DRAFT JACKSON COUNTY TRANSPORTATION SYSTEM PLAN

May 2016

Prepared for:

Jackson County
200 Antelope Road
White City, Oregon 97503
(541) 774-8184

Prepared by:

Kittelson & Associates, Inc.
610 SW Alder St. Suite 700
Portland, Oregon 97205
(503) 228-5230

JACKSON COUNTY
Oregon

Transportation System Plan

2016 Jackson County Transportation System Plan

Jackson County, Oregon

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Project Manager: Susan Wright, P.E.
Project Principal: Matt Hughart
Project Planner: Matt Bell

Project No. 18018.0

May 2016

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

ATTACHMENTS

Attachment A: Bicycle and Pedestrian Toolkit

Attachment B: ODOT Interchange Area Management and Corridor Projects

Attachment C: Current and Potential Funding Sources

Attachment D: Project Prospectus Sheets

PREFACE

This Transportation System Plan (TSP) was developed in collaboration with Jackson County, Oregon Department of Transportation, Rogue Valley Metropolitan Planning Organization, and the incorporated cities of Jackson County. This TSP has been the collective effort of the following people:

Project Management Team (PMT)

- Mike Kuntz Jackson County Roads
- John Vial, Jackson County Roads
- Craig Anderson, Jackson County Development Services
- Allie Coates, Oregon Department of Transportation (ODOT)
- Don Morehouse, Oregon Department of Transportation (ODOT)

Consultant Team

- Susan Wright, Kittelson & Associates, Inc. (KAI)
- Matthew Bell, Kittelson & Associates, Inc. (KAI)
- Darci Rudzinski, Angelo Planning Group (APG)
- Shayna Rehberg, Angelo Planning Group (APG)

Technical Advisory Committee (TAC)

- Paige Townsend, Rogue Valley Transit District (TVTD)
- Josh LeBombard, Oregon Department of Land Conservation and Development (DLCD)
- Alex Georgevitch, City of Medford
- Matt Samitore, City of Central Point
- Robert Miller, City of Eagle Point
- John Krawczyk, City of Rogue River
- Dan Moore, Rogue Valley Metropolitan Planning Organization (RVMPO)
- Jerry Marmon, Oregon Department of Transportation (ODOT)
- Jenna Stanke-Marmon, Jackson County Greenway

Citizens Advisory Committee (CAC)

- Tina Grimes, CRC & Real Estate
- Joe Fisher, CRC & Trucking
- Jay Harland, Jackson County Chamber of Commerce

- Andrea Carlson, SOREDI
- Tom Lavagnino, Jackson County Planning Commission
- Harlan Bittner, J.C. Bicycle Committee
- Edgar Hee, Member at Large
- Steve Mitchell, City of Shady Cove
- George Pelch, Amy's Kitchen

The Technical Advisory Committee (TAC) and Citizens Advisory Committee (CAC) members devoted a substantial amount of time and effort to the development of this TSP, and their participation was instrumental in the development of the recommendations that are presented in this report. The Project Management Team and Consultant Team believe that Jackson County's future transportation system will be better because of their commitment.

EXECUTIVE SUMMARY

Jackson County, in conjunction with the Oregon Department of Transportation (ODOT), initiated a study of the county's transportation system in summer 2015. This transportation system plan (TSP) will guide the management and development of transportation facilities within Jackson County over the next 20 years. This TSP incorporates the county's vision for the transportation system while remaining consistent with state, regional, and local plans. Sections 1 through 3 provides an introduction to the TSP planning process, an overview of the plan and policy review, and a summary of the technical background and needs analysis. Sections 4 and 5 of this document include the main plan elements including goals, policies, standards, and projects. Section 6 describes the financially constrained plan. Section 7 identifies Land Development Ordinance updates to implement the TSP and comply with current state land use and transportation rules. In addition, this plan provides ODOT, Rogue Valley Council of Governments (RVCOG), and other agencies with recommendations that can be incorporated into their respective planning efforts.

The contents of this TSP were guided by Oregon Revised Statute (ORS) 197.712 and the Department of Land Conservation and Development (DLCD) administrative rule known as the Transportation Planning Rule (TPR). These laws and rules require that counties develop the following:

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

This TSP also includes a transportation financing plan to help the County identify future unfunded transportation needs and potential revenue sources. The TPR requires that alternative travel modes be given equal consideration with the automobile, and that reasonable effort be applied to the development and enhancement of the alternative modes in providing the future transportation system.

A major component of the TSP planning process was coordinating with the Rogue Valley Council of Government (RVCOG) to ensure consistency with the RTP. The RTP currently covers the urban core of Jackson County, including Medford, Central Point, Eagle Point, Talent, Phoenix, and Ashland. The current RTP is being updated to reflect changes in the UGBs of incorporated cities as well as new assumptions about travel demand and mode choice. Anticipating changes to the RTP that will result from this process was one of the major challenges for the County's TSP.

TSP PROCESS

The Jackson County TSP was developed through a process that (1) reviewed and updated the current transportation policies, (2) identified transportation needs, (3) developed and analyzed potential projects addressing those needs and, and (4) prioritized the projects into Tier 1 Financially Constrained

and Tier 2 Unconstrained project lists. The Financially Constrained project list includes projects within the limits of the funding expected to be available during the next 20 years. The following steps were involved in this process:

- Reviewing state and regional plans and policies that the Jackson County TSP must comply with, and reviewing local cities' plans so that the plan is well coordinated with city plans.
- Reconciling the results from the plan review with existing policies in the Transportation Element to develop a recommended set of updated policies.
- Facilitating public meetings to provide project information to, and gather feedback from, the public at key points during the TSP development process.
- Establishing project advisory committees and developing transportation plan goals and objectives.
- Evaluating existing transportation needs.
- Evaluating future transportation needs in accordance with OAR 660-12-0030. The needs analysis identified where deficiencies are likely to occur if growth occurs as expected, but no transportation improvements are made, other than those already funded.
- Developing, modeling, and analyzing alternative transportation improvement packages intended to address Jackson County's future transportation needs.
- Estimating the revenue available for transportation capital projects through the year 2038, assuming no increase from current funding levels.
- Developing a prioritized, financially constrained, consultant-recommended alternative that includes projects that meet the project's goals and objectives, and that best address future transportation needs within the funding available.
- Modifying the consultant-recommended alternative, based on staff, public, and advisory committee input, to develop the preferred alternative that forms the heart of this TSP.
- Developing a list of unfunded priority projects, in the event that additional transportation funding becomes available in the future.
- Recommending ordinance updates for implementing the TSP.
- Compiling the results of this work into this TSP document, for review and adoption by the Jackson County Board of Commissioners.

TRANSPORTATION SYSTEM PLAN

The TSP includes the following elements:

- Transportation goals and policies;
- A street system plan, including functional classifications and representative street sections;

- Pedestrian and bicycle plans that identify the locations of future facilities;
- A transit plan that identifies major transit stops and streets that may have future transit service, potential locations for implementing traffic signal priority for buses, and transit supportive programs;
- Pipeline, air, rail, marine, and freight plans; and
- An implementation plan, including a prioritized, financially constrained transportation improvement program, and a list of other priority projects that could be funded if new sources of transportation revenue can be developed.

The remainder of this report summarizes the background information used to develop the TSP. Details of the TSP development process are documented in a series of technical memoranda, which are included in Volume II of the TSP.

Section 1 Introduction

INTRODUCTION

OVERVIEW

State of Oregon planning rules require that the County's Transportation System Plan (TSP) be based on the current comprehensive plan land use map. The TSP must provide a transportation system that accommodates the expected 20-year growth in population and employment in accordance with the County's land use plan as well as the land use plans for the cities within Jackson County. The RVMPO travel demand mode (version 3.1), which was used in the future conditions analysis, includes base year 2006 and forecast year 2038 population, household, and employment (retail, service, and other) estimates for Jackson County consistent with the current land use plan for Jackson County.

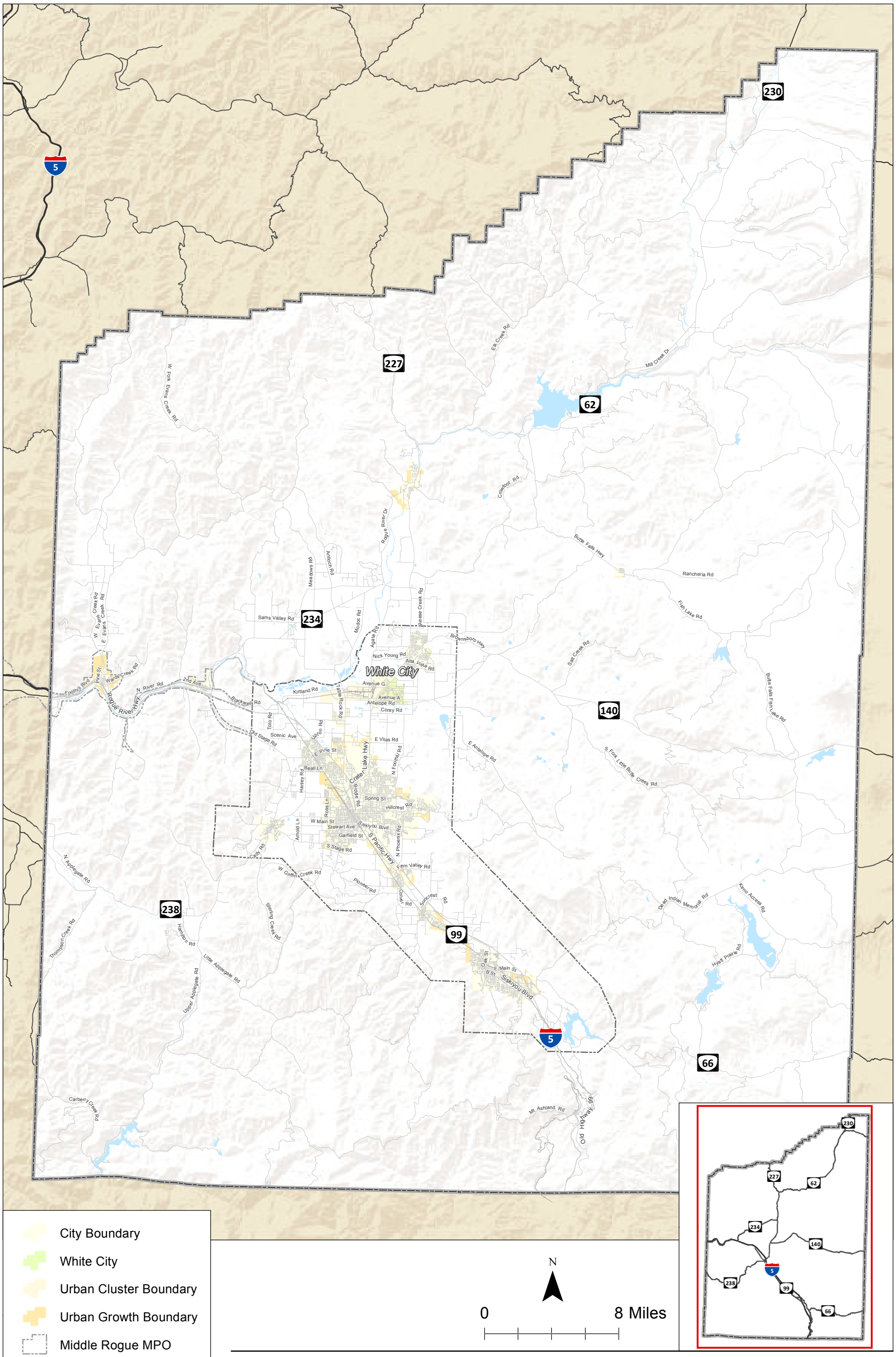
The contents of this TSP are guided by Oregon Revised Statute (ORS) 197.712 and the Department of Land Conservation and Development (DLCD) administrative rule known as the Transportation Planning Rule (TPR). These laws and rules require that jurisdictions develop the following:

- A road plan for a network of arterial and collector streets;
- A public transportation plan;
- A bicycle and pedestrian plan;
- An air, rail, water, and pipeline plan; and
- Policies and ordinances for implementing the transportation system plan.

This TSP includes a transportation financing plan to help the County identify future unfunded transportation needs and potential revenue sources. The TPR requires that alternative travel modes be given equal consideration with the automobile, and that reasonable effort be applied to the development and enhancement of the alternative modes in providing the future transportation system. In addition, the TPR requires that local jurisdictions adopt land use and subdivision ordinance amendments to protect transportation facilities and to provide bicycle and pedestrian facilities between residential, commercial, employment, and institutional areas. It is further required that counties coordinate their respective plans with applicable city, regional, and state transportation plans.

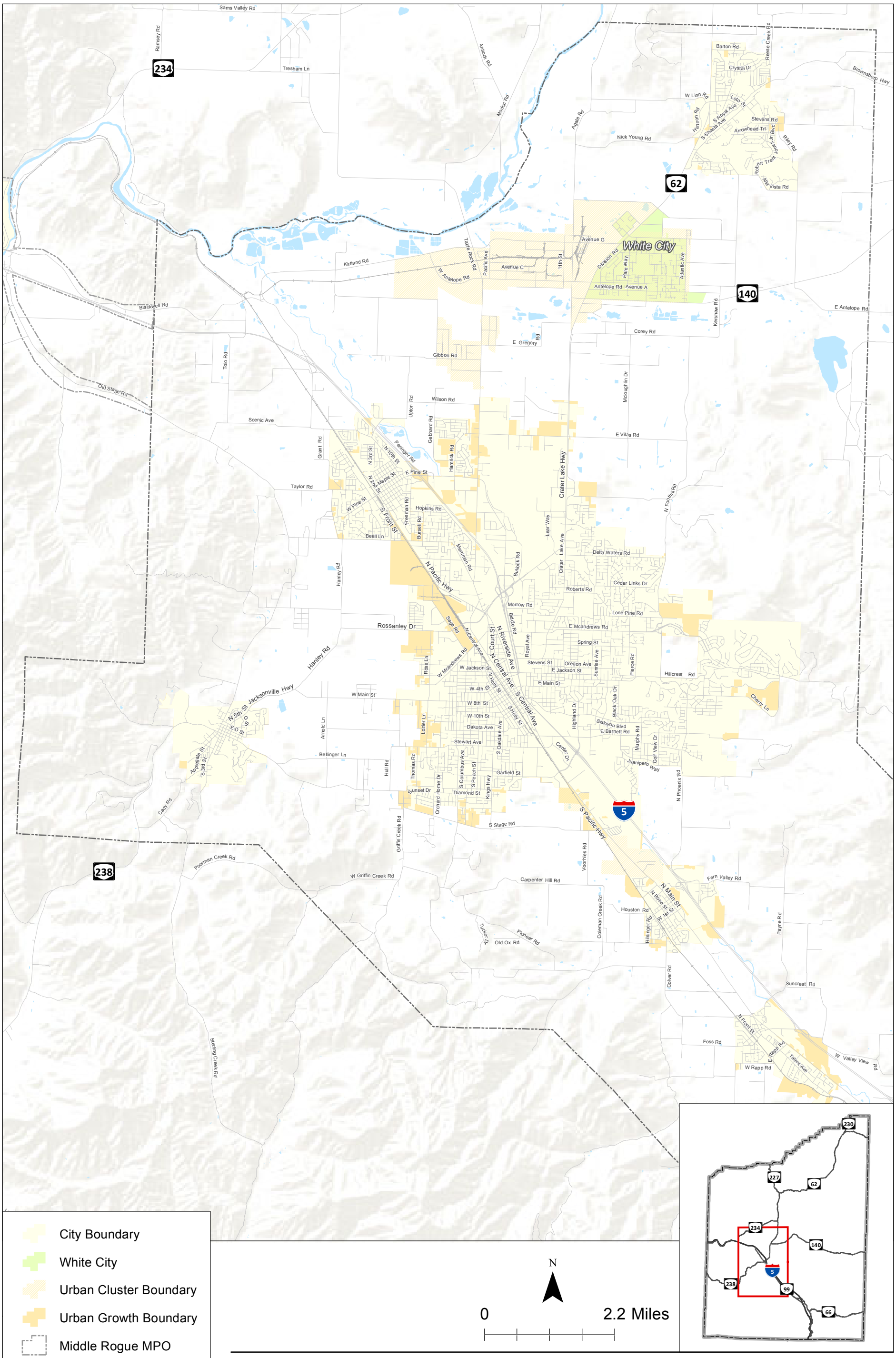
STUDY AREA AND SCOPE

Figure 1 shows a map of Jackson County, including the urban growth boundaries (UGBs) of each incorporated city and the urban containment boundaries (UCB). The primary study area for the Jackson County TSP consists of all areas of Jackson County located outside the UGBs of incorporated cities. The County's TSP generally defers to the applicable city TSP for County and State facilities within UGBs and to the Regional Transportation Plan (RTP) for regionally significant facilities in the Metropolitan Planning Organization (MPO) area. However, significant issues identified in local TSPs or the RTP that affect State and County facilities inside UGBs are also shown because they influence the function of the overall County transportation system.



Study Area
Jackson County, OR

Figure
1A



Study Area
Jackson County, OR

Figure
1B

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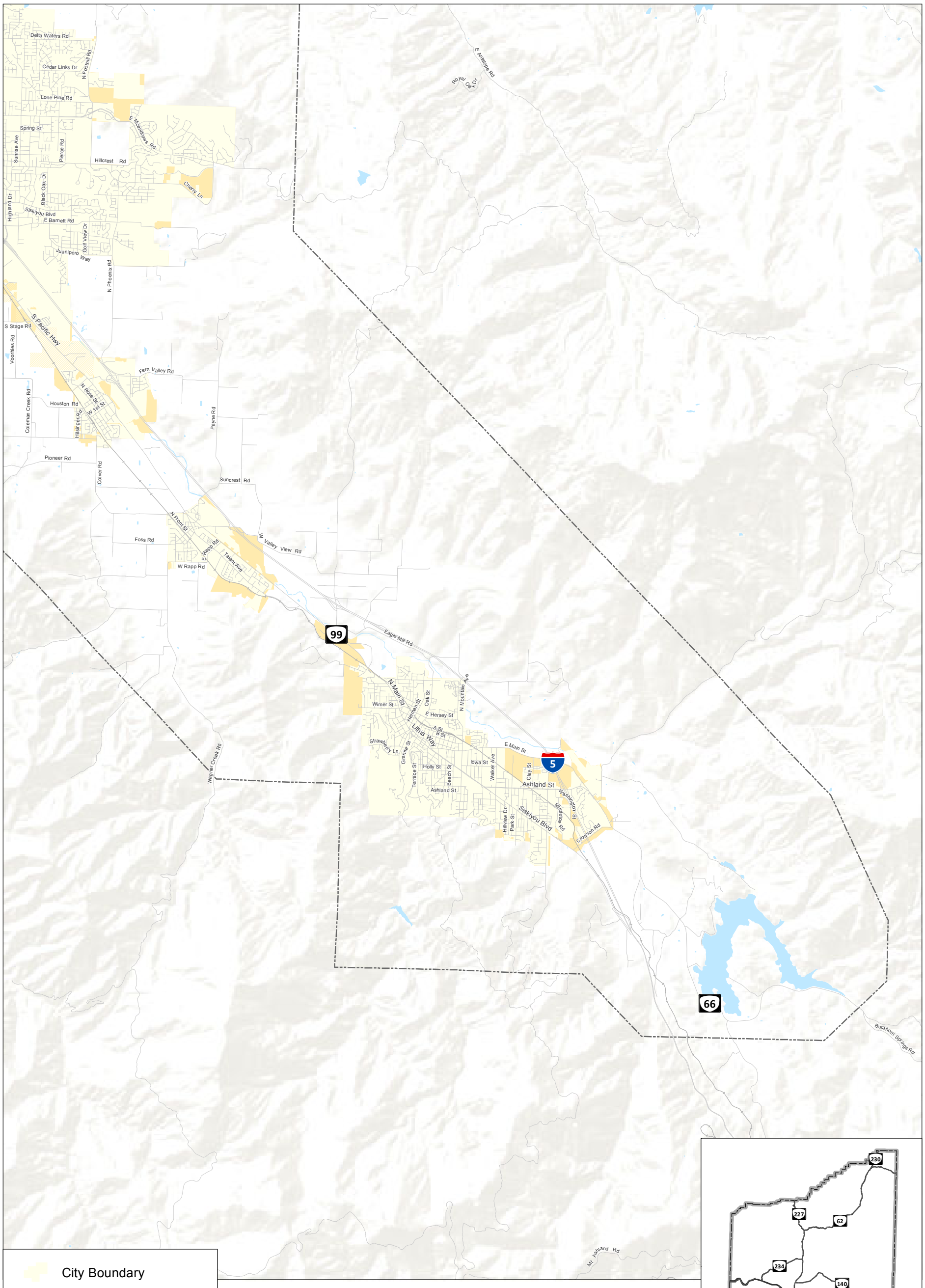
KITTELSON & ASSOCIATES, INC.
TRANSPORTATION ENGINEERING/PLANNING

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



Study Area
Jackson County, OR

Figure
1C

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

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Based on the requirements of the TPR, the study of County roadways and intersections is generally limited to those with the highest classifications – collectors and arterials – as well as state highways. Local street issues, such as street connectivity and design standards, were analyzed for general consistency with the TPR and the goals and policies.

