Appendix A Planning Process

Appendix A – Planning Process

The project team began the planning process by investigating existing conditions and background plans and policies within the study area. These included:

- Bicycle facilities (including bike lanes, shoulders, "sharrows," and signed bicycle routes), multiuse paths, sidewalks, and transit facilities
- Signalized intersections and other enhanced crossing opportunities
- Bicycle- and pedestrian-related crash history (five-year history)
- Existing land uses and community destinations

Prior to embarking on technical analysis related to the active transportation networks, the project team led stakeholders and the public through a process to agree on the regional vision for active transportation in the Rogue Valley and outline goals that will achieve the vision.

Once the vision and goals were determined, the project team developed the envisioned network of regionally-classified routes for walking and bicycling, using the following process:

- Define key destinations for walking and biking access
- Define regional corridors and route options to connect these destinations
- Select a designated route within each corridor to be part of the regional networks for walking/transit and bicycling

Based on the envisioned network, the project team developed a list of needs for completing the regional systems.

The project team built on the local transportation system plans (TSPs) to include design guidance for the routes within the study area. They analyzed existing level of traffic stress for people walking or biking along the identified regionally-classified routes and identified potential treatments. These are based on the desired level of traffic stress for different regional classifications in different contexts, including rural, urban, and regionally-significant routes. The design guidance is implementable and includes strategies for near-term incremental improvements and the ultimate envisioned design. The project team created a design guidance toolkit for local routes within jurisdictions that were not explicitly included in the active transportation network.

Next, the needs were prioritized into near-, mid-, and long-term projects based on which would yield the highest return on investment towards completing the regional network. The intent was to provide useful guidance to local jurisdictions in their own prioritization efforts.

Following this effort, the project team developed a set of proposed programs based on existing conditions and public input. The programs were designed to improve conditions for active transportation and equitable access across the Rogue Valley. Funding and implementation strategies identify existing and potential funding sources and actions for various agencies over the next five years.

Steps in the Plan Development Process

- Coordination with local jurisdictions
- Public outreach

The public involvement process aimed to gather input from all potentially affected and/or interested individuals, communities, and organizations. It gathered input from the following groups:

- Business and development organizations
    - Chamber of Medford & Jackson County
    - Major employers
- Transportation, active transportation, and transit interests
    - City of Medford Bicycle & Pedestrian Advisory Committee
    - Rogue Valley Transportation District
    - Siskiyou Velo
    - Bear Creek Greenway Foundation
    - Jackson County Bicycle Committee
    - Transportation Impact Committee
    - Ashland Transportation Commission
- Community or advocacy organizations related to:
    - Accessibility interests
    - Environmental interests
    - Public health
    - AARP
    - Recreation
- Government/Jurisdiction
    - Elected officials in Jackson County, Ashland, Central Point, Eagle Point, Jacksonville, Medford, Phoenix, Talent, and White City
    - Agency staff at RVMPO, Jackson County, Ashland, Central Point, Eagle Point, Jacksonville, Medford, Phoenix, Talent, and White City
    - State officials at Oregon Department of Transportation (ODOT), Oregon Department of Land Conservation and Development (DLCD), and Oregon Department of Environmental Quality (DEQ)
- Schools
    - School districts in Ashland, Central Point, Eagle Point, Medford, and Phoenix-Talent
    - Southern Oregon University
    - Rogue Community College – Medford campus
- Other Groups identified by Jackson County or local agencies

Public Involvement

Ongoing project decisions were based on technical input and policy guidance from the **Technical Advisory Committee** (TAC) and stakeholder input from the **Community Advisory Committee** (CAC). The decision-making structure for the RVATP was developed to establish broad-based support for the project. All meetings were open to the public and included public comment periods.

TAC and CAC Meetings

The TAC and CAC met four times throughout the development of the RVATP. The purpose of the TAC and CAC was to review, comment, and provide guidance on the development of material and memorandums produced throughout the project at key milestones. These milestones included:

- Milestone 1: Vision, Goals, Objectives
- Milestone 2: Defining the Regional Network
- Milestone 3: Regional Network Prioritization Process
- Milestone 4: Draft RVATP

Project Website

The project website (www.walkbikeroguevalley.com) was active throughout the project duration and served as a host site for all materials produced to-date, as well as a location for community members' to provide input on the overall project process.

Online Open Houses #1

Online open house #1 was conducted between October and November 2018. The purpose of the online open house #1 was to provide the public an opportunity to learn about the RVATP and to collect feedback on the project goals and objectives, the project vision, and barriers to walking and biking. The open house also provided an opportunity to solicit input on preferred active transportation facility types to gain a better understanding of where users feel most comfortable (or least comfortable) walking and biking.

The online open house #1 was conducted in two-part: One, a typical online survey including multiple choice and a visual preference survey questions; two, an interactive mapping exercise. The RVATP project management team (PMT) also participated in a collaborative in-person open house with the

Rogue Valley Transit District (RVTD) 2040 Transit Master Plan to solicit input on walking and biking barriers to accessing transit.

RVTD In-Person Open Houses

In November 2018, team members from the RVATP project co-hosted an in-person open house in partnership with the RVTD at the Medford library. The purpose of the open house was to introduce the RVATP project to the public while gaining publicity from the already established RVTD 2040 Transit Master Plan stakeholders. The draft goals and vision statement were presented to gather input. A hard copy survey of the online survey was also distributed.

Key Themes from Online Open House #1 and In-Person Open House

Throughout the online open house #1, several key themes were highlighted based on the online survey, visual preference survey, and input received at the in-person RVTD 2040 Transit Master Plan open house. Key themes are summarized below and further illustrated in the subsequent section.

- Safety and security ranked as the highest priority and was identified as a perceived barrier for people walking and biking,
- Connectivity in the form of new off-street trail connections, physically separated facilities, and filling in facility gaps (i.e. sidewalks and bike lanes) ranked highest for improvements that could increase walking and biking trips,
- The north Medford interchange, south Medford interchange, and Table Rock Bridge were identified as key active transportation barriers over I-5,
- Increased lighting along the Bear Creek Greenway may reduce perceived security barriers and encourage more people to walk and bike along the corridor,
- The walkshed or "catchment area" for people walking to transit stops within the Rogue Valley is approximately ½ to ¾ mile; this is greater than the typical ¼ mile "rule of thumb",
- Regional routes will primarily serve bicycle access and address pedestrian travel through access to transit.

Online Open Houses #2

In August 2020, the RVATP project team hosted online open house #2 providing information about the project's prioritization process in establishing the regional active transportation network and soliciting feedback on the network through an online interactive map.

The interactive map-based feedback tool collected comments from August 3, 2020 to August 21, 2020. The project management team (PMT), including staff at the Oregon Department of Transportation (ODOT) and Jackson County advertised the open house on the project website and by email to those who subscribed to the mailing list for the project. *Appendix "A" includes a detailed summary of the Online Open House #1, RVTD In-Person Open House, Online Open House #2.*

Appendix B Rogue Valley Context

Appendix B – Rogue Valley Context

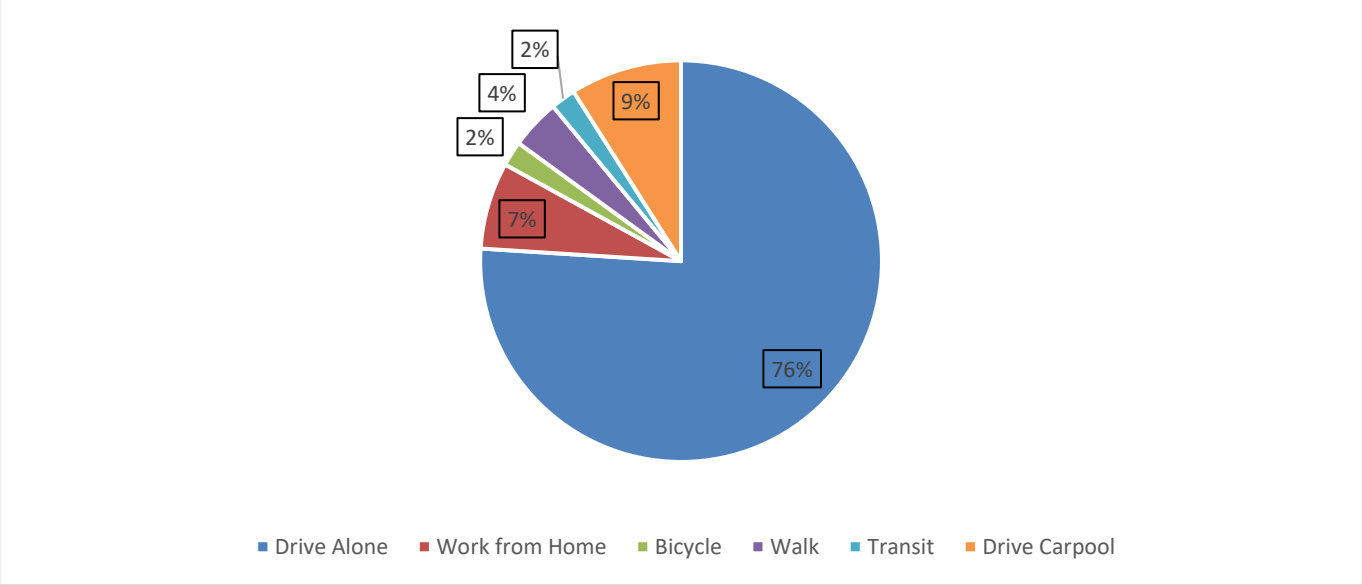
The Rogue Valley Context presents a set of maps that detail the existing active transportation system within the RVMPO boundary. The maps have been developed based on the current available data and information provided by the Rogue Valley Council of Governments (RVCOG), the ODOT Transportation Planning and Analysis Unit (TPAU), the United States Census Bureau, and a review of existing local jurisdiction plans.

The RVATP process built upon available data to identify gaps and deficiencies in the regional active transportation network that can be addressed to increase connectivity between cities, transit, activity centers, and locations of major employment and housing.

Rogue Valley Planning Area Characteristics

The RVATP identifies regional active transportation networks within the RVMPO boundary. These networks will provide connections between essential destinations. The planning area for the RVATP consists of all areas within the RVMPO boundary, which includes the Cities of Ashland, Central Point, Eagle Point, Jacksonville, Medford, Phoenix, and Talent; and the unincorporated community of White City; however, it does not include the entire county.

The total population of the planning area is approximately 179,340.[1] While comprehensive data about walking and bicycling activity for all purposes is not readily available, the U.S. Census Bureau's American Community Survey (ACS) estimates the number of people using these modes for commuting purposes. The 2012-2016 Five-Year ACS Estimates for commuting mode share percentages are shown in the chart below.



1 FY 2018-19 RVMPO Dues Recommendation Memorandum. The RVCOG staff used Portland State University population estimates for the incorporated areas for 2017. Unincorporated populations estimates use geo-enriched data.

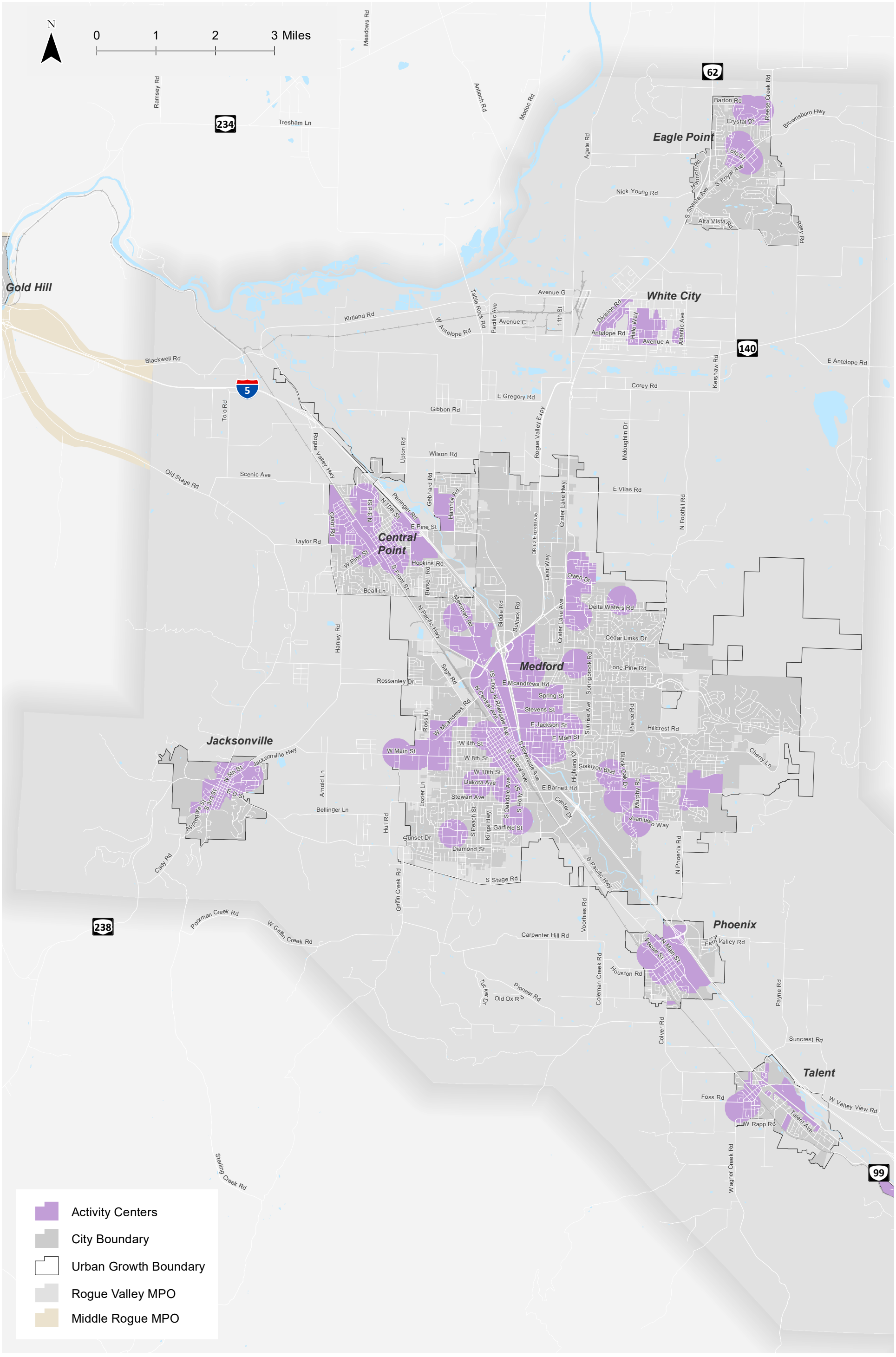
Sociodemographic Information

The RVATP draws on sociodemographic data, such as minority, impoverished, older, and younger populations, and people who speak limited English. This information helped the project team understand the area's population distribution and tailor the public outreach strategy accordingly. Further, it revealed concentrations of populations that may have a higher need or higher likelihood of using active transportation. Finally, it helped ensure that the development of the plan was equitable across different parts of the population. *Appendix "B" contains the Existing Conditions and Existing Data Memorandum* and illustrates the distribution of these populations within the Rogue Valley.

Land Use and Destinations

Activity Centers

The RVCOG provided the activity center data shown in **Figure 1**. Each incorporated jurisdiction within the RVMPO boundary defines its own Activity centers based on its understanding of commercial and employment land uses as well as a location's local relevance in the community. One consistent approach across all jurisdictions within the RVMPO boundary is to define an activity center as land within a quarter-mile radius around schools. More broadly, activity centers can be defined as destinations or attractions for bicyclists, pedestrians, and people using other active modes of transportation (e.g., rollerblades and skateboards).



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RTP Activity Centers

Jackson County, OR

Coordinate System: NAD 1983 StatePlane Oregon South FIPS 3602 Feet Intl

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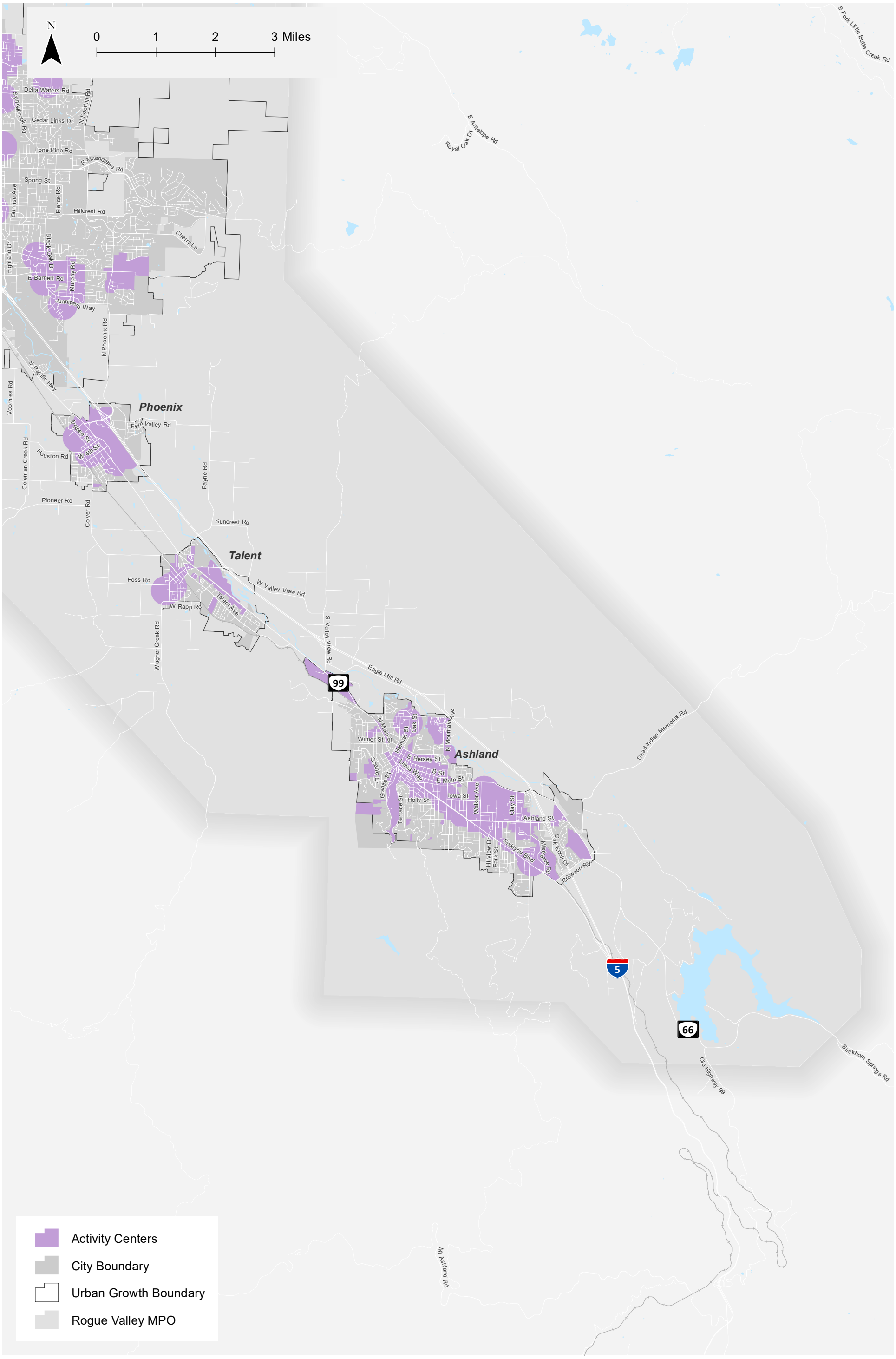

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RTP Activity Centers

Jackson County, OR

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Active Transportation Destinations and Daily Needs

RVCOG also provided specific destination data for various types of land uses in the RVMPO boundary. **Figure 2** shows a subset of destinations determined to be particularly suited for active transportation, many of which are considered essential daily needs. These are referred to as "active transportation destinations and daily needs" and include banks, commercial or retail facilities, community/recreation, hospitals or medical facilities, houses of worship, libraries, municipal government facilities, museums/attractions, parks, post offices, restaurants/eating establishments, and schools.

Figure 2 shows activity centers in addition to the active transportation destinations and daily needs, to compare the activity center boundaries with the clusters of individual locations. As shown in **Figure 2**, some locations, including portions of southwest White City and south Medford, have several active transportation destinations and daily needs outside of the designated activity centers.

While the designated activity centers can provide broad guidance on locations that need regional connections, the RVATP process also considered destinations that lie outside current activity center boundaries.

Higher Density Housing

Data for higher-density housing, including multi-family dwellings and mobile home parks, were provided through the Jackson County Geographic Information System (GIS) web portal and are illustrated in **Figure 3**. As shown in **Figure 3**, central Medford and downtown Ashland along Siskiyou Boulevard have the highest concentration of multi-family dwellings in the region. Mobile home parks are largely located in White City and northwest Phoenix along N Main Street.

Place Types 2017

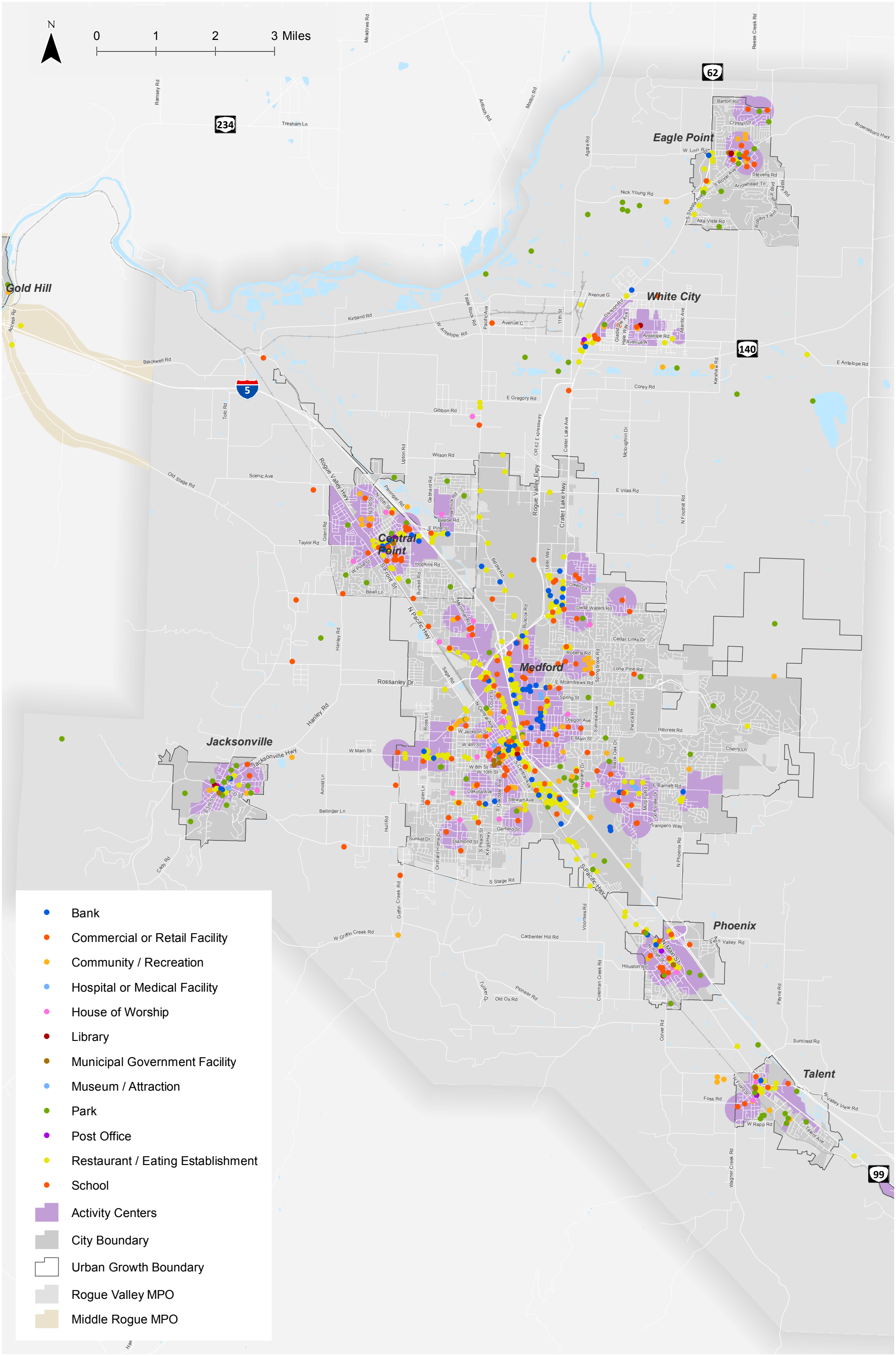
The DLCD provided place type data for 2017. **Figure 4** shows the predominant land use pattern within different areas of the Rogue Valley, including employment, residential, rural, and mixed use, with lower and higher levels of density. The I-5 corridor, western White City, northern Medford, and downtown Jacksonville are major employment zones in the region. The majority of residential place types are located adjacent to employment areas and within the urban growth boundaries (UGB) of Jackson County cities.

Place Types 2042

In addition to the 2017 place type data, the DLCD provided data for 2042 based on the distribution of anticipated growth shown in **Figure 5.** Similar to **Figure 4**, **Figure 5** place types include employment, low density/rural, mixed use, and residential. In comparing **Figure 4** and **Figure 5**, the I-5 corridor in southern Medford, western White City, and northern Medford are expected to see the majority of growth by 2042.

Employment Density

Figure 6 displays the major employment areas in the RVMPO boundary as a heat map, based on data supplied by the Oregon Employment Department for business establishments. Specific points within the data set are confidential, meaning that specific employment locations could not be mapped. As an alternative, this heat map shows overall concentrations of job locations in the RVMPO boundary. High employment areas include downtown Medford, southeastern Medford (along and to the east of I-5), White City, and Central Point.



