

Section 3 Technical Background and Needs Analysis

TECHNICAL BACKGROUND AND NEEDS ANALYSIS

INTRODUCTION

Development of the Jackson County TSP began with an assessment of current and forecast transportation system conditions. Current facilities for all transportation modes were inventoried and analyzed to identify any existing system deficiencies. This was followed by an analysis of anticipated future conditions. A future conditions analysis was conducted to approximate year 2038 conditions, based on population estimates for the area. Relevant transportation and land use projects were incorporated into the analysis to estimate future conditions, identify future transportation issues, and evaluate potential mitigations. Details of the technical analysis and project alternatives are provided in the *Volume II* of the TSP. The key findings are summarized below for each transportation mode.

LAND USE

Land is predominantly designated for resource uses in the County, with most land designated forest and agricultural. Approximately three percent of the total land in the county is zoned for a combination of urban and rural residential use, with a greater share being rural residential.

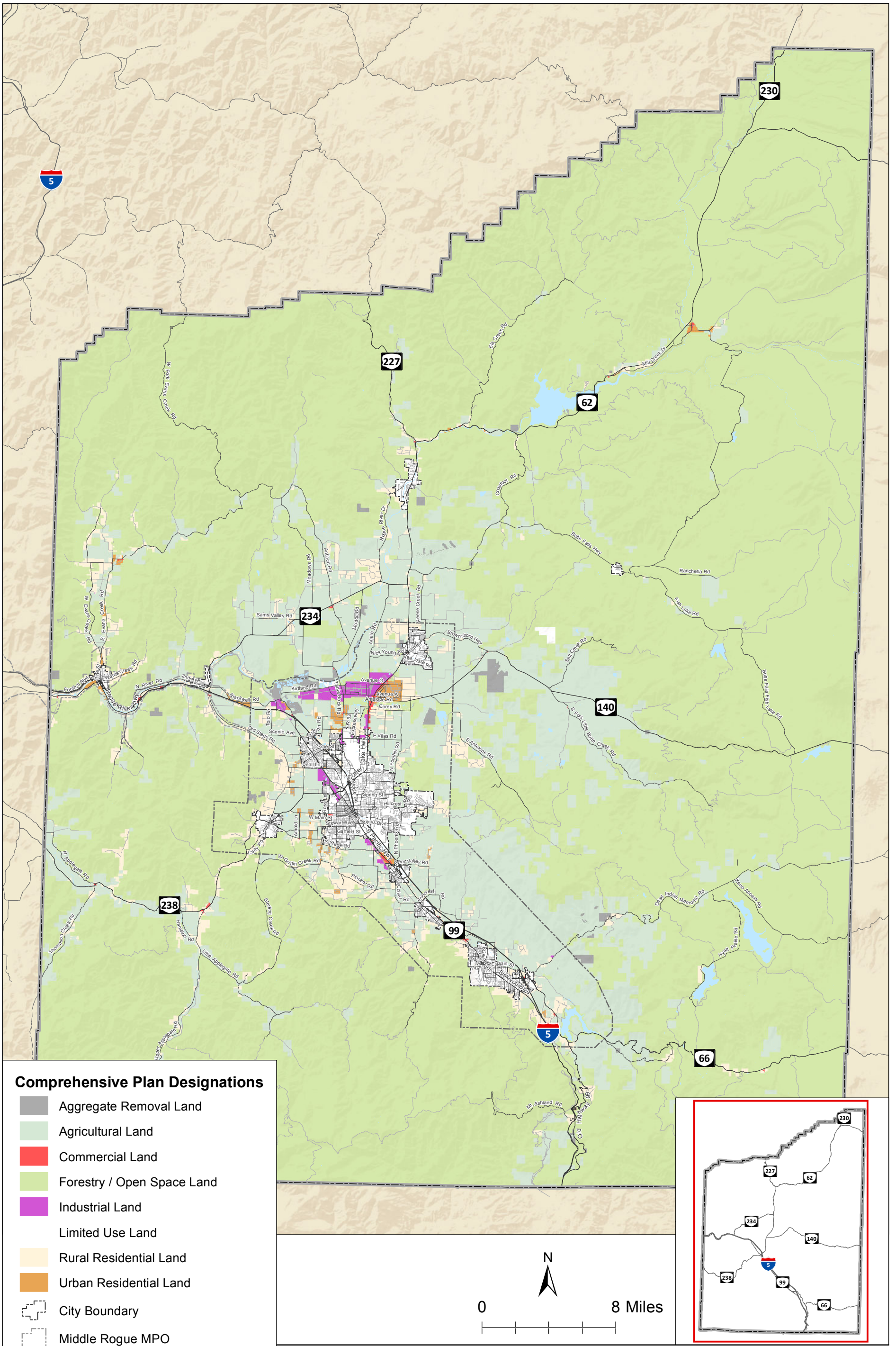
Zoning and Comprehensive Plan Designations

The zoning and comprehensive plan designations within Jackson County are shown in Figure 2. The regulations associated with the zoning designations are established in Jackson County Land and Development Ordinance (LDO) Chapter 4 (Resource Districts), Chapter 6 (Use Regulations), and Chapter 8 (Dimensional Standards)

The Jackson County LDO also contains the regulations for several overlay zoning districts. Overlay zoning districts are categorized as: environmental and cultural; floodplain; transportation and public facility; and urban. Overlay zoning districts are addressed in the Natural Resources and Environmental Section of Technical Memorandum #2, in the context of mapped environmental, cultural, and other resource areas that may have bearing on the TSP update process.

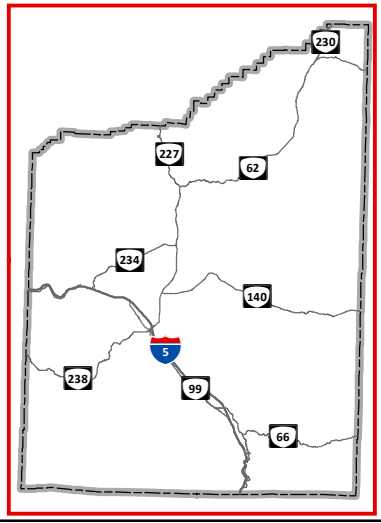
Existing Land Use

The Jackson County Comprehensive Plan identifies four unincorporated urban areas, one of which is considered an urban fringe area adjacent to a city boundary. The three unincorporated urban areas include White City, the Highway 99 Area, and the Gibbons/Forest Acres Area. White City is unique among the unincorporated urban areas due to its unique urban residential zoning designations and its potential for further development. There are multiple vacant commercial, residential, and miscellaneous parcels within the boundary of White City. Additionally there are multiple vacant industrial and farm parcels nearby.



Comprehensive Plan Designations

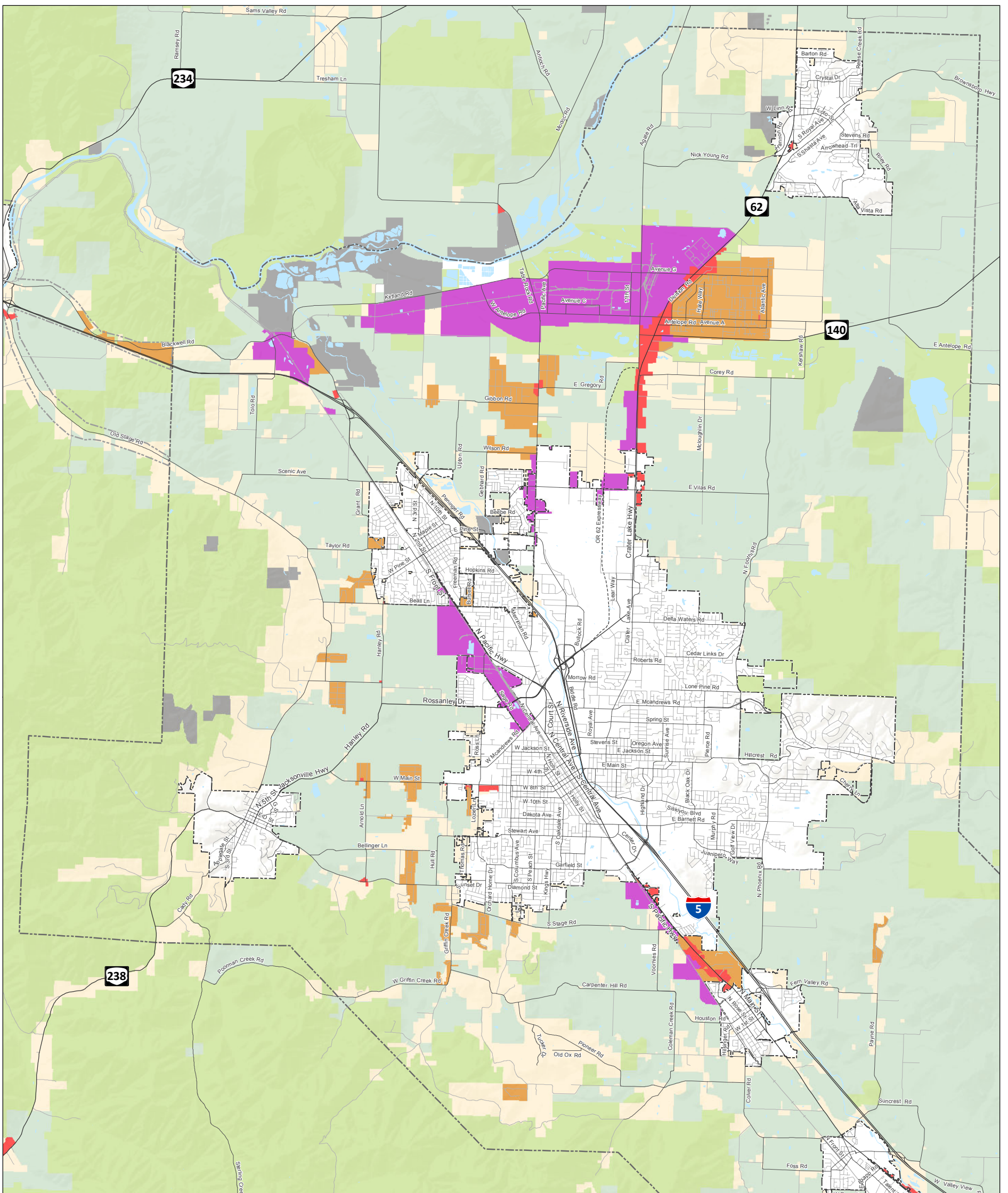
- Aggregate Removal Land
- Agricultural Land
- Commercial Land
- Forestry / Open Space Land
- Industrial Land
- Limited Use Land
- Rural Residential Land
- Urban Residential Land
- City Boundary
- Middle Rogue MPO
- Rogue Valley MPO
- County Boundary



**Zoning Designation
Jackson County, OR**

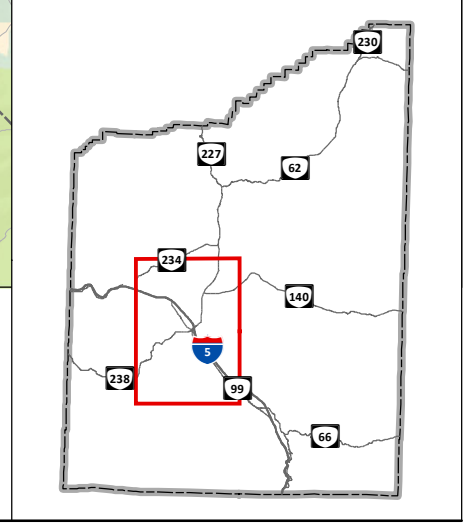
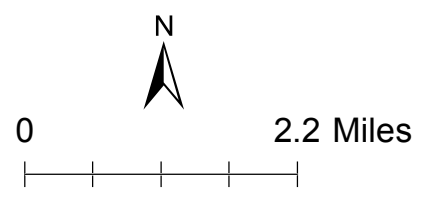
**Figure
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Comprehensive Plan Designations

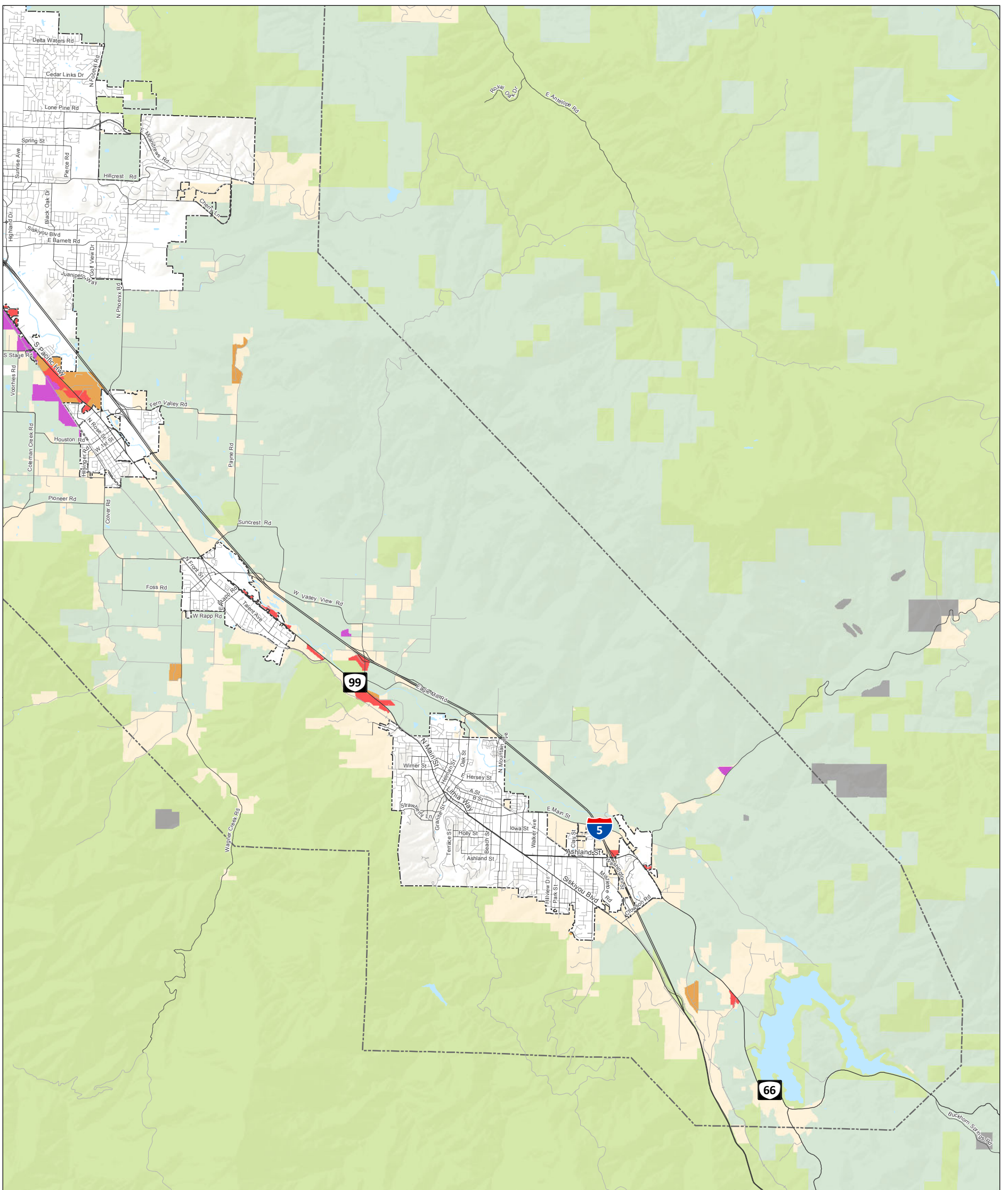
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**Zoning Designation
Jackson County, OR**

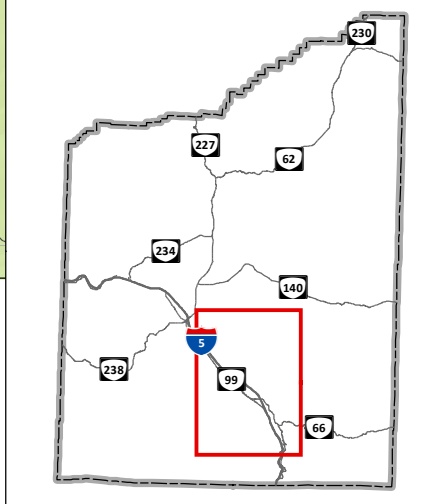
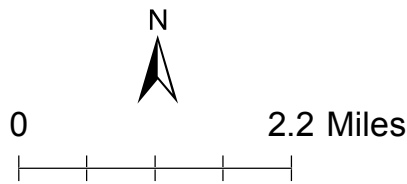
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Comprehensive Plan Designations

- Aggregate Removal Land
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**Zoning Designation
Jackson County, OR**

**Figure
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Both the OR 99 Area and the Gibbons/Forest Acres Area are not likely to undergo significant development as both areas are mostly improved with little to no vacant land. For the OR 99 Area, future development is limited to a manner which will not further degrade the traffic capacity and safety of the highway. In addition, the Comprehensive Plan's policy for the Gibbons/Forest Acres Area is to limit urban densities to two units per acre after community water service is provided.

ROADWAY SYSTEM

The roadway system is the backbone of the transportation system in Jackson County. Motor vehicle, bicycle, pedestrian, transit, and freight transportation all rely on the roadway system to some degree. The roadway system also provides motor vehicle, bicycle, pedestrian, and transit access to air and rail facilities. The following section describes the roadway system's jurisdiction, classifications, and characteristics.

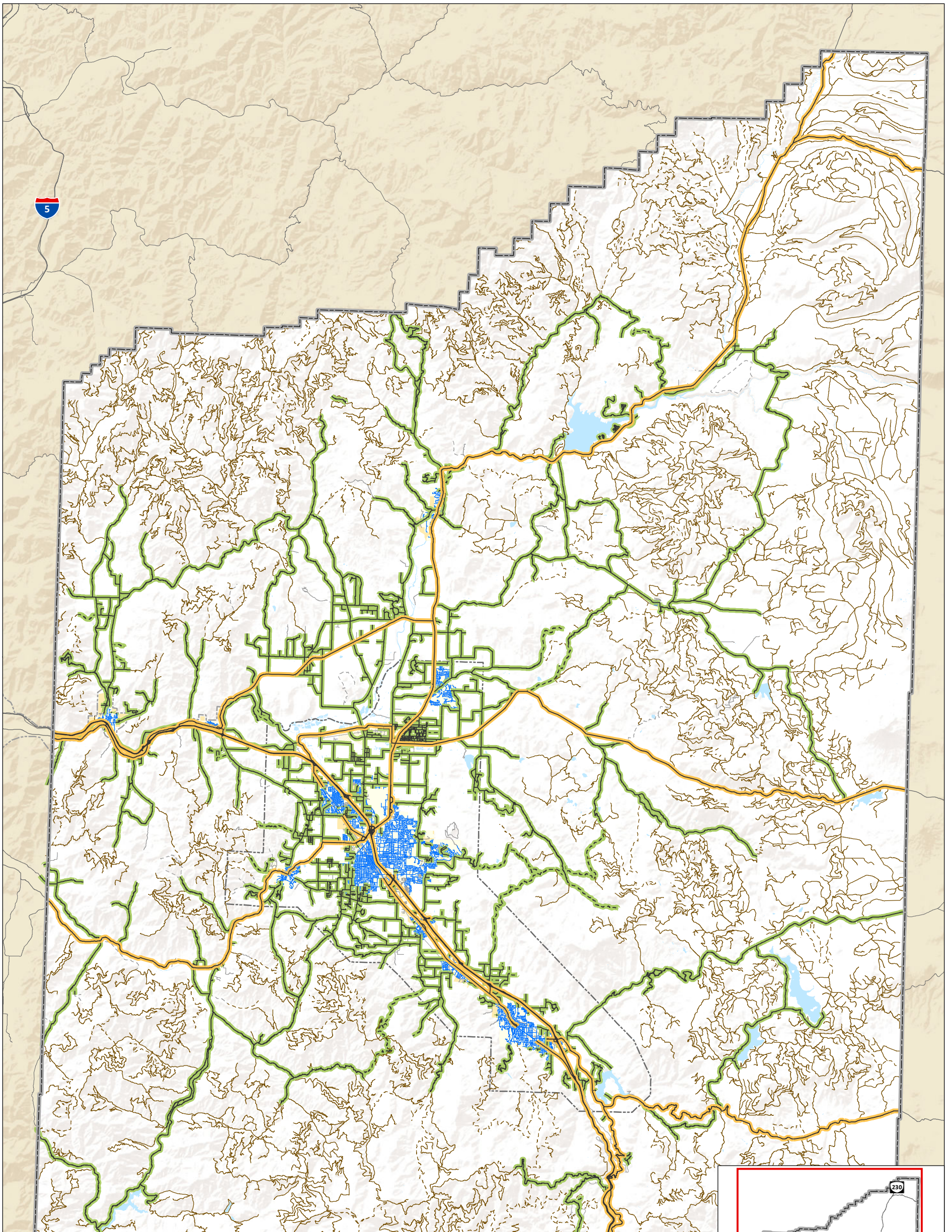
Jurisdiction

Roads within Jackson County are owned and maintained by several jurisdictions, including the US Forest Service, Bureau of Land Management (BLM), ODOT, Jackson County, and local cities. Each jurisdiction is responsible for determining the road's functional classifications, defining its major design and multimodal features, and approving construction and access permits. Coordination is required among the jurisdictions to ensure that the roads are planned, operated, maintained, and improved to safely meet public needs. Figure 3 illustrates the jurisdiction of the roads within Jackson County. The following summarizes the number of lane miles owned and maintained by each jurisdiction.

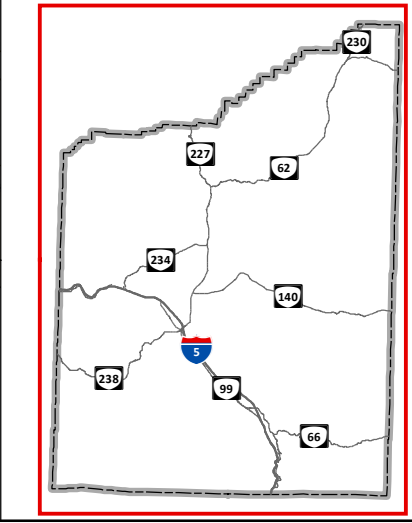
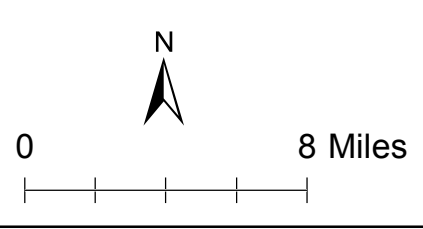
- The U.S. Forest Service and the Bureau of Land Management own approximately 4,687 miles of roadway in Jackson County.
- The Oregon Department of Transportation owns approximately 348 miles of roadway within Jackson County, including some of those most heavily traveled.
- Jackson County owns approximately 1,052 miles of roadway, including some roadways within incorporated cities.
- Local cities and private entities own most of the remaining public roadways.

