

City of Imbler

Transportation System Plan Final

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Prepared for
City of Imbler

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CHAPTER 1: INTRODUCTION

The Imbler Transportation System Plan (TSP) identifies existing transportation facilities and provides guidelines for future planned and constructed transportation facilities until the year 2018. This TSP updates the transportation element of the Imbler Land Use Plan and is intended to satisfy the requirements of the Oregon Transportation Planning Rule (TPR) and implement Statewide Planning Goal 12: Transportation, which is Oregon's transportation planning law. The TPR requires local jurisdictions to coordinate land use and transportation planning, and to consider all modes of travel.

It is important to recognize the relationship between land use and transportation because vehicle trip generation is a direct result of land use. Intense land uses produce large amounts of traffic. If the transportation system around these land uses cannot accommodate the traffic, then congestion, delays, and pollution can degrade quality of life and harm business opportunities. Planning for future development in conjunction with planning the future transportation system results in the most efficient possible transportation system. Identifying transportation needs for the next 20 years also provides the opportunity to plan the most equitable and economically beneficial transportation system for Imbler. The TSP takes into account surrounding land uses as it identifies potential transportation projects.

PLANNING AREA

The TSP planning area includes the City of Imbler and all areas inside Imbler's Urban Growth Boundary (UGB). This TSP applies to streets that fall under different jurisdictions, such as the State of Oregon, Union County, and the City of Imbler

Imbler has an estimated population of 310 people, and is located 12 miles north of La Grande and 8 miles south of Elgin on Oregon Highway 82. The town developed along the highway, which runs in a north-south direction through town, and maintained its grid pattern as it grew. The Idaho Northern and Pacific railroad tracks form the eastern border of town. Imbler is nestled on the floor of the Grande Ronde Valley surrounded by prime agricultural resource land, and is known as "the grass seed capital of the world." Agriculture, timber processing, and public employment provide the majority of jobs in Imbler. Figure 1-1 shows the Imbler planning area.

PLANNING PROCESS

The Imbler Transportation System Plan is compiled as part of an overall effort funded by the Oregon Transportation and Growth Management Program to develop individual transportation system plans for the rural portions of Union County and the incorporated jurisdictions of Imbler and Elgin. The Imbler and Elgin City Councils are serving as each jurisdiction's Technical Advisory Committee (TAC). In Union County, the County Transportation Advisory Committee is serving as the county's TAC. Important elements of the process include:

- Involving the Imbler community (Chapter 1)
- Developing goals and objectives (Chapter 2)
- Reviewing existing plans, policies, and transportation conditions (Chapters 3 & 4)
- Developing travel forecasts (Chapter 5)
- Developing and evaluating potential transportation system improvements (Chapter 6)
- Developing modal plans (Chapter 7)
- Identifying funding options (Chapter 8)
- Developing policy and ordinance amendments (Chapter 9)

City of Imbler Transportation System Plan

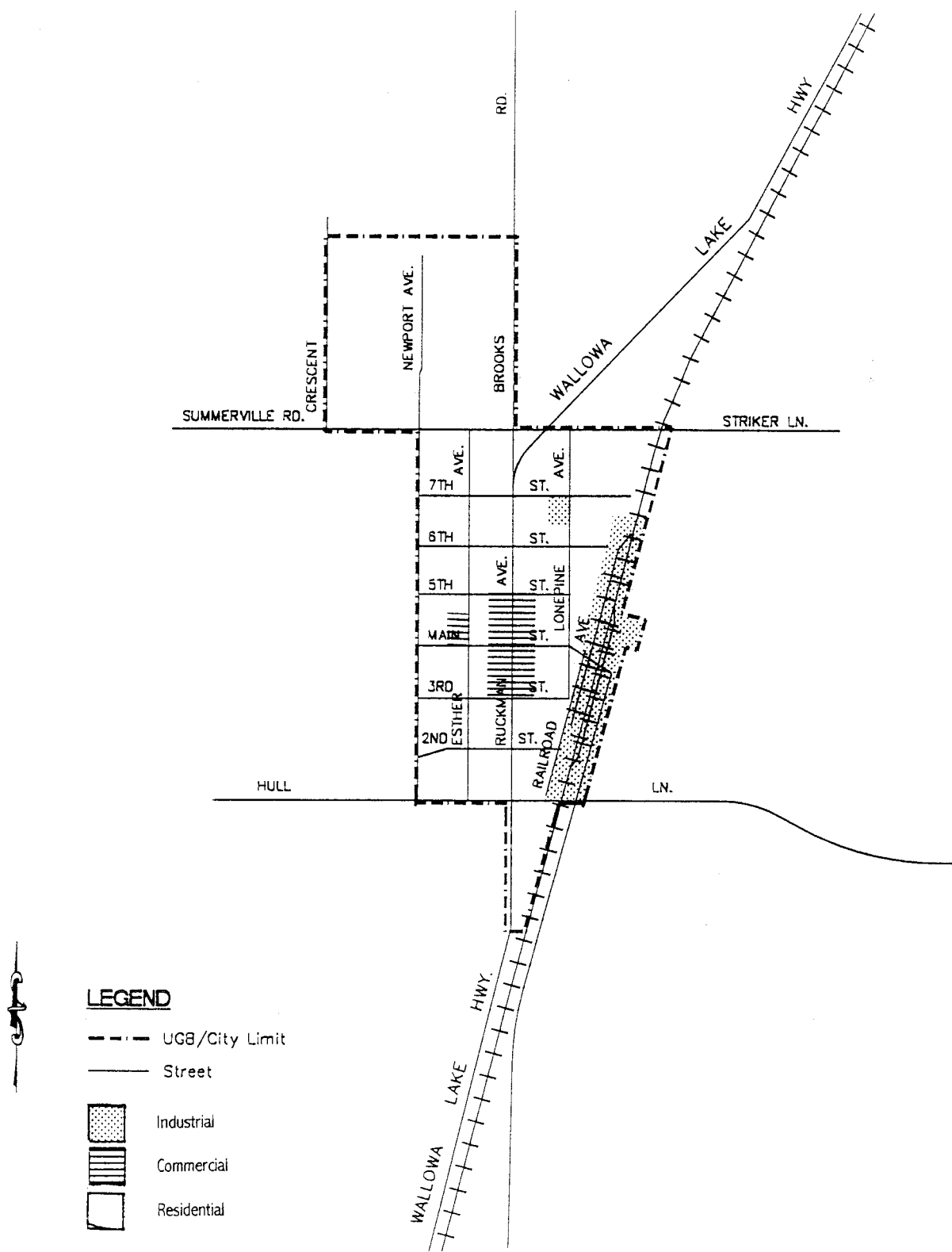


FIGURE 1-1
Planning Area

Community Involvement

Community involvement is an important aspect of any planning process. Part of the transportation planning process includes providing opportunity for the public to participate in the development of the Imbler Transportation System Plan. The opportunity for the public to become involved depends on distribution of notice to affected citizens. Letters mailed to stakeholders, local officials, and interested citizens were the most direct method of notification, and proved most useful to the City of Imbler. Posters, flyers, and public service announcements in local newspapers also serve to notify citizens of upcoming opportunities for public participation. A public involvement record is included in Appendix A.

Goals and Objectives

The goals and objectives of the Imbler TSP were developed using input from Imbler's TAC. These goals and objectives were used to make decisions about each potential improvement project. The goals and objectives are listed in Chapter 2.

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

For the purpose of understanding present conditions, and in order to identify transportation system deficiencies, all existing plans and policies were analyzed; and the current transportation system and facilities were inventoried. The purpose of this inventory and analysis was to identify how Imbler managed growth and development through its policies and ordinances, and to catalog the current transportation system and facilities.

The inventory of existing conditions is included in Appendix B and is explained in detail in Chapter 3. Chapter 4 describes how the current system functions.

Future Transportation System Demands

The Transportation Planning Rule requires a 20-year forecast be incorporated into each TSP. Future traffic volumes for the existing, plus committed, transportation system were projected using ODOT's Level 1 - Trending Analysis methodology. The travel forecasts are described in detail in Chapter 5.

Potential Transportation System Improvements

Once future traffic volumes were identified, an evaluation of several potential improvement projects took place. These potential projects were also weighed against the goals and objectives identified in Chapter 2. The evaluation of potential improvement projects was based on several factors, including the estimated cost of each project, land use impacts, safety, and equity to transportation users. The potential improvement projects were identified with the help of the TAC, community members, ODOT, and Union County staff. After the evaluation of all potential improvement projects was complete, transportation system improvements were selected. These recommendations are described in detail in Chapter 6.

Transportation System Plan

The Transportation System Plan addresses all modes of travel for the City of Imbler. This section of the TSP provides a framework for implementation by including street design standards, access management techniques, and a capital improvement program. The street system plan was developed from the traffic forecasting analysis and potential transportation improvement projects evaluation. The Imbler Bicycle and Pedestrian Plan is a separate document adopted by the Imbler City Council on November 4, 1996. The public transportation, rail, air, pipeline, and waterborne transportation modal plans were developed based on discussions with the owners and operators of the facilities. Chapter 7 details each of the modal plans and discusses street standards and access management techniques.

Funding Options

The City of Imbler will have to work with ODOT and each of the other 7 county incorporated jurisdictions to pay for new transportation projects over the next 20 years. A survey of potential funding and financing opportunities is described in Chapter 8.

Recommended Policy and Ordinance Amendments

Recommended policy and ordinance amendments for the Imbler Land Use Plan, the Imbler Subdivision & Partition Ordinance, and the Imbler Zoning Ordinance are included in Chapter 9. These policy and ordinance changes are necessary in order to implement the TSP and meet the requirements of the TPR.

RELATED DOCUMENTS

The Imbler TSP addresses local transportation needs within its Urban Growth Boundary and City Limits. There are several other documents related to specific local and regional transportation needs, which are listed below.

City Transportation System Plans

Three city TSPs were developed and adopted during the summer of 1998 for communities in the southern portion of Union County. These are:

- City of Cove Transportation System Plan
- City of Union Transportation System Plan
- City of North Powder Transportation System Plan

Additionally, La Grande and Island City are in the process of preparing a joint TSP to address transportation needs within both cities. This TSP is slated for adoption during fall 1999.

In conjunction with Imbler's Transportation System Plan, two more TSPs were developed. These are:

- City of Elgin Transportation System Plan
- Union County Transportation System Plan

Each small city TSP addresses needs identified within that jurisdiction's UGB. Each plan describes street development standards, access management standards, modal plans, and recommended policy and ordinance amendments necessary for the implementation of each TSP.

Corridor Strategies

Oregon Highway 82 is a highway of statewide significance and constitutes a major transportation corridor in Union County. A final Oregon Highway 82 Corridor Plan was completed in May 1998 and details several corridor strategy objectives in order to protect the function of the state highway system.

Other Plans

The Imbler TSP will coordinate with Oregon Highway 82 corridor strategies, as well as the following plans:

- Oregon Transportation Plan (1992)
- Oregon Highway Plan (1991)
- Imbler Bicycle and Pedestrian Plan (1996)
- Oregon Aviation System Plan (1974 – currently being updated)
- La Grande/Union County Airport Master Plan Update (1998)
- Oregon Rail Freight Plan (1994)
- Oregon Public Transportation Plan (1997)

CHAPTER 2: GOALS AND OBJECTIVES

The following goals and objectives provide a framework against which to compare each element of the TSP; specifically, the potential transportation system improvement projects. These goals and objectives were developed with input from the Technical Advisory Committee.

OVERALL TRANSPORTATION GOAL

To develop a transportation system that enhances the livability of Imbler and Union County and accommodates growth and development through careful planning and management of existing and future transportation facilities.

GOAL 1:

Improve and enhance safety and traffic circulation on the local street system.

Objectives:

- A) Analyze the safety of traveling speeds and consider proposals to modify posted speeds.
- B) Identify truck and/or heavy farm equipment routes to reduce truck traffic in urban areas where needed.
- C) Improve and maintain existing roadways.
- D) Ensure planning coordination between Imbler, the county, and the state.
- E) Develop an efficient road network for Imbler and the county.
- F) Ensure that roads created in land division and development be designed to tie into existing and anticipated road circulation patterns.
- G) Review and revise, if necessary, street cross section standards for local, collector, and arterial streets to enhance safety and mobility.
- H) Evaluate the need for traffic control devices.
- I) Identify local problem spots and recommended solutions.

GOAL 2:

Preserve the function, capacity, level of service, and safety of Oregon State Highway 82.

Objectives:

- A) Develop access management standards.
- B) Develop alternative, parallel routes.
- C) Promote alternative modes of transportation.
- D) Promote demand management (rideshare, park & ride).
- E) Promote transportation system management (median barriers, etc.)
- F) Develop procedures to minimize impacts to and protect transportation facilities, corridors, or sites during the development review process.
- G) Promote railroad freight service.

GOAL 3:

Identify the 20-year roadway system needs to accommodate developing or undeveloped areas without undermining the rural nature of Imbler.

Objectives:

- A) Adopt policies and standards that address street connectivity, spacing, and access management.

- B) Integrate new arterial and collector routes into improved grid systems with an emphasis on removing the pressure from traditionally heavy traffic collectors.
- C) Examine improved access into and out of Imbler and the county for goods and services.
- D) Explore improved access on and off arterials to encourage growth.
- E) Determine whether there are opportunities to promote railroad freight service to reduce truck-related traffic.

GOAL 4:

Increase the use of alternative modes of transportation (walking, bicycling, rideshare/carpooling, and transit) through improved access, safety, and service.

Objectives:

- A) Promote alternative modes and rideshare/carpool programs through community awareness and education.
- B) Promote future expanded transit service by recommending funding to local transit efforts and seeking consistent state support.

CHAPTER 3: TRANSPORTATION SYSTEM INVENTORY

Part of the TSP planning process includes an inventory of Imbler's existing transportation system. The inventory records the roadway system and roadway classifications, bicycle and pedestrian facilities, public transportation, rail service, and whether air service, pipeline systems, and waterborne transportation are present.

ROADWAY SYSTEM

The most obvious element of the transportation system is the roadway system. Historically, reliance on the automobile and rapid urbanization have led to the majority of transportation dollars being spent on building and maintaining roads. Recently, consideration of other modes, in addition to vehicular travel, has emerged as an alternative focus for transportation dollars.

This TSP inventories and discusses all modes of travel, but in Imbler the automobile remains the prevalent mode due to Imbler's relative isolation from other population centers and due to the lack of mass transit service. As a result, over the 20-year planning period, the roadway system will remain the emphasis of the transportation system; therefore, maintaining a safe, equitable transportation system is the primary focus of this TSP.

The existing street system in the City of Imbler was inventoried through several methods and includes facilities under different jurisdictions. All state highways, city and county arterials, collectors, and local streets included in the planning area were cataloged. Components of the inventory include:

- Road name, classification, and jurisdiction
- Road length, pavement width and total right-of-way width
- Road surface and surface condition
- Number of travel lanes
- Presence of parking, bicycle, and pedestrian facilities
- Posted speed limits

The complete inventory of Imbler's roadway system is included in Appendix B.

Roadway Classification

Imbler's streets are in state, county, or city jurisdiction. Some streets around Imbler's periphery are in joint city-county jurisdiction. Oregon Highway 82 serves as a principal arterial for Imbler. The state functional classification system is recognized as a separate classification system from Imbler's classification system. Remaining city streets are grouped either as arterials, collectors or local streets. Figure 3-1 shows Imbler's existing roadway system and functional classifications.

State Highways

In Imbler, Oregon Highway 82 serves as a principal arterial and forms the basis of the primary road network. It is the only state facility in Imbler. This network facilitates the movement of large volumes of people and freight within and through Imbler and the outlying area. It also links distant jurisdictions and provides connections with the greater region and surrounding states. Though the purpose of an arterial is to expeditiously move cars and trucks from one destination to the next, Oregon Highway 82 in Imbler also serves to access property. This is evident in Imbler where the state highway accommodates local, regional, and statewide transportation needs. Oregon Highway 82 carries most of Imbler's traffic, and as a result, sees all of Imbler's commercial development. This TSP is primarily

concerned with the section of the state highway that lies within Imbler's Urban Growth Boundary, while the Union County TSP addresses state highways outside of urban areas.

The Oregon Department of Transportation (ODOT) has a highway classification system to prioritize improvement needs and define operational objectives. The 1991 Oregon Highway Plan identifies four levels of importance, which are: interstate, statewide, regional, and district. A primary and secondary function is designated for each level of importance, as well as management objectives to guide highway operation.

Oregon Highway 82

Oregon Highway 82 extends approximately 33 miles in a northeasterly direction to the Wallowa County line, connecting Interstate 84 and La Grande to Imbler and Elgin, and eventually terminating at Wallowa Lake in Wallowa County. Oregon Highway 82 is a two-lane, paved highway with a posted speed of 55 miles per hour, except within cities, and potentially hazardous areas due to topography or weather. Posted speeds inside Imbler's UGB are typical of urban development; 25 miles per hour in congested areas of Imbler, 20 miles per hour in school zones, and 35 to 40 miles per hour at the periphery of town. Pavement condition is generally "good." The highway accommodates pedestrians or cyclists in Imbler's urban area, but they travel along four-foot, paved shoulders. Land uses along Oregon Highway 82 within Imbler's UGB are generally zoned for residential activity, with a downtown commercial core. City streets connect with Oregon Highway 82 to provide individual property access, and access to local businesses.

Oregon Highway 82 is a highway of statewide significance and originates in La Grande at its intersection with US Highway 30. According to the 1991 Oregon Highway Plan, the primary function of statewide highways is to provide connections and links to larger urban areas, ports and major recreation areas that are not directly served by interstate highways. Statewide highways also provide connection to the interstate system. The management objective of statewide highways is to provide for safe and efficient high-speed, through travel in rural areas and high-to-moderate speed traffic flow with limited interruptions in urban and urbanizing areas.

In the 1991 Oregon Highway Plan, Oregon Highway 82 is part of the Access Oregon Highway classification system which was developed to identify a network of primary statewide highways that link major economic and geographic activity centers to each other, to other high level highways, to ports, and to other states. Designation as an Access Oregon Highway means that the Oregon Highway 82 corridor is a top priority for improvement project funding. Oregon Highway 82 is also part of the Hells Canyon Oregon Scenic Byway system and portions of the corridor in Wallowa County are part of the Oregon Scenic Waterway and National Wild and Scenic Study Corridor, which is tied to the Wallowa and Minam River systems.

According to the Oregon Highway 82 Corridor Plan, "the overall strategy for the Highway 82 Corridor is to maintain the condition and increase the functionality of existing transportation facilities."¹ Corridor strategy objectives were identified in order to achieve the overall strategy and are grouped into either "transportation performance measures" or "transportation impacts." These are terms developed by ODOT to provide common language for statewide corridor analysis and are based on Oregon Transportation Plan goals and policies. Each corridor strategy objective is also associated with specific "decisions." Decisions can be either "management decisions," "capital improvement decisions," or "service improvement decisions." These decisions, then, become the recommended

¹ Otak, "Oregon Highway 82 Corridor Plan," May, 1998, 7-1.

improvement projects from the plan for the next 20 years. ODOT chose to use the term “decision” in order to demonstrate that some action was proposed to address an identified need within the corridor. These decisions, or improvement projects, will be implemented through the Statewide Transportation Improvement Program (STIP) and the ODOT Region 5 work program. The STIP balances recommended improvement projects from the Oregon Highway 82 Corridor Plan with other recommended improvement projects throughout the state in order to achieve a safe, efficient, and equitable transportation system. Each decision, or recommended improvement project, is prioritized as a “near” (0-5 years), “mid” (5-10 years), or “long” (10-20 years) term project. A more detailed discussion of improvement projects follows in Chapter 6.

City Streets

The City of Imbler has about 16 public streets totaling approximately 5 miles in its jurisdiction. These streets connect with the state highway system to form a network that provides circulation around the City of Imbler, and provides individual land access. City streets are two-lane facilities with limited on-street parking. Pavement conditions are generally very good and there are few gravel street segments. The adopted Imbler Bicycle and Pedestrian Plan identifies bicycle and pedestrian facilities on city streets and is included in Appendix C.

For the purposes of the TSP, city streets are divided into three functional classifications. Functional classifications for state highways are determined at the state level. Their function is mobility (movement *through* Imbler) versus access (movement to a specific destination *within* Imbler), and they carry the highest traffic volumes. Imbler’s city streets are designated either as arterials, collectors, or local streets depending upon their function. Arterials carry higher traffic volumes than collectors and connect Imbler with the nearby community of Summerville, continuing on to intersect with Oregon Highway 204. Collectors carry higher volumes of traffic than local streets and their function is to balance mobility and access. All Imbler’s collectors and arterials are paved. Local streets carry the lowest traffic volumes and their purpose is primarily to provide access to individual properties. Most local streets are paved, though a few segments are gravel.

Table 3-1 lists city arterials, collectors, and local streets. Figure 3-1 shows the existing roadway system and functional classifications in Imbler.

**Table 3-1
City of Imbler Functional Classifications**

Imbler Arterials
Summerville Road
Imbler Collectors
Striker Lane
Hull Lane
Brooks Road
Esther Avenue
5 th Street
6 th Street
Imbler Local Streets
Imbler Road
Lone Pine Avenue
Railroad Avenue
Newport Avenue
Crescent Road

2nd Street
3rd Street
Main Street
7th Street

PEDESTRIAN SYSTEM

Walking is a popular form of exercise, as well as the most basic form of transportation, for people of all ages and income levels. Everyone is a pedestrian, yet in rural Oregon, pedestrian facilities are seldom designed as an integral component of the road system. According to the Oregon Bicycle and Pedestrian Plan, a person in reasonable physical condition can walk up to one kilometer (about .6 miles) in less than twenty minutes with minimal physical exertion. This makes walking a viable alternative to many short commuter trips, and actually may take less time than driving a car.

Imbler's pedestrian traffic is concentrated in the vicinity of the schools and downtown commercial core, though many people walk throughout town for exercise. Imbler's small size easily accommodates foot travel to any area of Imbler, but moderate-to-severe cold weather can often deter wintertime pedestrians. Pedestrian facilities are provided on 5th street and Oregon Highway 82 (Ruckman Avenue) on the block where the post office is located, and there is a sidewalk segment on the south side of Main Street between Lone Pine and Ruckman Avenues, across from the Imbler Market. Pedestrians often utilize roadway shoulders, and traffic volumes on local streets are not significant enough to jeopardize pedestrian safety. Figure 3-2 shows Imbler's existing pedestrian system.

BIKEWAY SYSTEM

Bicycle facilities, like pedestrian facilities, are seldom designed as an integral component of the road system. Often, bikeways are added as an afterthought, and as a result, conflicts between cyclists and vehicles can occur, compromising safety.

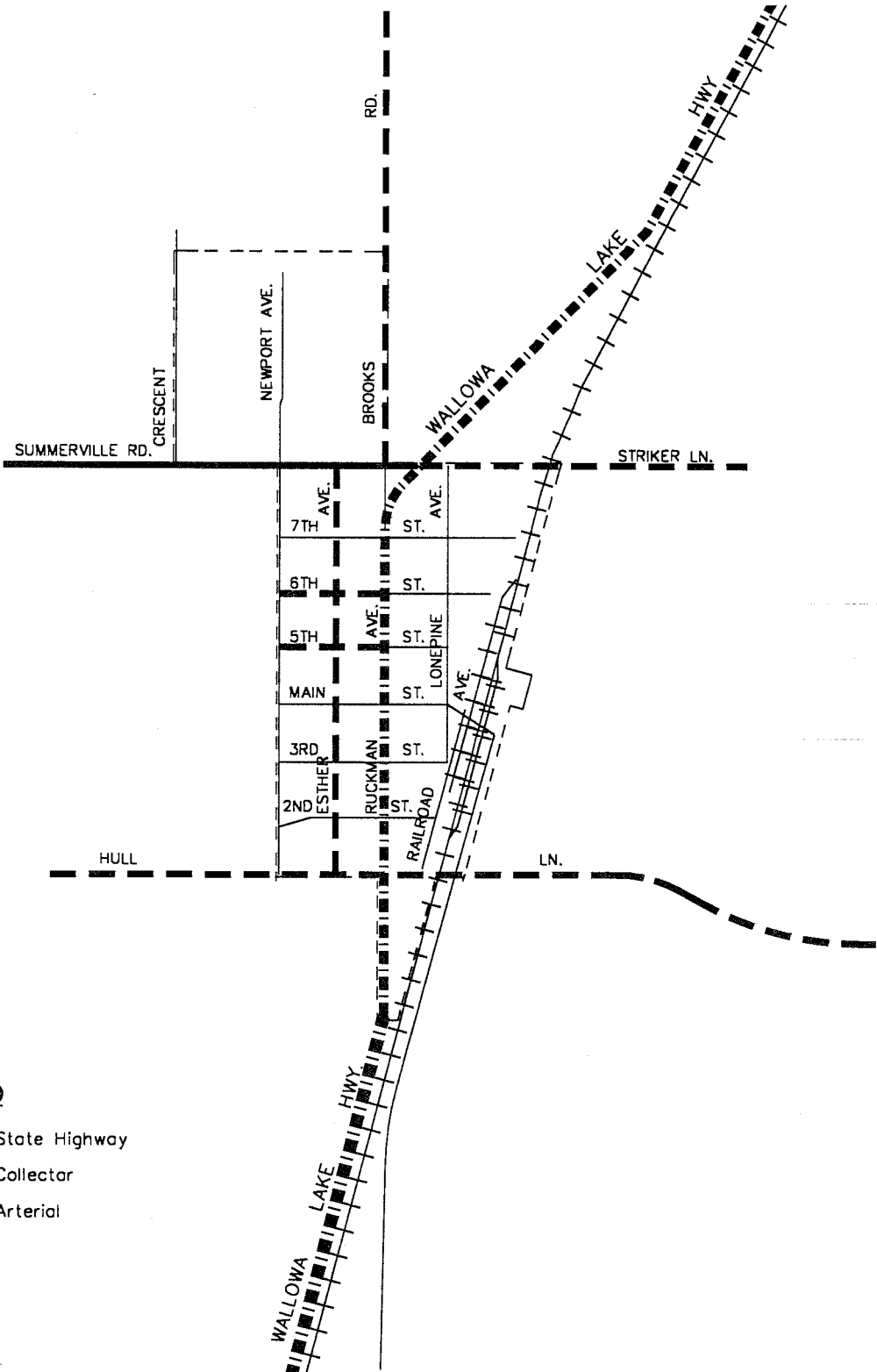
Cycling is an efficient mode of travel, with the average bicycle trip being two miles in length, and cycling mitigates some of the negative impacts of growth, such as air and water pollution, traffic congestion, and noise.

The Imbler City Council adopted the Imbler Bicycle and Pedestrian Plan on November 4, 1996. This plan identifies appropriate streets, based on traffic volumes and posted speeds, that can safely accommodate bicycle traffic. Few of these streets contain facilities designated only for bicycle travel; the majority of bicycle projects call for shared travel lanes with vehicles, or on roadway shoulder bikeways. Figure 3-2 shows Imbler's bikeway system.

The City of Imbler sees a moderate level of bicycle use, both for recreational and transit purposes. Most cyclists in Imbler are children at play, or traveling to and from school. Bicycle travel between cities also occurs on arterials and collectors, though on a much smaller scale. The recommendations from the Imbler Bicycle and Pedestrian Plan will expand and enhance bicycle travel in the city. The Imbler Bicycle and Pedestrian Plan is included in Appendix C.

The Imbler Bicycle and Pedestrian Plan was funded by the Transportation and Growth Management Program and prepared in accordance with the TPR. The plan identifies a set of goals and objectives to guide the development of a safe and efficient bikeway system for the City of Imbler. The plan was developed involving citizen participation and was guided by the Imbler City Council.

City of Imbler Transportation System Plan



LEGEND

- ▬▬▬ State Highway
- - - Collector
- ▬▬▬ Arterial

FIGURE 3-1
Street Classifications

City of Imbler Transportation System Plan

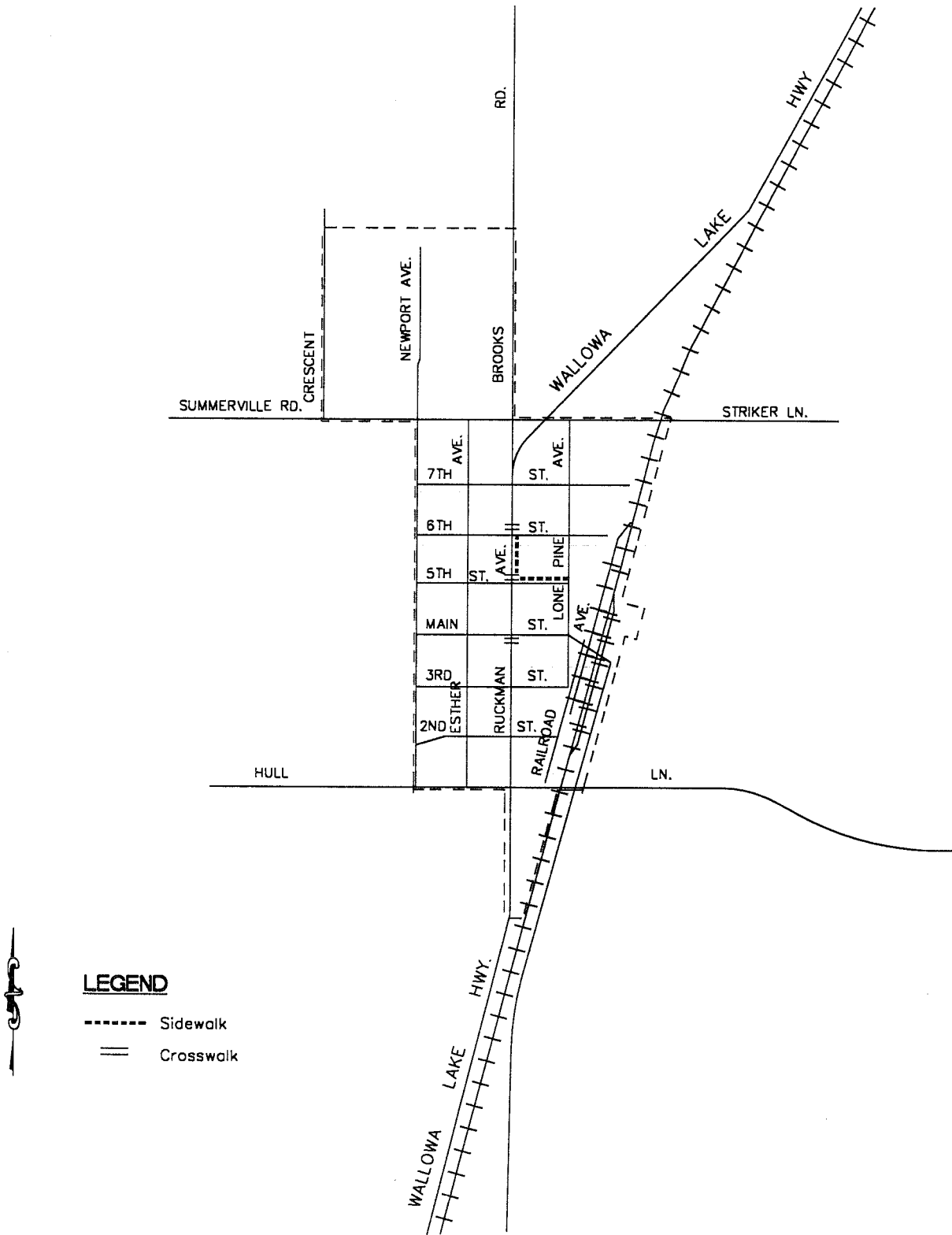


FIGURE 3-2
Existing Bikeway and Pedestrian System

PUBLIC TRANSPORTATION SYSTEM

Public transportation in Imbler is provided by Community Connection, which provides transit services to the general public. Client transport services are provided by New Day Enterprises and the Center for Human Development for the elderly and disabled. Wallowa Valley Stage Line, Blue Mountain Cab Company, Greyhound Bus Lines, and Mid-Columbia Bus Company offer a variety of specific transportation services, all of which affect the City of Imbler to some degree.

Community Connection is a Dial-A-Ride transit service begun originally for the transportation disadvantaged, but has expanded to serve the general public. Requests for rides should be made a day in advance. The bus fare is 50 cents per one way trip and \$1.00 per round trip. Community Connection has a total of six vans; one 10-passenger bus is utilized in Elgin and Imbler. Transit service in Imbler operates one day per week and all drivers are volunteers. The Elgin bus, operating on Wednesdays, travels to Elgin and Imbler, then continuing to La Grande. Community Connection is projecting a substantial ridership increase. In the mid-1990s, countywide, Community Connection served about 13,650 rides per year, and this is anticipated to grow to 27,000 rides per year.

There are two Dial-A-Ride services available in the Imbler area specifically for the transportation disadvantaged. New Day Enterprises and the Center for Human Development, both provide client transportation only. New Day Enterprises operates three lift-equipped vans, one lift-equipped mini-van, two standard vans, one standard mini-van, one lift-equipped station wagon, and one lift-equipped bus. The Center for Human Development operates one lift-equipped van, one lift-equipped bus, and three standard vans. These vehicles are used to transport group home clients on a 24-hour basis. Additionally, Union-Wallowa County Veteran's Services has one 8-passenger van stationed in La Grande for the transportation of veterans to the Veteran's Administration Hospital in Walla Walla, Washington two times per month. The van also travels periodically to Portland, Oregon. This van is used for medical transportation only and transported 700 people in 1997. There is no cost to passengers. The Veteran's Administration Hospital pays for vehicle maintenance and fuel, and drivers are volunteers.

Together Community Connection, New Day Enterprises and the Center for Human Development provide necessary transit services for the transportation disadvantaged of Union County. In 1990, these three non-profit groups formed the Union County Transportation Coalition to pool resources in an effort to lower the cost per trip, and to efficiently increase service in Union County without duplicating services.

The Wallowa Valley Stage Line is owned by Moffit Brothers Transportation and is based out of the City of Lostine (Wallowa County). An 8-person van operates daily, except Sundays and holidays, between Joseph in Wallowa County and La Grande in Union County with stops in Enterprise, Lostine, Wallowa, Minam, Elgin, Imbler, and Island City. This transit service is a fixed route service but during the summer months, Wallowa Lake is added to the route on an on-call basis only. Scheduled departure from Joseph is 6:30 A.M. with arrival in Imbler at 8:35 A.M. and the return trip is scheduled to depart from Imbler at 12:23 P.M. with arrival in Joseph at 2:45 P.M. The cost for a one-way trip from Joseph to Imbler is \$7.55 while a round trip costs \$13.60. Fare prices vary depending upon trip length. Wallowa Valley Stage Line does not currently have a van with wheelchair transport capabilities but is taking steps to remedy this situation. Until they have a van that complies with the Americans with Disabilities Act (ADA), Wallowa Valley Stage Line rents a van with these capabilities when a patron specifically requests the service. In addition to transporting passengers, Wallowa Valley Stage Line also transports individual packages. Moffit Brothers Transportation also offers charter service.

Blue Mountain Cab Company provides 24-hour taxi service to the general public, though they do not comply with the ADA. Trips within La Grande's City Limits cost \$5.00 one way and trips outside the city limits cost an additional \$1.25 per mile. The cost for senior citizens is \$2.50 one way, to any destination.

Greyhound Bus Lines does not provide transit service within Union County, but does provide connections with destinations outside of Union County. During the summer months there are eight buses per day traveling through Union County while during the rest of the year there are five buses per day traveling through the county. Wallowa Valley Stage Line coordinates its arrival in La Grande to connect with Greyhound Bus service. Greyhound Bus Lines has an agreement with AMTRAK whereby AMTRAK tickets can be used to ride Greyhound buses in order to facilitate the movement of passengers through areas no longer served by passenger rail.

Mid-Columbia Bus Company, based in Condon (Gilliam County), does not provide public transit services but does hold the contract in Union County for bussing school children. Additionally, Mid-Columbia Bus Company offers charter service.

RAIL SERVICE

Union County no longer has passenger rail service. AMTRAK's "Pioneer" route originated in Chicago, Illinois and ended in Seattle, Washington, utilizing the corridor that parallels Interstate 84 and stopping in La Grande. AMTRAK terminated its passenger rail service in May 1997 due to federal budget cuts. There is local interest in restoring AMTRAK service to La Grande. As passenger rail is developed in other parts of Oregon, an extension of this service to the east may be considered within the 20-year planning period. According to the ODOT Rail Section, there is a tentative proposal to implement a fleet of small, efficient trains for express service in the Willamette Valley within the 20-year planning period. This would serve as a test case to gauge support and ridership, and if successful, may impact eastern Oregon because express rail service may be extended to the eastern region of the state.

AMTRAK designated Greyhound Bus Lines a carrier of AMTRAK ticket holders in order to move passengers through areas no longer served by the passenger rail company. This means that through trips can be booked using the same ticket.

The Idaho Northern and Pacific (INP) railroad operates a freight line in Union County, which forms the eastern boundary of the City of Imbler. Idaho Northern and Pacific utilizes a branch line that diverges from the Union Pacific mainline in La Grande and heads due north along Oregon Highway 82 through Imbler to Elgin. This line moves less than one million gross tons of freight per year, mostly timber and agricultural products. In 1994, the Idaho Northern and Pacific petitioned the Surface Transportation Board to abandon roughly 61 miles of track between Elgin and Joseph, which mostly lies in Wallowa County. This petition for abandonment was approved March 12, 1997. The Oregon Highway 82 Corridor Plan identifies the acquisition of the INP railroad right-of-way to utilize as a multi-use path between Elgin and Joseph as a potential improvement project.

AIR SERVICE

Union County owns and operates the La Grande/Union County Airport, which is located roughly 12 miles south of Imbler. Vehicle access is provided from Pierce Road, which intersects with Oregon Highway 82 north of Island City and intersects with Oregon Highway 203 south of La Grande. A light industrial park is situated south of the airport containing land uses that are fully compatible with airport uses. The airport and the airport light industrial park are on approximately 680 acres of land zoned for Public Airport and Light Industrial uses. Approximately half of the acreage is vacant and one scenario

for future land use is to expand the light industrial park. Surrounding zoning is for exclusive agricultural use. According to the Union County Zoning, Partition & Subdivision Ordinance, an Airport Overlay Zone was “created in 1983 to provide safe and suitable airport operations without dangerous obstructions to air space and to provide an environment around airports which will not be adversely affected by noise and safety problems, and which is compatible with an airport and its operations.” Figure 3-3 shows the Airport Overlay Zone.

The La Grande/Union County Airport is currently a Transport Class Airport and is served by two runways, two parallel taxiways, and two stubtaxiways. Runway 12/30 is 5,600 feet long by 100 feet wide. Runway 16/34 is 3,400 feet long by 60 feet wide. The 1998 La Grande/Union County Airport Master Plan Update delineates two instrument approach procedures: a Non-Precision Instrument Global Positioning System (GPS) approach to Runway 16 or a circling type Non-Precision Non-Directional Beacon (NDB/GPS-A) approach to the airport; though this type is not aligned with a specific runway. In 1997, there were 40 based aircraft and an estimated 15,500 operations (take-offs and landings). As the number of based aircraft increases, so will the number of operations. Table 3-2 shows the forecast of based aircraft and operations until the year 2017.

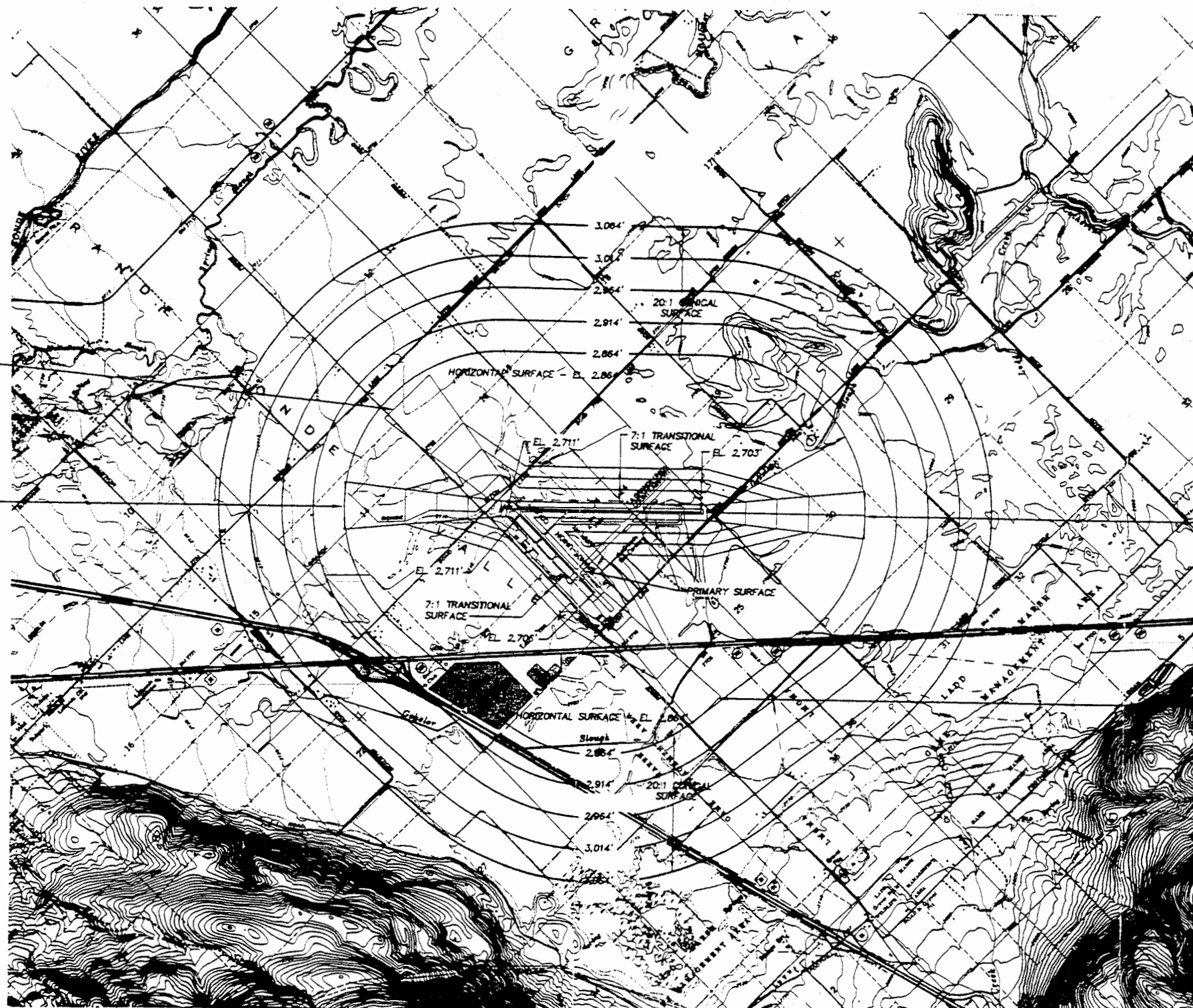
**Table 3-2
Based Aircraft and Operations Forecast**

	2000	2005	2010	2017
Based Aircraft	40	42	49	54
Operations	16,436	17,661	18,971	20,983

Source: La Grande/Union County Airport Master Plan Update, 1998

The La Grande/Union County Airport does not have scheduled passenger air service, but charter services are available. Federal Express and United Parcel Service (UPS) both land at the La Grande/Union County Airport on a daily basis (except Sundays) to deliver and pick up individual packages, as well as business inventory. There is also a plane landing twice daily to pick up and deliver bank notes and other important banking documents. This airport also serves as a base of operations for the U.S. Forest Service during fire suppression season facilitating air tanker operations, transporting fire crews and smoke jumpers to fire sites, operating fire spotter planes, and storing and delivering food and materials. The U.S. Forest Service estimates that the La Grande/Union County Airport is the most economically efficient and most strategically located airport for fire suppression in this region.

The La Grande/Union County Airport is currently equipped to accommodate commuter passenger service, except for the necessary metal detectors and related safety equipment for the terminal facilities. Union County supports commuter passenger service and has studied this issue to determine ridership in order to draw an air carrier to Union County. According to the Union County Director of General Services, an informal study of local travel agencies determined that approximately 36 airline tickets per day are purchased in Union and Wallowa Counties. So, theoretically, an airline with a six to ten passenger plane performing four operations per day would have the ridership necessary to support it. It is hard to gauge potential ridership, though, until a carrier actually tries to provide the service. The Union County Director of General Services speculates that La Grande would have to be a stop in between two points and that fares would probably be high to cover start-up costs. So while the La Grande/Union County Airport would like to see commercial passenger service, it is not likely within the 20-year planning period.



RUNWAY 16 APPROACH
APPROACH MINIMUMS
GREATER THAN 3/4 STATUTE MILE
500'x5,000'x1,500' @ 20:1

RUNWAY 12 APPROACH
VISUAL APPROACHES
LARGE AIRCRAFT
500'x5,000'x1,500' @ 20:1

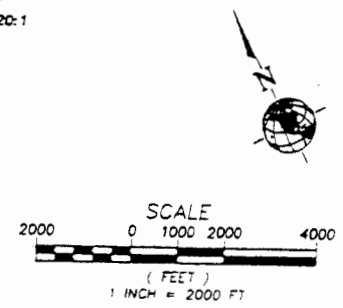
LEGEND
THERE ARE NO FAR PART 77 TERRAIN ENCROACHMENTS.

NOTE:
PROTECTION FROM ENCROACHMENT INTO FAR PART 77
SURFACES IS PROVIDED BY UNION COUNTY ZONING
ORDINANCE ARTICLE 16.00 - AIRPORT OVERLAY ZONE.

RUNWAY 30 APPROACH
VISUAL APPROACHES
LARGE AIRCRAFT
500'x5,000'x1,500' @ 20:1

RUNWAY 34 APPROACH
VISUAL APPROACHES
SMALL AIRCRAFT
500'x5,000'x1,250' @ 20:1

Drawing Reduced In Size
Not to Scale Shown



SECTION, TOWNSHIP, RANGE:	DATE	BY	REVISION	CK'D	APPR.

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Aviation Consultant

DESIGNED BY: CBC
DRAWN BY: HLG
CHECKED BY:
APPROVED BY:

LA GRANDE / UNION COUNTY AIRPORT
Figure 3-3 Airport Overlay Zone
LA GRANDE/UNION COUNTY OREGON
SCALE: 45 SHOWN- PROJECT NO. 4-1800-0101 DRAWING FILE NAME: ALAGA03.DWG SHEET 5/7

PLOT DATE: 7/15/98
ST. EDIT: RAI 7/13/98

PIPELINE SYSTEM

There are two major pipelines that traverse Union County.

The Chevron Pipeline carries refined products such as gasoline, diesel, and jet fuel. Chevron owns two lines but only one is utilized; the other is abandoned.

The Northwest Pipeline includes two large lines carrying natural gas, which is locally administered in Union County by WP Natural. This pipeline serves 7 of the 8 incorporated jurisdictions in Union County; only Cove does not have access to natural gas service. The stub gas line that serves Imbler and Elgin roughly parallels Oregon Highway 82 and terminates in Elgin.

Both the Chevron and Northwest Pipelines occupy the same corridor and enter Union County from Baker County at North Powder. They generally parallel Interstate 84 and exit into Umatilla County near Kamela.

WATER TRANSPORTATION SYSTEM

Imbler has no navigable waterways, therefore Imbler 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 Imbler.

TRAFFIC VOLUMES

Union County and ODOT staff collected A.M. and P.M. peak hour turning movement traffic volumes during September 1998 at the following study area intersections:

- Ruckman Avenue (Highway 82)/Hull Lane
- Ruckman Avenue (Highway 82)/Main Street
- Ruckman Avenue (Highway 82)/Brooks Road
- Esther Avenue/6th Street
- Esther Avenue/Summerville Road

The study intersections generally represent major intersections and access points for land uses generating significant amounts of traffic. These traffic volumes were adjusted by applying seasonal factors from *ODOT's 1997 Traffic Volume Tables*. The seasonal adjustment factors were derived from a permanent count station located on Highway 82 east of the Elgin City Limits. These seasonal factors are summarized in Table 4-1. The resulting A.M. and P.M. peak hour traffic volumes are shown in Figure 4-1.