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Active Transportation Destinations and Daily Needs

Jackson County, OR

Coordinate System: NAD 1983 StatePlane Oregon South FIPS 3602 Feet Intl

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N

0 1 2 3 Miles

Phoenix

Talent

Ashland

- Bank
- Commercial or Retail Facility
- Community / Recreation
- Hospital or Medical Facility
- House of Worship
- Library
- Municipal Government Facility
- Museum / Attraction
- Park
- Post Office
- Restaurant / Eating Establishment
- School
- Activity Centers
- City Boundary
- Urban Growth Boundary
- Rogue Valley MPO

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Active Transportation Destinations and Daily Needs

Jackson County, OR

Coordinate System: NAD 1983 StatePlane Oregon South FIPS 3602 Feet Intl

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N

0 1 2 3 Miles

Multi-Family Dwelling

Mobile Home Park

City Boundary

Urban Growth Boundary

Rogue Valley MPO

Middle Rogue MPO

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Higher Density Housing

Jackson County, OR

Coordinate System: NAD 1983 StatePlane Oregon South FIPS 3602 Feet Intl

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N

0 1 2 3 Miles

Phoenix

Talent

Ashland

Multi-Family Dwelling

Mobile Home Park

City Boundary

Urban Growth Boundary

Rogue Valley MPO

Middle Rogue MPO

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Higher Density Housing

Jackson County, OR

Coordinate System: NAD 1983 StatePlane Oregon South FIPS 3602 Feet Intl

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N

0 1 2 3 Miles

Place Types

- Employment
- Low Density/Rural
- Mixed
- Mixed High
- Residential

RTP 2017 Place Types

Jackson County, OR

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Coordinate System: NAD 1983 StatePlane Oregon South FIPS 3602 Feet Intl

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N

0 1 2 3 Miles

Delta Waters Rd
N Foothill Rd
Cedar Links Dr
Springbrook Rd
Lone Pine Rd
E Mcandrews Rd
Spring St
Sunrise Ave
Pierce Rd
Hillcrest Rd
Black Oak Dr
Highland Dr
Cherry Ln
E Barnett Rd
Murphy Rd
Juanipero Way
N Phoenix Rd
S Pacific Hwy
Voorhies Rd
Phoenix
Fern Valley Rd
Houston Rd
W 4th St
Coleman Creek Rd
Payne Rd
Pioneer Rd
Colver Rd
Talent
Foss Rd
W Valley View Rd
W Rapp Rd
Talent Ave
Wagner Creek Rd
S Valley View Rd
99
Eagle Mill Rd
N Mountain Ave
N Main St
Oak St
Helman St
E Hersey St
Ashland
Soeuc Dr
Granite St
A St
B St
Lithia Way
E Main St
Terrace St
Holly St
Iowa St
Wightman St
Walker Ave
Clay St
Ashland St
Siskiyou Blvd
Park St
Mistletoe Rd
Crowson Rd
Dead Indian Memorial Rd
5
66
Buckhorn Springs Rd
Mt Ashland Rd
Old Highway 99
E Antelope Rd
Royal Oak Dr
S Fork Little Butte Creek Rd

Place Types

- Employment
- Low Density/Rural
- Mixed
- Mixed High
- Residential

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RTP 2017 Place Types

Jackson County, OR

Coordinate System: NAD 1983 StatePlane Oregon South FIPS 3602 Feet Intl

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N

0 1 2 3 Miles

Place Types

- Employment
- Low Density/Rural
- Mixed
- Mixed High
- Residential

RTP 2042 Place Types

Jackson County, OR

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Coordinate System: NAD 1983 StatePlane Oregon South FIPS 3602 Feet Intl

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N

0 1 2 3 Miles

Delta Waters Rd
N Foothill Rd
Cedar Links Dr
Springbrook Rd
Lone Pine Rd
E Mcandrews Rd
Spring St
Sunrise Ave
Pierce Rd
Hillcrest Rd
Black Oak Dr
Cherry Ln
Highland Dr
E Barnett Rd
Murphy Rd
Juanipero Way
N Phoenix Rd
S Pacific Hwy
Voorhies Rd
Phoenix
Fern Valley Rd
Houston Rd
W 4th St
Coleman Creek Rd
Payne Rd
Pioneer Rd
Colver Rd
Talent
Foss Rd
W Valley View Rd
Talent Ave
W Rapp Rd
Wagner Creek Rd
S Valley View Rd
99
Eagle Mill Rd
N Mountain Ave
N Main St
Oak St
Hersey St
Ashland
Scenic Dr
Granite St
Little Wolf
A St
B St
E Main St
Terrace St
Holly St
Iowa St
Wightman St
Walker Ave
Clay St
Ashland St
Siskiyou Blvd
Park St
Mistletoe Rd
Oak Knoll Dr
Crowson Rd
5
66
Dead Indian Memorial Rd
Buckhorn Springs Rd
Mt Ashland Rd
Old Highway 99
E Antelope Rd
Royal Oak Dr
S Fork Little Butte Creek Rd

Place Types

- Employment
- Low Density/Rural
- Mixed
- Mixed High
- Residential

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RTP 2042 Place Types

Jackson County, OR

Coordinate System: NAD 1983 StatePlane Oregon South FIPS 3602 Feet Intl

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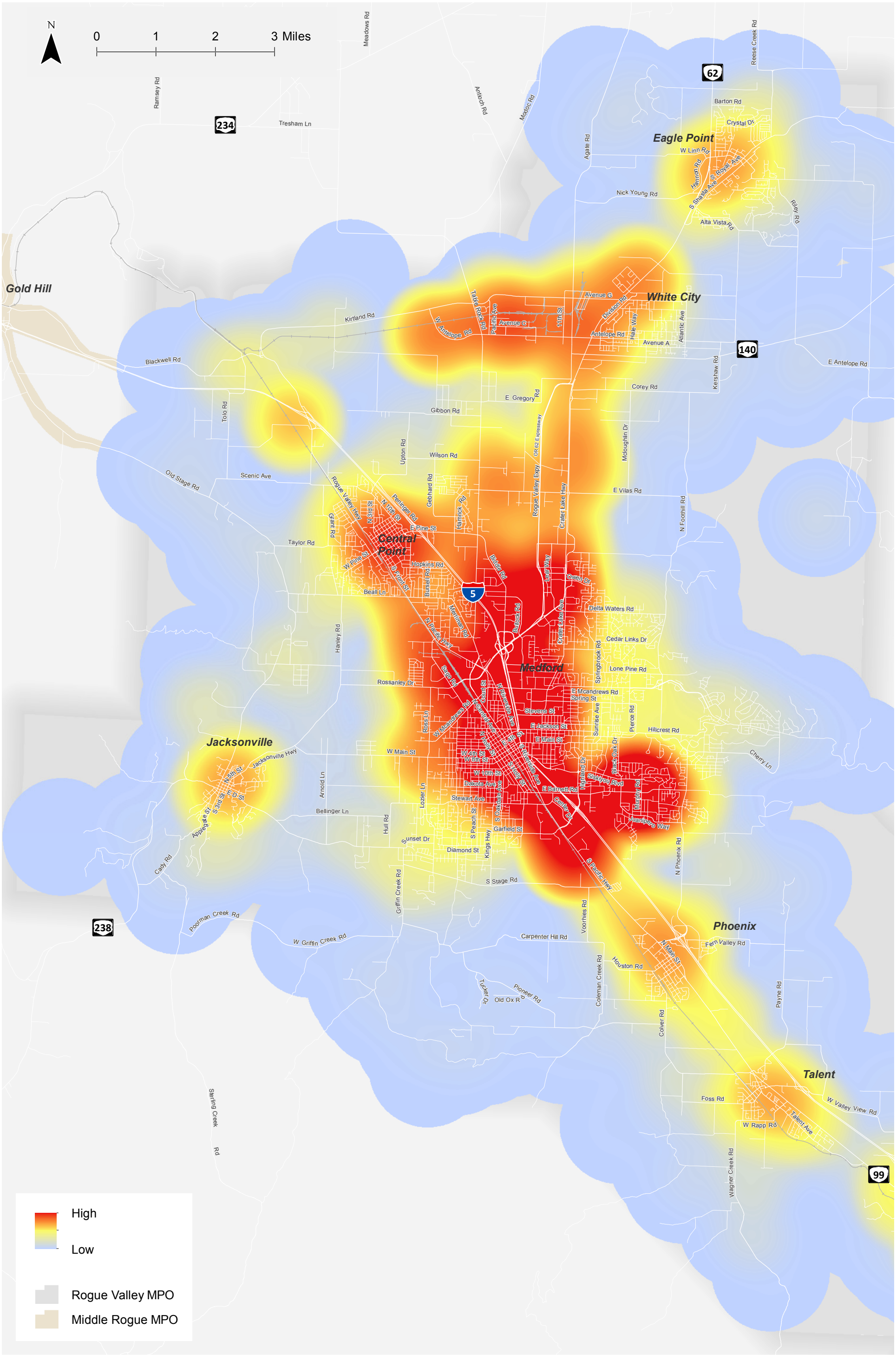

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Employment Density

Jackson County, OR

Coordinate System: NAD 1983 StatePlane Oregon South FIPS 3602 Feet Intl

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N

0 1 2 3 Miles

High

Low

Rogue Valley MPO

Employment Density

Jackson County, OR

KITTELSON & ASSOCIATES

Coordinate System: NAD 1983 StatePlane Oregon South FIPS 3602 Feet Intl
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Active Transportation Facilities

Existing Pedestrian Facilities

RVCOG provided the existing pedestrian facility data shown in **Figure 7**. The data include existing sidewalks on arterial and collector roadways within activity centers. The 2017 data came as part of an alternative measures project and include the Bear Creek and Rogue River Greenways.

As shown in **Figure 7**, the city centers of most jurisdictions, including Medford, Ashland, Jacksonville, Central Point, Talent, and Phoenix, have relatively high coverage of existing sidewalk infrastructure. However, sidewalk data is not shown for areas outside designated activity centers. As part of the RVATP development, sidewalk data on designated regional routes was compiled and completed. Facility types included in the existing pedestrian facility map are defined below.

- **Sidewalk**: Sidewalks are typically located along roadways, separated by a curb and/or planting strip or swale, and have a hard, smooth surface. Sidewalks are sometimes used by bicyclists that are not comfortable riding on the street.
- **Bear Creek Greenway**: The Bear Creek Greenway is an 18-mile multiuse path connecting Ashland, Talent, Phoenix, Medford, and Central Point. The Bear Creek Greenway is used for recreation and commuting and travels through numerous parks with restrooms, drinking water, and picnicking areas. Per the Jackson County TSP, the County is focused on improving both new and existing connections to the Greenway.
- **Rogue River Greenway**: The Rogue River Greenway is a planned 30-mile "emerald necklace" of parks and public access areas along the Rogue River. Work is currently underway in Grants Pass, Gold Hill, Rogue River, and Central Point. The goal is to have an off-road, separated trail where possible; in sections with significant constraints, widened shoulders and on-street bike lanes may be present.
- **Central Ashland Bikepath**: The Central Ashland Bikepath is a two-mile, multiuse path that runs next to a railroad track in Ashland. The path stretches from Railroad Park, a few blocks northeast of downtown Ashland, to Tolman Creek Road in southeast Ashland. The path connects downtown with Walker Elementary School, Ashland Middle School, portions of the Southern Oregon University campus, and several parks.

N

0 1 2 3 Miles

Legend

- Sidewalk
- Shared Use Path
- Sidepath
- Shoulder
- Bear Creek Greenway
- Rogue River Greenway
- Urban Growth Boundaries
- Rogue Valley MPO
- Middle Rogue MPO

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Existing Pedestrian Facilities

Jackson County, OR

7

Coordinate System: NAD 1983 StatePlane Oregon South FIPS 3602 Feet Intl

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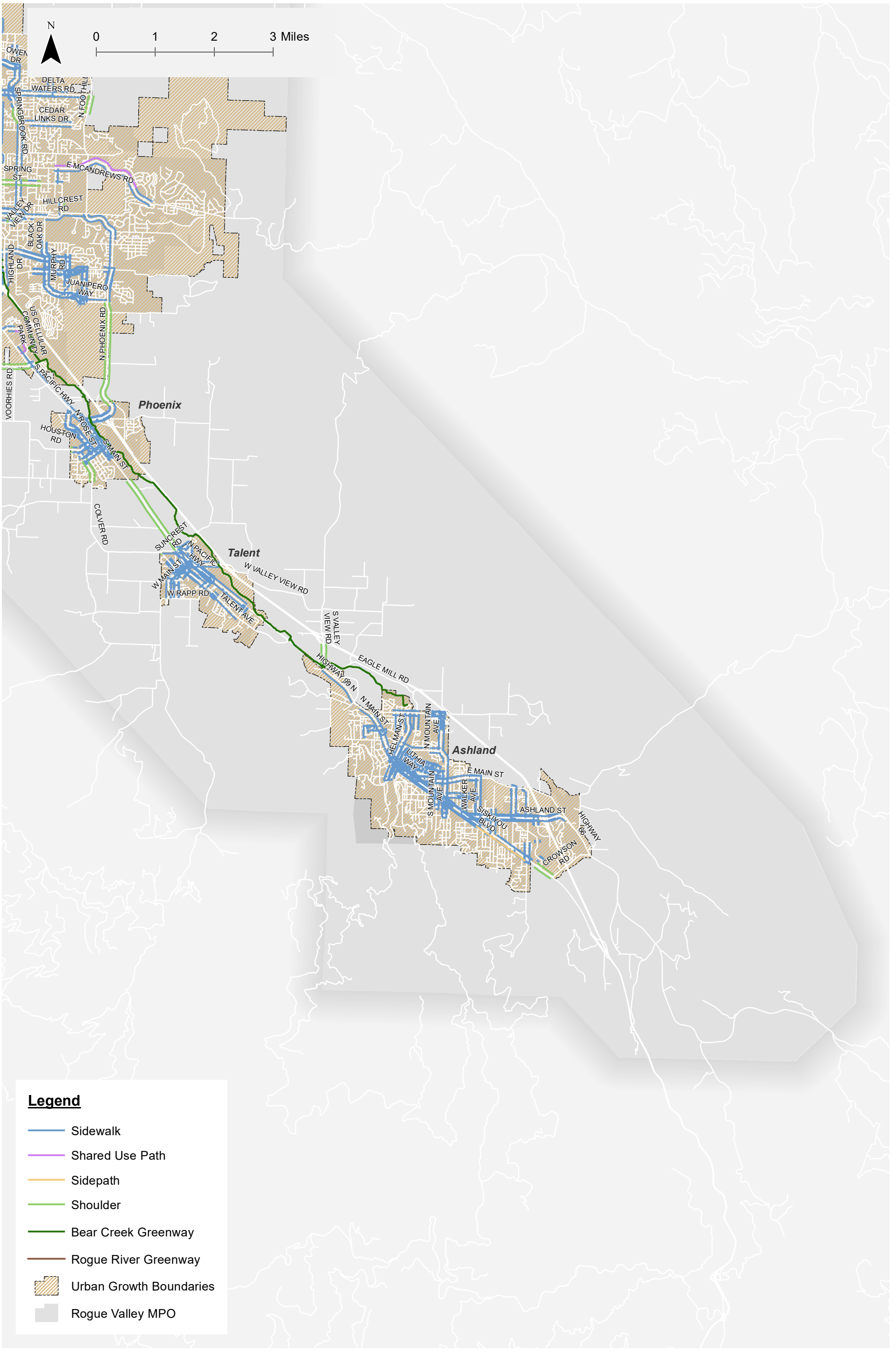

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Existing Pedestrian Facilities

Jackson County, OR

7

Coordinate System: NAD 1983 StatePlane Oregon South FIPS 3602 Feet Intl

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Existing Bicycle Facilities

Figure 8 presents the existing bicycle facilities within the RVMPO boundary. Jackson County provided the existing bicycle facility data. The GIS department does not actively update information related to the bike routes, but rather relies on input from jurisdictions. The map displays all existing bicycle facility types, including 3-foot-plus shoulders, bike lanes, mountain bike paths, multiuse paths, and shared lanes. The Bear Creek Greenway from Ashland through Central Point is included on the existing bicycle facility map.

- **Shoulder Bikeway:** A shoulder bikeway is a paved shoulder that provides a suitable area for bicycling, reducing the potential for conflicts with motor vehicles. The shoulder bikeways shown in **Figure 8** have a minimum striped shoulder width of 3 feet. Most bicycle travel on the rural state highway system and on many County roadways is accommodated on shoulder bikeways.
- **Bike Lanes:** Bike lanes designate an exclusive space for bicyclists using pavement markings and signage. Bike lanes are appropriate on a wide range of roadway types. Bike lane width can vary, and may include additional buffer space between the bike lane and motor vehicle lane. Bike lanes on local streets are appropriate where bicycle volumes are high, vehicle speeds are higher than 25 miles per hour, and/or poor sight distance exists. Bike lanes must always be well marked to call attention to their preferential use by bicyclists.
- **On-Street/Shared Lane/Sharrows:** On-street bicycle infrastructure is used on low-traffic or low-speed streets where it is possible for a bicyclist to comfortably ride in the motor vehicle travel lane. Sharrows—typically featuring a stenciled bicyclist with two chevron symbols—denote where bicyclists should share the road with motor vehicles. Different jurisdictions label this infrastructure in different ways.
- **Multiuse Path:** Multiuse paths are separated from the roadway by an open space or barrier. They are typically used by pedestrians and bicyclists as two-way facilities. Such paths can also be constructed on alignments separate from roadways to create more direct routes between destinations and serve as elements of a recreational trail system.

Existing Transit Facilities

Figure 9 shows the current transit system within the RVMPO boundary. RVTD operates nine fixed-route bus services operating six days a week, with limited Saturday service. Generally, weekday service operates from 5:00 a.m. to 9:30 p.m., depending on the route, while Saturday service operates from 7:00 a.m. to 7:30 p.m. Transit service and stop locations are important considerations when identifying and prioritizing active transportation infrastructure needs, as people often need to walk or bicycle to and from transit stop locations.

N

0 1 2 3 Miles

Legend

- Bike Lane
- Buffered Bike Lane
- Shared Lane
- Shared Use Path
- Shoulder
- Mountain Bike
- Bear Creek Greenway
- Rogue River Greenway
- Urban Growth Boundaries
- Rogue Valley MPO
- Middle Rogue MPO

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Existing Bicycle Facilities

Jackson County, OR

8

Coordinate System: NAD 1983 StatePlane Oregon South FIPS 3602 Feet Intl

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N

0 1 2 3 Miles

Phoenix

Talent

Ashland

Legend

- Bike Lane
- Buffered Bike Lane
- Shared Lane
- Shared Use Path
- Shoulder
- Mountain Bike
- Bear Creek Greenway
- Rogue River Greenway
- Urban Growth Boundaries
- Rogue Valley MPO

Existing Bicycle Facilities

Jackson County, OR

8

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Coordinate System: NAD 1983 StatePlane Oregon South FIPS 3602 Feet Intl

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N

0 1 2 3 Miles

RVTD Bus Routes

- 2 West Medford
- 10 Ashland
- 21 Poplar Square
- 24 Rogue Valley Medical Center
- 25 South Medford
- 30 Jacksonville
- 40 Central Point
- 60 White City
- 61 Rogue Community College
- RVTD Boundary
- City Boundary
- Urban Growth Boundary
- Rogue Valley MPO
- Middle Rogue MPO

KITTELSON & ASSOCIATES

Existing Transit Routes

Jackson County, OR

Coordinate System: NAD 1983 StatePlane Oregon South FIPS 3602 Feet Intl

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N

0 1 2 3 Miles

Delta Waters Rd
N Foothill Rd
Cedar Links Dr
Springbrook Rd
Lone Pine Rd
E Mcandrews Rd
Spring St
Sunrise Ave
Pierce Rd
Hillcrest Rd
Black Oak Dr
Cherry Ln
Highland Dr
Murphy Rd
E Barnett Rd
Juanipero Way
N Phoenix Rd
Voorhies Rd
S Pacific Hwy
Phoenix
Fern Valley Rd
N Rose St
Houston Rd
W 4th St
Coleman Creek Rd
Payne Rd
Pioneer Rd
Colver Rd
Talent
Talent Ave
W Rapp Rd
Foss Rd
W Valley View Rd
Wagner Creek Rd
S Valley View Rd
99
Eagle Mill Rd
5
N Mountain Ave
Oak St
N Main St
Scenic Dr
Helman St
E Hersey St
Ashland
A St
B St
E Main St
Granite St
Terrace St
Iowa St
Holly St
Lithia Way
Wightman St
Walker Ave
Clay St
Ashland St
Park St
Mistletoe Rd
Oak Knoll Dr
Crowson Rd
Siskiyou Blvd
Royal Oak Dr
E Antelope Rd
S Fork Little Butte Creek Rd
Dead Indian Memorial Rd
66
Buckhorn Springs Rd
Mt Ashland Rd
Old Highway 99

RVTD Bus Routes

- 10 Ashland
- 24 Rogue Valley Medical Center
- 60 White City
- RVTD Boundary
- City Boundary
- Urban Growth Boundary
- Rogue Valley MPO

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Existing Transit Routes

Jackson County, OR

Coordinate System: NAD 1983 StatePlane Oregon South FIPS 3602 Feet Intl

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Crash History

ODOT provides reported crash data from throughout the state. The data include crashes reported by police departments. A number of characteristics describing each crash are included. In some cases, crashes were not reported to police and are not shown in the data. Also, if a motor vehicle is not involved (for example, if a bicyclist crashes without interaction with a vehicle), the crash is not reflected in the dataset. There is not a comprehensive source of data for crashes such as these that are not reported to police. The data shown in the crash figures only cover reported crashes.

Chart 1 shows crash causes for all reported bicycle and pedestrian crashes in the Rogue Valley for the five-year period between January 1, 2012 to February 28, 2017. For both bicycle and pedestrian modes, the most likely crash cause was a motorist not yielding the right of way. The next most common crash cause was a vehicle operator disregarding a traffic signal and a non-motorist illegally located in the roadway.

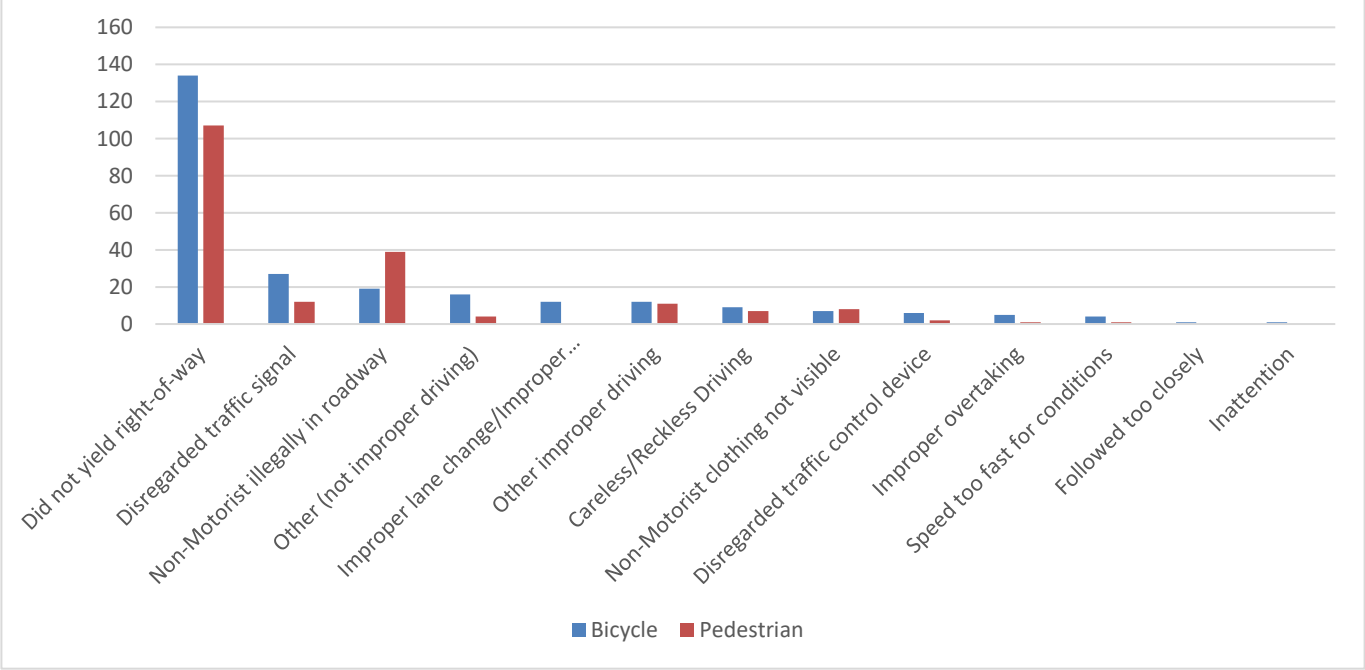
Pedestrian Crash History

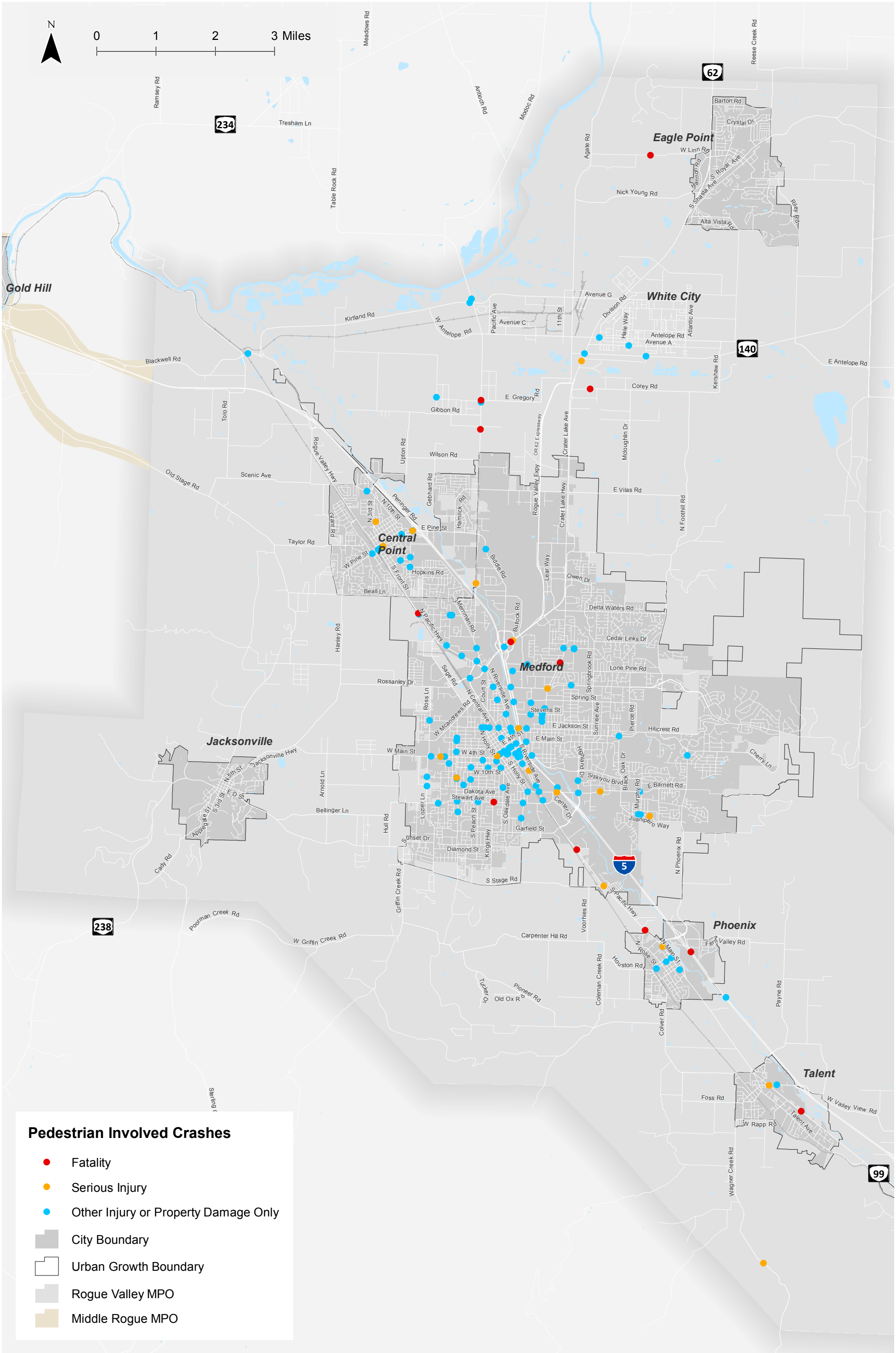
Figure 10 illustrates the reported pedestrian-related crash locations and severity for the five-year period between January 1, 2012 to February 28, 2017 within the RVMPO boundary. Crashes have been coded as property damage only (PDO), injury crashes (including Injury B and C), serious injury crashes (injury A), and fatal crashes. There were 203 pedestrian-related crashes reported within this timeframe. Of the total pedestrian crashes reported, 190 resulted in non-fatal injuries and 13 resulted in fatalities.

