CITY OF JOSEPH

TRANSPORTATION SYSTEM PLAN

Prepared for:

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TABLE OF CONTENTS

Page

APPENDICES

LIST OF TABLES

LIST OF FIGURES

Follows Page

CHAPTER 1: INTRODUCTION

The Joseph Transportation System Plan (TSP) guides the management of existing transportation facilities and the design and implementation of future facilities for the next 20 years. This Transportation System Plan constitutes the transportation element of the city's Comprehensive Plan and satisfies the requirements of the Oregon Transportation Planning Rule established by the Department of Land Conservation and Development. It identifies and prioritizes transportation projects for inclusion in the Oregon Department of Transportation's (ODOT's) Statewide Transportation Improvement Program.

PLANNING AREA

The Joseph Transportation System Plan planning area includes the City of Joseph and the area within the city's Urban Growth Boundary (UGB). The planning area is shown on Figure 1-1. Roadways included in the Transportation System Plan fall under several jurisdictions: Joseph, Wallowa County, and the State of Oregon.

Joseph is the second largest city in Wallowa County, with a population of 1,054. Located in northeastern Oregon about five miles south of Enterprise at the foot of Wallowa Lake, it is a self-contained community and provides a variety of residential, shopping, employment, and recreational opportunities within its UGB and the surrounding countryside. The area is economically viable, supported by a combination of resource-based industries, agriculture, a growing tourist trade and a burgeoning art community.

Joseph, like many other smaller communities in Oregon, developed along the state highways serving the region. State Highway 82 (Wallowa Lake Highway) runs north-south through the center of town along Main Street. Little Sheep Creek Highway runs east-west through town along Wallowa Avenue. A street grid pattern has been maintained in Joseph as it has developed over the years. The Idaho Northern Pacific Rail Road has a terminus in the northwest part of town and Joseph State Airport is located just west of town.

The Comprehensive Plan land use map of the Joseph Transportation System Plan planning area is shown on Figure 1-2.

Blocks along Main Street, in the northern half of town, are zoned for commercial uses. There are also a few parcels along Wallowa Avenue zoned commercial. Land zoned for industrial uses is limited to the airport and the parcels along the railroad and Russell Lane. Most of the other grid-system blocks are zoned general residential. The remaining land, along the fringes of the city, is zoned select residential. Land outside the city limits, but inside the UGB, is not zoned.

PLANNING PROCESS

The Joseph Transportation System Plan was prepared as part of an overall effort in Wallowa County to prepare TSPs for Wallowa County and the four municipalities: Enterprise, Joseph, Lostine, and Wallowa. Each plan was developed through a series of technical analyses combined with systematic input and review by the city, the combined management team, Transportation Advisory Committee (TAC), ODOT, and the public. The TAC consisted of staff, elected and appointed officials, residents, and business people from Wallowa County, and the cities of Enterprise, Joseph, Lostine, and Wallowa. Key elements of the process include:

- Involving the Joseph community (Chapter 1)

- Defining goals and objectives (Chapter 2)
- Reviewing existing plans and transportation conditions (Chapters 3 and 4; Appendices A and B)
- Developing population, employment and travel forecasts (Chapter 5; Appendix C)
- Developing and evaluating potential transportation system improvements (Chapter 6; Appendix D)
- Developing the Transportation System Plan (Chapter 7)
- Developing a capital improvement program (Chapter 8)
- Developing recommended policies and ordinances (Chapter 9)

Community Involvement

Community involvement is an integral component in the development of a TSP for the City of Joseph, the other cities, and Wallowa County. Since each of the communities needed to address similar transportation and land use issues, a public involvement program involving all the jurisdictions was used. Several different techniques were utilized to involve each local jurisdiction, ODOT, and the general public.

A combined management team and transportation advisory committee (TAC) provided guidance on technical issues and direction regarding policy issues to the consultant team. Staff members from each local jurisdiction and ODOT and a local resident from each community served on this committee. This group met three times during the course of the project.

The second part of the community involvement effort involved the consultant team meeting individually with representatives of each jurisdiction. The purpose of these meetings was to collect information specific to each jurisdiction and to discuss the development of the individual cities and county TSPs. The consultant team met two times with representatives from each jurisdiction during the project.

The third part consisted of community meetings within Wallowa County. The first set of public meetings was held in early January 1997 in Joseph, Enterprise, and Wallowa. The general public was invited to learn about the TSP planning process and provide input on transportation issues and concerns. A second set of public meetings was held in Wallowa County in late April 1997. The final set of public meetings, which consisted of presentations to the management team and TAC, was held during the month of June 1997. The public was notified of the public meetings through public announcements in the local newspapers and on the local radio station.

Goals and Objectives

Based on input from the city, the management team/TAC, and the community, a set of goals and objectives were defined for the TSP. These goals and objectives were used to make decisions about various potential improvement projects. They are described in Chapter 2.

Review and Inventory of Existing Plans, Policies, and Public Facilities

To begin the planning process, all applicable Joseph and Wallowa County transportation and land use plans and policies were reviewed and an inventory of public facilities was conducted. The purpose of these efforts was to understand the history of transportation planning in the Joseph area, including the street system improvements planned and implemented in the past, and how the city is currently managing its ongoing development. Existing plans and policies are described in Appendix A of this report.

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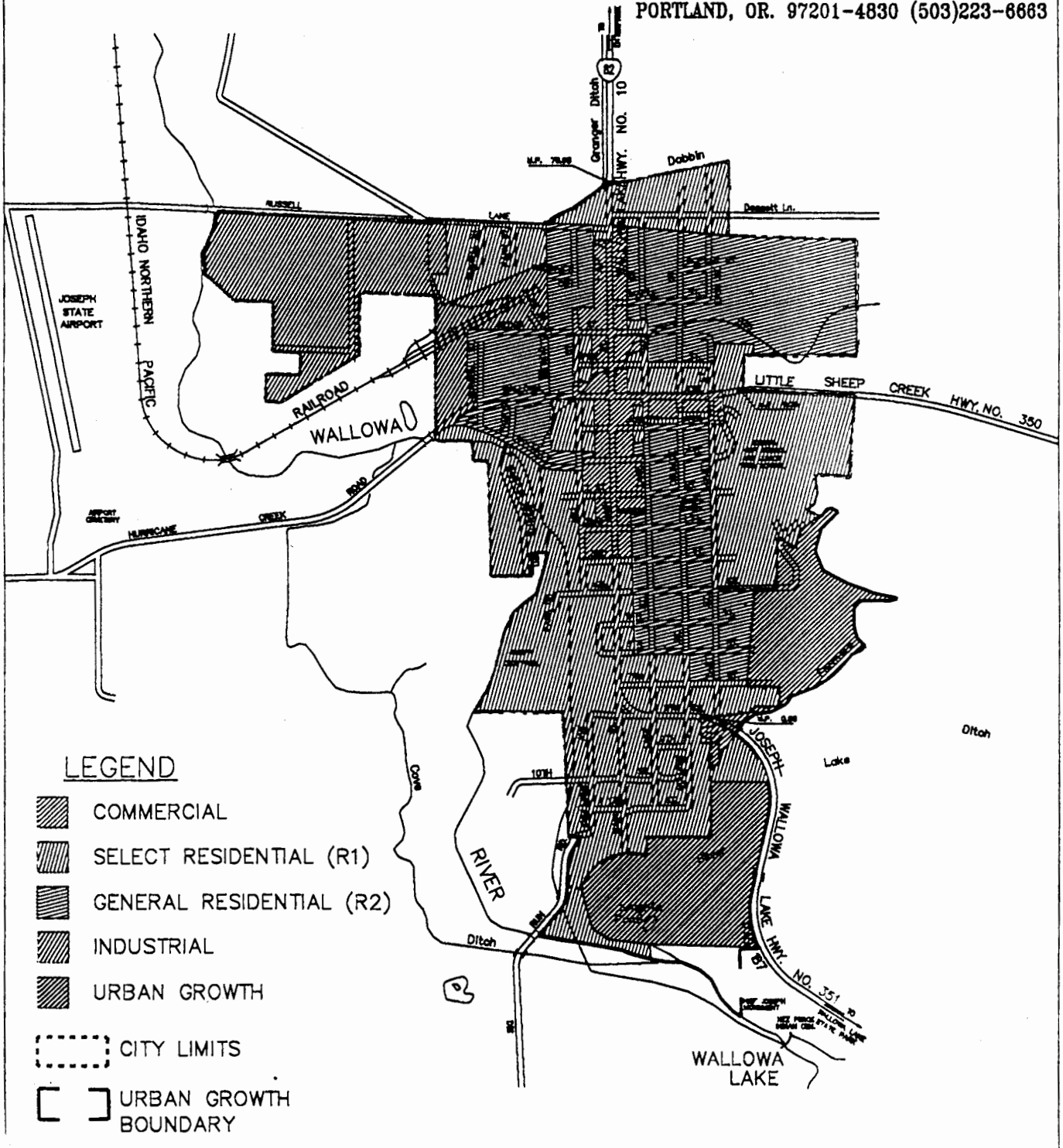

FIGURE 1-2
LAND USE/ZONING

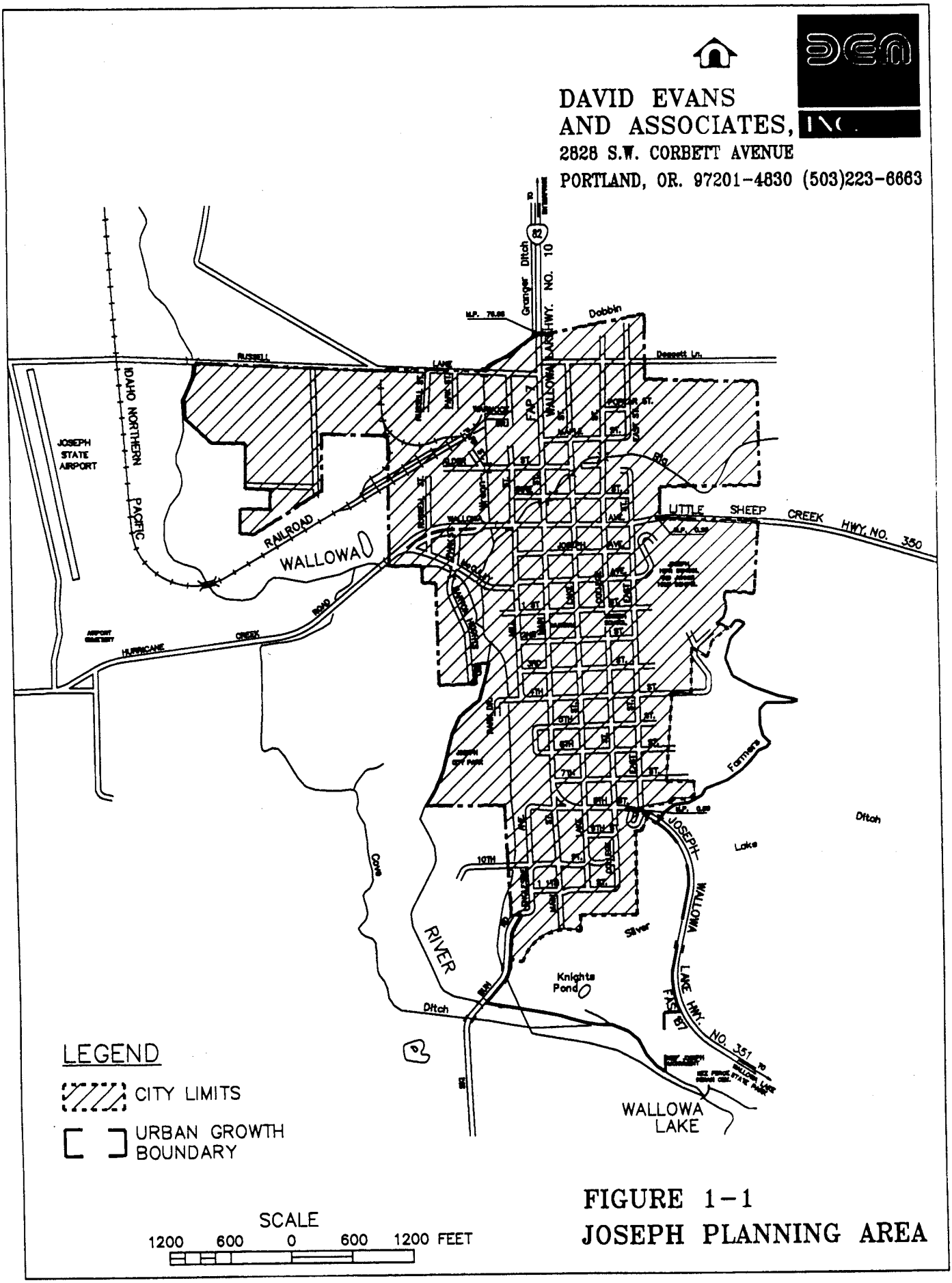

FIGURE 1-1
JOSEPH PLANNING AREA

The inventory of existing facilities catalogs the current transportation system. The results of the inventory are described in Chapter 3, while Chapter 4 describes how the system operates. Appendix B summarizes the inventory of the existing arterial and collector street system.

Future Transportation System Demands

The Transportation Planning Rule requires the Transportation System Plan to address a 20-year forecasting period. Future traffic volumes for the existing plus committed transportation systems were projected using ODOT's *Level 1 -- Trending Analysis* methodology. The overall travel demand forecasting process is described in Chapter 5.

Transportation System Potential Improvements

Once the travel forecasts were developed, it was possible to evaluate a series of potential transportation system improvements. The evaluation of the potential transportation improvements was based on a qualitative review of safety, environmental, socioeconomic, and land use impacts, as well as estimated cost. These improvements were developed with the help of the local working group, and they attempt to address the concerns specified in the goals and objectives (Chapter 2). After evaluating the results of the potential improvements analysis, a series of transportation system improvements were selected. These recommended improvements are described in Chapter 6.

Transportation System Plan

The Transportation System Plan addresses each mode of transportation and provides an overall implementation program. The street system plan was developed from the forecasting and potential improvements evaluation described above. The bicycle and pedestrian plans were developed based on current usage, land use patterns, and the requirements set forth by the Transportation Planning Rule. The public transportation, air, water, rail, and pipeline plans were developed based on discussions with the owners and operators of those facilities. Chapter 7 details the plan elements for each mode.

Funding Options

The City of Joseph will need to work with Wallowa County and ODOT to finance new transportation projects over the 20-year planning period. An overview of funding and financing options that might be available to the community are described in Chapter 8.

Recommended Policies and Ordinances

Comprehensive Plan policies and implementing zoning and subdivision ordinance amendments have been completed in concurrence with the TSP update. These policies and ordinances are intended to support the TSP and satisfy the requirements of the TPR as described in Chapter 9.

CHAPTER 2: GOALS AND OBJECTIVES

The purpose of the Transportation System Plan is to provide a guide for the City of Joseph to meet its transportation goals and objectives. The following goals and objectives were developed from concerns expressed during public meetings. An overall goal was drawn, along with more specific goals and objectives. Throughout the planning process, each element of the plan was evaluated against these parameters.

OVERALL TRANSPORTATION GOAL

To provide and encourage a safe, convenient and economic transportation system.

Goal 1

Preserve the function, capacity, level of service, and safety of the state highways.

Objectives

A. Develop access management standards.

B. Develop alternative, parallel routes.

C. Promote alternative modes of transportation.

D. Promote transportation demand management programs.

E. Promote transportation system management.

F. Develop procedures to minimize impacts to and protect transportation facilities, corridors, or sites during the development review process.

Goal 2

Ensure that the road system within the city and urban area is adequate to meet public needs, including those of the transportation disadvantaged.

Objectives

A. Develop a city transportation plan.

B. Meet identified maintenance level of service standards on the county and state highway systems.

C. Review and revise, if necessary, street cross section standards for local, collector, and arterial streets to enhance safety and mobility.

D. Develop access management strategies for Highway 82.

E. Evaluate the need for traffic control devices, particularly along Highway 82.

F. Analyze the safety of the transportation system, particularly along Highway 82.

Goal 3

Improve coordination among Wallowa County, the Oregon Department of Transportation (ODOT), the US Forest Service (USFS), the Federal Highway Administration (FHWA), and the city.

Objectives

A. Cooperate with ODOT in the implementation of the Statewide Transportation Improvement Program (STIP).

B. Work with the county in establishing cooperative road improvement programs and schedules.

C. Work with the county in establishing the right-of-way needed for new roads identified in the transportation system plan.

D. Take advantage of federal and state highway funding programs.

Goal 4

Increase the use of alternative modes of transportation (walking, bicycling, and public transportation) through improved access, safety, and service.

Objectives

A. Continue and improve existing service and seek new public transportation including that targeted for seniors.

B. Provide sidewalks or shoulders and safe crossings on collectors and arterials.

C. Explore options for a city bicycle plan.

D. Seek Transportation and Growth Management (TGM) and other funding for projects evaluating and improving the environment for alternative modes of transportation.

Goal 5

Support efforts to maintain the airport facilities for small aircraft and charter services.

Objectives

A. Encourage improvements and maintenance of airport facilities.

B. Cooperate with airport master planning efforts.

C. Incorporate airport master plans into local Comprehensive Plan.

Goal 6

Encourage the continued and improved rail transportation of goods.

Objectives

A. Maintain operational status of the Idaho Northern Pacific rail line.

B. Maintain railway corridor for potential future transportation or utility use.

CHAPTER 3: TRANSPORTATION SYSTEM INVENTORY

As part of the planning process, David Evans and Associates, Inc., conducted an inventory of the existing transportation system in Joseph. This inventory covered the street system as well as the pedestrian, bikeway, public transportation, rail, air, water, and pipeline systems.

STREET SYSTEM

The most common understanding of transportation is of roadways carrying cars and trucks. Most transportation dollars are devoted to building, maintaining, or planning roads to carry automobiles and trucks. The mobility provided by the personal automobile has resulted in a great reliance on this form of transportation. Likewise, the ability of trucks to carry freight to nearly any destination has greatly increased their use.

Encouraging the use of cars and trucks must be balanced against costs, livability factors, the ability to accommodate other modes of transportation, and negative impacts on adjacent land uses; however, the basis of transportation in nearly all American cities is the roadway system. This trend is clearly seen in the existing Joseph transportation system, which consists almost entirely of roadway facilities for cars and trucks. Because of the rural nature of the area, the street system will most likely continue to be the basis of the transportation system for at least the 20-year planning period; therefore, the emphasis of this plan is on improving the existing street system for all users.

The existing street system inventory was conducted for all highways, arterial roadways, and collector roadways within Joseph, as well as those in Wallowa County that are included in the Transportation System Plan planning area. Inventory elements include:

- street classification and jurisdiction;
- street width and right-of-way;
- number of travel lanes;
- presence of on-street parking, sidewalks, or bikeways;
- speed limits; and
- general pavement conditions.

Figure 3-1 shows the roadway functional classification and jurisdiction. Appendix B lists the complete inventory.

State Highways

Discussion of the Joseph street system must include the state highways that traverse the planning area. Although Joseph has no direct control over the state highways, adjacent development and local traffic patterns are heavily influenced by the highways. Joseph is served by three state highways, Highway 82, 350, and 351. Highways 82 and 351 serve as the major route through town with commercial and industrial development focused along their corridor.

The 1999 *Oregon Highway Plan* (OHP) classifies the state highway system into five categories: Interstate, Statewide, Regional, District, and Local Interest. ODOT has established primary and secondary functions for each type of highway and objectives for managing the operations for each one.

Joseph has two highways of statewide significance (Highways 82 and 351) and one highway of district significance (Highway 350). According to the OHP, statewide highways "provide connections to larger urban areas, ports, and major recreation areas that are not directly served by interstate highways." The management objective for statewide highways is to provide for safe and efficient high-speed continuous-flow operation. In constrained and urban areas, interruptions to flow should be minimal." The primary function of a district highway is to "serve local traffic and land access." For highways of district significance, emphasis is placed on preserving safe and efficient higher speed through travel in rural areas, and moderate- to low-speed operations in urban or urbanizing areas with a moderate to high level of interruptions to traffic flow. This means that design factors such as controlling access and providing passing lanes are of primary importance.

Highway 82

Highway 82 (Wallowa Lake Highway) is a highway of statewide significance, which connects Joseph with the City of Enterprise and to Interstate 84 to the northwest.

Highway 82 extends north-south through the center of town along Main Street. Main Street is a two-lane roadway with on-street parking in the center of town and is part of the city's grid system. Outside of the urbanized area, Highway 82 is a two-lane roadway with a speed limit of 55 mph.

In 1995, ODOT, in cooperation with the City of Joseph and other local jurisdictions along Highway 82 initiated the development of a long-range plan for managing, operating and improving transportation between La Grande and Wallowa Lake over the next 20 years. An interim Corridor Strategy endorsed by the Oregon Transportation Commission and each jurisdiction along the corridor guided the development of the plan. The Interim Corridor Strategy set forth an overall corridor strategy and objectives that emphasizes managing the highway facilities that currently exist without substantial increases in capacity or construction of new facilities. In 1999, the Oregon Transportation Commission adopted the La Grande to Wallowa Lake (Oregon Highway 82) Corridor Plan. The Corridor Plan identifies and prioritizes improvements of transportation facilities and services that will serve as the basis for updating the Statewide Transportation Improvement Program (STIP). The plan also has been closely coordinated with the development of this Transportation System Plan and policies and standards established in the Oregon Transportation Plan, as well as, other modal plans, such as the 1999 Oregon Highway Plan.

Highway 351 (Joseph-Wallowa Lake Highway) is a highway of statewide significance, which begins in Joseph and provides the only access to the commercial and residential areas at the south end of Wallowa Lake, as well as Wallowa Lake State Park.

Highway 351 continues south from the junction of Highway 82 and Highway 350 in Joseph to Wallowa Lake. Highway 351 is a two-lane roadway with a speed limit of 55 mph.

Highway 350

Highway 350 (Little Sheep Creek Highway) is a highway of district significance. To the northeast, Highway 350 extends to the unincorporated community of Imnaha and terminates at the boundary of the Hells Canyon National Recreation Area. Highway 350 also provides connections to Halfway in Baker County.

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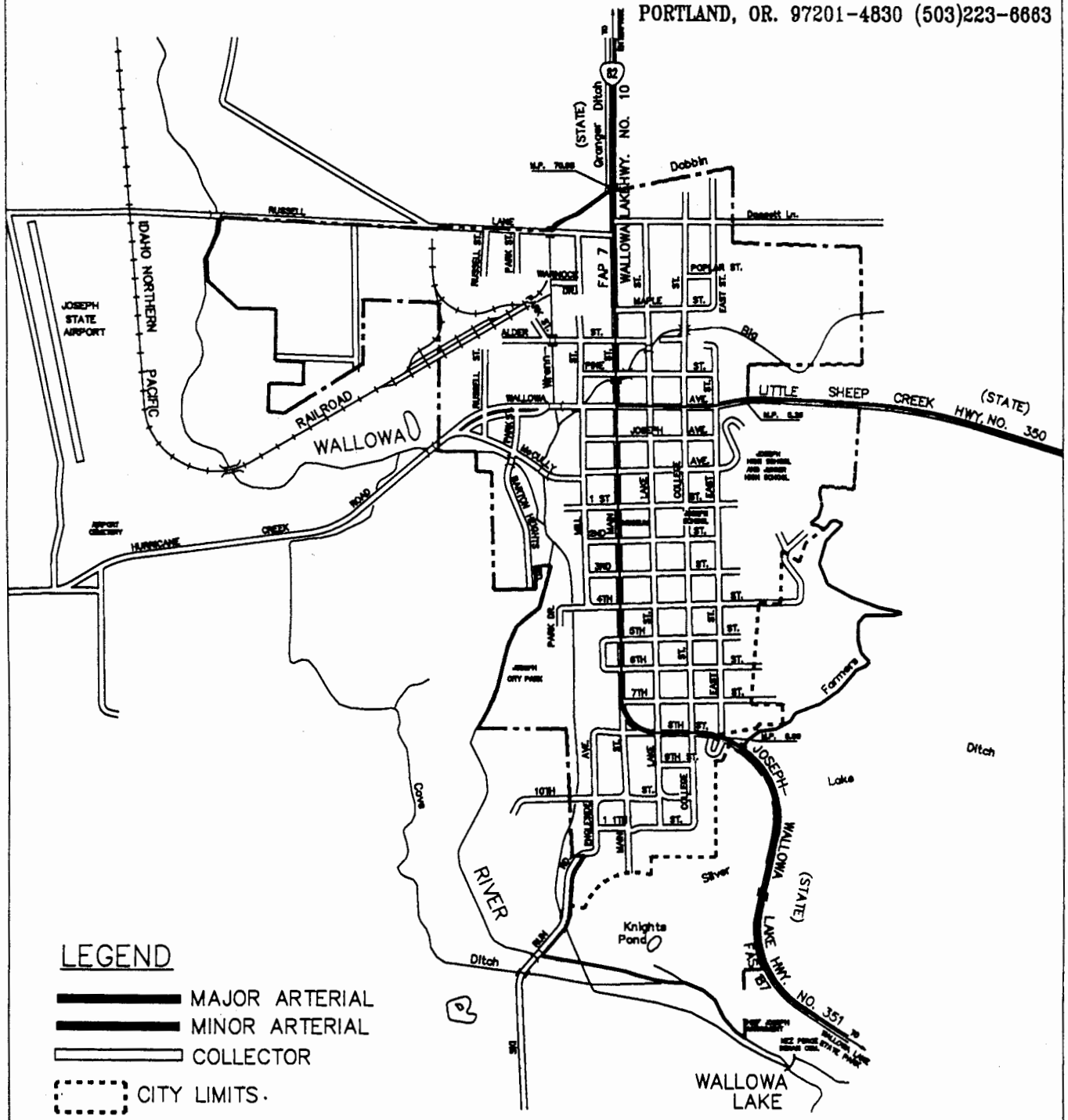

FIGURE 3-1

STREET CLASSIFICATION AND JURISDICTION

Street Classification

Joseph has classified their street system into three levels: major arterials, minor arterials, and collector streets. The classification system includes city, county, and state roadways.

Major Arterials

Major arterials form the primary roadway network within and through a region. They provide a continuous road system which distributes traffic between neighborhoods and districts. Generally, major arterials are high capacity roadways which carry high traffic volumes with minimal localized activity.

In Joseph, the major arterial network consists of Highways 82 and 351 (Main Street and 8th Street). These roadways, as described previously serve as the focus for most of the commercial development in the city.

Minor Arterials

Minor arterials connect local neighborhoods or districts to the arterial network. Joseph has one designated minor arterial, Little Sheep Creek Highway 350 (Wallowa Avenue).

Collector Streets

Collector streets form the majority of the street system in Joseph. They are designed to carry the very low traffic volumes associated with the local uses which abut them. In Joseph, the collector streets help form part of the grid system; however, they are not intended to function as alternate routes to the arterial street system.

Street Layout

The majority of the Joseph streets are positioned in a grid pattern. Block sizes vary but are typically 400 feet square. The grid system loses its rigidity on the fringes of the urbanized area.

Bridges

The Oregon Department of Transportation maintains an up to date inventory and appraisal of Oregon bridges. Part of this inventory involves the evaluation of three mutually exclusive elements of bridges. One element identifies which bridges are structurally deficient. This is determined based on the condition rating for the deck, superstructure, substructure, or culvert and retaining walls. It may also be based on the appraisal rating of the structural condition or waterway adequacy. Another element identifies which bridges are functionally obsolete. This element is determined based on the appraisal rating for the deck geometry, underclearances, approach roadway alignment, structural condition, or waterway adequacy. The third element summarizes the sufficiency ratings for all bridges. The sufficiency rating is a complex formula which takes into account four separate factors to obtain a numeric value rating the ability of a bridge to service demand. The scale ranges from 0 to 100 with higher ratings indicating optimal conditions and lower ratings indicating insufficiency. Bridges with ratings under 55 may be nearing a structurally deficient condition.

There are a total of six bridges located within the Joseph City Limits. Four of these bridges are owned and maintained by the City of Joseph. -The six bridges include:

- Alder Street Bridge, over Wrenn Dobbin Ditch just east of Park Street.
- Lake Street Bridge, over Big Bend Ditch just south of Alder Street. The East Pine Street Bridge is a wood structure that was closed to motor vehicles in 1995. It has since been converted into a pedestrian bridge.
- College Street Bridge, over Big Bend Ditch just north of Alder Street.
- West McCully Ave. Bridge, over Wrenn Dobbin Ditch. This bridge was completely replaced in 1998.
- Wallowa Avenue Bridge, over Wrenn Dobbin Ditch between Park and Mill Streets. This bridge is under Wallowa County jurisdiction.
- Barton Heights Road Bridge, over Wrenn Dobbin Ditch south of McCully Avenue. This is a single lane bridge that is under Wallowa County jurisdiction.

PEDESTRIAN SYSTEM

The most basic transportation option is walking. Walking is the most popular form of exercise in the United States and can be performed by people of all ages and all income levels. However, it is not often considered as a means of travel. Because pedestrian facilities are generally an afterthought, they are not planned as an essential component of the transportation system.

The relatively small size of Joseph indicates that walking could be employed regularly, weather permitting, to reach a variety of destinations. Encouraging pedestrian activities may not only decrease the use of the personal automobile but may also provide benefits for retail businesses. Where people find it safe, convenient, and pleasant to walk, they may linger and take notice of shops overlooked before. They may also feel inclined to return to renew the pleasant experience time and again.

Sidewalks exist along eight blocks of Main Street on both sides of the street between 3rd and Maple Streets, on the west side of Main Street between Maple Street and Russell Lane, on 1st Street , McCully Avenue, and on Joseph and on one side of Wallowa Avenue and Lake Street between Main Street and Lake Street as shown in Figure 3-2. Sidewalks and other pedestrian facilities, including curb cuts for wheelchair access are notably lacking throughout the rest of the city.

The existing sidewalks along Main Street include sidewalk construction and reconstruction that was completed in 1999 as part of a $1,533,000 ODOT project on Highway 82 in the City of Joseph. This project included resurfacing, drainage improvements, sidewalk construction, relocating utilities underground, and curb extensions.

