City of Heppner

Transportation System Plan

Heppner, Oregon

Transportation and Growth Management Program Oregon
Department of Transportation

Update June 2003

City of Heppner Transportation System Plan

Heppner, Oregon

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Original Draft, June 1999 by Kittelson & Associates, Inc.

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Preface

This project is partially funded by a grant from the Transportation Growth Management (TGM) Program, a joint program of the Oregon Department of Transportation and the Oregon Department of Land Conservation and Development. TGM grants rely on federal Intermodal Surface Transportation Efficiency Act and Oregon Lottery funds. The contents of this document do not necessarily reflect the views or policies of the state of Oregon.

The progress of the original plan was guided by the Management Team, Transportation Advisory Committee, and Consultant Team identified below.

The 2003 Update and Revision work was funded by a grant from the Transportation Growth Management Program.

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Advisory Committee members and later the Planning Commission and the City Council devoted a substantial amount of voluntary time and effort to the development of the Transportation System Plan, and their participation was instrumental in the development of the recommendations that are presented in this report. The Consultant Team and Management Team believe that the City of Heppner's future transportation system will be better because of their commitment.

1999 Consultant Team

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Section 1

Introduction

Introduction

The City of Heppner, in conjunction with Morrow County and the Oregon Department of Transportation (ODOT), initiated a study of the city's transportation system during the summer of 1998. The purpose of this study was two-fold: to guide the management and development of appropriate transportation facilities; and to incorporate the vision of the community into a land use and transportation system that addresses both the potential for infill and redevelopment strategies and the multimodal needs of the community.

Since 1990, Heppner has experienced a modest growth rate as well as an economic restructuring as it has become less resource dependent. This economic restructuring will likely continue to produce new growth pressures and community needs. To address these changing needs, Heppner needs to develop land use and transportation strategies that continue to plan for the economic development associated with the existing agriculture and timber industries. Care should also be taken to continue to foster economic development associated with recreation and tourism. The analysis, findings, and recommendations of this report incorporate a diverse spectrum of vehicular, pedestrian, bicycle, and other multi-modal circulation and connectivity solutions that will allow Heppner to prosper well into the next century.

This study was prepared as part of a Transportation Growth Management Grant and is formatted to provide the necessary elements for the City of Heppner to assemble its Comprehensive Plan. In addition, this document provides Morrow County and ODOT with recommendations for incorporation with their respective planning efforts.

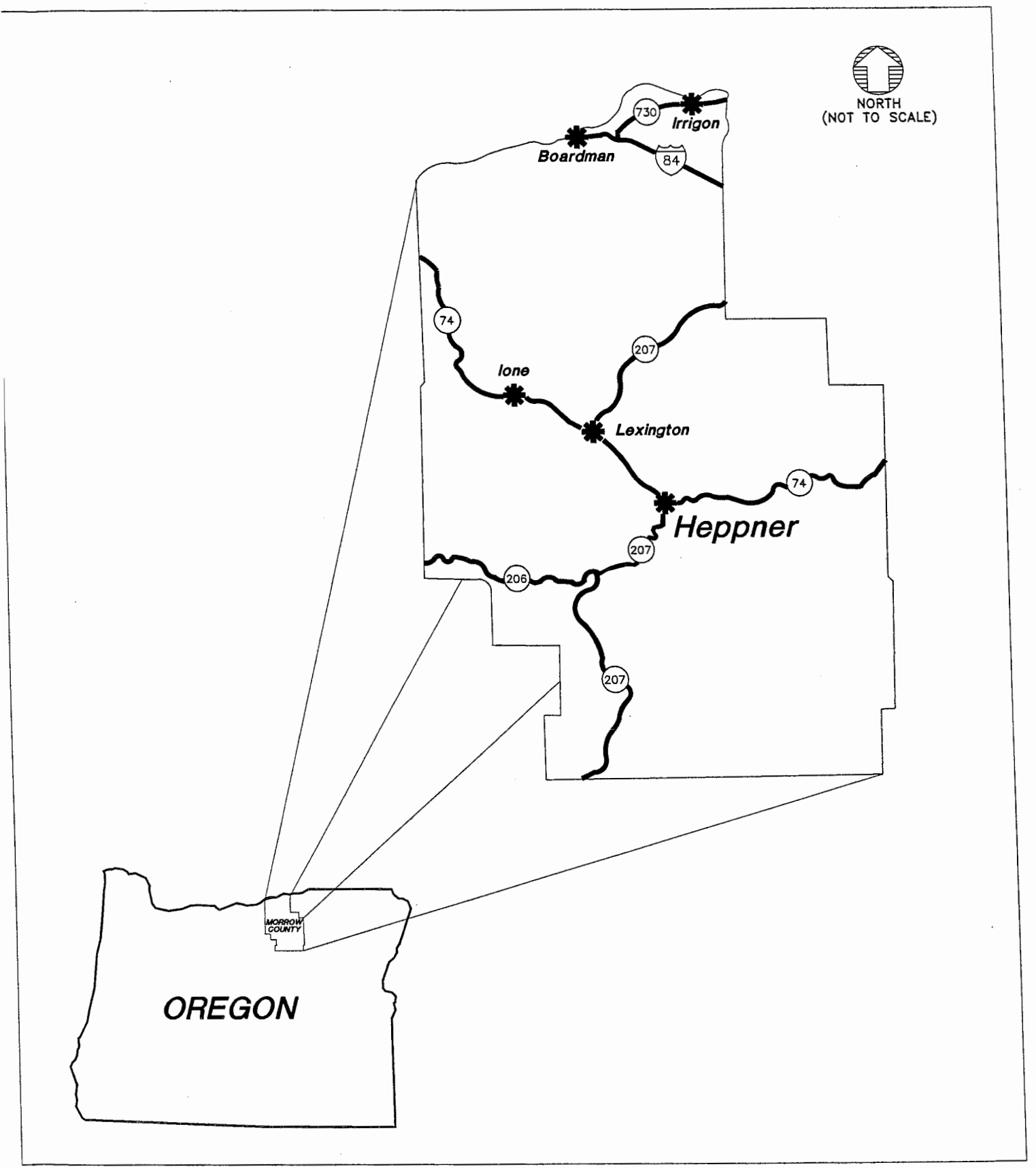
State of Oregon guidelines stipulate that the TSP must be based on the current comprehensive plan land use map and must provide a transportation system that accommodates the expected 20-year growth in population and employment that will result from implementation of the land use plan. Oregon Revised Statute 197.712 and the Land Conservation and Development Commission (LCDC) administrative rule known as the Transportation Planning Rule (TPR) require that all jurisdictions develop the following:

- a road plan for a network of arterial and collector streets;
- a public transit plan;
- a bicycle and pedestrian plan;
- an air, rail, water, and pipeline plan;
- a transportation finance plan; and,
- policies and ordinances for implementing the transportation system plan.

The TPR requires that alternative travel modes be given equal consideration and that reasonable effort be applied to the development and enhancement of the alternative modes in providing the future transportation system. In addition, the TPR requires that local jurisdictions adopt land use and subdivision ordinance amendments to protect transportation facilities and to provide bicycle and pedestrian facilities between residential, commercial, and employment/institutional areas. It is further stipulated that local communities coordinate their respective plans with county and state transportation plans.

STUDY AREA

The City of Heppner is located along Willow Creek in south central Morrow County, Oregon, as shown in Figure 1. Heppner is the Morrow County Seat and is home to an estimated population of 1,465 persons (1997 census estimate). Over the years, Heppner's development pattern has been shaped to reflect its



STUDY AREA MAP

CITY OF HEPPNER, OREGON TRANSPORTATION SYSTEM PLAN	FIGURE 1	K
JUNE 1999		

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heritage as an agricultural, timber, and government based economy. The downtown area contains a mix of commercial, residential, and public land uses.

The City of Heppner's growth patterns and the corresponding transportation network have been affected by local topography. The city is located at the convergence of three local waterways and is subject to flooding, the potential for which has shaped the city. Most of the commercial uses within Heppner are located along Highways 207 and 74. Industrial land uses are concentrated primarily along the northern section of the city, adjacent to Highway 207/74, the Heppner Highway. Residential land uses are located throughout the city, with farmland located on the outer periphery. Reflecting the area's rural nature, Heppner's residential development is mostly of low-density design. Single family homes and duplexes on modest lots are located throughout the city.

PUBLIC INVOLVEMENT AND STUDY GOALS

The TSP planning process provided the citizens of Heppner with the opportunity to identify their priorities for future growth and development. Expressing their vision for the future in terms of goals and objectives for the TSP was a central element of the public involvement process. The goals and objectives identified by the community were used as guidelines for developing and evaluating alternatives, selecting a preferred transportation plan, and prioritizing improvements.

Two committees were formed to guide the planning process: the Management Team and the Transportation Advisory Committee (TAC). The Management Team was composed of representatives of the City of Heppner, Morrow County, ODOT, and the consultant team. The Transportation Advisory Committee included several community members with a specific interest in transportation and land use planning in the community. The two committees convened at several key junctures of the project including: project inception and completion of the existing conditions analysis, presentation of the future conditions and alternatives analysis findings, and presentation of the draft TSP.

Given the city's Comprehensive Plan, and through the direction provided by both the two TSP committees and the public hearing process, a series of transportation system goals and objectives evolved that provided the planning process with direction as well as evaluation criteria. Those goals and objectives are listed below.

Goal 1

Promote a balanced, safe, and efficient transportation system.

Objectives

1. Develop a multi-modal transportation system that avoids reliance upon one form of transportation as well as minimizes energy consumption and air quality impacts.
2. Protect the qualities of neighborhoods and the community.
3. Provide for adequate street capacity and optimum efficiency.
4. Promote adequate transportation linkages between residential, commercial, public, and industrial land uses.

Goal 2

Ensure the adequacy of the roadway network in terms of function, capacity, level of service, and safety.

Objectives

1. Develop a functional classification system that addresses all roadways within the study area.

2. In conjunction with the functional classification system, identify corresponding street standards that recognize the unique attributes of the local area.
3. Identify existing and potential future capacity constraints and develop strategies to address those constraints, including potential intersection improvements, future roadway needs, and future street connections.
4. Evaluate the need for modifications to and/or the addition of traffic control devices.
5. Identify access spacing standards on Highways 74 and 207 that conform to the Oregon Highway Plan.
6. Provide an acceptable level of service at all intersections in the city, recognizing the rural character of the area. Intersection operations on Highways 74 and 207 should conform with the level of service and volume/capacity ratio requirements identified in the Oregon Highway Plan.
7. Identify existing and potential future safety concerns as well as strategies to address those concerns.

Goal 3

Promote alternative modes of transportation.

Objectives

1. Develop a comprehensive system of pedestrian and bicycle routes that link major activity centers within the study area.
2. Encourage the continued use of public transportation services.

Goal 4

Identify and prioritize transportation improvement needs in the City of Heppner, and identify a set of reliable funding sources that can be applied to these improvements.

Objectives

1. Develop a prioritized list of transportation improvement needs in the study area.
2. Develop construction cost estimates for the identified projects.
3. Evaluate the adequacy of existing funding sources to serve projected improvement needs.
4. Evaluate new innovative funding sources for transportation improvements.

TRANSPORTATION SYSTEM PLAN STUDY METHODOLOGY AND ORGANIZATION

The development of the City of Heppner's Transportation System Plan began with an inventory of the existing transportation system and a review of the local, regional, and statewide plans and policies that guide land use and transportation planning in the city (Appendix "A" contains the plans and policies review). The inventory included documentation of all transportation-related facilities within the study area and allowed for an objective assessment of the current system's physical characteristics, operational performance, safety, deficiencies, and general function. A description of the inventory process, as well as documentation of the existing conditions analyses and their implications, is presented in **Section 2** of this report. The findings of the existing conditions analysis were presented to and verified by the two TSP committees.

Upon completion of the existing conditions analysis, the focus of the project shifted to forecasting future travel demand and the corresponding long-term future transportation system needs. Development of long-term (year 2020) transportation system forecasts relied heavily on population and employment growth projections for the study area and review of historical growth in the area. Through the city's Comprehensive Plan and land use projections provided by the consultant team, reasonable assumptions could be drawn as to the potential for and location of future development activities. **Section 3** of this report, *Future Conditions Analysis*, details the development of anticipated long-term future transportation needs within the study area.

Section 4 of this report, *Alternatives Analysis*, documents the development and prioritization of alternative measures to mitigate identified safety and capacity deficiencies, as well as projects that would enhance the multi-modal features of the local transportation system. The impact of each of the identified alternatives was considered on the basis of individual merits, conformance with the existing transportation system and land use, as well as potential conflicts to implementation and integration with the surrounding transportation system and land use components. Advice as to the merit and priority of the recommended improvement alternatives was sought from the Management Team and the TAC during the TSP process. Ultimately, based on comments received from the Management Team and TAC, a preferred plan was developed that reflected a consensus as to which elements should be incorporated into the city's long-term transportation system.

Having identified a preferred set of alternatives, the next phase of the TSP planning process involved presenting and refining the individual elements of the transportation system plan through a series of decisions and recommendations. The recommendations identified in **Section 5**, *Transportation System Plan*, include a Roadway Network and Functional Classification Plan, a Pedestrian Plan, a Bikeway Plan, a Public Transportation Plan, and other multi-modal plans.

Section 6, *Transportation Funding Plan*, provides an analysis and summary of the alternative funding sources available to finance the identified transportation system improvements.

The city's existing comprehensive plan and zoning ordinances were limited and did not allow the city to develop the type of transportation system desired. In an effort to rectify this situation and ensure compliance with the TPR, several comprehensive plan and zoning ordinance modifications have been developed. Development review guidelines were also drafted. The recommended modifications presented in **Section 7**, *Policies and Land Use Ordinance Modifications*, address major land use and transportation issues identified through development of the TSP and reflect the desire to enhance all modes of the transportation system.

Finally, **Section 8**, *Transportation Planning Rule Compliance*, lists the requirements and recommendations of the Oregon Transportation Planning Rule (OAR 660 Division 12) and identifies how the City of Heppner TSP satisfies that criterion.

Section 2

Existing Conditions

Existing Conditions

INTRODUCTION

The development of this transportation system plan began with an assessment of the existing land use and transportation system conditions. This section describes the existing land uses and conditions for all transportation modes that the transportation system plan will address, including trucks, cars, pedestrians, bicycles, transit, air, and marine facilities. The purpose of this section is to provide an inventory description of existing facilities while setting the stage for a basis of comparison to future conditions.

LAND USE HISTORY

The history of development of the City of Heppner has been shaped, in large part, by two major factors: transportation and the creeks. In 1872, Henry Heppner and Jackson Lee Morrow opened a store near the fork of Willow Creek to serve the needs of the stockmen settled on Willow Creek, Balm Fork, and Rhea Creek. The stockmen were tired of individually hauling goods from the Columbia River and Sixmile Canyon and asked Heppner and Morrow to manage their supply and distribution.

In the 1800's, commercial farming in and near Heppner was constrained by the need to ship goods to and from the Columbia River for shipment on to Portland. The extension of the railroad in 1883 from Portland did not alleviate this problem because of its distance from Heppner. The construction of a railroad spur between the Willow Creek Valley and the Columbia River, which has since been abandoned, resulted in commercial grain and wool production in Heppner in the late 1800's that continued strongly until the depression era.

When Morrow County was incorporated in 1885, the struggle for the county seat was fierce between Lexington and Heppner, with Heppner winning by 33 votes. The historic County Courthouse building continues to be a strong focal point of the downtown and, as county seat, Heppner is ensured a steady employment base into the future.

Given its relative isolation from major cities and transportation routes, Heppner and Morrow County blossomed as a self-sufficient community between 1870 and 1920 and were home to a variety of businesses to serve the residents. The advent of the automobile and the construction of easily traveled roads to areas beyond the county boundaries led to an era of reliance on neighboring communities that continues today.

During the last 100 years, the population and land use patterns in the city have been shaped by the cyclical nature of agriculture and timber production, a catastrophic flood in 1903 and flooding in years hence, and the presence of the county seat. The regular occurrence of flooding affected the siting of many of the land uses in the city, particularly public uses such as the hospital, high school and police and emergency services offices, all of which are located on hills above the central part of town.

In the last ten years, Heppner has experienced relatively slow population growth (less than 90 people since 1990) and consequently, relatively little new commercial and residential development. Much of the residential development that has occurred has been located in the southern and eastern areas of town near Morrow Street and in the Lakeview Heights area (near Willow Creek Road). Today, there is a limited amount of flat, vacant residential land remaining within the central portion of town whereas the majority of the vacant residential land is located on or above the relatively steep slopes that surround the city.

Most of the commercial land in the city is located in the downtown area, primarily between Gale Street and Chase Street to the west and east, and Church and Hill Streets to the north and south (refer to Figure

2). The City recently finished Main Street improvements, including the addition of curb extensions, street trees, street lighting, a wide sidewalk, and other amenities and the incorporation of diagonal parking on both sides of the street. The resulting Main Street contributes to a strong sense of the downtown character and charm in Heppner. Additional commercial land is located on the northern end of town along Highway 207/74. Much of this area is undeveloped and within the floodway or has been developed as residential uses.

TRANSPORTATION FACILITIES

The City of Heppner's transportation system includes facilities that serve several different modes. All of these facilities are identified and discussed in detail in the following sections.

ROADWAY FACILITIES

Jurisdictions

All public roadways within the City of Heppner are operated and maintained under the auspices of one of three jurisdictions – the Oregon Department of Transportation (ODOT), Morrow County, and/or the city. The following paragraphs highlight the existing roadway network, which is illustrated in Figure 3. Figure 3 also identifies the jurisdiction responsible for the various roadways.

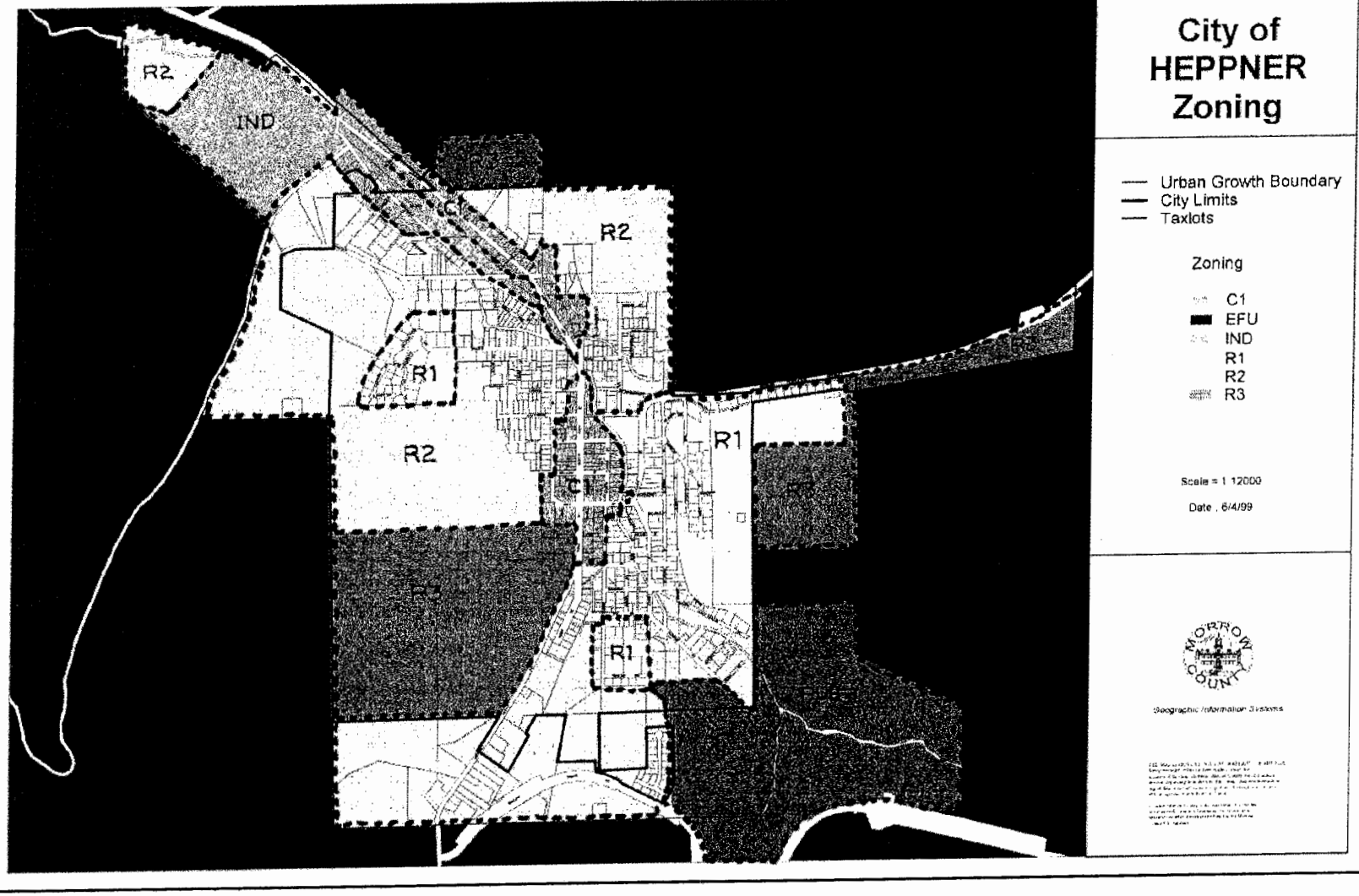
State Facilities

The City of Heppner is served by two state highways, Highway 74 and Highway 207/74. Several members of the local community use these facilities to commute to job opportunities located in surrounding communities such as Boardman, Hermiston, and Umatilla. While the city has highway access, it is not located in the vicinity of major trucking routes. Lack of direct access and the associated limitations on the movement of goods has limited the potential for employment growth since the inception of the city. A more detailed description of the state highways serving the city is presented below.

Highway 207/74

Highway 207/74, the Heppner Highway, passes through the downtown portion of the city and is identified as Main Street within the city. Highway 207/74 is maintained by the Oregon Department of Transportation (ODOT). ODOT designates the portion of Highway 207/74 that is located north of May Street as the Heppner Highway and classifies this section of roadway as being of a *Regional Level of Importance* in the *Oregon Highway Plan* (Reference 1). The section of Highway 74 that begins at May Street and extends to the east is also part of the Heppner Highway, though ODOT classifies this section of roadway as a *District Level of Importance.*

The primary function of a *Regional Highway* is to provide connections and links to areas within regions of the state, between small urbanized areas and larger population centers, and to higher level facilities. *District Highways* primarily serve local traffic and land access and are considered to be of relatively low significance from a statewide perspective.



EXISTING ZONING MAP

CITY OF HEPPNER, OREGON TRANSPORTATION SYSTEM PLAN JUNE 1999	FIGURE 2	

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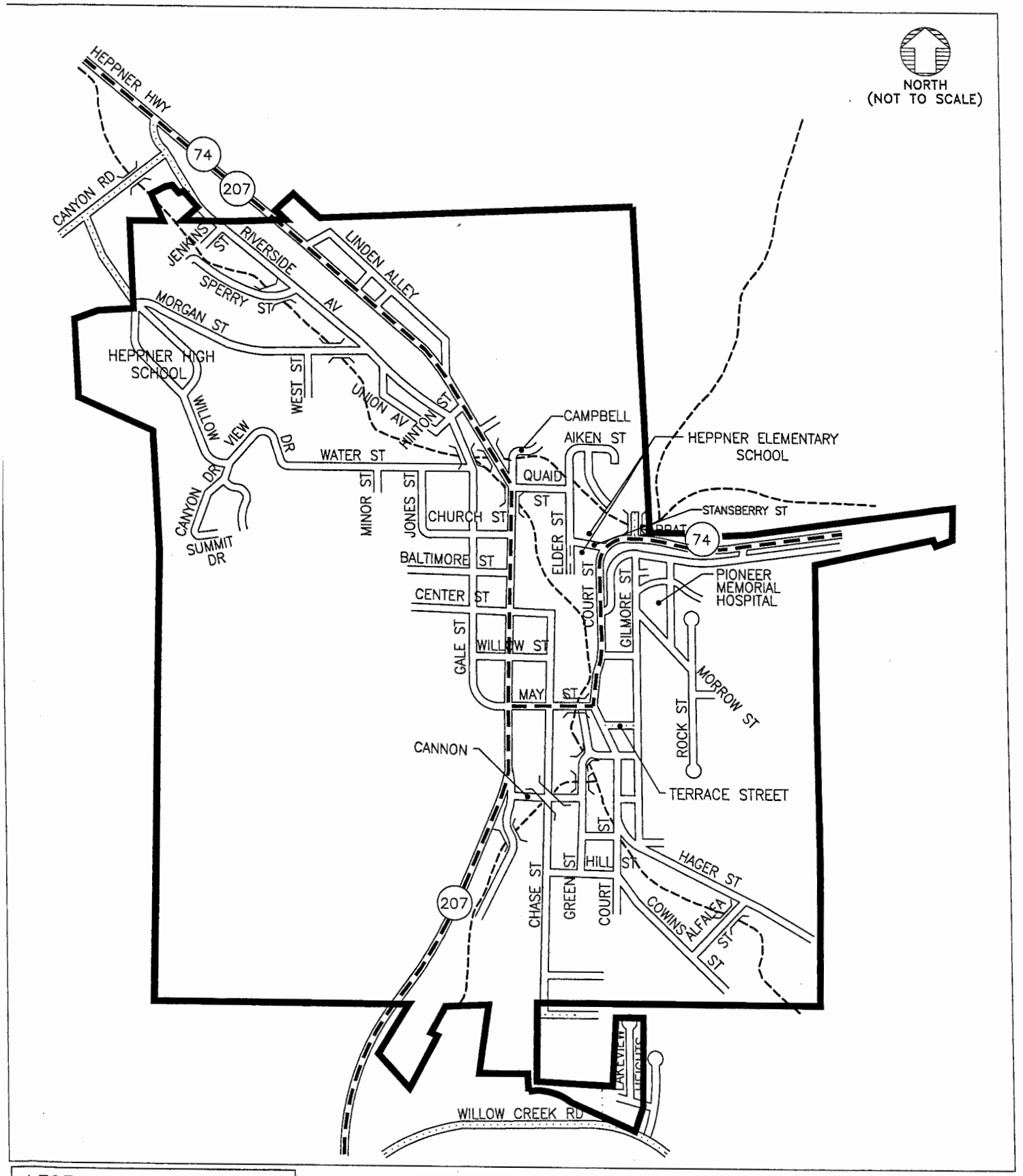

LEGEND

- STATE (ODOT)
- COUNTY
- CITY
- CITY LIMITS
- CREEK

EXISTING ROADWAY NETWORK AND JURISDICTIONAL OWNERSHIP

CITY OF HEPPNER, OREGON
TRANSPORTATION SYSTEM PLAN
JUNE 1999

FIGURE 3

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The portion of Highway 207/74 that is located south of May Street is designated as the Wasco-Heppner Highway by ODOT. This section of roadway is also classified as being of a *Regional Level of Importance.* Highway 207/74 connects Heppner with Interstate 84 and the Cities of Lexington and Ione to the north as well as Highway 395 to the east. Highway 207/74 has a two-lane cross section and a variable posted speed limit. Outside of the city, the posted highway speed limit is 55 miles per hour (mph). The 55 mph speed limit is reduced to 35 mph south of Riverside Avenue and is further reduced to 25 mph north of Quaid Street and continuing out past the county fairgrounds on the east side of the city. A historical landmark consisting of a pullout lane on Highway 207/74 and a plaque (which contains information about the flood that nearly destroyed the city) is located on the east side of the highway near Quaid Street.

Access to the state highways in the City of Heppner varies by location. As will be explained later in this section, Highway 207/74 within the downtown area of the City of Heppner (between Hinton Street and May Street and east on May Street to the bridge) was reconstructed recently. As a result, access along this stretch of highway is limited, with most storefronts served by on-street parking. Highway 207/74 north of Hinton Street exhibits areas of ill-defined private access points, though most of the public street access points are spaced at least 200 feet apart.

City of Heppner Facilities

The City of Heppner's roadway system is comprised of a number of local streets woven within the narrow valley formed by the Hinton, Shobe, and Balm Fork waterways that flow into Willow Creek. The City of Heppner Comprehensive Plan, through Title 12, identifies street classification terminology that includes alleys, arterials, collectors, cul-de-sacs, marginal access streets, and minor streets. Title 12 of the Comprehensive Plan identifies subdivision street design standards. The comprehensive plan does not, however, present a functional classification system for roadways within the city.

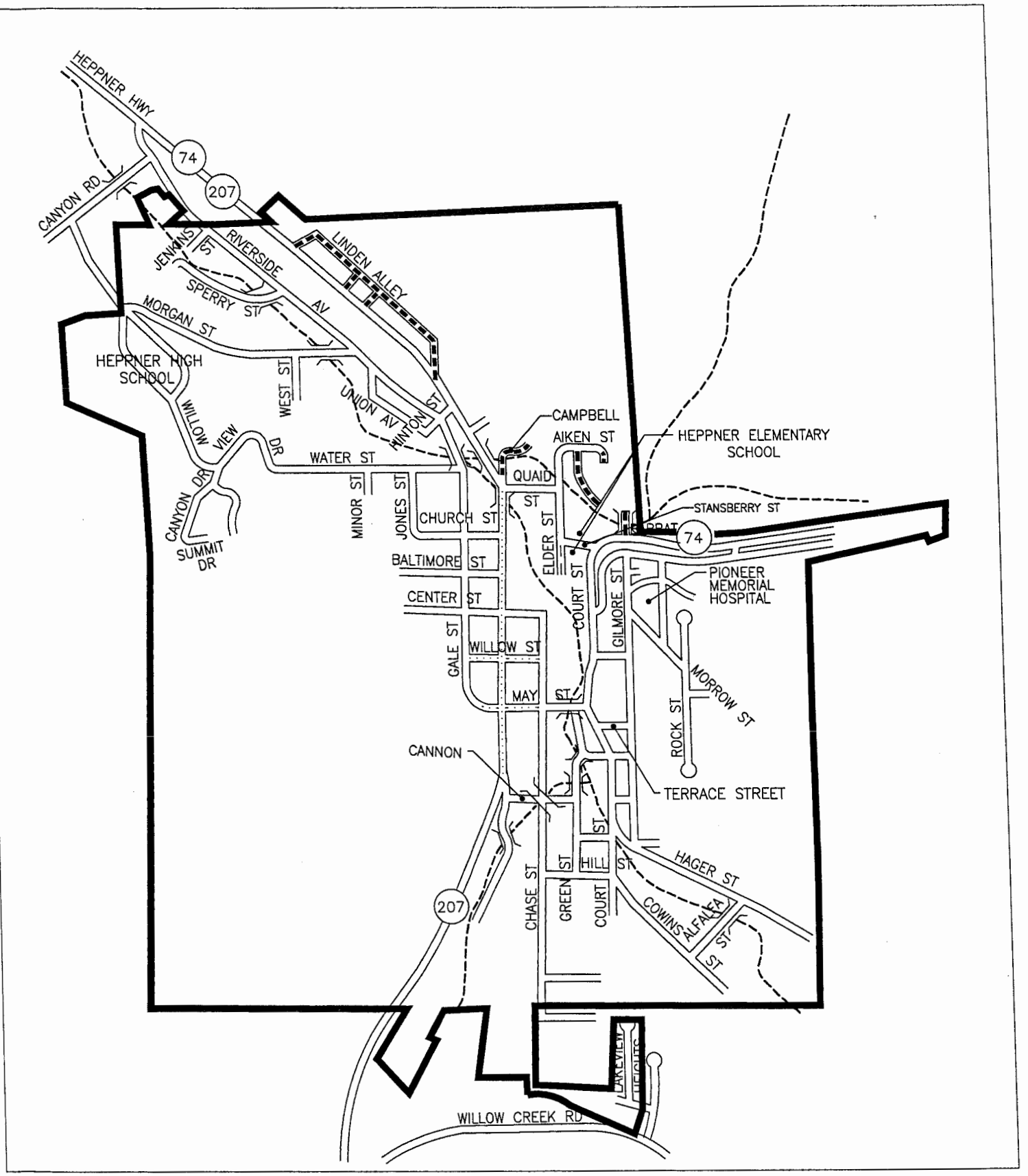
The transportation infrastructure within the downtown commercial area of Heppner was reconstructed in 1998 to revitalize the area and emphasize pedestrian access. Continuous sidewalk facilities on Main Street link downtown businesses. Newly installed curb extensions provide shorter roadway crossing distances and a more pedestrian friendly character. Other pedestrian facilities such as textured and/or striped crosswalks have also been provided. As shown in Figure 4, striped on-street parking is provided along Main Street in front of commercial businesses and some public buildings from Quaid Street to a point south of May Street. It was further noted that several homeowners appear to park off the shoulders of local roads within residential areas.

Figure 4 also identifies the location of unpaved roads within the City of Heppner.

PEDESTRIAN SYSTEM

The City of Heppner's existing pedestrian network system includes sidewalks along many of the local roads and portions of the state highways. Figure 5 illustrates the roadways within the City of Heppner that currently have sidewalks on one or both sides of the street.

As is typical with many rural cities, the existing sidewalk system in the city is relatively complete in some core areas and virtually non-existent in others. The majority of the sidewalks are provided along Main Street and the residential area to the west as well as along Court Street. While the recent improvement projects along Main Street and May Street significantly enhanced the city's pedestrian network, there is still a lack of sidewalks and pedestrian crossings along several key roadway facilities in the study area. No sidewalk facilities are available along Highway 74 north of Quaid Street (or north of Fairview Way on the east side of Willow Creek).