Bicycle Crash History

Figure 11 illustrates the reported bicycle related crash locations and severity for the five-year period between January 1, 2012 and February 28, 2017 within the RVMPO boundary. Crashes have been coded as property damage only (PDO), injury crash, and fatal crash. There were 253 bicycle related crashes reported within this timeframe. Of the total bicycle crashes reported, 248 resulted in non-fatal injuries, four resulted in PDO, and one resulted in a fatality.

Chart 1: Crash Cause for Crashes Involving Bicycles and Pedestrians in the Rogue Valley





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Reported Pedestrian Crashes

Jackson County, OR

Coordinate System: NAD 1983 StatePlane Oregon South FIPS 3602 Feet Intl

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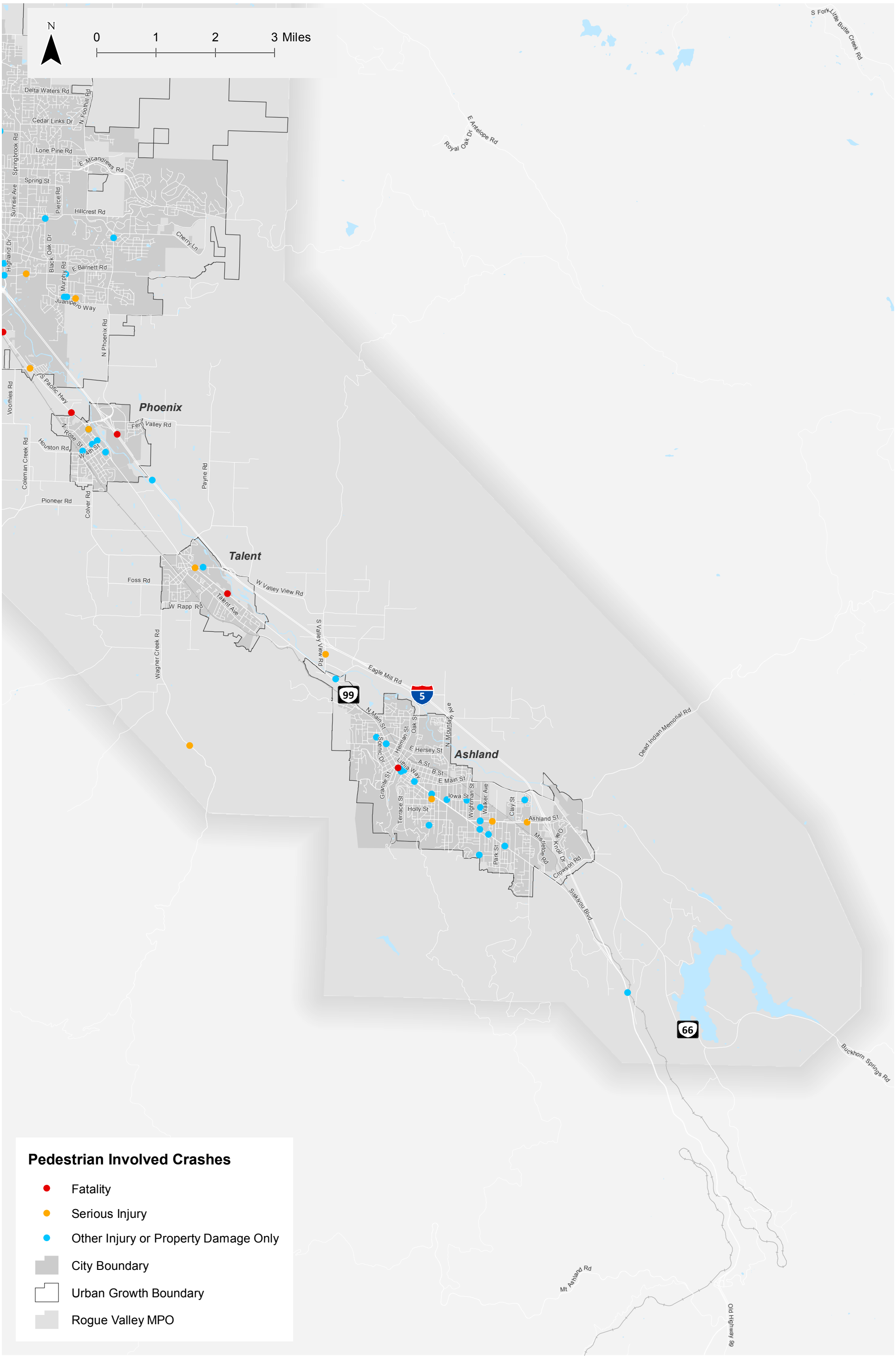

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Reported Pedestrian Crashes

Jackson County, OR

10

Coordinate System: NAD 1983 StatePlane Oregon South FIPS 3602 Feet Intl

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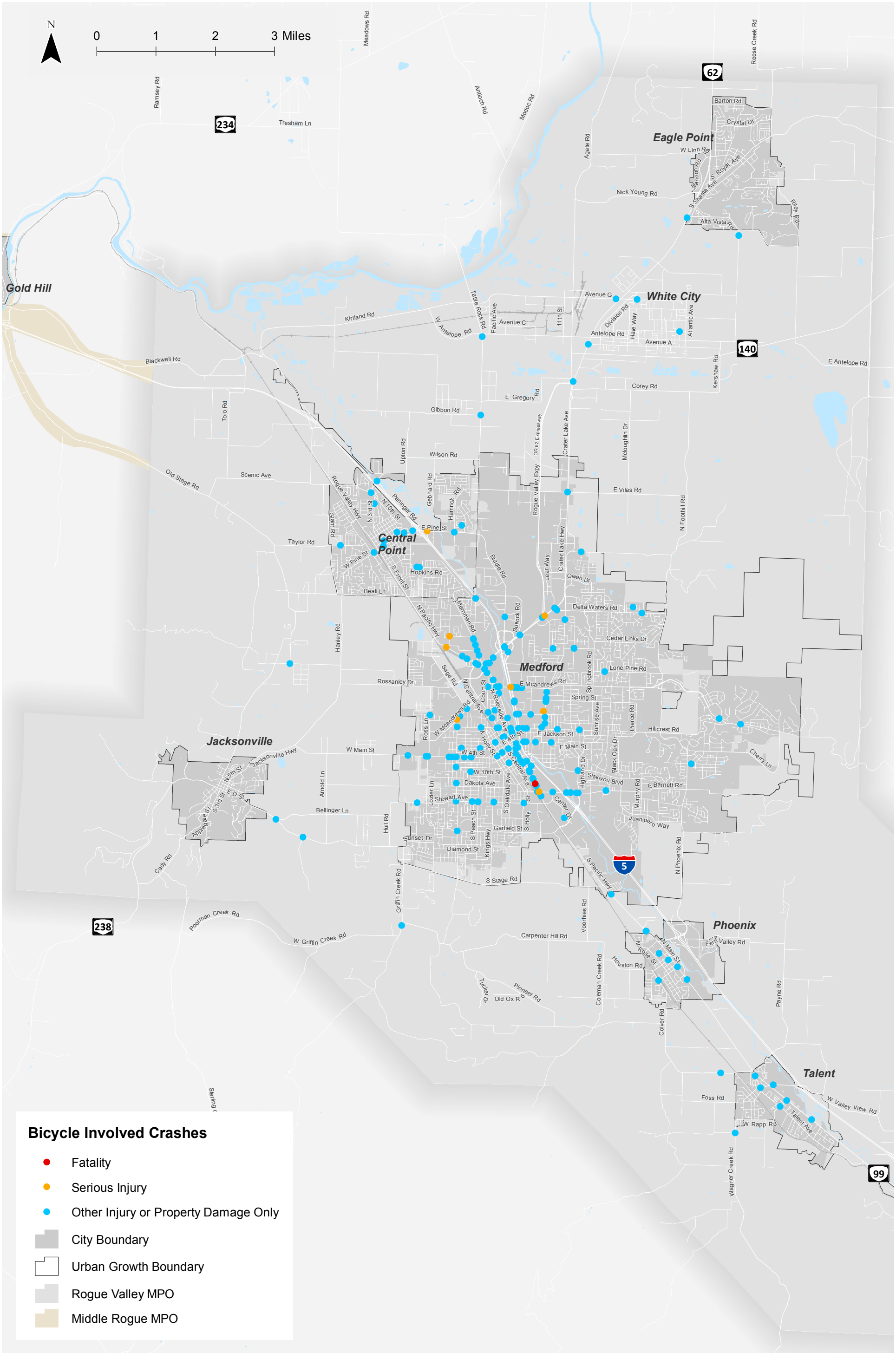

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Reported Bicycle Crashes

Jackson County, OR

Coordinate System: NAD 1983 StatePlane Oregon South FIPS 3602 Feet Intl

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N

0 1 2 3 Miles

Delta Waters Rd
N Foothill Rd
Cedar Links Dr
Springbrook Rd
Lone Pine Rd
E Mcandrews Rd
Spring St
Sunrise Ave
Pierce Rd
Hillcrest Rd
Black Oak Dr
Cherry Ln
Highland Dr
Murphy Rd
E Barnett Rd
Juanipero Way
N Phoenix Rd
S Pacific Hwy
Phoenix
Fern Valley Rd
Voorhies Rd
N Rose St
Houston Rd
W 4th St
Coleman Creek Rd
Payne Rd
Pioneer Rd
Colver Rd
Talent
Foss Rd
W Valley View Rd
W Rapp Rd
Talent Ave
Wagner Creek Rd
S Valley View Rd
Eagle Mill Rd
99
5
N Main St
Scenic Dr
Granite St
Helman St
Oak St
N Mountain Ave
E Hersey St
Ashland
B St
A St
E Main St
Iowa St
Terrace St
Wightman St
Walker Ave
Clay St
Ashland St
Park St
Mistletoe Rd
Oak Knoll Dr
Crowson Rd
Siskiyou Blvd
Dead Indian Memorial Rd
66
Buckhorn Springs Rd
Mt Ashland Rd
Old Highway 99
E Antelope Rd
Royal Oak Dr
S Fork Little Butte Creek Rd

Bicycle Involved Crashes

- Other Injury or Property Damage Only
- City Boundary
- Urban Growth Boundary
- Rogue Valley MPO

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Reported Bicycle Crashes

Jackson County, OR

11

Coordinate System: NAD 1983 StatePlane Oregon South FIPS 3602 Feet Intl

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Appendix C Design Guidance

Appendix C – Design Guidance

Creating a physical network of safe and comfortable facilities for people walking and biking is a critical step towards improving and encouraging use of these modes. The following sections provide best practices for walking and biking facility design.

Best Practices in Walking and Biking Facility Design

For walking and bicycling to be key forms of transportation, facilities must be comfortable, safe, convenient, and designed to be attractive to a wide range of potential users. To plan for walking and bicycling facilities that will be attractive to a wide range of potential users, RVMPO and its local agencies should consider the following best practices for walking and biking facility design for the regional network:

1. Travelers must feel comfortable and safe while walking and bicycling on the system
   - Facilities must be sufficiently separated from motor vehicle traffic
   - Facilities must feel secure for travel at all times of the day
   - Facilities should create a network that connects seamlessly between jurisdictions, including White City and other unincorporated Jackson County and the incorporated cities of Medford, Phoenix, Talent, Eagle Point, Central Point, White City, Jacksonville, and Ashland
   - Projects must be prioritized to address barriers, fill existing gaps, and create a continuous and comfortable experience for all users independent of skill level or ages
2. Walking and bicycling must be convenient ways to travel
   - Provide wayfinding signage, particularly for neighborhood routes and key connections that are not on the arterial roadway system
   - Design direct routes between origins and destinations where possible
   - Minimize delay for walkers and bikers at intersections and road crossings
   - Provide secure bicycle parking at employment areas, commercial areas, schools, and transit hubs
3. Create facilities to serve a wide range of users
   - Within one mile of schools, facilities should be designed to serve school-aged children walking and bicycling to school and should be consistent with safe routes to school action plans
   - Sidewalks and crossings throughout the RVATP area must be designed to serve persons with disabilities in accordance with the Americans with Disabilities Act (ADA)
   - In locations adjacent to senior centers or other similar facilities, design for slower walking speeds
   - Other parts of regional bicycling and walking network should be designed to serve the general population. In many cases, this will result in higher levels of separation from motor vehicles for bicyclists

Bicycle Facility Design

Bicycle facilities are the elements of the transportation system that enable people to bicycle safely and efficiently to all types of destinations, including retail centers, employment centers, schools, recreation sites, and transit stops. People biking are able to reach their destinations more quickly than people walking. As a result, good bicycle facilities can increase the range of destinations accessible to people without a vehicle. These facilities include protected bike lanes, buffered bicycle lanes, and shared-use paths. Safe crossing facilities are even more essential at intersections where crashes are most likely to

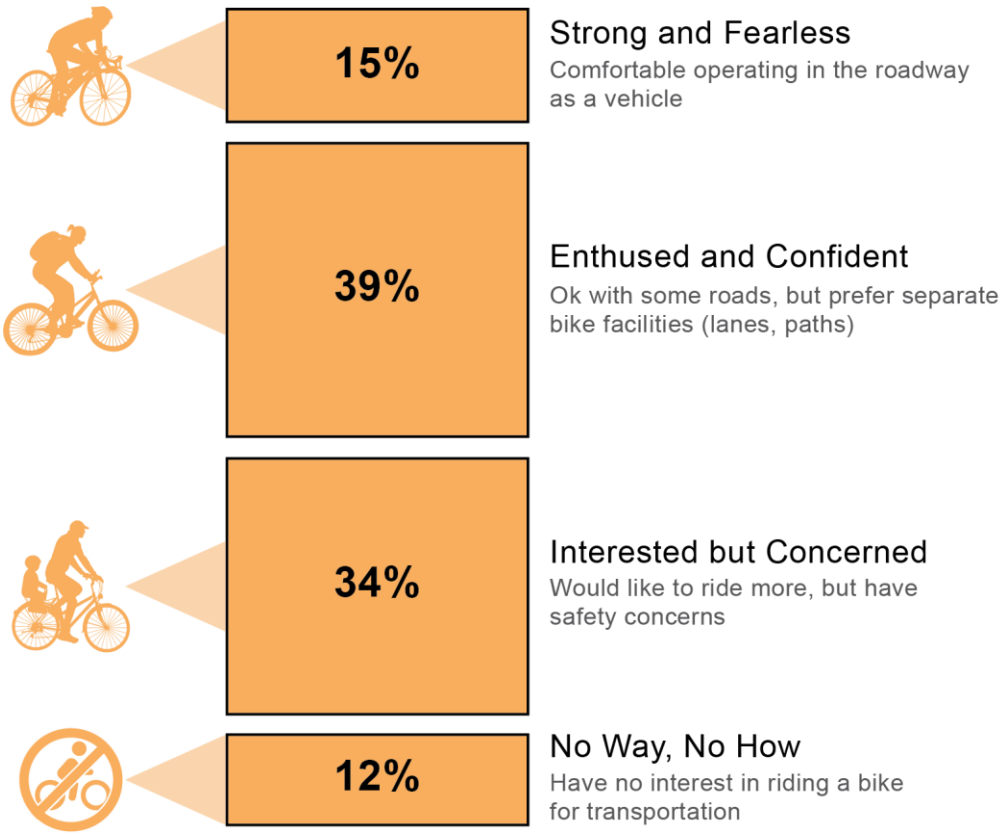
occur. Protected intersection designs, leading intervals, bicycle boxes, bicycle signals, and protected bike lanes can be installed to increase the safety of people biking. Each facility plays an important role in developing a comprehensive bicycle system.

This section summarizes the types of bicycle facilities that could be implemented in the RVATP area to address gaps and deficiencies in the bicycle system and considering who you are trying to attract and accommodate.

Who Are We Designing For?

The RVATP is seeking to design streets and trails so that bicyclists of all ages and abilities will be able to use them. Our future designs should consider students who would like to bicycle to school, as well as our general population who may use bicycling for errands or work commutes. One common typology, created in 2006 by Jennifer Dill of Portland State University, categorizes people into four different groups, described below. An online survey, conducted during the months of October and November 2018, asked people in the Rogue Valley area to define what type of bicyclist they are based on these categories. Over 193 people responded and identified themselves. The results of this are shown in **Figure C1**.

Figure C1: Four Types of Bicyclists in the RVATP Area[2]



Strong and Fearless

Strong and fearless riders are estimated at approximately 15% of the study population. These riders are comfortable mixing with motor traffic and are comfortable riding in all conditions.

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[2] The four types of cyclist and corresponding percentage breakdown represent only online open house survey participant responses; national averages for the "enthused and confident" are a higher percentage (50-60%) whereas the "enthused and confident" are a lower percentage (5-10%).

Enthused and Confident

Enthused and confident riders are estimated at approximately 39% of the study population. These riders are comfortable sharing the roadway with motor vehicles in some contexts, however they prefer to use bike facilities that are separated from motor traffic.

Interested but Concerned

Interested but concerned riders are estimated at approximately 34% of the study population. This population would like to ride more but is concerned about safety. This population needs slow motor traffic, low motor traffic volumes, and/or physical separation from motor traffic.

No Way, No How

About 12% of the study population fall into the "No Way, No How" category. This group has no interest in bicycling due to a variety of reasons, which may include physical inability.

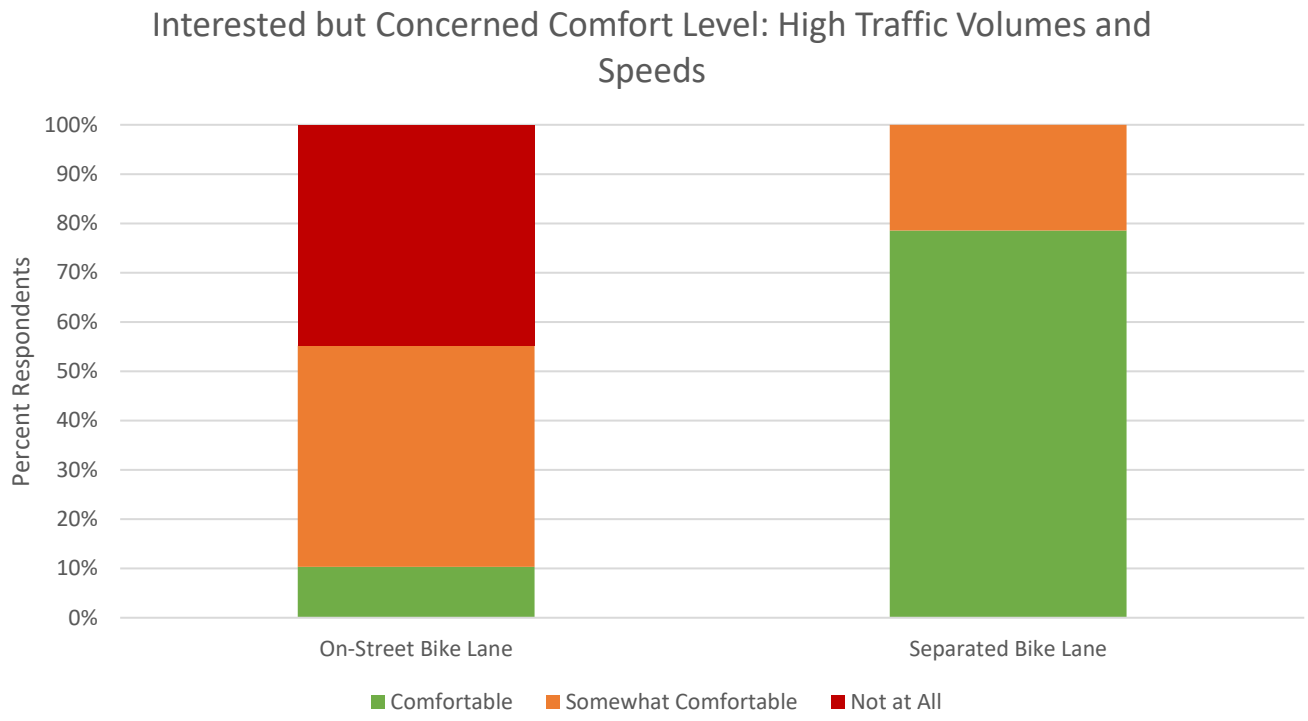
What Facilities Do "Interested but Concerned" Riders Prefer?

To serve the general population, the RVATP will seek to provide facilities to address the needs of the "interested but concerned" population.

The RVATP survey participants had a lower percentage of people in the "interested but concerned" category than the national average and a greater percentage of people in the "strong and fearless" and "enthused and confident" categories than the national average. Given that participants self-selected to take the survey, survey responses are likely to reflect an interest in bicycling. Based on the survey, nine out of every 10 people are interested in riding a bike for transportation.

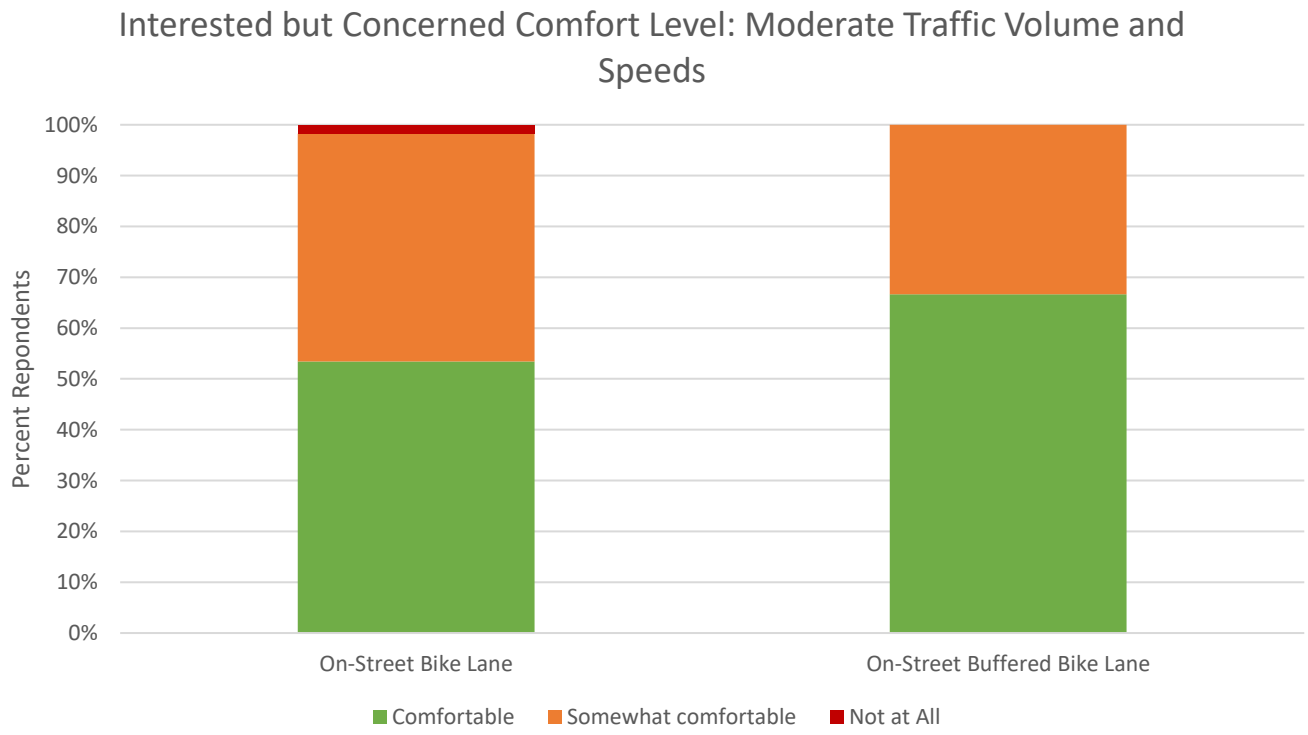
The survey asked respondents to share whether they would be comfortable bicycling on various facility types. Almost half of respondents identifying as "interested but concerned" would not feel comfortable riding on a standard bike lane on a road experiencing high motor traffic volume and speeds; however, the majority would be comfortable using protected bike lanes. **Figure C2** and **Figure C3** show that "interested but concerned" bicyclists feel more comfortable with greater separation from motor traffic and when motor traffic is moving at slower volume and speeds.

Figure C2: "Interested but Concerned" Cyclist Comfort Level in High Traffic Volume and Speeds



Almost half of "interested but concerned" cyclists in the survey would not feel comfortable traveling in an on-street bike lane given high motor traffic volume and speeds.

Figure C3: "Interested but Concerned" Cyclist Comfort Level in Moderate Traffic Volume and Speeds



Two-thirds of "interested but concerned" cyclists in the survey would feel comfortable travelling in an on-street buffered bike lane when there are moderate levels of motor traffic volume and speeds.