PUBLIC INVOLVEMENT AND PLAN COORDINATION

The Technical Advisory Committee (TAC) guided the initial planning process for the TSP. The TAC was made up of representatives from relevant state and county agencies, transportation providers, local jurisdictions, and the Rogue Valley Council of Governments (RVCOG). A full list of the TAC is provided in the plan's preface. The TAC was responsible for reviewing the technical aspects of the TSP, and evaluating the TSP from a policy perspective. This work included reviewing the TSP goals and policies, as well as the transportation evaluation criteria.

Public involvement for the TSP was addressed in several ways. Throughout the process, several public and virtual meetings were held in an effort to inform citizens and businesses in Jackson County of the TSP project goals and process, obtain information from the community on transportation issues and concerns, and incorporate community feedback into the TSP analysis. Citizens could either attend meetings in person or virtually online to provide input. The County led the public meetings and distributed meeting minutes and project documents on the TSP website at key points during the development of the TSP. In addition to the TAC, a Citizen Advisory Committee (CAC) was established to provide staff with a broad spectrum of opinions on the Technical Memorandum and the draft TSP. The CAC included members from a variety of backgrounds and interests. Most of the members had at least some basic understanding of transportation planning. Their ideas and concerns were critical in addressing major elements of the plan. A full list of the CAC is provided in the plan's preface. Also, the County is very lucky to have a standing Bike Committee. The Bike Committee provided a focused review of the bicycle and pedestrian aspects of the TSP throughout the process. Public work sessions with the Planning Commission were scheduled to provide an opportunity for the public to have access to the policy makers before official public hearings were conducted to provide a more relaxed atmosphere for the public to voice concerns with the plan. Finally, public hearings must be held before both the Planning Commission and the Board of Commissioners for adoption.

TSP ORGANIZATION AND METHODOLOGY

The development of the Jackson County Transportation System Plan began with a review of the local, regional, and statewide plans and policies that guide land use and transportation planning in Jackson County. The reviewed documents are listed and briefly summarized in **Section 2** of this plan. Goals and policies for the TSP are presented in **Section 4**.

A technical analysis of the existing transportation facilities was performed, which allowed for an objective assessment of the system's existing physical characteristics, operational performance, safety, and general function. Upon completion of the existing conditions analysis, the focus of the project

shifted to forecasting future travel demand and the corresponding long-term future transportation system needs. The development of long-term (year 2038) transportation system forecasts was based on population growth forecasts for Jackson County. There was extensive coordination between Jackson County staff, RVCOG, and Oregon Department of Transportation's (ODOT's) Transportation Planning Analysis Unit (TPAU) in developing the forecast traffic conditions. The County relied primarily on the MPOs regional travel demand model (version 3.1) for determination of future travel demand on regionally significant facilities within the MPO.

While forecast traffic volumes are not exact, they provide an estimate to evaluate how the existing system will function in 20 years. Those numbers were used to identify locations where existing system capacity would be exceeded by the estimated future volume. The combination of the existing and future conditions analyses revealed the transportation deficiencies to be addressed by the TSP. Project alternatives were developed to address these needs. Based on comments received from Jackson County and ODOT staff as well as members of the TAC, CAC, and general public, a preferred plan was developed that reflected a consensus on which elements should be incorporated into the County's long-term transportation system. The analyses of existing and future conditions and system needs are summarized in **Section 3** of this report.

Having identified the system needs and a preferred set of alternatives, the next phase of the planning process involved presenting and refining the individual elements of the TSP through a series of decisions and recommendations. The recommendations identified in **Section 5**, Transportation System Plan, include a Roadway System Plan, Public Transportation Plan, Bicycle and Pedestrian Plan, and plans for other transportation modes serving Jackson County.

Section 6, Transportation Financing Plan, provides an analysis and summary of the funding sources available to pay for the identified transportation system improvements and identifies the priority projects for the projected available funds. The recommended code modifications are presented in **Section 7**, Transportation Planning Rule Compliance. This section lists the requirements of the Oregon Transportation Planning Rule (OAR 660 Division 12) and identifies land development ordinance updates for TPR compliance.

Finally, **Section 8**, Glossary of Terms and Acronyms provides list of the terms and acronyms used in the document, along with a definition.

The detailed technical memoranda that were developed during the TSP process and support each of the TSP sections are provided in *Volume II* of the TSP.

Section 2 Plan and Policy Review

PLAN AND POLICY REVIEW

INTRODUCTION

This section summarizes the plans and policies at the state, regional, and local levels that directly impact transportation planning in Jackson County. Although each document reviewed contains many policies, only the most pertinent policies and information are summarized here. This review provides a policy framework for the Jackson County TSP.

DOCUMENTS REVIEWED

Several jurisdictions own, manage, and/or operate the transportation facilities serving Jackson County. ODOT, which has jurisdiction over the state highway system, has developed statewide plans for specific transportation modes, a statewide transportation improvement program, and specific area studies. The RVCOG is the MPO responsible for regional planning and allocation of federal transportation funds in the Medford-Ashland urban area. The Rogue Valley Transportation District (RVTD) is the major public transportation provider. Jackson County has developed a large number of relevant planning documents, including the existing comprehensive plan and White City Unincorporated Community Plan. Transportation plans for individual cities were also reviewed.

The Jackson County TSP was developed to be consistent with the Oregon Transportation Plan (OTP) and the requirements of the TPR. The plan was developed to be consistent with the RTP and cities' plan policies. The projects in the RTP and in cities' plans were analyzed to identify a list of projects that are already planned to address needs identified in the County plan, and to identify any project inconsistencies that will need to be reconciled among the plans. The TSP is a living document and future changes to these plans may require amendments to the County TSP. The following sections list the major documents reviewed during the development of the TSP.

State Documents

- Oregon Transportation Plan (Updated 2006)
- Oregon Highway Plan (Updated 2011)
- Oregon Bicycle and Pedestrian Plan (Updated 2011)
- Oregon State Rail Plan (2014)
- Oregon Freight Plan (2011)
- Oregon Public Transportation Plan (1997)
- Oregon Aviation Plan (2007)
- Oregon Transportation Safety Plan (2011)

- Transportation Planning Rule (OAR 660-012) with 2011 Amendments
- Access Management Rule (OAR 734-051) with 2012 Amendments
- 2012-2015 Statewide Transportation Improvement Program (STIP)
- OR 62: I-5 to Dutton Road Project Final Environmental Impact Statement (2013)
- Rogue Valley Corridor Plan (May 2014 Draft)
- OR 140 Corridor Plan: I-5 Exit 35 to Brownsboro-Eagle Point Road (2013)
- I-5 Rogue Valley Corridor Plan (2011)
- Old Stage Road Corridor Management Plan (2000)
- I-5 Exit 19 (North Ashland) Interchange Area Management Plan (2011)
- I-5 Exit 33 (Central Point) Interchange Area Management Plan (2014)
- I-5 Exit 35 (Seven Oaks) Interchange Area Management Plan (2013)
- I-5 Exists 40 and 43 (Gold Hill) Interchange Area Management Plan (Draft)

Regional Documents

- Greater Bear Valley Regional Plan (2009)
- Rogue Valley Metropolitan Planning Organization (RVMPO) 2013-2038 Regional Transportation Plan
- RVMPT Transportation Demand Management Reference Guide (2012)
- Rogue Valley Transit District Ten-Year Long Range Plan (2007-2017)
- RVTD Strategic Business and Operations Plan (2008-2015)
- RVTD United We Ride Plan (2013)
- RVMPO Metropolitan Transportation Improvement Program (2015-2018)
- Bear Creek Greenway Management Plan (2005-2010)

County Documents

- Jackson County Comprehensive Plan (2004, Last Updated 2008)
- Jackson County Land Development Ordinance (LDO) (2004, Last Updated 2013)
- Jackson County Transportation System Plan (2005)
- Jackson County Capital Improvement Plan (2014-2018)
- White City Urban Unincorporated Community Plan and TSP

City Documents

- City of Ashland
- City of Central Point
- City of Eagle Point
- City of Jacksonville
- City of Medford
- City of Talent

SUMMARY OF POLICY AND PLAN REVIEW

The documents reviewed for this project were relevant to the TSP process in varying degrees. Some of the key documents and elements from this review are described below. A more detailed discussion of the plan and policy review is provided in Technical Memorandum #1: Goals and Policies, which is included in *Volume II* of the TSP

The **Oregon Transportation Plan (OTP)** is a comprehensive plan that addresses the future transportation needs of the State of Oregon through the year 2030. The primary function of the OTP is to establish goals, policies, strategies and initiatives that are translated into a series of modal plans, such as the Oregon Highway Plan and Oregon Bike and Pedestrian Plan. The Jackson County TSP update will seek to maximize performance of the existing transportation system by, for example, the use of technology and system management before considering larger and costlier additions to the system.

The **Oregon Highway Plan (OHP)** is a modal plan of the OTP that guides ODOT's Highway Division in planning, operations, and financing. Policies in the OHP emphasize the efficient management of the highway system to increase safety and to extend highway capacity, partnerships with other agencies and local governments, and the use of new techniques to improve road safety and capacity. These policies also link land use and transportation, set standards for highway performance and access management, and emphasize the relationship between state highways and local road, bicycle, pedestrian, transit, rail, and air systems. The TSP update is being developed in coordination with ODOT so that projects, policies, and regulations proposed as part of the updated TSP will comply with or move in the direction of meeting the standards and targets established in the OHP related to safety, access, and mobility.

The intent of the **Oregon Bicycle and Pedestrian Plan (OBPP)**, a modal plan of the OTP, is to provide safe and accessible bicycling and walking facilities in an effort to encourage increased levels of bicycling and walking. The plan is comprised of two parts: the Policy and Action Plan and the Oregon Bicycle and Pedestrian Design Guide. The plan was adopted in 1995 and reaffirmed as an element of the OTP in 2006. The second part of the plan – the Design Guide – was updated in 2011. ODOT is currently updating the OBPP. According to the ODOT scope of work, because it has not been updated since 1995, the update will include a broader policy framework and be reviewed for consistency with OTP modal

plan requirements, federal requirements, and the statewide planning program. The plan is scoped to be developed in collaboration with stakeholders representing a wide variety of transportation interests. The update is due to be completed in 2016. The standards and guidelines for pedestrian and bicycle improvements in the OBPP can serve as "best practices" and inform recommended bicycle and pedestrian improvements in the updated TSP. In addition, advisory committees for the project include members that represent pedestrian and bicycle interests.

The **Oregon State Rail Plan ("State Rail Plan")**, a state modal plan under the OTP, addresses long-term freight and passenger rail planning in Oregon. The State Rail Plan provides a comprehensive assessment of the state's rail planning, freight rail, and passenger rail systems. The State Rail Plan identifies specific policies and planning processes concerning rail in the state, establishes a system of integration between freight and passenger elements into the land use and transportation planning processes, and calls for cooperation between state, regional and local jurisdictions in completing the plan. The TSP update will consider the needs of the rail freight system in developing recommended policies and projects related to improving safety and mobility in the county. In addition, the project technical advisory committee includes ODOT representatives that will advise on rail and freight interests.

The **Oregon Freight Plan (OFP)** is another modal plan of the OTP and implements the state's goals, and policies related to the movement of goods and commodities. Its purpose statement identifies the state's intent "to improve freight connections to local, Native American, state, regional, national and global markets in order to increase trade-related jobs and income for workers and businesses." The objectives of the plan include prioritizing and facilitating investments in freight facilities (including rail, marine, air, and pipeline infrastructure) and adopting strategies to maintain and improve the freight transportation system. The plan defines a statewide strategic freight network. I-5 and parallel railroads are designated as a strategic corridor in the OFP. Maintaining and enhancing efficiency of the truck and rail freight system in the study area will be integrated into the updated TSP. The project advisory committees include representatives from ODOT and local freight interests.

The **Oregon Public Transportation Plan (OPTP)** is the modal plan of the OTP that provides guidance for ODOT and public transportation agencies regarding the development of public transportation systems. The OPTP Implementation Plan directs ODOT investments towards commuter and mobility needs in larger communities and urban areas and also in smaller communities where warranted. It also prioritizes investments in intercity connections statewide. Long-term implementation and funding is geared toward both modernization and preservation projects while preservation projects are more the focus for short term implementation and funding. The TSP update process will coordinate with Rogue Valley Transit District (RVTD)long-range and strategic planning in the TSP study area. The project CAC included a representative from RVTD.

The **Oregon Aviation Plan (OAP)** is a modal plan of the OTP that defines policies and investment strategies for Oregon's public use aviation system for the next 20 years. The plan addresses the existing conditions, economic benefits, and jurisdictional responsibilities for the existing aviation infrastructure. The plan contains policies and recommended actions to be implemented by Oregon Department of Aviation in coordination with other state and local agencies and the Federal Aviation Administration.

The OAP categorizes airports based on functional role and service criteria. The TSP update will consider access to the Rogue Valley International Airport and Ashland Municipal Airport in developing its policies and projects.

An element of the OTP, the **Oregon Transportation Safety Action Plan (Action Plan)** establishes a safety agenda to guide the investments and actions of ODOT and the state for the next 20 years. As indicated in the name of the plan, the emphasis of the OTSAP is action and implementation. Actions included in the OTSAP were chosen based on crash data and information provided by transportation safety experts. Consistent with the state's Action Plan, the TSP update process will identify sites with high occurrences of safety problems and will consider safety in the selection and prioritization of transportation projects to meet the county's future system needs for all modes of transportation.

The **Transportation Planning Rule (TPR), OAR 660-012**, implements Goal 12 (Transportation) of the statewide planning goals. The TPR contains numerous requirements governing transportation planning and project development, including the required elements of a TSP. In addition to plan development, the TPR requires each local government to amend its land use regulations to implement its TSP (-0045). It also requires local government to adopt land use or subdivision ordinance regulations consistent with applicable federal and state requirements: "to protect transportation facilities, corridors and sites for their identified functions." Local compliance with -0045 provisions is achieved through a variety of measures, including access control requirements, standards to protect future operations of roads, and notice and coordinated review procedures for land use applications. Local development codes should also include a process to apply conditions of approval to development proposals, and regulations ensuring that amendments to land use designations, densities, and design standards are consistent with the functions, capacities, and performance standards of facilities identified in the TSP. The TPR directs local TSP development and requires specific transportation elements be implemented in the local development ordinance. Local requirements such as access management, coordinated land use review procedures, and transportation facility standards and requirements are meant to protect road operations and safety and provide for multi-modal access and mobility. Implementation measures that will be developed with the TSP update may entail proposed amendments to the Land Development Ordinance (LDO) to ensure consistency with TPR requirements as well as to reflect TSP recommendations.

Oregon Administrative Rule (OAR) 734-051 defines the State's role in managing access to highway facilities in order to maintain functional use and safety and to preserve public investment. OHP Policy 3A and OAR 734-051 set access spacing standards for driveways and approaches to the state highway system. The standards are based on state highway classification and differ depending on posted speed and average daily traffic volume. OAR 734-051 regulates access management on state roadways; analysis for the TSP update and final project recommendations will need to reflect state requirements for state facilities. Implementation measures that will be developed for the TSP update may entail local code amendments to ensure that the LDO is consistent with these access management requirements as well as TSP recommendations related to access management.

The **State Transportation Improvement Program (STIP)** is the four-year programming and funding document for transportation projects and programs for state and regional transportation systems, including federal land and Indian reservation road systems, interstate, state, and regional highways, bridges, and public transit. It includes state- and federally-funded system improvements that have approved funding and are expected to be undertaken during the upcoming four-year period. The projects and programs undergo a selection process managed by ODOT Regions or ODOT central offices, a process that is held every two years in order to update the STIP. The TSP update analysis will take into account projects that are programmed in the STIP. An expected outcome of this planning process is proposed recommendations to eventually amend the STIP to include projects from the updated TSP. These projects will most likely be projects that are eligible for funding through the ODOT Enhance program, which awards funding through a competitive application process.

The **Jackson County Comprehensive Plan** is a long-range policy guide for land use in the unincorporated area within the county, outside of city UGBs. The Comprehensive Plan originally included a Transportation Element, but this was wholly replaced by the Jackson County TSP upon its adoption in 2005. While transportation policies are established in the County TSP and not in the County Comprehensive Plan, the Comprehensive Plan contains policies in sections on rural and suburban lands, urban lands, regional planning, and implementation that address the relationship between land use planning and transportation planning. The updated TSP is intended to be adopted as the transportation element of the City's Comprehensive Plan, replacing the 2005 TSP. Policy changes considered as part of the TSP update process must either be consistent with existing policies, including those identified above, or propose amendments to adopted policies. Amendments to the LDO will also likely be needed in order to implement the updated TSP; proposed amendments will be based on existing, revised or new policies related to land use designations (use and density regulations), plan and code amendment procedures, land use review coordination, and/or protection of transportation facilities.

The **Jackson County Capital Improvement Plan (CIP)** programs the funding and construction of significant capital projects for five years. The current CIP for Jackson County Roads presents approximately 28 transportation projects or project categories (e.g., miscellaneous safety improvements) for the 2014-2018 programming period. The projects include bridge improvements, trail improvements, addition of turn lanes, roadway realignment, installation of signals, improvement of existing roadways to county standards, overlays, preliminary engineering, and acquisition of right-of-way. The document tracks the estimated cost of the projects and breaks them down by funding source; the funding source categories include STIP funding, System Development Charge (SDC) fees, other road funds, or other external sources. As needed, improvements recommended in the updated TSP will be coordinated with projects programmed in the CIP for the next five years or identified for programming in the next 15 years. There may also be opportunities to coordinate projects recommended in in the updated TSP with non-transportation projects, such as storm drainage and water, when these projects occur in public right-of-way and are part of other county departments' CIPs.