The A.M. peak hour traffic counts indicate that the A.M. peak hour begins between 7:15 and 7:30 A.M. depending on the location. The beginning of the P.M. peak hour occurs at 3:30.

Truck traffic turning movements were counted during the A.M. and P.M. peak hour by intersection approach. Table 4-2 summarizes the truck volumes and percentages. As shown in Table 4-2, the truck percentage in the A.M. peak hour on Highway 82 by intersection approach ranges from 22% to 29% in the northbound direction and 5% to 7% in the southbound direction. These percentages translate from 40 to 44 trucks in the A.M. peak hour in both directions of travel. During the P.M. peak hour, the truck percentage by intersection approach ranges from 3% to 5% in the northbound direction and 7% to 10% in the southbound direction. The number of trucks on Highway 82 range from 8 to 10 in the northbound direction and 13 to 16 in the southbound direction. As expected, the peak direction is reversed in the P.M. peak hour. The side streets intersecting with Highway 82 and other non-highway study area intersections also experienced high truck percentages in both the A.M. and P.M. peak hours. The high truck percentages on both the highway and side streets are a function of the relatively low traffic volumes, which skew the importance of each truck. The truck percentages were used as one of the input parameters in the levels of service analysis.

Existing average daily traffic volumes were obtained from ODOT's *1997 Traffic Volume Tables* and factored by a 2.3% annual historical growth rate to obtain 1998 daily traffic volumes. The 2.3% annual historical rate was derived from historical counts obtained from ODOT's Traffic Volume Tables between 1980 and 1997. The 1998 daily traffic volumes are shown in Figure 4-1 with the A.M. and P.M. peak hour traffic volumes. As shown in Figure 4-1, the average daily traffic volumes on Highway 82 range from 3,500 to 4,400 vehicles per day (vpd) in the Imbler Urban Growth Boundary.

LEVEL OF SERVICE

The following section provides a summary of the level of service (LOS) analysis conducted for the Imbler Urban Growth Boundary intersections and roadways. The level of service definition (methodologies used in calculating level of service) and the results of the analysis are summarized below. The purpose of this information is to provide an overview of LOS and to identify its relationship to the transportation goals and policies of the city.

Level of Service Definition

Level of service is an estimate of the quality and performance of transportation facility operations in a community. The degree of traffic congestion and delay is rated using the letter "A" for the least amount of congestion to the letter "F" for the highest amount of congestion.

**Table 4-1
Summary of Seasonal Adjustment Factors**

Month	Seasonal Adjustment Factors
January	1.27
February	1.22
March	1.25
April	1.22
May	1.02
June	0.93
July	0.79
August	0.80
September	0.87
October	0.97
November	1.05
December	1.27

The following level of service categories provide individual descriptions for non-state roadways. Communities decide what level of traffic congestion is tolerable (i.e. decides whether "C," "D," or some other level is acceptable). The choice of a particular LOS threshold can vary by planning sub-area, roadway classification, or specific corridor or street.

The level of service methodology for unsignalized intersections was based on reserve or unused capacity available for critical turning movements. Level of service values range from LOS A, indicating free-flowing traffic, to LOS F, indicating extreme congestion and long vehicle delays. Table 4-3 summarizes the relationship between level of service and reserve capacity at unsignalized intersections.

Level of service at the roadway mid-blocks was calculated based on correlating the volume to capacity ratio (V/C) to LOS values. Table 4-4 summarizes the Volume/Capacity ratio ranges that have been developed for determining planning level roadway mid-block LOS on urban and rural roadways.

Existing Level of Service

Based on current A.M. peak hour, P.M. peak hour, and daily traffic volumes, levels of service were calculated for the study area intersections and roadway mid-blocks. The results of the unsignalized intersection level of service analysis are summarized in Table 4-5. The results of the roadway mid-block level of service are summarized in Table 4-6.

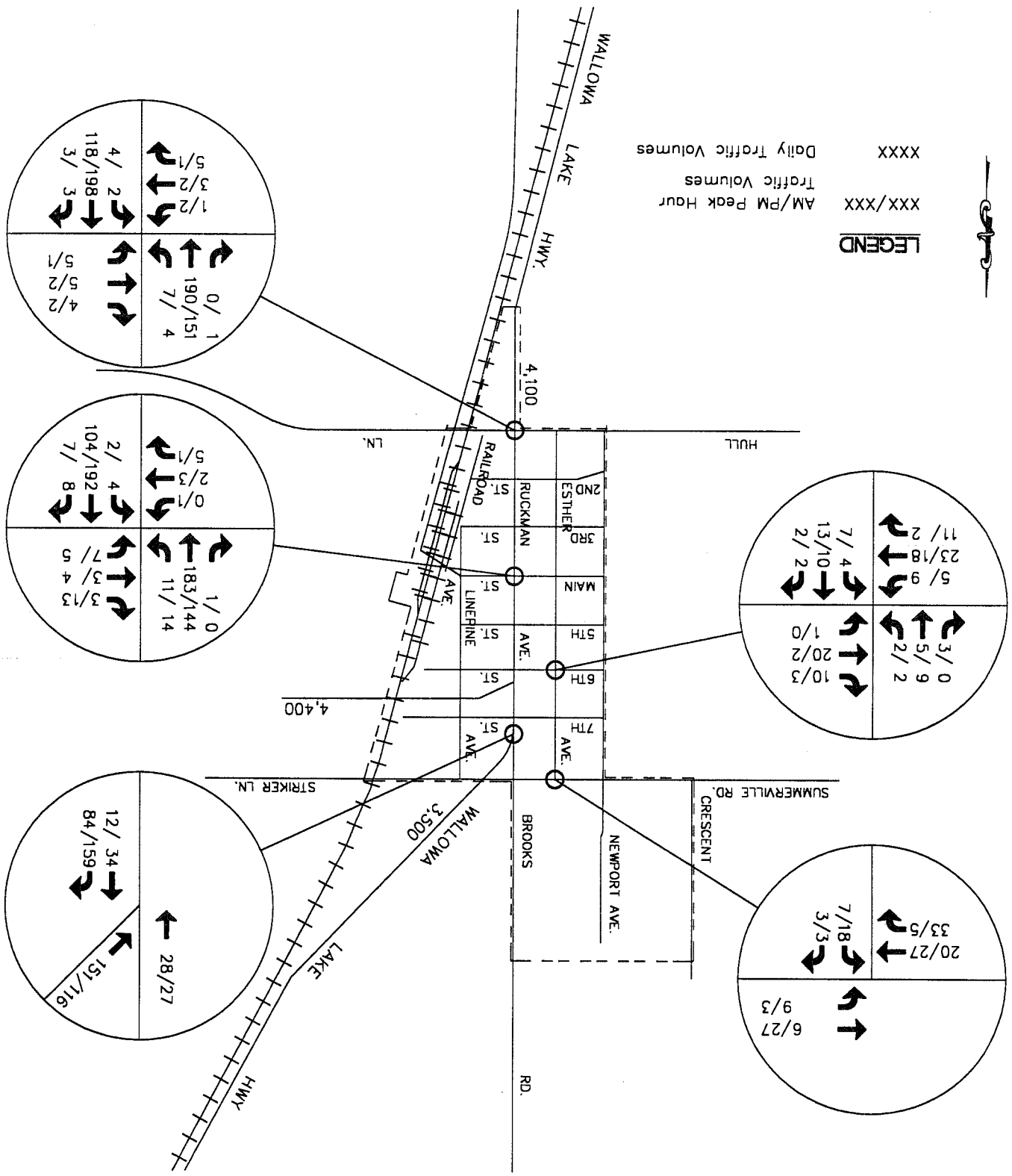


FIGURE 4-1 1998 Existing A.M. and P.M. Peak Hour Traffic Volumes

As shown in Table 4-5, all of the study area intersections in both the A.M. and P.M. peak hours operate at LOS A. All of the roadway mid-block sections are also operating at LOS A as shown in Table 4-6.

**Table 4-2
Truck Volume and Percentage Summary**

A.M. Peak Hour Truck Volume and Percentage Summary												
Intersection	Intersection Approach											
	Northbound			Southbound			Eastbound			Westbound		
	Truck Vol	Total Vol	Truck %	Truck Vol	Total Vol	Truck %	Truck Vol	Total Vol	Truck %	Truck Vol	Total Vol	Truck %
Hwy 82/Hull Ln	31	144	22%	12	226	5%	1	11	9%	4	17	24%
Hwy 82/Main St	29	130	22%	11	224	5%	0	8	0%	0	16	0%
Hwy 82/Brooks Rd	32	110	29%	1	32	3%	-	-	-	12	174	7%
Esther Ave/6 th St	0	25	0%	0	12	0%	5	45	11%	0	36	0%
Esther Ave/ Summerville Rd	0	12	0%	-	-	-	0	61	0%	1	17	6%
P.M. Peak Hour Truck Volume and Percentage Summary												
Hwy 82/Hull Ln	8	234	3%	13	180	7%	0	5	0%	0	5	0%
Hwy 82/Main St	9	235	4%	16	181	9%	0	5	0%	1	26	4%
Hwy 82/Brooks Rd	10	222	5%	3	31	10%	-	-	-	16	133	12%
Esther Ave/6 th St	2	19	11%	5	12	42%	1	33	3%	0	5	0%
Esther Ave/ Summerville Rd	2	25	8%				3	37	8%	1	35	3%

**Table 4-3
Level of Service Criteria for Unsignalized Intersections**

Level of Service	Reserve Capacity	Expected Delay
A	400 or more	little to no delay
B	300 to 399	short delays
C	200 to 299	average delays
D	100 to 199	long delays
E	0 to 99	very long delays
F	less than 0	failure-extreme congestion

**Table 4-4
Level of Service Criteria for Roadway Mid-Blocks**

LOS	Description	Volume/Capacity (V/C) Ratio
A	less than	0.60
B	less than or equal to	0.70
C	less than or equal to	0.80
D	less than or equal to	0.90
E	less than or equal to	1.00
F	greater than	1.00

TRANSPORTATION SAFETY

Accident data for the study area intersections and roadway mid-block sections were obtained from ODOT. Data was provided for a three year period between January 1, 1993 and December 31, 1997 and is summarized in Table 4-7.

As shown in Table 4-7, only one accident occurred in Imbler in the last five years. This accident occurred at the Highway 82/Hull Lane intersection and resulted in a fatality. The accident involved a passenger vehicle rear-ending a stopped truck waiting to make a left turn at the intersection. The driver of the truck was killed in the accident.

Highway 82 through the vicinity of Imbler is classified as rural primary non-freeway highway. The 1997 average accident rate for rural primary non-freeway highways in Oregon was 0.72 accidents per million vehicle miles traveled. This rate was taken from the *1997 State Highway Accident Rate Tables, Transportation Data Section - Accident Data Unit, ODOT, August 1998*. The accident rate at the Highway 82/Hull Lane intersection was 0.13 accidents per million entering vehicles. Although the accident rate at the intersection is measured differently than roadway segments, it is well below the magnitude of the 1997 average accident rate for primary non-freeway rural highways. If the intersection accident rate at the Highway 82/Hull Lane intersection is converted into a highway segment accident rate for Highway 82 within the Imbler City Limits, then the resulting rate would be 0.20 accidents per million vehicle miles, which is well below the state-wide average rate for rural primary non-freeway highways.

The only significant transportation safety concern identified in the public involvement process was the ability of pedestrians and school children to cross Highway 82 and Summerville Road safely.

**Table 4-5
Existing Intersection Level of Service**

Unsignalized Intersection	AM Peak		PM Peak	
	LOS	Reserve Capacity	LOS	Reserve Capacity
Highway 82/Hull Lane				
Northbound Left	A	1327	A	1427
Southbound Left	A	1449	A	1258
Eastbound Approach	A	855	A	640
Westbound Approach	A	722	A	703
Highway 82/Main Street				
Northbound Left	A	1345	A	1394
Southbound Left	A	1435	A	1280
Eastbound Approach	A	902	A	641

Westbound Approach	A	686	A	760
Highway 82/Brooks Road				
Northbound Left	A	1370	A	1450
Southbound Approach	A	1058	A	1147
Esther Avenue/6th Street				
Northbound Left	A	1677	A	1681
Southbound Left	A	1658	A	1680
Eastbound Approach	A	1002	A	991
Westbound Approach	A	1033	A	1210
Esther Avenue/Summerville Road				
Northbound Approach	A	999	A	928
Westbound Left	A	1515	A	1611

**Table 4-6
Existing Arterial Roadway Level of Service Summary**

Roadway	Section	AADT	Capacity	V/C Ratio	LOS
Highway 82	0.01 mi north Striker Lane	3,500	14,000	0.25	A
	0.01 mi north of 6th Street	4,400	14,000	0.32	A
	0.17 mi south of Hull Lane	4,100	14,000	0.29	A

**Table 4-7
Roadway Segment Accident Summary (January 1993 to December 1997)**

Intersection	Average Accidents per Year by Severity			Total (acc/yr) ³	Total (acc/mev) ⁴
	PDO ²	Injury	Fatal		
Highway 82/Hull Lane	0.0	0.0	0.2	0.2	0.13

TRANSPORTATION DEMAND MANAGEMENT MEASURES

Transportation Demand Management (TDM) measures consist of efforts taken to reduce the demand on a particular transportation system. TDM measures include such things as alternative work schedules, carpooling, and telecommuting.

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 4-8). Approximately 25% of the total employees depart for work between 6:00 and 7:00 A.M. Another 31% depart either the hour before or the hour after the peak.

Assuming an average nine-hour workday, the corresponding afternoon peak can be determined for work trips. Using this methodology, the peak work travel hour would occur between 3:00 and 4:00 P.M. which corresponds with the peak hour of activity measured for traffic volumes. This is consistent

² PDO=property damage only

³ acc/yr=accidents per year

⁴ acc/mev=accidents per million entering vehicles

with the afternoon peak hours indicated on the P.M. peak hour counts, which were performed by Union County and ODOT staff.

**Table 4-8
Departure to Work Distribution**

Departure Time	1990 Census	
	Trips	Percent
12:00 a.m. to 4:59 a.m.	6	5.5
5:00 a.m. to 5:59 a.m.	13	11.9
6:00 a.m. to 6:59 a.m.	27	24.8
7:00 a.m. to 7:59 a.m.	21	19.3
8:00 a.m. to 8:59 a.m.	13	11.9
9:00 a.m. to 9:59 a.m.	4	3.7
10:00 a.m. to 10:59 a.m.	0	0.0
11:00 a.m. to 11:59 a.m.	0	0.0
12:00 p.m. to 3:59 p.m.	20	18.3
4:00 p.m. to 11:59 p.m.	5	4.6
Total	109	100

TRAVEL MODE DISTRIBUTION

Although the automobile is the primary mode of travel for most residents in Imbler, 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 4-9. The census data reflects the predominant use of the automobile.

Most Imbler residents travel to work via private vehicle. In 1990, 80% of all trips to work were in an auto, van, or truck. Carpooling accounted for 5% of work trips. The remaining 15% of work trips were accounted for by either walking or telecommuting.

**Table 4-9
Journey to Work Trips**

	1990 Census	
	Trips	Percent
Car, Truck, or Van:		
Drove Alone	96	80
Carpooled	6	5
Public Transportation	0	0
Motorcycle	0	0
Bicycle	0	0
Walked	7	5.8
Other Means	0	0
Worked at Home	11	9.2
Total	120	100

EXISTING DEFICIENCIES

The existing deficiencies are described in the following sections: roadway system deficiencies and bicycle and pedestrian system deficiencies. There are no capacity deficiencies in Imbler based on the level of service analysis.

Roadway System Deficiencies

Imbler streets were constructed prior to the adoption of land use regulations stipulating street development standards; therefore, many of Imbler's streets can be identified as deficient. As development allows, and traffic volumes warrant, Imbler is modifying its street system to conform to its land development regulations.

Consider widening the following surface widths to city standards if traffic volumes increase significantly or if safety problems develop:

- Esther Avenue, Striker Lane, 5th Street, and 6th Street; which are classified as collectors; have pavement widths less than 24 feet. According to Imbler's street standards, collectors should have a minimum surface width of 24 feet, with 6-foot shoulders.
- A portion of 5th Street between its western terminus and Esther Avenue is not paved. As a collector, the entire length of the roadway should be paved.
- The following local streets have surface widths of less than 24 feet: 2nd Street, 3rd Street, 7th Street, Crescent Road, Newport Avenue, Railroad Avenue, Lone Pine Avenue, and Imbler Road.

Bicycle and Pedestrian System Deficiencies

The City of Imbler only has two blocks of existing sidewalks. Due to its small size, walking may be a significant mode of travel for residents making trips within Imbler. Therefore, pedestrian facilities linking major activity centers such as the Imbler High School, Imbler Elementary School, City Hall, and local retail stores should be considered.

Safe pedestrian paths for walking school children need to be considered, especially since most of Imbler's streets are narrow and without adequate shoulders. The safety of walking school children has emerged as the primary concern for the Imbler TAC. A Bicycle and Pedestrian Plan for Imbler was adopted on November 4, 1996 delineating a bicycle and pedestrian system that could also be utilized by walking school children. During the TSP process, the TAC identified an additional pedestrian alternative that would increase safety for the walking public and promote an urban feeling within Imbler's City Limits. This project is the preferred alternative and is outlined in Chapter 6.

CHAPTER 5: 2018 TRAFFIC VOLUME FORECAST

Chapter 5 identifies future traffic volumes, and how this could impact the current and planned transportation system in the City of Imbler.

2018 TRAFFIC FORECAST METHODOLOGY

The 2018 traffic projections developed as part of this study are used as the basis for assessing future roadway conditions and likely improvement requirements. These projections were developed through a two step process. First, the historical relationship between traffic growth and population growth was developed. Second, this traffic-to-population relationship was applied to the 20-year projected population to obtain the 20-year traffic forecast.

The population growth in the City of Imbler between 1980 and 1997 has been very modest. Based on historical population information, the City of Imbler’s population has increased from 287 to 310 between 1980 and 1997. This equates to an annual population growth rate of 0.5%. Table 5-1 summarizes this information.

**Table 5-1
Imbler Historic Population Growth Trend**

1980	1997	1980-1997 Percent Change	Annual Growth Rate
287	310	8.0%	0.5%

Table 5-2 shows the Highway 82 traffic growth rate in the City of Imbler between 1980 and 1997. As shown in Table 5-2, the historic annual traffic growth rates range from 1.9% to 2.6%. The weighted average historic annual traffic growth rate is 2.3% in the City of Imbler.

The historic traffic-to-population growth rate ratio from 1980 to 1997 is 4.98. This ratio is extremely high and indicates that there is not a direct correlation between the historic traffic levels and population growth. The majority of traffic growth on Highway 82 in Imbler can be attributed to trips generated outside the city. Since there is not a direct correlation between traffic growth on Highway 82 to population growth, the traffic-to-population relationship was not applied to the expected future population growth to obtain the future traffic volumes. Instead, the historical traffic growth rate of 2.3% per year was used to forecast the 2018 traffic volumes.

**Table 5-2
Imbler Historic Traffic Growth Trend on Highway 82**

Milepost	Location Description	1980 ADT	1997 ADT	Annual Growth Rate
11.81	South city limits	2,600	4,000	2.6%
12.35	0.01 miles north of 6th Street	3,100	4,300	1.9%
12.51	North city limits	2,300	3,400	2.3%
Weighted Average				2.3%

2018 LEVELS OF SERVICE

Level of service analyses were conducted based on the 2018 traffic volumes shown in Figure 5-1. The results of the analysis are summarized in Table 5-3. As shown in Tables 5-3 and 5-4, all of the study area intersections and roadways are projected to continue to operate at LOS A in the 2018 condition.

Table 5-3
2018 Intersection Level of Service

Unsignalized Intersection	AM Peak		PM Peak	
	LOS	Reserve Capacity	LOS	Reserve Capacity
Highway 82/Hull Lane				
Northbound Left	A	1147	A	1283
Southbound Left	A	1315	A	1051
Eastbound Approach	A	638	A	484
Westbound Approach	A	527	A	524
Highway 82/Main Street				
Northbound Left	A	1170	A	1238
Southbound Left	A	1293	A	1076
Eastbound Approach	A	760	A	454
Westbound Approach	A	502	A	550
Highway 82/Brooks Road				
Northbound Left	A	1202	A	1312
Southbound Approach	A	898	A	1024
Esther Avenue/6th Street				
Northbound Left	A	1652	A	1664
Southbound Left	A	1627	A	1664
Eastbound Approach	A	907	A	936
Westbound Approach	A	944	A	1181
Esther Avenue/Summerville Road				
Northbound Approach	A	927	A	837
Westbound Left	A	1443	A	1550

Table 5-4
Existing Arterial Roadway Level of Service Summary

Roadway	Section	AADT	Capacity	V/C Ratio	LOS
Highway 82	0.01 mi north Striker Lane	5,400	14,000	0.39	A
	0.02 mi north of 6th Street	6,900	14,000	0.49	A
	0.17 mi south of Hull Lane	6,400	14,000	0.46	A

2018 DEFICIENCIES

No additional deficiencies to those previously defined in the Existing Deficiencies section have been identified since the 2018 levels of service analysis yielded the same results as the existing levels of service analysis.

City of Imbler Transportation System Plan

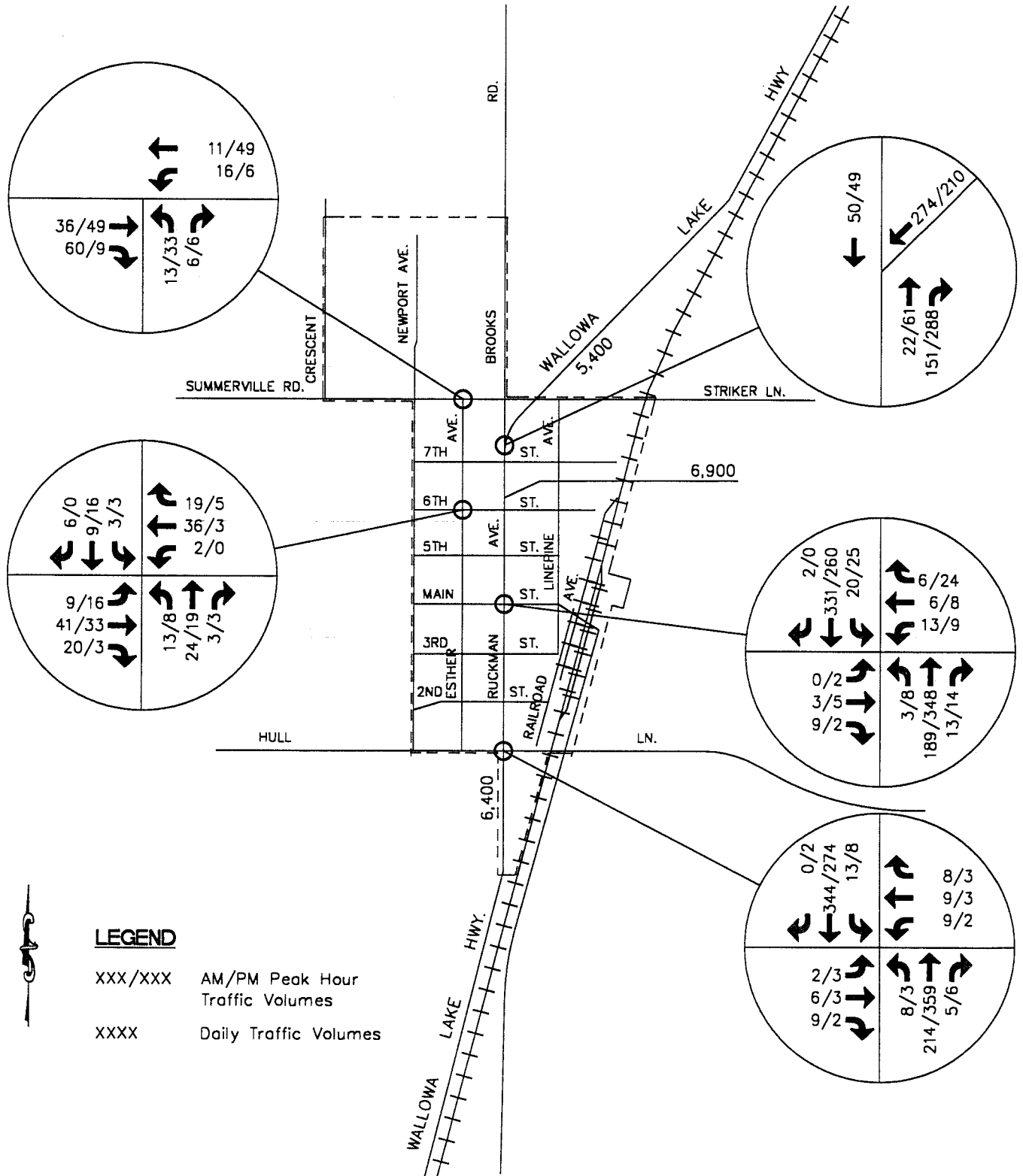


FIGURE 5-1
2018 A.M. and P.M. Peak Hour Traffic Volumes

CHAPTER 6: TRANSPORTATION IMPROVEMENT OPTIONS

The Transportation Planning Rule requires that Transportation System Plans evaluate alternatives to resolve system deficiencies. Several improvement alternatives were developed and analyzed with input from the TAC, Imbler staff and the public. The transportation system alternatives attempt to satisfy TSP goals and objectives, and meet identified needs.

The proposed improvement projects include state and city street projects, including surface water drainage projects; bicycle and pedestrian improvements; rail, air, and public transportation plans; and transportation demand management strategies. The proposed improvement projects address identified needs for all modes of travel in Imbler.

EVALUATION OF PROJECT ALTERNATIVES

Analysis of current and forecasted traffic volumes identified no capacity issues within the City of Imbler over the next 20 years. Improvement alternatives were evaluated based on project cost; safety; connectivity between high activity areas; and environmental, socioeconomic, and land use impacts. Listing project alternatives, however, does not imply final approval of the projects. Environmental issues may result in changes, delays or cancellation of projects.

The previously listed factors were the basis for determining project priority. Capacity issues aside, the Imbler TAC focused on pedestrian safety issues, and primarily the safety of school children crossing Oregon Highway 82. Other transportation system projects were also identified and prioritized in previous plans, such as the Oregon Highway 82 Corridor Plan, the Imbler Bicycle and Pedestrian Plan, and the La Grande/Union County Airport Master Plan Update. These projects have been incorporated into the TSP.

The primary concern for the Imbler TAC and the public isn't necessarily traffic volumes on Oregon Highway 82, it is the travel speed of motorists through the City of Imbler. There were several discussions at public meetings to identify potential projects that would improve pedestrian safety. The TAC considered a pedestrian actuated crossing signal for Oregon Highway 82, but the likelihood of meeting the necessary warrants for such a signal precluded it as a viable alternative. There was also concern that such a signal could be more unsafe than the current situation because the signal's activation would be infrequent enough that motorists may not pay attention to a change from green to red while school children are stepping out into the travel lane.

After Imbler considered and rejected the idea of a pedestrian actuated signal on Oregon Highway 82, discussion focused on enforcement and human behavior. The Oregon State Police (OSP) have a good working relationship with the City of Imbler and respond to requests for increased patrols in the area, but OSP staffing levels prevent them from maintaining a continued presence for traffic enforcement. Additionally, the City of Imbler is working with ODOT and the Oregon Speed Control Board to lower speed limits through downtown Imbler and at Imbler's periphery.

Enforcement aside, Imbler felt there were other opportunities for influencing the behavior of motorists. Highway pavement width, combined with wide, unrestricted shoulders and flat topography, invite higher travel speeds. There are no curbs and sidewalks along Oregon Highway 82, no tall buildings, no hills or curves, and no regulating factors like traffic signals. Speed zone enforcement is the only existing way to slow travel speed.

These factors led the TAC to consider installing curbs and sidewalks along Oregon Highway 82, and bulb-outs at each intersection to improve pedestrian safety. This fosters an “urban” feeling within the city core and provides a perception of a narrower roadway. Traffic then slows, not because speed zone signs demand it, but because motorists sense a tapering of the roadway and automatically respond by slowing travel speed. The bulb-outs provide an increased level of pedestrian safety by making pedestrians more visible to traffic and narrowing the roadway width they must cross. This project emerged as the preferred alternative for improving pedestrian safety and encouraging an urban feeling within the downtown core of Imbler.

In addition to pedestrian safety on Oregon Highway 82, the TAC recommended an additional crossing zone on Summerville Road for school children safety.

The City of Imbler is in the process of mitigating surface water drainage problems at the northern portion of town. A Stormwater/Surface Water Report (Appendix D) was prepared by Anderson Perry & Associates to provide conceptual design solutions to surface drainage problems along 6th Street, 7th Street, and at the intersection of Brooks Lane/Ruckman Road/Summerville Road/Highway 82. Additional surface water drainage problems were identified in areas around the Imbler School, Brooks Road, Crescent Road, and Summerville Road. The City has set surface water management as a high priority for the near future. The first step in accomplishing this priority is to identify the issues of surface water drainage. The primary goal will be to complete improvements to minimize surface water flooding for certain storm events. Secondary goals are to address water quality standards and mitigation requirements of regulatory agencies. Cooperation with agency projects upstream and downstream of Imbler will also be an important consideration. Any of the proposed alternatives could be folded into the bulb-out project to maximize resources.

Improvement projects are detailed in the Street System and Bicycle and Pedestrian Improvements sections at the end of this chapter. Aside from the surface water drainage improvement alternatives, the Imbler TAC recommends all projects eventually be constructed. The Imbler City Council is in the process of selecting the preferred surface water drainage improvement(s).

STATEWIDE TRANSPORTATION IMPROVEMENT PROGRAM PROJECTS

The Oregon Department of Transportation has a comprehensive improvement and maintenance program for Oregon’s highway system. The Statewide Transportation Improvement Program (STIP) is updated every two years and identifies projects that could improve the overall transportation system.

Committed and preliminary STIP projects for 1999-2003 are identified in the Union County Transportation System Plan. Many project locations are outside Imbler’s Urban Growth boundary except the following projects, which could improve Highway 82 travel to, and through, the City of Imbler.

Island City – Imbler

This is a preservation project located on the Wallowa Lake Highway (OR-82) between milepoint 2.64 and 12.80. Improvements to this section include pavement preservation (chip seal). Currently, there is \$375,000 programmed for this work (2002; Union County).

Imbler Section

This is a reconstruction project located within Imbler’s Urban Growth Boundary on the Wallowa Lake Highway (OR-82) between milepoints 11.98 and 12.50. Improvements include sidewalks, bulb-outs, curbs & gutters, rebase, pavement, utility relocation, and stormwater drainage improvements. Project cost is estimated at \$1,500,00 (Union County).

OREGON HIGHWAY 82 CORRIDOR PLAN

Improvement projects identified in the Oregon Highway 82 Corridor Plan will be implemented through the Statewide Transportation Improvement Program (STIP) and the ODOT Region 5 work program. Each recommended improvement project is prioritized as a “near” (0-5 years), “mid” (5-10 years), or “long” (10-20 years) term project. Projects are associated with three categories of management decisions, which are “Management Decisions,” “Capital Improvement Decisions,” and “Service Improvement Decisions.” Projects that will be implemented within the next 20 years include:

Capital Improvement Decisions

1. **Grade Crossing Protection Program** (long: 10-20 years) – The program is intended to improve the safety of highway and side road crossings of the Idaho Northern and Pacific (INP) by consolidating private and public crossings where practical between Island City and Elgin. The following are specific crossings that could be considered for future modification: Combine two crossings near both MP 8.2 and MP14.2; consolidate three crossings to two near Baum Industrial Park; close one of three public crossings near the center of Imbler; close Hayes and Janson Roads near the track; gate the six remaining public crossings between Island City and the east end of Elgin.
2. **Railroad Track Improvement Program, La Grande to Elgin** (long: 10-20 years) – The program is designed to improve the average speed of the INP to 25 mph between the Union Pacific Railroad interchange in Island City and Elgin by implementing track and maintenance enhancements such as partial tie replacement, addition of ballast, and surface and track alignment.

STREET SYSTEM IMPROVEMENTS

If safety problems develop or traffic volumes increase significantly, the following street improvements are proposed to mitigate identified deficiencies:

- Widen the following city streets to current collector standards: Striker Lane, Esther Avenue, 5th Street, and 6th Street. Imbler’s current collector standard is 24 feet, with 6-foot shoulders.
- 5th Street between its western terminus and Esther Avenue – Pave and widen to a minimum collector standard of 24 feet wide.
- Widen the following local street surfaces to Imbler’s current standard of 24 feet: 2nd Street, 3rd Street, 7th Street, Crescent Road, Newport Avenue, Railroad Avenue, Lone Pine Avenue, and Imbler Road.

Table 6-0
Imbler Preferred Alternative Cost Estimates

Project Description	Cost
1. Summerville Road east of Crescent Road – Install crosswalk and signs	\$1,000
2. Oregon Highway 82	
A. From 6 th Street to 2 nd Street – Install bulb-outs, sidewalks, curbs/gutters at all intersections along the improvement roadway section	\$35,000
B. From 7 th Street to Hull Lane – Install bulb-outs, sidewalks, curbs/gutters at all intersections along the improvement roadway section	\$45,000
C. Highway 82 Section within Imbler’s UGB – Install bulb-outs, sidewalks, curbs/gutters, rebase and pave, relocate utilities and install stormwater drainage improvements along the improvement roadway section	\$1,500,000

Preferred Alternative: Construct Sidewalks/Bulb-outs – Alternative A includes installing sidewalks, curbs, gutters, and bulb-outs along both sides of Oregon Highway 82 beginning on the north side of 2nd Street and continuing to the north side of 6th Street. This also involves shifting an existing crosswalk from the north side of 6th Street to the south side of 6th Street. Alternative B includes installing sidewalks, curbs, gutters, and bulb-outs along both sides of Oregon Highway 82 beginning on the north side of Hull Lane and continuing to the north side of 7th Street. Alternative C includes installing sidewalks, curbs, gutters, and bulb-outs, as well as rebasing and repaving the roadway, relocating utilities, and installing stormwater drainage improvements along Oregon Highway 82 within Imbler’s UGB. These projects are located in Figure 7-3.

STORMWATER/SURFACE WATER IMPROVEMENTS

The following provides Imbler alternative long-term solutions to existing surface water drainage deficiencies. Five project segments have been identified in the north Imbler drainage area from the Imbler Stormwater/Surface Water Report. Each project segment addresses a separate issue along the drainage path. The five north Imbler drainage area project segments are:

1. Imbler School District Properties
2. Highway 82 (6th Street to Striker Lane)
3. Summerville Road (Crescent Road to Brooks Lane)
4. Striker Lane to the Railroad Culvert
5. Railroad Culvert to Grande Ronde River

For each project segment, alternative(s) and associated estimated costs or suggested actions have been identified. Estimated costs were based on the assumption that construction will be completed through competitive bidding at current State Prevailing Wage Rates. Special traffic control and surface restoration may be required for options associated with the Oregon Department of Transportation. Operation and maintenance costs associated with the alternative(s) have not been considered. Each project segment has specific improvement needs and similar maintenance requirements. Many of the problems with the existing system can be attributed to a combination of poor maintenance practices and atypical weather conditions. Generally, the existing and proposed systems will not work at capacity if

the maintenance program fails. A maintenance program should be adopted regardless of the improvement alternative(s) selected.

Imbler School District

The Imbler School District properties are outside the jurisdiction of the City limits and scope of this project. However, a substantial volume of water that enters the 6th Street catch basin traverses through the school property. During meetings with Gus Forster, School Superintendent, and other agencies, possible problems and solutions to the School District property flooding were identified. As surface water collects northeast of the school property, the School District will pump water to the 6th Street catch basin. The District agreed to be careful not to overwhelm the 6th Street drainage system. To accomplish this, the District will pump surface water at a gradual pace rather than maximum pump capacity. Anticipation of special flooding conditions (i.e., frozen ground) can sometimes be recognized and accounted for.

Long-term solutions for the Imbler School District are being considered through other agencies. Meetings with the School District, Soil and Water Conservation District (SWCD), the Natural Resource Conservation Service (NRCS), and local farmers provided information for improvements upstream of the City. As stated by the District, ditch improvements by Bill Howell since the 1996 event may have helped the District's problem. Recurrence of surface water problems have been limited since the upstream ditch improvements were made. Improvements at the school buildings which may be helpful in controlling surface water include:

- Downspouts and drip rail collection area improvements to drain water away from buildings and footings.
- Improve the existing drainage path to drain naturally and filter sediments.
- Continued work with the county, state, and federal agencies to control runoff from agricultural lands.

Regulatory and agricultural agencies have funding packages to assist farmers in critical drainage issues. If surface water problems can be prevented upstream, the School District and city should be supportive.

Highway 82 (6th Street to Summerville Road)

Four different alternatives were considered for this project segment. The four alternatives address the runoff from the 6th Street/Highway 82 intersection in a separate fashion. Figures 6-1 through 6-4 are included to assist in the visualization of each of the four drainage improvement alternatives as described below.

Alternative No. 1

Alternative No. 1 would utilize the existing drainage route from 6th Street to Summerville Road, as shown in Figure 6-1. Ditch excavation along the west shoulder of Highway 82 will be required to prevent the street flows from crossing the highway. The flow line of the existing drainage swale should be improved to carry water from 6th Street to Summerville Road. A 30-inch culvert is proposed under 7th Street to meet the flow requirements of the swale. A second 30-inch culvert will be necessary to replace the existing 18-inch reinforced concrete pipe under Ruckman Road.

Estimated costs for proposed Alternative No. 1 improvements are summarized in Table 6-1. Additional culverts for private access driveways have not been included in the estimate.

Table 6-1
6th Street to Summerville Road (Alternative No. 1)

Item	Unit	Qty.	Unit Price	Cost
Mobilization	LS	1	\$1500.00	\$1,500.00
Temporary Protection and Direction of Traffic/Project Safety	LS	1	2,000.00	2,000.00
Flaggers	Hours	50	30.00	1,500.00
Permanent Seeding and Mulching	LS	1	1,000.00	1,000.00
Ditch Excavation	LF	1,000	5.00	5,000.00
30-inch CMP Culvert (at Ruckman)	LF	60	60.00	3,600.00
30-inch CMP Culvert (at 7th Street)	LF	60	60.00	3,600.00
Asphalt Surface Restoration	SY	50	35.00	1,750.00
Preliminary Estimated Construction Cost 1999 Prices				\$19,950.00
Construction Contingencies, Engineering, Administration, and Legal (35%)				\$6,000.00
Preliminary Estimated Project Cost 1999 Prices				\$25,950.00

Routine preventative maintenance of the drainage swale will be required for the system to function. Changes in snow removal techniques will be required to prevent snow and ice from plugging ditches and culverts during winter runoff events. An effort to keep runoff within state, county and city right-of-way will need to be maintained.

The advantages and disadvantages of improvements included in Alternative No. 1 of the 6th Street to Summerville Road project segment are as follows:

Advantages: Alternative No 1:

- Ditch/swale improvements have a low initial cost.
- Installation and maintenance is simplified compared to subsurface drainage systems.
- Installation and maintenance may be assisted by ODOT.
- Water quality is enhanced by filtration in grass-lined ditches.

Disadvantages: Alternative No. 1:

- Snow removal techniques will need to be monitored and altered.
- Regular maintenance (i.e. silt and debris removal) will be required.
- Snow and ice may freeze in culverts or ditches.
- Ditches/swales can become an "eye sore" without adequate maintenance.
- Safety to vehicular traffic should be considered.

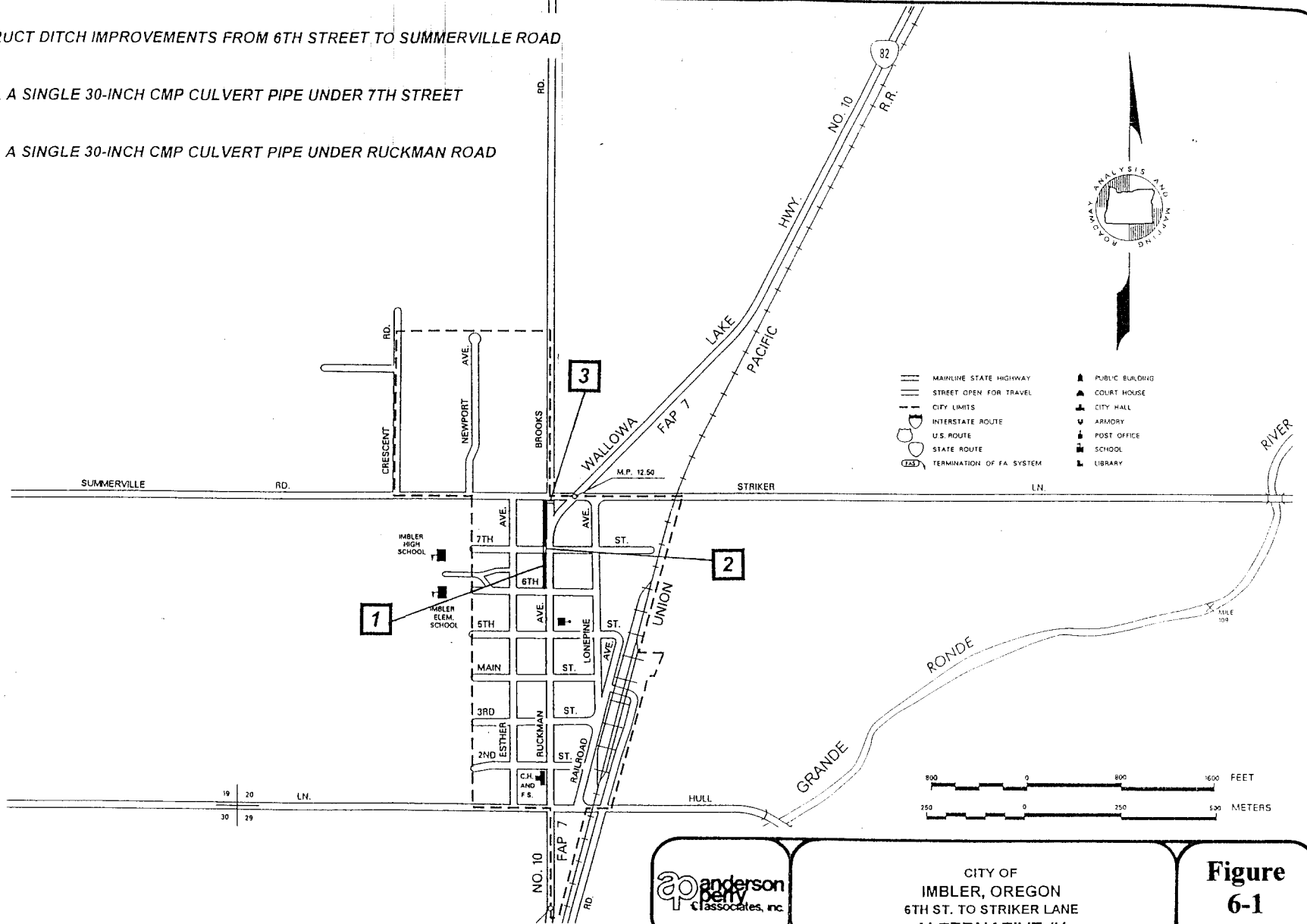
Alternative No. 2

A second alternative to the existing drainage route was proposed by Mike Buchanan, ODOT, District 13, Maintenance Manager. The suggested route would have the 6th Street runoff enter a grate inlet at 6th Street and Highway 82 and utilize a new subsurface storm drain system under Highway 82 to the east and down 6th Street, as shown in Figure 6-2. The final route of the piping would need to be determined by the final design and approved by the City. The majority of the construction would take place within state and city rights-of-way. Alternative No. 2 would also require the construction of a drainage swale from the outlet to the railroad culvert. This would provide a direct route from 6th Street

1 CONSTRUCT DITCH IMPROVEMENTS FROM 6TH STREET TO SUMMERVILLE ROAD

2 INSTALL A SINGLE 30-INCH CMP CULVERT PIPE UNDER 7TH STREET

3 INSTALL A SINGLE 30-INCH CMP CULVERT PIPE UNDER RUCKMAN ROAD



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6TH ST. TO STRIKER LANE
ALTERNATIVE #1

Figure
6-1

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to the railroad culvert. This proposed route would carry the 6th Street flows away from the Summerville Road/Highway 82 intersection and may require an additional drainage easement. Improvements to the existing ditch along the west side of Highway 82 are not included in this alternative. Table 6-2 summarizes the estimated costs for Alternative No. 2. Improvements to the Summerville Road/Highway 82 intersection would still be necessary.

Table 6-2
6th Street to Summerville Road (Alternative No. 2)

Item	Unit	Qty.	Unit Price	Cost
Mobilization	LS	1	\$5,000.00	\$5,000.00
Temporary Protection and Direction of Traffic/Project Safety	LS	1	4,000.00	4,000.00
Flaggers	Hours	50	30.00	1,500.00
Storm Drain Manholes w/Inlets	Each	3	2,000.00	6,000.00
Gravity Storm Drain 30-inch CMP	LF	600	60.00	36,000.00
Permanent Seeding and Mulching	LS	1	1,000.00	1,000.00
Ditch Excavation	LF	500	5.00	2,500.00
Riprap for Outlet	CY	20	20.00	400.00
State Highway Surface Restoration	SY	60	50.00	3,000.00
Asphalt Surface Restoration	SY	30	35.00	1,050.00
Drainage Easement	LS	1	2,000	2,000.00
Preliminary Estimated Construction Cost 1999 Prices				\$62,450.00
Construction Contingencies, Engineering and Legal (35%)				\$20,000.00
Preliminary Estimated Project Cost 1999 Prices				\$82,450.00

The advantages and disadvantages of improvements included as part of Alternative No. 2 of the 6th Street to Summerville Road project segment are as follows:

Advantages: Alternative No. 2:

- Provides a direct route for runoff.
- Subsurface drainage cannot be seen.
- Installation and maintenance may be assisted by ODOT.
- Subsurface pipes are usually unaffected by snow.
- If the system failed, existing ditches may be used for backup.

