffic signals at the intersections of SW 37th Street and SW Perkins Avenue with Southgate (US 395). The signal at Southgate Place and the pedestrian crossing at SW Nye Ave. could then be removed.

5. The abandoned Burlington Northern railroad right of way in NE Pendleton could be used as a recreational trail.

6. An intersection safety problem exists at NE 35th Street (county road) and State Highway 11.

7. Regarding SW 20th Street extension; 1) How will groundwater be dealt with at underpass and 2) Why are no bike or pedestrian facilities shown on the proposed street?

8. Signage at St. Anthony Hospital creates a vision clearance problem at SE 14th and Court as does a pine tree at the northwest corner of SW Perkins and Southgate.

9. Better public transportation connections are needed between Mission and Pendleton.

10. Goad Road overpass should be developed into a full interchange to serve developable lands in vicinity.

11. An extension of SW Court Place across the Umatilla River to the Pendleton Industrial Park, as set forth in the plan, is needed. This street extension will need to take into account the placement of Guerdon Homes and the potential acquisition of lands south of EOCI for prison expansion.

12. Safety hazards exist on SW 13th Street at Hawthorne School as school traffic mingles with through traffic.

13. A reconfiguration of the intersection of SW Emigrant and SW Frazer at US 395 and the I-84 ramps, as set forth in the plan, should be pursued with ODOT.

14. SW Perkins Avenue should be extended from SW 33rd Street to Southgate, as set forth in the plan, to provide safer and more convenient access to the Sherwood School and surrounding area.

The open house concluded at approximately 8:15 PM.

PENDLETON TRANSPORTATION SYSTEM PLAN
MANAGEMENT COMMITTEE MEETING

A Management Committee meeting for the Pendleton TSP project was held at 11:00 AM on June 25, 1996 at City Hall, with the following members in attendance: Dennis Olson, John Preston and Mike Hyde. Also present were Dave Lorenzen, Julia Kuhn and Todd Chase.

Ms. Kuhn gave an overview of the draft report. She explained how the discussion of alternate modes had been expanded. Alternatives studied have been grouped together in Section 6. Financial analysis is in Section 8 and the recommended improvements in Section 9.

Mr. Chase talked about the transportation efficient land use recommendations and distributed a June 24 memo that indicated some of the latest recommendations for the city.

There was a discussion regarding who should receive a copy of the draft plan. Mr. Preston will send a list of appropriate ODOT and DLCD personnel to Ms. Kuhn. Ms. Kuhn will see that copies of the draft are provided to ODOT and DLCD personnel on the list. Mr. Hyde requested about 25 additional copies of the draft plan for distribution to Naveen Chandra, Confederated Tribes Transportation Planner; Hal Phillips, Umatilla County Public Works Director; Larry Dalrymple, Airport Manager; Ed Balsiger of the airport task force; Tom Kuhlman, Region ODOT traffic engineer; David King, Oregon Dept. of Forestry; Brent Lake, DLCD Field Representative; and the entire city Planning Commission and City Council.

The committee discussed time frames for the review and adoption of the study. It was suggested that the city Planning Commission and City Council conduct a joint work session to review the plan in late July. A joint public hearing of those two groups would be scheduled for mid-August.

Mr. Chase briefed the committee on the budget for the project. Due to extra time spent by Kittelson and Associates in working with ODOT and DLCD to calibrate the traffic model, they are over budget. Andy Mortensen of Kittelson has been in contact with Mr. Preston to explore alternatives for these costs to be addressed.

Comments on the draft plan were solicited.

Mr. Preston noted that the city and ODOT had reached agreement that the Pendleton Retail Center would be allowed 300,000 square feet of retail space, but no more until the TSP is completed. He recommended that the plan clearly indicate direction for the city and ODOT to head with respect to what improvements are needed and when they are needed to support additional retail space at this location.

Mr. Chase noted that the plan assumes the build-out of the urban growth boundary, which includes filling of the entire commercial site. The plan notes that the extension of SW 20th Street is a

needed project for the community. It will be up to local decision makers to determine how and when this project is funded. The plan will provide some options in this regard.

Mr. Olson noted that the plan used a population of about 15,600 in looking at existing conditions. The estimated population is now about 15,900.

Ms. Kuhn covered the comments that were made at the June 24 open house.

Mr. Preston wondered if there should be an east-west connection across the top of the north hill. Mr. Hyde felt that such a connection is not feasible with the current UGB, but may be feasible after completion of the UGB study in the next year.

Comments on the plan should be directed to Mr. Hyde for submittal to the consultants. Comments will be listed for review by the city during the hearing process.

The meeting adjourned at 12:45 PM.

PENDLETON TRANSPORTATION SYSTEM PLAN
TECHNICAL ADVISORY COMMITTEE MEETING

A Technical Advisory Committee meeting for the Pendleton TSP project was held at 7:00 PM on June 25, 1996 at City Hall, with the following members in attendance: Bill Kyte, Carrie Legg, Steve Mohrland and Bob Jenson. Also present were Julia Kuhn and Todd Chase of the consultant team, Mike Hyde, John Taylor and Antoinette Alexander of the East Oregonian.

Mr. Hyde welcomed those present and introduced the members of the consultant team.

Mr. Chase gave an overview of the agenda for the evening and referred to the transportation projects displayed on maps.

Ms. Kuhn gave an overview of the draft report. She explained how the discussion of alternate modes had been expanded. Alternatives studied have been grouped together in Section 6. Financial analysis is in Section 8 and the recommended improvements in Section 9. She indicated that Section 10, containing policies and Section 11 (showing how the plan complies with the transportation planning rule) are new sections.

Ms. Kuhn also pointed out that the appendices to the study contain much of the technical materials that were used in the creation of the final report. They have tried to beef up the sections of the plan dealing with alternate modes, but are seeking comments from the committee members with expertise in these areas. Comments should be provided to Mr. Hyde in the next few weeks so they are available for the Planning Commission and City Council to consider.

Mr. Chase noted that DLCD is excited that Pendleton is looking at ways to make land use more transportation efficient even though the state rules do not require this of cities of Pendleton's size. The plan shows that by making minor alterations in the local land use pattern and encouraging use of alternate modes, the city may be able to avoid spending funds on certain transportation improvements in the future.

Mr. Chase indicated that this may be the last meeting of the committee prior to the review of the plan by the Planning Commission and City Council. However, the city may want to re-activate the committee when it comes to implementation of the plan. Appendix G contains some recommendations for ordinance modifications that will take some time for the city to review and prepare for adoption. Support from the committee will be needed in making these recommended changes a reality.

Ms. Kuhn covered the comments that were made at the June 24th open house.

Mr. Chase covered the comments that were made at the Management Committee meeting earlier in the day.

Mr. Taylor inquired about the findings of the plan with respect to the extension of SW 20th Street near the Pendleton Retail Center. He reminded the committee that only 300,000 square feet of retail space has been approved pending completion of the transportation system plan. He would like the plan to give clear direction regarding what needs to be done for additional commercial development to occur.

Mr. Chase indicated that the plan assumes that the SE Court Ave. viaduct project will be built. ODOT has indicated that funds are not available in Region 5 for many such large projects. The city will need to press for inclusion of the SW 20th Street project in the state transportation improvement plan and the TSP will give the city ammunition to do so. The city will need to prioritize transportation projects in its Capital Improvements Program and investigate the various funding possibilities set forth in the plan.

At the Management Committee meeting, Mr. Preston of ODOT recommended that the plan clearly indicate direction for the city and ODOT to head with respect to what improvements are needed and when they are needed to support additional retail space at this location. These amendments will be made.

Mr. Chase noted that the plan assumes the build-out of the urban growth boundary, which includes filling of the entire commercial site. The plan notes that the extension of SW 20th Street is a needed project for the community. It will be up to local decision makers to determine how and when this project is funded. The plan will provide some options in this regard.

The committee was informed that the city Planning Commission and City Council would conduct a joint work session to review the plan in late July. A joint public hearing of those two groups would be scheduled for mid-August. Comments on the plan should be provided to city staff in advance of these meetings.

Ms. Kuhn asked Ms. Legg for assistance in beefing up the public transportation aspects of the plan. Mr. Hyde noted that the draft plan sections on public transportation will be presented to the city's Senior Transportation committee on June 26th.

Mr. Hyde asked Mr. Jenson to coordinate comments from the Airport Commission with Larry Dalrymple, Airport Manager. Mr. Jenson indicated that the draft could be discussed at the mid-July airport commission meeting.

Mr. Mohrland will speak with Dave Lorenzen, City Engineer, to go over the draft plan with respect to the bicycle aspects. The bike committee may also review the draft.

Mr. Kyte asked what evidence the city has that people will increase their use of bicycles. Mr. Hyde noted that the price of fuel may drive up bike use and provision of safer and more convenient facilities for bikes will also help. Mr. Chase indicated that

bikes with electric motors are becoming more available and may lead to increased use of the mode in Pendleton.

Mr. Jenson asked how this study would tie in with the governor's transportation initiative? Mr. Hyde felt that the plan would give the city a tool to attract funding that may come forth from the governor's current task force.

Mr. Jenson saw some logic in the city shifting its priorities from the SE Court Avenue viaduct project to the SW 20th street extension based on the transportation and economic benefits it would provide.

The meeting adjourned at 9:15 PM.

PENDLETON TRANSPORTATION SYSTEM PLAN
MANAGEMENT COMMITTEE MEETING
DECEMBER 2, 1996

A meeting of the Pendleton Transportation System Plan (TSP) Management Committee was held at 3:00 PM on December 2, 1996 at City Hall. The following persons were present: John Preston, Cheryl Jarvis-Smith and Terry McArtor of ODOT, Andy Mortensen of the consultant team and Mike Hyde, Planning Director.

Mr. Mortensen reviewed the substantive changes that have been made in the October 31, 1996 final draft of the TSP.

The sections in Chapters 3 and 9 regarding rail service have been updated to reflect recent developments regarding Amtrak passenger service. Mr. Mortensen obtained this information from Claudia Howell of the ODOT Rail Section, which is heavily involved with the current efforts to either keep the Pioneer line in operation or find more feasible modes of travel along the corridor.

In response to DLCD comments, the financial plan and street plan has been amended to show the status of future streets that are currently outside of the urban growth boundary. These include portions of SW 37th Street, SW Runnion Avenue and the airport truck route to Barnhart Road.

Mr. Preston asked if the plan shows the benefits associated with these projects outside of the UGB. Mr. Mortensen noted that Figure 6-4 on page 6-14 shows how traffic on US 395 would be reduced if these streets are constructed. He indicated that Table 6-5 will be modified to better show these benefits.

Mr. Mortensen noted that Table 7-2 on page 7-3 has been modified to delete private access spacing standards on minor streets (which are designed to provide private access to property).

In the Financial plan, Table 8-8 on page 8-22 has been amended to give a more realistic estimate of funding that could be realized from a street utility fee.

There was discussion regarding Table 8-9 on page 8-25. It was suggested that the table include additional footnotes to indicate what is meant by short versus long term improvements, refer the reader to Appendix F for detailed cost estimates of these projects and clarify that these are top priority projects.

It was also suggested that (in Table 8-9) the percentage of funding for the SW 20th Street project be adjusted to include a range of funding percentages for the various funding sources. Mr. Preston indicated that more local funding available to a project would increase the chances of receiving ODOT funding and support. He suggested, given ODOT funding constraints, that the SW 20th Street project be funded 25-50% by ODOT versus the recommended 50%.

An amendment to the financial plan on page 8-14 is also being made to reflect the defeat of the light rail measure by the voters. This would have provided about $2 million to the city for transportation projects.

Mr. McArtor noted that page 10-1 should be amended to remove the 1991 date from the Oregon Highway Plan since is it currently being updated and will continue to be updated over the years.

Mr. Preston advised that ODOT has some model ordinance language that will be provided to the city for use in implementing the TSP. This can be used in conjunction with the recommendations in Appendix G of the plan. Mr. Hyde stated that, if the City Council adopts the TSP by ordinance, he will prepare implementation ordinances for the Planning Commission and Council to review and adopt in advance of the May, 1997 deadline.

Mr. Preston will provide Mr. Mortensen with a letter received from Erik East of the ODOT Public Transit Section. Page 9-9 has been amended to reflect recent conversations with this ODOT office and encourage the city and county to work together to improve public transportation opportunities.

Mr. Mortensen advised the committee of the process on page 10-6 whereby the city and ODOT will determine whether a new development would be required to prepare a traffic impact analysis. Basically, if a development is allowed outright or conditionally in a zone and falls below established traffic generation thresholds, a traffic impact study will not be required. Mr. McArtor and Mr. Hyde agreed that the state and city staff could live with this process.