LEGEND

- ON-STREET PARKING
- GRAVEL ROAD
- CITY LIMITS
- CREEK

LOCATIONS OF STRIPED ON-STREET PARKING AND UNPAVED ROADWAYS

CITY OF HEPPNER, OREGON
TRANSPORTATION SYSTEM PLAN
JUNE 1999

FIGURE 4

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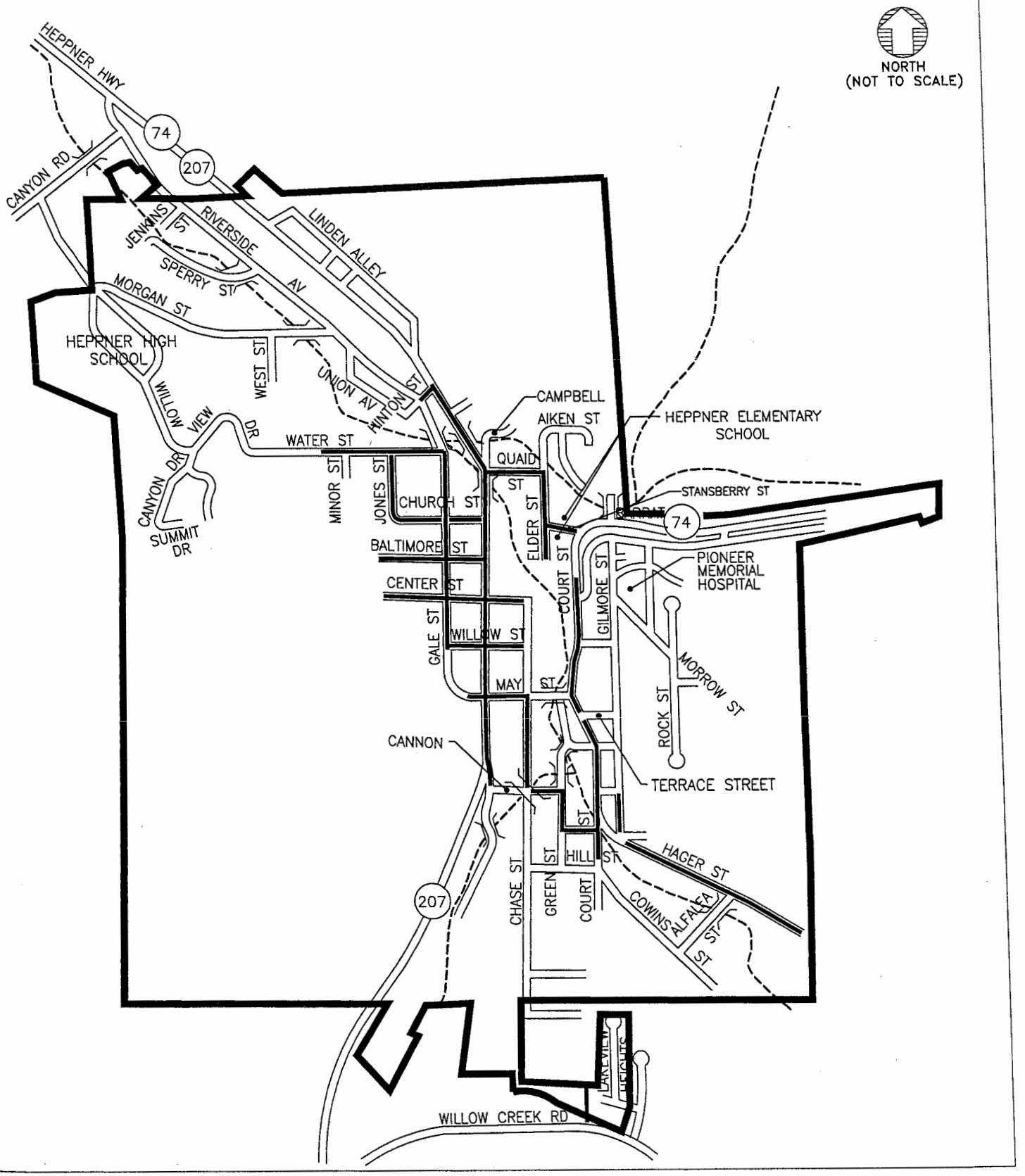

LEGEND

- SIDEWALK
- CITY LIMITS
- CREEK

LOCATIONS OF EXISTING SIDEWALK FACILITIES

CITY OF HEPPNER, OREGON TRANSPORTATION SYSTEM PLAN JUNE 1999	FIGURE 5

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Ideally, pedestrian facilities should provide connectivity between major activity centers, such as housing, commercial areas, schools, the hospital, the post office, and recreation areas such as the fair and rodeo grounds. The city has provided such connections in the downtown area but additional facilities are desirable to serve various locations. Currently, no sidewalk facilities are provided to the Heppner Elementary School, the Heppner Junior-Senior High School, or the Pioneer Memorial Hospital. All roadways connecting to the high school and hospital exhibit significant grades and relatively narrow cross sections that do not allow pedestrians to use a shoulder area.

Future sidewalk requirements for new subdivisions were identified in Title 12 of the Comprehensive Plan, including required sidewalk widths.

BICYCLE SYSTEM

The City of Heppner does not currently offer designated bicycle facilities and primarily recreational bicycle activity was noted during visits to the city. Topographical constraints and the remote location of the city in relation to trip generators limit the attractiveness of this mode of transportation. Nevertheless, the city does maintain a Footways and Bikeways Fund for future use.

PUBLIC TRANSPORTATION SYSTEM

Limited public transportation services within the City of Heppner are available through the county, the local school district, and the Retired Senior Volunteer Program (RSVP) sponsored by the Community Action Program of East Central Oregon (CAPECO).

Morrow County Special Transportation Program

Morrow County, through the Morrow County Special Transportation Program, provides two public transportation programs that serve the City of Heppner. A senior bus service is available to groups by appointment and provides service for seniors, disabled persons, and low-income persons. Other users are welcome as long as they do not displace the primary users (i.e., seniors, the disabled, and the disadvantaged). A dial-a-ride service is also available by appointment to serve the same audience. Both programs are funded through Special Transportation Funds and rely on a volunteer pool of drivers. While increased usage of these services is desirable, there are no current or pending plans to expand public transportation services to the area.

Relevant Information

- Program Contact: John Wenholz, County Commissioner, Phone (541) 922-3941
- Program Coordinator: Barbara Hayes, Phone (541) 676-5667
- Ride Scheduling Contact: Heppner Senior Center, Phone (541) 676-9030
- Scheduling Hours: Monday-Friday 9:00 a.m. to 5:00 p.m.
- Service Area: As needed, serves all of Morrow County and has provided trips out of county for medical services including trips to the Tri-Cities area of Washington State.
- Equipment/Facilities in Heppner (As of March 31, 1999):
  1. 1993 Dodge 5 Passenger Van (originally 12 passenger but modified for handicapped accessibility) - 33, 184 miles
  2. 1990 Ford 15 Passenger Bus – 50,652 miles (Handicapped accessible)

3. Two-bay Bus Barn

The county's transit program does not typically operate on weekends due to the nature of the volunteer staff pool and the limited demand for trips. Instead, if there is a need for handicapped accessible service on weekends, family members of the person to be transported can be van-trained and (once qualified) are then allowed to operate the vehicles.

Other Services

The local school district provides school bus service to portions of the city on school days. In addition, the RSVP/CAPECO program based in Pendleton provides one additional transportation option. Under the RSVP/CAPECO program, qualified drivers are reimbursed for transporting others in personal vehicles when the local county transportation service is unavailable. This program requires an initial application process and authorization prior to persons being qualified for reimbursement. Reimbursement is then available for qualified trips on a per mile basis.

Relevant Information

- Program Contact: Don Thorndike, Phone (541) 278-5669

General Comments

Discussions with local agency staff and TAC members indicated that, with the possible exception of school bus, the public transportation services available are not as well used as they could be. A commonly repeated theme was the notion that there is a need to create greater awareness of the programs among community members. Community input stressed the need for convenient access to public transit service for the elderly. It was further observed that the population under the driving age is particularly under-served and, as the community grows in geographic size, their overall accessibility will be diminished. Although enhanced service is desired, no segment of the city's population was specifically identified as being without transportation service.

Aside from the aforementioned services, for most of the city's residents, private transportation is the only available option to get to the local medical, social, and retail services and the educational and employment opportunities located in adjacent communities.

AIR TRANSPORTATION SYSTEM

No commercial or private aviation facilities are located within the City of Heppner. The nearest airfield is the Lexington Airport, located approximately 10 miles to the north of Heppner near the Town of Lexington. The Lexington Airport provides local air service and is estimated to support approximately 2,500 flight operations per year. The airport's single runway, Runway 08-26, has an asphalt surface that measures 4,150 feet in length and 75 feet in width. Fourteen aircraft are based at the airport. Efforts have begun to have the Federal Aviation Administration develop a Global Positioning Satellite (GPS) instrument approach to the Lexington Airport.

Regional freight cargo and air passenger services are provided at the Eastern Oregon Regional Airport at Pendleton, located approximately 70 miles to the northeast. In addition, the City of Hermiston owns and operates a general aviation airport located approximately 45 miles to the northeast that offers charter service.

RAILROAD TRANSPORTATION SYSTEM

Railroad service is no longer provided to the City of Heppner. Rail service would potentially be available through either the Port of Umatilla or Union Pacific's Hinkle Rail Yard located south of Hermiston, though intermediate non-rail transport would be necessary.

MARINE TRANSPORTATION SYSTEM

Marine transportation is not available within the City of Heppner, though the Port of Morrow maintains a barge area along the Columbia River in Boardman, Oregon. Similarly, The Port of Umatilla maintains two marine facilities along the Columbia River.

PIPELINE TRANSPORTATION SYSTEM

No major pipelines within the City of Heppner were identified as part of the TSP process.

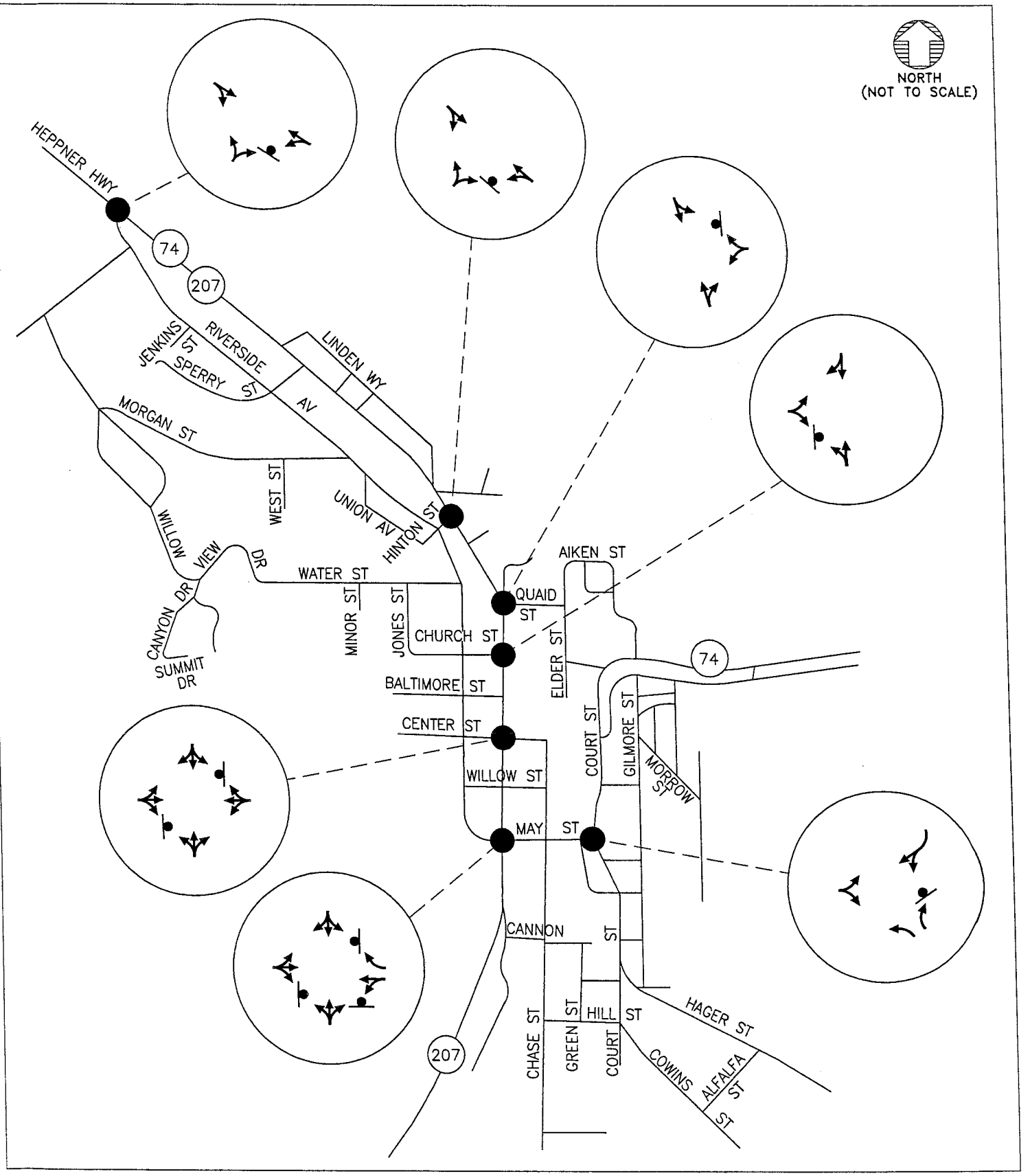
TRAFFIC OPERATIONS ANALYSIS

Seven intersections within the city were selected for operational analysis under 1998 existing conditions. Traveling north to south, those intersections include:

- Highway 207/74/Riverside Avenue
- Highway 207/74/Hinton Street
- Highway 207/74/Quaid Street
- Highway 207/74/Church Street
- Highway 207/74/Center Street
- Highway 207/74/May Street
- Highway 74/Court Street

Traffic Control

All of the study intersections within the City of Heppner are unsignalized, though the intersection of Highway 74 (May Street) and Court Street does have a flashing caution beacon. Figure 6 illustrates the existing lane configurations and traffic control devices at each of the study intersections. Traffic operations at each of the intersections were examined during the weekday p.m. peak hour. The p.m. peak period represents the worst case condition for traffic operations on the transportation system. Travel patterns during this weekday time period typically combine commuting, shopping, and recreational trips, thus generating higher traffic volumes on the transportation system than during any other time period or day of the week.



LEGEND

- — STOP SIGN
- — APPROACH LANE, INDICATING ALLOWED MOVEMENTS

EXISTING INTERSECTION LANE CONFIGURATIONS AND TRAFFIC CONTROL DEVICES

CITY OF HEPPNER, OREGON
TRANSPORTATION SYSTEM PLAN
JUNE 1999

FIGURE 6

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Traffic Volumes

Weekday p.m. peak hour manual traffic volume counts at the intersections were conducted in October 1998. Manual turning movement traffic counts were conducted between 4:00 p.m. and 5:30 p.m. on a mid-week day. These dates and times represent a seasonal peak traffic flow and are appropriate for use as design traffic volumes. The highest one-hour flows during these periods were used in this study.

Based on the turning movement counts conducted at study area intersections, the systemwide p.m. peak hour of traffic on a typical weekday afternoon was estimated to occur between 4:00 and 5:00 p.m. Existing weekday p.m. peak hour traffic volumes are shown in Figure 7. Traffic volumes have been rounded to the nearest five vehicles per hour. For comparative purposes, average daily traffic (ADT) volume data obtained from ODOT are summarized in Figure 8.

Level of Service Analysis

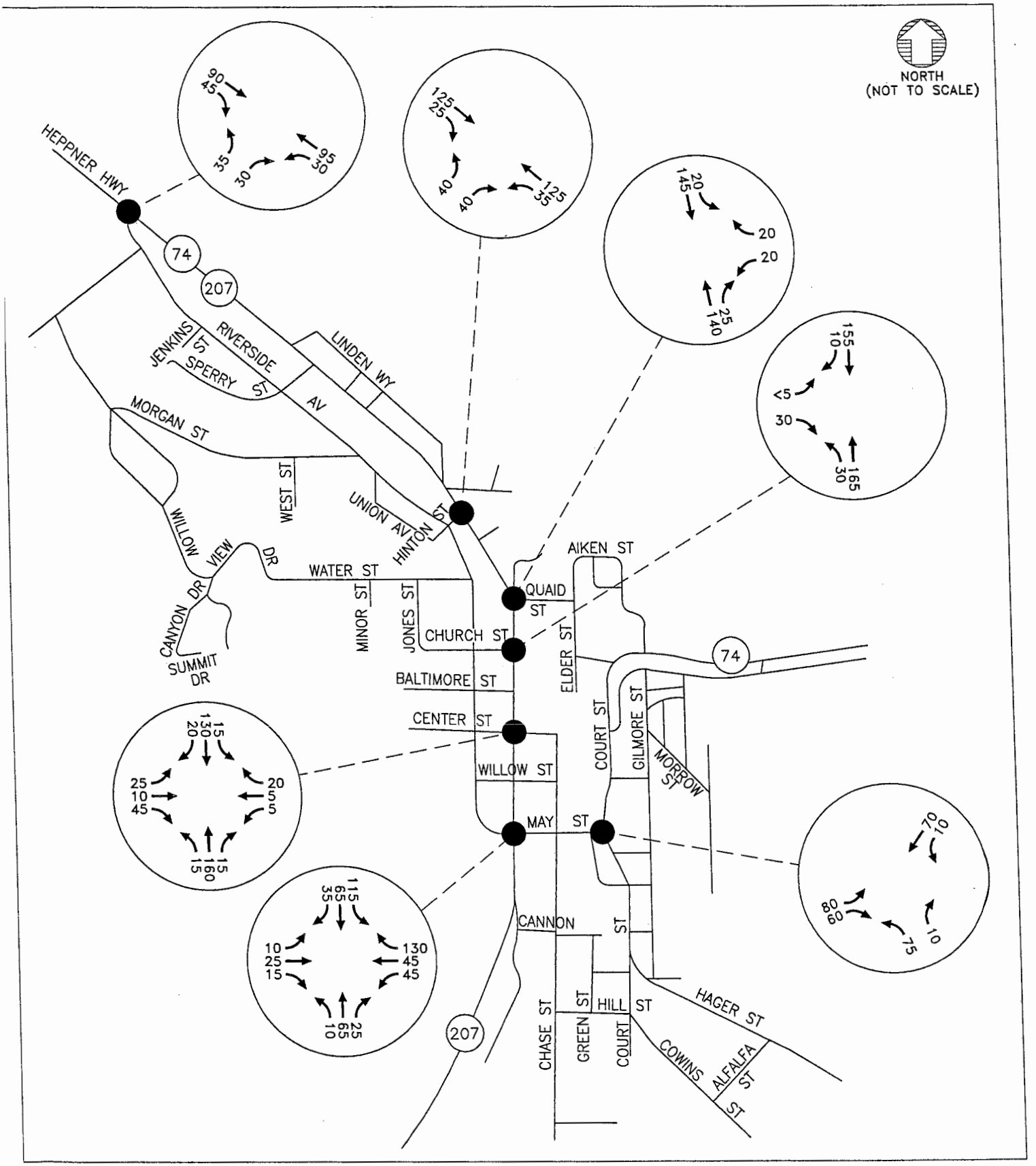
Using the weekday p.m. peak hour turning movement volumes shown in Figure 7, an operational analysis was conducted at each of the study area intersections to determine existing levels of service. All level of service analyses described in this study were conducted in accordance with the 1994 Highway Capacity Manual, published by the Transportation Research Board (Reference 2). Appendix "B" summarizes the level of service concept.

To ensure that this analysis was based on a reasonable worst case scenario, the peak 15 minute flow rate during the weekday p.m. peak hour was used in the evaluation of all intersection level of service analyses. For this reason, the analyses reflect conditions that are only likely to occur for 15 minutes out of each average weekday p.m. peak hour. Traffic conditions during all other weekday periods will likely operate under better conditions than those described in this report.

Unsignalized Intersections

For unsignalized two-way stop-controlled (TWSC) intersections, level of service (LOS) is based on an intersection's capacity to accommodate the worst, or critical, movement. Typically, the left-turn from the stop-controlled approach is the most difficult movement for drivers to complete at a TWSC intersection. This is due to this movement being exposed to the greatest potential number of conflicting, higher-priority movements at the intersection. Available gaps in the through traffic flow of the uncontrolled approach(es) are used by all other conflicting movements before the side-street left-turn can be negotiated. Therefore, the number of available gaps for the side street left-turn to negotiate its movement safely is likely to be substantially lower than any other movement. As a result, the side-street left-turn typically experiences the highest delays and the worst level of service.

For the portion of Highway 207/74 that is located north and south of May Street, the *Oregon Highway Plan* stipulates that levels of service "A" through "C" on the mainline approaches are considered acceptable (Reference 1). The *Oregon Highway Plan* stipulates that levels of service "A" through "D" on the mainline approaches are considered acceptable for the section of Highway 74 that begins at May Street and extends to the east (Reference 1).



1998 EXISTING TRAFFIC VOLUMES
WEEKDAY PM PEAK HOUR

CITY OF HEPPNER, OREGON TRANSPORTATION SYSTEM PLAN	FIGURE 7
JUNE 1999	

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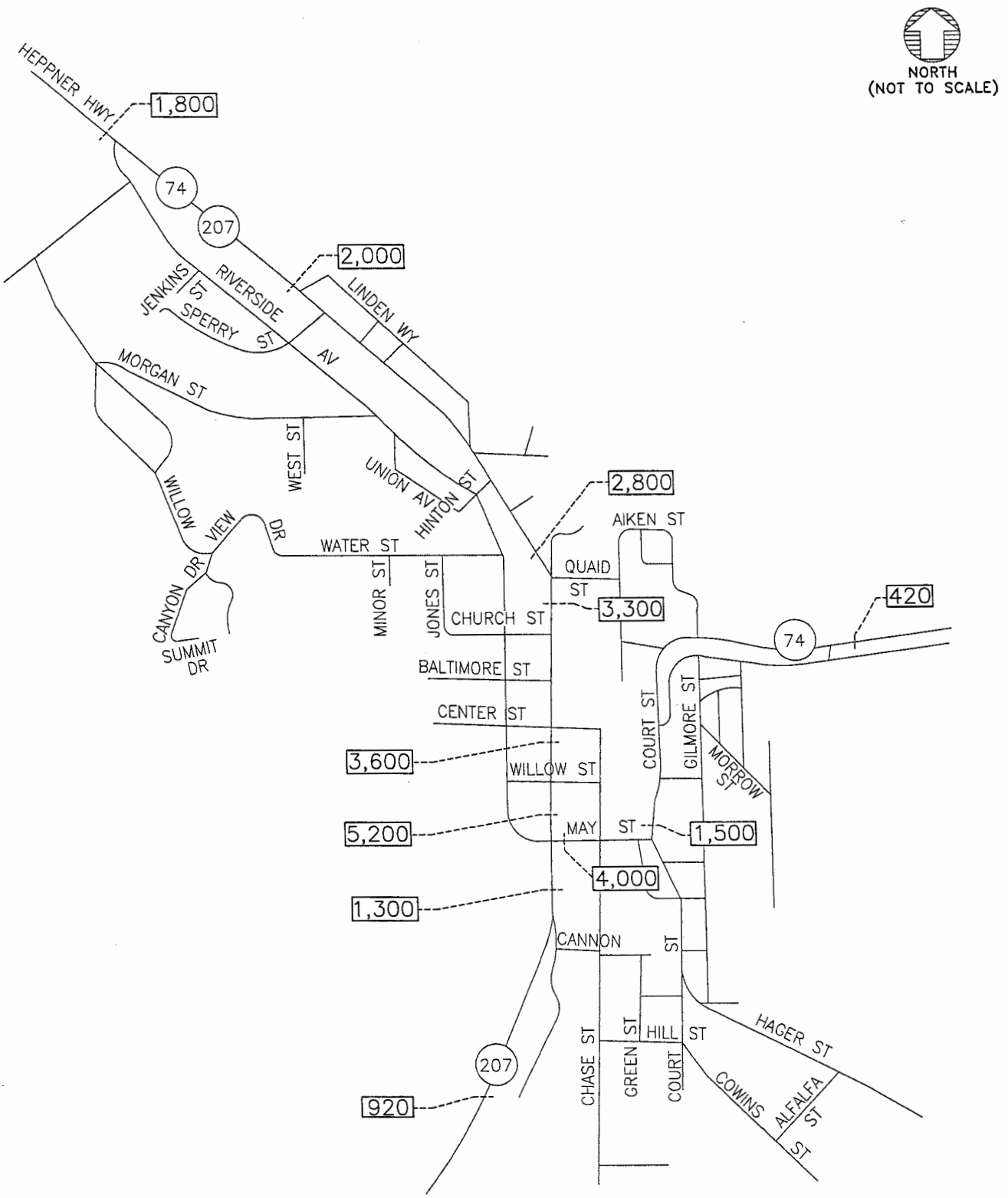

NOTE: TRAFFIC VOLUME DATA BASED ON 1997 ODOT TRANSPORTATION VOLUME TABLES

1997 ESTIMATED AVERAGE DAILY TRAFFIC VOLUMES

CITY OF HEPPNER, OREGON TRANSPORTATION SYSTEM PLAN JUNE 1999	FIGURE 8

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Table 1 summarizes the level of service results for the unsignalized study intersections.

TABLE 1
1998 EXISTING PM PEAK HOUR LEVEL OF SERVICE, UNSIGNALIZED INTERSECTIONS

Intersection	Critical Movement	V/C	Average Delay (sec/veh)	Critical Movement LOS	Major Street LOS
Riverside Avenue/Highway 207/74	Northbound	0.09	4.5	A	A
Hinton Street/Highway 207/74	Northbound	0.12	4.9	A	A
Quaid Street/Highway 207/74	Southbound	0.06	4.7	A	A
Church Street/Highway 207/74	Northbound	0.04	3.5	A	A
Center Street/Highway 207/74	Northbound	0.12	5.0	A	A
May Street/Highway 207/74	Southbound	0.19	7.2	B	B
Court Street/Highway 74 (May Street)	Westbound Left	0.14	5.2	B	B

Legend: LOS = Level of Service, V/C = Volume/Capacity Ratio

As Table 1 indicates, all of the unsignalized study area intersections operate at acceptable levels of service under existing weekday p.m. peak hour conditions.

TRAFFIC SAFETY

Another important aspect of the transportation system is safety. The safety analysis described in the following section focuses on the accident history for Highway 207/74 within the City of Heppner urban growth boundary.

Intersection Accident Analysis

The accident history of the study intersections was examined for potential and existing safety problems. ODOT accident data for the period January 1993 to December 1997 were used for this analysis. In addition, the ODOT District 12's 1996-1998 Safety Priority Index System (SPIS) lists were reviewed. The SPIS lists identify locations with relatively high accident rates and locations that have been the site of one or more fatal accidents.

Review of the three respective annual SPIS lists indicates that no SPIS sites are located within the City of Heppner. Table 2 presents accident rates for the individual study intersections. Accident rates for intersections are calculated by relating the total entering volume of traffic at the intersection, on an average daily basis, to the number of reported accidents for a given period of time. The accident rate for intersections is expressed as the number of accidents per million entering vehicles (acc/mev). As shown in Table 2, the accident data does not indicate a safety problem at the study intersections.

TABLE 2
STUDY INTERSECTION ACCIDENT RATES

Intersection	Number of Accidents	Accidents/MEV
Riverside Avenue/Highway 207/74	0	0
Hinton Street/Highway 207/74	0	0
Quaid Street/Highway 207/74	0	0
Church Street/Highway 207/74	0	0
Center Street/Highway 207/74	0	0
May Street/Highway 207/74	3	0.28
Court Street/Highway 74 (May Street)	1	0.18

*ODOT Accident data search period of 1993 - 1997

Of the three accidents recorded at the May Street/Highway 207/74 intersection during the analysis period, two involved single vehicle collisions with fixed objects (one involved drinking and driving, the other a young driver who cut the corner while turning and hit the curb) and the third was attributed to a driver who failed to yield the right-of-way. Community input during the TAC meeting process indicated that visitors to the city were often confused by the intersection's unique three-way stop control. This confusion was noted to be of concern to the community as some TAC members had observed near-miss situations at the intersection that they attributed to the existing traffic control.

The single recorded accident at the Court Street/Highway 74 intersection was attributed to speeding.

OTHER IDENTIFIED EXISTING TRANSPORTATION DEFICIENCIES

As an extension of the existing conditions analysis, different aspects of the transportation system with existing deficiencies were identified. A description of the deficiencies follows. The summary is based on field observations and information/suggestions that were made by members of the respective transportation agencies and the general public.

Access to the Heppner Junior-Senior High School and Surrounding Area

Community members identified several concerns with respect to access to the Heppner Junior-Senior High School and the surrounding area. This section of the city hosts the school, the Emergency Operations Center, and the Rasmussen-Lott subdivision. Access to the area is currently provided via Water Street and Willow View Drive from the east and East Spruce from the north. Between Willow View Drive and East Spruce, the roadway is owned by the school district.

Community members noted that East Spruce is the only access route to the area in the winter when weather conditions result in the closure of Water Street. Further, community members stated that the school district has been considering closing the access road for safety reasons. Such a closure could effectively eliminate access to the Rasmussen-Lott subdivision during those times when Water Street is closed and thereby disrupt emergency access to the area.

Access to the Pioneer Memorial Hospital and Rock Street Area

The area surrounding the Pioneer Memorial Hospital lacks convenient, readily accessible street connections with Highway 74. The hospital is located on a hill and, because of the local topography, all roads leading to the hospital exhibit significant grades and relatively narrow cross sections. No pedestrian or bicycle facilities are provided to the hospital and the narrow streets in the area do not allow pedestrians

to safely use the shoulder area for walking. Access to residential properties in this area is also limited. The limited street connections to this area, in conjunction with the current lack of local bicycle and pedestrian connections, is a subject of community concerns especially with respect to accessing the hospital.

Travel Speeds on Highway 207/74

One issue raised by the community was the desire to reduce travel speeds on Highway 207/74 in Heppner, especially as drivers are entering town. Two specific locations were noted: in the north part of town (e.g., Linden Way) near the swimming pool and on Highway 74 between the fairgrounds and Heppner Elementary School. The posted highway speed limit is 55 miles per hour (mph) at the north end of the city; south of Riverside it is reduced to 35 mph; and just north of Quaid Street it is further reduced to 25 mph. At the east end of town, the speed limit increases to 55 miles per hour in the vicinity of the fairgrounds. Previous requests by the city to reduce the posted speed limit on the highway have been denied.

Speed limits on roadways are established based on the 85th percentile speed, essentially the speed that 85 percent of the roadway users drive at or below. ODOT (and most other transportation agencies) consider the 85th percentile speed to be the best indicator of prevailing speeds on a given roadway. Posting speed limits based on the 85th percentile recognizes that drivers will travel at a speed that they are comfortable with regardless of the posted speed limit.

Main Street Improvements

As previously noted, the transportation infrastructure within the downtown commercial area of Heppner was reconstructed in 1998 to revitalize the area and emphasize pedestrian access. Continuous sidewalk facilities on Main Street link downtown businesses. Newly installed curb extensions provide shorter roadway crossing distances and a more pedestrian friendly character. Other pedestrian facilities such as textured and/or striped crosswalks have also been provided. Striped on-street parking is provided along Main Street in front of commercial businesses.

Although the improvements have been very effective in enhancing the quality of the urban environment in downtown Heppner, the community noted that additional improvements are desirable to better facilitate vehicular movements and parking maneuvers for large vehicles. One of the most common complaints related to the ability of drivers to clearly see opposing traffic when backing out of the on-street parking stalls. It was also noted that the presence of trucks on Main Street often obscures driver's sight distance when backing out of the angled parking spaces.

On-Street Parking in the Vicinity of Intersections

Field observations revealed that on-street parking is obstructing sight distance at some of the intersections in the vicinity of downtown, especially along Chase and May Streets. Large trucks parked at or near the intersections were observed to be one of the leading culprits in creating sight distance obstructions.

May/Main Street Intersection

The May/Main Street intersection is stop-controlled on the northbound, eastbound, and westbound approaches. The southbound movement along Main Street is uncontrolled and the westbound approach is signed such that the right-turn movement is permitted to occur without stopping. Community members noted that vehicles often fail to observe the stop sign for the westbound movement. Field observations at the intersection and discussions with community members suggest that the existing stop-control creates confusion for unfamiliar drivers, this confusion is especially evident during hunting season.

Court Street/May Street Intersection

The configuration and traffic control at the Court Street/May Street intersection in front of the County Courthouse was also identified as being of concern to the community. The intersection is currently configured such that the May Street to North Court Street (Highway 207) is the through movement at the intersection and South Court Street "tees" into the highway at a skew at a stop sign. Due to the skew, the intersection encompasses a large paved area with ill-defined lane channelization. A flashing beacon was installed at the intersection to caution drivers of its unusual configuration.

Although the existing conditions analysis did not reveal any apparent safety or capacity deficiency at this intersection, the intersection geometry is contrary to drivers' expectations and thus creates confusion for unfamiliar drivers. According to community members, this situation is especially evident during hunting season and in the summer. The City of Heppner has commissioned an engineering study to redesign the intersection.

Vertical Curvature Problems in Southeast Heppner (Terrace Street and Willow Street)

The topography in and around Heppner makes the design of roadways and pedestrian and bicycle facilities difficult in many instances. Many of the streets that provide access to the hospital and residential areas on the southeast part of the community are steep and cut into the embankment in areas that have only provided enough width for vehicular travel lanes, not sidewalks or bicycle lanes.

Terrace Street

The grade on Terrace Street likely exceeds recommended standards for street design (as summarized in *A Policy on Geometric Design of Highways and Streets*, American Association of State Highway and Transportation Officials, 1994). According to community members, during the winter months water and ice on the street create hazardous conditions for motorists, pedestrians, and bicycles. Field observations also revealed that it is difficult for some motorists to maneuver the grade. It was further noted that alternative access to the Morrow County Courthouse, the hospital, and other land uses on the hill are available via Cannon and August Streets to the south and Barratt Boulevard to the north.

Willow Street

The vertical curve on Willow Street at its intersection with Gilmore Street obstructs intersection sight distance. The steep topography in the vicinity of the street makes it difficult to reconstruct Willow Street to improve sight distance. As with Terrace Street, alternative access to Gilmore Street is available via August Street, Cannon Street, and Barratt Boulevard.

Gilmore Street/Hager Street Sight Distance Restriction

The Gilmore Street/Hager Street intersection exhibits an existing sight distance restriction. This sight distance restriction is primarily associated with shrubbery located along the north side of Hager Street but is also influenced by the curvature of Hager Street and the angle at which the two roadways intersect.

Stansberry Street and Heppner Elementary School

Stansberry Street bisects the Heppner Elementary School grounds. To facilitate pedestrian crossing between school uses, the city has installed a stop sign and crosswalk mid-block on Stansberry, between the highway and Elder Street. A crossing guard guides children across the street during hours of school operation. In addition, school buses park in the middle of Stansberry Street to load and unload passengers before and after school. The primary concerns with the existing design are that the stop sign is installed in

the middle of the street (which is not a standard placement and may raise liability issues) and that the buses block traffic on the street completely during loading and unloading periods.

While the current operating practice does offer safety benefits by effectively block the roadway to traffic during bus loading and unloading periods, it could be improved. Community members specifically noted that local traffic uses Stansberry Street as a cut-through route between Highway 74 and Highway 207/74. The use of Stansberry Street as an alternative to highway travel is in conflict with the daily temporary closure of the roadway to serve as a bus loading area. Blocking the roadway to through traffic suggests the road is private property in that public streets would not normally be blocked in such a manner.

