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ACKNOWLEDGEMENTS

The development of this plan was guided by the Project Management Team (PMT) and a volunteer Advisory Committee (AC). The City of Heppner would like to thank each of these individuals who devoted their time, expertise, and insight into the development of the plan.

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The contents of this document do not necessarily reflect views or policies of the State of Oregon.

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CHAPTER 1: INTRODUCTION

WHY CREATE A TRANSPORTATION SYSTEM PLAN?

The Heppner transportation system plan (TSP) is a long-range plan that sets the vision for the community's transportation system, facilities and services to meet state, regional, and local needs for the next 20 years. The TSP was developed through community and stakeholder input and is based on the system's existing needs, opportunities, and anticipated available funding. The plan also serves as the Transportation Element of the Heppner Comprehensive Plan. The purpose of the 2018 TSP update is to address regulatory changes that have occurred in the region since the previous 2003 TSP as well as to provide an updated listed of potential solutions to address local transportation needs and deficiencies.



City of Heppner, Oregon

The TSP addresses compliance with new or amended Federal, State, and local plans policies, and regulations including the Oregon Transportation Plan (OTP), the State's Transportation Planning Rule (TPR), the Oregon Highway Plan (OHP), and presents the investments and priorities for the Pedestrian, Bicycle, Transit, and Motor Vehicle System.

HEPPNER 2018

The City of Heppner lies approximately 50 miles south of the Columbia River and rest against the foothills of the Blue Mountains in north eastern Oregon. Highway 74 (OR74), also called the Blue Mountain Scenic Byway, winds south from Interstate 84 (I-84) through Lone, Lexington and Heppner. The City was incorporated in 1887 and is the County Seat of Morrow County as well as the largest of three communities in Willow Creek Valley. Heppner has an estimated population of approximately 1,295 people comprising 11 percent of Morrow County's 11,745 residents.

Heppner is known for its small-town livability, affordable housing, full service downtown amenities, medical facilities, superior schools, and low crime rate. The majority of Heppner residents are employed in agriculture, government, timber, and manufacturing. Heppner is suited for those interested in living a rural lifestyle with the convenience of accessing larger communities such as Hermiston, Pendleton, and the Tri-Cities. **Exhibit 1** illustrates the study area for the Heppner TSP update.



Morrow County Court House, Heppner



Historic Large-wheeled Wagon, Heppner

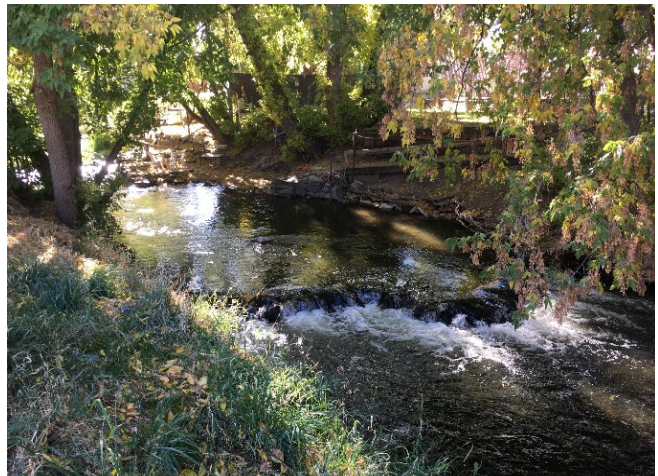
There are several active waterways within the City including the Willow, Hinton and Shobe Creeks. These natural tributaries interrupt the City’s street grid and minimize the number of multimodal crossings available. Matlock, May, Alfalfa and Main Street provide roadway crossings over Willow Creek whereas Elder Street provides a roadway crossing over Hinton Creek. Additional pedestrian crossings are provided across Willow Creek at the Baltimore and Willow Street extension multi-use paths.

HEPPNER 2038

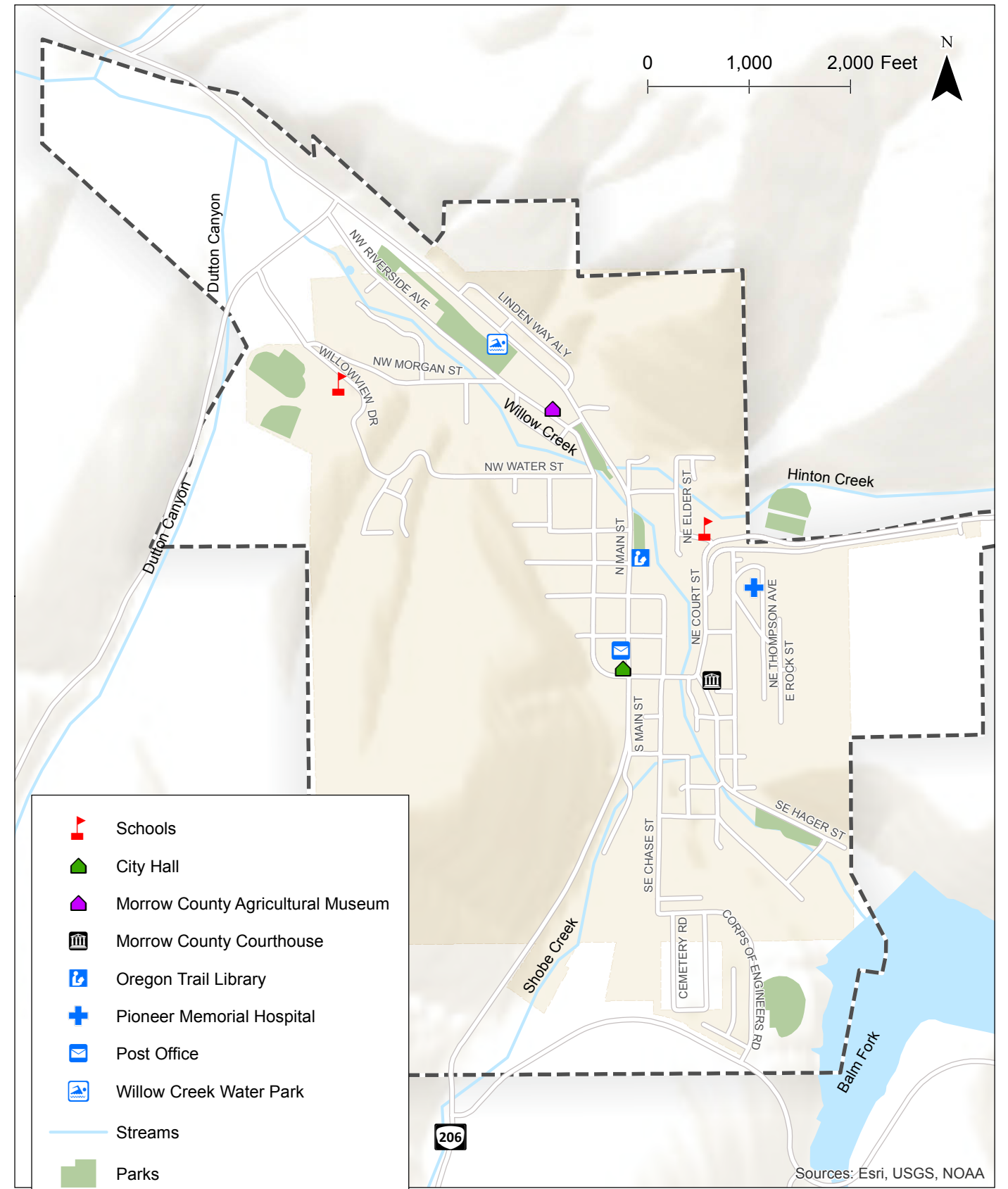
Land use plays an important role in developing a comprehensive transportation system. The amount of land that is planned to be developed, the type of land uses, and how the land uses are mixed together have a direct impact on how the transportation system will be used in the future. Understanding land use is critical to taking actions to maintain or enhance the transportation system.















Heritage Park, City of Heppner



Willow Creek, City of Heppner



-  Schools
-  City Hall
-  Morrow County Agricultural Museum
-  Morrow County Courthouse
-  Oregon Trail Library
-  Pioneer Memorial Hospital
-  Post Office
-  Willow Creek Water Park
-  Streams
-  Parks
-  City Boundary
-  Urban Growth Boundary

Sources: Esri, USGS, NOAA

Study Area Heppner, Oregon

Exhibit 1

H:\212\212 - Heppner TSP Update\gis\Final TSP\01 - Study Area.mxd - rgross - 11:26 AM 10/25/2018

2038 TRAFFIC VOLUME FORECAST

Oregon's Transportation Planning Rule (TPR) requires communities to develop a 20-year plan to support the transportation system needs. The City of Heppner anticipates completing and adopting the TSP update in 2018, thus the year 2038 is an appropriate forecast horizon year. The year 2038 traffic volumes were developed according to the Historical Trends methodology described in the ODOT Analysis Procedure Manual (APM). A summary of the traffic volume projection process is presented below.

Historical Trends Analysis

The historical trends method uses traffic volumes from previous years to project future volumes. This method assumes that the future growth trend will be similar to the historical trend. It is used mainly in rural or small urban areas where significant growth is not anticipated. Current and future year traffic volumes are available in the Future Volumes Table on the ODOT website.

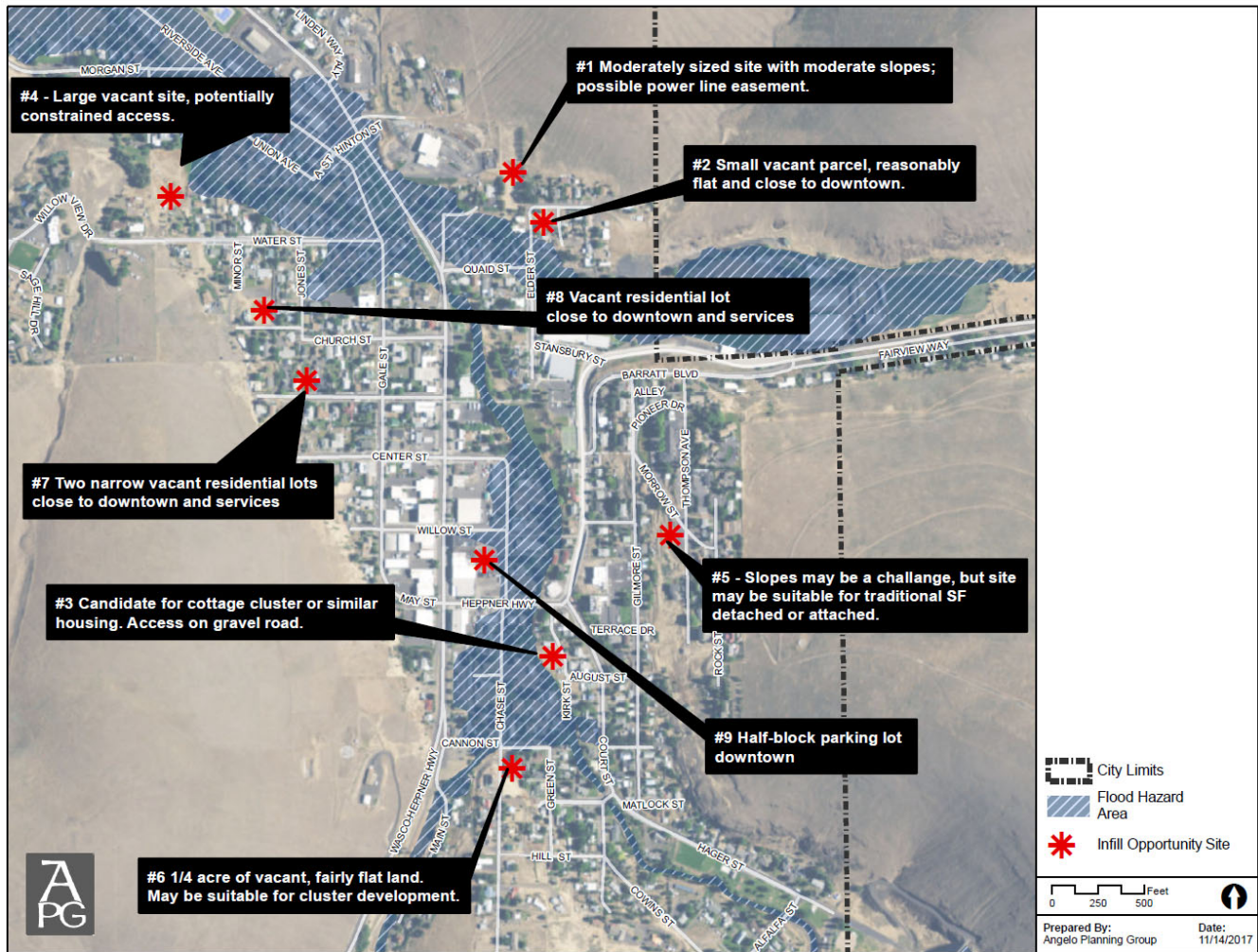
The Lexington automatic traffic recorder (ATR) station 25-007 is located approximately eight miles north of Heppner's northern city limits. Historical traffic data at this location as well as projected future traffic volumes for year 2035 were reviewed in order to develop a growth percentage to apply to OR 74 and OR 206 through Heppner.

Local Growth

An Infill Report was produced as part of the City's TSP Update and can be found in **Volume III**. The City of Heppner's Comprehensive Plan provides goals and policies related to three topic areas relevant to this evaluation. As stated in the Comprehensive Plan, the City's housing goal is "to increase the supply of housing to allow for population growth and to provide for the housing needs of the citizens of Heppner." The objectives to achieve this goal include to "encourage a moderate rate of growth and mixed population of varying age groups, incomes, and lifestyles" as well as "encourage residential development which provides prospective buyers with a variety of residential lot sizes, a diversity of housing types, including manufactured homes and multi-family housing, and a range in prices.

Individual infill site opportunities have been identified as part of the Infill Report (Volume III) and are illustrated in **Exhibit 2**. As shown in **Exhibit 2**, there are number of small residential infill parcels around the city and one commercial infill site in the downtown area. While these locations have been highlighted as potential infill opportunities, it is important to note that there are no major development sites or areas that appear to warrant significant development opportunity.

Exhibit 2: Infill Site Opportunities



TSP UPDATE PROCESS

The TSP update process began with a review of local, regional, and statewide plans and policies that guide land use and transportation planning in the City. Goals and objectives were then developed collaboratively with the project’s Advisory Committee (AC) to guide the evaluation of the existing and future transportation system conditions as well as the development of planned improvements. An inventory of the multimodal transportation system was conducted to serve as the basis for the existing and future conditions analyses. The existing and future condition analyses focused on identifying gaps and deficiencies in the multimodal transportation system based on current and forecast future performances. For each gap and deficiency, a solution was evaluated to address the system needs. The solutions were then prioritized through the public involvement process and organized into planned project lists. The culmination of the TSP update process is this document, which presents the plans and solutions identified to address the existing and future gaps and deficiencies in the City’s transportation system.

COMMITTEES

The project team developed the TSP update in close coordination with city staff along with key representatives from the local community. One formal committee, referred to as the Advisory Committee (AC), had a significant role in the TSP update process. The AC consisted of local residents with an interest in transportation, city representations, Morrow County School District staff, Morrow County staff, and staff from The Loop (formerly known as Morrow County Special Transportation). The AC provided technical guidance and coordination throughout the project. AC members reviewed and commented on technical memorandums and participated in committee meetings, community meetings, community curbside chats, and youth workshops. The AC served as the voice of the community and the caretakers of the goals and objectives of the TSP update.

PUBLIC INVOLVEMENT

The Heppner TSP is the result of a collaboration among various public agencies, the community, and the project team of city staff, Oregon Department of Transportation (ODOT), and consultants. The public involvement process consisted of continuous face-to-face interactions at multiple stakeholder and AC meetings, as well as a community curbside chat and two youth workshops.



