



Josephine County Transportation System Plan

Josephine County
Oregon Department of Transportation

Josephine County

Rural Transportation System Plan

June, 2004

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

This project was partially funded by a grant from the Transportation and Growth Management (TGM) Program, a joint program of the Oregon Department of Transportation and the Oregon Department of Land Conservation and Development. The contents of this document do not necessarily reflect the views or policies of the State of Oregon.

Acknowledgments

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	PCI – Pavement Condition Index
AC – Asphalt Concrete	RLDC – Rural Land Development Code
ADT – Average Daily Traffic	ROW – Right-of-Way
CAC- Citizens Advisory Committee	RTP – Regional Transportation Plan
CMAQ – Congestion Management and Air Quality Improvement Program	RVACT – Rogue Valley Area Commission on Transportaiton
CORP – Central Oregon and Pacific Railroad	RVMPO – Rogue Valley Metropolitan Planning Organization
DAR – Dial-a-Ride	RVTD – Rogue Valley Transportation District
DLCD – Oregon Department of Land Conservation and Development	RWIS – Road and Weather Information Systems
FAA – Federal Aviation Administration	SDC – Systems Development Charge
FFY – Federal Fiscal Year	SPIS – Safety Priority Index System
FHWA – Federal Highway Administration	STF – Special Transportation Fund
FTA – Federal Transit Administration	STIP – Statewide Transportation Improvement Program
FTZ – Foreign Trade Zone	TAC – Technical Advisory Committee
FY – Fiscal Year	TAZ – Transportation Analysis Zone
HBRR – Highway Bridge Replacement and Rehabilitation Program	TDM – Transportation Demand Management
HCM – Highway Capacity Manual	TGM – Transportation and Growth Management
ITS – Intelligent Transportation Systems	TIP – Transportation Improvement Program
IVHS – Intelligent Vehicle Highway Systems	Tier 1 – Maintenance of the existing transportation system at current, declining levels
JCT – Josephine County Transit	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
LID – Local Improvement District	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
LOS – Level of Service	TPR – Transportation Planning Rule
MEV – Million Entering Vehicles	TSP – Transportation System Plan
MOE – Measures of Effectiveness	TSM – Transportation Systems Management
MP – Milepost	UGB – Urban Growth Boundary
NBIS – National Bridge Inventory System	USFS – United States Forest Service
NEPA – National Environmental Policy Act	V/C – Volume-to-Capacity Ratio
NHS – National Highway System	VMS – Variable Message Sign
OAR – Oregon Administrative Rules	VMT – Vehicle Miles Traveled
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	

TABLE OF CONTENTS

<u>Chapter</u>		<u>Page</u>
1	INTRODUCTION AND SUMMARY	
	Introduction	1-1
	Public, Agency and Stakeholder Involvement.....	1-1
	Goals and Objectives.....	1-2
	Key Issues and Recommendations.....	1-4
	TSP Elements	1-5
	Previous Work/Background Studies	1-6
	Existing Conditions	1-6
	Future Transportation System Demand	1-7
	Development and Evaluation of TSP Alternatives	1-7
	Street Plan.....	1-8
	Freight Plan.....	1-8
	Public Transit Plan	1-8
	Transportation System Management / Transportation Demand Management Plan	1-8
	Air Transportation Plan.....	1-9
	Non-Motorized Transportation Plan	1-9
	Rail Plan	1-9
	Plan Implementation Strategy	1-9
2	PREVIOUS WORK/BACKGROUND STUDIES	
	Overview	2-1
	Statewide Plans and Policies Relating to Transportation	2-1
	County Plans and Policies Relating to Transportation	2-6
	Other Local Plans and Policies Relating to Transportation.....	2-8
	Programmed Maintenance/Committed Improvements.....	2-10
3	EXISTING CONDITIONS	
	Roadway Inventory	3-1
	Jurisdictional Responsibilities	3-1
	Existing Street Functional Classification and Standards	3-5
	Existing Street Characteristics.....	3-6
	Existing Traffic Operations.....	3-13
	Review of Speed Surveys.....	3-27
	Safety and Crash History.....	3-28
	Freight.....	3-32
	Truck Freight Service.....	3-32
	Pipeline Transportation	3-33
	Water Transportation.....	3-35
	Public Transit	3-35
	Josephine County Transit (JCT).....	3-35
	Non-Emergency Medical (Medicaid) Transportation.....	3-36
	Specialized Public Transportation Services	3-36
	Intercity Bus Service	3-37
	School Bus Routes.....	3-37
	Transportation System Management/Transportation Demand Management	3-37
	Transportation System Management.....	3-37
	Transportation Demand Management.....	3-38

TABLE OF CONTENTS Continued

<u>Chapter</u>		<u>Page</u>
3	EXISTING CONDITIONS Continued	
	Air Transportation	3-39
	Non-Motorized Transportation System	3-39
	Bicycle Facilities	3-39
	Pedestrian Facilities	3-40
	Rail Service	3-40
	Freight Rail Service	3-42
	Existing Rail Crossings	3-44
	Passenger Rail Service	3-45
4	FUTURE TRANSPORTATION SYSTEM DEMAND	
	Background	4-1
	Recent Demographic Characteristics and Economic Conditions	4-1
	Population and Employment Growth Forecasts	4-2
	Future Traffic Volume Forecasts	4-4
	Background and General Assumptions	4-4
	Level 1 Methodology – Trending Forecast	4-4
	Level 2 Methodology – Cumulative Land Use/Trip Generation Analysis	4-5
	Network Assumptions for 2025 Traffic Analysis	4-12
5	DEVELOPMENT AND EVALUATION OF TSP ALTERNATIVES	
	Overview	5-1
	TSP Alternative Development Process	5-1
	Introduction to Transportation Scenarios	5-3
	Evaluation Process	5-4
	Identification of Improvement Strategies and Tiered Alternatives	5-5
6	STREET PLAN	
	Overview	6-1
	Consistency with Other Plans and Policies	6-1
	Summary of 2025 Traffic Analysis Results	6-2
	Intersection Traffic Operations Analysis Methodology	6-2
	County Operational Standards for Roadway Design and Improvements	6-3
	Operational Standards for Design and Improvements on State Facilities	6-3
	2025 Intersection Analysis Results	6-4
	2025 Roadway Segment Analysis Results	6-4
	Summary of Existing and 2025 Transportation System Deficiencies	6-7
	Maintenance Deficiencies	6-7
	Congestion Deficiencies at Intersections	6-7
	Congestions Deficiencies on Roadway Segments	6-8
	Safety Deficiencies	6-13
	Bridge Deficiencies	6-15
	Development and Evaluation of Street System Improvement Scenarios	6-15
	Strategies	6-15
	Evaluation of Scenarios and Project Prioritization	6-17

TABLE OF CONTENTS Continued

<u>Chapter</u>		<u>Page</u>
6	STREET PLAN Continued	
	Action Plan.....	6-17
	Draft Street System Goals and Objectives	6-17
	Policies and Recommendations.....	6-22
	Recommended Functional Classification and Street Standards.....	6-23
	Access Management.....	6-24
	Roadway Maintenance	6-25
	Roadway Improvements.....	6-26
	Safety Improvements.....	6-28
	Bridge Improvements	6-30
	Summary of Street Plan Improvement Recommendations.....	6-30
7	FREIGHT PLAN	
	Overview	7-1
	Truck Freight.....	7-1
	Consistency with Other Plans and Policies	7-1
	Needs and Deficiencies	7-2
	Strategies	7-4
	Action Plan	7-5
	Draft Freight System Goals and Objectives.....	7-5
	Policies and Improvement Recommendations.....	7-6
	Pipeline Transportation	7-6
	Water Transportation.....	7-6
8	PUBLIC TRANSIT PLAN	
	Overview	8-1
	Consistency with Other Plans and Policies.....	8-1
	Needs.....	8-2
	Strategies	8-4
	Action Plan.....	8-7
	Draft Public Transit System Goals and Objectives.....	8-7
	Policies and Recommendations.....	8-8
	Public Transit Funding Options	8-8
	Intercity Bus Service	8-10
	Needs	8-10
	Action Plan	8-10
	Policies and Improvement Recommendations.....	8-10
9	TRANSPORTATION SYSTEM MANAGEMENT / TRANSPORTATION DEMAND MANAGEMENT PLAN	
	Overview	9-1
	Consistency with Other Plans and Policies.....	9-1
	Transportation System Management	9-2
	Existing TSM Activities.....	9-2
	Needs and Strategies.....	9-3
	Transportation Demand Management.....	9-4
	Existing TDM Activities	9-4
	Need and Strategies	9-4

TABLE OF CONTENTS Continued

<u>Chapter</u>		<u>Page</u>
9	TRANSPORTATION SYSTEM MANAGEMENT / TRANSPORTATION DEMAND MANAGEMENT PLAN Continued	
	TSM/TDM Action Plan	9-5
	Draft TSM/TDM Goals and Objectives.....	9-5
	TSM/TDM Policies and Recommendations	9-5
10	AIR TRANSPORTATION PLAN	
	Overview	10-1
	Consistency with Other Plans and Policies.....	10-1
	Needs	10-2
	Grants Pass Airport.....	10-2
	Illinois Valley Airport	10-3
	Land Use Issues.....	10-3
	Action Plan.....	10-4
	Draft Air Transportation Goals and Objectives	10-4
	Policies and Recommendations.....	10-4
11	NON-MOTORIZED TRANSPORTATION PLAN	
	Overview	11-1
	Consistency with Other Plans and Policies.....	11-1
	Needs	11-3
	Strategies	11-4
	Action Plan.....	11-6
	Draft Bicycle and Pedestrian System Goals and Objectives.....	11-6
	Policies and Recommendations.....	11-7
12	RAIL PLAN	
	Freight Rail.....	12-1
	Overview	12-1
	Consistency with Other Plans and Policies	12-1
	Needs	12-2
	Passenger Rail	12-4
	Overview	12-4
	Consistency with Other Plans and Policies	12-4
	Action Plan.....	12-6
	Draft Rail Transportation Goals and Objectives.....	12-7
	Policies and Recommendations.....	12-7
13	PLAN IMPLEMENTATION STRATEGY	
	Overview	13-1
	Goals and Objectives.....	13-2
	Summary of Action Plans	13-4
	Overall Transportation System.....	13-4
	Street System.....	13-5
	Freight Transportation System.....	13-10
	Public Transit System.....	13-11
	TSM/TDM.....	13-12

TABLE OF CONTENTS Continued

<u>Chapter</u>		<u>Page</u>
13	PLAN IMPLEMENTATION STRATEGY Continued	
	Air Transportation System	13-12
	Non-Motorized Transportation System.....	13-13
	Rail Transportation System.....	13-15
	Financing Transportation System Improvements	13-15
	Current Transportation Revenue Sources	13-16
	Recommended 20-Year Roadway Improvement Costs and Funding	13-17
	Staged Roadway Improvement Program	13-22
	Revenue Shortfalls for Roadway System Improvements	13-30
	Staged Public Transit Improvement Program.....	13-31
	Potential Sources of Additional Transportation Revenue.....	13-32
	Summary of Potential Revenue Sources for Roadways	13-32
	Recommendations for Roadway Funding.....	12-34
	Summary of Potential Revenue Sources for Public Transit.....	13-35
	Recommendations for Public Transit Funding	13-36
	Implementing the TSP.....	13-37
	Consistency with Other Plans and Ordinances	13-38
	Issues for Further Refinement Planning or Study.....	13-39
	Merlin Interchange	13-39
	Transportation Funding	13-39
	Ordinance Development.....	13-39
APPENDIX A:	Street Inventory	
APPENDIX B:	Crash Records and Crash Rate Calculations	
APPENDIX C:	Future Development Assumptions for Merlin and Murphy by Traffic Analysis Zone	
APPENDIX D:	Project Evaluation Matrices	
APPENDIX E:	Overview of Compliance with Transportation Planning Rule (State Planning Goal 12)	

LIST OF FIGURES

<u>Number</u>	<u>Description</u>	<u>Page</u>
2-1	STIP Programmed Improvements in Rural Josephine County.....	2-12
3-1	State Highway Locations and Posted Speeds	3-3
3-2	County Functional Classification System.....	3-7
3-3	Average Shoulder Width.....	3-9
3-4a	Merlin Level 2 Analysis Traffic Count Locations.....	3-17
3-4b	Murphy Level 2 Analysis Traffic Count Locations.....	3-18
3-4c	Level 1 Analysis Traffic Count Locations.....	3-19
3-5	Freight and Airport Facilities	3-34
3-6	Pedestrian and Bicycle Facilities and Activity Centers	3-41
3-7	Central Oregon and Pacific Railroad	3-42
4-1	County Travel Sheds	4-3
4-2	Merlin Vacant Lands.....	4-7
4-3	Murphy Vacant Lands.....	4-8
4-4	Merlin Transportation Analysis Zones	4-10
4-5	Murphy Transportation Analysis Zones.....	4-11
5-1	Plan Development Process.....	5-2
6-1	Maintenance Scenario	6-18
6-2	Safety Scenario.....	6-19
6-3	Mobility and Accessibility Scenario	6-20
6-4	Economic Development Scenario.....	6-21
11-1	Recommended Bicycle/Pedestrian Facilities.....	11-8
13-1	Typical Pavement Management Cycle	13-19
13-2	Recommended Roadway System Improvements	13-25

LIST OF TABLES

<u>Number</u>	<u>Description</u>	<u>Page</u>
2-1	Adopted Elements of The Oregon Transportation Plan.....	2-2
2-2	Oregon Highway Plan Access Spacing Standards.....	2-3
2-3	Draft 2004-2007 STIP Projects in Josephine County	2-11
3-1	Josephine County Functional Classification Standards	3-6
3-2	Average Shoulder Width on Rural County-Maintained Roadways	3-8
3-3	Pavement Condition Summary	3-10
3-4	Josephine County Bridges Identified as Structurally Deficient or Functionally Obsolete	3-12
3-5	Josephine County Bridges with Timber Components Presently Rated Sufficient	3-13
3-6	Applicable State Volume-to-Capacity (v/c) Thresholds in Josephine County.....	3-14
3-7	Intersection Level of Service Definitions	3-15
3-8	2002 PM Peak Hour Levels of Service at Key Intersections in Rural Josephine County.....	3-20
3-9	2002 PM Peak Hour Roadway Segment Traffic Operations	3-22
3-10	Assumed Values for Analysis of Two-lane, Two-way Roadway Segments.....	3-23
3-11	1998-2002 PM Peak Hour Roadway Traffic Operations – Major and Minor Collectors.....	3-24
3-12	Summary of Crash History for Major Intersections	3-28
3-13	Annual Crash Rates on County Roadways Averaging > 1.0 Crashes/Mile, 1999-2002.....	3-29
3-14	2000 Crash History Summary on State Highways in Rural Josephine County	3-30
3-15	Top 10 2002 Safety Priority Index System (SPIS) Sites on State Highways in Rural Josephine County.....	3-32
3-16	Examples of Transportation Demand Management Strategies	3-38
3-17	Major Freight Rail Crossings in Rural Josephine County	3-44
4-1	1990-2000 Population Growth in Josephine County and State of Oregon.....	4-1
4-2	Rural Josephine County Growth by Travel Shed, 2002-2025	4-2
4-3	Merlin and Murphy Level 2 Study Areas, Buildable Land Use/Trip Generation Estimates.....	4-9
6-1	2002 Existing and 2025 Future No Build PM Peak Hour Intersection Operations...	6-5
6-2	2002 Existing and 2025 Future No Build PM Peak Hour Traffic Operations on Key Roadway Segments	6-9
6-3	Summary of Guard Rail-Related Crashes	6-14
6-4	Street System Improvements Associated with Each Improvement Scenario	6-16
6-5	Summary of Roadway Improvement Recommendations by Scenario and Tiered Alternative.....	6-32
7-1	Freight System Improvements Associated with Each Improvement Scenario	7-4
7-2	Freight System Improvements Included in the Preferred Alternative (Tier 2).....	7-5
8-1	Current Josephine County Transit Services.....	8-3
8-2	Current Josephine County Transit Fleet.....	8-3
8-3	Public Transit System Alternatives	8-4
9-1	Examples of Transportation Demand Management Strategies	9-4
11-1	Bicycle/Pedestrian System Improvements Associated with Each Improvement Scenario	11-6
12-1	Major Freight Rail Crossings in Rural Josephine County	12-3

LIST OF TABLES Continued

<u>Number</u>	<u>Description</u>	<u>Page</u>
12-2	Southern Oregon Commuter Rail Service, Estimated System Capital Expenditures and Operating Costs	12-6
13-1	Summary of Existing Road System Revenues	13-16
13-2	Summary of Existing Road Fund Revenues	13-17
13-3	Summary of Existing Revenues and Routine Maintenance Program Funding Needs	13-20
13-4	Summary of Cost Estimates for Tier 2 Roadway Projects Excluding Routine Maintenance Program (2003 Dollars).....	13-23
13-5	Recommended Tier 1 and Tier 2 Short-Range (2004-2008) Roadway Improvements	13-26
13-6	Recommended Tier 1 and Tier 2 Medium-Range (2009-2013) Roadway Improvements	13-27
13-7	Recommended Tier 1 and Tier 2 Long-Range (2014-2023) Roadway Improvements	13-28
13-8	Tier 3 Roadway Improvements.....	13-30
13-9	Summary of Revenue Shortfall for Josephine County Roadway System Improvement Projects.....	13-31
13-10	Public Transit System Tier 2 Short-Term (2004-2008) Improvements	13-32
13-11	Potential Revenue Sources for Roadway System Improvements.....	13-32
13-12	Comparison of Potential Revenue Sources for Josephine County to Fund Tier 2 Roadway System Improvement Projects	13-34

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 $\frac{3}{4}$ 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**

Posted Speed	Spacing Standard by Type of Highway in Feet		
	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 (7 th 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 (6 th and 7 th 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):

