
# Josephine County
# Transportation System Plan

Josephine County
Oregon Department of Transportation

# Josephine County

# *Rural Transportation System Plan*

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Prepared for:

Josephine County

Prepared by:

Parametrix, Inc.
700 NE Multnomah Street, Suite 1160
Portland, OR 97232
(503) 233-2400

In Association with:
Nelson-Nygaard
Johnson Gardner

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**Josephine County**
Steve Hodge, County Engineer, Project Manager
Robert Weber, Public Works Director
William Bartow, Planning Director
Rolf Pitts, Public Works
Brad Barber, Public Works
Chuck Dejanvier, Public Works
Becki Ray, Public Works
Colleen O'Hickey, Public Works

**Technical assistance provided by:**
*Parametrix, Inc., Lead Project Consultants*
David Siegel, AICP, Project Manager
Howard Roll, P.E., Transportation Planning
Jennifer Bradford, GIS Coordinator/Land Use
Rory Renfro, Transportation Planning
Anne Sylvester, Deputy Project Manager
Jason Franklin, Land Use/Public Involvement
David Stocker, GIS and Land Use Planning

*Nelson/Nygaard, Transit Consultants*
Scott Chapman, Transit Planning

*Johnson-Gardner, Financial Consultants*
Bill Reid, Transportation Financing

**Agency Participants:**
Airport Advisory Board – Alex Grossi
Bureau of Land Management – Jim Roper
City of Cave Junction - Helen Early
City of Grants Pass – Dave Wright
Oregon Department of Land Conservation and Development – John Renz
Oregon Department of Transportation – Ingrid Weisenbach
Rogue Valley Area Commission on Transportation – Dick Smith
U.S. Forestry Service – Dave Ewing

**Citizen Advisory Committee:**
Donna Chickering
Dwight Ellis
Gerard Fitzgerald
Don Gray
Lee Harman
Bob Hyatt
Brian Lee
James Lowe
Monte Mendenhall
Andy Owens Sr.
Duane Petersen
Dave Toler

**Rural County Planning Commission**
Don Ashton
Douglas Beck
Louis Chauvin
John Ciminello
Elizabeth Metcalf
Duane Petersen
Jim Raffenburg
Sunny Sundquist
Ron White

**County Board of Commissioners**
Jim Brock
Harold Haugen
Jim Riddle

# LIST OF ACRONYMS

AASHTO – American Association of State Highway and Transportation Officials
AC – Asphalt Concrete
ADT – Average Daily Traffic
CAC- Citizens Advisory Committee
CMAQ – Congestion Management and Air Quality Improvement Program
CORP – Central Oregon and Pacific Railroad
DAR – Dial-a-Ride
DLCD – Oregon Department of Land Conservation and Development
FAA – Federal Aviation Administration
FFY – Federal Fiscal Year
FHWA – Federal Highway Administration
FTA – Federal Transit Administration
FTZ – Foreign Trade Zone
FY – Fiscal Year
HBRR – Highway Bridge Replacement and Rehabilitation Program
HCM – Highway Capacity Manual
ITS – Intelligent Transportation Systems
IVHS – Intelligent Vehicle Highway Systems
JCT – Josephine County Transit
LID – Local Improvement District
LOS – Level of Service
MEV – Million Entering Vehicles
MOE – Measures of Effectiveness
MP – Milepost
NBIS – National Bridge Inventory System
NEPA – National Environmental Policy Act
NHS – National Highway System
OAR – Oregon Administrative Rules
OHP – Oregon Highway Plan
ODOT – Oregon Department of Transportation
OPTP – Oregon Public Transportation Plan
ORS – Oregon Revised Statutes
OTC – Oregon Transportation Commission
OTIA – Oregon Transportation Investment Act
OTP – Oregon Transportation Plan
PDO – Property Damage Only
PCI – Pavement Condition Index
RLDC – Rural Land Development Code
ROW – Right-of-Way
RTP – Regional Transportation Plan
RVACT – Rogue Valley Area Commission on Transportaiton
RVMPO – Rogue Valley Metropolitan Planning Organization
RVTD – Rogue Valley Transportation District
RWIS – Road and Weather Information Systems
SDC – Systems Development Charge
SPIS – Safety Priority Index System
STF – Special Transportation Fund
STIP – Statewide Transportation Improvement Program
TAC – Technical Advisory Committee
TAZ – Transportation Analysis Zone
TDM – Transportation Demand Management
TGM – Transportation and Growth Management
TIP – Transportation Improvement Program
Tier 1 – Maintenance of the existing transportation system at current, declining levels
Tier 2 - Expands basic maintenance activities to optimal level for preservation of existing roadway system, plus a limited number of high priority repair/reconstruction, safety and mobility projects
Tier 3 – Needed, lower priority projects that are not proposed for funding during the next 20 years, unless grants or other unexpected revenue becomes available
TPR – Transportation Planning Rule
TSP – Transportation System Plan
TSM – Transportation Systems Management
UGB – Urban Growth Boundary
USFS – United States Forest Service
V/C – Volume-to-Capacity Ratio
VMS – Variable Message Sign
VMT – Vehicle Miles Traveled

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# Chapter 1
# Introduction and Summary

## Introduction

The *Josephine County Rural Transportation System Plan* (TSP) establishes the county's goals, policies and action strategies for developing the transportation system outside of the Grants Pass and Cave Junction Urban Areas. The TSP is intended to serve as a blueprint or master plan to guide transportation decisions to address both short and long term needs. The TSP discusses on-going roadway maintenance needs, and identifies improvements to enhance roadway safety, non-motorized travel (bicycles and pedestrians), and public transit service, and to accommodate future land development activity, particularly in the Murphy and Merlin areas.

The *Josephine County Rural TSP* addresses Oregon Statewide Planning Goal 12 and the Oregon Transportation Planning Rule (TPR). The TPR directs cities and counties to develop balanced transportation systems addressing all modes of travel including motor vehicles, transit, bicycles and pedestrians. The TPR envisions development of local plans that will promote changes in land use patterns and transportation systems that make it more convenient for people to walk, bicycle, use transit, and drive less to meet their daily needs.

The TSP development process was initiated in October 2002. The plan development process consisted of six main steps:

- Setting overarching goals and objectives,
- Analyzing existing conditions,
- Assessing future needs,
- Evaluating future alternatives,
- Creating a Draft TSP document and code revisions, and
- Finalizing the TSP.

Finally, the *Josephine County Rural Transportation System Plan* must reflect the transportation system that best serves the needs of residents and other users of the transportation system within the rural portion of the county. The plan must also provide a range of transportation options, and allow for the balancing of state and local transportation objectives. To do so, this plan must:

- Identify and support the values of the County regarding transportation and land use;
- Incorporate local citizen participation in the transportation planning process;
- Ensure consistency with the *Oregon Transportation Plan*, and be coordinated with federal, state and local agencies, as well as local transportation service providers; and
- Provide a framework for transportation-related decisions.

## Public, Agency and Stakeholder Involvement

As noted above, the process for preparing the *Josephine County Rural Transportation System Plan* must incorporate local citizen participation, be coordinated with local transportation service providers, and be coordinated with federal, state and local agencies. This requirement was satisfied through a comprehensive process with the following components:

Stakeholder Interviews. At the very beginning of the planning process, representatives from Federal, State and local government agencies and persons from private business interests were interviewed by Josephine County staff and asked for their input on transportation system issues, needs and concerns. This input helped shape the issues discussed with the Citizens Advisory Committee and Technical Advisory Committee, discussions which led to the development of overarching goals and objectives for this plan.

Citizens Advisory Committee. A Citizens Advisory Committee (CAC) with representatives of a broad cross-section of transportation system users and other transportation providers was formed to provide input and guidance to the plan development process. The CAC addressed the goals and objectives for the TSP, discussed the general needs for each mode of transportation, and reviewed improvement strategies and potential scenarios and alternatives. Meetings of this group were held throughout the planning process. A listing of CAC membership and affiliations is provided in an appendix to this document.

Technical Advisory Committee. A Technical Advisory Committee (TAC) with representatives of federal, State, County and local agencies was formed to provide input and guidance to the planning process. The TAC included a focus on technical and interagency issues, as well as helping establish the goals and objectives, improvement strategies and recommendations. Meetings of this group were held throughout the planning process. A listing of TAC membership and affiliations is provided in an appendix to this document.

Communications. Two newsletters were prepared to inform Josephine County residents about the process for developing the Rural Transportation System Plan, and how to get involved. These newsletters were mailed to Josephine County residents, distributed through electronic media or otherwise made available to rural county residents. In addition, information regarding the plan, major milestones and opportunities for public involvement was posted on the County's website.

Open Houses. Open houses were held in a variety of locations throughout the county in May and December, 2003. The initial set of open houses addressed existing conditions and future needs, and gathered input on transportation issues. The second set of open houses provided an opportunity for education and input regarding the draft transportation system plan.

Planning Commission Work Sessions. Two work sessions were held with the Josephine County Rural Planning Commission. The September, 2003 work session presented an overview of the process to-date and the evaluation of plan alternatives, and resulted in a recommendation of a preferred alternative for further refinement. The November, 2003 work session presented the draft *Rural Transportation System Plan* for approval to take to the second round of public open houses.

Public Hearings. Public hearings will be scheduled before the Rural Planning Commission and Board of County Commissioners in Winter and Spring, 2004.

The following section provides a summary of the major goals and objectives of the *Josephine County Rural Transportation System Plan*.

## Goals and Objectives

As noted in the Introduction, the *Josephine County Rural Transportation System Plan* must identify and support the values of the County regarding transportation and land use. The adopted *Josephine County Comprehensive Plan*, a plan prepared with substantial public and stakeholder involvement, served as the foundation for the *Rural Transportation System Plan* with regard to land use.

With regard to values concerning transportation, the stakeholder interviews conducted at the front end of the planning process provided an initial indication of key transportation issues. These issues were reviewed with the TSP Citizens Advisory Committee and Technical Advisory Committee, and a list of overall principles to guide development of the transportation system plan was developed. These guiding principles were then incorporated into a draft set of overarching goals and objectives for the *Josephine County Rural Transportation System Plan*, and were subsequently reviewed and approved by the CAC, the TAC, and the County Board of Commissioners. These overarching goals and the objectives for achieving them are listed below. These goals and objectives were used to guide development of the key recommendations and policy directives established for each travel mode in the TSP. Specific policies and recommendations to implement these goals and objectives are presented in the chapters for each mode. Goals, objectives, policies and recommendations are also summarized in Chapter 13 of the TSP.

The overarching goals and objectives for the *Josephine County Rural Transportation System Plan* are provided below. Goals are numbered and the supporting objectives are listed below each goal.

**Goal 1: Improve safety for all transportation modes.**

- *Objective 1 - Ensure the transportation system is planned to maximize safety.*

**Goal 2: Provide for a transportation system that is accessible, efficient and practical.**

- *Objective 1 - Increase mobility and access options for Josephine County citizens.*
- *Objective 2 - Facilitate movement of goods into and out of the County.*
- *Objective 3 - Enhance freight mobility (by rail, truck and air) and intermodal transfer.*
- *Objective 4 - Address changing characteristics of trucking, aviation and rail industries.*

**Goal 3: Provide sufficient capacity within the transportation system to accommodate future demand.**

- *Objective 1 - Satisfy Transportation Planning Rule requirements for system capacity and for encouraging the use of alternative modes of transportation.*
- *Objective 2 - Maximize transportation system capacity through the use of facility improvements, Transportation Demand Management actions, Transportation System Management actions, appropriate IVHS and other appropriate tools and techniques.*
- *Objective 3 - Encourage alternative modes of transportation by providing for a choice in modes.*

**Goal 4: Review and update roadway classifications as necessary.**

- *Objective 1 - Provide coordinated design standards for all modes of transportation.*
- *Objective 2 - Satisfy Transportation Planning Rule requirements for system planning.*
- *Objective 3 - Consider land use and transportation plans/solutions simultaneously in determining roadway classification and hierarchy.*
- *Objective 4 - Provide appropriate transitions between regional, urban and rural transportation facilities.*

**Goal 5: Provide system connections as needed to improve efficiency and access and to improve circulation.**

- *Objective 1 - Accommodate projected growth with improvements to the roadway network and increased options for choosing a mode of transportation.*
- *Objective 2 - Achieve greater mobility between communities, activities and land uses.*
- *Objective 3 - Achieve improved connectivity between modes of transportation.*

**Goal 6: Consider and implement land use and transportation plans/solutions simultaneously in all planning activities.**

- *Objective 1 - Provide for the consideration of the interrelationships and connections between transportation and land use in future planning.*
- *Objective 2 - Ensure that transportation improvements meet the needs of rural land uses, consistent with the Transportation Planning Rule.*

**Goal 7: Ensure an effective strategy for intergovernmental coordination in transportation planning.**

- *Objective 1 - Maintain coordination with multiple jurisdictions.*
- *Objective 2 - Provide compatible design standards for all modes of transportation.*
- *Objective 3 - Work to achieve a balance between business and economic development and preservation of the functional capacity of the transportation system when coordinating transportation planning with other jurisdictions.*

**Goal 8: Provide a plan document that is meaningful and useful to all stakeholders.**

- *Objective 1 - Prepare the plan at an easy-to-understand level, with a concise action plan and a list of needed follow-up tasks and/or refinement studies.*
- *Objective 2 - Develop a long-term public involvement process to ensure that the public is informed of and involved in the actions of multiple service providers in order to better coordinate transportation system decision making.*

**Goal 9: Consider funding issues in planning a future transportation system.**

- *Objective 1 - Identify a range of methods for funding recommended actions and improvements.*
- *Objective 2 - Ensure cost-effective investment in transportation. Improvements should be fiscally responsible, economically efficient and realistic.*
- *Objective 3 - Extend usable life of existing facilities*
- *Objective 4 - Ensure the plan provides for the maintenance of existing and planned improvements.*
- *Objective 5 - Achieve a balance between public and private sector interests when considering potential new funding sources for transportation improvements.*

**Goal 10: Plan for a transportation system that is environmentally responsible.**

- *Objective 1 - Provide for choice with regard to the use of alternative modes of transportation.*
- *Objective 2 - Ensure that transportation decisions and facility design standards consider environmental requirements and minimize impacts to the natural and built environment.*

## Key Issues and Recommendations

The on-going operations, maintenance and improvement of the rural transportation system in Josephine County is facing two significant challenges. Not only is the existing rural road and bridge system getting older and being used more heavily (most of these facilities are over 60 years old), but the County is currently experiencing sharply declining transportation revenues to maintain and preserve that system.

Use of the rural roadway system has increased over the past several years as the County has continued to grow. While much of this system currently appears to be in good condition, a significant percentage of these roads (estimated at about ¾ of the entire system) consist of an original pavement over dirt with a number of successive overlays. These roads have little or no structural support underneath the surface pavement. Heavy loads and/or frequent traffic will cause these roads to deteriorate rapidly without regular, routine pavement maintenance activities. In addition, a number of County bridges have also been

identified as structurally deficient and need to be replaced, similar to the cracked bridges problem currently being experienced by ODOT on the state highway system.

At the same time, the County is experiencing a significant decline in revenues available for routine transportation system maintenance. For example, in 1991 the County Public Works Department operated with an $11.4 million annual budget. With this budget, the County provided numerous routine maintenance services including chip sealing (to protect the roadway pavement surface), vegetation management, ditch clearing, sign repair/replacement, roadway striping/restriping, guardrail repair, roadway cleaning, and many other activities. By 2004, the County's Public Works Department budget had been reduced to $9.7 million. When the effect of inflation is considered, this $9.7 million budget will actually buy only $6.2 million worth of the services that were provided in 1991 – a decline in effective revenue of 36 percent.

In addition, timber receipts currently provided by the US Forest Service for roadway maintenance will no longer be available to the County after 2006. In the past, this program has been used to assist the county by providing compensation for the loss of timber harvests and for the large proportion of local land owned by the State and Federal governments (and thus not subject to local taxation). If the timber receipts program is not continued (and this will require an act of Congress), the loss of this revenue source will further reduce the County's budget for the roadway system by approximately one-third.

Clearly, the County is facing a significant decline in its ability to maintain its roadway system. As maintenance continues to be deferred, the cost of preserving roadways will go up. For example, every $1.00 that is spent in preventative maintenance for a road that is in generally good condition will cost $4.00 to $5.00 if the road is allowed to deteriorate to a poor condition. Currently it costs approximately $9,000 per mile to provide all necessary routine maintenance services. It costs $750,000 per mile to rebuild a road that has deteriorated beyond the kind of repairs provided by on-going and regular maintenance. On a scale of 5 (very good) to 1 (very poor), a broad assessment indicates that the County's road system should rank at 3.5 and this ranking is dropping.

The Rural Josephine County TSP includes several recommendations related to roadway maintenance. The TSP includes no new construction projects but is focused on returning the roadway maintenance program to a sustainable level that provides for the long-term preservation of the system at the least cost. The Plan also identifies the need for several bridge repair/replacement projects, some modest improvements at high accident or other high risk locations, and a limited number of improvements focused on areas with congestion or opportunities for economic development.

The organizational structure of the TSP document is described on the following pages. More detailed information about specific needs, conclusions and recommendations is provided in Chapters 2 through 13.

## TSP Elements

The *Josephine County Rural TSP* addresses all travel modes currently available to move people and goods within or through those portions of the County that lie outside of the Grants Pass and Cave Junction Urban Areas. The transportation modes examined in this document include:

- Motor vehicles (including autos and trucks)
- Public transit,
- Other surface transportation (including intercity bus, rail, and pipelines),
- Air transportation,
- Non-motorized transportation (including walking and bicycling), and
- Freight mobility

The TSP is organized into thirteen chapters beginning with this Introduction. Other chapters include the following:

- Previous work/background studies,
- Existing conditions,
- Future transportation system demand,
- Development and evaluation of TSP alternatives,
- Street plan,
- Freight plan,
- Public transit plan,
- Transportation system management/transportation demand management plan,
- Air transportation plan,
- Non-motorized transportation plan,
- Rail plan, and
- Plan implementation strategy.

Information presented and the key issues discussed in each chapter is summarized in the following paragraphs.

## Previous Work/Background Studies

The TSP begins with an overview of existing plans, studies and policy guidelines that are relevant to the development of a transportation plan for the rural portion of Josephine County. This review is intended to ensure that the County's TSP reflects and is consistent with state transportation planning policies and standards, and is coordinated with the plans of other local jurisdictions (e.g., Grants Pass and Cave Junction). Transportation planning requirements as articulated by the State of Oregon's Transportation Planning Rule (TPR) and other statewide transportation planning documents and programs are first summarized, followed by an overview of existing transportation plans and policies from the County and its cities.

## Existing Conditions

An inventory and evaluation of the County's existing rural transportation system was conducted to identify opportunities and constraints, and to provide the basis for developing short-range improvement recommendations. This rural transportation system includes Merlin, Murphy, Hugo, Sunny Valley, Wolf Creek, several small communities in the Illinois Valley outside of Cave Junction, and other locations. Inventory information was obtained from the 1982 *Josephine County Roadway Plan*, the 1982 *County Bicycle Master Plan*, street data maintained by the County Public Works Department, transit information from Josephine County Transit, highway data maintained by ODOT, and other information from various service providers and facility managers. System inventory and existing operations for the unincorporated area within the Grants Pass and Cave Junction urban areas are addressed in the TSPs for these cities.

The transportation system inventory includes:

- Existing street characteristics including physical features, traffic control, current traffic operations and safety with primary emphasis on the arterial and collector street systems

- Freight transportation systems including trucking and pipeline transportation (there is no water-based transportation in Josephine County)

- Public transit including intercity and dial-a-ride bus service

- Transportation system management and transportation demand management
- Air transportation
- Pedestrian and bicycle systems
- Rail transportation

## Future Transportation System Demand

This chapter describes the development of future traffic forecasts on the rural road system in Josephine County. These forecasts are based on projections of future population and socio-economic growth within the county, with a particular focus on the rural areas. Included in the chapter is a discussion of recent population and employment growth, future population and employment growth expectations to the planning horizon year of 2025, and future estimates of traffic volumes along the major roadways in the rural portion of the county.

## Development and Evaluation of TSP Alternatives

This chapter discusses the process used to develop and evaluate TSP alternatives. This process began with the identification of five distinct scenarios that approach improvement of the transportation system with an emphasis on varying priorities or "themes". These thematic scenarios include:

- No build - based on existing revenue and/or previously committed projects such as those currently in the State Transportation Improvement Program). For county roads this was largely a maintenance-only scenario that was severely limited in scope by inadequate revenue sources. This scenario would result in a steadily deteriorating system of roads and highways in the rural portion of the County due to the declining amount and value of the revenue received.

- Maintenance - emphasized a focus on "expanded" roadway maintenance to a level that would curtail the trend toward increased deterioration by providing additional revenue sufficient to maintain the County's roadways at their current levels. This scenario also included general "targeted" or significant major maintenance projects including repair/replacement of several deficient bridges.

- Safety - focused on implementation of projects that respond to existing high accident locations and areas of potential safety risk).

- Mobility and Accessibility - included projects that are intended to expand the existing multimodal transportation system by responding to existing and projected future congestion problems, and augmenting existing transit service)

- Economic Development - focused on specific improvement projects that would improve access to industrial or commercial property or expand recreational travel opportunities with the intent of encouraging job creation in the rural portions of the County).

The projects included in these scenarios were evaluated using criteria developed to support the draft goals and objectives of the TSP. The evaluation process resulted in a list of prioritized projects by type (e.g., consistent with the project groupings in each thematic scenario). These projects were then organized into tiered alternatives consistent with project priorities and levels of existing or potential funding. The Tiered Alternatives included:

- Tier 1 Alternative – consistent with the No Build scenario, this tiered alternative would be fully funded.

- Tier 2 Alternative – included the highest priority projects from each of the thematic scenarios. Implementation of this alternative would depend on the availability of new or additional transportation revenue above and beyond current sources and/or amounts. The Tier 2 Alternative has been identified as the Preferred Alternative for the TSP.

- Tier 3 Alternative – included the remaining, lower priority projects that respond to identified transportation system needs, problems and deficiencies. Significant addition revenue beyond the level identified for Tier 2 would be needed to implement these projects.

The next several chapters of the TSP focus on a discussion of the needs, improvement strategies, policy guidance, and recommendations for each transportation mode.

## Street Plan

This chapter presents a discussion of existing and anticipated future (2025) roadway system needs and deficiencies, and highlights the development and evaluation of potential improvements. The policy context of street plan is presented first, followed by the results of projected future travel demand analysis including identification of improvement needs, a discussion of improvement strategies and alternatives, and ending with a street system action plan. The action plan includes general policy guidance for street system improvement and management, along with specific policy or improvement recommendations.

## Freight Plan

Freight mobility is critical to maintain Josephine County's economic competitiveness, and is dependent on a number of transportation modes, including truck, air, pipeline and rail. This chapter addresses freight movement on the existing street and highway system, and for pipelines. Other travel modes that are important to the movement of goods and commodities are addressed in their respective chapters (e.g., air and rail transportation).

## Public Transit Plan

This chapter presents a review of needs, deficiencies, policies and recommended actions affecting the provision of public transportation services in Josephine County. Included is a discussion of the local and state policy context for developing and enhancing this travel mode, evaluating the existing public transportation system, and making recommendations for rural Josephine County. Josephine County Transit (JCT) currently provides public transportation services in the county. Three alternatives, based on available funding, are offered for operating and enhancing public transportation in the county.

## Transportation System Management/Transportation Demand Management Plan

Transportation System Management (TSM) and Transportation Demand Management (TDM) are terms used to describe a broad array of strategies, programs and technologies used to more effectively manage existing transportation resources and to potentially postpone or eliminate the need for major capacity-enhancing investments. The range of TSM and TDM strategies that may be applicable in rural Josephine County are presented and discussed in this chapter.

TSM strategies focus on measures that improve the efficiency of the existing transportation system. Such strategies include traffic signalization, removal of existing unwarranted traffic signals, signal synchronization to improve traffic progression, intersection channelization improvements, one-way streets, parking restrictions, turn prohibitions, and other similar actions. With only one traffic signal in

rural Josephine County and only a limited number of locations where traffic operational improvements are appropriate, the most applicable TSM strategies may be those that rely on Intelligent Transportation Systems (ITS) technologies. ITS strategies such as traffic cameras and variable message signs are currently in use at several locations on the state highway system and their use could be expanded.

TDM strategies and programs are aimed at reducing travel by single-occupant vehicle during peak travel periods, thus reducing the need for additional roadway capacity. TDM strategies include transit passes or other measures to increase transit use, carpools, vanpools, flexible work hours, a compressed workweek, telecommuting, videoconferencing, and other similar measures.

## Air Transportation Plan

This chapter discusses the transportation system needs, deficiencies, policies and improvement options affecting access to the two public airports in Josephine County. These include the Grants Pass Airport near Merlin, and the Illinois Valley Airport that is located approximately four miles south of Cave Junction. Land use issues in the vicinity of these airports are also discussed.

## Non-Motorized Transportation Plan

This chapter documents the review and assessment of needs, deficiencies, policies and improvement options affecting the bicycle and pedestrian transportation systems in rural Josephine County. In the rural area, bicyclists and pedestrians generally share the same facilities. Unlike urbanized areas – where bicyclists use designated lanes or wide shoulders, and pedestrians use sidewalks – rural facilities for non-motorized travel usually consist of wide shoulders and/or multi-use paths. As in most rural areas, bicycle/pedestrian needs are similar. Facilities that are deficient for one mode are usually deficient for the other, thus recommended improvements can benefit both modes. For these reasons, the discussion of needs and recommended improvements in this chapter apply to both the bicycle and pedestrian system.

This chapter includes an evaluation of needs and deficiencies in the existing systems, a discussion of improvement strategies for enhancing and expanding these systems, and an action plan for improvement. The action plan includes policy guidance along with specific project recommendations.

## Rail Plan

This chapter describes the existing rail system in Josephine County and addresses issues with respect to freight rail service, the potential for future passenger rail service, and improvement needs at existing at-grade railroad crossing locations.

## Plan Implementation Strategy

The last chapter of the TSP addresses those issues which are most pertinent to the long-term implementation of the policies and improvement recommendations contained in the document. This chapter begins with an overview of the policy guidance provided by the TSP in the form of goals and objectives. These goals and objectives are fleshed out by the policy and project improvement recommendations that follow. This chapter includes a discussion of transportation cost and revenue forecasts and identifies a significant revenue shortfall. This shortfall will require additional financial resources to implement any projects except for the most minimal (and inadequate) level of roadway maintenance. The chapter identifies and provides estimates of future revenue potential from a variety of additional transportation system funding sources. The chapter also includes a specific project list categorized into short-, medium-, and long-term timeframes, and concludes with a summary of the ordinances needed to implement the recommendations of the TSP. The funding and implementation plan included in this chapter provides a blueprint that makes it possible for the TSP's recommendations to become a reality.

# Chapter 2
# Previous Work/Background Studies

## Overview

This chapter reviews existing transportation policies and standards to ensure that the County Transportation System Plan and its recommendations will reflect and be consistent with state transportation planning policies and standards, and coordinated with plans of other local jurisdictions in the County (Grants Pass and Cave Junction). Transportation planning requirements as laid out by the State of Oregon's Transportation Planning Rule (TPR) and other statewide transportation planning documents and programs are first summarized, followed by a summary of existing transportation plans and policies from the County and its cities. Areas that may need attention in order to comply with state requirements are identified.

## Statewide Plans and Policies Relating to Transportation

### Oregon Transportation Planning Rule (TPR) (1991)

As applicable to Josephine County, the TPR requires local jurisdictions to develop a transportation system plan (TSP) to accommodate future travel demand resulting from adopted land use. The plan must accommodate all travel modes in use within the County, be consistent with the *Oregon Transportation Plan*, and coordinated with federal, state and local agencies, as well as various transportation providers.

In brief, TPR requires every local TSP to assess existing facilities for their adequacy and deficiencies; develop and evaluate system alternatives needed to accommodate land uses in the acknowledged comprehensive plan; and adopt local land use regulations to support implementation of the preferred alternative. The County TSP must also ensure its functional classification system is consistent or compatible with those applying to facilities maintained by adjacent jurisdictions.

### Oregon Transportation Plan (OTP) (1992)

The Oregon Department of Transportation (ODOT) utilizes several planning documents to guide transportation planning efforts and transportation system improvements in the state. The *Oregon Transportation Plan* (OTP) is ODOT's guiding policy document, driving all transportation planning in Oregon. Separate modal plans serve as individual elements to the OTP. The elements of the OTP provide a framework for cooperation between ODOT and local jurisdictions and offer guidance to cities and counties for developing local modal plans through their transportation system plans. The following table lists the different modal plans that have been established and the year the plan was adopted by the Oregon Transportation Commission (OTC).

The Oregon Transportation Commission (OTC) adopted the *Oregon Transportation Plan* in September 1992. The OTP has three elements: (1) Goals and Policies; (2) Transportation System; and (3) Implementation. The OTP meets a legal requirement that the OTC develop and maintain a plan for a multimodal transportation system for Oregon, as prescribed in the Transportation Planning Rule. Further, the OTP implements the Federal Intermodal Surface Transportation Efficiency Act (ISTEA) requirements for the state transportation plan. The OTP also meets land use planning requirements for State agency coordination and the Oregon Administrative Rule on transportation planning (the TPR). This rule requires ODOT, the cities, and the counties of Oregon to cooperatively plan and develop balanced transportation systems. The OTP provides the overall transportation planning framework with which local TSPs must be consistent.

**Table 2-1**
**Adopted Elements of the Oregon Transportation Plan**

| Oregon Transportation Plan or Plan Element | Year Adopted |
|---|---|
| Oregon Transportation Plan | 1992 |
| Bicycle/Pedestrian Plan | 1995 |
| Transportation Safety and Action Plan | 1995 |
| Public Transportation Plan | 1997 |
| Highway Plan | 1999 |
| Aviation System Plan | 2000 |
| Rail Freight and Passenger Plan | 2001 |

## Oregon Bicycle and Pedestrian Plan (1995)

The goal of this Plan is to provide safe, accessible and convenient bicycling and walking facilities in the state, and to support and encourage increased levels of bicycling and walking. The plan outlines the principles and policies that ODOT follows to provide bikeways and walkways along state highways. It also provides the framework for cooperation between ODOT and local jurisdictions and offers guidance to cities and counties for developing local bicycle and pedestrian plans. This guidance includes policies, classification of bikeways, construction and maintenance guidelines, and suggested actions to achieve the Plan's objectives. Actions address the need to: (1) provide bikeway and walkway systems that are integrated with other transportation systems; (2) create a safe, convenient, and attractive bicycling and walking environment, and (3) develop education programs that improve bicycle and pedestrian safety.

## Oregon Transportation Safety and Action Plan (1995)

This plan established the safety priorities for Oregon by identifying 70 actions relating to all modes of transportation and the roadway, driver and vehicle aspects. Included in this plan is a specific action regarding the way safety issues should be considered in local transportation planning.

Local transportation plans, as well as modal and corridor plans should consider the following:

- Involvement in the planning process of engineering, enforcement, and emergency service personnel as well as local transportation safety groups.
- Safety objectives.
- Resolution of goal conflicts between safety and other issues.

## Oregon Public Transportation Plan (1997)

The Oregon Public Transportation Plan (OPTP) provides a 20-year guide for the development of transit, rideshare and transportation demand management services in Oregon. It serves as a blueprint for the public transportation system envisioned in the *Oregon Transportation Plan* (OTP). To further implement the goals and policies of the OTP, the plan describes the roles and responsibilities of the key players, characterizes short- and long-term implementation steps, and maps out a financial investment strategy.

Minimum levels of service standards for public transportation operations are technical performance criteria or operational benchmarks. These criteria include peak and off-peak frequencies, vehicle

maintenance programs and replacement schedules, intermodal connections, and ridesharing, as well as policy-related objectives. Goals relevant to communities within Josephine County are listed below.

*Minimum levels of service standards in rural and frontier communities*

- Provide public transportation service to the general public based on locally established service and funding priorities, with accessible service provided as needed.
- Respond to service requests within 24 hours (not necessarily provide a ride within 24 hours).

*Minimum levels of service standards for intercity bus service*

- Provide daily round trip service for an incorporated city or group of cities within five miles of one another having a combined population of 2,500 and located 20 miles or more from the nearest city with a larger population and economy.
- Provide public transportation service to the general public based on locally established service and funding priorities, with accessible service provided as needed.
- Provide a response to service requests within 24 hours in rural and frontier areas (not necessarily a ride within 24 hours).

*Minimum levels of service standards for intercity rail*

- Provide regional rail service offering frequent schedules, through trains, extensive feeder bus networks with convenient connections.
- Provide incremental physical improvements to existing mainline railroad tracks to increase passenger speeds from 79 to 110 mph, where potential for high-volume ridership is evident, and up to 125 mph for intercity travel, as technology and financial support permit.

## Oregon Highway Plan (1999)

The *Oregon Highway Plan* defines policies and investment strategies for Oregon's state highways for the next 20 years. It further refines the goals and policies of the *Oregon Transportation Plan* and is part of Oregon's Statewide Transportation Plan. The Highway Plan gives policy and investment direction to corridor plans and transportation system plans that are being prepared around the state, but it leaves the responsibility for identifying specific projects and modal alternatives to these plans.

Specifically relevant to Josephine County are the volume-to-capacity ratio (v/c ratio) and rural access management standards from the *Oregon Highway Plan*, summarized below for the six state-maintained highways in the County: Interstate 5, US 199, OR 99, OR 238, OR 46, and Rogue River Loop Highway. The maximum v/c ratio is 0.70 for I-5 and US 199. I-5 is an Interstate Highway, while US 199 is a Statewide Highway. US 199 is also on the National Highway System (NHS), which is relevant to the funding discussion appearing at the end of this section. OR 99, OR 238, OR 46 and the Rogue River Loop Highway are District Highways, with a maximum v/c ratio of 0.75.

**Table 2-2**
**Oregon Highway Plan Access Spacing Standards**

| | Spacing Standard by Type of Highway in Feet | | |
|---|---|---|---|
| Posted Speed | Interstate (I-5) | Statewide (OR 99/US 199) | District (OR 99, OR 238, OR 46, and Rogue River Loop) |
| > 55 | 6 miles | 1,320 | 700 |
| 50 | n/a | 1,100 | 550 |
| 40 & 55 | n/a | 990 | 500 |
| 30 & 35 | n/a | 770 | 400 |
| < 25 | n/a | 550 | 400 |

## Oregon Aviation System Plan (2000)

The Aviation System Plan has been adopted in increments with final adoption of the complete plan in 2000. It provides forecasts and inventories for public access airports in the state. Some key issues that affect development of the aviation component of the *Josephine County Rural TSP* are the following:

- Local governments own most airports.
- The federal government owns most of the navigational system.
- The FAA determines funding levels and prioritization of expenditures.

## Oregon Rail Plan (2001)

The Oregon Rail Plan is the first comprehensive assessment of the state's rail planning, freight rail, and passenger rail systems since the 1992 Oregon Rail Passenger Policy and Plan and the 1994 Oregon Rail Freight Plan. The Plan contains three elements, which summarize the state's goals and objectives, measure the state's performance to-date, and refine the projected costs, revenues and investment needs with regard to rail transportation of people and goods.

The Rail Plan builds on and continues implementation of the *Oregon Transportation Plan*'s long-range vision for a viable rail freight and passenger system in the state.

The plan recommends that the State of Oregon develop adequate funding sources, both public and private, to finance the modernization of both rail passenger and freight service. Implementation should take place as rapidly as permitted by financial, design, construction, equipment and market considerations.

The State of Oregon will work with carriers, shippers and other groups to maintain and improve access to the national rail freight system, maintain a competitive environment for rail customers, strengthen the retention of local rail service, and assure a level playing field for all modes.

The State of Oregon will work with other state agencies, regional and local jurisdictions and the general public to integrate rail freight and passenger elements into land use and transportation planning processes. This will include working with private companies and public sector agencies to operate the rail system in a safe manner for the users of the system and public in general.

## Southern Oregon Commuter Rail Study (2001)

In 1999, the Oregon Legislature asked ODOT to study the feasibility of providing frequent local passenger rail service between Grants Pass and Ashland. The primary goal of the study was to provide useful information to assist legislators, state and local governing bodies and the general public in making a decision on the feasibility of developing a commuter rail system to serve the growing population in the Rogue Valley.

Elected officials, planners and public works staff from Jackson and Josephine Counties and the cities therein guided the study, with the assistance of ODOT, the Rogue Valley Transportation District and the Rogue Valley Council of Governments. In June of 2001, a final study report was presented to advisory group members.

## US 199 Corridor Study (1999 Draft)

US 199 runs through Josephine County from I-5 at Grants Pass to the California border, where it continues to Highway 101 on the California coast at Crescent City. In 1999 a corridor study was prepared for ODOT but was not adopted. The study includes mostly general recommendations for applicable transportation modes, with the automobile, freight, safety, bicycle and pedestrian sections most relevant to the County TSP.

Recommendations call for ODOT to construct a range of operational improvements such as slow vehicle pullouts, passing lanes, driveway consolidation and other access management measures, and shoulder widening through routine maintenance activity. Also recommended is creation of a clear zone management program and ongoing coordination with local jurisdictions to provide pedestrian and bicycle improvements through cooperative efforts and through the land development process. These recommended improvements would compete for funding with other ODOT facilities in the region.

## Freight Moves the Oregon Economy (1999)

This publication succinctly states that "freight plays a major role in moving the Oregon economy. Most freight moves by truck, rail, waterway, air and pipeline with trucks accounting for the greatest volume". Information found in this publication pertinent to Josephine County includes the following:

1. Josephine County has two highways on the National Highway System: US Highway 199; and Interstate 5. This publication notes that Interstate 5 is a component of a proposed State Highway Freight System, identifying its importance to moving freight into, within and out of Oregon; it also lists US 199 from Grants Pass to California as a Non-Freight System Highway important for moving freight. The document notes that much of Oregon's freight moves along the I-5 and I-84 corridors, and that natural gas transmission lines extend within the I-5 corridor from Portland to the Grants Pass area.

2. The document identifies Grants Pass as the location of an important "truck-rail facility", a transshipment point for moving/reloading freight between the two modes of transportation. The majority of Oregon's truck terminals are located in the Portland and Medford areas.

3. For those highways not on the State Highway Freight System, common problems include: congestion; access; pavement in poor condition; and inadequate bridges. The document notes that congestion can be expected to increase in the Grants Pass area. It also notes that related to congestion are those problems experienced by freight haulers between local roads and highways, especially with turning movements. The Rogue River Loop Highway west of Grants Pass is noted as having a structure not meeting the 14-foot standard for legal height.

## Oregon Administrative Rules Regarding Access Management (OAR 734-051)

The Oregon Department of Transportation manages access to the highway facilities of the State to the degree necessary to maintain functional use, highway safety, and the preservation of public investment consistent with the 1999 *Oregon Highway Plan* and adopted local comprehensive plans. The purpose of Oregon's Access Management Rules is to govern the issuing of construction, operation, maintenance and use permits for approaches onto state highways, state highway rights of way and properties under the State's jurisdiction. These rules also govern closure of existing approaches, spacing standards, medians, variances to the standards, appeal processes, and grants of access.

Through these rules, the State indicates its policy to manage the location, spacing and type of road and street intersections and approaches on state highways to assure the safe and efficient operation of state highways consistent with their classification, and the designation of the particular highway segment. OAR 734-051 contains policies and standards regulating access, and generally holds that access control should be considered where beneficial, such as when:

- Ensuring safe and efficient operation between connecting highways in interchange areas,
- Protecting resource lands,
- Preserving highway capacity on land adjacent to an urban growth boundary, or
- Ensuring safety on segments with sharp curves, steep grades or restricted sight distance or those with a history of accidents.

Oregon's access management rules and standards apply to those Josephine County roadways on the State Highway System, including: Interstate 5; US 199; OR 99; OR 238; OR 46; and the Rogue River Loop Highway.

### Intercity Passenger Policy and Program (2000)

The focus of the Intercity Passenger Program is on evaluating and supporting bus, air and rail intercity passenger transportation services in Oregon. The Oregon Department of Transportation's Public Transit Division worked with communities, providers, planners and local governments to develop responses to identified needs for connectivity between modes and communities. The document reviews the existing intercity transportation system, identifies service and policy gaps, and identifies intercity transportation needs, especially that of connecting rural areas to larger urban areas and services.

The Intercity Program reviewed each community of 2,500 or more persons for level of service in providing various passenger transportation services. The document points to a lack of east/west connectivity within the state, and Josephine County is no different. Communities and providers have consistent problems maintaining connections between smaller cities and larger urban centers. The document also found intercity bus deficiencies in the southern part of Oregon, and missing connections for smaller communities to the nearest larger economy or regional hub. Medford is the closest major transfer point in the region for most residents of Josephine County. The closest commercial airport for most Josephine County residents is also located in Medford where direct air passenger service is available to Portland, Seattle, and other destinations. There are shuttles in the Rogue Valley to connect people from Grants Pass, or points between to the Medford airport.

The Intercity Passenger Policy and Implementation Program focuses on coordination and support of services through regional and statewide hubs. The goal is to strategically invest existing funds to support and improve an intercity network.

## County Plans and Policies Relating to Transportation

### Josephine County Comprehensive Plan (2000)

Completed in 2000, the County's Comprehensive Plan lays out goals and policies applicable to all areas of planning, including transportation. The first applicable element, Goal 4, states that the County shall "plan and develop facilities and services that are needed, and can be afforded by residents of the County". This includes policies for providing adequate transportation services that are necessary to support development, as well as consideration of the needs of the physically handicapped and transportation disadvantaged. Goal 8, regarding pollution control, carries policies of identifying possible mass transportation methods and use of management programs to reduce dust and air contamination generated by vehicular movement. Also a policy is the need to improve alternative routes around congested commercial districts. Finally, under Goal 9 regarding energy conservation, the Plan opts for encouraging alternative modes of travel. In summary, this plan does the following:

- Promotes responsiveness to financial considerations when planning facilities and services.
- Considers travel needs of the physically handicapped and transportation disadvantaged in the design of transportation facilities and alternative transportation modes.
- Encourages use of mass transportation methods when warranted, and management programs that reduce road-associated dust and other sources of air contamination.
- Improves alternative routes around commercial districts within urbanizing areas to reduce congestion.
- Promotes reduced energy use through the encouragement of additional modes of transportation.

- Encourages construction of connecting pathways between major shopping centers and recreational and educational facilities as part of the reconstruction or development of new roads or streets.

## Josephine County Roadway and Traffic Management Plan (1982)

The Roadway and Traffic Management Plan is the most recent countywide transportation planning document prepared by Josephine County. It was prepared before the Transportation Planning Rule (TPR) was incorporated into the State's administrative rules in 1991. This plan identified the need for interjurisdictional coordination, access management techniques and clustered development as an alternative to "strip" development. While it provides a detailed inventory of the County's transportation facilities, as well as a description of the area's functional classification system, it does not address several elements now required under the TPR. Preparation of the *Rural TSP* was needed not only to ensure that the plan responds to changing demographic and developmental conditions within Josephine County, but also to ensure compliance with state requirements. Pursuant to state legislation, the following requirements are lacking in the 1982 plan, and needed to be evaluated or added to the updated TSP.

- An identification of and response to the transportation needs of the transportation disadvantaged,
- Transportation systems that support commercial and industrial development,
- A roadway classification system for arterials and collectors, consistent with State and/or local classifications,
- An inventory of and plan for addressing public transportation needs and service inadequacies,
- A planned countywide bicycle and pedestrian network,
- Updated plans for air, water, rail and pipeline transportation services.

A few of the roadway planning and design standards in the 1982 plan are inconsistent with the Transportation Planning Rule or other applicable state standards. The County's TSP planning process included a review of these standards and offers revisions as appropriate. Particular items in the 1982 plan that appeared inconsistent with the TPR and/or current design standards include bikeway widths and bicycle facility planning guidelines, minimum stopping sight distance, selected functional classifications, and local street connectivity criteria. In addition, a number of the County's decision-making criteria relating to the transportation system were based on subjective evaluations, whereas the TPR emphasizes the use of measurable, objective criteria to evaluate and make decisions concerning local transportation systems. It should be noted that policies and standards in the 1982 *Roadway Plan* were incorporated into the Josephine County Rural Land Development Code, the document that provides specifications for road construction, access, and integration into the existing street network.

The County will be adopting new standards and specifications for the design and construction of County roads by an order of the County Commissioners, pursuant to the authority granted by the Rural Land Development Code.

## Josephine County – Merlin and North Valley Regional Problem Solving Agreement Area Plan (1998)

The Regional Problem Solving Agreement (RPSA) was launched in 1998 to help address rapid urbanization of the unincorporated Merlin and North Valley areas of Josephine County, and in particular, the need to comply with the State Unincorporated Communities Rule. A Community Public Facility Plan was also prepared as part of the Merlin/North Valley Regional Problem Solving Agreement. The purpose of the plan is to identify the nature and types of community facilities that will be provided for within the Merlin and North Valley rural center boundaries. The document is similar to the RPSA and the Land Use and Services Analysis by analyzing four potential land development options.

In the late 1990s, voters turned down a proposal to incorporate the Merlin/North Valley area. As a result, the area is planned to remain unincorporated for at least the near-term. For purposes of the TSP, assumptions for zoning, land use and potential future development were developed by the County and incorporated into the TSP analysis.

### Josephine County Bikeways Master Plan Proposal (1982)

The City/County Bikeways Advisory Committee was appointed by the Josephine County Board of Commissioners and the Grants Pass City Council to develop a bicycle master plan. The plan was created in response to citizen requests to establish a plan for a network of meaningful bicycle routes in the City of Grants Pass and the entire county. The committee conducted surveys of local residents and used the results to generate criteria for bikeway route selection and classification. This plan included the following objectives:

- Coordinate the Bikeway Plan with any change in the city or county Transportation System Plan or Comprehensive Plan that would affect the Bikeways System,
- Incorporate the Bikeway Plan in design or road construction or reconstruction,
- Include facilities for bicycle parking in the planning requirements of new commercial areas, single and multi-use facilities and other developmental projects,
- Encourage increasing bicycle parking facilities in existing commercial and developed areas.

Many of these objectives are similar to related Transportation Planning Rule requirements for bicycle facilities, but have yet to be incorporated into the County's development code. Potential code modifications have been addressed in the implementation section of the *Rural TSP*.

### Josephine County Economic Development Department Strategic Plan (1999-2005)

This plan, prepared by the County's Economic Development Department, aimed to develop a set of strategies and goals to enhance economic development throughout the county. This plan recognizes the importance of tourism and economic development initiatives for the county. Project and action items identified in this plan include:

- Promotion of the Enterprise Zone,
- Illinois Valley EcoTourism Project,
- Historic Rouge River Loop,
- Create Selmac to Caves or IV Rim Trail.

Identified projects such as these may have implications for the development or improvement of the County's transportation system and have been acknowledged in the development of goals, objectives, policies, and evaluation criteria in the TSP.

## Other Local Plans and Policies Relating to Transportation

### City of Grants Pass Urban Area Master Transportation Plan (1997)

The City's *Urban Area Master Transportation Plan* provides a long-range "blueprint" for the development of the Grants Pass Urban Area transportation system to meet changing transportation needs. The document contains an inventory and assessment of existing conditions, and outlines several transportation system alternatives along with a list of recommended improvements. The policy element of the plan includes general goals and related objectives supporting a well-planned, comprehensive, financially stable transportation system based on cooperative interagency and public/private efforts,

supporting economic growth while avoiding negative impacts on the built and natural environment. The City TSP also includes a long list of more specific implementation policies, none of which should create consistency concerns for the County TSP. Policies relevant to the County's TSP process include:

- Complete missing links in the arterial and collector network in the urban area to improve accessibility to all parts of the area and improve the efficiency of the street network.,
- Support public transit services for those people who cannot provide their own private transportation due to age (too young or too old to drive), physical limitations, or economic circumstances,
- Provide safe and convenient facilities for bicyclists and pedestrians,
- Facilitate convenient connections between local and intercity travel,
- Maintain Level of Service (LOS) "D" or better for all arterials and collectors,
- Balance capital and system maintenance expenditures,
- Minimize conflicts between motorized vehicles and bicyclists and pedestrians,
- Coordinate efforts and combine resources with Josephine County, ODOT and the various city departments to meet transportation needs,
- Encourage more efficient land development patterns,
- Apply appropriate Transportation System Management (TSM) and Transportation Demand Management (TDM) techniques,
- Preserve right-of-way in future transportation corridors,
- Encourage alternatives to the private automobile to reduce total VMT (vehicle miles traveled) per capita and associated impacts,
- Encourage new developments to extend/connect roads, trails, and paths adjacent to their developments.

## City of Grants Pass Comprehensive Plan (1982)

The *Grants Pass Comprehensive Plan* (1982) is the current adopted land use plan for the city, guiding future growth and development within the city and its Urban Growth Boundary (UGB). It consists of 10 elements, each which include corresponding goals and policies. (The *Grants Pass Urban Area Master Transportation Plan* highlighted above comprises an eleventh element). The Comprehensive Plan:

- Encourages creation of a scenic route and major gateway overlay designation on the land use plan map,
- Continues and augments the program of paving unpaved roadways within the UGB, including alleys,
- Explores the acquisition and development of a greenway and trail network that would connect designated natural resource and recreation sites within, adjacent to and near the UGB,
- Aims to complete a facility plan and implementation strategy for the East Grants Pass Industrial area.
- Improves the efficiency with which the public uses off-street and on-street parking,
- Encourages establishing the transportation network in developing areas around the "superblock concept", reducing travel time to major traffic ways, providing open space, recreation areas and commercial activity in close proximity to residences, and providing an internal greenway pedestrian and bikeway system increasing non-vehicular transportation.

## City of Cave Junction Transportation System Plan (2000/2001)/City of Cave Junction Comprehensive Plan (2000-present)

The *Cave Junction Transportation System Plan* was completed in 2000 and revised in early 2001. The purpose of the plan is to ensure the future transportation system develops in an orderly and cost-effective

manner, and to serve as a guide for City decision makers on transportation issues. The document contains an inventory and assessment of the existing transportation system, and also proposes numerous municipal code amendments.

As of fall 2003, the *Cave Junction Draft Comprehensive Plan* (2000) was going through the adoption process. The *Draft Comprehensive Plan* includes 14 elements, of which 11 have been formally adopted. Once completely adopted, the *Draft Comprehensive Plan* will guide land use and development for the City. For transportation, the *Draft Comprehensive Plan* draws from the goals, policies and objectives in the *Transportation Systems Plan*. Policy items relevant to the County TSP are similar to those in the Grants Pass TSP, and are summarized below:

- Implementation of transportation system and demand management measures, enhanced transit service, and provision for bicycle and pedestrian facilities shall be pursued as a first choice for accommodating travel demand and relieving congestion before street widening projects are considered.
- The City shall incorporate relevant State access management standards into arterial street design projects. Access management may include measures such as raised medians, driveway consolidation, driveway relocation, and partial to full closure of local street access onto arterials.
- The City shall periodically review and revise street design standards. The City shall consider incorporating traditional neighborhood design elements such as planting strips, minimum necessary curb radii, alleys and "skinny streets" in standards.
- The City shall pursue development of a linked bicycle network, focusing on the provision of bicycle lanes on the arterial and collector street system.
- Sidewalks and walkways shall complement access to multi-use paths. Design of activity centers and business districts should encourage pedestrian travel within their proximity.

## Programmed Maintenance/Committed Improvements

While it does not have a traditional Capital Improvement Program outlining programmed transportation system improvements over a given period, the County manages an ambitious roadway maintenance program that targets 7-10 percent of the total County roadway system (40-60 miles annually) to receive chip seal treatment each summer. At that rate the entire County roadway system can be chip sealed over a 10 to 15 year cycle. Chip seals extend the useful life of asphalt roadways and shoulders at much lower cost than pavement overlays, consistent with the County focus on maintenance of existing facilities due to limited capital resources.

Most of the significant transportation system improvements in Josephine County are funded by the State of Oregon, through the State Transportation Improvement Program (the STIP) and, more recently, through the Oregon Transportation Investment Act (OTIA I and II). Planned improvements for all of Josephine County listed in the draft 2004-2007 State Transportation Improvement Program (the STIP) are shown below. The draft STIP includes about $25 million for modernization and preservation projects, primarily on State highways and bridges in both urban and rural portions of the county. These projects range from major reconstruction efforts (such as bridge replacements) to smaller signal operation improvements. As the draft 2004-2007 STIP is still in development, and will not be adopted until later in 2003, projects listed in the table below may still be added or removed.

**Table 2-3**
**Draft 2004-2007 STIP Projects in Josephine County**

| Section | Route | Highway Name | Total Cost | Description | Year |
|---|---|---|---|---|---|
| **Rural Areas** | | | | | |
| I-5: VMS @ Hugo and Glendale Roads (ITS) | I-5 | Pacific | $523,000 | NB and SB Variable Message Signs | 2004 |
| US 199: E/W Fork Illinois River Bridge Replacements | US 199 | Redwood | $8,756,000 | Bridge Replacements | 2005 |
| Grave Creek Bridge | Rural Road in Josephine County | | $1,620,000 | Replace Structure | 2005 |
| Lower River Road Drainage (Grants Pass) | | Rogue River Loop | $199,000 | Improve Drainage. | 2006 |
| **Total 2004-2007 STIP for Rural Areas** | | | **$11,098,000** | | |
| **Urban Areas** | | | | | |
| US199: NB Rogue River (7th St.) Bridge | US 199 | Redwood | $1,798,000 | Seismic Retrofit, Deck Overlay | 2005 |
| OR 99 @ Lewis in Grants Pass | OR 99 | | $2,488,000 | Reconstruct Intersection, Combine/Add Signals. | 2005 |
| OTIA – Rogue River Bridge to US 199 (6th and 7th Streets) | US 199 | Redwood | $1,100,000 | Overlay pavement, provide sidewalk, curb and wheelchair ramps and other streetscape features. | 2005 |
| OR 238 @ Union and Harbeck Signal Improvements | OR 238 | Jacksonville | $345,000 | Rebuild signal from 6 phase to 8 phase, median work. | 2005 |
| Allen Creek Road @ US 199 (Grants Pass) | US 199 | Redwood | $3,940,000 | Extend Allen Creek North. Close Redwood Avenue Intersection. | 2007 |
| US 199: Grants Pass Parkway Resurfacing | US 199 | Redwood | $2,092,000 | Grind/inlay and overlay. | 2006 |
| US 199 @ Laurel Road (Cave Junction) | US 199 | Redwood | $891,000 | Install SB Left Turn Lane. | 2007 |
| US 199 @ Josephine County Fairgrounds | US 199 | Redwood | $334,000 | Improve function of intersection. | 2007 |
| **Total 2004-2007 STIP for Urban Areas** | | | **$12,988,000** | | |

In addition to the projects identified above in the draft 2004-2007 STIP, in 2001 and 2002 the Oregon State Legislature passed bonding measures called the Oregon Transportation Investment Act, or OTIA (OTIA I in 2001 and OTIA II in 2002), which brought $500 million into the State Highway Fund. This money allowed additional modernization, bridge and pavement preservation projects to be added to the STIP. Although $6.1 million has been identified for two of the Josephine County bridge projects, these are improvements to the State-owned transportation system. Josephine County received no OTIA funds for roads or bridges on the County transportation system from either the OTIA I or OTIA II program.

Figure 2-1 shows the general location of the three capital, maintenance, operation or repair projects for rural Josephine County in the draft 2004-2007 STIP that would be constructed by ODOT on state highway facilities. One project on the County's rural road system is also included in the STIP, the Grave Creek Bridge project, that will be funded through the federal government's Highway Bridge Replacement and Rehabilitation (HBRR) program. The rural area projects represent a total of $11.1 million, and include the following improvements and program years (the numbers identify project locations in Figure 2-1):

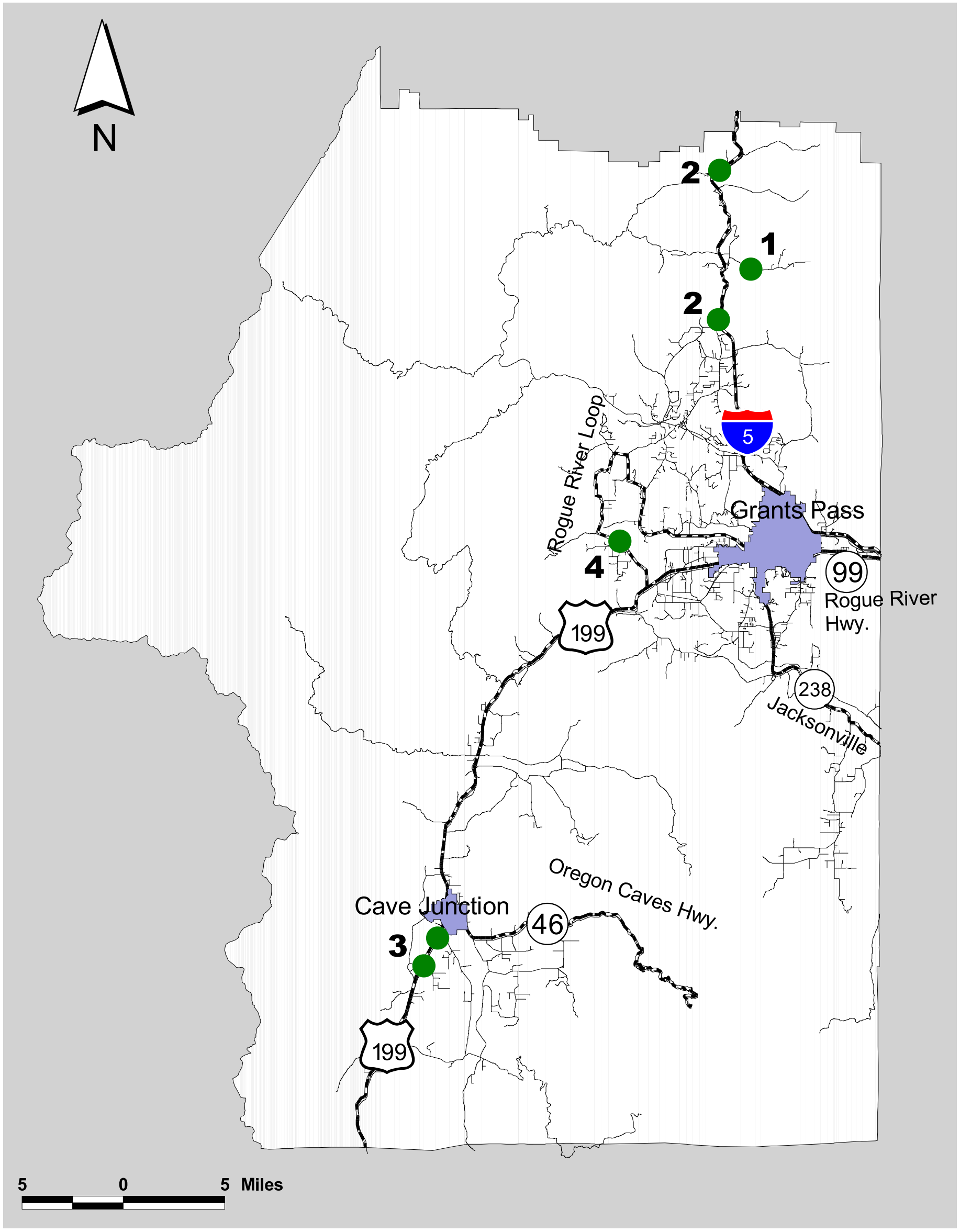



**Figure 2-1: STIP Programmed Improvements in Rural Josephine County**

\# ODOT Project
● Project Location (see project numbering on page 2-13)
State Highways
County Roads
Urban Growth Boundary

Josephine County
Transportation System Plan

1. Replace the Grave Creek Bridge on Beecher Road (2005, a federal HBRR project)
2. Install a northbound variable message sign (VMS) on I-5 at Hugo and Glendale Roads (2004)
3. Bridge replacements on US 199 at the East and West Forks of the Illinois River (2005)
4. Lower River Road drainage improvement project.

Additional planned improvements that could affect the rural roadway system in Josephine County are included in the Transportation System Plans for Grants Pass and Cave Junction. The *Grants Pass Urban Area Master Transportation Plan* was adopted in December 1997. Recommended improvements that could affect rural Josephine County include:

- A fourth Rogue River bridge connecting Lincoln Road and Allen Creek Road/Flower Lane, in combination with widening Lincoln Road to three-lane arterial standards.
- Widening Allen Creek Road to four lanes.
- Widening OR 238 to 4 lanes from New Hope Road to the Urban Growth Boundary.

In addition to these major projects, recommendations are made for reconstructing several existing streets on the periphery of the City to add sidewalks or sidewalks plus bike lanes. These recommendations, which include City, County and State-maintained roadways, include Cloverlawn Drive, Bridge Street, Dowell Road, Fairgrounds Road, Foothill Boulevard, Fruitdale Drive, G Street, Harbeck Road, Highland Avenue, Hillcrest Drive, Lower River Road, Rogue River Highway, Scenic Drive, Scoville Road, Vine Street, Upper River Road, and Willow Lane.

In the *Cave Junction TSP*, which was adopted in July 2001, the following long-term improvements are recommended, mostly along US 199. Any intersection improvement on US 199 would require approval by the State Traffic Engineer.

- Constructing a southbound left turn lane along US 199 at Laurel Road, potentially including a traffic signal and also requiring widening a bridge to the south over George Creek to accommodate the transition of northbound traffic. This improvement was estimated to cost approximately $1 million.
- Restriping westbound Caves Hwy (OR 46) at US 199 to provide one eastbound and two westbound lanes. Total cost could be $15-30,000 or more, depending on how much work is required to achieve adequate width for the right turn lane.
- Potential traffic signal at River Street at US 199: Future volumes were determined to approach capacity of the intersection with existing stop control, and monitoring the intersection was recommended. Design and construction of a new traffic signal would cost approximately $150,000 but could be less if a signal were moved from another location.
- Installing left turn lanes along US 199 at River Street and Lister Street: Existing volumes meet left turn lane warrants at both intersections, which would require restriping the roadway and reconfiguring on-street parking. (Approximate cost: $50,000)

# Chapter 3
# Existing Conditions

An inventory and evaluation of the County's existing rural transportation system was conducted to identify opportunities and constraints, and to provide the basis for developing short-range improvement recommendations. This rural transportation system includes Merlin, Murphy, Hugo, Sunny Valley, Wolf Creek, several small communities in the Illinois Valley outside of Cave Junction, and other locations. Inventory information was obtained from the 1982 *Josephine County Roadway Plan*, the 1982 *Josephine County Bicycle Master Plan*, street data maintained by the County Public Works Department, transit information from Josephine County Transit, highway data maintained by ODOT, and other information from various service providers and facility managers. System inventory and existing operations for the unincorporated area within the Grants Pass and Cave Junction urban areas are addressed in the TSP for these cities.

The inventory and analysis of existing transportation system conditions includes:

- Existing street characteristics including physical features, traffic control, current traffic operations and safety with primary emphasis on the major and minor collector street systems
- Public transit
- Other surface transportation such as intercity and dial-a-ride bus service
- Air transportation
- Pedestrian and bicycle systems
- Freight transportation systems including trucking, rail, and pipeline transportation (there is no water-based transportation in Josephine County)

Although all transportation system modes are inventoried, the street inventory is the most data intensive. It includes detailed tables and GIS-based maps describing major and minor collector roadway features. Among these features are: number of lanes; surface material; posted speeds; functional classification; facility and shoulder width; on-street parking; intersection traffic control; and pedestrian and bicycle facilities. Detailed tables are included in separate appendices that were attached to TSP Technical Memorandum #2: Existing Transportation Conditions which has been provided to the County Public Works Department and the ODOT Region 3 office in Roseburg.

## Roadway Inventory

This section describes the existing street circulation system within rural Josephine County. Jurisdictional ownership and maintenance responsibilities, functional classification, physical features and traffic control, safety, and traffic operations including existing levels of service are summarized.

### Jurisdictional Responsibilities

The Oregon Department of Transportation (ODOT), Josephine County, the City of Grants Pass and the City of Cave Junction all maintain portions of the existing street system within the county. Jurisdictional responsibility is summarized below for state highways, county roads, and private streets within rural Josephine County. County-maintained roadways within City UGBs are listed here without supporting details, as they are included in the TSPs of the two cities, as are facilities maintained by the two cities.

## State Highways

Six state-maintained highways pass through or within Josephine County, including Interstate 5 (I-5), US 199, OR 99, OR 238, OR 46, and the Rogue River Loop Highway, for a total of just over 134 miles (388 lane miles)[1]. Figure 3-1 shows the location of state highways in the County, as well as posted speeds on state highways. Where speeds are not posted, Oregon's Basic Rule applies. The Basic Rule states that a motorist must drive at a speed that is reasonable and prudent at all times by considering other traffic, road, and weather conditions, dangers at intersections and any other conditions that affect safety and speed. The Basic Rule does not allow motorists to exceed posted speeds, nor does it set absolute speeds for all conditions.

I-5 is a well-maintained, four-lane divided freeway classified as a principal arterial on the National Highway System, with a posted speed[2] of 65 miles per hour through Josephine County. I-5 serves as the primary north and south through route for traffic traveling through the northeast quadrant of the County, which includes the bulk of the County's populated area. The 1999 *Oregon Highway Plan* (the 1999 OHP) classifies I-5 as having interstate significance, and as a state Freight System Route.

US 199 (Redwood Highway) has been designated as a highway of Statewide Significance in the 1999 OHP and also listed as a rural principal arterial in the National Highway System. This highway runs from the City of Grants Pass into northern California, connecting the I-5 corridor with US 101. It is the primary transportation corridor for the Illinois Valley area. Posted speeds in unincorporated Josephine County range from 45 mph to 55 mph. A portion of this highway (mileposts 0.35 to 6.92) has been designated as an expressway where the transportation function will be of primary importance and more restricted access management standards will be implemented. These could include limitations on new or existing intersections and/or driveway access, ultimately, reducing the number of intersections where all-way turning movements are allowed.

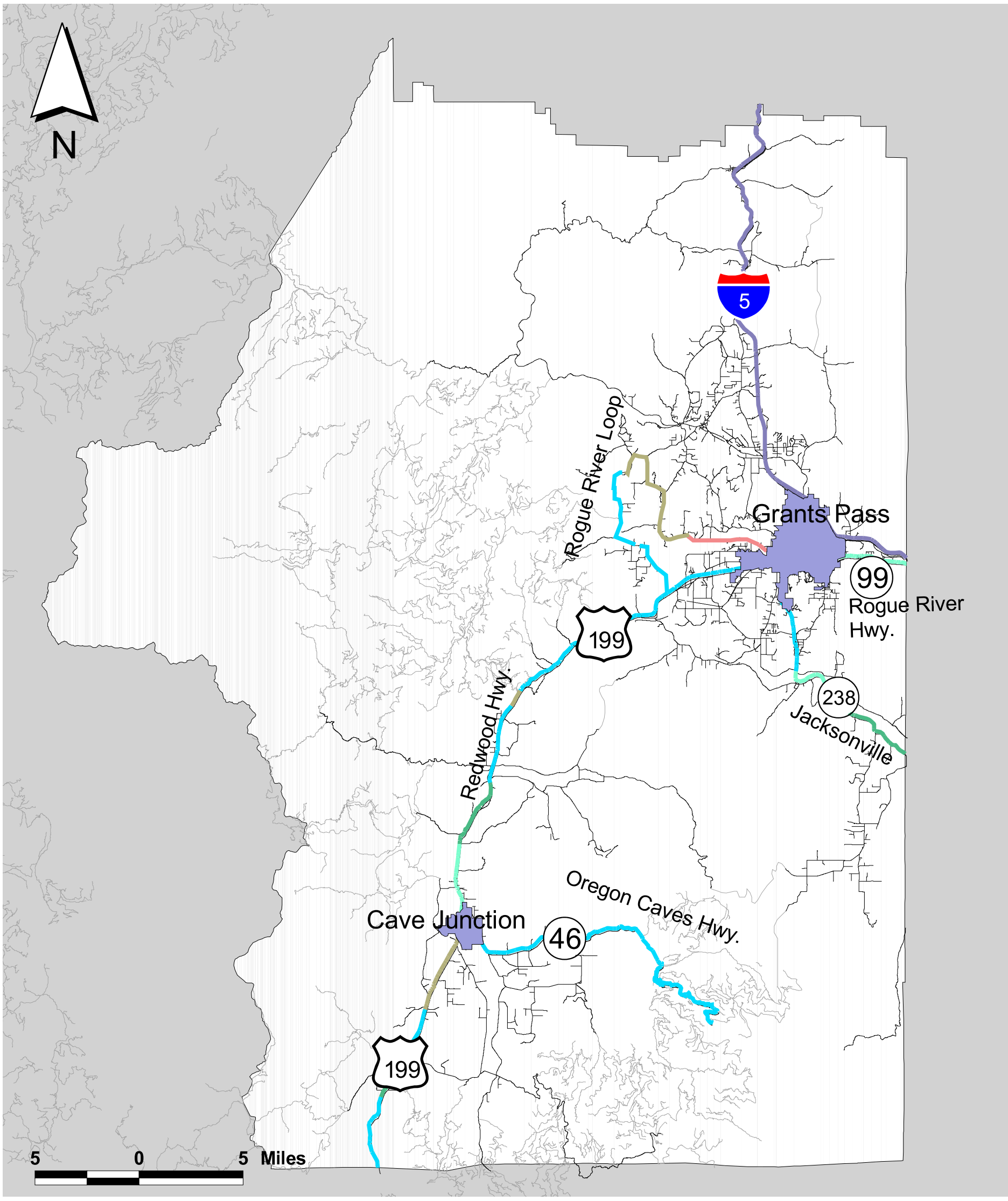
OR 99 runs concurrent with I-5 until it reaches the City of Grants Pass, and is designated as a District Highway of Regional Significance in the 1999 OHP. In Grants Pass, OR 99 becomes a north/south one-way couplet through downtown, converting into a four-lane east/west highway after crossing the Rogue River. It continues along the south side of the river into Jackson County, rejoining I-5 east of the City of Rogue River. The posted speed on OR 99 in unincorporated Josephine County is 45 mph.

OR 238 (Jacksonville Highway), a District Highway in the 1999 OHP, runs from the City of Grants Pass south and east along the Applegate River into Jackson County, where it intersects I-5 in the City of Medford. In Josephine County it has a posted speed ranging from 40 to 55 mph.

OR 46 (Oregon Caves Highway) serves as the primary link for visitors to the Oregon Caves National Monument in south-central Josephine County and is classified as a District Highway in the 1999 OHP. The posted speed on OR 46 is 55 mph outside the Cave Junction UGB. Overlength truck/trailer combinations are not allowed on OR 46.

Rogue River Loop Highway extends from southwest Grants Pass along the north side of the Rogue River (where it is also Lower River Road), crossing to the south side after about 10 miles at the Robertson Bridge, and returning along the south side of the river to a terminus at US 199 about six miles west of the City limits. Overlength truck/trailer combinations are not allowed on any part of the Rogue River Loop Highway, which is also a popular bicycling and recreation route.

[1] ODOT Transportation Systems Monitoring web page, 2003.
[2] Posted speeds per ODOT State Highway and County GIS data, 2003.




Posted Speeds
- 35
- 40
- 45
- 50
- 55
- 65

Highways
- County Roads
- Forest Roads

Urban Growth Boundary

**Figure 3-1: State Highway Locations and Posted Speeds**

Josephine County
Transportation System Plan

Another 21 miles of roadway owned and maintained by the State of Oregon run through state forest lands in the County. Nearly all of these roadways are unpaved, and about half are unimproved. The County's one state park, Illinois River State Park, has about 1.1 miles of roadway, which are mostly paved.

## County-Maintained Roads within City UGBs

Josephine County maintains all or segments of six roads within the Cave Junction UGB and about 160 roads within the Grants Pass UGB. These roadways are listed in Tables A-1 and A-2 of Appendix A of TSP Technical Memorandum #2: Existing Conditions (available for review in Josephine County Public Works or ODOT Region 3 offices). The lists of County-maintained roadways within the UGB of the two cities change periodically as areas are annexed, but maintenance responsibility is not transferred automatically with annexation. Josephine County has entered into an Intergovernmental Agreement (IGA) with the City of Grants Pass whereby the City is responsible for all local collector and residential roadways within the city limits except for Beacon Drive. Local collector and residential roadways within the UGB but outside the city limits exchange jurisdiction with annexation.

## County Roadways on Federal Lands

A good portion of the land within Josephine County is under the control of federal government agencies, including the U.S. Forest Service and the Bureau of Land Management. Under Revised Statute 2477 (RS 2477), a federal statute enacted in 1866 to facilitate settlement of the West, Josephine County also has control over various unimproved and/or unpaved roadways and rights-of-way in federal lands. RS 2477 was repealed in 1976, stopping new right-of-way grants on federal lands, but courts have ruled that rights-of-way established prior to 1976 remain valid. No list of the RS 2477 roads in Josephine County is currently available. The County supports the original purpose and intent of the RS 2477 road system.

## Federal Roadways on Federal Lands within Josephine County

In addition to roads on federal lands controlled by Josephine County under RS 2477, there are a few roadways on federal Bureau of Land Management (BLM) and U.S. Forest Service (USFS) lands in the county that play a role in the County's overall transportation system, for recreation, wilderness access and also inter-community travel in the south County area. These roads are also shown in Figure 3-1 above (as the lighter gray colored roads).

The following roads provide access to, through and within the area of the County in the western Siskiyou National Forest:

- Bear Camp Road, a Forest Service roadway from Galice to Curry County that is often used as a route to the coast and as a recreation access to Agness;
- Chrome Ridge Road, which connects to Galice;
- Taylor Creek Road, which accesses a number of campgrounds west of the Merlin area;
- Slate Creek Road;
- Illinois River Road, which runs deep into the National Forest from Selma;
- Fiddler Mountain Road and Eight Dollar Mountain Road, which link the Selma area to Curry County west of the National Forest;
- Swede Mountain Road, extending into the National Forest from US 199 near Hayes Hill; and
- Rough and Ready Road, which crosses the National Forest from O'Brien in the south County.

In the south County, several roads extend across the California border from the Siskiyou National Forest, including Sanger Peak Road, E Fork Illinois Road, and Happy Camp/Bolan Lake Road. One of the most important non-highway federal roads in the County's overall transportation system is Grayback Road, which provides a link connecting Cave Junction via OR 46 and Williams via Camp Creek Road.

In total, there are about 1,320 miles of roadways maintained by federal agencies in the County, including 1,170 miles of Bureau of Land Management roads and 150 miles of U.S. Forest Service roadways. Federal roadway surfaces are comprised of the following:

- 74% gravel
- 12% graded
- 10% oil mat
- 3% asphalt
- 1% unimproved

Graded roadways are dirt surfaces aligned and maintained to permit motor vehicle use. Oil mat refers to an earth road, a soil-surfaced road, or a gravel or stone road to which a hard surface course up to an inch thick has been added, with or without a seal coat. The County commonly applies chip seals as seal coats to extend the useful life of oil mat roadway surfaces.

### Privately Maintained Roads

Private roads in Josephine County are generally unimproved cul-de-sacs serving low-density rural residential development or facilities in mobile home parks. Private roads are not included in the street system inventory in Appendix A of TSP Technical Memorandum #2 that focuses on County-maintained facilities.

### Emergency Evacuation Routes

The Josephine County Emergency Operations Plan (adopted in September of 2003) identifies a series of lifeline routes in the county that serve hospitals, emergency centers or other critical facilities. Primarily consisting of arterial and collector roads, these facilities will receive priority attention during a national disaster or other emergency to ensure that they remain open and operational.

## Existing Street Functional Classification and Standards

Josephine County rural street classifications and standards are located in Chapter 8 Article 81.130 of the Josephine County Rural Development Code (RDC). The County uses a Street Functional Classification system to reserve future rights-of-way, determine street design, and develop future street improvement projects. As described in the RDC, this system is comprised of five classifications including major collector, minor collector, local, residential, limited residential and restricted residential, which is conditionally allowed by application.

For major collectors, the County RDC calls for AC (asphalt-concrete) pavement surface. Oil mat or AC surfaces are acceptable for the remaining classifications. At the County Engineer's discretion, travel lanes and shoulders of minor collectors and local streets may be required to be AC surfaces. Gravel shoulders are permitted for residential roads. Shoulders are not required for limited or restricted residential facilities. In addition, the RDC requires bike lanes or separate bicycle paths to be provided as needed, at the discretion of the review body. The Oregon Revised Statutes (ORS 366.514) requires bicycle facilities for all new roadway construction or major reconstruction as conditions permit on facilities classified as major collector or higher.

Rural Josephine County's six street classifications listed in the RDC are summarized in Table 3-1. Functional classification determination is a discretionary decision of the review and/or hearing body, per the County's RDC. Every facility maintained by the County has a functional classification. The County does not maintain some 236 miles out of a total of 812 roadway miles in Josephine County. These non-maintained roadways are not part of the functional classification system; most are surfaced with gravel or dirt and a few with oil mat. Sixty percent are short roads no longer than ¼ mile. Only 40 of the unclassified roadways are longer than one mile; the longest is seven miles. All County-maintained

roadways are listed by functional classification in Table A-3 of Appendix A in TSP Technical Memorandum #2.

Figure 3-2 shows the existing functional classification system of county-maintained collector and local streets within rural Josephine County, as well as federally maintained roads on USFS and BLM lands. During the development of the TSP the County's street classification system was reviewed to determine if modifications should be recommended based on state transportation system plan requirements, future operational needs and stakeholder input. Recommended changes are discussed in Chapter 6.

**Table 3-1**
**Josephine County Functional Classification Standards**

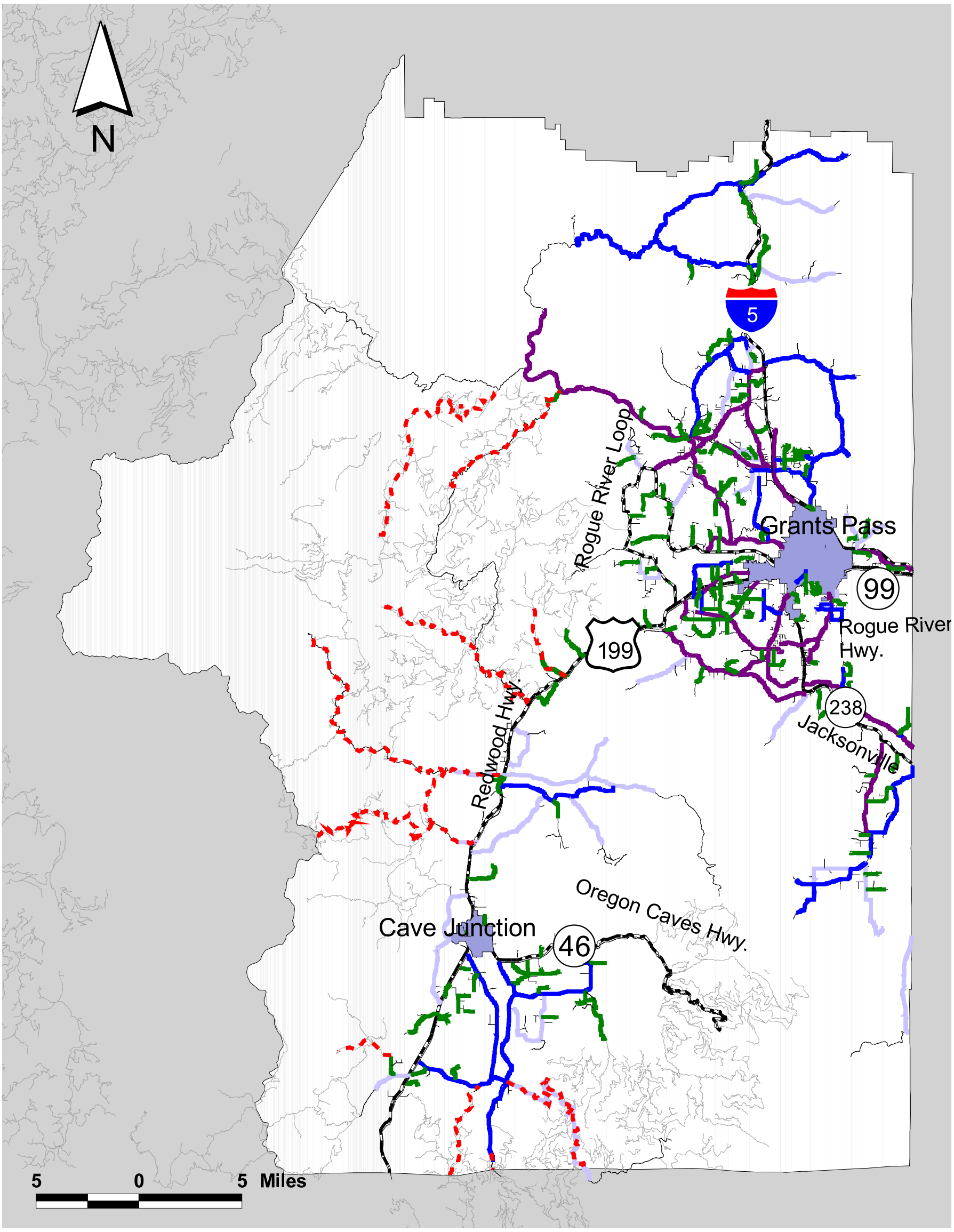
| Feature | Major Collector | Minor Collector | Local Collector | Residential | Limited Residential | Restricted Residential Max. 5 lots |
|---|---|---|---|---|---|---|
| Design Speed | 55 mph | 50 mph | 35 mph | 25 mph | 25 mph | 20 mph |
| Lane Width | 12 feet | 12 feet | 12 feet | 11 feet | 11 feet | 13 feet [2] |
| Surface Type | AC | oil mat-AC | oil mat-AC | oil mat | oil mat | oil mat |
| Maximum Grade | 8% | 10% | 12% | 15% | 15% | 18% |
| Shoulder Width | 8 feet | 6 feet | 4 feet | 2 feet | ----- | ----- |
| Shoulder Surface | AC | oil mat-AC | oil mat-AC | Gravel | Gravel | Gravel |
| Structure Width | 40 feet | 36 feet | 32 feet | 30 feet | 28 feet | 14 feet |
| Vertical Clearance | 16 ½ feet | 16 ½ feet | 16 ½ feet | 16 ½ feet | 16 ½ feet | 16 ½ feet |
| Load Design (Structure) | HS 20-44 | HS 20-44 | HS 20-44 | HS 20-44 | HS 20-44 | HS 20-44 |
| Right-of-Way [3] | 60 feet | 60 feet | 60 feet | 50 feet | 50 feet | 25 feet |
| Total Miles | 95 | 120 [4] | 100 | 190 | 20 | 18 |
| % of System [5] | 17.5% | 22.1% | 18.4% | 35.0% | 4.2% | 2.8% |

Source: Josephine County, Roadway and Traffic Management Plan.
[1] Future road standards above a residential standard will require the development to the greater standard
[2] One-lane roads, with 50-foot turnouts required at least every 800 feet.
[3] Right-of-way width may be increased because of the topography of a site.
[4] Includes 1 mile of rural industrial.
[5] Classified roadways only; 212 miles of the roadways in the County system are unclassified (28.1% of total mileage).

## Existing Street Characteristics

This section summarizes physical characteristics on the existing rural Josephine County street system. Josephine County's overall transportation system includes about 812 miles of roadway, including about 236 miles of gravel, dirt or unimproved roads that are not maintained by the County and, as a result, are not functionally classified.[3] Detailed tables that were provided by the County Public Works Department and documented in Appendix A of TSP Technical Memorandum #2, list features including number of

[3] Road mileage figures from Josephine County Department of Public Works, 2002.




Functional Classification
- Rural Major Collector (RCMA)
- Rural Minor Collector (RCMI)
- Rural Local Collector (RCL)
- Rural Industrial (RI)
- Rural Residential (RR)
- Unclassified County Road
- Urban Growth Boundary
- Significant Federal Roadways
- State Highways
- Forest Roads

**Figure 3-2: County Functional Classification System**

Josephine County
Transportation System Plan

lanes, travel lane and shoulder width and surface type, location and type of bicycle and pedestrian facilities, and posted speeds (see Tables A-4 through A-8). The data from these Appendix tables are summarized below.

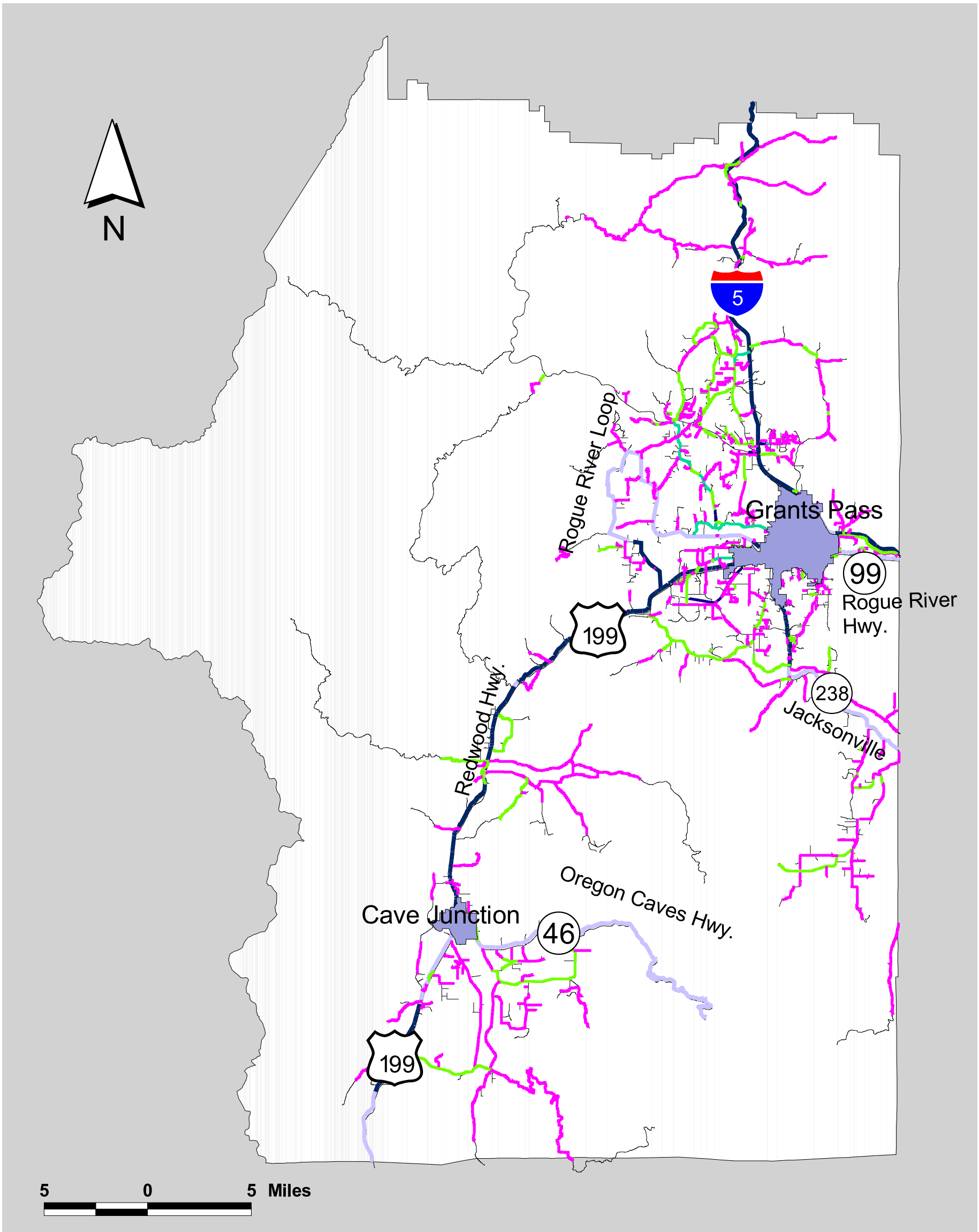
- About 98 percent of the total mileage in the County roadway system is comprised of two-lane roads. The County has one short segment of 4-lane roadway on N Valley Drive (about 700 feet long), five roadways with 3-lane segments, and fifteen 1-lane roadways. Travel surfaces on the total County roadway system are 50 percent AC or concrete, 25 percent oil mat, 17 percent gravel, 7 percent unimproved or not listed, and 1 percent dirt. The County-maintained system, which does not include roadways with gravel, dirt or unimproved surfaces, consists of about 2/3 AC or concrete and 1/3 oil mat surfaced roadways.
- Pavement conditions are rated good or very good on 100% of paved County roadways with functional classification of minor collector or higher, and on 99.9% of all County-maintained roadways.
- Shoulders on County roadways are 92 percent gravel, 2 percent paved, 1 percent dirt, 5 percent unspecified.
- Paved shoulder widths range from 1 to 9 feet on each side, and gravel shoulder widths range from 1 to 8 feet. Paved shoulders account for less than two percent of the total shoulder mileage on the County's unincorporated roadway network. Nearly all shoulder surfaces are gravel. Table 3-2 summarizes shoulder width on County-maintained facilities, which are also shown on Figure 3-3. (Black lines in Figure 3-3 are County facilities where shoulder width data was unavailable.)

**Table 3-2**
**Average Shoulder Width on Rural County-Maintained Roadways**

| Average Shoulder Width | Percent of Total |
|---|---|
| ≥ 6 ft: | 2.7% |
| 4-6 ft: | 4.6% |
| 3-4 ft: | 17.1% |
| 2-3 ft: | 36.2% |
| < 2 ft | 39.3% |
| Totals: | 100% |

Source: Josephine County Department of Public Works, 2002.
Note: Average shoulder width calculated as half the combined left and right shoulder widths.

- Within the rural Josephine County roadway system there are about 3,150 public street intersections, 1,050 commercial driveways, nearly 14,500 residential driveways, and almost 1,700 unimproved rural accesses. All public street intersections are stop sign controlled or uncontrolled; at present there are no signalized intersections in the County's rural roadway system.
- Posted speeds ranging from 20 mph to 55 mph govern drivers on 100 separate roadway segments of 84 different roadways, covering a total of 105 miles. Oregon's Basic Rule governs driver speeds on the remaining rural Josephine County roadways. As discussed earlier in this document, the Basic Rule states that a motorist must drive at a speed that is reasonable and prudent at all times by considering current conditions.




Avg. Shoulder Width (County Roads)
0 - 2 Feet
2 - 4 Feet
4 - 6 Feet
Avg. Shoulder Width (State Highways)
0 - 4 Feet
4+ Feet
County Roads (data unavailable)
Urban Growth Boundary

**Figure 3-3: Average Shoulder Width**

Josephine County
Transportation System Plan

## Pavement Condition

Josephine County uses a pavement management inventory system to maximize pavement life and prioritize limited roadway maintenance funds. Pavement condition is rated by trained County staff using a technical rating process based on the frequency and severity of signs of damage or wear such as cracks, holes and fissures. A score is assigned, called the pavement condition index (PCI), which ranges from 0 to 100.

Qualitative ratings ranging from very good to very poor are assigned based on the PCI score for each roadway classification. Classifications used for the pavement management system are different from the County's official functional classification system, even though they share names. Two slightly different sets of thresholds are used to correlate PCI scores and qualitative ranking. Facilities with asphalt concrete surfaces (AC) have a slightly higher breakpoint separating "good" from "very good" compared to facilities with Portland concrete (PCC), as shown below:

- PCI > 75 = very good (> 70 for roadways with combination PCC surfaces)
- PCI 50 to 75 = good (50 to 70 for roadways with combination PCC surfaces)
- PCI < 50 = poor

A breakdown of 2002/2003 PCI scores by percentage of lane miles of each classification is shown in Table 3-3. Overall, 96 percent of the County's roadway system maintains a PCI rating of very good, and only 0.1 percent – a ½-mile segment of Jerome Prairie Road from Sleepy Hollow Loop to Helms Road – is rated poor. No County-maintained roadways have any segments rated as very poor.

Pavement condition is very good on the 36 miles of roadway designated as County bike routes, with PCI scores of 79 or above. Bike route locations are discussed later in this document.

**Table 3-3**
**Pavement Condition Summary**

| | Percent of Pavement Condition by Category | | |
|---|---|---|---|
| **Pavement Management Classification** | **Very Good** | **Good** | **Poor** |
| Arterial | 97.1% | 2.9% | 0% |
| Collector | 96.3% | 3.7% | 0% |
| Local | 95.7% | 4.1% | 0.2% |
| All County Roadways | 96.2% | 3.7% | 0.1% |

Source: Josephine County Department of Public Works, 2002.

In contrast to the PCI ratings discussed above, a recent inspection performed by the County Engineer and the Public Works Superintendent showed that when the PCI analysis was conducted, quite a few of the roads were rated higher than can actually be justified given the definitions found in the PCI program. An explanation for the discrepancy may rest with the fact that the PCI rating only looks at the surface of the road and does not consider the damage to the road base and subgrade. In many cases, County roads in the rural areas have no base course at all. The road is constructed of chip seal over native material. A greater rate of decay would be expected on these roads as compared to those roads that were built to standards existing at the time of construction.

There is concern that roadway conditions could deteriorate in the future due to heavier trucks and potential increases in truck traffic with future development. Moreover, federal timber revenues that provide the main source of transportation system maintenance funding are scheduled to end by 2007, and the County has not yet identified a feasible source of revenue to replace these revenues. These issues will be explored further in the financial element of the Transportation System Plan.

## Existing Bridges

Bridges are critical for freight movement and the overall economy in Josephine County, Southwest Oregon and the entire state. Recently it has become clear that many bridges throughout the state are suffering from cracks and other age-related deficiencies, particularly those built before 1950. ODOT has mounted an intensive effort to identify and prioritize these bridge deficiencies. A June 2002 report to ODOT Director Bruce Warner from the Bridge Strategy Task Force found that 487 out of 555 state-owned bridges analyzed exhibit cracking, including 309 bridges with severe or moderate cracking that will probably need replacement. Oregon Transportation Investment Act I and II (OTIA I and OTIA II), two bond measures passed by the legislature in 2002 to fund priority transportation maintenance and capital improvements, include several hundred million dollars allocated to maintaining, upgrading and replacing critical bridges.

Josephine County owns and maintains 104 bridges on the National Bridge Inventory System (NBIS). These bridges have a replacement value of about $2.6 billion. In addition, the County owns and maintains 92 non-NBIS bridges, and 3200 culverts crossing roads and right-of-ways throughout the County. A variety of bridges exist in the County ranging from steel truss bridges, to concrete pier and deck bridges, to Sunny Valley's historic covered bridge.

Inspectors from Josephine County and the Oregon Department of Transportation evaluate these bridges once every three years. Inspectors rate the bridges on structural integrity, functionality, scour analysis, and other criteria, and assign a score called a sufficiency rating. The sufficiency rating is a numeric evaluation of a bridge's sufficiency to remain in service. Sufficiency ratings range from zero to 100, with zero being entirely insufficient and 100 percent entirely sufficient. The sufficiency rating takes into account structural adequacy, serviceability, functional obsolescence, importance for public use, eligibility for federal replacement funds, and a few lesser factors. Bridges receiving low scores are posted to restrict the allowable maximum vehicle weight, rehabilitated, or replaced.

A sufficiency rating below 50 implies that the bridge is in poor condition and needs to be replaced. Bridges rated between 50 and 80 indicate that the bridge is in fair condition, and that rehabilitation, if cost-effective, will bring the bridge up to current standards. Bridges with sufficiency ratings above 80 may have specific elements that do not met current minimum standards, but overall are considered to be in good or adequate condition in all areas and are not eligible for federal funding.

The status of all existing bridges in rural Josephine County, including bridges under ODOT control and those under County control, is summarized in Table A-9 of Appendix A of TSP Technical Memorandum #2. Information in the appendix bridge tables includes bridge location, jurisdictional ownership, sufficiency rating, and current status.

Presently there are a number of weight-restricted bridges along I-5 in southwest Oregon that force long-haul north-south freight traffic to use costly detours. In Josephine County, the only weight-restricted bridge on a state highway is the Applegate River Bridge, which is on US 199 seven miles south of Grants Pass. Other Southwest Oregon bridges with restrictions include:

- Northbound and southbound weight restrictions on Fords Bridge on Interstate 5 in southern Douglas County.
- Width limitations in both directions on Booth Branch Bridge on Interstate 5 in Roseburg, and weight restrictions on northbound truck traffic.
- Width restrictions over a seven-mile section of Interstate 5 south of Ashland.
- East of Medford on Highway 62 at Shady Cove Bridge, width restrictions and traffic flow restricted to one direction at a time.

Based on the most recent bridge inspection reports provided to Josephine County by ODOT for the 104 local bridges in the County, there are several bridges that are either structurally deficient or functionally obsolete (Table 3-4). Inspection reports for the County's bridges reveal the following points:

- 55 out of 104 bridges have sufficiency ratings of 80 or above, corresponding to adequate, good or very good condition. These bridges are ineligible for federal funding.
- 45 bridges have sufficiency ratings between 50 and 80. Of these, 15 are identified as functionally obsolete and five as structurally deficient.

Table 3-4 summarizes present conditions on existing bridges in the County rated either structurally deficient or functionally obsolete based on specific technical elements of the bridge inspection process that produces a sufficiency rating.

**Table 3-4**
**Josephine County Bridges Identified as Structurally Deficient or Functionally Obsolete**

| Bridge/ Waterway | Roadway | MP | Status | Sufficiency Rating | Timber Components |
|---|---|---|---|---|---|
| **Grave Creek** | **Beecher Rd** | **0.10** | **SD** | **25.3** | Slab w/ AC overlay, truss/arch, floor beam, bridge railing |
| **Coyote Creek** | **Bloom Rd** | **0.04** | **SD** | **36.4** | Deck, open girder |
| **Jones Cr/ Foothill Blvd.** | **Foothill Blvd.** | **0.72** | **SD** | **37.3** | None |
| **Sucker Creek** | **Holland Loop Rd** | **1.53** | **SD** | **41.8** | Not available |
| Illinois River | Finch Rd (Kerby) | 0.39 | FO | 47.6 | None |
| Illinois River | Waldo Rd | 0.53 | FO | 51.0 | None |
| Slate Creek | Elliot Creek Rd | 0.04 | FO | 51.9 | Deck w/ AC overlay |
| Woodcock Creek | Westside Rd | 0.78 | FO | 54.9 | Deck w/ AC overlay, open girder |
| Louse Creek | Highland Ave | 3.08 | FO | 62.0 | None |
| Galice Creek | Merlin-Galice Rd | 11.43 | FO | 62.9 | None |
| **Jacks Creek** | **Jump Off Joe Creek Rd** | **2.62** | **SD** | **63.2** | Deck w/ AC overlay, open girder |
| Jump Off Joe Cr | Merlin-Galice Rd | 1.07 | FO | 65.1 | None |
| Wolf Creek | Edgewood Rd | 0.01 | FO | 65.4 | None |
| Williams Creek | Browns Rd | 0.11 | FO | 67.3 | Deck w/ AC overlay |
| Grave Creek | Carrie Street | 0.13 | FO | 70.0 | Deck w/ AC overlay |
| E Fk. Illinois River | Takilma Rd | 8.61 | FO | 70.4 | None |
| Thompson Creek | Parker Lane | 0.12 | FO | 71.9 | None |
| Taylor Creek | Merlin-Galice Rd | 8.60 | FO | 72.2 | None |
| Dutcher Creek | Dutcher Creek Rd | 1.05 | FO | 77.1 | None |
| Bear Creek | Slate Creek Rd | 1.51 | FO | 78.0 | Deck w/ AC overlay, open girder, cap |

Source: Oregon Department of Transportation, 2001
Note: SD = Structural Deficiency, FO = Functionally Obsolete

Five bridges have sufficiency ratings below 50. Four are structurally deficient, including the Graves Creek Bridge on Beecher Road, which has urgent maintenance needs. This structure is programmed for replacement in the draft 2004-2007 STIP with federal HBRR funding (Highway Bridge Replacement and Rehabilitation Program). The other structurally deficient bridges are the Coyote Creek Bridge on Bloom

Road, the Jones Creek Bridge on Foothill Boulevard, the Holland Loop Road Bridge over Sucker Creek, and the Jacks Creek Bridge on Jumpoff Joe Road (which has a sufficiency rating greater than 50).

In addition to sufficiency ratings, Table 3-4 lists timber elements of those bridges in the County designated either as structurally deficient or functionally obsolete. Timber is less durable than comparable elements composed of steel or concrete, so bridges that have adequate sufficiency ratings but have timber components may deteriorate to deficient levels faster than bridges with lower sufficiency ratings but no timber components.

Table 3-5 below lists County bridges that are presently rated as structurally sufficient but have timber components. Although two have ratings below 60, none of the bridges listed in Table 3-5 have sufficiency ratings below 50 and none are presently rated functionally obsolete.

**Table 3-5**
**Josephine County Bridges with Timber Components Presently Rated Sufficient**

| Bridge/Waterway | Roadway | MP | Sufficiency Rating | Timber Components |
|---|---|---|---|---|
| Munger Creek | Davidson Road | 0.04 | 55.2 | Deck w/ AC overlay, open girder |
| Rock Creek | Lone Mountain Rd | 2.06 | 57.4 | Deck w/ AC overlay, open girder |
| Kerby Slough | Finch Rd in Kerby | 0.33 | 60.5 | Open girder |
| Grave Creek | Sunny Valley Loop | 0.31 | 62.0 | Deck w/ AC overlay, stringer, truss/arch, floor beam, bridge railing |
| Page Creek | Takilma Rd | 7.18 | 67.2 | Deck w/ AC overlay, open girder |
| Louse Creek | Carton Way | 0.10 | 69.0 | Open girder |
| Wolf Creek | Lower Grave Cr Rd | 2.55 | 72.6 | Deck w/ AC overlay |
| Quartz Creek | Ward Rd | 0.12 | 75.7 | Deck w/ AC overlay, open girder |
| Crooks Creek | Deer Creek Rd | 4.23 | 78.0 | Deck w/ AC overlay, open girder |
| Murphy Creek | Murphy Creek Rd | 3.37 | 78.9 | Open girder |
| Reeves Creek | Reeves Creek Rd | 0.45 | 83.7 | Deck w/ AC overlay, open girder |
| W Fork Williams Creek | Cave Camp Rd | 0.40 | 84.1 | Deck w/ AC overlay |
| Reuben Creek | Lower Grave Cr Rd | 10.44 | 96.5 | Open girder |

Source: Oregon Department of Transportation, 2001

## Existing Traffic Operations

This section addresses existing transportation system operations on State and County roadways in rural Josephine County, based on analysis of hourly intersection turn movement counts collected by ODOT and Josephine County in November and early December 2002, and roadway segment counts collected by the County over the past three years. Traffic count data used for the TSP is included in Appendix B of TSP Technical Memorandum #2. In addition, this section also includes an update of ODOT's 1998 analysis of the I-5 interchange in the Merlin area (Exit 61).

### State Highway Volume-to-Capacity (v/c) Ratio Thresholds

Several state highways pass through rural Josephine County. As adopted in the 1999 *Oregon Highway Plan*, ODOT uses volume-to-capacity (v/c) ratios to measure state highway performance rather than intersection or roadway levels of service. Various v/c thresholds are applied to state highways based on the functional classification of these facilities. For the five state highways passing through rural Josephine County, the applicable v/c thresholds range from 0.70 to 0.75, as shown in Table 3-6. The v/c thresholds for the same highways within urban areas are 0.05 points higher. For other state facilities such

as ramp terminal intersections, the 1999 *Oregon Highway Plan* specifies a v/c threshold of 0.85. At signalized and all-way stop-controlled intersections, the v/c threshold applies to the entire intersection. At two-way stop-controlled intersections, the v/c standard applies to the critical movement, which is typically traffic entering the major street from the side street. Operational analysis methodologies in the 2000 *Highway Capacity Manual* were used to determine v/c ratios for intersections and roadway segments.

According to the 2000 *I-5 State of the Interstate Report* by the Oregon Department of Transportation, Interstate 5 (I-5) operates today without significant congestion on the freeway mainline through Josephine County. Some congestion does occur at specific locations including the short northbound uphill grade just east of the southern Grants Pass interchange and over the multiple passes comprising the Sexton Summit area. Average daily traffic (ADT) ranges from about 31,000 vehicles at the Josephine County/Jackson County border to 22,000 vehicles where I-5 passes through the eastern edge of the mid-county Grants Pass urban area, increasing to about 30,000 ADT through the Merlin area, before decreasing again to less than 20,000 ADT at the County's northern boundary. Trucks account for 25 to 28 percent of total I-5 traffic between Grants Pass and Merlin.

**Table 3-6**
**Applicable State Volume-to-Capacity (V/C) Thresholds in Josephine County**

| Highway | Oregon Highway Plan Level of Significance | V/C Threshold |
|---|---|---|
| Interstate 5 (I-5) | Interstate Highway | 0.70 |
| US Highway (US) 199 | Statewide Highway | 0.70 |
| Oregon Highway (OR) 46 | District Highway | 0.75 |
| Oregon Highway (OR) 99 | District Highway | 0.75 |
| Oregon Highway (OR) 238 | District Highway | 0.75 |
| Rogue River Loop Highway | District Highway | 0.75 |
| Local Stop Sign Controlled Intersections on State Highways | All | 0.85 |

Source: 1999 *Oregon Highway Plan*

US 199 begins at I-5 in southeast Grants Pass where it carries about 12,000 ADT, running through the Illinois Valley and into northern California. Average daily traffic through the Illinois Valley on US 199 is less than 10,000 vehicles, except through the city of Cave Junction, where the volume peaks at about 13,000 at the junction with OR 46.

OR 99 runs through the City of Grants Pass as the 6th Avenue/7th Avenue one-way couplet carrying about 45,000 ADT across the Rogue River Bridge. South of the river OR 99 runs east as the Rogue River Highway, with traffic decreasing to about 5,000 ADT at the Josephine-Jackson County line.

OR 238, which connects Grants Pass and Medford, carries less than 10,000 ADT in rural Josephine County, increasing to over 17,000 ADT where it meets OR 99 south of the Rogue River.

OR 46 extends from Cave Junction, where it carries about 6,500 ADT, to the Oregon Caves National Monument, where the ADT is less than 1,000 vehicles.

The Rogue River Loop Highway makes a loop connection along both the north and south sides of the Rogue River west of Grants Pass, crossing the river at the Robertson Bridge. The portion of the Rogue River Loop on Upper River Road just east of the intersection with Azalea Drive Cutoff currently carries just under 5,000 ADT.

Existing congestion on state highways in Josephine County study is minimal, occurring primarily within the urban growth boundaries of Grants Pass and Cave Junction. Some seasonal congestion has been noted along US 199 in the Illinois Valley near Cave Junction and the connection to OR 46. The *Cave Junction TSP* recommends several intersection improvements for US 199, including left turn lanes and signalized traffic control, as well as various streetscape improvements. Any improvements to US 199 would require concurrence from ODOT, a funding plan and timeline, and compliance with the *Oregon Transportation Plan* and other applicable regulations.

## Existing Levels of Service (LOS)

While ODOT uses v/c ratios to evaluate the performance of state highways and freeways, Josephine County, like most local jurisdictions, uses the level of service concept to assess operational performance. Levels of service (LOS) are used to rate the performance of an intersection or roadway segment within a specified time period, typically the a.m. or p.m. peak hour.

Assignment of a specific LOS for intersections is based on average delay per vehicle, which is calculated using equations that take into account intersection lane geometry and traffic control features, as well as characteristics of the traffic stream passing through the intersection. For unsignalized intersections these characteristics include the time required to slow, stop, wait, and accelerate to move through the intersection. At signalized intersections the mix of traffic is the main characteristic of the traffic stream affecting the analysis, as heavier vehicles require more time to accelerate and decelerate. Like a traditional academic report card, LOS A represents the top rank of intersection performance (i.e., the least delay), and LOS F represents intersection failure, with extremely long delays. Levels of service B through E represent increasingly higher levels of delay and congestion. Table 3-7 summarizes level of service characteristics for signalized and unsignalized intersections. Delay thresholds for unsignalized intersection levels of service are lower than the corresponding thresholds for signalized intersections, reflecting the negative impact on the driver of being less able to predict when a gap will appear in opposing traffic, in contrast to traffic signal cycles at signalized intersections, which are more predictable.

Josephine County applies an intersection level of service threshold of LOS D or better to guide roadway design and improvement priorities. Under its current application, this standard requires that zone change decisions not allow increases in traffic that would exceed Level of Service D.

**Table 3-7**
**Intersection Level of Service Definitions**

| Level of Service | Average Delay/Vehicle (sec.) | | Description |
|---|---|---|---|
| | Signalized | Unsignalized | |
| A | <10 seconds | ≤10 seconds | Very low delay; most vehicles do not stop. |
| B | >10 and <20 seconds | >10 and <15 seconds | Low delay resulting from good progression, short cycle lengths, or both. |
| C | >20 and <35 seconds | >15 and <25 seconds | Higher delays with fair progression, longer cycle lengths, or both. |
| D | >35 and <55 seconds | >25 and <35 seconds | Noticeable congestion with many vehicles stopping. Individual cycle failures occur. |
| E | >55 and <80 seconds | >35 and <50 seconds | High delay with poor progression, long cycle lengths, high v/c ratios, and frequent cycle failures. |
| F | >80 seconds | >50 seconds | Very long delays, considered unacceptable by most drivers. Often results from over-saturated conditions or poor signal timing. |

Source: 2000 Highway Capacity Manual, Transportation Research Board.

While LOS is a common measure of effectiveness, and applies to the amount of time required by the average driver to pass through the intersection, the volume-to-capacity ratio (v/c ratio) is another measure of effectiveness used to evaluate intersection operations. ODOT uses v/c ratios exclusively to evaluate operations on state facilities including freeways, state highways, expressways and interchange terminal ramps. The v/c ratio compares the magnitude of traffic traveling through an intersection with its theoretical capacity.

The v/c ratio is calculated differently for signalized and unsignalized intersections. At signalized intersections, the level of service is calculated for the entire intersection, and the v/c ratio is calculated separately for each lane group as well as for the entire intersection. (A *lane group* is a combination of one or more left, through and/or right turn lanes that move together at an intersection.) In contrast, at unsignalized intersections both level of service and v/c ratio are calculated for each traffic movement affected by right-of-way controls like stop signs. A v/c ratio above 1.0 often accompanies LOS E and LOS F conditions, indicating inadequate capacity for one or more major movements. At intersections operating at LOS D or better, v/c ratios above 1.0 are indicators of concerns such as sub-optimal signal timing or inadequate turn lane storage. For unsignalized intersections, low levels of service (LOS E or LOS F) and/or high v/c ratios typically indicate a side street turning movement that faces substantial conflicting traffic on the main street, where traffic does not have to stop.

## Intersection Traffic Operations

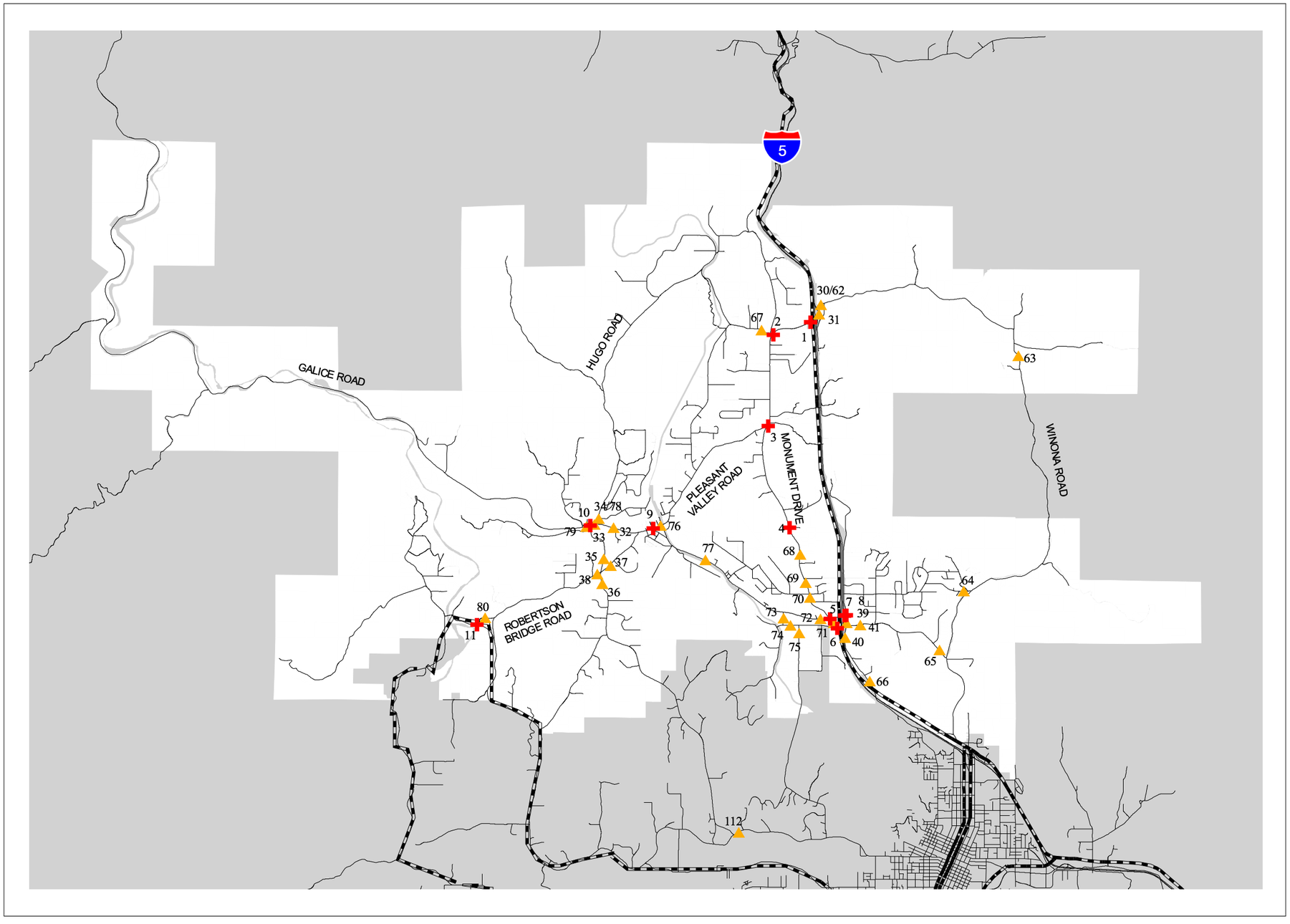
Weekday p.m. peak hour operating conditions – the four highest consecutive 15-minute periods during the evening peak period from 3:00 p.m. to 6:00 p.m. – were analyzed at 29 intersections selected by County staff in the rural area. Figure 3-4a covers the Merlin analysis area, Figure 3-4b covers the Murphy area, and Figure 3-4c covers analysis locations in the remainder of rural Josephine County. Merlin and Murphy are identified separately because they are analyzed for future conditions using a more detailed Level 2 analysis, which involves developing and assigning trip generation for specific land uses[4]. The intersections analyzed include four intersections in the Merlin area at the I-5/Merlin-Galice Road interchange. Turn movement counts conducted in 1998 by ODOT were increased by 10 percent (roughly 2 percent/year) to estimate existing 2003 p.m. peak hour volumes.

Table 3-8 summarizes existing traffic operations at these intersections, showing the LOS, delay and volume-to-capacity (v/c) ratios. For unsignalized intersections these measures of effectiveness apply only to the critical approach, not the entire intersection as at a signalized intersection. At three-legged and four-legged unsignalized intersections with stop control used only for side street traffic, through traffic on the major street does not encounter conflicting traffic or resultant delay. Intersection map ID numbers in Table 3-8 correspond to count location numbers shown in Figure 3-4a through 3-4c. These figures also identify roadway segment analysis locations. Analysis locations in Table 3-8, 3-9 and 3-11 are alphabetized separately for the Merlin area, Murphy area, and then other Level 1[5] analysis locations. Locations within the City of Grants Pass UGB were analyzed only for existing conditions.

With existing peak hour traffic volumes, 20 out of 28 of the unsignalized intersections analyzed operate at LOS A or B, which is generally considered very acceptable, with the typical driver facing no more than 15 seconds of delay. Another six intersections operate at LOS C with existing traffic, and one intersection functions at LOS D. For unsignalized intersections, LOS D or better is generally considered acceptable. Some jurisdictions consider LOS E acceptable for unsignalized intersections, because the portion of traffic affected by the LOS at unsignalized intersections is generally a fraction of total entering traffic (typically this would be a side street). The only unsignalized intersection analyzed for the TSP

[4] See Oregon Department of Transportation, Transportation System Planning Guidelines for a discussion of Level 1 and Level 2 traffic forecasting and analysis.
[5] Ibid..

# Figure 3-4a: Merlin Level 2 Analysis Traffic Count Locations



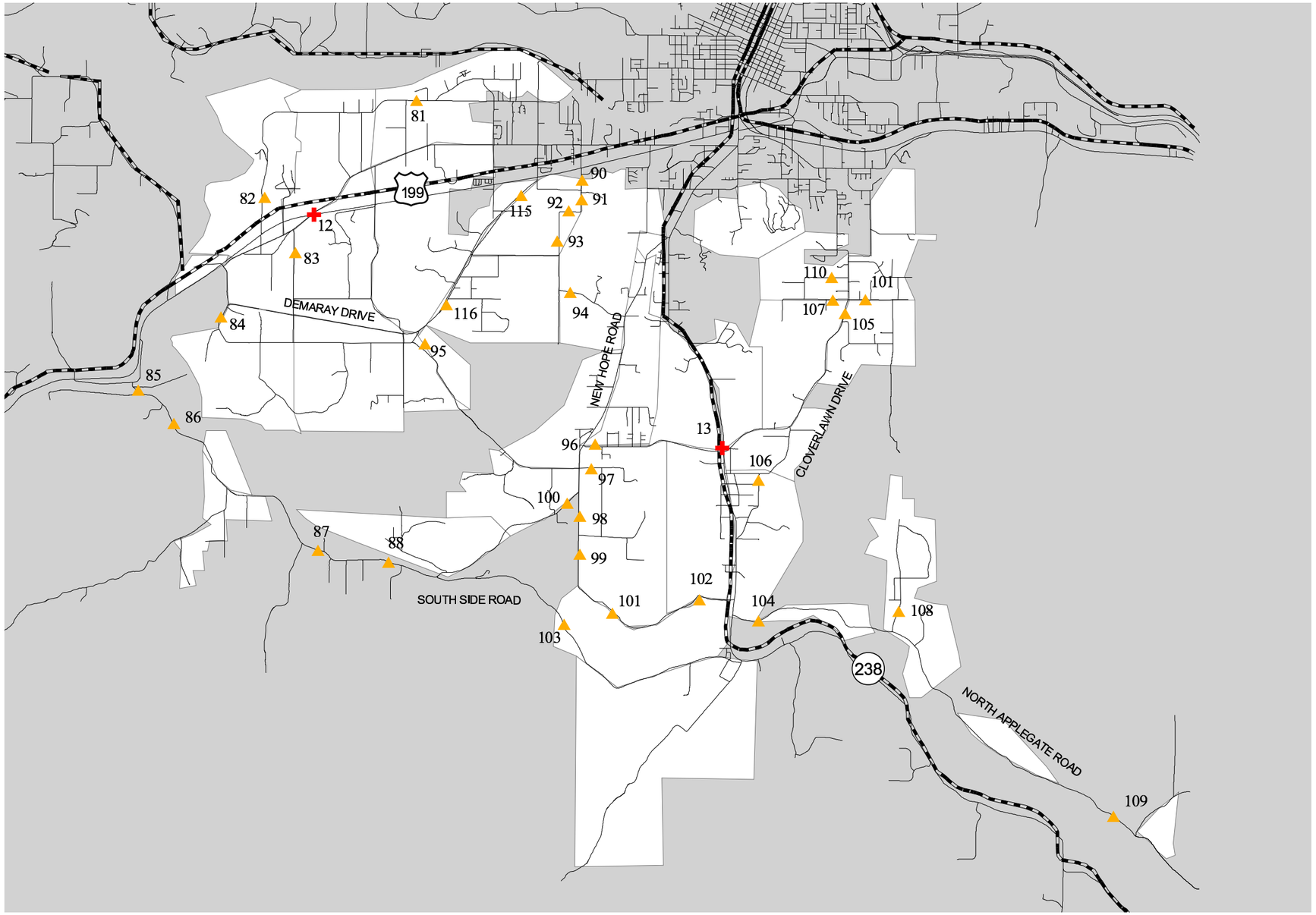

Intersection Count
Roadway Segment Count
State Highways
County Roads

N

2 0 2 Miles

Josephine County
Transportation System Plan

# Figure 3-4b: Murphy Level 2 Analysis Traffic Count Locations




Intersection Count

Roadway Segment Count

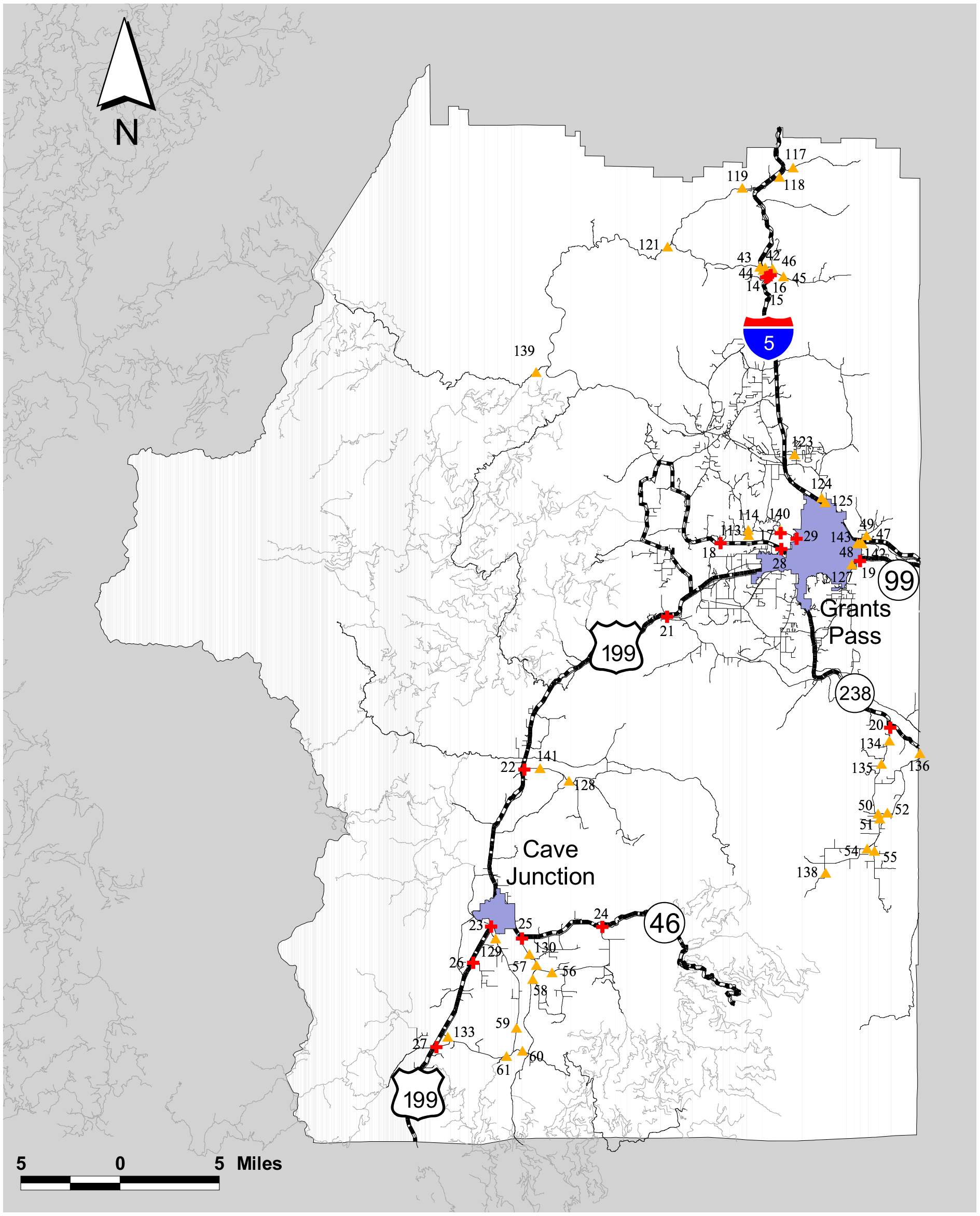
State Highways

County Roads

N

1 0 1 Miles

Josephine County
Transportation System Plan




- Intersection Count
- Roadway Segment Count
- Urban Growth Boundary
- State Highways
- County Roads
- Forest Roads

**Figure 3-4c: Level 1 Analysis Area Traffic Count Locations**

Josephine County
Transportation System Plan

that does not meet current level of service or volume-to-capacity ratio standards is the I-5 northbound off-ramp at Merlin-Galice Road. This intersection currently operates at LOS E and has a critical v/o ratio of 0.89, which exceeds the 0.85 threshold for non-highway state facilities included in the 1999 *Oregon Highway Plan*. Potential improvement options to address this deficiency are discussed below. None of the intersections analyzed operate at LOS F.

**Table 3-8**
**2002 PM Peak Hour Levels of Service at Key Intersections in Rural Josephine County**

| Map ID | Signalized Intersection | Area | Intersection v/c Ratio[1] | LOS[1] | Avg. Delay (seconds)[1] |
|---|---|---|---|---|---|
| 5 | Monument Drive/Merlin-Galice Road | Merlin | 0.59 | C | 24.8 |

| Map ID | Unsignalized Intersection | Area | Critical Approach | Max. v/c Ratio[1] | LOS[1] | Avg. Delay (seconds)[1] |
|---|---|---|---|---|---|---|
| 8 | Highlands Avenue/Merlin-Galice Rd | Merlin | EB L-T-R | 0.28 | B | 12.3 |
| 10 | Azalea Drive Cut-off/ Merlin-Galice Rd | Merlin | NB L-R | 0.18 | B | 11 |
| 7 | I-5 NB on/off ramps/Merlin-Galice Rd | Merlin | NB L-R | 0.89[2] | E | 38.3 |
| 1 | I-5 SB on/off ramps/Monument Road | Merlin | SB L-T-R | 0.04 | A | 9.1 |
| 6 | I-5 SB off /Monument Drive/Camp Joy Rd | Merlin | EB L-T-R | 0.15 | B | 12.9 |
| 11 | Lower River Rd/ Robertson Bridge Rd | Merlin | SB L-R | 0.1 | A | 9.2 |
| 9 | Merlin Road/ Pleasant Valley Rd | Merlin | NB L-R | 0.14 | B | 11.6 |
| 3 | Monument Drive/ Pleasant Valley Road | Merlin | SB L-R | 0.09 | B | 11.3 |
| 4 | Monument Drive/N Valley High School | Merlin | WB L-R | 0.27 | B | 12.4 |
| 2 | Monument Drive/Three Pines Road | Merlin | EB L-R | 0.12 | B | 10.7 |
| 12 | US 199/ Redwood Avenue | Murphy | SB L-T-R | 0.26 | C | 21.6 |
| 13 | OR 238/ Jaynes Drive | Murphy | WB L-T-R | 0.1 | C | 16.6 |
| 29 | G Street/Lincoln Street | Level 1 | NB L-R | 0.62 | D | 31.1 |
| 14 | I-5 SB on/off ramps at Grave Creek (Leland) | Level 1 | SB L-T-R | 0.05 | A | 10 |
| 15 | I-5 NB on/off ramps at Grave Creek (Leland) | Level 1 | SB L-T | 0.07 | A | 9.7 |
| 16 | Old Highway 99/ I-5 Frontage Street | Level 1 | WB L-T-R | 0.05 | B | 10.7 |
| 20 | OR 238/ Watergap Road | Level 1 | NB L | 0.16 | B | 11.2 |
| 24 | OR 46/ Holland Loop Road East | Level 1 | NB L-R | 0.01 | A | 9.3 |
| 25 | OR 46/ Holland Loop Road West | Level 1 | NB L-R | 0.16 | B | 11.4 |
| 19 | OR 99/ Fruitdale Drive | Level 1 | NB L-R | 0.13 | B | 11.7 |
| 28 | Rogue River Loop Highway/Glen Drive | Level 1 | SB L-T-R | 0.02 | B | 10.8 |
| 18 | Upper River Road/ Lower River Rd | Level 1 | NB L-R | 0.05 | B | 10.1 |
| 17 | Upper River Road/ Pine Crest Drive | Level 1 | SB L-R | 0.32 | C | 17.1 |
| 21 | US 199/ Fish Hatchery Road | Level 1 | NB L-T | 0.08 | C | 15.1 |
| 26 | US 199/ Ken Rose Lane | Level 1 | WB L-R | 0.05 | B | 10.4 |
| 22 | US 199/ Lakeshore Drive | Level 1 | WB L-T-R | 0.16 | C | 17.1 |
| 27 | US 199/ Lone Mountain-O'Brien | Level 1 | EB L-T-R | 0.06 | B | 11.5 |
| 23 | US 199/ Rockydale Road | Level 1 | EB L-T-R | 0.04 | C | 19.2 |

Note: In the Area column, '1' indicates a location included in the Level 1 analysis of future conditions, and 'Merlin' or 'Murphy' indicate a location included in the more detailed Level 2 future conditions analysis. 'Map ID' correlates to the location number in Figures 4a, 4b and 4c.

1 At the signalized intersection these performance measures apply to the entire intersection. At unsignalized intersections they apply only to the movement indicated, not the entire intersection.

2 V/C ratio exceeds standard of 0.85 in the 1999 *Oregon Highway Plan* for intersection on state facilities. Potential improvements discussed in Chapter 6.

With existing p.m. peak hour conditions, Monument Drive at the North Valley High School entrance has the highest v/c ratio, but at 0.74 it does not indicate potential capacity concerns. No operational or capacity concerns were revealed at any of the intersections analyzed for existing conditions. Calculation sheets in Appendix C to TSP Technical Memorandum #2 show traffic volumes, intersection lane geometry and traffic control assumed at every intersection analyzed.

The Merlin area locations include the only signalized intersection analyzed for existing conditions in rural Josephine County, at Monument Drive/Merlin-Galice Road. ODOT maintains this traffic signal, which operates acceptably at LOS B with a v/c ratio of 0.59. This intersection is discussed in more detail later in this section, along with three other unsignalized intersections in the Merlin area that were also selected for analysis.

Most of the analysis locations are on two-lane roadways at intersections with single-lane approaches in each direction. Exceptions where turn lanes or multi-lane approaches are provided are listed below. All but one of the exceptions is an intersection with a state highway:

- Monument Drive at I-5 southbound off-ramp (separate WB left turn lane)
- Monument Drive at Merlin-Galice Road (signalized intersection with separate EB and WB left turn lanes and separate NB and SB right turn lanes, not on a state highway)
- I-5 northbound off at the Grave Creek exit (separate right and left turn lanes)
- Watergap Road at OR 238 (separate NB right and left turn lanes)
- Rockydale Road at US 199 (separate NB and SB right and left-through lanes)
- Redwood Avenue at US 199 (5-lane cross section on US 199)
- Lakeshore Drive at US 199 (separate NB and SB right, left and through lanes)
- Fish Hatchery Road at US 199 (separate right turn lane)

## Roadway Segment Traffic Operations

Nearly all roadways in Josephine County are two-lane, two-way roadways. Two-way, two-lane facilities were analyzed based on methodology in the *2000 Highway Capacity Manual* (the 2000 HCM), which classifies two-lane, two-way roadways into Class I and Class II facilities. Class I roadways typically provide higher-speed travel between regions or communities, while Class II roads are lower-speed roads, emphasizing connections between higher and lower classification roadways more than higher speeds. For the TSP traffic analysis, all rural major collectors were analyzed as Class I facilities, and all rural minor collectors were analyzed as Class II.

While traffic performance for Class I facilities is based on average travel speed and percent time-spent-following, performance for Class II facilities is based only on percent time-spent-following. The percent time-spent-following criterion is a proxy measure of driver comfort, and is based factors such as traffic volume, directional split, percent no-passing zone, truck traffic, and peak hour factor. A more even directional split reduces the number of passing opportunities, which increases platoon formation. A higher total two-way volume with a pronounced directional split may provide a better level of service than a lower total volume with a more even directional split. Passing capacity is also reduced the higher the proportion of the traffic stream comprised of truck traffic, and the more extensive areas are where the ability to pass is restricted.

Levels of service and volume/capacity (v/c) ratios were analyzed in detail on 32 segments of two-lane roadways throughout the County where the County and ODOT conducted traffic counts in the fall of 2002 specifically for the County's TSP analysis. Actual values were used at these locations for variables such as truck percentage, peak hour factor and directional split. Results are summarized in Table 3-9 and described below.

It should be noted that on two-lane, two-way roads, the analysis methodology in the 2000 Highway Capacity Manual can result in low (good) v/c ratios paired with poor levels of service. Passing capacity diminishes and percent time-spent-following increases as traffic volumes on two-lane facilities rise. However, as mentioned above, the passing capacity decreases at a faster rate if the directional split is relatively even, because the number of gaps adequate for passing is lower with a more even directional split.

**Table 3-9**
**2002 PM Peak Hour Roadway Segment Traffic Operations**

| Map ID | Roadway | Nearest Intersection | Direction From Int. | Area | Milepost | County Functional Class.[1] | 2-way PM Peak Hour Volume | V/C Ratio | LOS |
|---|---|---|---|---|---|---|---|---|---|
| 35 | Azalea Rd | Robertson Bridge Rd | North | Merlin | 5.46 | Major Collector | 103 | 0.05 | C |
| 36 | Azalea Rd | Robertson Bridge Rd | South | Merlin | 5.38 | Major Collector | 203 | 0.09 | C |
| 41 | Donaldson Rd | Highland Rd | East | Merlin | 0.04 | Minor Collector | 64 | 0.03 | C |
| 32 | Galice Rd | Hugo Rd | East | Merlin | 0.96 | Major Collector | 339 | 0.17 | E |
| 33 | Galice Rd | Hugo Rd | West | Merlin | 0.88 | Major Collector | 231 | 0.09 | E |
| 39 | Highland Ave | Donaldson Rd | North | Merlin | 2.84 | Major Collector | 342 | 0.13 | D |
| 40 | Highland Ave | Donaldson Rd | South | Merlin | 2.91 | Major Collector | 298 | 0.12 | C |
| 34 | Hugo Rd | Galice Rd | North | Merlin | 0.04 | Minor Collector | 203 | 0.09 | D |
| 30 | Jump Off Joe Rd | Monument Dr | East | Merlin | 0.05 | Minor Collector | 110 | 0.06 | C |
| 31 | Monument Dr | I-5 NB/Jump Off Joe | South | Merlin | 5.57 | Major Collector | 129 | 0.06 | C |
| 37 | Robertson Br Rd | Azalea Rd | East | Merlin | 0.87 | Major Collector | 255 | 0.13 | D |
| 38 | Robertson Br Rd | Azalea Rd | West | Merlin | 0.95 | Major Collector | 190 | 0.09 | D |
| 53 | Cedar Flat Rd | E Fork Rd | East | Level 1 | 0.84 | Minor Collector | 242 | 0.11 | D |
| 54 | Cedar Flat Rd | E Fork Rd | West | Level 1 | 0.77 | Minor Collector | 165 | 0.08 | D |
| 55 | East Fork Rd | Cedar Flat Rd | South | Level 1 | 0.04 | Local Collector | 88 | 0.05 | C |
| 47 | Foothill Blvd | Jones Creek | East | Level 1 | 1.03 | Major Collector | 245 | 0.12 | E |
| 48 | Foothill Blvd | Jones Creek | West | Level 1 | 0.96 | Major Collector | 383 | 0.17 | E |
| 56 | Holland Loop Rd | Takilma Rd | East | Level 1 | 1.92 | Minor Collector | 138 | 0.08 | D |
| 57 | Holland Loop Rd | Takilma Rd | West | Level 1 | 1.85 | Minor Collector | 224 | 0.12 | E |
| 49 | Jones Creek Rd | Foothill Blvd | North | Level 1 | 0.04 | Local Collector | 205 | 0.10 | E |
| 44 | Lariat Dr (frontage road) | Leland Rd | South | Level 1 | 0.65 | Residential | 73 | 0.04 | C |
| 42 | Leland Rd | Lariat Rd (frontage rd) | East | Level 1 | 0.53 | Minor Collector | 11 | 0.01 | C |
| 43 | Leland Rd | Lariat Rd (frontage rd) | West | Level 1 | 0.45 | Minor Collector | 82 | 0.04 | D |
| 45 | Placer Rd | Sunny Valley Lp | East | Level 1 | 0.04 | Local Collector | 27 | 0.02 | C |
| 59 | Rockydale Rd | Waldo Rd | North | Level 1 | 6.49 | Minor Collector | 58 | 0.04 | D |
| 46 | Sunny Valley Lp | Placer Rd | South | Level 1 | 0.40 | Residential | 73 | 0.04 | C |
| 58 | Takilma Rd | Holland Loop Rd | South | Level 1 | 0.04 | Minor Collector | 123 | 0.07 | E |
| 60 | Waldo Rd | Rockydale Rd | East | Level 1 | 4.00 | Minor Collector | 85 | 0.04 | D |
| 61 | Waldo Rd | Rockydale Rd | West | Level 1 | 3.92 | Minor Collector | 27 | 0.02 | D |
| 50 | Watergap Rd | Williams Hwy | East | Level 1 | 4.84 | Major Collector | 167 | 0.10 | C |
| 51 | Williams Hwy | Watergap Rd | South | Level 1 | 4.79 | Minor Collector | 223 | 0.08 | D |
| 52 | Williams Hwy | Watergap Rd | North | Level 1 | 4.72 | Minor Collector | 356 | 0.16 | D |

Source: Josephine County Dept. of Public Works; Parametrix, Inc.

Note: In the Area column, a '1' indicates a location included in the Level 1 analysis of future conditions, while 'Merlin' and 'Murphy' indicate a location included in the more detailed Level 2 future conditions analysis. 'Map ID' correlates to the location number in Figures 4a, 4b and 4c.

[1] Existing County Functional Classification designation (all roadway types listed are rural).

Percent time-spent-following, which is the basis for the level of service on two-lane facilities, also increases dramatically as the free flow speed (i.e., unconstrained speed) decreases. One outcome of this methodology for two-lane facilities is that good v/c ratios sometimes accompany poor levels of service, particularly for lower-speed Class II facilities. A few examples of this result can be seen in Table 3-9, where LOS D or even LOS E is matched with a v/c ratio of 0.20 or less. These are typically the result of a combination of free flow speeds less than 50 mph, pronounced directional splits, relatively high traffic volumes and narrow shoulders, which also reduce passing capacity. The methodology also requires a percentage of no-passing zones to be estimated. A conservative assumption of 100% no-passing zones was used due to frequent curves, side streets or driveways activity, and limited shoulder width. Lastly, the methodology is valid only for roadways with design speeds of 50 mph or greater; there is no broadly accepted method similar to the HCM 2000 for analysis of two-lane roadways with design speeds below 50 mph. Roadway segment analysis worksheets are included in Appendix C of TSP Technical Memorandum #2.

In addition to analysis based on peak period traffic counts conducted in 2002 for the TSP, peak hour v/c ratios were estimated for roadways designated as major or minor collectors in the County's functional classification system based on daily traffic counts conducted by the County between 1998 and 2002. These count locations are also shown in Figures 3-4a, 3-4b and/or 3-4c above. Analysis of these two-way sections required a number of variables in the 2000 HCM methodology to be estimated. Table 3-10 lists these estimated values, which are appropriate for a planning level analysis such as the TSP. Using these common values avoids the need for an extensive, costly data collection effort that would have little effect on the analysis outcome. Analysis results are shown in Table 3-11.

**Table 3-10**
**Assumed Values for Analysis of Two-lane, Two-way Roadway Segments**

| Variable | Major Collectors (Class I) | Minor Collectors (Class II) |
|---|---|---|
| 30th Highest Hour % of ADT | 10% | 10% |
| Shoulder width[1] | 3 feet | 2.5 feet |
| Lane width[1] | 12 feet | 11 feet |
| Segment length[1] | 0.1 miles | 0.1 miles |
| Terrain type[2] | Rolling | Rolling |
| Directional split[2] | 60/40 | 60/40 |
| Peak hour factor[2] | 0.88 | 0.88 |
| Trucks and buses[2] | 14% | 14% |
| Recreational vehicles[1] | 0% | 0% |
| Percent no-passing zones[1] | 50% | 50% |
| Access points[2] | 8/mile | 8/mile |
| Free flow speed[2] | 60 mph | 50 mph |

[1] Based on general review of County roadway inventory data.

[2] Default values recommended in the *2000 Highway Capacity Manual*. Actual values were used as available – for example, some of the traffic counts included truck percentages, which ranged from 5 to 30 percent.

To determine 30th highest hour volumes for analysis, data was reviewed from ODOT's 5 Automatic Traffic Recorder (ATR) stations in or just east of Josephine County on I-5, US 199 and OR 238. Except for US 199 at the Oregon/California border, where the percentage of daily traffic is closer to 17 percent, ATR records show the 30th highest hour to be 9.6 to 11.1 percent of average daily traffic. Therefore the 30th highest hour was assumed to be 10 percent of daily traffic, which is a typical assumption for future traffic analysis. Existing traffic volumes at analysis locations near the state line south of Cave Junction are generally low. A sensitivity analysis using 17 percent of daily traffic for the 30th highest hour instead

of 10 percent resulted in no change at most locations. One location – Rockydale Road east of US 199 – decreased from LOS A with a v/c of 0.10 to LOS B with a v/c of 0.18, which remains well within acceptable operating conditions.

As shown in Table 3-11, which shows results incorporating the assumed values in Table 3-10, all the major collectors analyzed operate at LOS C or better. Minor collectors in Josephine County typically carry relatively low traffic volumes. Table 3-11 lists all the minor collectors in the County not reported in Table 3-9 above, and shows LOS A or LOS B conditions with existing traffic. Detailed worksheets for the analysis of these roadway segments are included in Appendix C of TSP Technical Memorandum #2.

Volume-to-capacity ratios at the locations listed in Table 3-11, which were analyzed with estimated 30th highest hour volumes, are all less than 0.30, with the highest v/c ratio (0.28) on two segments of Merlin Road and Monument Drive. In Murphy the highest v/c ratio is 0.22. In the remainder of the County's rural area, the highest v/c ratio is 0.20, on Foothill Boulevard just outside the City of Grants Pass UGB.

**Table 3-11**
**1998-2002 PM Peak Hour Roadway Segment Traffic Operations – Major and Minor Collectors[1]**

| Map ID | Roadway | Nearest Intersection | Direction From Int. | Area | Milepost | County Rural Functional Class.[2] | 2-way PM Peak Hour Volume[3] | V/C Ratio | LOS |
|---|---|---|---|---|---|---|---|---|---|
| | | | **Merlin Level 2 Analysis Area** | | | | | | |
| 74 | Camp Joy Rd | Jaime Ln | East | Merlin | 0.68 | Minor Collector | 130 | 0.08 | A |
| 65 | Donaldson Rd | Granite Hill Rd | West | Merlin | 1.74 | Minor Collector | 50 | 0.03 | A |
| 79 | Galice Rd | Azalea Dr | West | Merlin | 1.15 | Major Collector | 230 | 0.18 | C |
| 64 | Grouse Creek Rd | Granite Hill Rd | West | Merlin | 0.15 | Minor Collector | 40 | 0.03 | A |
| 66 | Highland Ave | Morewood Ln | South | Merlin | 1.95 | Major Collector | 350 | 0.15 | C |
| 78 | Hugo Rd | Galice Rd | North | Merlin | 0.03 | Minor Collector | 170 | 0.10 | A |
| 73 | Jaime Ln | Merlin Rd | South | Merlin | 0.15 | Minor Collector | 110 | 0.07 | A |
| 62 | Jump Off Joe Rd | I-5 ramp | East | Merlin | 0.07 | Minor Collector | 90 | 0.05 | A |
| 72 | Merlin Rd | Monument Dr | West | Merlin | 0.51 | Major Collector | 660 | 0.28 | C |
| 77 | Merlin Rd | Holbrook Way | West | Merlin | 2.58 | Major Collector | 440 | 0.18 | C |
| 71 | Monument Dr | Camp Joy Rd | Noreth | Merlin | 0.00 | Major Collector | 690 | 0.28 | C |
| 70 | Monument Dr | Brookside Blvd | South | Merlin | 0.48 | Major Collector | 510 | 0.22 | C |
| 69 | Monument Dr | Brookside Blvd | North | Merlin | 0.61 | Major Collector | 330 | 0.19 | C |
| 68 | Monument Dr | Mary Harris Way | North | Merlin | 1.19 | Major Collector | 290 | 0.13 | C |
| 76 | Pleasant Valley Rd | Merlin Ave | West | Merlin | 0.10 | Major Collector | 150 | 0.09 | B |
| 75 | Plumtree Ln | Camp Joy Rd | South | Merlin | 1.20 | Minor Collector | 150 | 0.09 | A |
| 80 | Robertson Bridge Rd | Lower River Rd | North | Merlin | 2.94 | Major Collector | 130 | 0.08 | B |
| 67 | Three Pines Rd | Oxyoke Rd | West | Merlin | 0.10 | Minor Collector | 100 | 0.05 | A |
| 112 | Upper River Rd | Azalea Dr Cutoff | East | Merlin | 2.47 | Major Collector | 450 | 0.19 | C |
| 63 | Winona Rd | Jump Off Joe Creek Rd | South | Merlin | 3.80 | Minor Collector | 30 | 0.02 | A |
| | | | **Murphy Level 2 Analysis Area** | | | | | | |
| 82 | Applegate Ave | US 199 | North | Murphy | 1.52 | Minor Collector | 60 | 0.04 | A |
| 92 | Arnold Ave | Elk Ln | East | Murphy | 0.14 | Minor Collector | 105 | 0.06 | A |
| 108 | Board Shanty Rd | North Applegate Rd | North | Murphy | 0.12 | Minor Collector | 50 | 0.03 | A |
| 105 | Cloverlawn Dr | Summit Loop S | North | Murphy | 2.22 | Major Collector | 150 | 0.10 | B |
| 106 | Cloverlawn Dr | Glenwood St | South | Murphy | 4.51 | Major Collector | 40 | 0.02 | B |

## Table 3-11 (cont'd.)
## 1998-2002 PM Peak Hour Roadway Segment Traffic Operations – Major and Minor Collectors[1]

| Map ID | Roadway | Nearest Intersection | Direction From Int. | Area | Milepost | County Rural Functional Class.[2] | 2-way PM Peak Hour Volume[3] | V/C Ratio | LOS |
|---|---|---|---|---|---|---|---|---|---|
| | | | **Murphy Level 2 Analysis Area Cont.** | | | | | | |
| 115 | Demaray Dr | Willow Lane | West | Murphy | 0.03 | Major Collector | 500 | 0.22 | C |
| 116 | Demaray Dr | Jerome Prairie Rd | North | Murphy | 2.18 | Major Collector | 70 | 0.04 | B |
| 90 | Dowell Rd | Wolf Lane | North | Murphy | 0.64 | Minor Collector | 140 | 0.09 | A |
| 91 | Dowell Rd | Wolf Lane | South | Murphy | 0.80 | Minor Collector | 140 | 0.08 | A |
| 93 | Elk Lane | Sand Creek Rd | North | Murphy | 0.10 | Minor Collector | 100 | 0.06 | A |
| 100 | Fish Hatchery Rd | New Hope Rd | West | Murphy | 0.15 | Major Collector | 120 | 0.07 | B |
| 88 | Fish Hatchery Rd | Felkner Rd | West | Murphy | 2.76 | Major Collector | 100 | 0.05 | B |
| 87 | Fish Hatchery Rd | Bull Creek Rd | East | Murphy | 3.51 | Major Collector | 120 | 0.06 | B |
| 86 | Fish Hatchery Rd | Crystal Springs Rd | East | Murphy | 6.08 | Major Collector | 100 | 0.06 | B |
| 85 | Fish Hatchery Rd | Redlands Dr | South | Murphy | 6.47 | Major Collector | 130 | 0.08 | B |
| 84 | Helms Rd | Laine Ct | South | Murphy | 0.52 | Major Collector | 40 | 0.02 | B |
| 96 | Jaynes Dr | New Hope Rd | East | Murphy | 2.42 | Major Collector | 110 | 0.07 | B |
| 81 | Leonard Rd | Westwood Dr | West | Murphy | 2.02 | Minor Collector | 60 | 0.02 | A |
| 123 | Lloyd Dr | Castle Creek Rd | East | Level 1 | 0.42 | Minor Collector | 130 | 0.08 | A |
| 94 | Lonnon Rd | Elk Ln | East | Murphy | 0.03 | Minor Collector | 70 | 0.04 | A |
| 98 | New Hope Rd | New Hope School | South | Murphy | 3.60 | Major Collector | 80 | 0.04 | B |
| 99 | New Hope Rd | Hidden Valley Road | South | Murphy | 4.17 | Major Collector | 50 | 0.03 | B |
| 101 | New Hope Rd | OR 238 (Murphy End) | West | Murphy | 5.28 | Major Collector | 60 | 0.03 | B |
| 102 | New Hope Rd | OR 238 (Murphy End) | West | Murphy | 6.00 | Major Collector | 130 | 0.09 | B |
| 104 | North Applegate Rd | OR 238 (Murphy End) | East | Murphy | 0.12 | Major Collector | 170 | 0.10 | B |
| 109 | North Applegate Rd | Kubli Rd | West | Murphy | 5.71 | Major Collector | 60 | 0.04 | B |
| 97 | Penny Lane Rd | New Hope Rd | East | Murphy | 0.04 | Major Collector | 70 | 0.04 | B |
| 107 | Ponderosa Ln | Cloverlawn Dr | West | Murphy | 1.01 | Minor Collector | 20 | 0.01 | A |
| 103 | South Side Rd | New Hope Rd | West | Murphy | 4.06 | Major Collector | 50 | 0.03 | B |
| 89 | Stringer Gap Rd | Jerome Prairie Rd | East | Murphy | 2.30 | Major Collector | 100 | 0.06 | B |
| 95 | Stringer Gap Rd | New Hope Rd | West | Murphy | 0.13 | Major Collector | 120 | 0.07 | B |
| 111 | Summit Loop | Cloverlawn Dr | East | Murphy | 0.06 | Minor Collector | 60 | 0.04 | A |
| 110 | Walker Rd | Cloverlawn Dr | West | Murphy | 0.02 | Minor Collector | 50 | 0.03 | A |
| 83 | Woodland Park Rd | Redwood Ave | South | Murphy | 0.10 | Minor Collector | 70 | 0.04 | A |
| | | | **Level 1 Analysis Area (Remainder of County Rural Area)** | | | | | | |
| 114 | Azalea Dr Cutoff | Upper River Rd | North | Level 1 | 0.16 | Major Collector | 190 | 0.12 | C |
| 138 | Cave Camp Rd | Cedar Flat Rd | South | Level 1 | 0.10 | Minor Collector | 30 | 0.02 | A |
| 118 | Frontage Rd | Speaker Rd | South | Level 1 | 1.10 | Minor Collector | 20 | 0.01 | A |
| 127 | Fruitdale Dr | OR 99 | South | Level 1 | 2.34 | Major Collector | 130 | 0.08 | B |
| 142 | Foothill Blvd | Ament Rd | West | Level 1 | 0.61 | Major Collector | 420 | 0.18 | C |
| 143 | Foothill Blvd | Aurora Ave | West | Level 1 | 0.52 | Major Collector | 490 | 0.20 | C |
| 139 | Galice Rd | Galice Resort | West | Level 1 | 11.81 | Major Collector | 20 | 0.01 | B |
| 124 | Granite Hill Rd | Scenic Dr | North | Level 1 | 0.08 | Minor Collector | 170 | 0.11 | A |
| 130 | Holland Loop Rd | Hayes Cutoff Rd | South | Level 1 | 1.52 | Minor Collector | 260 | 0.16 | B |
| 128 | Lakeshore Dr | Reeves Creek Rd | South | Level 1 | 2.32 | Minor Collector | 120 | 0.06 | A |

**Table 3-11 (cont'd.)**
**1998-2002 PM Peak Hour Roadway Segment Traffic Operations – Major and Minor Collectors[1]**

| Map ID | Roadway | Nearest Intersection | Direction From Int. | Area | Milepost | County Rural Functional Class.[2] | 2-way PM Peak Hour Volume[3] | V/C Ratio | LOS |
|---|---|---|---|---|---|---|---|---|---|
| | | | **Level 1 Analysis Area (Remainder of County Rural Area) Cont.** | | | | | | |
| 141 | Lakeshore Dr | US 199 | South | Level 1 | 0.50 | Minor Collector | 240 | 0.15 | B |
| 123 | Lloyd Dr | Castle Creek Rd | East | Level 1 | 0.42 | Minor Collector | 130 | 0.08 | A |
| 121 | Lower Grave Cr Rd | Leland Rd | West | Level 1 | 0.09 | Minor Collector | 10 | 0.01 | A |
| 119 | Lower Wolf Cr Rd | Milepost 0.13 | -- | Level 1 | 0.13 | Minor Collector | 40 | 0.02 | A |
| 140 | Pine Crest Dr | Carol Ann Way | South | Level 1 | 0.20 | Minor Collector | 220 | 0.13 | B |
| 129 | Rockydale Rd | US 199 | South | Level 1 | 0.04 | Minor Collector | 170 | 0.10 | A |
| 117 | Speaker Rd | Frontage Rd | East | Level 1 | 0.12 | Minor Collector | 10 | 0.01 | A |
| 113 | Upper River Rd | Azalea Dr Cutoff | West | Level 1 | 2.57 | Major Collector | 240 | 0.15 | C |
| 125 | W Scenic Dr | Scoville Rd | West | Level 1 | 0.04 | Minor Collector | 90 | 0.04 | A |
| 133 | Waldo Rd | US 199 | South | Level 1 | 0.07 | Minor Collector | 20 | 0.01 | A |
| 134 | Water Gap Rd | OR 238 | South | Level 1 | 0.05 | Major Collector | 220 | 0.13 | C |
| 135 | Water Gap Rd | Pine Tree Dr | South | Level 1 | 1.68 | Major Collector | 210 | 0.13 | C |
| 136 | Williams Highway | OR 238 | South | Level 1 | 0.39 | Minor Collector | 100 | 0.06 | A |

Source: Josephine County Dept. of Public Works; Parametrix, Inc.
Note: In the Area column, a '1' indicates a location included in the Level 1 analysis of future conditions, while 'Merlin' and 'Murphy' indicate a location included in the more detailed Level 2 future conditions analysis. 'Map ID' correlates to the location number in Figures 4a, 4b and 4c.
[1] Based on analysis methodology in the *2000 Highway Capacity Manual* for two-lane, two-way roadway sections including analysis values listed in Table 10.
[2] Existing County Functional Classification designation (all roadway types listed are rural).
[3] Estimated as 10% of daily traffic with a 40/60 directional split.

## Merlin Area Traffic Conditions

At the Merlin interchange, the northbound I-5 on/off ramp intersects Merlin-Galice Road only a short distance west of the intersection of Highland Avenue/Merlin-Galice Road. The off-ramp, a stop-controlled single lane approach, experiences a high left turn volume (nearly 500 vehicles in the p.m. peak hour). As a result, queues extend well up the ramp during peak period, creating the potential for negative impacts on mainline traffic flow and resultant safety concerns.

ODOT conducted an analysis of the Merlin area in 1998 to identify potential short-term and long-term improvements to address safety concerns and reduce the influence of the interchange on mainline traffic flow. Traffic volumes assumed in the ODOT analysis were updated to represent 2003 conditions by applying a uniform 10% increase, correlating to annual growth rates of 2%. The 2% annual growth rate is similar (slightly more conservative) than the 1.88% annual rate developed by ODOT for I-5 in the Merlin area for 2000-2020.[6]

As shown above in Table 3-8, with existing traffic the I-5 northbound on/off ramp intersection with Merlin-Galice Road operates with a v/c ratio of 0.89, which is beyond ODOT's acceptable maximum. In 1998 ODOT recommended consideration of a roundabout for the I-5 northbound off-ramps at Merlin-Galice Road, in combination with relocating the intersection of Merlin-Galice Road/Highland Avenue further east to provide greater separation between the intersection and the off-ramp, which today is only a few car lengths.

[6] Oregon Department of Transportation, Transportation Planning and Analysis Unit, Future Volumes web page as of April 2003.