BIKEWAY SYSTEM

Like pedestrians, bicyclists are often overlooked when considering transportation facilities. Bicycles are often considered merely as children's toys. However, cycling is a very efficient mode of travel. Bicycles take up

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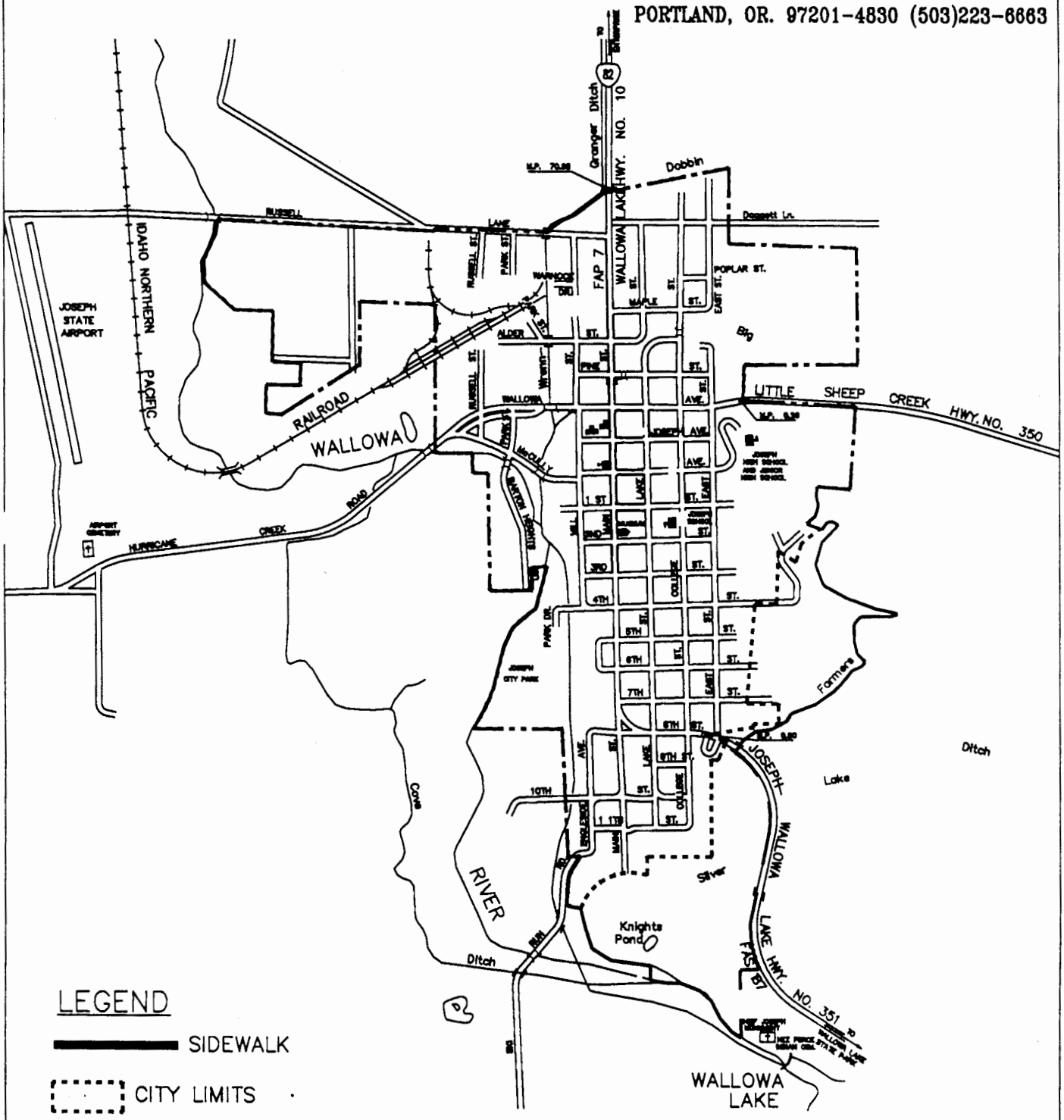

LEGEND

- SIDEWALK
- CITY LIMITS
- URBAN GROWTH BOUNDARY

SCALE
1200 600 0 600 1200 FEET

FIGURE 3-2

PEDESTRIAN SYSTEM INVENTORY

little space on the road or parked, do not contribute to air or noise pollution, and offer relatively higher speeds than walking. Because of the small size of Joseph, a cyclist can travel to any destination in town within a matter of minutes.

Bicycling should be encouraged to reduce the use of automobiles for short trips in order to reduce some of the negative aspects of urban growth. Noise, air pollution, and traffic congestion could be mitigated if more short trips were taken by bicycle or on foot. Typically, a short trip that would be taken by bicycle is around two miles; on foot, the distance commonly walked is around 1/2 mile.

Joseph currently has no sanctioned bikeways; bicyclists must share the roadways with motorized vehicles. On low volume roadways, such as many of the local streets, bicyclists and autos can both safely and easily use the roadway. On higher volume roadways, particularly the arterial streets, safety for the bicyclists is an important issue.

Bicycle racks were installed on Main Street as an element of the City of Joseph Downtown Beautification Project.

The City of Joseph prepared a draft bikeway master plan through an earlier TGM grant. The plan sets forth goals and objectives for the county which include providing safe and efficient bicycle access, reducing conflicts between bicyclists and motorized vehicle traffic, developing a system dedicated to bicycles, providing opportunities for recreational bicycle use, supplying information to the public about the location of bicycle facilities, and promoting citizen involvement through the development of a citizen bicycle committee and holding meetings in an open forum. The plan lists desirable projects and prioritizes them based on financial aspects, current use, and safety considerations. The projects listed (in priority order) are on Wallowa Avenue, Main Street/8th Street (Highway 82), First Street, McCully Avenue, Engleside Avenue/S. Main Street/Tenth Street, and College Street

PUBLIC TRANSPORTATION

Public transportation in Joseph consists of the Wallowa Valley Stage Line and service for senior citizens and persons with disabilities.

The Wallowa Valley Stage Line is operated by the Moffit Brothers and is based in Lostine. It provides van service which transports passengers to Enterprise, Lostine, Wallowa, and several cities in Union County, including La Grande. In La Grande, passengers can connect to Greyhound bus service. In addition to transporting passengers, the line also transports packages. It provides regularly scheduled service, with a westbound trip departing from Joseph at 6:30 a.m. and an eastbound trip departing from La Grande at 11:55 a.m. daily, except Sundays and holidays.

Dial-A-Ride service for senior citizens and those with disabilities is provided by Community Connections. It operates two 12-passenger, lift-equipped buses, one based in Enterprise and one based in Wallowa. The buses make one trip per day between Enterprise and Joseph and between Wallowa and Lostine. On Mondays, Wednesdays, and Fridays, the buses transport senior citizens and persons with disabilities to meal sites in Enterprise and Wallowa. On Tuesdays and Thursdays, the general public can use the service as well. On Tuesdays, the bus based in Wallowa goes to Enterprise. The operator estimates that the service is currently underutilized.

Another type of public transportation service available in the county is client transportation, which is provided by a social service or health care agency to individuals participating in the agency's service program. This type

of public transportation is offered by the Wallowa County Health Care District and the Wallowa County Nursing Home. A volunteer-driver program is also administered in Wallowa County by each of these social service and health care agencies as well as the Department of Human Resources Volunteer Program. A volunteer-driver program is a community based program to provide drivers to transport specific client groups.

The city has no local fixed-route transit service at this time. The small size and low traffic volumes on city streets indicate that mass transit is not necessary nor economically feasible at this time. The Transportation Planning Rule exempts cities with a population of less than 25,000 from including mass transit facilities in their development regulations.

RAIL SERVICE

Joseph has no passenger rail service.

The Idaho Northern Pacific Railroad (INP) owns an abandoned freight line which runs through the southern part of town. The rails and bridges are in variable condition. Discussions among INP, ODOT, local jurisdictions, and shippers concerning the future of the rail line and right-of-way are on-going.

AIR SERVICE

Joseph is serviced by the Joseph State Airport, which is under the jurisdiction of the Oregon Department of Aviation (formerly the Oregon Department of Transportation, Aeronautics Section).

The airport is located conveniently one mile from downtown Joseph and has one runway. In 1996, the Aeronautics Section replaced the runway surface on the existing runway and extended the runway from 3800 feet to 5500 feet. This project improved the condition and safety of this airport. The airport is now able to accommodate the majority of business class aircraft. Aircraft operations have grown from 1,100 take-offs and landings in 1989 to an estimated 1,980 operations in 1993. With the runway extension that was completed in 1996, the number of operations has increased to 2,927. Currently, there is no attendant or aviation fuel at the airport.

The Joseph State Airport is an integral part of the State's Airport System, as it provides better access to an area of the state that is somewhat remote. The airport provides a multitude of services including recreational transportation, search and rescue, medical transport, and fire fighting as well as some types of commerce transport.

The airport currently provides no commercial air service. The closest airport with regularly scheduled commercial air service is located in Lewiston, approximately 85 miles to the north. Scheduled air service and daily non-stop flights are available to Portland and from there to other locations in the western United States.

The Joseph State Airport is located outside of the City's Urban Growth Boundary. The airport is currently zoned Industrial (M-1) with Exclusive Farm Use (EFU) land north and south and Rural Residential (RR-1) with 5 acre lots to the west of the airport. Land east of the airport is within the City of Enterprise Watershed and is unlikely to be developed. A complete assessment of potential land use development impacts to the airport is included in the current Joseph State Airport Master Plan.

Ground access to the airport is provided from Highway 82 in downtown Joseph on Airport Lane which is a two-lane facility. Ground transportation for itinerant aircraft passengers is typically prearranged.

Because the Joseph State Airport is governed by the Oregon Department of Aviation, recommendations for its improvement fall into the scope of this Transportation System Plan. The airport is an essential part of the economy of the area. It is necessary to include the airport when considering future development proposals for the surrounding land. In many localities, uses have been allowed around airports that are not compatible with airport operations.

PIPELINE SERVICE

Although not often considered as transportation facilities, pipelines carry liquids and gases very efficiently. The use of pipelines can greatly reduce the number of trucks and rail cars carrying fluids such as natural gas, oil, and gasoline. There are currently no pipelines serving Joseph. There has been interest expressed in the communities of Wallowa County to extend natural gas service from Elgin.

WATER TRANSPORTATION

Joseph has no waterborne transportation services.

CHAPTER 4: CURRENT TRANSPORTATION CONDITIONS

As part of the planning process, the current operating conditions for the transportation system were evaluated. This evaluation focused primarily on street system operating conditions since the automobile is by far the dominant mode of transportation in Joseph. Census data were examined to determine travel mode distributions.

TRAFFIC VOLUMES

ODOT maintains historic average annual daily traffic volume counts for Highways 82, 351 and 350 in Joseph. No hourly traffic data or turning movement data are available for these state highways or any other local roadway in Joseph.

Average Daily Traffic

The Average Daily Traffic (ADT) on Highway 82 in Joseph is shown in Figure 4-1. The traffic volume on Highway 82 (Main Street) north of Little Sheep Creek Highway in the center of town was 4,600 vehicles per day (vpd) in 1998 and north of town, the average daily traffic volume was 4,100 vpd. South of Little Sheep Creek Highway, Main Street becomes Highway 351 and average daily traffic volumes are 3,500 vpd. Further south, traffic volumes drop to 2,400 vpd; however, they have been growing at a rate of approximately six percent per year over the past several years. With exception of this segment, the state highway segments within and near Joseph have experience slight decline or minimal growth in traffic volumes over the past few years.

The traffic volumes shown on Figure 4-1 and other volume figures are average volumes for the year. Summer is the season when volumes are highest. ODOT data on Highway 82 west of Wallowa County indicated that during the summer season, volumes are about 20 to 30 percent higher than average volumes. Urban sections of the highway (i.e., in Joseph) are expected to see smaller increases in summer.

Street Capacity

Transportation engineers have established various standards for measuring traffic capacity of roadways or intersections. Each standard is associated with a particular level of service (LOS). The LOS concept requires consideration of factors that include travel speed, delay, frequency of interruptions in traffic flow, relative freedom for traffic maneuvers, driving comfort and convenience, and operating cost. In the 1991 OHP, levels of service were defined by a letter grade from A-F, with each grade representing a range of volume to capacity (v/c) ratios. A volume to capacity ratio (v/c) is the peak hour traffic volume on a highway divided by the maximum volume that a highway can handle. If traffic volume entering a highway section exceeds the section's capacity then disruptions in traffic flow will occur, reducing the level of service. -LOS A represents relatively free-flowing traffic and LOS F represents conditions where the street system is totally saturated with traffic and movement is very difficult. The 1999 OHP maintains a similar concept for measuring highway performance, but represents LOS by specific v/c to improve clarity and ease of implementation. Table 4-1 presents the level of service criteria and associated range of v/c ratio for arterial roadways.

TABLE 4-1
Level of Service Criteria for Arterial and Collector Streets

Service Level[1] (v/c Ratio)[2]	Typical Traffic Flow Conditions
A (0.00-0.48)	Relatively free flow of traffic with some stops at signalized or stop sign controlled intersections. Average speeds would be at least 30 miles per hour.
B (0.49-0.59)	Stable traffic flow with slight delays at signalized or stop sign controlled intersections. Average speed would vary between 25 and 30 miles per hour.
C (0.60-0.69) C-D (0.70-0.73)	Stable traffic flow with delays at signalized or stop sign controlled intersections. Delays are greater than at level B but still acceptable to the motorist. The average speeds would vary between 20 and 25 miles per hour.
D (0.74-0.83) D-E (0.84-0.87)	Traffic flow would approach unstable operating conditions. Delays at signalized or stop sign controlled intersections would be tolerable and could include waiting through several signal cycles for some motorists. The average speed would vary between 15 and 20 miles per hour.
E (0.84-0.97) E-F (0.98-0.99)	Traffic flow would be unstable with congestion and intolerable delays to motorists. The average speed would be approximately 10 to 15 miles per hour.
F (>1.00)	Traffic flow would be forced and jammed with stop and go operating conditions and intolerable delays. The average speed would be less than 10 miles per hour.

Source: (1) Transportation Research Board, *Highway Capacity Manual*, Special Report 209. National Research Council, 1985.
(2) ODOT, *SIGCAP Users Manual*. ODOT, 1994.

The 1999 *Oregon Highway Plan* (OHP) establishes mobility standards for the state highway system. Highways of statewide importance, such as Highway 82, should operate at a maximum volume to capacity ratio of 0.80 where the speed limit is less than 45 mph inside the urban growth boundary. For highways of district importance, such as Highway 350, the roadways should operate at a volume to capacity ratio of 0.85 where the speed limit is less than 45 mph.

The traffic operation was determined at representative intersections along Highways 82, 350, and 351 using the 1994 Highway Capacity Software for unsignalized intersections. This software is based on the 1994 Highway Capacity Manual, Special Report 209, published by the Transportation Research Board. Since all intersecting streets and driveways are controlled by stop signs in the city, the analysis was performed for an unsignalized intersection. The peak hour traffic was assumed to be 10 percent of the 24-hour ADT volume and the directional split was assumed to be 60/40. Because side street traffic volumes were unavailable, an assumed volume of 30 vph was used and unsignalized intersection level-of-service calculations were made for each representative intersection. The results of the level-of-service analysis and associated range of v/c ratio are shown in Table 4-2.

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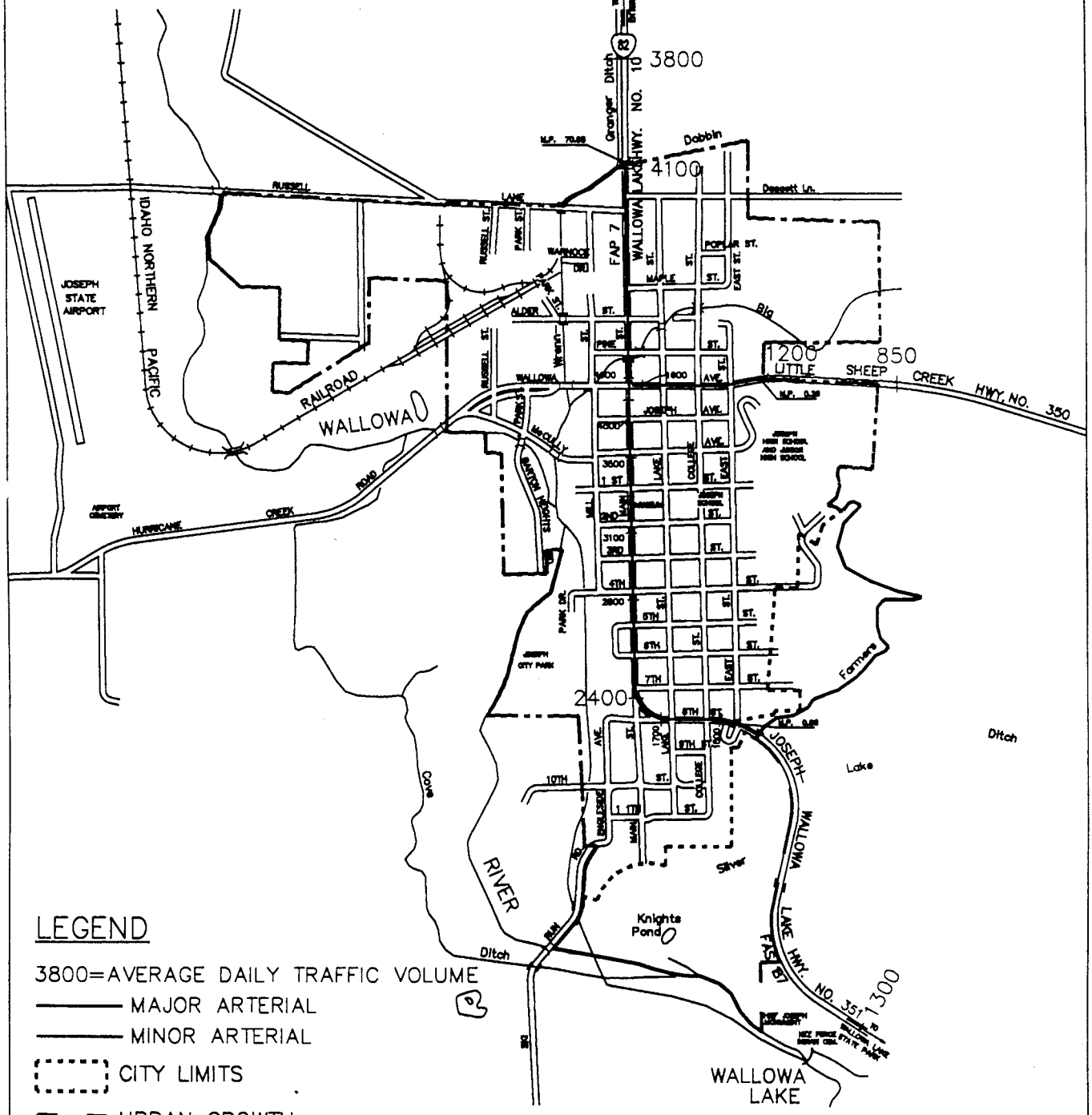

FIGURE 4-1

1998 WEEKDAY 24-HOUR
TWO-WAY TRAFFIC VOLUMES

TABLE 4-2
SUMMARY OF OPERATIONS AT REPRESENTATIVE INTERSECTIONS

Location	Movement	1995 LOS (v/c)
Highway 82	Eastbound; Left, Through, Right	B (0.49-0.59)
	Westbound; Left, Through, Right	B (0.49-0.59)
	Northbound; Left	A (<0.48)
	Southbound; Left	A (<0.48)
Highway 350	Eastbound; Left, Through, Right	A (<0.48)
	Westbound; Left, Through, Right	A (<0.48)
	Northbound; Left	A (<0.48)
	Southbound; Left	A (<0.48)
Highway 351	Eastbound; Left, Through, Right	B (0.49-0.59)
	Westbound; Left, Through, Right	B (0.49-0.59)
	Northbound; Left	A (<0.48)
	Southbound; Left	A (<0.48)

Note: The level of service is shown for all movements of the unsignalized intersections.

In general, traffic volumes in Joseph are very light and traffic flows smoothly. Traffic on the state highways and the representative cross streets operates at LOS B or better, which correlates to maximum volume to capacity ratio of 0.59.

TRANSPORTATION DEMAND MANAGEMENT MEASURES

In addition to inventorying the transportation facilities in Joseph, transportation demand management measures that are currently in place were also reviewed.

Alternative Work Schedules

One way to maximize the use of the existing transportation system is to spread peak traffic demand over several hours instead of a single hour. Statistics from the 1990 Census show the spread of departure to work times over a 24-hour period (see Table 4-3). Joseph does not have a clearly defined peak hour for departure for work trips. One fifth of the total employees depart for work within each of the three hours between 6:00 and 9:00 a.m. The remaining two fifths of the total journey to work trips occur over the other 21 hours of the day.

TABLE 4-3
DEPARTURE TO WORK DISTRIBUTION

Departure Time	1990 Census	
	Trips	Percent
12:00 a.m. to 4:59 a.m.	19	4.5
5:00 a.m. to 5:59 a.m.	65	15.6
6:00 a.m. to 6:59 a.m.	77	18.5
7:00 a.m. to 7:59 a.m.	85	20.4
8:00 a.m. to 8:59 a.m.	87	20.9
9:00 a.m. to 9:59 a.m.	16	3.8
10:00 a.m. .to 10:59 a.m.	9	2.2
11:00 a.m. to 11:59 a.m.	8	1.9
12:00 p.m. to 3:59 p.m.	30	7.2
4:00 p.m. to 11:59 p.m.	21	5.0
Total	**417**	**100.0**

Source: US Bureau of Census.

Assuming an average nine-hour work day, the corresponding afternoon peak can be determined for work trips. Using this methodology, the peak work travel hour would occur between 3:00 and 6:00 p.m.

TRAVEL MODE DISTRIBUTION

Although the automobile is the primary mode of travel for most residents in the Joseph area, some other modes are used as well. Modal split data is not available for all types of trips; however, the 1990 census data does include statistics for journey to work trips as shown in Table 4-4.

Most Joseph residents travel to work via a private vehicle. In 1990, 81.5 percent of all trips to work were in an auto, van, or truck. Trips in single-occupancy vehicles made up 72.8 percent of all trips, and carpooling accounted for 8.7 percent.

Bicycle usage was lower than many other communities (approximately 0.7 percent) in 1990. Since the census data do not include trips to school or other non-work activities, overall bicycle usage may be even greater. There are few roadways with dedicated bicycle lanes. In addition to bicycle lanes, bicycle parking, showers, and locker facilities can help to encourage bicycle commuting.

Pedestrian activity was high (9.8 percent of trips to work) due to the fact that in a small city the size of Joseph (less than one square mile) most of the city is within a few minutes walk of the city center. Again, census data do not include trips to school or other non-work activities. The high volume of tourists each year contribute even more pedestrian trips.

Although the census data reflects the predominant use of the automobile, the growing population and employment opportunities, relatively short travel distances, level terrain, and clear weather conditions

during the warmer seasons are favorable for other modes of transportation. The statewide emphasis on providing pedestrian and bicycle facilities along with roadways encourages the use of these modes.

TABLE 4-4
JOURNEY TO WORK TRIPS

Trip Type	1990 Census	
	Trips	Percent
Private Vehicle	365	81.5
Drove Alone	*326*	*89.3*
Carpooled	*39*	*10.7*
Public Transportation	0	0
Motorcycle	0	0
Bicycle	3	0.7
Walk	44	9.8
Other	5	1.1
Work at Home	31	6.9
Total	**448**	**100.0**

Source: US Bureau of Census.

ACCIDENT ANALYSIS

ODOT collects detailed accident information on an annual basis along Highways 82, 350 and 351 in Joseph. The accident information data show overall accident rates for the routes and accident locations. The accident rate for a stretch of roadway is typically calculated as the number of accidents per million vehicle miles traveled along that segment of roadway.

Historic

Table 4-5 shows the accident rates for Highways 82, 350 and 351 in Joseph as well as the Oregon statewide average for urban non-freeway primary state highways from January 1, 1996 to December 31, 1998. The accident rates for Highway 82 for the years where data are available are lower than the statewide average for similar highways. No data are available for Highway 350. The accident rates for Highway 351 for the years where data are available are also lower than the statewide average.

TABLE 4-5
HISTORIC ACCIDENT RATES FOR STATE HIGHWAYS
(Accidents per Million Vehicle Miles Traveled)

Highway	1998	1997	1996
Highway 82 in Joseph	4.15	N/A	1.39
Highway 350 in Joseph	N/A	N/A	N/A
Highway 351 in Joseph	1.12	N/A	N/A
Average for all Urban Non-freeway Primary State Highways	3.83	3.67	3.63

Source: Oregon Department of Transportation Accident Rate Tables.

Table 4-6 contains detailed accident information on Highways 82, 350 and 351 in Joseph from January 1, 1996 to December 31, 1998. It shows the number of fatalities and injuries, property damage only accidents, the total number of accidents, and the overall accident frequencies and rates for the segments of these roadways in Joseph. During the six-year period there was a total of fifteen accidents, ten of which were reported as resulting in property damage only. There were no fatalities and nine injuries on these roadway segments during the period. Four of the accidents occurred at intersections and four occurred on icy pavement. The accidents were scattered along the roadway segments and there were no particular locations that showed a consistent accident pattern. The accident rate on Highway 82 is significantly below the statewide average, indicating that this roadway segment does not have any safety problems. The accident rates on Highways 351 and 350 were also lower than the statewide average.

TABLE 4-6
ACCIDENT SUMMARIES FOR HIGHWAYS 82, 350 AND 351
(January 1, 1996 To December 31, 1998)

Location	Fatalities	Injuries	Property Damage Only	Total Accidents	Accident Frequency (acc/mi/yr)	Accident Rate (acc/mvm)
Highway 350 (MP 0.00 to 0.25)	0	5	0	2	2.62	4.06
Highway 351 (MP 0.00 to 0.79)	0	0	5	6	0.42	0.40

Source: Oregon Department of Transportation Accident Summary Database Investigative Report.

CHAPTER 5: TRAVEL FORECASTS

The traffic volume forecasts for Wallowa County and its municipalities are based on historic growth on the state highway system, historic population growth, and projected population growth. Forecasts were only prepared for the state highway system in the county, since the volumes on these roadways are much higher than on any of the roads in the county.

LAND USE

Land use and population growth play an important part in projecting future traffic volumes. Historic trends and their relationship to historic traffic demand are the basis of those projections. These population and employment forecasts were developed to determine future transportation needs. The amount of growth, and where it occurs, will affect traffic and transportation facilities in the study area. This report is not intended to provide a complete economic forecast or housing analysis, and it should not be used for any purpose other than that for which it is designed.

A more detailed description of existing and future land use projections is contained in the Population and Employment Analysis located in Appendix C. Both historic and projected population for Wallowa County and its incorporated cities are summarized in Table 5-1.

TABLE 5-1
WALLOWA COUNTY POPULATION TRENDS

	1970[1]	1980[1]	1990[1]	2000[1]	2020 Projected[2]
Wallowa County	6,247	7,273	6,911	7,226	8,248
Incorporated Cities:					
Enterprise	1,680	2,003	1,905	1,895	2,261
Joseph	839	999	1,073	1,054	1,511
Lostine	196	250	231	263	252
City of Wallowa	811	847	748	869	789

Source:
1) US Bureau of the Census.
2) State of Oregon Office of Economic Analysis

Historic

Population levels in most of Eastern Oregon are close to, or actually lower than, those experienced earlier in the century. Counties included in this phenomenon include Baker, Harney, Union, Grant, and Wallowa Counties. The population of Wallowa County actually declined in the 1960s and 1980s, reflecting the general slowdown in the state's economy during these time periods. As a result of this activity, the population of Wallowa County declined by 3 percent between the 1960 and 1990 Censuses (from 7,102 in 1960 to 6,911 in 1990). The only jurisdiction able to achieve significant positive growth throughout the 1970s, 1980s, and 1990s was Joseph, growing from 788 in 1970 to 1,073 in 1990 (an increase of 36 percent, or 1.6 percent per year for 20 years). This growth can be attributed, in part, to the community's proximity to Wallowa Lake, and the recreational opportunities this amenity provides.

Projected

Population projections in Wallowa County are based on historic growth rates and forecasts by the State of Oregon Office of Economic Analysis. Factors that will affect the future growth rate of Wallowa County include employment opportunities, available land area for development, and community efforts to manage growth.

Wallowa County is expected to experience small population gains for the next 20 years. Like much of Eastern Oregon, the economy of Wallowa County remains largely seasonal, with more than one-quarter of all employment agriculture-based. Therefore, population increases are difficult to predict, and are not likely to be as stable as the forecasts appear to imply.

The population of Wallowa County is expected to increase by 14 percent over the next 20 years, from the 2000 estimate of 7,226 to an estimated 8,248 in year 2020. The only jurisdiction expected to grow faster is Joseph, with a forecast increase of 43 percent over 20 years, from 1,054 in 2000 to 1,511 in 2020.

TRAFFIC VOLUMES

Traffic volume projections are based on historic growth trends for highway volumes and land use and on the future land use projections.

Historic

Before projecting future traffic growth, it is important to examine past growth trends on the Joseph roadway system. Historic data is only available for the state highway system in Joseph; however, these roadways carry far more traffic than any other streets in the city. The Oregon Department of Transportation (ODOT) collects traffic count data on the state highways (rural and urban sections) every year at the same locations. These counts have been conducted at one location on Highway 82, two locations on Highway 350 and at seven locations on Highway 351 in Joseph.

Historical growth trends on the state highways in and around Joseph were established using the average annual daily traffic (AADT) volume information presented in the ODOT Traffic Volume Tables for the years 1975 through 1995. The AADT volumes were obtained for each of these years at several locations along each highway. Using a linear regression analysis of the average AADT volumes between 1975 and 1995, an average annual growth rate was determined. Table 5-2 summarizes the historic average growth rate on each of these sections.

TABLE 5-2
HISTORIC TRAFFIC GROWTH RATES ON STATE HIGHWAYS

Highway Section	Average Annual Growth Rate 1975-1995	Total Growth 1975-1995
Highway 82 north of Joseph	1.9%	44%
Highway 82 in Joseph	2.4%	61%
Highway 350 east of Joseph	4.0%	111%
Highway 350 in Joseph	2.5%	61%
Highway 351 south of Joseph	6.2%	235%
Highway 351 in Joseph	3.1%	83%

Over the past 20 years, growth on Highway 82 in Joseph has averaged 2.4 percent per year. On the rural section of Highway 82 north of Joseph traffic has been growing at a rate of 1.9 percent per year.

Traffic growth on Highway 350 in Joseph has averaged 2.5 percent over the past 20 years. East of Joseph, traffic has been growing at a rate of 4.0 percent per year on Highway 350.

Traffic growth on Highway 351 in Joseph has averaged 3.1 percent over the past 20 years. South of Joseph, traffic has been growing at a rate of 6.2 percent per year on Highway 351.

The higher growth rates on some of the rural sections is somewhat misleading because the sections of highway in the city increased by more trips than the rural sections; however, it was a smaller portion of its base year trips.

In all cases, growth on the highways far exceeded the population growth in Joseph itself. This relationship reflects the modern trend toward an increase in per capita vehicle miles traveled and the increase in tourist traffic.

Forecasting Methodology

It was decided that the most appropriate growth rates to project future traffic are those calculated from the historic traffic growth and not those calculated from the historic and future population and employment forecasts. Using the same linear regression analysis used to calculate the historic growth rate of traffic, forecasts were made for the years 1997 through 2017. Traffic volumes are expected to grow at a rate of 1.6 percent per year (37 percent over the next 20 years) to 5,900 vpd on Highway 82, at 1.6 percent per year (38 percent over the next 20 years) to 2,060 vpd on Highway 350 and at 1.8 percent per year (43 percent over the next 20 years) to 4,120 vpd on Highway 351. These annual growth rates are higher than either of the estimated population and employment growth rates as described earlier in this chapter, and provide a more conservative estimate. Also, much of the traffic on these highways in Joseph is tourist traffic, whose growth is not directly determined by the population and employment growth in the study area.

It is important to note that using the historical growth trends assumes that future traffic patterns will remain consistent with historical patterns, without consideration of future planned developments.

HIGHWAY SYSTEM CAPACITY

For the year 2017, unsignalized intersection analyses were performed using the overall growth expected on highways at the same three representative intersections in Joseph for which the existing conditions were analyzed. The analyses indicated that all three intersections are expected to meet ODOT level of service standards over the 20-year forecast period. The results of the unsignalized intersection analyses are shown in Table 5-3.

Analysis Results

At a representative unsignalized intersection on Highway 82, traffic volumes are expected to be 37 percent higher than traffic volumes today. This increase in traffic volumes over the 20 year projection period will not impact the LOS or reach the maximum volume to capacity ratio of 0.80 at this intersection. The northbound and southbound left turns on this highway segment (Highway 82) will continue to operate at LOS A (<0.48 v/c), and the eastbound and westbound left, through and right turns will continue to operate at LOS B (0.49-0.59 v/c).

On Highway 350, the 38 percent increase in traffic volumes in the year 2017 will not have a significant impact on the intersection or reach the maximum volume to capacity ratio of 0.85. The northbound and southbound left turns on Highway 350 as well as the eastbound and westbound left, through and right turns will continue to operate at LOS A (<0.48 v/c)

At a representative unsignalized intersection on Highway 351, traffic volumes are expected to be 43 percent higher than traffic volumes today. This increase in traffic volumes over the 20-year projection period will not impact the level of service at this intersection or reach the maximum volume to capacity ratio of 0.80. The northbound and southbound left turns on Highway 351 will continue to operate at LOS A(<0.48 v/c), and the eastbound and westbound left, through and right turns will continue to operate at LOS B (0.49-0.59 v/c).