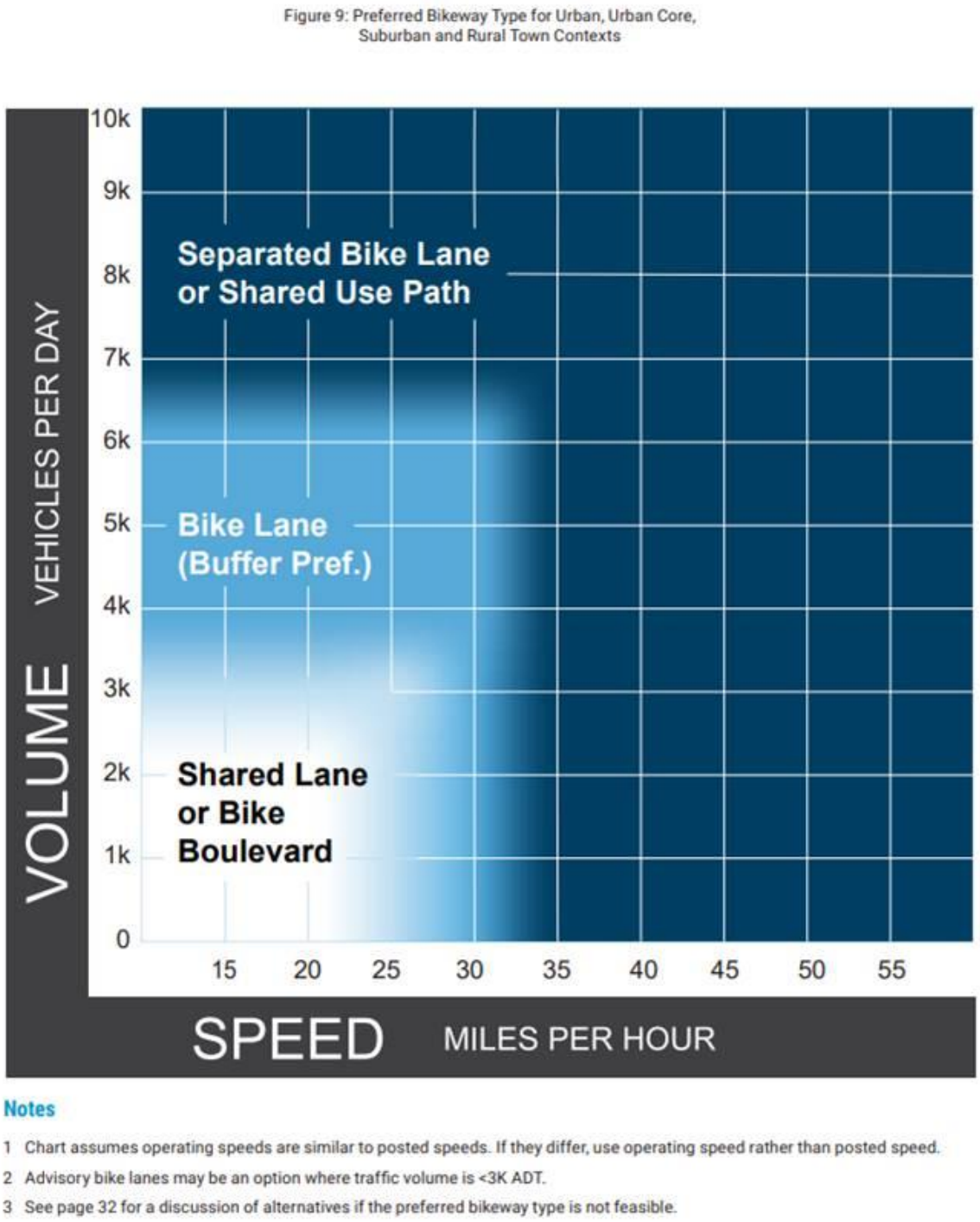
How Do We Choose the Right Bicycle Facilities for a Specific Location?

When designing bicycle facilities along roadways, the appropriate design treatment varies depending on the context of the road. When adding new bicycle facilities to existing roadways on the regional and connector networks, local jurisdictions should seek to provide low-stress facilities that serve:

- School-age children on routes near schools or identified through Safe Routes to Schools action plans; and,
- The general population ("interested but concerned"), who may be interested in bicycling to access transit and other daily needs.

Figure C4 provides guidance for the types of designs able to achieve a low level of stress and attract the general population, including the "interested but concerned" riders. This general guidance accounts for the need to provide different treatments in different contexts, depending primarily on the speeds and volumes of motor vehicles. For example, on a street with approximately 8,000 vehicles per day, with average speeds of 35 mph, the general population would feel comfortable using a protected bike lane, but it is unlikely that they would feel comfortable using a standard bike lane. However, on a street with 1,500 vehicles per day and speeds of 20 mph, the general population would likely feel comfortable bicycling on the street in a shared lane, without needing a bicycle lane. In order to serve the general population, the RVMPO and local agencies should follow this design treatment guidance and consider buffered bicycle lanes on streets over 25 mph and further separation at higher speeds and motor traffic volumes.

Figure C4: Facility selection for "interested but concerned" Users



Notes:

1. ***Chart assumes operating speeds are similar to posted speeds. If they differ, use operating speed rather than posted speed.***
2. ***Advisory bike lanes may be an option where traffic volume is <3K ADT.***
3. ***See guide for discussion of alternatives if the preferred bikeway type is not feasible.***

Source: Preferred Bikeway Type for urban, urban core, suburban and rural town contexts from FHWA Bikeway Facility Selection Guide

Facility Types

The following provides descriptions and design guidance for the urban and rural bicycle facility types that should be considered on the Regional and Connector route system.

Facility Type	Urban Example	Rural Example
Protected Bike Lanes Typically located on major arterials with high vehicular volumes, a protected bicycle lane is an exclusive space for bicyclists along or within a roadway that is physically separated from motor vehicles by vertical and horizontal elements. Protected bicycle lanes may be one or two-way facilities.		
Buffered Bicycle Lane/Shoulder Provides physical separation in the form of vertical flexible posts or paint. Buffered bicycle lanes are typically suggested for collector roadways with medium to high vehicular speeds and volumes.		
Bike Lane/Shoulder Designated exclusively for bicycle travel, bike lanes are separated from vehicle travel with striping and include pavement stencils. Bike lanes may include additional enhancements such as green paint. On rural facilities, rural bikeways or shoulders are appropriate and should be striped no smaller than 4-feet in width.		
Advisory Bike Lane/Shoulder Advisory shoulders, also known as "suggestion lanes," are bike lanes that motor vehicles can use to pass oncoming motor vehicles after yielding to people biking and walking. Advisory shoulders are used in combination with a single center lane (without a centerline) for bi-directional motor vehicle travel on low-volume streets.		

Facility Type	Urban Example	Rural Example
Limited Shoulders Limited shoulders are areas provided along shared lane roadways to allow cyclists to move out of the vehicle travel lane to stop or allow faster-moving vehicles to pass. They include short pullouts to provide cyclists a place to stop and long pullouts that would allow cyclists to keep traveling while allowing motorists to pass. Bicycle pullouts can be applied to any roadway without shoulder bikeways or other bicycle treatments. They are intended to be provided on designated bikeways as a lower impact alternative to continuous shoulder bikeways in constrained areas. They are most applicable on uphill roadways or long stretches of roadways without passing opportunities for vehicles.	Not applicable	
Bicycle Climbing Lanes/Shoulder A bicycle climbing lane consists of a bicycle lane/shoulder on one side of a roadway in the uphill direction and a shared lane on the downhill side. It allows bicyclists to travel at slower speeds when going uphill without interfering with vehicle travel. Bicycle climbing lanes can be applied to any roadway in the study area and should be considered on designated bikeways as a lower impact alternative to shoulder bikeways or bike lanes in both directions in constrained areas.	Not applicable	
Mixed Traffic or Shared Lane Marking (sharrow) Typically located on neighborhood streets with low vehicular volumes and speeds, “sharrows” are pavement markings that remind motorists to expect bicyclists in the travel lane. Sharrows also provide wayfinding for bicyclists on neighborhood bicycle routes.		Not applicable

Designing intersections for safe, comfortable, and accessible active transportation is an essential step forward in achieving low-stress bicycle networks. Successful intersection design can minimize delays, reduce the number of conflicts and decrease the severity of injuries resulting from crashes. Intersection design treatments vary for bicycles based on the context of the surrounding network. The following provides descriptions and design guidance for intersection treatments that should be considered on the Regional and Connector route system.

Intersection Treatment	Example
Protected Intersection Design Provides the highest level of comfort for bicyclists traveling through or turning at an intersection. Such designs are intended to minimize conflicts between bicyclists and vehicles by providing physical separation through the intersection. Where physical space is constrained, the design of the protected intersection may consider sharing space for people walking and biking.	
Bicycle Signals Provides protected and dedicated signal phase for bicyclists to eliminate the potential for vehicle conflicts. Prioritizes bicycle movements at intersections and may be programed to allow for leading bicycle intervals.	
Bicycle Boxes Provides a designated queuing space for bicyclists at signalized intersections between a set-back stop bar and the crosswalk. Allows bicyclists to queue in front of stopped vehicles to increase visibility and reduce turning conflicts. Application should be considered in full intersection context, including vehicle right-turn-on-red movements.	

Intersection Treatment	Example
Two-Stage Left-Turn Boxes Allows bicyclists to execute a left turn at multi-lane intersections from a right-side bicycle facility. Bicyclists arriving at a green light travel into the intersection and pull onto the two-stage turn queue box away from through moving bicycles.	
Pavement Markings Green paint used in "conflict zones" where vehicles and bicycles commonly cross paths at an intersection, driveway, or right-turn pocket.	
Traffic Diverters/Medians with Bicycle Access Designed to allow for bicycle movements while restricting through and left-turning movements for vehicles.	

Pedestrian Facility Design

Pedestrian facilities are the elements of the transportation system that enable people to walk safely and efficiently to retail centers, employment centers, and transit stops. These include facilities for pedestrian movement along key roadways (e.g., shoulders, sidewalks, shared-use paths) and for safe roadway crossings (e.g., crosswalks, crossing beacons, pedestrian refuge islands). Each facility plays an important role in developing a comprehensive pedestrian system.

This section summarizes the types of pedestrian facilities that could be implemented in the RVATP area to address gaps and deficiencies in the pedestrian system.

How Do We Choose Facilities That Enhance Comfort for People Walking?

Based on the project survey, pedestrians in the RVATP area feel more comfortable travelling on buffered sidewalks and less comfortable when they are traveling near motor traffic moving in higher volumes and speeds, as shown in **Figure C4** and **Figure C5**.

Figure C5: Pedestrian Comfort Level in High Traffic Volumes and Speeds

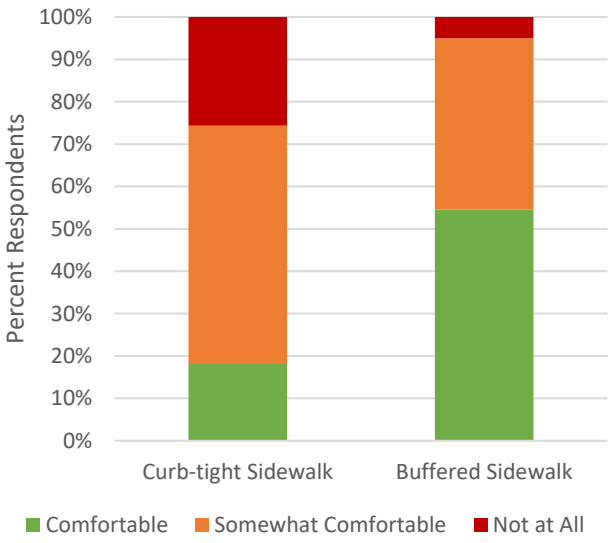
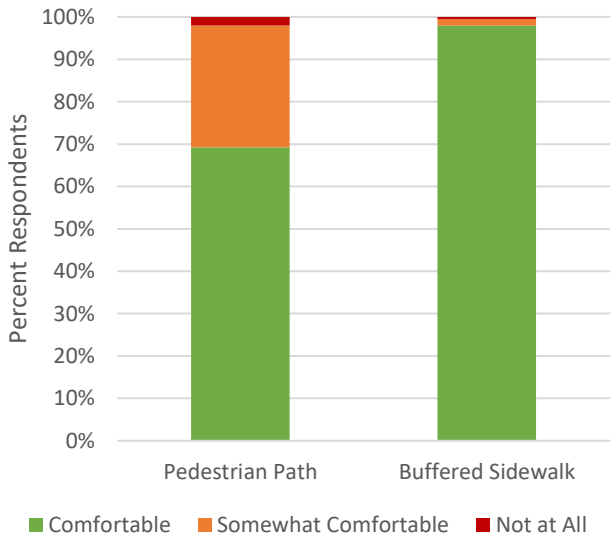


Figure C5: Pedestrian Comfort Level in Moderate Traffic Volume and Speeds



As illustrated in **Figure C4**, approximately a quarter of survey respondents would not feel comfortable traveling on curb-tight sidewalk in presence of high motor traffic volume and speeds. As illustrated in **Figure C5**, nearly all survey respondents would enjoy walking on buffered sidewalk in presence of moderate motor traffic volumes and speeds.

Facility Types

The following provides descriptions and design guidance for the urban and rural pedestrian facility types that should be considered on the Regional and Connector route system.

Facility Type	Urban Example	Rural Example
Sidewalk 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. Sidewalks are usually six- to eight-feet wide and constructed from concrete. They are also frequently separated from the roadway by a curb, landscaping, and/or on-street parking. Sidewalks are widely used in urbanized settings. Ideally, sidewalks are provided along both sides of the roadway in urban areas; however, some areas with physical or right-of-way constraints may require that sidewalk be located on only one side.	 	Not applicable.
Shoulder Walkways Shoulders on the edge of roadways in a rural context can be enhanced to serve as a functional space for pedestrians to travel in the absence of other facilities with more separation.	Not applicable	

Facility Type	Example
Shared-Use Path Shared-use paths and trails are paved and unpaved facilities that serve pedestrians and bicyclists. When serving as a connection on the regional network they should be paved. Shared-use paths and trails can be constructed adjacent to roadways where the topography, right-of-way, or other issues do not allow for the construction of sidewalks and bike facilities. A minimum width of 10 feet is recommended for low-pedestrian/bicycle-traffic contexts; 12 to 14 feet should be considered in areas with moderate to high levels of bicycle and pedestrian traffic.[3] Shared-use paths and trails can be used to create longer-distance links within and between communities and provide regional connections. They play an integral role in recreation, commuting, and accessibility due to their appeal to users of all ages and skill levels. Shared-use paths are applicable in urban and rural settings.	
Pedestrian Path (Side Path) A pedestrian path is a hard-surface path adjacent to the roadway in lieu of a sidewalk in areas where other bicycle facilities exist, or bicyclists share the roadway. While similar to a shared-use path, pedestrian paths are narrower in width and generally do not invite bicycle travel.	

[3] AASHTO Task Force on Geometric Design. "AASHTO Guide for the Development of Bicycle Facilities." American Association of State Highway and Transportation Officials, Washington, DC: 2012.

Enhanced Crossings

Enhanced 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 along the desired routes of people walking and biking. The following provides descriptions and design guidance for enhanced crossing treatments that should be considered on the Regional and Connector routes system. The following section is broken into crossing facilities and treatments appropriate at intersections, mid-block crossings, and those appropriate for both intersections and mid-block crossings.

Facility Type/Treatment (Intersections)	Example
Leading Pedestrian Interval (LPI) This treatment provides pedestrians with a 2-5 second head start before a concurrent vehicle phase turns green to allow pedestrians to enter and occupy the crosswalk before vehicles begin to turn. This is typically used in areas where vehicle turning movements often interfere with pedestrian crossing movements and is only possible to implement when pedestrian signal faces are present.	
Auto Pedestrian Recall In urban settings with high pedestrian activity, pedestrian calls can be programmed into traffic signals phasing and timing to be automatic and do not require a person to activate the recall i.e. Auto-Recall. Auto pedestrian recalls and also be combined with leading pedestrian intervals if the context of the surrounding area is appropriate and pedestrian activity is reasonably high.	
High Visibility Crosswalk This treatment is the least protective and provides the lowest level of separation from vehicles. It consists of reflective roadway markings and accompanying signage and is generally used at intersections of arterials and collectors with other facilities. It can also be **applied at mid-block** crossing locations on smaller streets with low traffic volumes and speeds.	

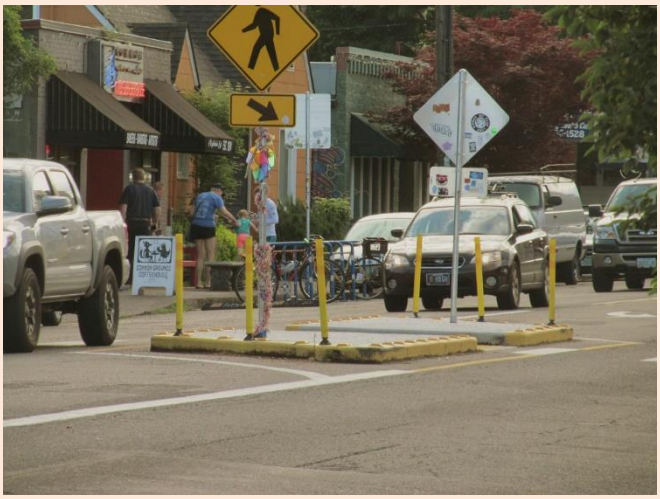
Facility Type/Treatment (Mid-Block)	Example

Rectangular Rapid Flash Beacon

Rectangular Rapid Flash Beacons (RRFBs) have a pedestrian activated strobe light that alerts motorists of pedestrians or bicyclists intending to cross a roadway. These are typically used at midblock crossings with medium to high pedestrian and bicycle demand and/or medium to high traffic volumes on roadways. RRFBs may not be as appropriate as pedestrian signals or pedestrian hybrid beacons on roadways wider than three lanes, unless a pedestrian refuge island is provided.

Crossing Island (Pedestrian Refuge)

This treatment provides a protected area for pedestrians to stop while crossing the street. They are typically used when crossing multi-lane streets, in areas with high levels of vulnerable pedestrian users. For example, crossing islands are used near schools or senior centers, and often applied in areas with medium to high traffic volumes and/or with pedestrian crash history.



Raised Pedestrian Crossing

This treatment brings the roadway even with the sidewalk and requires vehicles to slow. They are typically applied at mid-block crossings on two-lane roads where pedestrian volumes ≥ 50 pedestrians per hour and speed control is needed. Raised crosswalks may be provided at intersections where low-volume streets intersect with high-volume streets or where a roadway changes character (such as from commercial to residential). Raised crosswalks should not be used on transit routes or where there are steep grades or curves.

Facility Type/Treatment (Mid-block/Intersection)	Example
Grade Separated Crossing Grade-separated crossings (undercrossings or overcrossings) provide the highest level of separation from motor vehicles. They are best suited for crossings of roads with high vehicle volumes and speeds or locations where a path is naturally located on a different grade than the road. Grade-separated crossings should be appropriately lighted to increase perceived safety and should use switchbacks or circular ramps to provide direct, accessible, and convenient access from the street. They should not require extensive out of direction travel.	
Pedestrian Signal Pedestrian signals provide the next highest level of separation and protection from motor vehicles. These are typically applied at mid-block crossings with high pedestrian or bicycle demand and/or high traffic volumes, or previously stop-controlled intersections where pedestrian volumes warrant a signal.	
Pedestrian Hybrid Beacon Sometimes called a HAWK signal, a pedestrian hybrid beacon remains dark when not in use. When activated, the HAWK signal provides drivers a yellow light to alert them to slow down followed by a solid red light while pedestrians cross the street. It is typically used for mid-block crossing locations with high pedestrian or bicycle use and/or high traffic volumes.	
Bulb-out/Curb Extension This treatment shortens the crossing distance for pedestrians and narrows the vehicle path to reduce vehicle speeds. They are typically applied midblock or at intersections on streets with on-street parking.	

In addition to LPI, various signal timing strategies can increase priority for pedestrians:

- Timing that activates a pedestrian signal immediately after actuation, after completing the minimum green time for conflicting vehicles. This strategy minimizes pedestrian delay and can reduce vehicle delay as well (in cases where pedestrians use the push button, but then cross before the pedestrian signal is active due to excessive delay).
- Overall shorter cycle lengths at signals. Shorter signal lengths result in less delay for pedestrians, since the pedestrian phase will come up more frequently.
- Exclusive pedestrian phasing, also known as a "pedestrian scramble," which provides an exclusive phase where all vehicles are stopped and pedestrians can cross in any direction, including diagonally. This is appropriate for intersections with high pedestrian volumes in all directions.

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.

Crossing Distances Between Pedestrian Crossing Facilities

There are several tools, literature, and guidance documents that have been developed for evaluating the appropriateness and recommended spacing for pedestrian crossings at uncontrolled intersections. The following summarizes some of the guidance for spacing.

- ODOT recommends the following target pedestrian crossing spacing range (feet) based on the urban area type
  - Urban Mix[4]: 250-550 (1-2 blocks)
  - Commercial Corridor[5] 500-1,000
- Global Designing Cities Initiative is a program of the National Association of City Transportation Officials (NACTO) and recommends the following design guidance for pedestrian crossing spacing:
  - Provide level crossings every 80-100m (~262 – 328 feet) in urban environments[6].
  - Distances over 200m (656 feet) should be avoided, as they create compliance and safety issues.
  - If it takes a person more than three minutes to walk to a pedestrian crossing, he or she may decide to cross along a more direct, but unsafe route.
  - Pedestrian crossing spacing should be determined according to the pedestrian network, built environment, and desire lines. Designers should take into account both existing and projected crossing demand.
- PBOT has developed Spacing Standards for Marked Pedestrian Crossings intended to identify gaps in the pedestrian network where additional engineering analysis is required. Spacing standards are dependent on street classification and based on a 200-foot block module.

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[4] Mix of land uses with a **well-connected roadway network.** May extend long distances. Commercial uses front the street with residential neighborhoods on top or immediately behind land uses.

[5] Mostly commercial and industrial uses with **large building footprints** and large parking lots set within **large blocks** and a **disconnected or sparse roadway network.**

[6] Jure Kostanjsek and Lipar,Peter, "Pedestrian crossings priority for pedestrian safety" (Paper presented at the 3rd Urban Street Symposium, Seattle, June 2007).

- **Pedestrian Districts and Main Streets:** For arterials and collectors within designated Pedestrian Districts (TSP pedestrian classification), and on Civic Main Streets and Neighborhood Main Streets (TSP street design classifications), the maximum spacing between marked pedestrian crossings is 530 feet. On a street with standard 200-foot blockfaces, this results in a marked and/or enhanced pedestrian crossing a minimum of every other block. Marked pedestrian crossings may be provided at greater frequency, particularly in Pedestrian Districts located in the Center City, where traffic signals are provided at every block[7]. Where blocks are longer than 530 feet, mid-block crossings should be provided.
- **City Walkways:** On designated City Walkways outside of and between Pedestrian Districts and Main Streets, the maximum spacing between marked pedestrian crossings is 795 feet. On a City Walkway with standard 200-foot blocks, this results in a marked and/or enhanced pedestrian crossing a minimum of every three blocks (compared with every two blocks in Pedestrian Districts and Main Streets). However, marked pedestrian crossings may be provided at greater frequency.
- **Transit stops:** Within city limits, marked and/or enhanced crossings will be provided at all transit stops, regardless of street classification. Marked crossing requirements at transit stops may be implemented by providing new marked pedestrian crossings at existing transit stops, and/or by strategically relocating or consolidating transit stops such that they are located at existing marked crossings. Transit stop locations may determine marked crossing locations required to meet maximum spacing requirements in Pedestrian Districts and Main Streets and on City Walkways.

- The Washington County Pedestrian and Bicycle Plan and Washington County Approval Process for New Pedestrian Crossings at Mid-Block Locations and Uncontrolled Intersections provides guidance on pedestrian crossing spacing as well as street spacing standards that enhance pedestrian connectivity.
  - Within five acres or more of developable land, Washington County requires maximum block lengths for new development to be 530 feet and access ways must be provided every 330 feet.
  - If an existing crosswalk or controlled road intersection is less than 300 feet from the proposed location, the applicant shall reroute pedestrians and crossing cyclists to that location or relocate the generator if feasible, demonstrate the viability of the proposed location, or propose a grade separation of the crossing.
- Metro's 2018 RTP provides guidance on street spacing standards as it relates to multimodal connectivity.
  - The RTP sets some design standards that are relevant to pedestrian connectivity and crossing facility spacing, including a standard for new street connection spacing at no more than 530 feet in specific areas, except where barriers prevent connectivity; narrower roadways and rights of way; and direction.

Crosswalk Closures

Crosswalks exist at all locations where crosswalk markings indicate a pedestrian crossing and at all intersections (whether marked or unmarked) unless closed by official action (ORS801.220). The absence of crosswalk pavement markings at an intersection does not preclude the need to provide ADA-

[7] PBOT practice is to mark crosswalks at all signalized intersections.

compliant accommodations, such as new or upgraded curb ramps for all quadrants of an intersection unless a crosswalk has been closed by official action. If a crosswalk is closed, it must follow Manual on Uniform Traffic Control Devices (MUTCD) and ADA guidelines to make sure it is appropriately marked.

Washington County, OR provides several examples of when it may be appropriate to consider closing a crosswalk:

- When physical restrictions on the opposite side of the roadway hinder pedestrian activity there, closing the crosswalk is recommended. Typical examples of this condition include T intersections, where directly behind the opposite side of the roadway is railroad right of way, a drainage canal, or some other type of waterway where pedestrian activity is discouraged and/or prohibited. An exception will be when there are transit connections on the opposite side of the roadway.
- Where visibility (for people walking, on bikes or on motorcycles) is obstructed and the obstruction cannot be reasonably removed or otherwise reasonably mitigated, and where the cost of signalization is disproportionate to the closing of the crosswalk.
- Where multiple legal crosswalks exist so they conflict disproportionately with other modes. Examples include an arterial street with multiple offset or T intersections. Crosswalks at T and offset intersections should not be closed unless there is an alternative crossing within 300 feet of the closed crosswalk.
- Across the receiving leg of a dual right-turn lane at an intersection where an alternative accessible path is available
- Where analysis shows that the pedestrian crossing at a signalization intersection would significantly impact intersection operations and a reasonable alternative accessible path is available.

Within the Rogue Valley, it is recommended that local agencies develop their own crosswalk closure process with delegated authority. If the local agency does not have a process, the project team suggests the local agency provide an official letter to document where crosswalks are not intended, and what treatments are to be applied. Removing or closing any crosswalk on Jackson County roadways should require the approval of the County Engineer through design exception documentation of the following:

- The potential for or actual observed crashes, geometric design or operational concerns that adversely affect pedestrian safety
- An exhibit showing an alternative ADA-accessible path between the two points of the crossing that are being closed, demonstrating that the closure will not adversely impact accessibility

Shared-use Paths and Trails

Shared-use paths and trails serve as transportation and recreational corridors, separated from motor vehicles by open space and physical barriers. Establishing shared-use path and trail systems can provide long distance, regional connections and contribute to the local economy by attracting tourists from outside the region. The RVATP recognizes the benefits of shared-use paths and trails as links to connect residential neighborhoods to employment centers and community destinations.

How Are Shared-use Paths and Trails Incorporated into the Walking and Biking Networks?

Shared-use paths and trails are part of the walking and biking networks. These facilities play an integral role in recreation, commuting, and accessibility due to their appeal to users of all ages and skill levels.

Benefits

Shared-use paths and trails serve the needs of active transportation users. Separation from vehicles attracts users of all levels and skill sets. Shared-use paths and trails can provide safe and accessible regional connections.

Constraints

There is potential for conflicts between bicycles and pedestrians on a shared-use path. It may be necessary to create enhanced crossings of major roadways. Isolated segments of shared-use paths and trails may introduce personal security concerns.

Typical Application

Shared-use paths are medium- to long-distance links within and between communities that also serve as recreational facilities. They can be placed parallel to roads in rural areas where sidewalks and on-street facilities are not present.

Design Considerations

A minimum width of 10 feet is recommended for areas with low volumes of people walking and biking; 12 to 14 feet should be considered in areas with moderate to high numbers of walkers and bikers. The ODOT standard for regional trails is 12 feet plus a 1-foot buffer on each side. Pavement markings can be used to indicate distinct space for people walking and people biking while also serving as a wayfinding resource. Shared-use paths serving transportation functions should have lighting.