The **White City Urban Unincorporated Community Plan** was adopted by the Jackson County Board of Commissioners in September 2003. Subsequently, the White City TSP was developed and adopted in 2005. This project will incorporate the White City TSP into the County TSP, but the updated document

will still address White City's system and needs separately. The updated Jackson County TSP will update and include White City transportation policies and projects.

ONGOING PLANNING PROCESS

There are at least two major ongoing planning processes that could have significant impacts on the Jackson County TSP. While the full impact of these planning processes is undetermined at this time, the development of this TSP has attempted to anticipate the future planning implications that may result from these planning processes.

The first major planning project is the update to the RTP for 2017. Updates to the regional travel demand model and the RTP are being initiated to address changes in the UGBs of incorporated cities as well as new assumptions about travel demand and mode choice. The County's TSP policies address RTP coordination. The County's TSP policies are well coordinated with the RTP, but the County TSP process has identified some projects that are not currently in the RTP. These projects will be evaluated during the update process. Amendments to the County TSP will be required if these projects are not included in the 2017 RTP update.

The next major planning project is the OR 62 Corridor Project. This project will result in a new four-lane access-controlled expressway along the old Medco Haul Road. Most of the planning for the new expressway is now complete; however, construction is not expected to occur until 2017. Also, only cursory planning work has been done on the northernmost extension of the expressway from E Vilas Road to Dutton Road (Unit 3). Thus, the TSP includes policies and implementation strategies to address future planning of this facility.

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 Deisgnations

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

N

0 8 Miles

Zoning Designation
Jackson County, OR

Figure
1A

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

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Comprehensive Plan Deisgnations

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

N

0 2.2 Miles

Zoning Designation
Jackson County, OR

Figure **1B**

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

Comprehensive Plan Deisgnations

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

N

0 2.2 Miles

Zoning Designation
Jackson County, OR

Figure
1C

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

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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.

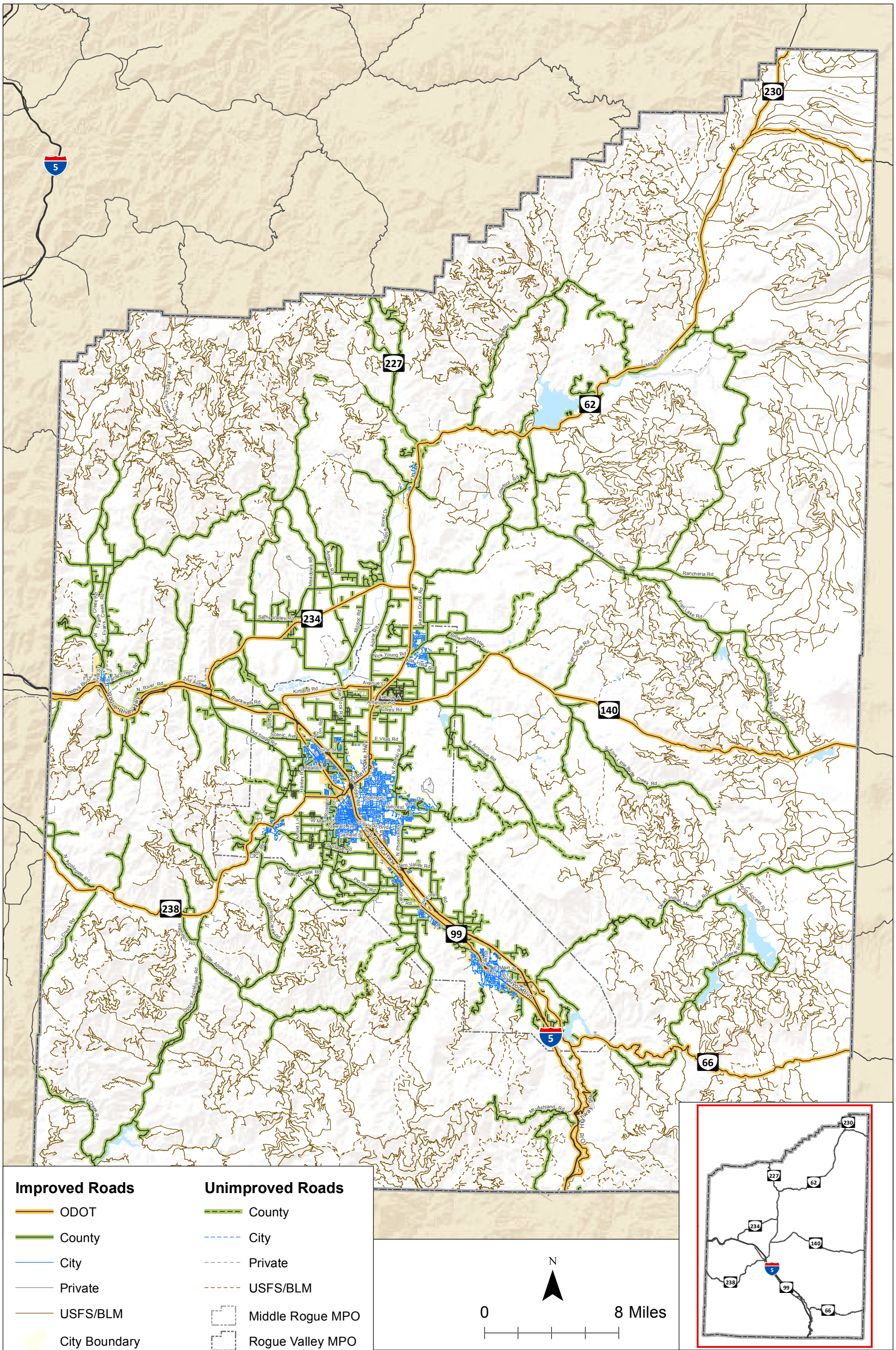
Jurisdiction

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 (Reference 3):



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
- Rogue Valley MPO
- County Boundary

Jurisdiction
Jackson County, OR

Figure
3A

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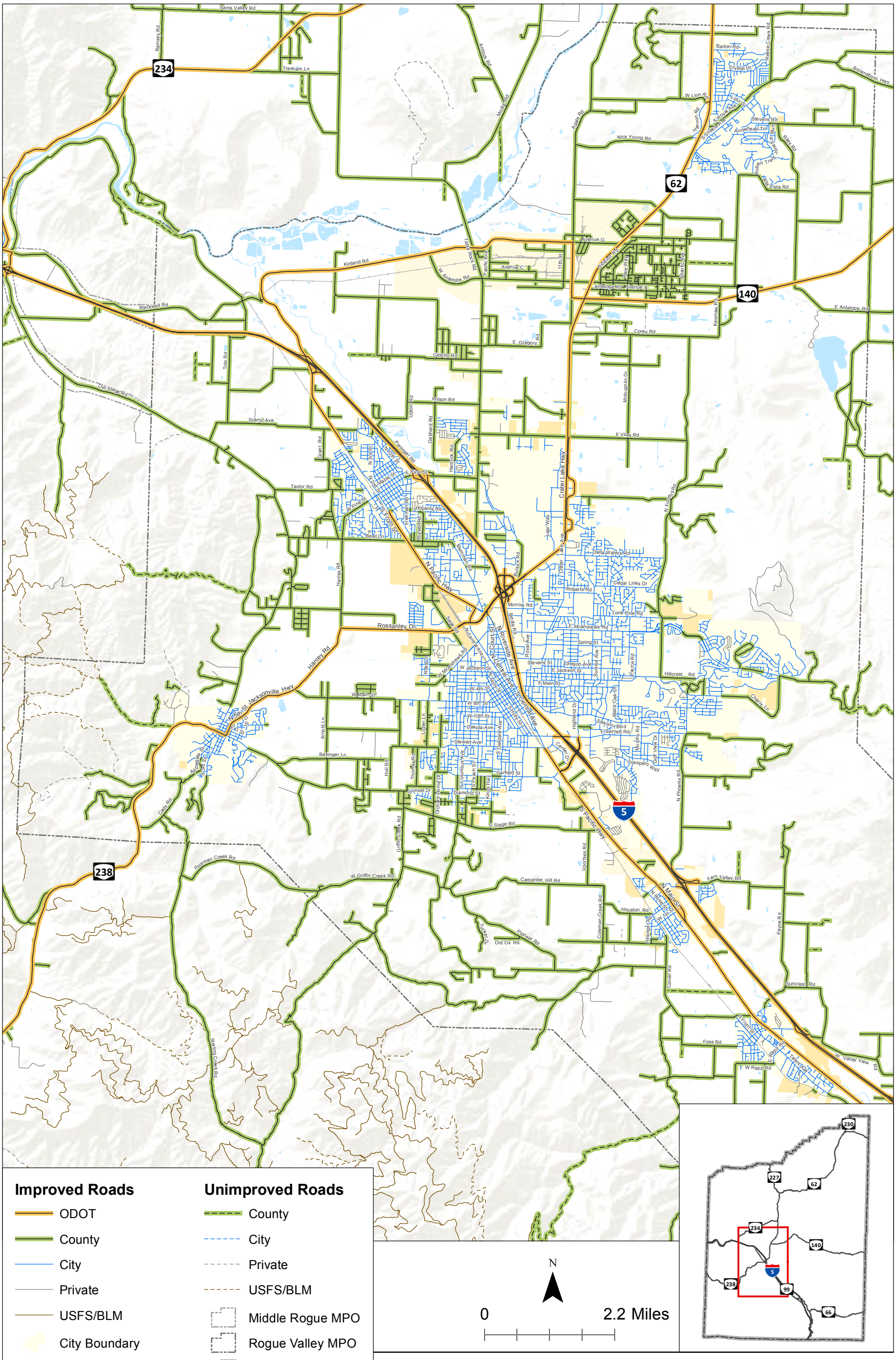
Coordinate System: NAD 1983 StatePlane Oregon South FIPS 3602 Feet Intl



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
- Rogue Valley MPO
- County Boundary

Jurisdiction
Jackson County, OR

Figure
3B

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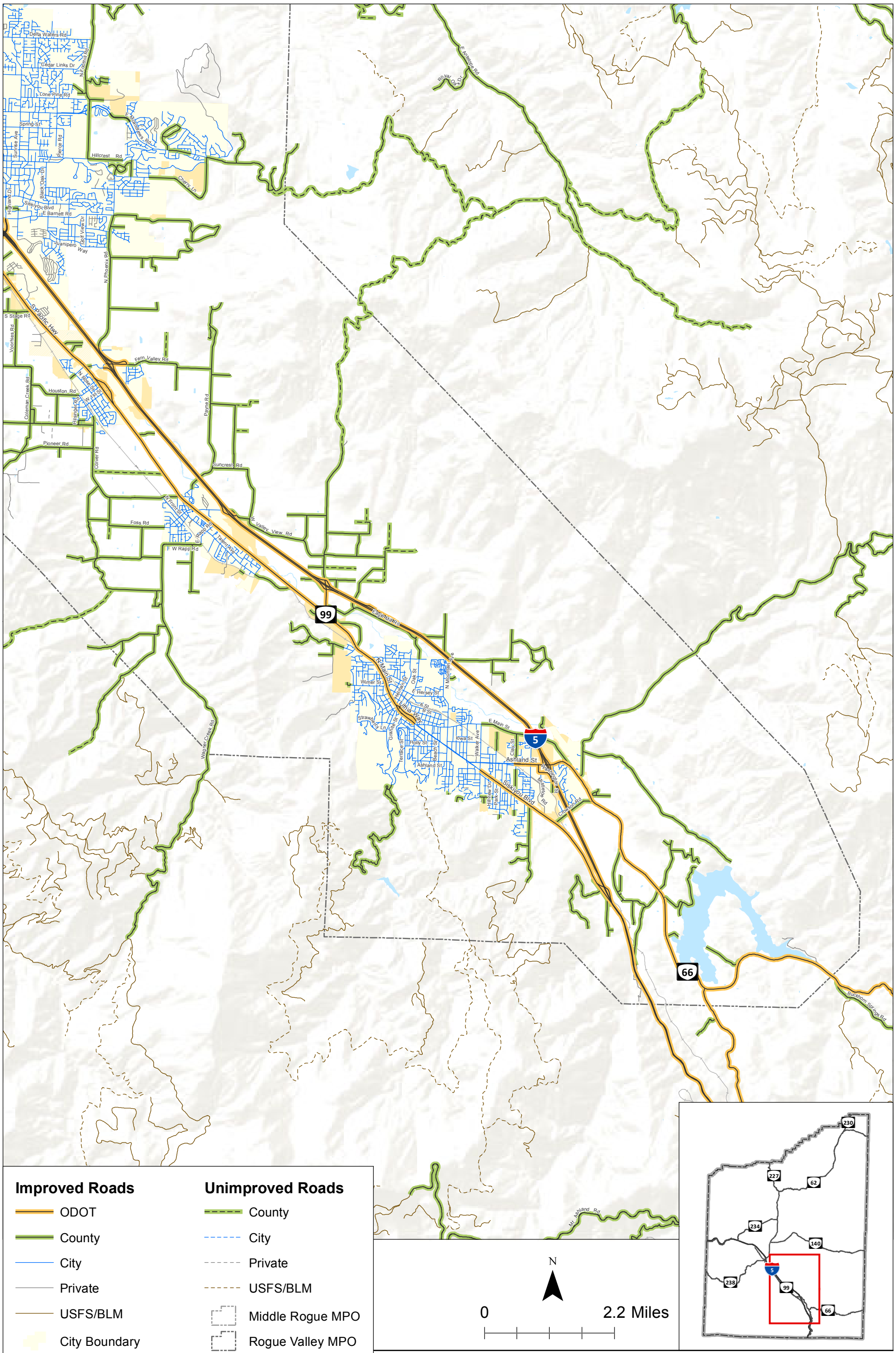
Coordinate System: NAD 1983 StatePlane Oregon South FIPS 3602 Feet Intl



Jurisdiction
Jackson County, OR

Figure
3C

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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 east 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 are City owned and maintained, each city has County or State roads passing through. 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; 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 being in the northeast corner of the junction. Antelope Road, one of the major County roads in Jackson County also passes through White City.

Intermodal Connections

The 1999 Oregon Highway Plan (OHP) describes the 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 located in Jackson County include 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 section of Biddle Road and Pine Street from I-5 to Table Rock Road is under County ownership. Both the connectors are owned by 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 classifications. All of the County roadways within urban growth or urban containment boundaries fall under the urban classification. All other County roadways fall under the rural functional classification. Within these groups, roadways are categorized as Freeways, Arterials, Major Collectors, Minor Collectors, or Local Streets or Roads. Section 5 includes 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 the downtown Jacksonville area. This connection, also known as the Jacksonville Bypass, has been considered for over 40 years with both a northerly and 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 the acknowledged urban growth boundary of Jacksonville. 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 road circulation problems in existing areas that would warrant construction or planning of a new local road connection. Also, outside urban growth boundaries there are relatively few opportunities for in-fill type 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 UGB's 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 intersection 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

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

Study Intersections

- Exceeds Standard (Existing)
- Exceeds Standard (2038)
- Below Standard
- City Boundary
- Urban Cluster Boundary
- Urban Growth Boundary
- Middle Rogue MPO
- Rogue Valley MPO
- County Boundary

N

0 8 Miles

Study Intersections
Jackson County, OR

Figure **4A**

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

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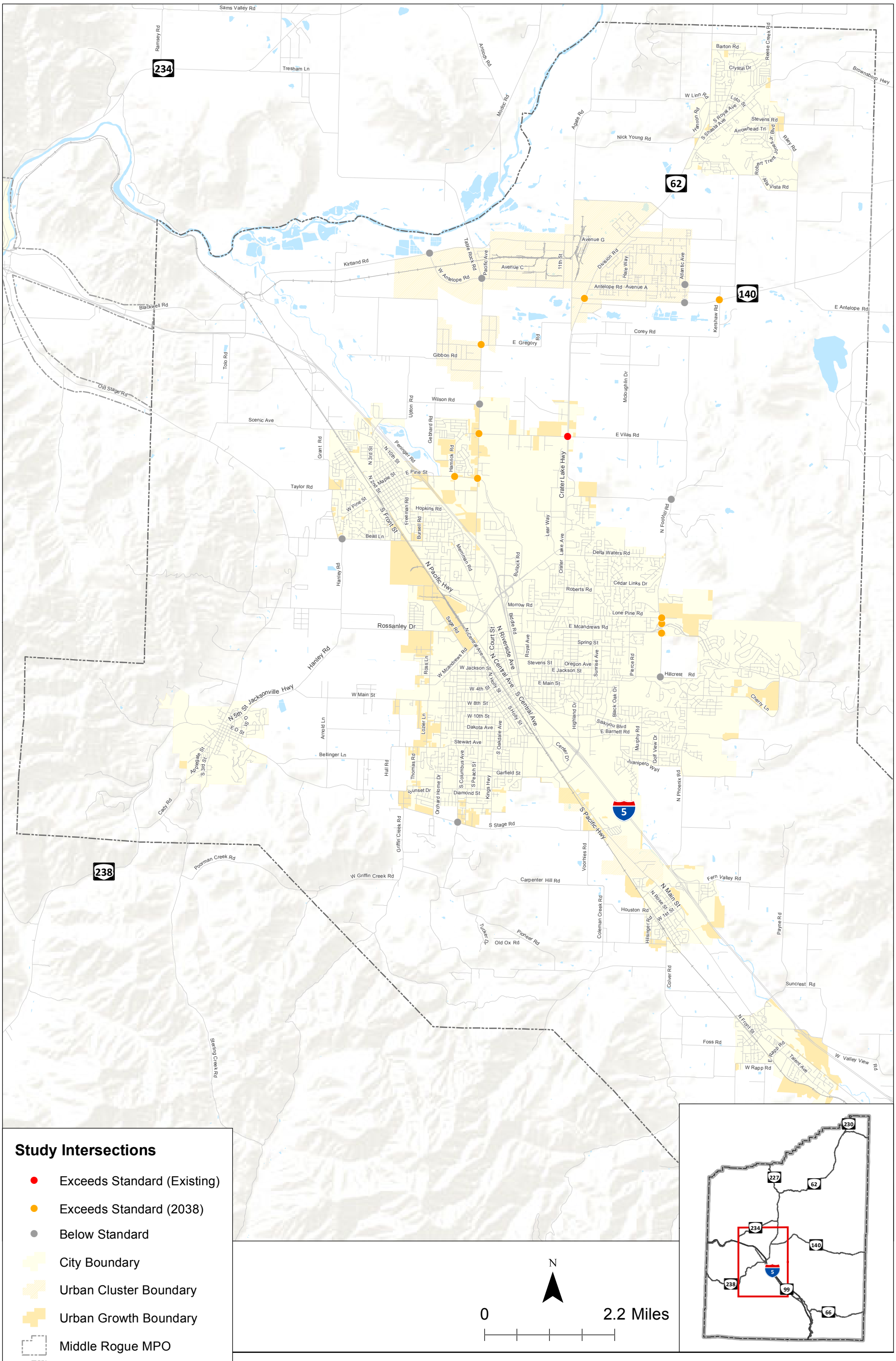