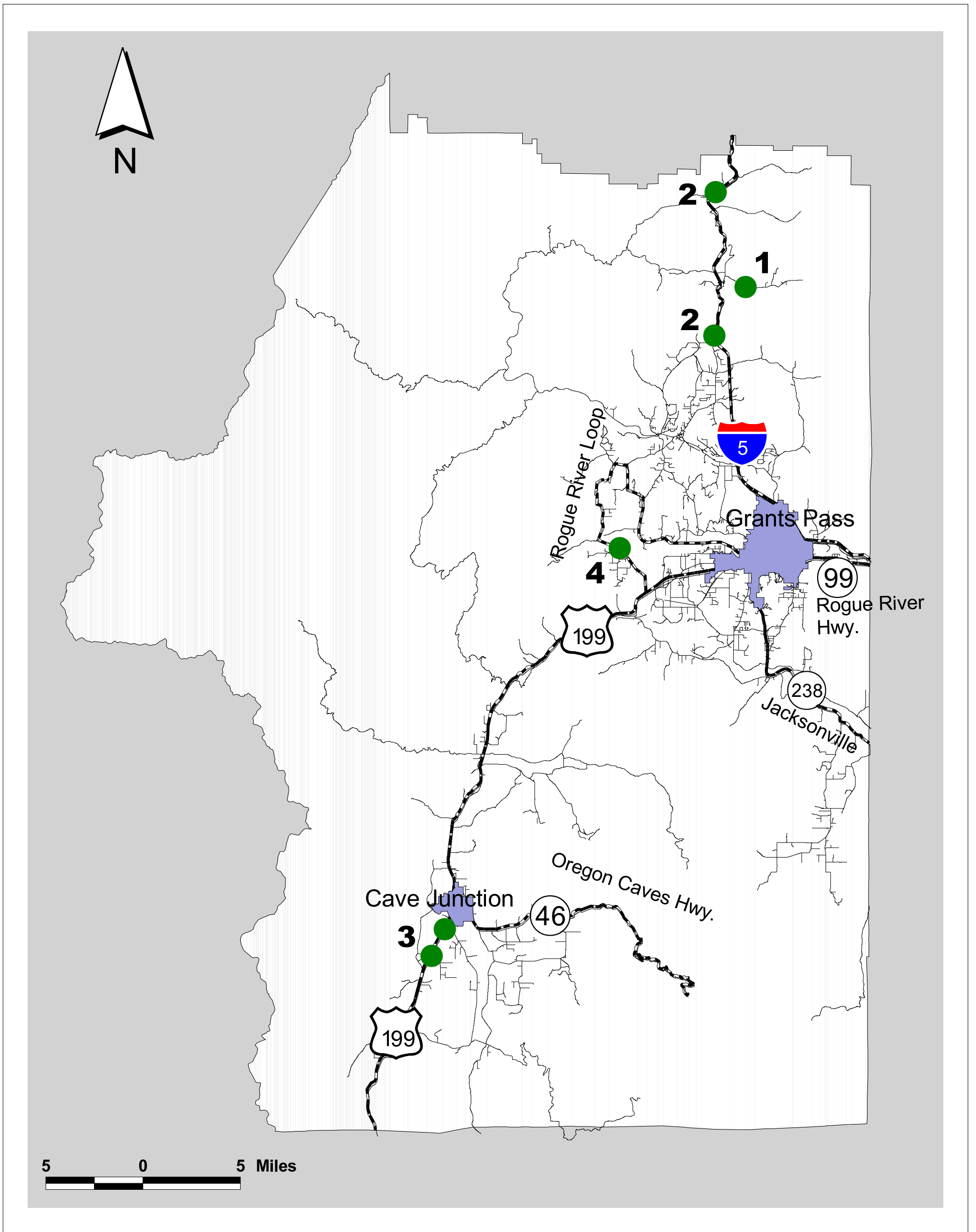


Figure 2-1: STIP Programmed Improvements in Rural Josephine County

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

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 speed² 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.

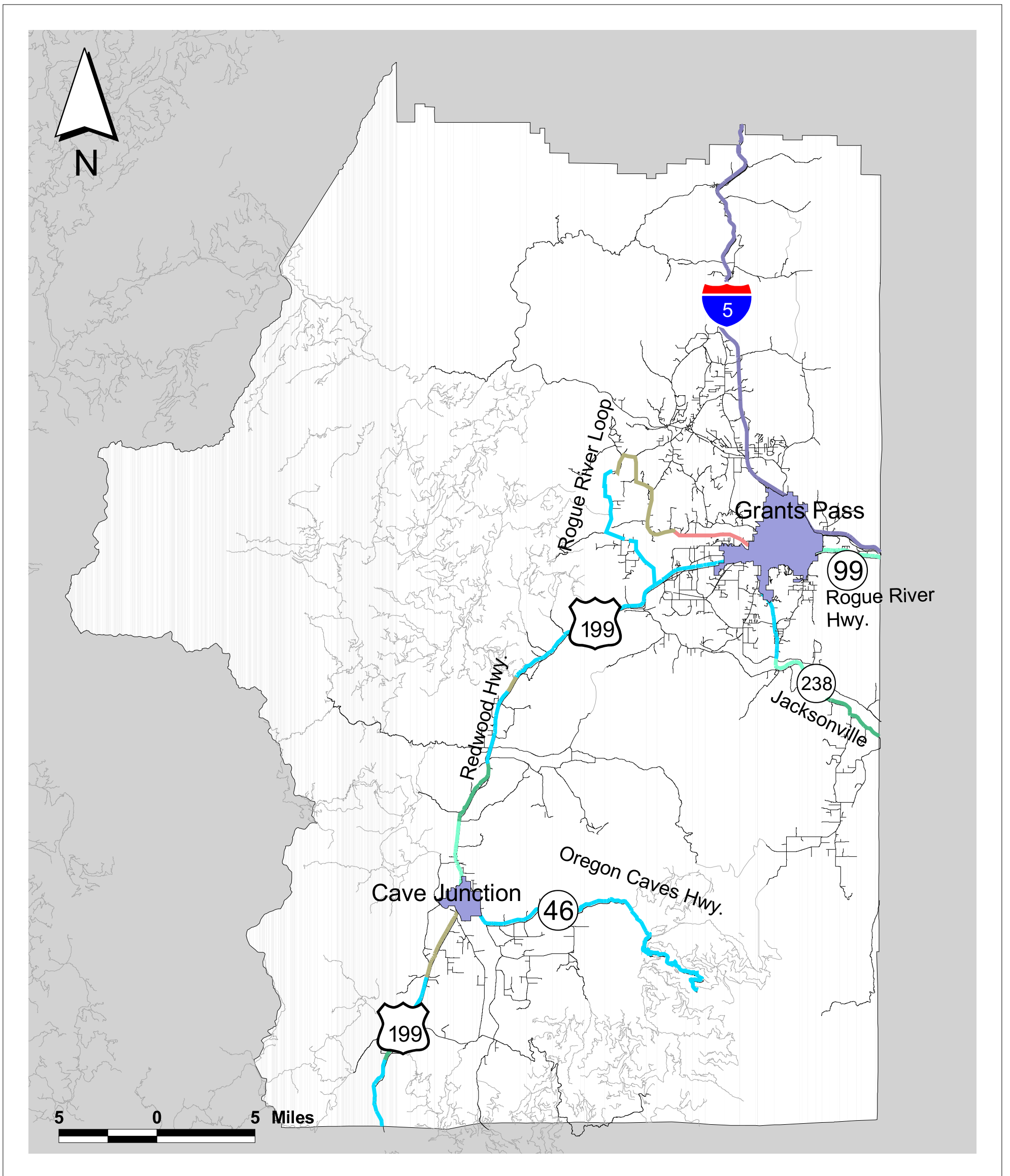



Figure 3-1: State Highway Locations and Posted Speeds

Posted Speeds

-  35
-  40
-  45
-  50
-  55
-  65

Highways

-  County Roads
-  Forest Roads

-  Urban Growth Boundary

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.

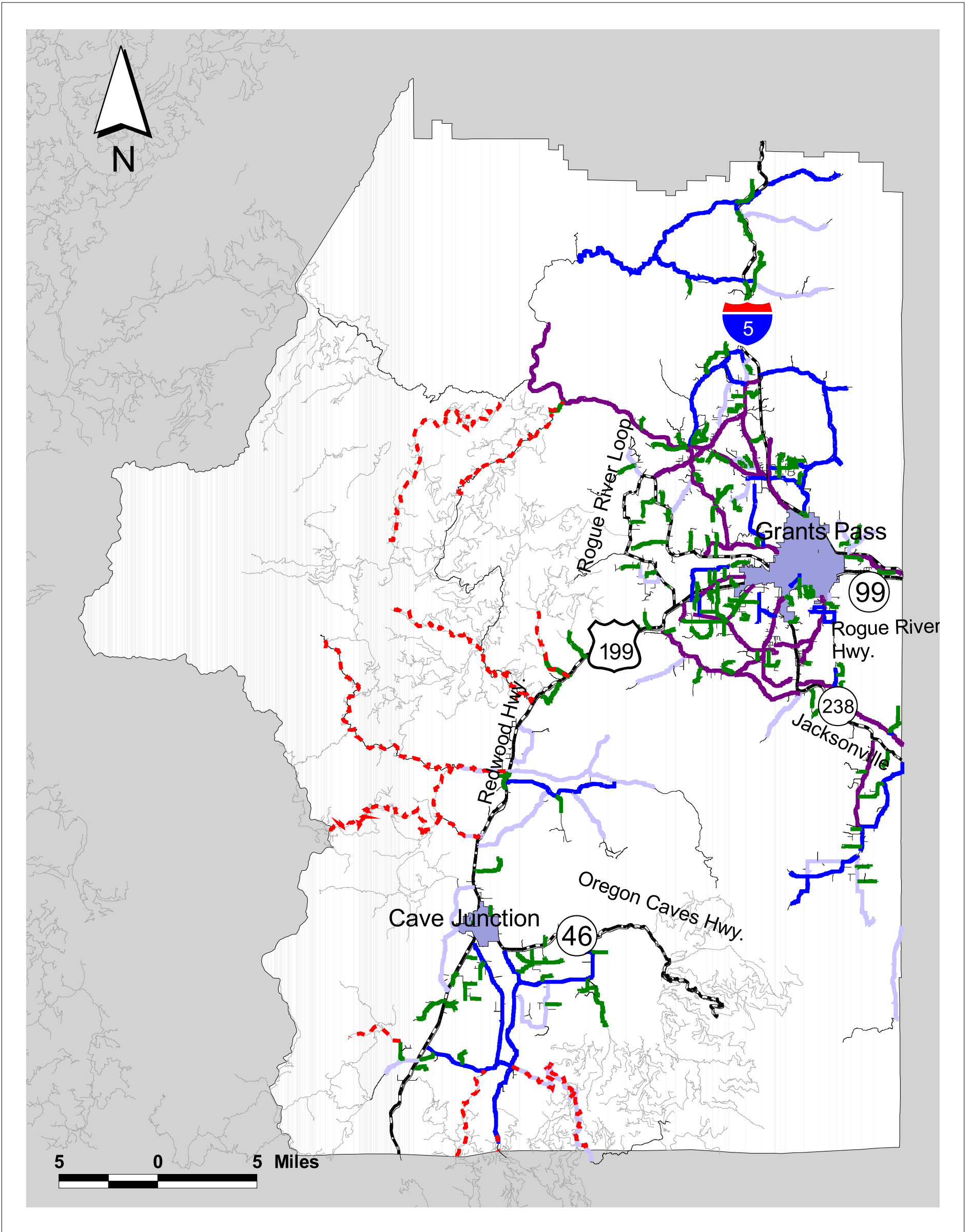
⁴ Includes 1 mile of rural industrial.

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

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	<u>39.3%</u>
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.

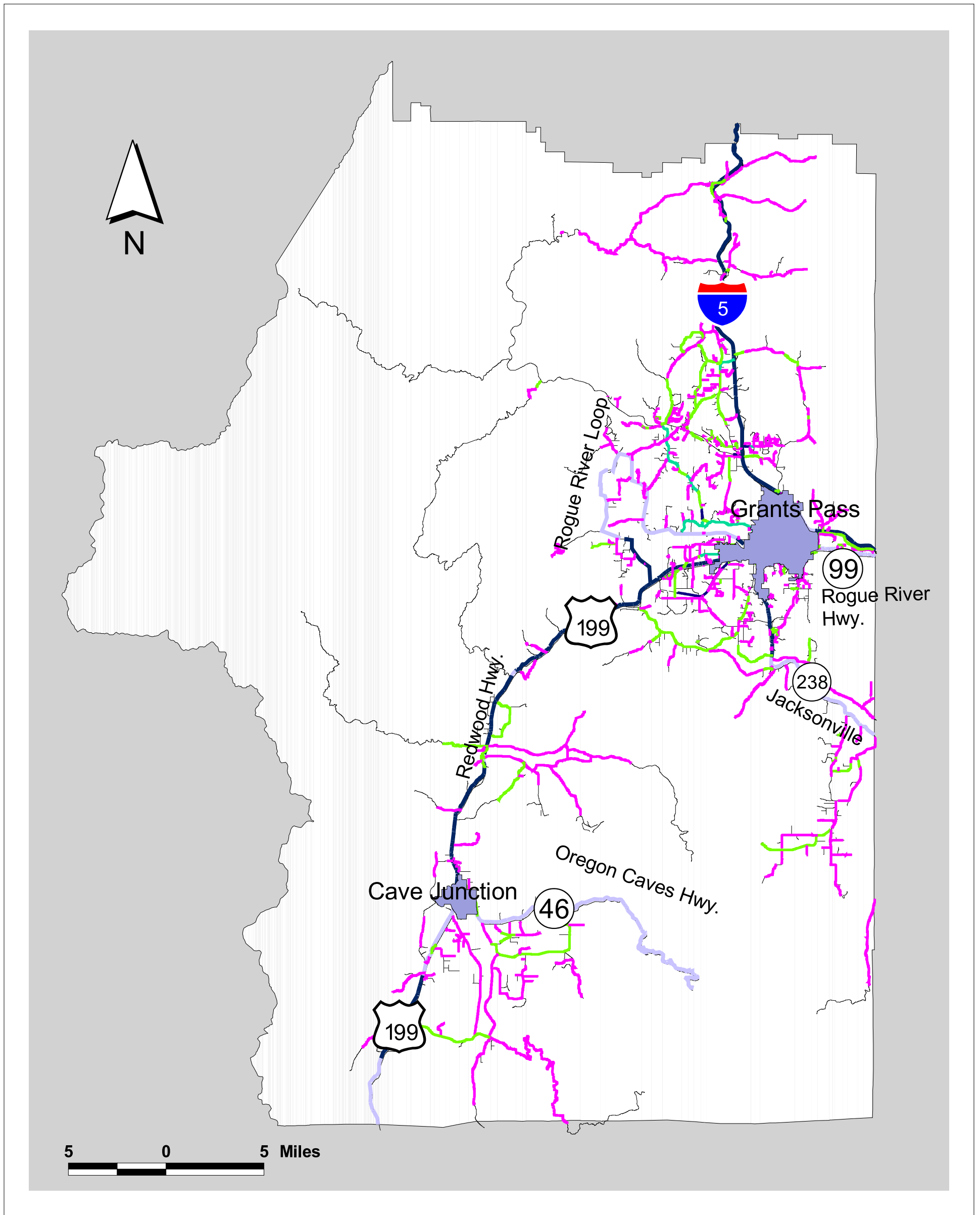


Figure 3-3: Average Shoulder Width

- 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

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**

Pavement Management Classification	Percent of Pavement Condition by Category		
	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 meet 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 uses⁴. 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.

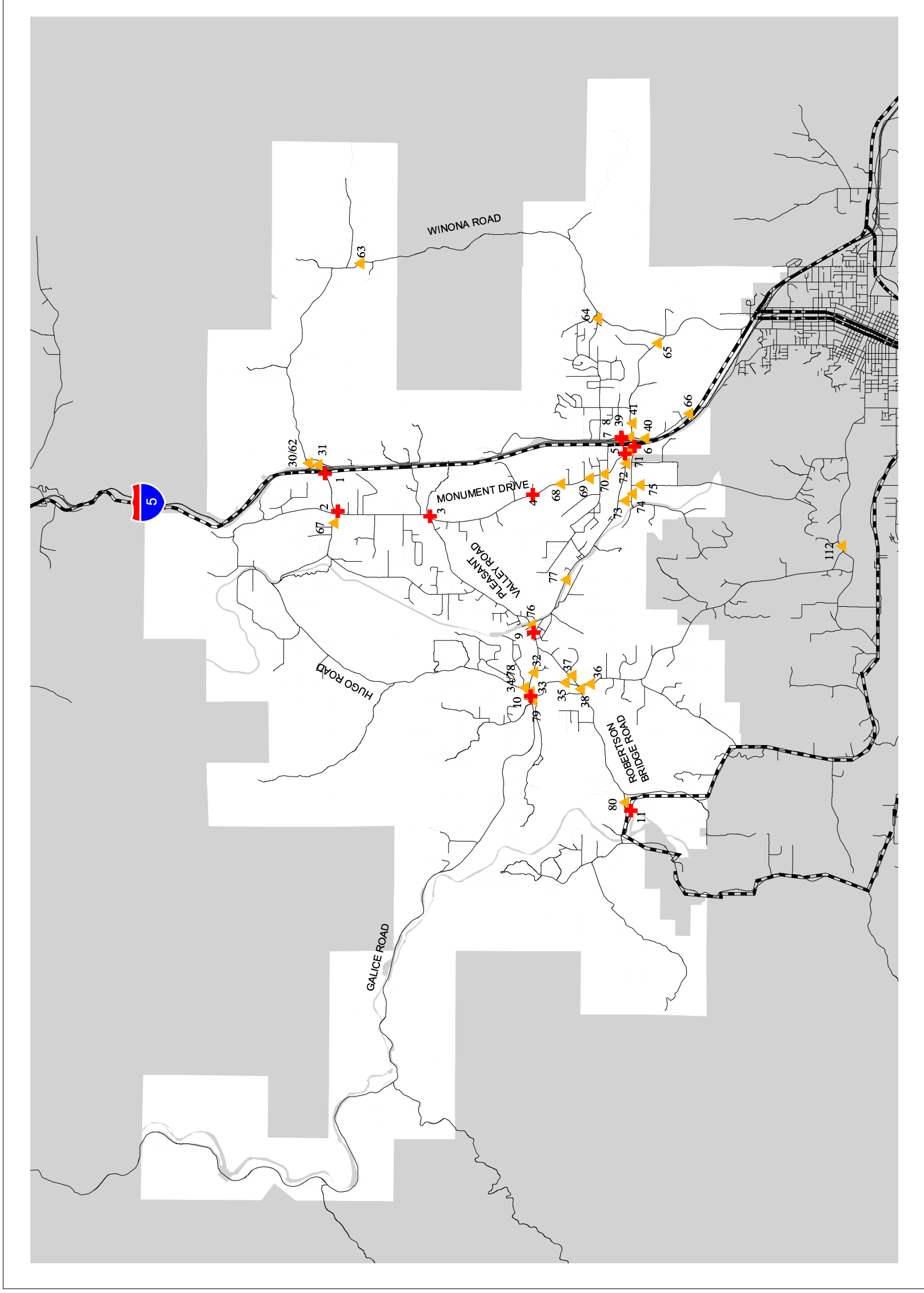
Table 3-8 summarizes existing traffic operations at these intersections, showing the LOS, delay and volume-to-capacity (v/c) ratios. For unsignalized intersections these measures of effectiveness apply only to the critical approach, not the entire intersection as at a signalized intersection. At three-legged 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 1⁵ 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

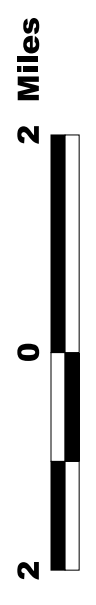
⁴ See Oregon Department of Transportation, Transportation System Planning Guidelines for a discussion of Level 1 and Level 2 traffic forecasting and analysis.