Mr. Mortensen noted that the final draft includes all of the written comments received to date and a response to each.

After a review by the Technical Advisory Committee tonight, the final draft is scheduled to be submitted to the City Council and Planning Commission for a joint public hearing on Wednesday, January 15, 1997 at 7:00 PM.

The meeting adjourned at 4:20 PM.

PENDLETON TRANSPORTATION SYSTEM PLAN
ADVISORY COMMITTEE MEETING
DECEMBER 2, 1996

A meeting of the Pendleton Transportation System Plan (TSP) Advisory Committee was held at 7:00 PM on December 2, 1996 at City Hall. The following committee members were present: Steve Taylor, Bill Kyte, Steve Mohrland, Carrie Legg and Doug Flatt. Also present were Andy Mortensen of the consultant team and Mike Hyde, Planning Director.

Mr. Mortensen reviewed the substantive changes that have been made in the October 31, 1996 final draft of the TSP.

The sections in Chapters 3 and 9 regarding rail service have been updated to reflect recent developments regarding Amtrak passenger service. Mr. Mortensen obtained this information from Claudia Howell of the ODOT Rail Section, which is heavily involved with the current efforts to either keep the Pioneer line in operation or find more feasible modes of travel along the corridor.

Mr. Taylor noted that the Mayor has appointed a committee to work with other cities in the Amtrak Pioneer corridor in an effort to preserve passenger rail service and explore alternatives.

In response to DLCD comments, the financial plan and street plan has been amended to show the status of future streets that are currently outside of the urban growth boundary. These include portions of SW 37th Street, SW Runnion Avenue and the airport truck route to Barnhart Road. Mr. Mortensen noted that Figure 6-4 on page 6-14 shows how traffic on US 395 would be reduced if these streets are constructed. He indicated that Table 6-5 will be modified to better show these benefits.

It was noted that the Barnhart Road project has been presented as an economic development and intermodal linkage project. Since it is entirely outside of the urban growth boundary, the city will want to work with the county to include this project as the county TSP is developed.

Mr. Mortensen noted that Table 7-2 on page 7-3 has been modified to delete private access spacing standards on minor streets (which are designed to provide private access to property). It was noted that driveway spacing standards are important along collector and arterial streets to maintain the carrying capacity of the street. In most cases, this will require residential developments to back onto collector streets. The access control policies include a variance procedure.

Mr. Flatt asked if the state decision to discourage designation of bicycle routes will save the city money. Mr. Mortensen responded that the city will still need to stripe bike lanes but will save money in not needing to place signs along bike routes. The state policy now discourages signing of shared facilities (auto/ bike).

Mr. Mohrland, a former member of the city bicycle committee, agreed with this assessment.

In the Financial plan, Table 8-8 on page 8-22 has been amended to give a more realistic estimate of funding that could be realized from a street utility user fee. This fee would be similar to the fire equipment fee Pendleton currently collects with water bills. In La Grande, the city collects about $70,000 annually by assessing a $4.00 per month street utility fee on residential water bills. A similar fee in Pendleton, if approved by the City Council within the limits of Measure 47, could generate about $280,000 per year for the city street system.

Mr. Flatt asked about local gas taxes. The plan, on page 8-16, lists the five local jurisdictions that levy a local fuel tax. The most comparable city to Pendleton is The Dalles, which collected $329,000 in fuel tax in the 1995/96 fiscal year with a one cent per gallon tax.

Mr. Taylor noted that the governor and others in Salem are likely to propose a six cent per gallon increase in the gas tax in the coming legislative session. Whether this is passed and the benefit to the city can not be predicted at this time.

There was discussion regarding Table 8-9 on page 8-25. Mr. Mortensen indicated that, as a result of the Management Committee meeting, the table will be amended to include additional footnotes to indicate what is meant by short versus long term improvements, refer the reader to Appendix F for detailed cost estimates of these projects and clarify that these are top priority projects.

It was also suggested that (in Table 8-9) the percentage of funding for the SW 20th Street project be adjusted to include a range of funding percentages for the various funding sources. ODOT officials have indicated that more local funding available to a project will increase the chances of receiving ODOT funding and support. Given ODOT funding constraints, it is proposed that the SW 20th Street project be funded 25-50% by ODOT versus the recommended 50%.

An amendment to the financial plan on page 8-14 is also being made to reflect the defeat of the light rail measure by the voters. This would have provided about $2 million to the city for transportation projects.

There was discussion regarding the use of a traffic impact fee or system development charge. Based on the application of the traffic impact fee for the Harris Pine site on a city-wide basis, the city could expect to collect around $100,000 per year for transportation improvements (see page 8-22 of the plan).

In response to a question from Mr. Taylor, Mr. Hyde noted that Wal-Mart paid a traffic impact fee of over $112,000 in addition to improving the streets abutting their site.

Mr. Mortensen stated that impact fees need to be carefully considered so they are high enough to meet needs and low enough to avoid discouraging development the community desires. Impact fees should be thought of as one leg of the funding stool, to be used in combination with bonds, developer funds, state funds and other sources.

Ms. Legg asked if the viaduct project is a certainty given its inclusion in the STIP. Mr. Mortensen felt that no project is "guaranteed" as the STIP is amended every two years and priorities change.

Mr. Flatt noted the importance of the SW 20th Street extension project. He currently routes school buses between the high school and middle school via the airport junction and I-84 versus travelling through the SW 20th Street area. As this area becomes more congested, the pressure will increase to get this project funded and constructed.

Mr. Mortensen cited a McMinnville example where the city was able to pass a bond issue for a list of transportation improvements, with a portion of the projects being paid for with traffic impact fees assessed to new developments. The committee felt that passing a bond in Pendleton at this time may be difficult due to the passage of the high school, city hall/library and jail bonds.

Ms. Legg asked if the plan adequately addresses the concerns expressed by DLCD in their letter of comment. Mr. Mortensen indicated that the plan meets and in some cases exceeds the requirements of the Transportation Planning Rule (TPR).

One DLCD concern is if the city will be able to fund the $44 million worth of transportation improvements that are needed to serve a complete development of the urban growth boundary. Mr. Mortensen noted that the financial planning requirements of the TPR have been met with the analysis of options. It is up to the city to take it from there and implement additional funding sources. There is no way to predict the transportation funding environment to the degree that will guarantee to DLCD that all needed improvements will be funded.

Mr. Mortensen advised the committee of the process on page 10-6 whereby the city and ODOT will determine whether a new development would be required to prepare a traffic impact analysis. Basically, if a development is allowed outright or conditionally in a zone and falls below established traffic generation thresholds, a traffic impact study will not be required. During the management committee meeting, it was agreed that the state and city staff could live with this process.

Appendix G of the plan gives the staff guidance for preparing ordinances to amend the comprehensive plan and land use ordinances to implement the TSP. ODOT has also agreed to provide the city with some model ordinance language for use in implementing the TSP. Mr. Hyde stated that, if the City Council adopts the TSP by

ordinance, he will prepare implementation ordinances for the Planning Commission and Council to review and adopt in advance of the May, 1997 deadline.

Mr. Mortensen noted that the final draft includes all of the written comments received to date and a response to each.

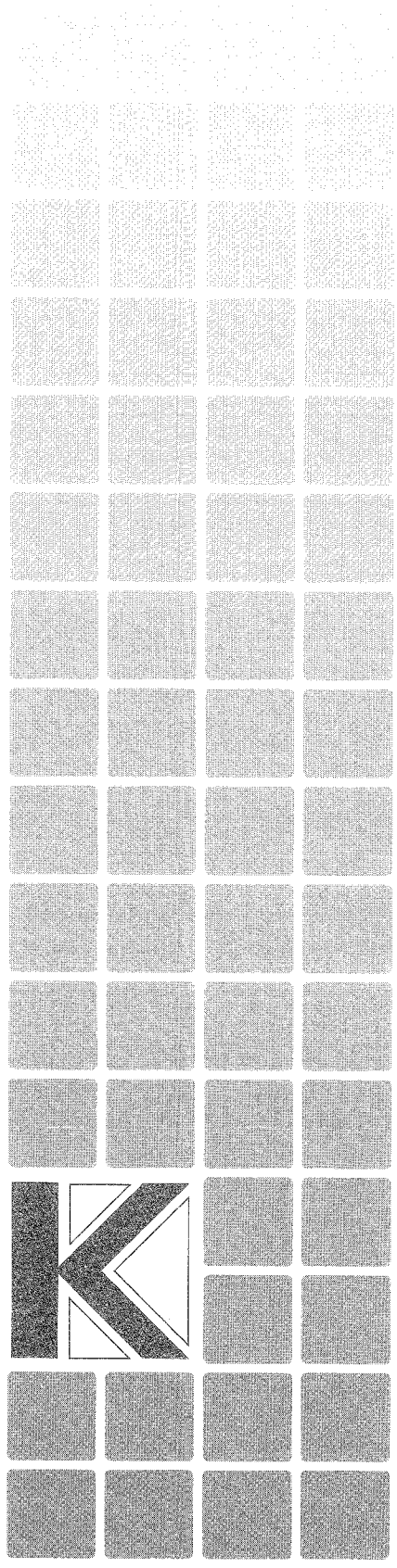
Ms. Legg had some additional comments regarding public transportation. She felt that the city is already involved with some of the programs mentioned. She also noted that the plan implies that Elite Taxi has a monopoly on the taxi business where, in reality, any company meeting city requirements could receive a franchise. It was decided that the public transportation plan on pages 9-5, 9-6 and 9-9 should be submitted to Linda Carter, staff for the city senior transportation committee, for a final review before being finalized. Mr. Hyde agreed to do this as soon as possible.

The committee expressed its overall satisfaction with the final draft, provided the amendments discussed are incorporated.

The final draft will be modified as a result of today's meetings and is scheduled to be submitted to the City Council and Planning Commission for a joint public hearing on Wednesday, January 15, 1997 at 7:00 PM.

Mr. Hyde encouraged all committee members to be present at the hearing to express support of the plan. Mr. Mortensen indicated that there will be a newsletter coming out for distribution to the community regarding the final stages of this planning process.

The meeting adjourned at 9:00 PM.



Appendix I

Draft TSP Review and Response

STATE OF OREGON **MEMORANDUM**

Department of Transportation
Transportation Development Branch
Mill Creek Office Park
555 13th Street NE
Salem, Oregon 97310
(503) 986-4112 FAX (503) 986-4174

File Code: TRA 1

AJM

Date: July 26, 1996

TO: John Preston
Region 5 Environmentalist/Planner

FROM: Harlan Nale, P.E., Transportation Analyst
Transportation Planning Analysis Unit

SUBJECT: Review of Draft for Pendleton Transportation System Plan

The draft for the Pendleton Transportation System Plan has been reviewed by Transportation Planning Analysis Unit. The comments are listed below:

Page 3-17: "All levels of service described in this study are in accordance with the procedure described in the 1994 Highway Capacity Manual."

Comment: Delay based planning analysis is not acceptable. Page 42 of the document titled "Transportation System Planning Guidelines" published by ODOT in August 1995 indicates that Volume/Capacity (V/C) analysis be used for planning analysis purposes at signalized intersections. ODOT recommends that reserve capacity analysis methodologies be used in lieu of delay at unsignalized intersections. ODOT prefers ODOT's computer programs SIGCAP and UNSIG10 be used to analyze signalized and unsignalized intersections, respectively.

Page 6-6: Table 6-3

Comment: A trip-length reduction of 30 percent for "Shopping/Recreation/Other Trips (Home Based Other)" seems too large of a reduction.

Page 6-11: Figure 6-8

Comment: Rename "Figure 6-8" "Figure 6-3"

Page 6-27: Figure 6-9

Comment: There are no traffic volumes or scale given in this schematic. Is there enough distance on Emigrant Avenue between SW 20TH Street and I-84 Westbound Ramps for both the traffic queue resulting from the traffic signal and the weaving of traffic on Emigrant Avenue from SW 20TH Street to Frazer Avenue? Is there enough storage distance on the section of roadway located between the I-84 Westbound Ramps and Frazer Avenue? Will the proposed stop sign placed at the south end of the section of roadway located between the I-84 Westbound Ramps and Frazer Avenue work in unison with the proposed traffic signal located to the north? Can trucks negotiate these intersections? Will the proposed intersections operate at acceptable LOS (using Volume/Capacity based planning analysis)?