US Forest Service Routes

The US Forest Service Routes within Jackson County are located within the four districts of Rogue River-Siskiyou National Forest: Applegate, Ashland, Butte Falls, and Prospect. Of the 2,551 miles of roads in the US Forest Service system, not all are in fully maintained status. In accordance with the Highway Safety Act of 1966, maintenance level 3-5 roads are maintained for low-ground-clearance vehicles, such as passenger cars. Maintenance level 2 roads in an open status are maintained primarily for high-ground-clearance vehicles. Maintenance level 1 roads are closed to public vehicular traffic. The US Forest Service road mileage by maintenance level (ML) is as follows:



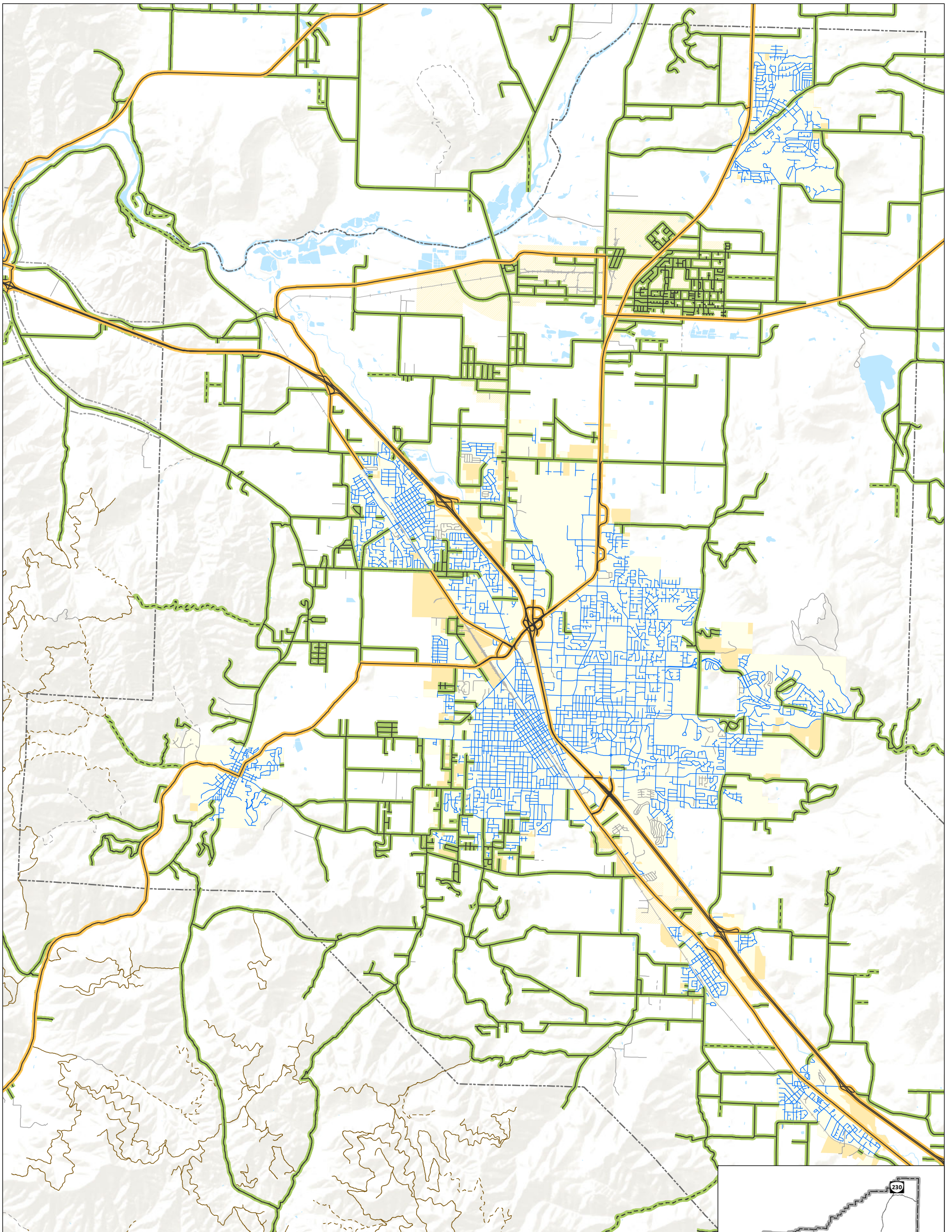
Improved Roads		Unimproved Roads	
— ODOT	— County	— City	— Private
— County	— County	— Private	— USFS/BLM
— City	— City	— Middle Rogue MPO	— Middle Rogue MPO
— Private	— Private	— Rogue Valley MPO	— Rogue Valley MPO
— USFS/BLM	— USFS/BLM	— County Boundary	— County Boundary
City Boundary			
Urban Cluster Boundary			
Urban Growth Boundary			



Jurisdiction
Jackson County, OR

Figure
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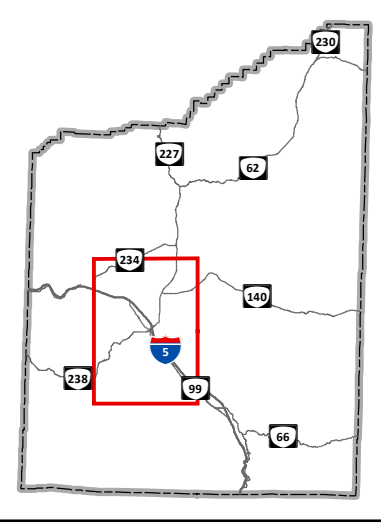
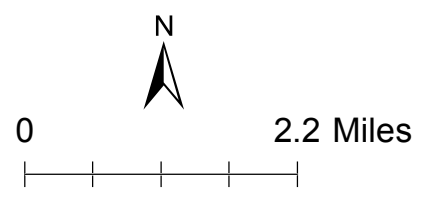


Improved Roads

- ODOT
- County
- City
- Private
- USFS/BLM
- City Boundary
- Urban Cluster Boundary
- Urban Growth Boundary

Unimproved Roads

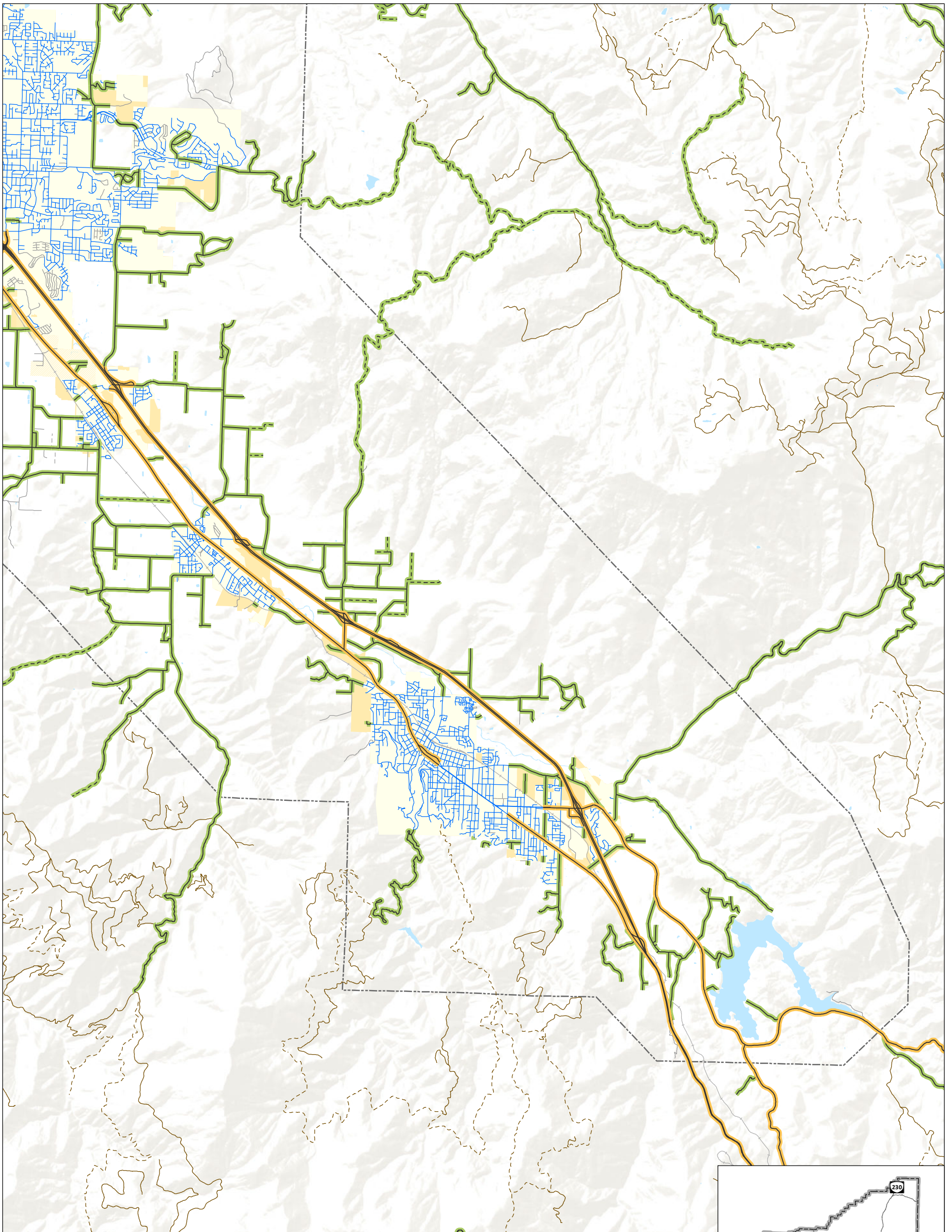
- - - County
- - - City
- - - Private
- - - USFS/BLM
- Middle Rogue MPO
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- County Boundary



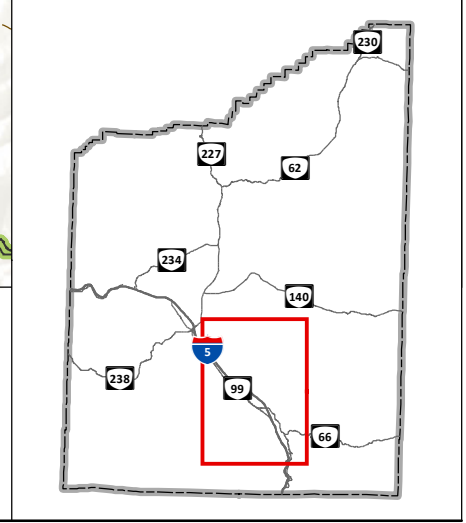
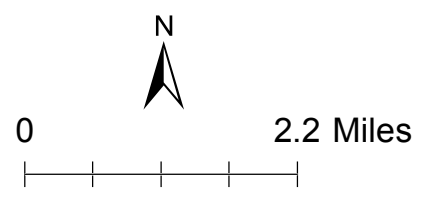
**Jurisdiction
Jackson County, OR**

**Figure
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Improved Roads		Unimproved Roads	
	ODOT		County
	County		City
	City		Private
	Private		USFS/BLM
	USFS/BLM		Middle Rogue MPO
	City Boundary		Rogue Valley MPO
	Urban Cluster Boundary		County Boundary
	Urban Growth Boundary		



**Jurisdiction
Jackson County, OR**

**Figure
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- 0.0 miles of ML 5 roads.
- 97 miles of ML 4 roads.
- 416 miles of ML 3 roads.
- 1,380 miles of ML 2 roads.
- 658 miles of ML 1 roads.

Additional information on US Forest Service Routes within Jackson County can be found here: <http://www.fs.usda.gov/rogue-siskiyou/>.

Bureau of Land Management Roads

The Bureau of Land Management owns roads that are used primarily for logging, recreational use and administrative purposes. Of the 2,500 miles of roads under its jurisdiction, only 150 miles are paved. The rest are crushed-rock surfaced roads which experience low to medium traffic volumes. Additional information on BLM Routes in Jackson County can be found here: <http://www.blm.gov/or/districts/medford/index.php>.

State Highways

The Oregon Department of Transportation owns the following State Highways within Jackson County:

- Interstate 5 (I-5) is a four-lane interstate highway that provides regional mobility within the County. I-5 is the main north-south route along the West Coast, running from the Canadian border south of Vancouver, B.C. through Seattle, Portland, Eugene, Medford, Sacramento, and Los Angeles to the Mexican border south of San Diego. Locally, it is the main route from the California border on the south to Josephine County on the west. Seven of the County's eleven incorporated cities are located on or near Interstate 5. A total of 18 interchanges serve Jackson County.
- Crater Lake Highway (Highway 62) is classified as a Statewide Highway south of Highway 140 and as a Regional Highway north of Highway 140. It is also designated as an Expressway from Delta Waters Road to Linn Road. It is a main north-south roadway that provides access to White City and the Upper Rogue Valley. Some of Highway 62's urban sections within the County carry higher traffic volumes than rural sections of I-5 in the County.
- Rogue River, Rogue Valley, and Siskiyou Highways (Highway 99) are District Highways that connect communities along the I-5 corridor. The highways are known locally by several other names, including Riverside Avenue, Siskiyou Boulevard, Main Street, etc. Highway 99 remains a high-volume roadway, even though I-5 now carries the through traffic that once used Highway 99. Siskiyou Highway is signed as a historic highway.
- Lake of the Woods Highway (Highway 140) is a Statewide Highway that connects the Rogue Valley to the Klamath Basin. It is part of the route of the old "Winnemucca-to-the-Sea Highway." Highway 140 is a modern two-lane rural highway.

- Jacksonville Highway (Highway 238) is a District Highway and is an alternate route to I-5 between Medford and Grants Pass. It is also a primary access roadway to the historic city of Jacksonville and the Applegate Valley.
- Sams Valley Highway (Highway 234) is a District Highway that traverses Sams Valley from Gold Hill to north of Eagle Point, connecting I-5 to Highway 62.
- Green Springs Highway (Highway 66) is a District Highway connecting Ashland and Klamath Falls.
- Diamond Lake Highway (Highway 230) is designated as a Regional Highway within Jackson County. It departs Highway 62 in the northeast section of the County and connects to Highway 138 in Douglas County near Diamond Lake.

County Roads

The major County roads in the study area are the following:

- Table Rock Road is Jackson County's only direct route north of Medford between Crater Lake Highway 62 and I-5. Antelope Road is a major east-west roadway that connects White City to Crater Lake Highway 62 and continues west to Table Rock Road. It provides access to industrial areas west of Crater Lake Highway 62 and to residential areas east of the highway.
- Tiller-Trail Highway provides access to the commercial forest land located in northern Jackson County. The road continues north to Douglas County then west to Canyonville.
- Old Stage Road travels between Gold Hill and Jacksonville, where it becomes Oregon Street.
- South Stage Road runs from Highway 99 between Medford and Phoenix west to Jacksonville, where it becomes California Street.
- Vilas and Hamrick Roads constitute one of the few east-west connections between I-5 and Crater Lake Highway 62. These roads serve an area with a substantial amount of land zoned or planned for commercial and industrial use. These roads also serve areas near the Medford/Jackson County airport and areas within the urban growth boundaries of Central Point and Medford.
- North Phoenix and Foothills Roads travel north-south on the east side of Medford.
- E Pine Street connects OR 99 to I-5 and I-5 to the Rogue Valley International-Medford Airport. The segment of E Pine Street/Biddle Road is classified as an Intermodal Facility on the National Highway System and is the highest volume County road.
- Butte Falls Highway travels east-west between OR 62 (Crater Lake Highway) and the City of Butte Falls where it becomes Broad Street.
- Dead Indian Memorial Road travels north east from OR 66 (Green Springs Highway) in Ashland to OR 140 (Falls Highway) in Klamath County.

- East Evans Creek Road travels north from the Rogue River along Evan Creek where it connects with Meadows Road, which connects to OR 234 (Sams Valley Highway).

City Roadways

Each of the incorporated cities of Ashland, Butte Falls, Central Point, Eagle Point, Gold Hill, Jacksonville, Medford, Phoenix, Rogue River, Shady Cove, and Talent have roadways that are maintained by the individual city authority. While the majority of the streets in these cities are City-owned and -maintained, each city has County or State roads passing through it. I-5 and Highway 99 pass through Rogue River, Gold Hill, Central Point, Medford, Phoenix, Talent, and Ashland; Highway 62 passes through Shady Cove and Eagle Point; Highway 238 passes through Jacksonville; and Butte Falls Highway starts in Butte Falls and connects to OR 62.

White City is comprised of roadways that are either state- or county-operated facilities, as it is an unincorporated community. White City is located at the junction of OR 62 and OR 140 with the majority of the community located northeast of the junction. Antelope Road, another one of the County's major roads, also passes through White City.

Intermodal Connections

The 1999 Oregon Highway Plan (OHP) describes Intermodal Connectors as short lengths of roads that connect intermodal facilities to the state highway system. The two defined Intermodal Connectors on the National Highway System within Jackson County are: (1) Biddle Road and Pine Street/Freeman Road to OR 62 (2.78 miles), and (2) Airport Road/Biddle Road to Biddle Road (0.51 miles). The sections of Biddle Road and Pine Street from I-5 to Table Rock Road are under County ownership. Both the connectors are owned by the City of Medford.

Functional Classification

A roadway's functional classification is determined by several factors, including how the facility connects with the rest of the system, the volume of traffic (local or through) it is expected to carry, and the types of trips it is expected to carry. The functional classification considers the adjacent land uses and the kinds of transportation modes that should be accommodated. The public right-of-way should also provide sufficient space for utilities to serve adjacent land uses.

The functional classification system for Jackson County divides all County roadways into Urban and Rural groups. All of the County roadways within urban growth or urban containment boundaries fall under the urban group. All other County roadways fall under the rural group. Within these groups, roadways are classified as Freeways, Arterials, Major Collectors, Minor Collectors, or Local Streets or Roads (e.g., Urban Freeway, Rural Arterial). Section 5 provides the Functional Classification Plan for Jackson County.

Connectivity and Circulation

The need for the following future roadway connections has been expressed by many previous planning documents, including the RTP, prior County TSPs, local TSPs, and more. These future roadway connections as well as several others would improve connectivity between the urbanized areas of Jackson County.

Jacksonville Bypass

The City of Jacksonville has identified the long-term need for an alternative connection for through traffic on OR 238 to address livability and capacity issues within downtown Jacksonville. This connection, also known as the Jacksonville Bypass, has been considered for over 40 years with both a northerly and a southerly route analyzed, along with multiple internal options analyzed through the City's TSP. Either route would require crossing resource land, although in different proportions, outside Jacksonville's acknowledged urban growth boundary. Downtown Jacksonville is a unique place, not just in Jackson County, but in the entire United States. It is nationally recognized as Oregon's, "most extensive and complete example of late 19th century inland commercial and mining community" (National Park Service). It is flourishing in the 21st century; the historic nature of downtown Jacksonville has supported the development of a specific cluster of economic activities. Downtown Jacksonville attracts many high-end retail establishments. It is a regional entertainment destination during the summer months. It also has many fine restaurants. Downtown Jacksonville is essential to the City's overall livability in an important way. The TSP includes a project that will help continue to plan for the Jacksonville bypass.

South Stage Road Extension

Travel from southwest Medford to northeast Phoenix and from southeast Medford to northwest Phoenix is somewhat circuitous and an improved east-west connection would provide a direct alternative route for these trips. The City of Medford has identified the long-term need for a connection of South Stage Road across the freeway to North Phoenix Road. This connection would provide an east-west crossing of the Interstate between the South Medford Interchange and the Phoenix Interchange. The Medford TSP does not establish a 20-year need for the facility, but identifies the need for an eventual connection. The TSP includes a project to construct the South Stage Road extension.

Foothill Road Extension

There has been a long-term need for a new roadway connection between the east side of Medford and White City that relieves traffic along OR 62 as well as many of the east-west connections to OR 62. While most of Foothill Road exists today, most of the roadway is relatively narrow with multiple horizontal and vertical curvature issues. The roadway also currently terminates at Corey Road where motorists can only continue north by traveling east to Kershaw Road or west to OR 62. A new connection from Corey Road to Atlantic Avenue would provide a continuous north-south route from Fern Valley Road in Phoenix to Dutton Road in White City. The TSP includes several projects that will improve Foothill Road as well as provide a new connection to Atlantic Avenue.

Local Street Connectivity and Circulation

The County's TSP does not plan local street layouts. This type of local street planning is generally a requirement of new development, and the TSP process did not identify any critical local street circulation problems in existing areas that would warrant construction or planning of a new local road connection. Also, there are relatively few opportunities outside urban growth boundaries for in-fill development that necessitate a local street network plan. However, there are instances where some local street planning may be appropriate. Often, the "local" County road network becomes the higher-order network when an exception area is taken into a UGB and developed at urban densities. What is a local road from the County's perspective may be a future collector street from the City's perspective. The quality of the local road network in these areas may affect the attractiveness of the exception area for future urbanization. Cities that have concerns about street connections in exception areas outside their UGBs should look at the potential for additional development under the current County zoning. If the existing zoning allows development that could jeopardize a critical road connection, then the City may want to approach the County about developing a local road network plan for the area to preserve critical future road connections.