⁵ Ibid..

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

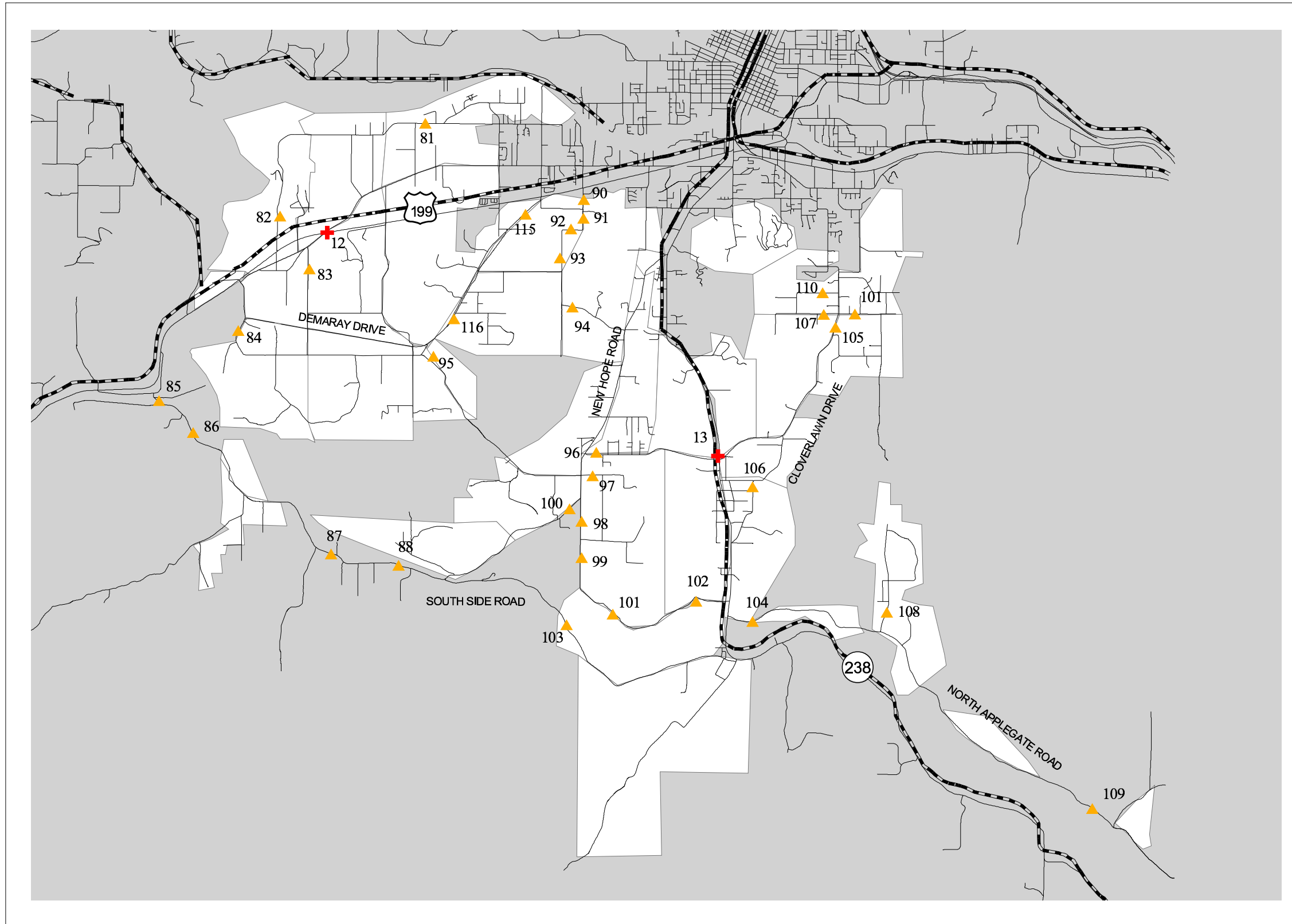





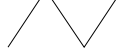
- Intersection Count
- Roadway Segment Count
- State Highways
- County Roads



Josephine County
Transportation System Plan

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

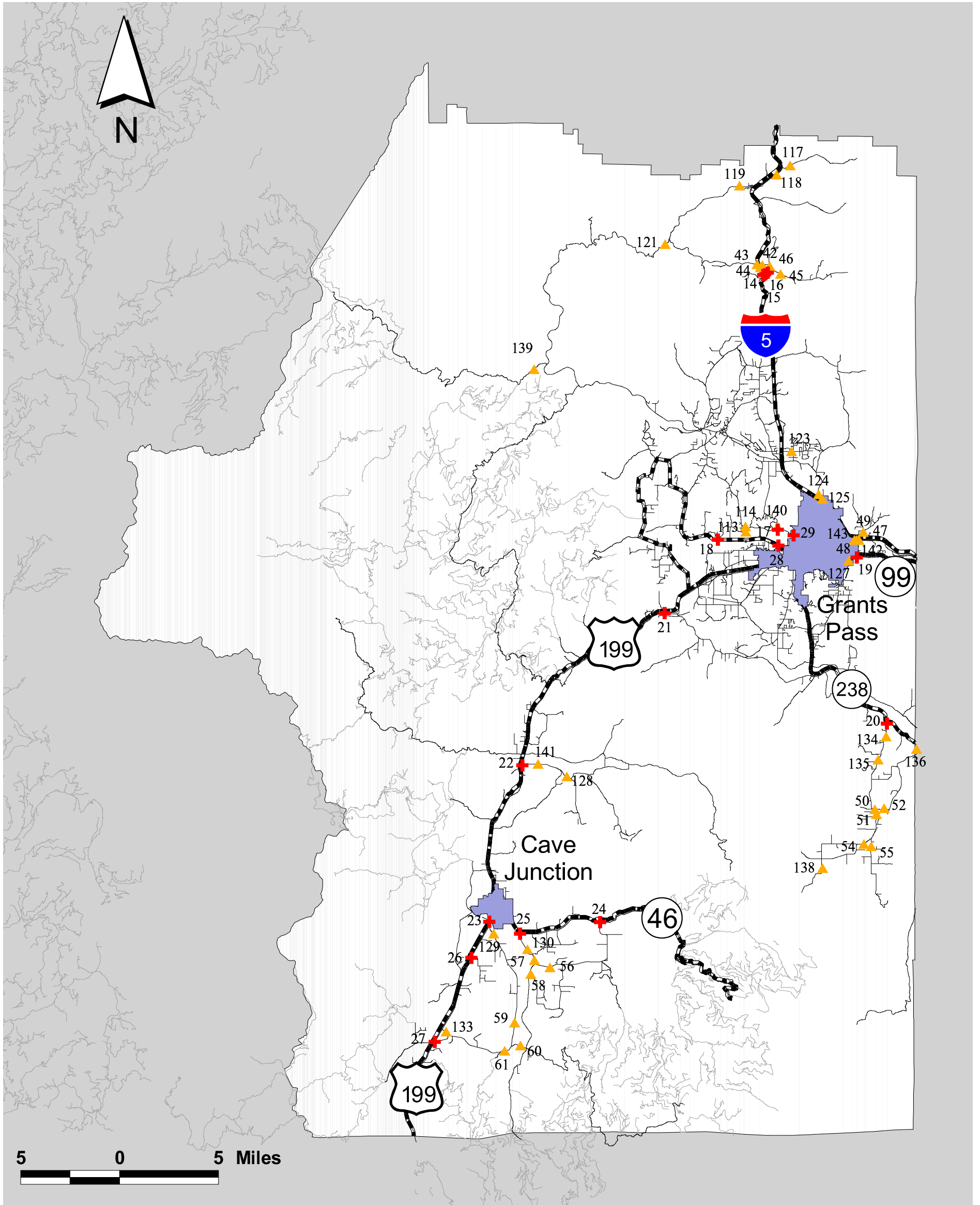


-  Intersection Count
-  Roadway Segment Count
-  State Highways
-  County Roads



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**

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 Ratio¹	LOS¹	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 Ratio¹	LOS¹	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)
30 th 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 Collectors¹

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
<u>Merlin Level 2 Analysis Area</u>									
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
<u>Murphy Level 2 Analysis Area</u>									
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 Collectors¹**

Map ID	Roadway	Nearest Intersection	Direction From Int.	Area	Milepost	County Rural Functional Class.²	2-way PM Peak Hour Volume³	V/C Ratio	LOS
<u>Murphy Level 2 Analysis Area Cont.</u>									
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
<u>Level 1 Analysis Area (Remainder of County Rural Area)</u>									
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 Collectors¹**

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 85th 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 85th percentile speed. Locations where 85th 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 85th 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 85th percentile speed was 55 mph vs. posted speed of 45 mph.
- Monument Drive (Rural Major Collector) north of Mary Harris Way, where the 85th percentile speed was 51 mph vs. posted speed of 40 mph.
- Old Stage Road (Rural Residential) near the Grave Creek interchange, where the 85th percentile speed was 45 mph vs. posted speed of 30 mph.
- Jones Creek Road (unclassified) south of Richland Avenue, where the 85th 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 are governed by posted speeds, eight roads with recent speed surveys had 85th 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 85th 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**

Roadway	Nearest Intersection		Accidents				Estimated	
	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

Roadway	Nearest Intersection		Accidents				Estimated	
	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

Segment Description	Milepost		ADT	Number of Crashes	Crash Rate *
	Beg	End			
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		ADT	Number of Crashes	Crash Rate *
	Beg	End			
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
<u>OR 99 (District Highway)</u>					
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
<u>OR 238 (District Highway)</u>					
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
<u>US 199 (Statewide Highway)</u>					
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
<i>Located within Rural Josephine County</i>						
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
<i>Located within Urban Areas</i>						
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.

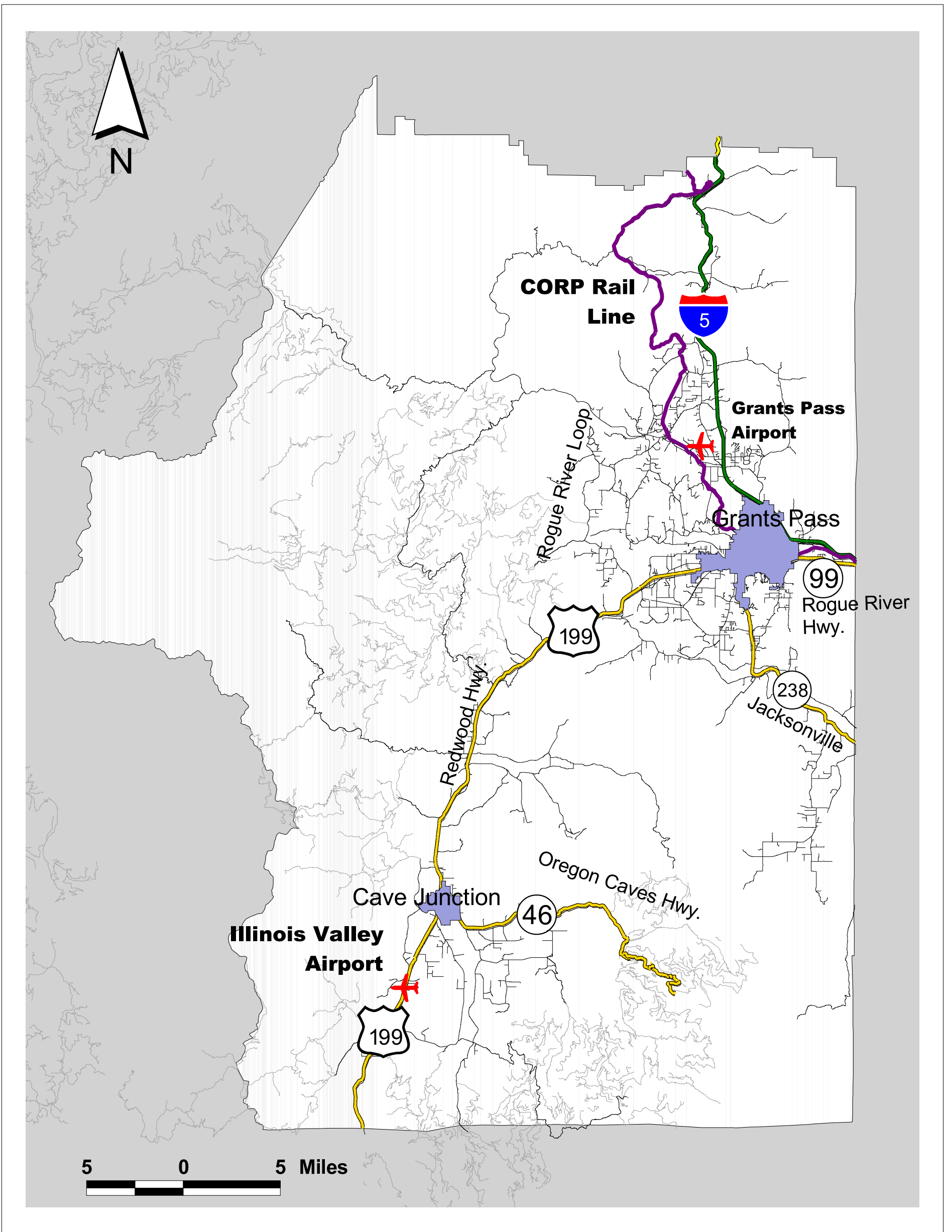
Pavement conditions and lack of restrictions on large vehicles along truck routes are also important for the efficient movement of freight. According to the *I-5 State of the Interstate* report, pavement conditions along I-5 generally fall in the very good category through Josephine County.

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

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 Statute (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.

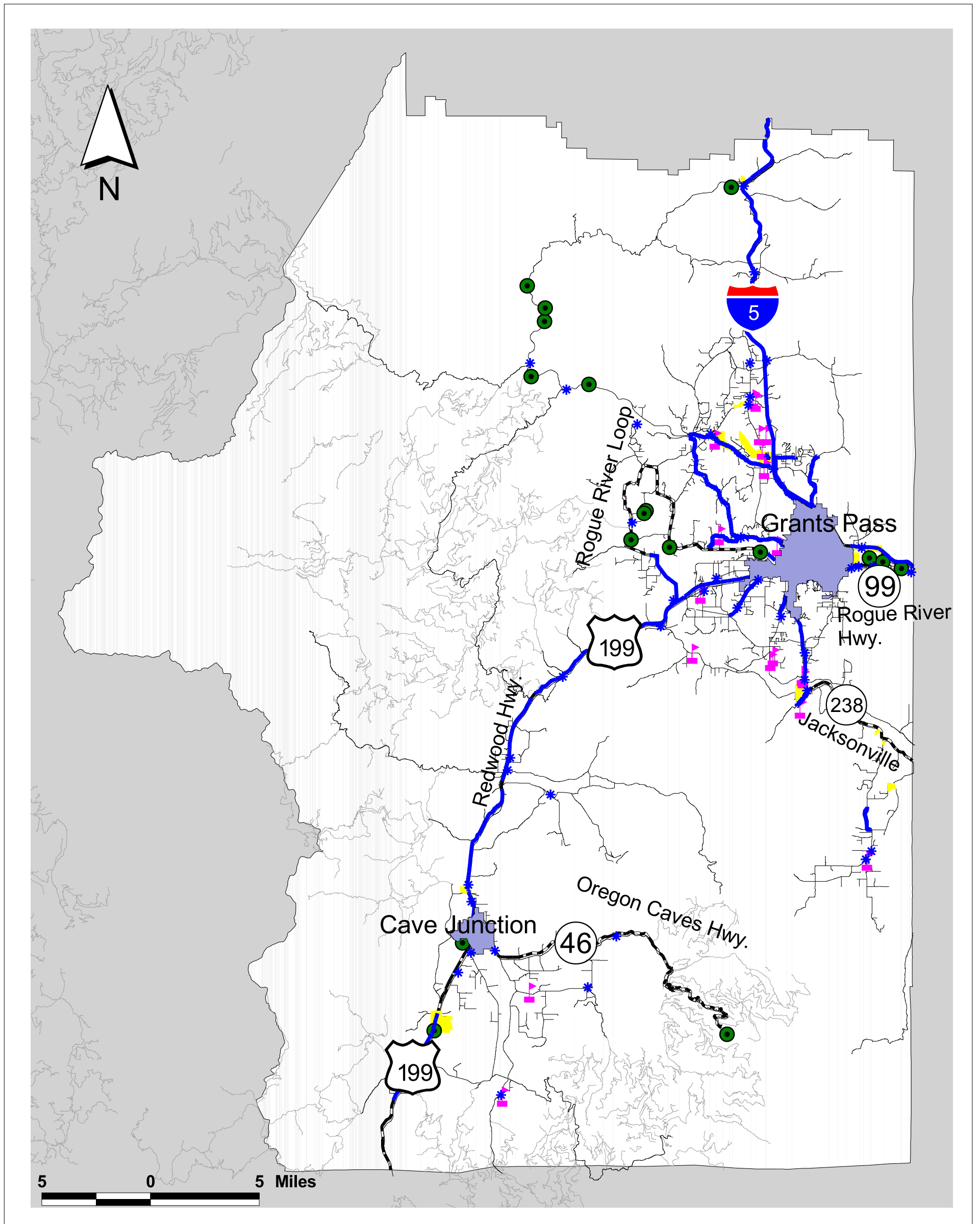


Figure 3-6: Pedestrian and Bicycle Facilities and Activity Centers

- | | |
|-----------------------|--|
| Activity Centers | Bicycle Route (shoulders at least 4 feet wide) |
| Hospital | Forest Roads |
| Park | County Roads |
| School | State Highways |
| Industrial Area | |
| Commercial Node | |
| Urban Growth Boundary | |

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.