Page 7-2: *Roadside Design Guide* by the American Association of State Highway Transportation Officials (AASHTO).

Comment: *A Policy on Geometric Design of Highways and Streets 1990* by the American Association of State Highway Transportation Officials (AASHTO).

Page 7-2: "As a minimum, there are four important references that should be used to assist in road design. These include:

Comment: Please add *Highway Design Manual 1993* published by ODOT as a fifth important reference.

Page 9-10: "SW 20th Street should be extended as a 5-lane arterial street from its current terminus at Court Place to Westgate."

Comment: Is it in the city of Pendleton's best interest to construct a five-lane arterial?

Page 9-10: "To accommodate future development in the southwest, SW 37th Street should be extended as a 3-lane arterial from its current terminus north of Hailey Avenue to Old Rieth Road."

Comment: Is it in the city of Pendleton's best interest to construct a 3-lane arterial to accommodate future development? What is the purpose of this roadway? A minor arterial serves as the primary travel routes within the community system and to augment and connect the arterial system. If this roadway provides limited property access to future developments, this roadway should be classified as a major collector rather than as an arterial.

Page 9-21: "The estimated cost for these traffic signals is $150,000 each for a total of $12,000,000 for eight new traffic signals."

Comment: Please check math.

Page B-2: Table B-2

Comment: The standards in Table 2 are used by the department when making operating decisions, such as access management decisions. Everything should be designed to the design standards shown in Table 8-1 of the 1993 Highway Design Manual. This design LOS table has four categories (Freeway, Arterial, Collector and Local) in lieu of the four categories of Levels of Importance (Interstate, Statewide, Regional and District) shown in Levels for Design Hour Operating Conditions Through a 20-Year Horizon Table in Appendix A.

There is a tendency for people to use the incorrect table because the roadway they are analyzing is identified in the OHP by one of the Level of Importance categories. The minimum acceptable operating standards for existing roadways are shown in another table. These LOS are shown in the Minimum Tolerable Condition (MTC) table on page 8 of the Oregon Highway Plan. When the LOS of an existing roadway drops below the acceptable operating LOS shown in the MTC table, a need is identified and there is the possibility of a modernization project being "triggered."

Page D-13: Table D-6
Comment: The V/C ratios in Tables D-6 through D-8 are not consistent with V/C ratios that are shown for the V/C based SIGCAP ODOT program. Here are the saturation levels for the SIGCAP program:

Metro Size and Saturation Value (X)

More than 500,000	100,000 to 500,000	20,000 to 100,000	Less than 20,000	Level of Service
.00-.55	.00-.50	.00-.50	.00-.48	A
.56-.66	.51-.61	.51-.61	.49-.59	B
.67-.75	.62-.71	.62-.71	.60-.69	C
.76-.79	.72-.75	.72-.75	.70-.73	C-D
.80-.86	.76-.84	.76-.84	.74-.83	D
.87-.90	.85-.88	.85-.88	.84-.87	D-E
.91-.97	.89-.97	.89-.97	.88-.97	E
.98-1.01	.98-1.01	.98-1.01	.98-1.01	E-F
1.02+	1.02+	1.02+	1.02+	F

Page D-13: Table D-6
Comment: The LOS tabulated for unsignalized intersections in Tables D-6 through D-8 are not computed using the reserved capacity analysis methodologies that ODOT has recommended. ODOT prefers ODOT's program UNSIG10 be used to analyze unsignalized intersections. The LOS tabulated in these tables are calculated using delay based planning analysis.

Appendix E: Table E-1
Comment: Please change heading from "19555 Land Use" to "1955 Land Use" on both front and back pages.

Page G-2: "New compliance methods to be explored include but are not limited to: closure, relocation and consolidation of access; right-in/right-out driveways; crossover easements; and use of local streets, alleys and frontage roads."
Comment: Should raised medians be included as a possible compliance method?

Appendix H: Transportation Advisory Committee Minutes, 02-15-95
Comment: Pages 2 and 3 are included twice within this report.

Appendix H: Meeting Summary, TSP Management Committee September 15, 1996
Comment: This page is included twice within this report.

Appendix H: "In other words, a single family household in Pendleton generates about 13.6 trips per day verses 10 trips per day for the national average."
Comment: This sounds too high.

Please contact me if you have any questions.

cc: Erik East

Date: July 23, 1996
To: John Preston, Region Planner
Region 5
From : Mark Wigg, Project Manager
Environmental Services
Subject: Review of the Pendleton Transportation System Plan

Scope and objectives of review

This review of the Pendleton Transportation System Plan (TSP) focuses on the state highway system and the objective of ODOT to provide a safe, convenient and efficient transportation system. This review will begin with general comments on the Pendleton TSP and then will comment on specific aspects of the TSP. The review sought answers to the following questions:

1. What is the current location and Level of Importance (LOI) of state highways in Pendleton?
2. What is the current and predicted Level of Service (LOS) of the state highways?
3. What are the primary transportation problems?
4. What proposed projects have been identified to maintain or improve the highways to the recommended LOS?
5. Is the TSP consistent with the state highway plan?
6. What funding is needed for state highway projects?
7. Does the TSP provide a rational prioritization of proposed projects?
8. Does the TSP identify reasonable solutions to problems?

General Comments

1. All of the maps should have a scale and north arrow.
2. An index to street locations would make review easier.
3. A map showing existing and planned land use is needed.

Existing Conditions

1. The discussion of safety is not sufficient to understand why the accident rate for some highways such as Hwy. 37 is so much higher than the average. The accident rate on Hwy. 37 is more than four times the average for this type of facility. Why? Several sections of other highways are also far above the average.
2. A discussion of extraordinary traffic-generating attractions (Walmart), places of employment, or events is needed to assess current conditions. For example, the Pendleton Round-up has a significant effect on traffic flow over state highways. Do other events or attractions also generate extraordinary traffic levels? Has the Umatilla Tribes' casino significantly affected Pendleton traffic?
3. What is the condition of the bridges in Pendleton? When are they scheduled for replacement?

Land Use, Growth, Travel Demand, Impact on Transportation System

1. Maps of city and county zoning are needed in the document to verify development predictions and compatibility with comprehensive plans.
2. The Figure 5-3 legend should be labeled "Future Level of Service."
3. Discussions on future housing and employment were very helpful in understanding predicted impacts on the transportation system.
4. While the TSP is prepared for the City of Pendleton, some assessments of the impacts of developments outside the city would be helpful and relevant to assessing future traffic demands. Large developments such as casinos, resorts, industrial developments, or housing developments in the immediate vicinity of Pendleton could affect traffic demand.
5. How do existing capacities of highways compare to predicted capacities?

Alternatives, Transportation System Plan, Financial Analysis

1. The most expensive project proposed in the TSP is the Highway 11 Viaduct. The Environmental Assessment (EA) for this project was completed in 1994. It made the assumption that the level of service in 20 years would be 'F'. The TSP predicts a higher LOS at the surrounding intersections and implies several reasons for postponing this project. The EA indicated that the viaduct project was proposed more than 20 years ago. When it was first proposed, the east side of Pendleton had more economic activity. The center of economic activity and residential development has now moved to the west and south sides of Pendleton. The models used in the TSP appear to be more comprehensive and accurate than the assumption used to justify the viaduct in the 1994 EA. The inclusion of the Hwy. 11 viaduct in the short-term project list should be reevaluated.
2. The I-84 eastbound/Hwy. 395 intersection currently provides an LOS of 'F', yet it is not scheduled for intersection improvements or signals. Improving this intersection should be a high priority.
3. The list of pedestrian improvements addresses many of the deficiencies in the pedestrian facilities along the highway system. However, Table 8-4 appears to have several errors in the location descriptions (e.g. Dorian, Emigrant, and Frazier projects). I could not find Intercourt Place on the map. One pedestrian improvement which may not be as high a priority as indicated in the TSP is along Hwy. 11 north of Nye Avenue. This is a very steep hill with wide shoulders on both sides of the 4-lane highway. Does the amount of pedestrian use warrant including a sidewalk as a high priority? Other areas may have a greater need for pedestrian improvements.
4. The intersections at ~~Airport Road /Hwy. 30~~, ~~Hwy. 11/Hwy. 30~~ and Hwy. 11/I-84 westbound are not given a high priority for signalization even though these intersections will be failing within 20 years. The TSP should address traffic problems at these intersections.
5. The number of existing and proposed traffic signals along state highways exceed recommended standards. Is signalization the best method of traffic control along these highways?
6. Pendleton is predicted to have most of its residential development south of I-84, but most of the employment opportunities will continue to be north of I-84. The primary routes across I-84 are via state highway 395 and 11. Hwy. 395 is already failing to provide the recommended level of service. The TSP should address this problem. The 37th Street extention to Old Rieth Road and Nye Avenue would help, but it needs supporting analysis for a goal exception.
7. Justification is presented for the Westgate Upgrade, SW 20th Street Upgrade, and SW 20th St. Extension. The proposed projects address identified problems with traffic on arterials and state highways and offer some alternatives for improvement.
8. Pedestrian crossing of Hwy. 395 south of I-84 is very difficult. Crossing at Hailey is a problem because Hailey does not have sidewalks or bike lanes. Should an improved pedestrian crossing at this corner be included in the TSP since this is probably a primary route used by children going to the middle school.
9. The safety problems on Hwy. 37 and other highways with higher than average accident rates should be evaluated to determine if highway design is contributing to the accidents.
10. Will the 37th Street and Barnhart Road projects be state facilities? Did the planning committee consider rezoning the land near the airport to CO or residential to avoid having to build Barnhart Road as part of the Transportation-Efficient Land Use Alternatives? Increasing residential development north of the railroad and I-84 may also reduce traffic congestion on Hwy. 395

Please call me if you have questions about my comments (503-986-3487)

cc: Bob Cortright,DLCD
Del Huntington (TPAU)
Bonnie Heitsch (Environmental)

July 29, 1996

Mike Hyde
Planning Director
City of Pendleton
34 SE Dorion Avenue
Pendleton, OR 97801

Dear Mike:

Thank you for the opportunity to review the city's draft Transportation System Plan. We understand that you, the consultant team, the Planning Commission, and the Council will be reviewing the plan over the next month. This letter and the attachment outline several comments and recommendations for your consideration.

We appreciate the obvious effort that you, the local advisory committee and the consultant have put into the draft plan. The development of a transportation efficient land use alternative is an innovative new approach which we support. Nonetheless, there are several aspects of the draft plan which need to be clarified in order to meet various requirements in the Transportation Planning Rule.

We are particularly concerned about three proposed streets that extend outside of the UGB. These street extensions would require goal exceptions which the plan has not addressed. This is a potentially serious problem, because the TSP needs to include a complete transportation system consistent with the Statewide Planning Goals. Since the analysis required for a goal exception is extensive, we recommend that the consultant analyze the adequacy of the proposed TSP without the projects outside the UGB. This would assure that the city has a TSP adequate to meet future transportation needs.

Further work is also needed to integrate the draft TSP into the city's existing plan and ordinance. Much of the draft plan is written as a recommendation to the city. Many of the recommendations are incomplete or require further work to identify specific plan policy and ordinance language changes. This makes it very difficult to understand exactly what the city proposes to adopt. We understand that the Council and Planning Commission will be reviewing the draft plan to identify possible changes. This is an excellent opportunity to clarify just what the city is proposing to adopt.

Our specific comments and recommendations are set forth in the attachment and include the following:

1. Delete roadways outside UGB or conduct analysis for goal exceptions
2. Adopt plan and policies for extension and connection of minor streets
3. Adopt reduced standards for "minor" or residential Streets
4. Provide for wider sidewalks on most streets.
5. Clarify status of implementing measures
6. Reconsider proposed bikeway designations
7. Modify proposed ordinance amendments to meet TPR requirements
8. Revise and expand the pedestrian plan
9. Clarify the Status of the Transportation efficient land use alternative
10. Use the "Cost and Financial Analysis" to evaluate whether the plan is affordable.
11. Clarify Access Management Policies and Standards

We hope that you find these comments useful as the planning commission and council evaluate the draft plan.

