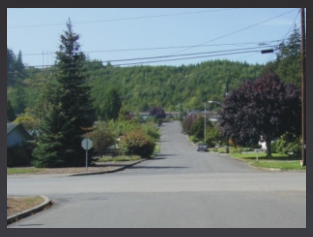

City of Reedsport
Transportation System Plan

February 2006

Prepared by

DKS Associates

TRANSPORTATION SOLUTIONS

Adopted by City Council
February 6, 2006

DKS *Associates*
TRANSPORTATION SOLUTIONS

February 7, 2006

Janelle Evans
City of Reedsport
451 Winchester Avenue
Reedsport, OR 97467

Subject: **Reedsport Transportation System Plan** P 04131-000

Dear Janelle:

DKS Associates is pleased to submit this Final Transportation System Plan to the City of Reedsport. This report reflects comments and revisions collected from the TAC, City Staff, ODOT, the public and other interested stakeholders. This final report and the supporting city ordinances, transmitted separately, concludes our contracted scope of services.

It has been a pleasure to work with you, and the rest of the TSP team, in preparing this document that will direct transportation investments in the City of Reedsport for the next 20 years.

Regards,

***DKS** Associates*

Carl Springer, P.E.
Principal

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Enc.: Reedsport Transportation System Plan (10 copies)
Cc: Lisa Cortes, ODOT, Region 3 (1 copy)

DKS 25 YEARS

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Acknowledgements

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1. SUMMARY

Overview

This Reedsport Transportation System Plan (TSP) identifies projects and programs needed to support the City's Goals and Policies and to serve planned growth over the next 20 years, and will be incorporated (by reference) into the Reedsport Comprehensive Plan. This document presents the investments and priorities for the Pedestrian, Bicycle, and Motor Vehicle systems along with new transportation programs to correct existing shortfalls and enhance critical services. For each travel mode, a Master Plan project map and list are identified to support the city's transportation goals and policies. The most critical elements of these Master Plans are referred to as Action Plans. The final chapter identifies the estimated plan costs and makes recommendations about potential new funding sources to support the plan.

Plan Process and Committees

The Reedsport TSP was developed in close coordination with Reedsport city staff, Oregon Department of Transportation staff and key representatives from the surrounding communities. Two formal committees were formed to participate in the plan development:

- *Technical Advisory Committee* – Agency staff from Oregon Department of Transportation, City of Reedsport and Douglas County participated in reviewing the technical methods and findings of the study. The focus of this group was on consistency with the plans and consensus on new recommendations.
- *Citizen Advisory Committee* – This committee was formed of interested citizens in the City of Reedsport and served as the representatives for citizens and community members.

The committees met regularly through the plan development process to review interim work products, assist in developing and ranking transportation solutions, and to refine master plan elements to ensure consistency with community goals.

Three public meetings were held, beginning in November 2004, to present the initial TSP elements to the community. A second public meeting was held in March, 2005 that presented transportation alternatives to the community. The public feedback from both meetings was compiled for the record, and changes were incorporated into the revised Public Draft TSP document. The Public Draft TSP was then submitted to the Planning Commission, who held public hearings to make further refinements, as appropriate, before recommending the Plan to the City Council for approval and implementation.

Plan Organization

This document is divided into nine chapters and a separate Technical Appendix. The title and focus of each chapter is summarized below:

- *Chapter 1: Summary* – This chapter provides a brief overview of the plan recommendations and presents the estimated funding needed to implement it.

- *Chapter 2: Goals and Policies* – This chapter presents the goals and policies related to transportation for adoption into the City's Comprehensive Plan, by reference.
- *Chapter 3: Existing Conditions* – This chapter examines the current transportation system in terms of the built facilities, how well they perform and comply with existing policies, and where outstanding deficiencies exist.
- *Chapter 4: Land Use Forecasts and Travel Demands* – This chapter presents the details of how the City of Reedsport is expected to grow under its present Comprehensive Plan over the next 20 years, and how travel demands on the city and regional facilities will change from growth patterns. This includes new development areas that have been identified by city staff.
- *Chapter 5: Pedestrian Plan* – This chapter presents strategies and plan recommendations to enhance pedestrian facilities and focus new improvements in areas with the highest concentration of activity.
- *Chapter 6: Bicycle Plan* – This chapter presents strategies and plan recommendations to enhance bicycle facilities and focus new improvements in areas with the highest concentration of activity.
- *Chapter 7: Motor Vehicles* – This chapter presents strategies and plan recommendations to provide adequate mobility and access to the city and state facilities as travel demands grow to 2025 levels. This chapter also recommends new street design standards, access spacing standards and functional class designations.
- *Chapter 8: Other Modes* – This chapter discusses transportation issues related to rail, air, and water transportation.
- *Chapter 9: Financing and Implementation* – This chapter presents the estimated revenues and costs for the transportation projects and programs developed in the plan. New funding alternatives are presented to bridge the gaps between the two.

Goals and Policies

The goals and polices pertaining to transportation are presented in Chapter 2. Goals are defined as brief guiding statements that describe a desired result. Policies associated with each of the individual goals describe the actions needed to move the community in the direction of completing each goal. These goals and policies were applied in the development of this Transportation System Plan to develop strategies and implementing measures for each of the travel modes applied in the City of Reedsport.

Other Implementing Land Use Actions

Several recommendations are made regarding implementing the pedestrian and bicycle Master Plans during application development review periods. These are explained in detail in the Pedestrian Plan (Chapter 5), Bicycle Plan (Chapter 6) and summarized briefly below:

- Pedestrian Facilities – As development or re-development occurs, fronting sidewalks as well as access to the existing city-wide sidewalk network, should be provided by the developer.
- Bicycle Facilities – The City Zoning Code should require on-site bicycle parking based on land use codes. New development or re-development must provide connections or accessways to link the development to the existing bicycle and pedestrian network.

Projects and Programs

Pedestrian

Detailed analysis was conducted on existing collector and arterial streets to identify locations where new or in-fill facilities would be required. Separate recommendations were made for enhancements to existing crossings at key arterial locations and to enhance pedestrian safety along US 101. Key findings and recommendations included:

- Identifying arterial crossing enhancements to increase pedestrian safety on US 101 between 18th Street and 22nd Street. A traffic signal that will enhance pedestrian safety at the US 101/20th Street intersection is proposed. The existing traffic signal at 19th Street will be removed.
- Construction of sidewalks and bike lanes on OR 38 between US 101 and Sixth Street. This improvement would include upgrading the existing railroad crossing.
- Identifying a toolbox of improvements that can be applied for pedestrian crossing enhancements including raised center refuge islands, traffic signals, and curb extensions along parts of US 101 and OR 38 where there is a pedestrian crossing deficiency. One location was identified on US 101 at Juniper Avenue as a master plan project to add a center raised pedestrian refuge area.
- Identifying a series of sidewalk in-fill projects (Pedestrian Action Plan) to connect existing sidewalks to key major pedestrian generators, such as schools, government facilities, etc.

The total City cost of the Pedestrian Action plan: $147,000

Bicycle

A Bicycle Master Plan was developed to provide bicycle access to all areas of the City, particularly key destinations. Key findings and recommendations included:

- Providing a continuous bicycle network along US 101, including a signed parallel route between 18th Street and 22nd Street.
- Identifying program costs to expand arterial streets to provide on-street bike facilities (or off-street trails).
- As re-development and street improvements occur, provide sufficient space for on-street bike facilities where identified on the Bicycle Master Plan map.
- Identified a multi-use trail along the water-front and Schofield Creek to provide additional recreation and mobility options to residents.

The total City cost of the Bicycle Action plan:..... $50,000

The primary purpose for the bicycle projects is to provide a safe and convenient route for bicycle travel along major traffic routes in the city. Longwood Drive, the only city funded project in the Action Plan, currently has enough width for a re-striping without the need for additional right-of-way. However, many of the city funded projects in the Master Plan will require additional right-of-way. It is acknowledged that this will occur only as property re-develops, or when the city undertakes a major new improvement project on a designated street.

Motor Vehicle

A comprehensive analysis of the 2025 motor vehicle needs for city streets and affected state highway facilities was performed within the City of Reedsport. A few key findings and recommendations from the Motor Vehicle chapter are summarized below:

- Most of the intersections in Reedsport will continue to function at acceptable levels of service under future operating conditions without any capacity enhancing projects. The exception is at US 101/22nd Street, which will have a v/c ratio in the future above the 0.80 standard.
- US 101 in Reedsport is designated as a State Highway Freight Route, which has higher mobility standards than other Statewide Highways. The proportion of large trucks on US 101 are key design elements for any type of improvements to the highway.
- Recent amendments to the *Oregon Highway Plan* have allowed for state facilities in cities with posted speeds below 35 miles per hour to be treated as a Urban Business Areas (UBA), without the need for a formal designation process. In Reedsport, this applies in the Uptown area on US 101. This would provide greater flexibility in recommended designs in this section of highway, and provide opportunities for "Main Street" features that are not generally recommended on state highways. The mobility standards in a UBA increases from 0.75 (typical) to 0.80.
- The construction of 20th Street extension is necessary to meet Master Heights development needs, however it is not needed for general city circulation, and it should be a constructed as a condition of approval for that project. The street design within the Master Heights development should not preclude a potential future extension to Ranch Road. The 20th Street design should not be terminated inside the development or blocked by an adjoining land owner. A street stub should be constructed with appropriate signs indicating that it could be extended in the future as development occurs. The street extension should also be constructed to the new street standards, which are narrower than the existing portions of 20th Street.
- A number of local, neighborhood and collector street connections should be made, either as development occurs or funding is available. While some of these are essential to circulation and operations (e.g. 20th Street extension), others would be desirable to improve circulation and connectivity (additional connection across the Schofield Bridge).
- Safety recommendations for the US 101 corridor between 18th Street and 22nd Street include a revised cross-section of US 101 that adds a center turn lane, removes the existing traffic signal at 19th Street, and constructs a new traffic signal at 20th Street. Any new traffic signal installation must meet ODOT warrants. Also, it is recommended that street lighting be enhanced at the US 101/21st .
- Future study be conducted for the potential construction of interchange ramps to and from the south at Ranch Road and US 101, to relieve forecasted congestion in the Uptown portion of US 101.
- *The recommended re-striping project on US 101 in the Uptown Area to add a center turn-lane is subject to further review, analysis and approval by ODOT. This would include a Design Exception for substandard lane widths, and also potentially could include a Refinement Plan.*

The total City cost of Motor Vehicle Action Plan projects: $0

The total city funded portion of the motor vehicle master plan is approximately $3.2 million and it includes the 20th Street extensions which may be offset with developer contributions. The 22nd Street extension to the south is expected to be paid in whole by developers.

Transportation Programs

Table 1-1 summarizes the elements of the plan that were not specifically defined in the project lists, and explains how costs will be addressed for these elements.

Table 1-1: Non-Auto, Pedestrian and Bicycle Costs Issues

Travel Mode	Issues
Parking	The Transportation System Plan does not define specific projects. Private property owners will provide off-street parking as land develops.
Neighborhood Traffic Management (NTM)	Specific NTM projects are not defined. These projects will be subject to neighborhood consensus based upon City placement and design criteria. A city NTM program, if desired, should be developed with criteria and policy adopted by the City Council. Traffic humps can cost $2,000 to $4,000 each and traffic circles can cost $3,000 to $8,000 each. A speed trailer can cost about $10,000. It is important, where appropriate, that any new development incorporate elements of NTM as part of its on-site design.
Trucks/Freight	Roadway funding will address these needs.
Rail	Costs to be addressed and funded by private railroad companies and the state.
Air, Water, Pipeline	Costs to be addressed by individual service providers.

Financing

Table 1-2 summarizes the costs outlined in the Transportation System Plan to implement the Action Plans for Pedestrian, Bicycles, and Motor Vehicles elements, and several other transportation programs (see Table 10-3 for details) that support the transportation goals and policies identified in the TSP update. The capital costs of the Action Plans that are the responsibility of the city total $197,000 over 20 years. By far, the greatest transportation cost is associated with facility maintenance and operations, which adds to $14,750,000 over 20 years. The total city cost for construction, operations and maintenance over the 20-year horizon of this plan is estimated at $14,947,000.

Table 1-2: Reedsport Transportation City Costs over 20 years (2005 Dollars)

Transportation Element	Approximate Cost ($1,000)
Capital Improvements	
Motor Vehicle Action Plan	$0
Bicycle Action Plan	$50
Pedestrian Action Plan	$147
Sub-total	**$197**
Maintenance and Operations	
Road Maintenance ($725,000/yr)	$14,500
Pedestrian/School Safety Program ($5,000/yr)	$100
Neighborhood Traffic Management ($5,000/yr)	$100
Transportation System Plan Support Documents (i.e. Design standard update, TSP updates)	$50
Sub-total	**$14,750**
20 YEAR TOTAL in 2005 Dollars	**$14,947**

The primary source of city revenues for transportation is provided by state gas tax funds. These funds are allocated based on the city's population relative to the remainder of Douglas County. The Oregon gas tax does not have an inflation index, and the rate has not changed since 1994. The estimated gas tax revenue to be collected from the State and allocated for capital projects in the City of Reedsport the next fiscal year is $22,000. Timber revenues from Douglas County, typically $60,000, have been applied for roadway maintenance. Over 20 years, the estimated revenue from gas tax and timber revenue to be applied to transportation total $1,640,000. The difference between the estimate needs, as shown in Table 1-2, and the revenue from gas tax is $13,307,000. This funding shortfall indicates that additional funding sources will be needed to complete the plan, and some of the plan elements, such as street maintenance, will need to be deferred until supplemental funds become available.

2. GOALS AND POLICIES

Background

These goals and policies have been developed to guide the City's twenty-year vision of transportation system needs. There are seven transportation goals with related policies organized under each goal. The goals and policies are not prioritized.

The goals are brief guiding statements that describe a desired result. The policies describe the actions needed to move the community toward the goal. Below many of the policies, italic text provides details of the implementing actions and clarifies the intent of the policy. The transportation goals and policies are implemented by these actions, by the improvement projects included in the master plans and action plans for each transportation mode, and by the Development Code.

Goals and Policies

Goal #1: Develop a transportation system to enhance Reedsport's livability and meet federal, state, and local requirements.

Policies:

a) Maintain the livability of Reedsport through proper location and design of transportation facilities.

Action:

Design streets and highways to respect the characteristics of the surrounding land uses, natural features, and other community amenities.

Recognizing that the magnitude and scale of capital facilities also affect aesthetics and environmental quality, the City will require design plans and impact analyses as specified in the Development Code.

b) Consider noise impacts in the design, redesign, and reconstruction of arterial streets immediately adjacent to residential neighborhoods.

c) Protect neighborhoods from excessive through traffic and travel speeds while providing reasonable access to and from residential areas. Build streets to minimize speeding.