Several potential modifications to the I-5 northbound off-ramp were tested with estimated 2003 turning movements. Adding a short right turn lane at the off-ramp would provide a v/c ratio of 0.81 for a shared left-through lane that would carry most of the traffic from the off-ramp. However, adding a right-turn lane would further decrease the distance between the off-ramp intersection and Merlin-Galice Road/Highland Avenue, which is presently a two-way stop-controlled intersection with eastbound traffic stop-controlled. As a short-term measure in 1998, ODOT tested revised traffic control with the off-ramp traffic uncontrolled and traffic on Merlin-Galice Road stop-controlled. A second and more costly short-term option would be to modify stop control at the Merlin-Galice Road/Highland Avenue such that northbound and southbound traffic is stop-controlled and eastbound traffic can continue onto Highland Avenue without stopping. In combination with providing a short (50-100 feet) right turn pocket at the northbound off-ramp, this measure would provide adequate capacity for several years. Potential long-term alternatives for the Merlin area including the interchange are addressed in Chapter 6.

## Review of Speed Surveys

An evaluation of surveyed travel speeds was conducted based on over 80 locations where the County conducted speed surveys over the past four years. This information is summarized in Table A-6 of Appendix A to TSP Technical Memorandum #2, and includes roadway location, posted speed, and 85th percentile surveyed speed, functional classification, and estimated average daily traffic volume.

The 85$^{th}$ percentile speed is a commonly used value in analyzing travel speeds with respect to safety and appropriate posted speeds. It is the speed at which 85 percent of the vehicles surveyed travel at or below. Posted speeds are often set so that they are within 5 mph of the 85$^{th}$ percentile speed. Locations where 85$^{th}$ percentile speeds exceed posted speeds by more than 5 mph may merit further attention, which include measures such as reviewing or modifying the posted speed, increased enforcement of existing posted speeds, installing signs or other passive measures to alert drivers to be aware of their travel speeds, or constructing physical modifications intended to reduce the potential for excess speeds. County roadways where 85$^{th}$ percentile measured speeds exceeded posted speeds by 5 mph or more include the following:

- Fish Hatchery Road (Rural Major Collector) east of Bull Creek Road, where the 85$^{th}$ percentile speed was 55 mph vs. posted speed of 45 mph.
- Monument Drive (Rural Major Collector) north of Mary Harris Way, where the 85$^{th}$ percentile speed was 51 mph vs. posted speed of 40 mph.
- Old Stage Road (Rural Residential) near the Grave Creek interchange, where the 85$^{th}$ percentile speed was 45 mph vs. posted speed of 30 mph.
- Jones Creek Road (unclassified) south of Richland Avenue, where the 85$^{th}$ percentile speed was 54 mph vs. posted speed of 45 mph.

On rural roadways, higher speeds often result in higher crash rates. In the following section covering crash history, both Monument Drive and Fish Hatchery Road are included in a table of County roadways experiencing more than one crash per mile over the past three years. Many of the roadways are governed by Oregon's Basic Rule and do not have posted speeds. In addition to Monument Drive and Fish Hatchery Road, which <u>are</u> governed by posted speeds, eight roads with recent speed surveys had 85$^{th}$ percentile speeds exceeding 50 mph. Selection of 50 mph is arbitrary and does not by itself indicate excessive speed, but may indicate locations where further investigation is warranted for corrective measures such as more frequent enforcement and use of posted speeds rather than reliance on the Basic Rule. The roads with 85$^{th}$ percentile speeds exceeding 50 mph include Cloverlawn Drive, Camp Joy Road, Galice Road, Highland Avenue, New Hope Road and W Jones Creek Road.

## Safety and Crash History

In urban areas, intersections generally experience a higher crash rate than roadway segments due to the increased number of potential conflicting traffic movements. In rural areas, however, roadway segments also can experience higher accident rates, often due to travel speeds that are not consistent with geometric concerns such as narrow lanes and shoulders, sharp corners and lack of streetlights. Annual crash rates for intersections are calculated based on the number of incidents per million entering vehicles (MEV). A crash rate of 1.0/MEV is a commonly used threshold to identify intersections that may warrant further investigation of crash experience. Crash rates provide more meaningful information than just the number of crashes alone as they relate the incidence of crashes to the magnitude of exposure. Roadway segment crash rates are calculated based on the number of incidents per million vehicle miles.

For intersections, the County provided an analysis of crash data from 1990 through 2001, including severity and estimated crash rates. Table 3-12 summarizes the results for intersections averaging at least one crash per year over the 12-year period. Information for every intersection that experienced a recorded crash is included in Appendix D to TSP Technical Memorandum #2, as is a listing of all recorded roadway segment crashes over the most recent three years.

**Table 3-12**
**Summary of Crash History for Major Intersections**

| Intersection | Fatal | Injury | PDO * | 1990-2001 Crash Total | Crash Rate/ MEV ** |
|---|---|---|---|---|---|
| Tetherow Road & Williams Hwy | 0 | 7 | 16 | 23 | 6.68 |
| Azalea Drive & Robertson Bridge Road | 1 | 6 | 33 | 40 | 4.26 |
| Pine Tree Drive & Water Gap Road | 0 | 13 | 11 | 24 | 3.19 |
| Hayes Cutoff Road & Holland Loop Road | 0 | 5 | 14 | 19 | 2.25 |
| Williams Hwy & Jacksonville Hwy (OR 238) | 0 | 2 | 10 | 12 | 1.37 |
| Redwood Avenue & Southgate Way | 2 | 6 | 4 | 12 | 1.32 |
| Holland Loop Road & Caves Hwy (OR 46) | 0 | 7 | 14 | 21 | 0.93 |
| Willow Lane & Redwood Hwy (US 199) | 1 | 7 | 32 | 40 | 0.82 |
| Ken Rose Lane & Redwood Hwy (US 199) | 0 | 3 | 12 | 15 | 0.79 |
| Rockydale Road & Redwood Hwy (US 199) | 0 | 1 | 14 | 15 | 0.56 |

Source: Josephine County data, 1990-2001* PDO = property damage only.
** Crash rate is expressed per million entering vehicles based on estimated average daily traffic.
Note: Table only includes intersections averaging one or more crash per year from 1990 through 2001.

Six rural Josephine County intersections have 3-year crash rates exceeding 1.0/MEV, including four exceeding 2.0/MEV. Three intersections have a high proportion of injury crashes compared to overall average of 25% injury crashes: Pine Tree Drive at Water Gap Road – which was modified in 2001, Holland Loop Road at OR 46, and Redwood Avenue at Southgate Way, where two crashes resulted in fatalities.

County crash data for roadway segments also was collected and analyzed for the 3-year period from November 1999 to November 2002 to determine annual crash rates per million vehicle miles of travel. Roadway crash data were first screened to focus only on rural Josephine County facilities averaging two or more annual reported crashes and at least one crash per mile over the three-year period.

As indicated in Table 3-13, about 98 percent of the crashes on these 32 roadways were property damage only crashes (PDO). Out of 608 total non-intersection crashes, there were 6 injury crashes and 8 fatal crashes. One fatal crash occurred over the 3-year period on Fish Hatchery Road, Galice Road, North Applegate Road and Granite Hill Road, while both Pine Crest Drive and Pleasant Valley Road experienced two fatal crashes over the same 3-year period. No road experienced more than one injury crash.

**Table 3-13**
**Annual Crash Rates on County Roadways Averaging > 1.0 Crashes/Mile, 1999-2002**

| | Nearest Intersection | | Accidents | | | | Estimated | |
|---|---|---|---|---|---|---|---|---|
| Roadway | Start | End | Fatal | Injury | PDO* | Total | ADT** | Crashes/ MVMT+ |
| Midway Avenue | Redwood Avenue | Carrollwood Drive | 0 | 0 | 11 | 11 | 350 | 9.6 |
| Jaynes Drive | Cloverlawn Drive | New Hope Road | 0 | 0 | 15 | 15 | 600 | 9.3 |
| Elk Lane | Arnold Road | Road 360 | 0 | 1 | 7 | 8 | 700 | 6.9 |
| Cloverlawn Drive | Hamilton Lane | OR 238 | 0 | 0 | 21 | 21 | 700 | 7.4 |
| Pine Crest Drive | Upper River Road | Plumtree Lane | 2 | 0 | 27 | 29 | 1500 | 6.7 |
| Sunny Valley Loop. | I-5 Ramps | Salmon Cr. Road | 0 | 0 | 10 | 10 | 650 | 4.9 |
| Camp Joy Road | I-5 Ramps | Walden Way | 0 | 0 | 8 | 8 | 1150 | 4.6 |
| Jerome Prairie Rd. | Demaray Drive | Helms Road | 0 | 1 | 12 | 13 | 700 | 4.6 |
| New Hope Road | Stringer Gap Road | OR 238 | 0 | 0 | 29 | 29 | 1000 | 4.4 |
| Fish Hatchery Rd. | New Hope Road | US 199 | 1 | 1 | 22 | 24 | 800 | 4.2 |
| Three Pines Road | Monument Drive | Hugo Road | 0 | 0 | 6 | 6 | 850 | 3.6 |
| Merlin Road | Pleasant Valley Rd. | Galice Road | 0 | 1 | 49 | 50 | 3900 | 3.5 |
| Plumtree Lane | Pine Crest Drive | Camp Joy Road | 0 | 0 | 7 | 7 | 1400 | 3.5 |
| Reeves Creek Rd. | US 199 | Lakeshore Drive | 0 | 0 | 6 | 6 | 300 | 3.5 |
| Monument Drive | Merlin Road | I-5 Ramps | 0 | 0 | 55 | 55 | 2900 | 3.1 |
| Robertson Br. Rd. | Galice Road | Lower River Road | 0 | 0 | 13 | 13 | 1200 | 3.1 |
| Rockydale Road | US 199 | Waldo Road | 0 | 0 | 21 | 21 | 1000 | 2.9 |
| Takilma Road | Holland Loop Road | Dick George Rd. | 0 | 0 | 15 | 15 | 550 | 2.9 |
| W Jones Creek Rd. | Foothill Boulevard | Carson Creek Rd. | 0 | 0 | 11 | 11 | 1500 | 2.7 |
| Granite Hill Road | Scenic Drive | Winona Road | 1 | 1 | 11 | 13 | 1000 | 2.6 |
| Foothill Boulevard | Ament Road | Jackson Co. Line | 0 | 0 | 22 | 22 | 2300 | 2.5 |
| N. Applegate Road | OR 238 | Jackson Co. Line | 1 | 0 | 12 | 13 | 750 | 2.4 |
| Highland Avenue | Pony Lane | Sportsman Park | 0 | 0 | 20 | 20 | 2000 | 2.2 |
| Holland Loop Road | OR 46 | OR 46 | 0 | 0 | 26 | 26 | 1500 | 2.0 |
| Placer Road | Sunny Valley Loop | McCoy Creek Rd. | 0 | 0 | 6 | 6 | 250 | 2.0 |
| Demaray Drive | Willow Lane | Woodland Park | 0 | 1 | 15 | 16 | 2100 | 1.9 |
| Water Gap Road | OR 238 | Williams Highway | 0 | 0 | 18 | 18 | 1800 | 1.9 |

**Table 3-13 (cont'd.)**
**Annual Crash Rates on County Roadways Averaging > 1.0 Crashes/Mile, 1999-2002**

| | Nearest Intersection | | Accidents | | | | Estimated | |
|---|---|---|---|---|---|---|---|---|
| Roadway | Start | End | Fatal | Injury | PDO* | Total | ADT** | Crashes/ MVMT+ |
| Upper River Road | Lincoln Road | Lower River Road | 0 | 1 | 24 | 25 | 2750 | 1.8 |
| Azalea Drive | Azalea Drive Cutoff | Galice Road | 0 | 0 | 24 | 24 | 2200 | 1.7 |
| Pleasant Valley Rd. | Galice Road | Monument Drive | 2 | 0 | 9 | 11 | 1750 | 1.3 |
| Galice Road | Merlin Road | Bureau of Land Mgt. Land | 1 | 1 | 55 | 57 | 2900 | 1.2 |
| Redwood Avenue | Kokanee Lane | Helms Road | 0 | 0 | 17 | 17 | 5300 | 0.8 |

Sources: Josephine County volume data (1990-2001), crash data (1999-2002), roadway classification milepost data (2002).
* PDO = property damage only.
** Estimated average daily traffic volume used in the crash rate calculation. Source for traffic volumes is historical count data provided by Josephine County over the past 10 years.
+ Estimated annual crash rate per million vehicle miles of travel, based on number of crashes, estimated average daily traffic and length of rural roadway segment.

Tables 3-12 and 3-13 provide a starting point should the County elect to conduct a more detailed safety analysis of specific intersections and roadway segments. Such an evaluation should include a detailed review of accident causes, field conditions, time of day and other information; conceptual development of potential safety improvements; and a benefit-cost evaluation of potential improvements. The Appendix attached to TSP Technical Memorandum #2 lists other available information on all reported non-intersection crashes on unincorporated County roadways, including date, time of day and location.

Data collected from ODOT summarizes crashes along various segments of the state highway system in rural Josephine County including I-5, OR 46, OR 90, OR 238, and US 199, and compares crash rates with statewide averages for facilities of the same classification. This data is presented in Table 3-14.

**Table 3-14**
**2000 Crash History Summary on State Highways in Rural Josephine County**

| | Milepost | | | Number of | Crash |
|---|---|---|---|---|---|
| Segment Description | Beg | End | ADT | Crashes | Rate * |
| **Interstate 5 (Interstate Highway)** | | | | | |
| Josephine Co line to Redwood Hwy spur | 52.19 | 55.78 | 31,700 | 2 | 0.06 |
| Grants Pass to Louse Creek Interchange | 55.78 | 61.5 | 29,700 | 5 | 0.15 |
| Louse Creek Interchange to Jump Off Joe Cr. | 61.5 | 65.7 | 20,400 | 7 | 0.19 |
| Jump Off Joe Creek to Sunny Valley Loop | 65.7 | 71.4 | 19,100 | 24 | ***0.67*** |
| Sunny Valley Lp to S Wolf Creek Interchange | 71.4 | 76.2 | 18,600 | 25 | ***0.79*** |
| S Wolf Cr. Interchange to Wolf Cr. Interchange | 76.2 | 76.6 | 17,610 | 2 | ***0.53*** |
| Wolf Creek Interchange to Douglas County | 76.6 | 79.2 | 18,300 | 12 | 0.48 |
| ***2000 statewide average crash rate for Rural Interstate Highways*** | | | | | ***0.25*** |
| **OR 46 (District Highway)** | | | | | |
| Cave Junction to Kelly Creek | 0.0 | 5.4 | 2,010 | 1 | 0.27 |
| Kelly Creek to Little Grayback Cr Br | 5.4 | 10.0 | 615 | 1 | 0.96 |

**Table 3-14 Continued**
**2000 Crash History Summary on State Highways in Rural Josephine County**

| Segment Description | Milepost Beg | Milepost End | ADT | Number of Crashes | Crash Rate * |
|---|---|---|---|---|---|
| Little Grayback Cr Br to Cave Cr Campground | 10.0 | 15.6 | 320 | 0 | 0 |
| Cave Cr Campground to Oregon Caves | 15.6 | 19.2 | 300 | 0 | 0 |
| ***2000 statewide average crash rate for Rural District Highways*** | | | | | ***1.14*** |
| **OR 99 (District Highway)** | | | | | |
| Grants Pass to Hamilton Lane | 0.9 | 1.3 | 11,500 | 1 | 0.46 |
| Hamilton Lane to Jackson County | 1.3 | 5.5 | 5,600 | 7 | 0.81 |
| ***2000 statewide average crash rate for Rural District Highways*** | | | | | ***1.14*** |
| **OR 238 (District Highway)** | | | | | |
| Grants Pass to Murphy | 0.0 | 5.9 | 8,100 | 16 | 0.60 |
| Murphy to Jackson County | 5.9 | 13.8 | 9, 260 | 11 | 0.49 |
| ***2000 statewide average crash rate for Rural District Highways*** | | | | | ***1.14*** |
| **US 199 (Statewide Highway)** | | | | | |
| Midway Ave to Rogue River Loop | 1.7 | 7.1 | 12,300 | 1 | 0.08 |
| Rogue River Loop to Elliot Creek Rd | 7.1 | 11.3 | 8,900 | 5 | 0.39 |
| Elliot Creek Rd to Illinois River Rd | 11.3 | 20.2 | 8,100 | 16 | 0.60 |
| Illinois River Rd to Holton Rd | 20.2 | 26.9 | 9, 260 | 11 | 0.49 |
| Holton Rd to Cave Jct | 26.9 | 27.6 | 9,600 | 1 | 0.33 |
| Cave Jct to Illinois Valley Rd | 27.6 | 32.7 | 5,750 | 3 | 0.33 |
| Illinois Valley Rd to CA State Line | 32.7 | 41.7 | 3,300 | 3 | 0.31 |
| ***2000 statewide average crash rate for Statewide Highways*** | | | | | ***0.88*** |

Source: ODOT, 2002.
* Crash rate is expressed per million vehicle miles of travel annually along the specified segment, assuming 365 x ADT for total annual volume.

Interstate 5 from Merlin to Douglas County is the only highway section in the County exceeding statewide average crash rates for comparable facilities. In ODOT's *I-5 State of the Interstate Report – 2000*, driving too fast for conditions was identified as the most common cause of collisions on I-5 in Josephine County. Based on field observations conducted as part of the TSP inventory, steep grades, roadway curvature and wet, icy or foggy conditions are factors likely to be involved in many of the collisions.

ODOT also conducts a more detailed annual analysis of safety conditions on State highways resulting in the Safety Priority Index System, or SPIS. ODOT applies the SPIS analysis to help determine where to apply available safety improvement resources to achieve the greatest benefit. The SPIS score is based on three years of crash data tallied by 0.10-mile segments. SPIS scores consider crash frequency, crash rate, and crash severity. Frequency and rate each account for 25 percent of the score, with severity weighted higher and accounting for 50 percent of the score. To become a SPIS site, a location must meet one of the following criteria:

- Three or more crashes have occurred at the same location over the previous three years.
- One or more fatal crashes have occurred at the same location over the previous three years.

Each year, each of ODOT's five regions generates a list of the top 10% SPIS sites, which are evaluated and investigated for safety problems. If a correctable problem is identified, ODOT conducts benefit/cost analysis and initiates appropriate safety improvement projects.

Table 3-15 lists the top 10 SPIS sites in Josephine County for 2002 ranked by SPIS score, based on crash data from 1999 through 2001. It should be noted that none of these locations is within the top 10th percentile of crash locations on all state highways.

**Table 3-15**
**Top 10 2002 Safety Priority Index System (SPIS) Sites**
**on State Highways in Rural Josephine County**

| Highway | General Location | Milepost Range | Avg Daily Traffic | Crashes, 1999-2001 | Fatalities, 1999-2001 | SPIS Score |
|---|---|---|---|---|---|---|
| *Located within Rural Josephine County* | | | | | | |
| I-5 | Jump Off Joe Creek | 65.9 – 66.1 | 20,400 | 6 | 0 | 48.06 |
| OR 238 | Jaynes Road | 4.09 – 4.25 | 8,600 | 6 | 0 | 39.12 |
| US 199 | Wild Park Ln. | 21.91 – 22.04 | 9,400 | 5 | 0 | 37.02 |
| I-5 | Grave Creek | 71.02 – 71.13 | 18,400 | 7 | 0 | 34.61 |
| I-5 | Grave Creek | 70.43 – 70.59 | 19,100 | 5 | 1 | 31.84 |
| I-5 | Jump Off Joe Creek | 67.95 – 68.07 | 19,100 | 13 | 0 | 31.63 |
| *Located within Urban Areas* | | | | | | |
| US 199 | Willow Lane | 2.47 – 2.65 | 22,700 | 17 | 1 | 71.95 |
| US 199 | Dowell Road | 1.96 – 2.14 | 22,700 | 15 | 0 | 50.49 |
| US 199 | Allen Creek Road | 1.17 – 1.29 | 22,800 | 8 | 1 | 38.14 |
| US 199 | RVCC | 3.37 – 3.52 | 5,100 | 5 | 0 | 36.95 |

Four of the five SPIS sites on US 199 lie within the Grants Pass UGB. The remaining six sites are within the study area of the Josephine County TSP. They include four sections of I-5 between the Monument Drive/Jump Off Joe Creek and Grave Creek interchanges, a section of OR 238 near Jaynes Drive, and a section of US 199 just south of Selma at Sis's Gap.

# Freight

Transportation distribution is an important economic activity in Southern Oregon including Josephine County, and good freight mobility is critical to maintaining the region's competitiveness. Particularly in the I-5 corridor, freight activity is showing a significant increase in comparison with a decade ago. The movement of goods and commodities into, out of, and through Josephine County is heavily dependent on the highway system where the demand for access and circulation by large vehicles is expected to be the highest. However, freight movement also occurs using rail, air, and pipeline modes. This section addresses freight movement on the road and highway system and in pipelines. Freight movement via rail and air transportation is addressed in the sections pertaining to these modes.

## Truck Freight Service

The foundations of the freight movement system are the critical "backbone" highways and roads identified by the Federal Highway Administration as the National Highway System. National Highway System Routes are intended to include the most significant highways in the United States for the movement of people and freight. Within Josephine County, this system includes Interstate 5, and US 199. Most truck traffic in the region and the state moves on the National Highway System. In addition,

the 1999 *Oregon Highway Plan* designated a State Highway Freight System based on freight volume, connectivity and linkages to major intermodal facilities. Interstate 5 is the only highway in Josephine County that has been designated as a State Freight Highway.

ODOT's *I-5 State of the Interstate* (2000) report indicates that trucks comprise up to 20 percent of the daily traffic stream on I-5 between Grants Pass and Medford, which corresponds to as many as 6,000 trucks per day in the vicinity of Grants Pass.[7] Josephine County presently has no designated truck routes, but I-5 and US 199 are primary routes for non-local freight traffic. I-5 is designated as a statewide freight system route in the *Oregon Transportation Plan* and is by far the most important freight link in the region. Not only does I-5 serve freight heading between the PML Forest Products inter-modal rail/truck reload facility in Grants Pass and the Medford area, but it also serves a significant number of trucks continuing south to destinations elsewhere along the West Coast.

Much of the freight activity in Josephine County is centered on the North Valley Industrial Park in the Grants Pass/Merlin area, a portion of which is included in federal Foreign Trade Zone (FTZ) 206 (FTZ 206 also includes the Rogue Valley International/Medford Airport area). Foreign Trade Zones (FTZs) are secured areas that are legally defined as outside a nation's territory for purposes of customs and excise activities. They allow companies doing business in a zone to reduce or eliminate the kinds of duties, taxes, and quotas that otherwise might apply, thereby potentially improving profitability. The FTZ designation is used as a business development or economic development tool. In the FTZ, goods may be stored, manufactured or assembled, mixed or manipulated, repaired or relabeled, processed or destroyed. Duties aren't due until the goods enter the US economy. The net effect can be drastic savings for a company importing or exporting any product or merchandise that might incur import taxes or duty. Other FTZ sites in unincorporated Josephine County are located at the Grants Pass Airport and the Illinois Valley Airport (Figure 3-5). [8]

Good freight mobility requires that the roadway system provide both an adequate level of service and good connectivity to intermodal facilities and inter-regional routes, such as Interstate 5 and US 199. Some guidance on the standard of performance necessary for freight movements is found in the 1999 *Oregon Highway Plan.* The *Highway Plan* sets mobility standards using volume-to-capacity ratios (v/c) rather than Level of Service standards, to identify the presence of congestion. If the v/c ratio for a highway segment exceeds the v/c ratio established in the plan, then the highway segment does not meet ODOT's minimum operating conditions. Acceptable v/c ratios are higher for urbanized areas than for sparsely settled rural areas, which means that relatively greater congestion is acceptable in urbanized areas than in rural areas.

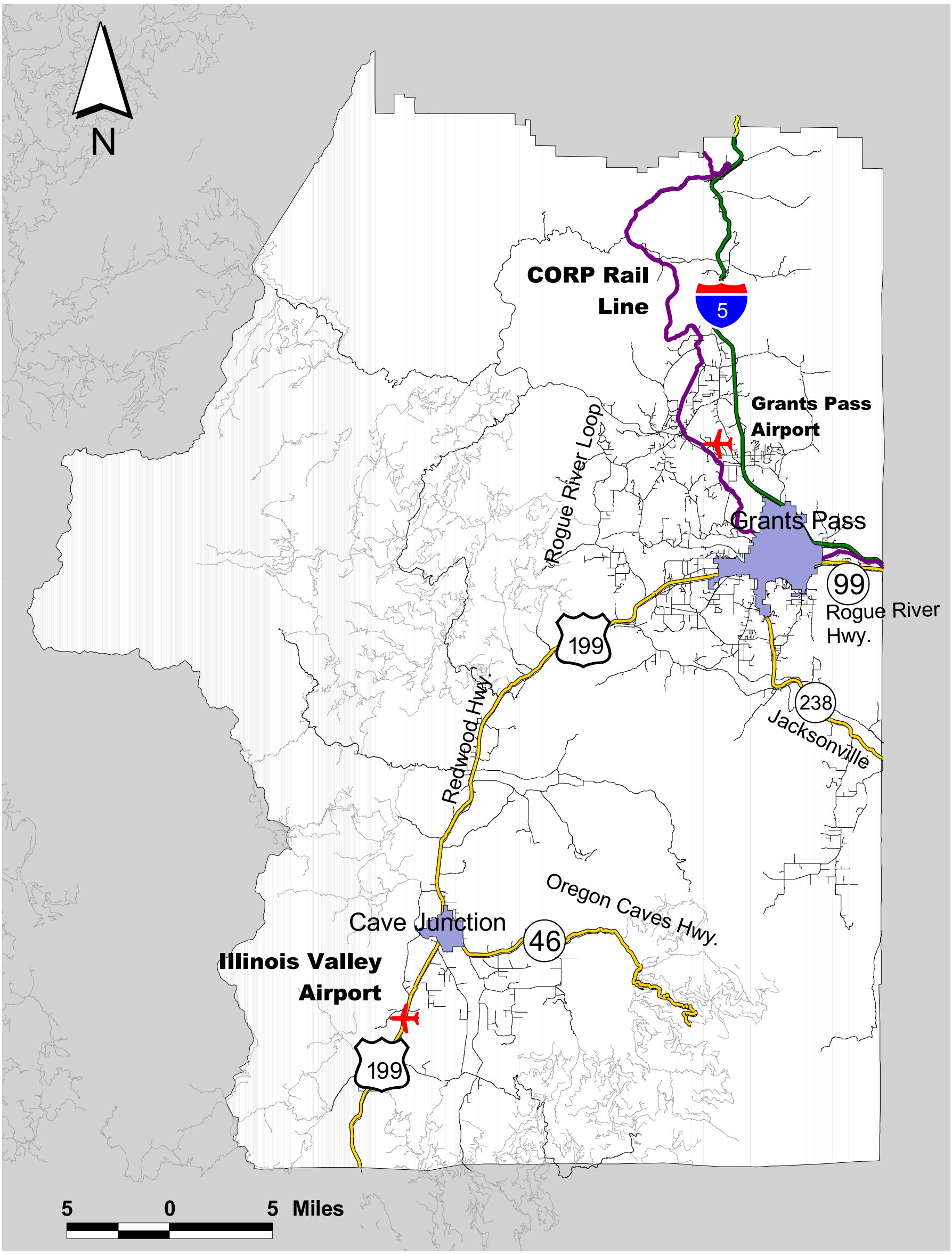
Acceptable v/c ratios for freight routes are slightly lower than for other highways, reflecting the desire of maintaining freight mobility on key routes. The maximum acceptable v/c ratio for the rural Josephine County area ranges from 0.70 for I-5, to 0.75 for OR 238.

Pavement conditions and lack of restrictions on large vehicles along truck routes are also important for the efficient movement of freight. According to the *I-5 State of the Interstate* report, pavement conditions along I-5 generally fall in the very good category through Josephine County.

## Pipeline Transportation

The only major pipeline transportation system in Josephine County is the major natural gas transmission line connecting at Grants Pass to a major natural gas transmission line operated by Northwest Pipeline Company. This major transmission line links the Grants Pass area northward to Eugene and the Portland

[7] *I-5 State of the Interstate Report*, ODOT, 2000.
[8] Rogue Valley International/Medford Airport web site, April 2003.




Airport
State Freight Highway
Other State Highway
Rail Corridor
County Road
Forest Road
Urban Growth Boundary

**Figure 3-5: Freight and Airport Facilities**

Josephine County
Transportation System Plan

metropolitan area. Other pipelines in the County include transmission lines for electricity, cable television and telephone services, as well as water and sanitary sewer pipelines.

### Water Transportation

There are no commercially navigable waterways in Josephine County.

## Public Transit

Two carriers provide fixed route public transit services in Josephine County, with local service provided by Josephine County Transit (JCT), and intercity transit service between Medford and Grants Pass provided by Greyhound. JCT uses the "Express Connections" branding. JCT also manages a transit brokerage, in partnership with local municipalities, nonprofits and community service providers. The brokerage service connects citizens requesting transportation with a ride from participating partners.

## Josephine County Transit (JCT)

#### Fixed Route Transit Service

JCT provides three fixed route services including: north-south and east-west routes in the greater Grants Pass area; and one to Cave Junction. The north-south route (Route 10) serves commercial, employment, educational and government destinations throughout the greater Grants Pass area. Appendix E to TSP Technical Memorandum #2 includes a detailed schedule and bus stop list for all routes. Route 10 operates weekdays from 7:00 a.m. to 6:00 p.m. and provides 30-minute service, using two buses on an hour-long route.

The east-west service is provided on three through-routes lines (Routes 20, 30 and 40). One bus provides hourly service on these three routes. During the first half of each hour Route 20 serves communities south and east of downtown Grants Pass, returning downtown on the half-hour. Routes 20 and 40 serve destinations east and west of downtown during the second half of each hour.

Route 50 provides four round trips each weekday to Cave Junction. Each round trip takes two hours to complete.

#### Senior and Disabled Transit Service

JCT also provides fixed-route and demand responsive service for senior and disabled riders. Route 1 is the Senior Shuttle Express and operates as a flexible fixed route on weekdays between 9:00 a.m. and 2:30 p.m.

JCT Dial-A-Ride (DAR) is a demand responsive service for seniors who are at least 60 years of age or have a physical or mental disability that prevents them from independently using JCT buses. DAR service area covers Merlin, Murphy, Williams, Jerome Prairie and Grants Pass. A second DAR service area encompasses Cave Junction. DAR provides service to and from locations within a particular service area. Service is provided Monday through Friday from 9:00 a.m. to 3:00 p.m.

#### Ridership and Funding

JCT charges passengers $1.00 per local ride and $2.00 for trips to Cave Junction. Monthly passes are available ($38 for full fare, $50 for Cave Junction and $19 for reduced fare). DAR Cost varies from $1.00 - $3.00 per ride depending on pick-up location and destination

The Grants Pass local routes are primarily funded out of a City of Grants Pass Congestion Air Quality Mitigation (CMAQ) grant that expires in April 2005. The Cave Junction and the senior service is funded with Oregon Special Transportation Grant funding.

Based on the 2000 census, only 0.2 percent of commuters in Josephine County used public transit. Residents who are transit-dependent likely make up the majority of transit users in the County. Slightly over 11 percent of commuters indicated that they carpooled by car, van or truck. Nearly 78 percent of work trips in the County are made by single-occupant vehicle.

In July of 2000, improvements were made to the transit system and ridership has subsequently increased to approximately 39,000 general public rides and 64,000 total rides per year. In addition, JCT recently began a carpool matching service that has about a dozen subscribers as of April 2003. At present JCT plans to continue existing services to the extent that funding can be maintained. There are no plans for further expansions to existing service at this time.

## Non-Emergency Medical (Medicaid) Transportation

Translink is the Medicaid transportation brokerage serving OMAP (Oregon Medical Assistance Program) clients in Douglas, Josephine, Jackson, Coos, and Curry counties. The Rogue Valley Transportation District (RVTD) administers Translink. The brokerage arranges about 3,800 rides per month for Josephine County residents. Most of these rides are local to the county with only about 60 per month traveling out of the county. Recent changes to the Oregon Health Plan in February 2003 cut the number of eligible clients and reduced the number of covered trips by about half from prior year levels.

## Specialized Public Transportation Services

As of the end of 2002, a number of specialized transportation services also operated in Josephine County, as described below.

- *Consumer Advocate Program* - Option of Southern Oregon provides demand response medical rides for people with disabilities who are enrolled in the State Medical program and/or Oregon Health Plan. Rides must be requested a minimum of 48 hours in advance.

- *Escort Program* – This service, also provided by Josephine County Community Services, provides volunteer transportation to seniors (60 and over) living independently. Volunteers are available during various days and times.

- *HASL (Handicapped Awareness Support League)* – A network of volunteer drivers who provide accessible transportation to individuals with disabilities, sponsored by the Independent Abilities Center in Southern Oregon.

- *Sunny Wolf Community Bus* – General public transit service provided through the Sunny Wolf Community Response Team (CRT). The cost varies according to pick-up and destination, with service to Grants Pass limited to Wednesdays.

- *Parkway Christian Center* - A 13-passenger wheelchair bus available to nursing home residents and parishioners.

- *Community Partnership Team* - The Department of Human Services provides volunteer accessible medical rides for people registered with the State of Oregon's Medical program, following referral by an authorized agency.

- *Rogue Valley Transportation District (RVTD)Valley Rideshare* – The rideshare program provides information, planning and support services to residents and employers in Josephine, Jackson, Klamath, and Siskiyou Counties. The basic service involves entering the transportation needs of a potential user into the computerized matching database. This data is compared with data from other drivers, providing potential matches with drivers with similar transportation needs. Other services include: free emergency ride home, free park and ride, and information on current incentive programs. RVTD is currently helping to support two vanpools running from Josephine

County to Medford, and is in the process of developing a park-and-ride lot in Grants Pass at the Fred Meyer store. According to RVTD there are less than a dozen Josephine County residents presently using the rideshare program.[9]

- *Taxi Service* – Rogue Transportation, Yellow Taxi and Metro Taxi all provide taxi service in Josephine County.

## Intercity Bus Service

Greyhound provides weekday intercity bus service along the I-5 corridor between Portland and Sacramento. As of winter 2003, Greyhound made four daily stops in Grants Pass in each direction. Greyhound terminals are located on Agness Avenue and at the Grants Pass Airport near Merlin.

## School Bus Routes

Josephine County is also served by numerous school bus routes operated by the Laidlaw Transportation Company. These routes rely on the County's rural arterial and collector roadway system to connect the homes of individual students or groups of students with the County's public schools. As the student population changes with each school year, no maps of bus routes exist. A full and current text description of existing routes is available from Laidlaw.

# Transportation System Management/Transportation Demand Management

## Transportation System Management

Transportation System Management (or TSM) improvements include actions designed to maximize efficient use of the existing transportation system. TSM strategies include actions such as traffic signalization, signal synchronization to improve traffic progression (particularly along major arterial streets), signal retiming, channelization improvements, one-way streets, parking prohibitions, turn prohibitions, use of Intelligent Transportation Systems (ITS), and other actions. TSM activities currently underway in rural Josephine County include:

- Traffic Signalization - there is currently only one signalize intersection in the rural portion of Josephine County (outside of the Grants Pass and Cave Junction urban areas). This signal is located at the intersection of Merlin Road with Monument Drive in the Merlin/North Valley area.

- Traffic Channelization – traffic lane channelization enhances the safety and capacity of the existing rural highway system by providing turn lanes and/or acceleration or deceleration lanes where necessary and appropriate. An example of lane channelization includes the northbound right turn lane on OR 238 at Jaynes Drive that permits the deceleration of right-turning vehicles transitioning from the state highway to the county road.

- Intelligent Transportation System Assets - the development and implementation of Intelligent Transportation Systems (or ITS) is a strategic approach to better managing the demands on our street and highway system and, thus, maximizing the value of transportation capital investment. According to the *Oregon ITS Strategic Plan: 1997-2017*, ITS *"involves the application of advanced technology to solve transportation problems, to provide services to travelers, and to assist transportation system operators in implementing the most effective traffic management strategies to meet actual highway conditions"*. More specifically, ITS can help to address existing and projected future transportation system needs by:

[9] Information provided by Matthew Barnes, Rogue Valley Transit District, April 7, 2003.

- "*Allowing for better management of transportation supply and demand*" (by allowing transportation managers to respond immediately to operational needs).
- "*Promoting the use of alternative modes and connectivity across the different modes*".
- "*Increasing travel efficiency and mobility without increasing the physical size of the transportation facility*" (in other words, getting more use out of each dollar invested in the highway and transit system).
- "*Enabling travelers to choose (their) travel time, mode and route efficiently based on real-time roadway and transit status information.*"
- "*Reducing the cost of operating and maintaining transportation facilities and services (through the use of newer technology with better reliability)*".
- "*Providing increased safety and security to travelers*" (through the reduction in time to respond and clear incidents).

In rural areas, ITS generally focuses on traveler safety and security, emergency services, operations and maintenance systems both for fleet vehicles and roadways, tourism and traveler information, public transportation, and commercial vehicles.

In Josephine County, ODOT operates two types of ITS devices on I-5 and US 199, highway cameras and road and weather information systems (RWIS). RWIS technologies are used in areas of extreme climate changes to report temperature, wind, precipitation and pavement conditions. ITS applications on I-5 include a highway camera and RWIS at Sexton Mountain Pass north of Merlin. On US 199, ITS features include a variable message sign located in Grants Pass near the UGB, a highway camera and RWIS installations at Hayes Hill and O'Brien.

## Transportation Demand Management

Transportation Demand Management or TDM involves using a variety of strategies to reduce travel by single-occupant vehicle during peak travel periods, to reduce the need for additional roadway capacity. TDM strategies include use of transit, carpooling, vanpooling, working flexible hours and/or a compressed workweek, and working from home with use of communications technology. Presently Josephine County does not have a TDM program for the rural area of the County. Table 3-16 lists TDM strategies that could be considered for implementation within rural Josephine County. These strategies are explored in more detail in Chapter 9 of the TSP.

**Table 3-16**
**Examples of Transportation Demand Management Strategies**

| Strategy | Description |
|---|---|
| Alternative Work Hours | Flex time and alternative work weeks (such as 4 10-hour days) |
| Bicycle Improvements | Improved bicycle planning, education and facilities |
| Guaranteed Ride Home | Provide a limited number of free rides home for transit and rideshare commuters |
| Intermodal Bicycle Services | Provision of bike lockers at transit stops; bike racks on transit vehicles |
| Park and Ride | Provision of commuter parking at urban-fringe transit stops |
| Preferential Parking | Preferential parking for rideshare vehicles |
| Rideshare Programs | Rideshare promotions and ride-matching |
| Security | Address security concerns of rideshare, transit, cycle, and pedestrian commuters |
| Telecommuting | Working at home to avoid commute trips |
| Transit Improvements | Improve public transit service |
| Vanpool Programs | Promotion/organization of vanpools |

## Air Transportation

There are two general aviation public airports in Josephine County, the Grants Pass Airport located just north of Grants Pass near the outskirts of Merlin, and the Illinois Valley Airport located four miles south of Cave Junction. The location of these airports is illustrated in Figure 3-5. Grants Pass Airport has one paved runway, 4,000 feet long by 75 feet wide, serving private and small commercial aircraft. A helicopter pad also exists at the airport. The Illinois Valley Airport, located four miles south of Cave Junction, also has one paved runway, 5,200 feet long by 75 feet wide, with 20,000 pounds single and 30,000 pounds double wheel-bearing weight.

Grants Pass Airport handles some 25-30,000 operations annually, while annual activity at the Illinois Valley Airport is closer to 2,000 operations. Grants Pass Airport primarily serves business travel, tourism, medical transport, overnight freight via Fed Ex and UPS, law enforcement activities, National Guard training, and other corrections transport needs. Tourists, recreational travelers and firefighters are the primary users of the Illinois Valley Airport.

Connecting flights are provided via commercial air taxi helicopter service from the Grants Pass Airport to airline service in Crescent City, California and Medford, Oregon, which is about 30 minutes from the Grants Pass Airport. These helicopters carry 14-18 passengers. Medford is the nearest international airport, and the third largest commercial service airport in Oregon. From Medford, direct connections are available to Portland, Seattle, San Francisco and other destinations.

In past years deferred maintenance was a concern at both airports, but in the past two years substantial rehabilitation efforts have been completed for both runways, and deferred maintenance concerns have been addressed. Nearly $1 million has been spent to rehabilitate the existing asphalt runways at the two airports.[10]

Josephine County employs an Airport Overlay Zone that governs land uses at and in the immediate vicinity of both County airports. The overlay zone prescribes the clear zone within which permitted uses are limited. Height limitations in the overlay zone ensure land uses at and adjacent to the airports do not interfere with approach, transitional, horizontal, or conical surfaces of the airports. No land uses or exterior materials or lights are allowed that would interfere with communication or visibility between aircraft and the airports.

## Non-Motorized Transportation System

This section discusses existing bicycle and pedestrian facilities in rural Josephine County.

### Bicycle Facilities

Bicycle facilities can generally be categorized as bicycle lanes, shared facilities including widened shoulders, and bicycle paths. Bicycle lanes are defined as that portion of a street that is designated by striping and pavement markings for the preferential or exclusive use of bicyclists. Shared facilities include locations where the bicyclist and the motorist must share a travel lane, as well as roadway shoulders contiguous to a travel lane where space is shared by bicyclists, pedestrians, emergency use by vehicles and for lateral support of the roadway pavement section. Bicycle paths are physically separated from the vehicle travel lane by an open space or barrier. A bicycle path may be located within the roadway right-of-way or on a separate right-of-way. Bicycle paths are also known as multi-use paths, as they can be used by pedestrians, joggers, skaters, and other non-motorized travelers, in addition to bicyclists.

[10] Information on local airport use and condition furnished by Alex Grossi, Director, Josephine County Airports.

About 36 miles - slightly more than six percent - of the 576 miles of roadway maintained by the County include designated bicycle facilities. Existing facilities cover a limited geographic area and, in most cases, are disconnected and do not serve major destinations such as schools and employment areas. All but two of the 36 miles have wider lanes classified as shared roadways. Striped bike lanes are limited to a total of about 1.5 miles on two roadways: Cedar Flat Road and Water Gap Road, both in Williams. A combined half-mile on Williams Highway and River Street have wider paved shoulders classified as shoulder bikeways. Although bicyclists are not restricted from using other County roadways, narrow lanes and/or lack of shoulders make bicycle travel less desirable than the designated facilities. The 1982 *Josephine County Bikeways Master Plan*, which was created in response to citizen requests to establish a plan for a network of bicycle routes in the entire county, contains a list of prioritized improvements categorized into three phases based on the amount of available funding

It should be noted that there are two statewide requirements that address the future provision of bicycle and pedestrian facilities along streets and highways in the state. Oregon Revised Statue (ORS) 366.514 requires the provision of bicycle and pedestrian facilities on all arterial and major collector roadway construction, reconstruction, or relocation projects where conditions permit. The statute also states that in any fiscal year, at least one percent of road improvement funds in a jurisdiction must be allocated for bicycle/pedestrian projects (this amount is in addition to any spending to provide bikeways or walkways as part of road construction projects). In addition, State Planning Goal 12, the Transportation Planning Rule (TPR) requires the Oregon Department of Transportation (ODOT) and the cities and counties of Oregon to cooperate and to develop balanced transportation systems, including bicycle facilities.

## Pedestrian Facilities

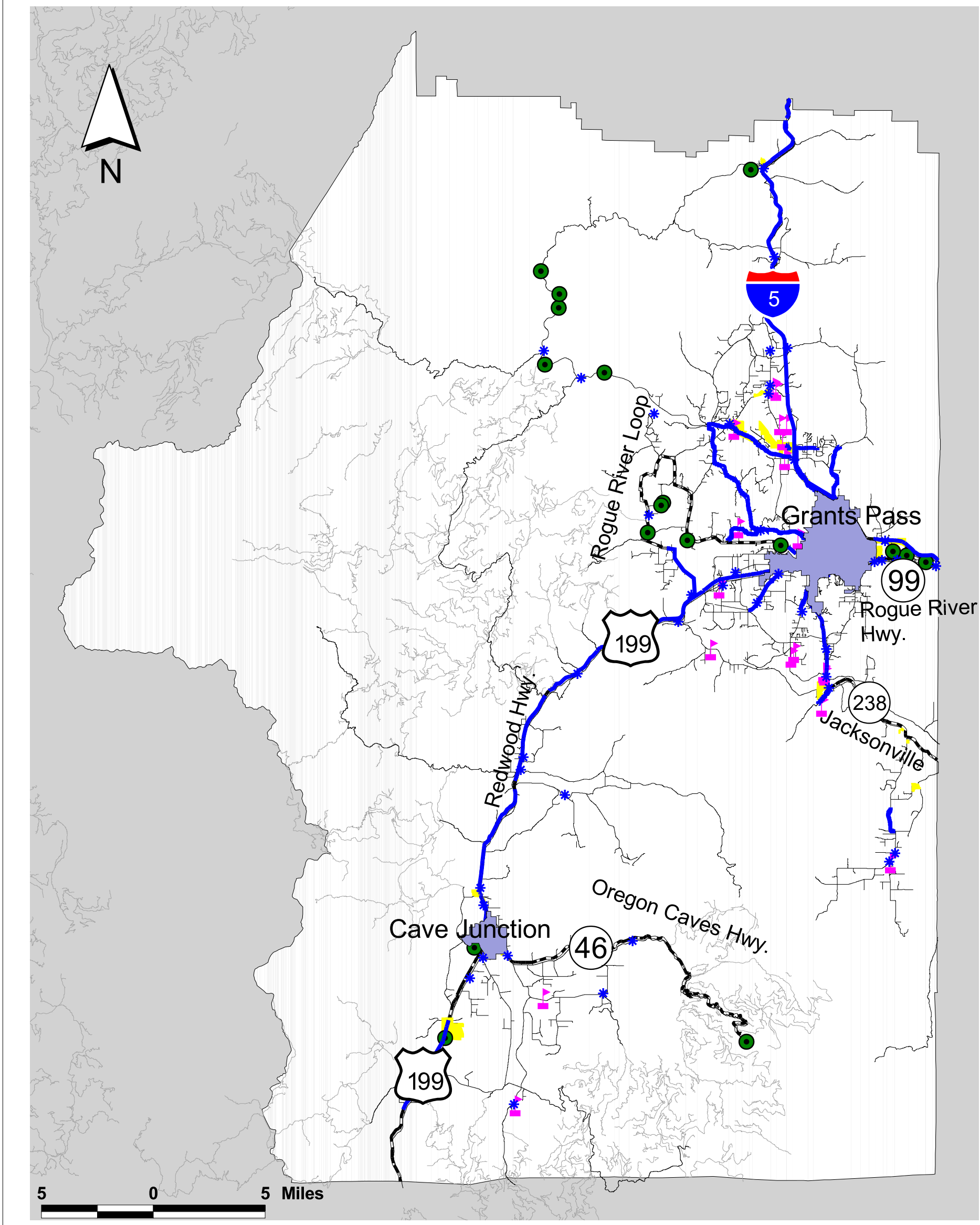
In rural areas, the outside shoulders of the roadway generally provide pedestrian facilities. Most of the primary roadways in the County lack sidewalks, as do most of the roads serving major pedestrian destinations such as schools and parks. Streets with sidewalks on both sides are few, and those that do have sidewalks on both sides are either short streets or short segments. Sidewalks are provided on about two percent of Josephine County's total roadway system, with 12.5 miles of sidewalk on 67 streets, but are not provided on any of the roads in the rural network covered by this plan. This is appropriate, as sidewalks would be inconsistent with a large portion of the rural transportation network.

As with bicycle facilities, ORS 366.514 requires construction of pedestrian facilities as part of all roadway construction, reconstruction or relocation projects on arterials and major collectors where conditions permit, and will require expenditure of at least one percent of road improvement funds on bicycle and pedestrian projects. Roadway shoulders qualify as bicycle and pedestrian facilities on new or reconstructed roadways in rural areas.

Figure 3-6 illustrates the location of bicycle and pedestrian activity centers such as schools, parks and other recreation areas that are the major generators of non-motorized pedestrian and bicycle travel throughout the County.

# Rail Service

This section describes existing rail service in Josephine County. At the present time rail service is limited to freight rail operations. However, as stakeholders have discussed the desirability of passenger rail service in the County, relevant passenger rail background information is included at the end of this section.




# Figure 3-6: Pedestrian and Bicycle Facilities and Activity Centers

Activity Centers
- Hospital
- Park
- School
- Industrial Area
- Commercial Node
- Urban Growth Boundary

- Bicycle Route (shoulders at least 4 feet wide)
- Forest Roads
- County Roads
- State Highways

Josephine County
Transportation System Plan

## Freight Rail Service

Josephine County has one rail line, which passes through Grants Pass and serves the Rogue Valley region. This line currently provides freight service only. Due to turns with tight radii and steep grades between Grants Pass and Medford, the Central Oregon and Pacific Railroad (CORP) is constrained by low speeds that make operation of passenger rail service unattractively slow. The CORP route generally follows an alignment built in the 1880s, extending from Weed, California north to Springfield, Oregon and then west to the coast at Cushman, where it turns south and continues through Coos Bay to its termination at Coquille (Figure 3-7). Josephine County is a low-use segment of the CORP line, as primary freight movement in southern Oregon is between Medford and Northern California, and between Roseburg and areas to the north. However, the PML Forest Products intermodal rail/truck reload facility in Grants Pass serves all of southern Oregon. CORP is Oregon's second largest short line railroad, operating on 391 route miles and 8 miles of trackage rights in the state, or 16 percent of all route miles statewide according to the *2001 Oregon Rail Plan*. The entire length of CORP trackage is categorized as a Class III railroad. (Railroad lines are categorized by the type of service provided: Class I are multi-state or national lines; Class II are regional lines; and Class III railroads are short lines.) CORP provides a link from northern California through southern Oregon to the southern Willamette Valley through the Union Pacific Yard in Eugene. Intermediate destinations along the CORP trackage include Black Butte, Ashland, Medford, Grants Pass, Glendale, Roseburg, Cottage Grove and Springfield. From Eugene, CORP also provides service to Reedsport, Coos Bay and Coquille on the Oregon Coast.

CORP's trackage is characterized by steep grades and tight turns that limit operating speeds to about 25 to 35 miles per hour. Forty-three miles of track are limited to an operating speed of only 10 miles per hour. CORP's line south from Medford is one of the most rugged rail lines in the western United States with gradients that approach 3.25 percent.

Since the Central Oregon & Pacific Railroad Company took over the former Southern Pacific Railroad's Siskiyou line in January 1995, rail service has increased and is now being offered six days per week. Generally, two trips per day are made in each direction on the line; however, this schedule is not consistent and there is some variation. Service increases have led to an expansion in the number of cars available to carry freight, reaching a level of approximately 28,000 cars per year. This is a significant increase over the 12,000 cars per year carried by the Southern Pacific Railroad when it operated the line. According to the *2001 Oregon Rail Plan*, CORP carries between 1 and 5 million tons of cargo each year.

**Figure 3-7**
**Central Oregon & Pacific Railroad**


Source: Central Oregon & Pacific Railroad website, 2003

The CORP is undertaking an aggressive maintenance program and is trying to increase operating speeds to 25 miles per hour and to ease some of the height restrictions currently in place on the line. Loan guarantees by the Federal Railroad Administration are being sought to help fund maintenance needs.

Rail service provides specific advantages for various bulk commodities or loads longer than those normally permitted on highways. Lumber and other wood products are the principal commodities

transported over the Central Oregon & Pacific line. However, even with recent increases in railroad traffic, the total volume of rail freight is far less than the highway freight tonnage for the region. Combined highway and rail freight tonnage in the I-5 corridor is estimated at 25 million tons annually, based on information contained in the *Rogue Valley Regional Transportation Plan*. Rail freight accounts for between 5 and 10 percent of this total. However, if this railroad were not available to carry commodities, there may be some impact on state freight routes in southern Oregon, particularly I-5 as commodities shift to truck transport, which requires both a far greater number of transport vehicles than rail freight, and competes for use of public right-of-way.

The *2001 Oregon Rail Plan* identifies several policies that are pertinent to the freight rail service in Josephine County, particularly within Grants Pass. These include:

- Providing level of service C or better on Oregon highways serving intermodal facilities during off-peak periods (I-5 and US 199 fall into this category).
- Providing high quality highway access to terminal and reload facilities for transfers from truck to rail for long haul movement of freight.

Additionally, the *Rail Plan* identifies actions that can be taken by local governments to mitigate conflicts between rail and vehicular traffic, and to improve access to freight facilities. These actions, which primarily affect rural Josephine County primarily where the CORP trackage passes through Merlin, include:

- Avoid or minimize the number of future railroad at-grade crossings when new streets are planned for growing portions of the community.
- Avoid creating intersections of major streets and railroads where possible.
- Locate new parallel streets at least 500 feet from the railroad to allow for industrial development between the tracks and the highway.
- Plan community development (particularly residential uses) with sensitivity to rail noise and other potential conflicts.

Despite growth in their business over the past few years, local rail providers like CORP face several infrastructure challenges requiring major investment. Apart from the ongoing need for track repair and improvements, system improvements are needed to allow short rails to continue serving the larger railroad companies. As larger railroads increase the size of their railroad cars, short lines need to make improvements to handle the larger cars from those companies. Tunnels likewise need to be modified to accommodate the increased height and lengths of containers and cars. Until this is done, local rail cannot carry “piggyback” truck trailers or containers.

In recognition of the fact that short line tracks comprise 47 percent of rail track mileage in Oregon, the state is now providing grants for short line track improvements. The federal government, through the Railroad Modernization Act of 2001, also provides funds for short line railroads to make the system changes that would allow the use of larger railroad cars. Until tunnel and other improvements are made, much of the freight traffic from southern Oregon will continue to be shipped on trucks to and from Portland where connections with Burlington Northern Santa Fe are made.

As discussed earlier, the potential for commuter rail service is being explored on the CORP trackage between Grants Pass and Ashland. While a commuter rail system that uses an existing rail corridor has the negative effect of increasing conflicts with freight trains, improved track conditions that would be necessary for commuter rail to be feasible would also permit greater speeds and safety for freight rail.

Existing connections to passenger rail service are provided via intercity bus service on Greyhound from Grants Pass to the Amtrak station in Klamath Falls, where a direct connection can be made to Amtrak's major west coast line, the Coast Starlight, as well as indirect connections through Portland to the Cascade Corridor and the Empire Builder (which provides service to the Midwest). The 2001 *Oregon Rail Plan* provides further guidance on the development of future passenger rail service along the I-5 corridor and elsewhere in the state.

Aging tracks slow rail transport on many segments of the rail system serving southern Oregon. Improved track conditions for part of the rail system could be realized through development of a commuter rail line between Grants Pass and Ashland. The 1999 legislature asked ODOT to examine the potential introduction of frequent local passenger service. Key findings of the study, published in June 2001, include:

- With substantial upgrading of the track and signal system, the rail line is well suited to serve as a backbone of an effective commuter transportation system.
- Top speeds of 60 miles per hour would permit making the 45-mile trip from Grants Pass to Ashland in about 80 minutes, with seven intermediate stops.
- The study found no "fatal flaws" to prevent operating a commute service over the existing railroad. It is likely that the main issues that will need to be addressed if the study moves beyond the preliminary investigation stage will be those related to financing capital costs and operating subsidies.

## Existing Rail Crossings

Within rural, unincorporated Josephine County, CORP has 11 major rail crossings on public roads with gates, traffic control and/or other warning devices. Features of existing crossing locations and a general assessment of condition are described in Table 3-17.

**Table 3-17**
**Major Freight Rail Crossings in Rural Josephine County**

| Roadway | Railroad Crossed | Street Classification | Type of Crossing | Warning Devices | Crossing Condition | Other Comments |
|---|---|---|---|---|---|---|
| Lower Wolf Creek Road | CORP | Rural Minor Collector | Grade-separated | None | N/A | |
| Leland Road | CORP | Rural Minor Collector | At-grade | Stop sign, X bars | Good | |
| Hugo Road | CORP | Rural Minor Collector | At-grade | Stop sign, X bars | Fair | |
| Three Pines Road | CORP | Rural Minor Collector | At-grade | X bars with flashers, pvmt. mark. | Fair - Good | In middle of lower speed S-curve with limited sight distance |
| Pleasant Valley Road | CORP | Rural Major Collector | At-grade | Gates and flashers | Good | Multiple tracks |
| Merlin-Galice Road | CORP | Rural Major Collector | At-grade | Gates and flashers | Very good | Advance warning flashers WB, EB is 40 mph and urban |
| Merlin Landfill Road | CORP | Rural Residential | At-grade | Stop sign, X bars | Poor - Fair | Serves landfill only |
| Camp Joy Road | CORP | Rural Minor Collector | At-grade | Gates and flashers | Good | Close spacing to Sierra Way |
| Plumtree Lane/ Pine Crest Drive | CORP | Rural Minor Collector | At-grade | Gates and flashers | Good | Advance warning flashers, limited SB sight distance |

**Table 3-17 Continued**
**Major Freight Rail Crossings in Rural Josephine County**

| Roadway | Railroad Crossed | Street Classification | Type of Crossing | Warning Devices | Crossing Condition | Other Comments |
|---|---|---|---|---|---|---|
| Averill Drive | CORP | Rural Residential | At-grade | Stop sign, X bars | Good | Dead end road – serves local residential traffic, close spacing to Foothill Blvd. |
| Pearce Park Road | CORP | Rural Residential | At-grade | Gates and flashers | Fair (timber) | Access road to County park only |

Note: CORP means Central Oregon and Pacific Railroad
Source: CORP administrative office, March 2003 and field reconnaissance.

## Passenger Rail Service

Passenger rail service is not directly available in Josephine County. The existing rail line between Black Butte, California and Eugene generally follows an alignment built in the 1880s. This rail line, operated by the Central Oregon and Pacific Railroad or CORP, provides freight-only service to southern Oregon. As discussed above, the line is constrained by low speeds and steep grades to the north and south that would make operation of passenger rail service very slow and thus unattractive. Intercity passenger rail service is available in Klamath Falls which lies on the major north/south rail line connecting California with destinations in the Willamette Valley and further north. North/south passenger rail service is operated by Amtrak in the California-Oregon-Washington corridor with its Coast Starlight route. The Coast Starlight provides one northbound and one southbound train each day as it passes through Klamath Falls.

Amtrak also provides four trips per day between Eugene and Seattle on its Cascades route. Intercity bus connections to the train service in Portland are available from Grants Pass via Greyhound bus lines. These connections are available for three trips each day in both northbound and southbound directions. Additional service is available northward to Vancouver, British Columbia, as well as to destinations east of Portland. The intercity passenger rail line in Oregon is part of the federally designated Pacific Northwest High Speed Rail Corridor that connects Eugene, Oregon with destinations in Washington State and with Vancouver, B.C. The federal designation gives this route preference for Federal Railroad Administration funding to develop advanced technology passenger train service. The States of Oregon and Washington, in cooperation with the Province of British Columbia, are working together to incrementally improve passenger train operations in the corridor. The Oregon Department of Transportation is developing Oregon's portion of the corridor, with the long-range goal of providing safe service at speeds of more than 100 miles per hour in rural areas. The 2001 *Oregon Rail Plan*, provides further guidance on the development of future passenger rail service along the I-5 corridor and elsewhere in the state. Key elements of this plan as they pertain to Josephine County are described in the "Rail Plan" chapter. This chapter also discusses findings and conclusions from the recently completed *Southern Oregon Commuter Rail Feasibility Study*.

# Chapter 4
# Future Transportation System Demand

## Background

This chapter describes the development of future traffic forecasts on the rural road system in Josephine County. These forecasts are based on projections of future population and socio-economic growth within the county, with a particular focus on the rural areas. Included in the chapter is a discussion of recent population and employment growth, future population and employment growth expectations to the planning horizon year of 2025, and future estimates of traffic volumes along the major roadways in the rural portion of the county.

## Recent Demographic Characteristics and Economic Conditions

Between 1990 and 2000, Josephine County grew by about 20 percent. This is similar to the growth rate for the state as a whole. Of course, growth rates varied by city. They have been highest for the City of Grants Pass, which contains approximately 30 percent of the county's population. According to studies conducted by the Oregon Employment Department, more than half of all residents in Josephine County live outside of the cities of Grants Pass and Cave Junction.[11]

**Table 4-1**
**1990-2000 Population Growth**
**Josephine County and State of Oregon**

| Area | 1990 | 2000 | Percent Growth (1990 – 2000) |
|---|---|---|---|
| Josephine County | 62,649 | 75,726 | 20.87% |
| City of Cave Junction | 1,126 | 1,363 | 21.05% |
| City of Grants Pass | 17,488 | 23,003 | 31.54% |
| Unincorporated Area | 44,035 | 51,360 | 16.63% |
| | | | |
| State of Oregon | 2,842,321 | 3,421,399 | 20.37% |

Source: US Department of Census, PL 171 Redistricting Data

Generally, southern Oregon's population is older than the rest of the state. According to a study conducted for the 2000 Regional Economic Profile from the Oregon Employment Department (OED), the percent of surveyed persons defining themselves as retired is more than twice that of the State of Oregon.

Also notable is that most of the population growth in the Rogue Valley area (Josephine and Jackson Counties) in recent years has been due to in-migration. For Josephine County alone, this accounted for about 85 percent of the population growth. In fact, the number of deaths in Josephine County has exceeded the number of births by about nine percent, meaning that without in-migration, the population would have decreased.

[11] Oregon Employment Department, 2000 Regional Economic Profile for Region 8 – Jackson County and Josephine County.

## Population and Employment Growth Forecasts

To forecast future travel demand for the TSP, it was first necessary to establish horizon year population and employment forecasts for the rural Josephine County study area. Each county in Oregon receives an allocation from the state economist, who prepares statewide population and employment growth estimates for a 20-year future planning period. The most recent 20-year forecast is for 2020 at which point there is expected to be approximately 93,670 persons in the County. These countywide allocations serve as the foundation for long-term land use and transportation planning activities carried out by local governments. The statewide allocation process considers a wide range of demographic, economic and geographic data, such as historic and projected birth rates and family sizes, exmigration and immigration rates, comprehensive plan and zoning designations, economic diversity, buildable land area, extent and needs of basic infrastructure, etc. After receiving its 20-year allocation, each county then subdivides the future growth allocation based on existing city, urban growth boundaries, and rural area development expectations within the county.

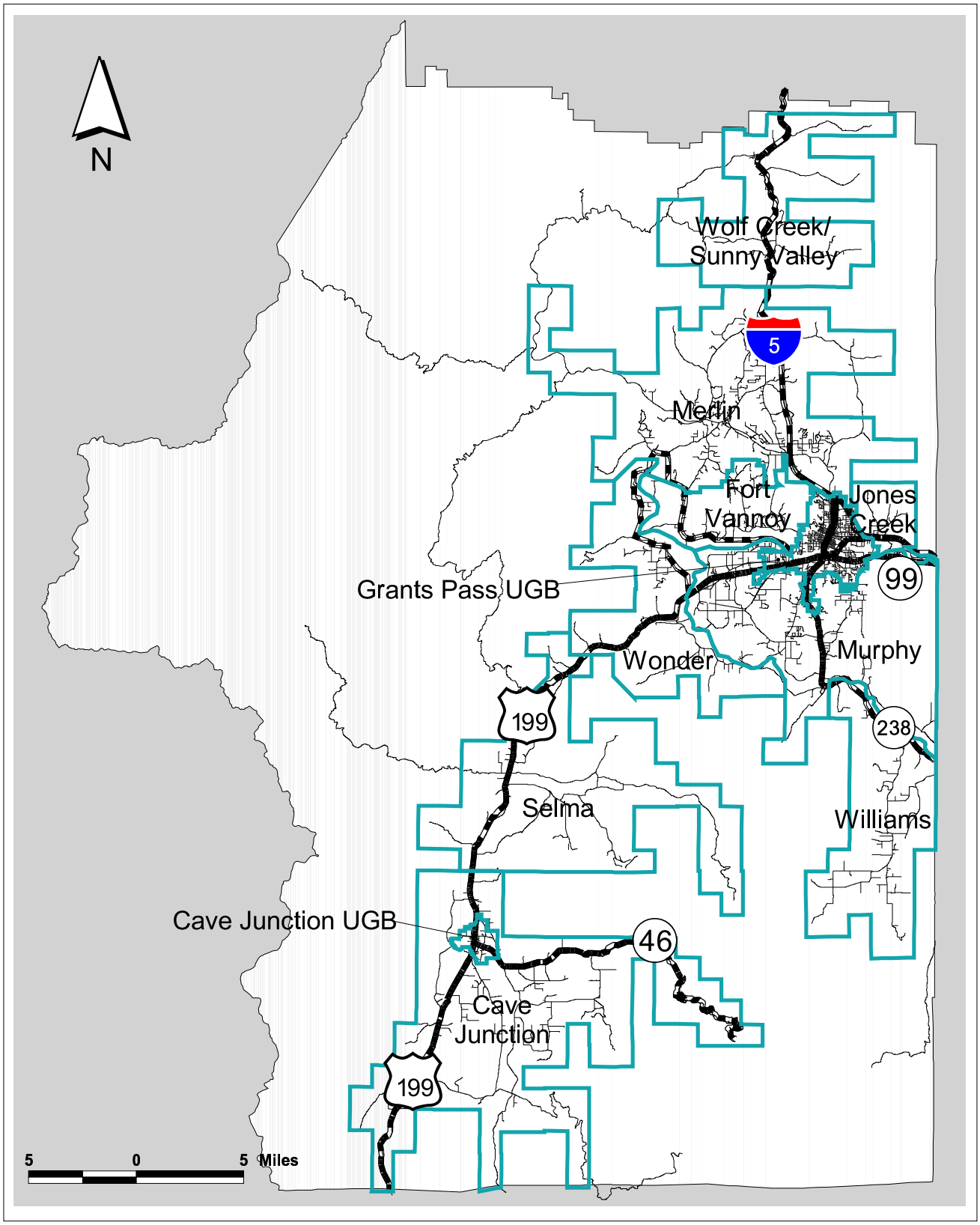
To determine horizon year population and employment for rural Josephine County, it was first necessary to subtract the allocations for Grants Pass and Cave Junction from the overall County allocation, including growth allocated to the urban growth boundaries for each city. The resulting 2020 forecasts for rural Josephine County were then factored to the 2025 horizon year for the TSP by the County Planning Department using an historical 2.1 percent annual population growth rate. The County further allocated growth projections into estimated 5-year increments to make more refined projections of future transportation need and infrastructure requirements. Growth was allocated within rural Josephine County to *travel sheds*, which are geographic areas that can be used as a starting point for more refined transportation analysis. County staff developed a system of nine travel sheds (Figure 4-1), which include over 98 percent of the County's total 2002 rural population. Table 4-1 shows growth by 5-year increment projected for each travel shed.

By 2025, the horizon year for the TSP, total population in rural Josephine County is projected to increase by nearly 11,500 people, a 28 percent increase over 2002 population and equivalent to slightly more than the 2002 population of the Merlin/North Valley area. Projections in Table 4-2 assume no change in the County's existing household population density of 2.6 people per residence.

**Table 4-2**
**Rural Josephine County Growth by Travel Shed, 2002-2025**

| People by Travel shed | Population Estimates | | | | | | | Residences | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 2002 | 2005 | 2010 | 2015 | 2020 | 2025 | Overall Increase | 2002 | 2025 | Overall Increase |
| Cave Junction | 5,200 | 5,501 | 5,791 | 6,082 | 6,358 | 6,632 | 1,432 | 2,000 | 2,551 | 551 |
| Fort Vannoy | 3,019 | 3,193 | 3,362 | 3,530 | 3,691 | 3,850 | 831 | 1,161 | 1,481 | 320 |
| Jones Creek | 1,136 | 1,202 | 1,265 | 1,329 | 1,389 | 1,449 | 313 | 437 | 557 | 120 |
| Merlin | 10,132 | 10,718 | 11,284 | 11,850 | 12,388 | 12,923 | 2,791 | 3,897 | 4,970 | 1,073 |
| Murphy | 12,438 | 13,158 | 13,853 | 14,547 | 15,208 | 15,864 | 3,426 | 4,784 | 6,102 | 1,318 |
| Selma | 2,467 | 2,610 | 2,748 | 2,886 | 3,017 | 3,147 | 680 | 949 | 1,210 | 261 |
| Williams | 2,907 | 3,075 | 3,237 | 3,400 | 3,554 | 3,707 | 800 | 1,118 | 1,426 | 308 |
| Wolf Creek/ Sunny Valley | 1,456 | 1,540 | 1,622 | 1,703 | 1,780 | 1,857 | 401 | 560 | 714 | 154 |
| Wonder | 2,891 | 3,058 | 3,220 | 3,381 | 3,535 | 3,687 | 796 | 1,112 | 1,418 | 360 |
| TOTAL: | 41,647 | 44,056 | 46,382 | 48,707 | 50,921 | 53,116 | 11,469 | 16,018 | 20,045 | 4,027 |

Note: Population figures assume 2.6 people/residence. Estimates do not include persons residing within the urban growth boundaries (UGBs) of Grants Pass and Cave Junction, which are included in the Transportation System Plans of the two cities.
Source: Josephine County Planning Department, 2003




Travel Shed Boundary
State Highway
County Roads

**Figure 4-1: County Travel Sheds**

Employment growth was estimated for the Merlin area based on forecasts developed for the *Merlin/North Valley Water Master Plan.* This study assumed growth of about 400 employees on the Rendata site, buildout of the North Valley Industrial Park, and small pockets of additional commercial and low-density industrial uses focused primarily near the I-5 interchange and in the Merlin core area. No significant employment growth was assumed elsewhere in the rural portions of the County.

# Future Traffic Volume Forecasts

This section presents the methodology and assumptions used to develop future travel demand forecasts, followed by an analysis of the impact of growth on traffic operations at selected intersections and along selected roadway segments.

## Background and General Assumptions

The methodology used for the TSP future year travel forecasts is based on procedures in the 2001 Transportation System Planning Guidelines prepared by the Oregon Department of Transportation. These guidelines identify three levels of transportation forecasting and analysis. Selection of the Level 1, 2 or 3 methodology depends on the type of area being analyzed. Level 1 is appropriate for areas with little existing or potential development. Level 2 analysis is used for small or otherwise isolated communities, and Level 3 analysis is used for large urban and suburban communities. Per the ODOT guidelines, separate Level 2 forecasts were prepared for the Murphy and Merlin unincorporated areas based on the anticipated growth in residential and employment land uses as discussed in detail below. The remainder of the County's rural unincorporated area was analyzed based on the Level 1 forecasting method, which relies on historical traffic volume trends.

ODOT is developing a travel demand forecasting model for the Grants Pass area that includes the Merlin and Murphy areas. This model will be completed following completion of the Josephine County TSP, and will be a useful tool to conduct more detailed analyses of the Merlin and Murphy Level 2 areas in the future.

## Level 1 Methodology – Trending Forecast

Level 1 trend forecasts account for both historical background traffic growth and local population and employment growth. Separate analysis methods were used for state highways and county roads.

### State Highways

For state highways, future traffic volume estimates for highway segments from the ODOT website were used as a starting point. These estimates, which are based on historic trends projected forward from 2000 to 2020, were used to determine average annual growth rates. The average annual rate was then applied to existing traffic data on the state highway to forecast 2025 peak hour volumes. Volumes were adjusted manually at I-5 interchanges or other state highway intersections to ensure continuity in traffic volume forecasts developed from different sources.

Areas along state highways analyzed for the TSP include:

- I-5, from south of the US 199 interchange to north of Wolf Creek interchange.
- US 199 from near the Oregon/California border (at the automatic traffic recorder at O'Brien) north to the Grants Pass Urban Growth Boundary (UGB).
- OR 238 from south of the Grants Pass UGB to 0.1 miles east of Williams Highway (Jackson County line).
- OR 99 from the Grants Pass UGB to the Josephine County/Jackson County line.

- The Rogue River Loop Highway along the entirety of the facility, from Upper River Road to US 199 west of the Grants Pass UGB.
- OR 46 from Cave Junction to Oregon Caves National Monument. Minimal growth was assumed east of the Cave Junction city limits, and no growth projected past MP 3.74 where OR 46 enters the National Monument. At Cave Junction, volumes from the City's TSP were used to estimate the growth rate to apply to gateways and intersections in the immediate vicinity for the analysis.

**County Roads**

On County roads outside the Level 2 analysis areas and not on state highways, future traffic volumes were estimated for each county roadway segment by applying historical traffic growth rates from the rural portions of lower order state highways in Josephine County (Jacksonville Highway and Rogue River Loop Highway). Based on input from ODOT staff, the 1.9 percent annual traffic growth rate experienced on these highways was used to estimate potential traffic growth on county roads in rural portions of unincorporated Josephine County outside of Merlin and Murphy. When compounded to 2025, the 1.9 percent annual rate translates to an increase of approximately 54 percent over existing volumes. This growth is reasonably consistent with the anticipated 2.1 percent annual population growth rate.

## Level 2 Methodology – Cumulative Land Use/Trip Generation Analysis

A Level 2 analysis was conducted in the Murphy and Merlin travel sheds, consistent with ODOT requirements and based on a multi-step process as described below.

- First, forecasted population and employment growth was allocated to individual analysis zones within the Murphy and Merlin travel sheds based on the amount of vacant, available and appropriately zoned land in each zone.

- Second, traffic generated by residential, commercial and industrial land development was estimated.

- Third, this traffic was distributed and assigned to the street system in each travel shed. It was assumed that the majority of traffic in both Murphy and, to a lesser extent, Merlin would be attracted to school, shopping and employment opportunities within the Grants Pass (or Medford) UGBs with a lesser, but still significant, amount remaining internal to these communities. Existing traffic volumes were used to determine trip distribution percentages and assign volumes to the street system.

- Forecasted traffic volumes were then analyzed at selected intersections and along selected roadway segments (similar to the locations analyzed in the Existing Conditions Chapter) to determine how well traffic would operate. Analysis was conducted using standard methodologies from the 2000 *Highway Capacity Manual* (HCM).

- The results of the traffic operations analysis were compared to applicable ODOT and County volume-to-capacity (v/c) and level of service standards , and deficiencies were identified.

A more detailed discussion of this analysis process is presented in the following pages.

**Level 2 Land Use**

Existing zoning and County tax assessor parcel data was analyzed to identify the amount of appropriately zoned, vacant and available land in each travel shed. In most instances a parcel with structures valued at less than $5,000 was assumed to be vacant. Data was developed for three general land use categories based on existing zoning: residential (assumed to be single family dwellings), commercial (assumed to be

smaller retail), and industrial (either low density mini-warehouse or repair shop-type development, or light industrial/business park). Low-density industrial uses are assumed to develop where there is no municipal water service. Light industrial or business park uses similar to the North Valley Industrial Park are assumed to develop where municipal water is provided. Both options were evaluated in the Merlin area. Figures 4-2 and 4-3 illustrate the general location of vacant lands included in the Level 2 analysis for Merlin and Murphy, respectively. Lightly shaded areas in these figures are areas represented by uses and zoning other than residential, commercial or industrial – primarily agricultural lands, forest lands and other resource areas that are not planned to accommodate additional housing or employment.

The specific approach for estimating future development on each land use type is provided below.

- Residential – Forecast residential dwelling units were allocated uniformly across all vacant residential property in the Merlin and Murphy study areas. A total of 1,073 new residences were forecast to develop in Merlin, and 1,318 new residences were added in Murphy.

- Commercial – No commercial growth is anticipated in Murphy. In Merlin, commercial growth consistent with the assumptions in the *Merlin/North Valley Water Master Plan* was assigned primarily in the Merlin "downtown" and near the I-5 interchange. A total of 51 parcels were assumed to develop.

- Industrial – No industrial growth is expected in Murphy. In Merlin, two scenarios were developed. Both assume the same acreage for industrial use, with two alternatives for the type of industrial development based on whether or not municipal water service would be available.

  Alternative 1 assumes that no municipal water service is provided to the Merlin area and that vacant industrial land outside of the North Valley Industrial Park would develop with low intensity uses such as mini-warehouses, RV or truck sales, and/or repair shops (similar to existing low-density industrial development). New industrial growth within the North Valley Industrial Park was assumed to be light industrial and/or business park, consistent with existing development in that area.

  Alternative 2 assumes that municipal water service is provided and that most vacant industrial property (including Rendata) is developed with light industrial and/or business park uses similar to those that currently exist in the North Valley Industrial Park. Alternative 2 would generate a higher volume of traffic and would be more likely to require improvement projects. This alternative was analyzed in greater detail, while a sensitivity analysis was conducted for Alternative 1 to compare likely differences in traffic impacts and roadway improvement needs.

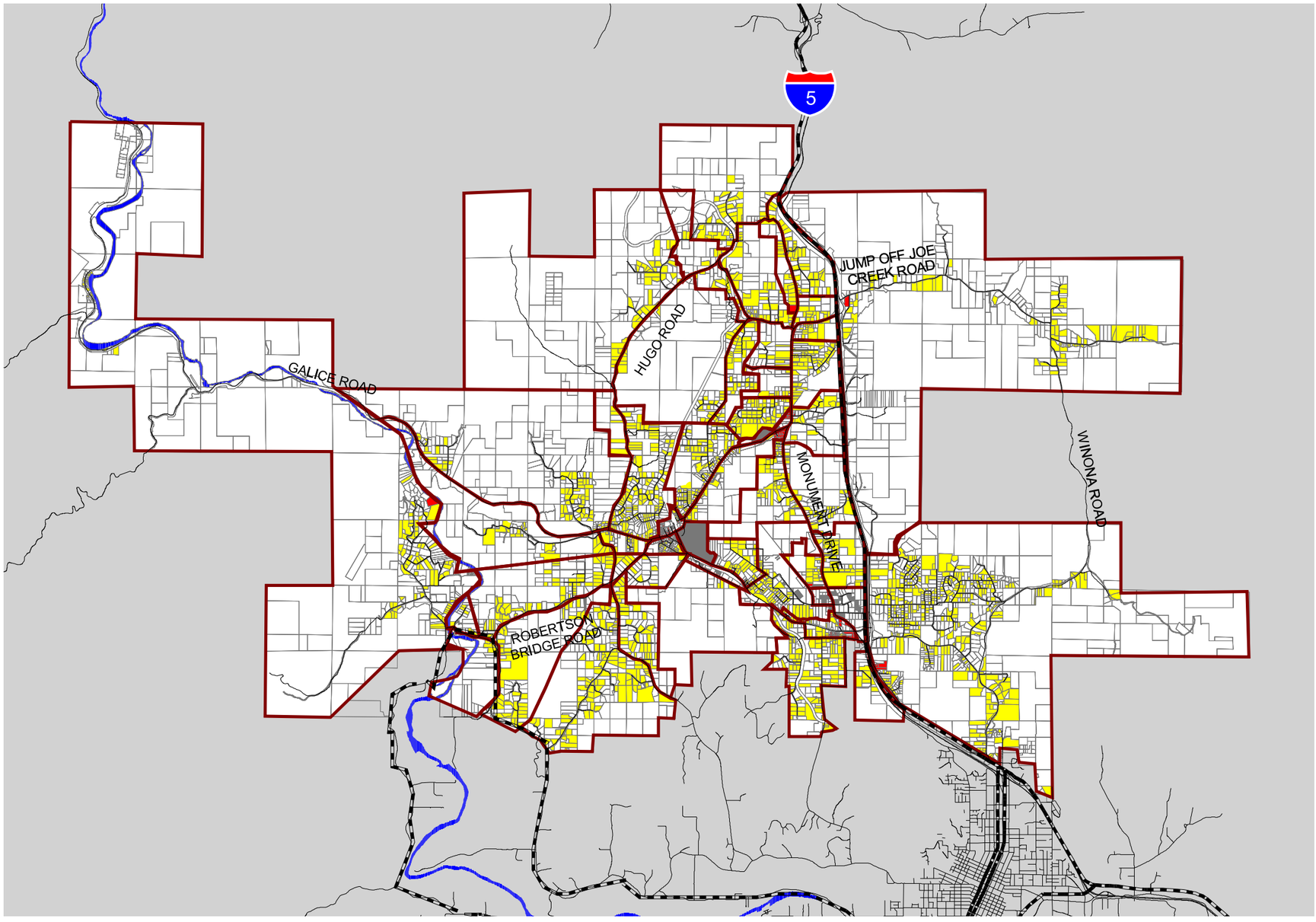
The amount of development forecast for each vacant residential, commercial or industrial parcel was aggregated into traffic analysis zones for analysis purposes as discussed below. No traffic growth was assumed on forest lands or in other portions of the rural area not encompassed by residential, commercial or industrial land use types.

## Level 2 Trip Generation Estimates

The land use forecasts for the traffic analysis zones (TAZs) were used as the basis for the trip generation estimates. Typical planning level ratios of net buildable area to gross area were applied to total vacant lands by zoning category, and then trip generation rates were applied to the resulting estimate of net buildable area.

Estimated number of residential dwelling units, estimated industrial acreage, and estimated commercial square footage were used to generate trips that were added to the existing street network.

# Figure 4-2:
# Merlin Vacant Lands




Vacant Lands
- Commercial
- Industrial
- Residential

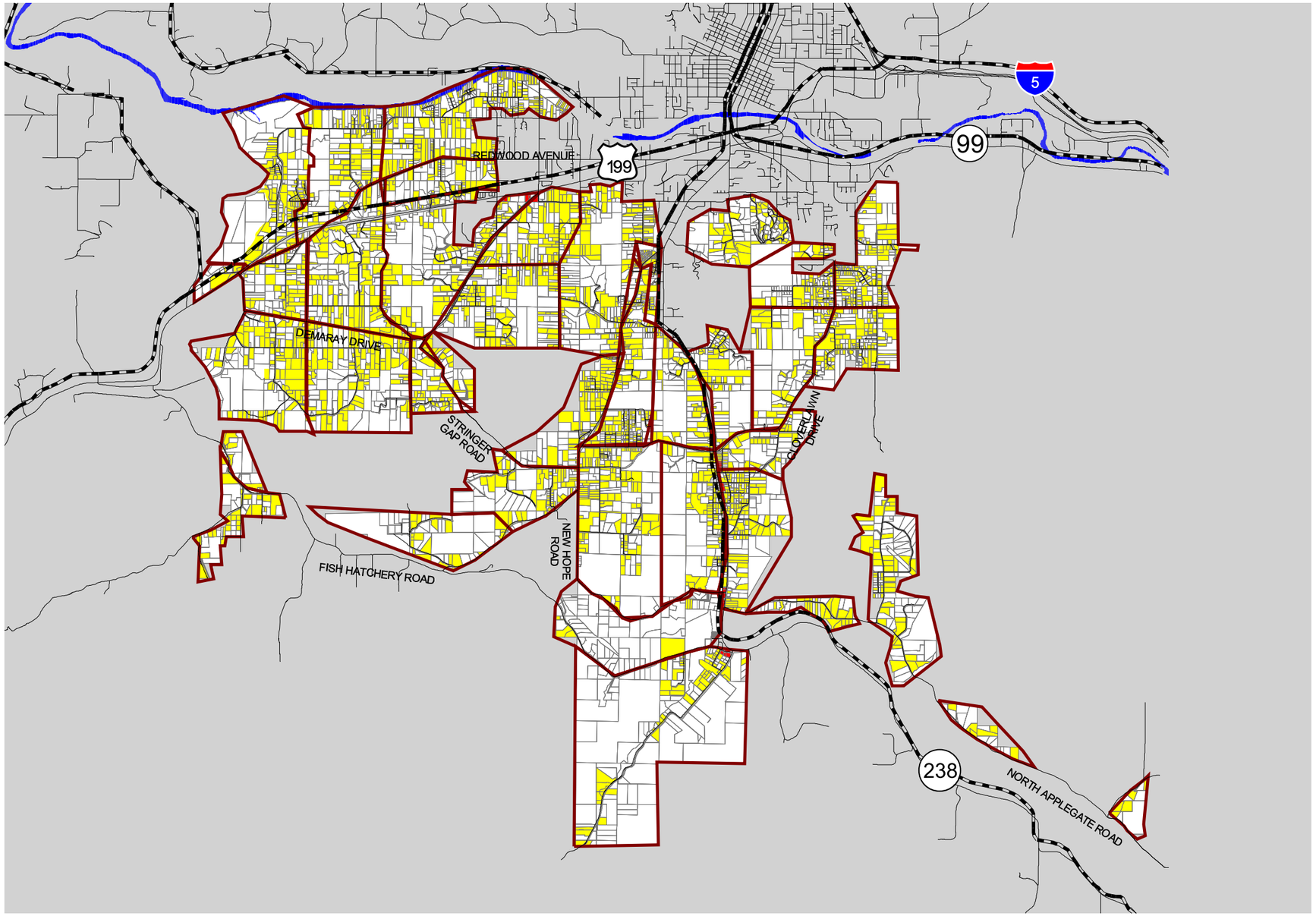
- State Highway
- County Roads
- TAZ Boundaries

N

2 0 2 Miles

Josephine County
Transportation System Plan

# Figure 4-3:
# Murphy Vacant Lands




Vacant Lands
- Commercial
- Industrial
- Residential

- State Highway
- County Roads
- TAZ Boundaries

N

1 0 1 Miles

Josephine County
Transportation System Plan

Data published in *Trip Generation* (Institute of Transportation Engineers, 1997) and the *1996 Oregon Travel Behavior Survey* provided the source for trip generation rates. Trips generated for each TAZ were distributed to the study locations based on engineering judgment, characteristics of the existing transportation system and knowledge of land uses in the area. Trips were assigned to turning movements at the study locations based on existing travel patterns and the location of the TAZ centroid in relation to the analysis location. (The centroid is the point representing the focal point of the TAZ.)

An internal capture rate was estimated to account for trips with origins and destinations within the Level 2 area travel shed. A 40 percent internal capture rate was used in Merlin, reflecting the presence of a variety of land uses that could accommodate PM peak hour trips made to various destinations like home, work, shopping, dining, school, etc. In Murphy, which is primarily residential and is not expected to have any new commercial or employment uses by 2025, no p.m. peak hour internal travel was assumed. Given these considerations and the locations of TAZs and study locations, trip generation rates and trip assignment percentages were input into master spreadsheets to develop traffic volume forecasts for 2025 conditions at each analysis location.

A total of 51 TAZs in the Merlin area (Figure 4-4) and 38 TAZs in the Murphy area (Figure 4-5) were developed for analysis of the Level 2 areas. White areas in the Murphy TAZ map (Figure 4-5) represent areas that were not assigned any future growth. These areas – generally agricultural, forest or resource extraction areas –were used in traffic analysis only to the extent that they generate or attract travel today. TAZ boundaries were developed to aggregate vacant land and assign land use growth in a manner that allowed trips to be loaded onto selected roadway segments consistent with existing traffic patterns. Assigned traffic increases were added to existing volumes to represent 2025 weekday PM peak hour conditions. Analysis focused on collector road segments and intersections where existing data could be used as a baseline for future year forecasts. External trips (100 percent of Murphy trip generation and 60 percent of Merlin trip generation) were assigned to travel sheds throughout the County shown in Figure 4-1 above. A small portion of trips was assigned to destinations in the Medford area and further south. Locations north of the County were assumed to generate only a token number of new trips.

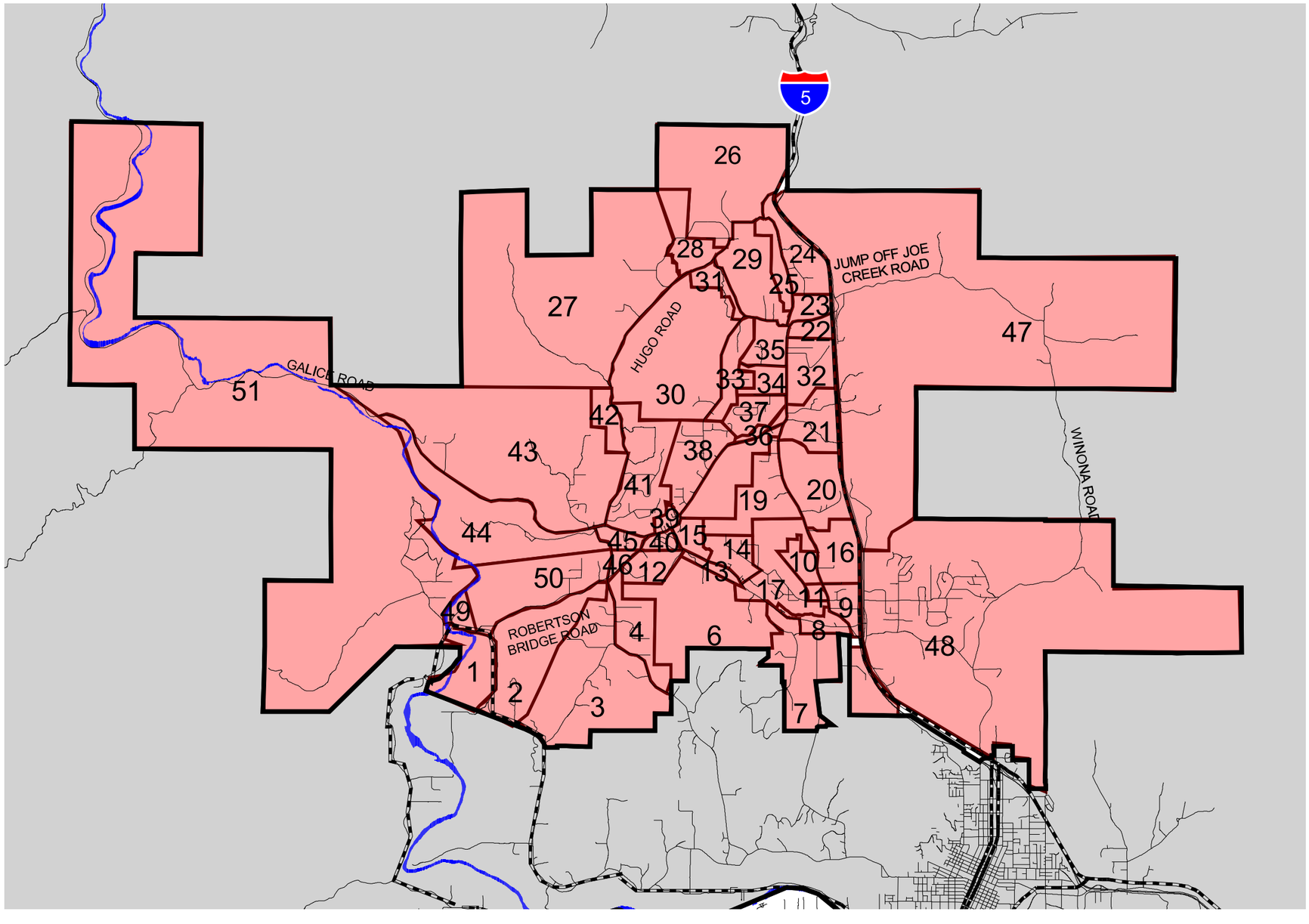
Table 4-3 lists the estimated buildable land quantities, trip generation rates and the estimated 2025 PM peak hour trip generation for each Level 2 area.

**Table 4-3**
**Merlin and Murphy Level 2 Study Areas**
**Buildable Land Use/Trip Generation Estimates**

| Land Use | Units | PM Peak Hour Trip Rate/Unit | PM Peak Trip Ends | Pass-By Trip Rate (%) | Net New Trips (PM Peak Hour) | Percent Internal to Level 2 Area |
|---|---|---|---|---|---|---|
| *Merlin Level 2 Analysis Area* | | | | | | |
| Industrial | 118 acres | 10.47 trips/acre | 1,235 | n/a | 1,235 | 40% |
| Residential | 1,073 units | 0.79 trips/unit | 845 | n/a | 845 | 40% |
| Commercial | 198 ksf | 12.0 trips/ksf | 2,375 | 41% | 1,400 | 40% |
| *Merlin Area Subtotals:* | | | 4,455 | 41% | 3,480 | 40% |
| *Murphy Level 2 Analysis Area* | | | | | | |
| Residential | 1,318 units | 0.79 trips/unit | 1,040 | n/a | 1,040 | 0% |
| | **TOTAL TRIPS, BOTH AREAS:** | | **5,495** | | **4,520** | |

Note: ksf = 1,000 gross square feet of commercial floor space
Sources: Josephine County Planning Department; *Merlin/North Valley Water Master Plan;* Institute of Transportation Engineers *Trip Generation, 6th Edition,* 1999; Oregon Department of Transportation *1996 Oregon Travel Behavior Survey*, 1996.

# Figure 4-4:
# Merlin Transportation Analysis Zones



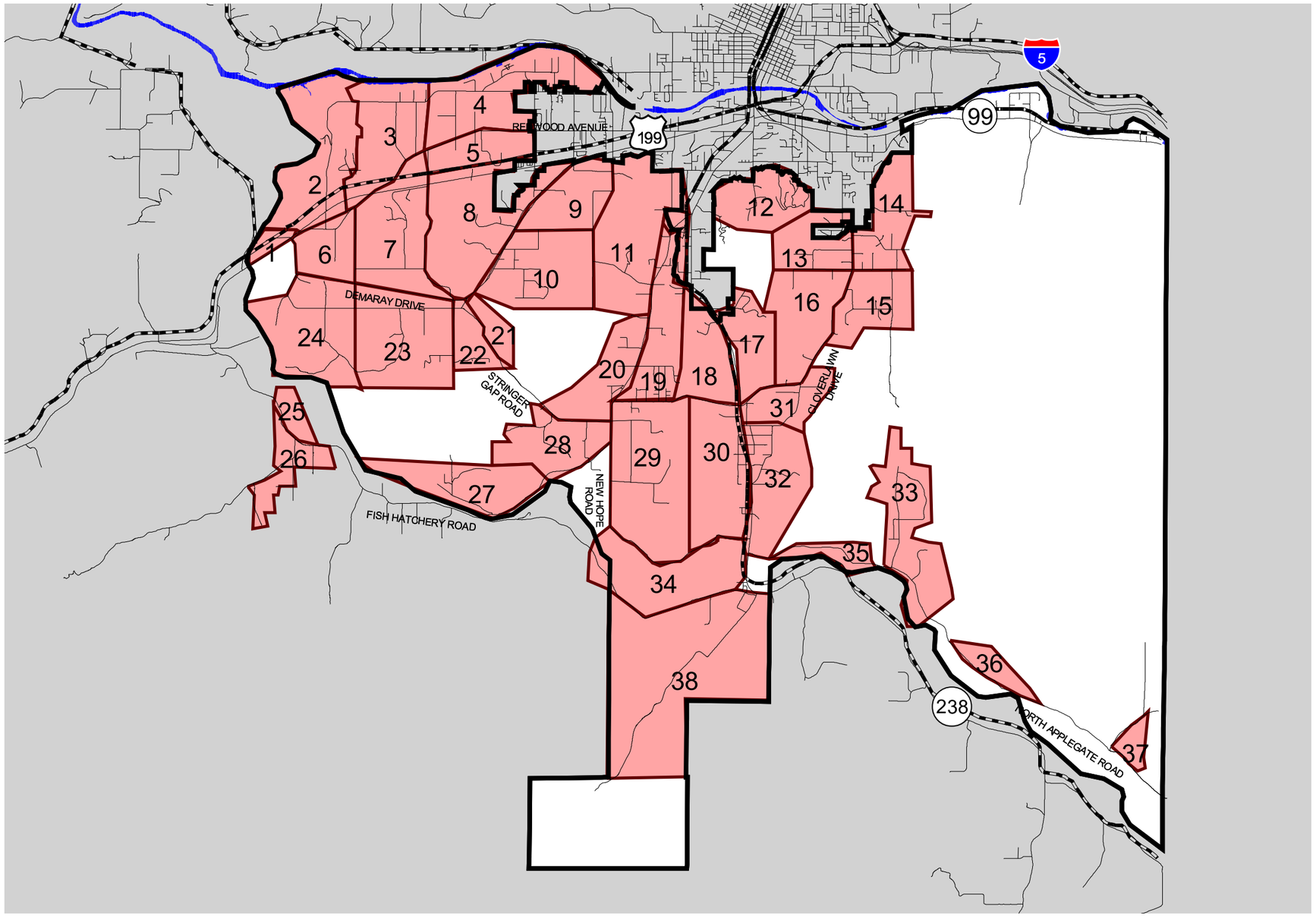

State Highway
County Roads
Merlin TAZ
Merlin Travel Shed

N

2 0 2 Miles

Josephine County
Transportation System Plan

# Figure 4-5:
# Murphy Transportation Analysis Zones




State Highway
County Roads
Murphy TAZ
Murphy Travel Shed

N

1 0 1 Miles

Josephine County
Transportation System Plan

About 4,500 net new PM peak hour trips would be generated by the land uses assumed in the Merlin and Murphy areas, including about 1,000 in Murphy and about 3,500 in Merlin/North Valley area. These trips were then distributed to the County roadway system. As noted previously, 1,400 trips or forty percent of traffic generated by potential future development in the Merlin area was assumed to remain within the overall travel shed boundary. The remaining 2,100 trips were distributed throughout the broader area – primarily Grants Pass, with a portion assigned to Cave Junction and Medford. A spreadsheet detailing the land use, trip generation and trip distribution assumptions for each TAZ is included in the Appendix C.

## Network Assumptions for 2025 Traffic Analysis

The analysis of future roadway system operational deficiencies was based on projected 2025 travel demand volumes that were loaded on the future roadway network. This network includes existing roads, as well as programmed roadway improvements that are expected to be constructed before the planning horizon year (2025).

### Josephine County Improvements

While it does not have a traditional Capital Improvement Program outlining programmed transportation system improvements over a given period, the County manages an ambitious roadway maintenance program that targets 7-10 percent of the total County roadway system (40-60 miles annually) to receive chip seal treatment each summer. At that rate the entire County roadway system can be chip sealed over a 10 to 15 year cycle. Chip seals extend the useful life of asphalt roadways and shoulders at much lower cost than pavement overlays, consistent with the County focus on maintenance of existing structures due to limited capital resources.

### State Transportation Improvement Program (STIP) Improvements

The State of Oregon approved 2002-2005 and draft 2004-2007 State Transportation Improvement Programs (STIP) include 23 projects in Josephine County. Listed in the STIP are major maintenance activities, operational and capacity improvements, bridge improvements and various highway amenities. None of the STIP projects in the County are expected to add capacity to or otherwise affect the assignment of future traffic volumes to the County's rural area street network. STIP projects within the rural Josephine County TSP planning area scheduled for 2003 or later are listed below for information purposes.

- Applegate River Bridge #1985 replacement on OR 238 (STIP project #2887, scheduled for 2003)
- Grave Creek Bridge #144005 replacement, a federal Highway Bridge Rehabilitation and Replacement (HBRR) project on Beecher Road (STIP project # 12201, 2005)
- Grave Creek Bridge #06493 replacement (STIP project #12365, 2003)
- OR 238 inlay/overlay from Murphy to MP 16 (STIP project #10825, 2003)
- Northbound variable message sign (VMS) on I-5 at Hugo and Glendale Roads (STIP project #10855, 2004)
- US 199 Bridge #01077A and #01108A replacements at the East and West Forks of the Illinois River (STIP project #11816, 2005)
- Lower River Road/Rogue River Loop Highway drainage improvements (STIP #12705, 2006)

### Other Potential Improvements

The TSPs for Grants Pass and Cave Junction also include recommended improvements within the UGBs of the two cities. None of these improvements is expected to have a noticeable effect on traffic patterns in rural Josephine County. One, a proposed fourth Rogue River Bridge connecting Lincoln Road and Allen Creek Road/Flower Lane, would provide a new travel route, but the new facility is expected to be used more for travel between central and southwest Grants Pass than to or from the Merlin area.

# Chapter 5
# Development and Evaluation of TSP Alternatives

## Overview

Based on the Transportation System Planning Guidelines developed by ODOT, several alternatives for improving the multimodal transportation system in rural Josephine County were developed and evaluated. The purpose of these alternatives was to provide the basis for identifying project priorities and determining the preferred policy direction and project improvement recommendations for the TSP, consistent with community values and local land use patterns.

The process leading to development and evaluation of transportation improvement scenarios and tiered TSP alternatives is described in this chapter. A more detailed discussion of the specific projects included in each scenario and alternative is presented in the chapters devoted to each major travel mode including: the street and roadway system plan (Chapter 6), the public transit plan (Chapter 8), and the non-motorized transportation plan (Chapter 11).

## TSP Alternative Development Process

TSP alternatives were developed and evaluated in a multi-step process as described below and illustrated in Figure 5-1:

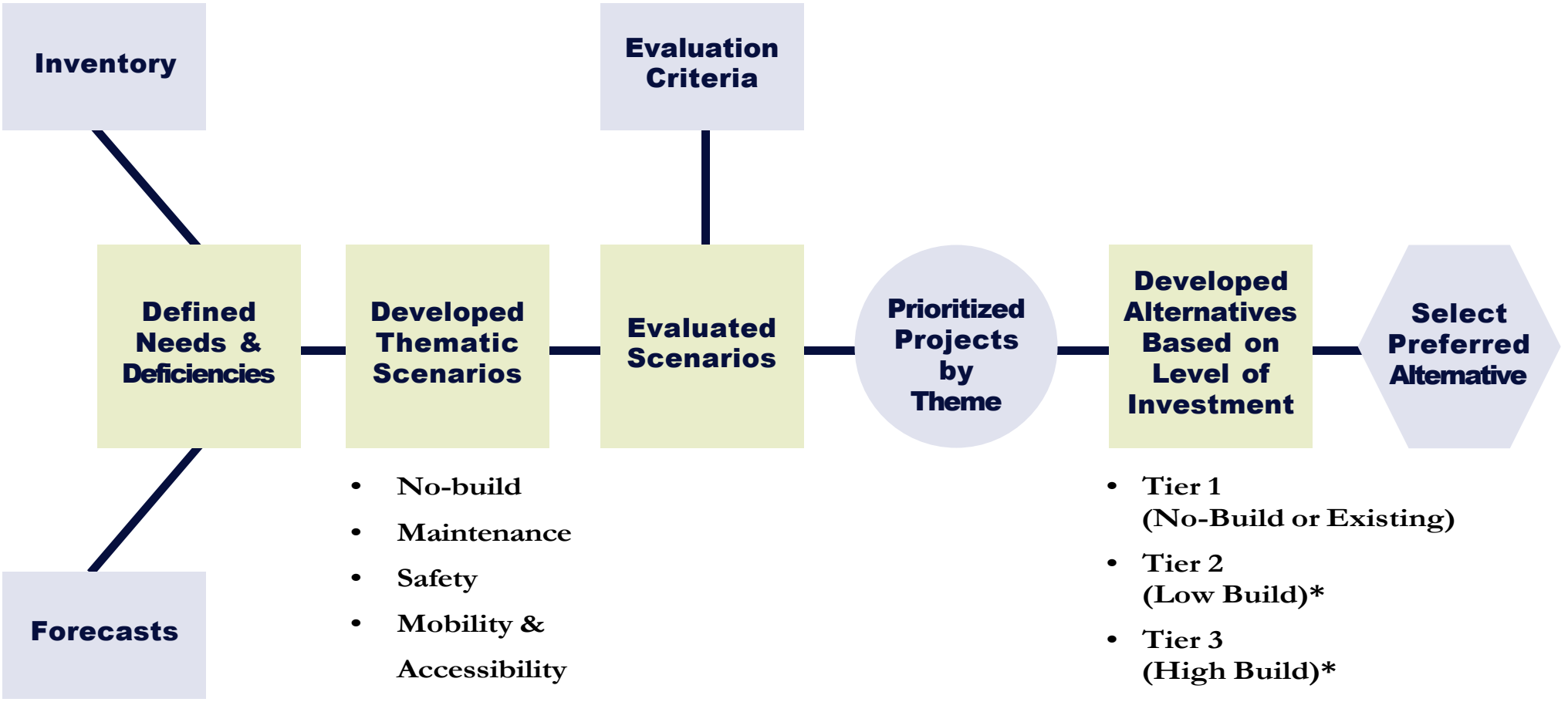
1. Existing and future (2025) transportation system needs and deficiencies were identified for each travel mode. Needs and deficiencies were identified in the following categories:

    - On-going and routine maintenance needs
    - Intersection and roadway congestion problems
    - Safety
    - Structurally-deficient bridges
    - Public transit
    - Pedestrian and bicycle circulation

2. Options to address these deficiencies were developed. These options were grouped by improvement type into "thematic" scenarios as described below. The term "thematic scenarios" refers to the overall *objective* of the specific grouping of projects, typically to address a specific *type* of problem, deficiency, or other community goal. The thematic scenarios developed for the Rural Josephine County TSP were based on the following objectives that stakeholders identified as important for the rural Josephine County TSP:

    - Continuation of existing patterns of investment and improvement (No Build Scenario).
    - Increased level of funding for maintenance to ensure that the roadway system can be preserved in a condition similar or better than today (Maintenance Scenario).
    - Emphasize safety-related improvements as the priority use of local transportation revenues (Safety Scenario).
    - Emphasize improvements that enhance existing and future roadway system capacity, accessibility to all developed portions of the county, and to ensure access to transit service (Mobility and Accessibility Scenario).

# Figure 5-1
# Plan Development Process



- Emphasize improvements that complement local economic development efforts including access to job-creating industrial or commercial property and/or tourism enhancement (Economic Development Scenario).

3. Projects within each scenario were evaluated using the criteria developed to support the draft goals and objectives of the TSP. These criteria were endorsed by the TSP stakeholder committees. This evaluation was "unweighted" meaning that, when the evaluation criteria were applied, no priority was given to any one specific criterion or groups of criteria. As the evaluation process continued into the development of a preferred transportation system alternative, some weighting of criteria was considered. For example, *maintaining a minimum level of roadway maintenance* was considered to be among the most important uses of available transportation revenue (for without maintenance the system will not continue to be usable over the long-term). Accordingly, expanded routine maintenance projects rose to the top of the prioritized list of projects for implementation.

4. After the evaluation process was completed, projects within each scenario were grouped into three *transportation system alternatives* consistent with a three-tiered approach to transportation funding. For example:

    - The Tier 1 (or No Build) Alternative would include all projects that could be built using only revenues from existing available funding sources (primarily the continuation of the existing program of maintenance with a declining level of investment consistent with declining revenues).

    - The Tier 2 (or Low Build) Alternative would include the most highly ranked projects coming out of the evaluation of the thematic scenarios. Tier 2 projects do not currently have an identified funding source, so some level of **additional revenue would be necessary** to implement this alternative.

    - The Tier 3 (or High Build) Alternative would include all of the projects that meet the transportation system needs identified in the TSP. While this alternative would likely be very expensive and probably not attainable, creating a Tier 3 project list has value. *If additional funding should become available over the lifetime of the TSP, a project that currently doesn't have funding must still be identified on either the Tier 2 or Tier 3 list in order to be eligible for this funding.*

As noted above the projects included in the tiered improvement alternatives are presented in the specific modal chapters. The sections below describe in greater detail the process of identifying thematic scenarios, prioritizing projects, and developing tiered alternatives.

## Introduction to Transportation Scenarios

The development of improvement scenarios provided the initial step in developing alternatives for the TSP. For each scenario, individual improvements were identified, analyzed and ranked according to a set of qualitative and quantitative criteria developed by TSP stakeholders. The ranking provided a foundation for discussing which potential improvements should be included in each tiered alternative.

Each of the transportation scenarios has a different emphasis to reflect the policy and financial choices available to the County. For example, one scenario reflects an emphasis on improved maintenance of the basic roadway system including repair of deficient bridges. Another emphasizes safety, while another focuses on resolution of the identified intersection and roadway congestion problems. Maps of all but the No Build scenario are included in Chapter 6. The five TSP scenarios include the following elements:

- No Build Scenario – this scenario assumes that no improvements will be made to the existing transportation system over the 20-year planning period except those identified in the State's Adopted 2002-2005 and Draft 2004-2007 STIP combined with routine County and State roadway maintenance. It should be noted that due to declining transportation revenues coupled with inflation, the level of routine maintenance included in this alternative would be less than the level currently provided to County residents, leading to increasing deterioration of the existing roadway system. Improvements listed in the No Build Scenario have not been evaluated, as they are committed improvements and are assumed in all scenarios.

- Maintenance Scenario – this scenario includes no new capacity enhancement projects, but focusing on improved maintenance of the collector roadway system and repair/replacement of structurally deficient bridges. Under this scenario, the level of funding for routine maintenance would be increased to a level sufficient to maintain the County's roadways at their current levels and to curtail the existing trend toward increased system deterioration. Several significant roadway maintenance projects are included in this scenario.

- Safety Scenario – this scenario focuses on projects addressing vehicle safety, and safety enhancements for non-motorized travel mainly within one mile of rural activity centers (such as schools or neighborhood commercial centers).

- Mobility/Accessibility Scenario – this scenario includes potential solutions for projected future mobility needs, including congested roadways and intersections; and improvements aimed at improving multi-modal accessibility such as enhanced transit service.

- Economic Development Scenario – this scenario includes improvements that would enhance freight mobility and support job creation at employment centers and in recreational/tourism related locations. Included are projects that improve access to industrial and commercial land, bicycle/pedestrian improvements along several major travel corridors in scenic or recreational locations, potential rail improvements within or otherwise benefiting the County, and improvements that would promote freight mobility in the Merlin area and through the Illinois Valley.

The five scenarios and their specific improvements and recommendations are discussed in Chapters 6 (for street improvements), 8 (public transit improvements), and 11 (bicycle and pedestrian improvements).

By grouping projects in this manner, the project evaluation process could focus on comparing similar types of projects to determine which ones would be the most effective in meeting identified needs. In other words, safety projects would be evaluated in comparison with other safety projects, and not compared with mobility projects that address congestion concerns.

## Evaluation Process

Stakeholders and Josephine County staff worked together with the consultant to develop a wide-ranging set of criteria with which to evaluate potential improvements in each of the scenarios. Stakeholders adopted eleven primary measures for evaluation. Detailed elements within various criteria were adopted to allow more focused assessment. For example, to evaluate whether a potential improvement would improve efficiency and circulation, three specific issues were evaluated:

- Would the improvement enhance street connectivity?
- Would the improvement facilitate connections to other transportation modes?

- Would the improvement make good use of existing facilities?

Other criteria analyzed address the degree to which an improvement would:

- Affect transportation safety;
- Meet County and ODOT traffic operational performance standards;
- Affect users of alternative transportation modes such as pedestrians and bicyclists;
- Promote economic development including freight mobility and business accessibility;
- Promote fiscal responsibility;
- Provide sufficient capacity to meet future demand;
- Minimize environmental impacts;
- Avoid impacts on existing property owners;
- Serve low-income and/or transportation-disadvantaged groups; and
- Meet multiple objectives.

A total of 26 factors were used to rate individual improvements. Three modifications were made to the original evaluation factors developed by project stakeholders, including combining State and County v/c and LOS traffic operational performance standards, adding a three-level order of magnitude cost, and adding an evaluation of the ability of specific improvements to meet the needs of groups underserved by the existing system. To quantify the evaluation, a matrix was developed for each scenario listing proposed improvements and strategies along one axis and the evaluation factors on the other. A matrix score sheet for each of the improvement scenarios is attached, detailing the scores assigned to every improvement.

Rating individual improvements is largely a qualitative exercise based on technical evaluation and professional judgment. For this reason, no weight was assigned to any of the criteria. Ratings of –1, 0 and +1 correspond to moderately ineffective, neutral, and moderately effective, respectively. Detailed spreadsheets summarizing the ratings are included in Appendix D.

The evaluation criteria include only a generalized assessment of fiscal impact. A 3-stage cost range was assigned, corresponding to inexpensive (e.g., warning sign installation), moderately expensive (e.g., signalization or intersection modifications) and highly expensive (e.g., replacement bridges or highway passing lanes). County staff and the consultant identified projects to include in each alternative based on the evaluation criteria. Besides fiscal impacts, other evaluation criteria that were used fall into the categories of safety, applicable State and County performance standards, non-motorized travel benefits, economic benefit, sufficient capacity, system efficiency and circulation, potential environmental impacts, potential impacts to property owners, benefit for groups that are transportation-disadvantaged, and ability to meet multiple objectives.

## Identification of Improvement Strategies and Tiered Alternatives

After the evaluation process was completed, projects within each scenario were grouped into three *transportation system alternatives* consistent with a three-tier approach to transportation funding.

- The Tier 1 (No Build) Alternative includes all projects that could be built using only revenues from existing available funding sources (primarily the continuation of the existing program of maintenance).

- The Tier 2 (Low Build) Alternative includes the most highly ranked projects coming out of the evaluation of the thematic scenarios. Tier 2 projects do not currently have an identified funding source, so some level of **additional revenue would be necessary** to implement this alternative. This alternative was identified as the Preferred course of action for the TSP.

- The Tier 3 (High Build) Alternative includes all of the remaining projects that meet the transportation system needs identified in the TSP. While this alternative would likely be very expensive and probably not attainable, creating a Tier 3 project list has value. *If additional funding should become available over the lifetime of the TSP, a project that currently doesn't have funding must still be identified on either the Tier 2 or Tier 3 list in order to be eligible for this funding.*

The three alternatives and the evaluation criteria results were then reviewed with project stakeholders, who shifted a few improvements from Tier 3 to Tier 2. These changes were made to reflect the relative importance of the projects that were shifted, as well as the potential for state funding of two additional projects located on State facilities. While ODOT currently has made no financial commitment to participate in any of the improvements identified in the TSP beyond those listed in the approved STIP, it may be possible for ODOT to finance a portion of the costs of these projects over the 20-year timeframe addressed in the TSP.

After an opportunity for review and comment, the improvements, programs and strategies included in these alternatives proceeded through a financial screening to identify a fiscally constrained alternative. Additional stakeholder input was used to mold the fiscally constrained alternative into the "preferred" or recommended system alternative for the Draft TSP.

It should be noted that the Preferred Alternative (Tier 2) includes more projects than could be funded by projected revenues from existing funding sources. By including these projects in the TSP they become eligible for a variety of potential local and external funding sources. Chapter 13, the financial element of the TSP, outlines a range of possibilities to fill the funding gap, such as System Development Charges (SDCs), local gas taxes, transportation utility taxes, extraction taxes, special assessment fees, local vehicle fees, revenue bonds, and general obligation bonds.

# Chapter 6
# Street Plan

## Overview

This chapter presents a discussion of existing and anticipated future (2025) roadway system needs and deficiencies, the development and evaluation of potential improvements, relevant TSP goals and objectives, and a summary of recommended policies and action strategies. Information in this chapter is built upon the material in Chapters 2 through 5, which include a summary of prior, relevant plans and policies, an inventory of the existing system including safety and congestion problems, a discussion of future travel demand and resulting problems, and the development and analysis of Street Plan alternatives.

More specifically, this chapter addresses:

- A discussion of the planning and policy context that guided development of the street plan
- A summary of existing street system deficiencies and potential future deficiencies based on community growth expectations
- An assessment of improvement alternatives focused primarily on different strategic approaches to using the County's scarce financial resources
- Recommendations for:
  - Street functional classification
  - Access management
  - Roadway maintenance
  - Roadway improvements
  - Safety improvements, and
  - Bridge improvements

## Consistency with Other Plans and Policies

The street plan for the Josephine County TSP was developed with consideration for the requirements of the *Oregon Highway Plan*, the Oregon Transportation Planning Rule (TPR), the *Josephine County Comprehensive Plan*, and the *Grants Pass Master Transportation Plan* and the *Cave Junction Transportation System Plan*. Key elements of these documents as they pertain to the management and improvement of the rural county roadway system are briefly discussed below.

The *Oregon Highway Plan* (OHP) was adopted by the Oregon Transportation Commission in 1999. The OHP includes policies that guide the planning, management of, and funding for state highway facilities. State facilities in Josephine County covered by the OHP include I-5, US 199, OR 238, OR 99, OR 46, and the Rogue River Loop Highway. OHP policies with which influence the development of the rural Josephine County TSP include the identification of a functional classification system for state highways (Policy 1A) including National Highway System designations, the need for coordinated planning between ODOT and local governments (Policy 1B), specification of access management policies for locally designated freight routes outside of UGBs and rural communities (Policy 1C), mobility standards for use in identifying improvement needs (Policy 1F), and prioritization of improvements on state facilities (Policy 1G). Josephine County is consistent with the state's priorities, which emphasize maintenance and efficiency improvements over the addition of new capacity.

The *Transportation Planning Rule* is the implementation mechanism for State of Oregon's Planning Goal 12 (Transportation), and was adopted *"to explain how local governments and state agencies responsible*

*for transportation planning demonstrate compliance with other statewide planning goals"*. The TPR requires local governments and ODOT to develop and coordinate transportation plans, facilities and services. It requires consistency between the functional classifications of County roads with those of state and regional TSPs, and requires continuity of functional classifications between adjacent jurisdictions. For rural lands, the TPR also specifies the type of roadway improvements allowed without a goal exception to State Planning Goals 3, 4, 11 and 14, and also details the steps required should the County pursue roadway improvements that require a goal exception.

Coordinated planning, design and funding among jurisdiction with authority for the roadway system is emphasized in local plans, including those of the County and the Cities of Grants Pass and Cave Junction. Goal 4 of the *Josephine County Comprehensive Plan* focuses on transportation needs, with Policy 4.4 requiring the County to *"encourage and facilitate the development of a transportation master plan for bridges and roads coordinated with City, State and Federal agencies"*.

The *Grants Pass Urban Area Master Transportation Plan* calls for *"interagency cooperation and coordination in the planning, design, construction, operation and maintenance of transportation facilities and services in the Grants Pass urban area."* (The County road system includes facilities within the Grants Pass UGB.) Policy 2.1.2 calls for the City to *"look for opportunities to combine resources to meet transportation needs shared by more than one agency"*.

The *Cave Junction Transportation System Plan* includes policies to support adequate funding for street maintenance: *"The City shall continue to participate in cooperative agreements with other State and local jurisdictions for maintenance and operation activities based on equitable determinations of responsibility and benefit"*.

# Summary of 2025 Traffic Analysis Results

## Intersection Traffic Operations Analysis Methodology

As described in the Existing Conditions chapter, traffic operations at intersections throughout Josephine County were analyzed using SYNCHRO, a traffic analysis software tool. SYNCHRO automates the analysis procedures outlined in the *2000 Highway Capacity Manual* (HCM) for signalized intersections. The program provides output data in the form of average intersection delay (in seconds per vehicle) and corresponding level of service (LOS), intersection volume-to-capacity ratios, 95$^{th}$ percentile queue lengths, and signal phase lengths. SYNCHRO also optimizes phase splits, cycle lengths, and intersection offsets to minimize intersection and network delay. Heavy vehicle percentages have a slight effect on intersection level of service and volume-to-capacity ratios, as heavier vehicles require more time to accelerate and decelerate.

Josephine County, like most local jurisdictions, uses the level of service concept to assess operational performance. Levels of service (LOS) are used to rate the performance of an intersection or roadway segment within a specified time period, typically the a.m. or p.m. peak hour. Assignment of a specific LOS for signalized and all-way stop-controlled intersections is based on average delay per vehicle. This delay is calculated using equations that take into account intersection lane geometry and traffic control features, as well as characteristics of the traffic stream passing through the intersection. For signalized intersections these characteristics include the time required to slow, stop, wait, and accelerate to move through the intersection. LOS A represents the top rank of intersection performance (i.e., the least delay), and LOS F represents intersection failure, with extremely long delays. Levels of service B through E represent increasingly higher levels of delay and congestion.

The 2000 HCM uses a more comprehensive methodology than past versions of the HCM, which focused on stop time and did not consider the full range of approach, deceleration, acceleration and clearance. As

a result, the 2000 HCM has higher limits of delay for each LOS than were previously used. At unsignalized two-way stop-controlled intersections, where through traffic on the main street does not have to stop, LOS, v/c ratio and average delay apply only to side street traffic and turning movements from the main street.

Table 3-7 in the Existing Conditions chapter summarizes level of service characteristics for signalized and unsignalized intersections. Delay thresholds for unsignalized intersection levels of service are lower than the corresponding thresholds for signalized intersections, reflecting the negative impact on the driver of being less able to predict when a gap will appear in opposing traffic, in contrast to traffic signal cycles at signalized intersections, which are more predictable.

## County Operational Standards for Roadway Design and Improvements

Using projected 2025 PM peak hour traffic volumes, future traffic conditions were analyzed at key intersections and on roadway segments throughout the rural unincorporated area of the County, including the Merlin and Murphy areas. At locations where existing traffic counts conducted for the TSP by ODOT were analyzed, future traffic conditions were assessed at a similar level of detail. Existing traffic characteristics at these locations, such as the mix of vehicles in the traffic stream and the peak hour factor – the 15-minute peaking pattern within the peak hour - were assumed to remain the same as today. Elsewhere on the County's collector roadway system, estimated 2025 PM peak hour volumes were analyzed at a planning level using typical default values for vehicle mix and peak directionality. The analysis using default values provides sufficient detail to identify the potential need for future improvements and areas warranting a more detailed analysis.

Various measures of effectiveness (MOEs) are used to evaluate the quality of traffic operations and the potential need for improvements at intersections and on roadway segments. The primary MOEs analyzed for county roads are the volume-to-capacity ratio (v/c), level of service (LOS), and average delay. LOS is reported only for intersections, although vehicle queue lengths were also analyzed at selected locations for a more refined analysis of the adequacy of intersection spacing and turn lane storage. The LOS methodology for two-way roadway segments, which is based on calculated *percent time spent following*, is unreliable without extensive data collection for each individual segment to accurately determine free-flow speeds and other variables. Average delay reported in seconds per vehicle is a direct measurement of the amount of delay faced by the average driver to pass through an intersection or along the length of a defined roadway segment. Josephine County applies an intersection level of service threshold of LOS D or better to guide roadway design and improvement priorities. Under its current application, this standard requires that zone change decisions not allow increases in traffic that would exceed Level of Service D.

## Operational Standards for Design and Improvements on State Facilities

As adopted in the 1999 *Oregon Highway Plan*, ODOT uses volume-to-capacity (v/c) ratios to measure state highway performance rather than intersection or roadway levels of service. Various v/c thresholds are applied to state highways based on functional classification of these facilities. For purposes of the TSP, ODOT's v/c threshold of 0.75 for rural district highways and local interest roads has been used to identify deficiencies on roadway segments. ODOT's v/c ratio is consistent with guidelines in the AASHTO Green Book, the industry's standard reference for highway design, which identifies LOS C as the design standard for rural collectors. ODOT's v/c standard for unsignalized intersections is 0.85, and where County roads intersect State highways the ODOT standard takes precedence.

The v/c ratio is equivalent to the percentage of theoretical capacity used by existing or projected future traffic during a specified time period. In the case of future traffic, the v/c ratio is also termed the demand-to-capacity ratio. A v/c or demand-to-capacity ratio in excess of 1.00 indicates a facility operating or projected to operate in excess of its theoretical capacity.

## 2025 Intersection Analysis Results

Detailed intersection analysis was conducted at 28 intersections throughout rural Josephine County, including 15 Level 1 locations and 13 Level 2 locations. (Level 1 and Level 2 refer to the complexity of traffic forecasting analysis required for compliance with TSP guidelines. Level 1 analysis relies on trend lines of historical traffic growth to forecast future traffic, while Level 2 analysis uses future travel demand estimates based on the type and amount of potential land development.) Of the Level 2 intersections, two are in Murphy and 13 are in Merlin – including the rural County's lone signalized intersection at Monument Drive/Merlin-Galice Road. The 2025 No Build analysis results are summarized in Table 6-1, which also includes existing 2002 PM peak hour intersection operations for comparison. Table 6-1 reflects the more aggressive trip generation scenario for the Level 2 areas that assumes adequate water supply is available for industrial development allowed under current zoning in the Merlin area. At intersections controlled by traffic signals or all-way stop signs, LOS, v/c ratio and average delay reported are averages for all the vehicles passing through the intersection.

With existing PM peak hour traffic volumes, only one intersection operates with a v/c ratio above 0.30, the I-5 NB on/off ramps at Merlin-Galice Road. At 0.89, the existing v/c ratio at this location exceeds the ODOT intersection threshold of 0.85 or better.

By 2025, two intersections would operate with maximum v/c ratios above 1.00, including the I-5 NB on/off ramps at Merlin-Galice Road and Redwood Avenue/US 199. Since these are unsignalized intersections, the maximum v/c ratio applies only to the affected movement rather than the entire intersection. At both locations the affected movement is traffic turning from the side street onto the main street. Without improvements, long queues and delays would be expected for side street turning traffic.

Potential side street delays are particularly significant for the I-5 off-ramp intersection, as backups on the ramp could affect I-5 mainline operations, creating an unsafe situation on the freeway. (Although it carries more traffic than other movements at the intersection, the off-ramp is considered the side street because it is stop-controlled, while traffic on Merlin Road does not stop.)

As noted above these analysis results are based on the potential for industrial land development associated with provision of municipal water in the Merlin area. A sensitivity analysis was conducted assuming that no municipal water would be provided outside of the North Valley Industrial Park. The sensitivity analysis assumes less future development, and results in approximately 14 percent less traffic in the Merlin area. Based on a review of the intersection traffic operations results presented in Table 6-1, it is unlikely that this lower level of traffic would significantly alter any of the future congestion locations identified in that table.

## 2025 Roadway Segment Analysis Results

Intersections are frequently the locations of traffic congestion and capacity constraints in a transportation network, due to conflicting traffic movements that create the need to allocate right-of-way by allowing certain movements to proceed while others are stopped. Concerns that are discovered through analysis of intersection traffic operations often have relatively simple solutions. However, this is generally not the case for roadway segments. Improving or widening an entire roadway can often be a more expensive, controversial and lengthy process than improving an intersection. As a result it is important to analyze safety and traffic operational concerns on roadway segments as well as at intersections.

Traffic operations on a roadway segment are analyzed considering factors such as traffic volume, composition of the traffic flow (i.e. amount of trucks and other heavy vehicles), directional split of peak hour traffic flow, conditions in the adjacent built environment, and various physical roadway characteristics. The methodology used to analyze two-way roadway segments, based on the 2000

## Table 6-1
## 2002 Existing and 2025 Future No Build PM Peak Hour Intersection Operations

| | | | 2002 PM Peak Hour | | | | 2025 PM Peak Hour | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Signalized Intersection** | **Forecast Area** | **Map ID** | **Intersection v/c Ratio[1]** | | **LOS[1]** | **Avg. Delay (secs.)[1]** | **Intersection v/c Ratio[1]** | | **LOS[1]** | **Avg. Delay (secs.)[1]** | **Deficiency (yes/no)** |
| Monument Drive/ Merlin-Galice Road | Merlin | 29 | 0.59 | | C | 24.8 | **0.90** | | D | 49.9 | Yes[3] |
| **Unsignalized Intersection** | **Forecast Area** | **Map ID** | **Critical Lane Group** | **Max. v/c Ratio[1]** | **LOS[1]** | **Avg. Delay (secs.)[1]** | **Critical Lane Group** | **Max. v/c Ratio[1]** | **LOS[1]** | **Avg. Delay (secs.)[1]** | **Deficiency (yes/no)** |
| Highland Avenue/ Merlin-Galice Road | Merlin | 28 | EB L-T-R | 0.28 | B | 12.3 | EB L-R | 0.73 | D | 30.9 | No |
| I-5 NB on/off ramps/ Merlin-Galice Road | Merlin | 26 | NB L-R | 0.89[2] | E | 38.3 | NB L-R | **1.84** | **F** | 406.3 | Yes |
| I-5 SB on/off ramps/ Monument Road | Merlin | 7 | SB L-T-R | 0.04 | A | 9.1 | SB L-R | 0.10 | A | 9.7 | No |
| Lower River Rd/ Robertson Bridge Rd | Merlin | 10 | SB L-R | 0.10 | A | 9.2 | SB L-R | 0.19 | B | 10.0 | No |
| Merlin Road/ Pleasant Valley Road | Merlin | 9 | NB L-R | 0.14 | B | 11.6 | NB L-R | 0.49 | C | 19.5 | No |
| Monument Drive/ Pleasant Valley Road | Merlin | 6 | SB L-R | 0.09 | B | 11.3 | EB L-R | 0.26 | C | 15.4 | No |
| Monument Drive/ Camp Joy Rd/ I-5 SB off | Merlin | 27 | EB L-T-R | 0.15 | B | 12.9 | EB L-R | 0.34 | C | 20.4 | No |
| Monument Drive/ N Valley High School | Merlin | 5 | WB L-R | 0.27 | B | 12.4 | WB L-R | 0.76 | D | 34.2 | No |
| Monument Drive/ Three Pines Road | Merlin | 4 | EB L-R | 0.12 | B | 10.7 | EB L-R | 0.34 | C | 15.3 | No |
| Robertson Bridge Road/ Merlin-Galice Road | Merlin | 8 | NB L-R | 0.18 | B | 11.0 | NB L-R | 0.39 | C | 15.8 | No |
| US 199/ Redwood Avenue | Murphy | 18 | SB L-T-R | 0.26 | C | 21.6 | SB L-T-R | **1.07** | **F** | 172.8 | Yes |
| OR 238/ Jaynes Drive | Murphy | 16 | EB L-T-R | 0.10 | C | 16.1 | EB L-T-R | 0.28 | D | 33.4 | No |
| US 199/ Fish Hatchery Road | 1 | 19 | NB L-T | 0.08 | C | 15.1 | NB L-T | 0.25 | D | 26.5 | No |
| US 199/ Ken Rose Lane | 1 | 22 | WB L-R | 0.05 | B | 10.4 | WB L-R | 0.13 | B | 14.3 | No |
| US 199/ Lakeshore Drive | 1 | 20 | WB L-T-R | 0.16 | C | 17.1 | WB L-T-R | 0.52 | E | 45.9 | No |
| US 199/ Lone Mountain-O'Brien | 1 | 23 | EB L-T-R | 0.06 | B | 11.5 | EB L-T-R | 0.16 | B | 14.4 | No |
| US 199/ Rockydale Road | 1 | 21 | EB L-T-R | 0.04 | C | 19.2 | EB L-T-R | 0.20 | E | 41.3 | No |
| OR 238/ Watergap Road | 1 | 17 | NB L | 0.16 | B | 11.2 | NB L | 0.31 | B | 14.5 | No |
| OR 46/ Holland Loop Road East | 1 | 24 | NB L-R | 0.01 | A | 9.3 | NB L-R | 0.03 | A | 9.7 | No |
| OR 46/ Holland Loop Road West | 1 | 25 | NB L-R | 0.16 | B | 11.4 | NB L-R | 0.32 | B | 14.6 | No |
| I-5 NB on/off ramps at Grave Creek (Leland) | 1 | 2 | SB L-T | 0.07 | A | 9.7 | SB L-T | 0.15 | B | 11.0 | No |

**Table 6-1 (cont'd.)**
**2002 Existing and 2025 Future No Build PM Peak Hour Intersection Operations**

| Unsignalized Intersection | Forecast Area | Map ID | Critical Lane Group | Max. v/c Ratio[1] | LOS [1] | Avg. Delay (secs.)[1] | Critical Lane Group | Max. v/c Ratio[1] | LOS[1] | Avg. Delay (secs.)[1] | Deficiency (yes/no) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| I-5 SB on/off ramps at Grave Creek (Leland) | 1 | 1 | SB L-T-R | 0.05 | A | 10 | SB L-T-R | 0.12 | B | 11.4 | No |
| Old OR 99/ I-5 Frontage Street/ Lower Wolf Creek Road | 1 | 3 | WB L-T-R | 0.05 | B | 10.7 | EB L-T-R | 0.29 | B | 12.8 | No |
| OR 99/ Fruitdale Drive | 1 | 15 | NB L-R | 0.13 | B | 11.7 | NB L-R | 0.30 | C | 17.1 | No |
| Rogue River Loop Highway/Glen Drive | 1 | 12 | SB L-T-R | 0.02 | B | 10.8 | SB L-T-R | 0.06 | B | 12.8 | No |
| Upper River Road/ Lower River Road | 1 | 11 | NB L-R | 0.05 | B | 10.1 | NB L-R | 0.09 | B | 11.1 | No |
| Upper River Road/ Pine Crest Drive | 1 | 13 | SB L-R | 0.32 | C | 17.1 | SB L-R | 0.70 | **E** | 37.8 | Yes[4] |

[1] At unsignalized intersections the v/c ratio and LOS apply only to the critical approach movement(s), not the entire intersection.

[1] At the signalized intersection the v/c ratio and LOS apply to the entire intersection.

[2] V/C ratio exceeds standard of 0.85 in the 1999 *Oregon Highway Plan* for intersection on state facilities. Potential improvements are discussed in this document.

[3] Westbound traffic queue would adversely affect intersection of I-5 northbound ramps/Merlin-Galice Road.

[4] Based on County's standard of LOS D or better for intersection operations.

*Highway Capacity Manual,* is particularly sensitive to the design speed assumed in the analysis, which must be a minimum of 50 mph to conform to the methodology. Because the analysis methodology is so sensitive to values that must be assumed for analysis of a large area, the v/c ratio was used as the primary measure for roadway segments.

Two levels of segment analysis were conducted for the TSP. Hourly traffic counts conducted specifically for the TSP offered the ability to conduct more detailed analyses that take into account directional split, peaking factors and the mix of vehicles in the traffic stream. Hourly machine counts were conducted in the late 2002 at 32 locations selected by the project team to represent traffic conditions on key roadways throughout the County. For the County's remaining collector roadways, daily traffic counts conducted over the past few years were analyzed using default factors for values such as traffic mix and directional split. Table 6-2 includes results for 2025 average delay and v/c ratios based on the 2002 hourly counts and also estimated from historic daily traffic counts, with existing conditions includes for comparison.

As with existing traffic, no roadway segments are projected to be over capacity or over applicable v/c thresholds under projected 2025 conditions. Projected 2002-2025 traffic increases depend on the location of the roadway segment, and whether it is within a Level 2 area where more intense development is expected. Highland Avenue, Monument Drive, Galice Road, Holland Loop Road, Azalea Drive, Foothill Boulevard, Williams Highway and Cedar Flat Road are all expected to carry PM peak period volumes in excess of 200 vehicles per hour but none are expected to approach facility capacity under normal traffic conditions. (The 200 vehicles per hour figure was used only to group facilities, and has no analytical significance.) However, seasonal peak recreational traffic may adversely affect traffic operations along US 199 or other recreational routes such as Merlin-Galice Road.

On Merlin Road west of Monument Drive and Monument Drive north of Camp Joy Road the projected volume meets or exceeds 1,000 vehicles per hour. While these segments fall within acceptable v/c thresholds, potential improvements have been recommended to provide continued accessibility to and from the Merlin area.

## Summary of Existing and 2025 Transportation System Deficiencies

As discussed in Chapter 3 and in the preceding pages, existing and potential future (2025) horizon year traffic conditions were analyzed in detail to assess operations at key intersections, roadway segments and bridges. Bridge deficiencies were identified through a structural assessment conducted by ODOT and are documented in Chapter 3. A more qualitative approach based on existing deficiencies was taken for other elements of the transportation system such as transit and non-motorized facilities. This section summarizes existing and future deficiencies to serve as an introduction to the specific project recommendations included in the TSP alternative scenarios that are discussed later in this chapter.

## Maintenance Deficiencies

Roadway maintenance is a much greater concern for the County roadway system than construction of new facilities or expansion existing roads. Historically, Josephine County has maintained its facilities to high standards, relying heavily on both state gas tax receipts and revenue stemming from the federal timber settlement affecting rural jurisdictions in southwest Oregon (a more detailed discussion of roadway maintenance funding is presented in Chapter 13). However, federal timber settlement revenues are slated to halt after 2007, which will create substantial hole in the County's maintenance budget (timber revenues currently represent about one third of the County's overall roadway budget).

Comparing existing and optimal chipseal schedules serves to illustrate the impact of the maintenance deficiency. Chipseals are widely used in rural jurisdictions to extend the useful life of roadways by deferring the need for major repaving and roadway reconstruction. The County's optimal chipseal program calls for 60 miles/year to be chipsealed, which correlates to a cycle of about once every 10 years for the 576 miles of County-maintained roads. However, existing revenues allow for only 20 miles per year to be chipsealed. This equates to a 30-year cycle for chipsealing the entire County roadway system compared to the optimal 10-year cycle. This extended 30-year cycle far exceeds the benefits of chipsealing on any given section of roadway and, if this maintenance schedule is continued, will result in the ultimate significant degradation of the County's roadway system. Cracked roads, potholes and sections of roadway that are beginning to revert to gravel surfacing will likely be experienced.

Funding shortfalls affect most of the County's other roadway maintenance needs to a similar degree, such that the annual rate of maintenance is less than half the optimal rate for most program elements, ranging from restoring roadway shoulders to cleaning drainage culverts. Only a few maintenance elements are currently funded at more than 2/3 of the optimal rate; these include ditching (regrading existing ditches), herbicide application along roadway shoulders, sign repair, and roadway striping.

## Congestion Deficiencies at Intersections

### Overview of 2002 Intersection Deficiencies

With existing 2002 PM peak hour traffic volumes (as documented in Chapter 3), 20 out of the 28 unsignalized intersections that were analyzed in the rural portion of the county currently operate at level of service (LOS) A or B. Another six intersections operate at LOS C with existing traffic volumes, one functions at LOS D, and the last one functions at LOS E, which exceeds Josephine County's threshold for acceptable traffic operations. This last location, the intersection of Merlin-Galice Road with the I-5 northbound on and off-ramps, is located in the Merlin area. This intersection is also the only location in the rural portion of the county where the critical volume-to-capacity ratio of 0.89 exceeds the 0.85 *Oregon Highway Plan* intersection threshold for non-highway facilities on the state system.

With the future population and employment growth in the rural portion of the county anticipated to occur by 2025, some increases in traffic volumes, congestion and delay on county roads are expected. The results of future traffic analysis are described in the section below.

**Overview of 2025 Intersection Deficiencies**

This section identifies the deficiencies that would result for PM peak hour traffic by 2025 based on the development assumptions previously discussed and assuming that no significant improvements are made to the roadway system beyond the projects proposed in the Draft 2004-2007 STIP or on-going maintenance. Intersection deficiencies include:

- *I-5 northbound on/off-ramps at Merlin-Galice Road* – This intersection is controlled by a stop sign that affects off-ramp traffic and currently operates at level of service (LOS) E in the PM peak hour with a volume-to-capacity (v/c) ratio of 0.89. By 2025, PM peak hour traffic operations will drop to LOS F with a v/c ratio of 1.84, far in excess of the theoretical capacity of the intersection. As the stop-controlled side street is the I-5 off-ramp, traffic queues on the off-ramp could periodically extend from the intersection back to the freeway mainline, creating a potential safety hazard.

- *US 199 at Redwood Avenue* – Redwood Avenue is controlled by a stop sign on both the north and south sides of US 199 at this intersection, with a single approach lane in each direction. Currently delay is experienced primarily by left-turning vehicles entering or crossing the highway from Redwood Avenue, although existing conditions do not exceed either the County's level of service standard or ODOT's v/c threshold. By 2025, increases in traffic along US 199 will reduce the availability of adequate gaps in traffic that allow side street traffic to enter the highway. In particular, southbound left turns are expected to experience LOS F conditions with a v/c ratio of 1.07, exceeding the County's LOS D standard and ODOT's v/c threshold of 0.85 (for intersections on state highways). However, the volume of left turning traffic is very low.

- *Upper River Road at Pine Crest Drive* – This intersection currently operates acceptably at level of service C. By 2025 traffic operations are expected to drop to LOS E, which exceeds the County's LOS D standard for intersections. However, this intersection is projected to operate with a v/c ratio of 0.70 in 2025, which is within the *Oregon Highway Plan* threshold for acceptable performance for intersections on local interest roads in rural areas (v/c of 0.85 or better). No mitigation is proposed.

- *US 199 at Lakeshore Drive* – Lakeshore Drive is stop sign-controlled on both the east and west legs of the intersection with US 199 with a single approach lane in each direction. Traffic is currently operating with acceptable levels of delay and meets both County and ODOT standards. By 2025, westbound left turns would operate at LOS E during the PM peak hour with a v/c ratio of 0.52. While the 2025 LOS exceeds the County's LOS D standard, the applicable ODOT v/c threshold of 0.85 would not be exceeded (v/c of 0.52 is expected). No mitigation is proposed.

- *US 199 at Rockydale Road* – This intersection is similar to the intersection of US 199 with Lakeshore Drive, in that it currently operates with acceptable levels of delay that would deteriorate to LOS E by 2025. This intersection also is not expected to experience a future v/c ratio that exceeds ODOT's standard (v/c 0.20 compared to the standard of 0.85). No mitigation is proposed.

## Congestion Deficiencies on Roadway Segments

Existing and projected future traffic operations on roadway segments throughout rural Josephine County are shown in Table 6-2. Most of the roadways in the rural portion of the county are currently operating with little or no delay. Aside from the intersection congestion concerns identified above, no roadway segment was identified as exceeding either state or local standards. Congestion in the rural portions of the County is largely confined to portions of US 199 and OR 238, typically at locations with significant

## Table 6-2
## 2002 Existing and 2025 Future No Build PM Peak Hour Traffic Operations on Key Roadway Segments

**Results Based on 2002 Hourly Counts**

| Map ID | Roadway | Nearest Intersection | Direction From Int. | Forecast Area | Milepost | County Functional Class.[1] | 2002 PM Peak Hour 2-way PM Peak Hour Volume | 2002 PM Peak Hour V/C Ratio | 2025 PM Peak Hour 2-way PM Peak Hour Volume | 2025 PM Peak Hour V/C Ratio |
|---|---|---|---|---|---|---|---|---|---|---|
| 31 | Monument Drive | I-5 NB ramp/Jump Off Joe | South | Merlin | 5.57 | Major Collector | 129 | 0.06 | 260 | 0.12 |
| 32 | Galice Road | Hugo Road | East | Merlin | 0.96 | Major Collector | 339 | 0.17 | 365 | 0.18 |
| 33 | Galice Road | Hugo Road | West | Merlin | 0.88 | Major Collector | 231 | 0.09 | 260 | 0.10 |
| 34 | Hugo Road | Galice Road | North | Merlin | 0.04 | Minor Collector | 203 | 0.09 | 260 | 0.12 |
| 35 | Azalea Road | Robertson Bridge Road | North | Merlin | 5.46 | Major Collector | 103 | 0.05 | 135 | 0.06 |
| 36 | Azalea Road | Robertson Bridge Road | South | Merlin | 5.38 | Major Collector | 203 | 0.09 | 235 | 0.10 |
| 37 | Robertson Bridge Road | Azalea Road | East | Merlin | 0.87 | Major Collector | 255 | 0.13 | 260 | 0.13 |
| 38 | Robertson Bridge Road | Azalea Road | West | Merlin | 0.95 | Major Collector | 190 | 0.09 | 195 | 0.09 |
| 39 | Highland Avenue | Donaldson Road | North | Merlin | 2.84 | Major Collector | 342 | 0.13 | 415 | 0.16 |
| 40 | Highland Avenue | Donaldson Road | South | Merlin | 2.91 | Major Collector | 298 | 0.12 | 370 | 0.15 |
| 41 | Donaldson Road | Highland Avenue | East | Merlin | 0.04 | Minor Collector | 64 | 0.03 | 135 | 0.06 |
| 42 | Leland Road | Lariat Road (frontage rd) | East | 1 | 0.53 | Minor Collector | 11 | 0.01 | 15 | 0.01 |
| 43 | Leland Road | Lariat Road (frontage rd) | West | 1 | 0.45 | Minor Collector | 82 | 0.02 | 125 | 0.08 |
| 44 | Lariat Road (frontage rd) | Leland Road | South | 1 | 0.65 | Residential | 73 | 0.02 | 115 | 0.07 |
| 45 | Placer Road | Sunny Valley Loop | East | 1 | 0.04 | Local Collector | 27 | 0.02 | 40 | 0.03 |
| 46 | Sunny Valley Loop | Placer Road | South | 1 | 0.40 | Residential | 73 | 0.04 | 115 | 0.07 |
| 47 | Foothill Boulevard | Jones Creek Road | East | 1 | 1.03 | Major Collector | 245 | 0.12 | 380 | 0.18 |
| 48 | Foothill Boulevard | Jones Creek Road | West | 1 | 0.96 | Major Collector | 383 | 0.17 | 590 | 0.23 |
| 49 | Jones Creek Road | Foothill Boulevard | North | 1 | 0.04 | Local Collector | 205 | 0.10 | 255 | 0.12 |
| 50 | Water Gap Road | Williams Highway | East | 1 | 4.84 | Major Collector | 167 | 0.10 | 255 | 0.12 |
| 51 | Williams Highway | Water Gap Road | South | 1 | 4.79 | Minor Collector | 223 | 0.08 | 345 | 0.16 |
| 52 | Williams Highway | Water Gap Road | North | 1 | 4.72 | Minor Collector | 356 | 0.16 | 550 | 0.21 |
| 53 | Cedar Flat Road | East Fork Road | East | 1 | 0.84 | Minor Collector | 242 | 0.11 | 375 | 0.17 |
| 54 | Cedar Flat Road | East Fork Road | West | 1 | 0.77 | Minor Collector | 165 | 0.08 | 255 | 0.13 |
| 55 | East Fork Road | Cedar Flat Road | South | 1 | 0.04 | Local Collector | 88 | 0.05 | 135 | 0.07 |
| 56 | Holland Loop Road | Takilma Road | East | 1 | 1.92 | Minor Collector | 138 | 0.08 | 215 | 0.12 |
| 57 | Holland Loop Road | Takilma Road | West | 1 | 1.85 | Minor Collector | 224 | 0.12 | 345 | 0.18 |
| 58 | Takilma Road | Holland Loop Road | South | 1 | 0.04 | Minor Collector | 123 | 0.07 | 190 | 0.10 |
| 59 | Rockydale Road | Waldo Road | North | 1 | 6.49 | Minor Collector | 58 | 0.04 | 90 | 0.05 |

## Table 6-2 Continued
## 2002 Existing and 2025 Future No Build PM Peak Hour Traffic Operations on Key Roadway Segments

**Results Based on 2002 Hourly Counts**

| Map ID | Roadway | Nearest Intersection | Direction From Int. | Forecast Area | Milepost | County Functional Class.[1] | 2002 PM Peak Hour 2-way PM Peak Hour Volume | 2002 PM Peak Hour V/C Ratio | 2025 PM Peak Hour 2-way PM Peak Hour Volume | 2025 PM Peak Hour V/C Ratio |
|---|---|---|---|---|---|---|---|---|---|---|
| 60 | Waldo Road | Rockydale Road | East | 1 | 4.0 | Minor Collector | 85 | 0.04 | 130 | 0.07 |
| 61 | Waldo Road | Rockydale Road | West | 1 | 3.92 | Minor Collector | 27 | 0.02 | 40 | 0.03 |

**Results Estimated from 1998-2002 Daily Counts**

| Roadway | Nearest Intersection | Direction From Intersection | Forecast Area | Milepost | County Rural Functional Class.[2] | Existing Count Date | 2002 PM Peak Hour 2-way PM Peak Hour Volume[3] | 2002 PM Peak Hour V/C Ratio | 2025 PM Peak Hour 2-way PM Peak Hour Volume[3] | 2025 PM Peak Hour V/C Ratio |
|---|---|---|---|---|---|---|---|---|---|---|
| **Merlin Level 2 Analysis Area** | | | | | | | | | | |
| Camp Joy Road | Jaime Lane | East | Merlin | 0.68 | Minor Collector | | 130 | 0.08 | 210 | 0.13 |
| Donaldson Road | Granite Hill Road | West | Merlin | 1.74 | Minor Collector | | 50 | 0.03 | 110 | 0.07 |
| Galice Road | Azalea Drive | West | Merlin | 1.15 | Major Collector | | 230 | 0.18 | 260 | 0.18 |
| Grouse Creek Road | Granite Hill Road | West | Merlin | 0.15 | Minor Collector | | 40 | 0.03 | 190 | 0.12 |
| Highland Avenue | Morewood Lane | South | Merlin | 1.95 | Major Collector | | 350 | 0.15 | 430 | 0.19 |
| Jaime Lane | Merlin Road | South | Merlin | 0.15 | Minor Collector | | 110 | 0.07 | 150 | 0.09 |
| Merlin Road | Monument Drive | West | Merlin | 0.51 | Major Collector | | 660 | 0.28 | 1210 | 0.46 |
| Merlin Road | Holbrook Way | West | Merlin | 2.58 | Major Collector | | 440 | 0.18 | 520 | 0.22 |
| Monument Drive | Camp Joy Road | North | Merlin | 0.00 | Major Collector | | 690 | 0.28 | 1000 | 0.37 |
| Monument Drive | Brookside Boulevard | South | Merlin | 0.48 | Major Collector | | 510 | 0.22 | 650 | 0.28 |
| Monument Drive | Brookside Boulevard | North | Merlin | 0.61 | Major Collector | | 330 | 0.19 | 470 | 0.19 |
| Monument Drive | Mary Harris Way | North | Merlin | 1.19 | Major Collector | | 290 | 0.13 | 430 | 0.20 |
| Pleasant Valley Rd | Merlin Avenue | West | Merlin | 0.70 | Major Collector | | 150 | 0.09 | 390 | 0.17 |
| Plumtree Lane | Camp Joy Road | South | Merlin | 1.20 | Minor Collector | | 150 | 0.09 | 460 | 0.20 |
| Robertson Bridge Rd | Lower River Road | North | Merlin | 2.94 | Major Collector | | 130 | 0.08 | 220 | 0.13 |
| Three Pines Road | Oxyoke Road | West | Merlin | 0.10 | Minor Collector | | 100 | 0.05 | 260 | 0.16 |
| Winona Road | Jump Off Joe Creek Rd | South | Merlin | 3.80 | Minor Collector | | 30 | 0.02 | 40 | 0.02 |
| Lloyd Drive | Castle Creek Road | East | Merlin | 0.42 | Minor Collector | | 130 | 0.08 | 190 | 0.12 |
| **Murphy Level 2 Analysis Area** | | | | | | | | | | |
| Stringer Gap Road | New Hope Road | West | Murphy | 0.13 | Major Collector | | 120 | 0.07 | 160 | 0.10 |
| Applegate Avenue | US 199 | North | Murphy | 1.52 | Minor Collector | | 60 | 0.04 | 90 | 0.05 |

## Table 6-2 Continued
## 2002 Existing and 2025 Future No Build PM Peak Hour Traffic Operations on Key Roadway Segments

| Results Estimated from 1998-2002 Daily Counts | | | | | | | 2002 PM Peak Hour | | 2025 PM Peak Hour | |
|---|---|---|---|---|---|---|---|---|---|---|
| Roadway | Nearest Intersection | Direction From Intersection | Forecast Area | Milepost | County Rural Functional Class.[2] | Existing Count Date | 2-way PM Peak Hour Volume[3] | V/C Ratio | 2-way PM Peak Hour Volume[3] | V/C Ratio |
| **Murphy Level 2 Analysis Area Continued** | | | | | | | | | | |
| Arnold Avenue | Elk Lane | East | Murphy | 0.14 | Minor Collector | | 100 | 0.06 | 160 | 0.10 |
| Board Shanty Road | North Applegate Road | North | Murphy | 0.12 | Minor Collector | | 50 | 0.03 | 70 | 0.04 |
| Cloverlawn Drive | Summit Loop S | North | Murphy | 2.22 | Major Collector | | 150 | 0.1 | 220 | 0.15 |
| Cloverlawn Drive | Summit Loop S | North | Murphy | 4.51 | Major Collector | | 40 | 0.02 | 110 | 0.07 |
| Demaray Drive | Willow Lane | West | Murphy | 0.03 | Major Collector | | 500 | 0.22 | 710 | 0.29 |
| Demaray Drive | Jerome Prairie Road | North | Murphy | 2.18 | Major Collector | | 70 | 0.04 | 150 | 0.09 |
| Dowell Road | Wolf Lane | North | Murphy | 0.64 | Minor Collector | | 140 | 0.09 | 200 | 0.13 |
| Dowell Road | Wolf Lane | South | Murphy | 0.80 | Minor Collector | | 140 | 0.08 | 200 | 0.11 |
| Elk Lane | Sand Creek Road | North | Murphy | 0.10 | Minor Collector | | 100 | 0.06 | 150 | 0.09 |
| Fish Hatchery Road | New Hope Road | West | Murphy | 0.15 | Major Collector | | 120 | 0.07 | 150 | 0.09 |
| Helms Road | Laine Court | South | Murphy | 0.52 | Major Collector | | 40 | 0.02 | 50 | 0.03 |
| Jaynes Drive | New Hope Road | East | Murphy | 2.42 | Major Collector | | 110 | 0.07 | 170 | 0.10 |
| Leonard Road | Westwood Drive | West | Murphy | 2.02 | Minor Collector | | 60 | 0.02 | 100 | 0.06 |
| Lonnon Road | Elk Lane | East | Murphy | 0.03 | Minor Collector | | 70 | 0.04 | 130 | 0.08 |
| New Hope Road | At New Hope School | -- | Murphy | 3.60 | Major Collector | | 80 | 0.04 | 120 | 0.07 |
| New Hope Road | 6400 New Hope Road | -- | Murphy | 4.17 | Major Collector | | 50 | 0.03 | 90 | 0.05 |
| New Hope Road | OR 238 (Murphy End) | West | Murphy | 5.28 | Major Collector | | 60 | 0.03 | 90 | 0.05 |
| New Hope Road | OR 238 (Murphy End) | West | Murphy | 6.00 | Major Collector | | 130 | 0.09 | 170 | 0.09 |
| North Applegate Rd | OR 238 (Murphy End) | East | Murphy | 0.12 | Major Collector | | 170 | 0.1 | 210 | 0.13 |
| North Applegate Rd | Kubli Road | West | Murphy | 5.71 | Major Collector | | 60 | 0.04 | 70 | 0.04 |
| Penny Lane Road | New Hope Road | East | Murphy | 0.04 | Major Collector | | 70 | 0.04 | 90 | 0.05 |
| Ponderosa Lane | Cloverlawn Drive | West | Murphy | 1.01 | Minor Collector | | 20 | 0.01 | 50 | 0.03 |
| Stringer Gap Road | Jerome Prairie Road | East | Murphy | 2.30 | Major Collector | | 100 | 0.06 | 150 | 0.09 |
| Summit Loop | Cloverlawn Drive | East | Murphy | 0.06 | Minor Collector | | 60 | 0.04 | 80 | 0.05 |
| Walker Road | Cloverlawn Drive | West | Murphy | 0.02 | Minor Collector | | 50 | 0.03 | 70 | 0.04 |
| Woodland Park Road | Redwood Ave | South | Murphy | 0.10 | Minor Collector | | 70 | 0.04 | 120 | 0.07 |

## Table 6-2 Continued
## 2002 Existing and 2025 Future No Build PM Peak Hour Traffic Operations on Key Roadway Segments

| Results Estimated from 1998-2002 Daily Counts | | | | | | | 2002 PM Peak Hour | | 2025 PM Peak Hour | |
|---|---|---|---|---|---|---|---|---|---|---|
| Roadway | Nearest Intersection | Direction From Intersection | Forecast Area | Milepost | County Rural Functional Classification[2] | Existing Count Date | 2-way PM Peak Hour Volume[3] | V/C Ratio | 2-way PM Peak Hour Volume[3] | V/C Ratio |
| **Level 1 Analysis Area (Remainder of County Rural Areas)** | | | | | | | | | | |
| Azalea Drive Cutoff | Upper River Road | North | 1 | 0.16 | Major Collector | 05/20/99 | 190 | 0.12 | 310 | 0.19 |
| Caves Camp Road | Cedar Flat Road | South | 1 | 0.10 | Minor Collector | 05/13/98 | 30 | 0.02 | 50 | 0.03 |
| Frontage Road | Speaker Road | South | 1 | 1.10 | Minor Collector | 01/25/00 | 20 | 0.01 | 30 | 0.02 |
| Fruitdale Drive | OR 99 | South | 1 | 2.34 | Major Collector | 08/06/99 | 130 | 0.08 | 210 | 0.13 |
| Galice Road | Galice Resort | West | 1 | 11.81 | Major Collector | 04/28/00 | 20 | 0.01 | 30 | 0.02 |
| Holland Loop Road | Hayes Cutoff Road | North | 1 | 1.29 | Minor Collector | 09/13/99 | 250 | 0.15 | 410 | 0.18 |
| Lakeshore Drive | US 199 | South | 1 | 0.50 | Minor Collector | 07/01/98 | 240 | 0.15 | 400 | 0.17 |
| Lakeshore Drive | Reeves Creek Road | South | 1 | 2.32 | Minor Collector | 08/31/99 | 120 | 0.06 | 200 | 0.11 |
| Lower Grave Cr Road | Leland Road | West | 1 | 0.09 | Minor Collector | 02/24/99 | 10 | 0.01 | 20 | 0.01 |
| Lower Wolf Cr Road | Milepost 0.13 | -- | 1 | 0.13 | Minor Collector | 05/27/98 | 40 | 0.02 | 70 | 0.04 |
| Pine Crest Drive | Carol Ann Way | South | 1 | 0.20 | Minor Collector | 02/01/02 | 220 | 0.13 | 340 | 0.15 |
| Rockydale Road | US 199 | South | 1 | 0.04 | Minor Collector | 01/11/00 | 170 | 0.1 | 270 | 0.16 |
| Speaker Road | Frontage Road | East | 1 | 0.12 | Minor Collector | 01/25/00 | 10 | 0.01 | 20 | 0.01 |
| Upper River Road | Azalea Drive Cutoff | East | 1 | 2.47 | Major Collector | 05/20/99 | 450 | 0.19 | 730 | 0.31 |
| Waldo Road | US 199 | South | 1 | 0.07 | Minor Collector | 01/11/00 | 20 | 0.01 | 30 | 0.02 |
| Water Gap Road | OR 238 | South | 1 | 0.05 | Major Collector | 07/30/99 | 220 | 0.13 | 360 | 0.15 |
| Water Gap Road | Pine Tree Drive | South | 1 | 1.68 | Major Collector | 07/12/99 | 210 | 0.13 | 340 | 0.15 |
| Williams Highway | OR 238 | South | 1 | 0.39 | Minor Collector | 07/30/99 | 100 | 0.06 | 160 | 0.10 |
| Foothill Boulevard | Aurora Avenue | West | 1 | 0.52 | Major Collector | 09/16/98 | 490 | 0.20 | 810 | 0.32 |
| Foothill Boulevard | Ament Road | West | 1 | 0.61 | Major Collector | 09/10/98 | 420 | 0.17 | 700 | 0.29 |
| Fish Hatchery Road | Felkner Road | West | 1 | 2.76 | Major Collector | 01/11/02 | 100 | 0.05 | 150 | 0.08 |
| Fish Hatchery Road | Bull Creek Road | East | 1 | 3.51 | Major Collector | 01/11/02 | 120 | 0.06 | 190 | 0.10 |
| Fish Hatchery Road | Crystal Springs Road | East | 1 | 6.08 | Major Collector | 12/21/00 | 100 | 0.06 | 160 | 0.10 |
| Fish Hatchery Road | Redlands Drive | South | 1 | 6.47 | Major Collector | 08/13/99 | 130 | 0.08 | 210 | 0.13 |
| South Side Road | New Hope Road | West | 1 | 4.06 | Major Collector | 09/21/98 | 50 | 0.03 | 80 | 0.05 |

[1] County rural road classification prior to classification changes recommended by this TSP.

roadside activity, along segments that include sharp turns or hills that reduce vehicle speed below the desired design level, or along segments that offer little opportunity for passing slow-moving vehicles.