Sincerely,

Robert Cortright
Land Use and Transportation Planner

cc: Dennis Olson, Umatilla County
John Preston, ODOT Region 5
Cheryl Jarvis-Smith, ODOT Region 5
Andrew Mortenson, Kittelson & Associates
Todd Chase, OTAK

Pendleton Draft Transportation System Plan
Draft -- June 14, 1996

DLCD Comments and Recommendations

1. Delete Roadways Outside UGB or Conduct Analysis for Goal Exceptions

The draft TSP includes at least several streets or street segments that extend outside of the UGB which require goal exceptions. These include projects in three areas:

- Southeast Area -- Portions of three road segments including Runnion Avenue, 37th Avenue, and the 3rd Drive/Highway 11 extension.
- Southwest Area -- The Bartsch Road/SW 37th Street Extension (near the sewage treatment plant) . Alternative routes -- 28th Drive and the Perkins Avenue extension --- appear to be logical and adequate alternatives for local circulation.
- Barnhart Road extension -- This is a road project entirely outside the city UGB. The plan should make it clear that this is only a recommendation and that land use planning decisions related to this project are to be addressed through the county TSP.

A major purpose of the TSP is to make binding land use decisions to allow certain transportation projects. The proposed TSP is incomplete because it does not include the analysis and information needed to justify a goal exception. This deficiency is significant. To remedy it, the city needs to either delete the proposed projects outside the UGB from its plan or provide the required goal exception and supporting analysis. Both options will require further analysis.

If the city decides to delete the proposed roadways from its plan, then the city will need to evaluate whether the proposed projects that remain are adequate to meet transportation needs within the city. If they are not, then other options for meeting these needs would need to be considered more thoroughly. Basically, the plan needs to result in a workable "system". If removing these links makes the system perform unacceptably, then the TSP needs to be revised to include other measures, such as other improvements within the UGB.

If the city decides to pursue goal exceptions for the proposed roadways, much more analysis of needs, alternatives, consequences and compatibility are required. The details of this analysis are spelled out in Section 070 of the Transportation Planning Rule. (See Attachment). Basically, the city would need to show that there is a transportation need which cannot reasonably be met by transportation improvements or other measures

within the UGB. This would include alternative projects or other measures, such as transportation demand management, or transportation system management measures to meet the identified transportation needs.

2. Adopt plan and policies for extension and connection of minor streets

The proposed streets plan focuses on the arterial and collector streets. This addresses some but not all of the requirements for street plans. Section 020(2)(b) also requires that the road plan include standards for the layout of local streets:

> (b) [The TSP shall include] A road plan for a system of arterials and collectors **and standards for the layout of local streets and other important non-collector street connections.** Functional classifications of roads in regional and local TSPs shall be consistent with functional classifications of roads in state and regional TSPs, and shall provide for continuity between adjacent jurisdictions. The standards for the layout of local streets shall provide for safe and convenient bike and pedestrian circulation necessary to carry out OAR 660-12-045(3)(b). New connections to arterials and state highways shall be consistent with designated access management categories. **The intent of this requirement is to provide guidance on the spacing of future extensions and connections along existing and future streets which are needed to provide reasonably direct routes for bicycle and pedestrian travel. The standards for the layout of local streets shall address:**
>
> (A) Extensions of existing streets;
>
> (B) Connections to existing or planned streets, including arterials and collectors; and
>
> (C) Connections to neighborhood destinations. (Emphasis added)

3. Adopt Reduced Standards for "Minor" or Residential Streets

The standards for minor streets need to be reviewed and revised to comply with Section 045(7) of the TPR. Both the existing and proposed standards require excessively wide residential streets.

Street Standard	Existing/ Proposed[1]	DLCD Recommendation	Comment
ADT (Average Daily Traffic)	5000	1000 to 2000	2000 vehicles per day is more consistent with function of residential streets
Speed	20 to 30 mph/25	15 to 25 mph	25 mph is the preferred speed in residential districts. Excessive speed is the major complaint on residential streets
Paved Width	44 feet, 24 feet for dead ends and cul-de-sacs	Develop several alternatives	Presently the narrower width is only allowed for cul-de-sacs and dead ends. This creates an incentive for creation of a disconnected network which does not meet TPR requirements for convenient pedestrian and bicycle circulation.
Right of Way	60 feet	40 to 50 feet	This is clearly excessive. ROW width should be tied to width of street and the need for sidewalks; street trees and utility placement
Turn Lanes		Delete	Turn lanes are inconsistent with the function of residential streets. If the volume of turning movements justifies a continuous turn lane, the street should probably be classified as a collector
Access/ Driveway Spacing	75 to 150 feet/ 45 feet	Delete	Driveway spacing is generally not an issue on residential streets, since the main function of the street is to provide access to property
Street Lighting	35-40 feet high	14-20 feet	Tall fixtures are out of scale with pedestrians and where there are street trees do a poor job of illuminating sidewalks and adjoining areas.
Maximum Slope	15 percent/ 12 percent	15 percent	The existing standard appears to recognize topographic constraints in Pendleton.
Alleys	Prohibited by Section 31P of the Subdivision Ordinance	Allow 14 to 16 foot wide alleys in residential areas	Alleys are regaining favor as an effective way to promote compact pedestrian friendly neighborhoods. The ordinance allows 25 foot wide alleys in commercial and industrial areas. 14 to 16 feet is sufficient in residential areas.

4. Provide for wider sidewalks on most streets.

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[1] Existing standards are from Table 7-1 on page 7-2. Proposed Standards are from Table 10-1 on Page 10-3. It is unclear whether or not the city is proposing to adopt the Kittelson proposed standards.

The current standards provide for four foot sidewalks on local and collector streets and five foot sidewalks on arterials. We agree with Kittelson recommendation to require a minimum five foot sidewalk. However it is unclear whether the city is proposing to adopt this standard as part of the TSP. Five feet is generally the minimum recommended width for sidewalks. Four feet is too narrow to allows two people to either walk side by side comfortably or to allow people to pass each other. The five foot width on arterials should be expanded to 6 feet. The standards for sidewalks in commercial areas should include a minimum width of eight feet. The city may want a wider standard for downtown commercial areas.

5. Clarify Status of Implementing Measures

Appendix B of the plan includes a series of recommendations for amendments to the City's Comprehensive Plan and Development Ordinance. It is unclear whether the city is intending to adopt these amendments at this time. We expect that the city intends to adopt these amendments at some later time, in part because many of the recommendations are general and would require substantially more work to be considered by the city as actual text changes to the plan or ordinance. In either case, the city should adopt findings making its intent clear. We expect that the city would adopt a finding saying that the proposed TSP is not intended to comply with Section 045 of the TPR, and that subsequent plan and ordinance amendments will be developed and adopted addressing compliance with this portion of the TPR.

6. Reconsider Proposed Bikeway Designations

The draft plan designates a number of arterial and collector streets for bikeways that will be implemented only by signing these streets as bike routes. (See Figure 9-2) The city needs to reevaluate these designations considering the 1995 Oregon Bike and Pedestrian Plan.

Separate bike lanes are the recommended means of accommodating bicycles on all arterials and most collector streets. The reason is that the volume and speed of motor vehicle traffic on arterials and collectors makes cycling unsafe or inconvenient for most people.

Signing, by itself, is not an appropriate way to assure that bicycling is properly accommodated. Signing alone implies that cyclists and vehicles are to share the roadway (i.e. the bikeway is designated as a "shared roadway"). (The city should make it clear that this is the approach it is proposing to implement.) To decide whether a bike lane or a shared roadway is appropriate the city needs to evaluate whether bicyclists can be safely and conveniently accommodated in travel lanes. Bicyclists and motor vehicles

can share relatively narrow lanes (i.e. less than 12 feet) where speeds are very low -- such as in the downtown business district. Alternatively, if speeds and volumes are not too high, a 14' wide travel lane can be considered adequate to accommodate cyclists.

The city should reconsider the designations for the following streets:

Arterials: Court Street Extension
Carden Avenue
Northgate (from Gilliam to the UGB)
Airport Road/A Avenue/Stage Gulch Road
Court Street /Dorion Street Couplet

Collectors: 28th Drive/30th Drive
44th Drive
Perkins Avenue
Nye Avenue
Kirk Avenue/10th Street

7. Modify Proposed Ordinance Amendments to Meet TPR Requirements

Appendix G to the plan lists plan and ordinance amendments recommended by the consultant. It is unclear about which of these ordinance amendments the city is proposing to adopt. Not all of the relevant TPR requirements are addressed by the proposed amendments. In addition, several of the proposed amendments are inadequate to meet the relevant TPR requirements.

G-1 Recommendation 1A would require bike lanes on arterial and collector streets and would be adequate to meet the TPR. However, as noted above, the recommendations provided in the bikeway section of the plan do not implement this requirement since a number of arterial and collector streets are proposed only to be signed as bike routes.

Recommendation 1C should say: "It is the policy of the City ...", not "It will be the policy of the city ..."

Recommendation 2A is incomplete. It describes a possible ordinance amendment, but does not include actual language to accomplish the amendment.

G-2 The recommendations in 2B and 2C are inadequate to meet the Transportation Planning Rule. The rule includes a number of specific requirements related to the

provision of walkways and accessways that are not implemented through the proposed amendments. This section needs to be significantly expanded

Recommendation 2B1 would appear to have little effect. Sidewalks are provided at the street and are typically required to connect to both sides (or all sides) of a property. Perhaps this was intended to require walkways rather than sidewalks. If so the standard should be rewritten to say "at least one walkway connection shall be provided to each abutting development."

2B3 and 2B4 use the term "connections". "Walkways" may be more appropriate. Whatever terms are used, should be defined. The TPR includes a series of related definitions that need to be included in the ordinance. TPR defined terms include: walkway, accessway, reasonably direct, pedestrian connection, pedestrian district.

Recommendation 2C recommends use of several parts of Island City's development code. (Again, it is not clear what Pendleton is proposing to adopt.) We have not reviewed these previously and would offer the following suggestions:

- (2) should be revised to treat developed and undeveloped properties separately. If the adjoining properties are fully developed (i.e. not likely to be redeveloped over the next 20 years) then the proposed development needs to provide walkways, sidewalks, etc. which connect to similar features on the abutting property. For properties that are undeveloped or which may be redeveloped, the code needs to require that provision for a connection be made. This would include laying out the internal circulation to provide for a logical extension or connection when the adjoining property is developed.

- Use of the term "potential" to modify "pedestrian connections" in (4) confuses this section. We recommend deleting the word "potential."

- Standards 7, 9, 12 and 13 are only described. Proposed wording needs to be provided to understand what the city is proposing to adopt.

2F The proposed bicycle parking standards are good but incomplete in several respects:

Recommended ordinance language needs to be provided not just described.

Standards defining the space required for individual bicycle parking spaces and clear areas from sidewalks, walkways, etc., need to be provided or referenced.

Standard #1 should require that bicycle parking connect to building entrances via required sidewalks or walkways.

Standard #2

The ordinance should allow for a portion of the required bicycle parking to be provided for employees. Also, and for employee parking should be provided at an employee entrance, at the location of the planned employee entrance. Employee and student parking is generally long-term parking, which the ordinance should require to be covered and secure.

G-4 The recommended revisions to the Subdivision and Partitioning Ordinance are a good start but incomplete in two general respects: (1) the draft describes proposed amendments but does not include proposed language for street design and limiting cul-de-sacs; and (2) the many of the detailed requirements of Section 045(3) are not addressed by the proposed standards.

The standard or policy for connectivity provided in Section A needs to be more specific to be consistent with 045(3) and 045(3)(b). The recommended standard is an incomplete and non-binding restatement of this part of the rule. This is to provide a system of streets and accessways that provides for safe, and convenient bike and pedestrian circulation within neighborhoods. The city has several existing policies in its Housing Plan that would provide a good basis for broader policy language for connectivity (See page 49 of the Comprehensive Plan, policies regulating subdivisions in low and medium density residential areas.) -- These policies do not appear to be implemented through the city's subdivision ordinance.

The provision for future street plans should be made mandatory and binding. The TSP should include either a clear set of policies or a map which designates future local street connections and extensions to aid preparation of future street plans. (This is required by Section 020(2)(c) of the TPR.) Such plans can allow for discretion in the precise alignment of future streets, but are of little value if they are non-binding.

Mid-block accessways should be required at more frequent intervals. Blocks longer than 600 feet should be rare if the city adopts a maximum block perimeter of 1400 to 1800 feet.

Section 3C should include detailed recommendations for reduced residential street widths. It does not appear that the city has completed the analysis and reduction in required widths required by Section 045(7).

We support and applaud the proposed block length and block perimeter standards recommended in 3D. Again, specific language implementing these recommendations is needed. The language allowing cul-de-sacs or dead ends needs to be carefully crafted, because Section 045(3)(b)(E) of the TPR includes very specific exemptions to the requirement to provide streets or accessway connections. The general references to topographic, access or environmental constraints currently outlined in 3D are too broad and need to be refined to specific language consistent with the exemptions provided in the rule.

