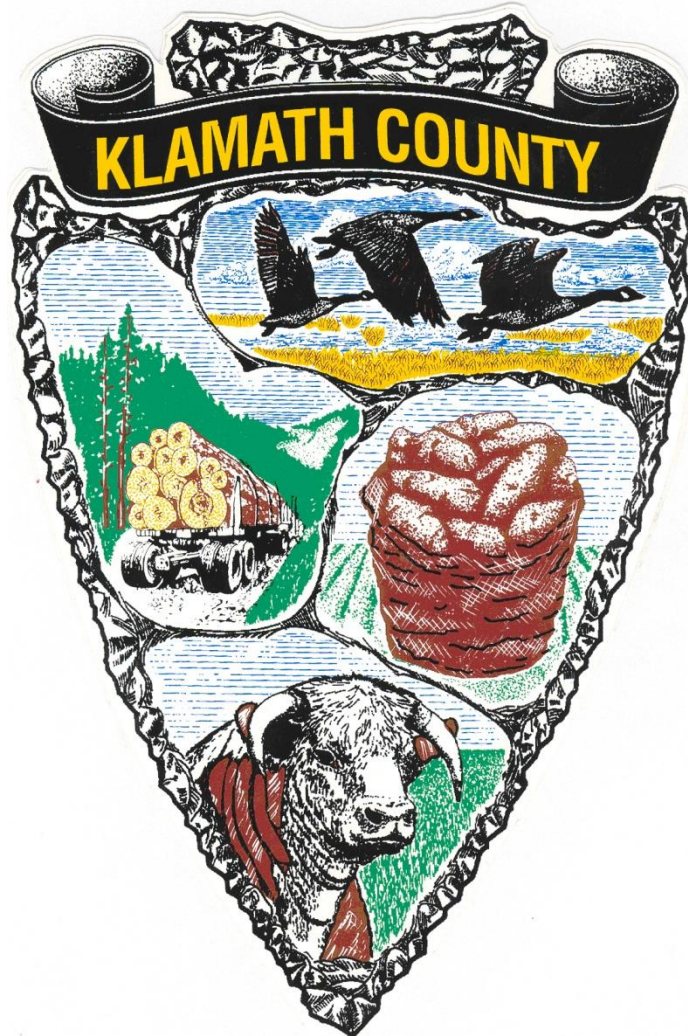


Klamath County



2010 - 2030 Transportation System Plan

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PUBLIC WORKS CONFERENCE ROOM #232

TAC #2 DECEMBER 2, 2004
COMMUNITY DEVELOPMENT DEPARTMENT CONFERENCE ROOM #150

TAC #3 JANUARY 27, 2005
PUBLIC WORKS CONFERENCE ROOM #232

TAC #4 MARCH 3, 2005
PUBLIC WORKS CONFERENCE ROOM #232

TAC #5 APRIL 28, 2005
PUBLIC WORKS CONFERENCE ROOM #232

PUBLIC OPEN HOUSES

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NO PUBLIC ATTENDEES PARTICIPATED IN OPEN HOUSE # 1

#2 CHEMULT – NORTH COUNTY FOREST SERVICE MARCH 3, 2005

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KAREN WILSON, RESIDENT (BUSINESS OWNER)
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RICHARD KILBURY, USFS
JOHN BAMBE, RESIDENT

Executive Summary

In accordance with the goals of the study, this Transportation System Plan (TSP) for Klamath County (County) addresses the provision of a safe, affordable, and accessible transportation system for all users. As such, the Plan includes an assessment of the existing transportation system; an evaluation of the impacts of growth on the transportation system; an identification of possible alternative improvements; an identification of improvement projects that are included in the preferred alternative; a transportation financing plan; transportation and land use policy recommendations that can assist the County in implementing the TSP; and a description of the Plan's compliance with the Transportation Planning Rule.

The identified transportation improvements are spread across a 20-year planning horizon; the TSP has determined that current transportation funding levels and resources are not adequate to meet the needs of the community. There are a number of potential funding resources that Klamath County may need to consider, including the state and local gasoline taxes, road user fees, traffic impact fees, revenue bonds, and developer fees. The complex task will be to match and combine federal, state, and local revenue programs to pay for needed capital improvements.

Klamath County will experience moderate growth over the next 20 years. The increasingly complex interaction of transportation and land use, and the need to find new and creative methods to fund public projects, will provide a challenge for policy-makers as they make public infrastructure investment decisions. This TSP is intended to guide transportation-related investment discussions in a coordinated and comprehensive manner and to provide local decision-makers with the standards to be met as transportation system improvements are implemented to meet the communities' overall vision.

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CHAPTER 1 INTRODUCTION

The Klamath County Transportation System Plan (TSP) will help to guide the development of existing transportation facilities and the funding of transportation facilities over the next 20 years. This TSP constitutes the Transportation Element of the County's Comprehensive Plan and satisfies the requirements of the Oregon Transportation Planning Rule (TPR) established by the Department of Land Conservation and Development (DLCD) upon adoption by Klamath County. This TSP identifies and prioritizes transportation projects for inclusion in the Oregon Department of Transportation's (ODOT's) Statewide Transportation Improvement Program (STIP) and the Klamath County Capital Facilities Plan.

PLANNING AREA

This 2009 Klamath County TSP includes plans for maintaining and upgrading the primary transportation modes in the county. The planning area for the Klamath County TSP is generally outside the Klamath Falls Urban Growth Boundary (UGB), and is shown on **Error! Reference source not found.** Transportation facilities included in this TSP fall under several jurisdictions, including the County, the State of Oregon, the United States Forest Service (USFS), the National Park Service (NPS), the National Wildlife Service (NWS), the Bureau of Land Management (BLM) and the Bureau of Reclamation (BOR).

Klamath County is located in south-central Oregon; it is the fourth largest county in the state, encompassing 6,135 square miles in total area, with a population in 2004 of approximately 64,800.¹ Klamath Falls is the largest city in the county, with a population of 20,190; other incorporated communities include Bonanza, Chiloquin, Malin, and Merrill. The county is bordered by Deschutes County to the north; Lake County to the east; California to the south; and Jackson, Lane and Douglas Counties to the west.

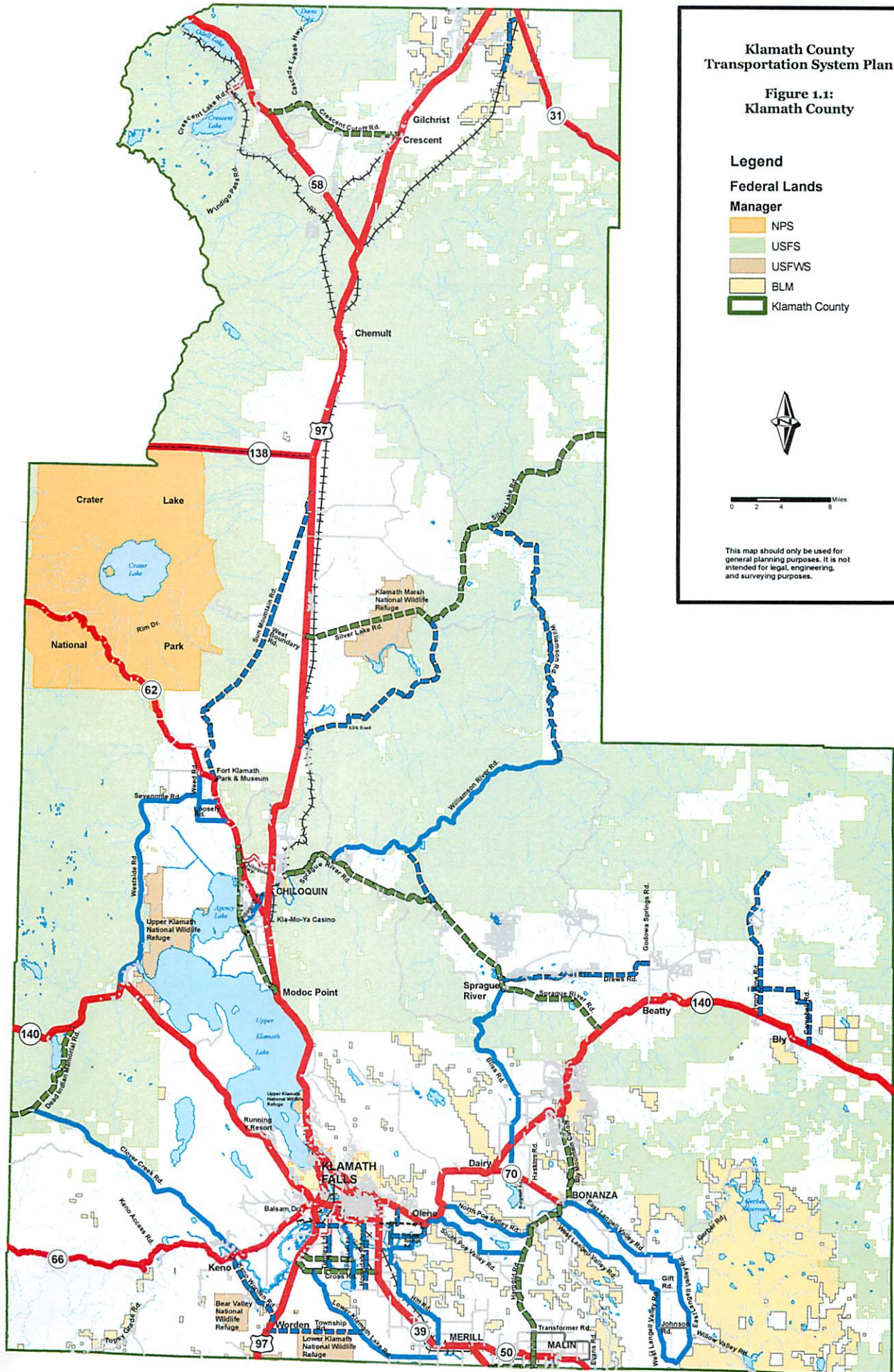
The Klamath Basin supports substantial agricultural and ranching industries. The wood products industry, and manufacturing, service, and technology sectors have helped diversify the local economy. Tourism is an emerging industry in the county due to the region's natural beauty and the proximity of attractions such as Oregon's only national park, Crater Lake National Park, plus Lava Beds National Monument, three national wildlife refuges, and area resorts.

¹ Portland State University Center for Population Research and Census.

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**Klamath County
Transportation System Plan**

**Figure 1.1:
Klamath County**



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The primary routes through the county are US Highway 97 (The Dalles-California Highway #4) and Oregon Highway 140 (Lake of the Woods Highway #270; South Klamath Highway #424; Klamath Falls Lakeview Highway #20). US Highway 97 (US 97) runs north-south through the entire county; Oregon Highway 140 runs east-west connecting Klamath Falls to Medford and I-5 (west) and Lakeview (east). Other highways in the county are described below:

Oregon Highway 39

(Klamath Falls- Malin Highway #50 and #426) generally runs north-south connecting Klamath Falls to Merrill and connecting to California. The Klamath Falls – Malin Highway connects from Highway 39 (#50) to the community of Malin.

Oregon Highway 138

(East Diamond Lake Highway #425) connects from the junction of Oregon Highway 230 near Diamond Lake. The highway runs east-west along the north side of Crater Lake National Park and connects to US 97. **Oregon Highway 62** (Crater Lake Highway #22) begins at the southeast border of Crater Lake National Park and connects the community of Fort Klamath to US 97.

Oregon Highway 70

(Dairy – Bonanza Highway #23) begins at the Dairy junction on OR 140 east of Klamath Falls and connects to Bonanza.

Oregon Highway 66

(Green Springs Highway #21) runs east-west connecting Klamath Falls to I-5 near Ashland.

Oregon Highway 58

(Willamette Highway #18) runs east-west connecting US 97 in northern Klamath County to I-5 near Eugene.

Chiloquin Highway 422

Runs east-west connecting OR 62 across US 97 to the community of Chiloquin.

Other transportation options in Klamath County include Basin Transit Service, Amtrak passenger rail service, commercial airline service at Klamath Falls International Airport and private bus and taxi service.

PLANNING PROCESS

The Klamath County TSP establishes the county's direction in developing its transportation system for a 20-year horizon. The TSP evaluates existing and future needs, and identifies improvements to meet those needs. It is intended to serve as a master plan to guide transportation investments as development occurs in the county, to improve mobility throughout the county, and to balance transportation needs and improvements over the next 20 years. The TSP includes the necessary Comprehensive Plan amendments and supporting ordinances to implement the TSP.

The Plan includes transportation issues related to the incorporated cities of Chiloquin, Bonanza, Merrill and Malin; the TSP also addresses proposed capital investments in rural communities including:

- Beatty
- Beaver Marsh
- Bly
- Chemult
- Crescent
- Crescent Lake
- Fort Klamath
- Dairy
- Gilchrist
- Keno
- Midland
- Rocky Point
- Sprague River

Overall, the TSP includes transportation issues related to state and county facilities, and not city facilities. However, this TSP attempts to identify projects that are beneficial to all agencies.

The Klamath County TSP satisfies the planning requirements of Oregon Statewide Planning Goal 12 and the Oregon Transportation Planning Rule (TPR). The TSP follows the ODOT *Transportation System Planning Guidelines*, including development of a balanced transportation system; the TSP process has consisted of four fundamental steps:

1. Analysis of existing conditions,
2. Assessment of future needs,
3. Creation of a draft TSP document and identification of code revisions, and

4. Finalization of the TSP.

During the development of the TSP, The Transportation Advisory Committee (TAC) guided the planning process through five (5) meetings. The Committee consisted of county staff, ODOT Staff, Basin Transit Service, elected and appointed county officials, residents, and members of Klamath County's business community. A series of public meetings also was conducted, which allowed citizens to provide input regarding the county's future transportation network. This feedback has proven invaluable in creating a TSP that will not only satisfy the State TPR requirements, but also meet the needs of the stakeholders it supports.

CHAPTER 2 KLAMATH COUNTY TSP GOALS AND OBJECTIVES

The TSP goals and objectives serve as the basis for the TSP needs analysis, policy and ordinance development, and project selection. These goals and objectives should reflect the transportation goals of the county and the overall transportation vision for the Klamath County community. The goals and objectives will maximize mobility, safety, efficiency and accessibility to the transportation system and will address the requirements of the Oregon Transportation Planning Rule (TPR), the Oregon Transportation Plan (OTP), the Oregon Highway Plan (OHP), and other state modal plans such as Bike and Pedestrian, Rail, and Aviation. **Error! Reference source not found.**

GOAL 1 OVERALL TRANSPORTATION SYSTEM

Provide a transportation system for the Klamath County planning area that is safe, efficient, economical, and accessible.

Objectives:

- A. Manage the transportation system for adequate and efficient operations consistent with community, land use, environmental, economic and livability goals.
- B. Enhance safety by prioritizing and mitigating high collision locations within the county.
- C. Ensure that adequate access for emergency services vehicles is provided throughout the county.
- D. Develop access management standards that will be consistent with county and state requirements to reduce conflicts among vehicles, trucks, bicycles, and pedestrians.
- E. Provide satisfactory levels of maintenance to the transportation system in order to preserve user safety, facility aesthetics, and the integrity of the system as a whole.
- F. Construct all new transportation facilities to meet the requirements of the Americans with Disabilities Act.

GOAL 2 LIVABILITY

Design and construct transportation facilities that enhance Klamath County's livability while meeting federal, state, regional, and local requirements.

Objectives:

- A. Enhance the livability of Klamath County through proper location and design of transportation facilities. Design roads, highways, and multi-use paths to be compatible with the existing and planned characteristics of the surrounding environment.
- B. Locate and design recreational and multi-use paths to balance the needs of human use and enjoyment with resource conservation.

GOAL 3 TRANSPORTATION AND LAND USE

Maximize the efficiency of Klamath County's transportation system through effective land use planning.

Objectives:

- A. Coordinate road and highway development so as to enhance overall county development.
- B. Revise development ordinances as needed to integrate transportation and land use to protect the long-term function of the transportation system.
- C. Ensure development is consistent with current and planned transportation infrastructure and provides proportionate mitigation of any adverse impacts.
- D. Require property access from facility with the lowest functional classification possible.
- E. Ensure any newly created parcels have legal and functional access.

GOAL 4 ROAD SYSTEM

Provide a well-planned, comprehensive road system that serves the needs of Klamath County.

Objectives:

- A. Develop and maintain a road classification system to provide an optimal balance between mobility and accessibility for all transportation modes consistent with road function.
- B. Design new roads to safely and efficiently accommodate multiple travel modes within public rights-of-way where practical.
- C. Balance the needed road function for all travel modes with adjacent land uses and stakeholders through context-sensitive design.
- D. Make needed safety improvements to existing state highways and county roads as part of the ongoing maintenance program.
- E. Provide for opportunities to implement rural Intelligent Transportation System (ITS) strategies.

GOAL 5 BALANCED TRANSPORTATION SYSTEM

Facilitate the development of a multi-modal transportation system in Klamath County to provide transportation options for Klamath County residents and visitors within the framework of context sensitive design.

Objectives:

- A. Ensure that design of any new roads consider the potential for the multi-purpose nature of the right-of-way for utility, pedestrian, bicycle, transit, truck, and auto use, and recognize roads as important to the community identity.
- B. Develop a safe, attractive, efficient, and accessible system of pedestrian ways and bicycle routes. Provide connectivity in the county for convenient multi-modal access where appropriate.
- C. In appropriate locations, consider grade-separated, multi-use paths and vehicle traffic ways to ensure maximum protection and convenience. Construct multi-use paths consistent with the Klamath County comprehensive plan and design standards where they can be developed with satisfactory design components that address safety, security, maintainability and affordability.

GOAL 6 TRANSPORTATION THAT SUPPORTS ECONOMIC DEVELOPMENT

Facilitate the provision of a multi-modal transport system for the efficient, safe, and competitive movement of goods and services to, from, and within Klamath County.

Objectives:

- A. Promote accessibility to transport modes that fulfill the needs of freight shippers.
- B. Designated arterial routes and expressways are essential for efficient movement of goods. Design these facilities and adjacent land uses to reflect the needs of goods movement.
- C. Coordinate proposed plans for truck routes with all related agencies and jurisdictions and strive to balance the needs of moving freight with community livability.
- D. Coordinate airport locations with the existing and future transportation system and land use. Encourage and support the operation, maintenance, and expansion of facilities and services provided at or near airports.
- E. Encourage a balanced system of transportation between air, rail, and land for efficient movement of goods and people.
- F. Promote the appropriate location of regional pipeline systems to enhance security, local service, and efficiency.
- G. Meet federal and state safety compliance standards for operation, construction, and maintenance of the rail system.
- H. Encourage efficient development and/or expansion of rail services to existing and future industrial land uses.
- I. Support and encourage tourism and recreational development through the transportation system by strategically upgrading transportations facilities.

GOAL 7 FUNDING TRANSPORTATION SYSTEM IMPROVEMENTS

Implement the transportation plan by working cooperatively with federal, state, regional, and local governments, the private sector, and residents. Create a stable, flexible financial system for funding transportation improvements.

Objectives:

- A. Encourage coordination and partnership between Klamath County and the Oregon Department of Transportation, along with other jurisdictions and agencies, to develop a long-range financial strategy to make needed improvements to the county transportation system and support operational and maintenance requirements.
- B. Coordinate transportation projects, policy issues, and development actions with all affected governmental units in the area. Key agencies for coordination include Oregon Department of Transportation and other jurisdictions and transportation agencies within the county.
- C. Participate in regional transportation, growth management, and air and water quality improvement policies. Work with agencies to assure adequate funding of transportation facilities to support these policies.
- D. Maintain a current capital improvement program that establishes Klamath County's construction and improvement priorities, and allocates the appropriate level of available funding.
- E. Establish rights-of-way that meet county or state standards, whichever are applicable, at the time of land division or site development and, where appropriate, officially secure them by dedication of property.
- F. Establish and provide adequate funding for maintenance of the capital investment in transportation facilities.
- G. Development to pay proportionate share to mitigate its impacts to the transportation system.
- H. Note that all financial planning must be done against the backdrop of the potential loss of the Federal Forest payments which make up about 2/3 of the county road funds annual revenue.



Goals and Objectives Relationship

CHAPTER 3 REVIEW OF EXISTING TRANSPORTATION FACILITIES

INTRODUCTION

As part of the planning process, an inventory of the existing transportation system in Klamath County was compiled. The inventory data came from a variety of sources, and includes data collected in the field to develop this TSP.

A comprehensive roadway inventory was conducted for all major roadways within Klamath County. This detailed inventory is included in the appendix, and includes information about each inventoried road segment. Separate appendices list all of the relevant roadways in the county; this additional listing provides pavement types (paved, gravel, or unimproved), and the overall length of the road. In addition, information was compiled about the freight system (trucks and rail), county and state bridges, air transportation, bicycle and pedestrian facilities, public transit, pipelines, and fiber optic facilities.

JURISDICTION AND ROADWAY DESCRIPTION

Roadways included in this TSP fall under several jurisdictions, as previously listed. Table 3-1 shows roadways that are under the jurisdiction of ODOT and their functional classification:

Table 3-1. ODOT Highways in Klamath County

Route Name	State Highway Cross Reference #	ODOT Functional Classification
US 97 The Dalles-California	4	Statewide Highway, Expressway
OR 58 Willamette	18	Statewide Highway, Expressway
OR 31 Fremont	19	Regional Highway
OR 140 Klamath Falls-Lakeview	20	Statewide Highway
OR 66 Green Springs	21	District Highway
OR 62 Crater Lake	22	District Highway
OR 70 Dairy-Bonanza	23	District Highway
OR 39 Klamath Falls-Malin	50	Statewide Highway
OR 138 North Umpqua	138	Regional Highway
OR 140 Lake of the Woods	270	Statewide Highway
OR 140 South Klamath Falls	424	Statewide Highway, Express Way
420 Midland	420	District Highway
422 Chiloquin Highway	422	District Highway
OR 39 Hatfield	426	Statewide Highway
429 Crescent Lake	429	District Highway

Figure 3-1 lists ODOT highways in Klamath County; following are descriptions of these highway classifications from the Oregon Highway Plan:

Statewide Highways (NHS) typically provide inter-urban and inter-regional mobility and provide connections to larger urban areas, ports, and major recreation areas that are not directly served by Interstate Highways. A secondary function is to provide connections for intra-urban and intra-regional trips. The management objective is to provide safe and efficient, high-speed, continuous-flow operation. In constrained and urban areas, interruptions to flow should be minimal. Inside Special Transportation Areas (STAs), local access may also be a priority.

Regional Highways typically provide connections and links to regional centers, Statewide or Interstate Highways, or economic or activity centers of regional significance. The management objective is to provide safe and efficient, high-speed, continuous-flow operation in rural areas and moderate to high-speed operations in urban and urbanizing areas. A secondary function is to serve land uses in the vicinity of these highways. Inside STAs, local access is also a priority. Inside Urban Business Areas, mobility is balanced with local access.

District Highways are facilities of countywide significance and function largely as county and city arterials or collectors. They provide connections and links between small urbanized areas, rural centers and urban hubs, and also serve local access and traffic. The management objective is to provide for safe and efficient, moderate to high-speed continuous-flow operation in rural areas reflecting the surrounding environment and moderate to low-speed operation in urban and urbanizing areas for traffic flow and for pedestrian and bicycle movements. Inside STAs, local access is a priority. Inside Urban Business Areas, mobility is balanced with local access.

Expressways primary function is to provide for interurban travel and connections to ports and major recreation areas with minimal or no delays. A secondary function is to provide for long-distance and intra-urban travel in metropolitan areas.

OVERVIEW OF STATE HIGHWAYS

State highways often function as major arterial streets forming the primary roadway network within and through a region. They provide a continuous road system that distributes traffic between cities. In Klamath County, the state highways/major arterial streets often serve statewide, regional, and local traffic demands combined. Although Klamath County has no direct control over the state highways, the highways heavily influence adjacent land use and traffic patterns across the county. Therefore, any recommended improvements in this TSP should be implemented with the cooperation of both state and county agencies.

Following are a series of photos that document and describe the existing conditions of state highways in Klamath County:

US Highway 97 (The Dalles-California Highway #4) runs north-south through the entire county and is classified by ODOT as a Statewide Highway and Expressway. The roadway width varies from one to two lanes in each direction, and posted speeds range from 40 mph to 55 mph. Cities and Communities that are served by US 97 include, Gilchrist, Crescent, Chemult, Chiloquin, Beaver Marsh, Klamath Falls, Midland, and Worden. US 97 is a designated State Freight Route and expressway. See figures 3-1, A-I for public roads that access Hwy 97 in North Klamath County.

US 97 & Crescent Cutoff Rd., from Crescent Cutoff Rd. looking east



US 97 & Silver Lake Rd., from Silver Lake Rd. looking west



US 97 & Keno Worden Rd., from Keno Worden Rd. looking east



Oregon Highway 140 runs east-west through the county and connects Klamath Falls to Medford and I-5 (as the Lake of the Woods Highway #270 and South Klamath Highway # 424) and Lakeview (as the Klamath Falls Lakeview Highway #20). ODOT has classified this road as a Statewide Highway and Statewide Highway and Expressway (Highway # 424 Milepost 0.0 to 567), OR 140 generally has one lane in each direction and posted speeds range from 30 mph to 55 mph. Cities and communities served by OR 140 include Rock Point, Klamath Falls, Olene, Dairy, Beatty, and Bly. OR 140 is designated State Freight Route.

OR 140 & Sprague River Rd., from Sprague River Rd. looking south



OR 140 & Bliss Rd., from Bliss Rd. looking south



Oregon Highway 39 (the Klamath Falls-Malin Highway #50 & Hatfield Highway # 426) runs southeast out of Klamath Falls through Merrill, and then continues south to California. ODOT has classified this road as a Statewide Highway. OR 39 generally has one lane in each direction, and posted speeds range from 30 to 55 mph. This section of OR 39 is designated State Freight Route.

The Klamath Falls–Malin Highway continues east where it connects to the City of Malin and California. After Milepost 16.51, OR 50 is classified as a District Highway by ODOT. The highway generally has one lane in each direction, and posted speeds range from 20 to 55 mph.

Oregon Highway 138 (North Umpqua Highway # 138) travels west from US 97 along the north side of Crater Lake National Park to the junction of Oregon Highway 230 near Diamond Lake. Its primary function is to provide recreation access connection between US 97 and I-5. ODOT has classified OR 138 as a Regional Highway. OR 138 has one lane in each direction and the posted speed limit is 55 mph.

US 97 & OR 138 (Diamond Lake Junction), from OR 138 looking east



Oregon Highway 62 (Crater Lake Highway #22) is classified by ODOT as a District Highway and connects Crater Lake National Park and connects to US 97 south of the City of Chiloquin. Chiloquin Highway 422 runs east-west connecting OR 62 across US 97 directly to Chiloquin. OR 62 has one lane in each direction, and posted speeds range from 30 to 55 mph. The community served by OR 62 is Fort Klamath.

Oregon Highway 70 (Dairy–Bonanza Highway #23) begins at the rural community of Dairy located at the junction on OR 140 east of Klamath Falls and connects to the Town of Bonanza. OR 70 has one lane in each direction, and posted speeds range from 25 to 55 mph. The city served by OR 70 is Bonanza.

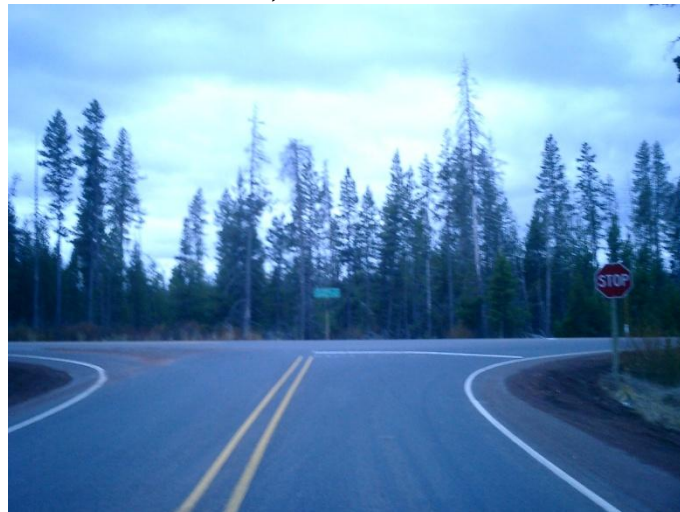
Oregon Highway 66 (Green Springs Highway #21) runs east-west connecting Klamath Falls to I-5 near Ashland and serves the rural community of Keno. OR 66 is classified by ODOT as a District Highway, has one lane in each direction, and posted speeds range from 35 to 55 mph. The community served by OR 66 is Keno.

OR 66 & Keno Worden Rd., from Keno Worden Rd. looking north



Oregon Highway 58 (Willamette Highway #18) is classified by ODOT as a Statewide Highway and Expressway and runs east-west connecting US 97 in northern Klamath County to I-5 near Eugene. OR 58 serves the community of Crescent Lake Junction in Klamath County and also provides recreational access. This route is also widely known to truckers and is used as a freight route to the mid-Willamette Valley. OR 58 is a designated State Freight Route.

OR 58 & Crescent Cutoff Rd., from Crescent Cutoff Rd. looking west



Oregon Highway 420 (Midland Highway #420) runs north-south connecting Klamath Falls to US 97 about 5 miles south of Klamath Falls. OR 420 is classified by ODOT as a District Highway, has one lane in each direction, and posted speeds range from 35 to 55 mph.

OVERVIEW OF MAJOR COUNTY ROADS

County roads traverse much of Klamath County; a complete listing is included in the appendix. Klamath County developed a road classification scheme; following is a description of some of the more heavily used roads in the county and their functional classification. All of these roads have one lane in each direction; none have curbs, sidewalks or parking. Traffic controls are stop signs.

RURAL MINOR ARTERIALS

Bly Mountain Cutoff Road:

Runs north from OR 70 from the City of Bonanza to OR 140 and a large percentage of vehicles using this road are trucks (approximately 70 percent).

Crescent Cutoff Road:

Connects US 97 to OR 58 in Northern Klamath County, and provides access to Davis Lake and other attractions in the Deschutes National Forest via the Cascade Lakes Highway.

Cross Road:

Is an east-west road connecting US 97 and OR 39 south of the City of Klamath Falls.

Dead Indian Memorial Road:

Connects OR 140W near Lake of the Woods to Jackson County.

Harpold Road:

Extends from Stateline Road north, crossing State Highway OR 39 between Merrill and Malin, to OR 70 at Bonanza.

Old Midland Road:

Connects US 97 at Midland to OR 39.

Modoc Point Road:

Connects US 97 at Modoc Point to the OR 62 north of Agency Lake.

Silver Lake Road:

Runs northeast from US 97 and provides access to the Klamath Marsh National Wildlife Refuge, recreational sites in the Winema and Fremont National Forests, and Silver Lake and OR 31 in Lake County.

Sprague River Road:

Runs southeast from the City of Chiloquin to OR 140E and provides access to the rural community of Sprague River and other residential developments, and also recreational sites near the Sprague River.

Stateline Road:

Connects Malin OR 39 (Klamath Falls- Malin Highway #50) from east of Malin to OR 39 (Hatfield Highway #426) at the Oregon-California border.

RURAL MAJOR COLLECTORS**Bliss Road:**

Connects OR 140E to the rural community of Sprague River and Sprague River Road.

East Langell Valley Road and West Langell Valley Road:

Collectively, make a loop around the Langell Valley area, from Harpold Road about a mile south of the Town of Bonanza, to Malone Reservoir at the south end of Langell Valley, and back to Bonanza.

Hill Road:

Starting at Crystal Springs Road southeast of Klamath Falls, Hill Road follows the base of Stukel Mountain, roughly paralleling OR 39, and then runs south to the City of Merrill.

Loosely Road:

Connects OR 62 to Weed Road, southeast of the rural community of Fort Klamath. This is part of the well known Westside Loop, which also includes Westside Road, Sevenmile Road and Weed Road. This loop currently serves as a detour for over dimensional loads on OR Highway 140 West that are unable to go along Upper Klamath Lake due to length and width restrictions.

Lower Klamath Lake Road:

Connects Cross Road to South Merrill Road, runs along the base of O'Connor Hill.

North Poe Valley Road:

Connects OR 140E to Harpold Road.

Sevenmile Road:

Connects Westside Road to Weed Road. Part of the Westside Loop.

South Chiloquin Road:

Connects Modoc Point Road and OR Highway 62 to US 97, southwest of the City of Chiloquin.

South Poe Valley Road:

Connects OR 140E to Harpold Road, about 2 miles south of North Poe Valley Road.

Spring Lake Road:

Runs north from O'Connor Road to Joe Wright Road; provides access to Klamath Falls Airport (Kingsley Field).

Weed Road:

Runs south out of Fort Klamath for about 3 ½ miles, then extends eastward to OR 62. Part of the Westside Loop.

Westside Road:

Connects OR 140 to OR 62 and Crater Lake National Park via Sevenmile, Weed, and Loosely Roads. This road also provides direct access to the Upper Klamath National Wildlife Refuge. Approximately 20 percent of the total traffic on Westside Road is oversized truck traffic due to restrictions on OR 140 near Upper Klamath Lake.

Williamson River Road:

Connects Sprague River Road to the Head of the Williamson River.

RURAL MINOR COLLECTORS

Beal Road:

Connects OR 31 to the Antelope Meadows Subdivision.

Campbell Road:

Runs north from OR 140E just east of Bly, then connects to Ivory Pine Road.

Crystal Springs Road:

From South Poe Valley Road at the bridge over the Lost River at Olene, Crystal Springs runs southwesterly along the base of the hill on the south side of the Olene Gap, then west to Reeder Road.

Drews Road:

From Sprague River Road just north of the rural community of Sprague River, Drews Road runs easterly to Godowa Springs Road north of Beatty.

Godowa Springs Road:

Starting at the rural community of Beatty on OR 140E, the paved section of Godowa Springs runs northerly for about 9 miles.

Homedale Road:

From OR 140 on the south side of Klamath Falls, Homedale extends south along the eastside of Kingsley Field and continues to O'Connor Road. Homedale also runs north of OR 140 to Foothills Blvd, inside the Urban Growth Boundary.

Ivory Pine Road:

Runs about 12 miles north of OR 140E, from a point roughly 3 miles west of the rural community of Bly.

Joe Wright Road:

Provides access from US 97 south of Klamath Falls to Kingsley Field at Altamont Drive.

Keno Worden Road:

Connects US 97 (at Worden) and OR 66 (at Keno) southwest of the City of Klamath Falls and provides access to the Bear Valley National Wildlife Refuge.

Reeder Road:

Extends from OR 140E in the Pine Grove area about 2 miles east of the Tulelake/Lakeview junction, to Hill Road at the Lost River.

Sun Mountain Road:

Connects OR 62 to Dixon Road, about a mile east of the rural community of Fort Klamath. Sun Mountain continues northward from Dixon Road over 20 miles and connects to US 97. This section of Sun Mountain Road is not paved and has a piece under the jurisdiction of the Oregon Department of Forestry, and another piece under the jurisdiction of the United States Forest Service, and a third piece is a user maintained public road under county jurisdiction.

Tingley Lane:

The county section of Tingley Lane extends from Miller Island Road to Cross Road, southwest of Klamath Falls. North of Miller Island Road and Tingley Lane OR Highway 424 is part of the State Highway system.

Township Road:

Connects US 97 to Lower Klamath Lake Road.

Figure 3-1. ODOT Highway Classifications (next page)






Klamath County
 Transportation System Plan
 Highway 97
 Public Access Points

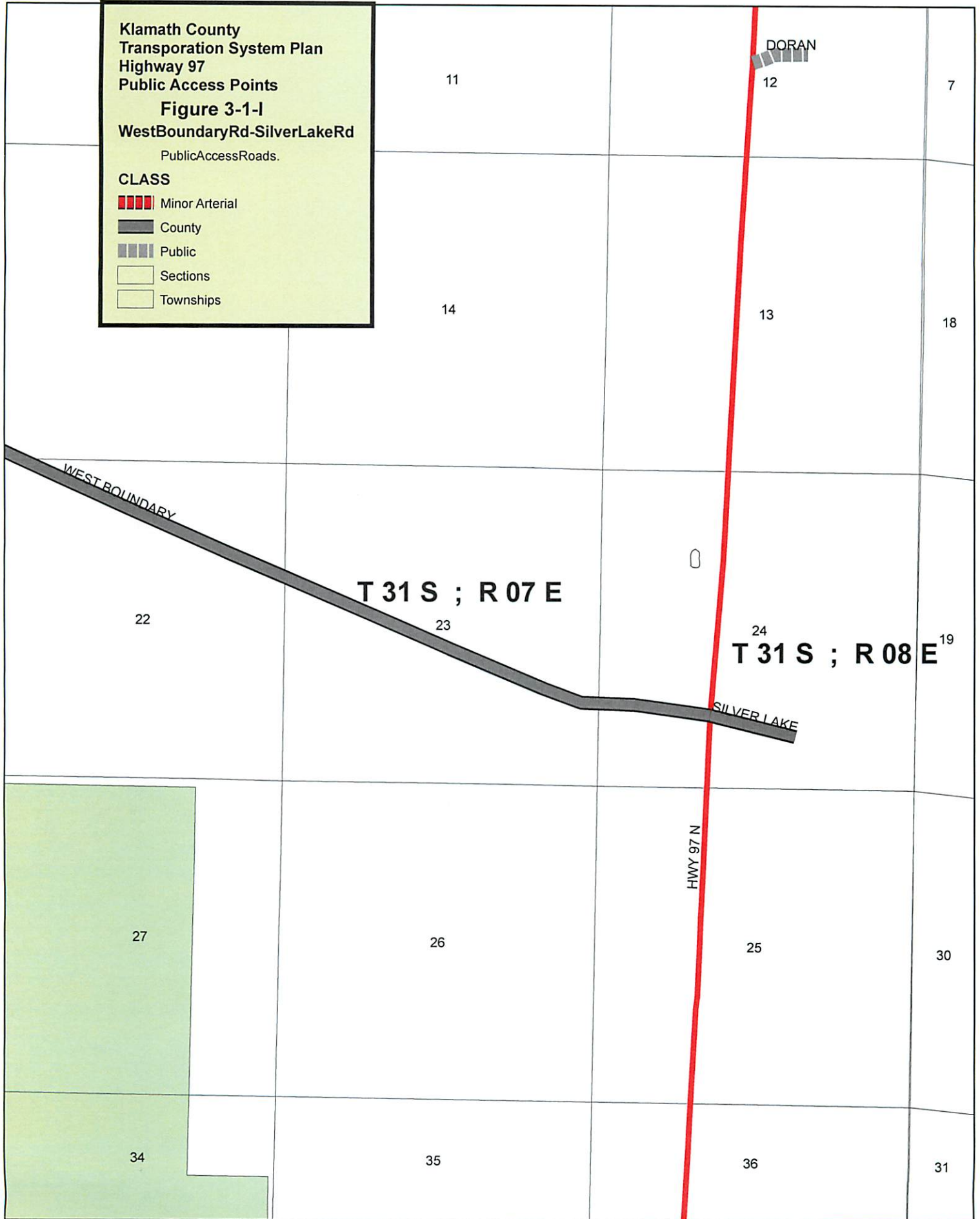
Figure 3-1-I

WestBoundaryRd-SilverLakeRd

PublicAccessRoads.

CLASS

-  Minor Arterial
-  County
-  Public
-  Sections
-  Townships



West Boundary Road
 Silver Lake Road

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



Klamath County
 Transportation System Plan
 Highway 97
 Public Access Points

Figure 3-1-H

Mt.Scott Meadows

PublicAccessRoads.

CLASS

-  Minor Arterial
-  County
-  Public
-  Sections
-  Townships

36

31

T 30 S ; R 08 E

MUNSON

2

1

6

HWY 97 N

T 31 S ; R 07 E

T 31 S ; R 08 E

PUMICE

11

12

7

DORAN



Mt. Scott Meadows

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36 T 29 S ; R 07 E

31 T 29 S ; R 08 E

32

1

6

**Klamath County
Transportation System Plan
Highway 97
Public Access Points**

Figure 3-1-G

||||| MILITARY

Military Road

PublicAccessRoads.

CLASS

||||| Minor Arterial

County

Public

Highways

Sections

Townships

Highway 97 N.