Further, the existing practice of blocking the roadway may also provide school children with a false sense of security in that they are used to having no traffic on Stansberry Street during those times when they enter and leave the school buses. During other times of the day, vehicles may be traveling the roadways without the children recognizing that the protective measures they are used to are not necessarily in place. As traffic volumes grow and additional cars use the Stansberry Street connection between Highway 74 and Highway 207/74 as a cut-through route to avoid the downtown, the possibility of pedestrian/vehicle interactions will increase.

Equestrian Facilities

The City of Heppner is the site of the Morrow County Fair and Rodeo grounds. Currently, no equestrian facilities are available outside of the fairgrounds. The community identified a need for equestrian facilities, especially in providing connections to the fairground area. Specifically, interest was expressed in providing appropriate facilities at key equestrian access points such as the intersection of Highway 74/Stansberry Street and Highway 74/Aiken Street.

SUMMARY

Through an inventory of existing conditions, several key findings were identified. Those findings are summarized below.

- The City of Heppner's roadway network is focused around State Highways 74 and 207. Local topographical constraints, flood-prone areas, and the lack of major transportation corridors in the area have shaped the city's transportation system and will continue to present constraints to both growth and transportation improvements.
- Recently reconstructed sidewalk facilities are concentrated in the commercial areas along Main Street. Sidewalk facilities are also available within the residential area west of Main Street as well as along portions of Court Street. Other local roads tend to exhibit disjointed or nonexistent sidewalks.
- A significant portion of Main Street within the city's downtown has been reconstructed. The newly constructed transportation infrastructure offers several pedestrian enhancements that contribute to the character of the downtown and make the area more accessible to non-auto traffic.
- No bicycle facilities were identified.
- Public transit service is primarily available in the form of a senior bus and dial-a-ride service provided through Morrow County. Other transportation services include the local school bus service and a personal vehicle reimbursement program for special needs that is funded through RSVP/CAPECO.

- On a typical weekday afternoon, the transportation system experiences its peak roadway traffic demand between 4:00 and 5:00 p.m. During this peak period, the transportation system operates well within established standards.
- Review of accident data from the study intersections did not identify any specific safety deficiencies.
- Other transportation issues of concern to the community include: access to the Heppner Junior-Senior High School and surrounding area, access to the Pioneer Memorial Hospital and Rock Street area, travel speeds on Highway 74/207, sight distance issues at various locations throughout the city, design of the Court Street/May Street intersection, vertical curvature and sight distance issues on Terrace Street and Willow Street, pedestrian access to Pioneer Memorial Hospital, operational issues on Stansberry Street, and the need for equestrian facilities especially in the area of the fair and rodeo grounds.

Section 3

Future Conditions Analysis

Future Conditions Analysis

INTRODUCTION

This section presents estimates of long-term future travel conditions within the TSP study area. The long-term future transportation needs for the City of Heppner were examined based on available employment and population forecasts, review of the proposed roadway network, results from the operational analysis of the existing street system, and discussions with regional transportation personnel and representatives from the City of Heppner.

TRANSPORTATION DEMAND

Future transportation demand within the City of Heppner was estimated based on expected growth in the study area population, employment, and traffic traveling through the study area for the horizon year 2020. Future growth estimates were developed based on historical traffic volume trends in the study area as well as consideration of the unique trip making characteristics of residential and employment-based activities. The estimation included a review of the land use mix proposed in the city's Comprehensive Plan.

Land Use/Demographics

Year 2020 traffic volumes on the City of Heppner's transportation system were forecast based on population and employment estimates developed by the State of Oregon for Morrow County and the city. These estimates were compared against recent development trends, planned developments, and forecast growth rates provided by local agencies to verify their appropriateness. The 20-year planning horizon was chosen to ensure compliance with the Transportation Planning Rule.

Population and Employment

Tables 3 and 4 summarize population and employment projections prepared for the City of Heppner in conjunction with the TSP process. The population information is based on forecasts prepared by the State Economist's office for Morrow County.

TABLE 3
POPULATION PROJECTIONS

Year	1997	2000	2002	2005	2010	2015	2020	1997-2020 Average
City of Heppner Projections								
Projected Population	1,480	1,502	1,517	1,601	1,733	1,867	1,992	--
Annual Percent Change	--	0.5%	0.5%	1.8%	1.6%	1.5%	1.3%	1.3%
Morrow County Projections								
Projected Population	9,895	11,131	12,039	12,701	13,750	14,812	15,801	--
Annual Percent Change	--	4.0%	4.0%	1.8%	1.6%	1.5%	1.3%	2.1%

TABLE 4
EMPLOYMENT PROJECTIONS

Year	1990	1997	2000	2002	2005	2010	2015	2020
City of Heppner Projections								
Projected Employment	580	601	610	616	652	702	738	772
Annual Percent Change	--	0.5%	0.5%	0.5%	1.9%	1.5%	1.0%	0.9%
Morrow County Projections								
Projected Employment	2,232	2,924	3,283	3,449	3,613	3,890	4,097	4,290
Annual Percent Change	--	3.93%	3.93%	2.5%	1.6%	1.5%	1.0%	0.9%

As shown in Table 3, the City of Heppner's population is forecast to grow by an average annual rate of 1.3 percent (approximately 512 people) between 1997 (estimated population of 1,480) and 2020 (projected population of 1,992). The local economy is forecast to create approximately 170 additional employment opportunities during the same 23-year period. The growth projections suggest that the city's growth will be moderate in the near-term and will increase to over 25 new residents per year in the mid- to long-term future.

Over the course of the same forecasting period, the population of Morrow County is projected to increase by approximately 2.1 percent annually (from an estimated population of 9,895 in 1997 to a projected population of 15,801 in 2020). Countywide employment is projected to include approximately 1,365 additional employment opportunities over the same 23-year period. The county is anticipating strong growth in the near-term horizon with the annual growth rate more closely paralleling Heppner's after the year 2005.

These findings reflect the current development patterns being experienced in the area. Within the City of Heppner, no significant near-term development or employment activities are anticipated, suggesting that near-term future population increases will continue to be relatively small.

The regional growth phenomenon evidenced by the County's population estimates has been attributed to several new employment and development activities that have occurred in and around the county. These countywide developments have an impact on the local City of Heppner transportation system in the form of increased traffic volumes traveling through the city on Highways 74 and 207.

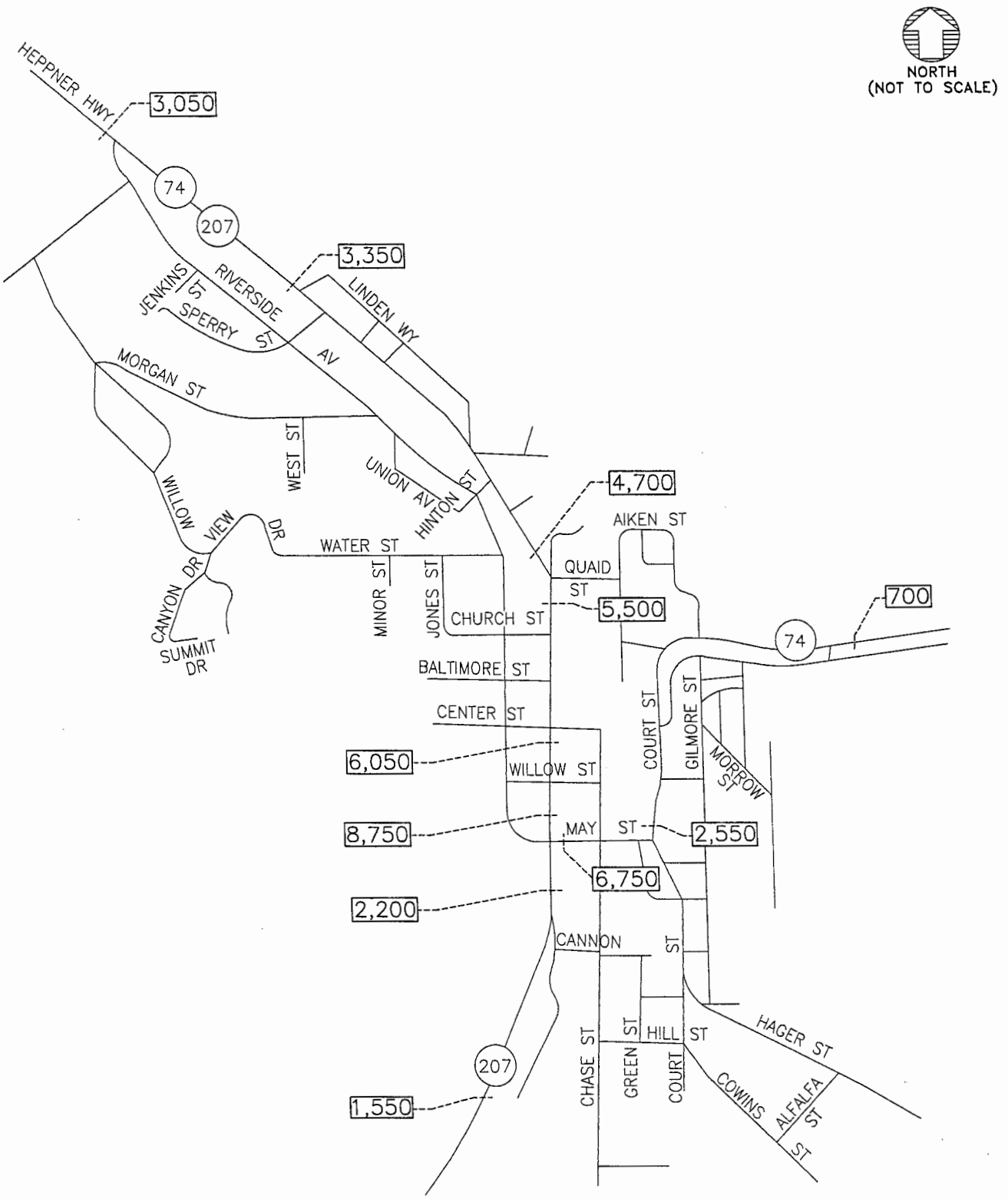
Further details regarding the employment and growth assumptions are detailed in Appendix "C".

Anticipated Future Growth

In an effort to account for regional traffic growth, a net annual growth rate was chosen to forecast the year 2020 traffic analysis. This rate was determined based on a review of historical traffic volume trends, anticipated population and employment growth, regional population densities, and local knowledge of planned development.

Historical Growth

As shown in Figure 9, a review of local Oregon Department of Transportation traffic volume data on Highway 74 indicated a historical 2.3 percent average annual growth rate between 1960 and 1997. It should be noted that the historical traffic volume data was obtained from ODOT's Lexington Automatic



2020 FORECAST AVERAGE DAILY TRAFFIC VOLUMES

CITY OF HEPPNER, OREGON TRANSPORTATION SYSTEM PLAN JUNE 1999	FIGURE 10

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Traffic Recorder, Station 25-007, which is located 1.4 miles south of the Town of Lexington on Highway 207/74. While the historical traffic volume data is not specific to the City of Heppner, it is considered to be indicative of the general regional growth trends anticipated for the city and thus was used in this analysis.

PLANNED TRANSPORTATION IMPROVEMENTS

Two planned roadway improvement projects within the City of Heppner urban growth boundary were identified at the time the TSP was prepared as discussed below.

Court Street/ May Street Intersection

As documented in the existing conditions analysis, the Court Street/May Street intersection was cited by the community as exhibiting geometric deficiencies. The City of Heppner has identified this intersection for improvement and an engineering study of the intersection was commissioned. Through the study, a $92,500 intersection improvement project had been designed for the city that would reconstruct curbs and channelization at the intersection in an effort to provide drivers a more definitive driving path. Sidewalks and curb cuts serving adjacent properties (improvements that would bring the intersection into compliance with Americans With Disabilities Act (ADA) standards) would also be provided in conjunction with the project.

Highway 74 Resurfacing/Improvements

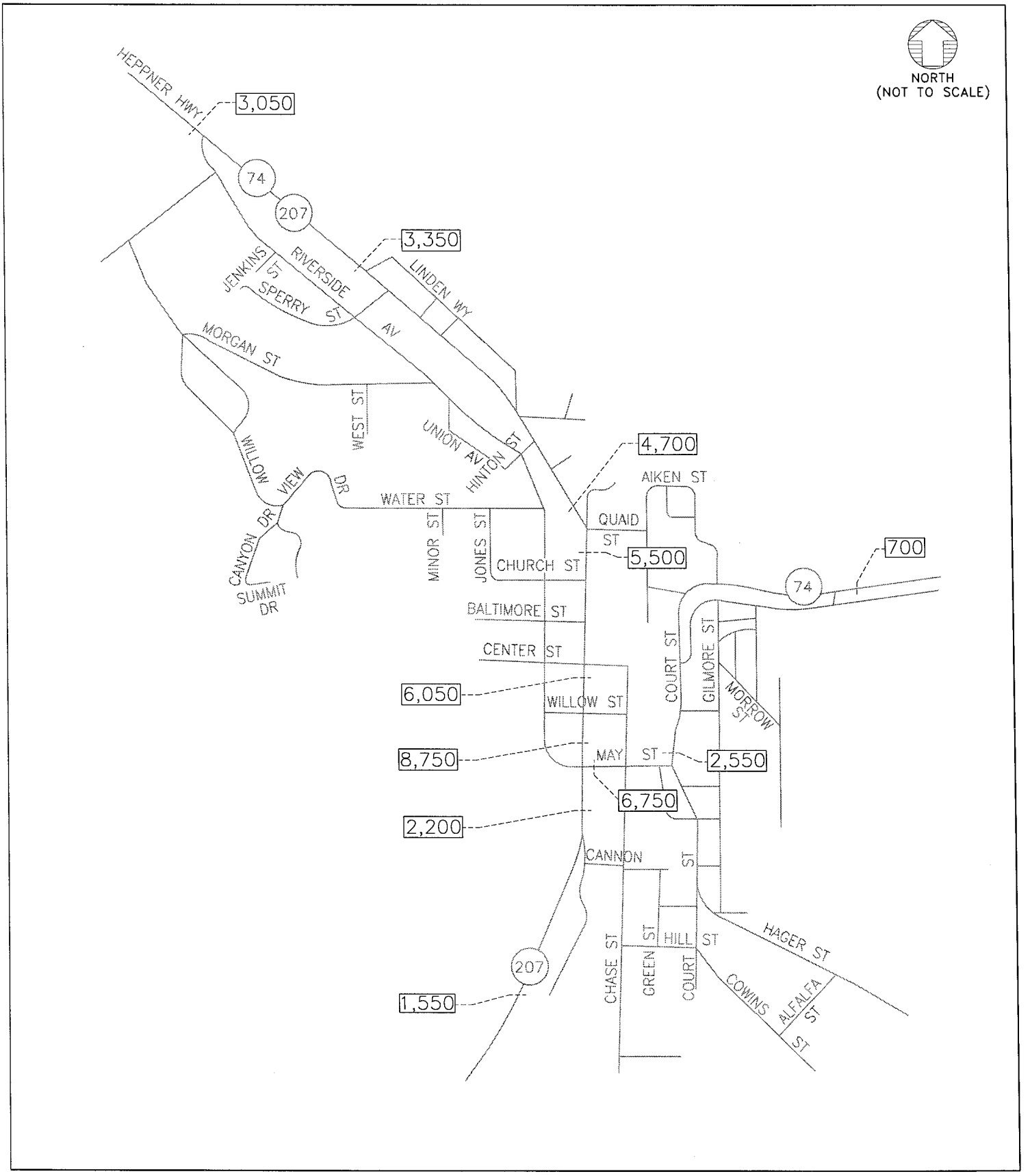
The Oregon Department of Transportation's Region 5 2000-2003 Statewide Transportation Improvement Program (STIP) Update identifies a resurfacing project along Highway 74 between Willow Creek and Hinton Creek. While no specific project information or timeline is identified, the project would reconstruct the highway with a new aggregate base and asphalt surface and is expected to entail shoulder work, ADA complaint sidewalk and curb improvements, and drainage work. ODOT has identified this project as being a "high" priority within Region 5. Construction cost is estimated by ODOT to be $3,000,000 and is currently unfunded.

No other planned improvement projects were identified. It should be noted however, that in 1993 the city adopted a city street replacement priority list and established a street replacement program through Resolution Number 73-93. The resolution was intended to prioritize street improvement projects such that the city's funds were allocated to the worst and most critical streets first. The resolution directs that city staff are to review and update the Street Replacement Priority List on an annual basis prior to the construction season and then seek the City Council's approval of the priority list.

FORECAST FUTURE TRAFFIC VOLUMES

Future conditions within the City of Heppner were forecast by applying the 2.3 percent annual growth rate assuming a "no-build" condition (i.e., no new roadways would be constructed in the 23-year horizon) to the 1997 local average daily traffic (ADT) volume data previously shown in Figure 8. Figure 10 illustrates the resulting forecast year 2020 average daily traffic volumes under the no-build condition.

A similar analysis of traffic volumes at the study intersections was completed by applying the 2.3 percent annual growth factor to the 1998 existing intersection traffic counts previously presented in Figure 7. Figure 11 summarizes the forecast year 2020 weekday p.m. peak hour traffic volumes at the study intersections under the no-build condition.



2020 FORECAST AVERAGE DAILY TRAFFIC VOLUMES

CITY OF HEPPNER, OREGON TRANSPORTATION SYSTEM PLAN JUNE 1999	FIGURE 10

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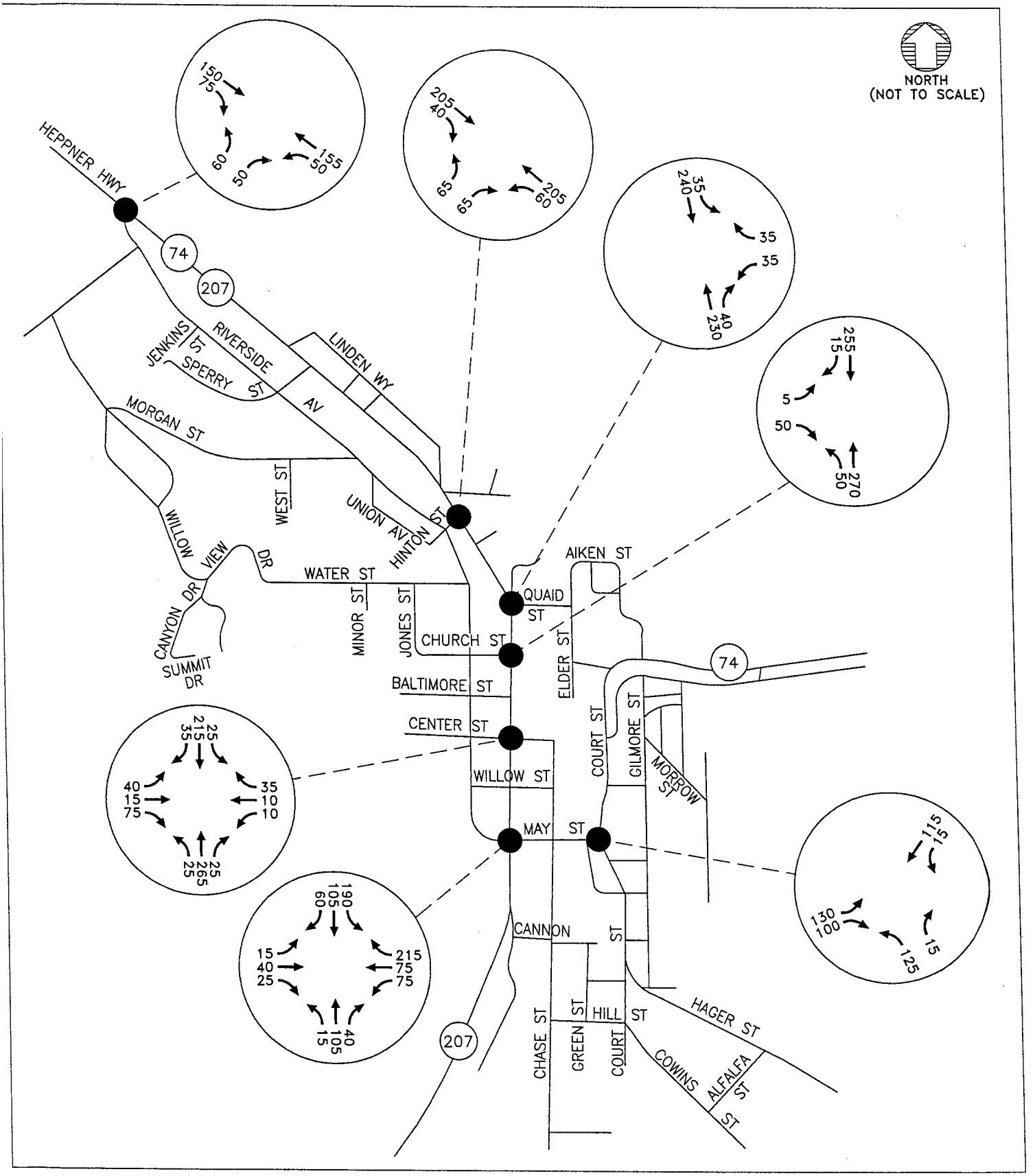

2020 FORECAST TRAFFIC VOLUMES
WEEKDAY PM PEAK HOUR

CITY OF HEPPNER, OREGON TRANSPORTATION SYSTEM PLAN	FIGURE 11
JUNE 1999	

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Level of Service Analysis

Typically, two-lane rural highways with geographic features similar to Highways 74 and 207/74 can accommodate a maximum of 17,000 to 20,000 vehicles (including vehicles in both directions) daily based on the *Highway Capacity Manual* (Reference 2). Accordingly, the year 2020 forecast average daily traffic volumes shown in Figure 9 can be accommodated by two-lane roadways such as Highways 74 and 207/74. It should, however, be noted that the daily traffic volumes on the two respective highways should be in the range of 5,000 to 7,000 vehicles to maintain the level of service that residents of Heppner are accustomed to.

Reviewing the volumes shown in Figure 9, this suggests that the downtown area of Highway 207/74 between Center Street and Chase Street will experience increased delay in the future that results in a degradation of service below levels currently experienced. While delay will increase, congestion in a central downtown commercial area should be expected. The forecast volumes clearly indicate that no capacity deficiencies are anticipated for highway traffic.

To ensure that the local study area intersections will continue to operate at an acceptable level of service during the peak period, the forecast future traffic volumes were also analyzed at the individual intersections. The findings of this analysis are summarized in Table 5.

TABLE 5
2020 FUTURE FORECAST LEVEL OF SERVICE, UNSIGNALIZED INTERSECTIONS

Intersection	Critical Movement	V/C	Average Delay (sec/veh)	Critical Movement LOS	Major Street LOS
Riverside Avenue/Highway 207/74	Northbound	0.18	6.2	B	A
Hinton Street/Highway 207/74	Northbound	0.25	7.6	B	A
Quaid Street/Highway 207/74	Southbound	0.13	6.7	B	A
Church Street/Highway 207/74	Northbound	0.08	4.7	A	A
Center Street/Highway 207/74	Northbound	0.26	7.9	B	A
May Street/Highway 207/74	Southbound	0.46	16.1	C	A
Court Street/Highway 74 (May Street)	Westbound Left	0.23	7.3	B	A

Legend: LOS = Level of Service, V/C = Volume/Capacity Ratio

As previously stated, the *Oregon Highway Plan* stipulates that intersection levels of service "A" through "C" on the mainline approaches are considered acceptable for the portion of Highway 207/74 that is located north and south of May Street (Reference 1). The *Oregon Highway Plan* stipulates that levels of service "A" through "D" on the mainline approaches are considered acceptable for the section of Highway 74 that begins at May Street and extends to the east (Reference 1).

As Table 5 indicates, all of the unsignalized study area intersections are forecast to continue operating at acceptable levels of service under year 2020 weekday p.m. peak hour conditions. Given the relatively small average delay for the critical movements of the study intersections, even if side-street volumes were to increase more substantially than suggested in Figure 10, there is more than adequate capacity at the study intersections.

Based on the future conditions analysis results, no roadway capacity-related mitigation measures are anticipated. The next section of the TSP presents an analysis of potential improvement alternatives that would address other existing and future forecast transportation system deficiencies.

SUMMARY

Several significant findings were identified through the future conditions analysis, most notably:

- The City of Heppner's population is forecast to grow by an average annual rate of 1.3 percent (approximately 512 people) between 1997 (estimated population of 1,480) and 2020 (projected population of 1,992). The growth projections suggest that the city's growth will be moderate in the near-term and will increase to over 25 new residents per year in the mid- to long-term future.
- During the same period, the population of Morrow County is projected to increase by approximately 2.1 percent annually (from an estimated population of 9,895 in 1997 to a projected population of 15,801 in 2020).
- The City of Heppner's transportation system is expected to accommodate forecast future growth in travel demand without triggering the need for major capacity-related roadway improvements.

Section 4

Alternatives Analysis

Alternatives Analysis

INTRODUCTION

This section presents a summary of future transportation improvement alternatives that could be implemented to mitigate existing and projected future transportation system deficiencies. Potential roadway improvement alternatives are presented and recommendations are offered as to their feasibility. As potential deficiency mitigation projects were developed, consideration was given to how a multi-modal approach could contribute to individual projects. Thus, while the primary impetus for a given mitigation alternative may center on increasing vehicular capacity, provision of appropriate bicycle and pedestrian facilities was given equal consideration.

Special effort was provided in considering and recommending improvements to the pedestrian and bicycle systems. Recommendations were developed that create direct linkage to all identified pedestrian/bicycle generators and provide for a core pedestrian and bicycle transportation system. The alternative analysis and subsequent recommendations process were handled separately to ensure that a complete system for each mode was identified without constraint.

It should be noted that, in this section, formal alternatives development and analysis have only been presented for the roadway network and its components. Other elements of the transportation system such as pedestrian access, bicycle access, etc. currently exist at a level such that an entire network needs to be developed. The **Transportation System Plan** section of this report contains the recommended improvements to all of the modal systems.

The remainder of this section is organized into two parts. First, a general discussion of improvement needs and associated ramifications is presented. A discussion of specific improvement alternatives, including estimated costs, then follows.

LAND USE/TRANSPORTATION SYSTEM RELATIONSHIP

The existing and future land uses within the City of Heppner have a substantial impact on the local transportation system. As a result, the city's transportation system will continue to reflect a strong relationship to local land use well into the future. For illustrative purposes, the following discussion presents some of the transportation implications associated with various land use alternatives.

Background

As stated in the **Existing Conditions** section, there is a limited amount of vacant land within the urban growth boundary that is not constrained by either steep slopes or located within the flood plain. There are a significant number of vacant lots within the urban growth boundary; however, a number of them (including some very large properties) suffer from building limitations such as steep slopes, poor soils, location in the floodplain and limited access that effectively land-lock them. Specific land use opportunities and constraints are described below for industrial, commercial, and residential land.

Commercial Land

Most of the commercial land in the city is located in the downtown area, primarily between Riverside Avenue and Chase Street to the west and east, and Church Street and Cannon Street to the north and south. Additional commercially zoned land is located on either side of Highway 207/74 as it enters the city from the north; however much of the land on the southwest side of the highway is located within the

floodplain. This land is currently used for the city's swimming pool and adjacent park facilities. Land on the northeast side of the highway is divided into relatively small lots. Though most of these properties currently are used for residential purposes, this area represents an opportunity for future commercial development. Given its location and orientation to the highway, strip commercial development could occur in this area. Such development could present several potential problems including:

- traffic congestion associated with an increase in the number of turning movements into and out of driveway access points (which can be particularly problematic for businesses that generate high traffic volumes);
- unattractive strip development; and
- loss of business for existing establishments in the central downtown area.

Residential Land

A buildable lands inventory completed by the City of Heppner in 1994 indicates that there were 13 buildable lots within the city limits at that time. Since then, additional land has been platted and planned for residential development, resulting in 30 to 50 buildable lots in the city. In addition, there is a significant amount of land on large vacant lots within the urban growth boundary, thought the 1994 inventory indicates that much of it is limited by development constraints such as steep slopes, poor soils and location in the flood plain. There also are opportunities for infill on several large lots with single houses, particularly in the southwestern corner of the city's urban growth area (between the city limits and urban growth boundary). City representatives state that sufficient land is available within the urban growth boundary for future residential development needs.

According to city representatives, some parcels are more likely than others to be developed in the future, given the current owner's willingness to sell or develop them. While all land within the urban growth boundary that does not suffer from physical constraints must be considered available and buildable in the long term, development could be encouraged in more likely areas in the near term.

Additional development also could be constructed by improving access and potential connections to existing city services for parcels of land within the city that suffer from limited access or similar limitations.

Accessibility of Land Parcels

Several large, vacant parcels on the east side of the city (e.g., east of Morrow Street and south of Highway 74) could be developed in the future with potential connections to the existing street network. These areas could be developed more efficiently by first creating local access or street plans for the area. In addition, several other areas of the city contain buildable parcels of land with access problems (e.g., the parcels north of Hinton Creek between Campbell and Elder Streets are landlocked or not well served by existing roads).

To promote more cost-efficient development, particularly in areas where connections to existing streets and other infrastructure (e.g., sewer and water lines) could be accomplished more easily, these measures could be undertaken:

- develop conceptual local street plans for areas likely to be developed to accommodate future growth; and,
- review zoning and subdivision regulations to identify policies that could inhibit infill and redevelopment.

Such alternatives would be consistent with city policy to encourage development to occur within a relatively compact urban area with controlled outward growth.

Provisions for Access and Provision of Infrastructure

It is important to provide connections between adjacent residential neighborhoods as well as between neighborhoods and commercial and other community services. Such connections provide neighborhood residents with more travel choices, reduce trip lengths and encourage walking and bicycling. In some areas, such connections have not been provided. For example, in the Lakeview Heights area, the city encouraged the provision of a connection to adjacent neighborhoods but was not successful. It is recommended that the city's ordinances be strengthened to include additional requirements related to connectivity, as well as provision of bicycle and pedestrian accessways. Suggested provisions are provided in Section 7, **Policies and Land Use Ordinance Modifications**.

Connectivity Improvements

Previous residential development in Heppner has highlighted the need for improved connectivity between and within residential areas. Several parcels of land on the edge of the city recently have been developed with relatively little consideration for how to effectively provide access and services to adjacent undeveloped land in the future. The result is limited access for pedestrians and drivers to important services and less potential for additional future development in these areas. For example, parcels in the Lakeview Heights area were developed at the end of a long cul-de-sac terminating at the top of the hill overlooking the southern portion of the city's developed street grid. Due to a number of factors, no street connection or accessway for bicyclists and pedestrians was developed between the end of the cul-de-sac and existing city streets to the north, though the city's Planning Commission recommended such a connection. In addition, staff note that the proposed plan for local streets in this area does not provide for the most efficient use and development of remaining land in this area.

Miscellaneous Issues

- According to city staff, development of roads and dwellings in areas with steep slopes has occurred without proper drainage facilities. To correct this situation, the city could review the adequacy of existing stormwater drainage requirements and implement appropriate changes.
- On-street parking of recreational vehicles and boats in residential areas can present aesthetic and safety issues. The city could explore opportunities to rectify this issue by adopting regulations that limit on-street parking of recreational vehicles or boats.

Land Use Recommendations

In light of the opportunities, constraints, and advantages/disadvantages of the alternative manners in which lands could develop in the future, the following recommendations have been developed to help guide future land use planning in Heppner. These recommendations reflect both the transportation and land use implications of future development patterns and a desire to maintain the sense of community that exists within Heppner today.

Commercial/Industrial Land

As noted previously there are two land use issues associated with this area, including:

- protection of buildings and property within the floodplain (primarily for the area southwest of the Highway); and,
- potential for strip commercial development adjacent to Highway 207/74.

To address these issues, several measures could be implemented, as discussed below.

1. Rezone commercial and possibly industrial land southwest of Highway 207/74

Commercially zoned land occupies a relatively narrow strip adjacent to the highway, north of Hinton and Morgan streets and extending approximately ¼ mile beyond the city limits. The city's swimming pool is located in this area and there are a limited number of existing commercial uses in the southern portion of the area near the intersection of Hinton Street and Riverside Avenue. The area between the commercial land and Riverside Avenue is zoned for industrial use. A portion of the industrial land currently is occupied by playing fields and is tentatively planned for future use as a museum. Most of the commercial and industrial land is potentially affected by flooding.

The city has a Flood Area Management Ordinance that governs development within areas affected by flooding. It includes regulations for two types of areas – the floodway (i.e., the expected path of moving water) and the area of inundation. In the floodway, no buildings or filling is allowed unless it can be shown through a hydrological study that the proposed development will not raise the base of the flood. In the area of inundation, commercial and industrial development are allowed under conditions that structures are constructed above the flood elevation or flood proofed, and residential development must be elevated. The ordinance follows the Federal Emergency Management Act (FEMA) guidelines and appears to provide adequate protection for uses in the floodway and area of inundation. Almost all of the industrial and much of the commercial land in this area (southwest of the Highway) is in the floodway.

To address concerns about development in this area (i.e., location in the floodway) and meet a number of other objectives, the city should proceed with tentative plans to rezone the commercial land in this area to open space use. The city should also consider rezoning the portion of industrially zoned land within the floodway not currently developed. The area to be rezoned will not include the existing uses near Hinton Street. Providing land for open space use in this area would help meet the following needs:

- compatibility with the existing swimming pool;
- reduce concerns about potential flood damage to commercial and industrial structures within the floodway;
- eliminate the potential for strip commercial development on the southwest side of the Highway; and,
- provide for needed open space near the central portion of the city.

Heppner does not have any land zoned for open space in the downtown or directly adjacent areas. Open space provides a number of community benefits, including opportunities for individual and community activities such as picnicking, walking, concerts and other recreational or entertainment activities. Providing open space in this area could help address this need and possibly complement future transportation improvements that are intended to create of more of a gateway to and extension of the city's downtown to this area and to help slow traffic as it enters the city along Highway 207/74. If the city desires to provide open spaces in this area, it is important that the area be zoned for such use to restrict development of other uses (e.g., commercial or industrial development). Without such restrictions, there will be less long-term certainty that the area will remain in open space.

2. Develop a Conceptual Plan to Manage Access to Individual Properties

The northeast side of Highway 207/74, which is divided into relatively small lots, represents an opportunity for future commercial development. Given its location and orientation to the highway, strip

commercial development could occur in this area. Such development could present several potential problems:

- traffic congestion caused by people turning into multiple driveways; this can be a particular problem for businesses that generate high traffic volumes;
- unattractive, auto-oriented, strip development; and,
- loss of business for existing establishments in the central downtown area.