We also recommend that the 800' spacing standard for streets be limited to streets with unrestricted access to arterial streets. Access control objectives can also be met by limiting traffic movements through street design. For example, construction of medians (allowing right-in and right-out movements only) or dead-ending streets at the arterial can restrict vehicle movement, but provide direct and convenient routes for pedestrians and cyclists.

8. Revise and Expand the Pedestrian Plan

Page 9-2 of the plan describes several areas where pedestrian improvements are needed, however, it does not appear that there are projects that correspond to these needs in the listing of proposed improvements in Pedestrian Facility Improvements in Appendix F. These areas and the proposed improvements are as follows:

Area	Needed Improvements
The area west of 395 and South of I-84	Minor street improvements Add sidewalks, provide connections to park, schools and commercial areas
South Hill Neighborhood Riverside Avenue	Connections within the neighborhood
River Parkway	Pedestrian connections to all new residential and commercial developments and street system

Pendleton Retail Center	Internal Connections Connections to downtown and River Parkway

1. Improvements needed to provide these connections should be identified, mapped and described, and added to the list of projects called for in the Pedestrian Facility Improvements in Appendix G.

2. Since these improvements are "necessary" and deserving "special emphasis", the plan needs to include some mechanism to assure that they are implemented. This should include a combination of adding projects to the Short-term Improvements Plan (page 9-23) and adoption of policies and implementing measures that require new developments to provide planned connections.

3. The list of "Pedestrian Facility Improvements" in Appendix G is limited to arterial and collector streets. The list needs to be expanded to include other improvements that are needed to provide convenient bike and pedestrian circulation within neighborhoods. This is especially important in the areas described above and in other areas where improvements are needed to provide safe, direct routes to typical neighborhood destinations, such as schools, parks and shopping areas. This should include:

   - Accessways or other off-street pathways
   - Sidewalks on local/minor streets in developed areas

   This additional listing is needed to meet Section 045(6):

   > In developing a bicycle and pedestrian circulation plan as required by 660-12-020(2)(d), local governments shall identify improvements to facilitate bicycle and pedestrian trips to meet local travel needs in developed areas. Appropriate improvements should provide for more direct, convenient and safer bicycle or pedestrian travel within and between residential areas and neighborhood activity centers (i.e. schools, shopping, transit stops). Specific measures include, for example, constructing walkways between cul-de-sacs and adjacent roads, providing walkways between buildings, and providing direct access between adjacent uses.

9. Transportation Efficient Land Use Alternative

We commend the city for its consideration of a transportation-efficient land use alternative as part of this planning effort. It is clear that changes to land use patterns are an effective way to reconcile imbalances between planned land uses. Inclusion of such an analysis in a TSP is a new practice, which we support. We do have several comments for your consideration:

1. The preferred alternative appears to include both the recommended land use strategies and the full set of road improvements discussed in the alternative. The value of the land use strategy is that it can avoid the need for road projects which the city is not likely to be able to construct given likely funding constraints. (See discussion below.) We recommend that the city revise the preferred alternative to (1) incorporate and implement the recommended land use strategies; and (2) delete or defer decisions on proposed road improvements which would otherwise not be needed if the land use alternative is implemented.

2. It is unclear whether the assumptions about future housing and employment growth are consistent with relevant TPR requirements. Section 4 of the plan outlines assumptions about future Land Use Growth and Travel Demand. Many of the assumptions that are part of this analysis are not clearly described and should be explained in detail. This should include assumptions about potential for infill and redevelopment and average lot sizes of future single family homes.

   The relevant portion of the TPR is section 030(3)(a). It requires the determination of future transportation needs to be based on:

   > Population and employment forecasts and distributions which are consistent with the acknowledged comprehensive plan, including those policies which implement Goal 14, including Goal 14's requirement to encourage urban development on urban lands prior to conversion of urbanizable lands. (emphasis added)

   As part of its last periodic review, the city adopted Policy 5A, which in part requires efficient development within the city:

   > It shall be the policy of the City of Pendleton to .... Encourage the maximum and efficient development of the land within the municipal limits and the urban growth boundary ...

3. The plan should be revised to include more aggressive estimates of employment growth in the downtown area. Additional analysis of employment potential in the downtown area is needed to meet Section 030 of the TPR as described above.

   The present assumptions about downtown employment growth seem questionable. Virtually all of the growth in "downtown" employment is expected to occur at the Pendleton Retail Center. (page 4-4) Employment in the remainder of the downtown area, which currently has almost 3,000 jobs, is projected to grow by less than 3% -- about 60 new jobs. Our experience is that there is substantial opportunity for increased employment in both existing businesses and buildings and through infill and redevelopment. 45% of the expected growth in jobs, (a total of 1042) is in the central/service commercial category that the downtown area is a logical location for. For example, it's reasonable to expect many downtown employers and businesses, including the city; the county; the hospital; and others, will add employment in the downtown area.

4. Transportation Analysis Zone (TAZ) 27 is projected to add 100 new single family homes over the planning period. Since this TAZ is outside the UGB it is inappropriate to assume urban development here. The analysis should be revised to correct this problem.

10. Cost and Financial Analysis

We are concerned that this part of the plan does not achieve the goal expressed on page 2-3 to develop a transportation system that is "economical and affordable ... for the community to construct and maintain." The analysis should help the city decide whether it can reasonably afford to make $40 million of transportation projects over the next 20 years. Adoption of the TSP clearly commits the city to making these investments, yet the financial analysis provided by the plan does little to help the city decide whether or not this amount is reasonable. This is important. Whether the city can afford these projects should affect its decision to commit to them, especially if there are other reasonable, and more affordable ways to meet transportation needs.

We do not believe that the analysis provided is sufficient to meet Section 040(3). This section requires a determination of rough cost estimates:

> to provide an estimate of the fiscal requirements to support the land uses in the acknowledged comprehensive plan and allow jurisdictions to assess the adequacy of existing and possible alternative funding mechanisms. In addition to including rough cost estimates for each transportation facility and major improvement, the transportation financing plan shall include a discussion of the facility provider's

existing funding mechanisms and the ability of these and possible new mechanisms to fund the development of each transportation facility and major improvement. (emphasis added)

We recommend that the analysis be revised to help the city decide how much it can reasonably expect to raise for major transportation improvements. We suggest this include:

1. An estimate of city maintenance and preservation funding needs over the next 20 years. This is important because several of the sources of funding identified are likely sources of maintenance and preservation funding, and because maintenance and preservation are recognized as priorities for transportation funding.

2. An estimate funding reasonably likely to be available from the state to fund city improvements. This should be coordinated with ODOT.

3. An estimate of the amount likely to be provided by city residents for major transportation improvements through likely funding sources. We suggest evaluating historic levels of city spending on transportation improvements and per capita spending by other municipalities in Oregon to identify some reasonable maximum amount to spend on planned improvements.

4. Separate estimates of committed and uncommitted funds. Projects which are scheduled for in the next few years (such as the Highway 11 Viaduct) should be counted separately from projects and funds which are not currently committed to construction.

11. Clarify procedures and standards for Access Management Policies and Ordinances

Section 10 includes "Recommended Transportation and Land Use Policies." Most of the recommendations relate to policies and ordinances that would regulate access to arterial and collector streets. However, the details are unclear and incomplete. It is particularly unclear how the proposed Policy on (page 10-2) and the review procedures (on pages 10-6 through 10-9) relate to or will be integrated into the city's existing land use code or approval process. The city or the consultant should prepare actual ordinance text to implement the recommendations. We have several suggestions to consider as this language is prepared:

1. The ordinance recommendations describe review procedures and standards for both ODOT and the city. While it is necessary and appropriate for the city to

coordinate with ODOT, it is generally inappropriate for the city's ordinance to either regulate ODOT's review or defer decisions about compliance with the city's standards to ODOT.

2. The subdivision and site plan recommendations on page 10-7 should be coordinated and integrated with the other ordinance recommendations in Appendix G.

12. Miscellaneous Comments

Our review identified several other minor points that should be corrected or clarified in the final plan.

9-21 The proposed signalization improvements should cost $1.2 million rather than the $12 million indicated. The related discussion says a total of eight signals at $150,000 per signal. This totals $1.2 million.

9-23 The list of projects and improvement costs should list the estimated cost of each project. Providing totals for multiple projects is confusing.

A-1 The Glossary of Transportation and Land Use terms should include relevant definitions from the Transportation Planning Rule, and should be adopted as part of the plan or ordinance as relevant. Key terms, such as "accessway", "walkway", "reasonably direct", etc. need to be added.

P:\TSP\PEND.WPD

CAPECO
Community Action Program East Central Oregon

721 S.E. 3rd Street, Suite D •Pendleton, OR 97801
(503) 276-1926 or (503) 276-0406
(Toll Free) 1 (800) 752-1139 •FAX (503) 276-7541

August 20, 1996

Mike Hyde
City of Pendleton
P.O. Box 190
Pendleton, OR 97801

Dear Mike,

As the representative for transportation services for the senior and disabled population, this letter will provide my response to the request to review the draft copy of the Pendleton Transportation System Plan.

After a more thorough review of the document, my statement made on June 25, 1996 stands. I still believe that this plan does not put enough emphasis on the City of Pendleton developing a transit system as a congestion management tool. To make a recommendation that "the city needs to evaluate the need for fixed-route transit service during the next twenty years" is too long range. If the City of Pendleton wants to bring in new industry and growth, public transportation for prospective employees is often considered. Also, with the development of the Pendleton Retail Center, folks that are currently using the taxi ticket program will have to make some tough decisions on how to use their limited number of taxi tickets.

On page 5-3 there is a statement that "the city will benefit from the coordination and expansion of the demand-responsive system." I was not able to find any further reference to this except in the reference stated above, only that reference refers to a fixed-route system. There is a big difference between a demand-responsive and fixed-route systems. Also, I could not find where there was a description or recommendation on **how** to expand and coordinate the demand-responsive system.

On page 3-25, there is a recommendation to reevaluate the continuation of the taxi ticket voucher system. Reevaluate it for what? What are we to be looking for? We already realize that this service is adequate and that it has been upgraded to transport the disabled. We also recognize that it is an expensive form of transportation that requires a large amount of S.T.F. funding that helps to support a private provider. So what really is the consultants' recommendation? Why was this not specifically addressed?

The idea that the "independent spirit" of the people of Pendleton (Page C-4) is not measurable and has very little bearing on the true need for transit services. Also on this page, there is a reference to a statement made by the activities director of the Pendleton Senior Center. I spoke to several people concerning this statement and no one can identify who the person was that made that statement. It should be removed from the paragraph.

Section 7 relates to Recommended Design Standards. Although it is probably not required, again I see no reference to include transit vehicles in the design standards. If this is not considered today, it will make it very difficult to change in the future. Also, page 9-10 New Roadways, does not include references to transit design.

Page 9-5 refers to the "creation of an endowment fund (or some other means to fund services) is recommended to once again provide a dial-a-ride service to the Pendleton area." This statement is unbelievable. In checking with an ODOT representative, who works in transit, this statement was laughable. She stated to me that she could not identify any current system that is using an endowment fund to provide services.

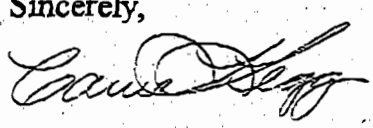
Page G-1 identifies recommended ordinance modifications. Again, transit is not mentioned. Requests for funding for transit projects now require that transit programs be identified in the City's and County's Comprehensive Plan. The City of Pendleton needs to also ensure that the wording is strong in their Comprehensive Plan in order to support the exploration of funding for transit services.

It is obvious that more emphasis was placed on the bicycle plan (which I understand is required) however, let's keep in mind that bicycles can only move one person at a time.

Please consider giving additional detailed attention to references on transit for the transportation disadvantaged population. It would be helpful if there was a specific and individual section that just related to public transit. Although this is not required, there were other areas that were researched and recommendations made that the consultant team felt were important. Such a section could be very beneficial for future planning and funding.

Your time and consideration are appreciated.