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

Figure 3-7
Central Oregon & Pacific Railroad



Source: Central Oregon & Pacific Railroad website, 2003

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	<u>2,891</u>	<u>3,058</u>	<u>3,220</u>	<u>3,381</u>	<u>3,535</u>	<u>3,687</u>	<u>796</u>	<u>1,112</u>	<u>1,418</u>	<u>360</u>
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

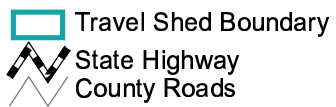
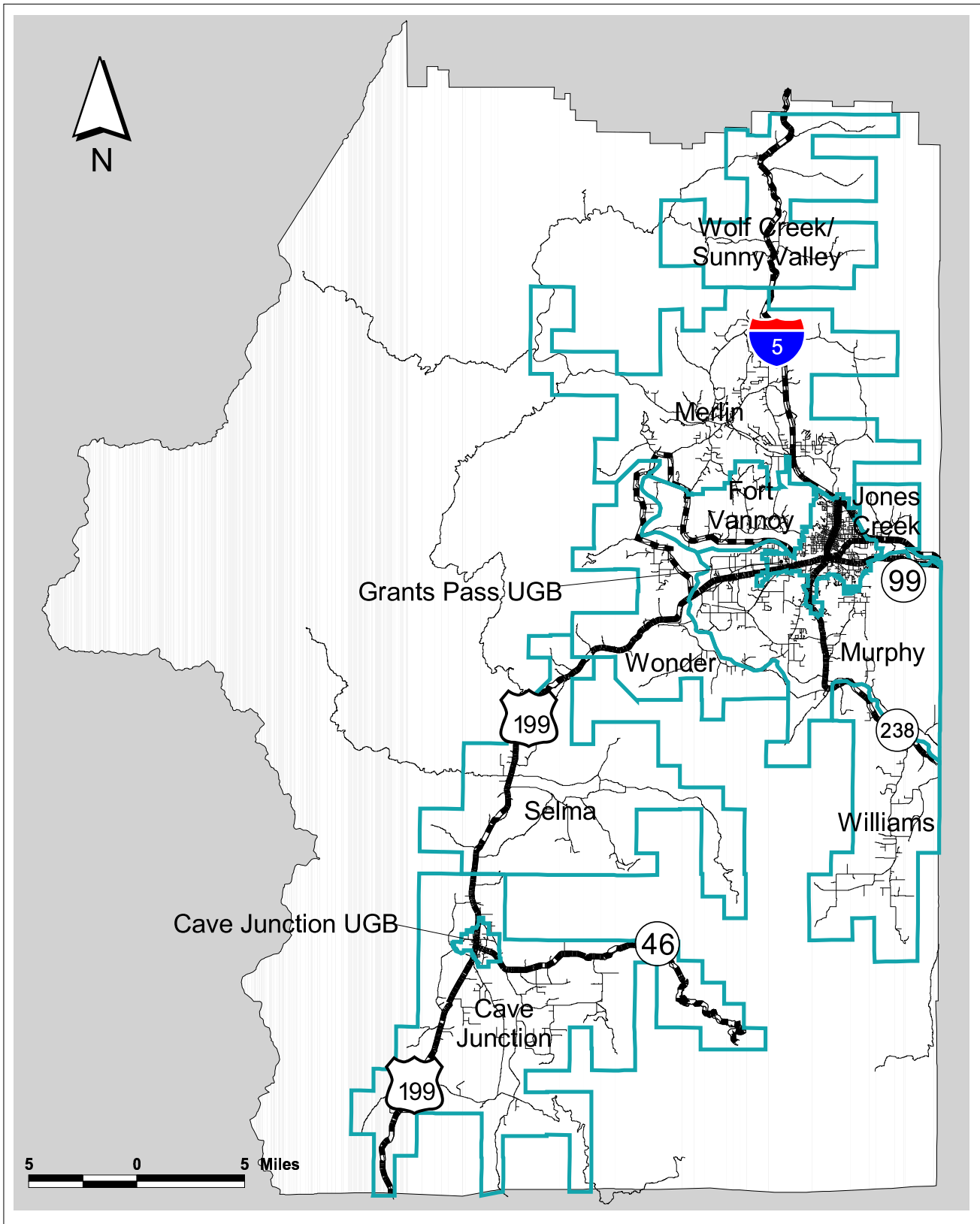


Figure 4-1: County Travel Sheds

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.

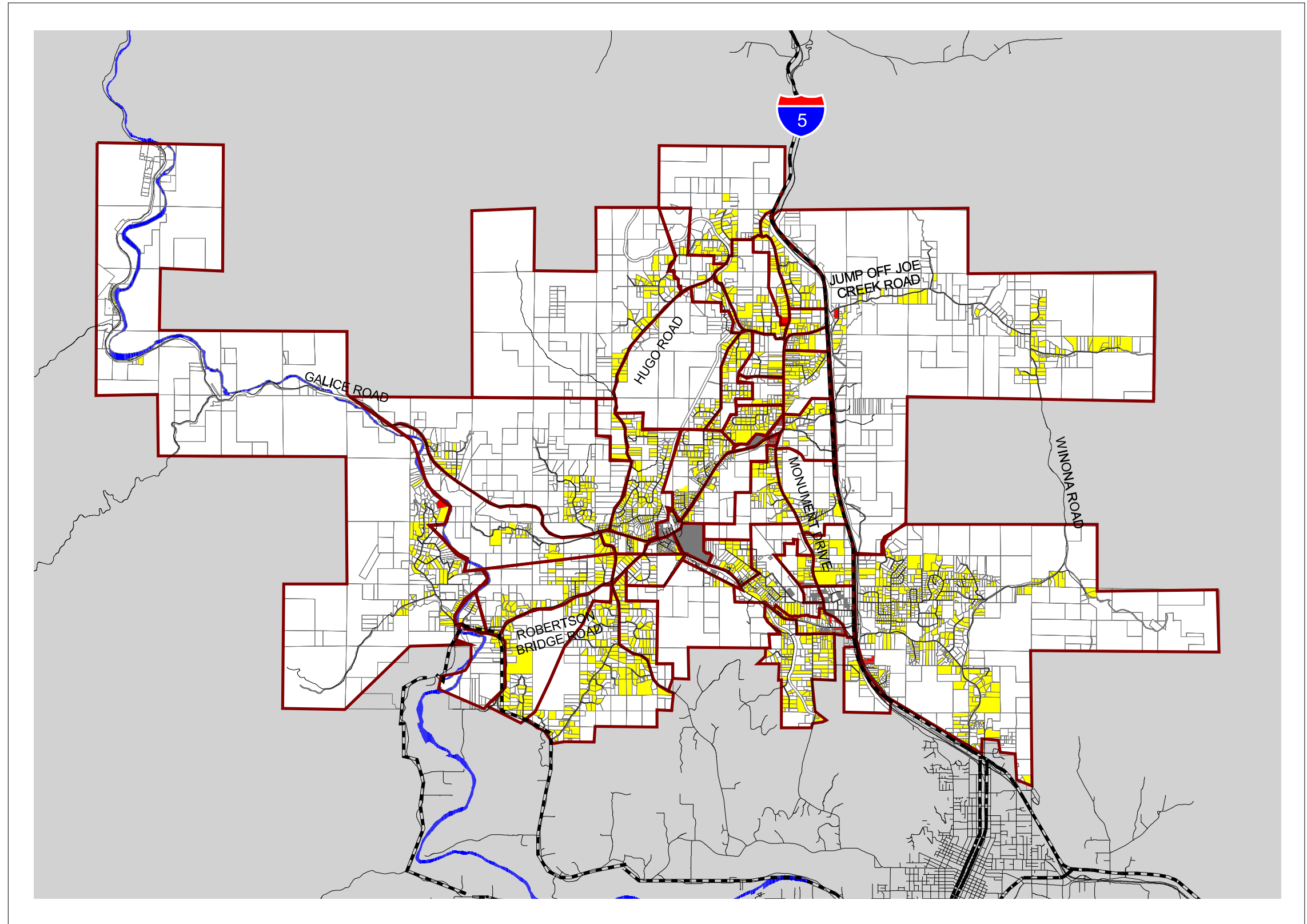
The amount of development forecast for each vacant residential, commercial or industrial parcel was aggregated into traffic analysis zones for analysis purposes as discussed below. No traffic growth was assumed on forest lands or in other portions of the rural area not encompassed by residential, commercial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

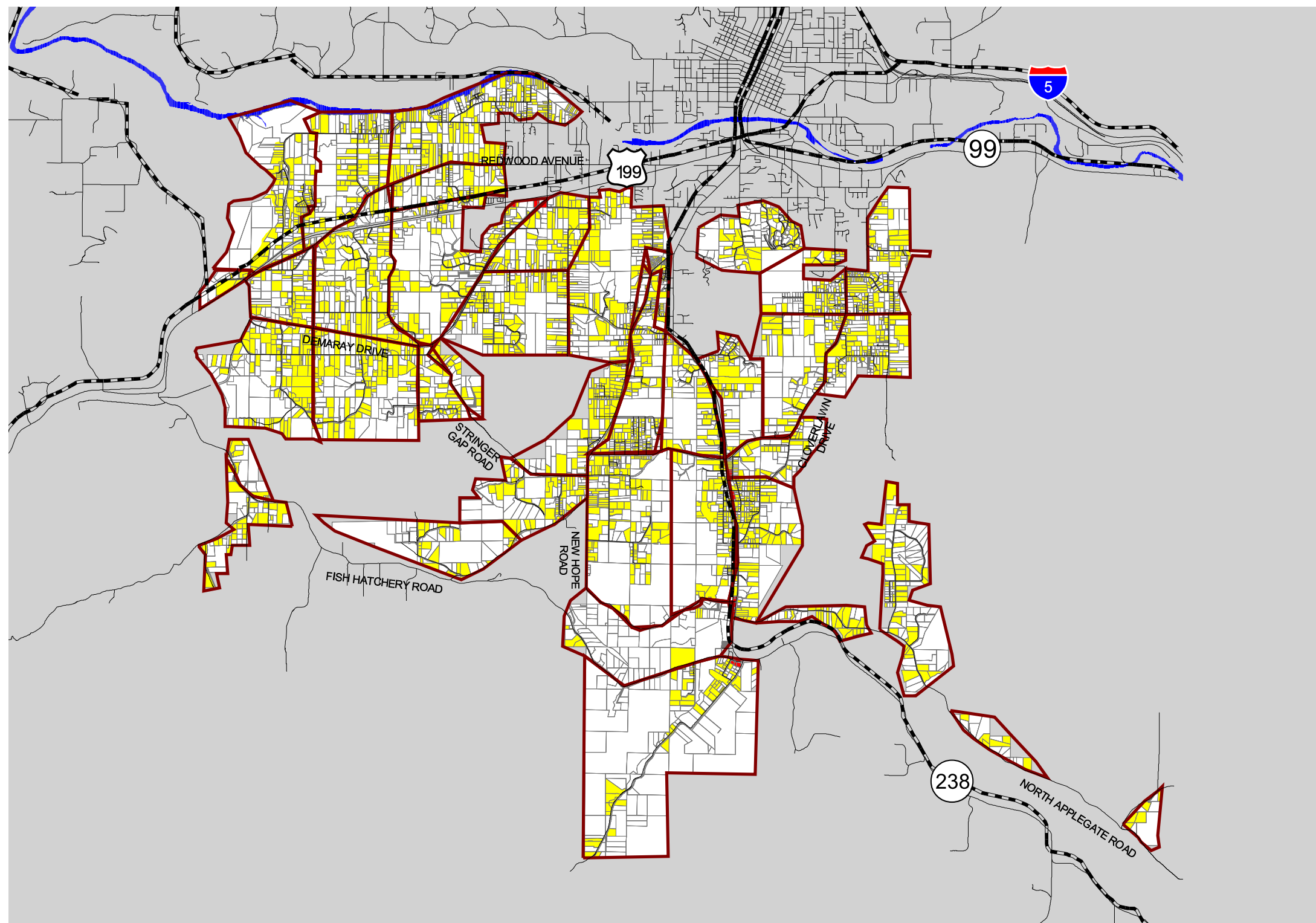
**Figure 4-2:
Merlin Vacant Lands**



- Vacant Lands
- Commercial
 - Industrial
 - Residential
- State Highway
 County Roads
 TAZ Boundaries



**Figure 4-3:
Murphy Vacant Lands**



- Vacant Lands
- Commercial
 - Industrial
 - Residential
- State Highway
 County Roads
 TAZ Boundaries



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.

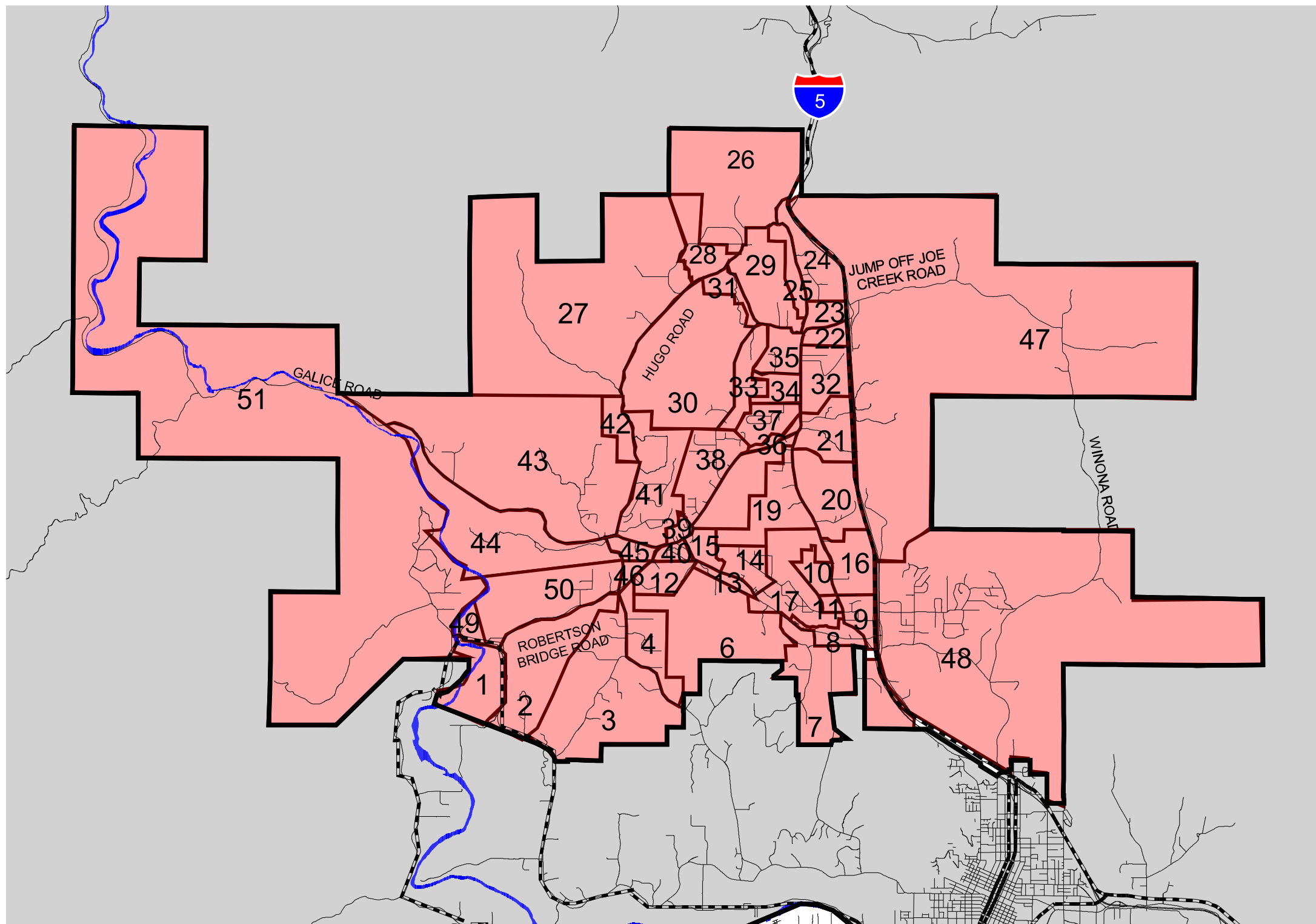
**Table 4-3
Merlin and Murphy Level 2 Study Areas
Buildable Land Use/Trip Generation Estimates**

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
<i>Merlin Level 2 Analysis Area</i>						
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	<u>2,375</u>	41%	<u>1,400</u>	40%
<i>Merlin Area Subtotals:</i>			4,455	41%	3,480	40%
<i>Murphy Level 2 Analysis Area</i>						
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.