Curbside Community Chat



Youth Workshop #1

The community curbside chat was held on October 16, 2017 with the purpose to allow community members to walk with the project team around the City to point out specific items such as community destinations, missing sidewalks, or safety issues for consideration as part of the existing conditions analysis and future system needs. Youth workshops were held on November 29, 2017 and the summer of 2018. During the youth workshop #1, the project team met with 6th graders at the Heppner Elementary School and high school students at Heppner High School.

The purpose of the initial youth workshop was to involve students in the planning effort of the TSP update and solicit feedback on their routes to school and areas of concern. Valuable feedback was provided by students through a hands-on mapping exercise which allowed students to locate specific areas of interest such as dangerous roadway crossings, suggested sidewalk improvements, and commonly traveled walking routes which were not identified as part of previous planning efforts. The feedback provided at the initial youth workshop was incorporated and prioritized into the list of potential TSP solutions.

The project team met with the AC three times and held two Town Hall Open Houses throughout the TSP update process. Each meeting was open to the general public. Additionally, the project team also met with the Planning Commission and City Council several times throughout the planning process (one joint work session and one joint hearing). Each meeting/workshop/hearing was open to the general public. The goal of the public involvement process was to develop a TSP update that addressed the gaps and deficiencies in the transportation system while meeting the needs of the community.

TSP ORGANIZATION

The Heppner TSP is comprised of the main TSP summary document (**Volume I**), a detailed list of projects and graphical illustrations of project solutions (**Volume II**), and a technical appendix (**Volume III**).

Volume I (this document) is organized into the following sections:

- » Chapter 1 – Introduction
- » Chapter 2 – The Vision for Transportation
- » Chapter 3 – Pedestrian System
- » Chapter 4 – Multi-Use Path System
- » Chapter 5 – Bicycle System
- » Chapter 6 – Transit System
- » Chapter 7 – Motor Vehicle System
- » Chapter 8 – Transportation System Management and Operations (TSMO)
- » Chapter 9 – Other Travel Modes
- » Chapter 10 – Funding, Implementation, and Funding Outline
- » Chapter 11 – Glossary of Terms

Volume II (under a separate cover) contains detailed project maps, summary tables, and project prospectus sheets (individual project summary sheets containing detailed project descriptions and graphical renderings). These prospectus sheets can be quickly referenced for project details (graphical illustration, cost estimate, and potential funding mechanism among others).

Volume III (under separate cover) contains the technical memorandums prepared during the development of the TSP including the detailed data and technical analyses that informed the plan.

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CHAPTER 2: THE VISION FOR TRANSPORTATION



E. May Street, Heppner

SETTING THE VISION FOR HEPPNER’S TRANSPORTATION SYSTEM

Setting a vision for a city’s transportation system is an essential first step in maintaining the existing system and establishing the framework to accommodate potential growth. The public involvement process for the TSP provided a forum for the community to express their vision for the future of Heppner’s transportation network. The community advisory committee and other community members expressed a desire for a transportation system that maintains community livability, enhances existing transportation infrastructure, increases safety for all users, and provides a framework for potential growth.



A “Walking School Bus” Brings Kids to and from School



A Child Rides his Bicycle down Gale Street

GOALS & OBJECTIVES

The goals and objectives for the Heppner TSP update provide direction for the City to achieve its ideal transportation network in a way that reflects local values and priorities. To ensure compliance with the Transportation Planning Rule (TPR), Regional Transportation Plan (RTP), Regional Transportation Functional Plan (RTFP), and other state, regional, and local planning requirements, the goals and objectives presented below emphasize mobility for all modes, safety, connectivity, health, financial stability, and intergovernmental coordination.

GOAL 1 – MOBILITY

Provide a balanced, safe, and efficient transportation system for all members of the community.

Objectives:

- A. Reduce reliance on single occupancy vehicles for trips within Heppner by improving the quality of available transit service and developing bicycle and pedestrian facilities that encourage non-vehicular modes of transportation suited for a range of skill levels.
- B. Protect the qualities of the neighborhoods and the community by providing a network of minor collectors and local streets that are interconnected, appropriately spaced, and reasonably direct.
- C. Provide for adequate intersection and street capacity by identifying existing and potential future capacity constraints and developing strategies to address those constraints, including potential intersection improvements, future roadway needs, and future street connections.

GOAL 2 – CONNECTIVITY & ACCESSIBILITY

Develop an interconnected, multimodal transportation system that connects all members of the community to essential destinations within the City and beyond.

Objectives:

- A. Improve existing connections between households and schools, parks, transit stops, local businesses and employers, and other community destinations.
- B. Create new connections between households and schools, parks, transit stops, and other community destinations.
- C. Provide for the needs of the transportation disadvantaged to the greatest extent possible.
- D. Ensure that the transportation system includes adequate facilities to address truck and rail freight mobility needs for the local and regional movement of goods and services.

GOAL 3 – SAFETY

Provide a transportation system that enhances the safety and security of all transportation modes.

Objectives:

- A. Address existing and potential future safety issues by identifying high crash locations and locations with a history of fatal, severe injury, and/or pedestrian/bicycle-related crashes and developing strategies to address those issues.
- B. Reduce the potential for future crashes by providing separation between travel modes (i.e. separated pedestrian and bicycle facilities, enhanced crossings, etc.)

GOAL 4 – HEALTH

Provide a transportation system that enhances the health of local residents by promoting active modes of transportation.

Objectives:

- A. Develop a comprehensive system of pedestrian and bicycle routes that link major activity centers within the study area.
- B. Encourage the use of active modes of transportation (walking and biking) for short distance, intercity trips and identify improvements to further promote their use in the community.
- C. Encourage the use of public transportation facilities and services and identify improvements to further promote their use in the community.

GOAL 5 – STRATEGIC INVESTMENT

Provide an implementable transportation system through responsible stewardship of assets and financial resources.

Objectives:

- A. Preserve and maintain the existing transportation system assets to extend their useful life.
- B. Identify new and innovative funding sources for transportation improvements.

GOAL 6 – COORDINATION AND INTEGRATION

Ensure that the local transportation system is integrated with county and state transportation systems and objectives, and with other related aspects of the community, including land use planning, natural resource protection, housing and economic development.

Objectives:

- A. Design transportation facilities and connections to support adjacent land uses, including local businesses and employers.
- B. Minimize and/or mitigate the effects of transportation projects and systems on natural resources and systems.
- C. Consider County and State goals and policies in design and implementation of the TSP and associated projects.
- D. Engage community members and organizations in the development and design of transportation facilities identified in the TSP.

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CHAPTER 3: PEDESTRIAN SYSTEM

The pedestrian system within Heppner consist of sidewalks, multi-use paths, as well as marked and unmarked pedestrian crossings. These facilities provide residents with the ability to access local schools, retail/commercial centers, recreational areas, and other land uses by foot. Many city streets currently have sidewalks on at least one side of the roadway while other roadways lack sidewalks altogether. Therefore, the pedestrian plan includes projects to fill-in the gaps in the sidewalk network along the city’s arterial and collector streets and a few local streets that provide access to essential destinations such as schools, parks, churches, and recreational areas.

PEDESTRIAN FACILITIES

The City of Heppner recognized pedestrian facilities, such as sidewalks, multi-use paths, as well as marked and unmarked pedestrian crossings are essential elements of the city’s pedestrian system. While these facilities are currently provided along many city streets, there are many more streets where these facilities are needed to improve pedestrian access and connectivity to enable people to walk safely and efficiently between neighborhoods, the downtown center, schools, and other essential destinations. This section summarizes the solutions that are integrated into the Pedestrian Plan to address existing gaps and deficiencies in the pedestrian system and future needs.

SIDEWALKS

Sidewalks are the fundamental building blocks of the pedestrian system. They enable people to walk comfortably, conveniently, and safely from place to place. They also provide an important means of mobility for people with disabilities, families with strollers, and others who may not be able to travel on an unimproved roadside surface. Standard widths have been developed based on the functional classification of the adjacent roadway and are included in Chapter 7: Motor Vehicle Plan; however, they are usually 6 to 8-feet wide and constructed from concrete. They are also frequently separated from the roadway by a curb, landscaping, and/or on-street parking. Ideally, sidewalks should be provided along both sides of the roadway; however, some areas with physical or right-of-way constraints may require that sidewalk be located on only one side. *Specific sidewalk improvement projects for the City of Heppner are detailed and graphically illustrated in Volume II.*



Example - Sidewalk in Need of Improvement



Example – Modern Improved Sidewalk

ENHANCED PEDESTRIAN CROSSINGS

Pedestrian crossing facilities enable pedestrians to safely cross streets, railroad tracks, and other transportation facilities. Planning for appropriate pedestrian crossings requires the community to balance vehicular mobility needs with providing crossing locations at desired routes for people walking. Enhanced pedestrian crossing treatments that are recognized for potential implementation on most Heppner streets include:

- » High visibility pavement markings and signs
- » Rapid rectangular flashing beacons (RRFB)
- » Pedestrian Hybrid Beacons (HAWK)
- » Curb extensions
- » Pedestrian signals
- » Median refuge islands

Many of the treatments listed above can be applied together at one crossing location to further alert drivers of the presence of pedestrians in the roadway. *Specific pedestrian crossing projects for the City of Heppner are detailed and graphically illustrated in **Volume II**.*



Example - Crosswalk in Need of Enhancement



Example - Enhanced Crosswalk with Curb Extensions

OTHER FACILITIES

- » Street Furniture and Lighting - Street furniture includes pedestrian seating, information / wayfinding structures, and trash cans while street lighting includes both street lights and pedestrian scale lighting. Street furniture and lighting can be used to enhance the pedestrian experience and encourage pedestrian activity on a street.
- » Mixed-use shoulder - A mixed-use shoulder can be used to provide a separated space for cyclists and pedestrians with some separation from motorists in areas where sidewalks are not present.

HIGHLIGHTED PEDESTRIAN PROJECTS

Conceptual renders and illustrations were produced for pedestrian projects P5 and P8 to help convey the projects for potential implementation, impacts, and community understanding. These graphics are shown in **Exhibit 3** and **Exhibit 4**. *A detailed description of each project is provided in **Volume II**.*

Exhibit 3: Gale Street/Center Street Enhanced Crossing



Exhibit 4: Sidewalk Enhancements along Gale Street with Curb Extensions



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CHAPTER 4: MULTI-USE SYSTEM

The multi-use system in Heppner consist of relatively short multi-use path segments (~<=500-feet) that serve as key connections between essential destinations and open spaces. While these facilities are provided sporadically around the City, there are several opportunities to construct multi-use paths to compliment the active transportation system for people walking and biking.

MULTI-USE FACILITIES

Multi-use facilities, most commonly referred to as multi-use paths, are essential elements of the city’s active transportation system. These facilities provide residents with the ability to access local retail/commercial centers, recreational areas, and other land uses by foot and bike while typically providing additional separation between vehicular traffic. This section summarizes the solutions that are integrated into the Multi-Use Plan to address to improve the existing and future needs of the active transportation system. As indicated below, the most common need is to provide a safe and connected system that encourages people to walk, especially for trips less than one-half mile in length.

MULTI-USE PATHS

The “Baltimore Street extension” multi-use path provides a connection from Main Street (OR 74) to Elder Street and is a frequently used path for students of the Elementary and Junior High Schools. The “Willow Street extension” multi-use path is primarily a staircase connection from Chase Street to Court Street (OR 74). A multi-use path also exists to the north between Sperry Street and Jenkins Street, connecting the two baseball fields and serving as an internal non-motorized connection between OR 74 and Riverside Avenue.



Multi-Use Path connection over Willow Creek



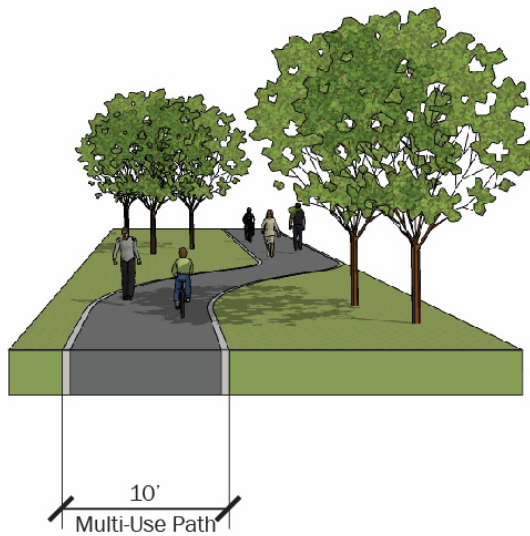
Multi-Use Path connection at City Park

It is the intent of the City of Heppner to add new multi-use paths over time. *Specific multi-use path projects for the City of Heppner are detailed and graphically illustrated in Volume II.*

MULTI-USE PATH STANDARD

A multi-use path standard was developed for the Heppner TSP update based on guidance provided in the Federal Highway Administration (FHWA) *Small Town and Rural Multimodal Networks* (Reference 1). The design of a multi-use path can (and will) vary from facility to facility due to adjacent land uses and user volume. The multi-use path cross section illustrated in **Exhibit 5** provides an example of the cross-section standard developed for the City of Heppner. In general, the recommended minimum width for a low volume multi-use path is 8 to 10 feet, whereas the minimum for a high-volume, multi-use path is 12 to 14 feet.

Exhibit 5: Multi-Use Path Standard Cross Section



HIGHLIGHTED MULTI-USE PATH PROJECTS

Conceptual renders and illustrations were produced for multi-use path project M5 to help convey the projects potential implementation, impacts, and community understanding.

Exhibit 6: Potential Future Sperry Street Multi-Use Path Connection over Willow Creek



CHAPTER 5: BICYCLE SYSTEM

On-street bike lanes and other bicycle facilities have not been a major component of Heppner’s transportation system to date. However, new bicycle lanes and other accommodations can significantly improve mobility choices within and through Heppner. Therefore, the bicycle plan includes several projects along the city’s arterial and collector streets and a few local streets that provide direct access to essential destinations. The bicycle plans also includes consideration of bicycle parking as well as off-street trail locations that support the bicycle system.

BICYCLE FACILITIES

Bicycle facilities are the elements of the transportation system than enable people to travel safely and efficiently by bike. These include facilities along key roadways (e.g., shared lane pavement markings, shoulder bikeways, on-street bike lanes, and shared-use paths) and facilities at key crossing locations (e.g., enhanced crossings). These also include end of trip facilities (e.g., secure bicycle parking); however, these facilities are addressed through the City’s development code. Each facility plays a role in developing a comprehensive bicycle system. This section identifies the appropriate bicycle system treatments and future projects.

SHARED ROADWAYS

Shared-lane pavement markings (often called “sharrows”) are not a bicycle facility, but a tool designed to help accommodate bicyclists on roadways where bike lanes are desirable but infeasible to construct. Sharrows indicate a shared roadway space for cyclists and motorists and are typically centered in the roadway or approximately four feet from the edge of the travelway. Sharrows are suitable on roadways with relatively low travel speeds (<25 mph) and low ADT (<3,000 ADT); however, they may also be used to transition between discontinuous bicycle facilities. Sharrows are identified in the Bicycle Plan along several streets within Heppner where room for on-street bike lanes is limited. *Specific shared roadway projects for the City of Heppner are detailed and graphically illustrated in Volume II.*



Example - Shared-lane pavement markings



Example - Green backed shared-lane pavement markings

SHOULDER BIKEWAY

Shoulder bikeways are located on the edge of the roadway and can serve to enhance the functional space for bicyclist to travel in the absence of other bicycle facilities with more separation. Paved shoulders are typically five-feet wide and appropriate along the roadways with moderate volumes and speeds; however, paved shoulders do not provide a low-stress experience for the majority of users on roads with vehicular higher speeds and/or volumes. At a minimum, paved shoulders should be visually separated from the vehicular travel lane by a painted strip. Further measures may be provided such as rumble strips, pavement contrast, or color to differentiate the shoulder from the adjacent travel lane.