Disadvantages: Alternative No. 2:

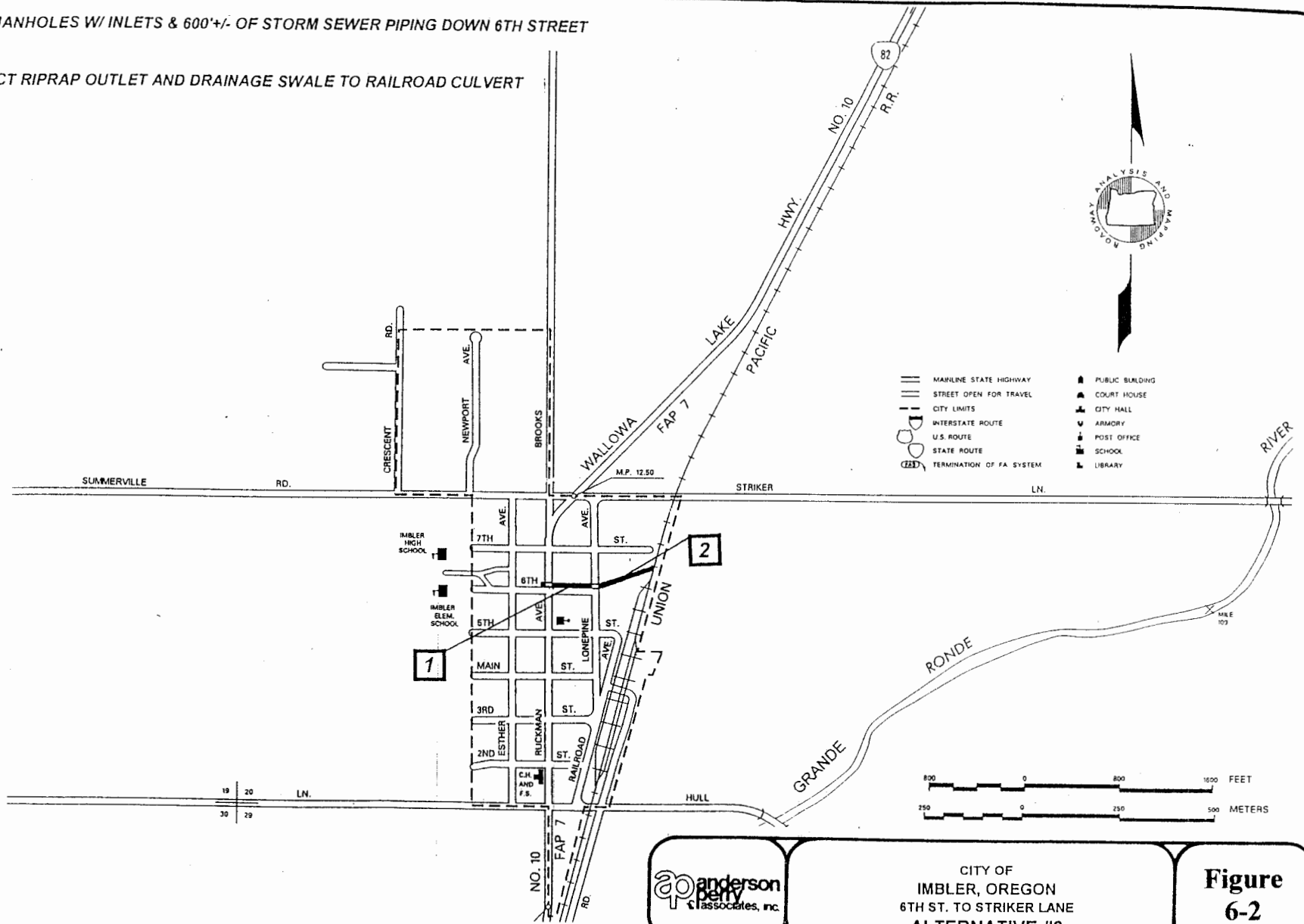
- Initial cost for the system is higher.
- Requires regular maintenance with special equipment.
- Piping and inlets can freeze or be obstructed in extreme weather.
- Surface restoration is required.
- Drainage easements may be necessary from Lone Pine Avenue to the Railroad Culvert.
- Subsurface drainage installations will need to work around existing utilities.

Alternative No. 3

The third alternative for the 6th Street to Summerville Road segment involves the construction of

1 INSTALL MANHOLES W/ INLETS & 600'+/- OF STORM SEWER PIPING DOWN 6TH STREET

2 CONSTRUCT RIPRAP OUTLET AND DRAINAGE SWALE TO RAILROAD CULVERT



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6TH ST. TO STRIKER LANE
ALTERNATIVE #2

**Figure
6-2**

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subsurface storm drainage piping from 6th Street to the Summerville Road/Highway 82 intersection, as shown in Figure 6-3. The drainage facility would have approximately four manholes with inlets to collect runoff from 6th Street, 7th Street, Ruckman Road, and Highway 82. The system would be designed with 30-inch piping. Water collection would be centralized at the Herbst triangle property on the west side of Highway 82. The installation would primarily be on state rights-of-way up to the Herbst property. The city or state may consider the purchase of this property for use as a stormwater collection/detention area. The estimated cost for Alternative No. 3 is presented below in Table 6-3.

Table 6-3
6th Street to Summerville Road (Alternative No. 3)

Item	Unit	Qty.	Unit Price	Cost
Mobilization	LS	1	\$5,000.00	\$5,000.00
Temporary Protection and Direction of Traffic/Project Safety	LS	1	4,000.00	4,000.00
Flaggers	Hours	100	30.00	3,000.00
Storm Drain Manholes w/Inlets	Each	3	2,000.00	6,000.00
Gravity Storm Drain 30-inch CMP	LF	900	60.00	54,000.00
State Highway Asphalt Surface Restoration	SY	60	50.00	3,000.00
Asphalt Surface Restoration (Ruckman Road)	SY	30	35.00	1,050.00
Preliminary Estimated Construction Cost 1999 Prices				\$76,050.00
Construction Contingencies, Engineering, Administration, and Legal (35%)				\$26,000.00
Preliminary Estimated Project Cost 1999 Prices				\$102,050.00

The advantages and disadvantages of improvements included as part of Alternative No. 3 of the 6th Street to Summerville Road project segment are as follows:

Advantages: Alternative No. 3:

- Collects runoff at a central location.
- Subsurface drainage cannot be seen.
- Installation and maintenance may be assisted by ODOT.
- If the system failed, existing ditches may be used for backup.

Disadvantages: Alternative No. 3:

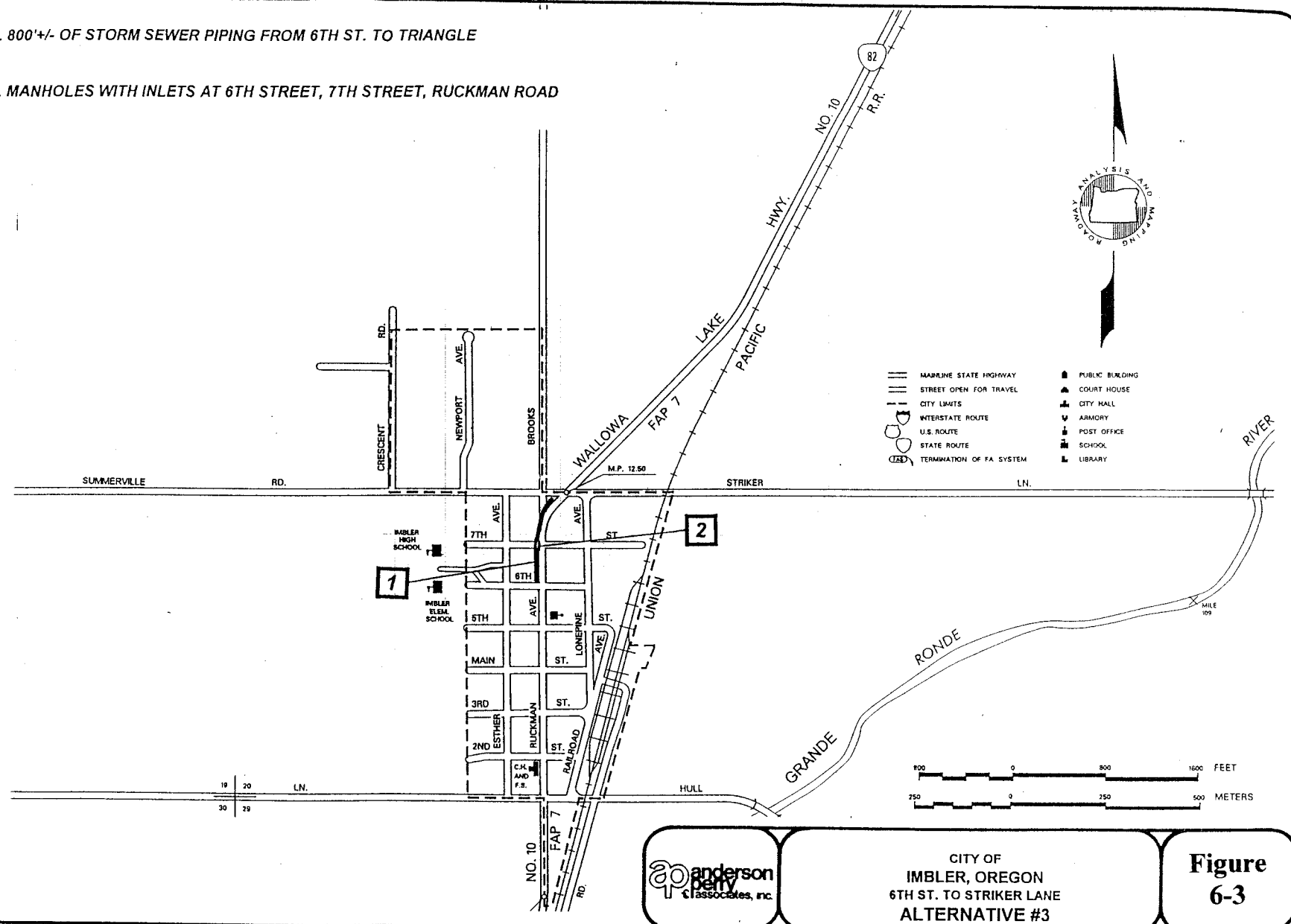
- Initial cost for the system is higher.
- Requires regular maintenance with special equipment.
- Piping and inlets can freeze or become obstructed in extreme weather.
- Surface restoration is required.
- Subsurface drainage installations will need to work around existing utilities.

Alternative No. 4

The final alternative would be a combination of ditches and subsurface drains used to develop a new drainage pathway. Similar to Alternative No. 2, the path of the water would deviate from the existing route through piping from 6th Street under Highway 82, as shown in Figure 6-4. A ditch would be

1 INSTALL 800'+/- OF STORM SEWER PIPING FROM 6TH ST. TO TRIANGLE

2 INSTALL MANHOLES WITH INLETS AT 6TH STREET, 7TH STREET, RUCKMAN ROAD



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 6TH ST. TO STRIKER LANE
 ALTERNATIVE #3

Figure
 6-3

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constructed on the north side of 6th Street from Highway 82 to Lone Pine Avenue with culverts at each driveway access. A manhole with an inlet and storm sewer piping will be necessary from Lone Pine Avenue beyond the residential properties. A riprap outlet and drainage swale to the railroad culvert will also need to be constructed. The system could be constructed on city and state rights-of-way down to Lone Pine Avenue. A drainage easement from Lone Pine Avenue to the railroad culvert may be necessary.

**Table 6-4
6th Street to Summerville Road (Alternative No. 4)**

Item	Unit	Qty.	Unit Price	Cost
Mobilization	LS	1	\$4,000.00	\$4,000.00
Temporary Protection and Direction of Traffic/Project Safety	LS	1	2,000.00	2,000.00
Flaggers	Hours	50	30.00	1,500.00
Storm Drain Manholes w/Inlets	Each	2	2,000.00	4,000.00
Gravity Storm Drain 30-inch CMP	LF	200	60.00	12,000.00
30-inch Culvert (at driveway accesses)	LF	90	60.00	5,400.00
Permanent Seeding and Mulching	LS	1	1,000.00	1,000.00
Ditch Excavation	LF	600	5.00	3,000.00
State Highway Asphalt Surface Restoration	SY	60	50.00	3,000.00
Asphalt Surface Restoration	SY	60	35.00	2,100.00
Drainage Easement	LS	1	2,000	2,000.00
Preliminary Estimated Construction Cost 1999 Prices				\$40,000.00
Construction Contingencies, Engineering, Administration, and Legal (35%)				\$14,000.00
Preliminary Estimated Project Cost 1999 Prices				\$54,000.00

The advantages and disadvantages of improvements included as part of Alternative No. 4 of the 6th Street to Summerville Road project segment are as follows:

Advantages: Alternative No. 4:

- Lower initial cost than full subsurface system.
- Installation and maintenance may be assisted by ODOT.
- If the system failed, existing ditches and drainage route can be used for backup.
- Provides a direct route for runoff.
- Ditch/swale sections provide an area for infiltration.

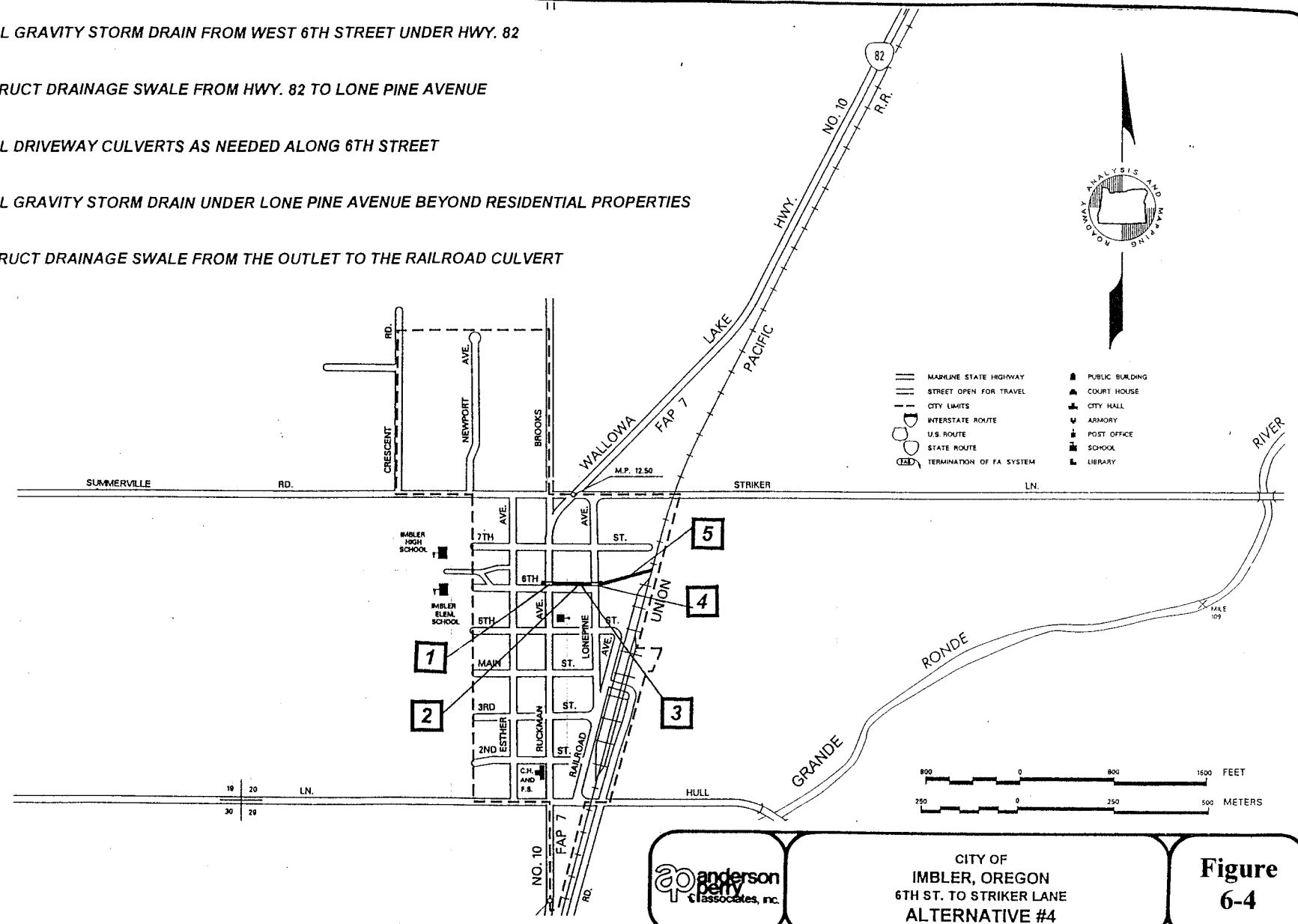
Disadvantages: Alternative No. 4:

- Requires regular maintenance with special equipment for subsurface section.
- Piping and inlets can freeze or be obstructed in extreme weather.
- Subsurface drainage installations will need to work around existing utilities.
- Surface restoration will be necessary.

Summerville Road (Crescent Road to Brooks Lane)

Additional flooding along Summerville Road was identified during informational meetings in Imbler. Residents reported accumulations of water along the north shoulder of Summerville Road from

- 1 INSTALL GRAVITY STORM DRAIN FROM WEST 6TH STREET UNDER HWY. 82
- 2 CONSTRUCT DRAINAGE SWALE FROM HWY. 82 TO LONE PINE AVENUE
- 3 INSTALL DRIVEWAY CULVERTS AS NEEDED ALONG 6TH STREET
- 4 INSTALL GRAVITY STORM DRAIN UNDER LONE PINE AVENUE BEYOND RESIDENTIAL PROPERTIES
- 5 CONSTRUCT DRAINAGE SWALE FROM THE OUTLET TO THE RAILROAD CULVERT



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6TH ST. TO STRIKER LANE
ALTERNATIVE #4

Figure
6-4

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Crescent Road to Newport Avenue. Suggested improvements include the construction of a drainage swale along the north shoulder of Summerville Road, as shown in Figure 6-5. Many of the residents have constructed temporary ditches on the road with sand bags during past flooding events. The proposed swale would require a culvert installation for every driveway access and street crossings. In order for these swales and culverts to be effective during the flooding, maintenance and snow removal methods need to be altered. Ice, snow, sediment, and debris may render culverts and ditches ineffective. Identifying and maintaining culverts and swales is a long-term commitment from the community and/or the county. Union County has joint jurisdiction of Summerville Road and maintenance costs will be an issue. A cost estimate for the construction of the swale, culvert, and improvements is presented below in Table 6-5.

Table 6-5
Summerville Road Improvements (Crescent Road to Brooks Road)

Item	Unit	Qty.	Unit Price	Cost
Mobilization	LS	1	\$4,000.00	\$4,000.00
Temporary Protection and Direction of Traffic/Project Safety	LS	1	1,000.00	1,000.00
Permanent Seeding and Mulching	LS	1	1,000.00	1,000.00
Flaggers	Hours	50	30.00	1,500.00
Ditch Excavation	LF	1,200	5.00	6,000.00
30-inch CMP Culvert (at access points)	LF	250	60.00	15,000.00
Surface Restoration (Intersections)	SY	100	35.00	3,500.00
Fence Relocation	LF	100	5.00	500.00
Preliminary Estimated Construction Cost 1999 Prices				\$32,500.00
Construction Contingencies, Engineering, Administration, and Legal (35%)				\$10,000.00
Preliminary Estimated Project Cost 1999 Prices				\$42,500.00

Sheet flows and patterns through the developments north of Summerville Road will require additional evaluation before the design of the swale is complete. Topography data from this project did not include the survey of the drainage area north of Summerville Road.

Striker Lane to the Railroad Culvert

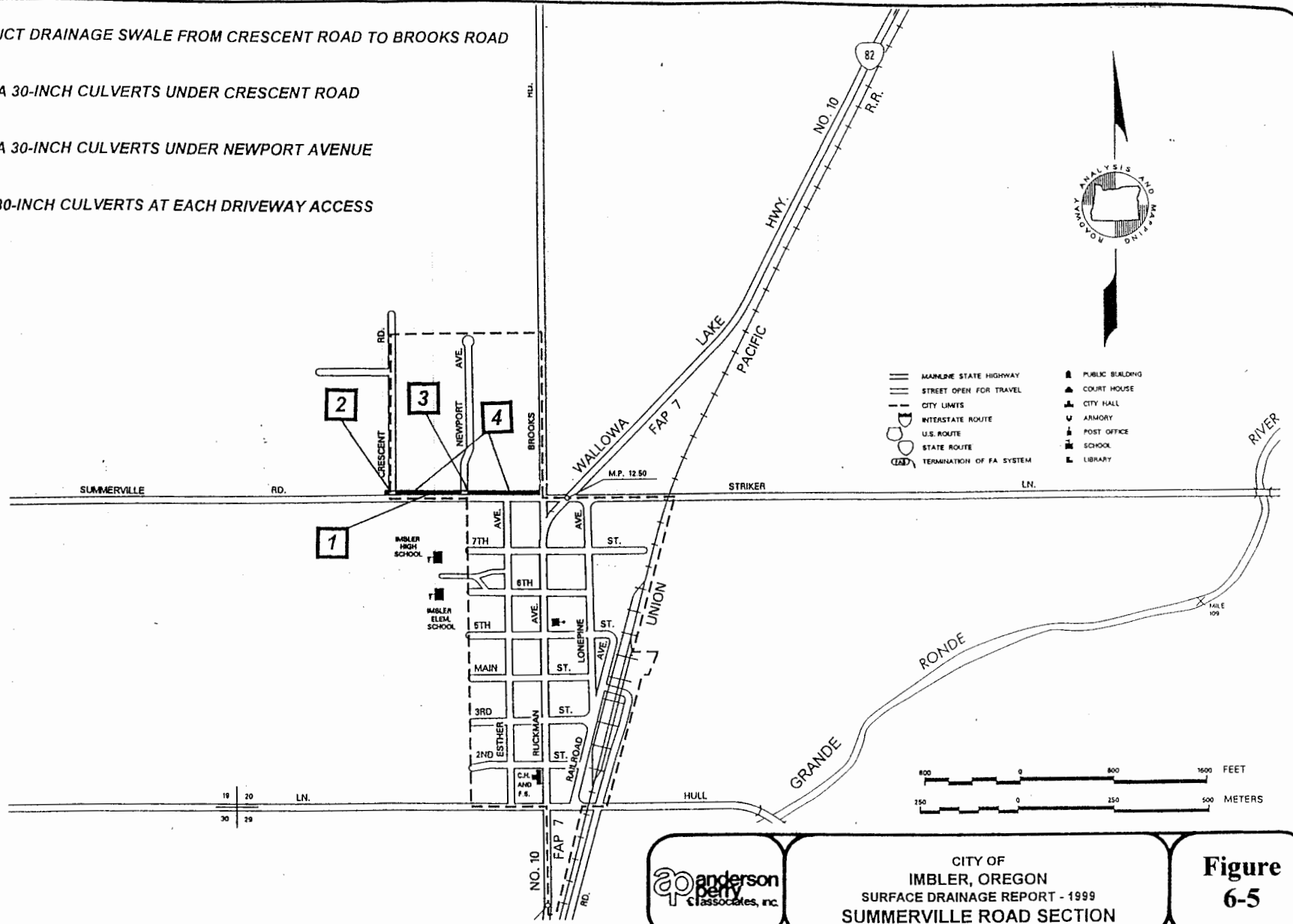
It is proposed to install two 42-inch culverts or a single 4-foot x 6-foot elliptical culvert from the northwest corner of the Summerville Road and Brooks Road to the southeast corner of Summerville Road and Ruckman Road onto the Herbst triangle, as shown in Figure 9. The single barrel culvert would require more cover depth and would need to be field verified for fill clearance under the highway. A second set of two 42-inch culverts is proposed from the southwest corner of Summerville Road and Highway 82 to the southeast corner of Striker Lane and Highway 82. Two 42-inch culverts are proposed under Lone Pine Avenue and 7th Street, as shown in Figure 6-6. All culvert installations would require screening for debris, safety and maintenance needs. Screening may prevent the collection of snow, ice and debris from entering and obstructing the culvert at the inlet. Improvements to the existing drainage swale at the shoulder of the city streets would be made within city right-of-way, with additional drainage easements as needed.

1 CONSTRUCT DRAINAGE SWALE FROM CRESCENT ROAD TO BROOKS ROAD

2 INSTALL A 30-INCH CULVERTS UNDER CRESCENT ROAD

3 INSTALL A 30-INCH CULVERTS UNDER NEWPORT AVENUE

4 INSTALL 30-INCH CULVERTS AT EACH DRIVEWAY ACCESS



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SURFACE DRAINAGE REPORT - 1999
SUMMERVILLE ROAD SECTION

Figure
6-5

One of the Best Management Practices (BMPs) suggested by regulatory agencies is a grass-lined swale with a slope less than six percent. The slope of the natural drainage is approximately one percent. The objective of the swale is to promote lower velocity flows to accomplish infiltration, sedimentation, and scour prevention. The swale would be a minimum of two feet in depth and five feet in width. Backslopes will be approximately 2:1 or flatter. A gradual backslope would provide an opportunity for grass maintenance during drier periods. Grasses planted in the swales should be a mixture that can tolerate water, yet hardy enough to survive dry seasons. These grasses will filter sediments, nutrients, and heavy metals very effectively. Improvements can be completed at a lower cost, due to the simplicity of the system. Advantages of the drainage swale are its low cost and simple maintenance. Swales are easily accessible for maintenance and debris removal. The estimated costs for drainage swales and other improvements are shown below in Table 6-6.

Table 6-6
Striker Lane to Railroad Culvert Improvements

Item	Unit	Qty.	Unit Price	Cost
Mobilization	LS	1	\$3,000.00	\$3,000.00
Temporary Protection and Direction of Traffic/Project Safety	LS	1	1,000.00	1,000.00
Permanent Seeding and Mulching	LS	1	1,000.00	1,000.00
Ditch Excavation	LF	1,500	10.00	15,000.00
42-inch CMP Culvert	LF	300	65.00	19,500.00
State Highway Asphalt Surface Restoration	SY	100	50.00	5,000.00
Surface Restoration (Lone Pine/7th Street)	SY	100	35.00	3,500.00
Type 2 Fence	LF	100	5.00	500.00
Preliminary Estimated Construction Cost 1999 Prices				\$48,500.00
Construction Contingencies, Engineering, Administration, and Legal (35%)				\$16,000.00
Preliminary Estimated Project Cost 1999 Prices				\$64,500.00

Several improvements to existing facilities may be considered with additional evaluations. An existing culvert under Striker Lane will require the outlet to be exposed to match the flow line of the proposed swale. The size of the culvert should be verified as it drains an additional basin. The railroad culvert may require a larger culvert or multiple culverts to drain runoff east of the city. Runoff from the south area of the city may be combining with the runoff from the north.

An additional evaluation of the area just upstream of the railroad culvert will also be necessary. If there is inadequate storage volume for the existing 24-inch culvert to pass the flow, Union Pacific Railroad may need to upgrade the existing culvert under the rail tracks.

Advantages and disadvantages of suggested Striker Lane to railroad culvert improvements are as follows:

Advantages: Striker Lane to the Railroad Culvert:

- Ditch/swale improvements have a low initial cost.
- Water quality is enhanced by filtration in grass-lined ditches.

1 INSTALL TWO 42-INCH CMP CULVERT PIPES UNDER SUMMERVILLE RD. TO TRIANGLE

2 INSTALL TWO 42-INCH CMP CULVERT PIPES UNDER HIGHWAY 82

3 CONSTRUCT DRAINAGE SWALE FROM STRIKER LANE TO LONE PINE AVENUE

4 INSTALL TWO 42-INCH CULVERTS UNDER LONE PINE AVENUE

5 CONSTRUCT DRAINAGE SWALE FROM LONE PINE AVENUE TO 7TH STREET

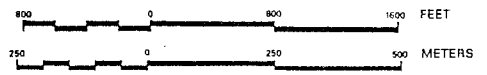
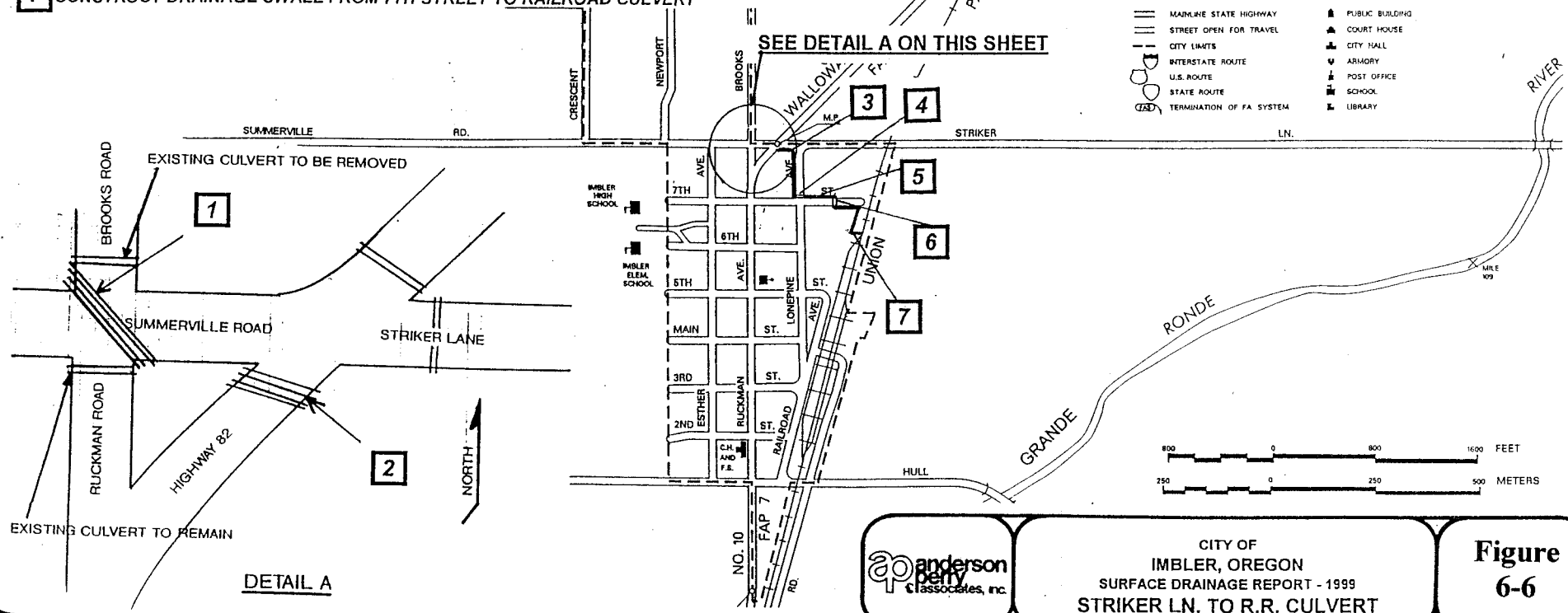
6 INSTALL TWO 42-INCH CULVERTS UNDER 7TH STREET

7 CONSTRUCT DRAINAGE SWALE FROM 7TH STREET TO RAILROAD CULVERT



- ||| MAINLINE STATE HIGHWAY
- ||| STREET OPEN FOR TRAVEL
- CITY LIMITS
- INTERSTATE ROUTE
- U.S. ROUTE
- STATE ROUTE
- TERMINATION OF FA SYSTEM
- ▲ PUBLIC BUILDING
- ▲ COURT HOUSE
- ▲ CITY HALL
- ▲ ARMORY
- ▲ POST OFFICE
- ▲ SCHOOL
- ▲ LIBRARY

SEE DETAIL A ON THIS SHEET



CITY OF
 IMBLER, OREGON
 SURFACE DRAINAGE REPORT - 1999
 STRIKER LN. TO R.R. CULVERT

Figure
6-6

168181

- Ditches/swales provide a means for infiltration.

Disadvantages: Striker Lane to the Railroad Culvert:

- Snow accumulations will need to be monitored for problems.
- Regular maintenance (i.e. silt and debris removal) will be required.
- Snow and ice may freeze in culverts or ditches.
- Ditches/swales can become an “eye sore” without maintenance.

Railroad Culvert to Grande Ronde River

The final project segment of concern is the outlet and path of the collective runoff. This segment stretches approximately one-half mile from the city limits to the Grande Ronde River. This segment is also outside the city limits. However, the water quality of the runoff into the river will be increasingly more regulated in the future. As the collection system for Imbler develops, and new federal regulations become effective, surface water drainage permits may be necessary. It is proposed that the city not make improvements to the existing drainage path beyond the city limits.

The city is not currently affected by backwater flooding at or beyond the railroad. The existing vegetated swale provides infiltration and settlement for runoff. An improved dedicated drainage swale is suggested to the county for this segment to aid the sedimentation process. This segment crosses private property and would require drainage easements before improvement. The landowners have also provided a natural vegetation buffer zone between the agricultural fields and the river. The vegetative zone acts as an additional filter before runoff enters the river. The agricultural practices may be suspended on the drainage path during winter months to prevent soil erosion. As reported by farmers, the drainage swale area has become wet and unproductive for farming the past two years. The farmers affected by the runoff may seek assistance from the Soil and Water Conservation District (SWCD), Natural Resources Conservation Service (NRCS), Union County, and the Department of Environmental Quality (DEQ) in completing improvements in this segment. These agencies are primarily concerned with water quality issues from the drainage basin. Assistance programs may become more prevalent as stringent stormwater regulations go into effect. The Grande Ronde Model Watershed (GRMW) and Governor’s Watershed Enhancement Board (GWEB) are also focused on salmon habitat and water quality. Potentially, the areas near the river could also be considered for improvement projects through these agencies.

The City of Imbler is in the process of selecting a preferred alternative(s) to mitigate the City’s surface water drainage problems.

BICYCLE AND PEDESTRIAN SYSTEM IMPROVEMENTS

The City of Imbler adopted their Bicycle and Pedestrian Plan on November 4, 1996. This plan specifies improvements necessary to mitigate previously identified deficiencies and improve pedestrian and bicycle facilities. The Imbler Bicycle and Pedestrian Plan is included in Appendix C. Recommended bicycle and pedestrian improvements are listed in Table 6-7 and project cost is in 1996 dollars:

**Table 6-7
Recommended Imbler Bicycle and Pedestrian Improvements**

Road Segment	Project Description	Length (miles)	Priority	Cost
Esther Avenue				
Hull Ln to Summerville Rd – Option 1	(2) 12' travel lanes & (2) 6' paved shoulder bikeways	.49	Low	\$46,800
Hull Ln to Summerville Rd – Option 2	(2) 12' travel lanes & (1) 5' sidewalk, without curbs and gutters, separated by (1) 8' parking lane or drainage swale	.49	Low	\$58,500
Summerville Road				
Ruckman Ave to Imbler W.C.L.	(2) 12' travel lanes & (2) 4' paved + 2' gravel shoulder bikeways	.24	Low	\$23,040
5th Street				
Ruckman Ave to Esther Ave	Install (1) 5' sidewalk on south side of street	.045	Low	\$5,400
6th Street				
Ruckman Ave to schools	Install (1) 5' sidewalk on north side of street in conjunction with future drainage system improvements	.061	Low	\$7,200
Brooks Road				
Ruckman Ave to Imbler N.C.L.	(2) 12' travel lanes & (2) 4' paved + 2' gravel shoulder bikeways	.27	Low	\$25,920

Additional Pedestrian System Improvements

The Imbler TAC discussed pedestrian safety on local streets and roads, and determined that an additional crosswalk on Summerville Road would provide a safe crossing for the student population living north of Summerville Road/Striker Lane.

Preferred Alternative: Paint and Sign Crosswalk – Paint crosswalk across Summerville Road near Crescent Road and provide adequate signage for motorist awareness. This project is located in Figure 7-3.

TRANSPORTATION DEMAND MANAGEMENT STRATEGIES

Transportation demand management strategies shift the reliance on one specific mode of travel to other modes, including walking and cycling. Demand management strategies also include ridesharing, telecommuting, or staggering workdays per week or work hours per day in order to spread traffic demand over many hours instead of focusing it into a specific peak time period.

PUBLIC TRANSPORTATION PROJECTS

Public transportation is coordinated by the Union County Transportation Coalition. The Coalition includes Community Connection, New Day Enterprises, and the Center for Human Development (CHD). Clients of these various organizations make up the majority of transit trips, but the public is also served by Community Connection. Shelter from the Storm and Union/Wallowa Veteran's Services are not considered part of the Union County Transportation Coalition, yet if a centralized transit program were developed, with a fixed point system and full-time coordinator to manage the overall program, they would benefit tremendously.

The diverse needs of the transportation disadvantaged make it difficult for each organization to reach their financial goals. As a result, the Coalition strives to consolidate resources in order to accommodate the specific needs of the elderly, disabled, and general public. The Union County Transportation Coalition desires to form one corporate umbrella over all of the non-profit transit services in Union County with a full-time coordinator to manage the entire program. Forming the Union County Transportation Coalition has allowed the three groups to combine their efforts to obtain grant money to purchase vehicles.

Demand for Dial-A-Ride service has increased steadily and is reaching capacity. The Coalition estimates that transit will have to shift from a Dial-A-Ride system to a fixed point system in order to be efficient. A fixed point system has all bus stops "fixed," but the route used by the driver varies depending upon the discretion of the dispatcher and driver. Though this is the Union County Transportation Coalition's primary goal, they estimate they are \$13,000 short of instituting a fixed point system. This type of service requires a centralized scheduling system, and specific locations and travel times. A full-time coordinator would be necessary to manage scheduling and coordinate vehicle maintenance. The coordinator would also be responsible for grant writing and identifying other funding opportunities for project support. Currently, the major funding source for these services is ODOT's Special Transportation Fund, which comes from a 2-cent cigarette tax.

Another goal of the Union County Transportation Coalition is intercity bus service between all jurisdictions in Union County, which would provide total connectivity within Union County. This would expand the service area to include North Powder and Summerville, which do not currently have access to transit service. The Coalition would also like to expand service to include weekends. In order to reduce traffic congestion and reserve capacity on the state highway system, the Union County Transportation Coalition is considering utilizing park and ride lots in conjunction with a fixed point system that would primarily benefit commuters to the Baum Industrial Park.

AIRPORT PROJECTS

The La Grande/Union County Airport Master Plan Update was adopted by Union County in 1998 and identifies a 20-year capital improvement plan for airport expansion. A detailed description of airport improvement projects is listed in the La Grande/Union County Airport Master Plan Update and the Union County TSP.

CHAPTER 7: TRANSPORTATION SYSTEM PLAN AND RECOMMENDATIONS

Elements of the transportation plan include street development standards, access management standards, transportation demand management measures, and modal plans.

STREET DEVELOPMENT STANDARDS

Street development standards are an important component of the TSP because they direct the design of future street construction or re-construction. Therefore, street standards must reflect the kind of street development the City of Imbler wants to see in the future. Table 7-1 shows the current street development standards. During the TSP process, the Imbler TAC revisited these street standards and the recommended standards are shown in Table 7-2.

**Table 7-1
Existing Street Development Standards for the City of Imbler**

	ROW	Surface Width	Base		Leveling Course		Overlay material	Shoulder width	Sidewalk location & width (optional)
			Depth	Aggregate size	Depth	Aggregate size			
Arterials	60'	24'	8"	1.5 – 3"	4"	¾ - 1.5	2" pavement	8'	5'
Collector or minor streets	60'	24'	8"	1.5 – 3"	4"	¾ - 1.5	2" pavement	6'	5'
Marginal access	30'*	20'	8"	1.5 – 3"	4"	¾ - 1.5	2" crushed gravel	6'	None

*Marginal access rights-of-way shall not be less than 10% of street length, and shall be provided with utility easements on each side to provide 50' combined utility easement and right-of-way width.

- ❖ Streets or roads with anticipated commercial or industrial traffic shall have a minimum base depth of 12".
- ❖ All bridges shall have a 30-year minimum life expectancy and shall be constructed to load limit standards approved by the Council.
- ❖ The above standards may be altered if the Council determines that more (or less), extensive standards may be desirable because of soil or topographical conditions, anticipated traffic counts, or continuation of existing street improvements or right-of-way widths warrant such.

City Arterials

City arterial streets are the primary transportation routes within Imbler. Arterials link with major county roads, the state highway system, and other outlying communities. Arterial streets carry the highest traffic volumes.

Figure 7-1 shows the recommended cross section for city arterials in Imbler. Total right-of-way width is 60 feet, with a 24-foot paved surface. The right-of-way provides for two, eight-foot shoulders. There are no designated parking lanes, though the shoulder is sometimes utilized for parking. If designated in the Imbler Bicycle and Pedestrian Plan, sidewalks and bikeways are also provided for in the right-of-way.

City of Imbler Transportation System Plan

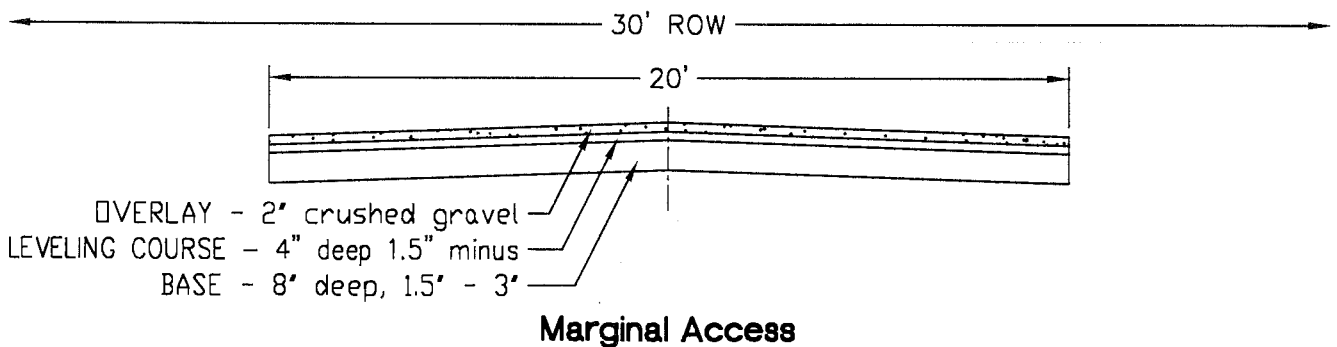
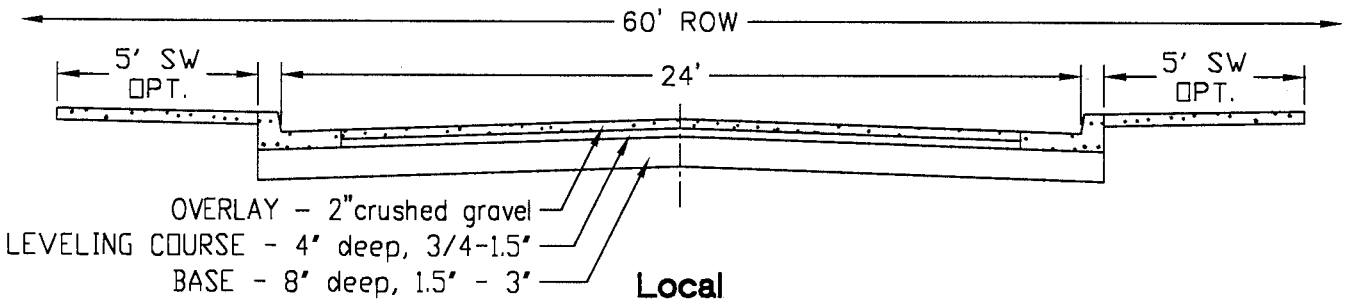
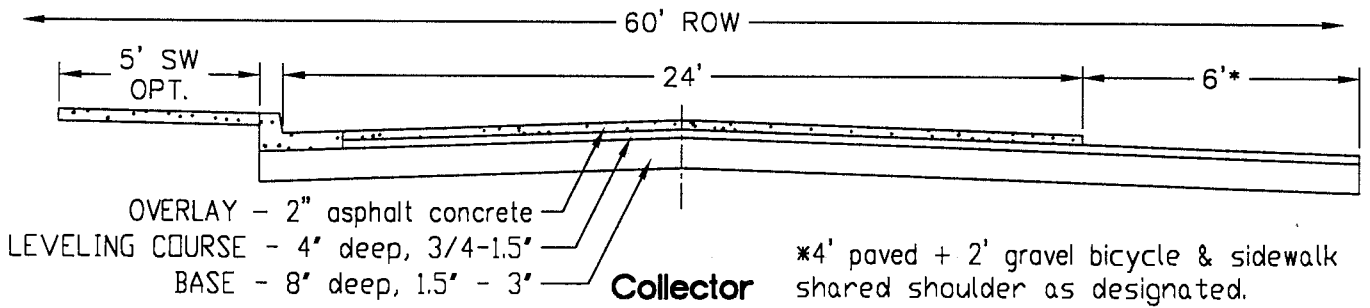
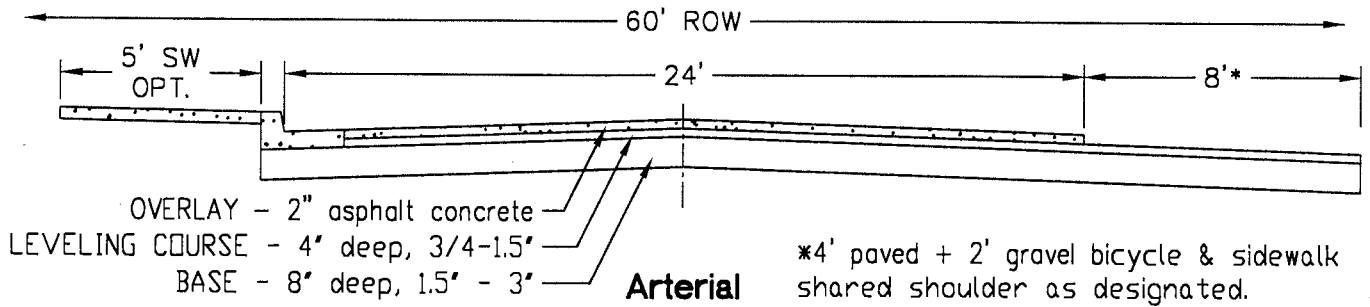


FIGURE 7-1
Recommended Typical Cross Sections

City Collectors

The primary function of collectors is to distribute traffic between local streets and arterial streets, and to access property.

Figure 7-1 shows the recommended cross section for Imbler collector streets. Total right-of-way width is 60 feet, with a 24-foot paved surface. The right-of-way provides for two, eight-foot shoulders. There are no designated parking lanes, but the shoulder is utilized for parking. If designated in the Imbler Bicycle and Pedestrian Plan, sidewalks and bikeways are also provided for in the right-of-way.

City Local Streets

The primary function of local streets is to provide property access. Local streets have the lowest traffic volumes.

Figure 7-1 depicts the recommended cross section for Imbler’s local streets. The total right-of-way width is 60 feet, with a 24-foot paved surface. The standard for local streets does not include the provision for shoulders, but the area beyond the paved surface can be utilized for parking. There are no designated bicycle and pedestrian facilities in the Imbler Bicycle and Pedestrian Plan for local streets.

Bicycle and Pedestrian Facilities

The Imbler Bicycle and Pedestrian Plan designates shared shoulder bikeways or separated bike lanes and sidewalks along selected Imbler streets. Average daily traffic, and in some cases, travel speed determined what type of facility would be added.

**Table 7-2
Recommended Street Development Standards for the City of Imbler**

	ROW	Surface width	Base		Leveling Course		Overlay material	Shoulder width (base + leveling course)	Sidewalk location & width (optional)	Where designated: bicycle & sidewalk shared shoulder
			Depth	Agg. Size	Depth	Agg. size				
Arterial Streets	60'	24'	8"	1.5 – 3"	4"	¾ - 1.5	2" asphalt concrete	8'	5'	4' paved + 2' gravel
Collectors	60'	24'	8"	1.5 – 3"	4"	¾ - 1.5	2" asphalt concrete	6'	5'	4' paved + 2' gravel
Locals	60'	24'	8"	1.5 – 3"	4"	¾ - 1.5	2" asphalt concrete	None	5'	None
Marginal Access	30"*	20'	8"	1.5 – 3"	4"	¾ - 1.5	2" crushed gravel	None	None	None
Alley	16'	16'	Unimproved					None	None	None

*Marginal access rights-of-way shall not be less than 10% of street length, and shall be provided with utility easements on each side to provide a combined utility easement and right-of-way width. Marginal access streets may be permitted for 2 to 5 dwellings, only where local street connectivity is not practical due to topographic constraints or existing development patterns preclude a through route extension.

- Streets or roads with anticipated commercial or industrial traffic shall have a minimum base depth of 12".
- ❖ All bridges shall have a 30-year minimum life expectancy and shall be constructed to load limit standards approved by the Council.

- ❖ The above standards may be altered if the Council determines that more (or less), extensive standards may be desirable because of soil or topographical conditions, anticipated traffic counts, or continuation of existing street improvements or right-of-way widths warrant such.

ACCESS MANAGEMENT

Access management is an important means of transportation system protection. By managing the location, design, and number of access points to a transportation system, the overall system level of service can be maintained. Too many connections to state highways in the form of new driveways and public roads can degrade the function of the road by increasing congestion and causing traffic delays. Too many access points can also create safety problems by increasing the potential for traffic conflicts at intersections or driveways.

The Oregon Department of Transportation has an access management policy for the state highway system to protect the function of Oregon highways. State highways are divided into levels of importance to prioritize improvement needs and define operational objectives. The four levels of importance are: interstate, statewide, regional, and district. The degree of access management coincides with each level of importance. A primary and secondary function is designated for each level of importance, as well as management objectives to guide highway operations. Imbler has one highway, Oregon Highway 82, which is of statewide significance.