A conceptual plan has been prepared for this area that includes shared parking and improvement and use of the alley right-of-way east of these properties for additional access. It also shows limited access to this area (e.g., direct access from Highway 207/74 to shared parking areas only, rather than to every individual parcel). An alley would serve as a one-way access road for business operations. It also could be used to reach shared parking proposed adjacent to the existing east/west streets in this area (Thornten Street and Birch Street). Conceptual drawings included in Appendix D illustrate this proposal. Effective access management, such as limited access from Highway 207/74, shared parking for multiple parcels and alternative access to businesses and parking via a one-way street along Linden Way, also could help maintain a high level of service for the road and result in a more attractive development pattern.

In addition to the proposed access management plan, this area of Highway 207/74 could be designed to slow traffic down and to serve as a gateway into the city.

Residential Land

As noted previously there are three land use issues associated with residential development:

- there is a limited amount of vacant land within the UGB that is not constrained by steep slopes and location in the flood plain;
- recent development in some areas has not been adequately connected to the existing street system; in other areas, pedestrian and bicycle connections between streets could improve connectivity where it is not feasible to build additional roads; and,
- on-street parking of recreational vehicles and boats in residential areas present aesthetic and safety issues.

To address these issues, the measures outlined below should be implemented.

1. Consider Amending the Urban Growth Boundary (UGB)

The UGB could be amended to remove lands that are unlikely to be developed and add lands (if a need can be demonstrated) that can be more likely and feasibly developed. Examples of areas that could be added are summarized below.

- Northwest of the High School: this area is relatively flat and served by at least some existing streets. Most of this property is already within the UGB. Additional land beyond the UGB also may be suitable for development, if the UGB is amended.
- Northeast of Morrow Street and south of Highway 74: This area has gradual to relatively moderate slopes. New developments potentially could connect to the existing street system (e.g., Morrow Street) with the possibility of additional, limited connections to Highway 74 that would improve connectivity with the Pioneer Memorial Hospital. Much of this area is within the UGB. Additional land beyond the UGB also may be suitable for development, if the UGB is amended.

- Existing areas within the city limits: Additional development can be accommodated in the Lakeview Heights area and the southern portion of the city. Additional development in these areas should be consistent with policies related to connectivity and access recommended in this report.

If the city finds that the above areas within the UGB are not adequate to accommodate future growth and that land to the west of town will not be available or suitable to accommodate growth in the next 20 years, amending the UGB should be considered. For example, the city may find that flatter land outside the UGB that is adjacent to developable land within the boundary can be developed more efficiently and cost-effectively than some of the vacant land within the UGB. The city also may find, over the long term (e.g., 20-40 years), that such areas can be better served by the existing road network and extensions to it than some of the land within the current UGB. However, amending the UGB should not be taken lightly. Justifying the need to amend a city's urban growth boundary typically is a complicated and costly endeavor in terms of staff and other resources.

2. Amend the City's Zoning Ordinance to Encourage Infill and Redevelopment

Land within the existing city limits that is already served by sewer, water, roads and other city services ultimately will be less costly to develop than land outside the city limits or land constrained by steep slopes or other service-related constraints. For this reason, it is recommended that the city encourage infill and redevelopment within the city, consistent with other city policies, to provide for more cost-effective provision of city services.

Two types of development are possible on existing platted residential lots in Heppner: 1) development of completely vacant lots; and 2) additional development on lots that already have a house but are large enough, given minimum lot sizes, to accommodate additional development. Both types of development will help make more efficient use of existing streets and other infrastructure, ultimately reducing the cost to provide public services. As noted previously, according to a recently completed buildable lands inventory, there are a limited number of vacant buildable lots served by the city's existing street grid and other services. However, there also may be other parcels that can accommodate additional dwelling units. Further, a review of the city's zoning and subdivision ordinances revealed that there are no regulations that would inhibit development on vacant lots or infill/redevelopment of underutilized parcels.

Additional development on underutilized lots typically is accomplished in two ways. First, some lots are wide enough to build a second house next to the existing one whereas other lots, although not wide enough, may be deep enough to accommodate a second house if the existing house is situated on the front or rear portion of the lot and if there is enough room to place a driveway next to the existing or proposed new house. Partitioning a lot to allow for a second house in front of or behind the existing one results in a "flag lot." Regulations that affect the ability to create flag lots include prohibitions or conditions on their use, as well as frontage and setback requirements that make it difficult to develop them. While Heppner's subdivision and zoning ordinances do not prohibit flag lot development, the following revisions could make the creation of flag lots more feasible: specifically allow flag lots as a conditional or outright use in all residential areas; and, reduce frontage requirements and establish access requirements to allow for flag lots. Suggested ordinance provisions are included in Section 7. Allowing for flag lots will provide another option for builders, developers or property owners to use land served by existing services more efficiently. This measure also would be consistent with city policy to encourage development to occur within a relatively compact urban area with controlled outward growth.

3. Amend the City's Subdivision Regulations to Ensure Connectivity

The city's existing subdivision regulations could be amended and/or supplement existing subdivision regulations to include policies/ requirements that ensure adequate connection to existing streets and

provisions for connections to adjacent undeveloped land. Recommended ordinance provisions are included in Section 7.

Connecting new developments to existing city streets will facilitate provision of services, provide for safe, direct and convenient access within the city, provide more choices for travel and encourage walking and bicycling. As noted above, this has been an issue for some recently developed areas in Heppner. In addition to general policies related to connectivity, ordinance language should be added regarding minimum block length, purpose, use and length of cul-de-sacs and provision of pedestrian/bicycle accessways. Such policies help provide for more travel options, can reduce the distance needed to get from one part of town to another and help improve access for emergency vehicles.

This approach would allow for future infill in areas where new development is occurring and facilitate more efficient planning and provision of roads and other city services. It also could facilitate more orderly and possibly more compact development.

4. Consider Development of Pedestrian/Bicycle Accessways to Improve Connectivity

While the previous recommendation is aimed at providing better connectivity in future developing areas, some existing areas also could benefit from pedestrian/bicycle accessways. On the west side of town, several long roads dead-end into the hillside along the western edge of the city (Willow, Center and Baltimore Streets), providing poor connectivity in this area. Pedestrian and bicycle accessways in this area could provide residents with additional travel options without incurring the expense of building an entire road, which likely would be expensive, given the topography.

In addition, a pedestrian/bicycle accessway between the Lakeview Heights area and the existing street grid to the north would provide alternative travel choices for residents of Lakeview Heights. The city should continue to explore development of a pedestrian/bicycle accessway in this area.

5. Work with Developers to Develop Local Access Plans

The city's subdivision regulations already require developers to submit sketch and tentative plans indicating the layout of streets in unsubdivided portions of property. It is important that the city meet with developers to jointly develop access plans (e.g., elements of the sketch and tentative plans that define internal and external street locations and connections) that meet the city's connectivity objectives, as well as policies related to topography and other design/layout issues.

6. Explore Opportunities to Reduce On-Street Parking of Recreational Vehicles and Boats in Residential Areas

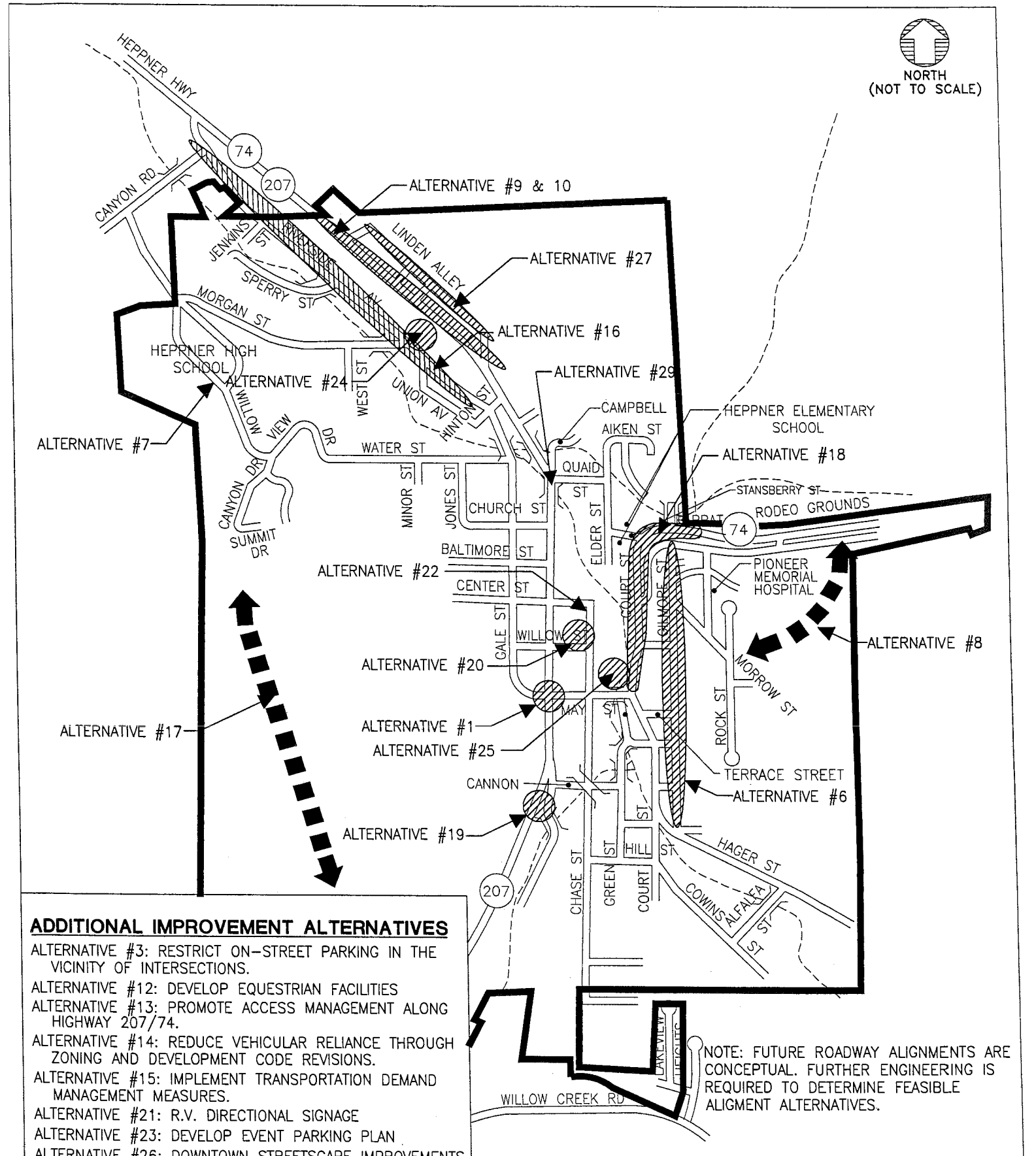
Concerns about aesthetics and safety related to on-street parking of recreational vehicles and boats in residential areas have been raised by the community. Safety concerns are most significant on relatively narrow streets where such vehicles may hamper the emergency vehicle access. Ordinance language that addresses this issue is included in Section 7.

There are also several transportation improvements that will be necessary in the future. The remainder of this section provides an overview of improvement alternatives that could be implemented to mitigate existing and anticipated transportation system deficiencies.

TRANSPORTATION IMPROVEMENT ALTERNATIVES EVALUATION

The following discussion presents specific improvement alternatives that were considered for inclusion as part of the recommended City of Heppner Transportation System Plan. Each of the alternatives has been identified by number for reference purposes, with the relative location of each improvement identified in Figure 12.

Neither the City of Heppner, nor the Oregon Department of Transportation guarantee funding to complete projects listed in the Transportation System Plan.



ADDITIONAL IMPROVEMENT ALTERNATIVES

ALTERNATIVE #3: RESTRICT ON-STREET PARKING IN THE VICINITY OF INTERSECTIONS.

ALTERNATIVE #12: DEVELOP EQUESTRIAN FACILITIES

ALTERNATIVE #13: PROMOTE ACCESS MANAGEMENT ALONG HIGHWAY 207/74.

ALTERNATIVE #14: REDUCE VEHICULAR RELIANCE THROUGH ZONING AND DEVELOPMENT CODE REVISIONS.

ALTERNATIVE #15: IMPLEMENT TRANSPORTATION DEMAND MANAGEMENT MEASURES.

ALTERNATIVE #21: R.V. DIRECTIONAL SIGNAGE

ALTERNATIVE #23: DEVELOP EVENT PARKING PLAN

ALTERNATIVE #26: DOWNTOWN STREETSCAPE IMPROVEMENTS (BENCHES, BIKE RACKS, LIGHTING, TREES)

NOTE: FUTURE ROADWAY ALIGNMENTS ARE CONCEPTUAL. FURTHER ENGINEERING IS REQUIRED TO DETERMINE FEASIBLE ALIGMENT ALTERNATIVES.

LEGEND

— CITY LIMITS

– – – – – – CREEK

IMPROVEMENT ALTERNATIVE RECOMMENDATIONS
HEPPNER, OREGON
Revised June 2003

FIGURE 12

MITCHELL NELSON

It should be noted that the order in which the alternatives are presented is not intended to convey the relative rank or significance of the respective projects. Further, the identified improvement alternatives were evaluated based on construction costs and ability to meet identified transportation needs. Other factors, including potential environmental impacts, were not specifically considered. Some environmental impacts that could occur have the potential to increase costs or require project modifications. The required modifications or increased costs could be significant enough to make the project impractical. All cost estimates were based on industry unit costs and do not reflect utility relocation, environmental constraints, property acquisition or inflationary increases in cost over the planning horizon of this document.

INTERSECTION IMPROVEMENTS

Alternative #1 -Provide Supplemental Signing at the May Street/Main Street Intersection

As previously explained, the May Street/Main Street intersection is currently stop-controlled on the northbound, eastbound, and westbound approaches. To address concerns involving driver confusion at the intersection, it is recommended that supplemental "Three-Way Stop" signing be provided at the intersection.

Estimated cost for this improvement is $200.

Recommendation

This improvement alternative is recommended for implementation in the near-term future. *(NOTE: The addition or modification of a traffic control device on any ODOT facility requires the approval of the State Traffic Engineer. Identification and documentation of the need in this TSP does not guarantee the provision or modification will occur.)*

PARKING CHANGES

Alternative #3 - Restrict On-Street Parking in the Vicinity of Intersections

As documented in the existing conditions analysis, field observations revealed that on-street parking is obstructing sight distance at some of the intersections in the vicinity of downtown, especially along Chase and May Streets. To remedy this problem, it is recommended that the City of Heppner installing signing and curb designations to prohibit parking within 20 feet of an intersection. Prohibition of parking within the 20 feet will also enhance truck turning movements at intersections and will allow for a better defined crossing space for pedestrians.

Estimated cost to completed this alternative is $150 per sign.

Recommendation

The City of Heppner should install signing to prohibit parking within 20 feet of an intersection in the near-term future. *(NOTE: The addition or modification of signing on any ODOT facility requires the approval of the State Traffic Engineer. Identification and documentation of the need in this TSP does not guarantee the provision or modification will occur.)*

Alternative #4 - Restripe On-Street Parking Stalls in the Downtown

The existing parking stalls on Main Street in the downtown area are striped at approximately an 80-degree angle. This configuration makes it difficult for large trucks to maneuver into and out of the on-street parking stalls without crossing the centerline, and creates sight distance limitations for passenger vehicles in the vicinity of the maneuvering trucks. It is recommended that the on-street angled parking spaces be restriped to a 60-degree angle.

Estimated cost to complete this alternative is $3,000.

Recommendation

The City of Heppner should restripe on-street angled parking spaces to a 60-degree angle along the Main Street commercial corridor in the near-term future.

VERTICAL CURVATURE PROBLEMS IN SOUTHEAST HEPPNER

Alternative #6 - Modifications to Gilmore Street

The vertical curve on Willow Street at its intersection with Gilmore Street obstructs intersection sight distance. The steep topography in the vicinity of the street makes it difficult to reconstruct Willow Street to improve sight distance. For this reason, it is recommended that at a minimum, the city acquire sight distance easements in the vicinity of the intersection to ensure that drivers' sight line is unobstructed by landscaping, signing, or other street furniture. In addition, due to the narrow width of Gilmore Street, the city should explore opportunities to restrict on-street parking where alternative parking is available for local residents until the time that the roadway is widened.

The cost to acquire sight distance easements at the Gilmore Street/Willow Street intersection was not estimated in conjunction with this project due to the private property issues involved. The actions necessary to prohibit parking along Gilmore Street should be primarily limited to the installation of "no-parking" signs, which is estimated to cost $150 per sign.

The existing Gilmore Street intersection with Hager Street also exhibits sight distance limitations. It is recommended that the city investigate potential mitigation measures to address this condition, potentially including acquisition of sight distance easements in the vicinity of the intersection to ensure that drivers' sight line is unobstructed by landscaping, signing, or other street furniture. Any mitigation measures should recognize that Gilmore Street serves as an ambulance route to the hospital and, accordingly, any modifications to Gilmore Street that would restrict emergency access in the area should be closely coordinated with local emergency service providers prior to implementation.

Recommendation

The City of Heppner should acquire sight distance easements in the vicinity of the Gilmore Street/Willow Street intersection in the near-term future. In addition, it is recommended that the city explore opportunities to restrict on-street parking along Gilmore Street where alternative parking is available for local residents until such time that the roadway is widened.

The city should also develop and select a mitigation measure to eliminate the existing sight distance restriction at the Gilmore Street/Hager Street intersection. Local neighborhood and emergency service providers should be included in discussions of any mitigation plans to ensure the adequacy of proposed mitigation treatments.

HEPPNER JUNIOR-SENIOR HIGH SCHOOL AREA

Alternative #7 – Develop an Access and Circulation Plan for the Heppner Junior-Senior High School Area

As documented in the **Existing Conditions** section, the area surrounding the Heppner Junior-Senior High School has relatively limited access. Local topographic conditions constrain transportation facilities in this area and also limit the ability to provide connections to the area to serve future development. Further, in the event of adverse climatic conditions, Water Street is often closed and all access to the area is restricted to East Spruce.

Recognizing the need to provide safe and convenient access to the school, the Emergency Operations Center, the Rasmussen-Lott subdivision, and other adjacent developable properties the city should work with the school district and the adjacent property owners to develop an access and circulation plan for the area. This plan should focus on safety and connectivity and include preservation of alternative access to the area such that this portion of the community is not isolated by the seasonal closure(s) of Water Street.

Recommendation

To equitably address the access and circulation issues associated with the area surrounding the high school, it is recommended that an access and circulation plan be developed for the area. Such a plan would involve the development and identification of a local street network and appropriate access points to that network given the topographic constraints of the area. This plan should consider the school district's access and safety concerns, emergency services' needs, the access needs of the existing residential housing in the area, as well as the potential future development of additional housing in the area. The plan should include an evaluation of pedestrian and bicycle access needs in the area and identify appropriate pedestrian and bicycle facilities.

Development of the plan should be closely coordinated with the school district, local emergency service providers, and the neighborhood prior to adoption and implementation to ensure that the community's interests are best served for the long-term future.

Estimated cost to facilitate and complete an access and circulation plan for this area is $10,000. At a minimum, dialogue between the city, school district, emergency service providers, and the neighborhood should be initiated immediately. The formal planning process should be initiated in the near-term future.

Additionally a preliminary engineering study should be undertaken to redesign Water Street to meet street design standards. Water Street provides the only public access to the Sheriff Office and the Rasmussen-Lott Subdivision. Additional access is available from Morgan Street and Canyon Road, but it requires crossing the Junior/Senior High School property. Water Street is substandard. It is narrow, very steep and has no sidewalk along the steep portions. During icy winter weather, the road may be closed. The roadway should be improved to 24-foot wide driving surface with a sidewalk on one side and its slope reduced. Such improvements will require construction of retaining walls and possibly the acquisition of grading easements. An engineering study to determine the feasibility and requirements for such an improvement should be made.

CONNECTIVITY WITH THE PIONEER MEMORIAL HOSPITAL AND ROCK STREET AREA

Alternative #8 – Develop Highway 74/Rock Street/Morrow Street Connection

The area surrounding the Pioneer Memorial Hospital lacks convenient, readily accessible street connections with Highway 74. The lack of street connections, in conjunction with the current limitations of the local bicycle and pedestrian connections, is a subject of community concerns especially with respect to accessing the hospital.

In order to address community concerns regarding access to the hospital and the surrounding residential area, alternative access roads to the area were considered. Based on a review of local circulation and topographic constraints, it was determined that a new roadway connection between Highway 74 and the residential area could be developed. This new roadway would likely connect with either Rock Street or Morrow Street, pending the outcome of a detailed engineering study.

Estimated cost to complete this roadway is subject to several variables including selection of a preferred alignment. On a scale of magnitude, the roadway could be expected to cost in the range of $900,000; however, it should be understood that this estimate is subject to many variables that were not studied in

detail for the purposes of this TSP. In addition, if the selected roadway alignment were to travel outside of the city's urban growth boundary, an amendment process would be required to approve the alignment.

Given that the new roadway would provide alternative access to the hospital as well as potential new emergency access routes, feasibility assessments and development of potential roadway alignments should be closely coordinated with local emergency service providers prior to implementation.

Recommendation

The city should develop a new roadway connection between Highway 74 and the residential area adjacent to Rock Street/Morrow Street. The roadway should include development of appropriate pedestrian and bicycle facilities in conjunction with the project. Implementation of this alternative is likely to be completed in conjunction with local development activity. It should be noted that development of a new connection to Highway 74 is subject to ODOT access management and spacing standards for the highway.

TRAVEL SPEEDS ON HIGHWAY 207/74 AND HIGHWAY 74

Community input identified operating speeds on Highway 207/74 and Highway 74 through the city as an issue of concern. Two specific locations were noted: on Highway 207/74 in the north part of town (e.g., Linden Way) near the swimming pool and on Highway 74 near the Fairgrounds and Heppner Elementary School. The speed limit currently posted on the respective highways was established by ODOT and reflects the 85th percentile speed. Posting speed limits based on the 85th percentile recognizes that drivers will travel at a speed that they are comfortable with regardless of the posted speed limit.

Given that changing the posted speed limit will not influence driver behavior, it is necessary to influence the driving environment to effect driver's speeds. Wide travel lanes and open shoulders convey a sense of security that encourages higher speeds. Changes to the roadway that effectively condense the road environment (through construction of curbs, lane restriping, other amenities such as planter strips, street trees, etc.) may contribute to reduced travel speeds on the highway. Once changes have been made to the roadway environment that effect drivers' perceptions, speeds will likely drop. Following modifications, ODOT could re-evaluate the need to change the posted speed limit.

Alternative #9 - Provide Gateway Treatments Along Highway 207/74

Through the public meeting process, it was noted that the northern portion of Heppner currently lacks a defined core area that is evident to travelers along Highway 207/74. The lack of a defined core has an indirect impact on highway operations in that drivers perceive a wide-open environment and tend to speed on Highway 207/74 through the city limits. Streetscape treatments such as landscape strips, pedestrian refuges and bike lanes may be valuable to the city in the future as an instrument by which the character of roadways can be influenced by providing a more narrow feel. Treatments such as pedestrian refuges, and landscaped medians provide an indication to drivers that the adjacent land uses necessitate slower speeds.

Recommendation

The city should develop gateway treatments along the highway in conjunction with implementation of the recommended land use policies and ordinances. Further, through new roadway and land-use standards, future development activities and roadway improvements along Highway 207/74 and Highway 74 should be focused to influence the streetscape of the highway. By modifying the streetscape of the two highways, driver's perceptions can be influenced and travel speeds may be reduced. Section 5, **Transportation System Plan**, presents recommended street standards that will assist in fostering a more constrained perception of the highway travel environment.

Alternative #10 - Enhance Pedestrian Crossings of Highway 207/74 and Highway 74

In conjunction with the improvement projects identified under Alternative #8, the pedestrian environment along the north section of Highway 207/74 should also be improved. In addition to providing traditional sidewalk facilities, there are several other potential enhancements that should be considered along the northern section of Highway 207/74, including:

- provision of additional street lighting to enhance visibility of pedestrians at night;
- limited construction of curb extensions that reduce the exposed crossing distance pedestrians must walk, and;
- limited use of median treatments that provide pedestrians with a "safe-haven" at a mid-crossing.
- Construction of sidewalks with a separating landscape strip with street trees.

Recommendation

Implementation of specific improvement measures will be dependent on local development activities and the city's ability to create some form of gateway treatment that influences the character of Highway 207/74. The Pedestrian and Bicycle System Plan contained in Section 5 identifies specific pedestrian and bicycle improvements along Riverside Avenue rather than in Highway 207/74.

STANSBERRY STREET AND HEPPNER ELEMENTARY SCHOOL

EQUESTRIAN FACILITIES

Alternative #12 - Develop Equestrian Facilities

Community involvement with the TSP identified a desire to provide equestrian facilities within the city. The primary purpose of these facilities would be to provide convenient access to the fair grounds that reduces or eliminates the interaction of horse traffic and vehicles on Highway 74. Additional facilities could provide connections servicing the downtown area and, potentially, a future trail. Provision of such facilities would enhance the safety of horseback riders by providing a separate travel environment that reduces the amount of interaction between horseback riders and vehicular traffic.

Development of equestrian facilities should consider the potential need for watering stations, loading/unloading points for horse trailers, and other amenities. Further, it would also be necessary to ensure that the trails and facilities were properly maintained to ensure sanitary conditions. Given the vague nature of these facilities, no cost estimates were prepared.

Recommendation

Development of appropriate equestrian facilities should be encouraged along side of the proposed multi-use trail from the City Park to Hager Park where space allows. Other trails are encouraged

ACCESS MANAGEMENT

The spacing of access points along roadways impacts the capacity, safety, and overall performance of a given facility. Accordingly, access locations on roadway sections need to be properly located to ensure safe and efficient travel along roadway corridors. Access locations should be placed appropriately to limit potential conflicting turning movements, weaving maneuvers over short distances, and congestion along facilities.

In general, as the number and proximity of access points along a given road increases, there is an increase in the number of potential conflicting turning movements into and out of those access points. These turning maneuvers ultimately can adversely affect the operations of traffic on the roadway itself.

Alternative #13 - Promote Access Management Along Highway 207/74 and Highway 74

The Oregon Department of Transportation has established access spacing standards for Highway 207/74. These standards, which are presented in detail in Section 5, are intended to ensure the long-term safety and efficiency of the Highway 207/74 corridor. Implementation of the standards as they relate to local development activities will be essential to ensure the long-term viability of the Highway 207/74 corridor.

The future conditions analysis, as presented in this document, assumes that current public roadway spacing along Highway 207/74 will be maintained into the long-term future. As long as the current public road access spacing standards along Highway 207/74 are maintained and new private access points are allowed in accordance with the access spacing standards presented in Section 5, it is expected that the forecast future traffic conditions will be reflective of long-term operations along the Highway 207/74 corridor. Conversely, if multiple additional access points are granted along Highway 207/74, it can be expected that additional incremental delay will be added to the highway's operations.

Recommendation

Access Management should be implemented in the immediate future. No specific construction need is evident to implement this improvement as it simply promotes compliance with existing roadway policy. No immediate land use actions would be required either. Instead, as property along Highway 207/74 is developed or redeveloped, appropriate action should be taken by local and state agencies to ensure that the relevant access spacing standards are reasonably enforced. Section 5, **Transportation System Plan,** includes a full access management plan and corresponding implementation strategy complete with typical spacing standards, driveway widths, etc.

REDUCE RELIANCE ON THE AUTOMOBILE

Alternative #14 - Reduce Vehicular Reliance Through Zoning and Development Code Revisions

In part, Oregon's Transportation Planning Rule seeks to reduce the reliance on personal vehicles as a mode of travel through the creation of environments that foster alternative modes of transportation. Local land uses can have a significant impact on the form of transportation necessary to travel from one location to another. Specifically, by carefully structuring local zoning and development codes, development activities can be focused such that a more self-contained community can be achieved. Construction of mixed-use developments, the location of commercial and service businesses in the vicinity of residential land uses, and the provision of employment opportunities near residential areas are all means by which the need for travel by personal automobile can be reduced.

In relatively rural areas such as Heppner, the need to travel long distances to employment, commercial, and service opportunities fosters a travel environment dependent on personal automobiles. This is an issue for many of the city's residents, who work in other communities such as Boardman and Hermiston that are 40 to 50 miles away. Some recent residential development also has contributed to reliance on the automobile. New homes in the Lakeview Heights area do not have a direct connection to existing streets at the southern end of the city's street grid. Development of vacant or underutilized parcels within the central part of Heppner with direct connections to the city's street grid system would reduce reliance on the automobile for short trips to local community commercial establishments and other uses.

Recommendation

Implementation of the recommended land use modifications is recommended. Provision of appropriate zoning and development code revisions should be approved by the city. These revisions are summarized in Section 7.

Estimated cost is $40,000. This project is on-going.

Alternative #15 - Implement Transportation Demand Management Measures

Transportation Demand Management (TDM) measures identify opportunities to reduce the impact of trips generated by various land uses. Specifically, TDM techniques typically seek to reduce reliance on single-occupant vehicle trips and promote the use of alternative travel modes by persons accessing a given area or facility. The Transportation Planning Rule encourages the evaluation of TDM measures as part of the TSP development process.

TDM strategies often focus on major employers or other sources of traffic that can be influenced through scheduling changes, alternative transit opportunities such as carpools and buses, and other means. Oftentimes, financial disincentives are included in programs as a revenue generator to support other elements of an overall program. The success of fee parking and other commonly used disincentives is dependent on the environment in which a given employer is located.

Given the rural nature of Eastern Oregon and the City of Heppner, the TDM measures available to the city are limited in scope as compared to larger metropolitan areas. One of the most promising options available to the city is the provision of a carpool or vanpool service for people who live in Heppner and work in neighboring communities. Coordination of a vanpool and/or carpool(s) to the major employers in the area could help to reduce the number of single occupant vehicle commute trips from Heppner and help the community to achieve transportation demand management objectives. The city could also promote carpooling to out-of-town employers through education.

Provision of a park-and-ride facility at a key location within the community is another means by which the use of non-auto dependent travel can be encouraged.

Recommendation

It is recommended that the City of Heppner focus TDM efforts on supporting carpools and/or vanpools to major employers through education, coordination with employers, and provision of appropriate facilities such as park-and-ride areas. The first step would be to conduct a survey of Heppner citizens to determine where and when they commute. Understanding the existing commuting patterns will lead to appropriate car-pool / commuting options. Additional recommendations include providing a facility for bus/van storage and development of a park and ride lot.

The cost of implementing a TDM program is dependent on the type and variety of measures selected. Facilitation of carpools, vanpools, or a park-and-ride facility could be completed through a volunteer network and/or coordination with major employers at minimal cost.

The commuter's survey is estimated to cost $10,000.

Alternative #16 - Riverside Avenue Reconstruction

The City of Heppner has identified a need for pedestrians to use Riverside Avenue rather than Highway 207 / 74 for access to the city pool and the ball fields.

Riverside Avenue is a minor collector and also serves the industrial zones in the city. The road and its sub- base is in poor condition. It requires reconstruction along with provisions for pedestrians and bicycle circulation facilities.

Recommendation

It is recommended that the City of Heppner improve Riverside Avenue to better serve industrial users and pedestrians alike by reconstructing the road way and constructing a multi use path on the north side of Riverside Avenue.

The estimated cost is $920,000.

Alternative #17 - North-South Collector on Westside of the City.

A large portion of the City's Residential land area is located on the westside hilltop.

Recommendation:
If this portion of the city is developed, a north-south connector road should be developed as the land area is developed. It shall provide a second north-south connection within the City and help improve access to existing development near to and including the High School.

Alternative #18 - North Court Street Improvements

Highway 74 coming into the city from the east curves sharply to the south after the Fair Grounds. Within the city and around the curve it is called North Court Street. The road from the Fair Grounds to the intersection of May Street is substandard and should be improved to closer meet state highway standards within the constraints of the existing topography.

Recommendation:
The roadway should be reconstructed within the existing right of way.
The estimated cost for this is $950,000.

Alternative #19 - Main Street Improvements between Cannon St and Shobe Creek

The city is planning a skate park at the old pool site along with a covered shelter. The facility can be used by the whole community but can also provide a special place for Heppner youth to gather in the summer.

Recommendation:
To support the improvements additional parking is suggested adjacent to the pool. Street improvements with curbs, gutters and sidewalks with ADA accessible crossings should be constructed adjacent to the skate board park. The new parking area can be part of the event-parking inventory.
The estimated cost is $60,000.

Alternative #20 - Off-street R.V. Parking Lot

Lack of parking for visiting recreational vehicles is a significant problem for downtown Heppner.

Recommendation:
Develop an off-street RV parking lot. An option is shown at the northwest corner of Chase and Willow streets on the Downtown Development Plan. One of the residential parcels is for sale. The second home abutting this property appears to be abandoned and is in poor condition. The two lots combined could provide space for about eight 12-foot wide over size parking stalls immediately behind the Red Apple Market with alley access. This option allows for pull-through access. If this location is not available then another area in the downtown district could be recommended.

The estimated Construction cost is $56,000.

Alternative #21 - Signage for R.V. Parking

Recreational vehicle users have difficulty finding parking in Heppner to stop and re-supply and shop in the downtown. Designated R.V. parking away from the highway is not visible to visitors passing through.

Recommendation:
Place signage on the highway to appropriately direct R.V. traffic to designed R.V. parking areas.

Alternative #22 - On-street R.V. Parking

Lack of parking for visiting recreational vehicles is a significant problem for downtown Heppner. Additional oversize parking is needed to meet the existing demand that is expected to grow with the construction of a new county RV park south of Heppner.

Recommendation:
The City should designate lightly used on-street parking space along the west side of Chase Street between Center Street and May Street and both sides of Center Street from Main Street to Chase Street as "Over-Size Parking" only areas.
The estimated cost is $3,500.

Alternative #23 - Event Parking Plan

Although adequate parking is available, for the most part, throughout the community, parking is a significant problem during the community's festivals and the Morrow County Fair. Providing full time parking for a part time need, though, is an inefficient use of resources.

Recommendation:
To resolve the part time parking problem, the city should inventory property owners with land that is being used for vehicular movement or parking and develop an Event Parking Plan.

If parking areas are not being used during special events, then the city can coordinate there use for special event parking. Undeveloped flat land such as behind the city pool could provide temporary parking or community church parking lots could be used when services are not in session.

A modest fee can be charged to defray operational costs such as compensation for staff to direct traffic and to set up temporary lots with cones and plastic ribbons.

The city will need to provide temporary signage to direct visitors to the potential parking areas. Someone from the city or a community volunteer should be responsible for identifying lots available, projecting parking needs and coordinating the use of available space.
The estimated cost is $7,500.