ON-STREET BIKE LANES

On-street bike lanes are striped lanes on the roadway dedicated for the exclusive use of cyclists. Bike lanes are typically placed at the outer edge of pavement (but to the inside of right-turn lanes and/or on-street parking). Bicycle lanes can improve safety and security of cyclists and (if comprehensive) can provide direct connections between origins and destinations. *On-street bike lanes are identified in the Bicycle Plan along all OR 206 and several collector Streets within Heppner as detailed and graphically illustrated in Volume II.*



Striped On-Street Bike Lane on Morgan Street



Striped On-Street Bike Lane

HIGHLIGHTED BICYCLE PROJECTS

Conceptual renders and illustrations were produced for bicycle project B2 along Gale Street and B3-A along Morgan Street to help convey the projects potential implementation, impacts, and community understanding.

Exhibit 7: Gale Street Neighborhood Bikeway



Exhibit 8: Morgan Street Contraflow Bike Lane



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CHAPTER 6: TRANSIT SYSTEM

TRANSIT SERVICE AND FACILITIES

Public transportation in Heppner today is provided by The Loop, which was formerly known as Morrow County Special Transportation. The Loop is a fare-free, curb-to-curb, dial-a-ride service operated by a team of volunteer drivers. Volunteers are reimbursed \$25 for each day of service. One full-time county employee, a Transportation Coordinator, manages the service. Record keeping for The Loop trips, including trip mileage, pickup address, and destination city, is handled manually by drivers.



Loop Vehicles parked inside the “Bus Barn”



A Loop Vehicle

Passengers request rides by calling the dispatcher during the hours of operation, but rides can be scheduled outside of these dispatch hours if given adequate lead time. Riders must give The Loop at least a 24-hour notice when requesting pickups. Anyone residing in Morrow County is eligible to use The Loop, regardless of disability, veteran, or age. The Transportation Coordinator manages dispatching and scheduling, and vehicles can be dispatched from three locations: Boardman, Irrigon, or Heppner. Volunteers drive a Morrow County vehicle; they are not allowed to use their personal vehicles. There is no limit to trip distance when riding The Loop, and destinations are not limited to places within Morrow County. Riders may arrange trips as far from their pickup location as the volunteer drivers are willing to go.

Table 1: The Loop Service Summary

| Element | Description |
|-----------------------------|---|
| Service Area | Any origin within Morrow County, destinations served depend on volunteer driver, but are not limited to Morrow County. |
| Eligibility | Morrow County resident |
| Days and Hours of Operation | Ride dispatch operates 8:00 a.m. to 5:00 p.m. Monday – Friday. Rides may be scheduled outside of those hours with adequate lead time. |
| Fares | Free; donations are accepted |
| Dispatch | Dispatch is coordinated manually; upgrade to dispatch software system expected in near future. |
| Fleet | Variety of sedans and vans |
| ADA accessibility | Roughly half of vehicle fleet is ADA accessible |
| Funding and budget | Oregon Special Transportation Fund (STF), Federal Transit Administration Section 5310 (Enhanced Mobility of Seniors and Individuals with Disabilities), and Veterans Administration Highly Rural Transportation Grant. Expenses include salary, building costs, insurance, phone, vehicle maintenance and upkeep, fuel, office expenditures, tires, drivers expenses, contracted services, training, mileage, lodging, registrations and dues, bus barn rent, vehicle replacement, software maintenance, meals, bus washing services and supplies, advertising, and miscellaneous other items, |
| Ridership | 4,463 in 2016 |

RIDERSHIP TRENDS

Since 2014, The Loop’s annual ridership has grown from 2,940 passengers to 4,463. Ridership is on a steady upward trend, increasing over 50% between 2014 and 2016 after a dip in 2015. If monthly trends continue, 2017 ridership will easily surpass 2016 levels. Since The Loop receives Veterans Administration funding through the Highly Rural Transportation Grant, veterans’ trips are reported separately from the general public. In 2015, veterans in Morrow County accounted for nearly 8% of all trips on The Loop, **Table 2** shows the breakdown of veterans’ trips versus all other trips by year going back to 2014.

Table 2: The Loop Annual Ridership by Year

| | 2014 | 2015 | 2016 | 2017 (through Sept.) |
|--------------------|---------------|--------------|--------------|----------------------|
| Veteran trips | (not tracked) | 191 | 189 | 141 |
| Non-Veteran | 2,940 | 2,402 | 4,274 | 3,816 |
| Total Trips | 2,940 | 2,593 | 4,463 | 3,957 |

Source: Morrow County Transportation

On average, The Loop has carried 310 passengers per month during the past four years.

Table 3: The Loop Average Monthly Ridership by Year

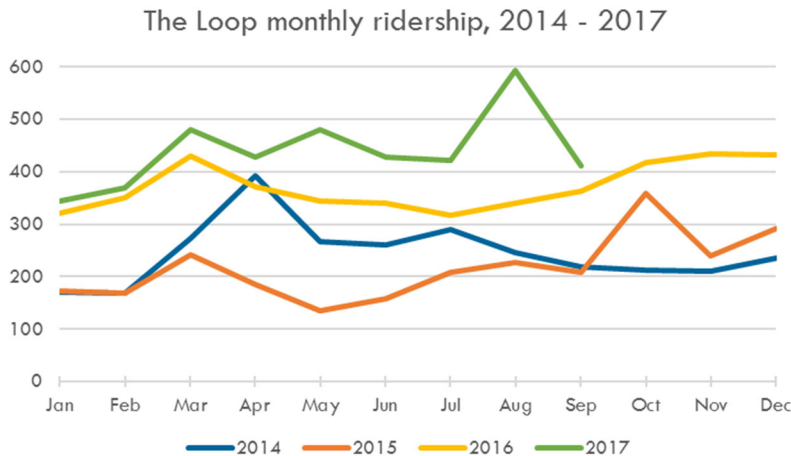
| 2014 | 2015 | 2016 | 2017 (through Sept.) |
|------|------|------|----------------------|
| 245 | 216 | 372 | 440 |

Source: Morrow County Transportation

Looking at ridership by month the number of passengers ebbs and flows throughout the year but there is no discernable seasonal or monthly pattern – e.g., there is no trend, for instance, showing

consistent lower summer ridership from year to year. August 2017 saw the highest monthly total over the past several years, with nearly 600 passengers.

Exhibit 9: Monthly Ridership by Year



Source: Morrow County Transportation

THE LOOP RIDERSHIP PATTERNS

Successful public transportation links common origins and destinations. Looking at a typical month of The Loop ridership can reveal trip patterns of current transit riders that may be representative of the overall community. This market could be tapped to increase transit ridership.

Trip log data from September 2017 show that The Loop carried 412 total passengers in the month, spread across 118 unique trips. Although the exact number of passengers riding per trip is unknown, this results in an overall average of nearly 3.5 passengers per trip across the entire month. Of these 118 unique trips, 46 trips, or 39% of all The Loop trips, started in Heppner (**Table 4**).

Table 4: The Loop Trips Starting in Heppner

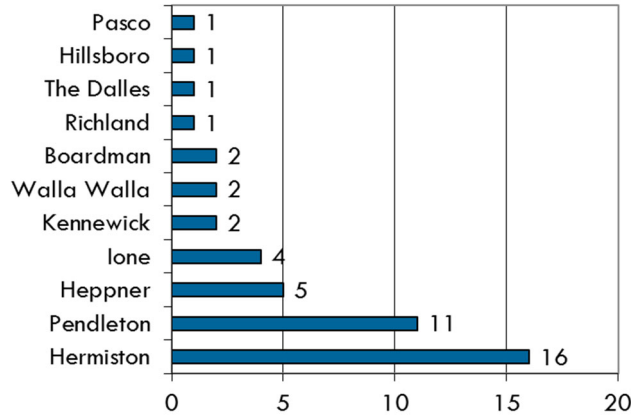
| Origin city | Trip total |
|--------------|------------|
| Heppner | 46 |
| Irrigon | 29 |
| Boardman | 19 |
| lone | 13 |
| Lexington | 11 |
| Total | 118 |

Source: Morrow County Transportation

Of the trips originating in Heppner, nearly 90% were headed toward a destination outside the city. The exact destination of the trip is not known, as volunteers are not required to report this information. Information on the city or general location of the destination is known, however, and is summarized in **Table 4** for trips starting in Heppner. Of the 46 trips in the month of September that began in Heppner, there were five intra-city trips – indicating riders who were going from one location in Heppner to another location in Heppner. No trips were recorded in September that left from another city for a destination in Heppner.

In terms of general destinations, people traveling from Heppner on The Loop are primarily going to Umatilla County. Destinations in Hermiston and Pendleton accounted for nearly 60% of all trips originating in Heppner (**Exhibit 10**). Just 11 out of 46 trips from Heppner were traveling to other destinations in Morrow County. These ridership patterns confirm stakeholder feedback stating that most people in Morrow County travel to Hermiston or farther for major services. For example, people might shop at Family Foods in Heppner for day-to-day groceries but need to travel to Hermiston occasionally for major shopping trips.

Exhibit 10: Destination City of The Loop Trips, September 2017



As mentioned above, there is no limit to the length of a trip that a rider may request – trip length is based on volunteer willingness. These factors contribute to a relatively high average trip length for all The Loop trips – 127 miles per round trip, and 5.3 hours of total trip time (**Table 5**). The Heppner average trip length for September 2017 includes one very long trip to Hillsboro (178 miles and 6.8 hours per round trip).

Table 5: Average Round Trip Distance and Length by Origin City, September 2017

| Origin | Average Trip Distance (mi) | Average Trip Length (hr) |
|----------------|----------------------------|--------------------------|
| Boardman | 123 | 5.0 |
| Irrigon | 125 | 5.3 |
| Heppner | 178 | 6.8 |
| lone | 113 | 4.8 |
| Lexington | 177 | 7.4 |
| Overall | 127 | 5.3 |

Source: Morrow County Transportation

VEHICLES

All vehicles in the Loop fleet have a maximum passenger capacity of 14 or fewer, which allows volunteer operators to drive without needing a commercial driver’s license (CDL). Many vehicles are less than two years old, and all are in fair condition or better.

Table 6: The Loop Vehicle Inventory

| Make | Year | Seats | Mileage | Lift? | Condition | Storage Location |
|------------------------|------|-------|---------|---------|-----------|--------------------|
| Ford | 2017 | 14 | 8,560 | Yes | New | Boardman |
| New ADA Accessible Van | 2017 | 5 | 11,560 | No/Ramp | New | Heppner |
| Dodge | 2016 | 7 | 6,179 | No | New | Heppner |
| Dodge | 2016 | 7 | 2,626 | No | New | Irrigon |
| Dodge | 2016 | 7 | 1,005 | No | New | Boardman |
| Dodge | 2015 | 7 | 12,398 | No | New | Heppner |
| Ford | 2002 | 14 | 81,264 | Yes | Fair | Irrigon |
| Ford | 2000 | 14 | 185,175 | Yes | Fair | Heppner |
| Ford | 2000 | 10 | 160,985 | Yes | Fair | Heppner |
| Ford Crown Victoria | 1999 | 5 | 94,656 | No | Fair | Heppner Courthouse |

Source: Morrow County Transportation

TRANSIT NEEDS ASSESSMENT

This analysis of existing conditions reveals issues and opportunities related to public transportation. **Table 7** presents transit findings by broad topic area. This needs assessment will help lay the foundation for future analysis by creating an inventory of critical concerns and possible ways to address them moving forward.

Table 7: Issues and Opportunities

| Topic Area | Issue | Opportunity |
|----------------------------|--|---|
| Information and Marketing | General public may not be aware of The Loop Service | Continue marketing service to all Morrow County residents |
| | Potential to appeal to younger generation who is interest in transit | Increase marketing and social media presence |
| Technology | Dispatching and schedule done manually | Staff currently receiving training on new scheduling software. Pursue a contract with software provider to automatically handle scheduling and dispatch. |
| | Limited vehicle amenities; long trip distances | Study the possibility of offering wi-fi on vehicles to increase appeal to broader range of riders. |
| Operations | Fleet has outgrown existing Heppner bus barn | Explore options for building or renting larger long-term facility in Heppner, Lexington, or the surrounding area. |
| | Not all The Loop vehicles are equipped with wheelchair lifts or ramps. | Upgrade vehicles when funding becomes available. |
| | Long-term staffing for The Loop uncertain | Form a succession plan to account for current staff retirement, and hire new staff with specific transit planning experience. |
| | Lack of volunteers/unmet demand – 17 denials in the month of September | Identify additional volunteer drivers to expand the volunteer pool beyond the existing nine. Explore ways to incentivize additional volunteers, such as by increasing the daily reimbursement rate. |
| | Limited funding for system expansion | Oregon HB 2017 will allocate additional funding for Morrow County transportation – possibly \$100,000 - \$200,000 annually beginning in FY 2020. |
| Market for Transit Service | Difficult to serve agricultural sector workers and Port of Morrow; destinations not on main roads and demand for employees ebbs and flows. | Shuttles or vanpools may best serve employment market |
| | Trip distances on The Loop are very long. People must travel far from Heppner to major destinations, which is difficult to address with regular transit service. | Consider connecting people via Morrow County transit to locations served by other providers, like Kayak. Transit to Hermiston, for example, would allow a person to travel via Kayak to Pendleton, Tri-Cities, or La Grande, for example. |
| | Desire to expand public transportation both within Heppner as well as connecting to regional destinations. | Study feasibility of establishing fixed route service in the near future. Look to Grant County People Mover as a potential example. |
| | Although Heppner is compact, topography and consideration of those with limited mobility may indicate demand for intra-Heppner transit | Continue providing demand-response service within Heppner |

CHAPTER 7: MOTOR VEHICLE SYSTEM

The street system within Heppner is well established in most areas; however, there are several existing roadways that could be improved and other areas where new roadways could be constructed to increase the efficiency of the transportation system as well as improve access and circulation for all travel modes. Many potential street connections are constrained by the topography of the surrounding land; therefore, the Motor Vehicle Plan primarily includes projects that could improve sight distance and visibility, transportation demand management measures, and city-wide parking management strategies.

FUNCTIONAL CLASSIFICATION SYSTEM

A street's functional classification defines its role in the transportation system and reflects desired operational and design characteristics such as right-of-way requirements, pavement widths, pedestrian and bicycle features, and driveway (access) spacing standards. The classification of a given street is intended to convey the requirements, capabilities, and capacity of each respective roadway while recognizing a roadway's contribution to the overall transportation system. Each roadway must be appropriately designed 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 service adjacent land uses.

The functional classification plan for the City of Heppner incorporates three functional categories: *Arterials, Collectors, and Local Streets* as defined below:

Arterial

Arterials are roadways that are primarily intended to serve traffic entering and leaving the urban area. Arterials tend to carry significant interurban 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.