Traffic Operations

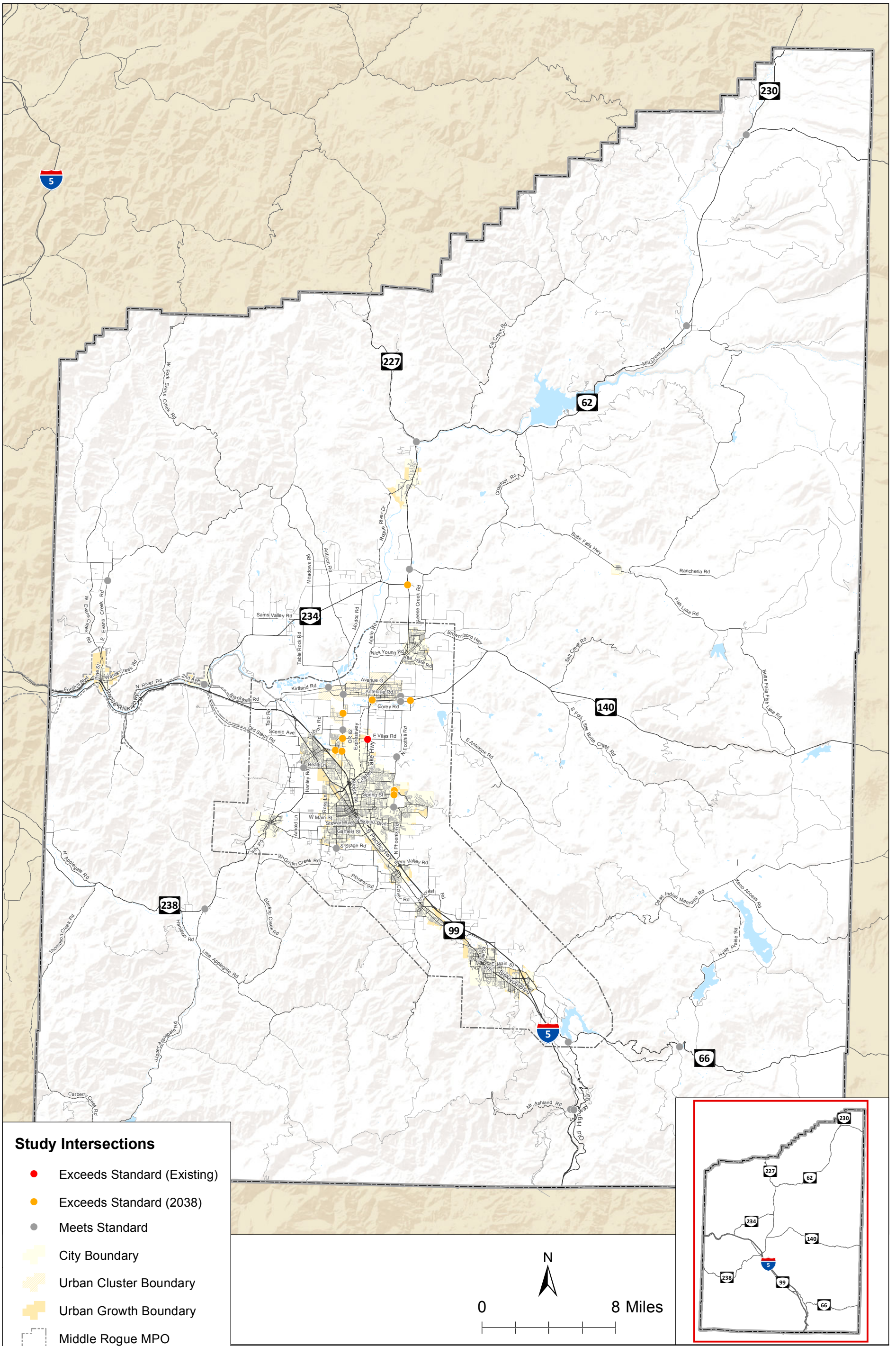
Traffic operations were evaluated under year 2015 existing and year 2034 future traffic conditions to identify any potential existing or future capacity problems.

Year 2015 Existing Traffic Conditions

The year 2015 existing traffic conditions analysis identifies how the study area's transportation system operates today. This analysis includes an evaluation of traffic operations at the study intersections, including non-motorized (pedestrian and bicycle) activity during the weekday morning and evening peak periods. Figure 4 illustrates the location of the study intersections. The results of this analysis indicate that two intersections currently operate at or above their respective mobility targets and two intersections have 95th percentile queues that exceed the available storage under year 2015 existing traffic conditions. Table 1 summarizes the intersection deficiencies identified under year 2015 existing traffic conditions.

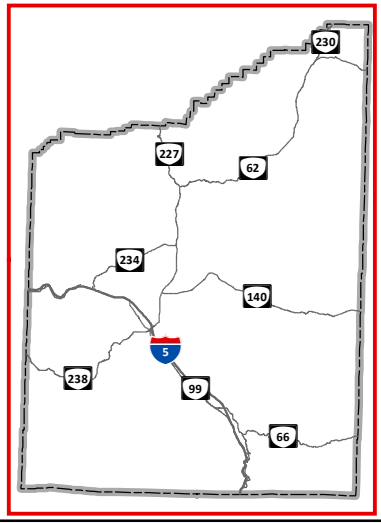
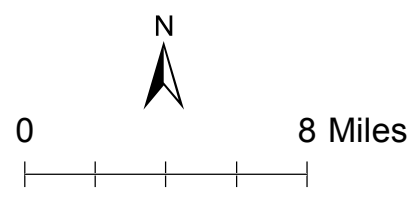
Table 1: Intersection Deficiencies – Year 2015 Existing Traffic Conditions

Intersection	Deficiency
Table Rock Road/Greggory Road	Currently operates below its mobility target ($v/c = 0.95$), but at LOS F
OR 62/OR140-Leigh Way	Northbound right-turn queue currently exceeds storage
OR 62/Vilas Road	Currently operates above mobility target ($v/c=0.85$)
OR 62/Vilas Road	Southbound right-turn queue currently exceeds storage



Study Intersections

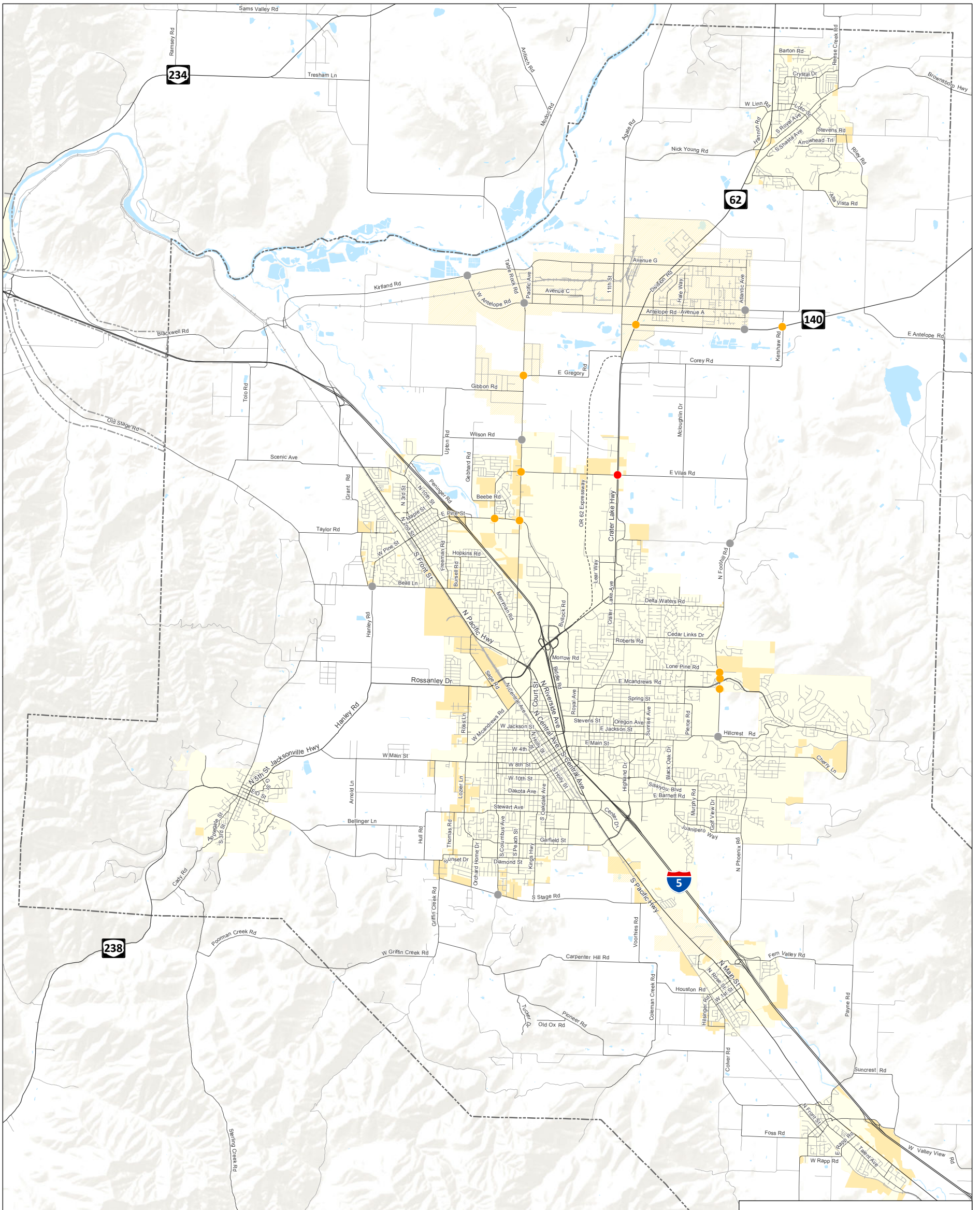
- Exceeds Standard (Existing)
- Exceeds Standard (2038)
- Meets Standard
- City Boundary
- Urban Cluster Boundary
- Urban Growth Boundary
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**Study Intersections
Jackson County, OR**

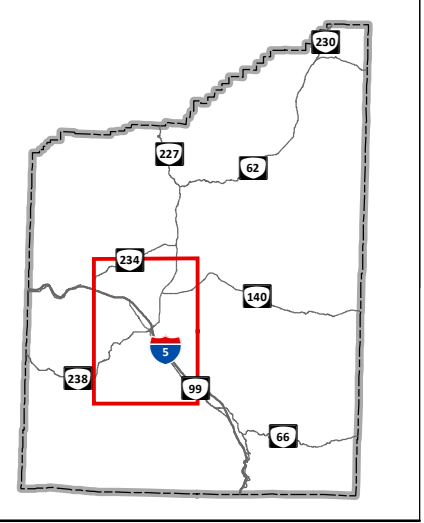
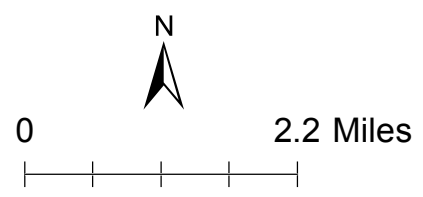
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Study Intersections

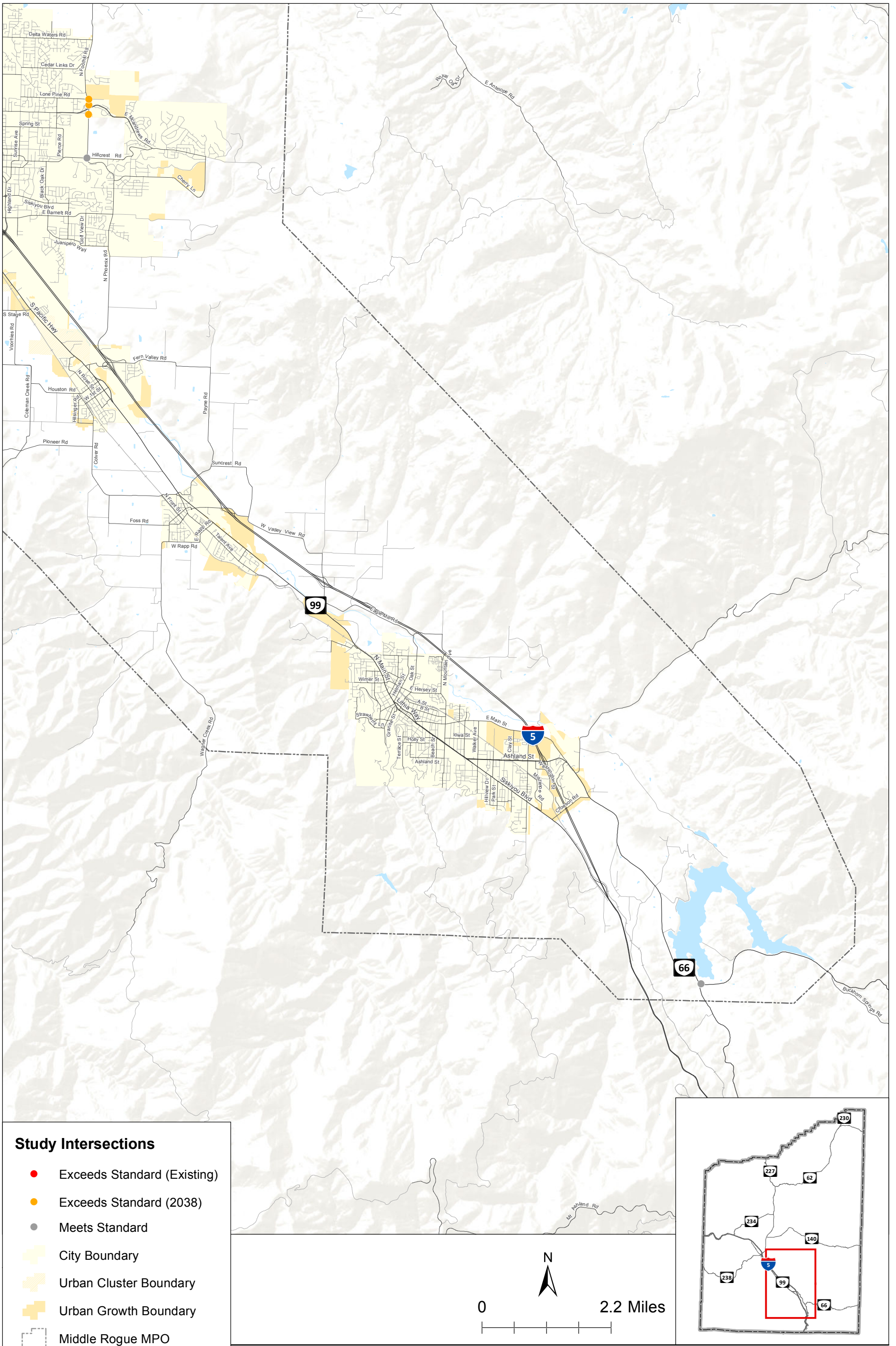
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- Exceeds Standard (2038)
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**Study Intersections
Jackson County, OR**

**Figure
4B**

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Study Intersections

- Exceeds Standard (Existing)
- Exceeds Standard (2038)
- Meets Standard
- City Boundary
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**Study Intersections
Jackson County, OR**

**Figure
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Year 2038 Future Traffic Operations

The year 2038 future traffic conditions analysis identifies how the study area's transportation system will operate in the horizon year of the current RVMPO RTP, year 2038. This analysis includes an evaluation of traffic operations at the study intersections, including non-motorized (pedestrian and bicycle) activity during the weekday evening peak period.

Forecast traffic volumes were developed for the study intersections located within the RVMPO boundary based on the existing traffic counts and information provided in ODOT's travel demand model for the RVMPO area (version 3.1). Forecast traffic volumes were developed for the study intersections located outside the RVMPO boundary based on the existing traffic counts and information provided in ODOT's 2033 Future Highway Traffic Volume Tables.

The results of this analysis indicate that ten intersections are forecast to operate at or above their respective mobility targets and two intersections are forecast to have 95th percentile queues that exceed the available storage under year 2038 future traffic conditions. Table 2 summarizes the intersection deficiencies identified under year 2038 traffic conditions.

Table 2: Intersection Deficiencies – Year 2038 Future Traffic Conditions

Intersection	Deficiency
Hamrick Road/E Pine Street-Biddle Road	The westbound through is expected to exceed the capacity of the intersection
Table Rock Road/Biddle Road	The eastbound left, northbound through, and southbound through are expected to exceed the capacity of the intersection
Table Rock Road/Vilas Road	The westbound left and westbound through are expected to exceed the capacity of the intersection
Table Rock Road/Gregory Road	The westbound left-through-right is expected to exceed the capacity of the intersection
Kershaw Road/OR140	The northbound left-through-right is expected to operate below capacity, but above its mobility standard
OR 62/OR140-Leigh Way	The eastbound through-left, westbound through-left, northbound left, northbound through, and southbound through are expected to exceed the capacity of the intersection The northbound right 95 th percentile queue is expected to exceed the available storage length
OR 62/OR234-Del Isle Way	The eastbound left is expected to exceed the capacity of the intersection
OR 62/Vilas Road ¹	The northbound left is expected to exceed the capacity of the intersection The eastbound right and southbound right 95 th percentile queues are expected to exceed the available storage length
Foothill Road/McAndrew Road WB Ramp	The eastbound left is expected to exceed the capacity of the intersection
Foothill Road/McAndrew Road EB Ramp	The eastbound left is expected to exceed the capacity of the intersection
Foothill Road/Lone Pine Road	The eastbound left is expected to exceed the capacity of the intersection

1. The City of Medford is planning to incorporate the southeast corner of the intersection into the City UGB. A concept plan for the area is currently being developed that involves the removal of the frontage road as well as other improvements to the westbound approach to the intersection.

Pavement Conditions

Jackson County maintains roads under its jurisdiction through its Pavement Management System. According to the Transportation Element of the Jackson County Comprehensive Plan, each year Jackson County utilizes a Pavement Management Program, which schedules road maintenance needs in the most effective manner. The Road System Plan indicates that about 20 miles of overlay and 60 to 80 miles of chip seal should be performed each year to maintain the existing system and to avoid costly

road reconstruction. The County collects an extensive amount of pavement condition data and compiles a pavement condition index (PCI). The County classifies each roadway link as follows:

- 70-100 PCI: Very Good
- 50-70 PCI: Good
- 25-50 PCI: Poor
- 0-25 PCI: Very Poor

The Oregon Department of Transportation goal is to have 78 percent of all their highway road mileage in fair (equivalent to the County's Good) or better (equivalent to the County's Very Good) condition. The pavement management system data shows that of the 767 miles of County roadways, approximately 74% are in "Very Good" condition, 20% are in "Good" condition, 5% miles are in "Poor" condition and 0.1% are in "Very Poor" condition. For the remaining 0.9% of roads under County jurisdiction, the data were missing or incomplete. Hence, the County maintains 94 percent of its roadways in fair or better condition. Technical Memorandum #2 contains more detailed information on pavement conditions along Jackson County and ODOT facilities.

Freight Routes

Freight movement is vital to Jackson County's economy. The ability to move freight efficiently is affected by the existence of a connected roadway network, the availability of roadway capacity, the existence of weight-restricted roadway and bridges, and the ease of access to freight terminals.

The capacity issues identified at study intersections and roadways impact freight movement by causing delays or forcing out-of-direction travel to avoid congestion. Freight issues in Jackson County are especially important for White City, which has the highest concentration of industrial activity in the county, and for roadways that provide access to Interstate 5 for regional and interstate shipments.

In 2012, The Rogue Valley Metropolitan Planning Organization (RVMPO) released the Freight Study Report. The report provides a comprehensive review of existing freight conditions within the RVMPO service area of Jackson County. Based on the report, the primary deficiencies of the Jackson County roadway network include a lack of viable alternative routes when regular routes are blocked during construction, daily out-of-direction travel to avoid bottlenecks and congestion, and restrictions that prevent the movement of oversized freight at certain times.

Local Roads and Streets

There are many local roads and streets in Jackson County that do not meet adopted local road standards. Many of these roads are unpaved, which can contribute to air quality problems. Substandard County roads may have inadequate shoulders, which make walking and cycling difficult. Substandard roads can complicate emergency management operations, such as firefighting. Jackson County applies several strategies for the maintenance and development of local roads.

Jackson County does not currently have a program to pave unpaved local roads. Inside the MPO boundary, local roads are sometimes paved through Congestion Mitigation and Air Quality (CMAQ) funding.

Jackson County Roads comments on land use applications regarding any public roads used by a development proposal. If the development is approved, then the LDO and TSP provide for conditions of approval to improve local roads. If the improvements are not conditioned at the time of development, then a Deferred Improvement Agreement is required, so that a local improvement district may be employed to improve the local road through a consolidated future project. Collectively, the TSP and LDO assure that local road improvements will meet basic safety standards for existing parcels through the development permitting process, and that any new land divisions will meet current standards. However, the development of rural land is carefully controlled under the Oregon Statewide Planning Goals, so opportunities for improvement of local roads through development exactions are somewhat limited.

Local landowners sometimes work with the Roads Department for development of a Local Improvement District (LID) to fund local road improvements on County maintained facilities. A LID allows the County to finance and perform the local road improvement and assess the properties that benefit from the improvements over a period of time. Current practice is for the Roads staff to work with local property owners on the formation of a LID when 60% of the property owners who will benefit from the improvements agree to formation of the LID. Jackson County Roads and the Board of County Commissioners must approve the LID.

Traffic Safety

A crash analysis was conducted at the study intersections and along select County facilities in an effort to identify any potential safety issues that could be addressed as part of the TSP update. The crash analysis includes a review and summary of data obtained from ODOT for the five-year period from January 1, 2009 through December 31, 2013. The data includes the location, type, and severity of all crashes that occurred along County and ODOT facilities within Jackson County, as well as detailed information on the crashes (year, month, day, time, weather, number, age, and gender of drivers/passengers, direction, actions, errors, causes, etc.).

A majority of rural County roadways are narrow, two-lane roads, with relatively low traffic volumes and high travel speeds. They also have limited sight distance due to substandard horizontal and vertical curvature, as well as vegetation and other physical and geographical features along the sides of the roadways. These conditions contribute to a high number of high-speed crashes where motorists lose control of their vehicles, drive off the side of the road, and collide with a fixed object (trees, rocks, embankments, etc.) and/or other vehicles. The intersection and segment crash data summarized below identifies many of these types of crashes and more; however, a more system-wide review of historical crash data is required to better understand the challenges along rural County roadways.

Figure 5 illustrates the location and severity of crashes along all County and ODOT facilities. The crash data at the study intersections and along select County facilities was compiled and analyzed for crash patterns, potential causes, and potential countermeasures.

Intersection Crash Analysis

The results of the intersection crash analysis indicate that three study intersections currently exceed the 90th-percentile crash rates for similar intersections. Of the three intersections, one experienced more than two crashes over the five-year period. The results also show that several additional intersections experienced a relatively high number of crashes over the five year period. Table 3 summarizes the intersection safety deficiencies within Jackson County.