T 30 S ; R 07 E

12

T 30 S ; R 08 E

Military Road

13

18

17



Military Road

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

Klamath County
 Transportation System Plan
 Highway 97
 Public Access Points

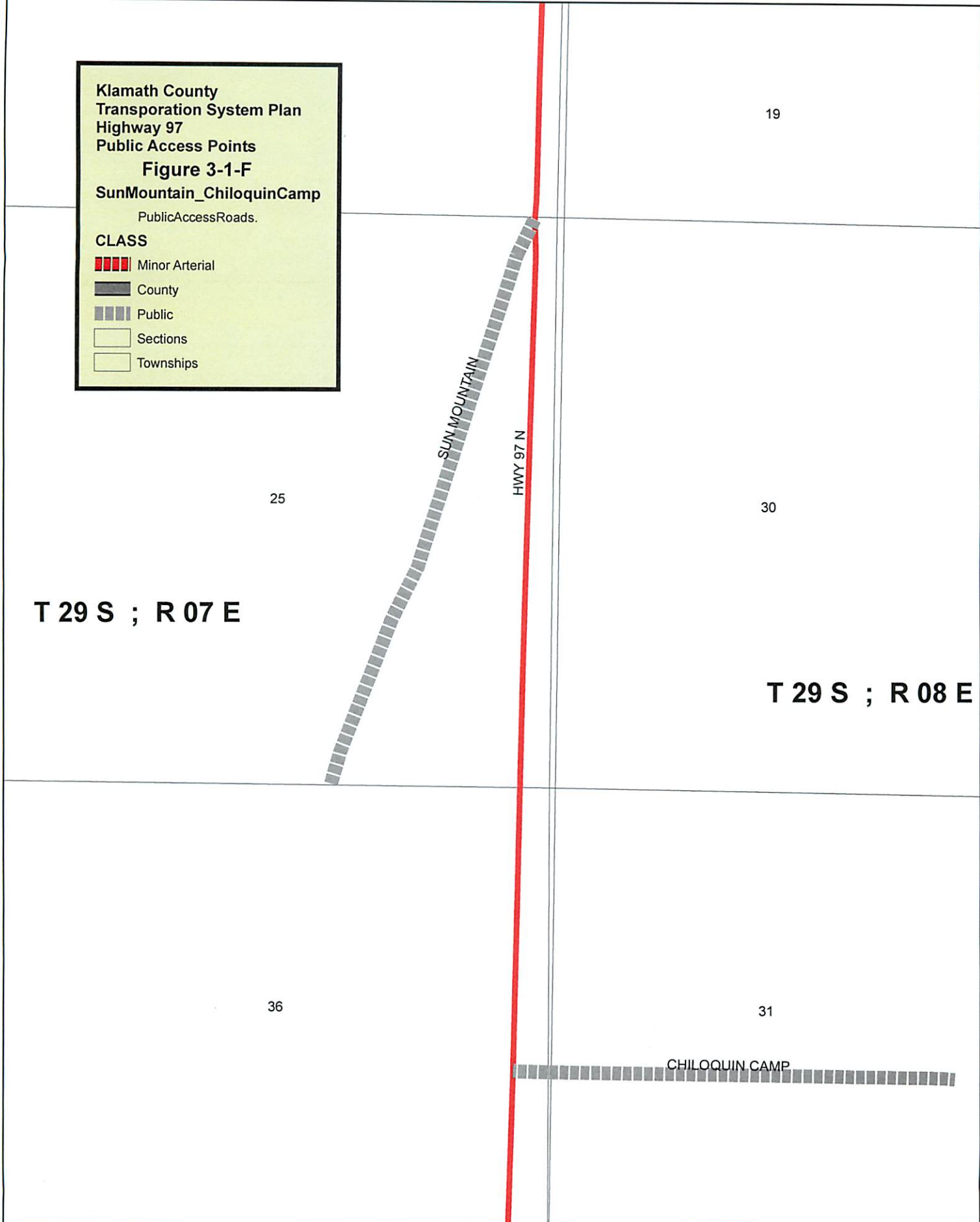
Figure 3-1-F

SunMountain_ChiloquinCamp

PublicAccessRoads.

CLASS

-  Minor Arterial
-  County
-  Public
-  Sections
-  Townships



T 29 S ; R 07 E

T 29 S ; R 08 E



Sun Mountain Rd
 Chiloquin Camp Road

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Klamath County
Transportation System Plan
Highway 97
Public Access Points

Figure 3-1-E

Beaver Marsh

PublicAccessRoads.

CLASS

Minor Arterial

County

Public

Sections

Townships

T 28 S ; R 08 E

HWY 97 N

HOLIDAY



Beaver Marsh

The information in this map has been prepared for the internal use of the Klamath County Public Works Department. Accuracy or completeness is not guaranteed to any other agency or private party.

Klamath County
Transportation System Plan
Highway 97
Public Access Points

Figure 3-1-D

Chemult Dump Road

PublicAccessRoads.

CLASS

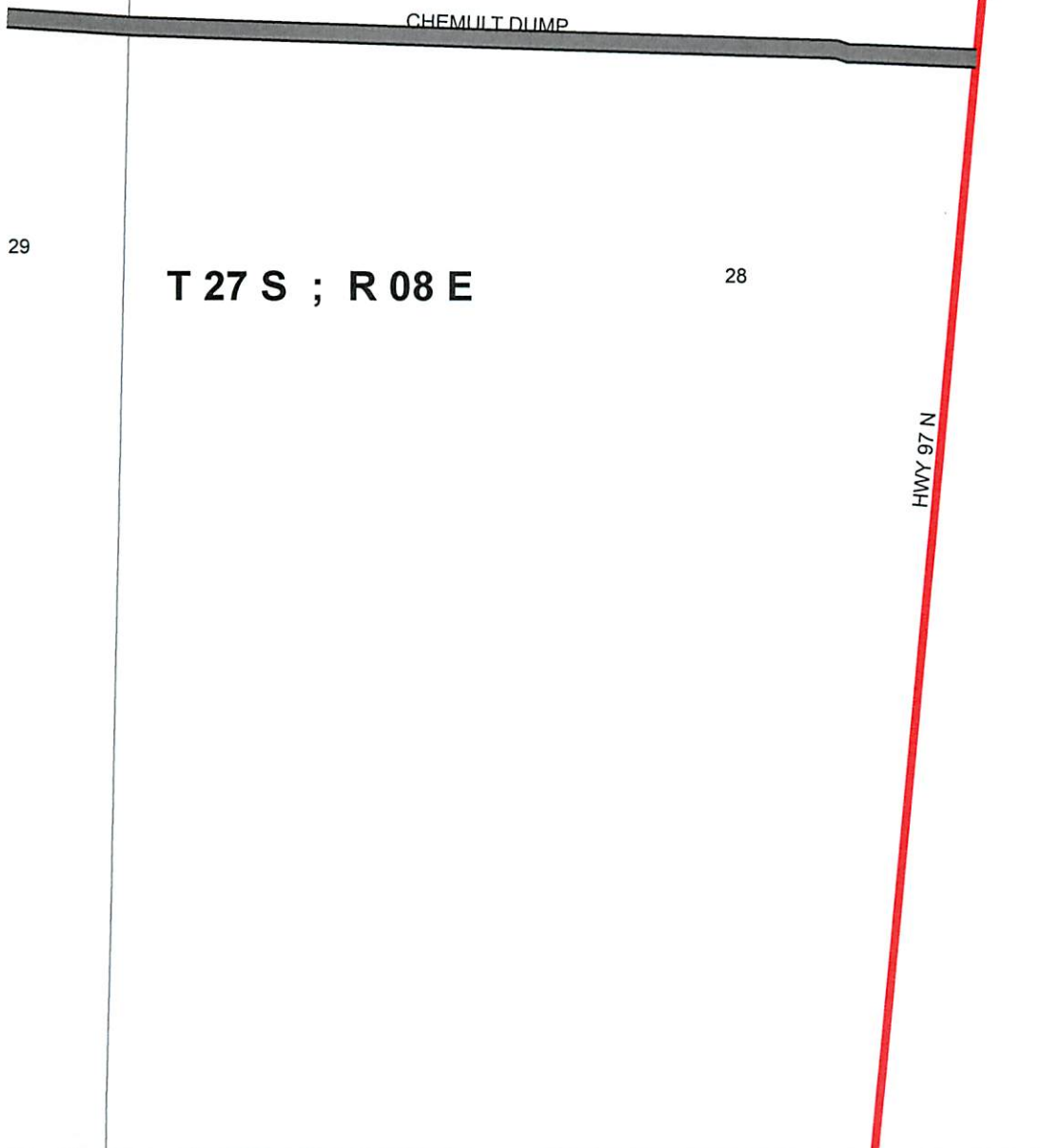
Minor Arterial

County

Public

Sections

Townships



Chemult Dump Road

The information in this map has been prepared for the internal use of the Klamath County Public Works Department. Accuracy or completeness is not guaranteed to any other agency or private party.

**Klamath County
Transportation System Plan
Highway 97
Public Access Points**

Figure 3-1-C

Chemult

PublicAccessRoads.

CLASS

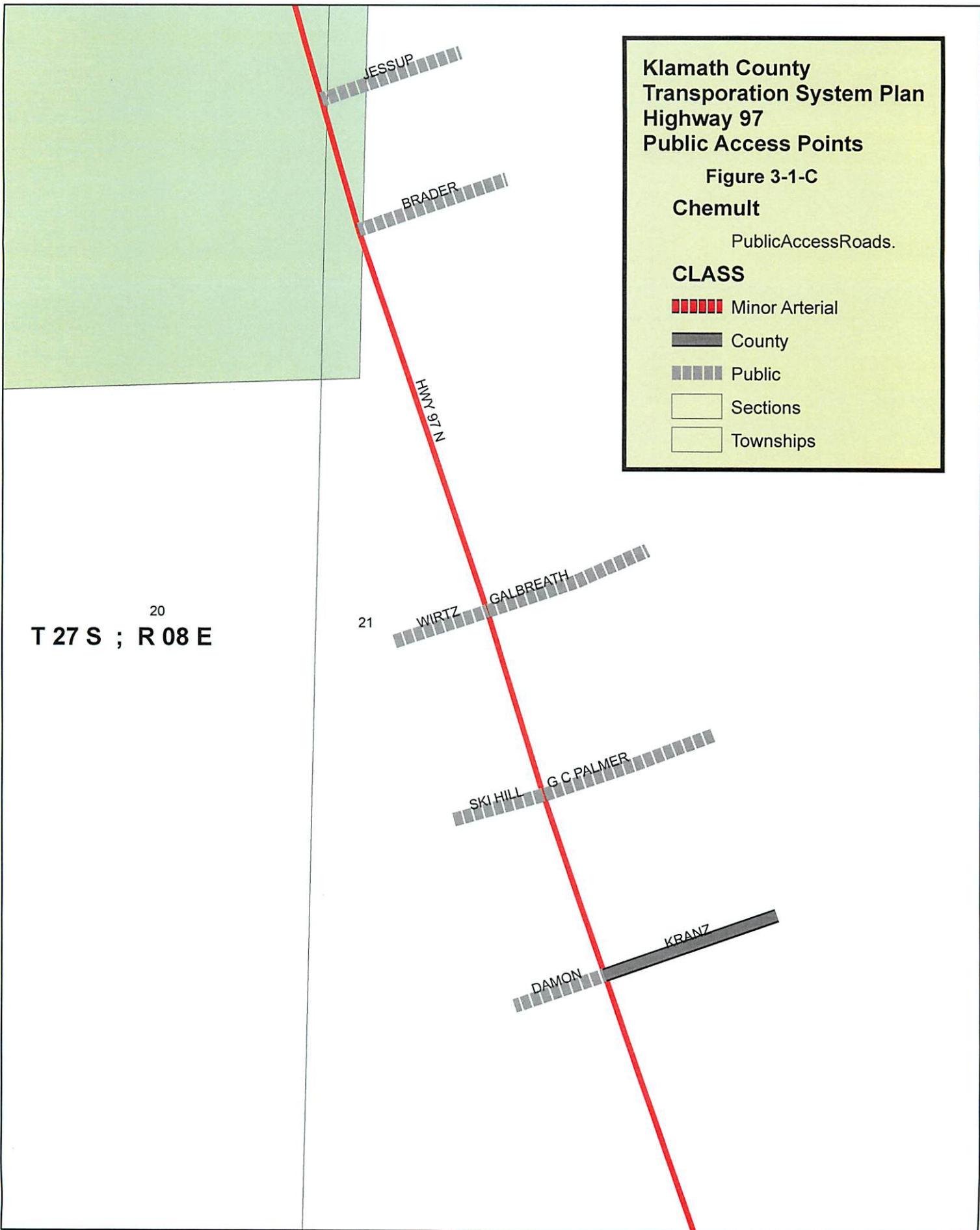
Minor Arterial

County

Public

Sections

Townships



20
T 27 S ; R 08 E

21



Chemult

The information in this map has been prepared for the internal use of the Klamath County Public Works Department. Accuracy or completeness is not guaranteed to any other agency or private party.

Klamath County
 Transportation System Plan
 Highway 97
 Public Access Points

Figure 3-1-B

PublicAccessRoads

CLASS

Minor Arterial

County

Public

Land_Management

OWNER

BLM

NPS

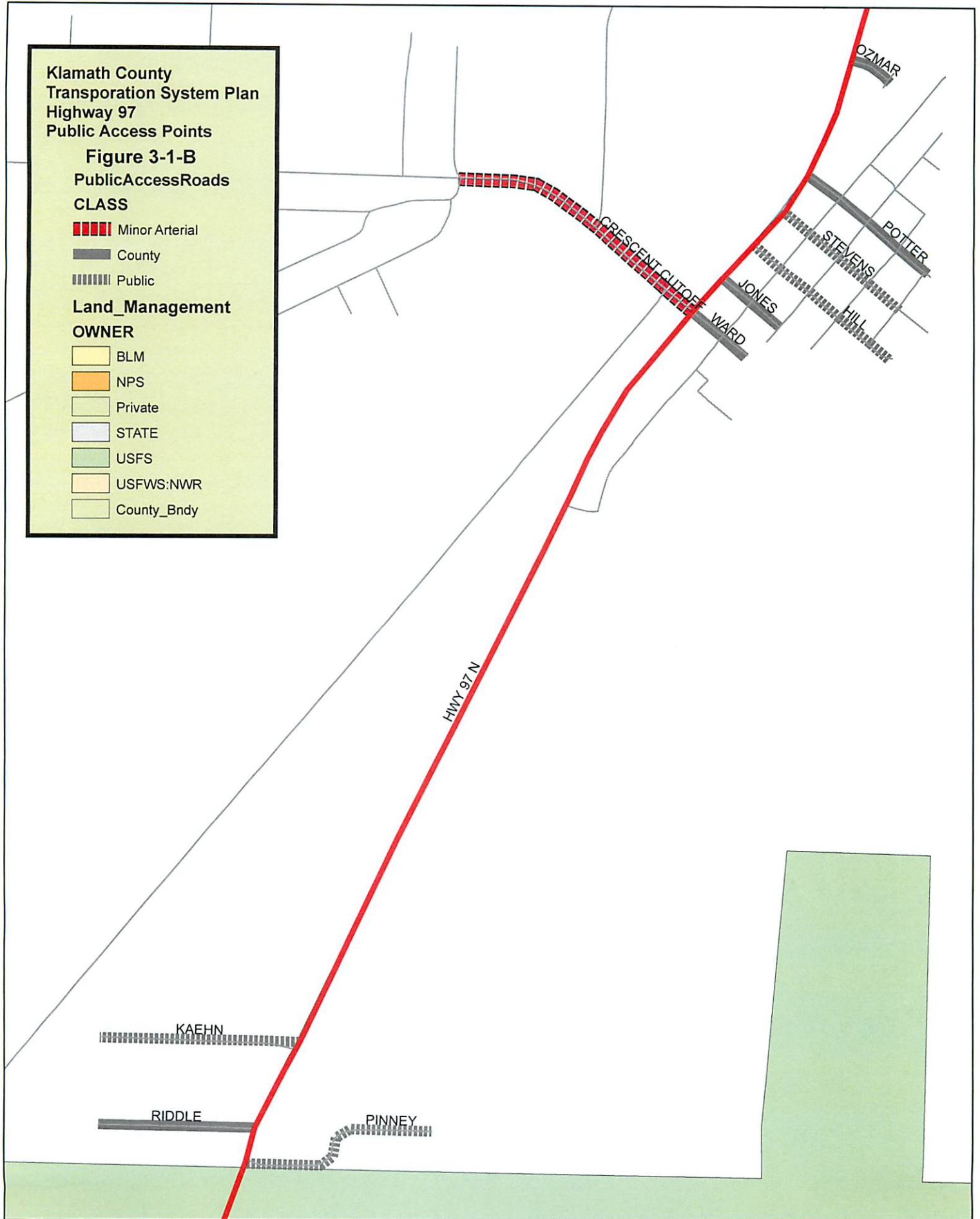
Private

STATE

USFS

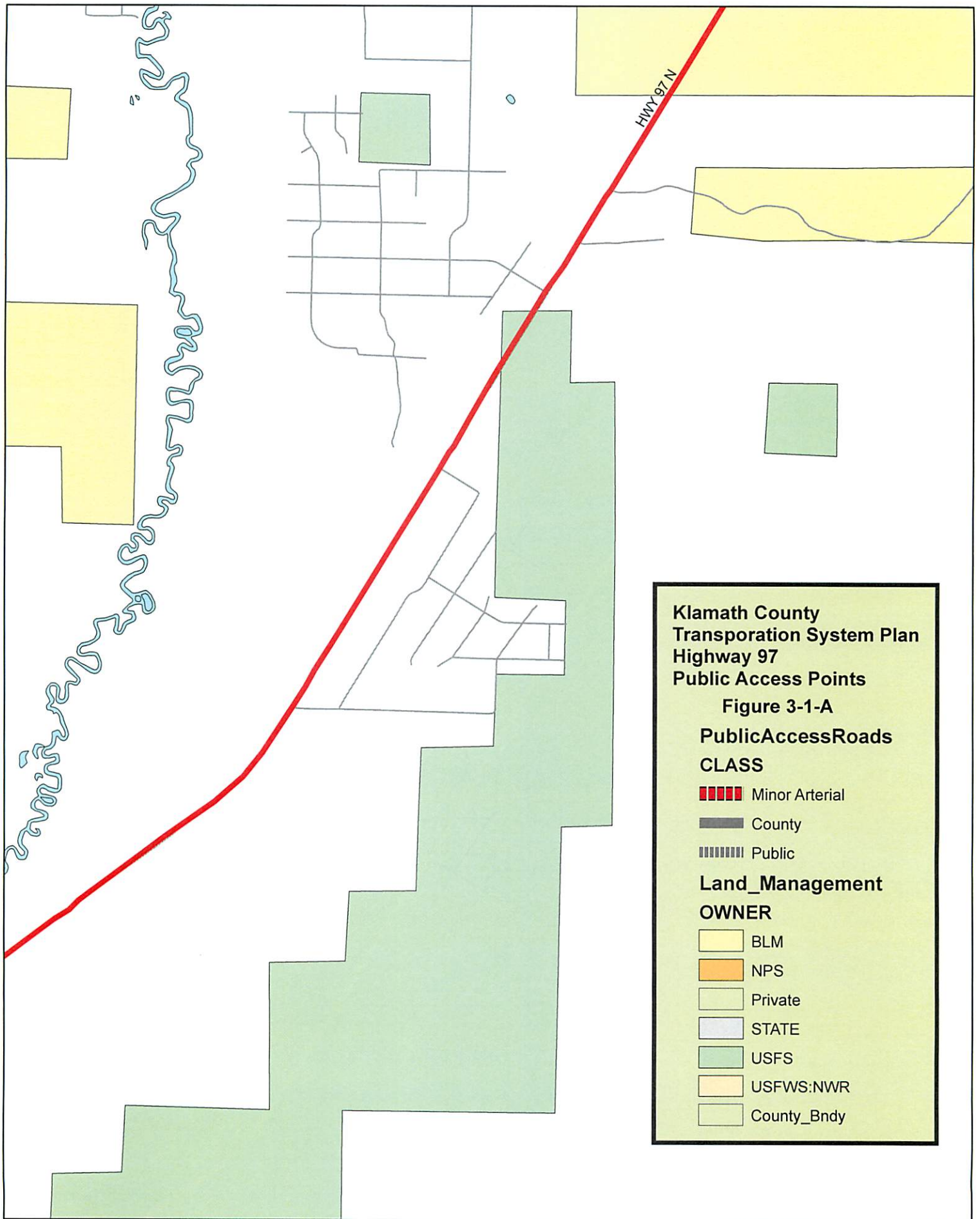
USFWS:NWR

County_Bndy



Pinney to Ozmar

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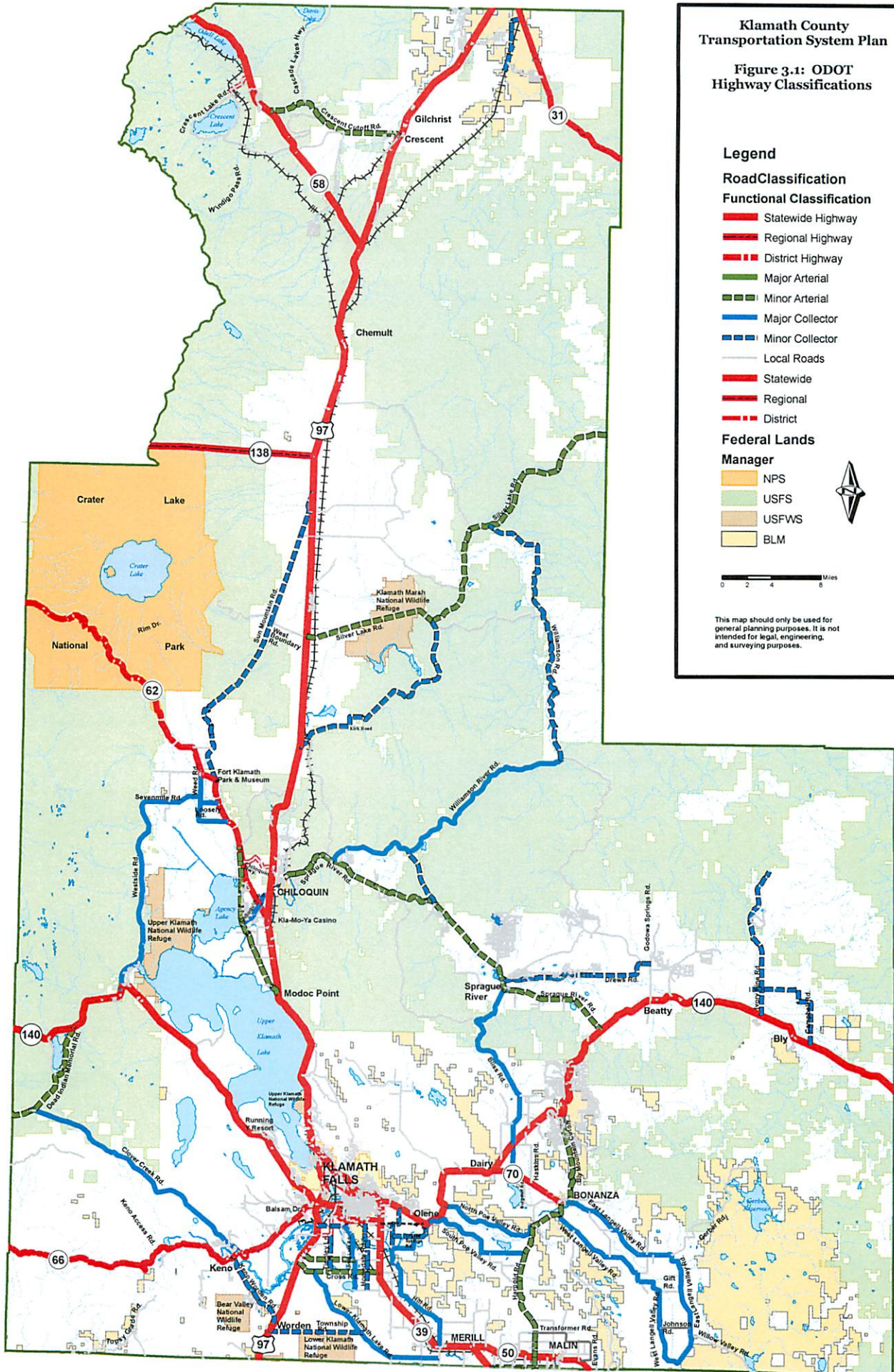


Chapman to Michael

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**Klamath County
Transportation System Plan**

**Figure 3.1: ODOT
Highway Classifications**



Bicycle and Multi-Use Facilities

The field inventory in the appendix shows that most bicycle facilities in the county are essentially located in the shoulders of state highways (e.g., along US 97, Oregon Highway 58). However, not all state highways have shoulders, (e.g., sections of Oregon Highway 62, much of Oregon Highway 140) and thus bicyclists and vehicular traffic must often travel in the same lanes.

Following are examples of dedicated bicycle facilities in the county:

- The State Park Trail is a paved “Rails to Trails” corridor extending east from Klamath Falls to the rural community of Olene, utilizing the old OCE Railroad right-of-way. From Olene, a separate path parallels Oregon Highway 140 east to Bly.
- Crescent Cutoff Road includes a one-mile paved bike path just west of the rural community of Crescent, which is separated from the roadway, but within the right-of-way.
- Nearby, a separate off-road bike path runs parallel to US 97 in the right-of-way and connects the rural community of Crescent and the rural community of Gilchrist.
- OR Highway #140 includes a half mile paved multi-use path on the west side of the highway in the community of Bly

Pedestrian Facilities

Among the inventoried road segments, the only sidewalks that were present in cities and communities were along the state highway. Oregon Highway 39 in the City of Merrill from the city limits east to west; sidewalks were present along Oregon Highway 140 in the rural community of Bly east to west in the commercial area of the community; in the rural community of Beatty east to west in commercial and residential area of the community sidewalks were present; sidewalks were present along Highway US 97 in the rural community of Crescent south to north in the commercial area of the community. Sidewalks along the local street systems outside of the Klamath Falls south suburbs are all within official city boundaries and are not the jurisdiction of the county.

Transit Services

Basin Transit Services (BTS), with service inside the Klamath Falls Urban Growth Boundary (UGB), operates six regular fixed-routes. None of these routes, however, extend beyond the city's UGB, and BTS has no plans to extend regular service outside of the city. Service generally operates from 6 AM to 7 PM (See the BTS website for rates; www.basintransit.com). BTS also operates a curb-to-curb Dial-A-Ride service for customers who are older than 60 or have a disability and are unable to use the fixed route buses.

Dial-A-Ride vans are also used to transport riders to and from selected areas outside of the transit district (i.e., outside of the UGB). Designated "Extended Service Areas" include:

- Henley, Wocus
- Klamath Falls Airport
- Columbia Plywood
- Aqua Glass
- International Paper
- Green Acres

Requests for this service must be made during regular office business hours of Monday through Friday from 8 AM to 5 PM, and rides are usually provided within 30-60 minutes. Reserved rides may be scheduled up to five days in advance, and the cost of the service is \$1.50.

Klamath Basin Senior Citizens Council (KBSCC), also based in Klamath Falls, operates special needs service for seniors, with fees varying by service type. Like BTS, this service operates entirely within Klamath Falls and there are no plans to expand the service.

Klamath Tribes (KT), based in Chiloquin, provides limited free transit for medical purposes. Service is available to both Tribal member and the general public, and transport must be scheduled in advance. Two routes are typically run:

1. Chiloquin to Klamath Falls
2. Chiloquin to Sprague River to Klamath Falls

Klamath Tribes also makes occasional trips to Portland for medical purposes.

Rail System

Freight Rail

Klamath County's railroad activity consists mainly of the Union Pacific's (UP) Cascade main line to California and the Burlington Northern Santa Fe's (BNSF) Oregon Trunk line. When it purchased the Southern Pacific, the UP acquired trackway rights over the BNSF between Bend and Chemult. In return, BNSF acquired the former UP line between Bieber and Keddie, California. This has resulted in both the UP and the BNSF having parallel main lines between Oregon and California. The UP also owns the Modoc line which runs southeast from Klamath Falls to a connection with its California-to-Odgen mainline at Flanigan, Nevada. In 1999, UP's Cascade main line carried about 28 million gross tons on its line north of Klamath Falls and into California. The BNSF moved about 6.5 million gross tons over the line between Bend and Klamath Falls¹.

The Klamath Northern Railroad is a short line that runs between Gilchrist and Gilchrist Junction on the UP's Cascade main line. This line is owned by a private timber products industry company and is primarily to move wood products from the company facility to Gilchrist.

The UP and BNSF operate parallel tracks south of Klamath Falls. Some county stakeholders have suggested that both tracks may not be needed, and that combining the tracks could eliminate several crossings. The at-grade crossing on the South Side Expressway near Summers Lane is particularly problematic and can cause significant back-ups on the expressway.

Figure 3-2. Freight Rail Operators



Source: ODOT Oregon Rail Plan. 2001

¹ ODOT Oregon Rail Plan. 2001.

Passenger Rail

Amtrak's Eugene-bound *Coast Starlight* passenger train departs in the mornings, and operates over the Union Pacific with stops at Klamath Falls and Chemult, the California-bound *Coast Starlight* departs in the evenings. The Chemult Train Station Welcome Center is on the list of Statewide Transportation Improvement Projects.

Air Transportation System

Klamath County has four public airports, shown on Figure 3-3. The Klamath Falls Airport (Kingsley Field) is the county's primary airport, located just south of the Klamath Falls metropolitan area. The Airport offers commercial air service (7 percent of operations), general aviation services (56 percent), air taxi services (7 percent), and also is home to the Oregon Air National Guard 173rd Fighter Wing (30 percent). The airport is served by Horizon Air, which provides three daily flights to and from Portland, and currently serves about 30,000 annual passengers². Land uses adjacent to the airport include:

- An industrial park developed by Klamath Economic Development group
- A new Business Park adjacent to the airfield, developed by the airport on airport property
- Agricultural lands
- Minor residential development

Klamath County also has four smaller airports:

Chiloquin State Airport

(Category 4 - Community General Aviation Airport) is about 25 miles north of Klamath Falls and is mainly used by small planes. Adjacent lands consist primarily of National Forest. No airport improvements are planned in the near future.

Malin Airport

(Category 5 - Low Activity General Aviation Airport) is about 18 miles southeast of Klamath Falls and is mainly used by small, privately-owned planes. Adjacent lands are used primarily for farming and agriculture. Part of the airport is leased by the Yankee Air Pirates to fly model airplanes. The airport is currently seeking grants to upgrade the runway.

² <http://www.airnav.com/airport/>

Beaver Marsh Airport - Private

(Category 5) is a small landing strip about 60 miles north of Klamath Falls.

Crescent Lake State Airport

(Category 5) is a small landing strip about 75 miles north of Klamath Falls, locate next to the community of Crescent Lake Jct. Adjacent lands consist of primarily of National Forest.

Figure 3-3. Klamath County Public Airports (next page)

**KLAMATH COUNTY
TRANSPORTATION SYSTEM PLAN
Figure 3-3: Public Airports**

Legend

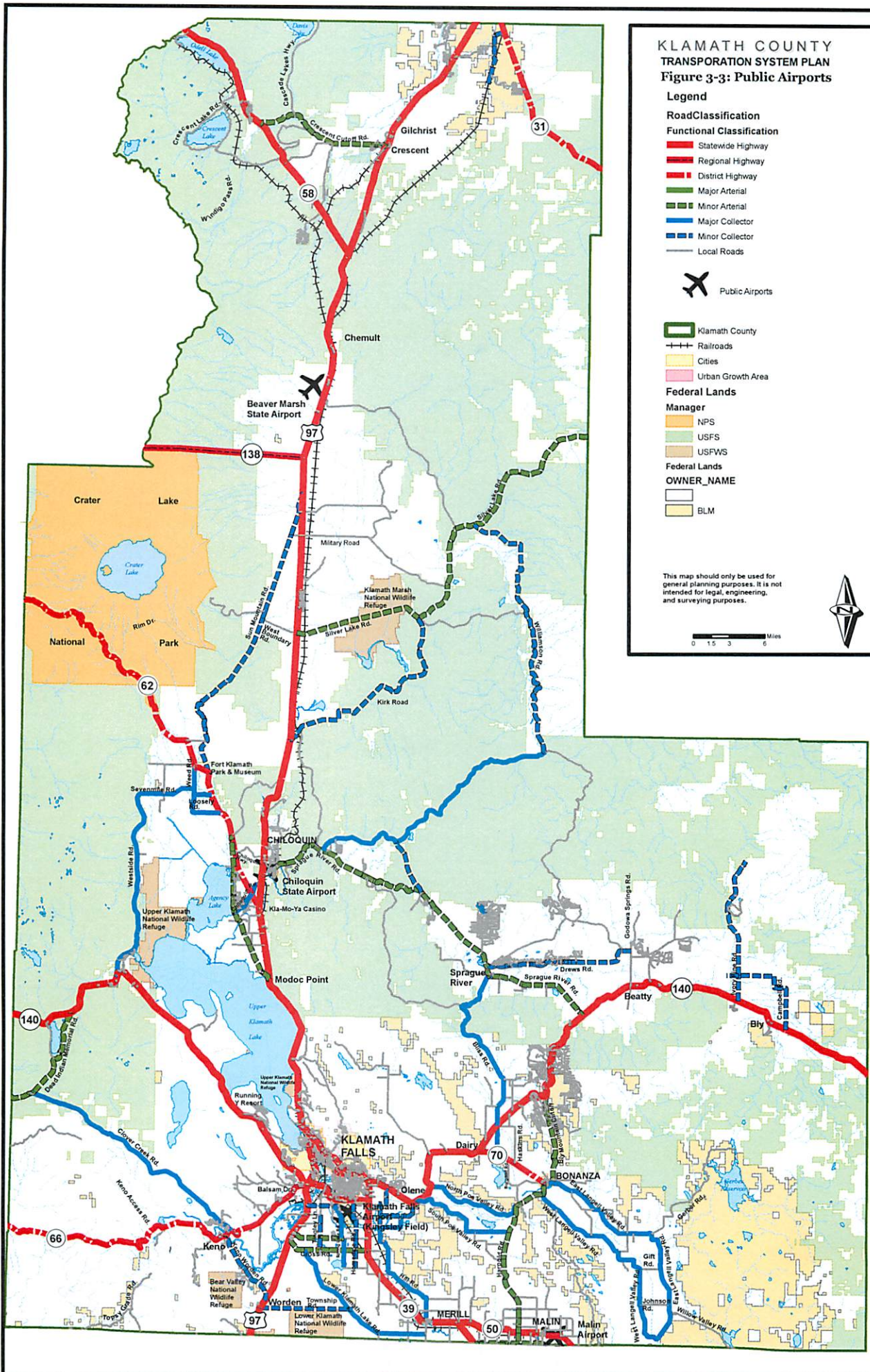
Road Classification

-  Statewide Highway
-  Regional Highway
-  District Highway
-  Major Arterial
-  Minor Arterial
-  Major Collector
-  Minor Collector
-  Local Roads



-  Klamath County
 -  Railroads
 -  Cities
 -  Urban Growth Area
- Federal Lands**
- Manager**
-  NPS
 -  USFS
 -  USFWS
- Federal Lands OWNER_NAME**
- 
 -  BLM

This map should only be used for general planning purposes. It is not intended for legal, engineering, and surveying purposes.



Pipelines and Fiber Optic Facilities

Two primary natural gas pipelines traverse Klamath County. One line runs north-south from the California border to the Oregon-Washington border near Umatilla. This line was recently acquired by TransCanada Pipeline from Gas Transmission Northwest. An east-west lateral line extends from the vicinity of Klamath Falls to Medford; this line is owned by Gas Transmission Northwest. These lines have not been mapped at the request of the pipeline owners due to homeland security issues. The following are pipeline providers in Klamath County: Avista Utilities, Pacific Gas Transmission, Gas Transmission Northwest, Northwest Pipeline, Williams Gas Co., Pacific Gas & Electric, and Tuscarora Gas Transmission Company.

Avista Utilities is the natural gas provider in the county. Avista's primary service area includes Klamath Falls, Keno, Running Y, and Malin. The company operates a secondary pipeline distribution system in the county, and maintains numerous lines that branch off the mainline to provide gas to residences and businesses.

Both Bel-Tec and Qwest have fiber optic lines in Klamath County. Bel-Tec has two lines that are entirely within the City of Klamath Falls; one hub is located at 403 Pine St, and the other hub is located at the Sheriff's Office on Vandenberg Rd. These fiber-optic lines have not been mapped at the request of the owners due to homeland security issues.

Regional Activity Centers

Regional attractions in Klamath County include its cities, where shopping and employment opportunities are located. Other attractions in the county are driven by its growing tourism industry; some of these attractions are listed below:

- Crater Lake National Park
- Upper Klamath Lake
- Train Mountain Railroad Museum
- National Wildlife Refuges
- Klamath County Museum
- Klamath County Fairgrounds
- Ross Ragland Theatre
- The Running Y Resort
- Fort Klamath Museum & Park
- Collier Memorial State Park
- Kla-Mo-Ya Casino
- Shieldcrest

CHAPTER 4 CURRENT TRANSPORTATION CONDITIONS

INTRODUCTION

This chapter describes the current transportation conditions and identified deficiencies within Klamath County. *Deficiencies* represent the difference between an existing or future transportation system characteristic and adopted standards for that characteristic. *Needs* represent the types of measures required to mitigate the deficiencies¹. Detailed improvement projects that will be identified as deficiencies are more clearly defined and transportation system alternatives are developed.

This chapter includes the following topics:

- Existing Traffic Conditions
- Roadway System Needs and Deficiencies
- Bridges
- Public Transportation
- Bicycle Network
- Pedestrian Network
- Freight Facilities

EXISTING TRAFFIC CONDITIONS

Roadway Conditions

Listed in Table 4-1 are ODOT highway segments deemed to be in poor condition in 2006. Pavement ratings for other road segments are included in the appendix. During the field inventory, no major paved roads maintained by the county were deemed to be in poor or very poor condition. ODOT's definitions for poor and very poor are:

¹ ODOT Transportation System Planning Guidelines. May, 2001.

Poor

Asphalt pavements in this category are marked by areas of instability, structural deficiency, large crack patterns (alligatoring), and numerous patches, and visible deformation. Ride quality ranges from acceptable to poor. Concrete pavements in this category may continue to provide acceptable ride quality. Both jointed and continually reinforced pavements display cracking patterns with longitudinal cracks connecting joints and transverse cracks occurring more frequently. Occasional pothole repair is evident, and some joints and cracks show a loss of base support.

Very Poor

Asphalt pavements in this category are in extremely deteriorated condition marked by numerous areas of instability and structural deficiency. Ride quality is unacceptable. Concrete pavements in this category display a rate of deterioration that is rapidly accelerating.

Table 4-1. ODOT Highways in Poor Condition

Hwy NO.	Section Name	Beg MP	End MP
OR140	JCT HWY 004-EWAUNA STREET	-0.14	0.19
OR39	ALTAMONT BRIDGE-PATTERSON ST	3.28	4.58
OR140	RITTER RD-SPRAGUE RIVER RD	25.17	35.90
OR140	JCT HWY 004-EWAUNA STREET	-0.15	0.07
OR66	JCT HWY 270-JCT HWY 004	58.99	59.29
OR39	MP 7.0-MERRILL PIT ROAD	7.00	11.76
OR39	MERRILL SECTION	13.17	14.49
OR39	SCL MERILL - JCT HWY 426	14.49	16.51
OR39	JCT HWY 050-CAL STATE LINE	16.51	18.93

Note: In 2006, no highway was assessed to be in very poor condition.

Source: IRIS Pavement Management System

Table 4-1 shows that about 39 centerline miles of state highways are in poor condition in Klamath County; the longest segment 12 centerline miles (Klamath Falls – Malin Highway) is along OR 39, this section of OR 39 provides connection to Klamath Falls, to Merrill and Malin. About 18 miles of OR 140 (the Klamath Falls-Lakeview Highway) are in poor condition, as are 10 miles of OR 39 (The Klamath Falls - Malin Highway). There are a total of 394 centerline miles on the state highway system in Klamath County, according to the 2003 Oregon Mileage Report.

Traffic Volumes

This section describes the traffic counts conducted in Klamath County for use in the roadway volume/capacity section analysis. Table 4-2 provides 2003 AADT volumes on state highways, which were collected for ODOT's regular counting program, and shows the percentage of trucks on each roadway as well.