TABLE 5-3
SUMMARY OF OPERATIONS AT REPRESENTATIVE INTERSECTIONS

Location	Movement	1995 LOS (v/c)	2017 LOS (v/c)
Highway 82	Eastbound; Left, Through, Right	B (0.49-0.59)	B (0.49-0.59)
	Westbound; Left, Through, Right	B (0.49-0.59)	B (0.49-0.59)
	Northbound; Left	A (<0.48)	A (<0.48)
	Southbound; Left	A (<0.48)	A (<0.48)
Highway 350	Eastbound; Left, Through, Right	A (<0.48)	A (<0.48)
	Westbound; Left, Through, Right	A (<0.48)	A (<0.48)
	Northbound; Left	A (<0.48)	A (<0.48)
	Southbound; Left	A (<0.48)	A (<0.48)
Highway 351	Eastbound; Left, Through, Right	B (0.49-0.59)	B (0.49-0.59)
	Westbound; Left, Through, Right	B (0.49-0.59)	B (0.49-0.59)
	Northbound; Left	A (<0.48)	A (<0.48)
	Southbound; Left	A (<0.48)	A (<0.48)

Note: The level of service is shown for all movements of the unsignalized intersections.

CHAPTER 6: IMPROVEMENT OPTIONS ANALYSIS

As required by the Oregon Transportation Planning Rule, transportation alternatives were formulated and evaluated for the Joseph Transportation System Plan. These potential improvements were developed with the help of the TAC, and the individual communities and attempt to address the concerns specified in the goals and objectives (Chapter 2).

Each of the transportation system improvements options was developed to address specific deficiencies or access concerns. The following list includes all of the potential transportation system improvements considered. Improvement Options 3, 4, and 8 are illustrated in Figure 6-1.

The proposed transportation system improvements recommended for the Joseph TSP include both state highway and local road projects. This section of the TSP describes the individual improvements and their associated costs. Improvement options include:

1. Revise zoning code to allow and encourage mixed-use development and redevelopment.
2. Continue to explore alternate truck routes to reduce truck traffic downtown.
3. Protect the Idaho Northern Pacific Railroad right-of-way.
4. Control speeds on Highway 82.
5. Explore a bikeway on Highway 82 or on Hurricane Creek Road to Enterprise.
6. Continue to upgrade structurally deficient bridges.
7. Implement Transportation Demand Management Strategies.

As discussed in the remaining sections of this chapter, all of these ongoing or considered improvements were recommended. The recommendations were based on costs and benefits relative to traffic operations, the transportation system, and the community livability.

EVALUATION CRITERIA

The evaluation of the potential transportation improvements was based on a qualitative review of safety, environmental, socioeconomic, and land use impacts, as well as estimated cost. The effect of each potential project on traffic patterns was not evaluated since existing and future traffic projections for the city indicate there will be no deficiencies in the capacity of the street system over the next 20 years.

Safety was the first qualitative factor to be evaluated. Although driver safety is considered in these projects, pedestrian and bicycle safety are a critical concern for the city. Environmental factors were also evaluated, such as air quality, noise, and water quality. Evaluation of socioeconomic and land use impacts considered right-of-way requirements, impacts to adjacent lands, and community livability. The final factor in the evaluation of each potential transportation improvement was cost. Costs were estimated in 2000 dollars based on preliminary alignments for each potential transportation system improvement.

STATEWIDE TRANSPORTATION IMPROVEMENT PROGRAM PROJECTS

The Oregon Department of Transportation has a comprehensive transportation improvement and maintenance program that covers the entire state highway system. The Statewide Transportation Improvement Program (STIP) identifies all the highway improvement projects in Oregon. The STIP lists specific projects, the counties in which they are located, and their construction year.

The 1998-2001 STIP, published in 1996, identified three major highway improvements within the City of Joseph:

- A modernization project to reconstruct Main Street between Russell Lane and 3rd Street was completed in fiscal year 1999 at a cost of $1,533,000. This project included grading, paving, drainage, construction of new sidewalks and curbs with handicap access, and relocation of utilities.

- The Wren Dobbin Ditch Bridge on West McCully Avenue was replaced by a new structure in fiscal year 1998 at a cost of $135,000.

- The Big Bend Ditch Bridge on East Pine Street, which was severely damaged and closed to motorized vehicle traffic, was replaced by a new structure on Lake Street south of Alder Street in fiscal year 2000, at a cost of $181,000.

IMPROVEMENT OPTIONS EVALUATION

Through the transportation analysis and input provided from the public involvement program, multiple improvement projects were identified. These options included reconstructing existing roads and providing improved pedestrian and bicycle facilities.

Option 1. Revise Zoning and Development Codes

One of the goals of the Oregon Transportation Planning Rule (TPR) is to reduce the reliance on the automobile. One way city jurisdictions can do this is through amendments in zoning and development codes to permit mixed-use developments and increases in density in certain areas. Specific amendments include allowing neighborhood commercial uses within residential zones and allowing residential uses within commercial zones. Such code amendments can encourage residents to walk and bicycle throughout the community by providing shorter travel distances between land uses.

These code revisions are generally more effective in medium to large sized cities with populations of 25,000 and over, but in cities such as Joseph, they are probably not appropriate. Because of Joseph's size, the decision of what mode of transportation to use when making a trip inside the city is not influenced by distance. The longest distance between city limit boundaries in Joseph is around one mile, a distance short enough to walk, ride a bike, or drive. Distances between different land uses, such as residential and commercial, is even shorter. Ten percent of the population already walks to work, which is higher than the statewide average.

Increasing density may have some effect on development in Joseph. Population is projected to increase by 19 percent (241 additional residents) in the next 20 years.

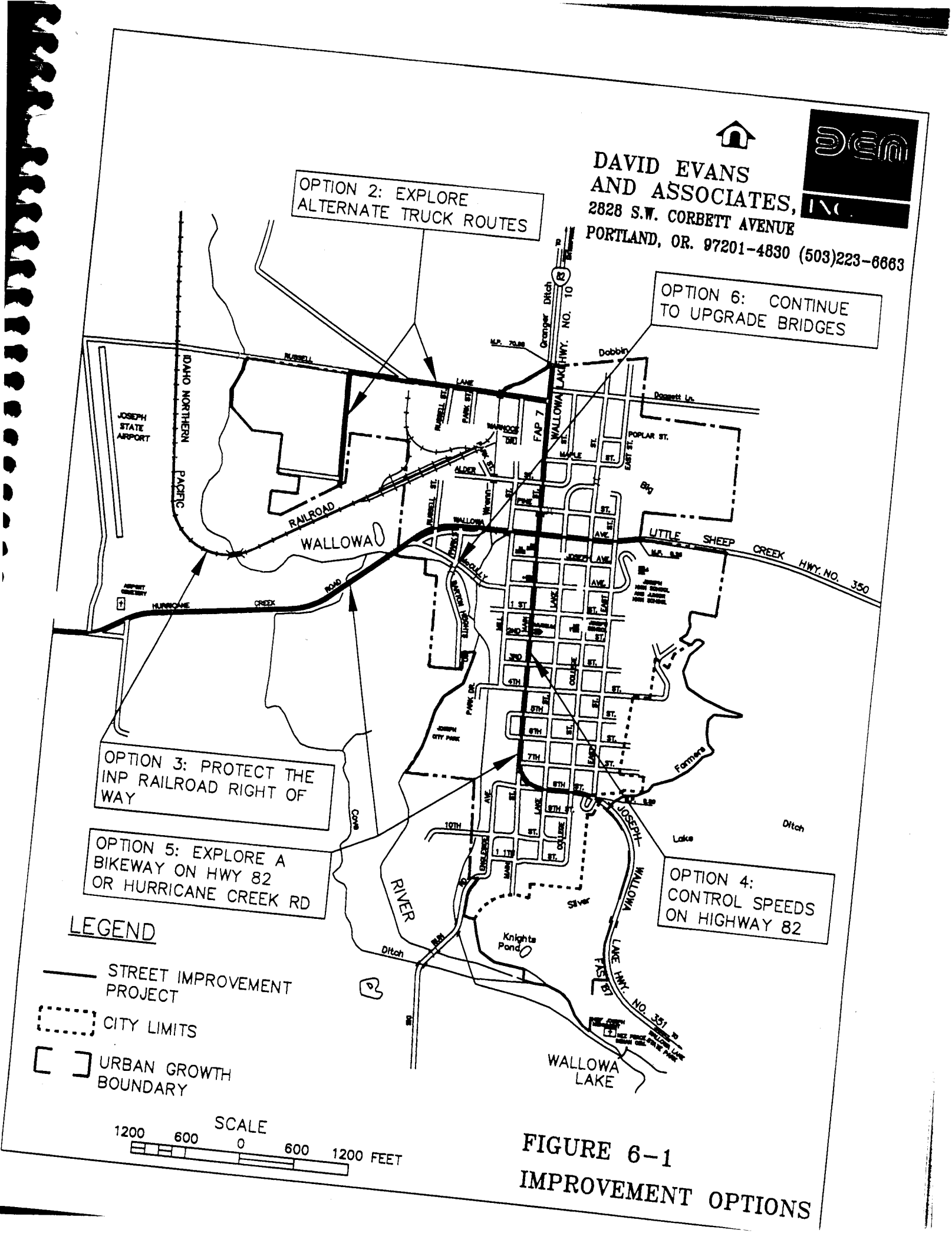

FIGURE 6-1
IMPROVEMENT OPTIONS

No direct costs are associated with making the zoning code amendments.

Revisions to zoning and development codes to allow for increased density have recently been completed. The City of Joseph Comprehensive Plan, Zoning Ordinance and Subdivision and Partitioning Ordinance have also been amended in concurrence with the TSP revisions to address applicable TPR requirements (see Chapter 9), including the addition of provisions to implement the TSP.

Option 2. Truck Routes

Currently, trucks going to and from the mill west of town must travel through the center of town on Main Street (Highway 82) and Wallowa Avenue. An optional route for trucks going to and from the mill should be considered based on the community need to access the industrial zone. Public meetings will be held prior to choosing an option.

Option 3. Protect the Idaho Northern Pacific Railroad Right-of-Way

The Idaho Northern Pacific Railroad (INP) owns an abandoned railroad right-of-way between Elgin and Joseph.

Oregon State Parks has obtained funding through the Transportation Equity Act for the 21st Century (TEA-21) to purchase the railroad right-of-way and preserve the rail corridor for public use.

There is strong community interest in Wallowa County to protect the railroad right-of-way for future uses of the abandoned rail line. Options that have been discussed include using the right-of-way for utility systems and as a recreational trail. It may be possible that the right-of-way could serve as both a linear utility corridor and as a non-motorized path.

Wallowa County has identified the need to extend natural gas and fiber optic telecommunication lines into the county to encourage the diversification of the local economy. Business recruiters have informed the Wallowa County Court that both natural gas service and an improved telecommunication system are essential for new businesses selecting development sites within the county. Presently, the natural gas line stops at Elgin and fiber optics have not been extended beyond La Grande. The INP rail right-of-way has the potential to serve as a utility corridor for these two utility systems.

Conversion to a horse, hiking, and/or bike trail may be an option because it would provide both recreational opportunities and a transportation system for non-motorized vehicles. However, public use of the right-of-way has not been embraced county-wide. Some residents expressed concerns about a hiking or riding trail along the abandoned rail lines because of increased risk of fire, compromises in safety and security, the possibility of more trash along the right-of-way, and a general dislike of public access through private property.

It is estimated that a "Rails to Trails" improvement option would have moderate to high construction costs. The Joseph section of this trail would be a small part of a much larger county-wide project. The cost of the right-of-way between Elgin and Joseph (approximately 50 miles) was estimated at $2.5 million (1995 dollars) in the *Oregon Highway 82 Corridor Plan*. The cost to clear, prepare, and construct a 10-foot-wide asphalt path is around $16 per linear foot. This assumes the pathway is composed of two inches of asphalt and four inches of aggregate. The section of this project within the City of Joseph is approximately 1,600

feet. Excluding the cost of the right-of-way, the cost to construct this path in the City of Joseph would be $28,000. A less costly option would be to not pave the path.

Efforts should be made to retain the right-of-way for utilities and as a possible recreational trail. Such a situation could preserve the integrity of the right-of-way and the possibility of future rail service. The Transportation Planning Rule requires that jurisdictions protect right-of-ways for future operation of transportation corridors.

There is community interest in pursuing this project because of its benefits to the community and the region. In spite of some opposition by the property owners along the alignment of the proposed multi-use path, it is recommended for inclusion in the plan. Efforts to implement this project will need to be coordinated with the county, the state, and INP.

Option 4. Control Speeds on Highway 82

The residents of Joseph are concerned about traffic exceeding the posted speed limit along Highway 82 through the city. Residents would like to see a system developed that would encourage traffic to slow down to a more appropriate speed. It is recommended that a system be developed that would discourage motorists from exceeding the speed limit along Highway 82 within Joseph. There are a variety of different speed control measures used on the roadways of many cities in the state ranging from narrowing lane widths to more stringent enforcement. Completion of the improvements in the Downtown Beautification Project may help calm traffic on Main Street. A technical memorandum describing the different types of speed control measures available can be found in Appendix D. A specific cost cannot be identified until a speed control program is developed.

Option 5. Explore a Bikeway on Highway 82 or on Hurricane Creek Road

Goals and objectives of the city's bicycle plan include reducing conflicts between bicyclists and motorized vehicle traffic, developing a system dedicated to bicycles, and providing opportunities for recreational bicycle use. Two options for meeting these goals include adding a bikeway on Highway 82 or Hurricane Creek Road.

Shared roadways, where bicyclists share normal vehicle lanes with motorists, are generally acceptable if speeds and traffic volumes are relatively low. On the collector and local streets in Joseph, shared roadways are not an issue; however, on arterial roadways bike lanes are recommended.

Highway 82 functions as an arterial street through Joseph, which means that it should have bike lanes on both sides of the street as specified in the recommended street standards listed in Chapter 7 and as required by the TPR.

On Highway 82, volumes are already over 4,500 vehicles per day. Accident statistics on the highway do not indicate that there are frequent conflicts between bicyclists and motorized vehicles. This is due in part to relatively low bicycle usage in the area. To install bicycle lanes along Highway 82 would involve removing diagonal on-street parking through downtown Joseph, as diagonal parking makes bike lanes unsafe. Shoulders would need widening on sections where no on-street parking exists. Some widening was completed as part of the construction project. There may be areas along Highway 82 toward the south of Joseph and along Highway 350 where bike lanes would be warranted. Some of these improvements would be expensive and others would be controversial. At this time, no specific bikeway improvements are recommended for Highway 82 through Joseph; however, the City will explore possible alternatives and

ODOT should track both traffic volumes and accident rates on this facility to identify any problems in the future.

During one of the community meetings in Joseph, it was suggested that a bike lane be installed on Hurricane Creek Road between Enterprise and Joseph and that route be promoted as the best route for bikes between the two cities. In rural areas without curbs and sidewalks, the typical recommended facility is a shoulder bikeway, where a six-foot standard paved shoulder is provided for bicycles. According to the *Oregon Bicycle and Pedestrian Plan*, the guideline for rural collectors with an ADT of less than 400 vpd, the paved shoulder can be as little as two feet wide. Hurricane Creek Road would not meet the traffic volume requirement for a separate bike lane, but at a minimum, a two-foot-wide paved shoulder for bikes is recommended.

Oregon Highway 82 Corridor Plan

The *Oregon Highway 82 Corridor Plan* describes a bike route on Hurricane Creek Road. This county road would not need widening but would require appropriate signage and an overlay to provide a smooth surface. An exception from the policies of the *Oregon Bicycle and Pedestrian Plan* would be required to implement this option. The estimated cost for a bike route on Hurricane Creek Road is $200,000 (1995 dollars). The project is a near term priority.

Option 6. Continue to Upgrade Structurally Deficient Bridges

The City of Joseph has one bridge which has deficiencies[1] that need to be addressed as soon as possible. This bridge is the Barton Heights Road Bridge, over Wrenn Dobbin Ditch south of McCully Avenue. This is a single lane bridge that is under Wallowa County jurisdiction. The City of Joseph would like the County to dedicate this bridge to the City and the City would propose to replace this bridge with a structure wide enough to accommodate two vehicle lanes. No estimated cost is provided for this low priority project.

This structurally deficient bridge was identified as unsafe through inventories of the various structural elements. It needs to be replaced or repaired in order to safely serve the traffic demands of the area.

If the Barton Heights Road Bridge is not repaired or replaced, limitations on usage may affect users of the facility. This could include long routes to divert traffic off the bridge which cannot safely service demand. Limitation on bridge use could affect the economy of some of the resource-based industries in the area.

Option 7. Implement Transportation Demand Management Strategies

Transportation demand management (TDM) strategies change the demand on the transportation system by providing facilities for modes of transportation other than single occupant passenger vehicles, implementing carpooling programs, altering work shift schedules, and applying other transportation measures within the community. The State Transportation Planning Rule recommends that cities should evaluate TDM measures as part of their Transportation System Plans.

[1]The description of structural deficiency, functional obsolescence, and sufficiency ratings are based on the *Oregon Coding Guide for the Inventory and Appraisal of Oregon Bridges* by the Oregon Department of Transportation Bridge Section in May, 1994.

TDM strategies are most effective in large, urban cities; however, some strategies can still be useful in small cities such as Joseph. For example, staggering work shift schedules at local businesses may not be appropriate in Joseph since there are no large employers in the area; however, provisions for alternative modes of transportation, such as sidewalks and bike lanes, and implementing a county-wide carpooling program can be beneficial for residents of the city. In rural communities, TDM strategies include providing mobility options.

Joseph can implement TDM strategies by requiring all future street improvement projects to include the addition of some sort of pedestrian facility, such as new sidewalks or walkways, which will effectively separate pedestrians from motorized traffic. All new street improvement projects should also consider bicycle lanes as well.

Implementing a local carpool program in Joseph alone is not necessary because of Joseph's geographical size; however, a county-wide carpool program is possible. Residents who live in Joseph and residents who live in other cities and rural areas should be encouraged to carpool with a fellow coworker or someone who works in the same area.

Although the primary goal of these measures is to reduce the number of vehicle trips made within the city, especially during peak periods, street capacity for automobiles and trucks is generally not an issue in Joseph. However, providing adequate facilities for pedestrians and bicyclists increases the livability of a city, and improves traffic and pedestrian safety. With more emphasis on walking or biking in the city, conditions such as air quality and noise levels would be improved as well, therefore, this option is recommended.

Costs associated with implementing TDM strategies were not determined.

SUMMARY

Table 6-1 summarizes the recommendations of the street system modal plan based on the evaluation process described in this chapter. Chapter 7 discusses how these improvement options fit into the modal plans for Joseph.

TABLE 6-1
TRANSPORTATION IMPROVEMENT OPTIONS: RECOMMENDATION SUMMARY

Option	Recommendation
1. Revise Zoning and Development Codes	• Completed
2. Explore Alternate Truck Routes	• Implement
3. Protect the Idaho Northern Pacific Railroad Right-of-Way	• Implement
4. Control Speeds on Highway 82	• Desirable to implement; ODOT has jurisdiction
5. Explore a Bikeway on Highway 82 or on Hurricane Creek Rd.	• Implement where volumes warrant bike lane and where safety of bike lane is not compromised by diagonal parking, otherwise provide paved shoulder
6. Continue to upgrade Structurally Deficient Bridge	• Implement
7. Implement Transportation Demand Management Strategies	• Implement

CHAPTER 7: TRANSPORTATION SYSTEM PLAN

The purpose of this chapter is to provide detailed operational plans for each of the transportation systems within the community. The Joseph Transportation System Plan covers all the transportation modes that exist and are interconnected throughout the urban area. Components of the street system plan include street classification standards, access management recommendations, transportation demand management measures, modal plans, and a system plan implementation program.

STREET DESIGN STANDARDS

Street classification standards relate the design of a roadway to its function. The function is determined by operational characteristics such as traffic volume, operating speed, safety, and capacity. Street standards are necessary to provide a community with roadways which are relatively safe, aesthetic, and easy to administer when new roadways are planned or constructed. They are based on experience, and policies and publications of the profession.

Existing Street Classification Standards

Currently, preliminary street standards exist for minimum pavement widths of 22 to 24 feet and sidewalk widths of 12 feet downtown and eight feet where the right-of-way is narrower. No width specifications are given for alleys. There are no bikeway requirements.

Recommended Street Standards

The development of the Joseph Transportation System Plan provides the city with an opportunity to review and revise street design standards to more closely fit with the functional street classification, and the goals and objectives of the Transportation System Plan.

The recommended street standards are shown graphically in Figure 7-1 through Figure 7-3 and summarized in Table 7-1. Since the Joseph Transportation System Plan includes land within the UGB, urban street standards should be applied in these outlying areas as well. Although portions of the city, especially outside the city boundary, may presently have a rural appearance, these lands will ultimately be part of the urban area. Retrofitting rural streets to urban standards in the future is expensive and controversial; it is better to initially build them to an acceptable urban standard.

TABLE 7-1
RECOMMENDED STREET DESIGN STANDARDS

Classification	Pavement Width	Right-of-Way Width	Min. Posted Speed
Local Residential	25-28 ft.	50-57 ft.	15-25 mph
Alley	12-16 ft.	16-20 ft.	10 mph
Collector	32-34 ft.	57-63 ft.	25-35 mph
Arterial	48-52 ft.	80 ft.	25-45 mph

A good, well-connected grid system of relatively short blocks can minimize excessive volumes of motor vehicles by providing a series of equally attractive or restrictive travel options. This street pattern is also beneficial to pedestrians and bicyclists.

Sidewalks must be included on all urban streets as an important component of the pedestrian system. When sidewalks are located directly adjacent to the curb, they can include such impediments as mailboxes, street light standards, and sign poles, which reduce the effective width of the walk. Sidewalks buffered from the street by a planting strip eliminate obstructions in the walkway, provide a more pleasing design as well as a buffer from traffic, and make the sidewalk more useable by persons with disabilities. To maintain a safe and convenient walkway for at least two adults, a five to six-foot sidewalk should be used in residential areas.

Residential Streets

The design of a residential street affects its traffic operation, safety, and livability. The residential street should be designed to enhance the livability of the neighborhood as well as to accommodate less than 1,200 vehicles per day. Design speeds should be 15 to 25 mph. When traffic volumes exceed approximately 1,000 to 1,200 vehicles per day, the residents on that street will begin to notice the traffic as a noise and safety problem. To maintain neighborhoods, local residential streets should be designed to encourage low speed travel and to discourage through traffic. Narrower streets improve neighborhood aesthetics and discourage speeding and through traffic. They also reduce right-of-way needs, construction costs, storm water run-off, and the need to clear vegetation.

Cul-de-sac, or "dead-end" residential streets are intended to serve only the adjacent land in residential neighborhoods. These streets should be short (less than 300 feet long) and serve a maximum of 20 single-family houses. Because the streets are short and the traffic volumes relatively low, the street width can be narrower than a standard residential street, allowing for the passage of two lanes of traffic when no vehicles are parked at the curb at one lane of traffic when vehicles are parked at the curb.

Because cul-de-sac streets limit street and neighborhood connectivity, they should only be used where topographical or other environmental constraints prevent street connections. Where cul-de-sacs must be used, pedestrian and bicycle connections to adjacent cul-de-sacs or through streets should be included.

The recommended street design standard for residential streets, is shown in Figure 7-1. This recommended standard provides 25-28 feet of pavement and accommodates on-street parking. Five to six-foot wide sidewalks should be provided on the roadway and should be set back from the street seven to eight feet to allow for a planted or gravel shoulder.

(not to scale)

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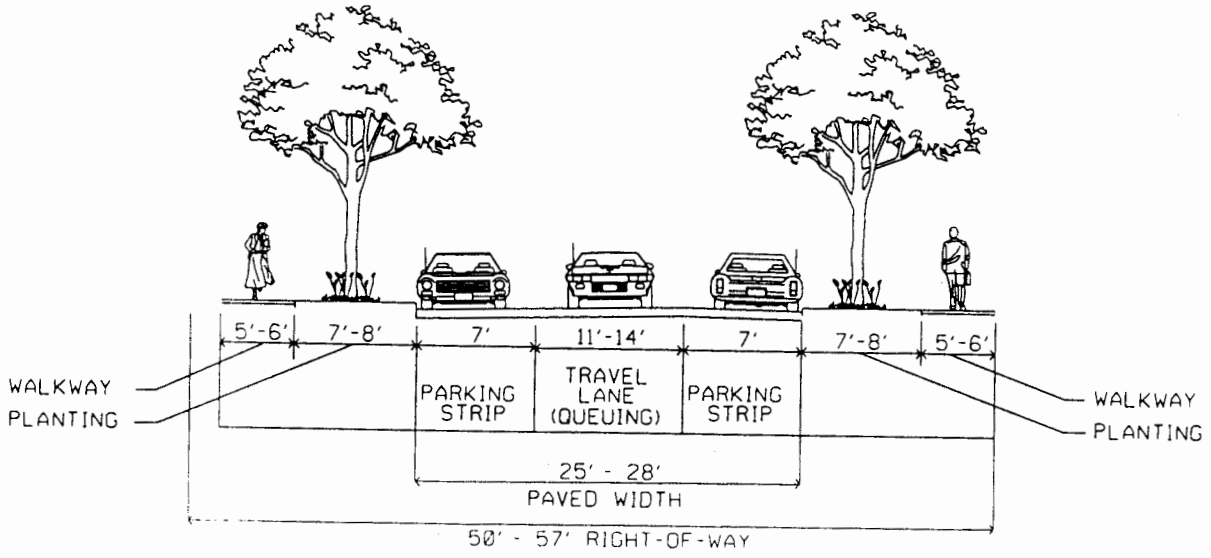
LOCAL RESIDENTIAL STREET:



ALLEY:

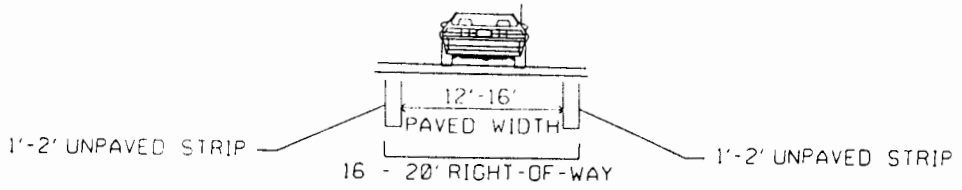


FIGURE 7-1
RECOMMENDED
STREET STANDARDS
-LOCAL RESIDENTIAL
AND ALLEY STREETS

(not to scale)

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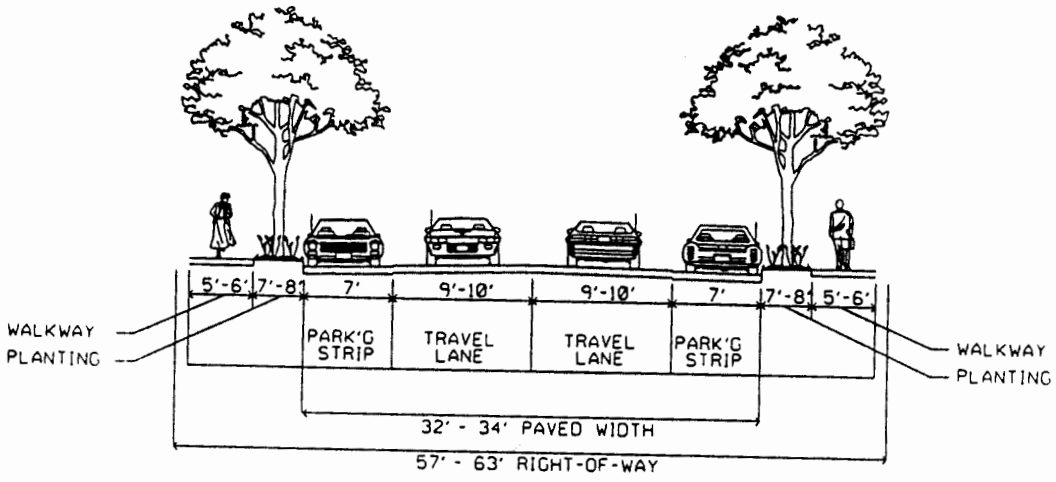

FIGURE 7-2
RECOMMENDED
STREET STANDARDS
-COLLECTOR STREETS

(not to scale)

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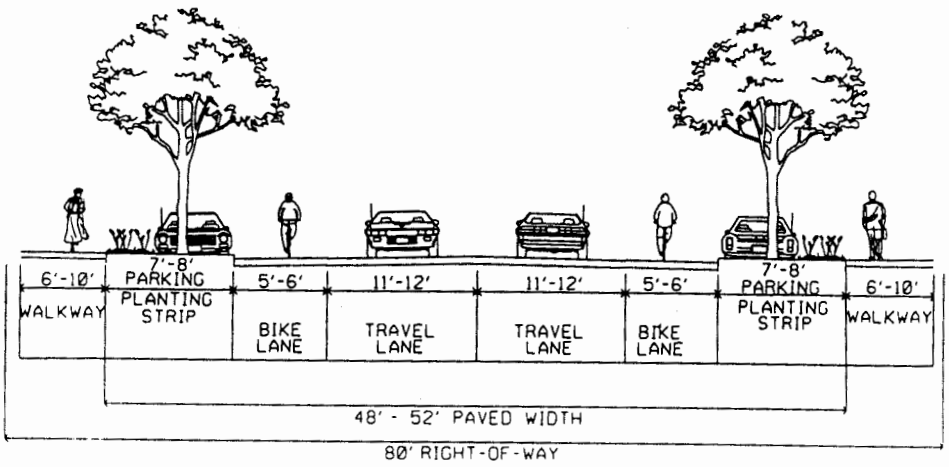

FIGURE 7-3
RECOMMENDED
STREET STANDARDS
-ARTERIAL STREETS

Alleys

Alleys can be a useful way to diminish street width by providing rear access and parking to residential areas. Including alleys in a subdivision design allows homes to be placed closer to the street and eliminates the need for garages to be the dominant architectural feature. This pattern, once common, has been recently revived as a way to build better neighborhoods. In addition, alleys can be useful in commercial and industrial areas, allowing access by delivery trucks that is off of the main streets. Alleys should be encouraged in the urban area of Joseph. Alleys should be 12 to 16 feet wide, with a 16 to 20-foot right-of-way. (See Figure 7-1.)

Collector Streets

Collectors are intended to carry between 1,200 and 10,000 vehicles per day, including limited through traffic, at a design speed of 25 to 35 mph. A collector can serve residential, commercial, industrial, or mixed land uses. Collectors are primarily intended to serve local access needs of residential neighborhoods through connecting local streets to arterials. Bike lanes are typically not needed due to slower traffic speeds.

The recommended street standard provided for collectors, is shown in Figure 7-2 This recommended standard provides one lane of moving traffic in each direction plus parking on both sides and can also be striped to provide two travel lanes plus left-turn lanes at intersections or driveways by removing parking for short distances. Five to six-foot sidewalks should be provided on each side of the roadway. An optional planting strip has been included with a width of seven to eight feet.

Arterial Streets

Arterial streets form the primary roadway network within and through a region. They provide a continuous roadway system that distributes traffic between different neighborhoods and districts. Generally, arterial streets are high capacity roadways that carry high traffic volumes with minimal localized activity. Design speeds should be between 25 and 45 mph. The recommended design standard for arterial streets is consistent with the improvements to Highway 82 in downtown Joseph that were completed in 1999 (See Figure 7-3). This standard section provides a 48-52-foot paved surface within an 80-foot right-of-way to allow for two 11 to 12-foot travel lanes, two five to six-foot bike lanes, and two eight-foot parking lanes. The bike lanes should be striped between the parking lane and the travel lane. Sidewalks that vary between six and 18-feet wide to accommodate optional planting strips and "bulbed out" sidewalk extensions at appropriate pedestrian crossings should be provided on each side of the roadway.