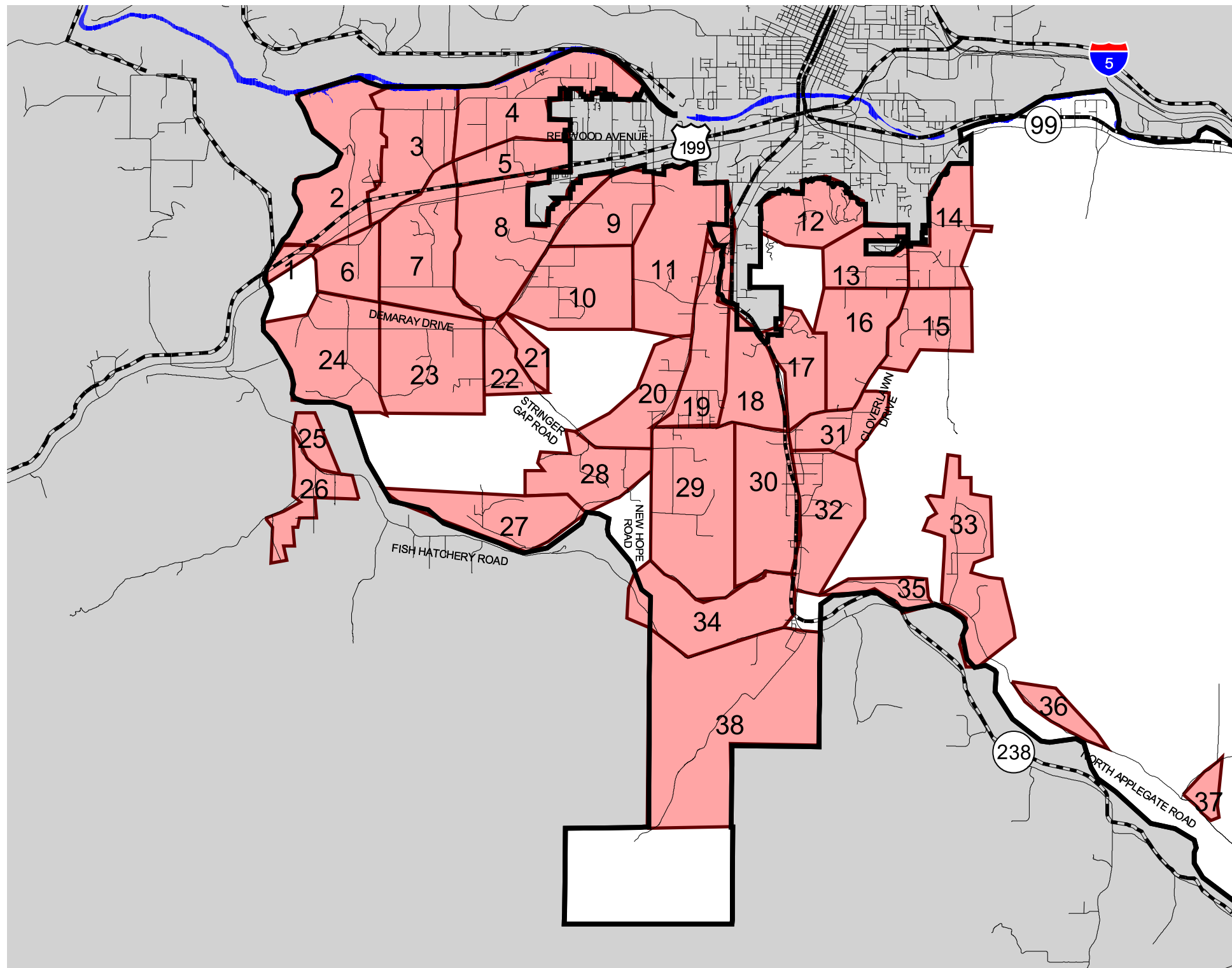
**Figure 4-4:
Merlin Transportation
Analysis Zones**







-  State Highway
-  County Roads
-  Merlin TAZ
-  Merlin Travel Shed



**Figure 4-5:
Murphy Transportation
Analysis Zones**



-  State Highway
-  County Roads
-  Murphy TAZ
-  Murphy Travel Shed



1 0 1 Miles

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.

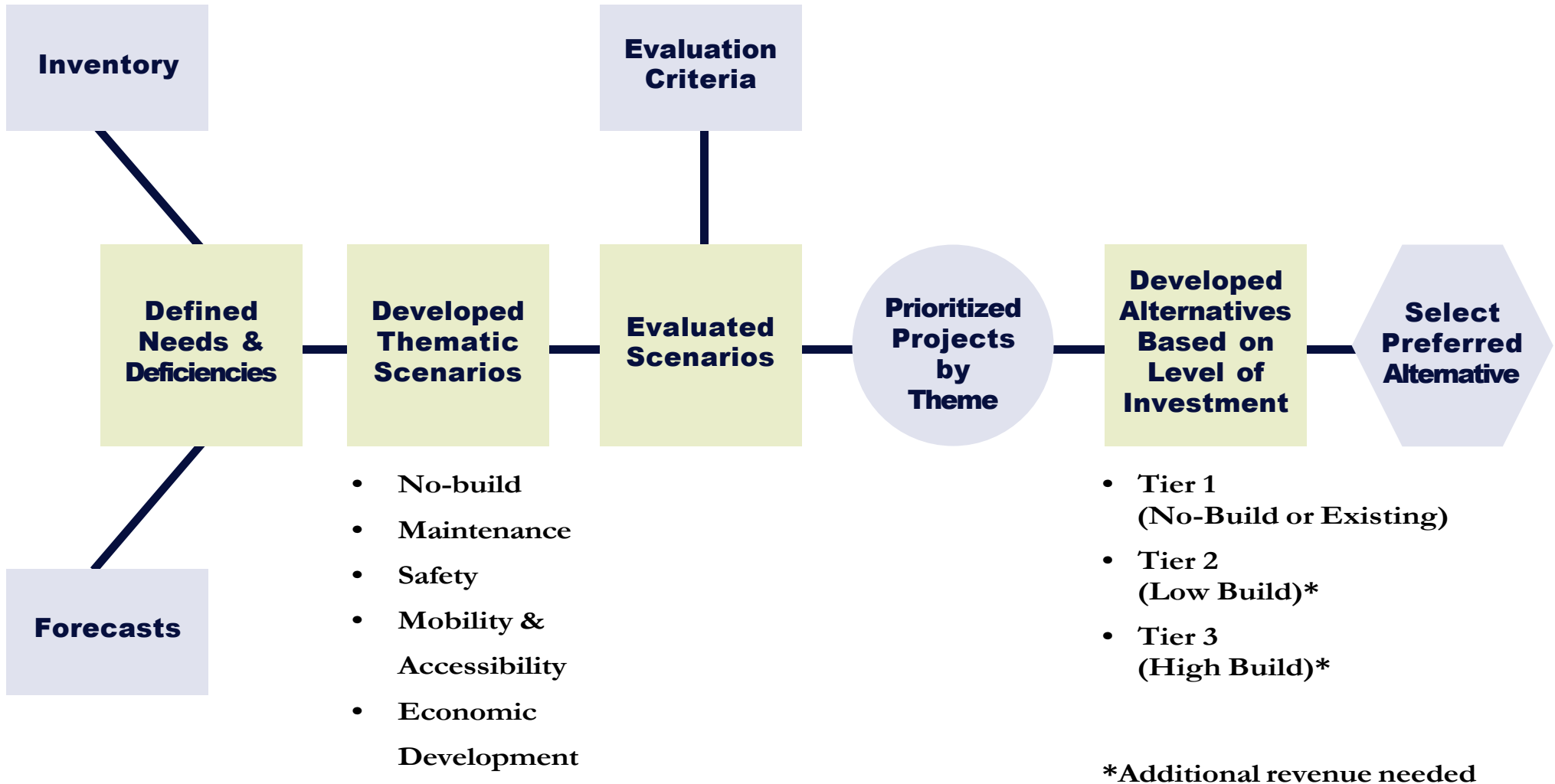
The process leading to development and evaluation of transportation improvement scenarios and tiered TSP alternatives is described in this chapter. A more detailed discussion of the specific projects included in each scenario and alternative is presented in the chapters devoted to each major travel mode 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, 95th 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**

Signalized Intersection	Forecast Area	Map ID	2002 PM Peak Hour			2025 PM Peak Hour			Deficiency (yes/no)		
			Intersection v/c Ratio ¹	LOS ¹	Avg. Delay (secs.) ¹	Intersection v/c Ratio ¹	LOS ¹	Avg. Delay (secs.) ¹			
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 Ratio¹	LOS¹	Avg. Delay (secs.)¹	Critical Lane Group	Max. v/c Ratio¹	LOS¹	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 included 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						2002 PM Peak Hour		2025 PM Peak Hour		
Map ID	Roadway	Nearest Intersection	Direction From Int.	Forecast Area	Milepost	County Functional Class.¹	2-way PM Peak Hour Volume	V/C Ratio	2-way PM Peak Hour Volume	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							<u>2002 PM Peak Hour</u>		<u>2025 PM Peak Hour</u>	
Map ID	Roadway	Nearest Intersection	Direction From Int.	Forecast Area	Milepost	County Functional Class. ¹	2-way PM Peak Hour Volume	V/C Ratio	2-way PM Peak Hour Volume	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							<u>2002 PM Peak Hour</u>		<u>2025 PM Peak Hour</u>	
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
<u>Merlin Level 2 Analysis Area</u>										
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
<u>Murphy Level 2 Analysis Area</u>										
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 Volume³	V/C Ratio	2-way PM Peak Hour Volume³	V/C Ratio
<u>Murphy Level 2 Analysis Area Continued</u>										
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 Classification²	Existing Count Date	2-way PM Peak Hour Volume³	V/C Ratio	2-way PM Peak Hour Volume³	V/C Ratio
<u>Level 1 Analysis Area (Remainder of County Rural Areas)</u>										
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 0135 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	<ul style="list-style-type: none"> • Programmed routine maintenance¹² • ODOT STIP improvements
Maintenance	<ul style="list-style-type: none"> • Expanded roadway maintenance to the optimal cycle needed to retain roadway system in current condition • Install left turn lanes along Monument Drive between Merlin Road and Timber Lane • Resurface Jerome Prairie Road (Woodland Park Road to west) • Resurface segments of Williams Highway as needed (Provolt to Water Gap Road) • Widen/surface shoulders on Pine Crest Drive/Plumtree Lane (Camp Joy Road to Upper River Road) • Widen/surface shoulders on segments of New Hope Road (Hidden Valley Road to OR 238) • Widen/surface shoulders on Laurel Road (US 199 to OR 46) • Widen/surface shoulders on Cloverlawn Drive (East View Place to Jaynes Drive) and improve intersection with Summit Loop Road • Widen/surface shoulders on Lakeshore Drive (US 199 to McMullen Creek Road) • Drainage improvements on Lakeshore Drive in vicinity of Deer Creek (MP 6.0 to 6.5) • Drainage and shoulder improvements on Lakeshore Drive (4700 block to Dryden Road) • Replace structurally-deficient Jacks Creek Bridge on Jumpoff Joe Creek Road (MP 2.62) • Replace structurally-deficient Jones Creek Bridge on Foothill Boulevard (MP 0.72), and improve Foothill Boulevard approaches • Replace structurally-deficient Sucker Creek Bridge on Holland Loop Road (MP 1.53) • Replace structurally-deficient Coyote Creek Bridge on Bloom Road in Wolf Creek
Safety	<ul style="list-style-type: none"> • Improve shoulders (to 4-foot minimum) on Major/Minor Collector Roadways within one mile of rural activity centers for vehicle recovery and bicyclist/pedestrians • 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) • Install warning signs on OR 238 at Williams Highway • 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 • Intersection improvements at OR 238 at Jaynes Drive, Applegate Road, Williams Highway, and New Hope Road • Passing lanes on US 199 between MP 16-24 (northbound) and MP 7-14 (southbound) • Install guard rail along segments of selected County roadways • Intersection realignment on Holland Loop Road at Hayes Cutoff • Intersection improvements on Dowell Road at Wolf Lane • Intersection improvements on OR 46 at Holland Loop Road (west) • 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	<ul style="list-style-type: none"> • 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). • Improve Merlin-Galice Road/Monument Drive intersection • Improve US 199/Redwood intersection • Pull-out and/or passing lanes on Galice Road
Economic Development	<ul style="list-style-type: none"> • Realign OR 238 at Water Gap Road • Widen shoulders to standard width on key segments of Monument Drive, OR 99, OR 238 and Rogue River Loop Highway (to improve vehicle safety, stabilize 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.

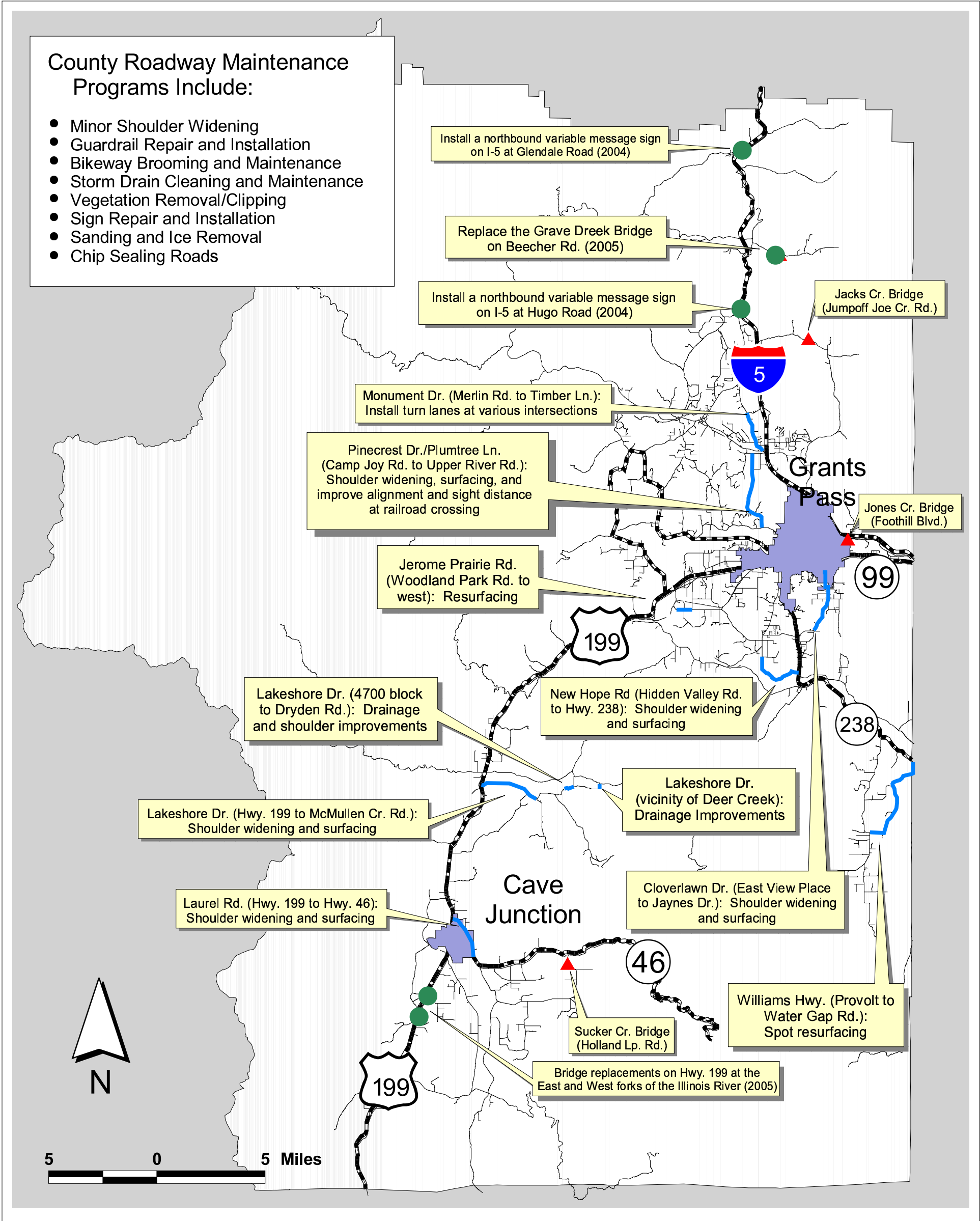
- *Objective 1 - Ensure the transportation system is planned to maximize safety.*

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.*

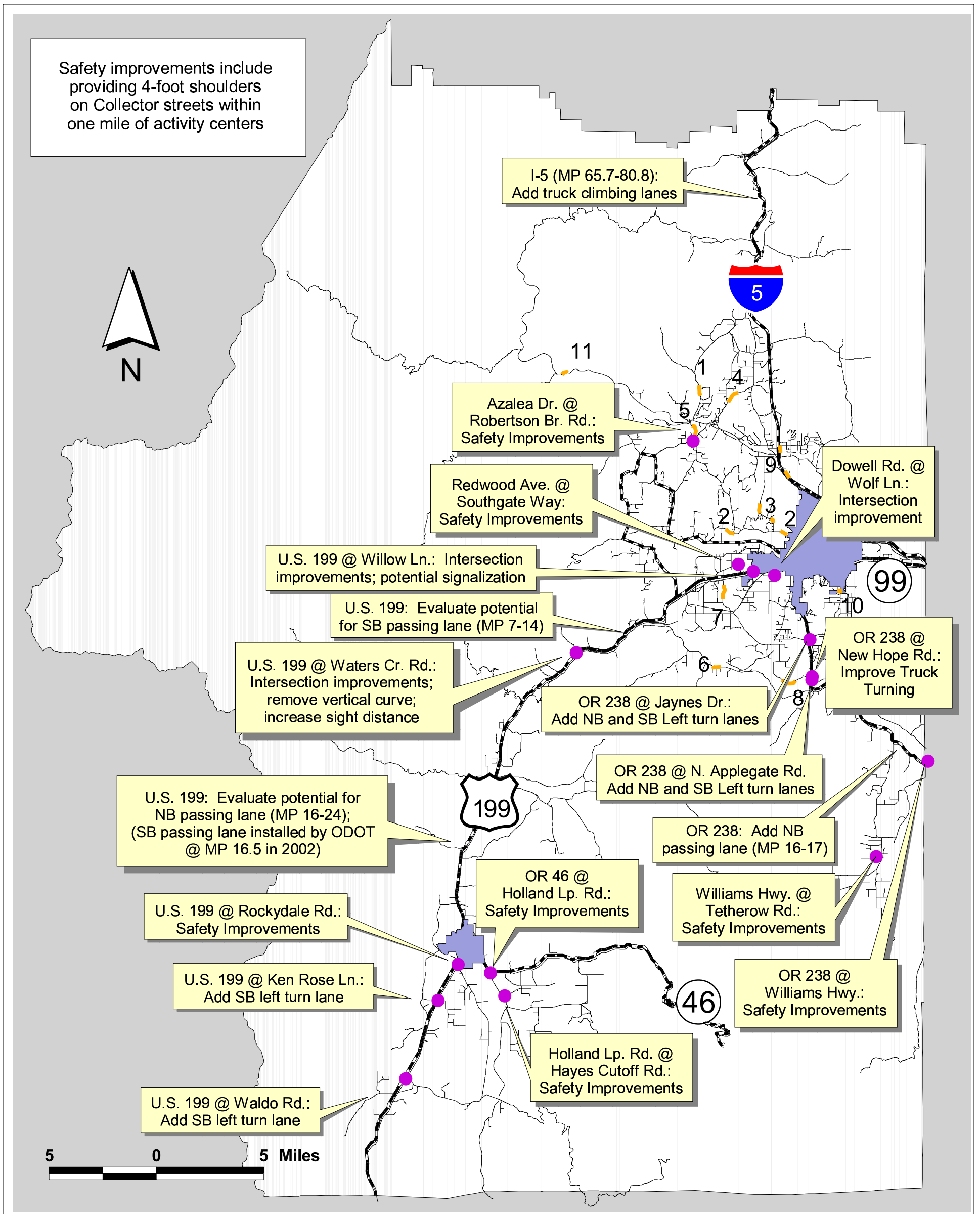
County Roadway Maintenance Programs Include:

- Minor Shoulder Widening
- Guardrail Repair and Installation
- Bikeway Brooming and Maintenance
- Storm Drain Cleaning and Maintenance
- Vegetation Removal/Clipping
- Sign Repair and Installation
- Sanding and Ice Removal
- Chip Sealing Roads



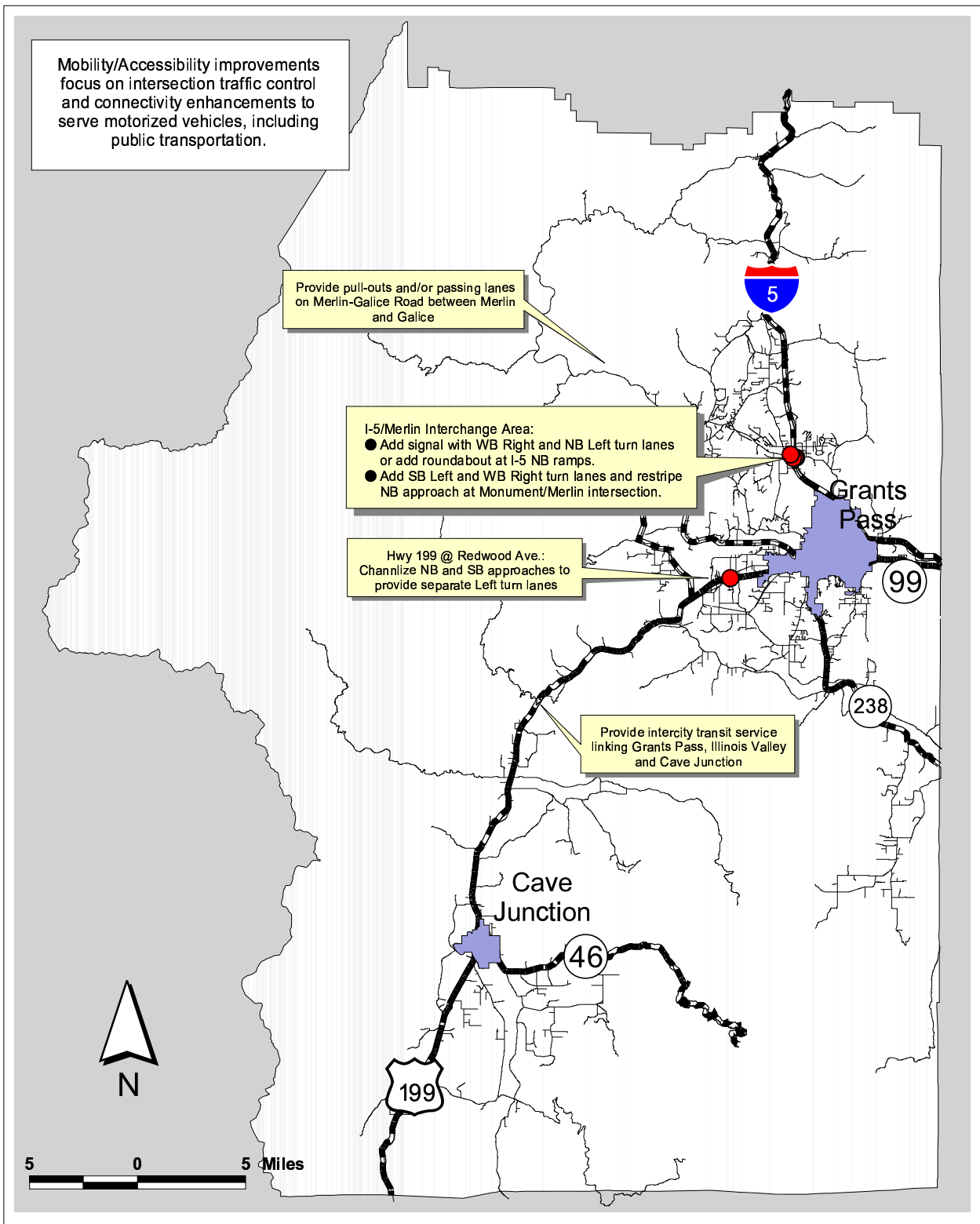
- State Highway Projects in STIP
- Roadway Repair Project
- ▲ Bridge Repair Project
- Urban Growth Boundary
- State Highway
- County Roads

Figure 6-1: Maintenance Scenario



- Intersection Safety Improvement
- ▲ Potential Guardrail Locations (# Locations)
- Urban Growth Boundary
- State Highway
- County Roads

Figure 6-2: Safety Scenario



- Intersection Mobility Improvements
- Urban Growth Boundary
- ▬ State Highway
- ▬ County Roads

Figure 6-3: Mobility and Accessibility Scenario

Economic Development improvements include adding bicycle amenities to roadways listed in the 1982 County Bicycle Master Plan (see text for details)

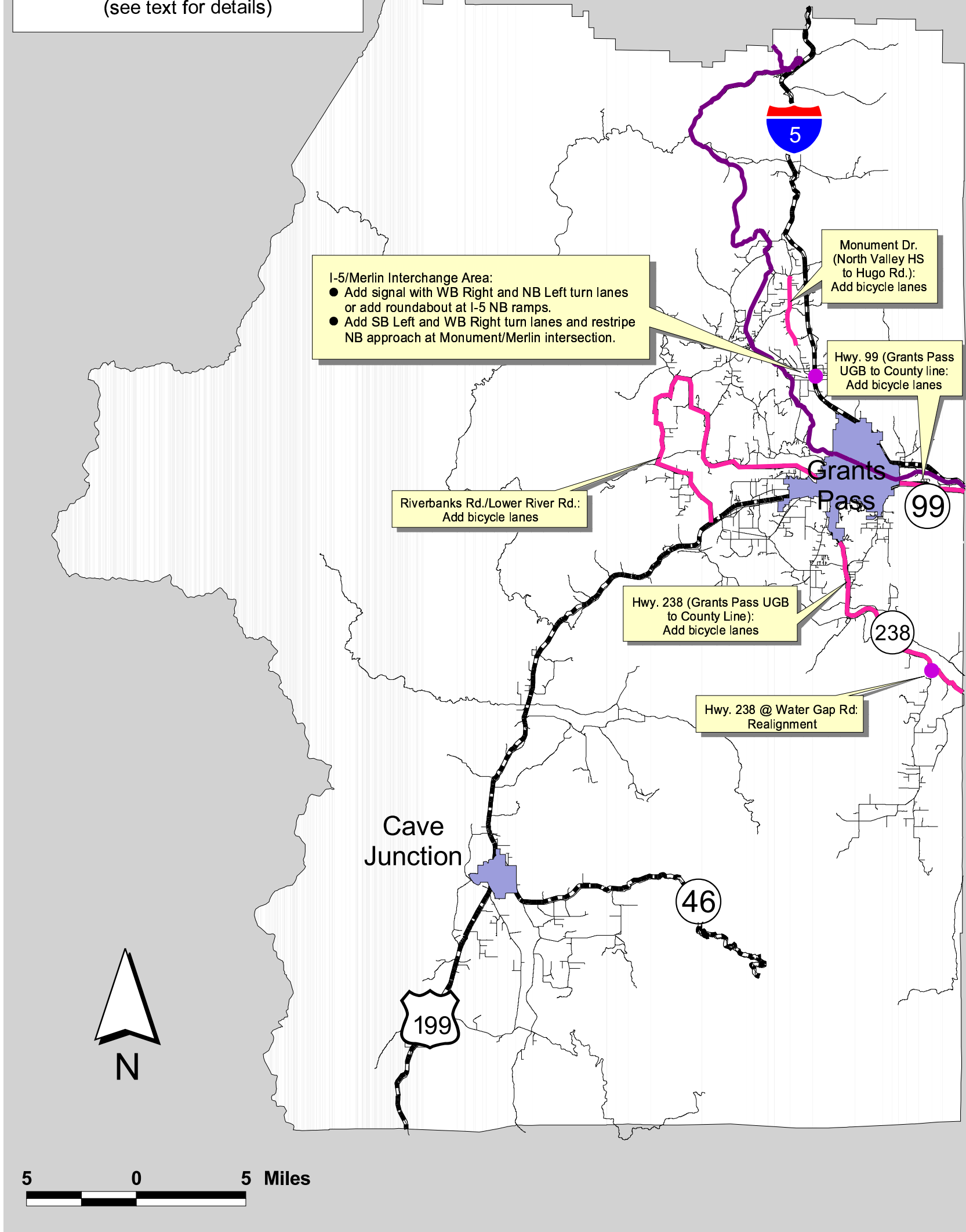








Figure 6-4: Economic Development Scenario

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

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 8th 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 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):** 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-Build¹	Tier 2 – Low Build	Tier 3 – High Build
<p><u>Maintenance Projects</u></p> <ul style="list-style-type: none"> Routine Programmed Maintenance based on existing funding (significant shortfall from optimal maintenance program) Replace Grave Creek Bridge on Beecher Road (ODOT) Install variable message signs on I-5 for mountain safety (ODOT) Replace Illinois River Bridges on US 199 (ODOT) 	<p><u>Maintenance Projects</u></p> <ul style="list-style-type: none"> Expanded program maintenance to allow for optimal cycle of roadway repair/resurfacing Monument Drive (Merlin Road to Timber Lane) – add left turn lanes Jerome Prairie Road (Woodland Park Road to west) – resurfacing Williams Highway (Provolt to Water Gap Road) – resurfacing various roadway segments as needed Pine Crest Drive/Plumtree Lane (Camp Joy Road to Upper River Road) – widen shoulders, improve alignment/sight distance at railroad crossing New Hope Road (milepost 0.0 to 3.7) – widen/resurface shoulders to at least 4 feet Laurel Road (milepost 0.0 to 2.2) – widen/resurface shoulders to at least 4 feet Jacks Creek Bridge on Jumpoff Joe Creek Road – replace existing deficient bridge Jones Creek Bridge on Foothill Road – replace existing deficient bridge and improve roadway approaches Sucker Creek Bridge on Holland Loop Road – replace existing deficient bridge <p><u>Safety Projects</u></p> <ul style="list-style-type: none"> Azalea Drive at Robertson Bridge Road (milepost 5.242) – install all-way stop or realign to enhance safety at this high accident location Williams Highway at Tetherow Road (milepost 5.6) – install warning signs at this high accident location Holland Loop Road at Hayes Cutoff Road – install warning signs at this high accident location Redwood Avenue at Southgate Way (milepost 2.659) – trim/eliminate trees obscuring sight distance at this high accident location 	<p><u>Maintenance Projects</u></p> <ul style="list-style-type: none"> Cloverlawn Drive (milepost 0.5 to 3.6) – widen shoulders/resurface to at least 4 feet, improve intersection with Summit Loop Road Lakeshore Drive (milepost 0.2 to 3.0) – widen shoulders/resurface to at least 4 feet Lakeshore Drive (milepost 6.0 to 6.5) – make drainage improvements Lakeshore Drive (4700 block to Dryden Road) – make drainage and shoulder improvements Coyote Creek Bridge on Bloom Road in Wolf Creek – replace existing deficient bridge <p><u>Safety Projects</u></p> <ul style="list-style-type: none"> 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) Install guard rail at various locations experiencing accidents that could be reduced by guard rail Holland Loop Road at Hayes Cutoff – realign intersection Dowell Road at Wolf Lane – improve intersection OR 238 at Applegate Road – add left turn lanes on state highway (may have ODOT financial share) 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) 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
	<p><u>Safety Projects Continued</u></p> <ul style="list-style-type: none"> • OR 238 at Williams Highway (milepost 0.0) – install warning signs at this high accident location (may have ODOT financial share) • US 199 at Willow Lane (milepost 0.138 on Willow Lane) – intersection improvements, potential signalization (may have ODOT financial share) • US 199 at Ken Rose Lane (milepost 0.0 on Ken Rose Lane) – add a southbound left turn lane (may have ODOT financial share) • US 199 at Waldo Road (milepost 0.0 on Waldo Road) – add a southbound left turn lane (may have ODOT financial share) • OR 238 at Jaynes Drive (milepost 0.84) – add northbound and southbound left turn lanes (may have ODOT financial share) • Truck climbing lane on I-5 at Sexton Summit between mileposts 65.7 and 80.8 (may have ODOT financial share) • OR 238 at New Hope Road – improve truck turning radii (may have ODOT financial share) 	<p><u>Safety Projects Continued</u></p> <ul style="list-style-type: none"> • US 199 at Rockydale Road – safety improvements (may have ODOT financial share) • OR 46 at Holland Loop Road (west) – safety improvements (may have ODOT financial share) • 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)
	<p><u>Mobility and Accessibility Projects</u></p> <ul style="list-style-type: none"> • 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) • Realign Highland Avenue at Merlin-Galice Road to increase separation from I-5 northbound ramp intersection • 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 	<p><u>Mobility and Accessibility Projects</u></p> <ul style="list-style-type: none"> • Install slow vehicle turnouts or passing lanes at selected locations on Galice Road • US 199 at Redwood Avenue – Coordinate with urban area improvements currently under study by ODOT (may have ODOT financial share) <p><u>Economic Development Projects</u></p> <ul style="list-style-type: none"> • 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
	<u>Economic Development Projects</u>	
	<ul style="list-style-type: none"> • Install bike lanes on Monument Drive from North Valley High School to Hugo Road • Widen shoulders to improve vehicle safety and provide for bicycle and pedestrian circulation on OR 99 from Grants Pass UGB to Jackson County line • Widen shoulders to improve vehicle safety and provide for bicycle and pedestrian circulation on OR 238 from Grants Pass UGB to Jackson County line • 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	<ul style="list-style-type: none"> • Grave Creek Bridge replacement on Interstate 5 (STIP) • Variable message sign on I-5 NB at Hugo and Glendale roads (STIP) • US 199 bridge replacement at East and West forks of the Illinois River (STIP)
Maintenance	<ul style="list-style-type: none"> • Monument Drive (Merlin Road to Timber Lane): Add left-turn lanes • Replace Jacks Creek Bridge on Jumpoff Joe Creek Road • Replace Jones Creek Bridge on Foothill Boulevard • Replace Sucker Creek Bridge on Holland Loop Road • Replace Coyote Creek Bridge on Bloom Road
Safety	<ul style="list-style-type: none"> • OR 238 at Williams Highway: Add warning signs • US 199 at Willow Lane: Intersection improvements; potential signalization • US 199 at Ken Rose Lane: Add SB left-turn lane • US 199 at Waldo Road: Add SB left-turn lane • OR 238 at Jaynes Drive: Add NB and SB left-turn lanes • I-5 at Sexton Summit (MP 67.5 to 80.8): Install truck climbing lanes • OR 238 at New Hope Road: Improve truck turning radii • US 199 at Waters Creek Road: Flatten curve to improve sight distance; install warning signs • US 199 (MP 16-24 northbound and MP 7-14 southbound): Potential passing lanes • OR 238 at Applegate Road: Add left-turn lanes on OR 238 • OR 238 (MP 16 to 17): Install northbound passing lane • US 199 at Rockdale Road: Safety improvements • OR 46 at Holland Loop Road (west): Safety improvements
Mobility and Accessibility	<ul style="list-style-type: none"> • I-5 NB on-/off-ramps at Merlin-Galice Road: Signal or roundabout • Monument Drive at Merlin-Galice Road: SB/WB turn lanes; restripe; signal modifications to provide NB/SB protected lefts • US 199 at Redwood Avenue: Side street left-turn lane
Economic Development	<ul style="list-style-type: none"> • I-5 NB on-/off-ramps at Merlin-Galice Road: Signal or roundabout • Monument Road at Merlin-Galice Road: SB/WB turn lanes; restripe; signal modifications to provide NB/SB protected lefts • 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	<ul style="list-style-type: none"> • Grave Creek Bridge replacement on Interstate 5 (STIP) • Variable message sign on I-5 NB at Hugo and Glendale Roads (STIP) • US 199 bridge replacement at East and West forks of the Illinois River (STIP)
Maintenance	<ul style="list-style-type: none"> • Monument Drive (Merlin Road to Timber Lane): Add left-turn lanes • Replace Jacks Creek Bridge on Jumpoff Joe Creek Road • Replace Jones Creek Bridge on Foothill Boulevard • Replace Sucker Creek Bridge on Holland Loop Road
Safety	<ul style="list-style-type: none"> • OR 238 at Williams Highway: Add warning signs • US 199 at Willow Lane: Intersection improvements; potential signalization • US 199 at Ken Rose Lane: Add SB left-turn lane • US 199 at Waldo Road: Add SB left-turn lane • OR 238 at Jaynes Drive: Add NB and SB left-turn lanes • I-5 at Sexton Summit (MP 67.5 to 80.8): Install truck climbing lanes • OR 238 at New Hope Road: Improve truck turning radii • US 199 at Waters Creek Road: Flatten curve to improve sight distance; install warning signs • US 199 (MP 16-24 northbound and MP 7-14 southbound): Potential passing lanes • OR 238 at Applegate Road: Add left-turn lanes on OR 238
Mobility and Accessibility	<ul style="list-style-type: none"> • I-5 NB on-/off-ramps @ Merlin-Galice Road: Signal or roundabout • Monument Drive @ Merlin-Galice Road: SB/WB turn lanes; restripe; signal modifications to provide NB/SB protected lefts
Economic Development	<ul style="list-style-type: none"> • I-5 NB on-/off-ramps @ Merlin-Galice Road: Signal or roundabout • 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 public 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) \$50,000 City of GP (ends FY02/03) \$48,400 FTA 5311 \$30,000 Fees \$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) \$60,000 Translink Fees \$18,000 Public Transit Ad Revenue \$10,000 Fees 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)	<ul style="list-style-type: none"> • Retain: <ul style="list-style-type: none"> ○ Special Transportation Funds (STF) - ODOT ○ Translink fees ○ RCC contract ○ Rider fees ○ Ad revenue • Discontinue: <ul style="list-style-type: none"> ○ CMAQ ○ City of Grants Pass funding ○ Funding from reserves 	<ul style="list-style-type: none"> • Reduced frequency of service on Route 10 in Grants Pass from 30 minutes to hourly • Shortened service day on Route 10 in Grants Pass, terminating service before 5:00 pm • Elimination of: <ul style="list-style-type: none"> ○ Senior Shuttle ○ Cave Junction route