Table 4-2. Klamath County Traffic Counts

Road Name	Count Location	Count Date	Direction	One-Way Volume (AADT)	Two-Way Volume (AADT)	Pct. Trucks*
Westside Rd.	S. of Rocky Point Rd.	8/02	N.bound	266	526	20%
Westside Rd.	S. of Rocky Point Rd.	8/02	S.bound	260		20%
Spring Lake Rd.	S. of K Falls	6/04	N.bound	811	1685	2%
Spring Lake Rd.	S. of K Falls	6/04	S.bound	874		1%
Sprague River Rd.	Chil.-Sprag. Riv.Rd.. Br. #4	6/02	W.bound	502	NA	12%
Short Rd.	Klamath Falls	5/03	W.bound	1066	2102	4%
Short Rd.	Klamath Falls	5/03	E.bound	1036		4%
Reeder Rd.	K Falls, S. of 140	11/01	N.bound	179	358	1%
Reeder Rd.	K Falls, S. of 140	11/01	S.bound	179		2%
Pine Grove Rd.	K Falls, W. of Schooler Ct.	10/03	E.bound	241	458	3%
Pine Grove Rd.	K Falls, W. of Schooler Ct.	10/03	W.bound	217		2%
Keno Worden Rd.	K Falls, E. Overland	8/02	W.bound	227	458	7%
Keno Worden Rd.	K Falls, E. Overland	8/02	E.bound	231		19%
Homedale Rd.	K Falls, S of Airway Dr.	9/04	N.bound	521	1108	1%
Homedale Rd.	K Falls, S of Airway Dr.	9/04	S.bound	587		2%
Hill Rd.	N. of Merrill	11/02	S.bound	269	579	6%
Hill Rd.	N. of Merrill	11/02	N.bound	310		4%
Crystal Springs Rd.	K Falls, W. of bridge	9/01	E.bound	211	422	1%
Crystal Springs Rd.	K Falls, W. of bridge	9/01	W.bound	211		1%
Chiloquin Ridge Rd.	Chiloquin	8/04	N.bound	74	149	5%
Chiloquin Ridge Rd.	Chiloquin	8/04	S.bound	75		9%
Bly Mt. Cutoff	Bonanza, S. of Teal Dr.	6/03	N.bound	1269	1448	73%
Bly Mt. Cutoff	Bonanza, S. of Teal Dr.	6/03	S.bound	179		8%

*Includes small trucks, large trucks, buses, and tractor trailers

Table source: Traffic counts received from Klamath County, October 14, 2004.

Traffic counts conducted by Klamath County using Nu-Metrics traffic analyzers (HI-STAR units).

Figure 4-1. 2003 Average Daily Traffic (next page)

Table 4-3 and Table 4-4 below provide additional traffic counts on various primary roads within Klamath County and their associated two-way volumes. Table 4-3 shows two-way traffic volumes on the local road system, with an estimate for Vale Road at about 600 vehicles per day; and Crescent Cutoff Road, with 1,500 vehicles per day.

Table 4-3. Additional Klamath County Traffic Counts

Street Name	Count Location	Date	Two-Way Volume (AADT)
Crescent Cutoff Rd	1/2 mile west of OR 58	1992	1,111
Crescent Cutoff Rd	1/2 mile west of US 97	1993	1,510
Silver Lake Rd	N/A	1995	351
Squaw Flat Rd (Bliss Rd)	N/A	1995	189
Vale Rd*	N/A	2004	600

* Estimated

Table source: Traffic counts received from Klamath County, November 30, 2004.

Table 4-4. 2003 AADT on State Highways

Road Name	Count Location	MP	Two-way Volume (AADT)
OR 31	Klamath/Lake County Line	18.28	910
US 97	Crescent Post Office	185.57	6,500
US 97	0.10 mile north of Chiloquin Hwy	248.99	4,100
US 97	0.30 mile north of OR 39/US 97 Bus.	272.31	9,400
US 97	On Klamath River Bridge	278.69	4,900
OR 58	0.01 mile south of Crescent Lake Rd.	69.42	4,000
OR 58	0.45 mile northwest of US 97	86	1,900
OR 138	0.10 mile west of US 97	100.72	1,400
OR 62	West boundary of Crater Lake NP	65.45	530
OR 62	Chiloquin west city limit	4.15	1,000
OR 140	0.01 mile west of Dead Indian Rd.	37.69	2,300
OR 140	0.01 mile west of OR 39	3.27	11,300
OR 140	0.06 mile east of OR 39	5.66	7,000
OR 140	0.01 mile west of Bly Mountain Cutoff	27.4	1,500
OR 66	0.01 mile east of Keno-Worden Rd.	49.92	2,900
OR 66	0.01 mile west of US 97	59.04	12,200
OR 39	0.01 mile south of OR 140	1.79	6,900
OR 39	Merrill east city limit	14.49	4,300
OR 50	Malin west city limit	23.82	1,400
OR 70	Bonanza west city limit	5.94	860

Table source: ODOT 2003 Traffic Volume Tables

Highlighted in Table 4-4 are state facilities with the highest two-way volumes, including sections of US 97, OR 140 and OR 66 within the Klamath Falls UGB.

The 1999 Oregon Highway Plan (OHP) uses a volume-to-capacity ratio (V/C). V/C is the ratio of peak hour traffic volume to the maximum hourly volume of vehicles that a particular roadway section can accommodate (see Table 4-5). When the V/C exceeds 1.0, vehicle demand exceeds the capacity of the facility.

The OHP states that the maximum acceptable V/C ratio for Regional Highways outside the Portland metro area, and not identified as a Special Transportation Area (STA), is 0.80, where non-freeway speed limit is less than 45 mph; and is 0.75 when non-freeway speed limit is greater than 45 mph. For district/local roads, the acceptable ratio is 0.85 where non-freeway speed limit is less than 45 mph, and is 0.80 when non-freeway speed limit is greater than 45 mph.

Table 4-5. Maximum Volume/Capacity Ratios for Peak Hour Operating Conditions

Highway Category	Land Use Type/Speed Limits						
	Inside Urban Growth Boundary					Outside Urban Growth Boundary	
	STAs	MPO	Non-MPO Outside of STAs where non-freeway posted speed <= 35 mph, or Designated UBA	Non-MPO outside of STAs where non-freeway speed limit >45 mph	Non-MPO where non-freeway speed limit >= 45 mph	Unincorporated Communities	Rural Lands
Interstate Highways (NHS)	N/A	0.80	N/A	0.70	0.70	0.70	0.70
Statewide Expressways	N/A	0.80	0.70	0.70	0.70	0.70	0.70
Freight Route on a Statewide Highway	0.85	0.80	0.80	0.75	0.70	0.70	0.70
Statewide (not a Freight Routes)	0.90	0.85	0.85	0.80	0.75	0.75	0.70
Freight Route on a Regional or District Highway	0.90	0.85	0.85	0.80	0.75	0.75	0.70
Expressways on Regional or District Highway	N/A	0.85	N/A	0.80	0.75	0.75	0.70
Regional Highways	0.95	0.85	0.85	0.80	0.75	0.75	0.70
District/Local Interest Roads	0.95	0.90	0.90	0.85	0.80	0.80	0.75

30th Highest Hour Volumes

The traffic counts and the results of traffic volume trends from ODOT's automatic traffic recorders (ATR) were used to estimate the annual 30th highest hour traffic volumes. ODOT traffic analysis procedures call for the annual 30th highest hour (30 HV) traffic volumes to be used to calculate volume-to-capacity ratios for intersections and street segments. Although most counts were taken close to the highest periods of the year and on weekdays, counts were checked for any seasonal variations.

Roadway Segment Operations

The following section presents the results of the operational analysis for selected roadway segments, and is based on the 30th HV. Using 14- and 48- hour directional tube counts, the two-way peak hour volumes were estimated at several roadway sections using the 30th HV adjustment factor. These sections were identified by the County and ODOT for analysis and represent key roadways within the study area.

The results of the operations analysis were compared with the appropriate OHP mobility standards to determine which study area roadway facilities are deficient. Table 4-6 presents the results of roadway section capacity analysis for highways within the county; the results show that all of the study area roadway segments are within OHP mobility standards.

**Table 4-6. Study Area Roadways Maximum V/C Ratios
– Year 2004 30th HV Conditions**

Street Name	Count Location	Two-way Adjusted Volume (AADT)*	Peak Volume**	Two-way Capacity (vph)	OHP Standard	V/C Ratio
Westside RD	S. of Rocky Point RD	536	54	2,000	0.75	0.03
Spring Lake RD	S. of K Falls	1,685	169	2,000	0.75	0.08
Sprague River RD	Chil.-Sprag. Riv.RD. Br. #4	511	50	2,000	0.75	0.03
Short RD	Klamath Falls	2,121	210	2,000	0.75	0.11
Reeder RD	K Falls, S. of 140	368	36	2,000	0.75	0.02
Pine Grove RD	K Falls, W. of Schooler CT	462	46	1,700	0.75	0.03
Keno Worden RD	K Falls, E. Overland	466	46	2,000	0.75	0.02
Homedale RD	K Falls, S of Airway DR	1,108	111	2,000	0.75	0.06
Hill RD	N. of Merrill	590	58	1,700	0.75	0.03
Crystal Springs RD	K Falls, W. of bridge	434	42	1,700	0.75	0.02
Chiloquin Ridge RD	Chiloquin	149	15	1,700	0.75	0.01
Bly Mnt. Cutoff	Bonanza, S. of Teal DR	1,461	145	1,700	0.75	0.09
OR 31	Klamath/Lake County Line	910	92	1,700	0.70	0.05
US 97	Crescent Post Office	6,500	656	2,000	0.70	0.33
US 97	0.10 mile north of Chiloquin Hwy	4,100	414	2,000	0.70	0.21
US 97	0.30 mile north of OR 39/US 97 Bus.	9,400	949	2,000	0.70	0.47
US 97	On Klamath River Bridge	4,900	495	2,000	0.70	0.25
OR 58	0.01 mile south of Crescent Lake Rd.	4,000	404	2,000	0.70	0.20
OR 58	0.45 mile northwest of US 97	1,900	192	2,000	0.70	0.10
OR 138	0.10 mile west of US 97	1,400	141	2,000	0.70	0.07
OR 62	west boundary of Crate Lake NP	530	53	1,700	0.70	0.03
OR 62	Chiloquin west city limit	1,000	101	1,700	0.70	0.06
OR 140	0.01 west of Dead Indian Rd.	2,300	232	2,000	0.70	0.12
OR 140	0.06 mile east of OR 39	7,000	706	2,000	0.70	0.35
OR 140	0.01 mile west of Bly Mountain Cutoff	1,500	151	2,000	0.70	0.08
OR 66	0.01 mile east of Keno-Worden Rd.	2,900	293	1,700	0.70	0.17
OR 66	0.01 mile west of US 97	12,200	1231	1,700	0.70	0.72
OR 39	0.01 mile south of OR 140	6,900	696	2,000	0.70	0.35
OR 39	Merrill east city limit	4,300	434	2,000	0.70	0.22
OR 50	Malin west city limit	1,400	141	1,700	0.70	0.08
OR 70	Bonanza west city limit	860	87	1,700	0.70	0.05

*1.05% per year growth rate

**30th HV estimated at 10% of the AADT

ROADWAY SYSTEM NEEDS

The state highway system within the Klamath County region should be upgraded to improve service for inter-city and urban area travel demand. When coupled with local street improvements and development, these highway enhancements will improve the functional capacity of the overall roadway system.

From the existing conditions inventory, participation from the TAC and ODOT, and interviews with local stakeholders, it became evident that particular facilities in the county have deficiencies of varying degrees; these fall under the category of either design deficiencies or, as in other instances, the need for passing lanes along particular sections.

Transportation System Deficiencies

US 97: Modoc Point – Algoma, Phase 2:

This segment of highway has substandard shoulder widths, substandard cut and fills slopes, and unprotected hazards that exist within the clear zone. The existing guardrail and guardrail end terminals need upgrades to current standards, and the existing concrete barrier does not meet current established road standards. Source: Supplemental STIP.

OR 39: Jct. Klamath Falls/Lakeview Hwy – Lost River:

The pavement in this segment of highway is rated in fair condition; safety problems also exist and four Safety Priority Index System (SPIS) sites are identified in this segment. During peak hour traffic volumes, vehicles coming from eastbound Southside Expressway and turning northbound have difficulty, and this signal currently meets warrants and should be reevaluated. Clearance and width requirements at the aqueduct (M.P. 3.68) are inadequate; widths and clearance at the newly constructed RR over crossing (M.P. 3.47) are also substandard.

Additional system deficiencies have been identified for portions of OR 140, including:

OR 140: Ritter Rd – Deer Run Rd (Bly Mt. Curves):

Substandard shoulders & curves to be addressed by wider roadway and shoulders, and realignment to correct curves & improve sight distance; upgrade and add guardrail. Source: SCORP Hwy 140 corridor analysis (2001).

OR 140 at Homedale Rd (in Klamath Falls UGB): congestion and accidents to be reduced by new construction, including roadway widening, bridge work and grade separation of Homedale. There is also consideration of an interim management strategy to look at a provisional signal solution. (Source: Klamath Falls TSP (1998).)

OR 140: Olene – Swan Lake Road:

The existing curves in this section of highway do not meet current design standards, and would be addressed by realignment of the highway, construction of a deceleration lane for right turns into North Poe Valley Rd and extension of North Poe Valley Rd to match the new state highway alignment.

OR 140 Southside Expressway Extension to Olene:

One of the more significant deficiencies on the state highway system is the Southside Expressway; the County has been very interested in working with ODOT to extend the Expressway from the intersection of OR 140/39 to Olene. The proposed alignment would require a Goal Exception from DLCD, as it goes through exclusive farm use (EFU) land and other agricultural zones.

The Olene extension project would consist of constructing a new 4-mile alignment from the junction at Hwy 39/Hwy 424 to Hwy 140 at Milepost 9.8. As part of this project, one mile of Reeder Road would also be reconstructed, as well as a new bridge over the Lost River canal and a bridge over BOR B Canal.

Short-term deficiencies on US 97 relate to the fact that it is a freight corridor, which is gaining additional usage because of bridge restrictions on I-5. Over time there could also be an increase in distribution centers in the corridor, which potentially would lead to an overall increase in freight traffic, and possibly increase the use of triple-trailer truck configurations; the need for passing lanes in several locations is addressed in Chapter 7 of this TSP.

Associated geometric improvements are also needed on portions of OR 66 through Keno, where substandard curves and excessive crashes are a growing issue. Sections of OR 58, particularly near Odell Lake, are a concern as the road is lined with boat trailers in the summer causing safety issues.

Crash Analysis

Data from ODOT's Crash Analysis and Reporting Unit provides crash summaries by year and collision type for all state highways within Klamath County (excluding the City of Klamath Falls).

As one might expect, the majority of crashes in the county occurred on US 97, The Dalles – California Highway, where a total of 11 crashes occurred between January 1999 and December 2003. Most of these crashes were not serious and did not cause bodily injury; however, one of these crashes on US 97 was fatal.

Other notable locations that indicate system deficiencies include OR 70 at East Langell Valley Road near the community of Bonanza, where two of the 16 reported crashes occurred. The remaining three reported crashes took place on Chiloquin Highway 422; of these three, two took place in virtually the same location: Chocktoot Street and Lalakes Street; one fatal accident occurred on Highway 422 at Chiloquin Highway and Chocktoot Street.

Safety Priority Index System

The Safety Priority Index System (SPIS) is a method developed by ODOT for identifying hazardous locations on state highways. The SPIS score is based on three years of crash data and considers the following factors: crash frequency, crash rate, and crash severity. ODOT bases its SPIS on 0.10-mile segments to account for variances in how crash locations are reported. 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.

For the year 2003, which includes crash data for 2000, 2001, and 2002, the SPIS scores at or above 45.07 are in the top 10 percent.

Each year, a list of the top 10 percent of SPIS sites is reviewed by the five Region Traffic Engineers. These sites are evaluated and investigated for safety problems; when a problem is identified, a cost/benefit analysis is performed and appropriate projects are initiated, often with funding from the Hazard Elimination Program (HEP). Regions report the results of their site evaluations to the State Traffic Engineer.

Specific SPIS sites as they relate to Klamath County are as follows:

- East Side Bypass (MP -2.24 at OR 39 MP 3.22)
OR 39 (MP 3.28 at Summers Ln)
- Esplanade/Hwy 50 spur @ (MP 4.97)
- Shady Pine Rd @ US 97 (MP 268.84)
- Railroad crossing west of Summers Ln (OR 140 MP 3.87)
- OR 39 (MP 17.00)
- US 97 (MP 251.00) beginning and ending of lanes
- US 97 (MP 228.70 and 228.76)
- Midland Hwy/Washburn Way/Laverne Ave (MP 1.46)
- Hwy 424 (OR140) access/39 intersection
- OR 39 (MP 32.00)
- MOLLIES (US 97 MP 272.4)
- End of Green Springs Hwy 021 (OR 66 MP 59.05)
- Near Varney Creek Rd (OR 140 MP 43.00)

FREIGHT INFRASTRUCTURE

Truck Routes

Truck traffic in and around the county is a growing concern, due to the safety issues that are present in either narrow roadway sections, or in areas where sight-distance is problematic because of topographic features. Table 4-1 summarizes the county roadways that have greater than 10 percent truck traffic, including the following:

- Westside Road, with 20 percent truck traffic south of Rocky Point Road, in both the northbound and southbound directions;
- 12 percent on Sprague River Road near Sprague River Road Bridge #4;
- 19 percent in the eastbound direction of Keno Worden Road, east of Overland; and
- 73 percent in both directions on Bly Mountain Cutoff in Bonanza, south of Teal Dr.

The map in Figure 3-2 in the previous chapter highlights the remainder of freight routes in the county and their associated percentage of truck traffic. Some percentages as shown, such as those for Highway 97 and other major, regional routes are to be expected.

US Highway 97, Oregon Highway 140, Oregon Highway 39 and Oregon Highway 58 are the designated state freight routes in Klamath County. Truck traffic typically accounts for 25 to 40 percent of all traffic on these routes; because US 97 has fewer mountain passes and a reduced amount of traffic than I-5, it is increasingly being used as an alternative route. As the advantages of US 97 over I-5 are discovered more and more (no passes, fewer winter delays, largely flat surface), additional passing lanes may be needed. A crucial deficiency on US 97 is its location along Upper Klamath Lake and the impracticality of widening the current two-lane configuration to four-lanes. The roadway is positioned in a difficult spot, whereby if it is widened to the west it will have to be on structure above the water; if it is widened to the east it will impact archeologically sensitive areas.

Truck traffic on Oregon Highways 39 and 140 typically comprises 10 to 25 percent of all traffic. On OR 140 beginning at the Klamath County Boat Launch to Running Y Ranch next to Klamath Lake, wide loads are currently prohibited in a four-mile section, forcing trucks to detour to the north. Wide loads are also prohibited on Bly Mountain between Ritter Road and Sprague River Road on OR 140 east of Klamath Falls; this section of highway is scheduled for improvements in 2011.

OR Highway 138 is also frequently used by trucks. The trucks traffic typical comprises 10 to 25 percent of all traffic.

One of the primary deficiencies in many locations, which relates to freight mobility, is the absence of passing lanes or segments of various roadways that are too narrow and cause safety issues.

Truck Freight

The State Highway freight system is intended to facilitate interstate, intrastate, and regional truck movements. This freight system, comprised of Interstate Highways and certain Statewide Highways on the National Highway System, includes routes that carry a significant tonnage of freight by truck and serve as the primary interstate and intrastate highway freight connection to ports, intermodal terminals and urban areas. US 97 and Oregon Highway 58 are the designated State Freight Routes in Klamath County. Truck traffic is increasing on US 97 in particular due to fuel savings to trucking. In addition, US 97 does have a distinct advantage over Interstate 5 during the winter months, due to the absence of mountain passes and the lesser snowfall amount on the east side of the Cascades vs. the Siskiyou mountains of southern Oregon.

Three of the largest employers in the county with heavy truck shipping/receiving demands are all located in Klamath Falls. These are:

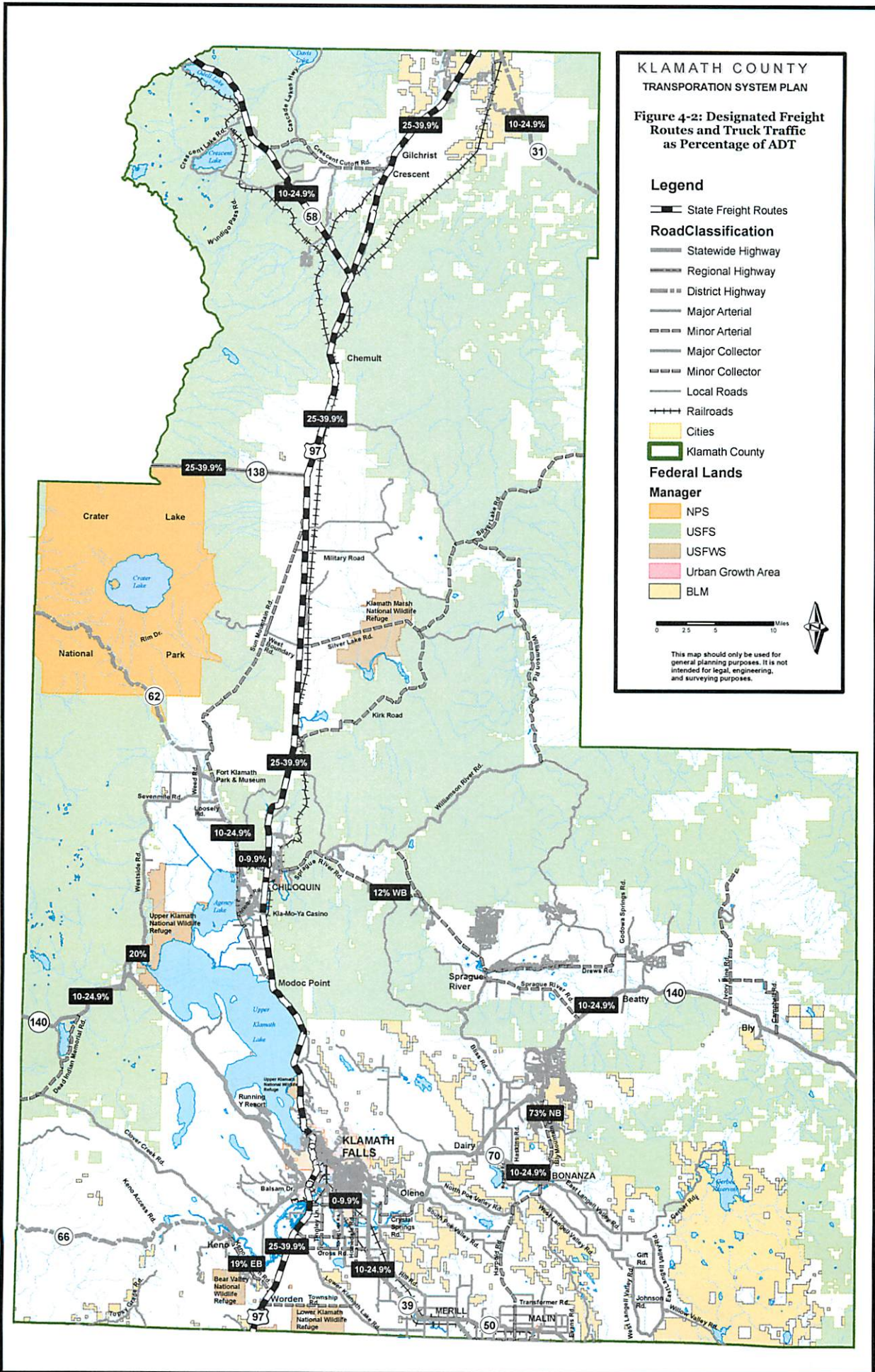
- Columbia Plywood—Hardwood
- Kingsley Field / ORANG (Oregon Air National Guard)
- Jeld-Wen, Inc. (Specialty windows and doorframes)

Figure 4-2. Designated Freight Routes and Truck Traffic as Percentage of ADT (next page)

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**KLAMATH COUNTY
TRANSPORTATION SYSTEM PLAN**

Figure 4-2: Designated Freight Routes and Truck Traffic as Percentage of ADT



Passing Lanes and Left-Turn Refuges

On many sections of the county road network, passing lanes and/or left-turn refuges are needed in an assortment of narrow, congested areas. This is particularly true for portions of US 97, which may experience additional usage as a freight corridor in the short term, due to various bridge work along I-5; US 97 is also being used more to bypass sections of I-5 in southern Oregon. These locations are summarized below:

- US 97: Gilchrist Passing Lane
- US 97: Extend Existing Passing Lanes between M.P. 230.0 and M.P. 181
- US 97: North Wocus & South Wocus
- OR 140: M.P. 17 to M.P. 44
- OR 39: M.P. 9.0 to M.P. 11.0

A high-priority location is the junction of OR 39 and OR 140, where congestion and delays will be addressed by a mix of traffic signal improvements, access improvements or a grade-separated intersection. This project is particularly important considering safety issues and the fact that it is a top-ten SPIS site with a total of 33 crashes from 2001-2003 (SPIS value = 74.57). The connection from the Southside By-pass to Olene is another alternative solution, although a costly one.

Freight Rail Network

The Klamath Basin is served by the Union Pacific (UP) and Burlington Northern Railroads (BN). As a result of its purchase of the Southern Pacific (SP), the UP acquired track-way rights over the BNSF between Bend and Chemult. In return, BNSF acquired the former UP line between Bieber and Keddie, California. This has resulted in both the UP and the BNSF having parallel main lines between the Pacific Northwest and California. The UP also owns the Modoc line, which runs southeasterly from Klamath Falls to a connection with its California-to-Ogden mainline at Flanigan, Nevada. The Oregon California and Eastern Railroad abandoned its right-of-way, which reverted to the state and is used as a bicycle/pedestrian connection.

Deficiencies in the freight rail network are found in areas north of Klamath Falls, where UP and BN both run on the Cascade Line track. Just south of Highway 140, the UP track has a wye that connects to the Modoc Line, which then aligns to the west of the rail yard and brackets the airport. This requires that an entry road must cross a portion of the trackway, causing potential at-grade conflicts.

General freight rail issues:

- General lack of railcars to meet local needs.
- At-grade crossing on South Side Expressway near Summers Lane; trains can cause significant back-ups on the Expressway.
- Two problem intersections along Hill Road – where there are two at-grade RR crossings within 1/4 mile of each other.

PUBLIC TRANSPORTATION

Basin Transit Service (BTS) is the public transit agency for the Greater Klamath Falls Urban Area. The District covers over 30 square miles; BTS operates six fixed-routes in the Klamath Falls basin serving the city and the surrounding suburbs (Figure 4-3 on the following pages shows BTS routes). Transfers are made at the Downtown and Fairgrounds Transit Centers; in addition, BTS offers Dial-a-Ride service to customers that are unable to use regular fixed-route buses. The District is essentially the same size as the Klamath Falls UGB and serves a population of roughly 45,000.

Dial-A-Ride vans are used to transport customers that want to go beyond the regular fixed routes into other locations in the District known as —~~Extended~~ “Service Areas,” which include Henley, Wocus, the Airport, Columbia Plywood, Aqua Glass, International Paper, and Green Acres. A unique service provided in Klamath County, The Linkville Trolley, is supported through the cooperative efforts of the City of Klamath Falls, Klamath County and BTS. The service is provided during the summer months to support the tourism industry, with round-trip service from the museum.

Basin Transit Service does not provide regular service outside of Klamath Falls; however, there is regular shuttle bus service to other destinations such as Medford, Ashland, and Kla-Mo-Ya Casino; and Sage Stage, operated by the Modoc Transportation Agency, which provides public transportation with connections to Redding, Susanville (CA), and Klamath Falls.

Public transportation in Klamath County is perceived by some to be lacking, and in particular the Klamath Tribes have indicated that more comprehensive transit service in the county is desirable. At this time, there are no expansion plans for Basin Transit’s regular service.

An opportunity for expansion relates to providing transit on Hwy 140 West, to the Ridge Water and Southview subdivisions areas – these areas are expected to grow over the next several years.

Figure 4-3. Basin Transit Service Route Map



BICYCLE AND PEDESTRIAN NETWORK

Pedestrian and bicycle modes serve a variety of needs in Klamath County, including relatively short trips to major attractors, recreational trips and circulation, and access to public transit. Bicycle travel is a viable commuting option, particularly where supported by facilities such as bicycle lanes and/or paved shoulders, secure bicycle parking and bus-mounted bicycle racks. Walking is also a viable choice for commute trips where mixed-use development occurs and when people live near their place of work.

One of the more distinct bike features in the county is the separated bikeway in Gilchrist-Crescent. Plus, there is a seven-mile separated multi-use path along the A Canal which parallels the Crater Lake Parkway; the A Canal path links to the Oregon, California, and Eastern railroad (OC&E) Woods Line State Trail, which starts at the city limits and is paved for 8 miles through the south suburban area and farm land out to Olene, where the Lost River cuts through into the mountains on its way to its terminus at Tulelake and the nearby wildlife refuges.

Sidewalks along the local street system outside of the Klamath UGB are all within official city boundaries and are not the jurisdiction of the county. Due to the rural nature of the county and the large distances between trip generators, there is relatively little demand for pedestrian facilities outside of the cities.

Bicycle advocacy issues are led by the Klamath County Bike and Pedestrian Trails Advisory Committee. This group coordinates with the County, ODOT and the City of Klamath Falls on bicycle and pedestrian infrastructure planning and other related issues. In addition, there is an active bicycle club, the Klamath Freewheelers, and a local Rails-to-Trails chapter.

ODOT has proposed several projects for the county that would add new/upgraded sidewalks in various communities on state facilities. This work included modernizing sidewalks and curbs in the existing curb area and an ADA crossing.

Pedestrian deficiencies exist on US 97 in Crescent-Gilchrist; OR Highway 62 in the Community of Fort Klamath; OR Highway 422 in the city of Chiloquin; OR Highway 70 in the City of Bonanza; OR Highway 66 in Keno; and OR Highway 39 in Merrill. These consist largely of sidewalk/shoulder needs for bicycle and pedestrian access.

Figure 4-4. County Deficiencies (next page)

Klamath County Transportation System Plan

Figure 4-4: General Deficiencies and Needs

Legend

Road Classification Functional Classification

- Statewide Highway
- - - Regional Highway
- · - · - District Highway
- Major Arterial
- · - · - Minor Arterial
- Major Collector
- · - · - Minor Collector
- Local Roads
- Klamath County
- + + + + Railroads
- Cities
- Urban Growth Area

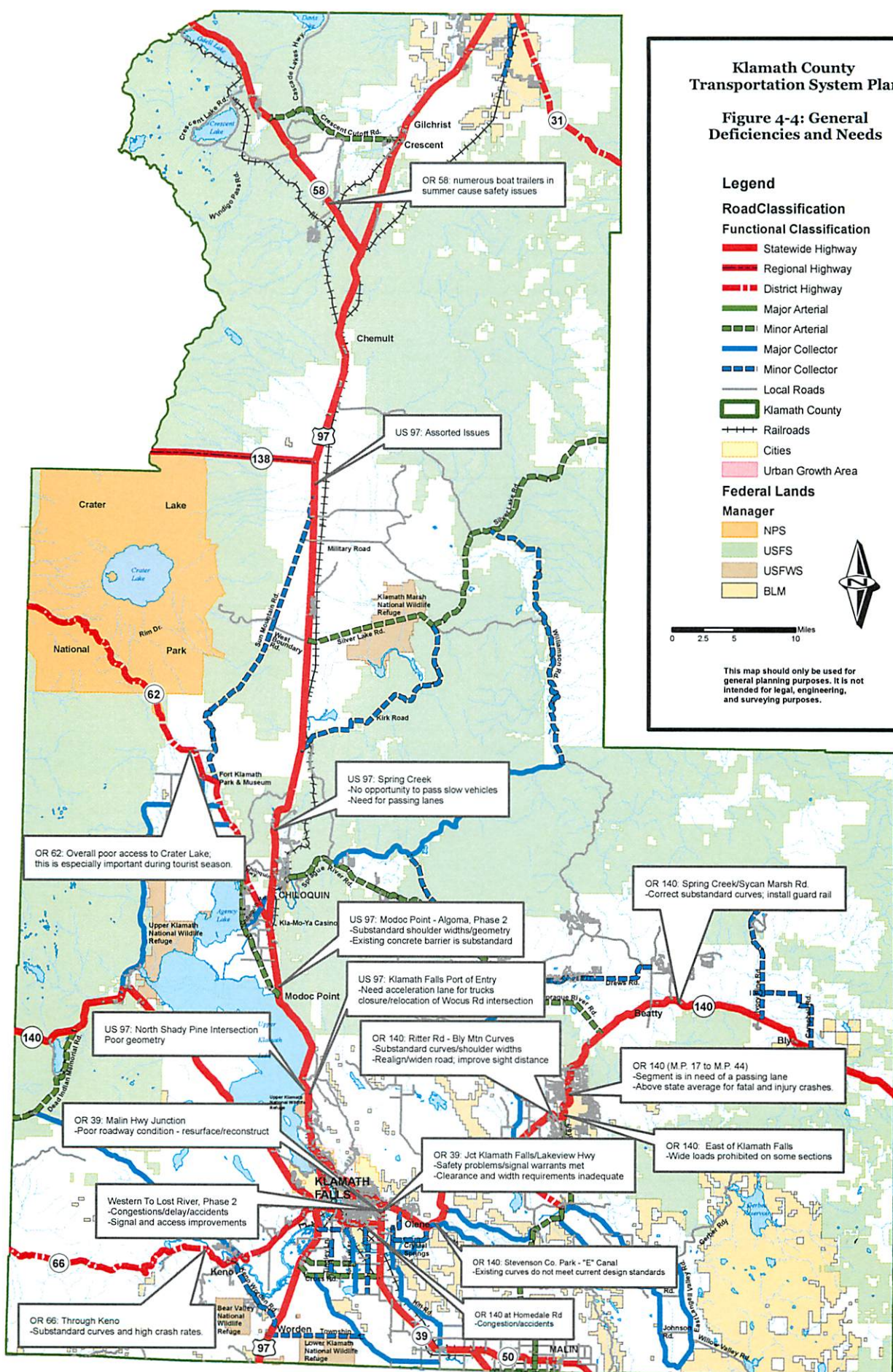
Federal Lands

Manager

- NPS
- USFS
- USFWS
- BLM



This map should only be used for general planning purposes. It is not intended for legal, engineering, and surveying purposes.



CHAPTER 5 FUTURE TRANSPORTATION CONDITIONS

Klamath County’s future transportation facility conditions presented in this chapter are based on several factors: historic and projected population change, historic and projected economic change, and historic and projected traffic growth.

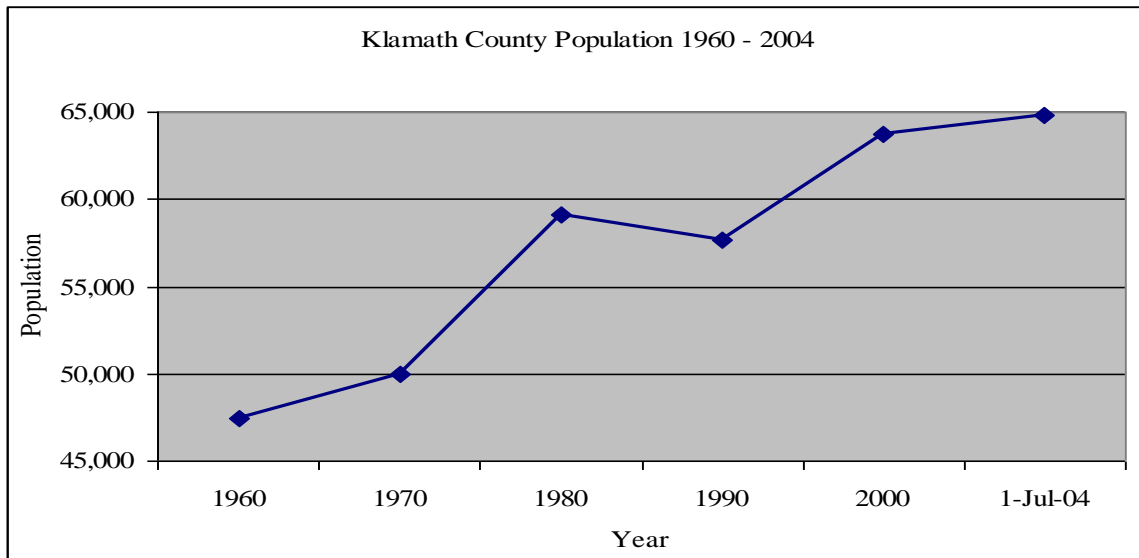
POPULATION

Land use and population change are key factors in projecting the future condition of the existing transportation infrastructure. As Table 5-1 illustrates, Klamath County has experienced relatively minor population shifts over the years. Table 5-1, below, shows the county’s populations from 1960 to 2004, as well as the percent change between 1990 and 2000. As these tables show, after declining by about 2,000 from 1980 to 1990, Klamath County’s population now appears to be on a gradual rise and holding steady.

Table 5-1. Klamath County Population, 1960-2000

	1960	1970	1980	1990	2000	July 1, 2004 ¹	Percent Change 1990-2000
County	47,475		59,117	57,702	63,775	64,800	10.5%

Table 5-2. Klamath County Population



¹ Population Research Center, Portland State University.

As Figure 5-1 below shows, the largest age group in Klamath County was 45-64 year olds (2000 Census). However, the three age groups that generally contain the most transportation-disadvantaged individuals (age 65 and over, under 5 years, and 5-19 years) together represented 64 percent of the County population.

Figure 5-1. Distribution of Population - 2000

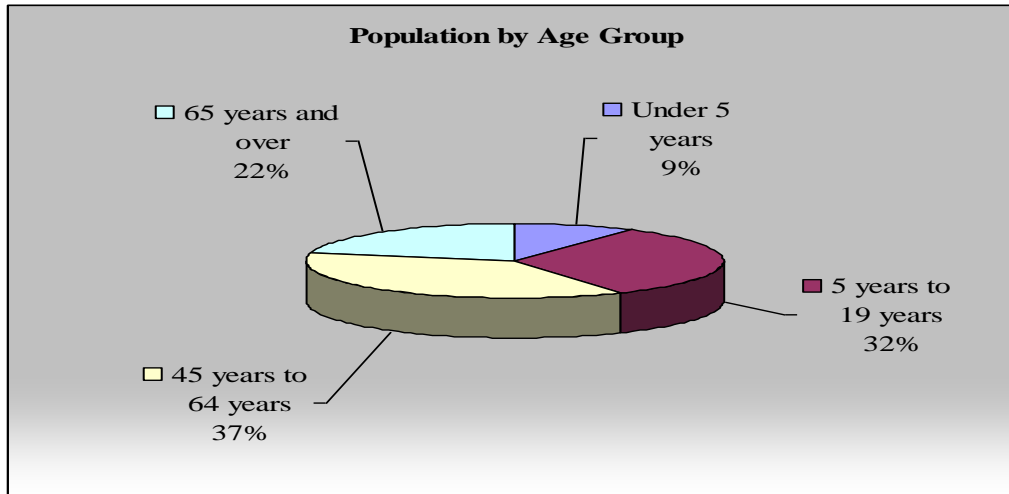


Table 5-3 presents population forecasts by age in Klamath County; workforce-aged people will increase by 1,591 from 2005 to 2025. More notable, however, is that the number of people in Klamath County 65 or older will increase by almost 5,000 from 2005 to 2025.

Table 5-3. Population Forecasts by Age

Year 2005	Age Group		
Area	0-14	15-64	65 + Over
Oregon Total	712,727	2,451,155	454,318
Klamath County	13,217	42,387	15,476
Year 2025	Age Group		
Area	0-14	15-64	65 + Over
Oregon Total	854,369	2,917,868	853,778
Klamath County	13,995	43,978	14,658

The State of Oregon’s Office of Economic Analysis develops growth projections for all of the counties; Table 5-4 identifies the 2025 population projection for Klamath County. Intermediate year projections are based on the 1995-2025 average annual growth rate of 0.51 percent (compounded). As this table shows, Klamath County is forecast to grow moderately over the next 20 years to reach a projected population of approximately 72,631.

Land use and population change plays an important role in projecting future traffic volumes. Historic trends and their relationship to historic traffic growth on state highways are the basis of those projections. Population forecasts were developed to determine future transportation needs. The amount of growth, and where it occurs, will affect traffic and transportation facilities in the study area.