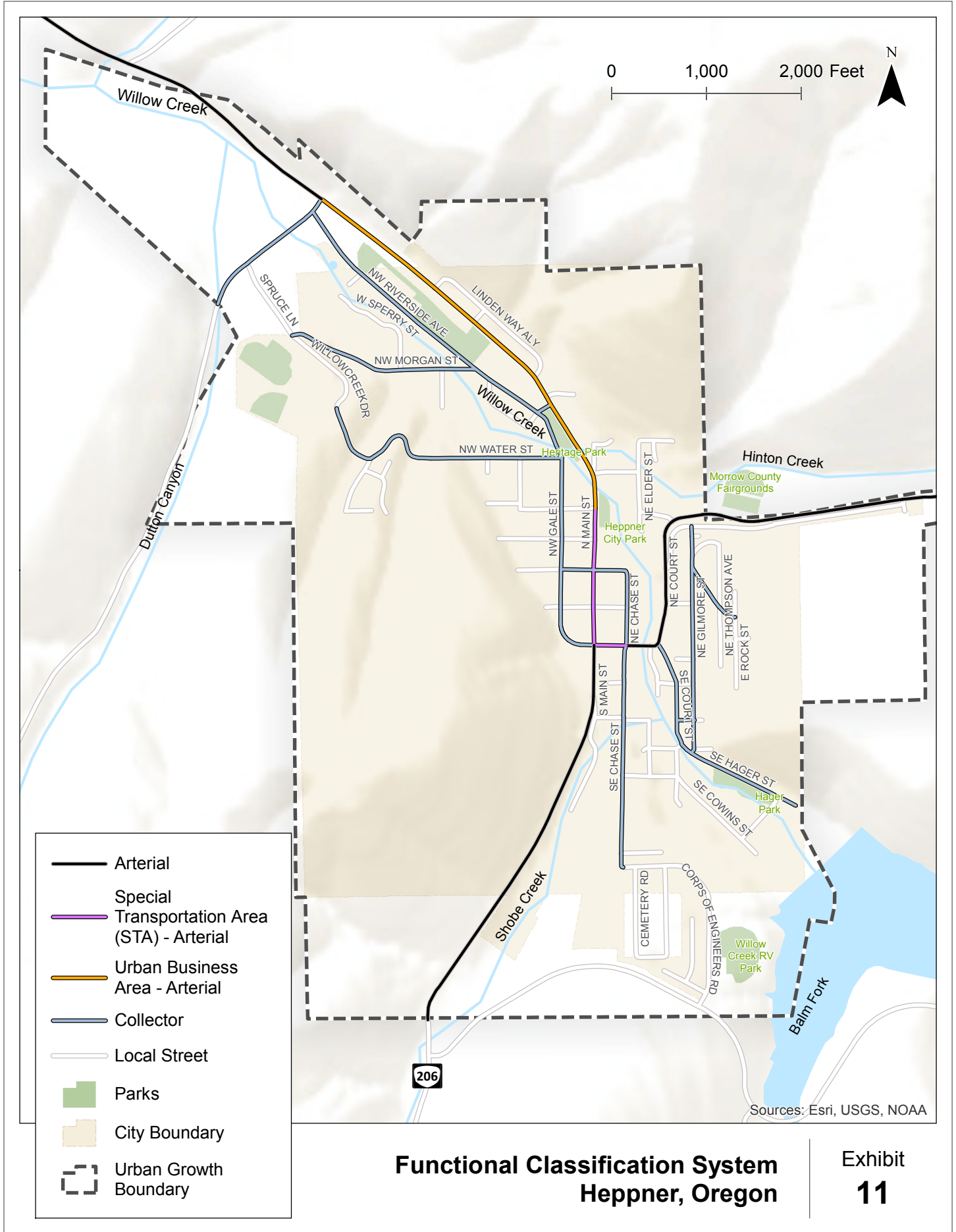
Collectors

Collector facilities link arterials with the local street system. As implied by their name, collectors are intended to collector 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.

Local Street

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.

Exhibit 11 illustrates the functional classification of the streets within Heppner.



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Functional Classification System Heppner, Oregon

Exhibit
11

ROADWAY CROSS SECTION STANDARDS

Roadway cross section standards were developed for the Heppner TSP update based on the characteristics of the existing roadways within the city. The design of a roadway can (and will) vary from street to street and segment to segment due to adjacent land uses and demand. The roadway cross sections are intended to define a system that allows standardization of key characteristics to provide consistency, but also to provide criteria for application that provides some flexibility while meeting the design standards. **Table 8** outlines the roadway cross section standards for city streets. **Exhibit 12** through **Exhibit 16** illustrate the cross-section standards for each functional classification.

Table 8: Street Design Standard Recommendations

| Classification | Cross Section | Right-of-Way | Travel Lanes | On-Street Parking | Bike Lane? | Sidewalks? | Landscape Strip? |
|-------------------------------|---------------|--------------|--|-------------------|------------|------------|------------------|
| Arterial Street | 2 lanes | 60 feet | 12 feet | No | Yes | Yes | No |
| Arterial Street (Main Street) | 2 lanes | 100 feet | 13 feet | Yes | No | Yes | Yes |
| Collector | 2 lanes | 60 feet | 12 feet | Yes | No | Yes | Yes |
| Local Street | 1-2 lanes | 40 feet | Not striped (28 feet paved width min.) | No | No | Yes | No |
| Local Street (Skinny Street) | 1-2 lanes | 32 feet | Not striped (20 feet paved width min.) | No | No | Yes | Optional |

Exhibit 12: Arterial Street

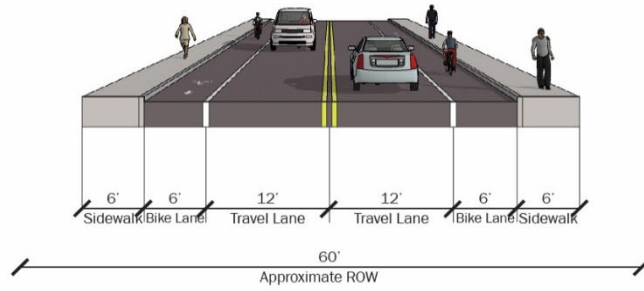


Exhibit 13: Arterial Street (Main Street)

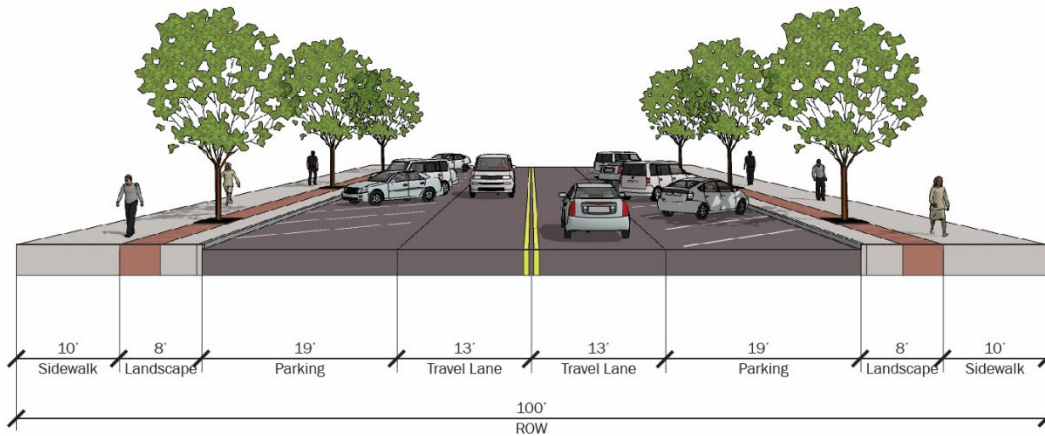


Exhibit 14: Collector Street

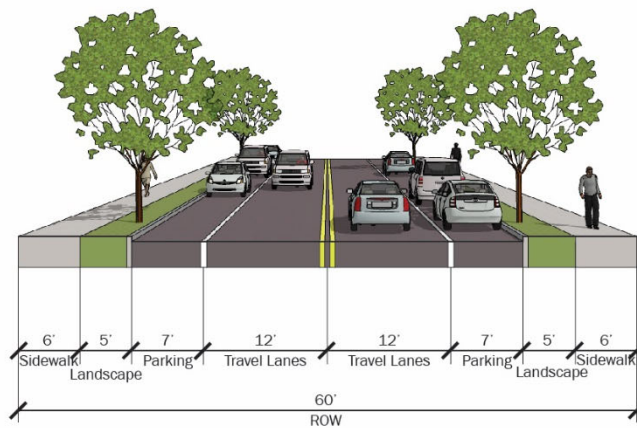


Exhibit 15: Local Street

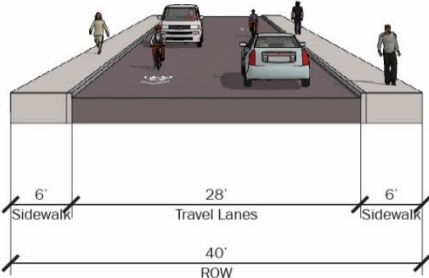
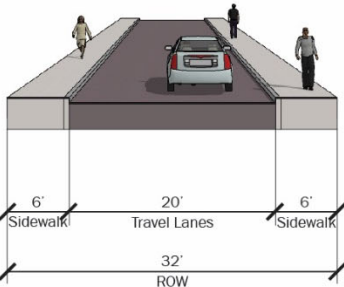


Exhibit 16: Local Street (Skinny Street)



ROADWAY PROJECTS

The street system within Heppner is well established in most areas; however, there are several existing roadways that could be improved and other areas where new roadways could be constructed to increase the efficiency of the transportation system as well as improve access and circulation for all travel modes. *Specific roadway projects for the City of Heppner are detailed and graphically illustrated in Volume II.*

Exhibit 17 illustrates a conceptual rendering of the identified improvement for the OR 74/Main Street/Quad Street intersection.

Exhibit 17: OR 74/Quad Street Intersection Improvements



CHAPTER 8: TRANSPORTATION SYSTEM MANAGEMENT AND OPERATIONS (TSMO) PLAN

TRANSPORTATION SYSTEM MANAGEMENT (TSM)

Transportation System Management (TSM) focuses on low cost strategies that can be implemented within the existing transportation infrastructure to enhance mobility performance. The priority is to find ways to better manage transportation while maximizing urban mobility and treating all modes of travel as a coordinated system. TSM strategies should continue to be explored in response to Heppner's development and growth.

TRANSPORTATION DEMAND MANAGEMENT (TDM)

Transportation Demand Management (TDM) is a policy tool as well as a general term used to describe any action that removes single occupant vehicle trips from the roadway during peak travel demand periods. As growth in the City of Heppner occurs, the number of vehicle trips and travel demand in the area will also increase. The ability to change a user's travel behavior and provide alternative mode choices will help accommodate this potential growth in trips. TDM strategies should continue to be explored specific to carpool services, collaborative marketing, limited and/or flexible parking requirements, and parking management.

TRAFFIC IMPACT STUDY

All land use actions, new developments, and/or redevelopments accessing the transportation system will need to provide a traffic impact study to the city and appropriate agencies (Morrow County and/or ODOT) if the proposed land use meets one or more of the criteria outlined in the Heppner City Code. A traffic impact study will not be required of a development that does not exceed the stated thresholds. All traffic impact studies will need to be prepared by a registered professional engineer.

ACCESS SPACING STANDARDS

Access management refers to a set of measures regulating access to streets, roads, and highways, from public roads and private driveways. Access management is a policy tool which seeks to balance the need to provide safe, efficient, and timely travel with the need to allow access to individual properties. Proper implementation of access management techniques should guarantee reduced congestion, reduced accident rates, less need for roadway widening, conservation of energy, and reduced air pollution. Measures may include but are not limited to restrictions on the type and amount of access to roadways, and use of physical controls, such as signals and channelization including raised medians, to reduce impacts of approach road traffic on the main facility.

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.

ODOT STANDARDS

Oregon Administrative Rule 734, Division 51 establishes procedures, standards, and approval criteria used by ODOT to govern highway approach permitting and access management consistent with

Oregon Revised Statutes (ORS), Oregon Administrative Rules (OAR), statewide planning goals, acknowledged comprehensive plans, and the Oregon Highway Plan (OHP). The OHP serves as the policy basis for implementing Division 51 and guides the administration of access management rules, including mitigation and public investment, when required, to ensure highway safety and operations pursuant to this division.

Access spacing standards for approaches to state highways are based on the classification of the highway and highway designation, type of area, and posted speed. Within the Heppner city limits, the OHP classifies OR 74 as a Regional Highway from the northern City limits to the OR74/May Street intersection and as a District Highway from the OR74/May Street intersection to the eastern City limits. South of the OR74/May Street, OR 74 becomes OR 207 and is classified as a Regional Highway. Future developments along OR 74 and OR 207 (new development, redevelopment, zone changes, and/or comprehensive plan amendments) will be required to meet the OHP policies and standards. **Table 9** summarizes ODOT’s current access spacing standards for the classifications of OR 74 and OR 207 per the OHP.

Table 9: OHP Access Spacing Standards

| Highway Classification | Posted Speed (MPH) | Spacing Standards (Feet) ¹ | UBA | STA ² |
|------------------------|--------------------|---------------------------------------|-----|------------------|
| Regional Highway | 35 | 600 | 425 | - |
| | 25 | 450 | 350 | - |
| District Highway | 35 | 400 | 350 | - |
| | 25 | | 350 | - |

1: These access management spacing standards do not apply to approaches in existence prior to April 1, 2000 except as provided in OAR 734-051-5120(9).
 2: Minimum 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).

Special Transportation Area

The segment of OR 74 from Church Street to Chase Street Avenue (mile point 45.61 to 45.98) is designated as a Special Transportation Area (STA). A STA is a designated district of compact development along a state highway in which the need for appropriate local access outweighs the considerations of highway mobility. The STA designation allows for redevelopment to occur along OR 74 with access less than that standard spacing shown in **Table 9**.

Urban Business Area

The segment of OR 74 from Fuller Canyon Road to Church Street (mile point 44.72 to 45.61) is designated as an Urban Business Area (UBA). An UBA is a highway segment designation applied to existing areas of commercial activity or future nodes of various types of centers of commercial activity within urban growth boundaries where vehicular accessibility is important to continued economic viability. The UBA designation allows for redevelopment to occur along OR 74 with access less than that standard spacing shown in **Table 9**.

CITY STANDARDS

The City’s access spacing standards are intended to maintain and enhance the integrity (capacity, safety, and level of service) of city streets. Numerous driveways or street intersections increase the

number of conflicts and potential for collisions and decrease mobility and traffic flow. The City of Heppner needs a balance of streets that provide access with streets that serve mobility. **Table 10** summarizes the City’s access spacing standards for City streets. **Table 11** summarizes the private access driveway width standards. These standards will help to preserve transportation system investments and guard against deteriorations in safety and increased congestion.

Table 10: City Access 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 |

In cases where physical constraints or unique site characteristics limit the ability for the access spacing standards listed in **Table 10** and **Table 11** to be met, the City retains the right to grant an access spacing variance.

ACCESS SPACING VARIANCES

Access spacing variances may be provided to parcels whose highway/street 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 or the City, as appropriate, for a connection to a property that cannot be accessed in a manner that is consistent with the spacing standards. The permit can carry a condition that the access may be closed at such time that reasonable access becomes available to a local public street. The approval condition 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.

The requirements for obtaining a deviation from ODOT’s minimum spacing standards are documented in OAR 734-051-3050. For streets under the City’s jurisdiction, the City may reduce the access spacing standards at the discretion of the Public Works Director if the following conditions exist:

- » Joint access driveways and cross access easements are provided in accordance with the standards;
- » The site plan incorporates a unified access and circulation system in accordance with the standards;
- » The property owner enters into a written agreement with the City that pre-existing connections on the site will be closed and eliminated after construction of each side of the joint use driveway; and/or,

- » The proposed access plan for redevelopment properties moves in the direction of the spacing standards.

The Public Works Director and/or Heppner Planning Commission may modify or waive the access spacing standards for streets under the City’s jurisdiction where the physical site characteristics or layout of abutting properties would make development of a unified or shared access and circulation system impractical, subject to the following considerations:

- » Unless modified, application of the access standard will result in the degradation of operational and safety integrity of the transportation system.
- » The granting of the variance shall meet the purpose and intent of these standards and shall not be considered until every feasible option for meeting access standards is explored.
- » Applicants for variance from these standards must provide proof of unique or special conditions that make strict application of the standards impractical. Applicants shall include proof that:
 - Indirect or restricted access cannot be obtained;
 - No engineering or construction solutions can be applied to mitigate the condition; and,
 - No alternative access is available from a road with a lower functional classification than the primary roadway.

No variance shall be granted where such hardship is self-created. Consistency between access spacing requirements and exceptions in the TSP and Heppner Municipal Code is an important regulatory solution to be addressed as part of this TSP update.

ACCESS CONSOLIDATION THROUGH MANAGEMENT

From an operational perspective, access management measures limit the number of redundant access points along roadways. This enhances roadway capacity, improves safety, and benefits circulation. Enforcement of the access spacing standards should be complemented with provision of alternative access points. Purchasing right-of-way and closing driveways without a parallel road system and/or other local access could seriously affect the viability of the impacted properties. Thus, if an access management approach is taken, alternative access should be developed to avoid “land-locking” a given property.