Study Intersections

- Exceeds Standard (Existing)
- Exceeds Standard (2038)
- Below Standard
- City Boundary
- Urban Cluster Boundary
- Urban Growth Boundary
- Middle Rogue MPO
- Rogue Valley MPO
- County Boundary

Study Intersections
Jackson County, OR

Figure **4B**

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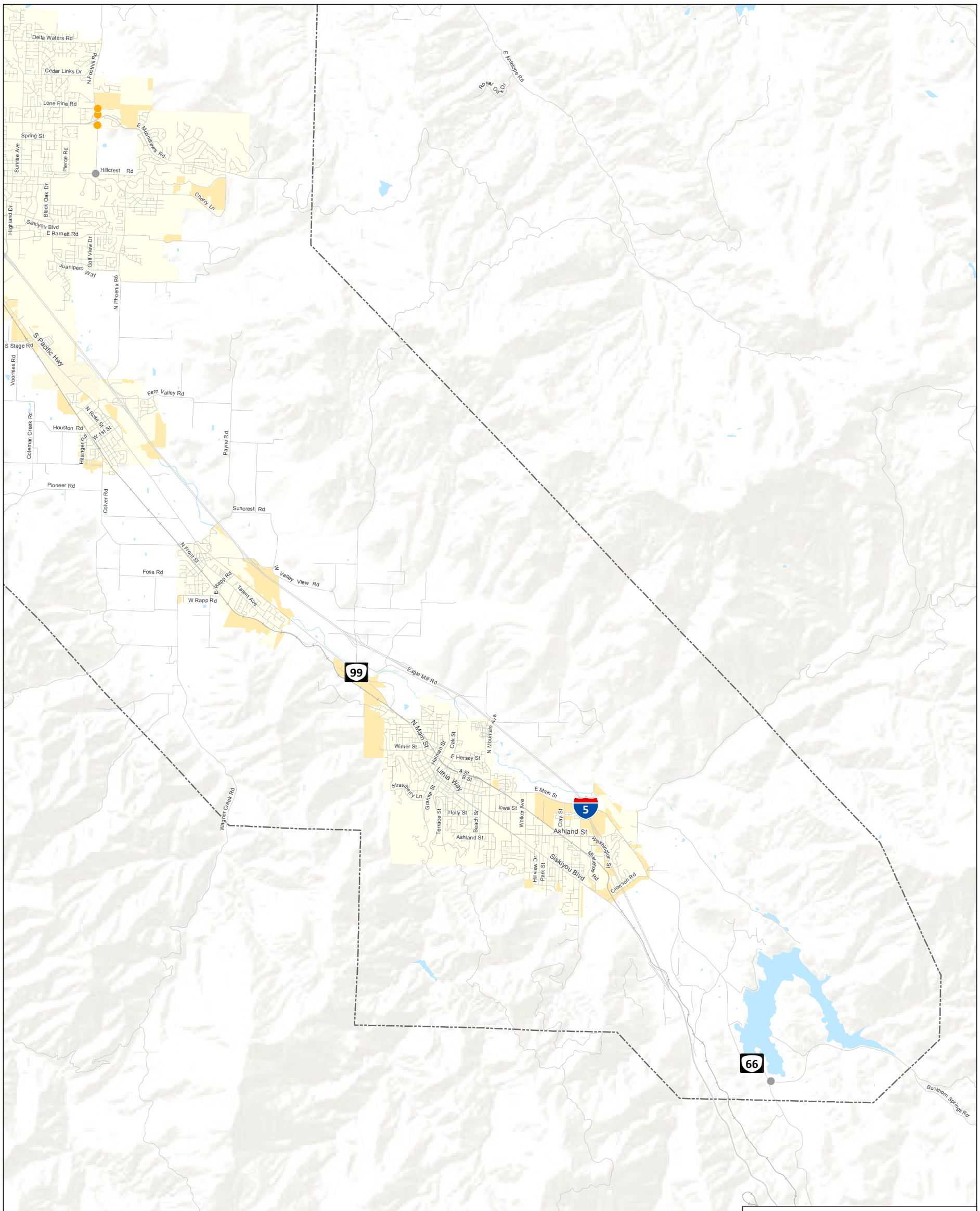
Coordinate System: NAD 1983 StatePlane Oregon South FIPS 3602 Feet Intl



Study Intersections

- Exceeds Standard (Existing)
- Exceeds Standard (2038)
- Below Standard
- City Boundary
- Urban Cluster Boundary
- Urban Growth Boundary
- Middle Rogue MPO
- Rogue Valley MPO
- County Boundary

Study Intersections
Jackson County, OR

Figure
4C

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

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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

Map ID	Intersection	Deficiency
1	Hamrick Road/E Pine Street-Biddle Road	The westbound through is expected to exceed the capacity of the intersection
2	Table Rock Road/Biddle Road	The eastbound left, northbound through, and southbound through are expected to exceed the capacity of the intersection
3	Table Rock Road/Vilas Road	The westbound left and westbound through are expected to exceed the capacity of the intersection
6	Table Rock Road/Gregory Road	The westbound left-through-right is expected to exceed the capacity of the intersection
7	Kershaw Road/OR140	The northbound left-through-right is expected to operate below capacity, but above its mobility standard
8	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 95th percentile queue is expected to exceed the available storage length
9	OR 62/OR234-Del Isle Way	The eastbound left is expected to exceed the capacity of the intersection
11	OR 62/Vilas Road	The northbound left is expected to exceed the capacity of the intersection The eastbound right and southbound right 95th percentile queues are expected to exceed the available storage length
21	Foothill Road/McAndrew Road WB Ramp	The eastbound left is expected to exceed the capacity of the intersection
22	Foothill Road/McAndrew Road EB Ramp	The eastbound left is expected to exceed the capacity of the intersection
23	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 Country 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 roadways within Jackson County are narrow, two-lane roads, with relatively low traffic volumes and high travel speeds. A majority of roadways 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. The result is a high number of high-speed crashes where motorists lose control of their vehicles, drive off-the side of the road, and collide with various fixed-objects (trees, rocks, embankments, etc.), and/or other vehicles on the roadway. 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.

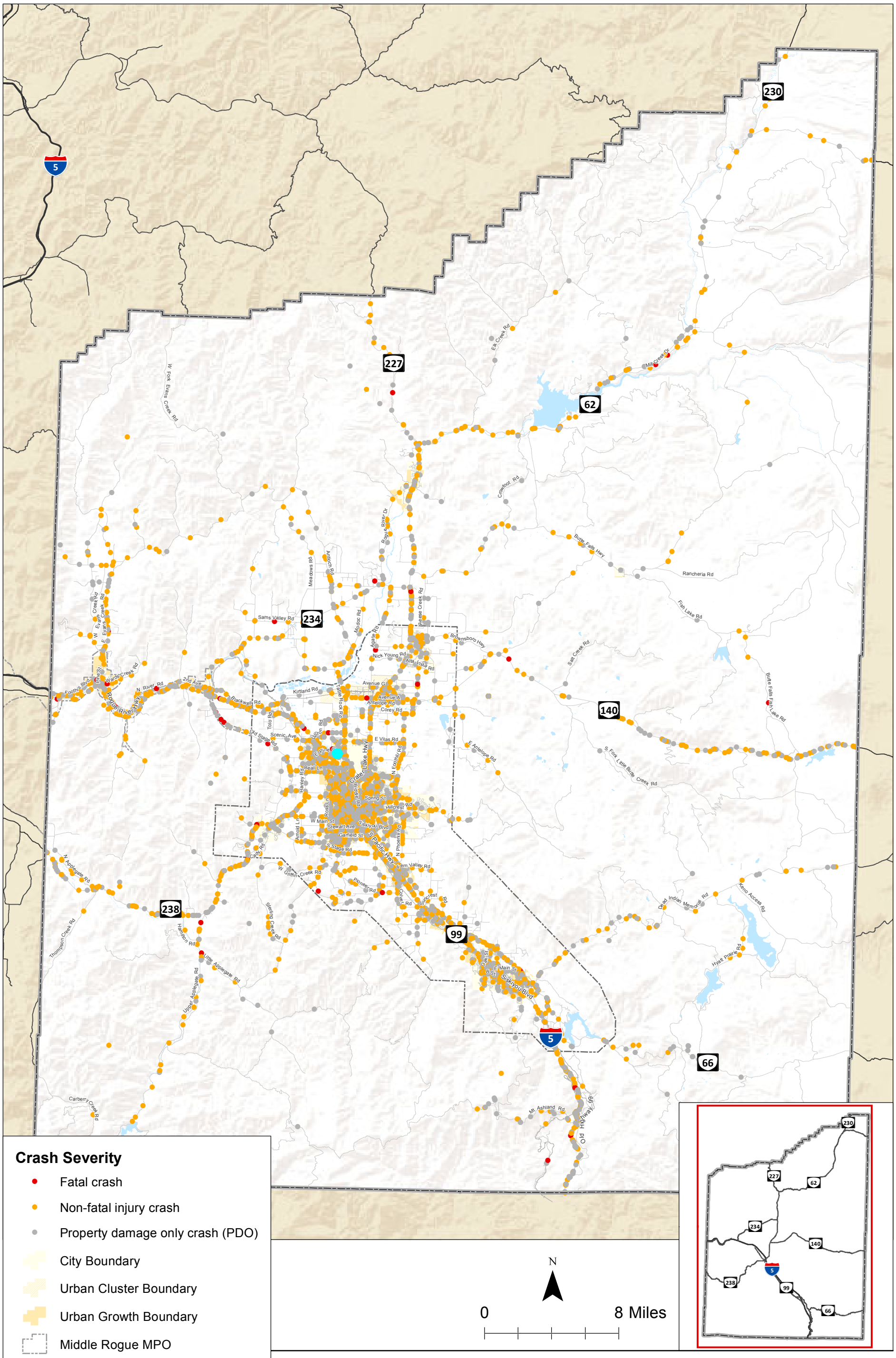
Figure 5 illustrates the location and severity of crashes along all County and ODOT facilities. The crash data at the study intersections and along select County facilities was compiled and analyzed for crash patterns, potential causes, and potential countermeasures.

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 4 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 volumes of crashes
Table Rock Road/Vilas Road	Currently experiences a high volumes of crashes
Kershaw Road/OR140	Currently experiences a high volumes of crashes
OR 62/Vilas Road	Currently experiences a high volumes of crashes
Foothill Road/Coker Butte Road	Currently exceeds 90th 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

N

0 8 Miles

Crash History
Jackson County, OR

Figure **5A**

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

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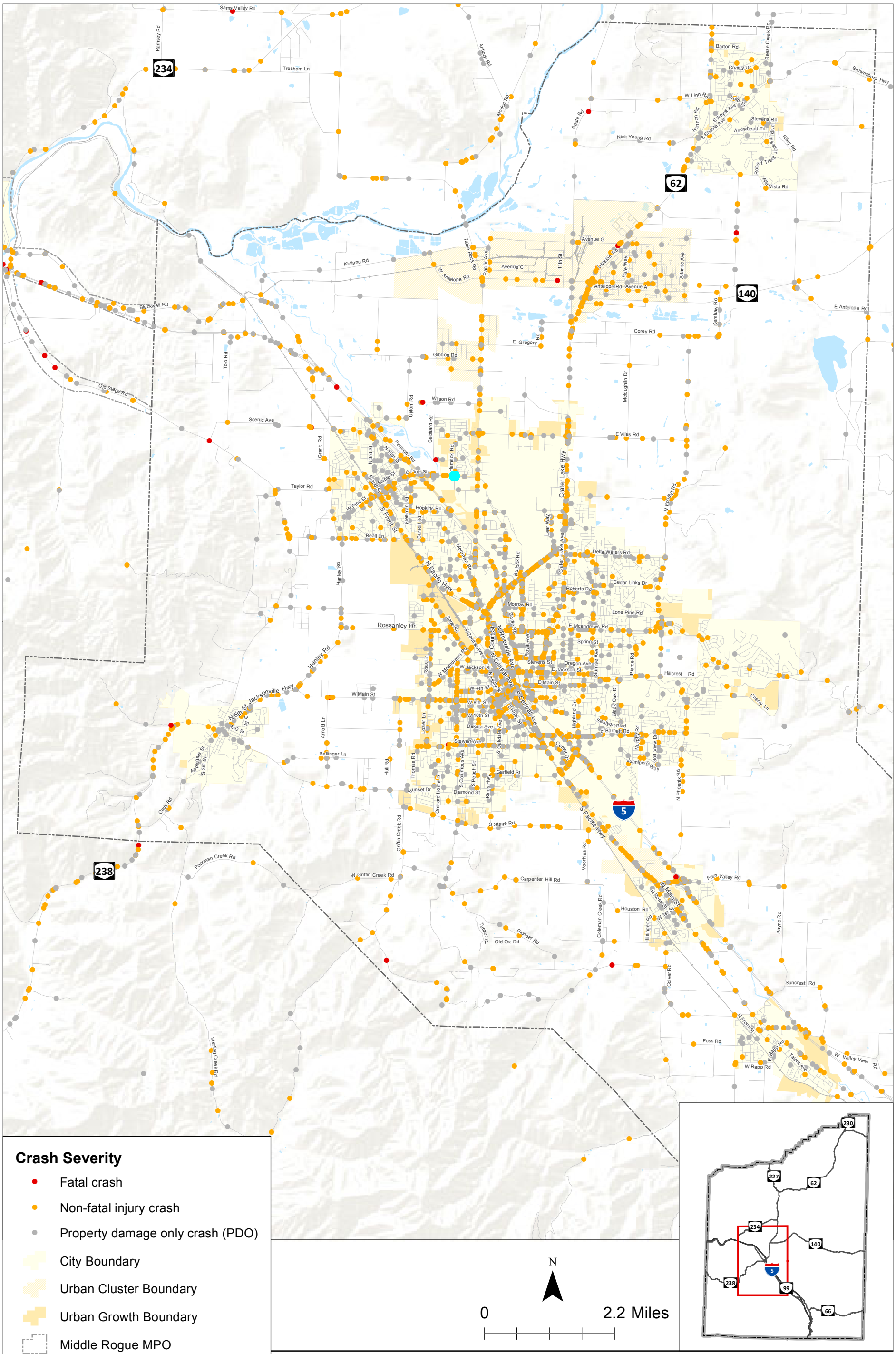

Crash History
Jackson County, OR

Figure
5B

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

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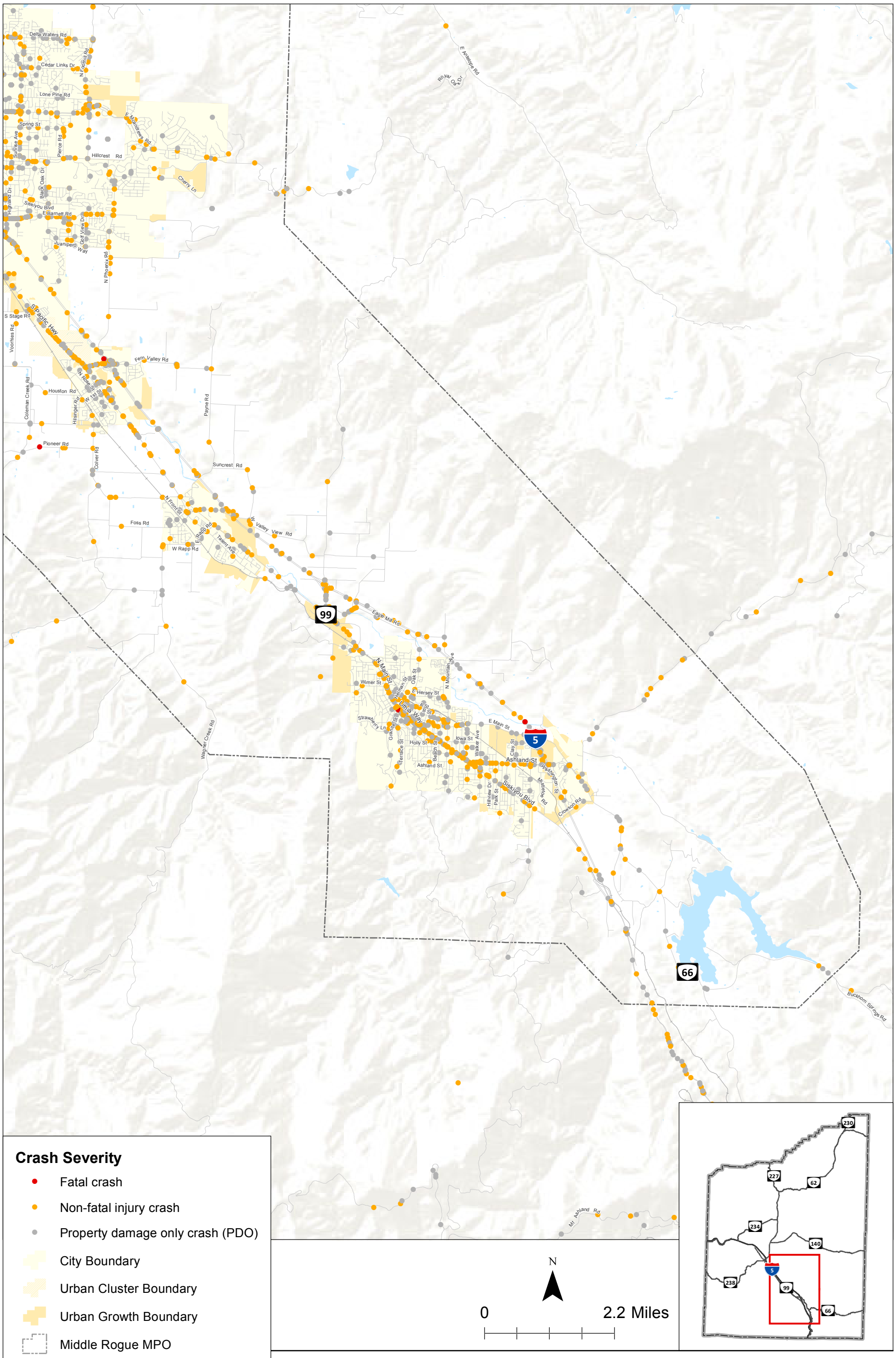

Crash Severity

- 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

N

0 2.2 Miles

Crash History
Jackson County, OR

Figure **5C**

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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 5 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 90th percentile crash rate for similar facilities
Foothill Road	Lone Pine Road to Coker Butte	Currently exceeds 90th percentile crash rate for similar facilities
Foothill Road	Coker Butte to Corey Road	Currently exceeds 90th percentile crash rate for similar facilities
Old Stage Road	Ross Lane to Beall Lane	Currently exceeds 90th percentile crash rate for similar facilities
Old Stage Road	Beall Lane to Taylor Road	Currently exceeds 90th percentile crash rate for similar facilities
Table Rock Road	Biddle Road to E Villas Road	Currently exceeds 90th percentile crash rate for similar facilities
Table Rock Road	Wilson to West Gregory Road	Currently exceeds 90th percentile crash rate for similar facilities
Table Rock Road	Modoc/Bybee Ferry Road to OR234	Currently exceeds 90th percentile crash rate for similar facilities
Antelope Road	Agate Road to OR 62	Currently exceeds 90th percentile crash rate for similar facilities
Meadows Road	E Evans Creek to Beagle Road	Currently exceeds 90th percentile crash rate for similar facilities
E Evans Creek Road	Minthorne Road to Pleasant Creek Road	Currently exceeds 90th percentile crash rate for similar facilities
Pioneer Road	Dark Hollow Road to Carpenter Hill Road	Currently exceeds 90th percentile crash rate for similar facilities
S Stage Road	Orchard Home Road to Hull Road	Currently exceeds 90th percentile crash rate for similar facilities
S Stage Road	Hull Road to Arnold Lane	Currently exceeds 90th percentile crash rate for similar facilities
Hanley Road	Rossanley to Jacksonville City Limits	Currently exceeds 90th percentile crash rate for similar facilities

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, colliding with various fixed-objects, and/or other vehicles on the roadway. 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 operated by RVTD and specialized transportation services provided by others for users such as senior citizens and persons with disabilities. Intercity transit service is provided by Greyhound and by Amtrak.