Action:

Develop and maintain street design standards and criteria for neighborhood traffic management for use in new development and existing neighborhoods.

d) New commercial and industrial development shall prepare traffic plans to minimize cut-through traffic on residential streets.

e) Cooperate with the Oregon Department of Transportation (ODOT) to maintain and improve US 101 and Highway 38 consistent with the Oregon Highway Plan (OHP).

Goal #2: Create a balanced transportation system.

Policies:

a) Implement street design standards that recognize the multi-purpose nature of the street right-of-way for utility, pedestrian, bicycle, truck, and vehicle traffic.

b) Provide connectivity to each area of Reedsport to ensure pedestrian, bicycle, and vehicle access to schools, parks, employment and recreational areas.

c) Develop neighborhood and local connections to provide adequate circulation into and out of neighborhoods.

d) Develop a pedestrian system of sidewalks and pathways to provide safe, attractive, efficient, and accessible routes that allows pedestrians to travel from residential areas to schools, parks, commercial areas and major employment centers. All new streets shall have sidewalks.

e) Develop a bikeway system of bike lanes, shared roadways, and multi-use paths that allows pedestrians to travel from residential areas to schools, parks, commercial areas and major employment centers.

Goal #3: Improve the safety of the transportation system.

Policies:

a) Improve traffic safety through a comprehensive program of engineering, education, and enforcement.

b) Where on-street pedestrian and bicycle facilities cannot reasonably be provided on highways and arterials, identify parallel routes that comply with state and city planning and design standards.

c) Enhance safety by prioritizing and improving high accident locations within the City.

Action:

Work with ODOT and Douglas County to periodically review traffic collision information in an effort to systematically identify, prioritize, and remedy safety problems.

d) Designate safe routes from residential areas to schools.

Action:

The City should work with area schools and the community in developing safe pedestrian, bicycle and bus routes to schools. Communicate selected safe school route program to community. Improvement projects near schools shall consider school access and safety during project development.

e) Maintain access management standards for streets to reduce conflicts between vehicles and trucks, and between vehicles and bicycles and pedestrians.

Action:

Preserve the functional integrity of the motor vehicle system by limiting access consistent with City, County, and State requirements standards [to be developed as part of this process].

f) Ensure that adequate access for emergency services vehicles is provided throughout the City.

Action:

Develop Neighborhood Traffic Management standards based on functional classification to preserve primary response routes.

g) Meet federal and state safety standards for rail crossings.

h) Provide safe routing of hazardous materials consistent with federal guidelines.

Action:

Work with federal agencies, the Public Utility Commission, the Oregon Department of Environmental Quality, public safety providers, and ODOT to assure consistent routes, laws, and regulations for the transport of hazardous materials.

Goal #4: Develop an efficient transportation system that will handle future traffic growth.

Policies:

a) Designate roadway functional classifications that reflect the desired function and characteristics of different roadways.

Action:

Maintain a functional classification system that meets the City's needs and respects the needs of other agencies including but not limited to Douglas County, and ODOT.

b) Adopt land use development standards to reduce travel demand and encourage all modes of transportation.

c) Encourage development that effectively mixes land uses to reduce reliance on vehicles.

d) Implement the bicycle, pedestrian, and vehicle improvements to create a multi-modal transportation system.

e) Maintain levels of service consistent with the Oregon Transportation Plan. Reduce traffic congestion and enhance traffic flow through such measures as intersection improvements, intelligent transportation systems, signal synchronization, and other similar measures.

Action:

Adopt level of service standards that are consistent with State and County standards.

f) Require comprehensive plan amendments and zone changes to demonstrate that the proposed changes will not significantly affect the transportation system and are consistent with the identified function, capacity, and performance standards of the transportation facility.

Goal #5: Provide a transportation system that is accessible to all members of the community.

Policies:

a) Construct transportation facilities to meet the requirements of the Americans with Disabilities Act.

b) Support service to respond to the transportation needs of disadvantaged individuals.

Goal #6: Develop a transportation system to provide for efficient freight movement.

Policies:

a) Truck routes and highway access are essential for efficient movement of goods. Design these facilities and adjacent land uses to reflect the needs of freight movement.

b) Consider the impact on railroad facilities in land use decisions.

Goal #7: Create a funding system to implement the recommended transportation system improvement projects.

Policies:

a) Partner with ODOT and other jurisdictions to develop a long-range financial strategy to make needed improvements to the transportation system and support operational and maintenance requirements.

Action:

The financial strategy should consider the appropriate elements. View the process of improving the transportation system as that of a partnership between the public (through fees and taxes) and private sectors (through exactions and conditions of development approval), each of which has appropriate roles in the financing of these improvements to meet present and projected needs.

b) Coordinate transportation projects, policy issues, and development actions with all affected governmental units in the area. Key agencies for coordination include Douglas County and ODOT

c) Provide adequate funding for maintenance of transportation facilities.

Action:

Develop a long-term financing program that provides a stable source of funds to ensure cost-effective maintenance of transportation facilities and efficient effective use of public funds.

d) Develop a funding program to pay for transportation improvements related to development impacts.

e) Establish rights-of-way at the time of site development and, where appropriate, officially secure them by dedication of property.

f) Monitor and update the Transportation System Plan so that issues and opportunities are addressed in a timely manner. Maintain a current capital improvement program that establishes the City's construction and improvement priorities, and allocate the appropriate level of funding.

3. EXISTING CONDITIONS

Existing transportation conditions were evaluated as part of the City of Reedsport Transportation System Plan (TSP). This chapter summarizes the traffic and transportation system inventory and operations conducted within the City for the purposes of this transportation system plan. The evaluation considered all types of travel within the city, including motor vehicles, pedestrians, bicycles, trucks, transit, rail, air, and waterways.

In the fall of 2004, an inventory of traffic conditions in the City of Reedsport was undertaken to establish a base year for the TSP. Much of this data provides a basis of comparison for future assessment of transportation performance in the City of Reedsport relative to desired policies.

Background

The City of Reedsport study area is shown in Figure 3-1, which includes the existing city limits and designated urban growth boundary. The physical inventory of transportation facilities included all public roads, trails and routes within these boundaries. No private facilities were included in this evaluation. Inventories were made through field reviews, and from historical data sources included aerial photographs and databases maintained by Reedsport, Douglas County and ODOT.

Ten street intersections within the study area were selected for evaluation of traffic operations. These intersections were selected by the contractor and city administrative staff as the most likely locations to have either congestion or key operational issues. Motor vehicle, pedestrian and bicycle data was collected during peak weekday driving hours. Two additional locations were also selected for motor vehicle volume analysis. The traffic data was adjusted to account for seasonal changes in traffic patterns through the city so that the volumes used in the TSP analysis represents an appropriate design hour for peak travel within the city. The traffic volume data was collected at these locations and analyzed in order to evaluate existing conditions, roadway capacity and levels of service.

Overview

The existing conditions inventory and evaluations for the City of Reedsport is presented in the following sections of this chapter. Overall, the key findings included:

- Pedestrian facilities crossing the Schofield Creek are limited to routes on US 101.
- Key gaps in the existing sidewalk system on OR 38 between US 101 and 5th Street including the railroad tracks, and along US 101 south of OR 38 to 13th Street were noted.
- Pedestrian crossings on US 101 in the Uptown area between 19th and 22nd Avenue were among the highest in the city. Proximity of the city high school and middle schools appear to contribute to midday pedestrian activity.
- Recent collisions between pedestrians and motor vehicles highlight safety and operational concerns along these blocks.
- The city has very limited designated on-street bike facilities. Major upgrades could be made to make bike travel on the arterials and collectors in Reedsport more convenient. Local streets

generally do not carry sufficient motor vehicle traffic or speeds to require widening for separate bike lanes.

- There is no fixed route transit service within the city, however, there are local taxis and an inter-city bus service.
- Traffic volumes on US 101 range up to 1100 vehicles per hour during heavy travel periods. Volumes on OR 38 within the city limits are about half the level observed on US 101 south of the OR 38 junction.
- Truck traffic represents about 8 to 10 percent of the total traffic observed on the two local state routes. This is a significant percentage of trucks, and it will be an important factor in any changes to highway design or operations.
- Travel congestion during peak hours is acceptable, based on ODOT mobility standards according to the Oregon Highway Plan.
- The intersection of US 101 and 22nd Street has the most reported traffic crashes in the city between 2000 and 2002.
- Up to two trains a day operate on the local rail line owned by Central Oregon and Pacific Rail. This small level of activity is not likely to significantly affect operational aspects of other travel modes, however safety remains a concern.

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City of Reedsport
Transportation System Plan

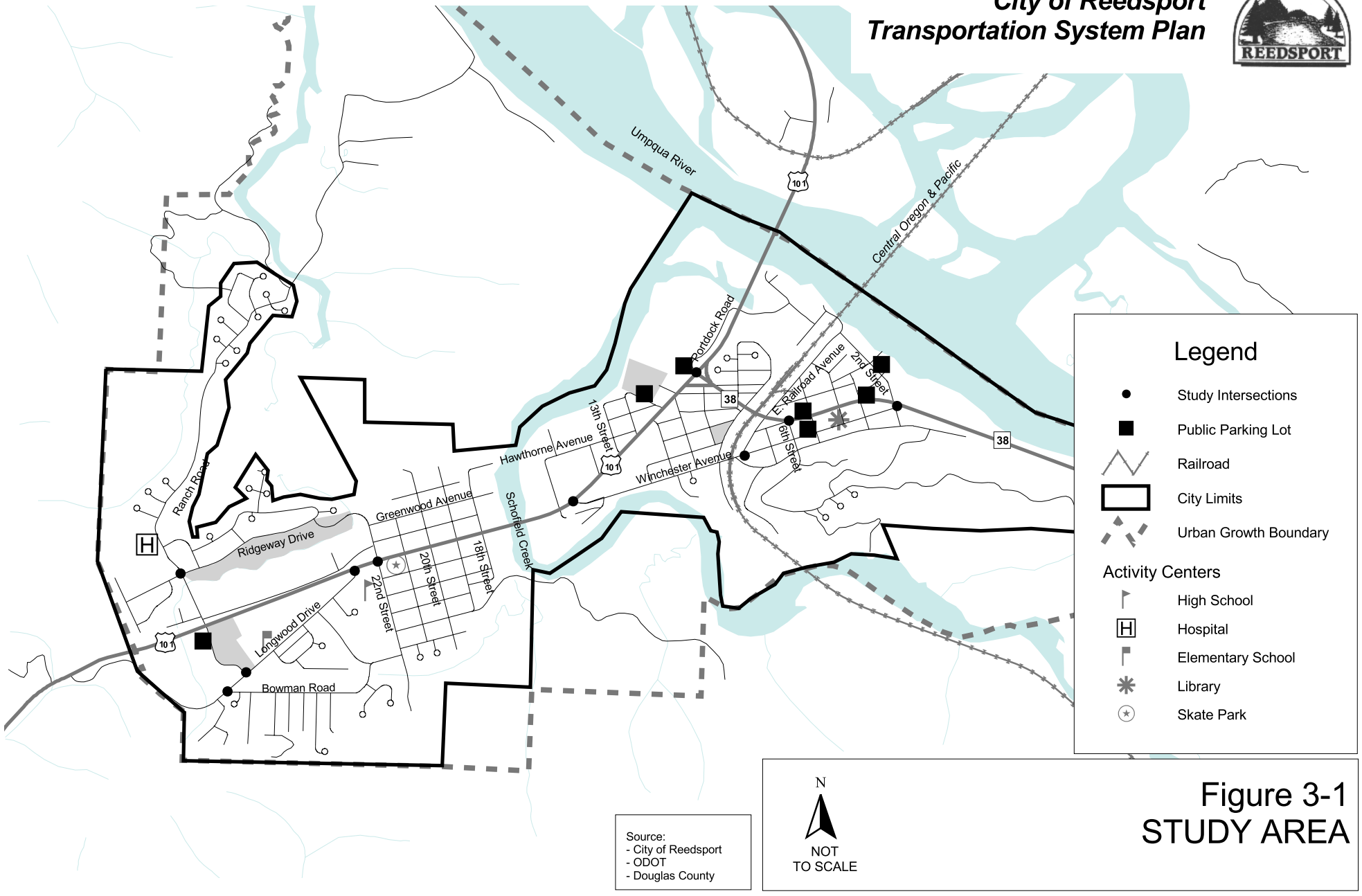

Figure 3-1
STUDY AREA

Pedestrians

Facilities

Figure 3-2 shows the sidewalk inventory in the City of Reedsport. Large portions of the arterial and collector streets in the City of Reedsport have sidewalks on at least one side of the street. There are some gaps in the sidewalk network; however, connectivity and pedestrian linkages are relatively good, particularly to and from parks and schools. A majority of the residential streets have sidewalk gaps, but most of the commercial areas include sidewalks on both sides of the street. This provides connections to major roadways and other neighborhoods.

Specific areas where pedestrian facilities are missing include OR 38 between 6th Street and US 101 (approximately 1,500 feet), US 101 between OR 38 and 13th Streets (approximately 1,600 feet), and Ranch Road which is a narrow street with no sidewalks north of Ash Court.

There are no multi-use paths in the City of Reedsport, aside from an unpaved path that runs along the Schofield Creek. The TSP should consider multi-use path alignments, as well as a grade separated pedestrian connection across US 101 at the Schofield Creek, to augment the current pedestrian network and provide additional connections between neighborhoods and pedestrian attractions.

Current Activity Levels

The majority of pedestrian activity in the City of Reedsport takes place along US 101 and State Highway 38 due to the commercial (pedestrian related) land uses. Higher speeds and traffic volumes along these corridors create an unfriendly pedestrian environment. The City of Reedsport's historic town center is characterized by a variety of small specialty retail shops, store front businesses and a historic grid street network. There are four main parks and one high school within the city limits boundaries.

Pedestrian crossings in the area of the Reedsport Junior/Senior High School, and skate park (which is located just a block north of the High School on US 101) present a safety issue, because during the lunch break for the High School (11:20am to 12:15pm) a high volume of pedestrians cross US 101 to access retail land uses. Between 2000 and 2002 there were four pedestrians injured at the US 101/20th Street intersection and another pedestrian injured at the US 101/22nd Street intersection. The pedestrian crossing volumes are shown in Table 1. The most significant pedestrian activities occur near retail, recreational, educational and town center areas, including US 101, OR 38 and Ridgeway Drive.

Existing pedestrian count data was collected during the evening peak period (3:00 to 6:00 PM) at the study intersections. Table 1 summarizes this data. As shown in the table, the highest level of PM peak hour pedestrian activity is located on US 101. Other counts were collected in October, 2003 by ODOT during studies on US 101. These counts were between 9AM and 7PM at US 101/22nd Street and US 101/20th Street. The highest reported volumes were US 101/20th Street with 136 pedestrian crossings.