As part of every land use action, the City 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.

- » Providing access only to the lower classification roadway when multiple roadways abut the property.
- » Provision of crossover easements on all compatible parcels (considering topography, access, and land use) to facilitate future access between adjoining parcels.

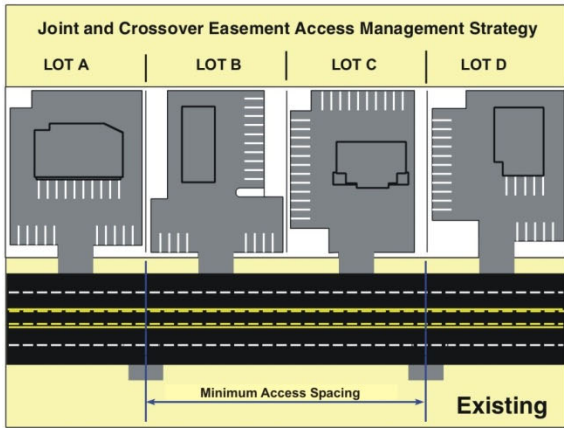
- » Issuance of conditional access permits to developments having proposed access points that do not meet the designated access spacing policy and/or have the ability to align with opposing driveways.
- » Right-of-way dedications to facilitate the future planned roadway system in the vicinity of proposed developments.
- » Half-street improvements (sidewalks, curb and gutter, bike lanes/paths, and/or travel lanes) along site frontages that do not have full build-out improvements in place at the time of development.

Exhibit 1 illustrates the application of cross-over easements and conditional access permits over time to achieve access management objectives. The individual steps are described in **Table 12**. As illustrated in the exhibit and supporting table, by using these guidelines, all driveways along the highways can eventually move in the overall direction of the access spacing standards as development and redevelopment occur along a given street.

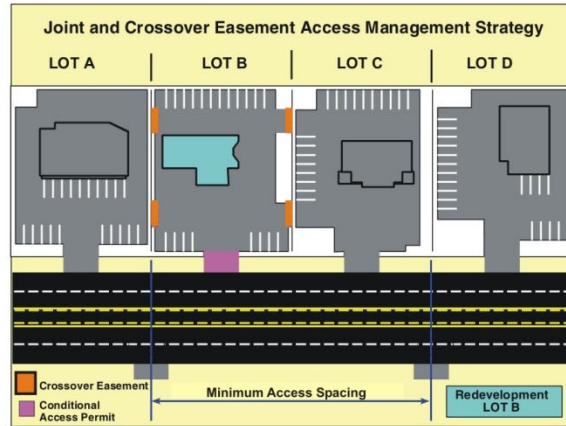
Table 12: Example of Crossover Easement/Indenture/Consolidation

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

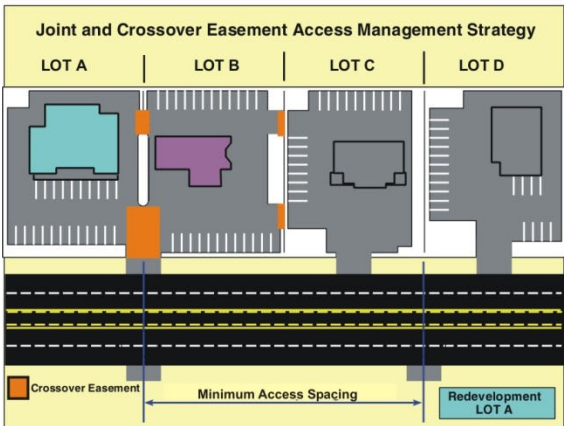
Exhibit 18: Cross Over Easement Proposed Access Management Strategy



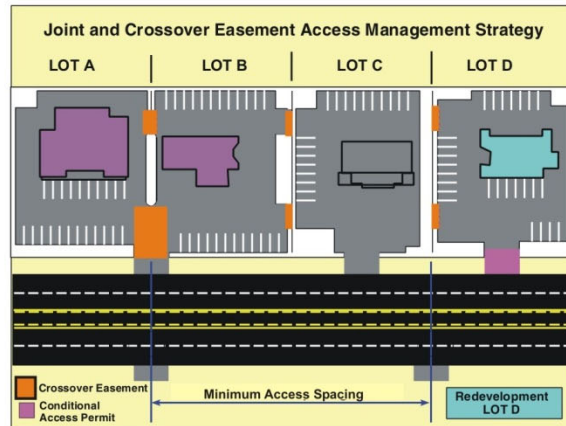
Step 1



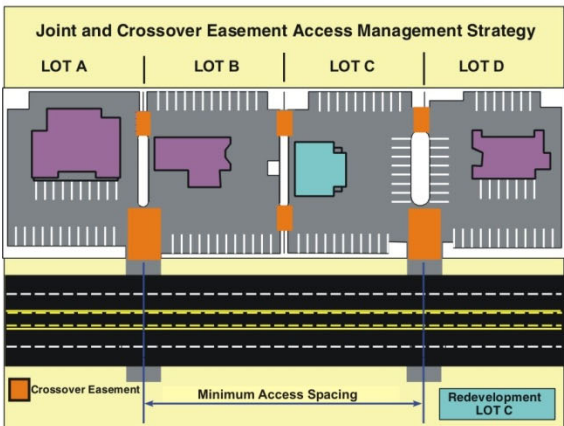
Step 2



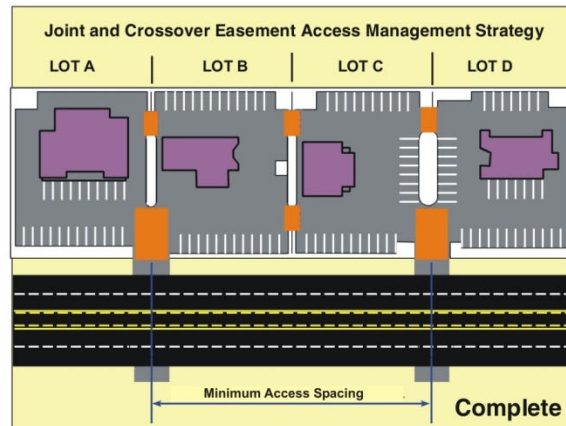
Step 3



Step 4



Step 5



Step 6

CHAPTER 9: OTHER TRAVEL MODES

This chapter summarizes the plans for other travel modes in Heppner such as rail, air, water, freight and pipeline.

RAIL TRANSPORTATION

Railroad service is no longer provided to the City of Heppner. While there are no rail transportation projects included in the Heppner TSP, the City will continue to support and promote improvements to the local and regional transportation system to ensure adequate access for Heppner residents to freight and passenger rail services.

AIR TRANSPORTATION

There are no public or private airports located within Heppner. The closest airport is the Lexington Airport located 10 miles northwest of Heppner. The city does support the continued use and expansion of local and regional air transportation facilities.

MARINE TRANSPORTATION

Marine transportation is not available within the City of Heppner. The city does 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)

PIPELINE

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

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CHAPTER 10: FUNDING AND IMPLEMENTATION OUTLINE

This chapter presents an overview of existing and future transportation funding estimates and identifies potential opportunities for the City to expand its transportation funding options.

TRANSPORTATION FUNDING IN HEPPNER

Key funding sources that have contributed to transportation projects within the City of Heppner over the past five years are summarized below.

REVENUE SOURCES

Table 13 displays the total revenue by source used to fund transportation projects within the city over the past five years. These include state gas tax revenue, intergovernmental grants, and miscellaneous funds. The vast majority of funds has come through intergovernmental grants.

Table 13: Heppner’s Revenue Source History (Five most recent years)

| Revenue Source | 2012/2013 | 2013/2014 | 2014/2015 | 2015/2016 | 2016/2017 | Average |
|-------------------|--------------------|------------------|------------------|-----------------|------------------|------------------|
| Taxes | \$70,460 | \$74,108 | \$73,365 | \$76,627 | \$77,598 | \$74,431 |
| Inter Govt. Grant | \$1,017,761 | \$446,789 | \$35,418 | \$5,000 | \$55,000 | \$311,993 |
| Other Int | \$168 | \$1,957 | \$171 | \$101 | \$76 | \$494 |
| Miscellaneous | - | \$43,283 | - | - | - | \$8,657 |
| Total | \$1,088,389 | \$566,137 | \$108,954 | \$81,728 | \$132,674 | \$430,201 |

Based on the information shown in **Table 13**, the City of Heppner has generated an average of approximately \$430,201 per year in total revenue for transportation related maintenance/projects. The steadiest revenue source for the City continues to be motor vehicle gas tax revenue at an average of approximately \$74,431 per year. In addition, the average of intergovernmental grants that did not include large dollar amounts (2014/2015 to 2016/2017) was approximately \$31,806. Based on the reliability and reasonableness of these two revenue sources, \$106,237 will be carried forward for projected transportation funding purposes.

EXPENDITURE HISTORY

Table 14 displays the total expenditures on transportation-related projects within the City of Heppner over the last five years.

Table 14: Heppner’s Expenditure History (Five most recent years)

| Expenditures | 2012/2013 | 2013/2014 | 2014/2015 | 2015/2016 | 2016/2017 | Average |
|----------------------|-----------------------|-----------------------|------------------|-----------------|------------------|-----------------|
| Materials & Services | \$29,959 | \$85,958 | \$42,519 | \$44,490 | \$36,020 | \$47,789 |
| Capital Outlay | \$24,927 ¹ | \$37,288 ² | \$73,435 | \$7,678 | \$66,810 | \$42,027 |
| Total | \$54,886 | \$123,246 | \$115,954 | \$52,168 | \$102,830 | \$89,817 |

1. Note: In year 2012/2013 approximately \$996,348 was spent on capital outlay; roughly 97% was funded through grants

2. Note: In year 2013/2014 approximately \$1,242,925 was spent on capital outlay; roughly 97% was funded through grants. Money

Based on the information shown in **Table 14**, the City of Heppner has spent an average of \$47,789 per year on materials and services (or approximately 11 percent of available resources) and \$42,027 on capital outlays (or approximately 10 percent of available resources). The information shown in **Table 13** and **Table 14** were used to project the availability of future funding for transportation improvement projects as described below.

PROJECTED TRANSPORTATION FUNDING

Table 15 provides a summary of the potential future project funding (in year 2018 dollars) over the next five, ten, and twenty years based on an assumed average funding level of approximately \$430,201 per year.

Table 15: Future Transportation Funding Projections

| Revenue Source | Average Annual | 5-Year Forecast | 10-Year Forecast | 20-Year Forecast |
|----------------------------------|----------------|-----------------|------------------|------------------|
| Total Revenue | \$106,237 | \$531,185 | \$1,062,370 | \$2,124,740 |
| Revenue for Materials & Services | \$56,305 | \$281,525 | \$563,050 | \$1,126,100 |
| Revenue for Capital Outlay | \$49,931 | \$249,655 | \$499,310 | \$998,620 |

As shown in **Table 15**, it is anticipated that approximately \$2,124,740 will be available for transportation project funding over the next 20 years using historical funding trends. This projection does not include potential funds received from intergovernmental grants. Under this methodology, approximately \$998,620 of the \$2,124,740 can reasonably be assumed to be available for funding the transportation plan while the remaining \$1,126,100 million will be needed for materials and services.

Table 16 summarizes the estimated transportation improvement costs. As shown, the funding shortfall is approximately \$22,474,130. Based on the estimated projected funding available and the estimated costs of the transportation improvement projects included in this memorandum, the City of Heppner will need to identify additional funding sources to pay for transportation improvements over the next 20 years.

Table 16: Estimated Transportation Improvement Cost

| Type | Near-Term | Medium-Term | Long-Term | Total |
|----------------|------------------|---------------------|--------------------|---------------------|
| Pedestrian | \$855,000 | \$7,615,000 | \$5,565,000 | \$14,035,000 |
| Bicycle | \$38,000 | \$2,361,000 | \$500,000 | \$2,899,000 |
| Multi-Use Path | \$0 | \$775,000 | \$1,015,000 | \$1,790,000 |
| Roadway | \$45,000 | \$3,152,250 | \$1,500,000 | \$4,697,250 |
| Transit | \$21,500 | 27,000 | \$3,000 | \$51,000 |
| Total | \$959,500 | \$13,930,250 | \$8,583,000 | \$23,472,750 |
| | | | Available | \$998,620 |
| | | | Funding Shortfall | \$22,474,130 |

POTENTIAL FUNDING SOURCES

Given the limited amount of capital funding Heppner has to implement transportation improvement projects, the most likely source of individual project funding will come from transportation improvement grants and partnerships with regional and state agencies. **Table 17** identifies a list of potential Grant sources and Partnering Opportunities for Heppner to consider during the course of the 20-year planning horizon. Following **Table 17**, identifies a list of potential new funding sources for Heppner to consider in an effort to bolster funds for additional capital improvement projects.

Table 17: Potential Grant Sources and Partnering Opportunities

| Funding Source | Description | Potential Facility Benefit | Opportunities |
|---|---|---|---|
| Federal Funding | Large trails or trail networks with a transportation purpose can compete for TIGER grant awards. Additional significant federal funding sources include TAP, STP and CMAQ. Depending upon the location and purpose, trails can also be funded by HUD CDBG funds, USDA rural development programs, or EPA funding. | - Multi-Use Trails | Projects in urban areas have traditionally been funded at a minimum of \$10,000,000 and rural trails of lower project costs are considered for TIGER funding. |
| Statewide Transportation Improvement Program (STIP) | The Statewide Transportation Improvement Program (STIP) is Oregon's 4-year capital improvement program for major state and regional transportation facilities. This scheduling and funding document is updated every two years. Projects included on the STIP are allocated into the five different ODOT regions. | - Streets - Sidewalks - Bike lanes - Trails | The next STIP (2018-2021) will be organized into two different categories that focus on projects that will fix/preserve the existing transportation network and enhance/improve the transportation network. |
| Oregon Bicycle and Pedestrian Program | The Oregon Pedestrian and Bicycle Grant program ended as a standalone solicitation process in 2012. Grant monies are now distributed through the "Enhance" process in the STIP program noted above. | - See STIP above | See STIP above. |
| ATV Grant Program | Operation and maintenance, law enforcement, emergency medical services, land acquisition, leases, planning, development and safety education in Oregon's OHV (off-highway vehicle recreation areas). | - Multi-use Trails | http://www.oregon.gov/oprd/ATV/pages/grants.aspx |
| Community Service Projects | Small-scale improvements could be organized, led and conducted by various members of the community to help implement and offset the costs of larger infrastructure projects. | - Multi-use Trails - Sidewalk/bike lane enhancements | Community service projects could be used to help clear brush for trail enhancement projects or improve existing walking /biking trails within the City. |

Table 18: Potential New Funding Sources for Consideration by Heppner

| Funding Source | Description | Potential Facility Benefit | Opportunities |
|--|--|--|--|
| User Fees | Fees tacked onto a monthly utility bill or tied to the annual registration of a vehicle to pay for improvements, expansion, and maintenance to the street system. This may be a more equitable assessment given the varying fuel efficiency of vehicles. Regardless of fuel efficiency, passenger vehicles do equal damage to the street system. | Primarily Street Improvements | The cost of implementing such a system could be prohibitive given the need to track the number of vehicle miles traveled in every vehicle. Additionally, a user fee specific to a single jurisdiction does not account for the street use from vehicles registered in other jurisdictions. |
| Street Utility Fees/Road Maintenance Fee | The fee is based on the number of trips a particular land use generates and is usually collected through a regular utility bill. For the communities in Oregon that have adopted this approach, it provides a stable source of revenue to pay for street maintenance allowing for safe and efficient movement of people, goods, and services. | Preservation, restoration, and reconstruction of existing paved residential streets. Includes sidewalks, ramps, curbs and gutters, and utility relocation. | Pendleton adopted the Street Maintenance Utility Fee in July 2015, which enables a \$5.00 monthly fee charged to residential meters. Heppner could consider a similar program. |
| Optional Tax | A tax that is paid at the option of the taxpayer to fund improvements. Usually not a legislative requirement to pay the tax and paid at the time other taxes are collected, optional taxes are usually less controversial and easily collected since they require the taxpayer to decide whether or not to pay the additional tax. | <ul style="list-style-type: none"> - Streets - Sidewalks - Bike lanes - Multi-Use Trails - Transit | The voluntary nature of the tax limits the reliability and stableness of the funding source. |
| Sponsorship | Financial backing of a project by a private corporation or public interest group, as a means of enhancing its corporate image. | <ul style="list-style-type: none"> - Transit - Multi-Use Trails | Sponsorship has primarily been used by transit providers to help offset the cost of providing transit services and maintaining transit related improvements. |
| Federal Funding | Trails with a transportation purpose can compete for TIGER grant awards. Depending upon the location and purpose, trails can also be funded by HUD, CDBG funds, USDA rural development programs, or EPA funding. | <ul style="list-style-type: none"> - Trails | Projects in urban areas have traditionally been funded at a minimum of \$10,000,000 and rural trails of lower project costs are considered for TIGER funding. |

PUBLIC TRANSPORTATION FUNDING IN HEPPNER

Public transportation service in Heppner is provided by Morrow County through a service called The Loop. The City of Heppner does not have city-specific public transportation, therefore this section describes the county’s financial history. The Loop has grown from a system with a \$36,500 operating budget in 2004 to nearly \$173,000 per year in 2017. The following sections describe revenue and expenditure trends, and future funding opportunities.