Access Management Techniques

The frequency of access points to the state highway system can be managed in the following ways:

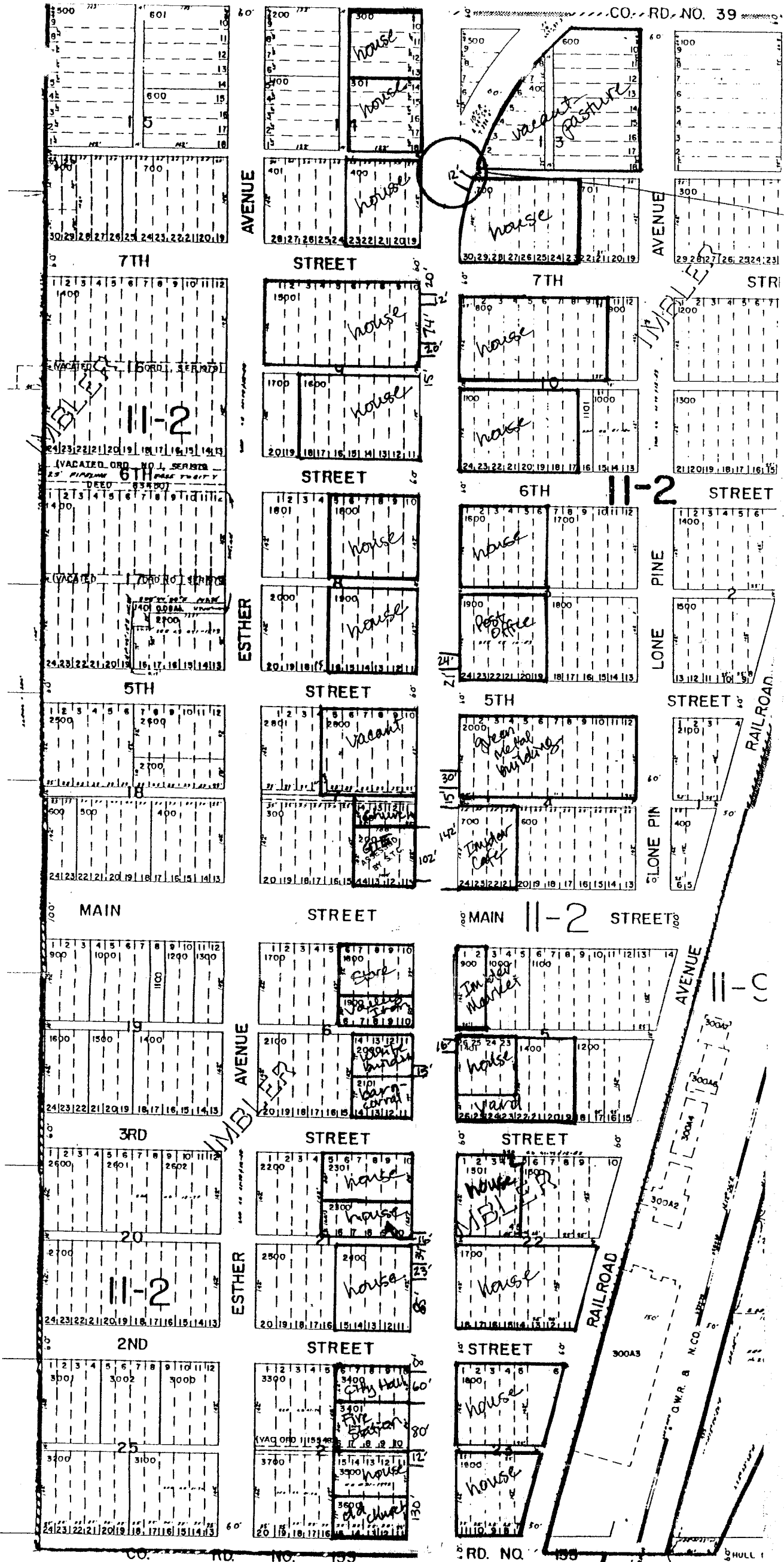
- Restrict the spacing between access points
- Share access points among adjacent properties
- Utilize access points on side streets, not the state system
- Construct frontage roads for the connection of new access points, instead of connecting to the state highway system
- Offset driveways to produce T-intersections so conflicts between driveway traffic and through traffic can be minimized
- Install raised median islands
- Add turn lane refuges

Recommended Access Management Policy

Union County and ODOT have collaborated with the jurisdictions in the county to develop a process for access management in conjunction with the 1991 Oregon Highway Plan. Proposed access to the state highway system is permitted upon review by ODOT, and is authorized by ORS 374.305.

All access points (streets and driveways) to Oregon Highway 82 within Imbler's UGB are mapped and potentially unsafe access points have been identified as Reviewable Access Points on the TSP Access Management Map (Figure 7-2). Regardless of Reviewable Access Point designation, changes in any use generating an additional 100 vehicle trips per day or more, or land use actions such as zone changes or plan amendments in association with proposed state highway connections are also subject to review by the City of Imbler and ODOT, Region 5 to ensure access safety and pursue access alternatives if safety is compromised.

The purpose of such contact is to involve ODOT at the beginning of the application process so that the

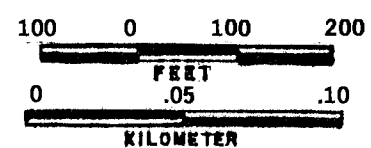


REVIEWABLE ACCESS POINT

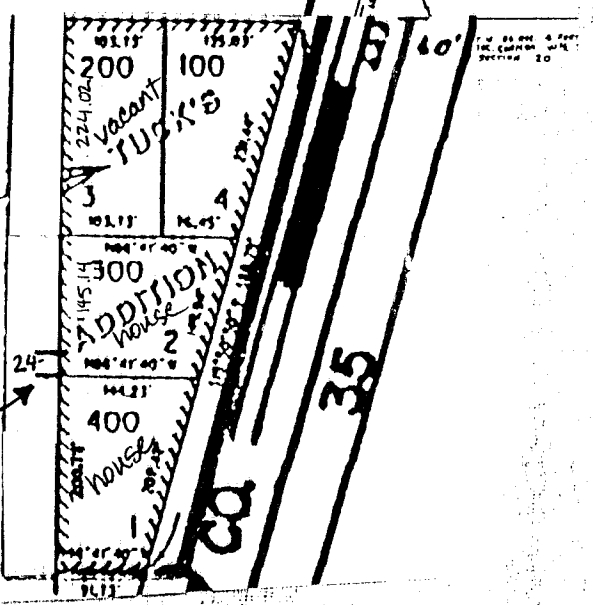
Figure 7-2

TSP Access Management Map

SCALE 1 : 2400



Shared Access



property owner/developer has the benefit of ODOT comments prior to submitting a site plan, conditional use, or tentative plat map. Existing legal access points on Oregon Highway 82, in place at TSP adoption, shall be designated as conforming features.

There are several alternatives when considering Reviewable Access Points - the access onto the state highway is closed and moved to a side street, the access is combined with other accesses within the same block, the access is moved to the center of the block in order not to conflict with intersection traffic, the access conforms to previously listed "Access Management Techniques," or nothing is done and the access is left alone. Land development affecting State Highway 82 will address safety, capacity, functional classification, and level of service.

MODAL PLANS

Imbler modal plans were drafted using data collected from a physical inventory of existing conditions, previous plans, Technical Advisory Committee and public input, forecasts, and community goals. The modal plans address transportation needs over the next 20 years, taking into account projected traffic volume growth. The specifics of recommended transportation improvement project may change slightly depending on the timing and location of projected growth in Imbler.

Street System Plan

Recommended improvements to the transportation system, including project priority and estimated cost, are listed in Tables 7-3 and 7-4. Table 7-3 lists state identified transportation system recommendations. Transportation system improvement projects identified by Imbler were refined by the Imbler TAC and are listed in Table 7-4. The "Imbler Section" project is listed in Table 7-3, as well as Table 7-4 (as project #2c) because both state and local officials identified this project as a high priority during the TSP process. Preferred improvement alternatives for Imbler's stormwater/surface water drainage problems have not yet been selected by the Imbler City Council, therefore are not listed in individual modal plans. Figure 7-3 shows project location for locally identified projects.

**Table 7-3
State Identified Transportation System Recommendations**

State Identified Projects	Priority or Year	Estimated Cost
2002 STIP Project Recommendations (preliminary)		
Island City – Imbler Preservation Project	2002	\$375,000
Imbler Section – Install sidewalks, bulb-outs, stormwater drainage improvements, rebase and repave roadway, relocate utilities	Low	\$1,500,000
Oregon Highway 82 Corridor Plan Project Recommendations		
Grade Crossing Protection Program	Low	No Estimate
Railroad Track Improvement Program, La Grande to Elgin	Low	\$1,200,000

**Table 7-4
Locally Identified Transportation System Recommendations**

Locally Identified Projects	Priority	Estimated Cost
(1) Summerville Road east of Crescent Road – Install Crosswalk/Signs	High	\$1,000
(2a) Highway 82 from 6 th Street to 2 nd Street – Alternative A	High	\$35,000
(2b) Highway 82 from 7 th Street to Hull Lane – Alternative B	High	\$45,000
(2c) Highway 82 within Imbler's UGB – Alternative C	High	\$1,500,000

Bicycle and Pedestrian System Plan

Table 7-5 lists recommended bicycle and pedestrian projects from the Imbler Bicycle and Pedestrian Plan, which was adopted in 1996. Bicycle and pedestrian projects are identified in Figure 7-3.

**Table 7-5
Recommended Imbler Bicycle and Pedestrian Improvements**

Road Segment	Project Description	Length (miles)	Priority	Cost
Esther Avenue				
Hull Ln to Summerville Rd – Option 1	(2) 12' travel lanes & (2) 6' paved shoulder bikeways	.49	Low	\$46,800
Hull Ln to Summerville Rd – Option 2	(2) 12' travel lanes & (1) 5' sidewalk, without curbs and gutters, separated by (1) 8' parking lane or drainage swale	.49	Low	\$58,500
Summerville Road				
Ruckman Ave to Imbler W.C.L.	(2) 12' travel lanes & (2) 4' paved + 2' gravel shoulder bikeways	.24	Low	\$23,040
5th Street				
Ruckman Ave to Esther Ave	Install (1) 5' sidewalk on south side of street	.045	Low	\$5,400
6th Street				
Ruckman Ave to schools	Install (1) 5' sidewalk on north side of street in conjunction with future drainage system improvements	.061	Low	\$7,200
Brooks Road				
Ruckman Ave to Imbler N.C.L.	(2) 12' travel lanes & (2) 4' paved + 2' gravel shoulder bikeways	.27	Low	\$25,920

Transportation Demand Management Plan

Transportation demand management promotes efficient utilization of the existing transportation system rather than widening or constructing new roadways. Some successful techniques include ridesharing, telecommuting, encouraging the use of other modes, and staggering work schedules. Many of these strategies work best when focused on high density employment areas.

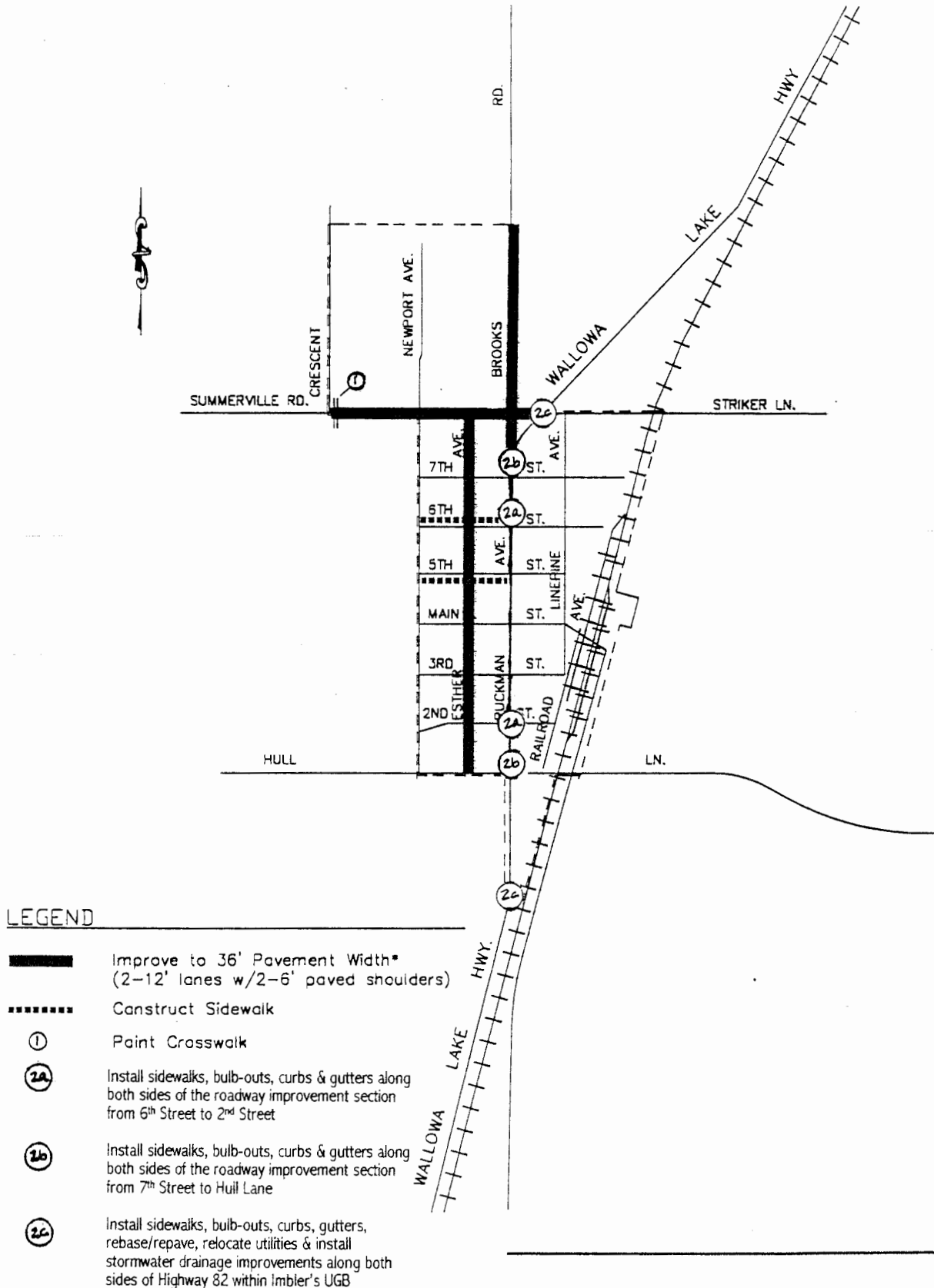
Encouraging other modes, such as bicycle and pedestrian facilities, could reduce some traffic congestion and such facilities are being recommended in all local bicycle and pedestrian plans. Telecommuting and staggered work schedules provide for employee work schedule flexibility, less onsite parking demand, and reduced peak hour traffic flows.

Community Connection is pursuing the implementation of intercity bus service, and is currently developing a 5-year plan for the identification of transit needs and funding sources. Intercity bus service would incorporate the area industrial parks, outlying communities, and may reduce congestion.







No costs have been estimated for the transportation demand management plan.

Public Transportation Plan

Wallowa Valley Stage Line, Blue Mountain Cab Company, Greyhound Bus Lines, and Mid-Columbia Bus Company offer a variety of privately owned public transportation services for Union County and



LEGEND

-  Improve to 36' Pavement Width* (2-12' lanes w/2-6' paved shoulders)
-  Construct Sidewalk
-  Paint Crosswalk
-  Install sidewalks, bulb-outs, curbs & gutters along both sides of the roadway improvement section from 6th Street to 2nd Street
-  Install sidewalks, bulb-outs, curbs & gutters along both sides of the roadway improvement section from 7th Street to Hull Lane
-  Install sidewalks, bulb-outs, curbs, gutters, rebase/repave, relocate utilities & install stormwater drainage improvements along both sides of Highway 82 within Imbler's UGB

*See Appendix C for Esther Avenue alternative

FIGURE 7-3
Street, Bicycle, and Pedestrian System Improvements

the City of Imbler. Public transportation is also provided through the Union County Transportation Coalition. The Coalition includes Community Connection, New Day Enterprises, and the Center for Human Development (CHD). Clients of these various organizations make up the majority of transit trips, but the general public is also served by Community Connection. Shelter from the Storm and Union/Wallowa Veteran's Services provide client transport as well.

Wallowa Valley Stage Line, Blue Mountain Cab Company, Greyhound Bus Lines, and Mid-Columbia Bus Company have no plans for service expansion.

The Union County Transportation Coalition is working toward the implementation of a fixed point system in the La Grande area, and eventually instituting intercity bus service connecting Union County communities and linking with Baker and Wallowa Counties. The Coalition is currently formulating a 5-year plan that identifies countywide transit needs and funding opportunities to meet those needs.

Fixed point bus service would include connecting the court system, Eastern Oregon University, and mental and public health services with Max Square, the downtown intermodal transportation hub, and with the senior center and businesses along Island Avenue (Oregon Highway 82) in La Grande. Fixed point bus service would ultimately connect with outlying communities, including Imbler, and would provide increased mobility within the Union County community. Intercity transit service could also reserve capacity on the state highway system by providing alternatives to auto travel.

Rail Transportation Plan

There is local interest in restoring AMTRAK service to La Grande, and ODOT's Rail Section is currently pursuing restoration at this time. As passenger rail develops in other parts of Oregon, an extension of this service to the east may be considered within the 20-year planning period. According to the ODOT Rail Section, there is a tentative proposal to implement a fleet of small, efficient trains for express service in the Willamette Valley within the next 20 years. This would serve as a test case to gauge support and ridership, and if successful, may be extended to the eastern region of the state.

In 1994, the Idaho Northern and Pacific petitioned the Surface Transportation Board to abandon roughly 61 miles of track between Elgin and Joseph, which lies mostly in Wallowa County. This abandonment petition was approved March 12, 1997 by the Surface Transportation Board. The Oregon Highway 82 Corridor Plan identifies the acquisition of the INP railroad right-of-way to be used as a multi-use path between Elgin and Joseph as a potential improvement project.

Discussion between Union County and Wallowa County is ongoing. Additionally, the Oregon Parks and Recreation Department is pursuing a grant application for Statewide Transportation Enhancement (TEA-21) funds through the Oregon Department of Transportation for the purchase of the abandoned rail corridor between Elgin and Joseph. The Union County Board of Commissioners is in support of preserving the abandoned Idaho Northern and Pacific railroad right-of-way for a multi-use path between Elgin and Joseph.

Air Transportation Plan

The La Grande/Union County Airport Master Plan Update was adopted by Union County in 1998 and identifies a 20-year capital improvement plan for airport expansion. A detailed description of airport improvement projects is listed in the La Grande/Union County Airport Master Plan Update and the Union County TSP.

Pipeline Transportation Plan

The two major pipelines that traverse Union County are the Chevron and Northwest Natural Gas Pipelines. The pipelines are projected to provide adequate capacity over the next 20 years.

Water Transportation Plan

The City of Imbler has no navigable waterways, therefore Imbler has no waterborne transportation services.

TRANSPORTATION SYSTEM PLAN IMPLEMENTATION PROGRAM

The implementation program includes a 20-year TSP Capital Improvement Program, which identifies project priorities for the next 20 years. High priority projects are those scheduled to be undertaken in the next 5 years, medium priority projects are those scheduled to be undertaken in the next 5 to 10 years, and low priority projects are those scheduled to be undertaken between the next 10 to 20 years. This Capital Improvement Program shall be updated yearly by resolution, if determined necessary by the Imbler City Council. Table 7-6 includes the Capital Improvement Program, project priority, and estimated project cost. These projects originate from several sources including the STIP, the Oregon Highway 82 Corridor Plan, the Imbler Bicycle and Pedestrian Plan, and locally identified TSP projects. Bicycle and pedestrian facilities are listed in 1996 dollars. Preferred improvement alternatives for Imbler’s stormwater/surface water drainage problems have not yet been selected by the Imbler City Council, therefore are not listed in the TSP Capital Improvement Program. The timing of these projects may change based on staff and financial resources.

**Table 7-6
TSP Capital Improvement Program**

Project	Estimated Cost
High Priority	
Island City – Imbler Preservation Project	\$375,000
Ruckman Avenue – Install Sidewalks, Curbs, Gutters, Bulb-outs, Stormwater Drainage Improvements, Rebase/Repave Roadway, Relocate Utilities on Oregon Highway 82	Alt. A = \$35,000 Alt. B = \$45,000
Paint and Sign New Crosswalk – Summerville Road	\$1,000
Low Priority	
Grade Crossing Protection Program	No Estimate
Railroad Track Improvement Program, La Grande to Elgin	\$1,200,000
Imbler Section – Install Sidewalks, Curbs, Gutters, Bulb-outs, Stormwater Drainage Improvements, Rebase/Repave Roadway, Relocate Utilities on Oregon Highway 82	Alt. C = \$1,500,000
Esther Avenue – Hull Lane to Summerville Road*	Option 1 = \$46,800 Option 2 = \$58,500
Summerville Road – Ruckman Avenue to West City Limit*	\$23,040
5 th Street – Ruckman Avenue to Esther Avenue*	\$5,400
6 th Street – Ruckman Avenue to schools*	\$7,200
Brooks Avenue – Ruckman Avenue to Imbler North City Limit*	\$25,920

*Imbler Bicycle and Pedestrian Plan

CHAPTER 8: FUNDING OPTIONS

The Transportation Planning Rule, OAR 660-012-0040 states under "Transportation Financing Program" that TSPs for jurisdictions within an Urban Growth Boundary containing a population greater than 2,500 people shall include a transportation financing program. Imbler's population of 310 people precludes a detailed TSP transportation financing program. This TSP will, however, evaluate potential funding and financing sources available for identified transportation improvement projects.

HISTORICAL STREET IMPROVEMENT FUNDING SOURCES

In the State of Oregon, transportation improvements are coordinated among state, county, and city jurisdictions in order to benefit the overall transportation system. Because of this relationship, project costs are frequently shared.

Table 8-1 shows the distribution of road revenues by jurisdiction level in Oregon. This analysis was performed in 1991, and continues to reflect the current funding allocation revenue structure.

Table 8-1
Road Revenue Allocation by Jurisdiction Level

Revenue Source	Jurisdiction Level			Statewide Total
	State	County	City	
State Highway Fund	57%	38%	41%	49%
Local	0%	22%	55%	17%
Federal Road	34%	40%	4%	30%
Other	9%	0%	0%	4%

Source: ODOT 1993 Oregon Road Finance Study

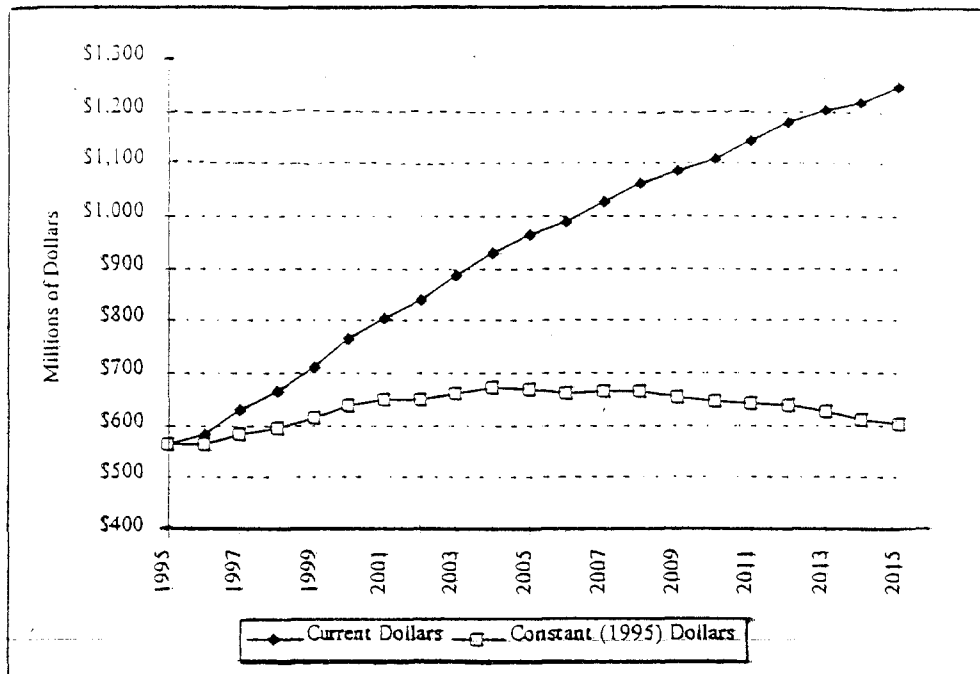
Across Oregon, the State Highway Fund comprises 49% of road revenues and becomes a significant source of funding at all levels of government. Sources of revenue for the fund include gas taxes, vehicle registration fees, and weight/mile taxes. Federal road sources generate another 30% of road revenues, and are comprised of federal highway funds and federal timber revenues. The remainder of road revenues are generated at the local level and are comprised of property taxes, Local Improvement Districts (LIDs), bonds, impact fees, system user taxes, general funds, and other sources.

In Oregon, the state produces 94% of its highway revenues from user fees, which is a much higher percentage than the average 78% for all other states. These highway revenues are generated from vehicle registration fees, weight/mile taxes, and fuel taxes. Theoretically, this is an equitable fee system because it generates the highest revenues from those creating the highest system maintenance needs. Oregon has not tied this fee system to inflation; therefore, the fuel tax is a fixed 24 cents per gallon.

Transportation Revenue Outlook

In a Financial Assumptions document prepared by ODOT in March 1995, some assumptions are recommended for consideration in the preparation of Transportation System Plans. The document projects revenues from the State Highway Fund through the year 2018. These estimates assume (1) the fuel and weight/mile tax will increase one cent per gallon per year, with an additional one cent per gallon every fourth year; (2) TPR goals are met; and (3) that inflation occurs at an average annual rate of 3.7%. Figure 8-1 shows projected State Highway Fund revenues to the year 2018. Both current and adjusted dollar amounts are shown. Revenues are projected to increase faster than inflation in the first 10 years, but slow to a rate less than inflation, and decline slightly, in the last 10 years.

FIGURE 3-1
STATE HIGHWAY FUND



Source: ODOT Financial Assumptions.

The State Highway Fund will remain a significant source of funding for Imbler over the next 20 years, however due to a projected reduction in State Highway Fund revenues, it is recommended that Imbler reduce reliance on this funding source.

REVENUE SOURCES

Road revenues have decreased, along with USFS timber receipts. Additionally, property tax limitations (Measures 5 and 50) have further reduced revenues for road maintenance and improvements. Over the next 20 years, Imbler will need to pursue other transportation funding sources. The following overview provides several Imbler funding options.

Property Taxes

Property taxes can be a local revenue source controlled by local decision makers because they can be relatively more stable than income or sales taxes.

Property taxes can be assessed in three ways – tax base levies, serial levies, and bond levies. The most common assessment method is through tax base levies, which don’t expire and currently in Oregon can be increased by 3% per year. Serial levies place a limit on the levied amount and limit the time they can be imposed. Bond levies are project specific and have time limits based on the local jurisdiction’s debt load.

Ballot Measure 5, passed in the early 1990s, limits the property tax rate for purposes other than payment of certain voter-approved general obligation debt. The tax rate for all local taxing authorities is limited to \$15 per \$1,000 of assessed valuation. 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.

Measures 47 and 50 were passed in November 1996, and 1997, respectively. They reduce and limit property taxes while also limiting local revenues. The measures limited 1997-98 property taxes to the lesser of either 1995-96 taxes minus 10%, or 1994-95 taxes. It also limits future annual property tax increases to 3%, with some exceptions. The lost revenue may be replaced only with state income tax, unless voters approve replacement fees or charges. Tax levy approvals require 50% voter participation in certain elections. Measure 50 also requires that cities and counties prioritize funding for education and public safety, and obtain voter approval to raise fees for services, if increased fee revenue is a substitute for property tax support.

System Development Charges

System development charges, or SDCs, are a method of generating revenue only if a community has specific infrastructure plans in place according to state guidelines. SDCs allocate infrastructure system development costs to the portion of property development that creates the increased system need.

Cities and counties have the legal authority to assess property owners/developers SDCs based on the projected demand from their development. SDCs usually target improvements to infrastructure systems, such as transportation, sewer, and water systems.

Imbler could utilize SDCs to generate money for transportation system maintenance and improvement. The fee is collected upon building permit issuance. In the case of transportation, SDCs would be calculated based on new development trip generation. This may not prove to be a significant revenue source, because the development rate in Imbler is slow, and not projected to increase to a level that make SDCs a pragmatic funding source.

State Gas Taxes

Fuel taxes are allocated by the state to all cities and counties for road system maintenance and construction. The fuel tax, along with vehicle registration fees and weight/mile taxes, are allocated back to cities and counties based on population and other factors determined at the state level. This is a significant source of revenue for Imbler.

Local Gas Taxes

The Oregon Constitution permits incorporated jurisdictions and counties to levy an additional fuel tax beyond the state fuel tax. The locally levied fuel tax must be used only for road system construction or improvements within the jurisdiction. Currently, only a handful of cities and counties use this method, including Woodburn, The Dalles, Washington County, and Multnomah County.

Vehicle Registration Fees

Oregon vehicle registration fees are distributed for city and county road funding based on a state level formula. Oregon counties do have state authority to impose local vehicle registration fees. This fee would be assessed to passenger cars on a biannual basis. This method is not currently being used in Oregon and would require coordination among other incorporated jurisdictions, Union County and Imbler.

Local Improvement Districts

Oregon Revised Statutes do allow local governments to form Local Improvement Districts (LIDs) to construct public improvements. LIDs are commonly used to construct projects in specific areas, such as a new bikeway, or a neighborhood street improvement project. State statutes allow for district formation by either the local government or property owners. An ordinance must be in place stipulating the procedure for district formation and participant payback. Costs can be allocated based on property

frontage or other methods, such as trip generation. Participants' costs are considered an assessment against the property, which is similar to a tax lien. Participants can generally choose to pay the assessment in cash or apply for financing through their local jurisdiction. Since Ballot Measure 5, counties often fund LIDs by selling special assessment bonds.

Grants and Loans

Most grants and loans are aimed at furthering economic development. They are typically used in developing areas that lack specific infrastructure, such as sewer, water, and adequate transportation. Many grant and loan programs require a local match and should not be counted on as a stable revenue source because there is no guarantee of project selection. These programs include Immediate Opportunity Grants, Oregon Special Public Works Funds, Public Transportation Funds, and Bicycle and Pedestrian Programs, which are described below.

Immediate Opportunity Grant Program

The Oregon Economic Development Department (OEDD) and the Oregon Department of Transportation jointly administer the Immediate Opportunity Grant Program. The program purpose is to provide financial opportunity for local and regional economic development efforts. The program receives \$5,000,000 from Oregon fuel tax revenues and individual maximum grants are \$500,000. The most significant components in determining whether a grant request will be funded are the potential improvement of public roads, the inclusion of a regionally significant economic development project, the creation of primary employment, and the presence of a local match.

Oregon Special Public Works Fund

This fund is derived from the Oregon Lottery and was created in 1995 as a means of distributing lottery money for economic development projects. Grants and loans are available to fund infrastructure construction necessary to support developments creating permanent jobs or retaining jobs. Infrastructure in support of developments wishing to locate, expand, or remain in Oregon are eligible for this program. These funds can be used for new construction or the expansion and rehabilitation of public improvements, such as sewage treatment plants, water works, and public transportation facilities.

Even though both loans and grants are available, the program emphasizes loans in order to ensure that money returns to the program for local project reinvestment. The maximum loan amount per project is \$11,000,000. The loan term cannot exceed the life of the project, or 25 years, whichever is less. The maximum grant per project is \$500,000 and may not exceed 85% of total project cost.

Public Transportation Funds

There are many grants and loans available for public transportation funding; some include Special Transportation Funds (STF), Section 5311 funds, Community Transportation Program funds, and Special Transportation District funds. All of these programs require local matches from the participating agencies.

Bicycle and Pedestrian Program Funds

Oregon's Bicycle and Pedestrian Program have grants for bicycle and pedestrian system improvements. These funds cannot be used for the construction or improvement of purely recreational facilities, but must be spent on projects that provide alternatives to the automobile. Local matches are required.

ODOT Funding Options

The Statewide Transportation Improvement Program (STIP) is administered by ODOT and prioritizes transportation projects throughout the state that would enhance the statewide transportation system. Projects are identified over a 3-year period and updated yearly. ODOT coordinates projects with local jurisdictions and verifies that the STIP is consistent with other plans including, corridor plans, TSPs, ODOT modal plans, and ISTEA planning requirements. Likewise, the Imbler TSP provides ODOT with a 20-year local transportation improvement projects estimation.

ODOT has stipulated that improvement projects not on the state highway system may be eligible for state funding if the project would reserve capacity on the state system by reducing congestion and preserving safety. ISTEA made this possible by allowing for the use of federal and state dollars outside of highway corridors. This may be a viable option for Imbler.

FINANCING TOOLS

Financing tools are an opportunity for local governments to pay for projects over time. These are different than the previously mentioned funding opportunities because here financing means *accruing money through debt obligation*. The previously mentioned funding opportunities are *the actual generation of dollars* for projects.

There are many types of financing options available to Imbler. These should not be viewed as a source of income, however, only as a method of shifting funding over time. Using debt to finance improvements depends upon the local government's ability to pay for debt service, the impact of the debt load, and the local government's credit rating. Debt financing is a way to shift the improvement cost burden to the people using the transportation system, and spreading it over the life of the transportation system.

General Obligation Bonds

General obligation bonds (GO bonds) are voter-approved and are the least expensive borrowing mechanism on the part of the local government. These bonds are typically supported by property tax levies that are specifically approved to retire debt, and do not expire until the debt is paid. The property tax levy is spread throughout the taxing district based on assessed valuation. These types of bonds are appropriate for public improvements, such as the transportation system, that benefit the entire community.

GO bonds are not subject to the limitations set by Ballot Measures 5 and 50 since they are issued subsequent to voter approval.

Limited Tax Bonds

Limited tax bonds are similar to general obligation bonds because they are an obligation on the part of the local government. This obligation is limited by current revenue sources and does not require voter approval. Since these are not issued pursuant to the taxing power of a local government, there is a higher borrowing cost than general obligation bonds. Because these bonds are not voter approved, Ballot Measure 5 and 50 limitations apply.

Bancroft Bonds

State law allows for local governments to issue Bancroft bonds. These bonds would pledge Imbler's faith and credit. They are essentially general obligation bonds that are paid with assessments. Historically, these bonds did not require voter approval, yet provided the city with the ability to pledge its faith and credit to obtain a lower borrowing cost. Since they are not voter approved, the Ballot

Measure 5 and 50 limitations apply to the taxes levied to pay debt service. Bancroft bonds have generally not been used since 1991 and the passage of Ballot Measure 5.

CHAPTER 9: RECOMMENDED POLICY AND ORDINANCE AMENDMENTS

IMPLEMENTATION PLAN

Transportation System Plan implementation includes updating street development standards, utilizing access management guidelines, and amending the Imbler Land Use Plan, Zoning Ordinance, and Partition & Subdivision Ordinance. This ensures implementation at the local level through coordinated and consistent development review, allows Imbler to address emerging transportation issues, and satisfies the requirements of the Transportation Planning Rule (TPR).

Table 9-1 shows TPR requirements for land use regulations and whether they are currently addressed in Imbler’s Land Use Plan and Zoning, Partition & Subdivision Ordinances. Some elements are partially addressed and some are not addressed at all. Upon adoption of the Transportation System Plan, all the required elements will be addressed in Imbler’s code language.

**Table 9-1
Required Code Elements of the Transportation Planning Rule**

TPR Requirements	Addressed in Code Language	Partially Addressed in Code Language	Not Addressed in Code Language
Amend land use regulations to reflect and implement the TSP – including road development standards		X	
Identify which transportation services and facilities will be allowed outright and which will be conditionally allowed			X
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:		X	
Access management and control			X
Protection of public use airport			X
A process for coordinated review of land use actions with ODOT			X
A process to apply conditions to development approvals	X		
Regulations to provide notice to public agencies		X	
Land use applications that require public hearings	X		
Subdivision and partition applications	X		
Other applications that affect private access to roads	X		
Regulations ensuring that amendments to land use designations and densities are consistent with the function, capacity, and facility levels of service identified in the TSP.		X	

The Imbler Bicycle and Pedestrian Plan was adopted on November 4, 1996 and was found to be in compliance with the TPR for bicycle and pedestrian facilities. Therefore, the proposed amendments in this chapter address other requirements of the TPR. The La Grande/Union County Airport Master Plan Update addresses the required elements of the TPR for public use airports. Policy and ordinance amendments are recommended for the Imbler Land Use Plan, the Imbler Zoning Ordinance, and the Imbler Partition and Subdivision Ordinance.

To comply with ORS 197.015 Statewide Planning Goal 12: Transportation, and OAR Chapter 660, Division 12, The Transportation Planning Rule (as amended), adoption of the final Imbler Transportation System Plan must take place following public review and comment on the draft TSP.

Proposed language is written in bold format while language proposed for deletion is stricken through.

Imbler Land Use Plan

LAND USE PLANNING GOAL

Policies:

1. As new data becomes available it will be incorporated into the plan through future updates of the plan.
2. The plan will be coordinated with the Union County Land Use Plan and **through** other state and federal agencies that may have an effect upon, or be affected by local decisions.
3. That as a condition of making plan changes, it will be determined that community attitudes and/or physical, social, economic, or environmental changes have occurred in the area or related areas since plan adoption and that a public need supports the change, or that the original plan was incorrect.
4. That in considering plan revisions, alternative sites for the proposed uses will be considered, and it will be determined that the area proposed to be changed compares favorably with other areas which might be available for the uses proposed.
5. That major plan changes requiring plan reprinting will follow a process similar to that utilized in plan preparation, and that such changes will not be made more frequently than two year intervals except that the public may petition for review and revision at more frequent intervals.
6. That minor plan changes such as corrections or boundary line adjustments and realignments will be made by the City Council and utilize a public hearing process.
7. **Land use decisions will consider impacts on existing or planned transportation facilities.**
8. **Development proposals, plan amendments, or zone changes shall conform with the adopted Transportation System Plan.**

Policy Recommendations:

1. New supportive data will be incorporated at the time of update.
2. Imbler's Joint Management Agreement with Union County will be revised if the need arises. See Appendix B for a copy of the agreement.
3. Imbler will submit amendments and updates to the land use plan for Union County ~~Planning Commission and Union County Court~~ review.
4. Findings made in the course of land use planning decisions will be related to specific plan policies or factual information, and that such findings be documented.
5. That an official copy of the plan be filed with the City Recorder and County Clerk, and similar copies be available for review in the City Hall and Union County Planning Office.

PUBLIC FACILITIES AND SERVICES GOAL

Policies:

1. That improvements or development of city facilities and services be guided by the Capital Improvement Program **and the Transportation System Plan**, but that enough flexibility be allowed to move projects to a higher priority if funding from outside sources become available.
2. Imbler will continue to support Department of Environmental Quality standards for subsurface sewage disposal systems, thereby retaining water quality and reducing the possibility of development of a ~~community water~~ or sewer system to protect public health.

3. Imbler will continue to cooperate with the Imbler Rural Fire Protection District, helping to insure the best possible fire protection to the district patrons.
4. Imbler will continue to cooperate in Union County's Solid Waste Management Plan.
5. Input from fire protection and school district representatives will be solicited when planning decisions are made that will impact those facilities and services.

Policy Recommendations:

1. Imbler will work closely with DEQ to insure ground water quality is maintained, thereby reducing the possibility for development of a public ~~water or~~ sewer system.
2. Development and improvement of city facilities and services will be guided by the Capital Improvement Program **and Transportation System Plan**. ~~This program~~ **The Capital Improvement Program** will be updated annually.
3. Imbler will cooperate with Union County, Special Districts, state and federal agencies in providing public services and facilities at the lowest possible cost to the citizens of Imbler.
4. Imbler will give written notice to the Imbler School District and Rural Fire Protection District at least 10 days before any public hearing on zoning and plan amendments.

TRANSPORTATION GOAL

Policies:

1. **The Transportation System Plan is an element of the Imbler Land Use Plan and identifies the general location of transportation improvements.**
2. ~~4-~~ Imbler will continue to support development of all types of economical transportation for local citizens, **including a network of streets, bikeways, sidewalks, and safe street crossings to promote safe and convenient bicycle and pedestrian circulation within the community, as set forth in the Imbler Bicycle and Pedestrian Plan.**
3. ~~2-~~ A priority list, **as a part of the TSP**, will guide road improvements and developments.
4. ~~3-~~ Road or street right-of-ways will not generally be vacated, but **the corridors will be considered for other possible public uses, such as accessways, paths, or trails.**
5. **Imbler shall protect the function of existing and planned roadways or roadway corridors as identified in the Transportation System Plan through the application of appropriate access control measures and land use regulations.**
6. **All development proposals, plan amendments, zone changes, and transportation facilities shall conform with the adopted Transportation System Plan street development standards.**
7. **Imbler shall coordinate with the Oregon Department of Transportation to implement the highway improvements listed in the Statewide Transportation Improvement Program (STIP) that are consistent with the Imbler Transportation System Plan and Land Use Plan.**

Policy Recommendations:

1. The Capital Improvement Program and **Transportation System Plan** will prioritize and guide transportation improvements and developments.
2. Imbler will support programs to improve conditions for the transportation disadvantaged.
3. Imbler will cooperate ~~with other~~ **and notify all appropriate** local, state, and federal agencies ~~to help~~ **and transportation interest groups when an application potentially impacts a transportation facility. Transportation interest groups must request notice in writing and may be subject to a fee. Notification will help to identify agency standards and provide an efficient and economical transportation system.**

ENERGY CONSERVATION GOAL

Policies:

1. Developments with high demand for transportation and utilities will be located along major transportation and utility routes **while incorporating access management standards set forth in the Transportation System Plan.**
2. Use of alternate energy sources will be encouraged.
3. Imbler will support national, state and local energy conservation measures.

Policy Recommendations:

1. The zoning ordinance map **and standards in the Transportation System Plan** will be used to locate high transportation demand developments near transportation routes.
2. Imbler will cooperate with Union County, other local, state and federal agencies in promoting alternate energy sources and energy conservation programs.

Imbler Zoning Ordinance

Section 7: General Provisions

1. Access. Every lot shall abut a street, other than an alley, for at least 25 feet, except in the “R” zone a lot may abut upon a private easement for a width of at least 25 feet, provided that the City Council grants approval upon making a finding that the private easement is of adequate width, alignment, grade and restricted length to afford the same degree of public safety as a public street and that unusual circumstances make extension of the public street system impractical.

Existing legal access points (streets and driveways) on Oregon Highway 82, in place at TSP adoption shall be designated as conforming features. The identification of Reviewable Access Points indicates an opportunity for ODOT review prior to Imbler’s final decision on the land use application. For Reviewable Access Point designation, property use changes generating an additional 100 vehicles per day or more, or zone changes/plan amendments accessing Highway 82, the developer/owner shall, prior to making city application, notify and coordinate with the City of Imbler and the ODOT District Manager (ODOT, Region 5) to ensure access safety and pursue access alternatives if safety is compromised. The purpose of such contact is to involve ODOT at the beginning of the application process so that the property owner/developer has the benefit of ODOT comments prior to submitting a site plan, conditional use, or tentative plat map.

There are several alternatives when considering Reviewable Access Points - the access onto the state highway is closed and moved to a side street, the access is combined with other accesses within the same block, the access is moved to the center of the block in order not to conflict with intersection traffic, the access conforms to “Access Management Techniques” listed in the TSP, or nothing is done and the access is left alone. Land development affecting State Highway 82 will address safety, capacity, functional classification, and level of service. Access management policies for the City of Imbler set forth in the Transportation System Plan will be observed.

8. **Standards for Transportation Projects. All transportation facilities will conform with the Transportation System Plan street development standards. Changes in the specific alignment of proposed public roads and highways shall be permitted without plan amendment if the**

new alignment falls within a transportation corridor identified in the Transportation System Plan. Transportation projects involving the operation, maintenance, repair, and preservation of existing facilities that are consistent with the Transportation System Plan, the classification of that roadway and approved road standards shall be allowed, except where specifically regulated (i.e. within a floodplain). Dedication of right-of-way, authorization of construction and the construction of facilities and improvements shall be allowed, where the improvements are consistent with the Transportation System Plan, the classification of the roadway and approved road standards. For state projects that require an Environmental Impact Statement (EIS) or Environmental Assessment (EA), the draft EIS or EA shall serve as the documentation for local land use review, if local review is required. More specifically, uses will be permitted as follows:

(A) Uses Permitted Outright

- Normal operation, maintenance, repair, and preservation activities associated with transportation facilities.
- Installation of culverts, pathways, fencing, guardrails, lighting, and similar types of improvements that take place within the existing right-of-way.
- Projects specifically identified in the Transportation System Plan as not requiring further land use regulation.
- Landscaping as part of a transportation facility.
- Emergency measures as necessary for the safety and protection of property.
- Acquisition of right-of-way for public roads, highways, and other transportation projects identified in the Transportation System Plan are permitted outright, except for those that are located in exclusive farm or forest zones.

(B) Conditional Uses Permitted

1. Construction, reconstruction, or widening of highways, roads, bridges, or other transportation projects that are: (1) not specifically identified in the Transportation System Plan or (2) not designed and constructed as part of a subdivision or planned development subject to site plan and /or conditional use review, shall comply with the Transportation System Plan and applicable standards, and shall address the following criteria. For state projects that require an EIS or EA, the draft EIS or EA shall be reviewed and used as the basis for findings to comply with the following criteria:
 - The project is designed to be compatible with existing land use and social patterns, including noise generation, safety, and zoning.
 - The project is designed to minimize avoidable environmental impacts, to identified wetlands, wildlife habit, air and water quality, and cultural resources.
 - The project preserves or improves the safety and function of the facility through access management, traffic calming, or other design features.
 - The project includes provision for bicycle and pedestrian circulation as consistent with the Land Use Plan and other requirements of this ordinance.
2. Construction of rest areas, weigh stations, and temporary storage and processing sites.
3. If review under this section indicates that the use or activity is inconsistent with the Transportation System Plan, the procedure for a plan amendment, including any necessary goal exceptions, shall be undertaken prior to or in conjunction with the conditional permit review.

9. Clear Vision Area. Clear vision areas shall be provided with the following dimensions:

- A clear vision area shall be a triangular area on a lot at the intersection of two streets, two sides of which are lot lines measured a distance of 30 feet from the corner intersection of the lot lines. The third side of the triangle is a line across the corner of the lot joining the ends of the other two sides. Where the lot lines at intersections have rounded corners, the lot lines will be extended in a straight line to the point of intersection.
- The clear vision area shall contain no plantings, walls, fences, structures or other temporary or permanent obstructions exceeding three feet in height measured from the grade of the street center line, except that trees exceeding this height may be located in this area, provided all branches and foliage are removed to a height of eight feet above the grade.

Section 11: Amendment

1. Authorization to Initiate Amendments. An amendment to the text of this ordinance or to a zoning map may be initiated by the City Council, or by application of a property owner. The request by a property owner for an amendment shall be accomplished by filing an application with the City using forms prescribed by the City. **Amendments will address Transportation System Plan policies and standards.**
2. Public Hearing on Amendment. The City Council shall conduct a public hearing on the proposed amendment at its earliest practicable meeting after the amendment is proposed and shall, within 40 days after hearing, approve, disapprove, or give modified approval of the proposed amendment. **Public hearing notice identifying the time and place for a City Council hearing and the purpose of the proposed amendment shall be given by the City per ORS 197.610 and 92.048 wherein it is indicated:**

A proposal to amend this ordinance shall be submitted to the Oregon Department of Land Conservation and Development Director and Oregon Department of Transportation, Region 5 Office at least 45 days before the final Council hearing on adoption. The submitted proposal shall contain 4 copies of the text and any supplemental information and the date of the final hearing on adoption. The Council shall hold a public hearing on the proposed ordinance or regulation after publishing notice of the hearing at least 10 days prior to the hearing in a newspaper of general circulation published in the area in which land to be subject to such ordinance or regulation is situated. The notice shall contain the time, place and purpose of the hearing and a description of the land to be subject to the ordinance or regulation.