**Table 5-4. Klamath County Office of Economic Analysis
Forecast, 2000-2025**

Klamath Co.	Population						Average Annual Growth Rate (compounded)
	2000	2005 ²	2010	2015	2020	2025	
Co. Total	63,775	65,330	67,423	69,432	71,440	73,449	0.59%

TRAFFIC VOLUMES

Projected traffic volumes are based on the population factors described above as well as the historic traffic volumes described below. Traffic volumes on Klamath County highways have historically grown very slowly; this trend is expected to continue. The general forecast for continued gradual growth is also reflected by the population projection for Klamath County (Table 5-3). While traffic volume data is not available for local roads, it is likely that traffic volumes on local roads will also follow a similar trend.

Future Traffic Conditions (2025)

This section summarizes the methodology used to determine future travel demand and shows the results of the operational analyses of future conditions for the roadways in the county. The forecasted, no-build, future conditions analyses assume that the existing roadway geometry, traffic controls and lane configurations all remain in place.

² http://www.oea.das.state.or.us/DAS/OEA/docs/demographic/pop_components.xls

The future traffic volume forecasts were based on the population and employment forecasts described by Oregon’s office of Economic Analysis. This technical memorandum was distributed and discussed by the Technical Advisory Committee (TAC) on January 27, 2005.

Seasonal Variations

Time of year may have effects on the amount of traffic on a roadway system; harvest, closure due to snow or flooding, and tourism are all examples of seasonal events. ODOT has permanent Automatic Traffic Recorders (ATR) on US 97 at Modoc Point (Milepost 254.3) and at Midland (Mile point 289.4). It is likely that seasonal impacts are similar to other highways in Klamath County; for example, areas on US Highway 58 are lined with boat trailers in the summer months, causing safety concerns and sight-distance issues. However, overall seasonal variations in the county are on a relatively small-scale level.

Level of Service (LOS) Impacts

As discussed previously, gradual increases in daily traffic are expected through the year 2025 on US 97 and the other major roadways in the county. The V/C ratio on those sections of roadway in the county is expected to remain satisfactory (V/C < 1) through the next 20 years; all other roadways in the study area are expected to maintain acceptable V/C throughout the 20-year horizon as well, as seen in Table 5-5 below.

Table 5-5. Average Annual Daily Traffic (2025)

Road	Count Location	Two-Way Adjusted Volume (AADT)*	Peak Volume**	Existing V/C Ratio	2025 Volumes (AADT)	Peak Volume** 2025	2025 V/C Ratio
Westside RD	S of Rocky Point RD	536	54	0.03	590	59	0.03
Spring Lake RD	S of K Falls	1,685	169	0.08	1857	186	0.09
Sprague River RD	Chil.-Sprag. Riv Rd Br #4	511	50	0.03	563	56	0.03
Short RD	Klamath Falls	2,121	210	0.11	2338	234	0.12
Reeder RD	K Falls, S of 140	368	36	0.02	406	41	0.02
Pine Grove RD	K Falls, W of Schooler CT	462	46	0.03	509	51	0.03
Keno Worden RD	K Falls, E Overland	466	46	0.02	514	51	0.03
Homedale RD	K Falls, S of Airway DR	1,108	111	0.06	1221	122	0.06
Hill RD	N of Merrill	590	58	0.03	650	65	0.04
Crystal Springs RD	K Falls, W of bridge	434	42	0.02	478	48	0.03

Chiloquin Ridge RD	Chiloquin	149	15	0.01	164	16	0.01
Bly Mnt. Cutoff	Bonanza, S of Teal DR	1,461	145	0.09	1610	161	0.09
OR 31	Klamath/Lake County Line	910	92	0.05	1003	100	0.06
US 97	Crescent Post Office	6,500	656	0.33	7163	716	0.36
US 97	0.10 mile north of Chiloquin Hwy	4,100	414	0.21	4518	452	0.23
US 97	0.30 mile north of OR 39/US 97 Bus.	9,400	949	0.47	10359	1036	0.52
US 97	On Klamath River Bridge	4,900	495	0.25	5400	540	0.27
OR 58	0.01 mile south of Crescent Lake Rd	4,000	404	0.20	4408	441	0.22
OR 58	0.45 mile northwest of US 97	1,900	192	0.10	2094	209	0.10
OR 138	0.10 mile west of US 97	1,400	141	0.07	1543	154	0.08
OR 62	west boundary of Crate Lake NP	530	53	0.03	584	58	0.03
OR 62	Chiloquin west city limit	1,000	101	0.06	1102	110	0.06
OR 140	0.01 west of Dead Indian Rd	2,300	232	0.12	2535	253	0.13
OR 140	0.06 mile east of OR 39	7,000	706	0.35	7714	771	0.39
OR 140	0.01 mile west of Bly Mountain Cutoff	1,500	151	0.08	1653	165	0.08
OR 66	0.01 mile east of Keno-Worden Rd	2,900	293	0.17	3196	320	0.19
OR 66	0.01 mile west of US 97	12,200	1231	0.72	13444	1344	0.79
OR 39	0.01 mile south of OR 140	6,900	696	0.35	7604	760	0.38
OR 39	Merrill east city limit	4,300	434	0.22	4739	474	0.24
OR 50	Malin west city limit	1,400	141	0.08	1543	154	0.09
OR 70	Bonanza west city limit	860	87	0.05	948	95	0.06

*0.51% per year growth rate

**30th HV estimated at 10% of the AADT

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CHAPTER 6 DEVELOPMENT OF TSP ALTERNATIVES

The modal plans that appear in subsequent chapters of this TSP identify several road, interchange, bicycle, pedestrian, transit, and freight projects to meet existing and future multi-modal needs. These plans and projects were developed through an iterative process and were informed by the following sources:

- A review of the system deficiencies identified during the plan process;
- Recommendations from the TAC, which were solicited during a series of meetings;
- Input from the residents of Klamath County, solicited during a public open house;
- Mitigation required by various policies and regulations;
- Professional judgment by City and ODOT staff and the project consultants.

EVALUATION PROCESS

Recognizing that the full set of identified needs and/or desired projects would likely outstrip available funding or conflict with other planned projects, it was important to determine which potential projects or groups of projects should be proposed for adoption and potential funding opportunities, and when the projects should be constructed. Several fundamental considerations were taken into account in making these determinations and in refining the improvements:

- How critical is the need for the project(s)?
- How urgent is that need?
- Is the County meeting its benchmark commitments (e.g., increasing bicycle and pedestrian facilities on arterial and collector streets)?
- Are the projects supportive of the County's land use and other Comprehensive Plan goals?
- Does the project(s) support the County's policies for transportation, and if so, how well?
- Does the range of projects include a reasonable mix from all travel modes?

To address these broader questions, the goals and objectives presented earlier in this TSP were used to establish which projects would be carried forward. These goals were applied to each potential (i.e., draft) improvement project, typically requiring subjective assessments. As **Error! Reference source not found.** shows, the projects chosen were consistent with the stated goal and could improve circulation by providing alternative routes, and on projects that directly improve mobility (e.g., mitigate traffic congestion at specific locations). The plans and projects that are described in the following chapters were deemed to be most consistent with these overall priorities within the TSP goals and objectives. Not all projects are listed in Table 6-1, but examples of projects geared towards each goal are provided.

Table 6-1. TSP Goals and Potential Transportation Improvement Projects (Examples)

<p><i>Goal 1: Provide a transportation system for the Klamath County planning area that is safe, efficient, economical, and accessible.</i></p> <p>Project #140-1: Fish Lake Passing Lanes</p>
<p><i>Goal 2: Design and construct transportation facilities that enhance Klamath County's livability while meeting federal, state, regional, and local requirements.</i></p> <p>Project #140-5: Southside Express Way Olene Extension</p>
<p><i>Goal 3: Maximize the efficiency of Klamath County's transportation system through effective land use planning.</i></p> <p>Project #3: Fort Klamath Community Sidewalks</p>
<p><i>Goal 4: Provide a well planned, comprehensive road system that serves the needs of Klamath County.</i></p> <p>Project# 97-4: Klamath Falls Port of Entry</p>
<p><i>Goal 5: Facilitate the development of a multi-modal transportation system in Klamath County to provide transportation options for Klamath County residents and visitors within the framework of context sensitive design.</i></p> <p>Project: Transit should be considered for OR 140 to Pine Grove</p>
<p><i>Goal 6: Facilitate the provision of a multi-modal transport system for the efficient, safe, and competitive movement of goods and services to, from, and within Klamath County.</i></p> <p>Project# 140-4: Realign and widen 4-mile section from Klamath County Boat Marina to Running Y Ranch to avoid out of direction travel.</p>
<p><i>Goal 7: Implement the transportation plan by working cooperatively with federal, state, regional, and local governments, the private sector, and residents. Create a stable, flexible financial system for funding transportation improvements.</i></p> <p>Project# 140-5: South Side Expressway Olene Extension</p>

CHAPTER 7 MODAL PLANS

The purpose of this chapter is to describe the individual elements of the TSP for Klamath County; the TSP provides operational plans for each modal element within the county. Projects are summarized on corresponding maps at the end of this chapter; components of this TSP include roadway standards, access management recommendations, transportation demand management measures, modal plans, and an implementation program.

ROADWAY ELEMENT

The Klamath County TSP provides the county with an opportunity to review and revise roadway design standards to more closely fit with the functional roadway classification, and the goals and objectives of this TSP.

In appreciation of funding cycles and capital costs, Klamath County supports ODOT policy to develop two-lane State Highways through a four-step approach. The goal of this approach is to improve an existing two-lane rural highway, culminating in a four-lane facility with grade-separated interchanges and frontage roads. The four phases of development are implemented incrementally as the traffic volumes increase and the associated level of service decreases. Beginning with a standard two-lane rural State Highway, the improvement phases are as follows:

1. Addition of passing or climbing lanes every 3 – 5 miles
2. Continuous four-lane section
3. Adding grade-separated interchanges and overpasses/raised medians
4. Full access control with median barriers, frontage roads. Depending on the intersection, some elements of Phases 3 and 4 can be intermixed.

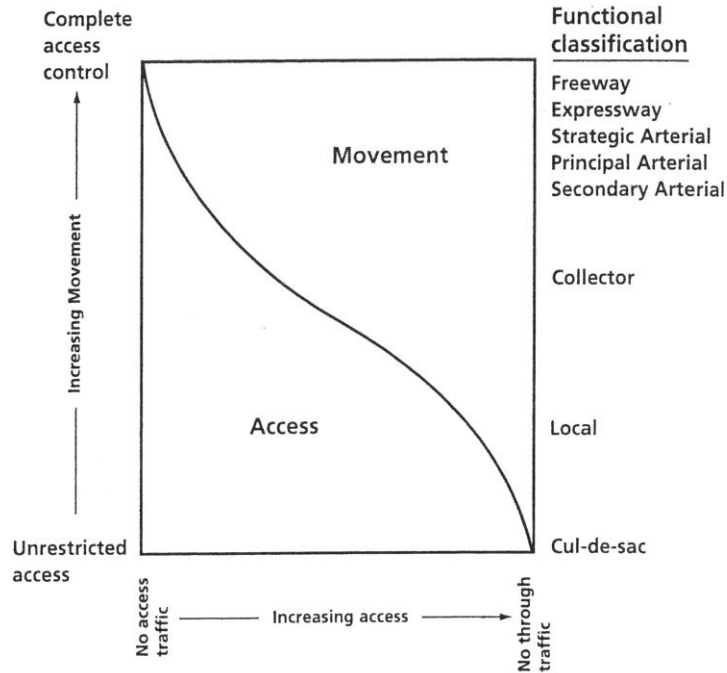
Considering the condition of Klamath County roadways and their rural nature, this four-phased approach is highly applicable. Available resources currently restrict efforts to Phase 1 for the near term.

Roadway Functional Class

Roadways have two functions, to provide mobility and to provide access. From a design perspective, these functions can be incompatible, since high or continuous speeds are desirable for mobility, while lower speeds are more desirable for access to homes and businesses. Furthermore, the number of accesses can have an inverse relationship to speed and safety, as more driveways (accesses) mean lower speeds and potentially more crashes.

Figure 7-1 below illustrates this tradeoff. Generally, arterials emphasize a high level of mobility for through movement; local facilities emphasize the land access function, and collectors offer a balance of both of these functions.

Figure 7-1. Relationship of Mobility and Access



Source: NCHPR Report 348, "Access Management Policies and Guidelines for Activity Centers." Metro Transportation Group. Transportation Research Board, Washington, DC 1993.

The functional class of a roadway relates to the intended purpose of that roadway. Whether the road serves to connect destinations and handle large volumes of high-speed traffic; or if it provides access to adjacent properties, the intent of the roadway will drive its physical characteristics (i.e., number of lanes, alignment, grade, speeds, anticipated volumes, etc.). For example, the vehicular traffic on a roadway can be directly related to specific land uses, and the fact that the road carries a lot or a little traffic does not determine its function. The traffic volume, design (including access standards) and size of the roadway are outcomes of function, but do not define function. Function can best be defined by connectivity; without connectivity, neither mobility nor access can be achieved. Roadways that provide the greatest reach of connectivity are the highest level facilities.

The Functional Classification for Klamath County is shown in Figure 7-2. A description of each functional classification follows. Generally, the geographic scope of the following descriptions goes from a physically large area for arterials, to moderate areas for collectors, to neighborhoods for local roads.

Rural Principal Arterials:

(State Highways) serve as the primary gateways in and out of the Klamath County area. These highways provide a connection between communities, towns, and cities. These highways are critical to the county because they generally serve the highest traffic volumes and longest trips between major attractors. Access control is critical on these facilities to ensure that they operate safely and efficiently.

Rural Minor Arterial System:

The minor arterial road system, in conjunction with the rural principal arterial system, forms a network with the following service characteristics:

1. Linkage of cities, larger towns, and other traffic generators (such as major resort areas) that are capable of attracting travel over similarly long distances.
2. Integrated interstate and inter-county service.
3. Internal spacing consistent with population density, so that all developed areas of the state are within reasonable distances of arterial highways.
4. Corridor movements consistent with items (1) through (3) with trip lengths and travel densities greater than those predominantly served by rural collector or local systems.

Minor arterials therefore constitute routes, the design of which should be expected to provide for relatively high travel speeds and minimum interference to through movement.

Rural Collector System:

The rural collector routes generally serve travel of primarily intra-county rather than statewide importance and constitute those routes on which (regardless of traffic volume) predominant travel distances are shorter than on arterial routes. Consequently, more moderate speeds may be typical. To define rural collectors more clearly, this system is sub-classified according to the following criteria:

- Major Collector Roads. These routes (1) serve county seats not on arterial routes, larger towns not directly served by the higher systems, and other traffic generators of equivalent intra-county importance, such as consolidated schools, shipping points, county parks, and important mining and agricultural areas; (2) link these places with nearby larger towns or cities, or with routes of higher classifications; and (3) serve the more important intra-county travel corridors.

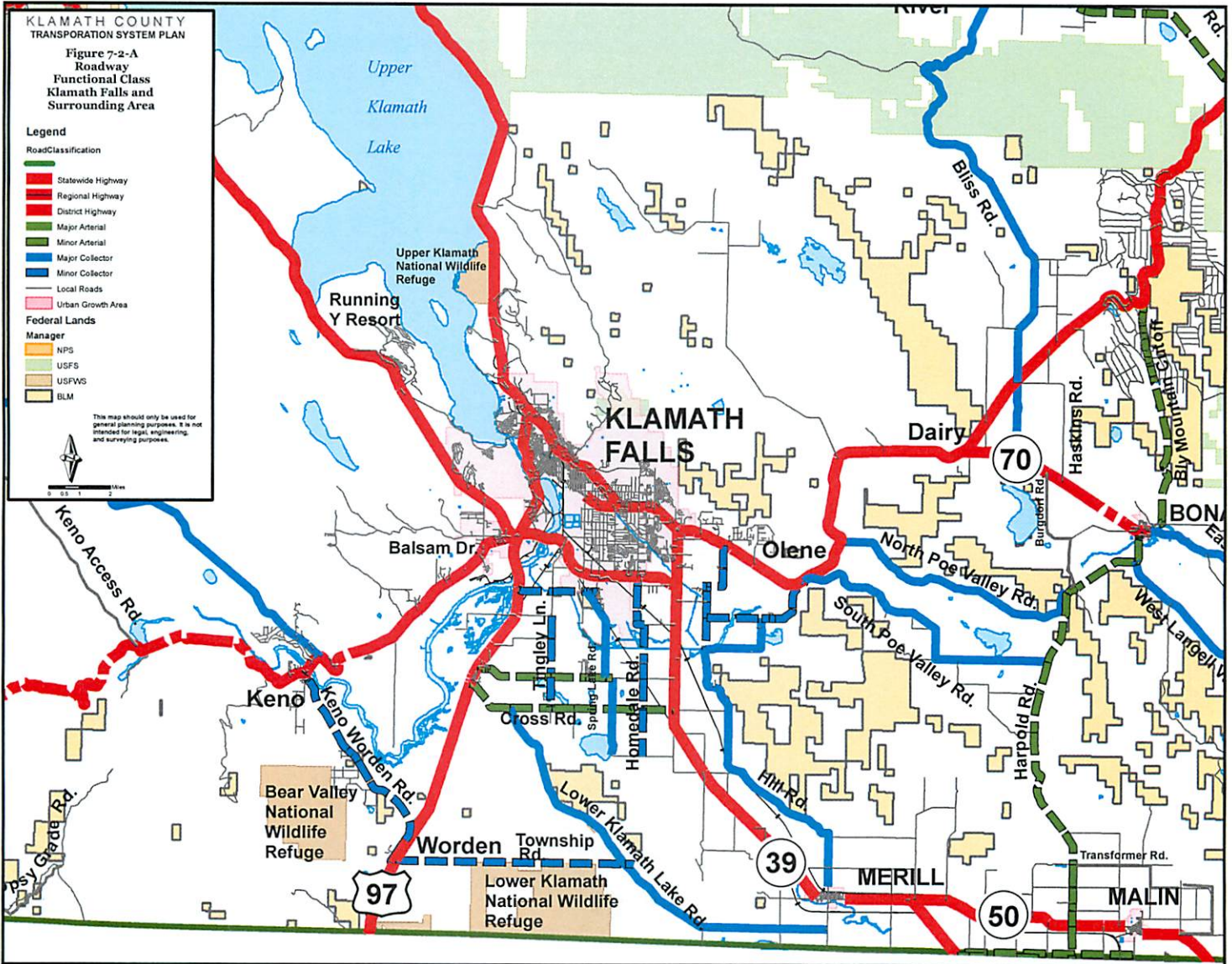
- Minor Collector Roads. These routes should (1) be spaced at intervals consistent with population density to accumulate traffic from local roads and bring all developed areas within reasonable distances of collector roads; (2) provide service to the remaining smaller communities; and (3) link the locally important traffic generators with their rural hinterland.

Rural Local Road System:

The rural local road system, in comparison to collectors and arterial systems, primarily provides access to land adjacent to the collector network and serves travel over relatively short distances. The local road system constitutes all rural roads not classified as principal arterials, minor arterials, or collector roads.

Figure 7-2. Roadway Functional Classification (next page)

Figure 7-2A. Roadway Functional Class, Klamath Falls & Surrounding Area
(Page 7-6)



**KLAMATH COUNTY
TRANSPORTATION SYSTEM PLAN**

**Figure 7-2
Roadway
Functional Class**

Legend

Road Classification

-  Statewide Highway
-  Regional Highway
-  District Highway
-  Major Arterial
-  Minor Arterial
-  Major Collector
-  Minor Collector
-  Local Roads
-  Urban Growth Area

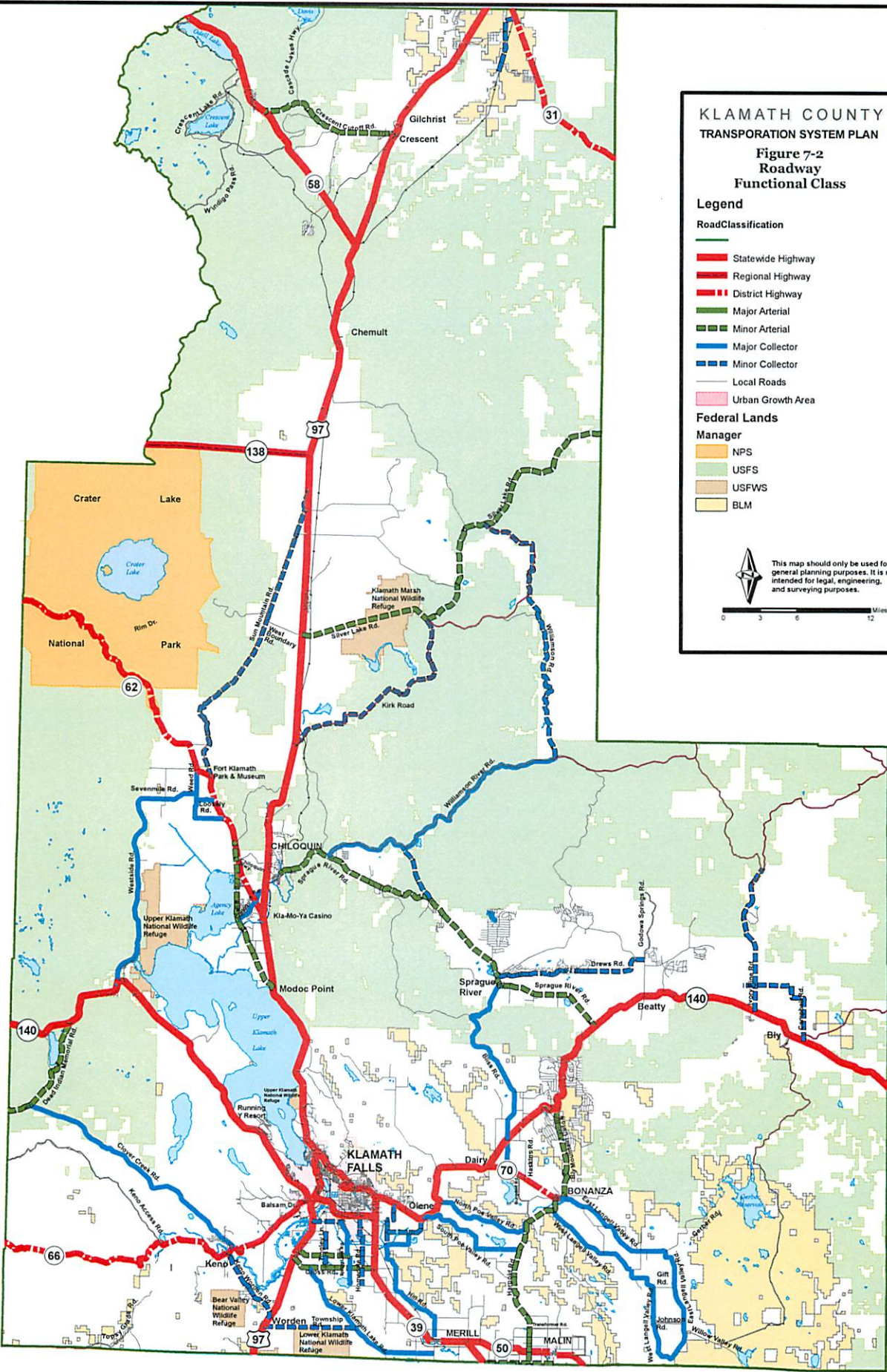
Federal Lands

Manager

-  NPS
-  USFS
-  USFWS
-  BLM



This map should only be used for general planning purposes. It is not intended for legal, engineering, and surveying purposes.



ROADWAY STANDARDS

State Highway Standards:

Roadway design standards for state highways are provided in the Oregon Highway Design Manual. These standards should be applied to all State Highway improvements.

Klamath County Road Standards:

Currently, Klamath County has a set of roadway design standards for the County which can be found in the *Klamath County Department of Public Works Standard Drawings, which is Appendix "A" to the Land Development Code*.

Suggested design standards on the Klamath County roadway system have been developed to maximize the safety and efficiency of the entire transportation system. The recommended roadway standards for arterials, collectors and local streets are summarized in Table 7-1. Because the final design of the roadway can vary from segment to segment due to adjacent land uses and demands, the objective was to develop a system that allows standardization of key characteristics to provide consistency and to provide guidelines for application that provides some flexibility while meeting standards.

Table 7-1. Recommended Design Standards for Klamath County Road Department¹

Roadway Design Standards	
Vehicle Lane Widths: (minimum widths)	Truck Route = 12 feet Arterial = 12 feet Collector = 12 feet Local = 10-11 feet Turn Lane = 10-14 feet
On-Street Parking:	Not Applicable
Bicycle Lanes: (minimum widths)	Arterials = 4' paved shoulder Collectors = 4' paved shoulder Curb & Gutter Streets = 5' Standard Bike Lane = 6'
Sidewalks:	Shoulder or separated pathway
Landscape Strips:	Optional
Medians:	Optional
Neighborhood Traffic Management /Traffic Calming:	None
Turn Lanes:	When warranted
Maximum Grade:	Arterials = 6 % Collectors = 6 % Local Streets = 10 %

¹ Highway Design Manual

Four notable references that could be used to assist in Klamath County road design include the following:

- *A Policy on Geometric Design of Highways and Streets*, American Association of Highway Transportation Officials (AASHTO)
- *Roadside Design Guide*, AASHTO
- *Residential Streets – 2nd Edition*, American Society of Civil Engineers, National Association of Home Builders and Urban Land Institute
- *Residential Street Design and Traffic Control*, Institute of Transportation Engineers

Bike Lanes

In Klamath County, rural roadways generally do not require separate bikeway facilities. Bicyclists are essentially accommodated on the shared roadway or on a shoulder, depending on traffic volumes. In general, bike lanes or shared roadway facilities may be provided on arterials and collectors in areas where forecasted traffic volumes and bicycle use warrant their consideration. In areas with high bicycle use, a pathway should be considered, preferably located on both sides of the roadway, separated from the roadway by at least five feet of greenbelt or a drainage ditch.

Sidewalks

Rural roadways generally do not require separate pedestrian facilities. Pedestrians are generally accommodated on the shoulder of the roadway. In areas with high pedestrian activity, a corridor should be considered, preferably located on both sides of the roadway, separated from the roadway by at least five feet of greenbelt or a drainage ditch.

For the Inside Urban Areas Alternative, sidewalks are shown on the typical cross-sections as well as sidewalk minimum widths.

Access Management

Access management is important, for maintaining safety, overall traffic flows and mobility. Whereas local and neighborhood streets primarily function to provide access, collector, and arterial streets typically serve greater traffic volumes. Numerous driveways or street intersections increase the number of conflicts and potential for accidents, and decrease mobility and traffic flow. Klamath County needs a balance of streets that provide access and streets that provide mobility.

Following are several access management strategies that the county could implement to ensure that access and mobility are both considered and maintained:

Establish new county access management standards for all routes on new developments using maximums and minimums;

Work with land use development applications to consolidate driveways;

Potentially use medians on arterial routes to limit access;

Provide right in/right out driveways on arterials or collectors where appropriate;

Close and consolidate existing access points within 1,320 feet of interchanges, as possible;

Allow no new access within 1,320 feet of interchange ramps (Interchange Management Access Plan (IAMP) required for new interchanges);

Develop minimum traffic signal spacing on arterials and collectors in coordination with Klamath County and ODOT.

Access Management Standards

Access management is hierarchical, ranging from complete access control on freeways, to increasing use of streets for access purposes, parking, and loading at the local level.

For state highways the guidelines are specified in the *1999 Oregon Highway Plan*, Appendix C – Access Management Standards. Access to State Highways is controlled under Oregon Administrative Rules, Division 51 (OAR 754-54-0115 & 0190). Table 7-2 and Table 7-3 below show ODOT's access standards for regional and district highways; Table 7-4 shows ODOT's access standards for Statewide Highways.

Table 7-2. Access Management Spacing Standards for Statewide Highways (Feet*)

Statewide Highways

Posted Speed	Rural		Urban			
	Expressway**	Other	Expressway**	Other	UBA	STA
≥55	5280	1320	2640	1320		
50	5280	1100	2640	1100		
40 & 45	5280	990	2640	990		
30 & 35		770		770	720	Note 1
≤25		550		550	520	Note 1

* Measurement of the approach road spacing is from center to center on the same side of the roadway.

**Spacing for Expressway at-grade intersections only.

Table 7-3. State Highway Access Management Spacing Standards for Regional Highways (Feet*)

Posted Speed	Rural		Urban			
	Expressway**	Other	Expressway**	Other	UBA	STA
≥55	5280	990	2640	990		
50	5280	830	2640	830		
40 & 45	5280	750	2640	750		
30 & 35		600		600	425	Note 1
≤25		450		450	350	Note 1

* Measurement of the approach road spacing is from center to center on the same side of the roadway.

** Spacing for at-grade intersections only.

Note 1: Minimum spacing is either existing city block spacing, or city block spacing in local comprehensive plan.

Table 7-4. Access Management Spacing Standards for District Highways (Feet*)

District Highways

Posted Speed	Rural		Urban			
	Expressway**	Other	Expressway**	Other	UBA	STA
≥55	5280	700	2640	700		
50	5280	550	2640	550		
40 & 45	5280	500	2640	500		
30 & 35		400		400	350	Note 1
≤25		400		400	350	Note 1

* Measurement of the approach road spacing is from center to center on the same side of the roadway.

** Spacing for at-grade intersections only.

Note 1: Minimum spacing is either existing city block spacing, or city block spacing in local comprehensive plan.

Notes: For most roadways, at-grade crossings are appropriate. Allowed moves and spacing requirements may be more restrictive than those shown to optimize capacity and safety. Any access to a State Highway requires a permit from the ODOT District Office. Access will generally not be granted where there is a reasonable alternative access. Access shall be granted to a road with a lower classification rather than one with a higher classification. Lots within a new development will be accessed by internal roads or driveways, rather than driveways directly to existing roads.

Proposed access management guidelines by roadway functional classification for Klamath County are described in Table 7-5. These access management guidelines should be applied to county roads; they are generally not intended to eliminate existing intersections or driveways. Rather, they should be applied as new development occurs. Over time, as land is developed and redeveloped, the access to roadways will meet these guidelines. In some cases, where there is a recognized problem, such as an unusual number of collisions, these techniques and standards can be applied to retrofit existing roadways.

**Table 7-5. Proposed County Road Access Management
– Minimum Centerline Spacing Standards**

Functional Class	System Spacing	Minimum Spacing	Corner Clearance
Rural Major Arterial	1 mile	1,000	1,000
Rural Minor Arterial	1 mile	500	600
Rural Major Collector	¼ mile	250	100
Rural Minor Collector	¼ mile	250	50
Rural Local Street	200-400 feet	75	25

Transportation Systems Management (TSM)

TSM focuses on low cost strategies to enhance operational performance of the existing transportation system. Measures that can optimize performance include intelligent transportation systems (ITS), intersection channelization, access management (as noted in prior section), incident response and various programs that enhance existing transit operations.

One of the tools that typically brings positive results is ITS. Incident detection and response along rural highways in Oregon has long been a concern for ODOT. ITS technologies such as cellular call-in services are currently in use and can effectively provide additional capacity without increasing the size of the facility. In some cases, public opposition to adding traffic lanes due to construction delays, as well as the overall public cost of building them, makes ITS an attractive alternative, with many more applications and technologies than just a short time ago.²

² 1999 Oregon Highway Plan, ODOT.

Maintenance

Preservation projects, maintenance, and operation are essential to protect the county's investment in transportation infrastructure. With increasing road inventory and the need for greater maintenance of older facilities, protecting and expanding funds for maintenance is critical.

A pavement management program is a systematic method of organizing and analyzing information about pavement conditions to develop the most cost-effective maintenance treatments and strategies. Pavement management can be a major factor in maintaining facilities in an environment of limited revenues. As a management tool, it enables public works to determine the most cost-effective maintenance program. The concept behind a pavement management system is to identify the optimal rehabilitation time and to pinpoint the type of repair that makes which makes the most sense.

Modal Plans

The Klamath County modal plans have been formulated using information collected and analyzed through a physical inventory, forecasts, goals and objectives, and input from area residents. The plans consider transportation system needs for Klamath County during the next 20 years assuming the growth projections discussed in Chapter 5. The timing for individual improvements will be guided by the changes in land use patterns and growth of the population in future years. Specific projects and improvement schedules may need to be adjusted depending on where growth occurs within Klamath County.

Roadway System Plan

The improvements to the roadway system include projects from three primary sources:

- The Klamath Falls Urban Area TSP 1998;
- The Statewide Transportation Improvement Program, and
- Those identified from deficiencies in Chapter 4 of this document. All of the improvement alternatives appear in figures at the end of this chapter.

Klamath Falls Urban Area TSP, 1998

Projects identified in the 1998 Klamath Falls TSP, which relate directly to state facilities, are being carried forward in this TSP. These are as follows:

- OR 39: Summers Lane - Klamath Falls-Malin Hwy (Klamath Falls)

- OR 39: Junction Klamath Falls - Malin Hwy (Klamath Falls)
- OR 140 at Homedale Road (Interchange) (Klamath Falls)
- OR 66 at US 97 Interchange (Klamath Falls)
- Olene Extension from OR 39/140

Statewide Transportation Improvement Program Projects

The Oregon Department of Transportation has a comprehensive transportation improvement and maintenance program that includes the entire State Highway System. The Statewide Transportation Improvement Program identifies all the highway improvement projects in Oregon. The program lists specific projects, the counties in which they are located, and their construction year. The final 2008-2011 Statewide Transportation Improvement Program identified several major highway improvements and bridge replacements in Klamath County as follows:

- US 97; N Chiloquin SB & S Klamath Falls NB VMS
- [Intelligent Transportation System]
- US 97; Modoc Point- Shady Pine- [Modernization]
- US 97; OR31 Hwy Jct-SCL Crescent-[Pavement Preservation]
- OR 39: OC&E Railroad Over crossing Bridge (Dairy) – [Replace bridge]
- OR 39: Western – Lost River Diversion – [Modernization]
- OR 140: Ritter Road – Deer Run Road (Bly Mountain) – [Modernization]
- North Entrance to the Volcanic Legacy {All-American Road}
– [Enhancement]
- Chemult Train Station Welcome Center – [Enhancement]

Deficiencies

In addition to the projects identified in existing state improvement programs, roadway and bridge projects have been identified as possible projects from those identified in Chapter 4.

Corridor Refinement Plans

The following corridor Refinement Plans should be accomplished to study numerous un-permitted access points along these sections of major highways.

- A. Highway 97, Spring Creek to Crescent, MP 241-184
- B. Highway 97, Crescent to Deschutes County Line, MP 172.2 - 198
- C. Highway 58, from Highway 97 to Lane County Line
- D. Highway 97, Chiloquin area from Spring Creek to Modoc Point Road

The potential may exist for creation of frontage and backage roads to consolidated public access points, such as Michael Road at Milepost 175.46

IMPROVEMENT PROJECTS

This section describes potential improvements that address deficiencies in each element of the transportation system. Not all potential improvements have been carried forward; overall, these recommendations are based on costs and benefits relative to traffic operations, the transportation system and community livability.

The remainder of this section is organized into the following topics:

- Road Improvement Alternatives
- Freight Improvement Alternatives
- Public Transportation Alternatives
- Bicycle/Pedestrian Network Improvements
- Future County Projects

Road Improvements

This section describes potential 20-year improvement projects that are primarily intended to improve safety and mobility. Each project is listed under its associated roadway; to the extent that these road improvements also improve freight, bicycle, and pedestrian mobility, they are indicated as such. All of the following roadway projects, along with the freight-related improvements, are shown together on Figure 7-3.

In Chapter 8, Finance, each of these listed improvement projects appears in Table 8-4, along with associated project costs and implementation strategies. Based on feedback from the TAC, each project is also given a priority rating of either High (0-6 years), Medium (6-14 years) or Low (14+ years); in the list that appears on the following pages, a priority ranking is indicated before the project description.

U.S. Highway 97

The following list shows these potential 20-year street improvements along with their priority rating (all figures appear at the end of this chapter). These improvements and associated project numbers are:

- 97-1. (Low) Worden Passing Lane:**
{Milepost 289.5 – 291.5} Construct a 1 ½ -mile passing lane; widen shoulders.
- 97-2. (Medium) Keno-Worden Road Left-Turn Refuge:**
{Milepost 289.5} Construct left-turn lane and widen shoulders.
- 97-3. (Medium) Miller Island Road-Old Midland Hwy:**
{Mileposts 280.16-282.61} Widen shoulders and flatten slopes, guardrail.
- 97-4. (Medium) Link River Bridge #08347, UPRR & Pelican City Road Bridge #08352:**
{Mileposts 273.00 & 275.00} Widen bridges to meet current standards for Statewide Freight and Expressways.
- 97-5. (Medium) South Wocus Relocation & North Wocus Realignment:**
{Milepost 271.25 – 270.0}: Close South Wocus Road, reconnect South Wocus Road north of the continuous left-turn refuge on US 97; reconstruct northbound on-ramp at Klamath Falls Port of Entry. Reconstruct North Wocus to 90 degrees with US 97.
- 97-6. (Low) South Wocus Road-North Shady Pine:**
{Milepost 271.27 – 267.08}: Widen shoulders and guardrail.
- 97-7. (High) Modoc Point – Shady Pine Road:**
{Milepost 257.80 – 268.80} Preserve pavement, rockfall protection, widen shoulders, add retaining walls & guardrail.

- 97-8. (Low) North Shady Pine Road Realignment and Left Turn Refuge:**
{Mileposts 268.80-269.90} An additional long-term project to consider in this TSP, and to carry forward in subsequent updates of the County TSP: County has had recent, preliminary discussions with private property owners and ODOT regarding acquisition of county right of way just south of their project so the county could bring Shady Pine straight over to connect with US 97 to a T-intersection; this would allow the intersection to be completely improved, with left-turn refuge from US 97 provided and access management. The remaining portion of Shady Pine would then be vacated and Klamath Pacific could use the remaining area for its inventory.
- 97-9. (Low) Kla-Mo-Ya Casino:**
{Milepost 251.48} This TSP lays out the basic needs at this intersection; future updates of this TSP should examine the feasibility, timing, and type of interchange.
- 97-10. (Medium) Spring Creek Campground – Silver Lake Road:**
{Milepost 244- 227.78}: Widen shoulders
- 97-11. (High) US 97 - Passing Lane:**
Extensions construct an – additional 1 mile Passing Lane to the four existing Passing Lane between M.P. 183.16 – M.P
- 97-12. (Medium) West Boundary Road./Silver Lake Road. Left-Turn Refuge:**
{Milepost 227.25 – 227.75} Construct left-turn refuge and right deceleration lane, widen roadway
- 97-13. (Low) Interchange US 97/ OR 58 Jtc.:**
{Mileposts 195.37} Reconstruct the OR Highway 58 west bound off-ramp for south bound US Highway 97, signage.
- 97-14. (Low) South Crescent-Rosedale:**
{Mileposts 185.77-188.00} Construct continuous left turn refuge and widen roadway.
- 97-15. (Medium) Gilchrist Passing Lanes:**
{MP 181.0 – MP 183.0} Construct 2-mile passing lanes and widen shoulders.

97-16. (Low) Gilchrist Bridge-Klamath County Line:

{Mileposts 172.19 – 183.16} Left-Turn Refuges, Frontage roads, Access Management. This is an additional long-term project to consider in this TSP, and to carry forward in subsequent updates of the County TSP. Various left turn refuges and frontage roads are require to provide safe and permit access.

97-17. (High) Chemult Train Station Welcome Center:

This enhancement project is listed in the 2004-2007 STIP and is scheduled to begin construction in 2010.

97-18. (Medium) South Bound Port of Entry:

Relocate weigh scale and weigh shack north of US 97 Inspection Area, on and off ramps.

Oregon Highway 39

39-1. (Medium) OR 39 (Hwy #50)/OR 140 (Hwy #424) Jtc. Signal:

{Milepost 1.78} Construct Signal for interchange at OR 39/ OR 140 Jct. Project to connect Southside Expressway *(See project #140-8 under Oregon Highway 140 projects).

39-2. (Low) Merrill Passing Lanes:

{Milepost 9.0 – 11.0} Construct passing lanes, widen roadway.

39-3. (Medium) OR 39/140 Western - Lost River Diversion (Klamath Falls):

{Mile Post 0.00 – 3.65} Reconstruct and widen roadway, construct continuous left turn refuge and sidewalks from Western Ave to Keller Road, Signal or round-a-bout at intersection of OR 39/140, reconstruct left turn refuge at short road, address width and height issues at aqueduct and BNSF railroad structures and access management.

39-4. (High) Alameda Ave Partial Viaduct Bridge #06741:

{Milepost 5.00-5.20} Replace bridge and bridge rail, construct sidewalk.