Alternative #24 - Municipal Parking Lot for the City Pool

There is no off-street parking for the swimming pool.

Recommendation
Develop a City owned parking lot behind the Swimming pool accessed from Riverside Avenue.
The estimated cost is $52,000.

Alternative #25 - Municipal Parking in the Downtown District

Although a parking survey indicated that downtown Heppner has adequate parking, there is a community perception that there is a shortage. The survey indicated the spaces in front of the Post Office were often full. Future development or greater use of existing second stories could impact the amount of available parking. The Zoning Code has a proposed provision for paying into a city fund for any required parking that a developer cannot provide.

Recommendation:
The city should develop a municipal lot in an under developed section of the downtown.
The city should consider replacing parallel parking of the side streets of the downtown with angled parking as space permits.

Alternative #26 - Streetscape Improvements in the Downtown District

The downtown pedestrian environment can be enhanced by improving the streetscape environment with street furniture, bike racks and landscape materials for shade and cooling. Street trees provide vertical elements and a living component to a streetscape. Placement and use of the right plant material is paramount to the success of the landscape. Heppner's dry climate and potentially cold winters require a tree that is tolerant of such conditions even with the addition of irrigation water.
Recommendation:
Place benches in strategic locations such as near the Post Office, City Hall, Library, or parks. A consistent bench will add to the visual character and provide a pleasant respite while walking through downtown on errands. Matching trash receptacles should be placed throughout the downtown.

Add bike racks within the public right-of-way making it easier for people bicycle downtown for errands or shopping. A bollard style bike rack will indicate separate areas while providing a safe bicycle storage system. Private bike racks will be required for new development per zoning code. They should be the same style if they are placed in the public right-of-way. All street future should be placed outside a clear (ADA accessible) walking area.

Because the landscape strip abuts the drive aisle, a deciduous columnar plant should be used to avoid conflict with vehicular traffic. A deciduous tree will provide shade in the summer and allow sun on the street during the winter.

The proposed landscape strip on Chase between May and Center Streets should use the same red blocks between the tree wells with drought tolerant ground cover used for accent areas.

Alternative #27 - Improve Linden Way

Linden Way provides a second access for property fronting on the northwest side of Highway 207/74. As these properties develop access from the rear may become more important. Linden Way is presently unimproved. When its use increases it should be improved.

Recommendation:

Improve Linden Way with asphalt pavement and other improvements as required.

Alternative #28 - Gale Street Bridge Pedestrian Improvements

Gale Street is a designated as a bike route. The Gale Street Bridge is narrow and does not have space for separate pedestrian walkways and or bike path.

Recommendation:

The bridge should be slated for replacement or if not feasible in the reasonably near future, a separate parallel bridge for bikes and pedestrians should be installed.

Alternative #29 - Quaid Street and Campbell Way intersections with Highway 207/74

These two streets intersect Highway 207/74 without definition creating a long pedestrian 'no mans land'.

Recommendation:

The intersections should be defined by appropriately designed turning radii with new curbs, gutters and ADA accessible sidewalks and crossings.

SUMMARY

This section has presented the alternatives that have been developed and evaluated to address the near-term and long-range transportation deficiencies within the City of Heppner urban growth boundary. Table 6 summarizes the potential improvement alternatives. Section 5, which follows, incorporates the recommended improvements for each transport mode into the city's transportation system.

TABLE 6
SUMMARY OF IMPROVEMENT ALTERNATIVE RECOMMENDATIONS

Alternative Number	Improvement Description	Estimated Cost*	Implementation Timeline	Responsible Jurisdiction
#1	Provide Supplemental Signing at the May Street/Main Street Intersection	$200	Near-term future	City/ODOT
#3	Restrict On-Street Parking in the Vicinity of Intersections	$175/sign	Near-term future	City
#6	Modifications to Gilmore Street -Acquire Sight Distance Easements at Willow Street -Mitigate Sight Distance Deficiency at Gilmore Street/Hager Street intersection	-Not estimated -Not estimated	-Near-term future -Near-term future	City
#7	Develop an Access and Circulation Plan for the Heppner Junior-Senior High School Area -Feasibility study of Water St improvements	$12,000 $29,000	Near- term future Near-term future	City and/or Developer City
#8	Develop Highway 74/Rock Street/Morrow Street Connection	$900,000	Concurrent with local development	Developer/ City
#9	Provide Gateway Treatments Along Highway 207/74	$436,000.00	Concurrent with local development	ODOT/City/ Developer
#10	Enhance Pedestrian Crossings of Highway 207/74	No estimate	Near-term future	City/ODOT
#12	Develop Equestrian Facilities-(concurrent and Parallel to stream path where appropriate)	No estimate	As appropriate	City
#13	Promote Access Management Along Highway 207/74	No estimate	Concurrent with local development	City/ODOT
#14	Reduce Vehicular Reliance Through Zoning and Development Code Revisions	$40,000	In process	City/ ODOT

#15	Implement Transportation Demand Management Measures -Survey of commuters -Bus/Van Facility -Park and Ride lot	10,000 No Estimate No Estimate	Near-term future Mid term future Mid term future	ODOT/City
#16	Reconstruct Riverside Avenue and construct a multi-use path in the ROW	$611,000	Mid term future	City
#17	Develop a north -south collector on the west side of the City	$1,775,000	Concurrent with local development	City / Developer
#18	North Court Street improvements from May street to Fair Grounds with sidewalk on west side only after the mid-block cross walk	$950,000	Mid-term future	City/ ODOT
#19	Main Street improvement between Cannon St and Shobe Creek including parking and sidewalks.	$60,000	Near Future	City
#20	Off-Street R.V. Parking construction	$45,000 & land cost	Near Future	City
#21	Directional Signage to R.V. parking areas	$200 per sign	Near Future	City / ODOT
#22	On-street R.V. parking designation, striping, & signage	$3500	Near Future	City
#23	Develop an Event parking plan and coordinate	$7,500	Near Future	City
#24	Construct a Municipal Parking lot near the City pool	$52,000	Near Future	City
#25	Construct a Municipal Parking lot in the Downtown District	$30,500	Mid Future	City / Developers
#26	Streetscape Improvements in the Downtown District (Benches, bike racks, sidewalks, lighting, landscape materials)	$75,000	Mid Future	City / Developers
#27	Improve Linden Way	$95,500	Long -term future	City
#28	Improve Bicycle and Pedestrian facility on Gale Street Bridge	No estimate	Mid-term Future	City
#29	Improve intersection at Quaid St and Hwy 207/74 and Campbell Way and Hwy 207/74	No Estimate	Mid-term Future	City / ODOT

*Estimated costs are in 2003 dollars and do not include right-of-way acquisition

Section 5

Transportation System Plan

Transportation System Plan

INTRODUCTION

This section describes the individual elements of the City of Heppner Transportation System Plan. The preferred alternative presented in this TSP consists of those land use and transportation improvements necessary to support the City of Heppner's Comprehensive Land Use Plan. The TSP addresses several components for development of the future transportation network including:

- Preferred Land Use Plan
- Roadway System Plan
- Pedestrian System Plan
- Bicycle System Plan
- Public Transportation System Plan
- Marine System Plan
- Air/Water/Pipeline System Plan
- Access Management Plan
- Implementation Plan

The individual plans and policies presented in this section were developed specifically to address the requirements of Oregon's Transportation Planning Rule. Projects associated with each plan element have been identified and costs have been estimated as described herein. The recommendations set forth by this plan reflect the findings of the existing and forecast future conditions analyses, the alternatives analysis, and the concerns expressed by both the citizens of Heppner and the public agencies that serve them.

PREFERRED LAND USE PLAN

The following are considered beneficial elements that should be explored as part of future land use planning and design efforts, preferably through amendments to the comprehensive plan, implementing ordinances and local street network:

- rezone select property along Highway 207/74 from commercial to open space or recreational use;
- develop a plan to manage access to individual properties on the northeast side of Highway 207/74;
- restrict development of land in the flood plain;
- amend the urban growth boundary to remove lands that are unlikely to be developed and add lands (if a need can be demonstrated) that can be more likely and feasibly developed;
- amend the city's zoning ordinance to allow flag lots;
- amend and supplement existing subdivision regulations to include policies/requirements that ensure adequate connections to existing streets and provisions for connections to adjacent undeveloped land;
- amend the city's subdivision regulations to limit cul-de-sac length;

- work with developers to incorporate the city requirements into a local access plan for any proposed development; and
- limit on-street parking of recreational vehicles and boats in residential areas.

ROADWAY SYSTEM PLAN

Based on the identified existing and anticipated operational and circulation needs, the roadway system plan was developed. The city's roadway system plan provides guidance as to how to best facilitate travel within the city by addressing two key issues:

- a roadway functional classification system and corresponding roadway design standards, and
- roadway connectivity, including new and improved streets to meet future capacity, circulation, and safety needs.

Functional Classification

The purpose of classifying roadways is to create a mechanism through which a balanced transportation system can be developed that facilitates mobility for all modes of transportation. A given roadway's functional classification determines its intended purpose, the amount and character of traffic that it is expected to carry, commitment to serve and promote non-auto travel, and its design standards.

The classification of a given street is intended to convey the requirements, capabilities, and capacity of each respective roadway while recognizing that roadway's contribution to the overall transportation system. It is imperative that the classification of streets is considered in relation to adjacent properties, the land uses that they serve, and the modes of transportation that can be accommodated. Further, each roadway must be appropriately designed so as to accommodate vehicles local to the roadway (i.e., passenger cars, heavy trucks, pedestrians, and bicycles). The public right-of-way must also provide sufficient space for utilities to serve adjacent land uses.

The functional classification plan for the City of Heppner incorporates three functional categories: arterials, collectors, and local streets.

Arterials

Arterials are roadways that are primarily intended to serve traffic entering and leaving the urban area. Arterials tend to carry significant intraurban travel between downtown areas and outlying residential areas. While arterials may provide access to adjacent land, that function is subordinate to the travel service provided to major traffic movements. Arterials are the longest distance, highest volume roadways within the urban growth boundary. Although focused on serving longer distance trips, pedestrian and/or bicycle activities often are associated with the arterial streetscape.

Collectors

Collector facilities link arterials with the local street system. As implied by their name, collectors are intended to collect traffic from local streets (and sometimes from direct land access) and channel it to arterial facilities. Collector facilities tend to carry lower traffic volumes at slower speeds than arterials. On-street parking is more prevalent and pedestrian facilities are typically provided.

For the purposes of TPR compliance, all collector facilities in this TSP are considered to be Minor Collectors. (The TPR requires that sidewalks and bike lanes be provided on all Major Collectors within a given Urban Growth Boundary).

Local Streets

Local streets are primarily intended to provide access to abutting land uses. Local street facilities offer the lowest level of mobility and consequently tend to be short, low-speed facilities. As such, local streets should primarily serve passenger cars, pedestrians, and bicyclists; heavy truck traffic should be discouraged. On-street parking is common and sidewalks are typically present.

Using the three roadway designations described, all current and future streets within the city have been designated in the Functional Classification Plan presented in Figure 13. As identified in Figure 13, the major roadway designations are summarized below.

Arterials

- Highway 207/74
- Highway 74

Minor Collectors

- Quaid Street
- Cannon Street (between South Court Street and Gilmore Street)
- Chase Street
- Center Street (east of Gale Street)
- South Court Street
- Gilmore Street
- Morgan Street
- Riverside Avenue
- Willow Drive/Water Street/East Spruce
- New Highway 74/Morrow Street/Rock Street connection

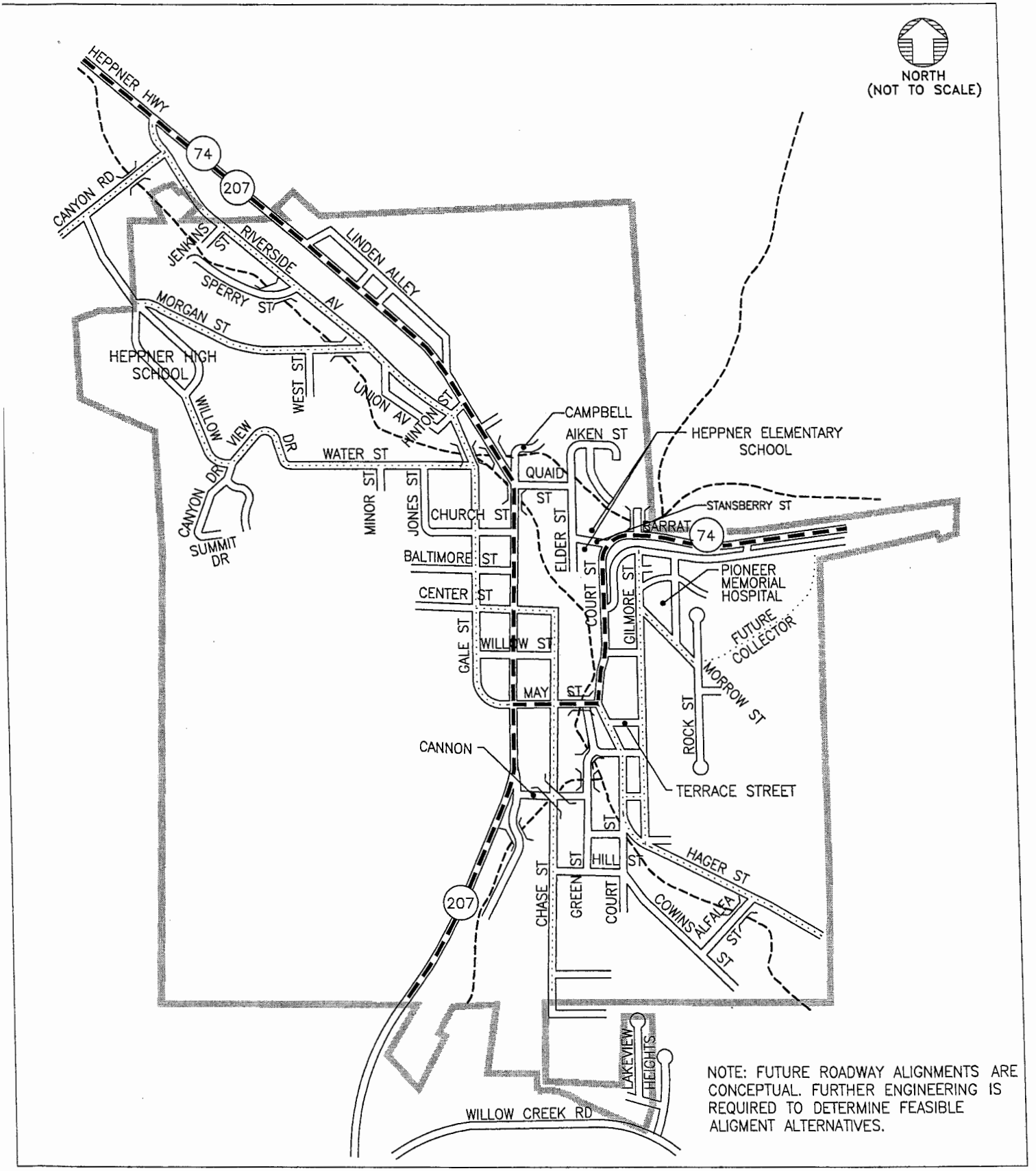
Local Streets

The remaining roads in the city are designated as local streets.

Street Design Standards

Street design standards are based on the functional and operational characteristics of streets such as travel volume, capacity, operating speed, and safety. The standards also are established to provide appropriate separation between travel lanes and pedestrian and bicycle facilities. They are necessary to ensure that the system of streets, as it develops, will be capable of safely and efficiently serving the traveling public while also accommodating the orderly development of adjacent lands.

Figures 14 A-C presents the typical cross sections for the various roadways identified in the functional classification system. The typical roadway cross sections comprise the following elements: right-of-way, number of travel lanes, bicycle and pedestrian facilities, drainage, and optional amenities such as landscape strips.



NOTE: FUTURE ROADWAY ALIGNMENTS ARE CONCEPTUAL. FURTHER ENGINEERING IS REQUIRED TO DETERMINE FEASIBLE ALIGMENT ALTERNATIVES.

LEGEND

- ARTERIAL
- MINOR COLLECTOR
- LOCAL STREET
- CITY LIMITS
- CREEK

ROADWAY NETWORK AND FUNCTIONAL CLASSIFICATION SYSTEM

CITY OF HEPPNER, OREGON
TRANSPORTATION SYSTEM PLAN
JUNE 1999

FIGURE 13

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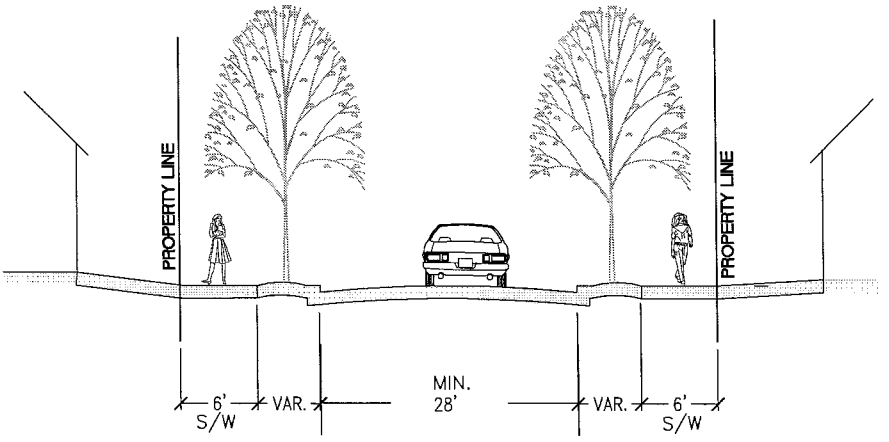
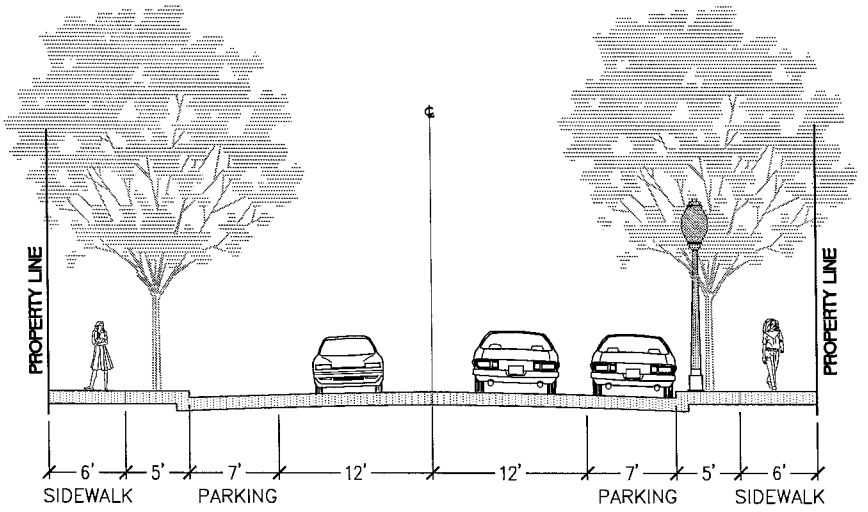
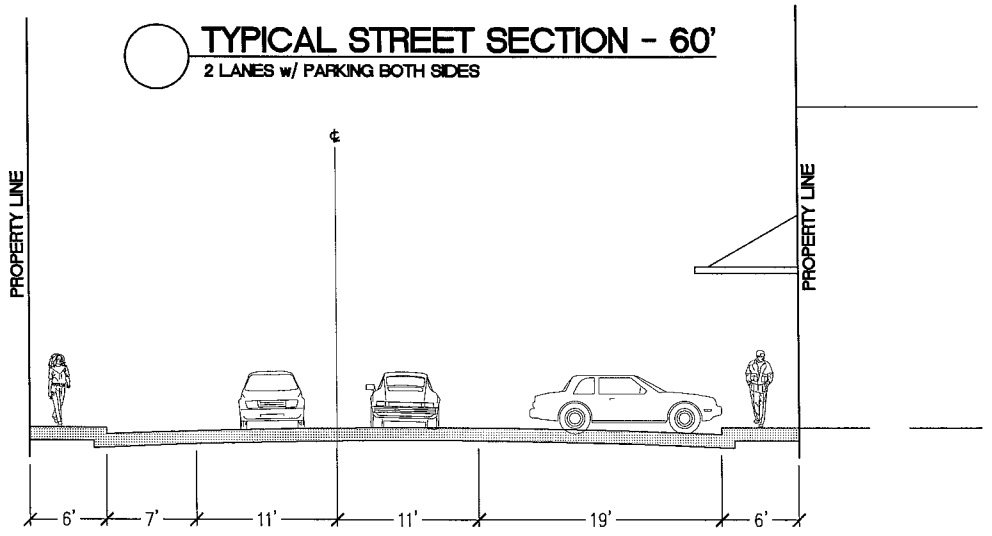


LOCAL STREET



TYPICAL STREET SECTION - 60'

2 LANES w/ PARKING BOTH SIDES



TYPICAL STREET SECTION - 60' DOWNTOWN

2 LANES, PARKING BOTH SIDES

STREET SECTIONS

DOWNTOWN DEVELOPMENT PLAN

HEPPNER, OREGON

FIGURE 14A

June 30, 2003

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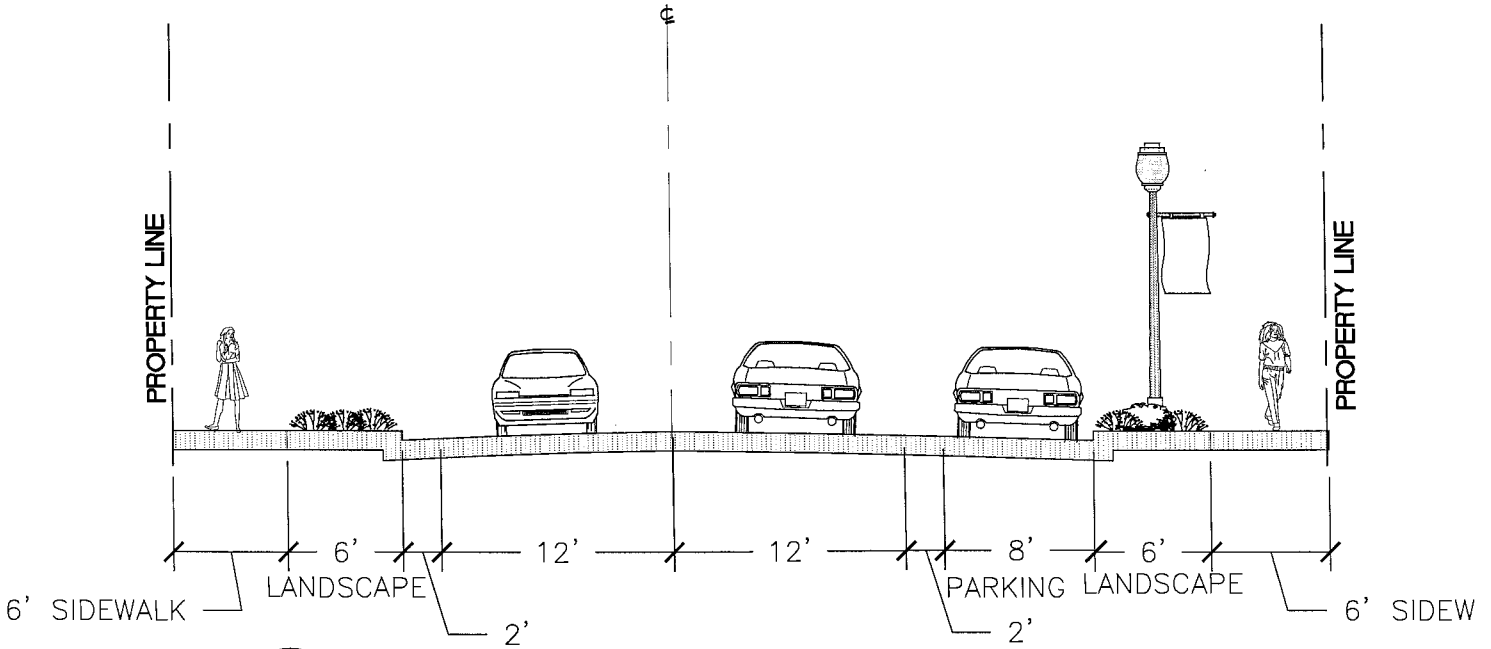
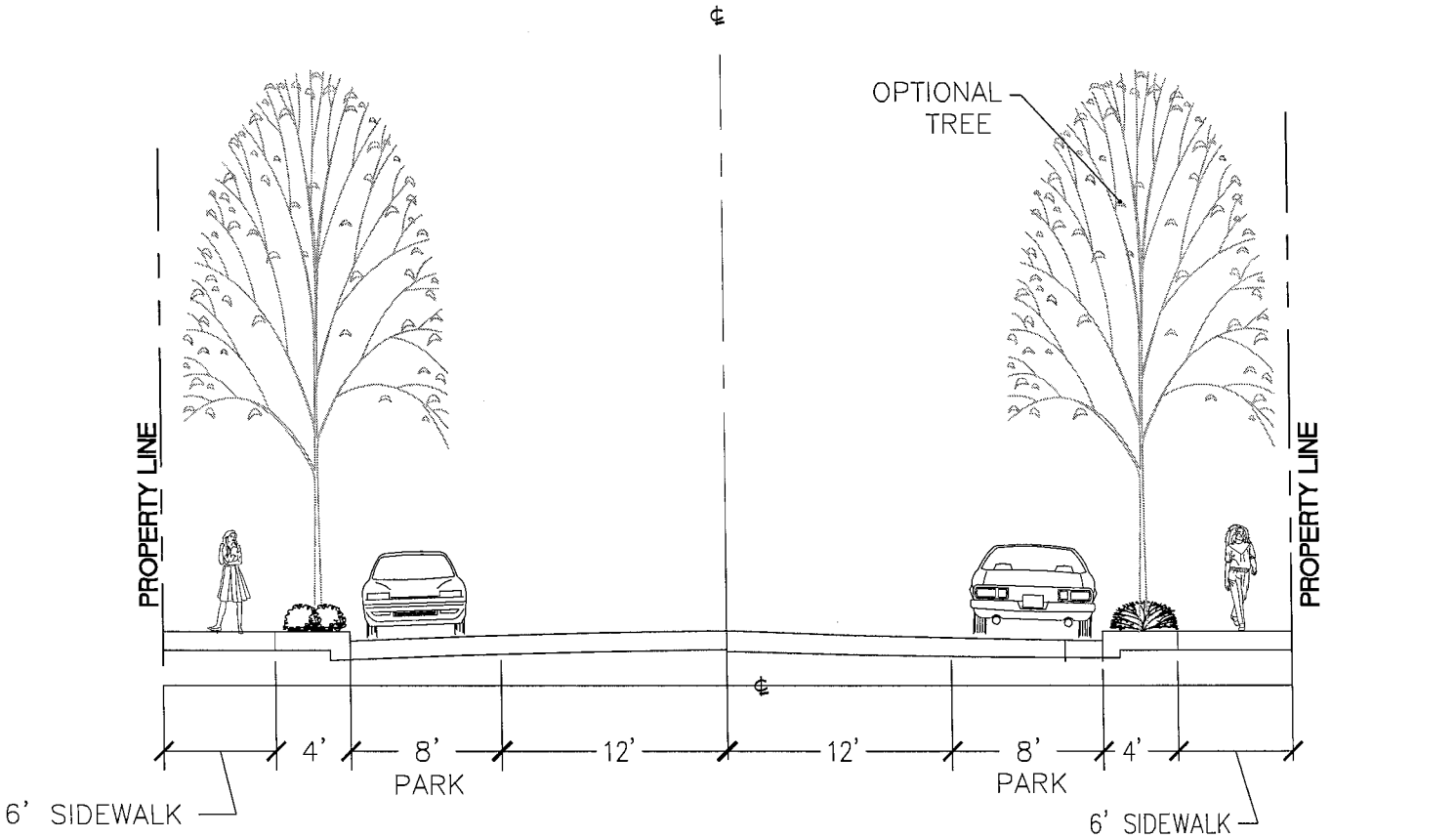
ENVIRONMENTAL PLANNERS
& LANDSCAPE ARCHITECTS



HEPPNER HIGHWAY - TYPICAL SECTION

2 LANES w/ PARKING ONE SIDE — ARTERIAL STREET



HEPPNER HIGHWAY at HERITAGE PLAZA

2 LANES WITH PARKING ON TWO SIDES — ARTERIAL STREET

STREET SECTIONS

DOWNTOWN DEVELOPMENT PLAN

HEPPNER, OREGON

June 30, 2003

FIGURE 14B

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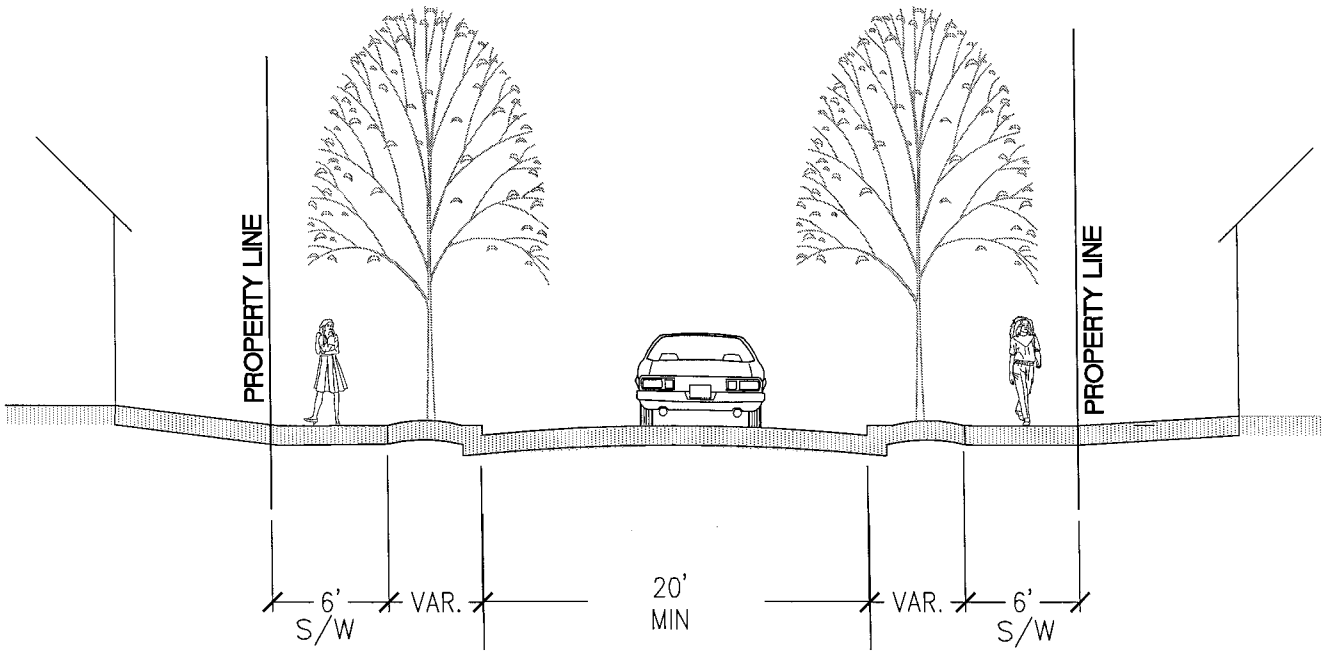
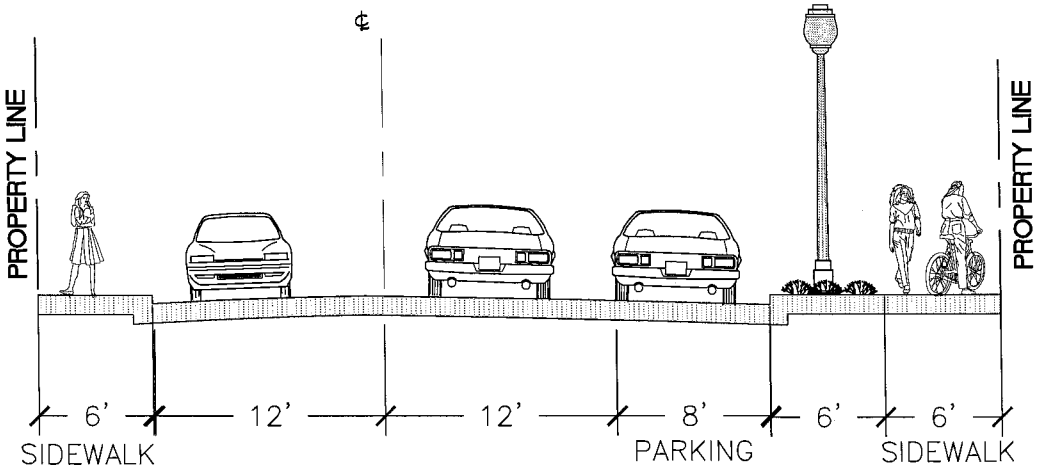


SKINNY STREET



RIVERSIDE AVENUE - TYPICAL SECTION

2 LANES w/ PARKING ONE SIDE

STREET SECTIONS

DOWNTOWN DEVELOPMENT PLAN

HEPPNER, OREGON

FIGURE 14C

June 30, 2003

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ENVIRONMENTAL PLANNERS
& LANDSCAPE ARCHITECTS

The cross sections illustrated in Figures 14 A-C reflect the desire to develop multi-modal roadway facilities within the City of Heppner in the future. The identified cross sections are intended for planning and design purposes for new road construction as well as for those locations where it is physically and economically feasible to improve existing streets.

The typical cross sections present standards for roadways that allow for flexibility in defining the actual roadway width through optional features such as landscape strips and on-street parking. The use of on-street parking and planter strips would be subject to the discretion of the City of Heppner which would determine whether such amenities are required on a given street (in the case of Highways 207/74 and 74, appropriate representatives from ODOT would have ultimate authority over the roadway design).

As shown in Figure 14B, two cross-section options are identified for ~~the~~ highways 207/74, a cross-section from the city limits to Hinton Street and one from Hinton Street to Quaid Street. The cross-section for Main Street (in the downtown with a 100 foot right of way) maintains the same type of urban design environment that is provided today, Table 7 summarizes the street design standards for the different roadway classifications. The Heppner Downtown Development Master Plan contained in Appendix "D" illustrate how the arterial street 60 foot right of way might be implemented along the north section of Highway 207/74.