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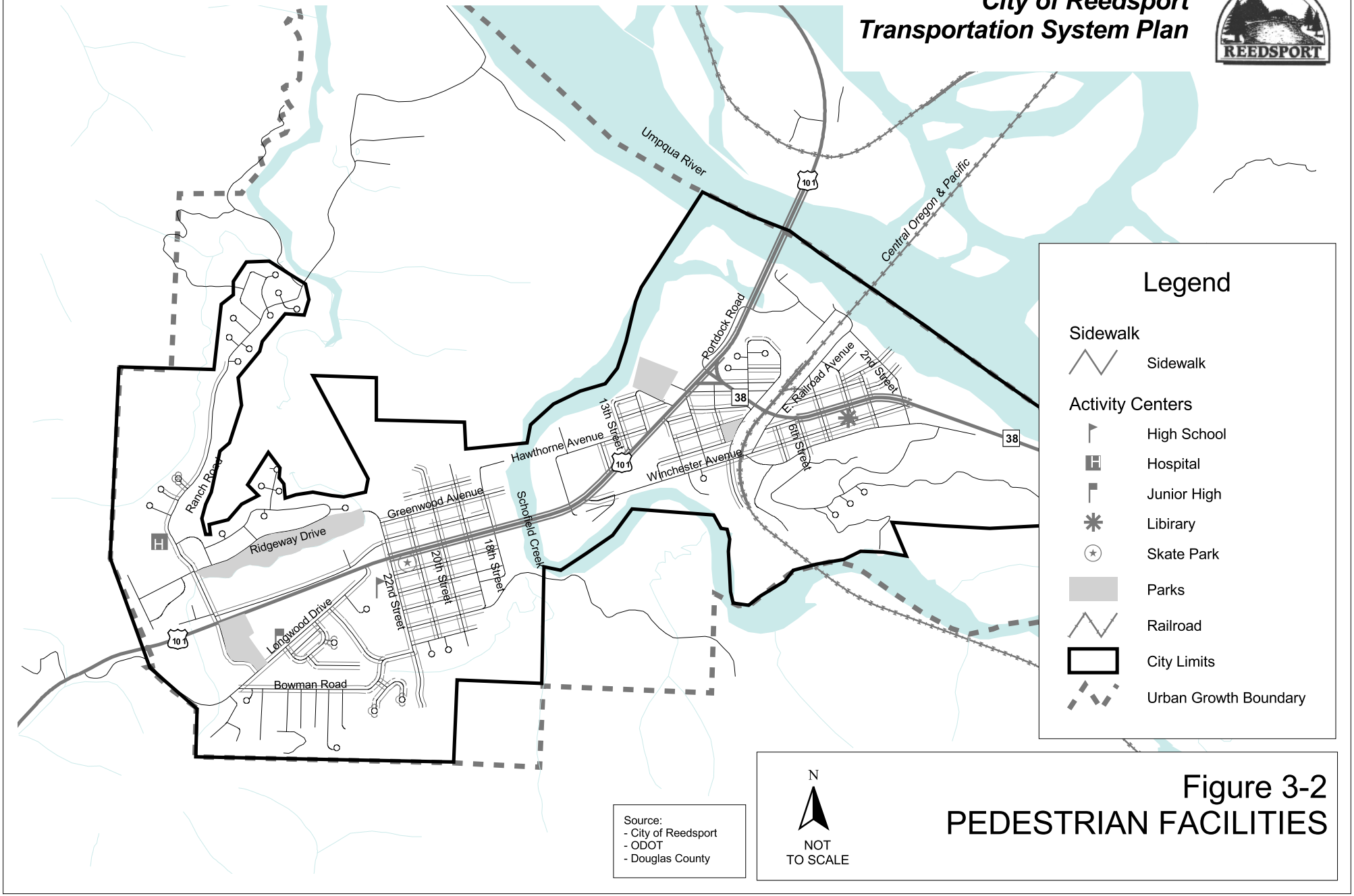

Figure 3-2
PEDESTRIAN FACILITIES

Table 3-1: Pedestrian Volumes

Intersection	PM Peak Hour* (3 PM to 6 PM)	14-Hours (6 AM to 7 PM)**
US 101/Longwood Drive	0	
US 101/22nd Street	11	
US 101/21st Street	–	84
US 101/20th Street	–	136
US 101/Winchester Avenue	12	
US 101/OR 38	3	
Ranch Road/ Ridgeway Drive	12	
Longwood Drive/Bowman Road	1	
Longwood Drive/Ranch Road	1	
East Fir Avenue/Winchester Avenue	4	
OR 38/East Fir/6th Street	0	
OR 38/Winchester Avenue	1	

Source:
* Traffic Smithy manual turn movement counts October, 2004.
**14-hour counts collected at two locations by ODOT, Region 3, on October 14, 2003.

Pedestrian collision data was also obtained from ODOT for the entire City between 2000-2002 and is shown in Table 3-2. The only two intersections that reported pedestrians collisions are on US 101 at 20th Street and 22nd Street.

Table 3-2: Pedestrian Crashes

Intersection	Number of Pedestrian Collisions (2000-2002)	Pedestrians Injured	Pedestrians under 16 Involved
US 101/20th Street	3	4	2
US 101/22nd Street	1	1	1

Source: ODOT Crash Analysis and Reporting Unit, October, 2004.

Bicycles

Facilities

Figure 3-4 shows the existing bicycle facility inventory in the City of Reedsport. A short section of OR 38 and segments on US 101 currently have delineated striped bike lanes. Winchester Avenue, OR 38 and US 101 all have enough room in the shoulder to allow a "shared roadway", however State bicycle planning standards require bike lanes on arterials and major collectors[1].

The remaining streets in the City of Reedsport do not have any existing delineated bike lanes. Most of these streets are collectors or local streets, serving residential neighborhoods. Due to the lower motor vehicle volumes and posted speeds on these streets, bikes and motor vehicles are better able to share the street right of way.

Current Activity Levels

Bicycle counts were conducted during the evening peak period (3:00 to 6:00 PM) at the study intersections in the City of Reedsport and are shown in Table 3-3. The existing bicycle volumes are generally low and can be expected to increase in residential areas during the summer months.

Table 3-3: Bicycle Volumes

Intersection	PM Peak Hour
Signalized Intersections	
US 101/22nd Street	3
US 101/Winchester Avenue	4
US 101/OR 38	2
Unsignalized Intersections	
Ranch Road/ Ridgeway Drive	6
Longwood Drive/Bowman Road	3
Longwood Drive/Ranch Road	3
US 101/Longwood Drive	4
East Fir Avenue/Winchester Avenue	4
OR 38/East Fir/6th Street	0
OR 38/Winchester Avenue	0

Source: Traffic Smithy manual turn movement counts October, 2004.

[1] TPR 660-012-0045 3(B) and ORS 366.514.

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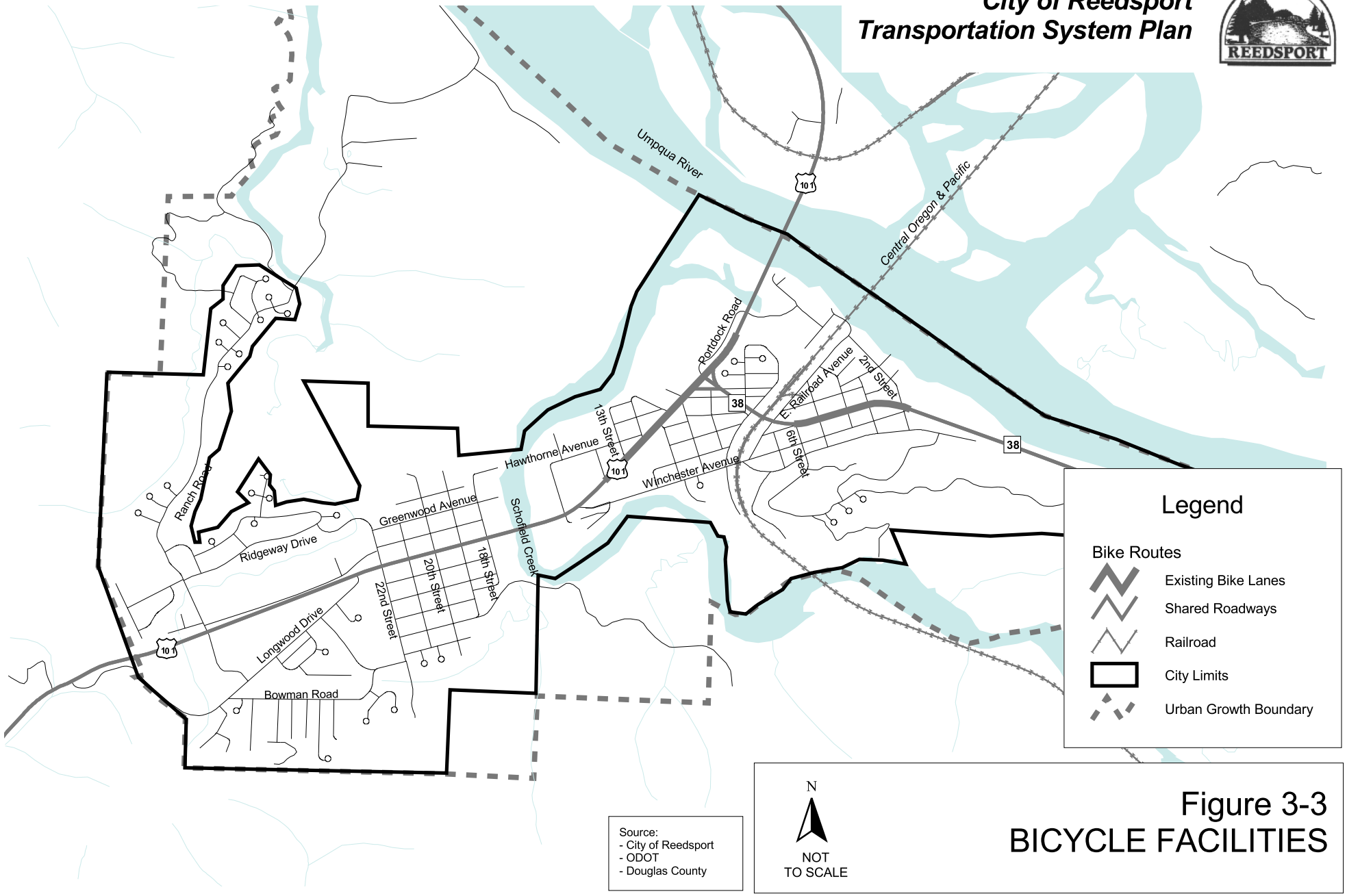

Figure 3-3
BICYCLE FACILITIES

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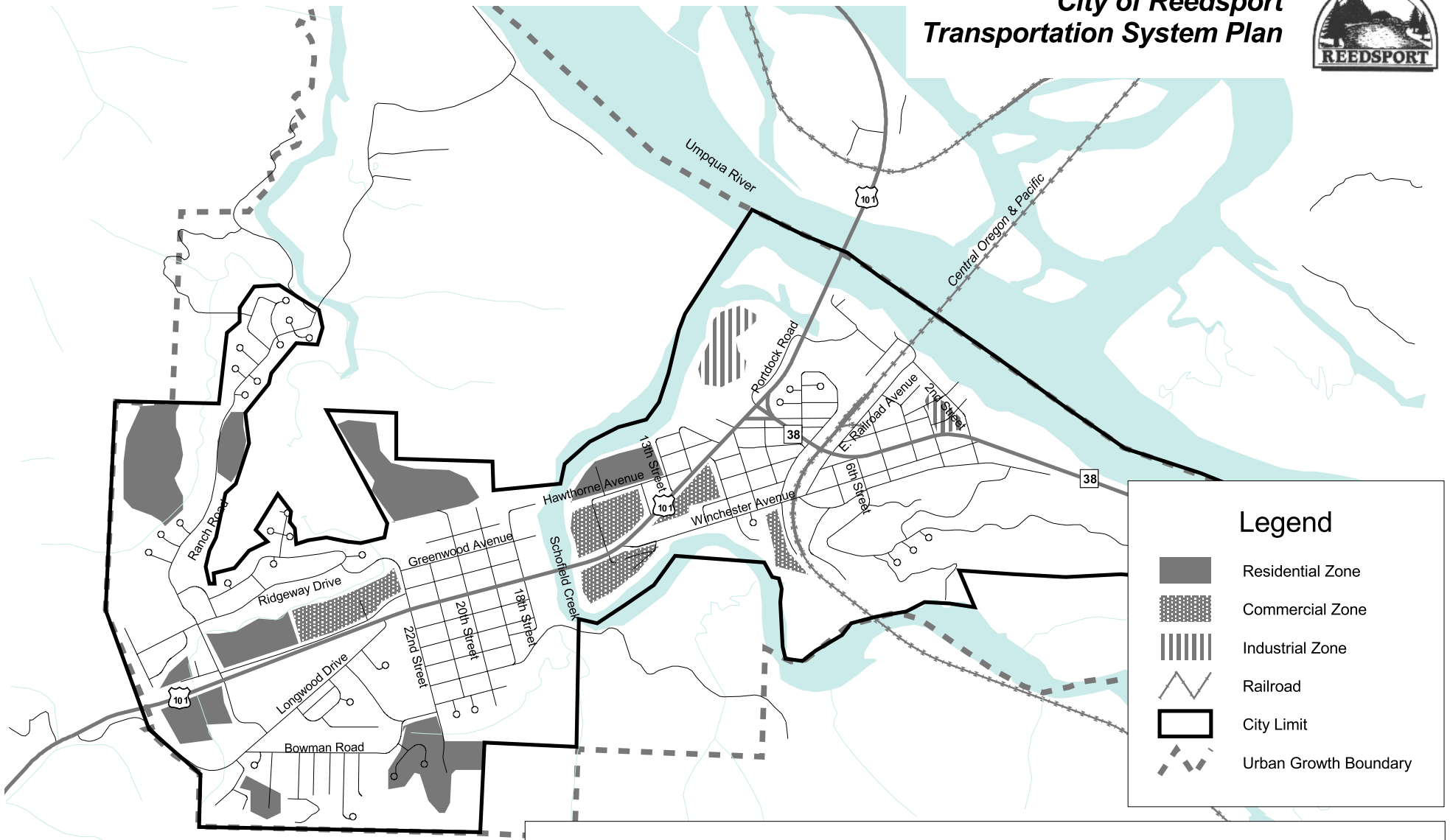


Figure 3-4
APPROXIMATE LOCATION OF BUILDABLE LANDS

Transit

There is currently no fixed route transit service provided in the City of Reedsport. However, two dial-a-ride programs are offered, plus a local taxi service. The Umpqua Regional Council of Governments sponsors the Umpqua Transit and Dial-A-Ride service that provides transportation to residents of Reedsport to/from and within Reedsport, Winchester Bay and Gardiner who are either over 60 years of age or are disabled. This service operates Monday thru Friday 9:00 AM to 3:45 PM and costs a $1.50 each direction. The Lower Umpqua Senior Disabled Transportation Service Inc. also offers services to residents of Reedsport, providing transportation to/from and within Reedsport, Winchester Bay and Gardiner. This service operates Tuesday, Thursday and Friday from 10 AM to 4 PM. A donation of $2 per day or $20 per month is requested as the operations of the service are financed strictly through donations. Greyhound Bus recently eliminated service to the area, which offered 6 departures/arrivals a day, connecting to Coos Bay and Eugene. A more limited inter-city service was extended to the area via Porter Stage Lines, which operates buses two times a day between Coos Bay, Reedsport, Florence, Eugene, Bend, Burns and Ontario, Oregon.