Crossing Treatments for People Walking and Biking

Building safe, comfortable and accessible walking and biking networks requires protected crossings and access to direct routes. The following describes approaches to providing crossings in different areas for people walking and biking.

How Do We Address Crossing Needs?

- Provide safe and convenient crossings between destinations. Consider that a crossing spaced 300 feet from a desired location adds 2.5 minutes of walking time. With the addition of signal delay, a few inconvenient crossings along a route can quickly add 10 minutes to someone's walk. For comparison, an intersection is considered to function at the worst level of service (LOS F), when people driving motor vehicles experience an average of 80 seconds or more of delay.
- On transit routes, provide crossings at transit stops (or locate transit stops at crossings).
- At mid-block, uncontrolled locations with pedestrian crossing demand, select treatments appropriate for the roadway characteristics.
- At intersections and mid-block crossings near schools, provide ADA-accessible crossings (and side-walk facilities) at all intersection legs.

What Crossing Treatments are Appropriate?

The type of appropriate crossing depends on the characteristics of the roadway being crossed. Vehicle speed, number of lanes, width, and number of vehicles are among the characteristics that need to be considered when designing a crossing. Generally speaking, wide, high-speed roadways with many vehicles necessitate a higher level of separation or protection for crossing pedestrians. The following design guidance tools may be used to determine the appropriate level of crosswalk protection based on the roadway context and surrounding area:

- *NCHRP Report 562: Improving Pedestrian Safety at Unsignalized Crossings*
    - Based on vehicular volume, speed, yielding compliance, pedestrian volume, crossing distance
- *FHWA: Guide for Improving Pedestrian Safety at Uncontrolled Crossing Locations*
    - Based on vehicular volume, speed, roadway configuration (number of lanes, raised median, etc.)

A Performance-Based Design Approach for Constrained Multimodal Streets

In order to complete the pedestrian and bicycle systems to serve users of all ages and abilities using the treatments discussed in this toolkit, the RVATP will need to outline flexible design solutions, particularly in constrained areas. This approach, also referred to as performance-based design, has been developed through federal research and guidance, and is being incorporated into design guidance from ODOT. In developing solutions for streets that require redesign to implement the envisioned improvements, the RVATP's design approach includes the following considerations:

What are the key functions of this transportation corridor?

- **Transit**: Is there bus service? What is the average level of ridership?
- **Motor Vehicles**: What is the Average Annual Daily Traffic (AADT)? What mobility and access needs are served?
- **Freight and Heavy Vehicles**: Is this a designated freight route? How many heavy vehicles use this route? What is the appropriate "design vehicle"?
- **Bicycles**: Is the roadway on the regional network or a connector route? What types of bicyclist are served and what destinations do they need to reach?
- **Pedestrians**: Is the roadway on the regional network or a connector route? What types of destinations are located on this corridor and how can access be provided?
- **Key Functions**: Are there other key functions, such as parking, stormwater management, street trees? Which, if any, of these key functions are well served by alternate, parallel routes?

Based on the key desired functions, and the existing types and volumes of users on the roadway, the RVMPO and local agencies should consider flexibility for roadway design elements such as number of lanes, lane widths, design speed, turning radii, medians, shoulders, and on-street parking.

Design Speed

Motor vehicle speeds have an impact on safety performance for all modes comfort level for people walking and biking. Lower vehicle speeds are correlated with lower crash risk and lower-severity crashes. Selecting a design speed for streets should be based on the "target" speed for the street. Target speeds should be determined based on the key functions of the street and should typically fall in the range of 10 to 35 mph for multimodal urban streets. Streets with speeds of 25 mph or less result in a smaller speed differential between bicyclists and motor vehicles, creating an environment where motorists and people on bikes can become more comfortable sharing the facility. The selected design speed impacts a number of different design elements:

- **Corner radii**: In urban areas, small corner radii are preferred to encourage slow turning speeds (15 mph or less). Corner radii dimensions should typically be 15 feet or less. Freight vehicles can still be accommodated through use of freight aprons, set-back stop bars, and designing to allow freight vehicles use of far receiving lanes.
- **Presence and width of shoulders or shy distance**: in urban areas, lower speed streets can be designed with minimal or no shoulders or shy distance between the travel lanes and curbs.
- **Traffic calming elements**, such as speed humps or bulb-outs, can be used to achieve lower target speeds.
- **Lane Widths**: for urban streets with target speeds of 35 mph or less, 10-foot lanes can be used, except where wider outside lanes are needed to accommodate transit or freight routes.

Lane Widths

There is no substantive decrease in urban street intersection capacity when through lane widths are narrowed from 12 feet to 10 feet, as long as all other geometric and traffic signalization conditions remain constant. Research has also shown that narrower lane widths in urban areas (10 or 11 feet) have equal or potentially improved safety performance over 12-foot lanes. The RVMPO and local agencies should consider narrowing travel lanes to 10 feet along facilities where posted speed limits do not exceed 35 mph to allow for the addition or widening of pedestrian or bicycle facilities. In transit or freight corridors, appropriate outside lane widths should be selected to accommodate transit and freight vehicles (11 feet or 12 feet).

Number of Lanes

The RVMPO and local agencies should consider reducing the number of vehicle travel lanes and reallocating street space to other modes or uses on a case-by-case basis. Typically, this type of redesign, often called a "road diet," is implemented by converting 4 travel lanes (two in each direction) to 3 travel lanes (one in each direction, and a center turn lane) and bike lanes. This type of conversion typically has minimal impacts on traffic operations on streets with less than 15,000 average daily vehicles (ADT). Streets with 15,000 to 25,000 ADT may have impacts to vehicle operations, but these effects should be studied for each specific case prior to implementation on higher ADT streets.

Parking

On-street parking should be considered for removal in order to add walking or biking facilities in locations where:

- On-street parking is underutilized
- On-street parking is utilized but adjacent off-street parking is available and underutilized
- On-street parking does not fulfill a key function of the street (e.g., providing access to destinations; providing a physical buffer to enhance pedestrian or bicycle facilities; or providing traffic calming)

Providing ADA Access

Best practices are evolving for providing ADA access at intersections, transit stops, and on-street parking, and in conjunction with protected bicycle facilities. The RVMPO and local agencies will continue to accommodate ADA access in all new street designs.

Appendix D Prioritization Process

Appendix D – Prioritization Process

National Cooperative Highway Research Program (NCHRP) Report 803: Pedestrian and Bicycle Transportation along Existing Roads—ActiveTrans Priority Tool Guidebook methodology was adapted for use in the RVATP as described below.

The methodology follows a two-phase, 10-step process: Phase 1 (Scoping) involves steps 1-6 in which the purpose of the prioritization process is established, factors and variables are selected, weights are established, and data availability and technical resources are assessed; this phase is often iterative as agencies may find a need to substitute factors and/or variables if there is a lack of data. Phase 2 (Prioritization) involves steps 7-10 in which data is organized, scaling is applied, and prioritization scores are calculated; this phase may also be iterative as agencies, advisory committees, and the general public provide feedback on the outcome of the process.

Factors and Variables

Factors are the categories used to express community or agency values considered in the prioritization process and contain groups of variables with similar characteristics. The NCHRP methodology includes nine factors commonly used by agencies across the country that are particularly suited for prioritization of pedestrian and bicycle transportation improvements. Five factors were selected for the prioritization process that closely align with the goals and objectives of the RVATP. Variables are the characteristics of roadways and intersections that can be measured and organized under each factor. Additional information on the factors and variables included in the prioritization process is provided below.

Safety

The Safety factor addresses **Goal 1: Safe and Secure**. This factor considers the crash history of a roadway segment or intersection. The Safety factor is evaluated primarily in terms of reported crashes and the severity of reported crashes. Roadway characteristics play a significant role in determining where crashes occur in a community. Therefore, as agencies consider priorities for improvements at different locations, it is important to assess crash history. The variable(s) included in the prioritization process under Safety include:

- **Total Crashes**—This variable refers to the total number of ped/bike-related crashes reported along a roadway segment or at an intersection over the five-year study period. It is determined based on information obtained from ODOT. Roadway segments or intersections with a higher number of total ped/bike-related crashes score higher than roadway segments or intersections with a lower number.
- **Total Fatal and Severe Crashes**—This variable refers to the total number of ped/bike-related fatal and severe injury crashes (Injury A) reported along a roadway segment or at an intersection over the five-year study period. It is determined based on information obtained from ODOT. Roadway segments or intersections with a higher number of bike/ped-related fatal or severe injury crashes score higher than roadway segments or intersections with a lower number.

Existing Conditions

The Existing Conditions factor addresses **Goal 3: Attractive and Appealing**. This factor considers the physical and operational characteristics of a roadway segment or intersection, such as the number and width of travel lanes, presence and width of shoulders/bike lanes and sidewalks, traffic volumes, travel speeds, and others. The variable(s) included in the prioritization process under Existing Conditions include:

- **LTS**—LTS is a rating system assigned to roadway segments to indicate the traffic stress they impose on people walking and biking. The ratings are determined by the physical and operational characteristics of the roadway segments, such as traffic volumes, travel speeds, and presence (and width) of walking and biking facilities. There are four levels of traffic stress, ranging from LTS 1 (little traffic stress) to LTS 4 (high traffic stress). A roadway segment that is rated LTS 1 generally has low traffic volumes and travel speeds and is suitable for all people walking and biking, including children. A roadway segment that is rated LTS 4 generally has high traffic volumes and travel speeds and is perceived as unsafe by most adults. Per discussions with the project team, LTS 2 is the intended target for the RVATP system. Roadway segments with high levels of traffic stress will be scored higher than roadway segments or intersections with low levels of traffic stress.
- **Potential Barriers**—Potential barriers were identified based on community input received from the online interactive mapping exercise, input from the TAC and CAC, and a planning-level assessment of all Regional and Connector Routes that cross each other (intersections). Projects located along segments or passing through intersections identified as potential barriers will score higher than projects without potential barriers. The number and presence of potential barriers will be assessed as a weighted variable; projects that address more potential barriers will score higher.

Connectivity

The Connectivity factor addresses **Goal 2: Connected and Accessible**. This factor accounts for the degree to which a project will allow residents to travel comfortably and continuously throughout their community. Connectivity is a relevant factor when prioritizing projects on existing roadways, such as wider shoulders, bike lanes, or sidewalks, particularly when the project fills a gap in an existing facility. The variables included in the prioritization process under Connectivity include:

- **Employment and Housing Served**—Employment and household densities vary throughout the RVMPO area; however, the highest densities occur within the urban unincorporated and incorporated communities. Projects that serve areas with higher employment and/ household density will score higher than projects with lower densities.
- **Distance Between Nodes/Destinations**—Several of the routes identified in the RVATP as Regional Routes are long and provide connections between communities. Others are shorter and provide connections within communities. Projects that complete shorter routes that are more likely to be served by walking and biking will score higher than longer routes.
- **Access to Transit**—Routes that provide direct access to an existing transit route or future transit route will score higher than projects that do not provide direct access to transit.
- **Fills in a gap in an existing facility or network**—There are numerous gaps in the walking and biking networks along city, county, and ODOT facilities. Projects that fill gaps and help extend the connected low-stress network will score higher that projects that do not.
- **Connects to an existing regional facility or activity center**—Several of the projects identified in the prioritized project list will provide direct connections to existing regional transportation facilities, such as the Bear Creek and Rogue River Greenway Trails and/or activity centers. Projects that provide these connections will score higher than projects that do not.

Equity

The Equity factor addresses **Goal 4: Community Vitality**. This factor represents the degree to which improvements are distributed evenly to all groups within a community, particularly those who are dependent on alternative forms of transportation. Taking equity into account can help agencies ensure

that improvements serve the needs of all transportation system users. The variables included in the prioritization process under Equity include:

- **Number of Households with No Vehicle Access**—This variable refers to the number of households within the area surrounding a project with no vehicle access and is determined based on Census data. Projects located within areas with a higher number of households with no vehicle access will score higher than projects in areas with a lower number of households.
- **Number of Households in Poverty**—This variable refers to the number of households in poverty within the area surrounding a project and is determined based on Census data. Projects located within areas with a higher number of households in poverty will score higher than projects located within areas with a lower number of households.

Opportunity

The Opportunity factor provides the closest possible connection to address **Goal 5: Regional Collaboration**. This factor quantifies the ability of an agency to take advantage of resources that can support project implementation. These resources may be financial or political. They are important to consider because they save time and money when implementing walking and biking projects. For example, financial opportunities include whether or not a proposed improvement is eligible for grant funding, can draw from a dedicated funding source (or multiple funding sources), can be incorporated into a scheduled roadway reconstruction or resurfacing project, or can be provided by private developers through development requirements/agreements. The variable(s) included in the prioritization process under Opportunity include:

- **Multi-jurisdictional Routes**—Several of the routes identified in the RVATP as Regional Routes are under the jurisdiction of the County or ODOT but located within one of the incorporated cities. These routes provide opportunities for multi-jurisdictional coordination and cooperation. Multi-jurisdictional routes will score higher than non multi-jurisdictional routes.

Scaling Variables

There are many different methods for scaling the factors and variables in the prioritization process, each of which can have a significant impact on the outcome. The scaling methods used in this prioritization process include the following:

- **Binary**—This method is applied to variables that result in a yes or no answer; either something exists (yes) or does not exist (no).
- **Proportionate Scaling**—This method is applied to variables with a range of potential values and no significant outliers. Variables with a higher value receive a higher score.
- **Inverse Proportionate Scaling**—This method is similar to proportionate scaling; however, in this method, low values receive a higher score than high values.

Table D1 summarizes the factors and variables included in the prioritization process along with how they were scaled.

Table D1: Project Prioritization—Factors and Variables

Factor	Variable	Scale Type	Scale
Safety	Total Crashes	Quantile Scaling (4)	Highest = 10, Lowest = 0
Existing Conditions	Level of Traffic Stress	Proportionate	Highest = 10, Lowest = 0
	Potential Barriers	Proportionate	Highest = 10, Lowest = 0
Connectivity	Employment and Housing Served	Quantile Scaling (10)	Highest = 10, Lowest = 0
	Distance between Nodes/ Destinations	Inverse Quantile Scaling (10)	Highest = 10, Lowest = 0
	Access to Transit	Proportionate	Highest = 10, Lowest = 0
	Fills in a gap (Ped)	Quantile Scaling (10)	Highest = 10, Lowest = 0
	Fills in a gap (Bike)	Quantile Scaling (10)	Highest = 10, Lowest = 0
	Connects to an existing facility	Proportionate	Highest = 10, Lowest = 0
Equity	Households with no Vehicle Access	Quantile Scaling (10)	Highest = 10, Lowest = 0
	Household in Poverty	Quantile Scaling (10)	Highest = 10, Lowest = 0
Opportunity	Multi-Jurisdictional Route	Proportionate	Highest = 10, Lowest = 0

Weighting Factors

Weights are numbers used to indicate the relative importance of different factors based on community values. The draft Prioritization Process weighted all factors evenly based on the number of variables included within each factor. For example, Safety had two variables scored at 10 with a weight of 2 whereas Opportunity and Existing Conditions each had one variable scored at 10 with a weight of 4; all totaling 40 for Highest Score by Factor.

Based on input received from the TAC and CAC, weights to certain variables were adjusted based on their importance. For example, variables listed under Existing Conditions, Connectivity, and Equity were increased and Opportunity was decreased. Safety was originally broken into two variables: Total Crashes and Total Fatal and Severe Crashes. In an effort to increase the importance of Safety, these two variables were combined to receive a single increased value to Highest Score by Variable for Safety.

When the prioritization process was implemented, the unweighted factor score was multiplied by the weight number to determine the weighted factor score. **Table D2** identifies weights for each factor based on input received from the TAC and CAC.

Table D2: Project Prioritization—Weights

Factor	Variable	Maximum Scale (Score)	Weight	Highest Score by Variable	Highest Score by Factor
Safety	Total Crashes	10	3	30	30
Existing Conditions	Level of Traffic Stress	10	2.5	25	50
	Potential Barriers	10	2.5	25	
Connectivity	Employment and Housing Served	10	1	10	50
	Distance between Nodes/ Destinations	10	1	10	
	Access to Transit	10	1	10	
	Fills in a Gap	10	1	10	
	Connects to an Existing facility	10	1	10	
Equity	Households with no Vehicle Access	10	2.5	25	50
	Household in Poverty	10	2.5	25	
Opportunity	Multi-Jurisdictional Route	10	2	20	20

Appendix E Planning-Level Cost Estimates for Prioritized Projects

Rogue Valley Active Transportation Plan

ID 1: E Main Street

ODOT, Jackson County Roads

Engineer's Conceptual Estimate

Prepared By: NHG		*Date: September, 2020*		
Prepared By: HJS				
	This Estimate has a Rating of:	**3C**	*(See rating scale guide below.)*	
ITEM	**UNIT**	**TOTAL QUANTITY**	**UNIT PRICE**	**TOTAL COST**
Mobilization	LS	ALL	$29,000.00	$29,000.00
Traffic Control	LS	ALL	$15,000.00	$15,000.00
Erosion Control	LS	ALL	$0.00	$0.00
Removal of Structures and Obstructions	LS	ALL	$7,000.00	$7,000.00
Asphalt Roadway - Grind & Inlay (2" Depth)	SF	54,000	$3.70	$199,800.00
Dura-Curb (Mountable Curb)	LF	2,000	$8.00	$16,000.00
Surface Mounted Tubular Markers	EA	100	$200.00	$20,000.00
Pavement Markings, Complete	LS	ALL	$5,000.00	$5,000.00
Signage, Complete	LS	ALL	$4,000.00	$4,000.00
Illumination System, Complete	LS	ALL	$33,800.00	$33,800.00
TOTAL CONSTRUCTION COST				**$ 329,600**
ENGINEERING SUPPORT				
Engineering & Construction Management	LS	ALL	$33,000.00	$33,000.00
ENGINEERING SUPPORT SUBTOTAL				**$ 33,000**
TOTAL PROJECT SUBTOTAL				**$ 362,600**
50% Contingency				**$ 181,300**
TOTAL ESTIMATED PROJECT COST				**$ 543,900**

Assumptions:

- Existing curbs will be maintained - no impacts to stormwater
- Asphalt Roadway - Grind & Inlay (2" Depth) assumed for restriping (edge of relocated parking lane to south curb)
- No right-of-way impacts
- No modifications to existing curb bump-outs at N Central Avenueor railroad

Scope Accuracy:

Level 1: Project scope well understood and well defined.

Level 2: Project scope conceptual. Scope lacks detail due to potential permit requirements; Unknown project conditions; limited knowledge of external impacts.

Level 3: Project scope is a "vision" with limited detail.

Engineering Effort:

Level A: Preliminary engineering performed. Technical information is available, engineering calculations have been performed; clear understanding of the materials size and quantities needed to execute job. Schedule understood; staff and permitting is fairly clear, (however this element may still need refining). Project Development & Construction Contingencies ranges between 10%-20%.

Level B: Conceptual engineering performed. Technical information is available, rough engineering calculations may have been performed, or similar information from previous similar work is compared and used. Project Development Contingencies ranges between 15% to 25% and Construction Contingencies ranges between 20% to 30%.

Level C: No engineering performed. Educated guesstimating. Limited technical information available and/or analysis performed. Project Development and Construction Contingencies should be selected appropriately by Project Manager. Contingency may range up to 50%.

Rogue Valley Active Transportation Plan

ID 2: OR99

ODOT, Jackson County Roads

KITTELSON & ASSOCIATES

Engineer's Conceptual Estimate

Prepared By: NHG		*Date: September, 2020*		
Prepared By: HJS				
This Estimate has a Rating of:		**3C**	*(See rating scale guide below.)*	
ITEM	**UNIT**	**TOTAL QUANTITY**	**UNIT PRICE**	**TOTAL COST**
Mobilization	LS	ALL	$108,000.00	$108,000.00
Traffic Control	LS	ALL	$55,000.00	$55,000.00
Erosion Control	LS	ALL	$10,000.00	$10,000.00
Removal of Structures and Obstructions	LS	ALL	$24,000.00	$24,000.00
Clearing and Grubbing	LS	ALL	$21,000.00	$21,000.00
General Earthworks	CY	2,600	$25.00	$65,000.00
Asphalt Roadway - Full Depth	SF	14,300	$8.00	$114,400.00
Subgrade Geotextile	SY	1,589	$1.00	$1,589.00
Concrete Curbs - Standard Curb	LF	2,600	$25.50	$66,300.00
Concrete Walks	SF	31,200	$7.40	$230,880.00
Detectable Warnings	EA	12	$500.00	$6,000.00
Pedestrian Ramps	EA	12	$5,000.00	$60,000.00
Bike Ramps	EA	12	$2,500.00	$30,000.00
Storm Water System & Water Quality Treatment, Complete	LS	ALL	$191,000.00	$191,000.00
Permanent Landscaping	SF	20,800	$3.70	$76,960.00
Pavement Markings, Complete	LS	ALL	$22,000.00	$22,000.00
Signage, Complete	LS	ALL	$17,000.00	$17,000.00
Illumination System, Complete	LS	ALL	$151,000.00	$151,000.00
TOTAL CONSTRUCTION COST				**$ 1,250,129**
ENGINEERING SUPPORT				
Engineering & Construction Management	LS	ALL	$313,000.00	$313,000.00
ENGINEERING SUPPORT SUBTOTAL				**$ 313,000**
TOTAL PROJECT SUBTOTAL				**$ 1,563,129**
50% Contingency				**$ 781,570**
TOTAL ESTIMATED PROJECT COST				**$ 2,344,699**

Assumptions:

- Asphalt Roadway - Full Depth assumed for half of outside travel lane associated with curb relocation (east side of roadway)
- No right-of-way impacts included
- Modifications to east curb only (west curb to be maintained)
- Does not include geometric modifications to Garfield Street intersection
- Assumes existing center median approaching Garfield Street to remain

Scope Accuracy:

Level 1: Project scope well understood and well defined.

Level 2: Project scope conceptual. Scope lacks detail due to potential permit requirements; Unknown project conditions; limited knowledge of external impacts.

Level 3: Project scope is a "vision" with limited detail.

Engineering Effort:

Level A: Preliminary engineering performed. Technical information is available, engineering calculations have been performed; clear understanding of the materials size and quantities needed to execute job. Schedule understood; staff and permitting is fairly clear, (however this element may still need refining). Project Development & Construction Contingencies ranges between 10%-20%.

Level B: Conceptual engineering performed. Technical information is available, rough engineering calculations may have been performed, or similar information from previous similar work is compared and used. Project Development Contingencies ranges between 15% to 25% and Construction Contingencies ranges between 20% to 30%.

Level C: No engineering performed. Educated guesstimating. Limited technical information available and/or analysis performed. Project Development and Construction Contingencies should be selected appropriately by Project Manager. Contingency may range up to 50%.

Rogue Valley Active Transportation Plan

ID 3: OR62

ODOT, Jackson County Roads

Engineer's Conceptual Estimate

Prepared By: NHG		*Date: September, 2020*		
Prepared By: HJS				
	This Estimate has a Rating of:	**3C**	*(See rating scale guide below.)*	
ITEM	**UNIT**	**TOTAL QUANTITY**	**UNIT PRICE**	**TOTAL COST**
Mobilization	LS	ALL	$130,000.00	$130,000.00
Traffic Control	LS	ALL	$66,000.00	$66,000.00
Erosion Control	LS	ALL	$14,000.00	$14,000.00
Removal of Structures and Obstructions	LS	ALL	$28,000.00	$28,000.00
Clearing and Grubbing	LS	ALL	$25,000.00	$25,000.00
General Earthworks	CY	3,700	$25.00	$92,500.00
Asphalt Roadway - Full Depth	SF	28,800	$8.00	$230,400.00
Subgrade Geotextile	SY	3,200	$1.00	$3,200.00
Concrete Curbs - Standard Curb	LF	3,200	$25.50	$81,600.00
Concrete Walks	SF	38,400	$7.40	$284,160.00
Detectable Warnings	EA	8	$500.00	$4,000.00
Pedestrian Ramps	EA	8	$5,000.00	$40,000.00
Bike Ramps	EA	8	$2,500.00	$20,000.00
Storm Water System & Water Quality Treatment, Complete	LS	ALL	$258,000.00	$258,000.00
Permanent Landscaping	SF	12,800	$3.70	$47,360.00
Pavement Markings, Complete	LS	ALL	$21,000.00	$21,000.00
Signage, Complete	LS	ALL	$16,000.00	$16,000.00
Illumination System, Complete	LS	ALL	$144,500.00	$144,500.00
TOTAL CONSTRUCTION COST			**$**	**1,505,720**
ENGINEERING SUPPORT				
Engineering & Construction Management	LS	ALL	$302,000.00	$302,000.00
TOTAL PROJECT SUBTOTAL			**$**	**1,807,720**
50% Contingency			**$**	**903,860**
TOTAL ESTIMATED PROJECT COST			**$**	**2,711,580**

Assumptions:

- Asphalt Roadway - Full Depth assumed for outside travel lane (adjacent to existing north curb) associated with curb relocation
- No right-of-way impacts included
- Existing center median to remain
- Does not include cost for potential Bear Creek Bridge widening, 12-foot path assumed on north side of bridge in existing shoulder

Scope Accuracy:

Level 1: Project scope well understood and well defined.

Level 2: Project scope conceptual. Scope lacks detail due to potential permit requirements; Unknown project conditions; limited knowledge of external impacts.

Level 3: Project scope is a "vision" with limited detail.

Engineering Effort:

Level A: Preliminary engineering performed. Technical information is available, engineering calculations have been performed; clear understanding of the materials size and quantities needed to execute job. Schedule understood; staff and permitting is fairly clear, (however this element may still need refining). Project Development & Construction Contingencies ranges between 10%-20%.

Level B: Conceptual engineering performed. Technical information is available, rough engineering calculations may have been performed, or similar information from previous similar work is compared and used. Project Development Contingencies ranges between 15% to 25% and Construction Contingencies ranges between 20% to 30%.

Level C: No engineering performed. Educated guesstimating. Limited technical information available and/or analysis performed. Project Development and Construction Contingencies should be selected appropriately by Project Manager. Contingency may range up to 50%.