TABLE 7
STREET DESIGN STANDARDS

Classification	Cross Section	Right-of-Way	Turn Lanes?	Travel Lanes	Bike Lane?	Sidewalks?	On-Street Parking?	Landscape Strip?
Arterial - 60' Typical - 60' Plaza Downtown Main St	 2 lanes 2 lanes	 60 feet 60 Feet	 No Partial No	 12 foot (min.) 12 foot (min) 14.7 foot	 No No No	 Yes Yes Yes	 Yes 1 side No Yes	 Street Trees Street Trees Street Trees
Minor Collector	2 lanes	60 feet	No	11 feet min.	No	Yes	Optional	Optional
Local Street	1-2 lanes	50 feet	No	Not striped (28 feet paved width min.)	No	Yes	Yes	Yes

[1] Minimum width = 12 feet
[2] Refer to Bicycle System Plan
[3] Provided ROW is available
ROW = Right of way

As indicated in Table 7, an arterial such as Highway 207/74 in the downtown will have a right-of-way requirement of 100 feet and will include two14.7 foot wide travel lanes, 18' diagonal parking on both sides of the street and generous 16.5' sidewalk. In Downtown Main Street (it is reiterated that Downtown Main Street represents the existing highway cross section in downtown Heppner). Alternatively, a 60' Typical arterial will have a 60-foot right-of-way requirement with, two 12' travel lanes, a 2' gutter/ shoulder, one 8' parking space and a 6' landscape and 6' sidewalk on both sides. The 60' Plaza arterial will have two 12' travel lanes with a 2' gutter/shoulder, a 12' center median or left turn lane, a 4' landscape strip and a 6'sidewalk.

In reviewing these standards, it should be noted that ODOT would have the ultimate authority as to which improvements are implemented along Highway 207/74.

Minor collector streets will have a right-of-way requirement of 60 feet and a required cross-section consisting of two travel lanes and five-foot wide (min.) sidewalks. A center left-turn lane and two travel lanes (in lieu of on-street parking) may be provided at locations where left-turn lanes are warranted. Optional landscape strips and on-street parking may also be required at the discretion of the city.

Local streets will have a right-of-way requirement of 50 feet, a minimum of 28-foot wide paved cross section (20 foot wide min. if on-street parking is prohibited), five-foot wide sidewalks, and an optional landscape strip. Generally cities have found that, for maintenance purposes, it is easier to place landscape strips next to the adjacent property line. The adjacent resident typically maintains the landscaping as part of their property (i.e., lawns, etc.).

Requirement of adjacent landscape strips may be made at the discretion of the city. The landscaping strips are recommended between the street and sidewalk on arterial and collector facilities to provide a buffer between cars and pedestrians. Locating the landscaping strip between the street and sidewalk allows for areas with no obstructions or impediments that would prevent or discourage pedestrian movements. Further, the landscape strips could be used for utility easements such that local utilities do not impede pedestrian movements.

Through the flexible requirements provided in Table 7, the City of Heppner will have an ability to reduce impervious surface and provide site-specific standards for roadway improvement projects that reflect local conditions. The optional availability of streetscape treatments such as landscape strips, pedestrian refuges and bike lanes may be valuable to the city in the future as an instrument by which the character of roadways can be influenced. For example, narrow collector streets may be desirable in some neighborhood areas for use as a deterrent to through or speeding traffic on local streets.

Skinny Streets

Given the topographical constraints and other unique needs of the City of Heppner, a variance process should allow for local streets to be constructed as skinny streets. Skinny streets reduce the amount of maintenance that is necessary, reduce impervious surface and drainage concerns, and also right-of-way requirements. Through the variance process, skinny streets as narrow as 28-feet should be allowed with local streets that have on-street parking and 20-foot wide streets should be allowed in areas where on-street parking is prohibited. Local emergency service providers should be consulted during the variance process to provide them with an opportunity to comment on the relative merits of a given skinny street proposal. The skinny streets have a right of minimum of forty feet.

Relation to Development Activities

At the time development activities are proposed, the City of Heppner, when appropriate, will require half-street improvements as part of a given project's conditions of approval. The conditions of approval should require that roadways adjacent to development activities be constructed to comply with the street standards presented in this TSP. Sections 7, **Policies and Land Use Modifications**, outlines sample development review guidelines that are recommended for adoption by the city.

Relation to County Facilities

The Morrow County Transportation System Plan (Reference 3) identified roadway standards for county facilities. The county's right-of-way requirement for Rural Access Roadways is 60 feet; as opposed to the 50 foot requirement identified for local roads in this TSP. Although the county's Rural Access Roadways may be applicable to some roadways within the City of Heppner, the roadway standards proposed in the City of Heppner TSP do not conflict with the county's standards. The county's Rural Access Roadway standards are intended for roads that do not exhibit substantial traffic volumes now but may be expected

to expand in the future, hence the additional right-of-way requirement. It is likely that the county roads will become collectors when incorporated into city limits.

By comparison, the 50 foot right-of-way required on city streets designated as being local roads reflects the expectation that these roadways will not require additional widening in the long-term future (50 feet is for local neighborhood streets with urban densities). The city's collector designation would be an appropriate counterpart to the county's Rural Access Roadway designation.

Parking Restrictions

To ensure adequate intersection sight distance, curbside parking should be prohibited within 20 feet of the edge of a given intersection.

Access spacing standards for the respective roadway classifications are presented later within this section.

Guidelines for Arterial/Collector Intersection Improvements

In addition to roadway cross-section standards, the city should adopt standards for intersection improvements. As intersection improvements are made at arterial/collector intersections in the city, the following general guidelines should be considered:

- maintain adequate signing of side-streets (stop signs and visible street signs);
- provide intersection illumination to increase visibility;
- provide proper channelization (striping, raised medians, etc.) of movements to/from the highway,
- construct either concrete- or asphalt paved side-street approaches (125-foot minimum from highway outside travel lane) to create a smooth transition to and from the highway; and
- install right-turn transition tapers at high-speed unsignalized intersections and tapers with storage lanes at signalized intersections on highway approaches (the standard designs identified in the ODOT Design Manual should be used when addressing intersections along state highways).

ROADWAY IMPROVEMENT PROGRAM

The required transportation improvements in the City of Heppner over the next 20 years, to meet both short- and long-term needs, are listed below in Table 8. The projects have been divided into near-term, high priority projects and projects that should be completed concurrent with local development or redevelopment.

TABLE 8
ROADWAY IMPROVEMENTS

Improvement Description	Estimated Cost*	Responsible Jurisdiction
Near-Term, High Priority Projects (0-5 years)		
Provide Supplemental Signing at the May Street/Main Street Intersection	$200	City/ODOT
Restrict On-Street Parking in the Vicinity of Intersections	$175/sign	City
Re-stripe for On-street R.V. parking and provide directional signage	$3,500 and $175/sign	City
Reconstruct Riverside Avenue and provide multiuse path and sidewalk in ROW, with new water line	$611,000	City
Modifications to Gilmore Street -Acquire Sight Distance Easements at Willow Street -Mitigate Sight Distance Deficiency at Gilmore Street/Hager Street intersection	 -Not estimated -Not estimated	 City City
Develop an Access and Circulation Plan for the Heppner Junior-Senior High School Area - Improve Water Street and Willow View Streets - Obtain an Easement or Public Right on School road - Develop access around School to the south	$10,000 No estimate No estimate No estimate	City/Developer City City City/Developer
Main St. Improvements between Cannon St and Shobe Creek including parking and sidewalk	$56,000	City
Improve Gilmore to North Court Street Pedestrian Access and Crosswalk	$22,000	City
Reduce Vehicular Reliance Through Zoning and Development Code Revisions	$40,000	City
Implement Transportation Demand Management Measures	No estimate	City
Widen and Improve Hwy 74 from May Street to the fairgrounds with a sidewalk on the northwest side	$950,000	City/ODOT
Concurrent with Local Development Projects		
Develop Highway 74/Rock Street/Morrow Street Connection	$900,000	City/Developer
Provide Gateway Treatments Along Highway 207/74	No estimate	City/Developer
Promote Access Management Along Highway 207/74	No estimate	City
Develop West Side North -South Connector Road	No estimate	City/Developer

*Estimated costs are in 1999 dollars and do not include right-of-way acquisition

ACCESS MANAGEMENT STRATEGIES

As the City of Heppner continues to develop, the arterial/collector/local street system will become more heavily relied upon for a variety of travel needs. As such, it will become increasingly important to manage access on the existing and future arterial/collector street system as new development occurs. Access locations on roadway sections need to be properly located to ensure safe and efficient travel along a given transportation facility. Access locations should be placed appropriately to limit potential conflicting turning movements, weaving maneuvers over short distances, and congestion along facilities.

The Oregon Transportation Planning Rule (TPR) defines access management as a set of measures regulating access to streets, roads, and highways, from public roads and private driveways. The TPR requires that new connections to arterials and state highways be consistent with designated access

management categories. One objective of the Heppner TSP was to develop an access management policy that maintains and enhances the integrity (capacity, safety, and level-of-service) of the city's streets. The Oregon Department of Transportation has legal authority to regulate access points along Highway 207/74 and Highway 74 within the city's urban growth boundary. The City of Heppner will manage access on other collector and local streets within its jurisdiction to ensure the efficient movement of traffic and enhance safety.

Access management standards vary depending on the functional classification and purpose of a given roadway. Roadways in the upper echelon of the functional classification system (i.e. arterials) tend to have stringent spacing standards, while facilities ranked lower in the functional classification system allow more closely spaced accesses. The following discussion presents the hierarchical access management system for roadways in Heppner.

ODOT Access Management Standards

The *1999 Oregon Highway Plan* (Reference 1) specifies an access management classification system for state facilities based on a highway classification system. The *Oregon Highway Plan* classifies the portion of Highway 207/74 that is located north and south of May Street as being of a *Regional Highway.* Highway 206/207 is also classified as a *Regional Highway* (Main Street south of May Street). The section of Highway 74 that begins at May Street and travels to the northeast is classified as being of a *District Highway.* Although Heppner may designate state highways as arterial roadways within its TSP, the access management categories for these facilities should generally follow the guidelines of the Oregon Highway Plan.

Impact on Local Development Activities

Future developments along Highway 207/74 and Highway 74 (zone changes, comprehensive plan amendments, redevelopment, and/or new development) will be required to meet the *1999 Oregon Highway Plan* Access Management policies and standards. Tables 9 and 9a show ODOT's access management standards for the state highways under the *1999 Oregon Highway Plan.*

Table 9: Access Management Spacing Standards for Regional Highways ① ②
(Main Street)

(Measurement is in Feet)*

Posted Speed③	Rural		Urban			
	Expressway **	Other	Expressway **	Other	UBA	STA
≥55	5280	990	2640	990		
50	5280	830	2640	830		
40 & 45	5280	750	2640	750		
30 & 35		600		600	425	④
≤25		450		450	350	④

Table 9a: Access Management Spacing Standards for District Highways ① ②
(OR 74 east of May)

(Measurement is in Feet)*

Posted Speed③	Rural		Urban			
	Expressway **	Other	Expressway **	Other	UBA	STA
≥55	5280	700	2640	700		
50	5280	550	2640	550		
40 & 45	5280	500	2640	500		
30 & 35		400		400	350	④
≤25		400		400	350	④

NOTE: The numbers in circles (③) refer to explanatory notes that follow tables.

* Measurement of the approach road spacing is from center to center on the same side of the roadway.

**Spacing for Expressway at-grade intersections only. See the current OHP for interchange spacing.

Notes on Tables 9 and 9a:

①Where a right of access exists, access will be allowed to a property at less than the designated spacing standard only if that property does not have reasonable access and the designated spacing cannot be accomplished. If possible, other options should be considered such as joint access.

Where the right of access exists, the number of approach roads (driveways) to a single property shall be limited to one, even when the property frontage exceeds the spacing standards. More than one approach road may be considered if, in the judgment of the Region Access Management Engineer, additional approach roads are necessary to accommodate and service the traffic to a property, and additional approach roads will not interfere with driver expectancy and the safety of the through traffic on the highway.

Approach roads shall be located where they do not create undue interference or hazard to the free movement of normal highway or pedestrian traffic. Locations on sharp curves, steep grades, areas

of restricted sight distance or at points which interfere with the placement and proper functioning of traffic control signs, signals, lighting or other devices that affect traffic operation will not be permitted.

If a property becomes landlocked (no reasonable access exists) because an approach road cannot be safely constructed and operated, and all other alternatives have been explored and rejected, ODOT might be required to purchase the property. (Note: If a hardship is self-inflicted, such as by partitioning or subdividing a property, ODOT does not have responsibility for purchasing the property.)

(Note ① has precedence over notes ②, ③ and ④.)

②These standards are for unsignalized access points only. Signal spacing standards supersede spacing standards for approaches.

③Posted (or Desirable) Speed: Posted speed can only be adjusted (up or down) after a speed study is conducted and that study determines the correct posted speed to be different than the current posted speed. In cases where actual speeds are suspected to be much higher than posted speeds, ODOT reserves the right to adjust the access spacing accordingly. A determination can be made to go to longer spacing standards as appropriate for a higher speed. A speed study will need to be conducted to determine the correct speed.

④Minimum spacing for public road approaches is either the existing city block spacing or the city block spacing as identified in the local comprehensive plan. Public road connections are preferred over private driveways, and in STAs driveways are discouraged. However, where driveways are allowed and where land use patterns permit, the minimum spacing for driveways is 175 feet (55 meters) or mid-block if the current city block spacing is less than 350 feet (110 meters).

In addition to the access standards shown above, according to the *1999 Oregon Highway Plan*, the impact of traffic generation from proposed land uses must maintain acceptable mobility measures within the development's influence area along the highway. Along District Highway segments, the volume to capacity ratio (v/c) must not exceed 0.80 when assessing the impact in traffic generation from proposed land uses. Regional Highway segments must maintain v/c ratio less than 0.85. The influence area is defined as the area in which the average daily traffic is increased by 10 percent or more by a single development, or 500 feet in each direction from the property-line of the development (whichever is greater).

The existing legal driveway connections, public street intersection spacing, and other accesses to the state highway system are not required to meet the spacing standards of the assigned category immediately upon adoption of this transportation system plan. However, existing permitted connections not conforming to the design goals and objectives of the roadway classification will be upgraded as circumstances permit and during redevelopment. At any time, an approach road may need to be modified due to a safety problem or a capacity issue that exists or becomes apparent. By statute, ODOT is required to ensure that all safety and capacity issues are addressed. Proposed land use actions that do not comply with the designated access spacing policy will be required to apply for an access variance from the City of Heppner and/or ODOT.

Variance Process

Access variances may be provided to parcels whose highway frontage, topography, or location would otherwise preclude issuance of a conforming permit and would either have no reasonable access or cannot obtain reasonable alternate access to the public road system. In such a situation, a conditional access permit may be issued by ODOT and the City of Heppner for a single connection to a property that cannot be accessed in a manner that is consistent with the spacing standards.

The permit may carry a condition that the access may be closed at such time that reasonable access becomes available to a local public street. Approval conditions might also require a given land owner to work in cooperation with adjacent land owners to provide either joint access points, front and rear cross-

over easements, or a rear-access upon future redevelopment. In addition, approval of a conditional permit might require ODOT-approved turning movement design standards to ensure safety and managed access. Under special circumstances, ODOT may be required to purchase property in order to prevent safety conflicts.

Special Transportation Area

Within the *Oregon Highway Plan*, provisions have been made to accommodate central business districts and other activity centers oriented to non-auto travel in which growth management considerations outweigh access spacing policy. Specifically, the *Oregon Highway Plan* allows for the designation of Special Transportation Areas (STA) and Urban Business Areas (UBA) for compact areas in which local access needs are equally important or more important than the movement of through traffic. Inclusion in an STA or UBA allows for redevelopment with exception to the access management standards. STAs can include central business districts, however, they do not apply to whole cities or strip development areas where the UBA designation is more appropriate.

The *Heppner Downtown Development Plan (2003) recommends* designating the portion of Main Street from Church Street to May Street and the portion of Hwy 74 along May from Main Street to the Willow Creek bridge as an STA. In addition, the portion of Main Street from Church Street to Riverside Avenue is designated as a UBA. This is the first step in the process pursuing STA and UBA designation agreements with ODOT.

City Standards

Table 10 identifies the minimum public street intersection and private access spacing standards for the City of Heppner roadway network as they relate to new development and redevelopment. Table 11 identifies standards for private access driveway widths. In cases where physical constraints or unique site characteristics limit the ability for the access spacing standards listed in Tables 10 and 11 to be met, the City of Heppner should retain the right to grant an access spacing variance. County facilities within the city's urban growth boundary should be planned and constructed in accordance with these street design standards.

TABLE 10
MINIMUM INTERSECTION SPACING STANDARDS

Functional Classification	Public Street (feet)	Private Access Drive (feet)
Arterial	600	300 - 500
Collector	300	75
Local	150	15

TABLE 11
PRIVATE ACCESS DRIVEWAY WIDTH STANDARDS

Land Use	Minimum (feet)	Maximum (feet)
Single Family Residential	12	24
Multi-Family Residential	24	30
Commercial	30	40
Industrial	30	40

Management Techniques

From an operational perspective, the City of Heppner should consider implementing access management measures to limit the number of redundant access points along roadways. This will enhance roadway capacity and benefit circulation. Improvements that should be considered include:

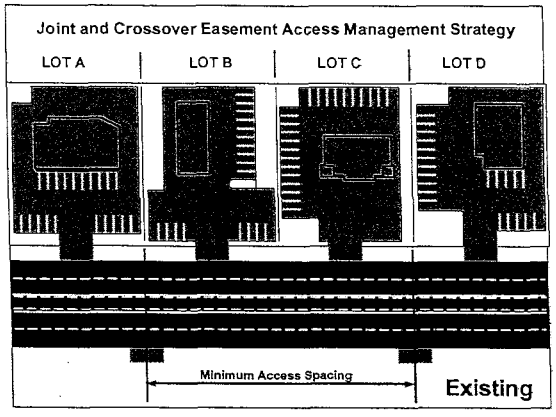
- planning for and developing intersection improvement programs in order to regularly monitor intersection operations and safety problems;
- purchasing right-of-way and closing driveways; and
- installing positive channelization and driveway access controls as necessary.

Enforcement of the access spacing standards should be complemented with the availability of alternative access points. Purchasing right-of-way and closing driveways without a parallel road system and/or other local access could seriously effect the viability of the impacted properties. Thus, if an access management approach is taken, alternative access should be developed prior to "land-locking" a given property.

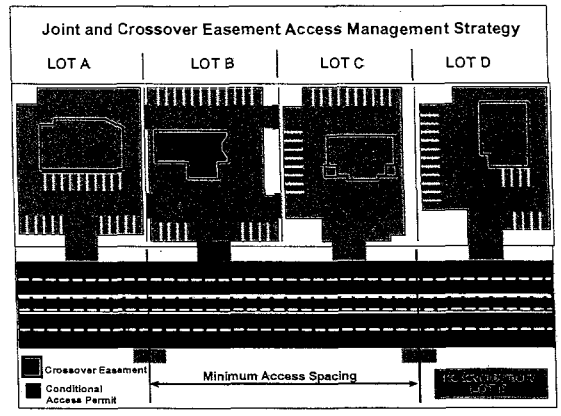
As part of every land use action, the City of Heppner should evaluate the potential need for conditioning a given development proposal with the following items, in order to maintain and/or improve traffic operations and safety along the arterial and collector roadways.

- Crossover easements should be provided on all compatible parcels (considering topography, access, and land use) to facilitate future access between adjoining parcels. Figure 15 illustrates how this process would, in the long run, facilitate compliance with access management objectives.
- Conditional access permits should be issued to developments having proposed access points that do not meet the designated access spacing policy and/or have the ability to align with opposing driveways. The actual access spacing policy will be developed later as part of the TSP process.
- Right-of-way dedications should be provided to facilitate the future planned roadway system in the vicinity of proposed developments.

Proposed Access Management Strategy



Step 1



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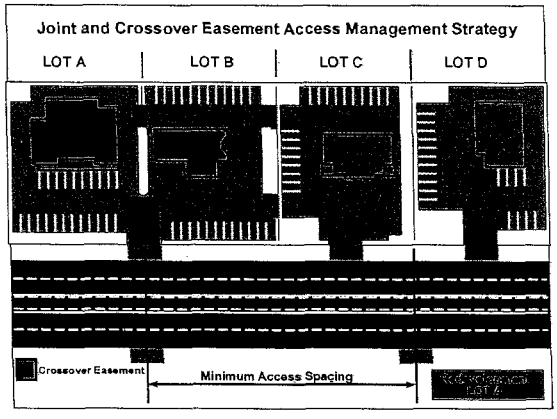

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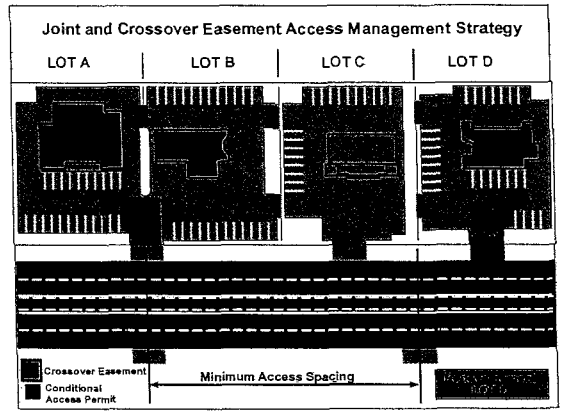

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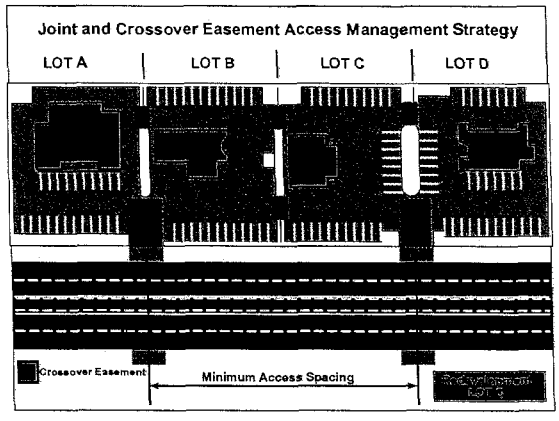

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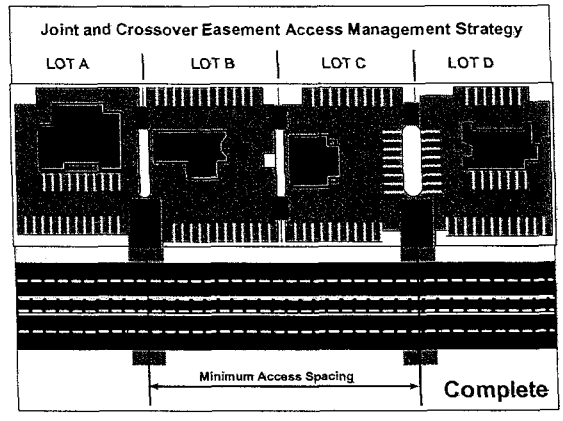


Step 6

EXAMPLE OF CROSS-OVER EASEMENTS AND CONDITIONAL ACCESS POLICY/PROCESS

CITY OF HEPPNER, OREGON TRANSPORTATION SYSTEM PLAN JUNE 1999	FIGURE 15

DWGS\HEPPNER\TSP\2899H015.CDR

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

As suggested by Figure 15, using these guidelines, all driveways and roadways along the highway will eventually comply with the access spacing policy set for a particular segment of roadway as development and redevelopment occurs in the study area. It should be noted that not every parcel can or should be addressed through the process illustrated in Figure 15. The topography of the parcel, type of proposed or adjoining use, and/or highway frontage may preclude a development from using consolidated or crossover access points (e.g., consolidating access for a commercial business and an industrial or agricultural land use would be inappropriate).

Section 7, **Policies and Land Use Ordinance Modifications**, contains suggested code language that could be adopted to implement the access spacing standards. Development review guidelines are also included for the city's use.

PEDESTRIAN AND BICYCLE SYSTEM PLAN

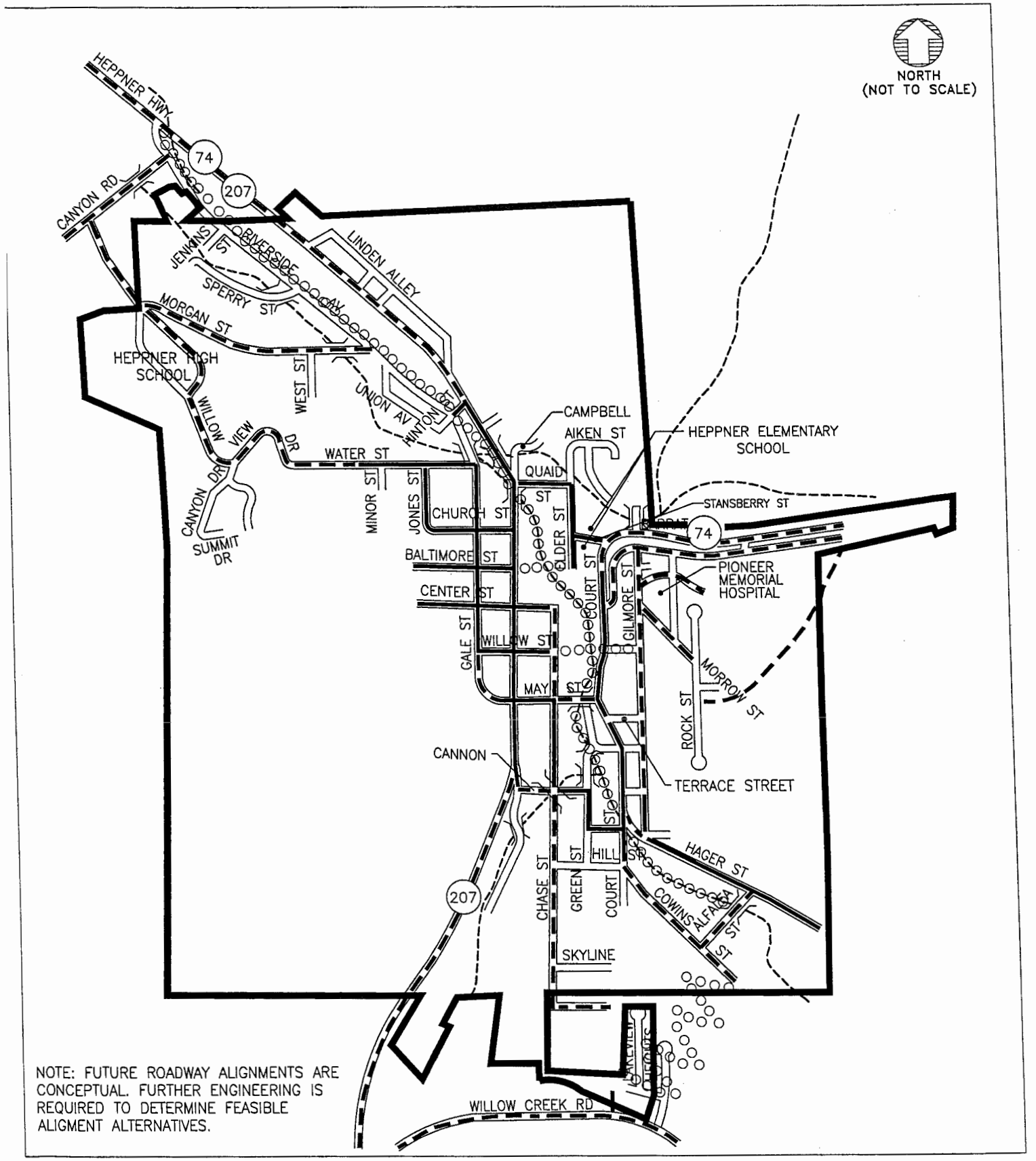
The pedestrian and bicycle system plan is shown in Figures 16 and 17. The key objective in the development of the pedestrian and bicycle system plan was to provide connectivity between major activity centers. Within the City of Heppner, these activity centers primarily include the downtown, Heppner Junior-Senior High School, Heppner Elementary School, Pioneer Memorial Hospital, the parks, post office, the community swimming pool on the highway, and other recreational areas.

Pedestrian System Components

Under the pedestrian component of the plan, sidewalks should be provided along all major roadways in an effort to continue the development of a comprehensive sidewalk system throughout the city. It is essential that existing sidewalks be connected to new sidewalks as new developments are constructed or as road improvements are made. Sidewalks should be included in any full reconstruction of arterials or collectors. The street design standards (refer to Figure 14) would ensure that pedestrian facilities are provided in conjunction with all new or substantially reconstructed collectors and arterials. Provision of sidewalks along one or both sides of key local roads is also encouraged.

Key elements of the pedestrian plan include:

- the provision of a continuous sidewalk network in the vicinity of the Pioneer Memorial Hospital, the adjacent multi-family and single-family developments and the elementary school in the southeast part of town;
- sidewalks along Quaid Street, Elder Street, and Stansberry Street to provide better pedestrian access to the elementary school from the downtown and the west part of Heppner;
- sidewalks on the streets that access Heppner Junior-Senior High School, including Willow View/Water Street and Morgan Street (provision of sidewalks on these streets will require reconstruction of the roadway; the existing roadways are narrow with no pedestrian or bicycle facilities and are adjacent to an embankment);
- provision of sidewalks along Cowins Street and Chase Street to link the residential areas in the hills at the south end of the community with the downtown;



NOTE: FUTURE ROADWAY ALIGNMENTS ARE CONCEPTUAL. FURTHER ENGINEERING IS REQUIRED TO DETERMINE FEASIBLE ALIGMENT ALTERNATIVES.

LEGEND

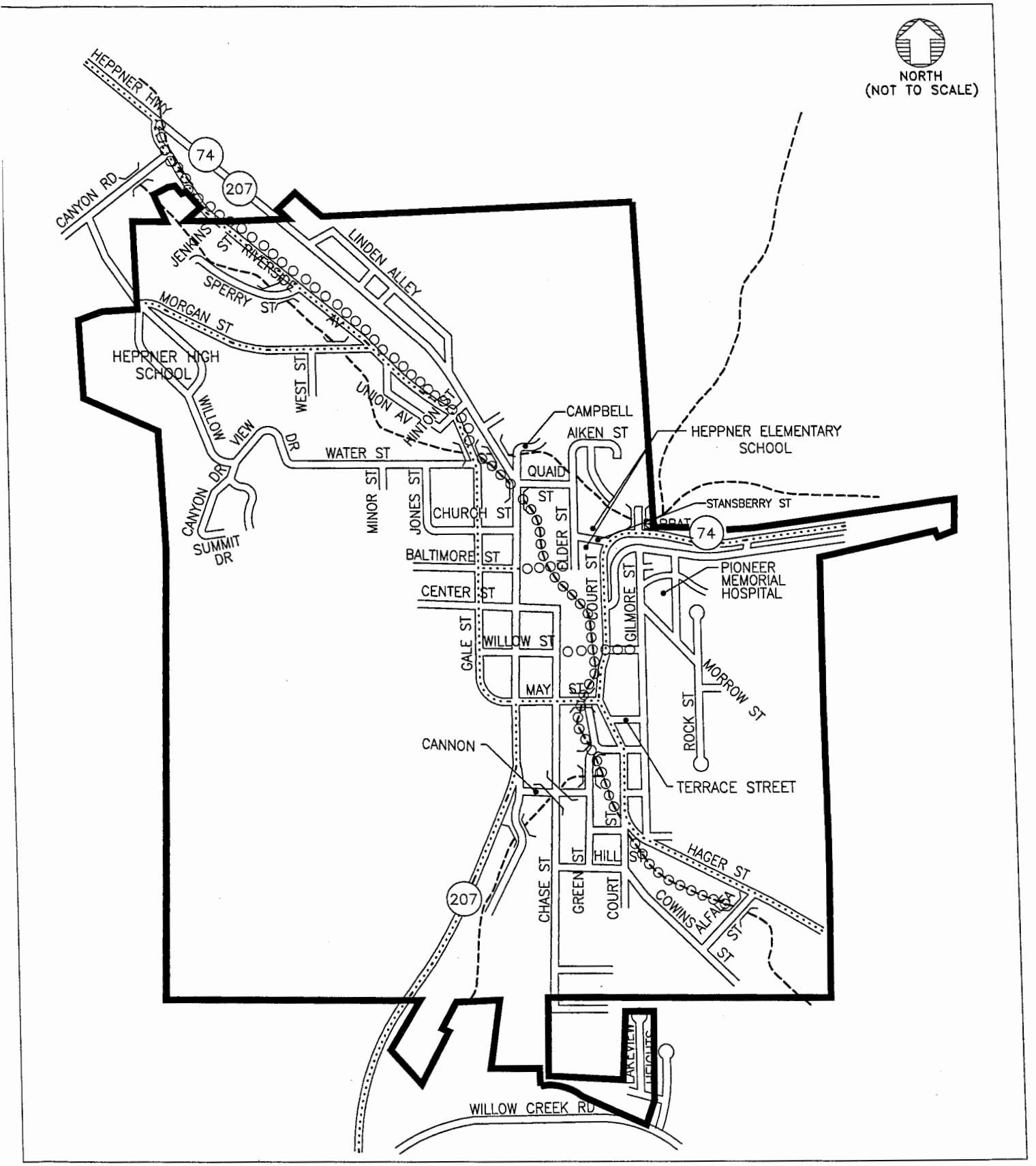
- EXISTING SIDEWALK
- FUTURE SIDEWALK
- FUTURE MULTI-USE PATH
- CITY LIMITS
- CREEK

PEDESTRIAN SYSTEM PLAN

CITY OF HEPPNER, OREGON
TRANSPORTATION SYSTEM PLAN
JUNE 1999

FIGURE 16

DWGS\HEPPNER\TSP\2899H016



LEGEND

- FUTURE BIKE LANE
- FUTURE MULTI-USE PATH
- CITY LIMITS
- CREEK

BICYCLE SYSTEM PLAN

CITY OF HEPPNER, OREGON
TRANSPORTATION SYSTEM PLAN
JUNE 1999

FIGURE 17

DWGS\HEPPNER\MEMO4\2899\TSP\2899H017

- provision of sidewalks along the entire length of Highway 207/74 and Highway 74 to Barrat Street. From Barrat Street north the side walk should be on the west and north side of Hwy 74.
- provision of sidewalks along Chase Street to complete the pedestrian network in the downtown; and,
- provision of appropriate sidewalk and/or multi-use trails both to and within all new development in the city.

In addition to providing the pedestrian system components, there are several other potential enhancements that were previously recommended and should be provided along the highways including:

- provision of additional street lighting to provide clear visibility of pedestrians at night,
- limited use of curb extensions that provide for ADA crossings and the existing on-street parallel parking while reducing the exposed crossing distance pedestrians must walk, and

Multi-Use Facilities

There are currently the beginnings of a multi-use path along Willow Creek in the downtown. In the future, the path should be improved between Hagar Park and the golf course at the south end of town. The cross sections of the multi-use pathways would consist of 10-foot wide paved paths separated from the roadway by a minimum of 10-feet (this can be accomplished through the use of a 10-foot wide landscaping strip). The existing pedestrian bridges across the creek should also be maintained at Willow Street and Baltimore Street.