Land Use

Within the Reedsport City Limits, there is approximately 190 acres[2] of buildable land that is zoned for residential (single family, multi-family or rural suburban) uses. Additionally, within the City Limits there are approximately 70 acres of commercially zoned acreage that is buildable and 18 acres of available industrial acreage.

Figure 4 shows general areas associated with the most recent survey of buildable lands within the Reedsport City Limits. Most of the residential acreage is located in three general areas: south of Bowman Road, west of Ranch Road and north of Hawthorne Avenue. All three of these areas are south of the Schofield Creek. The majority of commercial land is located along US 101 and OR 38, with the two main areas being around the intersection of US 101 and Winchester Avenue and along Frontage Road, just south of the US 101/22nd Avenue intersection. The industrial lands are located in the dock area and west of Port Dock Road.

Motor Vehicles

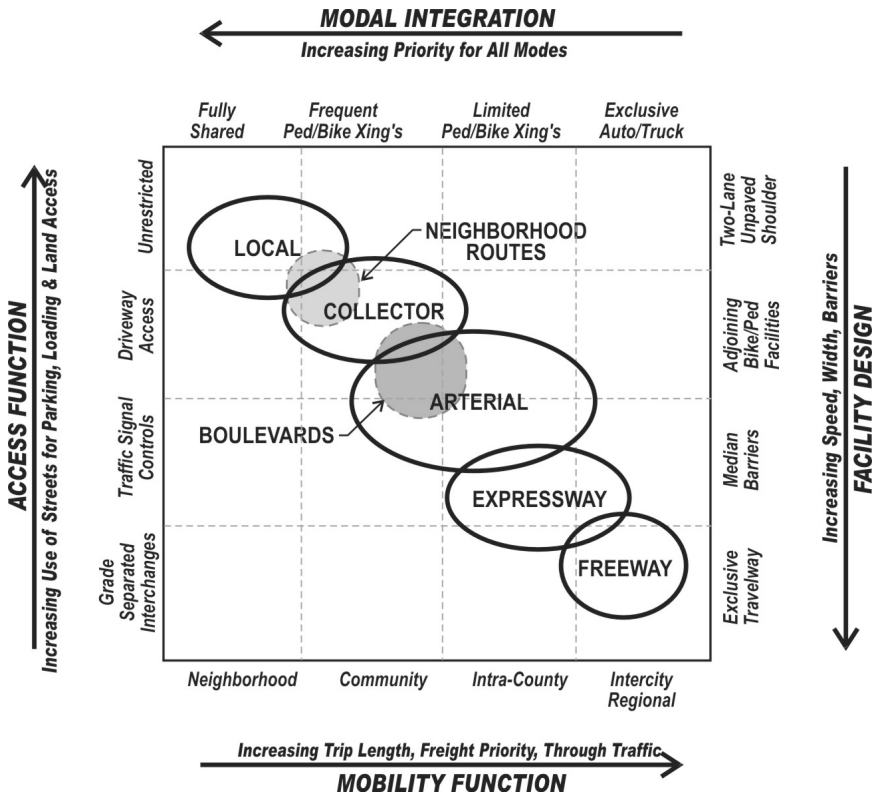
Functional Classification

The functional classification system is designed to serve transport needs within the community. The schematic diagram on the following page illustrates the competing functional nature of roadway facilities as it relates to access, mobility, multi-modal transport, and facility design. The diagram is useful to understand how worthwhile objectives can have opposing effects. For example, as mobility is increased (bottom axis), the provision for non-motor vehicle modes (top axis) is decreased accordingly. Similarly, as access increases (left axis), the facility design (right axis) dictates slower speeds, narrower travelways, and non-exclusive facilities. The goal of selecting functional classes for particular roadways is to provide a suitable balance of these four competing objectives.

The diagram shows that as street classes progress from local to collector to arterial to freeway (top left corner to bottom right corner) the following occurs:

[2] *Reedsport Buildable Lands Inventory*, Umpqua Regional Council of Governments June, 1999.

- *Mobility Increases* – Longer trips between destinations, greater proportion of freight traffic movement, and a higher proportion of through traffic.
- *Integration of Pedestrian and Bicycle Decreases* – Provisions for adjoining sidewalks and bike facilities are required up through the arterial class, however, the frequency of intersection or mid-block crossings for non-motorized vehicles steadily decreases with higher functional classes. The expressway and freeway facilities typically do not allow pedestrian and bike facilities adjacent to the roadway and any crossings are grade-separated to enhance mobility and safety.
- *Access Decreases*– The shared uses for parking, loading, and direct land access is reduced. This occurs through parking regulation, access control and spacing standards (see opposite axis).
- *Facility Design Standards Increase* – Roadway design standards require increasingly wider, faster facilities leading to exclusive travelways for autos and trucks only. The opposite end of the scale is the most basic two-lane roadway with unpaved shoulders.



Two additional areas are noted on the diagram for **Neighborhood Routes** and **Boulevards** that span two conventional street classes.

The existing City of Reedsport functional class system for roadway facilities is shown in Figure 3-5. With the exception of the State facilities and Longwood Drive, Bowman Road, Ranch Road, Frontage Road and Winchester Avenue, streets in the City of Reedsport are currently classified as local streets.

ODOT is responsible for the operation, development and maintenance of US 101 and OR 38 within the TSP study area. The City of Reedsport is responsible for the remaining street system within the city limit. Douglas County does not own or operate any of the streets within the boundaries of the City of Reedsport. Roadway ownership and maintenance in the City of Reedsport are identified in Figure 3-6.

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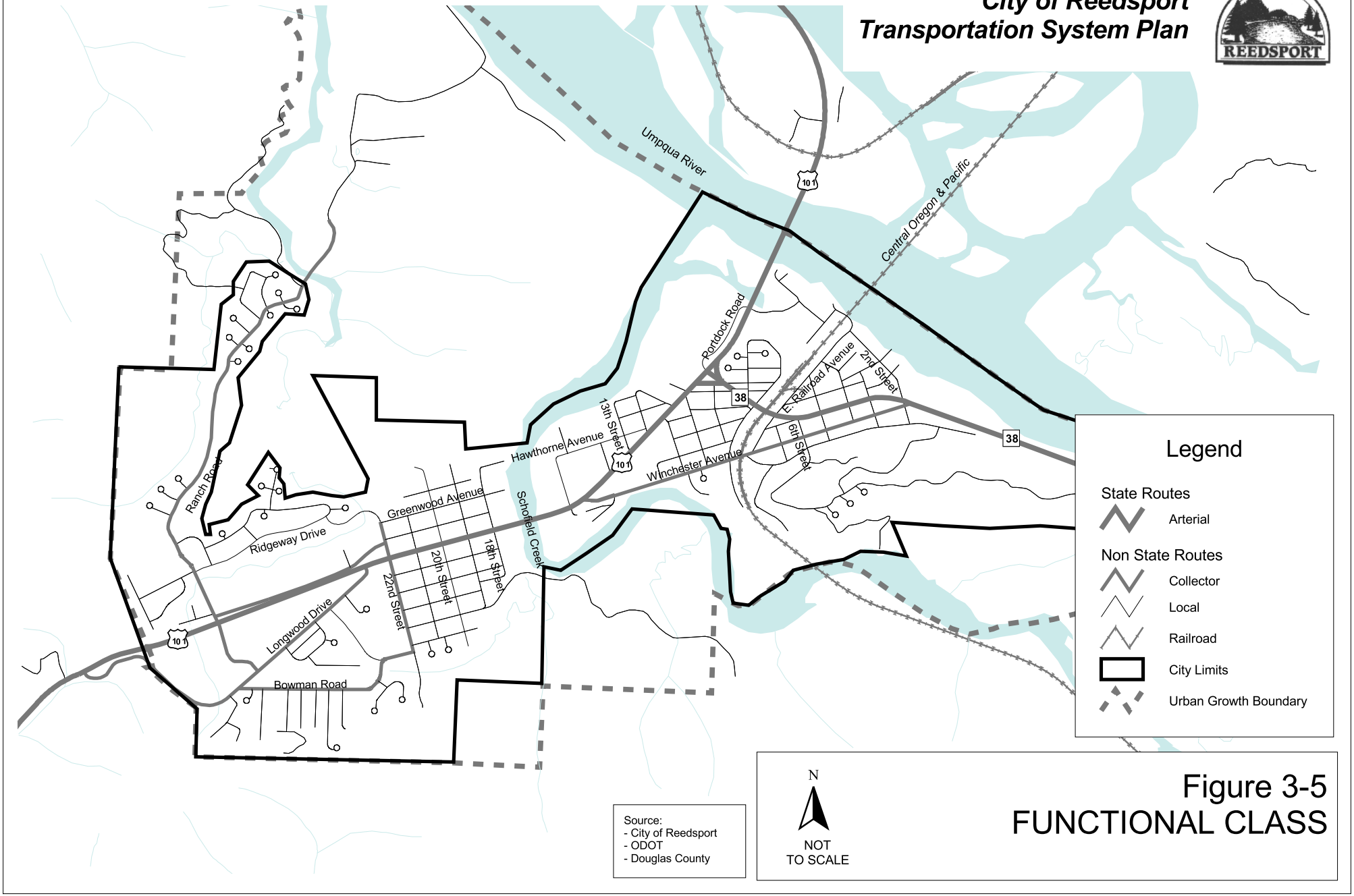

Figure 3-5
FUNCTIONAL CLASS

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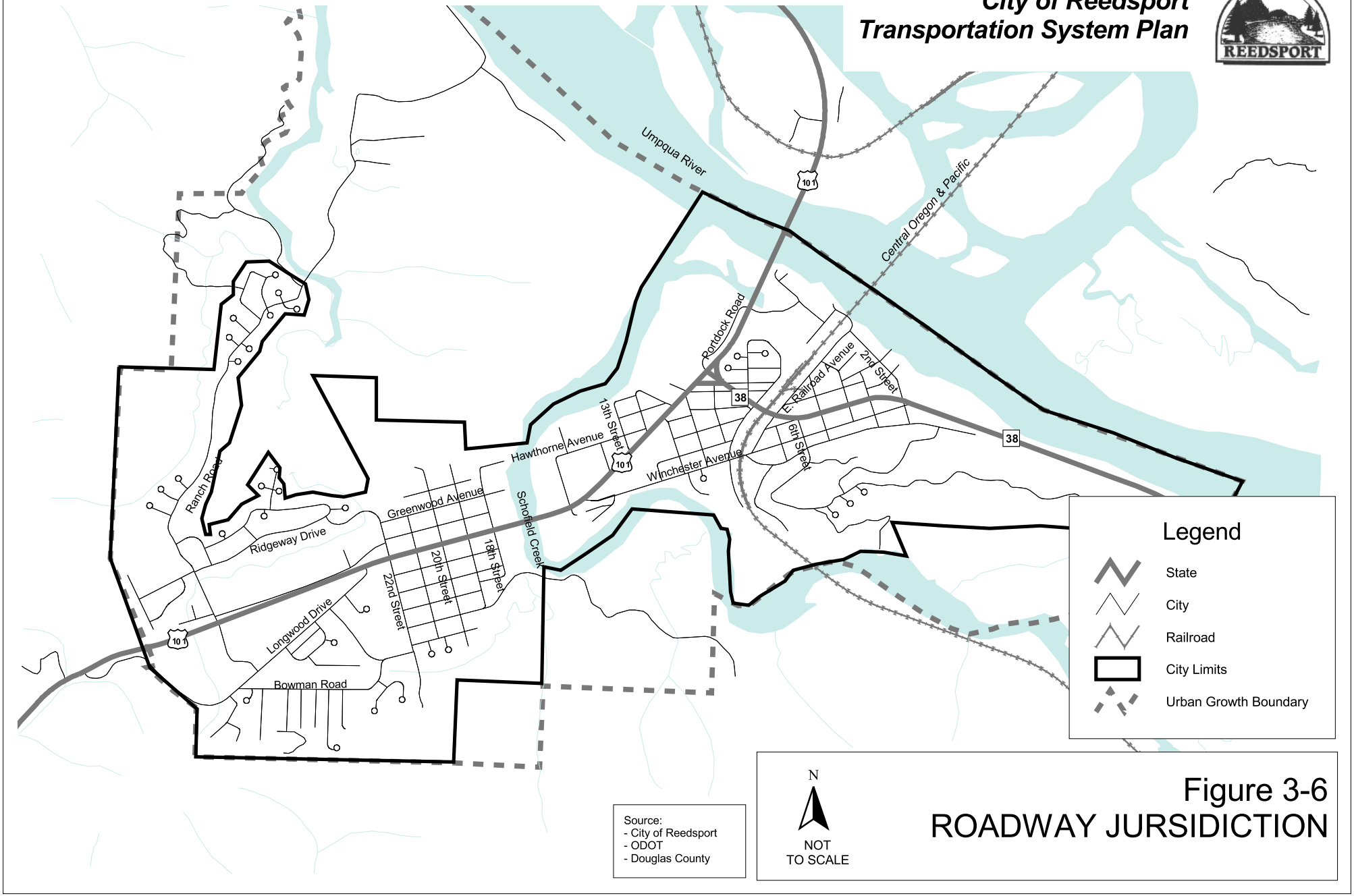

Figure 3-6
ROADWAY JURSIDICTION

Roadway Characteristics

Field inventories were conducted to determine characteristics of major roadways in the study area. Data collected included posted speed limits, roadway geometry, and intersection controls. Additional data, such as pavement condition, pavement widths on local streets and bridge information is included in Appendix A. These characteristics define roadway capacity and operating speeds through the street system, which effects travel path choices for drivers in the City of Reedsport.

Posted Speed Limits

Figure 3-7 shows a limited inventory of the posted speeds in the City of Reedsport. The majority of roadways in the City of Reedsport are posted at 25 miles per hour (mph) as they are local access roads. The two state highways, US 101 and OR 38, vary in posted speeds ranging from 25 mph (OR 38) and 30 mph (US 101) within the urban areas to 40 mph outside the urban areas.

Travel Lanes

Additionally, Figure 3-7 shows the existing number of lanes on each roadway in the City of Reedsport. US 101 has 4-lanes through the majority of the urban area. The remaining roads in the City of Reedsport, including OR 38 and Winchester Avenue, are 2 lane roadways.

Traffic Controls

Lastly, Figure 3-7 shows the existing intersection controls at the study intersections. Traffic signals exist exclusively along US 101. There are five signalized intersections in the City of Reedsport, three of which are study intersections. The remaining 7 study intersections for this TSP are all unsignalized.

Parking

On street parking is permitted on some segments of all streets within the City of Reedsport. On street parking is allowed along OR 38, within the urbanized area, as well as on US 101 between 18th Street and 22nd Street. All of the local streets permit on street parking, although it is not striped or signed.