Rogue Valley Active Transportation Plan

ID 4: Court Street

ODOT, Jackson County Roads

Engineer's Conceptual Estimate

Prepared By: NHG		*Date: September, 2020*		
Prepared By: HJS				
	This Estimate has a Rating of:	**3C**	*(See rating scale guide below.)*	
ITEM	**UNIT**	**TOTAL QUANTITY**	**UNIT PRICE**	**TOTAL COST**
Mobilization	LS	ALL	$43,000.00	$43,000.00
Traffic Control	LS	ALL	$22,000.00	$22,000.00
Erosion Control	LS	ALL	$8,000.00	$8,000.00
Removal of Structures and Obstructions	LS	ALL	$10,000.00	$10,000.00
Clearing and Grubbing	LS	ALL	$9,000.00	$9,000.00
General Earthworks	CY	1,900	$25.00	$47,500.00
Asphalt Roadway - Full Depth	SF	16,000	$8.00	$128,000.00
Subgrade Geotextile	SY	1,778	$1.00	$1,778.00
Concrete Curbs - Standard Curb	LF	3,200	$25.50	$81,600.00
Concrete Walks	SF	9,600	$7.40	$71,040.00
Pavement Markings, Complete	LS	ALL	$9,000.00	$9,000.00
Signage, Complete	LS	ALL	$7,000.00	$7,000.00
Illumination System, Complete	LS	ALL	$61,200.00	$61,200.00
TOTAL CONSTRUCTION COST				**$ 499,118**
ENGINEERING SUPPORT				
Engineering & Construction Management	LS	ALL	$125,000.00	$125,000.00
ENGINEERING SUPPORT SUBTOTAL				**$ 125,000**
TOTAL PROJECT SUBTOTAL				**$ 624,118**
50% Contingency				**$ 187,240**
TOTAL ESTIMATED PROJECT COST				**$ 811,358**

Assumptions:

- Asphalt Roadway - Full Depth assumed for half of adjacent travel lane and half of cycle track next to raised median (buffer)
- Existing curbs will be maintained - no impacts to stormwater
- Includes segment improvements only; intersection improvements will require further design
- No right-of-way impacts

Scope Accuracy:

Level 1: Project scope well understood and well defined.

Level 2: Project scope conceptual. Scope lacks detail due to potential permit requirements; Unknown project conditions; limited knowledge of external impacts.

Level 3: Project scope is a "vision" with limited detail.

Engineering Effort:

Level A: Preliminary engineering performed. Technical information is available, engineering calculations have been performed; clear understanding of the materials size and quantities needed to execute job. Schedule understood; staff and permitting is fairly clear, (however this element may still need refining). Project Development & Construction Contingencies ranges between 10%-20%.

Level B: Conceptual engineering performed. Technical information is available, rough engineering calculations may have been performed, or similar information from previous similar work is compared and used. Project Development Contingencies ranges between 15% to 25% and Construction Contingencies ranges between 20% to 30%.

Level C: No engineering performed. Educated guesstimating. Limited technical information available and/or analysis performed. Project Development and Construction Contingencies should be selected appropriately by Project Manager. Contingency may range up to 50%.

Rogue Valley Active Transportation Plan

ID 5: N Riverside Avenue

ODOT, Jackson County Roads

Engineer's Conceptual Estimate

Prepared By: NHG		*Date: September, 2020*		
Prepared By: HJS				
	This Estimate has a Rating of:	**3C**	*(See rating scale guide below.)*	
ITEM	**UNIT**	**TOTAL QUANTITY**	**UNIT PRICE**	**TOTAL COST**
Mobilization	LS	ALL	$49,000.00	$49,000.00
Traffic Control	LS	ALL	$25,000.00	$25,000.00
Erosion Control	LS	ALL	$9,000.00	$9,000.00
Removal of Structures and Obstructions	LS	ALL	$11,000.00	$11,000.00
Clearing and Grubbing	LS	ALL	$10,000.00	$10,000.00
General Earthworks	CY	2,200	$25.00	$55,000.00
Asphalt Roadway - Full Depth	SF	19,000	$8.00	$152,000.00
Subgrade Geotextile	SY	2,111	$1.00	$2,111.11
Concrete Curbs - Standard Curb	LF	3,800	$25.50	$96,900.00
Concrete Walks	SF	11,400	$7.40	$84,360.00
Pavement Markings, Complete	LS	ALL	$8,000.00	$8,000.00
Signage, Complete	LS	ALL	$6,000.00	$6,000.00
Illumination System, Complete	LS	ALL	$54,700.00	$54,700.00
TOTAL CONSTRUCTION COST				**$ 563,071**
ENGINEERING SUPPORT				
Engineering & Construction Management	LS	ALL	$141,000.00	$141,000.00
ENGINEERING SUPPORT SUBTOTAL				**$ 141,000**
TOTAL PROJECT SUBTOTAL				**$ 704,071**
30% Contingency				**$ 211,230**
TOTAL ESTIMATED PROJECT COST				**$ 915,301**

Assumptions:

- Asphalt Roadway - Full Depth assumed for half of adjacent travel lane and half of cycle track next to raised median (buffer)
- Existing curbs will be maintained - no impacts to stormwater
- Includes segment improvements only; intersection improvements will require further design
- No right-of-way impacts
- Does not include detailed cost associated with modifications to Rossanley Drive intersection

Scope Accuracy:

Level 1: Project scope well understood and well defined.

Level 2: Project scope conceptual. Scope lacks detail due to potential permit requirements; Unknown project conditions; limited knowledge of external impacts.

Level 3: Project scope is a "vision" with limited detail.

Engineering Effort:

Level A: Preliminary engineering performed. Technical information is available, engineering calculations have been performed; clear understanding of the materials size and quantities needed to execute job. Schedule understood; staff and permitting is fairly clear, (however this element may still need refining). Project Development & Construction Contingencies ranges between 10%-20%.

Level B: Conceptual engineering performed. Technical information is available, rough engineering calculations may have been performed, or similar information from previous similar work is compared and used. Project Development Contingencies ranges between 15% to 25% and Construction Contingencies ranges between 20% to 30%.

Level C: No engineering performed. Educated guesstimating. Limited technical information available and/or analysis performed. Project Development and Construction Contingencies should be selected appropriately by Project Manager. Contingency may range up to 50%.

Rogue Valley Active Transportation Plan

ID 6: E McAndrews Road

ODOT, Jackson County Roads

Engineer's Conceptual Estimate

Prepared By: NHG		*Date: September, 2020*		
Prepared By: HJS				
	This Estimate has a Rating of:	**3C**	*(See rating scale guide below.)*	
ITEM	**UNIT**	**TOTAL QUANTITY**	**UNIT PRICE**	**TOTAL COST**
Mobilization	LS	ALL	$8,000.00	$8,000.00
Traffic Control	LS	ALL	$4,000.00	$4,000.00
Erosion Control	LS	ALL	$1,000.00	$1,000.00
Removal of Structures and Obstructions	LS	ALL	$2,000.00	$2,000.00
Clearing and Grubbing	LS	ALL	$2,000.00	$2,000.00
General Earthworks	CY	200	$25.00	$5,000.00
Asphalt Roadway - Full Depth	SF	1,440	$8.00	$11,520.00
Subgrade Geotextile	SY	160	$1.00	$160.00
Concrete Curbs - Standard Curb	LF	240	$25.50	$6,120.00
Concrete Walks	SF	1,440	$7.40	$10,656.00
Detectable Warnings	EA	2	$500.00	$1,000.00
Pedestrian Ramps	EA	2	$5,000.00	$10,000.00
Storm Water System & Water Quality Treatment, Complete	LS	ALL	$16,000.00	$16,000.00
Pavement Markings, Complete	LS	ALL	$1,000.00	$1,000.00
Signage, Complete	LS	ALL	$1,000.00	$1,000.00
Illumination System, Complete	LS	ALL	$6,300.00	$6,300.00
TOTAL CONSTRUCTION COST				**$ 85,756**
ENGINEERING SUPPORT				
Engineering & Construction Management	LS	ALL	$26,000.00	$26,000.00
ENGINEERING SUPPORT SUBTOTAL				**$ 26,000**
TOTAL PROJECT SUBTOTAL				**$ 111,756**
50% Contingency				**$ 55,880**
TOTAL ESTIMATED PROJECT COST				**$ 167,636**

Assumptions:

- Assumes construction of 240-foot sidewalk gap on southside of roadway immediately west of N Riverside Avenue only
- Asphalt Roadway - Full Depth assumed for half of adjacent travel lane of newly constructed sidewalk
- No right-of-way impacts

Scope Accuracy:

Level 1: Project scope well understood and well defined.

Level 2: Project scope conceptual. Scope lacks detail due to potential permit requirements; Unknown project conditions; limited knowledge of external impacts.

Level 3: Project scope is a "vision" with limited detail.

Engineering Effort:

Level A: Preliminary engineering performed. Technical information is available, engineering calculations have been performed; clear understanding of the materials size and quantities needed to execute job. Schedule understood; staff and permitting is fairly clear, (however this element may still need refining). Project Development & Construction Contingencies ranges between 10%-20%.

Level B: Conceptual engineering performed. Technical information is available, rough engineering calculations may have been performed, or similar information from previous similar work is compared and used. Project Development Contingencies ranges between 15% to 25% and Construction Contingencies ranges between 20% to 30%.

Level C: No engineering performed. Educated guesstimating. Limited technical information available and/or analysis performed. Project Development and Construction Contingencies should be selected appropriately by Project Manager. Contingency may range up to 50%.

Rogue Valley Active Transportation Plan

ID 7: W McAndrews Road

ODOT, Jackson County Roads

Engineer's Conceptual Estimate

Prepared By: NHG		*Date: September, 2020*		
Prepared By: HJS				
	This Estimate has a Rating of:	**3C**	*(See rating scale guide below.)*	
ITEM	**UNIT**	**TOTAL QUANTITY**	**UNIT PRICE**	**TOTAL COST**
Mobilization	LS	ALL	$65,000.00	$65,000.00
Traffic Control	LS	ALL	$33,000.00	$33,000.00
Erosion Control	LS	ALL	$6,000.00	$6,000.00
Removal of Structures and Obstructions	LS	ALL	$14,000.00	$14,000.00
Clearing and Grubbing	LS	ALL	$13,000.00	$13,000.00
General Earthworks	CY	1,500	$25.00	$37,500.00
Asphalt Roadway - Full Depth	SF	10,800	$8.00	$86,400.00
Subgrade Geotextile	SY	1,200	$1.00	$1,200.00
Concrete Curbs - Standard Curb	LF	1,700	$25.50	$43,350.00
Concrete Walks	SF	18,000	$7.40	$133,200.00
Detectable Warnings	EA	17	$500.00	$8,500.00
Pedestrian Ramps	EA	17	$5,000.00	$85,000.00
Storm Water System & Water Quality Treatment, Complete	LS	ALL	$139,000.00	$139,000.00
Pavement Markings, Complete	LS	ALL	$8,000.00	$8,000.00
Wayfinding Signage	LS	ALL	$10,000.00	$10,000.00
Signage, Complete	LS	ALL	$6,000.00	$6,000.00
Illumination System, Complete	LS	ALL	$55,400.00	$55,400.00
TOTAL CONSTRUCTION COST				**$ 744,550**
ENGINEERING SUPPORT				
Engineering & Construction Management	LS	ALL	$187,000.00	$187,000.00
ENGINEERING SUPPORT SUBTOTAL				**$ 187,000**
TOTAL PROJECT SUBTOTAL				**$ 931,550**
50% Contingency				**$ 465,780**
TOTAL ESTIMATED PROJECT COST				**$ 1,397,330**

Assumptions:

- Includes construction of 10-foot path on south side of roadway between existing path terminus (near viaduct) to N Columbus Avenue
- Asphalt Roadway - Full Depth assumed for half of adjacent travel lane of newly constructed multiuse path
- No right-of-way impacts included
- Assumes no improvements to existing or underneath existing viaduct
- Does not include cost associated with modifications to Sage Road or N Columbus Avenue intersections

Scope Accuracy:

Level 1: Project scope well understood and well defined.

Level 2: Project scope conceptual. Scope lacks detail due to potential permit requirements; Unknown project conditions; limited knowledge of external impacts.

Level 3: Project scope is a "vision" with limited detail.

Engineering Effort:

Level A: Preliminary engineering performed. Technical information is available, engineering calculations have been performed; clear understanding of the materials size and quantities needed to execute job. Schedule understood; staff and permitting is fairly clear, (however this element may still need refining). Project Development & Construction Contingencies ranges between 10%-20%.

Level B: Conceptual engineering performed. Technical information is available, rough engineering calculations may have been performed, or similar information from previous similar work is compared and used. Project Development Contingencies ranges between 15% to 25% and Construction Contingencies ranges between 20% to 30%.

Level C: No engineering performed. Educated guesstimating. Limited technical information available and/or analysis performed. Project Development and Construction Contingencies should be selected appropriately by Project Manager. Contingency may range up to 50%.

Rogue Valley Active Transportation Plan

ID 6: OR62

ODOT, Jackson County Roads

Engineer's Conceptual Estimate

Prepared By: NHG		*Date: September, 2020*		
Prepared By: HJS				
	This Estimate has a Rating of:	**3C**	*(See rating scale guide below.)*	
ITEM	**UNIT**	**TOTAL QUANTITY**	**UNIT PRICE**	**TOTAL COST**
Mobilization	LS	ALL	$10,000.00	$10,000.00
Traffic Control	LS	ALL	$5,000.00	$5,000.00
Erosion Control	LS	ALL	$1,000.00	$1,000.00
Removal of Structures and Obstructions	LS	ALL	$2,000.00	$2,000.00
Clearing and Grubbing	LS	ALL	$2,000.00	$2,000.00
General Earthworks	CY	200	$25.00	$5,000.00
Concrete Walks	SF	3,900	$7.40	$28,860.00
Detectable Warnings	EA	4	$500.00	$2,000.00
Pedestrian Ramps	EA	4	$5,000.00	$20,000.00
Bike Ramps	EA	4	$2,500.00	$10,000.00
Permanent Landscaping	SF	2,600	$3.70	$9,620.00
Pavement Markings, Complete	LS	ALL	$2,000.00	$2,000.00
Signage, Complete	LS	ALL	$1,000.00	$1,000.00
Illumination System, Complete	LS	ALL	$7,900.00	$7,900.00
TOTAL CONSTRUCTION COST			**$**	**106,380**
ENGINEERING SUPPORT				
Engineering & Construction Management	LS	ALL	$27,000.00	$27,000.00
TOTAL PROJECT SUBTOTAL			**$**	**133,380**
50% Contingency			**$**	**66,690**
TOTAL ESTIMATED PROJECT COST			**$**	**200,070**

Assumptions:

- Existing curbs maintained
- Multiuse path constructed above curb, utilizing existing sidewalk as part of overall path width
- Does not include cost estimate for modifications to Delta Waters intersection
- No right-of-way impacts included

Scope Accuracy:

Level 1: Project scope well understood and well defined.

Level 2: Project scope conceptual. Scope lacks detail due to potential permit requirements; Unknown project conditions; limited knowledge of external impacts.

Level 3: Project scope is a "vision" with limited detail.

Engineering Effort:

Level A: Preliminary engineering performed. Technical information is available, engineering calculations have been performed; clear understanding of the materials size and quantities needed to execute job. Schedule understood; staff and permitting is fairly clear, (however this element may still need refining). Project Development & Construction Contingencies ranges between 10%-20%.

Level B: Conceptual engineering performed. Technical information is available, rough engineering calculations may have been performed, or similar information from previous similar work is compared and used. Project Development Contingencies ranges between 15% to 25% and Construction Contingencies ranges between 20% to 30%.

Level C: No engineering performed. Educated guesstimating. Limited technical information available and/or analysis performed. Project Development and Construction Contingencies should be selected appropriately by Project Manager. Contingency may range up to 50%.

Rogue Valley Active Transportation Plan

ID 9: E Pine Street

ODOT, Jackson County Roads

Engineer's Conceptual Estimate

Prepared By: NHG		*Date: September, 2020*		
Prepared By: HJS				
	This Estimate has a Rating of:	**3C**	*(See rating scale guide below.)*	
ITEM	**UNIT**	**TOTAL QUANTITY**	**UNIT PRICE**	**TOTAL COST**
Mobilization	LS	ALL	$163,000.00	$163,000.00
Traffic Control	LS	ALL	$82,000.00	$82,000.00
Erosion Control	LS	ALL	$0.00	$0.00
Removal of Structures and Obstructions	LS	ALL	$36,000.00	$36,000.00
Clearing and Grubbing	LS	ALL	$32,000.00	$32,000.00
Asphalt Roadway - Grind & Inlay (2" Depth)	SF	347,800	$3.70	$1,286,860.00
Dura-Curb (Mountable Curb)	LF	5,800	$8.00	$46,400.00
Surface Mounted Tubular Markers	EA	58	$200.00	$11,600.00
Signage, Complete	LS	ALL	$21,000.00	$21,000.00
Illumination System, Complete	LS	ALL	$194,200.00	$194,200.00
TOTAL CONSTRUCTION COST				**$ 1,873,060**
ENGINEERING SUPPORT				
Engineering & Construction Management	LS	ALL	$469,000.00	$469,000.00
ENGINEERING SUPPORT SUBTOTAL				**$ 469,000**
TOTAL PROJECT SUBTOTAL				**$ 2,342,060**
50% Contingency				**$ 1,171,030**
TOTAL ESTIMATED PROJECT COST				**$ 3,513,090**

Assumptions:

- Asphalt Roadway - Grind & Inlay (2" Depth) assumed for full roadway section associated with roadway reorganization (restriping)
- Existing curbs to be maintained
- No right-of-way impacts

Scope Accuracy:

Level 1: Project scope well understood and well defined.

Level 2: Project scope conceptual. Scope lacks detail due to potential permit requirements; Unknown project conditions; limited knowledge of external impacts.

Level 3: Project scope is a "vision" with limited detail.

Engineering Effort:

Level A: Preliminary engineering performed. Technical information is available, engineering calculations have been performed; clear understanding of the materials size and quantities needed to execute job. Schedule understood; staff and permitting is fairly clear, (however this element may still need refining). Project Development & Construction Contingencies ranges between 10%-20%.

Level B: Conceptual engineering performed. Technical information is available, rough engineering calculations may have been performed, or similar information from previous similar work is compared and used. Project Development Contingencies ranges between 15% to 25% and Construction Contingencies ranges between 20% to 30%.

Level C: No engineering performed. Educated guesstimating. Limited technical information available and/or analysis performed. Project Development and Construction Contingencies should be selected appropriately by Project Manager. Contingency may range up to 50%.

Rogue Valley Active Transportation Plan

ID 10: W Main Street

ODOT, Jackson County Roads

Engineer's Conceptual Estimate

Prepared By: NHG		*Date: September, 2020*		
Prepared By: HJS				
	This Estimate has a Rating of:	**3C**	*(See rating scale guide below.)*	
ITEM	**UNIT**	**TOTAL QUANTITY**	**UNIT PRICE**	**TOTAL COST**
Mobilization	LS	ALL	$65,000.00	$65,000.00
Traffic Control	LS	ALL	$33,000.00	$33,000.00
Erosion Control	LS	ALL	$7,000.00	$7,000.00
Removal of Structures and Obstructions	LS	ALL	$14,000.00	$14,000.00
Clearing and Grubbing	LS	ALL	$13,000.00	$13,000.00
General Earthworks	CY	1,800	$25.00	$45,000.00
Concrete Walks	SF	11,520	$7.40	$85,248.00
Detectable Warnings	EA	12	$500.00	$6,000.00
Pedestrian Ramps	EA	12	$5,000.00	$60,000.00
Bike Ramps	EA	12	$2,500.00	$30,000.00
Storm Water System & Water Quality Treatment, Complete	LS	ALL	$69,000.00	$69,000.00
Permanent Landscaping	SF	76,800	$3.70	$284,160.00
Pavement Markings, Complete	LS	ALL	$4,000.00	$4,000.00
Signage, Complete	LS	ALL	$3,000.00	$3,000.00
Illumination System, Complete	LS	ALL	$27,500.00	$27,500.00
TOTAL CONSTRUCTION COST				**$ 745,908**
ENGINEERING SUPPORT				
Engineering & Construction Management	LS	ALL	$187,000.00	$187,000.00
ENGINEERING SUPPORT SUBTOTAL				**$ 187,000**
TOTAL PROJECT SUBTOTAL				**$ 932,908**
50% Contingency				**$ 466,460**
TOTAL ESTIMATED PROJECT COST				**$ 1,399,368**

Assumptions:

- Construction of 12-foot multiuse trail
- Assumes 4 feet of landscaping on both sides of trail
- No right-of-way impacts included
- Assumes no modifications to Hanley Road intersection

Scope Accuracy:

Level 1: Project scope well understood and well defined.

Level 2: Project scope conceptual. Scope lacks detail due to potential permit requirements; Unknown project conditions; limited knowledge of external impacts.

Level 3: Project scope is a "vision" with limited detail.

Engineering Effort:

Level A: Preliminary engineering performed. Technical information is available, engineering calculations have been performed; clear understanding of the materials size and quantities needed to execute job. Schedule understood; staff and permitting is fairly clear, (however this element may still need refining). Project Development & Construction Contingencies ranges between 10%-20%.

Level B: Conceptual engineering performed. Technical information is available, rough engineering calculations may have been performed, or similar information from previous similar work is compared and used. Project Development Contingencies ranges between 15% to 25% and Construction Contingencies ranges between 20% to 30%.

Level C: No engineering performed. Educated guesstimating. Limited technical information available and/or analysis performed. Project Development and Construction Contingencies should be selected appropriately by Project Manager. Contingency may range up to 50%.

Appendix F Policy Recommendation

Appendix F – Policy Recommendations

Transportation goals, policies, and/or objectives—which are typically found in local TSPs—are used by local jurisdictions to guide decision-making about future transportation investments. Local jurisdictions should consider amending their local transportation policies to align with the goals, objectives, and design recommendations in the Rogue Valley ATP to ensure that the regional active transportation network is implemented consistently. This section includes a set of model policies that could be adopted by local jurisdictions to guide local implementation of the ATP, as well as a high-level assessment of jurisdictions' current consistency with the model policies. Jurisdictions may wish to adopt some or all of the model policies depending on how well their existing policies or objectives align with the recommendations in the ATP (see Table F2).

Model Policies

The following model policies were developed based on the goals, objectives, and recommendations in the Rogue Valley ATP. Table F1 provides a list of the model policies and the corresponding ATP goals.

Table F1. Model Policy Correspondence with Active Transportation Plan Goals

ATP Goals	Corresponding Model Policy/Objective
Goal 1: Create a system that is safe and comfortable for people walking and biking, and where people feel secure using the streets and trails.	1. Design active transportation facilities identified in the Rogue Valley Active Transportation Plan to be consistent with the Plan's Best Practices for Pedestrian and Bicycle Design.
	2. Invest in system elements that foster a safe and comfortable walking and biking experience such as lighting, plantings, bicycle parking, and other amenities.
	3. Provide safe and direct pedestrian and bicycle crossings at transit stops where practicable, particularly on collector or arterial streets with long signal spacing.
Goal 2: Provide Rogue Valley residents and visitors with reasonably direct, continuous connections between key destinations, so people are able to access their jobs and daily needs by walking, transit, and biking, by choice or necessity.	4. Provide reasonably direct walking and biking routes between local destinations, jobs, neighborhoods, and transit.
	5. Prioritize transportation projects that fill gaps in the regional pedestrian and bicycle system to create walking and biking routes to regional destinations.
Goal 3: Create an atmosphere and system where it is comfortable and enjoyable to walk and bike for people of all ages and abilities, including for commuting, other errands and purposes, and recreation.	6. Develop safe and comfortable active transportation facilities to encourage residents to use walking and biking for commuting, errands, and recreation.
	7. Develop safe routes to schools to increase the portion of students walking and biking to school.

ATP Goals	Corresponding Model Policy/Objective
	8. Improve and maintain walking and biking access for people with disabilities.
	9. Improve and maintain walking and biking access for historically underserved and vulnerable populations.
	10. Create active transportation routes that connect people to local and regional parks, natural areas, and scenic attractions.
Goal 4: Invest in infrastructure to support the local and regional economy, encourage vibrant streets that foster economic health, leverage our region's natural assets, and ensure that our communities thrive now and in the future.	11. Prioritize transportation projects on designated Regional and Connector Routes in the Rogue Valley Active Transportation Plan that provide access to key destinations to support creation of a regional active transportation network.
	12. Provide walking and biking connections to employment areas and transit stops to provide commuting options by walking and biking.
	13. Ensure that sufficient funding is dedicated to maintenance of existing and new active transportation facilities.
Goal 5: Collaborate at all levels of government to implement and maintain active transportation facilities to maximize the transportation system for all types of users.	14. Coordinate with Rogue Valley MPO and other local jurisdictions to implement the Rogue Valley Active Transportation Plan.
	15. Identify opportunity projects to package active transportation improvements with other roadway or transit planning and investments.

Assessment of Policy Consistency

Table F2 provides a high-level assessment of each jurisdiction's current consistency with the model policies based on the jurisdiction's existing Comprehensive Plan and/or TSP policies using a "yes," "no," or "partial" level of consistency with each policy. A "partial" notation indicates that the existing policy language addresses the topic or concept to some extent but may not completely capture the idea or use the words found in the corresponding model policy language.

Table F2. Assessment of Policy Consistency

Draft Policy	Jackson County	Ashland	Central Point	Eagle Point	Jacksonville	Medford	Phoenix	Talent	White City
1. Design active transportation facilities identified in the Rogue Valley Active Transportation Plan to be consistent with the Plan's Best Practices for Pedestrian and Bicycle Design.	No	No	No	No	No	No	No	No	No
2. Invest in system elements that foster a safe and comfortable walking and biking experience such as lighting, plantings, bicycle parking, and other amenities.	No	Yes	Partial	Partial	Partial	No	No	No	Partial
3. Provide safe and direct pedestrian and bicycle crossings at transit stops where practicable, particularly on collector or arterial streets with long signal spacing.	No	No	No	No	No	No	No	No	No
4. Provide reasonably direct walking and biking routes between local destinations, jobs, neighborhoods, and transit.	Partial	Partial	No	No	Partial	Yes	No	No	Partial
5. Prioritize transportation projects that fill gaps in the regional pedestrian and bicycle system to create walking and biking routes to regional destinations.	No	No	No	No	No	Yes	Yes	No	No
6. Develop safe and comfortable active transportation facilities to encourage residents to use walking and biking for commuting, errands, and recreation.	Partial	Partial	Partial	Partial	Partial	Partial	Partial	Partial	Partial

Draft Policy	Jackson County	Ashland	Central Point	Eagle Point	Jacksonville	Medford	Phoenix	Talent	White City
7. Develop safe routes to schools to increase the portion of students walking and biking to school.	Partial	Yes	Yes	No	No	Yes	No	No	Partial
8. Improve and maintain walking and biking access for people with disabilities.	Yes	No	No	No	No	Yes	No	No	Partial
9. Improve and maintain walking and biking access for historically underserved and vulnerable populations.	Yes	No	No	No	No	Partial	No	No	No
10. Create active transportation routes that connect people to local and regional parks, natural areas, and scenic attractions.	No	No	No	No	No	Yes	No	No	No
11. Prioritize transportation projects on designated Regional and Connector Routes in the Rogue Valley Active Transportation Plan that provide access to key destinations to support creation of a regional active transportation network.	No	No	No	No	No	No	No	No	No
12. Provide walking and biking connections to employment areas and transit stops to provide commuting options by walking and biking.	Partial	No	Yes	No	No	Yes	No	No	Partial
13. Ensure that sufficient funding is dedicated to maintenance of existing and new active transportation facilities.	Partial	Partial	Partial	Partial	Partial	Partial	Partial	Partial	Partial

Draft Policy	Jackson County	Ashland	Central Point	Eagle Point	Jacksonville	Medford	Phoenix	Talent	White City
14. Coordinate with Rogue Valley MPO and other local jurisdictions to implement the Rogue Valley Active Transportation Plan.	No	No	No	No	No	No	No	No	No
15. Identify opportunity projects to package active transportation improvements with other roadway or transit planning and investments.	No	No	Partial	No	No	No	No	No	No

Development Code Recommendations

Local development code regulations and design standards will be critical to achieving consistent implementation of the ATP throughout the Rogue Valley region. Local jurisdictions should consider amending their development codes to update standards and/or requirements that will ensure future development is consistent with and supportive of the regional active transportation network and design recommendations.