Oregon Highway 62

62-1. (Medium) Loosely Road Left-Turn Refuge:

Construct left-turn refuge, widen shoulders and enhance Loosely Road.

- 62-2. (Low) Junction Chiloquin Hwy 422 Left-Turn Refuge:**
Construct left-turn refuge and widen roadway for improved safety and enhanced access to Hwy 422.
- 62-3. (Low) Junction South Chiloquin Road Left-Turn Refuge:**
Construct left-turn refuge and widen roadway for improved safety and enhance access to OR 62.

Oregon Highway 140

- 140-1. (Low) Grizzly Road-Four-mile Flat Road (Lake-of-the-Woods):**
{Mileposts 41.0 – 51.16} Widen roadway and flatten slopes.
- 140-2. (Medium) Left-turn refuge at Varney Creek Road:**
{Milepost 42.5 – 43.25} Construct left-turn refuge, right turn lane and realign Varney Creek Road.
- 140-3. (High) Klamath County Boat Marina-Lakeshore Drive:**
{Mileposts 57.0 – 62.3} Widen roadway; install guardrail; reconstruct and realignment highway and curves to eliminate detours for oversized loads.
- 140-4. (High)Ridge Water Drive-OR 66/OR 140 Jtc.:**
{Mileposts 65.25-68.76}Widen highway to four lanes with median and median barrier, guardrail, signs.
- 140-5. (High) Orindale Interchange:**
{Milepost 67.22} Construct an Interchange to connecting Orindale Road and new developments, access management, frontage roads.
- 140-6. (High)South Klamath Hwy @ Homedale Road Interchange:**
{Milepost 4.63} Construct interchange; frontage roads, access management, traffic signal.
- 140-7. (Medium) Southside Expressway @ OR 39 Interchange:**
{Milepost 5.97} Construct interchange, access management and frontage roads* (See Project #39-2 of the Oregon Highway 39 project for the Signal.)

- 140-8. (Medium) Southside Expressway - Olene Extension:**
{Milepost 5.97 Hwy#424 to Milepost 10.00 Hwy#20} Construct a new alignment from the junction at Highway 39/Highway 140 to Olene (approximately 4 miles of new highway); reconstruct 1 mile of Reeder Road; construct a new bridge over BOR Lost River Canal; refurbish one bridge over BOR B Canal; add new guardrail and complete signage.
- 140-9. (Medium) Olene-Swan Lake Road:**
{Mileposts 8.0 -15.0} Widen shoulders, guardrail, widen bridge at B-Canal, flatten and realign curves, right lane deceleration lane at S Poe Valley Road; right deceleration lane at N Poe Valley Road.
- 140-10. (High) OC&E Over BNSF (Dairy) Bridge #02147:**
{Milepost 18.29-18.49} Replace bridge, install guardrail.
- 140-11. (High) Ritter Road – Deer Run Road (Bly Mtn):**
{Mileposts 25.17 – 32.56} Reconstruct and realign the highway; widen roadway; add guardrail, left-turn refuge at Bly Mountain Cutoff Road. (Project Scheduled for 2011).
- 140-12. (Medium) Sprague River Road Left Turn Refuge:**
{Mileposts 29.5-30.60} Construct Left turn refuge and right turn lane.
- 140-13. (High) Beatty Curves/Realignment and Shoulder Widening:**
{Mileposts 41- 45} Flatten curves, realign highway, widen shoulders, reduce the number of trees on the south side of the roadway to improve sight distance.

Oregon Highway 66

- 66-1. (Medium) OR 66/OR140/US 97 @ Green Spring Interchange:**
{Milepost 58.99} Interchange improvement - add south bound on and off loop ramps to eliminate left turns.
- 66-2. (Low) Orindale Road – OR 66/OR 140/US 97 Jct**
{Mileposts 57.81-58.99} Construct four lanes highway with continuous left turn refuge, curbs and sidewalks, drainage, and access management

- 66-3. (Low) Kern Swamp Road – Klamath River Bridge:**
{Mileposts 53.64 –50.26}. Reconstruct highway, realign curves, widen shoulders, and add guardrail and left-turn refuge at Clover Creek Road.
- 66-4. (Medium) Keno-Worden Road Left Turn Refuge:**
{Mileposts 49.41-50.4} Construct a left-turn refuge, sidewalks, drainage, and signs .

Oregon Highway 58

- 58-1. (Low) Klamath Northern Bridge Over Crossing:**
{Milepost 82.47} Replace the existing railroad bridge over OR 58 to current highway standards.
- 58-2. (Low) Diamond Peaks C.T. and Royce Mtn Way Left Turn Refuge and Shoulder Widening:**
{Milepost 70.0 to 72.0} Construct left turn refuge, widen shoulders. .
- 58-3. (Low) McNeele Drive Left Turn Refuge:**
{Milepost 80.77} Construct a left-turn refuge and widen shoulders for Mowich subdivision .

Oregon Highway 422

- 422-1 (High) Williamson River Bridge #01959:**
{Mileposts 4.47-4.67} Replace bridge deck, construct new bridge rail and guardrail.

FREIGHT IMPROVEMENTS

Truck Routes

The movement of freight through Klamath County is heavily dependent on the highway system, and US 97 is the most important roadway in the county with respect to trucks. In addition, a primary issue in the county regarding freight movement is the required out-of-direction travel on Oregon Highway 140 East and West.

Due to the substandard curvature of OR 140 from the Klamath County Boat Launch Park to Lakeshore Drive next to Upper Klamath Lake, trucks entering the county from the west are forced to detour north in a circuitous manner to get onto US 97. Klamath County recognizes the importance of OR 140 as an east-west freight route across the state; in keeping with Goal 6 of this Plan, this TSP recommends that freight improvements included in this modal plan have been grouped with the roadway improvement alternatives (see Figure 7-3), as several projects include passing lanes, which will enhance freight mobility.

NEW ROADS

In order to relieve traffic congestion on the Crater Lake Parkway Corridor and in particular the intersection of Foothills, CLP and Washburn Way, a new arterial is envisioned extending from Foothills Blvd to Old Fort Road at Collman Dairy Road, and then continuing on northwesterly serving the OIT/Sky Lakes area and Paradise Hill, on out to Highway 97 via Shady Pine.

The intersection of Summers Lane and OR 140, Hwy No. 424 exceeds the V/C ratio of 0.75 for that level facility according to the Oregon Highway Plan. This is currently impeding any further development of the Klamath Falls Airport Industrial Park. A proposed solution is to extend Brett Way from Summers Lane east to Homedale Road. Summers Lane would have a cul-de-sac installed on both sides of the existing at-grade railroad crossing, and a new at-grade crossing would be required south east of the old crossing to accommodate the Brett Way extension. The Homedale/140 intersection would also require improvements, such as signalization, a roundabout or an interchange. This project would alleviate a safety concern on the state highway and allow for new economic development.

FUTURE PROJECTS (BEYOND THIS TSP PLANNING HORIZON)

During the planning process, several capital improvement projects in the county were identified, though these particular projects are more conceptual in nature and are beyond the 20-year planning horizon of this TSP. The following conceptual projects were acknowledged by the Transportation Advisory Committee and therefore are included in this TSP for future consideration; these should be carried forward to future updates of county plans, so that if/when funding becomes available these projects can be prioritized accordingly. Future updates of this TSP should examine funding options that would be reasonably expected to be available to Klamath County and ODOT.

Width constraints on US 97:

As US 97 becomes a more popular and favored West Coast truck route, the current two-lane configuration around Upper Klamath Lake (from Modoc Point to Hagelstein Park – 6-mile section) makes future roadway widening extremely difficult and costly. If the highway were widened to the west, a viaduct would likely be required due to the existing railroad. To the east, major challenges exist in the form of an unstable hillside that is scattered with early Cultural sites, which, upon disturbance, would immediately cease any project work and require substantial excavation and documentation. However, if this segment remains only two lanes, it would essentially be the sole bottleneck on nearly 325 miles of highway. Some additional options to consider for widening US 97 in a 20- to 50-year timeframe include the following (each listed project is estimated to have a construction value of roughly \$200-\$300+ million):

- Realign highway over the top of the hill on existing ROW.
- Drop the highway down to the railroad level.
- Construct a two-lane causeway over the lake to parallel the existing roadway, which would accommodate southbound traffic; northbound traffic on existing alignment.
- Deck the highway for northbound over and southbound below.
- Existing road-cuts near the existing alignment could be pieced together to arrive at a 4-lane roadway.

With respect to future funding for the US 97 conceptual projects listed above, perhaps as an update to future TSP's or other Planning documents, the Oregon Transportation Commission suggests the following:

A study regarding the economic feasibility of adding capacity to US 97, whereby the added lanes would function as a toll facility; adding capacity to US 97 will be necessary to offload the burden on the portion of Interstate 5 between Eugene and the California border. An investigation into the feasibility of a public/private partnership should also be undertaken as part of future TSP updates. Irregardless of the final agreed upon solution for US 97, widening this 6-mile segment to 4 lanes is one of the biggest challenges facing ODOT and the county.

South Algoma Road Intersection:

Another long-term project to consider in subsequent updates of the Klamath County TSP: Moving this intersection north will be a major undertaking that would require a bridge to traverse an adjacent irrigation pond.

Spring Lake Road and Old Midland Road:

Construct a left turn refuge.

The following four road widening projects should be considered when the county turns its attention to Oregon Highway 140 west. Along Upper Klamath Lake (*see project #140-1 on page 7-18) there is a narrow section that forces wide-loads to detour off of 140 and travel north in a circuitous manner on these 4 roads as shown. It is recommended that these roads be improved to more efficiently handle freight traffic, or improve OR 140 to eliminate the required detour.

Westside Road: widen roads (detour)

Sevenmile Road: widen roads (detour)

Weed Road: widen roads (detour)

Loosely Road: widen road (detour)

Interchange at Highways 97/140/66:

The current configuration of this interchange is inefficient and substandard; however, it will also be very costly to upgrade to a grade-separated, free-flowing highway interchange. Options for funding this project should be explored and studied in the years to come and this project should be prioritized in future updates of this Plan. (The Access Management Plan for this project is in the 2008-2011 STIP)

Interchange at Running Y Road:

In the future, this intersection will need a grade-separated intersection to accommodate increasing traffic. Options for funding this project should be explored and studied in the years to come and this project should be prioritized in future updates of this Plan.

Interchange at Kla-Mo-Ya Casino (project #97-8):

In the future, this intersection will need a grade-separated intersection to accommodate increasing traffic. Options for funding this project should be explored and studied in the years to come and this project should be prioritized in future updates of this Plan. Preliminary estimates for a partial-diamond intersection at this location are on the order of roughly \$15 million.

Hwy 66 – widen, realign, curve correction from Kerns Swamp Road to Keno:

Need parallel road north of this area from Johnston Ranch Pit to Round Lake.

Destination Resort Overlay:

The traffic impact analysis (TIA) for the proposed Destination Resort Overlay also recommends several improvements at the Highway 97/Crescent Cutoff Road intersection to improve the at-grade railroad crossing and widen Crescent Cutoff Road. In addition, the TIA notes that a planned and funded ODOT Statewide Transportation Improvement Project (STIP) includes restriping US 97 through Crescent, from its existing four-lane configuration to a three-lane cross-section. This project may also include a new southbound right-turn deceleration lane on US 97 onto Crescent Cutoff Road. The TIA recommends that the Applicant construct the deceleration lane if: (1) ODOT cannot obtain STIP Funding for the deceleration lane; and (2) the Applicant can obtain adequate right-of-way for the deceleration lane.

Condition #31 – Prior to occupancy of any units in the resort, the RESORT shall execute a memorandum of understanding (“MOU”) with Klamath County and ODOT setting forth the RESORT’s obligations to: (a) Contribute to or construct the US 97/Crescent Cutoff intersection improvements set forth in the TIA (PDP Exhibit E) and the August 26, 2008 Supplemental Kittelson memorandum; and (b) Contribute the resort’s proportionate share on a per unit basis, of future capacity improvements at the collector/arterial intersections along the US 97 corridor within the City of La Pine, consistent with the June, 2008 TIA, the September 26, 2008 supplemental Kittelson memorandum and the findings and recommendations identified within the City’s Transportation System Plan (estimated TSP completion date: June 2009).

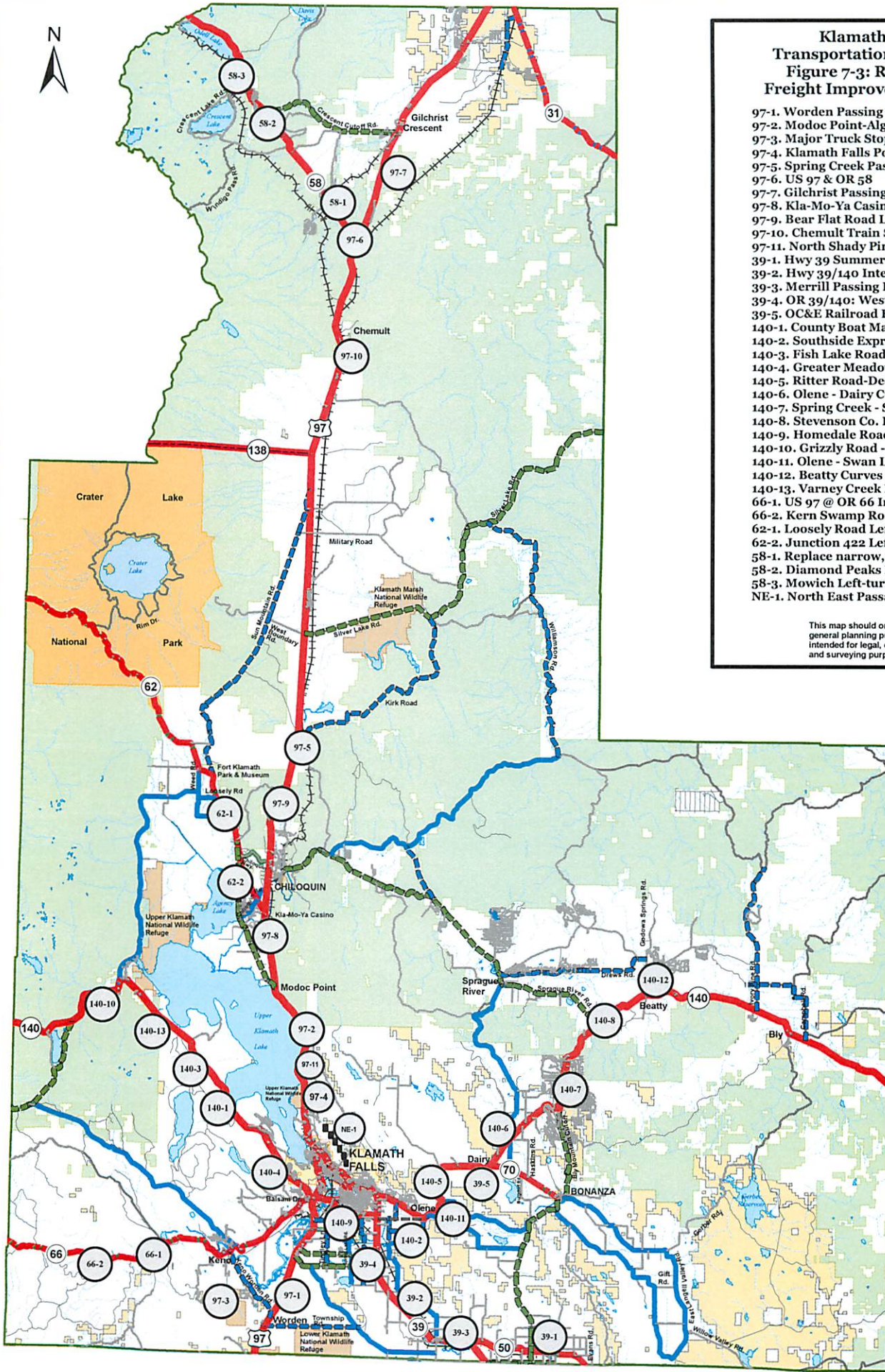
Condition #32 – The RESORT shall provide directional signage for the resort along US 97, Crescent Cutoff Road, and the Oregon 58, in accordance with requirements of KCLDC Article 66. The RESORT shall obtain all required sign permits from Klamath County Public Work and ODOT.



Klamath County Transportation System Plan Figure 7-3: Roadway and Freight Improvement Projects

- 97-1. Worden Passing Lane
- 97-2. Modoc Point-Algoma
- 97-3. Major Truck Stop-Left-turn Lane
- 97-4. Klamath Falls Port of Entry
- 97-5. Spring Creek Passing Lanes
- 97-6. US 97 & OR 58
- 97-7. Gilchrist Passing Lane
- 97-8. Kla-Mo-Ya Casino Interchange
- 97-9. Bear Flat Road Left-turn Lane
- 97-10. Chemult Train Station
- 97-11. North Shady Pine
- 39-1. Hwy 39 Summers Lane
- 39-2. Hwy 39/140 Interchange
- 39-3. Merrill Passing Lanes
- 39-4. OR 39/140: Western Lost River
- 39-5. OC&E Railroad Bridge #01247
- 140-1. County Boat Marina-Lakeshore Dr
- 140-2. Southside Expressway Extension
- 140-3. Fish Lake Road
- 140-4. Greater Meadows Snow Park
- 140-5. Ritter Road-Deer Run Road
- 140-6. Olene - Dairy Curve Correction
- 140-7. Spring Creek - Sycan Marsh
- 140-8. Stevenson Co. Park - E Canal
- 140-9. Homedale Road Interchange
- 140-10. Grizzly Road - Fourmile Flat
- 140-11. Olene - Swan Lake Road
- 140-12. Beatty Curves
- 140-13. Varney Creek Road
- 66-1. US 97 @ OR 66 Interchange
- 66-2. Kern Swamp Road - Bridge
- 62-1. Loosely Road Left Turn Refuge
- 62-2. Junction 422 Left Turn Refuge
- 58-1. Replace narrow, old bridge.
- 58-2. Diamond Peaks Development
- 58-3. Mowich Left-turns
- NE-1. North East Passage

This map should only be used for general planning purposes. It is not intended for legal, engineering, and surveying purposes.



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PUBLIC TRANSPORTATION

Basin Transit has six fixed-routes which provide transit service for the Klamath Falls urbanized area.

In the future, additional transit service should be oriented to:

- Klamath Tribes in Chiloquin
- Parks and athletic fields, and senior housing facilities
- Oregon 140 as Ridge Water and other developments occur
- Park-and-Ride lots (Peak-hour associated)

Currently, there are no plans for expanding service beyond the District boundaries (which are essentially the same as the Klamath Falls Urban Growth Area boundary). Basin Transit's service concentration is presently on improvements that offer better service to existing customers and/or expansion to meet anticipated needs due to growth or shifting population patterns. Local developments such as Ridge Water and Southview among others, suggest future needs for the District to expand or offer additional peak-hour service on Oregon 140 West.

Service to outlying areas of the county may eventually be implemented, particularly if fuel prices continue to escalate. Basin Transit's recent experience (out-of-county bus service funded by ODOT through the Senior Center) and additional studies have indicated that the use of such service would not justify the expense at this time. Park-and-Ride work trip services, for example, may be considered in the future.

BICYCLE AND PEDESTRIAN NETWORK

Potential bicycle and pedestrian-related improvement projects have been grouped together for this TSP and are listed below; they are also shown in Figure 7-4.

Crescent-Gilchrist Sidewalks (U.S. Highway 97):

Install ADA crossing; construct new sidewalk in the curb area; and re-construct the sidewalk/curbs as necessary.

Merrill Sidewalks (Oregon Highway 39):

Install ADA crossings; construct new sidewalks in current gutter sections; replace curb as necessary; and reconstruct sidewalk as necessary to improve access management.

Figure 7-4. Bicycle and Pedestrian Improvement Projects (next page)

**Klamath County
Transportation System Plan**

**Figure 7-4:
Bicycle and Pedestrian
Improvement Projects**

Legend

**Road Classification
Functional Classification**

- Statewide Highway
- Regional Highway
- District Highway
- Major Arterial
- Minor Arterial
- Major Collector
- Minor Collector
- Local Roads
- Railroads

- Cities
- Urban Growth Area
- Klamath County

Federal Lands

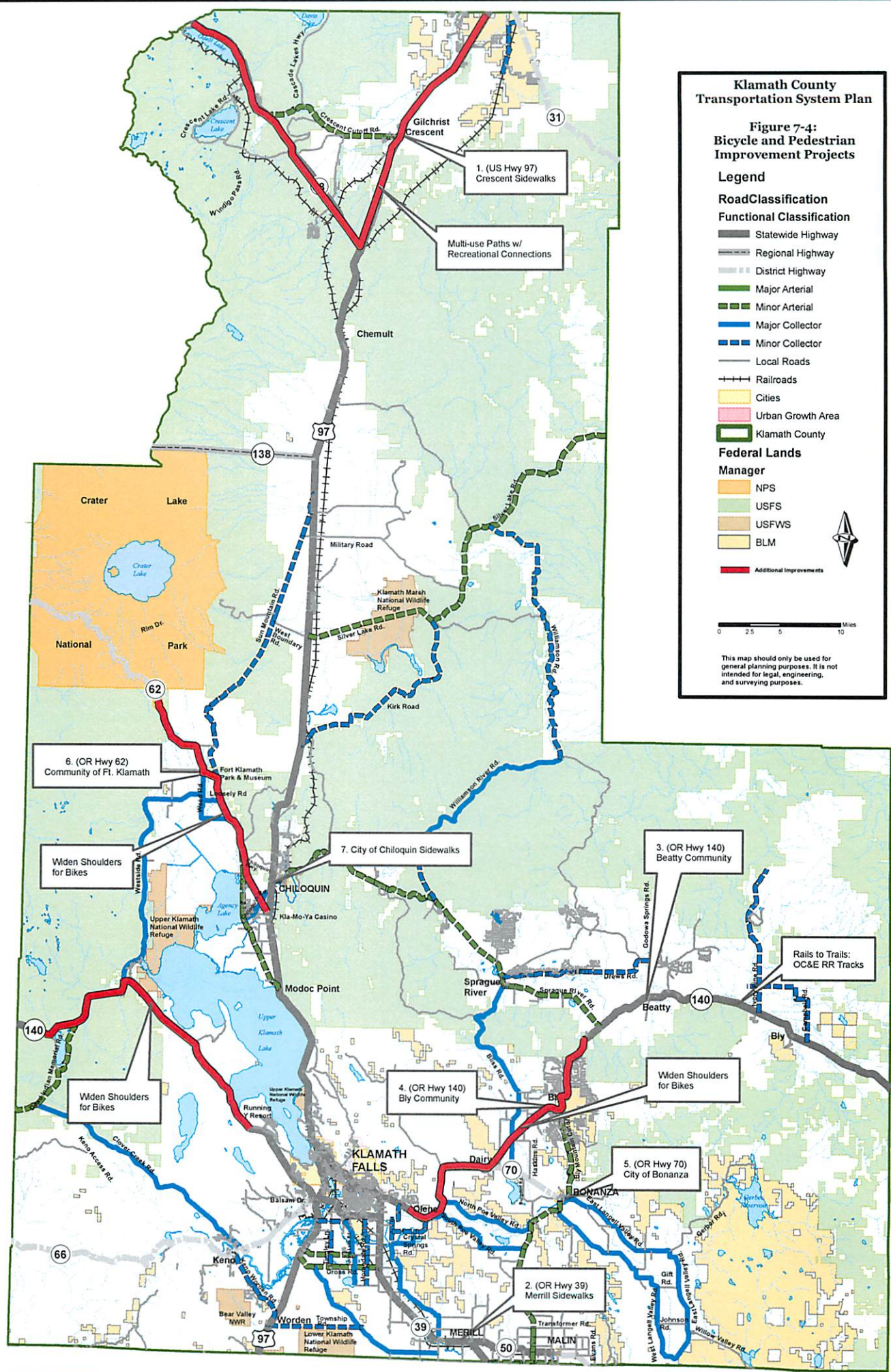
Manager

- NPS
- USFS
- USFWS
- BLM

Additional Improvements



This map should only be used for general planning purposes. It is not intended for legal, engineering, and surveying purposes.



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Community of Fort Klamath (Oregon Highway 62):

Construct sidewalks in curb areas and provide ADA crossings.

City of Chiloquin (Oregon Highway 422):

Construct sidewalk, curbs, and storm system from railroad tracks to Tribal Center.

Community of Keno (Oregon Highway 66):

Construct sidewalks from Klamath River Bridge to McCormick Road.

Crescent Lake (Oregon Highway 58):

Widen shoulders along Highway 58 to improve bicycle and pedestrian safety.

Town of Bonanza (Oregon Highway 70):

Construct sidewalks from Harpold Rd. – County /State Boundary.

City of Malin (Oregon Highway 39):

Construct sidewalks from M.P. 23.71 to M.P. 24.52.

INTELLIGENT TRANSPORTATION SYSTEMS

Intelligent Transportation Systems (ITS) include diverse technologies, ranging from information processing and communications to traffic control devices and electronics. These technologies were first introduced as a means of resolving the conflict between increasing travel demand and insufficient transportation infrastructure. The benefits of ITS strategies have become apparent to transportation departments across the country, and safety advantages have taken center stage as the major focus of many ITS programs.

Today, ITS is a collaborative effort that seeks to develop coordinated technologies to improve the efficiency of surface transportation through better informed drivers, improved traffic controls, information technology and electronic systems. ITS technologies are applied to vehicles and roadways that perform communications, data processing, traffic control, navigation and various other functions. The United States Department of Transportation (USDOT) has defined integration “links” connecting the various features of ITS infrastructure, and offers several components, some of which could be applicable to Klamath County³:

- Incident management
- Arterial management

³ Metropolitan ITS Integration, A Cross-Cutting Study, FHWA/FTA, August 2002

- Transit management
- Electronic fare payment
- Electronic toll collection
- Emergency management
- Highway-rail intersections
- Regional multi modal traveler information

Intelligent Transportation System (ITS) Facilities

ODOT has ITS facilities on US 97, OR 58, and OR 140. The types of ITS facilities in the county vary from variable message signs (VMS), cameras, road weather information systems (RWIS), and ice warning sign. The list of such facilities in the county are listed below:

Hwy OR 140 West

Lake of the Woods	Camera and RWIS
Seldom	Automated Ice Warning Sign (MP 41.7)
Doak Mountain	Camera and RWIS
Lake Shore Jtc	VMS
Hwy OR 140	East Camera and RWIS
Bly Mountain	Camera and RWIS

Hwy US 97

Green Spring Interchange	Camera
Modoc Point	Camera and RWIS
Diamond Lake Jtc	VMS
Chemult.....	Camera and RWIS
Klamath River Bridge (Northbound)	VMS
Collier (Southbound)	VMS

Hwy OR 58

Willamette Pass	Camera and RWIS
-----------------------	-----------------

The use of ITS technologies and strategies must be planned at the regional level and developed to properly and efficiently define projects so that they build upon one another. Regional integration is important so that planning and deployment of ITS can take place in an organized and coordinated fashion. It is also important that ITS solutions be implemented economically, in order to utilize public funds in a responsible manner. A regional ITS architecture illustrates this integration and provides the basis for planning the evolution of existing systems and the definition of future systems that facilitate the integration over time.

In Klamath County, the use of ITS could provide benefits to the roadway system and to overall safe travel throughout the county. Applicable components of the links listed above, with respect to the county, include incident and arterial management. There are a number of areas in the county that already have ITS components; following is a list of camera, automated signs, and variable message signs (VMS) for future implementation on the county road network:

Oregon Highway 140 West:

Automated chain up signs: (Mileposts 21, 41, 51, and 57)

Oregon Highway 140 East:

Automated chain up signs: (Mileposts 25, 33, and 62); Bly Maintenance Station - Camera and RWIS

US Highway 97 (several locations):

Midland Rest Area (KIOSK Center); Spring Creek Hill Camera and RWIS at bottom and top of hill; Diamond Lake junction camera and RWIS; Oregon Hwy 58 junction (VMS sign located south of Oregon Hwy 58 junction for northbound traffic); Gilchrist (VMS sign located north of Gilchrist for southbound traffic) with camera and RWIS; Chemult rest area (north and south bound - KIOSK Center).

Oregon Highway 58:

Automated chain up signs in the following locations (Mileposts 86, 75, and at Crescent Cut-Off Junction) with camera and RWIS.

Oregon Highway 62:

Fort Klamath (camera and RWIS)

Oregon Highway 66:

Keno (camera and RWIS)

Oregon Highway 66:

Green Springs Highway (Spencer Bridge camera and RWIS)

Oregon Highway 39:

California Border (camera and RWIS)

RAIL STATION

Chemult Train Station Welcome Center (Project #97-10):

This project will construction a new railroad station, reconstruct platform and provide parking. (Project scheduled for construction 2010 – listed in 2008-2011 STIP).

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CHAPTER 8 FINANCE

INTRODUCTION

This chapter describes various funding sources that could be used to meet the needs of the transportation system in Klamath County. Costs for individual elements of the transportation system plan are outlined and compared to potential revenue sources. Subsequently, options for balancing plan costs and revenues are discussed.

CAPITAL IMPROVEMENTS LIST

Order-of- magnitude cost estimates were developed for the projects identified in the roadway, bicycle, pedestrian and transit elements of this plan. Project costs were estimated using typical unit costs for transportation improvements, and do not reflect unique project costs such as significant environmental mitigation. Development of more detailed project costs (and additional financial analysis) could be prepared in the future as these projects are further studied and refined. Since many of the projects address multiple transportation modes (e.g., autos and bikes), projects costs were developed by project and include all elements of each relevant mode.

Table 8-1 is a summary of total capital cost by project. The State of Oregon would be responsible for many of the roadways, bicycle facilities, and pedestrian facilities in the plan. The pedestrian projects are not included in Table 8-1 because a specific cost has not been determined for their construction.

Table 8-1. Summary of Capital Improvements List

Project	Estimated Budget	Percent
OR 422: Williamson River Bridge	\$ 1,113,000	01.9%
OR 39/140: Western – Lost River Diversion	\$ 2,500,000	00.4%
OR 140: OC&E Over BNSF (Dairy)	\$ 2,479,000	00.4%
OR 140: Lakeshore – Green Springs	\$ 3,564,000	06.1%
OR 140: Modoc Billy Creek – Fish Hole Creek	\$ 4,073,000	07.0%
OR 140: N Little Butte Creek – Great Meadow	\$ 8,900,000	15.4%
OR 140: Summit Snow Park – Fourmile Flat	\$ 5,965,000	10.3%
Volcanic Legacy Byway: Doak Mtn Interp. Site	\$ 58,000	00.1%
US97: Modoc Point – Shady Pine	\$19,444,000	33.6%
US97: Chemult Cinder Production & Source Acq	\$ 288,000	00.4%
US97: N Chiloquin SB & Klamath Falls NB VMS	\$ 890,000	01.5%
US97: S. Century Drive – Spring Creek Hill	\$ 500,000	00.9%
US97: OR 31 Hwy Jct – SCL Crescent	\$ 8,178,000	14.1%
Total	\$57,952,000	

Note: Refer to ODOT'S 2008-2011 STIP for additional information on any of these projects.

In fiscal year ending June 30, 2003, the County received about \$15 million from federal, state, and local sources of revenue, and it spent about \$12 million on repair, replacement, and improvements to existing roadways and bridges. The single largest source of revenue, about 62 percent of total revenue, is the County share of timber receipts from federally managed forests in Klamath County. This source of revenue is due to be reduced to around \$500,000 per year from the current \$10,000,000 per year with the expiration of PL 106-393, commonly referred to as The Safety Net, after FY 20011-20012. Another significant and at risk source of revenue is interest on investments. The County invests reserves in interest bearing securities, and in 2003 these interest earnings amounted to over \$2.3 million, 15 percent of total receipts. The earnings are on cash reserves of approximately \$90 million. If the County spends these reserves, annual interest on investment also will decrease.

Klamath County owns and maintains 199 bridges. The transportation network is laced with bridges that link roadway sections, and these bridges are subject to storm damage and damage from daily usage. The County maintains a large reserve (\$45 million) for bridge repair and replacement.

Additional Funding Sources

System Development Charges

Oregon statutes permit Klamath County to charge each new real estate development in the County a transportation system development charge. The amount of the SDC is comprised of two fees—a reimbursement fee and an improvement fee. If the transportation system has excess capacity already built into it, then the County can calculate and charge a reimbursement fee to the new development. If no excess capacity exists, then the County may charge an SDC for roadways to be built that partially or wholly benefit future development.

The methodology to calculate the total SDC (with reimbursement and improvement fees) requires that each project in the capital improvement list be evaluated to determine how much benefit each proposed roadway improvement will benefit future development and determine a cost per future trip. In general terms, the SDC is the price one has to pay to purchase the capital assets needed to provide transportation services to a particular development. The amount that each new development pays varies proportionately with the amount of traffic the development is expected to produce.

In a perfect world where the county can precisely forecast future traffic, roadway capacity, and the cost of proposed projects, SDC charges will produce just enough money over time to pay the cost of building proposed roadways that benefit future developments. SDCs can provide a reasonable estimate of future capital costs and revenues resulting from growth.

Local-Option Motor Fuel Tax

The County could adopt a local option fuel tax that would be in addition to the federal and state motor fuel taxes. This type of tax is charged by a minority of cities and counties in Oregon, though they collect a significant amount of money for roadway improvements.

Table 8-2. Local Option Gas Tax Revenues

		Tax Rate	Annual	
		\$/gallon	Revenue	Gallons (Est.)
Cities				
	The Dalles	\$0.03	\$323,253	10,775,100
	Tillamook	\$0.02	\$115,000	7,666,667
	Woodburn	\$0.01	\$105,360	10,536,000
Counties				
	Multnomah	\$0.03	\$7,857,000	261,900,000
	Washington	\$0.01	\$1,684,000	168,400,000
	Klamath County (Est)	\$0.01	\$ 609,273	60,927,267

Without knowing the amount of motor fuel pumped by service stations in Klamath County, one cannot accurately predict the amount of revenue it would generate at various tax rates. Using population to extrapolate the tax revenues realized in other counties, a rough estimate shows that a \$0.01 per gallon tax would produce about \$609,000 annually from service stations in Klamath County.

Bond Issues

Klamath County could issue tax-based bonds to construct projects on the capital improvement list. Voters would need to approve a general obligation bond at a general election. In odd numbered years, a double majority is required to approve a tax measure such as a bond. That is, a majority of voters would have to cast ballots, and a majority of those would have to approve the bond. In even numbered years only a majority of cast ballots is needed to approve a bond measure. Revenues from a general obligation bond could be used only for capital improvements including major repairs to roadways.

The County's current assessed value is \$4,841,761,533. It has been growing about 12% per year, however the anticipated growth for 09-10 is in the neighborhood of 3.5%. A general obligation bond of \$1,000,000 repaid over a 20 year period at 5.5 % interest would require a tax of \$0.023 per \$1,000 of assessed value to pay annual debt service. A property (house) with an assessed value of \$150,000 would pay annual taxes of \$3.45 to pay debt service. The tax rate would decrease as assessed value increases. Growth in population and employment would distribute the fixed annual taxes over a broader base of tax payers, thus lessening the burden for all tax payers.

Table 8-3. Assessed Value

Tax year	Assessed Value	Growth
2007	\$4,326,787,882	NA
2008	\$4,841,761,533	12%

The County could ask voters to approve general obligation bonds periodically for a specific project or group of projects on the capital improvements list.

Another form of bonding is a serial levy in which voters approve a specific annual amount of taxes to be raised to fund construction of a particular project or set of projects. Each levy has a specific life, lasting up to 5 years. The drawback to this finance method is that projects can be funded only up to the amount of cash the County has in hand. Thus the County may need to levy the tax for 2 or 3 years before obtaining sufficient revenue to build a project. This source of bonding has most frequently been associated with operating expenses or major maintenance or repair projects. It also is considered to be part of the Constitutional property tax limit of \$10 per \$1,000 of assessed value. Depending upon the tax year and tax amounts by all taxing authorities on a particular property, the tax revenues may be compressed to less than the desired amount.

SUMMARY

The TSP capital improvements list identified \$238 million in projects of which \$91 million of projects will require new funding sources over the next 20 to 25 years. Most of the \$238 million of capital improvements will be paid with federal and state funding and with current County sources of revenue. Over time the County may consider adopting a system development charge, a local-option motor fuel tax, or use its bonding authority to borrow the money and repay it with new property tax assessments.

The County maintains a significant cash balance (approximately \$91 million) to account for the risks of lost timber receipts and of major damage to its 134 bridges.