In 2002, ODOT installed a southbound passing lane on OR 238 near MP 16.5. A complementary northbound lane is needed in the vicinity. The need for additional passing lanes has also been identified along US 199 between MP 7 and MP 14. Improvement to the sharp curve on OR 238 at Waters Gap Road has also been identified by the County as needed to enhance safety and traffic operations in this area.

On the County Road system, Monument Drive north of Merlin Road and Merlin Road west of Monument Drive are expected to experience some level of future congestion, primarily near the intersection of these two roads. Some roadway widening in the intersection vicinity may be necessary to accommodate intersection turning movements and driveway traffic near the intersection. Roadway widening along Monument Drive to accommodate left-turning traffic at driveways and intersecting streets may also be necessary. However, it is anticipated that the primary consideration in widening Monument Drive will be to improve safety.

Capacity constraints caused by the lack of passing lanes and/or slow vehicle pullouts on Galice Road between Merlin and Galice are also important to the County Road system. Galice Road provides access to camping, rafting, hiking and other recreational activities along the Rogue River. A high number of slow-moving recreational vehicles use the road, particularly in summer months. Travel speeds along this segment are expected to be impacted by future traffic growth, increasing the need for facilities to provide passing opportunities.

## Safety Deficiencies

Chapter 3 of the TSP discusses existing roadway safety problems in rural Josephine County, focusing on locations with high crash rates in comparison with other intersections or roadway segments in the county. Relevant information from that material is included below, supplemented by new material concerning potential guardrail locations.

For intersections, the County provided an analysis of crash data from 1990 through 2001, including severity and estimated crash rates. Key intersections in the rural area that were identified for potential improvement and their crash rates included:

- Williams Highway at Tetherow Road (crash rate of 6.68 per million entering vehicles or MEV)
- Azalea Drive at Robertson Bridge Road (crash rate of 4.26/MEV)
- Holland Loop Road at Hayes Cutoff Road (crash rate of 2.25/MEV)
- OR 238 at Williams Highway (crash rate of 1.37/MEV)
- Redwood Avenue at Southgate Way (crash rate of 1.32/MEV including two fatalities)

The intersection of Pine Tree Drive with Water Gap Road also has a high crash rate based on recent crash records. This intersection was improved in 2001, however, so no additional improvement is recommended. Crash experience at this intersection should be monitored in the future to ensure that the recent improvements have successfully addressed the problem.

It should be noted that there have been several accidents, including fatalities, at the intersection of US 199 with Redwood Avenue located in the unincorporated but urbanized portion of the County just west of the

City of Grants Pass. ODOT is currently investigating improvements to the expressway portion of this highway (between mileposts 0l35 and 4.44) including construction of frontage roads and installation of some intersection and/or median improvements. These improvements would ultimately be both a modernization and a safety project. If selected by the Rogue Valley Area Commission on Transportation (RVACT) for funding, the money will likely come from ODOT's modernization program.

County crash data for roadway segments also was collected and analyzed for the 3-year period from November 1999 to November 2002 to determine annual crash rates per million vehicle miles of travel. Roadway crash data were first screened to focus only on rural Josephine County facilities averaging two or more annual reported crashes and at least one crash per mile over the three-year period.

As indicated in Table 3-13 of the Existing Conditions chapter, about 98 percent of the crashes on these 32 roadways were property damage only crashes (PDO). Out of 608 total non-intersection crashes, there were 6 injury crashes and 8 fatal crashes. One fatal crash occurred over the 3-year period on Fish Hatchery Road, Galice Road, North Applegate Road and Granite Hill Road, while both Pine Crest Road and Pleasant Valley Road experienced two fatal crashes over the same 3-year period. No road experienced more than one injury crash. Many of these crashes resulted from collisions with fixed objects or turning vehicles but there appears to be little pattern of consistency in both the location and type of crashes experienced.

Of particular interest to the County are crash locations that could be improved by the installation of guardrail along the edge of pavement. Crash statistics for the period from 1999 through 2001 were reviewed to identify locations where there was some frequency of incidents that could be mitigated by guardrail installation. Table 6-3 summarizes this information.

**Table 6-3**
**Summary of Guard Rail-Related Crashes**

| No. | Roadway | From Milepost | To Milepost | Number of Preventable Crashes |
|---|---|---|---|---|
| 1 | Hugo Road | 0.81 | 1.00 | 2 |
| 2 | Upper River Road | 0.30 | 0.50 | 4 |
| | Upper River Road | 3.15 | 3.19 | 2 |
| 3 | Pine Crest Drive | 0.38 | 0.66 | 5 |
| | Pine Crest Drive | 1.25 | 1.90 | 3 |
| 4 | Pleasant Valley Road | 2.19 | 2.39 | 2 |
| 5 | Azalea Drive | 5.97 | 6.03 | 2 |
| 6 | Fish Hatchery Road | 2.91 | 3.21 | 2 |
| 7 | Midway Avenue | 0.75 | 0.75 | 2 |
| 8 | New Hope Road | 6.05 | 6.05 | 1 |
| 9 | Highland Avenue | 1.54 | 2.09 | 2 |
| | Highland Avenue | 3.01 | 3.57 | 2 |
| 10 | Cloverlawn Drive | 1.32 | 1.50 | 2 |
| 11 | Galice Road | 8.29 | 8.52 | 2 |

Guardrail is relatively expensive, and at some of these locations where there are paved shoulders and run-off-the-road crashes are a concern, highway shoulder rumble strips could be a less costly short-term safety improvement.

The need was also identified for other safety-related improvements to reduce the potential risk of crashes. Locations needing improvements to enhance safety include: US 199 at Willow Lane, Waters Creek Road, Ken Rose Lane, Waldo Road, and Rockydale Road; OR 238 at Jaynes Drive, Applegate Road, and New Hope Road; OR 46 at Holland Loop Road (west); and Dowell Road at Wolf Lane.

### Bridge Deficiencies

Several bridges in the County have existing deficiencies. The most serious are structural deficiencies on Grave Creek Bridge #144005 on Beecher Road, Jones Creek Bridge on Foothill Road, Sucker Creek Bridge on Holland Loop Road (east crossing), Jacks Creek Bridge on Jump Off Joe Creek Road, and Coyote Creek Bridge on Bloom Road. Two state bridges have also been identified as structurally deficient, the East and West Forks of the Illinois River bridges on US 199 (bridge #01077A and #01108A). The structurally deficient Grave Creek Bridge is slated for replacement in 2005 through state funding and federal Highway Bridge Replacement and Rehabilitation funds, as are the bridges over the East and West Forks of the Illinois River bridges on US 199 (which are not structurally deficient but are functionally obsolete)

## Development and Evaluation of Street System Improvement Scenarios

### Strategies

To initiate discussion of potential street system alternatives for the TSP, five improvement "scenarios" were developed to address existing plans and deficiencies as well as future land use plans and projected travel demand. Each scenario focused on a different aspect of the County's road system that stakeholders identified as important for rural Josephine County and the TSP. For each scenario, individual improvements were identified, analyzed and ranked according to a set of qualitative and quantitative criteria developed by stakeholders.

As described in Chapter 5, each scenario has a different emphasis to reflect a range of policy and financial choices for the County. The five TSP scenarios included:

- No Build Scenario – this scenario is limited to the three ODOT projects in Josephine County included in the approved 2004 STIP, and continuing the minimal level of roadway maintenance currently possible under the County's existing funding resources. This scenario assumes no new funding.

- Maintenance Scenario – this scenario focuses on implementing an enhanced and expanded maintenance program beyond that in the No Build Scenario and replacing four structurally deficient bridges. No new capacity projects are included, nor are there projects that address existing high accident locations.

- Safety Scenario – this scenario focuses on projects addressing vehicle safety at high-accident locations and other locations with potential safety concerns.

- Mobility/Accessibility Scenario – this scenario includes potential solutions for existing and projected future congestion problems, and anticipated public transit needs.

- Economic Development Scenario – this scenario includes improvements that range from measures to encourage bicycling and tourism to measures to facilitate rail and truck traffic all with the objective of supporting job creation at employment centers and in recreational/tourism related locations. Included are projects that improve access to industrial and commercial land,

improvements to US 199, and bicycle/pedestrian improvements beyond one mile from rural activity centers. The Josephine County Bikeway Committee provided recommendations for improvements to bicycle touring roadways. The Economic Development scenario also includes consideration of improvements and strategies for rail operations in the County, with attention focused on rail crossings. These recommendations are further discussed in Chapter 12.

Table 6-4 summarizes the projects included in each scenario, which are described further below in the discussion of roadway system alternatives. The project elements of each scenario are also illustrated in Figures 6-1 through 6-4.

**Table 6-4**
**Street System Improvements Associated with Each Improvement Scenario**

| Scenario | Improvement Projects |
|---|---|
| No-Build | • Programmed routine maintenance[12]<br>• ODOT STIP improvements |
| Maintenance | • Expanded roadway maintenance to the optimal cycle needed to retain roadway system in current condition<br>• Install left turn lanes along Monument Drive between Merlin Road and Timber Lane<br>• Resurface Jerome Prairie Road (Woodland Park Road to west)<br>• Resurface segments of Williams Highway as needed (Provolt to Water Gap Road)<br>• Widen/surface shoulders on Pine Crest Drive/Plumtree Lane (Camp Joy Road to Upper River Road)<br>• Widen/surface shoulders on segments of New Hope Road (Hidden Valley Road to OR 238)<br>• Widen/surface shoulders on Laurel Road (US 199 to OR 46)<br>• Widen/surface shoulders on Cloverlawn Drive (East View Place to Jaynes Drive) and improve intersection with Summit Loop Road<br>• Widen/surface shoulders on Lakeshore Drive (US 199 to McMullen Creek Road)<br>• Drainage improvements on Lakeshore Drive in vicinity of Deer Creek (MP 6.0 to 6.5)<br>• Drainage and shoulder improvements on Lakeshore Drive (4700 block to Dryden Road)<br>• Replace structurally-deficient Jacks Creek Bridge on Jumpoff Joe Creek Road (MP 2.62)<br>• Replace structurally-deficient Jones Creek Bridge on Foothill Boulevard (MP 0.72), and improve Foothill Boulevard approaches<br>• Replace structurally-deficient Sucker Creek Bridge on Holland Loop Road (MP 1.53)<br>• Replace structurally-deficient Coyote Creek Bridge on Bloom Road in Wolf Creek |
| Safety | • Improve shoulders (to 4-foot minimum) on Major/Minor Collector Roadways within one mile of rural activity centers for vehicle recovery and bicyclist/pedestrians<br>• Specific minor safety improvements at specific intersections and roadway segments on Azalea Drive (at Robertson Bridge Road), Williams Highway (at Tetherow Road), Holland Loop Road (at Hayes Cutoff Road) and Redwood Avenue (at Southgate Way)<br>• Install warning signs on OR 238 at Williams Highway<br>• Intersection and/or traffic control improvements at various locations along US 199, including Willow Lane, Waters Creek Road, Ken Rose Lane, Waldo Road, and Rockydale Road<br>• Intersection improvements at OR 238 at Jaynes Drive, Applegate Road, Williams Highway, and New Hope Road<br>• Passing lanes on US 199 between MP 16-24 (northbound) and MP 7-14 (southbound)<br>• Install guard rail along segments of selected County roadways<br>• Intersection realignment on Holland Loop Road at Hayes Cutoff<br>• Intersection improvements on Dowell Road at Wolf Lane<br>• Intersection improvements on OR 46 at Holland Loop Road (west)<br>• Install northbound passing lane on OR 238 between MP 16-17 |

[12] Routine programmed maintenance includes such activities as: guardrail installation and repair, bikeway maintenance, vegetation clipping and removal, storm drain maintenance and cleaning, sign installation and repair, sanding and ice removal during inclement weather, and chip sealing to extend the life of county roads

**Table 6-4 Continued**
**Street System Improvements Associated with Each Improvement Scenario**

| Scenario | Improvement Projects |
|---|---|
| Mobility/ Accessibility | • Modify I-5 northbound on/off ramps at Merlin-Galice Road by installing a traffic signal or roundabout, or by a new ramp configuration (includes relocation of Highland Avenue eastward from its present intersection with Merlin-Galice Road to provide adequate separation from the I-5 ramps).<br>• Improve Merlin-Galice Road/Monument Drive intersection<br>• Improve US 199/Redwood intersection<br>• Pull-out and/or passing lanes on Galice Road |
| Economic Development | • Realign OR 238 at Water Gap Road<br>• Widen shoulders to standard width on key segments of Monument Drive, OR 99, OR 238 and Rogue River Loop Highway (to improve vehicle safety, stablize roadway edge, and accommodate bicyclists and pedestrians) |

## Evaluation of Scenarios and Project Prioritization

To evaluate the scenarios, project stakeholders developed a detailed list of criteria that were used to rate each potential improvement. Chapter 5 details the evaluation process, which considered factors ranging from traffic safety to economic development to non-motorized mobility.

Based on the application of evaluation criteria and subsequent review with project stakeholders, the five "scenarios" were reduced to three "tiered alternatives" for the TSP. The Tier 1 Alternative is identical to the No Build Scenario, and includes no funding beyond committed STIP improvements and routine County maintenance. At the other end of the spectrum, the Tier 3 (High Build) Alternative includes the combined projects listed in all five scenarios for a full response to identified needs. The Tier 2 (Low Build) Alternative includes a more select group of improvements and strategies based on the assumption that some additional funding will become available. However, it is not anticipated that this funding would be sufficient to meet all identified needs.

The Tier 2 (Low Build) Alternative represents the Preferred Alternative for the *Josephine County Rural TSP*. The following Action Plan was developed for the Preferred Alternative, which includes goals, policies and specific recommendations for the County roadway system. A number of the recommendations are included in other TSP chapters as well, but are also included in this chapter because roadways serve multiple travel modes.

# Action Plan

## Draft Street System Goals and Objectives

Early in the TSP development process, the County developed a number of draft TSP goals and policies for the future transportation system. Below is a list of goals and supporting policies pertinent to the street and roadway system:

**Goal 1: Improve safety for all transportation modes.**

- *Objective 1 - Ensure the transportation system is planned to maximize safety.*

**Goal 2: Provide for a transportation system that is accessible, efficient and practical.**

- *Objective 1 - Increase mobility and access options for Josephine County citizens.*
- *Objective 2 - Facilitate movement of goods into and out of the County.*

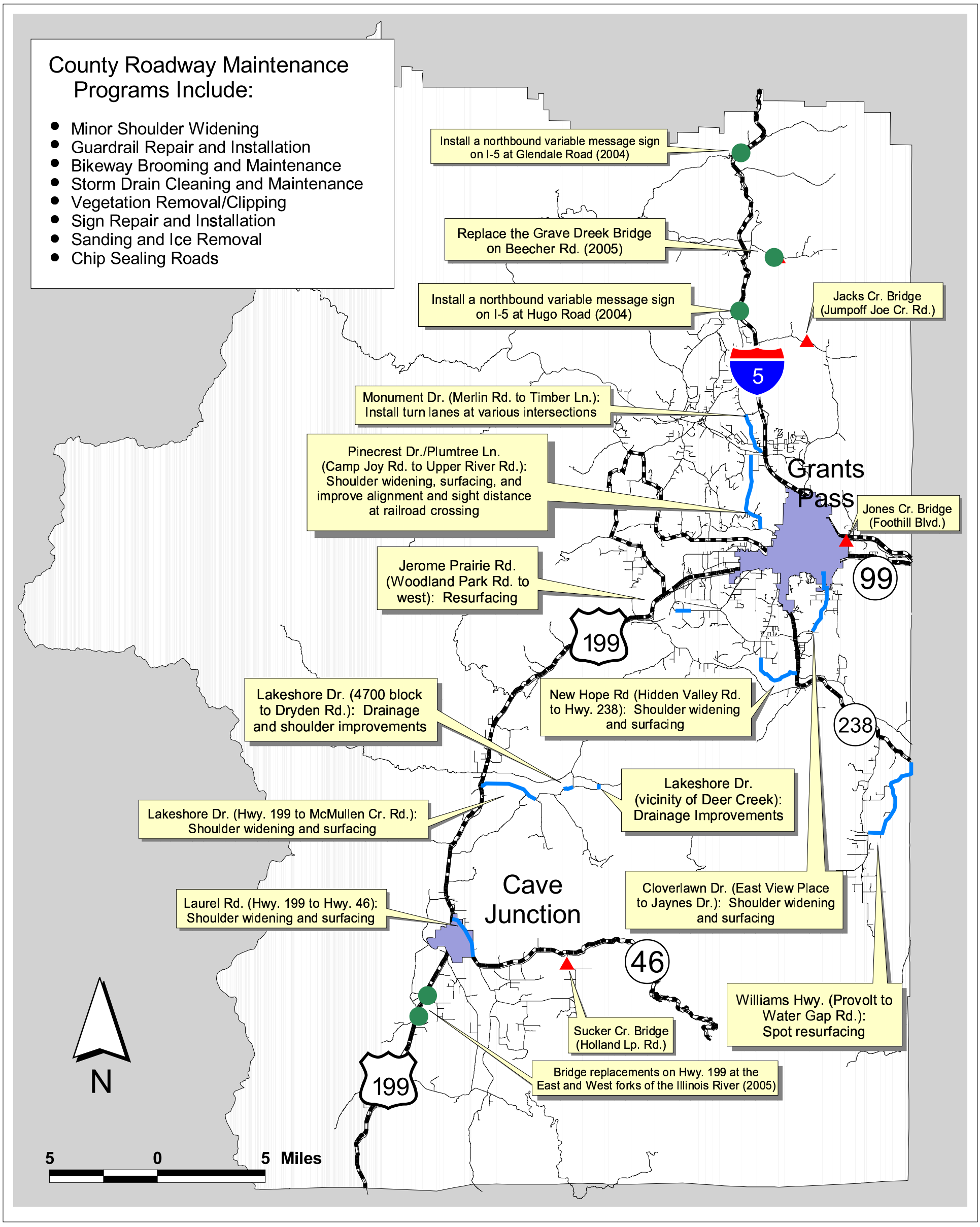



**Figure 6-1: Maintenance Scenario**

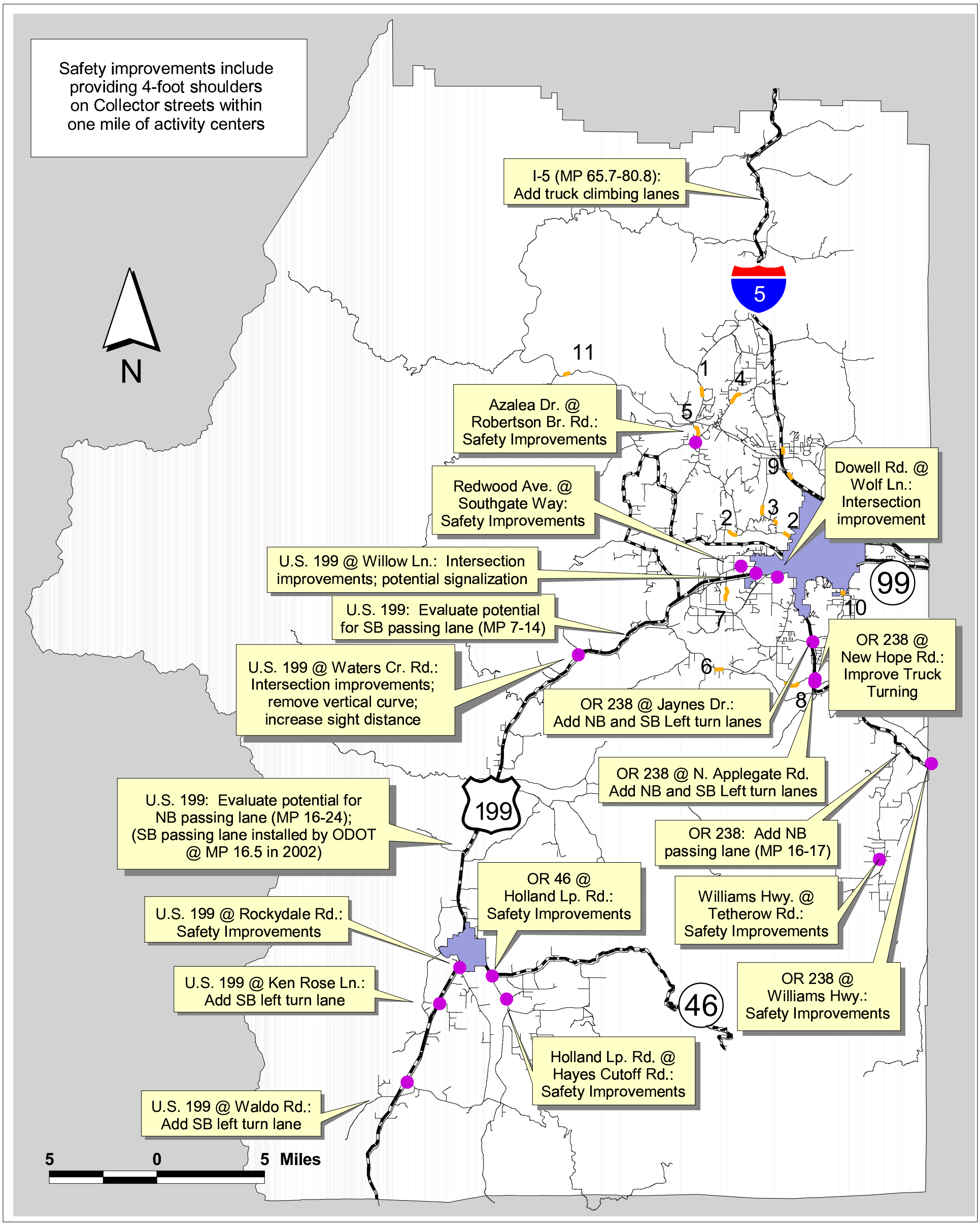
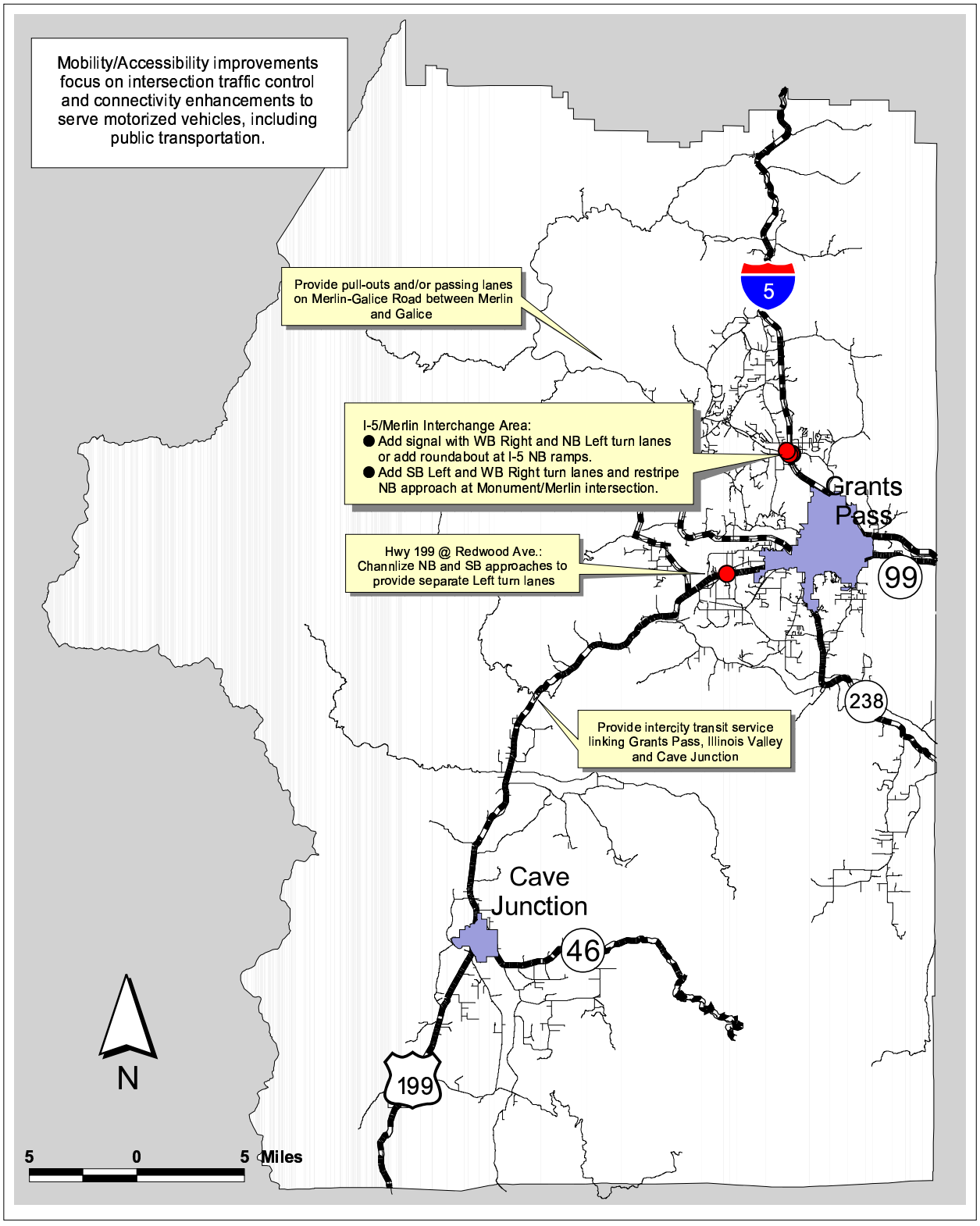
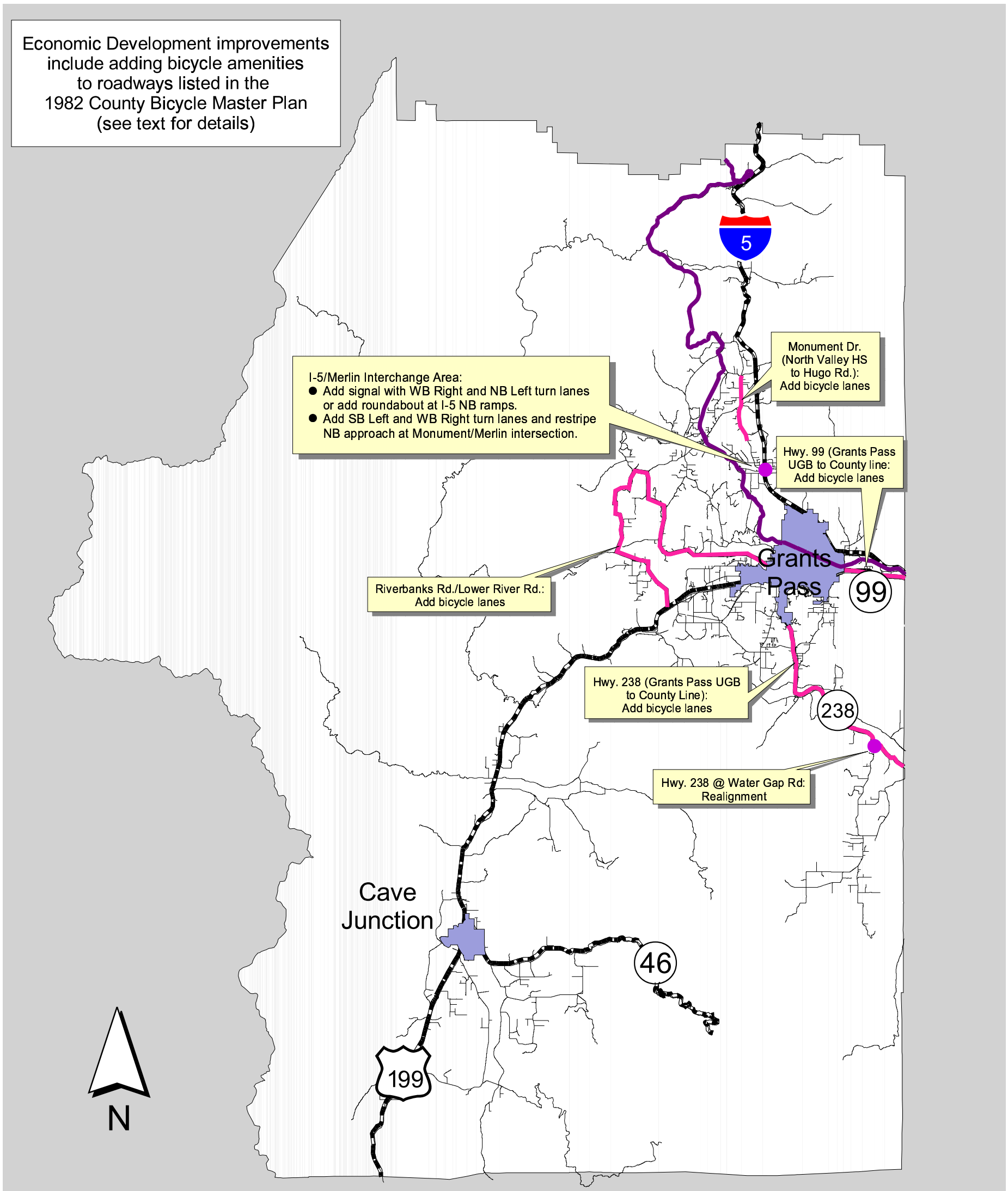



**Figure 6-2: Safety Scenario**




Intersection Mobility Improvements
Urban Growth Boundary
State Highway
County Roads

**Figure 6-3: Mobility and Accessibility Scenario**




- Intersection Improvement
- Bicycle Project
- Potential Rail Project
- Urban Growth Boundary
- State Highway
- County Roads

**Figure 6-4: Economic Development Scenario**

Josephine County
Transportation System Plan

**Goal 3: Provide sufficient capacity within the transportation system to accommodate future demand.**

- *Objective 1 - Satisfy Transportation Planning Rule requirements for system capacity and for encouraging the use of alternative modes of transportation.*
- *Objective 2 - Maximize transportation system capacity through the use of facility improvements, Transportation Demand Management actions, Transportation System Management actions, appropriate IVHS and other appropriate tools and techniques.*

**Goal 4: Review and update roadway classifications as necessary.**

- *Objective 1 - Provide coordinated design standards for all modes of transportation.*
- *Objective 2 - Satisfy Transportation Planning Rule requirements for system planning.*
- *Objective 3 - Consider land use and transportation plans/solutions simultaneously in determining roadway classification and hierarchy.*
- *Objective 4 - Provide appropriate transitions between regional, urban and rural transportation facilities.*

**Goal 5: Provide system connections as needed to improve efficiency and access and to improve circulation.**

- *Objective 1 - Accommodate projected growth with improvements to the roadway network and increased options for choosing a mode of transportation.*
- *Objective 2 - Achieve greater mobility between communities, activities and land uses.*
- *Objective 3 - Achieve improved connectivity between modes of transportation.*

**Goal 6: Consider and implement land use and transportation plans/solutions simultaneously in all planning activities.**

- *Objective 1 - Provide for the consideration of the interrelationships and connections between transportation and land use in future planning.*
- *Objective 2 - Ensure that transportation improvements meet the needs of rural land uses, consistent with the Transportation Planning Rule.*

**Goal 7: Ensure an effective strategy for intergovernmental coordination in transportation planning.**

- *Objective 1 - Maintain coordination with multiple jurisdictions.*
- *Objective 2 - Provide compatible design standards for all modes of transportation.*
- *Objective 3 - Work to achieve a balance between business and economic development and preservation of the functional capacity of the transportation system when coordinating transportation planning with other jurisdictions.*

**Goal 9: Consider funding issues in planning a future transportation system.**

- *Objective 1 - Identify a range of methods for funding recommended actions and improvements.*
- *Objective 2 - Ensure cost-effective investment in transportation. Improvements should be fiscally responsible, economically efficient and realistic.*
- *Objective 3 - Extend usable life of existing facilities*
- *Objective 4 - Ensure the plan provides for the maintenance of existing and planned improvements.*
- *Objective 5 - Achieve a balance between public and private sector interests when considering potential new funding sources for transportation improvements.*

**Goal 10: Plan for a transportation system that is environmentally responsible.**

- *Objective 1 - Provide for choice with regard to the use of alternative modes of transportation.*

- *Objective 2 - Ensure that transportation decisions and facility design standards consider environmental requirements and minimize impacts to the natural and built environment.*

## Policies and Recommendations

While goals and objectives establish a framework for the TSP, it is policies and recommendations for individual actions or projects addressing specific needs that set the stage for implementation. Recommendations for specific projects addressing identified short-term, medium-term and long-term transportation needs are listed below. Recommended roadway improvements in the Tier 2 Preferred Alternative include several projects that would be on State Highways in Josephine County.

Including an improvement project in the TSP for motor vehicles or other modes is an initial step toward competing for limited statewide funding resources. However, listing an improvement project in the TSP does not commit the County or ODOT to allow, construct, or participate in the funding of the specific improvement. Projects on the State Highway system in the TSP are not considered "planned" projects until they are programmed into the Statewide Transportation Improvement Program (the STIP). As such, projects proposed in the TSP that are located on a State highway cannot be considered mitigation for future development or land use actions until they are programmed into the STIP. Unanticipated issues related to project funding, the environment, land use, the economy, changes in the transportation system, or other concerns may be cause for the alternatives discussed below to be re-evaluated, which could result in the removal of a project from consideration for funding or construction. Highway projects that are programmed to be constructed may have to be altered or canceled at a later time to meet changing budgets or other conditions.

For the TSP Street Plan, policies and recommendations address functional classification, capacity, traffic control, access management, accessibility, intersection level of service standards, safety, and bridges. Many of the policies and recommendations also apply to freight, transit, bicycle and pedestrian travel due to the multi-modal nature of roadways.

### Recommended Functional Classification and Street Standards

As discussed in Chapter 3, the County currently has a functional classification system and two modifications to that system are recommended in this TSP. Revised County street standards are being developed concurrently with the Draft TSP and are not addressed in this document. The revised standards have been initially reviewed for compliance with applicable sections of the Transportation Planning Rule. These updated road standards will be approved by County Commissioners and adopted into the County Design Manual after a series of public hearings.

**Policy 6-A:** Josephine County shall periodically review its existing functional classification system, and update it as necessary to ensure the roadway system is adequate to accommodate existing and projected travel demand within unincorporated Josephine County.

- **Recommendation 6-A (1):** Roadway improvements for County facilities crossing jurisdictional boundaries shall be designed to ensure smooth transitions between urban and rural standards, or between state and county standards.

- **Recommendation 6-A (2):** The county's road standards shall address limits to the acceptable length of cul-de-sac or dead end roads and shall restrict the development of dead end roads beyond a specified length that do not have an existing or committed secondary access.

- **Recommendation 6-A (3):** The County shall require dedication of right-of-way as a condition of approval for proposed land development, where the County's adopted road standards demonstrate the need for a wider right-of-way and a rational nexus exists between the proposed land development and the amount right-of-way required.

- **Recommendation 6-A (4):** The County shall modify its functional classification system and transportation system data bases as follows:
    - Rename "major collector" streets to "arterial" streets
    - Rename "minor collector" streets to "collector" streets

## Access Management

Access management onto state highways and county roads is important to ensure that the functional use and capacity of these roads are not degraded by too frequent access, intersecting streets or traffic control devices.

**Policy 6-B:** Josephine County shall review the adequacy of access for all proposed new development and new accesses onto public right-of-way and ensure consistency with adopted street standards. ODOT will review all accesses onto State highway rights-of-way to ensure consistency with state access management standards.

- **Recommendation 6-B (1):** Proposed new or modified accesses onto State Highways shall be consistent with State access management standards contained in the OAR 734.051.

- **Recommendation 6-B (2):** Proposed new or modified accesses onto County roads shall be reviewed for safety and adequacy.

- **Recommendation 6-B (3):** Direct residential access shall be discouraged on roadways designated as County arterials.

- **Recommendation 6-B (4):** Properties with frontage along two streets shall take primary access from the street with the lower classification.

- **Recommendation 6-B (5):** Along facilities with arterial classifications, reciprocal shared access easements shall be designed and reserved through conditions of land use approval for future development with compatible zoning. Reciprocal shared access easements shall also be encouraged for existing development as appropriate

- **Recommendation 6-B (6):** Access spacing shall be determined based on functional roadway classification and consider case-by-case conditions. Generally and where possible, access locations on roadways classified as collector or arterial should be designed to provide access that aligns with other existing or future access points on the opposite side of the roadway.

- **Recommendation 6-B (7):** All new accesses to the public right-of-way shall be located, designed, and constructed to the standards adopted by order of the Board of County Commissioners. Variances to standards shall be granted at the discretion of the appropriate hearings body, based upon findings that approving the access will not substantially degrade conditions for other users of the roadway.

- **Recommendation 6-B (8):** Consistent with the County TSP goal of improving system efficiency and improving circulation, the County shall coordinate with ODOT and city agencies with any access management projects that would improve safety and traffic flow on congested county and/or state facilities.

## Roadway Maintenance

**Policy 6-C:** Josephine County shall maintain roadway surfaces to achieve maximum pavement life and minimize pavement maintenance and repair costs.

- **Recommendation 6-C (1):** The County should consider increasing the annual units of work or annual miles covered for repaving, restriping, drainage clearance, vegetation removal, and other routine maintenance activities. The end result would be an extended useful life for existing County roadways, with less demand for expensive major rehabilitation and reconstruction of existing facilities.

- **Recommendation 6-C (2):** Programmed routine or minor maintenance should prioritize maintenance efforts for the following areas:
  - Chip sealing to extend the life of County roads
  - Storm drain maintenance and cleaning
  - Sanding and ice removal during inclement weather
  - Programmed guardrail installation and repair
  - Bikeway maintenance
  - Vegetation chipping and removal
  - Sign and pavement marking installation and repair

**Policy 6-D:** The County's shoulder paving and widening maintenance activities shall consider maintenance-type projects included in the Tier 2 Preferred Alternative to be a high priority as funding is available.

- **Recommendation 6-D (1):** Resurface Jerome Prairie Road from Woodland Park Road to west.

- **Recommendation 6-D (2):** Resurface segments of Williams Highway from Provolt to Water Gap Road (MP 0.0 to MP 4.75).

- **Recommendation 6-D (3):** Widen and pave the shoulders on Pine Crest Drive/Plumtree Lane from Camp Joy Road to Upper River Road (MP 0.0 to MP 1.287), and improve the alignment and sight distance at rail crossings in this segment.

- **Recommendation 6-D (4):** Widen and pave the shoulders of New Hope Road from Hidden Valley Road to OR 238 (MP 0.0 to MP 3.697).

- **Recommendation 6-D (5):** Widen and pave the shoulders along Laurel Road from US 199 to OR 46 (MP 0.0 to MP 2.22).

- **Recommendation 6-D (6):** Install left turn lanes at various intersections along Monument Drive between Merlin Road and Timber Lane (MP 0.0 to MP 2.014).

**Policy 6-E:** The County's shoulder paving and widening maintenance activities shall consider maintenance-type projects included in the Tier 3 Alternative to be a lower priority for implementation as funding is available.

- **Recommendation 6-E (1):** Widen and pave the shoulders of Cloverlawn Drive from East View Place to Jaynes Drive (MP 0.498 to MP 3.633) improve intersection with Summit Loop Road.

- **Recommendation 6-E (2):** Widen and pave the shoulders along Lakeshore Drive from US 199 to McMullen Creek Road (MP 0.201 to MP 2.954).

- **Recommendation 6-E (3):** Make drainage improvements on Lakeshore Drive in the vicinity of Deer Creek (MP 6.0 to MP 6.5).

- **Recommendation 6-E (4):** Make drainage and shoulder improvements on Lakeshore Drive from 4700 block to Dryden Road (MP 4.9 to MP 5.1).

## Roadway Improvements

**Policy 6-F:** Josephine County shall actively coordinate with the State to promote roadway and bridge improvements in the County that are included in the approved STIP.

- **Recommendation 6-F (1):** Replace Grave Creek Bridge #144005, a federal Highway Bridge Rehabilitation and Replacement (HBRR) project on Beecher Road (STIP project # 12201).

- **Recommendation 6-F (2):** Replace US 199 Bridge #01077A and #01108A at the East and West Forks of the Illinois River (STIP project #11816).

- **Recommendation 6-F (3):** Install variable message signs (VMS) on I-5 at Hugo and Glendale Roads (STIP project #10855)

- **Recommendation 6-F (4):** Make drainage improvements on Lower River Road.

**Policy 6-G:** Josephine County's roadway improvement activities shall consider projects to improve mobility, accessibility and general traffic circulation included in the Tier 2 Preferred Alternative to be a high priority as funding is available.

- **Recommendation 6-G (1):** Identify a preferred course of action and improve the intersection of I-5 Northbound on/off Ramps/Merlin-Galice Road

  The I-5 northbound off-ramp currently operates at LOS E (v/c of 0.89) and is projected to operate at LOS F (v/c of 1.84) by 2025 without improvement. Such a high level of congestion could cause traffic to back up from the existing stop sign-controlled off-ramp intersection and impact I-5 northbound mainline traffic flow. Several potential improvements were evaluated, including additional turn lanes, all-way stop control, signalization, and installation of a roundabout. In all of the options described below, Highland Avenue would need to be relocated to the east to provide adequate area for traffic queues between this street and the off-ramp. The Highland Avenue realignment would also require reconstructing the small bridge on this street just north of the intersection with Merlin-Galice Road. The following conclusions were drawn from the evaluation:

  - Additional turn lanes: Adding turn lanes would not alleviate the projected failure, a finding consistent with ODOT's evaluation of the interchange based on 1998 and projected 2018 traffic volumes.

  - All-way stop control: An all-way stop-controlled intersections would also have long backups that could affect mainline traffic flow and would not meet applicable performance standards. This finding is consistent with ODOT's evaluation of the interchange based on 1998 and projected 2018 traffic volumes

  - Traffic signal or roundabout: Either a traffic signal or a roundabout would provide satisfactory conditions through 2025. A traffic signal does not satisfy signal warrants typically used by ODOT based on projected 2025 8$^{th}$ highest hour traffic volumes, but does satisfy the peak hour signal warrant and the roadway network warrant in the 2000 MUTCD. Signalization could also be justified based on the need to minimize the potential for queues on the off-ramp to interfere with I-5 mainline traffic flow. To meet ODOT standards, a traffic signal would also need the off-ramp to be split into separate right and left-turn lanes, and a westbound right turn lane would be needed. With these improvements the projected maximum 2025 PM peak hour v/c ratio is 0.75, which meets the state's design standard for

unincorporated communities outside urban growth boundaries. A roundabout would operate between the upper and lower bounds of capacity with projected 2025 peak hour volumes.

Although more land area would be required for a roundabout, relocation of the Highland Avenue/Merlin-Galice Road intersection for a roundabout may not be as extensive as it would need to be to accommodate queues from a signal at the ramp intersection. According to ODOT's earlier analysis, most of the land needed for the roundabout is within ODOT-controlled right-of-way. Further study is needed to determine potential right-of-way needs.

- Potential longer-term improvement: A potential improvement that may need to be considered to accommodate future volumes beyond 2025 is rebuilding the I-5 northbound off-ramp to provide a loop off-ramp, which would eliminate the high volume northbound left turn from the off-ramp. This improvement would involve both new structure and relocating Highland Boulevard to the east to provide adequate separation from the off-ramp, as with either a traffic signal or roundabout.

- **Recommendation 6-G (2):** Improve Merlin-Galice Road/Monument Drive intersection: While this intersection is anticipated to operate at acceptable levels of service based on 2025 PM peak hour traffic volumes, additional turn lanes are recommended to avoid intersection queues interfering with upstream traffic operations at the intersection of the I-5 off-ramp with Merlin Road. Without improvement, it is anticipated that the westbound traffic queue on Merlin-Galice Road would spill back from Monument Drive to at least the northbound freeway off-ramp during the PM peak. The recommended improvement includes the following signal modifications and turn lanes:

  - Widening the north leg to provide separate left, through and right turn lanes;

  - Adding a westbound right turn lane;

  - Restriping/widening the south leg to provide a northbound left turn lane and converting the existing right turn lane to a shared right-through lane; and

  - Modifying the traffic signal to provide protected northbound and southbound left turns, and a westbound right turn overlap phase.

  These improvements would provide LOS C with an intersection v/c ratio of 0.75.

- **Recommendation 6-G (3):** Galice Road between Merlin and Galice (MP 0.0 to MP 12, approximately): Pull-out lanes and/or passing lanes to pass slow-moving recreational vehicles are recommended.

**Policy 6-H:** When existing roads are widened or reconstructed they shall be designed to the adopted design standards for the appropriate functional classification. Modifications to the design standards may be necessary to avoid existing constraints created by topography, the built environment, historic resources or other significant features.

**Policy 6-I:** County roadway improvement projects should be prioritized based on consideration of improvements to safety, relief of existing congestion, response to near-term growth, system-wide benefits, geographic equity, and availability of funding, and ability to leverage funding from other sources. Safety needs should receive higher priority than capacity needs.

**Safety Improvements**

**Policy 6-J:** The County shall work toward providing paved shoulders adequate to accommodate bicycle travel on all arterials and collectors within rural activity centers.

- **Recommendation 6-J (1):** As practical and feasible, the County shall include minor shoulder widening in routine maintenance activities to provide 4-foot shoulders on all arterials and collectors within a one-mile radius of activity centers throughout the County (schools, parks and other areas that are the major generators of non-motorized pedestrian and bicycle travel).

**Policy 6-K:** Josephine County shall actively pursue grants and other sources of funding to implement Tier 2 (high priority) safety improvements.

- **Recommendation 6-K (1):** Williams Highway at Tetherow Road (MP 5.76 on Williams Highway): Install a "Congestion Ahead" sign or a "side street" advance warning sign for northbound traffic approaching Tetherow Road from the south. A commercial building to the south limits sight distance from Tetherow Road.

- **Recommendation 6-K (2):** Azalea Drive at Robertson Bridge Road (MP 5.242): A potential low-cost measure is all-way stop control, while eliminating the oblique angle of the intersection through realignment is a longer-term, more expensive project.

- **Recommendation 6-K (3):** Holland Loop Road at Hayes Cutoff (MP 1.351): Install "chevron" warning signs, "curve ahead with advisory speed" warning signs and "intersection" warning signs on each side of Hayes Cutoff Road and on Hayes Cutoff Road approach Holland Loop Road. A more costly project would be realigning Holland Loop Road to eliminate the southern s-curve.

- **Recommendation 6-K (4):** Redwood Avenue at Southgate Way (MP 2.659): Improve sight distance to the west through removal of low-growing trees on adjacent private property.

- **Recommendation 6-K (5):** OR 238 at Williams Highway (MP 0.0 on Williams Highway): Install warning signs to alert drivers of the s-curves and the tight southbound right turn.

**Policy 6-L:** Josephine County shall program Tier 3, low priority safety improvements at the following locations, consistent with available resources. Some of these locations will require additional investigation of detailed collision records and existing roadway conditions, such as pavement condition, traffic control, sight distance, vertical and horizontal geometry, driveway frequency, etc.

- **Recommendation 6-L (1):** Install guard rail along segments of county roads as indicated in Figure 6-2 and listed below:

  1 – Three Pines Road (MP 0.81 to 1.00)

  2 – Upper River Road (MP 0.30 to 0.50 and 3.15 to 3.19)

  3 – Pine Crest Drive (MP 0.38 to 0.66 and 1.25 to 1.90)

  4 – Pleasant Valley Road (MP 2.19 to 2.39)

  5 – Azalea Drive (MP 5.97 to 6.03)

  6 – Fish Hatchery Road (MP 2.91 to 3.21)

  7 – Midway Avenue (MP 0.75)

  8 – New Hope Road (MP 6.05)

  9 – Highland Avenue (MP 1.54 to 2.09 and 3.01 to 3.57)

  10 – Cloverlawn Drive (MP 1.32 to 1.50)

  11 – Galice Road (8.29 to 8.52)

- **Recommendation 6-L (2):** Realign intersection of Holland Loop Road at Hayes Cutoff to improve safety.

- **Recommendation 6-L (3):** Improve intersection of Dowell Road at Wolf Lane.

**Policy 6-M:** Josephine County shall monitor and periodically analyze collision data, and coordinate with city and state agencies as appropriate to address areas with crash rates exceeding commonly used cutoff values.

**Policy 6-N:** Josephine County shall actively work with the State to promote addition of other roadway and bridge improvements on state facilities in the County to the approved STIP list.

- **Recommendation 6-N (1):** Potential passing lane(s) on US 199 between MP 16-24 (northbound), and MP 7-14 (southbound): ODOT installed a southbound passing lane near MP 16.5 in 2002, and a northbound lane is needed on the southern side of the pass. South of Cave Junction toward the California border there are frequent slow-moving trucks and recreational vehicles.

- **Recommendation 6-N (2):** Improve the intersection of US 199 at Willow Lane (MP 0.138 on Willow Lane), possibly including signalization.

- **Recommendation 6-N (3):** Add a southbound left turn lane on US 199 at Ken Rose Lane (MP 0.0 on Ken Rose Lane).

- **Recommendation 6-N (4):** Add a southbound left turn lane on US 199 at Waldo Road (MP 0.0 on Waldo Road).

- **Recommendation 6-N (5):** Install southbound and northbound left turn lanes on OR 238 at its intersection with Jaynes Drive.

- **Recommendation 6-N (6):** Install left turn lanes on OR 238 at North Applegate Road.

- **Recommendation 6-N (7):** Improve the intersection of US 199 at Waters Creek Road (MP 0.0 on Waters Creek Road). The intersection needs sight distance improvements by flattening the vertical curve immediately north of the intersection on US 199 to safely accommodate heavy vehicles.

- **Recommendation 6-N (8):** Coordinate improvements on Redwood Avenue at US 199 with the urban area transportation plan and pending OODT improvements currently under study.

- **Recommendation 6-N (9):** Realign OR 238 at Water Gap Road to improve safety and traffic operations.

- **Recommendation 6-N (10):** Install truck climbing lanes on I-5 at Sexton Summit.

- **Recommendation 6-N (11):** Improve northbound and southbound truck turning radii from OR 238 to New Hope Road in Murphy.

- **Recommendation 6-N (12):** Install northbound passing lane on OR 238 between MP 16 and 17.

- **Recommendation 6-N (13):** Make safety improvements on US 199 at Rockydale Road to ward drivers of the intersection and/or enhance intersection visibility.

- **Recommendation 6-N (14):** Make safety improvements on OR 46 at Holland Loop Road (west). To warn drivers of this intersection and/or enhance intersection visibility. Consider minor roadway widening on OR 46 to provide area for vehicle recovery.

- **Recommendation 6-N (15):** Relocate Highland Avenue at Merlin-Galice Road eastward to increase separation from I-5 northbound ramps.

- **Recommendation 6-N (16):** Make safety and/or capacity improvements along US 199 between mileposts 0.35 and 4.44 (rural portion) consistent with expressway classification of this highway. This may include improving intersections and/or installing medians or frontage roads. Coordinate with urban area plans.

**Policy 6-O:** Josephine County shall ensure that all new land development activity adequately addresses safety considerations during engineering and construction.

- **Recommendation 6-O (1):** Warranted left-turn pockets, traffic control changes and other warranted safety improvements designed to applicable AASHTO standards shall be required at intersections on arterials and collectors, if added traffic from an approved development triggers applicable warrants. Cost responsibility should be reviewed through the development process to ensure mitigation costs are roughly proportional to the impact of the development.

## Bridge Improvements

**Policy 6-P:** Josephine County shall pursue state and federal funding sources to replace deficient bridges.

*Note:* Bridges in Josephine County are regularly inspected to determine maintenance needs and identify signs of undue deterioration. Bridges are assigned a technical ranking according to various criteria. Bridges that are assigned a rating of *structurally deficient* have one or more elements that show significant deterioration with the potential to affect the bridge's load-carrying capability. Structurally deficient bridges have the most urgent needs for rehabilitation and/or replacement. *Functionally obsolete* bridges have one or more significant elements that no longer meet the standards now in place for that element, but do not correspond to an urgent repair need.

- **Recommendation 6-P (1):** Replace Jacks Creek Bridge on Jumpoff Joe Creek Road (MP 2.62), which has been determined to be structurally deficient.

- **Recommendation 6-P (2):** Replace Jones Creek Bridge on Foothill Boulevard (MP 0.72), which has been determined to be structurally deficient.

- **Recommendation 6-P (3):** Replace Sucker Creek Bridge on Holland Loop Road (MP 7.2), which has been determined to be structurally deficient.

- **Recommendation 6-P (4):** Replace Coyote Creek Bridge on Bloom Road near Wolf Creek, which has been determined to be structurally deficient.

## Summary of Street Plan Improvement/Recommendations

Table 6-5 summarizes the improvement recommendations of the rural Josephine County TSP. This table includes three columns that illustrate existing funded projects (Tier 1 (No Build) Alternative, the high priority, Tier 2 "Preferred" Alternative, and the lower priority Tier 3 Alternative. As discussed in Chapter 13, additional funding will be required to implement either the Tier 2 or Tier 3 project lists.

Several improvements included in Table 6-5 include the notation that ODOT may be a potential participant in funding this project. However, as mentioned earlier in the TSP, listing an improvement project in the TSP does not commit the County or ODOT to allow, construct, or participate in the funding

of the specific improvement. Projects on the State Highway system in the TSP are not considered "planned" projects until they are programmed into the Statewide Transportation Improvement Program (the STIP), and cannot be considered as mitigation for future development or land use actions until they are programmed into the STIP. Unanticipated issues related to project funding, the environment, land use, the economy, changes in the transportation system, or other concerns may be cause for the alternatives discussed below to be re-evaluated, redesigned, and/or removed from consideration for funding or construction.

## Table 6-5
## Summary of Roadway Improvement Recommendations by Scenario and Tiered Alternative

| Tier 1 – No-Build[1] | Tier 2 – Low Build | Tier 3 – High Build |
|---|---|---|
| **Maintenance Projects**<br>• Routine Programmed Maintenance based on existing funding (significant shortfall from optimal maintenance program)<br>• Replace Grave Creek Bridge on Beecher Road (ODOT)<br>• Install variable message signs on I-5 for mountain safety (ODOT)<br>• Replace Illinois River Bridges on US 199 (ODOT) | **Maintenance Projects**<br>• Expanded program maintenance to allow for optimal cycle of roadway repair/resurfacing<br>• Monument Drive (Merlin Road to Timber Lane) – add left turn lanes<br>• Jerome Prairie Road (Woodland Park Road to west) – resurfacing<br>• Williams Highway (Provolt to Water Gap Road) – resurfacing various roadway segments as needed<br>• Pine Crest Drive/Plumtree Lane (Camp Joy Road to Upper River Road) – widen shoulders, improve alignment/sight distance at railroad crossing<br>• New Hope Road (milepost 0.0 to 3.7)) – widen/resurface shoulders to at least 4 feet<br>• Laurel Road (milepost 0.0 to 2.2) – widen/resurface shoulders to at least 4 feet<br>• Jacks Creek Bridge on Jumpoff Joe Creek Road – replace existing deficient bridge<br>• Jones Creek Bridge on Foothill Road – replace existing deficient bridge and improve roadway approaches<br>• Sucker Creek Bridge on Holland Loop Road – replace existing deficient bridge<br><br>**Safety Projects**<br>• Azalea Drive at Robertson Bridge Road (milepost 5.242) – install all-way stop or realign to enhance safety at this high accident location<br>• Williams Highway at Tetherow Road (milepost 5.6) – install warning signs at this high accident location<br>• Holland Loop Road at Hayes Cutoff Road – install warning signs at this high accident location<br>• Redwood Avenue at Southgate Way (milepost 2.659) – trim/eliminate trees obscuring sight distance at this high accident location | **Maintenance Projects**<br>• Cloverlawn Drive (milepost 0.5 to 3.6) – widen shoulders/resurface to at least 4 feet, improve intersection with Summit Loop Road<br>• Lakeshore Drive (milepost 0.2 to 3.0) – widen shoulders/resurface to at least 4 feet<br>• Lakeshore Drive (milepost 6.0 to 6.5) – make drainage improvements<br>• Lakeshore Drive (4700 block to Dryden Road) – make drainage and shoulder improvements<br>• Coyote Creek Bridge on Bloom Road in Wolf Creek – replace existing deficient bridge<br><br>**Safety Projects**<br>• Potential pass lane(s) on US 199 between milepost 16 and 24 (northbound) and between milepost 7 and 14 (southbound) (may have ODOT financial share)<br>• Install guard rail at various locations experiencing accidents that could be reduced by guard rail<br>• Holland Loop Road at Hayes Cutoff – realign intersection<br>• Dowell Road at Wolf Lane – improve intersection<br>• OR 238 at Applegate Road – add left turn lanes on state highway (may have ODOT financial share)<br>• US 199 at Waters Creek Road (milepost 0.0 on Waters Creek Road) – flatten curve to improve sight distance, install warning signs (may have ODOT financial share)<br>• Install northbound passing lane on OR 238 between milepost 16 and 17 (may have ODOT financial share) |

**Table 6-5 Continued**
**Summary of Roadway Improvement Recommendations by Alternative**

| Tier 1 – No-Build[1] | Tier 2 – Low Build | Tier 3 – High Build |
|---|---|---|
| | **Safety Projects Continued**<br>• OR 238 at Williams Highway (milepost 0.0) – install warning signs at this high accident location (may have ODOT financial share)<br>• US 199 at Willow Lane (milepost 0.138 on Willow Lane) – intersection improvements, potential signalization (may have ODOT financial share)<br>• US 199 at Ken Rose Lane (milepost 0.0 on Ken Rose Lane) – add a southbound left turn lane (may have ODOT financial share)<br>• US 199 at Waldo Road (milepost 0.0 on Waldo Road) – add a southbound left turn lane (may have ODOT financial share)<br>• OR 238 at Jaynes Drive (milepost 0.84) – add northbound and southbound left turn lanes (may have ODOT financial share)<br>• Truck climbing lane on I-5 at Sexton Summit between mileposts 65.7 and 80.8 (may have ODOT financial share)<br>• OR 238 at New Hope Road – improve truck turning radii (may have ODOT financial share)<br><br>**Mobility and Accessibility Projects**<br>• I-5 northbound on/off ramps at Merlin-Galice Road – signalize or install roundabout and realign intersection area to provide greater spacing from Highland Avenue and improve traffic operations (may have ODOT financial share)<br>• Realign Highland Avenue at Merlin-Galice Road to increase separation from I-5 northbound ramp intersection<br>• Merlin-Galice Road at Monument Drive – widen and restripe to provide additional turn lanes; modify traffic signal to provide protected north- and southbound left turns | **Safety Projects Continued**<br>• US 199 at Rockydale Road – safety improvements (may have ODOT financial share)<br>• OR 46 at Holland Loop Road (west) – safety improvements (may have ODOT financial share)<br>• US 199 (milepost 0.35 to 4.44) – make safety or capacity improvements consistent with expressway classification. May include improvements to intersections, medians and/or frontage roads (may have ODOT financial share)<br><br>**Mobility and Accessibility Projects**<br>• Install slow vehicle turnouts or passing lanes at selected locations on Galice Road<br>• US 199 at Redwood Avenue – Coordinate with urban area improvements currently under study by ODOT (may have ODOT financial share)<br><br>**Economic Development Projects**<br>• OR 238 at Water Gap Road – realignment (may have ODOT financial share) |

**Table 6-5 Continued**
**Summary of Roadway Improvement Recommendations by Alternative**

| Tier 1 – No-Build[1] | Tier 2 – Low Build | Tier 3 – High Build |
|---|---|---|
| | **Economic Development Projects**<br>• Install bike lanes on Monument Drive from North Valley High School to Hugo Road<br>• Widen shoulders to improve vehicle safety and provide for bicycle and pedestrian circulation on OR 99 from Grants Pass UGB to Jackson County line<br>• Widen shoulders to improve vehicle safety and provide for bicycle and pedestrian circulation on OR 238 from Grants Pass UGB to Jackson County line<br>• Widen shoulders to improve vehicle safety and provide for bicycle and pedestrian circulation on Rogue River Loop Highway | |

Note: All projects listed in this table would be constructed by Josephine County except as noted.

1 This list includes either ODOT projects funded through the 2004-2007 State Transportation Improvement Program (STIP) or through existing Josephine County revenue sources (including the county for road projects and Josephine County Transit for transit projects). All projects are considered "committed" in terms of the allocation of funding, and are anticipated to be constructed within the 20-year planning horizon covered by the TSP.

# Chapter 7
# Freight Plan

## Overview

Freight mobility is critical to maintain Josephine County's economic competitiveness, and is dependent on a number of transportation modes, including truck, air, pipeline and rail. This chapter presents a review and assessment of needs, deficiencies, policies and improvement options affecting the freight transportation system within the rural portion of the County. Freight transportation modes discussed in this chapter include trucking and pipelines. The chapter also acknowledges the water transportation mode. Issues related to air freight are discussed in the general context of air transportation in Chapter 10. Freight rail is discussed in Chapter 12.

## Truck Freight

In the rural portion of Josephine County, freight mobility is largely dependent on the movement of goods by truck. Key transportation issues affecting freight mobility include:

- Adequacy of access to specific freight-dependent industrial, commercial, or resource-based destinations in the rural area;

- Adequacy of the state highway and county road system to accommodate through truck traffic between major destinations within Josephine County and through the county to other destinations in Oregon or California.

Roadway adequacy is measured both in terms of capacity to serve current and future truck-related demand (as measured by levels of congestion on key routes that are used by trucks), the safety of the roadway system (particularly for larger vehicles with more limited operating characteristics than automobiles), and the sufficiency of access to significant truck trip generators.

Included in this section is a discussion of the planning and policy context for developing and maintaining the truck freight system, an evaluation of needs and deficiencies, and a discussion of the recommended truck freight mobility action plan (including goals, objectives, policies and specific improvement projects).

### Consistency with Other Plans and Policies

Development of the truck freight portion of this TSP has been influenced by several state and local plans and policies including the *Oregon Highway Plan*, the *Josephine County Comprehensive Plan* and the *Grants Pass Urban Area Master Transportation Plan*. Key goals and policies in these plans that relate to and affect the development of the *Josephine County Rural TSP* are described below.

The *1999 Oregon Highway Plan* (OHP) recognizes the importance of good freight mobility to the State's economy and includes a policy to "*maintain and improve the efficiency of freight movement on the state highway and access to intermodal connections. The State shall seek to balance the needs of long distance and rural communities."* Through the Transportation Planning Rule and guidelines prepared by ODOT for preparation of local transportation system plans, local and regional governments are encouraged to improve planning coordination between public investments in highways and other investments (both public and private) in the freight movement infrastructure.

The OHP also designates certain roadways as part of the State Highway Freight System based on freight volume, connectivity and linkages to major intermodal facilities. Within Josephine County, Interstate 5 is the only designated State Freight Highway. The OHP also provides some guidance on the standard of performance necessary for freight movement on State highways. Mobility standards (using volume-to-capacity ratios) are designated based on a facility's location and the type of traffic using the roadway. Acceptable v/c ratios are higher for urbanized areas than for sparsely populated rural areas, meaning that relatively greater congestion is acceptable in urbanized areas than in rural areas. Acceptable v/c ratios for freight routes are slightly lower than for other highways, reflecting the desire to maintain freight mobility on key routes.

The *Josephine County Comprehensive Plan* (2000) contains goals and supporting policies intended to support the movement of freight within and through the County. Goal 4 focuses on developing facilities and services that are needed and affordable to County residents. A supporting policy encourages the development of a master plan (coordinated with City, State and Federal agencies) for bridges and roads in Josephine County that can be used for freight mobility purposes. The intent of Goal 5 is to *"diversify, expand and stabilize economic opportunities for the betterment of the County"*. A supporting policy directs the County and cities to jointly seek methods of assuring long-term capital improvement financing in order to extend services to designated commercial and industrial lands. Of critical importance to emerging employment centers will be the availability and adequacy of transportation services.

The *Grants Pass Urban Area Master Transportation Plan* includes several goals and policies specifically directed at enhancing freight movement within the urban portions of the county. While not specifically applicable to the rural portions of Josephine County, they do offer guidance for the development of policies for the *Rural TSP*. Goal 1 encourages the City of Grants Pass, Josephine County and ODOT to *"Provide a Comprehensive Transportation System"*. This goal is supported by objectives that encourage completion of the transportation system. Freight-related policies supporting this objective include identifying and designating regional truck routes. For the rural areas, these primary truck routes include such state highways as I-5, US 199, and OR 238. Goal 3 stresses the importance of protecting public investments in the transportation system. Supporting objectives applicable to freight movement include preserving future transportation corridors including potential by-pass routes near urban areas. Goal 4 is intended to *"Support Economic Development and Vitality"*. This goal is supported by a policy for providing for efficient goods movement.

## Needs and Deficiencies

Transportation distribution is an important economic activity in Southern Oregon including Josephine County, and good freight mobility is critical to maintaining the region's competitiveness. Particularly in the I-5 corridor, freight activity is showing a significant increase in comparison with a decade ago. The movement of goods and commodities into, out of, and through Josephine County is heavily dependent on the highway system where the demand for access and circulation by large vehicles is expected to be the highest. However, freight movement also occurs using rail, air, and pipeline modes. This section addresses freight movement on the road and highway system and in pipelines. Freight movement via rail and air transportation is addressed in the chapters pertaining to these modes.

The truck freight transportation system consists of streets and highways where the demand for access and circulation by large vehicles is expected to be the highest. The foundations of the freight movement system are the critical "backbone" highways and roads identified by the Federal Highway Administration as the National Highway System. National Highway System Routes are intended to include the most significant highways in the United States for the movement of people and freight. Within Josephine County, this system includes Interstate 5 and US 199. Most truck traffic in the region and the state moves on the National Highway System. In addition, the 1999 *Oregon Highway Plan* designated a State Highway Freight System based on freight volume, connectivity and linkages to major intermodal

facilities. Interstate 5 is the only highway in Josephine County that has been designated as a State Freight Highway.

ODOT's *I-5 State of the Interstate* (2000) report indicates that trucks comprise up to 20 percent of the daily traffic stream on I-5 between Grants Pass and Medford, which corresponds to as many as 6,000 trucks per day in the vicinity of Grants Pass.[13] Rural Josephine County presently has no designated truck routes, but I-5 and US 199 are primary routes for non-local freight traffic. I-5 is designated as a statewide freight system route in the *Oregon Transportation Plan* and is by far the most important freight link in the region. Not only does I-5 serve freight heading between the PML Forest Products inter-modal rail/truck reload facility in Grants Pass and the Medford area, but it also serves a significant number of trucks continuing both north and south to destinations elsewhere along the West Coast. Freight activity, particularly along the Interstate 5 and US 199 corridors, has shown a significant increase in the past decade.

Much of the freight activity in rural Josephine County is centered on the North Valley Industrial Park in the Grants Pass/Merlin area, a portion of which is included in federal Foreign Trade Zone (FTZ) 206 (this zone also includes the Rogue Valley International/Medford Airport). Foreign Trade Zones (FTZs) are secured areas that are legally defined as outside a nation's territory for the purposes of customs and excise activities. They allow companies doing business in a zone to reduce or eliminate the kinds of duties, taxes, and quotas that otherwise might apply, thereby potentially improving profitability. The FTZ designation is used as a business development or economic development tool. In the FTZ, goods may be stored, manufactured or assembled, mixed or manipulated, repaired or relabeled, processed or destroyed. Duties aren't due until the goods enter the US economy. The net effect can be drastic savings for a company importing or exporting any product or merchandise that might incur import taxes or duty. Other FTZ sites in unincorporated Josephine County are located at the Grants Pass Airport and the Illinois Valley Airport (Figure 3-5). [14]

Good freight mobility requires that the roadway system provide both an adequate level of service and good connectivity to intermodal facilities and inter-regional routes, such as Interstate 5 and US 199. Some guidance on the standard of performance necessary for freight movements is found in the 1999 *Oregon Highway Plan.* The *Highway Plan* sets mobility standards using volume-to-capacity ratios (v/c) rather than Level of Service standards, to identify the presence of congestion. If the v/c ratio for a highway segment exceeds the v/c ratio established in the OHP, then the highway segment does not meet ODOT's minimum operating conditions. Acceptable v/c ratios are higher for urbanized areas than for sparsely settled rural areas, which means that relatively greater congestion is acceptable in urbanized areas than in rural areas. Acceptable v/c ratios for freight routes are slightly lower than for other highways, reflecting the desire of maintaining freight mobility on key routes. The maximum acceptable v/c ratio for the rural Josephine County ranges from 0.70 for I-5 and US 199, to 0.75 for OR 238, OR 99, OR 46 and the Rogue River Loop Highway.

Pavement conditions and lack of restrictions on large vehicles along truck routes are also important for the efficient movement of freight. According to the *I-5 State of the Interstate* report, pavement conditions along I-5 generally fall in the very good category through Josephine County.

As freight activity increases in the County, it will be important to maintain and improve the road system to ensure adequate freight mobility. In addition to corridors with greater truck traffic, local roads providing access to activity centers must also be maintained and improved as needed. Access to aggregate resource areas will also need to be improved. Among others, primary aggregate resource areas like rock quarries are located on US 199 west of the Grants Pass UGB, on New Hope Road in Murphy

[13] *I-5 State of the Interstate Report*, ODOT, 2000.
[14] Rogue Valley International/Medford Airport web site, April 2003.

and along OR 238 south of Murphy. Improving the truck freight transportation network on a timely basis will ensure Josephine County's competitive edge in the market.

## Strategies

A number of strategies were developed to provide the basis for a discussion of policies and priorities to be used in guiding the development of rural Josephine County's freight transportation system in the coming decades. In part, these strategies were derived from existing policies and an assessment of existing deficiencies and current improvement programs.

As described in Chapter 5, five improvement "scenarios" were developed, each focusing on a different aspect of the transportation system that stakeholders identified as important for the TSP. These improvement scenarios provide the initial step in developing and evaluating alternatives for the TSP. For each scenario, individual improvements were identified, analyzed and ranked according to a set of qualitative and quantitative criteria developed by TSP stakeholders. Each of the scenarios has a different emphasis to reflect the policy and financial choices available to the County. Each of the scenarios also differs in the degree in which the County freight system would be improved. Table 7-1 lists projects from each scenario that improve freight mobility in Josephine County.

**Table 7-1**
**Freight System Improvements Associated with Each Improvement Scenario**

| Scenario | Freight System Improvement Projects |
|---|---|
| No Build | • Grave Creek Bridge replacement on Interstate 5 (STIP)<br>• Variable message sign on I-5 NB at Hugo and Glendale roads (STIP)<br>• US 199 bridge replacement at East and West forks of the Illinois River (STIP) |
| Maintenance | • Monument Drive (Merlin Road to Timber Lane): Add left-turn lanes<br>• Replace Jacks Creek Bridge on Jumpoff Joe Creek Road<br>• Replace Jones Creek Bridge on Foothill Boulevard<br>• Replace Sucker Creek Bridge on Holland Loop Road<br>• Replace Coyote Creek Bridge on Bloom Road |
| Safety | • OR 238 at Williams Highway: Add warning signs<br>• US 199 at Willow Lane: Intersection improvements; potential signalization<br>• US 199 at Ken Rose Lane: Add SB left-turn lane<br>• US 199 at Waldo Road: Add SB left-turn lane<br>• OR 238 at Jaynes Drive: Add NB and SB left-turn lanes<br>• I-5 at Sexton Summit (MP 67.5 to 80.8): Install truck climbing lanes<br>• OR 238 at New Hope Road: Improve truck turning radii<br>• US 199 at Waters Creek Road: Flatten curve to improve sight distance; install warning signs<br>• US 199 (MP 16-24 northbound and MP 7-14 southbound): Potential passing lanes<br>• OR 238 at Applegate Road: Add left-turn lanes on OR 238<br>• OR 238 (MP 16 to 17): Install northbound passing lane<br>• US 199 at Rockdale Road: Safety improvements<br>• OR 46 at Holland Loop Road (west): Safety improvements |
| Mobility and Accessibility | • I-5 NB on-/off-ramps at Merlin-Galice Road: Signal or roundabout<br>• Monument Drive at Merlin-Galice Road: SB/WB turn lanes; restripe; signal modifications to provide NB/SB protected lefts<br>• US 199 at Redwood Avenue: Side street left-turn lane |
| Economic Development | • I-5 NB on-/off-ramps at Merlin-Galice Road: Signal or roundabout<br>• Monument Road at Merlin-Galice Road: SB/WB turn lanes; restripe; signal modifications to provide NB/SB protected lefts<br>• OR 238 re-alignment at Water Gap Road |

Following development of these scenarios, which included all travel modes, evaluation criteria were applied for an initial ranking of projects. Stakeholders then reviewed the rankings and made some changes based on needs of specific user groups and/or specific areas of the County. Prioritized projects were then sorted into three tiered alternatives representing varying levels of financial commitment. The resulting three TSP tiered alternatives (Tier 1-No Build, Tier 2-Low Build and Tier 3-High Build) include a number of projects that would benefit freight movement in the County. The Tier 1 Alternative is identical to the No Build Scenario described above, while the Tier 3-High Build Alternative includes all improvements listed in Table 7-1. Projects benefiting freight movement that are included in the Tier 2 Alternative are shown in Table 7-2 along with the scenario in which they originated. The Tier 2 Alternative represents the County's Preferred Alternative for the TSP.

**Table 7-2**
**Freight System Improvements Included in the Preferred Alternative (Tier 2)**

| Scenario | Freight System Improvement Projects |
|---|---|
| No Build | • Grave Creek Bridge replacement on Interstate 5 (STIP)<br>• Variable message sign on I-5 NB at Hugo and Glendale Roads (STIP)<br>• US 199 bridge replacement at East and West forks of the Illinois River (STIP) |
| Maintenance | • Monument Drive (Merlin Road to Timber Lane): Add left-turn lanes<br>• Replace Jacks Creek Bridge on Jumpoff Joe Creek Road<br>• Replace Jones Creek Bridge on Foothill Boulevard<br>• Replace Sucker Creek Bridge on Holland Loop Road |
| Safety | • OR 238 at Williams Highway: Add warning signs<br>• US 199 at Willow Lane: Intersection improvements; potential signalization<br>• US 199 at Ken Rose Lane: Add SB left-turn lane<br>• US 199 at Waldo Road: Add SB left-turn lane<br>• OR 238 at Jaynes Drive: Add NB and SB left-turn lanes<br>• I-5 at Sexton Summit (MP 67.5 to 80.8): Install truck climbing lanes<br>• OR 238 at New Hope Road: Improve truck turning radii<br>• US 199 at Waters Creek Road: Flatten curve to improve sight distance; install warning signs<br>• US 199 (MP 16-24 northbound and MP 7-14 southbound): Potential passing lanes<br>• OR 238 at Applegate Road: Add left-turn lanes on OR 238 |
| Mobility and Accessibility | • I-5 NB on-/off-ramps @ Merlin-Galice Road: Signal or roundabout<br>• Monument Drive @ Merlin-Galice Road: SB/WB turn lanes; restripe; signal modifications to provide NB/SB protected lefts |
| Economic Development | • I-5 NB on-/off-ramps @ Merlin-Galice Road: Signal or roundabout<br>• Monument Drive @ Merlin-Galice Road: SB/WB turn lanes; restripe; signal modifications to provide NB/SB protected lefts |

# Action Plan

## Draft Freight System Goals and Objectives

Early in the TSP development process, the County developed a number of draft TSP goals and policies for the future transportation system. Below is a goal and supporting policies pertinent to the improvement and management of the truck freight system.

**Goal 2: Provide for a transportation system that is accessible, efficient and practical.**

- *Objective 2 - Facilitate movement of goods into and out of the County.*
- *Objective 3 - Enhance freight mobility (by rail, truck and air) and intermodal transfer.*
- *Objective 4 - Address changing characteristics of trucking, aviation and rail industries.*

**Policies and Recommendations**

**Policy 7-A:** Josephine County shall pursue a variety of funding options for improving freight mobility in rural areas, with particular emphasis on implementation of the high priority projects identified in the TSP.

- **Recommendation 7-A (1):** As funding becomes available for projects that enhance freight mobility, Josephine County shall assign the highest priority to projects on the Tier 2 (preferred alternative) list as described in Table 7-2.

**Policy 7-B:** Josephine County shall evaluate and develop improvement recommendations to address existing deficient bridges along freight routes within the rural portion of the County, secure necessary funding, and manage freight traffic during construction to minimize adverse impacts on both freight mobility and local multimodal traffic circulation.

**Policy 7-C:** Josephine County shall work cooperatively with freight providers and other jurisdictions to balance freight mobility with community livability including:

- Increase freight transport safety awareness
- Reduce the number and severity of commercial transport-related accidents
- Enforce regulations related to safe transport of hazardous materials
- Reduce through truck traffic on residential streets

## Pipeline Transportation

The only major pipeline transportation system in Josephine County is the major natural gas transmission line connecting at Grants Pass to a major natural gas transmission line operated by Northwest Pipeline Company that connects northward to Eugene and the Portland metropolitan area. Other pipelines in the County include transmission lines for electricity, cable television and telephone services, as well as water and sanitary sewer pipelines.

Because there is no significant pipeline transportation system within the rural portion of Josephine County, no project-specific recommendations for this area of transportation are provided for in the *Josephine County Rural TSP*. It is recommended that the County establish policy to promote accessibility to, protection of and siting of appropriate locations for regional pipeline systems within the County to address potential future pipeline locations.

## Water Transportation

There are no commercially-navigable waterways in Josephine County. Accordingly, no recommendations for this transportation system are provided for in the *Josephine County Rural TSP*.

# Chapter 8
# Public Transit Plan

## Overview

This Chapter presents a review of needs, deficiencies, policies and recommended actions affecting the provision of public transportation services in Josephine County. Included is a discussion of the local and state policy context for developing and enhancing this travel mode, an evaluation of the existing public transportation system, and identification of recommendations for the County. Josephine County, through Josephine County Transit (JCT), currently provides public transportation services in the county. Three alternatives, based on available funding, are offered for JCT and public transportation in the county.

Information contained in this chapter was obtained largely from: the existing conditions inventory; input from JCT and ODOT staff; and related local and state plans including the *Josephine County Comprehensive Plan*, the *City of Grants Pass Comprehensive Plan* and the *Oregon Public Transportation Plan*.

## Consistency with Other Plans and Policies

The public transit component of this TSP is intrinsically linked to the *Oregon Public Transportation Plan*, the Transportation Planning Rule (TPR), and Josephine County and City of Grants Pass Comprehensive Plans. Policies, goals and objectives in these plans and rules assure that the mobility needs of Josephine County citizens are properly planned for.

The *Oregon Public Transportation Plan* (OPTP) codifies goals, policies, strategies and service standards for public transportation systems throughout the state. Goal 1 of the OPTP defines the purpose of public transportation stating, *"The public transportation system should provide mobility alternatives to meet daily medical, employment, educational, business and leisure needs without dependence on single-occupant vehicle transportation. The system should enhance livability and economic opportunities for all Oregonians, and lessen the transportation system's impact on the environment. The public transportation system should provide services and meet transportation needs in a coordinated, integrated and efficient manner."* Goal 2 defines the components of such a system, accounting for the different needs of and resources available to urban, small city and rural systems. The OPTP contains minimum service standards that each system should achieve.

The TPR is part of the planning context of the OPTP and thus addresses requirements placed on local land use plans, ordinances and development codes in order to promote pubic transportation as a viable alternative. The TPR further mandates that all local transportation system plans contain a public transportation plan.

Goal 4 of the *Josephine County Comprehensive Plan* addresses the mobility needs for those with special needs stating *"The physically handicapped and transportation disadvantaged shall be considered in the design of transportation facilities and alternative transportation modes."* Goal 8 of the plan identifies mass transportation as a means for controlling air pollution.

The *Grants Pass Urban Area Master Transportation Plan* includes several goals and policies specifically directed at enhancing public transit service within the urban portion of the county. While not specifically applicable to the rural portions of Josephine County, they do offer guidance for the development of policies for the *Rural TSP*. Goal 1 encourages the City of Grants Pass, Josephine County and ODOT to

take actions to "*Provide a Comprehensive Transportation System*". This goal is supported by objectives that encourage completion of the transportation system and the provision of adequate mobility for all travelers. Policy 1.1.2 directs the affected agencies to *"Support the provision of public transit services for those people who cannot provide their own private transportation due to age ..., physical limitations, or economic circumstances"*. Policy 1.2.2 encourages these agencies to "*Maintain (a) minimum level of public transit services for those people who cannot or who choose not to travel by private vehicle"*. Goal 1 also includes objectives that address provision of a multimodal transportation system (encouraging reduced reliance on the single occupant automobile and improving connections between transportation modes), and ensuring accessibility to transportation for all travelers (with particular emphasis on transportation services for the disabled).

## Needs

Josephine County Transit (JCT) provides fully accessible weekday bus service to residents of Grants Pass and Cave Junction as well as intercity service between the two communities. JCT's special transportation services (senior and disabled demand-responsive) are available to all communities south of the Merlin area. Table 8-1 summarizes the current JCT services, including operating costs and funding sources. JCT is heavily dependent on limited-duration grant funding and is continually seeking additional funding to sustain the current level of service.

JCT currently provides a relatively low level of lifeline public transportation service to non-urbanized areas of Josephine County. JCT's public and senior/disabled services address state requirements (those defining the types of services needed for the area covered) for rural areas and communities between 2,500 and 25,000 population. However, the amount of service falls well short of the 1.7 hours of service per capita standard for communities over 2,500 as identified in the *Oregon Public Transportation Plan*[15] (current Grants Pass population is 23,900). As the population of Grants Pass grows past the 25,000 mark, JCT will face additional standards in the areas of ride-matching, demand management programs, peak commuter services and alternatives to single-occupancy automobile travel.

Sunny Wolf Community Response Team, the local non-profit organization supporting of the Sunny Valley, Wolf Creek, and Galice Enterprise Communities, operates a one-day-a-week shuttle into Grants Pass from the far northern part of the county. Residents in these communities have expressed the need for more service to Grants Pass.

JCT provides just over 14,000 hours of revenue service per year. Roughly half of these are dedicated to the Grants Pass fixed routes. The limited amount of service JCT is able to operate is reflected in trip booking policies that require passengers to call five days in advance for Dial-A-Ride reservations. This allows JCT to maximize its limited vehicle and staff resources while fulfilling reservation requests. There are currently very few trip denials, as most residents have altered their travel behavior to work with the reservation requirements. JCT also provides dispatch services for Options for Southern Oregon and HASL (Handicapped Accessible Service League), two local client-based transportation service providers, when the JCT dispatcher is on duty. The current budget/staff limitations prevent JCT from providing this service after 3:00 pm, requiring these agencies to provide dispatch functions in the late afternoon and evening.

JCT is facing a large shortfall in its existing operations budget, as two major sources of funding will not be available in the coming years. The City of Grants Pass is terminating its annual funding, an amount equal to $50,000 a year for the last three years. The fixed-route system is also heavily dependent on $196,000 it receives annually from a CMAQ grant that terminates in April 2005.

[15] *Oregon Public Transportation Plan* (1997) Salem: Oregon Department of Transportation, V13-V18

**Table 8-1**
**Current Josephine County Transit Services**

| Service | Service Area | Type of Service | Targeted Service Group | Annual Service Hours | Operating Cost | Funding |
|---|---|---|---|---|---|---|
| Public Transit | City of Grants Pass | Fixed Route | General Public | 8,580 | $355,200 | $196,000 CMAQ Grant (ends FY04/05)<br>$50,000 City of GP (ends FY02/03)<br>$48,400 FTA 5311<br>$30,000 Fees<br>$30,000 Rogue Community College |
| **Dial-A-Ride** | Cities of Grants Pass and Cave Junction as well as Merlin, Murphy, Williams and Jerome Prairie (Central and Southern Josephine County) | Demand Responsive | Senior, Disabled | 3,250 | $290,213 | $143,243 Special Transportation Funds (ODOT)<br>$60,000 Translink Fees<br>$18,000 Public Transit Ad Revenue<br>$10,000 Fees<br>55,600 Reserves |
| **Cave Junction** | Cities of Grants Pass and Cave Junction | Fixed Route | Senior, Disabled and General Public if space available | 1,560 | | |
| **Senior Shuttle** | City of Grants Pass | Fixed Route | Senior, Disabled | 1,250 | | |

In addition, two of the special JCT services are currently funded out of a reserve carryover fund to cover an $85,000 shortfall. These reserves are expected to run out in three to six months (from October of 2003). As a result, the Senior Shuttle in Grants Pass and the Route 50 service between Grants Pass and Cave Junction are facing imminent service reductions.

JCT transit stop and transfer facilities are minimal by the standards of any public transit system. JCT estimates that it will require $150,000 to meet the County's most minimal needs for signage, benches, shelters and other transit facilities. JCT has recently purchased four new buses with special grant funding. Figure 8-2 presents the current JCT fleet, indicating those buses at or nearing the end of their useful lives.

**Table 8-2**
**Current Josephine County Transit Fleet**

| Bus # | End of Useful Life | Seating Capacity | Wheel Chair Capacity | Use as of Nov 2003 |
|---|---|---|---|---|
| 92663 | 1999 | 8 | 1 | Cave Junction DAR |
| 96602 | 2003 | 4 | 2 | DAR |
| 96603 | 2003 | 8 | 2 | DAR |
| 99601 | 2006 | 13 | 1 | Public Transit |
| 01664 | 2008 | 17 | 1 | DAR |
| 01667 | 2008 | 19/17 | 0/1 | Cave Junction Fixed Route |
| 01668 | 2008 | 19/17 | 0/1 | Public Transit |
| 02401 | 2006 | 5 | 0 | DAR (Leased from Cty Motor Pool) |
| NEW 1 | 2010 | 19/17 | 0/1 | Public Transit |

**Table 8-2 Continued**
**Current Josephine County Transit Fleet**

| Bus # | End of Useful Life | Seating Capacity | Wheel Chair Capacity | Use as of Nov 2003 |
|---|---|---|---|---|
| NEW 2 | 2010 | 19/17 | 0/1 | Senior Bus |
| NEW 3 | 2010 | 10 | 2 | DAR |
| NEW 4 | 2010 | 10 | 2 | DAR |

Travel to Medford is often cited as an unmet need. Greyhound currently operates four round trips between Grants Pass and Medford. The current schedule realistically provides for two daytime round trips from Grants Pass (leaving at 6:15 am and 12:01 pm, returning at 2:45 pm or 5:10 pm). The inflexibility in travel times, poor connections to rural transit services, and a $8 one-way ticket price make this a poor option for Josephine County residents traveling to medical, work or other appointments in Jackson County. JCT receives a number of requests each week to provide regularly scheduled service to Medford.

Vanpool and ridematching needs are limited in the Grants Pass area. In the last year, the Rogue Valley Transportation District (RVTD) attempted to initiate a vanpool in Josephine County. The district was not able to engage a local business or organization to run a vanpool with a district-supplied vehicle. Even Rogue Community College, which has a substantial number of cross border commuters and maintains facilities in both counties, was unable to initiate a successful vanpool.

## Strategies

Currently, Josephine County has limited unmet needs with respect to the delivery of public transportation services in the county, but the long-term provision of these services is facing serious funding shortfalls. Three alternative strategies for public transportation were developed and evaluated that reflect three different service levels based on available funding. Table 8-3 highlights the amount of new funding and resulting service offerings for the three scenarios. Information on available funding sources is provided at the end of this section.

**Table 8-3**
**Public Transit System Alternatives**

| System Alternative | Funding | Services |
|---|---|---|
| Tier 1 (Fully Funded, No Build) | • Retain:<br>  ○ Special Transportation Funds (STF) - ODOT<br>  ○ Translink fees<br>  ○ RCC contract<br>  ○ Rider fees<br>  ○ Ad revenue<br>• Discontinue:<br>  ○ CMAQ<br>  ○ City of Grants Pass funding<br>  ○ Funding from reserves | • Reduced frequency of service on Route 10 in Grants Pass from 30 minutes to hourly<br>• Shortened service day on Route 10 in Grants Pass, terminating service before 5:00 pm<br>• Elimination of:<br>  ○ Senior Shuttle<br>  ○ Cave Junction route |

**Table 8-3 Continued**
**Public Transit System Alternatives**

| System Alternative | Funding | Services |
|---|---|---|
| Tier 2 (Unfunded, Low Build) | Same as Tier 1 (No Build) with the Addition of:<br>• $250,000 to replace lost CMAQ and City of Grants Pass Funding. Options include:<br>o Local tax base<br>o Increased Ad revenue<br>o FTA Section 5311<br>• Replace reserve funding with $200,000 ODOT Region 3 Capital Grant<br>• $200,000 for fleet improvements in three years. Options include:<br>o FTA Section 5309<br>o FTA Section 5310 | • Retention of all current services and the possible addition of regular service to Sunny Wolf area in the north part of the county. |
| Tier 3 (Unfunded, High Build) | Same as Tier 2 (Low Build) with the Addition of:<br>• $50,000 annually for Intercity Service plus $60,000 for additional bus. Options include:<br>o FTA Section 5311(f)<br>o Fees<br>o FTA Section 5309<br>o FTA Section 5310<br>• $200,000 in funding to replace limited duration ODOT Region 3 Capital Grant. Options include:<br>o Fees<br>o 5310 if contracted services<br>o Increased tax base<br>• $30,000 for additional Dial-A-Ride Staff Options include:<br>o Contact fees<br>o STF discretionary funds<br>o Increased tax base<br>• $150,000 for amenities capital improvements. Options include:<br>o FTA Section 5309<br>o FTA Section 5310 | • Retention of all current services<br>• Plus:<br>o Service to Sunny Wolf area<br>o Intercity service to Medford<br>o Increased coordination with local providers<br>• Deployment of signs, benches and shelters |

**The Tier 1 (No Build) Alternative** for public transportation represents the scenario where JCT does not adequately replace the operations funding it expects to lose in the coming years. This alternative results in the loss of public fixed-route services, as the agency must eliminate roughly $250,000 from its operating budget. Currently, revenues generated by the fixed-route advertising program are currently used to subsidize the Dial-A-Ride system. JCT will have to increase advertising revenues and retain them to fund general public services, creating further budget pressures on the special transportation services.

The likely service cuts will entail a reduction in both level of service and the span of local transit service to the Grants Pass area. The current north-south route (Route 10) provides 30-minute service in Grants Pass. This will have to be reduced to hourly service under the No Build Alternative. In addition, the service day will have to be shortened. The 7:00 am start time will likely remain while the end of service will move from 5:00 pm to earlier in the day. This will provide the least negative impact for RCC students and staff.

The Senior Shuttle and Cave Junction route are currently funded out of reserves and face elimination in early 2004.

**The Tier 2 (Unfunded, Low Build) Alternative** seeks to replace lost revenues and maintain current services and/or slightly improve upon them. A county property tax levy and state/federal grants are feasible sources for the needed funding. JCT is also hoping to expand its advertising revenues to offset the pending lost revenues.

JCT already receives FTA Section 5311 funding based on existing formulas and will not likely receive substantial additional funds from this source. Josephine County has explored the potential for a public transportation tax levy. Property taxes could contribute the sustainable funding required to keep the fixed-route public service near today's levels. The *Transportation Feasibility Study* in 2000 indicated that a tax levy would probably pass, but not until the second or third effort. It is JCT's intent to go forward, placing a tax levy on the ballot in November 2004. To raise $200,000, the levy would be about 15 cents per $1,000 of assessed value in the City of Grants Pass or about 8 cents per $1,000 over the service area if a new transportation district is created. A countywide tax would put pressure on the use of these funds throughout the county, not just in Grants Pass where the imminent shortfall would exist. A voter supported levy has been estimated to collect between and $85,000 and $100,000 – less than half of what is needed.

If Josephine County employers consider public transportation vital for making commute trips, a payroll tax is another option. To create a tax base equivalent to the $250,0000 loss in CMAG and City of Grants Pass funding, a payroll tax rate of roughly 0.03% would be required (0.05% if State In-Lieu taxes are not available to match). This rate is far less than permitted or collected by other districts/jurisdictions in Oregon.

JCT is also exploring a short-term capital grant with ODOT Region 3 for the special transportation system. These capital funds would allow for contracted services to the Sunny Wolf area and the backfilling of other JCT provided special transportation services (including the Senior Shuttle and the Cave Junction route), allowing JCT to re-allocate any non-dedicated funds back to the fixed-route system. The grant could potentially provide $200,000 for these contracted services over the next two years.

The JCT fleet will require vehicle replacements in three years to maintain its current level of operation. Roughly $200,000 will be required to upgrade the rolling stock in this timeframe. Two Federal grant programs can be explored in conjunction with the potential for ODOT Special Transportation Fund (STF) Grants for capital and operating funds. Federal Transit Administration (FTA) Section 5310 Discretionary Grants, which funds vehicles and other capital projects for programs that serve elderly and disabled people or the FTA Section 5309 capital program are potential sources for vehicle purchases.

**The Tier 3 (Unfunded, High Build) Alternative** seeks to expand service and address perceived shortcomings. Federal monies in the form of grants and/or Congressional set asides will likely be required to meet these needs.

Intercity Service to Medford is likely to cost around $50,000 a year in operating costs (for three day-a-week, three roundtrips-per-day service) plus another $60,000 for a dedicated vehicle.

FTA Section 5311(f) funds startup intercity services. These funds can be used for both capital and operating expenses and require local matching funds. The 5311(f) process can be competitive and are intended for startups, leaving the need for sustainable funding if the service is to remain in place. Fare revenue for this service should help offset some of the costs. Something between the $1.00 basic JCT fare and the $8.00 charged by Greyhound should contribute toward the operating needs. Contracts with RCC and/or RVTD for any commuters coming to Grants Pass from Jackson County could also fund part of the operation.

As an alternative, a JCT-managed vanpool may meet the needs for community and/or commute trips to Medford on a slightly reduce scale, and therefore, at a lower cost. Based on the primary trip purposes (i.e. senior/disabled medical vs. worker commutes) various funding mechanisms may come into play, including those through RVTD for van programs.

JCT could also add one full time equivalent staff person (FTE) for the dial-a-ride system in order to provide service later in the day (e.g., after 3 p.m.) and to add capacity during peak times, allowing for more flexibility when taking reservations. Late afternoon service would also allow JCT to provide additional dispatch services for Options for Southern Oregon and HASL, increasing the coordination between county providers. The additional resource would require another $50,000 per year.

The aforementioned ODOT and FTA discretionary grants can fund capital improvements that address JCT's distinct need for signage, shelters and benches. JCT has solicited Congressional earmarked funding for its capital needs. The transit agency should continue to explore this funding mechanism in addition to any grants that have capital components.

# Action Plan

## Draft Public Transit Goals and Objectives

Draft goals and objectives have been prepared to guide the development and evaluation of improvement strategies for all transportation modes in rural Josephine County. Draft goals and objectives for public transit are as follows (numbers reflect the numbering of the complete list of goals and objectives):

**Goal 2: Provide for a transportation system that is accessible, efficient and practical.**

- *Objective 1 - Increase mobility and access options for Josephine County citizens.*

**Goal 3: Provide sufficient capacity within the transportation system to accommodate future demand.**

- *Objective 1 - Satisfy Transportation Planning Rule requirements for system capacity and for encouraging the use of alternative modes of transportation.*
- *Objective 3 - Encourage alternative modes of transportation by providing for a choice in modes.*

**Goal 5: Provide system connections as needed to improve efficiency and access and to improve circulation.**

- *Objective 1 - Accommodate projected growth with improvements to the roadway network and increased options for choosing a mode of transportation.*
- *Objective 2 - Achieve greater mobility between communities, activities and land uses.*
- *Objective 3 - Achieve improved connectivity between modes of transportation.*

**Goal 7: Ensure an effective strategy for intergovernmental coordination in transportation planning.**

- *Objective 2 - Provide compatible design standards for all modes of transportation.*

**Goal 9: Consider funding issues in planning a future transportation system.**

- *Objective 1 - Identify a range of methods for funding recommended actions and improvements.*
- *Objective 2 - Ensure cost-effective investment in transportation. Improvements should be fiscally responsible, economically efficient and realistic.*
- *Objective 3 - Extend usable life of existing facilities*
- *Objective 4 - Ensure the plan provides for the maintenance of existing and planned improvements.*
- *Objective 5 - Achieve a balance between public and private sector interests when considering potential new funding sources for transportation improvements.*

**Goal 10: Plan for a transportation system that is environmentally responsible.**

- *Objective 1 - Provide for choice with regard to the use of alternative modes of transportation.*

## Policies and Recommendations

Policies and specific recommendations were developed to support the goals and objectives for improving public transit service in the rural portions of Josephine County. The policies and recommendations are intended to provide a more-detailed guide to meeting the County's short- and long-term transportation needs for this travel mode.

**Policy 8-A:** Josephine County shall establish a sustainable funding source for the operation of public transportation in the county.

- **Recommendation 8-A (1):** Develop tax base dedicated to public transportation, sufficient to maintain existing services when combined with fees and non-discretionary federal and state grants (Tier 2 Alternative).

**Policy 8-B:** Josephine Country shall work to improve intercity connections between Josephine County communities and the Medford urban area.

- **Recommendation 8-B (1):** Investigate opportunities for the planning and funding of new intercity services.
- **Recommendation 8-B (2):** Investigate opportunities for better schedule coordination with private transit service providers.

**Policy 8-C:** Josephine Country shall maintain and enhance the capital facilities and equipment required by JCT.

- **Recommendation 8-C (1):** Review bus stop amenity needs and seek discretionary grant funding where required.
- **Recommendation 8-C (2):** Develop a capital equipment replacement plan and seek discretionary grant funding where required.

**Policy 8-D:** Josephine Country shall provide mobility options for those citizens who cannot, or choose not to, use private transportation due to age limitations, physical disabilities, economic circumstances, lack of access to private transportation, and/or transportation preferences.

- **Recommendation 8-D (1):** Maintain existing services to those citizens with special mobility needs.
- **Recommendation 8-D (2):** Further explore coordination opportunities with private and non-profit providers in order to expand services where needed in the county.

## Public Transit Plan Funding Options

This section identifies potential federal, state and local funding sources. Unless noted, JCT is eligible for each of these revenue sources.

## Federal Sources

*Federal Transit Administration (FTA) Section 5309-Capital Program*

Section 5309 provides funding directly to the transit provider to finance capital improvements such as vehicle acquisition, capital equipment and facility construction. This program will fund up to 80 percent of the costs of capital acquisition. These funds are discretionary and awarded competitively. Congress apportions Section 5309 funds and potential recipients are designated through a political process. After a potential recipient has been designated, it then must submit an application.

*FTA Section 5310 Discretionary Grants*

This program funds vehicles and other capital projects for programs that serve elderly and disabled people. Funding is available to private not-for-profit agencies, or public agencies that support specialized transportation services to senior citizens and persons with disabilities in addition to rural or small city transportation services that benefit the general public. Grant funds are available through the discretionary grant program managed by ODOT. This program has 50 percent match requirements for operating projects and a 10.27 percent requirement for capital or planning projects.

*FTA Section 5311-Nonurbanized Area Formula Program*

Section 5311 is a federally-sponsored program for general public transit services (public and/or private non-profit) in small urban and rural areas. These funds are earmarked for communities that have populations of less than 50,000 people. This program supports capital and operating as well as planning needs. These funds require local matches (80/20 for capital and administration, 50/50 for operating). The ODOT Public Transit Division distributes these funds.

*FTA Section 5311(f) Intercity Program*

Part of 5311 funds are allocated to intercity services. Intercity transit services connect communities to rail, bus and air hubs. The program places an emphasis on connecting communities of 2,500 or more with the next larger market economy (e.g., Medford) and connecting travel modes. These funds can be used for both capital and operating expenses. Local revenues must match these funds. Match requirements are the same as those for 5311 funds.

*Department of Labor/FTA Welfare-To-Work Programs*

The Department of Labor provides grants to communities to provide transitional assistance to move welfare recipients into unsubsidized employment. One of the areas applicants are encouraged to consider is the development of responsive transportation systems to move people to work or to career training. The ODOT Public Transit Division provides technical assistance to help local agencies pursue Job Access and Reverse Commute (JARC) program funding. This is an FTA-administered program for small cities and rural areas, encouraging access to employment. These programs fund capital as well as operating projects and require a 50/50 match.

## State Sources

*Special Transportation Funds (STF)*

STF is generated by a tax on cigarettes, and is available to public and social service transit providers to fund transportation for seniors and persons with disabilities. Funds may be used for capital or operating purpose. ODOT distributes these funds to counties. Seventy-five percent of funds are distributed as formula grants (entitlements) based on population; the other 25 percent is distributed along with federal Elderly and Disabled Capital Program funds and Federal Highway Administration (FHWA) Surface Transportation Program (STP) funds as discretionary grants based on need and merit.

## Local Sources

*Local Option Levy*

A jurisdiction or transportation district could place a local option levy before the voters for the purposes of funding transit. A levy could be placed on properties in either Josephine County, City of Grants Pass

or in a newly formed district covering the core JCT service area. Property values are estimated at $4 billion in the County, $1.3 billion in Grants Pass and $1.9 billion in the service area.

*Payroll Tax*
ORS 267.530 allows a transportation district to impose an excise tax on every employer equal to not more than six tenths of 1% (0.006) of the gross payroll. It is likely that municipalities have the same taxing authority. No vote of the electorate is needed to pass a payroll tax; the governing board of the jurisdiction may pass it. Transit services that use a payroll tax include Wilsonville SMART and Lane Transit District in Eugene.

In 2002, total payroll in Josephine County was approximately $553,000,000. Of that, $15,000,000 was payroll for state employees. Payroll taxes cannot be assessed on state employees. However, state In-Lieu taxes could match any payroll tax income for an amount up to just under $90,000 (an amount equivalent to 0.6% of state payroll total in the county).

## Intercity Bus Service

### Needs
Intercity bus service between Josephine County and other destinations in Oregon and elsewhere in the United States is provided by Greyhound Bus Lines. As described in Chapter 3, existing Greyhound service is provided each weekday along the I-5 corridor between Portland and Sacramento. As of the winter of 2003, Greyhound made four daily stops in Grants Pass in both northbound and southbound directions. Greyhound terminals are located on Agness Avenue and at the Grants Pass Airport near Merlin. No significant improvements are proposed for expansion of the existing privately-operated intercity bus service or facilities.

### Action Plan
Goals and objectives for intercity bus service are typically the same as those previously presented and discussed for general public transit service. Policies and recommendations that are specific to the provision of intercity bus service in Josephine County are described below.

**Policies and Recommendations**
To support the continued availability of intercity bus service to/from the Grants Pass area, the County should consider the following actions:

**Policy 8-E:** Josephine County shall coordinate with private transportation service providers to ensure that there is continued availability of transit, taxi and/or shuttle services to connect with all intercity passenger facilities.

**Policy 8-F:** Josephine County shall encourage the continued operations and future expansion of intercity bus service to and from the Grants Pass area.

- **Recommendation 8-F (1):** Explore coordination opportunities with RVTD for inter-county services.

# Chapter 9
# Transportation System Management/Transportation Demand Management Plan

## Overview

Transportation System Management (TSM) and Transportation Demand Management (TDM) are terms used to describe a broad array of strategies, programs and technologies used to more effectively manage existing transportation resources and to potentially postpone or eliminate the need for major capacity-enhancing investments. The range of TSM and TDM strategies that may be applicable in rural Josephine County are presented and discussed in this chapter.

TSM strategies focus on measures that improve the efficiency of the existing transportation system. Such strategies include traffic signalization, removal of existing unwarranted traffic signals, signal synchronization to improve traffic progression, intersection channelization improvements, one-way streets, parking restrictions, turn prohibitions, and other similar actions. With only one traffic signal in rural Josephine County, Intelligent Transportation Systems (ITS) technologies such as traffic cameras and variable message signs, particularly on state highways offer the greatest potential as TSM strategies for inclusion in the TSP.

TDM strategies and programs are aimed at reducing travel by single-occupant vehicle during peak travel periods, thus reducing the need for additional roadway capacity. TDM strategies include transit passes or other measures to increase transit use, carpools, vanpools, flexible work hours and/or a compressed workweek, telecommuting, videoconferencing, and other similar activities.

## Consistency with Other Plans and Policies

The TSM/TDM component of this TSP is primarily linked to the *Oregon Highway Plan*, Oregon's Transportation Planning Rule (TPR), the *Comprehensive Plan* for Josephine County, and the *Grants Pass Urban Area Master Transportation Plan*. The goals, objectives and policies within these plans and regulations are aimed at ensuring that TSM and TDM strategies are addressed as part of a comprehensive, multi-modal transportation system plan.

The 1999 *Oregon Highway Plan* defines policies and strategies for investing in Oregon's highway system over the next 20 years. It refines and amplifies the goals and policies of the 1992 *Oregon Transportation Plan*, and is part of Oregon's *Statewide Transportation Plan*. The *Oregon Highway Plan* recognizes the need for efficient and effective management of the street and highway system. The Plan places particular emphasis on safer traffic operations and greater system reliability through such actions as Intelligent Transportation Systems (ITS) strategies (including variable message signs to warn of congestion or hazards), slow vehicle turnouts, traffic signals and signs. The *Highway Plan* also recognizes the importance of developing and implementing a variety of travel demand management strategies that reduce reliance on single-occupant vehicles during peak travel times.

The TSM and TDM policies in the *Highway Plan* having the greatest relevance to the Josephine County TSP include:

- Establishing cooperative partnerships with local agencies to enhance overall operations and management of the transportation system.

- Working with local agencies to identify and implement off-(state highway)system improvements where these improvements would be a cost-effective way of improving the operation of the state highway system.
- Considering a broad range of ITS strategies to improve system efficiency and safety in a cost-effective manner. Particularly relevant for rural Josephine County would be such activities as: driver information, emergency or hazard notification, and traffic control.
- Supporting efficient use of the state transportation system through investment in TDM strategies.
- Seeking cost-effective expansion of the highway system's passenger capacity through development and use of park-and-ride facilities.

The Transportation Planning Rule requires that transportation system plans address all modes of transportation, including an evaluation of various TSM and TDM strategies to enhance the efficiency and safety of transportation system operations.

The *Josephine County Comprehensive Plan* contains goals and policies intended to support TSM and TDM strategies. Goal 4 focuses on developing facilities and services that are needed and affordable to County residents. A supporting policy states that *"the physically handicapped and transportation disadvantaged shall be considered in the design of transportation facilities and alternative transportation modes"*. The purpose of Goal 8 is to control pollution. A supporting policy of Goal 8 directs the Board of County Commissioners explore mass transit as an alternative means of transportation, and to also continue management programs that reduce road-associated dust and other forms of air contamination.

The *Grants Pass Urban Area Master Transportation Plan* includes several goals and policies specifically directed at TSM and TDM strategies. While not specifically applicable to the rural portions of Josephine County, they do offer guidance for the development of policies for the *Rural TSP*. Goal 3 pertains to *"Protecting Public Investments in Public Transportation"*. The supporting objective, *"Manage the Transportation System Effectively"* (including the supporting policies), directly relates to TSM and TDM measures. Policy 3.1.1 encourages the use of TSM techniques to preserve and enhance the capacity of transportation facilities in the urban area. Techniques include right-turn channelization, signal-timing coordination and on-street parking management. Policy 3.1.2 encourages the use of TDM techniques to reduce the total demand for travel. In addition, TDM measures are intended to change the timing and location of travel demand, and the chosen mode of travel (from single-occupant vehicles to other modes).

## Transportation System Management

Transportation System Management (or TSM) improvements include actions designed to maximize efficient use of the existing transportation system. TSM strategies include actions such as traffic signalization, signal synchronization to improve traffic progression (particularly along major arterial streets), signal retiming, channelization improvements, one-way streets, parking prohibitions, turn prohibitions, use of Intelligent Transportation Systems (ITS), and other actions.

### Existing TSM Activities

TSM activities currently underway in rural Josephine County include:

- Traffic Signalization - there is currently only one signalized intersection in the rural portion of Josephine County (outside of the Grants Pass and Cave Junction urban areas). This signal is located at the intersection of Merlin-Galice Road with Monument Drive in the Merlin/North Valley area.

- Traffic Channelization – traffic lane channelization enhances the safety and capacity of the existing rural highway system by providing turn lanes and/or acceleration or deceleration lanes

where necessary and appropriate. An example of lane channelization includes the northbound right turn lane on OR 238 at Jaynes Drive that permits the deceleration of right-turning vehicles transitioning from the state highway to the county road.

- Intelligent Transportation System Assets - the development and implementation of Intelligent Transportation Systems (ITS) is a strategic approach to better managing the demands on our street and highway system and, thus, maximizing the value of transportation capital investment. According to the *Oregon ITS Strategic Plan: 1997-2017*, ITS *"involves the application of advanced technology to solve transportation problems, to provide services to travelers, and to assist transportation system operators in implementing the most effective traffic management strategies to meet actual highway conditions"*. Also known as Intelligent Vehicle Highway Systems (IVHS), ITS can help to address existing and projected future transportation system needs by:

  - "*Allowing for better management of transportation supply and demand*" (by allowing transportation managers to respond immediately to operational needs).
  - "*Promoting the use of alternative modes and connectivity across the different modes*".
  - "*Increasing travel efficiency and mobility without increasing the physical size of the transportation facility*" (in other words, getting more use out of each dollar invested in the highway and transit system).
  - "*Enabling travelers to choose (their) travel time, mode and route efficiently based on real-time roadway and transit status information*."
  - "*Reducing the cost of operating and maintaining transportation facilities and services (through the use of newer technology with better reliability)*".
  - "*Providing increased safety and security to travelers*" (through the reduction in time to respond and clear incidents).

  In rural areas, ITS generally focuses on traveler safety and security, emergency services, operations and maintenance systems both for fleet vehicles and roadways, tourism and traveler information, public transportation, and commercial vehicles.

  Josephine County does not currently have TSM or ITS applications in use on the rural roadway system under the County's jurisdiction. However, ODOT operates two types of ITS devices on I-5 and US 199 in the County: highway cameras, and road and weather information systems (RWIS). RWIS technologies are used in areas subject to extreme climate changes to report temperature, wind, precipitation and pavement conditions. ITS applications on I-5 include a highway camera and RWIS at Sexton Mountain Pass north of Merlin. On US 199, ITS features include a variable message sign located in Grants Pass near the UGB, and a highway camera and RWIS installations at Hayes Hill and O'Brien.

## Needs and Strategies

TSM and ITS techniques can serve the need for driver information and education concerning issues such as travel options, weather conditions, and safe speeds in light of potential hazards like wildlife and physical roadway conditions.

Josephine County should continue to coordinate with ODOT and advocate for appropriate use of TSM and ITS on the State highways and major County roads. Areas where TSM and ITS applications may be appropriate include:

- Installation of traffic signals on the rural road system as warranted. The potential need for signalization has been discussed in Chapter 6 and includes the intersections of:

- I-5 northbound ramps at Merlin-Galice Road (Exit 61)
- US 199 at Willow Lane

- Public safety through coordinated response to incidents.

- Travel information such as road closures, weather, roadway events and construction delays. Information could be provided through coordinated efforts with other agencies on the internet.

- Transit information provided through the internet or other media, targeted at residents who are mobility impaired and dependent on rural transit for mobility.

- On-going traffic monitoring to provide the data necessary for effective management of the existing transportation system.

## Transportation Demand Management

Transportation Demand Management or TDM involves using a variety of strategies to reduce travel by single-occupant vehicle during peak travel periods, to reduce the need for additional roadway capacity. TDM strategies include the use of transit, carpooling, vanpooling, working flexible hours and/or a compressed workweek, and working from home through the use of communications technology. Most TDM strategies rely on voluntary participation and often incentives are provided to make the use of these strategies more attractive. TDM measures can also include land use actions such as higher density or mixed-use development and growth management (Smart Growth) strategies.

### Existing TDM Activities

Presently Josephine County does not have a TDM program for the rural area of the County. In Jackson County, RVTD currently promotes a full range of several TDM strategies, some of which may be applicable to Josephine County. Potential TDM strategies that could be expanded by RVTD in Josephine County including, but may not be limited to: education programs, carpools, vanpools, telework, and other strategies.

### Needs and Strategies

Table 9-1 lists TDM strategies that could be considered for implementation within rural Josephine County.

**Table 9-1**
**Examples of Transportation Demand Management Strategies**

| Strategy | Description |
|---|---|
| Alternative Work Hours | Flex time and alternative work weeks (such as 4 10-hour days) |
| Bicycle Improvements | Improved bicycle planning, education and facilities |
| Guaranteed Ride Home | Provide a limited number of free rides home for transit and rideshare commuters |
| Intermodal Bicycle Services | Provision of bike lockers at transit stops; bike racks on transit vehicles |
| Park and Ride | Provision of commuter parking at urban-fringe transit stops |
| Preferential Parking | Preferential parking for rideshare vehicles |
| Rideshare Programs | Rideshare promotions and ride-matching |
| Security | Address security concerns of rideshare, transit, cycle, and pedestrian commuters |
| Telecommuting | Working at home to avoid commute trips |
| Transit Improvements | Improve public transit service |
| Vanpool Programs | Promotion/organization of vanpools |

The County typically has a support role for TDM strategies, which is acknowledged in the following strategies:

- Coordinate with Rogue Valley Community College, major employers in the Merlin area, and business organizations such as the Grants Pass Chamber of Commerce to encourage TDM strategies including flex time/alternative work weeks, ridesharing and telecommuting.

- Coordinate with ODOT and the City of Grants Pass to pursue opportunities for installing one or more park-and-ride lots at the edge of the Grants Pass UGB.

# TSM/TDM Action Plan

## Draft TSM/TDM Goals and Objectives

Draft goals and objectives to address the need for Transportation System Management (TSM) and Transportation Demand Management (TDM) actions have been developed for the *Josephine County Rural TSP*. These goals and objectives are as follows (numbers reflect the numbering of the complete list of goals and objectives).

**Goal 1: Improve safety for all transportation modes.**

- *Objective 1 - Ensure the transportation system is planned to maximize safety.*

**Goal 2: Provide for a transportation system that is accessible, efficient and practical.**

- *Objective 1 - Increase mobility and access options for Josephine County citizens.*

**Goal 3: Provide sufficient capacity within the transportation system to accommodate future demand.**

- *Objective 1 - Satisfy Transportation Planning Rule requirements for system capacity and for encouraging the use of alternative modes of transportation.*
- *Objective 2 – Maximize transportation system capacity through the use of facility improvement, Transportation Demand Management actions, Transportation System Management actions, appropriate IVHS and other appropriate tools and techniques.*
- *Objective 3 - Encourage alternative modes of transportation by providing for a choice in modes.*

## TSM/TDM Policies and Recommendations

Policies and recommended actions were identified as a means to support TSP goals and objectives for each transportation mode, including TSM and TDM. The policies and recommendations listed below are intended to provide direction to the County for on-going TSM and TDM activities and improvements.

**Policy 9-A:** Josephine County will pursue and encourage implementation of Transportation Demand Management (TDM) and Transportation System Management (TSM) activities whenever possible as an alternative to building new transportation facilities.

- **Recommendation 9-A (1):** Josephine County should promote the use of alternative commute options to reduce motor vehicle travel generated by employment sites and schools by participating in activities to raise awareness about the use of TDM strategies.

- **Recommendation 9-A (2):** Josephine County should seek support from RVTD resources as available.

- **Recommendation 9-A (3):** Josephine County should work cooperatively with ODOT to identify and implement appropriate TSM strategies on the rural road and highway system including ITS strategies.

# Chapter 10
# Air Transportation Plan

## Overview

This chapter includes a review and assessment of needs, deficiencies, policies and improvement options affecting the air transportation system within Josephine County. Included is a discussion of the local and regional planning and policy context for developing and maintaining this travel mode, an evaluation of needs and deficiencies in the existing system, and a discussion of various improvement recommendations for enhancing and expanding this system.

Information contained in this memo was obtained largely from the 1992 *Grants Pass Airport Master Plan,* the 1992 *Illinois Valley Airport Master Plan*, and the 2001 *Illinois Valley Airport, Airport Layout Plan Update Report*. These three plans document existing and future demand for airport services, evaluate the condition of airport facilities, and identify the need for improvements. Of particular importance to the TSP are any landside access issues to these airports (including access from the airport property to the state and county roadway system. Also important are issues related to the preservation of compatible land uses in the vicinity of these airports to ensure that their long-term operational feasibility is not compromised by encroaching incompatible development.

## Consistency with Other Plans and Policies

The air transportation component of this TSP is primarily linked to the *Oregon Aviation Plan*, Oregon's Transportation Planning Rule (TPR), the *Comprehensive Plan* for Josephine County, and the *Grants Pass Urban Area Master Transportation Plan*. The goals, objectives and policies within these plans and regulations are aimed at ensuring that air transportation is addressed as part of a comprehensive, multi-modal transportation system plan.

The 2000 *Oregon Aviation Plan* defines policies and strategies for investing in Oregon's public-use aviation system over the next 20 years. It refines and amplifies the goals and policies of the 1992 *Oregon Transportation Plan*, and is part of Oregon's *Statewide Transportation Plan*. The *Oregon Aviation Plan* recognizes the key role that public-use airports play in ensuring economic growth and livability throughout the state, and the importance of air transportation in connecting Oregon's rural populations with services and businesses in larger cities, the nation, and beyond. The policies within this plan having the greatest relevance to the *Josephine County Rural TSP* include:

- Preserving Oregon's system of airports and current service levels.
- Protecting airports from incompatible land uses.
- Supporting airport access for emergency and medical response.
- Supporting economic development by providing access to markets.
- Integrating airport systems with surface modes of transportation, and allowing for a choice of modes for moving people and goods.

The Transportation Planning Rule requires that transportation system plans address all modes of transportation, including air transportation.

The *Josephine County Comprehensive Plan* (2000) contains goals and supporting policies related to air transportation. Goal 4 focuses on developing facilities and services that are needed and affordable to County residents. A supporting policy pertaining to air transportation states that *"the County shall*

*continue to maintain and improve the appropriate airport facilities within Josephine County. Zoning standards shall be established to prevent the development of incompatible uses or hazardous structures within the flight approach zones. Any development and expansion will be in accordance with applicable airport master plans"*. Goal 5 is intended to *"diversify, expand and stabilize economic opportunities for the betterment of the County"*. This goal is supported by a policy stating that County-owned land in the vicinity of the Grants Pass (Merlin area) Airport will be developed for industrial use.

The *Grants Pass Urban Area Master Transportation Plan* includes goals and policies related to air transportation. While not specifically applicable to the rural portions of Josephine County, they do offer guidance for the development of policies for the *Rural TSP*. Goal 1 encourages the City of Grants Pass, Josephine County and ODOT to *"Provide a Comprehensive Transportation System"*. This goal is supported by the objective of providing a multi-modal transportation system. Policy 1.5.1 relates somewhat to air transportation, as it calls for the provision of transportation choices for the movement of both people and goods.

The Rogue Valley International/Medford Airport (located at the northern end of the Medford urban area), is also important to the movement of people and goods by air in Josephine County. Along with the more distant airports in Coos Bay/North Bend and Klamath Falls, this facility is one of the few locations offering regularly scheduled airline service in southern Oregon. Of particular importance to the residents of Josephine County is the policy direction for operation and improvement to air carrier service in southern Oregon established by the 2002 *Regional Transportation Plan (RTP)* prepared by the Rogue Valley Council of Governments. The RTP recommends local governments to *"…take actions to promote air transportation in the region and its connections with the other areas in the state, nation, and abroad. This includes ensuring that good ground transportation is available for passengers and freight, and that the Airport Master Plan is periodically updated as necessary."* (Policy 13-1).

## Needs

Within Josephine County there are two general aviation public airports, the Grants Pass Airport located just north of Grants Pass near the outskirts of Merlin, and the Illinois Valley Airport located approximately four miles south of Cave Junction. A discussion of the existing facilities and usage patterns at these airports, as well as future projected use and improvement needs are briefly discussed in this section.

### Grants Pass Airport

The first Grants Pass Airport was built in 1928 just north of the city. The current airport near Merlin (approximately five miles northwest of Grants Pass) was completed in 1959, and is dedicated to general aviation use. Various improvements, including additional land acquisition for airport expansion, have been made to this airport over the past 45 years. The airport currently has 400 acres with a 4,000-foot runway, 46 hangars owned by the county, 70 private hangars, 75 outdoor tie-downs, and several commercial businesses on-site. Aviation fuel is also available on-site. Access to this airport is via Merlin-Galice Road and Carton Way. No existing or future high accident or congestion problems have been identified in the immediate airport area that exceed the County's threshold for improvement.

It should be noted that the Grants Pass Airport is currently located within the federal Foreign Trade Zone (FTZ) 206 (along with the Rogue Valley International/Medford Airport and substantial surrounding property). As noted in the discussion of freight movement, FTZs are secured areas that allow companies doing business within them to reduce or eliminate a number of federal duties, taxes, and quotas that otherwise might otherwise apply, thereby potentially improving profitability. The FTZ designation is used as a business development or economic development tool. In the Merlin area, much of the freight-related activity that could benefit from the FTZ is currently centered on the North Valley Industrial Park.

Potential future industrial development at the airport, on the Rendata property or in other locations, could also benefit from the FTZ designation.

The 1992 *Grants Pass Airport Master Plan* reports that the airport will continue to serve mainly general aviation traffic. Annual aircraft operations are projected to increase by 50 percent from 1992 to 2010, but would not exceed the capacity of the existing runway and taxi system. The *Master Plan* recommends expanding the runway length by 1,200 feet to increase the range of business aircraft it can accommodate. It also recommends various other airport infrastructure improvements including additional hangars and tie-downs, and improved navigational aids. Additionally, the *Master Plan* recommends various roadway and other infrastructure improvements to support development at the North Valley Industrial Park, such as the extension of Flaming Road to Paradise Ranch.

## Illinois Valley Airport

The Illinois Valley Airport was established in 1943 as a U.S. Forest Service smoke jumper base. The airport was deactivated by the Forest Service in 1981 and deeded to Josephine County in 1988. The airport is located four miles south of Cave Junction immediately adjacent to US 199. The airport currently serves a variety of general aviation users, with occasional government use. The airport has 175 acres with a 5,200-foot runway, VFR (visual flight rules) navigational aids, 20 rental hangars, recreational camping facilities, an on-site restaurant, and some industrial park development. Direct access to this airport is available from US 199. Secondary access is available via Airport Road. Approximately 400 feet of the existing runway has a displaced threshold due to the proximity of Airport Road.

The 2001 Airport Layout Plan includes several recommendations to accommodate anticipated growth in aircraft activity at this airport. These recommendations include returning the runway to a full 5,200 feet of useable length with the realignment of Airport Drive, development of new facilities on the airport site including taxiways, hangars, aircraft aprons, navigational aids, lighting, and fuel storage. The purchase of approximately 70 acres on the west side of the runway was recommended to expand industrial development potential, particularly in relation to the Foreign Trade Zone located on the northwest corner of the airport property. Some industrial park development has recently been completed which can accommodate between 15 and 20 businesses.

With a full service, air carrier airport offering scheduled passenger service located nearby in Medford, the Grants Pass Airport and Illinois Valley Airport appear to meet existing needs for general aviation services within rural Josephine County.

## Land Use Issues

In addition to the airport improvement needs identified and discussed above, consideration needs to be given to the impacts that the Grants Pass and Illinois Valley Airports can have on land uses in their vicinity. These impacts include not only potential safety issues related to both aircraft operations and risks to surrounding land uses, but also potentially to neighborhood quality of life issues related to airport noise. The economic and transportation needs associated with airport use and development must be balanced against these potential land use issues.

To address airport area land use issues, the Oregon Administrative Rules (Section 660-013-Airport Planning) requires local agencies with planning authority for one or more airports or for areas within safety or compatibility zones around airports to adopt comprehensive plan and land use regulations for airports consistent with the requirements to that division and ORS 836.600 through 836.630. These plans and regulations are intended to encourage the long-term viability and compatibility of airports with their surrounding communities.

To meet the requirements of the OAR, local governments are required to:

- Adopt an Airport Safety Overlay Zone to prohibit structure, trees and other objects of natural growth from penetrating airport imaginary surfaces (e.g., in particular, height limitations in areas used by aircraft to approach or depart from the airport's runways);

- Adopt airport compatibility requirements to prohibit new residential development and public assembly within the Runway Protection Zone; to limit establishment of specified uses within a noise impact boundary; to prohibit siting of new industrial uses and the expansion of existing industrial uses that could cause emissions of smoke, dust or steam that would obscure visibility within airport approach corridors; to limit outdoor lighting that would project directly onto an existing runway or taxiway or into existing airport approach corridors; to coordinate siting of transmission facilities with ODOT Aeronautics Division; and to regulate water impounds and the establishment of new landfills near airports (that might attract birds).

# Action Plan

## Draft Air Transportation Goals and Objectives

Draft goals and objectives to address the needs of air transportation have been developed for the rural Josephine County TSP. These goals and objectives are as follows (numbers reflect the numbering of the complete list of goals and objectives).

**Goal 1: Improve safety for all transportation modes.**

- *Objective 1 - Ensure the transportation system is planned to maximize safety.*

**Goal 2: Provide for a transportation system that is accessible, efficient and practical.**

- *Objective 1 - Increase mobility and access options for Josephine County citizens.*
- *Objective 2 - Facilitate movement of goods into and out of the County.*
- *Objective 3 - Enhance freight mobility (by rail, truck and air) and intermodal transfer.*
- *Objective 4 - Address changing characteristics of trucking, aviation and rail industries.*

**Goal 3: Provide sufficient capacity within the transportation system to accommodate future demand.**

- *Objective 1 - Satisfy Transportation Planning Rule requirements for system capacity and for encouraging the use of alternative modes of transportation.*
- *Objective 3 - Encourage alternative modes of transportation by providing for a choice in modes.*

**Goal 5: Provide system connections as needed to improve efficiency and access and to improve circulation.**

- *Objective 3 - Achieve improved connectivity between modes of transportation.*

**Goal 6: Consider and implement land use and transportation plans/solutions simultaneously in all planning activities.**

- *Objective 1 - Provide for the consideration of the interrelationships and connections between transportation and land use in future planning.*
- *Objective 2 - Ensure that transportation improvements meet the needs of rural land uses, consistent with the Transportation Planning Rule.*

## Policies and Recommendations

Policies and recommended actions were identified as a means to support TSP goals and objectives for each transportation mode, including aviation. The policies and recommendations listed below are

intended to provide direction to the County for the on-going management and improvement of the air transportation system, with particular emphasis on the Grants Pass and Illinois Valley Airports.

**Policy 10-A:** Future updates to the plans for the Grants Pass and Illinois Valley airports and the transportation system plans for Josephine County, Cave Junction and Grants Pass should be coordinated to:

- Improve opportunities and efficiencies for emergency and medical response;
- Maximize economic development opportunities by improving access between industry and commerce to markets both within and outside the region; and
- Provide for appropriate connections between modes of transportation to facilitate choice and efficiencies for the movement of people and goods.

**Policy 10-B:** Josephine County should coordinate implementation of recommended roadway system improvements in the vicinity of the Grants Pass and Illinois Valley Airports with the access and infrastructure needs of these facilities.

- **Recommendation 10-B (1):** Development plans and secure funding to implement the following roadway improvements:
  - Adding left turn lanes and bicycle lanes on Monument Drive.
  - Widening the Merlin-Galice Road/Monument Drive intersection to provide additional turn lanes and protected left turns.
  - Improving the I-5 northbound/Merlin-Galice Road intersection area to accommodate anticipated traffic growth.

**Policy 10-C:** Josephine County will protect the function and operations of airports from incompatible land uses.

- **Recommendation 10-C (1):** To address land use compatibility issues in the vicinity of the Grants Pass and Illinois Valley Airports, the current comprehensive plan and code should be evaluated to ensure the following:
  - That the types and levels of public facilities and services needed to support development located at or planned for the airports are provided;
  - That there is adequate mapping of the airport areas as required by OAR 660-013;
  - Develop and consider any ordinances necessary to carry out the requirements of OAR 660-013 consistent with applicable statewide planning requirements. This might include revisions to the County's existing Airport Overlay Zone (Josephine County RLDC, Aritcle 69.4) if this is determined to be inadequate to meet the requirements of OAR 660-013 for the safety provisions of an Airport Overlay Zone;

- **Recommendation 10-C (2):** Consider land use plans in the vicinity of the airport to minimize potential safety and noise related impacts associated with the airports.

# Chapter 11
# Non-Motorized Transportation Plan

## Overview

This chapter documents the review and assessment of needs, deficiencies, policies and improvement options affecting the bicycle and pedestrian transportation systems in Josephine County. Included is a discussion of the local and regional policy context for developing and maintaining the non-motorized travel modes, an evaluation of needs and deficiencies in the existing systems, a discussion of improvement strategies for enhancing and expanding these systems, and a summary of recommended improvements.

In rural Josephine County, bicyclists and pedestrians generally share the same facilities. Unlike urbanized areas – where bicyclists use designated lanes or wide shoulders, and pedestrians use sidewalks – rural facilities for non-motorized travel usually consist of wide shoulders and/or multi-use paths. As in most rural areas, bicycle/pedestrian needs are similar. Facilities that are deficient for one mode are usually deficient for the other, thus recommended improvements can benefit both modes. For these reasons, the following discussion of needs and recommended improvements apply to both the bicycle and pedestrian system.

Information contained in this chapter was obtained largely from the existing conditions inventory discussed in Chapter 3, as well as the goals and policies related to non-motorized travel from several relevant planning documents.

## Consistency with Other Plans and Policies

The non-motorized (bicycle and pedestrian) portion of the *Josephine County Rural TSP* is influenced and guided by a number of plans, policies and programs at both the state and local level including the *Oregon Bicycle and Pedestrian Plan*, the Transportation Planning Rule (TPR), and a variety of local plans adopted by Josephine County and the Cities of Grants Pass and Cave Junction. The *Oregon Bicycle and Pedestrian Plan* (adopted by the Oregon Transportation Commission in June 1995) contains an overall "vision" of a transportation system with appropriate choices for all users; wherein streets, roads and highways are designed to encourage bicycling; and other elements are in place to accommodate non-motorized travel. Included in the document are planning principles pertaining to rural bikeways and walkways. The Plan notes that wide shoulders are appropriate to accommodate bicycle and pedestrian travel on rural roads, however there are locations (like high-intensity commercial development) that warrant the need for striped bicycle lanes and sidewalks. The document also includes guidelines for providing non-motorized facilities on routes parallel to state highways.

The TPR (State Planning Goal 12) requires the Oregon Department of Transportation (ODOT) and the cities and counties of Oregon to cooperate and develop balanced transportation systems, including bicycle and pedestrian facilities. Oregon Revised Statute (ORS) 366.514 further requires the provision of bicycle and pedestrian facilities as part of all arterial and major collector construction, reconstruction, or relocation projects where conditions permit. Additionally, in any fiscal year, at least one percent of road improvement funds in a jurisdiction must be allocated for bicycle/pedestrian projects. This amount is in addition to any spending to provide bikeways and/or walkways as part of road construction projects. In rural areas (which encompass roads covered by the TSP), roadway shoulders qualify as bicycle and pedestrian facilities on new or reconstructed roads.

Goal 4 of the of the *Josephine County Comprehensive Plan* addresses the mobility needs for those with special needs stating, *"The physically handicapped and transportation disadvantaged shall be considered in the design of transportation facilities and alternative transportation modes."* This goal is particularly pertinent to the provision of pedestrian facilities that meet the standards required by the Americans with Disabilities Act (or ADA). Goal 9 of the *Comprehensive Plan* pertains to the development and preservation of energy resources and includes a supporting policy that encourages the construction of multi-use paths as a part of the reconstruction or development of new roads or streets, particularly to serve major shopping centers, recreational facilities and educational centers.

The *Josephine County Bicycle Master Plan* was prepared by the Josephine County/Grants Pass Bicycle Advisory Committee. Established by the County Board of Commissioners and Grants Pass City Council in 1978 this committee was tasked with creating a master plan for bicycle facilities in response to citizen requests to establish a plan for a network of meaningful bicycle routes in the City of Grants Pass and the surrounding areas. The *Bicycle Master Plan Proposal* was completed in 1982 and contains the following objectives:

- Coordinate the Bikeway Plan with any change in the city or county Transportation Plan or Comprehensive Plan that would affect the bikeways system;
- Incorporate the Bikeway Plan in design, road construction or reconstruction;
- Include facilities for bicycle parking in the planning requirements of new commercial areas, single and multi-use facilities and other developmental projects; and
- Encourage increasing bicycle parking facilities in existing commercial and developed areas.

The *Grants Pass Urban Area Master Transportation Plan* (adopted in 1997) provides a description of the planned bicycle and pedestrian system for the Grants Pass area. According to the Plan, the City's future bicycle network will be realized by improving existing transportation facilities and providing additional connections to schools and major parks. Among the recommendations is a bicycle/pedestrian bridge spanning the Rogue River on the west side of the City. The Plan notes that adequate connections between this bridge and the surrounding bicycle/pedestrian network may eliminate the need to include bicycle lanes on the proposed "Fourth Bridge" (a nearby facility to be constructed sometime between 2006 and 2015). General recommendations like bicycle parking facilities and ongoing bikeway maintenance are also listed. The Master Transportation Plan also provides general recommendations for improving the City's pedestrian system. Presently, the Grants Pass downtown core is well-served by sidewalks, but outer areas (specifically the southwest and southeast portions of the City) are underserved. The Plan recommends incorporating sidewalks into all new roadway construction and reconstruction.

The City of Grants Pass is also planning to construct the Rogue River Greenway, a multi-use path that will travel along the south side of the river initially between Tussing Park and Riverside Park. Using a combination of riverfront corridors and nearby streets, the path will eventually connect the Third Bridge (US 199) and the proposed Fourth Bridge (near the Josephine County Fairgrounds).

The *Cave Junction Transportation System Plan* was adopted in July 2001. The bicycle/pedestrian element provides a list of recommended improvements while noting the City's limited funding. The document also notes that several recommended bicycle/pedestrian improvements are located on State and County roads, therefore falling under the responsibility of their associated agencies. US 199 is described as a physical barrier for bicyclists and pedestrians. Within city limits, the Cave Junction TSP recommends narrowing the highway's interior lanes to provide wider outside lanes for shared vehicle/bicycle travel. Additionally, curb ramps are recommended at intersections along US 199 to provide better travel for persons with disabilities. For new facilities, the TSP calls for bicycle facilities on all arterials and collectors and for sidewalks on all new streets.

## Needs

As discussed in Chapter 3, about 36 miles of the 576 miles of roadway maintained by the County include designated bicycle facilities. Existing facilities cover a limited geographic area and, in most cases, are disconnected and do not serve major destinations like schools and employment areas. All but two of the 36 miles have wider lanes classified as shared roadways; striped bike lanes exist on 1.5 miles of County roads. A shoulder width of 4 feet is generally the minimum standard to adequately accommodate shared bicycle/pedestrian travel on state highways and on other rural roadways without curbs. Most bicycle/pedestrian facilities are located on major and minor collector streets, which require minimum shoulder widths of 8 feet and 6 feet, respectively[16]. Although bicyclists and pedestrians are not restricted from using other County roads, narrow lanes and/or lack of shoulders make them less desirable than the designated facilities.

State highways in Josephine County also have shoulder segments wider than 4 feet, but the system is not continuous. Between Grants Pass and Cave Junction, US 199 generally has wide shoulders, but includes several segments with narrow shoulders. South of Cave Junction, wide shoulders are only found in vicinity of the community of O'Brien. OR 238 has wide shoulders between Grants Pass and Murphy, but narrows beyond Murphy. The Rogue River Loop Highway (also a state-owned facility) only has wide shoulders between US 199 and Marcy Loop. The entire segment of Interstate 5 in Josephine County has wide shoulders, but provides little comfort for bicycle/pedestrian travel due to speeds of vehicle traffic and level of truck traffic. Finally, OR 46 and the portions of OR 99 within County boundaries typically have shoulders less than 4 feet wide.

Most primary roadways in the County lack sidewalks, as do most of the roads serving destinations like schools and parks. Only a few streets have sidewalks on both sides, and those that do are either short streets or short segments. Sidewalks are provided on about two percent of Josephine County's total roadway system, with 12.5 miles of sidewalk on 67 streets. None of these road segments are in the rural network covered by this plan.

Figure 3-6 in Chapter 3 shows activity centers throughout the County, including parks, schools, rural centers, commercial nodes and popular recreational bicycling areas. The figure also shows County road and State highway segments where shoulders are at least four feet wide, the minimum to accommodate pedestrian and bicycle travel. There are many sections of State highways and County roads near the activity centers that lack shoulders or contain narrow shoulders, forcing bicyclists and pedestrians to travel in the motor vehicle lane or entirely off the road on an unpaved surface (which is often vegetated or used for drainage).

Non-motorized access to and from activity centers is important for the County transportation system, as these areas currently generate or have the potential to generate the greatest number of trips in rural Josephine County. Not only will improved bicycle/pedestrian access to these centers increase safety for these modes, the improvements have the potential to reduce the number trips made via personal automobile.

Appendix A attached to TSP Technical Memorandum #2: Existing Conditions lists the Collector roadway segments shown on Figure 3-6 that are within one mile of activity centers and have hard-surfaced shoulders less than four feet wide. Nearly 86 miles of roadway are considered "deficient" due to these characteristics. Improving shoulder widths on these segments would flesh out the system, providing safety benefits for pedestrians, bicyclists, transit patrons, as well as motor vehicle operators.

[16] Josephine County Roadway Traffic and Management Plan.

In 2003, the Josephine County/Grants Pass Bikeways Committee met to discuss recommendations for the *Rural Transportation System Plan*. The committee created several guiding principles intended to serve as a blueprint for bicycle facility planning. These principles include:

- Accounting for bike lane design standards for all roads subject to the TSP;
- Considering bike lane construction within a 2- to 3-mile radius of all schools and parks;
- Requiring driveway aprons to be paved in order to reduce dirt and gravel accumulation on bike lanes and shoulders; and
- Implementing appropriate signing, striping, sweeping and ongoing maintenance programs.

The Committee also generated a list of specific facilities in need of new or improved bicycle facilities. As the initial list included almost all classified roads in the County, the Committee developed criteria to assign priority to the desired projects. The following criteria were used to shorten the desired project list:

- Likelihood of the facility to be used by bicyclists and pedestrians;
- Facility serves as a commuter link;
- Facility serves as a school route;
- Facility serves as a recreational/tourism route; and
- Cost and relative ease of implementation.

It should be noted that many people in the rural portions of the County have an interest in horseback riding. While this travel mode is not explicitly addressed in the Transportation Planning Rule or state guidelines for transportation system plan development, opportunities to develop equestrian trails should be explored in conjunction with the development of multi-use pedestrian and bicycle facilities. Key issues to be addressed must, at a minimum, include separation from motorized traffic (for safety) and pavement surfacing (where there may be competing needs from bicyclists and pedestrians for a different pavement type). It may be appropriate for some equestrian facilities to be developed outside of roadway corridors in conjunction with other recreational facility development (such as parks or the Rogue River Greenway).

## Strategies

A number of strategies were developed to provide the basis for policies and priorities to guide Josephine County's bicycle/pedestrian facility improvements in the coming decades. In part, these strategies were derived from existing policies and an assessment of existing deficiencies, as well as current improvement programs.

To start, the Josephine County/Grants Pass Bikeways Committee generated a list of specific facilities in need of new or improved bicycle facilities. The criteria listed above were used to shorten the list of projects to four specific roadways recommended for bicycle facilities and to be included in the TSP:

- Rogue River Loop Highway (entire distance) and Lower River Road (between Rogue River Loop Highway and Grants Pass UGB)

- Monument Drive between North Valley High School and Hugo Road

- OR 99 between Grants Pass UGB and the Josephine/Jackson County line

- OR 238 between Grants Pass UGB and the Josephine/Jackson County line

Five improvement "scenarios" were initially developed for the TSP, each focusing on a different aspect of the transportation system that stakeholders identified as important for the *Josephine County Rural TSP*. These improvement scenarios provided the initial step in assigning priority to County transportation needs. For each scenario, individual improvements were identified, analyzed and ranked according to a set of qualitative and quantitative criteria developed by stakeholders.

Each scenario has a different emphasis to reflect a range of policy and financial choices for the County. The five TSP scenarios included:

- No Build Scenario – this scenario includes no new projects and is limited to existing committed funding sources, which are largely devoted to a minimal program of roadway maintenance projects. This scenario assumes no new funding.

- Maintenance Scenario – this scenario includes no new capacity projects but focuses on enhancing the County's existing maintenance program and providing needed repair or replacement of existing structurally deficient bridges.

- Safety Scenario – this scenario focuses on projects addressing vehicle safety, and safety enhancements for non-motorized travel mainly within one mile of rural activity centers.

- Mobility/Accessibility Scenario – this scenario includes potential solutions for projected future mobility needs, including congested roadways and intersections, and improvements aimed at enhancing multi-modal accessibility – particularly for transit riders.

- Economic Development Scenario – this scenario includes improvements that would enhance freight mobility and accessibility to employment centers in the rural portions of the county, and would enhance transportation infrastructure that would support the expansion of recreational and tourism activity. Included are projects that improve access to industrial and commercial land, bicycle/pedestrian improvements to highways that could be used for bicycle touring consistent with the County's adopted *Bicycle Master Plan*, and potential rail improvements within or otherwise benefiting the county.

Each scenario differs in the degree to which the County's non-motorized system would be improved, as shown in Table 11-1. The five "scenarios" were assessed using the project evaluation method and criteria discussed in Chapter 5. Projects were rated based on their effectiveness in meeting a wide-ranging list of criteria including safety, non-motorized travel benefits, potential environmental impacts, and benefit for groups that are transportation-disadvantaged (Appendix D presents the matrices for projects initially evaluated in each scenario). The intent of this process was to ultimately develop a financially-constrained or "preferred" alternative. While the scoring method was used to establish a list of high priority projects, this evaluation was augmented by discussions between County staff and the County's Bicycle Advisory Committee which identified it's own priority list.

Based on the prioritization analysis, three "tiered" improvement alternatives were developed: Tier 1 (based on existing levels of funding), Tier 2 (assuming enhanced revenue for transportation improvements), and Tier 3 (representing the full list of potential improvements that respond to identified needs). Tier 1 projects are identical to those listed in the No Build Scenario, which includes no new bicycle or pedestrian projects and is limited to existing funding sources that are focused on a minimal program of maintenance projects. The Tier 3 project list includes all specific improvements that meet the identified needs described in the five scenarios. Tier 2 is recommended as the "Preferred Alternative" for the TSP.

**Table 11-1**
**Bicycle/Pedestrian System Improvements Associated with Each Improvement Scenario**

| Scenario | Bicycle/Pedestrian System Improvement Projects |
|---|---|
| No-Build | • Programmed routine roadway and bikeway maintenance |
| Maintenance | • Expanded roadway and bikeway maintenance<br>• Widen/surface shoulders on New Hope Road (Hidden Valley Road to OR 238)<br>• Widen/surface shoulders on Pine Crest Dr/Plumtree Lane (Camp Joy Rd to Upper River Rd)<br>• Widen/surface shoulders on Cloverlawn Drive (East View Place to Jaynes Drive)<br>• Widen/surface shoulders on Lakeshore Drive (US 199 to McMullen Creek Road)<br>• Widen/surface shoulders on Laurel Road (US 199 to OR 46) |
| Safety | • Improve shoulders (to 4-foot minimum) on existing Major/Minor Collector Roadways within one mile of rural activity centers |
| Mobility and Accessibility | • No identified bikeway improvement |
| Economic Development | • Add bicycle lanes on Monument Drive (North Valley High School to Hugo Road)<br>• Add bicycle lanes on Rogue River Loop Highway (entire distance) and Lower River Road (Rogue River Loop Highway to Grants Pass UGB)<br>• Add bicycle lanes on OR 99 (Grants Pass UGB to Josephine/Jackson County line)<br>• Add bicycle lanes on OR 238 (Grants Pass UGB to Josephine/Jackson County line)<br>• Balance of bikeways recommended in the Josephine County Bicycle Master Plan |

In developing the recommended list of priority bicycle and pedestrian facility projects, consideration was also given to exploring opportunities to use existing or abandoned railroad rights-of-way within the county for these modes. There are currently no abandoned railroad rights-of-way that would be appropriate for non-motorized transportation development. Any use of the existing Central Oregon and Pacific Railroad's (CORP's) right-of-way would require coordination with and agreement by CORP, the owner/operator of active rail service within the right-of-way. Challenges with using this right-of-way would include, but not be limited to, providing separation and protection from train operations, providing new structures for creek or ravine crossings, and ensuring adequate road crossing protection.

# Action Plan

## Draft Bicycle and Pedestrian System Goals and Objectives

Early in the TSP development process, the County developed a number of draft TSP goals and objectives for the future transportation system. Draft goals and supporting objectives pertinent to bicycle and pedestrian facility planning and development are listed below (numbers reflect the numbering of the complete list of goals and objectives):

**Goal 3: Provide sufficient capacity within the transportation system to accommodate future demand.**

- *Objective 1 - Satisfy Transportation Planning Rule requirements for system capacity and for encouraging the use of alternative modes of transportation.*
- *Objective 3 - Encourage alternative modes of transportation by providing for a choice in modes.*

**Goal 10: Plan for a transportation system that is environmentally responsible.**

- *Objective 1 - Provide for choice with regard to the use of alternative modes of transportation.*

## Policies and Recommendations

Policies and specific recommendations were developed as a means to support the TSP goals and objectives. The policies and recommendations are intended to provide a more-detailed guide toward meeting the County's short- and long-term transportation needs. The policies and recommendations listed below apply to the Josephine County bicycle and pedestrian systems.

**Policy 11-A:** Josephine County shall construct bicycle lanes/wide shoulders on all new arterial or collector roadways or as part of all projects on arterials or collectors involving major reconstruction as conditions permit.

- **Recommendation 11-A (1):** Include bicycle lanes or wide shoulders when new arterial or collector roads are constructed, or when existing facilities are reconstructed as conditions permit.

  Several of the recommended projects listed in this chapter consist of widening county roads to provide adequate shoulder widths to accommodate bicycle and pedestrian travel. As mentioned earlier, wide shoulders generally serve the needs of pedestrians on rural roadways while sidewalks are provided in urban areas. However, this criterion is not absolute in that installation of sidewalks may be appropriate along some rural roads, particularly in the vicinity of schools and/or rural activity centers.

  While providing wide shoulders consistent with County standards on all arterial and collector roads would contribute to an ideal bicycle/pedestrian environment, this may not be feasible due to constraints such as right-of-way, built or natural environmental impacts, extraordinarily high costs or other factors. Ultimately inclusion bicycle/pedestrian amenities on existing and new roads will not only expand the non-motorized transportation network, but will also provide more travel options.

- **Recommendation 11-A (2):** Work closely with the Oregon Department of Transportation to improve bicycle/pedestrian facilities on the state highway system.

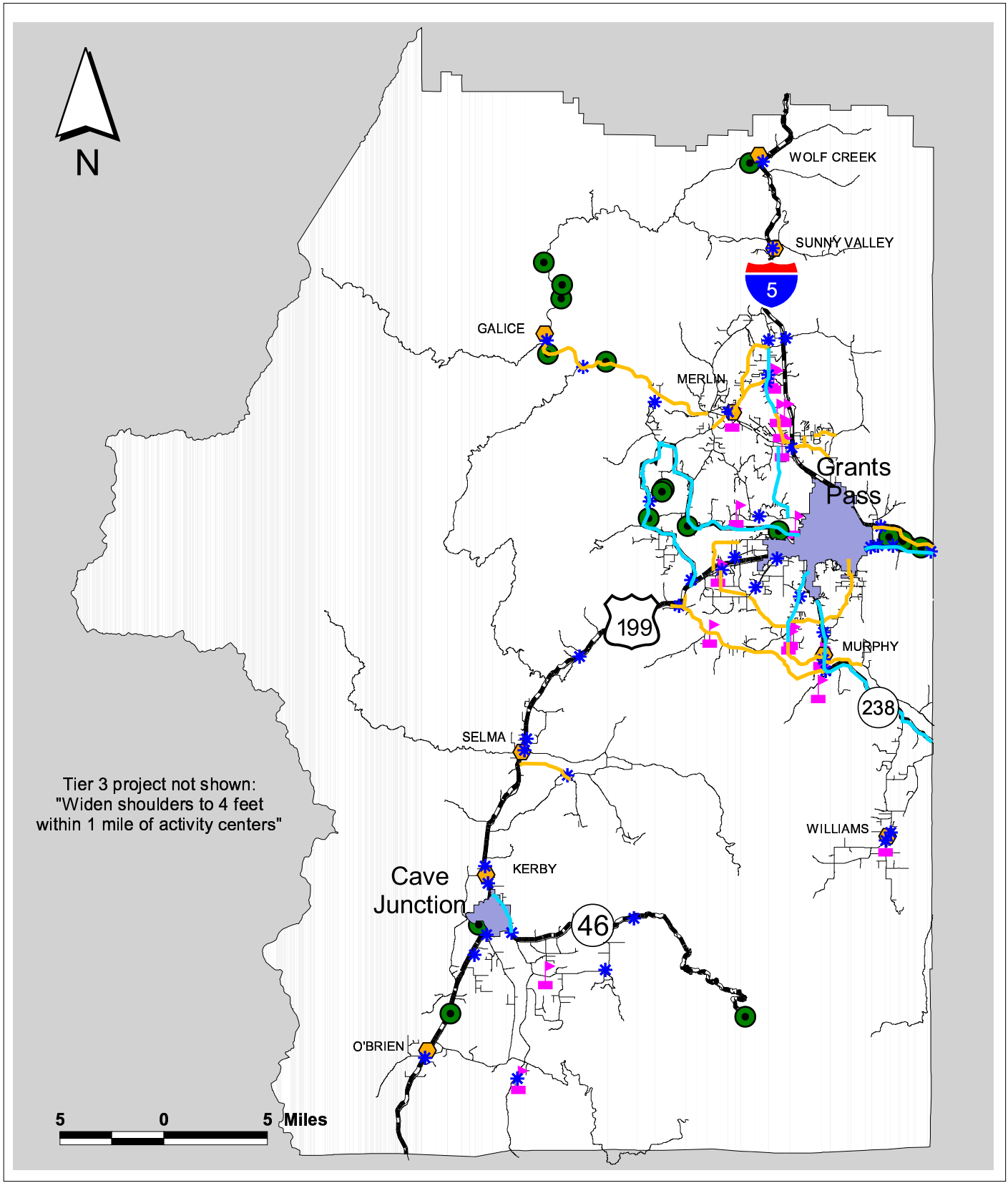
  While bicycle/pedestrian facilities are fragmented on state highways in Josephine County, incremental improvements (like filling in gaps) will improve facilities, in some cases, without substantial capital requirements.

**Policy 11-B:** Josephine County shall pursue a variety of funding options for enhancing the bicycle and pedestrian system, with particular emphasis on implementation of the high priority projects identified in the TSP.

- **Recommendation 11-B (1):** As funding becomes available for bicycle/pedestrian construction projects, Josephine County shall assign the highest priority to projects on the Tier 2 (preferred alternative) list.

  A handful of bicycle/pedestrian projects from the various improvement "scenarios" (described above) were selected for the Tier 2 project list. Most Tier 2 projects were selected from the Maintenance and Economic Development scenarios, as these scenarios contain the greatest number of general improvements. The Safety and Mobility Scenarios do not include any additional bicycle/pedestrian-related projects. Illustrated in Figure 11-1, the following list identifies the recommended Tier 2 bicycle/pedestrian improvements (in no particular order). These projects are also included in the list of Tier 2 roadway improvements illustrated in Table 6-5.

  - Programmed routine roadway and bikeway maintenance




Tier 2 Projects
Tier 3 Projects

State Highway
County Roads

Urban Growth Boundary

Activity Centers
Hospital
Park
School
Commercial Node
Rural Activity Center

**Figure 11-1: Recommended Bicycle/Pedestrian Facilities**

Josephine County
Transportation System Plan

- Widen/surface shoulders on Pine Crest Drive/Plumtree Lane (Camp Joy Road to Upper River Road)
- Widen/surface shoulders on New Hope Road (Hidden Valley Road to OR 238)
- Widen/surface shoulders on Laurel Road (US 199 to OR 46)
- Add bicycle lanes on Monument Drive (North Valley High School to Hugo Road)
- Add bicycle lanes on OR 99 (Grants Pass UGB to the Josephine/Jackson County line)
- Add bicycle lanes on OR 238 (Grants Pass UGB to the Josephine/Jackson County line)
- Add bicycle lanes on Rogue River Loop Highway (entire distance) and Lower River Road (Rogue River Loop Highway to Grants Pass UGB)

- **Recommendation 11-B (2):** Upon the completion of Tier 2 bicycle/pedestrian projects, Josephine County shall work to implement the recommended improvements on the Tier 3 list.

  Similar to the Tier 2 list, projects on the Tier 3 list are from the Maintenance, Safety and Economic Development scenarios. Among the Tier 3 recommendations is the completion of the recommended projects listed in the Josephine County *Bicycle Master Plan* not appearing on the Tier 2 list. Illustrated in Figure 11-1, the following list identifies (in no particular order) the recommended Tier 3 bicycle/pedestrian improvements.