Emergency Response Routes

The City of Reedsport has two fire stations. One is located on 4th Street between Winchester Avenue and OR 38 and the second is located on Frontage Road. Response times are a high priority for emergency services, as patient care is time-sensitive. Arterial and collector roadways are utilized by the City of Reedsport Fire Department as emergency routes in providing service to the City of Reedsport. Figure 3-7 shows the primary and secondary response routes in the City of Reedsport in conjunction with existing traffic calming devices.

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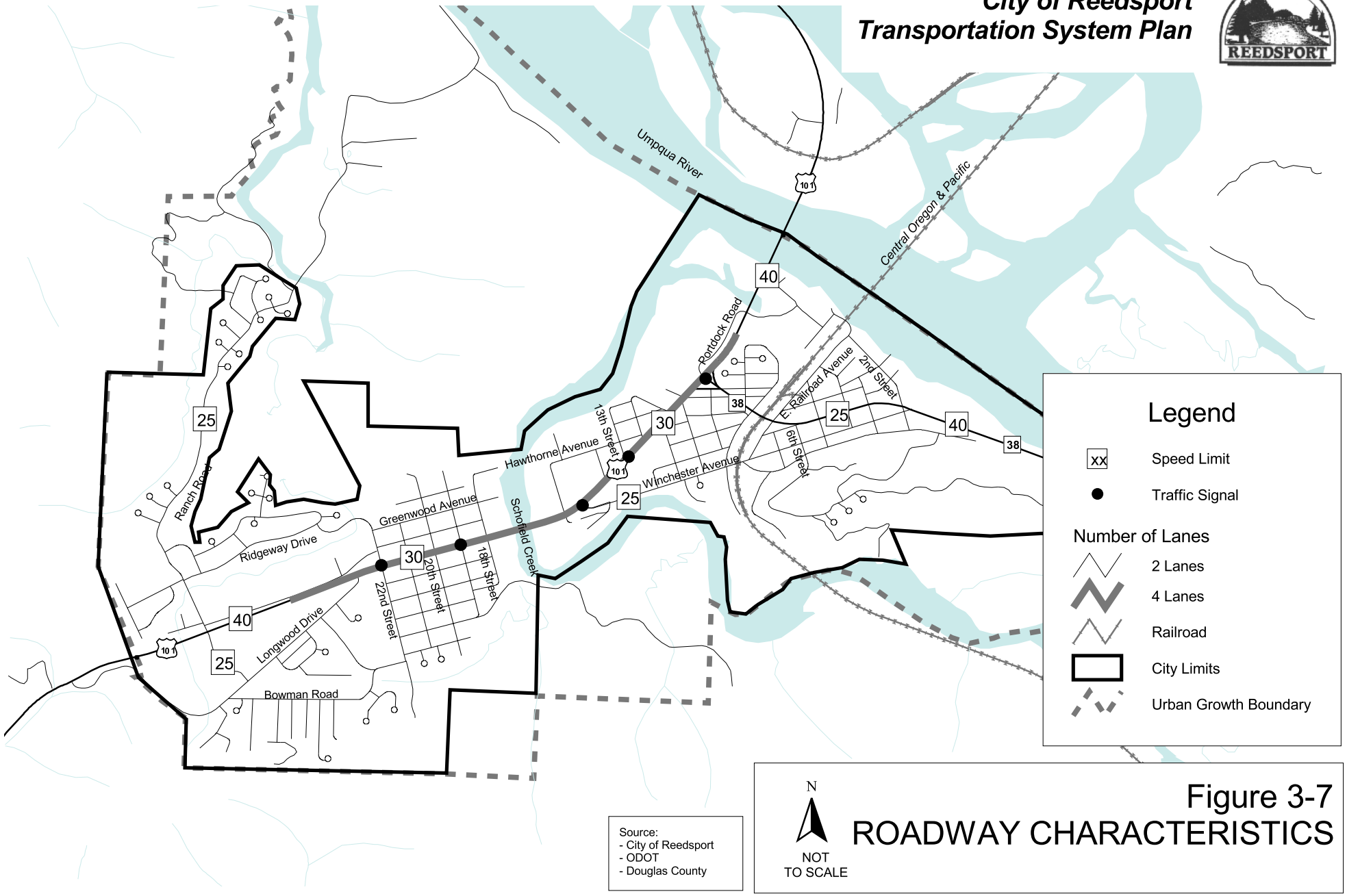

Figure 3-7
ROADWAY CHARACTERISTICS

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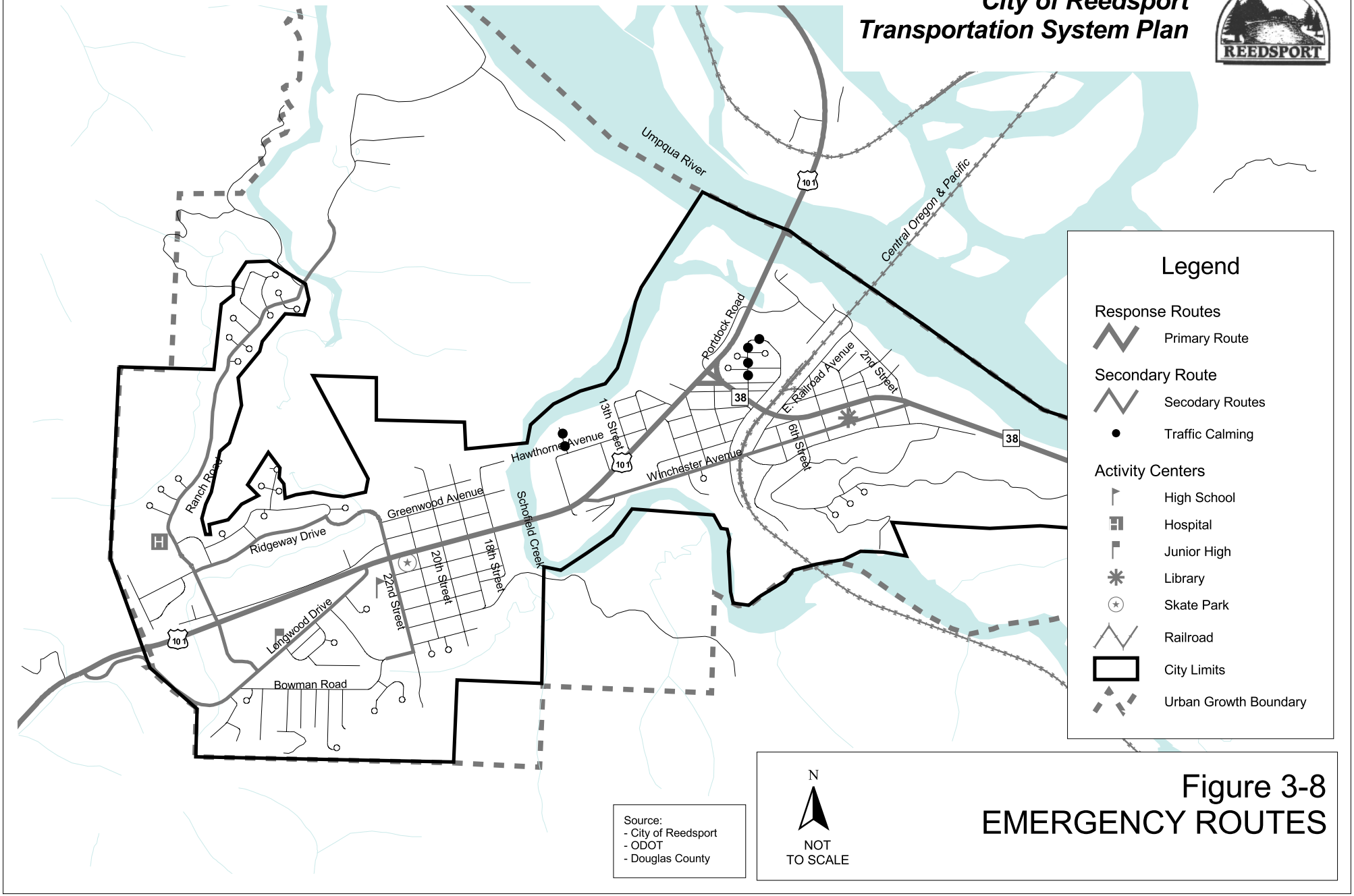

Figure 3-8
EMERGENCY ROUTES

Motor Vehicle Volume

An inventory of peak hour traffic conditions was performed in the Fall of 2004. The traffic turn movement counts conducted as part of this inventory provide the basis for establishing existing problem areas as well as establishing a base condition for future monitoring. Turn movement counts were conducted at eight intersections during the evening (3-6 PM) peak period to determine existing operating conditions. In addition, 14 hour counts were conducted at US 101/OR 38 and OR 38/Winchester Avenue between 6AM-8PM. In general, the PM peak hour in Reedsport occurs within the 4:00PM to 5:00PM period, with volumes staying fairly even throughout the mid-day time period. Study intersections were chosen in coordination with the City of Reedsport staff in order to address major roadways and noted areas of concern.

Seasonal Adjustment

Figure 3-9 shows the two-way existing traffic volumes on streets in the City of Reedsport area. These two-way traffic volumes can vary from day to day and month to month based on weather, surrounding roadway conditions, and holidays. In addition, traffic volumes vary substantially throughout the year along the Oregon Coast in general and Reedsport specifically, due to an influx of travelers and tourists in the summer months.

ODOT operates over 150 automatic traffic recorders (ATR) throughout the state 24 hours a day 7 days a week for the entire year. Using historic data at the closest ATR on US 101 (ATR 06-001 located 1 mile south of the Coos-Douglas County line and installed in January, 1992) and OR 38 (ATR 10-003 located 6 miles east of Scottsburg and installed in December, 1956) it was determined that August was the peak month for the area. As turn movements counts were conducted on September 30, 2004 for analysis of existing conditions, the volumes were adjusted to seasonal levels to better reflect operating characteristics[3].

Using the ATR data, it was determined that the peak month of August has approximately 25% more traffic along US 101 than the count month and approximately 24% more traffic along OR 38 in August than the count month. The traffic counts used for analysis in this TSP reflect this higher percentage.

[3] ODOT, Transportation Planning Analysis Unit (TPAU), Seasonal Factor Table.

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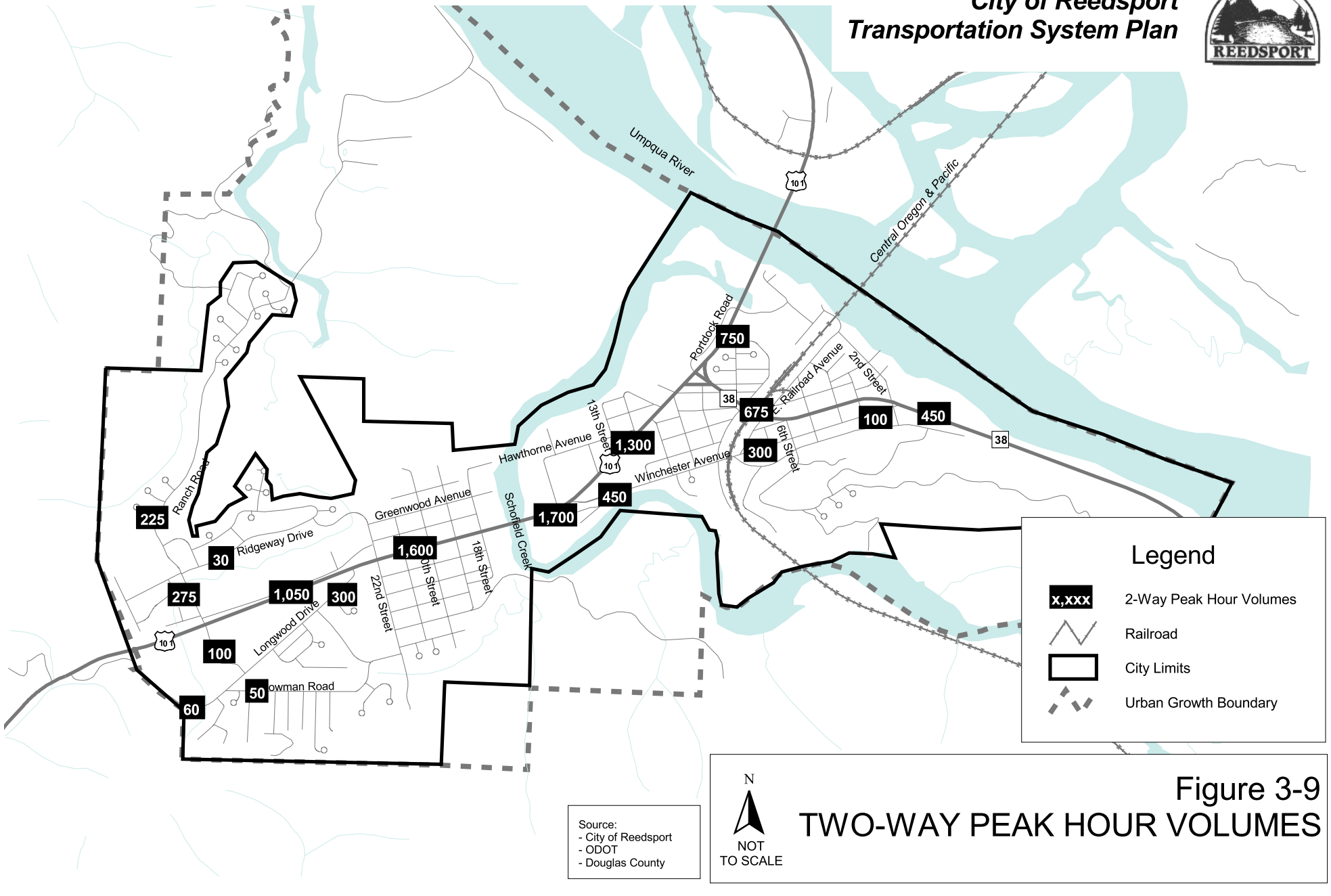
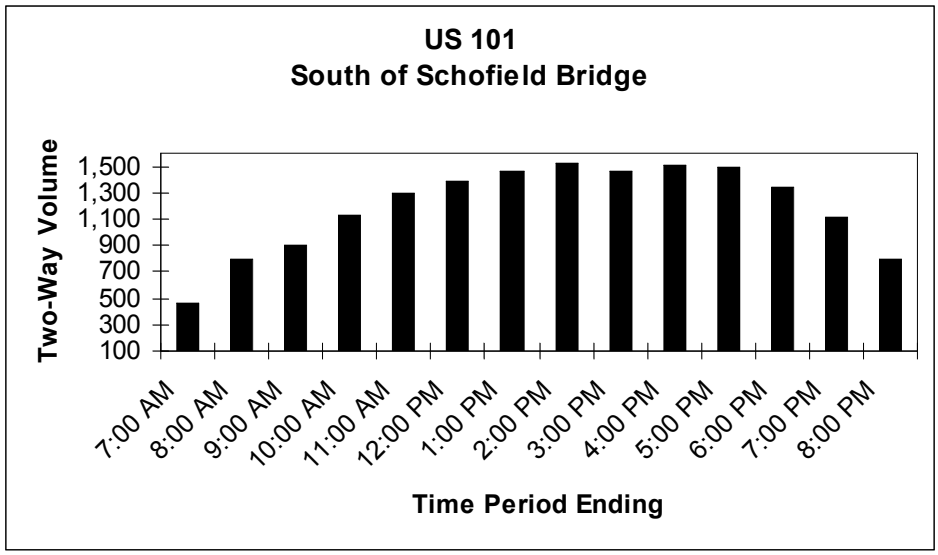
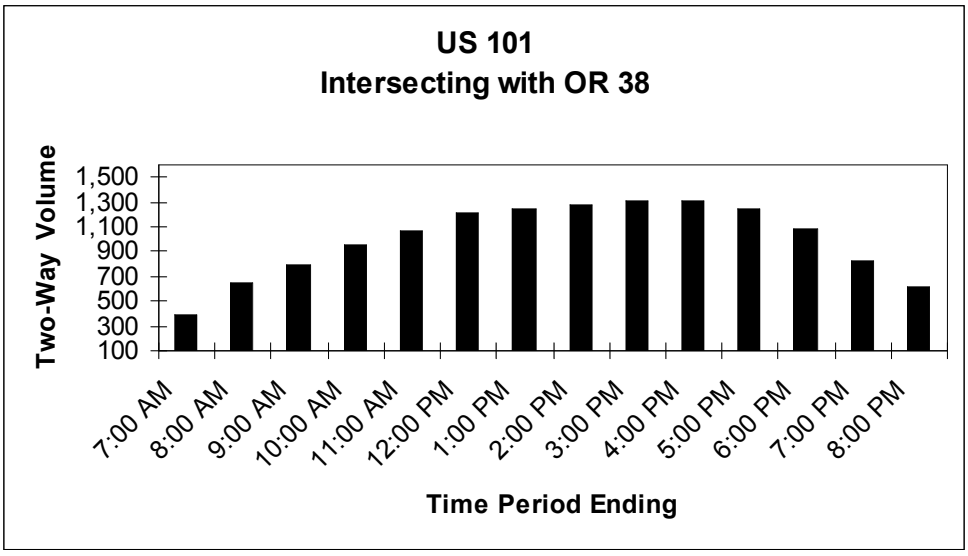