Bike Lanes

In cases where a bikeway is proposed within the street right-of-way, a minimum of 10 feet of roadway pavement (between curbs) should be provided for a five to six-foot bikeway on each side of the street, as shown on the cross section in Figure 7-3. Except in rare circumstances, bike lanes on one-way streets should be located on the right side of the roadway, be one-way, and flow in the same direction as vehicular traffic. The striping should be done in conformance with the State Bicycle and Pedestrian Plan (1995). In cases where curb parking will exist with a bike lane, the bike lane will be located between the parking and travel lanes. In some situations, curb parking may have to be removed to permit a bike lane.

The bikeways on new streets or streets to be improved as part of the street system plan should be added when the improvements are made. The implementation program identifies an approximate schedule for these improvements.

On arterial and collector streets that are not scheduled to be improved as part of the street system plan, bike lanes may be added to the existing roadway at any time to encourage cycling, or when forecast traffic volumes exceed 2,500 to 3,000 vehicles per day. The striping of bike lanes on streets which lead directly to schools should be a high priority.

Sidewalks

A complete pedestrian system should be implemented in the urban portion of Joseph. Every urban street should have sidewalks on both sides of the roadway as shown on the cross sections in Figure 7-1 through Figure 7-3. Sidewalks on residential and collector streets should have a minimum five-foot wide paved width. Arterial streets should have six-foot wide sidewalks, and downtown commercial streets should have 12-foot-wide curb sidewalks. In addition, pedestrian and bicycle connections should be provided from any cul-de-sac or other dead-end streets to each other, to other streets, or to local activity centers except where such a connection is impracticable.

Another essential component of the urban sidewalk system is street crossings. Intersections must be designed to provide safe and comfortable crossing opportunities.

Curb Parking Restrictions

Typically, curb parking is prohibited at least 25 feet from the end of an intersection curb return to provide sight distance at street crossings. Except where improvements along Main Street have been implemented, the City of Joseph does not have this type of parking restriction, as it would eliminate many existing on-street parking spaces. Instead, the first on-street parking space from the corner is reserved for handicapped parking, and the second space in from the corner is reserved for compact cars.

Street Connectivity

Street connectivity is important because a well-connected street system provides more capacity than a disconnected one, provides alternate routes for local traffic, and is more pedestrian and bicycle-friendly. It is likely that the City of Joseph's relative lack of congestion is in part due to its grid system. Ensuring that this grid is extended as development occurs is critical to Joseph's continued livability. To this end, a maximum block perimeter of 1,200 feet is recommended.

ACCESS MANAGEMENT

Access management is an important tool for maintaining a transportation system. Too many access points can diminish the function of an arterial, mainly due to delays and safety hazards created by turning movements. Traditionally, the response to this situation is to add lanes to the street. However, this can lead to increases in traffic and, in a cyclical fashion, require increasingly expensive capital investments to continue to expand the roadway.

Reducing capital expenditures is not the only argument for access management. Additional driveways along arterial streets lead to an increased number of potential conflict points between vehicles entering and exiting the

driveway, and through vehicles on the arterial streets. This not only leads to increased vehicle delay and a deterioration in the operation of the arterial, but also leads to a reduction in safety.

Research has shown a direct correlation between the number of access points and collision rates. In addition, the wider arterial streets that can ultimately result from poor access management can diminish the livability of a community. Therefore, it is essential that all levels of government maintain the efficiency of existing arterial streets through better access management.

Access Management Techniques

The number of access points to an arterial can be restricted through the following techniques:

- Restricting spacing between access points (driveways) based on the type of development and the speed along the arterial
- Sharing of access points between adjacent properties
- Providing access via collector or local streets where possible
- Constructing frontage roads to separate local traffic from through traffic
- Providing service drives to prevent spill-over of vehicle queues onto the adjoining roadways
- Providing acceleration, deceleration, and right turn only lanes
- Correctly designed offsetting driveways to produce T-intersections to minimize the number of conflict points between traffic using the driveways and through traffic
- Installing median barriers to control conflicts associated with left turn movements
- Installing side barriers to the property along the arterial to restrict access width to a minimum
- Signal spacing plan and locate signals consistent with desirable spacing standards to help maintain roadway performance and allow proper median designs
- Development of on-site circulation and adoption of supporting ordinances

Recommended Access Management Standards

Access management is hierarchical, ranging from complete access control on freeways to increasing use of streets for access purposes, parking and loading at the collector level. Table 7-2 describes recommended general access management guidelines by roadway functional classification.

TABLE 7-2

RECOMMENDED ACCESS MANAGEMENT STANDARDS

	Intersections			
Functional	**Public Road**		**Private Drive**	
Classification	**Type**	**Spacing**	**Type**	**Spacing**
Arterial				
State Highways	See Access Management Spacing Standards, Appendix C of the 1999 Oregon Highway Plan			
Highway 82: General				
Highway 351				
Highway 350				
Other Arterials within UGB	at-grade	250 ft.	L/R Turns	Mid-block
Collector	at-grade	250 ft.	L/R Turns	100 ft.
Residential Street	at-grade	250 ft.	L/R Turns	Access to Each Lot
Alley (Urban)	at-grade	100 ft.	L/R Turns	Access to Each Lot

Application

These access management standards are generally not intended to eliminate existing intersections or driveways. Rather, they should be applied as new development occurs. Over time, as land is developed and redeveloped, the access to roadways will meet these guidelines. However, where there is a recognized problem, such as an unusual number of collisions, these techniques and standards can be applied to retrofit existing roadways.

To summarize, access management strategies consist of managing the number of access points and providing traffic and facility improvements. The solution is a balanced, comprehensive system that provides reasonable access while maintaining the safety and efficiency of traffic movement.

State Highways

Access management is important to promoting safe and efficient travel for both local and long distance users along State Highways 82, 350, and 351 in Joseph. The 1999 *Oregon Highway Plan* specifies access management spacing standards and policies for State facilities. Although Joseph may designate state highways as arterial roadways within their transportation system, access management for these facilities follow the Access Management Spacing Standards of the 1999 Oregon Highway Plan. These spacing standards are based on highway classification, type of area and speed, which are shown in the appendix to this document. This section of the Transportation System Plan describes the state highway access management objectives and specific highway segments where special access spacing standards apply.

General

Highways 82 and 351 through Joseph are categorized in the 1999 Oregon Highway Plan as Statewide Highways. The primary function of these highways is to provide connections to larger urban areas, ports and major recreation areas of the state not served by Freeways. Access management to statewide urban highways is to provide high to moderate speed operations with limited interruptions in traffic flow.

Highway 350 is categorized as a District Highway in the Oregon Highway Plan. The primary function of District Highways is to provide connections and links to inter-community movements. They also serve local access and traffic. In urban areas the access management objective is to provide the highest and safest performance operation consistent with the identified function of the roadway. Access management for district urban highways recognizes the balanced demands of traffic movement and access needs.

To assist in implementing state access management standards and policies, the 1999 Oregon Highway Plan also recognizes that state highways serve as main streets of many communities, such as downtown Joseph. Shorter block lengths and a well-developed grid system are important to a downtown area, along with convenient and safe pedestrian facilities. In general, downtown commercial arterial streets typically have blocks 200 to 400 feet long, driveway access sometimes as close as 100-foot intervals and occasionally, signals may be spaced as close as every 400 feet. The streets in downtown areas must have sidewalks and crosswalks, along with on-street parking. The need to maintain these typical downtown characteristics must be carefully considered along with the need to maintain the safe and efficient movement of through traffic. The Oregon Highway Plan recognizes the main street function through the designation of Special Transportation Areas (STAs).

Special Transportation Area

A Special Transportation Area (STA) is a designation that may be applied to a state highway, when a downtown, business district or community center straddles the state highway within a community's urban growth boundary. The primary objective of an STA is to provide access to community activities, businesses and residences, and to accommodate pedestrian and bicycle movements along and across the highway in a compact central business district. An STA designation will allow reduced mobility standards, accommodate existing public street spacing and compact development patterns, and enhance opportunities to provide improvements for pedestrians and bicyclists in the downtown area.

Access management in STAs corresponds to the existing city block for public road connections and discourages private driveways. However, where driveways are allowed and land use patterns permit, the minimum spacing for driveways is 175 feet or mid-block if the current city block spacing is less than 350 feet. In addition, the need for local access outweighs the consideration of maintaining highway mobility within a STA. The maximum volume to capacity ratio for state highways increases in a STA.

In Joseph, the area along Highway 82 and Highway 351 (Main Street) between Pine Street and 2nd Street exemplifies the design features of a historic downtown. Within this five-block segment, buildings are spaced close together, parking is on street, sidewalks bind the street to the buildings, the posted speed limit is 25 m.p.h., and streets are designed with curb extensions for ease of pedestrian crossing. The compact development pattern and recent street treatments qualifies this area for a STA highway segment designation.

The adopted TSP, the existing cooperative improvement agreement between ODOT and the City for the segment of Highway 82 between Russell Lane and 3rd Street, included as Appendix E to this document, sufficiently addresses the STA Management Plan directives under Policy 1B of the 1999 Oregon Highway Plan. Upon adoption of the TSP by the Joseph City Council and a finding of Policy 1B compliance by ODOT's Technical Services Manager, the City of Joseph and ODOT may jointly designate this segment of Highway 82 as an STA by the following process. The TSP and the cooperative improvement agreement may be incorporated by reference in a Memorandum of Understanding (MOU) between ODOT and the city. The MOU may not be necessary where ODOT and the community have agreed to the management plan requirements that have been adopted into the city's comprehensive plan or zoning code.

MODAL PLANS

The Joseph modal plans have been formulated using information collected and analyzed through a physical inventory, forecasts, goals and objectives, and input from area residents. The plans consider transportation system needs for Joseph during the next 20 years assuming the growth projections discussed in Chapter 5. The timing for individual improvements will be guided by the changes in land use patterns and growth of the population in future years. Adjustment to specific projects and improvement schedules will likely need to be adjusted depending on where growth occurs within Joseph.

Street System Plan

The street system plan recommends changes to the current street classification system and outlines a series of improvements that are recommended for construction within the City of Joseph during the next 20 years. These options have been discussed in Chapter 6 (Improvement Options Analysis). The proposed street system plan is shown in Figure 7-4.

Street System Functional Classification

Street system functional classifications relate the design of a roadway to its function. The function is determined by operational characteristics such as traffic volume, operation speed, safety and capacity.

The City of Joseph currently classifies all streets within the corporate boundary as either major arterials, minor arterials or collectors. The analysis of the existing street system indicated that many of the streets within the community function differently than their classification. For example, most roadways are classified as collectors when they actually function as local streets. Most of these streets do not meet the design standards of collectors which include multiple travel lanes, on-street parking, curbs and sidewalks and access limitations. In addition, the Oregon Transportation Planning Rule requires that streets classified as major collectors or higher (includes major and minor arterial) must include bike lanes. Currently, none of the major or minor arterials in Joseph include bike lanes.

The City of Joseph should reclassify its street system so that each street's classification more closely matches its actual design and function. This could be accomplished by classifying all streets as either arterial, collector, residential, or alley. The following roadway classifications are recommended:

- Highway 82 (Main Street north of 8th Street and 8th Street east of Main Street) -- change classification from major arterial to arterial, as it is a state highway of statewide level of importance, it carries the highest traffic volumes in the city, and it is the primary route to Joseph from the rest of the state.

- Highway 350 (Wallowa Avenue) -- change classification from minor arterial to arterial, as it is a state highway of district level of importance, and it is the primary route to and from Imnaha.

- Russell Lane -- retain classification as a collector, as its function is to connect Joseph State Airport, industrial land uses, and residential land uses with the arterial roadway system.

- Alder Street - retain classification as a collector, as its function is to connect the mill with the arterial system.

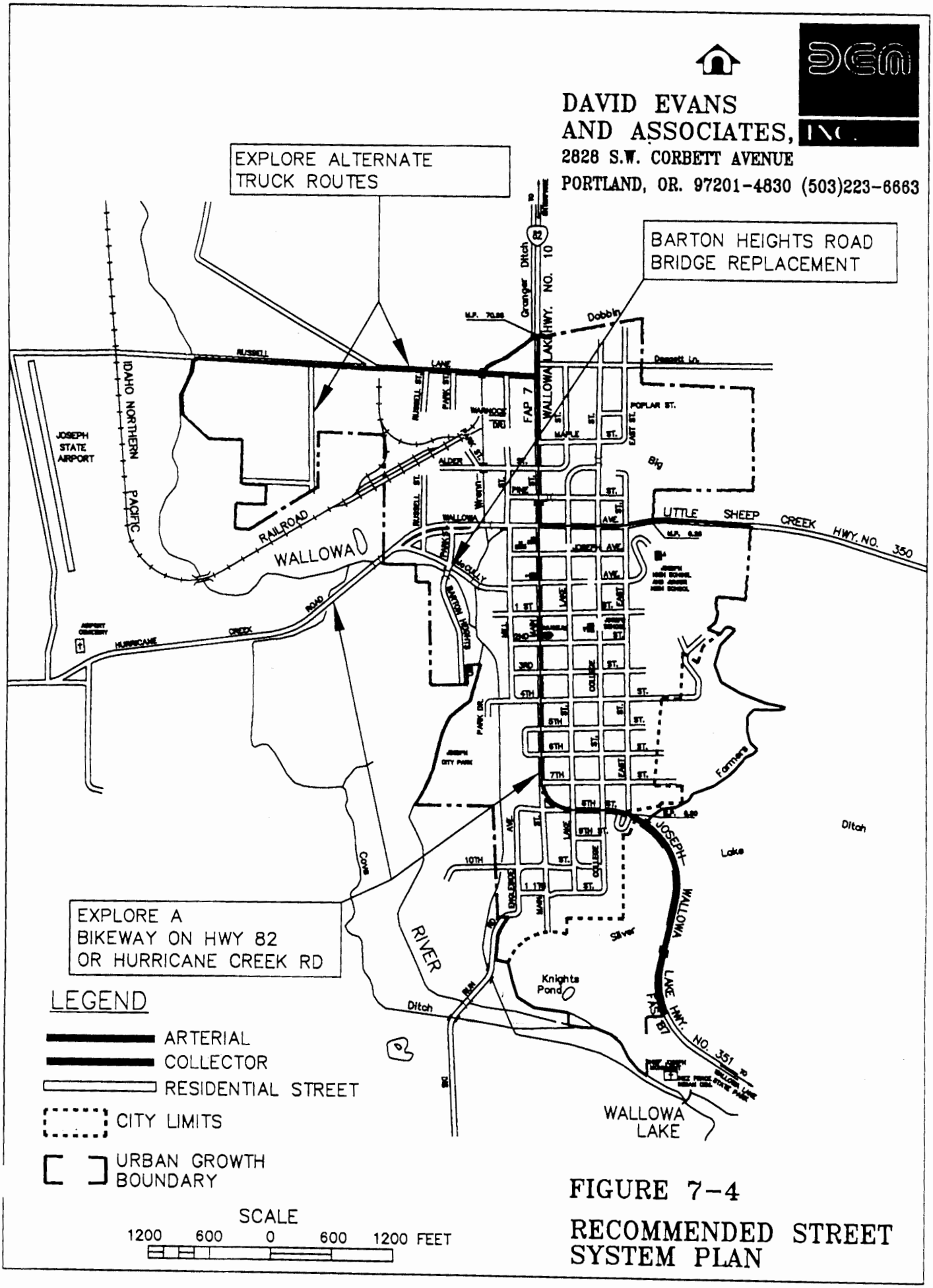

FIGURE 7-4

RECOMMENDED STREET SYSTEM PLAN

- Camp Street - retain classification as a collector, as its function is to connect the mill with the arterial system. However, residential properties align the east side of Camp Street and deviate from spacing standards for collector streets as shown in Table 7-2.

- All other roadways -- change classification from collector to residential.

No direct costs are associated with making the classification changes.

Street Improvement Projects

Table 7-3 presents three street improvement projects, including bridges on city streets that are included in the street system plan. Two of the projects are listed as high priority (construction expected in the next 0 to 5 years), one is listed as medium priority, and one is listed as low priority (construction in the next 20 years). The cost of implementing each of these projects is not known.

TABLE 7-3
RECOMMENDED STREET SYSTEM PROJECTS

Location	Project	Priority	Cost
Highway 82.	Implement speed control measures	High	unknown
Highway 82	Explore Alternate Truck Routes	Medium	unknown
Barton Heights Rd	Bridge replacement	Low	unknown
Total			**unknown**

Speed Control Measures

The City of Joseph should develop a system of speed control measures that will discourage motorists from exceeding the speed limit along Highway 82 within Joseph. There are a variety of different speed control measures which can be implemented, ranging from narrowing lane widths to more stringent enforcement.

The small size of the City of Joseph might make it difficult to raise funding to pay for these measures. However, if the costs are shared with several other cities, Wallowa County, and even the state, it may be possible for Joseph to implement a speed control program. Discussions with other jurisdictions should be a high priority for city officials to determine what kind of county-wide enforcement program may be possible and how the city could participate in and contribute to it. The total estimated cost of these speed control measures cannot be easily calculated because exact programs are unknown at this time.

Pedestrian System Plan

A complete pedestrian system should be implemented in the city. Every paved street should have sidewalks on both sides of the roadway, except in extenuating circumstances, meeting the requirements set forth in the recommended street standards. Pedestrian access on walkways should be provided between all buildings including shopping centers and abutting streets and adjacent neighborhoods. (Ordinances specifying these requirements are included in Chapter 9.)

A sidewalk inventory revealed that the downtown core of Joseph has sidewalks on the majority of blocks along Main Street, which supports extensive pedestrian activity. Many of the existing roadways outside of the downtown area do not have sidewalks.

The city's sidewalk system should be expanded to include, at a minimum, sidewalks along both sides of Highways 82/351 and 350 within the City Limits. Other blocks within the city's grid system which have a significant amount of pedestrian activity, such as in front of stores or schools, etc., should also have sidewalks. The primary goal of this improvement option is to improve pedestrian safety; however, an effective sidewalk system has several qualitative benefits as well. Providing adequate pedestrian facilities increases the livability of a city. When pedestrians can walk on a sidewalk, separated from vehicular street traffic, it makes the walking experience more enjoyable and may encourage walking, rather than driving, for short trips. Sidewalks enliven a downtown and encourage leisurely strolling and window shopping in commercial areas. This "Main Street" effect improves business for downtown merchants and provides opportunities for friendly interaction among residents. It may also have an appeal to tourists as an inviting place to stop and walk around.

The cost to construct a concrete sidewalk facility is around $35 per linear foot for a 6-foot wide sidewalk or $65 per linear foot for a 12-foot wide sidewalk including curbs. These cost estimates also assume the sidewalks are composed of 4 inches of concrete and 6 inches of aggregate.

New sidewalks should be constructed with curb cuts for wheelchairs at every crosswalk to comply with the Americans with Disabilities Act (ADA).

As street improvements are made to the existing street system, projects involving the construction of new sidewalks may require on-street parking to be implemented in place of parking on grass or gravel shoulders.

Table 7-4 contains a list of specific pedestrian improvements that will be needed over the next 20 years. (Figure 7-5 also shows these projects.) The high priority projects are for the next 0 to 5 years, the medium priority projects are for the next 5 to 10 years, the low priority projects are for the next 10 to 20 years. Sidewalks should be added as new streets are constructed and existing streets reconstructed. The implementation program identifies an approximate schedule for these improvements.

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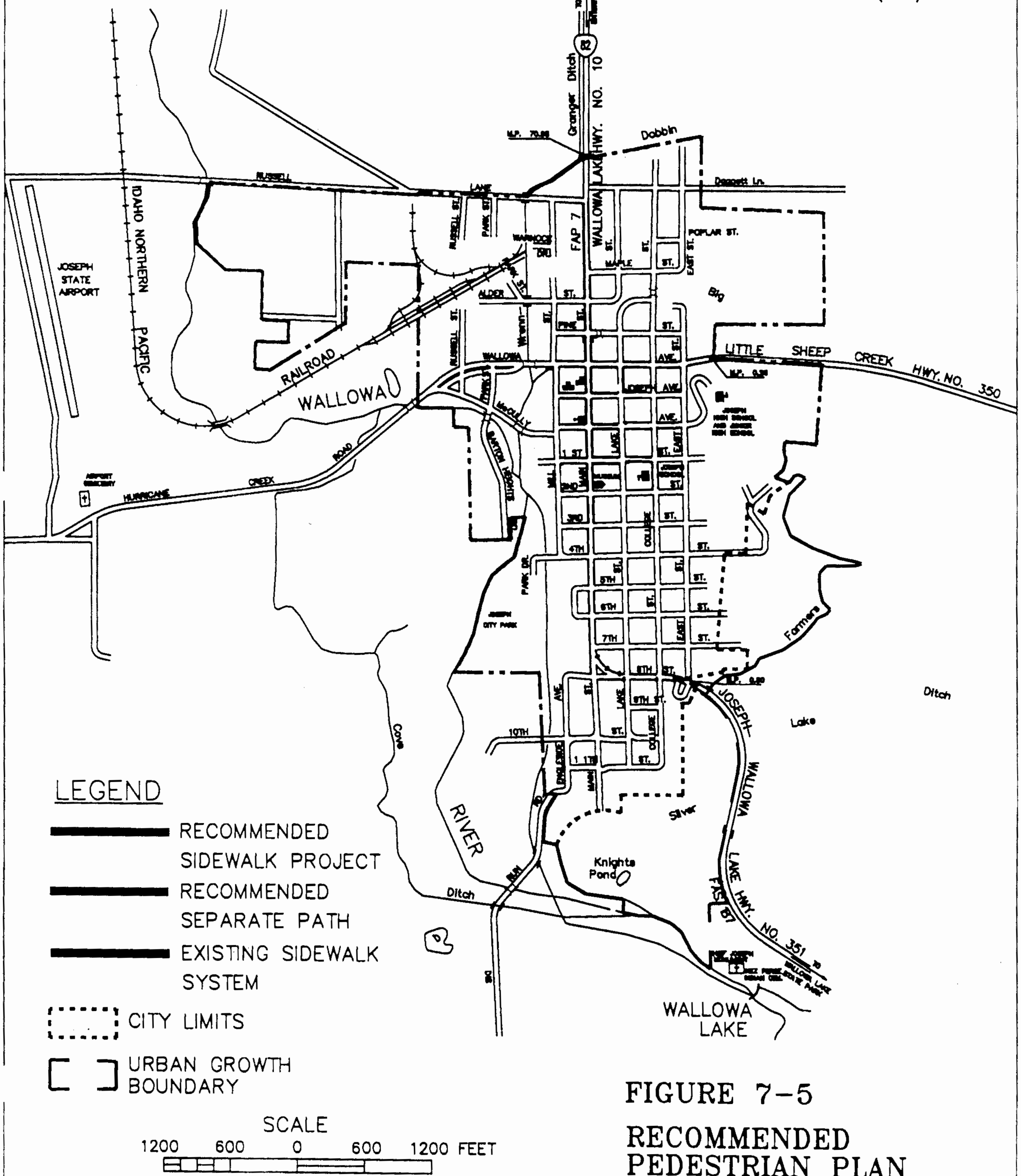


FIGURE 7-5

RECOMMENDED PEDESTRIAN PLAN

TABLE 7-4
RECOMMENDED PEDESTRIAN PROJECTS

Location	Project	Priority	Length (ft)	Cost
Main St. (Hwy 82)	3rd St. to 8th St.	High	1,500	$115,000
8th St. (Hwy 351)	Main St. to east City Line	High	1,200	$90,000
Wallowa Ave. (Hwy 350)	Main St. to East City Line	High	1,200	$90,000
Wallowa Ave.	Main St. to Park St.	High	900	$60,000
2nd Street	Main St. to College St.	High	600	$45,000
4th Street	Main St. to City Park	High	600	$45,000
McCully Ave	Lake St. to East St.	High	600	$45,000
1st Street	Lake St. to College Street	Medium	300	$23,000
College St.	1st St. to 2nd St.	Medium	300	$23,000
Wallowa Ave.	Mill St. to Main St.	Low	300	$23,000
Joseph Ave.	Mill St. to Main St.	Low	300	$23,000
McCully Ave.	Mill St. to Main Street	Low	300	$23,000
1st St.	Mill St. to Main St.	Low	300	$23.000
Subtotal High Priority Projects				$490,000
Subtotal Medium Priority Projects				$46,000
Subtotal Low Priority Projects				$92,000
Total				**$628,000**

Notes: Pedestrian projects include sidewalks on both sides unless otherwise noted. Costs are approximate.

The on-street pedestrian improvements only include sidewalk projects. Although shoulder additions serve pedestrians, they are not ideal because they are not separated from the roadway. Generally, shoulders are more of a benefit to cyclists than to pedestrians; therefore, proposed shoulder-widening or additions are discussed in the Bicycle System Plan section of this chapter.

A six-foot wide sidewalk with curbs already in place costs about $30 per linear foot. Adding a curb as well as a six-foot wide sidewalk costs about $35 per linear foot. In commercial areas, a 12-foot wide sidewalk with a curb would cost about $65 per linear foot. Applying these costs to a typical block in Joseph would require about 600 linear feet of sidewalk (2 x 300 feet). For a six-foot wide sidewalk including curbs, the cost would be approximately $23,000. With curbs already in place, the cost would be approximately $20,000.

Asphalt pathways could be provided instead of a concrete sidewalk. In general, asphalt pathways are a lower cost alternative to concrete sidewalks. Construction costs for asphalt pathways are about 40 percent of the costs for concrete sidewalks; however, the life expectancy of asphalt is less than that of concrete and maintenance, such as sealing and resurfacing the asphalt, must occur more frequently. Furthermore, sidewalks should be uniform throughout the downtown area, and asphalt pathways would not have the same visual character as concrete sidewalks.

Missing sidewalk segments should be infilled whenever an opportunity presents itself (such as infill development, special grants, etc.), concentrating on arterial streets, collectors, and school routes.

Bicycle System Plan

Goals and objectives of the city's bicycle plan include reducing conflicts between bicyclists and motorized vehicle traffic, developing a system dedicated to bicycles, and providing opportunities for recreational bicycle use. Two options for meeting these goals include adding a bikeway on Highway 82 and Hurricane Creek Road.

Shared roadways, where bicyclists share normal vehicle lanes with motorists, are generally acceptable if speeds and traffic volumes are relatively low. On the collector and local streets in Joseph, shared roadways are not an issue; however, on arterial roadways bike lanes are recommended.

Highway 82 functions as an arterial street through Joseph, which means that it should have bike lanes on both sides of the street as specified in the recommended street standards described earlier and as required by the TPR. Accident statistics on the highway do not indicate that there are frequent conflicts between bicyclists and motorized vehicles. To install bicycle lanes along Highway 82 would involve removing on-street parking through downtown Joseph. Shoulders would need widening on sections where no on-street parking exists. Some of these improvements would be expensive and others would be controversial. At this time, no specific bikeway improvements are recommended for Highway 82; however, ODOT should track both traffic volumes and accident rates on this facility to identify any problems in the future.

The Wallowa County TSP describes a bikeway on Hurricane Creek Road between Enterprise and Joseph. In rural areas without curbs and sidewalks, the typical recommended facility is a shoulder bikeway, where a six-foot standard paved shoulder is provided for bicycles. According to the *Oregon Bicycle and Pedestrian Plan*, the guideline for rural collectors with an ADT of less than 400 vpd, the paved shoulder can be as little as two feet wide. Hurricane Creek Rd. would not meet the traffic volume requirement for a separate bike lane, but at a minimum, a two-foot-wide paved shoulder for bikes is recommended.

Oregon Highway 82 Corridor Plan

The *Oregon Highway 82 Corridor Plan* describes a bike route on Hurricane Creek Road. This county road would not need widening but would require appropriate signage and an overlay to provide a smooth surface. An exception from the policies of the *Oregon Bicycle and Pedestrian Plan* would be required to implement this option. The estimated cost for a bike route on Hurricane Creek Road is $200,000 (1995 dollars). The project is a high priority project (for the next 0 to 5 years).

The plan also recommends a bicycle facility between Wallowa Lake State Park and the City of Joseph. The project is listed as a medium priority project (for the next 5 to 10 years). Five options, ranging in cost from $80,000 to $5.2 million (1995 dollars), have been reviewed. These options are described further in the Wallowa County TSP.

The *Oregon Highway 82 Corridor Plan* recommends collaboration among ODOT, Wallowa County, local jurisdictions, and other appropriate agencies to develop a Highway 82 corridor bicycle refinement plan. The plan will integrate municipal and county bike plans with the existing statewide plan and could be used to determine where to prioritize investment in Highway 82. A promotional strategy for the corridor bicycle system will be developed including mapping, signage and marketing.

Transportation Demand Management Plan

Through transportation demand management (TDM), peak travel demands can be reduced or spread to more efficiently use the transportation system, rather than building new or wider roadways. Techniques which have been successful and could be initiated to help alleviate some traffic congestion include carpooling and vanpooling, alternative work schedules, bicycle and pedestrian facilities, and programs focused on high density employment areas.

In Joseph, where traffic volumes are low and the population and employment is small, implementing TDM strategies is not practical in most cases. However, the sidewalks improvements recommended earlier in this chapter are also considered TDM strategies. By providing these facilities, the City of Joseph is encouraging people to travel by other modes than the automobile. In rural communities, TDM strategies include providing mobility options.

Because intercity commuting is factor in Wallowa County, residents who live in Joseph and work in other cities should be encouraged to carpool with a fellow coworker or someone who works in the same area. Implementing a local carpool program in Joseph alone is not practical because of the city's small size; however, a county-wide carpool program is possible. The City of Joseph should support state and county carpooling and vanpooling programs which could further boost carpooling ridership.

No costs have been estimated for the TDM plan. Grants may be available to set up programs; other aspects of transportation demand management can be encouraged through ordinance and policy.

Public Transportation Plan

Public transportation in Joseph consists of the Wallowa Valley Stage Line and Community Connection.

The Wallowa Valley Stage Line is operated by the Moffit Brothers and is based in Lostine. It provides van service which transports passengers to Enterprise, Lostine, Wallowa, and several cities in Union County, including La Grande. In La Grande, passengers can connect to Greyhound bus service. In addition to transporting passengers, the line also transports packages.

The senior citizens and persons with disabilities service is provided by Community Connection. It operates two 12-passenger, lift-equipped buses, one based in Enterprise and one based in Wallowa. The buses make one trip per day between Enterprise and Joseph and between Wallowa and Lostine. On Mondays, Wednesdays, and Fridays, the buses transport senior citizens and persons with disabilities to meal sites in Enterprise and Wallowa. On Tuesdays and Thursdays, the general public can use the service as well. On Tuesdays, the bus based in Wallowa goes to Enterprise. The operator estimates that the service is currently underutilized.

Another type of public transportation service available in the county is client transportation, which is provided by a social service or health care agency to individuals participating in the agency's service program. This type of public transportation is offered by the Wallowa County Health Care District and the Wallowa County Nursing Home. A volunteer driver program is also administered in Wallowa County by each of these social service and health care agencies as well as the Department of Human Resources Volunteer Program. A volunteer driver program is a community based program to provide drivers to transport specific client groups.

No specific expansions of these services are currently planned; however, intercity connections and public transportation for senior citizens and persons with disabilities should be maintained and increased usage of these services should be encouraged.