Table 3: Safety Deficiencies - Intersections

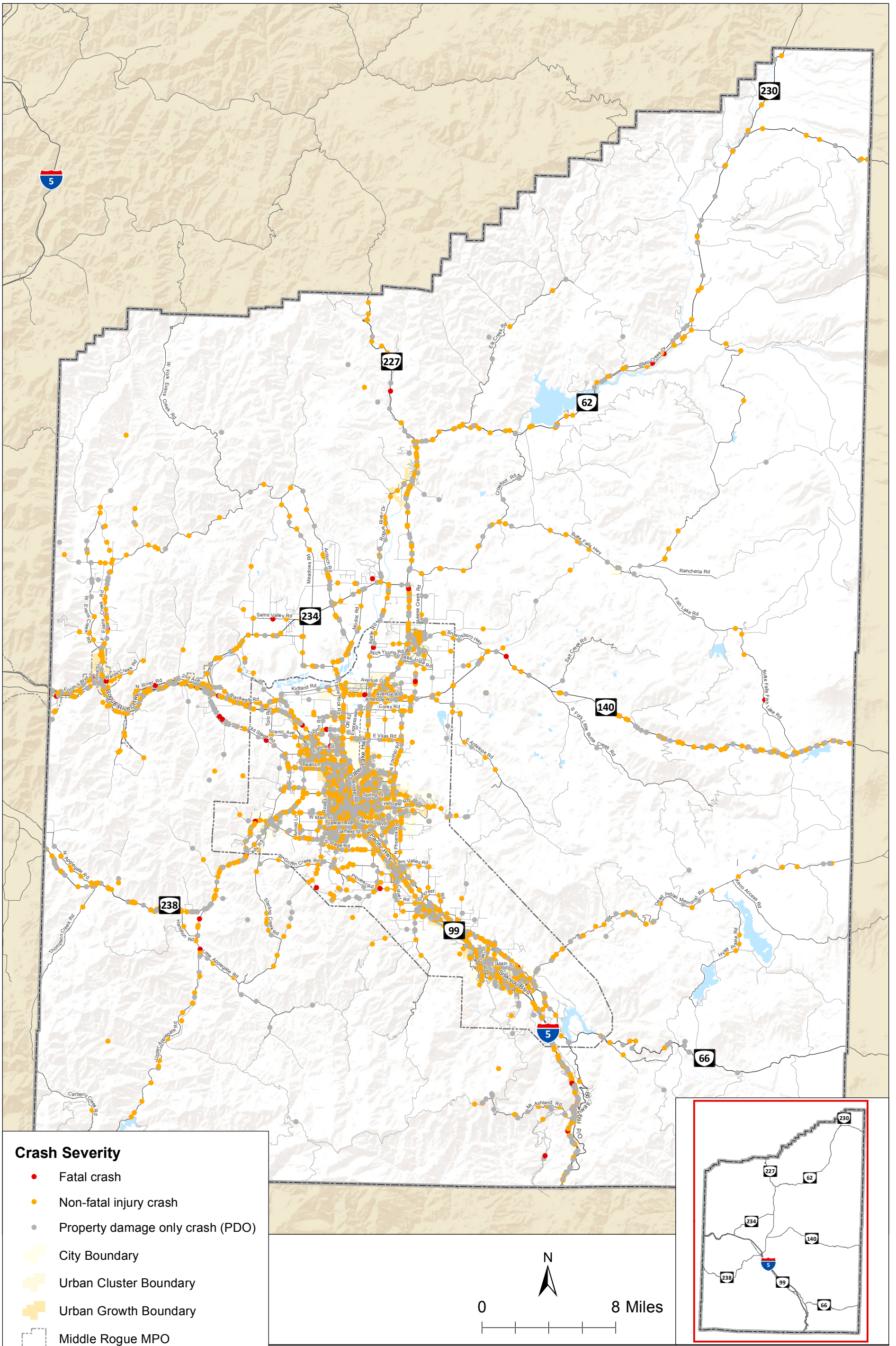
Intersection	Deficiency
Hamrick Road/E Pine Street-Biddle Road	Currently experiences a high volume of crashes
Table Rock Road/Vilas Road	Currently experiences a high volume of crashes
Kershaw Road/OR140	Currently experiences a high volume of crashes
OR 62/Vilas Road	Currently experiences a high volume of crashes
Foothill Road/Coker Butte Road	Currently exceeds 90th percentile crash rate for similar intersections

Segment Crash Analysis

The results of the segment crash analysis indicate that 19 segments currently exceed the 90th percentile crash rates for the similar facilities. Of the 19 segments, 17 experienced a significant number of crashes over the five year period. Table 4 summarizes the segment safety deficiencies within Jackson County.

Table 4: Safety Deficiencies - Segments

Road	From/To	Deficiency
Foothill Road	Hillcrest to Lone Pine Road	Currently exceeds 90 th percentile crash rate for similar facilities
Foothill Road	Lone Pine Road to Coker Butte	Currently exceeds 90 th percentile crash rate for similar facilities
Foothill Road	Coker Butte to Corey Road	Currently exceeds 90 th percentile crash rate for similar facilities
Old Stage Road	Ross Lane to Beall Lane	Currently exceeds 90 th percentile crash rate for similar facilities
Old Stage Road	Beall Lane to Taylor Road	Currently exceeds 90 th percentile crash rate for similar facilities
Table Rock Road	Biddle Road to E Villas Road	Currently exceeds 90 th percentile crash rate for similar facilities
Table Rock Road	Wilson to West Gregory Road	Currently exceeds 90 th percentile crash rate for similar facilities
Table Rock Road	Modoc/Bybee Ferry Road to OR234	Currently exceeds 90 th percentile crash rate for similar facilities
Antelope Road	Agate Road to OR 62	Currently exceeds 90 th percentile crash rate for similar facilities
Meadows Road	E Evans Creek to Beagle Road	Currently exceeds 90 th percentile crash rate for similar facilities
E Evans Creek Road	Minthorne Road to Pleasant Creek Road	Currently exceeds 90 th percentile crash rate for similar facilities
Pioneer Road	Dark Hollow Road to Carpenter Hill Road	Currently exceeds 90 th percentile crash rate for similar facilities
S Stage Road	Orchard Home Road to Hull Road	Currently exceeds 90 th percentile crash rate for similar facilities
S Stage Road	Hull Road to Arnold Lane	Currently exceeds 90 th percentile crash rate for similar facilities
Hanley Road	Rossanley to Jacksonville City Limits	Currently exceeds 90 th percentile crash rate for similar facilities



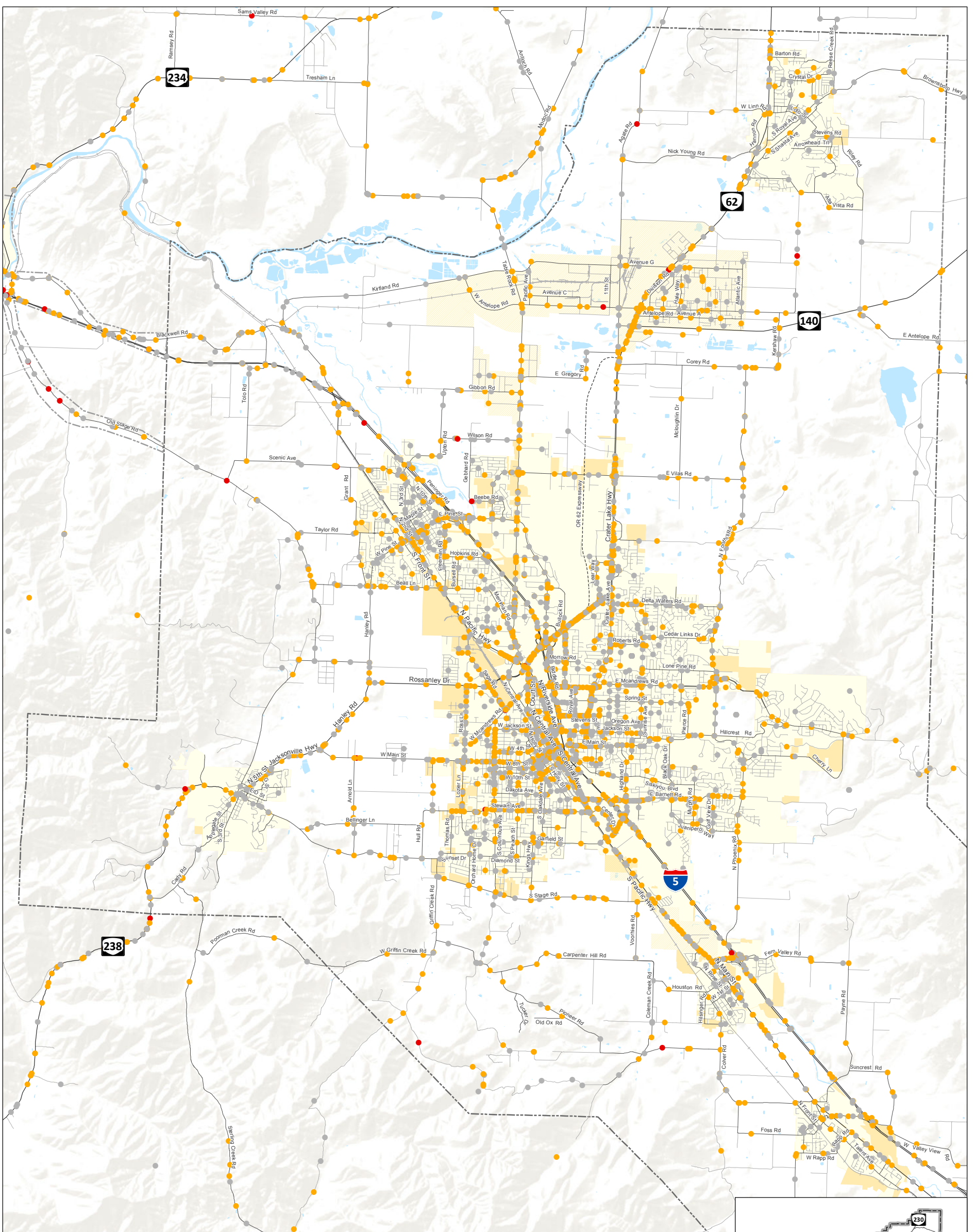
Crash Severity

- Fatal crash
- Non-fatal injury crash
- Property damage only crash (PDO)
- City Boundary
- Urban Cluster Boundary
- Urban Growth Boundary
- Middle Rogue MPO
- Rogue Valley MPO
- County Boundary

**Crash History (January 1, 2009 to December 31, 2013)
Jackson County, OR**

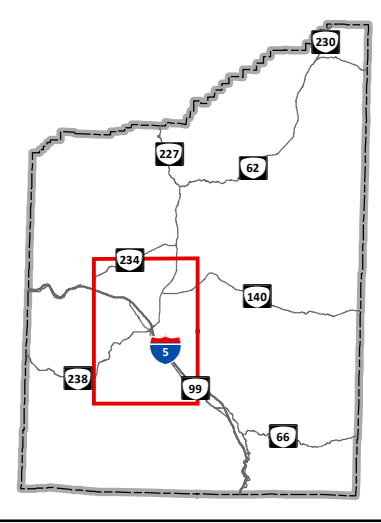
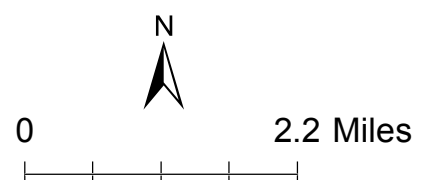
**Figure
5A**

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Crash Severity

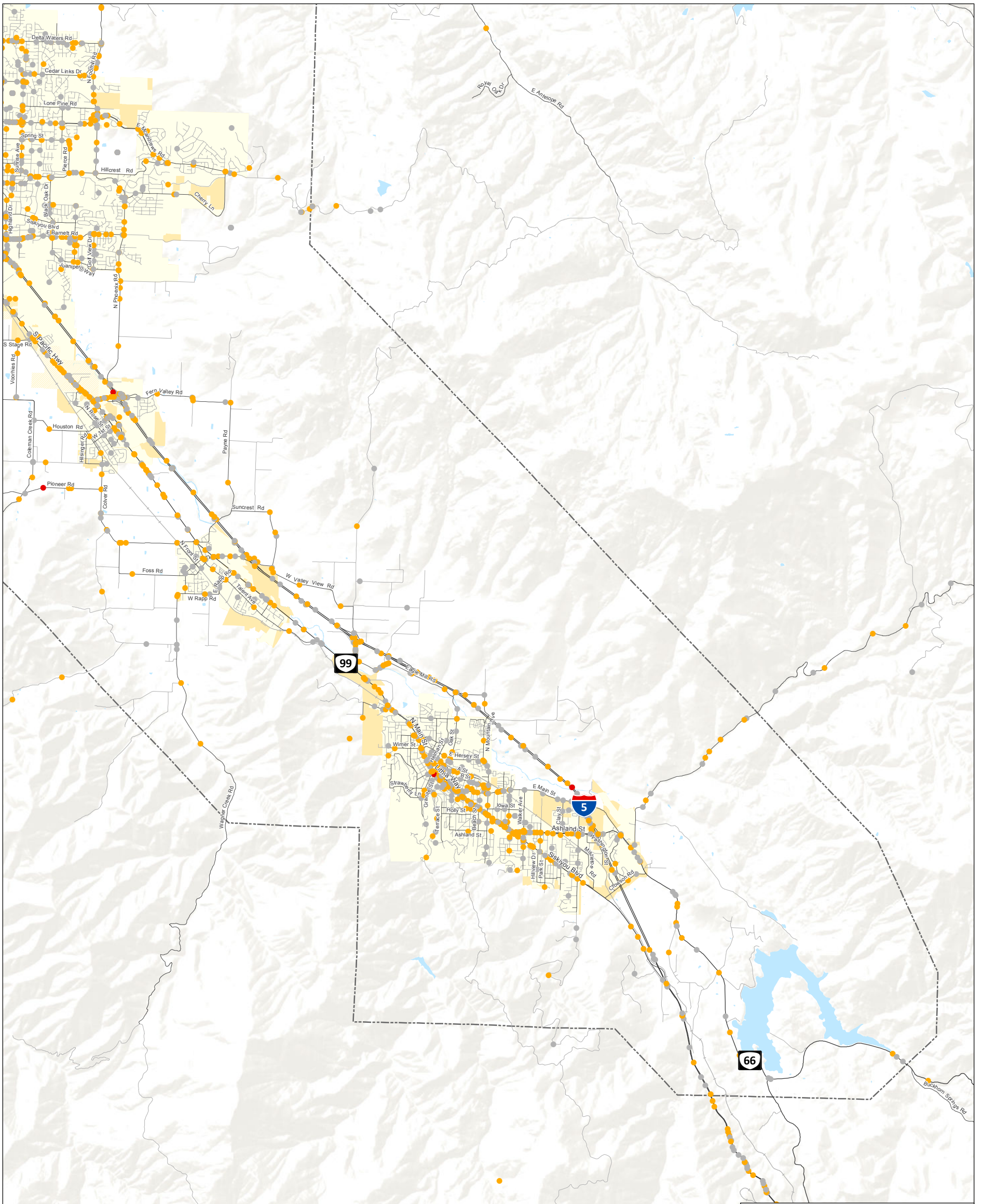
- Fatal crash
- Non-fatal injury crash
- Property damage only crash (PDO)
- City Boundary
- Urban Cluster Boundary
- Urban Growth Boundary
- Middle Rogue MPO
- Rogue Valley MPO
- County Boundary



**Crash History (January 1, 2009 to December 31, 2013)
Jackson County, OR**

**Figure
5B**

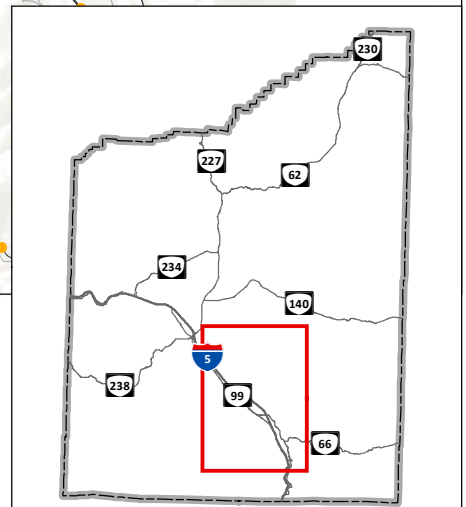
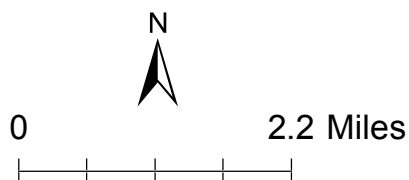
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Crash Severity

- Fatal crash
- Non-fatal injury crash
- Property damage only crash (PDO)

- City Boundary
- Urban Cluster Boundary
- Urban Growth Boundary
- Middle Rogue MPO
- Rogue Valley MPO
- County Boundary



**Crash History (January 1, 2009 to December 31, 2013)
Jackson County, OR**

**Figure
5C**

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Systemic Safety Improvements

Further review of the crash data indicates that a significant number of isolated, yet related crashes have occurred throughout Jackson County over the last five year period. These crashes include motorists losing control of their vehicles, driving off the side of the road, and colliding with fixed objects and/or other vehicles. A majority of these crashes resulted from motorists traveling too fast for roadway conditions, careless driving, or other improper driving.

PUBLIC TRANSPORTATION SYSTEM

Public transportation service within Jackson County includes fixed-route service provided by RVTD and Josephine Community Transit and specialized transportation services for senior citizens and persons with disabilities provided by others. Intercity transit service is provided by Greyhound and SouthWest POINT. Figure 6 illustrates the fixed-route public transportation services and stops within Jackson County along with the location of several key destinations, including schools, libraries, and municipal buildings.

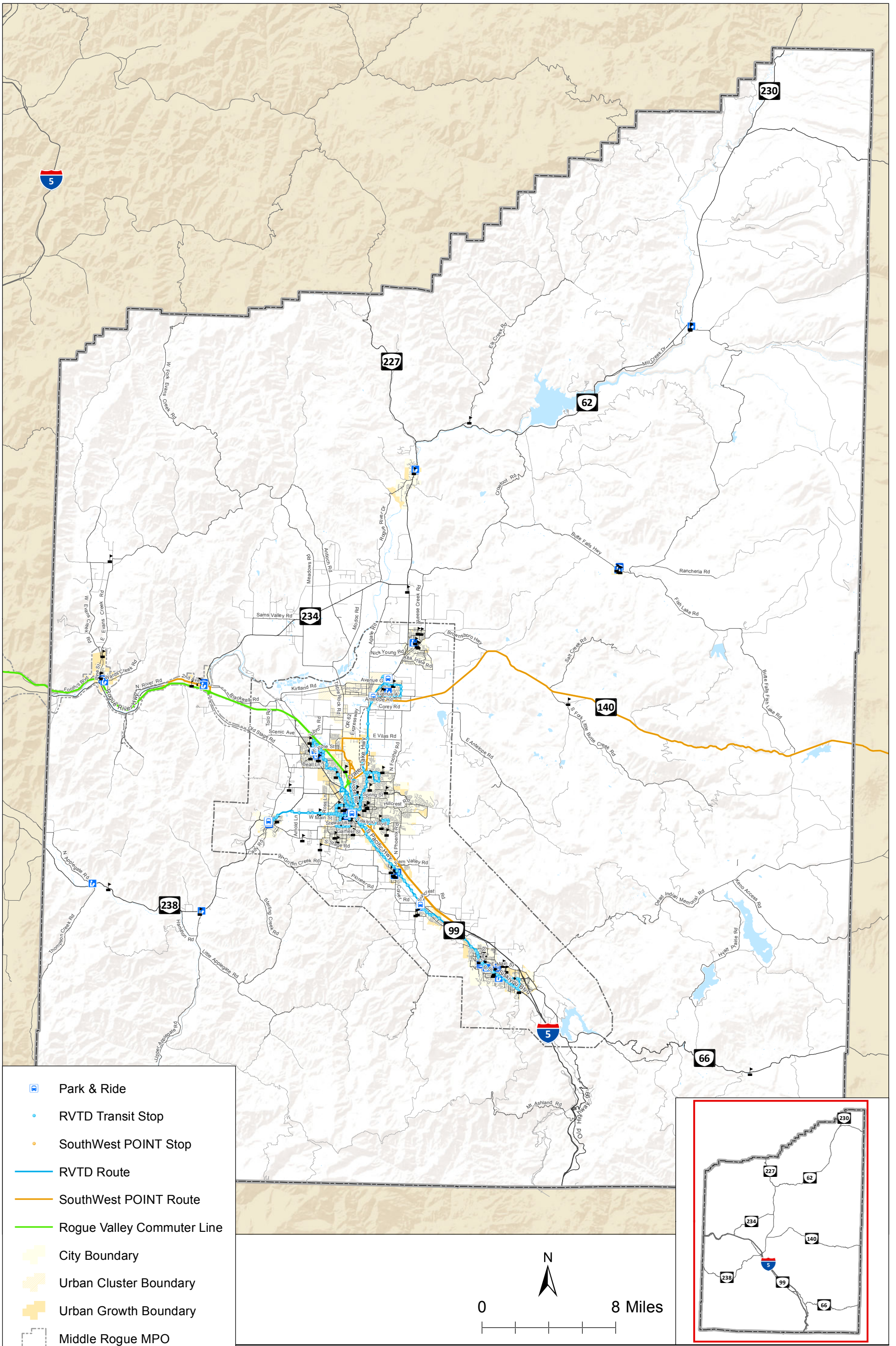
Fixed-Route Transit Service

RVTD Routes

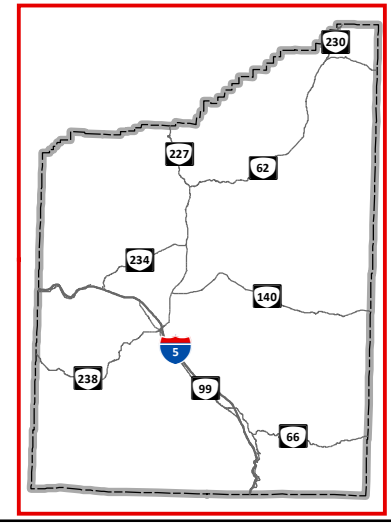
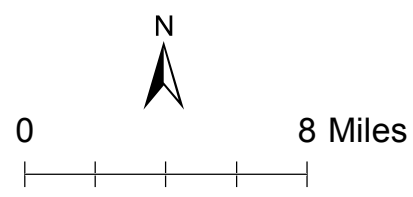
RVTD is the primary provider of public transportation service in Jackson County. RVTD operates seven fixed routes, all of which connect at the Front Street Transfer Station in Medford. Fixed-route service provides direct connections from Medford to White City, Central Point, Jacksonville, Phoenix, Talent, and Ashland. Complementary demand-responsive service², required by the American with Disabilities Act (ADA) is provided within $\frac{3}{4}$ mile of fixed-route service. RVTD service is provided on weekdays excluding national holidays. No service is provided on Saturdays or Sundays. The fixed-route bus lines include:

- Route 21, *RVIM Popular Drive;*
- Route 2, *Main Street/West Medford;*
- Route 24, *East Barnett/RVMC;*
- Route 10, *Ashland/Talent/Phoenix*
- Route 30, *Medford/Jacksonville;*
- Route 40, *Medford/Central Point;* and
- Route 60, *Medford/White City.*

² *Complementary demand-response service* is the legal term used to describe demand-responsive ADA service that supplements (complements) the fixed-route service. The term does not indicate that the service is free.