Sincerely,



Carrie L. Legg
CAPECO

DEPARTMENT OF ECONOMIC
AND COMMUNITY DEVELOPMENT

CONFEDERATED TRIBES
of the
Umatilla Indian Reservation
P.O. Box 638
PENDLETON, OREGON 97801
Area Code 503 Phone 276-3873

August 14, 1995

Mr. Mike Hyde,
Planning Director,
City of Pendleton
34 S.E. Dorion
Pendleton, OR 97801

RE: Pendleton Draft Transportation System Plan

Dear Mr. Hyde:
Thank you for the opportunity to review the Pendleton Draft Transportation System Plan. The CTUIR including the Wildhorse Destination Resort is the largest employer within the Umatilla County and most of the employees live within the City of Pendleton. Hence, the consultants should have considered the employment at the CTUIR, to develop a more realistic travel demand forecasting model. It is also important to consider the traffic generated from the City of Pendleton to the Wildhorse Destination Resort which has be considered in the Traffic Impact Study of the Wildhorse Gaming Resort datcd November 1994.

The Impact of the tourists using the Mission Road should be considered in the Transportation System Plan, if the City is interested in drawing the tourists from the Wildhorse Destination Resort to the Pendleton downtown tourist attractions. The CTUIR would like to see the safety concerns at the U.S. 30 and State Highway 12 intersection resolved at the earliest. Once again, thank you for the opportunity to comment on the Pendleton Transportation System Plan Draft and please let me know if I could be of any further assistance.

Sincerely,

Naveen G. Chandra

Naveen G. Chandra
Transportation Planner
Confederated Tribes of Umatilla

CC: Antone Minthorn, Chairman, General Council, CTUIR
Dave Tovey, Director, CTUIR-DECD
File: c:\data\wp51\pend\tranplan.doc

Harlan Nale (7-26-96) TSP Review Memorandum Response

Below is a detailed response to the comments Harlan Nale (ODOT TPAU) provided in his Memorandum to John Preston (ODOT, Regions 5) in review of the Pendleton TSP. The response to Harlan's comments follow the order as noted.

Comment Response #1
We understand and recognize that ODOT employs the use of SIGCAP and UNSIG10 for LOS measures in long-range planning. These procedures are outlined in ODOT's TSP Guidelines. However, in an appropriate response to the limited resources of the Pendleton TSP scope and contract we employed the use of national standards defined in the Highway Capacity Manual as the only technical tool, coupled with professional judgement, to efficiently and consistently identify LOS in the identification of existing and future needs, comparison of alternatives and identification of improvements *givin the limited budget of the project.* Employment of SIGCAP and UNSIG10 would have resulted in project budget overruns, but would not result any substantive modifications to the TSP recommendations based on our professional judgement and thorough knowledge of the Pendleton urban area.

The scope and contract (and also any preliminary discussions of the TSP development) did not include and define the specific tools that would be used to measure LOS in the TSP. Should ODOT require the use of SIGCAP and UNSIG10 the TSP technical analysis can be recalculated. This activity would be an additional expense to the project, but could be conducted with additional funding resources.

Comment Response #2
The trip length reduction of 30% for shopping/recreation/other trips (HBO) are high, but are only assumptions in an exercise in alternative land use/transportation analysis to highlight where enhancements to the City's land use/transportation polices could be made. No changes to the TSP methods (alternatives analysis) and findings should be made.

Comment Response #3
Comment noted, changes made accordingly.

Comment Response #4
Comment noted. A planning level analysis of vehicle mobility, intersection LOS, queue spacing requirements and weaving was performed in the identification and recommendation of street improvements in this constrained area. Further engineering analysis will need to be performed when this project is designed. These details can be thoroughly tested at such time. No changes to the TSP recommendations should be made.

Comment Response #5
Comment noted, changes made accordingly.

Comment Response #6
Comment Noted, changes made accordingly.

Comment Response #7
The analysis in the Pendleton TSP, given our knowledge and understanding of the urban area, give every indication that a five-lane cross section (and more importantly- the right-of-way for a 5-lane street) is appropriate for 20th Street if the 20th Street Extension plan is adopted and the project is constructed. No changes to the TSP should be made.

Comment Response #8
Comments noted, changes made accordingly.

Comment Response #9
Comment noted, changes made accordingly.

Comment Response #10
For simplicity, the Pendleton TSP provides a direct and appropriate citation of the Oregon Highway Plan (OHP) LOS policy standards as shown in the Pendleton TSP Appendix B in Table B-2. These LOS standards are consistent with the Oregon Level of Importance policies in the OHP. Further reference to additional LOS sources for design consideration like the ODOT 1993 Highway Design Manual, while these references are appropriate, will only unnecessarily further confuse lay readers of the TSP. No changes to the TSP were suggested nor will be made on this issue.

Comment Response #11
See comment Response #1.

Comment Response #12
See comment Response #1.

Comment Response #13
Comment noted, changes made accordingly.

Comment Response #14
Comment noted.

Comment Response #15

Comment noted, no changes to TSP are necessary or made.

Comment Response #16
Comment noted, no changes to TSP are necessary or made.

Comment Response #17
Comment noted, trip generation rates were checked and calibrated to local Pendleton conditions. No changes to TSP are necessary or made.

Mark Wigg (7-23-96) Pendleton TSP Review Memorandum Response

Below is a detailed response to the comments Mark Wigg (ODOT Environmental Services) provided in his Memorandum to John Preston (ODOT, Regions 5) in review of the Pendleton TSP. The response to Mark's comments follow the order by response category and line numbering for reference.

General Comments

1. The cost in the development and reproduction of maps with a detailed scale was found to be too cost-prohibitive given the resources of the contract. A scale could be developed (manually or by computer) with additional funding resources to the project.
2. The cost in the development and reproduction of a street index is beyond the scope of the project and the resources of the contract. A street index could be developed (manually or by computer) with additional funding resources to the project.
3. A map showing existing and planned land uses is not required by the TPR nor was this task outlined in the consultant contract. However, such a map would be informative but should be developed by City Staff. The coordination and final mapping of these resources in the TSP would be an additional expense to the project, but could be developed with additional funding resources to the project.

Existing Conditions

1. Comment noted. The discussion of safety conditions on state highways in Pendleton is commensurate with the funding level of the TSP preparation. A more detailed assessment of safety conditions could be conducted with additional funding resources to the project.
2. Inference that specific (and current) businesses or activities of extraordinary traffic generating attractions (e.g. Walmart - which is an approved use; and the Pendleton Round-Up - which is a one-time annual event) is inappropriate in the TSP.
3. An assessment of bridges is a good idea for the TSP, but it's beyond the scope of the consultant contract. A thorough assessment and evaluation of bridges could be conducted with additional funding resources to the project.

Land Use, Growth, Travel Demand, Impact on Transportation System

1. Maps showing City and County zoning are not required by the TPR nor was this task outlined in the consultant contract. However, these maps would be informative but should be developed by City Staff. The coordination and final mapping of these resources in the TSP would be an additional expense to the project, but could be developed with additional funding resources to the project.
2. Comment noted, changes made accordingly.
4. The Pendleton TSP technical exercises includes a level of traffic growth at the UGB

periphery on major streets (arterial and collectors) that generally reflect these kinds of development. The specific assessment of development outside UGB's (like Pendleton) are the responsibility of the county or state TSP's. Any transportation improvement needs identified in the respective state, county and city TSP's need to be coordinated. These efforts are outside the scope and contract of the Pendleton TSP.

5. Comment noted. The level of service analysis for existing and future traffic conditions all show a consistent level of "capacity" for each state highway in Pendleton. The portion of "capacity" that is "used" by traffic increases over the lifetime of the plan (by year 2015).

Alternatives, Transportation System Plan, Financial Analysis

1. Comment noted. The Highway 11 viaduct is as much a safety improvement project (if not more) as it is a capacity one. No changes to the prioritization of the projects is expected at this time.
2. Comment noted. The I-84/Highway 395 Eastbound intersection does not meet signal warrants. Gaps created by the planned traffic signal system on Highway 395 should improve the poor LOS expected at this intersection in the future (year 2015). Signalizing this intersection would also be inconsistent with the OHP signal spacing policy. No changes to the TSP are anticipated.
3. Comment noted, pedestrian plan recommendations and projects are accurately defined and designated in the TSP. No changes to TSP made.
4. The TSP adequately defines the type and timing (long-term) of new traffic signal improvements (based on future traffic generation trends) at the Hwy 11/Hwy 30 and Hwy 30/Airport Rd intersections. The Hwy 11/I-84 westbound ramp intersection does not meet signal warrants based on the future travel volumes generated by the type and location of new land development embodied in the TSP. No changes to the TSP are made.
5. Comment noted. The number and location of traffic signals identified in the Pendleton TSP may exceed the guidelines of signal spacing as noted in the OHP. Careful consideration of the local nature (opportunities and constraints) and condition of the state highways (existing and future traffic conditions) was made to determine the appropriate type and location of safe and efficient traffic control that minimized public investment in capital improvements. Not in all cases were ODOT's strict highway policies met when balancing these needs. No changes to the TSP are made.
6. Comment noted. Policy emphasis in TSP placed on employment land development on south side of Pendleton, and alternate roadway connections to Hwy 395 that link south and north Pendleton. No changes to TSP made.
7. Comment noted.
8. Comment noted. Highway and sidewalk improvements identified in TSP provide the pedestrian crossing access and circulation across Highway 395. No change to TSP made.

9. Comment noted and included in the TSP.
10. The future 37th Street improvement will likely be a local (city) facility. Barnhart Road was removed from the Pendleton TSP as a 20-year project, but remains in the TSP as a project to coordinate with the County and State. Jurisdiction responsibility can be defined as part of the Umatilla County TSP.. The need for Barnhart Road was based on economic development (industrial/trucking) around the Airport, not a capacity one (e.g. involving commuter traffic to/from industrial uses around Airport) that invokes issues such as TDM, TSM and transportation-efficient land use planning t o eliminate or reduce street capacity improvement needs. Changes made to TSP accordingly (Barnhart Road).

Response to Bob Cortright's Letter (July 29, 1996) in review of the Draft Pendleton TSP.

Below is a detailed response to the comments Bob Cortright (DLCD) provided in his Letter to Mike Hyde (City of Pendleton) in review of the Draft Pendleton TSP (dated June 14, 1996). The response to Bob's comments follow the order of specific comments made in his letter for reference.

1. Delete roadways outside UGB or conduct analysis of Goal exceptions.

Comment noted, changes to Pendleton TSP recommended street improvements with project descriptions and relative maps. The Bartsch Road/SW 37th Street Extension (Phases II and III with the Runnion Drive collector street extension) were recommended arterial and collector street improvements outside the UGB. These street projects are removed from financial plan section of the TSP, but retained as future street corridors on related maps as each will provide alternative route circulation linking south and north Pendleton, and hence relief to Highway 395.

The analysis of transportation-efficient land use revealed that even with an aggressive implementation of TSM, TDM and more transportation-efficient land use measures, poor LOS will likely exist on Highway 395 towards the later years of the 20-year planning horizon. These conditions are due to the limited arterial connectivity (Highway 395) linking north and south Pendleton given the extreme topographic and physical barriers (I-84 and Umatilla River). Pendleton is essentially stuck between a policy "rock and a hard spot" - needing to find local street connectivity and multi-modal improvements options that de-emphasize Highway 395 while at the same time constraining new street connections and extensions within its current UGB. A future land development moratorium would be an unreasonable burden to the City as resolution to this dilemma (since I-84 is one of the principal barriers to good local street connectivity). Therefore, the 37th Street (Phases II and III) corridors need to be retained in the TSP to provide the City and State these needed options in the future. The plan map and financial plan changes to the TSP provide the City and State of Oregon a compromise on conflicting land use and transportation policies.

The Barnhart Road extension is retained in the TSP as a recommended street improvement solely to improve inter-modal circulation and access thereby avoiding the steep grades of Airport Road to serve economic development associated with the Pendleton Airport area business/industrial park. These improvements are not needed to provide additional street capacity to mediate adverse traffic conditions on other arterials/collectors within the Pendleton urban area. The Pendleton TSP will summarize Barnhart Road as a recommendation for Umatilla County to include in their TSP. The Umatilla County TSP should address funding resources and an implementation plan for Barnhart Road.

2. **Adopt policy and plans for extension and connection of minor streets.**

Comment noted. The TSP does include recommended street design and functional classification policies that prescribe local street dimension and connectivity standards and recommended ordinance modifications for policies and standards that require adequate local street connectivity and extension. These recommendations together form the policies that, once adopted, will comply with the TPR. The TSP street recommendation map does not include the location of local streets. Typically these streets are planned and platted as part of site development proposals.

Upon adoption of the TSP the City of Pendleton can implement local street design standards at such time when development proposals are defined and forwarded for City staff review/comment. It is premature to plat the specific location and layout of future local streets, since this level of assessment requires specific and particular knowledge and appreciation of parcel-specific land use issues and constraints (topography, surface water, social/historic/cultural constraints, etc.) that are clearly beyond the scope and limitations of the State of Oregon's and City of Pendleton's project funding of the Pendleton TSP. Hence, the recommended street plan is supported with policy recommendations for the spacing and general location of local street connections to new arterial and collector streets as the means to comply with the TPR requirements.