Identified transit service needs are based on community policies and goals, rather than quantitative standards. The Regional Transportation Plan (RTP) establishes service goals related to transit. Because these are adopted regional goals, failure to achieve them can be considered an unmet need.

Fixed-Route Transit Service

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 service[1], required by the American with Disabilities Act (ADA) is provided within ¾ mile of fixed-route service. RVTD service is provided on weekdays excluding national holidays. Figure 6 illustrates the locations of RVTD routes and the Front Street Transfer Station. No service is provided on Saturdays or Sundays. The fixed-route bus lines include:

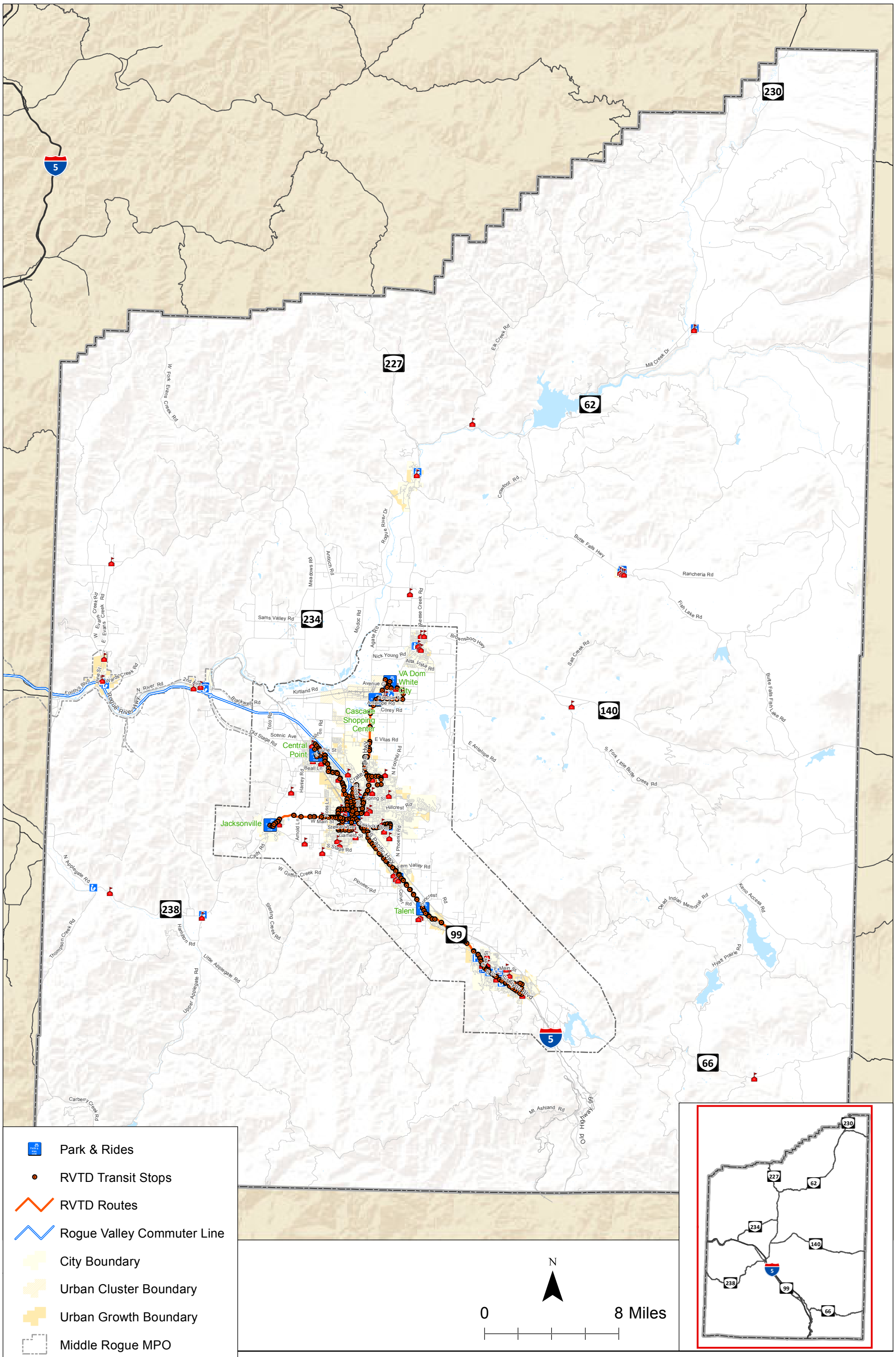
- Route 21, *RVIM Popular Drive;*
- Route 2, *Main Street/West Medford;*
- Route 24, *East Barnett/RVMC;*
- Route 10, *Ashland/Talent/Phoenix;*
- Route 30, Medford/*Jacksonville;*
- Route 40, Medford/*Central Point;* and
- Route 60, Medford/*White City.*

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 Contractos;
- Upper Rogue Community Center RSVP Call-a-Ride & TransMed;
- Private and Charter Services;
- Rogue Valley Commuter Line; and
- South West Point.

[1] [1] *Complementary demand-response service* is the term used to describe demand-responsive ADA service that supplements the fixed-route service. The term does not indicate that the service is free.



Public Transportation Routes and Stops
Jackson County, OR

Figure **6A**

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

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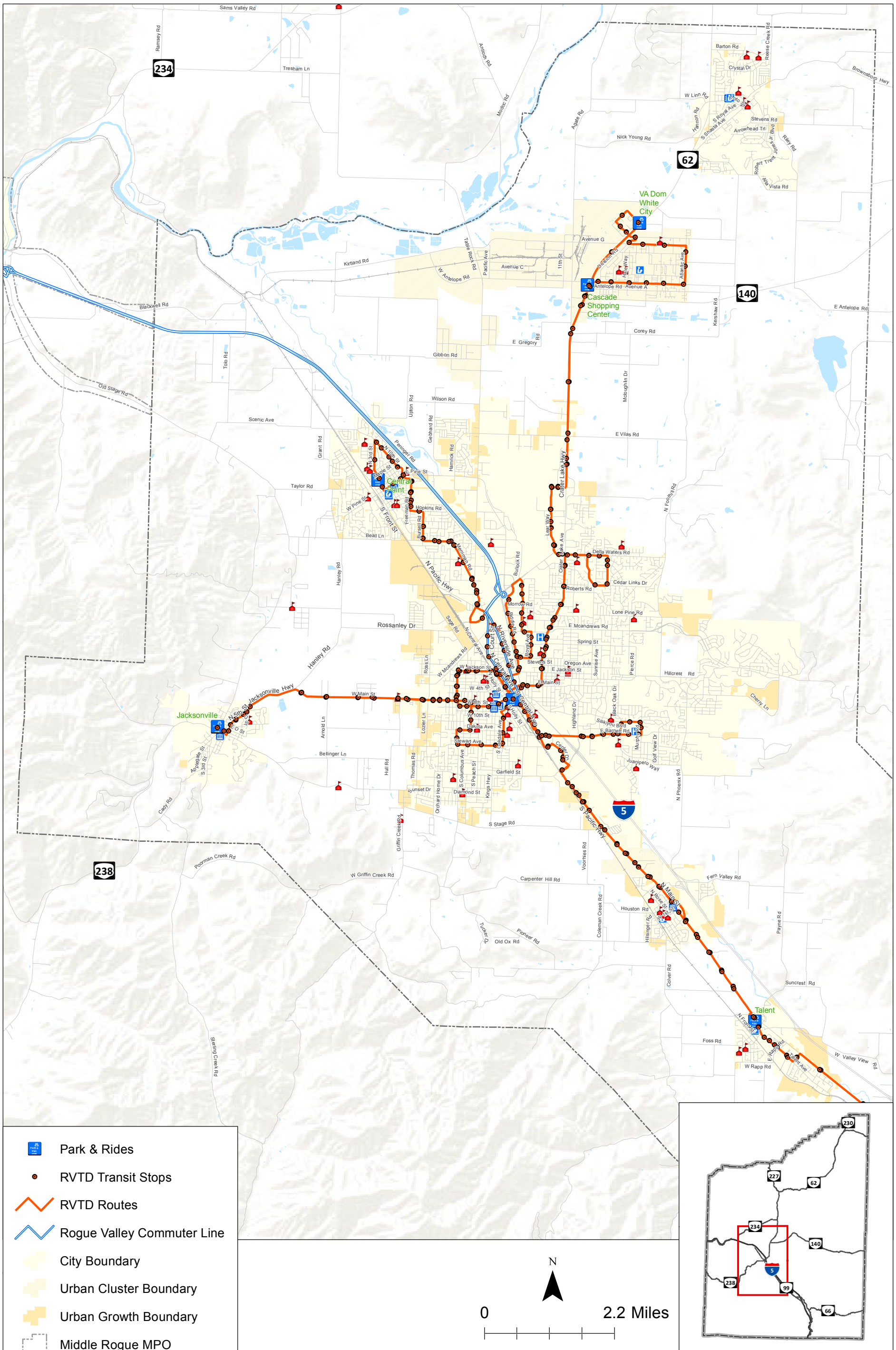

Public Transportation Routes and Stops
Jackson County, OR

Figure **6B**

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

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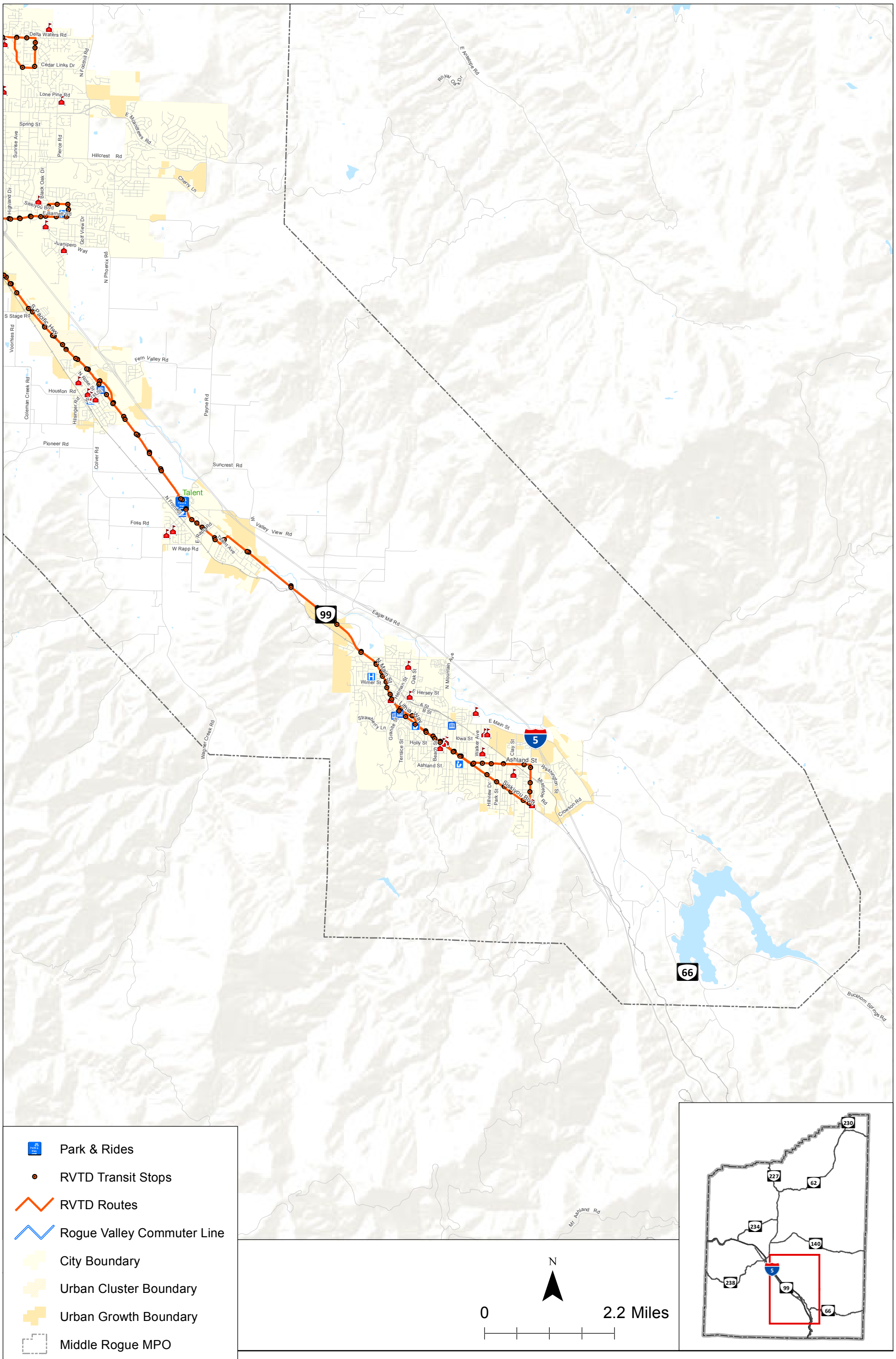

Public Transportation Routes and Stops
Jackson County, OR

Figure **6C**

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

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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. Five park & ride lots are located in Jackson County; two are located in White City and one in each of Central Point, Jacksonville, Medford, and Talent. Each lot has limited 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.

BICYCLE AND PEDESTRIAN SYSTEM

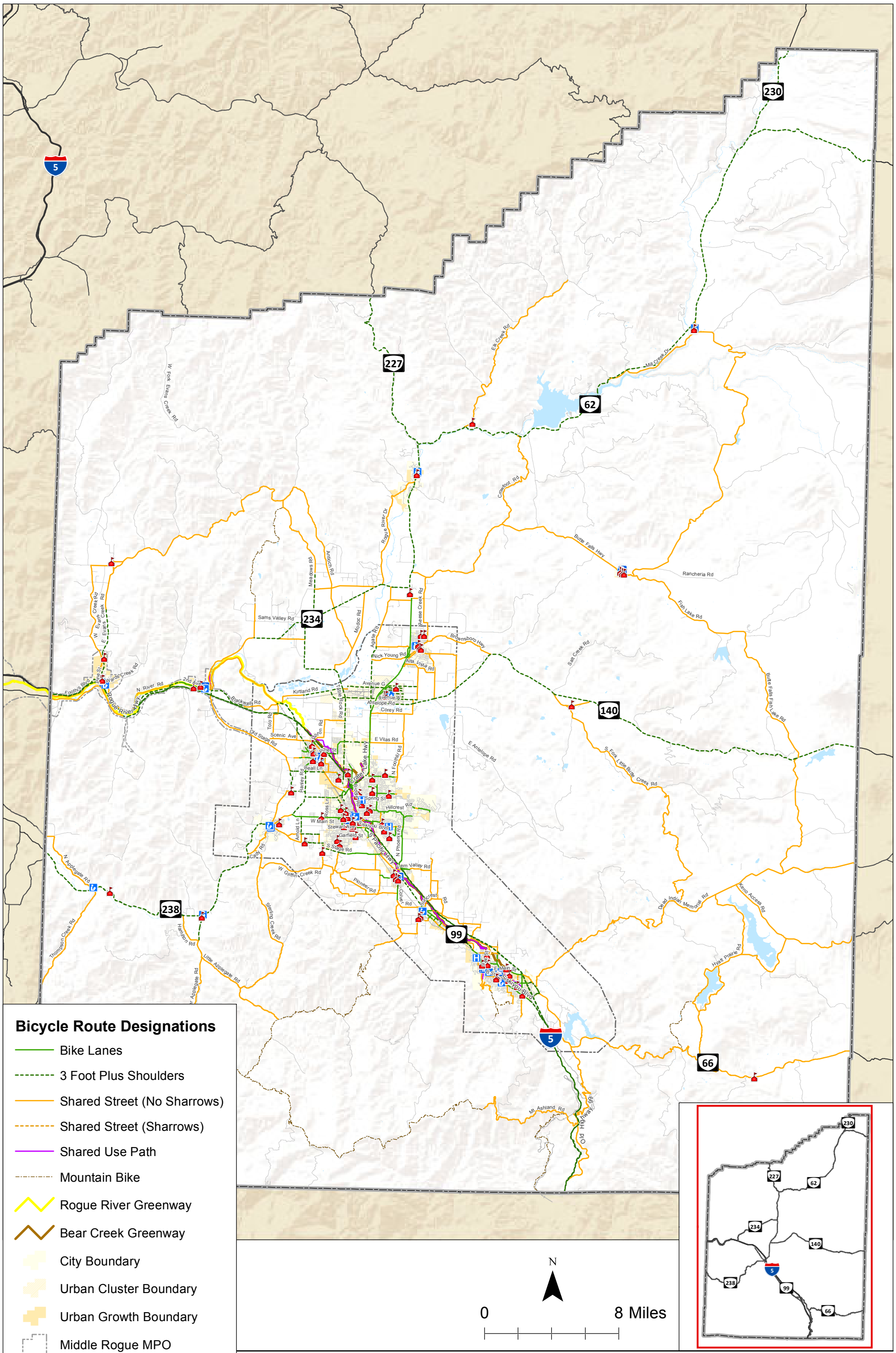
Pedestrian and bicycle facilities are the elements of the transportation system that enable people to walk and bike safely and efficiently between land uses. Within Jackson County, pedestrian and bicycle facilities primarily serve short trips to major attractors, such as schools, parks, and transit stops. 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. As shown, bike lanes and shared lanes are focused within the cities while 3 foot plus shoulders and on-street facilities are mainly between incorporated areas. The Bear Creek Greenway runs along Bear Creek from Ashland to Central Point along the I-5 and Highway 99 corridor. 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.

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 picnicking areas. The BCGW is complete and there is now a focus to improve existing connections.