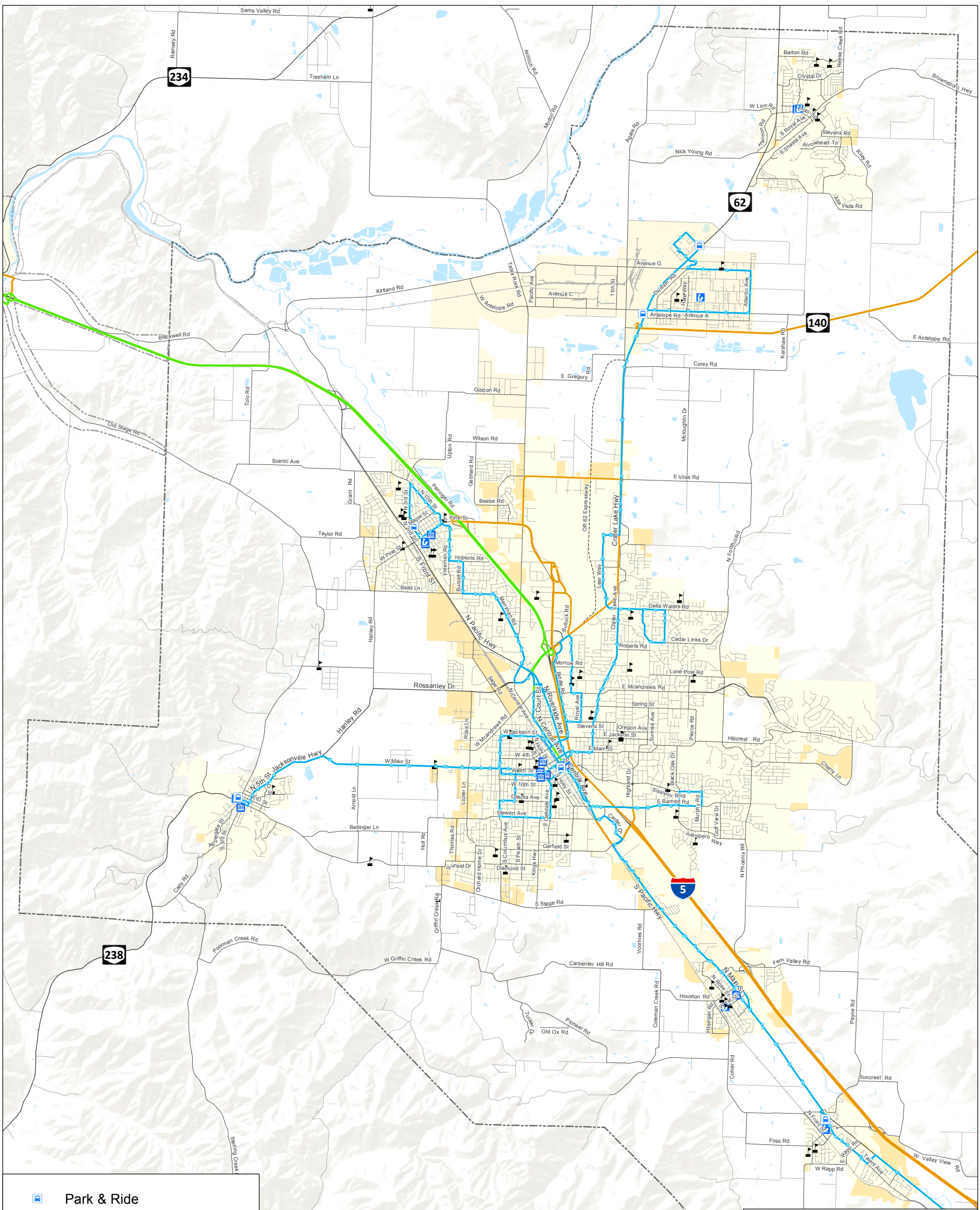
- Park & Ride
- RVTD Transit Stop
- SouthWest POINT Stop
- RVTD Route
- SouthWest POINT Route
- Rogue Valley Commuter Line
- City Boundary
- Urban Cluster Boundary
- Urban Growth Boundary
- Middle Rogue MPO
- Rogue Valley MPO
- County Boundary



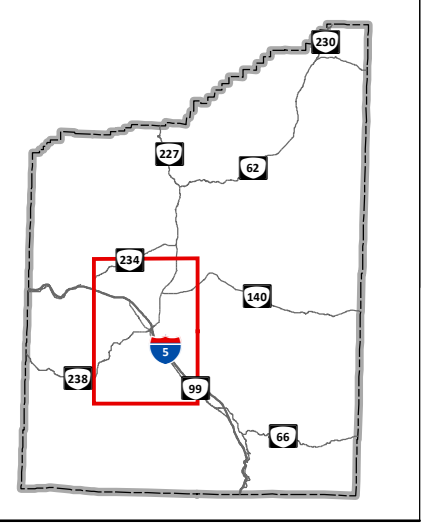
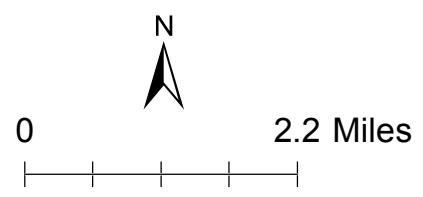
Fixed-Route Public Transportation
Jackson County, OR

Figure
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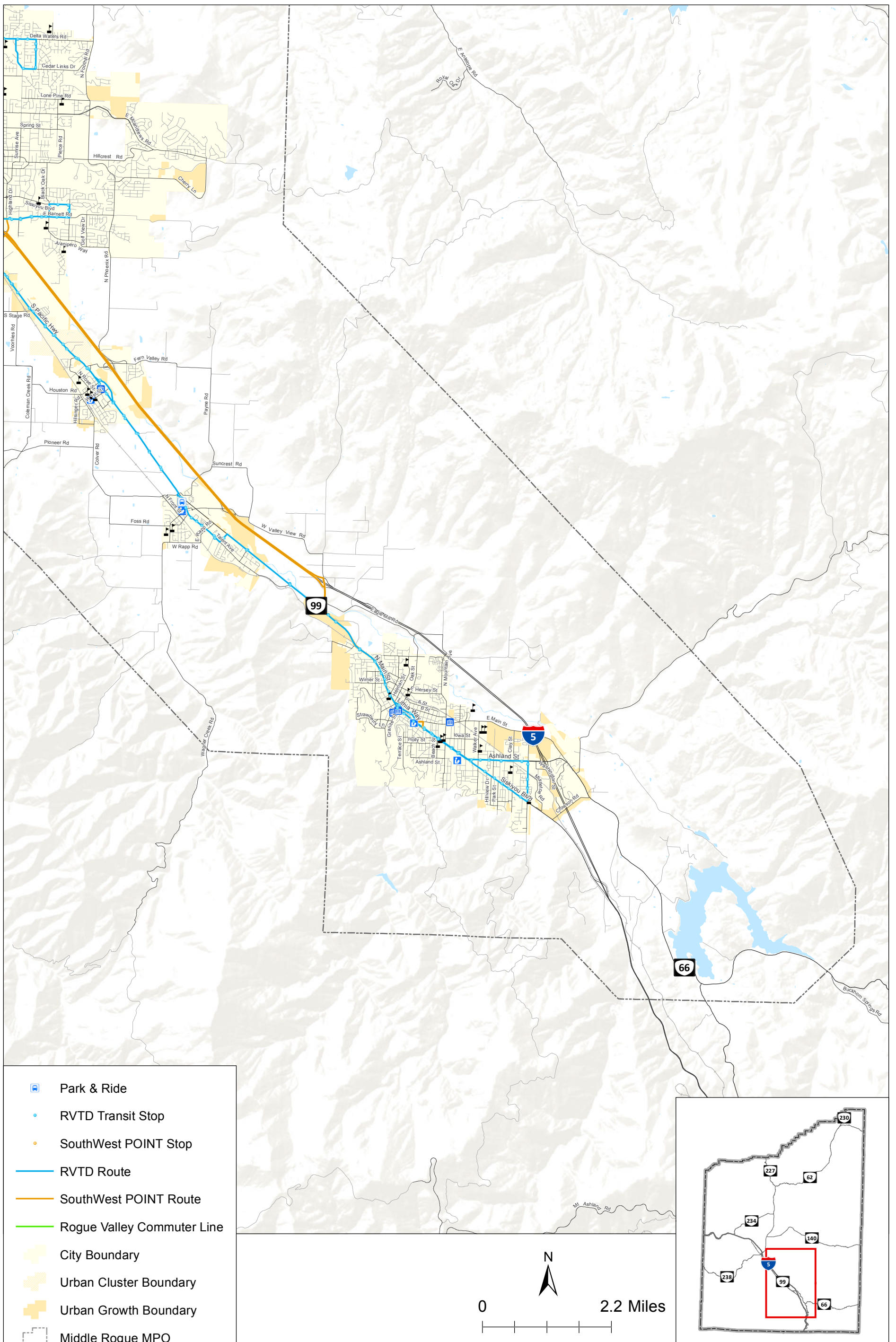
- Park & Ride
- RVTD Transit Stop
- SouthWest POINT Stop
- RVTD Route
- SouthWest POINT Route
- Rogue Valley Commuter Line
- City Boundary
- Urban Cluster Boundary
- Urban Growth Boundary
- Middle Rogue MPO
- Rogue Valley MPO
- County Boundary



Fixed-Route Public Transportation Jackson County, OR

Figure 6B

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Fixed-Route Public Transportation
Jackson County, OR

Figure
6C

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Rogue Valley Commuter Line

Josephine County Transit operates the Rogue Valley Commuter Line which offers service between Grants Pass and Medford. Additional stops in Rogue River and Gold Hill can be made by request; requested stops must be called in in advance. The route runs five times a day Monday through Friday. Fares are \$2 each way and are cash only. No reduced fares are offered but children six years old and younger ride for free.

Specialized Transit Service

Jackson County has several providers of transportation services for special populations. Typically, these services are limited to medical transportation for individuals with specific transportation challenges, such as the elderly or persons with disabilities. The service providers include:

- TransLink;
- Valley Lift;
- Rogue Valley Connector;
- N.E.E. Car, Inc.;
- Other TransLink contractors;
- Upper Rogue Community Center RSVP Call-a-Ride & TransMed;
- Private and charter services;

Intercity Transit Service

Greyhound

Greyhound provides intercity bus service in Jackson County with one stop in Medford where passengers can transfer to a local shuttle service that serves stops in Ashland, White City, and Gold Hill. Service is provided along I-5, with eight stops in Medford daily.

SouthWest Point

SouthWest POINT provides daily bus service between Klamath Falls, the Medford Airport, Crescent City, and Brookings. There are a total of nine stops; five of which are located in Jackson County (White City, Medford Airport, Medford Greyhound, Ashland, and Goldhill). There is one trip per day in each direction with a layover at the Medford Greyhound Station.

Park & Ride Lots

Park & ride lots are transit system components that provide patrons with a connection point to transit service. Patrons drive private automobiles (or ride bicycles) to a transit station, transit stop, or car/vanpool waiting area and park the vehicle in the area provided for that purpose. Several park & ride lots are located in Jackson County, including two in White City and one in Central Point, Jacksonville, Medford, and Talent. Each lot has a limited number of stalls; one offers only three stalls. Both of the park & ride lots in White City are served by RVTD Route 60. RVTD Route 40 serves the lot located in Central Point. The Jacksonville park & ride lot is served by RVTD Route 30. A permit is required for the Medford lot, which is located at the RVTD transfer station and is served by all RVTD routes. Talent's park & ride lot is served by RVTD Route 10.

Transportation Options

RVTD houses the Transportation Options program for southwest Oregon. The program promotes alternatives to driving alone through:

- Education: programs in local schools include "Gus Rides the Bus" Interactive Bus program, bicycle safety education classes, Safe Routes to School program coordination, and Walk and Bike to School Day.
- Public Outreach: RVTD hosts a booth at local events throughout the year to provide information on transportation options.
- Employer Outreach: programs include an employee bus pass program, tax credit assistance, carpool matching, park & ride lots, and our other services to employers.
- Government Outreach: the Transportation Options program works with local government to promote policies and infrastructure that reduce reliance on automobile transportation.

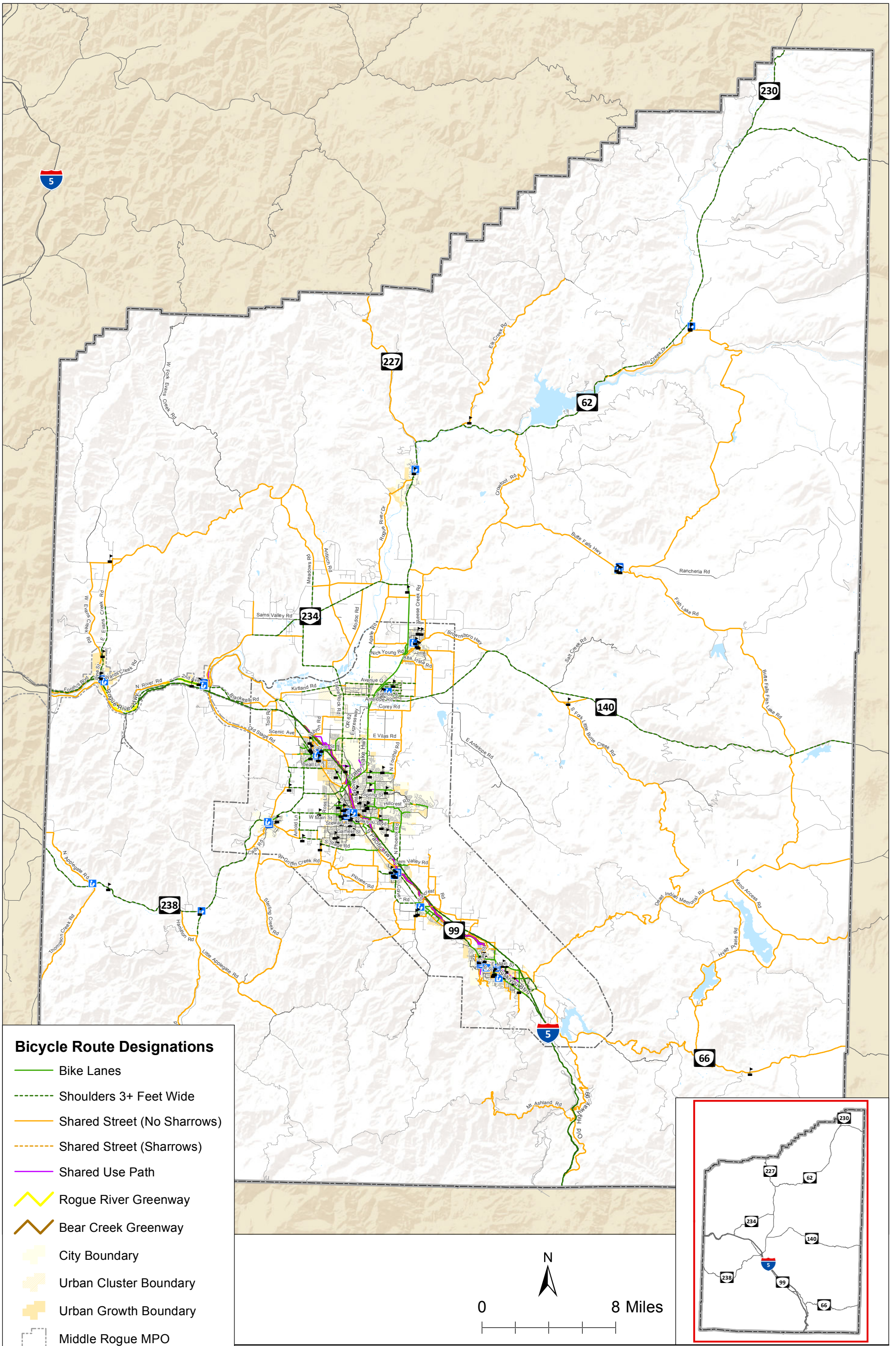
In addition to the Transportation Options program, RVTD buses are equipped with bike racks for up to three bikes and, where possible, RVTD installs bike parking at shelter stops.

BICYCLE AND PEDESTRIAN SYSTEM

Pedestrian and bicycle facilities are the elements of the transportation system that enable people to walk and bike safely and efficiently between land uses. Within Jackson County, pedestrian and bicycle facilities primarily serve short trips to major attractors, such as schools, parks, and transit stops. However, bicycle travel can be a viable commuting option for Jackson County residents when supported by facilities such as bicycle lanes or paved shoulders, secure bicycle parking, work-place showers, and bus-mounted bicycle racks. Walking can also be a viable commuting option when supported by facilities such as sidewalks, shared-use paths, and trails or when mixed-use developments give people the option to live near their work.

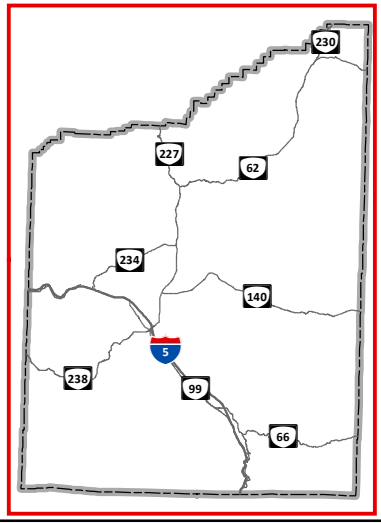
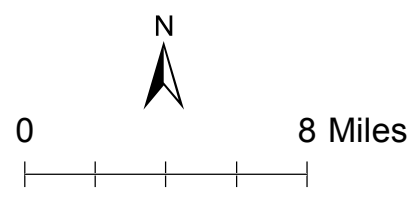
Bicycle Facilities

Jackson County's bicycle facilities were inventoried using data from the County's Geographic Information System (GIS) database, and the Jackson County Bicycle Plan. Figure 7 illustrates the location and type of existing bicycle facilities on County roads and State highways within Jackson County along with the location of several key destinations, including schools, libraries, and municipal buildings. As shown, bike lanes and shared lanes are primarily located within cities while 3-foot or wider shoulders and on-street facilities are mainly located between incorporated areas. Figure 7 also illustrates the location of the Bear Creek Greenway and the existing segments of the Rogue River Greenway. Additional information on these facilities is provided below.



Bicycle Route Designations

- Bike Lanes
- - - Shoulders 3+ Feet Wide
- Shared Street (No Sharrows)
- - - Shared Street (Sharrows)
- Shared Use Path
- Rogue River Greenway
- Bear Creek Greenway
- City Boundary
- Urban Cluster Boundary
- Urban Growth Boundary
- Middle Rogue MPO
- Rogue Valley MPO
- County Boundary



**Bicycle Facilities
Jackson County, OR**

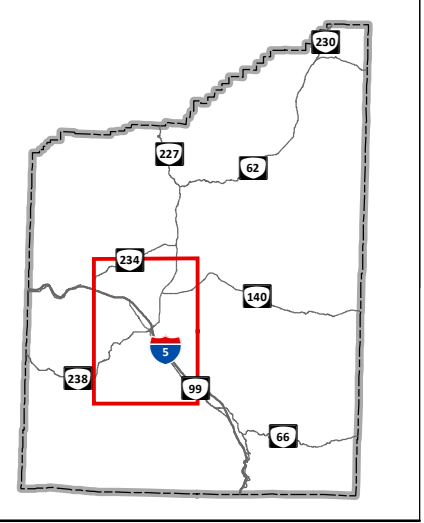
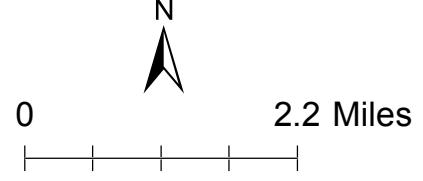
**Figure
7A**

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Bicycle Route Designations

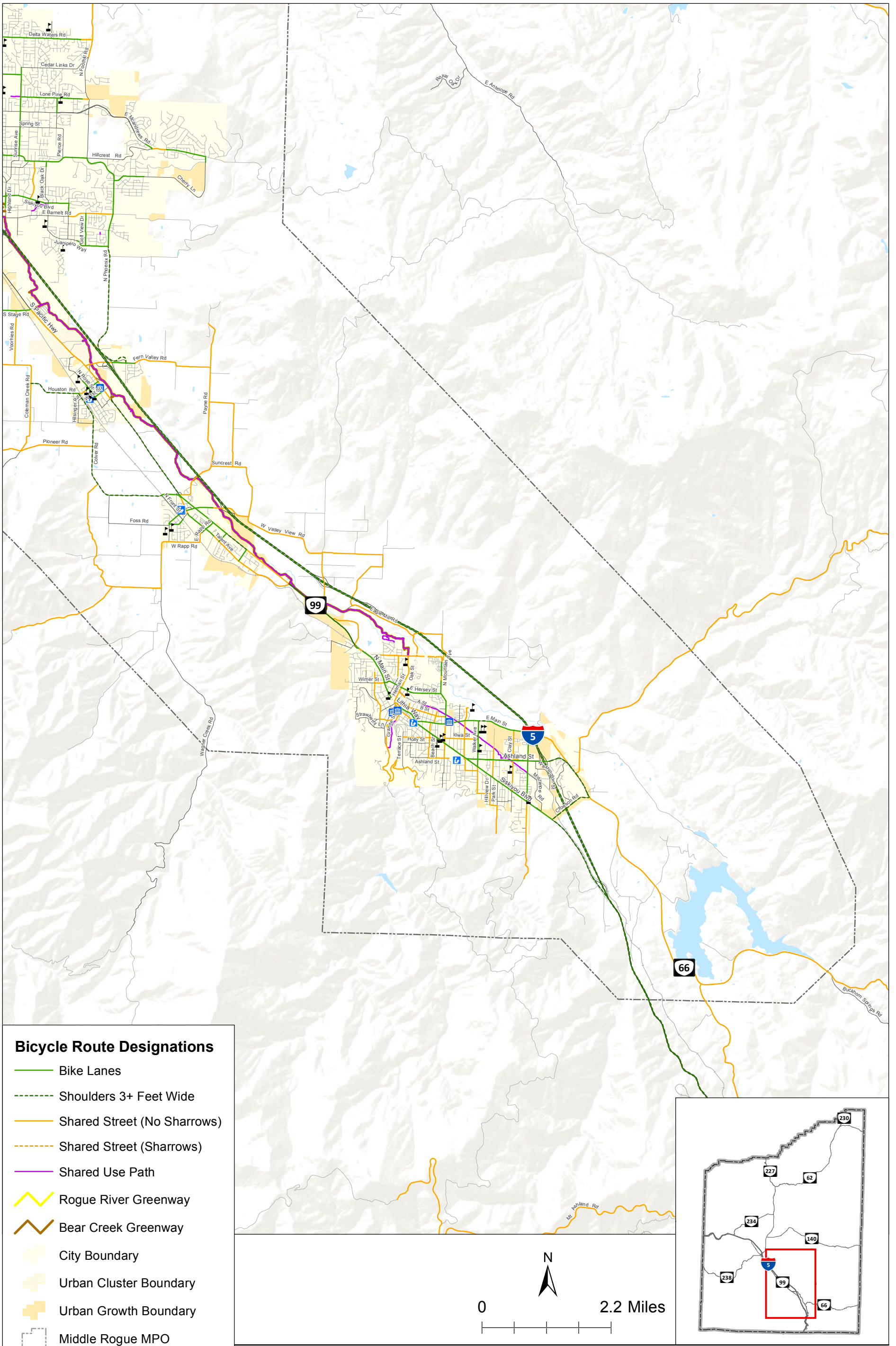
- Bike Lanes
- - - Shoulders 3+ Feet Wide
- Shared Street (No Sharrows)
- - - Shared Street (Sharrows)
- Shared Use Path
- Rogue River Greenway
- Bear Creek Greenway
- City Boundary
- Urban Cluster Boundary
- Urban Growth Boundary
- Middle Rogue MPO
- Rogue Valley MPO
- County Boundary



**Bicycle Facilities
Jackson County, OR**

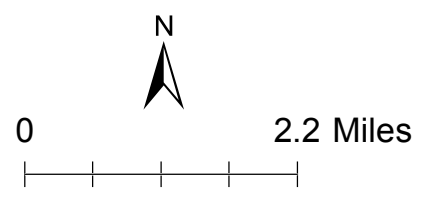
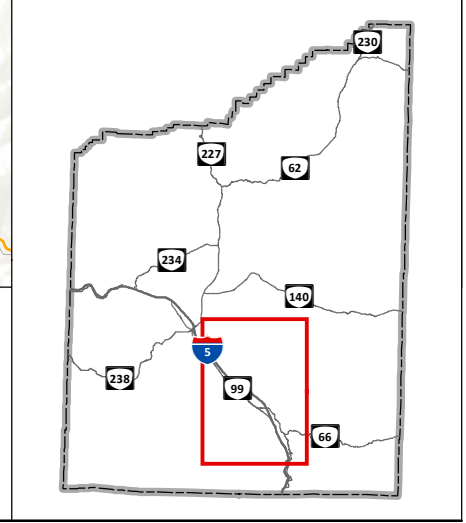
**Figure
7B**

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Bicycle Route Designations

- Bike Lanes
- - - Shoulders 3+ Feet Wide
- Shared Street (No Sharrows)
- - - Shared Street (Sharrows)
- Shared Use Path
- Rogue River Greenway
- Bear Creek Greenway
- City Boundary
- Urban Cluster Boundary
- Urban Growth Boundary
- Middle Rogue MPO
- Rogue Valley MPO
- County Boundary



**Bicycle Facilities
Jackson County, OR**

**Figure
7C**

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Bear Creek Greenway

The Bear Creek Greenway (BCGW) is a 20-mile multi-use path connecting Ashland, Talent, Phoenix, Medford, and Central Point. The BCGW is used for recreation and commuting and runs through numerous parks that provide restrooms, drinking water, and picnic areas. The BCGW is complete between Ashland and Central Point; the focus now is on improving connections to the trail as well as extending the trail into new areas.