  - Widen/surface shoulders on Cloverlawn Drive (East View Place to Jaynes Drive)
  - Widen/surface shoulders on Lakeshore Drive (US 199 to McMullen Creek Road)
  - Improve shoulders (to 4-foot minimum) on arterial and collector roadways within one mile of activity centers
  - Add bicycle amenities to facilities listed the *Bicycle Master Plan* (not appearing on the Tier 2 list):
    - Applegate Avenue/Leonard Road (US 199 to Breezy Lane)
    - Demaray Drive (Woodland Park Road to Midway Avenue)
    - Donaldson Road (Highland Avenue to Granite Hill Road)
    - Fish Hatchery Road (US 199 to New Hope Road)
    - Foothill Boulevard (Grants Pass UGB to Josephine/Jackson County line)
    - Grants Pass Road (Merlin Road to Monument Drive)
    - Jaynes Drive (New Hope Road to Cloverlawn Drive)
    - Merlin-Galice Road (Galice Road to Azalea Drive Cutoff)
    - Monument Drive (Merlin Road to North Valley High School)
    - New Hope Road (milepost 3.7 to OR 238)
    - North Applegate Road (OR 238 to east of Board Shanty Creek Road)
    - Pleasant Valley Road (Merlin Road to Monument Drive)
    - Robertson Bridge Road (Azalea Drive Cutoff to Merlin-Galice Road)
    - Russell Road (Pleasant Valley Road to Three Pines Road)
    - Soldier Creek Road (Donaldson Road to Lloyd Drive)
    - Soldier Creek Road (Nelson Way to Granite Hill Road)
    - Stringer Gap Road (Jerome Prairie Road to New Hope Road)
    - Three Pines Road (Russell Road to Oxyoke Road)
    - Woodland Park Road (Redwood Avenue to Demaray Drive)

**Policy 11-C:** Josephine County shall identify and work cooperatively with other agencies to develop multi-use paths.

- **Recommendation 11-C (1):** Work closely with the City of Grants Pass to determine the feasibility of extending the Rogue River Greenway to Tom Pearce Park and Schroeder Park.

Few if any multi-use paths exist in rural Josephine County. While these facilities are more common in urban areas, a rural non-motorized transportation system can also benefit from them. A long-term goal of the City of Grants Pass is to construct the Rogue River Greenway (discussed earlier) on the south side of the Rogue River between the third bridge (US 199) and the future fourth bridge. The path will use a combination of streets and riverfront corridors. While extensive time may be needed for the planning process, Josephine County has an opportunity to expand on this concept. Collaboration between the two agencies can potentially result in an extended multi-use path to serve additional destinations like Shroeder Park.

**Policy 11-D:** Josephine County shall work to improve the bicycle and pedestrian system environment by implementing appropriate safety and operational improvements.

- **Recommendation 11-D (1):** Maintain accurate data of bicycle/pedestrian volume and accident data, and evaluate contributing causes to bicycle and pedestrian accidents.

  On rural roadways, bicyclists and pedestrians often must share the road with vehicles moving at high speeds. In addition, intersections along these facilities typically do not provide bicycle lanes and protected crossings to accommodate non-motorized travelers. Crash data reveals that most bicycle and pedestrian-related collisions occur at intersections. Performing accurate record keeping of bicycle/pedestrian volume and accident data is a first step toward implementing safety measures. Evaluating the causes of bicycle and pedestrian accidents will enable the County to identify and prioritize road or intersection improvements to address potential safety problems such as limited sight distance or lack of clear right-of-way.

- **Recommendation 11-D (2):** Where appropriate, consider installing "Share the Road" signage along rural arterial and collector roadways that do not have wide shoulders or designated bicycle lanes.

**Policy 11-E:** Josephine County shall work cooperatively with other agencies to encourage development and implementation of a countywide bicycle/pedestrian safety program.

- **Recommendation 11-E (1):** Ensure that Josephine County employees, particularly Sheriff's Department staff, have adequate training regarding bicycle/pedestrian safety and enforcement issues.

- **Recommendation 11-E (2):** Encourage and support efforts by County schools or other organizations to develop and use a bicycle/pedestrian safety curriculum for students.

- **Recommendation 11-E (3):** Consider installing signage along roadways where bicycle touring or other significant bicycling activity is expected advising travelers of the "rules of the road" pertaining to motorists and non-motorized travelers.

**Policy 11-F:** Josephine County shall encourage walking and bicycling as viable modes of travel.

- **Recommendation 11-F (1):** Include facilities for bicycle parking in the planning requirements for new commercial areas, single and multi-use facilities and other development projects.

- **Recommendation 11-F (2):** Provide for secure bicycle storage facilities within rural activity centers and other major destinations that generate bicycle/pedestrian traffic.

- **Recommendation 11-F (3):** Support organized community events that promote bicycling and walking like the Evans Valley Biathlon.

**Policy 11-G:** Josephine County shall support the activities of local citizen committees that focus on Countywide bicycle and pedestrian issues.

- **Recommendation 11-G (1):** Coordinate bicycle/pedestrian planning efforts with the Grants Pass/Josephine County Bikeways Committee, and assign additional responsibilities to the committee.

  The Josephine County/Grants Pass Bikeways Committee played a vital role in developing the County *Bicycle Master Plan*, and played a key role in developing the non-motorized transportation recommendations in the TSP. This Committee should continue to have strong involvement in issues dealing with bicycle travel in the County. In addition, the committee should take on the role of supporting pedestrian transportation efforts. The committee should be charged with promoting and upholding the bicycle/pedestrian-related goals and objectives established in this document. This committee could be instrumental in refining the recommendations of the TSP and developing priorities for implementation. Additionally, as Josephine County continues to grow, the committee should ensure that conditions of development approval levied on land development support the non-motorized element of the TSP, and are met. This committee should also increase education to promote bicycle/pedestrian safety, which can be attained by implementing the education Action Items listed above.

**Policy 11-H:** Josephine County shall provide routine maintenance to ensure the long-term viability of the bicycle and pedestrian transportation system.

- **Recommendation 11-H (1):** Establish a maintenance schedule and budget for roads with wide shoulders, designated bicycle lanes or facilities with higher bicycle/pedestrian traffic.

  Ongoing maintenance is important to maximize the investment in bicycle and pedestrian facilities. Maintenance should provide for periodic removal of debris including small branches and other roadside debris that could create safety hazards for a bicyclist or pedestrian. This also includes regular pruning of trees and shrubbery extending onto the roadway. Cracks and potholes impede safe non-motorized travel, and should also be remedied promptly. When cracks and potholes on roadway shoulders are repaired, any repaving or overlay should span the entire width of the shoulder or bicycle lane (regardless of crack or pothole size). This will enhance safer bicycle travel, as pavement "ridges" parallel to the direction travel can create a safety hazard.

**Policy 11-I:** Explore opportunities for coordination and cooperation with state and federal agencies in examining innovative means of providing or funding pathways, trails and equestrian facilities.

**Policy 11-J:** Explore opportunities for development of non-motorized transportation facilities within the Central Oregon and Pacific railroad right-of-way, or within abandoned railroad rights-of-way as these become available.

# Chapter 12
# Rail Plan

This chapter presents a discussion of rail transportation in rural Josephine County including goals and objectives, an assessment of consistency with other plans and programs including the *Oregon Rail Plan*, a discussion of needs and strategy development, and a summary of policies and recommendations. The chapter is divided into two primary sections. The first is devoted to freight rail and the second presents a summary of the status of passenger rail service in Southern Oregon.

## Freight Rail

### Overview

As noted in Chapter 3, freight rail in Josephine County is provided by the Central Oregon and Pacific Railroad (CORP), the state's second largest short line railroad. CORP operates on 391 route miles and 8 miles of trackage rights within the state. The route generally follows an alignment build in the 1880s, extending from Weed, California north to Springfield, Oregon and then west to the Oregon Coast, where it turns south and continues through Coos Bay to its terminus in Coquille. With lumber and freight being the primary commodities carried, the CORP line handles between 1 and 5 million tons of cargo each year. Recent CORP service increases have led to significant growth in the number of cars available to carry freight. However, even with this growth the CORP line is underutilized in Josephine County due to constraints created by grades, tunnel dimensions, train speeds, and other factors.

In Josephine County, the CORP line runs generally west of and parallel to I-5 from the Josephine/Douglas County line before entering the Rogue Valley and continuing on to Medford. Although the Josephine County segment of CORP is used less than the segments leading to the coast and serving Medford, the PML Forest Products intermodal rail/truck reload facility in Grants Pass does serve all of southern Oregon. Freight that is carried on the CORP line through Josephine County to the intermodal facility and other stops is freight that does not travel by truck on the County roadway system. Maintaining the availability of freight rail service thus helps reduce the demand on the roads that would otherwise carry the equivalent amount of truck traffic, reducing maintenance costs and postponing the need for roadway improvements to accommodate growing truck traffic.

### Consistency with Other Plans and Policies

The 2001 *Oregon Rail Plan* is of particular importance to the operation and long-term management and improvement of freight rail service in rural Josephine County. The *Oregon Rail Plan* identifies several policies applicable to freight rail service in the County, particularly within the Grants Pass area. The policies include:

- Providing a Level of Service C or better on Oregon highways serving intermodal facilities during off-peak periods (applies to Interstate 5 and US 199)
- Providing high quality highway access to terminal and reload facilities for transfers from truck to rail for long haul movement of freight

The *Rail Plan* also identifies actions that can be taken by local governments to mitigate conflicts between rail and vehicular traffic, and to improve access to freight facilities. For the TSP these actions affect rural Josephine County mainly where CORP trackage passes through Merlin. They include:

- Avoid or minimize the number of future railroad at-grade crossings when new streets are planned for growing portions of the community
- Avoid creating intersections of major streets and railroads where possible
- Locate new parallel streets at least 500 feet from the railroad to allow for industrial development between the tracks and the highway
- Plan community development, particularly residential uses, with sensitivity to rail noise and other potential conflicts

The *Josephine County Comprehensive Plan* (2000) contains goals and policies intended to support rail transportation within and through the County. Goal 4 focuses on developing facilities and services that are needed and affordable to County residents. A supporting policy encourages the development of a master plan (coordinated with City, State and Federal agencies) for bridges and roads in Josephine County (this would also include at-grade road/rail crossings). Relating to passenger rail, another policy related to Goal 4 states that *"the physically handicapped and transportation disadvantaged shall be considered in the design of transportation facilities and alternative transportation modes"*.

The *Grants Pass Urban Area Master Transportation Plan* includes several goals and policies specifically directed at enhancing rail transportation. While not specifically applicable to the rural portions of Josephine County, they do offer guidance for the development of policies for the *Rural TSP*. Goal 1 encourages the City of Grants Pass, Josephine County and ODOT to *"Provide a Comprehensive Transportation System"*. This goal is supported by objectives that encourage completion of the transportation system. The supporting policy applicable to rail transportation focuses on *"maintaining adequate levels of service and facilities for freight movement"*. Goal 1 also has an objective of providing a multi-modal transportation system. Policy 1.5.1 supports this objective by providing transportation choices for the movement of people and goods.

## Needs

As discussed in Chapter 3, local rail (specifically CORP) faces several infrastructure challenges requiring major investment. The existing CORP line in Josephine County is characterized by steep grades and tight turning radii that limit operating speeds to about 25 or 35 miles per hour. Forty-three miles of track are limited to an operating speed of only 10 miles per hour. Apart from the ongoing need for track repair and improvements, system improvements are needed to allow short rails to continue serving the larger railroad companies. As larger railroads increase the size of their railroad cars, short lines need to make improvements to handle the larger cars from these companies. Tunnels likewise need to be modified to accommodate the increased height and lengths of containers and cars. Until this is done, local rail cannot carry "piggyback" truck trailers or containers. Systemwide, CORP has identified over $6 million in line, tie, and roadbed improvement and upgrade needs.

CORP is undertaking an aggressive maintenance program in an attempt to increase overall operating speeds to 25 miles per hour and to ease some of the height restrictions currently in place on the line. Loan guarantees by the Federal Railroad Administration are being sought to help fund maintenance needs.

While Josephine County has no direct control over the operation or improvement of the CORP's rail trackage and right-of-way, the County is impacted by the need for safe rail crossings on its roadway system. Table 12-1 lists the 11 major rail crossings (all involving CORP trackage) with gates, traffic control and/or other warning devices in rural Josephine County and includes a description of the features at each crossing and an general assessment of crossing condition.

**Table 12-1**
**Major Freight Rail Crossings in Rural Josephine County**

| Roadway | Railroad Crossed | Street Classification[1] | Type of Crossing | Warning Devices | Crossing Condition | Other Comments |
|---|---|---|---|---|---|---|
| Lower Wolf Creek Road | CORP | Rural Minor Collector | Grade-separated | None | N/A | |
| Leland Road | CORP | Rural Minor Collector | At-grade | Stop sign, X bars | Good | |
| Hugo Road | CORP | Rural Minor Collector | At-grade | Stop sign, X bars | Fair | |
| Three Pines Road | CORP | Rural Minor Collector | At-grade | X bars with flashers, pvmt. mark. | Fair - Good | In middle of lower speed S-curve with limited sight distance |
| Pleasant Valley Road | CORP | Rural Major Collector | At-grade | Gates and flashers | Good | Multiple tracks |
| Merlin-Galice Road | CORP | Rural Major Collector | At-grade | Gates and flashers | Very good | Advance warning flashers WB, EB is 40 mph and urban |
| Merlin Landfill Road | CORP | Rural Residential | At-grade | Stop sign, X bars | Poor - Fair | Serves landfill only |
| Camp Joy Road | CORP | Rural Minor Collector | At-grade | Gates and flashers | Good | Close spacing to Sierra Way |
| Plumtree Lane/ Pine Crest Drive | CORP | Rural Minor Collector | At-grade | Gates and flashers | Good | Advance warning flashers, limited SB sight distance |
| Averill Drive | CORP | Rural Residential | At-grade | Stop sign, X bars | Good | Dead end road – serves local residential traffic, close spacing to Foothill Blvd. |
| Pearce Park Road | CORP | Rural Residential | At-grade | Gates and flashers | Fair (timber) | Access road to County park only |

[1] Street classification in this table refers to categories that existed prior to adoption of the *Rural TSP*.
Note: CORP means Central Oregon and Pacific Railroad
Source: CORP administrative office, March 2003 and field reconnaissance.

Three deficiencies of note are identified in the table above:

- Three Pines Road near the intersection with Hugo Road – this crossing location is situated in the middle of a relatively low speed S-curve and is controlled by a stop sign, with advance warning signage. Sight distance approaching this crossing is limited but lower speeds, a posted stop at the crossing, and the visual clear zone that has been established around the crossing should be sufficient to protect motorists. Traffic volumes at this relatively isolated location are light. No improvement is recommended at this time.

- Merlin Landfill Road – this minor crossing location is controlled by a stop sign with advance warning signage. Pavement is rutted and broken at the tracks, but some useful life remains. Speeds at the crossing are very slow and sight distance appears to be adequate from the stop bars. Use of this crossing is limited to vehicles visiting the County landfill and improvement recommendations should be subject to pavement evaluation over the next five years.

- Plumtree Lane/Pine Crest Drive – This crossing location carries a higher volume of traffic at significantly higher speeds than the two crossings mentioned above. Currently the crossing location is identified by advance warning flashers, and is protected by gates and flashers.

Northbound sight distance approaching the crossing is adequate for the speed of traffic. Southbound sight distance is restricted. The County proposes to realign the road thus improving southbound sight distance at this crossing.

As noted in the discussion of policies and programs above, new railroad crossings are discouraged by policy. Creating a new public crossing or making any changes to an existing public railroad crossing requires interaction with the affected railroad public authority and ODOT's Rail Crossing Safety Section. ODOT Rail Division's regulatory responsibility includes any part of the crossing intersection (where steel meets asphalt) and the approaches (railroad and roadway) to the crossing. ODOT Rail Division's jurisdiction over the roadway approach extends to the safe stopping distance based on the posted speed of vehicles approaching the railroad crossing. Modifying an existing rail crossing by adding sidewalks, bicycle lanes, additional traffic lanes, etc., also requires a crossing application to be filed by the party initiating the modification and processed by the Rail Division.

# Passenger Rail

## Overview

Passenger rail is currently not provided in Josephine County. Passenger rail connections are provided via intercity bus service on Greyhound from Grants Pass to the Amtrak stations in Eugene and Klamath Falls. North/south passenger rail service is provided by the Amtrak Coast Starlight route in the California-Oregon-Washington corridor. The Coast Starlight provides one northbound and one southbound train each day as it passes through Klamath Falls and Eugene. Amtrak also provides four trips per day between Portland and Seattle on its Cascades route. Intercity bus connections to the train service in Portland are available via Greyhound bus lines. Three trips are provided each day in both northbound and southbound directions.

The intercity passenger rail line in Oregon is part of the federally designated Pacific Northwest High Speed Rail Corridor that connects Eugene, Oregon with destinations in Washington State and with Vancouver, B.C. The federal designation gives this route preference for Federal Railroad Administration funding to develop advanced technology passenger train service. The States of Oregon and Washington, in cooperation with the Province of British Columbia, are working together to incrementally improve passenger train operations in the corridor. The Oregon Department of Transportation is developing Oregon's portion of the corridor, with the long-range goal of providing safe service at speeds of more than 100 miles per hour in rural areas. The 2001 *Oregon Rail Plan* provides further guidance on the development of future passenger rail service along the I-5 corridor and elsewhere in the state. Key elements of this plan as they pertain to rural Josephine County are described below.

## Consistency with Other Plans and Policies

As with freight rail, the provision of passenger rail service to Josephine County is strongly influenced by the policies and recommendations of the *Oregon Rail Plan*, the *Josephine County Comprehensive Plan* and the *Grants Pass Urban Area Master Transportation Plan* as discussed above. In addition, the passenger rail component of the TSP is also influenced by the findings, conclusions and recommendations of the recently completed *Southern Oregon Commuter Rail Study* as discussed below.

### Oregon Rail Plan

The *2001 Oregon Rail Plan* updates the *1992 Oregon Rail Passenger Policy and Plan.* The *1992 Passenger Policy and Plan* proposed an extension of passenger rail service from Eugene to Roseburg as a "Second Stage" expansion beyond the current Eugene to Portland high speed service. The "Third Stage" of service expansion would extend passenger rail service further south to Medford. Second Stage package improvements were estimated at $32 million and Third Stage package improvements were estimated at

$275 million due to the extensive track upgrades that would be required through the mountainous terrain south of Roseburg.

The *Oregon Rail Passenger Policy and Plan* proposed two daily round trip passenger runs from Medford to Portland in the Third Stage with travel times of six to eight hours, depending upon the schedule ultimately adopted. There is no mention in the *Passenger Policy and Plan* of service south of Medford, to connect with Ashland or cities in California. Annual operating and maintenance costs for the Eugene to Medford service were estimated to be $15.8 million for the Third Stage with projected ridership for the entire segment south of Eugene being less than 500 passengers per day.

The *Oregon Rail Passenger Policy and Plan* did not propose an implementation schedule for any passenger rail expansion stages. Passenger rail service between Eugene and Medford would be constrained by a twisting track alignment, steep grades, and slow speeds. Given the need for significant trackway improvements, coupled with the competition for scarce resources on a statewide basis, it is not clear whether the Third Stage proposal from the *Passenger Policy and Plan* would be implemented within the 20-year planning horizon for the *Josephine County Rural TSP*. It is conceivable that passenger rail service might not be available until after 2023 in the county.

Even if Third Stage passenger rail service is available by the end of the planning period, reductions in traffic on the street and highway system are expected to be minimal. Traffic to and from a passenger terminal would be minor and would be unlikely to cause or contribute to any significant congestion. Likewise, intercity traffic volumes on I-5 should be unaffected by the minor diversion from auto to train travel.

The need for passenger rail service between Ashland and Grants Pass, then on to Portland as proposed in the Third Stage of the *Oregon Rail Passenger Policy and Plan* was further explored in the recently completed *Southern Oregon Commuter Rail Study*. Study objectives included both tourism enhancement, as well as improved connections to train service for intercity and/or commuter travel. This study and its key findings are discussed below.

**Southern Oregon Commuter Rail Study**

The 1999 session of the Oregon Legislature instructed the Oregon Department of Transportation (ODOT) to examine the potential for frequent local passenger service (commuter rail) between Grants Pass and Ashland, a distance of approximately 45 miles. This service was proposed to operate on trackage owned by the Central Oregon and Pacific Railroad (CORP). The majority of this trackage is in Federal Railroad Administration Class I and Class II conditions permitting top passenger train speeds of 15 and 30 mph. Freight train service on this line includes several local switchers, as well as through trains providing service to the north through Glendale to Roseburg and connection to CORP trackage in California to the south.

The *Southern Oregon Commuter Rail Study* was completed in 2001 as a joint effort of ODOT's Rail Division, the Rogue Valley Transportation District (RVTD), and the Rogue Valley Metropolitan Planning Organization (RVMPO). The overall goal of the study was to define costs, benefits and impacts of the project so that regional partners could compare implementation of this service with other regional transportation priorities. Key findings include:

- With substantial upgrading of the track and signal system, the rail line connecting Grants Pass with seven Rogue Valley communities is well suited to serve as the backbone of an effective commuter transportation system for the region.

- With top speeds of up to 60 miles per hour, commuter trains can travel the 45-mile corridor from Ashland to Grants Pass in about 80 minutes, making several intermediate stops.

- The estimated costs for upgrading the rail infrastructure (including track, ties, switches, a new 1.5-mile track through the Medford Yard, new sidings, and a modern train movement signaling system), making at-grade crossing safety improvements, acquiring passenger equipment, and operating the system at three potential levels of service are summarized in the table below.

**Table 12-2**
**Southern Oregon Commuter Rail Service**
**Estimated System Capital Expenditures and Operating Costs**

| Level of Service* | Capital Expenditures | Annual Operating Costs |
|---|---|---|
| Level 1 | $42,737,000 | $3,977,000 |
| Level 2 | $70,410,000 | $4,552,000 |
| Level 3 | $96,671,000 | $8,077,000 |

Source: Southern Oregon Rail Study, ODOT, 2001

* Levels of Service Explained:
Level 1: Full service (6 round trips in the morning and 6 in the evening) between Ashland and Central Point
Level 2: Level 1, plus limited service (2 round trips in the morning and 2 in the evening) between Central Point and Grants Pass
Level 3: Full service (6 round trips in the morning and 6 in the evening) between Ashland and Grants Pass

Ridership estimates range from a low of 475 passenger per day (based on Level 1 service) to a high of 850 per day (when the service is extended to Grants Pass). Daily ridership estimates are for new riders only as transfer of existing riders from public transit is not included in the total. The study also briefly explored the possibility of seasonal excursion service over the line during times when commuter trains are not operating.

In summary, the study found no fatal flows to prevent operating a commuter service over the existing railroad line between Ashland and Grants Pass. While only a field environmental review has been made to date, it is very unlikely that a full EIS would alter this conclusion. If the study moves beyond the preliminary investigation stage, the main issues to be addressed will likely involve financing, capital costs, and operating subsidies.

In addition to its potential for commuter rail, the rail line between Ashland and Grants Pass is well situated to attract tourist travel. Stations at each end of the line are conveniently located with respect to Interstate 5, and the line itself runs through very scenic areas. Ashland alone attracts over 350,000 visitors a year, many of whom visit the Oregon Shakespeare Festival. A daytime tourist train based in Ashland would be a major draw for people planning to attend a drama production later in the day.

By sharing equipment and facilities, a profitable tourist rail operation could help reduce the subsidy required to support a commuter rail operation. Thus, a well-designed system of commuter and tourist rail operations could produce benefits for each and for the County as a whole.

## Action Plan

Josephine County has no direct responsibility for the development, operations or maintenance of the Central Oregon and Pacific Railroad or for the provision of freight or commuter rail service in the region. However, there are specific actions that the County can take to ensure safety around existing rail trackage,

general land use compatibility with the existing freight rail corridor, and support for potential commuter rail service in the future. The TSP includes two goals and supporting policies that pertain directly to rail service or indirectly by supporting the coordinated planning that will be essential to any rail service improvements.

## Draft Rail Transportation Goals and Objectives

Draft goals and supporting objectives pertinent to rail transportation operation and improvement are listed below (numbers reflect the numbering of the complete list of goals and objectives).

**Goal 1:** Improve safety for all transportation modes.

- *Objective 1 – ensure the transportation system is planned to maximize safety.*

**Goal 2:** Provide for a transportation system that is accessible, efficient and practical.

- *Objective 1 - Increase mobility and access options for Josephine County citizens.*
- *Objective 2 - Facilitate movement of goods into and out of the County.*
- *Objective 3 - Enhance freight mobility (by rail, truck and air) and intermodal transfer.*
- *Objective 4 - Address changing characteristics of trucking, aviation and rail industries.*

**Goals 3:** Provide sufficient capacity within the transportation system to accommodate future demand.

- *Objective 1 – Satisfy Transportation Planning Rule requirements for system capacity and for encouraging the use of alternative modes of transportation.*
- *Objective 2 – Encourage alternative modes of transportation by providing for a choice in modes.*

**Goal 7:** Ensure an effective strategy for intergovernmental coordination in transportation planning.

- *Objective 1 - Maintain coordination with multiple jurisdictions.*
- *Objective 2 - Provide compatible design standards for all modes of transportation.*
- *Objective 3 - Work to achieve a balance between business and economic development and preservation of the functional capacity of the transportation system when coordinating transportation planning with other jurisdictions.*

## Policies and Recommendations

To carry out the freight and passenger rail-related goals and objectives identified above, more detailed policies and specific improvement recommendations have been developed. These policies and recommendations are listed below.

**Policy 12-A:** Josephine County shall work cooperatively with CORP and ODOT to secure funding and implement improvements to enhance the safety and viability of rail transportation in the County.

- **Recommendation 12-A (1):** Support CORP and ODOT in securing state and/or federal grants to improve existing rail trackage and service.

- **Recommendation 12-A (2):** Pursue federal and state grants to improve existing rail crossings, particularly the Pine Crest Drive/Plumtree Lane crossing, where restricted sight distance is a concern.

- **Recommendation 12-A (3):** Provide for regular and ongoing inspection, maintenance and repair of streets at existing at-grade crossings.

- **Recommendation 12-A (4):** Support efforts to develop additional rail reload or intermodal facilities if and when market forces should dictate the need.

- **Recommendation 12-A (5):** Require any new roadways in areas served by rail to be located at least 500 feet away from the rail line, to allow industrial development between the tracks and the roadway.
- **Recommendation 12-A (6):** Eliminate or consolidate existing rail crossings as feasible.
- **Recommendation 12-A (7):** Avoid or minimize the number of new at-grade railroad crossings created by new roads crossing existing rail lines.

**Policy 12-B:** Josephine County shall consider development of intercity passenger rail service in conjunction with ODOT and Jackson County.

# Chapter 13
# Implementation and Financing

## Overview

The *Josephine County Rural Transportation System Plan* (TSP) provides both policy guidance and specific recommendations for improving the multimodal transportation system outside of the Grants Pass and Cave Junction Urban Areas. In developing the *Rural TSP*, the County analyzed information and set priorities for the future function, improvement, and on-going management of the transportation system. These priorities include maintenance and operation of the existing system, capital improvements for enhancing safety and improving traffic congestion, relating land use decisions with transportation considerations, and balancing transportation needs with community, business and environmental needs. Priorities are implemented through the Plan's overarching goals and objectives, as well as more specific policy recommendations that identify the type and range of actions necessary to achieve these goals.

The goals, objectives, policies and recommendations for each travel mode are summarized in this chapter for ease of reference. Policy guidance and recommendations are grouped into the following categories:

- Street System – focusing on roadway and bridge improvements, functional classification of roadways and access management policies.
- Freight System – addressing key issues related to truck and rail mobility and safety.
- Public Transit System – including recommendations for maintaining and improving baseline transit service in the rural areas with an emphasis on serving the transit-dependent.
- TSM/TDM – identifying actions that enhance the use of existing transportation resources such as intelligent transportation systems (ITS), traffic signal improvements, ridesharing or vanpooling (particularly for long-distance commuter trips) and other strategies.
- Air Transportation System – focusing on the Grants Pass and Illinois Valley Airports including implementation of improvements in and around these airports, and preservation of compatible land uses in the vicinity.
- Non-Motorized Transportation System – including recommendations for high priority improvements to enhance bicycling and walking safety around schools and other major activity centers, as well as developing bicycle touring routes to enhance tourism in the County.
- Rail Transportation System – focusing on policies to support the provision of freight rail in the County and to ensure on-going safety at rail/roadway crossings.
- Transportation Funding – policies aimed at developing a transportation financing package and positioning the County to take advantage of funding opportunities.

A key element of this TSP is its emphasis on the continuing maintenance needs of the rural roadway system. As the County's transportation revenues continue to shrink, the ability to maintain existing roadway miles and county bridges at the level to which the general public has become accustomed is increasingly difficult. This chapter addresses issues related to the deteriorating roadway system and suggests an optimal maintenance program cycle that will allow roads to be maintained at a level that reduces the risk of pavement failure necessitating major reconstruction in the future. This chapter also addresses other high priority transportation system improvements including those related to:

- Roadway, bicycle and pedestrian safety
- Deficient bridges

- Resolution of existing and projected congestion (particularly in the vicinity of the I-5/Merlin-Galice Road interchange)
- Preservation of basic "lifeline" public transit service to the transit dependent and modest improvements to that service

This chapter includes a discussion of existing and projected transportation revenues from current sources and the anticipated revenue shortfall between program needs and these available resources. As noted above, current transportation revenues are inadequate to maintain the roadway system at its current level. This situation will become worse as the buying power of existing gas tax receipts declines and the U.S. Forest Service Timber Receipt Funds program ends after 2007. Existing revenue sources are also inadequate to continue the minimal "lifeline" transit service that is provided in the rural areas due to the loss of City of Grants Pass funding and revenues received from various discretionary grants. A revenue "shortfall" has been identified between the revenue that can be raised from existing sources, and the revenue that is needed to provide an optimal level of maintenance, transit service, and priority improvement projects.

This chapter also includes a discussion of various options for addressing the revenue shortfall through establishment of dedicated local roadway and/or or transit funding resources. Specific revenue resource recommendations are made for the County to pursue and a staged 5, 10 and 20-year program of transportation system improvements is identified.

## Goals and Objectives

As noted earlier in this document, several goals and supporting objectives were developed for the *Josephine County Rural Transportation System Plan*. These goals and objectives were used to guide development of the key recommendations and policy directives established for each travel mode in the TSP. Goals and objectives are listed below for ease of reference. Specific policies and recommendations to implement these goals and objectives are presented in the chapters for each mode and are summarized in the discussion that follows.

**Goal 1: Improve safety for all transportation modes.**
- *Objective 1 - Ensure the transportation system is planned to maximize safety.*

**Goal 2: Provide for a transportation system that is accessible, efficient and practical.**
- *Objective 1 - Increase mobility and access options for Josephine County citizens.*
- *Objective 2 - Facilitate movement of goods into and out of the County.*
- *Objective 3 - Enhance freight mobility (by rail, truck and air) and intermodal transfer.*
- *Objective 4 - Address changing characteristics of trucking, aviation and rail industries.*

**Goal 3: Provide sufficient capacity within the transportation system to accommodate future demand.**
- *Objective 1 - Satisfy Transportation Planning Rule requirements for system capacity and for encouraging the use of alternative modes of transportation.*
- *Objective 2 - Maximize transportation system capacity through the use of facility improvements, Transportation Demand Management actions, Transportation System Management actions, appropriate IVHS and other appropriate tools and techniques.*
- *Objective 3 - Encourage alternative modes of transportation by providing for a choice in modes.*

**Goal 4: Review and update roadway classifications as necessary.**
- *Objective 1 - Provide coordinated design standards for all modes of transportation.*

- *Objective 2 - Satisfy Transportation Planning Rule requirements for system planning.*
- *Objective 3 - Consider land use and transportation plans/solutions simultaneously in determining roadway classification and hierarchy.*
- *Objective 4 - Provide appropriate transitions between regional, urban and rural transportation facilities.*

**Goal 5: Provide system connections as needed to improve efficiency and access and to improve circulation.**

- *Objective 1 - Accommodate projected growth with improvements to the roadway network and increased options for choosing a mode of transportation.*
- *Objective 2 - Achieve greater mobility between communities, activities and land uses.*
- *Objective 3 - Achieve improved connectivity between modes of transportation.*

**Goal 6: Consider and implement land use and transportation plans/solutions simultaneously in all planning activities.**

- *Objective 1 - Provide for the consideration of the interrelationships and connections between transportation and land use in future planning.*
- *Objective 2 - Ensure that transportation improvements meet the needs of rural land uses, consistent with the Transportation Planning Rule.*

**Goal 7: Ensure an effective strategy for intergovernmental coordination in transportation planning.**

- *Objective 1 - Maintain coordination with multiple jurisdictions.*
- *Objective 2 - Provide compatible design standards for all modes of transportation.*
- *Objective 3 - Work to achieve a balance between business and economic development and preservation of the functional capacity of the transportation system when coordinating transportation planning with other jurisdictions.*

**Goal 8: Provide a plan document that is meaningful and useful to all stakeholders.**

- *Objective 1 - Prepare the plan at an easy-to-understand level, with a concise action plan and a list of needed follow-up tasks and/or refinement studies.*
- *Objective 2 - Develop a long-term public involvement process to ensure that the public is informed of and involved in the actions of multiple service providers in order to better coordinate transportation system decision making.*

**Goal 9: Consider funding issues in planning a future transportation system.**

- *Objective 1 - Identify a range of methods for funding recommended actions and improvements.*
- *Objective 2 - Ensure cost-effective investment in transportation. Improvements should be fiscally responsible, economically efficient and realistic.*
- *Objective 3 - Extend usable life of existing facilities*
- *Objective 4 - Ensure the plan provides for the maintenance of existing and planned improvements.*
- *Objective 5 - Achieve a balance between public and private sector interests when considering potential new funding sources for transportation improvements.*

**Goal 10: Plan for a transportation system that is environmentally responsible.**

- *Objective 1 - Provide for choice with regard to the use of alternative modes of transportation.*
- *Objective 2 - Ensure that transportation decisions and facility design standards consider environmental requirements and minimize impacts to the natural and built environment.*

## Summary of Action Plans

This section presents a summary of the action plans for each transportation mode addressed in the TSP. Included are policies and recommendations affecting the overall transportation system (e.g., those that are common to all modes), as well as those related to individual modes. These policies and recommendations are discussed in greater detail in the mode-specific chapters of the TSP. They are compiled below for ease of reference.

## Overall Transportation System

Transportation system planning recommendations serve as general guidelines for achieving a safe and efficient transportation system. These recommendations address transportation priorities for the County and provide vision for planning the future transportation system.

**Policy 13-A:** Josephine County will evaluate all transportation system investments for cost-effectiveness, fiscal responsibility, economic efficiency and practicality. This will include an evaluation of options for further privatization of roadway operations and/or construction of improvements, and other means of reducing costs.

**Policy 13-B:** To improve the safety, capacity and efficient life of the transportation system, the County will make facility or service improvements or adopt various recommendations and standards to enhance these qualities.

**Policy 13-C:** Josephine County will work cooperatively with its federal, state and local jurisdictional partners and public utility providers to coordinate on the approval, timing and funding of future transportation system improvements. This would include the proposed fourth Rogue River crossing.

**Policy 13-D:** Josephine County will use its discretion in selecting projects out of the suggested order of priority, if deemed to be in the best interest of the overall transportation system and general public for reasons including safety, time-sensitive availability of additional funds, improved coordination of work, or improved efficiencies.

**Policy 13-E:** Josephine County will encourage joint projects with the private sector, affected user groups, individual citizens, or other units of government if it improves or allows a project on the transportation system to proceed that might otherwise fail to be done. This participation may be in the form of material or resource contributions, right-of-way dedications or other financial assistance.

**Policy 13-F:** Josephine County will regularly update the *Rural Transportation System Plan*, revising it as necessary to reflect changing needs and circumstances. The County will involve citizens, stakeholders, and its jurisdictional partners in updates and revisions to this plan.

**Policy 13-G:** Josephine County will encourage the State Legislature to address the issue of increased, stable long-term transportation financing for rural roadway systems.

**Policy 13-H:** Josephine County will form an advisory body to research, recommend and champion the local transportation system financing strategy needed to carry out Tier 2 of the *Rural TSP*.

**Policy 13-I:** Recognizing the on-going need for roadway maintenance funding that continues to be impacted by the loss of forest-based revenues, Josephine County shall work closely with the State of Oregon and the U.S. Forest Service to continue the O & C timber receipts program.

**Policy 13-J:** Josephine County shall work closely with the Association of Oregon Counties and others to address rural county transportation funding issues at the state level.

## Street System

For the TSP Street Plan, policies and recommendations address functional classification, capacity, traffic control, access management, accessibility, intersection and roadway performance standards, safety, and bridges. Many of the policies and recommendations also apply to freight, transit, bicycle and pedestrian travel due to the multi-modal nature of roadways.

### Recommended Functional Classification and Street Standards

**Policy 6-A:** Josephine County shall periodically review its existing functional classification system, and update it as necessary to ensure the roadway system is adequate to accommodate existing and projected travel demand within unincorporated Josephine County.

- **Recommendation 6-A (1):** Roadway improvements for County facilities crossing jurisdictional boundaries shall be designed to ensure smooth transitions between urban and rural standards, or between state and county standards.

- **Recommendation 6-A (2):** The County's road standards shall address limits to the acceptable length of cul-de-sac or dead end roads and shall restrict the development of dead end roads beyond a specified length that do not have an existing or committed secondary access.

- **Recommendation 6-A (3):** The County shall require dedication of right-of-way as a condition of approval for proposed land development, where the County's adopted road standards demonstrate the need for a wider right-of-way and a rational nexus exists between the proposed land development and the amount right-of-way required.

- **Recommendation 6-A (4):** The County shall modify its functional classification system and transportation system data bases as follows:
    - Rename "major collector" streets to "arterial" streets
    - Rename "minor collector" streets to "collector" streets

### Access Management

**Policy 6-B:** Josephine County shall review the adequacy of access for all proposed new development and new accesses onto public right-of-way and ensure consistency with adopted street standards. ODOT will review all accesses onto state highway rights-of-way to ensure consistency with state access management standards.

- **Recommendation 6-B (1):** Proposed new or modified accesses onto State Highways shall be consistent with State access management standards contained in the OAR 734.051.

- **Recommendation 6-B (2):** Proposed new or modified accesses onto County roads shall be reviewed for safety and adequacy.

- **Recommendation 6-B (3):** Direct residential access shall be discouraged on roadways designated as County arterials.

- **Recommendation 6-B (4):** Properties with frontage along two streets shall take primary access from the street with the lower classification.

- **Recommendation 6-B (5):** Along facilities with arterial classifications, reciprocal shared access easements shall be designed and reserved through conditions of land use approval for future

development with compatible zoning. Reciprocal shared access easements shall also be encouraged for existing development as appropriate

- **Recommendation 6-B (6):** Access spacing shall be determined based on functional roadway classification and consider case-by-case conditions. Generally and where possible, access locations on roadways classified as collector or arterial should be designed to provide access that aligns with other existing or future access points on the opposite side of the roadway.

- **Recommendation 6-B (7):** All new accesses to the public right-of-way shall be located, designed, and constructed to the standards adopted by order of the Board of County Commissioners. Variances to standards shall be granted at the discretion of the appropriate hearings body, based upon findings that approving the access will not substantially degrade conditions for other users of the roadway.

- **Recommendation 6-B (8):** Consistent with the County TSP goal of improving system efficiency and improving circulation, the County shall coordinate with ODOT and city agencies with any access management projects that would improve safety and traffic flow on congested county and/or state facilities.

## Roadway Maintenance

**Policy 6-C:** Josephine County shall maintain roadway surfaces to achieve maximum pavement life and minimize pavement maintenance and repair costs.

- **Recommendation 6-C (1):** The County should consider increasing the annual units of work or annual miles covered for repaving, restriping, drainage clearance, vegetation removal, and other routine maintenance activities. The end result would be an extended useful life for existing County roadways, with less demand for expensive major rehabilitation and reconstruction of existing facilities.

- **Recommendation 6-C (2):** Programmed routine or minor maintenance should prioritize maintenance efforts for the following areas:
  - Chip sealing to extend the life of County roads
  - Storm drain maintenance and cleaning
  - Sanding and ice removal during inclement weather
  - Programmed guardrail installation and repair
  - Bikeway maintenance
  - Vegetation chipping and removal
  - Sign and pavement marking installation and repair

**Policy 6-D:** The County will pursue funding of Tier 2 (high priority) shoulder paving and widening maintenance activities.

- **Recommendation 6-D (1):** Resurface Jerome Prairie Road from Woodland Park Road to west.

- **Recommendation 6-D (2):** Resurface segments of Williams Highway from Provolt to Water Gap Road (MP 0.0 to MP 4.75).

- **Recommendation 6-D (3):** Widen and pave the shoulders on Pine Crest Drive/Plumtree Lane from Camp Joy Road to Upper River Road (MP 0.0 to MP 1.287), and improve the alignment and sight distance at rail crossings in this segment.

- **Recommendation 6-D (4):** Widen and pave the shoulders of New Hope Road from Hidden Valley Road to OR 238 (MP 0.0 to MP 3.697).

- **Recommendation 6-D (5):** Widen and pave the shoulders along Laurel Road from US 199 to OR 46 (MP 0.0 to MP 2.22).

- **Recommendation 6-D (6):** Install left turn lanes at various intersections along Monument Drive between Merlin Road and Timber Lane (MP 0.0 to MP 2.014).

**Policy 6-E:** The County's shoulder paving and widening maintenance activities shall consider maintenance-type projects included in the Tier 3 Alternative to be a lower priority for implementation as funding is available.

- **Recommendation 6-E (1):** Widen and pave the shoulders of Cloverlawn Drive from East View Place to Jaynes Drive (MP 0.498 to MP 3.633), improve intersection with Summit Loop Road.

- **Recommendation 6-E (2):** Widen and pave the shoulders along Lakeshore Drive from US 199 to McMullen Creek Road (MP 0.201 to MP 2.954).

## Roadway Improvements

**Policy 6-F:** Josephine County shall actively coordinate with the State to promote roadway and bridge improvements in the County that are included in the approved STIP.

- **Recommendation 6-F (1):** Replace Grave Creek Bridge #144005, a federal Highway Bridge Rehabilitation and Replacement (HBRR) project on Beecher Road (STIP project # 12201).

- **Recommendation 6-F (2):** Replace US 199 Bridge #01077A and #01108A at the East and West Forks of the Illinois River (STIP project #11816).

- **Recommendation 6-F (3):** Install variable message signs (VMS) on I-5 at Hugo and Glendale Roads (STIP project #10855)

- **Recommendation 6-F (4):** Make drainage improvements on Lower River Road.

**Policy 6-G:** Josephine County will actively pursue grants and other sources of funding to implement Tier 2 (high priority) mobility, accessibility and general traffic circulation improvements.

- **Recommendation 6-G (1):** Identify a preferred course of action and improve the intersection of I-5 Northbound on/off Ramps/Merlin-Galice Road.

- **Recommendation 6-G (2):** Improve Merlin-Galice Road/Monument Drive intersection.

- **Recommendation 6-G (3):** Galice Road between Merlin and Galice (MP 0.0 to MP 12, approximately): Pull-out lanes and/or passing lanes to pass slow-moving recreational vehicles are recommended.

**Policy 6-H:** When existing roads are widened or reconstructed they shall be designed to the adopted design standards for the appropriate functional classification. Modifications to the design standards may be necessary to avoid existing constraints created by topography, the built environment, historic resources or other significant features.

**Policy 6-I:** County roadway improvement projects should be prioritized based on consideration of improvements to safety, relief of existing congestion, response to near-term growth, system-wide benefits,

geographic equity, and availability of funding, and ability to leverage funding from other sources. Safety needs should receive higher priority than capacity needs.

**Safety Improvements**

**Policy 6-J:** The County shall work toward providing paved shoulders adequate to accommodate bicycle travel on all arterials and collectors within rural activity centers.

- **Recommendation 6-J (1):** As practical and feasible, the County shall include minor shoulder widening in routine maintenance activities to provide 4-foot shoulders on all arterials and collectors within a one-mile radius of activity centers throughout the County (schools, parks and other areas that are the major generators of non-motorized pedestrian and bicycle travel).

**Policy 6-K:** Josephine County shall actively pursue grants and other sources of funding to implement Tier 2 (high priority) safety improvements.

- **Recommendation 6-K (1):** Williams Highway at Tetherow Road (MP 5.76 on Williams Highway): Install a "Congestion Ahead" sign or a "side street" advance warning sign for northbound traffic approaching Tetherow Road from the south. A commercial building to the south limits sight distance from Tetherow Road.

- **Recommendation 6-K (2):** Azalea Drive at Robertson Bridge Road (MP 5.242): A potential low-cost measure is all-way stop control, while eliminating the oblique angle of the intersection through realignment is a longer-term, more expensive project.

- **Recommendation 6-K (3):** Holland Loop Road at Hayes Cutoff Road (MP 1.351): Install "chevron" warning signs, "curve ahead with advisory speed" warning signs and "intersection" warning signs on each side of Hayes Cutoff Road and on Hayes Cutoff Road approach Holland Loop Road. A more costly project would be realigning Holland Loop Road to eliminate the southern s-curve.

- **Recommendation 6-K (4):** Redwood Avenue at Southgate Way (MP 2.659): Improve sight distance to the west through removal of low-growing trees on adjacent private property.

- **Recommendation 6-K (5):** OR 238 at Williams Highway (MP 0.0 on Williams Highway): Install warning signs to alert drivers of the s-curves and the tight southbound right turn.

**Policy 6-L:** Josephine County shall program Tier 3, low priority safety improvements at the following locations, consistent with available resources. Some of these locations will require additional investigation of detailed collision records and existing roadway conditions, such as pavement condition, traffic control, sight distance, vertical and horizontal geometry, driveway frequency, etc. The following improvements are recommended:

- **Recommendation 6-L (1):** Install guard rail along segments of county roads as indicated in Figure 6-2.

- **Recommendation 6-L (2):** Realign intersection of Holland Loop Road at Hayes Cutoff to improve safety.

- **Recommendation 6-L (3):** Improve intersection of Dowell Road at Wolf Lane.

**Policy 6-M:** Josephine County shall monitor and periodically analyze collision data, and coordinate with city and state agencies to address areas with crash rates exceeding commonly used cutoff values.

**Policy 6-N:** Josephine County shall actively work with the State to promote addition of other roadway and bridge improvements on state facilities in the County to the approved STIP list.

- **Recommendation 6-N (1):** Potential passing lane(s) on US 199 between MP 16-24 (northbound), and MP 7-14 (southbound): ODOT installed a southbound passing lane near MP 16.5 in 2002, and a northbound lane is needed on the southern side of the pass. South of Cave Junction toward the California border there are frequent slow-moving trucks and recreational vehicles.

- **Recommendation 6-N (2):** Improve the intersection of US 199 at Willow Lane (MP 0.138 on Willow Lane), possibly including signalization.

- **Recommendation 6-N (3):** Add a southbound left turn lane on US 199 at Ken Rose Lane (MP 0.0 on Ken Rose Lane).

- **Recommendation 6-N (4):** Add a southbound left turn lane on US 199 at Waldo Road (MP 0.0 on Waldo Road).

- **Recommendation 6-N (5):** Install southbound and northbound left turn lanes on OR 238 at its intersection with Jaynes Drive.

- **Recommendation 6-N (6):** Install left turn lanes on OR 238 at North Applegate Road.

- **Recommendation 6-N (7):** Improve the intersection of US 199 at Waters Creek Road (MP 0.0 on Waters Creek Road). The intersection needs sight distance improvements by flattening the vertical curve immediately north of the intersection on US 199 to safely accommodate heavy vehicles.

- **Recommendation 6-N (8):** Coordinate improvements on Redwood Avenue at US 199 with the urban are transportation plan and pending ODOT improvements currently under study.

- **Recommendation 6-N (9):** Realign OR 238 at Water Gap Road to improve safety and traffic operations.

- **Recommendation 6-N (10):** Add truck climbing lanes on I-5 at Sexton Summit (between mileposts 65.7 and 80.8).

- **Recommendation 6-N (11):** Improve northbound and southbound truck turning radii from OR 238 to New Hope Road in the Murphy area.

- **Recommendation 6-N (12):** Install northbound passing lane on OR 238 between MP 16 and 17.

- **Recommendation 6-N (13):** Make safety improvements on US 199 at Rockydale Road to warn drivers of the intersection and/or enhance intersection visibility.

- **Recommendation 6-N (14):** Make safety improvements on OR 46 at Holland Loop Road to warn drivers of the intersection and/or enhance intersection visibility. Consider minor roadway widening on OR 46 to provide area for vehicle recovery.

- **Recommendation 6-N (15):** Relocate Highland Avenue at Merlin-Galice Road eastward to increase separation from I-5 northbound ramps.

- **Recommendation 6-N (16):** Make safety and/or capacity improvements along US 199 between mileposts 0.35 and 4.44 (rural portion) consistent with expressway classification of this highway. This may include improving intersections and/or installing medians or frontage roads. Coordinate with urban area plans.

**Policy 6-O:** Josephine County shall ensure that all new land development activity adequately addresses safety considerations during engineering and construction.

- **Recommendation 6-O (1):** Warranted left-turn pockets, traffic control changes and other warranted safety improvements designed to applicable AASHTO standards shall be required at intersections on arterials and collectors, if added traffic from an approved development triggers applicable warrants. Cost responsibility should be reviewed through the development process to ensure mitigation costs are roughly proportional to the impact of the development.

### Bridge Improvements

**Policy 6-P:** Josephine County shall pursue state and federal funding sources to replace deficient bridges.

*Note:* Bridges in Josephine County are regularly inspected to determine maintenance needs and identify signs of undue deterioration. Bridges are assigned a technical ranking according to various criteria. Bridges that are assigned a rating of *structurally deficient* have one or more elements that show significant deterioration with the potential to affect the bridge's load-carrying capability. Structurally deficient bridges have the most urgent needs for rehabilitation and/or replacement.

- **Recommendation 6-P (1):** Replace Jacks Creek Bridge on Jumpoff Joe Creek Road (MP 2.62), which has been determined to be structurally deficient.

- **Recommendation 6-P (2):** Replace Jones Creek Bridge on Foothill Boulevard (MP 0.72), which has been determined to be structurally deficient.

- **Recommendation 6-P (3):** Replace Sucker Creek Bridge on Holland Loop Road (MP 7.2), which has been determined to be structurally deficient.

- **Recommendation 6-P (4):** Replace Coyote Creek Bridge on Bloom Road, which has been determined to be structurally deficient.

## Freight Transportation System

Transportation distribution is an important economic activity in southern Oregon including Josephine County, and good freight mobility is critical to maintaining the region's competitiveness. The movement of goods and commodities into, out of, and through Josephine County is heavily dependent on the highway system (particularly I-5) where demand has increased significantly over the past decade, and where the need for access and circulation by large vehicles is expected to be the highest. Policies and recommendations in this section address freight movement on the road and highway system. Freight movement via rail and air transportation is addressed in these modal sections.

**Policy 7-A:** Josephine County shall pursue a variety of funding options for improving freight mobility in rural areas, with particular emphasis on implementation of the high priority projects identified in the TSP.

- **Recommendation 7-A (1):** As funding becomes available for projects that enhance freight mobility, Josephine County shall assign the highest priority to projects on the Tier 2 (preferred alternative) list as described in Table 7-2.

**Policy 7-B:** Josephine County shall evaluate and develop improvement recommendations to address existing deficient bridges along freight routes within the rural portion of the County, secure necessary funding, and manage freight traffic during construction to minimize adverse impacts on both freight mobility and local multimodal traffic circulation.

**Policy 7-C:** Josephine County shall work cooperatively with freight providers and other jurisdictions to balance freight mobility with community livability including:

- Increase freight transport safety awareness
- Reduce the number and severity of commercial transport-related accidents
- Enforce regulations related to safe transport of hazardous materials
- Reduce through truck traffic on residential streets

## Public Transit System

Public transit policies were developed to guide efforts to improve public transit service in the rural portions of Josephine County, while recommendations are intended to provide more specific direction to meet the County's short- and long-term transportation needs for this travel mode.

**Policy 8-A:** Josephine County shall establish a sustainable funding source for the operation of public transportation in the county.

- **Recommendation 8-A (1):** Develop tax base dedicated to public transportation, sufficient to maintain existing services when combined with fees and non-discretionary federal and state grants (Tier 2 Alternative).

**Policy 8-B:** Josephine Country shall work to improve intercity connections between Josephine County communities and the Medford urban area.

- **Recommendation 8-B (1):** Investigate opportunities for the planning and funding of new intercity services.

- **Recommendation 8-B (2):** Investigate opportunities for better schedule coordination with private transit service providers.

**Policy 8-C:** Josephine Country shall maintain and enhance the capital facilities and equipment required by JCT.

- **Recommendation 8-C (1):** Review bus stop amenity needs and seek discretionary grant funding where required.

- **Recommendation 8-C (2):** Develop a capital equipment replacement plan and seek discretionary grant funding where required.

**Policy 8-D:** Josephine Country shall provide mobility options for those citizens who cannot, or choose not to, use private transportation due to age limitations, physical disabilities, economic circumstances, lack of access to private transportation, and/or transportation preferences.

- **Recommendation 8-D (1):** Maintain existing services to those citizens with special mobility needs.

- **Recommendation 8-D (2):** Further explore coordination opportunities with private and non-profit providers in order to expand services where needed in the county.

**Policy 8-E:** Josephine County shall coordinate with private transportation service providers to ensure that there is continued availability of transit, taxi and/or shuttle services to connect with all intercity passenger facilities.

**Policy 8-F:** Josephine County shall encourage the continued operations and future expansion of intercity bus service to and from the Grants Pass area.

- **Recommendation 8-F (1):** Explore coordination opportunities with RVTD for inter-county services.

## TSM/TDM

Policies and recommended actions were identified as a means to support TSP goals and objectives for each transportation mode, including Transportation System Management (TSM) and Transportation Demand Management (TDM). The policies and recommendations listed below are intended to provide direction to the County for on-going TSM and TDM activities and improvements.

**Policy 9-A:** Josephine County will pursue and encourage implementation of Transportation Demand Management (TDM) and Transportation System Management (TSM) activities whenever possible as an alternative to building new transportation facilities.

- **Recommendation 9-A (1):** Josephine County should promote the use of alternative commute options to reduce motor vehicle travel generated by employment sites and schools by participating in activities to raise awareness about the use of TDM strategies.

- **Recommendation 9-A (2):** Josephine County should seek support from RVTD resources as available.

- **Recommendation 9-A (3):** Josephine County should work cooperatively with ODOT to identify and implement appropriate TSM strategies on the rural road and highway system including ITS strategies.

## Air Transportation System

The policies and recommendations listed below are intended to provide direction to the County for the on-going management and improvement of the air transportation system, with particular emphasis on the Grants Pass and Illinois Valley Airports.

**Policy 10-A:** Future updates to the plans for the Grants Pass and Illinois Valley airports and the transportation system plans for Josephine County, Cave Junction and Grants Pass should be coordinated to:

- Improve opportunities and efficiencies for emergency and medical response;
- Maximize economic development opportunities by improving access between industry and commerce to markets both within and outside the region; and
- Provide for appropriate connections between modes of transportation to facilitate choice and efficiencies for the movement of people and goods.

**Policy 10-B:** Josephine County should coordinate implementation of recommended roadway system improvements in the vicinity of the Grants Pass and Illinois Valley Airports with the access and infrastructure needs of these facilities.

- **Recommendation 10-B (1):** Development plans and secure funding to implement the following roadway improvements:
  - Adding left turn lanes and bicycle lanes on Monument Drive.

- Widening the Merlin-Galice Road/Monument Drive intersection to provide additional turn lanes and protected left turns.

- Improving the I-5 northbound/Merlin-Galice Road intersection area to accommodate anticipated traffic volume growth.

**Policy 10-C:** Josephine County will protect the function and operations of airports from incompatible land uses.

- **Recommendation 10-C (1):** To address land use compatibility issues in the vicinity of the Grants Pass and Illinois Valley Airports, the current comprehensive plan and code should be evaluated to ensure the following:
  - That the types and levels of public facilities and services needed to support development located at or planned for the airport are provided;

  - That there is adequate mapping of the airport area as required by OAR 660-013;

  - Develop and consider any ordinances necessary to carry out the requirements of OAR 660-013 consistent with applicable statewide planning requirements. This might include revisions to the County's existing Airport Overlay Zone (RLDC, Article 69.4) if this is determined to be inadequate to meet the requirements of OAR 660-013 for the safety provisions of an Airport Overlay Zone;

- **Recommendation 10-C (2):** Consider land use plans in the vicinity of the airport to minimize potential safety and noise related impacts associated with the airport.

## Non-Motorized Transportation System

The policies and specific recommendations in this section are intended to provide a more-detailed guide toward meeting the County's short- and long-term transportation needs for improving rural bicycle and pedestrian circulation.

**Policy 11-A:** Josephine County shall construct bicycle lanes/wide shoulders on all new arterial or collector roadways or as part of all projects on arterials or collectors involving major reconstruction as conditions permit.

- **Recommendation 11-A (1):** Include bicycle lanes or wide shoulders when new arterials or collector roads are constructed, or when existing facilities are reconstructed.

- **Recommendation 11-A (2):** Work closely with the Oregon Department of Transportation to improve bicycle/pedestrian facilities on the state highway system.

**Policy 11-B:** Josephine County shall pursue a variety of funding options for enhancing the bicycle and pedestrian system, with particular emphasis on implementation of the high priority projects identified in the TSP.

- **Recommendation 11-B (1):** As funding becomes available for bicycle/pedestrian construction projects, Josephine County shall assign the highest priority to projects on the Tier 2 (preferred alternative) list as described in Chapter 11.

- **Recommendation 11-B (2):** Upon the completion of Tier 2 bicycle/pedestrian projects, Josephine County shall work to implement the recommended improvements on the Tier 3 list, also described in Chapter 11.

**Policy 11-C:** Josephine County shall identify and work cooperatively with other agencies to develop multi-use paths.

- **Recommendation 11-C (1):** Work closely with the City of Grants Pass to determine the feasibility of extending the Rogue River Greenway to Tom Pearce Park and Schroeder Park.

**Policy 11-D:** Josephine County shall work to improve the bicycle and pedestrian system environment by implementing appropriate safety and operational improvements.

- **Recommendation 11-D (1):** Maintain accurate data of bicycle/pedestrian volume and accident data, and evaluate contributing causes to bicycle and pedestrian accidents.

- **Recommendation 11-D (2):** Where appropriate, consider installing "Share the Road" signage along rural arterial and collector roadways that do not have wide shoulders or designated bicycle lanes.

**Policy 11-E:** Josephine County shall work cooperatively with other agencies to encourage development and implementation of a countywide bicycle/pedestrian safety program.

- **Recommendation 11-E (1):** Ensure that Josephine County employees, particularly Sheriff's Department staff, have adequate training regarding bicycle/pedestrian safety and enforcement issues.

- **Recommendation 11-E (2):** Encourage and support efforts by County schools or other organizations to develop and use a bicycle/pedestrian safety curriculum for students.

- **Recommendation 11-E (3):** Consider installing signage along roadways where bicycle touring or other significant bicycling activity is expected advising travelers of the "rules of the road" pertaining to motorists and non-motorized travelers.

**Policy 11-F:** Josephine County shall encourage walking and bicycling as viable modes of travel.

- **Recommendation 11-F (1):** Include facilities for bicycle parking in the planning requirements for new commercial areas, single and multi-use facilities and other development projects.

- **Recommendation 11-F (2):** Provide for secure bicycle storage facilities within rural activity centers and other major destinations that generate bicycle/pedestrian traffic.

- **Recommendation 11-F (3):** Support organized community events that promote bicycling and walking like the Evans Valley Biathlon.

**Policy 11-G:** Josephine County shall support the activities of local citizen committees that focus on Countywide bicycle and pedestrian issues.

- **Recommendation 11-G (1):** Coordinate bicycle/pedestrian planning efforts with the Grants Pass/Josephine County Bikeways Committee, and assign additional responsibilities to the committee.

**Policy 11-H:** Josephine County shall provide routine maintenance to ensure the long-term viability of the bicycle and pedestrian transportation system.

- **Recommendation 11-H (1):** Establish a maintenance schedule and budget for roads with wide shoulders, designated bicycle lanes or facilities with higher bicycle/pedestrian traffic.

**Policy 11-I:** Explore opportunities for coordination and cooperation with state and federal agencies in examining innovative means of providing or funding pathways, trails, and equestrian facilities.

**Policy 11-J:** Explore opportunities for development of non-motorized transportation facilities within the Central Oregon and Pacific railroad right-of-way, or within abandoned railroad rights-of-way as these become available.

## Rail Transportation System

The Central Oregon and Pacific Railroad provides rail transportation service in Josephine County. While the County has no direct responsibility for the development, operations or maintenance for the provision of freight or commuter rail service in the region, there are specific actions that the County can take to improve this travel mode. More specifically, the County can act to ensure safety around existing rail trackage, to address general land use compatibility with the existing freight rail corridor, and to support potential commuter rail service in the future. Policies and recommendations for rail transportation in rural Josephine County include the following.

**Policy 12-A:** Josephine County shall work cooperatively with CORP and ODOT to secure funding and implement improvements to enhance the safety and viability of rail transportation in the County.

- **Recommendation 12-A (1):** Support CORP and ODOT in securing state and/or federal grants to improve existing rail trackage and service.

- **Recommendation 12-A (2):** Pursue federal and state grants to improve existing rail crossings, particularly the Pine Crest Drive/Plumtree Lane crossing, where restricted sight distance is a concern.

- **Recommendation 12-A (3):** Provide for regular and ongoing inspection, maintenance and repair of streets at existing at-grade crossings.

- **Recommendation 12-A (4):** Support efforts to develop additional rail reload or intermodal facilities if and when market forces should dictate the need.

- **Recommendation 12-A (5):** Require any new roadways in areas served by rail to be located at least 500 feet away from the rail line, to allow industrial development between the tracks and the roadway.

- **Recommendation 12-A (6):** Eliminate or consolidate existing rail crossings as feasible.

- **Recommendation 12-A (7):** Avoid or minimize the number of new at-grade railroad crossings created by new roads crossing existing rail lines.

**Policy 12-B:** Josephine County shall consider development of intercity passenger rail service in conjunction with ODOT and Jackson County.

# Financing Transportation System Improvements

Capital improvement and maintenance funding for the County roadway system presently comes almost entirely from two sources: state motor vehicle fuel tax, and a portion of the timber receipts from the U.S. Forest Service stemming from a 1908 federal act (P.L. 60-136). Both are declining revenue streams, and potential options to supplement or replace these funding sources will be addressed in the TSP.

While gas tax receipts are projected to see a small increase over time, this increase is expected to be more than offset by inflation. U.S. Forest Service receipts are currently not planned to continue beyond federal

fiscal year (FY) 2006, which would create a major loss of revenue for the County's road fund, although an extension is possible. Earmarking of U.S. National Forest Service revenue is required by federal law (16 U.S. Code 500), which states that 25 percent of "all moneys received" from National Forest timber sales and other sources be paid to the states in which the National forests are located. Further, the law required these funds to be used as each state legislature prescribes for the benefit of county roads and schools. Oregon Law (ORS 294.060) requires that the 25 percent payments be divided…with 75 percent going to the county road fund, and 25 percent going to the county school fund. With the decline of timber harvesting in the region, U.S. Forest Service receipts are also in decline. The federal government agreed to provide a 6-year guaranteed minimum amount through Federal Fiscal Year (FFY) 2006, when it is slated to be slightly under $1.9 million.

This section will evaluate the current transportation revenue situation in Josephine County, identify the cost of needed transportation improvements, and discuss potential funding mechanisms to fill at least a portion of the gap that would be created with the decline or elimination of U.S. Forest Service receipts.

## Current Transportation Revenue Sources

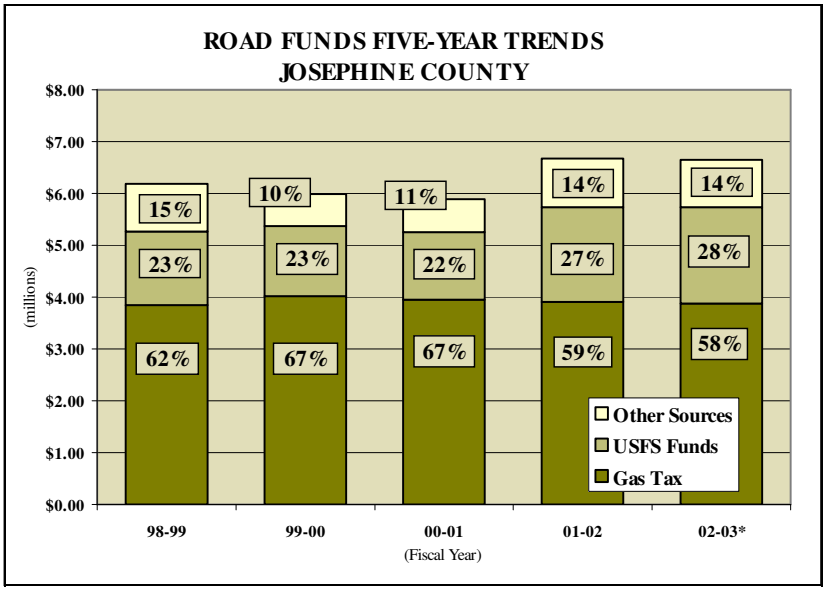
The Josephine County Public Works Department is tasked with designing, building and maintaining Josephine County's road network. The Department provides maintenance on approximately 576 miles of County roads, including bridges and signage. The primary sources of revenue for the Public Works Department are state motor vehicle fuel taxes and a portion of the timber receipts from the United States Forest Service lands in Josephine County. Revenue from these sources is legally designated for roads and road repairs. In addition, Local Improvement Districts (LIDs) have been established in some areas to provide for new roads and upgrades. The following table summarizes these programs

**Table 13-1**
**Summary of Existing Road System Revenues**

| Existing Road Funds | Mechanism |
|---|---|
| State Motor Vehicle Fuel (Gas) Tax | County receives State revenues via the State Highway Fund, largely funded by the State motor vehicle fuel tax. Distributions based on annual volume of motor vehicle and trailer registrations in the County. (ORS 366.524) |
| U.S. Forest Service Timber Receipt Funds | County receives funds from the U.S. Forest Service based on timber receipts from harvest on public lands within the County. A "safety net" mechanism guarantees consistency in the wake of reduced timber harvests resulting from spotted owl protection. 75% of funds are earmarked for roads, 25% for education. |
| Local Improvement District Assessments (LIDs) | Property owners jointly seeking a new road or improvement of existing road to county standard petition for construction. County funds the project and is reimbursed by petitioners over a ten-year period using various methods for apportioning the cost to each benefiting property. |

The overall revenue generated by the two primary funding sources has remained relatively constant over the last five years, providing between $5.89 and $6.67 million per year in annual revenue. Over this period, overall revenue has increased at a nominal average annual rate of 1.8 percent. Revenues from USFS Lands increased at a rate of 7.0 percent during the period, while revenue from gas taxes grew at a modest 0.2 percent rate. Other revenues declined at 0.2 percent. However, in terms of buying power (e.g., constant dollars), the County's transportation revenues have decreased by an average of 0.6 percent over this period. In constant dollars, revenues from the USFS have increased at an average rate of only 4.0 percent, gas tax revenues have dropped by an average of 2.2 percent, and revenue from other sources has dropped an average of 2.6 percent.

Due to the differential rate of growth, USFS revenues now account for almost a third of all road fund revenues in Josephine County. The growth in state motor vehicle fuel tax has been hampered by modest population growth in the County, which has limited the County's apportionment of these revenues. In addition, as the tax rate is set on a per gallon basis, it is not indexed for inflation and will suffer from reduced buying power over time. USFS funds are set to end in Federal Fiscal Year (FFY) 2006, with renewal of the program not guaranteed. The increasing dependence on these funds is therefore seen as potentially representing a significant problem.




*Projected
SOURCE: Josephine County Public Works Department

**Table 13-2**
**Summary of Existing Road Fund Revenues**

| Existing Road Funds | Historical Revenue Growth | | | | | | Comments |
|---|---|---|---|---|---|---|---|
| | **Fiscal Yr** | **98-99** | **99-00** | **00-01** | **01-02** | **02-03*** | |
| State Motor Vehicle Fuel (Gas) Tax | (millions) | $3.85 | $4.02 | $3.95 | $3.91 | $3.88 | • Moderate (2% annual) population growth, thus moderate growth in vehicle registration. Has limited apportionment escalation. |
| | 5-year growth | | 0.8% | | | | • The tax rate per gallon of fuel is not inflation-indexed. Therefore, revenues pay for less annually as materials and labor grow more costly with inflation. |
| | Annual growth | | 0.2% | | | | |
| | **Fiscal Yr** | **98-99** | **99-00** | **00-01** | **01-02** | **02-03*** | |
| U.S. Forest Service Timber Receipt Funds | (millions) | $1.42 | $1.36 | $1.31 | $1.83 | $1.86 | • Decreasing real gas tax revenues have forced the County to increase its reliance on federal funds to pay for upkeep of roads. |
| | 5-year growth | | 31.3% | | | | • Although a growing revenue source, timber funds are set to end in 2006. Renewal of the program is not guaranteed. |
| | Annual growth | | 5.6% | | | | |
| Local Improvement District Assessments | (millions) | $0.03 | $0.01 | n/a | n/a | n/a | • Only property owners directly access the new road pay under this program. |
| | | | | | | | • Although the Revolving Construction fund is in place, it is rarely utilized due to the fact that property owners rarely organize and undertake the payment burden. The fund has not advance-funded projects for a number of years. |

* Projected
Source: US General Accounting Office, ODOT, Josephine County Public Works Department, and Johnson Gardner

## Recommended 20-Year Roadway Improvement Costs and Funding

This section presents a summary of estimated costs associated with maintenance activities on the County's roadway system and the safety, congestion and multi-modal improvements that are recommended as part of the Tier 2 "Preferred" Alternative. This section also identifies the anticipated levels of roadway funding from existing revenue sources and discusses the significant difference between

necessary "baseline" roadway maintenance needs and revenue expectations. A significant revenue shortfall is anticipated just to maintain the existing $470 million investment that the County has in its roadway system.

## Maintenance Program Needs

Table 13-3 summarizes existing and projected transportation system revenues from current funding sources and compares these resources with the level of maintenance activities than can be accomplished. As indicated in the table, in 2003-2004 the County currently receives approximately $3.9 million from gas tax and an additional $1.9 million from U.S. Forest Service Timber Receipts. Approximately $800,000 is received from a variety of other sources including grants. The County currently maintains a cash reserve of approximately $3.1 million to cover the cost of four months of operations before forest service tax revenues are received each year, to provide for road repairs in the event of a natural disaster or some other emergency, and to accommodate annual variations in revenues received.

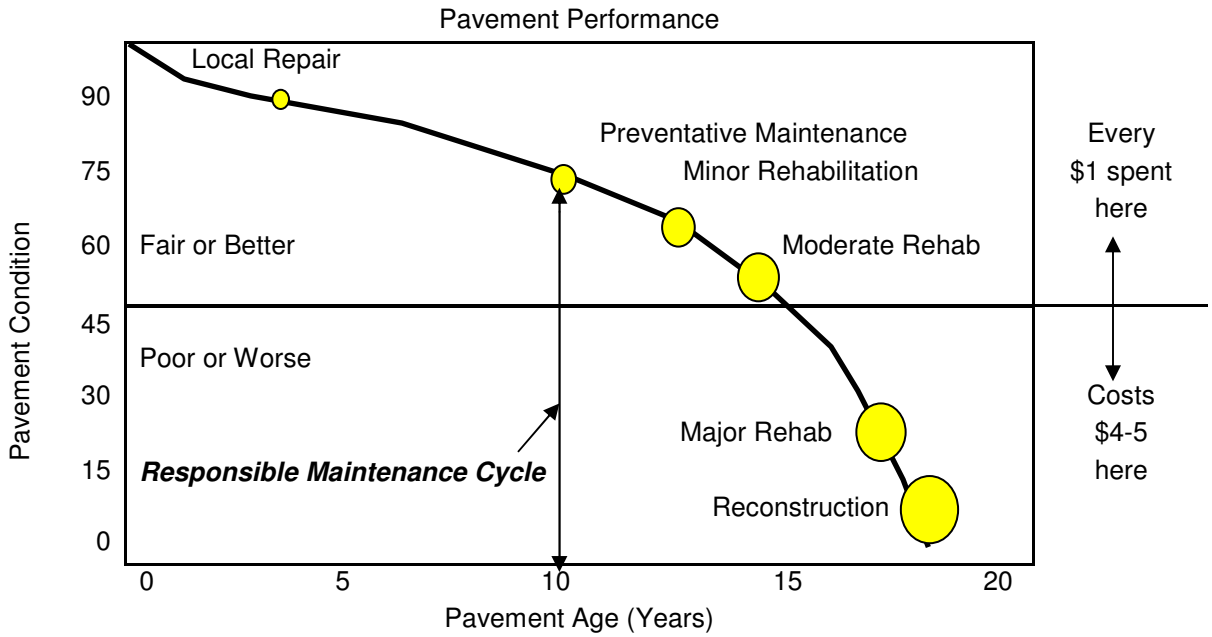
Table 13-3 also illustrates the types of roadway maintenance activity that the County current undertakes, including such things as routine cleaning, grading and roadway patching; bridge structure and deck repair; drainage system repair and enhancement; vegetation management; on-going signing, striping and other pavement marking; and roadway surface preservation by chip sealing. As indicated under Year 1 of the 20-year maintenance program outlined in the table, the County's current maintenance activities are limited by existing financial resources to a level that is significantly below the optimal maintenance cycle for all listed activities. For example, the County currently maintains 576 miles of roadway and, until 1999 had targeted approximately 60 miles in most years of chip sealing to attempt to ensure that all roads are treated an average of once every 10 years.

Since 1999, the County has not been able to maintain a 10-year cycle for pavement chip sealing. In fact, existing revenues will make it possible to treat only 20 miles of roadway each year, and this level will drop after FFY 2007 if the USFS Timber Receipt funding program ends. At 20 miles of chip sealing each year, a given segment of roadway can expect to be chip sealed only once every 30 years.

Figure 13-1 illustrates the typical life cycle of a roadway from construction through varying levels of deterioration that occur over time. From the day that a street is constructed environmental, chemical and mechanical factors begin to cause pavement deterioration. These factors include, but are not limited to, climatic conditions such as temperature variation and ultraviolet radiation, material durability, damage caused by inadequate drainage, poor construction technique, age, total traffic volumes, and the percent of heavy vehicles in the traffic stream. Street deterioration shows up as cracking, rutting, potholes, and a general disintegration of the pavement. If sufficiently advanced, street deterioration can result in complete failure of the roadway surface with substantial exposure of the aggregate subsurface. In Figure 13-1, the average rate at which a street can experience deterioration is graphed. This graph, also called a deterioration curve, is used by the County to maximize its maintenance dollars by spending in a strategic fashion to prolong the life of a street.

The average street is generally in "excellent", "very good", or "good" condition between the time of construction and up to about 12 or 13 years. Maintenance activities during this period of time generally include localized repairs such as filling potholes, preventative maintenance such as chip sealing to prevent deterioration, or minor rehabilitation and surfacing. Typically, beyond 15 years, a street will begin to experience more significant deterioration.

**Figure 13-1 - Typical Pavement Management Cycle**




Source: ODOT, 2003

The County has found that the maintenance cost of a road in the "fair", "poor", "very poor", or "failed" categories are at least four times more expensive as a road in the "good" to "excellent" categories. This is due to the type of treatment that a road needs for each stage of deterioration. Roads in the "fair" to "failed" categories require subsurface work such as replacing the road base, re-compaction of the road base, the placement of asphalt overlays (which are considerably more expensive than the alternative resurfacing technique of chip sealing), and safety or alignment improvements to meet today's engineering standards. The County has found that the most effective way to prolong the life of an asphalt road and to avoid the higher cost of overlays is to chip seal the road at a point in the life cycle of the pavement when only preventative maintenance or minor rehabilitation is required (e.g., between approximately 5 and 12 years of age). Chip sealing preserves the road by preventing storm water from getting in cracks in the road surface which can cause potholes, rutting and a condition called alligatoring (a cracking pattern resembling the patchwork skin of an alligator). A new surface also provides a better skid resistant roadway for motorists.

Once the roadway deteriorates beyond the point where minor rehabilitation is sufficient to preserve the pavement, the cost of maintaining that roadway goes up by an order of magnitude. As noted above, since 1999 the County can only afford to chip seal approximately 20 miles of roadway each year. This is about one third of the mileage that is actually needed to ensure that the County's roadway system remains in good or better condition over the long term. This is a significant change from the recent past, so it is not immediately evident that the County's roadways are experiencing deterioration. In most cases, the existing roadway system appears to be in relatively good condition. However, over the next 10 years, pavement deterioration will accelerate, until many of the County's roads are no longer in good or better condition. At that point, it will be necessary to spend considerably more money to regain the high quality roadway system that exists today. It is estimated that, if only 20 miles of county road are chip sealed each year, in 10 years two-thirds of the roadway network will drop to the "poor' or "very poor" category. This means that within 10 years, most county roads will have potholes, rutting or other obvious pavement

deterioration that will require expensive repairs. The County has two alternatives for on-going roadway maintenance under the current financial conditions:

- The County can accept a general lowering of pavement quality throughout the unincorporated area and continue attempting to maintain the entire system on a 30-year cycle. This would result in "poor" to "failed" roadways throughout the rural area without regard for the relative importance of a specific road. Ultimately, this would also result in a substantially higher cost to repair these roads and return them to "good" or better condition; or

- The County can reduce the number of roads on its maintenance list to a total mileage that can be successfully maintained with current funding on a 10-year chip sealing cycle. This would likely mean that only Rural Arterial and Collector roads (approximately 214 miles of the total 576-mile system) would be maintained. The intent of this alternative is to preserve the most important roads in the rural area in good or better condition. However, as time passes and inflation eats away at the buying power of the County's budget, the number of Rural Arterial and Collector roads that the County can maintain will drop. All other roads would not receive any resurfacing and would be converted to gravel when they eventually fail.

In addition to maintenance of the existing pavement surfacing, the County is also challenged to provide other on-going types of roadway maintenance activities at an optimal level. These include such things as guardrail repair and replacement, vegetation management (to prevent trees and shrubs from blocking visibility), bridge deck and railing repair, drainage maintenance and improvement, repair or installation of signs, on-going pavement marking and remarking to indicate centerlines and turn lanes, roadway cleaning, and other activities. Table 13-3 illustrates the optimal cycles for each major category of maintenance activity and includes an estimated cost in five-year increments over the next 20 years.

As indicated in the table, existing financial resources can only maintain a limited level of maintenance activities that falls far below the optimal level. This optimal level has been achieved by the County for many years, until cash reserves began to decline in 1998/99. As with the increased roadway pavement deterioration that would be experienced with a drop in the number of roadway miles that are chip sealed each year, the existing decline in other maintenance activities will mean that the entire roadway system will experience degradation in quality. Sign and guardrail repair and replacement will be slow, drainage problems may not always be promptly addressed, and bridge decks may become rough (of particular concern are those bridges with timber elements that are expected to begin wearing out over the 20-year planning period).

The cost and revenue estimates in Table 13-3 are segregated into two "Tiers" that relate to existing funding and levels of maintenance, and the optimal levels of maintenance for each activity type. Tier 1 refers to maintenance activities that can be funded and undertaken using existing anticipated roadway revenues over the next 20 years. Tier 2 includes the costs related to the expanded, optimal maintenance program above and beyond that which is addressed in Tier 1. In combination, Tier 1 and Tier 2 are the "Preferred" TSP improvement alternative. The table also identifies a revenue "shortfall" or gap between projected revenue from existing sources and the revenue needed to fund the Tier 2 program of optimal or responsible maintenance activities. According to the table, in the period between 2004 and 2008, an additional $23.3 million will be needed to fund Tier 2 maintenance activities. $40 million will be needed for the period between 2009 and 2013, $55 million between 2014 and 2018, and $73.6 million between 2019 and 2023. Options for meeting this revenue shortfall are discussed later in this chapter.

## Table 13-3
## Summary of Existing Revenues and Routine Maintenance Program Funding Needs

| Item | Unit of Measure | Total System | Year 1 2003-2004 Budget | Year 1 2003-2004 Optimal | Optimal Program Total 2004-2008 | Optimal Program Total 2009-1013 | Optimal Program Total 2014-2018 | Optimal Program Total 2019-2023 |
|---|---|---|---|---|---|---|---|---|
| **REVENUE NEEDS ANALYSIS** | | | | | | | | |
| Existing Revenue | | | | | | | | |
| *- Highway Trust Fund (increased at 0.2%/yr)* | | | *$3,855,000* | *$3,855,000* | *$19,372,000* | *$19,586,000* | *$19,783,000* | *$19,981,000* |
| *- Forest Service Receipts* | | | *$1,877,174* | *$1,877,174* | *$8,162,000* | *$0* | *$0* | *$0* |
| *- Other* | | | *$785,947* | *$785,947* | *$3,926,000* | *$3,925,000* | *$3,925,000* | *$3,925,000* |
| *- Operating cash carried forward (1)* | | | *$3,116,316* | *$3,116,316* | *$3,116,316* | *$3,116,000* | *$3,116,000* | *$3,116,000* |
| **Total Revenue from Existing Sources** | | | **$9,634,437** | **$9,634,437** | **$34,576,000** | **$26,627,000** | **$26,824,000** | **$27,022,000** |
| Estimated Costs | | | | | | | | |
| *Tier 1 Costs* | | | | | | | | |
| *- Annual Routine Maintenance Program Costs* | | | *$6,518,121* | *$6,518,121* | *$31,460,000* | *$23,511,000* | *$23,708,000* | *$23,905,000* |
| *- Cash reserves (emergencies and operating capital)* | | | *$3,116,316* | *$3,116,316* | *$3,116,316* | *$3,116,000* | *$3,116,000* | *$3,116,000* |
| *Total Tier 1 Costs* | | | *$9,634,437* | *$9,634,437* | *$34,576,000* | *$26,627,000* | *$26,824,000* | *$27,022,000* |
| *Tier 2 Costs* | | | | | | | | |
| *- Expanded or Optimal Maintenance Program Costs* | | | *-0-* | *$4,194,613* | *$23,003,000* | *$39,236,000* | *$54,021,000* | *$72,355,000* |
| *- Additional cash reserved required* | | | *-0-* | *-0-* | *$295,000* | *$797,000* | *$1,030,000* | *$1,217,000* |
| *Total Tier 2 Costs* | | | *-0-* | *$4,194,613* | *$23,298,000* | *$40,033,000* | *$55,051,000* | *$73,572,000* |
| **Total Routine Maintenance Program (Tier 1 & Tier 2)** | | | **$9,634,437** | **$13,829,050** | **$57,874,000** | **$66,660,000** | **$81,875,000** | **$100,594,000** |
| **Funding Shortfall for Maintenance Program** | | | | **($4,194,613)** | **($23,298,000)** | **($40,033,000)** | **($55,051,000)** | **($73,572,000)** |
| **ROUTINE ROADWAY MAINTENANCE PROGRAM ELEMENTS** | | | | | | | | |
| - Routinue road maintenance | | | | | | | | |
| - Sub-grade repair/stabilization | sq yds | N/A | 1,100 | 2,500 | | | | |
| - Asphalt blade patching | sq yds | N/A | 29,000 | 60,000 | | | | |
| - Shoulder grading/restoration | shldr mile | 1,138 | 80 | 350 | Same as 2003-2004 “Optimal” for each year | | | |
| - Guardrail repair/installation | linear ft | 47,735 | 500 | 2,000 | in these time periods. | | | |
| - Bikeway brooming/sweeping | bikewy mile | 80 | 500* | 1,000* | | | | |
| - Bikeway maintenance | bikewy mile | 80 | 3.5 | 8 | | | | |

(1) This line item assumes that there is a $3.1 million reserve that is carried forward each year to meet cash flow and emergency needs.

## Table 13-3 Continued
## Summary of Existing Revenues and Routine Maintenance Program Funding Needs

| Item | Unit of Measure | Total System | Year 1 2003-2004 Budget | Year 1 2003-2004 Optimal | Optimal Program Total 2004-2008 | Optimal Program Total 2009-1013 | Optimal Program Total 2014-2018 | Optimal Program Total 2019-2023 |
|---|---|---|---|---|---|---|---|---|
| **ROADWAY MAINTENANCE PROGRAM ELEMENTS** | | | | | | | | |
| - Routine bridge maintenance | | | | | | | | |
| - Deck/springer/beam - repair/install | bridge | 104 | 3 | 6 | | | | |
| - Footing/abutment/pier - repair/install | bridge | 104 | 3 | 5 | Same as 2003-2004 "Optimal" for each year | | | |
| - Guardrail/handrail - repair/install | bridge | 104 | 2 | 6 | in these time periods. | | | |
| - Deck and drain cleaning | bridge | 104 | 30 | 50 | | | | |
| - Drainage | | | | | | | | |
| - Ditching | ditch mile | 685 | 150 | 200 | | | | |
| - Culvert cleaning | culvert | 13,000 | 300 | 1,000 | Same as 2003-2004 "Optimal" for each year | | | |
| - Culvert replacement | culvert | N/A | 35 | 85 | in these time periods. | | | |
| - Ditch lining/rip-rap replacement | ditch mile | 685 | 0.5 | 1 | | | | |
| - Vegetation management | | | | | | | | |
| - Herbicide shoulder | shldr mile | 1,138 | 1,275* | 1,430* | Same as 2003-2004 "Optimal" for each year | | | |
| - Vegetation removal/chipping | shldr mile | 1,138 | 35 | 86 | in these time periods. | | | |
| - Mowing | shldr mile | 1,138 | 100* | 300* | | | | |
| - Signing, striping & pavement marking | | | | | | | | |
| - Sign repair/install/vandalism | sign | 8,350 | 1,250* | 1,400* | | | | |
| - Centerline striping | stripe mile | 545 | 492* | 665* | Same as 2003-2004 "Optimal" for each year | | | |
| - Fog & bike lane striping | stripe mile | 1,008 | 971* | 1,248* | in these time periods. | | | |
| - Pavement marking | marking | 1,133 | 412* | 920* | | | | |
| - Chipsealing of pavement | | | | | | | | |
| - Crack sealing | tons | N/A | 45 | 150 | Same as 2003-2004 "Optimal" for each year | | | |
| - Chipsealing | road mile | 576 | 20 | 60 | in these time periods. | | | |
| - Fog sealing | road mile | 576 | 12 | 25 | | | | |

Note 1: Dollars are inflated to year of activity.
Note 2: Tier 2 will require additional dollars to fund the optimal level of maintenance above and beyond the Tier 1 level that is funded by existing revenue sources.
Note 3: Highway Trust Fund includes fuel taxes, vehicle registration fees, and vehicle titling fees. Also includes recent allocation of funding from OTIA III.
* Assumes that the designated maintenance activity will occur more than once along certain roadway segments during the identified year.

### High Priority Improvement Needs

In addition to identifying a need for expanded routine roadway maintenance activities, the *Josephine County Rural TSP* includes a number of high priority roadway projects to address a variety of improvement needs. These needs were identified through the analysis of existing and projected roadway system deficiencies discussed in Chapter 6, and were prioritized through the evaluation process presented in Chapters 5. High priority roadway improvement projects resulting from this analysis and evaluation process are summarized in Table 13-4. Projects in this table are all recommended for inclusion in the Tier 2 "Preferred" TSP Alternative.

Table 13-4 includes a variety of larger maintenance projects that are targeted on specific improvement needs such as structurally-deficient bridges, existing pavement problems, a deficient railroad grade-crossing, and narrow roadways in several areas with higher traffic volumes. Table 13-4 also includes a number of safety-related projects that address improvement needs at existing high accident locations or locations with higher potential risk. Typical safety projects include improved warning signage, the addition of turn lanes at key intersections, other intersection improvements, and truck climbing lanes on I-5. Two projects have been identified to address potentially significant congestion problems in the rural area – I-5 at Merlin-Galice Road and Merlin-Galice Road at Monument Drive. Lastly, the list of Tier 2, high priority improvement projects includes improvements along Monument Drive, OR 99, OR 238 and the Rogue River Loop Highway to provide safer routes for auto, truck, bicycle and pedestrian circulation.

## Staged Roadway Improvement Program

This section presents a program of Tier 1 and Tier 2 roadway improvements that have been staged by recommended time period for implementation. Projects have been grouped into three periods according to urgency – short-term projects (2004-2008), medium-term projects (2009-2013), and long-term projects (2014-2023). Figure 13-2 illustrates the location and recommended timing of Tier 1 and Tier 2 projects with additional details included in Tables 13-5 through 13-7. Information included in these tables includes: a project identifying number, name and location of the project, a description of the project, type of work by improvement category, estimated cost in 2003 dollars, and future cost inflated to approximate year of implementation. It should be noted that many of these projects benefit not only autos but also freight movement via truck, as well as pedestrians and bicyclists.

The actual implementation and timing of the projects listed in these tables are dependent on the ability of the County to adopt a revenue package that will provide resources beyond the levels anticipated from existing funding sources. The primary purpose of this section is to convey a process for considering, evaluating and funding transportation system improvement needs when resources are available.

### 1 to 5 Year Improvement Recommendations

Table 13-5 summarizes projects recommended for implementation by Josephine County over the next one to five-year period. Included in this list of projects are urgent safety improvements to address existing high accident locations, major maintenance projects to address structurally-deficient bridges that need repair or replacement in the short-term, and other major, targeted maintenance projects to address deficient pavement or other immediate needs.

Total improvement needs over the next five-year period would cost $57.9 million for routine maintenance (Tier 1 and Tier 2 expanded, optimal maintenance including reserves) and an additional $4.7 million for safety and targeted major maintenance projects. The total cost of the Preferred TSP Alternative for the next five years would be $62.59 million. In addition to project recommended for improvement by the County, it is recommended that ODOT include in the next STIP update the addition of northbound and southbound left turn lanes on OR 238 at Jaynes Drive at an estimated cost of $872,000.

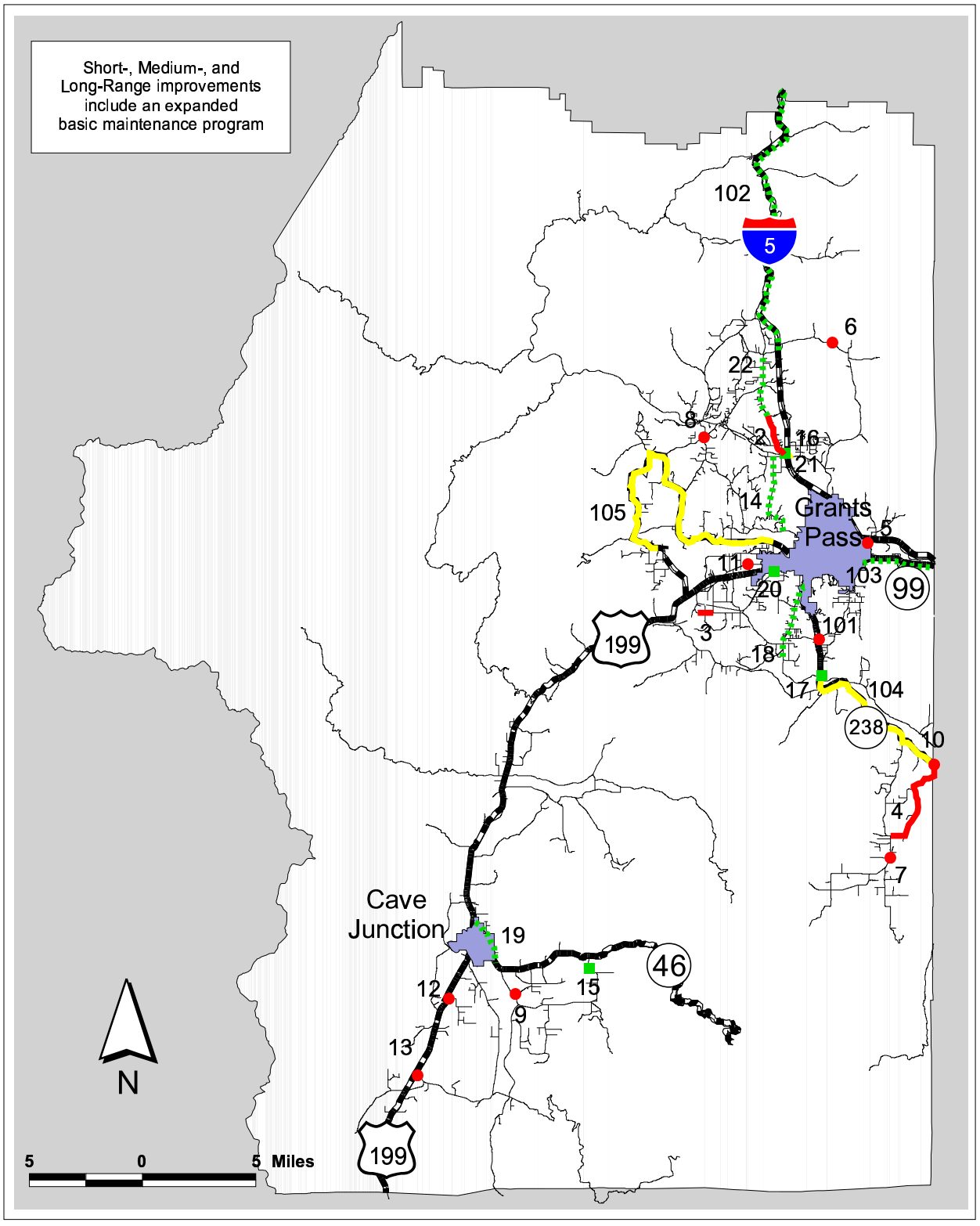
## Table 13-4
## Summary of Cost Estimates for Tier 2 Roadway Projects Excluding Routine Maintenance Program (2003 Dollars)

| Project No. | Project Location | Travel Mode Served | Description | Estimated Cost (2003) |
|---|---|---|---|---|
| | **MAINTENANCE PROJECTS** | | | |
| 2 | Monument Drive, Merlin Road to Timber Lane | Auto, freight | Install left turn lanes at intersections | $2,203,000 |
| 3 | Jerome Prairie Road, Woodland Park Road to west | Auto | Resurfacing | $357,000 |
| 4 | Williams Highway, Provolt to Water Gap Road | Auto | Resurfacing of various segments as needed | $208,000 |
| 5 | Jones Creek Bridge on Foothill Road | Auto, freight, bike/peds | Replace structurally deficient bridge and improve roadway approaches | $900,000 |
| 6 | Jacks Creek Bridge to Jumpoff Joe Creek Road | Auto, freight, bike/peds | Replace structurally deficient bridge | $500,000 |
| 14 | Pine Crest Drive/Plumtree Lane, Camp Joy to Upper River Road | Auto, freight, bike/peds | Widen shoulders to at least 4 feet for vehicle recovery and pedestrian/ bicycle circulation, improve alignment and sight distance at railroad crossing | $1,114,000 |
| 15 | Sucker Creek Bridge on Holland Loop Road | Auto, freight, bike/peds | Replace structurally deficient bridge | $2,756,000 |
| 18 | New Hope Road, milepost 0.0 to 3.7 | Auto, freight, bike/peds | Widen/resurface shoulders to at least 4 feet for vehicle recovery and pedestrian/bicycle circulation | $1,123,000 |
| 19 | Laurel Road, milepost 0.0 to 2.2 | Auto, freight, bike/peds | Widen/resurface shoulders to at least 4 feet for vehicle recovery and pedestrian/bicycle circulation | $635,000 |
| | **Maintenance Program Total** | | | **$9,796,000** |
| | **SAFETY PROJECTS** | | | |
| 7 | Williams Highway at Tetherow Road (milepost 5.6) | Auto | Install warning signs at this high accident location | $1,000 |
| 8 | Azalea Drive at Robertson Bridge Road (milepost 5.242) | Auto | Install all-way stop signs (consider realignment to enhance safety) | $2,000 |
| 9 | Holland Loop Road at Hayes Cutoff Road | Auto | Install warning signs at this high accident location | $3,000 |
| 10 | OR 238 at Williams Highway (milepost 0.0) | Auto, freight | Install warning signs at this high accident location (ODOT project) | $1,000 |
| 11 | Redwood Avenue at Southgate Way (milepost 2.659) | Auto, bike/ped | Trim/eliminate trees obscuring sight distance at this high accident location | $14,000 |
| 12 | US 199 at Ken Rose Lane (milepost 0.0 on Ken Rose Lane) | Auto, freight | Add southbound left turn lane (may have ODOT financial share) | $585,000 |
| 13 | US 199 at Waldo Road (milepost 0.0 on Waldo Road) | Auto, freight | Add southbound left turn lane (may have ODOT financial share) | $585,000 |
| 17 | OR 238 at New Hope Road | Auto, freight | Improve truck turning radii | $25,000 |
| 20 | US 199 at Willow Lane (milepost 0.138 on Willow Lane) | Auto, freight, bike/ped | Intersection improvements (may have ODOT financial share): | |
| | | | Install traffic signal | $150,000 |
| | | | Intersection realignment to reduce skewed angles | $1,191,000 |
| 101 | OR 238 at Jaynes Drive | Auto, freight | Add northbound and southbound left turn lanes (ODOT project) | $872,000 |

**Table 13-4 Continued**
**Summary of Cost Estimates for Tier 2 Projects Excluding Routine Maintenance Program (2003 Dollars)**

| Project No. | Project Location | Travel Mode Served | Description | Estimated Cost (2003) |
|---|---|---|---|---|
| | **SAFETY PROJECTS Cont.** | | | |
| 102 | I-5 at Sexton Summit | Auto, freight | Add north- and southbound truck climbing lanes between mileposts 65.7 and 80.8 (ODOT project) | $12,000,000 |
| | **Safety Program Total** | | | **$15,429,000** |
| | **MOBILITY/ACCESSIBILITY PROJECTS** | | | |
| 16 | Merlin/Galice Road at Monument Drive | Auto, freight, bike/ped | Widen and restripe to provide additional turn lanes, modify traffic signal to provide protected northbound and southbound left turn lanes | $380,000 |
| 21 | I-5 northbound on/off ramps at Merlin/Galice Road | Auto, freight, bike/ped | Intersection improvements to address traffic congestion problem including realignment of Highland Avenue to provide greater separation from the interchange: | |
| | | | Signalize intersection | $1,743,000 |
| | | | Install roundabout | $2,519,000 |
| | **Mobility/Accessibility Program Total** | | | **$2,899,000 *** |
| | **ECONOMIC DEVELOPMENT PROJECTS** | | | |
| 22 | Monument Drive, North Valley High School to Hugo Road | Auto, freight, bike/ped | Install bike lanes | $823,000 |
| 103 | OR 99, Grants Pass UGB to Jackson County line | Auto, freight, bike/ped | Widen shoulders to improve vehicle safety and provide for bicycle and pedestrian travel (may have ODOT financial share) | $6,800,000 |
| 104 | OR 238, Grants Pass UGB to Jackson County line | Auto, freight, bike/ped | Widen shoulders to improve vehicle safety and provide for bicycle and pedestrian travel (may have ODOT financial share) | $5,424,000 |
| 105 | Rogue River Loop Highway/Lower River Road | Auto, freight, bike/ped | Widen shoulders to improve vehicle safety and provide for bicycle and pedestrian travel (may have ODOT financial share) | $12,800,000 |
| | **Economic Development Program Total** | | | **$25,847,000 +** |
| | **GRAND TOTAL TIER 2 PROJECTS for JOSEPHINE COUNTY (excluding routine maintenance)** | | | **$16,075,000** |
| | **GRAND TOTAL TIER 2 PROJECTS for ODOT** | | | **$37,896,000** |

* Total includes the higher of the two project cost alternatives identified for the I-5 northbound off-ramp at Merlin/Galice Road
+ Total excludes the two mobility/accessibility improvement projects which can also be considered as part of the Economic Development Program.




Short Range (1-5 Years)
Roadway Segment Improvement
Intersection or Bridge Improvement

Medium Range (6-10 Years)
Roadway Segment Improvement
Intersection or Bridge Improvement

Long Range (11-20 Years)
Roadway Segment Improvement
Intersection or Bridge Improvement

Urban Growth Boundary
State Highway
County Roads

**Figure 13-2: Recommended Roadway System Improvements**

Josephine County
Transportation System Plan

## Table 13-5
## Recommended Tier 1 and Tier 2
## Short-Range (2004-2008) Roadway Improvements

| Project Number | Project Location | Description | Project Type | 2003 Estimated Cost | Estimated Cost (Future $) * |
|---|---|---|---|---|---|
| **TIER 1 PROJECTS** | | | | | |
| *Rural Josephine County Projects* | | | | | |
| 1 | Countywide | Existing basic maintenance program and reserves | Maintenance | -- | $34,576,000+ |
| **TIER 2 PROJECTS** | | | | | |
| *Rural Josephine County Projects* | | | | | |
| 1 | Countywide | Expanded basic maintenance program | Maintenance | -- | $23,298,000+ |
| 2 | Monument Drive, Merlin Road to Timber Lane | Install left turn lanes at intersections | Maintenance | $2,203,000 | $2,480,000 |
| 3 | Jerome Prairie Road, Woodland Park Road to west | Resurfacing | Maintenance | $357,000 | $402,000 |
| 4 | Williams Highway, Provolt to Water Gap Road | Resurfacing of various segments as needed | Maintenance | $208,000 | $234,000 |
| 5 | Jones Creek Bridge on Foothill Road | Replace structurally deficient bridge and improve roadway approaches | Maintenance | $900,000 | $1,013,000 |
| 6 | Jacks Creek Bridge to Jumpoff Joe Creek Road | Replace structurally deficient bridge | Maintenance | $500,000 | $563,000 |
| 7 | Williams Highway at Tetherow Road (MP 5.6) | Install warning signs at this high accident location | Safety | $1,000 | $1,125 |
| 8 | Azalea Drive at Robertson Bridge Road (MP 5.242) | Install all-way stop signs (may also consider realignment to enhance safety) | Safety | $2,000 | $2,250 |
| 9 | Holland Loop Road at Hayes Cutoff Road | Install warning signs at this high accident location | Safety | $3,000 | $3,375 |
| 10 | OR 238 at Williams Highway (MP 0.0) | Install warning signs at this high accident location (may have ODOT financial share) | Safety | $1,000 | $1,125 |
| 11 | Redwood Avenue at Southgate Way (MP 2.659) | Trim/eliminate trees obscuring sight distance at this high accident location | Safety | $14,000 | $15,750 |
| | | **Total Short-Range Josephine County Costs –Total Basic Maintenance** | | **--** | **$57,874,000** |
| | | **Total Short-Range Josephine County Cost – Tier 2 Roadway Improvements** | | **$4,189,000** | **$4,715,625** |
| | | **Total Josephine County Short-Range Improvements** | | **--** | **$62,589,625** |
| | | **Short-Range Revenue Needed – Josephine County** | | **--** | **$62,590,000** |
| **TIER 2 PROJECTS** | | | | | |
| *ODOT Projects* | | | | | |
| 101 | OR 238 at Jaynes Drive | Add northbound and southbound left turn lanes | Safety | -- | $872,000 |
| | | **Total ODOT Short-Range Improvements** | | **--** | **$872,000#** |
| | | **Short-Range Revenue Needed - ODOT** | | **--** | **$872,000** |

+ This is a five-year total estimate for this on-going annual expense.
* Assumes historical inflation rate of 3% per year targeted on the mid-point in the five-year time period (e.g., 2007).
# Projects assumed for ODOT financial participation are preliminary and must be included in a future State Transportation Improvement Program (STIP) to secure financial commitment for implementation.

## 6 to 10 Year Improvement Recommendations

Table 13-6 summarizes Tier 1 and Tier 2 roadway system improvements recommended for implementation by Josephine County over the second five-year period in the 20-year planning horizon covered by the *Rural TSP*. These projects are considered very important, but less urgent than the projects included in the short-term improvement program identified in Table 13-5.

Included in this list of projects are several improvements to enhance safety by improving key intersections, replacement of a structurally-deficient bridge, and roadway widening and realignment on Pine Crest Drive to improve railroad grade crossing safety. Improvements to Merlin-Galice Road at Monument Drive to address existing and anticipated future congestion are also recommended. Total improvement needs over this five-year period would cost $66.66 million for routine maintenance (Tier 1 and Tier 2 expanded, optimal maintenance) and an additional $6.73 million for safety and targeted major maintenance projects. The total cost of the Preferred TSP Alternative for the next five years would be $73.4 million.

**Table 13-6**
**Recommended Tier 1 and Tier 2 Medium-Range (2009-2013) Roadway Improvements**

| Project Number | Project Location | Description | Project Type | 2003 Estimated Cost | Estimated Cost (Future $) * |
|---|---|---|---|---|---|
| **TIER 1 PROJECTS** | | | | | |
| *Rural Josephine County Projects* | | | | | |
| 1 | Countywide | Existing basic maintenance program and reserves | Maintenance | -- | $26,627,000+ |
| **TIER 2 PROJECTS** | | | | | |
| *Rural Josephine County Projects* | | | | | |
| 1 | Countywide | Expanded basic maintenance program | Maintenance | -- | $40,033,000+ |
| 12 | US 199 at Ken Rose Lane (MP 0.0 on Ken Rose Lane) | Add southbound left turn lane (may have ODOT financial share) | Safety | $585,000 | $659,000 |
| 13 | US 199 at Waldo Road (MP 0.0 on Waldo Road) | Add southbound left turn lane (may have ODOT financial share) | Safety | $585,000 | $659,000 |
| 14 | Pine Crest Drive/Plumtree Lane, Camp Joy to Upper River Road | Widen shoulders to at least 4 feet for vehicle recovery and pedestrian/bicycle circulation, improve alignment and sight distance at railroad crossing | Maintenance | $1,114,000 | $1,411,000 |
| 15 | Sucker Creek Bridge on Holland Loop Road | Replace structurally deficient bridge | Maintenance | $2,756,000 | $3,491,000 |
| 16 | Merlin/Galice Road at Monument Drive | Widen and restripe to provide additional turn lanes, modify traffic signal to provide protected northbound and southbound left turn lanes | Mobility/ Accessibility | $380,000 | $481,000 |
| 17 | OR 238, at New Hope Road | Improve truck turning radii | Safety | $25,000 | $32,000 |
| | | **Total Medium-Range Josephine County Costs – Total Basic Maintenance** | | **--** | **$66,660,000** |
| | | **Total Medium-Range Josephine County Cost – Tier 2 Roadway Improvements** | | **$5,445,000** | **$6,733,000** |
| | | **Total Josephine County Medium-Range Improvements** | | **--** | **$73,394,000** |
| | | **Medium-Range Revenue Needed – Josephine County** | | **--** | **$73,394,000** |
| **TIER 2 PROJECTS** | | | | | |
| *ODOT Projects* | | | | | |
| 102 | I-5 at Sexton Summit | Install truck climbing lanes between mileposts 65.7 and 80.8 | Safety | -- | $12,000,000 |
| 103 | OR 99, Grants Pass UGB to Jackson County line | Widen shoulders to improve vehicle safety and provide for bicycle and pedestrian travel | Economic Development | -- | $6,800,000 |
| | | **Total ODOT Medium-Range Improvements** | | **--** | **$18,800,000#** |
| | | **Medium-Range Revenue Needed - ODOT** | | **--** | **$18,800,000** |

+ This is a five-year total estimate for this on-going annual expense.
* Assumes historical inflation rate of 3% per year targeted on the mid-point in the five year time period (e.g., 2011).
# Projects assumed for ODOT financial participation are preliminary and must be included in a future State Transportation Improvement Program (STIP) to secure financial commitment for implementation.

In addition to projects recommended for improvement by the County, it is recommended that ODOT incorporate into a future STIP update the addition of truck climbing lanes on I-5 over Sexton summit, and shoulder widening along OR 99 from the Grants Pass Urban Growth Boundary (UGB) to the Jackson County line to improve safety and provide for bicycle and pedestrian circulation. The total cost of ODOT projects for this time period is estimated at $18.8 million.

## 11 to 20 Year Improvement Recommendations

Table 13-7 summarizes Tier 1 and Tier 2 roadway system improvements recommended for implementation by Josephine County over the last ten-year period in the 20-year planning horizon covered by the *Rural TSP*. These projects are also considered important, but less urgent than the projects included in the short- and medium-term improvement programs identified in Tables 13-5 and 13-6.

**Table 13-7**
**Recommended Tier 1 and Tier 2 Long-Range (2014-2023) Roadway Improvements**

| Project Number | Project Location | Description | Project Type | 2003 Estimated Cost | Estimated Cost (Future $) * |
|---|---|---|---|---|---|
| **TIER 1 PROJECTS** | | | | | |
| *Rural Josephine County Projects* | | | | | |
| 1 | Countywide | Existing basic maintenance program and cash reserves | Maintenance | -- | $53,846,000+ |
| **TIER 2 PROJECTS** | | | | | |
| *Rural Josephine County Projects* | | | | | |
| 1 | Countywide | Expanded basic maintenance program | Maintenance | -- | $128,623,000 + |
| 18 | New Hope Road (MP 0.0 to 3.7) | Widen/resurface shoulders to at least 4 feet for vehicle recovery and pedestrian/bicycle circulation | Maintenance | $1,123,000 | $1,423,000 |
| 19 | Laurel Road (MP 0.0 to 2.2) | Widen/resurface shoulders to at least 4 feet for vehicle recovery and pedestrian/bicycle circulation | Maintenance | $635,000 | $805,000 |
| 20 | US 199 at Willow Lane (MP 0.138 on Willow Lane) | Intersection improvements (may have ODOT financial share): Install traffic signal | Safety | $150,000 | $190,000 |
| | | Realign intersection to reduce skewed angles | | $1,191,000 | $1,509,000 |
| 21 | I-5 northbound on/off ramps at Merlin/Galice Road | Intersection improvements to address traffic congestion problem including realignment of Highland Avenue to provide greater separation from the interchange. Assume roundabout as higher cost option (may have ODOT financial share). | Mobility/ Accessibility | $2,519,000 | $4,042,000 |
| 22 | Monument Drive, North Valley High School to Hugo Road | Install bike lanes | Economic Development | $823,000 | $1,043,000 |
| | | **Total Long-Range Josephine County Costs – Total Basic Maintenance** | | **--** | **$182,469,000** |
| | | **Total Long-Range Josephine County Cost – Tier 2 Roadway Improvements** | | **$6,441,000** | **$9,012,000** |
| | | **Total Josephine County Long-Range Improvements** | | **--** | **$191,481,000** |
| | | **Long-Range Revenue Needed – Josephine County** | | **--** | **$191,481,000** |
| **TIER 2 PROJECTS** | | | | | |
| *ODOT Projects* | | | | | |
| 104 | OR 238, Grants Pass UGB to Jackson County line | Widen shoulders to improve vehicle safety and provide for bicycle and pedestrian travel | Economic Development | $5,424,000 | $8,704,000 |

**Table 13-7 Continued**
**Recommended Tier 1 and Tier 2 Long-Range (2014-2023) Roadway Improvements**

| Project Number | Project Location | Description | Project Type | 2003 Estimated Cost | Estimated Cost (Future $) * |
|---|---|---|---|---|---|
| **TIER 2 PROJECTS Continued** | | | | | |
| *ODOT Projects* | | | | | |
| 105 | Rogue River Loop Highway/ Lower River Road | Widen shoulders to improve vehicle safety and provide for bicycle and pedestrian travel | Economic Development | $12,800,000 | $20,540,000 |
| | | **Total ODOT Long-Range Improvements** | | **$18,224,000** | **$29,244,000#** |
| | | **Long-Range Revenue Needed - ODOT** | | **--** | **$29,244,000** |

+ This is a five-year total estimate for this on-going annual expense.
* Assumes historical inflation rate of 3% per year targeted on the mid-point in the ten-year time period (e.g., 2019).
# Projects assumed for ODOT financial participation are preliminary and must be included in a future State Transportation Improvement Program (STIP) to secure financial commitment for implementation.

Included in this list of projects are several targeted major maintenance or other improvements to enhance safety by widening key roadway segments or improving key intersections. Improvements to the intersection of I-5 at Merlin-Galice Road are also recommended to address the significant congestion problems that are anticipated at this location if existing vacant residential and industrial land in the Merlin area should develop at the expected rate of growth. Total improvement needs over this ten-year period would cost $182.5 million for routine maintenance (Tier 1 and Tier 2 expanded, optimal maintenance) and an additional $9 million for targeted major maintenance, safety, and mobility projects. The total cost of the Preferred TSP Alternative for the last ten-year period would be $191.5 million.

In addition to projects recommended for improvement by the County, it is recommended that ODOT incorporate into a future STIP update shoulder widening along OR 238 from the Grants Pass Urban Growth Boundary (UGB) to the Jackson County line, and along the Rogue River Loop Highway to improve safety and provide for bicycle and pedestrian circulation. The total cost of ODOT projects for this time period is estimated at $29.2 million.

## Tier 3 Improvement Recommendations

In addition to the Tier 1 and Tier 2 improvements recommended as part of the "Preferred" TSP Alternative, several other roadway project needs were identified based on the analysis in Chapter 6. Referred to as Tier 3 projects, these recommendations have been grouped and are presented in Table 13-8. Information included in this table about these projects is similar to that included for the Tier 2 projects previously discussed. Included is a project identifying number, project name and limits, a description of the work involved, and project type by work category.

While probably beyond the County's means to fund, creating a Tier 3 project list has long-term value. Inclusion of these projects in the *Rural TSP* demonstrates need, forethought about improvement options and recommendations, and a general commitment to implementation. In many cases, if additional funding should become available over the lifetime of the *Rural TSP*, a project that currently does not have funding must be included in an adopted TSP in order to become be eligible for this funding. Cost estimates for the Tier 3 projects have not been prepared, nor are they included in the calculation of the estimated revenue "shortfall". However, estimates can be prepared by county staff to pursue money that may become available from grant or funding sources.

**Table 13-8**
**Tier 3 Roadway Improvements**

| Project Number | Project Location | Description | Project Type |
|---|---|---|---|
| *Rural Josephine County Projects* | | | |
| 23 | Cloverlawn Drive (milepost 0.5 to 3.6) | Widen shoulders/resurface to at least 4 feet, improve intersection with Summit Loop Road | Maintenance |
| 24 | Lakeshore Drive (milepost 0.2 to 3.0) | Widen shoulders/resurface to at least 4 feet | Maintenance |
| 25 | Lakeshore Drive (milepost 6.0 to 6.5) | Make drainage improvements | Maintenance |
| 26 | Lakeshore Drive (4700 block to Dryden Road) | Make drainage and shoulder improvements | Maintenance |
| 27 | Coyote Creek Bridge on Bloom Road in Wolf Creek | Replace existing deficient bridge | Maintenance |
| 28 | US 199 at Waters Creek Road (milepost 0.0 on Waters Creek Road) | Flatten curve to improve sight distance, install warning signs (may have ODOT financial share) | Safety |
| 29 | US 199 between milepost 16 and 24 (northbound) and between milepost 7 and 14 (southbound) | Potential pass lane(s) on (may have ODOT financial share) | Safety |
| 30 | OR 238 at Applegate Road | Add left turn lanes on state highway (may have ODOT financial share) | Safety |
| 31 | Various Locations on County Roads as Needed | Install guard rail at various locations experiencing accidents that could be reduced by guard rail | Safety |
| 32 | Holland Loop Road at Hayes Cutoff | Realign intersection | Safety |
| 33 | Dowell Road at Wolf Lane | Improve intersection | Safety |
| 34 | OR 238 between milepost 16 and 17 | Install northbound passing lane on (may have ODOT financial share) | Safety |
| 35 | US 199 at Rockydale Road | Safety improvements to warn drivers of intersection and/or improve visibility (may have ODOT financial share) | Safety |
| 36 | OR 46 at Holland Loop Road (west) | Safety improvements to warn drivers of intersection and/or improve visibility(may have ODOT financial share) | Safety |
| 37 | US 199 at Redwood Avenue | Install left turn lane on Redwood Avenue | Mobility and Accessibility |
| 38 | Various Locations on Galice Road | Install slow vehicle turnouts or passing lanes at selected locations on Galice Road | Mobility and Accessibility |
| 39 | OR 238 at Water Gap Road | Realignment (may have ODOT financial share) | Economic Development |
| 40 | Highland Avenue at Merlin-Galice Road | Relocate Highland Avenue eastward to increase separation from I-5 northbound ramp intersection (may have ODOT share) | Mobility and Accessibility |
| 41 | US 199 between mileposts 0.35 and 4.44 | Make safety and capacity improvements that may include modifications such as intersection improvements, medians and/or frontage roads | Safety |

## Revenue Shortfalls for Roadway System Improvements

As noted previously in this chapter, the region's roadway improvement needs exceed the available funding from existing resources. Tier 1 improvement projects fall within the current financial capabilities of the implementing agencies (both the County and ODOT). Tier 1 represents projects that meet the financially constrained criteria for federal and state funding. Tier 2 and Tier 3 projects exceed the region's current financial capabilities.

Table 13-9 presents a summary of the Tier 1 and Tier 2 costs estimates for short-, medium- and long-term projects as detailed in Tables 13-5 through 13-7. Also illustrated are the projections of available revenue from existing sources for each of the same time periods. The difference between the total of Tier 1 and Tier 2 projects (the Preferred TSP Alternative) and revenue projections from existing sources is known as the revenue "shortfall".

**Table 13-9**
**Summary of Revenue Shortfall for Josephine County**
**Roadway System Improvement Projects**

| Revenue Sources | Total 2004-2008 | Total 2009-2013 | Total 2014-2023 | 20-Year Total |
|---|---|---|---|---|
| **Tier 1 Cost Estimates** | | | | |
| *Tier 1 Projects (based on existing funding)* | | | | |
| Routine roadway maintenance | $31,460,000 | $23,511,000 | $47,613,000 | $102,584,000 |
| Cash reserves (e.g. emergencies) (1) | $3,116,316 | $3,116,316 | $3,116,316 | $3,116,316 |
| **Total Tier 1 Costs** | *$34,576,000* | *$26,627,000* | *$53,846,000* | *$105,700,000* |
| **Tier 2 Cost Estimates** | | | | |
| *Tier 2 Projects (high priority, unfounded)* | | | | |
| Expanded routine roadway maintenance | $23,003,000 | $39,236,000 | $126,376,000 | $188,615,000 |
| - Additional cash reserves required | 295,000 | 797,000 | 2,247,000 | 3,339,000 |
| Targeted maintenance/repair projects | $4,692,000 | $4,902,000 | $2,228,000 | $11,823,000 |
| Safety projects | $24,000 | $1,350,000 | $1,699,000 | $3,072,000 |
| Mobility/Accessibility | $0 | $481,000 | $4,042,000 | $4,523,000 |
| Economic Development | $0 | $0 | $1,043,000 | $1,043,000 |
| **Total Tier 2 Costs** | *$28,014,000* | *$46,767,000* | *$137,635,000* | *$212,416,000* |
| **Total Tier 1 and Tier 2 Costs** | **$62,590,000** | **$73,394,000** | **$191,481,000** | **$318,116,000** |
| **Tier 1 Revenue from Existing Sources** | | | | |
| Highway Trust Fund * | $19,372,000 | $19,586,000 | $39,763,000 | $73,721,000 |
| USFS Timber Receipts | $8,162,000 | $0 | $0 | $8,162,000 |
| Other | $3,926,000 | $3,925,000 | $7,850,000 | $15,701,000 |
| Operating Cash Carried Forward (1) | $3,116,316 | $3,116,316 | $3,116,316 | $3,116,316 |
| **Total Revenue from Existing Sources** | **$34,576,000** | **$26,627,000** | **$53,846,000** | **$105,700,000** |
| **Revenue Shortfall** | **($28,014,000)** | **($46,767,000)** | **($137,635,000)** | **($212,416,000)** |

Note: Future year costs and revenues are inflated to a specific year or time period. Consequently, some dollar amounts in the later years of this 20-year plan may appear high in relation to current (2003) values.
* Highway Trust Fund includes fuel taxes, vehicle registration fees and vehicle titling fees.
(1) Cash balance to meet emergency/disaster response and cash flow needs during months when expenses exceed revenues.

As indicated in the table, during the first five years of the 20-year TSP (2004 – 2008 or short-term), the revenue shortfall is estimated to be approximately $28 million. During the second five-year period (2009 – 2013 or medium-term), the revenue shortfall is estimated to be slightly less than $46.8 million. During the last ten years of the 20-year planning period (2014 – 2023 or long-term), the revenue shortfall is estimated to be around $137.6 million.

## Staged Public Transit Improvement Program

This section presents a discussion of public transit system improvements for rural Josephine County. The emphasis in this improvement program is on meeting short-term needs, as the time horizon for Josephine County Transit's (JCT) transit service planning efforts addresses primarily the next three to four years.

Currently, Josephine County has limited unmet needs with respect to the delivery of public transportation services in the county, but the long-term provision of these services is facing serious funding shortfalls. Three alternative strategies for public transportation were developed and evaluated that reflect three different service levels based on available funding. Table 13-10 highlights the service elements of the recommended Tier 2 Preferred Alternative

**Table 13-10**
**Public Transit System Tier 2 Short-Term (2004-2008) Improvements**

| Funding | Services Provided |
|---|---|
| • Includes Tier 1 services provided with revenue from existing sources:<br>  ○ Special Transportation Funds (STF) – ODOT, Translink fees, RCC contract, Rider fees, Ad revenue<br>• Addition of:<br>  ○ $250,000 to replace lost CMAQ and City of Grants Pass Funding. Options include:<br>  ➢ Local tax base<br>  ➢ Increased Ad revenue<br>  ➢ FTA Section 5311<br>  ○ Replace reserve funding with $200,000 ODOT Region 3 Capital Grant<br>  ○ $200,000 for fleet improvements in three years. Options include:<br>  ➢ FTA Section 5309<br>  ➢ FTA Section 5310 | • Retention of all current services and the possible addition of regular service to Sunny Wolf area in the north part of the county. |

The Tier 2 Preferred Alternative will require additional revenue to maintain current services and/or slightly improve upon them. A county property tax levy and state/federal grants are feasible sources for the needed funding. JCT is also hoping to expand its advertising revenues to offset the pending lost revenues. An analysis of revenue options and recommendations is presented later in this section.

# Potential Sources of Additional Transportation Revenue

## Summary of Potential Revenue Sources for Roadways

There are a number of potential funding sources for roadway-related expenses that are not currently being used by Josephine County. These include System Development Charges (SDCs), local gas taxes, transportation utility taxes, extraction taxes, special assessment fees, local vehicle fees, revenue bonds, general obligation bonds and transportation fees. Table 13-11 summarizes the types and features of a potential source of new and additional revenue to support improvement of the transportation system in rural Josephine County.

**Table 13-11**
**Potential Revenue Sources for Roadway System Improvements**

| Potential Revenue Sources | Mechanism |
|---|---|
| New State of Oregon Measures | House Bill 2041, the OTIA III transportation funding package, was signed into law on July 28, 2003. The legislation uses increased DMV and trucking-related fees to finance $2.5 billion in transportation construction projects for the state highway system as well as cities and counties. Fee increases will go into effect in January 2004. Over the next ten years, the package sets aside $371 million for county and city maintenance and preservation. |
| System Development Charges | System development charges are authorized by state law, and are widely used. They can be levied by local jurisdictions on new developments, and can be used for public services such as parks, roads, sewer and water. SDCs must: 1) show a reasonable connection between the growth generated by the development and the facilities constructed to serve that growth, and 2) establish a system-wide connection between fees collected from the development and the benefits development receives. In Josephine County, SDCs require a vote for public approval. |

**Table 13-11 Continued**
**Potential Revenue Sources for Roadway System Improvements**

| Potential Revenue Sources | Mechanism |
|---|---|
| Countywide Gas Tax/Registration Fee | Counties can provide basic roadway funding through a tax placed on gasoline. Local gas taxes and vehicle registration fees are voter approved. Several counties in the State have a local gas tax in place, including Multnomah and Washington Counties. Counties contract with the State Fuel Tax Branch to collect/administer the tax. |
| Street Utility/Road User Fee | Road user fees are a monthly or yearly assessment charged to residences and non-residential users of County roads. This fee is used in Medford, Ashland, La Grande and a number of other jurisdictions. The fee in Medford is based on trip generation models, Ashland's is $1 per month per residence or business, and La Grande charges $2.50 per water meter per month. Medford's fee generates about $1.4 million per year with 18,000 accounts. |
| Developer Exactions | Development exactions and contributions can pay for portions of roads in, adjacent to and through new developments. The road or improvement is typically paid for or built by a developer to County standard and then deeded to the County as a condition of development approval. Developers often receive SDC credit for this type of improvement if applicable. |
| Road Districts/Property Taxes | Counties may adopt property taxes for the construction and maintenance of county roads and bridges. In all, Oregon has 123 road districts, of which 86 receive revenues from dedicated property taxes. These can be used to fund maintenance, or be dedicated to service bonded indebtedness (General Obligation Bonds). |
| Non-Property Taxes | Oregon counties and cities have the power to devise their own non-property tax and other local revenue structures without specific state enabling legislation. Transit and transportation districts may levy income taxes up to 1% of payroll and self-employment taxes of up to 0.6%. While no districts currently impose an income tax, Lane County and Tri-Met use payroll and self-employment taxes. |
| Hotel/Motel Taxes | Hotel and motel taxes can provide a minor source of revenue for transportation finance. Four jurisdictions currently dedicate revenues from these taxes to transportation projects (Lake Oswego, Lincoln City, Umatilla County and Union County). |
| Extraction Taxes | A number of jurisdictions with significant mining activity have enacted extraction or severance taxes. Extraction taxes are weight-based charges on natural resource extraction operations, such as the removal of timber, coal, or stone. Because these industries use some remote roads with few other users, and their heavy trucks cause disproportionate damage to roads, taxation of the removal of natural resources has become an important way of financing rural road repair. This tax might be considered a user fee, except that in many places it is also used to fund education and general government services. |
| Grants | Grant funding is sometimes available, and typically requires a local match, although some grants are 100% awards. Most grants are slated for capital improvements or planning studies, and are not available for maintenance. |
| General Obligation Bonds | Bonding is used as a funding alternative to spread the project debt over voter district or districts. The residents vote to levy a special property tax. These bonds are generally used to make improvements benefiting the entire district population. When the bond issue is paid off completely, the levy is finished. |

Of the potential revenue sources outlined in the preceding table, a street utility/road user fee such as that used in Medford appears to provide the most attractive revenue generating potential while still representing a politically viable solution. With an estimated 22,000 dwelling units in unincorporated Josephine County, a $1 per month fee would generate an estimated $264,000 per year. Utility fees could be vulnerable to Measure 5 limitations, unless they include provisions for property owners to reduce or eliminate charges based on actual use.

A number of other alternatives outlined could be used to provide additional income, including SDCs and extraction taxes. While the modest pace of new development in the County would limit SDC revenues,

they do represent an equitable revenue-generating instrument that can mitigate adverse impacts of marginal growth.

Although a menu of diverse revenue sources is available to Josephine County, realization of new revenues is ultimately up to Josephine County residents directly. As provided by Josephine County's Home Rule Charter Section 29.5, voters must approve all new fees established by the County.

## Recommendations for Roadway Funding

Table 13-12 presents a summary of possible roadway improvement funding that could be raised from the revenue sources that appear to have the greatest potential for public acceptability and revenue generation. To avoid duplication in taxing the same persons or businesses for on-going roadway maintenance and high priority improvements, two alternative funding scenarios were developed.

**Table 13-12**
**Comparison of Potential Revenue Sources for Josephine County**
**To Fund Tier 2 Roadway System Improvement Projects (5)**

| Revenue Sources | Total 2004-2008 | Total 2009-2013 | Total 2014-2023 | 20-Year Total |
|---|---|---|---|---|
| **Revenue Shortfall** | **($28,014,000)** | **($46,767,000)** | **($137,635,000)** | **($212,416,000)** |
| **Tier 2 – Proposed Revenue from New Sources** | | | | |
| **Scenario 1 Utility Fee Option** | | | | |
| Utility Fee – Residential (1) | $4,762,000 | $11,415,000 | $43,605,000 | $59,138,000 |
| Utility Fee – Commercial (1) | $3,666,000 | $8,788,000 | $33,077,000 | $45,531,000 |
| Aggregate Extraction Fee ($0.20/ton) | $1,889,000 | $2,137,000 | $5,153,000 | $9,179,000 |
| Residential SDC ($1,800/residence) | $2,002,000 | $2,265,000 | $5,462,000 | $9,729,000 |
| Commercial SDC (3) | $2,001,000 | $2,266,000 | $5,463,000 | $9,730,000 |
| Local Option Gas Tax ($0.02/gallon) (4) | $1,043,000 | $1,316,000 | $2,671,000 | $5,030,000 |
| **Total Revenue with Scenario 1** | *$15,384,000* | *$28,186,000* | *$95,431,000* | *$138,981,000* |
| **Scenario 2 Road District Option** | | | | |
| Rural Road District (2) | $22,122,000 | $40,099,000 | $121,557,000 | $183,778,000 |
| Aggregate Extraction Fee ($0.20/ton) | $1,889,000 | $2,137,000 | $5,153,000 | $9,179,000 |
| Residential SDC ($1,800/residence) | $2,002,000 | $2,265,000 | $5,462,000 | $9,729,000 |
| Commercial SDC (3) | $2,001,000 | $2,266,000 | $5,463,000 | $9,730,000 |
| **Total Revenue with Scenario 2** | *$28,014,000* | *$46,767,000* | *$137,635,000* | *$212,416,000* |

(1) Assumes street utility fees are 29% higher than current Grants Pass rates ($3/month for single family household, $2.50/month for multi-family households) in Years 1-5 and gradually increase to 590% of current Grants Pass rates in Years 16-20. Note that these funds can only be used for maintenance.

(2) Assumes road district utilizes five-year maintenance levies based on five-year maintenance "package" cost requirements. Levy rate increases are determined by road district voter approval in the first of each five-year time period. District assessed value assumed to grow by annual rate of 4.5% consistent with unincorporated growth since Measure 50. Rates vary between $1.23 and $1.52/$1,000 for first five years, and between $1.68 and $2.11/$1,000 in last 15 years. Note that these funds can be used for both maintenance and roadway safety/capacity improvements. These rates are within the range currently levied by three road districts in rural Douglas County.

(3) Assumes commercial SDC set 12.5% higher than the Jackson County unincorporated road SDC, similarly for residential SDCs. Jackson County Public Works noted that for the past four years, commercial SDCs have roughly equaled residential SDCs in unincorporated areas. Note that these funds can only be used for capacity improvements.

(4) Based on analysis of gas tax options prepared for Washington and Multnomah Counties. Assumes $0.02 per gallon rate.

(5) All potential sources of additional transportation funding are subject to voter approval.

Scenario 1 includes residential and commercial utility fees (which can only be used for roadway maintenance activities), an aggregate extraction fee (to address the cost of roadway improvements resulting from heavy vehicle activity), both residential and commercial System Development Charges or

SDCs (which can only be used to fund roadway improvements to accommodate the travel demand generated by new development), and a $0.02/gallon local option gas tax. The initial rates identified for each revenue source are generally within the range presently levied by other, comparable agencies in rural areas elsewhere in Oregon. Based on the experience of Multnomah and Washington Counties, a local option gas tax would be expected to generate between $130,000 and $150,000 per year for the County for every $0.01 per gallon in local gas taxes[17]. This tax is expected to grow at approximately 0.2 percent per year.

Scenario 2 includes a rural road district (which can be used for either roadway maintenance or improvement projects), and the same aggregate extraction fee and SDCs as Scenario 1.

As can be seen from the table, Scenario 2 (with the rural road district) has the potential for generating a far higher amount of revenue than Scenario 1 (with the unincorporated area utility district), while rates would remain at a level generally comparable with several other road districts in Oregon.

## Summary of Potential Revenue Sources for Public Transit

Chapter 8 identifies and discusses in detail potential federal, state and local funding sources for which Josephine County Transit is eligible to receive. In summary, these include:

### Federal Sources

Federal sources are available from the Federal Transit Administration through various programs authorized by Congress. These include:

- Federal Transit Administration (FTA) Section 5309-Capital Program - funds capital improvements such as vehicle acquisition, capital equipment and facility construction,
- FTA Section 5310 Discretionary Grants - funds vehicles and other capital projects for programs that serve elderly and disabled people,
- FTA Section 5311-Nonurbanized Area Formula Program - provides financial support for general public transit services (public and/or private non-profit) in small urban and rural areas. Funds are distributed by the ODOT Public Transit Division,
- FTA Section 5311(f) Intercity Program – funds intercity passenger services,

Another federal program that could provide funding for public transit service in rural Josephine County includes:

- Department of Labor/FTA Welfare-To-Work Programs

### State Sources

Funds are available from the Oregon Special Transportation Fund (STF). STF is generated by a tax on cigarettes, and is available to public and social service transit providers to fund transportation for seniors and persons with disabilities.

### Local Sources

Several local sources of funding are also available to provide public transit service including:

- Local Option Levy – placed on properties in either Josephine County, City of Grants Pass or in a newly formed district covering the core JCT service area.
- Payroll Tax - ORS 267.530 allows a transportation district to impose an excise tax on every employer equal to not more than six tenths of 1% (0.006) of the gross payroll. It is likely that municipalities have the same taxing authority. No vote of the electorate is needed to pass a

[17] Estimate based on a downward proportional adjustment of Washington County local gas tax revenue to account for the relative population difference in Josephine County. No comparable data for gasoline use (gallons) exists for precise comparisons.

payroll tax; the governing board of the jurisdiction may pass it. Transit services that use a payroll tax include Wilsonville SMART and Lane Transit District in Eugene.

### Recommendations for Public Transit Funding

JCT already receives FTA Section 5311 funding based on existing formulas and will not likely receive substantial additional funds from this source. Josephine County has explored the potential for a public transportation tax levy. Property taxes could contribute the sustainable funding required to keep the fixed-route public service near today's levels. The *Transportation Feasibility Study* in 2000 indicated that a tax levy would probably pass, but not until the second or third effort. It is JCT's intent to go forward, placing a tax levy on the ballot in November 2004. To raise $200,000, the levy would be about 15 cents per $1,000 of assessed value in the City of Grants Pass or about 8 cents per $1,000 over the service area if a new transportation district is created. A countywide tax would put pressure on the use of these funds throughout the county, not just in Grants Pass where the imminent shortfall would exist. A voter supported levy has been estimated to collect between and $85,000 and $100,000 – less than half of what is needed.

If Josephine County employers consider public transportation vital for making commute trips, a payroll tax is another option. To create a tax base equivalent to the $250,0000 loss in CMAG and City of Grants Pass funding, a payroll tax rate of roughly 0.03% would be required (0.05% if State In-Lieu taxes are not available to match). This rate is far less than permitted or collected by other districts/jurisdictions in Oregon.

JCT is also exploring a short-term capital grant with ODOT Region 3 for the special transportation system. These capital funds would allow for contracted services to the Sunny Wolf area and the backfilling of other JCT provided special transportation services (including the Senior Shuttle and the Cave Junction route), allowing JCT to re-allocate any non-dedicated funds back to the fixed-route system. The grant could potentially provide $200,000 for these contracted services over the next two years.

The JCT fleet will require vehicle replacements in three years to maintain its current level of operation. Roughly $200,000 will be required to upgrade the rolling stock in this timeframe. Two Federal grant programs can be explored in conjunction with the potential for ODOT Special Transportation Fund (STF) Grants for capital and operating funds. Federal Transit Administration (FTA) Section 5310 Discretionary Grants, which funds vehicles and other capital projects for programs that serve elderly and disabled people or the FTA Section 5309 capital program are potential sources for vehicle purchases.

## Implementing the TSP

The *Rural Transportation System Plan* (TSP) is a twenty-year look forward that identifies the multi-modal transportation system improvements needed to accommodate planned land uses and population densities identified within the County's *Comprehensive Plan*. The TSP identifies overall goals and objectives for maintaining and improving the transportation system, and contains specific policies that the County will follow in order to make progress on achieving these goals and objectives. The TSP also contains a list of *recommended improvements* that affect:

- the level of roadway maintenance undertaken by the County on an annual basis to preserve the $470 million investment that the County currently has in its road system;
- the safety and function of the system;
- the ability to enhance the economic vitality of the region by improving the movement of people and goods within the rural portion of the County, and between economic activity centers within and outside of the County.

In the process of preparing this plan, general criteria were used to roughly prioritize projects to determine (if adequate funding were available) whether they should be considered for funding in the short (0-5 years), medium (5-10 years) or longer (10-years or more) term. Projects were not ranked, as there are a host of factors that can come into play in determining when a project or other improvement is programmed. Most jurisdictions implement their TSPs through a combination of the following three methods: development exactions; selecting and programming improvements through the process of capital improvements programming; and through opportunities afforded by grants, loans and other miscellaneous sources of funding. All three methods rely upon the demonstration of need, relative priority and commitment of public policy that a TSP provides. A brief discussion of each method of TSP project implementation follows.

Development Exaction. Many jurisdictions will require new development to help pay for the impacts that new growth places upon the existing system of infrastructure that supports the development and serves the surrounding area. Often, these exactions include System Development Charges and development exactions linked to conditions of development approval. When establishing System Development Charges, such charges can only be used to pay for additional system/facility capacity. An adopted TSP identifies needed capacity improvements. Additionally, developers are often required to upgrade transportation facilities abutting and connecting the development to the transportation system that serve the larger area. This level of upgrading must be commensurate with the ultimate standard identified by the adopted TSP and proportional to the impact of the development.

Capital Improvements Programming. Capital improvements programming is the multiyear (normally 5-6 years) scheduling of physical improvements to the transportation system. This programming is based on studies to identify the specific improvements to be made and projections of fiscal resources. The first year is normally referred to as the capital budget; a capital improvements program (or CIP) refers to the improvements that are scheduled in the succeeding four or five-year period. Improvements scheduled in the "out years" are programmed on the basis of funding projected to be available through various sources (such as bonds, taxes, user fees, systems development charges, and etc.), and on the basis of a set of criteria established by the jurisdiction. Programming of improvements in the "out years" does not *commit* a jurisdiction to a particular expenditure of funds in that particular year; rather, it signals an indication to fund the improvement at that time should anticipated funds be available, and should current conditions still warrant it. CIPs are normally updated annually, and the projects in the "out years" are re-examined by judging them (and any new, high-priority projects that may have recently been identified) against the jurisdiction's capital improvement programming ranking criteria. "Year 2" (if/as adjusted) becomes "Year 1" (the capital budget), priorities for the "out year" projects are readjusted depending upon the annual prioritization process, and a new "Year 5" or "Year 6" is added to the end of the program.

An adopted transportation system plan provides the foundation for capital improvements programming by identifying the long-term relative priority of improvements that need to be made to accommodate future planned growth. Josephine County has a set of criteria it uses to evaluate and prioritize capital improvement projects. These have been reviewed during the process of developing the *Rural Transportation System Plan*. It is recommended that these be examined periodically to ensure they are still appropriate for the times and circumstances, and consistent with current policy.

Opportunity Funding. In addition to known and predictable sources of funding, unforeseen opportunities for funding transportation improvements arise periodically. Existing or new grant or loan programs sometimes offer competitive opportunities to fund projects (or portions thereof). Examples of these include the State Transportation Improvement Program (STIP), the Oregon Transportation Investment Act (OTIA) and other funding/grant programs. Most often, the criteria for accessing such funding will require that the project being included within an adopted transportation system plan. A TSP also provides a statement of public support for a future transportation system improvement that is often relied upon

when making key decisions on allocation of resources, or to help coordinate with other jurisdictions on projects of mutual or regional benefit. Hence, the requirement and importance for the *Josephine County Rural Transportation System Plan* to be coordinated with the plans of other jurisdictions.

It is also important to note that, to be successful, plans must be dynamic and subject to examination and updating to reflect changing demographics, conditions, public policy and regulatory environment. Oregon's Transportation Planning Rule requires comprehensive plans and transportation system plans to be updated on a regularly scheduled, periodic basis.
In addition plans may be updated to reflect change more often, if/as needed. Revisiting the assumptions that form the plan's foundation and the current conditions that impact what improvements are needed and when, provides the county with a tool that remains pertinent and useful.

## Consistency with Other Plans and Ordinances

The State's Transportation Planning Rule (TPR) requires local transportation system plans and comprehensive plans to be consistent with each other, and for both plans to be incompliance with the TPR. Accordingly, one of the initial tasks in developing the *Josephine County Rural TSP* was a review of existing plans, ordinances and standards that had a bearing upon the rural transportation system within the County. This provided an overall regulatory and policy context for evaluating and then recommending improvements to the transportation system. In addition, the *Josephine County Comprehensive Plan* and various County ordinances have been reviewed to determine if changes are necessary to help carry out the policy objectives of the *Rural TSP* and comply with the requirements of the TPR, specifically Section 660-12-045 – Implementation of the Transportation System Plan. The following discussion summarizes the recommendations for changes needing to be made to the *Comprehensive Plan* and other County ordinances to ensure consistency with and implementation of the TSP.

Adopting the *Rural Transportation System Plan* as an element of the *Josephine County Comprehensive Plan* (and replacing the Transportation component of this plan), will ensure consistency between the two documents. When the *Rural TSP* is deemed compliant with the Transportation Planning Rule, the *Josephine County Comprehensive Plan* will be compliant as well.

The County's Rural Land Development Code (RLDC) has been reviewed for consistency with the TPR. Recommended changes to the RLDC have been identified and, once made, consistency with the TPR will have been achieved. These changes include:

- Permitting TSP-listed transportation improvements as allowed uses (outright, permitted or conditional uses).
- Adding language to highlight that among the purposes of the County's transportation standards is the protection of future operations of transportation facilities.
- Allowing applications for land uses that might affect transportation facilities, corridor or sites under ownership or maintenance of other jurisdictions to be reviewed by the corresponding/appropriate jurisdiction.
- Ensuring that new developments are reviewed to ensure the protection of transportation facilities and the function for which they are designated.
- Notifying public agencies providing transportation facilities and services (such as ODOT) of land use action requests (and allowing opportunity for review and comment).
- Allowing for the requirement of bicycle lanes, specifically on roadways designated as arterials or collectors.

Finally, the TPR requires local governments to establish street standards that minimize pavement width and total right-of-way, consistent with the operational needs of the facility. The intent of these standards

is to encourage local governments to consider and reduce excessive standards in order to reduce construction costs, provide for more efficient use of land, provide emergency vehicle access while discouraging inappropriate traffic volumes and speeds, and accommodate convenient bicycle and pedestrian circulation. The County's street standards are being updated as part of the effort to develop the *Rural TSP*, and will replace the previous street standards found in the Rural Land Development Code.

## Issues for Further Refinement Planning or Study

The TSP provides substantial direction for transportation decision-making and investment in the rural portions of Josephine County. However, there remain a few issues that will require further refinement planning to clarify appropriate direction and priorities for certain specific elements of the transportation system. These issues include:

### Merlin Interchange

In cooperation with ODOT, Josephine County should evaluate options for improving the northbound intersection of I-5 with Merlin-Galice Road. Several preliminary options were developed during the development of the *Rural TSP* and these should be refined through more detailed engineering, traffic operations analysis, and environmental review. A preferred course of action should be identified and a priority for implementation should be established. Consideration should be given to seeking ODOT financial participation by incorporating this project need into a future State Transportation Improvement Program.

### Transportation Funding

As noted in the earlier discussion of transportation financing, Josephine County's charter requires a public vote to approve the development of new revenue sources. The financial discussion in the *Rural TSP* identified a range of potential funding sources for development and maintenance of the various components of the County's transportation system. A recommendation has been made for the County to establish a "blue ribbon panel" to research, recommend and champion the local transportation system financing strategy needed to carry out the recommendations of the *Rural TSP*. It is suggested that this panel be formed of representatives of businesses, interest groups, Josephine County citizens and the County's governmental partners, that it be informed with the professional financial and legal expertise necessary to identify the steps and level of detail needed to support development of such a strategy, and that this effort be undertaken with broad-based public and stakeholder involvement to ensure participation, buy-in and success. Such a panel and supporting expertise should identify the appropriate mechanisms needed to fund the improvements recommended within this TSP, and program, contract or complete the necessary background or supporting studies and documentation necessary to inform and support the legal foundation required for establishing various sources, and for securing public understanding and support. The evaluation of options for cost reductions (such as through privatization of County road-related services) should be a part of any effort to seek additional roadway system funding.

### Ordinance Development

This TSP has identified a number of changes that need to be made to County plans and ordinances to carry out recommended transportation policy initiatives and improvements. While changes have been recommended, development of the ordinances and taking them through the process of hearing and adoption will follow the adoption of this TSP, with the exception of text amendments to the Rural Land Development Code that will be adopted concurrent with adoption of the *Rural TSP* (see Appendix E). In addition, there will likely be the need to develop ordinances to authorize and support the institution of expanded or new financing mechanisms should the recommendation for further supporting analysis be acted upon.

# APPENDIX A

## Street Inventory

Table A-1: Josephine County-Maintained Roads in Grants Pass UGB

| ***Josephine County-Maintained Roads within Grants Pass UGB*** [1] | | |
|---|---|---|
| ***Street*** | ***From*** | ***To*** |
| 'N' Street | M Street | Gladiola Avenue |
| 'N' Street | Shannon Lane | Ament Road |
| 'A' Street | 8th Street | Foothill Blvd. |
| 'M' Street | 240' east of Fern Street | N Street |
| Abby Lane | Estates Lane | Cul-de-sac |
| Alexander Lane | Fruitdale Drive | Cul-de-sac |
| Allen Creek Road | Redwood Avenue | South edge of Grants Pass UGB |
| Ament Road | Foothill Blvd. | N Street |
| Anastasia Court[3] | Ben Aire Circle | Cul-de-sac |
| Angler Lane | Leonard Road | End |
| Annabelle Lane | Redwood Avenue | End |
| Anthony Place[3] | Shady Lane | End |
| Apple Lane[3] | Rogue River Hwy 99 | End |
| Arms Way[3] | Shady Lane | End |
| Aurora Avenue | Foothill Blvd. | End |
| Axtell Drive | Overland Drive | Siebert Way |
| Bailey Drive | Drury Lane | End |
| Bayard Drive | New Hope Road | Cul-de-sac |
| Beacon Drive | Madrone Street | Hillcrest Drive |
| Belindy Circle | Florer Drive | Cul-de-sac |
| Ben Aire Circle | Cloverlawn Drive | Cloverlawn Drive |
| Bridge Street | Cottonwood Street | Lincoln Road |
| Buena Vista Lane | Leonard Road | North edge Grants Pass UGB |
| Cameo Court | Dowell Road | Cul-de-sac |
| Canyon Drive | Fruitdale Drive | End |
| Carnahan Drive | Rogue River Hwy 99 | End |
| Century Circle | Drury Lane | Cul-de-sac |
| Clara Avenue | East Park Street | Rogue River Hwy 99 |
| Cloverlawn Drive | Rogue River Hwy 99 | South edge of Grants Pass UGB |
| Coach Drive | Wagon Wheel Drive | End |
| Colorado Lane | West Harbeck Road | Cul-de-sac |
| Conestoga Circle | Drury Lane | Cul-de-sac |
| Corbin Drive | Jacksonville Hwy 238 | Florer Drive |
| Crestview Loop | Cloverlawn Drive | Crestview Loop |
| Cullison Road | West Harbeck Road | End |
| Curtis Drive | Jacksonville Hwy 238 | East edge of Grants Pass UGB |
| Daisy Lane | Redwood Avenue | End |
| Damon Court | Panoramic Loop | Cul-de-sac |
| Darin Drive | Willow Lane | Cul-de-sac |
| Darneille Lane | Redwood Avenue | Leonard Road |
| Darrell Circle | Axtell Drive | Cul-de-sac |
| Delsie Drive | Leonard Road | Mesman Drive |
| Dowell Road | Leonard Road | South edge of Grants Pass UGB |
| Drury Lane | Grandview Avenue | Grants Pass city limits |
| East View Place | Cloverlawn Drive | Cul-de-sac |
| Eastwood Lane | George Tweed Blvd | End |
| Elrod Lane | Haviland Drive | Cul-de-sac |
| Erin Drive | Landau Lane | End |
| Estates Lane | Willow Lane | Abby Lane |
| Evon Circle | Axtell Drive | Cul-de-sac |

Table A-1: Josephine County-Maintained Roads in Grants Pass UGB

| ***Street*** | ***From*** | ***To*** |
|---|---|---|
| Fahey Way | Sun Glo Drive | Cul-de-sac |
| Florer Drive | End | End |
| Flower Lane[3] | Redwood Avenue | End |
| Foothill Blvd. | Royal Drive | South 760' |
| Foothill Blvd. | Grants Pass city limits | Ament Road |
| Fruitdale Drive | Jacksonville Hwy 238 | East edge of Grants Pass UGB |
| G Street | Leonard Street | Lincoln Road |
| Galaxy Way | Darnielle Lane | Darnielle Lane |
| George Tweed Blvd | Redwood Avenue | End |
| Gladiola Avenue | N Street | Portola Drive |
| Golden Aspen Drive | Darnielle Lane | Cul-de-sac |
| Grandview Avenue | Harbeck Road | Cloverlawn Drive |
| Greenfield Road | Scoville Road | End |
| Gregg Circle | Florer Drive | Cul-de-sac |
| Half Moon Circle | Galaxy Way | Cul-de-sac |
| Hamilton Lane | East Park Street | South edge of Grants Pass UGB |
| Haviland Drive | Grandview Avenue | 750' south of Monroe Way |
| Hawthorne Avenue | Midland Avenue | Morgan Lane |
| Hieglen Loop Road | Woodbrook Drive | End |
| Highland Avenue | 75' south of Cooke Avenue | North edge Grants Pass UGB |
| Hillcrest Drive | 6th Street | Hawthorne Avenue |
| Hillcrest Drive | 9th Street | Hillcrest Lane |
| Hubbard Lane | Redwood Avenue | South edge of Grants Pass UGB |
| Jason Way | Swarthout Drive | Cul-de-sac |
| Johnmark Circle | Axtell Drive | Cul-de-sac |
| Keldan Lane | Hamilton Lane | Cul-de-sac |
| Kellenbeck Avenue | Redwood Avenue | Willow Lane |
| Kokanee Lane | Redwood Avenue | Leonard Road |
| Landau Lane | Coach Drive | Cul-de-sac |
| Lark Ellen Way | Jacksonville Hwy 238 | West 720' |
| Larkspur Court[3] | Golden Aspen Drive | Cul-de-sac |
| Lawless Lane | Foothill Blvd. | Cul-de-sac |
| Lee Roze Lane | Drury Lane | Cul-de-sac |
| Leonard Road | Dowell Road | West edge Grants Pass UGB |
| Lincoln Road | Lower River Road | Webster Road |
| Lois Lane | Darnielle Lane | Cul-de-sac |
| Mayfair Lane | Jacksonville Hwy 238 | Cul-de-sac |
| Mayfield Drive | Monroe Way | Cul-de-sac |
| McCarter Drive | Nebraska Avenue | Cul-de-sac |
| Medart Lane | Redwood Avenue | Willow Lane |
| Mendi Way | Sun Glo Drive | Cul-de-sac |
| Mesman Drive | Leonard Road | Cul-de-sac |
| Mist Circle[3] | Rainwood Lane | Cul-de-sac |
| Molly Lane[3] | Shady Lane | End |
| Monroe Way | Haviland Drive | Cul-de-sac |
| Montgomery Lane | Monroe Way | Cul-de-sac |
| Moon Glo Drive | Sun Glo Drive | Cul-de-sac |
| Morgan Lane | Vine Street | Highland Avenue |
| Mount Baldy Road | Rogue River Hwy 99 | Fruitdale Drive |
| N. 10th Street | Hillcrest Drive | South 1300' |
| Naples Drive[3] | Darnielle Lane | Cul-de-sac |

Table A-1: Josephine County-Maintained Roads in Grants Pass UGB

| ***Street*** | ***From*** | ***To*** |
|---|---|---|
| Nebraska Avenue | W Harbeck Road | McCarter Lane |
| New Hope Road | Jacksonville Hwy 238 | South edge of Grants Pass UGB |
| Nick Way | Sun Glo Drive | Cul-de-sac |
| North Star Drive | Sun Glo Drive | End |
| Nunnwood Lane | Eastwood Lane | Cul-de-sac |
| Omaha Drive | Nebraska Avenue | Cul-de-sac |
| Orchard Street | Woodbrook Drive | North 350' |
| Overland Drive | Fruitdale Drive | Axtell Drive |
| Panoramic Loop | Cloverlawn Drive | End |
| Pansy Lane[3] | Redwood Avenue | End |
| Pardee Lane | Redwood Avenue | Cul-de-sac |
| Parkdale Circle | Parkdale Drive | Cul-de-sac |
| Parkdale Drive | Fruitdale Drive | Cul-de-sac |
| Poplar Drive | Fruitdale Drive | End |
| Portola Drive | 450' west of Gladiola Drive | Shannon Lane |
| Rainwood Lane | Angler Lane | End |
| Raydean Drive | Redwood Avenue | Cul-de-sac |
| Raywood Circle | Raydean Drive | Cul-de-sac |
| Redwood Avenue | Redwood Highway | West edge Grants Pass UGB |
| Redwood Circle | Redwood Avenue | Cul-de-sac |
| Regina Way | West Harbeck Road | Cul-de-sac |
| Ringuette Street | Redwood Highway | West Park Street |
| Robertson Crest | Panoramic Loop | End |
| S&N Lane[3] | Hubbard Lane | End |
| Salmon Circle | Angler Lane | Cul-de-sac |
| Saradan Lane | Hamilton Lane | Cul-de-sac |
| Schroeder Lane | Leonard Road | North edge Grants Pass UGB |
| Schutzwohl Lane | Allen Creek Road | End |
| Shady Lane | Redwood Avenue | End |
| Shane Way | Sun Glo Drive | Cul-de-sac |
| Shannon Lane | Portola Drive | N Street |
| Siebert Way | Fruitdale Drive | Cul-de-sac |
| Skylark Lane | Leonard Road | Cul-de-sac |
| Smokey Lane | Hamilton Lane | Cul-de-sac |
| Sockeye Circle[3] | Kokanee Lane | Cul-de-sac |
| Spring Mountain Road | Greenfield Road | Cul-de-sac |
| Sprinkle Way[3] | Rainwood Lane | Cul-de-sac |
| Star Court | Sun Glo Drive | Cul-de-sac |
| Stellar Court | Darnielle Lane | Cul-de-sac |
| Sun Glo Drive | End | Cul-de-sac |
| Swarthout Circle | Swarthout Drive | Cul-de-sac |
| Swarthout Drive | Cloverlawn Drive | Cul-de-sac |
| Tanager Way | Leonard Road | Cul-de-sac |
| Thomas Circle | Florer Drive | Cul-de-sac |
| Towne Street | Jacksonville Hwy 238 | West Harbeck Road |
| Trout Circle | Angler Lane | Cul-de-sac |
| Union Avenue | Jacksonville Hwy 238 | Ringuette Street |
| Upper River Road | Lincoln Road | West edge Grants Pass UGB |
| Vertical Drive | Hillcrest Drive | Cul-de-sac |
| Virginia Lane | Bailey Drive | Cul-de-sac |
| W Harbeck Road | Harbeck Road | Allen Creek Road |

Table A-1: Josephine County-Maintained Roads in Grants Pass UGB

| ***Street*** | ***From*** | ***To*** |
|---|---|---|
| Wagon Wheel Drive | Jacksonville Hwy 238 | Cul-de-sac |
| Washington Blvd. | Midland Avenue | Morgan Lane |
| West Park Street | Redwood Highway | Ringuette Street |
| West Scenic Drive | Scoville Road | West edge Grants Pass UGB |
| West Schutzwohl Lane | Dowell Road | End |
| Willow Lane | Redwood Highway | Leonard Road |
| Wineteer Lane | Redwood Avenue | Cul-de-sac |
| Woodbrook Drive | Highland Avenue | End |
| Wylie Lane | Haviland Drive | West 310' |

Source: Josephine County, 2003; City of Cave Junction TSP, 2000; City of Grants Pass TSP, 1998

[1] UGB = Urban Growth Boundary

[2] Hamilton Avenue is jointly administered by the City and County, but only the City provides minor maintenance.

[3] Non-maintained public right-of-way.