Bicycle Route Designations

- Bike Lanes
- 3 Foot Plus Shoulders
- Shared Street (No Sharrows)
- Shared Street (Sharrows)
- Shared Use Path
- Mountain Bike
- 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 Facilities
Jackson County, OR

Figure
7B

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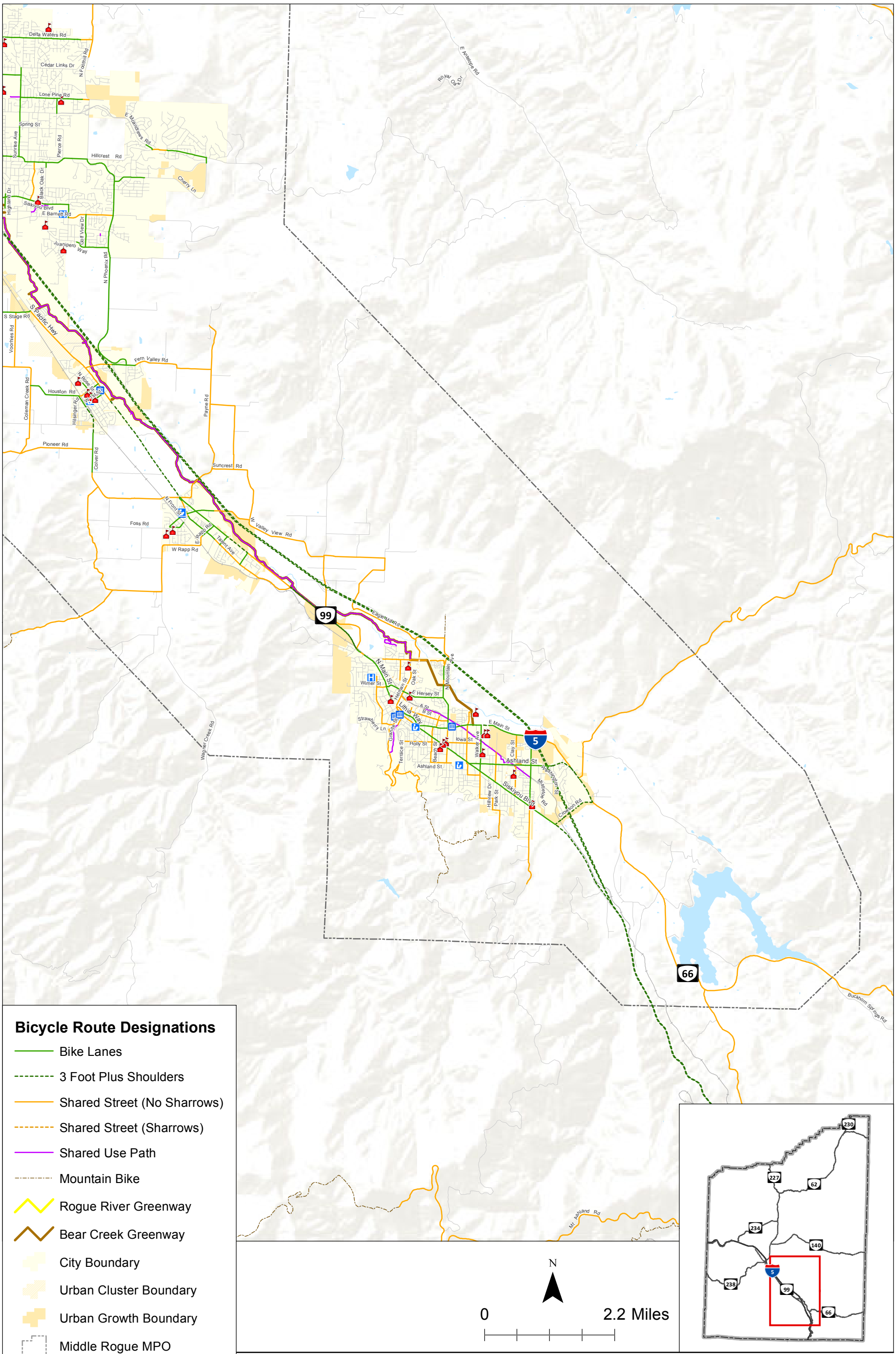
Coordinate System: NAD 1983 StatePlane Oregon South FIPS 3602 Feet Intl



Bicycle Route Designations

- Bike Lanes
- 3 Foot Plus Shoulders
- Shared Street (No Sharrows)
- Shared Street (Sharrows)
- Shared Use Path
- Mountain Bike
- 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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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, Gold Hill to Del Rio, and Depot Street Bridge through Valley of the Rogue State Park. The following sections are incomplete:

- Between Tom Pearce Park, Grants Pass and Depot Street Bridge, City of Rogue River;
- Between Twin Bridges Road (end of Valley of the Rogue State Park) and Del Rio;
- Upper River Road/Gold Ray Road from Gold Hill to Blackwell Road;
- Blackwell Road from Gold Ray Road to Dean Creek Road; and
- Dean Creek Road from Blackwell Road to connection with Bear Creek Greenway – The plan is to utilize Dean Creek Road as a shared facility.

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 County roads and State highways.

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 gage 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 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 by request by the County as well as members of the project team. Details on the review are reflected in the project list in Section 6 of the TSP.

- Existing Sidewalks
- Existing Sidewalk Gaps
- Partial Sidewalks
- 3 Foot Plus Shoulders
- Multi Use Path
- Rogue River Greenway
- Bear Creek Greenway
- City Boundary
- Urban Cluster Boundary
- Urban Growth Boundary
- Middle Rogue MPO
- Rogue Valley MPO
- County Boundary

N

0 8 Miles

Pedestrian Facilities
Jackson County, OR

Figure
8A

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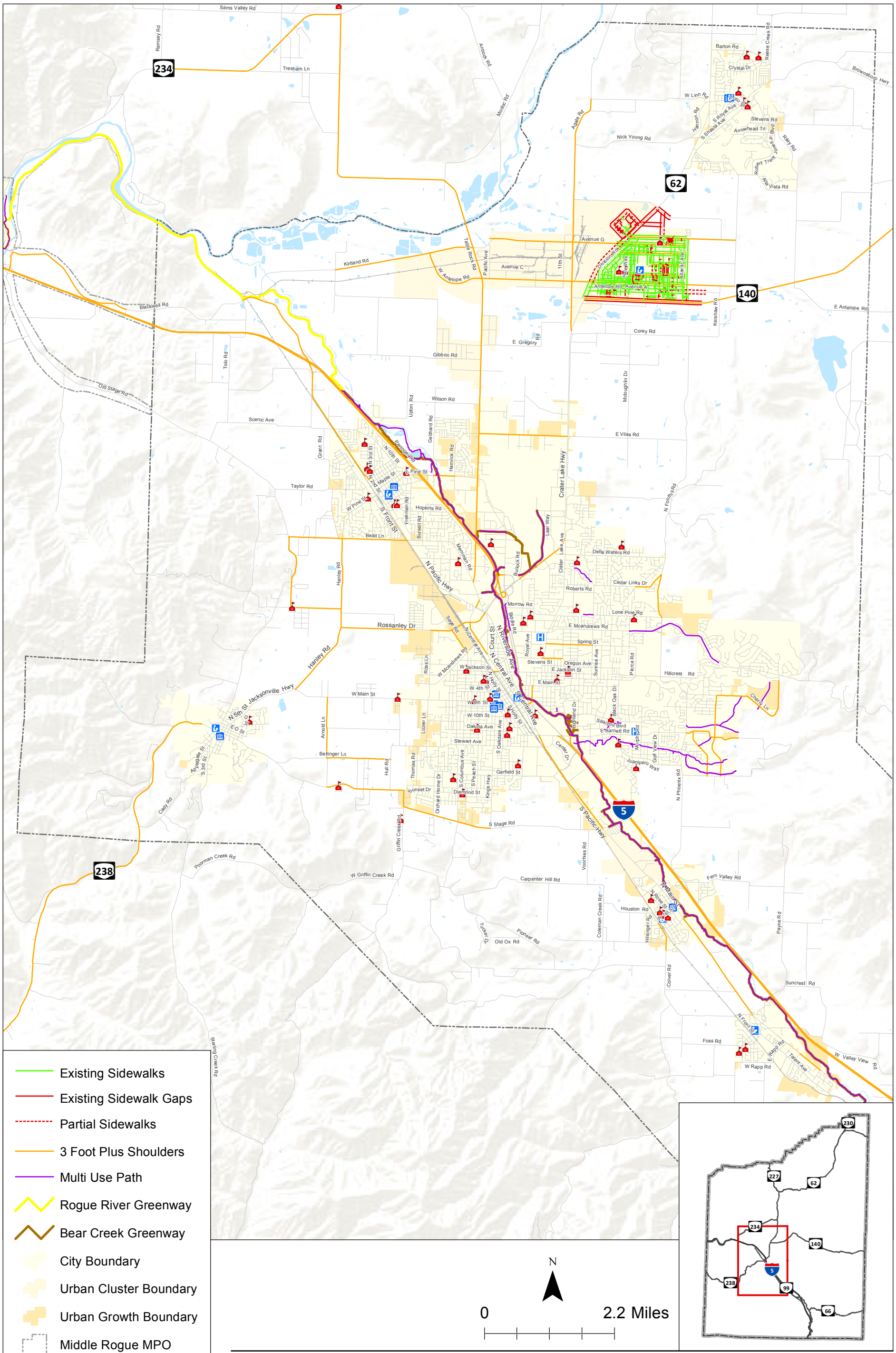

Pedestrian Facilities
Jackson County, OR

Figure
8B

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

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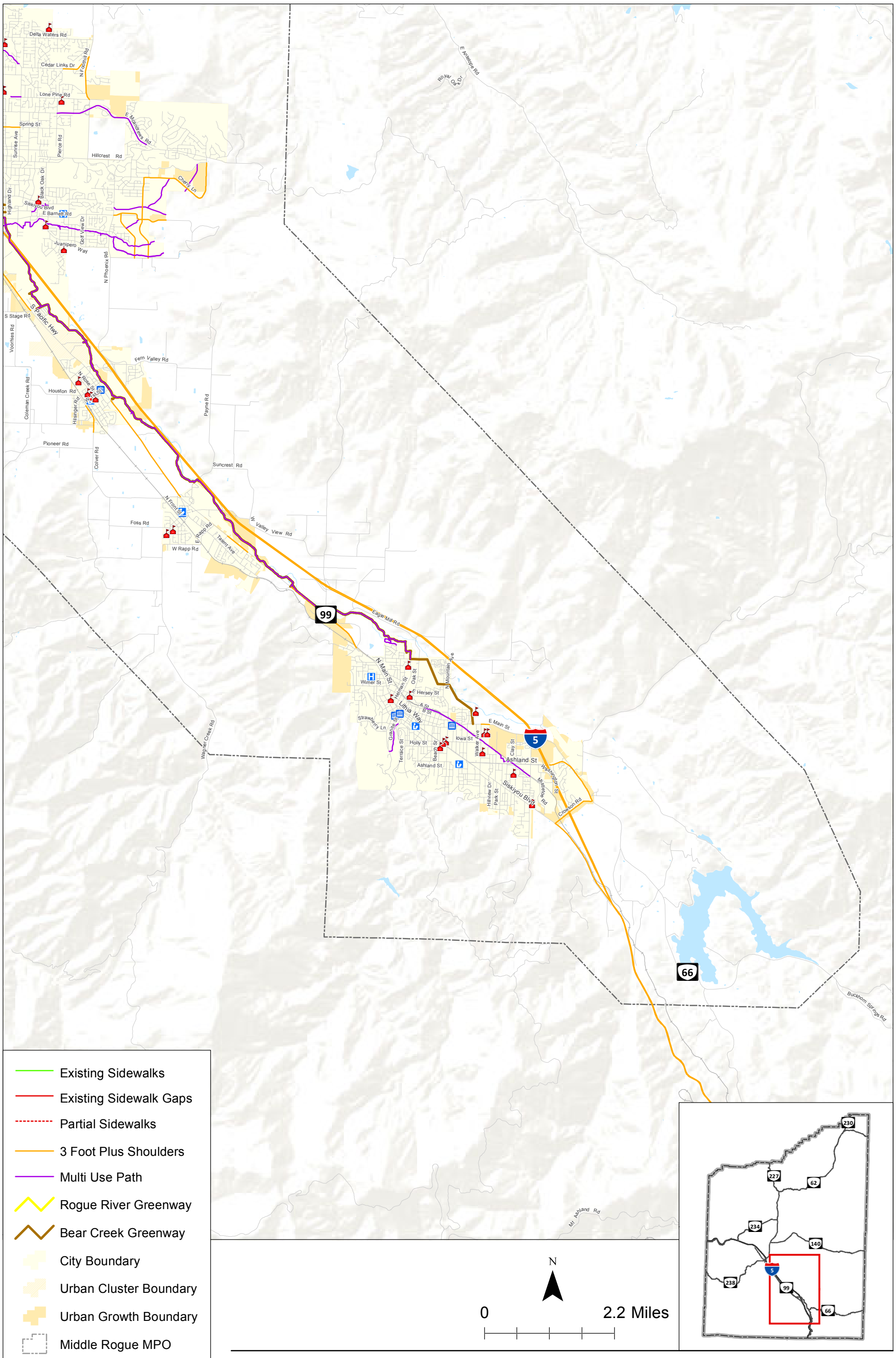

Pedestrian Facilities
Jackson County, OR

Figure
8C

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

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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 for evaluating bicycle facilities within urban and rural environments that is known as Bicycle Level of Traffic Stress (LTS). As applied by ODOT, 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 therefore, is the desired target on most roadways. Figure 9 illustrates the results of the LTS analysis for Jackson County.

The results of the analysis indicate that there are three segments with LTS 2, 11 segments with LTS 3, and 21 segments with LTS 4. It is important to note that while some segments with LTS 3 or 4 have shorter segments with lower LTS scores, the LTS of the whole segment is based on the worst LTS.

A majority of the segments rated LTS 3 and LTS 4 have shoulders or striped bike lanes; however, they are too narrow for roadways 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 6 summarizes the bicycle LTS deficiencies identified under existing traffic conditions.

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
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

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

N

0 8 Miles

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

Figure **9A**

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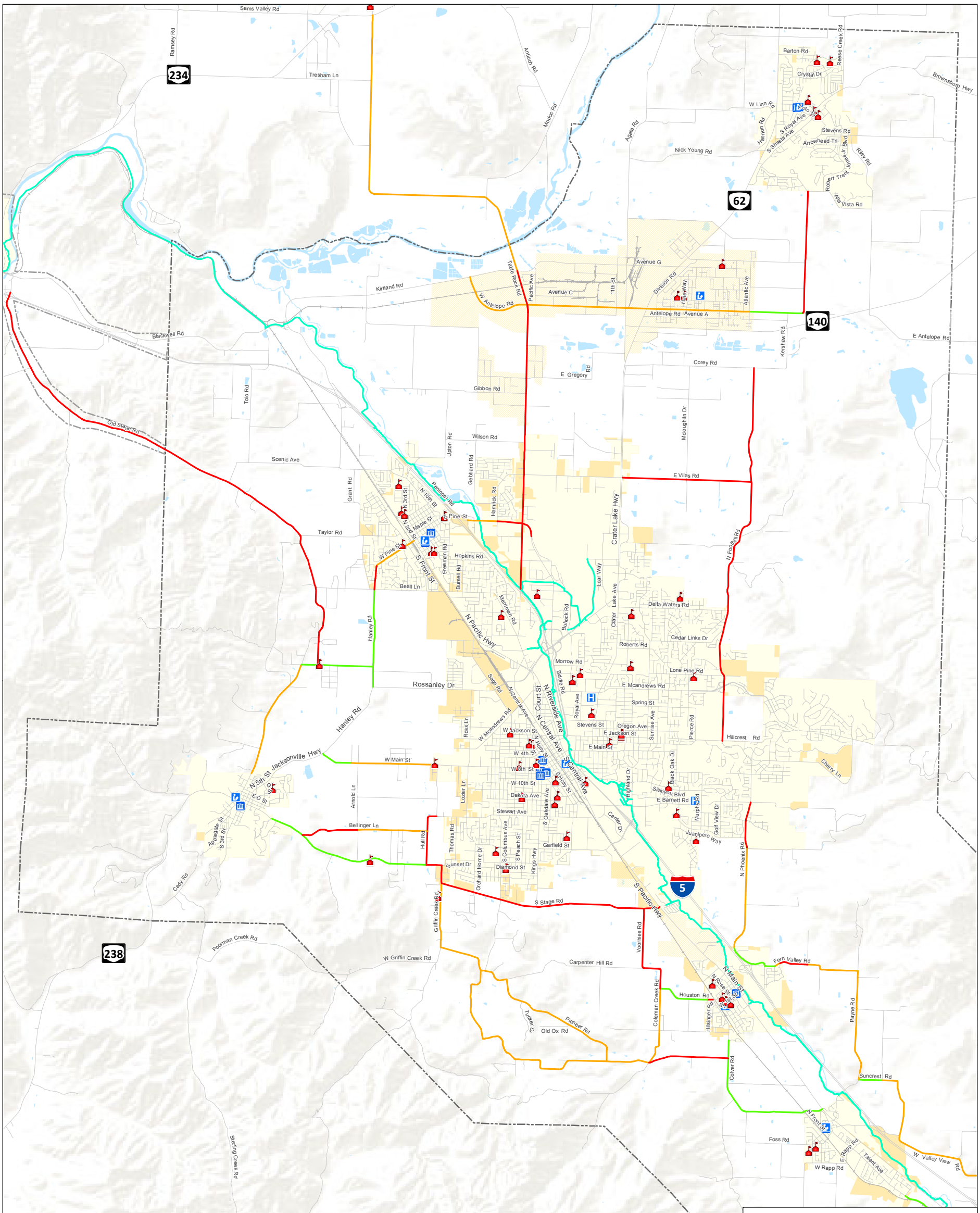

Bicycle Level of Traffic Stress (LTS)
Jackson County, OR

Figure **9B**

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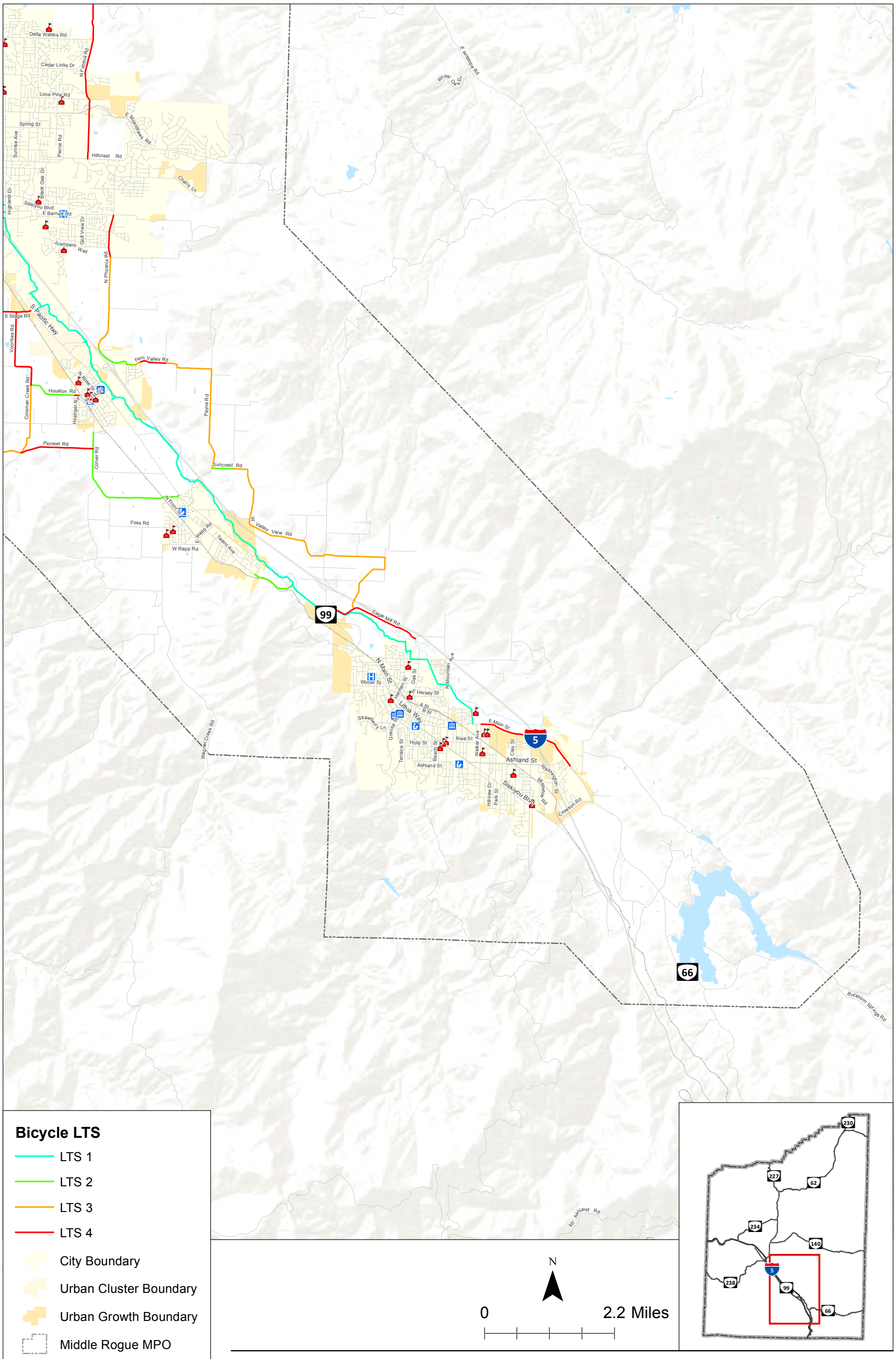

Bicycle Level of Traffic Stress (LTS) Jackson County, OR

Figure **9C**

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

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Road	From/To	Deficiency
E Pine Street	I-5 northbound ramps to 500' 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, 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.