Figure 3-9
TWO-WAY PEAK HOUR VOLUMES

Volume Profiles

Two way traffic volume profiles were developed for US 101 south of the Schofield Bridge and at the US 101/OR 38 intersection with recently conducted 14-hour volume survey data conducted September 2, 2004. The traffic volume profile for US 101 shows a strong peak occurring during the late afternoon and early evening hours, with a general decline in traffic between 4:00 and 5:00 PM. Traffic volumes are consistent during the mid-day hours.





Traffic Levels of Service

Level of Service (LOS) is used as a measure of effectiveness for intersection operation. It is similar to a "report card" rating based upon average vehicle delay. Level of Service A, B, and C indicate conditions where traffic moves without significant delays over periods of peak hour travel demand. Level of Service D and E are progressively worse peak hour operating conditions. Level of Service F represents conditions where average vehicle delay exceeds 80 seconds per vehicle entering a signalized intersection and demand has exceeded capacity. This condition is typically evident in long queues and delays. Level of service D or better is generally the accepted standard for signalized intersections in urban conditions.

Unsignalized intersections provide levels of service for major and minor street turning movements. For this reason, LOS E and even LOS F can occur for a specific turning movement; however, the majority of traffic may not be delayed (in cases where major street traffic is not required to stop). LOS E or F conditions at unsignalized intersections generally provide a basis to study intersections further to determine availability of acceptable gaps, safety and traffic signal warrants. A summary of the descriptions for level of service for signalized and unsignalized intersections is provided in the Level of Service Descriptions in the City of Reedsport Transportation System Plan technical appendix.

The volume to capacity ratio (V/C) is used as a measure of effectiveness for signalized intersection operation. The V/C is calculated by dividing the volume entering the intersection by the total capacity (maximum volume the intersection could serve). The V/C describes the amount of intersection capacity that is utilized by the volume. For example, a 0.65 V/C represents intersection volumes consuming 65% of the available capacity at that intersection. A V/C of 1.0 suggests there is no available capacity at that intersection and not one more vehicle could be accommodated during that time.

Standards in Reedsport

ODOT's performance standard[4] is a maximum volume to capacity ratio of 0.75 for Statewide (NHS) freight routes inside the Urban Growth Boundary, except in Urban Business Areas (UBA), where a higher value of 0.80 is allowed. Portions of US 101 in Reedsport qualify as a UBA, and they can be considered with the higher standard (0.80). One example is the Uptown Area between 18th Street and 22nd Street.

The intersection turn movement counts conducted during the evening peak periods were used to determine the existing 2004 LOS based on the *2000 Highway Capacity Manual* methodology for signalized and unsignalized intersections[5]. Traffic counts and level of service calculation sheets can be found in the Appendix B and C, respectively.

Table 3-4 lists the existing peak hour intersection operation at the 10 study intersections based on the seasonally adjusted volumes described above. Each of the study intersection operates at a LOS of B or better.

[4] Amendment to *1999 Oregon Highway Plan*, Oregon Department of Transportation, Table 6. As noted in Chapter 7, further amendments to the OHP provide for a higher v/c ratio standard within Urban Business Areas; generally highways posted at 35 miles per hour or less. By default, the v/c ratio standard on US 101 would be 0.80.

[5] *2000 Highway Capacity Manual*, Transportation Research Board, 2000.

Table 3-4: Seasonally Adjusted Existing Peak Hour Intersection Level of Service

Intersection	Average Delay (seconds per vehicle)	Level of Service	Volume to Capacity Ratio
Signalized Intersections		*Overall*	*Overall*
US 101/22nd Street	17.2	B	0.39
US 101/Winchester Avenue	16.3	B	0.39
US 101/OR 38	19.6	B	0.45
Unsignalized Intersections		*Major / Minor*	*Worst Movement*
Ranch Road/ Ridgeway Drive		A/B	0.02
Longwood Drive/Bowman Road		A/A	0.03
Longwood Drive/Ranch Road		A/A	0.07
US 101/Longwood Drive		A/B	0.19
East Fir Avenue/Winchester Avenue		A/B	0.03
OR 38/East Fir/6th Street		A/B	0.04
OR 38/Winchester Avenue		A/B	0.31

Collisions

Motor vehicle collision data between 2000-2002 was obtained from ODOT. Streets within the City of Reedsport that were ranked with Statewide data are displayed in Table 4. ODOT ranks streets according to their Safety Priority Index System (SPIS) based on the most current three years of collision data (2000-2002). The SPIS rankings are derived from factors such as the number of collisions, the type of collisions, the collision severity, and traffic volumes. The collision data only includes those collisions reported to the Oregon Department of Transportation. The City of Reedsport has one segment (US 101 between 20th Street and 19th Street) on the most recent SPIS list (2000-2002). Additionally, a 1.65 crash rate was calculated by ODOT for the entire length of US 101 within Reedsport City limits[6]. Comparatively, principal arterials in rural cities for the entire State of Oregon had a crash rate of 1.28[7].

In addition to the Statewide ODOT SPIS data, crash data was obtained for the 10 specific TSP study intersections between 2000-2002. A crash rate was calculated for each intersection by obtaining the million entering vehicles (MEV) per intersection a year and dividing by the total number of crashes at that intersection. Typically a crash rate above 1.00 indicates a safety pattern that merits further investigation. Table 3-5 lists each study intersection where a crash was reported. The average crash rate in a rural city in 2004 ranged from 0.99 to 1.62 crashes per MEV. The reported rate at the locations noted at the study intersections below were well below these average levels, and this indicates that the local crash rates are not significant compared to other similar facilities in the state.

[6] *2003 Oregon State Highway Crash Rate Tables Highway Crash Rates Highway 9, Oregon Coast*, Oregon Department of Transportation Crash Analysis and Reporting Unit, January, 2005.

[7] *2003 Oregon State Highway Crash Rate Tables Table IV – 2003 Crash Rates by Functional Classification and Jurisdiction*, Oregon Department of Transportation Crash Analysis and Reporting Unit, January, 2005

Table 3-5: TSP Study Area Intersection Crashes

Intersection	Number of Collisions (2000-2002)	Million Entering Vehicles (MEV)	Crash Rate
Signalized Intersection			
US 101/22nd Street	7	4.92	0.47
US 101/Winchester Avenue	3	4.75	0.21
US 101/OR 38	4	3.24	0.41
Unsignalized Intersection			
Ranch Road/ Ridgeway Drive	1	0.94	0.35
Longwood Drive/Bowman Road	0	0.34	0.00
Longwood Drive/Ranch Road	0	0.52	0.00
US 101/Longwood Drive	1	3.29	0.10
East Fir Avenue/Winchester Avenue	0	1.17	0.00
OR 38/East Fir/6th Street	1	1.75	0.57
OR 38/Winchester Avenue	1	1.49	0.19

Source: ODOT Crash Analysis and Reporting Unit, October, 2004.

The US 101/22nd Street intersection has the second highest motor vehicle crash rate and is one of the highest pedestrian crossings of any study intersection. The entire corridor between 18th Street and 22nd Street is characterized by high pedestrian traffic due to the City of Reedsport High School, and the City skate park both being located on the east side of US 101 while retail opportunities, such as a 7-11 store, are located on the west side of US 101.

Trucks

Efficient truck movement plays a vital role in the economical movements of raw materials and finished products. The designation of through truck routes provides for this efficient movement while at the same time maintaining neighborhood livability, public safety, and minimizing maintenance costs of the roadway system. ODOT[8] identifies US 101 between the City of Reedsport and the City of Coos Bay and OR 38 between the City of Reedsport and I-5 as Statewide, National Highway System (NHS), freight routes.

Table 3-6: PM Peak Hour Truck Volume Data

Intersection	% passenger cars	% trucks/buses (three or more axles)
Signalized Intersection		
US 101/22nd Street	91.2	8.8
US 101/Winchester Avenue	92.0	8.0
US 101/OR 38	91.8	8.2
Unsignalized Intersection		
Ranch Road/ Ridgeway Drive	98.7	1.3
Longwood Drive/Bowman Road	97.4	2.6
Longwood Drive/Ranch Road	98.3	1.7
US 101/Longwood Drive	95.5	4.5
East Fir Avenue/Winchester Avenue	96.7	3.3
OR 38/East Fir/6th Street	90.7	9.3
OR 38/Winchester Avenue	89.8	10.2

The truck (heavy vehicle) volumes and percentages of the traffic stream were collected as part of the intersection turn movement counts. Table 3-6 shows the PM peak hour truck volume and percentages at each of the study intersections. Truck volumes exceed 100 vehicles per hour along US 101 and OR 38 intersections. The percentage of large trucks, defined as three or more axles, ranges from 8 to 10 percent on US 101 and OR 38. This is a significant component of the traffic stream compared to most urban communities. Truck travel characteristics and design requirements should be an key element of any changes to the physical or operational features on these two state routes within the city.

[8] *1999 Oregon Highway Plan*, The Oregon Department of Transportation, May 1999.

Other Modes

There are three other modes that help comprise the transportation infrastructure for the City of Reedsport and are included in the TSP: rail, air, and water. The Umpqua River is located just north of the City of Reedsport city limits and serves as a major freight movement waterway, however, there is no port facility located within the City of Reedsport TSP study area.

Rail

The Central Oregon & Pacific (CORP) Railroad owns and operates the Coos Bay District (CO) Line that passes through the City of Reedsport, transporting less than one million gross tons of freight annually. CORP operates this line as a class II railroad with a maximum of two trains a day traveling through the city at a speed of not more than 15 mph. There are two grade crossings within the City of Reedsport, one on Umpqua Avenue (OR 38) and the other on Winchester Avenue. There are no passenger trains running through the City of Reedsport at this time. There is a current arm-guard at the at-grade crossing on Winchester Avenue, however, there is no arm-guard protection at the higher vehicular volume at-grade crossing on OR 38. Given the higher traffic and truck volumes on OR 38, it is reasonable to suggest that an arm-guard protection device be installed at this location.

Air

The North Bend Municipal Airport is located south of the City of Reedsport approximately 22 miles in the town of North Bend and is classified as a Category 1 – Commercial Service Airport as it accommodates scheduled major/national or regional commuter and commercial air carrier service.

4. FUTURE DEMAND AND LAND USE

This chapter discusses how travel patterns and local land development will influence traffic operations on the city streets within the next 20 years. A review was made of the housing and employment opportunities around the city, along with historical growth trends in neighboring communities to develop traffic volume forecasts in Reedsport for 2025. These forecasted volumes were re-evaluated at study locations to test how well the existing street system and traffic controls can serve this growth. These traffic volume projections form the basis for identifying potential roadway deficiencies and for evaluating alternative circulation improvements.

This approach to travel forecasts is referred to by ODOT as a Level 2 Cumulative Analysis. The land use inventory conducted in the 1999 Umpqua Regional Council of Governments buildable lands inventory of expected residential and employment growth was converted into vehicle trips which were then assigned to the roadway network based on current, and planned, infrastructure.

Projected Land Uses in Reedsport

Land use is a key factor in developing a functional transportation system. The amount of land that is planned to be developed, the type of land uses, and how the land uses are mixed together have a direct relationship to expected demands on the transportation system. Understanding the amount and type of land use is critical to taking actions to maintain or enhance transportation system operation.

Projected land uses were developed using the buildable lands inventory[1] for areas within the urban growth boundary. Using 2025 population forecasts[2], growth of approximately 1,000 new households was distributed throughout the City and included six general areas:

Table 4-1: Residential Land Development Potential in Reedsport

Area / Development	Future New Households
Master Heights	64
Ranch Road	595
Lower Ranch Road	75
Southwest	205
Central Area	50
Southeast Hills	80
Total	1,069

Source: Winterbrook Planning, 2025 Future Year Land Use Forecast Memo

The long-range employment forecasts were completed based on housing and population growth using the 2002 jobs-to-population ratio of 1 job for every 3.53 persons obtained from the 2000 Census. This forecast also assumes that the employment sector allocation will remain the same

[1] *Reedsport Buildable Lands Inventory* Umpqua Regional Council of Governments, June, 1999.

[2] *City of Reedsport Wastewater Facilities Plan*, February, 2004.

through 2025. Employment growth allocation is as follows:

Table 4-2: Employment Land Development Potential

Industry	2002 Employment	Sector allocation	2025 employment	Increase
Manufacturing	106	8.8%	167	61
Trade	160	13.3%	252	92
Natural Resources	60	5.0%	95	35
Retail and Services	368	30.7%	581	213
Education and Health Care	386	32.2%	608	222
Government	119	9.9%	188	69
Total	**1,199**	**100.0%**	**1,890**	**692**

Future employment was then allocated according the buildable lands inventory and zoning maps. Typically, there should be a mix of residential, commercial, and employment type land uses so that some residents may work and shop locally, reducing the need for residents to travel long distances as is the case in Reedsport in both the current and forecasted years.