Table 8-4. Klamath County Needs Projects

TSP Number	Project	Project	Brief Project Description	Project Source	Category1	Category2	PE Estimate	ROW Estimate	Total Estimate
Costed/Funded:									
140-4		OR140 @ Fish Lake Road (Greater Meadow Snow Park)	Left turn lane.	ODOT	Operations		\$15,000.00	\$0.00	\$377,000.00
140-5		OR 140: Ritter Rd. – Deer Run Rd. (Bly Mt. Curves)	{MP 25.17-32.56} Reconstruct and realign Hwy, widen shoulders, guardrail, construct climbing lane on eastside, left-turn refuge at Bly Mtn Cutoff (project scheduled 2008).	ODOT	Modernization				\$7,800,000.00
140-6		OR 140: Olene - Dairy	Curve correction.	ODOT	Operations	Safety	\$173,539.00	\$175,000.00	\$1,200,000.00
140-7		OR 140: Spring Creek - Sycan Marsh Rd	Install guardrail; curve correction	ODOT	Modernization		\$113,000.00	\$115,000.00	\$1,213,000.00
140-8		OR140: Stevenson Co. Park - "E" Canal	Realign highway and reconstruct roadway.	ODOT	Modernization		\$46,000.00	\$0.00	\$1,161,000.00
39-2		Hwy 39 & 140 Interchange.	Construct interchange at Hwy 39 & 424; project to connect Southside Expressway Extension project.	ODOT	Modernization		\$0.00	\$0.00	\$9,000,000.00
39-4		OR 39/140: Western - Lost River Diversion	Add signals; widen aqueduct; lower grade at RR crossing	ODOT	Modernization		\$1,108,000.00	\$3,000,000.00	\$7,588,000.00
66-2		Kern Swamp Road - Klamath River Bridge	{MP 53.64-50.26} Reconstruct highway; realign curves; widen shoulders; guardrail; left-turn refuge at Clover Creek Road, guardrail and culverts.	ODOT	Bridge		\$485,000.00	\$78,000.00	\$5,230,000.00
97-2		US97: Modoc Point - Algoma	This section of highway has narrow, substandard shoulder widths, substandard cut and fills slopes and unprotected hazards exist within the clear zone. The existing guardrail and guardrail end terminals need upgrades to current standards; the existing concrete barrier does not meet current road standards.	ODOT	Modernization		\$591,603.61	\$50,000.00	\$5,916,036.11
97-3		US97 @ Major Truck Stop	Left Turn Lane - half mile	ODOT	Operations		\$28,000.00		\$700,000.00
97-4		US 97: Klamath Falls Port of Entry (Klamath Falls)	{MP 271.25-MP 270} Close South Wocus Road, reconnect S. Wocus Road north to the continuous left-turn refuge on US 97, reconstruct northbound on-ramp at Klamath Falls Port of Entry. Reconstruct N. Wocus Road to 90 degree with US 97 road realignment. South Wocus Rd - Shady Pine: widen shoulders to 8 feet, add guardrail.	ODOT	Modernization		\$0.00	\$0.00	\$3,500,000.00
97-5		US97: {MP 230 - MP 232} Spring Creek Passing Lane	Construct 1-mile passing lane; widen shoulders.	ODOT	Modernization		\$0.00	\$0.00	\$6,000,000.00
39-5		OR 39: OC&E Railroad Overcrossing Bridge #02147 (Dairy)	Replace Bridge	ODOT	Bridge		\$0.00	\$0.00	\$2,492,000.00
97-10		Chemult Train Station Welcome Center	Enhancement Project	ODOT/County	Enhancement				\$310,000.00
140-3		Left-Turn Refuge at Fish Lake Road plus Passing Lanes	Construct left-turn refuge and realign Fish Lake Road. {Milepost 31 - Milepost 33} Construct one mile passing lane, widen shoulders and install standard guardrails. ODOT						
140-10		Grizzly Road – Four-mile Flat Road (Lake-of-the-Woods)	{Milepost 43.5 - Milepost 47} Construct 1-mile passing lane. Widen shoulders to 8 feet and flatten slopes. ODOT						\$7,708,000
140-1		Klamath County Boat Marina-Lakeshore Drive:	Milepost 57.0 - Milepost 62.3} Widen shoulders to 8 feet; install guardrail; minor realignment to include flatten curves and remove wide-load detour to the north. ODOT						
97-7		US 97: Hackett Dr. - Gilchrist (formerly La Pine - Crescent)	{MP 181-MP 183} Construct 1-mile Passing Lanes; widen shoulders.	ODOT	Modernization		\$171,591.00	\$0.00	\$1,715,914.00
Not Costed/Unfunded Projects in the TSP:									
140-2		Southside Expressway Extension	New alignment from the junction at Highway 39/Highway 424 to Hwy 140 at MP 9.8. Construct approximately 4 miles of new highway; reconstruct 1 mile of Reeder Road; construct a new bridge over USRS Lost River Canal; reconstruct one bridge over USRS B Canal; add new guardrail and complete signage. ODOT, County, Other						\$12,000,000

TSP Number	Project	Brief Project Description	Project Source	Category1	Category2	PE Estimate	ROW Estimate	Total Estimate
39-3	OR 39: Merrill Passing Lanes	{MP 6.6-MP 8.6} Construct passing lanes; widen shoulders.	ODOT					\$5,950,000
62-1	OR 62: Loosely Road left turn refuge	Construct left-turn refuge; widen shoulders.	ODOT					\$450,000
62-2	OR 62: Junction Chiloquin Hwy 422 Left turn refuge	Construct left-turn refuge; widen shoulders.	ODOT					\$450,000
97-1	US 97: Worden Passing Lane/Keno-Worden Road Left-turn Refuge	{Milepost 289.5 - Milepost 291.5} Construct a one-mile passing lane; widen shoulders. {Milepost 289.25} Construct a northbound left-turn refuge; widen shoulders. ODOT/County						
97-8	Kla-Mo-Ya Casino Interchange	Construct free-flowing interchange	ODOT/Tribe					\$15,000,000
97-9	Bear Flat Road Left-Turn Refuge	Left turn lane - half mile length	ODOT					\$800,000
140-12	Beatty Curves/Realignment and Shoulder Widening	{MP 41-MP 45} Flatten curves, realign highway, widen shoulders, reduce the number of trees on the south side of the roadway to improve sight distance. ODOT						
140-13	Left-turn refuge at Varney Creek Road	Construct left-turn refuge and realign Varney Creek Road.	ODOT					\$450,000
140-11	Olene-Swan Lake Road	{MP 8.0-MP 15.0} Widen shoulders, guardrail, flatten and realign curves, right lane deceleration lane at S. Poe Valley Road; right deceleration lane at N. Poe Valley Road. ODOT						
66-3	Keno-Worden Left-turn Refuge	Construct new left-turn refuge, widen shoulders.	ODOT/County					\$450,000
58-3	Left-turn refuge at Mowich	Construct new left-turn refuge, widen shoulders.	ODOT					\$450,000
58-2	OR 58: Diamond Peaks Development	Widen roadway; provide left-turn opportunity	ODOT					\$450,000
58-1	OR 58: Replace narrow, old Railroad bridge	Replace bridge (Mike Stinson will get details)	ODOT			\$485,000.00	\$78,000.00	\$5,230,000.00
97-6	Interchange Junction Hwy US 97 & Hwy OR 58:	Realign U.S. Highway 97 south to Highway 58 West off-ramp; improve safety conditions. ODOT						?
97-11	Reconstruct North Shady Pine	Reconstruct North Shady Pine to 90 degrees with Highway 97 road alignment						\$500,000
NE-1	Connection from Foothills to Shady Pine	New connection from Foothills Blvd to Old Fort Road to OIT/Sky Lakes to Shady Pine						\$12.0-\$20.0M
Pedestrian Related Projects:								
1	Crescent-Gilchrist Sidewalks (U.S. Highway 97):	Install ADA crossing; construct new sidewalk in the curb area; re-locate sidewalk obstructions; and re-construct the sidewalk/curbs as necessary.						\$670,000
2	Merrill Sidewalks (Oregon Highway 39)	Install ADA crossings; construct new sidewalks in current gutter sections; re-locate sidewalk obstructions; replace curb as necessary; and reconstruct sidewalk as necessary to improve access management.						\$1,340,000
3	Beatty community (Oregon Highway 140):	Widen shoulder to 8 feet within the Community on both sides of Hwy 140; re-locate sidewalk obstructions; install new sidewalks and curb ramps.						\$710,000
4	City of Bonanza (Oregon Highway 70):	Widen shoulders on both sides of highway to 8 feet for improved pedestrian circulation; relocate sidewalk obstructions; install new sidewalks and curb ramps.						\$710,000
5	Community of Fort Klamath (Oregon Highway 62):	Relocate sidewalk obstructions; install new sidewalks and curb ramps; construct sidewalks in curb areas and provide ADA crossings.						\$460,000
6	City of Chiloquin (Oregon Highway 422):	Relocate sidewalk obstructions; install new sidewalks and curb ramps; replace curbs and storm system from railroad tracks to Tribal Center.						\$450,000
7	Keno							

CHAPTER 9 IMPLEMENTING POLICIES AND ORDINANCES

Full implementation of the Transportation System Plan (TSP) will also require selected amendments to the Klamath County Comprehensive Plan and the Klamath County Land Development Code. These recommended amendments are intended to ensure that the TSP is consistent with the Oregon Transportation Planning Rule (TPR). Because the scope of the TSP does not include the Klamath Falls urban area, the focus of the recommended plan and code amendments pertain to:

- Rural portions of the county and urban areas for the remaining cities;
- Protecting street and road operations including implementing access controls and conditions on new development;
- Encourage alternatives to automobile use by providing safe and convenient pedestrian and bicycle circulation; and
- Reduced parking requirements where possible.

Two general types of plan and ordinance amendments address the transportation system and supportive land use: they are either required by the TPR, or they are recommended to enhance the performance of the transportation system for Klamath County. The recommended amendments should be considered for adoption in addition to the TSP. The majority of the TPR provisions that relate to the plan and ordinance amendments can be found in Section 660-12-0045 of the TPR.

To fully comply with the TPR, the County will need to address each element of section -045 of the TPR. For instance, subsection (1) of the TPR requires local government regulations to clarify the land use approval process for transportation projects. The County's Land Development Code needs to be updated to indicate how transportation projects are processed for non-resource zones.

It is anticipated that complete amendments – to address the TPR and the TSP - will be addressed in the County's upcoming Comprehensive Plan and Land Development Code Update project (year 2009-2010).

PROPOSED AMENDMENTS - COMPREHENSIVE PLAN FOR KLAMATH COUNTY

The comprehensive plan is generally consistent with the TPR and the TSP, however, there are several areas where the policy language should be clarified or strengthened. The recommended amendments are described below. Deleted text is shown with a ~~strike through~~ and new text is shown in **bold**.

Goal 5, Policy 28	The County shall encourage efficient energy design in and of proposed subdivisions by encouraging proper building energy-efficient design and orientation as well as efficient circulation for vehicles, pedestrians and bicyclists.
Goal 12, Policy 7	The County shall encourage , in coordination with private developers , local governments and ODOT , shall encourage appropriate improvements to improve the convenience and safety of pedestrian and bicycle transportation throughout the County.
Goal 13, Policy 1	The County shall encourage the use of renewable and efficient energy sources in residential, commercial, and industrial development, as well as energy-efficient forms of transportation.
Goal 13, Policy 3	New developments and neighborhoods that are large enough to support neighborhood-serving land uses (e.g., shopping centers, schools, parks) may be created , shall be encouraged to include such uses to reduce the need for long-distance trips.

PROPOSED AMENDMENTS - KLAMATH COUNTY LAND DEVELOPMENT CODE

The Land Development Code is generally consistent with the TPR and the TSP, however, there are several areas where the code language should be clarified or amended to comply with TPR requirements. The recommended amendments are described below. Deleted text is shown with a ~~strike through~~ and new text is shown in **bold**.

41.060 N.	Vehicular, pedestrian, and bicycle access and circulation as required by Article 71. <i>Comment: This amendment is recommended to recognize other travel modes besides the automobile.</i>
46.030 B. 5	The street plan for the proposed subdivision will permit the development of adjoining land in a safe and efficient manner for vehicles, pedestrians, and bicyclists in accordance with the Comprehensive Plan and this code; <i>Comment: This amendment is recommended to recognize other travel modes besides the automobile.</i>

62.040	<p>Front setbacks of 25 feet are required for the CN, CG, CR, and CT zones. This standard should be reduced to 0 feet (for areas inside the Klamath Falls UGB) and to 5 feet (for areas outside the Klamath Falls UGB).</p> <p><i>Comment: While creating a good pedestrian environment is not a TPR requirement, it is very difficult to attain between major streets and parking areas. People generally walk in these places because they <u>have to</u> and not because they <u>want to</u>. Required setbacks such as these encourage commercial development to have parking in the front and the building in the rear. New commercial development should at least be given the option of locating the building near the street with parking to the rear or side.</i></p>
68.030	<p>The off-street parking requirement for “Shopping Centers/Department Stores” of 5 spaces per 1,000 square feet of gross floor area should be reduced to 3.5 spaces per 1,000 square feet.</p> <p><i>Comment: Retail developers often want to have 5 spaces per 1,000 square feet, but this may be excessive for this type of commercial use where different businesses allow informal shared parking to reduce the demand. The TPR encourages parking reductions where practical.</i></p>
68.030	<p>The following bicycle parking standards are recommended:</p> <ul style="list-style-type: none"> ▪ 1 space per multiple family residence for project over 4 units; ▪ 1 space per classroom for primary and secondary schools; and ▪ 1 space per 10 required vehicle spaces for all other uses with a 2-space minimum. <p><i>Comment: Bicycle parking is required by Section 660-12-0045 (3). These standards are intended to provide a minimum amount of bicycle parking recognizing currently low demand. It is recommended that the County focus on providing a modest number of well-designed and located facilities.</i></p>
68.070.A	<p>A compact parking space dimension should be added and compact spaces should be allowed for up to 25% of the required number of parking spaces.</p> <p><i>Comment: this is standard in most zoning codes and will help stretch economic development dollars and reduce unnecessary paving.</i></p>
71	<p>Vehicular Access and Circulation. <i>Comment: <u>See the recommendations in Chapter 7</u> for road standards and access management – modify article 71 standards to be consistent with the TSP.</i></p>
71.040.H	<p><i>Comment: Add bicycle path and sidewalk or pedestrian path widths.</i></p>
83.040.C.7.a	<p>A circulation plan indicating proposed circulation for vehicles, pedestrians, and bicyclists, and . . . <i>Comment: PUD's should have safe and efficient circulation for all modes of travel.</i></p>
88.060	<p>The approval section should have an additional criterion related to circulation such as:</p> <p>G. Safe and efficient circulation shall be incorporated into the design for vehicles, pedestrians, and bicyclists to the extent practical.</p> <p><i>Comment: Destination resorts should be designed to encourage efficient travel, especially by walking and bicycling to reduce the need for automobile use while people are visiting the resort.</i></p>

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APPENDICES

Appendix A	Field Inventory of Major County Roads.....	A-A
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Appendices

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Appendices

Appendix A – Klamath County Transportation System Field Inventory

Appendix B – County Bridge Inventory

Appendix C – ODOT-Owned Bridges in Klamath County

Appendix D – ODOT Highway Road Conditions

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Appendix A – Field Inventory of Major County Roads

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Klamath County Transportation System Field Inventory

1=asphalt
 2=portland concrete
 3=other
 0=none
 1=paint
 2=CLT
 3=median
 0=none
 1=lane
 2=shoulder
 3=path
 0=no
 1=yes
 0=no
 1=yes
 0=no
 1=yes
 1=Freeflow
 2=Stop Sign
 3=Signal
 4=Yield
 VG
 G
 F
 P
 VP
 0 = State
 1 = County
 2 = Frst Serv.
 3 = Other

Street Name	Street From	Street To	Surface Type	No. Lanes	School Zone	Posted Speed	Median Type	Bike Lane	On-Street Parking	Curbs	Sidewalk	Traffic Control	Street Condition	Jurisdiction	ROW width	Notes
Chiloquin HWY 422	OR 62	US 97	1	1	N	-	1	2	0	0	0	1	G	0		Needs Speed limit signs
Chiloquin HWY 422	US 97	OR 62	1	1	N	-	1	2	0	0	0	2	G	0		Needs Speed limit signs
Chiloquin HWY 422	US 97	Chiloquin (town)	1	1	N	40	1	0	0	0	0	1	F	0		
Chiloquin HWY 422	Chiloquin (town)	US 97	1	1	N	55	1	0	0	0	0	1	F	0		
Crecent Lake HWY	OR 58	Crecent Lake RD	1	1	N	-	1	0	0	0	0	1	P	0		
Crecent Lake HWY	Crecent Lake RD	OR 58	1	1	N	-	1	0	0	0	0	2	P	0		
Market ST (Bonanza)	OR 70	Bly Mountain Cutoff	1	1	N	25	1	0	0	0	0	1	F	0		
Market ST (Bonanza)	Bly Mountain Cutoff	OR 70	1	1	N	25	1	0	0	0	0	1	F	0		
Midland HWY	US 97	Tingley LN	1	1	N	-	1	0	0	0	0	1	F	0		
Midland HWY	Tingley LN	US 97	1	1	N	-	1	0	0	0	0	2	F	0		
OR 138	US 97	W. County Line	1	1	N	55	1	2	0	0	0	1	G	0		
OR 138	W. County Line	US 97	1	1	N	55	1	2	0	0	0	2	G	0		
OR 140	E. County Line	Sprague River RD	1	1	N	35,45,55	1	0	0	0	0	1	F	0		
OR 140	Sprague River RD	E. County Line	1	1	N	35,45,55	1	0	0	0	0	1	F	0		
OR 140	Sprague River RD	Bliss RD	1	1	N	-	1	0	0	0	0	1	F	0		
OR 140	Bliss RD	Sprague River RD	1	1	N	-	1	0	0	0	0	1	F	0		
OR 140	Bliss RD	Poe Valley RD S.	1	1	N	-	1	0	0	0	0	1	F	0		
OR 140	Poe Valley RD S.	Bliss RD	1	1	N	-	1	0	0	0	0	1	F	0		
OR 140	Poe Valley RD S.	OR 39 (S. turn)	1	1	N	-	1	0	0	0	0	1,3	F	0		
OR 140	OR 39	Poe Valley RD S.	1	1	N	-	1	0	0	0	0	1	F	0		
OR 140	Westward turn	OR 39	1	1	N	45,55	1	0	0	0	0	3	F	0		
OR 140	OR 39	OR 66	1	1	N	55	1	2	0	0	0	1	F	0		
OR 140	OR 66	OR 39	1	1	N	55	1	2	0	0	0	2	F	0		
OR 140	OR 66	Lakeshore Dr	1	1,2	N	55	1	2	0	0	0	1	F	0		
OR 140	Lakeshore Dr	OR 66	1	1,2	N	-	1	2	0	0	0	2	F	0		
OR 140	Lakeshore Dr	Westside RD	1	1	N	-	1	0	0	0	0	1	F/G	0		
OR 140	Westside RD	Lakeshore Dr	1	1	N	-	1	0	0	0	0	1	F/G	0		
OR 140	Westside RD	W. County Line	1	1	N	55	1	0	0	0	0	1	G	0		
OR 140	W. County Line	Westside RD	1	1	N	-	1	0	0	0	0	1	G	0		
OR 140 (turn S.)	OR 39	Westward turn	1	1	N	45,55	1	0	0	0	0	1	F	0		
OR 39	S. County Line	OR 50 (KF Malin HWY)	1	1	N	-	1	2	0	0	0	1	F	0		
OR 39	OR 50 (KF Malin HWY)	S. County Line	1	1	N	-	1	2	0	0	0	1	F	0		
OR 39	OR 50 (KF Malin HWY)	Main ST (in Merrill)	1	1	N	30,45,55	1	0	0	0	0,1	1	F	0		
OR 39	Main ST (in Merrill)	OR 50 (KF Malin HWY)	1	1	N	30,45,55	1	0	0	0	0,1	1	F	0		
OR 39	Main ST (in Merrill)	Cross RD/Dehlinger LN	1	1	N	45,50	1	2	0	0	0	1	F	0		
OR 39	Cross RD/Dehlinger LN	Main ST (in Merrill)	1	1	N	45	1	2	0	0	0	1	F	0		
OR 39	Cross RD/Dehlinger LN	OR 140 (west turn)	1	1	N	55	1	0	0	0	0	1	F	0		
OR 39	OR 140 (west turn)	Cross RD/Dehlinger LN	1	1	N	55	1	0	0	0	0	1	F	0		
OR 39	OR 140 (west turn)	Jnct OR 39/OR140	1	1	N	45,55	1	0	0	0	0	3	F	0		
OR 39	Jnct OR 39/OR140	OR 140 (west turn)	1	1	N	45,55	1	0	0	0	0	1	F	0		
OR 50 (KF Malin HWY)	S. County Line	S. Malin RD (in Malin)	1	1	N	30	1	0	0	0	0	1	F	0		
OR 50 (KF Malin HWY)	S. Malin RD (in Malin)	S. County Line	1	1	N	55	1	0	0	0	0	1	F	0		
OR 50 (KF Malin HWY)	N. on Broadway	Market	1	1	Y	20	1	2	1	0	0	1	F	0		
OR 50 (KF Malin HWY)	Market	S. on Broadway	1	1	Y	20	1	2	1	0	0	1	F	0		
OR 50 (KF Malin HWY)	Broadway (in Malin)	Harpold RD	1	1	Y	20,55	1	2	0	0	0	1	G	0		
OR 50 (KF Malin HWY)	Harpold RD	Broadway (in Malin)	1	1	Y	20,30	1	2	0	0	0	1	G	0		
OR 50 (KF Malin HWY)	Harpold RD	OR 39	1	1	N	-	1	2	0	0	0	1	G	0		
OR 50 (KF Malin HWY)	OR 39	Harpold RD	1	1	N	-	1	2	0	0	0	1	G	0		
OR 58	W. Odel Rd	Crecent lake Junc.	1	1	N	55,45	1	2	0	0	0	1	F	0		
OR 58	Crecent lake Junc.	W. Odel Rd	1	1	N	55	1	2	0	0	0	1	F	0		
OR 58	Crecent lake Junc.	Crecent Cutoff Rd	1	1	N	-	1	2	0	0	0	1	F	0		
OR 58	Crecent Cutoff Rd	Crecent lake Junc.	1	1	N	-	1	2	0	0	0	1	F	0		
OR 58	Crecent Cutoff Rd	US 97	1	1,2	N	-	1	2	0	0	0	1	F	0		
OR 58	US 97	Crecent Cutoff Rd	1	1,2	N	-	1	2	0	0	0	1	F	0		
OR 62	US 97	Chiloquin HWY 422	1	1	N	-	1	2	0	0	0	1	G	0		
OR 62	Chiloquin HWY 422	US 97	1	1	N	-	1	2	0	0	0	1,2	G	0		
OR 62	Chiloquin HWY 422	Fort Klamath	1	1	N	30,40	1	2	0	0	0	1	F	0		

1=asphalt
 2=portland concrete
 3=other

0=none
 1=paint
 2=CLT
 3=median

0=none
 1=lane
 2=shoulder
 3=path

0=no
 1=yes

0=no
 1=yes

0=no
 1=yes

1=Freeflow
 2=Stop Sign
 3=Signal
 4=Yield

VG
 G
 F
 P
 VP

0 = State
 1 = County
 2 = Frst Serv.
 3 = Other

Street Name	Street From	Street To	Surface Type	No. Lanes	School Zone	Posted Speed	Median Type	Bike Lane	On-Street Parking	Curbs	Sidewalk	Traffic Control	Street Condition	Jurisdiction	ROW width	Notes
OR 62	Fort Klamath	Chiloquin HWY 422	1	1	N	40,55	1	2	0	0	0	1	F	0		
OR 66	OR 140	Orindale RD	1	1	N	35,45	1	1	0	0	0	1	VG	0		
OR 66	Orindale RD	OR 140	1	1	N	35,45	1	1	0	0	0	1	VG	0		
OR 66	Orindale RD	Keno Worden RD	1	1	Y/N	35,45,50,55	1	0,2	0	0	0	1	F/G/VG	0		
OR 66	Keno Worden RD	Orindale RD	1	1	Y/N	35,50,55	1	0,2	0	0	0	1	F/G/VG	0		
OR 66	Keno Worden RD	W. County Line	1	1	N	55	1	0	0	0	0	1	G	0		
OR 66	W. County Line	Keno Worden RD	1	1	N	-	1	0	0	0	0	1	G	0		
OR 70	OR 140	Casebeer RD-Bonanza	1	1	N	45,55	1	0	0	0	0	1	F	0		
OR 70	Casebeer RD-Bonanza	OR 140	1	1	N	35,55	1	0	0	0	0	2	F	0		
OR 70	Casebeer RD-Bonanza	Market ST (in Bonanza)	1	1	Y	25	1	2	1	0	0	1	F	0		
OR 70	Market ST (in Bonanza)	Casebeer RD-Bonanza	1	1	Y	25	1	2	1	0	0	1	F	0		
US 97	N. County Line	Crecent Cutoff Rd	1	1,2	N	40,55	1	2	0	0	0	1	F	0		
US 97	Crecent Cutoff Rd	N. County Line	1	1,2	N	55	1	2	0	0	0	1	F	0		
US 97	Crecent Cutoff Rd	OR 58	1	1,2	N	55	1	2	0	0	0	1	F	0		
US 97	OR 58	Crecent Cutoff Rd	1	1,2	N	40,55	1	2	0	0	0	1	F	0		
US 97	OR 58	Chemult (town)	1	1,2	N	40,55	1	2	0	0	0	1	P	0		
US 97	Chemult (town)	OR 58	1	1,2	N	55	1	2	0	0	0	1	P	0		
US 97	Chemult (town)	Beaver Marsh (town)	1	1,2	N	55	1	2	0	0	0	1	F	0		
US 97	Beaver Marsh (town)	Chemult (town)	1	1,2	N	40,55	1	2	0	0	0	1	F	0		
US 97	Beaver Marsh (town)	OR 138	1	1,2	N	50,55	1	2	0	0	0	1	F	0		
US 97	OR 138	Beaver Marsh (town)	1	1,2	N	50,55	1	2	0	0	0	1	F	0		
US 97	OR 138	Silver Lake RD	1	1,2	N	55	1	2	0	0	0	1	F	0		
US 97	Silver Lake RD	OR 138	1	1,2	N	55	1	2	0	0	0	1	F	0		
US 97	Silver Lake RD	Collier Mem. St. Prk	1	1,2	N	55	1	2	0	0	0	1	F	0		very few speed limit signs
US 97	Collier Mem. St. Prk	Silver Lake RD	1	1,2	N	55	1	2	0	0	0	1	F	0		very few speed limit signs
US 97	Collier Mem. St. Prk	Chiloquin HWY 422	1	1,2	N	-	1	2	0	0	0	1	F	0		
US 97	Chiloquin HWY 422	Collier Mem. St. Prk	1	1,2	N	-	1	2	0	0	0	1	F	0		
US 97	Chiloquin HWY 422	OR 62	1	1,2	N	55	1	2	0	0	0	1	G	0		
US 97	OR 62	Chiloquin HWY 422	1	1,2	N	-	1	2	0	0	0	1	G	0		
US 97	OR 62	Modoc Point (town)	1	1,2	N	55	1	2	0	0	0	1	G	0		
US 97	Modoc Point (town)	OR 62	1	1,2	N	555	1	2	0	0	0	1	G	0		
US 97	Modoc Point (town)	N. Side of K. Falls	1	1,2	N	55	1,2	2	0	0	0	1	G	0		
US 97	N. Side of K. Falls	Modoc Point (town)	1	1,2	N	50,55	1,2	2	0	0	0	1	G	0		
US 97	N. Side of K. Falls	OR 140 / OR 66	1	1,2	N	50,55	1	2	0	0	0	1	G	0		
US 97	OR 140 / OR 66	N. Side of K. Falls	1	1,2	N	50,55	1	2	0	0	0	1	G	0		
US 97	OR 140 / OR 66	Midland HWY	1	1,2	N	-	1,3	2	0	0	0	1	G	0		
US 97	Midland HWY	OR 140 / OR 66	1	1,2	N	-	1,3	2	0	0	0	1	G	0		
US 97	Midland HWY	Old Midland RD	1	1	N	-	1	2	0	0	0	1	G	0		
US 97	Old Midland RD	Midland HWY	1	1	N	55	1	2	0	0	0	1	G	0		
US 97	Old Midland RD	Keno Worden RD	1	1	N	55	1	2	0	0	0	1	G	0		
US 97	Keno Worden RD	Old Midland RD	1	1	N	55	1	2	0	0	0	1	G	0		
US 97	Keno Worden RD	S. County Line	1	1	N	55	1	2	0	0	0	1	G	0		
US 97	S. County Line	Keno Worden RD	1	1	N	55	1	2	0	0	0	1	G	0		
Balsam DR	OR 66	W. Line of UGB	1	1	N	35,55	1	0	0	0	0	1	F	1		
Balsam DR	W. Line of UGB	OR 66	1	1	N	35,55	1	0	0	0	0	2	F	1		
Bly Mountain Cutoff	Market ST (Bonanza)	OR 140	1	1	N	-	1	0	0	0	0	2	F	1		Needs Speed limit signs
Bly Mountain Cutoff	OR 140	Market ST (Bonanza)	1	1	N	-	1	0	0	0	0	1	F	1		Needs Speed limit signs
Carroll Ave (Bonanza)	OR 70	switches to Harpold RD	1	1	N	25	1	0	0	0	0	1	G	1		
Carroll Ave (Bonanza)	switches to Harpold RD	OR 70	1	1	N	25	1	0	0	0	0	2	G	1		
Cascade Lakes HWY	Crecent Cutoff Rd	N. County Line	1	1	N	-	1	2	0	0	0	1	G	1		
Cascade Lakes HWY	N. County Line	Crecent Cutoff Rd	1	1	N	-	1	2	0	0	0	2	G	1		
Chiloquin RD	Modoc Point RD	OR 62	1	1	N	-	1	0	0	0	0	2	G	1		Needs Speed limit signs
Chiloquin RD	OR 62	Modoc Point RD	1	1	N	-	1	0	0	0	0	2	G	1		Needs Speed limit signs
Chiloquin RD	OR 62	US 97	1	1	N	-	1	0	0	0	0	2	F	1		Needs Speed limit signs
Chiloquin RD	US 97	OR 62	1	1	N	-	1	0	0	0	0	2	F	1		Needs Speed limit signs
Chiloquin RD	US 97	Chiloquin HWY 422	1	1	N	30,40	1	2	0	0	0	2	G	1		
Chiloquin RD	Chiloquin HWY 422	US 97	1	1	N	40,55	1	2	0	0	0	2	G	1		
Clover Creek RD	OR 66	Dead Indian Memorial R	1	1	N	-	1	0	0	0	0	2	F	1		Needs Speed limit signs
Clover Creek RD	Dead Indian Memorial R	OR 66	1	1	N	-	1	0	0	0	0	2	F	1		Needs Speed limit signs

1=asphalt
2=portland concrete
3=other

0=none
1=paint
2=CLT
3=median
0=none
1=lane
2=shoulder
3=path
0=no
1=yes
0=no
1=yes
0=no
1=yes

1=Freeflow
2=Stop Sign
3=Signal
4=Yield
VG
G
F
P
VP
0 = State
1 = County
2 = Frst Serv.
3 = Other

Street Name	Street From	Street To	Surface Type	No. Lanes	School Zone	Posted Speed	Median Type	Bike Lane	On-Street Parking	Curbs	Sidewalk	Traffic Control	Street Condition	Jurisdiction	ROW width	Notes
Crecent Cutoff RD	OR 58	Cascase Lks HWY	1	1	N	55	1	2	0	0	0	1	G	1		
Crecent Cutoff RD	Cascase Lks HWY	OR 58	1	1	N	-	1	2	0	0	0	2	G	1		
Crecent Cutoff RD	Cascase Lks HWY	US 97	1	1	N	45,55	1	2,3	0	0	0	2	F	1		
Crecent Cutoff RD	US 97	Cascase Lks HWY	1	1	N	45,55	1	2,3	0	0	0	1	F	1		
Cross RD	Spring Lake RD	OR 39	1	1	N	-	1	0	0	0	0	2	F	1		
Cross RD	Spring Lake RD	Tingley LN	1	1	N	-	1	0	0	0	0	1	F	1		
Cross RD	Tingley LN	Spring Lake RD	1	1	N	-	1	0	0	0	0	1	F	1		
Cross RD	Tingley LN	US 97	1	1	N	-	1	0	0	0	0	2	G	1		
Cross RD	US 97	Tingley LN	1	1	N	-	1	0	0	0	0	1	G	1		
Cross RD (Lw.K. HWY)	OR 39	Spring Lake RD	1	1	N	-	1	0	0	0	0	1	F	1		
Crystal Springs RD	S. Poe Valley RD	Reader RD	1	1	N	-	1	0	0	0	0	2	F	1		Needs Speed limit signs
Crystal Springs RD	Reader RD	S. Poe Valley RD	1	1	N	-	1	0	0	0	0	1	F	1		Needs Speed limit signs
Dead Indian Memorial Memorial RD	W. County Line	Clover Creek RD	1	1	N	-	1	0	0	0	0	1	G	1		
Dead Indian Memorial Memorial RD	Clover Creek RD	W. County Line	1	1	N	-	1	0	0	0	0	1	G	1		
Dead Indian Memorial Memorial RD	Clover Creek RD	OR 140	1	1	N	-	1	0	0	0	0	2	G	1		
Dead Indian Memorial Memorial RD	OR 140	Clover Creek RD	1	1	N	-	1	0	0	0	0	1	G	1		
Dehlinger LN	Hill RD	OR 39	1	1	N	-	1	0	0	0	0	2	G	1		
Dehlinger LN	OR 39	Hill RD	1	1	N	-	1	0	0	0	0	2	G	1		
E. Langell Valley RD	OR 70	Gerber RD	1	1	N	-	1	0	0	0	0	1	F	1		
E. Langell Valley RD	Gerber RD	OR 70	1	1	N	25	1	0	0	0	0	2	F	1		
E. Langell Valley RD	Gerber RD	W. Langell Valley RD	1	1	N	-	1	0	0	0	0	1	F	1		
E. Langell Valley RD	W. Langell Valley RD	Gerber RD	1	1	N	-	1	0	0	0	0	1	F	1		
Elder RD	Elder ST/Crane ST	Gerber Ranch RD	1	1	N	-	1	0	0	0	0	1	F	1		
Elder RD	Gerber Ranch RD	Elder ST/Crane ST	1	1	N	-	1	0	0	0	0	1	F	1		
Elder ST	OR 140	Elder RD/Crane ST	1	1	N	20,25	1	0	0	0	0	1	F	1		
Elder ST	Elder ST/Crane ST	OR 140	1	1	N	20,25	1	0	0	0	0	2	F	1		
Gale RD	W. Langell Valley RD	E. Langell Valley RD	1	1	N	-	1	0	0	0	0	2	F	1		
Gale RD	E. Langell Valley RD	W. Langell Valley RD	1	1	N	-	1	0	0	0	0	2	F	1		
Gerber Ranch RD	Elder RD	Nfd 375 Rd	3	1	N	-	0	0	0	0	0	1	VP	1		
Gerber Ranch RD	Nfd 375 Rd	Elder RD	3	1	N	-	0	0	0	0	0	1	VP	1		
Gerber RD	Nfd 3814 Rd	E. Langell Valley RD	1	1	N	-	1	0	0	0	0	2	F	1		Needs Speed limit signs
Gerber RD	E. Langell Valley RD	Nfd 3814 Rd	1	1	N	-	1	0	0	0	0	1	F	1		
Gift RD	W. Langell Valley RD	E. Langell Valley RD	1	1	N	-	1	0	0	0	0	4	G	1		
Gift RD	E. Langell Valley RD	W. Langell Valley RD	1	1	N	-	1	0	0	0	0	4	G	1		
Harpold RD	Carroll Ave	S. Poe Valley RD	1	1	N	-	1	0	0	0	0	1	F	1		
Harpold RD	S. Poe Valley RD	Carroll Ave	1	1	N	-	1	0	0	0	0	1	F	1		
Harpold RD	S. Poe Valley RD	S. County Line	1	1	N	-	1	0	0	0	0	1	F	1		
Harpold RD	S. County Line	S. Poe Valley RD	1	1	N	-	1	0	0	0	0	1	F	1		
Hill RD	Reader RD	Dehlinger LN	1	1	N	-	1	0	0	0	0	1	G	1		
Hill RD	Dehlinger LN	Reader RD	1	1	N	-	1	0	0	0	0	1	G	1		
Hill RD	Dehlinger LN	OR 39	1	1	N	25	1	0	0	0	0	2	G	1		
Hill RD	OR 39	Dehlinger LN	1	1	N	-	1	0	0	0	0	1	G	1		
Homedale RD	OR 140	Henley RD	1	1	N	-	1	0	0	0	0	2	F	1		
Homedale RD	Henley RD	OR 140	1	1	N	-	1	0	0	0	0	2	F	1		
Ivory Pine RD	Nfd 288	OR 140	1	1	N	-	1	0	0	0	0	2	F	1		
Ivory Pine RD	OR 140	Nfd 288	1	1	N	-	1	0	0	0	0	1	F	1		
Keno Worden RD	OR 66	US 97	1	1	Y/N	35	1	0	0	0	0	2	G	1		No 55mph signs
Keno Worden RD	US 97	OR 66	1	1	Y/N	35	1	0	0	0	0	2	G	1		No 55mph signs
Lava Odell RD	Closed for Winter	Closed for Winter	-	-	-	-	-	-	-	-	-	-	-	1		
Lava Odell RD	Closed for Winter	Closed for Winter	-	-	-	-	-	-	-	-	-	-	-	1		
Loosley RD	OR 62	Weed Rd	1	1	N	-	1	0	0	0	0	4	F	1		Needs Speed limit signs
Loosley RD	Weed Rd	OR 62	1	1	N	-	1	0	0	0	0	2	F	1		Needs Speed limit signs
Lower Kl. Lake RD	Cross RD	Township RD	1	1	N	-	1	0	0	0	0	2	F	1		Needs Speed limit signs
Lower Kl. Lake RD	Township RD	Cross RD	1	1	N	-	1	0	0	0	0	2	F	1		Needs Speed limit signs
Modoc Point RD	US 97	Chiloquin RD	1	1	N	-	1	0	0	0	0	1	F	1		
Modoc Point RD	Chiloquin RD	US 97	1	1	N	35	1	0	0	0	0	2	F	1		
Modoc Point RD	Chiloquin RD	OR 62	1	1	N	-	1	0	0	0	0	2	F	1		
Modoc Point RD	OR 62	Chiloquin RD	1	1	N	-	1	0	0	0	0	1	F	1		
N. Poe Valley RD	OR 140	Bridge to Harpold RD	1	1	N	-	1	0	0	0	0	2	G	1		

1=asphalt
2=portland concrete
3=other

0=none 0=none
1=paint 1=lane
2=CLT 2=shoulder
3=median 3=path
0=no 0=no 0=no
1=yes 1=yes 1=yes

VG
1=Freeflow G
2=Stop Sign F
3=Signal P
4=Yield VP
0 = State
1 = County
2 = Frst Serv.
3 = Other

Street Name	Street From	Street To	Surface Type	No. Lanes	School Zone	Posted Speed	Median Type	Bike Lane	On-Street Parking	Curbs	Sidewalk	Traffic Control	Street Condition	Jurisdiction	ROW width	Notes
N. Poe Valley RD	Bridge to Harpold RD	OR 140	1	1	N	-	1	0	0	0	0	2	G	1		
Pine Grove	OR 140	Miracle Dr	1	1	N	-	1	0	0	0	0	1	F	1		
Pine Grove	Miracle Dr	OR 140	1	1	N	-	1	0	0	0	0	2	F	1		
Reeder RD	OR 140	Hill RD	1	1	N	45	1	0	0	0	0	4	G	1		
Reeder RD	Hill RD	OR 140	1	1	N	45	1	0	0	0	0	2	G	1		
Red Fir RD	Nfd 288 Rd (N)	Nfd 288 Rd (S)	1	1	N	-	1	0	0	0	0	1	F	1		
Red Fir RD	Nfd 288 Rd (S)	Nfd 288 Rd (N)	1	1	N	-	1	0	0	0	0	1	F	1		
S. Merrill RD	S. County Line	OR 39	1	1	N	25	1	0	0	0	0	1	F	1		
S. Merrill RD	OR 39	S. County Line	1	1	N	25	1	0	0	0	0	2	F	1		
S. Poe Valley RD	OR 140	Harpold RD	1	1	N	-	1	0	0	0	0	4	G	1		
S. Poe Valley RD	Harpold RD	OR 140	1	1	N	-	1	0	0	0	0	2	G	1		
Seven Mile RD	Weed Rd	Westside RD	1	1	N	-	1	0	0	0	0	1	F	1		Needs Speed limit signs
Seven Mile RD	Westside RD	Weed Rd	1	1	N	-	1	0	0	0	0	4	F	1		Needs Speed limit signs
Short RD	OR 39	Reader RD	1	1	N	-	1	0	0	0	0	2	G	1		
Short RD	Reader RD	OR 39	1	1	N	-	1	0	0	0	0	2	G	1		
Silver Lake RD	US 97	Nfd 7633 Rd	1	1	N	-	1	0	0	0	0	1	VG	1		Needs Speed limit signs
Silver Lake RD	Nfd 7633 Rd	US 97	1	1	N	-	1	0	0	0	0	2	VG	1		Needs Speed limit signs
Silver Lake RD	Nfd 7633 Rd	E. County Line	1	1	N	-	1	0	0	0	0	1	VG	1		
Silver Lake RD	E. County Line	Nfd 7633 Rd	1	1	N	-	1	0	0	0	0	1	VG	1		
Sprague River RD	Chiloquin (town)	Williamson River RD	1	1	N	-	1	0	0	0	0	1	G/F	1		Needs Speed limit signs
Sprague River RD	Williamson River RD	Chiloquin (town)	1	1	N	30	1	0	0	0	0	2	G/F	1		
Sprague River RD	Williamson River RD	Lone Pine (town)	1	1	N	-	1	0	0	0	0	1	G/F	1		
Sprague River RD	Lone Pine (town)	Williamson River RD	1	1	N	-	1	0	0	0	0	1	G/F	1		
Sprague River RD	Lone Pine (town)	Bliss RD	1	1	N	35,45	1	0	0	0	0	1	F	1		
Sprague River RD	Bliss RD	Lone Pine (town)	1	1	N	45,55	1	0	0	0	0	1	F	1		
Sprague River RD	Bliss RD	OR 140	1	1	N	45,55	1	0	0	0	0	2	F	1		
Sprague River RD	OR 140	Bliss RD	1	1	N	35,45	1	0	0	0	0	1	F	1		
Spring Lake RD	Cross RD (Lw.K. HWY)	Old Midland HWY	1	1	N	-	1	0	0	0	0	2	G	1		
Spring Lake RD	Old Midland HWY	Cross RD	1	1	N	-	1	0	0	0	0	2	G	1		
Spring Lake RD	Old Midland HWY	Joe Wright RD	1	1	N	-	1	0	0	0	0	2	G	1		
Spring Lake RD	Joe Wright RD	Old Midland HWY	1	1	N	-	1	0	0	0	0	2	G	1		
Tingley LN	Cross RD	Midland HWY/Miller Is.	1	1	N	-	1	0	0	0	0	2	G	1		
Tingley LN	Midland HWY/Miller Is.	Cross RD	1	1	N	-	1	0	0	0	0	2	G	1		
Tingley LN	Midland HWY/Miller Is.	OR 140	1	1	N	-	1	0	0	0	0	2	F	1		
Tingley LN	OR 140	Midland HWY/Miller Is.	1	1	N	-	1	0	0	0	0	1	F	1		
Township RD	US 97	Lower Kl. Lake RD	1	1	N	-	1	0	0	0	0	2	F	1		Needs Speed limit signs
Township RD	Lower Kl. Lake RD	US 97	1	1	N	-	1	0	0	0	0	2	F	1		Needs Speed limit signs
Transformer RD	Harpold RD	N. Maline RD	1	1	N	-	1	0	0	0	0	2	F	1		
Transformer RD	N. Maline RD	Harpold RD	1	1	N	-	1	0	0	0	0	2	F	1		
W. Langell Valley RD	E. Langell Valley RD	Gale Rd (HotSprings)	1	1	N	-	1	0	0	0	0	1	F	1		Needs Speed limit signs
W. Langell Valley RD	Gale Rd (HotSprings)	E. Langell Valley RD	1	1	N	-	1	0	0	0	0	1	F	1		Needs Speed limit signs
W. Langell Valley RD	Gale Rd (HotSprings)	Harpold RD	1	1	N	-	1	0	0	0	0	2	F	1		Needs Speed limit signs
W. Langell Valley RD	Harpold RD	Gale Rd (HotSprings)	1	1	N	-	1	0	0	0	0	1	F	1		Needs Speed limit signs
Weed RD	Loose RD	OR 62	1	1	N	-	1	0	0	0	0	2	F	1		Needs Speed limit signs
Weed RD	OR 62	Loose RD	1	1	N	-	1	0	0	0	0	1	F	1		Needs Speed limit signs
Westside RD	Seven Mile RD	OR 140	1	1	N	-	1	2	0	0	0	2	G	1		Needs Speed limit signs
Westside RD	OR 140	Seven Mile RD	1	1	N	-	1	2	0	0	0	1	G	1		Needs Speed limit signs
Williamson River RD	Sprague River RD	Lone Pine RD	1	1	N	-	1	0	0	0	0	1	G	1		
Williamson River RD	Lone Pine RD	Sprague River RD	1	1	N	-	1	0	0	0	0	2	G	1		
Williamson River RD	Lone Pine RD	Nfd 46 RD	1	1	N	-	1	0	0	0	0	1	G	1		
Williamson River RD	Nfd 46 RD	Lone Pine RD	1	1	N	-	1	0	0	0	0	1	G	1		
Willow Valley RD	E. Langell Valley RD	S. County Line	3	1	N	-	0	0	0	0	0	1	P	1		
Willow Valley RD	S. County Line	E. Langell Valley RD	3	1	N	-	0	0	0	0	0	4	P	1		
Willow Valley RD	S. County Line	E. County Line	3	1	N	-	0	0	0	0	0	1	P	1		
Willow Valley RD	E. County Line	S. County Line	3	1	N	-	0	0	0	0	0	1	P	1		
N.F. Route 27	Nfd 46 RD	N. County Line	1	1	N	-	1	0	0	0	0	1	F	2		
N.F. Route 27	N. County Line	Nfd 46 RD	1	1	N	-	1	0	0	0	0	1	F	2		
N.F. Route 27	Nfd 46 RD	Transition to Red Fir	1	1	N	-	1	0	0	0	0	1	F	2		
N.F. Route 27	Transition to Red Fir	Nfd 46 RD	1	1	N	-	1	0	0	0	0	1	F	2		