Rogue River Greenway

The Rogue River Greenway is a planned multi-use path that will add 30 miles of path to the system, connecting with the Bear Creek Greenway in Central Point and extending along the Rogue River to Grants Pass. The path will pass through Gold Hill and Rogue River. The path will provide commuting opportunities as well as access to areas for hiking, fishing, rafting, cycling, equestrian, whitewater, and wildlife viewing. Currently, only three sections are built: through Gold Hill, from Gold Hill to Del Rio, and from Depot Street Bridge through Valley of the Rogue State Park. Future sections of the Rogue River Greenway are identified in Section 5.

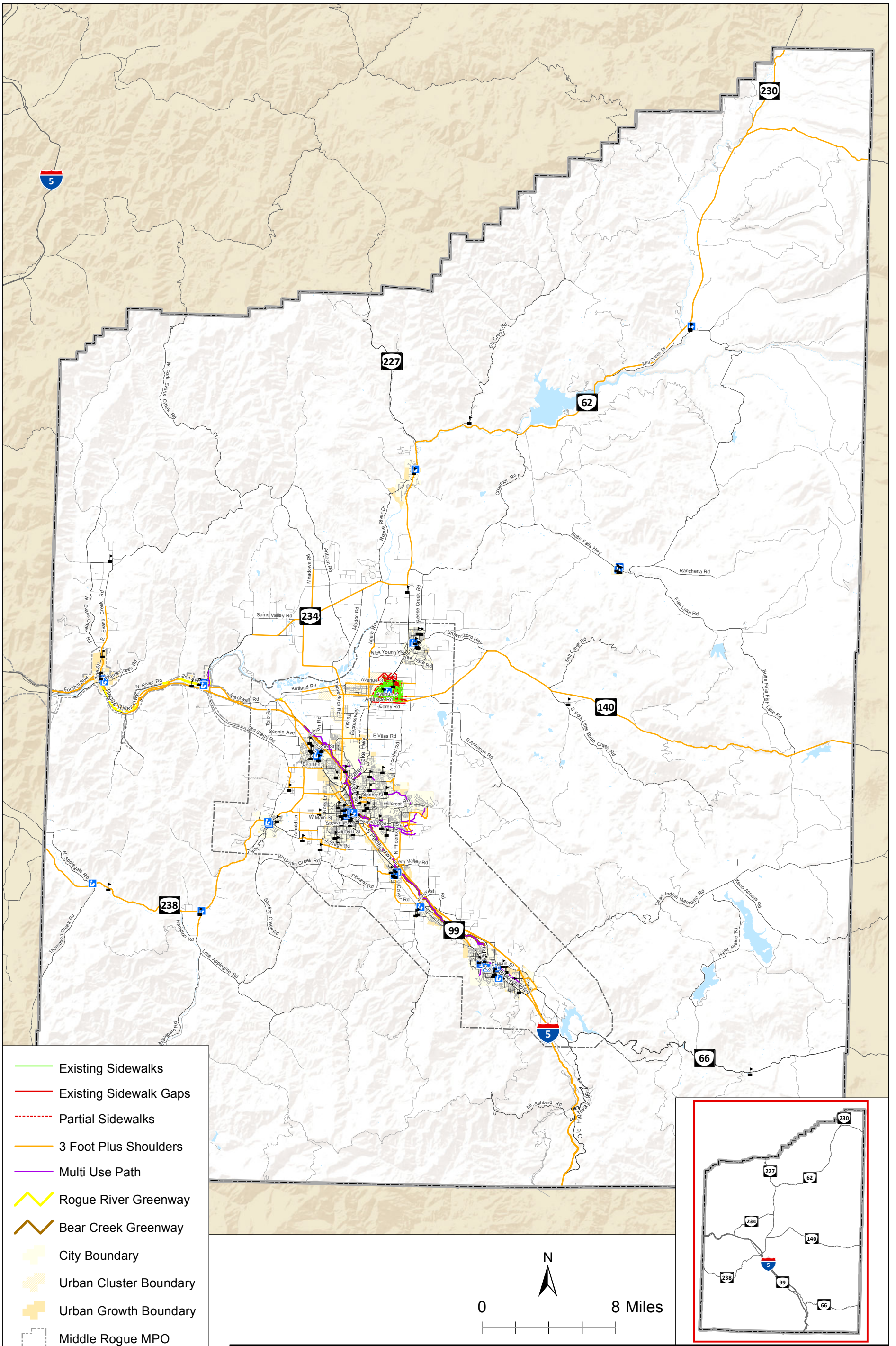
Pedestrian Facilities

Sidewalks on County roadways and State highways are generally located within the incorporated urban areas, such as along Highway 99 in Medford, Talent, Phoenix, and Ashland. However, many of the County's collector and arterial streets have paved shoulders, which serve both pedestrian and bicycle modes. The White City Urban Containment Area is an exception. A Jackson County Urban Renewal project constructed and improved the local street network throughout the residential area bounded by Highway 62, Avenue A, Avenue H, and Atlantic Avenue. Sidewalks are currently provided along every street within White City with few exceptions. Figure 8 illustrates the location and type of pedestrian facilities on several County roads and State highways within Jackson County along with the location of several key destinations, including schools, libraries, and municipal buildings – a comprehensive review of sidewalk coverage was not conducted as part of the TSP update.

Bicycle and Pedestrian Gaps

Jackson County design standards do not require bicycle lanes and sidewalks on rural arterial, collector, or local streets, and therefore gaps in these types of facilities were not identified. The standards do required shoulders that vary in width from 1 foot on rural local streets to 6 feet on rural arterials; however, it is difficult to gauge the width of shoulders based on aerial imagery and GIS data is not available; therefore bicycle and pedestrian gaps in these types of facilities were identified based on information provided in the PMI (described above).

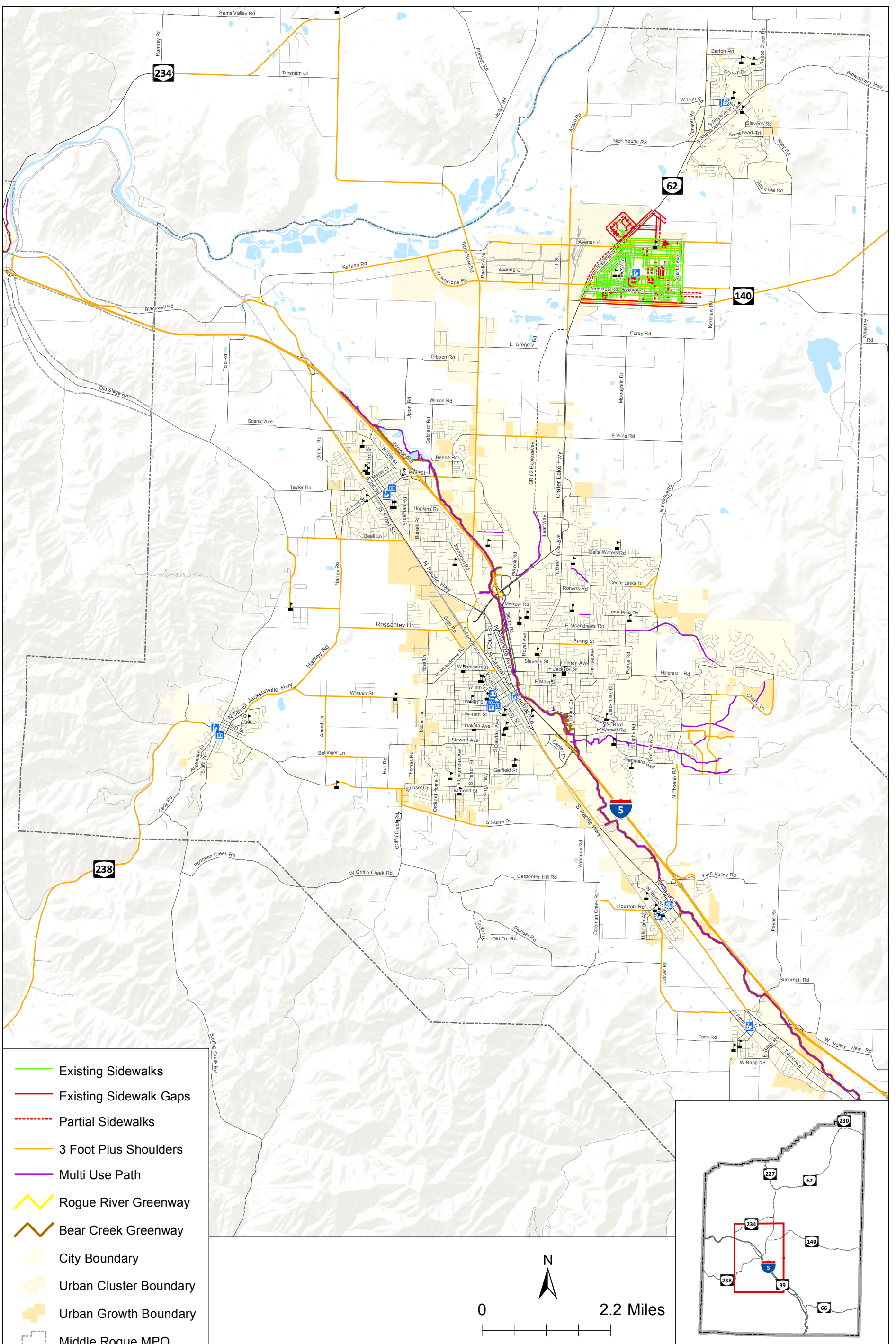
Jackson County design standards require bicycle lanes and sidewalks on all urban arterial, collector and local streets. These streets primarily include County facilities within the incorporated cities and White City. Given that the County has jurisdiction over more than 1,000 miles of streets and a majority of those streets have significant gaps in bicycle and pedestrian facilities, a comprehensive list of bicycle



**Pedestrian Facilities
Jackson County, OR**

**Figure
8A**

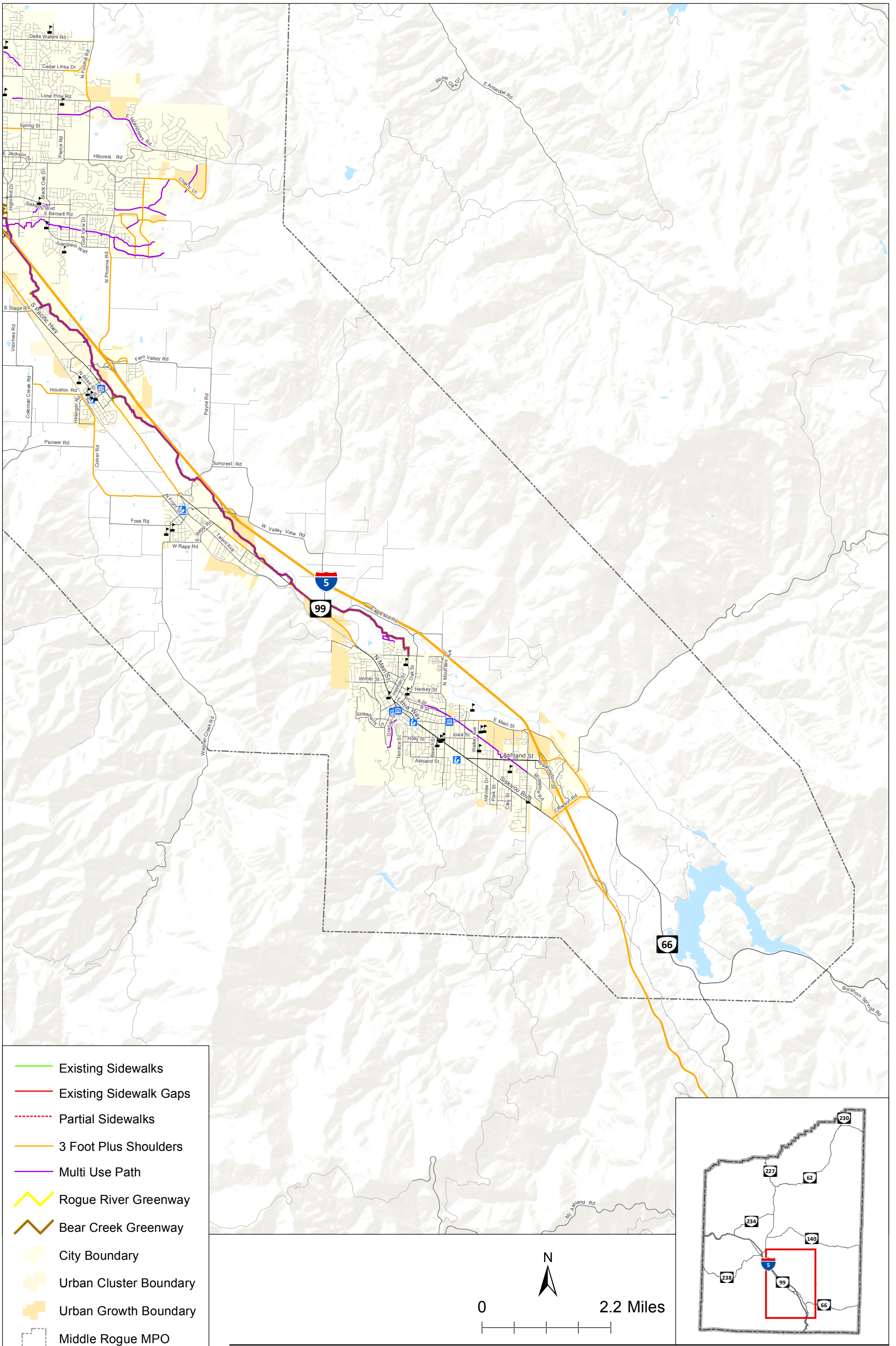
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**Pedestrian Facilities
Jackson County, OR**

**Figure
8B**

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**Pedestrian Facilities
Jackson County, OR**

**Figure
8C**

and pedestrian gaps in the rural and urban areas was not developed as part of the TSP; however, several hundred miles of streets were reviewed in detail as part of the bicycle level of traffic stress analysis (described below) as well as by special request by the County and by members of the project team. Details on the review are reflected in the project list in Section 6 of the TSP.

Bicycle Level of Traffic Stress

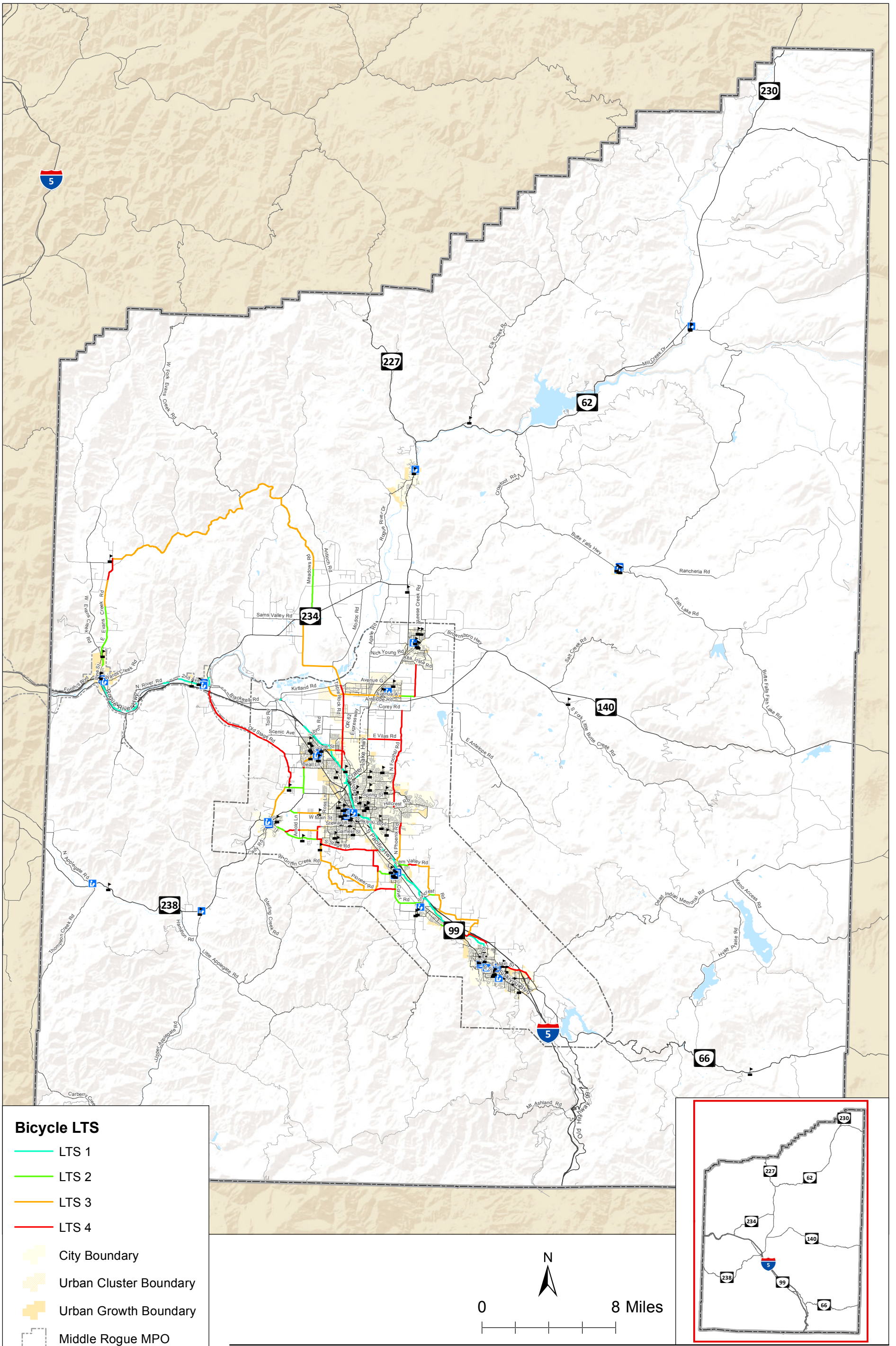
The bicycle facilities located along select County roadways were evaluated under existing traffic conditions in an effort to identify any potential issues that could be addressed as part of the TSP update. The ODOT Analysis Procedures Manual (APM) provides a methodology, known as Bicycle Level of Traffic Stress (LTS), for evaluating urban and rural bicycle facilities. This methodology classifies four levels of traffic stress that a cyclist can experience on the roadway, ranging from LTS 1 (little traffic stress) to LTS 4 (high traffic stress). A road segment with a LTS 1 generally has low traffic speeds and low volumes and is suitable for all cyclists, including children. A road segment with a LTS 4 generally has high speeds, high volumes, and is perceived as unsafe by most adults. LTS 2 is considered appealing to a majority of the bike-riding population and is therefore the desired target on most roadways. Figure 9 illustrates the results of the LTS analysis for Jackson County.

The analysis found three segments with LTS 2, 11 segments with LTS 3, and 21 segments with LTS 4. Note that while some segments with LTS 3 or 4 contain shorter subsegments with better LTS scores, the LTS for the entire segment is based on the worst LTS provided within the segment.

A majority of the segments rated LTS 3 and LTS 4 have shoulders or striped bike lanes; however, they are too narrow for roadway conditions. In order for these segments to be rated LTS 2, the shoulders would need to be widened to a minimum of 6 feet and the striped bike lanes would need to be widened to 7 feet, and/or the posted speed limits would need to be reduced to as low as 30 miles per hour (mph). Enhanced facilities, such as separated multi-use paths, may also be needed in some areas where traffic volumes and/or travel speeds are high. Table 5 summarizes the bicycle LTS deficiencies identified under existing traffic conditions. Note that not all study area roadways were evaluated; therefore, additional deficiencies may exist.