Travel Demand

The implications of local and regional growth over the next 20 years was evaluated by estimating how travel demands would change within the city through a two layer process. The first layer, forecasted through traffic growth, was added on top of existing counts using historical growth trends. Historical trends use past year's traffic volumes to project future volumes, and assumes that the future growth trend will be similar to past observations. ODOT calculates these trends based on traffic counts on the state facilities. Future volumes show relativity little growth along the state routes in Reedsport. ODOT forecasts an increase of 9% in traffic on OR 38 over the next 20 years. Traffic on US 101 is forecasted to increase 18% over the same time period. Consequently, through movements on OR 38 and US 101 were increased 9% and 18% respectively to reflect this growth by 2025.

The second layer, local growth, was then added on top of existing counts and the forecasted through traffic growth calculated above. Expected new trip activity from the growth in local housing and jobs by first, dividing the city into eight Transportation Analysis Zones (TAZ) that represent sources of vehicle trip generation. Figure 4-1 shows the TAZ allocation in the city. Once the land uses were divided up, vehicle trips were assigned to and from each TAZ using the basic transportation model described above and shown graphically in Figure 4-2.

Trip Generation

The trip generation process translates land use quantities (number of dwelling units, retail, and other employment) into vehicle trip ends (number of vehicles entering or leaving a TAZ or sub-TAZ). Using the *ITE Trip Generation Manual*[3], future traffic from each employment and residential zone was calculated according to the average PM Peak period trip rates shown in Table 4-3.

[3] 7th Edition Trip Generation Manual, Institute of Transportation Engineers, 2003.

Table 4-3: ITE Average PM Peak Period Trip Rates

		Average Trip Rate/Unit		
Land Use Type	**Unit**	**In**	**Out**	**Total**
Single-Family Detached Home	Dwelling Unit	0.63	0.37	1.01
Retail Employee	Employee	1.74	1.74	3.48
Manufacturing	Employee	0.20	0.16	0.36
Trade	Employee	0.09	0.37	0.46
Education	Employee	0.84	0.71	1.55
Health Care	Employee	0.50	0.73	1.23
Government	Employee	0.38	0.83	1.21

Source: *ITE Trip Generation Manual 7th edition*

Table 4-4 illustrates the estimated growth in vehicle trips generated within the Reedsport area during the PM peak hour. We estimate that vehicle trips in Reedsport would grow by approximately 45 percent between 2004 and 2025 if land develops according to the land use analysis described earlier. Assuming a 20-year horizon, this represents an annualized growth rate of about 2.25 percent per year. This growth rate is more than two times higher than the assumed background growth rate on the state facilities. It may be that the assumed local growth would require more than 20 years to be fully built, but, for the purposes of this study, they have been assumed to occur during the next 20 years to provide a conservative estimate.

Table 4-4: Reedsport Vehicle Trip Generation (PM Peak Hour Vehicle Trips)

	2004 Trips	*2025 Trips*
Reedsport TSP study area	4,000	5,800

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City of Reedsport
Transportation System Plan

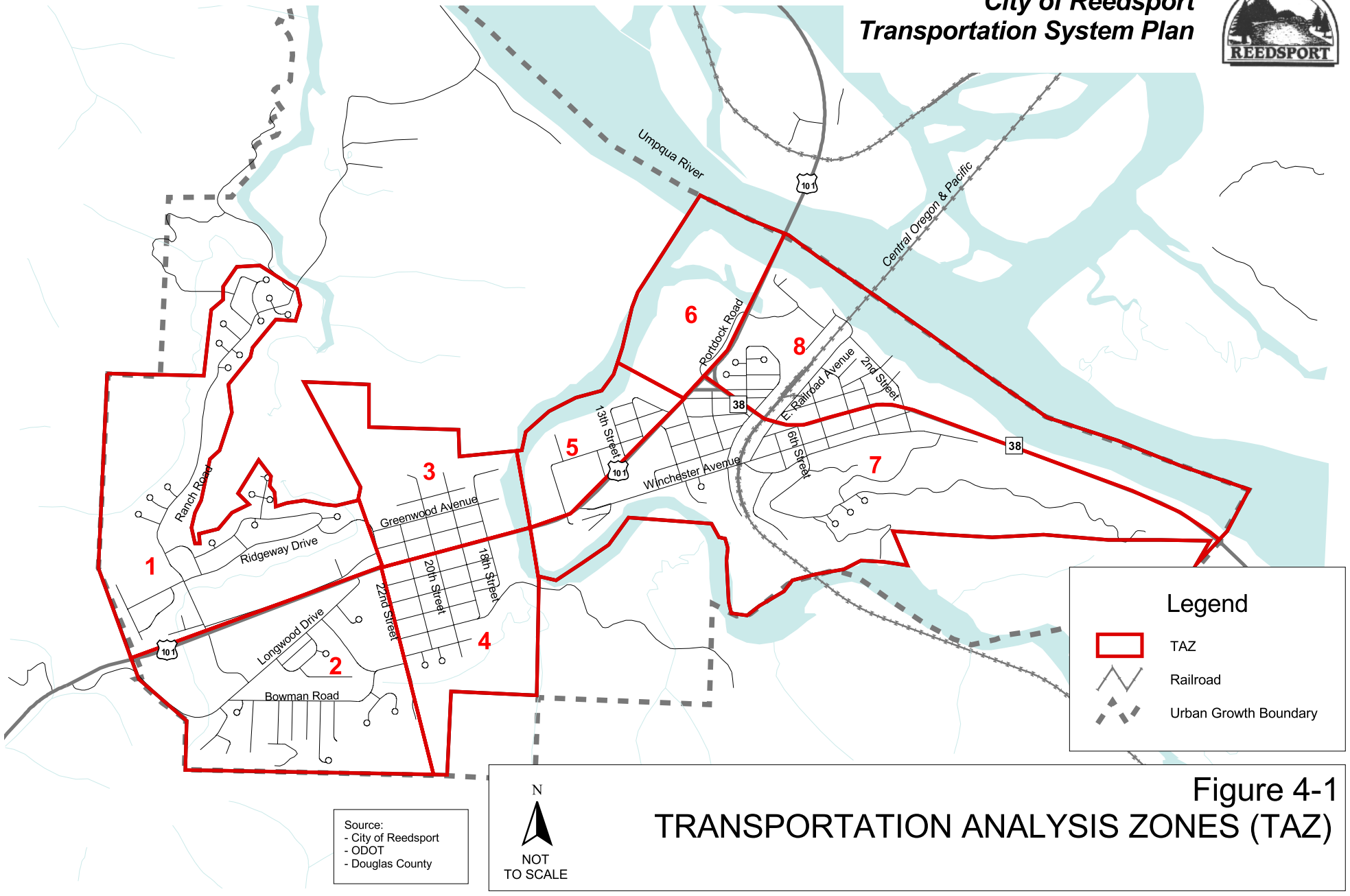

Figure 4-1
TRANSPORTATION ANALYSIS ZONES (TAZ)

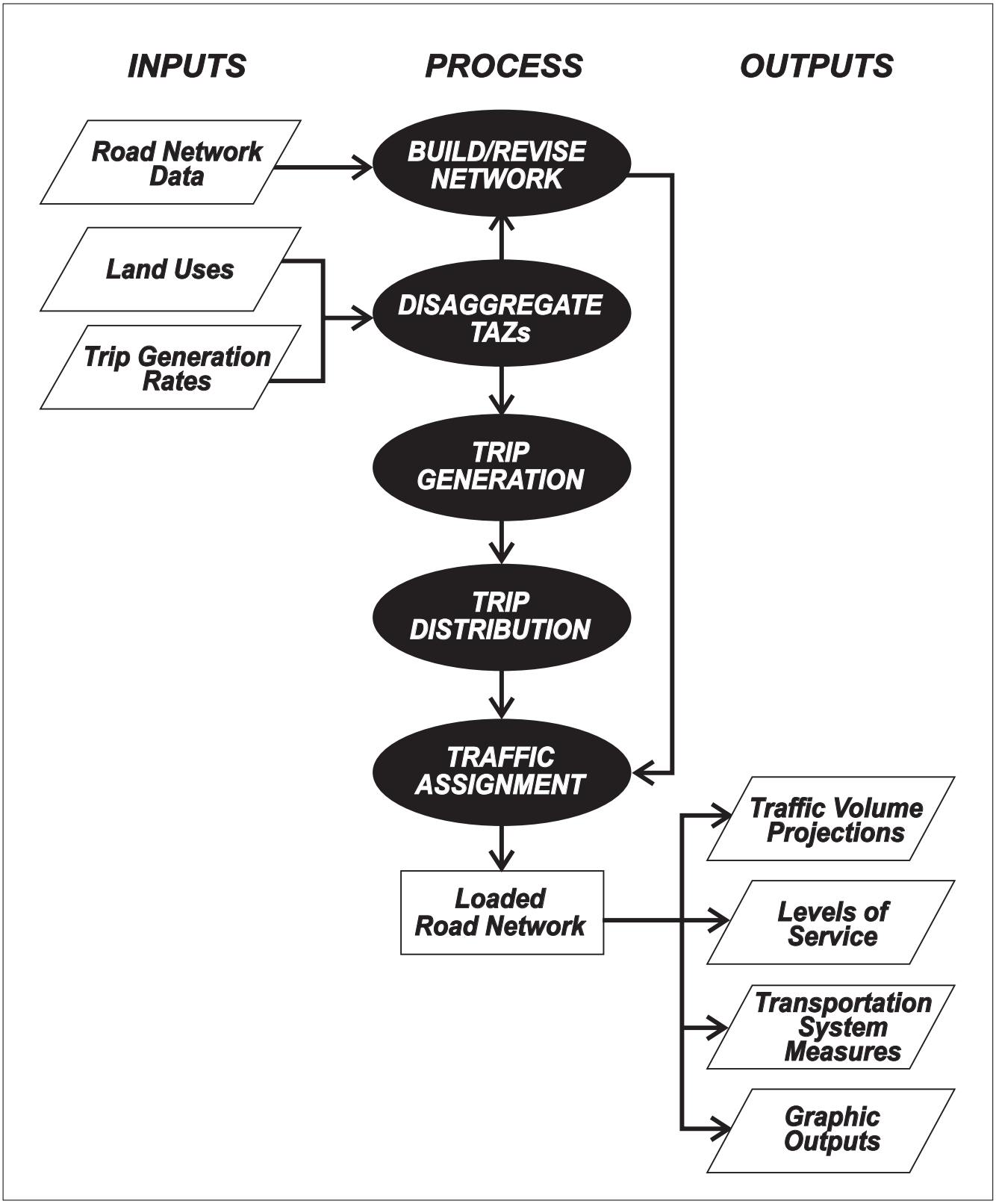

Figure 4-2
MODEL PROCESS

Trip Distribution

This step estimates how many trips travel from one zone in the model to another zone. In projecting long-range future traffic volumes, it is important to consider potential changes in regional travel patterns. The locations and amounts of traffic generation in Reedsport are essentially a function of future land use in the city. The distribution of trips is influenced by regional growth, and increases in travel along the state routes. External trips (trips that have either an origin and not a destination in Reedsport or have a destination but not an origin in Reedsport) and through trips (trips that pass through Reedsport and have neither an origin nor a destination there) are accounted for by the modest increases in through volumes along the state routes.

Trip assignment to the transportation network and study intersections is based on existing travel patterns and was added to the current, seasonally adjusted, traffic counts. Assumptions used in assigning these trips to the network included:

- Trips generated by residential land uses were distributed to employment, retail or regional destinations, and trips coming from employment or retail uses were distributed to the residential areas, based on a weighted average. For example, more trips were assigned to the Ranch Road area because 595 of the 1,100 households are forecasted to be in this area, with the remaining households spread over the rest of the city.
- 25% of trips were distributed south on US 101, 20% north on US 101 and 15% east on OR 38 respectively based on current trip patterns, thus 60% of trips are regionally based. 40% of trips are allocated within City boundaries.
- The Master Heights development will be connected to the current street network via a street extension of 20th Street. Development north of the current termination of Ranch Road (500 single family units) will use Ranch Road to access the existing street network as the planned Ranch Road/20th Street extension is not expected to be completed by 2025[4].

Mode Choice

This is the step where it is determined how many trips will be by each different mode (single-occupant vehicle, transit, carpool, pedestrian, bicycle, etc.). Since there is no transit service in Reedsport, and the ITE trip generation rates are based on vehicle trips per land use, it was assumed that each trip represented a vehicle trip with motor vehicles serving as the predominant mode of choice.

Traffic Assignment

In this process, trips from one zone to another are assigned to specific travel routes in the network, which increases the turn movement counts at each study intersection. Through an incremental process, development from the upper Ranch Road area was re-distributed to alternate routes from the US 101/22nd Street intersection due to congestion under future model conditions.

The existing streets served as the initial roadway network used in the traffic model. Traffic volumes from local growth were projected on all study intersections and most arterials and collector streets.

[4] Phone conservation with Janelle Evans 1/11/05.

5. PEDESTRIAN PLAN

This chapter summarizes existing and future pedestrian needs in the City of Reedsport, and outlines strategies and an Action Plan to effectively mitigate deficiencies. The criteria used in evaluating pedestrian needs and the strategies for addressing these needs were identified through work with the City's Technical Advisory Committee.

Facilities

Sidewalks should be built to current design standards of the City of Reedsport and in compliance with the Americans with Disabilities Act (at least four feet of unobstructed sidewalk).[1] Wider sidewalks may be constructed in commercial districts or on arterial streets. Additional pedestrian facilities may include accessways, pedestrian districts and pedestrian plazas.

- Accessway – A walkway that provides pedestrian and/or bicycle passage either between streets or from a street to a building or other destinations such as a school, park or transit stop.
- Pedestrian District – A plan designation or zoning classification that establishes a safe and convenient pedestrian environment in an area planned for a mix of uses likely to support a relatively high level of pedestrian activity.
- Pedestrian Plaza – A small, semi-enclosed area usually adjoining a sidewalk or a transit stop which provides a place for pedestrians to sit, stand or rest.

Sidewalks should be sized to meet the specific needs of the adjacent land uses. Guidance to assess capacity needs for pedestrians can be found in the *Highway Capacity Manual*.[2] Typically, the base sidewalk sizing for local streets should be six feet (clear of obstruction). The critical element is the effective width of the walkway. Because of street utilities and amenities, a six-foot walkway can be reduced to three feet of effective walking area. This is the greatest capacity constraint to pedestrian flow..

As functional classification of roadways change, so should the design of the pedestrian facilities. Collectors may need to consider minimum sidewalks widths of 6 to 8 feet and arterials should have sidewalk widths of 6 to 10 feet. Wider sidewalks may be necessary depending upon urban design needs and pedestrian flows (for example, adjacent to storefront retail).