Development Standards

Consistent with the recommendations of the ATP, the following development standards should be applied to facilities identified as a Greenway, Regional Rogue, Connector Rouge, or Minor Collector Route on the Rogue Valley ATP network map. These standards should be implemented locally through the development code and be consistent with the standards in the locally adopted TSP. Lessor standards may be used in rare circumstances when approved by a design exception per agency's design exception process.

Shared Use Paths

- Width: 10 feet minimum, 8 feet in topographically-constrained areas
- Clear area minimum width: 1-foot strip on both sides.

Bicycle Lanes

- Minimum width: 6 feet
- Joint clearance: minimum clear width of 3.5 feet between the joint and the edge of the bike lane

Vehicle Travel Lanes[8]

- Minimum width: minimum width 10-feet, except in the outside lane of a transit or freight corridor where motor vehicle lane widths should be a minimum of 11-feet

Bicycle Parking

- See model code language

Model Code Language

Facility Design Standards

The following model code language is intended to be adopted into a local jurisdiction's development code as part of the section or chapter addressing site development and design standards.

Regional Active Transportation Facilities.

A. *Purpose. The standards of this section are intended to implement a complete network for biking and walking for the region as envisioned in the Rogue Valley Active Transportation Plan.*

B. *Applicability. The standards in this section apply to facilities identified as Regional Route, Connector Route, or Minor Collector Route on the Rogue Valley ATP network map.*

[8] The proposed change in this standard is to ensure design flexibility to accommodate space for bicycle facilities

C. *General Requirements.*

1. *Shared Use Paths.*

   a. *Shared-use paths shall have a minimum width of ten feet. In extenuating circumstances that are due to unique topographic or natural constraints, or in areas of transition to existing narrower paths, the Engineer may approve path widths as narrow as eight feet. A path width of up to 14 feet may be used in areas with high density and mixed use and in areas where a high volume of path users is expected.*

   b. *Shared-use paths shall maintain a minimum clear area of one foot on both sides of the pavement. A minimum of two feet will be required to provide clearance from existing lateral obstructions such as trees, poles, walls, fences, guardrails, or other lateral obstructions.*

2. *Bicycle Lanes.*

   a. *Bicycle lanes shall have a minimum width of six feet.*

   b. *Buffered or protected bicycle lanes are required on roads that meet either of the following conditions for Bicycle and Pedestrian Level of Traffic Stress:*

      i. *The speed limit is greater than 30 miles per hour.*

      ii. *The traffic volume is 7,000 vehicles per day or greater.*

   c. *Where a longitudinal joint exists (such as the joint between street paving and gutter) within the bike lane, there shall be a minimum clear width of 3.5 feet between the joint and the edge of the bike lane.*

3. *Safe and Direct Crossings. Roadway crossings shall be considered at mid-block locations consistent with [the local jurisdiction's] bicycle and pedestrian access spacing standards and at locations identified in the Rogue Valley Active Transportation Plan or local transportation plans.*

4. *Lighting. The intent of required lighting is to improve safety and comfort for pedestrians and bicyclists. Outside of City Limits lighting may only be needed at select intersections or locations, as determined by agency. Lighting levels and design should provide illumination no greater than necessary to provide for pedestrian safety, property or business identification, and crime prevention and should consider and minimize impacts on wildlife and adjacent neighborhoods.*

   a. *Street and path lighting may be required on public rights-of-way within city limits for facilities subject to the provisions of this section.*

   b. *Lighting design is subject to the standards of [local code section xxx].*

Bicycle Parking Standards

The following model standards address bicycle parking design and are intended to be adopted as part of a jurisdiction's development requirements related to parking and loading. In addition to these design standards, jurisdictions are encouraged to adopt standards that specify the amount of bicycle parking that is required with development. Jurisdictions with existing standards that address required bicycle parking spaces should review and update them, if necessary, to align with current trends and mode share goals.

A. *Bicycle Parking.*

1. *Standards. Bicycle parking spaces shall be provided with new development and where a change of use occurs, at a minimum, based on the standards in [local jurisdiction's code section regarding number of spaces]. Where an application is subject to Conditional Use Permit approval or the applicant has requested a reduction to a vehicle parking standard, the [local jurisdiction] may require bicycle parking spaces in addition to those in [local jurisdiction's code section regarding number of spaces].*

2. *Design and Location.*

   a. *All bicycle parking shall be securely anchored to the ground or to a structure.*

   b. *All bicycle parking shall be well-lighted [to specified lighting level per local jurisdiction standards].*

   c. *All bicycle parking shall be designed so that bicycles may be secured to them without undue inconvenience, including being accessible without removing another bicycle. [Bicycle parking spaces shall be at least six (6) feet long and two-and-one-half (2 ½) feet wide, and overhead clearance in covered spaces should be a minimum of seven (7) feet. A three (3) foot aisle for bicycle maneuvering should be provided and maintained beside or between each row/ rack of bicycle parking.]*

   d. *Bicycle parking racks shall accommodate locking the frame and both wheels using either a cable or U-shaped lock.*

   e. *Direct access from the bicycle parking area to the public right-of-way shall be provided at-grade or by ramp access, and pedestrian access shall be provided from the bicycle parking area to the building entrance.*

   f. *All bicycle parking should be integrated with other elements in the planter strip when in the public right-of-way (if allowed by agency).*

   g. *Short-term bicycle parking.*

      i. *Short-term bicycle parking shall consist of a stationary rack or other approved structure to which the bicycle can be locked securely.*

      ii. *Short-term bicycle parking shall be located within 50 feet of the main building entrance or one of several main entrances, and no further from an entrance than the closest automobile parking space.*

   h. *Long-term bicycle parking. Long-term bicycle parking shall consist of a lockable enclosure, a secure room in a building on-site, monitored parking, or another form of sheltered and secure parking.*

3. *Exemptions. This Section does not apply to single-family and duplex housing, home occupations, and agricultural uses. The [City decision-making body] may exempt other uses upon finding that, due to the nature of the use or its location, it is unlikely to have any patrons or employees arriving by bicycle.*

4. *Hazards. Bicycle parking shall not impede or create a hazard to pedestrians or vehicles and shall be located so as to not conflict with the vision clearance standards of [local jurisdiction code section on vision clearance].*

Assessment of Development Code Consistency

Table FF3 indicates if the development standards and model code language described in the previous section are address in local development requirements. The table below lists the relevant code section associated with the topic for each jurisdiction and an assessment of how well each is addressed using a "yes," "no," or "partial" level of consistency. A "no" or "partial" notation is supported by the explanation in the notes column.

This review uses "development code" as a universal term for the document(s) used by local jurisdictions to regulate development. Depending on the jurisdiction, these documents may also be referred to as a municipal code, land development ordinance, or zoning and subdivision code. Some of the standards recommended in this section are also found in a local jurisdiction's engineering standards and specifications. References to specific code sections are included in Table F3.

Table F3. Assessment of Development Code Consistency

Jurisdiction	Code Topic	Code Reference	Consistency Assessment (yes/no/partial)	Notes
Jackson County	**Shared Use Paths**	n/a	No	No existing standards.
	Bicycle Lanes	9.5.6 Standards and Specifications	Partial	Code references "bikeways" as shoulder lanes. Standard drawings include 5'-6' bike lanes on some classifications of urban County roads.
	Safe and Direct Crossings	n/a	No	No existing standards.
	Lighting	n/a	No	No existing standards.
	Bicycle Parking Design	9.4.7	No	Existing standards for number of spaces, no design standards currently adopted.
Ashland	**Shared Use Paths**	18.4.6.040(F) 18.4.6.040(G)	Partial	Modify existing pavement width standards for paths to be consistent with ATP recommendations.
	Bicycle Lanes	18.4.6.040(F) 18.4.6.040(G)	Partial	6' bicycle lanes required for most high-volume street types.
	Safe and Direct Crossings	18.4.6.040(E)(9) 18.4.6.040(H)	Partial	Existing standards do not reference signage requirements.
	Lighting	18.4.6.040(D)(18)	Partial	Expand existing standards to require lighting for facilities included in ATP.
	Bicycle Parking	18.4.3.070(I)	Yes	Existing standards are consistent with ATP recommendations.
	Shared Use Paths	n/a	No	No existing standards.

Jurisdiction	Code Topic	Code Reference	Consistency Assessment (yes/no/partial)	Notes
Central Point	**Bicycle Lanes**	Standards and Specifications	Partial	Standard drawings include 5'-6' bike lanes on some classifications.
	Safe and Direct Crossings	17.75.031(D)	Partial	Expand existing standards to include crossings for bicycles.
	Lighting	17.75.031(D)	Partial	Expand existing standards to require lighting for facilities included in ATP.
	Bicycle Parking	17.75.039(H)	No	Expand existing standards to be consistent with ATP recommendations.
Eagle Point	**Shared Use Paths**	16.28.020(B)	Partial	Modify existing pavement width standards for paths to be consistent with ATP recommendations.
	Bicycle Lanes	16.24.050(E) Standards and Specifications	Partial	Bike lanes may be required as part of subdivisions. Standard drawings include 5'-6' bike lanes on some classifications.
	Safe and Direct Crossings	12.04.320	Partial	Expand existing standards to be consistent with ATP recommendations.
	Lighting	16.28.100(F)	Yes	Existing standards are consistent with ATP recommendations.
	Bicycle Parking	17.72.080(G)	No	Existing standards for number of spaces, no design standards currently adopted.
Jacksonville	**Shared Use Paths**	n/a	No	No existing standards.

Jurisdiction	Code Topic	Code Reference	Consistency Assessment (yes/no/partial)	Notes
	Bicycle Lanes	17.48.030	No	5.5' bike lanes required on some street classifications.
	Safe and Direct Crossings	n/a	No	No existing standards.
	Lighting	17.44.120	Partial	Expand existing standards to require lighting for facilities included in ATP.
	Bicycle Parking	18.17.110	Partial	Expand existing standards to be consistent with ATP recommendations.
Medford	**Shared Use Paths**	10.503	Yes	Existing standards are consistent with ATP recommendations.
	Bicycle Lanes	10.428	Partial	5' to 6' bike lanes are required on higher-order streets.
	Safe and Direct Crossings	10.426	Partial	Expand existing standards to be consistent with ATP recommendations.
	Lighting	10.495	Partial	Existing standards to not explicitly require lighting for shared use paths.
	Bicycle Parking	10.750	Yes	Existing standards are consistent with ATP recommendations.
Phoenix	**Shared Use Paths**	3.2.3(A)	Yes	Existing standards are consistent with ATP recommendations.
	Bicycle Lanes	3.5.2	Partial	6' bike lanes required for most street classifications.

Jurisdiction	Code Topic	Code Reference	Consistency Assessment (yes/no/partial)	Notes
	Safe and Direct Crossings	3.2.3(A)	Yes	Existing standards are consistent with ATP recommendations.
	Lighting	3.2.3(A)	Yes	Existing standards are consistent with ATP recommendations.
	Bicycle Parking	3.4.4(B)	Partial	Expand existing standards to be consistent with ATP recommendations.
Talent	**Shared Use Paths**	18.115.040	Yes	Existing standards are consistent with ATP recommendations.
	Bicycle Lanes	Talent TSP, Table 2	Partial	6' bike lanes required for most street classifications.
	Safe and Direct Crossings	18.115.040	Yes	Existing standards are consistent with ATP recommendations.
	Lighting	18.115.040	Yes	Existing standards are consistent with ATP recommendations.
	Bicycle Parking	18.110.100	Partial	Expand existing standards to be consistent with ATP recommendations.
White City	**Shared Use Paths**	n/a	No	No existing standards.
	Bicycle Lanes	12.8.1(H) Standards and Specifications	No	Code references Jackson County standards. Standard drawings include 5'-6' bike lanes on collectors and arterials and industrial local streets.
	Safe and Direct Crossings	n/a	No	No existing standards.

Jurisdiction	Code Topic	Code Reference	Consistency Assessment (yes/no/partial)	Notes
	Lighting	12.9.2	No	Existing standards apply to development types.
	Bicycle Parking	n/a	No	No existing standards.

Appendix G Funding

Appendix G – Funding

Funding for implementing the RVATP is likely to come from a variety of sources including combined streams to plan, build, and maintain projects and fund programs. Funding considerations should include the cost of capital improvement projects as well as the ongoing costs to maintain facilities after they are built.

The funding strategy does not identify funding priorities but does provide information and strategies based on existing best practices and best available information. This information can be used at the discretion of cities within the RVMPO boundary, Jackson County, and other agencies to develop funding priorities that respond to public desires, achieve transportation targets and goals, are cost effective and efficient, and provide transportation choices.

Funding priorities are mapped out through the RTP[9], local Capital Improvement Plans (CIP), and the State Transportation Improvement Program (STIP). The RVATP is intended to be adopted by the RVMPO and subsequently referenced by the RTP and the RVMPO agencies, including all city TSPs within the MPO and the Jackson County TSP. Pedestrian and bicycle routes identified on the regional and connector network maps are eligible for state and federal funding; however, to receive funding, active transportation projects must be on the RTP project list.

Funding Strategy Approach

As the adopting agency, the RVMPO can take a role in coordinating a funding strategy to develop the regional and connector active transportation network throughout the Rogue Valley. The funding strategy approach should consider:

- ***Flexible Funding:*** Projects are aligned with different funding opportunities and strategically advanced to make the most of the funding opportunities.
- ***Existing Enhancements:*** Projects that fill critical gaps, reduce barriers, and link existing facilities making them work more effectively can provide a high return on investment.
- ***Continuous Coordination:*** Integrating active transportation into projects from the beginning (e.g. roadway resurfacing, sewer, environmental mitigation) rather than adding them on at the end will maximize efficient use of taxpayer dollars.
- ***Prioritizing Projects:*** Projects need to be positioned to receive funding when funding opportunities becomes available. Projects should be developed and advanced to a "shovel ready" level to be most competitive for federal grant opportunities.
- ***Strategizing Success:*** Active transportation projects can be bundled with larger roadway improvement projects to achieve efficiencies and reduce costs, complete streets and improve transit access. At the same time, it can be critical to 'unbundle' pedestrian and bicycle projects from larger projects if the timeline, cost or size of the larger project may delay the project getting off of the ground for many years.

[9] The RTP is available at: https://rvmpo.org/regional-transportation-plan-rtp/

Funding Opportunities

Active transportation projects are implemented using a variety of funding sources; sometimes several different funding programs are needed to complete a project from concept to construction. The RVATP proposes a funding strategy that aligns projects with different funding opportunities and examines how those opportunities can be used to most effectively develop walking, biking, and transit networks.

Funding opportunities and implementation strategies may vary based on land use and context. For example, within an urban area where the majority of roads are already established, funding and implementation may focus on closing gaps, addressing deficiencies, and bringing roadways or trails up to standard to meet the goals of the walking and biking networks. In rural areas, funding and implementation may focus on the outset of project development when new infrastructure is being planned.

Construct Regional Routes Through CIP and Incrementally through Development

The regional walking and biking routes on arterials and collectors can be constructed as part of local agency Capital Improvement Programs (CIP), each of which implement major capital projects each year. The RVMPO and local agencies can review the needs evaluation for walking and biking to help select CIP projects that will address the highest needs.

Construct Crossings and Utilize Improvement Opportunities

Crossings can also be constructed as part of ongoing operations and maintenance programs. Locations identified as barriers, most commonly located at intersections, will be the focus. In addition, the RVMPO will work with local agencies to regularly review crossing needs in tandem with repaving schedules and complete any striping needs in conjunction with regular repaving and maintenance. Finally, as signals are maintained through regular maintenance, the local agencies can seek opportunities to adjust signal timing to shorten cycle lengths or decrease pedestrian delay at crossings located along the Regional and Connector Route system.

Maintenance Considerations

In addition to the construction of planned projects, Jackson County and local jurisdictions should identify funds to be used for maintenance of existing walking and biking facilities. The goal of any maintenance program is to proactively address declining conditions as soon as possible. Such a program achieves the lowest cost for maintenance over time and the best conditions possible. If maintenance is neglected past a certain point, more expensive rehabilitation techniques are necessary.

Potential Funding Sources

Table G1 summarizes the funding opportunities and identifies the intended uses of the funds and any applicable pedestrian and bicycle project types. Each of these funding sources is further defined following the table.

Table G1: Funding Opportunities Summary

Funding Source	Intended Use	Applicable Walking and Biking Project Types
Federal Funding Sources		
STBG	Preserves and improves surface transportation investments from a flexible funding source	Biking and walking infrastructure, planning, and traffic monitoring
TA Set-Aside	Smaller-scale transportation projects	Biking and walking facilities, recreational trails, SRTS projects, community improvements
CMAQ	Supports programs that reduce emissions from transportation-related activities	Biking and walking infrastructure (e.g., bike lanes, sidewalks, shared-use paths)
HSIP	Reduces traffic fatalities and serious injuries on all public roads	Biking and walking infrastructure (e.g., bike lanes, sidewalks, shared-use paths)
BUILD	Projects that achieve national objectives and have significant local and regional impact	Biking and walking infrastructure (e.g., bike lanes, sidewalks, shared-use paths)
Recreational Trails	Develops and maintains recreational trails and trail-related facilities	Recreational trails, shared-use paths, sidewalks, crosswalks, bike parking
NHPP	Projects that improve conditions along NHS Routes	Biking and walking infrastructure (e.g., bike lanes, sidewalks, shared-use paths)
State Funding Sources		
STIP	Multimodal projects on federal, state, and local facilities	Biking and walking infrastructure (e.g., bike lanes, sidewalks, crosswalks)
State Highway Trust Fund	Funds biking and walking infrastructure improvements	Biking and walking infrastructure (e.g., bike lanes, sidewalks, shared-use paths)
SWIP	Projects that enable people to move across or around the state highway system	Biking and walking infrastructure (e.g., bike lanes, sidewalks, crosswalks)
SRTS	Projects that improve safety for children walking or biking to school	Infrastructure and non-infrastructure projects, including education and outreach
ARTS	Projects that address hotspot and systemic safety issues and concerns	Biking and walking infrastructure (e.g., bike lanes, sidewalks, crosswalks)
OCP	Creates and maintain connections through shared-use paths	Multiuse paths and enhanced crossings that support paths
Small City Allotment	Funds projects in cities with less than 5,000 in population	Biking and walking infrastructure (e.g., bike lanes, sidewalks, crosswalks)

Funding Source	Intended Use	Applicable Walking and Biking Project Types
Local Funding Sources		
SDC	Increases capacity of transportation system to accommodate growth	Biking and walking infrastructure (e.g., bike lanes, sidewalks)
TUF	Provides additional funding for transportation infrastructure	Biking and walking infrastructure (e.g., bike lanes, sidewalks, crosswalks, shared-use paths and trails)
Local Fuel Tax	Provides additional funding for transportation infrastructure	Biking and walking infrastructure (e.g., bike lanes, sidewalks, crosswalks, shared-use paths and trails)
Other Local Funds	Provide additional funding for transportation infrastructure	Biking and walking infrastructure (e.g., bike lanes, sidewalks, crosswalks, shared-use paths and trails)

Federal Funding

Fixing America's Surface Transportation Act (FAST Act)

The FAST Act[10] funds surface transportation programs, including, but not limited to, federal-aid highways. The FAST Act is the first long-term surface transportation authorization enacted in a decade that provides long-term funding certainty for surface transportation. The FAST Act establishes and funds new programs to support critical transportation projects to ease congestion and facilitate the movement of freight on the Interstate Highway System and other major roads. The FAST Act is not a direct funding source; however, it funds programs at the federal and state levels that are direct funding sources for multimodal transportation improvements.

Surface Transportation Block Grant Program (STBG)

The STBG[11] provides flexible funding that may be used by states and localities for projects to preserve and improve the conditions and performance on any federal-aid highway, bridge and tunnel projects on any public road; walking and biking infrastructure; and transit capital projects, including intercity bus terminals. Projects must be identified in the STIP or TIP and be consistent with the long-range statewide transportation plan and the metropolitan transportation plan(s).

[10] Information on the Fast Act is available at: https://www.fhwa.dot.gov/fastact/

[11] Information on the STBG Program is available at: https://www.fhwa.dot.gov/specialfunding/stp/160307.cfm#c

Transportation Alternatives Program (TA Set-Aside)

The FAST Act replaced the former Transportation Alternatives Program (TAP)[12] with a set-aside of funds under the STBG Program. For administrative purposes, FHWA refers to these funds as the TA Set-Aside. The TA Set-Aside authorizes funding for programs and projects defined as transportation alternatives, including on- and off-road pedestrian and bicycle facilities, infrastructure projects for improving non-driver access to public transportation and enhanced mobility, community improvement activities such as historic preservation and vegetation management, and environmental mitigation related to stormwater and habitat connectivity; recreational trail projects; Safe Routes to School projects; and projects for planning, designing, or constructing boulevards and other roadways largely in the right of way of former divided highways. Oregon administers TA funds, giving grants to local governments, as part of the STIP Enhance funds (see below). Grants require a small local match (20%) and vary from $250,000 to $1.4 million.

Congestion Mitigation and Air Quality Program (CMAQ)

The Congestion Mitigation and Air Quality program (CMAQ)[13] provides a flexible funding source to state and local governments for transportation projects and programs to help meet the requirements of the Clean Air Act. Funding is available to reduce congestion and improve air quality for areas that do not meet the National Ambient Air Quality Standards for ozone, carbon monoxide, or particulate matter (nonattainment areas) and for former nonattainment areas that are now in compliance (maintenance areas), such as the Medford-Ashland area[14]. Funds may be used for a transportation project or program that is likely to contribute to the attainment or maintenance of a national ambient air quality standard, with a high level of effectiveness in reducing air pollution, and that is included in the MPO's current transportation plan and TIP or the current STIP in areas without an MPO.

Highway Safety Improvement Program (HSIP)

The HSIP[15] is a core federal-aid program with the purpose of achieving a significant reduction in traffic facilities and serious injuries on all public roads, including non-state-owned public roads and roads on tribal lands. The HSIP requires a data-driven, strategic approach to improving highway safety on all public roads that focuses on performance. Applications must focus on a strategy, activity or project consistent with a state strategic highway safety plan, and correct or improve a hazardous road location or feature, or address a highway safety problem, including automated enforcement in school zones. Infrastructure and non-infrastructure projects are eligible. Projects require a small local match (10%) and are administered through the STIP (See below).

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[12] Information on the TAP is available at: https://www.fhwa.dot.gov/environment/transportation_alternatives/

[13] Information on the CMAQ Program is available at: https://www.fhwa.dot.gov/fastact/factsheets/cmaqfs.cfm

[14] Information on the Medford-Ashland maintenance area: https://www.oregon.gov/deq/aq/Pages/Medford-Ashland.aspx

[15] Information on the HSIP Program is available at: https://safety.fhwa.dot.gov/hsip/

Better Utilizing Investments to Leverage Development (BUILD)

The BUILD Transportation Discretionary Grants program[16], provides funding for road, rail, transit and port projects that promise to achieve national objectives. Previously known as Transportation Investment Generating Economic Recovery, or TIGER Discretionary Grants, Congress has dedicated nearly $7.9 billion for 11 rounds of national infrastructure investments to fund projects that have a significant local or regional impact.

BUILD's eligibility requirements allow project sponsors at the state and local levels to obtain funding for multimodal, multi-jurisdictional projects that are more difficult to support through traditional DOT programs. BUILD can provide capital funding directly to any public entity, including municipalities, counties, port authorities, tribal governments, MPOs, or others in contrast to traditional federal programs which provide funding to very specific groups of applicants (mostly state DOTs and transit agencies). This flexibility allows BUILD and our traditional partners at the state and local levels to work directly with a host of entities that own, operate, and maintain much of our transportation infrastructure, but otherwise cannot turn to the federal government for support.

The BUILD discretionary grant program is a very competitive pot of funds; a small percentage of funded projects have been walking- and biking-related. Applications must highlight project benefits to safety, economic competitiveness, state of good repair, livability and environmental sustainability goals.

Recreational Trails Program (RTP)

The Recreational Trails Program (RTP)[17] provides funds to states to develop and maintain recreational trails and trail-related facilities for both nonmotorized and motorized recreational trail uses. The RTP is an assistance program of FHWA. Federal transportation funds benefit recreation including hiking, biking, in-line skating, equestrian use, cross-country skiing, snowmobiling, off-road motorcycling, all-terrain vehicle riding, four-wheel driving, or using other off-road motorized vehicles. The RTP is a set-aside under the TA Set-Aside for both motorized and non-motorized trail projects. ODOT currently sends Oregon's RTP funds to the Oregon Parks and Recreation Department for administration.

National Highway Performance Program (NHPP)

NHPP[18] provides support for the condition and performance of the National Highway System (NHS), for the construction of new facilities on the NHS, and to ensure that investments of Federal-aid funds in highway construction are directed to support progress toward the achievement of performance targets established in a State's asset management plan for the NHS. States may transfer up to 50% of the funds to the STBG, TA, HSIP, or CMAQ programs. NHPP funds can be used for a variety of biking and walking improvements, from bike lanes to curb cuts to bike/pedestrian overpasses.

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[16] Information on the BUILD discretionary grant program is available at: https://www.transportation.gov/BUILDgrants

[17] More information on the RTP is available at: https://www.fhwa.dot.gov/environment/recreational_trails/

[18] More information on the NHPP Program is available at: https://www.fhwa.dot.gov/fastact/factsheets/nhppfs.cfm

State Funding

Statewide Transportation Improvement Program (STIP)

The STIP[19] is ODOT's four-year capital improvement program for state and federally funded projects. It includes projects in federal, state, city, and county transportation systems; multimodal projects (highway, passenger rail, freight, public transit, bicycle and pedestrian); and projects in the National Parks or National Forests, and on Indian tribal lands. STIP project lists are developed through the coordinated efforts of ODOT, federal and local governments, area commissions on transportation, tribal governments, and the public.

The STIP is divided into five major categories: the **Fix-it** program funds projects that fix or preserve the state's transportation system, including bridges, pavement, culverts, traffic signals, and others. The **Enhance** program funds projects that enhance or expand the transportation system—area commissions on transportation recommend high-priority investments from state and local transportation plans in many of the Enhance programs. **Safety** programs reduce deaths and injuries on Oregon's roads. This includes the All Roads Transportation Safety (ARTS) program (see below), which selects projects through a data-driven process to ensure resources have maximum impact on improving the safety of Oregon's state highways and local roads. **Non-highway** programs fund bicycle and pedestrian projects and public transportation. **Local government** programs direct funding to local governments so they can fund priority projects.