PUBLIC TRANSPORTATION REVENUES & EXPENDITURES

The Loop typically receives both federal and state funds, distributed from the Oregon Department of Transportation. The County has also received funding from the Oregon Department of Veterans Affairs through the federal Highly Rural Transportation Grants program. **Table 19** describes the funding sources used to date to support The Loop.

The Oregon Special Transportation Fund (STF) is allocated through the Oregon Department of Transportation (ODOT) and has been a primary source of funding for The Loop. The funds may be used for transit operations, capital equipment, planning, travel training, and other transit-related purposes. Each STF Agency (e.g. Morrow County) has a government body (such as County Commissioners) and an STF Advisory Committee. This committee advises the STF Agency on project selection.

Table 19: The Loop Funding Sources

| Program Name | Description | Eligible Agencies | Eligible Activities |
|--|--|--|---|
| Federal | | | |
| FTA 5310 Enhanced Mobility of Seniors & Individuals with Disabilities ¹ | <ul style="list-style-type: none"> ▪ Federal Transit Administration grants for public transportation to agencies who serve older adults and people with disabilities ▪ ODOT allocates capital funds every two years by formula based on population ▪ ODOT may offer discretionary grants through this program, for capital or operating ▪ Local match is 20% capital (including purchased service) and 50% operating (limited eligibility) | ODOT Subrecipients: <ul style="list-style-type: none"> ▪ STF agencies (Morrow County) ▪ Nonprofit organizations ▪ Public transportation operators | <ul style="list-style-type: none"> ▪ Capital ▪ Operations (limited) ▪ Travel training, mobility management |
| Highly Rural Transportation Grants | <ul style="list-style-type: none"> ▪ US Department of Veterans Affairs provides up to \$50,000 per year for transportation in select counties nationwide (no local match required) ▪ Supports transportation programs in highly rural counties to help veterans access Veterans Administration (VA) authorized health care facilities ▪ Veterans receive free transportation to and from medical facilities | <ul style="list-style-type: none"> ▪ State Veterans Service agencies, recognized Veterans Service Organizations, and sub-grantees of the above ▪ Oregon Department of Veterans Affairs sub-grantees include counties and private non-profits | <ul style="list-style-type: none"> ▪ Capital ▪ Operations ▪ Planning |
| State | | | |
| Oregon Special Transportation Fund (STF) - Formula ² | <ul style="list-style-type: none"> ▪ Grants for public transportation agencies providing service to older adults, people with disabilities, and low-income communities ▪ ODOT awards funds every two years (odd-numbered fiscal years) to STF agencies by formula based on population | <ul style="list-style-type: none"> ▪ Designated STF agencies (Morrow County) receive funds and manage local award process with input from STF Advisory Committee | <ul style="list-style-type: none"> ▪ Capital ▪ Operations ▪ Planning |
| Oregon Special Transportation Fund (STF) - Discretionary ³ | <ul style="list-style-type: none"> ▪ Grants for public transportation agencies providing service to older adults, people with disabilities, and low-income communities ▪ ODOT awards funds on even-numbered fiscal years, contingent on available funds ▪ Funding criteria target innovative capital, start up, and pilot programs, though subject to change | <ul style="list-style-type: none"> ▪ ODOT manages award process ▪ Public and non-profit local public transportation providers apply through the local STF agency | <ul style="list-style-type: none"> ▪ Capital ▪ Operations ▪ Planning |

¹ Federal Transit Administration, Fact Sheet: Enhanced Mobility of Seniors and Individuals With Disabilities, Chapter 53 Section 5310, U.S. Department of Transportation, 2015. https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/funding/grants/37971/5310-enhanced-mobility-seniors-disabled-fact-sheet_0.pdf

² Oregon Department of Transportation, Public Transportation Funding in Oregon, 2017. <http://www.oregon.gov/ODOT/RPTD/RPTD%20Document%20Library/Transit-funding-in-Oregon.pdf>

³ Oregon Department of Transportation, Public Transportation Funding in Oregon, 2017. <http://www.oregon.gov/ODOT/RPTD/RPTD%20Document%20Library/Transit-funding-in-Oregon.pdf>

REVENUE TRENDS

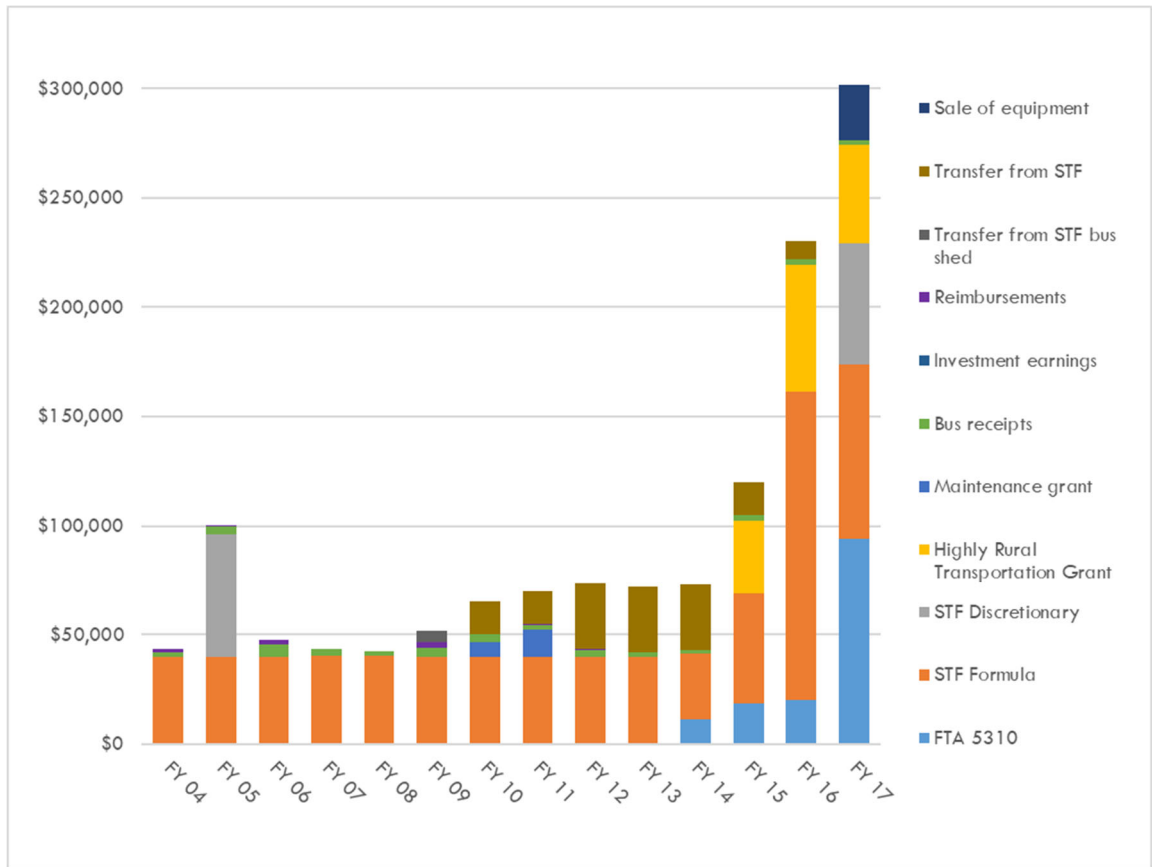
From approximately 2004 to 2011, the bulk of The Loop’s revenues came from STF funds. Over time, additional revenue sources have been added to The Loop budget since the service has expanded, but STF allocations per year remained fairly steady at approximately \$40,000 per year until 2016. **Exhibit 19** shows revenue trends by source from 2004 to 2017.

As shown, STF funds spiked in 2016 to \$141,000, due to a supplemental increase in STF funds available through STF revenue sources. ODOT allocated these funds to STF Agencies through two supplemental payments using existing grant agreements.

In 2014 and 2015, Morrow County began receiving FTA 5310 funds and Highly Rural Transportation Grants. Morrow County has also received two STF discretionary grants, enabling the purchase of new vehicles for The Loop in 2005 and 2017.

STF (formula and discretionary), FTA 5310, and HRTG funds have made up the majority of The Loop revenues during the past few years. Note that STF funds can be used as a match for federal funds. The balance of The Loop’s revenues has come from various sources, such as charges for service (donations), equipment sales, and transfers between county funds. There is no locally generated revenue for The Loop, such as contributions from a taxing district or City of Heppner funds. The Loop is fare-free, meaning there is no fare revenue aside from voluntary donations made by some passengers.

Exhibit 19: Revenue Trends

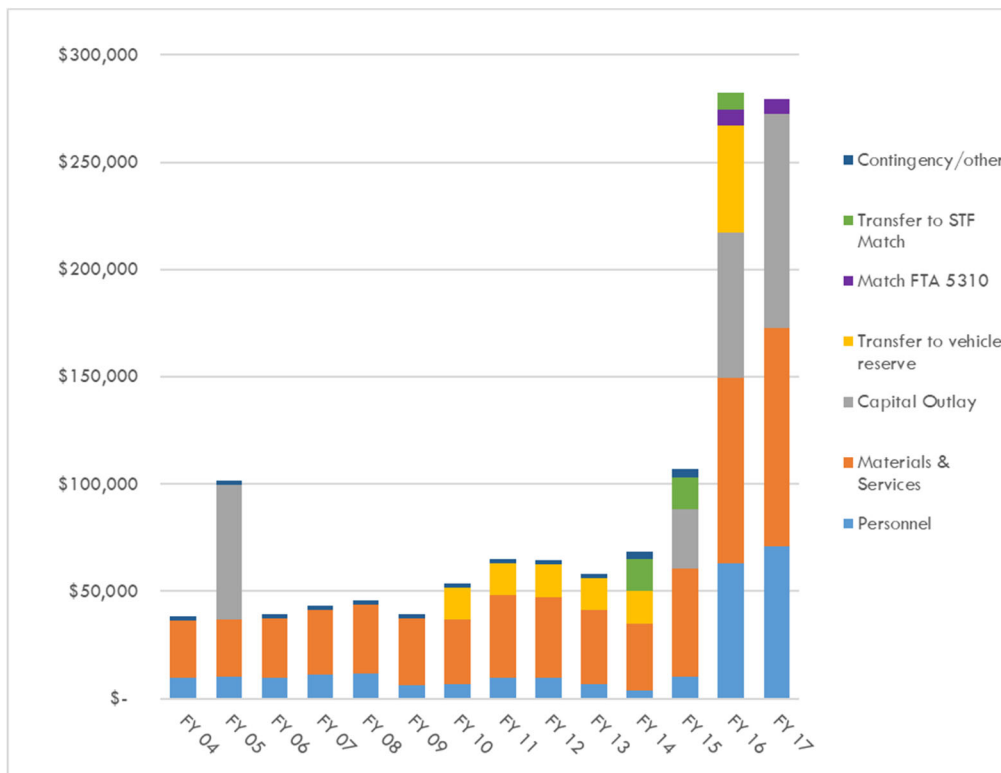


Source: Morrow County

EXPENDITURE TRENDS

Major recurring expenses for The Loop include costs for personnel, and materials and services. Personnel costs have increased from an average of \$8,500 per year from 2004 through 2014, to \$48,000 per year from 2015 through 2017 due to the hiring of a full-time transportation coordinator. Materials and services costs have increased from an average of \$31,500 from 2004 through 2015, to more than \$100,000 in 2017. Part of this increase can be attributed to the daily reimbursements for volunteer drivers (\$25 per day no matter the trip distance), which began in 2016. Large one-time capital outlays have occurred periodically as aging vehicles have been replaced, ranging in cost from \$26,000 to \$68,000 depending on the type of vehicle purchased.

Exhibit 20: Expenditure Trends



Source: Morrow County

SUMMARY

A summary of revenues and expenditures during the past 14 years is shown in **Table 20**.