3. Findings. In considering an amendment to the zoning ordinance or map, the Council shall seek to determine that:
 - a) The change is in accord with the Land Use Plan for the area, and
 - b) There has either been a substantial change in the character of the area since the current zoning was adopted and which warrants changing the zone, and or the zoning adopted for the area was in error, and
 - c) **If the amendment significantly affects a transportation facility, the amendment shall assure that land uses are consistent with the function, capacity, and level of service of the facility identified in the Transportation System Plan. This shall be accomplished by one of the following:**
 - Limiting allowed land uses to be consistent with the planned function of the transportation facility;

- Amending the Transportation System Plan to ensure that existing, improved, or new transportation facilities are adequate to support the proposed land uses consistent with the requirement of the Transportation Planning Rule; or,
- Altering land use designations, densities, or design requirements to reduce demand for automobile travel and meet travel needs through other modes.

A plan or land use regulation amendment significantly affects a transportation facility if it:

- Changes the functional classification of an existing or planned transportation facility;
- Changes standards implementing a functional classification system;
- Allows types or levels of land use that would result in levels of travel or access that are inconsistent with the functional classification of a transportation facility; or
- Would reduce the level of service of the facility below the minimum acceptable level identified in the Transportation System Plan.

4. Records of Amendment. The City Recorder shall maintain records of amendments to the text and zoning map of the ordinance.
5. Limitation on Reapplication. No application of a property owner for an amendment of the text of this ordinance or to the zoning map shall be considered by the City Council within the one-year period immediately following a previous denial of such request, except the City Council may permit a new application, if in the opinion of the City Council, new evidence or a change of circumstances warrants.

Section 12: Administrative Provisions

2. Other Provisions.

(B) Public Hearings.

- 1) Notice of hearing authorized by this ordinance shall be posted in two public places in the City at least ten days prior to the date of the hearing.
- 2) In addition, a notice of hearing on a conditional use, a variance, or an amendment to the zoning map shall be mailed to all owners of property within three hundred feet of the property for which the variance, conditional use, or zoning map amendment has been requested. The notice of hearing shall be mailed at least ten days prior to the date of hearing.
- 3) Failure of a person to receive the notice prescribed in this section shall not impair the validity of the hearing.
- 4) The City Council may recess a hearing in order to obtain additional information or to serve further notice upon other property owners or persons it decides may be interested in the proposal being considered. Upon recessing, the time and date when the hearing is to be resumed shall be announced.

Imbler Partition & Subdivision Ordinance

Section IV: Scope of Regulations

1. No person shall subdivide or partition land within the city limits except as provided in this ordinance. All partition and subdivision plats and all streets and ways utilized for the purpose of creating lots or parcels are required to be approved in accordance with these regulations **and the Transportation System Plan (TSP).**

A person desiring to subdivide or partition land within the incorporated area of the city shall submit tentative plans and final documents for approval as provided in this ordinance **the Transportation System Plan** and Oregon Revised Statutes. **If any parcel of land proposed for development joins Oregon State Highway 82 then the applicant shall notify ODOT, Region 5 Office prior to submitting any land use application. The purpose for this contact is to involve ODOT, Region 5 at the beginning of the application process so that the property owner/developer has the benefit of ODOT comments prior to submitting a site plan, conditional use application, or tentative plat map.**

Section VI: Application Procedure

2. Initiation of an Application.

(A) Is in accord with the area Land Use Plan, ~~and~~ zoning requirements, **and Transportation System Plan.**

3. Tentative Plan. ...The Planning Administrator shall mail notice of such hearing to all interested agencies and departments, Council members, area landowners within 300 feet of the proposed development, and to such other vicinity residents as he determines may be affected.

Notice shall be provided to ODOT, Region 5 regarding any land use action on or adjacent to a state facility. All actions potentially affecting a jurisdiction's road/street system shall require notice to that jurisdiction's public works department. Notice shall also be provided to public transit providers and special interest groups such as rail service, bicyclists, pedestrians, and the disabled to include information roadway or other transportation project. Transportation interest groups must request notice in writing and may be subject to a fee.

Section VIII: Tentative Plan Requirements

2. Proposed Design. The following information shall be included on the tentative plan:

- (A) The location, width, names, approximate grade of all streets. The relationship of all streets to any projected streets as shown on any plan adopted by the City, or, if no such plan has been adopted, as may be identified by the City Council in order to assure adequate traffic circulation.
- (B) The location, width and purpose of easements.
- (C) The location and approximate dimensions of parcels or lots and the proposed parcel or lot and block numbers.
- (D) **The location and design of existing and proposed bicycle and pedestrian facilities, including bicycle parking facilities.**
- (E) **If direct access to Oregon Highway 82 is proposed, access must be provided in a manner consistent with the access management provisions and spacing standards set forth in the Transportation System Plan.**

5. **Partial Development.** If the partition or subdivision plat pertains to only part of the tract owned or controlled by the partitioner or subdivider, the City Council may require a sketch of a tentative layout for streets in the unpartitioned or unsubdivided portion **to insure adequate traffic circulation.**
7. **Supplemental Plans with Tentative Plan.** The following information shall be submitted with the tentative plan:

(G) **Traffic analysis procedures.** If it is determined that a proposed project may impose an undue burden on the public transportation system, then traffic analysis and mitigation must be undertaken. Proposals generating up to 100 vehicle trips per day will be reviewed locally by ODOT, Region 5. Proposals generating between 100 and 400 vehicle trips per day will be reviewed by an ODOT Traffic Engineer. Proposals generating over 400 vehicle trips per day will be required to submit a traffic impact study.

- For developments that are likely to generate more than 400 average daily motor vehicle trips (ADTs), the applicant shall provide adequate information, such as a traffic impact study or traffic counts, to demonstrate the level of impact to the surrounding street system.
- Standards by which to gauge average daily vehicle trips include: 10 trips per day per single family household; 5 trips per day per apartment; and 30 trips per day per 1,000 square feet of gross floor area such as a new supermarket or other retail development. The developer shall be required to mitigate adverse impacts attributable to the project. The determination of impact or effect, and the scope of the impact study, should be coordinated with the provider of the affected transportation facility.
- Undue burden on the public transportation system includes any one of the following: 1) changes to the functional classification of an existing or planned transportation facility; 2) changes to standards implementing a functional classification system; 3) allowance of land uses that would result in levels of travel or access that are inconsistent with the functional classification of a transportation facility; or 4) reduction in facility level of service below the minimum acceptable level identified in the Transportation System Plan.

9. Approval of Tentative Plan.

(C) No tentative plan for a proposed subdivision and no tentative plan for a proposed major partition shall be approved unless:

- 1) The streets and roads are laid out so as to conform to the plat of subdivisions and major partitions already approved for adjoining property as to width, general direction and in all other respects unless the City determines it is in the public interests to modify the street or road pattern.
- 2) Streets and roads held for private use are clearly indicated on the tentative plan and all reservations or restrictions relating to such private roads and street are set forth thereon.
- 3) The tentative plan complies with the applicable zoning ordinance, ~~and~~ regulations, **and Transportation System Plan standards** that are then in effect.

Section IX: Submission of Final Plat

1. Final Plat Requirements. The final plat, known as the partition plat or subdivision plat, shall conform to surveying requirements in ORS.050 through 92.080. In addition to specific action in Oregon Revised Statutes, the following information shall be shown on the final plat:

- (A) The date, scale, northpoint, basis of bearing, legend, controlling topography such as bluffs, creeks, and other bodies of water, and existing features such as highways and railroads.
- (B) Legal description of the tract boundaries.
- (C) Name of the owner, subdivider and surveyor.
- (D) The exact location and width of streets and easements intersecting the boundary of the tract.

- (E) The width of street rights-of-way. For streets on curvature, curve data shall be based on the street centerline. In addition to the centerline dimensions, the radius and central angle shall be indicated.
- (F) Lot numbers beginning with the number 1 and numbered consecutively in each block, and the area of each lot containing one acre or more to the nearest hundredth of an acre.
- (G) Block letters beginning with letter A and continuing consecutively without omission or duplication throughout the subdivision. The letters shall be solid, of sufficient size and thickness to stand out and be so placed as not to obliterate any figure. Block letters in addition to a subdivision of the same name shall be a continuation of the lettering in the original subdivision.
- (H) Land parcels to be dedicated for any purpose, public or private, to be distinguished from lots intended for sale. **The City shall preserve right-of-way for planned transportation facilities through exactions, voluntary dedications, or setbacks.**
- (I) Building setback lines, if any, are to be made a part of the partition or subdivision restrictions.
- (J) The following certificates which may be combined where appropriate:
 - 1) A certificate signed and acknowledged by all parties having any record title interest in the land partitioned or subdivided, consenting to the preparation and recording of the plat.
 - 2) A certificate signed and acknowledged as above, dedicating all rights-of-way, parcels or lots of land shown on the final map intended for any public use. Streets and roads for public use are dedicated without any reservation or restriction other than reversionary rights upon vacation.
 - 3) An affidavit with the seal of and signed by the registered surveyor responsible for the land survey and final map per ORS 92.070.
 - 4) Other certifications now or hereafter required by law.

2. Supplementary Information with Final Plat. The following data shall accompany the final plat:

(F) (1) All improvements have been installed in accordance with the requirements of these regulations, **the Transportation System Plan** and with the action of the Council in giving approval of the tentative plan, or

3. Technical Review. Upon receipt of the final plat and accompanying data, the Planning Administrator shall review the final plat and documents to determine the following:

- (A) Private streets and roads conform to the tentative plan.
- (B) Subdivision or partition plat conforms with any applicable zoning ordinances and regulations that are in effect.
- (C) Donation and explanation of common improvements are recorded and referenced on the partition or subdivision plat.
- (D) The final plat conforms with the approved tentative plan.
- (E) Compliance with other provisions of Oregon Revised Statutes, ~~and~~ this Ordinance, **and the Transportation System Plan.**

Section X: Creation of Streets or Ways.

1. Creation of Streets. The creation of all streets not within a subdivision shall meet the **street construction standards set forth in the Transportation System Plan.** ~~for streets within a subdivision.~~ Creation of such streets may be initiated by the Council by resolution, or by a property owner request.

2. Any person wishing to create a public or private road or utilize an existing private road for purposes other than agriculture, forestry or mining, shall make written application for consideration by the Council at a public hearing.
3. Application for road approval shall comply with applicable tentative plan and final plat procedures and standards as provided in this ordinance **and the Transportation System Plan**.
4. Once roadway improvements are completed, or performance bonds have been approved for such, a centerline survey, deed, and a description of the proposed right-of-way shall be submitted to the Council. Deeds shall have the signatures of all owners of property to be dedicated.
5. Upon final approval by the Council, and recording of the survey and deed, final plat partitioning or subdivision procedures can be completed.
6. Expiration times for approval to create roads shall be the same as for tentative plans and plats.

Section XI: Street, Roadway and Other Utility Design and Improvement Standards.

1. Streets.

- (A) Conformity. The arrangement, character, extent, width, grade and location of all streets shall be ~~considered in their relation to~~ **designed to coordinate with** existing and planned streets, topographical conditions, construction and maintenance costs, public convenience and safety, and in their appropriate relation to the proposed uses of the land to be served by such streets. Where not shown on an area plan, the arrangement and other design standards of streets shall conform to the provisions found **in the Transportation System Plan and** herein.
- (B) Relation to Adjoining Street Systems. The arrangement of streets in new partitions and subdivisions shall ~~make provision for the continuation of the~~ **be designed to coordinate with** existing or desired streets in adjoining areas.
- (C) Projection of Streets. Where adjoining areas are not partitioned or subdivided, the arrangement of streets in new partitions or subdivisions shall make provisions for the proper projection of streets.
- (D) Streets to be Carried to Property Lines. When a proposed partition or subdivision joins unplatted land, street right-of-way shall be carried to the boundaries of the tract to be partitioned or subdivided.
- (E) Dead-end Street or Cul-de-Sac. Dead-end streets or cul-de-sacs, shall not be longer than 400 feet, and be provided at the closed end with a turn-around having outside roadway diameter of at least ninety feet. If a dead-end street is of a temporary nature, a similar turn-around shall be provided and provision made for future extension of the street into adjoining properties.
- (F) Frontage Streets. Where a partition or subdivision abuts or contains an existing arterial street, the Council may require frontage streets or other such treatment as may be necessary for adequate protection of abutting properties, and to afford separation of through and local traffic **in order to preserve the arterial level of service.**
- (G) Minor Streets. Minor streets shall be so laid out that their use by through traffic will be discouraged.
- (H) Street Standards. Street standards shall not be less than those set forth ~~hereunder~~ **in the Transportation System Plan.**
 - 1) In areas designed and zoned for commercial use, street widths may be increased by such amount as may be deemed necessary by the Council to provide for the free flow of vehicles, and to provide safe parking space for such commercial or business districts.
 - 2) Street and related improvements shall be completed or bonded for completion prior to final plat consideration and shall be constructed under the direction of the planning Administrator, according to the ~~following~~ **Road Standard Table 7-2 set forth in the Transportation System Plan** ~~or as adopted by the city as "Street Improvement~~

Guidelines.” for dimensional street standards for arterial, collector, local, and marginal access streets.

**Table 7-2
Recommended Street Development Standards for the City of Imbler**

	ROW	Surface width	Base		Leveling Course		Overlay material	Shoulder width (base + leveling course)	Sidewalk location & width (optional)	Where designated: bicycle & sidewalk shared shoulder
			Depth	Agg. Size	Depth	Agg. size				
Arterial Streets	60'	24'	8"	1.5 – 3"	4"	¾ - 1.5	2" asphalt concrete	8'	5'	4' paved + 2' gravel
Collectors	60'	24'	8"	1.5 – 3"	4"	¾ - 1.5	2" asphalt concrete	6'	5'	4' paved + 2' gravel
Locals	60'	24'	8"	1.5 – 3"	4"	¾ - 1.5	2" asphalt concrete	None	5'	None
Marginal Access	30''*	20'	8"	1.5 – 3"	4"	¾ - 1.5	2" crushed gravel	None	None	None
Alley	16'	16'	Unimproved					None	None	None

*Marginal access rights-of-way shall not be less than 10% of street length, and shall be provided with utility easements on each side to provide a combined utility easement and right-of-way width. Marginal access streets may be permitted for 2 to 5 dwellings, only where local street connectivity is not practical due to topographic constraints or existing development patterns preclude a through route extension.

- ❖ Streets or roads with anticipated commercial or industrial traffic shall have a minimum base depth of 12".
- ❖ All bridges shall have a 30-year minimum life expectancy and shall be constructed to load limit standards approved by the Council.
- ❖ The above standards may be altered if the Council determines that more (or less), extensive standards may be desirable because of soil or topographical conditions, anticipated traffic counts, or continuation of existing street improvements or right-of-way widths warrant such.

- Marginal access rights-of-way shall not be less than 10% of street length, and shall be provided with utility easements on each side to provide ~~50'~~ a combined utility easement and right-of-way width. **Marginal access streets may be permitted for 2 to 5 dwellings, only where local street connectivity is not practical due to topographic constraints or existing development patterns preclude a through route extension.**
- Streets or roads with anticipated commercial or industrial traffic shall have a minimum base depth of 12".
- All bridges shall have a 30-year minimum life expectancy and shall be constructed to load limit standards approved by the Council.
- The above standards may be altered if the Council determines that more (or less), extensive standards may be desirable because of soil or topographical conditions, anticipated traffic counts, or continuation of existing street improvements or right-of-way widths warrant such.

- (I) Intersections. The intersections of more than two streets at one point shall be avoided except where it is impractical to secure a proper street system otherwise. Streets shall intersect one another at an angle as near to a right angle as possible, and no streets shall intersect at an angle less than 75 degrees. Street intersections shall be rounded **at the outside lane edge and engineered to meet the intersection angle.**
- (J) Reverse Curve. A tangent at least 100 feet long shall be introduced between reverse curves on arterial streets.
- (K) Subdivision or Partition into Tracts Larger than Ordinary Building Lots. Where a tract is partitioned or subdivided into larger parcels than ordinary building lots, such parcels shall be arranged so as to allow the opening of future streets and logical further partitioning or subdividing.
- (L) Reserve Strips. Reserve strips controlling access to streets shall be prohibited except under conditions as approved by the Council.
- (M) Street Grades. No street grade shall be less than 3/10 of 1 percent, and shall not exceed the following, with due allowance for reasonable vertical curves:

STREET TYPE	MAX. % GRADE
Arterial	10
Collector	15
Minor	15
Marginal Access	15

- (N) Half Street Prohibited. Half streets shall be prohibited except where essential to the reasonable development of the partition or subdivision in conformity with the other requirements of these regulations. Where the Council finds it will be practicable to require the dedication of the other half when adjoining property is partitioned or subdivided, such right-of-way may be required as part of the initial plat.
- (O) Street Names and Numbers. Names of new streets shall not duplicate existing or platted street names unless a new street is a continuation of, or in alignment with the existing or platted street.
- (P) Access to Streets across Ditches. The developer shall provide access to all proposed lots or parcels, across all ditches in a standard method approved by the Council.
- (Q) Hardship to Owners of Adjoining Property Avoided. The street arrangement shall not be such as to cause hardship to owners of adjoining property in platting their own land and providing convenient access to it.
- (R) Street Intervals. In general, provisions should be made for through streets at intervals not exceeding 1250 feet. **For streets connecting to Oregon Highway 82, street intervals (from right-of-way edge to right-of-way edge) shall not exceed 300 feet, in accordance with the access management standards set forth in the Transportation System Plan.**
- (S) Access. For joint and cross access, adjacent commercial and industrial developments classified as major traffic generators shall provide a cross access drive and pedestrian access to allow circulation between sites. Shared parking areas shall be permitted a reduction in required parking spaces if peak demands do not occur at the same time periods.
- (T) Access Connection and Driveway Design. Driveway width shall meet the following guidelines: a) if the driveway is a one way in or one way out, then the driveway shall be a minimum width of 10 feet and shall have appropriate signage designating the driveway as a one way connection; b) for two-way access, each lane shall have a minimum width of 10 feet and a maximum of four lanes shall be allowed. Whenever more than two lanes are proposed, a median should be considered to divide the entrance and exit lanes. Driveway approaches must be designed and located to provide an exiting vehicle with an

unobstructed view. Construction of driveways along acceleration or deceleration lanes and tapers shall be avoided due to the potential for vehicular weaving conflicts. The length of driveways shall be designed in accordance with the anticipated storage length for entering and exiting vehicles to prevent vehicles from backing into the flow of traffic on the public street or causing unsafe conflicts with onsite circulation.

- (U) Existing Access Features. Legal driveway connections on Oregon Highway 82 in place as of adoption of the TSP shall be designated as conforming features. For Reviewable Access Point designation, property use changes generating an additional 100 vehicles per day or more, or zone changes/plan amendments accessing Oregon Highway 82, the developer/owner shall, prior to making city application, notify and coordinate with the City of Imbler and the ODOT District Manager (ODOT, Region 5) to ensure access safety and pursue access alternatives if safety is compromised. There are several alternatives when considering Reviewable Access Points - the access onto the state highway is closed and moved to a side street, the access is combined with other accesses within the same block, the access is moved to the center of the block in order not to conflict with intersection traffic, the access conforms to "Access Management Techniques" listed in the TSP, or nothing is done and the access is left alone.
 - (V) New Access Features. For proposed development of properties abutting Oregon Highway 82, new public streets shall be based on the existing block spacing standards of 300 feet and new driveways shall be constructed in the center of such blocks. The highest priority shall be placed on providing access to property abutting Oregon Highway 82 from city streets, combining driveways, or providing access points in the middle of the block. Land development affecting Oregon Highway 82 will address safety, capacity, functional classification, and level of service. Access management policies for the City of Imbler set forth in the Transportation System Plan will be observed.
 - (W) Shared Access. Proposed subdivisions with frontage on Oregon Highway 82 shall be designed to share access points from the highway. If access from a city street is possible, then access shall not be allowed onto the state highway. If access from a city street becomes available, then conversion to that access is encouraged, along with closing the state highway access. A maximum of 2 accesses may be allowed regardless of the number of lots or businesses served.
4. Blocks.
- (A) Factors Governing Dimensions. Block length and width or acreage within bounding roads shall be such as to accommodate the size of parcel or lot required in the area by the zoning ordinance of the City, and to provide for convenient access, circulation control and safety of street traffic.
 - (B) Lengths. Block lengths shall not exceed 1250 feet, or be less than 200 feet. **For streets connecting to Oregon Highway 82, block lengths shall not exceed 300 feet, in accordance with the access management standards set forth in the Transportation System Plan.**
 - (C) Arrangement. A block shall generally be so designed as to provide two rows of lots.
 - (D) Crosswalks. In blocks over 800 feet long, pedestrian crosswalks may be required by the Council in locations, and of a design and dimension determined desirable for public health, convenience and necessity.
10. Sidewalk and Bicycle Trail Improvements. Curbs and sidewalk improvements may be required by the ~~Commission and~~ Council to be provided of such design and location as the ~~Commission and~~ Council determines desirable. These improvements may be considered by the Council to meet park or recreation area requirements.

Section XII: Improvements.

1. Improvements in Partitions. The same improvements shall be installed to serve each building site of a partition as is required of a subdivision **and as is required in the Transportation System Plan.**

Section XIV: Amendments.

1. Authorization to Initiate Amendments. An amendment to the text of this ordinance may be initiated by the City or by application of a property owner or his authorized agent.
2. Application and Fee. An application for amendment by a property owner or his authorized agent shall be filed with the Planning Administrator. The application shall be accompanied by a fee as provided for by the Council. **Amendments shall conform with the adopted Transportation System Plan.**
3. Public Hearing on an Amendment.
 - (A) Notice of time and place of the public hearing before the Council and the purpose of the proposed amendment shall be given by the City as provided in ORS 197.610 and 92.048 wherein it is indicated:

A proposal to amend this ordinance shall be submitted to the Oregon Department of Land Conservation and Development Director **and Oregon Department of Transportation, Region 5 Office** at least 45 days before the final Council hearing on adoption. The submitted proposal shall contain 4 copies of the text and any supplemental information and the date of the final hearing on adoption. The Council shall hold a public hearing on the proposed ordinance or regulation after publishing notice of the hearing at least 10 days prior to the hearing in a newspaper of general circulation published in the area in which land to be subject to such ordinance or regulation is situated. The notice shall contain the time, place and purpose of the hearing and a description of the land to be subject to the ordinance or regulation.
 - (B) Recess of Hearing. The Council may recess a hearing in order to obtain additional information. Upon recessing for this purpose, they shall announce the time and date when the hearing will be resumed.
4. Record of Amendment. The City Recorder shall maintain a record of amendments to the text of this Ordinance in a form convenient for the use of the public.

Appendix A

THE OBSERVER, LA GRANDE, OREGON, SATURDAY, DECEMBER 5, 1998

UNION COUNTY: Transportation plan meets on tap

A public hearing on a proposed transportation system plan will take place during the regular meeting of the Imbler City Council at 7 p.m. Monday at City Hall. Union County Planner Hanley Jenkins will present a report. Additional public hearings on the transportation system plan will take place at 1:30 p.m. Tuesday at the Joseph Annex and at 8 p.m. Tuesday at Elgin City Hall. Transportation plans are being developed for Union County and the cities of Elgin and Imbler. The plans will identify existing facilities and services and project future transportation needs. The plans will cover 20 years.

IMBLER TRANSPORTATION SYSTEM PLAN

Monday, December 7, 1998

7:00 p.m.

Imbler City Hall

AGENDA

- I. Introduction
 - Brief background of TSP

- II. Work to Date
 - Existing Conditions
 - Transportation system inventory
 - Accident history
 - Traffic volumes
 - Travel Forecasts
 - Future traffic volumes
 - Transportation system deficiencies

- III. Proposed Alternatives
 - Explanation of alternatives
 - How alternatives shape the future transportation system

- IV. Next Steps
 - Where we're going from here

- V. Discussion

PLEASE SIGN IN!
Imbler TAC Meeting
Monday, December 7, 1998
7:00 p.m. Imbler City Hall

Name	Address/Agency
Dana Decker	Union Co. Planning Dept.
Gus Forster	Imbler School District
Jerry Huffman	Imbler School Dist.
James McDonald	Council Member
John Dewey	Council member
Dwight Matthews	COUNCIL MEMBER
Ori Tubbs	Council member
Duane Berry	Mayor
Guth Zinke	City Recorder
Julie Bennett	Council member
Sandra Anderson	Council member
Jo Ann Christenson	Citizen
Cora Smith	
Allen Rieke	Anderson-Perry & Assoc.
Jason Peterson	Anderson-Perry & Assoc., Inc
Hann Lee	H. Lee + Associates

The Elgin Recorder

January 26, 1999

IMBLER CITY COUNCIL MEETING	
	FEBRUARY 1, 1999 7:00 pm
	IMBLER CITY HALL
	Agenda:
I.	Public hearing on safety issues in the city transportation system plan (with Dara Decker)
II.	Consent agenda
	A. Minutes
	B. Financial report and bills
III.	Old business
	A. Update on encroachment at 5th and Lone Pine
	B. Street lighting
	C. Update on Pledge Community program
	D. Building repairs
IV.	New business
	A. Set date for spring cleanup day
	B. Registration for workshop for city officials

and would reverse previous decisions by the Public Utility Commission to lower rates and refund at least \$430 million to US

companies to pay into the fund for four years, so US West would pay at least \$120 million. Haynes said that's a better deal for the state

pretty bleak," said Lee Hayburn, chief information officer for Central Oregon Community College.

Lot two (2), in GRAND VIEW ADDITION, said point being North 89°56'28" West 100.00 feet from the southeast corner of Lot 2; thence North 0°09'58" West, 248.19 feet to the South line of Union County road No. 116 (Gekeler Lane); thence North 81°29'20" West, along said south line of Gekeler Lane, a distance of 191.15 feet; thence South 00°09'58" East, 263.06 feet to the South line of lot 2; thence South 89°56'28" East, along said south

Grand, County of Union, and State Oregon, sell at public auction to the highest bidder for cash the interest in the Property which the Grantor had or had power to convey at the time of the execution by Grantor of the Trust Deed, together with any interest which the Grantor acquired after the execution of the Trust Deed; to satisfy the debt hereby secured and the costs and expenses of sale including a reasonable charge by the Trustee.

Imbler council puts focus on pedestrian safety

IMBLER — Pedestrian safety is expected to be a major area of concern when the Imbler City Council and Union County Planning Director Hanley Jenkins discuss the city's transportation plan beginning at 7 p.m. Monday. The

council will meet in City Hall. Other issues regarding transportation include a bicycle plan and street maintenance. The meeting is open to the public.

PUBLIC SAFETY REPORT

POLICE AND FIRE La Grande Police

Arrested: Justin Caleb Wilsey, 22, was arrested Monday evening, charged via a parole and probation warrant with violating probation.

Assistance: Police responded to the 2000 block of Penn Avenue early Monday morning when a woman reported that a pipe had come off her hot water heater and she didn't know if it was for water or gas. The pipe was an overflow pipe and everything was safe.

Cited: Evita Guiteau, 16, 2005 Gekeler Road No. E6, was cited Monday afternoon, charged with fourth-degree assault. Jennifer Guiteau, 15, of the same address, was also cited, charged with harassment, second-degree burglary and third-degree criminal mischief.

Found property: Monday afternoon a large exotic silver ring was found at the skate park. Police put the ring in lost and found.

Found property: A bag of tapes and some speakers were reported found Monday afternoon in the 2500 block of First Street. Police picked up the found items.

Lost items: Police received a report Monday evening of tools being on Fourth Street after falling out of the back of a pickup.

Arrested: Dee Jay Miller, 20, 86 Hawthorne St., was arrested and lodged in the Union County jail Monday evening.

experiencing ongoing nightly harassment. La Grande Haz-Mat Team

Assistance: The La Grande Hazardous Materials Team, based at the La Grande Fire Department, assisted at an accident scene on Interstate 84 near the Ladd Creek bridge Sunday afternoon.

Thomas Fallon, 54, Henderson, Nev., was driving a semi truck that was pulling two trailers when the vehicle hit ice and lost control at about 1 p.m. The second trailer became unlatched during the mishap and traveled 235 feet down the center median. The truck was leaking diesel fuel from both saddle tanks.

The fuel contaminated Ladd Creek and Brush Creek. Absorbent booms were placed in the waterway by the Haz-Mat Team. The La Grande Rural Fire Protection District and personnel from the Oregon Department of Fish and Wildlife also assisted at the scene.

La Grande Fire

Medical assist: Rescue personnel responded Tuesday morning to the 600 block of 16th Street to assist with a patient having difficulty breathing.

False alarm: Firefighters responded Monday evening to the 900 block of Sunset Drive. A sprinkler head, part of a fire suppressant system, had opened and was flowing water, but there was no fire. Maintenance personnel were called to repair the system.

Structure fire: Firefighters responded this morning to the 1000 block of Eighth

Union Police

No report available.

Enterprise Police

Cited: Timothy Beirl, 15, Enterprise; Gary Huff, 15, Joseph; Cody Dickenson, 16, Enterprise; Dylan Luka, 15, Enterprise; and William Burta, 16, Enterprise, were all cited to juvenile authorities Jan. 13, each charged with fourth-degree assault stemming from an incident at Enterprise High School that afternoon. A female student had been rolled into a wrestling mat and pummeled.

Unfounded reports: Enterprise police have said that after interviewing several people and exhausting all leads, including talking to the identified young suspect, they have determined that reports that an Enterprise youth was carrying a handgun in the downtown area were unfounded.

Union County Sheriff


Found property: A set of golf clubs were found in a ditch along Foothill Road and turned into the sheriff's office.

Arrested: William Arthur Kirk, 34, address unknown, was arrested Monday by the Troutdale police on a Union County warrant charging Kirk with failure to appear in court on an original charge of driving "while under the influence of intoxicants." He was lodged in the Multnomah County jail.

Cited: Marian Margaret Martin, 40, 62120 Hamilton Road, was cited

CHECKING

Looking for better checks



- FREE checks
- FREE Vis
- No service deposit

Pioneer
and over and

IMBLER TRANSPORTATION SYSTEM PLAN

Monday, February 1, 1999

7:00 P.M.

Imbler City Hall

AGENDA

- I. Work to Date
 - Identified safety projects (December 7, 1998 meeting)
 - Bicycle & Pedestrian Plan projects
- II. Discuss/Select TSP Projects
 - Specific project selection
 - Project prioritization
- III. Discuss Road Standards
 - Determine adequacy
- IV. Discuss Road Jurisdiction (Richard Comstock)
 - Who is responsible for the cost of projects on County roads?
 - Memorandums of Understanding (MOUs) to agree to work together on identifying project funding
- V. Other Discussion/Questions

IMBLER TRANSPORTATION SYSTEM PLAN

February 1, 1999

7:00 P.M.

Imbler City Hall

PLEASE SIGN IN!

Dana Decker UC Planning Department

Sandra Anderson ^{City} Council

Quane Gray Mayor City of Imbler

DWIGHT MATTHEWS

RUTH ZEMKE, CITY RECORDER

Sori Lebler, Councilor #5

Miki Conger, Committee #3

John Dewey Councilor

Eus Foster Imbler School Super.

Terry Huffman Imbler School District

Julie Bennett

Mike Buchanan ODOT

Bob Kelley UC Public Works

Hanley Jenkins II UC Planning Director

IMBLER TRANSPORTATION SYSTEM PLAN

Monday, March 1, 1999

7:00 P.M.

Imbler City Hall

AGENDA

1. Access Management

- Techniques and purpose
- Recommended standards
- How do these standards relate to development?

2. Local Street Plan

- Future street system – how does this relate to development?
- Future bicycle and pedestrian system
- Other future modal plans

3. Other Discussion/Questions

- Next TAC meeting is April 5, 1999
Topics include implementing language for the TSP

PLEASE SIGN IN!

**Imbler TAC Meeting
Monday, March 1, 1999
7:00 p.m. Imbler City Hall**

Name

Address/Agency

Dave Decker

UC Plan. Dept.

Ron Bond

Sequim

Loree Clayton Fox

Box 142 Imbler

Jason Peterson

Anderson Perry & Assoc. Inc.

John Liddy

Box 73 Imbler 120th Street

Lori Tubbs

P.O. Box 211, Imbler, OR.

Nike Conyuan

P.O. Box 10, Imbler, OR

James McDonald

110 Luckman Imbler, OR

John C Dewey

340 Newport Ave Imbler, OR.

Duane Berry

P.O. Box 63 Imbler OR

Steve Jenke

City Recorder

THE OBSERVER, LA GRANDE, OREGON, SATURDAY, APRIL 3, 1999

IMBLER: Committee targets transportation

The Imbler Technical Advisory Committee will meet at 7 p.m. Monday in Imbler City Hall.

Policy and ordinance amendments necessary for the creation of Imbler's Transportation System Plan will be discussed. The meeting is open to the public.

IMBLER TRANSPORTATION SYSTEM PLAN

Monday, April 5, 1999

7:00 P.M.

Imbler City Hall

AGENDA

1. Recommended Implementing Language

- Imbler Land Use Plan
- Imbler Partition & Subdivision Ordinance
- Imbler Zoning Ordinance

2. Other Discussion/Questions

- Draft final will be provided for your review before the first public hearing – *tentatively scheduled for May 3, 1999*

PLEASE SIGN IN!

**Imbler TAC Meeting
Monday, April 5, 1999
7:00 p.m. Imbler City Hall**

Name

Address/Agency

Dana Decker

UC Planning Dept.

Al & Marie Tucker

1000 Brooks Road

Terry Knight

860 Brooks

James McDonald

110 Reedman

Guth Zinke

City Recorder

Duane Berry

Mayor

DWIGHT MATTHEWS

550 LONE PINE AV

John Dewey

840 Newport

Mike Cragg

620 Lone Pine

Ron Brand

Elgin Recorder

Jason Peterson

A&P

Dale Eisiminger

Appendix B

Imbler													
	# travel lanes	on-pavement parking?	sidewalks?	bike lanes?	surfacing mat?	surfacing cond?	st. classif	length (.1 m)	Jurisdiction	able to widen shoulder?	ROW (ft)	Pave width (ft)	comment
west of 82- Summerville Rd	2	N	N	SHOULDER	PAVEMENT	GOOD	arterial	0.3	COUNTY	Y	60	24	
east of 82- Striker Ln	2	N	N	N	GRAVEL	GOOD	collector	0.2	COUNTY	Y	60	20	
7th	2	N	N	N	PAVE/GRAV	GOOD	local	0.3	CITY	Y	60	22	
8th	2	N	N	SHARED ROADWAY	PAVEMENT	GOOD	collector	0.3	CITY	Y	60	22	
5th	2	N	N	N	PAVEMENT	GOOD	collector	0.3	CITY	Y	60	22	48' wide block adjacent to post office
Main	2	N	N	N	PAVEMENT	GOOD	local	0.3	CITY	Y	100	30	
3rd	2	N	N	N	PAVEMENT	GOOD	local	0.2	CITY	Y	60	22	19' wide west of hwy
2nd	2	N	N	N	PAVEMENT	GOOD	local	0.2	CITY	Y	60	22	
Hull Lane	2	N	N	N	PAVEMENT	FAIR	collector	0.3	CITY/COUNTY	Y	60	24	between 82-RR tracks is City
Crescent Rd	2	N	N	N	PAVEMENT	GOOD	local	0.3	COUNTY	Y	60	19	
Newport Ave	2	N	N	N	PAVEMENT	GOOD	local	0.3	CITY	Y	60	20	
Brooks Rd	2	N	N	SHOULDER	PAVEMENT	GOOD	collector	0.3	COUNTY	Y	60	24	
Esther Ave	2	N	N	SHOULDER	PAVEMENT	GOOD	collector	0.6	CITY	Y	60	22	
Ruckman Ave (82)	2	Y	N	SHOULDER	PAVEMENT	GOOD	principal arterial	0.7	STATE	Y	80	24	strip-to-stripe=40'
Railroad Ave	2	N	N	N	PAVEMENT	GOOD	local	0.2	CITY	Y	60	22	
Lone Pine Ave	2	N	N	N	GRAVEL	GOOD	local	0.3	CITY	Y	60	19	
Imbler Rd	2	N	N	N	GRAVEL	GOOD	local	0.3	COUNTY	Y	60	20	

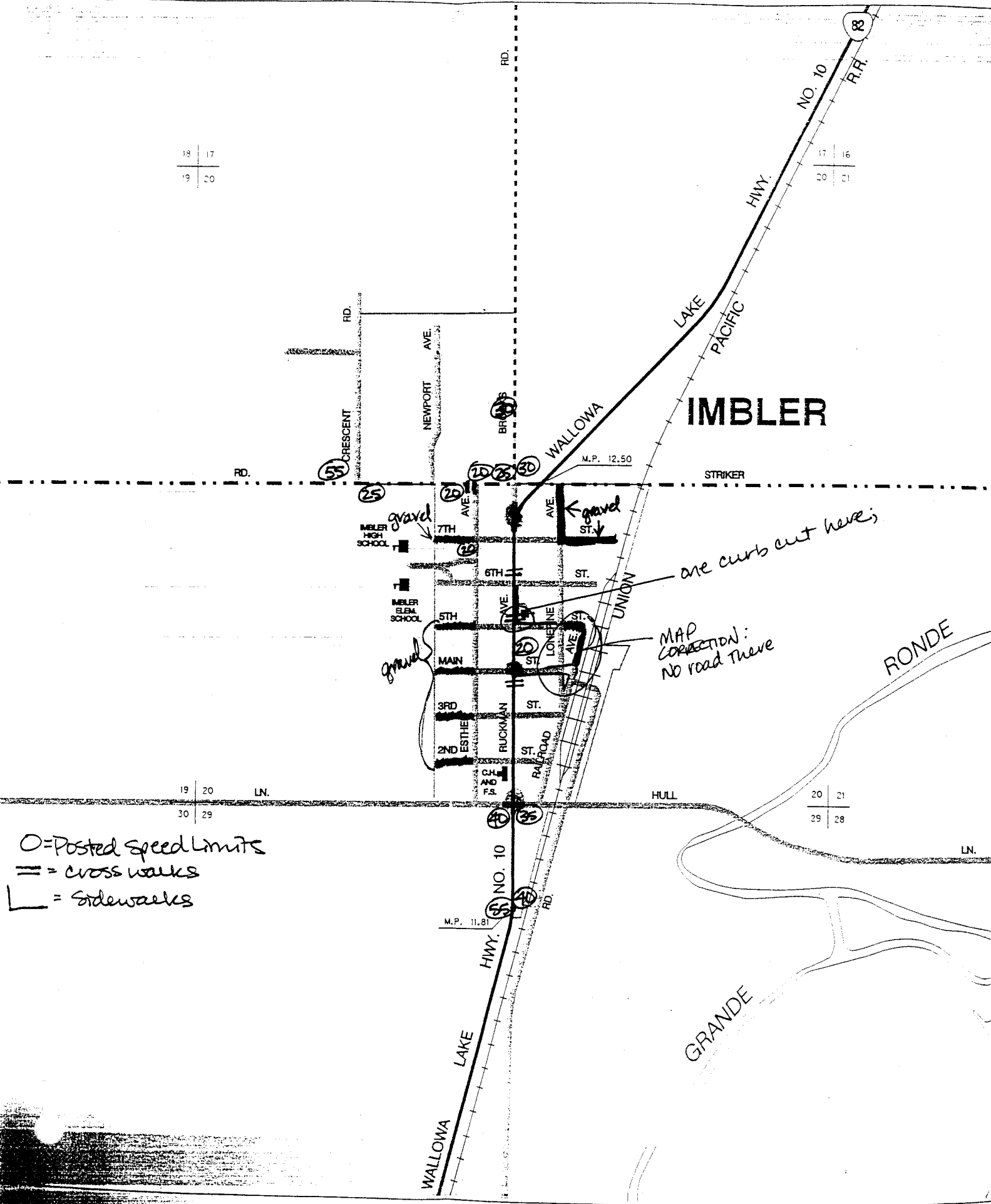
18 | 17
19 | 20

17 | 16
20 | 21

19 | 20 LN.
30 | 29

20 | 21
29 | 28

O = Posted Speed Limits
= = cross walks
L = sidewalks



IMBLER

one curbs cut here;

MAP CORRECTION:
NO road there

gravel

gravel

M.P. 11.81

M.P. 12.50

WALLOWA LAKE

GRANDE

RONDE

CRESCENT RD.

NEWPORT AVE.

RD.

WALLOWA

LAKE PACIFIC

HWY.

NO. 10

R.R.

STRIKER

UNION

HULL

LN.

Appendix C

IMBLER, OREGON

BICYCLE-PEDESTRIAN PLAN

A Comprehensive Land Use Plan Supplement

Prepared by Union County Planning Department

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Adopted:
November 4, 1996

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BICYCLE AND PEDESTRIAN PLAN FOR CITY OF IMBLER

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Bicycle and Pedestrian Plan

PLAN PURPOSE

I. INTRODUCTION

Bicycling and walking are ecological, energy efficient, and cost effective modes of transportation, which can help reduce traffic congestion, air and water pollution, road wear and the cost of road construction and repair. Urban bikeway and walkway networks address nicely the mobility and access needs of those who do not drive, including children too young to drive, people with income too low to own a car, many elderly people, and people with disabilities.

A. PURPOSE

This Plan addresses the Transportation Planning Rule bicycle and pedestrian requirements for the City of Imbler. The Plan identifies and directs opportunities for developing and improving bicycle and pedestrian facilities to assure that new streets and new development are designed in ways that provide safe, convenient, and direct bicycle and pedestrian access.

The Bicycle and Pedestrian Plan serves several purposes:

- . Guide the development of bicycle and pedestrian facilities in the participating jurisdictions;
- . Educate and inform about bicycle and pedestrian transportation; and
- . Set standards for planning and construction bikeways and walkways.

The Plan is intended to be used by the people of Imbler as a tool to preserve and enhance the livable character of the community and the quality of the road network by increasing non-motorized transportation choices. Most existing land use and transportation patterns and land development codes are oriented toward automobiles as the dominant transportation mode, with little thought given to the needs of people who bicycle and walk as a means of transportation. Today, each household owns more cars, makes more trips, and travels more miles per year than ever before. This has undesirable consequences as urban areas grow. Traffic volumes increase. More traffic means increased congestion, noise, and air and water pollution. Livability of communities declines, and demand for expensive road improvements increases.

Walking for recreation is a popular activity, and 75% percent of us own bikes. Most of our trips are short trips, less than two miles from home. Yet most of us make even short trips by automobile because there aren't safe and easy ways to get from one place to another by walking or bike riding. If safe, convenient walkways and bikeways are provided people will choose

Bicycle and Pedestrian Plan

pollution, traffic congestion and consumption of petroleum resources; they reduce the consumption of land for roads and parking resulting in compact urban growth; and they have very low impact on land uses and natural systems.

e. Transportation Planning Rule 12

The Transportation Planning Rule (OAR Chapter 660, Division 12) adopted in April 1991, requires cities and counties to plan for non-automotive transportation choices including bicycling and walking. Rule provisions vary based on a jurisdiction's population. Small jurisdictions are defined as cities with population under 2,500; small counties are those with populations under 25,000. Except for the City of La Grande, eight of the nine jurisdictions in Union County are defined as small jurisdictions, and are eligible to apply for whole or partial exemption from the Rule.

The TPR 12 bicycle and pedestrian facility requirements are as follows:

Safe and Convenient Bike and Pedestrian Access

Facilities providing safe and convenient pedestrian and bicycle access shall be provided within and from new subdivisions, planned developments, shopping centers and industrial parks to nearby residential areas, transit stops, and neighborhood activity centers, such as schools, parks and shopping. This shall include:

- (A) Sidewalks along arterials and collectors in urban areas;
- (B) Bikeways along arterials and major collectors;
- (C) Where appropriate, separate bike or pedestrian ways to minimize travel distances within and between the areas and developments listed above.

"Safe convenient and adequate" means bicycle and pedestrian routes facilities and improvements which; (A) are reasonably free from hazards particularly types or levels of automobile traffic which would interfere with or discourage pedestrian or cycle travel for short trips. (B) Provide a direct route of travel between destinations, such as between transit stop and a store; and, (C) meet the travel needs of cyclists and pedestrians considering the destination and length of trip. (045(3)(b)).

Internal Pedestrian Circulation

Internal pedestrian circulation shall be provided in new office parks, and commercial developments through clustering buildings, construction of pedestrian ways, skywalks, where appropriate, and similar techniques. (045(3)(d)).

Bicycle and Pedestrian Plan

II. EXISTING FACILITIES INVENTORY, NEEDS ANALYSIS, AND RECOMMENDED BICYCLE AND PEDESTRIAN FACILITY PROJECTS

A. COMMUNITY PROFILE

Imbler is a small agricultural community, population 297, located in the center of the flat Grande Ronde Valley floor, between La Grande and Elgin. The majority of households are families with two persons in the work force. Employment opportunities in Imbler are limited. Most workers commute 10 to 25 minutes to work in Elgin, La Grande, and Island City. In 1990, 80% of workers drove alone to work in an automobile, 5% carpooled, 5% walked to work, and 9% worked at home.

B. COMPREHENSIVE PLAN

The City of Imbler Comprehensive Plan supports the development and use of alternative types of energy efficient and economical transportation for local citizens. The City supports the use of bicycles and walking as transportation; it supports programs to improve transportation conditions for the disadvantaged; and cooperates with other local, state and federal agencies to help provide an efficient and economical transportation system.

C. BICYCLE AND PEDESTRIAN PLANNING IN IMBLER

The City of Imbler has developed without curbs, gutters, sidewalks, or bike facilities. The City does not have a storm drainage system. However, it does have good soil permeability and maintains barrow ditches and swales adjacent City streets for snow removal and drainage. In the past, the citizens and City Council felt the City was too small and rural in nature, and financial resources were too limited to consider planning for alternative modes of transportation.

Despite challenges, there are excellent opportunities to improve bicycling and walking conditions and to preserve and enhance the quality of life enjoyed in Imbler. The City is one-quarter to three-quarters of a mile across, small enough that the schools, churches, stores, post office, and other destinations are within walking and biking distance. Imbler's minimum residential lot size is 14,000 square feet which is needed to accommodate individual septic systems. The low density, large lot development pattern reflects the community preference for rural living.

The City of Imbler does not receive gasoline tax funds for bicycle and pedestrian facilities. Development of these facilities would rely on City resources for matching funds.

Bicycle and Pedestrian Plan

Recommendations:

Option 1 Widen the road surface to 36 feet to provide two 12 foot travel lanes for automobiles, and two 6 foot shoulders for shared bicycle and pedestrian use. This option employs rural highway standards rather than urban standards based on the rural character of Imbler.

Option 2 Maintain the existing 24 foot road surface with two 12 foot travel lanes for shared used by automobiles and bicycles. Install a sidewalk for pedestrians, without curb and gutter, separated from the road by an 8 foot parking lane and/or drainage swale. This option would provide adequate bicycle and pedestrian facilities, and preserve the rural and residential character of Esther Avenue better than paving 6 foot shoulders.