Project proposals for the STIP can be made to the state via regional offices; however, projects must be in a local adopted TSP.

State Highway Trust Fund/Bicycle Bill

When roads are constructed or reconstructed, Oregon law requires that walkways and bikeways be provided. Additionally, all agencies receiving State Highway Funds are required to spend at least 1% of those funds on bicycle and/or pedestrian infrastructure improvements (ORS 366.514). Currently, cities and counties receive 20% and 30% of the state's highway trust funds, respectively, which can be used for walking and biking projects along roads.

Sidewalk Improvement Program (SWIP)

The SWIP[20] builds pedestrian and bicycle facilities on state and local roads that help people moving across or around the state system. Projects should address needs identified in the region's Active Transportation Needs Inventory (ATNI) or other Oregon Bicycle and Pedestrian Plan (OBPP) priorities. All project phases are eligible for SWIP funding, but emphasis is on construction activities, per ORS 366.514. Funds may be used for standalone projects or as an add-on to another project if all region Active Transportation Leverage funds have already been allocated.

[19] More information on the STIP is available at: http://www.oregon.gov/ODOT/TD/STIP/Pages/default.aspx

[20] More information on SWIP funds is available at: https://www.oregon.gov/odot/programs/pages/bikeped.aspx

Safe Routes to School Program (SRTS)

ODOT's SRTS[21] program is focused on providing grants to make it safer for children to walk and bike to school, providing opportunity through investments in infrastructure and other programs. ODOT's grant funding for infrastructure programs helps create and improve safe walking and biking routes to school, while its grant funding for non-infrastructure programs help raise awareness by focusing on education and outreach. Non-motorized transportation projects related to getting children to school safely, such as closing gaps in the sidewalk and bicycle networks, are eligible for infrastructure program funding.

All Roads Transportation Safety (ARTS)

The ARTS[22] program (formerly known as Jurisdictionally Blind Safety Program) is intended to address safety needs on all public roads in Oregon. By working collaboratively with local jurisdictions, ODOT expects to increase safety awareness on all roads, promote best practices for infrastructure safety, compliment behavioral safety efforts and focus limited resources to reduce fatal and serious injury crashes in Oregon. The program is data driven to achieve the greatest benefits in crash reduction, including addressing hotspot. A portion is dedicated to a few proven low-cost measures to implement widely, where there is evidence that they would be most useful. Local agencies can submit applications for bicycle and pedestrian projects.

Oregon Community Paths Program (OCP)

The OCP[23] program is a new grant program dedicated to helping communities create and maintain connections through multiuse paths. ODOT uses money from the state Multimodal Action Transportation Fund (See below) and the federal TA Set-Aside (See above) to fund this program. The OCP program funds grants for project development, construction, reconstruction, major resurfacing or other improvements of multiuse paths that improve access and safety for people walking and bicycling. The OCP may also fund on-road improvements, such as enhanced crossing infrastructure that support a path although the focus of the program is on projects outside of the road right-of-way. Projects must improve a critical link, regional path, or path crossing of a roadway.

Small City Allotment

Through an agreement between the League of Oregon Cities and ODOT, ODOT sets aside $5 million each year (half from city gas tax revenue and half from the State Highway Fund) for cities under 5,000 residents, such as Phoenix and Jacksonville. Projects are selected through a competitive process by region. Project funding is limited to $100,000; however, the funds may be used as a match on an existing federal or state funded project. Eligible projects are located on streets that are not part of the state highway system, that are inadequate for the capacity they serve, or that are in poor condition.

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[21] More information on ODOT's SRTS program is available at: https://www.oregon.gov/ODOT/Programs/Pages/SRTS.aspx

[22] More information on the ARTS program is available at: https://www.oregon.gov/ODOT/Engineering/Pages/ARTS.aspx

[23] More information on the OCP program is available at: https://www.oregon.gov/ODOT/Programs/Pages/OCP.aspx

Multimodal Active transportation Fund

In 2019, the Oregon Legislature passed House Bill 2592 to clarify and amend House Bill 2017. The legislation establishes the Multimodal Active Transportation (MAT) Fund for bicycle and pedestrian projects, consisting of 7% of the Connect Oregon Fund plus revenues from Oregon's bicycle excise tax. The MAT is a separate grant program from Connect Oregon and requires a new set of administrative rules. With the separation of bicycle/pedestrian projects into the Multimodal Active Transportation fund, new rules for this fund are also anticipated to be established in early 2020.

Local Funding

System Development Charges (SDC)/Transportation Impact Fees

SDCs are one-time fees imposed on new developments (and some redevelopments) to help offset the cost of new transportation infrastructure (and the expansion of existing transportation infrastructure) needed to accommodate traffic generated by development. Jackson County and incorporated cities within the MPO can offer SDC credits to developers that provide public improvements beyond the required frontage improvements, including those that can be constructed by the private sector at a lower cost. For example, and SDC credit might be given to a developer for providing improvements along both sides of an adjacent facility or for extending frontage improvements beyond the site frontage.

Transportation Utility Fees (TUF)

Transportation Utility Fees (also known as Street Utility, Road User, or Street Maintenance Fees) are monthly fees collected from residences and businesses via their water/sewer bills. Fees are assessed based on the expected number of trips for each land use. Funds are usually used for road maintenance and sidewalks but can cover capital improvements. At least 19 Oregon cities currently have TUFs, including Eagle Point, Medford, Phoenix, Talent, and Ashland. Funds generated by these fees can add up; roughly half of Medford's Public Works operations budget comes from a street utility fee.[24]

Local Fuel Tax

While every state collects an excise tax on fuel, Oregon is one of only nine states that permits cities and counties to impose a local fuel tax to pay for street operation, maintenance, and preservation activities. The taxes are paid to the cities and counties monthly by distributors of fuel. Voters would need to pass the tax, and the process for presenting such a tax to voters would need to be consistent with Oregon State law as well as the laws of the local jurisdiction. There are currently 27 cities and two counties in Oregon that have a local fuel tax. The taxes range from $0.01 to $0.10 per gallon.[25]

Other Local Funds

- **Local Improvement Districts (LID)**: LIDs are most often used to construct projects such as streets, sidewalks, or bikeways. Through the LID process, the costs of local improvements are generally

[24] More information is available from the League of Oregon Cities in their 2008 report: https://www.orcities.org/application/files/3015/7481/0598/TUFReport2011.pdf.

[25] More information is available at: https://www.oregon.gov/ODOT/FTG/Pages/Current%20Fuel%20Tax%20Rates.aspx?wp9904=p:2&wp4401=l:100#g_2d60aa8d_2408_4664_bd10_d745b56f361d.

spread out among a group of property owners within a specified area. The cost can be allocated based on property frontage or other methods such as trip generation. The cost of LID projects are borne primarily by property owners. Moderate administrative costs must be factored in, and the public involvement process must still be followed. If the cost of the local improvement is not 100% funded by property owners, the city/county is required to contribute the remaining unfunded portion of the improvement.

- **Economic Improvement Districts (EID):** Transportation improvements can often be included as part of larger efforts aimed at business improvement and retail district beautification. EIDs collect assessments or fees on businesses to fund improvements that benefit businesses and improve customer access within the district. Adoption of a mutually agreed upon ordinance establishing guidelines and setting necessary assessments or fees to be collected from property owners is essential to ensuring a successful EID.
- **Urban Renewal District/Tax Increment Financing:** Urban Renewal Districts are separate taxing districts created to remove blight. Each Urban Renewal Plan has identified actions that will remove the blight within the district. Those actions are funded by debt financing (e.g., bonds) using the incremental tax revenue generated from improvements on private property that increase the tax assessable value of that property that then create additional property tax revenue. The additional tax revenue (i.e., tax increment) is then directed to the Urban Renewal District to be used for blight removal. This public finance method is referred to as Tax Increment Financing (TIF) and is limited to Urban Renewal in the State.
- **Local Bond Measures:** Local bond measures, or levies, are usually initiated by voter-approved general obligation bonds for specific projects. Bond measures are typically limited by time, based on the debt load of the local government or the project under focus. Funding from bond measures can be used for right-of-way acquisition, engineering, design, and construction of transportation facilities. Transportation-specific bond measures have passed in other communities throughout Oregon. Though this funding source is one that can be used to finance a multitude of project types, it must be noted that the accompanying administrative costs are high and voter approval must be gained. In addition, local bonds for transportation improvements will compete with local bonds for other public needs, such as fire and rescue, parks and recreation, schools, libraries, etc.
- **Road District**: Road districting is a technique used to localize road construction or maintenance to a portion of a county and to place financial responsibility within the localized area. Currently no special road districts exist in Jackson County; however, this approach has proven effective in some other Oregon counties. Typically, this tool is used to facilitate the improvement of local access or unimproved roads and is not used on roads already maintained by the county.
- **Development Community**: The development community provides funding for pedestrian and bicycle improvements through conditions of approval, right of way dedication and frontage improvements. These are an important way that communities improve areas for walking and biking. The value of pedestrian and bicycle improvements provided by developers through frontage improvements are difficult to determine.
- **Larger Transportation Improvement Projects**: Including walking and biking infrastructure improvements as part of larger roadway improvement projects is an opportunity to streamline and incorporate active transportation solutions into project development. Oregon's bicycle bill states that roadway projects that increase capacity for auto travel must include pedestrian and bicycle facilities.

Appendix H Programs

Appendix H – Programs

Programming to support and encourage walking and biking is a key component of promoting active transportation. This section includes a set of current and proposed programs for Way to Go, the Rogue Valley's transportation options program, to encourage walking and biking.

Current Programs and Events

The Way To Go Program helps connect Rogue Valley residents to a variety of available transportation options. The program website provides a wide range of information about the programs and events offered by Rogue Valley Transit District (RVTD) to promote modes other than the single-occupancy vehicle. A main goal of the program is to be the one-stop shop for residents trying to understand their transportation options and resources. RVTD's program strives to improve mobility for people in the Rogue Valley and reduce automobile trips, congestion, and pollution. RVTD's current programs and events are discussed below, organized by similar categories as those used on their website.

Options

Rogue Valley residents have many options for traveling to work, school, home, and other destinations. RVTD provides descriptions of these options on their website, along with additional mode-specific services that are provided in the region if applicable.

Walk

Other than facilities for people walking, such as sidewalks, crosswalks, shared-use paths, and trails, there are no specific services provided to promote walking in the Rogue Valley. Walking and other modes are promoted through the *Gus Rides the Bus* interactive bus program and several annual events and challenges such as Rogue Commute Challenge, "Be Seen. Be Safe," Medford Open Streets, Walk and Bike to School Day, and the Get There Challenge.

Bike

In addition to bicycle facilities provided by the local jurisdictions of Rogue Valley, such as the Bear Creek Greenway multiuse trail, the following programs support those traveling via bike:

Rogue Bikeshare: A community bikeshare program that is operated through Zagster and sponsored by RVTD, RVCOG, ODOT, City of Ashland, and Southern Oregon University. Users can pay an hourly or annual price to use the shared bikes. Bikes must be picked up and returned to static bike share stations, largely located in Ashland and downtown Medford.

Safe Cycling Class: RVTD provides a free class that helps attendees learn to ride confidently and safely on the different streetscapes of the Rogue Valley, teaching basics of bicycle safety and riding. A League of American Bicyclists Certified Instructor teaches this class. Attendees are of all ages and can include individuals or groups, such as families or organizations.

Adult Bicycle Safety Classes: These classes provide participants with the knowledge, skills, and confidence needed to safely bicycle for transportation. Participants attend a three-hour course with classroom, parking lot, and community bike ride sections. A course goal is for participants to have the confidence and skill level needed to navigate local bicycle facilities to make bike trips for commuting, shopping, and recreational activities.

Bike Rodeo Skills Course (Youth Bike Safety): RVTD's Bike Rodeo is a bicycle skills event which offers an opportunity for bicyclists to practice and develop skills that will help them to become better bicyclists and

avoid typical crashes. An evaluator provides immediate feedback to the participant in a positive manner (satisfactory; needs improvement). If the child has difficulty with a particular lesson, he or she has the chance to keep practicing. The goal of the bicycle rodeo is to give participants an opportunity to learn, practice, and demonstrate their bicycle handling skills in a fun, noncompetitive atmosphere. During RVTD's 2018-2019 fiscal year, there were approximately 40 participants.

Bikes on the Bus: RVTD provides a bike rack on the front of every fixed-route bus, allowing travelers to use both modes in a single trip. The bike racks can carry up to three bikes with spaces being first come, first served. During RVTD's 2018-2019 fiscal year, there were approximately 45,069 counts of riders using the bikes on the bus service.

Employer Commute Solutions

RVTD supports worksites to help improve transportation options for employees and others accessing the site. RVTD's Commute Solutions Program offers employers in Southern Oregon information and solutions for employee commute options. RVTD meets with interested employers to discuss specific concerns, issues, or employee transportation barriers for that organization. If possible, an Employee Transportation Survey is administered to better understand issues and opportunities. RVTD provides customized transportation options programs to best match the needs of the employer, including developing a carpool network on Get There, Emergency Ride Home Program, Group Bus Pass Program, transportation options kits for new employees, and employee outreach and education about available services. The following are the employer programs offered by RVTD, the majority of which are free of charge.

Employee Surveying

RVTD will help an employer conduct a survey to find out how their employees are currently getting to work and which commute options are of interest to them. This includes processing and analyzing the results and providing a written report. This service is free upon request.

Transportation Fairs and Employee Outreach

RVTD will put on an event at a workplace to help promote commute options and provide personalized trip-planning assistance for employees. RVTD will educate employees on walking, bicycling carpooling, and riding transit. Marketing materials and incentives can be provided.

New Employee Commuter Kit

One of the best times to educate employees about their commuting options is when they first start to work for a company. RVTD can provide an employer with free transit kits for new hires, filled with service information, maps, and trip-planning tips. The employee receives customized information about how to get to and from work and the available transportation options, including walking and biking, in Southern Oregon.

On Site Audit

RVTD will help an employer review viable transportation options at the worksite and audit accessibility for people on bikes and on foot. The audit includes suggestions on how to make the workplace attractive and accessible for a variety of transportation modes.

Employee Transportation Coordinator and Staff Training

RVTD will train a staff member to serve as the worksite's Employee Transportation Coordinator (ETC), helping employees get to and from work. RVTD will show them how to effectively manage and promote the company's commute options program.

Emergency Ride Home Program: The Emergency Ride Home Program (ERH) is available to employers who have an established ETC. ERH is like commuter insurance. Qualified employers in the Rogue Valley can provide employees with up to four free taxi rides home (up to 30 metered miles) each year, should they experience a personal or family emergency on a day when they have commuted to work without a car (bike, bus, walk, carpool, vanpool). RVTD covers the cost of the taxi ride, as long as the employer is enrolled in the program, has an ETC as a liaison between RVTD and its employees, and the employee has experienced a qualified emergency. RVTD's website[26] covers the program in more detail. During RVTD's 2018-2019 fiscal year, there were five participating employers.

Employee Outreach

RVTD will produce customized marketing materials to help employees learn about their transportation options. Biking, walking, carpooling, and transit information can all be provided at no cost to the employer or employees.

Education and School Solutions

In addition to the mode-specific classes and trainings described above, the following programs are provided to support education around Rogue Valley transportation options.

Walk and Bike to School Days

Schools in Rogue Valley participate in national Walk and Bike to School Days[27], normally occurring every year in May and October.

Events and Campaigns

RVTD advertises and markets transportation options in the Rogue Valley through events and campaigns. Most of the events and campaigns occur once a year and educate community members about the options that are available.

Get There Challenge

In addition to the everyday functionality of the Get There statewide tool, an annual competition is hosted to further publicize and promote the program. The Get There Challenge allows individuals or teams to log all trips not made by a single-occupancy vehicle to become eligible for prizes.

Go By Bike Week

Go By Bike Week is Southern Oregon's campaign to promote and encourage biking for transportation in the Rogue Valley and replacing car trips with bicycle trips. The campaign utilizes community marketing and advertising for awareness, campaign events for engagement, and online trip logging for participation. One event that occurs simultaneously is Bike Month Bingo, where participants track their points on a personal bingo sheet and can win prizes after they reach a "Bingo." During RVTD's 2018-2019 fiscal year, there were approximately 146 pledges made by community members, 103 filled bingo cards received by RVTD, and 6,658 logged miles.

[27] http://www.walkbiketoschool.org

Medford Open Streets Event

The Medford Open Streets Event temporarily closes streets to personal vehicle traffic, opening that space up to other modes of transportation, socializing, and fun. The goal is to create a standalone event to promote active transportation options and help visualize others uses of public spaces in Medford.

Rogue Commute Challenge

The Rogue Commute Challenge is RVTD's workplace team commute challenge. Employers sign up to participate in a two-week campaign to commute by walking, biking, carpooling, or using transit. Workplaces with the most trips and miles are recognized. The goal of the Rogue Commute Challenge is to educate and promote commute alternatives to driving alone. Through the Rogue Commute Challenge, RVTD fosters connections with local workplaces to promote transportation options to employees year round. During the 2019 Rogue Commute Challenge, there were nine workplace teams and approximately 413 logged trips.

"Be Seen. Be Safe." Light Giveaways

RVTD provides safety lights and "Be Seen. Be Safe." handouts to community members during the early fall to promote visibility as the darker commuting months approach.

Ashland Community Bike Swap

This fundraiser promotes bicycle transportation and benefits bike safety education in the Rogue Valley by providing a community venue for buying and selling working-condition bicycles and related equipment. This event is made possible by Ashland Parks & Recreation Commission (APRC); RVTD; and the City of Ashland Fire Department, Police Department, and Transportation Commission. Community members can sell or donate bikes and bike gear.

Go Vets Program

Go Vets is an RVTD program to help local veterans learn about transportation options and connect to the services needed to sustain a happy and healthy life. The program goal is to connect veterans to employment, education, medical, recreational, and social opportunities and services through an engaging and customized approach. The Go Vets program has been successful in improving the mobility and independence of veterans by providing transportation options that were not there before.

Pedals for Patriots

The Pedals for Patriots program helps veterans that cannot afford transportation gain independence and mobility. The program refurbishes and donates bikes to these veterans that need a mode of transportation. The bikes that are given away are all donations; most of the bikes are given by local police departments.

U.S. Department of Veterans Affairs (VA) Bike Loan Program

The Go Vets VA Bike Loan Program will provide VA inpatients with access to a bicycle to use while staying at the VA's Southern Oregon Rehabilitation Center and Clinics (VA-SORCC). The program aims to increase inpatients' independence and mobility.

Go Vets Travel Training

The RVTD Travel Training program was developed by Veterans for Veterans. The program is open to veterans who want to learn to travel safely and independently using public transportation. Travel training

is a free, self-paced process where a veteran, regardless of ability or age, can learn to ride RVTD's fixed-route system and learn about transportation options like bicycling, walking, and carpooling.

RVTD 2040 Transit Master Plan Recommended New Programs and Services

The following are potential programs and services recommended in the RVTD 2040 Transit Master Plan that could be created to add to the robust set of offerings RVTD provides through the Way To Go Program. Any new or enhanced programs are not currently funded. Enhancing programs would require additional funding from the region for the Way to Go Program.

- Establish a Safe Routes to School program that can house all youth education programs and work with walking and biking advocacy groups to expand the number of events, classes, and activities.
- Create a commute cost calculator to compare annual cost of the available active travel mode options and further promote transportation options other than the single-occupancy vehicle.
- Create a marketing program that provides personalized information about transportation options to individual residents. An example is the Portland Bureau of Transportation's (PBOT's) SmartTrips Program[28], which allows community members to provide basic information about their essential destinations and receive hand-delivered packets and personalized emails describing their transportation options. These types of programs can also go door-to-door in neighborhoods with multiple transportation options available to discuss an individual's options. This approach considers that it is not "one size fits all" when it comes to transportation options. Different community and neighborhood characteristics, such as land use and geography, can greatly impact what modes are available in different portions of the Rogue Valley.
- Provide a transportation combination plan where a single monthly or annual pass grants the user access to a transit pass, bikeshare pass, carshare (up to a defined dollar amount), and/or taxi service (up to a defined dollar amount) at a discounted rate. PBOT provides an example program called the Transportation Wallet[29], where residents who live in specified areas of the city can pay a single price for access to transit, streetcar, bikeshare, and carshare, or trade in a parking pass to receive the benefits are free.

Action Items

The action items in **Table H1** address areas of focus for the Transportation Demand Management (TDM) planner/marketing coordinator in Rogue Valley to continue to improve the Way To Go Program. The action items include those underway by RVTD as the agency responsible for the region's Transportation Options Program (Way to Go), those identified in RVTD's Master Plan, and new recommendations from this plan that are recommended for RVTD to consider in their Transportation Options Strategic Plan.

Table H1: Action Items for the Transportation Options Program

Description	Timeline	Support
RVTD-Identified		
Update the Way To Go Program branding to be separate but complementary to RVTD's transit	Within 2 years	NA

[28] https://www.portlandoregon.gov/transportation/article/625239

[29] https://www.portlandoregon.gov/transportation/78470

Description	Timeline	Support
services. All components of the Transportation Options program are housed under the Way To Go Program and will use the same branding. Create an official logo and use this logo on all marketing and outreach to provide consistent branding, including the RVTD website.		
Create an annual Transportation Partnership Inventory. Catalog Transportation Options partnerships across the Rogue Valley and determine level of partnership.	Ongoing	Partners
Continue outreach to existing partners, including employers. Administer working sessions with partners and stakeholders.	Ongoing	Partners
Continue to explore new partners, such as walking and biking advocacy groups and major employers.	Ongoing	Potential partners
Reach out to new target audiences (e.g., minority populations, youth), not just the commuting public.	Ongoing	NA
Review and gather local TDM ordinances in Southern Oregon to identify potential opportunities to collaborate on shared transportation option goals. Identify barriers or gaps in Transportation Options Policies.	Ongoing	Local and regional jurisdictions
Sit on local transportation committees to provide transportation options guidance and perspective.	Ongoing	City of Medford Bicycle Pedestrian Advisory Committee, Ashland Transportation Commission, Jackson County Bicycle Committee, Grants Pass Walkways and Bikeways Committee, AARP Livability Group
Get There administration and training to learn the new rideshare and trip-logging platform, acquire donations for year-round use, and administer Get There and related campaigns.	Ongoing	ODOT
Get There promotion and outreach to educate existing and new partners, employers, and network about the tool functionality. This includes major promotional efforts to encourage registrations.	Ongoing	ODOT
Administer Annual Participant Survey and increase participation each year.	Ongoing	ODOT

Description	Timeline	Support
Monitor need for additional staff.	Ongoing	NA
Explore new technology such as apps, social media, and other tools to support the Transportation Options program. When new tools are added to RVTD's services, update all materials and the website to reference the current services available and create a marketing or campaign strategy to share with the traveling public.	Ongoing	NA
Participate in Medford's Safe Routes to School Task Force.	Ongoing	Local jurisdictions
Continue to increase the network of ETCs.	Ongoing	Partners
Work with local governments to combat congestion problems, such as the continued effort with the City of Medford and local employers on the 2018 Exit 27 Congestion Mitigation Program.	Ongoing	Local and regional jurisdictions
Enlist at least one new employer into the bus pass program each year.	Ongoing	Local employers
Recommended in the RVTD 2040 Transit Master Plan		
Explore opportunities to partner with for-hire transportation companies for first mile/last mile connections.	Within 2 years	For-hire transportation companies operating in the Rogue Valley
Create a communications plan, with identified audiences/dates/individualized marketing.	Within 2 years	NA
Update all materials and the website to provide information about mobility options to points outside the Rogue Valley and where and how RVTD connects to them. Link the regional public transit services page and the Way To Go page on the district's website.	Within 2 years	Regional and external transportation services partners
Restructure the Way To Go program webpages of the RVTD website to make the information more manageable and easy to navigate. Remove duplicate pages or information.	Within 2 years	NA
Review and update all materials and the website to use the same terminology and make the target audience clear for each service. For example, always refer to the employer-based services as "employer commute solutions" and not "employer commute services" or "commute trip reduction services," or to provide more clarity that these are services for	Within 2 years	NA

Description	Timeline	Support
employers and not directly for commuters call them "employer solutions."		
Work with ODOT to create a full Transportation Options Strategic Plan.	Within 5 years	ODOT, regional, and local jurisdictions
Work with local jurisdictions to increase their capacity to provide TDM programming and support, either independent or in coordination with RVTD.	Within 5 years	Local jurisdictions
Market park-and-ride facilities and monitor the ability to add more throughout RVTD's service area.	Ongoing	Local jurisdictions
Monitor usage of existing programs and periodically evaluate need for changes. Underutilized and duplicative programs could be targets for improvement to make them more useful to the target audience, to focus on awareness and marketing, and/or to eliminate and use resources elsewhere.	Ongoing	NA
Consider new programs and services to add to the Way To Go Program, such as a Safe Routes to School program, an employer TDM support program, or others listed above.	Ongoing	NA
Provide long-term/secure bicycle parking at park-and-ride facilities and transit stations.	Ongoing	Local jurisdictions
Work with local agencies to improve bike access to transit stations and stops.	Ongoing	Local jurisdictions
Explore partnering with for-hire transportation services and apps, such as Lyft or Uber.	Ongoing	Potential partners
Consider other promotions similar to the Rogue Transit Trails Passport completed in 2016.	Ongoing	Local businesses
Conduct annual ETC surveys to understand what barriers ETCs are facing to encourage coworkers to use different modes, gain ideas about new services or enhancements, and better support the ETC role.	Ongoing	Partners
Work with other City governments to create Open Streets events throughout the Rogue Valley with support from RVTD.	Ongoing	Local Jurisdictions
Update the commute solutions toolkit as programs and services change.	Ongoing	NA

Description	Timeline	Support
Work with United Way's transportation committee to further the program and help promote what is available.	Ongoing	United Way
Promote ability to provide travel training and other programs in Spanish.	Ongoing	NA
New Recommendations		
Encourage walking and biking as part of first-mile/last-mile connections to transit options.	Ongoing	NA
Create park-and-bike programs for people commuting by bicycle to some of the denser environments.	Within 5 years	Local Jurisdictions
Offer free or discounted electric bike rentals to individuals who commit to commute by bicycle a certain number of days per week.	Within 5 years	Partners
Establish local chapter of volunteer organization like "Cycling without Age" to encourage programs and opportunities for people without the physical ability to bicycle to have the opportunity to use bicycle facilities.	Within 5 years	Community Volunteers and Partners
Train the community, including local law enforcement, on bicycling and walking laws.	Ongoing	NA
Increase educational resources about the benefits of active transportation for health and wellbeing.	Within 5 years	NA
Establish "remote drop-offs" where parents can park their vehicles and walk or bike with their children the rest of the way to school.	Within 5 years	Local Jurisdictions and School Districts
Create "traffic gardens[30]" to teach children about roadway safety.	Within 5 years	Local Jurisdictions and School Districts
Teach cycling classes in elementary school and include field trips.	Within 5 years	School Districts

[30] https://www.trafficgardens.com/about