**Table 8-3 Continued
Public Transit System Alternatives**

System Alternative	Funding	Services
Tier 2 (Unfunded, Low Build)	<p>Same as Tier 1 (No Build) with the Addition of:</p> <ul style="list-style-type: none"> • \$250,000 to replace lost CMAQ and City of Grants Pass Funding. Options include: <ul style="list-style-type: none"> ○ Local tax base ○ Increased Ad revenue ○ FTA Section 5311 • Replace reserve funding with \$200,000 ODOT Region 3 Capital Grant • \$200,000 for fleet improvements in three years. Options include: <ul style="list-style-type: none"> ○ FTA Section 5309 ○ FTA Section 5310 	<ul style="list-style-type: none"> • 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)	<p>Same as Tier 2 (Low Build) with the Addition of:</p> <ul style="list-style-type: none"> • \$50,000 annually for Intercity Service plus \$60,000 for additional bus. Options include: <ul style="list-style-type: none"> ○ FTA Section 5311(f) ○ Fees ○ FTA Section 5309 ○ FTA Section 5310 • \$200,000 in funding to replace limited duration ODOT Region 3 Capital Grant. Options include: <ul style="list-style-type: none"> ○ Fees ○ 5310 if contracted services ○ Increased tax base • \$30,000 for additional Dial-A-Ride Staff Options include: <ul style="list-style-type: none"> ○ Contact fees ○ STF discretionary funds ○ Increased tax base • \$150,000 for amenities capital improvements. Options include: <ul style="list-style-type: none"> ○ FTA Section 5309 ○ FTA Section 5310 	<ul style="list-style-type: none"> • Retention of all current services • Plus: <ul style="list-style-type: none"> ○ Service to Sunny Wolf area ○ Intercity service to Medford ○ Increased coordination with local providers • 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 \$250,000 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, 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 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, respectively¹⁶. 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	<ul style="list-style-type: none"> • Programmed routine roadway and bikeway maintenance
Maintenance	<ul style="list-style-type: none"> • Expanded roadway and bikeway maintenance • Widen/surface shoulders on New Hope Road (Hidden Valley Road to OR 238) • Widen/surface shoulders on Pine Crest Dr/Plumtree Lane (Camp Joy Rd to Upper River Rd) • Widen/surface shoulders on Cloverlawn Drive (East View Place to Jaynes Drive) • Widen/surface shoulders on Lakeshore Drive (US 199 to McMullen Creek Road) • Widen/surface shoulders on Laurel Road (US 199 to OR 46)
Safety	<ul style="list-style-type: none"> • Improve shoulders (to 4-foot minimum) on existing Major/Minor Collector Roadways within one mile of rural activity centers
Mobility and Accessibility	<ul style="list-style-type: none"> • No identified bikeway improvement
Economic Development	<ul style="list-style-type: none"> • Add bicycle lanes on Monument Drive (North Valley High School to Hugo Road) • Add bicycle lanes on Rogue River Loop Highway (entire distance) and Lower River Road (Rogue River Loop Highway to Grants Pass UGB) • Add bicycle lanes on OR 99 (Grants Pass UGB to Josephine/Jackson County line) • Add bicycle lanes on OR 238 (Grants Pass UGB to Josephine/Jackson County line) • 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.

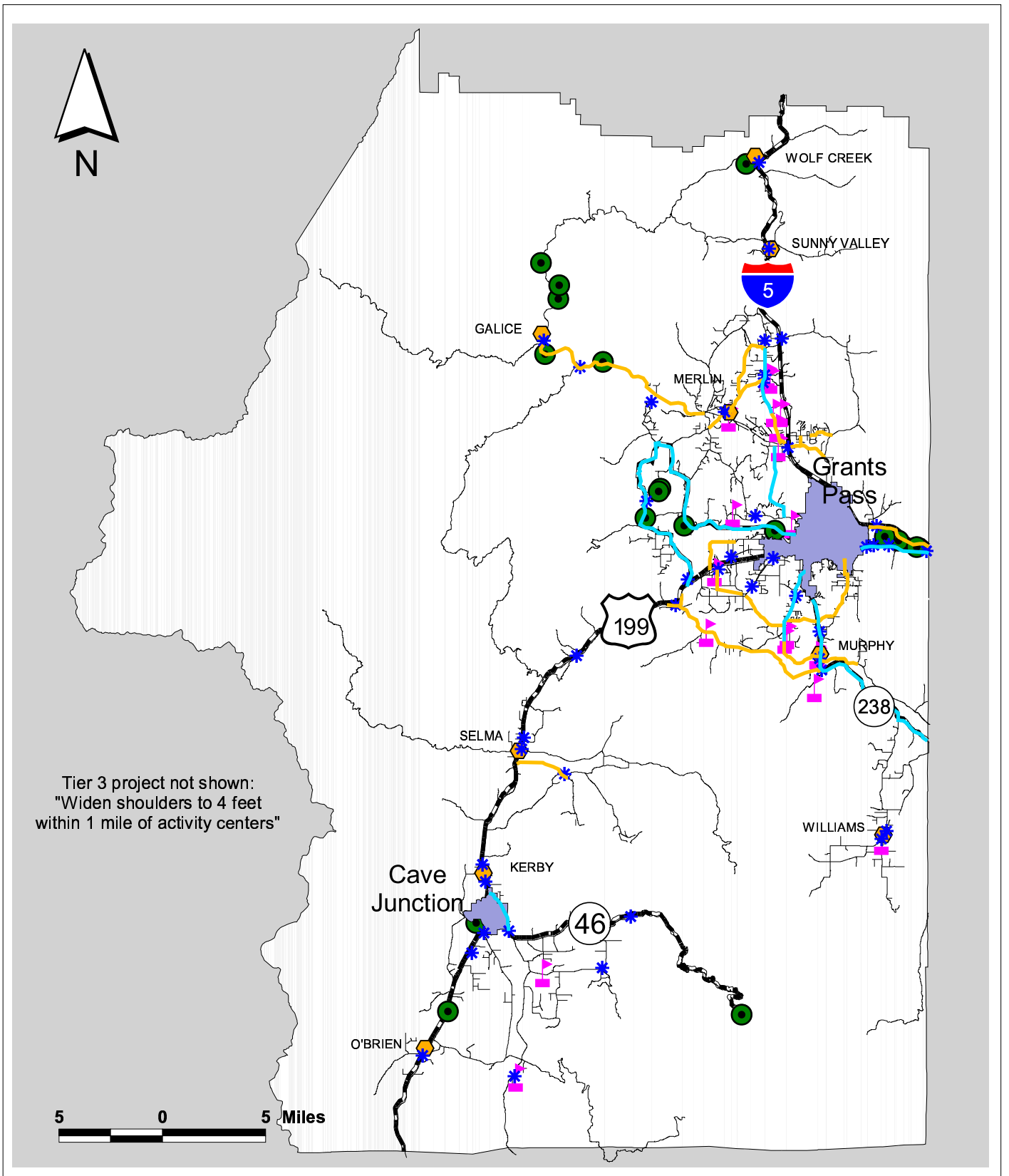
While bicycle/pedestrian facilities are fragmented on state highways in Josephine County, incremental improvements (like filling in gaps) will improve facilities, in some cases, without substantial capital requirements.





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

- 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 Classification¹	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 flaws 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 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 area 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 County 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 County 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 County 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

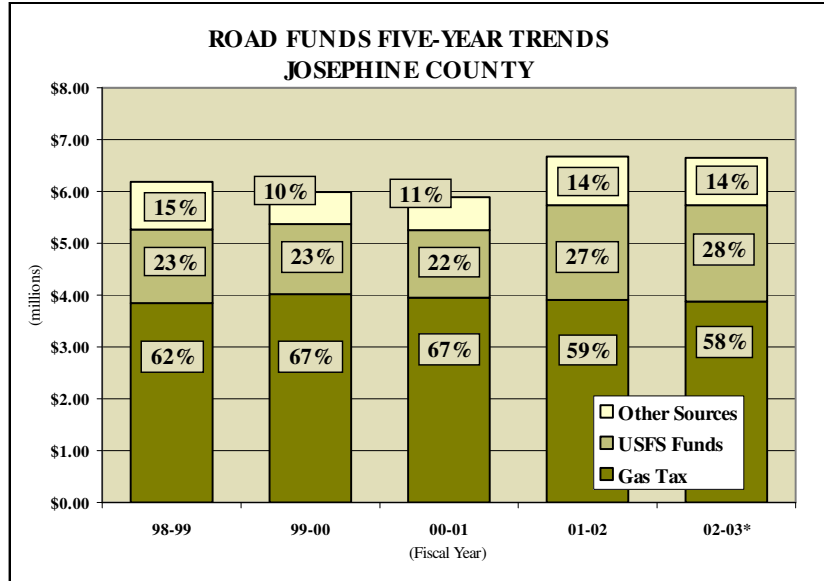
The Josephine County Public Works Department is tasked with designing, building and maintaining Josephine County’s road network. The Department provides maintenance on approximately 576 miles of County roads, including bridges and signage. The primary sources of revenue for the Public Works Department 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	<ul style="list-style-type: none"> Moderate (2% annual) population growth, thus moderate growth in vehicle registration. Has limited apportionment escalation. 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.
	5-year growth	0.8%					
	Annual growth	0.2%					
U.S. Forest Service Timber Receipt Funds	Fiscal Yr	98-99	99-00	00-01	01-02	02-03*	<ul style="list-style-type: none"> Decreasing real gas tax revenues have forced the County to increase its reliance on federal funds to pay for upkeep of roads. Although a growing revenue source, timber funds are set to end in 2006. Renewal of the program is not guaranteed.
	(millions)	\$1.42	\$1.36	\$1.31	\$1.83	\$1.86	
	5-year growth	31.3%					
Local Improvement District Assessments	(millions)	\$0.03	\$0.01	n/a	n/a	n/a	<ul style="list-style-type: none"> 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 that 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.

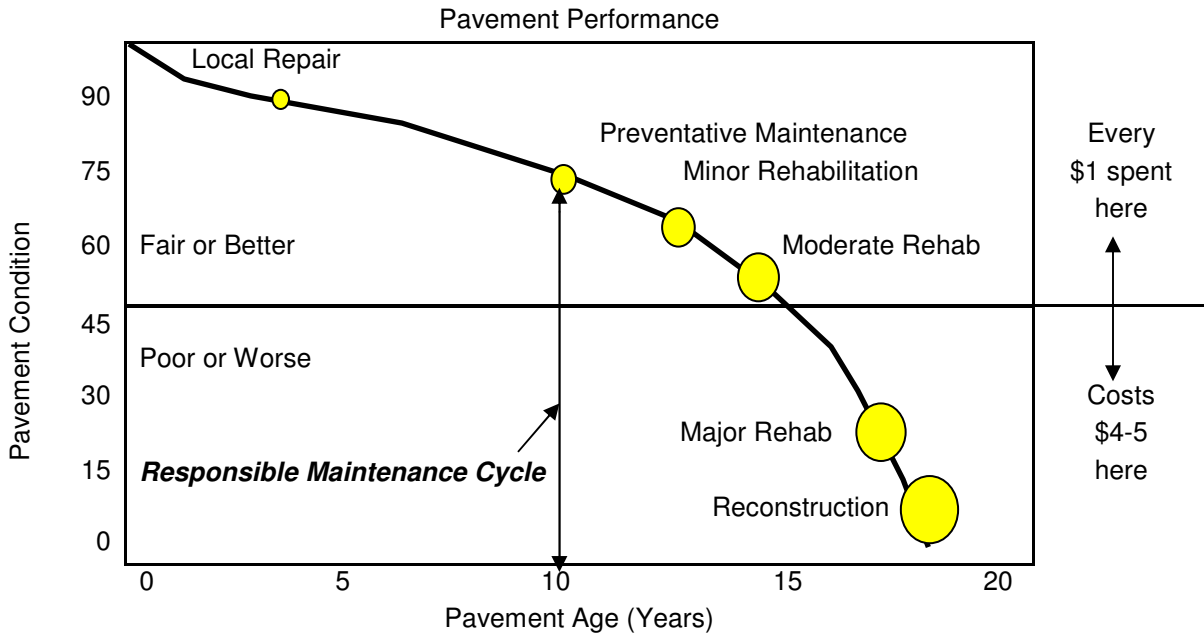
Table 13-3 also illustrates the types of roadway maintenance activity that the County currently undertakes, including such things as routine cleaning, grading and roadway patching; bridge structure and deck repair; drainage system repair and enhancement; vegetation management; on-going signing, striping 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 alligating (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		Optimal Program			
			2003-2004 Budget	Optimal	Total 2004-2008	Total 2009-2013	Total 2014-2018	Total 2019-2023
REVENUE NEEDS ANALYSIS								
<u>Existing Revenue</u>								
- 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)			<u>\$3,116,316</u>	<u>\$3,116,316</u>	<u>\$3,116,316</u>	<u>\$3,116,000</u>	<u>\$3,116,000</u>	<u>\$3,116,000</u>
Total Revenue from Existing Sources			\$9,634,437	\$9,634,437	\$34,576,000	\$26,627,000	\$26,824,000	\$27,022,000
<u>Estimated Costs</u>								
<u>Tier 1 Costs</u>								
- 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)			<u>\$3,116,316</u>	<u>\$3,116,316</u>	<u>\$3,116,316</u>	<u>\$3,116,000</u>	<u>\$3,116,000</u>	<u>\$3,116,000</u>
Total Tier 1 Costs			\$9,634,437	\$9,634,437	\$34,576,000	\$26,627,000	\$26,824,000	\$27,022,000
<u>Tier 2 Costs</u>								
- 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-	<u>\$295,000</u>	<u>\$797,000</u>	<u>\$1,030,000</u>	<u>\$1,217,000</u>
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								
<u>- Routine road maintenance</u>								
- 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				
- Guardrail repair/installation	linear ft	47,735	500	2,000				
- 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		Optimal Program		
			2003-2004 Budget	Optimal	Total 2004-2008	Total 2009-2013	Total 2014-2018
ROADWAY MAINTENANCE PROGRAM ELEMENTS							
<u>- Routine bridge maintenance</u>							
- 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 in these time periods.		
- Guardrail/handrail - repair/install	bridge	104	2	6			
- Deck and drain cleaning	bridge	104	30	50			
<u>- Drainage</u>							
- Ditching	ditch mile	685	150	200			
- Culvert cleaning	culvert	13,000	300	1,000	Same as 2003-2004 "Optimal" for each year in these time periods.		
- Culvert replacement	culvert	N/A	35	85			
- Ditch lining/rip-rap replacement	ditch mile	685	0.5	1			
<u>- Vegetation management</u>							
- Herbicide shoulder	shldr mile	1,138	1,275*	1,430*	Same as 2003-2004 "Optimal" for each year in these time periods.		
- Vegetation removal/chipping	shldr mile	1,138	35	86			
- Mowing	shldr mile	1,138	100*	300*			
<u>- Signing, striping & pavement marking</u>							
- 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 in these time periods.		
- Fog & bike lane striping	stripe mile	1,008	971*	1,248*			
- Pavement marking	marking	1,133	412*	920*			
<u>- Chipsealing of pavement</u>							
- Crack sealing	tons	N/A	45	150	Same as 2003-2004 "Optimal" for each year in these time periods.		
- Chipsealing	road mile	576	20	60			
- 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)