Project	From-To	Miles	Cost	Priority
<u>Option 1</u>				
Widen pavement +12 ft asphalt	Hull-Summerville	.49	\$46,800	low
<u>Option 2</u>				
1x5 ft sidewalk	Hull-Summerville	.49	\$58,500	low

2. **Summerville Road**

Hwy 82 to Imbler West City Limits

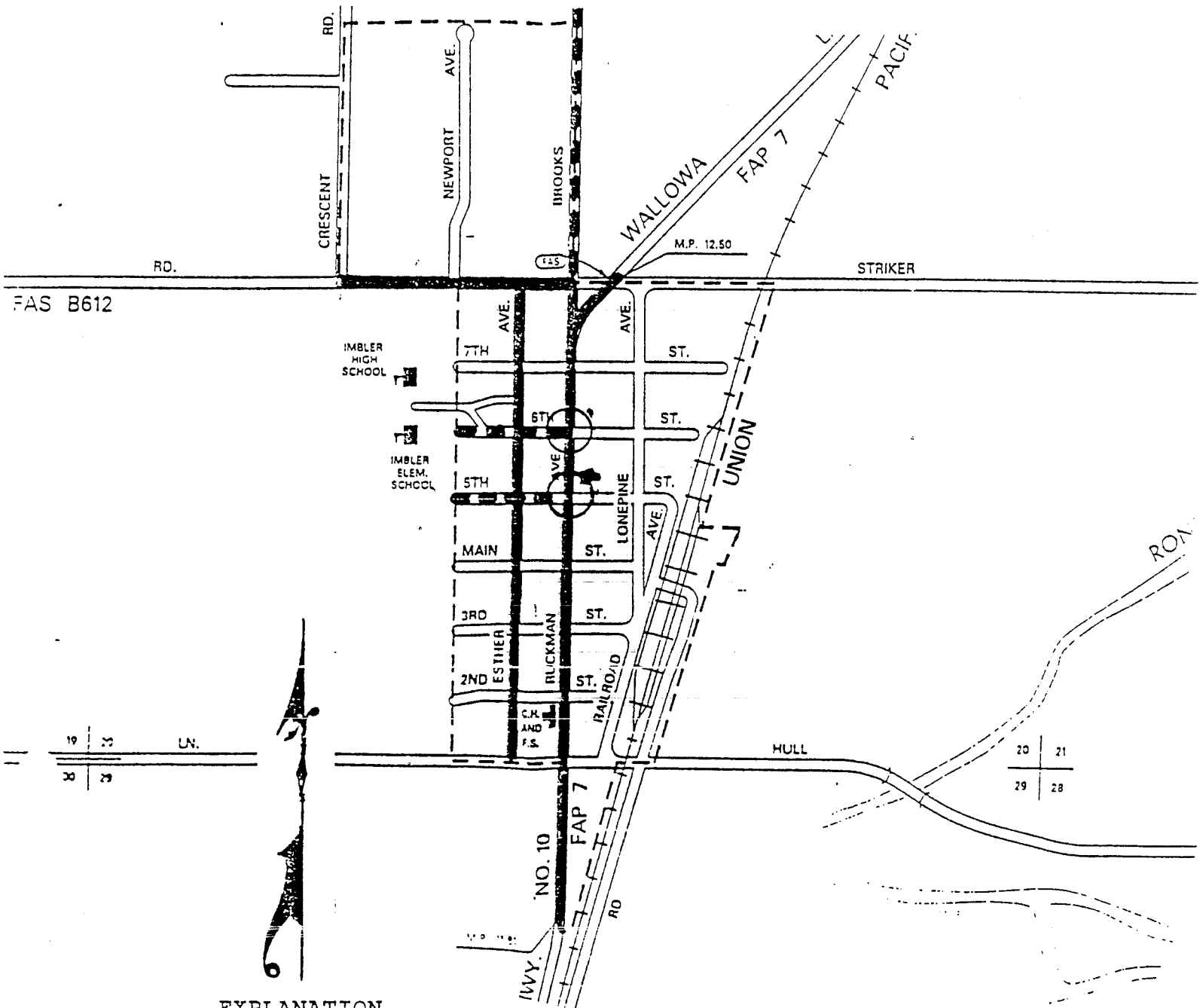
Summerville Road, a major collector in Union County, is used frequently for bicycling as well as by truck traffic taking a short-cut between Hwy 82 and Hwy 204. The road has a 24 foot oil mat surface, two 12 foot travel lanes, and no shoulders. The road edge, in places, slopes to barrow ditches on both sides.

Recommendations: Widen the road surface to 36 feet, maintain two 12 foot travel lanes, and add two 6 foot shoulders for bike and pedestrian use. This option employs rural highway standards rather than urban standards based on the rural character of Imbler.




Project	From-To	Miles	Cost	Priority
Widen pavement +12 ft asphalt	Hwy 82-West CL	.24	\$23,040	low

Bicycle and Pedestrian Plan

CITY OF IMBLER, UNION COUNTY, OREGON
 ROADWAY FUNCTIONAL CLASSIFICATION MAP
 BICYCLE AND PEDESTRIAN PLAN - 1995



EXPLANATION

-  Arterials and Major Collectors
-  Minor Collectors and Local Streets
-  Dangerous Intersections

Bicycle and Pedestrian Plan

Table 1: Summary of Existing Facilities and Recommendations

Street Name, Segment	Existing Geometry	Recommendations
State Hwy 82 Wallowa Lake Hwy (Ruckman Road) North to south CL Imbler's Main Street.	Minor Arterial Right-of-way: 80 Length: .50 mi Pavement: 44 2(14t) 2(8p) 2(8sh) bike/peds	No change.
Esther Avenue 6th-Summerville Rd Access to schools. High bike/ped use.	Minor Collector Right-of-way: 60 Pavement: 24 2(12t) Road aligned closer to west side of ROW.	Pavement: 36, 24 2(12t) 2(6sh) Option 1 1(5sw) Option 2 Provide sidewalk on east side separated from road by 8 ft parking lane or drainage swale.
Summerville Road (County Road #39) Hwy 82-West CL Popular road to bike, walk & jog	Minor Collector Right-of-way: 60 Length: .24 mi Pavement: 24 2(12t)	Pavement: 36 2(12t) 2(6sh)
5th Street Hwy 82-Ester Ave Access to schools.	Minor Collector Right-of-way: 60 Length: .045 mi Pavement: 22 2(11t) Drainage swales on both sides of right-of-way.	Pavement: 22 2(11t) 1(5sw) optional Plan for sidewalk on south side.
Key: bl bike lane, p parking, t travel lane, sh shoulder bikeway, sw sidewalk, Pavement pavement width.		

Bicycle and Pedestrian Plan

Table 1: Summary of Existing Facilities and Recommendations

Street Name, Segment	Existing Geometry	Recommendations
<p>6th Street</p> <p>Hwy 82-Ester Ave</p> <p>Access to schools.</p>	<p>Minor Collector Right-of-way: 60</p> <p>Length: .061 mi. Pavement: 20 2(10t) Large drainage ditch on norths side for 1/2 block.</p>	<p>Pavement: 24 2(12t) 1(5sw) optional Plan for sidewalk on south side behind ditch.</p>
<p>Brooks Road (County Road #35)</p> <p>Hwy 82-North CL</p> <p>Popular road to bike, walk, and jog.</p>	<p>Minor Collector Right-of-way: 60</p> <p>Length: .27 mi. Pavement: 24 2(12t)</p>	<p>Pavement: 36 2(12t) 2(6sh)</p>
<p>Key: bl bike lane, p parking, t travel lane, sh shoulder bikeway, sw sidewalk, Pavement pavement width.</p>		

Bicycle and Pedestrian Plan

III. BIKEWAY AND WALKWAY PLANNING PRINCIPLES, OBJECTIVES, PLAN POLICIES AND DESIGN STANDARDS

The bikeway and walkway planning principles and design standards discussed below were derived in whole or part from the Oregon Bicycle and Pedestrian Plan, 1995 draft, which has been an invaluable aid in preparation of this plan.

A. PLANNING PRINCIPLES

1. INTRODUCTION

New national and statewide emphasis on increasing walking and bicycling as important modes of transportation require that we design and provide appropriate bicycling and pedestrian facilities that are safe, direct, convenient and attractive to users.

It is physically, financially and politically impractical to provide a new and separate bicycle and pedestrian network in developed urban areas. It is therefore necessary to reconfigure existing roads to accommodate bicycles and pedestrians.

In Oregon, a basic principle for planning bikeway and walkway networks is to build and reconfigure roads to serve all users, both motorized and non-motorized. Bicycling and walking should occur on the existing roadway system that already serves all destinations.

2. ARTERIAL AND COLLECTOR STREETS

The arterial and collector street network is important to pedestrian and bicycle circulation in urban areas because it serves the mobility and access needs of the entire community. Arterial streets carry mostly through traffic. Collector streets carry traffic to and from local streets and arterials. Arterials and collectors provide direct, continuous and convenient access to most destinations. However, problems need to be overcome before they can be effectively used. Many arterial and collector streets have very high traffic volumes and speeds that discourage people who might want to walk or bike. Local streets are quieter, but are often not as direct or convenient.

Arterial and collector streets can be modified to accommodate bicycles and pedestrians when they are newly built or reconstructed, or by renovating them with bikeways and walkways.

In developed urban areas there is often little opportunity to add bicycle and pedestrian facilities by widening roadways because right-of-ways are utilized. Therefore, it will often be necessary to rededicate existing roadway space from automobile to bicycle and pedestrian use. This can help reduce traffic speeds and make the streets more attractive safe and pleasant for all users.

Bicycle and Pedestrian Plan

Where bike lanes cannot be provided, a safer bike and pedestrian environment can be achieved by reducing traffic speeds to 25 MPH or less using traffic calming techniques.

Minor Collectors and Local Streets

The appropriate facilities for bikes on minor collectors and local streets are shared roadways, because the low traffic speeds and volumes allow bicycles and automobiles to safely share the road.

Bike lanes are appropriate on minor collectors if traffic speed is above 25 MPH or traffic ADT is over 3000. Bike lanes on minor collectors are also appropriate to connect existing bike lanes or to extend bike lanes to destination points that generate high bicycle use, such as schools, parks and multi-family residential uses.

Walkways

Sidewalks are the appropriate pedestrian facilities in urban areas and should be provided on all urban streets. They provide a hard all-weather surface, physically separated from motor vehicle traffic as required by ADA regulations. Planting strips separate pedestrians from traffic and increase user comfort and safety.

Arterials and Major Collectors

Sidewalks should be provided on both sides of arterial and major collector streets in urban areas. In developing areas at the urban fringe or in small rural cities a paved 6 foot shoulder for shared pedestrian and bicycle use may be used as an interim pedestrian facility. This notion is based on rural standards. As urban development proceeds sidewalks should be provided.

Minor Collectors and Local Streets

Sidewalks should be provided continuous on one or both sides of all new minor collector and local streets. Often it isn't possible to install sidewalks in neighborhoods which were developed without them. On minor collector and local streets which do not have sidewalks, and have very low traffic volumes and speeds, it may be appropriate for pedestrians to share the road with vehicles. When pedestrians must share the road, a safer pedestrian environment can be achieved by reducing traffic speeds to 25 MPH or less using traffic calming techniques.

4. AASHTO GUIDELINES

To establish design practices and standards for bicycle facilities the Oregon Department of Transportation adopted the American Association of State Highway and Transportation Officials' (AASHTO) manual "Guide for the Development of Bicycle

Bicycle and Pedestrian Plan

The following Objectives and Plan Policies will be incorporated into the land use plan during implementation. These provisions are also intended to be used as a model for other jurisdictions when they are addressing federal and state bicycle and pedestrian transportation planning requirements.

Objective 1

Integrate bicycle and pedestrian planning into all transportation planning, design, construction and maintenance activities of ODOT, Union County and the eight incorporated cities.

Plan Policies

. Bicycle and pedestrian routes along road and street networks are preferred over separate pathways or accessways to provide safe, direct and convenient facilities.

. Separate bicycle and pedestrian pathways and accessways are reserved for situations where bicycle and pedestrian access would be enhanced and where street connections do not exist or are inappropriate.

. New residential streets will connect with existing street networks in order to provide more direct and convenient routes for automobiles, pedestrian and bicycle travel. Cul-de-sacs will be discouraged except where necessitated by environmental or existing development limitations.

Plan policies are adopted to satisfy the bicycle and pedestrian elements of the TPR 12.

Implementing ordinances, codes and standards are adopted to carry out the Plan Policies.

A Bicycle Coordinator and perpetual Bicycle Advisory Committee will coordinate the efforts of planning, public works, enforcement, and promotional activities as described in this Plan, and will be responsible for monitoring the continuing achievements of the Plan.

Develop dependable funding sources and actively seek additional sources.

Objective 2

Provide and maintain a network of safe and convenient pedestrian and bicycle access within and from new subdivisions, planned developments, shopping centers and industrial parks to nearby residential areas, and neighborhood activity centers, such as schools, parks and shopping.

Bicycle and Pedestrian Plan

Plan Policies cont...

Moderate hazards due to high traffic speeds and volumes to encourage bike and foot travel for short trips.

Objective 4

Increase bicycling and walking in urban areas to encourage 10% of trips by bike or foot.

Plan Policies

Collect and analyze data annually to increase bicycle usage and to improve the system's safety and efficiency.

Establish benchmarks to measure progress.

C. BIKEWAY DESIGN STANDARDS

1. INTRODUCTION

Bicycles are legally classified as vehicles. They can and will be ridden, and should be expected on most public roadways in Oregon. New roadways in La Grande therefore should be designed and constructed to accommodate both automobile and bicycle traffic. Road improvements for automobiles should be planned to enhance bicycle travel whenever possible, and should not create barriers and hazards for bike travel.

La Grande's urban and rural areas contain both paved and gravel semi-rural roads as well as city streets with and without curbs and sidewalks. The following standards recognize this variety and address both new construction and improvements on existing roadways. The design standards are meant to give bicyclists space on the roadway where they can travel with convenience and safety; to allow bicyclists to emulate automobile drivers and blend into the traffic flow. Attention is given to minimizing conflicts with motorists and pedestrians. In all cases, it is important that bikeways be incorporated into other road work to both minimize cost and to create an integrated system where all modes - motorized and non-motorized - are considered.

2. TYPES OF BICYCLE FACILITIES

There are four types of bicycle facilities: 1. shared roadways, 2. wide outside lane, 3. shoulder bikeway, and 4. bike lanes. Each facility design is discussed below.

a. Shared Roadway

On a shared roadway bicycles and automobiles share the same travel lanes. An automobile driver usually crosses over into the adjacent travel lane to pass a bicycle.

Bicycle and Pedestrian Plan

Paved shoulders are provided on rural roadways for a variety of safety, operational, and maintenance reasons, including emergency stopping, improved sight distance, structural support of the paved surface, and other maintenance and operation considerations. In general, the shoulder widths recommended for rural roadways and highways in the ODOT Highway Design Manual will serve bicycles well.

The standard width for shoulder bikeways is 6 feet. This provides ample width for bicycles, allows bicyclists to ride far enough from the edge of the pavement to avoid debris, and far enough from passing vehicles to avoid conflicts. Where there are physical width limitations, a minimum 4 foot shoulder may be adequate. Shoulders against a curb face must have a 5 foot minimum width, measured from lane stripe to curb face, the face of a guard rail, or other roadside barrier. On climbing lanes, a 6 foot shoulder (5 foot minimum) is needed to give uphill bicyclists the additional space needed to maneuver.

Whenever a highway or roadway is constructed, widened or overlain, all gravel driveways should be paved back a minimum 15 feet to prevent loose gravel from tracking onto the roadway shoulders.

ODOT's Standard Shoulder Widths for Rural Highways

Traffic Volume	Shoulder Widths		
	Rural Arterial	Collector	Rural Local
ADT under 250	4 ft	2 ft	2 ft
ADT 250-400	4 ft	2 ft	2 ft
ADT 400-DHV *100	6 ft	4 ft	4 ft
DHV 100-200	6 ft	6 ft	6 ft
DHV 200-400	8 ft	8 ft	6 ft
DHV over 400	8 ft	8 ft	8 ft

*DHV (Design Volume) is the expected traffic volume in the peak design hour (usually commuter times). DHV can vary from 13% to 25% of ADT. Source: Oregon Bicycle and Pedestrian Plan, 1995 draft.

Many paved county roads are 24 feet wide or less without a fog line. If present, fog lines are striped 10 or 11 feet from the center line. The remaining 2 feet of pavement should not be considered a shoulder bikeway (minimum width is 4 feet for a shoulder bikeway). These are considered shared roadways because most bicyclists will ride on or near the fog line.

Where existing gravel shoulders have sufficient width and base to support shoulder bikeways, minor excavation and the

Bicycle and Pedestrian Plan

the pavement allows a good tight joint, eliminates a ragged joint at the edge of the existing pavement.

d. Bike Lanes

A bike lane is a well marked travel lane on the roadway designated for preferential use by bicycles. Bike lanes are appropriate on urban arterials and major collectors. They may also be established on rural roads where significant bicycle use is expected.

Design Criteria

Bike lanes are one-way facilities that carry bicycle traffic in the same direction as adjacent motor vehicle traffic.

The standard bike lane width is 6 feet, wide enough for a bicyclist to ride far enough from the curb to avoid debris and drainage grates and far enough from adjacent traffic to avoid conflicts. Bicyclists riding three or four feet from the curb are more visible to passing traffic than bicyclists who hug the curb.

The minimum width for a bike lane is 4 feet on open shoulders, or 5 feet from the face of a curb, guard rail or parked cars. Bike lanes wider than 6 feet may be mistaken for a motor vehicle travel or parking lane.

A bike lane must be marked with an 8-inch wide lane stripe and pavement stencils to mark it for preferential use by bicycles.

If parking is permitted the bike lane should always be placed between the parked cars and the travel lane and be a minimum 5 feet wide.

Bike lanes on one-way streets should be on the right side of the roadway except where a bike lane on the left will decrease the number of conflicts (e.g., conflicts with right-turn lanes, driveway entrances). Bike lanes should only be located on the left side of one-way street if it is possible to safely reenter the traffic flow at the ends of the section.

A contra-flow bike lane on a one-way street is permitted in the December 1994, draft Oregon Bike and Pedestrian Plan, page 112, in some situations including the following:

1. The contra-flow bike lane is short and provides direct access to a high use destination.
2. Bicyclists can safely and conveniently reenter the traffic stream at either end of the section.
3. Bicyclists already use the street.

D. WALKWAY DESIGN STANDARDS

1. TYPES OF WALKWAY FACILITIES

Walkways, usually sidewalks, are designed and constructed to provide safe, convenient, and attractive places for people to walk separated from traffic. Walkways include sidewalks, paths, and roadway shoulders.

a. Sidewalks

In urban areas sidewalks are recommend for pedestrians. Curbs and gutters help drain the road and separate pedestrians from traffic. However, curb and gutter can add substantially to the cost of providing sidewalks in areas without storm drain systems. There are many situations in Eastern Oregon where sidewalks are needed but the cost of curb, gutter, and drainage cannot be justified, or where curbs don't fit the rural character of the community.

Design Criteria

Ideally a sidewalk should be 6 feet wide, but in most situations a 5 foot sidewalk is adequate. This width allows two people to walk side by side, or to pass a third person without leaving the sidewalk surface. Sidewalk width does not include the curb.

The useable 5 foot sidewalk space must be unobstructed from street furniture, trees, planters, mail boxes, light poles, signs, or other obstructions.

A sidewalk directly adjacent a travel lane should be 6 feet wide. In commercial areas and other areas with high foot traffic an 8 foot sidewalk is recommended. It is best to buffer pedestrians from traffic by placing a planting strip, bike lane, or parking lane adjacent the sidewalk.

Vertical clearance under signs, trees, and other vertical obstructions should be 8 feet, minimum 7 feet.

Sidewalks on bridges should match the width of the approach sidewalk, but should not be less than 5 feet. Raised sidewalks on bridges with design speeds greater than 40 MPH require a fence or other vertical barrier at curb line.

In small cities with open drainage systems, sidewalks without curb and gutter may be installed separated from traffic behind drainage swales or drainage ditches. These sidewalks should be built to the same standard as curbed sidewalks.

Bicycle and Pedestrian Plan

pedestrian facilities. However, in low density rural communities a 6 foot paved shoulder may serve pedestrian needs in the interim. Note that roadway shoulders do not satisfy ADA requirement for pedestrian facilities which are physically separated from motor vehicle traffic. On rural county roads or state highways where residential and commercial uses abut the road, sidewalks may be needed. Sidewalks without curb and gutter, provided on one or both sides of the road will provide adequate pedestrian facilities and preserve the rural residential character of the community better than paving 6 foot shoulders.

E. ADDITIONAL PLANNING CONSIDERATIONS

1. AMERICANS WITH DISABILITIES ACT (ADA)

The American with Disabilities Act (ADA) requires that transportation facilities accommodate disabled persons. For most practical purposes wheelchair users and vision-impaired people are the pedestrian facility user groups whose needs require special attention. ADA requires that pedestrian facilities be physically separated from motor vehicle traffic.

Sidewalk standards used by the jurisdictions in Union County are based on ODOT's standards and meet or exceed minimum ADA requirements.

a. Width

ADA requires a minimum 3 foot wide sidewalk; ODOT's standard 6 foot wide sidewalk exceeds this requirement.

b. Grade

ADA requires that facilities have 5% or less grade. A maximum grade of 12:1 (8.33%) is acceptable for a rise not more than 2.5 feet if a level landing at least five feet long is provided at each end. It would be better to extend the length of the rise to achieve a flatter grade of 5%.

Often when roads are built in hilly terrain, and the adjacent residential and commercial land uses warrant sidewalks, they will probably have to be built to the grade of the adjacent road.

c. Crossings

The allowable cross-slope for sidewalks and paths is 2%. At driveway approaches and curb cuts a minimum 3 foot wide area should be maintained at 2%.

d. Facilities for the Visually Impaired

Pedestrian facilities should be designed so visually impaired people can track through intersections. It is important to install crosswalks so they form a 90 degree angle with the curb, because visually impaired pedestrians are conditioned to depart the curb at 90 degrees and go straight to the opposite side. If angles other than 90 degrees are used, then the pavement marking material should be detectable to the visually impaired using the

Bicycle and Pedestrian Plan

standards and practices for multi-use paths, including at-grade and separated crossings, width and clearance, typical pavement structural sections, grades, structures, railings, fences and barriers.

Multi-use paths, known as "bike paths" in the past, are separated from automobile traffic. It is important to recognize these paths will be used by bicycles, pedestrians, joggers, and skaters, and sometimes even by equestrians, and to design them for a variety of uses.

In certain situations multi-use paths can help complete the bicycle and pedestrian network by providing a shorter, more direct path to destination points than the street network allows. This includes shortcuts through parks, connecting cul-de-sacs, and grade separated freeway, railroad, stream bridge crossings. They may also be components of a community trail system.

Multi-use paths have some disadvantages that are important to note. They create security problems if they are located in isolated places; personal security can become a problem if users cannot be seen. In case of emergency, it could take longer for medical or police help to arrive.

Multi-use paths are difficult and expensive to install and maintain. They must be built to higher standards and require special maintenance.

Multi-use paths should not be placed directly adjacent to roadways because some of the bicyclists will have to ride against traffic, a dangerous and illegal situation. Although not generally encouraged, multi-use paths can be constructed parallel to roadways under specific conditions. Refer to the Oregon Bicycle and Pedestrian Plan.

5. INTERSECTION DESIGN

At intersections the various roadway users must cross paths, giving rise to conflicts and accidents. Intersections should be designed so motorists, bicyclists and pedestrians clearly understand their best trajectory across the intersection and who has right-of-way.

a.. Right Angle Intersections

At right angle intersections, bike lanes should be striped to the marked crosswalks or a point where turning vehicles would normally cross them. The bike lanes should resume at the other side of the intersection.

Crosswalks, marked or unmarked, are considered an extension of sidewalks. They should be as short as possible. Wheelchair curb cuts should be placed in line with the crosswalk.

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The different travel speeds allow a vehicle driver to pass a bicyclist rather than ride side-by-side; and

All users are encouraged to follow the rules of the road requiring through vehicles to proceed to the left of right-turning vehicles.

For pedestrian safety and convenience, the pedestrian crossing must be clearly visible to the approaching right-turning vehicles. Where needed, curb extensions and pedestrian refuges should be provided to increase visibility and decrease the total crossing distance.

F. BIKEWAY SIGNING, MARKING AND RESTRIPIING

1. INTRODUCTION

As previously mentioned, all traffic control devices must conform to the national "Manual on Uniform Traffic Control Devices" (MUTCD) as supplemented by the Oregon Traffic Control Devices Committee. It is very important that signing and marking of bikeways and walkways is uniform and consistent if the facilities are to command the respect of the public and be safe for users. To provide uniformity and continuity, all jurisdictions in Union County will adopt the statewide traffic control standards.

2. BIKEWAY SIGNING AND MARKING

Standards for bikeway signing and marking are provided in the Oregon Bicycle and Pedestrian Plan, and the MUTCD, and are summarized below.

There are three groups of signs: regulatory, warning and guidance. Regulatory signs inform bicyclists, motorists and other users of traffic laws or regulations. Warning signs inform bicyclists and other users of potential hazardous conditions such as turns and curves, intersections, stops, hills, slippery surfaces, and railroad tracks. Guidance signs direct bicyclists and other users along an established bikeway.

a. Shared Roadways and Shoulder Bikeways Signing and Marking

Signs aren't usually required on shared roadways and shoulder bikeways. Bicyclists should be expected on all urban local streets which are mostly shared roadways. Roadway shoulders that meet ODOT standards have adequate width and surface to serve bicyclists.

On narrow rural roads heavily used by bicyclists it may be helpful to install bike warning signs (W11-1) with the rider "ON ROADWAY" or "ON BRIDGE ROADWAY." These signs should be used where there is insufficient shoulder width for a significant distance. This signing should be placed in advance of the roadway condition. If the roadway condition is continuous, an Additional rider "NEXT XX MILES" may be used.

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placed between the bike lane and the curb. Avoid placing stencils where automobiles frequently cross the bike lane, such as driveways, and the area immediately past intersections.

Extra stencils should be placed on long sections of roadway with no intersections. To determine the stencil spacing, multiply the travel speed (in MPH) by 40. For example, in a 35 MPH zone stencils would be placed approximately every 1400 feet. Stencils can be placed closer together if necessary.

Where parking is restricted, install "NO PARKING" signs (R7-9 and R7-9a) if problems with parking occur, or paint curbs yellow to indicate that parking is prohibited.

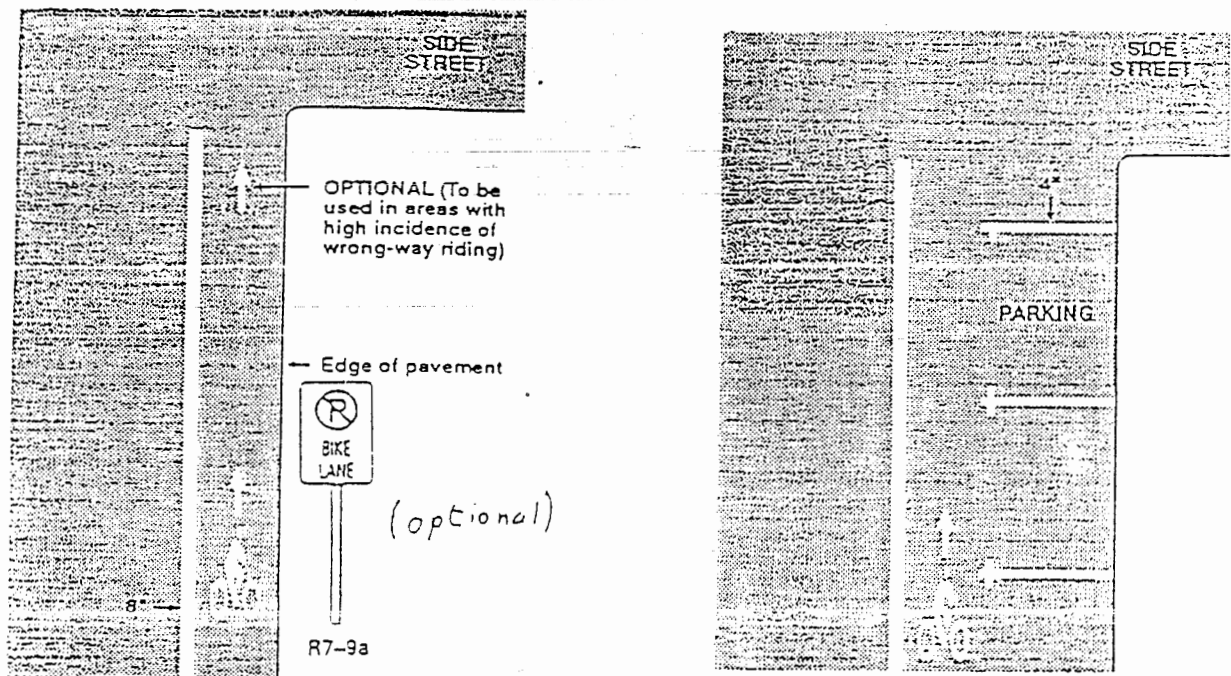


Figure 3: Typical bike lane markings
Source: Oregon Bicycle and Pedestrian Plan, 1995 draft.

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- . Mark and sign existing shoulders as bike lanes. Bike lane standards are listed above and outlined in the Oregon Bicycle and Pedestrian Plan.
- . Physically widen the road to add bike lanes. Standards are outlined in the Oregon Bicycle and Pedestrian Plan.
- . Restripe the existing road to add bike lanes. On many roadways it is necessary to use the existing road surface to accommodate bike lanes.

Three options for modifying existing roads to accommodate bike lanes or wide outside lanes are discussed below: 1. reduce travel lane widths; 2. reduce number of travel lanes; and 3. reconsider the need for parking.

a. Reduce Travel Lane Widths

Current urban roadway width standards are 12 foot travel lanes, 14 foot center turns lanes, 6 foot bike lanes, and 8 foot parking lanes. The reduced lanes widths presented below are within ASSHTO guidelines. However, review by a traffic engineer is advised. The need for full-width travel lanes decreases with traffic speed.

- . In 25 MPH speed zones, travel lanes may be reduced to 10 or 10.5 feet;
- . In 30 to 40 MPH speed zones, 11 foot travel lanes and 12 foot center turn lanes may be adequate; and
- . In 45 MPH or greater speed zones, maintain a 12 foot outside travel lane, and if traffic volumes are high, maintain a 14 foot center turn lane.

b. Reduce Number of Travel Lanes

Many one-way couplets were originally two-way streets. In some cases traffic can be handled with one less lane.

c. Reconsider the Need for Parking

A roadways primary function is to move people and goods not to store stationary vehicles. When parking is removed safety and road capacity are generally improved. Restricting parking will require negotiations with city councils and affected businesses and residents. To stave off potential conflicts, careful research is needed before making a proposal. This includes:

- . Counting the number of businesses and residences and the availability of both on-street and off-street parking.
- . Selecting which side would be less affected by removal. It will usually be the side with fewer businesses and residences or the side with residences rather than businesses in a mixed-use neighborhood.
- . Proposing alternatives such as;

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ways to modify existing roads for bike lanes. It is important to have a traffic engineer review proposals which reduce roadway widths below the current urban standards.

Adding bike lanes can increase safety because automobile travel lanes are farther from curbs, traffic lanes are better defined, and parking is reduced. Adding bike lanes often improve sight distances and increase radii at intersections and driveways.

Restriping travel lanes relocates automobile traffic lanes which can help extend the pavement life as traffic is no longer driving in the same well worn ruts.

G. BICYCLE PARKING STANDARDS

1. INTRODUCTION

The Transportation Planning Rule requires jurisdictions to adopt bicycle parking standards. OAR 660-12-045(3)(a) requires local governments to adopt land use or subdivision regulations for urban areas and rural communities to require: (a) bicycle parking facilities as part of new multi-family residential developments of four units or more, new retail, office and institutional developments. . ."

Safe and convenient parking facilities are essential to all modes of transportation, including bicycles. Any bicycle trip includes parking. The lack of secure and convenient places to park bicycles discourages their use as transportation. The same consideration should be given to bicyclists as is given to automobile drivers who expect to find parking at their destinations.

2. TYPES OF BIKE PARKING

There are two types of bike parking, Class 1 and Class 2:

- a. Class 1, long-term parking should provide complete security and protection from weather. It is intended for situations where a bicycle is left unattended for extended periods of time. For example, apartment complexes, places of employment, schools, libraries, entertainment centers, and shopping centers.
- b. Class 2, short-term parking, provides racks that allow the bicycle frame and both wheels to be locked to the rack, but is not necessarily protected from the weather.

3. BICYCLE RACKS

Bicycle racks for required bicycle parking must be designed so that they:

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- . All of the required bicycle parking for residential, school and places of employment should be covered.
- . 50% of required bicycle parking for commercial uses should be covered.
- . If motor vehicle parking is covered, required bicycle parking should also be covered.
- . If 10 or more bicycle parking spaces are required, then at least 50% of the bicycle parking spaces should be covered.

6. BICYCLE PARKING LOCATION

Required bicycle parking should be located in well lighted, secure locations within 50 feet of a main entrance to a building, but not further from the entrance than the closest automobile parking space. A highly visible location with significant pedestrian traffic reduces the risk of theft. Care must be taken to avoid conflicts with pedestrian traffic.

Short term bike parking for customers may be located up front; long term parking for employees should be covered and may be located farther from an entrance.

In Central Business Districts efforts should be made to provide bicycle parking on the street or in established parking lots rather than on sidewalks. Bike parking on sidewalks encourages riding on the sidewalks and reduces the available sidewalk width. Care must be taken to protect on-street bike parking from automobiles.

Bicycle parking may be provided within the public right-of-way in areas without building setbacks, subject to approval of local officials and provided it meets other bicycle parking requirements. Bicycle parking within a public right-of-way should allow 6 feet clearance around parked bikes to allow pedestrians to pass.

7. NUMBER OF PARKING SPACES

The required number of bicycle parking spaces should be based on easily measured criteria such as, square feet of buildings, number of residential units, number of classrooms, etc. Employment and retail centers are encouraged to voluntarily provide additional parking to satisfy the needs of their customers and employees.

8. SIGNAGE

Bicycle parking facilities may be under used if they are not identified with appropriate signs, particularly when parking locations are not visible from the main building entrance. Signs indicating the bicycle parking location should be installed.

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root barrier (12 inch recommended) when constructing new facilities will help to supplement this effort.

The edges of paved areas are typically very susceptible to deterioration. Since this is the portion of the roadway which is utilized for bicycle and pedestrian activity it is important they are maintained in an acceptable condition. Chip sealing and oiling needs to be extended across the entire roadway so the ability to utilize shoulders for alternate sources of transportation is not jeopardized. This action will also ensure that the surface of the roadway is smooth and accommodating and that noticeable inconsistencies between travel lanes and other portions are rare. Items such as manhole covers and drainage gates should be improved so that they match the surface of the roadway with a minimum margin of error (no more than 3/4" is recommended). Where this can not be accomplished, edges should be tapered to provide a transition area in the roadway surface.

Maintenance work which is limited to one area or spot on the roadway surface may also prove to be detrimental unless precautionary measures are taken. If possible, the improvement project should extend across the entire roadway to maintain a consistent surface. If this is not possible, fill or patch material should be properly compacted and excess or loose materials should be swept away before they are able to stray onto a bikeway or shoulder and cause conflicts. Rolling is preferred to utilizing a grader blade although a grader having smooth tires will work acceptably. Maintenance projects which occur directly on the shoulder or in the bike lane should leave a smooth surface. Eliminating sharp edges is also important.

Ideally each jurisdiction would be capable of creating a position for a Bicycle/Pedestrian Coordinator. This position would oversee the development and maintenance of the program. Acting as a liaison between involved agencies the coordinator would have primary responsibility to ensure that facilities are planned, funded, constructed, maintained and used. This position would also work with the public on awareness and educational items. Lacking such an individual to work exclusively and extensively with bicycle and pedestrian elements, a Bicycle/Pedestrian Advisory Committee can play a key role in the implementation of the bicycle/pedestrian program.

The committee can identify current or potential conflicts between transportation system users due to a lack of signing, maintenance and/or high levels of traffic. Holding meetings in an open forum can solicit public input. The committee can provide support to local law enforcement officers who are required to issue tickets for violations related to bicycle use and provide the public with educational information about bicycling standards and the location of bicycle and pedestrian routes. In addition, the Bicycle/Pedestrian Advisory Committee can work to encourage recreational uses.

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City Street:

Widen roadway 6 feet for a distance of 1000 feet (fill needed)
\$6.00 multiplied by 1000 feet = \$6,000.00 (one side)
\$6,000.00 multiplied by a chaos factor of 1.5 = \$9,000.00
\$9,000.00 is the estimated expense of the improvement for one side

These figures are estimates and can not be considered to represent the true cost of the improvement projects. This method of calculating costs has been reviewed by representatives of the Union County Road Department. The analysis concluded that although the figures may not be correct, they should by no means be under stated.

The expense of striping the road surface to delineate bicycle lanes and shoulder bikeways has been determined with more precision. Information gathered from the Oregon Department of Transportation identifies the following costs for painting lines:

4" Solid Line - \$180.00/mile	approximately \$.034/foot
8" Solid Line - \$384.00/mile	approximately \$.073/foot
4" Skip Line - \$70.00/mile	

ODOT estimates striping projects at cost plus 10%. This method was used to calculate project expenses. The cost for an eight-inch solid line was utilized.

Sidewalk construction costs have also been estimated with relative precision. Information provided the City of La Grande Public Works Department identifies the City's low bid for sidewalks at \$4.50 per square foot. This figure has been used to calculate project expenses. Curb installation cost the City of La Grande \$21.00 per foot. Storm drains have been estimated at \$1400.00 per catch basin, \$2500.00 per man hole into which the catch basin drains and \$30.00 per foot for pipe (8").

D. FUNDING

Finding funding sources will be critical to the implementation of this plan. Programs such as the federal Intermodal Surface Transportation Efficiency Act (ISTEA) and the State Highway Fund are potential sources.

ISTEA was passed in 1991 to facilitate and encourage the development of transportational facilities which are not dependant on the automobile. Along with the passage of this act vast sums of money were dedicated to supporting transportation enhancements. These enhancements have been defined as follows:

" with respect to any projects or the area to be served by the project, provision of facilities for pedestrians and bicycles, acquisition of scenic easements and scenic or historic sights, scenic or historic highway programs, landscaping and other scenic

Bicycle and Pedestrian Plan

Category 4 is the name given to local assistance grants which jurisdictions are eligible to apply for. In this category applications can be made for construction projects with 80% state grants up to \$50,000. Bicycle plan development with 50% state grants up to \$20,000 and Bicycle map development with 50% state grants up to \$10,000.

The Oregon Community Development Block Grant Program is also a possible source of state funding for bicycle projects. The Oregon Special Works Fund is another. Education and safety programs may be partially funded by the Oregon Traffic Safety Division.

Some projects for jurisdictions such as Union County, La Grande, Imbler and Elgin may be eligible to be included in the Oregon Department of Transportation's Corridor Management Plan for the La Grande-Wallowa Lake Transportational Corridor. The intent of this management plan is to analyze all types of transportation within the corridor and to encourage alternate sources of transportation which are not dependent on the automobile. The inclusion of some of these projects into ODOT's improvement program may shift the responsibility from the affected jurisdiction.

In addition, private citizens, businesses and developers may all be persuaded to encourage the use of alternate sources of transportation and perhaps even fund the construction of facilities or donate materials and/or equipment. Abandoned railroad lines, utility easements and many other types of corridors present opportunities to establish bicycle and pedestrian facilities. Jurisdictions need to be constantly on the look out for potential facilities.

E. EDUCATION & ENFORCEMENT

Along with providing facilities for bicycle and pedestrian mobility the public needs to be educated about their use. First of all, the public needs to understand where such facilities are located, so they can choose safe routes and reduce conflicts with the other system users.

Educating the public how to use these facilities is also extremely necessary. This aspect is commonly overlooked. Bicyclists who are turned onto the roadway with little or no regulations and an equally deficient understanding of how to effectively utilize the facilities are a potential threat to themselves and other system users.

Failing to educate the public about location and proper use can have several adverse effects. Facilities which are constructed but not used are of no benefit to anyone. Misuse of the facilities can create an animosity between motorists and bicyclists which discourage bicycle use and encourage conflict between the two users.

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Requiring bicyclists to obey the rules designed for them has a farther reaching effect than simply issuing citations. Statistics show that many bicycle/automobile accidents are the result of a bicyclist failing to yield at a stop sign or weaving in and out of traffic with reckless abandon. These activities and similar traffic infractions place both the cyclist and the motorist in danger. These are also the type of activities which enrage motorists and discourages their support for construction of bicycle and pedestrian facilities. Police officers must be willing and able to enforce bicycle laws. They must receive the support of the community in doing so.

Bicycle and Pedestrian Plan

APPENDIX A: GLOSSARY OF TERMS AND ABBREVIATIONS

AASHTO American Association of State Highway and Transportation Officials. Their publication, *Guide for Development of New Bicycle Facilities*, provides the basic facility construction guidelines and specifications for this plan.

Accessway An interconnecting paved pathway that provides pedestrian and or bicycle passage between blocks running from street to street.

ADA The Americans with Disabilities Act; civil rights legislation passed in 1990, effective July 1992.

ADT Average daily trips, a measure of traffic volume.

Arterial A through road that connects major traffic generators. Arterials are designated by the Transportation Plan/Comprehensive Plan and the various City Comprehensive Plan.

BADT Bicycle average daily trips measured during the months of June through September.

Bicycle In the strictest sense a bicycle is a human-powered land vehicle with two tandem wheels, a steering handle, a saddle seat, and pedals by which it is propelled. In legal terms, the definition is expanded to include other velocipedes: (1) designed to operate on the ground on wheels, (2) propelled solely by human power, upon which any person or persons may ride, and (3) with every wheel more than 14 inches in diameter. This takes in the broader range of bicycle-type vehicle (recumbents, tricycle, etc.) while excluding such vehicles as pushcarts. Bicycles are legally classified as vehicles that may be ridden on public roadways in Oregon.

Bicycle Facilities General term denoting improvements and provisions made by public agencies to accommodate or encourage bicycling, including parking facilities, all bikeways, and shared roadways not specifically designated for bicycle use.

Bicycle Parking Facilities Space and improvements dedicated for securing bicycles including but not limited to marked spaces, structures including lockers, racks and enclosures and areas providing maneuvering space for access to parking spaces and improvements.

Bike Lane A portion of the roadway which has been designated by striping, signing, and pavement marking for preferential or exclusive use by bicyclists.

Bike Lane Stripe An 8-inch wide line separating a bike lane from a travel lane.

Bicycle and Pedestrian Plan

Grade Separation__ Vertical separation of travelways through the use of a structure so the traffic crosses without interference.

Highway__ A general term denoting a public way for purposes of travel, including the entire area within the right-of-way.

ISTEA__ The Intermodal Surface Transportation Efficiency Act.

Local Street__ A street designated to provide access to and from residences or businesses.

Main Entrance__ The principle building entrance or entrances. A main entrance door is not a door that is locked during normal business hours.

Motor Vehicles__ A vehicle that is self propelled or designed for self-propulsion.

Multi-Use Path__ A bikeway physically separated from motorized vehicular traffic by an open space or barrier and either within the highway right-of-way or within an independent right-of-way.

MUTCD__ Abbreviation for Manual on Uniform Traffic Control Devices approved by the Federal Highway Administration as a national standard for placement and selection of all traffic control devices on or adjacent to all roadways open to public travel.

MVC__ Motor Vehicle Code which contains the rules of the road that motorists and cyclists must follow.

Mountain Bike__ A bicycle generally characterized by rugged construction, wide tires, extra bottom bracket clearance, low gears, and stable handling - attributes that enhance its rideability on rough and steep terrain.

Mountain Bike Route__ A rough or unpaved bikeway upon which an average cyclist using a normal road bike would have difficulty.

OAR__ Oregon Administrative Rule, A rule written by an affected government agency, intended to clarify the intent of an ORS.

ODOT__ Oregon Department of Transportation

ORS__ Oregon Revised Statute. ORS 366.514, the "Oregon Bicycle Bill," is the law describing funding and development of bikeways.

Pavement Marking__ Painted or applied line(s) or legend placed on any bikeway surface for regulating, guiding or warning traffic.

Pedestrian__ A person whose mode of transportation is on foot. A person walking a bicycle becomes a pedestrian.

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Traffic Control Devices__Signs, signals or other fixtures, whether permanent or temporary, placed on or adjacent to the travelway by authority of public body having jurisdiction to regulate or guide traffic.

Traffic Volume__The number of vehicles that pass a give point for a given amount of time, usually expressed as Average Daily Trips (ADT).

Travelway__Any way, path, road or other travel facility used by any and all modes of transportation.

UGB__Urban Growth Boundary defines the area near an incorporated city, that is deemed suitable and necessary for urban uses.

Vehicle__Any device in, upon or by which any person or property is or may be driven or drawn upon a public highway. A bicycle is a vehicle.

Walkway__A transportation facility built for use by pedestrians, including persons in wheel chairs. Walkways include sidewalks, paths and paved shoulders.

Wide Outside Lane__A wider than normal curbside travel lane that is provided for ease of bicycle operation where there is insufficient room for a bike lane or shoulder bikeway.

APPENDIX B: LAND USE REGULATION CODE PROVISIONS

TPR Requirements for Urban Areas and Rural Communities [OAR 660-12-045 (3)(a)]

(3) (a) Bicycle parking facilities as a part of new multi-family residential developments (9+ units), new retail, office and institutional developments.

A. Discussion

Two types of bicycle parking are needed: long-term parking for employees and residents and short-term parking for visitors and customers. Long-term parking needs to be especially secure and protected because it may be unattended for hours at a time or overnight and possibly even longer. However, it does not need to be located any closer to a building entrance than auto parking. Short-term parking does not need to be as secure, bicycles will not be left unattended for long periods of time. To be convenient, short-term bicycle parking does need to be located near a building entrance.

Bicycle parking requirements need to address two distinct needs. Generally, long-term bicycle parking should be provided for one out of ten employees.

The need for the second type of bicycle parking, short-term, will vary from use to use. For example, an industrial use will not receive many visitors or customers, and therefore would not need a large amount of short-term parking of any kind. Retail uses, on the other hand, can expect to receive a large amount of short-term traffic and should provide for greater amounts of short-term parking. The recommended bicycle parking requirements are based on these concepts.

B. CODE PROVISIONS

Standards for Commercial, Professional and Public Zones, and Commercial Uses in Residential Zones

1. Number of Parking Spaces Required

- Integrate bicycle parking space requirements with auto parking space requirements - i.e, one space per multi-family residential unit, one space per 5,000 square feet of retail show room floor, one space per five employees and one space per five persons for places of assembly - churches, granges, etc.

- Shared bicycle parking areas shall be encouraged where all of the bicycle standards can be satisfied for the collective uses.

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- Bicycle parking facilities shall be separated from motor vehicle parking and maneuvering areas by a barrier or sufficient distance to prevent damage to the parked bicycles.
- If ten or more bicycle spaces are required, then at least 50 percent of the bicycle spaces must be covered.
- Vertical or upright bicycle storage structures are exempted from the parking space length standard.
- Each required bicycle parking space must be accessible without moving another bicycle.
- Bicycle parking facilities shall offer security in the form of either a lockable enclosure in which the bicycle can be stored or a stationary object (i.e., a "rack") upon which the bicycle can be locked.
- All bicycle racks, lockers, or other facilities shall be securely anchored to the ground or to a structure.
- Lighting shall be provided in a bicycle parking area so that all facilities are thoroughly illuminated and visible from adjacent sidewalks or motor vehicle parking lots during all hours of use. Bicycle parking shall be at least as well-lit as motor vehicle parking.
- Areas set aside for required bicycle parking must be clearly marked and reserved for bicycle parking only.
- Where bicycle parking facilities are not directly visible and obvious from the public right(s)-of-way, entry and directional signs shall be provided to direct bicyclists from the public right-of-way to the bicycle parking facility. Directions to employee parking facilities may be signed or supplied by the employer as appropriate.
- Outdoor bicycle parking facilities shall be surfaced in the same manner as the motor vehicle parking areas or with a minimum of one inch thickness of hard surfacing (i.e., asphalt, concrete, pavers, or similar material). This surface will be maintained in a smooth, durable, and well-drained condition.

TPR Requirements for Urban Areas and Rural Communities [OAR 660-12-045 (3) (b), (c) & (d)]

(3) (b) Safe and convenient pedestrian and bicycle access within and from new subdivisions, planned developments, shopping areas and industrial parks to nearby residential areas, neighborhood activity centers including:

(c) An accessway is provided consistent with the standards for Accessways;

(d) Cul-de-sacs shall be as short as possible and shall not exceed 400 feet in length.

- Where a subdivision or partition includes or is adjacent to land likely to be divided and developed in the future; streets, bicycle paths and pedestrian ways shall continue through the full length of the subdivision or partition and be planned for the adjacent land where necessary to provide for convenient pedestrian and bicycle access to other transportation routes, businesses and residential services areas.