The city has no local fixed-route transit service at this time. The small size and low traffic volumes on city streets indicate that mass transit is not necessary nor economically feasible at this time. The Transportation Planning Rule exempts cities with a population of less than 25,000 from including mass transit facilities in their development regulations. However, Joseph can plan for future transit services with growth patterns that support rather than discourage transit use in the future.

The existing stage line services already meet the required daily trip to a larger city specified for communities the size of Joseph in the Oregon Transportation Plan.

No costs have been estimated for this modal plan. Grants may be available to conduct feasibility studies. State and Federal funding may be available to purchase equipment.

Oregon Highway 82 Corridor Plan

The *Oregon Highway 82 Corridor Plan* calls for preparation of a Public Transportation Plan that integrates all appropriate public transit to make the most efficient use of scarce public transit resources. The product will be a comprehensive public/private transit plan for the corridor.

Rail Service Plan

Joseph has no passenger rail service. The Idaho Northern Pacific Railroad (INP) owns an abandoned freight line which runs through the southern part of town. The rails and bridges are in good condition and retaining transportation use of the line is a goal of the local jurisdictions. Discussions among INP, state agencies, local jurisdictions and shippers concerning the future of the rail line and right-of-way are on-going.

Efforts should be made to retain the right-of-way as a utility corridor or as a possible recreational trail. Such a situation would preserve the integrity of the right-of-way and the possibility of future rail service. The Transportation Planning Rule requires that jurisdictions protect right-of-ways for future operation of transportation corridors.

The *Oregon Highway 82 Corridor Plan* describes a service improvement decision to work with Wallowa County and local jurisdictions, the ODOT Rail Section, Oregon Parks and Recreation Department and INP to develop a plan that addresses the ongoing preservation of the Elgin-Joseph rail line for freight transportation. Potential alternatives considered for the line include preserving the line as a freight railroad, modifying it for an excursion train, converting it into a trail system, or as a corridor for fiber optic cables. The cost of the right-of-way between Elgin and Joseph was estimated at $2.5 million (1995 dollars).

Air Service Plan

Joseph is serviced by the Joseph State Airport, which is under the jurisdiction the Oregon Department of Aviation. In 1996, the Department of Aviation replaced the runway surface on the existing runway and extended the runway from 3 800 feet to 5 500 feet. This project improved the condition and safety of this airport. The Joseph State Airport is an integral part of the State's Airport System, as it provides better access to an area of the state that is somewhat remote. The airport provides a multitude of services including recreational transportation, search and rescue, medical transport, fire fighting as well as some types of commerce transport. The Oregon Transportation Commission adopted the 2000 Oregon Aviation Plan in March. The plan establishes a policy that encourages the Department of Aviation to transfer state-owned airports to local

governments where feasible. Other policies include protecting airports from incompatible land uses, and providing an airport system that is integrated with surface transportation modes and allows for a choice of modes for the movement of people and goods.

The Joseph State Airport is located outside of the City's Urban Growth Boundary. The airport is currently zoned Industrial (M-1) with Exclusive Farm Use (EFU) land north and south and Rural Residential (RR-1) with 5 acre lots to the west of the airport. Land east of the airport is within the City of Enterprise Watershed and is unlikely to be developed. A complete assessment of potential land use development impacts to the airport is included in the current Joseph State Airport Master Plan.

Efforts should be made by the city to retain or expand its air service through compatible land use planning. As per OAR 660, Division 13: Airport Planning, local comprehensive plan and land use regulation requirements must be consistent with adopted elements of the state Aviation System Plan. This includes adopting an Airport Safety Overlay Zone and airport compatibility requirements for other uses surrounding the airport.

Pipeline Service Plan

There are currently no pipelines serving Joseph. There has been interest expressed in the communities of Wallowa County to extend natural gas service from Elgin.

Water Transportation Plan

Joseph has no waterborne transportation services.

TRANSPORTATION SYSTEM PLAN IMPLEMENTATION PROGRAM

Implementation of the Joseph Transportation System Plan will require both changes to the city comprehensive plan and zoning code and preparation of a 20-year Capital Improvement Plan. These actions will enable Joseph to address both existing and emerging transportation issues throughout the urban area in a timely and cost effective manner.

One part of the implementation program is the formulation of a 20-year Capital Improvement Plan (CIP). The purpose of the CIP is to detail what transportation system improvements will be needed as Joseph grows and provide a process to fund and schedule the identified transportation system improvements. It is expected that the Transportation System Plan Capital Improvement Plan can be integrated into the existing city CIP and the ODOT STIP. This integration is important since the TSP proposes that both governmental agencies will fund some of the transportation improvement projects.

Model policy and ordinance language that conforms with the requirements of the Transportation Planning Rule is included in Chapter 9. The proposed ordinance amendments will require approval by the City Council and those that affect the unincorporated urban area will also require approval by the Board of County Commissioners.

20-Year Capital Improvement Program

The CIP is shown with the following priorities:

- High Priority (next 0 to 5 years)
- Medium Priority (next 5 to 10 years)
- Low Priority (next 10 to 20 years)

These priorities are based on current need, the relationship between transportation service needs, and the expected growth of the city. The following schedule indicates priorities and may be modified to reflect the availability of finances or the actual growth in population and employment.

Table 7-5 summarizes the CIP. It lists the projects by type, prioritizes them, and provides cost information. The cost estimates for all the project listed on the CIP were prepared on the basis of 1997 dollars. These costs include design, construction, and some contingency costs. They are preliminary estimates and generally do not include right-of-way acquisition, water or sewer facilities, adding or relocating public utilities, or detailed intersection design.

Joseph has identified a total of 17 projects in its CIP with a cost of about $882,000. Nine high priority projects have been identified with a cost of about $690,000. Four medium priority projects have been identified with a cost of about $46,000. Finally, four low priority projects have been identified, with a cost of about $92,000.

TABLE 7-5
PRIORITIZED CAPITAL IMPROVEMENT PROGRAM
(2000) DOLLARS

Project Description	Local Cost	County Cost	State Cost	Total Cost
High Priority				
Sidewalk on Main St. (Highway 82) between 3rd St. and 8th St.			$115,000	$115,000
Sidewalk on 8th St. (Highway 82) between Main St. and East City Line			$90,000	$90,000
Sidewalk on Wallowa Ave. (Highway 350) between Main St. and East City Line			$90,000	$90,000
Sidewalk on Wallowa Ave. between Main St. and Park St.			$60,000	$60,000
Sidewalk on McCully Ave. between Lake St. and East Sts.			$45,000	$45,000
Sidewalk on 2nd St. between Main St. and College St.			$45,000	$45,000
Sidewalk on 4th St. between Main Sts. and City Park			$45,000	$45,000
Hurricane Creek Rd. bikeway between Enterprise and Joseph[1]		$200,000		$200,000
Implement speed control measures on Highway 82	unknown		unknown	unknown
Medium Priority				
Explore alternative truck routes	unknown			unknown
Sidewalk on 1st St. between Lake St. and College St.	$23,000			$23,000
Sidewalk on College St. between 1st St. and 2nd St.	$23,000			$23,000
Bikeway between Joseph and Wallow Lake State Park[2]	unknown			unknown
Low Priority				
Sidewalk on Wallowa Ave. between Mill St. and Main St.	$23,000			$23,000
Sidewalk on Joseph Ave. between Mill St. and Main St.	$23,000			$23,000
Sidewalk on McCully Ave. between Mill St. and Main St.	$23,000			$23,000
Sidewalk on 1st St. between Mill St. and Main St.	$23,000			$23,000
High Priority	$0	$200,000	$490,000	$690,000
Medium Priority	$91,000	$0	$0	$46,000
Low Priority	$92,000	$0	$0	$92,000
Total	**$138,000**	**$200,000**	**$490,000**	**$828,000**

Notes:
1) Most of this project is outside the Joseph city limits. $200,000 cost estimate (1995 dollars).
2) Most of this project is outside the Joseph city limits. Cost estimates range from $80,000 to $5.2 million (1995 dollars).

CHAPTER 8: FUNDING OPTIONS AND FINANCIAL PLAN

The Transportation Planning Rule requires Transportation System Plans to evaluate the funding environment for recommended improvements. This evaluation must include a listing of all recommended improvements, estimated costs to implement those improvements, and a review of potential financing mechanisms to fund proposed transportation improvement projects. The City of Joseph's TSP identifies $882,000 in improvements recommended over the next 20 years. This section of the Transportation System Plan provides an overview of the City of Joseph's revenue outlook and a review of some funding and financing options that may be available to the City of Joseph.

Pressures from increasing growth throughout much of Oregon have created an environment of recommended improvements that remain unfunded. The City of Joseph will need to work with Wallowa County and ODOT to finance new transportation projects over the 20-year planning horizon. The actual timing of these projects will be determined by the rate of population and employment growth actually experienced by the community. If population growth exceeds the anticipated rate, the improvements may need to be accelerated. Slower than expected growth will relax the improvement schedule. Availability of funding will also play an important role in the implementation program.

HISTORICAL STREET IMPROVEMENT FUNDING SOURCES

In Oregon, state, county, and city jurisdictions work together to coordinate transportation improvements. In addition to this overlapping jurisdiction of the road network, transportation improvements are funded through a combination of federal, state, county, and city sources.

Table 8-1 shows the distribution of road revenues for the different levels of government within the state by jurisdiction level. Although these numbers were collected and tallied in 1991, ODOT estimates that these figures accurately present the current revenue structure for transportation-related needs.

TABLE 8-1
SOURCES OF ROAD REVENUES BY JURISDICTION LEVEL

	Jurisdiction Level			Statewide
Revenue Source	**State**	**County**	**City**	**Total**
State Road Trust	58%	38%	41%	48%
Local	0%	22%	55%	17%
Federal Road	34%	40%	4%	30%
Other	9%	0%	0%	4%

Source: ODOT 1993 Oregon Road Finance Study.

At the state level, nearly half (48 percent in Fiscal Year 1991) of all road-related revenues are attributable to the State Highway Fund, whose sources of revenue include fuel taxes, weight-mile taxes on trucks, and vehicle registration fees. As shown in the table, the state road trust is a considerable source of revenue for all levels of government. Federal sources (generally the federal highway trust account and federal forest revenues) comprise another 30 percent of all road-related revenue. The remaining sources of road-related revenues are generated locally, and include property taxes, LIDs, bonds, traffic impact fees, road user taxes, general fund transfers, receipts from other local governments, and other sources.

As a state, Oregon generates 94 percent of its highway revenues from user fees, compared to an average of 78 percent among all states. This fee system, including fuel taxes, weight distance charges, and registration

fees, is regarded as equitable because it places the greatest financial burden upon those who create the greatest need for road maintenance and improvements. Unlike many states that have indexed user fees to inflation, Oregon has static road-revenue sources. For example, rather than assessing fuel taxes as a *percentage* of price per gallon, Oregon's fuel tax is a fixed amount (currently 24 cents) per gallon.

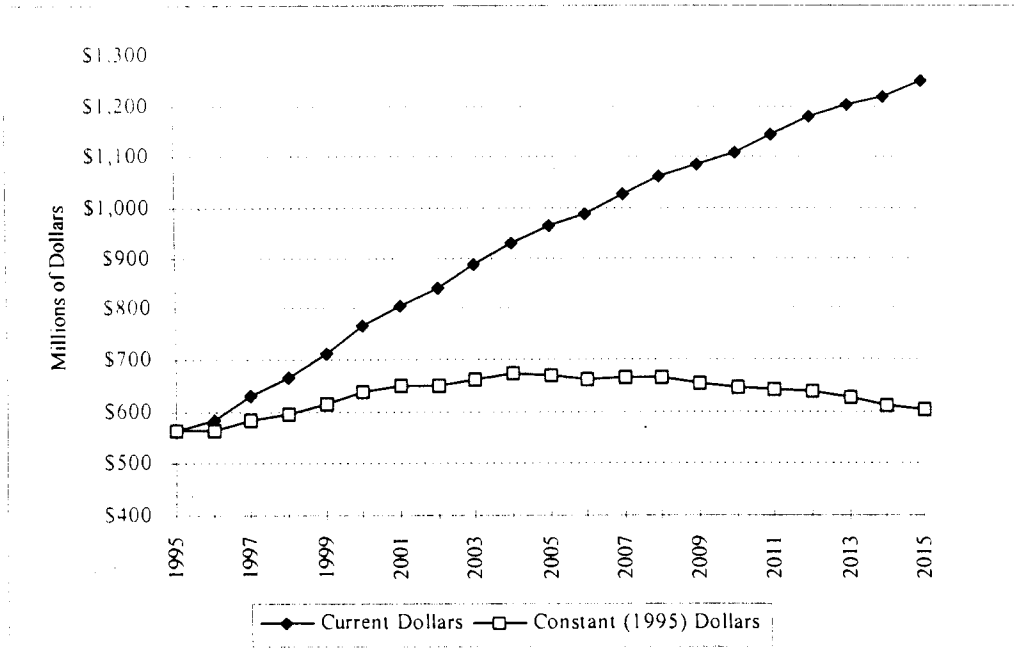
Transportation Revenue Outlook

ODOT's policy section recommends certain assumptions in the preparation of transportation plans. In its *Financial Assumptions* document prepared in March 1995, ODOT projected the revenue of the State Highway Fund through year 2018. The estimates are based on the following assumptions:

- Fuel tax (and weight-mile fee) increases of one cent per gallon per year, with an additional one cent per gallon every fourth year;
- Transportation Planning Rule goals are met; and
- Inflation occurs at an average annual rate of 3.7 percent (as assumed by ODOT).

Figure 8-1 shows the forecast in both current-dollar and inflation-deflated constant (1995) dollars. As highlighted by the constant-dollar data, the highway fund is expected to grow faster than inflation early in the planning horizon, with growth slowing to a rate somewhat less than inflation around year 2004, continuing a slight decline through the remainder of the planning horizon.

FIGURE 8-1
STATE HIGHWAY FUND



Source: ODOT Financial Assumptions.

The State Highway Fund is expected to remain a significant source of funding for the City of Joseph during the next 20 years. Although the city has historically received revenue from this fund for transportation

maintenance and improvements, Joseph should be cautious of relying heavily on this source, since funds are expected to decline after 2005.

REVENUE SOURCES

In order to finance the recommended transportation system improvements in Joseph, it will be important to consider a range of funding sources. Recent property tax limitations have created the need for local governments to seek revenue sources other than the traditional property tax. The use of alternative revenue funding has been a trend throughout Oregon as the full implementation of Measure 5 has significantly reduced property tax revenues. This trend is expected to continue with the recent passage of Measure 47 and its revised version, Measure 50. The alternative revenue sources described in this section may not all be appropriate in the City of Joseph; however, this overview is being provided to illustrate the range of options currently available to finance transportation improvements during the next 20 years.

Property Taxes

Property taxes have historically been the primary revenue sources for local governments. However, property tax revenue goes into general fund operations, and is not typically available for street improvements or maintenance. The dependence of local governments on this revenue source is due largely to the fact that property taxes are easy to implement and enforce. Property taxes are based on real property (i.e., land and buildings) which have a predictable value and appreciation, in contrast to income or sales taxes, which can fluctuate with economic trends or unforeseen events.

Property taxes can be levied through: 1) tax base levies, 2) serial levies, and 3) bond levies. The most common method uses tax base levies which do not expire and are allowed to increase by six percent per annum. Serial levies are limited by amount and time they can be imposed. Bond levies are for specific projects and are limited by time based on the debt load of the local government or the project.

The historic dependence on property taxes changed with the passage of Ballot Measure 5 in 1990. Ballot Measure 5 created an amendment to the Oregon Constitution limiting the property tax rate for purposes other than payment of certain voter-approved general obligation indebtedness. Under full implementation, the tax rate for all local taxing authorities is limited to $15 per $1,000 of assessed valuation. As a group, all non-school taxing authorities are limited to $10 per $1,000 of assessed valuation. All tax base, serial, and special levies are subject to the tax rate limitation. Ballot Measure 5 requires that all non-school taxing districts property tax rate be reduced if together they exceed $10 per $1,000 per assessed valuation by county. If the non-debt tax rate exceeds the constitutional limit of $10 per $1,000 of assessed valuation, then all of the taxing districts' tax rates are reduced on a proportional basis. The proportional reduction in the tax rate is commonly referred to as compression of the tax rate.

Any new funding sources will also need to be reconciled with Measure 47, an initiative petition passed by Oregon voters in November 1996. The measure created a constitutional amendment that reduces and limits property taxes and limits local revenues and replacement fees. The measure limits 1997-98 property taxes to the lesser of 1995-96 tax minus 10 percent, or 1994-95 tax. It limits future annual property tax increase to three percent, with exceptions. Local governments' lost revenue may be replaced only with state income tax, unless voters approve replacement fees or charges. Tax levy approvals in certain elections require 50 percent voter participation.

Measure 47 adds another layer of restrictions to those which govern the adoption of tax bases and levies outside the tax base, as well as Measure 5's tax rate limits for schools and non-schools and tax rate exceptions for voter-approved debt. Each new levy and the imposition of a property tax must be tested against a longer series of criteria before the collectible tax amount on a parcel of property can be determined.

The state legislature created Measure 50, which retains the tax relief of Measure 47 but clarifies some legal issues. This revised tax measure was approved by voters in May 1997 and it now replaces Measure 47.

The League of Oregon Cities (LOC) estimated that direct revenue losses to local governments, including school districts, totaled $467 million in fiscal year 1998, $553 million in 1999, and increases thereafter. The actual revenue losses to local governments will depend on actions of the Oregon Legislature. LOC also estimates that the state will have revenue gains of $23 million in 1998, $27 million in 1999, and increasing thereafter because of increased personal and corporate tax receipts due to lower property tax deduction.

These measures will impact the ability of cities to pay for transportation improvements out of general funds or other funds created through property taxes. In addition, it may impact cities abilities to create alternative funding sources if those sources are perceived to be in replacement of property tax revenue.

System Development Charges

System Development Charges (SDCs) are becoming increasingly popular in funding public works infrastructure needed for new local development. Generally, the objective of systems development charges is to allocate portions of the costs associated with capital improvements upon the developments which increase demand on transportation, sewer or other infrastructure systems.

Local governments have the legal authority to charge property owners and/or developers fees for improving the local public works infrastructure based on projected demand resulting from their development. The charges are most often targeted towards improving community water, sewer, or transportation systems. Cities and counties must have specific infrastructure plans in place that comply with state guidelines in order to collect SDCs.

The City of Joseph could implement SDCs for their transportation system. The fee is collected when new building permits are issued. The cities would calculate the fee based on trip generation of the proposed development. Residential calculations would be based on the assumption that a typical household will generate a given number of vehicle trips per day. Nonresidential use calculations are based on the number of trips generated or on employee ratios for the type of business or industrial uses. The SDC fees will help construct and maintain of the transportation network throughout the TSP study area.

Gas Tax, License Fee, and Vehicle Weight

The state of Oregon collects revenues to fund transportation needs almost exclusively through user fees. These fees are collected through state fuel taxes, vehicle registration fees, overweight/overheight fines, and vehicle weight/mile taxes on heavy vehicles weighing in excess of 26,000 pounds.

Oregon's vehicle registration fee, at $30 every two years, is a relatively minor source of revenue for highways and roads, generating less than 10 percent of total highway user tax and fee revenue. In 1990, vehicle registration fees were increased by 50 percent, the first increase in 40 years. Compared to other states, Oregon's registration fee is low; registration fees in other states range from a low of $8.00 annually in Arizona to $125 annually in Minnesota. Vehicle registration fees are allocated to the state, counties, and cities for road funding.

The state allocates a portion of the revenue to counties and cities and retains the remainder for state programs. Currently, the state retains approximately 60 percent of these taxes and distributes close to 25 percent to the counties and just over 15 percent to the cities. The revenue share to cities is divided among all incorporated cities based on population.

Local Gas Taxes

The Oregon Constitution permits counties and incorporated cities to levy additional local gas taxes with the stipulation that the monies generated from the taxes will be dedicated to street-related improvements and maintenance within the jurisdiction. At present, only a few local governments (including the cities of Woodburn and The Dalles, and Multnomah and Washington Counties) levy a local gas tax. Based on the experiences of other local jurisdictions, the City of Joseph may have difficulty gaining public support for a local gas tax, even on a county-wide basis.

Local Vehicle Registration Fees

Although cities do not currently have the legislative authority to impose local registration fees, Oregon Revised Statues (ORS) grants counties and special districts the right to establish registration fees for vehicles. Counties and districts, however, are limited to a maximum of $30 for a two-year period on allowed classes of motor vehicles. To establish an ordinance imposing the fee, the county must first obtain the approval of the electors of the county. The ordinance must be filed with the Department of Transportation. The governing body of the county must enter into an intergovernmental agreement with the department outlining the rules for administration of laws authorizing county and district registration fees and for the collection of the fees. The owner of any vehicles subject to multiple fees is allowed a credit or credits with respect to such fees so that the total of such fees does not exceed $30.

Although vehicle registration fees have not yet been imposed by any local jurisdictions in the state, Deschutes County could impose a registration fee for all passenger cars and other specified classes of vehicles licensed within the county. The county must pay at lease 40 percent of the money to cities within the county unless a different distribution is agreed to between the county and the cities within the jurisdiction of the county. The funds may be used for any purpose for which the moneys for registration fees may be used.

Local Improvement Districts

The Oregon Revised Statutes allow local governments to form Local Improvement Districts (LIDs) to construct public improvements. LIDs are most often used by cities to construct localized projects such as streets, sidewalks or bikeways. The statutes allow formation of a district by either the city government or property owners. Cities that use LIDs are required to have a local LID ordinance that provides a process for district formation and payback provisions. Through the LID process, the cost of local improvements are

generally spread out among a group of property owners within a specified area. The cost can be allocated based on property frontage or other methods such as traffic trip generation. The types of allocation methods are only limited by the Local Improvement Ordinance. The cost of LID participation is considered an assessment against the property which is a lien equivalent to a tax lien. Individual property owners typically have the option of paying the assessment in cash or applying for assessment financing through the city. Since the passage of Ballot Measure 5, cities have most often funded local improvement districts through the sale of special assessment bonds.

Urban Renewal Districts

The Oregon Revised Statutes allow a city or county to create an urban renewal agency to improve "blighted areas" within the municipality. These areas must be detrimental to the health, safety, or welfare of the community because of deterioration, faulty planning, inadequate or improper facilities, and/or deleterious land use. The agency must prepare an urban renewal plan that describes the blighted area, how the area will be improved, and specific improvement projects. The agency can acquire funds by issuing bonds, borrowing money, and accepting loans or grants from any sources, public or private. Taxes from the property within the urban renewal district are collected at the normal rate. However, additional tax revenue generated by improvements within the district must be used for additional improvements within the district instead of being evenly distributed throughout the municipality. Typically, urban renewal districts last for 20 years.

Grants and Loans

The majority of the grant and loan programs available today are geared towards economic development and not specifically for construction of new streets. Typically, grant programs target areas that lack basic public works infrastructure needed to support new or expanded industrial businesses. Because of the popularity of some grant programs such as the Oregon Special Public Works Fund, the emphasis has shifted to more of a loan program. Many programs require a match from the local jurisdiction as a condition of approval. Because grant programs are subject to change, they should not be considered a secure long-term funding source for the City of Joseph.

These programs include the Immediate Opportunity Grant, the Oregon Special Public Works Fund program, and the Special Small City Allotment program which are described below. Some special programs for public transportation and non-auto modes are also described briefly.

ODOT Immediate Opportunity Grant Program

The Oregon Economic Development Department (OEDD) and ODOT jointly administer a grant program designed to assist local and regional economic development efforts. The program is funded to a level of approximately $7 million per year through state gas tax revenues. The following factors determine which projects are eligible for grants:

- Improvement of public roads;
- Inclusion of an economic development-related project of regional significance;
- Creation or retention of primary employment; and
- Ability to provide local funds (50/50) to match grant.

The maximum amount of any grant under the program is $500,000. Local governments that have received grants under the program include Washington County, Multnomah County, Douglas County, the City of Hermiston, the Port of St. Helens, and the City of Newport.

Oregon Special Public Works Fund

The Special Public Works Fund (SPWF) program was created by the 1985 State Legislature as one of the several programs for the distribution of funds from the Oregon Lottery to economic development projects in communities throughout the State. The program provides grant and loan assistance to eligible municipalities primarily for the construction of public infrastructure that supports commercial and industrial development that result in permanent job creation or job retention. To be awarded funds, an infrastructure project must support businesses wishing to locate, expand, or remain in Oregon. SPWF awards can be used for improvement, expansion, and new construction of public sewage treatment plants, water supply works, public roads, or transportation facilities.

While SPWF program assistance is provided in the form of both loans and grants, the program emphasizes loans in order to assure that funds will return to the state over time for reinvestment in local economic development infrastructure projects. Jurisdictions that have received SPWF funding for projects that include some type of transportation-related improvement include Douglas County and the Cities of Baker City, Bend, Cornelius, Forest Grove, Madras, Portland, Redmond, Reedsport, Toledo, Wilsonville, and Woodburn

The contact person for the Oregon Special Public Works Fund is Betty Pongracz, who can be reached at (503) 986-0136.

Special Small City Allotment Program

This program is restricted to cities with populations under 5,000 residents. Unlike the OEDD Immediate Opportunity Grant program and the Oregon Special Public Works Fund, no locally funded match is required for participation. Grant amounts are limited to $25,000 and must be earmarked for surface projects (drainage, curbs, sidewalks, etc.). However, the program does allow jurisdictions to use the grants to leverage local funds on non-surface projects if the grant is used specifically to repair the affected area.

Transportation Enhancement Program

The federally-funded Transportation Enhancement Program earmarks $8 million annually for projects in Oregon. In order to receive funds, projects must demonstrate a link to the intermodal transportation system, compatibility with approved plans, and local financial support. A 10.27 percent local match is required. Each proposed project is evaluated against all other proposed projects in its region. Within the five Oregon regions, funds are distributed based on population, vehicle miles traveled, number of vehicles registered, and other transportation-related criteria.

The contact person for the Enhancement Program is Pat Rogers, who can be reached at (503) 986-3528.

Public Transportation Funds

There are several different grants and loans which are available to fund public transportation, including:

- Special Transportation Fund (STF)
- Section 5311
- Community Transportation Program
- Special Transportation District

These grant and loan programs require a local funding match from the participating local government agencies.

Bicycle and Pedestrian Program Funds

By law (ORS 366.514), all road street or highway construction or reconstruction projects must include facilities for pedestrians and bicyclists, with some exceptions. ODOT's Bike and Pedestrian Program administers two programs to assist in the development of walking and bicycling improvements: local grants, and Small-Scale Urban Projects. Cities and counties with projects on local streets are eligible for local grant funds. A 20 percent local match is required. Eligible projects include curb extensions, pedestrian crossings and intersection improvements, shoulder widening, and re-striping for bike lanes. Projects on urban state highways with little or no right-of-way taking and few environmental impacts are eligible for Small-Scale Urban Project Funds. Both programs are limited to projects costing up to $100,000. Projects that cost more than $100,000, require right-of-way acquisition, or have environmental impacts should be submitted to ODOT for inclusion in the STIP.

Many projects in the Redmond TSP would be eligible for partial funding though this program. All of the urban upgrade (road widening) projects would add bike lanes to roadways, and several projects would add sidewalks and/or bike lanes in existing right-of-way.

The contact person for the Bike-Pedestrian Grant Program is Michael Ronkin, who can be reached at (503) 986-3555.

Highway Bridge Rehabilitation or Replacement Program

The Highway Bridge Rehabilitation or Replacement Program (HBRR) provides federal funding for the replacement and rehabilitation of bridges of all functional classifications. A portion of the HBRR funding is allocated for the improvement of bridges under local jurisdiction. A quantitative ranking system is applied to the proposed projects based on sufficiency rating, cost factor, and load capacity. Projects are ranked against other proposed projects throughout the state, and require state and local matches of 10 percent each. The program includes the Local Bridge Inspection Program and the Bridge Load Rating Program.

The contact person for the Highway Bridge Rehabilitation or Replacement Program is Mark Hirota, who can be reached at (503) 986-3344.

Transportation Safety Grant Program

Managed by ODOT's Transportation Safety Section (TSS), this program's objective is to reduce the number of transportation-related accidents and fatalities by coordinating several statewide programs. These funds are intended for use as seed money, funding a program for three years. Eligible programs include those that address impaired driving, occupant protection, youth, pedestrians, speed enforcement, and bicycle and motorcycle safety. Every year, TSS produces a Highway Safety Plan that identifies the major safety programs, suggests counter measures to existing safety problems, and lists successful projects selected for funding, rather than granting funds through an application process.

The contact person for the Transportation Safety Grant Program is Troy Costales, who can be reached at (503) 986-4192.

Special Transportation Fund

The Special Transportation Fund (STF) awards funds to maintain, develop, and improve transportation services for people with disabilities and those over 60 years of age. Financed by a two-cent tax on each pack of cigarettes sold in the state, the annual distribution is approximately $5 million. Three-quarters of the available funds are distributed on a per-capita basis to mass transit districts, transportation districts, and -- where such districts do not exist -- counties. The remaining funds are distributed on a discretionary basis.

The contact person for the Special Transportation Fund is Gary Whitney, who can be reached at (503) 986-3885.

Oregon Transportation Infrastructure Bank

The Oregon Transportation Infrastructure Bank (OTIB) program is a revolving loan fund administered by ODOT to provide loans to local jurisdictions (including cities, counties, special districts, transit districts, tribal governments, ports, and state agencies). Eligible projects include construction of federal-aid highways, bridges, roads, streets, bikeways, pedestrian accessways, and right-of-way costs. Capital projects such as buses, light-rail cars and lines, maintenance yards, and passenger facilities are also eligible.

The contact person for the Oregon Transportation Infrastructure Bank is John Fink, who can be reached at (503) 986-3922.

State Transportation Improvement Program (STIP)

The State of Oregon provides funding for all highway-related transportation projects through the Statewide Transportation Improvement Program (STIP) administered by the Oregon Department of Transportation. The STIP outlines the schedule for ODOT projects throughout the State. The STIP, which identifies transportation for a three-year funding cycle, is updated on an annual basis. Starting with the 1998 budget year, ODOT will then identify projects for a four-year funding cycle. In developing this funding program, ODOT must verify that the identified projects comply with the Oregon Transportation Plan (OTP), ODOT Modal Plans, Corridor Plans, local comprehensive plans, and ISTEA Planning Requirements. The STIP must fulfill ISTEA/TEA-21 planning requirements for a staged, multi-year, statewide, intermodal program of transportation projects. Specific transportation projects are prioritized based on a review of the

ISTEA/TEA-21 planning requirements and the different state plans. ODOT consults with local jurisdictions before highway-related projects are added to the STIP.

The highway-related projects identified in the City of Joseph's Transportation System Plan will be considered for future inclusion on the STIP. The timing of including specific projects will be determined by ODOT based on an analysis of all the project needs within Region 5. The Transportation System Plan will provide ODOT with a prioritized project list for the City of Joseph for the next 20 years. The City of Joseph, Wallowa County, and ODOT will need to communicate on an annual basis to review the status of the STIP and the prioritization of individual projects within the project area. Ongoing communication will be important for the city, county, and ODOT to coordinate the construction of both local and state transportation projects.

An ODOT funding technique that will likely have future application to the City of Joseph's Transportation System Plan is the use of state and federal transportation dollars for off-system improvements. Until the passage and implementation of ISTEA, state and federal funds were limited to transportation improvements within highway corridors. ODOT now has the authority and ability to fund transportation projects that are located outside the boundaries of the highway corridors. The criteria for determining what off-system improvements can be funded has not yet been clearly established. It is expected that this new funding technique will be used to finance local system improvements that reduce traffic on state highways while preserving the existing function, capacity, level of service, and safety of the existing state highway.