Table A-2: Josephine County-Maintained Roads in Cave Junction UGB

| ***Josephine County-Maintained Roads within Cave Junction UGB*** [1] | | |
|---|---|---|
| ***Street*** | ***From*** | ***To*** |
| Laurel Road | Redwood Highway | Oregon Caves Highway |
| Old Stage Road | Laurel Road | South edge of Cave Junction |
| Hamilton Avenue[3] | Barlow Street | Redwood Highway |
| River Street | Old Stage Road | Laurel Road |
| Daisy Hill Road[3] | River Street | End |
| Hanby Lane[3] | Old Stage Road | End |

Source: Josephine County, 2003; City of Cave Junction TSP, 2000; City of Grants Pass TSP, 1998

[1] UGB = Urban Growth Boundary

[2] Hamilton Avenue is jointly administered by the City and County, but only the City provides minor maintenance.

[3] Non-maintained public right-of-way.

Table A-3: Functional Classification of County Roads

| Road Name | County FC Code | County FC Description | Begin Milepost | End Milepost |
|---|---|---|---|---|
| A STREET | UAIC | Urban Arterial - Minor /City Limits | 0 | 0.945 |
| ABBY LANE | UR | Urban Residential | 0 | 0.168 |
| ABEGG ROAD | RR | Rural Residential | 0 | 2.45 |
| ACORN STREET | RR | Rural Residential | 0 | 0.428 |
| ACRES ROAD | RORR | Rural Restricted Residential | 0 | 0.08 |
| ADELINE DRIVE | RRL | Rural Limited Residential | 0 | 0.13 |
| ADMIRAL CIRCLE | RORR | Rural Restricted Residential | 0 | 0.08 |
| AGAPE WAY | | | 0 | 0.2 |
| AGEE DRIVE (EXT.) | | | 0 | 0.7 |
| AGGREGATE AVENUE | | | 0 | 0.08 |
| AGGREGATE AVENUE | RI | Rural Industrial | 0 | 0.047 |
| AGNESS AVENUE | UAMI | Urban Arterial - Minor | 0 | 0.072 |
| AIRPORT DRIVE | RR | Rural Residential | 0 | 2.236 |
| ALAN LEE ROAD | RORR | Rural Restricted Residential | 0 | 0.14 |
| ALANITA LANE | | | 0 | 0.02 |
| ALDER STREET | | | 0 | 0.08 |
| ALDERBROOK LANE | RR | Rural Residential | 0 | 0.165 |
| ALEXANDER LANE | UR | Urban Residential | 0 | 0.089 |
| ALLEN CREEK ROAD | UAIC | Urban Arterial - Minor /City Limits | 0.07 | 0.252 |
| ALLEN CREEK ROAD | UAMI | Urban Arterial - Minor | 0.252 | 0.495 |
| ALLEN CREEK ROAD | UAMI | Urban Arterial - Minor | 0.495 | 1 |
| ALLEN CREEK ROAD | UAMI | Urban Arterial - Minor | 0 | 0.07 |
| ALLENWOOD DRIVE | UR | Urban Residential | 0 | 0.122 |
| ALLEY 118 | | | 0 | 0.11 |
| ALLEY 687 | | | 0 | 0.02 |
| ALLMAN WAY | RRL | Rural Limited Residential | 0 | 0.045 |
| ALLMAN WAY, EAST | RORR | Rural Restricted Residential | 0 | 0.06 |
| ALLMAN WAY, WEST | RORR | Rural Restricted Residential | 0 | 0.06 |
| ALMAR ROAD | RR | Rural Residential | 0 | 0.242 |
| ALMEDA STREET | | | 0 | 0.14 |
| ALMEDA STREET | RR | Rural Residential | 0 | 0.113 |
| ALMOND STREET | | | 0 | 0.13 |
| ALMOND STREET | RR | Rural Residential | 0 | 0.085 |
| ALPINE CIRCLE | | | 0 | 0.03 |
| ALTHOUSE CREEK ROAD | RR | Rural Residential | 0 | 2.885 |
| AMBER LANE | | | 0 | 0.37 |
| AMENT ROAD | UC | Urban Collector (17) | 0 | 0.24 |
| AMENT ROAD | UR | Urban Residential | 0.24 | 0.526 |
| ANASTASIA COURT | UOP | Urban Private ("O") | 0 | 0.3 |
| ANDERSON CREEK ROAD | | | 0 | 1.25 |
| ANGLER LANE | UR | Urban Residential | 0 | 0.143 |
| ANITA DRIVE | RRL | Rural Limited Residential | 0 | 0.343 |
| ANN ROY DRIVE | RR | Rural Residential | 0 | 0.244 |
| ANNA WAY | RRL | Rural Limited Residential | 0 | 0.157 |
| ANNABELLE LANE | UR | Urban Residential | 0 | 0.309 |
| ANNIE WAY | | | 0 | 0.27 |
| ANTHONY PLACE | UOP | Urban Private ("O") | 0 | 0.07 |
| APPALOOSA DRIVE | | | 0 | 0.34 |
| APPLE LANE | | | 0 | 0.15 |
| APPLE STREET | | | 0 | 0.1 |
| APPLEGATE AVENUE | RCMI | Rural Minor Collector | 0 | 1.775 |
| APRIL DRIVE | RR | Rural Residential | 0 | 0.498 |
| AQUARIUS WAY | | | 0 | 0.48 |
| ARDATH DRIVE | | | 0 | 0.26 |
| ARIES LANE | | | 0 | 0.08 |
| ARMS WAY | UOP | Urban Private ("O") | 0 | 0.03 |
| ARNOLD AVENUE | RCMI | Rural Minor Collector | 0 | 0.244 |
| ARROWHEAD DRIVE | | | 0 | 1.87 |
| ARROYO DRIVE | | | 0 | 0.3 |
| ARTLIN ROAD | RR | Rural Residential | 0 | 0.345 |
| ASH STREET | | | 0 | 0.19 |
| ASH STREET | | | 0 | 0.25 |
| ASHBROOK LANE | RORR | Rural Restricted Residential | 0 | 0.12 |
| AUBY WAY | RORR | Rural Restricted Residential | 0 | 0.17 |
| AURORA AVENUE | UR | Urban Residential | 0 | 0.14 |
| AUTUMN LANE | | | 0 | 0.27 |
| AVALON PLACE | | | 0 | 0.08 |
| AVENUE DE TERESA | RR | Rural Residential | 0 | 0.457 |

Table A-3: Functional Classification of County Roads

| Road Name | County FC Code | County FC Description | Begin Milepost | End Milepost |
|---|---|---|---|---|
| AVERILL DRIVE | RR | Rural Residential | 0 | 1.327 |
| AXTELL DRIVE | UR | Urban Residential | 0 | 0.212 |
| AZALEA DRIVE | RCMA | Rural Major Collector | 0 | 0.32 |
| AZALEA DRIVE | RCMA | Rural Major Collector | 0.32 | 6.137 |
| AZALEA DRIVE CUTOFF | RCMA | Rural Major Collector | 0 | 0.356 |
| BABY STREET | | | 0 | 0.04 |
| BAILEY DRIVE | UR | Urban Residential | 0 | 0.161 |
| BARBARA DRIVE | RR | Rural Residential | 0 | 0.589 |
| BARBARA DRIVE EXT. | | | 0 | 0.14 |
| BARKER DRIVE | RORR | Rural Restricted Residential | 0 | 0.13 |
| BARKER DRIVE | RR | Rural Residential | 0 | 1.023 |
| BARNES WAY | | | 0 | 0.24 |
| BARTLETT LANE | | | 0 | 0.28 |
| BASTIAN ROAD | RRL | Rural Limited Residential | 0 | 0.204 |
| BAYARD DRIVE | UR | Urban Residential | 0 | 0.085 |
| BAYBERRY LANE | UOP | Urban Private ("O") | 0 | 0.09 |
| BEACON DRIVE | URC | Urban Residential / City limits | 0 | 0.885 |
| BEAVER MEADOW ROAD | | | 0 | 0.38 |
| BECKLIN DRIVE | RR | Rural Residential | 0 | 0.672 |
| BEEBE DRIVE | | | 0 | 0.72 |
| BEECHER ROAD | RRL | Rural Limited Residential | 0 | 0.37 |
| BELINDY CIRCLE | UR | Urban Residential | 0 | 0.038 |
| BELL ROAD | | | 0 | 0.5 |
| BEN AIRE CIRCLE | UR | Urban Residential | 0 | 0.225 |
| BENTLEY DRIVE | | | 0 | 0.13 |
| BERMAR CIRCLE | RRL | Rural Limited Residential | 0 | 0.048 |
| BETTY ANN | | | 0 | 0.23 |
| BICKFORD DRIVE | | | 0 | 0.25 |
| BIG SPRINGS DRIVE | | | 0 | 0.18 |
| BILL LANE | RORR | Rural Restricted Residential | 0 | 0.28 |
| BLACK OAK DRIVE | UOP | Urban Private ("O") | 0 | 0.09 |
| BLACK PINE DRIVE | UOP | Urban Private ("O") | 0 | 0.06 |
| BLACKBERRY LANE | | | 0 | 0.12 |
| BLACKWELL DRIVE | RORR | Rural Restricted Residential | 0 | 0.14 |
| BLAS CERDENA DRIVE | RR | Rural Residential | 0 | 0.329 |
| BLITZ CANYON ROAD | | | 0 | 1.44 |
| BLODGETT ROAD | | | 0 | 1.5 |
| BLOOM ROAD | RRL | Rural Limited Residential | 0 | 0.22 |
| BLUE JAY LANE | | | 0 | 0.22 |
| BLUE MOUNTAIN ROAD | RRL | Rural Limited Residential | 0 | 0.104 |
| BLUE RIDGE LANE | RORR | Rural Restricted Residential | 0 | 0.129 |
| BLUE WATER LANE | | | 0 | 0.11 |
| BLUEBELL LANE | RRL | Rural Limited Residential | 0 | 0.159 |
| BOARD CREEK ROAD | | | 0 | 0.284 |
| BOARD SHANTY ROAD | | | 0 | 2.13 |
| BOARD SHANTY ROAD | RCMI | Rural Minor Collector | 0 | 1.312 |
| BOLT MOUNTAIN ROAD | | | 0 | 0.75 |
| BOLT VIEW ROAD | RRL | Rural Limited Residential | 0 | 0.256 |
| BONANZA DRIVE | RRL | Rural Limited Residential | 0 | 0.1 |
| BONLINDA LANE | RR | Rural Residential | 0 | 0.285 |
| BONNIE LANE | RR | Rural Residential | 0 | 0.418 |
| BORICA DRIVE | | | 0 | 0.36 |
| BOUNDARY LANE | RRL | Rural Limited Residential | 0 | 0.145 |
| BOUNDARY ROAD | RR | Rural Residential | 0 | 0.596 |
| BOWHILL ROAD | RRL | Rural Limited Residential | 0 | 0.067 |
| BOYER ROAD | RR | Rural Residential | 0 | 0.507 |
| BOYER ROAD (EXT) | | | 0 | 0.51 |
| BRADLEY COURT | UOP | Urban Private ("O") | 0 | 0.03 |
| BRANDY COURT | | | 0 | 0.03 |
| BRANDY LANE | UR | Urban Residential | 0 | 0.093 |
| BREEZY LANE | RR | Rural Residential | 0 | 0.194 |
| BRENTWOOD DRIVE | | | 0 | 0.03 |
| BRETT WAY | RR | Rural Residential | 0 | 0.381 |
| BRIAR LANE | | | 0 | 0.73 |
| BRIARWOOD WAY | | | 0 | 0.05 |
| BRIDGE LANE | RR | Rural Residential | 0 | 2.561 |
| BRIDGE STREET, WEST | UAIC | Urban Arterial - Minor /City Limits | 0 | 0.275 |
| BRIMSTONE ROAD | | | 0 | 0.17 |

Table A-3: Functional Classification of County Roads

| Road Name | County FC Code | County FC Description | Begin Milepost | End Milepost |
|---|---|---|---|---|
| BRIMSTONE ROAD | RR | Rural Residential | 0 | 0.824 |
| BRISTOW ROAD | RR | Rural Residential | 0 | 0.245 |
| BROCK LANE | RORR | Rural Restricted Residential | 0 | 0.1 |
| BROOKE LANE | RR | Rural Residential | 0 | 0.25 |
| BROOKSIDE BOULEVARD | RCL | Rural Local Collector | 0 | 1.042 |
| BROOKSTONE HILLS DRIVE | RRL | Rural Limited Residential | 0 | 0.384 |
| BROWNING STREET | | | 0 | 0.08 |
| BROWNS ROAD | RR | Rural Residential | 0 | 0.748 |
| BROWNTOWN ROAD | | | 0 | 0.62 |
| BUCK CANYON ROAD | RORR | Rural Restricted Residential | 0 | 0.42 |
| BUCKHORN ROAD | | | 0 | 0.44 |
| BUCKSKIN ROAD | RR | Rural Residential | 0 | 0.137 |
| BUENA VISTA LANE | UR | Urban Residential | 0 | 0.123 |
| BULL CREEK ROAD | RR | Rural Residential | 0 | 1.401 |
| BUMMER CREEK LANE | | | 0 | 0.6 |
| BURCH DRIVE | RR | Rural Residential | 0 | 0.552 |
| BURNETTE DRIVE | | | 0 | 0.27 |
| BURTON DRIVE | RORR | Rural Restricted Residential | 0 | 0.14 |
| BUSHNELL WAY | RR | Rural Residential | 0 | 0.275 |
| BUTCHER KNIFE CREEK ROAD | | | 0 | 0.1 |
| BUYSMAN WAY | RR | Rural Residential | 0 | 0.382 |
| C & O CO. R.R. (ABANDONED) | | | 0 | 1.06 |
| CALIFORNIA AVENUE | RR | Rural Residential | 0 | 0.475 |
| CALVERT DRIVE | | | 0 | 0.21 |
| CAMBRIDGE DRIVE | | | 0 | 0.06 |
| CAMBRIDGE DRIVE | RR | Rural Residential | 0 | 0.529 |
| CAMEO COURT | URMI | Urban Minor Residential | 0 | 0.083 |
| CAMERON CIRCLE | | | 0 | 0.01 |
| CAMP JOY ROAD | RCMI | Rural Minor Collector | 0 | 1.371 |
| CAMPUS VIEW DRIVE | RR | Rural Residential | 0 | 0.656 |
| CANAAN STREET | RRL | Rural Limited Residential | 0 | 0.159 |
| CANAL AVENUE | | | 0 | 0.11 |
| CANAL LANE | | | 0 | 0.06 |
| CANDLELIGHT LANE | RRL | Rural Limited Residential | 0 | 0.053 |
| CANYON DRIVE | UR | Urban Residential | 0 | 0.109 |
| CANYON DRIVE (EXT) | | | 0 | 0.5 |
| CANYON OAK DRIVE | | | 0 | 1.04 |
| CARNAHAN DRIVE | | | 0 | 0.1 |
| CARNAHAN DRIVE | UR | Urban Residential | 0 | 0.182 |
| CAROLANN WAY | RRL | Rural Limited Residential | 0 | 0.077 |
| CARRIAGE ROAD | RRL | Rural Limited Residential | 0 | 0.098 |
| CARRIE STREET | | | 0 | 0.29 |
| CARRIE STREET | RRL | Rural Limited Residential | 0 | 0.157 |
| CARROLLWOOD DRIVE | RR | Rural Residential | 0 | 0.459 |
| CARSON DRIVE | RORR | Rural Restricted Residential | 0 | 0.2 |
| CARTER DRIVE | | | 0 | 0.09 |
| CARTER DRIVE | RR | Rural Residential | 0 | 0.375 |
| CARTON WAY | RCL | Rural Local Collector | 0 | 0.617 |
| CASCADE DRIVE | RR | Rural Residential | 0 | 0.38 |
| CASITA DRIVE | | | 0 | 0.25 |
| CASTLE CREEK ROAD | RR | Rural Residential | 0 | 0.48 |
| CATALPA DRIVE | | | 0 | 0.5 |
| CATHEDRAL WAY | RRL | Rural Limited Residential | 0 | 0.195 |
| CATHY DRIVE | | | 0 | 0.12 |
| CAVES CAMP ROAD | RCMI | Rural Minor Collector | 0 | 2.348 |
| CEDAR FLAT ROAD | RCMI | Rural Minor Collector | 0 | 3.08 |
| CEDAR FLAT ROAD | RCMI | Rural Minor Collector | 3.08 | 4.2 |
| CEDAR GULCH ROAD | | | 0 | 4.5 |
| CEDAR HEIGHTS DRIVE | RRL | Rural Limited Residential | 0 | 0.222 |
| CEDAR HEIGHTS DRIVE (EXT.) | | | 0 | 0.12 |
| CEDAR SPRINGS DRIVE | | | 0 | 0.05 |
| CEDAR STREET | | | 0 | 0.2 |
| CEDARAPIDS ROAD | | | 0 | 0.04 |
| CENTURY CIRCLE | UR | Urban Residential | 0 | 0.027 |
| CHAPARRAL DRIVE | RRL | Rural Limited Residential | 0 | 0.176 |
| CHAPMAN CREEK ROAD | | | 0 | 1.74 |
| CHENEY CREEK ROAD | RCL | Rural Local Collector | 0 | 3.32 |
| CHEROKEE LANE | | | 0 | 0.33 |

Table A-3: Functional Classification of County Roads

| Road Name | County FC Code | County FC Description | Begin Milepost | End Milepost |
|---|---|---|---|---|
| CHEROKEE ROAD | | | 0 | 0.15 |
| CHERRY GULCH ROAD | | | 0 | 0.11 |
| CHERRY STREET | | | 0 | 0.08 |
| CHERRY STREET | RR | Rural Residential | 0 | 0.043 |
| CHESLOCK ROAD | | | 0 | 0.24 |
| CHESLOCK ROAD | RR | Rural Residential | 0 | 0.427 |
| CHEYENNE DRIVE | UR | Urban Residential | 0 | 0.08 |
| CHINA BASIN ROAD | | | 0 | 0.9 |
| CHINA CREEK ROAD | | | 0 | 0.5 |
| CHINOOK PARK LANE | RR | Rural Residential | 0 | 0.203 |
| CHIPLEY ROAD | | | 0 | 0.28 |
| CIENEGA LANE | RR | Rural Residential | 0 | 1.262 |
| CINDY LANE | RRL | Rural Limited Residential | 0 | 0.056 |
| CIRCLE W DRIVE | | | 0 | 0.6 |
| CLAIBOURN DRIVE | | | 0 | 0.24 |
| CLARA AVENUE | UR | Urban Residential | 0 | 0.145 |
| CLEAR CREEK ROAD | | | 0 | 0.26 |
| CLEWIS LANE | RORR | Rural Restricted Residential | 0 | 0.25 |
| CLEWIS LANE | RRL | Rural Limited Residential | 0 | 0.138 |
| CLIFFSIDE DRIVE | | | 0 | 0.51 |
| CLINE DRIVE | RORR | Rural Restricted Residential | 0 | 0.07 |
| CLOVERLAWN DRIVE | UC | Urban Collector (17) | 0 | 1.472 |
| CLOVERLAWN DRIVE | RCMA | Rural Major Collector | 1.472 | 5.195 |
| CLYDESDALE DRIVE | | | 0 | 0.25 |
| COACH DRIVE | UCL | Urban Local Collector | 0 | 0.088 |
| COBALT DRIVE | | | 0 | 0.18 |
| COED PLACE | RRL | Rural Limited Residential | 0 | 0.106 |
| COHO COURT | UOP | Urban Private ("O") | 0 | 0.02 |
| COLIN ROAD | | | 0 | 0.25 |
| COLLEEN COURT | RORR | Rural Restricted Residential | 0 | 0.04 |
| COLLEGE DRIVE | RR | Rural Residential | 0 | 0.45 |
| COLONIAL DRIVE | RR | Rural Residential | 0 | 0.519 |
| COLONIAL DRIVE (EXT) | | | 0 | 0.35 |
| COLORADO LANE | UR | Urban Residential | 0 | 0.061 |
| COMBS DRIVE | RORR | Rural Restricted Residential | 0 | 0.15 |
| COMET COURT | UOP | Urban Private ("O") | 0 | 0.02 |
| COMMERCE WAY | RI | Rural Industrial | 0 | 0.144 |
| CONESTOGA DRIVE | UR | Urban Residential | 0 | 0.089 |
| CONIFER DRIVE | | | 0 | 0.09 |
| CONNIE LANE | RR | Rural Residential | 0 | 0.405 |
| CONRAD DRIVE | RORR | Rural Restricted Residential | 0 | 0.18 |
| COPPER DRIVE | RR | Rural Residential | 0 | 0.645 |
| CORBIN DRIVE | UR | Urban Residential | 0 | 0.092 |
| CORNETT LANE | RRL | Rural Limited Residential | 0 | 0.318 |
| CORPORATE WAY | RI | Rural Industrial | 0 | 0.119 |
| CORRAL DRIVE | | | 0 | 0.64 |
| COUNTRY AIRE DRIVE | | | 0 | 0.22 |
| COUNTRY AIRE DRIVE | RR | Rural Residential | 0 | 0.557 |
| COUTANT LANE | RCL | Rural Local Collector | 0 | 0.07 |
| COUTANT LANE | RCL | Rural Local Collector | 0.07 | 0.483 |
| COVEY LANE | URLM | Urban Limited Minor Residential | 0 | 0.046 |
| COWBOY WAY | | | 0 | 0.17 |
| COYOTE CREEK ROAD | RCL | Rural Local Collector | 0 | 5.44 |
| CREEKS ROAD | RORR | Rural Restricted Residential | 0 | 0.21 |
| CREEKSIDE WAY | RORR | Rural Restricted Residential | 0 | 0.05 |
| CREST DRIVE | RR | Rural Residential | 0 | 0.436 |
| CRESTVIEW LOOP | UR | Urban Residential | 0 | 0.545 |
| CRICKET LANE | | | 0 | 0.14 |
| CRICKETT LANE | | | 0 | 0.26 |
| CROOKS CREEK ROAD | RCL | Rural Local Collector | 0 | 1.59 |
| CROOKS CREEK ROAD | RCL | Rural Local Collector | 1.59 | 2.814 |
| CROSSBOW LANE | RRL | Rural Limited Residential | 0 | 0.1 |
| CROW ROAD | | | 0 | 1.32 |
| CROW ROAD | RR | Rural Residential | 0 | 0.867 |
| CROW ROAD, EAST | | | 0 | 0.15 |
| CROW ROAD, EAST | | | 0 | 0.53 |
| CROW ROAD, EAST | RR | Rural Residential | 0 | 0.213 |
| CRYSTAL DRIVE | RR | Rural Residential | 0 | 0.615 |

Table A-3: Functional Classification of County Roads

| Road Name | County FC Code | County FC Description | Begin Milepost | End Milepost |
|---|---|---|---|---|
| CRYSTAL SPRINGS ROAD | RR | Rural Residential | 0 | 0.323 |
| CULLISON ROAD | UR | Urban Residential | 0 | 0.247 |
| CULVER DRIVE | | | 0 | 0.28 |
| CUMBERLAND DRIVE | | | 0 | 0.83 |
| CURRIE LANE | | | 0 | 0.11 |
| CURTIS DRIVE | UCL | Urban Local Collector | 0 | 0.07 |
| CURTIS DRIVE | UR | Urban Residential | 0.07 | 0.15 |
| CURTIS DRIVE | RR | Rural Residential | 0.15 | 0.634 |
| CUT RATE LANE | | | 0 | 0.15 |
| DAILY LANE | | | 0 | 0.51 |
| DAILY LANE | RR | Rural Residential | 0 | 0.099 |
| DAISY HILL ROAD | | | 0 | 0.55 |
| DAISY LANE | UR | Urban Residential | 0 | 0.165 |
| DAISY MINE ROAD | | | 0 | 4.5 |
| DAMON COURT | UR | Urban Residential | 0 | 0.048 |
| DARIN DRIVE | UR | Urban Residential | 0 | 0.116 |
| DARNEILLE LANE | UC | Urban Collector (17) | 0 | 0.494 |
| DARNEILLE LANE | UCL | Urban Local Collector | 0.494 | 0.787 |
| DARRELL CIRCLE | UR | Urban Residential | 0 | 0.053 |
| DAUGHERTY WAY | RR | Rural Residential | 0 | 0.039 |
| DAVIDSON ROAD | RR | Rural Residential | 0 | 0.487 |
| DAVIDSON ROAD (EXT) | | | 0 | 0.3 |
| DAVIS CREEK ROAD | | | 0 | 2.9 |
| DAVIS ROAD | | | 0 | 2.9 |
| DAWN ALLAN DRIVE | RR | Rural Residential | 0 | 0.273 |
| DAWN DRIVE | RRL | Rural Limited Residential | 0 | 0.094 |
| DAWN DRIVE (EXT) | | | 0 | 0.18 |
| DE WOODY LANE | RRL | Rural Limited Residential | 0 | 0.431 |
| DEARING WAY | RRL | Rural Limited Residential | 0 | 0.151 |
| DEARING WAY (EXT.) | RORR | Rural Restricted Residential | 0 | 0.06 |
| DEBRA LANE | | | 0 | 0.24 |
| DEBRICK WAY | RRL | Rural Limited Residential | 0 | 0.226 |
| DEBRICK WAY (EXT) | | | 0 | 0.39 |
| DEER CREEK ROAD | RCL | Rural Local Collector | 0 | 8.144 |
| DEER HAVEN LANE | RORR | Rural Restricted Residential | 0 | 0.15 |
| DEERHORN DRIVE | | | 0 | 0.21 |
| DEL ROGUE ROAD | | | 0 | 0.05 |
| DELL ROAD | | | 0 | 0.24 |
| DELLWOOD DRIVE | | | 0 | 0.17 |
| DELLWOOD DRIVE | RR | Rural Residential | 0 | 0.169 |
| DELLWOOD DRIVE | RR | Rural Residential | 0 | 0.27 |
| DELSIE DRIVE | UR | Urban Residential | 0 | 0.275 |
| DEMARAY DRIVE | RCMA | Rural Major Collector | 0 | 3.653 |
| DEMARAY DRIVE (EXT) | | | 0 | 0.75 |
| DENTON TRAIL | | | 0 | 0.25 |
| DENVER AVENUE | RR | Rural Residential | 0 | 0.343 |
| DETRICK DRIVE | RR | Rural Residential | 0 | 0.859 |
| DETRICK DRIVE (EXT) | | | 0 | 0.05 |
| DEVON DRIVE | RRL | Rural Limited Residential | 0 | 0.07 |
| DEXTER WAY | RRL | Rural Limited Residential | 0 | 0.293 |
| DICK GEORGE ROAD | RCL | Rural Local Collector | 0 | 5.193 |
| DIXIE DRIVE | | | 0 | 0.1 |
| DOG CREEK ROAD | | | 0 | 1.12 |
| DOG CREEK ROAD | RR | Rural Residential | 0 | 0.259 |
| DOGWOOD DRIVE | | | 0 | 0.38 |
| DOGWOOD LANE | | | 0 | 0.3 |
| DOLORES DRIVE | RRL | Rural Limited Residential | 0 | 0.075 |
| DONALDSON ROAD | RCMI | Rural Minor Collector | 0 | 1.88 |
| DONEEN LANE | UR | Urban Residential | 0 | 0.052 |
| DONET LANE | RR | Rural Residential | 0 | 0.403 |
| DORRY LANE | RRL | Rural Limited Residential | 0 | 0.138 |
| DOUGLAS DRIVE | RR | Rural Residential | 0 | 0.718 |
| DOWELL ROAD | UCL | Urban Local Collector | 0 | 0.24 |
| DOWELL ROAD | UAMI | Urban Arterial - Minor | 0.24 | 0.5 |
| DOWELL ROAD | UC | Urban Collector (17) | 0.5 | 0.62 |
| DOWELL ROAD | RCMI | Rural Minor Collector | 0.62 | 1.002 |
| DRAKE DRIVE | RORR | Rural Restricted Residential | 0 | 0.14 |
| DRAPER VALLEY ROAD | RCL | Rural Local Collector | 0 | 2.917 |

Table A-3: Functional Classification of County Roads

| Road Name | County FC Code | County FC Description | Begin Milepost | End Milepost |
|---|---|---|---|---|
| DREAMHILL DRIVE | | | 0 | 1.15 |
| DRUMM ROAD | | | 0 | 0.25 |
| DRURY LANE | UCL | Urban Local Collector | 0 | 0.245 |
| DRYDEN ROAD | RR | Rural Residential | 0 | 0.477 |
| DUNLAP LANE | RORR | Rural Restricted Residential | 0 | 0.32 |
| DUSTIN WAY | RRL | Rural Limited Residential | 0 | 0.132 |
| DUTCHER CREEK ROAD | RR | Rural Residential | 0 | 1.371 |
| DUTCHY WAY | | | 0 | 0.29 |
| DWIGHT CREEK ROAD | | | 0 | 0.75 |
| EAGLE RIDGE DRIVE | RRL | Rural Limited Residential | 0 | 0.18 |
| EAGLES VIEW DRIVE | RORR | Rural Restricted Residential | 0 | 0.549 |
| EASEMENT 688 | | | 0 | 0.02 |
| EASEMENT ROAD 164 | | | 0 | 0.2 |
| EASEMENT ROAD 170 | | | 0 | 0.15 |
| EASEMENT ROAD 198 | | | 0 | 0.15 |
| EASEMENT ROAD 274 | | | 0 | 0.89 |
| EASEMENT ROAD 316 | | | 0 | 0.13 |
| EASEMENT ROAD 321 | | | 0 | 0.61 |
| EASEMENT ROAD 341 | | | 0 | 0.25 |
| EASEMENT ROAD 342 | | | 0 | 0.19 |
| EASEMENT ROAD 361 | | | 0 | 0.21 |
| EASEMENT ROAD 362 | | | 0 | 0.11 |
| EASEMENT ROAD 363 | | | 0 | 1.05 |
| EASEMENT ROAD 369 | | | 0 | 0.14 |
| EASEMENT ROAD 371 | | | 0 | 0.18 |
| EASEMENT ROAD 378 | | | 0 | 0.13 |
| EASEMENT ROAD 380 | | | 0 | 0.23 |
| EASEMENT ROAD 381 | | | 0 | 0.1 |
| EASEMENT ROAD 391 | | | 0 | 0.16 |
| EASEMENT ROAD 395 | | | 0 | 0.22 |
| EASEMENT ROAD 396 | | | 0 | 0.22 |
| EASEMENT ROAD 404 | | | 0 | 0.5 |
| EASEMENT ROAD 419 | | | 0 | 0.3 |
| EASEMENT ROAD 55 | | | 0 | 0.43 |
| EASEMENT ROAD 7 | | | 0 | 0.04 |
| EASEMENT ROAD 81 | | | 0 | 0.27 |
| EAST FORK ROAD | RCL | Rural Local Collector | 0 | 3.966 |
| EAST FORK ROAD | RCL | Rural Local Collector | 3.966 | 5.1 |
| EAST STANFORD WAY | RORR | Rural Restricted Residential | 0 | 0.13 |
| EAST VIEW PLACE | UR | Urban Residential | 0 | 0.117 |
| EASY STREET | | | 0 | 0.04 |
| EAU CLAIRE CAMP LANE | | | 0 | 0.26 |
| ECHO WAY | RRL | Rural Limited Residential | 0 | 0.222 |
| EDEN DRIVE | RORR | Rural Restricted Residential | 0 | 0.107 |
| EDGERTON LANE | RR | Rural Residential | 0 | 0.328 |
| EDGEWOOD ROAD | RR | Rural Residential | 0 | 0.187 |
| EDWARDS WAY | RORR | Rural Restricted Residential | 0 | 0.12 |
| EGGER LANE | | | 0 | 0.13 |
| EIGHT DOLLAR MOUNTAIN ROAD | RCL | Rural Local Collector | 0 | 1.021 |
| EL CAMINO WAY | RR | Rural Residential | 0 | 0.248 |
| EL CAMINO WAY (EXT) | | | 0 | 0.26 |
| EL CONEJO DRIVE | | | 0 | 0.18 |
| ELAINE DRIVE | RRL | Rural Limited Residential | 0 | 0.074 |
| ELBERTA STREET | | | 0 | 0.16 |
| ELK LANE | RCMI | Rural Minor Collector | 0 | 1.51 |
| ELKHORN DRIVE | | | 0 | 0.32 |
| ELLIOT CREEK ROAD | | | 0 | 0.08 |
| ELLIOTT CREEK ROAD | RR | Rural Residential | 0 | 0.127 |
| ELROD LANE | UR | Urban Residential | 0 | 0.043 |
| ELWOOD LANE | | | 0 | 0.18 |
| EMILY WAY | RORR | Rural Restricted Residential | 0 | 0.19 |
| ENTERPRISE AVENUE | RR | Rural Residential | 0 | 0.293 |
| ERIC LOOP | RR | Rural Residential | 0 | 0.492 |
| ERIC WAY | | | 0 | 0.25 |
| ERIN DRIVE | UR | Urban Residential | 0 | 0.018 |
| ESPEY ROAD | UR | Urban Residential | 0 | 0.24 |
| ESPEY ROAD | RR | Rural Residential | 0.24 | 0.595 |
| ESTATES LANE | | | 0 | 0.12 |

Table A-3: Functional Classification of County Roads

| Road Name | County FC Code | County FC Description | Begin Milepost | End Milepost |
|---|---|---|---|---|
| ESTATES LANE | UCL | Urban Local Collector | 0 | 0.07 |
| ESTHER LANE | UOP | Urban Private ("O") | 0 | 0.06 |
| EUREKA FRUIT FARM ROAD | | | 0 | 0.33 |
| EVON CIRCLE | UR | Urban Residential | 0 | 0.062 |
| EWE CREEK ROAD | RCL | Rural Local Collector | 0 | 1.962 |
| FAHEY WAY | UR | Urban Residential | 0 | 0.032 |
| FAIRFIELD LANE | | | 0 | 0.2 |
| FAIRWAY DRIVE | RORR | Rural Restricted Residential | 0 | 0.09 |
| FALLING LEAF DRIVE | | | 0 | 0.22 |
| FARISS LANE | | | 0 | 0.14 |
| FAVILL LANE | RR | Rural Residential | 0 | 0.129 |
| FAVILL ROAD | RRL | Rural Limited Residential | 0 | 0.17 |
| FAWN DRIVE | RORR | Rural Restricted Residential | 0 | 0.1 |
| FAY LANE | RORR | Rural Restricted Residential | 0 | 0.09 |
| FELICIA LANE | RRL | Rural Limited Residential | 0 | 0.125 |
| FELKNER ROAD | RRL | Rural Limited Residential | 0 | 0.455 |
| FERNWOOD DRIVE | RR | Rural Residential | 0 | 0.881 |
| FERRY ROAD | RR | Rural Residential | 0 | 1.505 |
| FIELDS ROAD | RRL | Rural Limited Residential | 0 | 0.288 |
| FIFTH STREET | | | 0 | 0.1 |
| FINCH ROAD | RCL | Rural Local Collector | 0 | 0.834 |
| FINDLEY ROAD | | | 0 | 0.25 |
| FIR CANYON ROAD | | | 0 | 0.53 |
| FIR DRIVE | | | 0 | 0.39 |
| FIRST STREET | | | 0 | 0.25 |
| FIRVIEW LANE | RR | Rural Residential | 0 | 0.419 |
| FIRWOOD DRIVE | | | 0 | 0.18 |
| FISH HATCHERY PARK ROAD | | | 0 | 0.06 |
| FISH HATCHERY ROAD | RCMA | Rural Major Collector | 0 | 6.544 |
| FLAMING ROAD | RR | Rural Residential | 0 | 0.746 |
| FLORER DRIVE | UCL | Urban Local Collector | 0 | 0.196 |
| FLOWER LANE | | | 0 | 0.1 |
| FLOYD LANE | | | 0 | 0.29 |
| FLUME GULCH ROAD | | | 0 | 0.4 |
| FOOTHILL BOULEVARD | UAIC | Urban Arterial - Minor /City Limits | 0 | 0.144 |
| FOOTHILL BOULEVARD | RCMA | Rural Major Collector | 0.735 | 4.191 |
| FOOTHILL BOULEVARD | UC | Urban Collector (17) | 0.438 | 0.735 |
| FOREST CREEK ROAD | | | 0 | 1.36 |
| FOREST CREEK ROAD | | | 0 | 1.37 |
| FOREST GLEN DRIVE | RR | Rural Residential | 0 | 0.339 |
| FOREST LANE | RRL | Rural Limited Residential | 0 | 0.107 |
| FOURTH AVENUE | | | 0 | 0.18 |
| FOXWOOD DRIVE | | | 0 | 0.09 |
| FRANCES WAY | RORR | Rural Restricted Residential | 0 | 0.09 |
| FRANCIS LANE | | | 0 | 0.24 |
| FRANKHAM ROAD | RR | Rural Residential | 0 | 0.649 |
| FRONT STREET | | | 0 | 0.12 |
| FRONT STREET | RCMI | Rural Minor Collector | 0 | 0.103 |
| FRONTAGE ROAD | RCMI | Rural Minor Collector | 0 | 1.497 |
| FRUITDALE DRIVE | UCC | Urban Collector / City Limits | 0 | 1.05 |
| FRUITDALE DRIVE | RCMA | Rural Major Collector | 2.04 | 2.47 |
| FRUITDALE DRIVE | UC | Urban Collector (17) | 1.05 | 2.04 |
| G STREET | UAMI | Urban Arterial - Minor | 0.095 | 0.245 |
| G STREET | UAIC | Urban Arterial - Minor /City Limits | 0 | 0.095 |
| G.I. LANE | UC | Urban Collector (17) | 0 | 0.06 |
| G.I. LANE | UC | Urban Collector (17) | 0.06 | 0.08 |
| GALAXY WAY | UR | Urban Residential | 0 | 0.304 |
| GALICE ROAD | RCMA | Rural Major Collector | 0 | 15.352 |
| GARDEN TERRACE ROAD | UR | Urban Residential | 0 | 0.097 |
| GARNER ROAD | RR | Rural Residential | 0 | 0.882 |
| GARNET LANE | RORR | Rural Restricted Residential | 0 | 0.25 |
| GARNET LANE | RR | Rural Residential | 0 | 0.316 |
| GARY LANE | RRL | Rural Limited Residential | 0 | 0.176 |
| GEMINI LANE | | | 0 | 0.1 |
| GENE BROWN ROAD | RR | Rural Residential | 0 | 0.874 |
| GENEVIEVE DRIVE | | | 0 | 0.06 |
| GENVERNA GLEN | RR | Rural Residential | 0 | 0.561 |
| GEORGE TWEED BLVD | | | 0 | 0.25 |

Table A-3: Functional Classification of County Roads

| Road Name | County FC Code | County FC Description | Begin Milepost | End Milepost |
|---|---|---|---|---|
| GEORGIA TERRACE | | | 0 | 0.04 |
| GIBSON STREET | | | 0.28 | 0.33 |
| GIBSON STREET | | | 0 | 0.15 |
| GIBSON STREET | RR | Rural Residential | 0 | 0.081 |
| GLADE DRIVE | | | 0 | 0.64 |
| GLADIOLA AVENUE | UCL | Urban Local Collector | 0 | 0.067 |
| GLADIOLA AVENUE | UCLC | Urban Local Collector / City Limits | 0.067 | 0.076 |
| GLADIOLA AVENUE | UCL | Urban Local Collector | 0 | 0.093 |
| GLEN CREST WAY | RORR | Rural Restricted Residential | 0 | 0.26 |
| GLEN DRIVE | RR | Rural Residential | 0 | 0.207 |
| GLENBE DRIVE | | | 0 | 0.38 |
| GLENDALE ROAD | | | 0 | 1.33 |
| GLENDON ROAD | | | 0 | 0.61 |
| GLENDON ROAD | RR | Rural Residential | 0 | 0.086 |
| GLENLYN DRIVE | | | 0 | 1.25 |
| GLENOAK LANE | RRL | Rural Limited Residential | 0 | 0.182 |
| GLENWOOD STREET | RR | Rural Residential | 0 | 0.425 |
| GLENWOOD STREET (EXT.) | | | 0 | 0.3 |
| GLORY LANE | | | 0 | 0.6 |
| GOLD CANYON DRIVE | | | 0 | 0.46 |
| GOLD CANYON DRIVE, NORTH | | | 0 | 0.65 |
| GOLD RIVER LANE | | | 0 | 0.04 |
| GOLDEN ASPEN DRIVE | UR | Urban Residential | 0 | 0.12 |
| GOLDEN CREEK COURT | RORR | Rural Restricted Residential | 0 | 0.13 |
| GORDON WAY | RR | Rural Residential | 0 | 0.33 |
| GORDON WAY, SOUTH | RR | Rural Residential | 0 | 0.287 |
| GRANDVIEW AVENUE | UC | Urban Collector (17) | 0 | 0.255 |
| GRANDVIEW AVENUE | UCC | Urban Collector / City Limits | 0.568 | 0.686 |
| GRANDVIEW AVENUE | UC | Urban Collector (17) | 0.686 | 0.966 |
| GRANDVIEW AVENUE | UCC | Urban Collector / City Limits | 0.255 | 0.497 |
| GRANDVIEW AVENUE | UC | Urban Collector (17) | 0.497 | 0.568 |
| GRANDVIEW AVENUE | UCC | Urban Collector / City Limits | 0.966 | 1.004 |
| GRANGE ROAD | RR | Rural Residential | 0 | 0.138 |
| GRANITE HILL ROAD | RCMI | Rural Minor Collector | 0 | 3.9 |
| GRANITE HILL ROAD | RCMI | Rural Minor Collector | 3.9 | 4.576 |
| GRANNY LANE | | | 0 | 0.25 |
| GRANTS PASS ROAD | | | 0 | 0.208 |
| GRANTS PASS ROAD | | | 0 | 0.37 |
| GRANTS PASS ROAD | RR | Rural Residential | 0 | 0.075 |
| GRAY AVENUE | | | 0 | 0.31 |
| GRAYS CREEK ROAD | RR | Rural Residential | 0 | 1.388 |
| GREEN ACRES DRIVE | RRL | Rural Limited Residential | 0 | 0.199 |
| GREEN LEAF WAY | | | 0 | 0.26 |
| GREEN MEADOW ROAD | | | 0 | 0.19 |
| GREEN TREE LOOP | | | 0 | 0.93 |
| GREENASH DRIVE | UOP | Urban Private ("O") | 0 | 0.07 |
| GREENBACK MINE ROAD | | | 0 | 2.24 |
| GREENFIELD ROAD | UCC | Urban Collector / City Limits | 0 | 0.28 |
| GREENFIELD ROAD | UC | Urban Collector (17) | 0.28 | 0.525 |
| GREENS CREEK ROAD | RR | Rural Residential | 0 | 1.088 |
| GREENVIEW DRIVE | | | 0 | 1.44 |
| GREGG CIRCLE | UR | Urban Residential | 0 | 0.033 |
| GRIFFIN ROAD | RR | Rural Residential | 0 | 0.573 |
| GROUSE CREEK ROAD | RCMI | Rural Minor Collector | 0 | 0.778 |
| GUNNELL ROAD | RR | Rural Residential | 0 | 1.966 |
| GUTH ROAD | RRL | Rural Limited Residential | 0 | 0.18 |
| GWEN DOVER CIRCLE | | | 0 | 0.03 |
| HACIENDA WAY | RORR | Rural Restricted Residential | 0 | 0.21 |
| HAINES LANE | RR | Rural Residential | 0 | 0.182 |
| HALES WAY | | | 0 | 0.06 |
| HALF MOON CIRCLE | UR | Urban Residential | 0 | 0.045 |
| HALL MEMORIAL DRIVE | | | 0 | 0.33 |
| HAMILTON AVENUE | | | 0 | 0.26 |
| HAMILTON LANE | UR | Urban Residential | 0.062 | 0.283 |
| HAMILTON LANE | UCL | Urban Local Collector | 0.56 | 1.18 |
| HAMILTON LANE | UCL | Urban Local Collector | 0 | 0.062 |
| HAMILTON LANE | UR | Urban Residential | 0.283 | 0.56 |
| HAMILTON LANE | RCL | Rural Local Collector | 1.18 | 1.726 |

Table A-3: Functional Classification of County Roads

| Road Name | County FC Code | County FC Description | Begin Milepost | End Milepost |
|---|---|---|---|---|
| HAMPDEN DRIVE | RR | Rural Residential | 0 | 0.172 |
| HANBY LANE | | | 0 | 0.24 |
| HANNUM STREET | | | 0 | 0.08 |
| HANSEN DRIVE | RR | Rural Residential | 0 | 0.231 |
| HAPPY CAMP ROAD | RCL | Rural Local Collector | 0 | 10.61 |
| HAPPY CAMP ROAD | RCL | Rural Local Collector | 10.61 | 11.577 |
| HARBECK ROAD | UCC | Urban Collector / City Limits | 0 | 0.365 |
| HARBECK ROAD | UCL | Urban Local Collector | 0.365 | 0.428 |
| HARBECK ROAD | RR | Rural Residential | 0.428 | 1.08 |
| HARBECK ROAD EXT. | | | 0 | 0.3 |
| HARBECK ROAD, WEST | UAMI | Urban Arterial - Minor | 0.49 | 1.029 |
| HARBECK ROAD, WEST | UCL | Urban Local Collector | 0 | 0.49 |
| HARLEY LANE | RRL | Rural Limited Residential | 0 | 0.091 |
| HARLOW WAY | RRL | Rural Limited Residential | 0 | 0.148 |
| HARPER LOOP | RR | Rural Residential | 0.15 | 0.505 |
| HARPER LOOP | UR | Urban Residential | 0 | 0.15 |
| HARRIS ROAD | | | 0 | 0.6 |
| HARRIS ROAD | RR | Rural Residential | 0 | 0.072 |
| HARTLEY LANE | RR | Rural Residential | 0 | 0.248 |
| HARTMAN LANE | RORR | Rural Restricted Residential | 0 | 0.15 |
| HARTSFIELD LANE | RR | Rural Residential | 0 | 0.407 |
| HASIS DRIVE | RR | Rural Residential | 0 | 0.413 |
| HATHAWAY DRIVE | | | 0 | 0.1 |
| HATHAWAY DRIVE | RR | Rural Residential | 0 | 0.264 |
| HAVILAND DRIVE | UCL | Urban Local Collector | 0 | 0.335 |
| HAWKSDALE DRIVE, EAST | | | 0 | 0.47 |
| HAWKSDALE DRIVE, WEST | | | 0 | 0.3 |
| HAWTHORNE AVENUE | UCC | Urban Collector / City Limits | 0 | 0.428 |
| HAYES HILL | RR | Rural Residential | 0 | 2.098 |
| HAYLEES WAY | RRL | Rural Limited Residential | 0 | 0.418 |
| HAYS CUTOFF ROAD | RR | Rural Residential | 0 | 1.017 |
| HAZEL STREET | | | 0 | 0.15 |
| HAZELNUT LANE | | | 0 | 0.09 |
| HEBERLEIN WAY | | | 0 | 0.074 |
| HELGESON LANE | RR | Rural Residential | 0 | 0.384 |
| HELGESON LANE (EXT) | | | 0 | 0.25 |
| HELMS ROAD | RCMA | Rural Major Collector | 0 | 0.5 |
| HELMS ROAD | RCMA | Rural Major Collector | 0.5 | 0.978 |
| HELMS ROAD (EXT.) | | | 0 | 0.42 |
| HESSAR STREET | RR | Rural Residential | 0 | 0.25 |
| HICKENBOTTOM ROAD | | | 0 | 0.75 |
| HIDDEN ACRES DRIVE | RR | Rural Residential | 0 | 0.47 |
| HIDDEN CREEK ROAD | | | 0 | 0.7 |
| HIDDEN PINE DRIVE | RORR | Rural Restricted Residential | 0 | 0.26 |
| HIDDEN VALLEY ROAD | RR | Rural Residential | 0 | 0.967 |
| HIEGLEN LOOP ROAD | UR | Urban Residential | 0 | 0.204 |
| HIGH RIDGE TERRACE | RORR | Rural Restricted Residential | 0 | 0.2 |
| HIGHLAND AVENUE | UAIC | Urban Arterial - Minor /City Limits | 0 | 0.781 |
| HIGHLAND AVENUE | UAMI | Urban Arterial - Minor | 0.781 | 1.1 |
| HIGHLAND AVENUE | RCMA | Rural Major Collector | 1.1 | 1.474 |
| HIGHLAND AVENUE | RCMA | Rural Major Collector | 1.474 | 5.234 |
| HIGHLAND RANCH ROAD | | | 0 | 0.35 |
| HIGHWOOD LANE | RORR | Rural Restricted Residential | 0 | 0.15 |
| HILLCREST DRIVE | UCC | Urban Collector / City Limits | 0 | 0.239 |
| HILLCREST DRIVE, NORTHEAST | UC | Urban Collector (17) | 0 | 0.267 |
| HILLCREST DRIVE, NORTHEAST | UCL | Urban Local Collector | 0.267 | 0.51 |
| HILLCREST DRIVE, NORTHEAST | UR | Urban Residential | 0.51 | 0.58 |
| HILLVIEW DRIVE | RR | Rural Residential | 0 | 0.382 |
| HIMRICH DRIVE | RRL | Rural Limited Residential | 0 | 0.105 |
| HITCHING POST ROAD | RR | Rural Residential | 0 | 0.595 |
| HIXSON DRIVE | RR | Rural Residential | 0 | 0.812 |
| HOFFMAN WAY | | | 0 | 0.14 |
| HOGUE DRIVE | RR | Rural Residential | 0 | 1.233 |
| HOLBROOK WAY | RR | Rural Residential | 0 | 0.137 |
| HOLIDAY ROAD | | | 0 | 0.26 |
| HOLLAND CORNER | | | 0 | 0.28 |
| HOLLAND LOOP ROAD | RCMI | Rural Minor Collector | 0 | 7.791 |
| HOLMESTEAD ROAD | | | 0 | 0.5 |

Table A-3: Functional Classification of County Roads

| Road Name | County FC Code | County FC Description | Begin Milepost | End Milepost |
|---|---|---|---|---|
| HOLTON CREEK ROAD | RR | Rural Residential | 0 | 0.47 |
| HOLTON CREEK ROAD (EXT) | | | 0 | 1.15 |
| HOLTON STREET | | | 0 | 0.06 |
| HOMEWOOD ROAD | | | 0 | 0.33 |
| HOMEWOOD ROAD | RR | Rural Residential | 0 | 0.336 |
| HONEYCUTT DRIVE | RR | Rural Residential | 0 | 0.385 |
| HONEYLOCUST DRIVE | UOP | Urban Private ("O") | 0 | 0.08 |
| HONEYLYNN LANE | RR | Rural Residential | 0 | 0.441 |
| HOPE LANE | | | 0 | 0.11 |
| HORIZON HILLS ROAD | RR | Rural Residential | 0 | 0.622 |
| HORNET LANE | | | 0 | 0.5 |
| HORSESHOE DRIVE | RR | Rural Residential | 0 | 1.001 |
| HOWARD PLACE | RORR | Rural Restricted Residential | 0 | 0.08 |
| HUBBARD LANE | UR | Urban Residential | 0.44 | 0.57 |
| HUBBARD LANE | RR | Rural Residential | 0.57 | 0.855 |
| HUBBARD LANE | UC | Urban Collector (17) | 0 | 0.44 |
| HUBBARD LANE | RR | Rural Residential | 0 | 0.095 |
| HUGO ROAD | RCMI | Rural Minor Collector | 0 | 6.795 |
| HULBURT ROAD | | | 0 | 0.33 |
| HULBURT ROAD | RORR | Rural Restricted Residential | 0 | 0.31 |
| HULL DRIVE | RORR | Rural Restricted Residential | 0 | 0.13 |
| HUMBERD LANE | | | 0 | 0.12 |
| HUMBERD LANE | RR | Rural Residential | 0 | 0.273 |
| HUMMINGBIRD ROAD | RR | Rural Residential | 0 | 0.758 |
| HUMPHREY LANE | | | 0 | 0.22 |
| HUNT LANE | RR | Rural Residential | 0 | 0.688 |
| HUSSEY LANE | | | 0 | 0.19 |
| HYDE PARK ROAD | | | 0 | 0.86 |
| I.V. AIRPORT ACCESS ROAD | | | 0 | 0.37 |
| ICHABOD LANE | | | 0 | 0.4 |
| IDLEWILD DRIVE | RR | Rural Residential | 0 | 0.994 |
| ILLINOIS RIVER ROAD | RCL | Rural Local Collector | 0 | 2.559 |
| INCLINE DRIVE | RRL | Rural Limited Residential | 0 | 0.067 |
| INDIAN CREEK ROAD | | | 0 | 1.06 |
| INGALLS LANE | RR | Rural Residential | 0 | 1.209 |
| INGALLS LANE (EXT) | | | 0 | 0.26 |
| INMAN LANE | | | 0 | 0.11 |
| INTERVALE ROAD (EXT), EAST | | | 0 | 0.25 |
| INTERVALE ROAD, EAST | RR | Rural Residential | 0 | 0.48 |
| INTERVALE ROAD, WEST | | | 0 | 0.25 |
| IRENA ROAD | | | 0 | 0.39 |
| IRIS LANE | RR | Rural Residential | 0 | 0.19 |
| IRON WAY | | | 0 | 0.17 |
| IVY DRIVE | RR | Rural Residential | 0 | 0.243 |
| JACKADEL LANE | RR | Rural Residential | 0 | 0.498 |
| JACKPINE DRIVE | | | 0 | 0.25 |
| JAIME LANE | RCMI | Rural Minor Collector | 0 | 0.206 |
| JANICE WAY | RRL | Rural Limited Residential | 0 | 0.189 |
| JANICE WAY (EXT) | RORR | Rural Restricted Residential | 0 | 0.06 |
| JASON WAY | URLM | Urban Limited Minor Residential | 0 | 0.052 |
| JASPER LANE | | | 0 | 0.11 |
| JAYNES DRIVE | RCMA | Rural Major Collector | 0 | 0.9 |
| JAYNES DRIVE | RCMA | Rural Major Collector | 0.9 | 2.468 |
| JEANNIE WAY | | | 0 | 0.27 |
| JENKINS AVENUE | RR | Rural Residential | 0 | 0.666 |
| JEROME PRAIRIE ROAD | RR | Rural Residential | 0 | 3.7 |
| JERRY DRIVE | | | 0 | 0.25 |
| JESS WAY | | | 0 | 0.65 |
| JESSINGHAUS ROAD | RORR | Rural Restricted Residential | 0 | 0.41 |
| JEWITT CREEK DRIVE | | | 0 | 0.13 |
| JEWITT CREEK DRIVE | | | 0 | 0.38 |
| JILLANA TERRACE | RORR | Rural Restricted Residential | 0 | 0.15 |
| JO CREEK PLACE | RRL | Rural Limited Residential | 0 | 0.091 |
| JOHN STREET | | | 0 | 0.08 |
| JOHNMARK CIRCLE | UR | Urban Residential | 0 | 0.06 |
| JOHNSON DRIVE | RR | Rural Residential | 0 | 0.331 |
| JONATHAN STREET | | | 0 | 0.55 |
| JONES CREEK LOOP, EAST | RRL | Rural Limited Residential | 0 | 0.094 |

Table A-3: Functional Classification of County Roads

| Road Name | County FC Code | County FC Description | Begin Milepost | End Milepost |
|---|---|---|---|---|
| JONES CREEK ROAD, EAST | | | 0 | 0.5 |
| JONES CREEK ROAD, EAST | RCL | Rural Local Collector | 0 | 1.702 |
| JONES CREEK ROAD, WEST | RCL | Rural Local Collector | 0 | 2.468 |
| JOSEPHINE STREET | | | 0 | 0.06 |
| JOSEPHINE STREET | | | 0 | 0.11 |
| JOSEPHINE STREET | | | 0 | 0.06 |
| JOSEPHINE STREET | RRL | Rural Limited Residential | 0 | 0.128 |
| JOSHUA STREET | RRL | Rural Limited Residential | 0 | 0.107 |
| JUMP OFF JOE CREEK ROAD | RCMI | Rural Minor Collector | 0 | 3.82 |
| JUMP OFF JOE CREEK ROAD | RCMI | Rural Minor Collector | 3.82 | 5.298 |
| JUNE DRIVE | | | 0 | 0.25 |
| KAGGERUND DRIVE | | | 0 | 0.42 |
| KANEETA LANE | RORR | Rural Restricted Residential | 0 | 0.2 |
| KAREN DRIVE | RRL | Rural Limited Residential | 0 | 0.086 |
| KARRAL DRIVE | RRL | Rural Limited Residential | 0 | 0.111 |
| KEEN ROAD | RR | Rural Residential | 0 | 0.734 |
| KEEN ROAD (PARK ENTRANCE) | | | 0 | 0.09 |
| KEETA WAY | RRL | Rural Limited Residential | 0 | 0.179 |
| KELDAN LANE | UR | Urban Residential | 0 | 0.071 |
| KELLENBECK AVENUE | UC | Urban Collector (17) | 0 | 0.324 |
| KEN CANYON ROAD | RRL | Rural Limited Residential | 0 | 0.061 |
| KEN ROSE LANE | RR | Rural Residential | 0 | 0.332 |
| KENDALL ROAD | RR | Rural Residential | 0 | 1.043 |
| KENDALLBROOK WAY | RRL | Rural Limited Residential | 0 | 0.106 |
| KENWOOD STREET | | | 0 | 0.39 |
| KENYON DRIVE | | | 0 | 0.25 |
| KERBY MAINLINE ROAD | RR | Rural Residential | 0 | 1.736 |
| KERBY STREET | RR | Rural Residential | 0 | 0.078 |
| KEVIN DRIVE | RORR | Rural Restricted Residential | 0 | 0.14 |
| KILBORN DRIVE | RR | Rural Residential | 0 | 0.24 |
| KIMBERLY WAY | RR | Rural Residential | 0 | 0.272 |
| KINCAID ROAD | RCL | Rural Local Collector | 0 | 2.57 |
| KING MOUNTAIN TRAIL | | | 0 | 0.6 |
| KINGSBURY DRIVE | | | 0 | 0.05 |
| KINGSGATE WAY | RR | Rural Residential | 0 | 0.162 |
| KINGSLEY DRIVE | | | 0 | 0.18 |
| KINNIKINNICK DRIVE | | | 0 | 0.5 |
| KIRA LANE | RORR | Rural Restricted Residential | 0 | 0.16 |
| KIRKHAM ROAD | RR | Rural Residential | 0 | 0.807 |
| KNIGHTS CROSSING | RORR | Rural Restricted Residential | 0 | 0.15 |
| KOKANEE LANE | UR | Urban Residential | 0 | 0.489 |
| KOLKANA WAY | RORR | Rural Restricted Residential | 0 | 0.11 |
| KRAUSS LANE | RR | Rural Residential | 0 | 0.658 |
| KRUGER LANE | RORR | Rural Restricted Residential | 0 | 0.12 |
| KUBLI ROAD | RR | Rural Residential | 0 | 1.127 |
| KURTZ LANE | UR | Urban Residential | 0 | 0.07 |
| LADEANA WAY | RR | Rural Residential | 0 | 0.275 |
| LAINE COURT | RRL | Rural Limited Residential | 0 | 0.224 |
| LAKE SHORE DRIVE | RCMI | Rural Minor Collector | 0 | 3.83 |
| LAKE SHORE DRIVE | RCMI | Rural Minor Collector | 3.83 | 6.5 |
| LAKEVIEW DRIVE | | | 0 | 0.03 |
| LAMONT WAY | RRL | Rural Limited Residential | 0 | 0.322 |
| LANCE DRIVE | | | 0 | 0.3 |
| LANCELOT LANE | | | 0 | 0.05 |
| LANDAU LANE | UR | Urban Residential | 0 | 0.138 |
| LAPPLAND DRIVE | RR | Rural Residential | 0 | 0.308 |
| LARIAT DRIVE | RR | Rural Residential | 0 | 0.612 |
| LARK ELLEN WAY | UR | Urban Residential | 0 | 0.137 |
| LARKIN ROAD | RRL | Rural Limited Residential | 0 | 0.146 |
| LARKIN ROAD (EXT) | | | 0 | 0.17 |
| LARKSPUR COURT | | | 0 | 0.03 |
| LATHROP LANE | RR | Rural Residential | 0 | 0.146 |
| LATHROP LANE | RR | Rural Residential | 0 | 0.251 |
| LATHROP LANE (EXT) | | | 0 | 0.25 |
| LATHROP ROAD | RR | Rural Residential | 0 | 0.399 |
| LATIGO RANCH ROAD | RR | Rural Residential | 0 | 0.499 |
| LAUBAUCH LANE | RRL | Rural Limited Residential | 0 | 0.063 |
| LAUER WAY | RORR | Rural Restricted Residential | 0 | 0.15 |

Table A-3: Functional Classification of County Roads

| Road Name | County FC Code | County FC Description | Begin Milepost | End Milepost |
|---|---|---|---|---|
| LAUREL AVENUE | RR | Rural Residential | 0 | 0.876 |
| LAUREL ROAD | UCLC | Urban Local Collector / City Limits | 0 | 0.53 |
| LAUREL ROAD | UCL | Urban Local Collector | 0.75 | 1.52 |
| LAUREL ROAD | RCL | Rural Local Collector | 1.52 | 2.23 |
| LAUREL ROAD | RCL | Rural Local Collector | 0.53 | 0.75 |
| LAURELDALE LANE | RR | Rural Residential | 0 | 0.238 |
| LAURIE LANE | | | 0 | 0.12 |
| LAWLESS LANE | UR | Urban Residential | 0 | 0.22 |
| LAWRENCE LANE | RORR | Rural Restricted Residential | 0 | 0.06 |
| LEANING PINE LANE | | | 0 | 0.24 |
| LEAVITT LANE | RR | Rural Residential | 0 | 0.404 |
| LEE ROZE LANE | URMI | Urban Minor Residential | 0 | 0.114 |
| LELAND ROAD | RCMI | Rural Minor Collector | 0 | 4.147 |
| LENELLA LANE | RR | Rural Residential | 0 | 0.242 |
| LEONARD ROAD | UC | Urban Collector (17) | 1.2 | 1.5 |
| LEONARD ROAD | RCMI | Rural Minor Collector | 1.5 | 3.714 |
| LEONARD ROAD | UCL | Urban Local Collector | 0 | 0.719 |
| LEONARD ROAD | UC | Urban Collector (17) | 0.719 | 1.2 |
| LESISZ LANE | | | 0 | 0.11 |
| LEWIS COURT | | | 0 | 0.05 |
| LEXINGTON AVENUE | | | 0 | 0.23 |
| LILAC LANE | | | 0 | 0.11 |
| LIMPY CREEK ROAD | RR | Rural Residential | 0 | 1.771 |
| LINCOLN ROAD | UAIC | Urban Arterial - Minor /City Limits | 0.123 | 0.246 |
| LINCOLN ROAD | UAMI | Urban Arterial - Minor | 0 | 0.123 |
| LIND ROAD | | | 0 | 0.25 |
| LINDA LEE LANE | RR | Rural Residential | 0 | 0.228 |
| LINDA VISTA ROAD | RR | Rural Residential | 0 | 0.353 |
| LINDY LANE | RORR | Rural Restricted Residential | 0 | 0.19 |
| LINKHART DRIVE | | | 0 | 0.23 |
| LISA LANE | | | 0 | 0.03 |
| LITTLE CHEYENNE TRAIL | RORR | Rural Restricted Residential | 0 | 0.18 |
| LITTLE LANE | RRL | Rural Limited Residential | 0 | 0.065 |
| LIVINGSTON WAY | RR | Rural Residential | 0 | 0.322 |
| LLOYD DRIVE | RCMI | Rural Minor Collector | 0 | 0.526 |
| LOFLAND LANE | | | 0 | 0.54 |
| LOGAN CUT DRIVE | RR | Rural Residential | 0 | 0.62 |
| LOIS LANE | UR | Urban Residential | 0 | 0.096 |
| LONE MOUNTAIN ROAD | RCL | Rural Local Collector | 0 | 2.216 |
| LONG ACRES ROAD | | | 0 | 0.51 |
| LONNON ROAD | RR | Rural Residential | 0.8 | 0.992 |
| LONNON ROAD | RCMI | Rural Minor Collector | 0 | 0.8 |
| LOWE AVENUE | | | 0 | 0.16 |
| LOWER GRAVE CREEK ROAD | RCMI | Rural Minor Collector | 0 | 11.482 |
| LOWER WOLF CREEK ROAD | RCMI | Rural Minor Collector | 0 | 5.638 |
| LOY-BIRCH DRIVE | RORR | Rural Restricted Residential | 0 | 0.08 |
| LYLE DRIVE | RORR | Rural Restricted Residential | 0 | 0.1 |
| M STREET | UAIC | Urban Arterial - Minor /City Limits | 0 | 0.156 |
| MACNEW LANE | RRL | Rural Limited Residential | 0 | 0.138 |
| MADRONA DRIVE | | | 0 | 0.42 |
| MADRONA STREET | | | 0 | 0.12 |
| MADRONE RIDGE DRIVE | RORR | Rural Restricted Residential | 0 | 0.24 |
| MAGNOLIA LANE | UOP | Urban Private ("O") | 0 | 0.07 |
| MAHIN ROAD | | | 0 | 0.12 |
| MAIN STREET | | | 0 | 0.25 |
| MAIN STREET | RR | Rural Residential | 0 | 0.325 |
| MAJESTIC DRIVE | RORR | Rural Restricted Residential | 0 | 0.27 |
| MAKENZIE ROAD | | | 0 | 0.42 |
| MALLORY HEIGHTS ROAD | | | 0 | 0.29 |
| MALONE WAY | RORR | Rural Restricted Residential | 0 | 0.06 |
| MANZANITA LANE | | | 0 | 0.14 |
| MAPLE STREET | | | 0 | 0.08 |
| MARBLE DRIVE, NORTH | RRL | Rural Limited Residential | 0 | 0.094 |
| MARBLE DRIVE, SOUTH | | | 0 | 0.12 |
| MARBLE DRIVE, SOUTH | RRL | Rural Limited Residential | 0 | 0.06 |
| MARBLE MOUNTAIN ROAD | | | 0 | 0.5 |
| MARCY LOOP | RCL | Rural Local Collector | 0 | 2.243 |
| MARDAN DRIVE | | | 0 | 0.13 |

Table A-3: Functional Classification of County Roads

| Road Name | County FC Code | County FC Description | Begin Milepost | End Milepost |
|---|---|---|---|---|
| MARLSAN ROAD | RR | Rural Residential | 0 | 0.209 |
| MARTIN ROAD | RR | Rural Residential | 0 | 0.43 |
| MARY HARRIS WAY | | | 0 | 0.25 |
| MARY LYNN LANE | UOP | Urban Private ("O") | 0 | 0.04 |
| MASTERS DRIVE | | | 0 | 0.48 |
| MAUPIN LANE | | | 0 | 0.25 |
| MAUREEN DRIVE | RR | Rural Residential | 0 | 0.23 |
| MAURER DRIVE | | | 0 | 1.65 |
| MAYFAIR LANE | UR | Urban Residential | 0 | 0.183 |
| MAYFIELD DRIVE | UR | Urban Residential | 0 | 0.166 |
| MC CARTER LANE | UR | Urban Residential | 0 | 0.154 |
| MC INTOSH LANE | | | 0 | 0.09 |
| MC MULLEN CREEK ROAD | RR | Rural Residential | 0 | 0.892 |
| MC MULLIN CREEK ROAD | | | 0 | 0.84 |
| MC VAY LANE | | | 0 | 0.2 |
| MEADOW BROOK LANE | | | 0 | 0.06 |
| MEADOW LANE | | | 0 | 0.08 |
| MEADOW LARK DRIVE | RR | Rural Residential | 0 | 0.257 |
| MEADOW VIEW DRIVE | | | 0 | 0.45 |
| MEADOWS ROAD | | | 0 | 0.56 |
| MEDART LANE | UR | Urban Residential | 0 | 0.452 |
| MELINDA WAY | | | 0 | 0.06 |
| MELISSA LANE | | | 0 | 0.35 |
| MENDI WAY | UR | Urban Residential | 0 | 0.032 |
| MERLIN AVENUE | | | 0 | 0.08 |
| MERLIN AVENUE | RR | Rural Residential | 0 | 0.215 |
| MERLIN LANDFILL ROAD | RR | Rural Residential | 0 | 0.498 |
| MERLIN ROAD | RCMA | Rural Major Collector | 0 | 3.345 |
| MERLIN SANITARIUM ROAD | RR | Rural Residential | 0 | 0.616 |
| MESA VERDE DRIVE | RR | Rural Residential | 0 | 0.736 |
| MESMAN DRIVE | UR | Urban Residential | 0 | 0.357 |
| MESSINGER ROAD | RR | Rural Residential | 0 | 0.927 |
| MICHELS STREET (STREET PLUG) | | | 0 | 0 |
| MIDWAY AVENUE | RR | Rural Residential | 0 | 3.004 |
| MILLER CREEK ROAD | | | 0 | 0.9 |
| MIMOSA WAY | | | 0 | 0.15 |
| MINA LANE | RR | Rural Residential | 0 | 0.519 |
| MINERS CREEK ROAD | | | 0 | 0.28 |
| MINI LANE | UR | Urban Residential | 0 | 0.035 |
| MINNOW LANE | RR | Rural Residential | 0 | 0.645 |
| MINT LANE | RORR | Rural Restricted Residential | 0 | 0.12 |
| MISSOURI FLAT ROAD | RR | Rural Residential | 0 | 0.933 |
| MISSOURI FLAT ROAD (EXT) | | | 0 | 0.19 |
| MIST CIRCLE | UOP | Urban Private ("O") | 0 | 0.02 |
| MOBIL WAY | RR | Rural Residential | 0 | 0.1 |
| MOLLY LANE | RORR | Rural Restricted Residential | 0 | 0.04 |
| MONA WAY | | | 0 | 0.5 |
| MONICA DRIVE | RRL | Rural Limited Residential | 0 | 0.268 |
| MONROE WAY | UR | Urban Residential | 0 | 0.162 |
| MONTEFLORA TERRACE | | | 0 | 0.25 |
| MONTERICO ROAD | RR | Rural Residential | 0 | 0.579 |
| MONTGOMERY LANE | UR | Urban Residential | 0 | 0.08 |
| MONUMENT DRIVE | RCMA | Rural Major Collector | 0 | 5.604 |
| MOON GLO DRIVE | UR | Urban Residential | 0 | 0.296 |
| MOON MOUNTAIN ROAD | | | 0 | 0.02 |
| MOONBEAM LANE | | | 0 | 0.2 |
| MOONBEAM LANE | RR | Rural Residential | 0 | 0.167 |
| MOONEY MOUNTAIN ROAD | | | 0 | 4.1 |
| MOORE DRIVE | | | 0 | 0.14 |
| MOREWOOD LANE | RR | Rural Residential | 0 | 0.228 |
| MOREWOOD LANE (EXT) | RORR | Rural Restricted Residential | 0 | 0.05 |
| MORGAN LANE | UCC | Urban Collector / City Limits | 0 | 0.442 |
| MORRIS LANE | UR | Urban Residential | 0 | 0.244 |
| MOSS LANE | RRL | Rural Limited Residential | 0 | 0.15 |
| MOSS LANE (EXT) | | | 0 | 0.15 |
| MOUNT BALDY ROAD | UR | Urban Residential | 0 | 0.199 |
| MOUNTAIN FIR ROAD | RI | Rural Industrial | 0 | 0.106 |
| MOUNTAIN GREENS LANE | | | 0 | 1.15 |

Table A-3: Functional Classification of County Roads

| Road Name | County FC Code | County FC Description | Begin Milepost | End Milepost |
|---|---|---|---|---|
| MOUNTAIN HOME DRIVE | RORR | Rural Restricted Residential | 0 | 0.26 |
| MOUNTAIN PARADISE DRIVE | RR | Rural Residential | 0 | 0.717 |
| MOUNTAIN PINE DRIVE | RR | Rural Residential | 0 | 0.122 |
| MOUNTAIN SPRINGS DRIVE | RRL | Rural Limited Residential | 0 | 0.3 |
| MOUNTAIN VIEW PLACE | RR | Rural Residential | 0 | 0.167 |
| MULBERRY COURT | UOP | Urban Private ("O") | 0 | 0.03 |
| MUNGER CREEK ROAD | | | 0 | 0.5 |
| MURPHY CREEK ROAD | RCL | Rural Local Collector | 0 | 3.482 |
| MURPHY LANE | RR | Rural Residential | 0 | 0.345 |
| MYRNA LANE | | | 0 | 0.07 |
| MYRTLEWOOD DRIVE | | | 0 | 0.25 |
| MYSTIC DRIVE | | | 0 | 0.13 |
| N STREET, NORTHEAST | UR | Urban Residential | 0 | 0.204 |
| N STREET, NORTHEAST | UR | Urban Residential | 0.204 | 0.358 |
| N STREET, SOUTHEAST | UAMI | Urban Arterial - Minor | 0 | 0.451 |
| NANCY PLACE | RORR | Rural Restricted Residential | 0 | 0.12 |
| NAPLES DRIVE | UOP | Urban Private ("O") | 0 | 0.055 |
| NATURESCAPE ROAD | RORR | Rural Restricted Residential | 0 | 0.37 |
| NAUE WAY | RR | Rural Residential | 0 | 1.072 |
| NEAMAR DRIVE | UR | Urban Residential | 0 | 0.174 |
| NEBRASKA AVENUE | NCR | Proposed, Private, Non County (00) | 0 | 0.252 |
| NEBRASKA AVENUE | UCL | Urban Local Collector | 0 | 0.131 |
| NEEDLEWOOD DRIVE | RR | Rural Residential | 0 | 0.295 |
| NEILA COURT | UOP | Urban Private ("O") | 0 | 0.02 |
| NEILA LANE | UR | Urban Residential | 0 | 0.121 |
| NEILL ROAD | RR | Rural Residential | 0 | 0.286 |
| NELSON WAY | RR | Rural Residential | 0 | 0.511 |
| NEW HOPE ROAD | UAMI | Urban Arterial - Minor | 0 | 0.29 |
| NEW HOPE ROAD | RCMA | Rural Major Collector | 0.29 | 6.362 |
| NEWBY ROAD | | | 0 | 0.06 |
| NEWT GULCH ROAD | | | 0 | 0.8 |
| NICK WAY | UR | Urban Residential | 0 | 0.033 |
| NINTH STREET, NORTHEAST | UR | Urban Residential | 0 | 0.217 |
| NOLAN ROAD | | | 0 | 0.27 |
| NORMAN ROAD | RR | Rural Residential | 0 | 0.574 |
| NORTH ADELINE WAY | RRL | Rural Limited Residential | 0 | 0.075 |
| NORTH APPLEGATE ROAD | RCMA | Rural Major Collector | 0 | 6.688 |
| NORTH LAPPLAND DRIVE | RORR | Rural Restricted Residential | 0 | 0.22 |
| NORTH PINNON ROAD | RR | Rural Residential | 0 | 0.965 |
| NORTH STAR DRIVE | | | 0 | 0.09 |
| NORTH VALLEY DRIVE | RI | Rural Industrial | 0 | 0.296 |
| NORTHWOODS DRIVE | RR | Rural Residential | 0 | 0.247 |
| NORTON ROAD | | | 0 | 0.13 |
| NORWOOD LANE | RRL | Rural Limited Residential | 0 | 0.158 |
| NOTTINGHAM WAY | RRL | Rural Limited Residential | 0 | 0.058 |
| NURSERY LANE | | | 0 | 0.25 |
| O BRIEN ROAD | RR | Rural Residential | 0 | 0.872 |
| O BRIEN STREET | | | 0 | 0.2 |
| OAK DRIVE | | | 0 | 0.31 |
| OAK RANCH ROAD | RR | Rural Residential | 0 | 0.258 |
| OAK STREET | | | 0 | 0.2 |
| OAK STREET | | | 0 | 0.09 |
| OAKHILL LANE | | | 0 | 0.05 |
| OAKMONT DRIVE | RR | Rural Residential | 0 | 0.374 |
| OAKRIDGE DRIVE | | | 0 | 0.1 |
| OCTOBER LANE | RRL | Rural Limited Residential | 0 | 0.236 |
| OJAI AVENUE | RR | Rural Residential | 0 | 0.26 |
| OLD HIGHWAY 199 | RR | Rural Residential | 0 | 0.363 |
| OLD HWY 99 | RCMI | Rural Minor Collector | 0 | 0.669 |
| OLD OAK CIRCLE | | | 0 | 0.05 |
| OLD ONION MOUNTAIN ROAD | | | 0 | 0.38 |
| OLD ORIGINAL STAGE ROAD | | | 0 | 0.7 |
| OLD PIONEER TRAIL | | | 0 | 0.55 |
| OLD SOUTH SIDE ROAD | | | 0 | 0.31 |
| OLD STAGE ROAD | RR | Rural Residential | 0 | 0.631 |
| OLD STAGE ROAD | UR | Urban Residential | 0.6 | 1.03 |
| OLD STAGE ROAD | URC | Urban Residential / City limits | 1.03 | 1.11 |
| OLD STAGE ROAD | URC | Urban Residential / City limits | 0 | 0.6 |

Table A-3: Functional Classification of County Roads

| Road Name | County FC Code | County FC Description | Begin Milepost | End Milepost |
|---|---|---|---|---|
| OLD STAGE ROAD, SOUTH | URC | Urban Residential / City limits | 0 | 0.34 |
| OLD STAGE ROAD, SOUTH | UR | Urban Residential | 0.34 | 0.735 |
| OLLIS ROAD | | | 0 | 1.51 |
| OMAHA DRIVE | UR | Urban Residential | 0 | 0.098 |
| OOTZ LANE | RORR | Rural Restricted Residential | 0 | 0.19 |
| OPAL LANE | RR | Rural Residential | 0 | 0.439 |
| ORANGEWOOD DRIVE | | | 0 | 0.03 |
| ORCHARD LANE | | | 0 | 0.25 |
| ORCHARD STREET | UR | Urban Residential | 0 | 0.066 |
| OROFINO ROAD | | | 0 | 0.07 |
| ORT LANE | RR | Rural Residential | 0 | 0.762 |
| OSPREY GLEN LANE | RORR | Rural Restricted Residential | 0 | 0.13 |
| OVERLAND DRIVE | UAMI | Urban Arterial - Minor | 0 | 0.19 |
| OVERLAND DRIVE | UAMI | Urban Arterial - Minor | 0 | 0.06 |
| OXYOKE ROAD | RCL | Rural Local Collector | 0 | 1.19 |
| OXYOKE ROAD | RCL | Rural Local Collector | 1.19 | 1.551 |
| PACIFIC CREST DRIVE | UOP | Urban Private ("O") | 0 | 0.05 |
| PAGE CREEK ROAD | | | 0 | 0.75 |
| PALOMINO DRIVE | RR | Rural Residential | 0 | 0.744 |
| PALOMINO DRIVE (EXT) | | | 0 | 0.3 |
| PALOS VERDES DRIVE | RRL | Rural Limited Residential | 0 | 0.414 |
| PANORAMIC LOOP | UR | Urban Residential | 0 | 0.126 |
| PANSY LANE | | | 0 | 0.18 |
| PANTHER GULCH ROAD | RR | Rural Residential | 0 | 1.096 |
| PARADISE DRIVE | | | 0 | 0.31 |
| PARADISE GARDENS ROAD | | | 0 | 1.08 |
| PARDEE LANE | UR | Urban Residential | 0 | 0.153 |
| PARK AVENUE | | | 0 | 0.07 |
| PARK AVENUE | | | 0 | 0.14 |
| PARK STREET, EAST | UR | Urban Residential | 0.509 | 0.52 |
| PARK STREET, EAST | UCL | Urban Local Collector | 0 | 0.509 |
| PARK STREET, WEST | UCC | Urban Collector / City Limits | 0 | 0.399 |
| PARKDALE CIRCLE | URLM | Urban Limited Minor Residential | 0 | 0.024 |
| PARKDALE DRIVE | URLM | Urban Limited Minor Residential | 0 | 0.158 |
| PARKER LANE | RR | Rural Residential | 0 | 0.528 |
| PARKHILL PLACE | | | 0 | 0.24 |
| PASS CREEK ROAD | | | 0 | 0.53 |
| PATRICK ROAD | RR | Rural Residential | 0 | 0.362 |
| PATTON BAR ROAD | RR | Rural Residential | 0 | 0.546 |
| PAULA LANE | | | 0 | 0.6 |
| PAULDINE WAY | RRL | Rural Limited Residential | 0 | 0.251 |
| PAVILLION DRIVE | RR | Rural Residential | 0 | 0.281 |
| PEACEFUL VALLEY LANE | | | 0 | 0.51 |
| PEACH STREET | | | 0 | 0.27 |
| PEAR STREET | | | 0 | 0.22 |
| PEARCE PARK ROAD | RR | Rural Residential | 0 | 1.098 |
| PEARL DRIVE | RR | Rural Residential | 0 | 0.17 |
| PEARSOLL LANE | RR | Rural Residential | 0 | 0.098 |
| PEAVINE ROAD | | | 0 | 0.21 |
| PECKERWOOD LANE | | | 0 | 0.28 |
| PECO ROAD | RR | Rural Residential | 0 | 0.888 |
| PENINGER PLACE | RI | Rural Industrial | 0 | 0.182 |
| PENNINGTON CREEK ROAD | | | 0 | 0.25 |
| PENNY LANE | RCMA | Rural Major Collector | 0 | 0.512 |
| PENNY LANE (EXT) | | | 0 | 0.25 |
| PENNY LANE, SOUTH | | | 0 | 0.15 |
| PEPPERMINT LANE | | | 0 | 0.13 |
| PERCY LANE | | | 0 | 0.25 |
| PESTERFIELD PLACE | RRL | Rural Limited Residential | 0 | 0.056 |
| PETERSON GULCH ROAD | | | 0 | 0.32 |
| PHILLIPS LANE | | | 0 | 0.11 |
| PICKETT CREEK ROAD | RCL | Rural Local Collector | 0 | 1.628 |
| PICKETT CREEK ROAD, WEST | RR | Rural Residential | 0 | 0.788 |
| PILLER PLACE | | | 0 | 0.37 |
| PINE CONE DRIVE (EXT.) | | | 0 | 0.54 |
| PINE COURT | UOP | Urban Private ("O") | 0 | 0.03 |
| PINE CREST DRIVE | RCMI | Rural Minor Collector | 0 | 2.617 |
| PINE DELL LANE | | | 0 | 0.23 |

Table A-3: Functional Classification of County Roads

| Road Name | County FC Code | County FC Description | Begin Milepost | End Milepost |
|---|---|---|---|---|
| PINE RIDGE DRIVE | RRL | Rural Limited Residential | 0 | 0.28 |
| PINE STREET | | | 0 | 0.2 |
| PINE TREE DRIVE | RR | Rural Residential | 0 | 0.507 |
| PINE TREE WAY | | | 0 | 0.22 |
| PINEWOOD WAY | RR | Rural Residential | 0 | 0.541 |
| PINNON ROAD | | | 0 | 0.5 |
| PINNON ROAD | RR | Rural Residential | 0 | 0.388 |
| PLACER ROAD | RCL | Rural Local Collector | 0 | 3.4 |
| PLACER ROAD | RCL | Rural Local Collector | 3.4 | 4.286 |
| PLEASANT VALLEY ROAD | RCMA | Rural Major Collector | 0 | 2.659 |
| PLEASANTVILLE WAY | RR | Rural Residential | 0 | 0.579 |
| PLUM STREET | | | 0 | 0.2 |
| PLUMTREE LANE | RCMI | Rural Minor Collector | 0 | 1.287 |
| POLARIS CIRCLE | RRL | Rural Limited Residential | 0 | 0.149 |
| PONDEROSA LANE | RCMI | Rural Minor Collector | 0 | 0.513 |
| PONY LANE | RORR | Rural Restricted Residential | 0 | 0.15 |
| POOH LANE | RORR | Rural Restricted Residential | 0 | 0.09 |
| POORMANS CREEK ROAD | | | 0 | 5.2 |
| POPLAR DRIVE | | | 0 | 0.19 |
| POPLAR DRIVE | UR | Urban Residential | 0 | 0.03 |
| PORTER LANE | RORR | Rural Restricted Residential | 0 | 0.07 |
| PORTLAND AVENUE | | | 0 | 0.75 |
| PORTOLA DRIVE | UCL | Urban Local Collector | 0 | 0.085 |
| PORTOLA DRIVE | UCL | Urban Local Collector | 0.085 | 0.318 |
| POTTS WAY | RR | Rural Residential | 0 | 0.449 |
| POTTS WAY (EXT) | RORR | Rural Restricted Residential | 0 | 0.3 |
| POWELL CREEK ROAD | RR | Rural Residential | 0 | 1.85 |
| PRAIRIE LANE | RR | Rural Residential | 0 | 0.325 |
| PROTTSMAN WAY | | | 0 | 0.32 |
| PRUDEN DRIVE | | | 0 | 0.1 |
| PRUITT PLACE | | | 0 | 0.29 |
| PUGETVILLE ROAD | RR | Rural Residential | 0 | 0.212 |
| PYLE DRIVE | RR | Rural Residential | 0 | 0.865 |
| QUAIL LANE | | | 0 | 0.32 |
| QUAIL LANE | RRL | Rural Limited Residential | 0 | 0.192 |
| QUEEN OF BRONZE ROAD | | | 0 | 0.71 |
| RAGAN WAY | | | 0 | 0.25 |
| RAIL LANE | | | 0 | 0.24 |
| RAILROAD AVENUE | RR | Rural Residential | 0 | 0.974 |
| RAINBOW DRIVE | RR | Rural Residential | 0 | 0.51 |
| RAINBOW LANE | | | 0 | 0.08 |
| RAINTREE DRIVE | | | 0 | 0.44 |
| RAINWOOD LANE | UR | Urban Residential | 0 | 0.126 |
| RAMSEY AVENUE | | | 0 | 0.3 |
| RAMSEY AVENUE | UC | Urban Collector (17) | 0 | 0.121 |
| RANCHO VISTA DRIVE | RR | Rural Residential | 0 | 0.601 |
| RANCHO VISTA DRIVE (EXT) | | | 0 | 0.5 |
| RANDY DRIVE | | | 0 | 0.27 |
| RAY DRIVE | RR | Rural Residential | 0 | 0.287 |
| RAYDEAN DRIVE | UR | Urban Residential | 0 | 0.277 |
| RAYWOOD CIRCLE | URLM | Urban Limited Minor Residential | 0 | 0.035 |
| REAGOR LANE | | | 0 | 0.42 |
| RED FOX LANE | RRL | Rural Limited Residential | 0 | 0.114 |
| RED MOUNTAIN DRIVE | RR | Rural Residential | 0 | 1 |
| RED SPUR DRIVE | RR | Rural Residential | 0 | 0.279 |
| REDLANDS DRIVE | RR | Rural Residential | 0 | 0.654 |
| REDWOOD AVENUE | UAMI | Urban Arterial - Minor | 0 | 1.79 |
| REDWOOD AVENUE | RCMA | Rural Major Collector | 1.79 | 4.2 |
| REDWOOD AVENUE | RCMA | Rural Major Collector | 4.2 | 5.491 |
| REDWOOD CIRCLE | UR | Urban Residential | 0 | 0.259 |
| REDWOOD LANE | UOP | Urban Private ("O") | 0 | 0.24 |
| REDWOOD VISTA LANE | RORR | Rural Restricted Residential | 0 | 0.151 |
| REEVES CREEK ROAD | RCL | Rural Local Collector | 0 | 5.237 |
| REGINA WAY | UR | Urban Residential | 0 | 0.259 |
| RENNICK LANE | | | 0 | 0.13 |
| RHONDA DRIVE | RORR | Rural Restricted Residential | 0 | 0.15 |
| RICHLAND DRIVE | RRL | Rural Limited Residential | 0 | 0.106 |
| RIDGE VISTA DRIVE (EXT.) | | | 0 | 0.75 |

Table A-3: Functional Classification of County Roads

| Road Name | County FC Code | County FC Description | Begin Milepost | End Milepost |
|---|---|---|---|---|
| RIDGECREST DRIVE | RR | Rural Residential | 0 | 0.557 |
| RIDGEFIELD ROAD | RORR | Rural Restricted Residential | 0 | 0.087 |
| RIDGEFIELD ROAD | RRL | Rural Limited Residential | 0 | 0.144 |
| RIESSEN ROAD | | | 0 | 0.71 |
| RIESSEN ROAD | RR | Rural Residential | 0 | 0.303 |
| RINGUETTE STREET | UCC | Urban Collector / City Limits | 0 | 0.204 |
| RIO MESA DRIVE | RR | Rural Residential | 0 | 0.328 |
| RIO VISTA LANE | RORR | Rural Restricted Residential | 0 | 0.05 |
| RIPPLING WAY | RORR | Rural Restricted Residential | 0 | 0.6 |
| RIVAWAY LANE | | | 0 | 0.25 |
| RIVER BEND LANE | | | 0 | 0.1 |
| RIVER CIRCLE | | | 0 | 0.06 |
| RIVER DRIVE | | | 0 | 0.08 |
| RIVER STREET | | | 0 | 0.21 |
| RIVER STREET | UR | Urban Residential | 0.28 | 0.39 |
| RIVER STREET | URC | Urban Residential / City limits | 0 | 0.28 |
| RIVER VISTA DRIVE | RR | Rural Residential | 0 | 0.376 |
| RIVERCREST DRIVE | | | 0 | 0.16 |
| ROAD 223 | | | 0 | 0.03 |
| ROAD 231 | | | 0 | 0.14 |
| ROAD 287 | | | 0 | 0.3 |
| ROAD 352 | | | 0 | 0.18 |
| ROAD 360 | | | 0 | 0.24 |
| ROAD 374 | | | 0 | 0.19 |
| ROAD 382 | | | 0 | 0.11 |
| ROAD 4 | | | 0 | 0.47 |
| ROAD 548 | | | 0 | 0.12 |
| ROAD 555 | | | 0 | 0.25 |
| ROAD 556 | | | 0 | 0.27 |
| ROAD 557 | | | 0 | 0.19 |
| ROAD 682 | | | 0 | 0.09 |
| ROAD 683 | | | 0 | 0.02 |
| ROAD 693 | | | 0 | 0.1 |
| ROAD 699 | | | 0 | 0.12 |
| ROAD 717 | | | 0 | 0.02 |
| ROAD 738 | | | 0 | 0.07 |
| ROAD 86 | | | 0 | 0.1 |
| ROAD 911 | | | 0 | 0.13 |
| ROAN DRIVE | RR | Rural Residential | 0 | 0.427 |
| ROBERT AVENUE | RRL | Rural Limited Residential | 0 | 0.12 |
| ROBERTSON BRIDGE ROAD | RCMA | Rural Major Collector | 0 | 3.22 |
| ROBERTSON CREST | UR | Urban Residential | 0 | 0.071 |
| ROBERTSON LANE | RORR | Rural Restricted Residential | 0 | 0.09 |
| ROBINSON CORNER ROAD | RR | Rural Residential | 0 | 0.842 |
| ROBINSON GULCH ROAD | | | 0 | 0.45 |
| ROBINSON ROAD | | | 0 | 0.25 |
| ROBINSON ROAD | RR | Rural Residential | 0 | 0.696 |
| ROBMAR LANE | RRL | Rural Limited Residential | 0 | 0.549 |
| ROCK CREEK ROAD | | | 0 | 1.5 |
| ROCKWOOD STREET | | | 0 | 0.29 |
| ROCKYDALE ROAD | RCMI | Rural Minor Collector | 0 | 6.529 |
| ROGUE MANOR PLACE | RRL | Rural Limited Residential | 0 | 0.068 |
| ROGUE RIDGE DRIVE | RRL | Rural Limited Residential | 0 | 0.133 |
| ROGUE RIFFLES DRIVE | | | 0 | 0.22 |
| ROGUE RIM DRIVE | RR | Rural Residential | 0 | 0.142 |
| ROGUE RIM DRIVE (EXT) | | | 0 | 0.19 |
| ROGUE WAY | | | 0 | 0.05 |
| ROGUELEA LANE | UR | Urban Residential | 0 | 0.495 |
| ROLLING HILLS DRIVE | RR | Rural Residential | 0 | 0.238 |
| ROSEWOOD STREET | | | 0 | 0.12 |
| ROSEWOOD STREET | RR | Rural Residential | 0 | 0.309 |
| ROSLINGTON LANE | RORR | Rural Restricted Residential | 0 | 0.07 |
| ROSSIER LANE | RR | Rural Residential | 0 | 0.314 |
| ROUND PRAIRIE CREEK ROAD | RR | Rural Residential | 0 | 0.435 |
| ROUND PRAIRIE CREEK ROAD (EXT) | | | 0 | 1.5 |
| ROUNDS AVENUE | RR | Rural Residential | 0 | 0.769 |
| ROWLEY ROAD | | | 0 | 0.75 |
| ROYAL STREET | | | 0 | 0.12 |

Table A-3: Functional Classification of County Roads

| Road Name | County FC Code | County FC Description | Begin Milepost | End Milepost |
|---|---|---|---|---|
| ROYAL VIEW LANE | RORR | Rural Restricted Residential | 0 | 0.09 |
| RUBY DRIVE | RR | Rural Residential | 0 | 0.173 |
| RUSK ROAD | | | 0 | 0.3 |
| RUSSELL ROAD | RCL | Rural Local Collector | 0 | 2.611 |
| RUSTIC CANYON DRIVE | RRL | Rural Limited Residential | 0 | 0.37 |
| RUSTY SPUR | RORR | Rural Restricted Residential | 0 | 0.13 |
| RUTH AVENUE | | | 0 | 0.07 |
| RYAN COURT | UOP | Urban Private ("O") | 0 | 0.03 |
| S & K RANCH ROAD | RORR | Rural Restricted Residential | 0 | 0.33 |
| S & N LANE | | | 0 | 0.12 |
| SADDLE LANE | | | 0 | 0.15 |
| SAGAMORE ROAD | | | 0 | 0.36 |
| SAINT-PARRIS DRIVE | RORR | Rural Restricted Residential | 0 | 0.22 |
| SALLSTEN ROAD | | | 0 | 0.41 |
| SALMON CIRCLE | URMI | Urban Minor Residential | 0 | 0.022 |
| SAMARKAND DRIVE | | | 0 | 0.54 |
| SAN FRANCISCO STREET | | | 0 | 0.25 |
| SAN FRANCISCO STREET | RR | Rural Residential | 0 | 0.291 |
| SAND CREEK ROAD | RR | Rural Residential | 0 | 0.997 |
| SAND CREEK ROAD, NORTH | | | 0 | 0.25 |
| SARADAN LANE | UR | Urban Residential | 0 | 0.087 |
| SARATOGA WAY | RCL | Rural Local Collector | 0 | 1.738 |
| SASHA COURT | UOP | Urban Private ("O") | 0 | 0.03 |
| SAWYER AVENUE | | | 0 | 0.1 |
| SCENIC DRIVE, WEST | UCC | Urban Collector / City Limits | 0 | 0.03 |
| SCENIC DRIVE, WEST | RCMI | Rural Minor Collector | 0.03 | 0.26 |
| SCENIC DRIVE, WEST | RR | Rural Residential | 0.26 | 0.588 |
| SCHOOL HOUSE CREEK ROAD | | | 0 | 1.15 |
| SCHOOL STREET | | | 0 | 0.48 |
| SCHROEDER LANE | RR | Rural Residential | 0.07 | 0.442 |
| SCHROEDER LANE | UR | Urban Residential | 0 | 0.07 |
| SCHUMACHER STREET | | | 0 | 0.5 |
| SCHUTZWOHL LANE | UCC | Urban Collector / City Limits | 0 | 0.26 |
| SCHUTZWOHL LANE, WEST | UC | Urban Collector (17) | 0 | 0.215 |
| SCOTCHPINE DRIVE | UOP | Urban Private ("O") | 0 | 0.05 |
| SCOTT DRIVE | | | 0 | 0.06 |
| SCOTT DRIVE | RR | Rural Residential | 0 | 0.856 |
| SCOTT DRIVE (PORTION) | | | 0 | 0.26 |
| SCOVILLE ROAD | UCC | Urban Collector / City Limits | 0 | 0.131 |
| SCOVILLE ROAD | RR | Rural Residential | 9.00E-03 | 0.179 |
| SCOVILLE ROAD | URC | Urban Residential / City limits | 0 | 9.00E-03 |
| SECLUSION LOOP | RR | Rural Residential | 0 | 0.859 |
| SECOND STREET | | | 0 | 0.04 |
| SECOND STREET | | | 0 | 0.25 |
| SEQUOIA COURT | UOP | Urban Private ("O") | 0 | 0.03 |
| SERENITY LANE | RR | Rural Residential | 0 | 0.646 |
| SHADOW HILLS DRIVE | RR | Rural Residential | 0 | 0.943 |
| SHADOW LANE | RRL | Rural Limited Residential | 0 | 0.077 |
| SHADOW MOUNTAIN WAY | RR | Rural Residential | 0 | 0.377 |
| SHADY LANE | UR | Urban Residential | 0 | 0.192 |
| SHADYWOOD DRIVE | RR | Rural Residential | 0 | 0.39 |
| SHAMROCK LANE | | | 0 | 0.34 |
| SHAN CREEK LANDING ROAD | | | 0 | 0.3 |
| SHAN CREEK ROAD | | | 0 | 7 |
| SHANE WAY | UR | Urban Residential | 0 | 0.033 |
| SHANNON LANE | UR | Urban Residential | 0.15 | 0.235 |
| SHANNON LANE | UCL | Urban Local Collector | 0 | 0.15 |
| SHARON DRIVE | RORR | Rural Restricted Residential | 0 | 0.27 |
| SHERATON DRIVE | | | 0 | 1.03 |
| SHERIER ROAD | | | 0 | 0.5 |
| SHERRY LANE | RORR | Rural Restricted Residential | 0 | 0.04 |
| SHERWOOD LANE | RRL | Rural Limited Residential | 0 | 0.058 |
| SHETLAND DRIVE | RR | Rural Residential | 0 | 0.352 |
| SHORE STREET | | | 0 | 0.05 |
| SHORTHORN GULCH ROAD | | | 0 | 1.5 |
| SIEBERT WAY | UR | Urban Residential | 0 | 0.111 |
| SIERRA WAY | RR | Rural Residential | 0 | 0.38 |
| SILVER STREET | | | 0 | 0.08 |

Table A-3: Functional Classification of County Roads

| Road Name | County FC Code | County FC Description | Begin Milepost | End Milepost |
|---|---|---|---|---|
| SIMMONS CUT DRIVE | RR | Rural Residential | 0 | 0.315 |
| SISKIYOU DRIVE | | | 0 | 0.29 |
| SIXTH STREET | | | 0 | 0.06 |
| SIXTH STREET | RR | Rural Residential | 0 | 0.341 |
| SKY CREST DRIVE | RR | Rural Residential | 0.277 | 0.814 |
| SKY CREST DRIVE | UR | Urban Residential | 0 | 0.277 |
| SKY WAY | UR | Urban Residential | 0 | 0.06 |
| SKY WAY | RR | Rural Residential | 0.06 | 0.869 |
| SKYLARK LANE | UR | Urban Residential | 0 | 0.111 |
| SKYLINE DRIVE | | | 0 | 0.25 |
| SLATE CREEK ROAD | RR | Rural Residential | 0 | 1.976 |
| SLEEPY HOLLOW LOOP | RR | Rural Residential | 0 | 2.22 |
| SLOAN MOUNTAIN LANE | RR | Rural Residential | 0 | 0.244 |
| SMALL LOOP | | | 0 | 0.17 |
| SMITH-SAWYER ROAD | RR | Rural Residential | 0 | 0.656 |
| SMOKEY LANE | UR | Urban Residential | 0 | 0.219 |
| SOCKEYE CIRCLE | UOP | Urban Private ("O") | 0 | 0.02 |
| SOLDIER CREEK ROAD | RR | Rural Residential | 0 | 1.547 |
| SOLITUDE LANE | RR | Rural Residential | 0 | 0.253 |
| SOURDOUGH GULCH ROAD | | | 0 | 0.57 |
| SOUTH ESPEY ROAD | | | 0 | 0.13 |
| SOUTH ESPEY ROAD | RRL | Rural Limited Residential | 0 | 0.384 |
| SOUTH LIVINGSTON WAY | RRL | Rural Limited Residential | 0 | 0.24 |
| SOUTH PASS ROAD | | | 0 | 0.23 |
| SOUTH RIVER ROAD | RR | Rural Residential | 0 | 0.616 |
| SOUTH RIVER ROAD | RCL | Rural Local Collector | 0.616 | 0.981 |
| SOUTH SHORE DRIVE | RR | Rural Residential | 0 | 0.384 |
| SOUTH SIDE ROAD | RCMA | Rural Major Collector | 0 | 4.167 |
| SOUTH STREET | | | 0 | 0.18 |
| SOUTH STREET | | | 0 | 0.076 |
| SOUTH VANNOY CREEK ROAD | RR | Rural Residential | 0 | 0.938 |
| SOUTHGATE WAY | RR | Rural Residential | 0 | 0.773 |
| SPACE VIEW DRIVE | | | 0 | 0.29 |
| SPARROW CIRCLE | RORR | Rural Restricted Residential | 0 | 0.13 |
| SPEAKER ROAD | RCMI | Rural Minor Collector | 0 | 4.238 |
| SPLENDOR DRIVE | RORR | Rural Restricted Residential | 0 | 0.1 |
| SPLENDOR DRIVE | RRL | Rural Limited Residential | 0 | 0.107 |
| SPRING MOUNTAIN ROAD | RRL | Rural Limited Residential | 0 | 0.179 |
| SPRING OAK WAY | RR | Rural Residential | 0 | 0.099 |
| SPRINGBROOK DRIVE | RR | Rural Residential | 0 | 0.548 |
| SPRINGWOOD PLACE | | | 0 | 0.1 |
| SPRINKLE WAY | UOP | Urban Private ("O") | 0 | 0.02 |
| SPYGLASS LANE | RRL | Rural Limited Residential | 0 | 0.518 |
| SQUAW CREEK ROAD | | | 0 | 1.5 |
| SQUAW MOUNTAIN ROAD | | | 0 | 0.57 |
| SQUIRREL LANE | | | 0 | 0.25 |
| STAGECOACH ROAD | | | 0 | 0.51 |
| STANFORD WAY | RR | Rural Residential | 0 | 0.192 |
| STANVIRA WAY | | | 0 | 0.1 |
| STAR COURT | UR | Urban Residential | 0 | 0.02 |
| STAR CREST DRIVE | UOP | Urban Private ("O") | 0 | 0.06 |
| STARBURST DRIVE | UOP | Urban Private ("O") | 0 | 0.07 |
| STARDUST CIRCLE | RRL | Rural Limited Residential | 0 | 0.127 |
| STARFLOWER WAY | RORR | Rural Restricted Residential | 0 | 0.083 |
| STEELHEAD LANE | | | 0 | 0.14 |
| STELLAR COURT | UR | Urban Residential | 0 | 0.038 |
| STEPHEN WAY | | | 0 | 0.38 |
| STERLING DRIVE | | | 0 | 0.04 |
| STEWART ROAD | RR | Rural Residential | 0 | 1.164 |
| STEWART ROAD (EXT) | | | 0 | 0.05 |
| STILL WATER WAY | RORR | Rural Restricted Residential | 0 | 0.15 |
| STONE CANYON DRIVE | RORR | Rural Restricted Residential | 0 | 0.15 |
| STONE DRIVE | | | 0 | 0.14 |
| STONEBROOK WAY | RR | Rural Residential | 0 | 0.248 |
| STONERIDGE DRIVE | RORR | Rural Restricted Residential | 0 | 0.11 |
| STRATTON CREEK ROAD | | | 0 | 0.5 |
| STRINGER GAP ROAD | RCMA | Rural Major Collector | 0 | 2.589 |
| STUART DRIVE | | | 0 | 0.05 |

Table A-3: Functional Classification of County Roads

| Road Name | County FC Code | County FC Description | Begin Milepost | End Milepost |
|---|---|---|---|---|
| SUGARPINE DRIVE | RR | Rural Residential | 0 | 0.477 |
| SUMMER LANE | | | 0 | 0.23 |
| SUMMIT LOOP | RCMI | Rural Minor Collector | 0 | 1.792 |
| SUN GLO DRIVE | UR | Urban Residential | 0 | 0.488 |
| SUN OAK WAY | RORR | Rural Restricted Residential | 0 | 0.21 |
| SUNBEAM CIRCLE | RRL | Rural Limited Residential | 0 | 0.091 |
| SUNBURST DRIVE | UOP | Urban Private ("O") | 0 | 0.22 |
| SUNCREST DRIVE | RR | Rural Residential | 0 | 0.976 |
| SUNFLOWER LANE | RORR | Rural Restricted Residential | 0 | 0.11 |
| SUNNY CIRCLE | UR | Urban Residential | 0 | 0.028 |
| SUNNY GLEN WAY | | | 0 | 1.37 |
| SUNNY VALLEY LOOP | RR | Rural Residential | 0 | 0.57 |
| SUNNY VALLEY LOOP | RR | Rural Residential | 0.57 | 2.887 |
| SUNRISE DRIVE | RR | Rural Residential | 0 | 0.265 |
| SUNSHINE ROAD | | | 0 | 0.54 |
| SURREY DRIVE | | | 0 | 0.12 |
| SURREY DRIVE | RR | Rural Residential | 0 | 0.315 |
| SUSAN LANE | UR | Urban Residential | 0 | 0.119 |
| SUZANNE COURT | | | 0 | 0.07 |
| SWARTHOUT CIRCLE | UR | Urban Residential | 0 | 0.024 |
| SWARTHOUT DRIVE | UR | Urban Residential | 0 | 0.159 |
| SYCAMORE DRIVE | RR | Rural Residential | 0 | 0.2 |
| TACOMA STREET | | | 0 | 0.16 |
| TAKILMA ROAD | RCMI | Rural Minor Collector | 0 | 4.6 |
| TAKILMA ROAD | RCMI | Rural Minor Collector | 4.6 | 8.634 |
| TANAGER WAY | UR | Urban Residential | 0 | 0.116 |
| TARA LANE | | | 0 | 0.03 |
| TAURUS LANE | | | 0 | 0.37 |
| TAVIS DRIVE | | | 0 | 0.18 |
| TAVIS DRIVE | RRL | Rural Limited Residential | 0 | 0.184 |
| TAYLOR CREEK ROAD | RR | Rural Residential | 0 | 1.439 |
| TAYLOR PLACE | | | 0 | 0.07 |
| TECH WAY | RI | Rural Industrial | 0 | 0.223 |
| TEEL LANE | RR | Rural Residential | 0 | 0.205 |
| TEMPLIN AVENUE | RR | Rural Residential | 0 | 0.399 |
| TEMPLIN AVENUE (EXT) | | | 0 | 0.1 |
| TENTH STREET, NORTHEAST | UC | Urban Collector (17) | 0 | 0.246 |
| TERRACE HEIGHTS DRIVE | | | 0 | 0.42 |
| TERRACE OAKS LANE | RRL | Rural Limited Residential | 0 | 0.08 |
| TETHEROW ROAD | RR | Rural Residential | 0 | 1.008 |
| THE TREES DRIVE | RR | Rural Residential | 0 | 0.495 |
| THIRD AVENUE | | | 0 | 0.12 |
| THIRD STREET | | | 0 | 0.09 |
| THIRD STREET | | | 0 | 0.25 |
| THOMAS CIRCLE | UR | Urban Residential | 0 | 0.03 |
| THOMAS TERRACE | RRL | Rural Limited Residential | 0 | 0.167 |
| THOMAS TERRACE (EXT.) | RORR | Rural Restricted Residential | 0 | 0.07 |
| THOMPSON CREEK ROAD | | | 0 | 0.5 |
| THOMPSON CREEK ROAD (4) | RCL | Rural Local Collector | 0 | 4.672 |
| THOMPSON CREEK ROAD (5) | RCL | Rural Local Collector | 0 | 3.122 |
| THORNBERRY DRIVE | | | 0 | 0.13 |
| THORNBROOK DRIVE | RR | Rural Residential | 0 | 0.667 |
| THORNRIDGE LANE | RRL | Rural Limited Residential | 0 | 0.215 |
| THREE MILL ROAD | | | 0 | 0.82 |
| THREE PINES ROAD | RCMI | Rural Minor Collector | 0 | 1.793 |
| THUNDERBIRD LANE | | | 0 | 0.04 |
| TIFFANY WAY | RRL | Rural Limited Residential | 0 | 0.067 |
| TIMBER LANE | RR | Rural Residential | 0 | 0.822 |
| TIMBERIDGE ROAD | RR | Rural Residential | 0 | 1.496 |
| TINA WAY | | | 0 | 0.5 |
| TIPTON ROAD | | | 0 | 0.08 |
| TIPTON ROAD | | | 0.08 | 0.33 |
| TIPTON ROAD | RRL | Rural Limited Residential | 0 | 0.039 |
| TOMOE COURT | RRL | Rural Limited Residential | 0 | 0.085 |
| TORI LANE | RORR | Rural Restricted Residential | 0 | 0.03 |
| TORREY PINES ROAD | RR | Rural Residential | 0 | 0.052 |
| TOWER HEIGHTS DRIVE | RORR | Rural Restricted Residential | 0 | 0.42 |
| TOWNE STREET | UR | Urban Residential | 0 | 0.295 |

Table A-3: Functional Classification of County Roads

| Road Name | County FC Code | County FC Description | Begin Milepost | End Milepost |
|---|---|---|---|---|
| TRACY DRIVE | RR | Rural Residential | 0 | 0.14 |
| TREVOR WAY | RORR | Rural Restricted Residential | 0 | 0.1 |
| TRILLER LANE | RR | Rural Residential | 0 | 0.248 |
| TROLLEY LANE | RORR | Rural Restricted Residential | 0 | 0.036 |
| TROLLVIEW ROAD | RR | Rural Residential | 0 | 0.409 |
| TROLLVIEW ROAD (EXT) | | | 0 | 0.27 |
| TROUT CIRCLE | URMI | Urban Minor Residential | 0 | 0.023 |
| TUNNEL CREEK ROAD | | | 0 | 0.58 |
| TUNNEL LOOP ROAD | RR | Rural Residential | 0 | 2.139 |
| TURNAGAIN DRIVE | RORR | Rural Restricted Residential | 0 | 0.14 |
| TURNER ROAD | RR | Rural Residential | 0 | 0.247 |
| TURTLE LANE | RRL | Rural Limited Residential | 0 | 0.169 |
| TWILIGHT LANE | RRL | Rural Limited Residential | 0 | 0.053 |
| TWISTED PINE DRIVE | UOP | Urban Private ("O") | 0 | 0.146 |
| TYCER CROSSING | RR | Rural Residential | 0 | 0.549 |
| TYEE COURT | UOP | Urban Private ("O") | 0 | 0.02 |
| UDEE ROAD | | | 0 | 0.23 |
| UNION AVENUE | UCC | Urban Collector / City Limits | 0 | 0.36 |
| UPPER POWELL CREEK ROAD | RR | Rural Residential | 0 | 0.187 |
| UPPER RIVER ROAD | RCMA | Rural Major Collector | 0 | 0.5 |
| UPPER RIVER ROAD | RCMA | Rural Major Collector | 0.5 | 4.529 |
| UPPER RIVER ROAD LOOP | RRL | Rural Limited Residential | 0 | 0.267 |
| VALLE VISTA DRIVE | RR | Rural Residential | 0 | 0.289 |
| VALLEY HEIGHTS ROAD | | | 0 | 0.15 |
| VALLEY ROGUE WAY | RRL | Rural Limited Residential | 0 | 0.138 |
| VANNOY CREEK ROAD | | | 0 | 0.44 |
| VARNER ROAD | | | 0 | 0.15 |
| VENCILL LANE | RORR | Rural Restricted Residential | 0 | 0.32 |
| VERDE LANE | | | 0 | 0.15 |
| VERNA LANE | RR | Rural Residential | 0 | 0.215 |
| VERONIQUE PLACE | RORR | Rural Restricted Residential | 0 | 0.12 |
| VERTICAL DRIVE | UR | Urban Residential | 0 | 0.267 |
| VILLAGE LANE | RRL | Rural Limited Residential | 0 | 0.213 |
| VINE STREET | UAMI | Urban Arterial - Minor | 0 | 0.58 |
| VINE STREET | UAIC | Urban Arterial - Minor /City Limits | 0.58 | 0.646 |
| VIRGINIA LANE | UR | Urban Residential | 0 | 0.16 |
| VOLKMER WAY | RORR | Rural Restricted Residential | 0 | 0.13 |
| VOLKMER WAY | RR | Rural Residential | 0 | 0.225 |
| WAGGLE WAY | | | 0 | 0.23 |
| WAGON ROAD | | | 0 | 0.55 |
| WAGON WHEEL DRIVE | UR | Urban Residential | 0 | 0.181 |
| WALDAMAR LANE | | | 0 | 0.75 |
| WALDO ROAD | RCMI | Rural Minor Collector | 0.497 | 4.797 |
| WALDO ROAD | RCMI | Rural Minor Collector | 0 | 0.497 |
| WALKER ROAD | RCMI | Rural Minor Collector | 0 | 1.224 |
| WALLACE LANE | RORR | Rural Restricted Residential | 0 | 0.15 |
| WALNUT AVENUE | RR | Rural Residential | 0 | 0.742 |
| WALTERS DRIVE | RR | Rural Residential | 0 | 0.57 |
| WARD ROAD | RR | Rural Residential | 0 | 0.261 |
| WARNER ROAD | | | 0 | 0.5 |
| WARNER ROAD | RR | Rural Residential | 0 | 0.967 |
| WARREN ROAD | RR | Rural Residential | 0 | 0.475 |
| WASHINGTON BOULEVARD | UCC | Urban Collector / City Limits | 0 | 0.492 |
| WATER GAP ROAD | RCMA | Rural Major Collector | 0 | 4.798 |
| WATERS CREEK ROAD | RR | Rural Residential | 0 | 1.814 |
| WATKINS STREET | | | 0 | 0.25 |
| WATTS MINE ROAD | | | 0 | 0.75 |
| WAVERLY DRIVE | | | 0 | 0.09 |
| WEDGEWOOD DRIVE | | | 0 | 0.03 |
| WEEKLY DRIVE | | | 0 | 0.62 |
| WEST HILLS DRIVE | | | 0 | 0.37 |
| WEST SIDE ROAD | RCL | Rural Local Collector | 0 | 6.438 |
| WEST STREET | | | 0 | 0.09 |
| WEST STREET | | | 0 | 0.21 |
| WEST WOODSIDE DRIVE | UOP | Urban Private ("O") | 0 | 0.75 |
| WESTMINSTER DRIVE | | | 0 | 0.09 |
| WESTMONT DRIVE | | | 0 | 0.12 |
| WESTRIDGE DRIVE | RORR | Rural Restricted Residential | 0 | 0.1 |

Table A-3: Functional Classification of County Roads

| Road Name | County FC Code | County FC Description | Begin Milepost | End Milepost |
|---|---|---|---|---|
| WESTWOOD DRIVE | RR | Rural Residential | 0 | 0.296 |
| WETHERBEE DRIVE | RR | Rural Residential | 0 | 0.628 |
| WHIPPLETREE LANE | | | 0 | 0.06 |
| WHISPERING PINES LANE | RR | Rural Residential | 0 | 0.313 |
| WHITE CREEK ROAD | | | 0 | 1 |
| WHITE FIR DRIVE | | | 0 | 0.22 |
| WHITE OAK DRIVE | RR | Rural Residential | 0 | 0.37 |
| WHITE SCHOOL ROAD | RR | Rural Residential | 0 | 2.495 |
| WHITERIDGE ROAD | RRL | Rural Limited Residential | 0 | 0.142 |
| WHITESTONE DRIVE | RR | Rural Residential | 0 | 0.425 |
| WHITMAN ROAD | | | 0 | 0.25 |
| WILD PARK LANE | | | 0 | 0.76 |
| WILD RASPBERRY CIRCLE | RORR | Rural Restricted Residential | 0 | 0.08 |
| WILDERVILLE LANE | | | 0 | 1.34 |
| WILDFLOWER DRIVE | RORR | Rural Restricted Residential | 0 | 0.01 |
| WILDFLOWER DRIVE | RR | Rural Residential | 0 | 1.205 |
| WILDROSE LANE | | | 0 | 0.44 |
| WILLAMETTE STREET | | | 0 | 0.41 |
| WILLIAMS HIGHWAY | RCMI | Rural Minor Collector | 0 | 4.69 |
| WILLIAMS HIGHWAY | RCMI | Rural Minor Collector | 4.69 | 6.297 |
| WILLIAMSON LOOP | RR | Rural Residential | 0 | 1.131 |
| WILLOW CREEK LANE | RRL | Rural Limited Residential | 0 | 0.134 |
| WILLOW LANE | UC | Urban Collector (17) | 0.505 | 0.995 |
| WILLOW LANE | RR | Rural Residential | 0 | 0.138 |
| WILLOW LANE | UAMI | Urban Arterial - Minor | 0.138 | 0.505 |
| WILMA LANE | RRL | Rural Limited Residential | 0 | 0.097 |
| WILMAR DRIVE | | | 0 | 0.13 |
| WILSON STREET | RR | Rural Residential | 0 | 0.275 |
| WILSON STREET (EXT) | | | 0 | 0.12 |
| WINETEER LANE | UR | Urban Residential | 0 | 0.351 |
| WINONA ROAD | RCMI | Rural Minor Collector | 0 | 3.834 |
| WINSTON DRIVE | | | 0 | 0.04 |
| WOLF LANE | RR | Rural Residential | 0 | 0.496 |
| WONDER LANE | | | 0 | 0.43 |
| WOOD CREEK ROAD | | | 0 | 1.5 |
| WOOD DUCK LANE | | | 0 | 0.07 |
| WOODBROOK DRIVE | UR | Urban Residential | 0 | 0.241 |
| WOODBURY LANE | | | 0 | 0.27 |
| WOODLAKE DRIVE | RR | Rural Residential | 0 | 0.392 |
| WOODLAND PARK ROAD | RCMI | Rural Minor Collector | 0 | 1.282 |
| WOODLAWN CIRCLE | | | 0 | 0.06 |
| WOODROW WAY | RR | Rural Residential | 0 | 0.128 |
| WOODS LANE | | | 0 | 0.35 |
| WOODS WAY | RORR | Rural Restricted Residential | 0 | 0.17 |
| WOODSIDE STREET | | | 0 | 0.19 |
| WOODSIDE STREET | RR | Rural Residential | 0 | 0.226 |
| WOODY ACRES ROAD | | | 0 | 0.42 |
| WORDEN WAY | RR | Rural Residential | 0 | 0.089 |
| WORK LANE | RORR | Rural Restricted Residential | 0 | 0.24 |
| WYLIE LANE | UR | Urban Residential | 0 | 0.059 |
| YEARLY WAY | | | 0 | 0.62 |
| YOUR WAY | | | 0 | 0.02 |
| ZOOK ROAD | | | 0 | 0.08 |

# Table A-4
## Surface Type/Pavement Conditions on County Roads

| Road Name | Section ID | Begin Location | End Location | Area of Section | Road Width | Length | PCI | # of Lanes | Surface Type |
|---|---|---|---|---|---|---|---|---|---|
| A STREET | 2498 | 8TH ST | 10TH ST. | 82112 | 32 | 2566 | 66 | 2 | AC |
| A STREET | 2498-A | 10TH ST. | FOOTHILL BLVD. | 87264 | 36 | 2424 | 71 | 2 | AC |
| ABBY LANE | 3527 | ESTATES LANE | CUL-DE-SAC | 29271 | 33 | 887 | 100 | 2 | AC |
| ABEGG ROAD | 2450 | AZALEA DR | #3000 ABEGG RD. | 193360 | 20 | 9668 | 100 | 2 | AC |
| ABEGG ROAD | 2450-A | #3000 ABEGG RD. | END OF PAVEMENT | 45836 | 14 | 3274 | 85 | 1 | AC |
| ACORN STREET | 2438 | MERLIN SANITARIUM RD | GIBSON ST. | 47313 | 21 | 2253 | 81 | 2 | AC |
| ADELINE DRIVE | 3452 | ROBERT AV. | END OF PAVEMENT | 14637 | 21 | 697 | 80 | 2 | AC |
| AGGREGATE AVENUE | 3814 | JACKSONVILLE HWY 238 | MOUNTAIN FIR ROAD | 7936 | 32 | 248 | 83 | 2 | AC |
| AGNESS AVENUE | 2686 | SPALDING AV | END OF PAVEMENT | 11400 | 30 | 380 | 100 | 2 | AC |
| AIRPORT DRIVE | 5510 | REDWOOD HWY 199 | CUL-DE-SAC | 257818 | 22 | 11806 | 78 | 2 | ST |
| ALDERBROOK LANE | 3365 | SOUTH RIVER ROAD | CUL-DE-SAC | 22620 | 26 | 870 | 95 | 2 | AC |
| ALEXANDER LANE | 3155 | FRUITDALE DR | CUL-DE-SAC | 12194 | 26 | 469 | 69 | 2 | AC |
| ALLEN CREEK ROAD | 3410 | REDWOOD AVE | REDWOOD HWY 199 | 8140 | 22 | 370 | 83 | 2 | AC |
| ALLEN CREEK ROAD | 3410-A | REDWOOD HWY 199 | SCHUTZWOHL LN | 21142 | 22 | 961 | 83 | 2 | AC |
| ALLEN CREEK ROAD | 3410-B | SCHUTZWOHL LN. | WEST HARBECK RD. | 28226 | 22 | 1283 | 82 | 2 | AC |
| ALLEN CREEK ROAD | 3410-C | WEST HARBECK RD. | DENTON TRAIL | 47592 | 18 | 2644 | 85 | 2 | AC |
| ALLENWOOD DRIVE | 3432 | JACKSONVILLE HWY. 238 | CUL-DE-SAC | 13926 | 22 | 633 | 90 | 2 | ST |
| ALLMAN WAY | 2404 | MERLIN RD. | CUL-DE-SAC | 5742 | 22 | 261 | 82 | 2 | AC |
| ALMAR ROAD | 3088 | WHISPERING PINES LN | GORDON WY. | 28116 | 22 | 1278 | 83 | 2 | AC |
| ALMEDA STREET | 2432 | CHERRY STREET | CUL-DE-SAC | 13134 | 22 | 597 | 100 | 2 | ST |
| ALMOND STREET | 2436 | JOSEPHINE ST | GIBSON ST. | 8940 | 20 | 447 | 79 | 2 | AC |
| ALTHOUSE CREEK ROAD | 5861 | KENDALL RD. | BROWNTOWN RD. | 52844 | 22 | 2402 | 82 | 2 | ST |
| ALTHOUSE CREEK ROAD | 5861-A | BROWNTOWN RD. | END OF CO. MAINT. | 192450 | 15 | 12830 | 67 | 1 | ST |
| AMENT ROAD | 2560 | FOOTHILL BLVD. | S.E. N ST. | 61094 | 22 | 2777 | 87 | 2 | AC |
| ANGLER LANE | 3335 | LEONARD RD. | DEAD END | 20574 | 27 | 762 | 83 | 2 | AC |
| ANITA DRIVE | 2229 | MT. PARADISE DR. | CUL-DE-SAC | 39864 | 22 | 1812 | 88 | 2 | AC |
| ANN ROY DRIVE | 3245 | CLOVERLAWN DR. | CUL-DE-SAC | 32200 | 25 | 1288 | 79 | 2 | ST |
| ANNA WAY | 2872 | HIXSON DR | CUL-DE-SAC | 22282 | 26 | 857 | 89 | 2 | AC |
| ANNABELLE LANE | 3514 | REDWOOD AV | DEAD END | 29322 | 18 | 1629 | 76 | 2 | ST |
| APPLEGATE AVENUE | 3380 | LEONARD RD. | REDWOOD HWY. | 279344 | 34 | 8216 | 81 | 2 | AC |
| APPLEGATE AVENUE | 3380-A | REDWOOD HWY 199 | PRAIRIE LANE | 20808 | 18 | 1156 | 83 | 2 | AC |
| APRIL DRIVE | 2061 | HUGO RD. | WILDFLOWER DR. | 63360 | 24 | 2640 | 74 | 2 | ST |
| ARNOLD AVENUE | 3315 | DOWELL RD. | ELK LN. | 25760 | 20 | 1288 | 87 | 2 | ST |
| ARTLIN ROAD | 2891 | LOWER RIVER RD-HWY 260 | ROBERTSON BR RD | 34618 | 19 | 1822 | 79 | 2 | ST |
| AURORA AVENUE | 2540 | FOOTHILL BLVD | END OF PAVEMENT | 14041 | 19 | 739 | 87 | 2 | ST |
| AVENUE DE TERESA | 2582 | AVERILL DR | CUL-DE-SAC | 63076 | 26 | 2426 | 79 | 2 | AC/AC |
| AVERILL DRIVE | 2580 | FOOTHILL BLVD | END OF CO. MAINT. | 154154 | 22 | 7007 | 74 | 2 | AC |
| AXTELL DRIVE | 3143 | OVERLAND DR | SIEBERT WY. | 39600 | 36 | 1100 | 82 | 2 | AC |
| AZALEA DRIVE | 2800 | UPPER RIVER RD | AZALEA DR CUTOFF | 40062 | 22 | 1821 | 78 | 2 | AC |
| AZALEA DRIVE | 2800-A | AZALEA DR CUTOFF | CALVERT DR. | 361570 | 38 | 9515 | 76 | 2 | AC |
| AZALEA DRIVE | 2800-B | CALVERT DR. | EWE CREEK RD | 407512 | 38 | 10724 | 80 | 2 | AC |
| AZALEA DRIVE | 2800-C | EWE CREEK RD. | GALICE RD. | 393034 | 38 | 10343 | 77 | 2 | AC |
| AZALEA DRIVE CUTOFF | 2801 | UPPER RIVER RD | AZALEA DR | 63478 | 34 | 1867 | 82 | 2 | AC |
| BAILEY DRIVE | 3122 | DRURY LN | END OF CO. MAINT. | 20616 | 24 | 859 | 78 | 2 | ST |
| BARBARA DRIVE | 2792 | UPPER RIVER RD | PINNON RD. | 80730 | 26 | 3105 | 80 | 2 | AC |
| BARKER DRIVE | 2051 | HUGO RD. | CONNIE LN. | 106245 | 27 | 3935 | 88 | 2 | ST |
| BARKER DRIVE | 2051-A | CONNIE LN. | CUL-DE-SAC | 32186 | 22 | 1463 | 88 | 2 | ST |
| BASTIAN ROAD | 2794 | UPPER RIVER RD | END OF PAVEMENT | 12924 | 12 | 1077 | 81 | 1 | AC |
| BAYARD DRIVE | 3403 | NEW HOPE RD. | CUL-DE-SAC | 17244 | 36 | 479 | 82 | 2 | AC |
| BEACON DRIVE | 2665 | MADRONE ST | HILLCREST DR. | 107479 | 23 | 4673 | 82 | 2 | AC |
| BECKLIN DRIVE | 2054 | HUGO RD. | APRIL DR. | 106440 | 30 | 3548 | 83 | 2 | ST |
| BEECHER ROAD | 1440 | PLACER RD | END OF PAVEMENT | 41349 | 21 | 1969 | 84 | 2 | ST |
| BELINDY CIRCLE | 3407 | FLORER DR. | CUL-DE-SAC | 6963 | 33 | 211 | 82 | 2 | AC |
| BEN AIRE CIRCLE | 3204 | CLOVERLAWN DR | CLOVERLAWN | 40095 | 33 | 1215 | 63 | 2 | AC |
| BERMAR CIRCLE | 4222 | WILLIAMS HWY | CUL-DE-SAC | 6028 | 22 | 274 | 83 | 2 | AC |
| BLAS CERDENA DRIVE | 5615 | IDLEWILD DR | WEST OF HARLOW WY | 41520 | 24 | 1730 | 85 | 2 | ST |
| BLOOM ROAD | 1220 | COYOTE CREEK RD | END OF PAVEMENT | 22572 | 19 | 1188 | 83 | 2 | ST |
| BLUE MOUNTAIN ROAD | 3935 | KEEN ROAD | CUL-DE-SAC | 12078 | 22 | 549 | 87 | 2 | ST |
| BLUEBELL LANE | 3213 | SKYCREST DR | CUL-DE-SAC | 16780 | 20 | 839 | 83 | 2 | ST |
| BOARD SHANTY ROAD | 3840 | NORTH APPLEGATE RD | END OF MAINT. | 165816 | 24 | 6909 | 84 | 2 | AC |
| BOLT VIEW ROAD | 3759 | JEROME PRAIRIE RD | DEAD END | 27240 | 20 | 1362 | 83 | 2 | ST |
| BONANZA DRIVE | 5275 | MCMULLIN CREEK RD | DEAD END | 11403 | 21 | 543 | 83 | 2 | AC |
| BONLINDA LANE | 4103 | KINCAID RD | CUL-DE-SAC | 33506 | 22 | 1523 | 80 | 2 | AC |
| BONNIE LANE | 3637 | DAILY LN. | DEAD END | 53112 | 24 | 2213 | 78 | 2 | AC |
| BOUNDARY LANE | 3541 | REDWOOD AV | DEAD END | 13243 | 17 | 779 | 80 | 2 | AC |
| BOUNDARY ROAD | 3540 | REDWOOD AV | LEONARD RD | 66003 | 21 | 3143 | 75 | 2 | AC |
| BOWHILL ROAD | 2251 | TIMBER LN. | END OF PAVEMENT | 8784 | 24 | 366 | 92 | 2 | ST |
| BOYER ROAD | 2240 | MONUMENT DR. | END OF PAVEMENT | 53540 | 20 | 2677 | 100 | 2 | ST |
| BRANDY LANE | 3211 | SKY WY | CUL-DE-SAC | 12792 | 26 | 492 | 84 | 2 | ST |
| BREEZY LANE | 3368 | LEONARD ROAD | CUL-DE-SAC | 26624 | 26 | 1024 | 100 | 2 | AC |
| BRETT WAY | 2472 | SARATOGA WY | CUL-DE-SAC | 52130 | 26 | 2005 | 87 | 2 | ST |
| BRIDGE LANE | 1210 | SPEAKER RD. | ROAD NARROWS | 258566 | 22 | 11753 | 84 | 2 | AC |
| BRIDGE LANE | 1210-A | ROAD NARROWS | END OF CO. MAINT. | 27232 | 16 | 1702 | 84 | 1 | AC |
| BRIDGE STREET, WEST | 2731 | COTTONWOOD ST | LINCOLN RD. | 60984 | 42 | 1452 | 100 | 2 | AC/AC |
| BRIMSTONE ROAD | 1350 | LELAND RD | END OF PAVEMENT | 60382 | 14 | 4313 | 78 | 1 | AC |
| BRISTOW ROAD | 3745 | DeWOODY LN. | HELGESON LN. | 28622 | 22 | 1301 | 84 | 2 | AC |
| BROOKE LANE | 3229 | FRANKHAM RD. | JEWITT CR. DR. | 31224 | 24 | 1301 | 86 | 2 | ST |
| BROOKSIDE BOULEVARD | 2280 | MONUMENT DR. | CARTON WAY | 132048 | 24 | 5502 | 89 | 2 | AC |
| BROOKSTONE HILLS DRIVE | 2879 | RIESSEN RD | CUL-DE-SAC | 48384 | 24 | 2016 | 86 | 2 | AC |
| BROWNS ROAD | 4230 | EAST FORK RD | CUL-DE-SAC | 79420 | 20 | 3971 | 85 | 2 | AC |
| BUCKSKIN ROAD | 2918 | LOWER RIVER RD-HWY 260 | CUL-DE-SAC | 17880 | 24 | 745 | 82 | 2 | AC |
| BUENA VISTA LANE | 3345 | LEONARD RD. | CUL-DE-SAC | 15624 | 24 | 651 | 92 | 2 | ST |
| BULL CREEK ROAD | 3960 | FISH HATCHERY RD | ROAD NARROWS | 67460 | 20 | 3373 | 81 | 2 | AC |
| BULL CREEK ROAD | 3960-A | ROAD NARROWS | CUL-DE-SAC | 88286 | 22 | 4013 | 80 | 2 | AC |
| BURCH DRIVE | 5570 | REDWOOD HWY 199 | REDWOOD HWY 199 | 64130 | 22 | 2915 | 83 | 2 | AC |
| BUSHNELL WAY | 3314 | DOWELL RD. | CUL-DE-SAC | 30492 | 21 | 1452 | 92 | 2 | AC |

## Table A-4
## Surface Type/Pavement Conditions on County Roads

| Road Name | Section ID | Begin Location | End Location | Area of Section | Road Width | Length | PCI | # of Lanes | Surface Type |
|---|---|---|---|---|---|---|---|---|---|
| BUYSMAN WAY | 2566 | FOOTHILL BLVD | CUL-DE-SAC | 48576 | 24 | 2024 | 89 | 2 | AC |
| CALIFORNIA AVENUE | 2290 | MONUMENT DR. | CUL-DE-SAC | 65156 | 26 | 2506 | 80 | 2 | ST |
| CAMBRIDGE DRIVE | 2796 | UPPER RIVER RD | ASHBROOK LN | 67080 | 24 | 2795 | 85 | 2 | AC |
| CAMEO COURT | 3302 | DOWELL RD. | CUL-DE-SAC | 11826 | 27 | 438 | 82 | 2 | AC |
| CAMP JOY ROAD | 2470 | MONUMENT DR | SARATOGA WAY | 142744 | 28 | 5098 | 93 | 2 | AC |
| CAMP JOY ROAD | 2470-A | SARATOGA WAY | CUL-DE-SAC | 33552 | 16 | 2097 | 87 | 2 | AC |
| CAMPUS VIEW DRIVE | 3585 | DEMARAY DR | CUL-DE-SAC | 93258 | 27 | 3454 | 85 | 2 | AC |
| CANAAN STREET | 3280 | JACKSONVILLE HWY. (238) | END OF PAVEMENT | 16397 | 19 | 863 | 92 | 2 | AC |
| CANDLELIGHT LANE | 3466 | MOONBEAM LN | CUL-DE-SAC | 6160 | 22 | 280 | 92 | 2 | AC |
| CANYON DRIVE | 3168 | FRUITDALE DR | END OF CO. MAINT. | 12672 | 22 | 576 | 83 | 2 | AC |
| CARNAHAN DRIVE | 3150 | ROGUE RIVER HWY 99 | FRUITDALE DR. | 19220 | 20 | 961 | 85 | 2 | AC |
| CAROLANN WAY | 2765 | PINE CREST DR | CUL-DE-SAC | 9394 | 22 | 427 | 61 | 2 | AC |
| CARRIAGE ROAD | 2141 | GROUSE CREEK RD. | CUL-DE-SAC | 12864 | 24 | 536 | 79 | 2 | AC |
| CARRIE STREET | 1450 | PLACER RD | END OF PAVEMENT | 14671 | 17 | 863 | 82 | 1 | ST |
| CARROLLWOOD DRIVE | 3755 | MIDWAY AV. | SHERWOOD LN. | 57888 | 24 | 2412 | 74 | 2 | ST |
| CARTER DRIVE | 2850 | AZALEA DR | END OF PAVEMENT | 41454 | 21 | 1980 | 90 | 2 | AC |
| CARTON WAY | 2420 | MERLIN RD. | BROOKSIDE BLVD. | 71676 | 22 | 3258 | 85 | 2 | AC |
| CASCADE DRIVE | 5572 | KEN ROSE LN | MESA VERDE DR | 54000 | 27 | 2000 | 83 | 2 | AC |
| CASTLE CREEK ROAD | 2359 | LLOYD DR. | HIGHLAND AVENUE | 65416 | 26 | 2516 | 89 | 2 | AC |
| CATHEDRAL WAY | 2771 | PINE CREST DR | CUL-DE-SAC | 22814 | 22 | 1037 | 86 | 2 | AC |
| CAVES CAMP ROAD | 4120 | CEDAR FLAT RD | END OF PAVEMENT | 272734 | 22 | 12397 | 86 | 2 | AC |
| CEDAR FLAT ROAD | 4110 | WILLIAMS HWY | CAVES CAMP RD | 351384 | 22 | 15972 | 83 | 2 | AC |
| CEDAR FLAT ROAD | 4110-A | CAVES CAMP RD | END OF MAINT. | 136488 | 22 | 6204 | 84 | 2 | AC |
| CEDAR HEIGHTS DRIVE | 2810 | AZALEA DR | CUL-DE-SAC | 25784 | 22 | 1172 | 71 | 2 | AC |
| CENTURY CIRCLE | 3124 | DRURY LN | CUL-DE-SAC | 5148 | 33 | 156 | 85 | 2 | AC |
| CHAPARRAL DRIVE | 2774 | LATHROP RD | END OF PAVEMENT | 22296 | 24 | 929 | 83 | 2 | ST |
| CHENEY CREEK ROAD | 3980 | FISH HATCHERY RD | MILEPOST 1 | 126072 | 24 | 5253 | 84 | 2 | AC |
| CHENEY CREEK ROAD | 3980-A | MILEPOST 1 | END OF MAINT. | 171864 | 14 | 12276 | 88 | 1 | AC |
| CHERRY STREET | 2431 | GALICE ROAD | ALMEDA STREET | 5902 | 26 | 227 | 100 | 2 | ST |
| CHESLOCK ROAD | 3265 | KENWOOD ST. | DEAD END | 53784 | 24 | 2241 | 81 | 2 | AC |
| CHEYENNE DRIVE | 3438 | NEAMAR DR. | CUL-DE-SAC | 13827 | 33 | 419 | 73 | 2 | AC |
| CHINOOK PARK LANE | 3086 | GORDON WAY | CUL-DE-SAC | 30016 | 28 | 1072 | 76 | 2 | AC |
| CIENEGA LANE | 2863 | PECO RD | CUL-DE-SAC | 159912 | 24 | 6663 | 79 | 2 | AC |
| CINDY LANE | 2791 | LATHROP LN | CUL-DE-SAC | 9128 | 28 | 326 | 92 | 2 | AC |
| CLARA AVENUE | 3050 | PARK ST EAST | ROGUE RIVER HWY 99 | 26775 | 35 | 765 | 78 | 2 | AC |
| CLEWIS LANE | 2875 | EWE CREEK RD | CUL-DE-SAC | 16302 | 22 | 741 | 89 | 2 | AC |
| CLOVERLAWN DRIVE | 3200 | ROGUE RIVER HWY 99 | FRUITDALE DR. | 43989 | 33 | 1333 | 90 | 2 | AC/AC |
| CLOVERLAWN DRIVE | 3200-A | FRUITDALE DR. | EAST VIEW PLACE | 43494 | 33 | 1318 | 90 | 2 | AC/AC |
| CLOVERLAWN DRIVE | 3200-B | EAST VIEW PLACE | HAMILTON LN. | 112816 | 22 | 5128 | 85 | 2 | AC |
| CLOVERLAWN DRIVE | 3200-C | HAMILTON LN. | JAYNES DR. | 251020 | 22 | 11410 | 94 | 2 | AC |
| CLOVERLAWN DRIVE | 3200-D | JAYNES DR. | JACKSONVILLE HWY 238 | 181786 | 22 | 8263 | 85 | 2 | AC |
| COACH DRIVE | 3254 | WAGON WHEEL DRIVE | DEAD END | 15345 | 33 | 465 | 100 | 2 | AC/AC |
| COED PLACE | 3586 | CAMPUS VIEW DR | CUL-DE-SAC | 15363 | 27 | 569 | 85 | 2 | ST |
| COLLEGE DRIVE | 3582 | DEMARAY DR | COLLEGE PARKING LOT | 66528 | 28 | 2376 | 80 | 2 | AC |
| COLONIAL DRIVE | 2130 | HORSESHOE DR. | RUSTIC CANYON RD | 57120 | 21 | 2720 | 84 | 2 | AC |
| COLORADO LANE | 3417 | WEST HARBECK RD. | CUL-DE-SAC | 10923 | 33 | 331 | 85 | 2 | AC |
| COMMERCE WAY | 2277 | CALIFORNIA AV. | NORTH VALLEY DR. | 24320 | 32 | 760 | 84 | 2 | AC |
| CONESTOGA DRIVE | 3123 | DRURY LN | CUL-DE-SAC | 20812 | 43 | 484 | 83 | 2 | AC |
| CONNIE LANE | 2052 | BARKER DR. | BARKER DR. | 55588 | 26 | 2138 | 89 | 2 | ST |
| COPPER DRIVE | 3832 | GRAYS CREEK RD | CUL-DE-SAC | 82104 | 24 | 3421 | 84 | 2 | AC |
| CORBIN DRIVE | 3404 | JACKSONVILLE HWY. (238) | FLORER DR. | 16038 | 33 | 486 | 82 | 2 | AC |
| CORNETT LANE | 5613 | IDLEWILD DR | CUL-DE-SAC | 36982 | 22 | 1681 | 84 | 2 | ST |
| CORPORATE WAY | 2276 | NORTH VALLEY DR. | TECH WAY | 20768 | 32 | 649 | 84 | 2 | AC |
| COUNTRY AIRE DRIVE | 2761 | UPPER RIVER RD | END OF PAVEMENT | 64702 | 22 | 2941 | 82 | 2 | ST |
| COUTANT LANE | 3340 | LEONARD ROAD | SOUTH RIVER ROAD | 25140 | 20 | 1257 | 100 | 2 | AC |
| COUTANT LANE | 3340-A | SOUTH RIVER ROAD | DEAD END | 25840 | 20 | 1292 | 92 | 2 | ST |
| COVEY LANE | 3448 | JACKSONVILLE HWY. (238) | CUL-DE-SAC | 5460 | 21 | 260 | 84 | 2 | AC |
| COYOTE CREEK ROAD | 1200 | I-5 OFFRAMP | MILE POST 2 | 316560 | 30 | 10552 | 80 | 2 | AC |
| COYOTE CREEK ROAD | 1200-A | MILE POST 2 | GOLDEN COMMUNITY CHURCH | 176132 | 22 | 8006 | 82 | 2 | AC |
| COYOTE CREEK ROAD | 1200-B | GOLDEN COM. CHURCH | END OF PAVEMENT | 221826 | 22 | 10083 | 73 | 2 | AC |
| CREST DRIVE | 5605 | ROCKYDALE RD | CUL-DE-SAC | 62154 | 27 | 2302 | 86 | 2 | ST |
| CRESTVIEW LOOP | 3209 | CLOVERLAWN DR | END-O-LOOP | 64328 | 22 | 2924 | 92 | 2 | ST |
| CROOKS CREEK ROAD | 5151 | DEER CREEK RD | ROAD NARROWS | 229940 | 20 | 11497 | 84 | 2 | ST |
| CROOKS CREEK ROAD | 5151-A | ROAD NARROWS | CUL-DE-SAC | 47096 | 14 | 3364 | 81 | 1 | ST |
| CROSSBOW LANE | 2252 | TIMBER LN. | CUL-DE-SAC | 12672 | 24 | 528 | 87 | 2 | ST |
| CROW ROAD | 2460 | GALICE RD | EAST CROW RD. | 100716 | 22 | 4578 | 84 | 2 | AC |
| CROW ROAD, EAST | 2466 | CROW RD | JANICE WAY | 29250 | 26 | 1125 | 84 | 2 | AC |
| CRYSTAL DRIVE | 3835 | JACKSONVILLE HWY 238 | CUL-DE-SAC | 85618 | 26 | 3293 | 83 | 2 | AC |
| CRYSTAL SPRINGS ROAD | 3985 | FISH HATCHERY RD | CUL-DE-SAC | 44148 | 26 | 1698 | 82 | 2 | AC |
| CULLISON ROAD | 3423 | HARBECK ROAD, WEST | ALLENDALE SCHOOL | 42669 | 33 | 1293 | 84 | 2 | ST |
| CURTIS DRIVE | 3252 | JACKSONVILLE HWY. (238) | COLLEEN CT. (UGB) | 40458 | 22 | 1839 | 56 | 2 | AC/AC |
| CURTIS DRIVE | 3252-A | COLLEEN CT. (UGB) | RHONDA DR. | 32516 | 22 | 1478 | 86 | 2 | AC |
| DAILY LANE | 3636 | MARCY LP. | BONNIE LN. | 15510 | 30 | 517 | 85 | 2 | AC |
| DAISY LANE | 3508 | REDWOOD AV | #1320 DAISY | 20010 | 23 | 870 | 65 | 2 | AC |
| DAMON COURT | 3239 | PANORAMIC LOOP | CUL-DE-SAC | 6072 | 24 | 253 | 92 | 2 | AC |
| DARIN DRIVE | 3523 | WILLOW LN | CUL-DE-SAC | 21012 | 34 | 618 | 85 | 2 | AC |
| DARNEILLE LANE | 3350 | REDWOOD AV. | LEONARD RD. | 57134 | 22 | 2597 | 87 | 2 | AC |
| DARNEILLE LANE | 3350-A | LEONARD RD. | S. RIVER RD. | 37128 | 24 | 1547 | 82 | 2 | AC |
| DARRELL CIRCLE | 3144 | AXTELL DR | CUL-DE-SAC | 10080 | 36 | 280 | 82 | 2 | AC |
| DAUGHERTY WAY | 2456 | STONEBROOK WY | CUL-DE-SAC | 5544 | 24 | 231 | 85 | 2 | ST |
| DAVIDSON ROAD | 4130 | CEDAR FLAT RD | END OF MAINT. | 52040 | 20 | 2602 | 84 | 2 | AC |
| DAWN ALLAN DRIVE | 3436 | ESPEY RD. | S. ESPEY RD. | 31702 | 22 | 1441 | 100 | 2 | ST |
| DAWN DRIVE | 3539 | REDWOOD HWY 199 | DEAD END | 9920 | 20 | 496 | 86 | 2 | ST |
| DE WOODY LANE | 3744 | JEROME PRAIRIE RD. | HARTLEY LN. | 50072 | 22 | 2276 | 80 | 2 | AC |
| DEARING WAY | 3236 | FRANKHAM RD. | CUL-DE-SAC | 17534 | 22 | 797 | 78 | 2 | AC |
| DEBRICK WAY | 2354 | SOLDIER CREEK RD. | CUL-DE-SAC | 28920 | 24 | 1205 | 79 | 2 | AC |

## Table A-4
## Surface Type/Pavement Conditions on County Roads

| Road Name | Section ID | Begin Location | End Location | Area of Section | Road Width | Length | PCI | # of Lanes | Surface Type |
|---|---|---|---|---|---|---|---|---|---|
| DEER CREEK ROAD | 5100 | REDWOOD HWY 199 | CROOKS CREEK RD | 445520 | 20 | 22276 | 81 | 2 | ST |
| DEER CREEK ROAD | 5100-A | CROOKS CREEK RD | LAKESHORE DRIVE | 169920 | 20 | 8496 | 84 | 2 | ST |
| DEER CREEK ROAD | 5100-B | LAKESHORE DRIVE | END OF CO. MAINT. | 244560 | 20 | 12228 | 83 | 2 | ST |
| DELLWOOD DRIVE | 2279 | BROOKSIDE BLVD. | HAMPDEN RD. | 19624 | 22 | 892 | 90 | 2 | AC |
| DELLWOOD DRIVE | 2281 | RAINBOW DR. | CUL-DE-SAC | 36920 | 26 | 1420 | 87 | 2 | AC |
| DELSIE DRIVE | 3305 | LEONARD RD. | MESMAN DR. | 64152 | 44 | 1458 | 81 | 2 | AC |
| DEMARAY DRIVE | 3580 | REDWOOD HWY 199 | WILLOW LN. | 24400 | 16 | 1525 | 90 | 1 | AC/AC |
| DEMARAY DRIVE | 3580-A | WILLOW LN. | JEROME PRAIRIE RD. 3rd Int. | 512820 | 44 | 11655 | 86 | 2 | AC |
| DEMARAY DRIVE | 3580-B | JEROME PRAIRIE RD. 3rd Int. | MIDWAY AV. | 35475 | 33 | 1075 | 87 | 2 | AC |
| DEMARAY DRIVE | 3580-C | MIDWAY AV. | WOODLAND PARK RD. | 152214 | 23 | 6618 | 79 | 2 | AC |
| DENVER AVENUE | 2426 | HARRIS RD. | CUL-DE-SAC | 43464 | 24 | 1811 | 100 | 2 | ST |
| DETRICK DRIVE | 3483 | JAYNES DR. | WHITERIDGE RD. | 11778 | 26 | 453 | 87 | 2 | AC |
| DETRICK DRIVE | 3483-A | PENNY LN | HIDDEN VALLEY RD. | 98160 | 24 | 4090 | 84 | 2 | AC |
| DEVON DRIVE | 3227 | FRANKHAM RD | CUL-DE-SAC | 8228 | 22 | 374 | 76 | 2 | ST |
| DEXTER WAY | 3901 | FISH HATCHERY RD | CUL-DE-SAC | 30940 | 20 | 1547 | 86 | 2 | AC |
| DICK GEORGE ROAD | 5840 | HOLLAND LP. RD. | GREEN VIEW RD. | 272976 | 22 | 12408 | 82 | 2 | ST |
| DICK GEORGE ROAD | 5840-A | GREEN VIEW RD. | TAKILMA RD. | 330242 | 22 | 15011 | 82 | 2 | ST |
| DOG CREEK ROAD | 1330 | LELAND RD | END OF CO. MAINT. | 32928 | 24 | 1372 | 84 | 2 | ST |
| DOLORES DRIVE | 3633 | DOUGLAS DR | CUL-DE-SAC | 9975 | 25 | 399 | 92 | 2 | ST |
| DONALDSON ROAD | 2350 | HIGHLAND AV. | GRANITE HILL RD. | 218372 | 22 | 9926 | 86 | 2 | AC |
| DONEEN LANE | 2736 | LOWER RIVER RD | CITY LIMITS (#957) | 6028 | 22 | 274 | 78 | 2 | AC |
| DONET LANE | 2462 | CROW RD | CUL-DE-SAC | 50952 | 24 | 2123 | 82 | 2 | AC |
| DORRY LANE | 3242 | SUMMIT LP. | CUL-DE-SAC | 16302 | 22 | 741 | 78 | 2 | AC |
| DOUGLAS DRIVE | 3632 | RIVERBANKS RD ( HWY 260) | MARCY LP | 114510 | 30 | 3817 | 82 | 2 | ST |
| DOWELL ROAD | 3310 | LEONARD ROAD | REDWOOD AVENUE | 45036 | 36 | 1251 | 83 | 2 | AC |
| DOWELL ROAD | 3310-A | REDWOOD AVENUE | REDWOOD HWY 199 | 62730 | 45 | 1394 | 84 | 3 | AC |
| DOWELL ROAD | 3310-B | REDWOOD HWY 199 | ARNOLD AVENUE | 55990 | 22 | 2545 | 87 | 2 | AC |
| DRAPER VALLEY ROAD | 5060 | REDWOOD HWY 199 | REDWOOD HWY 199 | 336776 | 22 | 15308 | 84 | 2 | ST |
| DRURY LANE | 3120 | GRANDVIEW AVENUE | CITY LIMITS | 29555 | 23 | 1285 | 73 | 2 | AC |
| DRYDEN ROAD | 5170 | DEER CREEK RD | LAKE SHORE DR | 45342 | 18 | 2519 | 86 | 2 | AC |
| DUSTIN WAY | 2769 | PINE CREST DR | CUL-DE-SAC | 15334 | 22 | 697 | 85 | 2 | ST |
| DUTCHER CREEK ROAD | 3631 | MARCY LP | CUL-DE-SAC | 172680 | 24 | 7195 | 80 | 2 | ST |
| EAGLE RIDGE DRIVE | 2974 | LOWER RIVER RD-HWY 260 | CUL-DE-SAC | 21384 | 22 | 972 | 82 | 2 | ST |
| EAST FORK ROAD | 4200 | WILLIAMS HWY | BROWNS RD. | 88228 | 28 | 3151 | 85 | 2 | AC/AC |
| EAST FORK ROAD | 4200-A | BROWNS RD | PERCY LN. | 250355 | 23 | 10885 | 84 | 2 | AC |
| EAST FORK ROAD | 4200-B | PERCY LN. | BLM ROAD 39-5-23.2 | 141162 | 21 | 6722 | 84 | 2 | AC |
| EAST FORK ROAD | 4200-C | BLM ROAD 39-5-23.2 | END OF PAVEMENT | 144208 | 16 | 9013 | 100 | 2 | ST |
| EAST VIEW PLACE | 3202 | CLOVERLAWN DR | CUL-DE-SAC | 21630 | 35 | 618 | 95 | 2 | PCC |
| ECHO WAY | 2056 | BECKLIN DR. | CUL-DE-SAC | 35100 | 30 | 1170 | 82 | 2 | ST |
| EDGERTON LANE | 1445 | PLACER ROAD | CUL-DE-SAC | 41568 | 24 | 1732 | 100 | 2 | AC |
| EDGEWOOD ROAD | 1140 | SPEAKER RD | END OF PAVEMENT | 18666 | 18 | 1037 | 79 | 2 | ST |
| EIGHT DOLLAR MOUNTAIN ROAD | 5240 | REDWOOD HWY 199 | END OF CO. MAINT. | 118074 | 22 | 5367 | 72 | 2 | ST |
| EL CAMINO WAY | 2915 | LOWER RIVER RD-HWY 260 | ROAN DR. | 33930 | 26 | 1305 | 83 | 2 | AC |
| ELAINE DRIVE | 3464 | HONEYLYNN LN | CUL-DE-SAC | 8602 | 22 | 391 | 90 | 2 | AC |
| ELK LANE | 3316 | ARNOLD AV. | LONNON RD. | 93880 | 20 | 4694 | 86 | 2 | ST |
| ELK LANE | 3316-A | LONNON RD. | CUL-DE-SAC | 64960 | 20 | 3248 | 86 | 2 | ST |
| ELLIOTT CREEK ROAD | 3655 | REDWOOD HWY. 199 | END OF PAVEMENT | 4725 | 21 | 225 | 84 | 2 | AC/AC |
| ELROD LANE | 3218 | HAVILAND DR | CUL-DE-SAC | 5448 | 24 | 227 | 100 | 2 | ST |
| ENTERPRISE AVENUE | 2442 | PLEASANT VALLEY RD | CUL-DE-SAC | 40222 | 26 | 1547 | 84 | 2 | ST |
| ERIC LOOP | 2357 | SOLDIER CREEK RD. | SOLDIER CREEK RD. | 57090 | 22 | 2595 | 86 | 2 | AC |
| ERIN DRIVE | 3256 | LANDAU LANE | DEAD END | 3135 | 33 | 95 | 100 | 2 | AC/AC |
| ESPEY ROAD | 3435 | JACKSONVILLE HWY. (238) | GOLF COURSE ENT. | 19968 | 32 | 624 | 92 | 2 | AC |
| ESPEY ROAD | 3435-A | GOLF COURSE ENTRANCE | END OF PAVEMENT | 55418 | 22 | 2519 | 85 | 2 | AC |
| ESTATES LANE | 3526 | WILLOW LANE | REDWOOD LANE | 12210 | 33 | 370 | 100 | 2 | AC |
| EVON CIRCLE | 3146 | AXTELL DR | CUL-DE-SAC | 12024 | 36 | 334 | 79 | 2 | AC |
| EWE CREEK ROAD | 2870 | LOWER RIVER RD. (HWY 260) | MONICA RD. | 128600 | 20 | 6430 | 83 | 2 | AC |
| EWE CREEK ROAD | 2870-A | MONICA RD. | RIESSEN RD. | 101024 | 32 | 3157 | 85 | 2 | AC |
| EWE CREEK ROAD | 2870-B | RIESSEN RD. | AZALEA DR. | 23488 | 32 | 734 | 89 | 2 | AC |
| FAHEY WAY | 3518 | SUN GLO DR | CUL-DE-SAC | 6120 | 34 | 180 | 89 | 2 | AC |
| FAVILL LANE | 2677 | 200' W. OF FAVILL RD | 500' E. OF FAVILL RD. | 13760 | 20 | 688 | 83 | 2 | ST |
| FAVILL ROAD | 2678 | N ST NE | FAVILL LN. | 19756 | 22 | 898 | 73 | 2 | AC |
| FELICIA LANE | 3367 | LEONARD ROAD | CUL-DE-SAC | 14520 | 22 | 660 | 95 | 2 | AC |
| FELKNER ROAD | 3925 | FISH HATCHERY RD | CUL-DE-SAC | 52844 | 22 | 2402 | 90 | 2 | AC |
| FERNWOOD DRIVE | 5574 | MESA VERDE DR | CUL-DE-SAC | 115875 | 25 | 4635 | 83 | 2 | ST |
| FERRY ROAD | 2981 | LOWER RIVER RD-HWY 260 | QUAIL LN. | 52912 | 16 | 3307 | 89 | 1 | AC |
| FERRY ROAD | 2981-A | QUAIL LN. | END OF PAVEMENT | 55572 | 12 | 4631 | 83 | 1 | AC |
| FIELDS ROAD | 4012 | WATERGAP RD | END OF MAINT. | 35075 | 23 | 1525 | 84 | 2 | ST |
| FINCH ROAD | 5315 | REDWOOD HWY 199 | WEST SIDE RD | 92526 | 21 | 4406 | 84 | 2 | ST |
| FIRVIEW LANE | 3658 | ROUND PRARIIE CR. RD. | MINNOW LN. | 57954 | 26 | 2229 | 81 | 2 | AC |
| FISH HATCHERY ROAD | 3900 | NEW HOPE RD | SOUTHSIDE RD | 249120 | 24 | 10380 | 84 | 2 | AC |
| FISH HATCHERY ROAD | 3900-A | SOUTHSIDE RD | 500' SE BULL CREEK RD | 177650 | 22 | 8075 | 83 | 2 | AC |
| FISH HATCHERY ROAD | 3900-B | 500' SE BULL CREEK RD | MILEPOST 4 | 99280 | 40 | 2482 | 84 | 2 | AC |
| FISH HATCHERY ROAD | 3900-C | MILEPOST 4 | CRYSTAL SPRINGS DR | 245696 | 22 | 11168 | 84 | 2 | AC |
| FISH HATCHERY ROAD | 3900-D | CRYSTAL SPRINGS DR | WILDERVILLE LN | 35772 | 22 | 1626 | 84 | 2 | AC |
| FISH HATCHERY ROAD | 3900-E | WILDERVILLE LN | REDWOOD HWY 199 | 17072 | 22 | 776 | 84 | 2 | AC |
| FLAMING ROAD | 2282 | BROOKSIDE BLVD. | END OF PAVEMENT | 86658 | 22 | 3939 | 81 | 2 | AC |
| FLORER DRIVE | 3405 | 200' N. OF THOMAS CIRCLE | 100' S. OF BELINDY CIRCLE | 22011 | 33 | 667 | 87 | 2 | AC |
| FLORER DRIVE | 3405-A | 174' N. OF MINI LANE | 200' N. OF THOMAS CIRCLE | 12210 | 33 | 370 | 100 | 2 | AC |
| FOOTHILL BOULEVARD | 2499 | ROYAL DRIVE | FOOTHILL BOULVEARD-CITY | 25080 | 33 | 760 | 75 | 2 | AC |
| FOOTHILL BOULEVARD | 2500 | ODD FELLOWS CEMENTARY | AMENT RD. | 50176 | 32 | 1568 | 100 | 2 | AC |
| FOOTHILL BOULEVARD | 2500-A | AMENT RD. | JONES CREEK RD. | 29876 | 22 | 1358 | 95 | 2 | AC/AC |
| FOOTHILL BOULEVARD | 2500-B | JONES CREEK RD. | AVERILL DR. | 219328 | 23 | 9536 | 82 | 2 | AC |
| FOOTHILL BOULEVARD | 2500-C | AVERILL DR. | COUNTY LINE. | 169050 | 23 | 7350 | 82 | 2 | AC |
| FOREST GLEN DRIVE | 2878 | AZALEA DR | CUL-DE-SAC | 42936 | 24 | 1789 | 70 | 2 | ST |
| FOREST LANE | 3243 | SUMMIT LP. | CUL-DE-SAC | 12804 | 22 | 582 | 86 | 2 | AC |
| FRANKHAM ROAD | 3228 | CLOVERLAWN DR | BROOK LN. | 82056 | 24 | 3419 | 85 | 2 | ST |