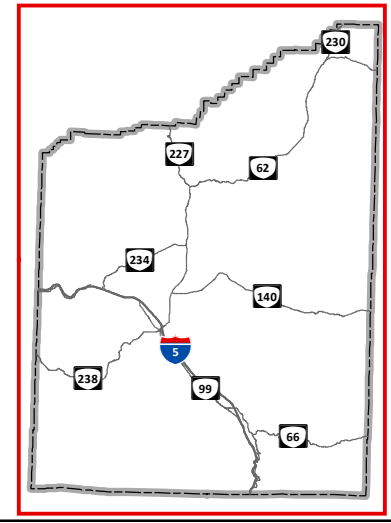
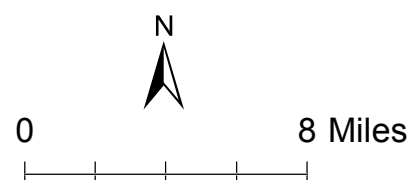
Table 5: Bicycle LTS Deficiencies

Road	From/To	Deficiency
W Pine Street	Highway 99 to Hanley Road	Currently rated LTS 3
W Main Street	Renault Avenue to Hanley Road	Currently rated LTS 3
Antelope Road	Kirtland Road to Bigham-Brown Road	Currently rated LTS 3
Payne Road	Fern Valley Road to Suncrest Road	Currently rated LTS 3
Suncrest Road	Payne Road to West Valley View Road	Currently rated LTS 3
West Valley View Road	Suncrest Road to S Valley View Road	Currently rated LTS 3
East Valley View Road	South Valley View Road to Butler Creek Road	Currently rated LTS 3
Butler Creek Road	E Valley View Road to Eagle Mill Road	Currently rated LTS 3
Dark Hollow Road	Pioneer Road (north) to Pioneer Road (south)	Currently rated LTS 3
Griffin Creek Road	South Stage Road to Pioneer Road	Currently rated LTS 3



Bicycle LTS

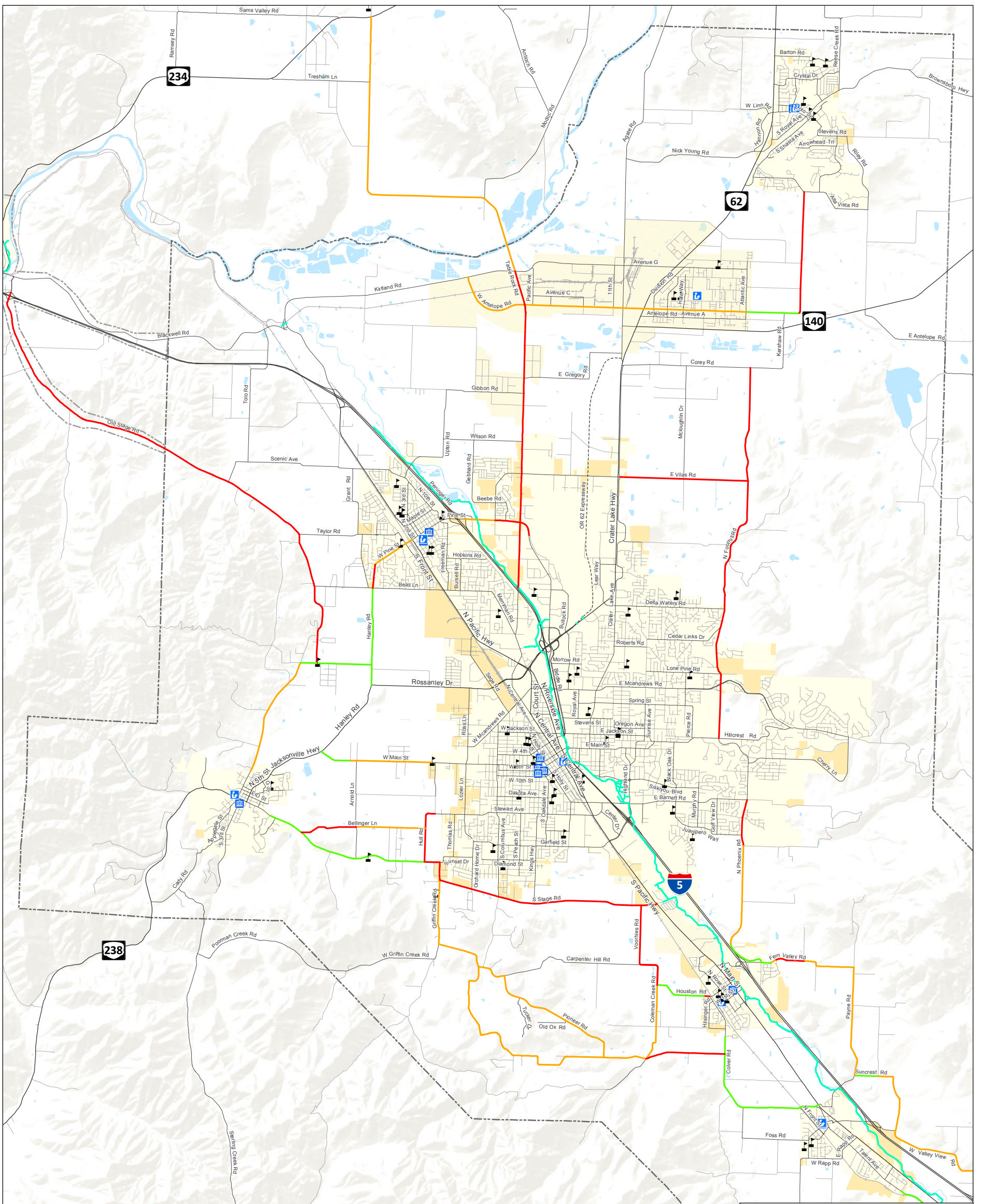
- LTS 1
- LTS 2
- LTS 3
- LTS 4
- City Boundary
- Urban Cluster Boundary
- Urban Growth Boundary
- Middle Rogue MPO
- Rogue Valley MPO
- County Boundary



**Bicycle Level of Traffic Stress (LTS)
Jackson County, OR**

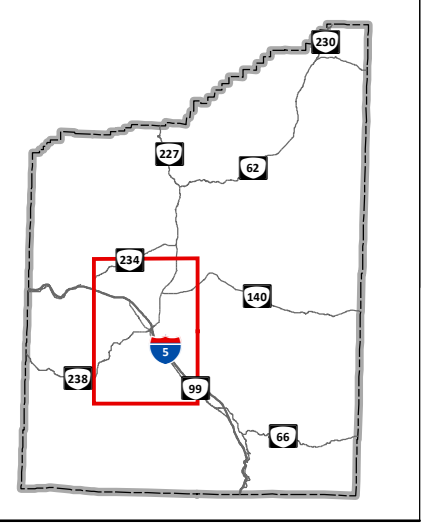
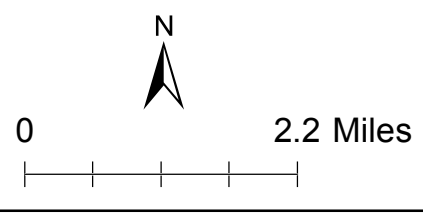
**Figure
9A**

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Bicycle LTS

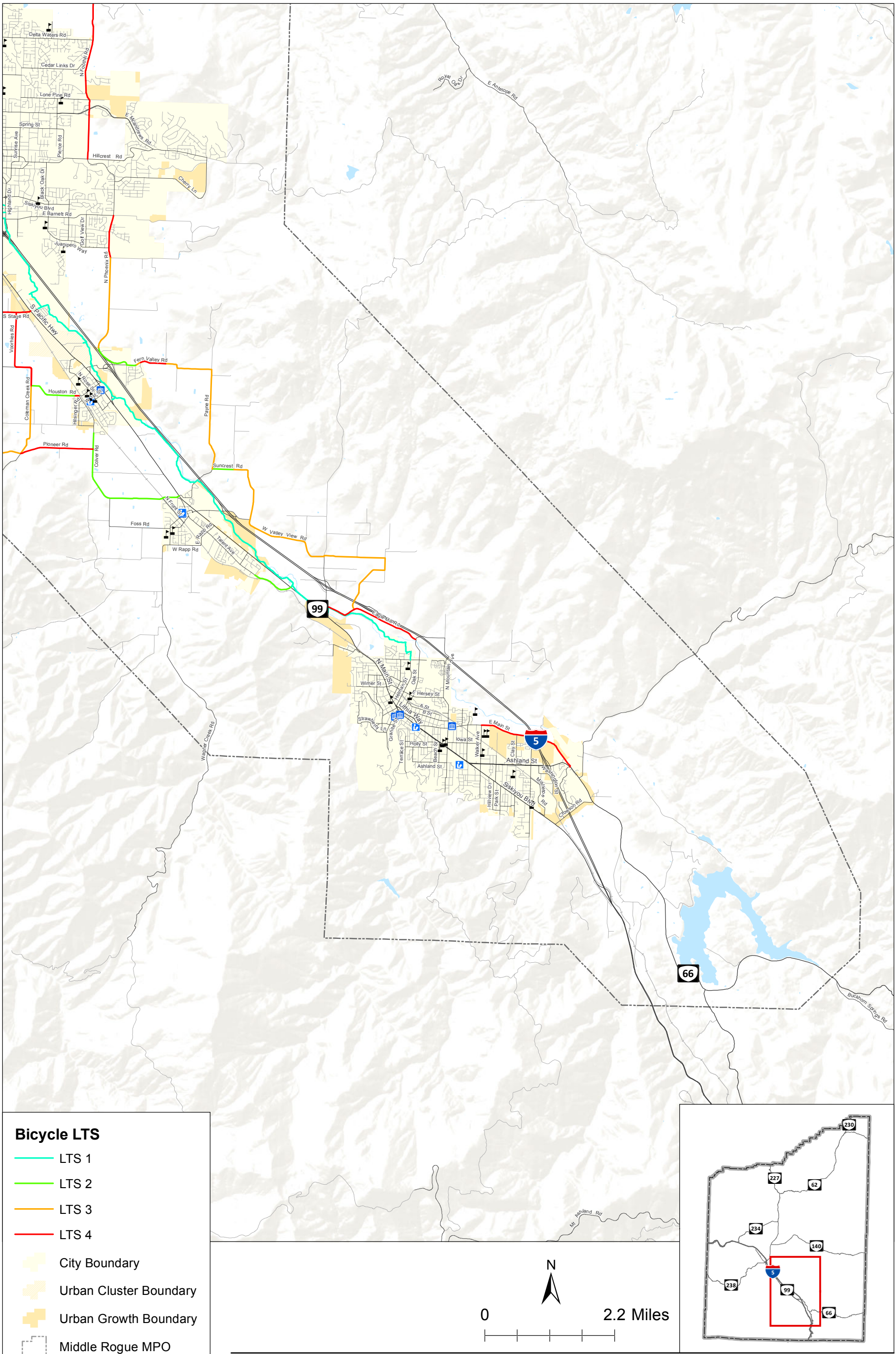
- LTS 1
- LTS 2
- LTS 3
- LTS 4
- City Boundary
- Urban Cluster Boundary
- Urban Growth Boundary
- Middle Rogue MPO
- Rogue Valley MPO
- County Boundary



**Bicycle Level of Traffic Stress (LTS)
Jackson County, OR**

**Figure
9B**

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**Bicycle Level of Traffic Stress (LTS)
Jackson County, OR**

**Figure
9C**

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Table 5: Bicycle LTS Deficiencies (cont.)

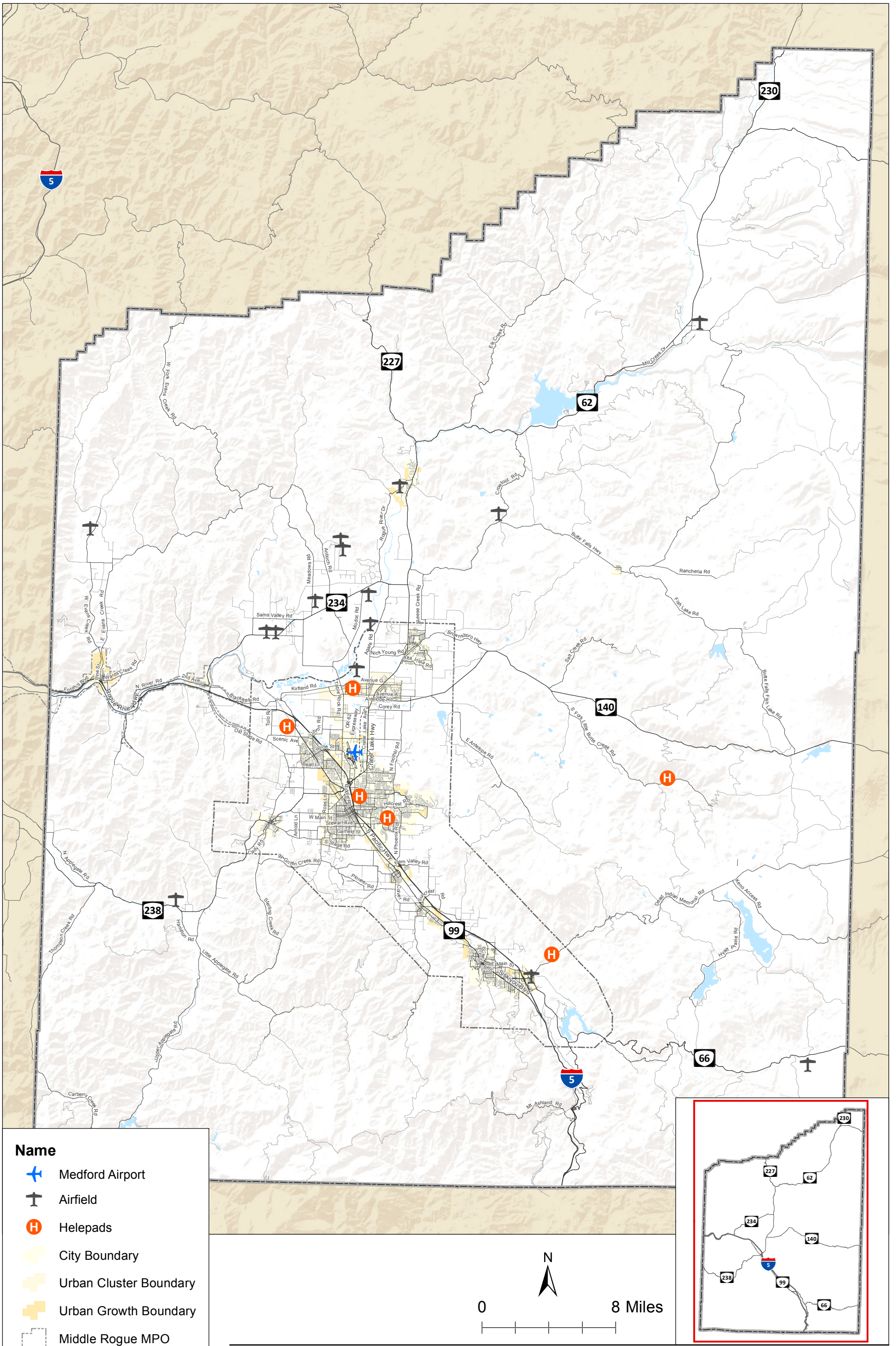
Road	From/To	Deficiency
Meadows Road	East Evans Creek Road to OR234	Currently rated LTS 3
Hanley Road	W Pine Street to Rossanley Drive	Currently rated LTS 4
Old Stage Road	Jacksonville city limits to I-5 Exit 40	Currently rated LTS 4
S Stage Road	Highway 99 to Jacksonville	Currently rated LTS 4
N Phoenix Road	Phoenix city limits to Barnett Road	Currently rated LTS 4
Foothill Road	Hillcrest Road to Corey Road	Currently rated LTS 4
Bigham-Brown Road	Antelope Road to Alta Vista Road	Currently rated LTS 4
E Pine Street	I-5 northbound ramps to 500 feet east of Table Rock Road	Currently rated LTS 4
Table Rock Road	South touchdown of I-5 overcrossing to OR234	Currently rated LTS 4
East Vilas Road	OR 62 to Foothill Road	Currently rated LTS 4
Fern Valley Road	N. Phoenix to Payne Road	Currently rated LTS 4
Eagle Mill Road	S Valley View Road to Oak Street	Currently rated LTS 4
Pioneer Road	Colver Road to Griffin Creek Road	Currently rated LTS 4
Houston Road	Colver Road to Griffin Creek Road	Currently rated LTS 4
Coleman Creek Road	Pioneer Road to Carpenter Hill Road	Currently rated LTS 4
Carpenter Hill Road	Coleman Creek Road to Voorhies Road	Currently rated LTS 4
Voorhies Road	Carpenter Hill Road to S Stage Road	Currently rated LTS 4
Stewart Avenue	Oak Grove Road to Hull Road	Currently rated LTS 4
Hull Road	Stewart Avenue to S Stage Road	Currently rated LTS 4
Bellinger Lane	Hull Road to S Stage Road	Currently rated LTS 4
E Main Street	Walker Road to OR66	Currently rated LTS 4
E Evans Creek Road	Rogue River city limit to Meadows Road	Currently rated LTS 4

AIR, WATER, RAIL, AND PIPELINE SYSTEM

Air

Jackson County is served by 23 air transportation facilities, including seven heliports and 16 airports. Only four of these facilities, all airports, are open to the general public: Rogue Valley International–Medford Airport; Ashland Municipal Airport–Sumner Parker Field; Pinehurst State Airport; and Prospect State Airport. Figure 10 illustrates the locations of the four public airports in Jackson County.

The Rogue Valley International–Medford Airport is the largest airport in the county and provides passenger, mail, and freight transportation. The airport is served by four major airlines, including Alaska Airlines, Delta Airlines, United Airlines, and Allegiant. These airlines provide direct flights to seven major cities, including Seattle, Portland, San Francisco, Los Angeles, Las Vegas, Salt Lake City, and Denver. The airport’s master plan identifies 31 projects in its short, intermediate, and long-term capital improvement program for 2001-2020, with a total cost of \$121.9 million. Public airport issues relevant to the Jackson County TSP primarily relate to access to the airport for passengers and freight. The RTP identifies expanded service to the Rogue Valley International-Medford Airport as a Tier 1 (i.e., part of the financially constrained plan) transit improvement project.

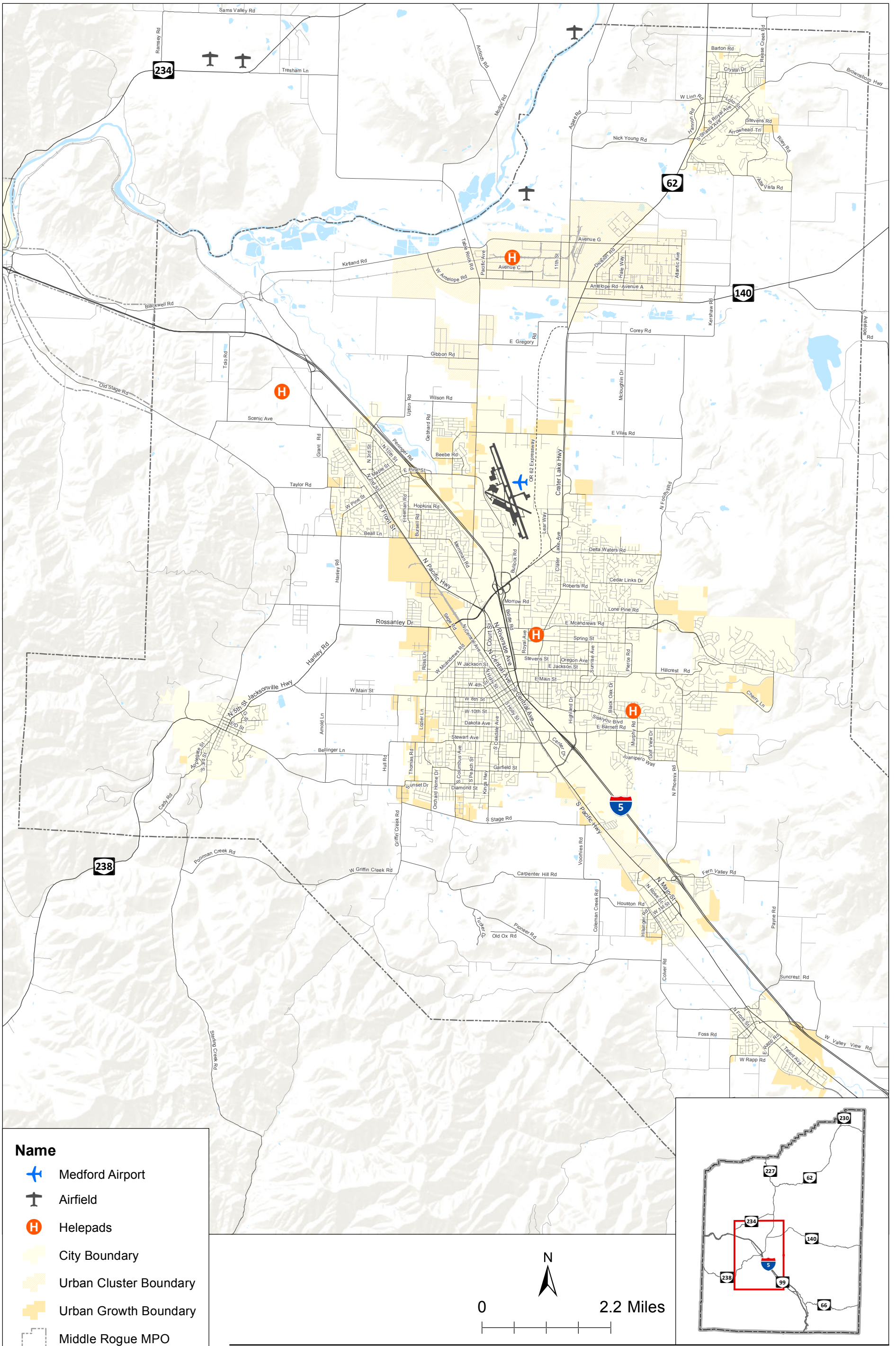


- Name**
- Medford Airport
 - Airfield
 - Helepad
 - City Boundary
 - Urban Cluster Boundary
 - Urban Growth Boundary
 - Middle Rogue MPO
 - Rogue Valley MPO
 - County Boundary

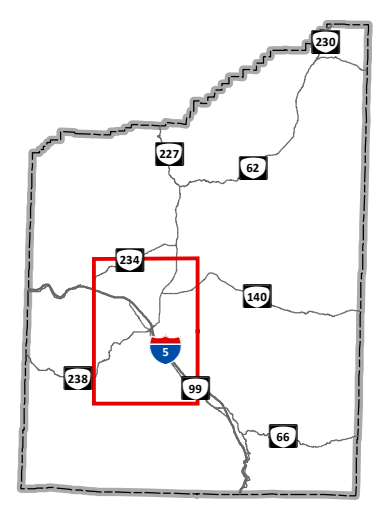
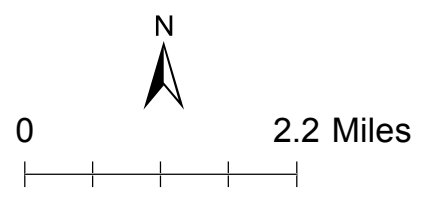
**Airport Facilities
Jackson County, OR**