Table 20: Summary of Revenues and Expenses, 2004 – 2017

| | FY 04 | FY 05 | FY 06 | FY 07 | FY 08 | FY 09 | FY 10 | FY 11 | FY 12 | FY 13 | FY 14 | FY 15 | FY 16 | FY 17 |
|-----------------------------------|-----------------|------------------|-----------------|-----------------|------------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|------------------|-------------------|------------------|
| Revenues | | | | | | | | | | | | | | |
| FTA 5310 | \$- | \$- | \$- | \$- | \$- | \$- | \$- | \$- | \$- | \$- | \$11,250 | \$18,750 | \$19,893 | \$94,042 |
| STF Formula | \$40,000 | \$40,000 | \$40,000 | \$40,150 | \$40,124 | \$40,000 | \$40,000 | \$40,000 | \$40,000 | \$40,000 | \$30,000 | \$50,000 | \$141,332 | \$80,000 |
| STF Discretionary | \$- | \$56,017 | \$- | \$- | \$- | \$- | \$- | \$- | \$- | \$- | \$- | \$- | \$- | \$55,000 |
| Highly Rural Transportation Grant | \$- | \$- | \$- | \$- | \$- | \$- | \$- | \$- | \$- | \$- | \$- | \$33,571 | \$58,128 | \$45,025 |
| Maintenance grant | \$- | \$- | \$- | \$- | \$- | \$- | \$6,438 | \$12,260 | \$- | \$- | \$- | \$- | \$- | \$- |
| Bus receipts | \$2,026 | \$3,786 | \$5,232 | \$3,152 | \$1,996 | \$3,959 | \$3,564 | \$1,942 | \$2,729 | \$1,703 | \$1,470 | \$2,620 | \$2,723 | \$2,379 |
| Investment earnings | \$- | \$- | \$- | \$- | \$- | \$- | \$- | \$- | \$- | \$- | \$140 | \$32 | \$35 | \$49 |
| Reimbursements | \$1,500 | \$160 | \$2,200 | \$- | \$- | \$2,500 | \$- | \$355 | \$820 | \$132 | \$26 | \$- | \$- | \$- |
| Transfer from STF bus shed | \$- | \$- | \$- | \$- | \$- | \$4,970 | \$- | \$- | \$- | \$- | \$- | \$- | \$- | \$- |
| Transfer from STF | \$- | \$- | \$- | \$- | \$- | \$- | \$15,000 | \$15,000 | \$30,000 | \$30,000 | \$30,000 | \$15,000 | \$7,950 | \$- |
| Sale of equipment | \$- | \$- | \$- | \$- | \$- | \$- | \$- | \$- | \$- | \$- | \$- | \$- | \$- | \$25,043 |
| Total Revenues | \$43,526 | \$99,963 | \$47,432 | \$43,302 | \$42,120 | \$51,429 | \$65,002 | \$69,557 | \$73,550 | \$71,834 | \$72,886 | \$119,973 | \$230,061 | \$301,538 |
| Expenses | | | | | | | | | | | | | | |
| Personnel | \$9,699 | \$10,056 | \$9,506 | \$11,044 | \$11,604 | \$6,407 | \$6,497 | \$9,583 | \$9,511 | \$6,554 | \$3,552 | \$10,371 | \$62,924 | \$70,836 |
| Materials & Services | \$26,810 | \$27,021 | \$27,638 | \$30,075 | \$32,167 | \$30,990 | \$30,315 | \$38,416 | \$37,874 | \$34,781 | \$31,487 | \$50,075 | \$86,441 | \$102,087 |
| Capital Outlay | \$- | \$62,428 | \$- | \$- | \$- | \$- | \$- | \$- | \$- | \$- | \$- | \$27,854 | \$67,911 | \$99,611 |
| Transfer to vehicle reserve | \$- | \$- | \$- | \$- | \$- | \$- | \$15,000 | \$15,000 | \$15,000 | \$15,000 | \$15,000 | \$- | \$50,000 | \$- |
| Match FTA 5310 | \$- | \$- | \$- | \$- | \$- | \$- | \$- | \$- | \$- | \$- | \$- | \$- | \$7,074 | \$7,074 |
| Transfer to STF Match | \$- | \$- | \$- | \$- | \$- | \$- | \$- | \$- | \$- | \$- | \$15,000 | \$15,000 | \$7,950 | \$- |
| Contingency/other | \$2,000 | \$2,000 | \$2,000 | \$2,000 | \$2,000 | \$2,000 | \$2,000 | \$2,000 | \$2,000 | \$2,000 | \$3,500 | \$3,500 | \$- | \$- |
| Total Expenses | \$38,508 | \$101,505 | \$39,144 | \$43,119 | \$45,771 | \$39,398 | \$53,812 | \$64,999 | \$64,385 | \$58,335 | \$68,539 | \$106,800 | \$282,300 | \$279,608 |
| Balance | \$5,018 | \$(1,542) | \$8,288 | \$183 | \$(3,650) | \$12,031 | \$11,190 | \$4,558 | \$9,164 | \$13,499 | \$4,347 | \$13,173 | \$(52,239) | \$21,929 |

Source: Morrow County

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THE LOOP PERFORMANCE MEASURES

The public transportation industry uses common performance measures to evaluate service cost-effectiveness (how much service the agency produces compared to cost) and service consumption (how many people use the service compared to the service levels provided). There is no “correct” metric or benchmark for each measure; rather, the metrics vary widely across different service providers and operating contexts. National data sets and peer reviews can provide a range of metrics against which an agency can benchmark itself, but ultimately a community’s decision to fund public transportation is based upon its goals and values.

For The Loop service, volunteer drivers record the number of passengers, round trip distance, and round trip time. Note that the round trip time includes the time spent at the appointment; in a fixed-route public transportation system this time would not be counted as part of the agency’s revenue hours. Data on total operating cost, ridership (total number of trips), mileage, and service time can be used to calculate five key measures often used by public transportation agencies:

- » Operating cost per trip – This evaluates the cost to transport each individual rider. As more riders are grouped onto the same vehicle, this figure declines. Costs per trip vary greatly based upon trip length, service boundary, and other factors. For example, demand-response systems might experience costs ranging from \$7 per rider to \$45 per rider. According to the National Center for Transit Research Rural Transit Fact Book, rural demand-response providers experience an average cost per trip of \$18.86.⁴
- » Operating cost per mile – This calculates the cost to provide one mile of public transportation service. The Rural Transit Fact Book reports that rural demand-response services had average operating costs of \$2.10 per mile of service in 2012.
- » Operating cost per service hour – This calculates the financial resources needed to produce one hour of transportation service. According to a sample of providers by the Transportation Research Board, rural countywide and multi-county demand-response services have operating costs per service hour ranging from \$26.08 to \$78.05.⁵
- » Trips per mile – This calculates the number of passengers riding the service per mile of operation, and relates to cost-efficiency in terms of understanding how much service is consumed by the population served. This figure is influenced by the average trip distance and the size of the service area. According to the Rural Transit Fact Book, rural demand-response services averaged 0.11 trips per mile of service in 2012.
- » Trips per hour – This calculates the number of passengers riding the service per hour of in-service time. Rural demand-response services average 1.8 trips per hour, according to the Rural Transit Fact Book, while the Transportation Research Board sample found a range from 1.6 to 6.2 trips per hour for countywide or multi-county systems.

⁴ National Center for Transit Research. Rural Transit Fact Book. <http://www.surtrc.org/transitfactbook/downloads/2014-rural-transit-fact-book.pdf>. 2014. Page 20. Note that this fact book relies upon data reported to the rural National Transit Database program. Very small operators like Morrow County do not report to NTD, therefore the metrics may not be directly comparable.

⁵ Transportation Research Board. Transit Cooperative Research Program (TCRP) Report 136: Guidebook for Rural Demand-Response Transportation: Measuring, Assessing, and Improving Performance: 2014. Page 56.

Annual and monthly ridership data for The Loop was available for 2015-2017. Combined with operating costs from the expenditures analysis, this allows for an analysis of operating cost per trip, as shown in **Table 21**.

The Loop cost per trip has ranged from \$24.45 per rider in FY 2015 to \$34.35 in FY 2017. The Loop's average cost per trip for 2015-2017 sits at the 75th percentile among all rural demand-response service providers nationwide, meaning The Loop's costs are higher than 75% of the systems surveyed in the Rural Transit Fact Book.

Table 21: Annual cost per rider, FY 15 – FY17

| Fiscal Year | Total Ridership (Includes veterans trips) | Total Operating Cost (Personnel + Materials and Services) | Cost per Trip |
|-------------|--|--|---------------|
| 2015 | 2,472 | \$60,446 | \$24.45 |
| 2016 | 3,923 | \$149,366 | \$38.07 |
| 2017 | 5,034 | \$172,923 | \$34.35 |
| Total | 11,429 | \$382,735 | \$32.29 |

Source: Morrow County

For the month of September 2017, data was available on total volunteer mileage and trip time length, which allows for calculation of cost per mile and hour, and trips per mile and hour. As shown in **Table 22**, The Loop provided more than 12,000 miles of service and carried 412 passengers in September 2017. Operating costs of \$1.17 per mile indicate that The Loop service efficiency is better than the \$2.10 national average for rural demand-response services. Long trip distances and low costs for vehicle operators likely contribute to this relatively high cost efficiency per mile. The Loop recorded 515 hours of service in September 2017, resulting in an operating cost per service hour of \$27.94, which is lower than national peers. This relatively low figure is likely a product of The Loop's low operating costs due to using volunteer drivers.

In terms of service consumption, The Loop carried 0.03 trips per mile of service in September 2017, which is below the national average of 0.11 trips per mile. Long trip distances (an average of 127 miles per round trip in September 2017) translated into relatively low numbers of trips per mile of service. Productivity was also below national demand-response peers, at 0.80 trips per hour.

Table 22: The Loop average monthly performance metrics, September 2017

| Passengers | Miles of service | Operating Cost (FY 2017 monthly average) | Operating cost per mile | Operating cost per service hour | Trips per mile | Trips per hour |
|------------|------------------|---|-------------------------|---------------------------------|----------------|----------------|
| 412 | 12,330 | \$14,410 | \$1.17 | \$27.94 | 0.03 | 0.80 |

Source: Morrow County

FUNDING OPPORTUNITIES

Morrow County has sustained The Loop using federal and state grant programs, relying primarily on STF and FTA 5310 funds. Stakeholders are interested in a more robust public transportation service, which would require additional resources. **Table 23** summarizes federal, state and local funding sources that are used to support public transportation in other communities and could be pursued for The Loop. Public transportation is county-funded, but the City of Heppner could help support the county in attaining these funds, whether through financial, policy, marketing, or other supportive measures.

One important new funding source already in rulemaking is the State Transportation Improvement Fund (STIF). Morrow County will receive from \$100,000 to \$140,000 per year beginning in 2019 through this new funding source generated by payroll tax. This greatly increases revenues, and with it, the opportunity to expand and improve public transportation in the region. The County and its local partners will need a local long-range plan, and a two-year STIF plan, to qualify for funding.

Table 23: Public Transportation Revenue Opportunities

| Program Name | Description | Eligible Agencies | Eligible Activities | Applicability/Assessment/Comments |
|--|---|---|---|---|
| Federal Grants | | | | |
| FTA 5311 | Capital, planning, and operations assistance that supports public transportation in rural communities with populations less than 50,000 Training and technical assistance through the Rural Transportation Assistance Program (RTAP) ODOT allocates funds every two years by formula based on ridership, population and miles Local match is 20% capital and 50% operating | Recipients o States o Native tribes or villages Subrecipients: o Local government authorities o Nonprofit organizations - Public transportation operators | Capital Planning Operations | This could be a long-term source of operating funding for The Loop, depending on service model / type A local agency must apply to ODOT to become an eligible “start-up” recipient of these formula-based funds; the funding allocation is based on ridership and miles, with a base amount determined annually for small agencies |
| FTA 5311(f) Rural Intercity Bus | ODOT statewide discretionary grant program. Discretionary program funds are generally very limited (i.e. < \$2 million) Rural intercity bus routes are those serving multiple jurisdictions with stops generally 5 miles apart or more Local match is 20% capital and 50% operating | State Public transportation operators Intercity bus service companies | Capital Operations Planning | This program may change as ODOT implements STIF programs This program is not likely to be a significant or sustainable source of ongoing funding for Morrow County |
| FTA 5339 Buses and Bus Facilities Grants Program ⁶ | Replace, rehabilitate, and purchase transit vehicles and related equipment Construct public transportation-related facilities ODOT discretionary program every 1 to 3 years Local match is 20% capital | Public transportation operators State and local government entities Tribes that are eligible to receive 5307 or 5311 | Capital | Though competitive, a transit provider can receive funding to replace vehicles exceeding useful life thresholds |
| Planning Grant Program (from ODOT via FTA 5303, 5304, and 5305) ⁷ | Discretionary ODOT grant program for public transportation plans that lead to improved public transportation systems ODOT Transit awards funds through irregularly-scheduled solicitations depending on available funds, or on an as-needed basis Local match is 20% | Rural and small urban public transportation providers | Planning | This offers local agencies a flexible, limited resource to create and maintain public transportation plans |
| State | | | | |
| State Transportation Investment Fund (STIF) - Formula | Included in Oregon House Bill 2017, passed in 2017 Dedicated funding source for public transportation from three new taxes 90% distributed by formula, 5% through a general discretionary program, and 4% through an intercity discretionary program. ODOT will use 1% for a transit technical resource center | Counties, public transportation districts, and tribes Public and private non-profit agencies | To improve or expand public transportation service in Oregon. Capital, operating, planning, administration | STIF Formula will provide \$100,000-\$140,000 per year to Morrow County Funds expected in 2019, date to be determined. Morrow County will manage the local project solicitation and recommendation process, similar to Oregon’s STF and FTA 5310 programs Cities and agencies in Morrow County are eligible to apply through Morrow County STIF adds reporting requirements to maintain eligibility |
| State Transportation Investment Fund (STIF) - Discretionary | STIF program includes a discretionary grant fund using 5% total funding | Counties and public transportation districts Public and private non-profit agencies | To improve or expand public transportation service in Oregon | Total funding amount to be determined. Cities and agencies are eligible to apply through Morrow County Emphasis on interregional travel; this is not considered a sustainable funding source for local agencies |
| Oregon Transportation Infrastructure Bank (OTIB) ⁸ | Statewide revolving loan fund “designed to promote innovative financing solutions for transportation needs” Set-aside for public transportation projects. Interest rates are very low and more favorable to local agencies than other loan programs | Cities Counties Public transportation districts Port authorities Special service districts Tribal governments State agencies | Public transportation capital projects (facilities, vehicles) Active transportation access projects on highway rights-of-way | This has been a resource for public transportation providers to cost-effectively secure a loan for major capital purposes A sustainable, regular local funding source is required to meet repayment schedule This is a financing source and not new revenue |
| ODOT Transportation Growth Management (TGM) Program | TGM Grants help local communities plan for streets and land use to foster more livable, economically vital, and sustainable communities and increase opportunities for transit, walking and bicycling ODOT solicits proposals and awards funds annually Local match is 12% | Counties Cities Public transportation providers | Planning | Heppner received TGM funding to support the TSP update in 2017 Awards are needs-based (e.g., time since last planning process), and Heppner is unlikely to require or receive an award in the near future |

⁶ Federal Transit Administration, Fact Sheet: Grants for Bus and Bus Facilities, Chapter 53 Section 5339, U.S. Department of Transportation, 2015. <https://www.transit.dot.gov/sites/fta.dot.gov/files/5339%20Bus%20and%20Bus%20Facilities%20Fact%20Sheet.pdf>

⁷ Oregon Department of Transportation, Public Transportation Funding Options, 2017. <http://www.oregon.gov/ODOT/RPTD/Pages/Funding-Opportunities.aspx#2f96a75c-e0ff-4504-aae5-ec14cee35125>

⁸ Oregon Department of Transportation, Financial Services: Oregon Transportation Infrastructure Bank, 2017. <http://www.oregon.gov/odot/about/pages/financial-information.aspx>

| Program Name | Description | Eligible Agencies | Eligible Activities | Applicability/Assessment/Comments |
|--------------------------------|---|--|---|---|
| Local | | | | |
| Transit Access (Utility) Fee | A transit access (utility) fee is paid by households and businesses within a service district, and is designed to support a transit service provider over time. A transit access fee could be assessed for all households within the transit service district, or a subset. | County Cities | Operations Capital Administration | There are approximately 550 households in Heppner as of 2015. A monthly utility fee of \$1 to \$1.50 per household could generate between \$6,500 and \$10,000 in annual revenue Transit access fees are typically a monthly charge of between \$1 to \$ 5 per household |
| Gasoline Tax | A gas tax is a tax on the sale of gasoline for use in motor vehicles Motorists already pay federal, state, and local taxes on motor fuel so the levy would not impose a new type of tax | State Local government authorities | Operations Capital Administration | Various cities and counties in Oregon have local gas taxes, ranging from \$0.01 to \$0.05 per gallon. Gas tax revenues are currently on a declining trend, due to factors such as increasing vehicle fuel efficiency, and adoption of alternative vehicle fuel sources. This long-term trend is expected to continue. |
| Property Tax | A property tax dedicated to funding public transportation is usually assessed at a rate per \$1,000 of property value Property taxes may be permanent, or temporary and need to be re-approved by voters | State Local government authorities | Operations Capital Administration | There are dedicated property taxes for public transportation in Oregon. Tillamook County has a tax of \$0.20 per \$1,000 in property value to fund operation of its public transportation system. Basin Transit (Klamath Falls) has a levy of \$0.38 per \$1,000 in property value. Property taxes in Oregon are subject to “compression,” which limits the amount of property taxes that can be collected (based on state Measures 5, 47, and 50) and can reduce the amount of revenue collected. |
| Local Option Sales Tax | A tax assessed on the purchase of goods or services within the jurisdiction of a taxing authority | State Local government authorities | Operations Capital Administration | Ontario, OR passed a 1% general sales tax in 2017, which will fund street repairs, law enforcement, parks, and other city services. Yachats and Ashland have excise taxes on food and beverages. ⁹ A specific local option sales tax can apply to tourism, collecting revenue from outside visitors. |
| Motor Vehicle Registration Fee | A tax assessed on the registration of private motor vehicles within the jurisdiction of a taxing authority | Counties Special districts | Operations Capital Administration | As of 2016, over 16,300 private motor vehicles are registered in Morrow County. ¹⁰ A \$1 annual registration fee would generate over \$8,000, with the assumption that at least 50% of registrations are ineligible for the fee. |
| Systems Development Charges | 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 public transportation use | Local government authorities | Capital | Irrigon and Boardman may have code provisions that allow SDCs that could fund transportation projects, but they have yet to be implemented. 2012 Morrow County Transportation System Plan suggests SDCs as a source of future transportation funding Cities in Morrow County currently have transportation system development charges and other fees associated with new developments. These are not linked to public transportation. |
| Tax Increment Financing | Tax increment financing (TIF) is the primary finance tool used within urban renewal areas TIF is generated when an urban renewal area (URA) is designated and the assessed value of all property in the area is ‘frozen.’ Over time, the total assessed value in the area increases above the ‘frozen base’ from appreciation and new development. The value in the area greater than the frozen base is called the incremental assessed value, and taxes generated on the incremental assessed value are received by the URA, rather than other taxing districts | Urban Renewal Area | TIF could only be used on public transportation capital projects that directly benefit the URA Projects that benefit the broader area can only receive TIF funding proportional to the benefits the URA receives | Could be used to fund capital improvements in conjunction with an urban renewal district within a Morrow County city, if established in the future |
| Advertising | Public transportation providers can display paid advertisements on agency properties, including the inside and outside of fleet vehicles, bus shelters, benches, and at transit stations | Public transportation providers Private businesses Non-profit agencies | Advertising | Could be a locally-generated source of funding for Heppner and support Heppner-specific transit service |