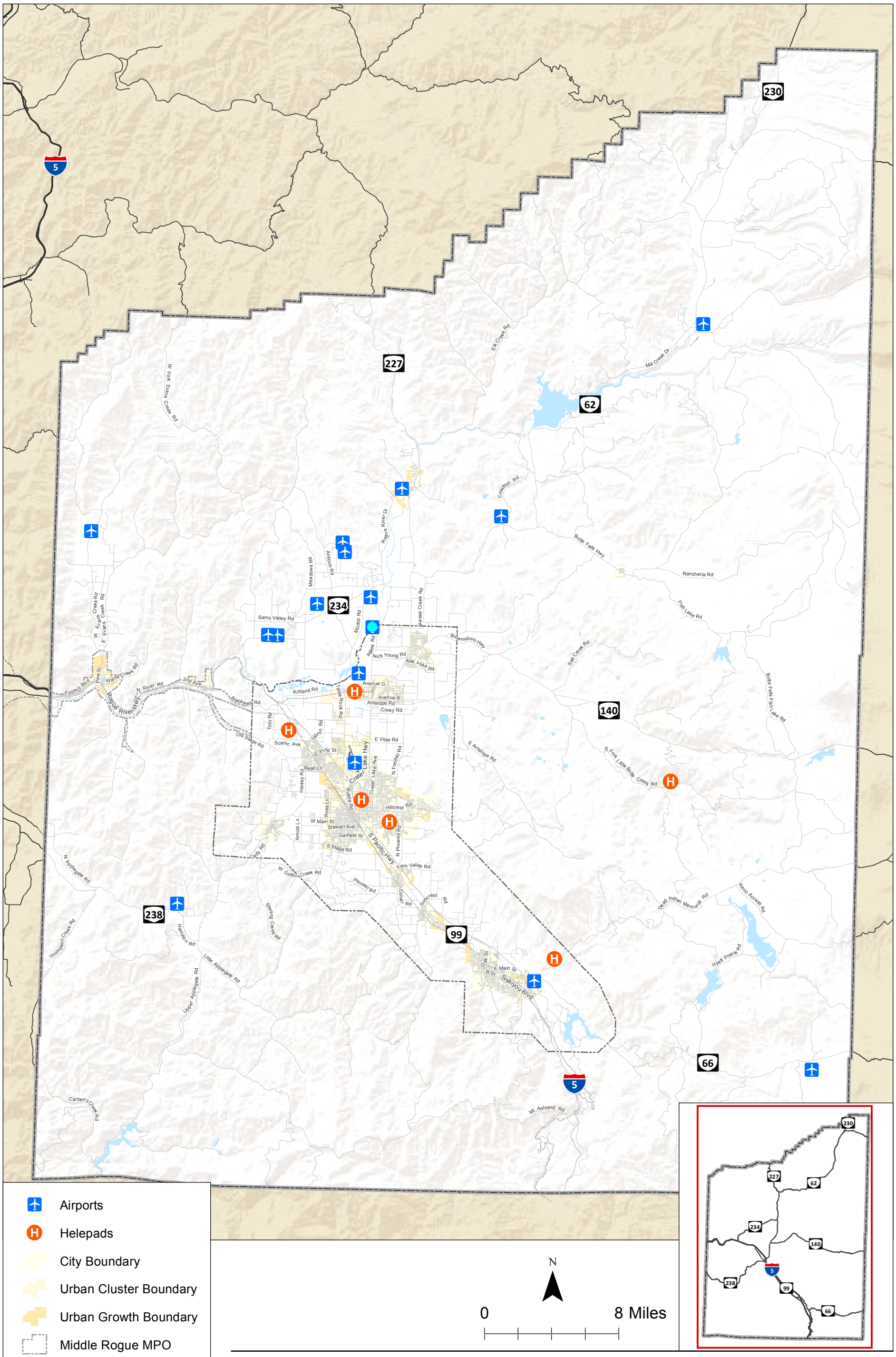
The Rogue Valley International-Medford Airport is the largest airport in the county and provides passenger, mail, and freight transportation. The airport's master plan identifies 31 projects in its short, intermediate, and long-term capital improvement program for 2001-2020, with a total cost of $121.9 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.

Water

Jackson County does not have a significant water-based transportation systems or facilities. The Rogue River runs through Jackson County and 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.



Airport Facilities
Jackson County, OR

Figure
10A

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

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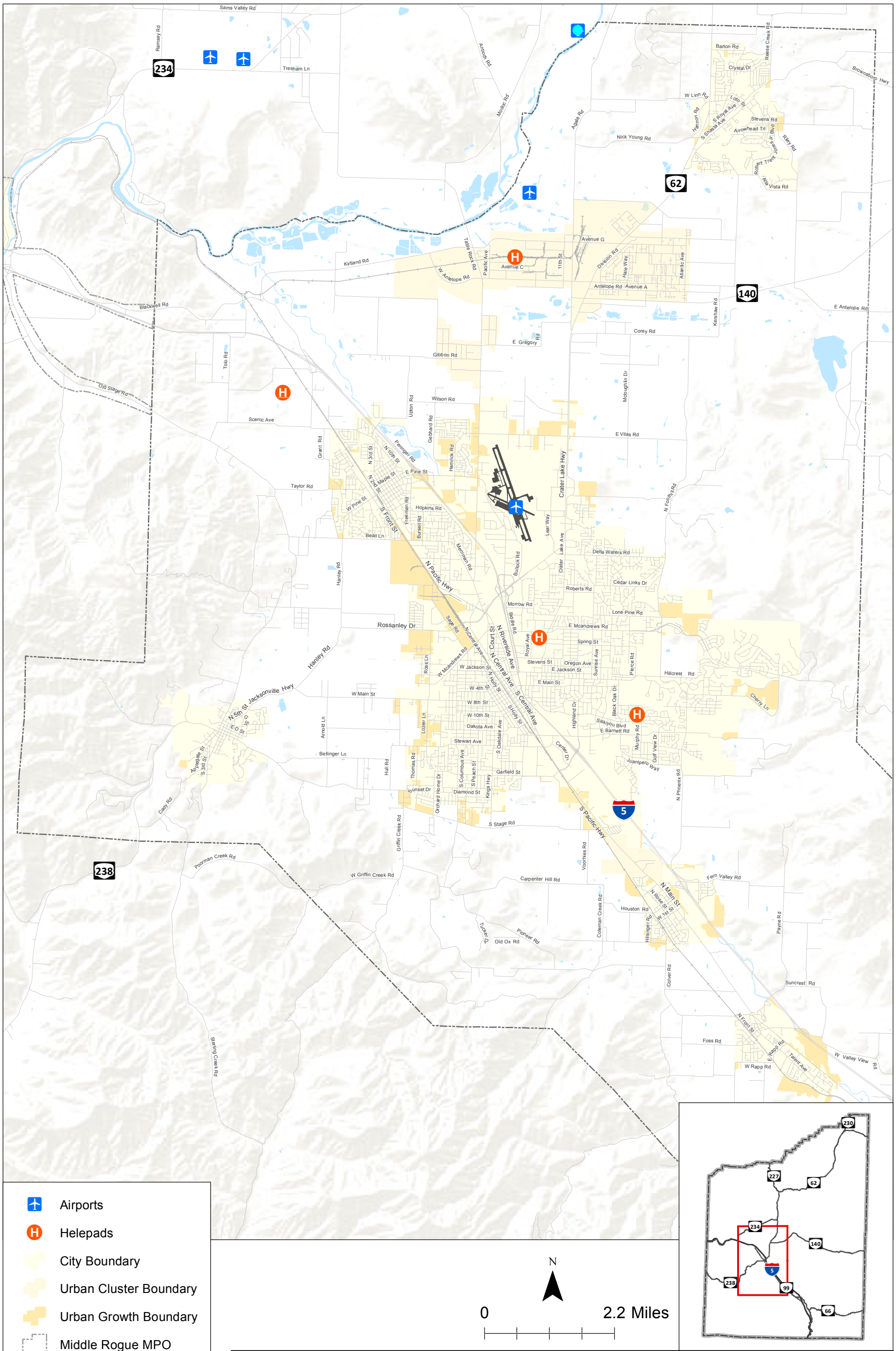

Airport Facilities
Jackson County, OR

Figure **10B**

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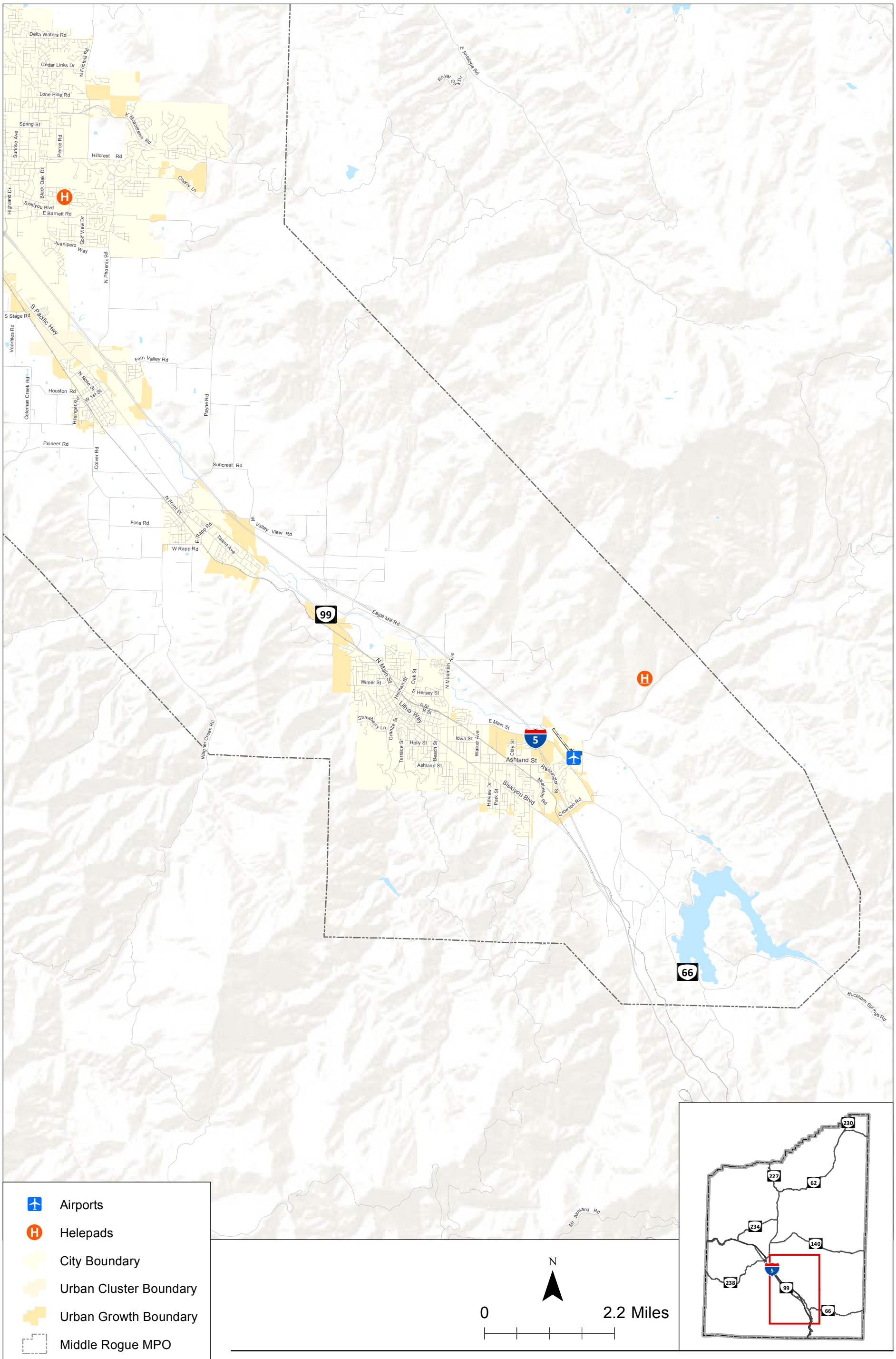
Coordinate System: NAD 1983 StatePlane Oregon South FIPS 3602 Feet Intl



Airport Facilities
Jackson County, OR

Figure
10C

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

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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 Rouge 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 north of Medford with the CORP. Superior Lumber Company also operates a small railroad that connects its wood products facility to the CORP main line at Glendale.

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, the tunnels both north and south of Rogue Valley cannot accommodate large containers. As a result, dimensional restrictions are in place.

Figure 11 shows the map of the CORP and VRT route and location 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 are both “wig wag” types. The “Passive Control” crossings are signed only. There are 30 active control crossings and 18 passive control crossings in the County. Currently, a project at the Depot Street crossing in Rogue River is underway which will improve the operation of the crossing.

Passenger Rail

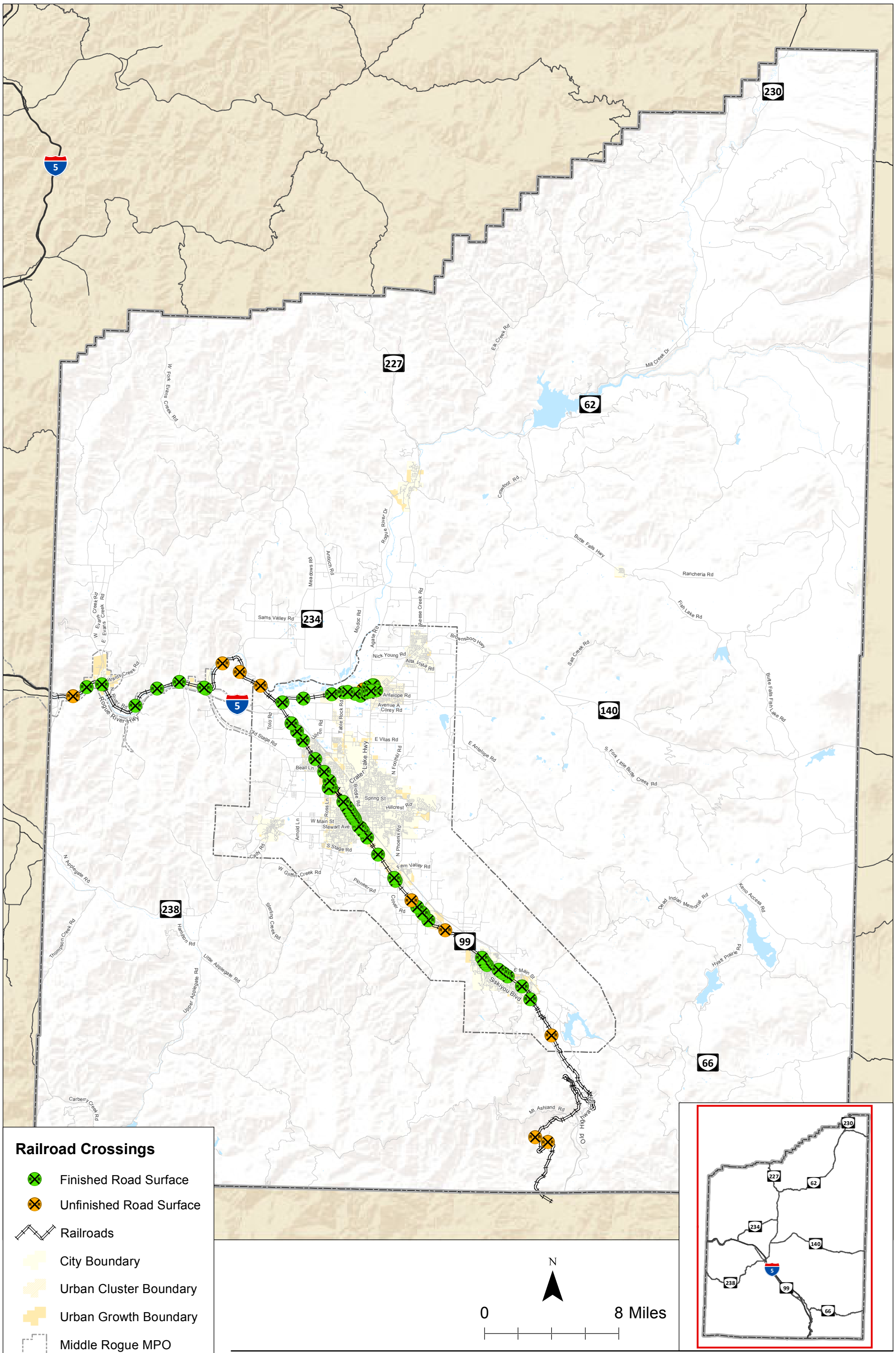
Passenger Rail service is offered within Jackson County by Amtrak. Amtrak has stops in Medford, Ashland, White City, and Gold Hill. None of the stops have a ticketing office and are for pick up and drop offs only. The nearest full service station is in Klamath Falls, which has a ticket office, enclosed waiting area, and restrooms. Amtrak Thruway bus service provides service from the stops in Jackson County to the station in Klamath Falls.

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 with approximately 60% of these residents 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.