- Where subdivision lots or partition parcels can be redivided the location of lot and parcel lines and other layout details shall be such that future division may be readily made without interfering with the orderly extension of adjacent streets, bicycle paths or pedestrian ways. Any building restrictions within future transportation locations shall be made a matter of record for the purpose of future land divisions.

- Where determined necessary by the decisionmaking body for public safety and convenience, the land developer may be required to publicly dedicate accessways (1) to connect to cul-de-sacs, (2) to pass through oddly shaped or unusually long blocks, (3) to provide for networks of public pedestrian and bicycle paths, or (4) to provide access to other transportation routes, businesses, residential or services areas.

- New construction or reconstruction of major collector and arterial streets will include bicycle facilities as prescribed by the BP Plan.

- Bikeways and sidewalks shall be installed along the frontage of all new streets during the construction of arterial and collector roads, where so designated in the comprehensive land use plan during reconstruction of arterial and collector roads and streets, and construction of local streets in other than single-family residential developments.

- On local streets in areas planned for single family residential development, sidewalks shall be constructed during home construction. The land divider may file an agreement as assurance of completion of all sidewalks within two years of final plat. The agreement may be in the form of a bank's letter of credit, surety bond or other acceptable surety and must cover 100% of the cost of the sidewalks. Sureties covering stages or portions of improvements may be released as such portion is completed to the satisfaction of the City Council or authorized agent.

* Curb sidewalks shall maintain a minimum unobstructed width two feet less than the required sidewalk width. (Example - A mailbox may be located within two feet of the curb)

* A setback sidewalk shall be separated from the curb by a planting strip of at least four feet in width. The planting strip may be paved in neighborhood commercial areas.

* Bike lanes and shoulder bikeways along collectors and arterials shall be six feet wide and shall be provided for each direction of travel allowed on the street.

* Sidewalk and bicycle path lighting shall be provided in conjunction with new road construction and new development.

* Wheelchair ramps and other facilities shall be provided as required by the Americans with Disabilities Act (ADA). The lower lip of the wheelchair ramp shall be flush with the roadway surface.

* Bikeways shall be designed and constructed consistent with the design standards in the Oregon Bicycle Plan, 1992 and AASHTO's "Guide for the Development of Bicycle Facilities, 1991".

- Adequate overhead clearance on sidewalks, pedestrian paths and bicycle paths shall be eight feet for all signs projecting over such routes except where a marquee projects more than two-thirds of the distance from the property line to the curb or street side of the bicycle way, the minimum clearance shall be 12 feet.

- Vegetation shall not overhang or encroach upon a sidewalk, pedestrian path or bicycle path lower than nine feet. The city may require the person(s) responsible for encroachment into clearance areas to trim, prune or remove all trees, shrubs, plants and vegetation.

- Sidewalks along collector and arterial streets shall be set back from the curb where possible. On low-volume, residential collector streets, a five foot wide, curb-side sidewalk may be acceptable. On high-volume collector streets if the sidewalk is built adjacent to the curb, it shall be a minimum of seven feet wide. Greater width, up to 10 feet, may be required where higher pedestrian volumes, shared use with bicycles, or other pertinent factors require a safer and more convenient facility.

Vacating Public Right-of-Way

When vacating improved or unimproved public right-of-way, pedestrian and bicycle easements shall be established for public safety and convenience where determined necessary.

except when construction or a crossing structure is found to be feasible; or,

6. When a cul-de-sac or dead end street abuts rural resource land in farm or forest use at an urban growth boundary except where the adjoining land is designated as an urban reserve area.

Accessways shall be provided to adjacent developments when feasible. Development patterns must not preclude eventual site-to-site connections even if infeasible at the time of development.

(3) (d) Provide internal pedestrian circulation in new office parks and new commercial developments by clustering buildings; constructing pedestrian ways, skywalks, where appropriate; and similar techniques.

A. DISCUSSION

Walkways should be provided for the following:

- . New office parks and commercial developments.
- . Recommended for institutional development and public buildings.
- . To each street abutting the property, not including limited access freeways.
- . For every 300 feet of street frontage or for every eight rows of vehicle parking.
- . To any bikeway or walkway along a frontage of the site which is not bordered by a street.

B. CODE PROVISIONS

- Walkways shall connect building entrances to one another and from building entrances to public street entrances.
- Onsite walkways shall connect with walkways, sidewalks, bikepaths, alleyways and other bicycle or pedestrian connections on adjacent properties used or planned for commercial, multi-family, institutional or park use.
- Walkways and driveways shall provide a direct connection to walkways and driveways on adjacent developments.
- Potential pedestrian connections between the proposed development and existing or future development on adjacent properties other than connections via the street system shall be identified. The development application shall designate these connections on the proposed site plan or

provided which prevent parked vehicles from obstructing the walkway.

- Pedestrian scale lighting fixtures shall be provided along all walkways. Onsite pedestrian walkways must be lighted to a level where the system can be used at night by employees, residents and customers.

- Stairs or ramps shall be provided where necessary to provide a direct route. Walkways without stairs shall have a maximum slope of eight percent and a maximum cross slope of two percent. Where walkways provide principal access to building entrances maximum slope is limited to five percent to meet ADA standards.

- Where the pedestrian system crosses driveways, parking areas and loading areas, the system must be clearly identifiable through the use of elevation changes, speed bumps, a different paving material or other similar method.

- Walkways on private property that provide direct links between publicly owned pedestrian routes shall be placed in public easements or be dedicated to the public.

APPENDIX C: TRANSPORTATION PLANNING RULE; OAR CHAPTER 660,
DIVISION 12

660-12-000 Purpose

The purpose of this division is to implement Statewide Planning Goal 12 (Transportation). It is also the purpose of this division to explain how local governments and state agencies responsible for transportation planning demonstrate compliance with other statewide planning goals and to identify how transportation facilities are provided on rural lands consistent with the goals. The division sets requirements for coordination among affected levels of government for preparation, adoption, refinement, implementation and amendment of transportation system plans. Transportation system plans adopted pursuant to this division fulfill the requirements for public facilities planning required under ORS 197.712(2)(e), Goal 11 and OAR Chapter 660, Division 11, as they relate to transportation facilities. Through measures designed to reduce reliance on the automobile, the rule is also intended to assure that the planned transportation system supports a pattern of travel and land use in urban areas which will avoid the air pollution, traffic and livability problems faced by other areas of the country. The rules in this Division are not intended to make local government determinations 'land use decisions' under ORS 197.015(10). The rules recognize, however, that, under existing statutory and case law, many determinations relating to the adoption and implementation of transportation plans will be land use decisions.

660-12-005 Definitions

For the purposes of this division, the definitions in ORS 197.015, the Statewide Planning Goals and OAR Chapter 660 shall apply. In addition the definitions listed below shall apply.

(1) Access Management, means measures regulating access to streets, roads and highways from public roads and private driveways. Measures may include but are not limited to restrictions on the siting of interchanges, restrictions on the type and amount of access to roadways, and use of physical controls, such as signals and channelization including raised medians, to reduce impacts of approach road traffic on the main facility.

(2) Affected local government: means a city, county or metropolitan service district that is directly impacted by a proposed transportation facility or improvement.

(3) Committed Transportation Facilities, means those proposed transportation facilities and improvements which are consistent with the acknowledged comprehensive plan and have approved funding for construction in a public facilities plan of the Six Year Highway or Transportation Improvement Program.

(4) Demand Management means actions which are designed to change travel behavior in order to

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

(5) Major: means, in general, those facilities or developments which, considering the size of the urban or rural area and the range of size, capacity or service level of similar facilities or developments in the area, are either larger than average, serve more than neighborhood needs or have significant land use or traffic impacts on more than the immediate neighborhood.

"Major" as it modifies transit corridors, stops, transfer stations and new transportation facilities means those facilities which are most important to the functioning of the system or which provide a high level, volume or frequency of service.

"Major" as it modifies industrial, institutional and retail development means such developments which are larger than average, serve more than neighborhood needs or which have traffic impacts on more than the immediate neighborhood.

Application of the term "major" will vary from area to area depending upon the scale of transportation improvements, transit facilities and development which occur in the area. A facility considered to be major in a smaller or less densely developed area may, because of the relative significance and impact of the facility or development, not be considered a major facility in a larger or more densely developed area with larger or more intense development or facilities.

(6) Metropolitan Planning Organization (MPO), an organization located within the State of Oregon and designated by the Governor to coordinate transportation planning in an urbanized area of the state including such designations made subsequent to the adoption of this rule. The Longview-Kesaw-Rainier MPO is not considered an MPO for the purposes of this rule.

(7) ODOT: means the Oregon Department of Transportation.

(8) Parking spaces: means on and off street spaces designated for automobile parking in areas planned for industrial, commercial, institutional or public uses. The following are not considered parking spaces for the purposes of 660-12-045(5)(c) park and ride lots, handicapped parking, and parking spaces for carpools and vanpools.

(9) Planning Period means the twenty year period beginning with the date of adoption of a TSP to meet the requirements of this rule.

(10) Preliminary Design means an engineering design which specifies in detail the location and

services adequate to meet identified state transportation needs

(a) The state TSP shall include the state transportation policy plan, modal systems plans and transportation facility plans as set forth in OAR 731, Division 15.

(b) State transportation project plans shall be compatible with acknowledged comprehensive plans as provided for in OAR 731, Division 15. Disagreements between ODOT and affected local governments shall be resolved in the manner established in that division.

(2) MPOs and counties shall prepare and amend regional TSPs in compliance with this division. MPOs shall prepare regional TSPs for facilities of regional significance within their jurisdiction. Counties shall prepare regional TSPs for all other areas and facilities.

(a) Regional TSPs shall establish a system of transportation facilities and services adequate to meet identified regional transportation needs and shall be consistent with adopted elements of the state TSP.

(b) Where elements of the state TSP have not been adopted, the MPO or county shall coordinate the preparation of the regional TSP with ODOT to assure that state transportation needs are accommodated.

(c) Regional TSPs prepared by MPOs other than metropolitan service districts shall be adopted by the counties and cities within the jurisdiction of the MPO. Metropolitan service districts shall adopt a regional TSP for areas within their jurisdiction.

(d) Regional TSPs prepared by counties shall be adopted by the county.

(3) Cities and counties shall prepare, adopt and amend local TSPs for lands within their planning jurisdiction in compliance with this division.

(a) Local TSPs shall establish a system of transportation facilities and services adequate to meet identified local transportation needs and shall be consistent with regional TSPs and adopted elements of the state TSP.

(b) Where the regional TSP or elements of the state TSP have not been adopted, the city or county shall coordinate the preparation of the local TSP with the regional transportation planning body and ODOT to assure that regional and state transportation needs are accommodated.

(4) Cities and counties shall adopt regional and local TSPs required by this division as part of their comprehensive plans. Transportation financing programs required by OAR 660-12-040 may be adopted as a supporting document to the comprehensive plan.

(b) The preparation of TSPs shall be coordinated with affected state and federal agencies, local governments, special districts, and private providers of transportation services.

(6) Mass transit, transportation, airport and port districts shall participate in the development of TSPs for those transportation facilities and services they provide. These districts shall prepare and adopt plans for transportation facilities and services they provide. Such plans shall be consistent with and adequate to carry out relevant portions of applicable regional and local TSPs. Cooperative agreements executed under ORS 197.185(2) shall include the requirement that mass transit, transportation, airport and port districts adopt a plan consistent with the requirements of this section.

(7) Where conflicts are identified between proposed regional TSPs and acknowledged comprehensive plans, representatives of affected local governments shall meet to discuss means to resolve the conflicts. These may include:

(a) Changing the draft TSP to eliminate the conflicts; or

(b) Amending acknowledged comprehensive plan provisions to eliminate the conflicts;

For MPOs which are not metropolitan service districts, if conflicts persist between regional TSPs and acknowledged comprehensive plans after efforts to achieve compatibility, an affected local government may petition the Commission to resolve the dispute.

660-12-020 Elements of Transportation System Plans

(1) A TSP shall establish a coordinated network of transportation facilities adequate to serve state, regional and local transportation needs.

(2) The TSP shall include the following elements:

(a) A determination of transportation needs as provided in 660-12-030.

(b) A road plan for a network of arterials and collectors. Functional classifications of roads in regional and local TSPs shall be consistent with functional classifications of roads in state and regional TSPs and shall provide for continuity between adjacent jurisdictions.

(c) A public transportation plan which

(A) Describes public transportation services for the transportation disadvantaged and identifies service inadequacies.

(B) Describes intercity bus and passenger rail service and identifies the location of terminals.

(C) For areas within an urban growth boundary which have public transit service, identifies existing and planned transit trunk routes, exclusive transit ways, terminals and major transfer stations, and park and ride stations.

(D) For areas within an urban area containing a population greater than 25,000 persons, not currently

coordinated with the preparation of the Corridor EIS. The refinement plan shall be adopted prior to the issuance of the Final EIS.

660-12-030 Determination of Transportation Needs

(1) The TSP shall identify transportation needs relevant to the planning area and the scale of the transportation network being planned including:

(a) State, regional, and local transportation needs.

(b) Needs of the transportation disadvantaged.

(c) Needs for movement of goods and services to support industrial and commercial development planned for pursuant to OAR 660-09 and Goal 9 (Economic Development).

(2) Counties or MPOs preparing regional TSPs shall rely on the analysis of state transportation needs in adopted elements of the state TSP. Local governments preparing local TSPs shall rely on the analyses of state and regional transportation needs in adopted elements of the state TSP and adopted regional TSPs.

(3) Within urban growth boundaries, the determination of local and regional transportation needs shall be based upon:

(a) Population, and employment forecasts and distributions which are consistent with the acknowledged comprehensive plan, including those policies which implement Goal 14, including Goal 14's requirement to encourage urban development on urban lands prior to conversion of urbanizable lands. Forecasts and distributions shall be for 20 years and, if desired, for longer periods.

(b) Measures adopted pursuant to 660-12-045 to encourage reduced reliance on the automobile.

(4) In MPO areas, calculation of local and regional transportation needs also shall be based upon accomplishment of the requirement in 660-12-035(4) to reduce reliance on the automobile.

660-12-035 Evaluation and Selection of Transportation System Alternatives

(1) The TSP shall be based upon evaluation of potential impacts of system alternatives that can reasonably be expected to meet the identified transportation needs in a safe manner and at a reasonable cost with available technology. The following shall be evaluated as components of system alternatives:

(a) Improvements to existing facilities or services.

(b) New facilities and services, including different modes or combinations of modes that could reasonably meet the identified transportation needs.

(c) Transportation system management measures.

(d) Demand management measures, and

(e) A no-build system alternative required by the National Environmental Policy Act of 1969 or other laws.

(2) Local governments in MPO areas of larger than 1,000,000 population shall and other governments may also evaluate alternative land use designations, densities and design standards to meet local and regional transportation needs. Local governments preparing such a strategy shall consider:

(a) Increasing residential densities and establishing minimum residential densities within one quarter mile of transit lines, major regional employment areas and major regional retail shopping areas;

(b) Increasing densities (i.e. minimum floor area ratios) in new commercial office and retail developments;

(c) Designating lands for neighborhood shopping centers within convenient walking and cycling distance of residential areas;

(d) Designating land uses to provide a better balance between jobs and housing considering:

(A) The total number of jobs and total of number of housing units expected in the area or subarea;

(B) The availability of affordable housing in the area or subarea; and,

(C) Provision of housing opportunities in close proximity to employment areas.

(e) Establishing maximum parking limits for office and institutional developments consistent with 660-12-045(5)(c) which reduce the amount of parking available at such developments.

(3) The following standards shall be used to evaluate and select alternatives:

(a) The transportation system shall support urban and rural development by providing types and levels of transportation facilities and services appropriate to serve the land uses identified in the acknowledged comprehensive plan.

(b) The transportation system shall be consistent with state and federal standards for protection of air, land and water quality including the State Implementation Plan under the Federal Clean Air Act and the State Water Quality Management Plan.

(c) The transportation system shall minimize adverse economic, social, environmental and energy consequences.

(d) The transportation system shall minimize conflicts and facilitate connections between modes of transportation.

(B) Dedication of right-of-way, authorization of construction and the construction of facilities and improvements, where the improvements are consistent with clear and objective dimensional standards.

(C) Uses permitted outright under ORS 215.213(1)(m) through (p) and ORS 215.283(1)(k) through (n), consistent with the provisions of 660-12-065, and,

(D) Changes in the frequency of transit, rail and airport services.

(b) To the extent, if any, that a transportation facility, service or improvement concerns the application of a comprehensive plan provision or land use regulation, it may be allowed without further land use review if it is permitted outright or if it is subject to standards that do not require interpretation or the exercise of factual, policy or legal judgment.

(c) In the event that a transportation facility, service or improvement is determined to have a significant impact on land use or to concern the application of a comprehensive plan or land use regulation and to be subject to standards that require interpretation or the exercise of factual, policy or legal judgment, the local government shall provide a review and approval process that is consistent with 660-12-050. To facilitate implementation of the TSP, each local government shall amend its land use regulations to provide for consolidated review of land use decisions required to permit a transportation project.

(2) Local governments shall adopt land use or subdivision ordinance regulations, consistent with applicable federal and state requirements, to protect transportation facilities, corridors and sites for their identified functions. Such regulations shall include:

(a) Access control measures, for example, driveway and public road spacing, median control and signal spacing standards, which are consistent with the functional classification of roads and consistent with limiting development on rural lands to rural uses and densities;

(b) Standards to protect future operation of roads, transitways and major transit corridors;

(c) Measures to protect public use airports by controlling land uses within airport noise corridors and imaginary surfaces, and by limiting physical hazards to air navigation

(d) A process for coordinated review of future land use decisions affecting transportation facilities, corridors or sites.

(e) A process to apply conditions to development proposals in order to minimize impacts and protect transportation facilities, corridors or sites

(f) Regulations to provide notice to public agencies providing transportation facilities and services, MAPDs and OCOT of

(A) Land use applications that require public hearings.

(B) Subdivision and partition applications.

(C) Other applications which affect private access to roads; and

(D) Other applications within airport noise corridors and imaginary surfaces which affect airport operations

(g) Regulations assuring that amendments to land use designations, densities, and design standards are consistent with the functions, capacities and levels of service of facilities identified in the TSP.

(3) Local governments shall adopt land use or subdivision regulations for urban areas and rural communities to require:

(a) Bicycle parking facilities as part of new multi-family residential developments of four units or more, new retail, office and institutional developments, and all transit transfer stations and park and ride lots.

(b) Facilities providing safe and convenient pedestrian and bicycle access within and from new subdivisions, planned developments, shopping centers and industrial parks to nearby residential areas, transit stops, and neighborhood activity centers, such as schools, parks and shopping. This shall include:

(A) Sidewalks along arterials and collectors in urban areas.

(B) Bikeways along arterials and major collectors;

(C) Where appropriate, separate bike or pedestrian ways to minimize travel distances within and between the areas and developments listed above

(c) For purposes of subsection (b) "safe, convenient and adequate" means bicycle and pedestrian routes, facilities and improvements which

(A) Are reasonably free from hazards, particularly types or levels of automobile traffic which would interfere with or discourage pedestrian or cycle travel for short trips.

(B) Provide a direct route of travel between destinations such as between a transit stop and a store, and,

(C) Meet travel needs of cyclists and pedestrians considering destination and length of trip.

(d) Provision of internal pedestrian circulation in new office parks and commercial developments through clustering of buildings, construction of pedestrian ways, skywalks, where appropriate, and similar techniques

(4) To support transit in urban areas containing a population greater than 25,000 where the area is already served by a public transit system or where a determination has been made that a public transit

with applicable requirements remain outstanding at the project development phase. Issues may include, but are not limited to, compliance with regulations protecting or regulating development within floodways and other hazard areas, identified Goal 5 resource areas, estuarine and coastal shoreland areas, and the Willamette River Greenway. Where project development involves land use decisionmaking, all unresolved issues of compliance with applicable acknowledged comprehensive plan policies and land use regulations shall be addressed and findings of compliance adopted prior to project approval. To the extent compliance has already been determined during transportation system planning, including adoption of a refinement plan, affected local governments may rely on and reference the earlier findings of compliance with applicable standards.

(4) Where an Environmental Impact Statement (EIS) is prepared pursuant to the National Environmental Policy Act of 1969, project development shall be coordinated with the preparation of the EIS. All unresolved issues of compliance with applicable acknowledged comprehensive plan policies and land use regulations shall be addressed and findings of compliance adopted prior to issuance of the Final EIS.

(5) If a local government decides not to build a project authorized by the TSP, it must evaluate whether the needs that the project would serve could otherwise be satisfied in a manner consistent with the TSP. If identified needs cannot be met consistent with the TSP, the local government shall initiate a plan amendment to change the TSP or the comprehensive plan to assure that there is an adequate transportation system to meet transportation needs.

(6) Transportation project development may be done concurrently with preparation of the TSP or a refinement plan.

660-12-055 Timing of Adoption and Update of Transportation System Plans; Exemptions

(1) MPOs shall complete regional TSPs for their planning areas within four years following the effective date of this division. For those areas within an MPO, cities and counties shall adopt local TSPs and implementing measures within one year following completion of the regional TSP. Urban areas designated as MPCs subsequent to the adoption of this rule shall adopt TSPs in compliance with applicable requirements of this rule within three years of designation.

(2) For areas outside an MPO, cities and counties shall complete and adopt regional and local TSPs and implementing measures within five years of the effective date of this division.

(3) Within two years of adoption of this rule affected cities and counties shall, for urban areas of 25,000 or more, adopt land use and subdivision ordinances or amendments required by 660-12-045(3), (4)(a)-(e) and (5)(d).

(4) Cities and counties shall update their TSPs and implementing measures as necessary to comply with this division at each periodic review subsequent to initial compliance with this division. This shall include a reevaluation of the land use designations, densities and design standards in the following circumstances:

(a) If the interim benchmarks established pursuant to 660-12-035(b) have not been achieved, or,

(b) If a refinement plan has not been adopted consistent with the requirements of 660-12-025(3).

(5) The director may grant a whole or partial exemption from the requirements of this division to cities, under 2,500 population outside MPO areas and counties under 25,000 population. Eligible jurisdictions may, within five years following the adoption of this rule or at subsequent periodic reviews, request that the director approve an exemption from all or part of the requirements in this division until the jurisdiction's next periodic review.

(a) The director's decision to approve an exemption shall be based upon the following factors:

(A) Whether the existing and committed transportation system is generally adequate to meet likely transportation needs,

(B) Whether the new development or population growth is anticipated in the planning area over the next five years;

(C) Whether major new transportation facilities are proposed which would affect the planning areas,

(D) Whether deferral of planning requirements would conflict with accommodating state or regional transportation needs; and,

(E) Consultation with the Oregon Department of Transportation on the need for transportation planning in the area, including measures needed to protect existing transportation facilities.

(b) The director's decision to grant an exemption under this section is appealable to the Commission as provided in OAR 660-02-020 (Delegation of Authority Rule).

(6) Portions of TSPs and implementing measures adopted as part of comprehensive plans prior to the responsible jurisdiction's periodic review shall be reviewed pursuant to OAR 660, Division 18, Post Acknowledgement Procedures.

660-12-060 Plan and Land Use Regulation Amendments

(1) Amendments to functional plans, acknowledged comprehensive plans, and land use regulations which significantly affect a transportation facility shall assure that allowed land uses are consistent with the identified function, capacity, and level of

needs in the rural area includes travel that would result from development otherwise anticipated to occur in the rural area consistent with plan policies including those which encourage new development to locate within urban growth boundaries.

660-12-070 Exceptions for Transportation Improvements on Rural Land

(1) Transportation facilities and improvements which do not meet the requirements of 660-12-065 require an exception to be sited on rural lands.

(2) Where an exception to Goals 3, 4, 11, or 14 is required, the exception shall be taken pursuant to ORS 197.732(1)(c), Goal 2, OAR 660, Division 4 and this division.

(3) An exception adopted as part of a TSP or refinement plan shall, at a minimum, decide need, mode, function and general location for the proposed facility or improvement.

(a) The general location shall be specified as a corridor within which the proposed facility or improvement is to be located, including the outer limits of the proposed location. Specific sites or areas within the corridor may be excluded from the exception to avoid or lessen likely adverse impacts.

(b) The size, design and capacity of the proposed facility or improvement shall be described generally, but in sufficient detail to allow a general understanding of the likely impacts of the proposed facility or improvement. Measures limiting the size, design or capacity may be specified in the description of the proposed use in order to simplify the analysis of the effects of the proposed use.

(c) The adopted exception shall include a process and standards to guide selection of the precise design and location within the corridor and consistent with the general description of the proposed facility or improvement. For example, where a general location or corridor crosses a river, the exception would specify that a bridge crossing would be built but would defer to project development decisions about precise location and design of the bridge within the selected corridor subject to requirements to minimize impacts on riparian vegetation, habitat values, etc.

(d) Land use regulations implementing the exception may include standards for specific mitigation measures to offset unavoidable environmental, economic, social or energy impacts of the proposed facility or improvement or the assure compatibility with adjacent uses.

(4) To address Goal 2, Part II(c)(1) the exception shall demonstrate that there is a transportation need identified consistent with the requirements of 660-12-030 which cannot reasonably be accommodated through one or a combination of the following measures not requiring an exception:

- (a) Alternative modes of transportation,
- (b) Traffic management measures, and
- (c) Improvements to existing transportation facilities.

(5) To address Goal 2, Part II(c)(2), the exception shall demonstrate that non-exception locations cannot reasonably accommodate the proposed transportation improvement or facility.

(6) To determine the reasonableness of alternatives to an exception under subsections (4) and (5) of this section, cost, operational feasibility, economic dislocation and other relevant factors shall be addressed. The thresholds chosen to judge whether an alternative method or location cannot reasonably accommodate the proposed transportation need or facility must be justified in the exception.

(7) To address Goal 2, Part II(c)(3), the exception shall:

(a) Compare the economic, social, environmental and energy consequences of the proposed location and other alternative locations requiring exceptions.

(b) Determine whether the net adverse impacts associated with the proposed exception site are significantly more adverse than the net impacts from other locations which would also require an exception. A proposed exception location would fail to meet this requirement only if the affected local government concludes that the impacts associated with it are significantly more adverse than the other identified exception sites.

(c) The evaluation of the consequences of general locations or corridors need not be site-specific, but may be generalized consistent with the requirements of 660-12-070(3).

(8) To address Goal 2, Part II(c)(4), the exception shall:

(a) Describe the adverse effects that the proposed transportation improvement is likely to have on the surrounding rural lands and land uses, including increased traffic and pressure for nonfarm or highway oriented development on areas made more accessible by the transportation improvement.

(b) Adopt as part of the exception, facility design and land use measures which minimize accessibility of rural lands from the proposed transportation facility or improvement and support continued rural use of surrounding lands.



April 5, 1999
Job No. 882-21

Mayor Duane Berry and City Council
City of Imbler
P.O. Box 40
Imbler, Oregon 97841

RE: City of Imbler, Oregon
Stormwater/Surface Water Report

INTRODUCTION

This report has been written for the City of Imbler to provide conceptual design solutions to surface drainage problems along 6th Street, 7th Street, and at the intersection of Brooks Lane/Ruckman Road/Summerville Road/Highway 82. Additional surface water drainage problems were identified in areas around the Imbler School, Brooks Lane, Crescent Lane, and Summerville Road. This report will 1) define the surface drainage problems in the study area; 2) outline improvement options and cost estimates for each option; and, 3) discuss implementation alternatives.

In order to compile site specific data, Anderson Perry & Associates, Inc. attempted to gather as much local information as possible. Public meetings were held to discuss historical surface drainage problems. Residents have provided written descriptions, videotapes, and photographic evidence of flooding events. Meetings with local agencies, farmers, and school officials were held in October 1998 to discuss contributing areas upstream of the City Limits. A questionnaire was sent to north Imbler residents for documentation of any surface drainage problems encountered. Additional photographs and video footage were gathered during an event that occurred the last week of December 1998. With the information gathered and the occurrence of the runoff event in December, we have confirmed the assumed drainage route through the City. Our surveyors have collected topographic data for the existing drainage route through north Imbler to the Grande Ronde River. This data will be vital in determining the design of the future drainage system.

The City has set surface water management as a high priority for the near future. The first step in accomplishing this priority is to identify the issues of surface water drainage. The primary goal will be to complete improvements to minimize surface water flooding for certain storm events. Secondary goals are to address water quality standards and mitigation requirements of the regulatory agencies. Cooperation with agency projects upstream and downstream of the City will also be an important consideration.

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BASIN EVALUATION

Existing Drainage Routes

In the study area, the natural drainage route for surface water is southeasterly flowing through the north part of Imbler. Prior to development of highways, local streets, railroad and developments in Imbler, drainage paths ran uninhibited to the Grande Ronde River. Currently, the natural water flow has been altered by roads, subdivisions, and low lying topography creating sub-basins within north Imbler drainage. This meandering path is shown in the attached Figure 2. The normal flow of surface water is impeded by embankments or by plugged or undersized culverts causing backwater flooding in some cases. This ponding water may be contributing to groundwater problems that occur in some areas.

Within the north Imbler drainage basin, there are two main sub-basins, as shown in Figure 1. One primary sub-basin (Area No. 1) is the area north of Summerville Road and west of Brooks Road. This drainage area consists of approximately 0.67 square miles. Runoff from Area No. 1 accumulates on the north side of Summerville Road and the west side of Brooks Road and collects at the intersection of Brooks Road/Summerville Road. A second sub-basin (Area No. 2) is the area west of Highway 82 between 6th Street and Summerville Road and consists of approximately 0.13 square miles. The second sub-basin drainage generally collects at the school property south of Summerville Road and feeds down the Highway to the triangle property on the west side of Highway 82 to the Ruckman Road/Summerville Road intersection.

Surface water is collected upstream of Highway 82 and flows through Imbler, as shown in the attached Figure 2. On the northeast side of the Imbler School properties, surface water collects to a depth of 2 to 3 feet. The water is contained by topography and occasionally by snow accumulations. The water is pumped by the School District to the 6th Street catch basin within the City Limits. The 6th Street catch basin is drained by a culvert under Esther Avenue into a swale on the north side of 6th Street. The water drains eastward to Highway 82 where it is directed north. During higher flow events, water has been reported to overtop the highway at 6th Street. In most events, the water drains northward to the 7th Street/Highway 82 intersection. There is an existing drainage swale in the 7th Street asphalt to carry flows north. If the water is diverted by snow/ice or debris in the existing ditches, then the flows cross over the highway in a northeasterly direction. If it crosses over the highway, it is channeled through a private lot owned by Herbst, as shown in Figure 3. Otherwise the water continues north to the Ruckman Road and Summerville Road intersection. An 18-inch reinforced concrete pipe carries the flow east under Ruckman Road to a triangular property also owned by Herbst. There is no evidence of an existing culvert outlet from the triangular property. Water accumulates until it overtops Striker Lane and accesses an existing 24-inch corrugated metal pipe under Highway 82. Before going into the culvert under Highway 82, waters from the Brooks Lane culvert are combined with the flow. Water pools before entering a 24-inch reinforced concrete pipe under Striker Lane. The culvert inlet was located, but the outlet location could not be checked as it was "silted-in". The water infiltrates through the culvert onto the Herbst property. Water from 6th Street that previously overtopped Highway 82 rejoins the flow within this low-lying property.

From the Herbst property at the Striker Lane/Lone Pine Avenue area, water traverses a small ditch system to a culvert of undetermined size under Lone Pine Avenue through the Jacoby property. This culvert has the inlet and outlet buried at the shoulders of the road. The flow crosses under 7th Street through a 12-inch corrugated metal pipe. After passing through a 6-inch pipe, water slowly drains to a 24-inch steel culvert under the railroad tracks. From the railroad culvert, the drainage path is a gradual meandering swale across farmlands to the Grande Ronde River north of Hull Lane, approximately one-half-mile away.

Historic Flood Events

Much of the surface water drainage problems were reported to have occurred in recent history. Many of the questionnaires returned to the City referenced events in early February of 1996. Information gathered from residents and officials recounts the accumulation of snow on frozen ground then rain and warming. Frozen ground and ditches prevent runoff and precipitation from infiltrating the soil. Runoff collects behind ice dams, frozen culverts, and accumulated snow. The accumulated snow and ice in ditches and drainage paths was caused by wind and/or snow removal efforts. For example, water collected at the intersection of Crescent Road and Summerville Road and was channeled down Summerville Road by sandbags and snow/ice dams. During December 1998, an event very similar to 1996 was reported. Warming trends after snow accumulations occurred in late December. Runoff was noted to be sheeting across the highway at the 7th Street intersection. Water accumulated behind frozen driveway culverts along Brooks Road. The assumed drainage route through Imbler was confirmed for that particular event. Water velocities were constant but slow from Highway 82 to the Grande Ronde River. Farmers between Imbler and the river have declared the drainage path downstream of Imbler has become wet and unsuitable for farming during the past two years.

Basin Hydrology

The drainage basins previously described have an approximate surface area of one square mile. Runoff from Area 1 and Area 2 is collected at the intersection of Highway 82 and Striker Lane. After meeting with the agencies involved, it was decided that the design storm will be the 25-year event. The 25-year event is a standard used by ODOT in the design of surface water runoff facilities. Regression equations from the Oregon Department of Transportation Hydraulic Manual have been used to calculate runoff for the 2, 5, 10, 25, 50 and 100-year events. Approximate flows for the common design frequencies have been calculated and are shown below in Table 1. Culvert sizes selected for this study are approximate and design flows should be revisited prior to final culvert selection.

Table 1. Discharge and frequency for drainage Area 1 north of Summerville Road and west of Brooks Road and Area 2 west of Hwy. 82 between 6th and Summerville Road. (See Figure 1)

FREQUENCY	DISCHARGE Area 1 (CFS)	DISCHARGE Area 2 (CFS)	Total (CFS)
2 - Year	17.8	4.6	22.4
5 - Year	40.0	11.0	51.0
10 - Year	60.0	16.7	76.7
25 - Year	93.0	26.3	119.7
50 - Year	124.6	35.8	160.4
100 - Year	158.2	45.5	203.7

Precipitation data provided by the National Weather Service at the La Grande gaging station was used as the average rainfall for the drainage basin. In 1996, total rainfall at the La Grande gaging station was 21.07 inches. The average annual precipitation is approximately 17.44 inches. While rainfall in 1996 was approximately 20 percent higher than average, Imbler may have seen slightly different precipitation. In 1997, data was incomplete in the months of April and December. The available data collected suggested at least 14.49 inches of precipitation with 8 of the other 10 months being below average. The annual climatological data summary for 1998 will not be released until July 1999.

Two flooding events have occurred during the past three years. Both events occurred as a result of snow accumulation, warming trends, rainfall, and frozen ground. This is consistent with the findings of the ODOT Hydraulics Manual which states that the largest flows on most Eastern Oregon streams result from heavy winter rain accompanied by snow melt on frozen ground.

PROPOSED IMPROVEMENTS

General

This section provides the City alternative long-term solutions to existing surface water drainage deficiencies. Five project segments have been identified in the north Imbler drainage area. Each project segment addresses a separate issue along the drainage path. The five north Imbler drainage area project segments are:

1. Imbler School District Properties
2. Highway 82 (6th Street to Striker Lane)
3. Summerville Road (Crescent Road to Brooks Lane)
4. Striker Lane to the Railroad Culvert
5. Railroad Culvert to Grande Ronde River

For each project segment, alternative(s) and associated estimated costs or suggested actions have been identified. Estimated costs were based on the assumption that construction will be completed through competitive bidding at current State Prevailing Wage Rates. Special traffic control and surface restoration may be required for options associated with the Oregon Department

of Transportation. Operation and maintenance costs associated with the alternative(s) have not been considered. Each project segment has specific improvement needs and similar maintenance requirements. Many of the problems with the existing system can be attributed to a combination of poor maintenance practices and atypical weather conditions. Generally, the existing and proposed systems will not work at capacity if the maintenance program fails. A maintenance program should be adopted regardless of the improvement alternative(s) selected.

Imbler School District

The Imbler School District properties are outside the jurisdiction of the City limits and scope of this project. However, a substantial volume of water that enters the 6th Street catch basin traverses through the school property. During meetings with Gus Forster, School Superintendent, and other agencies, possible problems and solutions to the School District property flooding were identified. As surface water collects northeast of the school property, the School District will pump water to the 6th Street catch basin. The District agreed to be careful not to overwhelm the 6th Street drainage system. To accomplish this, the District will pump surface water at a gradual pace rather than maximum pump capacity. Anticipation of special flooding conditions (i.e., frozen ground) can sometimes be recognized and accounted for.

Long-term solutions for the Imbler School District are being considered through other agencies. Meetings with the School District, Soil and Water Conservation District (SWCD), the Natural Resource Conservation Service (NRCS), and local farmers provided information for improvements upstream of the City. As stated by the District, ditch improvements by Bill Howell since the 1996 event may have helped the District's problem. Recurrence of surface water problems have been limited since the upstream ditch improvements were made. Improvements at the school buildings which may be helpful in controlling surface water include:

- Downspouts and drip rail collection area improvements to drain water away from buildings and footings.
- Improve the existing drainage path to drain naturally and filter sediments.
- Continued work with the county, state, and federal agencies to control runoff from agricultural lands.

Regulatory and agricultural agencies have funding packages to assist farmers in drainage critical issues. If surface water problems can be prevented upstream, the School District and City should be supportive.

Highway 82 (6th Street to Summerville Road)

Four different alternatives were considered for this project segment. The four alternatives address the runoff from the 6th Street/Highway 82 intersection in a separate fashion. Figures 3 through 6 are attached to assist in the visualization of each of the four drainage improvement alternatives as described below.

Alternative No. 1

Alternative No. 1 would utilize the existing drainage route from 6th Street to Summerville Road, as shown in Figure 4. Ditch excavation along the west shoulder of Highway 82 will be required to prevent the street flows from crossing the highway. The flow line of the existing drainage swale should be improved to carry water from 6th Street to Summerville Road. A 30-inch culvert is proposed under 7th Street to meet the flow requirements of the swale. A second 30-inch culvert will be necessary to replace the existing 18-inch reinforced concrete pipe under Ruckman Road.

Estimated costs for proposed Alternative No. 1 improvements are summarized in Table 2. Additional culverts for private access driveways have not been included in the estimate.

Table 2 - 6th Street to Summerville Road (Alternative No. 1)

Item	Unit	Qty.	Unit Price	Cost
Mobilization	LS	1	\$ 1500.00	\$ 1,500.00
Temporary Protection and Direction of Traffic/Project Safety	LS	1	2,000.00	2,000.00
Flaggers	Hours	50	30.00	1,500.00
Permanent Seeding and Mulching	LS	1	1,000.00	1,000.00
Ditch Excavation	LF	1,000	5.00	5,000.00
30-inch CMP Culvert (at Ruckman)	LF	60	60.00	3,600.00
30-inch CMP Culvert (at 7th Street)	LF	60	60.00	3,600.00
Asphalt Surface Restoration	SY	50	35.00	1,750.00
Preliminary Estimated Construction Cost 1999 Prices				\$ 19,950.00
Construction Contingencies, Engineering, Administration, and Legal (35%)				\$ 6,000.00
Preliminary Estimated Project Cost 1999 Prices				\$ 25,950.00

Routine preventative maintenance of the drainage swale will be required for the system to function. Changes in snow removal techniques will be required to prevent snow and ice from plugging ditches and culverts during winter runoff events. An effort to keep runoff within State, County and City right-of-way will need to be maintained.

The advantages and disadvantages of improvements included in Alternative No. 1 of the 6th Street to Summerville Road project segment are as follows:

Advantages: Alternative No 1:

- Ditch/swale improvements have a low initial cost.
- Installation and maintenance is simplified compared to subsurface drainage systems.
- Installation and maintenance may be assisted by ODOT.
- Water quality is enhanced by filtration in grass-lined ditches.

Disadvantages: Alternative No. 1:

- Snow removal techniques will need to be monitored and altered.
- Regular maintenance (i.e. silt and debris removal) will be required.
- Snow and ice may freeze in culverts or ditches.
- Ditches/swales can become an "eye sore" without adequate maintenance.
- Safety to vehicular traffic should be considered.

Alternative No. 2

A second alternative to the existing drainage route was proposed by Mike Buchanan, ODOT, District 13, Maintenance Manager. The suggested route would have the 6th Street runoff enter a grate inlet at 6th Street and Highway 82 and utilize a new subsurface storm drain system under Highway 82 to the east down 6th Street, as shown in Figure 5. The final route of the piping would need to be determined by the final design and approved by the City. The majority of the construction would take place within State and City rights-of-way. Alternative No. 2 would also require the construction of a drainage swale from the outlet to the railroad culvert. This would provide a direct route from 6th Street to the railroad culvert. This proposed route would carry the 6th Street flows away from the Summerville Road/Highway 82 intersection and may require an additional drainage easement. Improvements to the existing ditch along the west side of Highway 82 are not included in this alternative. Table 3 summarizes the estimated costs for Alternative No. 2. Improvements to the Summerville Road/Highway 82 intersection would still be necessary.

Table 3 - 6th Street to Summerville Road (Alternative No. 2)

Item	Unit	Qty.	Unit Price	Cost
Mobilization	LS	1	\$ 5,000.00	\$ 5,000.00
Temporary Protection and Direction of Traffic/Project Safety	LS	1	4,000.00	4,000.00
Flaggers	Hours	50	30.00	1,500.00
Storm Drain Manholes w/Inlets	Each	3	2,000.00	6,000.00
Gravity Storm Drain 30-inch CMP	LF	600	60.00	36,000.00
Permanent Seeding and Mulching	LS	1	1,000.00	1,000.00
Ditch Excavation	LF	500	5.00	2,500.00
Riprap for Outlet	CY	20	20.00	400.00
State Highway Surface Restoration	SY	60	50.00	3,000.00

Item	Unit	Qty.	Unit Price	Cost
Asphalt Surface Restoration	SY	30	35.00	1,050.00
Drainage Easement	LS	1	2,000	2,000.00
Preliminary Estimated Construction Cost 1999 Prices				\$ 62,450.00
Construction Contingencies, Engineering and Legal (35%)				\$ 20,000.00
Preliminary Estimated Project Cost 1999 Prices				\$ 82,450.00

The advantages and disadvantages of improvements included as part of Alternative No. 2 of the 6th Street to Summerville Road project segment are as follows:

Advantages: Alternative No. 2:

- Provides a direct route for runoff.
- Subsurface drainage cannot be seen.
- Installation and maintenance may be assisted by ODOT.
- Subsurface pipes are usually unaffected by snow.
- If the system failed, existing ditches may be used for backup.

Disadvantages: Alternative No. 2:

- Initial cost for the system is higher.
- Requires regular maintenance with special equipment.
- Piping and inlets can freeze or be obstructed in extreme weather.
- Surface restoration is required.
- Drainage easements may be necessary from Lone Pine Avenue to the Railroad Culvert.
- Subsurface drainage installations will need to work around existing utilities.

Alternative No. 3

The third alternative for the 6th Street to Summerville Road segment involves the construction of subsurface storm drainage piping from 6th Street to the Summerville Road/Highway 82 intersection, as shown in Figure 6. The drainage facility would have approximately four manholes with inlets to collect runoff from 6th Street, 7th Street, Ruckman Road, and Highway 82. The system would be designed with 30-inch piping. Water collection would be centralized at the Herbst triangle property on the west side of Highway 82. The installation would primarily be on State rights-of-way up to the Herbst property. The City or State may consider the purchase of this property for use as a stormwater collection/detention area. The estimated cost for Alternative No. 3 is presented below in Table 4.

Table 4 - 6th Street to Summerville Road (Alternative No. 3)

Item	Unit	Qty.	Unit Price	Cost
Mobilization	LS	1	\$ 5,000.00	\$ 5,000.00
Temporary Protection and Direction of Traffic/Project Safety	LS	1	4,000.00	4,000.00
Flaggers	Hours	100	30.00	3,000.00
Storm Drain Manholes w/Inlets	Each	3	2,000.00	6,000.00
Gravity Storm Drain 30-inch CMP	LF	900	60.00	54,000.00
State Highway Asphalt Surface Restoration	SY	60	50.00	3,000.00
Asphalt Surface Restoration (Ruckman Road)	SY	30	35.00	1,050.00
Preliminary Estimated Construction Cost 1999 Prices				\$ 76,050.00
Construction Contingencies, Engineering, Administration, and Legal (35%)				\$ 26,000.00
Preliminary Estimated Project Cost 1999 Prices				\$ 102,050.00

The advantages and disadvantages of improvements included as part of Alternative No. 3 of the 6th Street to Summerville Road project segment are as follows:

Advantages: Alternative No. 3:

- Collects runoff at a central location.
- Subsurface drainage cannot be seen.
- Installation and maintenance may be assisted by ODOT.
- If the system failed, existing ditches may be used for backup.

Disadvantages: Alternative No. 3:

- Initial cost for the system is higher.
- Requires regular maintenance with special equipment.
- Piping and inlets can freeze or become obstructed in extreme weather.
- Surface restoration is required.
- Subsurface drainage installations will need to work around existing utilities.

Alternative No. 4

The final alternative would be a combination of ditches and subsurface drains used to develop a new drainage pathway. Similar to Alternative No. 2, the path of the water would deviate from the existing route through piping from 6th Street under the Highway, as shown in Figure 7. A ditch would be constructed on the north side of 6th Street from the Highway to Lone Pine Avenue with culverts at each driveway access. A manhole with an inlet and storm sewer piping will be necessary from Lone Pine Avenue beyond the residential properties. A riprap outlet and drainage swale to the

railroad culvert will also need to be constructed. The system could be constructed on City and state rights-of-way down to Lone Pine Avenue. A drainage easement from Lone Pine Avenue to the railroad culvert may be necessary.

Table 5 - 6th Street to Summerville Road (Alternative No. 4)

Item	Unit	Qty.	Unit Price	Cost
Mobilization	LS	1	\$ 4,000.00	\$ 4,000.00
Temporary Protection and Direction of Traffic/Project Safety	LS	1	2,000.00	2,000.00
Flaggers	Hours	50	30.00	1,500.00
Storm Drain Manholes w/Inlets	Each	2	2,000.00	4,000.00
Gravity Storm Drain 30-inch CMP	LF	200	60.00	12,000.00
30-inch Culvert (at driveway accesses)	LF	90	60.00	5,400.00
Permanent Seeding and Mulching	LS	1	1,000.00	1,000.00
Ditch Excavation	LF	600	5.00	3,000.00
State Highway Asphalt Surface Restoration	SY	60	50.00	3,000.00
Asphalt Surface Restoration	SY	60	35.00	2,100.00
Drainage Easement	LS	1	2000	2,000.00
Preliminary Estimated Construction Cost 1999 Prices				\$ 40,000.00
Construction Contingencies, Engineering, Administration, and Legal (35%)				\$ 14,000.00
Preliminary Estimated Project Cost 1999 Prices				\$ 54,000.00

The advantages and disadvantages of improvements included as part of Alternative No. 4 of the 6th Street to Summerville Road project segment are as follows:

Advantages: Alternative No. 4:

- Lower initial cost than full subsurface system.
- Installation and maintenance may be assisted by ODOT.
- If the system failed, existing ditches and drainage route can be used for backup.
- Provides a direct route for runoff.
- Ditch/swale sections provide an area for infiltration.

Disadvantages: Alternative No. 4:

- Requires regular maintenance with special equipment for subsurface section.
- Piping and inlets can freeze or be obstructed in extreme weather.
- Subsurface drainage installations will need to work around existing utilities.
- Surface restoration will be necessary.

Summerville Road (Crescent Road to Brooks Lane)

Additional flooding along Summerville Road was identified during informational meetings in Imbler. Residents reported accumulations of water along the north shoulder of Summerville Road from Crescent Lane to Newport Avenue. Suggested improvements include the construction of a drainage swale along the north shoulder of Summerville Road, as shown in Figure 8. Many of the residents have constructed temporary ditches on the road with sand bags during past flooding events. The proposed swale would require a culvert installation for every driveway access and street crossings. In order for these swales and culverts to be effective during the flooding, maintenance and snow removal methods need to be altered. Ice, snow, sediment, and debris may render culverts and ditches ineffective. Identifying and maintaining culverts and swales is a long-term commitment from the community and/or the County. Union County has partial ownership in Summerville Road and maintenance costs will be an issue. A cost estimate for the construction of the swale, culvert, and improvements is presented below in Table 6.