1=asphalt
 2=portland concrete
 3=other
 0=none
 1=paint
 2=CLT
 3=median
 0=none
 1=lane
 2=shoulder
 3=path
 0=no
 1=yes
 0=no
 1=yes
 0=no
 1=yes
 1=Freeflow
 2=Stop Sign
 3=Signal
 4=Yield
 VG
 G
 F
 P
 VP
 0 = State
 1 = County
 2 = Frst Serv.
 3 = Other

Street Name	Street From	Street To	Surface Type	No. Lanes	School Zone	Posted Speed	Median Type	Bike Lane	On-Street Parking	Curbs	Sidewalk	Traffic Control	Street Condition	Jurisdiction	ROW width	Notes
N.F. Route 27	Transit. From Red Fir	End (Nfd 30/Ivory Pn)	1	1	N	-	1	0	0	0	0	2	P/VP	2		
N.F. Route 27	End (Nfd 30/Ivory Pn)	Transit. From Red Fir	1	1	N	-	1	0	0	0	0	1	P/VP	2		
N.F. Route 375	Gerber Ranch RD	Nfd 3814 Rd	3	1	N	-	0	0	0	0	0	1	VP	2		
N.F. Route 375	Nfd 3814 Rd	Gerber Ranch RD	3	1	N	-	0	0	0	0	0	1	VP	2		
N.F. Route 3847	Nfd 375 Rd	Gerber RD	3	1	N	-	0	0	0	0	0	1	VP	2		COWS on the road!
N.F. Route 3847	Gerber RD	Nfd 375 Rd	3	1	N	-	0	0	0	0	0	1	VP	2		COWS on the road!
N.F. Route 46	Williamson River RD	Nfd 288 Rd	1	1	N	-	1	0	0	0	0	1	G	2		
N.F. Route 46	Nfd 288 Rd	Williamson River RD	1	1	N	-	1	0	0	0	0	1	G	2		
Cr. Lake N. HWY	Rim Drive	N. County Line	1	1	N	-	1	0	0	0	0	1	F	3		
Cr. Lake N. HWY	N. County Line	Rim Drive	1	1	N	-	1	0	0	0	0	1	F	3		
OR 62	Rim Drive	W. County Line	1	1	N	45	1	0	0	0	0	1	P/VP	3		
OR 62	W. County Line	Rim Drive	1	1	N	-	1	0	0	0	0	1	P/VP	3		
Rim Drive	OR 62	Rim Drive Fork	1	1	N	-	1	0	0	0	0	1	F	3		Road paint BARELY visible
Rim Drive	Rim Drive Fork	OR 62	1	1	N	45	1	0	0	0	0	2	F	3		Road paint BARELY visible
Rim Drive	Rim Drive Fork	Visitor's Center	1	1	N	15,25,35	1	0	0	0	0	1	F	3		Road paint BARELY visible
Rim Drive	Visitor's Center	Rim Drive Fork	1	1	N	25	1	0	0	0	0	1	F	3		Road paint BARELY visible
John Wright RD	Tingley LN	Spring Lake RD	1	1	N	-	1	0	0	0	0	1	G	?		
John Wright RD	Spring Lake RD	Tingley LN	1	1	N	-	1	0	0	0	0	2	G	?		
OR 62	Fort Klamath	Rim Drive	1	1	N	55	1	0	0	0	0	1	F	0,3		
OR 62	Rim Drive	Fort Klamath	1	1	N	30,40	1	0	0	0	0	1	F	0,3		

Appendix B –County Road Inventory

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Appendix B –County Road Inventory

ROAD NAME	NUMBER	PAVED	GRAVEL	UNIMPROVED
ABILENE STREET	594		0.08	
ADAMS POINT ROAD	1099	2.59		
AIRWAY DRIVE	880	1.12		
ALAMEDA AVE.	866	0.60		
ALGOMA ROAD	671	3.90		
ALLYN STREET	849	0.06		
ALPINE DRIVE	915	0.15		
ALT WAY	731	0.15		
ALTADENA DRIVE	752	0.13		
ALTAMONT DRIVE	877	2.82		
ALVA AVENUE	824	0.96	0.15	
AMBER AVENUE	798	0.14		
ANDREW DRIVE	936	0.22		
ANDERSON AVE.	874	1.19		
ANDERSON ROAD	984	4.46	0.38	
ANDERSON WAY	871	0.23		
ANGLE STREET	579	0.07		
ANKO COURT	1046	0.04		
ANKO STREET	1047	0.03		
ANTHONY STREET	1002	0.10		
APPALOOSA COURT	989	0.16		
ARANT ROAD	523	0.25		
ARNOLD AVENUE	716	0.10		
ARROYO COURT	707	0.03		
ARTHUR STREET	883	0.81		
ASH DRIVE	908	0.02		
ASHLEY COURT	757	0.03		
AURORA COURT	527	0.10		
AURORA DRIVE	526	0.23		
AUSTIN STREET	884	0.80	0.09	
AUTUMN AVENUE	646	0.16		0.10
AVALON PLACE	897	0.15		
AVALON STREET	835	0.50	0.50	
BALSAM DRIVE	782	1.95		3.11
BARNES WAY	841	0.15		
BARRY AVENUE	856	0.69		
BARRY DRIVE	583	0.14		
BARTLETT AVENUE	829	0.38		
BEAL ROAD	991	2.72		
BEAVER STREET	595		0.08	
BECKTON AVENUE	769	0.12		
BEDFIELD CEMETERY ROAD	1356		1.78	
BEL AIRE DRIVE	891	0.26		
BELLM DRIVE	733	0.05		
BEVERLY DRIVE	905	0.80		

ROAD NAME	NUMBER	PAVED	GRAVEL	UNIMPROVED
BISBEE STREET	825	1.81		
BLACKBERRY COURT	732	0.06		
BLISS ROAD	1057	2.48		
BLUE MOUNTAIN DRIVE	515	0.54		
BLY MOUNTAIN CUTOFF ROAD	1063	7.86		
BOARDMAN AVENUE	1312	0.90		
BOEHM STREET	626		0.23	
BOOTH ROAD	524	0.75		
BRENNAN DRIVE	601	0.09		
BRIARWOOD LANE	1339	0.12		
BRISTOL AVENUE	865	1.60	0.08	
BROADMORE STREET	927	0.51		
BROOKE DRIVE	845	0.09		
BROOKLYN AVENUE	898	0.07		
BROWN ROAD	1418		0.72	
BRYANT AVENUE	812	0.67		
BRYANT COURT	933	0.02		
BUCKMASTER STREET	1004	0.31		
BUESING ROAD	979	2.68		
BUNN ROAD	1204	2.38		
BUNN WAY	1205	0.98		
BURGDORF ROAD	1346	4.72		
BURNS STREET	899	0.24		
CABLE AVENUE	593	0.06		
CACKLER COURT	628	0.05		
CALIMESA WAY	741	0.09		
CALLAHAN ROAD	1086	0.82		
CAMPBELL ROAD	1210	5.51	3.99	
CANNON AVENUE	1322	0.86		
CARLON WAY	786	0.03		
CARLSON DRIVE	832	0.75		
CAROLINE STREET	557	0.14		
CASA WAY	840	0.13		
CASCADE LAKES HWY	1352	6.40		
CASEBEER ROAD	1077	2.52		
CHALET DRIVE	568	0.28		
CHAMBERS LANE	873	0.11		
CHEESE FACTORY ROAD	1088	0.76		
CHEMULT DEPOT STREET	621	0.07		
CHEMULT DUMP ROAD	606		0.43	
CHERRY WAY	826	0.09		
CHEYNE AVENUE	893	0.14		
CHEYNE ROAD	977	3.98		
CHILOQUIN RIDGE ROAD	652	2.09		
CHIN ROAD	982	1.35		
CHINCHALLA WAY	836	0.27		

ROAD NAME	NUMBER	PAVED	GRAVEL	UNIMPROVED
CHOLOX STREET	1049	0.04		
CINDER COURT	1005	0.09		
CLARK STREET	648	0.06		
CLIMAX AVENUE	834	0.67	0.23	
CLINTON AVENUE	886	0.74		
CLOVER CREEK ROAD	603	21.59		
COLLIER LANE	964	0.36		
COLLMAN DAIRY ROAD	792		0.39	
COLLMAN ROAD	958		0.82	
CORONADO WAY	709	0.42		
COTTAGE AVENUE	806	0.85		
COVINA COURT	746	0.03		
CRESENT CUTOFF ROAD	1351	12.25		
CREST STREET	828	1.15	0.42	
CROSBY AVENUE	1323	0.84		
CROSS ROAD	556	7.02		
CRYSTAL SPRINGS ROAD	976	4.01		
DAKOTA COURT	844	0.09		
DARWIN PLACE	804	0.22		
DAWN COURT	930	0.07		
DAWN DRIVE	931	0.22		
DAY DRIVE	718	0.11		
DAY SCHOOL ROAD	753	1.58		
DAYTON STREET	807	0.20	0.16	
DEAD INDIAN MEMORIAL ROAD	533	10.25		
DEGROOT STREET	773	0.11		
DEHLINGER LANE	975	1.78		
DEL FATTI LANE	785	2.07		
DELAP ROAD	554			0.68
DELAWARE AVENUE	848	0.84		
DEMERRIT ROAD	1168	1.53		
DENNIS DRIVE	890	0.13		
DENVER AVENUE	855	0.73	0.11	
DENVER PARK	900	0.09		
DERBY PLACE	797	0.13		
DERBY STREET	578	0.66	0.17	
DEVONRIDGE DRIVE	1303	0.13		
DIXON ROAD	624	1.61		
DOAK ROAD	771		1.00	
DODDS HOLLOW ROAD	1091	2.10	2.00	1.10
DONEGAL AVENUE	864	0.19		
DOVER AVENUE	592	0.06	0.06	
DRAZIL ROAD	1167	3.05		
DREWS ROAD	599	13.38		
EAGLE RIDGE ROAD	637		1.46	4.02
EAST LANGELL VALLEY	1211	20.69		

ROAD NAME	NUMBER	PAVED	GRAVEL	UNIMPROVED
ROAD				
EASTMOUNT STREET	901	0.16		
EBERLEIN AVENUE	837	0.43	0.09	
EDISON STREET	925	0.22		
EDLER STREET (Bly)	504	1.12		
EGERT ROAD	1071	1.47	1.51	
EL CERRITO WAY	723	0.48		
ELDER WAY	821	0.10		
ELLIOTT ROAD	962	0.85		
ESTATE DRIVE	860	0.08		
ETNA STREET	1325	0.62		
EVANS ROAD	1184	1.50		
EVERGREEN DRIVE	967	0.39		
EZELL AVENUE	598		0.24	
FAIRGROUND ROAD	885	0.07		
FALVEY ROAD	990	1.19		
FARGO STREET	585	0.82		
FOOTHILLS BLVD.	878	2.41		
FORT KLAMATH LOOP	501	0.33		
FRIEDA AVENUE	808	0.69		
FRONTAGE ROAD	542	0.51	0.07	
FUGATE ROAD	986		0.65	
G. C. PALMER STREET	620	0.07		
GAINES ROAD	1109	1.32		
GALE ROAD	1089	2.92		
GARDENA PLACE	722	0.03		
GARY STREET	584	0.86		
GERBER ROAD	1218	8.26	4.97	
GETTLE STREET	1309	0.60		
GIFT ROAD	1224	1.75		
GODOWA SPRINGS ROAD	1193	5.22	3.58	
GRAPE STREET	596		0.07	
GREEN WING LOOP	609	0.28		
GREENSPRINGS DRIVE	622	1.78		
GREGORY DRIVE	789	0.09		
GRENADA WAY	708	0.38		
HACKLER ROAD	505	2.53		
HAGER LANE	745	0.02		
HARLAN DRIVE	1317	1.48		
HARPOLD ROAD	1097	16.17		
HARVEY DRIVE	831	0.11		
HASKINS ROAD	1079	5.26		
HENLEY ROAD	857	1.28		
HENWAS LOOP	1041	0.23		
HENWAS STREET	1040	0.17		
HERITAGE COURT	937	0.06		

ROAD NAME	NUMBER	PAVED	GRAVEL	UNIMPROVED
HIGHLAND WAY	788	0.09		
HILDEBRAND ROAD	1059	5.16		
HILL ROAD	566	13.05		
HILLDALE STREET	800	0.12		
HILTON DRIVE	922	0.20		
HILYARD AVENUE	892	2.14		
HOLBROOK STREET	777	0.13		
HOLIDAY ROAD	514	0.33		
HOLL ROAD	1175	0.93		
HOMEDALE ROAD	830	8.97		
HOMER DRIVE	907	0.10		
HOOTER STREET	627		0.26	
HOPE STREET	816	2.05		
HORIZON STREET	625	0.49	0.06	
HORSLEY ROAD	614	0.31		
HORTON ROAD	1127		0.90	
HRICIZISCE ROAD	1216		1.40	
HUNTERS RIDGE ROAD	853	0.20		
INDEPENDENCE AVENUE	577	0.43		
IOOF CEMETERY ROAD	988	0.27	1.34	
IVORY PINE ROAD	1257	12.54		
IVORY STREET	882	0.44		
JEFFREY LANE	759	0.09		
JELINEK ROAD	1114		0.81	
JENNIE DRIVE	651	0.14		
JENNIFER LANE	776	0.07		
JESSE COURT	842	0.03		
JOE WRIGHT ROAD	803	2.64		
JOHNS AVENUE	896	0.26		
JOHNSON ROAD	1217		2.43	
JONES ROAD	1206	0.65		
JONES STREET (Crescent)	688	0.06		
JORDAN JUNCTION	772	0.02		
JUNIPER WAY	827	0.19		
KANE STREET	1328	1.28		
KATIE LANE	756	0.11		
KELLER ROAD	553	0.60		
KELLEY DRIVE	802	0.21		
KELSEY LANE	758	0.06		
KENO SPRINGS ROAD	1499	1.17	0.65	
KENO WORDEN ROAD	793	7.68		
KERN SWAMP ROAD	787		1.95	
KIMBERLY COURT	801	0.09		
KIMBERLY DRIVE	795	0.80		
KINGS WAY	551	0.50		
KLAD ROAD	894	0.18		

ROAD NAME	NUMBER	PAVED	GRAVEL	UNIMPROVED
KOTYA LANE	1043	0.21		
KRANZ STREET	619	0.07		
KYEM COURT	1048	0.03		
LA HABRA WAY	735	0.28		
LA JOLLA COURT	717	0.03		
LA MARADA WAY	715	0.51		
LA WANDA DRIVE	516	0.52		
LAKEPORT BLVD	562	1.34		
LAKESHORE DRIVE	630	3.58		
LARRY PLACE	902	0.13		
LAUREL STREET	591	0.29		
LAVERNE AVENUE	862	1.22		
LEACH DRIVE	649	0.22		
LEE STREET	650	0.03		
LELAND DRIVE	1324	0.30		
LINDLEY WAY	642	0.35		
LOCKFORD DRIVE	701	0.22		
LODI STREET	581	0.14		
LOGAN STREET/DRIVE	794	0.49		
LOMA LINDA DRIVE	868	0.40		
LOMBARD DRIVE	704	0.32		
LONE PINE ROAD	852		5.01	
LONG LAKE ROAD	774		1.43	0.95
LONGACRE LANE	559	0.53		
LOOSLEY ROAD	1332	1.49		
LORRAYNE PLACE	815	0.13		
LOVENESS ROAD	1120	0.53		
LOWER KLAMATH LAKE ROAD	791	13.84		
MACK AVENUE	846	0.25		
MADERA DRIVE	712	0.10		
MADISON STREET	1327	1.87		
MAHAN AVENUE	575	0.09		
MAIN STREET (Crescent)	903	0.28		
MALIN CEMETERY ROAD	1139	0.45		
MALIN DEPOT ROAD	1170	0.39		
MALIN LOOP ROAD	1183	2.00		
MALIN SIDING ROAD	1135		0.82	
MALLARD LANE	1302	0.30		
MALLORY DRIVE	972	0.21		
MALONE ROAD	993	2.78		
MALONE SPRINGS ROAD	532			1.00
MANN ROAD	555		0.96	
MAPLE STREET	645	0.20		
MAPLEWOOD COURT	916	0.03		
MAPLEWOOD DRIVE	919	0.10		

ROAD NAME	NUMBER	PAVED	GRAVEL	UNIMPROVED
MARINA DRIVE	631	0.21		
MARIUS DRIVE	1320	0.17		
MARYLAND AVENUE	813	0.45		
MASON LANE	1337	0.75		
MATHERS STREET	574	0.17		
MATNEY ROAD	889	1.52		
MATNEY WAY	904	1.97		
MAUPIN ROAD	1133	1.77		
MAYWOOD DRIVE	912	0.58		
MAZAMA DRIVE	720	0.45		
Mc CARTY LANE	1156	3.40		
Mc CLELLAN DRIVE	833	0.61		
Mc CORMICK ROAD	604	0.30		
Mc CULLEY ROAD	1173	1.11		
Mc KINNON STREET	616	0.13		
Mc LAUGHLIN LANE	618	0.76		
Mc QUISTON ROAD	1343	2.00		
MEADOW GLEN LOOP	749	0.18		
MEADOWBROOK COURT	778	0.11		
MEADOWBROOK LANE	779	0.17		
MEADOWS COURT NORTH	926	0.02		
MEADOWS COURT SOUTH	921	0.01		
MEADOWS DRIVE	928	0.33		
MEMORIAL DRIVE	872	0.97		
MEMORIE LANE	586	0.47		
MERRILL PIT ROAD	983	3.12		
METLER STREET (Bly)	503	0.07		
METRO STREET	588	0.04		
MICKA ROAD	1078	2.84		
MILBERT AVENUE	768	0.11		
MILITARY ROAD	677		3.10	11.30
MILLER AVENUE	805	0.68		
MILLER ISLAND ROAD	790	2.07		
MIRACLE DRIVE	727	0.19		
MITCHELL ROAD	1126		1.00	
MODOC POINT ROAD	1334	12.89		
MOKAS COURT	1051	0.09		
MONROVIA WAY	743	0.16		
MONTAVILLA DRIVE	1318	0.12		
MONTEREY DRIVE	711	0.18		
MORELOCK ROAD	1179	1.56	0.25	
MORNINGSIDE LANE	784	0.32		
MOY COURT	1044	0.03		
MOYINA WAY	820	0.13		
MYRTLEWOOD DRIVE	911	0.15		
NAOMA STREET	576	0.09		
NICHOLSON ROAD	1419	3.89		

ROAD NAME	NUMBER	PAVED	GRAVEL	UNIMPROVED
NILE STREET	895	0.25	0.17	
NORTH MALIN ROAD	1169	1.77		
NORTH POE VALLEY ROAD	978	9.64		
NORTHRIDGE DRIVE	861	0.50		
O'CONNOR ROAD	887	1.99		
OGDEN STREET	851	0.40	0.06	
OLD FORT ROAD	867	5.30	6.33	
OLD MALIN HIGHWAY	1080	1.73		
OLD MIDLAND ROAD	888	6.51		
OLD WAGON ROAD	602		0.25	
ONA COURT	1045	0.02		
ONYX AVENUE	582	1.32	0.25	
ONYX DRIVE	809	0.11		
ONYX PLACE	810	0.10		
ORINDA DRIVE	713	0.10		
ORINDALE ROAD	1338	1.49		
OXBOW STREET	909	0.06		
OZMAR LANE	686	0.09		
PALOMINO COURT	992	0.13		
PARAMONT STREET	589	0.15		
PATTERSON STREET	847	1.80	0.17	
PAYGR ROAD	1113	1.83		
PAYGR WAY	1112	1.19		
PECK DRIVE	587	0.54		
PEGGY AVENUE	573	0.11	0.04	
PELICAN BUTTE ROAD	530		0.25	
PEPPERWOOD COURT	924	0.06		
PEPPERWOOD DRIVE	920	0.14		
PERRY STREET	703	0.13		
PETERSTEINER ROAD	1069		0.55	
PICKETT ROAD	1166	1.82		
PINE CONE DRIVE	738	0.37		
PINE CREST DRIVE	1000	0.71		
PINE GROVE ROAD	973	2.78		
PINE RIDGE ROAD	739	1.20		
PINE TREE DRIVE	968	0.41		
PINTO COURT	996	0.05		
PLUM BUSH COURT	729	0.10		
PLUM BUSH DRIVE	730	0.11		
POPE ROAD	1093	0.50	0.76	0.89
POTTER STREET (Crescent)	687	0.07		
PRIMROSE LANE	1335	0.24		
PUCKETT ROAD	605	0.43		
QLIDIS DRIVE	1042	0.63		
QUAIL LANE	726	0.07		
RAJNUS ROAD	1172	2.28		

ROAD NAME	NUMBER	PAVED	GRAVEL	UNIMPROVED
RAMIREZ ROAD	965	0.26		
RAVEN COURT	780	0.03		
RAVENWOOD DRIVE	783	0.34		
RAYMOND STREET	580	0.21		
RED WING LOOP	611	0.33		
REDDING STREET	869		0.24	
REDONDO WAY	710	0.32		
REDWOOD DRIVE	644	0.12		
REEDER ROAD	981	4.16		
REILING ROAD	966		1.37	
RIDDLE ROAD	689	0.22		
RIDGE ROAD	929	0.04		
RIO VISTA WAY	714	0.47		
RITTER ROAD	1060		0.50	
RIVER STREET (Keno)	608	0.05		
RIVERSIDE DRIVE	1329	0.76		
ROBINSON DRIVE	1003	0.10		
ROCKING HORSE LANE	987	0.52		
ROCKY POINT ROAD	529	3.88	1.92	
ROSARIA PLACE	721	0.04		
ROUND LAKE ROAD	781	3.99	0.81	
RUTH DRIVE	750	0.13		
SADDLE MT. PIT ROAD	747		0.62	
SAGE WAY	823	0.15		
SARAH CIRCLE	843	0.03		
SAYLER STREET	748	0.28		
SCHAUPP ROAD	1116	4.95		
SCHIESEL AVENUE	995	0.20		
SCHOOLER COURT	737	0.08		
SCOTCH PINE ROAD	963	0.09		
SCOTT VALLEY DRIVE	767	0.12		
SELMA STREET	796	0.15		
SEQUOIA STREET	643	0.06		
SEUTTER PLACE	725	0.30		
SEVENMILE ROAD	1349	4.77		
SHADY PINE ROAD	698	2.56		
SHARP ROAD	613	0.23		
SHASTA WAY	870	2.35		
SHAWNA COURT	932	0.07		
SHORT ROAD	974	1.00		
SIERRA COURT	517	0.15		
SIERRA HEIGHTS DRIVE	822	0.22		
SIERRA PLACE	719	0.07		
SILVER LAKE ROAD	676	35.52		
SIMMERS AVENUE	913	0.05		
SING ROAD	699		0.06	
SKYLINE DRIVE	863	0.15		

ROAD NAME	NUMBER	PAVED	GRAVEL	UNIMPROVED
SMALL COURT	728	0.12		
SORREL COURT	994	0.09		
SOUTH CHILOQUIN ROAD	1331	4.17		
SOUTH ETNA STREET	1326	0.26		
SOUTH MALIN ROAD	1177	0.90		
SOUTH MERRILL ROAD	1103	1.80		
SOUTH POE VALLEY ROAD	500	9.64		
SOUTHGATE DRIVE	706	0.18		
SPRAGUE RIVER DRIVE	1102	1.28		
SPRAGUE RIVER ROAD	858	33.13		
SPRIG COURT	629	0.04		
SPRING LAKE ROAD	876	5.51		
SQUAW FLAT ROAD	1101	17.60		
STASTNY ROAD	1174	1.53		
STATELINE ROAD	985	5.80		
STEENS DRIVE	518	0.19		
STROH STREET	617		0.11	
STURDIVANT AVENUE	879	0.98		
SUMAC AVENUE	914	0.19		
SUMAC COURT	917	0.03		
SUMMERS LANE	854	3.11		
SUMMIT STREET	850	0.07		
SUN MOUNTAIN ROAD	623	2.85		
SUNNYSIDE LANE	597		0.17	
SUNRISE STREET	615	0.13	0.23	
SUNSET BEACH ROAD	552	0.28	0.76	
SUNSHINE PLACE	558	0.15		
SUTY ROAD	1111	1.20		
SWAN LAKE ROAD	971	12.26	4.84	
SYCAMORE DRIVE	705	0.16		
SYCAN ROAD	1191	1.50	3.18	
SYLVIA AVENUE	702	0.24		
TAMERA DRIVE	819	0.56		
TAYLOR ROAD	980	2.80		
TEARE LANE	1161	4.37		
THOMAS DRIVE	923	0.18		
THOMPSON AVENUE	839	0.19		
TINGLEY LANE	528	3.12		
TOQUA ROAD	736		1.06	
TOWNSHIP ROAD	607	7.44		
TRANSFORMER ROAD	1150	3.32		
UHRMANN ROAD	561	1.00	0.57	
UNITY STREET	935	0.38		
VALE ROAD	525	0.67		
VALENCIA WAY	740	0.02		
VALHALLA AVENUE	934	0.10		

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Appendix C –County Bridge Inventory

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Appendix C –County Bridge Inventory

ROAD NAME	RD #	MP	BG #	YEAR BUILT	INTERSECTS	Lgth. (ft.)	Width (ft.)	STATE ID#	YEAR RATED	SUFFICIENCY RATING	REMARKS	Type	Funct. Cl
REEDER RD.	981	2.45	5	1956	LOST RIVER	74.0	30.9	8105	2003.0	49.6		C	7
CRESCENT CUTOFF RD.	1351	12.20	1	1962	LIT. DESCHUTES R.	66.0	34.6	9027	2003.0	64.3		C/T	7
MATNEY RD.	889	1.40	1	1969	IRRIG. CANAL	37.0	28.0	35C157	2003.0	74.8		C/T	9
SOUTH MERRILL RD.	1103	0.09	1	1955	LOST RIVER	146.0	34.5	7906	2003.0	75.0		C/T	7
W. LANGELL VLY ROAD	520	18.42	6	1959	LOST R. @ MALONE DAM	126.0	35.4	8592	2003.0	78.5		C	7
W. LANGELL VAL. RD.	520	9.85	3	1978	IRRIG. CANAL	32.0	32.0	18C12A	2003.0	80.3		C/T	7
E. LANGELL VALLEY RD.	1211	13.80	6	1976	DRAIN DITCH	32.0	32.0	18C15A	2003.0	81.6		C	7
E. LANGELL VALLEY RD.	1211	10.00	4	1976	DRAIN DITCH	25.0	32.0	35C338	2003.0	81.6		C/T	7
WASHBURN WAY	875	5.73	1	1962	BNRR O-XING	339.0	65.0	8881	2003.0	82.2		S/C	16
HARPOLD RD.	1097	7.50	5	1972	IRRIG. CANAL	21.0	32.2	18C038	2003.0	84.7		C/T	7
W. LANGELL VAL. RD.	520	18.10	5	1995	IRRIG. CANAL	24.0	40.0	18C014	2003.0	84.9		C	7
O'CONNOR RD.	887	1.10	1	1966	IRRIG. CANAL	41.0	32.0	35C169	2003.0	85.4		C/T	9
MCQUISTON RD.	1343	0.50	1	1978	DRAIN DITCH	31.0	32.0	35C153	2003.0	89.8		C/T	9
STASTNY RD.	1174	1.50	1	1988	LOW LINE CANAL	18.0	32.0	35C185	2003.0	90.0		C/T	9
HARPOLD ROAD	1097	1.40	6	1960	D CANAL	37.0	30.0	18C001	2003.0	91.2		C/T	7
IVORY PINE RD	1257	5.60	5	1970	MERYL CREEK	25.0	32.0	35C223	2003.0	91.2		C/T	7
ADAMS POINT RD.	1099	0.90	1	1980	IRRIG. CANAL	37.0	32.0	35C101	2003.0	91.4		C/T	9
POPE RD.	1093	0.20	1	1978	IRRIG. CANAL	43.0	32.0	35C177	2003.0	91.6		C/T	9
WEST SIDE RD	531	11.50	2	1967	CHERRY CR.	31.0	36.0	18C005	2003.0	91.9		C	7
DODDS HOLLOW RD.	1091	0.20	1	1971	IRRIG. CANAL	42.0	32.0	35C124	2003.0	92.0		C/T	9
MATNEY WAY	904	1.90	1	1970	IRRIG. CANAL	32.0	32.0	35C158	2003.0	92.0		C/T	9

ROAD NAME	RD #	MP	BG #	YEAR BUILT	INTERSECTS	Lgth. (ft.)	Width (ft.)	STATE ID#	YEAR RATED	SUFFICIENCY RATING	REMARKS	Type	Funct. Cl
MATNEY WAY	904	1.00	3	1970	G CANAL	46.0	28.0	35C212	2003.0	92.0		C/T	9
SPRAGUE RIVER RD.	858	18.08	3	1972	DRAIN CHANNEL	21.0	32.0	18C040	2003.0	92.0		C/T	7
SUTY RD.	1111	0.70	1	1974	J CANAL	46.0	32.0	35C196	2003.0	92.0		C/T	9
JOE WRIGHT RD.	803	0.34	2	1989	NO. 1 DRAIN	25.0	32.0	35C216	2003.0	92.6		C/T	7
SPRAGUE RIVER RD.	858	29.50	5	1978	ROCK CR. DRAIN	26.0	32.0	35C229	2003.0	94.0		C/T	7
CRESCENT CUTOFF RD.	1351	3.60	2	1972	CRESCENT CREEK	29.0	32.0	9028	2003.0	94.2		C/T	7
STATELINE RD.	985	5.45	10	1969	J CANAL	47.0	28.0	35C195	2003.0	94.2		C/T	9
BURGDORF RD.	1346	2.05	2	1978	DRAIN DITCH	25.0	32.0	35C111	2003.0	94.4		C/T	8
DREWS RD.	599	8.55	2	1973	DRAIN CANAL	26.0	32.0	35C127	2003.0	94.5		C/T	8
ANDERSON AVE.	874	0.50	1	1986	1-C DRAIN	25.0	32.0	35C366	2003.0	94.6		C/T	19
HARPOLD RD.	1097	0.50	7	1979	J CANAL	47.0	32.0	35C134	2003.0	94.7		C/T	7
PAYGR RD.	1113	1.10	1	1992	D CANAL	40.0	32.0	35C175	2003.0	94.8		C/T	9
CROSS ROAD	556	6.49	1	1977	C CANAL	42.0	32.0	3906	2003.0	95.5		C	7
SILVER LAKE RD.	676	20.75	7	1986	JACK CREEK	37.0	32.0	18C035	2003.0	95.7		C/T	7
WEED RD.	1333	3.70	2	1984	DRAIN DITCH	17.0	32.0	35C204	2003.0	96.0		C/T	7
HILL ROAD	566	11.20	1	1979	D CANAL	43.0	32.0	35C137	2003.0	96.1		C/T	9
SILVER LAKE RD.	676	17.43	4	1986	WILLIAMSON R.	29.0	32.0	18C032	2003.0	96.6		C/T	7
SILVER LAKE RD.	676	18.98	6	1986	DRAIN CHANNEL	29.0	32.0	18C034	2003.0	96.6		C/T	7
DREWS RD.	599	5.70	3	1973	DRAIN CANAL	21.0	32.0	35C128	2003.0	96.7		C/T	7
HARPOLD RD.	1097	6.40	4	1983	CATTLE PASS	15.0	32.0	35C359	2003.0	96.7		C/T	7
IVORY PINE RD	1257	1.10	2	1981	DRAIN CHANEL	39.0	32.0	35C220	2003.0	96.8		C/T	7
IVORY PINE RD	1257	4.00	3	1981	DRAIN CHANEL	51.0	32.0	35C221	2003.0	96.8		C/T	7
MILITARY CROSSING RD	677	9.60	2	1983	CANAL	25.0	32.0	35C164	2003.0	96.8		C/T	9

ROAD NAME	RD #	MP	BG #	YEAR BUILT	INTERSECTS	Lgth. (ft.)	Width (ft.)	STATE ID#	YEAR RATED	SUFFICIENCY RATING	REMARKS	Type	Funct. Cl
OLD MIDLAND RD.	888	5.50	4	1976	IRRIG. CANAL	31.0	32.0	35C173	2003.0	96.8		C/T	9
OLD MIDLAND RD.	888	6.20	5	1973	IRRIG. CANAL	33.0	32.0	35C174	2003.0	96.8		C	9
ROCKY POINT RD	529	0.00	1	1982	VARNEY CR.	17.0	32.0	35C333	2003.0	96.8		C/T	8
SEVENMILE RD.	1349	5.00	3	1972	DRAIN DITCH	25.0	32.0	18C039	2003.0	96.8		C/T	7
SEVENMILE RD.	1349	3.35	1	1981	IRRIG. CANAL	25.0	32.0	35C330	2003.0	96.8		C/T	7
STATELINE RD.	985	3.90	7	1971	NO. 45 DRAIN	31.0	32.2	35C192	2003.0	96.8		C/T	9
W. LANGELL VAL. RD.	520	6.70	1	1992	IRRIG. CANAL	31.0	32.0	18C010	2003.0	96.8		C/T	7
ANDERSON RD.	984	0.10	3	1984	IRRIG. CANAL	21.0	32.0	35C105	2003.0	96.9		C/T	9
ANDERSON RD.	984	3.10	6	1981	IRRIG. CANAL	47.0	32.2	35C108	2003.0	96.9		C/T	9
BURGDORF RD.	1346	1.87	1	1977	DRAIN DITCH	25.0	32.0	35C110	2003.0	96.9		C/T	8
HENLEY RD.	857	0.15	1	1974	NO. 1 DRAIN	30.0	32.0	35C135	2003.0	96.9		C/T	9
HOMEDALE RD.	830	3.25	3	1977	NO. 1 DRAIN	25.0	32.0	35C140	2003.0	96.9		C/T	8
MALONE RD.	993	0.30	1	1985	D CANAL	46.0	32.0	35C155	2003.0	96.9		C/T	9
MERRILL PIT RD.	983	0.50	1	1976	IRRIG. CANAL	33.0	32.0	35C159	2003.0	96.9		C/T	9
MERRILL PIT RD.	983	1.30	3	1977	VAN BRIMMER CANAL	23.0	32.0	35C161	2003.0	96.9		C/T	9
REEDER RD.	981	2.46	4	1981	LOST R. DIV.CH.	113.0	44.1	18C22A	2003.0	96.9		C	7
REEDER RD.	981	2.35	3	1974	B CANAL	37.0	32.0	35C180	2003.0	96.9		C	9
SOUTH MERRILL RD.	1103	1.75	2	1985	VAN BRIMMER CANAL	15.0	32.0	35C360	2003.0	96.9		C/T	7
SPRING LAKE RD.	876	2.26	2	1981	LOST R. DIV.CH.	125.0	44.0	18C19A	2003.0	96.9		C	7
SQUAW FLAT RD.	1101	15.70	1	1982	BUCK CR. DRAIN	25.0	32.0	35C343	2003.0	96.9		C/T	9
WEST BOUNDARY RD. (S-14)	675	2.90	1	1978	SCOTT CREEK	25.0	32.0	35C364	2003.0	96.9		C/T	9
ADAMS POINT RD.	1099	0.70	2	1979	J CANAL	48.0	32.0	35C103	2003.0	97.0		C/T	9
BUESING RD.	979	2.50	1	1983	IRRIG. CANAL	49.0	32.0	35C112	2003.0	97.0		C/T	9

ROAD NAME	RD #	MP	BG #	YEAR BUILT	INTERSECTS	Lgth. (ft.)	Width (ft.)	STATE ID#	YEAR RATED	SUFFICIENCY RATING	REMARKS	Type	Funct. Cl
CAMPBELL RD.	1210	9.20	4	1980	N. FK. SPRAGUE R.	41.0	32.0	35C226	2003.0	97.0		C/T	9
CHEYNE RD.	977	0.70	1	1974	IRRIG. CANAL	36.0	32.0	35C119	2003.0	97.0		C/T	9
CHIN RD	982	0.40	1	1985	IRRIG. CANAL	37.0	32.0	35C113	2003.0	97.0		C/T	9
DRAZIL RD.	1167	0.80	1	1979	D CANAL	42.0	32.0	35C125	2003.0	97.0		C/T	9
FALVEY RD.	990	0.15	1	1978	VAN BRIMMER CANAL	18.0	32.0	35C130	2003.0	97.0		C/T	8
FALVEY RD.	990	0.70	2	1989	LOST RIVER	69.0	32.0	35C131	2003.0	97.0		C	9
GAINES RD.	1109	0.55	1	1979	J CANAL	48.0	32.2	35C132	2003.0	97.0		C/T	9
HILDEBRAND RD.	1059	3.00	1	1981	BUCK CR. DRAIN	23.0	32.0	35C136	2003.0	97.0		C/T	9
MCCULLEY RD.	1173	0.85	1	1979	J CANAL	43.0	32.0	35C152	2003.0	97.0		C/T	9
WILSON RD.	1105	0.80	1	1978	J CANAL	49.0	32.1	35C209	2003.0	97.0		C/T	9
WU RD.	1064	0.40	1	1974	DRAIN DITCH	27.0	32.0	35C210	2003.0	97.0		C/T	9
DREWS RD.	599	13.10	1	1982	SYCAN RIVER	137.0	32.0	35C126	2003.0	97.4		C	8
GODOWA SPRINGS RD.	1193	1.20	1	1984	SPRAGUE RIVER	121.0	32.0	35C133	2003.0	97.9		C	9
LAKEPORT BLVD	562	0.82	2	1983	DRAIN	17.0	32.0	35C345	2003.0	97.9		C/T	17
W. LANGELL VAL. RD.	520	16.91	4	1995	IRRIG. CANAL	24.0	40.0	18C013	2003.0	97.9		C	7
HOMEDALE RD.	830	1.70	1	2003	A CANAL	106.0	57.3	19068	2003.0	98.2		C	16
IVORY PINE RD	1257	4.00	4	1985	N. FK. SPRAGUE R.	72.0	32.0	35C222	2003.0	98.3		C	7
SILVER LAKE RD.	676	7.65	2	1986	LENZ CREEK	72.0	32.0	35C365	2003.0	98.3		C	7
SILVER LAKE RD.	676	17.48	5	1986	WILLIAMSON R.	72.0	32.0	18C033	2003.0	98.6		C	7
SILVER LAKE RD.	676	9.21	3	1986	WILLIAMSON R.	71.0	32.0	18C031	2003.0	99.2		C	7
MODOC POINT RD.	1334	7.32	1	1982	WILLIAMSON RIVER	220.0	32.4	5478A	2003.0	99.4		C	7
GIFT RD.	1224	0.44	1	1973	LOST RIVER	93.0	32.2	18C26A	2003.0	61.1	CAUTION ALL TIMBER	T	7
DEHLINGER RD.	975	6.47	1	1975	LOST RIVER	92.0	32.2	18C24A	2003.0	88.1	CAUTION ALL TIMBER	T	7