**Figure
10A**

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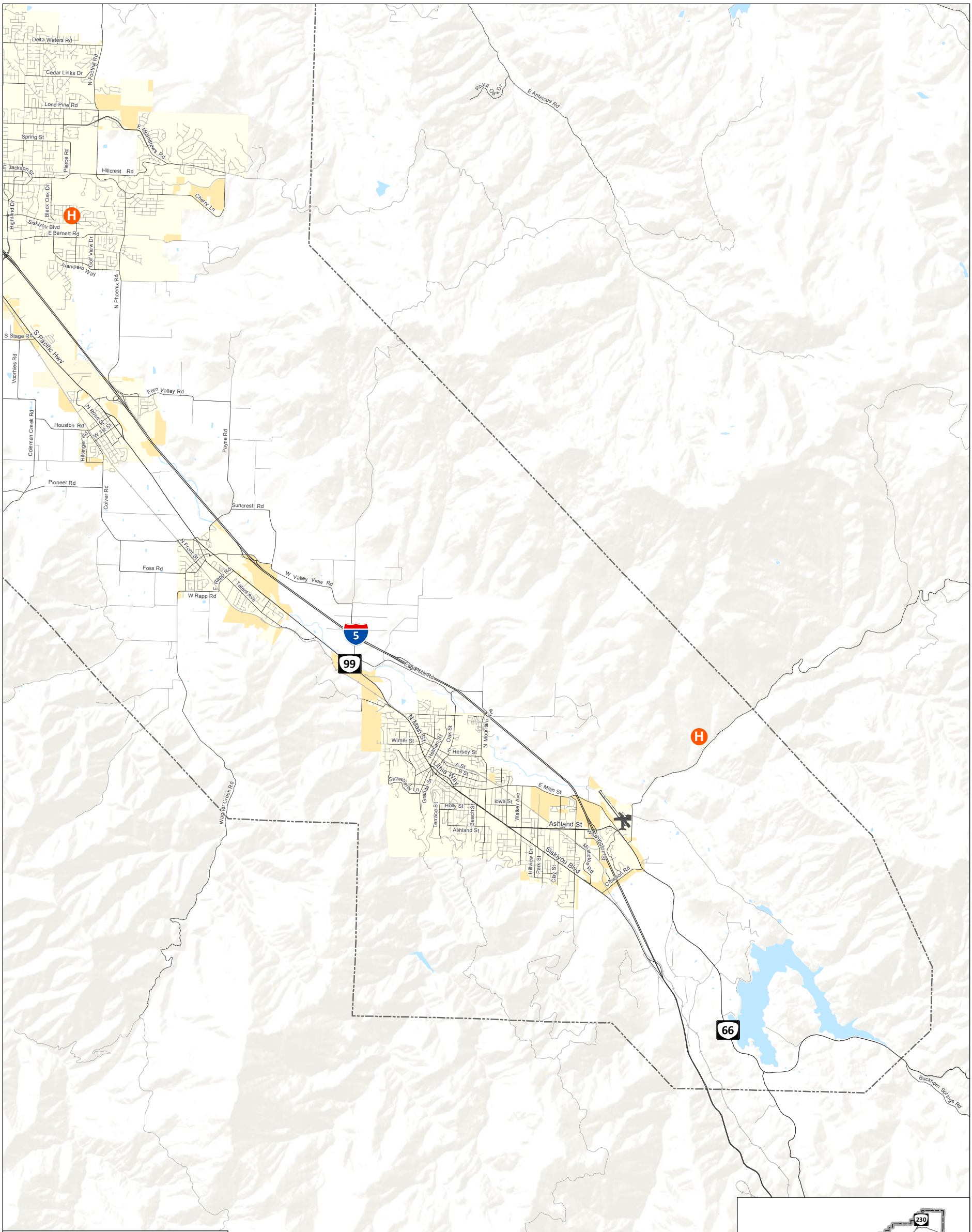
- Name**
- Medford Airport
 - Airfield
 - Helipads
 - City Boundary
 - Urban Cluster Boundary
 - Urban Growth Boundary
 - Middle Rogue MPO
 - Rogue Valley MPO
 - County Boundary












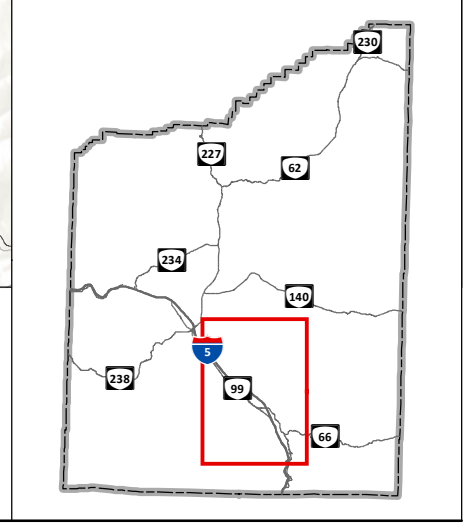
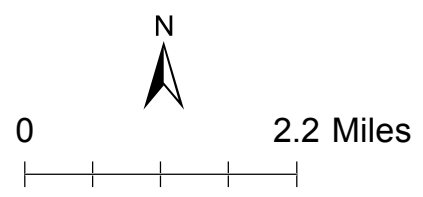
**Airport Facilities
Jackson County, OR**

**Figure
10B**

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- Name**
-  Medford Airport
 -  Airfield
 -  Helipads
 -  City Boundary
 -  Urban Cluster Boundary
 -  Urban Growth Boundary
 -  Middle Rogue MPO
 -  Rogue Valley MPO
 -  County Boundary



**Airport Facilities
Jackson County, OR**

**Figure
10C**

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Water

Jackson County does not have significant water-based transportation systems or facilities. The Rogue River runs through Jackson County, but does not serve as a major water transportation route. The river is used for recreational purposes only.

Rail

Jackson County's freight rail facilities are discussed below. The closest passenger rail stations are in Eugene and Klamath Falls, Oregon, and Dunsmuir, California.

Lines and Operators

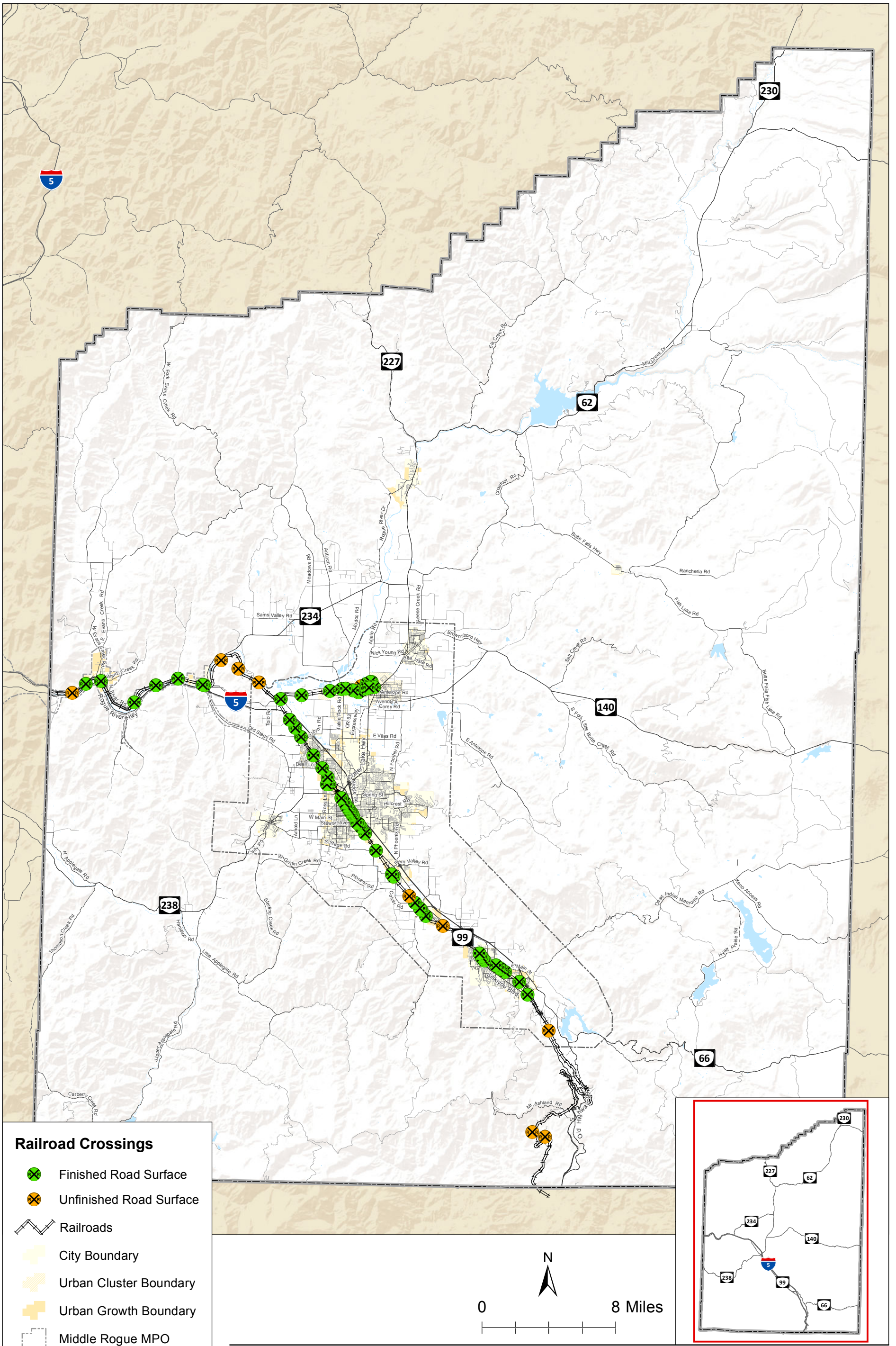
The Central Oregon & Pacific Railroad (CORP) provides freight service along the I-5 corridor, connecting with the Union Pacific Railroad in Black Butte, California and Eugene, Oregon. The CORP operates 389 miles of mainline in this area. Connections are also made with Rogue Valley Terminal Railroad Corporation (RVT) in Oregon and with Yreka Western in California. The RVT (previously named White City Terminal Railroad) operates a 14-mile railroad that connects the Medford Industrial Park in White City to a junction with the CORP north of Medford

There are two yard-engines in Medford, which are used on demand. Most of the traffic originating in Medford heads south to California. The portion of the line south from Ashland to Black Butte has no weight restrictions. However, tunnels both north and south of the Rogue Valley cannot accommodate large containers. As a result, dimensional restrictions are in place.

Figure 11 maps the CORP and RVT routes and the locations of at-grade crossings on major roads in Jackson County. At-grade crossings create important safety concerns, as they are the locations where interactions with other transportation system users occur. There are 29 at-grade crossings on County roads, 16 on city collector or higher roadways, and three on state highways. "Active Control" crossings usually have flashing lights and a gate. The exceptions are the Main Street crossing in Talent, which has flashing lights only; and Oak Street in Ashland and Gold Ray Road at Tolo Station, which both have "wig wag" lights. "Passive Control" crossings are signed only. There are 30 active control crossings and 18 passive control crossings in the County. At present, a project at the Depot Street crossing in Rogue River is underway which will improve the operation of the crossing.

Passenger Rail

The closest passenger rail stations are in Eugene and Klamath Falls, Oregon, and Dunsmuir, California, all of which serve Amtrak's Coast Starlight route, with once-a-day service north to Portland and Seattle and south to Sacramento, the Bay Area, and Los Angeles. Amtrak offers Amtrak Thruway bus service from Ashland, Medford, White City, and Gold Hill to the rail station in Klamath Falls.

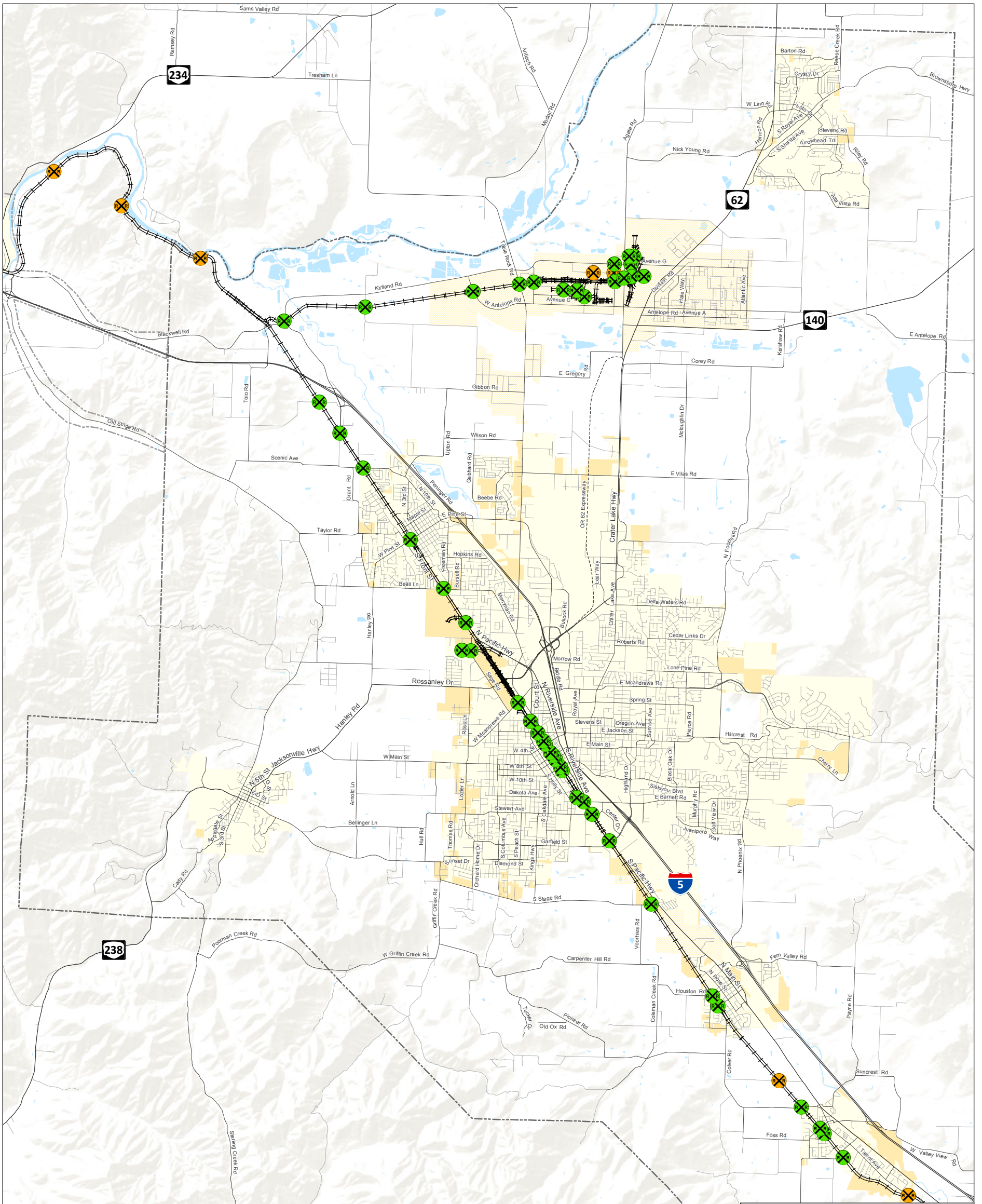


- Railroad Crossings**
- Finished Road Surface
 - Unfinished Road Surface
 - Railroads
 - City Boundary
 - Urban Cluster Boundary
 - Urban Growth Boundary
 - Middle Rogue MPO
 - Rogue Valley MPO
 - County Boundary

**Rail Facilities
Jackson County, OR**

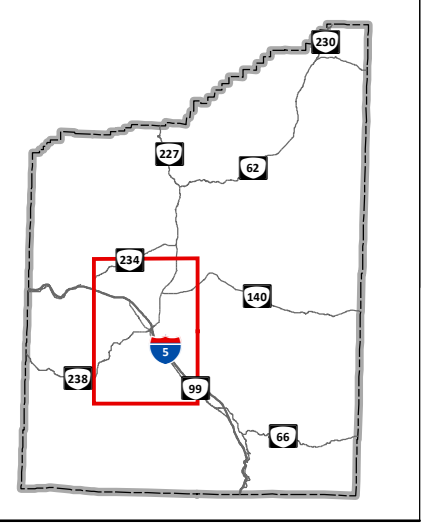
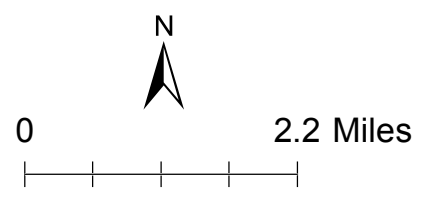
**Figure
11A**

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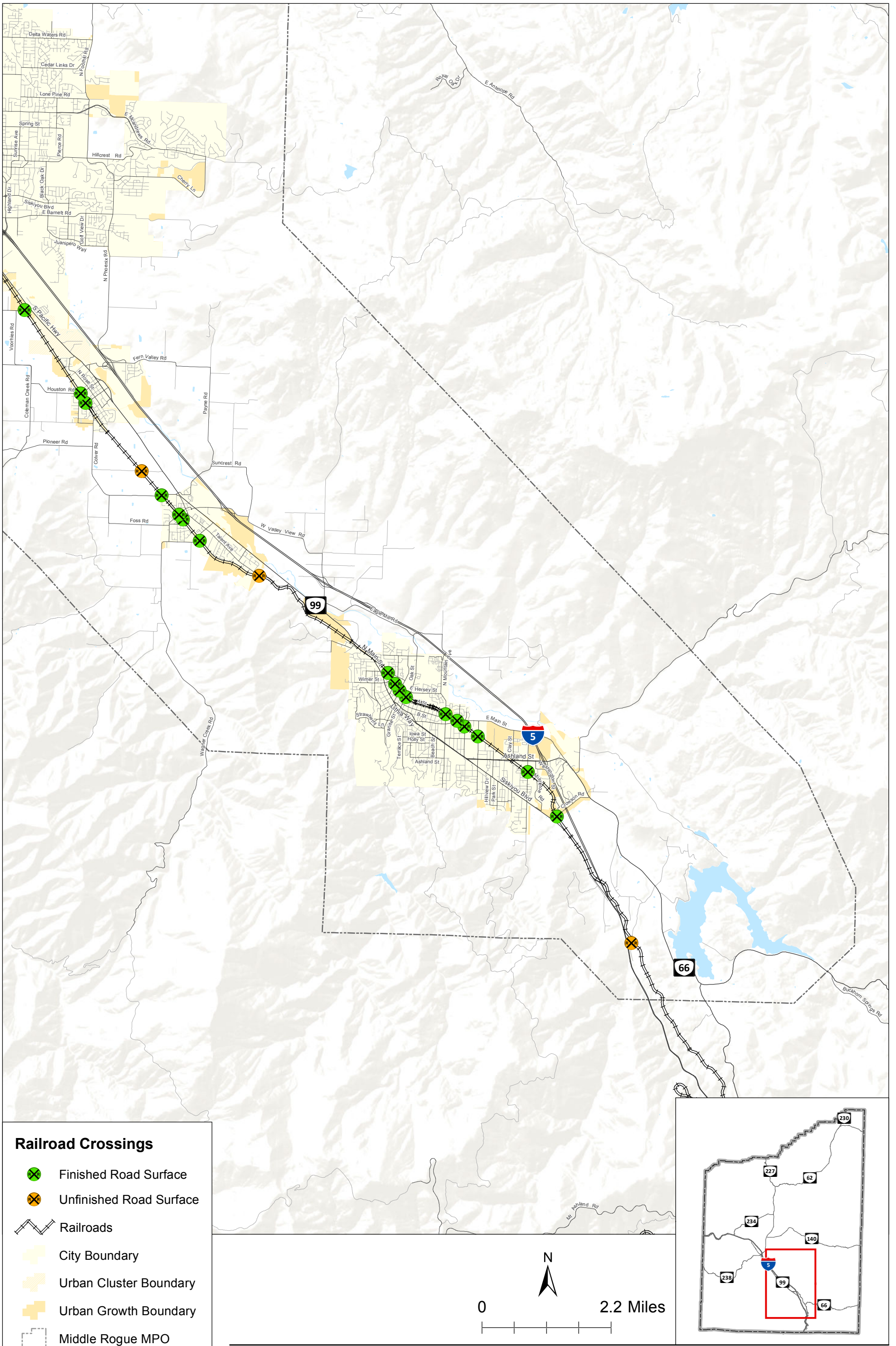
Railroad Crossings

- Finished Road Surface
- Unfinished Road Surface
- Railroads
- City Boundary
- Urban Cluster Boundary
- Urban Growth Boundary
- Middle Rogue MPO
- Rogue Valley MPO
- County Boundary



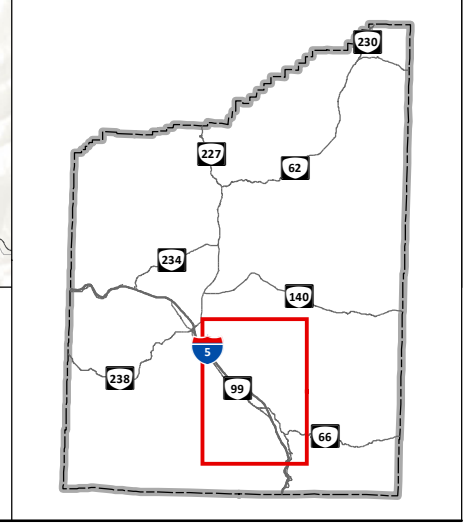
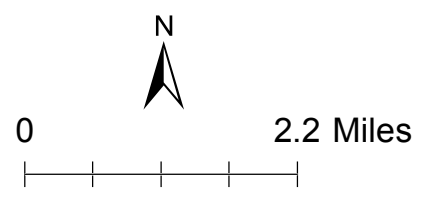
**Rail Facilities
Jackson County, OR** Figure
11B

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Railroad Crossings

- Finished Road Surface
- Unfinished Road Surface
- Railroads
- City Boundary
- Urban Cluster Boundary
- Urban Growth Boundary
- Middle Rogue MPO
- Rogue Valley MPO
- County Boundary



**Rail Facilities
Jackson County, OR**

**Figure
11C**

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Pipeline and Transmission System

An inventory of Jackson County's water, natural gas, and power transmission systems was conducted for the TSP.

Water Transmission

The Medford Water Commission (MWC) operates and maintains the water system that delivers drinking water to over 131,000 Rogue Valley residents. Approximately 60% of these residents are located in the City of Medford. The Medford Water Commission serves customers inside the City of Medford, and some outside customers such as in White City. The Commission's wholesale customers include the cities of Central Point, Jacksonville, Phoenix, and Eagle Point.

Other wholesale customers outside Medford include three domestic water districts. The Coker Butte Water Association purchases its water from the Medford Water Commission and contracts with the Commission to operate and maintain its systems. The City of Talent is not currently a MWC customer, but has entered into a contract with the Commission to facilitate future service. Talent is actively pursuing construction of an intertie to the MWC system.

The Medford Water Commission's principal source of water is Big Butte Springs, located about thirty miles northeast of Medford, Oregon and five miles east of the town of Butte Falls. The Rogue River is used as a supplemental source during the summer months of May through September.

Natural Gas

Avista Utilities is the natural gas provider serving Jackson County and neighboring counties. Natural gas is transmitted from the north via the Williams Pipeline, which runs generally along the I-5 corridor. The PG&E Northwest Pipeline runs across Eastern Oregon, connecting Klamath Falls with Medford. A distribution network distributes natural gas throughout Jackson County and neighboring counties. For security reasons, Avista limits public dissemination of detailed information regarding the natural gas distribution system.

Power

Pacific Power is the provider of electric power in Jackson County. Efforts to obtain information regarding the power transmission system have not been successful to date.