On June 9, 1998, the Transportation Equity Act for the 21st Century (TEA-21) was enacted, authorizing highway, highway safety, transit, and other surface transportation programs for the next six years. TEA-21 combines the continuation and improvement of ISTEA programs with new initiatives such as: investing in research and deployment of Intelligent Transportation Systems, strengthening safety programs, and extension of the Disadvantaged Business Enterprises program. TEA-21 assures a guaranteed level of federal funding for surface transportation through FY 2003.

FINANCING TOOLS

In addition to funding options, the recommended improvements listed in this plan may benefit from a variety of financing options. Although often used interchangeably, the words financing and funding are not the same. Funding is the actual generation of revenue by which a jurisdiction pays for improvements, some examples include the sources discussed above: property taxes, SDCs, fuel taxes, vehicle registration fees, LIDs, and various grant programs. In contrast, financing refers to the collecting of funds through debt obligations.

There are a number of debt financing options available to the City of Joseph. The use of debt to finance capital improvements must be balanced with the ability to make future debt service payments and to deal with the impact on its overall debt capacity and underlying credit rating. Again, debt financing should be viewed not as a source of funding, but as a time shifting of funds. The use of debt to finance these transportation-system improvements is appropriate since the benefits from the transportation improvements will extend over the period of years. If such improvements were to be tax financed immediately, a large short-term increase in the tax rate would be required. By utilizing debt financing, local governments are essentially spreading the burden of the costs of these improvements to more of the people who are likely to benefit from the improvements and lowering immediate payments.

General Obligation Bonds

General obligation bonds (GOs) are voter-approved bond issues which represent the least expensive borrowing mechanism available to municipalities. GO bonds are typically supported by a separate property tax levy specifically approved for the purposes of retiring debt. The levy does not terminate until all debt is paid off. The property tax levy is distributed equally throughout the taxing jurisdiction according to assessed value of property. General obligation debts typically used to make public improvement projects that will benefit the entire community.

State statutes require that the general obligation indebtedness of a city not exceed three percent of the real market value of all taxable property in the city. Since general obligation bonds would be issued subsequent to voter approval, they would not be restricted to the limitations set forth in Ballot Measures 5 and 50 (revised Measure 47). Although new bonds must be specifically voter approved, Measure 50 provisions are not applicable to outstanding bonds, unissued voter-approved bonds, or refunding bonds.

Limited Tax Bonds

Limited tax general obligation bonds (LTGOs) are similar to general obligation bonds in that they represent an obligation of the municipality. However, a municipality's obligation is limited to its current revenue sources and is not secured by the public entity's ability to raise taxes. As a result, LTGOs do not require voter approval. However, since the LTGOs are not secured by the full taxing power of the issuer, the limited tax bond represents a higher borrowing cost than general obligation bonds. The municipality must pledge to levy the maximum amount under constitutional and statutory limits, but not the unlimited taxing authority pledged with GO bonds. Because LTGOs are not voter-approved, they are subject to the limitations of Ballot Measures 5 and 47.

Local Improvement District Bonds

Local improvement districts (LID's) may be formed to construct local improvements including street and sidewalk repairs and improvements. They are formed either through petition by the benefited property owners who seek a set of public improvements or through the legislative process of the city council. After the district is formed, public improvements may be made and the costs of those improvements distributed among the properties within the LID according to their respective benefit. The benefit is set by formula by the city council. Once the benefit and cost have been set, an assessment is levied against the benefiting properties. Assesses may pay in one up-front assessment or apply for assessment financing. In Oregon, this means that the city will issue bonds and allow the property owners to pay their assessment over time. Since the security of special assessment bonds lies solely with the assessment payments, potential investors and rating agencies apply a much more rigorous credit evaluation than they would to a general obligation issue backed by property taxes. As a result, it may be very difficult to sell special assessment bonds at reasonable rates for projects that are of marginal credit quality.

Bancroft Bonds

Under Oregon Statute, municipalities are allowed to issue Bancroft bonds which pledge the city's full faith and credit to assessment bonds. As a result, the bonds become general obligations of the city but are paid with assessments. Historically, these bonds provided a city with the ability to pledge its full faith and credit in order to obtain a lower borrowing cost without requiring voter approval. However, since Bancroft bonds

are not voter-approved, taxes levied to pay debt service on them are subject to the limitations of Ballot Measures 5 and 50 (revised Measure 47). As a result, since 1991, Bancroft bonds have not been used by municipalities who were required to compress their tax rates.

Special Tax Revenue Bond

Cities may issue revenue bonds based on the expected receipt of special taxes. Examples of such revenues are gas taxes, hotel-motel taxes, or system development charges. Generally speaking, the more predictable the revenue source, the easier it is to support debt financing with that revenue. These types of bonds are more complicated to issue and usually restrict the other uses of the dedicated revenues so that the bond holders can be assured timely payment.

A few cities in Oregon have secured revenue bond issues with gas taxes or other special transportation revenues. In many cases, local governments have become accustomed to using state gas tax revenues solely for maintenance needs. Using gas tax revenues to pay debt service on bonds instead of funding maintenance would require an issuer to either reduce its maintenance budget or provide some other source of funding for maintenance needs.

CHAPTER 9: RECOMMENDED POLICIES AND ORDINANCES

In 1991, the Oregon Transportation Planning Rule was adopted to implement State Planning Goal 12 Transportation (amended in May and September 1995). The Transportation Planning Rule requires counties and cities to complete a TSP that includes policies and ordinances to implement that plan. The City of Joseph's Land Use Plan was completed in 1978 and amended and revised in 1996. Based on content, the Transportation discussion in the Land Use Plan has not been significantly updated since the implementation of the Transportation Planning Rule. The city's zoning ordinance, and subdivision and partitioning ordinance also need updating to meet the requirements of the Transportation Planning Rule and this TSP. Applicable amendments to the City of Joseph's land use plan, zoning ordinance, and subdivision and partitioning ordinance were provided to the City in concurrence with the update to the 1997 TSP.

ELEMENTS REQUIRED BY THE TRANSPORTATION PLANNING RULE

The applicable portion of the Transportation Planning Rule is found in Section 660-12-045: *Implementation of the Transportation System Plan.* In summary, the Transportation Planning Rule requires that local governments revise their land use regulations to implement the Transportation System Plan in the following manner:

- *Amend land use regulations to reflect and implement the Transportation System Plan.*

- *Clearly identify which transportation facilities, services, and improvements are allowed outright, and which will be conditionally permitted or permitted through other procedures.*

- *Adopt land use or subdivision ordinance measures, consistent with applicable federal and state requirements, to protect transportation facilities, corridors and sites for their identified functions, to include the following topics:*

  - ⇒ *access management and control;*
  - ⇒ *protection of public use airports;*
  - ⇒ *coordinated review of land use decisions potentially affecting transportation facilities;*
  - ⇒ *conditions to minimize development impacts to transportation facilities;*
  - ⇒ *regulations to provide notice to public agencies providing transportation facilities and services of land use applications that potentially affect transportation facilities;*
  - ⇒ *regulations assuring that amendments to land use applications, densities, and design standards are consistent with the Transportation System Plan.*

- *Adopt land use or subdivision regulations for urban areas and rural communities to provide safe and convenient pedestrian and bicycle circulation and bicycle parking, and to ensure that new development provides on-site streets and accessways that provide reasonably direct routes for pedestrian and bicycle travel.*

- *Establish street standards that minimize pavement width and total right-of-way.*

These elements have been addressed through the aforementioned plan and code amendments. The amended documents are recommended for approval and adoption by the Joseph City Council.

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APPENDIX A

Review of Existing Plans and Policies

REVIEW OF EXISTING PLANS AND POLICIES
CITY OF JOSEPH

The City of Joseph Land Use Plan was reviewed to establish the history of planning in the City and a comparison was made of the information in the existing Plan with the requirements of the Oregon Transportation Planning Rule (TPR). A description of the information in the Plan is provided followed by comments in italics.

CITY OF JOSEPH LAND USE PLAN

The City of Joseph Land Use Plan was adopted by the City Council in April 1978, and was revised and amended in May and December 1986.

The purpose of the Land Plan is to encourage appropriate and orderly development in the City for the benefit of the general welfare, health, safety and convenience of the public. More specifically, the plan is adopted in order to achieve the following objectives:

1. To provide long-range guidelines and policies regarding the City's land use suitability, transportation problems, the public facilities and utility improvements and growth characteristics.

2. To provide a basis from which the public, affected state and federal agencies and others can make sound land use decisions.

   To provide a basis from which more specific implementation measures can be developed such as zoning and subdivision ordinances.

4. To satisfy the requirements of ORS 197, the Plan's enabling legislation.

5. To maintain a flexibility in order to meet changes in the social, economical, physical, political and environmental conditions of the town.

The Plan is based upon the following fourteen Statewide Planning Goals:

I. Citizen Involvement

II. Planning Process

III. Agricultural Lands

IV. Forest Lands

V. Natural Resources

VI. Air, Water and Land Resources Quality

VII. Natural Disasters and Hazards

VIII. Recreational Needs

IX. Economy

X. Housing

XI. Public Facilities and Services

XII. Transportation

XIII. Energy Conservation

XIV. Urbanization

For each goal, the Plan presents findings and policies. Only Goal XII specifically relates to transportation.

Transportation Goal

Goal: To provide and encourage a safe, convenient and economic transportation system.

Background: Transportation has and, most likely, will continue to be oriented towards the individual modes such as the automobile. Mass transit and other means of moving a number of people at one time appears uneconomical at this time. Joseph, however, is served by a few varying types of transportation, meriting plan recognition and protection. These are summarized below:

Railroad – The City has access to a branch line of Union Pacific Railroad which provides a key link in transporting the raw manufactured goods such as lumber products. The area so serviced is recognized on both the County Plan and City Plan as being suitable for industrial type development. However, recent petitions filed by the owner of the line with the Interstate Commerce Commission leave the future use, ownership and continued existence of the line and its right of way in question.

Highway – State Highways 82 and 350, the major access route in and out of Wallowa County, terminate in Joseph at mile post 71.42. State Highway 350 and the Little Sheep Creek Highway both commence at the intersection of Wallowa Avenue and Main Street. All those State Highways are important accesses to and from the City. The City, itself, is served by approximately 12 miles of streets, including 7.91 miles paved, 1.58 miles graveled, and 2.51 miles unimproved. These are generally well laid out and designed to afford maximum access to property. The City would encourage future highway improvements to include additional non-motorized facility and access management improvements.

Bicycle Paths – Joseph does not have any officially designated bike paths. The existing road system can serve this function. However, the City anticipates an increase in the demand for these facilities. Specific projects and policies shall be found in the Wallowa County Bicycle and Pedestrian Plan as it relates to the City of Joseph.

Mass Transit – Joseph is served by a small bus company connecting the town to the other towns in the County and to La Grande on a regular basis.

Pedestrian – A previous BMIC visual survey indicated approximately 8 ½ miles of sidewalk, of which about 1 ½ miles are improved. It should be recognized well, laid-out streets with curbs and maintained sidewalks presents a more applealing development prospect than the undeveloped. Specific projects and policies shall be found in the Wallowa County Bicycle and Pedestrian Plan as it relates to the City of Joseph.

Airport – The City is served by an adjacent, State operated airport capable of handling a large variety of aircraft. The facility used to be operated by the City which still owns a considerable amount of adjacent land. The importance of this airport should be recognized in the plan and protected from encroaching, incompatible uses.

Findings:

The following findings are the basis for policies related to the transportation needs of the City:

1. Joseph's transportation facilities typify a small, rural town.

2. Joseph is served by a branch line of the Union Pacific Railroad.

Service no longer exists on this line, and the line has been sold to the Idaho Northern Pacific Railroad, which has begun abandonment proceedings.

3. Mass transit within city limits is not economical.

4. The State Highways are important links in providing access to Joseph.

5. The transportation facilities listed in the background are sufficient to meet current and anticipated public needs.

6. A city "transportation plan" other than what is incorporated herein, appears warranted.

Policies:

The following policies are part of the City Land Use Plan and will be taken into consideration by both private and public interest in making land use decisions:

1. All new developments within City jurisdiction shall provide as visually attractive transportation facilities as possible and of such specifications as listed within the appropriate Ordinance.

2. In response to citizen surveys, the City shall give priority for improvements to the following streets:

   a) **Main Street south of 10th Street**

   b) **10th Street (Lake to College)**

   c) 9th Street (Main to College)

   d) McCully Street

3. All new subdivisions shall be so planned and located as to tie into and conform to the existing street system.

4. The naming of new streets shall attempt to follow the general pattern of existing streets.

5. The terminus of Union Pacific's Rail Line shall be protected from incompatible uses.

6. The City shall encourage existing and future development a long M ain S treet t o c onform t o t he provisions of this plan and to be well maintained to retain a high quality of visual attractiveness.

7. The City of Joseph recognizes that its comprehensive plan implementing ordinances must be amended to coordinate the local planning review of highway projects with the Oregon Action Plan for transportation.

8. The City will take part in planning for Bicycle and pedestrian facilities.

Recommendations:

The following recommendations are additional implementation measures identified in plan preparation but not felt to be critical:

1. The City should seek funds to improve foot paths and bridges.

2. Consideration should be given to a program to improve the sidewalk area along Main Street. Installation of additional sidewalk benches may be beneficial.

3. The Oregon State Highway Department is encouraged to maintain and improve the State Highways within the City Limits.

4. That the City take advantage of State and/or Federal funding to help provide a comprehensive transportation network for the citizens of Joseph.

No i nventory o f t he C ity of Joseph's streets was included in the plan. No existing traffic volume data nor projections of future traffic demand were presented. No analysis of existing or future system operations was performed. No future improvements were recommended. All of these elements will need to be included to meet the requirements of the TPR.

APPENDIX B

Existing Street Inventory

TABLE 1

1997 MAJOR STREETS INVENTORY

Joseph Transportation System Plan

Street Segment	Jurisdict.	Classification	Speed Limit (mph)	ROW Width (feet)	Street Width (feet)	# of Travel Lanes	Curbs	On-Street Parking	Sidewalks	Bikeway	Pavement Condition
11th Street											
Engleside Avenue to Main Street	City	local	25	75	20	2	no	no	no	no	good
Main Street to Lake Street	City	local	25	75	20	2	no	no	no	no	good
Lake Street to College Street	City	local	25	75	20	2	no	no	no	no	good
10th Street											
west of Engleside Avenue	City	local	25	75	20	2	no	no	no	no	poor
Engleside Avenue to Main Street	City	local	25	75	20	2	no	no	no	no	poor
Main Street to Lake Street	City	local	25	75	20	2	no	no	no	no	poor
Lake Street to College Street	City	local	25	75	20	2	no	no	no	no	poor
9th Street											
Lake Street to College Street	City	local	25	100	20	2	no	no	no	no	poor
Joseph-Wallowa Lake Hwy / 8th Street											
Engleside Avenue to Main Street	City	local	25	80	20	2	no	no	no	no	fair
Main Street to Lake Street &	City	local	25	80	20	2	no	no	no	no	fair
7th Street to Lake Street	State	arterial	25	80	30	2	no	no	no	no	good
Lake Street to College Street	State	arterial	25	80	30	2	no	no	no	no	good
College Street to East Street	State	arterial	25	80	30	2	no	no	no	no	good
east of East Street	State	arterial	55	80	30	2	no	no	no	no	good
7th Street											
Main Street to Lake Street	City	local	25	80	20	2	no	no	no	no	fair
Lake Street to College Street	City	local	25	80	20	2	no	no	no	no	fair
College Street to East Street	City	local	25	80	20	2	no	no	no	no	fair
east of East Street	City	local	25	80	20	2	no	no	no	no	poor

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Joseph Transportation System Plan

Street Segment	Jurisdict.	Classification	Speed Limit (mph)	ROW Width (feet)	Street Width (feet)	# of Travel Lanes	Curbs	On-Street Parking	Sidewalks	Bikeway	Pavement Condition
6th Street											
west of Main Street	City	local	25	80	20	2	no	no	no	no	fair
Main Street to Lake Street	City	local	25	80	20	2	no	no	no	no	fair
Lake Street to College Street	City	local	25	80	20	2	no	no	no	no	fair
College Street to East Street	City	local	25	80	20	2	no	no	no	no	fair
east of East Street	City	local	25	80	20	2	no	no	no	no	poor
5th Street											
west of Main Street	City	local	25	80	20	2	no	no	no	no	fair
Main Street to Lake Street	City	local	25	80	20	2	no	no	no	no	fair
Lake Street to College Street	City	local	25	80	20	2	no	no	no	no	fair
College Street to East Street	City	local	25	80	20	2	no	no	no	no	fair
east of East Street	City	local	25	80	20	2	no	no	no	no	poor
4th Street											
Park Drive to Mill Street	City	local	25	100	15	2	no	no	no	no	poor
Mill Street to Main Street	City	local	25	100	20	2	no	no	no	no	fair
Main Street to Lake Street	City	local	25	100	20	2	no	no	no	no	fair
Lake Street to College Street	City	local	25	100	20	2	no	no	no	no	fair
College Street to East Street	City	local	25	100	20	2	no	no	no	no	fair
east of East Street	City	local	25	100	20	2	no	no	no	no	fair
3rd Street											
Mill Street to Main Street	City	local	25	100	20	2	no	no	no	no	fair
Main Street to Lake Street	City	local	25	100	20	2	no	no	no	no	fair
Lake Street to College Street	City	local	25	100	20	2	no	no	no	no	fair
College Street to East Street	City	local	25	100	20	2	no	no	no	no	fair
east of East Street	City	local	25	100	20	2	no	no	no	no	poor

TABLE 1
1997 MAJOR STREETS INVENTORY
Joseph Transportation System Plan

Street Segment	Jurisdict.	Classification	Speed Limit (mph)	ROW Width (feet)	Street Width (feet)	# of Travel Lanes	Curbs	On-Street Parking	Sidewalks	Bikeway	Pavement Condition
2nd Street											
Mill Street to Main Street	City	local	25	100	20	2	no	no	no	no	fair
Main Street to Lake Street	City	local	25	100	30	2	no	no	no	no	fair
Lake Street to College Street	City	local	25	100	60	2	no	yes	no	no	fair
College Street to East Street	City	local	25	100	20	2	no	no	no	no	fair
1st Street											
west of Mill Street	City	local	25	100	20	2	no	no	no	no	fair
Mill Street to Main Street	City	local	25	100	20	2	no	no	no	no	fair
Main Street to Lake Street	City	local	25	100	50	2	no	no	yes	no	good
Lake Street to College Street	City	local	25	100	20	2	no	no	no	no	fair
College Street to East Street	City	local	25	100	20	2	no	no	no	no	fair
east of East Street	City	local	25	100	20	2	no	no	no	no	poor
McCully Avenue											
Little Sheep Creek Hwy to Park Street	City	local	25	60	20	2	no	no	no	no	poor
Park Street to Mill Street	City	local	25	60	20	2	no	no	no	no	poor
Mill Street to Main Street	City	local	25	80	50	2	no	yes	no	no	fair
Main Street to Lake Street	City	local	25	80	50	2	no	yes	yes	no	good
Lake Street to College Street	City	local	25	80	30	2	no	no	no	no	good
College Street to East Street	City	local	25	80	30	2	no	no	no	no	good
east of East Street	City	local	25	80	30	2	no	no	no	no	fair
Joseph Avenue											
Mill Street to Main Street	City	local	25	80	20	2	no	no	no	no	fair
Main Street to Lake Street	City	local	25	80	20	2	no	no	no	no	fair
Lake Street to College Street	City	local	25	80	20	2	no	no	no	no	fair
College Street to East Street	City	local	25	80	20	2	no	no	no	no	fair

TABLE 1
1997 MAJOR STREETS INVENTORY
Joseph Transportation System Plan

Street Segment	Jurisdict.	Classification	Speed Limit (mph)	ROW Width (feet)	Street Width (feet)	# of Travel Lanes	Curbs	On-Street Parking	Sidewalks	Bikeway	Pavement Condition
Little Sheep Creek Highway											
west of McCully Avenue	County	arterial	55	80	30	2	no	no	no	no	good
McCully Avenue to Park Street	County	arterial	30	80	30	2	no	no	no	no	good
Park Street to Mill Street	County	arterial	30	80	30	2	no	no	no	no	good
Mill Street to Main Street	County	arterial	30	80	30	2	no	no	no	no	good
Main Street to Lake Street	County	arterial	30	80	30	2	no	no	no	no	good
Lake Street to College Street	County	arterial	30	80	30	2	no	no	no	no	good
College Street to East Street	County	arterial	20	80	30	2	no	no	no	no	good
east of East Street	County	arterial	45	80	30	2	no	no	no	no	good
Pine Street											
Mill Street to Main Street	City	local	25	60	20	2	no	no	no	no	fair
Main Street to Lake Street	City	local	25	60	20	2	no	no	no	no	fair
Lake Street to College Street	City	local	25	60	20	2	no	yes	no	no	fair
College Street to East Street	City	local	25	60	20	2	no	no	no	no	fair
Alder Street											
west of Park Street	City	local	25	80	20	2	no	no	no	no	good
Park Street to Mill Street	City	local	25	80	20	2	no	no	no	no	good
Mill Street to Main Street	City	local	25	80	20	2	no	no	no	no	good
Main Street to Maple Street	City	local	25	80	20	2	no	no	no	no	good
Maple Street											
Mill Street to Main Street	City	local	25	80	20	2	no	no	no	no	poor
Main Street to Lake Street	City	local	25	80	20	2	no	no	no	no	poor
Lake Street to College Street	City	local	25	80	20	2	no	no	no	no	poor
College Street to East Street	City	local	25	80	20	2	no	no	no	no	poor
Poplar Street											
College Street to East Street	City	local	25	80	20	2	no	no	no	no	poor
Kiel Drive											
west of Mill Street	City	local	25	60	15	2	no	no	no	no	poor

TABLE 1
1997 MAJOR STREETS INVENTORY
Joseph Transportation System Plan

Street Segment	Jurisdict.	Classification	Speed Limit (mph)	ROW Width (feet)	Street Width (feet)	# of Travel Lanes	Curbs	On-Street Parking	Sidewalks	Bikeway	Pavement Condition
Russell Lane											
west of Russell Street	City	local	25	80	20	2	no	no	no	no	good
Russell Street to Park Street	City	local	25	80	20	2	no	no	no	no	good
Park Street to Mill Street	City	local	25	80	20	2	no	no	no	no	good
Mill Street to Main Street	City	local	25	80	20	2	no	no	no	no	good
Engleside Avenue											
11th Street to 10th Street	City	local	25	60	20	2	no	no	no	no	poor
10th Street to 8th Street	City	local	25	60	20	2	no	no	no	no	poor
Mill Street											
4th Street to 3rd Street	City	local	25	100	20	2	no	no	no	no	fair
3rd Street to 2nd Street	City	local	25	100	20	2	no	no	no	no	fair
2nd Street to 1st Street	City	local	25	100	20	2	no	no	no	no	fair
1st Street to McCully Avenue	City	local	25	100	20	2	no	no	no	no	fair
McCully Avenue to Joseph Avenue	City	local	25	100	20	2	no	no	no	no	fair
Joseph Avenue to Little Sheep Creek Hwy	City	local	25	100	20	2	no	no	no	no	fair
Little Sheep Creek Hwy to Pine Street	City	local	25	100	20	2	no	no	no	no	fair
Pine Street to Alder Street	City	local	25	100	20	2	no	no	no	no	fair
Warnock Drive to Russell Lane	City	local	25	100	20	2	no	no	no	no	fair
Russell Street											
McCully Avenue to Little Sheep Creek Hwy	City	local	25	80	20	2	no	no	no	no	fair
Little Sheep Creek Hwy to railroad	City	local	25	80	20	2	no	no	no	no	fair
railraod to Russell Lane	City	local	25	80	20	2	no	no	no	no	poor

TABLE 1
1997 MAJOR STREETS INVENTORY
Joseph Transportation System Plan

Street Segment	Jurisdict.	Classification	Speed Limit (mph)	ROW Width (feet)	Street Width (feet)	# of Travel Lanes	Curbs	On-Street Parking	Sidewalks	Bikeway	Pavement Condition
Park Street											
south of Russell Lane	City	local	25	80	20	2	no	no	no	no	good
Little Sheep Creek Hwy to McCully Avenue	City	local	25	66	20	2	no	no	no	no	fair
Barton Heights Road											
south of McCully Avenue	City	local	25	80	20	2	no	no	no	no	poor
Main Street / Wallowa Lake Hwy											
south of 11th Street	City	local	30	100	20	2	no	no	no	no	fair
11th Street to 10th Street	City	local	30	100	20	2	no	no	no	no	good
10th Street to 8th Street	City	local	30	100	20	2	no	no	no	no	good
8th Street to 7th Street	City	local	30	100	30	2	no	no	no	no	good
7th Street to 6th Street	State	arterial	30	100	30	2	no	no	no	no	good
6th Street to 5th Street	State	arterial	30	100	30	2	no	no	no	no	good
5th Street to 4th Street	State	arterial	30	100	30	2	no	no	no	no	good
4th Street to 3rd Street	State	arterial	25	100	30	2	no	no	no	no	good
3rd Street to 2nd Street	State	arterial	25	100	30	2	no	no	no	no	good
2nd Street to 1st Street	State	arterial	20	100	60	2	no	yes	yes	yes	good
1st Street to McCully Avenue	State	arterial	25	100	60	2	no	yes	yes	yes	good
McCully Avenue to Joseph Avenue	State	arterial	25	100	60	2	no	yes	yes	yes	good
Joseph Avenue to Little Sheep Creek Hwy	State	arterial	25	100	60	2	no	yes	yes	yes	good
Little Sheep Creek Hwy to Pine Street	State	arterial	25	100	30	2	no	no	no	no	good
Pine Street to Alder Street	State	arterial	25	100	30	2	no	no	no	no	good
Alder Street to Maple Street	State	arterial	25	100	30	2	no	no	no	no	good
Maple Street to Russell Lane	State	arterial	25	100	30	2	no	no	no	no	good
north of Russell Lane	State	arterial	55	100	30	2	no	no	no	no	good
Park Drive											
south of 4th Street	City	local	25	80	15	2	no	no	no	no	poor
Lake Street											
11t et to 10th Street	City	local	25	100	20	2	no	no	no	no	
10t et to 9th Street	City	local	25	100	0	2	no	no	no	no	

TABLE 1
1997 MAJOR STREETS INVENTORY
Joseph Transportation System Plan

Street Segment	Jurisdict.	Classification	Speed Limit (mph)	ROW Width (feet)	Street Width (feet)	# of Travel Lanes	Curbs	On-Street Parking	Sidewalks	Bikeway	Pavement Condition
9th Street to 8th Street	City	local	25	100	20	2	no	no	no	no	fair
8th Street to 7th Street	City	local	25	100	20	2	no	no	no	no	fair
8th Street to 7th Street	City	local	25	100	30	2	no	no	no	no	fair
7th Street to 6th Street	City	local	25	100	30	2	no	no	no	no	fair
6th Street to 5th Street	City	local	25	100	30	2	no	no	no	no	fair
5th Street to 4th Street	City	local	25	100	30	2	no	no	no	no	fair
4th Street to 3rd Street	City	local	25	100	30	2	no	no	no	no	fair
3rd Street to 2nd Street	City	local	25	100	30	2	no	no	no	no	fair
2nd Street to 1st Street	City	local	25	100	30	2	no	no	no	no	fair
1st Street to McCully Avenue	City	local	25	100	30	2	no	no	no	no	fair
McCully Avenue to Joseph Avenue	City	local	25	100	30	2	no	no	no	no	fair
Joseph Avenue to Little Sheep Creek Hwy	City	local	25	100	30	2	no	no	no	no	fair
Little Sheep Creek Hwy to Pine Street	City	local	25	100	20	2	no	no	no	no	fair
Pine Street to College Street	City	local	25	100	20	2	no	no	no	no	fair
College Street											
11th Street to 10th Street	City	local	25	100	20	2	no	no	no	no	poor
10th Street to 9th Street	City	local	25	100	20	2	no	no	no	no	poor
9th Street to 8th Street	City	local	25	100	20	2	no	no	no	no	poor
8th Street to 7th Street	City	local	25	100	20	2	no	no	no	no	fair
7th Street to 6th Street	City	local	25	100	20	2	no	no	no	no	fair
6th Street to 5th Street	City	local	25	100	20	2	no	no	no	no	fair
5th Street to 4th Street	City	local	25	100	20	2	no	no	no	no	fair
4th Street to 3rd Street	City	local	25	100	20	2	no	no	no	no	fair
3rd Street to 2nd Street	City	local	25	100	20	2	no	no	no	no	fair
2nd Street to 1st Street	City	local	25	100	20	2	no	no	no	no	fair
1st Street to McCully Avenue	City	local	25	100	20	2	no	no	no	no	fair
McCully Avenue to Joseph Avenue	City	local	25	100	20	2	no	no	no	no	fair
Joseph Avenue to Little Sheep Creek Hwy	City	local	25	100	20	2	no	no	no	no	fair
Little Sheep Creek Hwy to Pine Street	City	local	25	100	20	2	no	no	no	no	fair
Pine Street to Maple Street	City	local	25	100	15	2	no	no	no	no	poor
Maple Street to Poplar Street	City	local	25	100	15	2	no	no	no	no	poor

TABLE 1
1997 MAJOR STREETS INVENTORY
Joseph Transportation System Plan

Street Segment	Jurisdict.	Classification	Speed Limit (mph)	ROW Width (feet)	Street Width (feet)	# of Travel Lanes	Curbs	On-Street Parking	Sidewalks	Bikeway	Pavement Condition
East Street											
8th Street to 7th Street	City	local	25	80	20	2	no	no	no	no	fair
7th Street to 6th Street	City	local	25	80	20	2	no	no	no	no	fair
6th Street to 5th Street	City	local	25	80	20	2	no	no	no	no	fair
5th Street to 4th Street	City	local	25	80	20	2	no	no	no	no	fair
4th Street to 3rd Street	City	local	25	80	20	2	no	no	no	no	fair
3rd Street to 2nd Street	City	local	25	80	20	2	no	no	no	no	fair
2nd Street to 1st Street	City	local	25	80	30	2	no	no	no	no	good
1st Street to McCully Avenue	City	local	25	80	30	2	no	no	no	no	good
McCully Avenue to Joseph Avenue	City	local	25	80	30	2	no	no	no	no	good
Joseph Avenue to Little Sheep Creek Hwy	City	local	25	80	30	2	no	no	no	no	good
Little Sheep Creek Hwy to Pine Street	City	local	25	80	30	2	no	no	no	no	good
north of Pine Street	City	local	25	80	30	2	no	no	no	no	poor

APPENDIX C

Population and Employment Analysis

METHODOLOGY AND DATA SOURCES

Population estimates and projections were developed from historical data as reported by the Census Bureau. Portland State University's Center for Population Research and Census (PSU CPRC) developed annual population estimates for cities and counties for the purpose of allocating certain state tax revenues to cities and counties. The State of Oregon Office of Economic Analysis (OEA) provided long-term (through year 2040) state population forecasts, disaggregated by county, for state planning purposes. OEA also developed county-level employment forecasts based on covered employment payrolls as reported by the Oregon Employment Department.

The Office of Economic Analysis used business-cycle trends (as reflected by the Employment Department's employment forecasts) as the primary driver of population and employment for the short term. For the long term, the forecasts shift to a population-driven model, which emphasizes demographics of the resident population, including age and gender of the population, with assumptions regarding life expectancy, fertility rate, and immigration. DEA used a methodology based on OEA's county-distribution methodology in developing population and employment forecasts for each of the cities in Wallowa County. DEA calculated a weighted average growth rate for each jurisdiction (weighting recent growth more heavily than past growth) and combined this average growth rate with the projected county-wide growth rate. This methodology assumes convergence of growth rates because of the physical constraints of any area to sustain growth rates beyond the state or county average for long periods of time. These constraints include availability of land and housing, congestion, and other infrastructure limitations.