ROAD NAME	RD #	MP	BG #	YEAR BUILT	INTERSECTS	Lgth. (ft.)	Width (ft.)	STATE ID#	YEAR RATED	SUFFICIENCY RATING	REMARKS	Type	Funct. Cl
JOE WRIGHT RD.	803	0.50	1	1981	LOST R. DIV.CH.	190.0	44.3	35C336	2003.0	92.3	LOAD RATED	C	7
HARPOLD RD.	1097	14.88	1	2000	LOST RIVER	218.0	24.3	18669	2003.0	99.7	AKA #07119	C	7
S. POE VALLEY ROAD	500	0.03	1	2000	LOST RIVER	151.0	34.7	18786	2003.0	99.5	AKA #15448	C/S	7
SEVENMILE RD.	1349	5.90	4	1995	SEVENMILE CREEK	62.0	40.0	18043	2003.0	99.8	AKA #18C004	C	7
LOOSLEY RD.	1332	0.70	1	1995	WOOD RIVER	65.0	32.0	17989	2003.0	100.0	AKA #35C149	C	9
REEDER RD.	981	0.90	1	1998	B CANAL	46.0	24.0	18599	2003.0	99.9	AKA #35C178	C	9
TOWNSHIP RD.	607	1.50	1	1999	ADY CANAL	64.0	30.2	18728	2003.0	98.6	AKA #35C200	C	8
SEVENMILE RD.	1349	3.80	2	1999	DRAIN DITCH	40.0	32.0	186661	2003.0	99.8	AKA #35C331	C	7
CHEESE FACTORY RD.	1088	0.20	2	2002	IRRIG. CANAL	30.0	32.0	19607	2003.0	99.9	AKA 15445	C	7
DIXON ROAD	624	0.10	1	1978	ANNIE CR. IR. DIT.	37.0	32.5	35C122	2003.0	97.0	CAUTION AGE, SPAN	C/T	9
NICHOLSON RD.	1419	0.05	1	1960	CANAL-MELHASE DITCH	23.0	32.0	35C165	2003.0	65.6	CAUTION ALL TIMBER	T	9
TOWNSHIP RD.	607	4.10	2	1968	STRAITS DRAIN	70.0	24.2	35C201	2003.0	68.1	CAUTION ALL TIMBER	T	8
MATNEY WAY	904	0.90	2	1974	LOST RIVER	124.0	32.0	35C211	2003.0	69.4	CAUTION ALL TIMBER	T	9
GERBER RD.	1218	9.70	2	1963	BEN HALL CREEK	60.0	20.0	35C218	2003.0	72.2	CAUTION ALL TIMBER	T	7
SHORT RD.	974	0.64	1	1980	C CANAL	75.0	32.0	18C21A	2003.0	73.4	CAUTION ALL TIMBER	T	7
GERBER RD.	1218	0.55	1	1963	IRRIG. CANAL	21.0	24.0	35C217	2003.0	73.9	CAUTION ALL TIMBER	T	7
SADDLE MT. RD.	747	0.30	1	1965	SPRAGUE R.	155.0	16.1	35C225	2003.0	74.5	CAUTION ALL TIMBER	T	9
JOE WRIGHT RD.	803	0.20	3	1970	A-3 IRRIG. LAT.	21.0	33.3	35C215	2003.0	74.6	CAUTION ALL TIMBER	T	7
N. POE VALLEY RD.	978	0.03	1	1964	LOST R.@HARPOLD	85.0	25.7	35C168	2003.0	78.0	CAUTION ALL TIMBER	T	8
WEED RD.	1333	4.11	3	1975	WOOD RIVER	95.0	32.2	35C206	2003.0	79.8	CAUTION ALL TIMBER	T	9
HOMEDALE RD.	830	6.20	6	1963	IRRIG. CANAL	32.0	24.0	35C143	2003.0	79.9	CAUTION ALL TIMBER	T	8
STATELINE RD.	985	4.20	8	1965	J-11 LATERAL	19.0	25.5	35C193	2003.0	80.7	CAUTION ALL TIMBER	T	9
STATELINE RD.	985	3.60	6	1969	J-10 LATERAL	19.0	25.0	35C191	2003.0	80.8	CAUTION ALL TIMBER	T	9

ROAD NAME	RD #	MP	BG #	YEAR BUILT	INTERSECTS	Lgth. (ft.)	Width (ft.)	STATE ID#	YEAR RATED	SUFFICIENCY RATING	REMARKS	Type	Funct. Cl
HOLL RD	1175	1.60	1	1986	LOW LINE CANAL	16.0	25.0	35C186	2003.0	81.0	CAUTION ALL TIMBER	T	8
SPRING LAKE RD.	876	2.31	1	1971	DRAIN DITCH	71.0	29.5	18C020	2003.0	81.9	CAUTION ALL TIMBER	T	7
E. LANGELL VALLEY RD.	1211	6.40	3	1965	IRRIG. CANAL	15.0	25.0	35C361	2003.0	83.2	CAUTION ALL TIMBER	T	7
HILL ROAD	566	12.20	2	1965	IRRIG. CANAL	25.0	27.3	35C138	2003.0	83.4	CAUTION ALL TIMBER	T	9
W. LANGELL VAL. RD.	520	7.41	2	1968	IRRIG. CANAL	27.0	27.5	18C011	2003.0	84.9	CAUTION ALL TIMBER	T	7
OLD MIDLAND RD.	888	4.30	2	1971	IRRIG. CANAL	25.0	33.0	35C171	2003.0	85.8	CAUTION ALL TIMBER	T	7
MILITARY CROSSING RD	677	9.20	1	1962	WILLIAMSON R.	47.0	24.0	35C163	2003.0	86.0	CAUTION ALL TIMBER	T	9
ANDERSON RD.	984	1.10	5	1967	IRRIG. CANAL	21.0	24.6	35C107	2003.0	86.5	CAUTION ALL TIMBER	T	9
SWAN LAKE RD.	971	15.30	1	1973	DRAIN CHANNEL	25.0	31.0	35C197	2003.0	86.7	CAUTION ALL TIMBER	T	9
CAMPBELL RD.	1210	1.60	2	1981	DITCH	32.0	32.2	35C117	2003.0	86.8	CAUTION ALL TIMBER	T	8
IVORY PINE RD	1257	1.00	1	1971	S. FK. SPRAGUE R.	95.0	32.2	35C219	2003.0	88.0	CAUTION ALL TIMBER	T	7
CAMPBELL RD.	1210	9.40	5	1982	N. FK. SPRAGUE R.	55.0	32.0	35C228	2003.0	89.5	CAUTION ALL TIMBER	T	9
CAMPBELL RD.	1210	1.80	3	1980	S. FK. SPRAGUE R.	63.0	32.3	35C116	2003.0	90.6	CAUTION ALL TIMBER	T	8
MCQUISTON RD.	1343	1.90	2	1984	SEVENMILE CANAL	63.0	32.0	35C154	2003.0	91.9	CAUTION ALL TIMBER	T	9
SPRING LAKE RD.	876	1.60	3	1961	IRRIG. CANAL	21.0	30.8	18C018	2003.0	95.5	CAUTION ALL TIMBER	T	7
STATELINE RD.	985	1.90	3	1972	J-7 LATERAL	21.0	30.0	35C188	2003.0	95.8	CAUTION ALL TIMBER	T	9
SCHAUPP RD.	1116	0.50	1	1961	F CANAL	14.0	22.0	35C183	2003.0	96.0	CAUTION ALL TIMBER	T	9
LAKEPORT BLVD	562	0.01	1	1972	SPRR O-XING	68.0	32.0	35C224	2003.0	96.1	CAUTION ALL TIMBER	T	17
STATELINE RD.	985	0.05	1	1972	J-3 LATERAL	16.0	32.0	35C187	2003.0	96.7	CAUTION ALL TIMBER	T	9
STATELINE RD.	985	5.00	9	1963	J-13 LATERAL	18.0	32.0	35C194	2003.0	96.7	CAUTION ALL TIMBER	T	9
STATELINE RD.	985	2.50	4	1973	J-8 LATERAL	21.0	33.7	35C189	2003.0	96.8	CAUTION ALL TIMBER	T	9
STATELINE RD.	985	3.05	5	1971	J-9 LATERAL	21.0	34.1	35C190	2003.0	96.8	CAUTION ALL TIMBER	T	9
DIXON ROAD	624	1.10	2	1978	WOOD RIVER	82.0	32.0	35C123	2003.0	97.0	CAUTION ALL TIMBER	T	9

ROAD NAME	RD #	MP	BG #	YEAR BUILT	INTERSECTS	Lgth. (ft.)	Width (ft.)	STATE ID#	YEAR RATED	SUFFICIENCY RATING	REMARKS	Type	Funct. Cl
SUMMERS LANE	854	0.10	1	1982	1-C DRAIN	25.0	32.0	35C341	2003.0	97.0	CAUTION ALL TIMBER	T	16
ANDERSON RD. (IOOF)	984	0.30	1	1970	IRRIG. CANAL	39.0	28.1	35C146	2003.0	84.0	CAUTION ALL TIMBER	T	9
E. LANGELL VALLEY RD.	1211	13.00	5	1975	MILLER CREEK	82.0	32.8	18C16A	2003.0	86.7	CAUTION ALL TIMBER - Struct. Def.	T	7
MICKA RD.	1078	0.60	1	1989	IR.CANAL-BOX CULV.	155.0	12.0	35C162	2003.0	100.0	CONC. BOX CULVERT	C	9
E. LANGELL VALLEY RD.	1211	0.10	1	1955	LOST RIVER	205.0	34.7	15442	2003.0	62.9	Conc. Deck over Timber Sub.	C/T	7
HOPE STREET	816	0.64	1	1960	A CANAL	154.0	34.8	8104	2003.0	76.7	FUNC. OBSOLETE	C	17
SHASTA WAY	870	0.90	1	1979	A CANAL	87.0	55.5	35C184	2003.0	79.4	LOAD RATED	C	16
HOMEDALE RD.	830	4.80	5	1979	LOST R. DIV.CH.	121.0	44.4	35C142	2003.0	81.3	LOAD RATED	C	9
CHEESE FACTORY RD.	1088	0.67	1	1985	LOST RIVER	132.0	32.0	15444A	2003.0	89.4	LOAD RATED	C	7
MALONE RD.	993	0.97	2	1989	LOST RIVER	309.0	32.0	35C156	2003.0	94.2	LOAD RATED	C	9
HOMEDALE RD.	830	4.60	4	1979	NO. 1 DRAIN	53.0	32.0	35C141	2003.0	96.9	LOAD RATED	C	8
OLD MIDLAND RD.	888	3.70	1	1999	IRRIG. CANAL	28.0	35.0	35C380	2003.0	99.8	New Conc. Pre-fab Brg.	C	9
CRYSTAL SPRINGS RD.	976	2.60	2	1940	IRRIG. CANAL	5.0	32.0	35C356	1996.0	94.9	Not on insp. list due to short length	X	7
CRYSTAL SPRINGS RD.	976	4.05	3	1940	IRRIG. CANAL	5.0	32.0	35C357	1996.0	96.9	Not on insp. list due to short length	X	7
PINECONE DRIVE	739	1.20	1	1964	WILLIAMSON R.	82.0	21.5	35C176	2003.0	83.0	Posted 30 Tons, Struc. Def.	T/C/S	9
JOHNSON RD.	1217	1.00	1	1978	LOST RIVER	59.0	20.1	35C147	2003.0	79.0	POSTED FOR LOAD LIMITS	T	8
S. POE VALLEY RD.	500	2.92	4	1940	F CANAL	12.0	27.0	35C351	2003.0	80.9	RCBC	C	7
S. POE VALLEY RD.	500	1.84	3	1940	F CANAL	12.0	34.0	35C350	2003.0	96.5	RCBC	C	7
S. POE VALLEY RD.	500	3.99	5	1940	F CANAL	12.0	34.0	35C352	2003.0	96.5	RCBC	C	7
HARPOLD RD.	1097	3.10	3	1950	IRRIG. CANAL	6.0	33.0	35C358	2003.0	96.7	RCBC	C	7
HARPOLD RD.	1097	2.80	2	1950	DRAIN DITCH	13.0	33.0	35C363	2003.0	96.7	RCBC	C	7
TINGLEY ROAD	528	1.75	1	1960	IRRIG. CANAL	10.0	32.0	35C348	2003.0	96.7	RCBC	C	8
NICHOLSON RD.	1419	1.85	2	1960	ANNIE CREEK	26.0	30.0	35C166	2003.0	96.8	RCBC	C	9

ROAD NAME	RD #	MP	BG #	YEAR BUILT	INTERSECTS	Lgth. (ft.)	Width (ft.)	STATE ID#	YEAR RATED	SUFFICIENCY RATING	REMARKS	Type	Funct. Cl
SILVER LAKE RD.	676	34.70	8	1959	CATTLE PASS	12.0	33.0	35C354	2003.0	96.9	RCBC	C	7
SILVER LAKE RD.	676	35.46	9	1959	BEAR CR/CATTLE PASS	12.0	33.0	35C355	2003.0	96.9	RCBC	C	7
S. POE VALLEY RD.	500	0.34	2	1940	F CANAL	12.0	24.0	35C349	2003.0	82.4	RCBC	C	7
BUNN RD.	1204	1.10	1	1996	IRRIG. CANAL	9.0	42.0	35C114	2003.0	96.7	RCBC NOV. 1996	C	9
CALLAHAN RD.	1086	0.70	1		WILDHORSE DRAIN			35C346		100.0	REPLACED WITH 7 FOOT CMP	X	
SPRAGUE RIVER RD.	858	31.10	6	1970	DRAIN CHANNEL	24.0	28.0	18C008	2003.0	76.7	REPLACED WITH CMP	X	7
HORTON RD.	1127	0.30	1	1968	DRAIN DITCH	9.0	29.0	35C144	2003.0	70.0	Replaced with Culvert	X	
E. LANGELL VALLEY RD.	1211	5.20	2	1967	LOST RIVER	157.0	28.0	18C017	2003.0	61.1	STRUC. DEF. [Rehabed 2000]	T	7
IOOF CEMETERY RD.	988	0.70	1	1972	IRRIG. CANAL	35.0	32.0	35C145	2003.0	65.0	STRUCT DEF.	C/T	9
REEDER RD.	981	1.65	2	1975	B CANAL	39.0	32.0	35C179	2003.0	69.8	STRUCT DEF.	C/T	9
SPRAGUE RIVER RD.	858	24.05	4	1944	SPRAGUE R.	218.0	30.9	6835	2003.0	14.5	STRUCT. DEF.	C	7
SPRAGUE RIVER RD.	858	5.79	1	1944	SPRAGUE R.	167.0	30.7	6745	2003.0	24.2	STRUCT. DEF.	C	7
SPRAGUE RIVER RD.	858	11.53	2	1944	SPRAGUE R.	241.0	30.8	6746	2003.0	36.4	STRUCT. DEF.	C	7
CHILOQUIN RDG. RD.	652	0.10	1	1958	SPRAGUE R.	182.0	26.7	35C120	2003.0	64.5	STRUCT. DEF.	C	9
WASHBURN WAY	875	0.03	2	1981	IRRIG. CANAL	41.0	32.0	35C342	2003.0	70.0	STRUCT. DEF.	C/T	16
DEHLINGER RD.	975	5.20	2	1968	G CANAL	43.0	28.3	18C023	2003.0	67.1	STRUCT. DEF.	C/T	7
CRYSTAL SPRINGS RD.	976	0.02	1	1967	LOST RIVER	219.0	32.2	18C025	2003.0	46.9	STRUCT. DEF. (POSTED 10 TONS)	T	7
SPRAGUE RIVER RD.	858	34.20	7	1980	WHISKEY CR.	21.0	32.0	18C009	2003.0	69.7		C/T	7
CAMPBELL RD.	1210	0.90	1	1974	DRAIN DITCH	21.0	32.0	35C118	2003.0	69.8		C/T	8
WILLIAMSON RD.	600	6.50	1	1979	DRAIN	16.0	32.0	35C334	2003.0	69.8		C/T	7
LONE PINE RD.	852	4.60	1	1976	CREEK	21.0	32.0	35C148	2003.0	80.9		C/T	7
ROCKY POINT RD	529	0.90	2	1965	FOURMILE CR.	80.0	34.0	35C182	2003.0	85.6		C	9

ROAD NAME	RD #	MP	BG #	YEAR BUILT	INTERSECTS	Lgth. (ft.)	Width (ft.)	STATE ID#	YEAR RATED	SUFFICIENCY RATING	REMARKS	Type	Funct. Cl
REILING RD.	966	0.60	2	1988	F CANAL	22.0	24.0	35C337	2003.0	88.0		C/T	9
WEST SIDE RD	531	14.90	3	1967	ROCK CR.	18.0	38.0	35C353	2003.0	88.1		C	7
HILYARD AVE.	892	0.78	1	1983	1-C DRAIN	17.0	32.0	35C344	2003.0	89.7		C/T	17
WEBBER RD.	1085	0.20	1	1991	IRRIG. CANAL	18.0	32.0	35C202	2003.0	91.8		C	9
TEARE RD.	1161	1.75	1	1982	DRAIN DITCH	21.0	32.0	35C198	2003.0	91.9		C/T	7
WEST SIDE RD	531	8.40	1	1980	THREEMILE CR.	20.0	56.0	35C332	2003.0	91.9		C	7
REILING RD.	966	0.20	1	1990	F CANAL	20.0	32.0	35C181	2003.0	92.0		C/T	9
GERBER RD.	1218	13.00	3	1978	BARNES CREEK	15.0	20.0	35C362	2003.0	94.7		C/T	7
HOMEDALE RD.	830	1.60	2	1980	IRRIG. CANAL	21.0	56.3	35C139	2003.0	95.8		C/T	9
SILVER LAKE RD.	676	2.80	1	1978	DRAIN CHANNEL	17.0	32.0	35C335	2003.0	96.3		C/T	7
LOWER LAKE RD.	791	13.70	1	1975	IRRIG. CANAL	21.0	32.0	35C150	2003.0	96.8		C/T	9
NICHOLSON RD.	1419	2.20	3	1984	CREEK	15.0	32.0	35C167	2003.0	96.8		C/T	9
OLD MIDLAND RD.	888	5.30	3	1975	IRRIG. CANAL	21.0	32.1	35C172	2003.0	96.8		C/T	9
ANDERSON RD.	984	0.70	4	1981	IRRIG. CANAL	21.0	32.4	35C106	2003.0	96.9		C/T	8
BOARDMAN AVE.	1312	0.45	1	1981	1-C DRAIN	16.0	32.0	35C339	2003.0	96.9		C/T	19
DAY SCHOOL RD.	753	0.05	1	1991	IRRIG. CANAL	21.0	32.0	35C121	2003.0	96.9		C/T	8
MERRILL PIT RD.	983	0.70	2	1985	C CANAL	21.0	32.0	35C160	2003.0	96.9		C/T	9
TEARE RD.	1161	2.40	2	1984	IRRIG. CANAL	12.0	32.0	35C199	2003.0	96.9		C/T	7
ALGOMA RD.	671	2.40	1	1981	CATTLE PASS/DRAIN	17.0	32.0	35C104	2003.0	97.0		C/T	8
EZELL STREET	598	0.15	1	1983	1-C DRAIN	17.0	32.0	35C347	2003.0	97.0		C/T	8
GODOWA SPRINGS RD.	1193		2	1992	DRAIN	16.0	32.0	35C367	2003.0	97.0		C/T	9
McCARTY LANE	1156	3.65	1	1982	DRAIN DITCH	17.0	32.0	35C151	2003.0	97.0		C/T	7
WEED RD.	1333	3.40	1	1982	DRAIN DITCH	17.0	32.0	35C203	2003.0	97.0		C/T	7

Appendix D –ODOT Highway Road Conditions

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ODOT Highway Road Conditions in Klamath County

Region	District	Road ID	OR Sheild	Section Name	Beg MP	End MP	Length	2003 Overall Index	2003 Rut Index	2003 Fatigue Index	2003 Patch Index	2003 NoLoad Index	2003 Ravelling Index	2003 Condition*
2	5	18	OR 58	Viaduct - Klamath Co. Line	56.18	62.07	5.89	89.60	97.60	97.10	95.10	100.00	99.30	GD
2	5	18	OR 58	Lane Co. Line - Odell Maint. Station Rd.	62.07	64.24	2.17	50.40	98.20	51.20	98.70	100.00	99.90	FR
2	5	18	OR 58	Odell Maint. Station Rd. - E. Odell Lake Rd.	64.24	67.64	3.40	99.50	99.50	100.00	100.00	100.00	100.00	VG
2	5	18	OR 58	E. Odell Lake Rd. - Crescent Lake Jct.	67.64	69.60	1.96	95.60	96.80	100.00	98.50	100.00	100.00	GD
2	5	18	OR 58	Crescent Lake Jct. - MP 70.0	69.60	70.00	0.40	100.00	100.00	100.00	100.00	100.00	100.00	VG
2	5	429		Jct. Hwy 18 - Crescent Lake	0.00	2.39	2.39	20.50						PR
3	8	21	OR 66	Pinehurst - Johnson Prairie	23.57	31.00	7.43	57.00						FR
3	8	21	OR 66	Johnson Prairie - Ward Rd.	31.00	38.75	7.75							UC
3	8	21	OR 66	Ward Rd. - Spencer Bridge	38.75	43.86	5.11							UC
4	11	20	OR 140	Jct. Hwy 50 - MP 11.0 (SCS=R)	5.48	5.54	0.06	93.60	95.00	100.00	100.00	95.30	100.00	GD
4	11	20	OR 140	Jct. Hwy 50 - MP 11.0	5.54	11.00	5.46	68.10	79.30	87.70	98.70	95.80	100.00	FR
4	11	20	OR 140	Jct. Hwy 50 - MP 11.0 (SCS=S)	5.54	5.60	0.06	92.90	95.00	100.00	100.00	92.90	100.00	GD
4	11	20	OR 140	MP 11.0 - MP 16.0	11.00	15.70	4.70	54.70	81.60	71.60	92.60	92.90	99.00	FR
4	11	20	OR 140	MP 16.0 - Ritter Rd.	15.70	25.17	9.47	61.10	95.80	69.70	98.30	90.40	99.00	FR
4	11	20	OR 140	Ritter Rd. - Sprague River Rd.	25.17	35.90	10.73	24.70	87.70	44.90	81.40	64.80	100.00	PR
4	11	20	OR 140	Sprague River Rd. - Scyan Marsh Rd.	35.90	42.20	6.30	45.00	75.80	68.40	97.60	76.70	100.00	PR
4	11	20	OR 140	Scyan Marsh Rd. - Bly	42.20	54.11	11.91	82.10	88.00	95.30	96.70	96.60	100.00	GD
4	11	20	OR 140	Bly - Forest Boundary	54.11	63.94	9.79	100.00	100.00	100.00	100.00	100.00	100.00	VG
4	11	21	OR 66	Spencer Bridge - Klamath River	43.86	49.96	6.10	93.40						GD
4	11	21	OR 66	Klamath River - MP 52	49.96	52.10	2.14	75.00						FR
4	11	21	OR 66	MP 52 - Kern Swamp Rd.	52.10	53.65	1.55	69.00						FR
4	11	21	OR 66	Kern Swamp Rd. - Weyerhaeuser Rd.	53.65	56.72	3.07	86.50						GD
4	11	21	OR 66	Weyerhaeuser Rd. - Jct. Hwy 270	56.72	58.86	2.14	41.50						PR
4	11	21	OR 66	Jct. Hwy 270 - Jct. Hwy 004	58.86	59.05	0.19	31.30	95.00	44.90	86.50	79.50	100.00	PR
4	11	21	OR 66	Jct. Hwy 270 - Jct. Hwy 004	58.99	59.29	0.30	41.90	96.70	59.40	100.00	72.40	100.00	PR
4	11	22	OR 62	Crater Lake National Park - Weed Rd.	83.63	90.00	6.37							UC
4	11	22	OR 62	Weed Rd. - Loosely Rd.	90.00	93.28	3.24	91.10						GD
4	11	22	OR 62	Loosely Rd. - Jct. Hwy 422	93.28	98.55	5.27	98.40						VG
4	11	22	OR 62	Jct. Hwy 422 - Jct. Hwy 004	98.55	103.95	5.40	27.50						PR
4	11	22	OR 62	Jct. Hwy 422 - Jct. Hwy 004	103.72	103.79	0.07	75.00						FR
4	11	23	OR 70	Jct. Hwy 020 - Bonanza	0.00	6.97	6.97	88.80						GD
4	11	50	OR 39	Jct. Hwy 004 - Jct. Hwy 020	-6.92	-2.24	4.68							UC
4	11	50	OR 39	Jct. Hwy 004 - Jct. Hwy 020	-6.81	-5.40	1.41							UC
4	11	50	OR 39	Jct. Hwy 020 - MP 7.0	0.00	7.00	7.00	67.00	71.50	97.40	98.30	94.50	100.00	FR
4	11	50	OR 39	Esplanade St. Spur (PCC)	4.97	5.06	0.09	86.50						GD
4	11	50	OR 39	Esplanade St. Spur (AC)	5.06	5.10	0.04	98.00						GD
4	11	50	OR 39	MP 7.0 - Merrill Pit Rd.	7.00	11.60	4.60	43.90	97.10	97.90	45.10	99.60	100.00	PR
4	11	50	OR 39	Merrill Pit Rd. - N. Polk St.	11.60	13.73	2.13							UC
4	11	50	OR 39	N. Polk St. - SCL Merrill	13.73	14.50	0.77	43.80	95.00	59.00	82.20	88.00	100.00	PR
4	11	50	OR 39	SCL Merrill - MP 16.51	14.50	16.51	2.01	54.20	82.90	61.30	95.90	98.20	99.00	FR
4	11	50	OR 39	MP 16.51 - Paygr Rd.	16.51	20.81	4.30							UC
4	11	50	OR 39	Paygr Rd. - S. Malin Rd.	20.81	24.30	3.49							UC
4	11	50	OR 39	S. Malin Rd. - CA State Line	24.30	27.10	2.80							UC
4	11	270	OR 140	Hanley Ranch - Fish Lake Rd.	16.04	25.92	9.88	36.40	89.50	48.00	79.50	97.30	100.00	PR
4	11	270	OR 140	Fish Lake Rd. - Dead Indian Rd.	25.92	37.50	11.58	55.50	89.80	61.00	98.70	92.10	100.00	FR
4	11	270	OR 140	Dead Indian Rd. - Fourmile Flat Rd.	37.50	41.50	4.00	74.80	93.40	83.00	97.10	98.80	100.00	FR
4	11	270	OR 140	Fourmile Flat Rd. - MP 50.8	41.50	50.80	9.30	100.00	100.00	100.00	100.00	100.00	100.00	VG
4	11	270	OR 140	MP 50.8 - Eagle Ridge Rd.	50.80	51.52	0.72	68.70	91.50	85.90	95.00	83.40	100.00	FR
4	11	270	OR 140	Eagle Ridge Rd. - Lake Shore Drive	51.52	62.40	10.88	58.70	95.60	81.50	78.40	96.30	100.00	FR
4	11	004	US 97	District Boundary - MP 231	227.77	231.00	3.23	96.60	96.80	100.00	100.00	99.80	100.00	GD
4	11	004	US 97	MP 231 - MP 233	231.00	233.00	2.00	95.80	95.80	100.00	100.00	100.00	100.00	GD
4	11	004	US 97	MP 233 - Forge Rd.	233.00	241.00	8.00	96.20	96.70	100.00	99.60	100.00	100.00	GD
4	11	004	US 97	Forge Rd. - MP 250	241.00	249.99	8.99	58.00	87.50	85.60	73.80	99.90	100.00	FR
4	11	004	US 97	MP 250 - Lobert Jct.	250.00	252.10	2.10	54.60	61.90	83.70	91.00	95.20	95.20	FR
4	11	004	US 97	Lobert Jct. - Lobert O-XING	252.10	252.60	0.50	96.00	100.00	100.00	100.00	0.00	0.00	GD
4	11	004	US 97	Lobert O-XING - MP 256.5	252.60	256.50	3.90	64.30	92.10	75.40	86.00	94.60	99.50	FR

ODOT Highway Road Conditions in Klamath County

Region	District	Road ID	OR Sheild	Section Name	Beg MP	End MP	Length	2003 Overall Index	2003 Rut Index	2003 Fatigue Index	2003 Patch Index	2003 NoLoad Index	2003 Ravelling Index	2003 Condition*
4	11	004	US 97	MP 256.5 - Modoc Point	256.50	257.69	1.19	71.80	99.60	79.70	91.80	14.40	15.70	FR
4	11	004	US 97	Modoc Point - Algoma Rd.	257.69	263.00	5.31	97.70	99.10	99.00	99.40	100.00	100.00	GD
4	11	004	US 97	Algoma Rd. - Wocus Rd.	263.00	269.43	6.43	99.00	99.10	100.00	100.00	100.00	100.00	VG
4	11	004	US 97	Wocus Rd. - K Falls/Malin Int.	269.43	272.72	3.29							UC
4	11	004	US 97	NCL K Falls - K Falls/Malin Int.	272.35	272.92	0.57							UC
4	11	004	US 97	K Falls/Malin Int. - O-XING Hwy 20	272.72	274.92	2.20	90.40	97.30	96.00	95.90	100.00	100.00	GD
4	11	004	US 97	O-XING Hwy 20 - Link River	274.92	275.15	0.23							ST
4	11	004	US 97	O-XING Hwy 20 - SCL K Falls	275.15	277.61	2.46	92.70	92.80	100.00	100.00	100.00	100.00	GD
4	11	004	US 97	O-XING Hwy 20 - SCL K Falls	275.41	277.37	1.96	100.00	100.00	100.00	100.00	100.00	100.00	VG
4	11	004	US 97	SCL K Falls - Midland	278.03	280.51	2.48	97.40	97.40	100.00	100.00	100.00	100.00	GD
4	11	004	US 97	Midland - State Line	280.51	291.73	11.22	99.20	99.70	100.00	99.40	100.00	100.00	VG
4	11	270	OR 140	Lake Shore Drive - Jct. Hwy 21	62.40	68.76	6.36	82.10	94.50	94.00	100.00	87.70	100.00	GD
4	11	420	OR 140	Jct. Hwy 20 - Laverne Ave.	0.00	1.33	1.33	66.00						FR
4	11	420	OR 140	Laverne Ave. - Joe Wright Rd.	1.33	3.75	2.42	38.00						PR
4	11	420	OR 140	Joe Wright Rd. - Jct. Hwy 004	3.75	5.65	1.90	38.00						PR
4	11	422	OR 140	Modoc Point Rd. - Jct. Hwy 004	0.00	5.29	5.29	45.00						PR
4	11	422	OR 140	Chiloquin Spur	4.39	4.58	0.19	31.00						PR
4	11	424	OR 140	Jct. Hwy 004 - Klamath River Bridge	0.00	0.90	0.90	66.40	84.30	78.90	92.60	94.30	100.00	FR
4	11	424	OR 140	Klamath River Bridge - Altamont Dr.	0.90	3.31	2.41	93.30	94.80	100.00	99.80	96.70	100.00	GD
4	11	424	OR 140	Altamont Dr. - Jct. Hwy 50	3.37	5.97	2.60							UC
4	11	426	OR 140	Jct. Hwy 50 - CA State Line	16.51	18.93	2.42	51.00	95.50	62.00	94.20	87.60	100.00	FR
4	10	004	US 97	Jct. Fremont Hwy - Hackett Dr.	169.83	177.10	7.27	87.50	99.70	99.50	99.20	88.80	100.00	GD
4	10	004	US 97	Hackett Dr. - MP 183	177.10	183.00	5.90	63.30	75.10	91.20	86.80	94.40	100.00	FR
4	10	004	US 97	MP 183 - Crescent Ranger Station	183.00	185.60	2.60	36.20	92.10	67.30	56.10	91.10	99.90	PR
4	10	004	US 97	Crescent Ranger Station - MP 186.5	185.60	186.50	0.90	100.00	100.00	100.00	100.00	100.00	100.00	VG
4	10	004	US 97	MP 186.5 - MP 192.8	186.50	192.80	6.30	99.80	99.80	100.00	100.00	100.00	100.00	VG
4	10	004	US 97	MP 192.8 - MP 193.75	192.80	193.75	0.95	100.00	100.00	100.00	100.00	100.00	100.00	VG
4	10	004	US 97	MP 193.75 - MP 194.65	193.75	194.65	0.90	100.00	100.00	100.00	100.00	100.00	100.00	VG
4	10	004	US 97	MP 194.65 - Jct. Willamette Hwy	194.65	195.50	0.85	95.50	100.00	100.00	95.50	100.00	100.00	GD
4	10	004	US 97	MP 194.80 - Jct. Willamette Hwy	194.80	195.52	0.72	94.80	100.00	100.00	95.00	100.00	99.70	GD
4	10	004	US 97	Jct. Willamette Hwy - MP 202	195.50	202.00	6.50	99.90	99.90	100.00	100.00	100.00	100.00	VG
4	10	004	US 97	MP 202 - MP 203.1	202.00	203.01	1.01	97.50	100.00	100.00	97.50	100.00	100.00	GD
4	10	004	US 97	MP 203.1 - Chemult	203.01	203.64	0.63	100.00	100.00	100.00	100.00	100.00	100.00	VG
4	10	004	US 97	Chemult - MP 221	203.64	221.00	17.36	98.20	98.70	100.00	99.60	100.00	100.00	VG
4	10	004	US 97	MP 221 - MP 227.2	221.00	227.21	6.21	95.10	98.50	100.00	100.00	95.90	100.00	GD
4	10	004	US 97	MP 227.2 - District Boundary	227.21	227.77	0.56	96.50	96.50	100.00	100.00	99.20	100.00	GD
4	10	18	OR 58	MP 75 - The Dalles/CA Hwy	75.00	86.45	11.45	98.20	99.70	99.20	99.40	99.90	100.00	VG
4	10	18	OR 58	Little Odell Creek - The Dalles/ CA Hwy	86.04	86.55	0.51	93.90	100.00	100.00	93.90	100.00	100.00	GD
4	10	19	OR 31	Jct. Hwy 004 - Lake County Line	0.00	19.29	19.29	31.00						PR

*Key:

- VG= Very Good
- GD= Good
- FR= Fair
- PR= Poor
- VP= Very Poor
- ST= Structure
- UC= Under Construction
- NR= Not Rated

Appendix E – Stakeholder Interview Summary

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Appendix E

Klamath TSP Stakeholder Interview Summary

02/08/05

Overview

Between November 24, 2004 and February 1, 2005, Amanda Garcia-Snell, with JLA, Inc completed 14 stakeholder interviews over the telephone. The interviewees ranged from elected officials to agency staff. The interviews provided elected officials and agency staff to identify issues to address and others to involve and to offer input into the public process design. The following people were interviewed:

- Todd Kellstrom – Mayor of Klamath Falls, OR
- Samantha Meadows – City Recorder for Merrill, OR
- Teresa Foreman – City Recorder for Chiloquin, OR
- Danise Brakeman – City Recorder for Bonanza, OR
- Craig Miller – Engineer for Winema/Fremont National Forest
- Ed Case – Planning Director for Klamath Tribes
- Jana DeGarma – Community Services Director for Klamath Tribes
- Kathleen Mitchell – General Manager for Klamath Tribes
- Bill Thompson – Emergency Services Coordinator for Klamath County
- Stuart Bennett – with the Oregon Trucking Association
- Ernie Palmer – Director for Basin Transit
- Randy Bednar – with the Bicycle Advisory Committee
- Mike Stinson – District Manager and South Central Area Manager with ODOT
- Bob Bryant – Region 4 Manager at ODOT

Interviews not completed:

- Dave Walter – in the permitting Department at the Winema/Fremont National Forest he did not feel that he was the right person for me to speak with and insisted that I speak with Craig Miller.
- Gordon Toso – Maintenance Manager at Crater Lake National Park, he was referred to me by Chuck Lundy the Superintendent. I was unable to reach Mr. Toso although I left seven telephone messages for him.
- Mel Nowak – with Jeld Wen Corporation, he did not feel that he was the right person for me to speak with and said that he would try to find the most appropriate contact and call me back. He did not return the call and I was unable to reach him although I left four telephone messages for him.

Interview Highlights

This summary is a compilation of all the comments received during the interviews, organized by question. Responses to the questions varied according to the individual, yet some common themes emerged from those interviewed:

- Many people felt that Highway 97 had a variety of issues that need to be addressed ranging from passing lanes to winter weather treatments.
- Many people were concerned about safety being the most important focus of the plan.
- Many people felt that pedestrian access to schools was the most important and pedestrian access to recreational areas was the least important.

Summary of Interviews

The comments have been paraphrased to capture the main points of the speaker. Comments are not attributed to any one person, however issues specific to an organization/agency are highlighted as such. A number in parenthesis following a comment indicates the comment was heard at more than one meeting.

Question #1: Have you been involved with transportation planning in Klamath County before?

- Yes, with federal or state agencies (5)
- Yes, from an overview standpoint (2)
- Yes, when related to Klamath Tribes (2)
- No (5)

Question #2: What are the current transportation problems and key issues, if any, in the County?

- Lack of transportation to outlying communities and the reservation (3)
- The safety of exiting off of and passing on Highway 97 (3)
- The concerns I have are being addressed (2)
- Pedestrian concerns in town (2)
- Detours off of Highway 97 during fire season (1)
- General condition of Highway 97 needs to be improved (1)
- Finding an overall balance between access for development, business and reasonable safety in the infrastructure (1)
- Lack of a TSP (1)

Question #3: How do you think the County should address these issues?

- County wide evaluation and TSP (6)
- They are already addressing them (2)
- Collaborative working groups with communities (1)
- Local and regional stakeholders need to communicate with elected officials (1)
- County wide public transportation (1)
- Install traffic signals (1)
- Not a an issue that the County needs to address (1)
- No Answer (1)

Question #4: The transportation plan will likely contain a mix of roadway improvement options. What types of improvements are most important to you?

- Connectivity (7)
- Safety (2)
- Arterial (2)
- Winter weather treatments (1)
- Dealing with debris on the road (1)
- No improvement necessary (1)

Question #5: Please rank the following pedestrian access alternatives in order of importance (with 1 being the most important)

	1	2	3	4
Schools	9	1	2	1
Employment	1	7	4	1
Commercial Services	2	3	5	3
Recreation Areas	1	2	2	8

Question #6: What would be the best way to engage people in Klamath County around this issue?

- Town Hall/ Community or Public Meetings (6)
- Media Coverage (4)
- Involve local groups and local government (5)
- Send out or conduct in person surveys (2)
- Website (1)
- Not sure (1)

Question #7: Who else should be included in our stakeholder and/or mailing list?

- Can't think of anyone (3)
- Local Government Agencies and Interest Groups (3)
- Chiloquin Action Team – Quintin Green (2)
- Chiloquin Fire Chief – Dwayne Holster (1)
- Running Y Resort _ Bode Cavallero (1)
- Scenic Byway Committee for CA and OR (1)
- Tribal Health – Leroy Jackson (1)
- Klamath County Fire Chief – Dave Hard (1)
- Base Commander at Kinsley Field – Col. Johnny Atkinson (1)
- Klamath Falls City Manager – Jeff Ball (1)
- Editor of the local Klamath newspaper _ Heidi Wright (1)
- Bureau of Land Management (1)

Question #8: Do you have any final messages or suggestions?

- No (11)
- Glad to see the County engaging in a planning process for the infrastructure (1)
- Appreciate ODOT making the small communities a priority (1)
- Would like to see more collaboration between County and ODOT (1)

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