⁹Oregon Public Broadcasting, “Ontario Becomes Oregon’s Only City to Approve a Sales Tax,” 2017. <https://www.opb.org/news/article/ontario-oregon-sales-tax/>

¹⁰ Oregon Department of Transportation, Driver and Motor Vehicle Services Division, Oregon Motor Vehicle Registrations By County (Note 1), 2016. http://www.oregon.gov/ODOT/DMV/docs/2016_Vehicle_County_Registration.pdf

CONCLUSION

Morrow County's The Loop public transportation service has expanded significantly during the past 15 years. The recent hiring of a full-time staff member has increased annual expenditures, while substantially increasing capability. The Loop now has the responsiveness, expertise, and coordination needed to maintain compliance with existing and new grant programs, and to recruit and train volunteer drivers. The Oregon STIF program will add to the county public transportation revenues, increasing opportunities to expand service in Heppner and across the county.

CHAPTER 11: GLOSSARY OF TERMS

The following terms are applicable only to the Molalla Transportation System Plan and shall be construed as defined herein.

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

Accessway: Refers to a walkway that provides pedestrian and or bicycle passage either between streets or from a street to a building or other destination such as a school, park, or transit stop.

Alternative Modes: Transportation alternatives other than single-occupant automobiles such as rail, transit, bicycles and walking.

American Association of State Highway Transportation Officials (AASHTO): The American Association of State Highway and Transportation Officials (AASHTO) is a standards setting body which publishes specifications, test protocols and guidelines which are used in highway design and construction throughout the United States.

Americans with Disabilities Act (ADA): A civil rights law that prohibits discrimination against individuals with disabilities in all areas of public life, including jobs, schools, transportation, and all public and private places that are open to the general public.

Arterial (Street): A street designated in the functional class system as providing the highest amount of connectivity and mostly uninterrupted traffic flow through an urban area.

Arterial Corridor Management (ACM): a series of measures intended to improve access and circulation along arterial corridors.

Average Annual Daily Traffic (AADT): A measure used primarily in transportation planning and traffic engineering that represents the total volume of vehicular traffic on a highway or roadway for a year divided by 365 days.

Average Daily Traffic (ADT): This is the measurement of the average number of vehicles passing a certain point each day on a highway, road or street.

Bicycle Facility: Any facility provided for the benefit of bicycle travel, including bikeways and parking facilities.

Bicycle Network: A system of connected bikeways that provide access to and from local and regional destinations.

Bicycle Boulevard: Lower-order, lower-volume streets with various treatments to promote safe and convenient bicycle travel. Usually accommodates bicyclists and motorists in the same travel lanes, often with no specific vehicle or bike lane delineation. Assigns higher priority to through

bicyclists, with secondary priority assigned to motorists. Also includes treatments to slow vehicle traffic to enhance the bicycling environment.

Bike Lane: Area within street right-of-way designated specifically for bicycle use.

Capital Improvement Plan (CIP): A community planning and fiscal management tool used to coordinate the location, timing and financing of capital improvements over a multi-year period.

Capacity: The maximum number of vehicles or individuals that can traverse a given segment of a transportation facility with prevailing roadway and traffic conditions.

Central Business District (CBD): This is the traditional downtown area, and is usually characterized by slow traffic speeds, on-street parking and a compact grid system.

Citizen Advisory Committee (CAC): An advisory committee consisting of volunteer citizens from the community they represent.

Collector (Street): A street designated in the functional class system that provides connectivity between local and neighborhood streets with the arterial streets serving the urban area. Usually shorter in distance than arterials, designed with lower traffic speeds and has more traffic control devices than the arterial classification.

Congestion Mitigation/Air Quality (CMAQ): A program within the federal ISTEA and TEA-21 regulations that address congestion and transportation-related air pollution.

Crosswalk: Portion of a roadway designated for pedestrian crossing and can be either marked or unmarked. Unmarked crosswalks are the national extension of the shoulder, curb line or sidewalk.

Cycle Track: An exclusive bike facility that combines the user experience of a separated path with the on-street infrastructure of a conventional bike lane. A cycle track is physically separated from motor traffic and distinct from the sidewalk.

Demand Management: Refers to actions which are designed to change travel behavior in order to improve performance of transportation facilities and to reduce need for additional road capacity. Methods may include subsidizing transit for the journey to work trip, charging for parking, starting a van or car pool system, or instituting flexible work hours.

Department of Environmental Quality (DEQ): A regulatory agency whose job is to protect the quality of Oregon's environment.

Department of Land Conservation and Development (DLCD): A public agency that helps communities and citizens plan for, protect and improve the built and natural systems that provide a high quality of life.

Driveway (DWY): A short road leading from a public road to a private business or residence.

Eastbound (EB): Leading or traveling toward the east.

Employee Commute Options (ECO): rules that were passed by the Oregon Legislature in 1993 (and revised in February 2007) to help protect the health of Portland area residents from air pollution and to ensure that the area complied with the Federal Clean Air Act

Fiscal Year (FY): A year as reckoned for taxing or accounting purposes.

Geographic Information Systems (GIS): A system designed to capture, store, manipulate, analyze, manage, and present all types of spatial or geographical data.

Grade: A measure of the steepness of a roadway, bikeway or walkway, usually expressed in a percentage form of the ratio between vertical rise to horizontal distance, (e.g. a 5% grade means that the facility rises 5 feet in height over a 100 feet in length.)

Grade Separation: The vertical separation of conflicting travelways.

Green Street: A street designed to reduce or redirect stormwater runoff quantity and/or to improve stormwater runoff quality. Green street design generally involves using rain gardens, vegetated swales and/or pervious materials (porous pavement or permeable paving) as an alternative to conventional stormwater facilities.

High-capacity Transit (HCT): A form of public transit distinguished from local service transit such as bus lines by higher speeds, fewer stops, more passengers, and more frequent service.

Highway Design Manual (HDM): A manual that provides uniform standards and procedures for the design of new roadways and the major reconstruction, rehabilitation, restoration, and resurfacing of existing roadways.

High Occupancy Vehicle (HOV): A vehicle containing two or more occupants, generally a driver and one or more passengers.

Impervious Surfaces: Hard surfaces that do not allow water to soak into the ground, increasing the amount of stormwater running into the drainage system.

Intelligent Transportation Systems (ITS): the application of advanced technologies and proven management techniques to relieve congestion, enhance safety, provide services to travelers and assist transportation system operators in implementing suitable traffic management strategies.

Level of Service (LOS): A qualitative measure describing the perception of operation conditions within a traffic stream by motorists and or passengers. An LOS rating of "A" to "F" describes the traffic flow on streets and at intersections, ranging from LOS A, representing virtually free flow conditions and no impedance to LOS F representing forced flow conditions and congestion.

Local (Street): A street designated in the functional class system that's primary purpose is to provide access to land use as opposed to enhancing mobility. These streets typically have low volumes and are very short in relation to collectors and arterials.

Manual on Uniform Traffic Control Devices (MUTCD): A document issued by the Federal Highway Administration (FHWA) of the United States Department of Transportation (USDOT) to

specify the standards by which traffic signs, road surface markings, and signals are designed, installed, and used.

Metropolitan Planning Organization (MPO): An organization in each federally recognized urbanized area (population over 50,000) designated by the Governor which has the responsibility for planning, programming and coordinating the distribution of federal transportation resources.

Metropolitan Transportation Improvement Program (MTIP): The list of projects selected by Metro to receive regional funding assistance.

Multi-Modal: Involving several modes of transportation including bus, rail, bicycle, motor vehicle etc.

Multi-Use Path: Off-street route (typically recreationally focused) that can be used by several transportation modes, including bicycles, pedestrians and other non-motorized modes (i.e. skateboards, roller blades, etc.)

National Highway System (NHS): The National Highway System is interconnected urban and rural principal arterial and highways that serve major population centers, ports, airports and other major travel destinations, meet national defense requirements and serve interstate and interregional travel.

Neighborhood Route (Street): A street designated in the functional class system that's primary purpose is to provide access to land use, but provides more mobility than a local street. These streets typically have moderate volumes and are shorter in relation to collectors and arterials.

Neighborhood Traffic Management (NTM): Traffic control devices typically used in residential neighborhoods to slow traffic or possibly reduce the volume of traffic.

Northbound (NB): Traveling or leading toward the north.

Oregon Administrative Rules (OAR): The official compilation of rules and regulations having the force of law in the U.S. state of Oregon. It is the regulatory and administrative corollary to Oregon Revised Statutes, and is published pursuant to ORS 183.360 (3).

Oregon Department of Transportation (ODOT): ODOT is a public agency that helps provide a safe, efficient transportation system that supports economic opportunity and livable communities throughout Oregon. ODOT owns and operates two roadways (OR 213 and OR 211) that are located in Molalla or provide access to the city. There are street design and operational standards for these roadways which supersede Molalla's street design and operational standards.

Oregon Highway Plan (OHP): The document that establishes long range policies and investment strategies for the state highway system in Oregon.

Oregon Revised Statutes (ORS): The codified body of statutory law governing the U.S. state of Oregon, as enacted by the Oregon Legislative Assembly, and occasionally by citizen initiative. The statutes are subordinate to the Oregon Constitution.

Peak Period or Peak Hour: The period of the day with the highest number of travelers. This is normally between 4:00 p.m. to 6:00 p.m. on weekdays.

Pedestrian Connection: A continuous, unobstructed, reasonably direct route between two points that is intended and suitable for pedestrian use. These connections could include sidewalks, walkways, accessways, stairways and pedestrian bridges.

Pedestrian District: A comprehensive plan designation or implementing land use regulation, such as an overlay zone, that establishes requirements to provide a safe and convenient pedestrian environment an area planned for a mix of uses likely to support a relatively high level of pedestrian activity.

Pedestrian Facility: A facility provided for the benefit of pedestrian travel, including walkways, crosswalks, signs, signals and benches.

Pedestrian Scale: Site and building design elements that are oriented to the pedestrian and are dimensionally less than those sites designed to accommodate automobile traffic.

Regional Transportation Functional Plan (RTFP): A planning document that contains policies and guidelines to help local jurisdictions implement the policies in the Regional Transportation Plan (RTP) and its modal plans, include those for active transportation, freight movement and high capacity transit.

Regional Transportation Plan (RTP): The transportation plan for the Portland Metro region.

Right-Of-Way (ROW or R/W): A general term denoting publicly-owned land or property upon which public facilities and infrastructure is placed.

Safety Priority Index System (SPIS): An indexing system used by Oregon Department of Transportation to prioritize safety improvements based on crash frequency and severity on state facilities.

Safe Routes to School (SRTS): Federal, state, and local programs that create safe, convenient, and fun opportunities for children to bicycle and walk to and from schools.

Shared Roadway: Roadways where bicyclists and autos share the same travel lane. May include a wider outside lane and/or bicycle boulevard treatment (priority to through bikes on local streets).

Single-Occupancy Vehicle or Single-Occupant Vehicle (SOV): A vehicle containing only a single occupant, the driver.

Southbound (SB): Traveling or leading toward the south.

Special Transportation Area (STA): An ODOT designation that allows state facilities that run through downtown business districts to have alternate mobility standards in an effort to accommodate other special needs (such as pedestrian, transit, business, etc.) in an area.

Statewide Transportation Improvement Plan (STIP): The capital improvement program that identifies funding and schedule of statewide projects.

System Development Charge (SDC): Fees that are collected when new development occurs in the city and are used to fund a portion of new streets, sanitary sewers, parks and water.

Technical Advisory Committee (TAC): An advisory committee consisting of state, county, and city staff that review and provide feedback on technical memorandums.

Technical Memorandum (TM): A document that is specifically targeted to technically capable persons, such as practicing engineers or engineering managers, who are interested in the technical details of the project or task.

Traffic Control Devices: Signs, signals or other fixtures placed on or adjacent to a travelway that regulates, warns or guides traffic. Can be either permanent or temporary.

Transportation Advisory Board (TAB): A standing advisory board made of up volunteers that comment on transportation issues within the City.

Transportation Analysis Zone (TAZ): A geographic sub-area used to assess travel demands using a travel demand forecasting model. Often defined by the transportation network and US Census blocks.

Transportation Demand Management (TDM): A policy tool as well as any action that removes single-occupant vehicle trips from the roadway network during peak travel demand periods.

Transportation and Growth Management (TGM): A program of the Oregon Department of Transportation (ODOT) that supports community efforts to expand transportation choices. By linking land use and transportation planning, TGM works in partnership with local governments to create vibrant, livable places in which people can walk, bike, take transit or drive where they want to go.

Transportation Management Area (TMA): A Transportation Management Area is an area designated by the Secretary of Transportation, having an urbanized area population of over 200,000, or upon special request from the Governor and the MPO designated for the area.

Transportation Planning Rule (TPR): A series of Oregon Administrative Rules intended to coordinate land use and transportation planning efforts to ensure that the planned transportation system supports a pattern of travel and land use in urban areas that will avoid the air pollution, traffic and livability problems faced by other large urban areas of the country through measures designed to increase transportation choices and make more efficient use of the existing transportation system.

Transportation System Management (TSM): Management strategies such as signal improvements, traffic signal coordination, traffic calming, access management, local street connectivity, and intelligent transportation systems

Transportation System Management and Operations (TSMO): An integrated program to optimize the performance of existing multimodal infrastructure through implementation of systems, services, and projects to preserve capacity and improve the security, safety, and reliability of our transportation system.

Transportation System Plan (TSP): Is a comprehensive plan that is developed to provide a coordinated, seamless integration of continuity between modes at the local level as well as integration with the regional transportation system.

Two-Way Stop Control (TWSC): An intersection, where one or more approaches is stop controlled and must yield the right-of-way to one or more approaches that are not stop controlled.

Urban Area: The area immediately surrounding an incorporated city or rural community that is urban in character, regardless of size.

Urban Growth Boundary (UGB): A regional boundary, set in an attempt to control urban sprawl by mandating that the area inside the boundary be used for higher density urban development and the area outside be used for lower density development.

Vehicle Miles Traveled (VMT): The cumulative distance a vehicle travels, regardless of number of occupants.

Volume to Capacity Ratio (V/C): A measure that reflects mobility and quality of travel of a roadway or a section of a roadway. It compares roadway demand (vehicle volumes) with roadway supply (carrying capacity).

Westbound (WB): Leading or traveling toward the west