These population and employment forecasts were developed to determine future transportation needs. The amount of growth, and where it occurs, will affect traffic and transportation facilities in the study area. This report is not intended to provide a complete economic forecast or housing analysis, and it should not be used for any purpose other than that for which it is designed.

CURRENT POPULATION AND EMPLOYMENT LEVEL

Estimated at 7,250 in 1995, the population of Wallowa County has remained relatively stable since the 1990 Census, with an average annual growth rate of less than one percent. The following table shows the estimated change in population for Wallowa County and the jurisdictions of Enterprise, Joseph, Lostine, and the City of Wallowa from 1990 to 1995.

Wallowa County Population Level

	1990	1995	1990-1995 Change Number	1990-1995 Change CAARG*
Wallowa County	6,911	7,250	339	0.96%
Enterprise	1,905	2,010	105	1.08%
Joseph	1,073	1,190	117	2.09%
Lostine	231	230	(1)	-0.09%
City of Wallowa	748	755	7	0.19%

** Compound Average Annual Rate of Growth*

Source: Portland State University Center for Population Research and Census.

Employment levels have declined since 1990. This decline is, in part, attributable to an increase in the unemployment rate throughout Oregon. Average unemployment rates for Wallowa County hit a low for the decade at 7.5 percent in 1989. Since then, unemployment has climbed, reaching an average 11.1 percent in 1995.

Wallowa County Employment

	1990	1995	1990-1995 Change Number	1990-1995 Change CAARG*
Wallowa County Employment	3,270	2,970	(300)	-1.91%
Unemployment Rate	7.6%	11.1%	n.a.	n.a.

** Compound Average Annual Rate of Growth*

Note: These figures are reported as place-of-work series, rather than place-of-residence. In other words, these estimated total jobs in Wallowa County may be held by residents of other counties. The impact of this difference is considered minimal for Wallowa County as the 1990 Census reports that over 96 percent of workers who live in Wallowa County also work in the County.

Source: Oregon Employment Department.

The unemployment rates contrast with the economic performance of the state as a whole. The state's unemployment rate has been at approximately 5 percent for several years, and has just begun creeping upward. As of November 1996, the statewide unemployment rate was 5.5 percent--still a historically low rate, but the state's highest level in over two years.

HISTORICAL GROWTH

Interestingly, population levels in most of Eastern Oregon are close to, or actually lower than, those experienced earlier in the century. Counties included in this phenomenon include Baker, Harney, Union, Grant, and Wallowa Counties. The population of Wallowa County actually declined in the 1960s and 1980s, reflecting the general slowdown in the state's economy during these time periods. As a result of this activity, the population of Wallowa County declined overall between the 1960 and 1990 Censuses (from 7,102 in 1960 to 6,911 in 1990). The following table shows the population trend for Enterprise, Joseph, Lostine, the City of Wallowa and Wallowa County as a whole.

Wallowa County Historical Population Trend

					1960-1990 Change	
	1960	1970	1980	1990	Number	CAARG *
Wallowa County	7,102	6,247	7,273	6,911	(191)	-0.09%
Enterprise	1,932	1,680	2,003	1,905	(27)	-0.05%
Joseph	788	839	999	1,073	285	1.03%
Lostine	240	196	250	231	(9)	-0.13%
City of Wallowa	989	811	847	748	(241)	-0.93%

* *Compound Average Annual Rate of Growth*

Source: U.S. Bureau of the Census.

The only jurisdiction able to achieve positive population growth between 1960 and 1990 was Joseph, growing from 788 in 1960 to 1,073 in 1990. This growth can attributed, in part, to the community's proximity to Wallowa Lake, and the recreational opportunities this amenity provides.

Despite minimal growth in population since 1970, other demographic changes have occurred that may impact the community's employment and travel patterns. For example, there have been national trends of both decreasing household size and increasing numbers of workers per household.

Household size in Wallowa County has gone from an average of 2.93 persons per household in 1970 to an average of 2.44 persons in 1990. Changes in life expectancy and lifestyle choices (i.e. electing to delay marriage and childbearing) have resulted in relatively high proportions of "empty-nester," "singles," and "couples-without-children" households.

The number of jobs per household has also been increasing. With 6,247 reported persons in 1970 and total employment estimated at 2,420, the population/employment ratio in 1970 was 2.58 persons per job. In 1995, there were 2,970 jobs for the estimated population of 7,250, for a population/employment ratio of 2.44 persons per job. The increasing numbers of jobs in relation to population is due to a number of factors including a low savings rate, increased life expectancy, and higher education levels. These factors have combined to increase the labor participation rate, particularly by women and older adults.

POPULATION AND EMPLOYMENT FORECASTS

Wallowa County is expected to experience small population gains for the next 20 years. Like much of Eastern Oregon, the economy of Wallowa County remains largely seasonal, with more than one-quarter of all employment agriculture-based. Therefore, population increases are difficult to predict, and are not likely to be as stable as the forecasts appear to imply.

The population forecast for Wallowa County and the jurisdictions of Enterprise, Joseph, Lostine, and the City of Wallowa are shown in five-year increments in the following table.

Wallowa County Population Forecast

	1995	2000	2005	2010	2015	1995-2000 CAARG	1995-2015 CAARG
Wallowa County	7,250	7,458	7,632	7,815	8,025	0.57%	0.51%
Enterprise	2,010	2,060	2,106	2,153	2,206	0.49%	0.47%
Joseph	1,190	1,260	1,329	1,396	1,460	1.15%	1.03%
Lostine	230	233	235	238	242	0.26%	0.25%
City of Wallowa	755	763	769	777	789	0.21%	0.17%

Source: 1995 estimates developed by Portland State University Center for Population Research and Census; County forecasts developed by State of Oregon Office of Economic Analysis; and Jurisdiction forecasts developed by David Evans and Associates, Inc.

The population of Wallowa County is expected to increase by 11 percent over the next 20 years, from the 1995 estimate of 7,250 to an estimated 8,025 in year 2015. The only jurisdiction expected to grow faster is Joseph, with a forecast increase of nearly 23 percent over 20 years, from 1,190 in 1995 to 1,460 in 2015.

The Office of Economic Analysis also developed forecasts of Non-Agricultural Employment by county. Oregon Employment data suggest that over one-quarter (an estimated 29 percent in 1995) of all employment in Wallowa County is agriculture-based. This agriculture-based proportion, although higher than the state average, is typical for counties in Eastern Oregon. The economy of Wallowa County has been moving toward a greater degree of diversification, going from 46 percent agricultural-based employment in 1970, to 29 percent in 1995, as shown in the table below.

Agricultural Employment Trend

Wallowa County

		1970	1975	1980	1985	1990	1995
Total Employment	Estimated	2,420	2,820	3,280	3,080	3,270	2,970
Nonfarm Employment	Payroll	1,310	1,620	1,860	1,780	2,270	2,110
Agricultural Proportion		46%	43%	43%	42%	31%	29%

Source: Oregon Employment Department.

The shift from agriculture occurred primarily in the late 1980s with agriculture-based employment accounting for 42 percent of all employment in 1985, falling to 31 percent just five years later. Statewide, the Office of Economic Analysis expects this diversification to continue, but at a decreasing rate. Applying this principle to Wallowa County employment, the following table shows forecast non-agricultural and estimated total employment for Wallowa County.

Wallowa County Employment Forecast*

	1995	2000	2005	2010	2015	1995-2000 CAARG	1995-2015 CAARG
Non-Agricultural Employment	2,110	2,302	2,377	2,423	2,438	1.76%	0.73%
Estimated Total Employment	2,970	3,201	3,274	3,314	3,317	1.51%	0.55%
Agricultural Proportion	29.0%	28.1%	27.4%	26.9%	26.5%	n.a.	n.a.

* *The Office of Economic Analysis inflated non-agricultural employment to 2,151 to correct for Oregon jobs not attributed to any specific county.*

Source: Non-Agricultural employment forecasts developed by the State of Oregon Office of Economic Analysis; 1995 estimates developed by the Oregon Employment Department; and estimated total employment forecasts developed by David Evans and Associates, Inc.

Employment is expected to grow by over 11 percent over the next twenty years, with the proportion captured by agricultural employment declining over time, from its current level of 29 percent, reaching 26.5 percent of total employment in Wallowa County in year 2015. The population/employment ratio will remain relatively stable (decreasing slightly from 2.44 persons per job to 2.42 persons per job).

APPENDIX D

Speed Control Measures

TECHNICAL MEMORANDUM

SPEED CONTROL MEASURES

Numerous studies have been carried out to determine the influence of particular roadway features on traffic speed. Some of the most significant characteristics of roadway features are curvature, grades, length of grade, number of lanes, surface condition, sight distance, lateral clearance, number of intersections, and built-up areas near the roadways. Some of the main reasons drivers give for speeding include being in a hurry, to avoid a potential danger, to keep up with other traffic, and to maintain a speed with which the driver feels comfortable.

This technical memorandum describes a variety of speed control measures to address public concern over high-speed traffic through the downtown areas of many of the cities in Grant County. Speed control measures consist of physical controls, passive controls, and psycho-perception controls. Specific speed control techniques for each of these three categories are summarized in the following pages and listed in Table 1 located at the end of this memorandum.

Physical Controls

Physical speed controls are those measures which are physically constructed to restrict or affect vehicle operation or performance. Speed control techniques that can be designed or built into transportation systems include the use of road markings, texturing, medians, street narrowing, and other physical features. They often result in other "traffic calming" benefits such as reduced traffic volumes and noise levels in congested areas. High construction costs somewhat limit extensive use of these types of speed control measures.

Speed Bumps

Speed bumps are short bumps in a roadway used in parking lots, on private roads, and around universities. Their effectiveness at reducing speed is somewhat inconsistent, as drivers tend to slow down to reduce vehicle rocking while traveling over the bumps but will then increase their speeds between the bumps to make up for lost time. They increase the likelihood of vehicle damage and loss of control even when driving over them at low speeds. Speed bumps can be effective in lowering traffic volumes; however, they cause an increase in noise. They also cause problems for snowplows. Speed bumps have moderately high construction costs and little to no maintenance costs once constructed.

Road Humps

Road humps are typically 12 feet long and three to four inches high and can be safely crossed at speeds of 30 mph. Extensive testing has indicated that road humps are effective in reducing speeds on residential streets; that in the 85th percentile, speeds closely match the 25 mph speed limit used on most residential streets. Road humps are less likely than speed bumps to cause loss of control or vehicle damage caused by vehicles bottoming-out. Tests also showed a reduction in injury accidents and no statistically significant change in accidents on surrounding streets that could have been used as alternate routes. Speed bumps tend to reduce traffic volumes by discouraging through traffic on local neighborhood streets. Noise levels go down by slowing down traffic. Speed humps have moderately high construction costs and little to no maintenance costs once constructed.

Rumble Strips

Like road humps, rumble strips have been found to be effective in reducing average travel speeds and are less likely than speed bumps to cause loss of control or vehicle damage. Rumble strips typically consist of rows of raised metallic saucer-like elements affixed to the roadway which cause a mild rumbling under the vehicle and a significant amount of noise when driven over. The effect is to make motorists more aware of their speed and their surroundings with the intent of causing drivers to slow down. This in turn improves safety. Rumble strips have moderate construction costs and low maintenance costs once installed.

A significant disadvantage to this control measure is that it is difficult to construct a rumble surface that would not generate too much noise for adjacent residents. Raised metallic rumble strips also cause maintenance problems for snowplows and can be a hazard if dislodged.

Rumble strips can also be constructed by scoring the roadway pavement, which may be more desirable as they would create less noise. They would not result in a raised profile which would interfere with snowplows and there would be nothing that could become dislodged.

Median Barrier

The primary function of medians is to restrict conflicting turning movements by not allowing left turns from a travel lane into a driveway. Wide medians can also allow for turning pockets at intersections, provide pedestrian refuge, and reduce pavement width. Medians can be as narrow as two to four feet wide within a limited right-of-way.

Medians often slow traffic by giving the appearance of a parkway setting and narrow lanes. They improve safety and may increase the capacity of high-volume streets by limiting conflicting mid-block movements and channelizing traffic at complex intersections. They may improve safety at certain locations by making side street driveways right turn in and out only. Medians also increase pedestrian

safety and ability to cross wider streets by providing mid-street pedestrian refuge. Construction costs for medians are high; however, they have low maintenance costs once constructed.

Traffic Circle

Traffic circles are primarily used to reduce delay at intersections and improve safety. Traffic circles have advantages over traffic signals because they improve intersection operations, tend to have lower accident rates, less severe accidents, and cost less. Entry into traffic circles is continuous and controlled by yield signs. In many situations the capacity is similar to other intersection traffic control.

Traffic circles may reduce delays at intersections and can improve local street access as well as decrease speed depending on design. Traffic circles reduce the number of conflict points and the number and severity of crashes at some locations. Safety may be an issue in areas where drivers are not used to and are unclear about how to use them. Other disadvantages are that they may reduce the opportunity for pedestrians to cross roads and they can be intimidating to bicyclists. Traffic circles also have high construction costs.

Chokers and Road Narrowing

Lateral clearance on a roadway has been proven to have an effect on travel speeds, albeit a minor effect. The narrower a road is, the more slowly drivers tend to travel.

Where on-street parking exists, constructing sidewalks with curb extensions, or bulbs at intersections such that the sidewalk is extended to the end of the parking lane is an effective way to narrow a road. Narrower streets mean shorter crosswalk lengths, thus improving pedestrian safety by reducing the amount of time pedestrians are in the street. Narrow streets also shorten the pedestrian phase at signalized intersections, thus allowing a redistribution of green time to the traffic movements which need it most. They can also slow traffic in these areas.

Road narrowing usually does not result in reduced traffic volumes nor in reduced noise. This measure may cause problems for cyclists if the curb extension conflicts with a bike lane.

This improvement option can be made at a moderate to high construction cost. The cost of a single curb extension is about $2,000. For all four corners of an intersection, the total cost would be about $8,000. Once constructed, there is little to no maintenance required for this option.

Passive Controls

Passive speed control measures do not physically alter vehicle operation or speed. They typically consist of regulatory signs or signals and rely on driver compliance to be effective. This inherently makes them

less effective at controlling speeds than physical controls. Their relatively low construction costs, however, may make them more practical to implement on a large-scale basis.

Stop Signs

Experience in the United States over the years indicates that stop signs installed on local streets have little effect on speed except in the immediate vicinity of the signs. Tests found that motorists start to slow down 200 feet before the intersection and return to near normal speed about 100 feet past the stop point. Studies also showed that speeds between intersections are not significantly changed but tend to increase slightly after the installation of stop signs. In addition, some tests found that stop signs installed to control speed were disobeyed on a wide scale. When not forced to stop by a priority vehicle, few drivers came to a complete stop and many did not stop at all. The Manual on Uniform Traffic Control Devices requires that stop signs not be used for speed control.

Speed Limit Signs

Speed limit laws often specify general limits for residential streets, business districts, school zones, or rural areas. The laws usually recognize that safe speed varies from road to road and permit highway agencies to raise or lower speed limits on the basis of an engineering or traffic survey. The basic intent of speed zoning is to identify a safe and reasonable limit for a given road section or zone. The most widely accepted method of setting speed limits is the 85th percentile speed. This is the speed that 85 percent of traffic is moving at or below and reflects the safe speed for the given roadway conditions as determined by a large majority of drivers. The 85th percentile speed is in the speed range where the accident involvement rate is lowest.

Numerous studies have been carried out on the effects of speed limits. Studies on urban and rural roads indicate that speed limits have little or no effect on traffic speed and that drivers respond to changing roadway conditions more so than posted speed limits. A survey of drivers indicated that over three-fourths of the motorists indicated they drive at a speed that traffic and road condition will permit regardless of the posted speed limit. Although the motorists tended to think of speeding as one of the primary causes of accidents, they did not feel that going ten mph over the legal limit was very wrong. One speed study indicated that when the speed limit was raised to match the 85th percentile speed, there was essentially no change in speed. Where the speed limit was lowered, the spread in speeds increased and compliance dropped from 89 percent to 24 percent.

In summary, changing the posted speed limit can be done at a low construction cost with little to no maintenance problems or cost; however, lowering posted speed limits rarely results in actual reductions in speed. Speed zones need to be constantly enforced to be effective. Lowering the posted speed limit rarely results in improved safety because any safety benefits realized by slower speeds is negated by an increase in speed variance. Speed limits can also give pedestrians a false sense of security by expecting

drivers to obey signs. Changes to the posted speed limit are not likely to result in any changes in traffic volumes or noise either.

Traffic Activated Signs

Radar can be used to activate variable message signs when vehicles are traveling faster than the speed limit. These signs display the speed indication and the message SLOW DOWN or TOO FAST with flashing beacons to drivers exceeding the posted speed limit. Speed limit signs without beacons produced no significant reductions in speed. Some tests indicated that there was an increase in the speed variance with the speed violation sign. This is an unfavorable effect since it has been shown to increase the likelihood of accidents. Other tests indicated that speeds became more uniform. It is unlikely that a traffic activated sign would have any effect on traffic volumes or noise. These signs have moderately high construction costs and low maintenance costs.

Psycho-Perception Controls

Psycho-perception controls are those speed control measures that rely on drivers' attitudes, perceptions, and reactions to their surroundings. These include knowledge about speed enforcement, perceived safe traveling speed, and reaction to changes in the surrounding environment. They rely less on physically moving vehicles or driver compliance with the law and more on the human psyche. Nonetheless, their benefits can be quantified and they make an important contribution to speed control.

Enforcement

In the presence of police enforcement, motorists tend to slow down. The magnitude of the speed decrease depends on the relative level of the speed limit and the perceived severity of the threat and enforcement. A marked police vehicle parked with lights flashing and simulating an arrest produces the largest reduction in speed. Stationary enforcement is more effective than moving enforcement in controlling speed. In most cases, the decrease in speed is less than three mph but reductions up to ten mph have been observed. As would be expected, the greater the number of enforcement measures present in a given area or the greater the frequency of presence, the greater the impact on the speed of traffic in that area.

The distance that the speed suppression effect extends from the enforcement measure depends on the frequency or strategy of patrol, the patrol method, the traffic situation, and other factors. In most cases, this distance is less than three miles either side of the measure, but there have been reports of an effect up to four miles upstream and ten miles downstream of the enforcement.

Enforcement also appears to have a carryover effect. That is, the speed suppression effect remains for some period of time after the enforcement unit is removed. The duration of this effect and the factors

which can alter it are not well defined, but are associated with driver communication and frequency of exposure.

Speed enforcement not only reduces speed but also has the tendency to reduce accident severity as well. Studies have shown that the variance of speed distribution is reduced by enforcement. The effect of enforcement on speed variance is of interest since it is related to accident involvement. Other studies have shown that the effect of enforcement is to shift the entire speed distribution in the direction of lower speeds without actually altering speed distribution.

Economic and manpower constraints usually prohibit widespread or long-term employment of speed enforcement measures.

Transverse Markings

Transverse markings consist of a series of pavement markings placed across the road. Pavement marking materials consist of paint, thermoplastic, or pre-cut adhesive backed lines. The spacing between the markings gradually decreases as the area of speed control is approached. The marking pattern is intended to give the illusion of high speed and cause drivers to slow down. Tests have shown transverse markings to be successful in producing speed reductions, especially for speeders, and to reduce speed-related accidents, as well as all accidents. The technique may not affect those who are familiar with the area.

Transverse markings do not result in a decrease in traffic volumes nor a decrease in noise. They can create a hazard to pedestrians and bicyclists because some markings are slicker than the normal pavement when wet. Providing painted markings can be accomplished at a low construction cost and do not require much maintenance beyond routine painting.

Crosswalks

Providing marked crosswalks is primarily to improve pedestrian safety. Sometimes crosswalks are effective in causing drivers to slow down when approaching intersections with marked crosswalks. Raised or textured crosswalks are more effective than painted crosswalks at producing this effect, as they act as speed humps; however, they could result in an increase in noise and are not recommended for streets with high traffic volumes. They could also create a safety hazard for bicyclists.

Marked crosswalks indicate to drivers that they are approaching an area of high pedestrian volumes and that they are expected to yield the right-of-way to pedestrians. Crosswalks make crossing streets more pleasant because they delineate and reinforce pedestrian crossing. Area businesses may consider this option a plus.

A danger associated with this improvement option is that marked crosswalks could give pedestrians a false sense of security, especially at unsignalized intersections.

Providing painted crosswalks can be accomplished at a low construction cost (approximately $3 per linear foot) and do not require much maintenance beyond routine painting. Raised or textured crosswalks have higher construction costs and little to no maintenance costs.

Odd Speed Limit Signs

Differentiated speed limits and advisory speed limits can be considered "odd" speed limits. Differentiated speed limits can consist of different speed limits for day and night or different speed limits for cars and trucks. Advisory speed limits are often used to aid drivers in selecting safe speeds for hazardous locations such as curves, roadwork sites, intersections, and road sections with lower design speeds.

When different speed limits are used for day and night, the night speed limits are generally set at five to ten mph lower than day speed limits. There are no reports available on the effectiveness of these limits, although speeds are generally lower and accident risk has been found to be greater at night.

Different speed limits for cars and trucks have also been used. One study of differentiated speed limits indicated that the actual difference in car and truck speeds was less than the posted ten mph differential except on steep upgrades where trucks could not maintain speed. At most sites studied the actual difference between car and truck speeds was less than six mph.

Studies have indicated that drivers exceeded advisory speeds of 15 to 35 miles per hour but did not exceed 45 and 50 mph speed advisories. Advisory and regulatory 35 mph speed limit signs were shown to have little if any effect on speed compared to the standard curve sign. In general, drivers were not influenced by raising or lowering advisory speeds, but they were influenced by the sharpness of the curve. Additionally, drivers using a highway repeatedly, quickly learn the speed that curvature and road conditions will allow and advisory speeds can be expected to have little effect on them.

As with typical speed limit signs, odd speed limit signs can be installed at a low construction cost with little to no maintenance problems or cost; however, they rarely result in actual reductions in speed. These signs also have a tendency to be ignored, and are more subject to vandalism.

Vertical Elements Along Roadway

This option consists of adding a vertical architectural element to the sides of a two-lane highway within an urban area to give the appearance of narrowness. This technique, sometimes called "Gateway Treatment," also gives drivers a sense of "place," i.e., the feeling that they have entered an urban area with lower speed limits, on-street parking, conflicting pedestrian and bicycle movements, and increased highway access.

This treatment may improve pedestrian safety because it causes drivers to be more alert; however, it could also distract motorists' attention.

The most common and most aesthetically pleasing way of accomplishing this is with the use of trees in a landscaped strip along the highway's edge. Trees provide shade and improve the landscape. The subliminal effect of getting drivers to slow down when driving a stretch of highway treated in this way is best achieved when the trees consist of mature shade trees which provide a canopy over the road somewhat limiting peripheral vision; however, it takes many years for newly-planted trees to reach the maturity level needed to provide the desired effect. The disadvantages of using trees are that trees may conflict with utility lines and outdoor advertising, they may obscure traffic signs and limit sight distance, and trees with heavy leaves or fruit can create slippery conditions. Issues of maintenance including irrigation and drainage must be determined. Appropriate species must be selected so that roots do not disturb sidewalks.

Other vertical elements which could be used in place of trees are period street lamps, signs or even moving building lines closer to the highway edge to provide the illusion of a more narrow right-of-way. Care should be taken so as not to block drivers' sight distance.

This option is a popular improvement because of its aesthetic value, and because it does not compromise safety nor create negative noise impacts. This improvement option is estimated to have moderate to high construction costs; however, there is little to no maintenance required after construction.

Narrowing Lane Widths

Narrowing lane widths may slow traffic through the perceived higher risk of collision in narrower lanes. One study indicated no reduction in roadway capacity when changed from 12-foot-wide to 11-foot-wide lanes. This study noted a decrease in accidents; however, the reduction could not clearly be attributed to the lane modification. Another study of arterials and collectors suggests that for speeds of 30 mph, a 20-foot width is sufficient for a two-lane, two-way road.

Narrowing lane widths marginally shortens crossing distance and may increase pedestrian safety. This technique also has the effect of widening pedestrian space.

Significant narrowing is not feasible where through traffic volumes are close to road capacity. Lanes narrower than 11 feet on through, high volume streets may have higher accident rates. In addition, this technique may limit some truck movements depending on how narrow the streets are. There may also be a decrease in bicycle safety depending on how narrow the lanes are. Motorists may not wait, but attempt to move around a bicyclist even in narrow lanes. The presence of bike lanes might help although motorists might drive in bike lanes.

Narrowing lanes with the use of pavement markings can be accomplished at a low construction cost and little to no maintenance cost.

Bicycle Lanes

Bicycles should be accommodated on virtually all roadways. For most local streets, the traffic volume and speeds are low enough that bicycles and autos can safely share the same roadway. On collector streets and arterials, both the volume and speed of the automobile traffic is high enough that a designated space is needed for bicyclists. In urban areas where there are curbs, a six-foot bike lane is recommended for bicycles, and special care taken to secure safe bicycle passage through intersections. In rural areas without curbs and sidewalks, the typical recommended facility is a shoulder bikeway, where a six-foot standard paved shoulder is provided for bicycles. According to the Oregon Bicycle and Pedestrian Plan, the guideline for rural arterials with a design hour volume of less than 200 vpd is for a paved shoulder which is four feet wide.

Bicycle lanes also improve bicyclist safety and encourage more bicycle trips by improving the cycling experience by taking bike trips out of the general flow traffic lanes. Depending on the existing pavement width, bike lanes can be provided at a low construction cost simply by restriping an existing road (approximately $0.40 per linear foot). If a roadway has to be widened to provide a bike lane or a paved shoulder, it can be done at a relatively high construction cost (approximately $45 per linear foot for a facility five feet wide on both sides of the road, built to highway standards, with curbs and striping). After construction, little to no maintenance is required except for routine painting of pavement markings.

References

DeLuca, Frank, "Effects of Lane Width Reduction on Safety and Flow." Effectiveness of Highway Safety Improvements, 1985.

Manual on Uniform Traffic Control Devices. US Department of Transportation Federal Highway Administration, Washington, DC, 1988.

Oregon Bicycle and Pedestrian Plan. Oregon Department of Transportation, Salem, OR, June 1995.

Pharaoh, Tim and Russell, John, Traffic Calming: Policy and Evaluations in Three European Countries. London South Bank Polytechnic, 1989.

Sharing the Main Street: A Practitioners' Guide to Managing the Road Environment of Traffic Routes Through Commercial Centers. Roads and Traffic Authority of New South Wales and Federal Office of Road Safety, November, 1993.

Smith, Eugene A. and Barnes, John W., "A Trial of Traffic Calming on a Sub-arterial Road in Sydney." Institution of Professional Engineers New Zealand, Conference Proceedings IPENZ Annual Conference, 1992.

Synthesis of Safety Research Related to Traffic Control and Roadway Elements. US Department of Transportation Federal Highway Administration, Washington, DC, December 1982.

APPENDIX E

Highway 82 Cooperative Improvement Agreement

January 21, 1999

Misc. Contracts & Agreements
No. 17,109

COOPERATIVE IMPROVEMENT AGREEMENT
Joseph Section

THIS AGREEMENT is made and entered into by and between THE STATE OF OREGON, acting by and through its Department of Transportation, hereinafter referred to as "ODOT"; and CITY OF JOSEPH, acting by and through its Elected Officials, hereinafter referred to as "Agency".

WITNESSETH

RECITALS

1. The Wallowa Lake Highway (Oregon Highway 82) and Joseph – Wallowa Highway (#351) are State Highways under the jurisdiction and control of the Oregon Transportation Commission and are routed through the corporate limits of City over Main Street.

2. By the authority granted in ORS 366.770 and 366.775, ODOT may enter into cooperative agreements with the counties and cities for the performance of work on certain types of improvement projects with the allocation of costs on terms and conditions mutually agreeable to the contracting parties.

NOW, THEREFORE, the premises being in general as stated in the foregoing RECITALS, it is agreed by and between the parties hereto as follows

TERMS OF AGREEMENT

1. For the purpose of providing acceptable traffic circulation patterns on public highways and roads in the vicinity of the Wallowa Lake Highway and the Joseph – Wallowa Highway between Russell Lane and 3rd Street, ODOT and Agency plan and propose to provide the following improvements:

a. ODOT shall design and construct pavement overlay, storm sewer system improvements, curbs, ADA sidewalk upgrades, and provide other safety improvements to the Wallowa Lake Highway and the Joseph – Wallowa Highway between Russell Lane and 3rd Street. The location of the project is approximately as shown on the attached map, marked Exhibit A, and by this reference made a part hereof.

b. ODOT shall design and construct, on behalf of Agency, new sidewalks between Russell Lane and Pine Street. The location of project elements is approximately as shown on the attached map, marked Exhibit B, and by this reference made a part hereof.

c. ODOT shall design and construct, on behalf of Agency, irrigation, decorative luminaries, and brick pavers for sidewalks. The location of project elements is approximately as shown on the attached map, marked Exhibit A, and by this reference made a part hereof.

2. The project described in paragraph 1a (Terms of Agreement) will be financed with funds available to the ODOT.

3. The project elements described in paragraph 1b (Terms of Agreement) will be financed with a $100,000 State Bicycle/Pedestrian Grant. Agency is not required to match this Grant. If costs should exceed $100,000 for work described in paragraph 1b (Terms of Agreement), Agency shall be responsible for said costs.

4. The project elements described in paragraph 1c (Terms of Agreement) will be financed with Transportation Equity Act of the 21st Century (TEA-21) transportation enhancement funds. These elements of the project shall be conducted as a part of the Enhancement Program under Title 23, United States Code, and the Oregon Action Plan. The total estimated cost of the project elements is $554,146. Agency shall be responsible for the match for the federal funds and any portion of the project elements which is not covered by federal funding. The total estimate for these project elements is subject to change.

5. The Standard Provisions attached hereto, marked Attachment 2 by this reference made a part hereof. The Standard Provisions apply to all federal-aid projects and may be modified only by this agreement. The parties hereto mutually agree to the terms and conditions set forth in Attachment 2. In the event of a conflict, this agreement shall control over Attachment 2.

6. This agreement shall become effective on the date all required signatures are obtained and shall remain in effect for the purpose of ongoing maintenance responsibilities for the useful life of the facilities constructed as part of the project.

ODOT OBLIGATIONS

1. ODOT shall conduct the necessary field surveys, environmental studies, traffic investigations, identify and obtain all required permits, and perform all preliminary engineering and design work required to produce plans, specifications and cost estimates for project described in paragraph 1a, 1b, and 1c (Terms of Agreement).

2. ODOT shall provide final plans, prepare contract and bidding documents, advertise for construction bid proposals, award all contracts, pay all contractor costs, furnish all construction engineering, technical inspection, and project manager services for the administration of the contract for project described in paragraph 1a, 1b, and 1c (Terms of Agreement).

3. ODOT shall, at its own expense, lay out and paint the necessary lane lines and erect the required directional and traffic-control signing for the project described in paragraph 1a, 1b, and 1c(Terms of Agreement).

4. ODOT shall relocate, or cause to be relocated, all existing utility conduits, lines, poles, mains, pipes, and other such facilities that are located on private property or within state jurisdiction where such relocation is necessary to conform such utilities or facilities to the plans for the project described in paragraph 1a, 1b, and 1c (Terms of Agreement).

5. ODOT shall, upon execution of this agreement, and after contract award, forward a letter to Agency outlining the cost for the Items identified in paragraph 1c (Terms of Agreement). ODOT shall send billing statements to agency monthly for work completed on elements of the project described in paragraph 1c (Terms of Agreement) to accommodate the agency's matching grant funds from the Old Growth Diversification funds granted by the Oregon Economic Development Department. ODOT shall invoice Agency for any costs exceeding $100,000 for work described in 1b (Terms of Agreement) and for any costs not covered by federal funding for work described in 1c (Terms of Agreement).