Table 6 - Summerville Road Improvements (Crescent Road to Brooks Road)

Item	Unit	Qty.	Unit Price	Cost
Mobilization	LS	1	\$ 4,000.00	\$ 4,000.00
Temporary Protection and Direction of Traffic/Project Safety	LS	1	1,000.00	1,000.00
Permanent Seeding and Mulching	LS	1	1,000.00	1,000.00
Flaggers	Hours	50	30.00	1,500.00
Ditch Excavation	LF	1,200	5.00	6,000.00
30-inch CMP Culvert (at access points)	LF	250	60.00	15,000.00
Surface Restoration (Intersections)	SY	100	35.00	3,500.00
Fence Relocation	LF	100	5.00	500.00
Preliminary Estimated Construction Cost 1999 Prices				\$ 32,500.00
Construction Contingencies, Engineering, Administration, and Legal (35%)				\$ 10,000.00
Preliminary Estimated Project Cost 1999 Prices				\$ 42,500.00

Sheet flows and patterns through the developments north of Summerville Road will require additional evaluation before the design of the swale is complete. Topography data from this project did not include the survey of the drainage area north of Summerville Road.

Striker Lane to the Railroad Culvert

It is proposed to install two 42-inch culverts or a single 4-foot x 6-foot elliptical culvert from the northwest corner of the Summerville Road and Brooks Road to the southeast corner of Summerville Road and Ruckman Road onto the Herbst triangle, as shown in Figure 9. The single barrel culvert would require more cover depth and would need to be field verified for fill clearance under the highway. A second set of two 42-inch culverts is proposed from the southwest corner of Summerville Road and Highway 82 to the southeast corner of Striker Lane and Highway 82. Two 42-inch culverts are proposed under Lone Pine Avenue and 7th Street, as shown in Figure 9. All culvert installations would require screening for debris, safety and maintenance needs. Screening may prevent the collection of snow, ice and debris from entering and obstructing the culvert at the inlet. Improvements to the existing drainage swale at the shoulder of the City streets would be made within City right-of-way, with additional drainage easements as needed.

One of the Best Management Practices (BMPs) suggested by regulatory agencies is a grass-lined swale with the slope less than six percent. The slope of the natural drainage is approximately one percent. The objective of the swale is to promote lower velocity flows to accomplish infiltration, sedimentation, and scour prevention. The swale would be a minimum of two feet in depth and five feet in width. Backslopes will be approximately 2:1 or flatter. A gradual backslope would provide an opportunity for grass maintenance during drier periods. Grasses planted in the swales should be a mixture that can tolerate water, yet hardy enough to survive dry seasons. These grasses will filter sediments, nutrients, and heavy metals very effectively. Improvements can be completed at a lower cost, due to the simplicity of the system. Advantages of the drainage swale are its low cost and simple maintenance. Swales are easily accessible for maintenance and debris removal. The estimated costs for drainage swales and other improvements are shown below in Table 7.

Table 7 - Striker Lane to Railroad Culvert Improvements

Item	Unit	Qty.	Unit Price	Cost
Mobilization	LS	1	\$ 3,000.00	\$ 3,000.00
Temporary Protection and Direction of Traffic/Project Safety	LS	1	1,000.00	1,000.00
Permanent Seeding and Mulching	LS	1	1,000.00	1,000.00
Ditch Excavation	LF	1,500	10.00	15,000.00
42-inch CMP Culvert	LF	300	65.00	19,500.00
State Highway Asphalt Surface Restoration	SY	100	50.00	5,000.00

Item	Unit	Qty.	Unit Price	Cost
Surface Restoration (Lone Pine/7th Street)	SY	100	35.00	3,500.00
Type 2 Fence	LF	100	5.00	500.00
Preliminary Estimated Construction Cost 1999 Prices				\$ 48,500.00
Construction Contingencies, Engineering, Administration, and Legal (35%)				16,000.00
Preliminary Estimated Project Cost 1999 Prices				\$ 64,500.00

Several improvements to existing facilities may be considered with additional evaluations. An existing culvert under Striker Lane will require the outlet to be exposed to match the flow line of the proposed swale. The size of the culvert should be verified as it drains an additional basin. The railroad culvert may require a larger culvert or multiple culverts to drain runoff east of the City. Runoff from the south area of the City may be combining with the runoff from the north.

An additional evaluation of the area just upstream of the railroad culvert will also be necessary. If there is inadequate storage volume for the existing 24-inch culvert to pass the flow, Union Pacific Railroad may need to upgrade the existing culvert under the rail tracks.

Advantages and disadvantages of suggested Striker Lane to Railroad culvert improvements are as follows:

Advantages: Striker Lane to the Railroad Culvert:

- Ditch/swale improvements have a low initial cost.
- Water quality is enhanced by filtration in grass-lined ditches.
- Ditches/swales provide a means for infiltration.

Disadvantages: Striker Lane to the Railroad Culvert:

- Snow accumulations will need to be monitored for problems.
- Regular maintenance (i.e. silt and debris removal) will be required.
- Snow and ice may freeze in culverts or ditches.
- Ditches/swales can become an "eye sore" without maintenance.

Railroad Culvert to Grande Ronde River

The final project segment of concern is the outlet and path of the collective runoff. This segment stretches approximately one-half mile from the City limits to the Grande Ronde River. This segment is also outside the City limits. However, the water quality of the runoff into the river will be increasingly more regulated in the future. As the collection system for Imbler develops, and new federal regulations become effective, surface water drainage permits may be necessary. It is proposed that the City not make improvements to the existing drainage path beyond the City limits.

The City is not currently affected by backwater flooding at or beyond the railroad. The existing vegetated swale provides infiltration and settlement for runoff. An improved dedicated drainage swale is suggested to the County for this segment to aid the sedimentation process. This segment crosses private property and would require drainage easements before improvement. The landowners have also provided a natural vegetation buffer zone between the agricultural fields and the river. The vegetative zone acts as an additional filter before runoff enters the river. The agricultural practices may be suspended on the drainage path during winter months to prevent soil erosion. As reported by farmers, the drainage swale area has become wet and unproductive for farming the past two years. The farmers affected by the runoff may seek assistance from the Soil and Water Conservation District (SWCD), Natural Resources Conservation Service (NRCS), Union County, and the Department of Environmental Quality (DEQ) in completing improvements in this segment. These agencies are primarily concerned with water quality issues from the drainage basin. Assistance programs may become more prevalent as stringent stormwater regulations go into effect. The Grande Ronde Model Watershed (GRMW) and Governor's Watershed Enhancement Board (GWEB) are also focused on salmon habitat and water quality. Potentially, the areas near the river could also be considered for improvement projects through these agencies.

REGULATIONS

In 1990, the U.S. Environmental Protection Agency (EPA) passed federal stormwater regulations mandating municipalities address the quantity and quality of surface water and the quality of the receiving waters. As the new regulations become effective, the City of Imbler may be required to regulate the quantity and quality of runoff. The City may also be responsible for maintaining a permit with the DEQ. The DEQ is primarily concerned in meeting the Total Maximum Daily Load (TMDL) requirements of the Grande Ronde River in the months of June through September. With these regulations, the agencies will provide a list of Best Management Practices, or BMPs. These BMPs are potential solutions for flooding and water quality problems. Typical BMPs include grass-lined swales, detention/settlement facilities, and oil separating catch basins. It will eventually become the responsibility of local agencies and cities to assure surface water management requirements are fulfilled.

RECOMMENDATION AND IMPLEMENTATION

There were five project segments for which three separate segments have been proposed for possible improvements in the north Imbler drainage. The remaining two project segment areas fall outside of the City limits and have no changes currently proposed. While City financial resources for these segments are limited, the impacts on and from these areas are directly related to the community. Upstream developments and improvements should be regulated by the City whenever possible. Water quality is becoming an important issue with the DEQ and the EPA with regards to the receiving waters of the Grande Ronde River. Encouraging farmers and other local agencies to make improvements will ultimately benefit the City. The remaining areas of concern are within the City limits and have several options for improvement.

We have identified four steps for the City to complete the proposed improvements. These steps should be viewed as part of a long-term process with the following path:

1. Review and Decide on Alternatives Provided
 - Decide on alternatives
 - Identify other areas of concern
 - Identify additional evaluations needed

2. Meet with Project Stakeholders
 - Develop a plan for implementation including funding
 - Develop a plan for maintenance
 - Address rights-of-way, permit issues
 - Hold public information sessions
 - Involve all potential funding agencies
 - Acquire easements

3. Authorize Design
 - Verify costs and preliminary design
 - Comply with funding agency guidelines when necessary

4. Construction
 - Comply with funding agency requirements if necessary

5. Maintenance
 - Develop and implement a permanent maintenance program for new and existing facilities

There are several potential funding sources and stakeholders for the Imbler drainage facilities. The first source is the Oregon Department of Transportation. The Small City Allotment (SCA) Grant is provided by ODOT for improvement projects. The City has utilized this source to complete street improvements and this report. ODOT also has other street enhancement programs available that may meet the City's needs. With a majority of the 6th Street to Striker Lane project in contact with the State Highway, ODOT may be responsive to completing some or all of the work through a District 13 Maintenance Project. All proposed improvements can be tied into the Imbler Transportation System Plan (TSP). Once these projects are listed, they will stand a better chance in qualifying for funding. Union County may also be able to assist in work areas that are in contact with County roads. Project packages would need to be presented to the Union County Commissioners for approval. In addition, maintenance agreements may be required by ODOT or the County as part of the projects.

In closing, several segments of improvements have been identified as potential solutions to existing stormwater drainage deficiencies. Problems associated with surface drainage have developed over the long term. Solutions to these problems may take a considerable amount of time. Additional evaluations may be necessary in areas not covered in this report. During the process of recovery, it is important to maintain the existing system so it can function at capacity. Routine maintenance is a key ingredient in the volume and quality of surface water runoff. It is essential to recognize that community support in monitoring and documenting flooding events is helpful during the final design. The proposed system would not be designed to handle the runoff of all storms and conditions.

City of Imbler
April 5, 1999
Page -16-

Sudden weather changes from cold to warm can be anticipated and provisions can be made. We have assembled a list of agency contacts during the research for this letter that may be helpful during the funding process. Please feel free to contact me for further information.

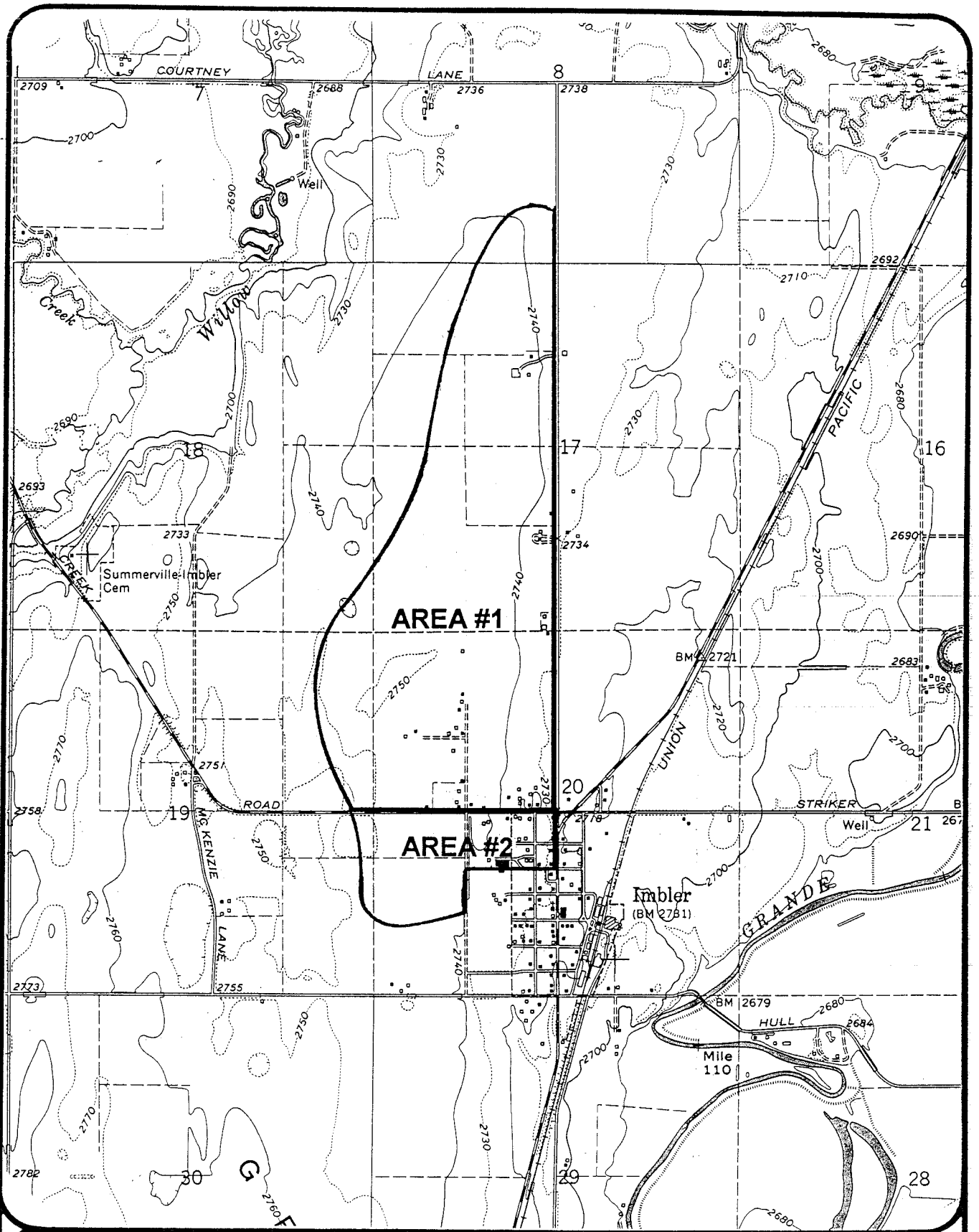
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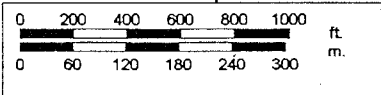
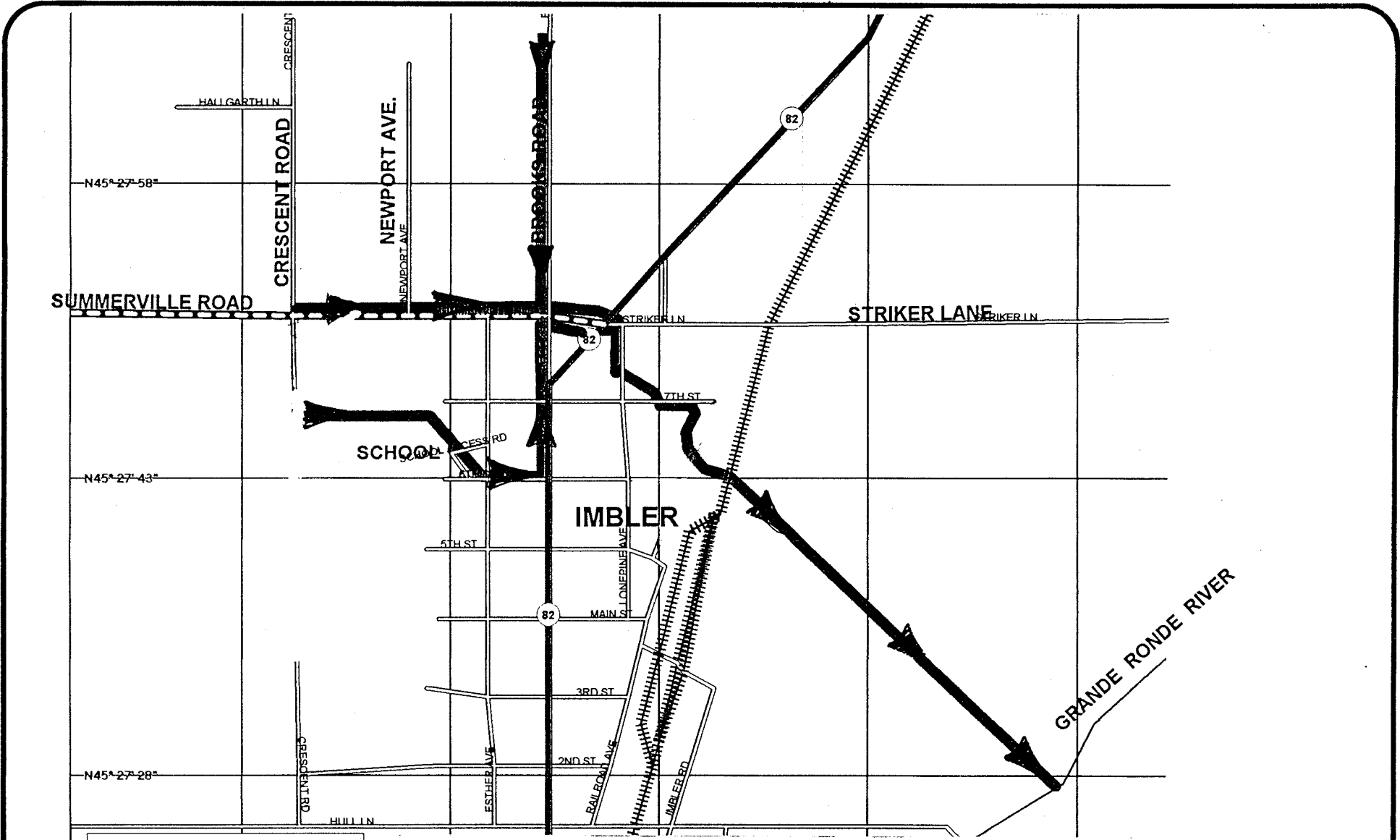
ANDERSON-PERRY & ASSOCIATES, INC.

By 
Jason Peterson, Staff Engineer

JP/rg

cc: Mitch Wolgamott - DEQ
Melanie Tromp Van Holst - SWCD
Mike Buchanan - ODOT District 13 Maintenance
Richard Comstock - Union County Public Works
Eileen Larkin - NRCS
File No. 882-20-02

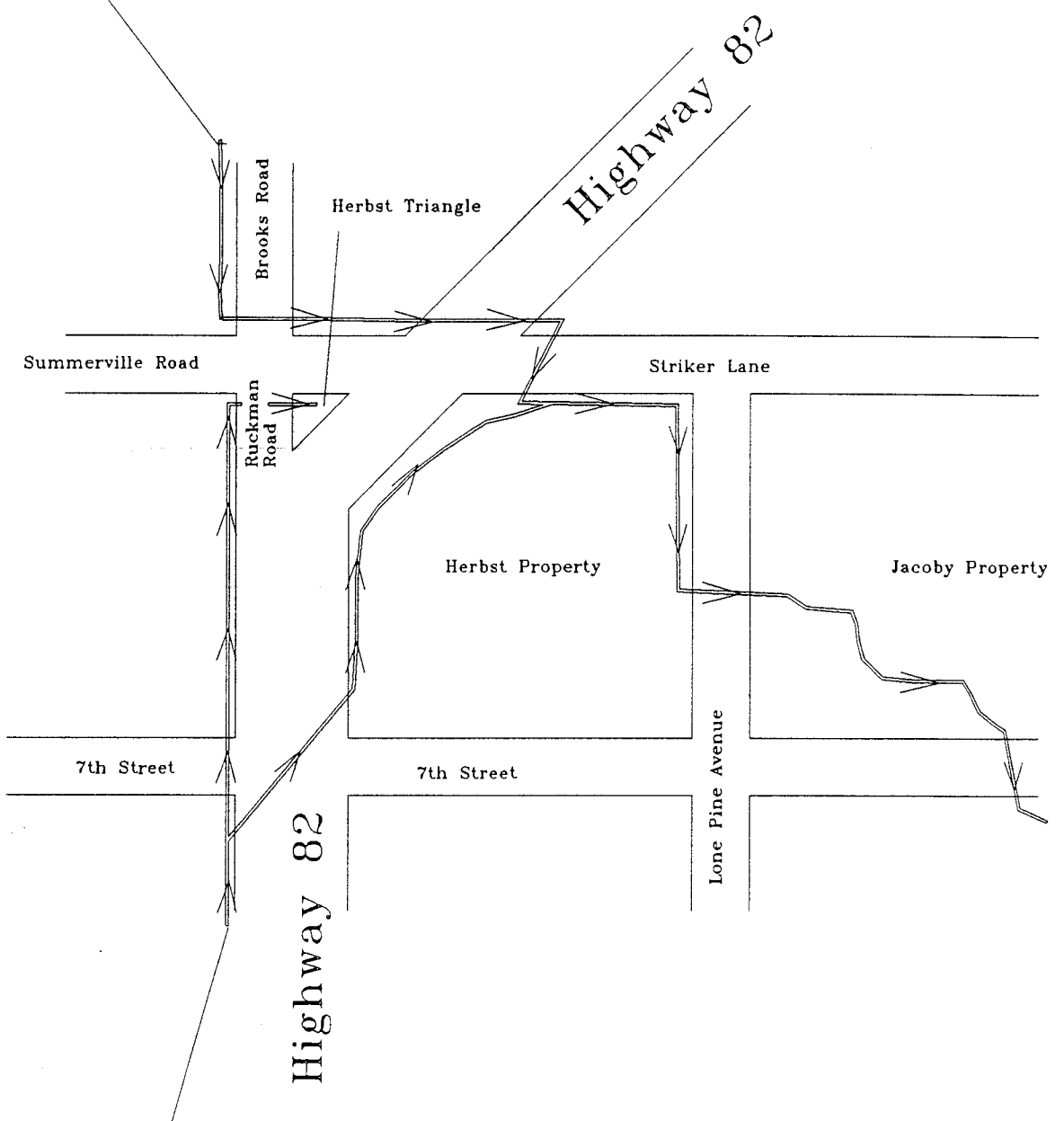
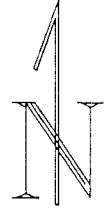




CITY OF
IMBLER, OREGON
SURFACE DRAINAGE REPORT - 1999
EXISTING DRAINAGE PATHS

FIGURE
2

Area 1 Surface Flows



Area 2 Surface Flows



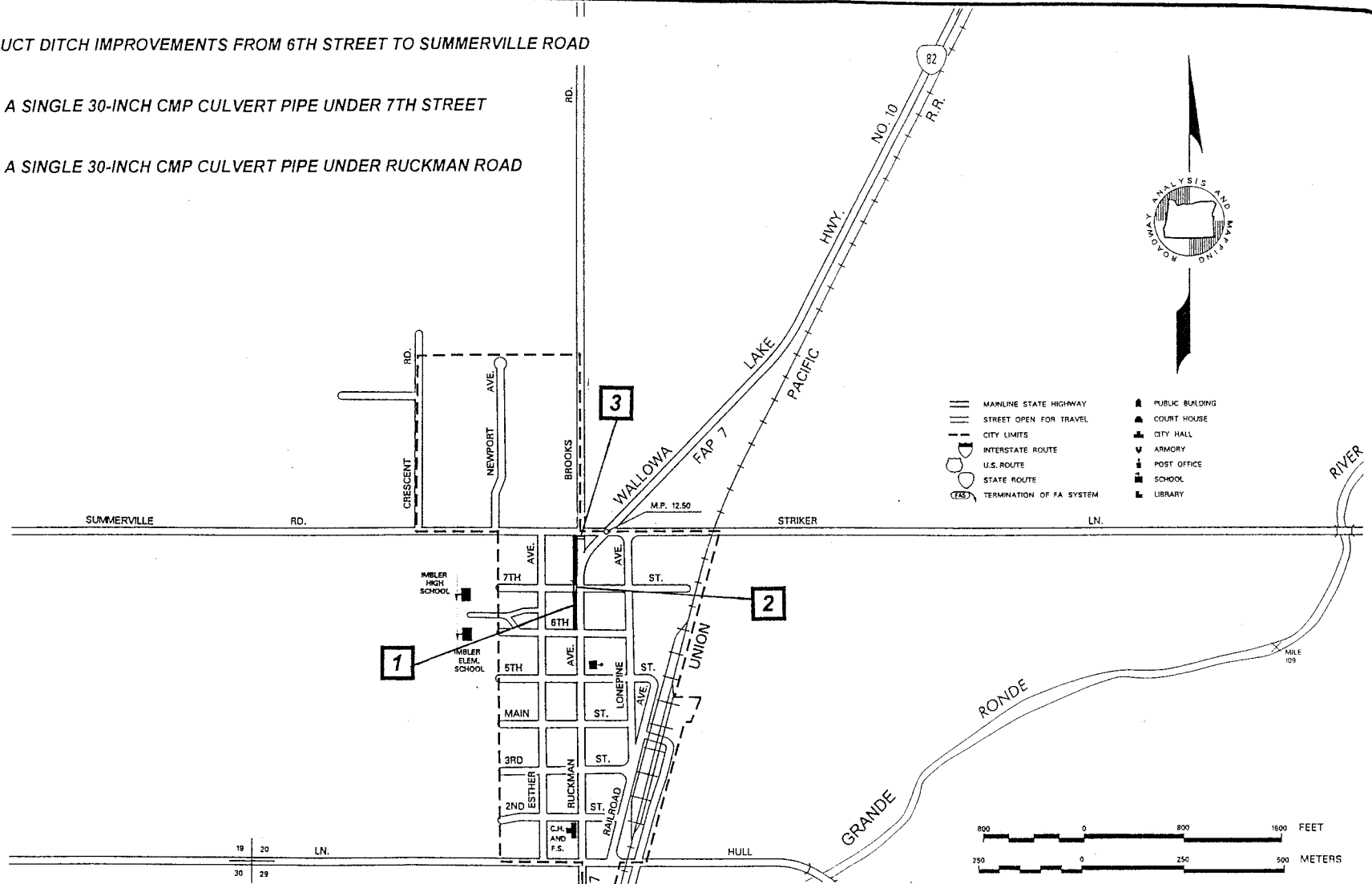
CITY OF
 IMBLER, OREGON
 STRIKER LANE/HWY. 82 INTERSECTION
 EXISTING DRAINAGE PATH

FIGURE
 3

1 CONSTRUCT DITCH IMPROVEMENTS FROM 6TH STREET TO SUMMERVILLE ROAD

2 INSTALL A SINGLE 30-INCH CMP CULVERT PIPE UNDER 7TH STREET

3 INSTALL A SINGLE 30-INCH CMP CULVERT PIPE UNDER RUCKMAN ROAD



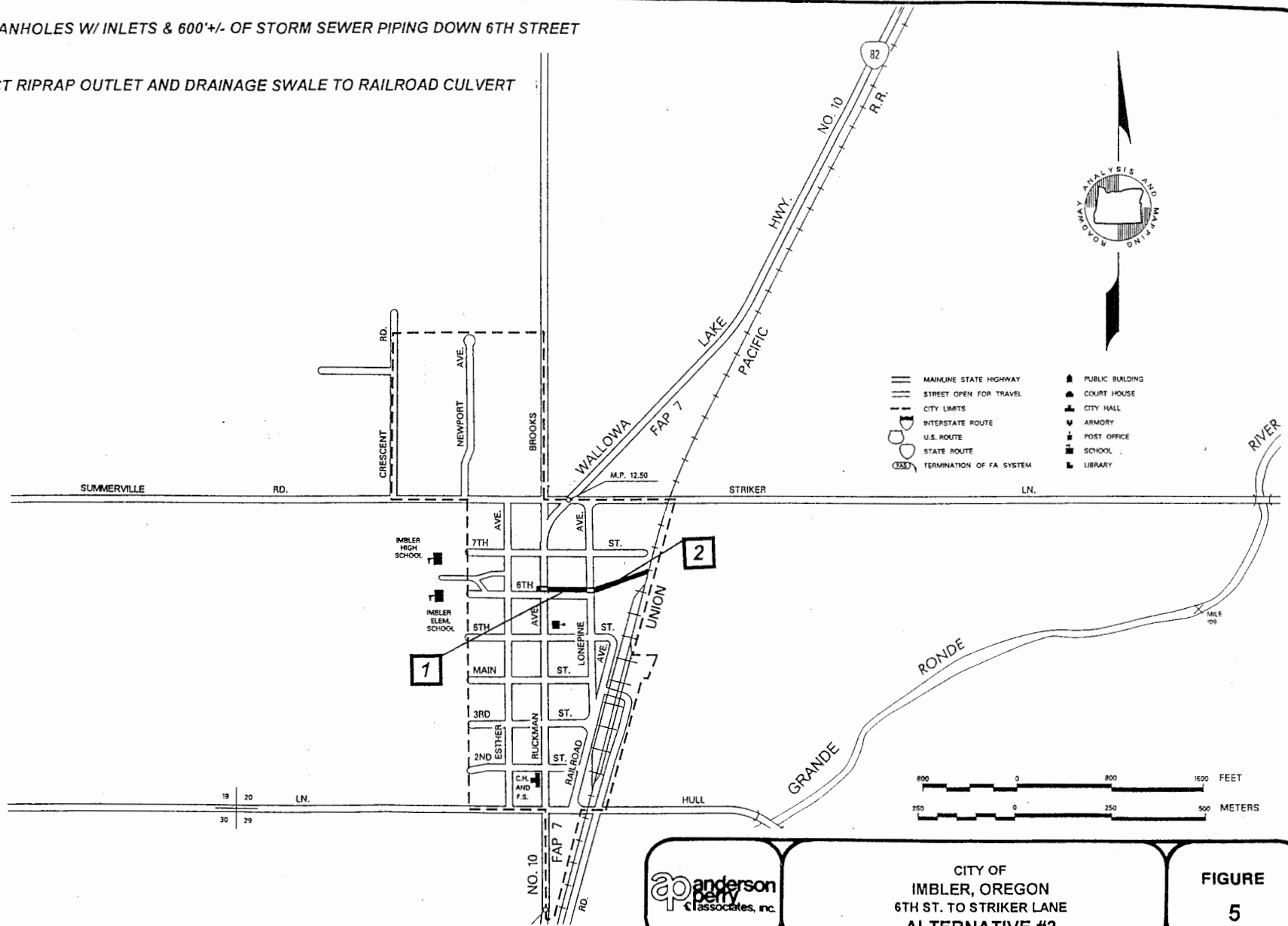
CITY OF
IMBLER, OREGON
6TH ST. TO STRIKER LANE
ALTERNATIVE #1

FIGURE
4

105151

1 INSTALL MANHOLES W/ INLETS & 600'+/- OF STORM SEWER PIPING DOWN 6TH STREET

2 CONSTRUCT RIPRAP OUTLET AND DRAINAGE SWALE TO RAILROAD CULVERT



anderson berry associates, inc.

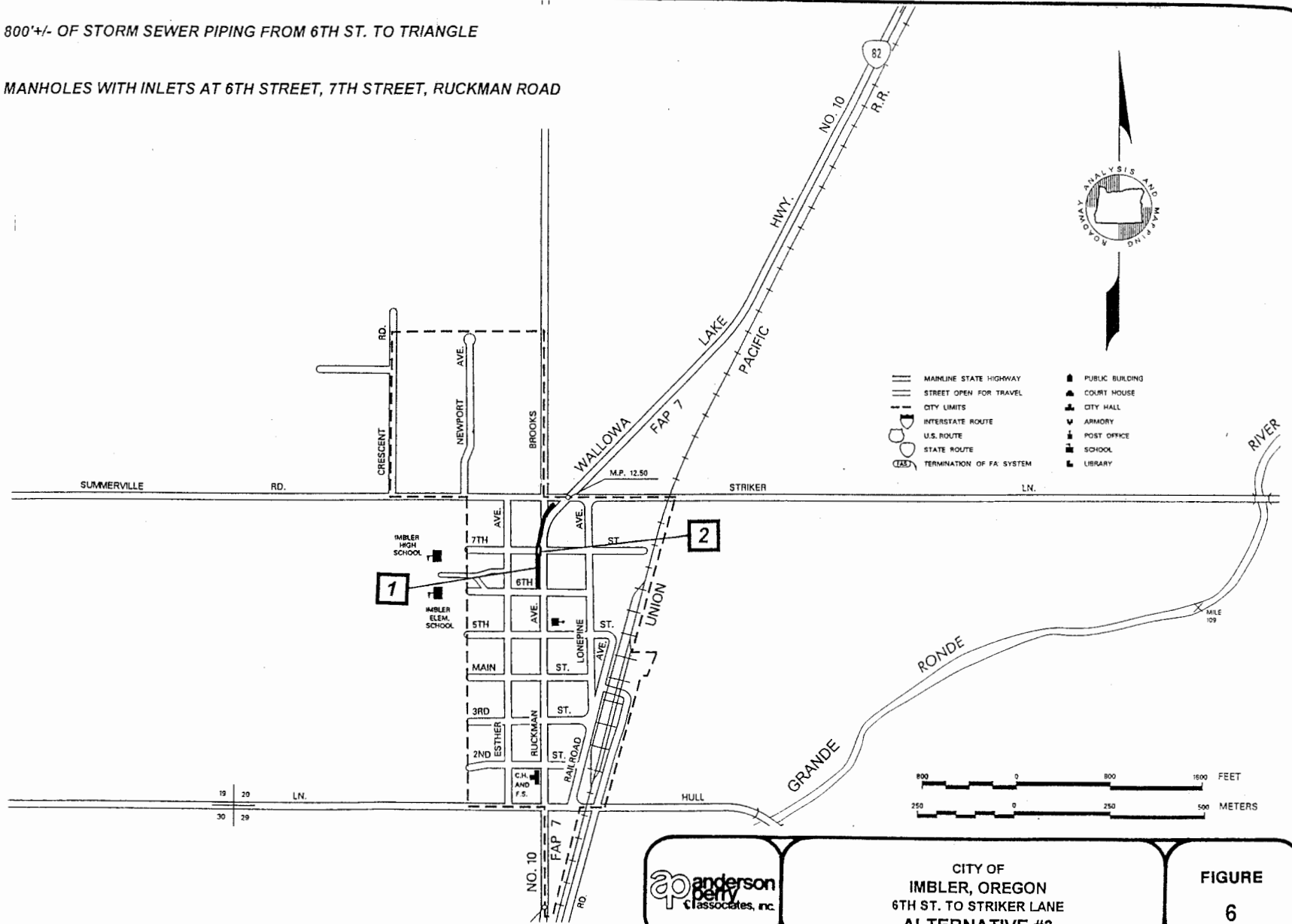
CITY OF
IMBLER, OREGON
6TH ST. TO STRIKER LANE
ALTERNATIVE #2

FIGURE
5

165181

1 INSTALL 800'+/- OF STORM SEWER PIPING FROM 6TH ST. TO TRIANGLE

2 INSTALL MANHOLES WITH INLETS AT 6TH STREET, 7TH STREET, RUCKMAN ROAD

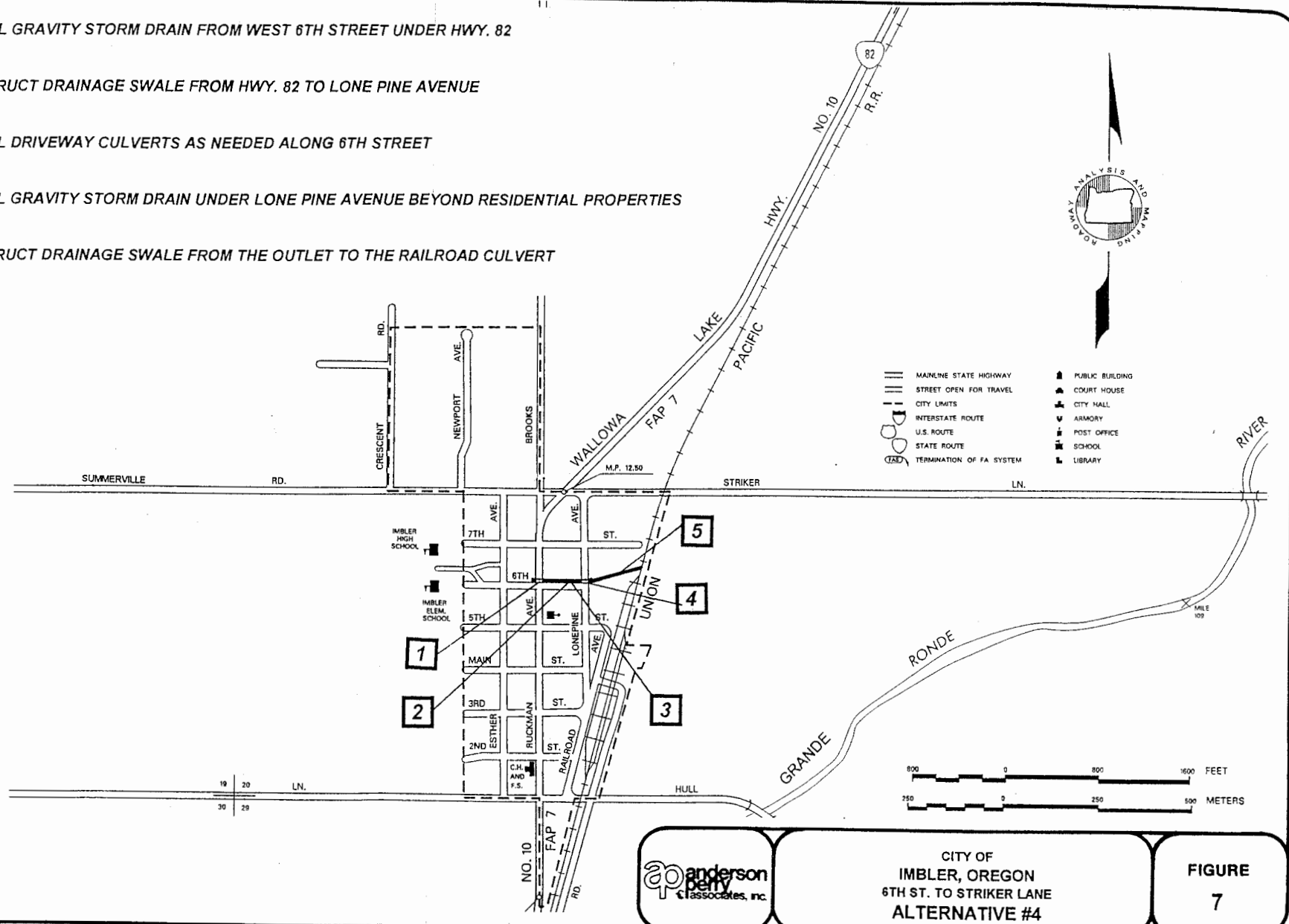


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& associates, inc.

CITY OF
IMBLER, OREGON
6TH ST. TO STRIKER LANE
ALTERNATIVE #3

FIGURE
6

- 1 INSTALL GRAVITY STORM DRAIN FROM WEST 6TH STREET UNDER HWY. 82
- 2 CONSTRUCT DRAINAGE SWALE FROM HWY. 82 TO LONE PINE AVENUE
- 3 INSTALL DRIVEWAY CULVERTS AS NEEDED ALONG 6TH STREET
- 4 INSTALL GRAVITY STORM DRAIN UNDER LONE PINE AVENUE BEYOND RESIDENTIAL PROPERTIES
- 5 CONSTRUCT DRAINAGE SWALE FROM THE OUTLET TO THE RAILROAD CULVERT



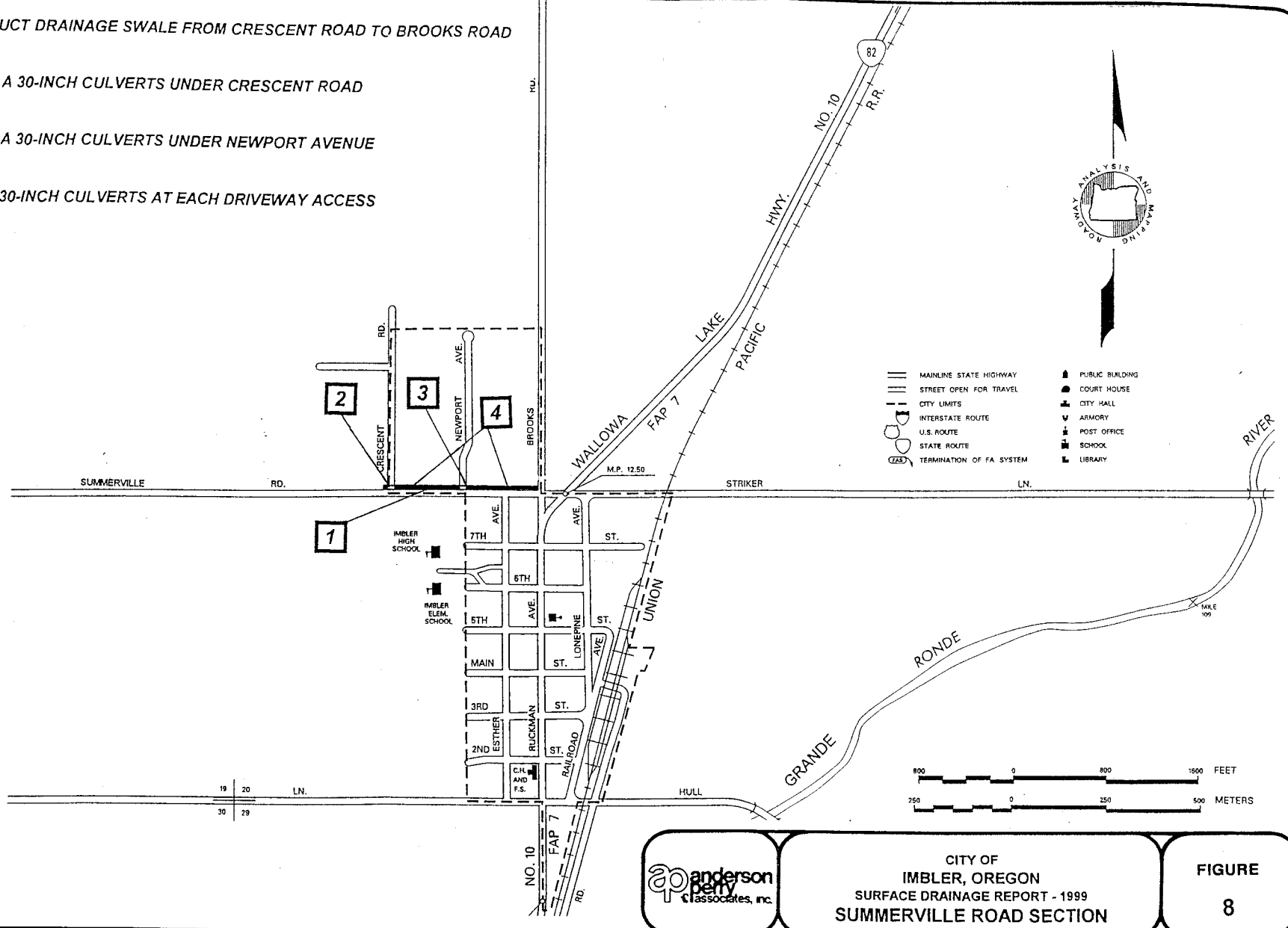
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CITY OF
IMBLER, OREGON
6TH ST. TO STRIKER LANE
ALTERNATIVE #4

FIGURE
7

105115

- 1 CONSTRUCT DRAINAGE SWALE FROM CRESCENT ROAD TO BROOKS ROAD
- 2 INSTALL A 30-INCH CULVERTS UNDER CRESCENT ROAD
- 3 INSTALL A 30-INCH CULVERTS UNDER NEWPORT AVENUE
- 4 INSTALL 30-INCH CULVERTS AT EACH DRIVEWAY ACCESS





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SUMMERVILLE ROAD SECTION

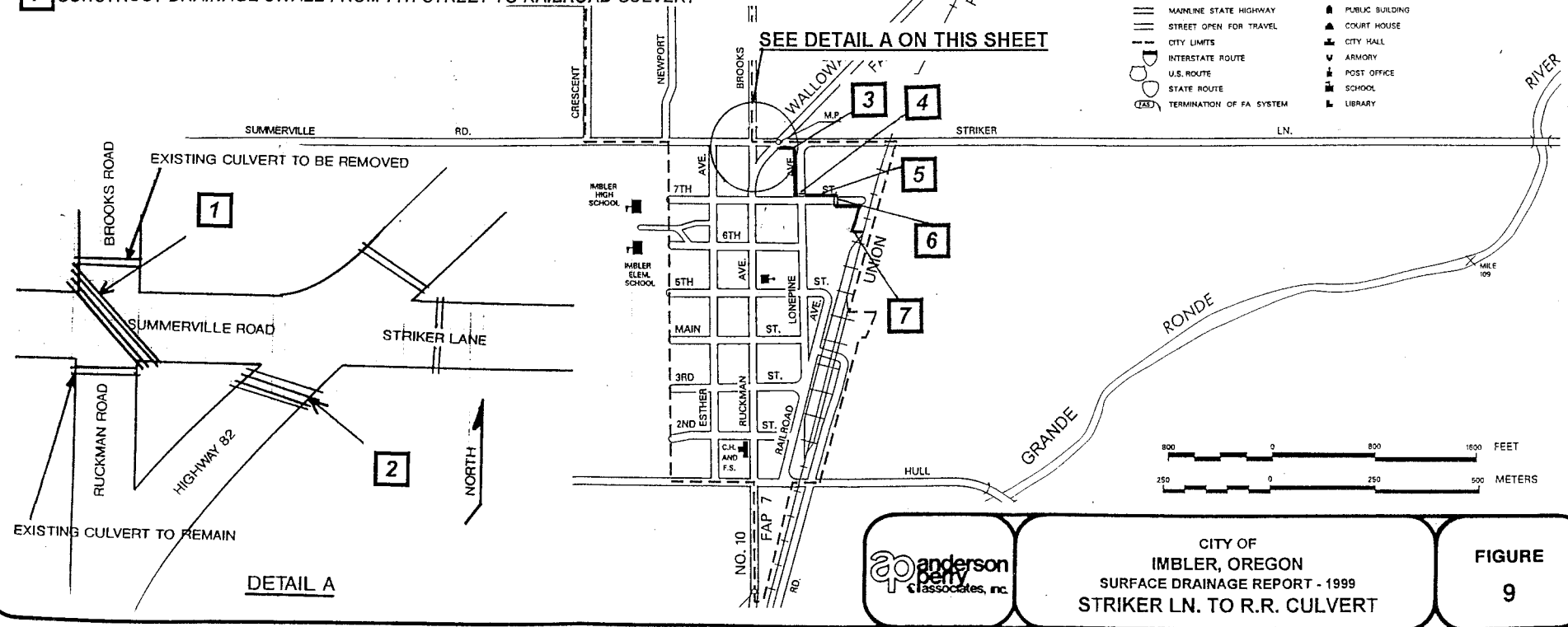
FIGURE
8

105101

- 1 INSTALL TWO 42-INCH CMP CULVERT PIPES UNDER SUMMERVILLE RD. TO TRIANGLE
- 2 INSTALL TWO 42-INCH CMP CULVERT PIPES UNDER HIGHWAY 82
- 3 CONSTRUCT DRAINAGE SWALE FROM STRIKER LANE TO LONE PINE AVENUE
- 4 INSTALL TWO 42-INCH CULVERTS UNDER LONE PINE AVENUE
- 5 CONSTRUCT DRAINAGE SWALE FROM LONE PINE AVENUE TO 7TH STREET
- 6 INSTALL TWO 42-INCH CULVERTS UNDER 7TH STREET
- 7 CONSTRUCT DRAINAGE SWALE FROM 7TH STREET TO RAILROAD CULVERT



- | | | | |
|--|--------------------------|--|-----------------|
| | MAINLINE STATE HIGHWAY | | PUBLIC BUILDING |
| | STREET OPEN FOR TRAVEL | | COURT HOUSE |
| | CITY LIMITS | | CITY HALL |
| | INTERSTATE ROUTE | | ARMORY |
| | U.S. ROUTE | | POST OFFICE |
| | STATE ROUTE | | SCHOOL |
| | TERMINATION OF FA SYSTEM | | LIBRARY |



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FIGURE
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