3. **Adopt reduced standards for "minor" or residential streets.**

Comments noted. The Pendleton TSP provides recommendations for the City to implement flexible street standards for varied pavement widths (28-36 feet) on minor (local) streets, and that this flexibility addresses the requirements of the TPR. The TSP Management Team, Advisory Committee, Planning Commission and City Council has discussed and considered "skinny streets" There was near unanimous finding that a single, 28-foot "skinny street" minimum standard doesn't fit Pendleton's unique geographic and climatic conditions (the combination of which could result in unsafe travel conditions on a skinny street, particularly under icy conditions). No change to the Pendleton TSP is recommended at this time.

4. **Provide for wider sidewalks.**

The Pendleton TSP provides recommendations to the City of Pendleton for a minimum five-foot sidewalk on all local, collector and arterials streets. A minimum eight-foot sidewalk is recommended in commercial areas where planting strip buffers the sidewalk from the street. These recommendations were made based on a thorough review by city staff and officials, reflecting local considerations and recognition of ADA standards. No change to the Pendleton TSP is recommended at this time.

5. **Clarify status of implementing measures.**

Comment noted, minor changes to TSP Section 10 (Recommended Transportation and Land Use Policies) and Appendix B clarifying status of implementing measures.

6. Reconsider proposed bikeway designations.

Comment noted, changes made accordingly.

7. Modify proposed ordinance amendments to meet TPR requirements.

This comment pertains to Appendix G. In general, this section should be edited to clarify that these are preliminary recommendations to be refined by city staff and adopted by May 1997. Specific items for change include:

Introduction, first paragraph: insert "preliminary recommended" in place of "suggested".

Introduction, second paragraph: expand first sentence, "....city staff and adopted by City Council prior to the May 1997 TPR compliance deadline."

G-1 Recommendation 1A: edit second sentence by inserting "or routes on all new" prior to arterial...

Recommendation 1C: change "will be" to "is".

Recommendation 2A: since we are presenting preliminary recommendations this item is considered to be adequate by the consultants, City of Pendleton and ODOT.

G-2 Recommendation 2A: expand section by adding a new paragraph at the end. "On all collector and arterial streets, the Oregon Department of Transportation and the City of Pendleton will adopt access management policies identified in Section 10, and enforce compliance during design review."

Change "connections" to "walkways" in 2B3 and 2B4. Expand Appendix A Glossary of Terms to include TPR definitions.

General DLCD comments regarding item (2) on developed and undeveloped properties should be considered by the City during preparation of actual ordinances for adoption.

Item (4): delete the word "potential".

G-3 Actual ordinance language for items (7), (9), (12) and (13) shall be prepared as the city refines and adopts new TPR ordinances. No change proposed at this time.

F-2 actual ordinance language for this item will be prepared by city as mentioned

above. Consider DLCD Standards #1 and #2 suggestions during ordinance preparation. No change proposed at this time.

G-4 Consider DLCD standards and suggestions regarding Subdivision and Partitioning Ordinances, and Connectivity during refinement of TPR Ordinances for adoption. No change proposed at this time.

G-5 Detailed ordinances for narrow street widths shall be part of the proposed amendment to Section 31.D of the Subdivision and Partitioning Ordinance. No change proposed at this time.

8. Revise and expand the pedestrian plan.

The recommended ordinance language contained in Appendix G, Page G-2, Item C, if adopted by the City, would ensure that proper pedestrian connections are provided on local streets, not just arterials and collectors. Consider DLCD suggestions during refinement and adoption of actual ordinance language.

A source of confusion seems to be how these requirements are to be implemented. Our recommendations on G-3, D. Authority include a new Site Plan Review Section (eg. Design Review) that would assist the City in clarifying how design review will be conducted to ensure TPR Ordinance compliance. No change is recommended at this time.

9. Clarify the status of the transportation-efficient land use alternative.

The introduction to Section 9 will be revised to indicate that the Transportation Efficient Land Use Alternative is the recommended TSP Alternative, and mention the projects that will be delayed beyond the planning horizon if this alternative is implemented

Technical Memorandum #6 provides a detailed methodology and summary of assumptions underlying the Transportation Efficient Land Use alternative. The first step in implementing the Transportation Efficient Land Use Alternative is now underway as part of the Pendleton Urban Fringe Study (a Transportation Growth Management grant-funded project).

Clarifying methodology in Section 6 may be helpful. Under Methodology (page 6-2):

Second Paragraph, Insert after first sentence: "The population and employment growth forecasts for the transportation efficient land use alternative are consistent with the base case "no build" alternative.

Second Paragraph, insert: "distribution of" prior to ...."base case comprehensive plan year 2015 land use projections, ..."

The estimates of potential infill and employment growth in downtown are considered to be adequate at this time. They were preliminarily estimated by the consultant with technical review by the TSP Management Team and Advisory Committee. While the preliminary estimate of infill does take into account vacant sites and upper level redevelopment potential, the current Pendleton Urban Fringe Study is taking a detailed look at these estimates.

Item 5. Page 6-5 will be expanded to include a new paragraph. "Estimates for infill and redevelopment in downtown take into account know vacant lands and second level redevelopment opportunities. The infill estimates were preliminarily estimated by the consultant with technical review by the TSP Management Team and Advisory Committee."

TAZ #27 demographic changes and analysis revisions made to TSP.

10. Use the "Cost and Financial Analysis" to evaluate whether the plan is affordable.

Comment noted. Major changes to draft TSP summary of Project Funding Options (Table 8-9) to include all project needs and possible local funding sources are provided. DLCD's suggested effort to further enhance the financial plan section are beyond the scope and budget of the TSP project and are unnecessary to comply with the TPR.

11. Clarify the Access Management Policies and Standards.

Comment noted. Consider DLCD suggestions during refinement and adoption of actual ordinance language that defines how the access management policy and review procedures will be integrated into the city's land use code or approval process. No changes to the TSP are recommended at this time.

12. Miscellaneous Comments

Comments noted, changes made accordingly.

Technical Memorandum No. 6

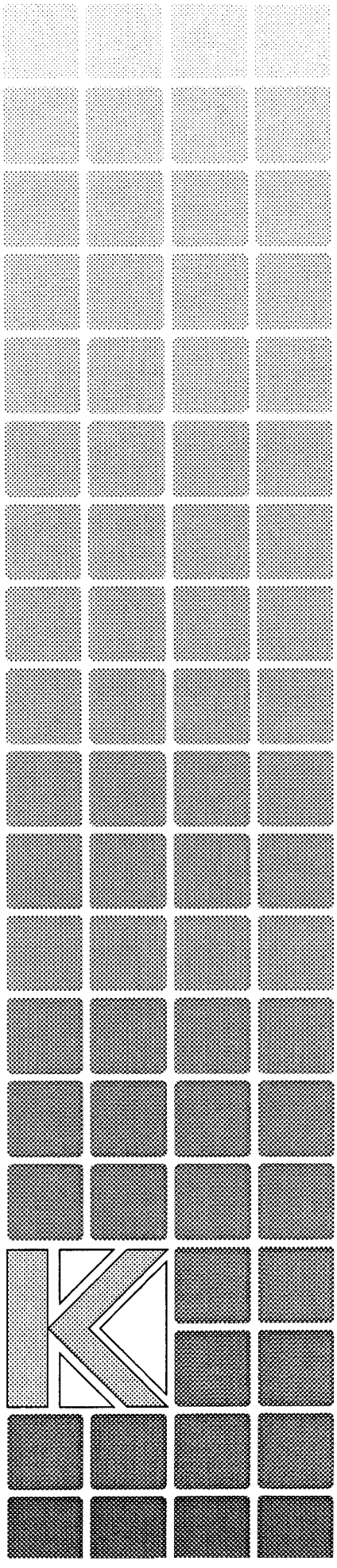
Evaluation of Land Use and TDM Strategies

Pendleton Transportation System Plan

May 1996

Kittelson & Associates, Inc.
Transportation Planning/Traffic Engineering

In association with
OTAK, Inc.
Pacific Rim Resources



Technical Memorandum No. 6

Evaluation of Land Use and TDM Strategies

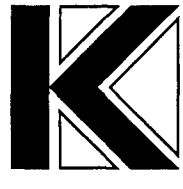
Pendleton Transportation System Plan

Prepared for:
City of Pendleton
34 SE Dorion Avenue
Pendleton, Oregon 97801
(541) 276-1811

Prepared by:
Kittelson & Associates, Inc.
610 SW Alder, Suite 700
Portland, Oregon 97205
(503) 228-5230

May 1996

Project No.: 1567.00



Development of a "Transportation Efficient" Land Use Alternative

INTRODUCTION

As discussed in Technical Memorandum No. 5, even with the addition of several new roadways and roadway improvements, several of the intersections in the west area of Downtown Pendleton and in the vicinity of the interchange ramps will need to be modified in the future to provide acceptable levels of service. In addition, topographic and financial constraints and quality of life issues limit the degree to which roadway improvements can be constructed in the Pendleton urban area over the next twenty years. Therefore, as part of the development of the TSP, a "transportation efficient" land use alternative was developed and evaluated.

The Transportation Planning Rule identifies several "performance standards" for developing and evaluating a Transportation System Plan. Many of these standards are aimed at reducing auto reliance, providing and encouraging alternative modes and supporting efficient land use development.

Although the provisions of the TPR do not require Pendleton to evaluate the benefits of an alternative land use scenario, a preliminary land use alternative has been identified to evaluate the potential benefit from reallocating land use type and densities within the Pendleton urban growth area. This alternative may result in a more efficient transportation system.

By including a transportation efficient land use alternative in the TSP, the potential reduction in vehicle trips, congestion and roadway improvements can be determined using the EMME/2 travel forecasting model. The additional benefit from improved facilities, access management, local street network connectivity, and enhanced bicycle/pedestrian facilities can also be determined.

METHODOLOGY

The intent of the development and analyses of Transportation Demand Management (TDM)/transportation efficient land use patterns is to reduce the demand for automobile travel, thereby improving the efficiency of roadways. The fundamental approach to the alternative land use concept is to develop a pattern of uses that enhance community orientation and provide the greatest potential for local non-auto activity by residents and workers. This can be accomplished by evaluating and modifying several development patterns, including: density, land use mix, jobs/housing balance, and activity concentration.

The methodology used to define a transportation efficient land use alternative is fairly simple. The objective is to make selected minor adjustments in the base case comprehensive plan year 2015 land use projections, with a goal of developing a better mix of land use and infill opportunities to work towards a jobs/housing ratio that approaches unity and reduces vehicle miles of travel. Unity indicates the balance achieved as a jurisdiction approaches the statewide metropolitan area jobs/housing ratio of 1.2. The statewide metro and non-metro area balance is 1. 15 jobs per housing unit.

In Pendleton, the current ratio of jobs per households is approximately 1. 13. The 2015 base

case alternative, which is premised upon development of the existing comprehensive plan

zoning with minor refinements, would result in a jobs/housing ratio to 1. 1 0. While the base case projection approaches unity, there is a major variation in the jobs/housing balance within regional subareas that would result in increased cross-town trips and levels of congestion. For example, the base case jobs/housing ratio in year 2015 is expected to range from 0.07 in the north district (the area to the north of the Umatilla River and to the east of Highway 37) to 33.95 in the northwest district (the area north of Interstate 84 and to the west of Highway 37).

The step-wise methodology used to calculate the transportation efficient land use alternative is discussed below.

1. **Establish 2015 Base Case Assumptions**

   The 1995 to 2015 base case growth assumptions for jobs and households were established based on discussions with city staff and the Management Team. The growth rates and corresponding household and employment estimates for year 2015 conditions are discussed in Technical Memorandum No. 4 - Future Transportation System Needs as well as Working Paper No. 2 - Future Population and Employment Forecasts.

2. **Compare Jobs/Housing Ratio and Establish General Objectives for Approaching Unity**

   The existing estimates and future projections for non-retail jobs per households and retail jobs per households were calculated using the base case assumptions determined in Step 1. General objectives for increasing or decreasing retail jobs, non-retail jobs, single family dwellings, multifamily dwellings were established in each subarea with the goal of working towards a jobs/housing balance that approaches unity. The general objectives for creating the transportation-efficient land use alternative are described below.