6. Upon completion of the project, ODOT shall submit to Agency an itemized statement of the total actual cost of the elements of the project described in paragraph 1c (Terms of Agreement). ODOT shall send final billing to Agency for final payment of the Agency's match for this work.

7. ODOT shall be responsible for the ongoing maintenance of the roadway surface between curbs, painting centerline strips, school crosswalk delineation, directional and regulatory signs except those signs described in paragraph 2 (Agency Obligations), and plowing snow, one plow width each side of centerline to the center of the roadway.

AGENCY OBLIGATIONS

1. Agency shall, upon receipt of the monthly billing from ODOT, for work completed on elements of the project described in paragraph 1c (Terms of Agreement), send a bill to the Oregon Economic Development Department for reimbursement of Old Growth Diversification grant funds. Upon receipt of funds from the Oregon Economic Development Department, send payment to ODOT for match for work completed on these elements of the project. Upon completion of the project and receipt of final billing from ODOT, Agency shall, complete payment of their match for these elements of the project.

2. Agency agrees to provide payment to ODOT upon invoice for any costs exceeding #100,000 for work described in paragraph 1b (Terms of Agreement) and for any costs not covered by federal funding for work described in paragraph 1c (Terms of Agreement.

3. City represents that adequate City funds are available prior to advertisement for bids to accommodate 110 % of the Engineers estimate for work identified in paragraph 1b and 1c (Terms of Agreement).

4. Agency shall be responsible for the ongoing maintenance of the following items: (a) storm sewer system (b) sidewalks (c) landscaping, irrigation system, and luminaries (d) U-turn signs, parking signs, and street name signs (e) paint parking striping and other pavement delineation not shown under paragraph 7 (ODOT Obligations) (f) snow plowing from ODOT responsibility in paragraph 7 (ODOT Obligations) to the curb.

5. Agency agrees to obtain permission from ODOT's District 13 office for any open cutting of the pavement to repair or upgrade underground utilities, except for emergencies, on this section for the life of the project (20 years). Permission will not be unreasonably denied.

6. Agency, by execution of this agreement, does hereby give its consent as required by ORS 373.030 (2) to any and all changes of grade within the City Limits, and give its consent as required by ORS 373.050 (1) to any and all closure of streets intersecting the highway, if any there be in connection with or arising out of the project covered by this agreement.

7. Agency hereby grants ODOT the right to enter onto and occupy City Street right-of-way for the performance of construction of this project.

8. Agency shall enter into and execute this agreement during a duly authorized session of its City Council.

GENERAL PROVISIONS

1. ODOT and Agency agree and understand that a mutual review of the project plans and specifications, for the project described in paragraph 1a, 1b, and 1c (Terms of Agreement), will be conducted prior to advertisement for construction bid proposals, and that Agency prior written approval is necessary before such advertisement.

2. Termination

a) Parties Right to Terminate for Convenience. This Agreement may be terminated at any time by mutual written consent of the parties.

b) ODOT's Right to Terminate for Convenience. ODOT may, at its sole discretion, terminate this Agreement, in whole or in part, upon thirty (30) days written notice to Agency.

c) ODOT's Right to Terminate for Cause. ODOT may terminate, in whole of in part, immediately upon notice to Agency, or at such later date as ODOT may establish in such notice, upon the occurrence of any of the following events:

i) ODOT's failure to receive funding, appropriations, limitations or any other expenditure authority at levels sufficient to pay for the work provided in the agreement;

ii) Federal or State laws, regulations or guidelines are modified or interpreted in such a way that either the work under this agreement, is prohibited, or ODOT is prohibited from paying for such work from the planned funding source;

iii) Agency fails to provide its share of the cost of the project.

d) Any termination of this agreement shall not prejudice any rights or obligations accrued to the parties before termination.

3. The parties, their consultants or subcontractors, if any, and all employers working under this agreement are subject employers under the Oregon Workers Compensation Law and shall comply with ORS 656.017, which requires them to provide workers' compensation coverage for all their subject workers.

4. Both parties shall comply with all federal, state, and local laws, regulations, executive orders and ordinances applicable to the work under this agreement, including, without limitation, the provisions of ORS 279.312, 279.314, 279.316, 279.320 and 279.555, which hereby are incorporated by reference. Without limiting the generality of the foregoing, Agency expressly agrees to comply with (i) Title VI of Civil Rights Act of 1964; (ii) Section V of the Rehabilitation Act of 1973; (iii) the Americans with Disabilities Act of 1990 and ORS 659.425; (iv) all regulations and administrative rules established pursuant to the foregoing laws; and (v) all other applicable requirements of Federal and state civil rights and rehabilitation statutes, rules and regulations.

5. Agency, as a recipient of grant funds, pursuant to this agreement with the ODOT, shall assume sole liability for Agency's breach of the conditions of the grant, and shall, upon Agency's breach of grant conditions that requires ODOT to return funds to the Federal Highway Administration, the grantor, hold harmless and indemnify ODOT for an amount equal to the funds received under this agreement; or if legal limitations apply to the indemnification ability of Agency, the indemnification amount shall be the maximum amount of funds available for expenditure, including any available contingency funds or other available non-appropriated funds, up to the amount received under this agreement.

6. This agreement and attached exhibits constitute the entire agreement between the parties on the subject matter hereof. There are no understandings, agreements, or representations, oral or written, not specified herein regarding this agreement. No waiver, consent, modification or change of terms of this agreement shall bind either party unless in writing and signed by both parties and all necessary approvals have been obtained. Such waiver, consent, modification or change, if made, shall be effective only in the specific instance and for the specific purpose given. The failure of ODOT to enforce any provision of this agreement shall not constitute a waiver by ODOT of that or any other provision.

M.C. & A No. 17,109
City of Joseph – Joseph Section

This project was approved by the Oregon Transportation Commission on October 15, 1997, as part of the 1998 - 2001 Statewide Transportation Improvement Program, page 155.

The Oregon Transportation Commission on June 18, 1998, approved Subdelegation Order No. 2, in which the Director grants authority to the Deputy Director/Chief Engineer to approve and execute agreements over $50,000 when the work is related to a project included in the Statewide Transportation Improvement Program.

IN WITNESS WHEREOF, the parties hereto have set their hands and affixed their seals as of the day and year hereinafter written.

APPROVAL RECOMMENDED

By _____
Region Manager

Date 3/19/99

APPROVED AS TO LEGAL SUFFINCENCY

By _____
Asst. Attorney General

Date _____

REVIEWED FOR AGENCY

By _____
Agency Attorney

Date _____

STATE OF OREGON, by and through its Department of Transportation

By _____
Deputy Director/Chief Engineer

Date 4/7/99

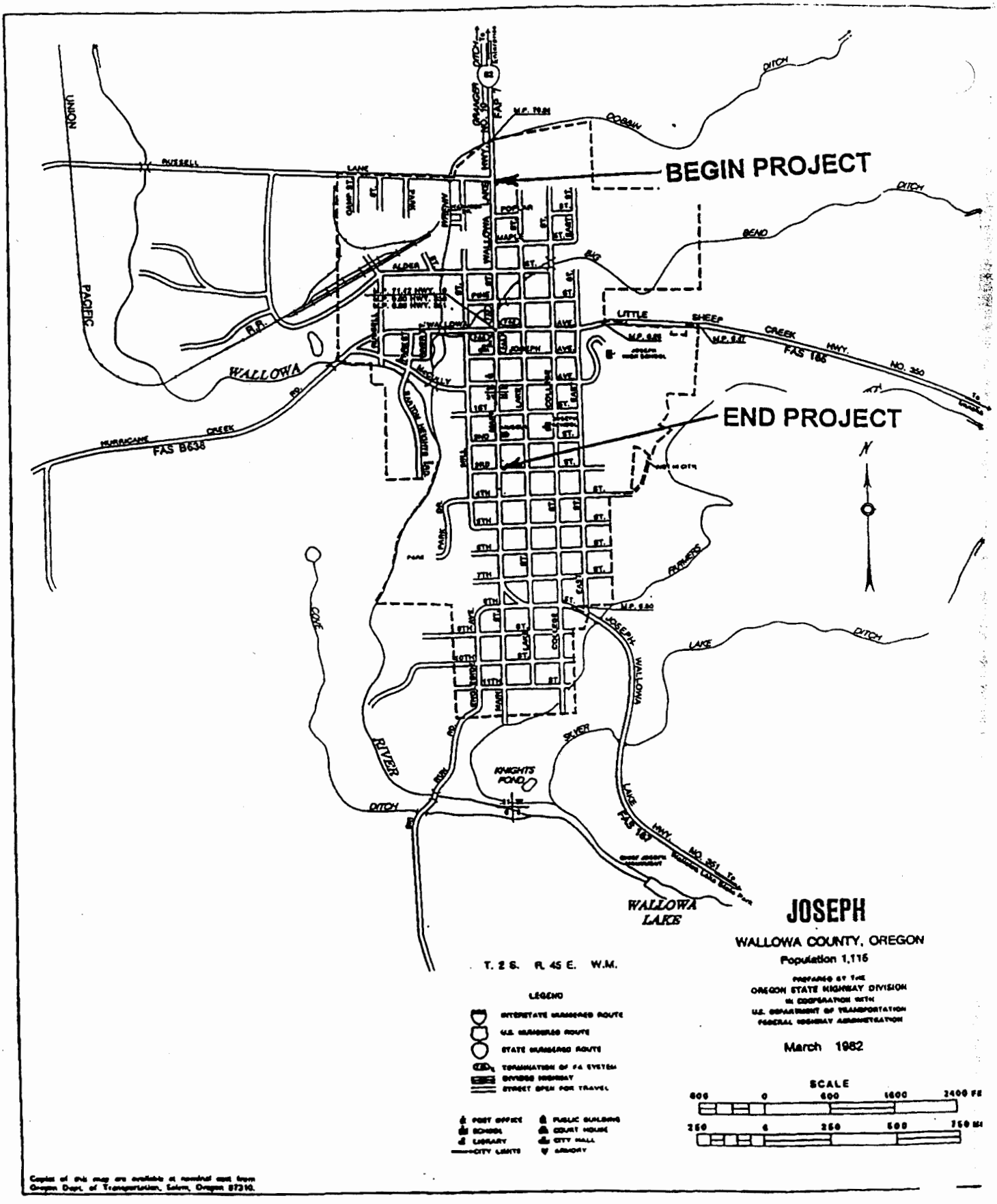
CITY OF JOSEPH, by and through its Elected Officials

By _____
Mayor

By _____
City Recorder

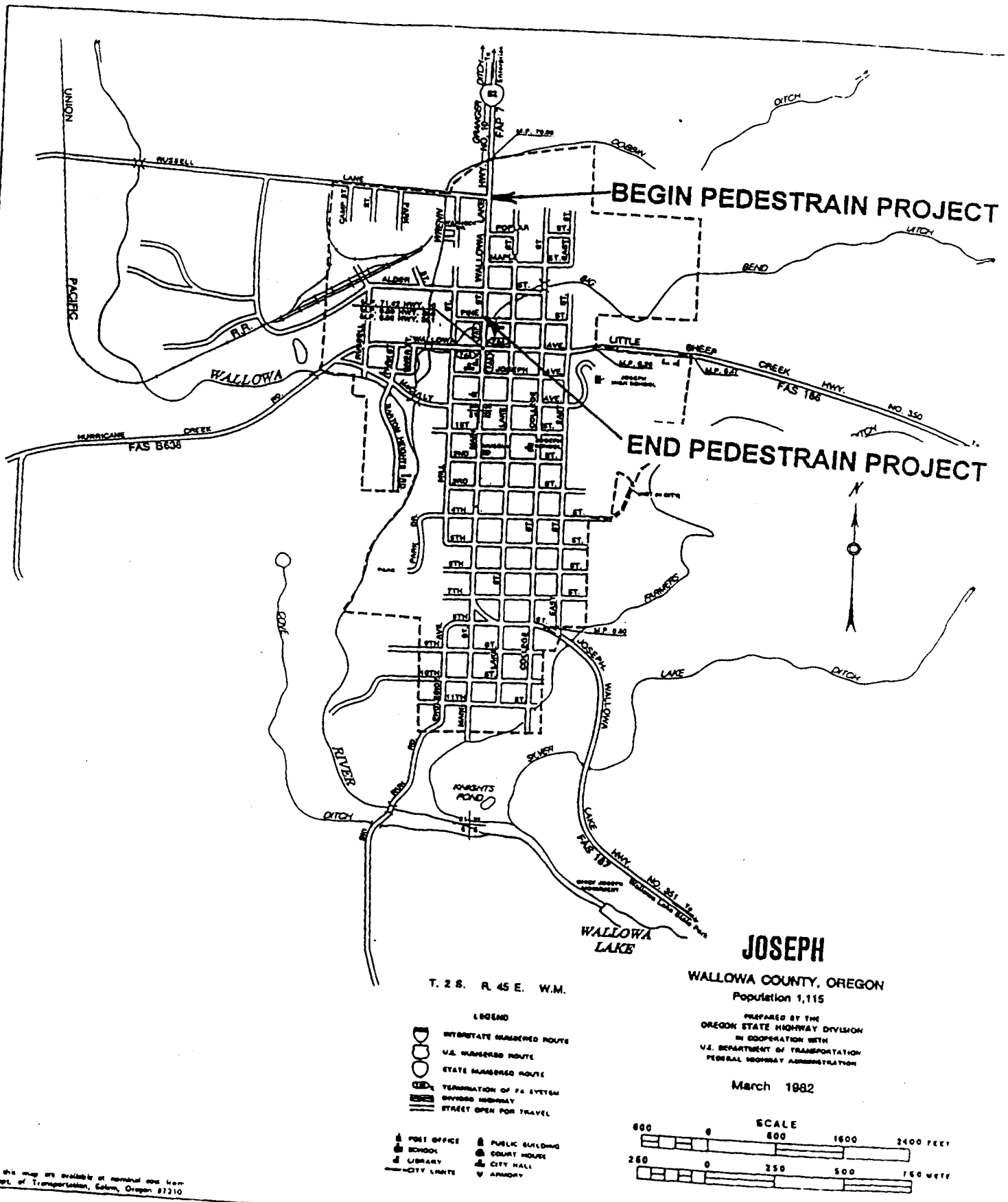
Date March 18, 1999

JOSEPH SEC.DOC
KEY NO. 09515
F: / 5802Shar / Agremnts / Wallowa



Copies of this map are available at nominal cost from Oregon Dept. of Transportation, Salem, Oregon 97310.

EXHIBIT A



of this map are available at nominal cost from Dept. of Transportation, Salem, Oregon 97310

EXHIBIT B

ATTACHMENT NO. 2

STANDARD PROVISIONS

JOINT OBLIGATIONS

PROJECT ADMINISTRATION

1. State (ODOT) is acting to fulfill its responsibility to the Federal Highway Administration (FHWA) by the administration of this project, and Agency (i.e. county, city, unit of local government, or other state agency) hereby agrees that State shall have full authority to carry out this administration. If requested by Agency or if deemed necessary by State in order to meet its obligations to FHWA, State will further act for the Agency in other matters pertaining to the project. State and Agency shall actively cooperate in fulfilling the requirements of the Oregon Action Plan. Agency shall, if necessary, appoint and direct the activities of a Citizen's Advisory Committee and/or Technical Advisory Committee, conduct a hearing and recommend the preferred alternative. State and Agency shall each assign a liaison person to coordinate activities and assure that the interests of both parties are considered during all phases of the project.

2. Any project that uses federal funds in project development is subject to plans, specifications and estimates (PS&E) review and approval by FHWA or State acting for FHWA prior to advertisement for bid proposals, regardless of the source of funding for construction.

PRELIMINARY & CONSTRUCTION ENGINEERING

3. State, Agency, or others may perform preliminary and construction engineering. If Agency or others perform the engineering, State will monitor the work for conformance with FHWA rules and regulations. In the event that Agency elects to engage the services of a personal service consultant to perform any work covered by this agreement, Agency and Consultant shall enter into a State reviewed and approved personal service contract process and resulting contract document. State must concur in the contract prior to beginning any work. State's personal service contracting process and resulting contract document will follow Title 23 Code of Federal Regulations (CFR) 172, Title 49 CFR 18, ORS 279.051, the current State Administrative Rules and ODOT Personal Services Contracting Procedures as approved by the Federal Highway Administration (FHWA). Such personal service contract(s) shall contain a description of the work to be performed, a project schedule, and the method of payment. Subcontracts shall contain all required provisions of Agency as outlined in the agreement. No reimbursement shall be made using federal-aid funds for any costs incurred by Agency or its consultant prior to receiving authorization from State to proceed. Any amendments to such contract(s) also require State's approval.

4. On all construction projects where State is the signatory party to the contract, and where Agency is doing the construction engineering and project management, Agency, subject to any limitations imposed by State law and the Oregon Constitution, agrees to accept all responsibility, defend lawsuits, indemnify and hold State harmless, for all tort claims, contract claims, or any other lawsuit arising out of the contractor's work or Agency's supervision of the project.

REQUIRED STATEMENT FOR USDOT FINANCIAL ASSISTANCE AGREEMENT

5. If as a condition of assistance the Agency has submitted and the US Department of Transportation has approved a Disadvantaged Business Enterprise Affirmative Action Program which the Agency agrees to carry out, this affirmative action program is incorporated into the financial assistance agreement by reference. That program shall be treated as a legal obligation and failure to carry out its terms shall be treated as a violation of the financial assistance agreement. Upon notification to the Agency of its failure to carry out the approved program, the US Department of Transportation shall impose such sanctions as noted in Title 49, Code of Federal Regulations, Part 23, Subpart E, which sanctions may include termination of the agreement or other measures that may affect the ability of the Agency to obtain future US Department of Transportation financial assistance.

6. The Agency further agrees to comply with all applicable civil rights laws, rules and regulations, including Section 504 of the Rehabilitation Act of 1973, the Americans with Disabilities Act of 1990 (ADA), and Titles VI and VII of the Civil Rights Act of 1964.

7. The parties hereto agree and understand that they will comply with all applicable federal, state, and local laws, regulations, executive orders and ordinances applicable to the work including, but not limited to, the provisions of ORS 279.312, 279.314, 279.316, 279.320 and 279.555, incorporated herein by reference and made a part hereof; Title 49 CFR, Parts 23 and 90, Audits of State and Local Governments; 49 CFR Parts 18 and 24; 23 CFR Part 771; Title 41, USC, Anti-Kickback Act; Title 23, USC, Federal-Aid Highway Act; 42 USC, Uniform Relocation Assistance and Real Property Acquisition Policy Act of 1970, as amended; provisions of Federal-Aid Policy Guide (FAPG), Title 23 Code of Federal Regulations (23 CFR) 1.11, 710, and 140; and the Oregon Action Plan.

STATE OBLIGATIONS

PROJECT FUNDING REQUEST

8. State shall submit a project funding request to the FHWA with a request for approval of federal-aid participation in all engineering, right-of-way acquisition, eligible utility relocations and/or construction work for the project. **No work shall proceed on any activity in which federal-aid participation is desired until such approval has been obtained.** The program shall include services to be provided by State, Agency, or others. State shall notify Agency in writing when authorization to proceed has been received from the FHWA. Major responsibility for the various phases of the project will be as outlined in the Special Provisions. All work and records of such work shall be in conformance with FHWA rules and regulations and the Oregon Action Plan.

FINANCE

9. State shall, in the first instance, pay all reimbursable costs of the project, submit all claims for federal-aid participation to the FHWA in the normal manner and compile accurate cost accounting records. Agency may request a statement of costs to date at any time by submitting a written request. When the actual total cost of the project has been computed, State shall furnish Agency with an itemized statement of final costs. Agency shall pay an amount which, when added to said advance deposit and federal reimbursement payment, will equal 100 percent of the final total actual cost. Any portion of deposits made in excess of the final total costs of project, minus federal reimbursement, shall be released to Agency. The actual cost of services provided by State will be charged to the project expenditure account(s) and will be included in the total cost of the project.

PROJECT ACTIVITIES

10. State shall, if the preliminary engineering work is performed by Agency or others, review and process or approve all environmental statements, preliminary and final plans, specifications and cost estimates. State shall, if they prepare these documents, offer Agency the opportunity to review and approve the documents prior to advertising for bids.

11. The party responsible for performing preliminary engineering for the project shall, as part of its preliminary engineering costs, obtain all project related permits necessary for the construction of said project. Said permits shall include, but are not limited to, access, utility, environmental, construction, and approach permits. All pre-construction permits will be obtained prior to advertisement for construction.

12. State shall prepare contract and bidding documents, advertise for bid proposals, and award all contracts.

13. Upon State's award of a construction contract, State shall perform independent assurance testing in accordance with State and FHWA Standards, process and pay all contractor progress estimates, check final quantities and costs, and oversee and provide intermittent inspection services during the construction phase of the project.

14. The State shall, as a project expense, assign a liaison person to provide project monitoring as needed throughout all phases of project activities (preliminary engineering, right-of-way acquisition, and construction). The liaison shall process reimbursement for federal participation costs.

RIGHT-OF-WAY

15. State is responsible for proper acquisition of the necessary right-of-way and easements for construction and maintenance of the project. Agency may perform acquisition of the necessary right-of-way and easements for construction and maintenance of the project, provided Agency (or Agency's consultant) are qualified to do such work as required by the ODOT Right of Way Manual and have obtained prior approval from ODOT Region Right of Way office to do such work.

16. Regardless of who acquires or performs any of the right-of-way activities, a right-of-way services agreement shall be created by ODOT Region Right of Way office setting forth the responsibilities and activities to be accomplished by each party. State shall always be responsible for requesting project funding, coordinating certification of the right-of-way, and providing oversight and monitoring. Funding authorization requests for federal right-of-way funds must be sent through the Region Right of Way offices on all projects. All projects must have right-of-way certification coordinated through Region Right of Way offices (even for projects where no federal funds were used for right-of-way, but federal funds were used elsewhere on the project). Agency should contact the Region Right of Way office for additional information or clarification.

17. State shall review all right-of-way activities engaged in by Agency to assure compliance with applicable laws and regulations. Agency agrees that right-of-way activities shall be in accord with the Uniform Relocation Assistance & Real Property Acquisition Policy Act of 1970, as amended, State's Right of Way Manual and the Code of Federal Regulations, Title 23, Part 710 and Title 49, Part 24.

18. If any real property purchased with federal-aid participation is no longer needed for the originally authorized purpose, the disposition of such property shall be subject to applicable rules and regulations, which are in effect at the time of disposition. Reimbursement to State and FHWA of the required proportionate shares of the fair market value may be required.

19. Agency insures that all project right-of-way monumentation will be conducted in conformance with ORS 209.150.

20. State and Agency grants each other authority to enter onto the other's right-of-way for the performance of the project.

AGENCY OBLIGATIONS

FINANCE

21. Agency shall, prior to the commencement of the preliminary engineering, utility, right-of-way acquisition and miscellaneous phases, deposit with State its estimated share of each phase upon receipt of a written request from State.

22. Agency's share of construction shall be deposited in two parts. The initial deposit shall represent 65 percent of the Agency's share, based on the engineer's estimate and shall be requested three weeks prior to opening bids on the project. The contract will not be awarded until the deposit is received. Upon award of the contract, the balance of the Agency's share shall be requested and deposited with the State in a timely manner.

23. Pursuant to ORS 366.425, the advance deposit may be in the form of 1) money deposited in the State Treasury (Local Government Investment Pool, and an Irrevocable Limited Power of Attorney is sent to ODOT's Financial Services Branch), or 2) an Irrevocable Letter of Credit issued by a local bank in the name of the State. The deposit may also be in the form of cash.

24. Deposits may be applied to any phase of the project under the same agreement.

25. Additional deposits, if any, shall be made as needed upon request from the State. Requests for additional deposits shall be accompanied by an itemized statement of expenditures and an estimated cost to complete the project.

26. Agency shall present invoices for 100 percent of actual costs incurred by Agency on behalf of the project directly to State's Liaison Person for review and approval. Such invoices shall identify the project and agreement number, and shall itemize and explain all expenses for which reimbursement is claimed. Billings shall be presented for periods of not less than one-month duration, based on actual expenses to date. All billings received from Agency must be approved by State's Liaison Person prior to payment. Agency's actual costs eligible for federal-aid or State participation shall be those allowable under the provisions of FAPG, 23CFR 1.11, 710, and 140. Final billings shall be submitted to State for processing within three months from the end of each funding phase as follows: 1) award date of a construction contract for preliminary engineering 2) last payment for right-of-way acquisition and 3) third notification for construction. Partial billing (progress payment) shall be submitted to State within three months from date that costs are incurred. Final billings submitted after the three months may not be eligible for reimbursement.

27. The cost records and accounts pertaining to work covered by this agreement are to be kept available for inspection by representatives of State and the FHWA for a period of three (3) years following the date of final voucher to FHWA. Copies of such records and accounts shall be made available upon request. For real property and equipment, the retention period starts from the date of disposition (49 CFR 18.42).

28. If Agency should cause the project to be canceled or terminated for any reason prior to its completion, Agency agrees to reimburse State within three months of billing for any costs that have been incurred by State on behalf of the project.

29. State shall request reimbursement, and Agency agrees to reimburse State, for federal-aid funds distributed to Agency if any of the following events occur:

    a) That right-of-way acquisition or actual construction of the facility for which preliminary engineering is undertaken is not started by the close of the tenth fiscal year following the fiscal year in which the federal-aid funds were authorized;

b) That right-of-way acquisition is undertaken utilizing federal-aid funds and actual construction is not started by the close of the twentieth fiscal year following the fiscal year in which the federal-aid funds were authorized for right-of-way acquisition.

c) That construction proceeds after the project is determined to be ineligible for federal-aid funding (e.g., no environmental approval, lacking permits, or other reasons).

30. The agreement is subject to the provisions of the Single Audit Act of 1984 (49 CFR, Part 90) as stated in Circular A-128 of the United States Office of Management and Budget.

31. Agency shall maintain all project documentation in keeping with State and FHWA standards and specifications. This shall include, but is not limited to, daily work records, quantity documentation, material invoices and quality documentation, certificates of origin, process control records, test results, and inspection records to ensure that projects are completed in conformance with approved plans and specifications.

RAILROADS

32. Agency shall follow State established policy and procedures when impacts occur on railroad property. The policy and procedures are available through the appropriate Region contact or Railroad & Utility Engineer. Only those costs allowable under 23 CFR 646B & 23 CFR 140I, shall be included in the total project costs; all other costs associated with railroad work will be at the sole expense of the Agency, or others. Agency may request State, in writing, to provide railroad coordination and negotiations. However, the State is under no obligation to agree to perform said duties.

UTILITIES

33. Agency shall relocate or cause to be relocated, all utility conduits, lines, poles, mains, pipes, and other such facilities where such relocation is necessary in order to conform said utilities and facilities with the plans and ultimate requirements of the project. Only those utility relocations, which are eligible for federal aid participation under the FAPG, 23 CFR 645A, shall be included in the total project costs; all other utility relocations shall be at the sole expense of the Agency, or others. State will arrange for utility relocations/adjustments in areas lying within jurisdiction of State, if State is performing the preliminary engineering. Agency may request State in writing to arrange for utility relocations/adjustments lying within Agency jurisdiction, acting on behalf of Agency. This request must be submitted no later than 21 weeks prior to bid let date. However, the State is under no obligation to agree to perform said duties.

34. Agency shall follow established State utility relocation policy and procedures. The policy and procedures are available through the appropriate Region Utility Specialist or ODOT Right of Way Section's Railroad and Utility Coordinator.

STANDARDS

35. Design standards for all projects on the National Highway System (NHS) and the Oregon State Highway System shall be in compliance to standards specified in the current ODOT Highway Design Manual and related references. Construction plans shall be in conformance with standard practices of State for plans prepared by its own staff. All specifications for the project shall be in substantial compliance with the most current "Oregon Standard Specifications for Highway Construction".

36. Agency agrees that minimum design standards for non-NHS projects shall be recommended AASHTO Standards and in accordance with the current "Oregon Bicycle and Pedestrian Plan", unless otherwise requested by Agency and approved by State.

37. Agency agrees and will verify that the installation of traffic control devices shall meet the warrants prescribed in the "Manual on Uniform Traffic Control Devices and Oregon Supplements".

38. All plans and specifications shall be developed in general conformance with the current "Contract Road Plans Guide" and the current "Guideline to Region/Consultants/Local Agency for the Preparation of Highway Contract Specifications".

39. The standard unit of measurement for all aspects of the project will be System International (SI) Units (metric). This includes, but is not limited to, right-of-way, environmental documents, plans and specifications, and utilities.

GRADE CHANGE LIABILITY

40. Agency, if a County, acknowledges the effect and scope of ORS 105.755 and agrees that all acts necessary to complete construction of the project which may alter or change the grade of existing county roads are being accomplished at the direct request of the County.

41. Agency, if a City, hereby accepts responsibility for all claims for damages from grade changes. Approval of plans by State shall not subject State to liability under ORS 105.760 for change of grade.

42. Agency, if a City, by execution of agreement, gives its consent as required by ORS 373.030(2) to any and all changes of grade within the City limits, and gives its consent as required by ORS 373.050(1) to any and all closure of streets intersecting the highway, if any there be in connection with or arising out of the project covered by the agreement.

CONTRACTOR CLAIMS

43. Agency shall, to the extent permitted by State law, indemnify, hold harmless and provide legal defense for the State against all claims brought by the contractor, or others resulting from Agency's failure to comply with the terms of this agreement.

MAINTENANCE RESPONSIBILITIES

44. Agency shall, upon completion of construction, thereafter maintain and operate the project at its own cost and expense, and in a manner satisfactory to State and the FHWA.

WORKERS' COMPENSATION COVERAGE

45. Agency, its subcontractors, if any, and all employers working under this agreement are subject employers under the Oregon Workers' Compensation Law and shall comply with ORS 656.017, which requires them to provide workers' compensation coverage for all their subject workers.

LOBBYING RESTRICTIONS

46. Agency certifies by signing the agreement that:

    A. No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

    B. If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

C. The undersigned shall require that the language of this certification be included in the award documents for all subawards at all tiers (including subgrants, and contracts and subcontracts under grants, subgrants, loans, and cooperative agreements) which exceed $100,000, and that all such subrecipients shall certify and disclose accordingly.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by Section 1352, US Code.

Any person who fails to file the required certification shall be subject to a civil penalty of not less than $10,000 and not more than $100,000 for each such failure.

Paragraphs 33, 34, and 44 are not applicable to any local agency on state highway projects.

PLAN AMENDMENT TRACKING SHEET

AMENDMENT PROPOSED 10933

Jurisdiction : JOSEPH
Jurisdiction Abbrev : CJOSEP
DLCD File No : 002-00 Local File No : TSP 2000

Proposal Summary :

Amend the Transportation System Plan Chapters 1-8 in 65 areas to update the 1997 version by adding, deleting text; renumbering sections; and deleting sections. Amend the comprehensive plan in 62 areas, the zoning ordinance in 43 areas, and the subdivision ordinance in 25 areas to implement the TSP by adding, deleting text; and deleting, renumbering sections.

Locally Identified Affected Agencies:

Oregon Department of Transportation, Wallowa County.

Proposal Received : 8/18/2000

First Evidentiary Hearing : 10/03/2000 Days Notice to First Evid. Hearing: 46

Final Hearing : 11/7/2000 Days Notice to Final Hearing: 81

Local Contact: Scott Richman 503-499-0593 EXT :

Field Representative : JJ AS Supervisor : MJR

Notice of Proposed Amendment : Number of Amendments : 195

PROPOSAL REVIEW

DLCD Notice of Participation :

Department Participation : Y

Goals: 12, 14

Reviewer : EJ/RW Time Spent on Review : 2

Final Due : 09/11/2000 Mail Deadline : 09/13/2000

Response Sent : None Fax Deadline : 09/18/2000

Response Type :