## Table A-4
## Surface Type/Pavement Conditions on County Roads

| Road Name | Section ID | Begin Location | End Location | Area of Section | Road Width | Length | PCI | # of Lanes | Surface Type |
|---|---|---|---|---|---|---|---|---|---|
| FRONT STREET | 1050 | SPEAKER RD | LOWER WOLF CR. | 13600 | 25 | 544 | 83 | 2 | AC |
| FRONTAGE ROAD | 1012 | ON RAMP TO I-5 NORTH1 | NORTHERN MOST ON RAMP | 174240 | 22 | 7920 | 82 | 2 | AC |
| FRUITDALE DRIVE | 3100 | JACKSONVILLE HWY 238 | BOYNTON DR. | 72684 | 36 | 2019 | 91 | 2 | AC |
| FRUITDALE DRIVE | 3100-A | BOYNTON DR. | PARKDALE DR. | 49644 | 36 | 1379 | 89 | 2 | AC |
| FRUITDALE DRIVE | 3100-B | PARKDALE DR. | GARDENDALE LN. | 71460 | 36 | 1985 | 85 | 2 | AC |
| FRUITDALE DRIVE | 3100-C | GARDENDALE LN. | MT. BALDY RD. | 172074 | 42 | 4097 | 90 | 2 | AC |
| FRUITDALE DRIVE | 3100-D | MT. BALDY RD. | ROGUE RIVER HWY 99 | 78650 | 22 | 3575 | 93 | 2 | AC |
| G STREET | 2707 | LEONARD ST | LINCOLN RD | 41600 | 32 | 1300 | 75 | 2 | AC |
| GALAXY WAY | 3351 | DARNEILLE LN. | DARNEILLE LN. | 49856 | 32 | 1558 | 88 | 2 | AC |
| GALICE ROAD | 2401 | PLEASANT VALLEY ROAD | ROBERTSON BRIDGE ROAD | 56232 | 44 | 1278 | 92 | 2 | AC/AC |
| GALICE ROAD | 2401-A | ROBERTSON BRIDGE ROAD | AZALEA DRIVE | 175767 | 41 | 4287 | 92 | 2 | AC/AC |
| GALICE ROAD | 2401-B | AZALEA DR. | THORNBROOK DR. | 372100 | 25 | 14884 | 83 | 2 | AC |
| GALICE ROAD | 2401-C | THORNBROOK DR. | HOG CREEK LANDING | 123825 | 25 | 4953 | 85 | 2 | AC |
| GALICE ROAD | 2401-D | HOG CREEK LANDING | INDIAN MARY PARK ENT. | 292968 | 24 | 12207 | 84 | 2 | AC |
| GALICE ROAD | 2401-E | INDIAN MARY PARK ENT. | TAYLOR CREEK RD. | 186528 | 24 | 7772 | 85 | 2 | AC |
| GALICE ROAD | 2401-F | TAYLOR CREEK RD. | GALICE ACCESS RD. | 367872 | 24 | 15328 | 84 | 2 | AC |
| GALICE ROAD | 2401-G | GALICE ACCESS RD. | CHAIR RIFFLE REC. SITE | 314520 | 24 | 13105 | 84 | 2 | AC |
| GALICE ROAD | 2401-H | CHAIR RIFFLE REC. SITE | END OF CO. MAINT. | 173856 | 24 | 7244 | 85 | 2 | AC |
| GARDEN TERRACE ROAD | 3131 | GAFFNEY WY | CUL-DE-SAC | 10815 | 21 | 515 | 83 | 2 | ST |
| GARNER ROAD | 5855 | WHITE SCHOOL RD. | CUL-DE-SAC | 102608 | 22 | 4664 | 84 | 2 | ST |
| GARNET LANE | 2925 | STEWART RD | CUL-DE-SAC | 37136 | 22 | 1688 | 81 | 2 | AC |
| GARY LANE | 2053 | BARKER DR. | CUL-DE-SAC | 23575 | 25 | 943 | 89 | 2 | ST |
| GENE BROWN ROAD | 5580 | REDWOOD HWY 199 | DEAD END | 59423 | 13 | 4571 | 82 | 1 | ST |
| GENVERNA GLEN | 3472 | FISH HATCHERY RD | STRINGER GAP | 68172 | 23 | 2964 | 85 | 2 | AC |
| GIBSON STREET | 2433 | ALMOND ST. | ACORN ST. | 8400 | 20 | 420 | 79 | 2 | AC |
| GLADIOLA AVENUE | 2673 | N STREET | 270' NORTH OF LEIGH LATERIAL | 13634 | 34 | 401 | 95 | 2 | AC |
| GLADIOLA AVENUE | 2679 | LEIGH LATERIAL | PORTOLA DRIVE | 16694 | 34 | 491 | 95 | 2 | AC |
| GLEN DRIVE | 2760 | LOWER RIVER RD-HWY 260 | CUL-DE-SAC | 24508 | 22 | 1114 | 84 | 2 | AC |
| GLENDON ROAD | 5350 | REDWOOD HWY 199 | HATHAWAY ROAD | 11934 | 26 | 459 | 87 | 2 | AC |
| GLENOAK LANE | 2527 | LENELNA LN | CUL-DE-SAC | 20181 | 21 | 961 | 79 | 2 | AC |
| GLENWOOD STREET | 3260 | CLOVERLAWN DR. | JACKSONVILLE HWY 238 | 41646 | 22 | 1901 | 81 | 2 | AC |
| GLENWOOD STREET | 3260-A | JACKSONVILLE HWY 238 | HOMEWOOD RD. | 7546 | 22 | 343 | 89 | 2 | AC |
| GOLDEN ASPEN DRIVE | 3355 | DARNEILLE LANE | CUL-DE-SAC | 22824 | 36 | 634 | 100 | 2 | AC |
| GORDON WAY | 3092 | ROGUE RIVER HWY 99 | CHINOOK PARK LN. | 38324 | 22 | 1742 | 77 | 2 | AC |
| GORDON WAY, SOUTH | 3093 | ROGUE RIVER HWY 99 | GREENS CREEK RD. | 27270 | 18 | 1515 | 80 | 2 | AC |
| GRANDVIEW AVENUE | 3210 | HARBECK RD | CLOVERLAWN DR. | 121647 | 23 | 5289 | 71 | 2 | AC |
| GRANGE ROAD | 2241 | BOYER RD. | WILLIAMSON LP. | 14460 | 20 | 723 | 100 | 2 | ST |
| GRANITE HILL ROAD | 2300 | SCENIC DRIVE (WEST) | DONALDSON RD | 301160 | 40 | 7529 | 85 | 2 | AC |
| GRANITE HILL ROAD | 2300-A | DONALDSON RD. | GROUSE CREEK RD. | 219912 | 34 | 6468 | 85 | 2 | AC |
| GRANITE HILL ROAD | 2300-B | GROUSE CREEK RD. | WINONA RD. | 202740 | 30 | 6758 | 80 | 2 | AC |
| GRANITE HILL ROAD | 2300-C | WINONA RD. | END OF CO. MAINT. | 61308 | 18 | 3406 | 100 | 2 | ST |
| GRANTS PASS ROAD | 2402 | MERLIN RD. | CUL-DE-SAC | 10634 | 26 | 409 | 77 | 2 | AC |
| GRAYS CREEK ROAD | 3830 | JACKSONVILLE HWY 238 | CUL-DE-SAC | 161062 | 22 | 7321 | 83 | 2 | AC |
| GREEN ACRES DRIVE | 2446 | PLEASANT VALLEY RD | CUL-DE-SAC | 23474 | 22 | 1067 | 86 | 2 | AC |
| GREENFIELD ROAD | 2312 | SCOVILLE RD. | END OF CO. MAINT. | 55440 | 20 | 2772 | 84 | 2 | AC |
| GREENS CREEK ROAD | 3090 | ROGUE RIVER HWY 99 | CUL-DE-SAC | 154791 | 27 | 5733 | 85 | 2 | AC |
| GREGG CIRCLE | 3408 | FLORER DR. | CUL-DE-SAC | 5742 | 33 | 174 | 84 | 2 | AC |
| GRIFFIN ROAD | 3610 | RIVERBANKS RD (HWY 260) | EAST OF ROSSIERE LN | 51425 | 17 | 3025 | 100 | 2 | ST |
| GROUSE CREEK ROAD | 2140 | GRANITE HILL RD. | HORSESHOE DRIVE | 98472 | 24 | 4103 | 87 | 2 | AC |
| GUNNELL ROAD | 2970 | LOWER RIVER RD-HWY 260 | END OF CO. MAINT. | 217980 | 21 | 10380 | 88 | 2 | AC |
| GUTH ROAD | 2120 | HORSESHOE DR. | CUL-DE-SAC | 23160 | 24 | 965 | 79 | 2 | AC |
| HAINES LANE | 2447 | PLEASANT VALLEY RD | CUL-DE-SAC | 21010 | 22 | 955 | 77 | 2 | AC |
| HALF MOON CIRCLE | 3352 | GALAXY WAY | CUL-DE-SAC | 8151 | 33 | 247 | 89 | 2 | AC |
| HAMILTON LANE | 3220 | EAST PARK ST | ROGUE RIVER HWY | 6540 | 20 | 327 | 91 | 2 | AC |
| HAMILTON LANE | 3220-A | ROGUE RIVER HWY | FRUITDALE DRIVE | 25674 | 22 | 1167 | 69 | 2 | AC |
| HAMILTON LANE | 3220-B | FRUITDALE DRIVE | KELDAN LN. | 70862 | 22 | 3221 | 82 | 2 | AC |
| HAMILTON LANE | 3220-C | KELDAN LN. | CLOVERLAWN DR | 96756 | 22 | 4398 | 84 | 2 | AC |
| HAMPDEN DRIVE | 2284 | BROOKSIDE BLVD. | DELLWOOD DR. | 19976 | 22 | 908 | 90 | 2 | AC |
| HANSEN DRIVE | 2775 | LATHROP RD | LATHROP LANE | 28632 | 24 | 1193 | 86 | 2 | AC |
| HAPPY CAMP ROAD | 5828 | WALDO RD. | MILEPOST 3 | 332976 | 21 | 15856 | 84 | 2 | AC |
| HAPPY CAMP ROAD | 5828-A | MILEPOST 3 | MILEPOST 6 | 331128 | 21 | 15768 | 85 | 2 | AC |
| HAPPY CAMP ROAD | 5828-B | MILE POST 6 | MILE POST 9 | 333858 | 21 | 15898 | 71 | 2 | AC |
| HAPPY CAMP ROAD | 5828-C | MILE POST 9 | SNOW-PARK ENTRANCE | 170037 | 21 | 8097 | 71 | 2 | AC |
| HAPPY CAMP ROAD | 5828-D | SNOW-PARK ENTRANCE | CALIFORNIA BORDER | 117411 | 21 | 5591 | 76 | 2 | AC |
| HARBECK ROAD | 3430 | JACKSONVILLE HWY. (238) | WEST HARBECK RD. | 85880 | 38 | 2260 | 75 | 2 | AC |
| HARBECK ROAD | 3430-A | HARBECK RD. (WEST) | #2575 HARBECK RD. | 75504 | 22 | 3432 | 86 | 2 | AC |
| HARBECK ROAD, WEST | 3420 | HARBECK RD. | JACKSONVILLE HWY 238 | 90545 | 35 | 2587 | 81 | 2 | AC |
| HARBECK ROAD, WEST | 3420-A | JACKSONVILLE HWY 238 | ALLEN CREEK ROAD | 73996 | 26 | 2846 | 74 | 2 | AC |
| HARLEY LANE | 2463 | DONNET LN | CUL-DE-SAC | 11808 | 24 | 492 | 87 | 2 | ST |
| HARLOW WAY | 5614 | BLAS CERDENA DR | CUL-DE-SAC | 17270 | 22 | 785 | 86 | 2 | ST |
| HARPER LOOP | 3216 | SKY CREST DR | SKY CREST DR. | 58652 | 22 | 2666 | 85 | 2 | ST |
| HARRIS ROAD | 2428 | CARTON WY. | DENVER AVE. | 9120 | 24 | 380 | 100 | 2 | ST |
| HARTLEY LANE | 3743 | SAND CREEK RD. | DE WOODY LN. | 28600 | 22 | 1300 | 83 | 2 | AC |
| HARTSFIELD LANE | 2258 | RUSSELL RD. | CUL-DE-SAC | 55874 | 26 | 2149 | 83 | 2 | AC |
| HASIS DRIVE | 2074 | HUGO RD. | CUL-DE-SAC | 54775 | 25 | 2191 | 78 | 2 | ST |
| HATHAWAY DRIVE | 5345 | PUGETVILLE RD | GLENDON ROAD | 35932 | 26 | 1382 | 87 | 2 | AC |
| HAVILAND DRIVE | 3215 | GRANDVIEW AVE | CUL-E-SAC | 42576 | 24 | 1774 | 70 | 2 | AC |
| HAWTHORNE AVENUE | 2641 | MIDLAND AV. | 100 FT S. OF MORGAN LN. | 76840 | 34 | 2260 | 81 | 2 | AC |
| HAYES HILL | 3680 | REDWOOD HWY. 199 | REDWOOD HWY.199 | 233331 | 21 | 11111 | 81 | 2 | AC/AC |
| HAYLEES WAY | 2232 | MONUMENT DR. | CUL-DE-SAC | 46221 | 21 | 2201 | 89 | 2 | AC |
| HAYS CUTOFF ROAD | 5810 | HOLLAND LOOP RD | WHITE SCHOOL RD. | 107340 | 20 | 5367 | 100 | 2 | ST |
| HELGESON LANE | 3746 | JEROME PRAIRIE RD. | PATRICK RD | 40560 | 20 | 2028 | 85 | 2 | AC |
| HELMS ROAD | 3790 | REDWOOD HWY 199 | LAINE CT. | 105760 | 40 | 2644 | 85 | 2 | AC |
| HELMS ROAD | 3790-A | LAINE CT. | JEROME PRAIRIE RD. | 39042 | 27 | 1446 | 85 | 2 | AC |
| HELMS ROAD | 3790-B | JEROME PRAIRIE RD. | EUREKA FRUIT FARM RD. | 22659 | 21 | 1079 | 83 | 2 | AC |
| HESSAR STREET | 3231 | WALKER RD. | CUL-DE-SAC | 34346 | 26 | 1321 | 83 | 2 | ST |

## Table A-4
## Surface Type/Pavement Conditions on County Roads

| Road Name | Section ID | Begin Location | End Location | Area of Section | Road Width | Length | PCI | # of Lanes | Surface Type |
|---|---|---|---|---|---|---|---|---|---|
| HIDDEN ACRES DRIVE | 2263 | NORTHWOODS DR. | CUL-DE-SAC | 54384 | 22 | 2472 | 81 | 2 | ST |
| HIDDEN VALLEY ROAD | 3485 | NEW HOPE RD | CUL-DE-SAC | 123288 | 24 | 5137 | 84 | 2 | AC |
| HIEGLEN LOOP ROAD | 2612 | WOODBROOK DR | END OF CO. MAINT. | 23694 | 22 | 1077 | 72 | 2 | AC |
| HIGHLAND AVENUE | 2600 | 100 FT N. OF CAROL ST. | 100 FT S. OF WRIGHTWOOD CIR | 89680 | 38 | 2360 | 81 | 2 | AC |
| HIGHLAND AVENUE | 2600-A | 100' S OF WRIGHTWOOD CIR | 300' S OF SINCLAIR ST | 31572 | 36 | 877 | 83 | 2 | AC |
| HIGHLAND AVENUE | 2600-B | 300' S OF SINCLAIR ST | VINE ST. | 21645 | 37 | 585 | 84 | 2 | AC |
| HIGHLAND AVENUE | 2600-C | VINE ST. | 500' N OF PONY LANE | 89460 | 36 | 2485 | 90 | 2 | AC |
| HIGHLAND AVENUE | 2600-D | 500' N OF PONY LN | MOREWOOD LN. | 151920 | 36 | 4220 | 90 | 2 | AC |
| HIGHLAND AVENUE | 2600-E | MOREWOOD LN. | MERLIN RD. | 204516 | 36 | 5681 | 89 | 2 | AC |
| HIGHLAND AVENUE | 2600-F | MERLIN RD. | LLOYD DR. | 69552 | 36 | 1932 | 80 | 2 | AC |
| HIGHLAND AVENUE | 2600-G | LLOYD DR. | 500' N OF #6203 | 61680 | 20 | 3084 | 86 | 2 | AC/AC |
| HIGHLAND AVENUE | 2600-H | 500' N OF #6203 HIGHLAND | #6767 HIGHLAND | 62552 | 28 | 2234 | 87 | 2 | AC/AC |
| HIGHLAND AVENUE | 2600-I | #6767 HIGHLAND RD. | END OF CO. MAINT. (GATE) | 92224 | 22 | 4192 | 72 | 2 | AC |
| HILLCREST DRIVE | 2659 | 6TH ST | HAWTHORNE AV. | 50480 | 40 | 1262 | 71 | 2 | AC |
| HILLCREST DRIVE, NORTHEAST | 2660 | 9TH ST | BEACON DR. | 78097 | 29 | 2693 | 78 | 2 | AC |
| HILLCREST DRIVE, NORTHEAST | 2660-A | BEACON DRIVE | HILLCREST LANE | 9620 | 26 | 370 | 76 | 2 | AC |
| HILLVIEW DRIVE | 3836 | CRYSTAL DR | CUL-DE-SAC | 44396 | 22 | 2018 | 87 | 2 | AC |
| HIMRICH DRIVE | 3902 | FISH HATCHERY RD | CUL-DE-SAC | 12716 | 22 | 578 | 85 | 2 | AC |
| HITCHING POST ROAD | 2072 | HUGO RD. | CUL-DE-SAC | 75336 | 24 | 3139 | 88 | 2 | AC |
| HIXSON DRIVE | 2871 | AZALEA DR | CUL-DE-SAC | 119700 | 28 | 4275 | 82 | 2 | AC |
| HOGUE DRIVE | 5090 | REDWOOD HWY 199 | REDWOOD HWY 199 | 144474 | 22 | 6567 | 88 | 2 | AC |
| HOLBROOK WAY | 2424 | MERLIN RD. | CUL-DE-SAC | 15906 | 22 | 723 | 87 | 2 | ST |
| HOLLAND LOOP ROAD | 5800 | OREGON CAVES HWY 46 | TAKILMA ROAD | 208026 | 21 | 9906 | 90 | 2 | AC |
| HOLLAND LOOP ROAD | 5800-A | TAKILMA ROAD | KENDALL ROAD | 382200 | 21 | 18200 | 100 | 2 | ST |
| HOLLAND LOOP ROAD | 5800-B | KENDALL RD. | CAVES HWY 46 | 272874 | 21 | 12994 | 100 | 2 | ST |
| HOLTON CREEK ROAD | 5320 | REDWOOD HWY 199 | CUL-DE-SAC | 54428 | 22 | 2474 | 80 | 2 | ST |
| HOMEWOOD ROAD | 3261 | GLENWOOD ST. | END OF PAVEMENT | 39138 | 22 | 1779 | 89 | 2 | AC |
| HONEYCUTT DRIVE | 2776 | LATHROP LN | CUL-DE-SAC | 44704 | 22 | 2032 | 87 | 2 | AC |
| HONEYLYNN LANE | 3465 | INTERVALE RD (EAST) | JAYNES DR | 55872 | 24 | 2328 | 85 | 2 | AC |
| HORIZON HILLS ROAD | 4070 | WILLIAMS HWY | CUL-DE-SAC | 88155 | 27 | 3265 | 85 | 2 | AC |
| HORSESHOE DRIVE | 2110 | NELSON WY. | NELSON WY | 126312 | 24 | 5263 | 81 | 2 | AC |
| HUBBARD LANE | 3530 | REDWOOD AVENUE | REDWOOD HWY 199 | 51700 | 22 | 2350 | 82 | 2 | AC |
| HUBBARD LANE | 3530-A | REDWOOD HWY 199 | HUBBARD LN (#2222) | 33110 | 22 | 1505 | 84 | 2 | AC |
| HUBBARD LANE | 3530-B | HUBBARD LN (#2222) | DEMARAY DRIVE | 14520 | 22 | 660 | 83 | 2 | AC |
| HUBBARD LANE | 3531 | HUBBARD LN (#2222) | DEAD END | 12792 | 24 | 533 | 100 | 2 | ST |
| HUGO ROAD | 2050 | GALICE ROAD | BECKLIN DRIVE | 38720 | 22 | 1760 | 89 | 2 | AC |
| HUGO ROAD | 2050-A | BECKILN DRIVE | QUARTZ CREEK ROAD | 229988 | 22 | 10454 | 86 | 2 | AC |
| HUGO ROAD | 2050-B | QUARTZ CREEK RD. | THREE PINES RD. | 312576 | 22 | 14208 | 86 | 2 | AC |
| HUGO ROAD | 2050-C | THREE PINES RD | OXYOKE ROAD | 208032 | 22 | 9456 | 86 | 2 | AC |
| HUMBERD LANE | 3437 | JACKSONVILLE HWY. (238) | DEAD END | 31702 | 22 | 1441 | 85 | 2 | AC |
| HUMMINGBIRD ROAD | 5837 | HOLLAND LP. RD. | CUL-DE-SAC | 88704 | 22 | 4032 | 82 | 2 | ST |
| HUNT LANE | 2910 | UPPER RIVER RD | LOWER RIVER RD. | 79508 | 22 | 3614 | 84 | 2 | AC |
| IDLEWILD DRIVE | 5612 | ROCKYDALE RD | DEAD END | 156390 | 30 | 5213 | 83 | 2 | ST |
| ILLINOIS RIVER ROAD | 5070 | REDWOOD HWY 199 | END OF PAVEMENT | 268500 | 20 | 13425 | 81 | 2 | AC |
| INCLINE DRIVE | 3441 | SHADOW MOUNTAIN WY. | CUL-DE-SAC | 8496 | 24 | 354 | 89 | 2 | AC |
| INGALLS LANE | 3650 | REDWOOD HWY. (HWY. 199) | END OF PAVEMENT | 95760 | 15 | 6384 | 82 | 1 | AC |
| INTERVALE ROAD, EAST | 3460 | NEW HOPE RD. | RANDY DR. | 63350 | 25 | 2534 | 85 | 2 | AC |
| IRIS LANE | 2855 | AZALEA DR | CUL-DE-SAC | 24360 | 24 | 1015 | 69 | 2 | AC |
| IVY DRIVE | 5576 | FERNWOOD DR | SIMMONS CUT DR | 32075 | 25 | 1283 | 83 | 2 | ST |
| JACKADEL LANE | 5844 | DICK GEORGE RD. | CUL-DE-SAC | 55020 | 21 | 2620 | 79 | 2 | ST |
| JAIME LANE | 2490 | CAMP JOY RD | MERLIN RD. | 30968 | 28 | 1106 | 100 | 2 | ST |
| JANICE WAY | 2467 | CROW RD (EAST) | CUL-DE-SAC | 27944 | 28 | 998 | 85 | 2 | AC |
| JASON WAY | 3206 | SWARTHOUT DR | CUL-DE-SAC | 6600 | 24 | 275 | 84 | 2 | ST |
| JAYNES DRIVE | 3462 | CLOVERLAWN DR | JACKSONVILLE HWY 238 | 176840 | 40 | 4421 | 82 | 2 | AC |
| JAYNES DRIVE | 3462-A | JACKSONVILLE HWY 238 | NEW HOPE RD | 275232 | 32 | 8601 | 83 | 2 | AC |
| JENKINS AVENUE | 3370 | REDWOOD AV. | LEONARD RD. | 87950 | 25 | 3518 | 85 | 2 | ST |
| JEROME PRAIRIE ROAD | 3700 | DEMARAY DR (NORTH INT) | DEMARAY DRIVE (SOUTH INT.) | 135600 | 20 | 6780 | 89 | 2 | AC |
| JEROME PRAIRIE ROAD | 3700-A | DEMARAY DR. | WOODLAND PARK RD. | 236340 | 30 | 7878 | 83 | 2 | AC |
| JEROME PRAIRIE ROAD | 3700-B | WOODLAND PARK RD. | 100' N. OF MILE POST 3 | 27522 | 22 | 1251 | 71 | 2 | AC |
| JEROME PRAIRIE ROAD | 3700-C | 100' N. OF MILE POST3 | 100' S. OF SLEEPY HOLLOW LP. | 27982 | 34 | 823 | 60 | 2 | AC |
| JEROME PRAIRIE ROAD | 3700-D | 100' S. OF SLEEPY HOLLOW | HELMS RD. | 50364 | 18 | 2798 | 46 | 2 | AC |
| JO CREEK PLACE | 2269 | RUSSELL RD. | CUL-DE-SAC | 10560 | 22 | 480 | 87 | 2 | AC |
| JOHNMARK CIRCLE | 3145 | AXTELL DR | CUL-DE-SAC | 12096 | 36 | 336 | 81 | 2 | AC |
| JOHNSON DRIVE | 3450 | NEW HOPE RD. | END OF PAVEMENT | 35060 | 20 | 1753 | 83 | 2 | AC |
| JONES CREEK LOOP, EAST | 2533 | JONES CREEK, EAST | JONES CREEK, EAST | 8928 | 18 | 496 | 72 | 2 | AC |
| JONES CREEK ROAD, EAST | 2534 | JONES CREEK RD, WEST | CUL-DE-SAC | 268230 | 30 | 8941 | 88 | 2 | AC |
| JONES CREEK ROAD, WEST | 2530 | FOOTHILL BLVD. | CUL-DE-SAC | 286682 | 22 | 13031 | 80 | 2 | AC |
| JOSEPHINE STREET | 2439 | MERLIN RD | ACORN ST. | 13053 | 19 | 687 | 70 | 2 | ST |
| JOSHUA STREET | 2802 | AZALEA DR | CUL-DE-SAC | 13024 | 22 | 592 | 66 | 2 | ST |
| JUMP OFF JOE CREEK ROAD | 2010 | I-5 FRONTAGE RD. | SHORTHORN GULCH RD. | 206195 | 23 | 8965 | 83 | 2 | AC |
| JUMP OFF JOE CREEK ROAD | 2010-A | SHORTHORN GULCH RD. | WINONA RD. | 243826 | 22 | 11083 | 83 | 2 | AC |
| JUMP OFF JOE CREEK ROAD | 2010-B | WINONA RD. | #4760 JUMP OFF JOE CR RD | 71400 | 28 | 2550 | 89 | 2 | AC |
| JUMP OFF JOE CREEK ROAD | 2010-C | #4760 JUMP OFF JOE CR RD | MILE POST 5 | 80146 | 22 | 3643 | 89 | 2 | AC |
| JUMP OFF JOE CREEK ROAD | 2010-D | MILE POST 5 | END OF PAVEMENT | 29444 | 17 | 1732 | 89 | 2 | AC |
| KAREN DRIVE | 2880 | LOWER RIVER RD-HWY 260 | KIMBERLY WAY | 12075 | 25 | 483 | 83 | 2 | ST |
| KARRAL DRIVE | 3385 | PAULDINE WY. | DEAD END | 10548 | 18 | 586 | 84 | 2 | ST |
| KEEN ROAD | 3933 | WETHERBEE DR | CUL-DE-SAC | 92880 | 24 | 3870 | 86 | 2 | AC |
| KEETA WAY | 2213 | MONTERICO RD. | END OF PAVEMENT | 18900 | 20 | 945 | 100 | 2 | ST |
| KELDAN LANE | 3225 | HAMILTON LN | CUL-DE-SAC | 8558 | 22 | 389 | 85 | 2 | AC |
| KELLENBECK AVENUE | 3524 | REDWOOD AV | CUL-DE-SAC | 28500 | 38 | 750 | 85 | 2 | AC |
| KELLENBECK AVENUE | 3524-A | DEAD END | WILLOW LN. | 36518 | 38 | 961 | 85 | 2 | AC |
| KEN CANYON ROAD | 2531 | MINA LANE | CUL-DE-SAC | 7040 | 22 | 320 | 95 | 2 | AC |
| KEN ROSE LANE | 5571 | REDWOOD HWY 199 | CASCADE DR | 45630 | 26 | 1755 | 83 | 2 | ST |
| KENDALL ROAD | 5860 | HOLLAND LP. RD. | ALTHOUSE CREEK ROAD | 46140 | 20 | 2307 | 100 | 2 | ST |
| KENDALL ROAD | 5860-A | ALTHOUSE CR. RD | END OF PAVEMENT | 51200 | 16 | 3200 | 82 | 2 | AC |
| KENDALLBROOK WAY | 3473 | STRINGER GAP ROAD | CUL-DE-SAC | 12320 | 22 | 560 | 100 | 2 | AC |

## Table A-4
## Surface Type/Pavement Conditions on County Roads

| Road Name | Section ID | Begin Location | End Location | Area of Section | Road Width | Length | PCI | # of Lanes | Surface Type |
|---|---|---|---|---|---|---|---|---|---|
| KERBY MAINLINE ROAD | 5330 | REDWOOD HWY 199 | GATE | 183320 | 20 | 9166 | 80 | 2 | ST |
| KERBY STREET | 5310 | REDWOOD HWY 199 | DEAD END | 7004 | 17 | 412 | 84 | 2 | AC |
| KILBORN DRIVE | 2355 | SOLDIER CREEK RD. | DEAD END | 30864 | 24 | 1286 | 80 | 2 | ST |
| KIMBERLY WAY | 2881 | CUL-DE-SAC 700' E OF KAREN DR | CUL-DE-SAC 700' W OF KAREN | 34680 | 24 | 1445 | 94 | 2 | ST |
| KINCAID ROAD | 4100 | CEDAR FLAT RD. | CEDAR FLAT RD. | 271400 | 20 | 13570 | 83 | 2 | AC |
| KINGSGATE WAY | 3449 | VALLEY VISTA DR. | CUL-DE-SAC | 20520 | 24 | 855 | 82 | 2 | AC |
| KIRKHAM ROAD | 5842 | DICK GEORGE RD. | 980 KIRKHAM | 94094 | 22 | 4277 | 81 | 2 | ST |
| KOKANEE LANE | 3338 | REDWOOD AV. | LEONARD ROAD | 83168 | 32 | 2599 | 83 | 2 | AC |
| KRAUSS LANE | 5540 | REDWOOD HWY 199 | DEAD END | 76560 | 22 | 3480 | 79 | 2 | ST |
| KUBLI ROAD | 3882 | NORTH APPLEGATE RD | COUNTY LINE | 125181 | 21 | 5961 | 83 | 2 | AC |
| KURTZ LANE | 2706 | G STREET | DEAD END | 13320 | 36 | 370 | 95 | 2 | AC |
| LADEANA WAY | 3469 | NEW HOPE RD | CUL-DE-SAC | 31922 | 22 | 1451 | 86 | 2 | AC |
| LAINE COURT | 3795 | HELMS RD | CUL-DE-SAC | 28608 | 24 | 1192 | 52 | 2 | ST |
| LAKE SHORE DRIVE | 5200 | HOGUE DR | REDWOOD HWY 199 | 22902 | 22 | 1041 | 78 | 2 | AC |
| LAKE SHORE DRIVE | 5200-A | REDWOOD HWY 199 | REEVES CR. ROAD | 233596 | 22 | 10618 | 82 | 2 | AC |
| LAKE SHORE DRIVE | 5200-B | REEVES CR. ROAD | MCMULLIN CR. ROAD | 86196 | 22 | 3918 | 83 | 2 | AC |
| LAKE SHORE DRIVE | 5200-C | MCMULLIN CR. ROAD | THOMPSON CR. ROAD | 158550 | 30 | 5285 | 83 | 2 | AC |
| LAKE SHORE DRIVE | 5200-D | THOMPSON CR. ROAD | DRYDEN ROAD | 121264 | 22 | 5512 | 86 | 2 | AC |
| LAKE SHORE DRIVE | 5200-E | DRYDEN ROAD | DEER CREEK ROAD | 166425 | 21 | 7925 | 84 | 2 | AC |
| LAMONT WAY | 5845 | SHADYWOOD DR. | CUL-DE-SAC | 33740 | 20 | 1687 | 77 | 2 | ST |
| LANDAU LANE | 3255 | COACH DRIVE | CUL-DE-SAC | 24057 | 33 | 729 | 100 | 2 | AC/AC |
| LAPPLAND DRIVE | 3638 | MARCY LP. | SLOAN MT. LN. | 39384 | 24 | 1641 | 84 | 2 | ST |
| LARIAT DRIVE | 1390 | MOBIL WY | LELAND RD. | 87416 | 28 | 3122 | 81 | 2 | AC |
| LARK ELLEN WAY | 3427 | JACKSONVILLE HWY. (238) | #892 LARK ELLEN WAY | 26028 | 36 | 723 | 79 | 2 | AC |
| LARKIN ROAD | 3431 | NEW HOPE RD. | DEAD END | 16962 | 22 | 771 | 86 | 2 | AC |
| LATHROP LANE | 2789 | HONEYCUTT DR | CUL-DE-SAC | 16786 | 22 | 763 | 87 | 2 | AC |
| LATHROP LANE | 2790 | UPPER RIVER RD | END OF PAVEMENT | 23850 | 18 | 1325 | 100 | 2 | ST |
| LATHROP ROAD | 2773 | PINE CREST DR | HANSEN DR. | 46794 | 22 | 2127 | 88 | 2 | AC |
| LATIGO RANCH ROAD | 4245 | EAST FORK RD | CUL-DE-SAC | 63432 | 24 | 2643 | 85 | 2 | AC |
| LAUBAUCH LANE | 2421 | MERLIN RD. | END OF PAVEMENT | 7920 | 24 | 330 | 92 | 2 | AC |
| LAUREL AVENUE | 3557 | MIDWAY AV | WOODLAND PARK RD | 92740 | 20 | 4637 | 80 | 2 | ST |
| LAUREL ROAD | 5400 | REDWOOD HWY 199 | OLD STAGE RD | 45650 | 22 | 2075 | 85 | 2 | ST |
| LAUREL ROAD | 5400-A | OLD STAGE RD | RIVER STREET | 86548 | 22 | 3934 | 84 | 2 | ST |
| LAUREL ROAD | 5400-B | RIVER STREET | CAVES HWY 46 | 126852 | 22 | 5766 | 87 | 2 | ST |
| LAURELDALE LANE | 3085 | ROGUE RIVER HWY 99 | END OF PAVEMENT | 26628 | 21 | 1268 | 81 | 2 | AC |
| LAWLESS LANE | 2505 | FOOTHILL BLVD | BEGIN CURB SECTION | 19008 | 24 | 792 | 90 | 2 | AC |
| LAWLESS LANE | 2505-A | BEGIN CURB SECTION | CUL-DE-SAC | 13320 | 36 | 370 | 92 | 2 | AC |
| LEAVITT LANE | 3905 | FISH HATCHERY RD | CUL-DE-SAC | 44793 | 21 | 2133 | 90 | 2 | AC |
| LEE ROZE LANE | 3119 | DRURY LN | CUL-DE-SAC | 18060 | 30 | 602 | 82 | 2 | AC |
| LELAND ROAD | 1320 | SUNNY VALLEY LP | DOG CREEK RD. | 251244 | 21 | 11964 | 89 | 2 | AC |
| LELAND ROAD | 1320-A | DOG CREEK RD. | LOWER GRAVE CREEK RD. | 150129 | 21 | 7149 | 89 | 2 | AC |
| LELAND ROAD | 1320-B | LOWER GRAVE CR. RD. | RAILROAD TRACKS | 50094 | 18 | 2783 | 78 | 2 | AC |
| LENELLA LANE | 2528 | JONES CREEK RD,WEST | CUL-DE-SAC | 28116 | 22 | 1278 | 77 | 2 | AC |
| LEONARD ROAD | 3300 | DOWELL RD. | 50' E. OF YOUR WAY | 35064 | 36 | 974 | 86 | 2 | AC |
| LEONARD ROAD | 3300-A | 50 E. OF YOUR WAY | PARKHILL PLACE | 29602 | 19 | 1558 | 100 | 2 | AC/AC |
| LEONARD ROAD | 3300-B | PARKHILL PLACE | WILLOW LANE | 23978 | 19 | 1262 | 100 | 2 | AC/AC |
| LEONARD ROAD | 3300-C | WILLOW LN. | DARNEILLE LN. | 55818 | 21 | 2658 | 90 | 2 | AC/AC |
| LEONARD ROAD | 3300-D | DARNELLE LN. | REDWOOD ELEM. SCHOOL | 48636 | 42 | 1158 | 86 | 3 | AC |
| LEONARD ROAD | 3300-E | REDWOOD ELEM. SCHOOL | #4182 LEONARD ROAD | 107184 | 21 | 5104 | 83 | 2 | AC |
| LEONARD ROAD | 3300-F | #4182 LEONARD ROAD | BREEZY LN | 24171 | 21 | 1151 | 83 | 2 | AC |
| LEONARD ROAD | 3300-G | BREEZY LN | #5420 LEONARD ROAD | 121443 | 21 | 5783 | 83 | 2 | AC |
| LIMPY CREEK ROAD | 3620 | RIVERBANKS RD (HWY 260) | CUL-DE-SAC | 205722 | 22 | 9351 | 82 | 2 | ST |
| LINCOLN ROAD | 2730 | LOWER RIVER RD- HWY 260 | WEBSTER RD. | 47160 | 36 | 1310 | 70 | 2 | AC |
| LINDA LEE LANE | 3545 | BOUNDARY RD | DEAD END | 26884 | 22 | 1222 | 100 | 2 | ST |
| LINDA VISTA ROAD | 3572 | ROBINSON RD | CASITA DR. | 36920 | 20 | 1846 | 87 | 2 | ST |
| LITTLE LANE | 3489 | NEW HOPE RD | GATE | 6860 | 20 | 343 | 78 | 2 | AC |
| LIVINGSTON WAY | 2067 | HUGO RD. | SOUTH LIVINGSTON WAY | 42770 | 26 | 1645 | 85 | 2 | ST |
| LLOYD DRIVE | 2351 | HIGHLAND AV. | SOLDIER CREEK RD. | 99972 | 36 | 2777 | 87 | 2 | AC |
| LOGAN CUT DRIVE | 5577 | SIMMONS CUT DR | CUL-DE-SAC | 81850 | 25 | 3274 | 84 | 2 | ST |
| LOIS LANE | 3353 | DARNIELLE LN. | CUL-DE-SAC | 18936 | 36 | 526 | 83 | 2 | AC |
| LONE MOUNTAIN ROAD | 5550 | REDWOOD HWY 199 | END OF PAVEMENT | 234000 | 20 | 11700 | 81 | 2 | ST |
| LONNON ROAD | 3440 | ELK LN. | NEW HOPE RD. | 96404 | 22 | 4382 | 81 | 2 | AC |
| LONNON ROAD | 3440-A | NEW HOPE RD. | CUL-DE-SAC | 22126 | 26 | 851 | 87 | 2 | AC |
| LOWER GRAVE CREEK ROAD | 1300 | LELAND RD | LOWER WOLF CR. RD. | 282240 | 21 | 13440 | 79 | 2 | AC |
| LOWER GRAVE CREEK ROAD | 1300-A | LOWER WOLF CR. RD. | ANGORA ROAD | 194712 | 21 | 9272 | 82 | 2 | AC |
| LOWER GRAVE CREEK ROAD | 1300-B | ANGORA CREEK RD. | #8155 LOWER GRAVE CR. RD | 264621 | 21 | 12601 | 82 | 2 | AC |
| LOWER GRAVE CREEK ROAD | 1300-C | #8155 LOWER GRAVE CR. RD | MILE POST 9 | 222660 | 18 | 12370 | 79 | 2 | AC |
| LOWER GRAVE CREEK ROAD | 1300-D | MILE POST 9 | GALICE RD. | 225468 | 18 | 12526 | 82 | 2 | AC |
| LOWER WOLF CREEK ROAD | 1100 | FRONT ST | #2460 LOWER WOLF CR. RD. | 348964 | 28 | 12463 | 83 | 2 | AC |
| LOWER WOLF CREEK ROAD | 1100-A | #2460 LOWER WOLF CR. RD. | LOWER GRAVE CR. RD. | 374748 | 22 | 17034 | 81 | 2 | AC |
| M STREET | 2669 | 420 EAST OF FERN STREET | 145' EAST OF CAMELOT DR | 29700 | 36 | 825 | 61 | 2 | AC |
| MACNEW LANE | 3233 | CLOVERLAWN DR. | CUL-DE-SAC | 16566 | 22 | 753 | 68 | 2 | AC |
| MAIN STREET | 1110 | FRONT ST. | WOLF CR. PARK | 30960 | 18 | 1720 | 81 | 2 | AC |
| MARBLE DRIVE, NORTH | 2806 | MARBLE DR (SOUTH) | CUL-DE-SAC | 11904 | 24 | 496 | 89 | 2 | AC |
| MARBLE DRIVE, SOUTH | 2805 | AZALEA DR | MARBLE DR. (NORTH) | 7824 | 24 | 326 | 94 | 2 | ST |
| MARCY LOOP | 3630 | RIVERBANKS RD (HWY 260) | 500' S. OF DAILY LN. | 90530 | 22 | 4115 | 84 | 2 | AC |
| MARCY LOOP | 3630-A | 500' S. OF DAILY LN. | 200' W. OF DAILY LN. | 23716 | 28 | 847 | 85 | 2 | AC |
| MARCY LOOP | 3630-B | 200' W. OF DAILY LN | RIVERBANKS RD. (HWY 260) | 144312 | 21 | 6872 | 85 | 2 | AC |
| MARLSAN ROAD | 2780 | PINE CREST DR | END OF COUNTY MAINT. | 24200 | 22 | 1100 | 79 | 2 | AC |
| MARTIN ROAD | 5610 | ROCKYDALE RD | DEAD END | 43377 | 19 | 2283 | 100 | 2 | ST |
| MAUREEN DRIVE | 5841 | DICK GEORGE RD. | CUL-DE-SAC | 25641 | 21 | 1221 | 81 | 2 | ST |
| MAYFAIR LANE | 3426 | JACKSONVILLE HWY. 238 | CUL-DE-SAC | 23184 | 24 | 966 | 93 | 2 | AC |
| MAYFIELD DRIVE | 3222 | MONROE WY | CUL-DE-SAC | 21024 | 24 | 876 | 100 | 2 | ST |
| MC CARTER LANE | 3418 | NEBRASKA AV. | CUL-DE-SAC | 26829 | 33 | 813 | 84 | 2 | AC |
| MC MULLEN CREEK ROAD | 5270 | LAKE SHORE DR | END OF CO. MAINT. | 103532 | 22 | 4706 | 80 | 2 | AC |
| MEADOW LARK DRIVE | 2132 | 700' W. OF RED FOX LN. | 600' E. OF RED FOX LN | 32568 | 24 | 1357 | 84 | 2 | AC |

## Table A-4
## Surface Type/Pavement Conditions on County Roads

| Road Name | Section ID | Begin Location | End Location | Area of Section | Road Width | Length | PCI | # of Lanes | Surface Type |
|---|---|---|---|---|---|---|---|---|---|
| MEDART LANE | 3519 | REDWOOD AV | CUL-DE-SAC | 39208 | 29 | 1352 | 83 | 2 | AC |
| MEDART LANE | 3519-A | KELLENBECK AV | KELLENBECK AV | 35190 | 34 | 1035 | 85 | 2 | AC |
| MENDI WAY | 3521 | SUN GLO DR | CUL-DE-SAC | 6018 | 34 | 177 | 89 | 2 | AC |
| MERLIN AVENUE | 2441 | MERLIN RD | PLEASANT VALLEY RD. | 29510 | 26 | 1135 | 73 | 2 | AC |
| MERLIN LANDFILL ROAD | 2417 | MERLIN RD. | LANDFILL GATE | 63120 | 24 | 2630 | 79 | 2 | ST |
| MERLIN ROAD | 2400 | MONUMENT DR. | MERLIN LANDFILL RD. | 338560 | 40 | 8464 | 90 | 2 | AC/AC |
| MERLIN ROAD | 2400-A | MERLIN LANDFILL RD. | RAILROAD TRACKS | 248200 | 40 | 6205 | 90 | 2 | AC/AC |
| MERLIN ROAD | 2400-B | RAILROAD TRACKS | PLEASANT VALLEY RD. | 124080 | 44 | 2820 | 95 | 2 | AC/AC |
| MERLIN SANITARIUM ROAD | 2435 | MERLIN RD. | END OF CO. MAINT. | 78072 | 24 | 3253 | 81 | 2 | ST |
| MESA VERDE DRIVE | 5573 | CASCADE DR | CUL-DE-SAC | 104868 | 27 | 3884 | 84 | 2 | ST |
| MESMAN DRIVE | 3312 | LEONARD RD. | CUL-DE-SAC | 44976 | 24 | 1874 | 81 | 2 | AC |
| MESSINGER ROAD | 4030 | JACKSONVILLE HWY 238 | CUL-DE-SAC | 102795 | 21 | 4895 | 82 | 2 | AC |
| MIDWAY AVENUE | 3750 | REDWOOD AV. | REDWOOD HWY 199 | 47901 | 21 | 2281 | 87 | 2 | AC |
| MIDWAY AVENUE | 3750-A | REDWOOD HWY | #3470 MIDWAY | 149740 | 20 | 7487 | 93 | 2 | AC |
| MIDWAY AVENUE | 3750-B | #3470 MIDWAY | DEMARAY DR. | 42868 | 28 | 1531 | 90 | 2 | AC |
| MIDWAY AVENUE | 3750-C | DEMARAY DR. | JEROME PRAIRIE RD. | 12078 | 22 | 549 | 88 | 2 | AC |
| MIDWAY AVENUE | 3750-D | JEROME PRAIRIE RD. | CUL-DE-SAC | 120390 | 30 | 4013 | 92 | 2 | AC |
| MINA LANE | 2532 | WEST JONES CREEK RD. | CUL-DE-SAC | 65976 | 24 | 2749 | 84 | 2 | AC |
| MINI LANE | 3409 | FLORER DRIVE | CUL-DE-SAC | 6105 | 33 | 185 | 92 | 2 | AC |
| MINNOW LANE | 3657 | ROUND PRAIRIE CR. RD. | CUL-DE-SAC | 98774 | 29 | 3406 | 84 | 2 | AC |
| MISSOURI FLAT ROAD | 3880 | KUBLI RD | DEAD END | 93328 | 19 | 4912 | 84 | 2 | ST |
| MOBIL WAY | 1311 | LARIAT DR. | OLD STAGE RD. | 10200 | 20 | 510 | 82 | 2 | AC |
| MONICA DRIVE | 2876 | EWE CREEK RD | CUL-DE-SAC | 28720 | 20 | 1436 | 89 | 2 | AC |
| MONROE WAY | 3217 | HAVILAND DR | CUL-DE-SAC | 19052 | 22 | 866 | 100 | 2 | ST |
| MONTERICO ROAD | 2212 | OXYOKE RD. | MONTFLORA TERRACE | 66836 | 22 | 3038 | 100 | 2 | ST |
| MONTGOMERY LANE | 3223 | MONROE WY | CUL-DE-SAC | 9108 | 22 | 414 | 100 | 2 | ST |
| MONUMENT DRIVE | 2200 | MERLIN RD. | NORTH VALLEY HIGH SCHOOL | 324648 | 36 | 9018 | 81 | 2 | AC |
| MONUMENT DRIVE | 2200-A | NORTH VALLEY HIGH SCHOOL | PLEASANT VALLEY RD. | 220752 | 24 | 9198 | 81 | 2 | AC |
| MONUMENT DRIVE | 2200-B | PLEASANT VALLEY RD. | I-5 SB ONRAMP | 272952 | 24 | 11373 | 83 | 2 | AC |
| MOON GLO DRIVE | 3513 | SUN GLO DR | CUL-DE-SAC | 53142 | 34 | 1563 | 89 | 2 | AC |
| MOONBEAM LANE | 3467 | JAYNES DR | DEAD END | 21696 | 24 | 904 | 84 | 2 | AC |
| MOREWOOD LANE | 2616 | HIGHLAND AV | CUL-DE-SAC | 26334 | 22 | 1197 | 82 | 2 | AC |
| MORGAN LANE | 2658 | VINE ST | HAWTHORNE AV. | 35496 | 34 | 1044 | 86 | 2 | AC/AC |
| MORGAN LANE | 2658-A | HAWTHORN AV. | HIGHLAND AV. | 28996 | 22 | 1318 | 100 | 2 | AC |
| MORRIS LANE | 3433 | JACKSONVILLE HWY. (238) | CUL-DE-SAC | 28336 | 22 | 1288 | 100 | 2 | ST |
| MOSS LANE | 3442 | NEW HOPE RD. | DEAD END | 17424 | 22 | 792 | 56 | 2 | AC |
| MOUNT BALDY ROAD | 3160 | ROGUE RIVER HWY 99 | FRUITDALE DR. | 22071 | 21 | 1051 | 83 | 2 | AC |
| MOUNTAIN FIR ROAD | 3816 | AGGREGATE AV. | SOUTH SIDE RD. | 14820 | 26 | 570 | 78 | 2 | AC |
| MOUNTAIN PARADISE DRIVE | 2228 | MONUMENT DR. | CUL-DE-SAC | 90528 | 24 | 3772 | 89 | 2 | AC |
| MOUNTAIN PINE DRIVE | 2255 | MONUMENT DR. | CUL-DE-SAC | 15600 | 24 | 650 | 87 | 2 | AC |
| MOUNTAIN SPRINGS DRIVE | 3754 | MIDWAY AVENUE | CUL-DE-SAC | 35332 | 22 | 1606 | 92 | 2 | AC |
| MOUNTAIN VIEW PLACE | 3081 | ROGUE RIVER HWY 99 | END OF CO. MAINT. | 32400 | 36 | 900 | 76 | 2 | AC |
| MURPHY CREEK ROAD | 3810 | JACKSONVILLE HWY 238 | HV HIGH SCHOOL ENTRANCE | 184860 | 39 | 4740 | 85 | 2 | AC |
| MURPHY CREEK ROAD | 3810-A | HV HIGH SCHOOL ENTRANCE | CUL-DE-SAC | 271040 | 20 | 13552 | 85 | 2 | AC |
| MURPHY LANE | 3812 | MOUNTAIN FIR RD | SOUTH SIDE RD. | 17030 | 26 | 655 | 84 | 2 | AC |
| MURPHY LANE | 3812-A | SOUTH SIDE RD. | WOODROW WAY | 20718 | 18 | 1151 | 84 | 2 | AC |
| N STREET, NORTHEAST | 2670 | SHANNON LN | DEAD END | 41250 | 22 | 1875 | 67 | 2 | AC |
| N STREET, SOUTHEAST | 2672 | M ST. | GLADIOLA ST. | 83808 | 36 | 2328 | 84 | 2 | AC |
| NAUE WAY | 5552 | LONE MOUNTAIN RD | ROUGH READY CR. RD. | 169170 | 30 | 5639 | 100 | 2 | ST |
| NEAMAR DRIVE | 3434 | MORRIS LN. | CUL-DE-SAC | 30393 | 33 | 921 | 76 | 2 | AC |
| NEBRASKA AVENUE | 3416 | HARBECK RD. (WEST) | 100' N. OF MCCARTER LN. | 23133 | 33 | 701 | 82 | 2 | AC |
| NEEDLEWOOD DRIVE | 2869 | LOWER RIVER RD | CUL-DE-SAC | 40534 | 26 | 1559 | 85 | 2 | AC |
| NEILA LANE | 3517 | REDWOOD AV | CUL-DE-SAC | 18763 | 29 | 647 | 79 | 2 | ST |
| NEILL ROAD | 3791 | REDWOOD HWY 199 | GATE AT #6380 | 30200 | 20 | 1510 | 79 | 2 | AC |
| NELSON WAY | 2100 | SOLDIER CREEK RD. | HORSESHOE DR. | 25432 | 22 | 1156 | 90 | 2 | AC |
| NELSON WAY | 2100-A | HORSESHOE DR. | END OF CO. MAINT | 30840 | 20 | 1542 | 82 | 2 | AC |
| NEW HOPE ROAD | 3400 | JACKSONVILLE HWY. (238) | ALAN LEE RD. | 95744 | 44 | 2176 | 76 | 2 | AC |
| NEW HOPE ROAD | 3400-A | ALAN LEE RD. | 500' NORTH OF LONNON RD. | 122012 | 44 | 2773 | 84 | 2 | AC |
| NEW HOPE ROAD | 3400-B | 500' NORTH OF LONNON RD. | JAYNES DR. | 376824 | 42 | 8972 | 84 | 2 | AC |
| NEW HOPE ROAD | 3400-C | JAYNES DR. | FISH HATCHERY RD. | 157680 | 54 | 2920 | 85 | 3 | AC |
| NEW HOPE ROAD | 3400-D | FISH HATCHERY RD. | MILEPOST 4 | 145296 | 36 | 4036 | 85 | 2 | AC |
| NEW HOPE ROAD | 3400-E | MILEPOST 4 | JACKSONVILLE HWY 238 | 275440 | 22 | 12520 | 78 | 2 | AC |
| NICK WAY | 3525 | SUN GLO DR. | CUL-DE-SAC | 5940 | 33 | 180 | 89 | 2 | AC |
| NINTH STREET, NORTHEAST | 2662 | HILLCREST DR | BEGINNING OF CURB | 22920 | 20 | 1146 | 88 | 2 | AC |
| NORMAN ROAD | 5110 | ILLINOIS RIVER RD | SHARP CURVE(PPL #4124) | 30008 | 22 | 1364 | 78 | 2 | ST |
| NORMAN ROAD | 5110-A | SHARP CURVE(PPL #4124) | END OF CO. MAINT. | 28305 | 17 | 1665 | 76 | 2 | ST |
| NORTH ADELINE WAY | 2464 | WARD RD | CUL-DE-SAC | 9460 | 22 | 430 | 85 | 2 | ST |
| NORTH APPLEGATE ROAD | 3800 | JACKSONVILLE HWY 238 | BOARD SHANTY RD | 247680 | 24 | 10320 | 84 | 2 | AC |
| NORTH APPLEGATE ROAD | 3800-A | BOARD SHANTY RD | 11262 NORTH APPLEGATE RD. | 315072 | 24 | 13128 | 83 | 2 | AC |
| NORTH APPLEGATE ROAD | 3800-B | 11262 NORTH APPLEGATE RD. | JACKSON COUNTY LINE | 256344 | 22 | 11652 | 84 | 2 | AC |
| NORTH PINNON ROAD | 2840 | AZALEA DRIVE | CUL-DE-SAC | 132470 | 26 | 5095 | 95 | 2 | AC |
| NORTH VALLEY DRIVE | 2275 | MONUMENT DR. | CORPORATE WAY | 37368 | 54 | 692 | 84 | 4 | AC |
| NORTH VALLEY DRIVE | 2275-A | CORPORATE WAY | CUL-DE-SAC | 27872 | 32 | 871 | 80 | 4 | AC |
| NORTHWOODS DRIVE | 2264 | RUSSELL RD. | CUL-DE-SAC | 28930 | 22 | 1315 | 85 | 2 | ST |
| NORWOOD LANE | 3635 | DOUGLAS DR. | DEAD END | 20424 | 24 | 851 | 65 | 2 | ST |
| NOTTINGHAM WAY | 3757 | CARROLLWOOD DR. | CUL-DE-SAC | 7512 | 24 | 313 | 76 | 2 | ST |
| O BRIEN ROAD | 5555 | REDWOOD HWY 199 | WALDO RD | 110496 | 24 | 4604 | 83 | 2 | ST |
| OAK RANCH ROAD | 2972 | GUNNEL RD | CUL-DE-SAC | 30250 | 22 | 1375 | 92 | 2 | AC |
| OAKMONT DRIVE | 2358 | LLOYD DR. | SOLDIER CREEK RD. | 51350 | 26 | 1975 | 83 | 2 | AC |
| OCTOBER LANE | 2055 | BECKLIN DR. | CUL-DE-SAC | 30096 | 24 | 1254 | 89 | 2 | ST |
| OJAI AVENUE | 3538 | REDWOOD AV | CUL-DE-SAC | 30536 | 22 | 1388 | 86 | 2 | AC |
| OLD HIGHWAY 199 | 5302 | WEST SIDE RD | DEAD END | 49842 | 26 | 1917 | 79 | 2 | AC |
| OLD HWY 99 | 1014 | BRIDGE LN. | 800' N. OF EDGEWOOD RD. | 140250 | 55 | 2550 | 78 | 3 | AC |
| OLD HWY 99 | 1014-A | 800' N. OF EDGEWOOD RD. | I-5 SOUTH OFF RAMP | 32096 | 32 | 1003 | 78 | 2 | AC |
| OLD STAGE ROAD | 1310 | 300' E. OF MOBIL WY | COPPER QUEEN RD. | 42144 | 16 | 2634 | 80 | 2 | AC |
| OLD STAGE ROAD | 1310-A | COPPER QUEEN RD. | END OF PAVEMENT | 7678 | 11 | 698 | 85 | 2 | AC |

## Table A-4
## Surface Type/Pavement Conditions on County Roads

| Road Name | Section ID | Begin Location | End Location | Area of Section | Road Width | Length | PCI | # of Lanes | Surface Type |
|---|---|---|---|---|---|---|---|---|---|
| OLD STAGE ROAD | 5480 | LAUREL RD | RIVER STREET | 65832 | 24 | 2743 | 100 | 2 | ST |
| OLD STAGE ROAD | 5480-A | RIVER STREET | CAVES HWY 46 | 61700 | 20 | 3085 | 100 | 2 | ST |
| OLD STAGE ROAD, SOUTH | 5490 | CAVES HWY 46 | DEAD END | 77620 | 20 | 3881 | 73 | 2 | ST |
| OMAHA DRIVE | 3419 | NEBRASKA AV. | CUL-DE-SAC | 17094 | 33 | 518 | 64 | 2 | AC |
| OPAL LANE | 2266 | RUSSELL RD. | CUL-DE-SAC | 56040 | 24 | 2335 | 83 | 2 | ST |
| ORCHARD STREET | 2611 | WOODBROOK DR | 175 FT. W. OF SINCLAIR DR. | 7656 | 22 | 348 | 76 | 2 | AC |
| ORT LANE | 2430 | MERLIN RD. | END OF PAVEMENT | 75924 | 19 | 3996 | 89 | 2 | AC |
| OVERLAND DRIVE | 3140 | FRUITDALE DR | AXTELL DR. | 7475 | 23 | 325 | 85 | 2 | AC |
| OXYOKE ROAD | 2210 | THREE PINES RD. | HUGO RD. | 178584 | 28 | 6378 | 83 | 2 | AC |
| OXYOKE ROAD | 2210-A | HUGO RD. | END OF PAVEMENT | 33801 | 19 | 1779 | 83 | 2 | AC |
| PALOMINO DRIVE | 2352 | LLOYD DR. | END OF CO. MAINT. | 93408 | 24 | 3892 | 83 | 2 | AC |
| PALOS VERDES DRIVE | 2874 | AZALEA DR | CUL-DE-SAC | 48136 | 22 | 2188 | 83 | 2 | AC |
| PANORAMIC LOOP | 3237 | CLOVERLAWN DRIVE | DEAD END | 19950 | 30 | 665 | 92 | 2 | AC |
| PANTHER GULCH ROAD | 4250 | EAST FORK RD | END OF MAINT. | 116020 | 20 | 5801 | 79 | 2 | AC |
| PARDEE LANE | 3511 | REDWOOD AV | CUL-DE-SAC | 20325 | 25 | 813 | 80 | 2 | ST |
| PARK STREET, EAST | 3010 | 520' EAST OF PARKDALE DR | HAMILTON LN. | 77730 | 30 | 2591 | 83 | 2 | AC |
| PARK STREET, WEST | 3490 | REDWOOD HWY 199 | SHORT ST. | 25137 | 27 | 931 | 82 | 2 | AC/AC |
| PARK STREET, WEST | 3490-A | SHORT ST. | RINGUETTE ST. | 28128 | 24 | 1172 | 89 | 2 | AC/AC |
| PARKDALE CIRCLE | 3041 | PARKDALE DR | CUL-DE-SAC | 3024 | 24 | 126 | 69 | 2 | AC |
| PARKDALE DRIVE | 3040 | FRUITDALE DR | CUL-DE-SAC | 20352 | 24 | 848 | 74 | 2 | AC |
| PATRICK ROAD | 3747 | HELGESON LN. | PYLE DR. | 46008 | 24 | 1917 | 84 | 2 | AC |
| PATTON BAR ROAD | 5520 | REDWOOD HWY 199 | END OF PAVEMENT | 57660 | 20 | 2883 | 80 | 2 | ST |
| PAULDINE WAY | 3382 | APPLEGATE AV. | CUL-DE-SAC | 29150 | 22 | 1325 | 84 | 2 | ST |
| PAVILLION DRIVE | 2772 | PINE CREST DR | CUL-DE-SAC | 32648 | 22 | 1484 | 81 | 2 | AC |
| PEARCE PARK ROAD | 2509 | FOOTHILL BLVD | PARK GATE | 139080 | 24 | 5795 | 82 | 2 | AC |
| PEARL DRIVE | 3463 | JAYNES DR | DEAD END | 21552 | 24 | 898 | 85 | 2 | AC |
| PEARSOLL LANE | 5092 | HOGUE DR | DEAD END | 12408 | 24 | 517 | 92 | 1 | AC/AC |
| PECO ROAD | 2860 | AZALEA DR | CIENEGA LN. | 50138 | 22 | 2279 | 80 | 2 | AC |
| PECO ROAD | 2860-A | CIENEGA LN. | CUL-DE-SAC | 62894 | 26 | 2419 | 85 | 2 | AC |
| PENINGER PLACE | 5515 | AIRPORT DRIVE | CUL-DE-SAC | 35136 | 32 | 1098 | 100 | 2 | AC |
| PENNY LANE | 3480 | NEW HOPE RD | END OF MAINT. | 64608 | 24 | 2692 | 92 | 2 | AC |
| PESTERFIELD PLACE | 2422 | MERLIN RD. | PRUDEN DR. | 6534 | 22 | 297 | 94 | 2 | AC |
| PICKETT CREEK ROAD | 2990 | RIVERBANKS RD-HWY 260 | END OF PAVEMENT | 223496 | 26 | 8596 | 80 | 2 | ST |
| PICKETT CREEK ROAD, WEST | 2993 | PICKETT CREEK RD | END OF CO. MAINT. | 82020 | 20 | 4101 | 87 | 2 | ST |
| PINE CREST DRIVE | 2770 | UPPER RIVER RD | PLUMTREE LN. | 303996 | 22 | 13818 | 84 | 2 | AC |
| PINE RIDGE DRIVE | 3753 | TIMBERIDGE RD. | CUL-DE-SAC | 32384 | 22 | 1472 | 80 | 2 | AC |
| PINE TREE DRIVE | 4040 | WATERGAP RD | CUL-DE-SAC | 59686 | 22 | 2713 | 72 | 2 | ST |
| PINEWOOD WAY | 5593 | REDWOOD HWY 199 | CUL-DE-SAC | 62832 | 22 | 2856 | 81 | 2 | ST |
| PINNON ROAD | 2795 | BARBARA DR | CUL-DE-SAC | 52936 | 26 | 2036 | 82 | 2 | AC |
| PLACER ROAD | 1400 | SUNNY VALLEY LP | MILE POST 2 | 253128 | 24 | 10547 | 84 | 2 | ST |
| PLACER ROAD | 1400-A | MILE POST 2 | McCOY CREEK RD. | 265540 | 22 | 12070 | 84 | 2 | AC |
| PLEASANT VALLEY ROAD | 2440 | MERLIN RD | ENTERPRISE AVE. | 116892 | 36 | 3247 | 83 | 2 | AC |
| PLEASANT VALLEY ROAD | 2440-A | ENTERPRISE AV. | MONUMENT DR. | 237314 | 22 | 10787 | 84 | 2 | AC |
| PLEASANTVILLE WAY | 2897 | ROBERTSON BRIDGE ROAD | CUL-DE-SAC | 79456 | 26 | 3056 | 95 | 2 | AC |
| PLUMTREE LANE | 2480 | PINE CREST DR | CAMP JOY RD. | 149490 | 22 | 6795 | 77 | 2 | AC |
| POLARIS CIRCLE | 2444 | ENTERPRISE AV | CUL-DE-SAC | 19320 | 24 | 805 | 84 | 2 | ST |
| PONDEROSA LANE | 3235 | CLOVERLAWN DR. | WALKER RD. | 65016 | 24 | 2709 | 80 | 2 | ST |
| POPLAR DRIVE | 3102 | FRUITDALE DR | END OF PAVEMENT | 1580 | 10 | 158 | 79 | 1 | AC |
| PORTOLA DRIVE | 2674 | 450' W OF GLADIOLA AV | SHANNON LN. | 35259 | 21 | 1679 | 78 | 2 | AC |
| POTTS WAY | 2205 | MONUMENT DR. | CUL-DE-SAC | 51898 | 22 | 2359 | 83 | 2 | ST |
| POWELL CREEK ROAD | 4060 | WATERGAP RD | WILLIAMS HWY. | 214984 | 22 | 9772 | 81 | 2 | AC |
| PRAIRIE LANE | 3573 | REDWOOD AV | WALNUT AV. | 34260 | 20 | 1713 | 87 | 2 | ST |
| PUGETVILLE ROAD | 5340 | REDWOOD HWY 199 | HATHAWAY DR | 20142 | 18 | 1119 | 86 | 2 | ST |
| PYLE DRIVE | 3748 | PATRICK RD. | CUL-DE-SAC | 119132 | 26 | 4582 | 91 | 2 | AC |
| QUAIL LANE | 2980 | FERRY RD | END OF PAVEMENT | 12168 | 12 | 1014 | 100 | 1 | ST |
| RAILROAD AVENUE | 1120 | FRONT ST | CUL-DE-SAC | 102820 | 20 | 5141 | 79 | 2 | ST |
| RAINBOW DRIVE | 2283 | HAMPDEN RD. | CARTON WAY | 59246 | 22 | 2693 | 89 | 2 | ST |
| RAINWOOD LANE | 3331 | ANGLER LN. | DEAD END | 22704 | 33 | 688 | 87 | 2 | AC |
| RANCHO VISTA DRIVE | 2536 | JONES CREEK RD, EAST | CUL-DE-SAC | 69916 | 22 | 3178 | 72 | 2 | AC |
| RAY DRIVE | 2451 | ABEGG RD | ABEGG RD. | 24240 | 16 | 1515 | 84 | 1 | AC |
| RAYDEAN DRIVE | 3528 | REDWOOD AV | CUL-DE-SAC | 38168 | 26 | 1468 | 81 | 2 | ST |
| RAYWOOD CIRCLE | 3529 | RAYDEAN DR | CUL-DE-SAC | 5427 | 27 | 201 | 86 | 2 | AC |
| RED FOX LANE | 2131 | COLONIAL DR. | MEADOW LARK DR. | 14448 | 24 | 602 | 87 | 2 | AC |
| RED MOUNTAIN DRIVE | 2230 | MONUMENT DR. | CUL-DE-SAC | 116160 | 22 | 5280 | 80 | 2 | ST |
| RED SPUR DRIVE | 3244 | SUMMIT LP. | CUL-DE-SAC | 43065 | 29 | 1485 | 87 | 2 | ST |
| REDLANDS DRIVE | 3990 | FISH HATCHERY RD | DEAD END | 58701 | 17 | 3453 | 76 | 2 | ST |
| REDWOOD AVENUE | 3500 | REDWOOD HWY 199 | REDWOOD CIR. | 67602 | 38 | 1779 | 83 | 2 | AC |
| REDWOOD AVENUE | 3500-A | REDWOOD CIR. | 400' E. OF DOWELL RD. | 106505 | 35 | 3043 | 86 | 2 | AC |
| REDWOOD AVENUE | 3500-B | 400' E. OF DOWELL RD. | SUN GLO DR. | 40986 | 46 | 891 | 81 | 3 | AC |
| REDWOOD AVENUE | 3500-C | SUN GLO DR. | WILLOW LN. | 80256 | 38 | 2112 | 87 | 3 | AC |
| REDWOOD AVENUE | 3500-D | WILLOW LN. | DARNEILLE LN. | 92960 | 35 | 2656 | 86 | 2 | AC |
| REDWOOD AVENUE | 3500-E | DARNEILLE LN. | REDWOOD HWY 199 | 273218 | 22 | 12419 | 83 | 2 | AC |
| REDWOOD AVENUE | 3500-F | REDWOOD HWY 199 | 500' N. OF PRAIRIE LN. | 92026 | 22 | 4183 | 80 | 2 | AC |
| REDWOOD AVENUE | 3500-G | 500' N. OF PRAIRIE LN. | HELMS RD. | 57300 | 30 | 1910 | 79 | 2 | AC |
| REDWOOD CIRCLE | 3509 | REDWOOD AV | CUL-DE-SAC | 33288 | 24 | 1387 | 100 | 2 | AC/AC |
| REEVES CREEK ROAD | 5250 | REDWOOD HWY 199 | SOUTH SHORE DRIVE | 504262 | 22 | 22921 | 79 | 2 | ST |
| REEVES CREEK ROAD | 5250-A | SOUTH SHORE DRIVE | LAKE SHORE DR. | 100430 | 22 | 4565 | 81 | 2 | ST |
| REGINA WAY | 3424 | HARBECK RD. (WEST) | CUL-DE-SAC | 30096 | 22 | 1368 | 83 | 2 | ST |
| RICHLAND DRIVE | 2529 | JONES CREEK RD, WEST | CUL-DE-SAC | 11400 | 20 | 570 | 78 | 2 | AC |
| RIDGECREST DRIVE | 3587 | DEMARAY DR | CUL-DE-SAC | 70584 | 24 | 2941 | 86 | 2 | AC |
| RIDGEFIELD ROAD | 3820 | JACKSONVILLE HWY 238 | CUL-DE-SAC | 16676 | 22 | 758 | 92 | 2 | AC |
| RIESSEN ROAD | 2877 | EWE CREEK RD | BROOKSTONE HILLS DR. | 41548 | 26 | 1598 | 83 | 2 | AC |
| RINGUETTE STREET | 3503 | REDWOOD HWY 199 | WEST PARK ST | 36618 | 34 | 1077 | 100 | 2 | AC/AC |
| RIO MESA DRIVE | 3645 | RIVERBANKS ROAD | CUL-DE-SAC | 45032 | 26 | 1732 | 89 | 2 | ST |
| RIVER STREET | 5420 | OLD STAGE RD | LAUREL ROAD | 78014 | 38 | 2053 | 79 | 2 | AC |
| RIVER VISTA DRIVE | 2885 | LOWER RIVER ROAD | CUL-DE-SAC | 43670 | 22 | 1985 | 76 | 2 | ST |

## Table A-4
## Surface Type/Pavement Conditions on County Roads

| Road Name | Section ID | Begin Location | End Location | Area of Section | Road Width | Length | PCI | # of Lanes | Surface Type |
|---|---|---|---|---|---|---|---|---|---|
| ROAN DRIVE | 2916 | EL CAMINO WY | BUCKSKIN DR. | 54168 | 24 | 2257 | 84 | 2 | AC |
| ROBERT AVENUE | 3451 | JOHNSON DR. | ADELINE DR. | 13461 | 21 | 641 | 86 | 2 | AC |
| ROBERTSON BRIDGE ROAD | 2890 | GALICE ROAD | AZALEA DRIVE | 115200 | 24 | 4800 | 85 | 2 | AC |
| ROBERTSON BRIDGE ROAD | 2890-A | AZALEA DRIVE | LOWER RIVER RD | 292848 | 24 | 12202 | 84 | 2 | AC |
| ROBERTSON CREST | 3238 | PANORAMIC LOOP | DEAD END | 10500 | 28 | 375 | 92 | 2 | AC |
| ROBINSON CORNER ROAD | 5880 | HOLLAND LP. RD. | END OF CO. MAINT. | 80028 | 18 | 4446 | 82 | 2 | ST |
| ROBINSON ROAD | 3570 | REDWOOD AV. | REDWOOD HWY 199 | 15664 | 22 | 712 | 85 | 2 | AC |
| ROBINSON ROAD | 3570-A | REDWOOD HWY 199 | END OF PAVEMENT | 75920 | 26 | 2920 | 86 | 2 | ST |
| ROBMAR LANE | 3246 | CLOVERLAWN DR. | CUL-DE-SAC | 63756 | 22 | 2898 | 88 | 2 | AC |
| ROCKYDALE ROAD | 5600 | REDWOOD HWY 199 | CREST DRIVE | 161502 | 22 | 7341 | 81 | 2 | ST |
| ROCKYDALE ROAD | 5600-A | CREST DRIVE | STILLWATER WAY | 239646 | 22 | 10893 | 85 | 2 | ST |
| ROCKYDALE ROAD | 5600-C | STILLWATER WAY | WALDO ROAD | 357082 | 22 | 16231 | 84 | 2 | ST |
| ROGUE MANOR PLACE | 3098 | ROGUE RIVER HWY 99 | CUL-DE-SAC | 13824 | 36 | 384 | 90 | 2 | AC |
| ROGUE RIDGE DRIVE | 3362 | SOUTH RIVER ROAD | CUL-DE-SAC | 15444 | 22 | 702 | 92 | 2 | AC |
| ROGUE RIM DRIVE | 2465 | GALICE RD. | END OF PAVEMENT | 17273 | 23 | 751 | 89 | 2 | ST |
| ROGUELEA LANE | 2740 | WEBSTER RD | LOWER RIVER RD. | 45045 | 35 | 1287 | 79 | 2 | AC |
| ROGUELEA LANE | 2740-A | LOWER RIVER RD. | DEAD END | 46410 | 35 | 1326 | 65 | 2 | AC |
| ROLLING HILLS DRIVE | 2895 | ROBERTSON BRIDGE RD | CATALPA DR. | 27324 | 22 | 1242 | 83 | 2 | ST |
| ROSEWOOD STREET | 3263 | DELL RD. | JACKSONVILLE HWY 238 | 25080 | 22 | 1140 | 78 | 2 | AC |
| ROSEWOOD STREET | 3263-A | JACKSONVILLE HWY 238 | HOMEWOOD RD. | 10802 | 22 | 491 | 89 | 2 | AC |
| ROSSIER LANE | 3612 | GRIFFIN RD | CUL-DE-SAC | 47763 | 29 | 1647 | 100 | 2 | ST |
| ROUND PRAIRIE CREEK ROAD | 3656 | REDWOOD HWY. 199 | END OF MAINT. | 67657 | 29 | 2333 | 84 | 2 | AC |
| ROUNDS AVENUE | 3560 | REDWOOD AV | LEONARD RD | 85239 | 21 | 4059 | 85 | 2 | ST |
| RUBY DRIVE | 3461 | JAYNES DR. | 100' EAST JASPER LN. | 20086 | 22 | 913 | 84 | 2 | AC |
| RUSSELL ROAD | 2260 | PLEASANT VALLEY RD. | THREE PINES RD. | 304810 | 22 | 13855 | 80 | 2 | ST |
| RUSTIC CANYON DRIVE | 2133 | COLONIAL DR. | CUL-DE-SAC | 43208 | 22 | 1964 | 78 | 2 | AC |
| SALMON CIRCLE | 3337 | ANGLER LN. | CUL-DE-SAC | 3132 | 27 | 116 | 93 | 2 | AC |
| SAN FRANCISCO STREET | 2270 | MONUMENT DR. | END OF PAVEMENT | 52224 | 34 | 1536 | 82 | 2 | AC |
| SAND CREEK ROAD | 3740 | ELK LN. | DEMARAY DRIVE | 105280 | 20 | 5264 | 82 | 2 | ST |
| SARADAN LANE | 3221 | HAMILTON LN | CUL-DE-SAC | 11784 | 24 | 491 | 86 | 2 | ST |
| SARATOGA WAY | 2471 | CAMP JOY RD | DEAD END | 272820 | 30 | 9094 | 84 | 2 | ST |
| SCENIC DRIVE, WEST | 2310 | SCOVILLE RD. | #244 SCENIC DR. | 20880 | 24 | 870 | 80 | 2 | AC |
| SCENIC DRIVE, WEST | 2310-A | #244 SCENIC DR. | GRANITE HILL RD. | 34120 | 40 | 853 | 87 | 2 | AC |
| SCENIC DRIVE, WEST | 2310-B | GRANITE HILL RD. | CUL-DE-SAC | 30294 | 22 | 1377 | 80 | 2 | AC |
| SCHROEDER LANE | 3320 | LEONARD RD. | SCHROEDER PARK(GATE) | 50996 | 22 | 2318 | 100 | 2 | ST |
| SCHUTZWOHL LANE | 3413 | ALLEN CREEK RD. | DEAD END | 38556 | 28 | 1377 | 81 | 2 | AC |
| SCHUTZWOHL LANE, WEST | 3311 | DOWELL ROAD | DEAD END | 40860 | 36 | 1135 | 90 | 2 | AC |
| SCOTT DRIVE | 3841 | BOARD SHANTY RD | CUL-DE-SAC | 117520 | 26 | 4520 | 81 | 2 | AC |
| SCOVILLE ROAD | 2320 | GREENFIELD ROAD | SCENIC DRIVE | 20125 | 35 | 575 | 75 | 2 | AC |
| SCOVILLE ROAD | 2320-B | URBAN GROWTH BOUNDARY | END OF CO. MAINT. | 18280 | 20 | 914 | 83 | 2 | AC |
| SECLUSION LOOP | 2868 | LOWER RIVER RD | LOWER RIVER RD. | 117962 | 26 | 4537 | 87 | 2 | AC |
| SERENITY LANE | 2345 | DONALDSON RD. | CUL-DE-SAC | 81864 | 24 | 3411 | 83 | 2 | ST |
| SHADOW HILLS DRIVE | 2977 | LOWER RIVER RD-HWY 260 | CUL-DE-SAC | 119016 | 24 | 4959 | 80 | 2 | AC |
| SHADOW LANE | 2978 | SHADOW HILLS DR | CUL-DE-SAC | 9724 | 22 | 442 | 81 | 2 | AC |
| SHADOW MOUNTAIN WAY | 3439 | JACKSONVILLE HWY. (238) | CUL-DE-SAC | 55748 | 28 | 1991 | 85 | 2 | AC |
| SHADY LANE | 3507 | REDWOOD AV | 100' N. OF MOLLY LN. | 20320 | 20 | 1016 | 61 | 2 | AC |
| SHADYWOOD DRIVE | 5843 | DICK GEORGE RD. | CUL-DE-SAC | 43197 | 21 | 2057 | 84 | 2 | ST |
| SHANE WAY | 3522 | SUN GLO DR. | CUL-DE-SAC | 5973 | 33 | 181 | 89 | 2 | AC |
| SHANNON LANE | 2675 | PORTOLA DR | N.E. N ST. | 44784 | 36 | 1244 | 75 | 2 | AC |
| SHERWOOD LANE | 3758 | CARROLLWOOD DR. | CUL-DE-SAC | 7152 | 24 | 298 | 91 | 2 | ST |
| SHETLAND DRIVE | 2364 | PALOMINO DR. | END OF CO. MAINT. | 44616 | 24 | 1859 | 83 | 2 | AC |
| SIEBERT WAY | 3147 | FRUITDALE DR | CUL-DE-SAC | 21096 | 36 | 586 | 81 | 2 | AC |
| SIERRA WAY | 2474 | SARATOGA WY | CUL-DE-SAC | 54648 | 27 | 2024 | 83 | 2 | ST |
| SIMMONS CUT DRIVE | 5578 | LOGAN CUT DRIVE | CUL-DE-SAC | 41575 | 25 | 1663 | 84 | 2 | ST |
| SIXTH STREET | 5360 | REDWOOD HWY 199 | DEAD END | 39336 | 22 | 1788 | 82 | 2 | ST |
| SKY CREST DRIVE | 3214 | GRAND VIEW AV | SKY WAY | 98854 | 23 | 4298 | 83 | 2 | ST |
| SKY WAY | 3212 | GRANDVIEW AV | CUL-DE-SAC | 123768 | 27 | 4584 | 84 | 2 | ST |
| SKYLARK LANE | 3347 | LEONARD ROAD | CUL-DE-SAC | 20664 | 36 | 574 | 95 | 2 | AC |
| SLATE CREEK ROAD | 3690 | REDWOOD HWY. 199 | SLATE CREEK BRIGE | 107954 | 22 | 4907 | 85 | 2 | AC |
| SLATE CREEK ROAD | 3690-A | SLATE CREEK BRIDGE | END OF PAVEMENT | 82845 | 15 | 5523 | 89 | 1 | AC |
| SLEEPY HOLLOW LOOP | 3760 | JEROME PRAIRIE RD | JEROME PRAIRIE RD | 222737 | 19 | 11723 | 84 | 2 | ST |
| SLOAN MOUNTAIN LANE | 3639 | LAPPLAND DR. | CUL-DE-SAC | 30456 | 24 | 1269 | 86 | 2 | ST |
| SMITH-SAWYER ROAD | 5830 | ST. HWY. 46 | WHITE SCHOOL RD. | 59364 | 17 | 3492 | 100 | 2 | ST |
| SMOKEY LANE | 3224 | HAMILTON LN | CUL-DE-SAC | 24276 | 21 | 1156 | 89 | 2 | ST |
| SOLDIER CREEK ROAD | 2353 | DONALDSON RD. | LLOYD DR. | 83104 | 32 | 2597 | 79 | 2 | AC |
| SOLDIER CREEK ROAD | 2353-A | LLOYD DR. | NELSON WAY | 97704 | 36 | 2714 | 89 | 2 | AC |
| SOLDIER CREEK ROAD | 2353-B | NELSON WAY | END OF CO. MAINT. | 51228 | 18 | 2846 | 86 | 2 | AC |
| SOLITUDE LANE | 3341 | S. RIVER RD. | CUL-DE-SAC | 40350 | 30 | 1345 | 91 | 1 | AC/AC |
| SOUTH ESPEY ROAD | 3445 | ESPEY ROAD | DAWN ALLAN DRIVE | 11968 | 22 | 544 | 78 | 2 | AC/AC |
| SOUTH ESPEY ROAD | 3445-A | DAWN ALLAN DRIVE | CUL-DE-SAC | 33528 | 22 | 1524 | 91 | 2 | AC |
| SOUTH LIVINGSTON WAY | 2068 | LIVINGSTON WAY | CUL-DE-SAC | 27874 | 22 | 1267 | 92 | 2 | AC/AC |
| SOUTH RIVER ROAD | 3360 | LEONARD ROAD | DARNEILLE LANE | 65040 | 20 | 3252 | 83 | 2 | AC |
| SOUTH RIVER ROAD | 3360-A | DARNEILLE ALNE | COUTANT LANE | 38280 | 20 | 1914 | 90 | 2 | AC/AC |
| SOUTH SHORE DRIVE | 5253 | REEVES CREEK RD | PARKING LOT | 40560 | 20 | 2028 | 85 | 2 | ST |
| SOUTH SIDE ROAD | 3920 | MURPHY CREEK RD | 2553 SOUTH SIDE RD. | 260172 | 22 | 11826 | 84 | 2 | AC |
| SOUTH SIDE ROAD | 3920-A | 2553 SOUTH SIDE RD. | FISH HATCHERY RD | 244200 | 24 | 10175 | 84 | 2 | AC |
| SOUTH VANNOY CREEK ROAD | 2478 | SARATOGA WY | CUL-DE-SAC | 128830 | 26 | 4955 | 77 | 2 | AC |
| SOUTHGATE WAY | 3537 | REDWOOD AV | DEAD END | 89738 | 22 | 4079 | 83 | 2 | AC |
| SPEAKER ROAD | 1010 | NORTHERN MOST ON RAMP | MILE POST 5 | 277080 | 20 | 13854 | 83 | 2 | AC |
| SPEAKER ROAD | 1010-A | MILE POST 5 | END OF STRIPING | 113340 | 20 | 5667 | 83 | 2 | AC |
| SPEAKER ROAD | 1010-B | END OF STRIPING | END OF CO. MAINT. | 60918 | 22 | 2769 | 81 | 2 | ST |
| SPLENDOR DRIVE | 3659 | FIRVIEW LN | CUL-DE-SAC | 15210 | 26 | 585 | 85 | 2 | AC |
| SPRING MOUNTAIN ROAD | 2311 | GREENFIELD RD. | CUL-DE-SAC | 21054 | 22 | 957 | 73 | 2 | AC |
| SPRING OAK WAY | 2449 | PLEASANT VALLEY RD | CUL-DE-SAC | 11506 | 22 | 523 | 81 | 2 | AC |
| SPRINGBROOK DRIVE | 3860 | NORTH APPLEGATE RD | CUL-DE-SAC | 69288 | 24 | 2887 | 84 | 2 | AC |
| SPYGLASS LANE | 3752 | LAUREL AVENUE | CUL-DE-SAC | 60170 | 22 | 2735 | 100 | 2 | AC |

## Table A-4
## Surface Type/Pavement Conditions on County Roads

| Road Name | Section ID | Begin Location | End Location | Area of Section | Road Width | Length | PCI | # of Lanes | Surface Type |
|---|---|---|---|---|---|---|---|---|---|
| STANFORD WAY | 3281 | JACKSONVILLE HWY. (238) | CANAAN ST. | 22308 | 22 | 1014 | 90 | 2 | AC |
| STAR COURT | 3512 | SUN GLO DR | CUL-DE-SAC | 4012 | 34 | 118 | 89 | 2 | AC |
| STARDUST CIRCLE | 2443 | ENTERPRISE AV | CUL-DE-SAC | 16536 | 24 | 689 | 84 | 2 | ST |
| STELLAR COURT | 3354 | DARNEILLE LN. | CUL-DE-SAC | 6880 | 32 | 215 | 89 | 2 | AC |
| STEWART ROAD | 2920 | LOWER RIVER RD-HWY 260 | CUL-DE-SAC | 134398 | 22 | 6109 | 77 | 2 | AC |
| STONEBROOK WAY | 2455 | GALICE RD | CUL-DE-SAC | 34112 | 26 | 1312 | 86 | 2 | AC |
| STRINGER GAP ROAD | 3470 | NEW HOPE RD | CUMBERLAND DR. | 164738 | 41 | 4018 | 88 | 2 | AC |
| STRINGER GAP ROAD | 3470-A | CUMBERLAND DR. | JEROME PRAIRIE RD. | 193040 | 20 | 9652 | 85 | 2 | AC |
| SUGARPINE DRIVE | 2262 | RUSSELL RD. | CUL-DE-SAC | 30030 | 22 | 1365 | 82 | 2 | ST |
| SUGARPINE DRIVE | 2262-A | CUL-DE-SAC | CUL-DE-SAC | 25212 | 22 | 1146 | 95 | 2 | AC |
| SUMMIT LOOP | 3240 | CLOVERLAWN DR. | CLOVERLAWN DR. | 169596 | 18 | 9422 | 86 | 2 | ST |
| SUN GLO DRIVE | 3516 | REDWOOD AV | CUL-DE-SAC | 43316 | 34 | 1274 | 90 | 2 | AC |
| SUN GLO DRIVE | 3516-A | REDWOOD AV | NORTH STAR DR | 16520 | 28 | 590 | 89 | 2 | AC |
| SUN GLO DRIVE | 3516-B | NORTH STAR | DEAD END | 24444 | 36 | 679 | 89 | 2 | AC |
| SUNBEAM CIRCLE | 2445 | ENTERPRISE AV | CUL-DE-SAC | 11520 | 24 | 480 | 84 | 2 | ST |
| SUNCREST DRIVE | 5564 | WALDO RD | CUL-DE-SAC | 123672 | 24 | 5153 | 85 | 2 | ST |
| SUNNY CIRCLE | 3149 | HAMILTON LN | CUL-DE-SAC | 5760 | 36 | 160 | 90 | 2 | AC |
| SUNNY VALLEY LOOP | 1410 | I-5 NB OFF RAMP | PLACER RD. | 45624 | 24 | 1901 | 82 | 2 | AC |
| SUNNY VALLEY LOOP | 1410-A | PLACER RD. | 200 FT N. OF SALMON CR. RD. | 132810 | 19 | 6990 | 90 | 2 | AC |
| SUNNY VALLEY LOOP | 1410-B | 200' N. OF SALMON CR. RD. | END OF PAVEMENT | 114336 | 18 | 6352 | 58 | 2 | AC |
| SUNRISE DRIVE | 2538 | JONES CREEK RD, EAST | CUL-DE-SAC | 36946 | 26 | 1421 | 83 | 2 | AC |
| SURREY DRIVE | 2356 | DONALDSON RD. | AT CIRCLE | 39936 | 24 | 1664 | 80 | 2 | AC |
| SUSAN LANE | 2733 | LINCOLN RD | CUL-DE-SAC | 12700 | 20 | 635 | 79 | 2 | AC |
| SWARTHOUT CIRCLE | 3207 | SWARTHOUT DR | CUL-DE-SAC | 3048 | 24 | 127 | 82 | 2 | ST |
| SWARTHOUT DRIVE | 3205 | CLOVERLAWN DR | CUL-DE-SAC | 20544 | 24 | 856 | 79 | 2 | ST |
| SYCAMORE DRIVE | 2738 | LOWER RIVER RD-HWY 260 | CUL-DE-SAC | 27456 | 26 | 1056 | 100 | 2 | ST |
| TAKILMA ROAD | 5820 | HOLLAND LP. RD. | WALDO RD. | 540848 | 22 | 24584 | 88 | 2 | ST |
| TAKILMA ROAD | 5820-A | WALDO RD. | WHERE ROAD FORKS(USFS) | 340056 | 18 | 18892 | 100 | 2 | ST |
| TAKILMA ROAD | 5820-B | WHERE ROAD FORKS | WEST END OF BRIDGE | 29344 | 14 | 2096 | 100 | 1 | ST |
| TANAGER WAY | 3348 | LEONARD ROAD | CUL-DE-SAC | 21960 | 36 | 610 | 95 | 2 | AC |
| TAVIS DRIVE | 2437 | PLEASANT VALLEY RD | FRONT STREET | 7600 | 19 | 400 | 72 | 2 | AC |
| TAVIS DRIVE | 2437-A | FRONT STREET | CUL-DE-SAC | 12236 | 23 | 532 | 92 | 2 | AC |
| TAYLOR CREEK ROAD | 2468 | GALICE RD | END OF CO. MAINT. | 136764 | 18 | 7598 | 76 | 1 | AC |
| TECH WAY | 2273 | 300' W. OF CORPORATE WY. | 545' E. OF CORPORATE WAY | 25632 | 32 | 801 | 80 | 2 | AC |
| TECH WAY | 2273-A | 545' E. OF CORPORATE WAY | CUL-DE-SAC | 11328 | 32 | 354 | 90 | 2 | AC |
| TEEL LANE | 3446 | NEW HOPE RD. | CUL-DE-SAC | 21640 | 20 | 1082 | 61 | 2 | AC |
| TEMPLIN AVENUE | 2225 | THREE PINES RD. | CUL-DE-SAC | 41840 | 20 | 2092 | 100 | 2 | ST |
| TENTH STREET, NORTHEAST | 2664 | HILLCREST DR | END OF CURB | 36344 | 28 | 1298 | 83 | 2 | AC |
| TERRACE OAKS LANE | 2261 | RUSSELL RD. | CUL-DE-SAC | 9768 | 22 | 444 | 90 | 2 | ST |
| TETHEROW ROAD | 4220 | WILLIAMS HWY | CUL-DE-SAC | 117084 | 22 | 5322 | 83 | 2 | AC |
| THE TREES DRIVE | 4055 | POWELL CREEK RD | CUL-DE-SAC | 70578 | 27 | 2614 | 82 | 2 | AC |
| THOMAS CIRCLE | 3406 | FLORER DR. | CUL-DE-SAC | 4950 | 33 | 150 | 82 | 2 | AC |
| THOMAS TERRACE | 3421 | HARBECK RD. | CUL-DE-SAC | 22150 | 25 | 886 | 90 | 2 | ST |
| THOMPSON CREEK ROAD (4) | 4300 | JACKSON COUNTY LINE | MILEPOST 2 | 211060 | 20 | 10553 | 90 | 2 | AC |
| THOMPSON CREEK ROAD (4) | 4300-A | MILEPOST 2 | END OF PAVEMENT | 268052 | 19 | 14108 | 89 | 2 | AC |
| THOMPSON CREEK ROAD (5) | 5290 | LAKE SHORE DR | FOREST CREEK RD | 362032 | 22 | 16456 | 84 | 2 | ST |
| THORNBROOK DRIVE | 2410 | GALICE RD. | CUL-DE-SAC | 91572 | 26 | 3522 | 87 | 2 | AC |
| THORNRIDGE LANE | 2411 | THORNBROOK DR. | CUL-DE-SAC | 29536 | 26 | 1136 | 87 | 2 | AC |
| THREE PINES ROAD | 2220 | MONUMENT DR. | HUGO RD. | 198807 | 21 | 9467 | 82 | 2 | AC |
| TIFFANY WAY | 2764 | PINE CREST DR | CUL-DE-SAC | 7720 | 20 | 386 | 83 | 2 | ST |
| TIMBER LANE | 2250 | MONUMENT DR. | CUL-DE-SAC | 103512 | 24 | 4313 | 89 | 2 | ST |
| TIMBERIDGE ROAD | 3751 | MIDWAY AVENUE | 697 TIMBERIDGE ROAD | 79144 | 26 | 3044 | 89 | 2 | AC |
| TIMBERIDGE ROAD | 3751-A | 697 TIMBERIDGE ROAD | LAUREL AVENUE | 125736 | 26 | 4836 | 87 | 2 | AC |
| TIPTON ROAD | 3731 | DEMARAY DRIVE | END OF PAVEMENT | 2472 | 12 | 206 | 77 | 2 | ST |
| TOMOE COURT | 2259 | HARTSFIELD LN. | CUL-DE-SAC | 12936 | 28 | 462 | 83 | 2 | AC |
| TORREY PINES ROAD | 3429 | JACKSONVILLE HWY 238 | CUL-DE-SAC | 7150 | 26 | 275 | 100 | 2 | AC |
| TOWNE STREET | 3425 | JACKSONVILLE HWY. (238) | WEST HARBECK RD. | 34276 | 22 | 1558 | 72 | 2 | ST |
| TRACY DRIVE | 3842 | BOARD SHANTY RD | CUL-DE-SAC | 16720 | 22 | 760 | 59 | 2 | AC |
| TRILLER LANE | 3487 | HIDDEN VALLEY RD | CUL-DE-SAC | 27930 | 21 | 1330 | 82 | 2 | AC |
| TROLLVIEW ROAD | 3226 | HAMILTON LN | END OF CO. MAINT. | 41363 | 19 | 2177 | 84 | 2 | ST |
| TROUT CIRCLE | 3336 | ANGLER LN. | CUL-DE-SAC | 3267 | 27 | 121 | 92 | 2 | AC |
| TUNNEL LOOP ROAD | 2070 | HUGO RD. | HUGO RD. | 248468 | 22 | 11294 | 94 | 2 | AC |
| TURNER ROAD | 5301 | WEST SIDE RD | OLD HWY 199 | 26560 | 20 | 1328 | 79 | 2 | ST |
| TURTLE LANE | 3942 | FISH HATCHERY RD | DEAD END (GATE) | 21648 | 24 | 902 | 87 | 2 | AC |
| TWILIGHT LANE | 3468 | MOONBEAM LN | CUL-DE-SAC | 5600 | 20 | 280 | 81 | 2 | AC |
| TYCER CROSSING | 5870 | ST. HWY. 46 | CUL-DE-SAC | 69264 | 24 | 2886 | 85 | 2 | ST |
| UNION AVENUE | 3401 | JACKSONVILLE HWY 238 | RINGUETTE STREET | 68931 | 37 | 1863 | 100 | 2 | AC |
| UPPER POWELL CREEK ROAD | 4015 | WATERGAP RD | PAULA LN | 20400 | 20 | 1020 | 85 | 2 | AC |
| UPPER RIVER ROAD | 2700 | LINCOLN ROAD | AZALEA DR CUTOFF | 488215 | 37 | 13195 | 83 | 2 | AC |
| UPPER RIVER ROAD | 2700-A | AZALEA DR CUTOFF | LOWER RIVER RD (HWY 260) | 396566 | 37 | 10718 | 85 | 2 | AC |
| UPPER RIVER ROAD LOOP | 2705 | UPPER RIVER RD | UPPER RIVER RD. | 32430 | 23 | 1410 | 76 | 2 | AC |
| VALLE VISTA DRIVE | 3447 | JACKSONVILLE HWY. 238 | 158' E. OF KINGSGATE WAY | 15696 | 24 | 654 | 89 | 2 | AC |
| VALLE VISTA DRIVE | 3447-A | 158' E. OF KINGSGATE WAY | CUL-DE-SAC | 21552 | 24 | 898 | 90 | 2 | AC |
| VALLEY ROGUE WAY | 2762 | COUNTRY AIRE DR | CUL-DE-SAC | 16302 | 22 | 741 | 81 | 2 | ST |
| VERNA LANE | 3454 | INTERVALE RD. (EAST) | DEAD END | 27720 | 24 | 1155 | 87 | 2 | AC |
| VERTICAL DRIVE | 2661 | HILLCREST DR | CUL-DE-SAC | 27037 | 19 | 1423 | 84 | 2 | AC |
| VILLAGE LANE | 3241 | SUMMIT LP. | CUL-DE-SAC | 29250 | 26 | 1125 | 86 | 2 | ST |
| VINE STREET | 2625 | EAST END OF CURB SECTION | HIGHLAND AVENUE | 27300 | 26 | 1050 | 79 | 2 | AC |
| VINE STREET | 2625-A | HAWTHORNE AVENUE | EAST END OF CURB SECTION | 84996 | 36 | 2361 | 83 | 2 | AC |
| VIRGINIA LANE | 3121 | BAILEY DR | CUL-DE-SAC | 20184 | 24 | 841 | 84 | 2 | ST |
| VOLKMER WAY | 4065 | POWELL CREEK RD | CUL-DE-SAC | 26136 | 22 | 1188 | 84 | 2 | AC |
| WAGON WHEEL DRIVE | 3253 | JACKSONVILLE HWY 238 | CUL-DE-SAC | 31548 | 33 | 956 | 100 | 2 | AC/AC |
| WALDO ROAD | 5560 | REDWOOD HWY 199 | SUNCREST DRIVE | 259896 | 24 | 10829 | 85 | 2 | ST |
| WALDO ROAD | 5560-A | SUNCREST DRIVE | TAKILMA ROAD | 347976 | 24 | 14499 | 84 | 2 | ST |
| WALKER ROAD | 3230 | CLOVERLAWN DR. | DEAD END | 154200 | 24 | 6425 | 87 | 2 | ST |
| WALNUT AVENUE | 3571 | REDWOOD AV | PRAIRIE LN. | 34580 | 20 | 1729 | 84 | 2 | AC |

## Table A-4
## Surface Type/Pavement Conditions on County Roads

| Road Name | Section ID | Begin Location | End Location | Area of Section | Road Width | Length | PCI | # of Lanes | Surface Type |
|---|---|---|---|---|---|---|---|---|---|
| WALNUT AVENUE | 3571-A | PRAIRIE LN. | END OF PAVEMENT | 36397 | 17 | 2141 | 87 | 2 | ST |
| WALTERS DRIVE | 5410 | LAUREL RD | JUNE DRIVE | 78260 | 26 | 3010 | 82 | 2 | AC |
| WARD ROAD | 2461 | HUGO RD | CROW RD. | 27560 | 20 | 1378 | 92 | 2 | AC |
| WARNER ROAD | 1020 | RAILROAD AVE. | END OF PAVEMENT | 86802 | 17 | 5106 | 75 | 2 | AC |
| WARREN ROAD | 5130 | HOGUE DR | CUL-DE-SAC | 51140 | 20 | 2557 | 100 | 2 | ST |
| WASHINGTON BOULEVARD | 2639 | MIDLAND AV. | MORGAN LN. | 106518 | 41 | 2598 | 100 | 2 | AC/AC |
| WATER GAP ROAD | 4010 | JACKSONVILLE HWY 238 | 500' SOUTH OF FIELDS RD. | 167804 | 28 | 5993 | 84 | 2 | AC |
| WATER GAP ROAD | 4010-A | 500' S. OF FIELDS ROAD | MILEPOST 2 | 110856 | 24 | 4619 | 82 | 2 | AC |
| WATER GAP ROAD | 4010-B | MILEPOST 2 | 900' S. UPPER POWELL CR RD | 82800 | 24 | 3450 | 79 | 2 | AC |
| WATER GAP ROAD | 4010-C | 900' S. UPPER POWELL CR RD | 1000' S. POWELL CREEK RD | 84168 | 24 | 3507 | 83 | 2 | AC |
| WATER GAP ROAD | 4010-D | 1000' S. POWELL CREEK RD. | WILLIAMS HWY | 284508 | 36 | 7903 | 83 | 2 | AC |
| WATERS CREEK ROAD | 3670 | REDWOOD HWY.199 | END OF PAVEMENT | 201180 | 21 | 9580 | 85 | 2 | AC |
| WEST SIDE ROAD | 5300 | REDWOOD HWY 199 | MILE POST 3 | 287208 | 18 | 15956 | 85 | 2 | ST |
| WEST SIDE ROAD | 5300-A | MILE POST 3 | END OF CO. MAINT. | 324684 | 18 | 18038 | 85 | 2 | ST |
| WESTWOOD DRIVE | 3342 | LEONARD RD. | CUL-DE-SAC | 40638 | 26 | 1563 | 88 | 2 | AC |
| WETHERBEE DRIVE | 3930 | FISH HATCHERY RD | 200' WEST OF KEEN RD | 80088 | 24 | 3337 | 90 | 2 | AC |
| WHISPERING PINES LANE | 3089 | ROGUE RIVER HWY 99 | ALMAR RD. | 36366 | 22 | 1653 | 83 | 2 | AC |
| WHITE OAK DRIVE | 5575 | FERNWOOD DR | DEAD END | 48875 | 25 | 1955 | 84 | 2 | ST |
| WHITE SCHOOL ROAD | 5850 | ST. HWY. 46 | GARNER ROAD | 182160 | 20 | 9108 | 100 | 2 | ST |
| WHITE SCHOOL ROAD | 5850-A | GARNER ROAD | CAVES HWY 46 | 81320 | 20 | 4066 | 100 | 2 | ST |
| WHITERIDGE ROAD | 3481 | DETRICK DR | CUL-DE-SAC | 18000 | 24 | 750 | 83 | 2 | AC |
| WHITESTONE DRIVE | 3642 | RIVERBANKS ROAD | CUL-DE-SAC | 58344 | 26 | 2244 | 100 | 2 | AC |
| WILDFLOWER DRIVE | 2062 | ECHO WY. | CUL-DE-SAC | 110066 | 22 | 5003 | 80 | 2 | ST |
| WILDFLOWER DRIVE | 2062-A | CUL-DE-SAC | CUL-DE-SAC | 34606 | 26 | 1331 | 95 | 2 | AC |
| WILDFLOWER DRIVE | 2062-B | CUL-DE-SAC | CUL-DE-SAC | 24856 | 26 | 956 | 100 | 2 | AC |
| WILLIAMS HIGHWAY | 4500 | JACKSONVILLE HWY 238 | POWELL CREEK RD. | 288256 | 32 | 9008 | 83 | 2 | AC/AC |
| WILLIAMS HIGHWAY | 4500-A | POWELL CREEK ROAD | 3000' S. OF POWELL CREEK RD | 66000 | 22 | 3000 | 89 | 2 | AC/AC |
| WILLIAMS HIGHWAY | 4500-B | 3000' S. OF POWELL CREEK RD | FINDLEY ROAD | 210342 | 22 | 9561 | 84 | 2 | AC/AC |
| WILLIAMS HIGHWAY | 4500-C | FINDLEY RD. | WATER GAP RD. | 77484 | 22 | 3522 | 84 | 2 | AC/AC |
| WILLIAMS HIGHWAY | 4500-D | WATER GAP RD. | CEDAR FLAT RD. | 195792 | 24 | 8158 | 80 | 2 | AC |
| WILLIAMSON LOOP | 2244 | GRANGE RD. | WILLIAMSON LP. #1136 | 130812 | 22 | 5946 | 80 | 2 | ST |
| WILLOW CREEK LANE | 3208 | CLOVERLAWN DR | CUL-DE-SAC | 16992 | 24 | 708 | 87 | 2 | AC |
| WILLOW LANE | 3520 | WOLF LN | REDWOOD HWY | 16038 | 22 | 729 | 84 | 2 | ST |
| WILLOW LANE | 3520-A | REDWOOD HWY 199 | REDWOOD AV | 42636 | 22 | 1938 | 83 | 2 | ST |
| WILLOW LANE | 3520-B | REDWOOD AV | LEONARD RD | 56914 | 22 | 2587 | 85 | 2 | ST |
| WILMA LANE | 2768 | PINE CREST DR | CUL-DE-SAC | 12012 | 22 | 546 | 84 | 2 | ST |
| WILSON STREET | 2223 | THREE PINES RD. | END OF PAVEMENT | 29060 | 20 | 1453 | 100 | 2 | ST |
| WINETEER LANE | 3510 | REDWOOD AV | CUL-DE-SAC | 38787 | 21 | 1847 | 81 | 2 | ST |
| WINONA ROAD | 2040 | GRANITE HILL | #722 WINONA RD | 118209 | 21 | 5629 | 91 | 2 | AC |
| WINONA ROAD | 2040-A | #722 WINONA RD. | ROAD NARROWS MP 1.6 | 76020 | 30 | 2534 | 93 | 2 | AC |
| WINONA ROAD | 2040-B | ROAD NARROWS MP 1.6 | JUMP OFF JOE CREEK RD | 229140 | 19 | 12060 | 86 | 2 | AC |
| WOLF LANE | 3313 | DOWELL RD. | WILLOW LN. | 57618 | 22 | 2619 | 85 | 2 | AC |
| WOODBROOK DRIVE | 2610 | HIGHLAND AV | CURB BEGINS (#222) | 17724 | 21 | 844 | 86 | 2 | AC |
| WOODBROOK DRIVE | 2610-A | CURB BEGINS (#222) | 100' N. OF LASSEN WY. | 11984 | 28 | 428 | 85 | 2 | AC |
| WOODLAKE DRIVE | 3634 | DUTCHER CREEK RD | CUL-DE-SAC | 62100 | 30 | 2070 | 84 | 2 | ST |
| WOODLAND PARK ROAD | 3770 | REDWOOD AV | JEROME PRAIRIE RD | 169225 | 25 | 6769 | 85 | 2 | AC |
| WOODROW WAY | 3811 | MURPHY CREEK RD | MURPHY LN. | 10455 | 15 | 697 | 86 | 1 | AC |
| WOODSIDE STREET | 3264 | CLOVERLAWN DR. | DEAD END | 16744 | 26 | 644 | 83 | 2 | AC |
| WOODSIDE STREET | 3264-A | JACKONVILLE HWY 238 | HOMEWOOD RD. | 12078 | 22 | 549 | 89 | 2 | AC |
| WORDEN WAY | 3232 | FRANKHAM RD. | CUL-DE-SAC | 10560 | 22 | 480 | 85 | 2 | ST |
| WYLIE LANE | 3219 | HAVILAND DR | CURB SECTION #1118 | 7925 | 25 | 317 | 100 | 2 | ST |
| | | | | | | 3031619 | | | |
| | | | | | | 574 | | | |
| | | | | | | | | | |
| | | | **% of All County Roadways** | | | | | | |
| | | | Poor: | 0.1% | | | | | |
| | | | Good: | 3.7% | | | | | |
| | | | Very Good: | 96.2% | | | | | |

Table A-5: Shoulder Widths and Types on County Roads

| Road Name | Begin Milepost | End Milepost | Miles | Right Width | Left Width | Avg width | Left Shoulder Type | Right Shoulder Type |
|---|---|---|---|---|---|---|---|---|
| ABEGG ROAD | 0 | 0.76 | 0.76 | 2 | 1 | 1.5 | Gravel | Gravel |
| ABEGG ROAD | 0.76 | 0.98 | 0.22 | 3 | 3 | 3.0 | Gravel | Gravel |
| ABEGG ROAD | 0.98 | 1.18 | 0.2 | 3 | 2 | 2.5 | Gravel | Gravel |
| ABEGG ROAD | 1.18 | 1.64 | 0.46 | 1 | 1 | 1.0 | Gravel | Gravel |
| ABEGG ROAD | 1.64 | 1.81 | 0.17 | 2 | | 1.0 | | Gravel |
| ABEGG ROAD | 1.81 | 2.45 | 0.64 | 2 | | 1.0 | | Gravel |
| ACORN STREET | 0 | 0.14 | 0.14 | 1 | 1 | 1.0 | Gravel | Gravel |
| ACORN STREET | 0.14 | 0.16 | 0.02 | 1 | 1 | 1.0 | Gravel | Gravel |
| ACORN STREET | 0.16 | 0.54 | 0.38 | 1 | 1 | 1.0 | Gravel | Gravel |
| ADELINE DRIVE | 0 | 0.15 | 0.15 | 1 | | 0.5 | | Gravel |
| AGGREGATE AVENUE | 0 | 0.131 | 0.131 | 2 | 2 | 2.0 | Paved (ACP) | Paved (ACP) |
| AGNESS AVENUE | 0 | 0.11 | 0.11 | 3 | 3 | 3.0 | Gravel | Gravel |
| AGNESS AVENUE | 0.11 | 0.66 | 0.55 | 3 | 3 | 3.0 | Gravel | Gravel |
| AIRPORT DRIVE | 0 | 2.236 | 2.236 | 1 | 1 | 1.0 | Gravel | Gravel |
| ALEXANDER LANE | 0 | 0.089 | 0.089 | 2 | 2 | 2.0 | Gravel | Gravel |
| ALLENWOOD DRIVE | 0 | 0.12 | 0.12 | 3 | 3 | 3.0 | Gravel | Gravel |
| ALMAR ROAD | 0 | 0.25 | 0.25 | 3 | 3 | 3.0 | Gravel | Gravel |
| ALTHOUSE CREEK ROAD | 0 | 0.45 | 0.45 | 1 | 1 | 1.0 | Gravel | Gravel |
| ALTHOUSE CREEK ROAD | 0.45 | 2.885 | 2.435 | 2 | 2 | 2.0 | Gravel | Gravel |
| AMENT ROAD | 0 | 0.71 | 0.71 | 2 | 2 | 2.0 | Gravel | Gravel |
| ANITA DRIVE | 0 | 0.343 | 0.343 | 2 | 2 | 2.0 | Gravel | Gravel |
| ANN ROY DRIVE | 0 | 0.244 | 0.244 | 2 | 2 | 2.0 | Gravel | Gravel |
| ANNA WAY | 0 | 0.16 | 0.16 | 2 | 2 | 2.0 | Gravel | Gravel |
| ANNABELLE LANE | 0 | 0.18 | 0.18 | | | 0.0 | | |
| APRIL DRIVE | 0 | 0.37 | 0.37 | 2 | 2 | 2.0 | Gravel | Gravel |
| ARTLIN ROAD | 0 | 0.36 | 0.36 | 2 | 2 | 2.0 | Gravel | Gravel |
| AURORA AVENUE | 0 | 0.14 | 0.14 | 2 | 2 | 2.0 | Gravel | Gravel |
| AVERILL DRIVE | 0 | 1.32 | 1.32 | 1 | 1 | 1.0 | Gravel | Gravel |
| AZALEA DRIVE | 0 | 0.32 | 0.32 | 5 | 5 | 5.0 | Gravel | Gravel |
| AZALEA DRIVE | 0.32 | 0.91 | 0.59 | 7 | 7 | 7.0 | Gravel | Gravel |
| AZALEA DRIVE | 0.91 | 1.85 | 0.94 | 4 | 4 | 4.0 | Gravel | Gravel |
| AZALEA DRIVE | 1.85 | 2.87 | 1.02 | 6 | 3 | 4.5 | Gravel | Gravel |
| AZALEA DRIVE | 2.87 | 3.49 | 0.62 | 4 | 4 | 4.0 | Gravel | Gravel |
| AZALEA DRIVE | 3.49 | 5.75 | 2.26 | 7 | 4 | 5.5 | Gravel | Gravel |
| AZALEA DRIVE | 5.75 | 6.07 | 0.32 | 7 | 4 | 5.5 | Gravel | Gravel |
| AZALEA DRIVE CUTOFF | 0 | 0.356 | 0.356 | 3 | 3 | 3.0 | Gravel | Gravel |
| BAILEY DRIVE | 0 | 0.15 | 0.15 | 2 | 2 | 2.0 | Gravel | Gravel |
| BARBARA DRIVE | 0 | 0.56 | 0.56 | 2 | 2 | 2.0 | Gravel | Gravel |
| BARKER DRIVE | 0 | 1.023 | 1.023 | 1 | 1 | 1.0 | Gravel | Gravel |
| BECKLIN DRIVE | 0 | 0.65 | 0.65 | 2 | 2 | 2.0 | Gravel | Gravel |
| BEECHER ROAD | 0 | 0.37 | 0.37 | 1 | 1 | 1.0 | Gravel | Gravel |
| BLAS CERDENA DRIVE | 0 | 0.329 | 0.329 | 1 | 1 | 1.0 | Gravel | Gravel |
| BLOOM ROAD | 0 | 0.22 | 0.22 | | | 0.0 | | |
| BLUE MOUNTAIN ROAD | 0 | 0.114 | 0.114 | 4 | 4 | 4.0 | Gravel | Gravel |
| BLUE RIDGE LANE | 0 | 0.129 | 0.129 | 1.5 | 1.5 | 1.5 | Gravel | Gravel |
| BLUEBELL LANE | 0 | 0.17 | 0.17 | 1 | 1 | 1.0 | Gravel | Gravel |
| BOARD SHANTY ROAD | 0 | 1.35 | 1.35 | 3 | 3 | 3.0 | Gravel | Gravel |
| BOLT VIEW ROAD | 0 | 0.2 | 0.2 | 1 | 1 | 1.0 | Gravel | Gravel |
| BONANZA DRIVE | 0 | 0.1 | 0.1 | 3 | 3 | 3.0 | Gravel | Gravel |
| BOUNDARY ROAD | 0 | 0.35 | 0.35 | 1 | 1 | 1.0 | Gravel | Gravel |
| BOUNDARY ROAD | 0.35 | 0.61 | 0.26 | 1 | 1 | 1.0 | Gravel | Gravel |
| BOWHILL ROAD | 0 | 0.05 | 0.05 | 1 | 1 | 1.0 | Gravel | Gravel |
| BOYER ROAD | 0 | 0.49 | 0.49 | 2 | 2 | 2.0 | Gravel | Gravel |
| BRANDY LANE | 0 | 0.093 | 0.093 | 3 | 3 | 3.0 | Gravel | Gravel |
| BREEZY LANE | 0 | 0.194 | 0.194 | | | 0.0 | Gravel | Gravel |

Table A-5: Shoulder Widths and Types on County Roads

| Road Name | Begin Milepost | End Milepost | Miles | Right Width | Left Width | Avg width | Left Shoulder Type | Right Shoulder Type |
|---|---|---|---|---|---|---|---|---|
| BRETT WAY | 0 | 0.34 | 0.34 | 2 | 2 | 2.0 | Gravel | Gravel |
| BRIDGE LANE | 0 | 0.34 | 0.34 | 3 | 3 | 3.0 | Gravel | Gravel |
| BRIDGE LANE | 0.34 | 1.87 | 1.53 | 2 | 2 | 2.0 | Gravel | Gravel |
| BRIDGE LANE | 1.87 | 2.561 | 0.691 | 3 | 3 | 3.0 | Gravel | Gravel |
| BRIMSTONE ROAD | 0 | 0.824 | 0.824 | 1 | 1 | 1.0 | Gravel | Gravel |
| BRISTOW ROAD | 0 | 0.25 | 0.25 | 2 | 2 | 2.0 | Gravel | Gravel |
| BROOKE LANE | 0 | 0.24 | 0.24 | 2 | 2 | 2.0 | Gravel | Gravel |
| BROOKSIDE BOULEVARD | 0 | 1.04 | 1.04 | 4 | 4 | 4.0 | Gravel | Gravel |
| BROWNS ROAD | 0 | 0.7 | 0.7 | 1 | 1 | 1.0 | Gravel | Gravel |
| BUENA VISTA LANE | 0 | 0.123 | 0.123 | 1 | 1 | 1.0 | Gravel | Gravel |
| BULL CREEK ROAD | 0 | 1.36 | 1.36 | 1 | 1 | 1.0 | Gravel | Gravel |
| BURCH DRIVE | 0 | 0.55 | 0.55 | 4 | 4 | 4.0 | Gravel | Gravel |
| BUSHNELL WAY | 0 | 0.275 | 0.275 | 1 | 1 | 1.0 | Gravel | Gravel |
| BUYSMAN WAY | 0 | 0.15 | 0.15 | 2 | 2 | 2.0 | Gravel | Gravel |
| BUYSMAN WAY | 0.15 | 0.382 | 0.232 | 2 | 2 | 2.0 | Gravel | Gravel |
| CALIFORNIA AVENUE | 0 | 0.475 | 0.475 | 2 | 2 | 2.0 | Gravel | Gravel |
| CAMBRIDGE DRIVE | 0 | 0.52 | 0.52 | 2 | 2 | 2.0 | Gravel | Gravel |
| CAMP JOY ROAD | 0 | 1.43 | 1.43 | 2 | 2 | 2.0 | Gravel | Gravel |
| CAMPUS VIEW DRIVE | 0 | 0.656 | 0.656 | 1 | 1 | 1.0 | Gravel | Gravel |
| CANAAN STREET | 0 | 0.16 | 0.16 | 2 | 2 | 2.0 | Gravel | Gravel |
| CANDLELIGHT LANE | 0 | 0.04 | 0.04 | | | 0.0 | | |
| CANYON DRIVE | 0 | 0.15 | 0.15 | 2 | 2 | 2.0 | Gravel | Gravel |
| CARNAHAN DRIVE | 0 | 0.182 | 0.182 | 1 | 1 | 1.0 | Gravel | Gravel |
| CAROLANN WAY | 0 | 0.08 | 0.08 | 2 | 2 | 2.0 | Gravel | Gravel |
| CARRIE STREET | 0 | 0.16 | 0.16 | 1 | 1 | 1.0 | Gravel | Gravel |
| CARROLLWOOD DRIVE | 0 | 0.46 | 0.46 | 1 | 1 | 1.0 | Gravel | Gravel |
| CARTER DRIVE | 0 | 0.37 | 0.37 | 2 | 2 | 2.0 | Gravel | Gravel |
| CARTON WAY | 0 | 0.13 | 0.13 | 3 | 3 | 3.0 | Gravel | Gravel |
| CARTON WAY | 0.13 | 0.55 | 0.42 | 3 | 3 | 3.0 | Gravel | Gravel |
| CASCADE DRIVE | 0 | 0.38 | 0.38 | 2 | 2 | 2.0 | Gravel | Gravel |
| CASTLE CREEK ROAD | 0 | 0.48 | 0.48 | 1 | 1 | 1.0 | Gravel | Gravel |
| CATHEDRAL WAY | 0 | 0.195 | 0.195 | 2 | 2 | 2.0 | Gravel | Gravel |
| CAVES CAMP ROAD | 0 | 0.41 | 0.41 | 1 | 1 | 1.0 | Gravel | Gravel |
| CAVES CAMP ROAD | 0.41 | 0.58 | 0.17 | 2 | 2 | 2.0 | Gravel | Gravel |
| CAVES CAMP ROAD | 0.58 | 0.75 | 0.17 | | | 0.0 | | |
| CAVES CAMP ROAD | 1 | 2 | 1 | | | 0.0 | | |
| CEDAR FLAT ROAD | 0 | 1.2 | 1.2 | 3 | 3 | 3.0 | Gravel | Gravel |
| CEDAR FLAT ROAD | 1.2 | 4.2 | 3 | 3 | 3 | 3.0 | Gravel | Gravel |
| CEDAR HEIGHTS DRIVE | 0 | 0.22 | 0.22 | 1 | 1 | 1.0 | Gravel | Gravel |
| CHAPARRAL DRIVE | 0 | 0.15 | 0.15 | 2 | 2 | 2.0 | Gravel | Gravel |
| CHENEY CREEK ROAD | 0 | 0.75 | 0.75 | 3 | 3 | 3.0 | Gravel | Gravel |
| CHENEY CREEK ROAD | 0.75 | 0.95 | 0.2 | | | 0.0 | | |
| CHENEY CREEK ROAD | 1.28 | 2.13 | 0.85 | | | 0.0 | | |
| CHESLOCK ROAD | 0 | 0.32 | 0.32 | 3 | 3 | 3.0 | Gravel | Gravel |
| CHINOOK PARK LANE | 0 | 0.203 | 0.203 | 2 | 2 | 2.0 | Gravel | Gravel |
| CIENEGA LANE | 0 | 0.25 | 0.25 | 2 | 2 | 2.0 | Gravel | Gravel |
| CIENEGA LANE | 0.25 | 0.62 | 0.37 | 1 | 1 | 1.0 | Gravel | Gravel |
| CIENEGA LANE | 0.62 | 1.25 | 0.63 | 1 | 1 | 1.0 | Gravel | Gravel |
| CINDY LANE | 0 | 0.06 | 0.06 | 2 | 2 | 2.0 | Gravel | Gravel |
| CLEWIS LANE | 0 | 0.33 | 0.33 | 1 | 1 | 1.0 | Gravel | Gravel |
| CLEWIS LANE | 0 | 0.11 | 0.11 | 1 | 1 | 1.0 | Gravel | Gravel |
| CLOVERLAWN DRIVE | 0.54 | 0.6 | 0.06 | 5 | 5 | 5.0 | Gravel | Gravel |
| CLOVERLAWN DRIVE | 0.6 | 0.84 | 0.24 | 2 | 2 | 2.0 | Gravel | Gravel |
| CLOVERLAWN DRIVE | 0.84 | 1.94 | 1.1 | | | 0.0 | | |
| CLOVERLAWN DRIVE | 2.08 | 5.12 | 3.04 | 2 | 2 | 2.0 | Gravel | Gravel |

Table A-5: Shoulder Widths and Types on County Roads

| Road Name | Begin Milepost | End Milepost | Miles | Right Width | Left Width | Avg width | Left Shoulder Type | Right Shoulder Type |
|---|---|---|---|---|---|---|---|---|
| COED PLACE | 0 | 0.106 | 0.106 | 1 | 1 | 1.0 | Gravel | Gravel |
| COLONIAL DRIVE | 0 | 0.5 | 0.5 | 2 | 2 | 2.0 | Gravel | Gravel |
| COMMERCE WAY | 0 | 0.15 | 0.15 | 4 | 4 | 4.0 | Paved (BST) | Paved (BST) |
| CONNIE LANE | 0 | 0.41 | 0.41 | 1 | 1 | 1.0 | Gravel | Gravel |
| CORNETT LANE | 0 | 0.318 | 0.318 | 1 | 1 | 1.0 | Gravel | Gravel |
| CORPORATE WAY | 0 | 0.12 | 0.12 | 4 | 4 | 4.0 | Paved (BST) | Paved (BST) |
| COUNTRY AIRE DRIVE | 0 | 0.12 | 0.12 | 2 | 2 | 2.0 | Gravel | Gravel |
| COUNTRY AIRE DRIVE | 0.12 | 0.52 | 0.4 | 2 | 2 | 2.0 | Gravel | Gravel |
| COYOTE CREEK ROAD | 0 | 2.3 | 2.3 | 2 | 2 | 2.0 | Gravel | Gravel |
| COYOTE CREEK ROAD | 2.3 | 5.44 | 3.14 | 1 | 1 | 1.0 | Gravel | Gravel |
| COYOTE CREEK ROAD | 5.3 | 5.4 | 0.1 | 1 | 1 | 1.0 | Gravel | Gravel |
| CREST DRIVE | 0 | 0.436 | 0.436 | 1 | 1 | 1.0 | Gravel | Gravel |
| CROOKS CREEK ROAD | 0 | 2.18 | 2.18 | 1 | 1 | 1.0 | Dirt | Dirt |
| CROSSBOW LANE | 0 | 0.1 | 0.1 | 1 | 1 | 1.0 | Gravel | Gravel |
| CROW ROAD | 0 | 0.84 | 0.84 | 1 | 1 | 1.0 | Gravel | Gravel |
| CROW ROAD, EAST | 0 | 0.18 | 0.18 | 2 | 2 | 2.0 | Gravel | Gravel |
| CRYSTAL DRIVE | 0 | 0.615 | 0.615 | 2 | 2 | 2.0 | Gravel | Gravel |
| CULLISON ROAD | 0 | 0.25 | 0.25 | 1 | 1 | 1.0 | Gravel | Gravel |
| CURTIS DRIVE | 0.05 | 0.634 | 0.584 | 2 | 2 | 2.0 | Gravel | Gravel |
| DAISY LANE | 0 | 0.15 | 0.15 | 2 | 2 | 2.0 | Gravel | Gravel |
| DARNEILLE LANE | 0 | 0.26 | 0.26 | 3 | 3 | 3.0 | Gravel | Gravel |
| DARNEILLE LANE | 0.26 | 0.76 | 0.5 | 3 | 3 | 3.0 | Gravel | Gravel |
| DAVIDSON ROAD | 0 | 0.5 | 0.5 | 2 | 2 | 2.0 | Gravel | Gravel |
| DAWN ALLAN DRIVE | 0 | 0.27 | 0.27 | 2 | 2 | 2.0 | Gravel | Gravel |
| DAWN DRIVE | 0 | 0.07 | 0.07 | 2 | 2 | 2.0 | Gravel | Gravel |
| DE WOODY LANE | 0 | 0.41 | 0.41 | 2 | 2 | 2.0 | Gravel | Gravel |
| DEBRICK WAY | 0 | 0.226 | 0.226 | 2 | 2 | 2.0 | Gravel | Gravel |
| DEER CREEK ROAD | 0 | 4.19 | 4.19 | 1 | 1 | 1.0 | Gravel | Gravel |
| DEER CREEK ROAD | 4.19 | 8.04 | 3.85 | 2 | 2 | 2.0 | Gravel | Gravel |
| DELLWOOD DRIVE | 0 | 0.17 | 0.17 | 2 | 2 | 2.0 | Gravel | Gravel |
| DEMARAY DRIVE | 0 | 3.55 | 3.55 | 8 | 8 | 8.0 | Gravel | Gravel |
| DENVER AVENUE | 0 | 0.343 | 0.343 | 3 | 3 | 3.0 | Gravel | Gravel |
| DICK GEORGE ROAD | 0.56 | 5.13 | 4.57 | 2 | 2 | 2.0 | Gravel | Gravel |
| DOG CREEK ROAD | 0 | 0.24 | 0.24 | 1 | 1 | 1.0 | Gravel | Gravel |
| DOG CREEK ROAD | 0.24 | 0.259 | 0.019 | 3 | 1 | 2.0 | Gravel | Gravel |
| DONALDSON ROAD | 0 | 1.05 | 1.05 | 3 | 3 | 3.0 | Gravel | Gravel |
| DONALDSON ROAD | 1.05 | 1.5 | 0.45 | 2 | 2 | 2.0 | Gravel | Gravel |
| DONALDSON ROAD | 1.5 | 1.85 | 0.35 | 2 | 2 | 2.0 | Gravel | Gravel |
| DONEEN LANE | 0 | 0.052 | 0.052 | 2 | 2 | 2.0 | Gravel | Gravel |
| DONET LANE | 0 | 0.4 | 0.4 | 3 | 3 | 3.0 | Gravel | Gravel |
| DRAPER VALLEY ROAD | 0 | 2.9 | 2.9 | 3 | 3 | 3.0 | Gravel | Gravel |
| DRURY LANE | 0 | 0.1 | 0.1 | 7 | 7 | 7.0 | Gravel | Gravel |
| DRURY LANE | 0.1 | 0.245 | 0.145 | 7 | 7 | 7.0 | Gravel | Gravel |
| DRYDEN ROAD | 0 | 0.477 | 0.477 | 1 | 1 | 1.0 | Gravel | Gravel |
| DUSTIN WAY | 0 | 0.11 | 0.11 | 2 | 2 | 2.0 | Gravel | Gravel |
| DUTCHER CREEK ROAD | 0 | 1.36 | 1.36 | 3 | 3 | 3.0 | Gravel | Gravel |
| EAGLES VIEW DRIVE | 0 | 0.549 | 0.549 | 1.5 | 1.5 | 1.5 | Gravel | Gravel |
| EAST FORK ROAD | 0 | 3.2 | 3.2 | 2 | 2 | 2.0 | Gravel | Gravel |
| EAST FORK ROAD | 3.2 | 3.3 | 0.1 | 1 | 1 | 1.0 | Gravel | Gravel |
| EAST FORK ROAD | 3.3 | 3.8 | 0.5 | | | 0.0 | | |
| ECHO WAY | 0 | 0.222 | 0.222 | 2 | 2 | 2.0 | Gravel | Gravel |
| EDEN DRIVE | 0 | 0.107 | 0.107 | 1 | 1 | 1.0 | Gravel | Gravel |
| EDGERTON LANE | 0 | 0.328 | 0.328 | 2 | 2 | 2.0 | | Gravel |
| EDGEWOOD ROAD | 0 | 0.187 | 0.187 | 3 | 3 | 3.0 | Gravel | Gravel |
| EIGHT DOLLAR MOUNTAIN ROAD | 0 | 1.3 | 1.3 | 2 | 2 | 2.0 | Gravel | Gravel |

Table A-5: Shoulder Widths and Types on County Roads

| Road Name | Begin Milepost | End Milepost | Miles | Right Width | Left Width | Avg width | Left Shoulder Type | Right Shoulder Type |
|---|---|---|---|---|---|---|---|---|
| ELAINE DRIVE | 0 | 0.074 | 0.074 | 3 | | 1.5 | | Gravel |
| ELK LANE | 0 | 1.51 | 1.51 | 2 | 2 | 2.0 | Gravel | Gravel |
| ELROD LANE | 0 | 0.043 | 0.043 | 3 | 3 | 3.0 | Gravel | Gravel |
| ENTERPRISE AVENUE | 0 | 0.293 | 0.293 | 3 | 3 | 3.0 | Gravel | Gravel |
| ERIC LOOP | 0 | 0.46 | 0.46 | 1 | 1 | 1.0 | Gravel | Gravel |
| ESPEY ROAD | 0.15 | 0.33 | 0.18 | 2 | | 1.0 | | Gravel |
| ESPEY ROAD | 0.33 | 0.6 | 0.27 | 2 | | 1.0 | | Gravel |
| EWE CREEK ROAD | 0 | 1.91 | 1.91 | 1 | 1 | 1.0 | Gravel | Gravel |
| FAVILL LANE | 0 | 0.13 | 0.13 | 2 | 2 | 2.0 | Gravel | Gravel |
| FAVILL ROAD | 0 | 0.18 | 0.18 | 3 | 3 | 3.0 | Gravel | Gravel |
| FELICIA LANE | 0 | 0.114 | 0.114 | 2 | 2 | 2.0 | Gravel | Gravel |
| FERRY ROAD | 0 | 0.4 | 0.4 | 1 | 1 | 1.0 | Gravel | Gravel |
| FERRY ROAD | 0.4 | 1.65 | 1.25 | 1 | 1 | 1.0 | Gravel | Gravel |
| FIELDS ROAD | 0 | 0.3 | 0.3 | 3 | 3 | 3.0 | Gravel | Gravel |
| FINCH ROAD | 0 | 0.32 | 0.32 | | | 0.0 | | |
| FIRVIEW LANE | 0 | 0.33 | 0.33 | 1 | 1 | 1.0 | Gravel | Gravel |
| FISH HATCHERY ROAD | 0.05 | 6.55 | 6.5 | 3 | 3 | 3.0 | Gravel | Gravel |
| FLAMING ROAD | 0 | 0.3 | 0.3 | | | 0.0 | | |
| FOOTHILL BOULEVARD | 0 | 0.27 | 0.27 | 6 | 3 | 4.5 | Gravel | Paved (ACP) |
| FOOTHILL BOULEVARD | 0.27 | 0.63 | 0.36 | 3 | 3 | 3.0 | Gravel | Gravel |
| FOOTHILL BOULEVARD | 0.63 | 1.09 | 0.46 | 5 | 3 | 4.0 | Gravel | Gravel |
| FOOTHILL BOULEVARD | 1.09 | 1.73 | 0.64 | 3 | 3 | 3.0 | Gravel | Gravel |
| FOOTHILL BOULEVARD | 1.73 | 3.92 | 2.19 | 3 | 3 | 3.0 | Gravel | Gravel |
| FRANKHAM ROAD | 0 | 0.63 | 0.63 | 2 | 2 | 2.0 | Gravel | Gravel |
| FRONTAGE ROAD | 0 | 1.417 | 1.417 | 1 | 1 | 1.0 | Gravel | Gravel |
| FRONTAGE ROAD | 1.417 | 1.497 | 0.08 | 2 | 2 | 2.0 | Gravel | Gravel |
| FRUITDALE DRIVE | 0 | 2.47 | 2.47 | 3 | 3 | 3.0 | Gravel | Gravel |
| GALICE ROAD | 0 | 0 | 0 | 0 | 0 | 0.0 | | |
| GARDEN TERRACE ROAD | 0 | 0.097 | 0.097 | 2 | 2 | 2.0 | Gravel | Gravel |
| GARNER ROAD | 0 | 0.882 | 0.882 | 2 | 2 | 2.0 | Gravel | Gravel |
| GARY LANE | 0 | 0.176 | 0.176 | 1 | 1 | 1.0 | Gravel | Gravel |
| GENE BROWN ROAD | 0 | 0.874 | 0.874 | 1 | 1 | 1.0 | Gravel | Gravel |
| GENVERNA GLEN | 0 | 0.17 | 0.17 | 1 | | 0.5 | | Gravel |
| GENVERNA GLEN | 0.17 | 0.56 | 0.39 | 1 | | 0.5 | | Gravel |
| GLADIOLA AVENUE | 0 | 0.076 | 0.076 | 2 | 2 | 2.0 | Gravel | Gravel |
| GLADIOLA AVENUE | 0 | 0.083 | 0.083 | 2 | 2 | 2.0 | Gravel | Gravel |
| GLEN DRIVE | 0 | 0.207 | 0.207 | 2 | 2 | 2.0 | Gravel | Gravel |
| GLENDON ROAD | 0 | 0.09 | 0.09 | 2 | 2 | 2.0 | Gravel | Gravel |
| GLENWOOD STREET | 0 | 0.4 | 0.4 | 3 | 3 | 3.0 | Gravel | Gravel |
| GORDON WAY | 0 | 0.4 | 0.4 | 3 | 3 | 3.0 | Gravel | Gravel |
| GORDON WAY, SOUTH | 0 | 0.3 | 0.3 | 2 | 2 | 2.0 | Gravel | Gravel |
| GRANDVIEW AVENUE | 0 | 0.33 | 0.33 | 2 | 2 | 2.0 | Gravel | Gravel |
| GRANDVIEW AVENUE | 0.33 | 0.72 | 0.39 | 4 | 4 | 4.0 | Gravel | Gravel |
| GRANDVIEW AVENUE | 0.72 | 0.81 | 0.09 | 2 | 2 | 2.0 | Gravel | Gravel |
| GRANDVIEW AVENUE | 0.81 | 0.87 | 0.06 | | | 0.0 | Paved (ACP) | Paved (ACP) |
| GRANGE ROAD | 0 | 0.15 | 0.15 | 2 | 2 | 2.0 | Gravel | Gravel |
| GRANITE HILL ROAD | 3.34 | 4.66 | 1.32 | 2 | 2 | 2.0 | Gravel | Gravel |
| GRAYS CREEK ROAD | 0 | 1.35 | 1.35 | 2 | 2 | 2.0 | Gravel | Gravel |
| GREENFIELD ROAD | 0 | 0.54 | 0.54 | 3 | 3 | 3.0 | Gravel | Gravel |
| GREENS CREEK ROAD | 0 | 1.088 | 1.088 | 2 | 2 | 2.0 | Gravel | Gravel |
| GRIFFIN ROAD | 0 | 0.7 | 0.7 | 1 | 1 | 1.0 | Gravel | Gravel |
| GROUSE CREEK ROAD | 0 | 0.78 | 0.78 | 2 | 2 | 2.0 | Gravel | Gravel |
| GUNNELL ROAD | 0 | 1.89 | 1.89 | 1 | 1 | 1.0 | Gravel | Gravel |
| GUTH ROAD | 0 | 0.18 | 0.18 | 1 | 1 | 1.0 | Gravel | Gravel |
| HAMILTON LANE | 0 | 0.23 | 0.23 | 1 | 1 | 1.0 | Gravel | Gravel |

Table A-5: Shoulder Widths and Types on County Roads

| Road Name | Begin Milepost | End Milepost | Miles | Right Width | Left Width | Avg width | Left Shoulder Type | Right Shoulder Type |
|---|---|---|---|---|---|---|---|---|
| HAMILTON LANE | 0.23 | 1.66 | 1.43 | 1 | 1 | 1.0 | Gravel | Gravel |
| HAMPDEN DRIVE | 0 | 0.17 | 0.17 | 4 | 4 | 4.0 | Gravel | Gravel |
| HANSEN DRIVE | 0 | 0.23 | 0.23 | 2 | 2 | 2.0 | Gravel | Gravel |
| HAPPY CAMP ROAD | 0 | 1.78 | 1.78 | 2 | 2 | 2.0 | Gravel | Gravel |
| HAPPY CAMP ROAD | 1.78 | 11.577 | 9.797 | 1 | 1 | 1.0 | Gravel | Gravel |
| HARBECK ROAD | 0.877 | 1.517 | 0.64 | 2 | 2 | 2.0 | Gravel | Gravel |
| HARBECK ROAD, WEST | 0 | 0.1 | 0.1 | | 2 | 1.0 | Gravel | Paved (ACP) |
| HARBECK ROAD, WEST | 0.1 | 0.46 | 0.36 | 3 | 3 | 3.0 | Gravel | Gravel |
| HARBECK ROAD, WEST | 0.46 | 0.96 | 0.5 | 3 | 3 | 3.0 | Gravel | Gravel |
| HARLEY LANE | 0 | 0.091 | 0.091 | 2 | 2 | 2.0 | Gravel | Gravel |
| HARRIS ROAD | 0 | 0.07 | 0.07 | 2 | 2 | 2.0 | Gravel | Gravel |
| HARTLEY LANE | 0 | 0.25 | 0.25 | 3 | 3 | 3.0 | Gravel | Gravel |
| HASIS DRIVE | 0 | 0.413 | 0.413 | 2 | 2 | 2.0 | Gravel | Gravel |
| HATHAWAY DRIVE | 0 | 0.264 | 0.264 | 2 | 2 | 2.0 | Gravel | Gravel |
| HAVILAND DRIVE | 0 | 0.335 | 0.335 | 1 | 1 | 1.0 | Gravel | Gravel |
| HAYES HILL | 0.1 | 1.9 | 1.8 | | | 0.0 | | |
| HAYLEES WAY | 0 | 0.418 | 0.418 | 2 | 2 | 2.0 | Gravel | Gravel |
| HAYS CUTOFF ROAD | 0.33 | 1 | 0.67 | 3 | 3 | 3.0 | Gravel | Gravel |
| HELGESON LANE | 0 | 0.38 | 0.38 | 2 | 2 | 2.0 | Gravel | Gravel |
| HELMS ROAD | 0.5 | 0.95 | 0.45 | 2 | 2 | 2.0 | Gravel | Gravel |
| HESSAR STREET | 0 | 0.25 | 0.25 | 2 | 2 | 2.0 | Gravel | Gravel |
| HIDDEN ACRES DRIVE | 0 | 0.47 | 0.47 | 2 | 2 | 2.0 | Gravel | Gravel |
| HIDDEN VALLEY ROAD | 0.08 | 0.23 | 0.15 | 1 | | 0.5 | | Gravel |
| HIDDEN VALLEY ROAD | 0.23 | 0.53 | 0.3 | 1 | 1 | 1.0 | Gravel | Gravel |
| HIDDEN VALLEY ROAD | 0.53 | 0.6 | 0.07 | 1 | | 0.5 | | Gravel |
| HIDDEN VALLEY ROAD | 0.6 | 0.96 | 0.36 | 1 | | 0.5 | | Gravel |
| HIEGLEN LOOP ROAD | 0 | 0.05 | 0.05 | | | 0.0 | | |
| HITCHING POST ROAD | 0 | 0.57 | 0.57 | 2 | 2 | 2.0 | Gravel | Gravel |
| HIXSON DRIVE | 0 | 0.3 | 0.3 | | | 0.0 | | |
| HOGUE DRIVE | 0 | 1.2 | 1.2 | 3 | 3 | 3.0 | Gravel | Gravel |
| HOLBROOK WAY | 0 | 0.137 | 0.137 | 1 | 1 | 1.0 | Gravel | Gravel |
| HOLLAND LOOP ROAD | 0 | 1.13 | 1.13 | 2 | 2 | 2.0 | Gravel | Gravel |
| HOLLAND LOOP ROAD | 1.13 | 1.88 | 0.75 | 3 | 3 | 3.0 | Gravel | Gravel |
| HOLLAND LOOP ROAD | 1.88 | 3.02 | 1.14 | 4 | 4 | 4.0 | Gravel | Gravel |
| HOLLAND LOOP ROAD | 3.02 | 7.791 | 4.771 | 3 | 3 | 3.0 | Gravel | Gravel |
| HOLTON CREEK ROAD | 0 | 0.42 | 0.42 | 2 | 2 | 2.0 | Gravel | Gravel |
| HOMEWOOD ROAD | 0 | 0.3 | 0.3 | 2 | 2 | 2.0 | Gravel | Gravel |
| HONEYLYNN LANE | 0 | 0.3 | 0.3 | 1 | | 0.5 | | Gravel |
| HONEYLYNN LANE | 0.3 | 0.43 | 0.13 | 1 | | 0.5 | Gravel | Gravel |
| HORSESHOE DRIVE | 0 | 0.98 | 0.98 | 2 | 2 | 2.0 | Gravel | Gravel |
| HUBBARD LANE | 0 | 0.21 | 0.21 | | | 0.0 | | |
| HUBBARD LANE | 0.41 | 0.83 | 0.42 | 1 | 1 | 1.0 | Gravel | Gravel |
| HUGO ROAD | 0 | 2.5 | 2.5 | 3 | 2 | 2.5 | Gravel | Gravel |
| HUGO ROAD | 2.5 | 4.91 | 2.41 | 2 | 2 | 2.0 | Gravel | Gravel |
| HUGO ROAD | 4.91 | 6.77 | 1.86 | 2 | 2 | 2.0 | Gravel | Gravel |
| HUMBERD LANE | 0 | 0.28 | 0.28 | | | 0.0 | | |
| HUMMINGBIRD ROAD | 0 | 0.77 | 0.77 | 1 | 1 | 1.0 | Gravel | Gravel |
| IDLEWILD DRIVE | 0 | 0.994 | 0.994 | 1 | 1 | 1.0 | Gravel | Gravel |
| ILLINOIS RIVER ROAD | 0 | 2.55 | 2.55 | 3 | 3 | 3.0 | Gravel | Gravel |
| INGALLS LANE | 0.65 | 1.18 | 0.53 | 1 | 1 | 1.0 | Gravel | Gravel |
| INTERVALE ROAD, EAST | 0 | 0.2 | 0.2 | 2 | | 1.0 | | Gravel |
| INTERVALE ROAD, EAST | 0.2 | 0.45 | 0.25 | 2 | | 1.0 | | Gravel |
| JACKADEL LANE | 0 | 0.498 | 0.498 | 2 | 2 | 2.0 | Gravel | Gravel |
| JAIME LANE | 0 | 0.2 | 0.2 | 2 | 2 | 2.0 | Gravel | Gravel |
| JANICE WAY | 0 | 0.189 | 0.189 | 2 | 2 | 2.0 | Gravel | Gravel |

Table A-5: Shoulder Widths and Types on County Roads

| Road Name | Begin Milepost | End Milepost | Miles | Right Width | Left Width | Avg width | Left Shoulder Type | Right Shoulder Type |
|---|---|---|---|---|---|---|---|---|
| JASON WAY | 0 | 0.052 | 0.052 | 2 | 2 | 2.0 | Gravel | Gravel |
| JENKINS AVENUE | 0 | 0.65 | 0.65 | 2 | 2 | 2.0 | Gravel | Gravel |
| JEROME PRAIRIE ROAD | 0 | 3.54 | 3.54 | 2 | 2 | 2.0 | Gravel | Gravel |
| JONES CREEK LOOP, EAST | 0 | 0.1 | 0.1 | 1 | 1 | 1.0 | Gravel | Gravel |
| JONES CREEK ROAD, EAST | 0 | 0.1 | 0.1 | 2 | 1 | 1.5 | Gravel | Gravel |
| JONES CREEK ROAD, EAST | 0.1 | 0.42 | 0.32 | 1 | 1 | 1.0 | Gravel | Gravel |
| JONES CREEK ROAD, EAST | 0.42 | 0.66 | 0.24 | 3 | 1 | 2.0 | Gravel | Gravel |
| JONES CREEK ROAD, EAST | 0.66 | 1.07 | 0.41 | 1 | 1 | 1.0 | Gravel | Gravel |
| JONES CREEK ROAD, EAST | 1.07 | 1.61 | 0.54 | 1 | 1 | 1.0 | Gravel | Gravel |
| JONES CREEK ROAD, WEST | 0 | 0.35 | 0.35 | 6 | 2 | 4.0 | Gravel | Gravel |
| JONES CREEK ROAD, WEST | 0.35 | 0.4 | 0.05 | 2 | 2 | 2.0 | Gravel | Gravel |
| JONES CREEK ROAD, WEST | 0.4 | 0.92 | 0.52 | 1 | 1 | 1.0 | Gravel | Gravel |
| JONES CREEK ROAD, WEST | 0.92 | 2.42 | 1.5 | 1 | 1 | 1.0 | Gravel | Gravel |
| JOSEPHINE STREET | 0 | 0.15 | 0.15 | 1 | 1 | 1.0 | Gravel | Gravel |
| JUMP OFF JOE CREEK ROAD | 0 | 0.52 | 0.52 | 3 | 3 | 3.0 | Gravel | Gravel |
| JUMP OFF JOE CREEK ROAD | 0.52 | 0.88 | 0.36 | 3 | 1 | 2.0 | Gravel | Gravel |
| JUMP OFF JOE CREEK ROAD | 0.88 | 2.72 | 1.84 | 1 | 1 | 1.0 | Gravel | Gravel |
| JUMP OFF JOE CREEK ROAD | 2.72 | 3.82 | 1.1 | 3 | 3 | 3.0 | Gravel | Gravel |
| JUMP OFF JOE CREEK ROAD | 3.82 | 4.67 | 0.85 | 2 | 1 | 1.5 | Gravel | Gravel |
| JUMP OFF JOE CREEK ROAD | 4.67 | 5.02 | 0.35 | 2 |  | 1.0 |  | Dirt |
| KARRAL DRIVE | 0 | 0.111 | 0.111 | 1 | 1 | 1.0 | Gravel | Gravel |
| KEETA WAY | 0 | 0.11 | 0.11 |  |  | 0.0 |  |  |
| KELDAN LANE | 0 | 0.071 | 0.071 | 1 | 1 | 1.0 | Gravel | Gravel |
| KEN ROSE LANE | 0 | 0.332 | 0.332 | 1 | 1 | 1.0 | Gravel | Gravel |
| KENDALL ROAD | 0.45 | 1.043 | 0.593 | 1 | 1 | 1.0 | Gravel | Gravel |
| KENDALLBROOK WAY | 0 | 0.1 | 0.1 |  |  | 0.0 | Gravel | Gravel |
| KERBY MAINLINE ROAD | 0 | 0.43 | 0.43 | 1 | 1 | 1.0 | Gravel | Gravel |
| KERBY MAINLINE ROAD | 0.43 | 0.82 | 0.39 | 2 | 2 | 2.0 | Gravel | Gravel |
| KERBY MAINLINE ROAD | 0.82 | 1.26 | 0.44 | 1 | 1 | 1.0 | Gravel | Gravel |
| KERBY MAINLINE ROAD | 1.26 | 1.91 | 0.65 | 1 | 1 | 1.0 | Gravel | Gravel |
| KERBY STREET | 0 | 0.11 | 0.11 | 2 | 2 | 2.0 | Gravel | Gravel |
| KILBORN DRIVE | 0 | 0.24 | 0.24 | 2 | 2 | 2.0 | Gravel | Gravel |
| KINCAID ROAD | 0 | 2.5 | 2.5 | 1 | 1 | 1.0 | Gravel | Gravel |
| KIRKHAM ROAD | 0 | 0.79 | 0.79 | 2 | 2 | 2.0 | Gravel | Gravel |
| KRAUSS LANE | 0 | 0.2 | 0.2 | 1 | 1 | 1.0 | Gravel | Gravel |
| KUBLI ROAD | 0 | 1.15 | 1.15 | 1 | 1 | 1.0 | Gravel | Gravel |
| LADEANA WAY | 0 | 0.275 | 0.275 | 4 | 4 | 4.0 | Gravel | Gravel |
| LAKE SHORE DRIVE | 0 | 0.21 | 0.21 | 4 | 4 | 4.0 | Gravel | Gravel |
| LAKE SHORE DRIVE | 0.21 | 1.09 | 0.88 | 2 | 2 | 2.0 | Gravel | Gravel |
| LAKE SHORE DRIVE | 1.09 | 2.41 | 1.32 | 1 | 1 | 1.0 | Gravel | Gravel |
| LAKE SHORE DRIVE | 2.41 | 3.2 | 0.79 | 2 | 2 | 2.0 | Gravel | Gravel |
| LAKE SHORE DRIVE | 3.2 | 4.17 | 0.97 | 1 | 1 | 1.0 | Gravel | Gravel |
| LAKE SHORE DRIVE | 4.17 | 4.85 | 0.68 | 2 | 2 | 2.0 | Gravel | Gravel |
| LAKE SHORE DRIVE | 4.85 | 6.55 | 1.7 | 2 | 2 | 2.0 | Gravel | Gravel |
| LAPPLAND DRIVE | 0 | 0.38 | 0.38 | 2 | 2 | 2.0 | Gravel | Gravel |
| LARKIN ROAD | 0 | 0.14 | 0.14 | 1 | 1 | 1.0 | Gravel | Gravel |
| LATHROP LANE | 0 | 0.1 | 0.1 | 2 | 2 | 2.0 | Gravel | Gravel |
| LATHROP ROAD | 0 | 0.38 | 0.38 | 1 | 1 | 1.0 | Gravel | Gravel |
| LATIGO RANCH ROAD | 0 | 0.499 | 0.499 | 1 | 1 | 1.0 | Gravel | Gravel |
| LAUBAUCH LANE | 0 | 0.06 | 0.06 | 1 | 1 | 1.0 | Gravel | Gravel |
| LAUREL ROAD | 0 | 0.5 | 0.5 | 3 | 3 | 3.0 | Gravel | Gravel |
| LAUREL ROAD | 0.5 | 2.23 | 1.73 | 3 | 3 | 3.0 | Gravel | Gravel |
| LELAND ROAD | 0 | 0.27 | 0.27 |  |  | 0.0 |  |  |
| LELAND ROAD | 0.65 | 3.61 | 2.96 | 1 | 1 | 1.0 | Gravel | Gravel |
| LELAND ROAD | 3.61 | 4.147 | 0.537 | 1 | 1 | 1.0 | Gravel | Gravel |