In addition, equestrian facilities should be provided within the city. These facilities should provide safe convenient access to the fair grounds as well as access to the downtown area and potential future trails. Provision of appropriate services along the equestrian facilities (e.g., watering stations, loading/unloading points for horse trailers, sanitary maintenance, etc.) could also be considered in conjunction with development of the system.

Bicycle Facilities

In addition to the multi-use pathways and sidewalks, designated on-street bicycle facilities would be provided along portions of Highway 207/74, Highway 74, and Riverside Avenue as shown in Figure 17. The designated on-street bike lanes, in conjunction with the multi-use paths along the creek, provide for essential connections into and out of town. Additional bicycle routes within the city's collector and local-level street system are not considered to warrant roadway treatments and are proposed to remain as undesignated shared facilities.

Table 12 provides a summary of pedestrian and bicycle system projects.

TABLE 12
PEDESTRIAN AND BICYCLE SYSTEM IMPROVEMENTS

General Alignment	Project Start/End Point	Improvement Description	Estimated Cost*	Responsible Jurisdiction
Highway 74/207	Riverside Avenue to Hinton Street	Sidewalk	$40,000	ODOT
Riverside Avenue	Highway 74/207 to Water Street	Sidewalk	$54,000	City
Canyon Road	Riverside Avenue to Willow View Street	Sidewalk	$16,000	City
Willow View Street	Canyon Road to View Drive	Sidewalk	$32,000	City
Morgan Street	Willow View Street to Riverside Avenue	Sidewalk	$40,000	City
View Drive	Willow Street to Minor Street	Sidewalk	$20,000	City
Quaid Street	Highway 74/207 to Elder Street	Sidewalk	$6,000	City
Stream Path	Riverside Avenue to Alfalfa Street	Multi-use Path	$25,000	City
Elder Street	Quaid Street to southern terminus	Sidewalk	$10,000	City
Highway 74	Stansberry Street to Eastern UGB (Northwest side of road only)	Sidewalk	$36,000	ODOT
Gilmore Street	Hager Street to northern terminus	Sidewalk	$32,000	City
Morrow Street	Gilmore Street to Rock Street	Sidewalk	$8,000	City
Hager Street	Court Street to Alfalfa Street	Sidewalk	$16,000	City
Cowins Street	Court Street to Alfalfa Street	Sidewalk	$12,000	City
Alfalfa Street	Cowins Street to Hager Street	Sidewalk	$8,000	City
Chase Street	Center Street to southern terminus	Sidewalk	$40,000	City
Highway 207	Cannon Street to Willow Creek Road	Sidewalk	$52,000	ODOT
Baltimore Street	Main Street to Elder Street	Multi-use Path	$27,000	City
Baltimore Street	Main Street to Gail Street	Sidewalk Repair	$4,500	City
Gale Street	May Street to Willow Street	Sidewalk	$3,000	City
May Street	Main Street to Gale Street	Sidewalk	$3,800	City
Willow Street	Chase Street to Gilmore Street	Sidewalk	$30,000	City
Cannon Street	Highway 207 to Green Street	Sidewalk	$8,000	City
Church Street	Main Street to Gale Street	Elevate Sidewalk	$4,000	City
Church Street	Main Street to Gale Street	Elevate Sidewalk	$4,000	City
Gale Street	Hinton to May Streets	Bicycle Path	Signage cost	City
Riverside Ave.	Riverside to Hinton	Bicycle Path	Included with Street Work	State or City
Pedestrian Way	Gilmore St. to Court Street	Bicycle/Ped Path	$19,000	City

*Estimated costs are in 2002 dollars and do not include right-of-way acquisition

Many of the sidewalk and multi-use facilities presented in Table 12 could be completed incrementally as part of local development projects. Creating "partnership programs" with landowners and businesses to construct such facilities would be one method by which individual projects could be brought to fruition in a timely manner. The pedestrian facilities could be constructed as adjacent properties develop, thereby ensuring alternative modes of access to various land uses. The city would however, need to develop a reasonably equitable methodology of assessing the extent of facilities that individual developers would be required to provide.

PUBLIC TRANSPORTATION SYSTEM PLAN

Transit service provides mobility to community residents who do not have access to automobiles and provides an alternative to driving for those who do. Transit service should meet the needs both of travelers within the city and those of travelers making trips outside of the community.

The *1997 Oregon Public Transportation Plan* identifies minimum level of service standards for rural and frontier communities such as the City of Heppner (Reference 4). Under the *1997 Oregon Public Transportation Plan*, public transportation in small communities and rural areas in the year 2015 (under Level 3-Respond to State and Federal Mandates and Goals) should:

- Provide public transportation service to the general public based on locally established service and funding priorities;
- Provide an accessible ride to anyone requesting service;
- Provide a coordinated centralized scheduling system in each county and at the state level;
- Provide phone access to the scheduling system at least 40 hours weekly between Monday and Friday; and
- Respond to service requests within 24 hours (not necessarily provide a ride within 24 hours).

Service Enhancements

Overall, the City of Heppner should continue to monitor the adequacy of the transit service provided to the community and work with the county to extend service as necessary. The local transit program should also seek to meet the 2015 minimum level of service standards identified in the *1997 Oregon Public Transportation Plan*. Three improvement strategies are identified below for further consideration.

Increase Public Awareness

Both the city and the county should promote a greater public awareness of the available public transit services and the need for additional volunteer dispatchers and drivers. Greater awareness of the service and its needs will likely result in increased usage and availability. Provision of better recognition for drivers and/or driver meetings would be an additional avenue by which to encourage more volunteer participation in the program.

Coordinate Trips

Secondly, consideration should be given to coordinating trip requests to other neighboring communities and areas outside the county such as Hermiston and Pendleton. For example, a given day of the week could be designated for trips to Pendleton. This would then allow the city's residents to visit specialized medical service providers or satisfy other needs on a scheduled basis. Similarly, weekly shopping trips to Boardman, Hermiston, or other communities could be established to allow community members to purchase commodities not available through local commercial and service providers.

A recent survey conducted by transportation provider staff suggests that coordination of medical visits could be difficult due to the unpredictable nature of office visits, though the need for such a service should be more closely examined. Assuming that the demand for such a service exists, a scheduled weekly service would lend itself to greater coordination with service providers in the neighboring communities of Lexington and Ione.

Close coordination between the City of Heppner and adjacent communities is also encouraged and should increase ridership and efficiency through better use of the resources available. Such coordination could prove to be especially fruitful if the weekly trips previously discussed are established as a joint community service. Coordinated trips to local community events would likely generate significant interest. Ultimately, if an increased demand for service can be established and documented, additional resources (i.e. funding, equipment) may be successfully pursued through grant applications or other alternative financing sources.

Provide Commuter Service

It is recommended that a carpool or vanpool service be provided for people who live in Heppner and work in neighboring communities. Provision of a vanpool and/or carpools to major employers in the area could help to reduce the number of single occupant vehicle commute trips from Heppner and help the community to achieve transportation demand management (TDM) objectives.

Transit Needs Analysis

A Transit needs analysis should occur to determine when and where people are commuting and if they are willing and able to ride share. Based on the findings of the survey, a ride share bus or van could provide transit to employment out of the area. The van could be used for mid day transportation of elderly and disabled for medical appointments or out of the area shopping needs.

Vehicle Replacement

The Morrow County Special Transportation Program replaces vehicles on an as-needed basis. No specific plans to replace the current vehicles in use in the City of Heppner are in place. The county has budgeted to replace one vehicle in 1999 though that will not necessarily affect the vehicles in Heppner. The county is pursuing additional funding for vehicles and has, through the Region 5 Public Transit Division, submitted a grant application that would allow the program to purchase a new modified van in 2001 and a small bus in 2003. In addition, a new bus barn would be built somewhere in the county if the grant were to be approved. The City of Heppner should support the Morrow County Special Transportation Program in its pursuit of additional vehicles and funding.

MARINE SYSTEM PLAN

The city should support the continued use of port facilities in neighboring communities such as the City of Boardman (Port of Morrow) and the City of Umatilla (Port of Umatilla).

AIR TRANSPORTATION SYSTEM PLAN

The City of Heppner should support the continued use and expansion of local and regional air transportation facilities.

EVACUATION PLAN

The Morrow County Planning Department, in conjunction with several local and state agencies, has developed response plans in the unlikely event of an incident at the Umatilla Ordinance Depot. According

to county officials, in the event of an incident at the ordinance depot, persons in the area surrounding the Ordinance Depot may be instructed to travel to a safe destination, potentially involving reception areas that have been designated in the Dalles, Heppner, and Pendleton.

IMPLEMENTATION PLAN

This section has outlined specific transportation system improvement projects as well as a corresponding timeline for implementation of the identified improvements. The sequencing plan presented is not detailed to the point of a schedule identifying specific years when infrastructure should be constructed, but rather ranks projects to be developed over 0 to 5 year, 5 to 10 year, and 10 to 20 year horizon periods. In this manner, the implementation of identified system improvements has been staged to spread investment in this infrastructure over the 20-year life of the plan.

The construction of roads, water, sewer, and electrical facilities in conjunction with local development activity should be coordinated if the City of Heppner is to develop in an orderly and efficient way. Consequently, the plans proposed in the TSP should be considered in light of developing infrastructure sequencing plans, and may need to be modified accordingly.

SUMMARY

The adoption and implementation of this Transportation System Plan will enable the City of Heppner to rectify existing transportation system deficiencies while also facilitating growth in the study area population and employment levels assumed in this study.

Section 6

Transportation Funding Plan

Transportation Funding Plan

INTRODUCTION

The Transportation Planning Rule (OAR 660-12-040) requires that the City of Heppner Transportation System Plan (TSP) include a transportation financing program. These programs are to include:

- a list of planned transportation facilities and major improvements;
- a general estimate of the timing for planned transportation facilities and major improvements;
- determination of rough cost estimates for the transportation facilities and major investments identified in the TSP (intended to provide an estimate of the fiscal requirements to support the land uses in the acknowledged comprehensive plan(s) and allow jurisdictions to assess the adequacy of existing and possible alternative funding mechanisms); and,
- a discussion of existing and potential financing sources to fund the development of each transportation facility and major improvement (which can be described in terms of general guidelines or local policies).

Section 5 of this TSP identified the recommended improvement projects, an implementation timeline, and estimated improvement costs. This section provides an overview of the City of Heppner's historic funding levels and available funding sources at a federal, state, county, and local level.

The timing and financing provisions in the transportation financing program are not considered a land use decision as defined by the TPR and ORS 197.712(2)(e) and, therefore, cannot be the basis of appeal under State law. In addition, the transportation financing program is intended to implement the comprehensive plan policies, which provide for phasing of major improvements to encourage infill and redevelopment of urban lands, prior to facilities that would cause premature development of urbanizable areas or conversion of rural lands to urban uses.

CITY OF HEPPNER FUNDING HISTORY

Street Fund

The 1998-1999 Street Fund for the City of Heppner provided a budget of $93,322.00 that was dedicated entirely to the operation and maintenance of the city's transportation facilities. The Street Fund is derived from two primary sources, the state gasoline tax and the county road tax. Of the total resources available to the Fiscal Year 1998-1999 Street Fund, 70.7 percent were derived from the state gasoline tax (This revenue sharing is based on population and distributed on a proportional share basis to all cities and counties.), 18.5 percent were from the county road tax, 9.6 percent were previously in the fund, 0.3 percent were realized through investment income, and 0.9 percent originated from other sources. Some of this funding was transferred to a Debt Service Fund for principle and interest payments for the 1994 Street Improvement Bond.

From a historical perspective, the street fund has recently been in a decline as shown in the summary below.

City of Heppner Street Fund
Historical Annual Funding

Year	Budget
1995-1996	$112,113
1996-1997	$105,686
1997-1998	$104,011
1998-1999	$93,332

Street and Bridges Improvement Fund

The City of Heppner's Street and Bridges Improvement Fund is intended to provide the budgetary authority to improve the city's streets and bridges and included a $191,023.00 outlay for the 1998-1999 fiscal year. The stated Fiscal Year 1998-1999 objective of the fund was to provide the budgetary authority to administer the 1998 Riverside/Linden Way/North Court Street Sidewalk Project and to close out the remaining financial obligations related to a Main and May Street Improvement Program that was completed in 1997. The Fiscal Year 1998-1999 Street and Bridges Improvement Fund was composed of funding from three sources: the fund had a beginning balance that equated to 67.6 percent of the fund, grant money comprised 32.1 percent of the fund, and investment income provided the remaining 0.3 percent of the fund.

Finances for the fund are obtained through the state gas tax, investment interest, the county road tax, and grants. The Streets and Bridges Improvement Fund is currently being used by the city primarily as a tool to repay loans for improvement projects that have been completed. As evidenced by the summary below, the amount of money in the fund has been growing over the last few years, though primarily because of a loan that was obtained for an improvement project and because relatively large sums of money have been carried-over to finance major improvement projects.

City of Heppner Streets and Bridges Fund
Historical Annual Funding

Year	Budget	Carry-over
1995-1996	$83,909	—
1996-1997	$135,928	$12,530 $55,000 loan
1997-1998	$169,640	$129,123
1998-1999	$191,023	—

Footpaths and Bikeways Reserve Account

The City of Heppner also maintains a Footpaths and Bikeways Reserve account. The fiscal year 1998-1999 adopted budget for this account resulted in an account balance of $2,206.00 after a $700.00 transfer from the Street Fund. This account is also invested and thus receives some funding through interest generated on the principle.

OREGON TRANSPORTATION FUNDING HISTORY

Road-Related Funding

The most significant portion of Oregon's highway user taxes and fees come from federal fuel and vehicle taxes, state taxes, and general motor vehicle fees. These categories account for 32 percent, 34 percent, and 25 percent, respectively, of all highway user taxes and fees collected in the State. Through the fiscal year 1996, the matching ratio in Oregon for Interstate Funds was: Federal 92.22 percent and State 7.78 percent (Reference 5).

During the 1980's, Oregon's transportation budget was bolstered by a series of two-cent annual gas tax increases. At the same time, the Federal Government was increasing investment in highways and public transportation. The situation is different today. The last three Oregon Legislatures failed to increase the gas tax and federal budget cuts are reducing transportation funding available to Oregon. The State Highway Fund is further losing buying power because the gas tax is not indexed to inflation, and increased fuel efficiency of vehicles reduces overall consumption. Nevertheless, fuel taxes are the largest single source of highway revenues at approximately $390 million annually (Reference 5). Weight-miles taxes are the second largest source of revenue to the Highway Fund, at approximately $215 million annually (Reference 5).

Oregon Highway Trust Fund revenues are distributed among State (60.05 percent), County (24.38 percent) and City (15.57 percent) governments to fund their priority road needs. Under the 1997-1999 legislatively adopted Department of Transportation budget, a total of $2,284 million revenue dollars was identified. Of the total available revenue, approximately $317 million dollars was allocated to counties and $185 million to cities (Reference 6).

Oregon law allows local government, in addition to receiving state highway trust fund revenues, to levy local fuel taxes for street related improvements. Multnomah and Washington Counties, and some small cities (Tillamook, The Dalles, Woodburn) have used this authorization. Several attempts have been made by other jurisdictions, but have not been supported by the local electorate. As few local governments have implemented this option, non-user road revenues tend to be relied upon to supplement the funds received from state and federal user revenues. Other local funding sources have included property tax levies, local improvement district assessments, bonds, traffic impact fees, road user taxes, general fund transfers, receipts from other local governments, and other miscellaneous sources.

Oregon's current fee for cars and other light vehicles weighing 8,000 pounds or less is $30 biennially (Reference 5). Oregon law permits local governments (counties) and governmental entities to impose local option vehicle registration fees. To date, no county has implemented this tax.

Cities in Oregon have relied more on transfers from their general funds to support roadway improvements, than have counties. Ballot Measure 5, however, approved by the voters in 1990, reduced the range of funding and financing options available to both cities and counties. Measure 5 limited the property tax rate for purposes other than for payment of certain general obligation indebtedness to $15 per $1,000 of assessed value. The measure further divided the $15 per $1,000 property tax authority into two components: $5 per $1,000 dedicated to the public schools; the remaining $10 dedicated to other local government units, including cities, counties, special service districts, and other non-school entities. The tax rate limitation for cities and counties went into effect in July 1991. The school portion of the measure was phased in over a five-year period beginning in July 1991.

In 1996, voters again approved a property tax limitation measure, Ballot Measure 47, which further impacted the ability of cities and counties to pay for needed infrastructure through historic or traditional means. Ballot Measure 50 was then approved by Oregon voters in May of 1997 and, through

implementing legislation, became law in July 1997. Ballot Measure 50 repealed Measure 47 and made efficiency changes to Measure 5. Measure 50 limits taxes on each property by rolling back the 1997-1998 assessed value of each property to 90 percent of its 1995-1996 value. Measure 50 also limits future growth on taxable value to three percent per year, with exceptions for new items such as new construction, remodeling, subdivisions, and rezoning. Permanent tax rates for Oregon's local taxing districts are also established in Measure 50 that replace the former tax base amounts of the district. Measure 50 allows voters to approve new short-term levies outside the permanent rate limit if approved by a double majority.

At the same time that increased growth and increased transportation demands are occurring, cities and counties have lost another traditional source of revenue for infrastructure construction and modernization - timber harvest receipts. Under a 1993 negotiated mitigation plan, federal forest receipts to support county roads are decreasing 3 percent per year. In 1996, counties received 74 percent of their 1986-90 average receipts, and by 2003 they will receive 55 percent of the late 1980s average receipts.

Given this funding environment, current funding levels and sources are not adequate to meet the transportation needs of the State, counties, or cities, for the next 20 years. In response to this gap between needs and funding, Governor Kitzhaber organized the Oregon Transportation Initiative to look at statewide transportation needs and to develop a program to address how these needs will be met. Through a public process led by business and civic leaders across the State, findings and recommendations on the state of transportation needs and methods to address those needs was submitted to the Governor in July 1996.

A result of these recommendations was the appointment of a committee to develop a legislative proposal to the 1997 Legislature regarding transportation funding. Part of that proposal included a process for identifying a "base" transportation system, with a priority of maintenance, preservation, and operation of a system of transportation facilities and services that ensures every Oregonian a basic level of mobility within and between communities. Other components included provisions for realizing efficiencies resulting from better intergovernmental cooperation (shared resources and equipment, better communication on project needs and definition), and elimination of legislative barriers to more efficient and cost-effective methods of providing transportation services. The State Legislature was unable to reach consensus on the means to collect and distribute the funds and the package failed.

A part of future transportation funding will include identification of relationships and responsibilities relative to delivery of projects and services. In Oregon, the primary state role has been to construct and maintain the state highway system and to assist local government with funding of other modes. The State also has a role in intercity passenger services and airports. This has historically been minor but would grow significantly, if serious efforts were put into intercity transportation improvements. Local governments provide local transit and airport support, in addition to providing maintenance, preservation, and construction for local roads, streets, and bridges. The Federal Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA) began moving decision-making for federal programs to states and this program and other state policies incorporated in the Oregon Transportation Plan (OTP) encourage reassessment of responsibilities and obligations for funding. The Transportation Equity Act for the 21st Century (TEA21), passed in 1998, has continued the efforts first initiated by ISTEA.

These changing relationships have resulted in two significant issues for State and local governments. First, there is no clear definition of State responsibility. At one time, the State operated on an informal consensus that it should provide one-half the match on federally funded, local, and other projects that served statewide needs. No similar consensus seems to exist today. The State's responsibility for transit, airports, and other local transportation infrastructure and services is not clear. The question of regional equity is raised in considering especially high-cost project needs, such as the Bend Parkway or the

Portland area light rail program. Regional equity will probably require consideration of all modes together, because different regions may have different modal needs and financial arrangements.

Given this dynamic transportation funding environment, it is clear that local governments need to reassess traditional methods of funding projects and look creatively at ways to meet public expectations of high quality transportation services.

Transit Funding

Transit service in Oregon has evolved from private development and reliance on user fees for operating revenue, to public ownership with public subsidy for operations. No clear philosophy of the State role in providing transit services is evident and the State is discussing how it should raise revenue in support of transit. The State has used general funds, lottery funds, cigarette tax revenue, and other funds at various times to support transit service. These efforts have largely been targeted towards supplying half the required match to federal capital improvement grants. To date, the State has provided no operating funds for transit, other than the elderly and disabled program. The State role has been one of granting authority to local governments to raise locally-generated operating revenue.

While the state's role in transit funding is limited, the ODOT Public Transit Section does currently administer three public transit funding sources. These include Small City and Rural Transit Assistance (Section 18), the Special Transportation Fund (STF), and Section 16.

The Small City and Rural Transit Assistance program is a federally funded initiative that provides capital to operate and acquire vehicles for public transportation systems in cities with populations of less than 50,000 and rural areas. This assistance program is funded annually through an appropriation from the Federal Transit Administration (FTA) to each state with funds allocated to eligible providers based on a three-part formula. Fifty percent of the funds are distributed based on population, 25 percent are based on ridership, and 25 percent are based on service hours. There is a 50 percent local match requirement for operating costs and a 20 percent match for capital costs. The program stipulates that service must be marketed as "public transit": exclusive transportation services such as those limited strictly to senior citizens or employers are not eligible for funding under this program. Additional funding details, application information, and general assistance with the Small City and Rural Transit Assistance is available through ODOT's Public transit Division.

The Special Transportation Fund is intended for elderly and disabled citizens and is funded through the State cigarette tax. Funding for the purchase of vehicles and equipment for special transportation providers (i.e., servicing the elderly and disabled) is provided through a federal funding program known as Section 16.

POTENTIAL TRANSPORTATION FUNDING SOURCES

There are a variety of methods to generate revenue for transportation projects. Funding for transportation improvement projects are derived from three sources: federal, state, and local governments. Appendix E (Table E-1) provides a summary of federal, state, and local highway, bridge, sidewalk, and bicycle funding programs respectively, which have typically been used in the past. Although property tax is listed as a possible revenue source, the impacts of Ballot Measure 50 limit the opportunities for this funding source.

Appendix E (Table E-2) presents details of the revenue sources for streets, bridges, sidewalks, and bicycle facilities currently used by cities. The information is summarized by type of facility, and indicates the percent of revenue each funding source represents for all cities in Oregon, likely trends for the source,

known constitutional or other limitations, and their respective rates. The general status of each funding source is summarized in Table E-3.

Funding Program

Major expenditures for transportation improvements are anticipated in the next five years, with some moderation thereafter. The city can expect to make significant investments to improve transportation facilities for existing development and to improve collectors and arterials that serve the entire area. In future years, however, the burden for expansion of the transportation network should be borne by the development community creating the additional demand and this is reflected in the project costs/responsibilities previously summarized in Table 8.

Based on the recommended roadway improvement projects identified in Table 8, at least $150,000 of roadway improvements have been identified for completion within the next five years. Additional projects for which cost estimates could not be prepared are also anticipated. With the possible exception of the Court Street/May Street intersection improvement project and a study of circulation near the Heppner Junior-Senior High School, the City of Heppner would bear most of the financial burden for near-term improvements. ODOT's funding involvement for roadway improvements potentially would be limited to supporting the Court Street/May Street intersection improvement project, which has an estimated cost of $92,500.

Within the 20-year planning horizon, the construction of a Highway 74/Rock Street/Morrow Street roadway is also anticipated. Financing of this facility, which is estimated to cost $900,000, would likely be shared by local development and the city. It is assumed that this project will be completed as development occurs, which may or may not fall within the 20-year planning horizon.

Pedestrian and bicycle improvement projects are expected to be implemented on a gradual basis as roadways are reconstructed, development activities occur, or alternative funding becomes available through grant projects or some other financing mechanism. Sidewalk improvement projects that would likely be completed in conjunction with reconstruction of ODOT facilities total $128,000. The remaining $391,000 in identified pedestrian and bicycle improvement projects are expected to be financed either by the city or developers as appropriate. Funding programs such as the Transportation Enhancement Program provide funds for enhancing pedestrian and bicycle facilities, landscaping, and other scenic beautification that may be a source of funding for adding sidewalks, multi-use paths, and bicycle facilities. Additional funding may be available through the creation of Local Improvement Districts or through grant projects.

State Funding

ODOT operates and maintains Highway 207 and Highway 74 in the City of Heppner. State and federal funds administered through ODOT will be the primary sources of funding for improvements to these facilities. Further, most Federal funding is passed through ODOT to local jurisdictions. While improvement projects affecting ODOT facilities are documented in this TSP, the inclusion of such projects in the TSP does not obligate ODOT to finance them.

A good working relationship with ODOT Region 5 planning staff and the Region Manager will be important to ensure that major roadway improvement projects on state facilities within the city are included in ODOT's State Transportation Improvement Plan (STIP) when it is updated. The city and Morrow County should take an active role in jointly representing the transportation priorities of Heppner to ODOT during its process of formally incorporating priorities into the STIP. For its part, the City of Heppner Transportation System Plan will provide ODOT with highway-related transportation projects of importance to the city and should be used as a basis for discussion with ODOT.

Local funding participation in projects on state facilities may enable the ODOT to accelerate the priority of an improvement identified in the STIP. While not normally a requirement of project funding, local participation does demonstrate a strong commitment to ODOT and the local funds may be used to leverage state funds.

Local Funding

The City of Heppner should continue to pursue federal, state, and county transportation funds for transportation projects. Given the high level of annual expenditures needed for construction of the transportation projects identified, existing sources of transportation revenue are not expected to be adequate to meet the demand for new projects. To meet the additional funding needs, the city may wish to consider additional revenue-generating options such as systems development charges, local improvement districts, and street maintenance fees as discussed below. It should be noted that, even with increased funding, it may prove difficult to fund all of the projects identified in this TSP within the 20-year planning horizon. Accordingly, the city should review the identified improvement projects on a periodic basis to prioritize local transportation system funding such that it most appropriately reflects current and projected needs.

Transportation System Development Charge

The City of Heppner does not currently have a transportation system development charge, which would be assessed to developers. This charge could be implemented by the city, with both a "reimbursement fee" and an "improvement fee" element built into its structure. The reimbursement fee places a value on the amount of capacity on an existing street that is utilized by new site development traffic. The improvement fee is an assessment for the added traffic impact associated with new development that triggers new roadway improvements. As a follow up to the Heppner TSP study, it is recommended that the city undertake a study to consider the appropriateness of a transportation SDC structure that would further facilitate the development of a multi-modal charge where funds could be spent on pedestrian, bicycle, transit improvements, and street improvements. The study should determine the feasibility of implementing SDC fees, particularly with respect to evaluating equitability with neighboring cities both in economic and political terms.

Local Improvement Districts

Local improvement districts could be formed to improve currently substandard and unimproved roads. These projects may or may not be fully completed within the 20-year planning horizon.

Street Maintenance Fee

The City of Heppner could investigate local adoption of a street maintenance fee to raise revenues to be dedicated toward street rehabilitation projects. These revenues could also be used to supplement the current State Highway Fund (State gas tax and vehicle registration fees) revenues already used for on-going maintenance.

Additional Considerations

There are important limitations that should be considered with respect to additional funding options. For example, the dollar amount of SDCs that can be assessed must meet legal requirements for establishing SDCs. Also, the success of any funding plan will be reliant on the approval of the community. Accordingly, the involvement of citizens of the community in developing and implementing a funding package is essential.

SUMMARY

Transportation funding resources available to the City of Heppner and ODOT are limited. It is expected that, for the foreseeable future, those funding sources that are available will predominantly be applied to

maintenance and preservation of the existing transportation system. As additional funding becomes available, the list of transportation improvement projects identified in this TSP should used to select projects for implementation. In the interim, the City of Heppner should consider developing alternative transportation funding sources such as System Development Charges, Local Improvement Districts, or Street Maintenance Fees as a mechanism by which to finance improvements to the city's transportation system.

Section 7

Policies and Land Use Ordinance Modifications

Policies and Land Use Ordinance Modifications

This section is provided under separate cover in the document "Downtown Development Plan, City of Heppner, Oregon", Section VII. Code Ordinances. A summary of the proposed ordinance and and policy revisions is as follows:

Ordinance to Adopt the Downtown Development Plan-

The purpose of the Downtown Development Plan is to serve as guide for community improvements over a twenty-year period. The plan integrates Heppner's Transportation System Plan with the City's overall planning efforts which are to:

- Preserve and enhance the historic downtown character
- Enhance connections between the downtown and the remainder of the city
- Plan and locate city amenities

Plan features include transportation improvements such as:

- Gateway enhancements along Highway 207/74 with streetscape improvements,
- Reconstruction of Riverside Avenue and construction of a multiuse path within its right of way,
- Pedestrian improvements at the Gale Street Bridge,
- Improvements to Water Street to insure all-weather access to the hill top west of the city,
- Proposed street connections on the east and west sides of the city,
- Intersection improvements on Heppner Highway at Quaid Street and Campbell Way,
- Sidewalk and pedestrian path construction and improvements,
- Pedestrian access way from Gilmore Street to Court Street with cross walk improvements,
- Improved crosswalks and ADA access,
- Revised Street cross-sections,
- New parking facilities for automobiles and Recreational Vehicles,
- Development of an Event Parking Plan,
- Access Management requirements,
- Street connectivity requirements,
- Right of Way improvements at the new skateboard park located at the old swimming pool.

The plan includes recommendations for zoning and subdivision code revisions and revisions to the Comprehensive Plan. The Code and Comprehensive Plan revisions are being presented for recommendation to the Planning Commission concurrently with the Development Plan.

Ordinance to Adopt the Transportation System Plan

The City of Heppner's Transportation System Plan (TSP), originally drafted in 1999 was never formally adopted by the city. The revised Transportation System Plan updates the City's list of transportation projects. Code language required for the successful implementation of the Transportation System Plan is outlined in the document and is being presented for adoption by the city concurrently with the TSP.

Projects listed in the TSP reflect the recommendations of the Downtown Development Plan and are listed below:

- Provide Supplemental Signing at the May Street/Main Street Intersection
- Restrict On-Street Parking in the Vicinity of Intersections
- Modifications to Gilmore Street
  –Acquire Sight Distance Easements at Willow Street
  –Mitigate Sight Distance Deficiency at Gilmore Street/Hager Street intersection
- Develop an Access and Circulation Plan for the Heppner Junior-Senior High School Area

  -Conduct a feasibility study of Water St improvements
- Develop Highway 74/Rock Street/Morrow Street Connection
- Provide Gateway Treatments Along Highway 207/74
- Enhance Pedestrian Crossings of Highway 207/74
- Develop Equestrian Facilities-(concurrent and Parallel to stream path where appropriate)
- Promote Access Management Along Highway 207/74
- Reduce Vehicular Reliance Through Zoning and Development Code Revisions
- Implement Transportation Demand Management Measures
  -Survey of commuters
  -Bus/Van Facility
  -Park and Ride lot
- Reconstruct Riverside Avenue and construct a multi-use path in the ROW
- Develop a north –south collector on the west side of the City
- Make North Court Street improvements from May Street to the Fair Grounds with sidewalk on west side only after the mid-block cross walk
- Main Street improvement between Cannon Street and Shobe Creek including parking and sidewalks
- Construct off-street R.V. parking
- Install directional Signage to R.V. parking areas
- Provide on-street R.V. parking designation, striping, & signage
- Develop an Event parking plan and coordinate
- Construct a Municipal Parking lot near the City pool
- Construct a Municipal Parking lot in the Downtown District

- Streetscape Improvements in the Downtown District (Benches, bike racks, sidewalks, lighting, landscape materials)
- Improve Linden Way
- Improve Bicycle and Pedestrian facility on Gale Street Bridge
- Improve intersections on Heppner Highway 207/74 at Quaid St and Campbell Way
- Install sidewalk and pedestrian path improvements throughout the City

Ordinance to Adopt revisions to Title 11 City of Heppner Zoning Code

Proposed zoning code revisions include language that will allow implementation of Transportation System Plan and will create a Downtown District to protect the historic character of downtown Heppner.

Access and transportation related terms have been added to the definitions section.

The proposed revision creates a new Downtown District composed of the commercially zoned property on the west side of Willow Creek.

A city goal is to strengthen the Downtown District as the "heart" of the community and as the logical place for people to gather and create a business center. The District is intended to support this goal through elements of design and appropriate mixed-use development. This chapter provides standards for the orderly improvement of the Downtown District based on the following principles:

- Efficient use of land and urban services;
- A mixture of land uses to encourage walking as an alternative to driving, and provide more employment and housing options;
- Downtown District provides both formal and informal community gathering places;
- A distinct storefront character identifies Downtown District.
- The Downtown District is connected to neighborhoods and other employment areas;
- Provide visitor accommodations and tourism amenities;
- Design guidelines to maintain and enhance the City's historic architecture;

Architecture Guidelines have been added to insure development in keeping with the historic building character in the Downtown District. Dimensional requirements with a zero setback are created. Pedestrian amenities are required. No parking is allowed in front of any new development.

Dimensional standards are added to the Light Industrial Zone.

A Design Standards Chapter has been added.

- It includes modified parking requirements and defines parking dimensional standards.
- Access and circulation standards are described in this section.
- Traffic Study requirements are defined.
- Street Connectivity is addressed.
- Standards for Transportation Improvements are discussed.
- Clear Vision requirements are moved to this section.
- Landscaping Requirements are defined.

A Site Plan Review chapter has been added to describe when Site Plan Review is required, to define the approval criteria, and to define the submittal requirements.

Ordinance to Adopt revisions to the Comprehensive Plan

Additions have been made to the Transportation Goal of the Comprehensive Plan that support the implementation of the Transportation System Plan. The additions also make into policy the improvement of access between areas within the city, street connectivity, and the encouragement of multi-modal transportation. Provisions encouraging the development of bicycle facilities are also included.

The establishment of a Downtown District has been added to the Urbanization Goal.

Ordinance to Adopt revisions to the Subdivision Code

The subdivision title is modified to reduce the maximum allowed length of a Cul-de-sac to two-hundred feet.

Access-way width information is added to Table 1.

Section 8

Transportation Planning Rule Compliance

Transportation Planning Rule Compliance

In April 1991, the Land Conservation and Development Commission (LCDC), with the concurrence of ODOT, adopted the Transportation Planning Rule (TPR), OAR 660 Division 12. The TPR requires local jurisdictions to prepare and adopt a Transportation System Plan (TSP) by 1997. Outlined below is a list of recommendations (designated by *italics*) and requirements for a TSP for an urban area with a population between 2,500 and 25,000, and how each of those were addressed in the City of Heppner TSP. The comparison demonstrates that the City of Heppner TSP is in compliance with the provisions of the TPR.