   - *Downtown.* Increase multi-family households (infill opportunity) over those projected in the 2015 base case.
   - *East.* Same as base case.
   - *North.* Increase retail and non-retail employment and decrease single-family households.
   - *Northwest.* Decrease non-retail employment and increase multi-family households.
   - *Southeast.* Increase non-retail employment and decrease single-family households.
   - *Southwest.* Increase non-retail employment and decrease single-family households.

   The ability to achieve a better jobs/housing mix is dictated primarily by available developable lands, infill opportunities and relationship with compatible land use types. A comparison among the base core and transportation efficient land use alternatives is provided in Table 1.

Table 1

Comparison of Jobs: Households Ratio

	Downtown	East	North	Northwest	Southeast	Southwest	Total
Existing (1995)							
Retail Employment	0.6	0.2	0.0	0.4	0.4	0.1	0.3
Non-Retail Employment	1.2	0.9	0.1	9.4	0.7	0.6	0.9
Total	1.9	1.1	0.1	9.8	1.1	0.7	1.1
2015 Base Case							
Retail Employment	0.9	0.2	0.0	0.9	0.2	0.2	0.3
Non-Retail Employment	1.1	0.7	0.1	33.0	0.4	0.5	0.8
Total	2.0	0.9	0.1	34.0	0.6	0.7	1.1
2015 TDM Land Use Alternative							
Retail Employment	0.8	0.2	0.0	0.2	0.2	0.2	0.3
Non-Retail Employment	1.1	0.7	0.1	7.1	0.5	0.6	0.8
Total	2.0	0.9	0.1	7.4	0.7	0.8	1.1

3. Analyze Land Use Trade-offs of Approaching Unity

Once general objectives for increasing or decreasing jobs and housing for each subarea were established, conversion factors were used to identify the net land area requirement for retail jobs, non-retail jobs, single family and multifamily housing to allow an analysis of substituting land use types for one another. For example, this analysis assumes the average retail project would accommodate 21.8 jobs per acre, non-retail would have 8.7 jobs per acre, and residential densities would be 5.45 single family and 9.0 multi-family dwellings per gross acre.

4. Reconcile Build-out Projections with 2015 Base Case Control Totals

In cases where the general objectives assume more land intensive development (i.e., more multifamily in lieu of single family or industrial development), the carrying capacity of the land area in terms of households or jobs may increase beyond the 2015 control totals. For this analysis, any induced carrying capacity that exceeds 2015 base case assumptions was assumed to occur beyond year 2015. Hence, the land use alternative projections for 2015 were reconciled to the 2015 base case control totals for total jobs and total households.

The key differences between the base case and the transportation efficient land use growth projections are shown in Table 2.

Table 2

Comparison of Household and Employment Estimates

	Downtown	East	North	Northwest	Southeast	Southwest	Total
Base Case vs. Existing Land Uses (2015 - 1995)							
Retail Employment	647	0	0	5	24	331	1,007
Non-Retail Employment	73	92	1	883	194	224	1,467
Total Employment	720	92	1	888	218	555	2,474
Single-Family Households	13	251	301	-18	645	534	1,726
Multi-Family Households	205	15	90	-37	344	120	737
Total Households	218	266	391	-55	989	654	2,463
TDM Land Use Alternative vs. Existing Land Uses							
Retail Employment	604	0	34	5	22	309	974
Non-Retail Employment	68	86	32	660	326	329	1,500
Total Employment	672	86	66	664	348	638	2,474
Single-Family Households	13	251	271	-18	548	454	1,519
Multi-Family Households	230	15	90	145	344	120	944
Total Households	243	266	361	128	892	574	2,463
TDM Land Use Alternative vs. 2015 Base Case							
Retail Employment	-43	0	34	0	-2	-22	-33
Non-Retail Employment	-5	-6	31	-223	132	105	33
Total Employment	048	-6	65	-224	130	83	0
Single-Family Households	0	0	-30	0	-97	-80	-207
Multi-Family Households	25	0	0	182	0	0	207
Total Households	25	0	-30	182	-97	-80	0

5. **Allocate Transportation Efficient Land Use Alternative Projections by TAZ**

   The job and housing projections for the urban subareas were allocated by TAZ using objective considerations unique to each TAZ. The allocation of jobs and housing takes into account the base case growth rate assumptions for each TAZ and unique opportunities such as infill development potential and compatibility of existing zoning. The TAZ assumptions for year 2015 are shown in Table 3.

6. **Run EMME/2 Traffic Model Using 2015 Transportation Efficient Land Use Assumptions**

   The traffic model prepared for the TSP was run using the TAZ input variables calculated in Step 5. The results of this model run are intended to indicate the relative beneficial impact of an optimum transportation-efficient land use alternative.

KEY FINDINGS

This analysis determined that the existing base case 2015 land use alternative would result in an uneven jobs/housing balance within the urban area. Also, additional non-retail jobs could be accommodated if additional multifamily housing is provided in lieu of single family homes. The current assumptions would generate significant traffic along Westgate to/from the Northwest. The base case assumptions for housing envision the share of multi-family housing increasing slightly to 32 percent of total housing in year 2015 from 30 percent today. The average lot size is for new single family homes is expected to remain fairly constant over the projection period at 8,000 square feet per lot.

The preliminary transportation efficient land use alternative assumptions are briefly described below by geographic area.

- *Downtown:* Some infill multifamily is assumed.
- *East:* No change relative to our case.
- *North:* A 10 percent reduction in the potential increase in single family units with a small commercial convenience retail component and a moderate non-retail component would help achieve a slightly better jobs/housing balance and provide neighborhood residents convenient goods and services.
- *Northwest:* Fewer non-retail land uses with more multifamily housing than that assumed the base case.
- *Southeast and Southwest:* A 15 percent reduction in the potential increase in single family homes with more non-retail employment-generating land uses is assumed.

Results of Land Use Alternative

The land use alternative helps in balancing growth within the region and results in a jobs/housing ratio of 1. 12. It places greater reliance on accommodating better paying non-retail jobs than retail jobs, but makes important decisions regarding how to provide multifamily development within the northwest by more evenly transferring potential non-retail development from northwest to other areas of the urban area.

Other issues

The potential for increased development near the intersection of Goad Road and Interstate 84 was discussed during the preparation of the transportation-efficient land use alternative. A concept for a new grade separated intersection at this location surfaced during discussions with the TSP Technical Advisory Committee. While this area is currently outside the UGB, this transportation improvement would put pressure on UGB annexation and lead to increased development pressure, particularly commercial retail within the east/southeast subareas.

It is recommended that the soon to be initiated Pendleton Urban Fringe Study evaluate the land use and traffic impacts associated with the Goad Road/1-84 Intersection project, as well as the fiscal costs of extending public infrastructure and services to this and other fringe areas of the UGB.

EVALUATION OF LAND USE AND TDM STRATEGIES

Future (year 2015) p.m. peak hour volumes were calculated based on the transportation efficient land use alternative discussed above. Because this alternative would include significant enhancements to the pedestrian, bicycle, and transit systems, as well as TDM and alternative land use strategies, modifications were made to the trip length and mode-split model assumptions. used to calibrate the model.

The alternative land use and TDM strategies identified provide neighborhood commercial opportunities and a balance of jobs to households in each of the nodes; therefore, the trip lengths were modified by trip purpose as shown in Table 3.

Table 3

Trip Length Reduction by Trip Purpose

Trip Purpose	Trip Length Reduction
Home Based Work	10%
Home Based Other	30%
Non-Home Based	10%

The mode-split assumptions were also modified because of the benefits provided by the alternative land use and TDM strategies. The reductions in the number of auto trips by trip length are listed in Table 4. No reductions in vehicle trips were made for trips more than 10 miles in length.

Table 4

Reductions in Vehicle Trips to Account for changes in Mode-Split

Trip Length	Vehicle Trip Reduction by Purpose		
	Home-Based Work	Home-Based Other	Non-Home Based
Trips Less Than ½ Mile			
Pedestrian	10%	10%	5%
Cycling	10%	10%	5%
Transit	No Reduction	No Reduction	No Reduction
Trips Less Than 2.5 Miles			
Pedestrian	No Reduction	No Reduction	No Reduction
Cycling	5%	5%	5%
5%Transit	2%	2%	2%
Trips Less Than 10 Miles			
Pedestrian	No Reduction	No Reduction	No Reduction
Cycling	2%	2%	No Reduction
Transit	2%	2%	2%

The resulting 2015 p.m. peak hour volumes under the TDM Land Use Alternative are shown in Figure 1. Figure 2 provides a comparison between the TDM Land Use Alternative and 2015 base case forecasts. As shown in the figure, the implementation of TDM and alternative land use strategies provides some relief to the transportation system. Specifically, a 15-20 percent decrease in traffic volumes along the Emigrant/Frazer and Court Dorion couplets is expected in the downtown as compared to the 2015 base case. Additionally, the traffic volumes on U.S. 395 in the vicinity of the Interstate 84 ramp termini decrease by approximately 15 percent. Subsequently, the levels of service at the Westgate/Court/Dorion, the Emigrant/SW 17th, the Hailey/Tutuilla Creek Road/U.S. 395, and the Court/SW 17th intersections are expected to improve as compared to the 2015 base case and the 2015 comprehensive plan alternative.

Two quantitative measures of effectiveness, vehicle miles traveled (VMT) and vehicle hours traveled (VHT), were evaluated in addition to the level of service to evaluate and compare the alternatives. A comparison of the per capita VMT and VHT for each of the alternatives is shown in Table 5.

Table 5

Comparison of Per Capita VHT and VMT

Alternative	Vehicle Miles Traveled (Per Person)	Vehicle Hours Traveled (Per Person)
Existing (1995)	1.41	0.04
2015 No Build Alternative	1.69	0.05
2015 Comprehensive Plan	1.67	0.05
2015 TDM Land Use Alternative	1.56	0.04

As shown in Table 5, there is a 20 percent increase in per capita VMT between the existing conditions and the future "No Build Alternative". With the implementation of TDM measures, per capita VMT decreases 8 percent from the future No Build Alternative. The construction of new roadways, without any TDM or alternative land use strategies, provides a minimal reduction in VMT from the "No Build" Alternative.

The implementation of TDM measures and alternative land use strategies also results in reductions in per capita VHT when compared to the "No Build Alternative". The per capita VHT for the TDM Land Use Alternative is approximately 20 percent less than the per capita VHT of the "No Build Alternative".

CAPECO (Carrie Legg) and Confederate Tribes of the Umatilla Indian Reservation Letters

Below are general responses to the comments Carrie Legg (CAPECO) and Naveen Chandra provided in their letters to Mike Hyde (City of Pendleton) in review of the Pendleton TSP.

Carrie Legg - CAPECO Comment Response

The Draft Pendleton TSP has been modified and expanded to included greater discussion and direction for the City of Pendleton with respect to future public transportation services. This includes a specific recommendations with step by step direction for the City to seek State, Federal and local funding support to provide general public transit services. For the most part, these plan changes address the various issues raised by Ms. Legg. With respect to street design standards, the recommended street designs in the Draft TSP are more than sufficient to accommodate fixed-route bus transit at such time if and when future transit services are provided.

Naveen Chandra, Confederate Tribes of the Umatilla Indian Reservation Comment Response (CTUIR)

The CTUIR are concerned that the Pendleton TSP did not fully address travel implications of travel demand between the Reservation and the City of Pendleton, particularly the Wildhorse Gaming Resort. The CTUIR is also concerned about safety improvements as the US 30/Highway 11 intersection. The following is our response:

1) We agree with the CTUIR that tourist traffic between the City and CTUIR is important to recognize. In general, the current state highway system should accommodate any reasonable travel generated by development within the CTUIR.

The Pendleton TSP is developed for the City UGB area specifically. The Pendleton travel model was calibrated for the UGB area based on 1994 travel conditions which includes specific traffic between the City and the Wildhorse Gaming Center (as a major employment center). Future travel demand between the City and CTUIR includes the specific level of current traffic (including the Gaming Center) plus an assumed, gradual growth between CTUIR and the City, but not specific traffic generated by any new and large development within the CTUIR (above and beyond the current Gaming Center).

Should such developments occur, the CTUIR should work with the City to identify the impacts that these developments have on traffic conditions within the Pendleton UGB and participate in any transportation improvements needed to mitigate unforseen and unacceptable safety or operation conditions.

2) The Pendleton TSP analysis identified deficient conditions at the US 30/Highway 11 intersection. The TSP calls for a future traffic signal installed at the intersection as a capacity improvement. The design and installation of this signal should provide safe travel conditions.