Table A-5: Shoulder Widths and Types on County Roads

| Road Name | Begin Milepost | End Milepost | Miles | Right Width | Left Width | Avg width | Left Shoulder Type | Right Shoulder Type |
|---|---|---|---|---|---|---|---|---|
| LENELLA LANE | 0 | 0.23 | 0.23 | 2 | 2 | 2.0 | Gravel | Gravel |
| LEONARD ROAD | 0 | 0.05 | 0.05 | 2 | 2 | 2.0 | Gravel | Gravel |
| LEONARD ROAD | 0.05 | 0.47 | 0.42 | 1 | 1 | 1.0 | Gravel | Gravel |
| LEONARD ROAD | 0.47 | 1.21 | 0.74 | 3 | 3 | 3.0 | Gravel | Gravel |
| LEONARD ROAD | 1.21 | 2.1 | 0.89 | 1 | 1 | 1.0 | Gravel | Gravel |
| LEONARD ROAD | 2.1 | 3.7 | 1.6 | 1 | 1 | 1.0 | Gravel | Gravel |
| LIMPY CREEK ROAD | 0 | 1.771 | 1.771 | 2 | 2 | 2.0 | Gravel | Gravel |
| LINDA VISTA ROAD | 0 | 0.16 | 0.16 | | | 0.0 | | |
| LLOYD DRIVE | 0 | 0.3 | 0.3 | 8 | 5 | 6.5 | Gravel | Gravel |
| LLOYD DRIVE | 0.3 | 0.53 | 0.23 | 6 | 6 | 6.0 | Gravel | Gravel |
| LONE MOUNTAIN ROAD | 0 | 2.216 | 2.216 | 1 | 1 | 1.0 | Gravel | Gravel |
| LONNON ROAD | 0 | 0.76 | 0.76 | 1 | | 0.5 | | Gravel |
| LONNON ROAD | 0.76 | 0.8 | 0.04 | 1 | | 0.5 | | Gravel |
| LOWER GRAVE CREEK ROAD | 0 | 1.87 | 1.87 | 1 | 1 | 1.0 | Gravel | Gravel |
| LOWER GRAVE CREEK ROAD | 1.87 | 6.85 | 4.98 | | | 0.0 | | |
| LOWER GRAVE CREEK ROAD | 8.11 | 8.31 | 0.2 | | | 0.0 | | |
| LOWER GRAVE CREEK ROAD | 9.6 | 11.482 | 1.882 | 1 | 1 | 1.0 | Gravel | Gravel |
| LOWER WOLF CREEK ROAD | 0 | 0.15 | 0.15 | 1 | 2 | 1.5 | Gravel | Gravel |
| LOWER WOLF CREEK ROAD | 0.15 | 1.6 | 1.45 | 2 | 2 | 2.0 | Gravel | Gravel |
| LOWER WOLF CREEK ROAD | 1.6 | 5.638 | 4.038 | 1 | 1 | 1.0 | Gravel | Gravel |
| MAIN STREET | 0 | 0.325 | 0.325 | 1 | 1 | 1.0 | Gravel | Gravel |
| MARCY LOOP | 0 | 0.79 | 0.79 | | | 0.0 | | |
| MARCY LOOP | 0.9 | 0.93 | 0.03 | 1 | 1 | 1.0 | Gravel | Gravel |
| MARCY LOOP | 0.93 | 2.25 | 1.32 | 1 | 1 | 1.0 | Gravel | Gravel |
| MARLSAN ROAD | 0 | 0.3 | 0.3 | 2 | 2 | 2.0 | Gravel | Gravel |
| MARTIN ROAD | 0 | 0.43 | 0.43 | 2 | 2 | 2.0 | Gravel | Gravel |
| MAUREEN DRIVE | 0 | 0.23 | 0.23 | 2 | 2 | 2.0 | Gravel | Gravel |
| MAYFAIR LANE | 0 | 0.183 | 0.183 | 1 | 1 | 1.0 | Gravel | Gravel |
| MAYFIELD DRIVE | 0 | 0.166 | 0.166 | 3 | 3 | 3.0 | Gravel | Gravel |
| MC MULLEN CREEK ROAD | 0 | 0.89 | 0.89 | 1 | 1 | 1.0 | Gravel | Gravel |
| MEADOW LARK DRIVE | 0 | 0.257 | 0.257 | 2 | 2 | 2.0 | Gravel | Gravel |
| MERLIN AVENUE | 0 | 0.03 | 0.03 | 4 | 3 | 3.5 | Gravel | Gravel |
| MERLIN AVENUE | 0.03 | 0.19 | 0.16 | 4 | 3 | 3.5 | Gravel | Gravel |
| MERLIN LANDFILL ROAD | 0 | 0.06 | 0.06 | 2 | 2 | 2.0 | Gravel | Gravel |
| MERLIN ROAD | 0 | 0.32 | 0.32 | 9 | 9 | 9.0 | Paved (BST) | Paved (BST) |
| MERLIN SANITARIUM ROAD | 0.02 | 0.6 | 0.58 | 2 | 2 | 2.0 | Gravel | Gravel |
| MESA VERDE DRIVE | 0 | 0.736 | 0.736 | 2 | 2 | 2.0 | Gravel | Gravel |
| MESSINGER ROAD | 0 | 0.927 | 0.927 | 2 | 2 | 2.0 | Gravel | Gravel |
| MIDWAY AVENUE | 0 | 1.5 | 1.5 | 1 | 1 | 1.0 | Dirt | Dirt |
| MIDWAY AVENUE | 2.21 | 3.004 | 0.794 | 1 | 1 | 1.0 | Gravel | Gravel |
| MINA LANE | 0 | 0.27 | 0.27 | 2 | 2 | 2.0 | Gravel | Gravel |
| MINA LANE | 0.27 | 0.53 | 0.26 | 2 | 2 | 2.0 | Gravel | Gravel |
| MINNOW LANE | 0 | 0.645 | 0.645 | 1 | 1 | 1.0 | Gravel | Gravel |
| MISSOURI FLAT ROAD | 0.15 | 1.1 | 0.95 | 2 | 2 | 2.0 | Gravel | Gravel |
| MOBIL WAY | 0 | 0.1 | 0.1 | 3 | 3 | 3.0 | Gravel | Gravel |
| MONROE WAY | 0 | 0.162 | 0.162 | 1 | 1 | 1.0 | Gravel | Gravel |
| MONTERICO ROAD | 0 | 0.55 | 0.55 | 2 | 2 | 2.0 | Gravel | Gravel |
| MONTGOMERY LANE | 0 | 0.08 | 0.08 | 3 | 3 | 3.0 | Gravel | Gravel |
| MONUMENT DRIVE | 0 | 0.16 | 0.16 | | | 0.0 | | |
| MONUMENT DRIVE | 1.67 | 1.71 | 0.04 | 2 | 2 | 2.0 | Gravel | Gravel |
| MONUMENT DRIVE | 1.71 | 2.01 | 0.3 | 3 | 3 | 3.0 | Gravel | Gravel |
| MONUMENT DRIVE | 2.01 | 2.37 | 0.36 | 4 | 3 | 3.5 | Gravel | Gravel |
| MONUMENT DRIVE | 2.37 | 2.86 | 0.49 | 3 | 3 | 3.0 | Gravel | Gravel |
| MONUMENT DRIVE | 2.86 | 3.15 | 0.29 | 4 | 3 | 3.5 | Gravel | Gravel |
| MONUMENT DRIVE | 3.15 | 3.77 | 0.62 | 3 | 3 | 3.0 | Gravel | Gravel |

Table A-5: Shoulder Widths and Types on County Roads

| Road Name | Begin Milepost | End Milepost | Miles | Right Width | Left Width | Avg width | Left Shoulder Type | Right Shoulder Type |
|---|---|---|---|---|---|---|---|---|
| MONUMENT DRIVE | 3.77 | 3.86 | 0.09 | 4 | 3 | 3.5 | Gravel | Gravel |
| MONUMENT DRIVE | 3.86 | 4.65 | 0.79 | 5 | 3 | 4.0 | Gravel | Gravel |
| MONUMENT DRIVE | 4.65 | 5.06 | 0.41 | 5 | 4 | 4.5 | Gravel | Gravel |
| MONUMENT DRIVE | 5.06 | 6 | 0.94 | 5 | 4 | 4.5 | Gravel | Gravel |
| MORRIS LANE | 0 | 0.244 | 0.244 | 3 | 3 | 3.0 | Gravel | Gravel |
| MOSS LANE | 0 | 0.15 | 0.15 | 2 | | 1.0 | | Gravel |
| MOUNT BALDY ROAD | 0 | 0.2 | 0.2 | 2 | 2 | 2.0 | Gravel | Gravel |
| MOUNTAIN FIR ROAD | 0 | 0.106 | 0.106 | 1 | 1 | 1.0 | Paved (ACP) | Paved (ACP) |
| MOUNTAIN PARADISE DRIVE | 0 | 0.717 | 0.717 | 2 | 2 | 2.0 | Gravel | Gravel |
| MURPHY CREEK ROAD | 0 | 3.482 | 3.482 | 2 | 2 | 2.0 | Gravel | Gravel |
| MURPHY LANE | 0 | 0.1 | 0.1 | | | 0.0 | | |
| N STREET, NORTHEAST | 0 | 0.2 | 0.2 | 2 | 2 | 2.0 | Gravel | Gravel |
| N STREET, SOUTHEAST | 0 | 0.12 | 0.12 | 1 | 1 | 1.0 | Gravel | Gravel |
| N STREET, SOUTHEAST | 0.12 | 0.254 | 0.134 | 6 | 6 | 6.0 | Gravel | Gravel |
| N STREET, SOUTHEAST | 0.351 | 0.451 | 0.1 | 6 | 6 | 6.0 | Gravel | Gravel |
| NAUE WAY | 0 | 1.072 | 1.072 | 3 | 3 | 3.0 | Gravel | Gravel |
| NEEDLEWOOD DRIVE | 0 | 0.295 | 0.295 | 1 | 1 | 1.0 | Gravel | Gravel |
| NELSON WAY | 0 | 0.48 | 0.48 | 2 | 2 | 2.0 | Gravel | Gravel |
| NEW HOPE ROAD | 1.25 | 2.6 | 1.35 | 4 | 4 | 4.0 | Gravel | Gravel |
| NEW HOPE ROAD | 2.6 | 3.2 | 0.6 | | | 0.0 | Paved (ACP) | Paved (ACP) |
| NEW HOPE ROAD | 3.88 | 6.362 | 2.482 | 3 | 3 | 3.0 | Gravel | Gravel |
| NINTH STREET, NORTHEAST | 0 | 0.22 | 0.22 | 1 | 1 | 1.0 | Gravel | Gravel |
| NORMAN ROAD | 0 | 0.28 | 0.28 | 1 | 1 | 1.0 | Gravel | Gravel |
| NORMAN ROAD | 0.28 | 0.57 | 0.29 | 1 | 1 | 1.0 | Gravel | Gravel |
| NORTH APPLEGATE ROAD | 0 | 0.15 | 0.15 | 2 | 2 | 2.0 | Gravel | Gravel |
| NORTH APPLEGATE ROAD | 0.15 | 6.6 | 6.45 | 2 | 2 | 2.0 | Gravel | Gravel |
| NORTH PINNON ROAD | 0 | 0.965 | 0.965 | 2 | 2 | 2.0 | Gravel | Gravel |
| NORTH VALLEY DRIVE | 0.17 | 0.296 | 0.126 | 4 | 4 | 4.0 | Paved (BST) | Paved (BST) |
| NORTHWOODS DRIVE | 0 | 0.247 | 0.247 | 2 | 2 | 2.0 | Gravel | Gravel |
| NORTON ROAD | 0 | 0.13 | 0.13 | | | 0.0 | | |
| NOTTINGHAM WAY | 0 | 0.058 | 0.058 | 1 | 1 | 1.0 | Gravel | Gravel |
| O BRIEN ROAD | 0 | 0.872 | 0.872 | 4 | 4 | 4.0 | Gravel | Gravel |
| OAKMONT DRIVE | 0 | 0.34 | 0.34 | 2 | 2 | 2.0 | Gravel | Gravel |
| OCTOBER LANE | 0 | 0.236 | 0.236 | 1 | 1 | 1.0 | Gravel | Gravel |
| OLD HIGHWAY 199 | 0 | 0.363 | 0.363 | 2 | 2 | 2.0 | Gravel | Gravel |
| OLD HWY 99 | 0 | 0.43 | 0.43 | 3 | 3 | 3.0 | Gravel | Gravel |
| OLD HWY 99 | 0.43 | 0.669 | 0.239 | 1 | 1 | 1.0 | Gravel | Gravel |
| OLD STAGE ROAD | 0 | 0.14 | 0.14 | 1 | 1 | 1.0 | Gravel | Gravel |
| OLD STAGE ROAD | 0 | 0.77 | 0.77 | | | 0.0 | | |
| OLD STAGE ROAD | 0.14 | 0.631 | 0.491 | 1 | 1 | 1.0 | Gravel | Gravel |
| OLD STAGE ROAD | 1.08 | 1.35 | 0.27 | 1 | 2 | 1.5 | Gravel | Gravel |
| OLD STAGE ROAD | 1.35 | 1.8 | 0.45 | 1 | 2 | 1.5 | Gravel | Gravel |
| OOTZ LANE | 0 | 0.19 | 0.19 | 1.5 | 1.5 | 1.5 | Gravel | Gravel |
| OPAL LANE | 0 | 0.439 | 0.439 | 2 | 2 | 2.0 | Gravel | Gravel |
| ORCHARD STREET | 0 | 0.06 | 0.06 | 2 | 2 | 2.0 | Gravel | Gravel |
| ORT LANE | 0 | 0.05 | 0.05 | 3 | 3 | 3.0 | Gravel | Gravel |
| ORT LANE | 0.05 | 0.76 | 0.71 | 3 | 3 | 3.0 | Gravel | Gravel |
| OVERLAND DRIVE | 0 | 0.04 | 0.04 | 1 | 1 | 1.0 | Gravel | Gravel |
| OXYOKE ROAD | 0 | 0.85 | 0.85 | 4 | 3 | 3.5 | Gravel | Gravel |
| OXYOKE ROAD | 0.85 | 1.19 | 0.34 | 2 | 2 | 2.0 | Gravel | Gravel |
| OXYOKE ROAD | 1.19 | 1.67 | 0.48 | 2 | 2 | 2.0 | Gravel | Gravel |
| PALOMINO DRIVE | 0 | 0.35 | 0.35 | 2 | 2 | 2.0 | Gravel | Gravel |
| PALOMINO DRIVE | 0.35 | 0.75 | 0.4 | 2 | 2 | 2.0 | Gravel | Gravel |
| PANTHER GULCH ROAD | 0 | 1.1 | 1.1 | 1 | 1 | 1.0 | Gravel | Gravel |
| PARDEE LANE | 0 | 0.05 | 0.05 | 1 | 1 | 1.0 | Gravel | Gravel |

Table A-5: Shoulder Widths and Types on County Roads

| Road Name | Begin Milepost | End Milepost | Miles | Right Width | Left Width | Avg width | Left Shoulder Type | Right Shoulder Type |
|---|---|---|---|---|---|---|---|---|
| PARDEE LANE | 0.05 | 0.17 | 0.12 | 1 | 1 | 1.0 | Gravel | Gravel |
| PATRICK ROAD | 0 | 0.36 | 0.36 | 2 | 2 | 2.0 | Gravel | Gravel |
| PATTON BAR ROAD | 0 | 0.546 | 0.546 | 1 | 1 | 1.0 | Gravel | Gravel |
| PAULDINE WAY | 0 | 0.16 | 0.16 | 1 | 1 | 1.0 | Gravel | Gravel |
| PEARCE PARK ROAD | 0 | 1.08 | 1.08 | 2 | 2 | 2.0 | Gravel | Gravel |
| PEARL DRIVE | 0 | 0.15 | 0.15 | 3 | | 1.5 | | Gravel |
| PEARL DRIVE | 0.15 | 0.16 | 0.01 | 3 | | 1.5 | | Gravel |
| PEAVINE ROAD | 0 | 0.08 | 0.08 | | | 0.0 | | |
| PECO ROAD | 0 | 0.45 | 0.45 | 2 | 2 | 2.0 | Gravel | Gravel |
| PENNY LANE | 0 | 0.1 | 0.1 | 1 | | 0.5 | | Gravel |
| PENNY LANE | 0.1 | 0.5 | 0.4 | 1 | | 0.5 | | Gravel |
| PESTERFIELD PLACE | 0 | 0.04 | 0.04 | 2 | 2 | 2.0 | Gravel | Gravel |
| PICKETT CREEK ROAD | 0 | 0.13 | 0.13 | 1 | 1 | 1.0 | Gravel | Gravel |
| PICKETT CREEK ROAD | 0.13 | 1.6 | 1.47 | 1 | 1 | 1.0 | Gravel | Gravel |
| PICKETT CREEK ROAD, WEST | 0 | 0.6 | 0.6 | | | 0.0 | | |
| PINE CREST DRIVE | 0 | 0.07 | 0.07 | 7 | 4 | 5.5 | Gravel | Gravel |
| PINE CREST DRIVE | 0.07 | 0.23 | 0.16 | 4 | 3 | 3.5 | Gravel | Gravel |
| PINE CREST DRIVE | 0.23 | 1.62 | 1.39 | 2 | 2 | 2.0 | Gravel | Gravel |
| PINE CREST DRIVE | 1.62 | 2.6 | 0.98 | 2 | 2 | 2.0 | Gravel | Gravel |
| PINE TREE DRIVE | 0 | 0.5 | 0.5 | 2 | 2 | 2.0 | Gravel | Gravel |
| PINEWOOD WAY | 0 | 0.541 | 0.541 | 2 | 2 | 2.0 | Gravel | Gravel |
| PLACER ROAD | 0 | 0.4 | 0.4 | 2 | 2 | 2.0 | Paved (ACP) | Paved (ACP) |
| PLACER ROAD | 0.7 | 4.4 | 3.7 | 2 | 2 | 2.0 | Gravel | Gravel |
| PLEASANT VALLEY ROAD | 0 | 0.5 | 0.5 | 2 | 2 | 2.0 | Gravel | Gravel |
| PLEASANT VALLEY ROAD | 0.5 | 2 | 1.5 | 4 | 2 | 3.0 | Gravel | Gravel |
| PLEASANT VALLEY ROAD | 2 | 2.47 | 0.47 | 4 | 2 | 3.0 | Gravel | Gravel |
| PLEASANTVILLE WAY | 0 | 0.579 | 0.579 | 2 | 2 | 2.0 | Gravel | Gravel |
| PLUMTREE LANE | 0 | 1.26 | 1.26 | 3 | 3 | 3.0 | Gravel | Gravel |
| POLARIS CIRCLE | 0 | 0.149 | 0.149 | 2 | 2 | 2.0 | Gravel | Gravel |
| PONDEROSA LANE | 0 | 0.42 | 0.42 | 3 | 3 | 3.0 | Gravel | Gravel |
| PORTOLA DRIVE | 0 | 0.06 | 0.06 | 1 | 1 | 1.0 | Gravel | Gravel |
| PORTOLA DRIVE | 0.06 | 0.27 | 0.21 | 1 | 1 | 1.0 | Gravel | Gravel |
| POTTS WAY | 0 | 0.45 | 0.45 | 1 | 1 | 1.0 | Gravel | Gravel |
| POWELL CREEK ROAD | 0 | 1.3 | 1.3 | 3 | 3 | 3.0 | Gravel | Gravel |
| POWELL CREEK ROAD | 1.3 | 1.81 | 0.51 | 2 | 2 | 2.0 | Gravel | Gravel |
| PRAIRIE LANE | 0 | 0.3 | 0.3 | 1 | 1 | 1.0 | Gravel | Gravel |
| PUGETVILLE ROAD | 0 | 0.17 | 0.17 | 1 | 1 | 1.0 | Gravel | Gravel |
| PYLE DRIVE | 0 | 0.85 | 0.85 | 2 | 2 | 2.0 | Gravel | Gravel |
| QUAIL LANE | 0 | 0.22 | 0.22 | 1 | 1 | 1.0 | Gravel | Gravel |
| RAILROAD AVENUE | 0 | 0.974 | 0.974 | 3 | 3 | 3.0 | Gravel | Gravel |
| RAINBOW DRIVE | 0 | 0.48 | 0.48 | 2 | 2 | 2.0 | Gravel | Gravel |
| RANCHO VISTA DRIVE | 0 | 0.41 | 0.41 | | | 0.0 | | |
| RAY DRIVE | 0 | 0.06 | 0.06 | | | 0.0 | | |
| RED FOX LANE | 0 | 0.11 | 0.11 | 1 | 1 | 1.0 | Gravel | Gravel |
| RED MOUNTAIN DRIVE | 0 | 1 | 1 | 2 | 2 | 2.0 | Gravel | Gravel |
| RED SPUR DRIVE | 0 | 0.279 | 0.279 | 1 | 1 | 1.0 | Gravel | Gravel |
| REDLANDS DRIVE | 0 | 0.62 | 0.62 | 1 | 1 | 1.0 | Gravel | Gravel |
| REDWOOD AVENUE | 0 | 0.01 | 0.01 | 8 | | 4.0 | | Gravel |
| REDWOOD AVENUE | 0.01 | 0.3 | 0.29 | 4 | 4 | 4.0 | Gravel | Gravel |
| REDWOOD AVENUE | 0.3 | 0.5 | 0.2 | 8 | 8 | 8.0 | Gravel | Gravel |
| REDWOOD AVENUE | 0.5 | 0.65 | 0.15 | 8 | | 4.0 | | Gravel |
| REDWOOD AVENUE | 0.65 | 1.01 | 0.36 | 6 | 6 | 6.0 | Gravel | Gravel |
| REDWOOD AVENUE | 1.01 | 1.2 | 0.19 | 6 | | 3.0 | | Gravel |
| REDWOOD AVENUE | 1.2 | 1.42 | 0.22 | 8 | 8 | 8.0 | Gravel | Gravel |
| REDWOOD AVENUE | 1.42 | 1.52 | 0.1 | 8 | | 4.0 | | Gravel |

Table A-5: Shoulder Widths and Types on County Roads

| Road Name | Begin Milepost | End Milepost | Miles | Right Width | Left Width | Avg width | Left Shoulder Type | Right Shoulder Type |
|---|---|---|---|---|---|---|---|---|
| REDWOOD AVENUE | 1.52 | 1.65 | 0.13 | 5 | 5 | 5.0 | Gravel | Gravel |
| REDWOOD AVENUE | 1.65 | 1.72 | 0.07 | 5 | | 2.5 | | Gravel |
| REDWOOD AVENUE | 1.72 | 1.86 | 0.14 | 8 | 8 | 8.0 | Gravel | Gravel |
| REDWOOD AVENUE | 1.86 | 1.87 | 0.01 | 8 | | 4.0 | | Gravel |
| REDWOOD AVENUE | 1.87 | 3.08 | 1.21 | 6 | 6 | 6.0 | Gravel | Gravel |
| REDWOOD AVENUE | 3.08 | 3.23 | 0.15 | 6 | | 3.0 | | Gravel |
| REDWOOD AVENUE | 3.23 | 3.8 | 0.57 | 2 | 2 | 2.0 | Gravel | Gravel |
| REDWOOD AVENUE | 3.8 | 4.2 | 0.4 | 4 | 4 | 4.0 | Gravel | Gravel |
| REDWOOD AVENUE | 4.2 | 4.4 | 0.2 | 4 | | 2.0 | | Gravel |
| REDWOOD AVENUE | 4.4 | 5.08 | 0.68 | 4 | 4 | 4.0 | Gravel | Gravel |
| REDWOOD AVENUE | 5.08 | 5.15 | 0.07 | 4 | | 2.0 | | Gravel |
| REDWOOD AVENUE | 5.15 | 5.26 | 0.11 | 4 | 4 | 4.0 | Gravel | Gravel |
| REDWOOD AVENUE | 5.26 | 5.4 | 0.14 | 4 | | 2.0 | | Gravel |
| REDWOOD CIRCLE | 0 | 0.25 | 0.25 | 1 | 1 | 1.0 | Gravel | Gravel |
| REEVES CREEK ROAD | 2.61 | 5.237 | 2.627 | 3 | 2 | 2.5 | Gravel | Gravel |
| REGINA WAY | 0 | 0.23 | 0.23 | 2 | 2 | 2.0 | Gravel | Gravel |
| RICHLAND DRIVE | 0 | 0.1 | 0.1 | 1 | 1 | 1.0 | Gravel | Gravel |
| RINGUETTE STREET | 0 | 0.04 | 0.04 | 2 | | 1.0 | | Gravel |
| RINGUETTE STREET | 0.04 | 0.1 | 0.06 | 1 | 1 | 1.0 | Gravel | Gravel |
| RINGUETTE STREET | 0.1 | 0.15 | 0.05 | 1 | | 0.5 | | Gravel |
| RINGUETTE STREET | 0.15 | 0.22 | 0.07 | 3 | 3 | 3.0 | Gravel | Gravel |
| RINGUETTE STREET | 0.22 | 0.33 | 0.11 | 3 | | 1.5 | | Gravel |
| RINGUETTE STREET | 0.33 | 0.35 | 0.02 | 3 | 3 | 3.0 | Gravel | Gravel |
| RINGUETTE STREET | 0.35 | 0.53 | 0.18 | 3 | | 1.5 | | Gravel |
| RIVER STREET | 0 | 0.07 | 0.07 | | | 0.0 | | |
| ROBERTSON BRIDGE ROAD | 0 | 3.13 | 3.13 | 2 | 2 | 2.0 | Gravel | Gravel |
| ROBINSON CORNER ROAD | 0 | 0.842 | 0.842 | 1 | 1 | 1.0 | Gravel | Gravel |
| ROBINSON ROAD | 0 | 0.13 | 0.13 | 2 | 2 | 2.0 | Gravel | Gravel |
| ROBINSON ROAD | 0.13 | 0.36 | 0.23 | 1 | 1 | 1.0 | Gravel | Gravel |
| ROBINSON ROAD | 0.36 | 0.65 | 0.29 | 1 | 1 | 1.0 | Gravel | Gravel |
| ROCKYDALE ROAD | 0 | 6.529 | 6.529 | 2 | 2 | 2.0 | Gravel | Gravel |
| ROGUE RIM DRIVE | 0 | 0.06 | 0.06 | 2 | 2 | 2.0 | Gravel | Gravel |
| ROLLING HILLS DRIVE | 0 | 0.22 | 0.22 | 2 | 2 | 2.0 | Gravel | Gravel |
| ROSEWOOD STREET | 0 | 0.28 | 0.28 | 3 | 3 | 3.0 | Gravel | Gravel |
| ROUND PRAIRIE CREEK ROAD | 0 | 0.43 | 0.43 | 1 | 1 | 1.0 | Gravel | Gravel |
| ROUNDS AVENUE | 0 | 0.75 | 0.75 | 2 | 2 | 2.0 | Gravel | Gravel |
| RUBY DRIVE | 0 | 0.15 | 0.15 | 2 | | 1.0 | | Gravel |
| RUSSELL ROAD | 0 | 2.54 | 2.54 | 3 | 3 | 3.0 | Gravel | Gravel |
| SAN FRANCISCO STREET | 0 | 0.49 | 0.49 | 2 | 2 | 2.0 | Gravel | Gravel |
| SARATOGA WAY | 0 | 1.68 | 1.68 | 2 | 2 | 2.0 | Gravel | Gravel |
| SCENIC DRIVE, WEST | 0 | 0.15 | 0.15 | | | 0.0 | Paved (ACP) | Paved (ACP) |
| SCENIC DRIVE, WEST | 0.27 | 0.54 | 0.27 | 3 | 3 | 3.0 | Gravel | Gravel |
| SCHROEDER LANE | 0 | 0.45 | 0.45 | 2 | 2 | 2.0 | Gravel | Gravel |
| SCHUTZWOHL LANE | 0 | 0.25 | 0.25 | 1 | 1 | 1.0 | Gravel | Gravel |
| SECLUSION LOOP | 0 | 0.87 | 0.87 | 1 | 1 | 1.0 | Gravel | Gravel |
| SERENITY LANE | 0 | 0.646 | 0.646 | 2 | 2 | 2.0 | Gravel | Gravel |
| SHADOW HILLS DRIVE | 0 | 0.51 | 0.51 | 2 | 2 | 2.0 | Gravel | Gravel |
| SHADOW HILLS DRIVE | 0.51 | 0.93 | 0.42 | 2 | 2 | 2.0 | Gravel | Gravel |
| SHADOW LANE | 0 | 0.1 | 0.1 | 2 | 2 | 2.0 | Gravel | Gravel |
| SHADYWOOD DRIVE | 0 | 0.39 | 0.39 | 1 | 1 | 1.0 | Gravel | Gravel |
| SHANNON LANE | 0 | 0.24 | 0.24 | 1 | 1 | 1.0 | Gravel | Gravel |
| SHERWOOD LANE | 0 | 0.058 | 0.058 | 2 | 2 | 2.0 | Gravel | Gravel |
| SHETLAND DRIVE | 0 | 0.34 | 0.34 | 1 | 1 | 1.0 | Gravel | Gravel |
| SKY CREST DRIVE | 0 | 0.75 | 0.75 | 3 | 3 | 3.0 | Gravel | Gravel |
| SKY WAY | 0 | 0.869 | 0.869 | 1 | 1 | 1.0 | Gravel | Gravel |

Table A-5: Shoulder Widths and Types on County Roads

| Road Name | Begin Milepost | End Milepost | Miles | Right Width | Left Width | Avg width | Left Shoulder Type | Right Shoulder Type |
|---|---|---|---|---|---|---|---|---|
| SLATE CREEK ROAD | 0 | 0.95 | 0.95 | | | 0.0 | | |
| SLATE CREEK ROAD | 1.12 | 1.3 | 0.18 | | | 0.0 | | |
| SLOAN MOUNTAIN LANE | 0 | 0.25 | 0.25 | 1 | 1 | 1.0 | Gravel | Gravel |
| SMITH-SAWYER ROAD | 0 | 0.66 | 0.66 | 2 | 2 | 2.0 | Gravel | Gravel |
| SMOKEY LANE | 0 | 0.219 | 0.219 | 2 | 2 | 2.0 | Gravel | Gravel |
| SOLDIER CREEK ROAD | 0.49 | 1.04 | 0.55 | | | 0.0 | | |
| SOUTH RIVER ROAD | 0 | 0.98 | 0.98 | 2 | 2 | 2.0 | Gravel | Gravel |
| SOUTH SHORE DRIVE | 0 | 0.25 | 0.25 | 2 | 2 | 2.0 | Gravel | Gravel |
| SOUTH SIDE ROAD | 0.05 | 0.6 | 0.55 | 3 | 3 | 3.0 | Gravel | Gravel |
| SOUTH SIDE ROAD | 0.6 | 2.4 | 1.8 | 2 | 2 | 2.0 | Gravel | Gravel |
| SOUTH SIDE ROAD | 2.4 | 4.05 | 1.65 | 2 | 2 | 2.0 | Gravel | Gravel |
| SOUTH VANNOY CREEK ROAD | 0 | 0.954 | 0.954 | 1 | 1 | 1.0 | Gravel | Gravel |
| SOUTHGATE WAY | 0 | 0.773 | 0.773 | 2 | 2 | 2.0 | Gravel | Gravel |
| SPEAKER ROAD | 0 | 3.00E-02 | 0.03 | 2 | 2 | 2.0 | Gravel | Gravel |
| SPEAKER ROAD | 3.00E-02 | 4.238 | 4.208 | 1 | 1 | 1.0 | Gravel | Gravel |
| SPYGLASS LANE | 0 | 0.518 | 0.518 | | | 0.0 | | Gravel |
| SQUIRREL LANE | 0 | 0.17 | 0.17 | 2 | 2 | 2.0 | Gravel | Gravel |
| STANFORD WAY | 0 | 0.2 | 0.2 | 1 | 1 | 1.0 | Gravel | Gravel |
| STARDUST CIRCLE | 0 | 0.127 | 0.127 | 2 | 2 | 2.0 | Gravel | Gravel |
| STEWART ROAD | 0 | 0.66 | 0.66 | 2 | 2 | 2.0 | Gravel | Gravel |
| STRINGER GAP ROAD | 0.71 | 0.92 | 0.21 | 4 | | 2.0 | | Gravel |
| STRINGER GAP ROAD | 0.92 | 1.97 | 1.05 | | | 0.0 | | |
| STRINGER GAP ROAD | 2.22 | 2.32 | 0.1 | 2 | | 1.0 | | Gravel |
| STRINGER GAP ROAD | 2.32 | 2.6 | 0.28 | 2 | | 1.0 | | Gravel |
| SUGARPINE DRIVE | 0 | 0.477 | 0.477 | 2 | 2 | 2.0 | Gravel | Gravel |
| SUNBEAM CIRCLE | 0 | 0.091 | 0.091 | 2 | 2 | 2.0 | Gravel | Gravel |
| SUNCREST DRIVE | 0 | 0.976 | 0.976 | 2 | 2 | 2.0 | Gravel | Gravel |
| SUNNY VALLEY LOOP | 0 | 0.2 | 0.2 | 3 | 3 | 3.0 | Gravel | Gravel |
| SUNNY VALLEY LOOP | 0.2 | 0.57 | 0.37 | 1 | 1 | 1.0 | Gravel | Gravel |
| SUNNY VALLEY LOOP | 0.57 | 2.65 | 2.08 | 1 | 1 | 1.0 | Gravel | Gravel |
| SUNRISE DRIVE | 0 | 0.25 | 0.25 | 1 | 1 | 1.0 | Gravel | Gravel |
| SURREY DRIVE | 0 | 0.34 | 0.34 | 2 | 2 | 2.0 | Gravel | Gravel |
| SUSAN LANE | 0 | 0.119 | 0.119 | 2 | 2 | 2.0 | Gravel | Gravel |
| SWARTHOUT DRIVE | 0 | 0.159 | 0.159 | 2 | 2 | 2.0 | Gravel | Gravel |
| SYCAMORE DRIVE | 0 | 0.19 | 0.19 | 1 | 1 | 1.0 | Gravel | Gravel |
| TAKILMA ROAD | 0 | 6.02 | 6.02 | 1 | 1 | 1.0 | Gravel | Gravel |
| TAKILMA ROAD | 6.02 | 8.11 | 2.09 | 1 | | 0.5 | | Gravel |
| TAKILMA ROAD | 8.11 | 8.48 | 0.37 | 1 | | 0.5 | | Gravel |
| TAVIS DRIVE | 0 | 0.16 | 0.16 | 2 | 2 | 2.0 | Gravel | Gravel |
| TAYLOR CREEK ROAD | 0 | 0.28 | 0.28 | 4 | 2 | 3.0 | Gravel | Gravel |
| TAYLOR CREEK ROAD | 0.28 | 0.47 | 0.19 | 4 | 3 | 3.5 | Gravel | Gravel |
| TAYLOR CREEK ROAD | 0.47 | 0.7 | 0.23 | 2 | 2 | 2.0 | Gravel | Gravel |
| TAYLOR CREEK ROAD | 0.7 | 1.44 | 0.74 | 2 | 2 | 2.0 | Gravel | Gravel |
| TECH WAY | 0 | 0.11 | 0.11 | 4 | 4 | 4.0 | Paved (BST) | Paved (BST) |
| TECH WAY | 0.11 | 0.156 | 0.046 | 4 | 4 | 4.0 | Paved (BST) | Paved (BST) |
| TEEL LANE | 0 | 0.01 | 0.01 | 1 | | 0.5 | | Gravel |
| TEEL LANE | 0.01 | 0.18 | 0.17 | 1 | | 0.5 | | Gravel |
| TEMPLIN AVENUE | 0 | 0.39 | 0.39 | 1 | 1 | 1.0 | Gravel | Gravel |
| TERRACE OAKS LANE | 0 | 0.08 | 0.08 | 2 | 2 | 2.0 | Gravel | Gravel |
| TETHEROW ROAD | 0 | 1.008 | 1.008 | 1 | 1 | 1.0 | Gravel | Gravel |
| THIRD AVENUE | 0 | 0.1 | 0.1 | | | 0.0 | | |
| THOMPSON CREEK ROAD (4) | 0 | 4.672 | 4.672 | 1 | 1 | 1.0 | Gravel | Gravel |
| THOMPSON CREEK ROAD (5) | 0 | 3.122 | 3.122 | 2 | 2 | 2.0 | Gravel | Gravel |
| THORNBROOK DRIVE | 0 | 0.667 | 0.667 | 1 | 1 | 1.0 | Gravel | Gravel |
| THORNRIDGE LANE | 0 | 0.215 | 0.215 | 1 | 1 | 1.0 | Gravel | Gravel |

Table A-5: Shoulder Widths and Types on County Roads

| Road Name | Begin Milepost | End Milepost | Miles | Right Width | Left Width | Avg width | Left Shoulder Type | Right Shoulder Type |
|---|---|---|---|---|---|---|---|---|
| THREE PINES ROAD | 0 | 0.62 | 0.62 | 3 | 2 | 2.5 | Gravel | Gravel |
| THREE PINES ROAD | 0.62 | 0.75 | 0.13 | 3 | 3 | 3.0 | Gravel | Gravel |
| THREE PINES ROAD | 0.75 | 0.84 | 0.09 | 4 | 4 | 4.0 | Gravel | Gravel |
| THREE PINES ROAD | 0.84 | 1.76 | 0.92 | 3 | 3 | 3.0 | Gravel | Gravel |
| TIFFANY WAY | 0 | 0.08 | 0.08 | 2 | 2 | 2.0 | Gravel | Gravel |
| TIMBER LANE | 0 | 0.822 | 0.822 | 1 | 1 | 1.0 | Gravel | Gravel |
| TORREY PINES ROAD | 0 | 0.052 | 0.052 | | | 0.0 | Gravel | Gravel |
| TOWNE STREET | 0 | 0.13 | 0.13 | | 3 | 1.5 | Gravel | |
| TOWNE STREET | 0.13 | 0.23 | 0.1 | | 2 | 1.0 | Gravel | |
| TOWNE STREET | 0.23 | 0.3 | 0.07 | | 2 | 1.0 | Gravel | |
| TRILLER LANE | 0 | 0.23 | 0.23 | 1 | | 0.5 | | Gravel |
| TRILLER LANE | 0.23 | 0.248 | 0.018 | 1 | | 0.5 | | Gravel |
| TROLLVIEW ROAD | 0 | 0.25 | 0.25 | | | 0.0 | | |
| TUNNEL LOOP ROAD | 0 | 2.21 | 2.21 | 4 | 2 | 3.0 | Gravel | Gravel |
| TWILIGHT LANE | 0 | 0.06 | 0.06 | 3 | | 1.5 | | Gravel |
| UNION AVENUE | 0 | 0.36 | 0.36 | 4 | 4 | 4.0 | Gravel | Gravel |
| UPPER POWELL CREEK ROAD | 0 | 0.17 | 0.17 | 3 | 3 | 3.0 | Gravel | Gravel |
| UPPER RIVER ROAD | 0 | 4.46 | 4.46 | 6 | 6 | 6.0 | Paved (BST) | Paved (BST) |
| UPPER RIVER ROAD LOOP | 0 | 0.25 | 0.25 | 2 | 2 | 2.0 | Gravel | Gravel |
| VALLEY ROGUE WAY | 0 | 0.138 | 0.138 | 2 | 2 | 2.0 | Gravel | Gravel |
| VERNA LANE | 0 | 0.25 | 0.25 | 1 | | 0.5 | | Gravel |
| VERTICAL DRIVE | 0 | 0.267 | 0.267 | 1 | 1 | 1.0 | Gravel | Gravel |
| VILLAGE LANE | 0 | 0.213 | 0.213 | 1 | 1 | 1.0 | Gravel | Gravel |
| VOLKMER WAY | 0 | 0.13 | 0.13 | 2 | 2 | 2.0 | Gravel | Gravel |
| VOLKMER WAY | 0 | 0.23 | 0.23 | 2 | 2 | 2.0 | Gravel | Gravel |
| WALDO ROAD | 0 | 0.25 | 0.25 | 4 | 4 | 4.0 | Gravel | Gravel |
| WALDO ROAD | 0.25 | 0.4 | 0.15 | 2 | 2 | 2.0 | Gravel | Gravel |
| WALDO ROAD | 0.4 | 4.797 | 4.397 | 3 | 3 | 3.0 | Gravel | Gravel |
| WALNUT AVENUE | 0 | 0.74 | 0.74 | 1 | 1 | 1.0 | Gravel | Gravel |
| WALTERS DRIVE | 0 | 0.57 | 0.57 | 1 | 1 | 1.0 | Paved (ACP) | Paved (ACP) |
| WARD ROAD | 0 | 0.29 | 0.29 | 3 | 3 | 3.0 | Gravel | Gravel |
| WARNER ROAD | 0 | 0.967 | 0.967 | 1 | 1 | 1.0 | Gravel | Gravel |
| WARREN ROAD | 0 | 0.47 | 0.47 | 1 | 1 | 1.0 | Gravel | Gravel |
| WATER GAP ROAD | 0 | 2.25 | 2.25 | 2 | 2 | 2.0 | Gravel | Gravel |
| WATER GAP ROAD | 2.25 | 2.4 | 0.15 | 4 | 4 | 4.0 | Gravel | Gravel |
| WATER GAP ROAD | 2.4 | 2.97 | 0.57 | 2 | 2 | 2.0 | Gravel | Gravel |
| WATER GAP ROAD | 2.97 | 3.35 | 0.38 | | | 0.0 | | |
| WEST SIDE ROAD | 0 | 0.2 | 0.2 | 2 | 2 | 2.0 | Gravel | Gravel |
| WEST SIDE ROAD | 1.03 | 1.75 | 0.72 | 1 | 1 | 1.0 | Gravel | Gravel |
| WEST SIDE ROAD | 1.75 | 2 | 0.25 | 2 | 2 | 2.0 | Gravel | Gravel |
| WEST SIDE ROAD | 2 | 2.16 | 0.16 | 1 | 2 | 1.5 | Gravel | Gravel |
| WEST SIDE ROAD | 2.16 | 2.61 | 0.45 | 1 | 1 | 1.0 | Gravel | Gravel |
| WEST SIDE ROAD | 5.14 | 6.5 | 1.36 | 2 | 2 | 2.0 | Gravel | Gravel |
| WHISPERING PINES LANE | 0 | 0.3 | 0.3 | 2 | 2 | 2.0 | Gravel | Gravel |
| WHITE SCHOOL ROAD | 0 | 0.54 | 0.54 | | 1 | 0.5 | Gravel | |
| WHITE SCHOOL ROAD | 0.54 | 1.31 | 0.77 | 3 | 2 | 2.5 | Gravel | Gravel |
| WHITE SCHOOL ROAD | 1.31 | 1.8 | 0.49 | | 3 | 1.5 | Gravel | |
| WHITE SCHOOL ROAD | 1.8 | 2.45 | 0.65 | | 3 | 1.5 | Gravel | |
| WHITERIDGE ROAD | 0 | 0.02 | 0.02 | 1 | | 0.5 | | Gravel |
| WHITERIDGE ROAD | 0.02 | 0.142 | 0.122 | 1 | | 0.5 | | Gravel |
| WILDFLOWER DRIVE | 0 | 0.953 | 0.953 | 2 | 2 | 2.0 | Gravel | Gravel |
| WILLIAMS HIGHWAY | 0 | 1.55 | 1.55 | 3 | | 1.5 | | Gravel |
| WILLIAMS HIGHWAY | 1.55 | 1.8 | 0.25 | 3 | 1 | 2.0 | Gravel | Gravel |
| WILLIAMS HIGHWAY | 1.8 | 2.2 | 0.4 | 3 | 3 | 3.0 | Gravel | Gravel |
| WILLIAMS HIGHWAY | 2.2 | 4.65 | 2.45 | | | 0.0 | | |

Table A-5: Shoulder Widths and Types on County Roads

| Road Name | Begin Milepost | End Milepost | Miles | Right Width | Left Width | Avg width | Left Shoulder Type | Right Shoulder Type |
|---|---|---|---|---|---|---|---|---|
| WILLIAMS HIGHWAY | 4.75 | 6.2 | 1.45 | 2 | 2 | 2.0 | Gravel | Gravel |
| WILLIAMSON LOOP | 0 | 1.07 | 1.07 | 2 | 2 | 2.0 | Gravel | Gravel |
| WILLOW CREEK LANE | 0 | 0.134 | 0.134 | 1 | 2 | 1.5 | Gravel | Gravel |
| WILLOW LANE | 0 | 0.84 | 0.84 | 4 | 4 | 4.0 | Gravel | Gravel |
| WILLOW LANE | 0.84 | 0.96 | 0.12 | 4 | 4 | 4.0 | Gravel | Gravel |
| WILMA LANE | 0 | 0.1 | 0.1 | 2 | 2 | 2.0 | Gravel | Gravel |
| WILSON STREET | 0 | 0.28 | 0.28 | 2 | 2 | 2.0 | Gravel | Gravel |
| WINETEER LANE | 0 | 0.3 | 0.3 | 2 | 2 | 2.0 | Gravel | Gravel |
| WINONA ROAD | 0 | 0.94 | 0.94 | 2 | 2 | 2.0 | Gravel | Gravel |
| WINONA ROAD | 0.94 | 1.15 | 0.21 | 3 | 3 | 3.0 | Gravel | Gravel |
| WINONA ROAD | 1.15 | 1.55 | 0.4 | | | 0.0 | | |
| WINONA ROAD | 2 | 2.5 | 0.5 | 1 | 1 | 1.0 | Gravel | Gravel |
| WINONA ROAD | 2.5 | 3.86 | 1.36 | 1 | 1 | 1.0 | Gravel | Gravel |
| WOLF LANE | 0 | 0.5 | 0.5 | 2 | 2 | 2.0 | Gravel | Gravel |
| WOODBROOK DRIVE | 0 | 0.25 | 0.25 | 2 | 2 | 2.0 | Gravel | Gravel |
| WOODLAKE DRIVE | 0 | 0.392 | 0.392 | 2 | 2 | 2.0 | Gravel | Gravel |
| WOODLAND PARK ROAD | 0 | 1.27 | 1.27 | 4 | 4 | 4.0 | Gravel | Gravel |
| WOODROW WAY | 0 | 0.13 | 0.13 | 1 | 1 | 1.0 | Gravel | Gravel |
| WOODSIDE STREET | 0 | 0.11 | 0.11 | 3 | 3 | 3.0 | Gravel | Gravel |
| WYLIE LANE | 0 | 0.03 | 0.03 | 3 | 3 | 3.0 | Gravel | Gravel |
| | | | 442.84 | | | | | |

Table A-6: Speed Data on State Highways and County Roads

| Road Name | Location | Posted Speed | 85th Percentile Speed |
|---|---|---|---|
| A STREET | 265' e/o BEACON Dr | | |
| AGGREGATE AVENUE | 160' w/o JACKSONVILLE Hwy 238 | | |
| AIRPORT DRIVE | 445 Ft n/o Redwood Hwy 199 | | |
| ALLEN CREEK ROAD | 80' s/o REDWOOD AVENUE | | |
| ALLEN CREEK ROAD | 80' s/o REDWOOD AVENUE | | |
| AMENT ROAD | 180' s/o FOOTHILL BLVD. | 40 mph | 42.8 mph |
| APPLEGATE AVENUE | 175' n/o REDWOOD Hwy 199 | | |
| ARNOLD AVENUE | 570' e/o ELK Ln | basic | 35.5 mph |
| AVERILL DRIVE | 65' s/o FOOTHILL BOULEVARD | | |
| AZALEA DRIVE | 340' n/o UPPER RIVER Rd | | |
| AZALEA DRIVE CUTOFF | 850' n/o UPPER RIVER Rd | | |
| AZALEA DRIVE CUTOFF | 840' n/o UPPER RIVER Rd | 55 mph | 31.4 mph |
| BAILEY DRIVE | 70' w/o DRURY Ln | basic | 39.4 mph |
| BEACON DRIVE | 320 s/o HEFLEY St | | |
| BEECHER ROAD | AT GRAVE CREEK BRIDGE | | |
| BLOOM ROAD | 220 Ft s/o COYOTE CREEK Rd | | |
| BOARD SHANTY ROAD | 630' n/o NORTH APPLEGATE Rd | basic | 46.8 mph |
| BRIDGE STREET, WEST | 330' e/o LINCOLN Rd | | |
| BRIMSTONE ROAD | 45' s/o RAILRd CROSSING | | |
| BROOKSIDE BOULEVARD | 170' w/o MONUMENT Dr | basic | 48.3 mph |
| BROOKSIDE BOULEVARD | 170' w/o MONUMENT Dr | | |
| CAMP JOY ROAD | 970' e/o JAIME Ln | | |
| CAMP JOY ROAD | AT MOUNMENT Dr Intersection - LEFT TURN Ln | basic | 53.7 mph |
| CAMP JOY ROAD | AT MOUNMENT Dr Intersection - RIGHT TURN Ln | | |
| CARTER DRIVE | 250 w/o AZALEA Dr | | |
| CARTON WAY | 525 Ft n/o MERLIN Rd | | |
| CAVES CAMP ROAD | 520' s/o CEDAR FLAT Rd | | |
| CEDAR FLAT ROAD | 650' s/o EAST FORK Rd | | |
| CEDAR FLAT ROAD | 165' e/o KINCAID Rd | | |
| CEDAR FLAT ROAD | 285' s/o KINCAID Rd | | |
| CHENEY CREEK ROAD | 70' s/o FISH HATCHERY Rd | basic | 58.7 mph |
| CLOVERLAWN DRIVE | 90' n/o SUMMIT LOOP - S Intersection | basic | 51.3 mph |
| CLOVERLAWN DRIVE | 70' s/o SUMMIT LOOP - S Intersection | | |
| CLOVERLAWN DRIVE | 70' s/o SUMMIT LOOP - S Intersection | | |
| CLOVERLAWN DRIVE | 70' s/o SUMMIT LOOP - S Intersection | | |
| CLOVERLAWN DRIVE | 150' s/o GLENWOOD St | basic | 39.5 mph |
| CLOVERLAWN DRIVE | 150' s/o GLENWOOD St | basic | 49.9 mph |
| COLLEGE DRIVE | 270 Ft w/o DEMARAY Dr | | |
| COMMERCE WAY | 400' n/o CALIFORNIA AVENUE | | |
| CORPORATE WAY | 190' n/o NORTH VALLEY Dr | | |
| COUTANT LANE | 520' n/o LEONARD Rd | basic | 36.8 mph |
| COYOTE CREEK ROAD | 400' e/o INTERSTATE 5 | | |
| CROOKS CREEK ROAD | 225' e/o DEER CREEK Rd | basic | 40.5 mph |
| CROOKS CREEK ROAD | 140' n/o DEER CREEK Rd | | |
| CURTIS DRIVE | 470' e/o JACKSONVILLE Hwy 238 | | |
| DARNEILLE LANE | 800' s/o LEONARD Rd | | |
| DEER CREEK ROAD | 830' s/o REDWOOD Hwy 199 | basic | 39.9 mph |
| DEER CREEK ROAD | 145 Ft n/o DRYDEN Rd | | |
| DEER CREEK ROAD | 255 Ft e/o DRYDEN Rd | | |
| DEER CREEK ROAD | 90' w/o LAKESHORE Dr | basic | 43.3 mph |
| DEER CREEK ROAD | 490' e/o LAKESHORE Dr | | |
| DEER CREEK ROAD | 95' e/o CROOKS CREEK Rd | | |
| DEER CREEK ROAD | 100 Ft n/o LAKE SHORE Dr | basic | 45.9 mph |
| DEER CREEK ROAD | 370' w/o CROOKS CREEK Rd | | |
| DEER CREEK ROAD | 240 Ft e/o LAKE SHORE Dr | | |

Table A-6: Speed Data on State Highways and County Roads

| Road Name | Location | Posted Speed | 85th Percentile Speed |
|---|---|---|---|
| DEMARAY DRIVE | 150 Ft w/o WILLOW Ln | | |
| DEMARAY DRIVE | 200 Ft n/o JEROME PRAIRIE Rd | | |
| DICK GEORGE ROAD | 360' s/o HOLLAND LOOP Rd | basic | 39.4 |
| DONALDSON ROAD | 745' w/o GRANITE HILL Rd | basic | 40.2 mph |
| **DOWELL ROAD** | **245' n/o REDWOOD AVENUE** | **35 mph** | **48.9 mph** |
| DOWELL ROAD | 245' n/o REDWOOD AVENUE | 35 mph | 40.6 mph |
| DOWELL ROAD | 260' s/o WOLF Ln | basic | 48.1 mph |
| DOWELL ROAD | 260' s/o WOLF Ln | basic | 40.1 mph |
| DOWELL ROAD | 260' s/o WOLF Ln | basic | 35.2 mph |
| DOWELL ROAD | 240' s/o REDWOOD AVENUE | | |
| DOWELL ROAD | 240' s/o REDWOOD AVENUE | | |
| DOWELL ROAD | 585' n/o WOLF Ln | | |
| DOWELL ROAD | 585' n/o WOLF Ln | | |
| DOWELL ROAD | 100' n/o WOLF Ln | | |
| DOWELL ROAD | 260' s/o WOLF Ln | | |
| DOWELL ROAD | AT CROSSWALK, LEFT TURN ONLY | | |
| DOWELL ROAD | AT CROSSWALK, THROUGH TRAFFIC AND RIGHT TURN | | |
| DOWELL ROAD | AT CROSSWALK, LEFT TURN ONLY | | |
| DOWELL ROAD | AT CROSSWALK, THROUGH TRAFFIC AND RIGHT TURN | 35 mph | 27.2 mph |
| DRAPER VALLEY ROAD | 150' s/o REDWOOD Hwy 199 | | |
| DRURY LANE | AT IRRIGATION CANAL BRIDGE | | |
| DRURY LANE | 65' s/o BAILEY Dr & LEE ROZE Ln | | |
| DRURY LANE | 110' n/o BAILEY Dr & LEE ROZE Ln | | |
| DRYDEN ROAD | 320 Ft s/o DEER CREEK Rd | basic | 40.1 mph |
| DRYDEN ROAD | 35' n/o LAKESHORE Dr | | |
| EAST FORK ROAD | AT WILLIAMS CREEK BRIDGE | | |
| EIGHT DOLLAR MOUNTAIN ROAD | 310 n/o REDWOOD Hwy 199 | | |
| ELK LANE | 2110' n/o SAND CREEK Rd | | |
| EWE CREEK ROAD | 400' n/o LOWER RIVER Rd | | |
| FAVILL ROAD | 15' n/o RAILRd CROSSING | | |
| FINCH ROAD | 275' n/o REDWOOD Hwy 199 | | |
| FINCH ROAD | 85 Ft e/o WEST SIDE Rd | | |
| FISH HATCHERY ROAD | 70 Ft e/o CRYSTAL SPRINGS Rd | 45 mph | 45.6 mph |
| FISH HATCHERY ROAD | 530 Ft e/o LEAVITT Ln | | |
| **FISH HATCHERY ROAD** | **430 Ft e/o BULL CREEK Rd** | **45 mph** | **53.1 mph** |
| FISH HATCHERY ROAD | 300' w/o NEW HOPE Rd | | |
| FISH HATCHERY ROAD | 770 Ft w/o NEW HOPE Rd | | |
| FISH HATCHERY ROAD | 1900 Ft w/o FELKNER Rd | 45 mph | 34.6 mph |
| FISH HATCHERY ROAD | 115' s/o REDLANDS Dr | | |
| FISH HATCHERY ROAD | 1900 Ft w/o FELKNER Rd | | |
| **FISH HATCHERY ROAD** | **430 Ft e/o BULL CREEK Rd** | **45 mph** | **54.8 mph** |
| FLORER DRIVE | 110' n/o CORBIN Dr | | |
| FOOTHILL BOULEVARD | 130 FT w/o AURORA AVENUE | | |
| FOOTHILL BOULEVARD | 645' w/o AMENT Rd | 45 mph | 45.1 mph |
| FOOTHILL BOULEVARD | 185' e/o 'A' St | city | 43.7 mph |
| FOOTHILL BOULEVARD | 225' w/o AURORA AVENUE | | |
| FOOTHILL BOULEVARD | 130 FT w/o AURORA AVENUE | | |
| FOOTHILL BOULEVARD | 390' e/o AMENT Rd | | |
| FOOTHILL BOULEVARD | 390' e/o AMENT Rd | | |
| FRONT STREET | 85' n/o MAIN St | | |
| FRONTAGE ROAD | 2090' s/o SPEAKER Rd | | |
| **FRUITDALE DRIVE** | **690' e/o GAFFNEY WAY** | **35 mph** | **44.8 mph** |
| FRUITDALE DRIVE | 690' e/o GAFFNEY WAY | | |
| FRUITDALE DRIVE | 220' w/o PARKDALE Dr | 35 mph | 40.2 mph |
| FRUITDALE DRIVE | 275' e/o PARKDALE Dr | | |

Table A-6: Speed Data on State Highways and County Roads

| Road Name | Location | Posted Speed | 85th Percentile Speed |
|---|---|---|---|
| FRUITDALE DRIVE | 690' e/o GAFFNEY WAY | | |
| FRUITDALE DRIVE | 220' w/o PARKDALE Dr | | |
| FRUITDALE DRIVE | 550' s/o ROGUE RIVER Hwy 99 | 35 mph | 38.6 mph |
| FRUITDALE DRIVE | 140 Ft w/o ROGUE RIVER Hwy | | |
| G STREET | 545 Ft w/o LEONARD St | | |
| GALICE ROAD | 480' w/o AZALEA Dr | basic | 52.2 mph |
| GALICE ROAD | 480' w/o AZALEA Dr | basic | 50.6 mph |
| GALICE ROAD | 370 Ft w/o GALICE RESORT | | |
| GLADIOLA AVENUE | 345' n/o PORTOLA Dr | city? | 29.6 mph |
| GORDON WAY | 200' n/o ROGUE RIVER Hwy 99 | | |
| **GRANDVIEW AVENUE** | | **30 mph** | **50.8 mph** |
| **GRANDVIEW AVENUE** | | **30 mph** | **50.7 mph** |
| GRANDVIEW AVENUE | 450 Ft e/o HARBECK Rd | | |
| **GRANDVIEW AVENUE** | | **30 mph** | **40.8 mph** |
| GRANDVIEW AVENUE | | | |
| GRANDVIEW AVENUE | | | |
| GRANDVIEW AVENUE | | | |
| GRANITE HILL ROAD | 420' n/o SCENIC Dr | | |
| GREENFIELD ROAD | 255' e/o SCOVILLE Rd | 55 mph | 44.5 mph |
| GROUSE CREEK ROAD | 770' w/o GRANITE HILL Rd | basic | 37.5 mph |
| GROUSE CREEK ROAD | 530' e/o HORSESHOE Dr | | |
| GROUSE CREEK ROAD | 770' w/o GRANITE HILL Rd | | |
| HAMILTON LANE | 155 Ft s/o ROGUE RIVER Hwy 99 | | |
| HAMILTON LANE | 170' n/o TROLLVIEW Rd | | |
| HAMILTON LANE | 170' n/o TROLLVIEW Rd | | |
| HAMILTON LANE | 90' s/o TROLLVIEW Rd | | |
| HAMILTON LANE | 90' s/o TROLLVIEW Rd | basic | 40.5 mph |
| HAPPY CAMP ROAD | 310' s/o TAKILMA Rd | | |
| HARBECK ROAD | 460 Ft s/o Hwy 238 | | |
| HARBECK ROAD, WEST | 320' w/o REGINA WAY | | |
| HAVILAND DRIVE | 80 Ft s/o GRANDVIEW AVENUE | | |
| HAWTHORNE AVENUE | 690' s/o MORGAN Ln | | |
| HAYS CUTOFF ROAD | 255' e/o HOLLAND LOOP Rd | | |
| HELMS ROAD | 615' n/o JEROME PRAIRIE Rd | basic | 45.1 mph |
| HELMS ROAD | 100' s/o LAINE COURT | | |
| HELMS ROAD | 50' n/o LAINE COURT | | |
| HIGHLAND AVENUE | 1625 Ft w/o PONY Ln | city? | 38.4 mph |
| HIGHLAND AVENUE | 255' s/o MOREWOOD Ln | city? | 33.1 mph |
| HIGHLAND AVENUE | 80' s/o MOREWOOD Ln | | |
| HIGHLAND AVENUE | 255' s/o MOREWOOD Ln | | |
| HIGHLAND AVENUE | 90 Ft s/o SINCLAIR Dr | | |
| HILLCREST DRIVE | 170' e/o HAWTHORNE AVENUE | | |
| HILLCREST DRIVE, NORTHEAST | 1145' e/o NINTH St | | |
| HOGUE DRIVE | 920' n/o LAKESHORE Dr | | |
| HOGUE DRIVE | 930' n/o LAKESHORE Dr | | |
| HOGUE DRIVE | 930' n/o LAKESHORE Dr | | |
| HOGUE DRIVE | 920' n/o LAKESHORE Dr | | |
| HOLLAND LOOP ROAD | 90' s/o HAYES CUTOFF Rd | 55 mph | 43.3 mph |
| HOLLAND LOOP ROAD | 875' s/o HAYES CUTOFF Rd | | |
| HOLLAND LOOP ROAD | 300' n/o HAYES CUTOFF Rd | | |
| HOLLAND LOOP ROAD | AT NORTH END OF SUCKER CREEK BRIDGE | | |
| HOLLAND LOOP ROAD | AT NORTH END OF SUCKER CREEK BRIDGE | | |
| HUBBARD LANE | 1268 Ft s/o REDWOOD AVENUE | | |
| HUBBARD LANE | 720' s/o REDWOOD AVENUE | | |
| HUBBARD LANE | 1268 Ft s/o REDWOOD AVENUE | | |

Table A-6: Speed Data on State Highways and County Roads

| Road Name | Location | Posted Speed | 85th Percentile Speed |
|---|---|---|---|
| **HUBBARD LANE** | **720' s/o REDWOOD AVENUE** | **35 mph** | **48.1 mph** |
| HUGO ROAD | 135' n/o GALICE Rd | | |
| HUGO ROAD | 290 Ft s/o THREE PINES Rd | basic | 42.3 mph |
| HUGO ROAD | 155 Ft n/o THREE PINES Rd | | |
| HUGO ROAD | 30' e/o RAILRd CROSSING | | |
| ILLINOIS RIVER ROAD | 265' w/o REDWOOD Hwy 199 | | |
| JAIME LANE | 320' s/o MERLIN Rd | basic | 41.4 mph |
| JAYNES DRIVE | 265' e/o NEW HOPE Rd | 55 mph | 36.6 mph |
| JEROME PRAIRIE ROAD | 140 Ft s/o SAND CREEK Rd | | |
| JEROME PRAIRIE ROAD | 200 Ft n/o DEMARAY Dr | | |
| JEROME PRAIRIE ROAD | 70' s/o SAND CREEK Rd | | |
| JEROME PRAIRIE ROAD | 175' w/o SLEEPY HOLLOW LOOP | | |
| JEROME PRAIRIE ROAD | 175' w/o SLEEPY HOLLOW LOOP | | |
| JEROME PRAIRIE ROAD | 130 Ft n/o SAND CREEK Rd | | |
| JEROME PRAIRIE ROAD | 125' n/o SAND CREEK Rd | | |
| JEROME PRAIRIE ROAD | 120 Ft n/o SAND CREEK Rd | | |
| JONES CREEK ROAD, EAST | 380' e/o WEST JONES CREEK Rd | | |
| JONES CREEK ROAD, WEST | 265' s/o RICHLAND Dr | | |
| JONES CREEK ROAD, WEST | 310' n/o FOOTHILL BOULEVARD | | |
| JONES CREEK ROAD, WEST | 265' s/o RICHLAND Dr | 45 mph | 53.9 mph |
| JUMP OFF JOE CREEK ROAD | 360' e/o INTERSTATE 5 | basic | 41.9 mph |
| JUMP OFF JOE CREEK ROAD | 180 Ft w/o JACKS CREEK Rd | | |
| KELLENBECK AVENUE | 50' e/o WILLOW Ln | | |
| KELLENBECK AVENUE | 30' s/o REDWOOD AVENUE | | |
| KINCAID ROAD | 465' w/o CEDAR FLAT Rd | | |
| KINCAID ROAD | 355' w/o CEDAR FLAT Rd | basic | 47.1 mph |
| KINCAID ROAD | 0' w/o CEDAR FLAT Rd | | |
| KUBLI ROAD | 270' s/o NORTH APPLEGATE Rd | | |
| LAINE COURT | 130' e/o HELMS Rd | basic | 33.6 mph |
| LAKE SHORE DRIVE | 1570' s/o REDWOOD Hwy 199 | | |
| LAKE SHORE DRIVE | 565' s/o REEVES CREEK Rd | | |
| LAKE SHORE DRIVE | 1.15 MILES e/o REDWOOD Hwy 199 | basic | 47.3 mph |
| LAKE SHORE DRIVE | 1.15 MILES e/o REDWOOD Hwy 199 | basic | 33.1 mph |
| LAKE SHORE DRIVE | 2380 Ft w/o REEVES CREEK Rd | | |
| LAKE SHORE DRIVE | 2380 Ft w/o REEVES CREEK Rd | | |
| LAKE SHORE DRIVE | 40' w/o DRYDEN Rd | | |
| LAKE SHORE DRIVE | 345' n/o DRYDEN Rd | basic | 52.1 mph |
| LAKE SHORE DRIVE | 1210 Ft w/o DRYDEN Rd | basic | 26.3 mph |
| LAKE SHORE DRIVE | 1210 Ft w/o DRYDEN Rd | | |
| LAKE SHORE DRIVE | 1525' w/o DEER CREEK Rd | | |
| LAKE SHORE DRIVE | 250' w/o DEER CREEK Rd | basic | 54.6 mph |
| LAKE SHORE DRIVE | 250 Ft s/o DEER CREEK Rd | | |
| LAUREL ROAD | 475' s/o REDWOOD Hwy 199 | | |
| LAUREL ROAD | 295' e/o CAVES Hwy 46 | | |
| LAUREL ROAD | AT CAVES Hwy, LEFT LEG - RIGHT TURN ONTO LAUREL RD | | |
| LAUREL ROAD | AT CAVES Hwy, LEFT LEG - LEFT TURN ONTO CAVES Hwy | | |
| LAUREL ROAD | AT CAVES Hwy, RIGHT LEG - RIGHT TURN ONTO CAVES Hwy | | |
| LAUREL ROAD | AT CAVES Hwy, RIGHT LEG - LEFT TURN ONTO LAUREL Rd | | |
| LEE ROZE LANE | AT STOP SIGN | | |
| LELAND ROAD | 290' w/o SUNNY VALLEY LOOP | | |
| LEONARD ROAD | 250' w/o WESTWOOD Dr | | |
| LEONARD ROAD | 250' w/o WESTWOOD Dr | | |
| LEONARD ROAD | 250' w/o WESTWOOD Dr | | |
| LINCOLN ROAD | 360 Ft n/o LOWER RIVER Rd | | |
| LINCOLN ROAD | 360 Ft n/o LOWER RIVER Rd | | |

Table A-6: Speed Data on State Highways and County Roads

| Road Name | Location | Posted Speed | 85th Percentile Speed |
|---|---|---|---|
| LINCOLN ROAD | 300' n/o WEBSTER Rd | basic | 50.2 mph |
| LLOYD DRIVE | 540 Ft e/o CASTLE CREEK Rd | | |
| LONE MOUNTAIN ROAD | 500' n/o REDWOOD Hwy 199 | | |
| LONNON ROAD | 180' e/o ELK Ln | | |
| LOWER GRAVE CREEK ROAD | 490' w/o LELAND Rd | | |
| LOWER WOLF CREEK ROAD | Milepost 0.13 | | |
| M STREET | 555 Ft w/o MILBANK Rd | | |
| M STREET | 175 Ft w/o CAMELOT Dr | | |
| M STREET | 170 Ft w/o CAMELOT Dr | | |
| MARCY LOOP | 460' e/o RIVERBANKS Rd (S END) | | |
| MARCY LOOP | 205' w/o RIVERBANKS Rd (NORTH END) | basic | 46.5 mph |
| MERLIN LANDFILL ROAD | 155' s/o MERLIN Rd | | |
| MERLIN ROAD | 2670' w/o MONUMENT Dr | | |
| MERLIN ROAD | 2670' w/o MONUMENT Dr | | |
| MERLIN ROAD | 2190' w/o HOLBROOK WAY | | |
| MIDWAY AVENUE | 505' n/o LAUREL AVENUE | basic | 27.7 mph |
| MIDWAY AVENUE | 505' n/o LAUREL AVENUE | basic | 37.8 mph |
| MIDWAY AVENUE | 885' n/o REDWOOD Hwy 199 | | |
| MIDWAY AVENUE | 505' n/o LAUREL AVENUE | | |
| MONUMENT DRIVE | AT CAMP JOY JOY Rd Intersection | | |
| MONUMENT DRIVE | 555 Ft n/o CAMP JOY Rd | | |
| MONUMENT DRIVE | 315' n/o MERLIN Rd | | |
| MONUMENT DRIVE | 315' n/o MERLIN Rd | 55 mph | 52.8 mph |
| MONUMENT DRIVE | 545' n/o MARY HARRIS WAY | 40 mph | 36.6 mph |
| MONUMENT DRIVE | 315' n/o MERLIN Rd | | |
| **MONUMENT DRIVE** | **545' n/o MARY HARRIS WAY** | **40 mph** | **50.9 mph** |
| MONUMENT DRIVE | 390' s/o BROOKSIDE BLVD | | |
| MONUMENT DRIVE | 340' n/o BROOKSIDE BLVD | | |
| MONUMENT DRIVE | 390' s/o BROOKSIDE BLVD | | |
| MONUMENT DRIVE | AT CAMP JOY JOY Rd Intersection | 55 mph | 53.9 mph |
| MONUMENT DRIVE | 340' n/o BROOKSIDE BLVD | | |
| MONUMENT DRIVE | 545' n/o MARY HARRIS WAY | | |
| MORGAN LANE | 415' w/o HAWTHORNE AVENUE | | |
| MOUNTAIN FIR ROAD | 150' s/o MURPHY Ln | | |
| MURPHY CREEK ROAD | 265' s/o S SIDE Rd | | |
| N STREET, SOUTHEAST | 1415' e/o CAMELOT Dr | | |
| NEBRASKA AVENUE | 210' n/o WEST HARBECK Rd | | |
| NEW HOPE ROAD | 1890' w/o JACKSONVILLE Hwy 238 | basic | 35.4 mph |
| NEW HOPE ROAD | AT NEW HOPE CHRISTIAN SCHOOL | basic | 42.2 mph |
| NEW HOPE ROAD | 6400 New Hope Rd | basic | 55.4 mph |
| NEW HOPE ROAD | 1890' w/o JACKSONVILLE Hwy 238 (MURPHY END) | basic | 57.6 mph |
| NEW HOPE ROAD | 6400 New Hope Rd | basic | 54.7 mph |
| NEW HOPE ROAD | 0.75 MILES w/o Hwy 238 (S END) | basic | 43.1 mph |
| NEW HOPE ROAD | 560 Ft w/o JACKSONVILLE Hwy 238 (MURPHY END) | | |
| NEW HOPE ROAD | 1390 Ft w/o JACKSONVILLE Hwy 238 (MURPHY END) | | |
| NEW HOPE ROAD | 1.086 MILES w/o Hwy 238 (MURPHY END) | | |
| NEW HOPE ROAD | 355 Ft w/o JACKSONVILLE Hwy 238 (MURPHY END) | | |
| NEW HOPE ROAD | 1390 Ft w/o JACKSONVILLE Hwy 238 (MURPHY END) | | |
| NEW HOPE ROAD | 0.75 MILES w/o Hwy 238 (MURPHY END) | basic | 44 mph |
| NEW HOPE ROAD | 6802 New Hope Rd | | |
| NORTH APPLEGATE ROAD | 630' e/o JACKSONVILLE Hwy 238 | | |
| NORTH APPLEGATE ROAD | 275' w/o KUBLI Rd | | |
| NORTH APPLEGATE ROAD | 110' e/o KUBLI Rd | | |
| NORTH VALLEY DRIVE | 250' e/o MONUMENT Dr | basic | 54.3 mph |
| NORTH VALLEY DRIVE | 250' e/o MONUMENT Dr | basic | 40.4 mph |

Table A-6: Speed Data on State Highways and County Roads

| Road Name | Location | Posted Speed | 85th Percentile Speed |
|---|---|---|---|
| OLD HWY 99 | 370' n/o BRIDGE Ln | 40 mph | 38.5 mph |
| **OLD STAGE ROAD** | **175' e/o CAVES Hwy 46** | **30 mph** | **44.9 mph** |
| OLD STAGE ROAD | 250' w/o RIVER St | | |
| OVERLAND DRIVE | 120' s/o FRUITDALE Dr | basic?? | 31.6 mph |
| OXYOKE ROAD | 795' n/o THREE PINES Rd | basic | 54.9 mph |
| PARK STREET, EAST | 1315 Ft e/o Parkdale Dr | | |
| PARK STREET, WEST | 100' e/o RINGUETTE St | basic | 54.4 mph |
| PARKDALE DRIVE | 290 Ft n/o FRUITDALE Dr | ?? | 9.7 mph |
| PARKDALE DRIVE | 50' s/o FRUITDALE Dr | | |
| PEARCE PARK ROAD | 45' n/o RAILRd CROSSING | basic | 51.7 mph |
| PENNY LANE | 210' e/o NEW HOPE Rd | | |
| PICKETT CREEK ROAD | 475' n/o RIVERBANKS Rd | | |
| PINE CREST DRIVE | 185 Ft s/o CAROL ANN WAY | | |
| PINE TREE DRIVE | 150' w/o WATER GAP Rd | | |
| PINE TREE DRIVE | 130 Ft w/o WATER GAP Rd | | |
| PINEWOOD WAY | 65' e/o REDWOOD Hwy 199 | | |
| PLACER ROAD | 305' e/o SUNNY VALLEY LOOP | basic?? | 27.4 mph |
| PLEASANT VALLEY ROAD | 210' w/o MERLIN AVENUE | | |
| PLUMTREE LANE | 470' s/o CAMP JOY Rd | | |
| PONDEROSA LANE | 70' w/o CLOVERLAWN Dr | | |
| PORTOLA DRIVE | 490' e/o GLADIOLA AVENUE | basic | 52.2 mph |
| PUGETVILLE ROAD | 110' s/o REDWOOD Hwy 199 | | |
| REDWOOD AVENUE | 180' e/o ALLEN CREEK Rd | 35 mph | 17.7 mph |
| REDWOOD AVENUE | 235' e/o DOWELL Rd | | |
| REDWOOD AVENUE | 215 Ft w/o MCDONALD Ln | | |
| REDWOOD AVENUE | 250' w/o DOWELL Rd | 35 mph | 30.3 mph |
| REDWOOD AVENUE | 250' w/o DOWELL Rd | | |
| REDWOOD AVENUE | 250' e/o WILLOW Ln | 35 mph | 9.8 mph |
| REDWOOD AVENUE | 250' w/o ALLEN CREEK Rd | | |
| REDWOOD AVENUE | 180' e/o ALLEN CREEK Rd | | |
| REDWOOD AVENUE | 250' w/o ALLEN CREEK Rd | | |
| REDWOOD AVENUE | 260' e/o DOWELL Rd | | |
| REDWOOD AVENUE | 235' e/o DOWELL Rd | | |
| REDWOOD AVENUE | 220' w/o DOWELL Rd | | |
| REDWOOD AVENUE | 155' w/o WILLOW Ln | | |
| REDWOOD AVENUE | 155' w/o WILLOW Ln | 35 mph | 33.7 mph |
| REDWOOD AVENUE | 250' e/o WILLOW Ln | | |
| REDWOOD AVENUE | 220 Ft e/o DOWELL Rd | | |
| REDWOOD AVENUE | 260 Ft w/o DOWELL Rd | | |
| REEVES CREEK ROAD | 120' s/o REDWOOD Hwy 199 | | |
| RINGUETTE STREET | 320' s/o WEST PARK St | | |
| ROBERTSON BRIDGE ROAD | 1480 Ft n/o LOWER RIVER Rd | basic | 48.8 mph |
| ROBERTSON BRIDGE ROAD | 330' n/o LOWER RIVER Rd | | |
| ROCKYDALE ROAD | 270 Ft e/o Hwy 199 | | |
| ROCKYDALE ROAD | 185' s/o REDWOOD Hwy 199 | | |
| ROCKYDALE ROAD | 270 Ft e/o Hwy 199 | | |
| ROGUELEA LANE | 605 s/o LOWER RIVER Rd | | |
| RUSSELL ROAD | 585 Ft w/o PLEASANT VALLEY Rd | basic | 46.6 mph |
| SAND CREEK ROAD | 30 Ft w/o JEROME PRAIRIE Rd | 45 mph | 43.9 mph |
| SAND CREEK ROAD | 30' w/o JEROME PRAIRIE Rd | 45 mph | 38.0 mph |
| SAND CREEK ROAD | 110' e/o JEROME PRAIRIE Rd | | |
| SAND CREEK ROAD | 115 Ft e/o JEROME PRAIRIE Rd | 45 mph | 43.9 mph |
| SAND CREEK ROAD | 110' e/o JEROME PRAIRIE Rd | | |
| SAND CREEK ROAD | 1190 w/o ELK Ln | | |
| SAND CREEK ROAD | 110' e/o JEROME PRAIRIE Rd | | |

Table A-6: Speed Data on State Highways and County Roads

| Road Name | Location | Posted Speed | 85th Percentile Speed |
|---|---|---|---|
| SARATOGA WAY | 1220' s/o CAMP JOY Rd | basic | 34.1 mph |
| SCENIC DRIVE, WEST | 220' w/o SCOVILLE Rd | | |
| SCHUTZWOHL LANE | 700' w/o ALLEN CREEK Rd | | |
| SCHUTZWOHL LANE, WEST | 245 Ft e/o DOWELL Rd | | |
| SCOVILLE ROAD | 280' s/o SCENIC Dr | | |
| SHANNON LANE | 485' s/o 'N' St | basic | 42.9 mph |
| SHETLAND DRIVE | 95 e/o PALOMINO Dr | | |
| SLATE CREEK ROAD | 280 Ft n/o Redwood Hwy 199 | | |
| SOUTH RIVER ROAD | 760' e/o SOLITUDE Ln | | |
| SOUTH SIDE ROAD | 550' w/o NEW HOPE Rd | basic | 48.8 mph |
| SPEAKER ROAD | 620' e/o FRONTAGE Rd | | |
| STRINGER GAP ROAD | 1505' e/o JEROME PRAIRIE Rd | basic | 44.8 mph |
| STRINGER GAP ROAD | 700' w/o NEW HOPE Rd | basic | 39.4 mph |
| STRINGER GAP ROAD | 325' w/o CUMBERLAND Dr | | |
| SUMMIT LOOP | 295' e/o CLOVERLAWN Dr | basic | 53.7 mph |
| SUMMIT LOOP | 100' e/o CLOVERLAWN Dr - S Intersection | | |
| SUNNY VALLEY LOOP | 495 s/o LELAND Rd | | |
| TAKILMA ROAD | 410' s/o HOLLAND LOOP Rd | | |
| TAKILMA ROAD | AT PAGE CREEK BRIDGE | | |
| TECH WAY | 135' e/o CORPORATE WAY | | |
| TENTH STREET, NORTHEAST | 280' s/o HILLCREST Dr | city | 43.9 mph |
| THOMPSON CREEK ROAD (4) | Milepost 0.09 | | |
| THOMPSON CREEK ROAD (5) | 615' s/o LAKESHORE Dr | | |
| THREE PINES ROAD | 350 Ft w/o OXYOKE Rd | | |
| THREE PINES ROAD | 110 Ft e/o HUGO Rd | | |
| TROLLVIEW ROAD | 70' e/o HAMILTON Ln | | |
| TROLLVIEW ROAD | 70' e/o HAMILTON Ln | | |
| UNION AVENUE | 570 Ft w/o JACKSONVILLE Hwy 238 | | |
| UPPER RIVER ROAD | 180' e/o AZALEA Dr CUTOFF | | |
| UPPER RIVER ROAD | 300' w/o AZALEA Dr CUTOFF | | |
| VINE STREET | 745' w/o HAWTHORNE AVENUE | 45 mph | 53.0 mph |
| VINE STREET | 1075 Ft e/o HIGHLAND AVENUE | | |
| WALDO ROAD | 380' s/o REDWOOD Hwy 199 | basic | 23.1 mph |
| WALKER ROAD | 125' w/o CLOVERLAWN Dr | | |
| WARNER ROAD | 180' n/o RAILRd AVENUE | basic | 26.3 |
| WASHINGTON BOULEVARD | 820' s/o MORGAN Ln | | |
| WATER GAP ROAD | 270' s/o JACKSONVILLE Hwy 238 | | |
| WATER GAP ROAD | 580' s/o JACKSONVILLE Hwy 238 | basic | 46.6 mph |
| WATER GAP ROAD | 145' s/o PINE TREE Dr | | |
| WEST SIDE ROAD | 185' n/o REDWOOD Hwy 199 | | |
| WEST SIDE ROAD | 215 Ft s/o FINCH Rd | | |
| WEST SIDE ROAD | 175 Ft n/o FINCH Rd | basic | 20.0 mph |
| WILLIAMS HIGHWAY | 2050' s/o JACKSONVILLE Hwy 238 | | |
| WILLIAMS HIGHWAY | 255' n/o POWELL CREEK Rd | | |
| WILLIAMS HIGHWAY | 615' n/o FINDLEY Rd | | |
| WILLOW CREEK LANE | 40 Ft w/o Cloverlawn Dr | | |
| WILLOW LANE | 250' n/o REDWOOD AVENUE | 35 mph | 42.5 mph |
| WILLOW LANE | 250' n/o REDWOOD AVENUE | | |
| WILLOW LANE | 80' s/o REDWOOD AVENUE | | |
| WILLOW LANE | 80' s/o REDWOOD AVENUE | | |
| WINONA ROAD | 175' s/o JUMP OFF JOE CREEK Rd | | |
| WOLF LANE | 100' w/o DOWELL Rd | | |
| WOLF LANE | 100' w/o DOWELL Rd | | |
| WOODLAND PARK ROAD | 515 Ft s/o REDWOOD AVENUE | basic | 45 mph |
| | | | |

Table A-8: Designated Bicycle Facilities

| Road Name | Begin Milepost | End Milepost | Length | Bikeway Type |
|---|---|---|---|---|
| CEDAR FLAT ROAD | 0.000 | 0.088 | 0.088 | Bike Lanes |
| WATER GAP ROAD | 3.454 | 4.798 | 1.344 | Bike Lanes |
| AZALEA DRIVE | 0.340 | 6.137 | 5.797 | Shared Roadway |
| AZALEA DRIVE CUTOFF | 0.000 | 0.356 | 0.356 | Shared Roadway |
| BRIDGE STREET, WEST | 0.000 | 0.275 | 0.275 | Shared Roadway |
| DEMARAY DRIVE | 0.024 | 2.384 | 2.360 | Shared Roadway |
| G STREET | 0.000 | 0.245 | 0.245 | Shared Roadway |
| GALICE ROAD | 0.000 | 1.070 | 1.070 | Shared Roadway |
| GRANITE HILL ROAD | 0.000 | 2.651 | 2.651 | Shared Roadway |
| HARBECK ROAD | 0.037 | 0.447 | 0.410 | Shared Roadway |
| HARBECK ROAD, WEST | 0.000 | 0.458 | 0.458 | Shared Roadway |
| HIGHLAND AVENUE | 0.045 | 0.724 | 0.679 | Shared Roadway |
| HIGHLAND AVENUE | 0.724 | 3.417 | 2.693 | Shared Roadway |
| LINCOLN ROAD | 0.000 | 0.246 | 0.246 | Shared Roadway |
| LLOYD DRIVE | 0.000 | 0.517 | 0.517 | Shared Roadway |
| M STREET | 0.000 | 0.156 | 0.156 | Shared Roadway |
| MERLIN ROAD | 0.000 | 3.345 | 3.345 | Shared Roadway |
| MURPHY CREEK ROAD | 0.021 | 0.888 | 0.867 | Shared Roadway |
| N STREET, SOUTHEAST | 0.000 | 0.209 | 0.209 | Shared Roadway |
| NEW HOPE ROAD | 0.028 | 1.198 | 1.170 | Shared Roadway |
| REDWOOD AVENUE | 0.000 | 1.987 | 1.987 | Shared Roadway |
| REDWOOD AVENUE | 0.081 | 1.987 | 1.906 | Shared Roadway |
| SCENIC DRIVE, WEST | 0.000 | 0.325 | 0.325 | Shared Roadway |
| SOLDIER CREEK ROAD | 0.496 | 1.000 | 0.504 | Shared Roadway |
| UNION AVENUE | 0.011 | 0.360 | 0.349 | Shared Roadway |
| UPPER RIVER ROAD | 0.000 | 4.529 | 4.529 | Shared Roadway |
| VINE STREET | 0.000 | 0.646 | 0.646 | Shared Roadway |
| RIVER STREET | 0.000 | 0.390 | 0.390 | Shoulder Bikeway |
| WILLIAMS HIGHWAY | 6.180 | 6.297 | 0.117 | Shoulder Bikeway |
| | | TOTAL: | 35.689 | |

Totals by Type of Facility

| | Percent |
|---|---|
| Bike Lanes | 4% |
| Shared Roadway | 95% |
| Shoulder Bikeway | 1% |
| | 100% |

Table A-9: Status of County-Maintained Bridges in Rural Josephine County

## Deficient Josephine County Bridges with Timber Elements

| Bridge | Roadway | MP | Status | Score | Timber Elements |
|---|---|---|---|---|---|
| Grave Creek | Beecher Rd | 0.10 | SD | 25.3 | Slab w/ AC overlay, truss/arch, floor beam, bridge railing |
| Coyote Creek | Bloom Rd | 0.04 | FO | 36.4 | Deck, open girder |
| Slate Creek | Elliot Creek Rd | 0.04 | FO | 51.9 | Deck w/ AC overlay |
| Woodcock Creek | Westside Rd | 0.78 | FO | 54.9 | Deck w/ AC overlay, open girder |
| Jacks Creek | Jumpoff Joe Creek Rd | 2.62 | SD | 63.2 | Dec k w/ AC overlay, open girder |
| Williams Creek | Browns Rd | 0.11 | FO | 67.3 | Deck w/ AC overlay |
| Grave Creek | Carrie Street | 0.13 | FO | 70.0 | Deck w/ AC overlay |
| Bear Creek | Slate Creek Rd | 1.51 | FO | 78.0 | Deck w/ AC overlay, open girder, cap |

FO = functionally obsolete

SD = structurally deficient

## Deficient Josephine County Bridges without Timber Elements

| Bridge | Roadway | MP | Status | Score | Timber Elements |
|---|---|---|---|---|---|
| Jones Cr/Foothill Blvd. | Foothill Blvd. | 0.72 | SD | 37.3 | none |
| Illinois River | Finch Rd (Kirby) | 0.39 | FO | 47.6 | none |
| Illinois River | Waldo Rd | 0.53 | FO | 51.0 | none |
| Louse Creek | Highland Ave | 3.08 | FO | 62.0 | none |
| Sucker Creek | Holland Lp Rd | 1.53 | FO | 62.1 | none |
| Galice Creek | Merlin Galice Rd | 11.43 | FO | 62.90 | none |
| Jumpoff Joe Cr | Merlin Galice Rd | 1.07 | FO | 65.10 | none |
| Wolf Creek | Edgewood Rd | 0.01 | FO | 65.40 | none |
| E Fk. Illinois River | Takilma Rd | 8.61 | FO | 70.4 | none |
| Thompson Creek | Parker Lane | 0.12 | FO | 71.9 | none |
| Taylor Creek | Merlin Galice Rd | 8.60 | FO | 72.2 | none |
| Dutcher Creek | Dutcher Creek Rd | 1.05 | FO | 77.1 | none |

FO = functionally obsolete

SD = structurally deficient

## Nondeficient Josephine County Bridges with Timber Elements

| Bridge | Roadway | MP | Status | Score | Timber Elements |
|---|---|---|---|---|---|
| Crooks Creek | Deer Creek Rd | 4.23 | | 78.0 | Deck w/ AC overlay, open girder |
| Grave Creek | Sunny Valley Loop | 0.31 | | 62.0 | Deck w/ AC overlay, stringer, truss/arch, floor beam, bridge railing |
| Kerby Slough | Finch Rd in Kirby | 0.33 | | 60.5 | Open girder |
| Louse Creek | Carton Way | 0.10 | | 69.0 | Open girder |
| Munger Creek | Davidson Road | 0.04 | | 55.2 | Deck w/ AC overlay, open girder |
| Murphy Creek | Murphy Creek Rd | 3.37 | | 78.9 | Open girder |
| Page Creek | Takilma Rd | 7.18 | | 67.2 | Deck w/ AC overlay, open girder |
| Quartz Creek | Ward Rd | 0.12 | | 75.7 | Deck w/ AC overlay, open girder |
| Reeves Creek | Reeves Creek Rd | 0.45 | | 83.7 | Deck w/ AC overlay, open girder |
| Reuben Creek | Lower Grave Cr Rd | 10.44 | | 96.5 | Open girder |
| W Fork Williams River | Cave Camp Rd | 0.40 | | 84.1 | Deck w/ AC overlay |
| Wolf Creek | Lower Grave Cr Rd | 2.55 | | 72.6 | Deck w/ AC overlay |

# APPENDIX B

## Crash Records and Crash Rate Calculations

**Table B-1**
**Countywide Crash Data, 11/13/99 - 11/12/02**

| Most recent 3 years of County crash data (11/13/99-11/12/02) by location | | | | | Subtotal | Est'd | Annual Rates | |
|---|---|---|---|---|---|---|---|---|
| Road Name | Milepost | Date | Time | Severity | by Street | ADT | per mi. | per MVM |
| ABEGG ROAD | 0.75 | 6/15/2000 | 11:20 PM | PDO | 1 | | | |
| ALLEN CREEK ROAD | 0.00 | 6/12/2000 | 4:39 PM | PDO | | | | |
| ALLEN CREEK ROAD | 0.10 | 12/11/1999 | 2:41 PM | PDO | | | | |
| ALLEN CREEK ROAD | 0.25 | 12/9/2001 | 6:06 PM | PDO | | | | |
| ALLEN CREEK ROAD | 0.25 | 12/1/2000 | 2:10 AM | PDO | | | | |
| ALLEN CREEK ROAD | 0.60 | 7/29/2002 | 1:22 PM | PDO | 5 | 700 | 2.8 | 15.2 |
| ANN ROY DRIVE | 0.00 | 9/13/2001 | 7:49 AM | PDO | 1 | | | |
| APPLEGATE AVENUE | 1.40 | 3/12/2002 | 5:27 PM | PDO | | | | |
| APPLEGATE AVENUE | 1.56 | 10/20/2002 | 4:28 PM | PDO | | | | |
| APPLEGATE AVENUE | 1.56 | 10/3/2002 | 6:31 AM | PDO | | | | |
| APPLEGATE AVENUE | 1.56 | 6/5/2001 | 10:29 PM | PDO | | | | |
| APPLEGATE AVENUE | 1.56 | 12/7/2000 | 1:43 PM | PDO | 5 | 600 | 10.4 | 66.5 |
| ARNOLD AVENUE | 0.20 | 3/30/2002 | 8:55 PM | PDO | 1 | | | |
| AVERILL DRIVE | 0.00 | 1/29/2001 | 2:14 PM | PDO | | | | |
| AVERILL DRIVE | 0.00 | 8/4/2000 | 2:18 PM | PDO | | | | |
| AVERILL DRIVE | 0.30 | 5/28/2000 | 1:25 AM | Injury | 3 | | | |
| AZALEA DRIVE | 0.00 | 10/1/2002 | 6:58 AM | PDO | | | | |
| AZALEA DRIVE | 0.00 | 11/7/2000 | 12:51 PM | PDO | | | | |
| AZALEA DRIVE | 0.35 | 12/10/2000 | 8:57 AM | PDO | | | | |
| AZALEA DRIVE | 0.50 | 7/15/2002 | 4:16 PM | PDO | | | | |
| AZALEA DRIVE | 0.50 | 3/7/2000 | 2:55 PM | PDO | | | | |
| AZALEA DRIVE | 0.80 | 12/8/2000 | 11:25 PM | PDO | | | | |
| AZALEA DRIVE | 1.10 | 8/24/2002 | 2:01 PM | PDO | | | | |
| AZALEA DRIVE | 1.80 | 5/21/2002 | 2:29 PM | PDO | | | | |
| AZALEA DRIVE | 2.54 | 9/4/2000 | 5:38 PM | PDO | | | | |
| AZALEA DRIVE | 3.40 | 2/17/2002 | 2:26 AM | PDO | | | | |
| AZALEA DRIVE | 3.80 | 1/28/2002 | 8:49 AM | PDO | | | | |
| AZALEA DRIVE | 4.18 | 9/25/2001 | 1:39 PM | PDO | | | | |
| AZALEA DRIVE | 4.18 | 9/15/2000 | 6:51 PM | PDO | | | | |
| AZALEA DRIVE | 4.18 | 12/8/1999 | 12:01 AM | PDO | | | | |
| AZALEA DRIVE | 4.50 | 6/6/2000 | 11:20 AM | PDO | | | | |
| AZALEA DRIVE | 4.64 | 7/27/2001 | 9:39 AM | PDO | | | | |
| AZALEA DRIVE | 4.70 | 4/1/2000 | 3:42 PM | PDO | | | | |
| AZALEA DRIVE | 5.00 | 11/21/2001 | 5:52 PM | PDO | | | | |
| AZALEA DRIVE | 5.20 | 12/23/2001 | 11:57 AM | PDO | | | | |
| AZALEA DRIVE | 5.20 | 9/30/2000 | 1:46 PM | PDO | | | | |
| AZALEA DRIVE | 5.24 | 8/13/2002 | 9:11 AM | PDO | | | | |
| AZALEA DRIVE | 5.24 | 12/28/2000 | 9:26 PM | PDO | | | | |
| AZALEA DRIVE | 5.70 | 2/10/2000 | 7:19 PM | PDO | | | | |
| AZALEA DRIVE | 5.90 | 5/26/2000 | 8:33 AM | PDO | | | | |
| AZALEA DRIVE | 6.11 | 11/21/2001 | 9:58 PM | PDO | | | | |
| AZALEA DRIVE | 6.14 | 2/7/2000 | 9:56 PM | PDO | 26 | | 1.4 | |
| AZALEA DRIVE CUTOFF | 0.00 | 2/8/2002 | 12:02 PM | PDO | | | | |
| AZALEA DRIVE CUTOFF | 0.10 | 12/10/2000 | 8:01 PM | PDO | | | | |
| AZALEA DRIVE CUTOFF | 0.10 | 9/22/2000 | 12:55 PM | PDO | 3 | | | |
| BARBARA DRIVE | 0.00 | 10/12/2001 | 5:49 PM | PDO | 1 | | | |
| BECKLIN DRIVE | 0.14 | 3/15/2002 | 2:07 PM | PDO | 1 | | | |
| BOARD SHANTY ROAD | 0.38 | 5/9/2001 | 9:07 PM | PDO | | | | |
| BOARD SHANTY ROAD | 1.00 | 4/28/2000 | 3:22 PM | PDO | 2 | | | |
| BOYER ROAD | 0.00 | 3/21/2002 | 7:53 PM | PDO | 1 | | | |
| BRIDGE STREET, WEST | 0.25 | 8/17/2000 | 4:47 PM | PDO | | | | |
| BRIDGE STREET, WEST | 0.28 | 10/5/2002 | 5:41 PM | PDO | | | | |
| BRIDGE STREET, WEST | 0.28 | 3/22/2002 | 11:18 AM | PDO | 3 | | | |
| BROOKSIDE BOULEVARD | 0.00 | 3/30/2000 | 9:52 AM | PDO | | | | |
| BROOKSIDE BOULEVARD | 1.04 | 1/1/2002 | 3:51 PM | PDO | 2 | | | |
| BUCKSKIN ROAD | 0.00 | 2/26/2001 | 3:33 PM | PDO | | | | |
| BUCKSKIN ROAD | 0.10 | 2/19/2000 | 7:59 AM | PDO | 2 | | | |
| BULL CREEK ROAD | 1.30 | 12/18/1999 | 3:17 AM | PDO | 1 | | | |
| BURCH DRIVE | 0.10 | 6/29/2000 | 10:56 AM | PDO | 1 | | | |
| BUYSMAN WAY | 0.10 | 7/26/2002 | 11:17 AM | PDO | 1 | | | |
| CAMP JOY ROAD | 0.10 | 7/11/2002 | 7:14 PM | PDO | | | | |
| CAMP JOY ROAD | 0.24 | 7/12/2002 | 9:36 AM | PDO | | | | |
| CAMP JOY ROAD | 0.61 | 2/3/2001 | 7:10 PM | PDO | | | | |
| CAMP JOY ROAD | 0.61 | 12/3/2000 | 8:26 PM | PDO | | | | |
| CAMP JOY ROAD | 0.61 | 7/19/2000 | 6:33 PM | PDO | | | | |

**Table B-1**
**Countywide Crash Data, 11/13/99 - 11/12/02**

| Most recent 3 years of County crash data (11/13/99-11/12/02) by location | | | | | Subtotal | Est'd | Annual Rates | |
|---|---|---|---|---|---|---|---|---|
| **Road Name** | **Milepost** | **Date** | **Time** | **Severity** | **by Street** | **ADT** | **per mi.** | **per MVM** |
| CAMP JOY ROAD | 0.61 | 1/3/2000 | 9:56 AM | PDO | | | | |
| CAMP JOY ROAD | 0.61 | 12/7/1999 | 6:44 AM | PDO | | | | |
| CAMP JOY ROAD | 0.61 | 11/25/1999 | 11:18 PM | PDO | 8 | | 5.2 | |
| CAMPUS VIEW DRIVE | 0.50 | 5/17/2002 | 4:21 PM | PDO | 1 | | | |
| CANAAN STREET | 0.00 | 9/15/2001 | 10:16 PM | PDO | 1 | | | |
| CARTON WAY | 0.00 | 11/29/2000 | 1:46 PM | PDO | | | | |
| CARTON WAY | 0.00 | 1/31/2000 | 10:51 AM | PDO | | | | |
| CARTON WAY | 0.00 | 12/12/1999 | 1:59 PM | PDO | | | | |
| CARTON WAY | 0.20 | 8/25/2000 | 11:55 AM | PDO | 4 | | | |
| CASCADE DRIVE | 0.00 | 1/18/2002 | 1:19 PM | PDO | | | | |
| CASCADE DRIVE | 0.38 | 1/17/2002 | 8:58 PM | PDO | 2 | | | |
| CAVES CAMP ROAD | 0.60 | 7/26/2001 | 8:04 PM | PDO | | | | |
| CAVES CAMP ROAD | 0.80 | 1/13/2002 | 12:13 AM | PDO | | | | |
| CAVES CAMP ROAD | 0.80 | 9/17/2001 | 12:54 PM | PDO | 3 | | | |
| CEDAR FLAT ROAD | 0.76 | 10/27/2000 | 7:44 AM | PDO | | | | |
| CEDAR FLAT ROAD | 0.76 | 4/25/2001 | 11:56 AM | PDO | | | | |
| CEDAR FLAT ROAD | 0.80 | 12/8/1999 | 11:01 PM | PDO | | | | |
| CEDAR FLAT ROAD | 1.60 | 1/19/2001 | 7:26 AM | PDO | | | | |
| CEDAR FLAT ROAD | 2.50 | 8/2/2001 | 6:11 PM | PDO | | | | |
| CEDAR FLAT ROAD | 3.50 | 6/23/2001 | 10:10 PM | PDO | | | | |
| CEDAR FLAT ROAD | 3.70 | 7/16/2002 | 12:10 AM | PDO | 7 | | 0.8 | |
| CHENEY CREEK ROAD | 0.00 | 12/21/2001 | 6:59 PM | PDO | | | | |
| CHENEY CREEK ROAD | 0.00 | 8/3/2000 | 3:34 AM | PDO | | | | |
| CHENEY CREEK ROAD | 0.30 | 2/23/2000 | 7:27 PM | PDO | | | | |
| CHENEY CREEK ROAD | 1.13 | 6/2/2000 | 10:27 PM | PDO | | | | |
| CHENEY CREEK ROAD | 2.30 | 3/23/2000 | 7:31 AM | PDO | 5 | | 0.7 | |
| CHESLOCK ROAD | 0.25 | 4/8/2001 | 10:45 PM | PDO | 1 | | | |
| CLOVERLAWN DRIVE | 0.00 | 12/4/2000 | 6:57 PM | PDO | | | | |
| CLOVERLAWN DRIVE | 0.20 | 1/23/2001 | 3:17 PM | PDO | | | | |
| CLOVERLAWN DRIVE | 0.25 | 2/26/2000 | 5:24 PM | PDO | | | | |
| CLOVERLAWN DRIVE | 0.40 | 6/21/2001 | 7:43 AM | PDO | | | | |
| CLOVERLAWN DRIVE | 0.41 | 8/25/2001 | 12:15 AM | PDO | | | | |
| CLOVERLAWN DRIVE | 0.41 | 12/13/1999 | 5:52 PM | PDO | | | | |
| CLOVERLAWN DRIVE | 0.50 | 12/27/2000 | 4:36 PM | PDO | | | | |
| CLOVERLAWN DRIVE | 0.50 | 5/7/2000 | 4:04 PM | PDO | | | | |
| CLOVERLAWN DRIVE | 0.50 | 3/27/2000 | 7:03 PM | PDO | | | | |
| CLOVERLAWN DRIVE | 1.20 | 6/11/2002 | 12:00 PM | PDO | | | | |
| CLOVERLAWN DRIVE | 1.30 | 7/19/2002 | 8:19 PM | PDO | | | | |
| CLOVERLAWN DRIVE | 1.30 | 3/16/2002 | 4:34 PM | PDO | | | | |
| CLOVERLAWN DRIVE | 1.30 | 8/30/2001 | 11:58 PM | PDO | | | | |
| CLOVERLAWN DRIVE | 1.30 | 12/10/1999 | 7:01 AM | PDO | | | | |
| CLOVERLAWN DRIVE | 1.30 | 11/19/1999 | 9:47 PM | PDO | | | | |
| CLOVERLAWN DRIVE | 1.40 | 5/13/2002 | 5:58 PM | PDO | | | | |
| CLOVERLAWN DRIVE | 1.40 | 12/15/2001 | 10:58 PM | PDO | | | | |
| CLOVERLAWN DRIVE | 1.40 | 10/7/2001 | 8:29 PM | PDO | | | | |
| CLOVERLAWN DRIVE | 1.40 | 4/7/2000 | 7:34 PM | PDO | | | | |
| CLOVERLAWN DRIVE | 1.40 | 3/3/2000 | 11:11 PM | PDO | | | | |
| CLOVERLAWN DRIVE | 1.40 | 1/6/2000 | 3:20 PM | PDO | | | | |
| CLOVERLAWN DRIVE | 1.47 | 1/6/2000 | 2:12 PM | PDO | | | | |
| CLOVERLAWN DRIVE | 1.47 | 3/18/2001 | 11:25 AM | PDO | | | | |
| CLOVERLAWN DRIVE | 1.55 | 8/25/2000 | 12:49 PM | PDO | | | | |
| CLOVERLAWN DRIVE | 1.80 | 10/18/2002 | 7:10 PM | PDO | | | | |
| CLOVERLAWN DRIVE | 1.98 | 1/22/2001 | 12:19 PM | PDO | | | | |
| CLOVERLAWN DRIVE | 2.20 | 6/1/2001 | 8:08 AM | PDO | | | | |
| CLOVERLAWN DRIVE | 2.50 | 2/2/2000 | 3:39 PM | PDO | | | | |
| CLOVERLAWN DRIVE | 2.60 | 3/31/2002 | 8:51 PM | PDO | | | | |
| CLOVERLAWN DRIVE | 2.80 | 5/14/2001 | 8:06 PM | PDO | | | | |
| CLOVERLAWN DRIVE | 2.80 | 11/28/1999 | 9:59 PM | PDO | | | | |
| CLOVERLAWN DRIVE | 2.86 | 1/20/2001 | 5:13 AM | PDO | | | | |
| CLOVERLAWN DRIVE | 2.86 | 1/20/2001 | 1:22 PM | PDO | | | | |
| CLOVERLAWN DRIVE | 2.90 | 1/11/2001 | 7:33 AM | PDO | | | | |
| CLOVERLAWN DRIVE | 3.50 | 11/19/2000 | 9:08 AM | PDO | | | | |
| CLOVERLAWN DRIVE | 3.63 | 11/17/1999 | 7:35 PM | PDO | | | | |
| CLOVERLAWN DRIVE | 3.90 | 6/7/2001 | 7:28 PM | PDO | | | | |
| CLOVERLAWN DRIVE | 3.90 | 4/1/2001 | 8:53 PM | PDO | | | | |

**Table B-1**
**Countywide Crash Data, 11/13/99 - 11/12/02**

| Most recent 3 years of County crash data (11/13/99-11/12/02) by location | | | | | Subtotal | Est'd | Annual Rates | |
|---|---|---|---|---|---|---|---|---|
| Road Name | Milepost | Date | Time | Severity | by Street | ADT | per mi. | per MVM |
| CLOVERLAWN DRIVE | 4.50 | 10/22/2002 | 12:08 AM | PDO | | | | |
| CLOVERLAWN DRIVE | 4.80 | 11/10/2001 | 1:56 PM | PDO | | | | |
| CLOVERLAWN DRIVE | 5.19 | 6/30/2001 | 10:07 PM | PDO | | | | |
| CLOVERLAWN DRIVE | 5.20 | 6/29/2000 | 12:41 PM | PDO | 42 | | 2.7 | |
| COLLEGE DRIVE | 0.00 | 10/20/2000 | 4:43 PM | PDO | | | | |
| COLLEGE DRIVE | 0.14 | 11/2/2000 | 9:48 AM | PDO | 2 | | | |
| CORBIN DRIVE | 0.00 | 3/25/2001 | 10:24 AM | PDO | | | | |
| CORBIN DRIVE | 0.00 | 1/5/2001 | 3:08 PM | PDO | 2 | | | |
| COUNTRY AIRE DRIVE | 0.30 | 9/20/2002 | 10:29 AM | PDO | 1 | | | |
| COYOTE CREEK ROAD | 1.50 | 8/20/2002 | 9:50 PM | PDO | | | | |
| COYOTE CREEK ROAD | 2.30 | 1/8/2002 | 8:43 PM | PDO | | | | |
| COYOTE CREEK ROAD | 3.40 | 3/10/2001 | 4:55 AM | PDO | 3 | | | |
| CROOKS CREEK ROAD | 0.00 | 8/21/2002 | 7:12 PM | PDO | | | | |
| CROOKS CREEK ROAD | 0.00 | 6/30/2001 | 6:42 PM | PDO | | | | |
| CROOKS CREEK ROAD | 0.00 | 1/21/2000 | 7:05 PM | PDO | | | | |
| CROOKS CREEK ROAD | 0.00 | 11/21/1999 | 1:53 PM | PDO | | | | |
| CROOKS CREEK ROAD | 0.40 | 3/11/2000 | 11:26 PM | PDO | | | | |
| CROOKS CREEK ROAD | 0.80 | 2/28/2000 | 8:37 PM | PDO | | | | |
| CROOKS CREEK ROAD | 1.30 | 6/24/2000 | 5:57 PM | PDO | 7 | | 1.8 | |
| CROW ROAD | 0.00 | 3/11/2002 | 2:33 PM | PDO | 1 | | | |
| CRYSTAL DRIVE | 0.00 | 7/27/2002 | 5:12 PM | PDO | | | | |
| CRYSTAL DRIVE | 0.00 | 4/6/2000 | 5:53 AM | PDO | 2 | | | |
| CURTIS DRIVE | 0.50 | 9/10/2001 | 3:01 PM | PDO | 1 | | | |
| DARNEILLE LANE | 0.10 | 7/29/2001 | 11:06 AM | PDO | 1 | | | |
| DAWN DRIVE | 0.00 | 5/13/2000 | 12:52 AM | PDO | 1 | | | |
| DEER CREEK ROAD | 0.00 | 10/16/2002 | 2:40 PM | PDO | | | | |
| DEER CREEK ROAD | 0.00 | 5/5/2002 | 3:50 PM | PDO | | | | |
| DEER CREEK ROAD | 0.00 | 9/18/2001 | 5:05 PM | PDO | | | | |
| DEER CREEK ROAD | 0.00 | 7/11/2000 | 4:30 PM | PDO | | | | |
| DEER CREEK ROAD | 0.00 | 3/3/2000 | 2:29 PM | PDO | | | | |
| DEER CREEK ROAD | 1.00 | 7/20/2002 | 5:33 PM | PDO | | | | |
| DEER CREEK ROAD | 1.40 | 9/2/2001 | 4:17 PM | PDO | | | | |
| DEER CREEK ROAD | 1.50 | 1/27/2002 | 11:45 AM | PDO | | | | |
| DEER CREEK ROAD | 1.50 | 10/20/2000 | 2:32 PM | PDO | | | | |
| DEER CREEK ROAD | 1.90 | 9/28/2001 | 8:05 PM | PDO | | | | |
| DEER CREEK ROAD | 2.00 | 2/14/2001 | 7:56 PM | PDO | | | | |
| DEER CREEK ROAD | 2.10 | 11/14/2001 | 1:10 PM | PDO | | | | |
| DEER CREEK ROAD | 2.50 | 1/3/2002 | 9:43 PM | PDO | | | | |
| DEER CREEK ROAD | 2.90 | 11/6/2001 | 8:12 PM | PDO | | | | |
| DEER CREEK ROAD | 3.40 | 4/8/2002 | 7:46 PM | PDO | | | | |
| DEER CREEK ROAD | 3.50 | 9/22/2001 | 2:39 PM | PDO | | | | |
| DEER CREEK ROAD | 4.22 | 7/27/2001 | 5:47 PM | PDO | | | | |
| DEER CREEK ROAD | 4.22 | 10/26/2000 | 8:36 PM | PDO | | | | |
| DEER CREEK ROAD | 5.00 | 2/9/2001 | 10:57 AM | PDO | | | | |
| DEER CREEK ROAD | 5.40 | 12/17/2000 | 3:58 PM | Injury | | | | |
| DEER CREEK ROAD | 6.90 | 8/24/2002 | 12:52 AM | PDO | 21 | | 1.0 | |
| DELLWOOD DRIVE | 0.00 | 4/13/2001 | 3:04 PM | PDO | 1 | | | |
| DEMARAY DRIVE | 0.00 | 6/28/2002 | 8:49 AM | PDO | | | | |
| DEMARAY DRIVE | 0.00 | 4/6/2001 | 10:06 AM | PDO | | | | |
| DEMARAY DRIVE | 0.00 | 2/8/2000 | 3:16 PM | PDO | | | | |
| DEMARAY DRIVE | 0.20 | 7/29/2002 | 4:15 PM | PDO | | | | |
| DEMARAY DRIVE | 0.57 | 4/10/2002 | 3:56 PM | PDO | | | | |
| DEMARAY DRIVE | 0.57 | 6/23/2000 | 11:27 AM | PDO | | | | |
| DEMARAY DRIVE | 0.70 | 11/19/1999 | 5:57 PM | PDO | | | | |
| DEMARAY DRIVE | 0.89 | 2/15/2002 | 6:48 AM | PDO | | | | |
| DEMARAY DRIVE | 0.89 | 3/28/2000 | 9:21 AM | Injury | | | | |
| DEMARAY DRIVE | 1.14 | 6/4/2002 | 3:26 PM | PDO | | | | |
| DEMARAY DRIVE | 1.14 | 12/11/2000 | 11:45 AM | PDO | | | | |
| DEMARAY DRIVE | 1.50 | 6/4/2001 | 10:14 PM | PDO | | | | |
| DEMARAY DRIVE | 1.50 | 3/25/2000 | 5:49 PM | PDO | | | | |
| DEMARAY DRIVE | 2.39 | 9/4/2000 | 5:12 AM | PDO | | | | |
| DEMARAY DRIVE | 2.39 | 8/11/2000 | 5:39 PM | PDO | | | | |
| DEMARAY DRIVE | 3.30 | 4/15/2001 | 10:54 AM | PDO | 16 | | 1.6 | |
| DEXTER WAY | 0.29 | 9/11/2002 | 11:03 AM | PDO | 1 | | | |
| DICK GEORGE ROAD | 0.00 | 9/8/2002 | 1:32 AM | PDO | | | | |

**Table B-1**
**Countywide Crash Data, 11/13/99 - 11/12/02**

| Most recent 3 years of County crash data (11/13/99-11/12/02) by location | | | | | Subtotal | Est'd | Annual Rates | |
|---|---|---|---|---|---|---|---|---|
| Road Name | Milepost | Date | Time | Severity | by Street | ADT | per mi. | per MVM |
| DICK GEORGE ROAD | 1.30 | 9/8/2002 | 1:31 AM | PDO | | | | |
| DICK GEORGE ROAD | 3.60 | 8/11/2001 | 9:42 PM | PDO | 3 | | | |
| DONALDSON ROAD | 0.00 | 7/5/2002 | 3:50 PM | PDO | | | | |
| DONALDSON ROAD | 0.00 | 2/16/2002 | 3:50 AM | PDO | | | | |
| DONALDSON ROAD | 0.00 | 9/28/2000 | 2:50 PM | PDO | | | | |
| DONALDSON ROAD | 0.00 | 9/27/2000 | 7:37 AM | PDO | | | | |
| DONALDSON ROAD | 0.00 | 1/12/2000 | 4:38 PM | PDO | 5 | | #DIV/0! | |
| DONET LANE | 0.00 | 11/23/1999 | 11:27 PM | PDO | 1 | | | |
| DORRY LANE | 0.14 | 6/3/2002 | 4:00 PM | PDO | 1 | | | |
| DOWELL ROAD | 0.10 | 8/30/2000 | 8:23 PM | PDO | | | | |
| DOWELL ROAD | 0.20 | 3/12/2002 | 12:55 PM | PDO | | | | |
| DOWELL ROAD | 0.24 | 11/8/2001 | 8:53 PM | PDO | | | | |
| DOWELL ROAD | 0.24 | 4/25/2001 | 3:25 PM | PDO | | | | |
| DOWELL ROAD | 0.30 | 8/30/2002 | 3:27 PM | PDO | | | | |
| DOWELL ROAD | 0.48 | 6/3/2001 | 5:12 PM | PDO | | | | |
| DOWELL ROAD | 0.50 | 9/24/2000 | 5:17 PM | PDO | | | | |
| DOWELL ROAD | 0.50 | 2/13/2000 | 12:50 PM | PDO | | | | |
| DOWELL ROAD | 0.50 | 11/8/2002 | 1:33 PM | PDO | | | | |
| DOWELL ROAD | 0.50 | 11/7/2002 | 4:32 PM | PDO | | | | |
| DOWELL ROAD | 0.50 | 10/31/2002 | 11:58 AM | PDO | | | | |
| DOWELL ROAD | 0.50 | 9/4/2002 | 2:09 PM | PDO | | | | |
| DOWELL ROAD | 0.50 | 7/29/2002 | 3:49 PM | PDO | | | | |
| DOWELL ROAD | 0.50 | 7/23/2002 | 8:04 AM | PDO | | | | |
| DOWELL ROAD | 0.50 | 7/23/2002 | 7:04 PM | PDO | | | | |
| DOWELL ROAD | 0.50 | 6/24/2002 | 2:26 PM | PDO | | | | |
| DOWELL ROAD | 0.50 | 5/29/2002 | 4:09 PM | PDO | | | | |
| DOWELL ROAD | 0.50 | 5/9/2002 | 12:59 PM | PDO | | | | |
| DOWELL ROAD | 0.50 | 12/19/2001 | 3:29 PM | PDO | | | | |
| DOWELL ROAD | 0.50 | 12/18/2001 | 1:24 PM | PDO | | | | |
| DOWELL ROAD | 0.50 | 11/3/2001 | 12:42 PM | PDO | | | | |
| DOWELL ROAD | 0.50 | 8/21/2001 | 2:31 PM | PDO | | | | |
| DOWELL ROAD | 0.50 | 6/24/2001 | 5:14 PM | PDO | | | | |
| DOWELL ROAD | 0.50 | 5/14/2001 | 12:59 PM | PDO | | | | |
| DOWELL ROAD | 0.50 | 5/10/2000 | 7:43 AM | PDO | | | | |
| DOWELL ROAD | 0.50 | 5/9/2000 | 1:33 PM | PDO | | | | |
| DOWELL ROAD | 0.50 | 12/11/1999 | 7:37 PM | Injury | | | | |
| DOWELL ROAD | 0.50 | 11/16/1999 | 3:04 PM | PDO | | | | |
| DOWELL ROAD | 1.00 | 7/25/2001 | 2:44 PM | PDO | | | | |
| DOWELL ROAD | 1.00 | 11/24/1999 | 6:17 AM | PDO | 30 | | 11.1 | |
| DRAPER VALLEY ROAD | 0.00 | 11/21/2001 | 4:54 PM | PDO | | | | |
| DRAPER VALLEY ROAD | 0.00 | 1/24/2001 | 9:49 AM | PDO | | | | |
| DRAPER VALLEY ROAD | 0.00 | 1/9/2001 | 3:52 PM | Injury | | | | |
| DRAPER VALLEY ROAD | 0.00 | 11/28/2000 | 7:48 PM | PDO | | | | |
| DRAPER VALLEY ROAD | 0.00 | 3/26/2000 | 3:35 PM | PDO | | | | |
| DRAPER VALLEY ROAD | 1.00 | 9/6/2000 | 7:39 PM | PDO | | | | |
| DRAPER VALLEY ROAD | 2.00 | 5/10/2000 | 1:25 PM | PDO | 7 | | 1.2 | |
| DRURY LANE | 0.03 | 7/10/2002 | 10:27 AM | PDO | | | | |
| DRURY LANE | 0.24 | 2/8/2001 | 6:35 PM | PDO | 2 | | | |
| DUSTIN WAY | 0.00 | 12/1/2001 | 1:48 AM | PDO | 1 | | | |
| EAST FORK ROAD | 1.65 | 1/16/2001 | 6:30 AM | PDO | | | | |
| EAST FORK ROAD | 3.10 | 9/7/2002 | 8:17 PM | PDO | | | | |
| EAST FORK ROAD | 3.11 | 12/26/1999 | 4:51 PM | PDO | 3 | | | |
| EIGHT DOLLAR MOUNTAIN ROAD | 0.00 | 9/24/2001 | 8:19 AM | PDO | | | | |
| EIGHT DOLLAR MOUNTAIN ROAD | 0.00 | 4/30/2001 | 6:55 PM | Fatal | | | | |
| EIGHT DOLLAR MOUNTAIN ROAD | 0.00 | 3/23/2000 | 3:19 PM | PDO | 3 | | | |
| EL CAMINO WAY | 0.00 | 6/29/2002 | 2:11 PM | PDO | | | | |
| EL CAMINO WAY | 0.00 | 3/22/2000 | 6:51 AM | PDO | 2 | | | |
| ELK LANE | 0.00 | 1/3/2002 | 8:38 AM | PDO | | | | |
| ELK LANE | 0.00 | 8/6/2001 | 10:47 PM | PDO | | | | |
| ELK LANE | 0.00 | 12/21/1999 | 8:10 PM | PDO | | | | |
| ELK LANE | 0.10 | 2/14/2000 | 5:40 AM | PDO | | | | |
| ELK LANE | 0.30 | 12/12/2001 | 9:23 PM | PDO | | | | |
| ELK LANE | 0.30 | 4/7/2000 | 9:23 PM | PDO | | | | |
| ELK LANE | 0.50 | 3/14/2002 | 9:50 PM | PDO | | | | |
| ELK LANE | 1.40 | 11/29/2001 | 2:49 AM | PDO | 8 | | 1.9 | |

**Table B-1**
**Countywide Crash Data, 11/13/99 - 11/12/02**

| Most recent 3 years of County crash data (11/13/99-11/12/02) by location | | | | | Subtotal | Est'd | Annual Rates | |
|---|---|---|---|---|---|---|---|---|
| Road Name | Milepost | Date | Time | Severity | by Street | ADT | per mi. | per MVM |
| ELLIOTT CREEK ROAD | 0.00 | 8/10/2001 | 5:43 PM | PDO | | | | |
| ELLIOTT CREEK ROAD | 0.00 | 6/13/2001 | 4:59 PM | PDO | 2 | | | |
| ENTERPRISE AVENUE | 0.00 | 6/17/2000 | 11:42 AM | Injury | 1 | | | |
| ESPEY ROAD | 0.00 | 10/13/2002 | 10:29 PM | PDO | | | | |
| ESPEY ROAD | 0.00 | 3/10/2002 | 11:32 AM | PDO | | | | |
| ESPEY ROAD | 0.00 | 12/8/2001 | 1:50 PM | PDO | | | | |
| ESPEY ROAD | 0.00 | 7/10/2001 | 9:32 AM | PDO | | | | |
| ESPEY ROAD | 0.00 | 5/14/2001 | 2:49 PM | PDO | | | | |
| ESPEY ROAD | 0.00 | 3/2/2001 | 7:00 PM | PDO | | | | |
| ESPEY ROAD | 0.00 | 1/24/2001 | 11:38 PM | PDO | | | | |
| ESPEY ROAD | 0.00 | 1/14/2001 | 8:36 PM | PDO | | | | |
| ESPEY ROAD | 0.00 | 6/9/2000 | 6:40 PM | PDO | | | | |
| ESPEY ROAD | 0.00 | 1/21/2000 | 6:43 AM | PDO | 10 | | #DIV/0! | |
| EWE CREEK ROAD | 1.96 | 5/15/2001 | 6:55 AM | PDO | 1 | | | |
| FERRY ROAD | 0.00 | 1/25/2000 | 6:20 PM | PDO | | | | |
| FERRY ROAD | 0.20 | 10/30/2001 | 1:34 PM | PDO | | | | |
| FERRY ROAD | 0.63 | 3/8/2000 | 5:21 PM | PDO | 3 | | | |
| FINCH ROAD | 0.00 | 8/16/2002 | 12:44 PM | PDO | | | | |
| FINCH ROAD | 0.00 | 10/20/2001 | 12:11 PM | PDO | | | | |
| FINCH ROAD | 0.00 | 5/4/2001 | 8:41 PM | PDO | | | | |
| FINCH ROAD | 0.04 | 6/15/2000 | 2:21 PM | PDO | | | | |
| FINCH ROAD | 0.83 | 6/10/2002 | 11:45 PM | PDO | 5 | | 2.0 | |
| FISH HATCHERY ROAD | 0.00 | 5/11/2002 | 9:20 PM | PDO | | | | |
| FISH HATCHERY ROAD | 0.00 | 2/18/2000 | 3:25 PM | PDO | | | | |
| FISH HATCHERY ROAD | 1.00 | 8/6/2000 | 3:51 PM | PDO | | | | |
| FISH HATCHERY ROAD | 1.70 | 7/11/2000 | 1:17 PM | PDO | | | | |
| FISH HATCHERY ROAD | 1.80 | 5/23/2000 | 4:26 PM | Injury | | | | |
| FISH HATCHERY ROAD | 1.84 | 6/24/2001 | 8:28 AM | PDO | | | | |
| FISH HATCHERY ROAD | 1.84 | 6/13/2001 | 4:37 PM | PDO | | | | |
| FISH HATCHERY ROAD | 1.84 | 12/18/1999 | 5:11 AM | PDO | | | | |
| FISH HATCHERY ROAD | 1.96 | 2/2/2000 | 9:29 PM | PDO | | | | |
| FISH HATCHERY ROAD | 1.97 | 4/27/2002 | 7:23 PM | PDO | | | | |
| FISH HATCHERY ROAD | 1.97 | 10/31/2000 | 8:39 AM | PDO | | | | |
| FISH HATCHERY ROAD | 2.00 | 3/1/2002 | 8:58 AM | PDO | | | | |
| FISH HATCHERY ROAD | 2.60 | 12/15/1999 | 8:28 PM | PDO | | | | |
| FISH HATCHERY ROAD | 2.80 | 7/22/2000 | 1:47 PM | Fatal | | | | |
| FISH HATCHERY ROAD | 3.20 | 5/15/2000 | 5:02 PM | PDO | | | | |
| FISH HATCHERY ROAD | 3.90 | 7/8/2001 | 3:27 PM | PDO | | | | |
| FISH HATCHERY ROAD | 4.10 | 5/17/2002 | 6:40 PM | PDO | | | | |
| FISH HATCHERY ROAD | 4.20 | 5/12/2002 | 3:51 PM | PDO | | | | |
| FISH HATCHERY ROAD | 4.79 | 10/19/2002 | 7:02 PM | PDO | | | | |
| FISH HATCHERY ROAD | 4.79 | 3/22/2002 | 5:31 PM | PDO | | | | |
| FISH HATCHERY ROAD | 5.00 | 9/6/2002 | 6:28 PM | PDO | | | | |
| FISH HATCHERY ROAD | 5.80 | 1/27/2001 | 9:52 PM | PDO | | | | |
| FISH HATCHERY ROAD | 6.00 | 1/13/2001 | 8:21 AM | PDO | | | | |
| FISH HATCHERY ROAD | 6.54 | 8/7/2000 | 12:31 PM | Injury | 24 | | 1.2 | |
| FOOTHILL BOULEVARD | 0.49 | 7/20/2000 | 8:54 PM | PDO | | | | |
| FOOTHILL BOULEVARD | 0.57 | 7/2/2001 | 5:11 PM | PDO | | | | |
| FOOTHILL BOULEVARD | 0.70 | 10/10/2001 | 3:53 PM | PDO | | | | |
| FOOTHILL BOULEVARD | 0.70 | 9/15/2001 | 2:20 PM | PDO | | | | |
| FOOTHILL BOULEVARD | 0.74 | 10/27/2000 | 12:12 PM | PDO | | | | |
| FOOTHILL BOULEVARD | 0.74 | 10/8/2000 | 5:11 PM | PDO | | | | |
| FOOTHILL BOULEVARD | 0.74 | 6/30/2000 | 8:39 PM | PDO | | | | |
| FOOTHILL BOULEVARD | 0.77 | 11/16/2000 | 11:11 AM | PDO | | | | |
| FOOTHILL BOULEVARD | 0.80 | 8/28/2002 | 8:28 PM | PDO | | | | |
| FOOTHILL BOULEVARD | 0.80 | 5/1/2002 | 9:04 PM | PDO | | | | |
| FOOTHILL BOULEVARD | 0.80 | 10/30/2000 | 8:50 AM | PDO | | | | |
| FOOTHILL BOULEVARD | 0.90 | 2/5/2000 | 3:35 PM | PDO | | | | |
| FOOTHILL BOULEVARD | 1.20 | 4/19/2002 | 6:13 PM | PDO | | | | |
| FOOTHILL BOULEVARD | 1.30 | 4/25/2002 | 4:16 PM | PDO | | | | |
| FOOTHILL BOULEVARD | 2.00 | 4/10/2000 | 10:11 PM | PDO | | | | |
| FOOTHILL BOULEVARD | 2.10 | 9/4/2002 | 5:18 PM | PDO | | | | |
| FOOTHILL BOULEVARD | 2.10 | 6/18/2002 | 6:51 AM | PDO | | | | |
| FOOTHILL BOULEVARD | 2.10 | 2/8/2002 | 7:30 AM | PDO | | | | |
| FOOTHILL BOULEVARD | 2.10 | 5/7/2001 | 7:45 PM | PDO | | | | |

**Table B-1**
**Countywide Crash Data, 11/13/99 - 11/12/02**

| Most recent 3 years of County crash data (11/13/99-11/12/02) by location | | | | | Subtotal | Est'd | Annual Rates | |
|---|---|---|---|---|---|---|---|---|
| Road Name | Milepost | Date | Time | Severity | by Street | ADT | per mi. | per MVM |
| FOOTHILL BOULEVARD | 2.45 | 6/7/2000 | 10:47 PM | PDO | | | | |
| FOOTHILL BOULEVARD | 2.50 | 10/17/2002 | 9:00 PM | PDO | | | | |
| FOOTHILL BOULEVARD | 2.50 | 11/24/2000 | 3:25 PM | PDO | | | | |
| FOOTHILL BOULEVARD | 2.80 | 11/15/1999 | 8:53 AM | PDO | | | | |
| FOOTHILL BOULEVARD | 2.80 | 5/16/2001 | 3:43 AM | PDO | | | | |
| FOOTHILL BOULEVARD | 2.90 | 7/26/2002 | 8:14 AM | PDO | | | | |
| FOOTHILL BOULEVARD | 3.00 | 7/27/2001 | 10:31 PM | PDO | 26 | | 3.5 | |
| FRANKHAM ROAD | 0.00 | 3/5/2001 | 10:09 PM | PDO | | | | |
| FRANKHAM ROAD | 0.00 | 8/27/2000 | 7:11 PM | PDO | 2 | | | |
| FRONT STREET | 0.04 | 12/23/1999 | 11:10 AM | PDO | 1 | | | |
| FRUITDALE DRIVE | 0.00 | 12/18/1999 | 2:02 AM | PDO | | | | |
| FRUITDALE DRIVE | 0.50 | 2/14/2002 | 3:09 PM | PDO | | | | |
| FRUITDALE DRIVE | 0.50 | 3/9/2001 | 7:35 PM | PDO | | | | |
| FRUITDALE DRIVE | 0.50 | 8/7/2000 | 11:06 AM | Injury | | | | |
| FRUITDALE DRIVE | 0.50 | 2/22/2000 | 3:47 PM | PDO | | | | |
| FRUITDALE DRIVE | 0.90 | 6/5/2000 | 9:02 PM | PDO | | | | |
| FRUITDALE DRIVE | 1.00 | 11/14/2000 | 8:25 PM | Fatal | | | | |
| FRUITDALE DRIVE | 1.00 | 3/29/2000 | 8:37 PM | PDO | | | | |
| FRUITDALE DRIVE | 1.07 | 6/29/2002 | 9:29 AM | PDO | | | | |
| FRUITDALE DRIVE | 1.79 | 11/8/2002 | 10:46 AM | PDO | | | | |
| FRUITDALE DRIVE | 1.79 | 6/1/2002 | 3:17 AM | PDO | | | | |
| FRUITDALE DRIVE | 1.80 | 2/22/2000 | 4:11 PM | PDO | | | | |
| FRUITDALE DRIVE | 1.90 | 9/22/2000 | 5:51 PM | PDO | | | | |
| FRUITDALE DRIVE | 2.36 | 11/4/2000 | 12:06 AM | PDO | | | | |
| FRUITDALE DRIVE | 2.40 | 1/28/2001 | 1:38 AM | PDO | | | | |
| FRUITDALE DRIVE | 2.47 | 8/6/2002 | 11:45 AM | PDO | | | | |
| FRUITDALE DRIVE | 2.47 | 12/20/1999 | 1:15 PM | PDO | 17 | | 2.3 | |
| G STREET | 0.00 | 9/23/2002 | 2:16 PM | PDO | | | | |
| G STREET | 0.00 | 11/7/2001 | 12:41 PM | PDO | | | | |
| G STREET | 0.17 | 8/23/2001 | 5:45 PM | PDO | | | | |
| G STREET | 0.17 | 1/11/2001 | 3:12 PM | PDO | | | | |
| G STREET | 0.25 | 7/24/2001 | 12:08 PM | PDO | | | | |
| G STREET | 0.25 | 6/7/2000 | 3:16 PM | PDO | 6 | | 8.2 | |
| GALICE ROAD | 0.00 | 9/19/2002 | 9:50 AM | PDO | | | | |
| GALICE ROAD | 0.24 | 2/11/2002 | 7:40 AM | PDO | | | | |
| GALICE ROAD | 0.24 | 1/13/2000 | 11:37 AM | PDO | | | | |
| GALICE ROAD | 0.30 | 6/27/2002 | 8:11 PM | PDO | | | | |
| GALICE ROAD | 0.30 | 8/11/2001 | 4:07 PM | PDO | | | | |
| GALICE ROAD | 0.30 | 7/25/2000 | 4:19 PM | PDO | | | | |
| GALICE ROAD | 0.30 | 4/9/2000 | 1:43 PM | PDO | | | | |
| GALICE ROAD | 0.40 | 9/20/2002 | 2:49 PM | PDO | | | | |
| GALICE ROAD | 0.40 | 6/4/2000 | 2:28 PM | PDO | | | | |
| GALICE ROAD | 0.50 | 2/16/2002 | 7:44 PM | PDO | | | | |
| GALICE ROAD | 0.50 | 7/26/2001 | 2:49 PM | PDO | | | | |
| GALICE ROAD | 0.50 | 7/13/2001 | 8:57 PM | PDO | | | | |
| GALICE ROAD | 0.90 | 9/12/2002 | 8:52 PM | PDO | | | | |
| GALICE ROAD | 0.90 | 3/26/2001 | 8:30 PM | PDO | | | | |
| GALICE ROAD | 0.90 | 10/9/2000 | 5:53 PM | PDO | | | | |
| GALICE ROAD | 1.00 | 8/23/2000 | 11:55 PM | PDO | | | | |
| GALICE ROAD | 1.05 | 6/26/2000 | 8:40 PM | PDO | | | | |
| GALICE ROAD | 1.18 | 3/27/2001 | 8:12 AM | PDO | | | | |
| GALICE ROAD | 1.18 | 4/25/2000 | 3:15 PM | PDO | | | | |
| GALICE ROAD | 2.00 | 7/8/2002 | 7:49 AM | PDO | | | | |
| GALICE ROAD | 2.40 | 3/27/2002 | 5:53 PM | PDO | | | | |
| GALICE ROAD | 3.10 | 8/18/2002 | 3:46 PM | PDO | | | | |
| GALICE ROAD | 3.10 | 1/5/2002 | 5:37 AM | PDO | | | | |
| GALICE ROAD | 3.10 | 1/5/2002 | 10:14 AM | PDO | | | | |
| GALICE ROAD | 3.50 | 5/20/2000 | 8:54 AM | PDO | | | | |
| GALICE ROAD | 3.60 | 7/21/2000 | 6:24 PM | PDO | | | | |
| GALICE ROAD | 3.80 | 11/10/2002 | 9:46 PM | Fatal | | | | |
| GALICE ROAD | 4.20 | 5/19/2002 | 10:46 PM | PDO | | | | |
| GALICE ROAD | 4.20 | 5/19/2002 | 10:46 PM | PDO | | | | |
| GALICE ROAD | 4.67 | 7/11/2001 | 4:45 PM | PDO | | | | |
| GALICE ROAD | 4.80 | 6/1/2000 | 9:29 PM | PDO | | | | |
| GALICE ROAD | 4.81 | 8/14/2000 | 2:32 AM | PDO | | | | |

**Table B-1**
**Countywide Crash Data, 11/13/99 - 11/12/02**

| Most recent 3 years of County crash data (11/13/99-11/12/02) by location | | | | | Subtotal | Est'd | Annual Rates | |
|---|---|---|---|---|---|---|---|---|
| Road Name | Milepost | Date | Time | Severity | by Street | ADT | per mi. | per MVM |
| GALICE ROAD | 5.50 | 6/14/2001 | 7:18 PM | PDO | | | | |
| GALICE ROAD | 5.52 | 9/13/2002 | 11:47 PM | PDO | | | | |
| GALICE ROAD | 6.33 | 9/19/2001 | 3:22 PM | PDO | | | | |
| GALICE ROAD | 6.33 | 8/30/2002 | 8:35 PM | PDO | | | | |
| GALICE ROAD | 6.50 | 5/26/2001 | 11:30 PM | PDO | | | | |
| GALICE ROAD | 7.10 | 1/31/2002 | 9:49 AM | PDO | | | | |
| GALICE ROAD | 7.10 | 11/18/2001 | 3:35 PM | PDO | | | | |
| GALICE ROAD | 7.10 | 8/27/2001 | 4:57 PM | PDO | | | | |
| GALICE ROAD | 7.10 | 6/2/2000 | 1:24 PM | PDO | | | | |
| GALICE ROAD | 7.10 | 1/5/2000 | 3:39 PM | PDO | | | | |
| GALICE ROAD | 7.12 | 8/23/2002 | 5:44 PM | PDO | | | | |
| GALICE ROAD | 8.50 | 8/16/2002 | 3:20 AM | PDO | | | | |
| GALICE ROAD | 8.50 | 5/26/2001 | 1:01 PM | PDO | | | | |
| GALICE ROAD | 8.50 | 5/6/2001 | 9:38 PM | PDO | | | | |
| GALICE ROAD | 9.90 | 7/30/2002 | 2:04 PM | PDO | | | | |
| GALICE ROAD | 11.00 | 8/11/2002 | 1:35 PM | PDO | | | | |
| GALICE ROAD | 11.40 | 11/24/1999 | 11:26 AM | PDO | | | | |
| GALICE ROAD | 11.50 | 6/20/2000 | 10:09 PM | Injury | | | | |
| GALICE ROAD | 11.70 | 7/23/2000 | 5:28 PM | PDO | | | | |
| GALICE ROAD | 11.70 | 3/10/2000 | 8:48 PM | PDO | | | | |
| GALICE ROAD | 11.76 | 8/28/2000 | 2:25 PM | PDO | | | | |
| GALICE ROAD | 11.80 | 8/12/2002 | 4:46 PM | PDO | | | | |
| GALICE ROAD | 12.00 | 7/4/2002 | 12:46 AM | PDO | | | | |
| GALICE ROAD | 12.00 | 8/26/2001 | 4:41 AM | PDO | | | | |
| GALICE ROAD | 12.20 | 7/1/2000 | 11:42 PM | PDO | 57 | | 1.6 | |
| GLENDON ROAD | 0.00 | 5/16/2002 | 6:13 PM | PDO | 1 | | | |
| GLENWOOD STREET | 0.36 | 4/15/2002 | 3:59 PM | PDO | | | | |
| GLENWOOD STREET | 0.36 | 4/15/2002 | 5:17 PM | PDO | | | | |
| GLENWOOD STREET | 0.36 | 12/24/2000 | 11:06 AM | PDO | 3 | | | |
| GRANDVIEW AVENUE | 0.00 | 6/22/2002 | 8:22 PM | PDO | | | | |
| GRANDVIEW AVENUE | 0.69 | 2/28/2001 | 5:43 PM | PDO | | | | |
| GRANDVIEW AVENUE | 0.69 | 5/6/2000 | 1:35 PM | PDO | | | | |
| GRANDVIEW AVENUE | 0.70 | 4/21/2001 | 9:01 AM | PDO | | | | |
| GRANDVIEW AVENUE | 1.00 | 6/12/2000 | 5:26 PM | PDO | 5 | | 1.7 | |
| GRANITE HILL ROAD | 0.00 | 9/21/2001 | 11:35 PM | PDO | | | | |
| GRANITE HILL ROAD | 0.00 | 5/7/2001 | 6:05 PM | PDO | | | | |
| GRANITE HILL ROAD | 0.20 | 11/18/1999 | 8:33 PM | PDO | | | | |
| GRANITE HILL ROAD | 0.80 | 7/6/2002 | 12:33 PM | PDO | | | | |
| GRANITE HILL ROAD | 0.80 | 5/1/2002 | 11:15 AM | PDO | | | | |
| GRANITE HILL ROAD | 0.80 | 2/25/2000 | 10:50 PM | PDO | | | | |
| GRANITE HILL ROAD | 0.90 | 9/25/2001 | 9:39 PM | PDO | | | | |
| GRANITE HILL ROAD | 1.30 | 8/29/2000 | 12:20 PM | PDO | | | | |
| GRANITE HILL ROAD | 1.43 | 8/31/2001 | 9:34 PM | PDO | | | | |
| GRANITE HILL ROAD | 1.43 | 4/6/2001 | 12:09 AM | Fatal | | | | |
| GRANITE HILL ROAD | 3.10 | 6/6/2001 | 7:09 PM | Injury | | | | |
| GRANITE HILL ROAD | 3.93 | 12/23/2000 | 8:59 PM | PDO | | | | |
| GRANITE HILL ROAD | 3.93 | 12/6/1999 | 8:39 PM | PDO | 13 | | 1.1 | |
| GRANTS PASS ROAD | 0.00 | 2/6/2000 | 3:36 PM | PDO | 1 | | | |
| GRAYS CREEK ROAD | 0.00 | 11/7/2002 | 9:30 AM | PDO | | | | |
| GRAYS CREEK ROAD | 0.00 | 7/2/2002 | 10:49 PM | PDO | | | | |
| GRAYS CREEK ROAD | 0.70 | 6/20/2000 | 9:04 AM | PDO | 3 | | | |
| GREENS CREEK ROAD | 0.00 | 5/30/2002 | 1:35 PM | PDO | 1 | | | |
| GRIFFIN ROAD | 0.57 | 9/16/2001 | 2:01 PM | PDO | 1 | | | |
| GROUSE CREEK ROAD | 0.00 | 3/18/2001 | 7:21 PM | PDO | | | | |
| GROUSE CREEK ROAD | 0.00 | 12/4/2000 | 9:23 PM | PDO | | | | |
| GROUSE CREEK ROAD | 0.78 | 8/12/2001 | 11:06 AM | PDO | 3 | | | |
| GUNNELL ROAD | 0.70 | 11/14/1999 | 10:20 PM | PDO | 1 | | | |
| HAMILTON LANE | 0.06 | 11/29/2001 | 8:34 PM | PDO | | | | |
| HAMILTON LANE | 0.10 | 5/31/2002 | 11:54 AM | PDO | | | | |
| HAMILTON LANE | 0.28 | 9/29/2000 | 5:40 PM | PDO | | | | |
| HAMILTON LANE | 0.35 | 3/3/2000 | 9:43 PM | PDO | | | | |
| HAMILTON LANE | 0.74 | 7/25/2001 | 5:02 PM | PDO | | | | |
| HAMILTON LANE | 0.80 | 7/10/2000 | 11:00 PM | PDO | 6 | | 2.7 | |
| HAPPY CAMP ROAD | 0.00 | 6/18/2001 | 6:26 PM | PDO | | | | |
| HAPPY CAMP ROAD | 0.70 | 11/16/1999 | 2:09 PM | PDO | | | | |

**Table B-1**
**Countywide Crash Data, 11/13/99 - 11/12/02**

| Most recent 3 years of County crash data (11/13/99-11/12/02) by location | | | | | Subtotal | Est'd | Annual Rates | |
|---|---|---|---|---|---|---|---|---|
| **Road Name** | **Milepost** | **Date** | **Time** | **Severity** | **by Street** | **ADT** | **per mi.** | **per MVM** |
| HAPPY CAMP ROAD | 1.10 | 9/29/2002 | 1:47 PM | PDO | | | | |
| HAPPY CAMP ROAD | 3.00 | 6/15/2002 | 4:12 PM | PDO | | | | |
| HAPPY CAMP ROAD | 10.60 | 12/5/1999 | 5:55 PM | Injury | 5 | | 0.2 | |
| HARBECK ROAD | 0.21 | 4/4/2001 | 2:11 PM | PDO | 1 | | | |
| HARBECK ROAD, WEST | 0.00 | 9/19/2002 | 10:10 AM | PDO | | | | |
| HARBECK ROAD, WEST | 0.49 | 11/15/2001 | 8:36 PM | PDO | | | | |
| HARBECK ROAD, WEST | 0.49 | 6/26/2001 | 1:37 PM | PDO | | | | |
| HARBECK ROAD, WEST | 0.49 | 7/22/2000 | 12:00 AM | PDO | | | | |
| HARBECK ROAD, WEST | 0.62 | 12/11/1999 | 1:43 PM | PDO | 5 | | 2.7 | |
| HATHAWAY DRIVE | 0.26 | 12/1/2001 | 12:52 PM | PDO | 1 | | | |
| HAYES HILL | 0.00 | 6/1/2001 | 10:38 AM | PDO | | | | |
| HAYES HILL | 2.10 | 12/10/2001 | 10:53 AM | PDO | 2 | | | |
| HELMS ROAD | 0.00 | 1/2/2001 | 9:20 AM | PDO | | | | |
| HELMS ROAD | 0.50 | 2/22/2002 | 9:10 PM | PDO | | | | |
| HELMS ROAD | 0.50 | 8/21/2001 | 1:11 PM | PDO | 3 | | | |
| HIGHLAND AVENUE | 0.50 | 1/16/2000 | 5:09 PM | PDO | | | | |
| HIGHLAND AVENUE | 0.72 | 1/14/2000 | 12:26 PM | PDO | | | | |
| HIGHLAND AVENUE | 0.90 | 10/26/2000 | 1:10 PM | PDO | | | | |
| HIGHLAND AVENUE | 0.90 | 12/10/1999 | 3:12 PM | PDO | | | | |
| HIGHLAND AVENUE | 1.00 | 5/21/2002 | 8:27 PM | PDO | | | | |
| HIGHLAND AVENUE | 1.10 | 5/27/2000 | 7:34 AM | PDO | | | | |
| HIGHLAND AVENUE | 1.10 | 12/26/1999 | 8:18 AM | PDO | | | | |
| HIGHLAND AVENUE | 1.50 | 9/16/2002 | 8:22 AM | PDO | | | | |
| HIGHLAND AVENUE | 1.60 | 2/21/2002 | 2:43 PM | PDO | | | | |
| HIGHLAND AVENUE | 1.60 | 12/10/2000 | 3:41 PM | PDO | | | | |
| HIGHLAND AVENUE | 1.60 | 9/18/2000 | 4:20 PM | PDO | | | | |
| HIGHLAND AVENUE | 1.60 | 4/5/2000 | 11:50 AM | PDO | | | | |
| HIGHLAND AVENUE | 1.60 | 12/22/1999 | 5:41 PM | PDO | | | | |
| HIGHLAND AVENUE | 1.70 | 1/17/2002 | 12:59 AM | PDO | | | | |
| HIGHLAND AVENUE | 1.70 | 9/30/2001 | 8:17 PM | PDO | | | | |
| HIGHLAND AVENUE | 1.90 | 6/11/2001 | 1:17 PM | PDO | | | | |
| HIGHLAND AVENUE | 2.10 | 2/20/2000 | 9:59 PM | PDO | | | | |
| HIGHLAND AVENUE | 2.20 | 9/12/2000 | 3:29 PM | PDO | | | | |
| HIGHLAND AVENUE | 2.30 | 1/17/2002 | 7:16 AM | PDO | | | | |
| HIGHLAND AVENUE | 2.40 | 4/2/2001 | 5:20 PM | PDO | | | | |
| HIGHLAND AVENUE | 2.88 | 11/8/2002 | 4:10 PM | PDO | | | | |
| HIGHLAND AVENUE | 3.07 | 2/26/2002 | 1:42 PM | PDO | | | | |
| HIGHLAND AVENUE | 3.07 | 1/29/2002 | 3:05 PM | PDO | | | | |
| HIGHLAND AVENUE | 3.07 | 1/15/2002 | 7:57 PM | PDO | | | | |
| HIGHLAND AVENUE | 3.07 | 8/9/2000 | 12:07 PM | PDO | 25 | | 3.2 | |
| HOGUE DRIVE | 0.00 | 6/14/2002 | 2:52 PM | PDO | | | | |
| HOGUE DRIVE | 0.10 | 2/5/2002 | 8:54 PM | PDO | 2 | | | |
| HOLLAND LOOP ROAD | 0.00 | 9/6/2002 | 6:29 AM | PDO | | | | |
| HOLLAND LOOP ROAD | 0.00 | 8/30/2002 | 3:11 PM | PDO | | | | |
| HOLLAND LOOP ROAD | 0.00 | 1/30/2002 | 6:19 PM | PDO | | | | |
| HOLLAND LOOP ROAD | 0.00 | 12/31/2001 | 1:08 PM | PDO | | | | |
| HOLLAND LOOP ROAD | 0.00 | 2/5/2001 | 6:51 PM | PDO | | | | |
| HOLLAND LOOP ROAD | 0.00 | 6/8/2000 | 2:10 AM | PDO | | | | |
| HOLLAND LOOP ROAD | 0.50 | 5/11/2001 | 5:12 PM | PDO | | | | |
| HOLLAND LOOP ROAD | 1.00 | 11/13/2000 | 1:03 PM | PDO | | | | |
| HOLLAND LOOP ROAD | 1.35 | 11/26/2001 | 7:17 AM | PDO | | | | |
| HOLLAND LOOP ROAD | 1.35 | 1/26/2001 | 10:26 PM | PDO | | | | |
| HOLLAND LOOP ROAD | 1.35 | 6/18/2002 | 12:47 PM | PDO | | | | |
| HOLLAND LOOP ROAD | 1.35 | 4/12/2002 | 6:28 PM | PDO | | | | |
| HOLLAND LOOP ROAD | 1.35 | 2/21/2002 | 9:11 PM | PDO | | | | |
| HOLLAND LOOP ROAD | 1.35 | 3/28/2001 | 7:08 AM | PDO | | | | |
| HOLLAND LOOP ROAD | 1.40 | 5/22/2002 | 10:51 PM | PDO | | | | |
| HOLLAND LOOP ROAD | 1.40 | 10/19/2001 | 9:48 PM | PDO | | | | |
| HOLLAND LOOP ROAD | 1.40 | 9/12/2001 | 11:55 AM | PDO | | | | |
| HOLLAND LOOP ROAD | 1.40 | 1/11/2001 | 9:15 AM | PDO | | | | |
| HOLLAND LOOP ROAD | 1.88 | 5/11/2002 | 7:09 AM | PDO | | | | |
| HOLLAND LOOP ROAD | 2.00 | 3/13/2002 | 1:34 PM | PDO | | | | |
| HOLLAND LOOP ROAD | 2.30 | 10/21/2000 | 2:13 PM | PDO | | | | |
| HOLLAND LOOP ROAD | 2.70 | 1/21/2000 | 7:54 AM | PDO | | | | |
| HOLLAND LOOP ROAD | 3.30 | 2/25/2001 | 7:57 PM | PDO | | | | |

**Table B-1**
**Countywide Crash Data, 11/13/99 - 11/12/02**

| Most recent 3 years of County crash data (11/13/99-11/12/02) by location | | | | | Subtotal | Est'd | Annual Rates | |
|---|---|---|---|---|---|---|---|---|
| Road Name | Milepost | Date | Time | Severity | by Street | ADT | per mi. | per MVM |
| HOLLAND LOOP ROAD | 3.33 | 12/18/2001 | 5:33 PM | PDO | | | | |
| HOLLAND LOOP ROAD | 3.33 | 3/25/2002 | 9:38 PM | PDO | | | | |
| HOLLAND LOOP ROAD | 3.50 | 11/11/2002 | 1:28 AM | PDO | 26 | | 2.5 | |
| HOLTON CREEK ROAD | 0.00 | 6/1/2001 | 12:35 AM | PDO | | | | |
| HOLTON CREEK ROAD | 0.00 | 11/15/2000 | 3:50 PM | PDO | | | | |
| HOLTON CREEK ROAD | 0.00 | 10/23/2000 | 11:57 AM | PDO | | | | |
| HOLTON CREEK ROAD | 0.00 | 12/30/1999 | 7:09 PM | PDO | 4 | | | |
| HONEYLYNN LANE | 0.44 | 9/14/2002 | 4:18 AM | PDO | 1 | | | |
| HORSESHOE DRIVE | 0.14 | 7/8/2001 | 11:25 AM | PDO | 1 | | | |
| HUBBARD LANE | 0.45 | 7/23/2002 | 4:01 PM | PDO | | | | |
| HUBBARD LANE | 0.45 | 4/1/2002 | 3:03 PM | PDO | | | | |
| HUBBARD LANE | 0.45 | 3/23/2002 | 3:27 PM | PDO | | | | |
| HUBBARD LANE | 0.45 | 9/25/2001 | 9:18 PM | PDO | | | | |
| HUBBARD LANE | 0.45 | 8/21/2000 | 5:04 PM | PDO | | | | |
| HUBBARD LANE | 0.45 | 8/17/2000 | 8:22 PM | PDO | 6 | | #DIV/0! | |
| HUGO ROAD | 0.00 | 11/11/2001 | 7:15 PM | PDO | | | | |
| HUGO ROAD | 0.00 | 7/13/2001 | 3:44 PM | PDO | | | | |
| HUGO ROAD | 0.30 | 9/29/2001 | 10:31 PM | PDO | | | | |
| HUGO ROAD | 0.60 | 3/10/2001 | 9:40 PM | PDO | | | | |
| HUGO ROAD | 0.70 | 6/19/2001 | 9:54 PM | PDO | | | | |
| HUGO ROAD | 0.88 | 5/11/2002 | 1:34 PM | PDO | | | | |
| HUGO ROAD | 1.00 | 6/13/2002 | 1:19 PM | PDO | | | | |
| HUGO ROAD | 1.11 | 3/9/2000 | 12:28 PM | PDO | | | | |
| HUGO ROAD | 2.00 | 1/1/2002 | 1:10 AM | PDO | | | | |
| HUGO ROAD | 2.31 | 1/29/2001 | 4:43 PM | PDO | | | | |
| HUGO ROAD | 3.30 | 6/26/2001 | 8:58 PM | PDO | | | | |
| HUGO ROAD | 6.70 | 7/9/2001 | 2:53 PM | PDO | 12 | | 0.6 | |
| HUMBERD LANE | 0.00 | 6/2/2000 | 3:39 PM | PDO | 1 | | | |
| ILLINOIS RIVER ROAD | 0.00 | 7/17/2001 | 2:04 PM | PDO | | | | |
| ILLINOIS RIVER ROAD | 0.10 | 10/31/2000 | 6:23 PM | PDO | | | | |
| ILLINOIS RIVER ROAD | 0.60 | 2/17/2000 | 9:54 PM | PDO | 3 | | | |
| INGALLS LANE | 0.00 | 11/2/2002 | 1:02 PM | PDO | | | | |
| INGALLS LANE | 0.00 | 7/4/2002 | 6:38 AM | PDO | | | | |
| INGALLS LANE | 0.00 | 5/9/2002 | 1:54 PM | PDO | 3 | | | |
| IRIS LANE | 0.00 | 5/24/2002 | 10:35 AM | PDO | 1 | | | |
| JAIME LANE | 0.21 | 1/25/2001 | 8:24 PM | PDO | 1 | | | |
| JAYNES DRIVE | 0.20 | 1/22/2002 | 8:32 AM | PDO | | | | |
| JAYNES DRIVE | 0.84 | 11/4/2002 | 4:09 PM | PDO | | | | |
| JAYNES DRIVE | 0.84 | 7/7/2002 | 9:40 AM | PDO | | | | |
| JAYNES DRIVE | 0.84 | 4/29/2002 | 9:37 PM | PDO | | | | |
| JAYNES DRIVE | 0.84 | 3/12/2002 | 3:17 PM | PDO | | | | |
| JAYNES DRIVE | 0.84 | 3/10/2002 | 8:18 PM | PDO | | | | |
| JAYNES DRIVE | 0.84 | 2/1/2002 | 8:44 PM | PDO | | | | |
| JAYNES DRIVE | 0.84 | 1/3/2002 | 9:34 PM | PDO | | | | |
| JAYNES DRIVE | 0.84 | 11/28/2001 | 6:23 PM | PDO | | | | |
| JAYNES DRIVE | 0.84 | 10/3/2001 | 8:35 PM | PDO | | | | |
| JAYNES DRIVE | 0.84 | 9/13/2001 | 8:30 AM | PDO | | | | |
| JAYNES DRIVE | 0.84 | 9/13/2001 | 12:28 AM | PDO | | | | |
| JAYNES DRIVE | 0.84 | 8/29/2000 | 1:36 PM | PDO | | | | |
| JAYNES DRIVE | 0.84 | 2/24/2000 | 10:41 PM | PDO | | | | |
| JAYNES DRIVE | 1.82 | 10/9/2002 | 1:24 PM | PDO | 15 | | 3.1 | |
| JENKINS AVENUE | 0.15 | 9/28/2000 | 1:44 PM | PDO | 1 | | | |
| JEROME PRAIRIE ROAD | 0.00 | 9/22/2002 | 6:02 PM | PDO | | | | |
| JEROME PRAIRIE ROAD | 0.00 | 4/3/2001 | 2:55 AM | PDO | | | | |
| JEROME PRAIRIE ROAD | 0.30 | 6/16/2001 | 1:55 PM | PDO | | | | |
| JEROME PRAIRIE ROAD | 1.42 | 9/7/2002 | 9:17 PM | PDO | | | | |
| JEROME PRAIRIE ROAD | 1.42 | 12/29/2001 | 2:37 PM | PDO | | | | |
| JEROME PRAIRIE ROAD | 1.80 | 12/5/2000 | 2:20 PM | PDO | | | | |
| JEROME PRAIRIE ROAD | 2.21 | 1/20/2001 | 12:52 AM | PDO | | | | |
| JEROME PRAIRIE ROAD | 2.21 | 11/1/2000 | 6:54 AM | PDO | | | | |
| JEROME PRAIRIE ROAD | 2.63 | 1/7/2001 | 5:56 PM | PDO | | | | |
| JEROME PRAIRIE ROAD | 2.70 | 7/13/2002 | 12:28 PM | PDO | | | | |
| JEROME PRAIRIE ROAD | 3.15 | 10/27/2001 | 11:21 PM | Fatal | | | | |
| JEROME PRAIRIE ROAD | 3.30 | 3/7/2000 | 8:16 AM | PDO | | | | |
| JEROME PRAIRIE ROAD | 3.40 | 8/12/2001 | 1:32 PM | PDO | 13 | | 1.3 | |