Rail Facilities
Jackson County, OR

Figure
11A

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

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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

N

0 2.2 Miles

Rail Facilities
Jackson County, OR

Figure
11B

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

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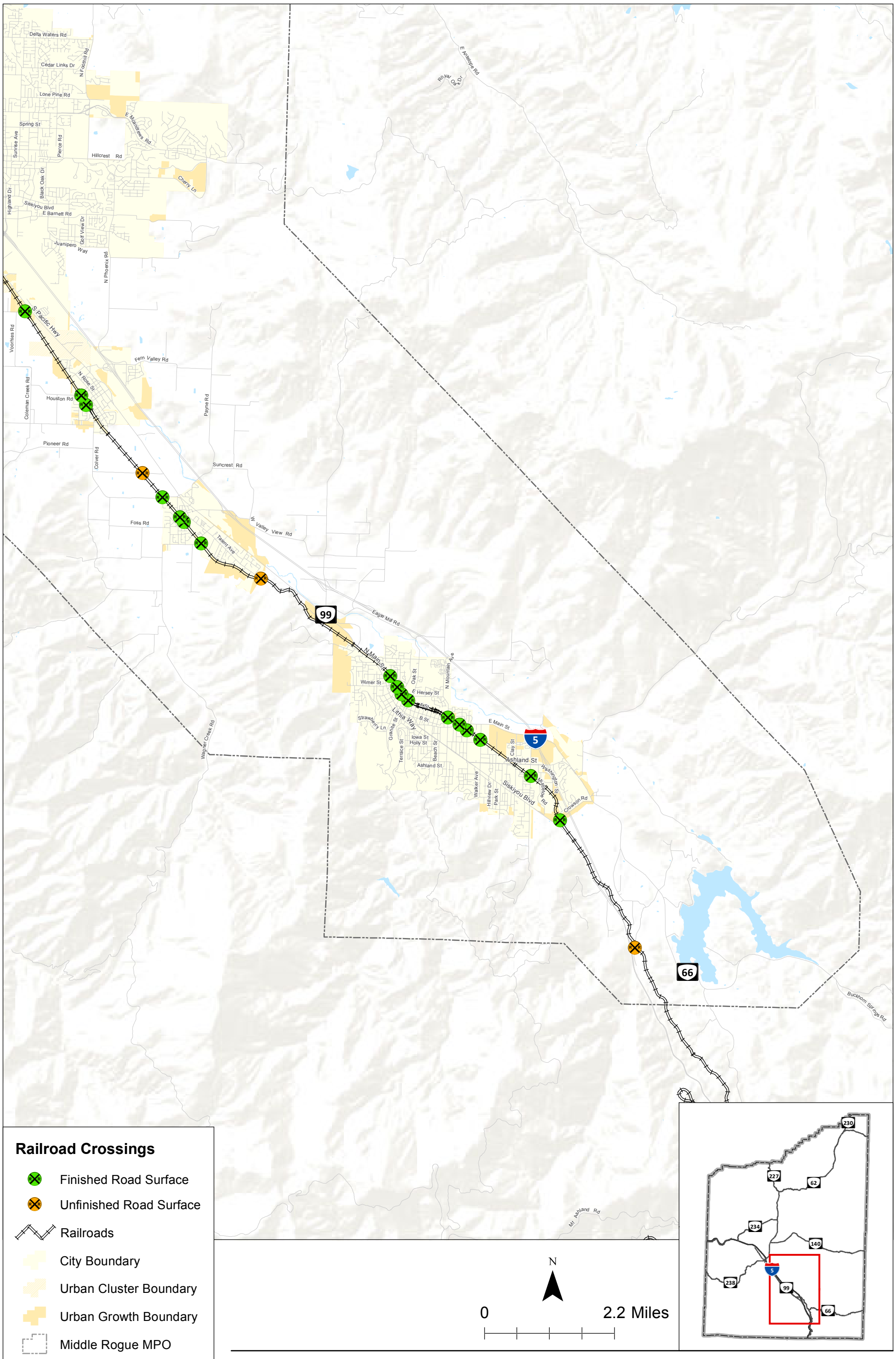

Railroad Crossings

- 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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KITTELSON & ASSOCIATES, INC.
TRANSPORTATION ENGINEERING/PLANNING

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

Other wholesale customers outside Medford include three domestic water districts. The Coker Butte Water Association, which purchases its water from the Medford Water Commission 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 other 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.

Section 4 Goals and Policies

GOALS AND POLICIES

This section provides the goals and policies that will guide the development of the Jackson County transportation system. Three primary goals are presented for Livability, Modal Components, and Integration.

4.1 LIVABILITY

Livability Goal: To develop and maintain a safe multi-modal transportation system capable of meeting the diverse transportation needs of the County while minimizing adverse impacts to the environment and to the County's quality of life.

4.1.1 Accessibility and Connectivity

4.1.1-A The County will work to provide all users with access to integrated transportation facilities and services, including addressing the needs of those with limited mobility, consistent with the federal Americans with Disabilities Act (ADA).

4.1.1-B In partnership with cities, regional agencies, and the State, the County will continue to develop a transportation system that provides equitable access to underserved and vulnerable populations.

4.1.1-C The County will strive to preserve and maintain the existing transportation system assets in a state of good repair in order to preserve their intended function and maintain their useful life.

4.1.1-D Consistent with the spacing and improvement standards in the adopted County Transportation System Plan (TSP), the County will promote a well-connected street and road system, and in urban areas will work to enhance a grid system, in order to minimize travel distances.

4.1.1-E The County will add and maintain strategic system connections for all modes throughout the transportation system to improve access between developed areas, serve new development, and manage system performance.

4.1.1-F The County will work to improve and expand access via all travel modes to recreational areas and facilities throughout the county, including establishing new and improved connections and access to trails, greenways, and other pedestrian and bicycle facilities, with a focus on improved connections to regional bicycle routes and trails systems.

4.1.2 Safety Policies

4.1.2-A The County will provide and support needed investments along wildfire hazard evacuation and Seismic Lifeline Routes.

4.1.2-B Public Safety will be a primary consideration in the planning, design, and maintenance of all Jackson County Transportation Systems. The County will improve safety for walking, biking and driving trips by prioritizing improvements to high collision locations.

4.1.2-C The County will provide and support enhanced street and highway crossings for pedestrians and bicyclists, consistent with identified needs in the County TSP and focused on reducing collisions.

4.1.2-D In order to enhance safety and operations, the County will prioritize improvements to roads that do not meet width or horizontal or vertical alignment standards.

4.2 MODAL COMPONENTS

Modal Components Goal: To plan an integrated transportation system that maintains existing facilities and responds to the changing needs of the County by providing effective multi-modal transportation options.

4.2.1 General Policies

4.2.1-A The County will prioritize preservation and maintenance of the existing transportation system rather than increasing vehicular capacity.

4.2.1-B The County shall adopt and maintain transportation design guidelines and development regulations that address all elements of the county transportation system and that promote access to and use of a multi-modal transportation system.

4.2.1-C The County will seek opportunities to work with employers to reduce reliance on single-occupant vehicles, including exploring transportation demand management strategies and tools.

4.2.1-D The County will employ new technologies to enhance and make the most efficient use of the transportation system and extend the useful life of existing facilities.

4.2.1-E The County will implement parking strategies to encourage walking, bicycling, carpooling and transit.

4.2.1-F The County will design and manage the road system consistent with adopted TSP mobility standards for facilities both within and outside of the MPO boundary. State and County mobility standards will be supported on facilities under the respective jurisdiction.

4.2.1-G Project implementation will be guided by the prioritization of projects established in the TSP. However, it is not bound by it.

4.2.1-H Where right-of-way acquisition will encroach on the existing structural setback area, a hierarchy of right-of-way reduction solutions will be employed. This hierarchy will be established in the County TSP consistent with road standards.

Freight Movement

4.2.1-I The County will seek to improve the movement of goods and delivery of services throughout the County while balancing the needs of all users with a variety of travel modes.

4.2.1-J The County will work with regional partners to identify obstacles and barriers to safe, reliable and efficient goods movement and coordinate highway projects with other freight movement projects and infrastructure.

4.2.1-K The County will prioritize improvements to enhance efficient goods movement on designated freight routes, as identified in the County TSP.

4.2.1-L The County will maintain and improve roadway facilities serving inter-modal freight facilities.

4.2.1-M The County will continue to plan for rail service as a viable long-term transportation option for the Rogue Valley.

4.2.1-N The County will encourage bulk transportation facilities to provide efficient transport of bulk goods.

Coordination

4.2.1-O The County will continue to implement regional transportation goals and objectives by reflecting Regional Transportation Plan (RTP) policies in adopted county policy and adopting as part of its TSP all planned transportation improvements in the RTP for all regionally significant transportation facilities within the MPO area. RTP policy or project updates that impact regionally significant County facilities will require amendment to the County TSP to maintain plan consistency.

4.2.1-P The County will coordinate transportation and land use planning and decision-making with other transportation agencies and public service providers, such as ODOT, cities within the County, and emergency services agencies, when their facilities or services may be impacted by a County decision or there may be opportunities to increase the efficiency and benefits of a potential decision.

4.2.1-Q The County will pursue jurisdictional road transfers that improve jurisdictional allocation of facility management responsibilities. Roads accepted by Jackson County in jurisdictional transfers should be paved rural roads for which the County has special maintenance expertise. The County should take all appropriate legal opportunities to negotiate jurisdictional transfer of County roads within urban growth boundaries and city limits.

4.2.1-R Unless a project is needed to address hazards or immediate safety needs, the County will only improve County roads within city limits if the project is part of a jurisdictional transfer agreement, and if the City or a third party agrees to cover at least half of the project cost and County funds are available to cover the remaining cost.

4.2.1-S The County will pave an unpaved (gravel) local road or accept maintenance of an unimproved County road or local access road only if another party pays the full cost of improving the road to the County's standard for Improvement of Existing Unpaved Roads or higher standard as required; except if and when the Director determines it is in the best interest of the County to improve a County maintained unpaved road, the Director may do so provided funds are appropriated in the approved departmental budget.

4.2.1-T The County will not allocate capital improvement funds to improve local roads with the exception of roads that are part of, or providing connections to, the bicycle network or greenway systems.

4.2.1-U The County will pursue reclassification of County unimproved roads that are no longer maintained by the County as local access roads. The County will continue to exercise limited jurisdiction over local access roads but, consistent with the State's requirements, will only expend County road funds on projects that respond to an emergency or that are warranted based on the public use of the road per ORS Chapter 368.

Access Management

4.2.1-V The County will manage road approaches to preserve the safe and efficient operation of the County's roadways, consistent with their functional classification.

4.2.2 Transit System Policies

4.2.2-A The County will work with Rogue Valley Transportation District (RVTD) and specialized transportation service providers to increase transit service availability for those who are transportation disadvantaged, such as for the elderly and disabled.

4.2.2-B The County encourages fixed-route transit service in urban and urbanizing areas, where it is an energy-efficient form of transportation, and increased on-demand service to other areas of the county.

4.2.2-C The County will require as part of commercial, multi-family, and institutional development approval design elements and physical improvements that are supportive of the existing and planned public transit system and that are appropriate for the planned development.

4.2.2-D The County is committed to working with RVTD, property owners and developers to improve pedestrian connections where pedestrian access to bus stops is deficient.

4.2.3 Pedestrian System Policies

4.2.3-A The County transportation system will promote a safe, linked pedestrian system that connects residential areas to schools, recreation, commercial centers, employment centers, services, and other activity centers.

4.2.3-B Pedestrian needs within the rural areas of the County will be primarily addressed through shared-use paths or the addition of roadway shoulders that serve pedestrians and bicyclists and that may display shared roadway pavement markings or signs.

4.2.3-C The County shall consider shared-use paths designated in the TSP and other adopted plans in the county both transportation facilities and recreational/transportation enhancement facilities.

4.2.3-D The County shall require the construction of shared-use paths designated in an adopted plan as part of the development review process.

4.2.4 Bicycle System Policies

4.2.4-A The County will encourage bicycle use by maintaining and developing a safe, linked bicycle system that connects residential areas to schools, recreation, commercial centers, employment centers, services, and other activity centers.

4.2.4-B The County is committed to improving and expanding its inventory of bicycle amenities (e.g., bicycle parking, wayfinding) to make cycling a more convenient and desirable transportation alternative.

4.2.4-C Bicycle route designations established in the TSP shall provide a basis for prioritizing improvements to bicycle facilities.

4.2.4-D In most cases, roadway shoulders will provide for multiple uses such as bikeways, pedestrian facilities, breakdown areas, and temporary parking. Shoulders may be dedicated bikeways only when dedicated pedestrian facilities are also available.

4.2.5 Aviation System Policies

4.2.5-A The County's first aviation planning priority is the preservation and protection of existing commercial and general aviation facilities and uses for all public use airports.

4.2.5-B The County will plan for and support the expansion and enhancement of commercial and general aviation facilities and uses for all public use airports as planning deficiencies are identified.

4.2.5-C The County will support the development of new private-use airports and the preservation and expansion of existing private-use airports in accordance with applicable comprehensive plan policies and development ordinances.

4.2.5-D The County will support multi-modal transportation improvement and service enhancements to improve access to the air system facilities, including the Medford International Airport.

4.3 INTEGRATION

Integration Goal: Provide an open and balanced process for planning and developing a transportation system that integrates land use, financial, and environmental planning to prioritize strategic transportation investments.

4.3.1 Community Involvement Policies

4.3.1-A The County will encourage strong community involvement in planning for and amending the County's transportation system.

4.3.1-B The County will work to ensure the full and fair participation by all potentially affected communities in the transportation system decision-making process.

4.3.2 Transportation and Land Use Coordination Policies

4.3.2-A The County will protect the function of existing and planned roadways as identified in the TSP and will ensure that all development proposals, plan amendments, and zone changes are consistent with the adopted TSP.

4.3.2-B The County will consider the impacts on existing or planned transportation facilities in all discretionary land use decisions and, unless a waiver is granted by the Development Services Director and the County Engineer, shall require applicable development proposals, as defined in the Land Development Ordinance, to prepare a traffic impact study.

4.3.2-C The County will establish and maintain land development ordinance regulations to protect and improve the transportation system.

4.3.2-D The County will consider only those projects listed in the RVMPO's Tier 1 list of financially constrained federally-funded and regionally-significant projects, and/or in the County's 5-year Capital Improvement Plan (CIP), in determining the planned capacity, function and level of service of transportation facilities and services.

4.3.2-F The County will program transportation improvements to facilitate planned land uses, including commercial, industrial and residential growth in unincorporated urban areas.

4.3.3 Financing Policies

4.3.3-A The County will prioritize transportation projects that have the most benefits for the cost. This prioritization will not discount the value of qualitative differences among projects.

4.3.3-B The County will review transportation system needs and funding on an annual basis. Required adjustments will be made by updates to the CIP, which is approved annually by the Board of Commissioners.

4.3.3-C The County shall require that proposed land developments mitigate their adverse transportation impacts and ensure that all expanding or new development contributes a fair and proportionate share toward on-site and off-site transportation system improvements.

4.3.4 Environmental and Scenic Resources Policies

4.3.4-A The County shall support the exploration and innovation of alternative travel modes and fuel sources in order to reduce single-occupancy vehicles, vehicle miles traveled, air and noise pollution, greenhouse gas emissions, and reliance on fossil fuels.

4.3.4-B The County will remain committed to the maintenance and development of an environmentally sensitive transportation system.

4.3.4-C The County will continue to support the ODOT scenic byways program and will continue to protect other designated scenic roadways.

4.3.4-D The County will provide a transportation system that is consistent with the Natural Hazards Element of the Comprehensive Plan through best management practices in design and maintenance of the system as well as through adherence to applicable sections of the Land Development Ordinance, such as floodplain development requirements.

4.3.5 Urban Area Policies

Connectivity Policies

4.3.5-A The County shall require commercial, institutional, multi-family, and office developments to provide internal bicycle and pedestrian circulation patterns that makes reasonably direct connections with external bicycle and pedestrian facilities.

Safety and Aesthetics Policies

4.3.5-B The County shall require landscape strips to be provided in accordance with urban street design standards where adjacent property owners assume responsibility for their maintenance.

4.3.5-C The County will ensure that all proposed new development within White City residential areas includes street lighting.

4.3.5-D The County shall require well-designed site plans for on-site loading and motorized and non-motorized circulation will be required in urban areas to assure developments provide appropriate safety, efficiency, and aesthetic elements.

Economic Polices

4.3.5-E The County will strive to meet the transportation needs of urban industrial areas by balancing freight mobility against access to labor and services.

4.3.5-F The County shall support commercial land use opportunities along Highway 62 in White City, to the extent these uses are consistent with the Oregon Highway Plan.

4.3.5-G The County will strive to meet the transportation needs of urban residential areas by providing diverse transportation options for accessibility to regional employment and activity centers. Maximizing opportunities for non-auto local trips is critical for provision of transportation options.

Vehicular System Policies

4.3.5-H West of Highway 62, within the White City urban reserve area, the need for movement of goods is the highest priority for street use. The County will strive to balance other uses of County arterials and State Highways west of Highway 62 with this priority.

4.3.5-I The County shall ensure that street designs in the core of urban residential neighborhoods will encourage a pedestrian friendly street environment by providing and implementing street designs that discourage vehicle speeds above the posted speed limit.

Transportation Demand Management

4.3.5-J The County shall implement transportation demand management primarily through application of a mixed-use, pedestrian-friendly land-use plan. The County shall encourage other methods of transportation demand management as feasible opportunities arise.

Parking

4.3.5-K The County shall encourage shared off-street parking for uses that can fill spaces at different times.

4.3.5-L The County shall manage the supply and type of on-street parking in urban areas to provide a safe, efficient and attractive street system.

Transit Component Policies

4.3.5-M The County shall adopt and maintain land use regulations that allow for park-and-ride lots and other major transit facilities in appropriate locations, recognizing these uses as a cost-effective means of increasing the efficiency of the existing transportation system.

Pedestrian Component Policies

4.3.5-N The County shall address pedestrian needs within urban areas of the county primarily through sidewalks or shared-use paths. Improvements to enhance the pedestrian system include installing shared roadway pavement markings and signs along both sides of the roadway, bike lanes and sidewalks along both sides of the roadways, and buffered bike lanes, cycle tracks, or shared-use paths, consistent with the County and ODOT standards.

4.3.5-O The County will require pedestrian accessways between adjacent developments when roadway connections cannot be provided, unless it can be shown that an accessway cannot reasonably be expected to improve pedestrian connectivity now or in the future.

4.3.5-P The County will require construction of sidewalks as a condition of approval on proposed development. This requirement may be relaxed in industrial areas where there is little opportunity for systemic pedestrian circulation.

4.3.5-Q Sidewalk alternatives may be installed consistent with options provided in the TSP with Development Services Director or County Engineer discretion and approval.

4.3.5-R Development of an attractive and functional pedestrian system is critical for the successful redevelopment of urban residential areas. The County will ensure that pedestrian needs are incorporated in street planning, design, construction, and maintenance activities.

4.3.5-S The County shall require that the location and design of all sidewalks comply with the requirements of the Americans with Disabilities Act.

Transportation and Land Use Coordination Policies

4.3.5-T For the residential area east of Highway 62 in White City, the County shall maintain land use policies that will reduce reliance on the automobile and support the TSP by facilitating a compact community of mixed uses and development that is oriented to the use of public transportation and non-motorized travel.

Area Specific Policies

4.3.5-U The well-being of White City and other urban unincorporated areas is highly dependent on State highways. The County will work collaboratively with ODOT on planning and project development for these highways.