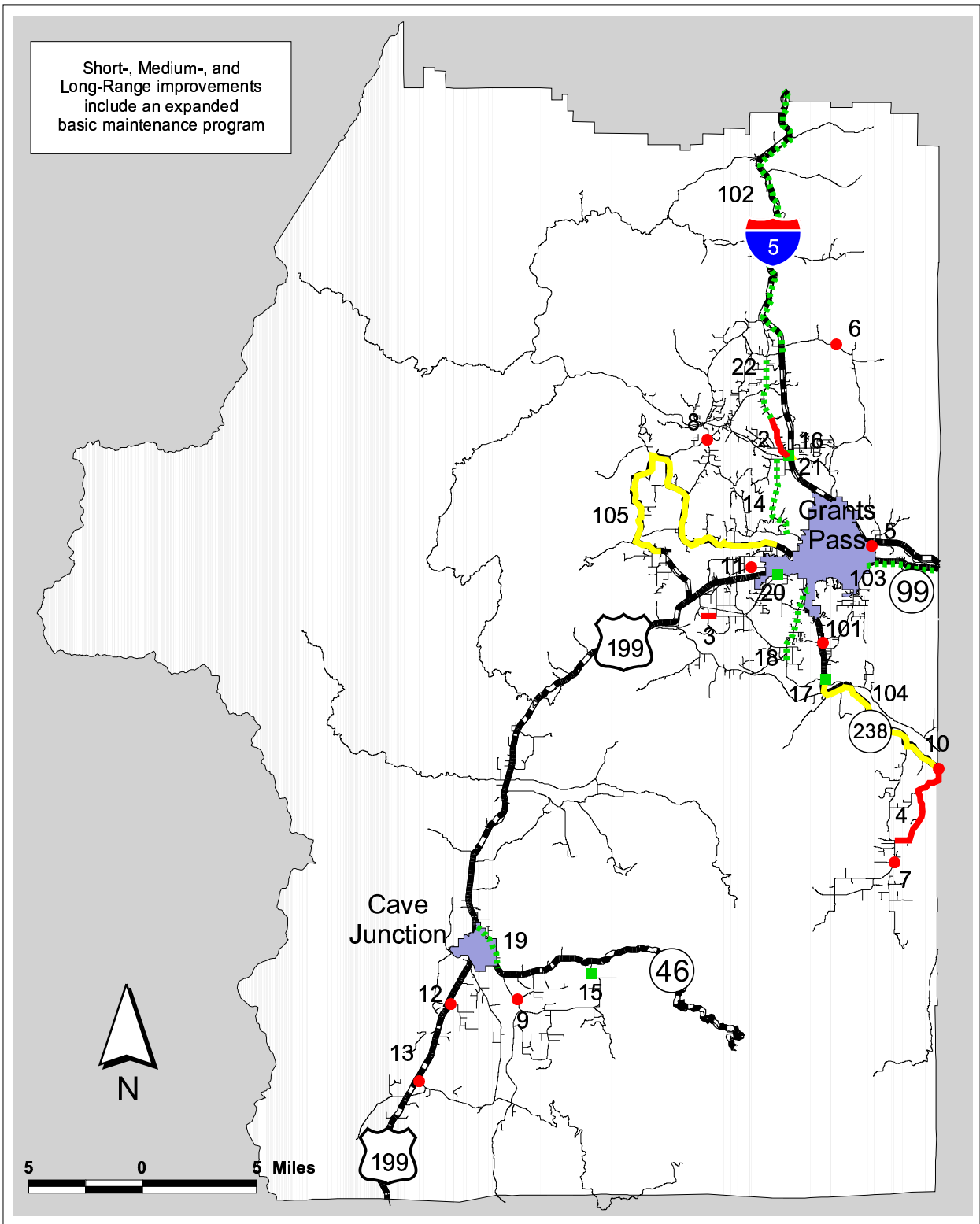
Project No.	Project Location	Travel Mode Served	Description	Estimated Cost (2003)
MAINTENANCE PROJECTS				
2	Monument Drive, Merlin Road to Timber Lane	Auto, freight	Install left turn lanes at intersections	\$2,203,000
3	Jerome Prairie Road, Woodland Park Road to west	Auto	Resurfacing	\$357,000
4	Williams 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 Install roundabout	\$1,743,000 \$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

**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					
<i>Rural Josephine County Projects</i>					
1	Countywide	Existing basic maintenance program and reserves	Maintenance	--	\$34,576,000+
TIER 2 PROJECTS					
<i>Rural Josephine County Projects</i>					
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					
<i>ODOT Projects</i>					
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					
<i>Rural Josephine County Projects</i>					
1	Countywide	Existing basic maintenance program and reserves	Maintenance	--	\$26,627,000+
TIER 2 PROJECTS					
<i>Rural Josephine County Projects</i>					
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					
<i>ODOT Projects</i>					
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					
<i>Rural Josephine County Projects</i>					
1	Countywide	Existing basic maintenance program and cash reserves	Maintenance	--	\$53,846,000+
TIER 2 PROJECTS					
<i>Rural Josephine County Projects</i>					
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 Realign intersection to reduce skewed angles	Safety	\$150,000 \$1,191,000	\$190,000 \$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					
<i>ODOT Projects</i>					
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					
<i>ODOT Projects</i>					
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 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
<i>Rural Josephine County Projects</i>			
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				
<i>Tier 1 Projects (based on existing funding)</i>				
Routine roadway maintenance	\$31,460,000	\$23,511,000	\$47,613,000	\$102,584,000
Cash reserves (e.g. emergencies) (1)	<u>\$3,116,316</u>	<u>\$3,116,316</u>	<u>\$3,116,316</u>	<u>\$3,116,316</u>
Total Tier 1 Costs	\$34,576,000	\$26,627,000	\$53,846,000	\$105,700,000
Tier 2 Cost Estimates				
<i>Tier 2 Projects (high priority, unfunded)</i>				
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	<u>\$0</u>	<u>\$0</u>	<u>\$1,043,000</u>	<u>\$1,043,000</u>
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
<ul style="list-style-type: none"> • Includes Tier 1 services provided with revenue from existing sources: <ul style="list-style-type: none"> ○ Special Transportation Funds (STF) – ODOT, Translink fees, RCC contract, Rider fees, Ad revenue • Addition of: <ul style="list-style-type: none"> ○ \$250,000 to replace lost CMAQ and City of Grants Pass Funding. Options include: <ul style="list-style-type: none"> ➢ Local tax base ➢ Increased Ad revenue ➢ FTA Section 5311 ○ Replace reserve funding with \$200,000 ODOT Region 3 Capital Grant ○ \$200,000 for fleet improvements in three years. Options include: <ul style="list-style-type: none"> ➢ FTA Section 5309 ➢ FTA Section 5310 	<ul style="list-style-type: none"> • 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)	<u>\$1,043,000</u>	<u>\$1,316,000</u>	<u>\$2,671,000</u>	<u>\$5,030,000</u>
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)	<u>\$2,001,000</u>	<u>\$2,266,000</u>	<u>\$5,463,000</u>	<u>\$9,730,000</u>
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 taxes¹⁷. 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 \$250,000 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 in compliance 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 UGB¹		
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. 10 th 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
Pansv 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
Sockeve 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 Schutzwahl 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 UGB¹		
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
FLOREN 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
JAIMIE 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
LAINÉ 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
MICHEL'S 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 APPLGATE 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
THORNBRIDGE 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.	EWING CREEK RD	407512	38	10724	80	2	AC
AZALEA DRIVE	2800-C	EWING 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	FLOREN 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 APPLGATE 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
DEMARAMY DRIVE	3580	REDWOOD HWY 199	WILLOW LN.	24400	16	1525	90	1	AC/AC
DEMARAMY DRIVE	3580-A	WILLOW LN.	JEROME PRAIRIE RD. 3rd Int.	512820	44	11655	86	2	AC
DEMARAMY DRIVE	3580-B	JEROME PRAIRIE RD. 3rd Int.	MIDWAY AV.	35475	33	1075	87	2	AC
DEMARAMY 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
DOLOROS 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
EWEE CREEK ROAD	2870	LOWER RIVER RD. (HWY 260)	MONICA RD.	128600	20	6430	83	2	AC
EWEE CREEK ROAD	2870-A	MONICA RD.	RIESSEN RD.	101024	32	3157	85	2	AC
EWEE 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 PRAIRIE 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
FLOREN DRIVE	3405	200' N. OF THOMAS CIRCLE	100' S. OF BELINDY CIRCLE	22011	33	667	87	2	AC
FLOREN 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 NORTH	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	FLOREN 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.	#1760 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 APPLGATE 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
LAINÉ 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	121284	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	FLOREN 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	EWING 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.	MONTEFLORA 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 ADELIN WAY	2464	WARD RD	CUL-DE-SAC	9460	22	430	85	2	ST
NORTH APPLGATE ROAD	3800	JACKSONVILLE HWY 238	BOARD SHANTY RD	247680	24	10320	84	2	AC
NORTH APPLGATE ROAD	3800-A	BOARD SHANTY RD	11262 NORTH APPLGATE RD.	315072	24	13128	83	2	AC
NORTH APPLGATE ROAD	3800-B	11262 NORTH APPLGATE 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	APPLGATE 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
PINWOOD 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.	ADELIN 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	151	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 APPLGATE 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	FLOREY 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
THORNBRIDGE 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-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
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
HOMWOOD 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
PINWOOD 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 APPLGATE 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
FLOREN 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 APPLGATE 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 APPLGATE ROAD	630' e/o JACKSONVILLE Hwy 238		
NORTH APPLGATE ROAD	275' w/o KUBLI Rd		
NORTH APPLGATE 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

	<u>Percent</u>
Bike Lanes	4%
Shared Roadway	95%
Shoulder Bikeway	<u>1%</u>
	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	Deck 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 by Street	Est'd ADT	Annual Rates	
Road Name	Milepost	Date	Time	Severity	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 by Street	Est'd ADT	Annual Rates	
Road Name	Milepost	Date	Time	Severity			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 by Street	Est'd ADT	Annual Rates	
Road Name	Milepost	Date	Time	Severity	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 by Street	Est'd ADT	Annual Rates	
Road Name	Milepost	Date	Time	Severity	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 by Street	Est'd ADT	Annual Rates	
Road Name	Milepost	Date	Time	Severity	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 by Street	Est'd ADT	Annual Rates	
Road Name	Milepost	Date	Time	Severity			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 by Street	Est'd ADT	Annual Rates	
Road Name	Milepost	Date	Time	Severity	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 by Street	Est'd ADT	Annual Rates	
Road Name	Milepost	Date	Time	Severity	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 by Street	Est'd ADT	Annual Rates	
Road Name	Milepost	Date	Time	Severity	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 by Street	Est'd ADT	Annual Rates	
Road Name	Milepost	Date	Time	Severity	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 by Street	Est'd ADT	Annual Rates	
Road Name	Milepost	Date	Time	Severity			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 by Street	Est'd ADT	Annual Rates	
Road Name	Milepost	Date	Time	Severity			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 by Street	Est'd ADT	Annual Rates	
Road Name	Milepost	Date	Time	Severity	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 by Street	Est'd ADT	Annual Rates	
Road Name	Milepost	Date	Time	Severity			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 APPLGATE ROAD	0.00	7/25/2002	7:15 PM	PDO				
NORTH APPLGATE ROAD	0.00	1/22/2002	7:22 AM	PDO				
NORTH APPLGATE ROAD	0.00	1/21/2000	7:45 AM	PDO				
NORTH APPLGATE ROAD	1.00	10/27/2000	2:08 PM	PDO				
NORTH APPLGATE ROAD	1.50	6/8/2002	5:03 PM	Fatal				
NORTH APPLGATE ROAD	1.90	4/4/2002	10:30 AM	PDO				
NORTH APPLGATE ROAD	2.40	12/16/2000	12:15 AM	PDO				
NORTH APPLGATE ROAD	3.10	6/16/2002	8:02 PM	PDO				
NORTH APPLGATE ROAD	3.10	11/27/1999	4:07 PM	PDO				
NORTH APPLGATE ROAD	3.30	3/7/2000	7:33 PM	PDO				
NORTH APPLGATE ROAD	5.76	2/2/2001	5:44 AM	PDO				
NORTH APPLGATE ROAD	5.80	3/17/2001	9:35 AM	PDO				
NORTH APPLGATE 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 by Street	Est'd ADT	Annual Rates	
Road Name	Milepost	Date	Time	Severity			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 by Street	Est'd ADT	Annual Rates	
Road Name	Milepost	Date	Time	Severity			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 by Street	Est'd ADT	Annual Rates	
Road Name	Milepost	Date	Time	Severity	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 by Street	Est'd ADT	Annual Rates	
Road Name	Milepost	Date	Time	Severity	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 by Street	Est'd ADT	Annual Rates	
Road Name	Milepost	Date	Time	Severity	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 by Street	Est'd ADT	Annual Rates	
Road Name	Milepost	Date	Time	Severity			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 by Street	Est'd ADT	Annual Rates	
Road Name	Milepost	Date	Time	Severity			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				Trips to Assign	
TAZ	TAZ Total Trip Gen.	Aggregate Group	% of TAZ	N/O	S/O	E/O	W/O		
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
2025	1.00	Growth Factors
	60	Growth-Factored Vol.
		Apply to Through Trips
		not rounded

Land Use Forecasts				Centroid Loads				Trips to Assign	
TAZ	TAZ Total Trip Gen.	Aggregate Group	% of TAZ	N/O	S/O	E/O	W/O		
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				Trips to Assign		
TAZ	TAZ Total Trip Gen.	Aggregate Group	% of TAZ	N/O	S/O	E/O			W/O
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 Distribution (Assumed)	App 60%	
	Dep 40%	
	Peak 60%	
2025	0.0%	Growth Rates
2025	1.00	Growth Factors
	70	Growth-Factored Vol.
		Apply to Through Trips
		not rounded

Land Use Forecasts				Centroid Loads				Trips to Assign	
TAZ	TAZ Total Trip Gen.	Aggregate Group	% of TAZ	N/O	S/O	E/O	W/O		
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																							
	Sum of Parcels	5																							
High Density Residential	Sum of ACRES	0.232																							
	Sum of Parcels	4																							
Low Density Residential	Sum of ACRES	0.94																							
	Sum of Parcels	4																							
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																							
	Sum of Parcels	2																							
Rural Convenience Commercial	Sum of ACRES	0.01																							
	Sum of Parcels	1																							
Rural Industrial	Sum of ACRES	0.119																							
	Sum of Parcels	1																							
Rural Residential 1 Acre	Sum of ACRES	0.351																							
	Sum of Parcels	2																							
Rural Residential 2.5 Acre	Sum of ACRES	0.252																							
	Sum of Parcels	1																							
Rural Residential 5 Acre	Sum of ACRES	0.001																							
	Sum of Parcels	0																							
Rural Residential 1 Acre	Sum of ACRES	0.854																							
	Sum of Parcels	1																							
Rural Residential 2.5 Acre	Sum of ACRES	0.006																							
	Sum of Parcels	0																							
Rural Residential 5 Acre	Sum of ACRES	0.002																							
	Sum of Parcels	0																							
Rural Residential 1 Acre	Sum of ACRES	0.127																							
	Sum of Parcels	4																							
Rural Residential 2.5 Acre	Sum of ACRES	0.375																							
	Sum of Parcels	1																							
Rural Residential 5 Acre	Sum of ACRES	1.055																							
	Sum of Parcels	7																							
Rural Residential 1 Acre	Sum of ACRES	12.282																							
	Sum of Parcels	31																							
Rural Residential 2.5 Acre	Sum of ACRES	1.81																							
	Sum of Parcels	10																							
Rural Residential 5 Acre	Sum of ACRES	1.18																							
	Sum of Parcels	9																							
Rural Residential 1 Acre	Sum of ACRES	0.069																							
	Sum of Parcels	2																							
Rural Residential 2.5 Acre	Sum of ACRES	10.573																							
	Sum of Parcels	46																							
Rural Residential 5 Acre	Sum of ACRES	1.944																							
	Sum of Parcels	8																							
Rural Residential 1 Acre	Sum of ACRES	0.336																							
	Sum of Parcels	2																							
Rural Residential 2.5 Acre	Sum of ACRES	24.42																							
	Sum of Parcels	91																							
Rural Residential 5 Acre	Sum of ACRES	32.864																							
	Sum of Parcels	115																							
Rural Residential 1 Acre	Sum of ACRES	12.66																							
	Sum of Parcels	39																							
Rural Residential 2.5 Acre	Sum of ACRES	9.993																							
	Sum of Parcels	51																							
Rural Residential 5 Acre	Sum of ACRES	17.155																							
	Sum of Parcels	88																							
Rural Residential 1 Acre	Sum of ACRES	18.385																							
	Sum of Parcels	70																							
Rural Residential 2.5 Acre	Sum of ACRES	14.639																							
	Sum of Parcels	44																							
Rural Residential 5 Acre	Sum of ACRES	11.655																							
	Sum of Parcels	40																							
Rural Residential 1 Acre	Sum of ACRES	11.278																							
	Sum of Parcels	16																							
Rural Residential 2.5 Acre	Sum of ACRES	17.829																							
	Sum of Parcels	97																							
Rural Residential 5 Acre	Sum of ACRES	19.42																							
	Sum of Parcels	78																							
Rural Residential 1 Acre	Sum of ACRES	5.15																							
	Sum of Parcels	7																							
Rural Residential 2.5 Acre	Sum of ACRES	8.653																							
	Sum of Parcels	35																							
Total Sum of ACRES	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		
	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	Sum of ACRES	0	56	65	138	23	58	109	106	60	93	137	49	59	88	70	48	44	69	119	78	7	35		
	Sum of 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	Sum of ACRES	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%		
	Sum of 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)	Sum of ACRES	0	33	39	82	14	35	65	63	36	55	82	29	35	52	42	29	26	41	71	46	4	21		
	Sum of Parcels	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	Sum of ACRES	0.79	0	26	31	65	11	27	51	50	28	44	65	23	28	41	33	23	21	32	56	37	3	16	
	Sum of Parcels	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	Sum of ACRES	0%																							
	Sum of Parcels	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
																0
																0.362
																8
																0.232
																4
																5.365
																112
																0.001
																1
																0.016
																0
																1.674
																18
																0.099
																8
																0.314
																0
																0.294
																3
																1.273
																12
																0.018
																1
																0.649
																2
																0.17
																4
																0.436
																5
																0.372
																0
																3
																0.372
																4
																20.155
																133
																0
																0.953
																0
																1.54
																10
																40.133
																153
																6.176
																19
																4.025
																21
																0.229
																0
																0
																0.4
																2
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

Maintenance Scenario Projects and Evaluation

Projects and Ratings (-2, -1, 0, 1, 2)	TOTALS FOR EACH IMPROVEMENT	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
		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	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

Projects and Ratings (-2, -1, 0, 1, 2)	TOTALS FOR EACH IMPROVEMENT	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	
		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	2	0	0	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	0	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	2	0	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	2	0	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	2	-1	-1	0	0	-1	-1	0	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	1	0	1	0	-1	0	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	-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	-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	1	0	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	1	0	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	1	0	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	1	0	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	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	1	0	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

Projects and Ratings (-2, -1, 0, 1, 2)	TOTALS FOR EACH IMPROVEMENT	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
		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

Projects and Ratings (-2, -1, 0, 1, 2)	TOTALS FOR EACH IMPROVEMENT	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	
		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**

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 61.030 – Inadequate 62.020 – Inadequate 62.120 – Inadequate 62.130 – Inadequate 62.220 – Inadequate 62.230 – Inadequate 63.020 – Inadequate 63.120 – Inadequate 63.130 – Inadequate 64.020.E – Adequate 64.030.E – Adequate 64.040.V – Adequate 64.040.W – Adequate 65.020.B.8 – Adequate

		65.030.Y – Adequate 66.020 – Inadequate 66.120 – Inadequate 66.130 – Inadequate 66.140 – Inadequate 67.020 – Inadequate 67.030 – Inadequate
Access Control	045 (2) (a)	81.020 – Adequate
Protecting Future Operations	045 (2) (b)	50.050.B – Adequate 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 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

Access control

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-of-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.