**Table B-1**
**Countywide Crash Data, 11/13/99 - 11/12/02**

| Most recent 3 years of County crash data (11/13/99-11/12/02) by location | | | | | Subtotal | Est'd | Annual Rates | |
|---|---|---|---|---|---|---|---|---|
| Road Name | Milepost | Date | Time | Severity | by Street | ADT | per mi. | per MVM |
| JO CREEK PLACE | 0.09 | 4/2/2001 | 4:38 PM | PDO | 1 | | | |
| JOHNSON DRIVE | 0.10 | 6/14/2000 | 7:32 AM | PDO | 1 | | | |
| JONES CREEK ROAD, EAST | 0.53 | 1/5/2001 | 6:00 AM | PDO | 1 | | | |
| JONES CREEK ROAD, WEST | 0.00 | 8/23/2002 | 5:10 PM | PDO | | | | |
| JONES CREEK ROAD, WEST | 0.00 | 3/13/2000 | 4:11 PM | PDO | | | | |
| JONES CREEK ROAD, WEST | 0.30 | 5/5/2002 | 4:23 PM | PDO | | | | |
| JONES CREEK ROAD, WEST | 0.40 | 7/31/2002 | 7:50 AM | PDO | | | | |
| JONES CREEK ROAD, WEST | 0.60 | 8/16/2002 | 3:23 PM | PDO | | | | |
| JONES CREEK ROAD, WEST | 0.60 | 3/11/2000 | 12:54 AM | PDO | | | | |
| JONES CREEK ROAD, WEST | 0.70 | 1/3/2002 | 9:28 AM | PDO | | | | |
| JONES CREEK ROAD, WEST | 0.80 | 8/24/2002 | 5:57 PM | PDO | | | | |
| JONES CREEK ROAD, WEST | 1.20 | 8/12/2000 | 4:01 PM | PDO | | | | |
| JONES CREEK ROAD, WEST | 1.80 | 10/24/2001 | 9:30 PM | PDO | | | | |
| JONES CREEK ROAD, WEST | 2.10 | 7/23/2002 | 7:57 AM | PDO | 11 | | 1.7 | |
| JOSEPHINE STREET | 0.00 | 12/4/1999 | 8:50 AM | PDO | 1 | | | |
| JUMP OFF JOE CREEK ROAD | 0.00 | 3/1/2002 | 7:18 PM | PDO | | | | |
| JUMP OFF JOE CREEK ROAD | 0.00 | 8/18/2001 | 7:06 PM | PDO | | | | |
| JUMP OFF JOE CREEK ROAD | 0.00 | 7/19/2001 | 8:23 PM | PDO | | | | |
| JUMP OFF JOE CREEK ROAD | 1.30 | 1/21/2000 | 6:07 AM | PDO | | | | |
| JUMP OFF JOE CREEK ROAD | 1.90 | 11/4/2002 | 3:12 PM | PDO | | | | |
| JUMP OFF JOE CREEK ROAD | 2.30 | 3/5/2002 | 9:11 AM | PDO | | | | |
| JUMP OFF JOE CREEK ROAD | 2.66 | 10/9/2002 | 11:17 AM | PDO | | | | |
| JUMP OFF JOE CREEK ROAD | 2.70 | 10/1/2001 | 1:37 PM | PDO | | | | |
| JUMP OFF JOE CREEK ROAD | 3.60 | 4/9/2002 | 11:50 PM | PDO | | | | |
| JUMP OFF JOE CREEK ROAD | 4.00 | 12/20/1999 | 7:52 PM | PDO | | | | |
| JUMP OFF JOE CREEK ROAD | 4.10 | 8/28/2000 | 1:49 AM | PDO | | | | |
| JUMP OFF JOE CREEK ROAD | 5.00 | 9/24/2000 | 1:43 AM | PDO | 12 | | 0.8 | |
| KELLENBECK AVENUE | 0.32 | 1/1/2001 | 9:36 AM | PDO | 1 | | | |
| KEN ROSE LANE | 0.00 | 7/13/2002 | 5:01 PM | PDO | | | | |
| KEN ROSE LANE | 0.00 | 7/13/2002 | 5:42 PM | PDO | | | | |
| KEN ROSE LANE | 0.00 | 10/28/2001 | 11:26 PM | PDO | | | | |
| KEN ROSE LANE | 0.00 | 2/23/2000 | 4:56 PM | PDO | | | | |
| KEN ROSE LANE | 0.00 | 11/24/1999 | 7:26 PM | PDO | 5 | | #DIV/0! | |
| KERBY MAINLINE ROAD | 0.00 | 9/18/2002 | 12:37 AM | PDO | | | | |
| KERBY MAINLINE ROAD | 0.00 | 9/22/2001 | 3:10 PM | PDO | | | | |
| KERBY MAINLINE ROAD | 0.00 | 7/8/2000 | 2:48 PM | PDO | | | | |
| KERBY MAINLINE ROAD | 0.00 | 4/6/2000 | 12:20 PM | PDO | | | | |
| KERBY MAINLINE ROAD | 0.00 | 3/4/2000 | 12:24 AM | PDO | 5 | | #DIV/0! | |
| KILBORN DRIVE | 0.00 | 8/6/2002 | 9:39 AM | PDO | 1 | | | |
| KINCAID ROAD | 0.60 | 10/3/2001 | 7:45 PM | PDO | | | | |
| KINCAID ROAD | 0.85 | 8/18/2001 | 11:30 AM | PDO | | | | |
| KINCAID ROAD | 0.90 | 12/7/2000 | 11:48 PM | PDO | 3 | | | |
| KRAUSS LANE | 0.00 | 6/7/2000 | 12:20 PM | PDO | 1 | | | |
| LAKE SHORE DRIVE | 0.20 | 9/25/2000 | 4:42 PM | PDO | | | | |
| LAKE SHORE DRIVE | 0.20 | 4/17/2000 | 3:21 PM | PDO | | | | |
| LAKE SHORE DRIVE | 0.20 | 1/18/2000 | 6:05 PM | PDO | | | | |
| LAKE SHORE DRIVE | 0.20 | 1/7/2000 | 2:56 PM | PDO | | | | |
| LAKE SHORE DRIVE | 0.20 | 10/9/2001 | 6:57 PM | PDO | | | | |
| LAKE SHORE DRIVE | 0.20 | 6/24/2001 | 12:19 AM | PDO | | | | |
| LAKE SHORE DRIVE | 0.20 | 6/3/2001 | 8:12 PM | PDO | | | | |
| LAKE SHORE DRIVE | 0.20 | 5/16/2000 | 7:58 PM | PDO | | | | |
| LAKE SHORE DRIVE | 0.20 | 12/9/1999 | 4:58 PM | PDO | | | | |
| LAKE SHORE DRIVE | 0.40 | 12/15/2000 | 2:21 PM | PDO | | | | |
| LAKE SHORE DRIVE | 1.20 | 8/6/2000 | 5:26 PM | PDO | | | | |
| LAKE SHORE DRIVE | 1.40 | 12/19/2000 | 6:37 PM | PDO | | | | |
| LAKE SHORE DRIVE | 1.40 | 12/13/2000 | 6:04 PM | PDO | | | | |
| LAKE SHORE DRIVE | 2.95 | 2/5/2002 | 5:44 PM | PDO | | | | |
| LAKE SHORE DRIVE | 3.30 | 11/11/2001 | 4:31 PM | PDO | | | | |
| LAKE SHORE DRIVE | 3.50 | 4/6/2000 | 3:15 PM | PDO | | | | |
| LAKE SHORE DRIVE | 3.70 | 12/26/1999 | 11:50 PM | PDO | | | | |
| LAKE SHORE DRIVE | 6.30 | 3/8/2001 | 10:08 PM | PDO | 18 | | 1.0 | |
| LAUREL ROAD | 0.00 | 7/17/2002 | 3:25 PM | PDO | | | | |
| LAUREL ROAD | 0.00 | 1/29/2002 | 2:37 PM | PDO | | | | |
| LAUREL ROAD | 0.00 | 12/19/2001 | 6:54 PM | PDO | | | | |
| LAUREL ROAD | 0.00 | 4/9/2001 | 4:09 PM | PDO | | | | |

**Table B-1**
**Countywide Crash Data, 11/13/99 - 11/12/02**

| Most recent 3 years of County crash data (11/13/99-11/12/02) by location | | | | | Subtotal | Est'd | Annual Rates | |
|---|---|---|---|---|---|---|---|---|
| Road Name | Milepost | Date | Time | Severity | by Street | ADT | per mi. | per MVM |
| LAUREL ROAD | 0.00 | 3/24/2001 | 9:57 PM | Injury | | | | |
| LAUREL ROAD | 0.73 | 3/15/2002 | 9:42 AM | PDO | | | | |
| LAUREL ROAD | 1.00 | 7/14/2001 | 6:26 AM | PDO | | | | |
| LAUREL ROAD | 1.14 | 5/12/2000 | 5:29 PM | PDO | | | | |
| LAUREL ROAD | 1.50 | 2/4/2000 | 7:20 PM | PDO | | | | |
| LAUREL ROAD | 1.70 | 4/18/2000 | 12:00 PM | PDO | | | | |
| LAUREL ROAD | 2.23 | 11/7/2002 | 7:05 PM | PDO | | | | |
| LAUREL ROAD | 2.23 | 9/6/2001 | 3:18 PM | PDO | 12 | | 1.8 | |
| LELAND ROAD | 0.90 | 5/1/2002 | 3:56 PM | PDO | | | | |
| LELAND ROAD | 2.60 | 9/14/2001 | 6:13 PM | PDO | 2 | | | |
| LEONARD ROAD | 0.80 | 10/4/2001 | 8:00 PM | PDO | | | | |
| LEONARD ROAD | 0.97 | 4/16/2001 | 11:09 PM | PDO | | | | |
| LEONARD ROAD | 2.10 | 10/9/2001 | 1:34 PM | PDO | | | | |
| LEONARD ROAD | 2.70 | 10/8/2000 | 7:38 PM | PDO | | | | |
| LEONARD ROAD | 2.70 | 1/17/2000 | 9:35 AM | PDO | | | | |
| LEONARD ROAD | 3.40 | 1/8/2002 | 7:38 PM | PDO | | | | |
| LEONARD ROAD | 3.40 | 6/12/2001 | 1:34 PM | Injury | 7 | | 0.9 | |
| LIMPY CREEK ROAD | 0.08 | 8/26/2002 | 10:46 PM | PDO | 1 | | | |
| LINCOLN ROAD | 0.00 | 12/20/2000 | 7:33 PM | PDO | | | | |
| LINCOLN ROAD | 0.00 | 4/15/2000 | 2:03 PM | PDO | 2 | | | |
| LLOYD DRIVE | 0.00 | 6/5/2001 | 9:46 PM | PDO | 1 | | | |
| LONE MOUNTAIN ROAD | 0.20 | 5/31/2001 | 12:04 AM | PDO | | | | |
| LONE MOUNTAIN ROAD | 0.83 | 12/31/2001 | 6:58 PM | Fatal | | | | |
| LONE MOUNTAIN ROAD | 1.00 | 8/4/2000 | 9:01 PM | PDO | | | | |
| LONE MOUNTAIN ROAD | 1.50 | 7/27/2000 | 8:46 PM | PDO | 4 | | | |
| LONNON ROAD | 0.14 | 4/28/2000 | 9:34 AM | PDO | | | | |
| LONNON ROAD | 0.83 | 6/26/2000 | 8:07 PM | PDO | | | | |
| LONNON ROAD | 0.83 | 4/12/2000 | 7:14 PM | PDO | 3 | | | |
| LOWER GRAVE CREEK ROAD | 0.60 | 1/14/2001 | 12:19 AM | PDO | | | | |
| LOWER GRAVE CREEK ROAD | 0.60 | 1/3/2000 | 5:34 PM | PDO | | | | |
| LOWER GRAVE CREEK ROAD | 1.00 | 9/20/2001 | 7:10 PM | PDO | 3 | | | |
| LOWER WOLF CREEK ROAD | 1.40 | 8/14/2002 | 4:10 PM | PDO | | | | |
| LOWER WOLF CREEK ROAD | 1.60 | 9/5/2000 | 9:26 PM | PDO | | | | |
| LOWER WOLF CREEK ROAD | 4.30 | 6/8/2002 | 9:30 PM | PDO | | | | |
| LOWER WOLF CREEK ROAD | 4.30 | 10/27/2001 | 10:25 PM | PDO | 4 | | | |
| MAIN STREET | 0.00 | 12/17/1999 | 3:18 PM | Injury | 1 | | | |
| MARCY LOOP | 0.00 | 4/20/2001 | 9:08 AM | PDO | | | | |
| MARCY LOOP | 0.00 | 5/6/2000 | 9:01 PM | PDO | | | | |
| MARCY LOOP | 0.40 | 5/5/2002 | 7:42 PM | PDO | | | | |
| MARCY LOOP | 2.24 | 8/12/2000 | 11:54 AM | PDO | 4 | | | |
| MARTIN ROAD | 0.00 | 2/3/2001 | 12:39 PM | PDO | 1 | | | |
| MC CARTER LANE | 0.15 | 3/2/2002 | 7:52 PM | PDO | 1 | | | |
| MEDART LANE | 0.00 | 8/12/2002 | 5:59 PM | PDO | | | | |
| MEDART LANE | 0.35 | 12/27/2001 | 11:51 AM | PDO | 2 | | | |
| MERLIN ROAD | 0.00 | 10/31/2002 | 5:47 PM | PDO | | | | |
| MERLIN ROAD | 0.00 | 4/6/2002 | 10:31 AM | PDO | | | | |
| MERLIN ROAD | 0.00 | 11/26/2001 | 6:14 PM | PDO | | | | |
| MERLIN ROAD | 0.00 | 6/2/2000 | 3:43 PM | PDO | | | | |
| MERLIN ROAD | 0.00 | 5/3/2000 | 10:59 AM | PDO | | | | |
| MERLIN ROAD | 0.00 | 4/6/2000 | 5:29 PM | PDO | | | | |
| MERLIN ROAD | 0.10 | 7/28/2002 | 12:45 PM | PDO | | | | |
| MERLIN ROAD | 0.10 | 10/4/2001 | 7:45 PM | PDO | | | | |
| MERLIN ROAD | 0.10 | 8/1/2001 | 9:02 PM | PDO | | | | |
| MERLIN ROAD | 0.50 | 3/30/2001 | 2:42 PM | PDO | | | | |
| MERLIN ROAD | 0.77 | 4/9/2001 | 11:12 AM | PDO | | | | |
| MERLIN ROAD | 0.77 | 6/18/2002 | 1:02 PM | PDO | | | | |
| MERLIN ROAD | 0.77 | 2/26/2002 | 6:14 PM | PDO | | | | |
| MERLIN ROAD | 0.77 | 1/9/2002 | 6:03 PM | PDO | | | | |
| MERLIN ROAD | 0.77 | 10/25/2001 | 4:37 PM | PDO | | | | |
| MERLIN ROAD | 0.77 | 8/30/2001 | 1:15 AM | PDO | | | | |
| MERLIN ROAD | 0.77 | 12/7/1999 | 9:20 PM | PDO | | | | |
| MERLIN ROAD | 0.80 | 9/27/2001 | 12:18 PM | PDO | | | | |
| MERLIN ROAD | 0.90 | 8/17/2001 | 2:18 PM | PDO | | | | |
| MERLIN ROAD | 0.90 | 6/30/2001 | 9:54 PM | PDO | | | | |
| MERLIN ROAD | 0.90 | 3/21/2000 | 6:09 AM | PDO | | | | |

**Table B-1**
**Countywide Crash Data, 11/13/99 - 11/12/02**

| Most recent 3 years of County crash data (11/13/99-11/12/02) by location | | | | | Subtotal | Est'd | Annual Rates | |
|---|---|---|---|---|---|---|---|---|
| Road Name | Milepost | Date | Time | Severity | by Street | ADT | per mi. | per MVM |
| MERLIN ROAD | 1.00 | 3/20/2000 | 8:36 PM | PDO | | | | |
| MERLIN ROAD | 1.10 | 10/29/2002 | 7:33 PM | PDO | | | | |
| MERLIN ROAD | 1.10 | 1/22/2002 | 8:24 AM | PDO | | | | |
| MERLIN ROAD | 1.20 | 10/31/2002 | 2:21 PM | PDO | | | | |
| MERLIN ROAD | 1.50 | 8/30/2001 | 8:46 AM | PDO | | | | |
| MERLIN ROAD | 1.84 | 1/9/2001 | 2:09 PM | PDO | | | | |
| MERLIN ROAD | 1.84 | 10/13/2000 | 10:17 PM | PDO | | | | |
| MERLIN ROAD | 1.89 | 5/15/2002 | 12:55 AM | PDO | | | | |
| MERLIN ROAD | 1.89 | 1/15/2000 | 12:59 PM | PDO | | | | |
| MERLIN ROAD | 2.16 | 12/8/2000 | 9:07 PM | PDO | | | | |
| MERLIN ROAD | 2.20 | 10/30/2000 | 4:12 PM | PDO | | | | |
| MERLIN ROAD | 2.80 | 10/17/2000 | 9:57 PM | PDO | | | | |
| MERLIN ROAD | 2.82 | 10/10/2001 | 3:07 PM | PDO | | | | |
| MERLIN ROAD | 2.82 | 4/26/2001 | 9:08 PM | PDO | | | | |
| MERLIN ROAD | 2.82 | 7/6/2000 | 12:10 PM | PDO | | | | |
| MERLIN ROAD | 2.82 | 7/5/2000 | 10:01 AM | PDO | | | | |
| MERLIN ROAD | 2.90 | 6/29/2001 | 3:12 PM | PDO | | | | |
| MERLIN ROAD | 2.90 | 8/2/2000 | 12:28 PM | Injury | | | | |
| MERLIN ROAD | 3.00 | 8/31/2002 | 11:19 AM | PDO | | | | |
| MERLIN ROAD | 3.00 | 7/30/2002 | 2:42 PM | PDO | | | | |
| MERLIN ROAD | 3.00 | 5/5/2002 | 1:15 PM | PDO | | | | |
| MERLIN ROAD | 3.00 | 4/1/2000 | 3:06 AM | PDO | | | | |
| MERLIN ROAD | 3.10 | 2/25/2002 | 5:01 PM | PDO | | | | |
| MERLIN ROAD | 3.20 | 7/7/2001 | 10:22 AM | PDO | | | | |
| MERLIN ROAD | 3.20 | 5/18/2001 | 4:46 PM | PDO | | | | |
| MERLIN ROAD | 3.30 | 6/10/2001 | 3:10 PM | PDO | | | | |
| MERLIN ROAD | 3.30 | 9/24/2000 | 4:03 PM | PDO | | | | |
| MERLIN ROAD | 3.30 | 8/29/2000 | 11:39 PM | PDO | | | | |
| MERLIN ROAD | 3.35 | 4/19/2002 | 3:51 PM | PDO | 50 | | 5.0 | |
| MERLIN SANITARIUM ROAD | 0.62 | 12/31/1999 | 9:50 PM | PDO | 1 | | | |
| MIDWAY AVENUE | 0.00 | 5/20/2001 | 6:45 PM | PDO | | | | |
| MIDWAY AVENUE | 0.30 | 8/5/2000 | 3:50 PM | PDO | | | | |
| MIDWAY AVENUE | 0.43 | 5/22/2002 | 11:11 AM | PDO | | | | |
| MIDWAY AVENUE | 0.43 | 11/15/1999 | 9:34 AM | PDO | | | | |
| MIDWAY AVENUE | 0.66 | 6/30/2001 | 5:06 PM | PDO | | | | |
| MIDWAY AVENUE | 1.00 | 5/26/2002 | 9:43 PM | PDO | | | | |
| MIDWAY AVENUE | 1.00 | 12/15/2001 | 11:28 AM | PDO | | | | |
| MIDWAY AVENUE | 1.30 | 6/3/2001 | 4:29 PM | PDO | | | | |
| MIDWAY AVENUE | 2.14 | 12/9/2001 | 11:33 AM | PDO | | | | |
| MIDWAY AVENUE | 2.14 | 1/20/2001 | 4:17 AM | PDO | | | | |
| MIDWAY AVENUE | 2.24 | 6/29/2000 | 9:05 AM | PDO | 11 | | 1.6 | |
| MOBIL WAY | 0.00 | 12/26/1999 | 5:56 PM | PDO | 1 | | | |
| MONUMENT DRIVE | 0.00 | 9/18/2002 | 10:42 PM | PDO | | | | |
| MONUMENT DRIVE | 0.00 | 9/17/2002 | 9:00 PM | PDO | | | | |
| MONUMENT DRIVE | 0.00 | 8/17/2002 | 12:38 AM | PDO | | | | |
| MONUMENT DRIVE | 0.00 | 8/12/2002 | 10:31 PM | PDO | | | | |
| MONUMENT DRIVE | 0.00 | 5/11/2002 | 11:40 AM | PDO | | | | |
| MONUMENT DRIVE | 0.00 | 3/2/2002 | 9:45 AM | PDO | | | | |
| MONUMENT DRIVE | 0.00 | 4/7/2001 | 12:25 PM | PDO | | | | |
| MONUMENT DRIVE | 0.00 | 10/3/2000 | 6:52 PM | PDO | | | | |
| MONUMENT DRIVE | 0.00 | 12/4/1999 | 8:56 AM | PDO | | | | |
| MONUMENT DRIVE | 0.20 | 9/8/2002 | 4:14 PM | PDO | | | | |
| MONUMENT DRIVE | 0.20 | 10/24/2000 | 7:42 AM | PDO | | | | |
| MONUMENT DRIVE | 0.40 | 12/2/1999 | 11:40 AM | PDO | | | | |
| MONUMENT DRIVE | 0.43 | 10/3/2002 | 1:56 PM | PDO | | | | |
| MONUMENT DRIVE | 0.50 | 4/5/2002 | 3:10 PM | PDO | | | | |
| MONUMENT DRIVE | 0.50 | 8/31/2001 | 12:08 AM | PDO | | | | |
| MONUMENT DRIVE | 0.55 | 5/24/2002 | 6:11 AM | PDO | | | | |
| MONUMENT DRIVE | 0.55 | 5/1/2002 | 7:32 AM | PDO | | | | |
| MONUMENT DRIVE | 0.55 | 3/26/2002 | 7:30 PM | PDO | | | | |
| MONUMENT DRIVE | 0.55 | 8/6/2001 | 2:02 PM | PDO | | | | |
| MONUMENT DRIVE | 0.55 | 1/5/2000 | 4:29 PM | PDO | | | | |
| MONUMENT DRIVE | 0.90 | 11/19/2001 | 9:53 PM | PDO | | | | |
| MONUMENT DRIVE | 1.00 | 6/6/2002 | 4:03 PM | PDO | | | | |
| MONUMENT DRIVE | 1.00 | 7/15/2000 | 5:20 AM | PDO | | | | |

**Table B-1**
**Countywide Crash Data, 11/13/99 - 11/12/02**

| Most recent 3 years of County crash data (11/13/99-11/12/02) by location | | | | | Subtotal | Est'd | Annual Rates | |
|---|---|---|---|---|---|---|---|---|
| Road Name | Milepost | Date | Time | Severity | by Street | ADT | per mi. | per MVM |
| MONUMENT DRIVE | 1.10 | 6/30/2001 | 12:52 PM | PDO | | | | |
| MONUMENT DRIVE | 1.10 | 3/27/2001 | 6:21 PM | PDO | | | | |
| MONUMENT DRIVE | 1.20 | 12/31/2001 | 10:45 PM | PDO | | | | |
| MONUMENT DRIVE | 1.70 | 9/2/2002 | 2:43 PM | PDO | | | | |
| MONUMENT DRIVE | 1.70 | 2/20/2002 | 2:43 PM | PDO | | | | |
| MONUMENT DRIVE | 1.70 | 2/5/2001 | 7:25 AM | PDO | | | | |
| MONUMENT DRIVE | 1.70 | 6/8/2000 | 11:42 AM | PDO | | | | |
| MONUMENT DRIVE | 1.70 | 5/3/2000 | 2:57 PM | PDO | | | | |
| MONUMENT DRIVE | 1.70 | 1/22/2000 | 12:39 AM | PDO | | | | |
| MONUMENT DRIVE | 2.00 | 6/21/2000 | 4:35 PM | PDO | | | | |
| MONUMENT DRIVE | 2.25 | 11/15/2001 | 1:12 PM | PDO | | | | |
| MONUMENT DRIVE | 2.60 | 7/1/2000 | 3:45 PM | PDO | | | | |
| MONUMENT DRIVE | 2.65 | 1/17/2002 | 2:52 PM | PDO | | | | |
| MONUMENT DRIVE | 2.90 | 12/24/1999 | 5:43 PM | PDO | | | | |
| MONUMENT DRIVE | 3.00 | 12/7/1999 | 3:15 PM | PDO | | | | |
| MONUMENT DRIVE | 3.10 | 9/2/2000 | 5:14 PM | PDO | | | | |
| MONUMENT DRIVE | 3.17 | 1/25/2001 | 2:35 PM | PDO | | | | |
| MONUMENT DRIVE | 3.45 | 3/7/2001 | 1:17 AM | PDO | | | | |
| MONUMENT DRIVE | 3.50 | 12/5/1999 | 12:12 AM | PDO | | | | |
| MONUMENT DRIVE | 3.60 | 6/14/2000 | 5:41 PM | PDO | | | | |
| MONUMENT DRIVE | 3.60 | 4/21/2000 | 7:29 PM | PDO | | | | |
| MONUMENT DRIVE | 3.91 | 12/7/2001 | 8:10 PM | PDO | | | | |
| MONUMENT DRIVE | 3.91 | 8/1/2000 | 5:34 PM | PDO | | | | |
| MONUMENT DRIVE | 4.20 | 12/19/2000 | 7:54 PM | PDO | | | | |
| MONUMENT DRIVE | 4.30 | 6/23/2002 | 5:35 PM | PDO | | | | |
| MONUMENT DRIVE | 4.40 | 8/2/2000 | 9:16 AM | PDO | | | | |
| MONUMENT DRIVE | 4.50 | 4/4/2000 | 1:10 PM | PDO | | | | |
| MONUMENT DRIVE | 4.57 | 12/29/2001 | 3:12 PM | PDO | | | | |
| MONUMENT DRIVE | 4.98 | 10/30/2001 | 2:08 PM | PDO | | | | |
| MONUMENT DRIVE | 5.30 | 8/12/2001 | 4:33 PM | PDO | | | | |
| MONUMENT DRIVE | 5.60 | 6/14/2000 | 1:10 PM | PDO | | | | |
| MONUMENT DRIVE | 5.60 | 2/12/2000 | 4:07 PM | PDO | 55 | | 3.3 | |
| MURPHY CREEK ROAD | 0.00 | 6/2/2000 | 9:50 AM | PDO | | | | |
| MURPHY CREEK ROAD | 0.60 | 1/27/2000 | 4:23 PM | PDO | | | | |
| MURPHY CREEK ROAD | 0.80 | 3/4/2002 | 1:51 PM | PDO | | | | |
| MURPHY CREEK ROAD | 0.80 | 4/19/2001 | 2:51 PM | PDO | | | | |
| MURPHY CREEK ROAD | 2.00 | 7/1/2002 | 5:49 PM | PDO | | | | |
| MURPHY CREEK ROAD | 2.30 | 9/17/2001 | 6:16 PM | PDO | 6 | | 0.9 | |
| N STREET, NORTHEAST | 0.00 | 4/17/2000 | 8:22 PM | PDO | 1 | | | |
| N STREET, SOUTHEAST | 0.30 | 1/31/2000 | 12:04 PM | Injury | | | | |
| N STREET, SOUTHEAST | 0.30 | 11/17/1999 | 1:41 PM | Fatal | | | | |
| N STREET, SOUTHEAST | 0.45 | 10/7/2002 | 3:47 PM | PDO | 3 | | | |
| NAUE WAY | 0.00 | 2/7/2002 | 8:10 PM | PDO | | | | |
| NAUE WAY | 0.90 | 11/24/2001 | 3:13 PM | PDO | 2 | | | |
| NEBRASKA AVENUE | 0.00 | 11/12/2001 | 8:18 PM | PDO | | | | |
| NEBRASKA AVENUE | 0.00 | 11/12/2001 | 7:48 PM | PDO | | | | |
| NEBRASKA AVENUE | 0.00 | 11/14/1999 | 9:44 PM | PDO | 3 | | | |
| NEILL ROAD | 0.00 | 4/23/2001 | 8:40 AM | PDO | 1 | | | |
| NELSON WAY | 0.10 | 7/1/2002 | 9:55 PM | PDO | | | | |
| NELSON WAY | 0.10 | 10/16/2001 | 11:07 PM | PDO | | | | |
| NELSON WAY | 0.10 | 9/7/2001 | 8:23 PM | PDO | | | | |
| NELSON WAY | 0.10 | 6/9/2001 | 2:03 AM | PDO | 4 | | | |
| NEW HOPE ROAD | 0.00 | 4/25/2002 | 2:50 PM | PDO | | | | |
| NEW HOPE ROAD | 0.00 | 4/17/2001 | 12:36 AM | PDO | | | | |
| NEW HOPE ROAD | 0.00 | 4/10/2001 | 6:34 PM | PDO | | | | |
| NEW HOPE ROAD | 0.00 | 1/25/2001 | 1:19 PM | PDO | | | | |
| NEW HOPE ROAD | 0.00 | 12/23/2000 | 11:53 PM | PDO | | | | |
| NEW HOPE ROAD | 0.00 | 12/3/2000 | 7:10 PM | PDO | | | | |
| NEW HOPE ROAD | 0.00 | 11/18/2000 | 1:21 PM | PDO | | | | |
| NEW HOPE ROAD | 0.00 | 11/18/2000 | 9:33 PM | PDO | | | | |
| NEW HOPE ROAD | 0.00 | 9/15/2000 | 4:58 PM | PDO | | | | |
| NEW HOPE ROAD | 0.00 | 6/26/2000 | 10:45 PM | PDO | | | | |
| NEW HOPE ROAD | 0.00 | 6/3/2000 | 11:02 PM | PDO | | | | |
| NEW HOPE ROAD | 0.00 | 1/21/2000 | 6:43 PM | PDO | | | | |
| NEW HOPE ROAD | 0.00 | 1/17/2000 | 6:13 PM | PDO | | | | |

**Table B-1**
**Countywide Crash Data, 11/13/99 - 11/12/02**

| Most recent 3 years of County crash data (11/13/99-11/12/02) by location | | | | | Subtotal | Est'd | Annual Rates | |
|---|---|---|---|---|---|---|---|---|
| Road Name | Milepost | Date | Time | Severity | by Street | ADT | per mi. | per MVM |
| NEW HOPE ROAD | 0.00 | 12/26/1999 | 6:08 AM | PDO | | | | |
| NEW HOPE ROAD | 0.00 | 12/11/1999 | 5:51 PM | PDO | | | | |
| NEW HOPE ROAD | 0.30 | 2/19/2002 | 2:17 PM | PDO | | | | |
| NEW HOPE ROAD | 0.40 | 10/27/2002 | 3:40 PM | PDO | | | | |
| NEW HOPE ROAD | 0.40 | 6/16/2002 | 10:48 AM | PDO | | | | |
| NEW HOPE ROAD | 1.07 | 4/18/2000 | 12:05 PM | PDO | | | | |
| NEW HOPE ROAD | 1.07 | 2/6/2000 | 4:26 PM | PDO | | | | |
| NEW HOPE ROAD | 1.50 | 11/21/2001 | 7:00 PM | PDO | | | | |
| NEW HOPE ROAD | 1.90 | 7/9/2000 | 9:48 PM | PDO | | | | |
| NEW HOPE ROAD | 2.48 | 12/21/2001 | 3:22 PM | PDO | | | | |
| NEW HOPE ROAD | 2.50 | 12/16/1999 | 1:40 PM | PDO | | | | |
| NEW HOPE ROAD | 2.65 | 8/9/2001 | 12:36 PM | PDO | | | | |
| NEW HOPE ROAD | 2.65 | 5/31/2001 | 10:06 PM | PDO | | | | |
| NEW HOPE ROAD | 2.90 | 6/28/2002 | 7:39 PM | PDO | | | | |
| NEW HOPE ROAD | 2.93 | 5/4/2001 | 8:05 AM | PDO | | | | |
| NEW HOPE ROAD | 3.21 | 1/1/2001 | 1:08 PM | PDO | | | | |
| NEW HOPE ROAD | 3.60 | 1/21/2000 | 7:04 AM | PDO | | | | |
| NEW HOPE ROAD | 3.80 | 6/8/2001 | 12:03 PM | PDO | | | | |
| NEW HOPE ROAD | 3.90 | 11/11/2001 | 4:48 PM | PDO | | | | |
| NEW HOPE ROAD | 4.20 | 5/19/2002 | 12:49 PM | PDO | | | | |
| NEW HOPE ROAD | 4.20 | 5/9/2001 | 9:27 AM | PDO | | | | |
| NEW HOPE ROAD | 4.20 | 3/1/2001 | 7:45 PM | PDO | | | | |
| NEW HOPE ROAD | 4.20 | 11/20/2000 | 10:07 PM | PDO | | | | |
| NEW HOPE ROAD | 4.30 | 2/19/2002 | 11:47 AM | PDO | | | | |
| NEW HOPE ROAD | 4.50 | 6/29/2002 | 7:09 PM | PDO | | | | |
| NEW HOPE ROAD | 4.60 | 4/1/2001 | 8:03 AM | PDO | | | | |
| NEW HOPE ROAD | 5.80 | 10/17/2002 | 4:52 PM | PDO | | | | |
| NEW HOPE ROAD | 5.80 | 8/30/2002 | 8:44 PM | PDO | | | | |
| NEW HOPE ROAD | 5.80 | 11/23/2000 | 2:46 PM | PDO | | | | |
| NEW HOPE ROAD | 6.00 | 8/27/2002 | 4:00 AM | PDO | | | | |
| NEW HOPE ROAD | 6.00 | 2/19/2002 | 8:30 PM | PDO | 44 | | 2.4 | |
| NORTH APPLEGATE ROAD | 0.00 | 7/25/2002 | 7:15 PM | PDO | | | | |
| NORTH APPLEGATE ROAD | 0.00 | 1/22/2002 | 7:22 AM | PDO | | | | |
| NORTH APPLEGATE ROAD | 0.00 | 1/21/2000 | 7:45 AM | PDO | | | | |
| NORTH APPLEGATE ROAD | 1.00 | 10/27/2000 | 2:08 PM | PDO | | | | |
| NORTH APPLEGATE ROAD | 1.50 | 6/8/2002 | 5:03 PM | Fatal | | | | |
| NORTH APPLEGATE ROAD | 1.90 | 4/4/2002 | 10:30 AM | PDO | | | | |
| NORTH APPLEGATE ROAD | 2.40 | 12/16/2000 | 12:15 AM | PDO | | | | |
| NORTH APPLEGATE ROAD | 3.10 | 6/16/2002 | 8:02 PM | PDO | | | | |
| NORTH APPLEGATE ROAD | 3.10 | 11/27/1999 | 4:07 PM | PDO | | | | |
| NORTH APPLEGATE ROAD | 3.30 | 3/7/2000 | 7:33 PM | PDO | | | | |
| NORTH APPLEGATE ROAD | 5.76 | 2/2/2001 | 5:44 AM | PDO | | | | |
| NORTH APPLEGATE ROAD | 5.80 | 3/17/2001 | 9:35 AM | PDO | | | | |
| NORTH APPLEGATE ROAD | 6.68 | 9/6/2001 | 7:37 AM | PDO | 13 | | 0.6 | |
| NORTH VALLEY DRIVE | 0.00 | 10/18/2002 | 5:07 PM | PDO | | | | |
| NORTH VALLEY DRIVE | 0.00 | 3/19/2002 | 7:25 AM | PDO | 2 | | | |
| O BRIEN ROAD | 0.00 | 1/26/2002 | 7:20 PM | PDO | | | | |
| O BRIEN ROAD | 0.10 | 7/10/2002 | 3:27 PM | PDO | | | | |
| O BRIEN ROAD | 0.87 | 9/13/2001 | 6:12 PM | PDO | | | | |
| O BRIEN ROAD | 0.87 | 8/5/2000 | 9:43 AM | PDO | 4 | | | |
| OLD HWY 99 | 0.30 | 8/16/2002 | 6:30 PM | PDO | | | | |
| OLD HWY 99 | 0.34 | 4/18/2000 | 8:07 AM | PDO | | | | |
| OLD HWY 99 | 0.37 | 3/9/2001 | 10:17 PM | PDO | | | | |
| OLD HWY 99 | 0.40 | 3/8/2000 | 5:08 PM | PDO | 4 | | | |
| OLD STAGE ROAD | 0.20 | 4/11/2001 | 4:51 PM | PDO | | | | |
| OLD STAGE ROAD | 1.00 | 11/19/1999 | 2:02 PM | PDO | | | | |
| OLD STAGE ROAD | 1.10 | 12/23/2000 | 9:25 PM | PDO | | | | |
| OLD STAGE ROAD | 1.11 | 12/18/1999 | 2:22 PM | PDO | 4 | | | |
| ORT LANE | 0.00 | 3/7/2000 | 10:32 PM | PDO | | | | |
| ORT LANE | 0.12 | 6/26/2001 | 4:38 PM | PDO | | | | |
| ORT LANE | 0.34 | 8/21/2001 | 8:42 AM | PDO | 3 | | | |
| OXYOKE ROAD | 1.20 | 9/11/2000 | 6:20 PM | PDO | 1 | | | |
| PARDEE LANE | 0.00 | 2/28/2002 | 8:23 AM | PDO | | | | |
| PARDEE LANE | 0.00 | 2/19/2000 | 11:44 AM | PDO | 2 | | | |
| PARK STREET, EAST | 0.51 | 2/28/2001 | 12:00 PM | PDO | 1 | | | |

**Table B-1**
**Countywide Crash Data, 11/13/99 - 11/12/02**

| Most recent 3 years of County crash data (11/13/99-11/12/02) by location | | | | | Subtotal | Est'd | Annual Rates | |
|---|---|---|---|---|---|---|---|---|
| Road Name | Milepost | Date | Time | Severity | by Street | ADT | per mi. | per MVM |
| PEARCE PARK ROAD | 0.00 | 11/23/2001 | 2:57 PM | PDO | | | | |
| PEARCE PARK ROAD | 0.80 | 11/29/2001 | 3:58 PM | PDO | | | | |
| PEARCE PARK ROAD | 0.80 | 10/17/2000 | 2:07 PM | PDO | | | | |
| PEARCE PARK ROAD | 1.00 | 10/17/2002 | 11:13 AM | PDO | 4 | | | |
| PESTERFIELD PLACE | 0.00 | 1/15/2000 | 12:57 PM | PDO | 1 | | | |
| PICKETT CREEK ROAD | 0.00 | 7/28/2001 | 11:22 AM | PDO | | | | |
| PICKETT CREEK ROAD | 0.20 | 2/23/2001 | 3:53 PM | PDO | 2 | | | |
| PICKETT CREEK ROAD, WEST | 0.70 | 7/3/2002 | 11:18 PM | PDO | 1 | | | |
| PINE CREST DRIVE | 0.00 | 12/1/2001 | 6:10 AM | PDO | | | | |
| PINE CREST DRIVE | 0.00 | 9/24/2001 | 8:42 PM | PDO | | | | |
| PINE CREST DRIVE | 0.00 | 9/4/2001 | 5:22 PM | PDO | | | | |
| PINE CREST DRIVE | 0.00 | 5/8/2001 | 10:56 AM | PDO | | | | |
| PINE CREST DRIVE | 0.00 | 2/9/2001 | 12:58 PM | PDO | | | | |
| PINE CREST DRIVE | 0.00 | 1/12/2001 | 5:16 PM | PDO | | | | |
| PINE CREST DRIVE | 0.00 | 1/29/2000 | 12:10 PM | PDO | | | | |
| PINE CREST DRIVE | 0.39 | 10/12/2000 | 7:12 PM | PDO | | | | |
| PINE CREST DRIVE | 0.60 | 12/20/2000 | 9:09 PM | PDO | | | | |
| PINE CREST DRIVE | 0.78 | 2/12/2002 | 2:27 PM | PDO | | | | |
| PINE CREST DRIVE | 0.80 | 12/25/1999 | 10:02 PM | PDO | | | | |
| PINE CREST DRIVE | 1.21 | 11/8/2002 | 12:12 PM | PDO | | | | |
| PINE CREST DRIVE | 1.30 | 8/21/2001 | 8:55 AM | PDO | | | | |
| PINE CREST DRIVE | 1.40 | 6/19/2000 | 10:22 AM | PDO | | | | |
| PINE CREST DRIVE | 1.50 | 5/29/2001 | 1:58 PM | PDO | | | | |
| PINE CREST DRIVE | 1.50 | 6/25/2000 | 10:19 AM | PDO | | | | |
| PINE CREST DRIVE | 1.50 | 5/25/2000 | 11:19 AM | Fatal | | | | |
| PINE CREST DRIVE | 1.60 | 8/4/2000 | 10:27 PM | PDO | | | | |
| PINE CREST DRIVE | 1.70 | 11/9/2000 | 7:24 AM | PDO | | | | |
| PINE CREST DRIVE | 1.80 | 8/22/2001 | 1:15 PM | PDO | | | | |
| PINE CREST DRIVE | 2.00 | 12/14/1999 | 6:59 AM | PDO | | | | |
| PINE CREST DRIVE | 2.10 | 12/13/1999 | 12:14 PM | PDO | | | | |
| PINE CREST DRIVE | 2.60 | 1/13/2000 | 2:48 PM | PDO | | | | |
| PINE CREST DRIVE | 2.62 | 11/6/2002 | 3:36 PM | Fatal | | | | |
| PINE CREST DRIVE | 2.62 | 8/9/2002 | 4:29 PM | PDO | | | | |
| PINE CREST DRIVE | 2.62 | 4/8/2002 | 12:07 PM | PDO | | | | |
| PINE CREST DRIVE | 2.62 | 8/7/2001 | 6:16 AM | PDO | | | | |
| PINE CREST DRIVE | 2.62 | 7/6/2001 | 5:59 PM | PDO | | | | |
| PINE CREST DRIVE | 2.62 | 9/1/2000 | 7:02 AM | PDO | 29 | | 3.7 | |
| PINEWOOD WAY | 0.00 | 11/7/2001 | 3:17 PM | PDO | 1 | | | |
| PLACER ROAD | 0.00 | 10/5/2001 | 5:09 PM | PDO | | | | |
| PLACER ROAD | 0.00 | 12/3/1999 | 8:38 PM | PDO | | | | |
| PLACER ROAD | 0.90 | 6/29/2002 | 7:29 PM | PDO | | | | |
| PLACER ROAD | 1.00 | 1/8/2002 | 7:28 PM | PDO | | | | |
| PLACER ROAD | 3.00 | 4/6/2002 | 3:31 PM | PDO | | | | |
| PLACER ROAD | 4.20 | 6/12/2000 | 1:48 PM | PDO | 6 | | 0.5 | |
| PLEASANT VALLEY ROAD | 0.14 | 1/25/2002 | 3:44 PM | PDO | | | | |
| PLEASANT VALLEY ROAD | 0.44 | 3/14/2000 | 7:11 AM | PDO | | | | |
| PLEASANT VALLEY ROAD | 1.48 | 5/1/2001 | 6:47 PM | PDO | | | | |
| PLEASANT VALLEY ROAD | 2.20 | 10/10/2000 | 9:55 AM | Fatal | | | | |
| PLEASANT VALLEY ROAD | 2.50 | 3/9/2001 | 6:36 AM | PDO | | | | |
| PLEASANT VALLEY ROAD | 2.50 | 5/20/2000 | 2:37 PM | PDO | | | | |
| PLEASANT VALLEY ROAD | 2.66 | 3/4/2002 | 7:14 AM | PDO | | | | |
| PLEASANT VALLEY ROAD | 2.66 | 8/12/2001 | 9:57 PM | PDO | | | | |
| PLEASANT VALLEY ROAD | 2.66 | 7/15/2001 | 12:56 AM | PDO | | | | |
| PLEASANT VALLEY ROAD | 2.66 | 8/18/2000 | 10:52 PM | PDO | | | | |
| PLEASANT VALLEY ROAD | 2.66 | 7/17/2000 | 3:13 PM | Fatal | 11 | | 1.5 | |
| PLUMTREE LANE | 0.00 | 6/22/2002 | 2:29 PM | PDO | | | | |
| PLUMTREE LANE | 0.00 | 11/13/1999 | 4:38 PM | PDO | | | | |
| PLUMTREE LANE | 0.70 | 1/11/2002 | 10:07 PM | PDO | | | | |
| PLUMTREE LANE | 0.70 | 10/14/2001 | 11:36 PM | PDO | | | | |
| PLUMTREE LANE | 0.80 | 9/24/2000 | 1:28 PM | PDO | | | | |
| PLUMTREE LANE | 1.29 | 12/26/2001 | 7:02 PM | PDO | | | | |
| PLUMTREE LANE | 1.29 | 8/23/2000 | 9:47 PM | PDO | 7 | | 1.8 | |
| PONDEROSA LANE | 0.10 | 8/2/2001 | 4:36 AM | PDO | 1 | | | |
| POTTS WAY | 0.16 | 10/28/2000 | 12:23 PM | PDO | 1 | | | |
| POWELL CREEK ROAD | 0.00 | 9/21/2000 | 4:10 PM | PDO | | | | |

**Table B-1**
**Countywide Crash Data, 11/13/99 - 11/12/02**

| Most recent 3 years of County crash data (11/13/99-11/12/02) by location | | | | | Subtotal | Est'd | Annual Rates | |
|---|---|---|---|---|---|---|---|---|
| Road Name | Milepost | Date | Time | Severity | by Street | ADT | per mi. | per MVM |
| POWELL CREEK ROAD | 0.28 | 12/30/2001 | 3:26 PM | PDO | | | | |
| POWELL CREEK ROAD | 1.85 | 2/26/2002 | 7:37 PM | PDO | 3 | | | |
| RAILROAD AVENUE | 0.00 | 6/18/2001 | 11:13 PM | PDO | 1 | | | |
| RED MOUNTAIN DRIVE | 0.60 | 5/28/2000 | 7:10 PM | PDO | 1 | | | |
| RED SPUR DRIVE | 0.20 | 8/3/2002 | 7:28 PM | PDO | 1 | | | |
| REDWOOD AVENUE | 0.00 | 9/9/2002 | 7:53 AM | PDO | | | | |
| REDWOOD AVENUE | 0.00 | 7/5/2000 | 6:40 PM | PDO | | | | |
| REDWOOD AVENUE | 0.20 | 2/21/2001 | 4:11 PM | PDO | | | | |
| REDWOOD AVENUE | 0.20 | 11/14/2000 | 3:44 PM | PDO | | | | |
| REDWOOD AVENUE | 0.21 | 12/1/2001 | 2:57 PM | PDO | | | | |
| REDWOOD AVENUE | 0.21 | 6/26/2001 | 2:11 PM | PDO | | | | |
| REDWOOD AVENUE | 0.21 | 2/21/2001 | 4:21 PM | PDO | | | | |
| REDWOOD AVENUE | 0.21 | 10/3/2000 | 4:35 PM | PDO | | | | |
| REDWOOD AVENUE | 0.21 | 9/7/2000 | 9:52 AM | PDO | | | | |
| REDWOOD AVENUE | 0.21 | 6/24/2002 | 4:07 PM | PDO | | | | |
| REDWOOD AVENUE | 0.21 | 4/8/2002 | 6:03 PM | PDO | | | | |
| REDWOOD AVENUE | 0.21 | 8/17/2000 | 5:22 PM | PDO | | | | |
| REDWOOD AVENUE | 0.21 | 8/16/2000 | 10:45 PM | PDO | | | | |
| REDWOOD AVENUE | 0.21 | 7/8/2000 | 1:37 PM | PDO | | | | |
| REDWOOD AVENUE | 0.22 | 2/26/2001 | 1:59 PM | PDO | | | | |
| REDWOOD AVENUE | 0.22 | 8/19/2000 | 9:11 PM | PDO | | | | |
| REDWOOD AVENUE | 0.30 | 4/7/2002 | 2:47 PM | PDO | | | | |
| REDWOOD AVENUE | 0.30 | 4/27/2001 | 11:06 AM | PDO | | | | |
| REDWOOD AVENUE | 0.30 | 4/4/2000 | 2:33 PM | PDO | | | | |
| REDWOOD AVENUE | 0.31 | 4/29/2000 | 2:44 PM | PDO | | | | |
| REDWOOD AVENUE | 0.34 | 10/20/2002 | 1:08 PM | PDO | | | | |
| REDWOOD AVENUE | 0.55 | 6/7/2002 | 9:13 PM | PDO | | | | |
| REDWOOD AVENUE | 0.60 | 8/14/2001 | 12:00 PM | PDO | | | | |
| REDWOOD AVENUE | 0.69 | 8/3/2001 | 8:48 AM | PDO | | | | |
| REDWOOD AVENUE | 0.69 | 7/3/2001 | 4:41 PM | PDO | | | | |
| REDWOOD AVENUE | 0.69 | 6/14/2000 | 8:56 AM | PDO | | | | |
| REDWOOD AVENUE | 0.70 | 5/9/2001 | 3:24 PM | PDO | | | | |
| REDWOOD AVENUE | 0.70 | 5/7/2000 | 2:11 PM | PDO | | | | |
| REDWOOD AVENUE | 0.76 | 7/3/2002 | 7:45 PM | PDO | | | | |
| REDWOOD AVENUE | 0.76 | 3/25/2002 | 1:13 PM | PDO | | | | |
| REDWOOD AVENUE | 0.76 | 1/5/2000 | 3:39 PM | PDO | | | | |
| REDWOOD AVENUE | 0.80 | 3/20/2001 | 3:23 PM | PDO | | | | |
| REDWOOD AVENUE | 0.87 | 10/6/2002 | 3:28 PM | PDO | | | | |
| REDWOOD AVENUE | 0.87 | 10/12/2001 | 1:39 PM | PDO | | | | |
| REDWOOD AVENUE | 0.90 | 1/25/2002 | 11:59 AM | PDO | | | | |
| REDWOOD AVENUE | 0.90 | 1/5/2002 | 3:40 AM | PDO | | | | |
| REDWOOD AVENUE | 0.90 | 11/8/2001 | 3:36 PM | PDO | | | | |
| REDWOOD AVENUE | 0.90 | 11/17/2000 | 2:05 PM | PDO | | | | |
| REDWOOD AVENUE | 0.90 | 7/6/2000 | 6:23 PM | PDO | | | | |
| REDWOOD AVENUE | 0.99 | 6/5/2002 | 3:18 PM | PDO | | | | |
| REDWOOD AVENUE | 0.99 | 12/5/2001 | 5:10 PM | PDO | | | | |
| REDWOOD AVENUE | 0.99 | 8/1/2001 | 2:01 AM | PDO | | | | |
| REDWOOD AVENUE | 0.99 | 5/7/2001 | 8:20 AM | PDO | | | | |
| REDWOOD AVENUE | 0.99 | 4/18/2001 | 8:42 PM | PDO | | | | |
| REDWOOD AVENUE | 0.99 | 3/30/2001 | 6:58 PM | PDO | | | | |
| REDWOOD AVENUE | 0.99 | 3/7/2001 | 12:11 PM | PDO | | | | |
| REDWOOD AVENUE | 0.99 | 1/17/2001 | 5:21 PM | PDO | | | | |
| REDWOOD AVENUE | 0.99 | 12/9/2000 | 5:43 PM | PDO | | | | |
| REDWOOD AVENUE | 0.99 | 10/13/2000 | 5:29 AM | PDO | | | | |
| REDWOOD AVENUE | 0.99 | 9/5/2000 | 6:50 AM | PDO | | | | |
| REDWOOD AVENUE | 0.99 | 2/22/2000 | 5:16 AM | PDO | | | | |
| REDWOOD AVENUE | 1.02 | 9/13/2000 | 10:29 PM | PDO | | | | |
| REDWOOD AVENUE | 1.02 | 12/16/1999 | 11:31 PM | PDO | | | | |
| REDWOOD AVENUE | 1.10 | 11/29/1999 | 7:42 AM | PDO | | | | |
| REDWOOD AVENUE | 1.20 | 3/18/2001 | 10:42 AM | PDO | | | | |
| REDWOOD AVENUE | 1.33 | 8/26/2000 | 9:54 PM | PDO | | | | |
| REDWOOD AVENUE | 1.40 | 1/25/2002 | 6:56 PM | PDO | | | | |
| REDWOOD AVENUE | 1.40 | 12/19/2001 | 6:26 PM | PDO | | | | |
| REDWOOD AVENUE | 1.40 | 11/22/1999 | 10:45 PM | PDO | | | | |
| REDWOOD AVENUE | 1.48 | 9/8/2002 | 3:27 PM | PDO | | | | |

**Table B-1**
**Countywide Crash Data, 11/13/99 - 11/12/02**

| Most recent 3 years of County crash data (11/13/99-11/12/02) by location | | | | | Subtotal | Est'd | Annual Rates | |
|---|---|---|---|---|---|---|---|---|
| Road Name | Milepost | Date | Time | Severity | by Street | ADT | per mi. | per MVM |
| REDWOOD AVENUE | 1.48 | 8/2/2002 | 1:41 PM | PDO | | | | |
| REDWOOD AVENUE | 1.48 | 7/6/2002 | 10:15 PM | PDO | | | | |
| REDWOOD AVENUE | 1.48 | 8/16/2001 | 12:15 PM | PDO | | | | |
| REDWOOD AVENUE | 1.48 | 4/30/2001 | 4:13 PM | PDO | | | | |
| REDWOOD AVENUE | 1.48 | 12/8/1999 | 6:44 PM | PDO | | | | |
| REDWOOD AVENUE | 1.50 | 6/12/2000 | 7:02 PM | Injury | | | | |
| REDWOOD AVENUE | 1.70 | 7/27/2002 | 11:02 PM | PDO | | | | |
| REDWOOD AVENUE | 1.70 | 4/23/2001 | 3:49 PM | PDO | | | | |
| REDWOOD AVENUE | 1.99 | 2/14/2002 | 12:45 PM | PDO | | | | |
| REDWOOD AVENUE | 1.99 | 10/30/2001 | 3:20 PM | PDO | | | | |
| REDWOOD AVENUE | 1.99 | 12/17/2000 | 3:23 PM | PDO | | | | |
| REDWOOD AVENUE | 1.99 | 6/18/2000 | 11:43 AM | PDO | | | | |
| REDWOOD AVENUE | 1.99 | 4/10/2000 | 10:47 PM | PDO | | | | |
| REDWOOD AVENUE | 1.99 | 1/4/2000 | 4:53 PM | PDO | | | | |
| REDWOOD AVENUE | 2.00 | 7/24/2001 | 2:16 PM | PDO | | | | |
| REDWOOD AVENUE | 2.30 | 8/25/2001 | 5:44 PM | PDO | | | | |
| REDWOOD AVENUE | 2.30 | 7/24/2001 | 2:05 PM | PDO | | | | |
| REDWOOD AVENUE | 2.70 | 8/14/2002 | 4:31 PM | PDO | | | | |
| REDWOOD AVENUE | 2.70 | 5/28/2001 | 6:28 PM | PDO | | | | |
| REDWOOD AVENUE | 2.74 | 12/27/2000 | 9:25 PM | PDO | | | | |
| REDWOOD AVENUE | 2.75 | 6/25/2001 | 7:16 PM | PDO | | | | |
| REDWOOD AVENUE | 3.00 | 4/7/2002 | 10:42 AM | PDO | | | | |
| REDWOOD AVENUE | 3.00 | 12/9/2001 | 7:11 PM | PDO | | | | |
| REDWOOD AVENUE | 4.40 | 10/22/2000 | 9:45 PM | PDO | | | | |
| REDWOOD AVENUE | 5.00 | 1/17/2002 | 7:01 AM | PDO | 85 | | 5.7 | |
| REEVES CREEK ROAD | 1.70 | 2/3/2001 | 3:27 AM | PDO | | | | |
| REEVES CREEK ROAD | 2.00 | 11/4/2001 | 3:26 PM | PDO | | | | |
| REEVES CREEK ROAD | 2.00 | 11/11/2000 | 4:21 AM | PDO | | | | |
| REEVES CREEK ROAD | 2.50 | 3/11/2000 | 11:53 PM | PDO | | | | |
| REEVES CREEK ROAD | 2.70 | 9/8/2000 | 11:35 AM | PDO | | | | |
| REEVES CREEK ROAD | 3.00 | 1/21/2002 | 2:18 PM | PDO | 6 | | 1.5 | |
| RIDGEFIELD ROAD | 0.00 | 3/4/2000 | 8:52 PM | PDO | | | | |
| RIDGEFIELD ROAD | 0.14 | 8/15/2000 | 8:30 PM | PDO | 2 | | | |
| RIO MESA DRIVE | 0.00 | 1/25/2002 | 12:32 PM | PDO | 1 | | | |
| ROBERTSON BRIDGE ROAD | 0.00 | 5/8/2001 | 4:53 PM | PDO | | | | |
| ROBERTSON BRIDGE ROAD | 0.30 | 8/23/2002 | 7:49 PM | PDO | | | | |
| ROBERTSON BRIDGE ROAD | 0.53 | 12/1/2001 | 9:50 AM | PDO | | | | |
| ROBERTSON BRIDGE ROAD | 0.80 | 12/3/2001 | 3:44 PM | PDO | | | | |
| ROBERTSON BRIDGE ROAD | 0.91 | 2/25/2001 | 7:26 PM | PDO | | | | |
| ROBERTSON BRIDGE ROAD | 0.91 | 2/4/2001 | 7:35 PM | PDO | | | | |
| ROBERTSON BRIDGE ROAD | 1.00 | 11/4/2000 | 6:54 PM | PDO | | | | |
| ROBERTSON BRIDGE ROAD | 1.40 | 4/17/2002 | 12:28 AM | PDO | | | | |
| ROBERTSON BRIDGE ROAD | 1.40 | 4/17/2002 | 3:31 PM | PDO | | | | |
| ROBERTSON BRIDGE ROAD | 1.90 | 3/29/2002 | 10:07 AM | PDO | | | | |
| ROBERTSON BRIDGE ROAD | 1.90 | 3/29/2002 | 11:25 AM | PDO | | | | |
| ROBERTSON BRIDGE ROAD | 3.10 | 7/12/2001 | 8:34 PM | PDO | | | | |
| ROBERTSON BRIDGE ROAD | 3.10 | 2/1/2000 | 10:22 AM | PDO | 13 | | 1.4 | |
| ROBINSON CORNER ROAD | 0.80 | 11/13/2000 | 5:53 PM | PDO | 1 | | | |
| ROBINSON ROAD | 0.00 | 1/22/2002 | 5:24 PM | PDO | | | | |
| ROBINSON ROAD | 0.28 | 9/9/2000 | 8:23 AM | PDO | 2 | | | |
| ROCKYDALE ROAD | 0.00 | 9/10/2002 | 10:53 AM | PDO | | | | |
| ROCKYDALE ROAD | 0.00 | 6/26/2002 | 12:07 PM | PDO | | | | |
| ROCKYDALE ROAD | 0.00 | 5/31/2002 | 11:45 AM | PDO | | | | |
| ROCKYDALE ROAD | 0.00 | 5/24/2002 | 1:06 PM | PDO | | | | |
| ROCKYDALE ROAD | 0.00 | 1/28/2002 | 6:16 AM | PDO | | | | |
| ROCKYDALE ROAD | 0.00 | 12/16/2000 | 6:33 AM | PDO | | | | |
| ROCKYDALE ROAD | 0.00 | 6/10/2000 | 2:03 AM | PDO | | | | |
| ROCKYDALE ROAD | 0.00 | 2/14/2000 | 10:20 AM | PDO | | | | |
| ROCKYDALE ROAD | 0.40 | 10/5/2002 | 6:00 AM | PDO | | | | |
| ROCKYDALE ROAD | 0.40 | 11/27/1999 | 4:51 PM | PDO | | | | |
| ROCKYDALE ROAD | 0.50 | 11/24/2001 | 2:43 PM | PDO | | | | |
| ROCKYDALE ROAD | 0.70 | 1/31/2002 | 7:33 PM | PDO | | | | |
| ROCKYDALE ROAD | 1.00 | 2/11/2000 | 11:08 PM | PDO | | | | |
| ROCKYDALE ROAD | 1.80 | 5/11/2002 | 4:41 PM | PDO | | | | |
| ROCKYDALE ROAD | 2.30 | 1/24/2000 | 8:45 PM | PDO | | | | |

**Table B-1**
**Countywide Crash Data, 11/13/99 - 11/12/02**

| Most recent 3 years of County crash data (11/13/99-11/12/02) by location | | | | | Subtotal | Est'd | Annual Rates | |
|---|---|---|---|---|---|---|---|---|
| Road Name | Milepost | Date | Time | Severity | by Street | ADT | per mi. | per MVM |
| ROCKYDALE ROAD | 2.40 | 10/21/2001 | 1:45 PM | PDO | | | | |
| ROCKYDALE ROAD | 2.80 | 5/11/2002 | 9:15 AM | PDO | | | | |
| ROCKYDALE ROAD | 3.80 | 7/8/2000 | 12:43 PM | PDO | | | | |
| ROCKYDALE ROAD | 4.30 | 1/4/2000 | 8:19 AM | PDO | | | | |
| ROCKYDALE ROAD | 5.40 | 8/15/2002 | 7:43 AM | PDO | | | | |
| ROCKYDALE ROAD | 6.53 | 5/1/2000 | 6:47 PM | PDO | 21 | | 1.1 | |
| ROSEWOOD STREET | 0.20 | 8/14/2000 | 5:18 PM | PDO | 1 | | | |
| ROUND PRAIRIE CREEK ROAD | 0.00 | 6/5/2000 | 9:45 AM | PDO | 1 | | | |
| ROUNDS AVENUE | 0.00 | 9/28/2001 | 7:31 AM | PDO | | | | |
| ROUNDS AVENUE | 0.10 | 12/18/1999 | 9:43 AM | PDO | 2 | | | |
| RUSSELL ROAD | 0.00 | 11/16/2001 | 10:47 PM | PDO | | | | |
| RUSSELL ROAD | 0.03 | 3/7/2001 | 7:44 AM | PDO | | | | |
| RUSSELL ROAD | 0.03 | 3/7/2001 | 3:24 PM | PDO | | | | |
| RUSSELL ROAD | 0.15 | 10/9/2000 | 7:16 AM | PDO | 4 | | | |
| SAND CREEK ROAD | 0.40 | 6/23/2000 | 4:56 PM | PDO | | | | |
| SAND CREEK ROAD | 1.00 | 7/29/2002 | 3:34 PM | PDO | 2 | | | |
| SARATOGA WAY | 0.86 | 5/28/2000 | 7:01 PM | PDO | | | | |
| SARATOGA WAY | 0.90 | 7/8/2002 | 8:10 PM | PDO | 2 | | | |
| SCENIC DRIVE, WEST | 0.32 | 2/27/2000 | 7:54 PM | PDO | | | | |
| SCENIC DRIVE, WEST | 0.32 | 12/23/1999 | 11:24 PM | PDO | 2 | | | |
| SCHROEDER LANE | 0.30 | 7/26/2002 | 5:07 PM | PDO | 1 | | | |
| SCHUTZWOHL LANE | 0.26 | 3/3/2000 | 10:59 PM | PDO | 1 | | | |
| SHADOW MOUNTAIN WAY | 0.12 | 6/26/2001 | 5:21 PM | PDO | 1 | | | |
| SHANNON LANE | 0.05 | 8/15/2002 | 6:11 PM | PDO | | | | |
| SHANNON LANE | 0.24 | 10/20/2000 | 12:58 PM | PDO | 2 | | | |
| SIXTH STREET | 0.00 | 12/7/2001 | 11:54 AM | PDO | | | | |
| SIXTH STREET | 0.10 | 4/9/2000 | 11:12 PM | PDO | 2 | | | |
| SKY CREST DRIVE | 0.66 | 8/25/2001 | 11:08 PM | PDO | 1 | | | |
| SKY WAY | 0.00 | 2/7/2002 | 3:26 PM | PDO | 1 | | | |
| SLATE CREEK ROAD | 0.00 | 7/23/2001 | 10:35 AM | PDO | | | | |
| SLATE CREEK ROAD | 0.00 | 1/13/2000 | 11:57 AM | PDO | 2 | | | |
| SLEEPY HOLLOW LOOP | 0.70 | 9/3/2000 | 7:11 PM | PDO | | | | |
| SLEEPY HOLLOW LOOP | 1.90 | 11/18/2000 | 9:02 PM | PDO | 2 | | | |
| SMITH-SAWYER ROAD | 0.00 | 7/18/2002 | 7:35 PM | PDO | 1 | | | |
| SMOKEY LANE | 0.22 | 9/27/2002 | 2:54 PM | PDO | 1 | | | |
| SOLDIER CREEK ROAD | 0.49 | 8/5/2000 | 5:40 PM | PDO | 1 | | | |
| SOUTH SIDE ROAD | 1.40 | 9/24/2000 | 2:51 AM | PDO | | | | |
| SOUTH SIDE ROAD | 1.50 | 11/17/2000 | 7:40 AM | PDO | | | | |
| SOUTH SIDE ROAD | 4.17 | 12/12/2001 | 11:12 AM | PDO | | | | |
| SOUTH SIDE ROAD | 4.17 | 8/20/2001 | 4:18 PM | PDO | | | | |
| SOUTH SIDE ROAD | 4.17 | 5/24/2000 | 6:42 AM | PDO | 5 | | 0.6 | |
| SOUTHGATE WAY | 0.20 | 11/15/2001 | 6:46 PM | PDO | 1 | | | |
| SPEAKER ROAD | 0.00 | 1/15/2002 | 5:52 PM | PDO | | | | |
| SPEAKER ROAD | 3.70 | 2/14/2001 | 12:44 PM | PDO | 2 | | | |
| SPRING OAK WAY | 0.00 | 7/10/2001 | 9:15 PM | PDO | 1 | | | |
| STEWART ROAD | 0.00 | 4/30/2002 | 12:29 AM | PDO | | | | |
| STEWART ROAD | 0.00 | 8/8/2001 | 1:27 AM | PDO | | | | |
| STEWART ROAD | 0.00 | 6/29/2001 | 10:40 PM | PDO | | | | |
| STEWART ROAD | 0.00 | 12/31/2000 | 12:23 PM | PDO | | | | |
| STEWART ROAD | 0.00 | 6/6/2000 | 5:34 PM | PDO | 5 | | #DIV/0! | |
| STRINGER GAP ROAD | 0.00 | 11/12/2000 | 12:37 AM | PDO | | | | |
| STRINGER GAP ROAD | 1.40 | 4/15/2000 | 8:56 PM | PDO | | | | |
| STRINGER GAP ROAD | 2.59 | 7/13/2002 | 1:02 PM | PDO | | | | |
| STRINGER GAP ROAD | 2.59 | 4/10/2002 | 11:32 PM | PDO | | | | |
| STRINGER GAP ROAD | 2.59 | 12/17/1999 | 3:57 PM | PDO | 5 | | 0.6 | |
| SUMMIT LOOP | 0.00 | 2/17/2000 | 7:20 AM | PDO | | | | |
| SUMMIT LOOP | 0.26 | 4/19/2001 | 10:38 PM | PDO | 2 | | | |
| SUN GLO DRIVE | 0.25 | 4/30/2002 | 12:14 PM | PDO | 1 | | | |
| SUNNY VALLEY LOOP | 0.00 | 1/6/2002 | 9:43 PM | PDO | | | | |
| SUNNY VALLEY LOOP | 0.00 | 12/30/2001 | 7:55 PM | PDO | | | | |
| SUNNY VALLEY LOOP | 0.00 | 12/24/2001 | 2:32 AM | PDO | | | | |
| SUNNY VALLEY LOOP | 0.00 | 1/13/2001 | 2:08 AM | PDO | | | | |
| SUNNY VALLEY LOOP | 0.30 | 8/16/2002 | 12:29 PM | PDO | | | | |
| SUNNY VALLEY LOOP | 0.31 | 7/5/2001 | 1:09 AM | PDO | | | | |
| SUNNY VALLEY LOOP | 0.31 | 12/4/1999 | 5:06 AM | PDO | | | | |

**Table B-1**
**Countywide Crash Data, 11/13/99 - 11/12/02**

| Most recent 3 years of County crash data (11/13/99-11/12/02) by location | | | | | Subtotal | Est'd | Annual Rates | |
|---|---|---|---|---|---|---|---|---|
| Road Name | Milepost | Date | Time | Severity | by Street | ADT | per mi. | per MVM |
| SUNNY VALLEY LOOP | 0.36 | 10/2/2000 | 7:15 PM | PDO | | | | |
| SUNNY VALLEY LOOP | 0.36 | 6/12/2000 | 10:09 AM | PDO | | | | |
| SUNNY VALLEY LOOP | 1.10 | 8/16/2002 | 4:53 PM | PDO | 10 | | 3.0 | |
| TAKILMA ROAD | 0.00 | 2/16/2002 | 12:51 PM | PDO | | | | |
| TAKILMA ROAD | 0.00 | 1/17/2002 | 8:32 AM | PDO | | | | |
| TAKILMA ROAD | 1.80 | 2/26/2002 | 4:44 PM | PDO | | | | |
| TAKILMA ROAD | 2.20 | 2/3/2001 | 4:51 AM | PDO | | | | |
| TAKILMA ROAD | 2.20 | 1/25/2001 | 8:15 PM | PDO | | | | |
| TAKILMA ROAD | 2.30 | 9/30/2001 | 6:24 PM | PDO | | | | |
| TAKILMA ROAD | 2.30 | 12/31/1999 | 12:03 AM | PDO | | | | |
| TAKILMA ROAD | 3.50 | 11/5/2000 | 2:37 PM | PDO | | | | |
| TAKILMA ROAD | 4.66 | 6/28/2002 | 12:03 AM | PDO | | | | |
| TAKILMA ROAD | 4.66 | 11/7/2001 | 9:21 PM | PDO | | | | |
| TAKILMA ROAD | 4.66 | 11/7/2001 | 10:12 PM | PDO | | | | |
| TAKILMA ROAD | 4.66 | 9/7/2001 | 1:43 PM | PDO | | | | |
| TAKILMA ROAD | 4.66 | 9/3/2001 | 7:12 PM | PDO | | | | |
| TAKILMA ROAD | 4.66 | 7/3/2001 | 6:03 PM | PDO | | | | |
| TAKILMA ROAD | 5.70 | 5/26/2002 | 12:33 PM | PDO | 15 | | 0.9 | |
| TAYLOR CREEK ROAD | 0.00 | 8/21/2002 | 3:18 PM | PDO | | | | |
| TAYLOR CREEK ROAD | 0.40 | 6/21/2002 | 5:58 PM | PDO | 2 | | | |
| TETHEROW ROAD | 0.30 | 2/12/2000 | 3:58 AM | PDO | 1 | | | |
| THOMPSON CREEK ROAD (4) | 0.60 | 7/11/2002 | 7:46 PM | PDO | | | | |
| THOMPSON CREEK ROAD (4) | 0.60 | 7/11/2002 | 8:44 PM | PDO | | | | |
| THOMPSON CREEK ROAD (5) | 3.10 | 1/2/2001 | 8:41 PM | PDO | 3 | | | |
| THREE PINES ROAD | 0.00 | 3/5/2000 | 11:44 PM | PDO | | | | |
| THREE PINES ROAD | 0.03 | 5/24/2002 | 3:32 PM | PDO | | | | |
| THREE PINES ROAD | 0.03 | 2/14/2002 | 8:51 PM | PDO | | | | |
| THREE PINES ROAD | 0.03 | 2/4/2000 | 9:51 PM | PDO | | | | |
| THREE PINES ROAD | 0.73 | 1/19/2000 | 7:32 PM | PDO | | | | |
| THREE PINES ROAD | 1.79 | 6/10/2000 | 8:31 PM | PDO | 6 | | 1.1 | |
| TIMBERIDGE ROAD | 1.00 | 2/5/2002 | 10:23 AM | PDO | 1 | | | |
| TUNNEL LOOP ROAD | 1.30 | 8/1/2001 | 1:11 PM | PDO | 1 | | | |
| UPPER POWELL CREEK ROAD | 0.00 | 2/26/2001 | 11:19 PM | PDO | 1 | | | |
| UPPER RIVER ROAD | 0.00 | 10/7/2002 | 7:47 PM | PDO | | | | |
| UPPER RIVER ROAD | 0.00 | 3/8/2002 | 10:58 PM | PDO | | | | |
| UPPER RIVER ROAD | 0.00 | 9/16/2001 | 7:32 PM | PDO | | | | |
| UPPER RIVER ROAD | 0.00 | 6/5/2001 | 4:21 PM | PDO | | | | |
| UPPER RIVER ROAD | 0.00 | 2/7/2000 | 9:25 PM | PDO | | | | |
| UPPER RIVER ROAD | 0.14 | 10/9/2000 | 11:30 AM | PDO | | | | |
| UPPER RIVER ROAD | 0.30 | 9/26/2000 | 2:04 PM | PDO | | | | |
| UPPER RIVER ROAD | 0.40 | 6/17/2001 | 2:42 PM | Injury | | | | |
| UPPER RIVER ROAD | 0.90 | 5/31/2001 | 1:21 PM | PDO | | | | |
| UPPER RIVER ROAD | 0.93 | 11/10/2002 | 10:42 PM | PDO | | | | |
| UPPER RIVER ROAD | 0.93 | 1/11/2001 | 6:16 PM | PDO | | | | |
| UPPER RIVER ROAD | 1.10 | 5/26/2002 | 1:10 PM | PDO | | | | |
| UPPER RIVER ROAD | 1.10 | 3/12/2002 | 2:41 PM | PDO | | | | |
| UPPER RIVER ROAD | 1.20 | 3/12/2002 | 10:08 PM | PDO | | | | |
| UPPER RIVER ROAD | 1.40 | 5/19/2002 | 5:26 PM | PDO | | | | |
| UPPER RIVER ROAD | 1.70 | 9/8/2002 | 6:04 PM | PDO | | | | |
| UPPER RIVER ROAD | 1.88 | 6/22/2000 | 8:07 PM | PDO | | | | |
| UPPER RIVER ROAD | 2.40 | 2/28/2001 | 6:14 PM | PDO | | | | |
| UPPER RIVER ROAD | 2.50 | 12/22/2000 | 12:39 PM | PDO | | | | |
| UPPER RIVER ROAD | 2.70 | 8/2/2001 | 4:44 PM | PDO | | | | |
| UPPER RIVER ROAD | 2.92 | 12/14/2001 | 11:25 PM | PDO | | | | |
| UPPER RIVER ROAD | 3.50 | 9/14/2001 | 4:37 PM | PDO | | | | |
| UPPER RIVER ROAD | 3.60 | 2/27/2002 | 5:30 PM | PDO | | | | |
| UPPER RIVER ROAD | 3.96 | 2/11/2002 | 9:16 PM | PDO | | | | |
| UPPER RIVER ROAD | 4.40 | 3/18/2002 | 11:58 AM | PDO | 25 | | 1.9 | |
| VALLE VISTA DRIVE | 0.00 | 2/19/2002 | 10:35 AM | PDO | 1 | | | |
| WALDO ROAD | 3.40 | 12/16/2001 | 3:39 AM | PDO | | | | |
| WALDO ROAD | 3.40 | 12/9/1999 | 6:23 AM | PDO | | | | |
| WALDO ROAD | 3.90 | 2/9/2002 | 12:55 AM | PDO | | | | |
| WALDO ROAD | 3.96 | 9/14/2001 | 10:25 PM | PDO | | | | |
| WALDO ROAD | 4.80 | 7/14/2000 | 8:19 PM | PDO | 5 | | 1.2 | |
| WALKER ROAD | 1.00 | 2/5/2000 | 4:35 AM | PDO | 1 | | | |

**Table B-1**
**Countywide Crash Data, 11/13/99 - 11/12/02**

| Most recent 3 years of County crash data (11/13/99-11/12/02) by location | | | | | Subtotal | Est'd | Annual Rates | |
|---|---|---|---|---|---|---|---|---|
| Road Name | Milepost | Date | Time | Severity | by Street | ADT | per mi. | per MVM |
| WALTERS DRIVE | 0.57 | 10/31/2000 | 8:33 PM | PDO | 1 | | | |
| WATER GAP ROAD | 0.00 | 7/8/2002 | 1:18 AM | PDO | | | | |
| WATER GAP ROAD | 0.00 | 9/17/2001 | 3:51 AM | PDO | | | | |
| WATER GAP ROAD | 0.00 | 9/17/2001 | 9:57 AM | PDO | | | | |
| WATER GAP ROAD | 0.00 | 4/28/2001 | 8:51 AM | PDO | | | | |
| WATER GAP ROAD | 0.00 | 4/6/2001 | 6:06 AM | PDO | | | | |
| WATER GAP ROAD | 0.00 | 6/29/2000 | 6:21 PM | PDO | | | | |
| WATER GAP ROAD | 0.40 | 11/20/1999 | 9:31 AM | PDO | | | | |
| WATER GAP ROAD | 1.50 | 8/7/2000 | 8:36 AM | PDO | | | | |
| WATER GAP ROAD | 1.60 | 11/25/2001 | 7:31 AM | PDO | | | | |
| WATER GAP ROAD | 1.60 | 7/29/2001 | 9:26 PM | PDO | | | | |
| WATER GAP ROAD | 1.60 | 6/7/2000 | 4:52 PM | PDO | | | | |
| WATER GAP ROAD | 1.65 | 1/22/2001 | 8:53 AM | PDO | | | | |
| WATER GAP ROAD | 1.80 | 4/30/2001 | 7:44 AM | PDO | | | | |
| WATER GAP ROAD | 1.90 | 12/4/2000 | 10:36 PM | PDO | | | | |
| WATER GAP ROAD | 2.49 | 1/31/2000 | 8:33 AM | PDO | | | | |
| WATER GAP ROAD | 3.10 | 11/14/2000 | 4:25 PM | PDO | | | | |
| WATER GAP ROAD | 3.10 | 6/7/2000 | 5:10 PM | PDO | | | | |
| WATER GAP ROAD | 4.30 | 10/5/2001 | 7:15 PM | PDO | 18 | | 1.4 | |
| WATERS CREEK ROAD | 0.00 | 2/21/2002 | 9:41 AM | PDO | | | | |
| WATERS CREEK ROAD | 0.00 | 6/21/2001 | 2:23 PM | PDO | | | | |
| WATERS CREEK ROAD | 0.00 | 3/2/2000 | 5:05 PM | PDO | 3 | | | |
| WEST SIDE ROAD | 0.00 | 3/16/2002 | 3:44 PM | PDO | | | | |
| WEST SIDE ROAD | 0.00 | 8/26/2001 | 7:48 AM | PDO | | | | |
| WEST SIDE ROAD | 0.00 | 8/10/2001 | 4:39 PM | PDO | | | | |
| WEST SIDE ROAD | 4.00 | 12/25/2000 | 11:56 AM | PDO | | | | |
| WEST SIDE ROAD | 5.00 | 6/25/2002 | 9:27 PM | PDO | | | | |
| WEST SIDE ROAD | 5.96 | 4/2/2001 | 6:48 PM | PDO | 6 | | 0.3 | |
| WILLIAMS HIGHWAY | 0.00 | 9/30/2001 | 7:51 AM | PDO | | | | |
| WILLIAMS HIGHWAY | 0.00 | 4/4/2001 | 11:40 PM | PDO | | | | |
| WILLIAMS HIGHWAY | 2.60 | 12/31/2001 | 6:50 PM | PDO | | | | |
| WILLIAMS HIGHWAY | 2.70 | 6/29/2001 | 8:41 PM | Injury | | | | |
| WILLIAMS HIGHWAY | 3.80 | 4/20/2002 | 8:31 AM | PDO | | | | |
| WILLIAMS HIGHWAY | 4.30 | 8/15/2002 | 2:58 PM | PDO | | | | |
| WILLIAMS HIGHWAY | 4.75 | 7/28/2000 | 7:05 PM | PDO | | | | |
| WILLIAMS HIGHWAY | 4.75 | 4/19/2000 | 2:31 PM | PDO | | | | |
| WILLIAMS HIGHWAY | 4.75 | 1/12/2000 | 8:31 AM | PDO | | | | |
| WILLIAMS HIGHWAY | 5.69 | 4/21/2002 | 4:33 AM | PDO | | | | |
| WILLIAMS HIGHWAY | 5.76 | 1/9/2002 | 5:29 PM | PDO | | | | |
| WILLIAMS HIGHWAY | 5.76 | 10/30/2001 | 8:35 PM | PDO | | | | |
| WILLIAMS HIGHWAY | 5.76 | 8/21/2001 | 7:19 PM | PDO | | | | |
| WILLIAMS HIGHWAY | 5.76 | 5/7/2001 | 5:24 PM | PDO | | | | |
| WILLIAMS HIGHWAY | 5.80 | 5/8/2000 | 9:35 AM | PDO | | | | |
| WILLIAMS HIGHWAY | 6.00 | 4/21/2002 | 3:50 AM | PDO | | | | |
| WILLIAMS HIGHWAY | 6.30 | 5/2/2000 | 4:50 PM | PDO | 17 | | 0.9 | |
| WILLOW LANE | 0.10 | 8/11/2002 | 9:40 PM | PDO | | | | |
| WILLOW LANE | 0.10 | 1/5/2002 | 4:30 PM | PDO | | | | |
| WILLOW LANE | 0.10 | 7/28/2001 | 12:34 PM | PDO | | | | |
| WILLOW LANE | 0.14 | 11/12/2002 | 12:56 PM | PDO | | | | |
| WILLOW LANE | 0.14 | 8/26/2002 | 2:00 PM | PDO | | | | |
| WILLOW LANE | 0.14 | 7/23/2002 | 8:35 AM | PDO | | | | |
| WILLOW LANE | 0.14 | 5/26/2002 | 9:36 AM | PDO | | | | |
| WILLOW LANE | 0.14 | 4/10/2002 | 8:54 AM | PDO | | | | |
| WILLOW LANE | 0.14 | 1/26/2002 | 6:55 PM | PDO | | | | |
| WILLOW LANE | 0.14 | 1/9/2002 | 9:55 AM | PDO | | | | |
| WILLOW LANE | 0.14 | 9/20/2001 | 4:22 PM | PDO | | | | |
| WILLOW LANE | 0.14 | 8/17/2001 | 9:06 AM | PDO | | | | |
| WILLOW LANE | 0.14 | 6/15/2001 | 3:49 PM | PDO | | | | |
| WILLOW LANE | 0.14 | 6/2/2001 | 5:27 PM | PDO | | | | |
| WILLOW LANE | 0.14 | 2/21/2001 | 9:15 AM | PDO | | | | |
| WILLOW LANE | 0.14 | 8/4/2000 | 4:15 PM | Injury | | | | |
| WILLOW LANE | 0.14 | 3/17/2000 | 7:11 PM | PDO | | | | |
| WILLOW LANE | 0.51 | 12/29/2001 | 8:51 PM | PDO | | | | |
| WILLOW LANE | 0.70 | 6/9/2002 | 12:46 PM | PDO | | | | |
| WILLOW LANE | 0.84 | 8/29/2000 | 12:19 PM | PDO | | | | |

**Table B-1**
**Countywide Crash Data, 11/13/99 - 11/12/02**

| Most recent 3 years of County crash data (11/13/99-11/12/02) by location | | | | | Subtotal | Est'd | Annual Rates | |
|---|---|---|---|---|---|---|---|---|
| **Road Name** | **Milepost** | **Date** | **Time** | **Severity** | **by Street** | **ADT** | **per mi.** | **per MVM** |
| WILLOW LANE | 1.00 | 6/19/2002 | 5:39 PM | PDO | | | | |
| WILLOW LANE | 1.00 | 12/11/2001 | 5:34 PM | PDO | | | | |
| WILLOW LANE | 1.00 | 6/18/2000 | 3:19 PM | PDO | 23 | | 8.5 | |
| WINONA ROAD | 0.00 | 4/20/2001 | 5:28 PM | PDO | | | | |
| WINONA ROAD | 0.00 | 3/21/2001 | 12:55 PM | PDO | | | | |
| WINONA ROAD | 0.00 | 3/4/2001 | 3:24 PM | PDO | | | | |
| WINONA ROAD | 0.60 | 12/27/1999 | 3:04 AM | Injury | | | | |
| WINONA ROAD | 0.70 | 7/8/2000 | 12:06 PM | PDO | | | | |
| WINONA ROAD | 0.70 | 12/24/1999 | 5:37 PM | PDO | | | | |
| WINONA ROAD | 1.10 | 12/17/2000 | 10:02 PM | PDO | | | | |
| WINONA ROAD | 1.98 | 2/8/2001 | 10:11 PM | PDO | 8 | | 1.3 | |
| WOODLAND PARK ROAD | 1.00 | 11/15/2000 | 3:56 PM | PDO | | | | |
| WOODLAND PARK ROAD | 1.28 | 2/4/2002 | 10:49 PM | PDO | | | | |
| WOODLAND PARK ROAD | 1.28 | 5/5/2000 | 1:48 PM | PDO | 3 | | | |
| WOODSIDE STREET | 0.12 | 2/17/2002 | 7:59 PM | PDO | 1 | | | |
| | | | | 3-Year Total, 11/99- | 1315 | | | |

# APPENDIX C

## Future Development Assumptions for Merlin and Murphy by Traffic Analysis Zone

# PM Peak Hour Trip Generation Rates

| Category | ITE Code | Land Use | AVTE vs.: | On a: | Average Rate | Small Sample Size | Average Pass-By Trip % | Non-Pass-By Trip Rate |
|---|---|---|---|---|---|---|---|---|
| Industrial/Agricultural | 110 | General Light Industrial | Acres | Weekday, PH of Adj. St. Traffic, One Hr. Between 4 & 6 p.m. | 7.26 | | | 7.26 |
| Industrial/Agricultural | 120 | General Heavy Industrial | Acres | Weekday, PH of Adj. St. Traffic, One Hr. Between 4 & 6 p.m. | 2.16 | X | | 2.16 |
| Industrial/Agricultural | 130 | Industrial Park | Acres | Weekday, PH of Adj. St. Traffic, One Hr. Between 4 & 6 p.m. | 10.47 | | | 10.47 |
| Industrial/Agricultural | 140 | Manufacturing | Acres | Weekday, PH of Adj. St. Traffic, One Hr. Between 4 & 6 p.m. | 8.37 | | | 8.37 |
| Industrial/Agricultural | 150 | Warehousing | Acres | Weekday, PH of Adj. St. Traffic, One Hr. Between 4 & 6 p.m. | 8.86 | | | 8.86 |
| Industrial/Agricultural | 151 | Mini-Warehouse | Acres | Weekday, PH of Adj. St. Traffic, One Hr. Between 4 & 6 p.m. | 3.83 | | | 3.83 |
| | 199 | Average Industrial | | | 6.83 | | | 6.83 |
| Low Density Industrial | 120 | General Heavy Industrial | Acres | Weekday, PH of Adj. St. Traffic, One Hr. Between 4 & 6 p.m. | 2.16 | X | | 2.16 |
| Low Density Industrial | 151 | Mini-Warehouse | Acres | Weekday, PH of Adj. St. Traffic, One Hr. Between 4 & 6 p.m. | 3.83 | | | 3.83 |
| | 199a | Average Low Density (w/o water) Industrial | | | 3.00 | | | 3.00 |
| Residential | 210 | Single-Family Detached Housing | Dwelling Units | Weekday, PH of Adj. St. Traffic, One Hr. Between 4 & 6 p.m. | 1.01 | | | 1.01 |
| J. Co. Residential | 299daily | Single Family Residential | Dwelling Units | Average Daily Trips | 7.50 | | | 7.50 |
| J. Co. Residential | 299PMX | Single Family Residential | Dwelling Units | Weekday, PH of Adj. St. Traffic, One Hr. Between 4 & 6 p.m. (PM Peak Hour = 10.55% of daily) | 0.79 | | | 0.79 |
| Institutional | 520 | Elementary School | Students | Weekday, PH of Adj. St. Traffic, One Hr. Between 4 & 6 p.m. | No data | No data | | No data |
| Institutional | 521 | Private School (K-12) | Students | Weekday, PH of Adj. St. Traffic, One Hr. Between 4 & 6 p.m. | 0.20 | X | | 0.20 |
| Institutional | 522 | Middle School/Jr. HS | Students | Weekday, PH of Adj. St. Traffic, One Hr. Between 4 & 6 p.m. | 0.16 | X | | 0.16 |
| Institutional | 530 | High School | Students | Weekday, PH of Adj. St. Traffic, One Hr. Between 4 & 6 p.m. | 0.15 | | | 0.15 |
| Office | 710 | General Office Buiding | 1000 SF GFA | Weekday, P.M. Peak Hour | 1.49 | | | 1.49 |
| Office | 720 | Medical-Dental Office Building | 1000 SF GFA | Weekday, PH of Adj. St. Traffic, One Hr. Between 4 & 6 p.m. | 3.66 | | | 3.66 |
| Office | 750 | Office Park | 1000 SF GFA | Weekday, P.M. Peak Hour | 1.50 | | | 1.50 |
| Office | 770AC | Business Park | Acres | Weekday, P.M. Peak Hour | 16.84 | | | 16.84 |
| Office | 770SF | Business Park | 1000 SF GFA | Weekday, P.M. Peak Hour | 1.29 | | | 1.29 |
| Retail | 812 | Building Materials and Lumber Store | 1000 SF GFA | Weekday, PH of Adj. St. Traffic, One Hr. Between 4 & 6 p.m. | 4.04 | | | 4.04 |
| Retail | 814 | Specialty Retail Center | 1000 SF GLA | Weekday, PH of Adj. St. Traffic, One Hr. Between 4 & 6 p.m. | 2.59 | X | | 2.59 |
| Retail | 816 | Hardware/Paint Store | 1000 SF GFA | Weekday, PH of Adj. St. Traffic, One Hr. Between 4 & 6 p.m. | 4.42 | | | 4.42 |
| Retail | 817 | Nursery (Garden Center) | 1000 SF GFA | Weekday, PH of Adj. St. Traffic, One Hr. Between 4 & 6 p.m. | 3.80 | | | 3.80 |
| Retail | 818 | Nursery (Wholesale) | 1000 SF GFA | Weekday, PH of Adj. St. Traffic, One Hr. Between 4 & 6 p.m. | 5.17 | | | 5.17 |
| Retail | 820 | Shopping Center | 1000 SF GLA | Weekday, PH of Adj. St. Traffic, One Hr. Between 4 & 6 p.m. | 3.74 | | 34% | 2.47 |
| Retail | 823 | Factory Outlet Center | 1000 SF GFA | Weekday, PH of Adj. St. Traffic, One Hr. Between 4 & 6 p.m. | 1.69 | | | 1.69 |
| Retail | 832 | High-Turnover (Sit-Down) Restaurant | 1000 SF GFA | Weekday, PH of Adj. St. Traffic, One Hr. Between 4 & 6 p.m. | 10.86 | | 43% | 6.19 |
| Retail | 834 | Fast-Food Restaurant with Drive-Through Window | 1000 SF GFA | Weekday, PH of Adj. St. Traffic, One Hr. Between 4 & 6 p.m. | 33.48 | | 50% | 16.74 |
| Retail | 836 | Drinking Place | 1000 SF GFA | Weekday, PH of Adj. St. Traffic, One Hr. Between 4 & 6 p.m. | 11.54 | | | 11.54 |
| Retail | 840 | Automobile Care Center | 1000 SF GFA | Weekday, PH of Adj. St. Traffic, One Hr. Between 4 & 6 p.m. | 3.38 | X | | 3.38 |
| Retail | 843 | Automobile Parts Sales | 1000 SF GFA | Weekday, PH of Adj. St. Traffic, One Hr. Between 4 & 6 p.m. | 5.98 | X | 43% | 3.41 |
| Retail | 845 | Gasoline/Service Station with Convenience Market | 1000 SF GFA | Weekday, PH of Adj. St. Traffic, One Hr. Between 4 & 6 p.m. | 96.37 | | 56% | 42.40 |
| Retail | 848 | Tire Store | 1000 SF GFA | Weekday, PH of Adj. St. Traffic, One Hr. Between 4 & 6 p.m. | 4.12 | | 28% | 2.97 |
| Retail | 850 | Supermarket | 1000 SF GFA | Weekday, PH of Adj. St. Traffic, One Hr. Between 4 & 6 p.m. | 11.51 | | 36% | 7.37 |
| Retail | 851 | Convenience Market (Open 24 Hours) | 1000 SF GFA | Weekday, PH of Adj. St. Traffic, One Hr. Between 4 & 6 p.m. | 53.73 | | 61% | 20.95 |
| Retail | 853 | Convenience Market with Gasoline Pumps | 1000 SF GFA | Weekday, PH of Adj. St. Traffic, One Hr. Between 4 & 6 p.m. | 60.61 | | 66% | 20.61 |
| Retail | 870 | Apparel Store | 1000 SF GFA | Weekday, PH of Adj. St. Traffic, One Hr. Between 4 & 6 p.m. | 3.83 | | | 3.83 |
| Retail | 880 | Pharmacy/Drugstore without Drive-Through Window | 1000 SF GFA | Weekday, PH of Adj. St. Traffic, One Hr. Between 4 & 6 p.m. | 7.63 | | 53% | 3.59 |
| Retail | 881 | Pharmacy/Drugstore with Drive-Through Window | 1000 SF GFA | Weekday, PH of Adj. St. Traffic, One Hr. Between 4 & 6 p.m. | 10.40 | X | 49% | 5.30 |
| Retail | 896 | Video Rental Store | 1000 SF GFA | Weekday, PH of Adj. St. Traffic, One Hr. Between 4 & 6 p.m. | 13.60 | | | 13.60 |
| Services | 912 | Drive-In Bank | 1000 SF GFA | Weekday, PH of Adj. St. Traffic, One Hr. Between 4 & 6 p.m. | 54.77 | | 47% | 29.03 |
| | 999 | Average Commercial (Office, Retail, Services) | | | 16.00 | | | 8.88 |
| | 999PMX | Average of Small Retail | | | 12.02 | | | 7.07 |

## Dowell Road 0.8

| By: | CAD | 5/2/2003 |
|---|---|---|
| QA/QC: | | |

| | | Date | Leg Volumes | | Units or Additional comments |
|---|---|---|---|---|---|
| | | | 140 | | PM Peak Hour Vehicles |
| Directional | | App | 60% | | |
| Distribution | | Dep | 40% | | |
| (Assumed) | | Peak | 60% | | |
| | | **2025** | 0.0% | Growth Rates | Apply to Through Trips |
| | | **2025** | 1.00 | Growth Factors | |
| | | | 140 | Growth-Factored Vol. | not rounded |

| Land Use Forecasts | | | | Centroid Loads | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| TAZ | TAZ Total Trip Gen. | Aggregate Group | % of TAZ | N/O | S/O | E/O | W/O | Trips to Assign | |
| 1 | 0 | | 0% | | | | | 0 Trips | |
| 2 | 26 | | 0% | | | | | 0 Trips | |
| 3 | 31 | | 0% | | | | | 0 Trips | |
| 4 | 65 | | 0% | | | | | 0 Trips | |
| 5 | 11 | | 0% | | | | | 0 Trips | |
| 6 | 27 | | 0% | | | | | 0 Trips | |
| 7 | 51 | | 0% | | | | | 0 Trips | |
| 8 | 50 | | 0% | | | | | 0 Trips | |
| 9 | 28 | | 45% | | | | | 13 Trips | |
| 10 | 44 | | 40% | | | | | 18 Trips | |
| 11 | 65 | | 30% | | | | | 20 Trips | |
| 12 | 23 | | 0% | | | | | 0 Trips | |
| 13 | 28 | | 0% | | | | | 0 Trips | |
| 14 | 41 | | 0% | | | | | 0 Trips | |
| 15 | 33 | | 0% | | | | | 0 Trips | |
| 16 | 23 | | 0% | | | | | 0 Trips | |
| 17 | 21 | | 0% | | | | | 0 Trips | |
| 18 | 32 | | 0% | | | | | 0 Trips | |
| 19 | 56 | | 0% | | | | | 0 Trips | |
| 20 | 37 | | 5% | | | | | 2 Trips | |
| 21 | 3 | | 0% | | | | | 0 Trips | |
| 22 | 16 | | 0% | | | | | 0 Trips | |
| 23 | 44 | | 0% | | | | | 0 Trips | |
| 24 | 29 | | 0% | | | | | 0 Trips | |
| 25 | 2 | | 0% | | | | | 0 Trips | |
| 26 | 13 | | 0% | | | | | 0 Trips | |
| 27 | 9 | | 0% | | | | | 0 Trips | |
| 28 | 24 | | 0% | | | | | 0 Trips | |
| 29 | 58 | | 0% | | | | | 0 Trips | |
| 30 | 31 | | 0% | | | | | 0 Trips | |
| 31 | 17 | | 0% | | | | | 0 Trips | |
| 32 | 50 | | 0% | | | | | 0 Trips | |
| 33 | 17 | | 0% | | | | | 0 Trips | |
| 34 | 3 | | 0% | | | | | 0 Trips | |
| 35 | 8 | | 0% | | | | | 0 Trips | |
| 36 | 2 | | 0% | | | | | 0 Trips | |
| 37 | 2 | | 0% | | | | | 0 Trips | |
| 38 | 20 | | 0% | | | | | 0 Trips | |
| | | | | | 53 | | | Trip Growth | unrounded |
| | | | | | 53 | | | Trip Growth | rounded to nearest 1 trip |
| | | | | | **200** | | | **2025 Total Volumes** | rounded **up** to the nearest 10 vehicles |
| | | | **Resultant Growth Factor** | | 1.43 | | | | |

## Leonard Road 2.02

| By: | CAD | 5/2/2003 |
|---|---|---|
| QA/QC: | | |

| | | Date | Leg Volumes | | Units or Additional comments |
|---|---|---|---|---|---|
| | | | 60 | | PM Peak Hour Vehicles |
| Directional | | App | 60% | | |
| Distribution | | Dep | 40% | | |
| (Assumed) | | Peak | 60% | | |
| | | **2025** | 0.0% | Growth Rates | Apply to Through Trips |
| | | **2025** | 1.00 | Growth Factors | |
| | | | 60 | Growth-Factored Vol. | not rounded |

| Land Use Forecasts | | | | Centroid Loads | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| TAZ | TAZ Total Trip Gen. | Aggregate Group | % of TAZ | N/O | S/O | E/O | W/O | Trips to Assign | |
| 1 | 0 | | 0% | | | | | 0 Trips | |
| 2 | 26 | | 20% | | | | | 5 Trips | |
| 3 | 31 | | 20% | | | | | 6 Trips | |
| 4 | 65 | | 40% | | | | | 26 Trips | |
| 5 | 11 | | 0% | | | | | 0 Trips | |
| 6 | 27 | | 0% | | | | | 0 Trips | |
| 7 | 51 | | 0% | | | | | 0 Trips | |
| 8 | 50 | | 0% | | | | | 0 Trips | |
| 9 | 28 | | 0% | | | | | 0 Trips | |
| 10 | 44 | | 0% | | | | | 0 Trips | |
| 11 | 65 | | 0% | | | | | 0 Trips | |
| 12 | 23 | | 0% | | | | | 0 Trips | |
| 13 | 28 | | 0% | | | | | 0 Trips | |
| 14 | 41 | | 0% | | | | | 0 Trips | |
| 15 | 33 | | 0% | | | | | 0 Trips | |
| 16 | 23 | | 0% | | | | | 0 Trips | |
| 17 | 21 | | 0% | | | | | 0 Trips | |
| 18 | 32 | | 0% | | | | | 0 Trips | |
| 19 | 56 | | 0% | | | | | 0 Trips | |
| 20 | 37 | | 0% | | | | | 0 Trips | |
| 21 | 3 | | 0% | | | | | 0 Trips | |
| 22 | 16 | | 0% | | | | | 0 Trips | |
| 23 | 44 | | 0% | | | | | 0 Trips | |
| 24 | 29 | | 0% | | | | | 0 Trips | |
| 25 | 2 | | 0% | | | | | 0 Trips | |
| 26 | 13 | | 0% | | | | | 0 Trips | |
| 27 | 9 | | 0% | | | | | 0 Trips | |
| 28 | 24 | | 0% | | | | | 0 Trips | |
| 29 | 58 | | 0% | | | | | 0 Trips | |
| 30 | 31 | | 0% | | | | | 0 Trips | |
| 31 | 17 | | 0% | | | | | 0 Trips | |
| 32 | 50 | | 0% | | | | | 0 Trips | |
| 33 | 17 | | 0% | | | | | 0 Trips | |
| 34 | 3 | | 0% | | | | | 0 Trips | |
| 35 | 8 | | 0% | | | | | 0 Trips | |
| 36 | 2 | | 0% | | | | | 0 Trips | |
| 37 | 2 | | 0% | | | | | 0 Trips | |
| 38 | 20 | | 0% | | | | | 0 Trips | |
| | | | | | 37 | | | Trip Growth | unrounded |
| | | | | | 37 | | | Trip Growth | rounded to nearest 1 trip |
| | | | | | **100** | | | **2025 Total Volumes** | rounded **up** to the nearest 10 vehicles |
| | | | **Resultant Growth Factor** | | 1.67 | | | | |

## Lonnon Road 0.03

| By: | CAD | 5/2/2003 |
|---|---|---|
| QA/QC: | | |

| | | Date | Leg Volumes | | Units or Additional comments |
|---|---|---|---|---|---|
| | | | 100 | | PM Peak Hour Vehicles |
| Directional | | App | 60% | | |
| Distribution | | Dep | 40% | | |
| (Assumed) | | Peak | 60% | | |
| | | **2025** | 0.0% | Growth Rates | Apply to Through Trips |
| | | **2025** | 1.00 | Growth Factors | |
| | | | 100 | Growth-Factored Vol. | not rounded |

| Land Use Forecasts | | | | Centroid Loads | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| TAZ | TAZ Total Trip Gen. | Aggregate Group | % of TAZ | N/O | S/O | E/O | W/O | Trips to Assign | |
| 1 | 0 | | 0% | | | | | 0 Trips | |
| 2 | 26 | | 0% | | | | | 0 Trips | |
| 3 | 31 | | 0% | | | | | 0 Trips | |
| 4 | 65 | | 0% | | | | | 0 Trips | |
| 5 | 11 | | 0% | | | | | 0 Trips | |
| 6 | 27 | | 0% | | | | | 0 Trips | |
| 7 | 51 | | 0% | | | | | 0 Trips | |
| 8 | 50 | | 0% | | | | | 0 Trips | |
| 9 | 28 | | 10% | | | | | 3 Trips | |
| 10 | 44 | | 10% | | | | | 4 Trips | |
| 11 | 65 | | 20% | | | | | 13 Trips | |
| 12 | 23 | | 0% | | | | | 0 Trips | |
| 13 | 28 | | 0% | | | | | 0 Trips | |
| 14 | 41 | | 0% | | | | | 0 Trips | |
| 15 | 33 | | 0% | | | | | 0 Trips | |
| 16 | 23 | | 0% | | | | | 0 Trips | |
| 17 | 21 | | 0% | | | | | 0 Trips | |
| 18 | 32 | | 0% | | | | | 0 Trips | |
| 19 | 56 | | 0% | | | | | 0 Trips | |
| 20 | 37 | | 5% | | | | | 2 Trips | |
| 21 | 3 | | 0% | | | | | 0 Trips | |
| 22 | 16 | | 0% | | | | | 0 Trips | |
| 23 | 44 | | 0% | | | | | 0 Trips | |
| 24 | 29 | | 0% | | | | | 0 Trips | |
| 25 | 2 | | 0% | | | | | 0 Trips | |
| 26 | 13 | | 0% | | | | | 0 Trips | |
| 27 | 9 | | 0% | | | | | 0 Trips | |
| 28 | 24 | | 0% | | | | | 0 Trips | |
| 29 | 58 | | 0% | | | | | 0 Trips | |
| 30 | 31 | | 0% | | | | | 0 Trips | |
| 31 | 17 | | 0% | | | | | 0 Trips | |
| 32 | 50 | | 0% | | | | | 0 Trips | |
| 33 | 17 | | 0% | | | | | 0 Trips | |
| 34 | 3 | | 0% | | | | | 0 Trips | |
| 35 | 8 | | 0% | | | | | 0 Trips | |
| 36 | 2 | | 0% | | | | | 0 Trips | |
| 37 | 2 | | 0% | | | | | 0 Trips | |
| 38 | 20 | | 0% | | | | | 0 Trips | |
| | | | | | 22 | | | Trip Growth | unrounded |
| | | | | | 22 | | | Trip Growth | rounded to nearest 1 trip |
| | | | | | **130** | | | **2025 Total Volumes** | rounded **up** to the nearest 10 vehicles |
| | | | **Resultant Growth Factor** | | 1.30 | | | | |

## Woodland Park Road 0.1

| By: | CAD | 5/2/2003 |
|---|---|---|
| QA/QC: | | |

| | | Date | Leg Volumes | | Units or Additional comments |
|---|---|---|---|---|---|
| | | | 70 | | PM Peak Hour Vehicles |
| Directional | | App | 60% | | |
| Distribution | | Dep | 40% | | |
| (Assumed) | | Peak | 60% | | |
| | | **2025** | 0.0% | Growth Rates | Apply to Through Trips |
| | | **2025** | 1.00 | Growth Factors | |
| | | | 70 | Growth-Factored Vol. | not rounded |

| Land Use Forecasts | | | | Centroid Loads | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| TAZ | TAZ Total Trip Gen. | Aggregate Group | % of TAZ | N/O | S/O | E/O | W/O | Trips to Assign | |
| 1 | 0 | | 0% | | | | | 0 Trips | |
| 2 | 26 | | 0% | | | | | 0 Trips | |
| 3 | 31 | | 0% | | | | | 0 Trips | |
| 4 | 65 | | 0% | | | | | 0 Trips | |
| 5 | 11 | | 0% | | | | | 0 Trips | |
| 6 | 27 | | 45% | | | | | 12 Trips | |
| 7 | 51 | | 40% | | | | | 20 Trips | |
| 8 | 50 | | 0% | | | | | 0 Trips | |
| 9 | 28 | | 0% | | | | | 0 Trips | |
| 10 | 44 | | 0% | | | | | 0 Trips | |
| 11 | 65 | | 0% | | | | | 0 Trips | |
| 12 | 23 | | 0% | | | | | 0 Trips | |
| 13 | 28 | | 0% | | | | | 0 Trips | |
| 14 | 41 | | 0% | | | | | 0 Trips | |
| 15 | 33 | | 0% | | | | | 0 Trips | |
| 16 | 23 | | 0% | | | | | 0 Trips | |
| 17 | 21 | | 0% | | | | | 0 Trips | |
| 18 | 32 | | 0% | | | | | 0 Trips | |
| 19 | 56 | | 0% | | | | | 0 Trips | |
| 20 | 37 | | 0% | | | | | 0 Trips | |
| 21 | 3 | | 0% | | | | | 0 Trips | |
| 22 | 16 | | 0% | | | | | 0 Trips | |
| 23 | 44 | | 0% | | | | | 0 Trips | |
| 24 | 29 | | 40% | | | | | 12 Trips | |
| 25 | 2 | | 0% | | | | | 0 Trips | |
| 26 | 13 | | 0% | | | | | 0 Trips | |
| 27 | 9 | | 0% | | | | | 0 Trips | |
| 28 | 24 | | 0% | | | | | 0 Trips | |
| 29 | 58 | | 0% | | | | | 0 Trips | |
| 30 | 31 | | 0% | | | | | 0 Trips | |
| 31 | 17 | | 0% | | | | | 0 Trips | |
| 32 | 50 | | 0% | | | | | 0 Trips | |
| 33 | 17 | | 0% | | | | | 0 Trips | |
| 34 | 3 | | 0% | | | | | 0 Trips | |
| 35 | 8 | | 0% | | | | | 0 Trips | |
| 36 | 2 | | 0% | | | | | 0 Trips | |
| 37 | 2 | | 0% | | | | | 0 Trips | |
| 38 | 20 | | 0% | | | | | 0 Trips | |
| | | | | | 44 | | | Trip Growth | unrounded |
| | | | | | 44 | | | Trip Growth | rounded to nearest 1 trip |
| | | | | | **120** | | | **2025 Total Volumes** | rounded **up** to the nearest 10 vehicles |
| | | | **Resultant Growth Factor** | | 1.71 | | | | |

Murphy Vacant Land Summary by TAZ and Land Use Category

| | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| External Trip Generation | | 0 | 26 | 31 | 65 | 11 | 27 | 51 | 50 | 28 | 44 | 65 | 23 | 28 | 41 | 33 | 23 | 21 | 32 | 56 | 37 | 3 | 16 |
| | | TAZ ID | | | | | | | | | | | | | | | | | | | | | |
| DESC | Data | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 |
| Business Park | Sum of ACRES | | | | | | | | | | | 0.106 | | | | | | | | | | | |
| | Sum of Parcels | | | | | | | | | | | 0 | | | | | | | | | | | |
| General Commercial | Sum of ACRES | | | | | | | | 0.197 | | | | | | | | | | 0.165 | | | | |
| | Sum of Parcels | | | | | | | | 5 | | | | | | | | | | 3 | | | | |
| High Density Residential | Sum of ACRES | | | | | | | | 0.232 | | | | | | | | | | | | | | |
| | Sum of Parcels | | | | | | | | 4 | | | | | | | | | | | | | | |
| Low Density Residential | Sum of ACRES | | | | 0.94 | | | | | | | 0.333 | 0.462 | 0.044 | 0.233 | | | 0.266 | 3.754 | 0.186 | | | |
| | Sum of Parcels | | | | 4 | | | | | | | 20 | 10 | 0 | 0 | | | 4 | 49 | 15 | | | |
| Medium Density Residential | Sum of ACRES | | | | | | | | | | | 0.001 | | | | | | | | | | | |
| | Sum of Parcels | | | | | | | | | | | 1 | | | | | | | | | | | |
| River | Sum of ACRES | | | | 0.016 | | | | | | | | | | | | | | | | | | |
| | Sum of Parcels | | | | 0 | | | | | | | | | | | | | | | | | | |
| Rural Commercial | Sum of ACRES | | | 0.196 | | | 0.01 | 0.119 | 0.351 | 0.252 | 0.001 | 0.01 | | | | | | | | 0.028 | | | |
| | Sum of Parcels | | | 2 | | | 1 | 1 | 2 | 1 | 0 | 0 | | | | | | | | 0 | | | |
| Rural Convenience Commercial | Sum of ACRES | | | | | | | | | | | | | | | | | | | | | | |
| | Sum of Parcels | | | | | | | | | | | | | | | | | | | | | | |
| Rural Industrial | Sum of ACRES | | | | | | | | | | | | | | | | | | | | | | |
| | Sum of Parcels | | | | | | | | | | | | | | | | | | | | | | |
| Rural Residential 1 Acre | Sum of ACRES | | | 2.657 | 12.586 | | | | | | | 0 | | 0.854 | 0.006 | 0.002 | 0.127 | | 0.375 | 1.055 | | | |
| | Sum of Parcels | | | 17 | 83 | | | | | | | 1 | | 8 | 0 | 0 | 4 | | 1 | 7 | | | |
| Rural Residential 2.5 Acre | Sum of ACRES | | 12.282 | 1.81 | | 1.18 | | 0.069 | 10.573 | 1.944 | 0.336 | | | | | | | 0.095 | 1.014 | | | | |
| | Sum of Parcels | | 31 | 10 | | 9 | | 2 | 46 | 8 | 2 | | | | | | | 0 | 3 | | | | |
| Rural Residential 5 Acre | Sum of ACRES | 2.448 | 8.653 | 17.792 | 22.812 | 4.83 | 11.424 | 33.749 | 19.313 | 20.105 | 24.42 | 32.864 | 12.66 | 9.993 | 17.155 | 18.385 | 14.639 | 11.655 | 11.278 | 17.829 | 19.42 | 5.15 | 8.653 |
| | Sum of Parcels | 0 | 25 | 38 | 51 | 14 | 58 | 107 | 56 | 52 | 91 | 115 | 39 | 51 | 88 | 70 | 44 | 40 | 16 | 97 | 78 | 7 | 35 |
| Total Sum of ACRES | | 2.448 | 20.935 | 22.455 | 36.354 | 6.01 | 11.434 | 33.937 | 30.666 | 22.301 | 24.757 | 33.314 | 13.122 | 10.891 | 17.394 | 18.387 | 14.766 | 12.016 | 16.586 | 19.098 | 19.42 | 5.15 | 8.653 |
| Total Sum of Parcels | | 0 | 56 | 67 | 138 | 23 | 59 | 110 | 113 | 61 | 93 | 137 | 49 | 59 | 88 | 70 | 48 | 44 | 72 | 119 | 78 | 7 | 35 |
| Total Residential Parcels | | 0 | 56 | 65 | 138 | 23 | 58 | 109 | 106 | 60 | 93 | 137 | 49 | 59 | 88 | 70 | 48 | 44 | 69 | 119 | 78 | 7 | 35 |
| Percent of Residential Parcels | | 0.00% | 2.53% | 2.94% | 6.24% | 1.04% | 2.62% | 4.93% | 4.79% | 2.71% | 4.21% | 6.20% | 2.22% | 2.67% | 3.98% | 3.17% | 2.17% | 1.99% | 3.12% | 5.38% | 3.53% | 0.32% | 1.58% |
| *Allocation of Residential Growth (dwelling units)* | | *0* | *33* | *39* | *82* | *14* | *35* | *65* | *63* | *36* | *55* | *82* | *29* | *35* | *52* | *42* | *29* | *26* | *41* | *71* | *46* | *4* | *21* |
| Trip Generation Total | 0.79 | 0 | 26 | 31 | 65 | 11 | 27 | 51 | 50 | 28 | 44 | 65 | 23 | 28 | 41 | 33 | 23 | 21 | 32 | 56 | 37 | 3 | 16 |
| Internal Traffic Shed Trip Capture | 0% | | | | | | | | | | | | | | | | | | | | | | |

Note: No growth in commercial or industrial land uses is assumed in Murphy.

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 44 | 29 | 2 | 13 | 9 | 24 | 58 | 31 | 17 | 50 | 17 | 3 | 8 | 2 | 2 | 20 | |
| | | | | | | | | | | | | | | | | |
| 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | Grand Total |
| | | | | | | | | | | | | | | | | 0.106<br>0 |
| | | | | | | | | | | | | | | | | 0.362<br>8 |
| | | | | | | | | | | | | | | | | 0.232<br>4 |
| | | | | | | | | | | | | | | | | 5.365<br>112 |
| | | | | | | | | | | | | | | | | 0.001<br>1 |
| | | | | | | | | | | | | | | | | 0.016<br>0 |
| | | | | | | | 0.099<br>8 | 0.314<br>0 | 0.294<br>3 | | | | | | | 1.674<br>18 |
| | | | | | | | 0.018<br>1 | | 0.649<br>2 | | 0.17<br>4 | | | | 0.436<br>5 | 1.273<br>12 |
| | | | | | | | | | | | 0.372<br>1 | | | | 0<br>3 | 0.372<br>4 |
| | | | | | | | 0<br>0 | | 0.953<br>2 | | 0<br>0 | | | | 1.54<br>10 | 20.155<br>133 |
| | | | | 6.176<br>19 | | 4.025<br>21 | 0.229<br>0 | | 0<br>0 | | | 0.4<br>2 | | | | 40.133<br>153 |
| 32.963 | 30.389 | 2.975 | 3.867 | 9.092 | 10.832 | 30.157 | 16.213 | 7.979 | 20.062 | 20.884 | 5.903 | 6.628 | 3.644 | 2.597 | 16.291 | 565.703 |
| 94 | 61 | 5 | 9 | 19 | 29 | 124 | 65 | 37 | 104 | 37 | 6 | 15 | 5 | 4 | 32 | 1818 |
| 32.963 | 30.389 | 2.975 | 10.043 | 9.092 | 14.857 | 30.386 | 16.33 | 8.293 | 21.958 | 20.884 | 6.445 | 7.028 | 3.644 | 2.597 | 18.267 | 635.392 |
| 94 | 61 | 5 | 28 | 19 | 50 | 124 | 74 | 37 | 111 | 37 | 11 | 17 | 5 | 4 | 50 | 2263 |
| | | | | | | | | | | | | | | | | |
| 94 | 61 | 5 | 28 | 19 | 50 | 124 | 65 | 37 | 106 | 37 | 6 | 17 | 5 | 4 | 42 | 2211 |
| 4.25% | 2.76% | 0.23% | 1.27% | 0.86% | 2.26% | 5.61% | 2.94% | 1.67% | 4.79% | 1.67% | 0.27% | 0.77% | 0.23% | 0.18% | 1.90% | 100.00% |
| *56* | *36* | *3* | *17* | *11* | *30* | *74* | *39* | *22* | *63* | *22* | *4* | *10* | *3* | *2* | *25* | *1318* |
| 44 | 29 | 2 | 13 | 9 | 24 | 58 | 31 | 17 | 50 | 17 | 3 | 8 | 2 | 2 | 20 | 1040 |

*1318*

# APPENDIX D

## Project Evaluation Matrices

**Josephine County Transportation System Plan Evaluation of Alternative Scenarios**

Evaluation Criteria Worksheet

No Build Scenario Projects and Evaluation

| | | Improves Safety | | Meets Performance Standards | | Improves Non-motorized Mobility | | Economic Development | | Fiscal Impacts | | | | | Provides Sufficient Capacity | | | Efficiency & Circulation | | | Minimizes Environmental Impacts | | | | Impacts on Property Owners | Environmental Justice | Meets Multiple Objectives |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Projects and Ratings (-2, -1, 0, 1, 2) | TOTALS FOR EACH IMPROVEMENT | Addresses Problem Locations | Improves Travel Safety | County LOS | State V/C | Pedestrians | Bicyclists | Freight Mobility | Business Access | Range of Cost ($, $$ or $$$) | Cost- Effective | Fundable | Extends Facility Life | Impact on Builders/ Developers | Streets | Transit | Other Modes | Improves Street Connectivity | Connects Other Modes | Good use of Existing Facilities | Natural Environment | Neighborhoods | Design Impacts | Preserves Rural Character | Potential Property Owner Impacts | Benefits Transportation-Disadvantaged | Multiple Objectives |
| **No Build Scenario Improvements** | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Routine Programmed Maintenance | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Replace Grave Cr. Bridge on Beecher Rd. (ODOT) | | No - Build projects are not evaluated or prioritized, these projects are all funded and assumed to be constructed. | | | | | | | | | | | | | | | | | | | | | | | | | |
| Install variable message signs on I-5 for mtn. safety (ODOT) | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Replace Illinois River Bridges on US 199 (ODOT) | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Continue but reduce level of basic transit service consistent with available funding | | | | | | | | | | | | | | | | | | | | | | | | | | | |

**Josephine County Transportation System Plan Evaluation of Alternative Scenarios**

Evaluation Criteria Worksheet

Maintenance Scenario Projects and Evaluation

| | | Improves Safety | | Meets Performance Standards | | Improves Non-motorized Mobility | | Economic Development | | Fiscal Impacts | | | | | Provides Sufficient Capacity | | | Efficiency & Circulation | | | Minimizes Environmental Impacts | | | | Impacts on Property Owners | Environmental Justice | Meets Multiple Objectives |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Projects and Ratings (-2, -1, 0, 1, 2) | TOTALS FOR EACH IMPROVEMENT | Addresses Problem Locations | Improves Travel Safety | County LOS | State V/C | Pedestrians | Bicyclists | Freight Mobility | Business Access | Range of Cost ($, $$ or $$$) | Cost- Effective | Fundable | Extends Facility Life | Impact on Builders/ Developers | Streets | Transit | Other Modes | Improves Street Connectivity | Connects Other Modes | Good use of Existing Facilities | Natural Environment | Neighborhoods | Design Impacts | Preserves Rural Character | Potential Property Owner Impacts | Benefits Transportation-Disadvantaged | Multiple Objectives |
| **Maintenance Scenario Improvements** | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Expanded Routine Maintenance (increased rate of coverage) | 16 | 1 | 1 | 0 | 0 | 2 | 1 | 1 | 1 | $ | 2 | 0 | 0 | 0 | 1 | 0 | 2 | 1 | 1 | 1 | 0 | 1 | -1 | 0 | -1 | 1 | 1 |
| Monument Dr (Merlin Rd - Timber Ln): Add left turn lanes | 14 | 1 | 2 | 1 | 0 | 0 | 0 | 2 | 2 | $$ | 1 | 0 | 0 | 1 | 2 | 1 | 0 | 1 | 0 | 1 | 0 | 1 | -1 | -1 | -1 | 0 | 1 |
| Widen shoulders (to at least 4')/realign Plumtree Ln, Camp Joy - Upper River | 19 | 1 | 2 | 0 | 0 | 2 | 2 | 1 | 1 | $$ | 1 | 0 | 1 | 1 | 1 | 0 | 2 | 1 | 2 | 1 | -1 | 0 | 0 | -1 | -1 | 2 | 1 |
| Widen/resurface shoulders (to at least 4') on New Hope Rd, MP 0.0 - 3.7 | 18 | 2 | 2 | 0 | 0 | 2 | 2 | 1 | 1 | $ | 1 | 0 | 0 | 1 | 1 | 0 | 2 | 1 | 2 | 1 | -1 | 0 | -1 | -1 | -1 | 2 | 1 |
| Widen/resurface shoulders (to at least 4') on Cloverlawn, MP 0.5 to 3.6 | 16 | 0 | 2 | 0 | 0 | 2 | 2 | 1 | 1 | $ | 1 | 0 | 0 | 1 | 1 | 0 | 2 | 1 | 2 | 1 | -1 | 0 | -1 | -1 | -1 | 2 | 1 |
| Widen/resurface shoulders (to at least 4') on Lakeshore, MP 0.2 to 3.0 | 16 | 0 | 2 | 0 | 0 | 2 | 2 | 1 | 1 | $ | 1 | 0 | 0 | 1 | 1 | 0 | 2 | 1 | 2 | 1 | -1 | 0 | -1 | -1 | -1 | 2 | 1 |
| Widen/resurface shoulders (to at least 4') on Laurel, MP 0.0 - 2.2 | 18 | 0 | 2 | 0 | 0 | 2 | 2 | 1 | 1 | $ | 1 | 0 | 0 | 1 | 1 | 0 | 2 | 1 | 2 | 1 | -1 | 0 | -1 | 1 | -1 | 2 | 1 |
| Replace Jacks Creek Bridge on Jumpoff Joe Creek Rd. | 17 | 2 | 1 | 0 | 0 | 1 | 1 | 1 | 0 | $$$ | 1 | 0 | 2 | 1 | 0 | 0 | 1 | 0 | 1 | 2 | 0 | 1 | 0 | 0 | 1 | 0 | 1 |
| Replace Jones Creek Bridge on Foothill Blvd. | 18 | 2 | 1 | 0 | 0 | 1 | 1 | 1 | 1 | $$$ | 1 | 0 | 2 | 1 | 0 | 0 | 1 | 0 | 1 | 2 | 0 | 1 | 0 | 0 | 1 | 0 | 1 |
| Replace Sucker Creek Bridge on Holland Lp Rd. | 16 | 2 | 1 | 0 | 0 | 1 | 1 | 0 | 0 | $$$ | 1 | 0 | 2 | 1 | 0 | 0 | 1 | 0 | 1 | 2 | 0 | 1 | 0 | 0 | 1 | 0 | 1 |

Rankings: -2 = least effective at meeting criteria or greater potential negative impact, -1 = ineffective or less potential negative impact, 0 = neutral, 1 = moderately effective or some positive impact, 2 = most effective or greater positive impact

**Josephine County Transportation System Plan Evaluation of Alternative Scenarios**

Evaluation Criteria Worksheet

Safety Scenario Projects and Evaluation

| | | Improves Safety | | Meets Performance Standards | | Improves Non-motorized Mobility | | Economic Development | | Fiscal Impacts | | | | | Provides Sufficient Capacity | | | Efficiency & Circulation | | | Minimizes Environmental Impacts | | | | Impacts on Property Owners | Environmental Justice | Meets Multiple Objectives |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Projects and Ratings (-2, -1, 0, 1, 2) | TOTALS FOR EACH IMPROVEMENT | Addresses Problem Locations | Improves Travel Safety | County LOS | State V/C | Pedestrians | Bicyclists | Freight Mobility | Business Access | Range of Cost ($, $$ or $$$) | Cost- Effective | Fundable | Extends Facility Life | Impact on Builders/ Developers | Streets | Transit | Other Modes | Improves Street Connectivity | Connects Other Modes | Good use of Existing Facilities | Natural Environment | Neighborhoods | Design Impacts | Preserves Rural Character | Potential Property Owner Impacts | Benefits Transportation-Disadvantaged | Multiple Objectives |
| **Safety Scenario Improvements** | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Williams Hwy. @ Tetherow Rd. (MP 5.76): Install warning signs | 7 | 1 | 1 | 0 | 0 | 0 | 1 | 1 | 0 | $ | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Azalea Drive at Robertson Bridge Road (MP 5.242): all-way stop or realignment to enhance safety | 12 | 2 | 2 | 0 | 0 | 1 | 2 | 1 | 1 | $$ | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 1 | 1 | -1 | -1 | 0 | 0 | 0 | 1 | 1 |
| Holland Lp. Rd. @ Hayes Cutoff Rd.: Install warning signs | 9 | 1 | 1 | 0 | 0 | 0 | 1 | 1 | 0 | $ | 1 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Hwy. 238 @ Williams Hwy. (MP 0.0): Install warning signs | 8 | 1 | 1 | 0 | 0 | 0 | 1 | 1 | 0 | $ | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Redwood Avenue at Southgate Way (MP 2.659): Trim/eliminate trees obscuring sight distance. | 3 | 1 | 1 | 0 | 0 | 0 | 1 | 1 | 0 | $ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | -1 | -1 | 0 | 0 | -1 | -1 | 1 | 0 |
| Highway 199 at Willow Lane (MP 0.138 on Willow Lane): intersection improvements, potential signalization. | 9 | 1 | 1 | 0 | 0 | 1 | 1 | 1 | 0 | $$ | 0 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 1 | 0 | 1 | 0 | -1 | 0 | 0 | 0 | 1 |
| Highway 199 at Waters Creek Road (MP 0.0 on Waters Creek Road), Flatten curve to improve sight distance; install warning signs. | 3 | 1 | 2 | 0 | 0 | 0 | 1 | 1 | 1 | $$ | -2 | 1 | -1 | 0 | 0 | 1 | 1 | 0 | 0 | -2 | -1 | -1 | 0 | 0 | 0 | 1 | 0 |
| Potential passing lane(s) on Highway 199 between MP 16-24 (northbound), and MP 7-14 (southbound). | 3 | 1 | 1 | 0 | 0 | 0 | 1 | 1 | 0 | $$$ | 0 | 1 | 0 | 2 | 1 | 0 | 1 | 0 | 0 | -1 | -1 | -1 | -1 | -1 | -1 | 0 | 1 |
| Highway 199 at Ken Rose Lane (MP 0.0 on Ken Rose Lane). Add a southbound left turn lane. | 8 | 1 | 1 | 0 | 0 | 0 | 1 | 1 | 0 | $$ | 0 | 1 | -1 | 1 | 1 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| Highway 199 at Waldo Road (MP 0.0 on Waldo Road). Add a southbound left turn lane. | 8 | 1 | 1 | 0 | 0 | 0 | 1 | 1 | 0 | $$ | 0 | 1 | -1 | 1 | 1 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| Hwy. 238 @ Jaynes Dr (MP 0.84): Add northbound and southbound left turn lanes | 9 | 1 | 1 | 1 | 0 | 0 | 1 | 1 | 0 | $$ | 0 | 1 | -1 | 1 | 1 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| Hwy 238 @ Applegate Rd, add left turn lanes on state highway | 6 | 1 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | $$ | 0 | 0 | -1 | 1 | 1 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| Widen shoulders to 4-feet within 1 mile of activity centers (see Figure 6) | 8 | 1 | 2 | 0 | 0 | 2 | 2 | 1 | 0 | $$ | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 0 | -1 | -1 | -1 | -1 | -1 | -1 | 2 | 1 |
| Install guard rail at various locations (see Figure 8) | 7 | 2 | 2 | 0 | 0 | 0 | 0 | 1 | 0 | $$ | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

Rankings: -2 = least effective at meeting criteria or greater potential negative impact, -1 = ineffective or less potential negative impact, 0 = neutral, 1 = moderately effective or some positive impact, 2 = most effective or greater positive impact

**Josephine County Transportation System Plan Evaluation of Alternative Scenarios**

Evaluation Criteria Worksheet

Mobility Scenario Projects and Evaluation

| | | Improves Safety | | Meets Performance Standards | | Improves Non-motorized Mobility | | Economic Development | | Fiscal Impacts | | | | | Provides Sufficient Capacity | | | Efficiency & Circulation | | | Minimizes Environmental Impacts | | | | Impacts on Property Owners | Environmental Justice | Meets Multiple Objectives |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Projects and Ratings (-2, -1, 0, 1, 2) | TOTALS FOR EACH IMPROVEMENT | Addresses Problem Locations | Improves Travel Safety | County LOS | State V/C | Pedestrians | Bicyclists | Freight Mobility | Business Access | Range of Cost ($, $$ or $$$) | Cost- Effective | Fundable | Extends Facility Life | Impact on Builders/ Developers | Streets | Transit | Other Modes | Improves Street Connectivity | Connects Other Modes | Good use of Existing Facilities | Natural Environment | Neighborhoods | Design Impacts | Preserves Rural Character | Potential Property Owner Impacts | Benefits Transportation-Disadvantaged | Multiple Objectives |
| **Mobility Scenario Improvements** | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| I-5 NB on/off ramps/Merlin-Galice Road: Signal, or | 28 | 0 | 2 | 2 | 2 | 1 | 1 | 2 | 2 | $$ | 2 | 1 | 1 | 1 | 2 | 1 | 1 | 0 | 0 | 2 | 1 | 1 | 1 | -1 | 1 | 0 | 2 |
| I-5 NB on/off ramps/Merlin-Galice Road: roundabout | 22 | 0 | 2 | 2 | 2 | 1 | 1 | 2 | 2 | $$ | 1 | 1 | 1 | 1 | 2 | 1 | 1 | 0 | 0 | 1 | 1 | 1 | -1 | -1 | -1 | 0 | 2 |
| Merlin-Galice/Monument: SB/WB turn lanes, restripe, signal modifications to provide NB/SB protected lefts | 21 | 0 | 2 | 2 | 1 | 1 | 0 | 2 | 2 | $$ | 2 | 0 | 1 | 1 | 2 | 1 | 1 | 0 | 0 | 2 | 0 | 1 | -1 | -1 | 0 | 0 | 2 |
| Highway 199/Redwood Avenue: Side street left turn lane | 11 | 0 | 1 | 2 | 1 | 0 | 0 | 1 | 1 | $ | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 1 |
| Slow vehicle turn-outs or passing lane locations on Galice Road | 4 | 0 | 1 | 1 | 0 | 0 | 1 | 1 | 1 | $$ | 0 | 0 | 0 | 0 | 2 | 1 | 0 | 0 | 0 | 0 | -1 | -1 | -1 | -1 | -1 | 0 | 1 |
| Retail all current transit service including intercity service to Cave Junction/Illinois Valley | 24 | 0 | 1 | 0 | 0 | 2 | 1 | 0 | 0 | $$ | 1 | 0 | 1 | 0 | 1 | 2 | 1 | 0 | 2 | 2 | 2 | 2 | 0 | 2 | 0 | 2 | 2 |
| Provide intercity transit service linking Grants Pass and Medford | 23 | 0 | 1 | 0 | 0 | 2 | 1 | 0 | 0 | $$ | 1 | 0 | 1 | 0 | 1 | 1 | 1 | 0 | 2 | 2 | 2 | 2 | 0 | 2 | 0 | 2 | 2 |
| Add regular transit service to Sunny Wolf area | 21 | 0 | 1 | 0 | 0 | 2 | 1 | 0 | 0 | $ | 1 | 0 | 1 | 0 | 0 | 1 | 1 | 0 | 2 | 2 | 1 | 2 | 0 | 2 | 0 | 2 | 2 |
| Install transit signs, benches, and shelters | 10 | 0 | 1 | 0 | 0 | 2 | 1 | 0 | 0 | $ | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 0 | 1 | 1 |

Rankings: -2 = least effective at meeting criteria or greater potential negative impact, -1 = ineffective or less potential negative impact, 0 = neutral, 1 = moderately effective or some positive impact, 2 = most effective or greater positive impact

**Josephine County Transportation System Plan Evaluation of Alternative Scenarios**

Evaluation Criteria Worksheet

Economic Development Scenario Projects and Evaluation

| | | Improves Safety | | Meets Performance Standards | | Improves Non-motorized Mobility | | Economic Development | | Fiscal Impacts | | | | | Provides Sufficient Capacity | | | Efficiency & Circulation | | | Minimizes Environmental Impacts | | | | Impacts on Property Owners | Environmental Justice | Meets Multiple Objectives |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Projects and Ratings (-2, -1, 0, 1, 2) | TOTALS FOR EACH IMPROVEMENT | Addresses Problem Locations | Improves Travel Safety | County LOS | State V/C | Pedestrians | Bicyclists | Freight Mobility | Business Access | Range of Cost ($, $$ or $$$) | Cost- Effective | Fundable | Extends Facility Life | Impact on Builders/ Developers | Streets | Transit | Other Modes | Improves Street Connectivity | Connects Other Modes | Good use of Existing Facilities | Natural Environment | Neighborhoods | Design Impacts | Preserves Rural Character | Potential Property Owner Impacts | Benefits Transportation-Disadvantaged | Multiple Objectives |
| **Economic Development Scenario Improvements** | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| I-5 NB on/off ramps/Merlin-Galice Road: Signal, or | 28 | 0 | 2 | 2 | 2 | 1 | 1 | 2 | 2 | $$ | 2 | 1 | 1 | 1 | 2 | 1 | 1 | 0 | 0 | 2 | 1 | 1 | 1 | -1 | 1 | 0 | 2 |
| I-5 NB on/off ramps/Merlin-Galice Road: roundabout | 22 | 0 | 2 | 2 | 2 | 1 | 1 | 2 | 2 | $$ | 1 | 1 | 1 | 1 | 2 | 1 | 1 | 0 | 0 | 1 | 1 | 1 | -1 | -1 | -1 | 0 | 2 |
| Merlin-Galice/Monument: SB/WB turn lanes, restripe, signal modifications to provide NB/SB protected lefts | 21 | 0 | 2 | 2 | 1 | 1 | 0 | 2 | 2 | $$ | 2 | 0 | 1 | 1 | 2 | 1 | 1 | 0 | 0 | 2 | 0 | 1 | -1 | -1 | 0 | 0 | 2 |
| Monument Drive (North Valley HS to Hugo Rd) bike lanes | 20 | 0 | 2 | 0 | 0 | 2 | 2 | 0 | 0 | $$ | 1 | 0 | 0 | 0 | 1 | 0 | 2 | 0 | 2 | 1 | 0 | 1 | 1 | 1 | 0 | 2 | 2 |
| Hwy 99 from Grants Pass UGB to Co. Line: add bike lanes | 20 | 0 | 2 | 0 | 0 | 2 | 2 | 0 | 0 | $$ | 1 | 0 | 0 | 0 | 1 | 0 | 2 | 0 | 2 | 1 | 0 | 1 | 1 | 1 | 0 | 2 | 2 |
| Rogue River Hwy/Lower River Rd: add bike lanes | 20 | 0 | 2 | 0 | 0 | 2 | 2 | 0 | 0 | $ | 1 | 0 | 0 | 0 | 1 | 0 | 2 | 0 | 2 | 1 | 0 | 1 | 1 | 1 | 0 | 2 | 2 |
| Hwy 238 from Grants Pass UGB to Co. line: add bike lanes | 20 | 0 | 2 | 0 | 0 | 2 | 2 | 0 | 0 | $ | 1 | 0 | 0 | 0 | 1 | 0 | 2 | 0 | 2 | 1 | 0 | 1 | 1 | 1 | 0 | 2 | 2 |
| Pinecrest Dr./Plumtree Ln (Camp Joy Rd to Upper River Rd): Widen/surface shoulders; improve alignment/sight distance at railroad crossing. | 16 | 0 | 2 | 1 | 0 | 2 | 2 | 1 | 1 | $$ | 1 | 0 | 1 | 0 | 1 | 0 | 1 | 1 | 0 | 1 | 0 | -1 | 0 | 0 | -1 | 1 | 2 |
| Hwy 238 realignment at Water Gap | 15 | 0 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | $$ | 1 | 0 | 1 | 0 | 2 | 0 | 1 | 1 | 0 | 1 | 0 | -1 | 0 | 0 | -1 | 0 | 2 |

Rankings: -2 = least effective at meeting criteria or greater potential negative impact, -1 = ineffective or less potential negative impact, 0 = neutral, 1 = moderately effective or some positive impact, 2 = most effective or greater positive impact

# APPENDIX E

## Overview of Compliance with Transportation Planning Rule

**Parametrix** ENGINEERING ▪ PLANNING ▪ ENVIRONMENTAL SCIENCES

700 NE MULTNOMAH, SUITE 1160
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www.parametrix.com

# M E M O R A N D U M

Date: **December 8, 2003**

To: **Steve Hodge, Josephine County**
**Ingrid Weisenbach, Oregon Department of Transportation**

From: **Rory Renfro, David Siegel**

Subject: **Overview of Comprehensive Plan and Code Compliance with TPR**

cc:

Project Number: **273-2395-029**

Project Name: **Josephine County Rural TSP**

---

This memo describes the requirements of Oregon's Transportation Planning Rule (TPR), specifically Section 660-12-045 – Implementation of the Transportation System Plan (TSP). It also describes Josephine County's existing policies and plans that are designed to meet the TPR requirements, and it identifies policy inconsistencies or changes needed to address the TPR. This memo also reviews the County's existing Comprehensive Plan policies for needed changes to implement the TSP.

**Transportation Planning Rule**

A major goal of the TPR is reducing reliance on the automobile and encouraging pedestrian, bicycle and transit facilities as part of a multi-modal transportation system. Table 1 cross-references TPR requirements and Josephine County's code provisions and other applicable regulations and plan language. The language is rated as either adequately meeting the requirements of the TPR or needing additional work to insure compliance. Each section is described in further detail with new code language provided where necessary.

**Table 1**
**TPR Implementation Measures**

| Issue | TPR Citation | Josephine County Rural Land Development Code |
|---|---|---|
| Land Use Approval for Transportation Projects | 045 (1) | 61.020 – Inadequate<br>61.030 – Inadequate<br>62.020 – Inadequate<br>62.120 – Inadequate<br>62.130 – Inadequate<br>62.220 – Inadequate<br>62.230 – Inadequate<br>63.020 – Inadequate<br>63.120 – Inadequate<br>63.130 – Inadequate<br>64.020.E – Adequate<br>64.030.E – Adequate<br>64.040.V – Adequate<br>64.040.W – Adequate<br>65.020.B.8 – Adequate |

| | | |
|---|---|---|
| | | 65.030.Y – Adequate<br>66.020 – Inadequate<br>66.120 – Inadequate<br>66.130 – Inadequate<br>66.140 – Inadequate<br>67.020 – Inadequate<br>67.030 – Inadequate |
| Access Control | 045 (2) (a) | 81.020 – Adequate |
| Protecting Future Operations | 045 (2) (b) | 50.050.B – Adequate<br>81.010 – Inadequate |
| Airports | 045 (2) (c) | 69.410-69.480 – Adequate |
| Coordinated Review | 045 (2) (d) | Inadequate |
| Conditions of Approval | 045 (2) (e) | Inadequate |
| Notification | 045 (2) (f) | 32.030.A.1 – Inadequate |
| Consistency with TSP | 045 (2) (g) | 46.040.A – Adequate |
| Bicycle Parking | 045 (3) (a) | 75.040.E – Adequate |
| Pedestrian and Bicycle Facilities | 045 (3) (b) | 51.080.B.3 – Adequate<br>53.080.B.3 – Adequate |
| Off-site Improvements | 045 (3) (c) | 81.150 – Inadequate |
| Street Standards | 045 (7) | Included in TSP – Adequate |

**Land Use Approvals for Transportation Projects**
The TPR [660-12-045(1)] requires that local governments amend their land use regulations to implement their adopted TSP and to clarify the land use approval process for transportation-related projects.

The Josephine County Rural Land Development Code (RLDC) lists transportation projects as outright, permitted or conditional uses in the Exclusive Farm/Farm Resource and Forest Commercial/Woodlot Resource zones. All zones should allow transportation improvements listed in the TSP as an allowed use. Additional provisions for transportation projects not in the TSP could be made with the development of corresponding criteria.

*Suggested Code Language*
For all code sections listed as "Inadequate" in Table 1 (in the "Land Use Approvals for Transportation Projects" section), transportation-related projects (especially those in the TSP) should be added as outright, permitted or conditional uses.

The Goals and Policies section of the Josephine County Comprehensive Plan currently does not have any language about implementing an adopted TSP. The document also lacks clear language about the land use approval process for transportation-related projects. The draft TSP however, has a goal and supporting policies that reference the transportation/land use connection. Goal 6 states that the County should *"consider and implement land use and transportation plans/solutions simultaneously in all planning activities"*. Objective 1 within in this goal directs the County to *"provide for the consideration of the interrelationships and connections between transportation and land use in future planning"*. Objective 2 contains the directive to *"ensure that transportation improvements meet the needs of rural land uses, consistent with the Transportation Planning Rule"*. While adopting the draft Rural Transportation System Plan will meet the requirements of the TPR, future updates of the Josephine County Comprehensive Plan might consider inclusion of language clarifying the relationship of the TSP to the Comprehensive Plan.

**Protecting the Existing and Future Operations of Facilities**

<u>Access control</u>
The TPR [660-12-045(2)(a)] requires local governments to adopt access control measures, such as driveway and public road spacing, median control, and signal spacing standards that are consistent with the functional classification of roads.

The Josephine County RLDC includes access control standards for both County roads and State highways.

The Comprehensive Plan does not have any goals or policies pertaining to access control, but the draft TSP contains a policy for access management stating, *"Josephine County shall review the adequacy of access for all proposed new development and new accesses onto public right-of-way and ensure consistency with adopted street standards"*. This policy is supported by eight "recommendations" which are listed in the draft TSP. While the Comprehensive Plan does not contain specific language addressing access control, adoption of the draft TSP as a component of the Comprehensive Plan will address the TPR requirement.

Protecting Future Operations

The TPR [660-12-045(2)(b)] requires local governments to adopt standards to protect future operations of roads, transit ways and major transit corridors.

Section 50.050.B of the Josephine County RLDC (pertaining to subdivisions) states that any proposed development must conform with the Official Street Map and/or any potential street extension, and may not prohibit the extension of streets or roads. Section 81.010 states the purposes for implementing access control standards for both County roads and State highways, but the listed purposes of these standards do not include the intent of protecting future roadway operations.

*Suggested Code Language*

Add the following language to Section 81.010 (shown as underlined)

- The purpose of these standards is to ensure safe ingress and egress to and from properties; to minimize street congestion and traffic hazards; to protect the future operations of transportation facilities; to provide safe and convenient access to businesses, public services, and places of public assembly; and to make vehicular circulation more compatible with surrounding land uses.

The Goals and Policies section of the Comprehensive Plan does not contain specific language about protecting future operations on transportation facilities, but adoption of the draft TSP as a component of the Comprehensive Plan will address the TPR requirement. The draft TSP has a policy regarding access management (stated above), and a policy pertaining to Transportation System Management (TSM). The TSM policy (Policy 9-A) states that *"Josephine County will pursue and encourage implementation of Transportation Demand Management (TDM) and Transportation System Management (TSM) whenever possible as an alternative to building new transportation facilities"*. These policies are intended to maximize operations on existing facilities with minimal physical improvements.

Airports

The TPR [660-12-045 (2)(c)] requires local governments to adopt measures to control land uses within airport noise corridors and imaginary surfaces.

The RLDC adequately addresses these requirements in sections 64.410 through 69.480.

In addition to the TPR requirements there are OAR requirements [660-013] that pertain to airport planning. OAR 660-013-0040 requires that local jurisdictions adopt a map showing the airport boundary, location of runways and other features and future areas of expansion.

The RLDC does not reference the maps and figures required by OAR 660-013-0040. Josephine County should adopt the *Grants Pass Airport Master Plan* and the *Illinois Valley Airport Master Plan* (or portions of) to meet requirements of the OAR.

The Comprehensive Plan references airports in two policies. In Policy 5 under Goal 4, the document states that *"Zoning standards shall be established to prevent the development of incompatible uses or hazardous structures within the flight approach zones. Any development and expansion will be in accordance with applicable airport master plans"*. Policy 3 under Goal 5 states that *"County-owned land in the vicinity of the Josephine County Airport . . . shall be developed for industrial use. The County will*

*encourage the participation of property owners of adjacent and appropriately zoned land to facilitate the development of an attractive and economically viable industrial park at this site"*. The draft TSP contains a similar policy about land uses near airports, stating, *"Josephine County will protect the function and operations of airports from incompatible land uses"*. The policies in the Comprehensive Plan and the draft TSP appear to adequately meet requirements of the TPR.

**Process for Coordinated Review of Land Use Decisions**

Coordinated Review
The TPR [660-12-045(2)(d)] requires local governments to create a process for coordinated review of future land use decisions affecting transportation facilities, corridors or sites.

Neither the RLDC or Comprehensive Plan goals and policies provide any language that specifically refers to including other agencies in the review process for future land uses affecting transportation facilities. The Comprehensive Plan however requires coordination with applicable state and local agencies when pollution control standards are modified; considering future land uses near the Rogue River; and when seeking methods of assuring long-term capital financing to allow the extension of public services to designated commercial and industrial areas.

*Suggested Code Language*
Section 20.030 of the RLDC might be an appropriate location to insert a provision requiring coordinated review of land use decisions affecting transportation facilities, corridors or sites. This will allow any additional affected agencies (like ODOT) to submit comments on the land use application under study. Add the following language to Section 20.030.B (shown as underlined):

- Notwithstanding subsection A above, the Director may require the separate process of applications whenever the Director determines that the advantages of consolidated review are outweighed by complications, confusion or administrative burdens to the review body, the county or other participants. Applications for land uses that might affect transportation facilities, corridors or sites under ownership or maintenance of other jurisdictions will also be reviewed by the corresponding jurisdiction.

The draft TSP references coordinated review in a number of goals, objectives and policies. Goal 7 directs the County to *"ensure an effective strategy for intergovernmental coordination in transportation planning"*. Objective 1 within this goal provides a directive to *"maintain coordination with multiple jurisdictions"*. Objective 2 instructs the County to *"provide compatible design standards for all modes of transportation"*, while the directive of Objective 3 is *"work to achieve a balance between business and economic development and preservation of the functional capacity of the transportation system when coordinating transportation planning with other jurisdictions"*. Some of the overall transportation system policies in the draft TSP also reference coordinated review. Policy 13-C states, *"Josephine County will work cooperatively with its federal, state and local jurisdictional partners to coordinate on the approval, timing and funding of future transportation system investments"*. Policy 13-E stresses the need for coordinated review among all affected groups: *"Josephine County will encourage joint projects with the private sector, affected user groups, individual citizens, or other units of government if it improves or allows a project on the transportation system to proceed that might otherwise fail to be done. This participation may be in the form of material or resource contributions, right-or-way dedications or other financial assistance"*. Finally, Policy 13-F states that *"Josephine County will regularly update the Rural Transportation System Plan, revising it as necessary to reflect changing needs and circumstances. The County will involve citizens, stakeholders, and its jurisdictional partners in updates and revisions to this plan"*. Adoption of the draft TSP as a component of the Comprehensive Plan will meet the TPR requirement of coordinated review.

Conditions of Approval
The TPR [660-12-045(2)(e)] requires local governments to adopt land use regulations that create a process for applying conditions to development proposals to minimize impacts and protect transportation facilities, corridors or sites.

The RLDC lists a few conditions of approval pertaining to the protection of transportation facilities, and these provisions are found mostly in the section on Planned Unit Developments (55.080.K.3-4). The listed conditions include limiting the number of vehicular access points to a PUD and increasing right-of-way width on existing streets. Conditions aimed at protecting the transportation system however are not found in the articles pertaining to subdivisions and land partitions.

*Suggested Code Language*
The Conditions of Approval sections of Article 51 (Subdivisions) and Article 52 (Land Partitions) would be an appropriate place to include provisions aimed at minimizing impacts and protecting transportation facilities. Specifically, these provisions would be appropriate in sections 51.080 and 52.080. Add the following language to sections 51.080 and 52.080 (shown as underlined):

- In addition to the requirements of this Article, the commission may attach conditions it finds necessary to carry out the purposes of this Article. These conditions may include, but are not limited to, the following:
    - Controlling the location and number of vehicular access points;
    - Establishing new streets, increasing the right-of-way or roadway width of existing streets, requiring curbs and sidewalks, and, in general, improving the traffic circulation system.

The Comprehensive Plan goals and policies do not contain language regarding conditions of approval, but a recommendation under Policy 6-A of the draft TSP states: *"The County shall require dedication of right-of-way as a condition of approval for proposed land development, where the County's adopted road standards demonstrate the need for a wider right-of-way and a rational nexus exists between the proposed land development and the amount right-of-way required"*. Adoption of the draft TSP as a component of the Comprehensive Plan will address the TPR requirement for conditions of approval.

Notification
The TPR [660-12-045(2)(f)] requires regulations calling for notification of the following to public agencies providing transportation facilities and services, metropolitan planning organizations and the Oregon Department of Transportation (ODOT):

- Land use applications that require public hearings
- Subdivision and partition applications
- Other applications that affect private access to roads
- Other applications that within airport noise corridors and imaginary surfaces affect airport operations

Section 32.030.A.1 of the RLDC provides a list of persons and agencies to be notified when land use cases are considered. The list does not include public agencies providing transportation facilities and services or ODOT. However, the RLDC requires that public airports be notified if potential zone changes would permit certain types of development within the runway "approach surface" (as defined by ODOT).

*Suggested Code Language*
Add the following to the list persons and organizations (in Section 32.030.A.1) to be notified of land use procedures (shown as underlined):

- Public agencies providing transportation facilities or services, metropolitan planning organizations or the Oregon Department of Transportation (as necessary) if the proposed land use action will affect their respective transportation facilities.

The Comprehensive Plan goals and policies do not include any notification provisions, but adoption of the draft TSP as a component of the Comprehensive Plan will address the TPR requirement. The draft TSP contains goals, objectives and polices relating to the notification of other agencies. Goal 7 directs the County to *"ensure an effective strategy for intergovernmental coordination in transportation planning"*. A supporting objective of this goal provides a directive to *"maintain coordination with multiple jurisdictions"*. A policy for the overall transportation system also references other agencies, stating, *"Josephine County will work cooperatively with its federal, state and local jurisdictional partners to coordinate on the*

*approval, timing and funding of future transportation system improvements"*. The Air Transportation Chapter contains a policy directing the County to maintain communication with appropriate agencies when planning transportation facilities near airports. Specifically, Policy 10-B states: *"Josephine County should coordinate implementation of recommended roadway system improvements in the vicinity of the Grants Pass and Illinois Valley airports with the access and infrastructure needs of these facilities"*.

Consistency with TSP
The TPR [660-12-045(2)(g)] requires regulations assuring that amendments to land use designations, densities, and design standards are consistent with the functions, capacities and levels of service of facilities identified in the TSP. The purpose of this requirement is to ensure that a comprehensive plan amendment, zoning ordinance amendment or zone change considers the impact on traffic and is consistent with the TSP.

Section 46.040.A of the RLDC states that *"amendments to a plan and zone map shall demonstrate compliance with all applicable statewide and county goals and policies"*. This appears to be adequate in meeting the TPR requirement.

Policy 4 under Goal 4 of the Comprehensive Plan states: *"It shall be the policy of the Board of County Commissioners to encourage and facilitate the development of a transportation master plan for bridges and roads coordinated with City, State and Federal agencies"*. The Comprehensive Plan also contains policies allowing for amendments. Policy 2-A under Goal 11 states that *"Amendments to a plan and zone map shall demonstrate compliance with all applicable statewide and county goals and policies"*. This policy will help the Comprehensive Plan meet the TPR requirement if the draft TSP is adopted as a component of the Comprehensive Plan.

**Safe and convenient Pedestrian and Bicycle Circulation**

Bicycle Parking
The TPR [660-12-045(3)(a)] requires bicycle parking facilities as part of multi-family residential units of four units or more, new retail, office or institutional developments, and all transit transfer stations and park-and-ride lots.

The RLDC references bicycle parking facilities in the general off-street parking chapter. Section 75.040.E states that bicycle racks may be required if vehicle parking exceeds 20 spaces per parking area. Because multiple-family housing, office developments and transit centers are not common in rural Josephine County, the bicycle parking language appears adequate to meet the TPR.

The Comprehensive Plan goals and policies do not reference bicycle parking, but Policy 11-F of the draft TSP includes language on this subject. The supporting recommendations of Policy 11-F direct Josephine County to *"include facilities for bicycle parking in the planning requirements for new commercial areas, single and multi-use facilities and other development projects"*; and to *"provide secure bicycle storage facilities within rural activity centers and other major destinations that generate bicycle/pedestrian traffic"*. Adoption of the draft TSP as a component of the Comprehensive Plan will address the TPR requirement for bicycle parking facilities.

Pedestrian and Bicycle Facilities
The TPR [660-12-045(3)(b)] requires on-site facilities that accommodate safe and convenient pedestrian and bicycle access from within new subdivisions, multi-family developments, planned developments, shopping centers, and commercial districts to adjacent residential areas and transit stops, and to neighborhood activity centers within a half-mile of the development. The TPR also provides that single-family residential developments shall generally include streets and accessways; and that pedestrian circulation through parking lots should generally be provided in the form of accessways.

Sidewalks and pedestrian paths are listed in the RLDC as a condition of approval for subdivisions (Section 51.080.B.3), and for land re-plats (Section 53.080.B.3). This appears to be adequate in meeting TPR requirements.

Policy 3 under Goal 9 of the Comprehensive Plan directs the Board of County Commissioners to *"encourage the construction of safety paths with the reconstruction or development of new roads or streets between major shopping centers and recreational and educational facilities"*. Policy 11-A of the draft TSP directs Josephine County to *"construct bicycle lanes/wide shoulders as part of all new roadway project improvements or roadway projects involving major reconstruction"*. In terms of paths, Policy 11-C directs the County to *"identify and work cooperatively with other agencies to develop multi-use paths"*. Adoption of the draft TSP as a component of the Comprehensive Plan will help meet the TPR requirement.

Off-site Improvements

The TPR [660-12-045(3)(c)] requires that off-site improvements that are required as a condition of approval include pedestrian and bicycle improvements, including bicycle ways along arterials and major collectors.

Like most rural areas, wide shoulders serve the needs of both bicyclists and pedestrians in rural Josephine County (except for some instances where high or potentially high pedestrian traffic may warrant the installation of sidewalks). The RLDC states (in Section 81.150) that bicycle facilities (i.e. lanes or paths) are to be included on streets that are included on the County's adopted bicycle route plan. However, the RLDC does not specifically mention the requirement for bicycle lanes on Major/Minor Collector roads.

*Suggested Code Language*

Add the following language to Section 81.150 (shown as underlined):

- The review body may require the installation of separate bicycle lanes within streets (specifically on Major/Minor Collectors) and/or separate bicycle paths, if necessary to extend an existing or planned system of bicycle routes, shown on the adopted bicycle route plan, or if a need is otherwise indicated. Such paths shall meet the standards of the state of Oregon.

Policy 10 under Goal 9 of the Comprehensive Plan pertains to alternative transportation modes in general: *"The physically handicapped and transportation disadvantaged shall be considered in the design of transportation facilities and alternative transportation modes"*. Policy 3 under Goal 9 directs the Board of County Commissioners to *"encourage the construction of safety paths with the reconstruction or development of new roads or streets between major shopping centers and recreational and educational facilities"*. The draft TSP also contains policies pertinent to bicycle/pedestrian facilities. Policy 11-A directs Josephine County to *"construct bicycle lanes/wide shoulders as part of all new roadway project improvements or roadway projects involving major reconstruction"*. Policy 11-C directs the County to *"identify and work cooperatively with other agencies to develop multi-use paths"*. Included in the non-motorized transportation element of the draft TSP is a list of high-priority and lower-priority bicycle/pedestrian projects. Adoption of the draft TSP as a component of the Comprehensive Plan will help meet the TPR requirement.

**Other TPR Provisions**

Street Standards

The TPR [660-12-045(7)] requires local governments to establish street standards that minimize pavement width and total right-of-way, consistent with the operational needs of the facility. The intent of these standards is to encourage local governments to consider and reduce excessive standards in order to reduce construction costs, provide for more efficient use of urban land, provide emergency vehicle access while discouraging inappropriate traffic volumes and speeds, and accommodate convenient bicycle and pedestrian circulation.

Street standards were updated as part of the draft TSP. These standards will replace the current street standards found in the RLDC.