DEVELOPMENT OF A TRANSPORTATION SYSTEM PLAN

TPR Recommendations/Requirements	City of Heppner TSP Compliance
Public and Interagency Involvement	
• Establish Advisory Committees.	A Management Team and Technical Advisory Committee was established at the outset of the project. Membership on the Management Team included members of the City, County, and ODOT staff. Membership on the Technical Advisory Committee included representatives from all facets of the community.
• Develop informational material.	Technical memoranda and current status reports of work undertaken and completed by the advisory committee were published and made available to the public throughout the project. Informational posters were also prepared concerning the project and opportunities for participation at public workshops for use at community information centers.
• Schedule informational meetings, review meetings and public hearings throughout the planning process. Involve the community.	Three Management Team/TAC meetings were held through the planning process. The meetings were advertised by distribution of meeting notices. All TAC meetings were advertised and open to the public as part of joint City Council/Planning Commission meetings.
• Coordinate Plan with other agencies.	Coordination with the City, ODOT, and Morrow County was accomplished by including agency representatives on the project mailing list, individual project briefings/meetings, and participation on the Management Team and the TAC.

Review Existing Plans, Policies, Standards, and Laws

• *Review and evaluate existing comprehensive plan.*	The following plans were reviewed as part of the development of the TSP: *1991 Oregon Highway Plan,* (June, 1991); 1996 *Oregon Bicycle Plan*; *City of Heppner Comprehensive Plan,* (1979); Draft *Statewide Transportation Improvement Program* (2000-2003).
• *Land use analysis - existing land use/vacant lands inventory.*	An analysis was conducted of current land use designations and land status within the project area to determine the capacity for growth, which would increase demand for transportation services. Population and employment forecasts were prepared for the year 2020 that reflect regional growth prospects and the city's economic role in the region. Estimates of needed housing, commercial, and employment lands were derived from these forecasts. An inventory of vacant buildable lands within the city was also conducted by Cogan Owens Cogan. In developing the forecast of transportation needs, these growth trends were applied to existing traffic data.
• *Review existing ordinances - zoning, subdivision, engineering standards.*	Existing City Subdivision Ordinances, Zoning Ordinances, and Comprehensive Plan engineering standards were reviewed for adequacy in the development of the City of Heppner TSP.
• *Review existing significant transportation studies.*	Significant transportation studies reviewed as part of the City of Heppner TSP include the above mentioned comprehensive plans, their associated transportation elements, and the Morrow County TSP.
• *Review existing capital improvements programs/public facilities plans.*	The City of Heppner CIP, Morrow County CIP, and the State TIP were reviewed as part of City of Heppner TSP development.
• Americans with Disabilities Act requirements.	The ADA requirements were reviewed and acknowledged as part of the City of Heppner TSP development.

Inventory Existing Transportation System

• Street system (number of lanes, lane widths, traffic volumes, level of service, traffic signal location and jurisdiction, pavement conditions, structure locations and conditions, functional classification and jurisdiction, *truck routes, number and location of accesses, safety, substandard geometry*).	An inventory of the existing street network, traffic volumes, traffic control devices, accident history, and levels of service is provided in Section 2: Existing Conditions.
• Bicycle ways (type, location, width, condition, *ownership/jurisdiction*).	As noted in Section 2: Existing Conditions, there are no existing bicycle ways within the City of Heppner.
• Pedestrian ways (location, width, condition, ownership/jurisdiction).	Section 2: Existing Conditions documents the existing pedestrian ways within the City of Heppner.
• Public Transportation Services (transit ridership, volumes, route, frequency, stops, fleet, intercity bus, passenger rail, special transit services).	A summary of the existing public transportation services is presented in Section 2: Existing Conditions. Only Special Transit and Intercity Bus services exist within the City of Heppner.
• Intermodal and private connections.	A summary of the existing intermodal and private carrier transportation services is presented in Section 2: Existing Conditions.
• Air transportation.	A summary of existing air transportation facilities is provided in Section 2: Existing Conditions. No air transportation facilities are provided in the City of Heppner.
• Freight rail transportation.	As noted in Section 2: Existing Conditions, there are no freight rail transportation services within the City of Heppner.
• Water transportation.	A summary of water transportation services is provided in Section 2: Existing Conditions.
• Pipeline transportation.	A summary of pipeline transportation services is provided in Section 2: Existing Conditions.
• *Environmental constraints.*	Development of the TSP did not include the identification of environmental constraints beyond reporting local topographical constraints and the flood plain area as noted in the TSP.
• Existing population and employment.	As outlined Section 1: Introduction, the 1997 City of Heppner population was approximately 1,480 persons. This information and employment data cited in Section 3: Future Conditions Analysis, is included in Future Conditions as the basis for the forecasts that were performed for this TSP.

Determine Transportation Needs

• Forecast population and employment	Population and employment forecasts were prepared for the year 2020 that reflect regional growth prospects and City of Heppner's economic role. This information is summarized in Section 3: Future Conditions.
• Determination of transportation capacity needs (cumulative analysis, *transportation gravity model*).	Travel demand forecasts were undertaken as part of this project. The methodology for travel forecasting and assumptions used in the transportation model are contained in Section 3: Future Conditions, which presents an analysis of future transportation conditions and identifies capacity needs.
• Other roadway needs (safety, bridges, reconstruction, operation/maintenance).	Non-capacity related transportation needs are identified and recommended for implementation in Section 5: Transportation System Plan.
• Freight transportation needs.	Freight transportation needs are adequately met via motor carrier freight services.
• Public transportation needs (special transportation needs, general public transit needs).	Public transportation needs are presented in Section 5: Transportation System Plan.
• Bikeway needs. • Pedestrian needs.	Future bicycle and pedestrian improvements are to be made in conjunction with roadway improvements to provide cyclists and pedestrians with full accessibility to City of Heppner's street system. Plans for these facilities are detailed in Section 5: Transportation System Plan.

Develop and Evaluate Alternatives

• Update community goals and objectives.	Goals were established as part of the TSP development (see Section 1: Introduction).
• Establish evaluation criteria.	Evaluation criteria was established from the study goals and objectives and used to develop the Preferred Alternative presented in Section 5: Transportation System Plan.
• Develop and evaluate alternatives (no-build system, all build alternatives, transportation system management, transit alternative/feasibility, improvements/additions to roadway system, land use alternatives, combination alternatives).	Section 4: Alternatives Analysis includes a summary of the land use and transportation alternatives considered and analyzed for City of Heppner's TSP. Land uses, roadway alternatives, transportation system management options, bike and pedestrian options were analyzed.
• Select recommended alternative.	A recommended alternative for roadways, bikeways, and pedestrian facilities is contained in Section 5: Transportation System Plan.

Produce a Transportation System Plan

• Transportation goals, objectives and policies.	Specific recommendations regarding transportation goals and policies are outlined in Section 7: Policies and Land Use Ordinance Modifications.
• Streets plan element (functional street classification and design standards, proposed facility improvements, access management plan, truck plan, safety improvements).	The streets plan element is outlined in Section 5: Transportation System Plan.
• Public transportation element (transit route service, transit facilities, special transit services, intercity bus and passenger rail).	The public transportation element is outlined in Section 5: Transportation System Plan.
• Bikeway system element.	The bikeway plan is outlined in Section 5: Transportation System Plan, and shown in Figure 15.
• Pedestrian system element.	The pedestrian plan is outlined in Section 5: Transportation System Plan, and shown in Figure 15.
• Airport element (land use compatibility, future improvements, accessibility/ connections/conflicts with other modes).	The airport element is outlined in Section 5: Transportation System Plan.
• Freight rail element (terminals, safety).	There is no rail service available or anticipated to serve the City of Heppner.
• Water transportation element (terminals).	The water transportation element is outlined in Section 5: Transportation System Plan

Produce a Transportation System Plan (Continued)

• *Transportation System Management element (TSM).*	TSM element not applicable per OAR 660-12-020(2)(f) and (g).
• *Transportation Demand Management element (TDM).*	TDM element not applicable per OAR 660-12-020(2)(f) and (g).

Implementation of a Transportation System Plan

Plan Review and Coordination

• Consistent with ODOT and other applicable plans.	See Section 7: Policies and Land Use Ordinance Modifications

Adoption

• Is it adopted?	*To follow.*

Implementation

• Ordinances (facilities, services and improvements; land use or subdivision regulations).	Included in Section 7: Policies and Land Use Ordinance Modifications.
• Transportation financing/capital improvements program.	The transportation finance plan is summarized in Section 6: Transportation Funding Plan.

Section 9

References

References

1. Oregon Department of Transportation. *Oregon Highway Plan.* 1999.
2. Transportation Research Board. *Highway Capacity Manual,* Special Report No. 209. 1994.
3. KCM, Inc. *Morrow County Transportation System Plan Final Report.* March 1998.
4. Oregon Department of Transportation. *1997 Oregon Public Transportation Plan.* April 1997.
5. Oregon Department of Transportation. *State Transportation Fiscal and Statistical Data for 1997.* September 1998.
6. Oregon Department of Transportation. *Financial Services Website,* http://www.odot.state.or.us */fspublic.* May 1999.

Appendix A

Plan and Policy Review

Plans and Policies Review

Existing plan policies and other actions will influence the analysis of land use and transportation issues and the alternatives to address these issues as well as other community objectives. This appendix provides a summary of the plans and policies reviewed as part of the development of the Transportation System Plan.

CITY OF HEPPNER COMPREHENSIVE PLAN

Heppner's Comprehensive Plan and implementing regulations were acknowledged by the Land Conservation and Development Commission (LCDC) on July 10, 1980.

The Plan consists of eight chapters as follows:

Chapter I: Summary and Conclusions and Comprehensive Plan Map

Chapter II: Summary of Findings

Chapter III: Citizen Involvement

Chapter IV: Goals and Policies

Chapter V: Natural Environment

Chapter VI: Socio-Economic Environment

Chapter VII: Bibliography

Chapter VIII: Appendices

Most findings and policies relevant to this study are found in Chapters II, IV and VI (under a detailed discussion of current conditions and future need for transportation facilities). Relevant findings and policies are summarized below.

Chapters II and IV

Open Spaces, Scenic and Historical Areas and Natural Resources: Examine any publicly owned lands including street rights-of-way for their potential open space use before their disposition.

Recreational Needs: Encourage tourist commercial uses such as motels, restaurants, gas stations, gift shops, and other noise and traffic generators to cluster in or adjacent to other commercial centers."

Economic Development:

- Encourage the expansion of job opportunities and reduce unemployment, reduce out-migration of youth, and accommodate the growth of the local labor force.
- Minimize high noise levels, heavy traffic volumes, and other undesirable effects of heavy commercial and industrial development.
- Cluster commercial uses intended to meet the business needs of area-residents and highway travelers only in designated areas to prevent the undesirable effects of strip commercial areas.
- Public Facilities and Services: Develop, maintain, update and expand police and fire services, streets and sidewalks, water and sewer system, and storm drains as necessary to provide adequate facilities and services to the community.

Transportation Policies:

- To minimize conflicts between through and local traffic on Highway 74 to reduce traffic hazards and expedite the flow of traffic.
- To develop good transportation linkage (pedestrian, vehicular, bicycles, etc.) between residential areas and major activity centers.
- To prioritize the paving of city streets.

Energy Conservation: Encourage the design of streets, buildings, and landscaping in subdivisions to allow for utilization of solar energy.

Urbanization Findings: Property east of Heppner, along Highway 74 has been included in the UGB to provide access to future development on the hill behind the hospital; because the land is not constrained by flood or steep slope designations; and water and sewer lines could be extended to the top.

Urbanization Policies:

- To establish an urban growth boundary to identify and separate urbanizable land from rural land.
- To encourage development to occur within a relatively compact urban area with controlled outward growth.
- To consider only those areas that are within the urban growth boundary for annexation to the city.

Chapters VI: Socio-Economic Chapter, Section on Transportation

Objectives for the development of a transportation system include:

- To provide an integrated transportation system that will link the city with regional production, distribution and marketing centers.
- To incorporate safety and efficiency factors in transportation system design to allow people and goods to travel conveniently.
- To create a transportation system which is current, flexible, and coordinated with the comprehensive plan.
- Permit orderly and timely expansion of the transportation system in an economically feasible manner.
- To maintain and improve the transportation system to allow it to carry out its intended function.

Future Transportation Needs include:

- The City of Heppner should accumulate funds and provide for continued maintenance and expansion of their public streets and sidewalks.
- Heppner needs an intra-city bus service especially to serve senior citizens.
- Bicycles serve as an alternate form of transportation and recreation. Thought should be given to the placement of bicycle paths in the community to provide safe routes between various city activity centers.

IMPLEMENTING REGULATIONS

The Zoning Ordinance (Ordinance No. 428) as amended, implements the Comprehensive Plan by establishing specific standards for use of the land by zoning districts and other development standards.

The ordinance contains regulations for off-street parking, loading, internal access and recreational vehicle parking, but does not have development standards related to streets, use of streets or access standards.

The Subdivision Ordinance, last amended in 1996, requires the dedication of streets in subdivisions and contains street standards including the street widths shown in Table A-1.

Table A-1
Street Standards

Street Type	Minimum right-of-way	Minimum pavement width	Maximum Grade (percent)
Arterial	80	44	8
Collector	60	38	10
Local street	50	30	12
Alley	20	20	--

Other standards include minimum curve radius, minimum length of tangents between reverse curves, minimum sight distance, cul-de-sac radius, design speed, minimum length of vertical curves and pavement depths. In residential areas, four-foot wide sidewalks are required on both sides of arterials and one side of local and collector streets. In business-industrial areas, six-foot wide sidewalks are required on both sides of arterial, local and collector streets.

Other provisions include frontage on improved streets; topography and arrangements; intersection angles (no less than 75 degrees, with intersection of no more than two streets); minimum curb radius (20 feet for local streets and 25 feet if one or more streets is a collector); pavement depth (minimum three inches of asphalt); street names; and excess right-of-way. In non-residential subdivisions, street rights-of-way must be adequate to accommodate the type and volume of traffic anticipated to be generated and special requirements for street, curb, gutter and sidewalk design and construction may be imposed by the city. In addition, streets carrying nonresidential traffic, especially truck traffic are not normally to be extended to the boundaries of adjacent existing or potential residential areas.

In 1993, the city adopted a street replacement priority list rating the condition of each paved and unpaved street. The resolution directs city staff to review and update the list each year and to recommend to the City Council replacement projects based on the list, as funding is available.

STRATEGIC PLAN

The city completed a Strategic Plan in 1992 and updated it in 1994, 1995, 1997 and 1998. The plan identifies goals, strategies and action plans aimed at attracting and retaining new and existing employment, developing adequate infrastructure, increasing/ improving housing, expanding the visitor industry, developing/maintaining accurate community information and enhancing community appearance, livability and viability. The following are specific goals, strategies and actions proposed by the Strategic Plan that could affect the TSP and land use alternatives.

GOAL: Identify and develop infrastructure necessary to maintain and attract employment and residents.

Strategy: Improve street name and traffic control signage.

Action Plan: Purchase and install new street name and traffic control signage as needed for all city streets.

Strategy: Replace North Court Street sidewalks and reconfigure May and Court Street Intersection.

Action Plan: Same as strategy.

Strategy: Construct new sidewalks on Riverside Avenue and realign the Linden Way/"A" Street/Riverside/Gale Street intersection using grant funds.

Action Plan: Same as strategy.

GOAL: Increase and improve housing.

Strategy: Install moderately priced manufactured or stick build homes on available lots – both vacant lots and lots with marginal structures on them.

Action Plan: Encourage landowners in Heppner and the surrounding area to make land available for affordable housing.

Strategy: Develop additional senior housing.

Action Plan: Locate land or structures to remodel and/or build a structure for senior citizens providing seven to twenty living units.

Strategy: Increase available housing stock through subdivision development.

Action Plan: Continue development of residential subdivisions.

GOAL: Enhance community appearance, livability and viability.

Strategy: Continue development of walking/biking routes.

Action Plan: Establish bike/pedestrian lanes on the shoulders of State Highway 74 between Heppner and Kinzua Mill.

Action Plan: Complete and maintain various routes including creekside pathways and trails adjoining the Willow Creek Lake.

Action Plan: Consider building sidewalks on Chase Street from May Street to Willow Street to the corner of Main and Center Streets.

Appendix B

Description of Level-of-Service Methods and Criteria

Appendix B

LEVEL OF SERVICE CONCEPT

Level of service (LOS) is a concept developed to quantify the degree of comfort (including such elements as travel time, number of stops, total amount of stopped delay, and impediments caused by other vehicles) afforded to drivers as they travel through an intersection or roadway segment. Six grades are used to denote the various LOS from A to F.[1]

SIGNALIZED INTERSECTIONS

The six LOS grades are described qualitatively for signalized intersections in Table B1. Additionally, Table B2 identifies the relationship between level of service and average stopped delay per vehicle. Using this definition, LOS D is generally considered to represent the minimum acceptable design standard.

Table B1
Level of Service Definitions (Signalized Intersections)

Level of Service	Average Delay per Vehicle
A	Very low average stopped delay, less than five seconds per vehicle. This occurs when progression is extremely favorable, and most vehicles arrive during the green phase. Most vehicles do not stop at all. Short cycle lengths may also contribute to low delay.
B	Average stop delay is in the range of 5.1 to 15.0 seconds per vehicle. This generally occurs with good progression and/or short cycle lengths. More vehicles stop than for a LOS A, causing higher levels of average delay.
C	Average stop delay is in the range of 15.1 to 25.0 seconds per vehicle. These higher delays may result from fair progression and/or longer cycle lengths. Individual cycle failures may begin to appear at this level. The number of vehicles stopping is significant at this level, although many still pass through the intersection without stopping.
D	Average stopped delays are in the range of 25.1 to 40.0 seconds per vehicle. The influence of congestion becomes more noticeable. Longer delays may result from some combination of unfavorable progression, long cycle length, or high volume/capacity ratios. Many vehicles stop, and the proportion of vehicles not stopping declines. Individual cycle failures are noticeable.
E	Average stop delay is in the range of 40.1 to 60.0 seconds per vehicle. This is considered to be the limit of acceptable delay. These high delay values generally indicate poor progression, long cycle lengths, and high volume/capacity ratios. Individual cycle failures are frequent occurrences.
F	Average stop delay is in excess of 60 seconds per vehicle. This is considered to be unacceptable to most drivers. This condition often occurs with oversaturation. It may also occur at high volume/capacity ratios below 1.0 with many individual cycle failures. Poor progression and long cycle lengths may also contribute to such high delay values.

1 Most of the material in this appendix is adapted from the Transportation Research Board, *Highway Capacity Manual*, Special Report 209 (1994).

Table B2
Level of Service Criteria for Signalized Intersections

Level of Service	Stopped Delay per Vehicle (Seconds)
A	≤ 5.0
B	5.1 to 15.0
C	15.1 to 25.0
D	25.1 to 40.0
E	40.1 to 60.0
F	> 60

UNSIGNALIZED INTERSECTIONS

Unsignalized intersections include two-way stop-controlled (TWSC) and all-way stop-controlled (AWSC) intersections. The *1994 Highway Capacity Manual* provides new models for estimating total vehicle delay at both TWSC and AWSC intersections. Unlike signalized intersections, where LOS is based on stopped delay, unsignalized intersections base LOS on total vehicle delay. A qualitative description of the various service levels associated with an unsignalized intersection is presented in Table B3. A quantitative definition of LOS for unsignalized intersections is presented in Table B4. Using this definition, LOS E is generally considered to represent the minimum acceptable design standard.

Table B3
Level of Service Criteria for Unsignalized Intersections

Level of Service	Average Delay per Vehicle to Minor Street
A	• Nearly all drivers find freedom of operation. • Very seldom is there more than one vehicle in queue.
B	• Some drivers begin to consider the delay an inconvenience. • Occasionally there is more than one vehicle in queue.
C	• Many times there is more than one vehicle in queue. • Most drivers feel restricted, but not objectionably so.
D	• Often there is more than one vehicle in queue. • Drivers feel quite restricted.
E	• Represents a condition in which the demand is near or equal to the probable maximum number of vehicles that can be accommodated by the movement. • There is almost always more than one vehicle in queue. • Drivers find the delays approaching intolerable levels.
F	• Forced flow. • Represents an intersection failure condition that is caused by geometric and/or operational constraints external to the intersection.

Table B4
Level of Service Criteria for Unsignalized Intersections

Level of Service	Average Total Delay per Vehicle (Seconds)
A	< 5.0
B	5.1 to 10.0
C	10.1 to 20.0
D	20.1 to 30.0
E	30.1 to 45.0
F	> 45.0

It should be noted that the LOS criteria for unsignalized intersections are somewhat different than the criteria used for signalized intersections. The primary reason for this difference is that drivers expect different levels of performance from different kinds of transportation facilities. The expectation is that a signalized intersection is designed to carry higher traffic volumes than an unsignalized intersection. Additionally, there are a number of driver behavior considerations that combine to make delays at signalized intersections less onerous than at unsignalized intersections. For example, drivers at signalized intersections are able to relax during the red interval, while drivers on the minor street approaches to TWSC intersections must remain attentive to the task of identifying acceptable gaps and vehicle conflicts. Also, there is often much more variability in the amount of delay experienced by individual drivers at unsignalized intersections than signalized intersections. For these reasons, it is considered that the total delay threshold for any given LOS is less for an unsignalized intersection than for a signalized intersection. **While overall intersection LOS is calculated for AWSC intersections, LOS is only calculated for the minor approaches and the major street left turn movements at TWSC intersections.** No delay is assumed to the major street through movements. For TWSC intersections, the overall intersection LOS is defined by the movement having the worst LOS (typically a minor street left turn).

V/C Analysis

When evaluating State facilities, the 1999 Highway Plan requires a similar assessment for measuring highway performance, but represents levels of service by specific volume to capacity ratios to improve clarity and ease of implementation. A volume to capacity ratio (v/c) is the peak hour traffic volume (vehicles/hour) on a highway section divided by the maximum volume that the highway section can handle. For example, when v/c equals 0.85, peak hour traffic uses 85 percent of a highway's capacity; 15 percent of the capacity is not used. If the traffic volume entering a highway section exceeds the section's capacity, traffic queues will form and lengthen for as long as there is excessive demand. When v/c is less than but close to 1.0 (e.g., 0.95), traffic flow becomes very unstable. Small disruptions can cause traffic flow to break down and long traffic queues to form. This is a particular concern for freeways because the capacity of a freeway under stop-and-go traffic conditions is lower than the capacity when traffic is flowing smoothly. Maximum v/c ratios are defined for state facilities by roadway classification and adjacent land uses. Acceptable v/c values range from 0.70 for high speed rural facilities to grater than 1.0 for some areas within the Portland Metro area.

Appendix C

Supplemental Funding Information

Table E-1
Heppner Area Transportation System Plan
Summary of Road-Related Transportation Funding Programs: Federal Sources

Program Name	Description
Community Development block Grants (CDBG)	Community Development Block Grants (CDBG) are administered by the Department of Housing and Urban Development (HUD) and potentially be used for transportation improvements in eligible areas.

Table E-1 (Continued)
Heppner Area Transportation System Plan
Summary of Road-Related Transportation Funding Programs: State Level

Program Name	Description
State Highway Fund	The State Highway Fund composed of gas taxes, vehicle registration fees, and weight-mile taxes assessed on freight carrier. In 1994, the state gas tax was $0.24 per gallon. Vehicle registration fees were $15 annually. Revenues are divided as follows: 15.57 percent to cities, 24.38 percent to counties, and 60.05 percent to ODOT. The city share of the State Highway Fund is allocated based on population. ORS 366.514 requires at least one percent of the State Highway Fund received by ODOT, counties and cities be expended for the development of footpaths and bikeways. ODOT administers the bicycle funds, handles bikeway planning, design, engineering and construction, and provides technical assistance and advice to local governments concerning bikeways.
Special Public Works Fund (SPWF)	The State of Oregon allocates a portion of revenues from the state lottery for economic development. The Oregon Economic Development Department provides grants and loans through the SPWF program to construct, improve and repair infrastructure to support local economic development and create new jobs. The SPWF provides a maximum grant of $500,000 for projects that will help create a minimum of 50 jobs.
Transportation Access Charges	The most familiar form of a transportation access charge is a bridge or highway toll. Transportation access charges are most appropriate for high-speed, limited access corridors; service in high-demand corridors; and bypass facilities to avoid congested areas. Congestion pricing, where drivers are charged electronically for the trips they make based on location and time of day, is the most efficient policy for dealing with urban congestion. It not only generates revenue for maintenance and improvements; but also decreases congestion and the need for capital improvements by increasing the cost of trips during peak periods. The Oregon Revised Statutes allow ODOT to construct toll bridges to connect state highways and improve safety and capacity. The Statues also allow private development of toll bridges. Recent actions by the Oregon legislature provide authority for developing toll roads. State authority for congestion pricing does not exist; new legislation would be required.
Immediate Opportunity Fund (IOF)	Financed at a level of $5 million per year to a maximum of $40 million through FY96. The fund is to support specific economic developments in Oregon through the construction and improvement of roads and is restricted for use in situations that require a quick response and commitment of funds. It is anticipated that the maximum amount available for a single project is $500,000 or 10 percent of the annual program level. This fund may be used only when other sources of financial support are unavailable or insufficient and are not a replacement or substitute for other funding sources.
OR Transportation Infrastructure Bank	As a pilot program for the USDOT, the Oregon Transportation Commission has made $10 million available from projects that will not be contracted in FY 1996. The OTIB will make loans for transportation projects and will offer a variety of credit enhancements. Initial loans must be for improvements on federal aid highways, repayments go into an account that will be made available for any mode. Ability to repay will be a key factor in all loans.
Traffic Control Projects	The State maintains a policy of sharing installation, maintenance, and operational costs for traffic signals and luminaire units at intersections between State highway and city streets (or county roads). Intersections involving a State highway and a city street (or county road) which are included on the state-wide priority list are eligible to participate in the cost sharing policy. ODOT establishes a statewide priority list for traffic signal installations on the State Highway System. The priority system is based on warrants outlined in the Manual for Uniform Traffic Control Devices. Local agencies are responsible for coordinating the statewide signal priority list with local road requirements.

Table E-1 (Continued)
Heppner Area Transportation System Plan
Summary of Road-Related Transportation Funding Programs: State Level

Program Name	Description
OR Transportation Infrastructure Bank	As a pilot program for the USDOT, the Oregon Transportation Commission has made $10 million available from projects that will not be contracted in FY 1996. The OTIB will make loans for transportation projects and will offer a variety of credit enhancements. Initial loans must be for improvements on federal aid highways, repayments go into an account that will be made available for any mode. Ability to repay will be a key factor in all loans.
Traffic Control Projects	The State maintains a policy of sharing installation, maintenance, and operational costs for traffic signals and luminaire units at intersections between State highway and city streets (or county roads). Intersections involving a State highway and a city street (or county road) which are included on the state-wide priority list are eligible to participate in the cost sharing policy. ODOT establishes a statewide priority list for traffic signal installations on the State Highway System. The priority system is based on warrants outlined in the Manual for Uniform Traffic Control Devices. Local agencies are responsible for coordinating the statewide signal priority list with local road requirements.

Table E-1 (Continued)
Heppner Area Transportation System Plan
Summary of Road-Related Transportation Funding Programs: Local Sources

Program Name	Description
Special Assessments/Local Improvements Districts	Special assessments are charges levied on property owners for neighborhood public facilities and services, with each property assessed a portion of total project cost. They are commonly used for such public works projects as street paving, drainage, parking facilities and sewer lines. The justification for such levies is that many of these public works activities provide services to or directly enhance the value of nearby land, thereby providing direct and/or financial benefit to its owners. Local Improvement Districts (LIDs) are legal entities established by the City to levy special assessments designed to fund improvements that have local benefits. Through a local improvement district (LID), streets or other transportation improvements are constructed and a fee is assessed to adjacent property owners.
Systems Development Charges (Impact Fees)	Systems Development Charges (SDCs) are fees paid by land developers intended to reflect the increased capital costs incurred by a municipality or utility as a result of a development. Development charges are calculated to include the costs of impacts on adjacent areas or services, such as increased school enrollment, parks and recreation use, or traffic congestion. Numerous Oregon cities and counties presently use SDCs to fund transportation capacity improvements. SDCs are authorized and limited by ORS 223.297 - 223.314.
Local Gas Tax	A local gas tax is assessed at the pump and added to existing state and federal taxes. Tillamook, The Dalles and Woodburn are Oregon cities that have a local gas tax. Multnomah and Washington Counties also have gas taxes.
Local Parking Fees	Parking fees are a common means of generating revenue for public parking maintenance and development. Most cities have some public parking and many charge nominal fees for use of public parking. Cities also generate revenues from parking citations. These fees are generally used for parking-related maintenance and improvements.

Table E-1 (Continued)
Heppner Area Transportation System Plan
Summary of Road-Related Transportation Funding Programs: Local Sources

Program Name	Description
Street Utility Fee	Most city residents pay water and sewer utility fees. Street user fees apply the same concept to city streets. A fee would be assessed to all businesses and households in the city for use of streets based on the amount of use typically generated by a particular use. For example, a single-family residence might, on average, generate 10 vehicle trips per day compared to 130 trips per 1,000 square feet of floor area for retail uses. Therefore, the retail use would be assessed a higher fee based on higher use. Street services fees differ from water and sewer fees because usage cannot be easily monitored. Street user fees are typically used to pay for maintenance more than for capital projects.
Vehicle Registration Fees	Counties can implement a local vehicle registration fee. The fee would operate similar to the state vehicle registration fee. A portion of the County fee would be allocated to the City.
Property Taxes	Local property taxes could be used to fund transportation, although this is limited by Ballot Measure 5 and 47.
Revenue Bonds	Revenue Bonds are bonds whose debt service is financed by user charges, such as service charges, tolls, admissions fees, and rents. If revenues from user charges are not sufficient to meet the debt service payments, the issuer generally is not legally obligated to levy taxes to avoid default, unless they are also based by the full faith and credit of the insuring governmental unit. In that case, they are called indirect general obligation bonds. Revenue bonds could be secured by a local gas tax, street utility fee, or other transportation-related stable revenue stream.

Table E-2
Currently Used Revenue Sources For Cities (millions of 1995 dollars)

Facility	Revenue Source	Importance (not 100%)	3-Year Trend	Dedication	Rate
Streets/Bridges/ Sidewalks/ Bike Lanes	Oregon Highway Trust Fund	51% of total road or $89.	Growing about 1.75% per year.	Constitutionally limited to funding activities that benefit autos & trucks.	24¢/gal. for gas; $30/biennium registration fee.
	General Fund Transfers	9% or $15.	Varies but assume growth @ 3%/yr. But not used by all cities.	May be used for any purpose.	Varies widely.
	Special Property Tax Levies	5% or $7.	Increasing, only used by about 18 cities.	May be used for purpose described in election.	Varies widely.
	Improvement District Assessments	7% or $12.5.	Varies but increases when local development increases.	May be used for construction of adjacent streets-sidewalks.	Varies with construction cost & local ordinances.
	Systems Development Charges/Traffic Impact Fees	4% or $7.	Varies but increases when local development increases, only used by about 2 dozen cities.	May be used for construction of new streets.	Varies with construction cost & local ordinances. Rates generally higher in Portland Metro area.
	Utility Franchise Fees	3% or $4.	Grows roughly w/population and inflation.	Is a general revenue used by some cities for streets.	Statutory limit of 5% of utility gross receipts.
	Interest Earnings	4% or $6.	Varies w/current interest rates.	Have same Constitutional limits as Highway Fund.	Used as general street revenue.
	Local Gas Tax	0.44% or $0.7	Unchanged.	Have same Constitutional limits as Highway Fund.	Used by Tillamook, The Dalles, and Woodburn.
	Private Contributions	3% or $4.3	Varies widely.	Usually contributions are related to specific development street impacts.	Negotiated individually.

Table E-2: (Continued)
Currently Used Revenue Sources For Cities (millions of 1995 dollars)

Facility	Revenue Source	Importance (not 100%)	3-Year Trend	Dedication	Rate
	Misc. - permit fees, finds, fines, parking, Motel Tax, other	8% or $14.5.	Gradual growth.	General revenues used for streets.	Varies widely by City.
	Federal - FHWA+HUD	3% or $5.6.	Relatively stable	Used mainly for new construction w/some rehab.	Based on federal allocation to Oregon.
	Misc. State Revenues - mainly Lottery funds.	2% or $3.	Varies, no trend.	Used mainly for economic development capital improvements.	Specific grants to individual cities each year.
Off-street Bike Paths	Misc. general funds & ISTEA	??	Varies from year to year.	ISTEA & General Funds used for construction, General Funds used for maintenance & repair.	Varies from year to year.

Table E-3
Heppner Area Transportation System Plan
Currently Used Revenue Sources in Oregon

Transit Service Type/Function	Funding Source	Status
Urban Public Transportation (Portland & Eugene) (operating & capital)	1. Local Payroll Tax - operating 2. Federal grants - capital 3. Federal grants - operating 4. Fares & advertising	1. Major Source - $100 million/yr. Growing - Sensitive to Economic Conditions 2. Major source - $10 million/yr - Stable 3. Minor source - $5 million/yr - Declining 4. Minor source - Growing w/ridership
Urban Public Transportation (Salem, Corvallis, Medford, K-Falls)	1. Property tax (typically a taxbase or stand-alone levy w/in $10 cap for local gov't services) 2. Federal grants - capital 3. Federal grant - operating 4. Fares & advertising	1. Major Source - Growing Slowly 2. Major Source - $2 million/yr. - Stable 3. Major Source - $2 million/yr. - Declining 4. Minor Source - Growing w/ridership
Small City & Rural (Astoria, Union County, etc.) (operating & capital)	1. Federal grants - capital & operating 2. Local Property Tax (typically w/in city or county operating levy) 3. Fares, donations & advertising	1. Major Source - Declining 2. Major Source - Stable 3. Minor Source - Stable
Mobility for Seniors & People with Disabilities - (operating & capital)	1. Special Transportation Fund (2¢ state cigarette tax) - operating & capital 2. Social Service Agency grants / contracts - operating 3. Local Property Tax (typically w/in city or county operating levy) 4. Federal grants - capital & operating 5. Fares, donations advertising	1. Major Source - $5 million/yr. - Declining 2. Major Source - Declining 3. Minor Source - Stable 4. Major Source - Declining 5. Minor - Stable
Intercity Bus (operating & capital)	1. Major Interstate Routes: Fares 2. Branch & feeder routes: Private capital, Fares	1. Sole Source - Declining 2. Private