Criteria

A set of goals and policies were developed for this TSP to guide transportation system development in Reedsport (see Chapter 2). Several of these goals and policies pertain specifically to pedestrian needs:

Goal 1: Develop a transportation system to enhance Reedsport's livability and meet federal, state, and local requirements.

[1] *Americans with Disabilities Act*, Uniform Building Code.

[2] *Highway Capacity Manual*, Transportation Research Board, 2000; Chapter 18.

- Policy a – Maintain the livability of Reedsport through proper location and design of transportation facilities.

Goal 2: Create a balanced transportation system.

- Policy a – Implement street design standards that recognize the multi-purpose nature of the street right-of-way for utility, pedestrian, bicycle, truck, and vehicle traffic.
- Policy b - Provide connectivity to each area of Reedsport to ensure pedestrian, bicycle, and vehicle access to school, parks, employment and recreational areas.
- Policy d – Develop a pedestrian system of sidewalks and pathways to provide safe, attractive, efficient, and accessible routes that allows pedestrians to travel from residential areas to schools, parks, commercial areas and major employment centers. All new streets shall have sidewalks.

Goal 3: Improve the safety of the transportation system.

- Policy b – Where on-street pedestrian and bicycle facilities cannot reasonably be provided on highways and arterials, identify parallel routes that comply with state and city planning design standards.
- Policy d – Designate safe routes from residential areas to schools.

These goals and policies are the criteria that all pedestrian improvements in Reedsport should be compared against to determine if they conform to the intended vision of the City.

Strategies

Several strategies were developed for future pedestrian projects in Reedsport. These strategies are aimed at providing the City with priorities to direct its funds towards pedestrian projects that meet the goals and policies of the City.

Strategy 1 – "Connect Key Pedestrian Corridors to Schools, Parks, Recreational Uses and Activity Centers"

This strategy provides sidewalks leading to activity centers in Reedsport, such as schools and parks. It provides added safety on routes to popular pedestrian destinations by separating pedestrian flows from auto travel lanes. This strategy also supports and encourages the provision of off-street trails. Trails provide additional pedestrian capacity and separates auto from pedestrian traffic. These trails are also common places that children and elderly individuals may walk to and from activity centers.

A key element of this strategy is to require all new development to define direct safe pedestrian paths to parks, activity centers, and schools within one mile of the development site. Direct will be defined as 1.25 times the straight line connection to these points from the development.

Strategy 2 – "Fill in Gaps in the Network Where Some Sidewalks Exist"

This strategy provides sidewalks that fill in the gaps between existing sidewalks where a substantial portion of a pedestrian corridor already exists. This strategy maximizes the use of existing pedestrian facilities to create complete section of an overall pedestrian network. These on-street pedestrian facilities can be complemented with the off-street trail system.

Strategy 3 – "Coordination of Land Use Approval Process to Provide Sidewalks and Links to Existing Sidewalks"

This strategy uses the land use approval process to ensure that sidewalks are provided adjacent to new development and that links from that new development to existing sidewalks are evaluated. If there are existing sidewalks in close proximity, the developer will be required to extend the sidewalk adjacent to the new development to meet the existing nearby sidewalk. The development shall use the pedestrian master plan as a basis for determining adjacent sidewalk placement. To effectively implement this strategy, close proximity shall be determined to be within 300 feet of the proposed development. In addition, if extension is not found to be roughly proportional to the development, the City shall add this to future years Capital Improvement Program candidate project list.

Strategy 4 – "Improved Crossings"

This strategy focuses on ensuring that safe street crossing locations are available, particularly along high traffic volume streets or locations where there is high pedestrian traffic (i.e., adjacent to schools, activity centers, etc.) and can include such pedestrian amenities as curb extensions or pedestrian signals.

Strategy 5 – "Pedestrian Corridors that Connect to Major Recreational Uses"

This strategy provides a connection between the sidewalk network and major recreational facilities, such as parks in the Reedsport area, the off-street trail system, etc.

Strategy 6 – "Reconstruct All Existing Substandard Sidewalks to City of Reedsport Standards"

This strategy focuses on upgrading any substandard sidewalks to city standards. Standards are for six-foot sidewalks. Sidewalks that do not meet the minimum six-foot requirement should be widened if and when improvements are made to the existing roadway cross section, typically through a city funded improvement project.

Table 5-1provides an assessment of how each of the strategies meets the requirements of the goals and policies related to pedestrian facilities.

Table 5-1: Pedestrian Facility Strategies Comparisons

	Policies					
Strategy	1-a	2-a	2-b	2-d	3-b	3-d
1. Connect Key Pedestrian Corridors to Schools, Parks, Recreational Uses and Activity Centers	☐	●	■	■	☐	■
2. Fill in Gaps in the Network Where Some Sidewalks Exist	☐	☐	☐	☐	●	●
3. Coordination of Land Use Approval Process to Provide Sidewalks and Links to Existing Sidewalks	☐	■	●	☐	☐	●
4. Improved Crossings	●	☐	☐	☐	❍	☐
5. Pedestrian Corridors that Connect to Major Recreational Uses	☐	☐	☐	■	☐	☐
6. Reconstruct All Existing Substandard Sidewalks to City of Reedsport Standards	☐	●	●	●	❍	●

■ Fully meets criteria
☐ Mostly meets criteria
● Partially meets criteria
❍ Does not meet criteria

Needs

Sidewalks should be built to current design standards of the City of Reedsport and in compliance with the Americans with Disabilities Act (at least four feet of unobstructed sidewalk).[3] Wider sidewalks may be constructed in commercial districts or on arterial streets. Sidewalks are provided on a majority of the arterial, collector and local roadways in the City of Reedsport resulting in a fairly good existing pedestrian network. However, the availability and convenience for crossing arterial roadways, usually provided by pedestrian traffic signals at major intersections or a marked crosswalk at lower volume intersections is not adequate along sections of US 101. In many cases, the spacing between these marked and controlled crossings is designed to facilitate safe and efficient vehicular traffic flow rather than accessibility by pedestrian travelers. This can create unsafe situations where pedestrians cross arterials at mid-block locations without any controls.

Aside from simply completing the arterial and collector gaps in sidewalk infrastructure, several strategies have been identified to address pedestrian needs and create a prioritized Pedestrian Action Plan. The Action Plan are those projects which are selected from the Master Plan to be funded and constructed over the next 20 years. This selection process helps to focus community investment on those projects that are most effective at meeting critical needs, while deferring other projects of lesser value. The strategies for pedestrian facilities are:

- Arterial crossing enhancements
- Connect key pedestrian corridors to schools, parks, and activity centers
- Create pedestrian corridors that connect neighborhoods

[3] *Americans with Disabilities Act*, Uniform Building Code.

- Fill in gaps in the network where some sidewalks exist
- Create pedestrian corridors that connect to major recreational uses
- Create pedestrian corridors that encourage retail development

The first three strategies place a strong emphasis on those types of improvements that would likely be more used than others (connection to schools versus shoppers) and provide a more significant safety improvement (arterial crossing enhancement versus filling in sidewalk gaps).

Pedestrian Facility Plan

This section identifies improvements to provide a connected pedestrian network within the City of Reedsport, along all arterial and collector roadways and in high pedestrian activity areas. In addition, local streets should provide sidewalks where possible, and the City of Reedsport Development Code regulations should require new development to provide pedestrian infrastructure as part of the development costs.

The recommended pedestrian projects generally include new or replacement sidewalk construction, and enhanced pedestrian crossings at a few key locations. The list of projects were divided into a Pedestrian Master Plan and Action Plan to separate out the projects that are expected to be constructed over the next 20 years (Action Plan), and the other projects that meet plan goals but are outside of the 20-year horizon. As development occurs, streets are rebuilt, and other opportunities (such as grant programs) arise, other projects on the Master Plan should be pursued as well. Pedestrian projects are outlined in Table 5-2 and shown in Figure 5-1.

Table 5-2: Pedestrian Plan Projects

Location		Side	From	To	Estimated Cost ($1,000)
Complete Sidewalks					
Action Plan					
OR 38	(1,2,3)	Both	6th Street	US 101	$536
Ranch Road		West	Ashwood Court	Hemlock Court	147
US 101	(1)	East	OR 38	Schofield Bridge	95
Master Plan					
Longwood Drive		West	Bowman Road	Ranch Road	$42
Longwood Drive	(2)	West	US 101	North of High St.	37
Longwood Drive		Both	Bowman Road	Maple Drive	63
US 101	(1)	North	Laurel Avenue	13th Street	137
Winchester Avenue		Both	East of US 101	Schofield Drive	294
Enhanced Pedestrian Crossings					
Action Plan		**Cross Street**		**Description**	**Estimated Cost ($1,000)**
OR 38	(1)	West Railroad Avenue		Crosswalk	$10
OR 38	(1)	Winchester Avenue		Crosswalk	10
US 101	(1)	20th Avenue		Traffic signal, curb extensions and street lighting	190
Master Plan					
US 101	(1)	Schofield Creek Bridge		Future study for possible crossing options	n/a
US 101	(1)	Juniper Avenue		Center Median Refuge	150
Winchester Avenue		4th Street		Crosswalk	10
Action Plan Subtotal (State Funded)					**$841**
Action Plan Subtotal (City Funded)					**$147**
Total (State Funded)					**$1,128**
Total (City Funded)					**$593**

Notes:

1. Project eligible to be programmed into the State Transportation Improvement Plan (STIP).
2. Bicycle and Pedestrian project to be completed at the same time.
3. Cost estimate of OR 38 project includes $200,000 for upgrading the railroad crossing and traffic control gates as part of this project.

DKS Associates
TRANSPORTATION SOLUTIONS

City of Reedsport
Transportation System Plan

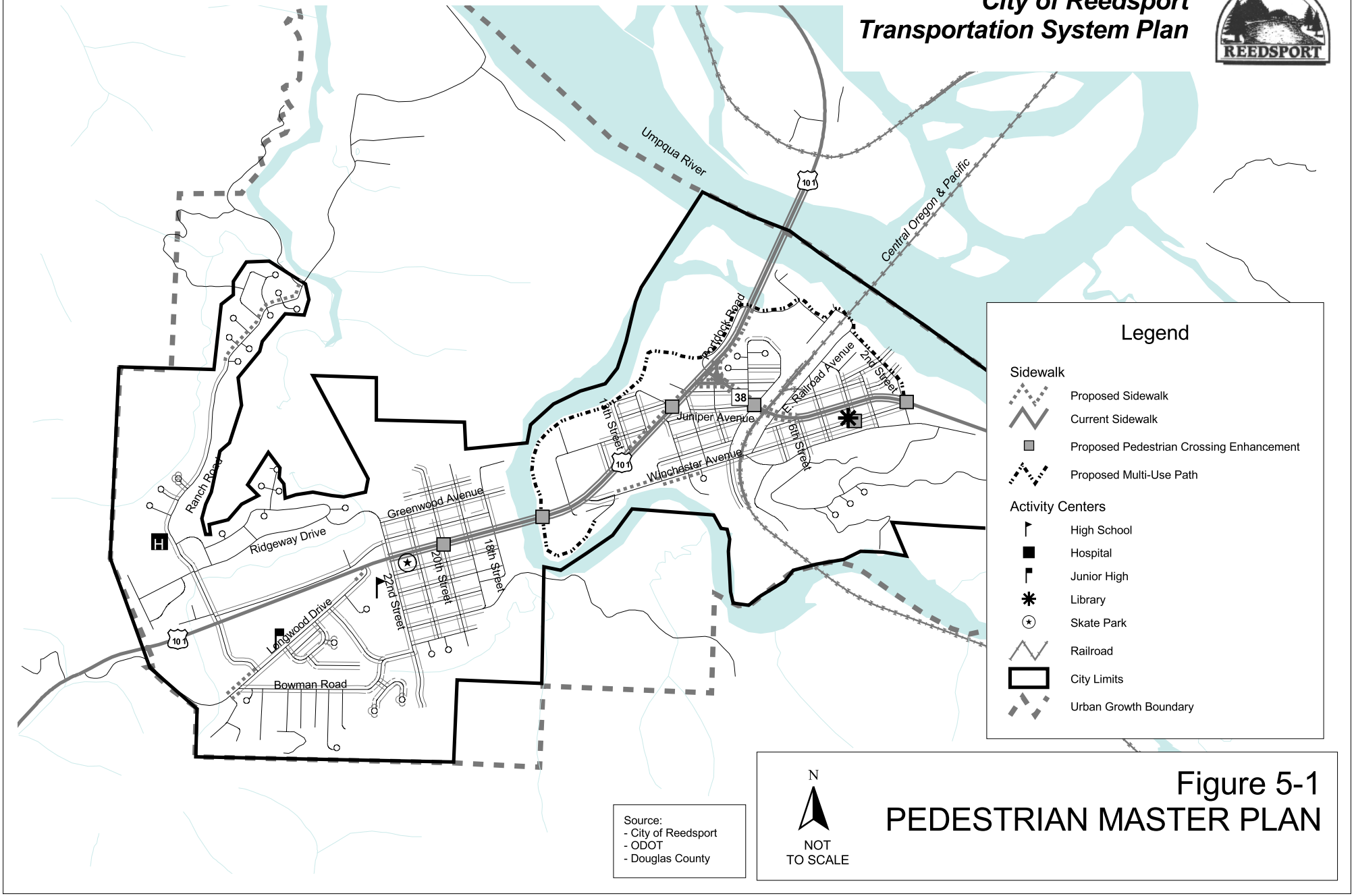

Figure 5-1
PEDESTRIAN MASTER PLAN

Arterial Crossing Enhancements

Pedestrian safety is a major issue. Pedestrian conflicts with motor vehicles are a major issue in pedestrian safety. These conflicts can be reduced by providing direct links to buildings from public rights-of-way, considering neighborhood traffic management, providing safe roadway crossing points and analyzing/reducing the level of pedestrian/vehicle conflicts in every land use application.

In setting priorities for the pedestrian action plan, school access was given a high priority to improve safety. However, beyond simply building more sidewalks, school safety involves education and planning. Many cities have followed guidelines provided by Federal Highway Administration and Institute of Transportation Engineers. Implementing plans of this nature has demonstrated accident reduction benefits. However, this type of work requires staffing and coordination by the Reedsport School District as well as the City to be effective.

Several "pedestrian crossing enhancement" locations were identified. A screening evaluation was done for arterial streets within Reedsport to identify roadway segments that should be considered for enhanced pedestrian crossing treatments. The criterion used was based on roadway daily volumes, posted speeds, and proximity to pedestrian generators based on published guidelines[4] in the *Traffic Control Devices Handbook*. The crossing type in the rightmost column of Table 5-3 indicates whether enhancements are optional (type B) or mandatory (type C) for the specified location.

Table 5-3: Pedestrian Crossing Enhancement Locations

Intersection	2004 Daily Volume	Posted Speed	Number Travel Lanes	Crossing Type (1)
US 101 and Juniper Avenue	13,000	30	4	C
US 101 and Schofield Creek Bridge	17,000	30	4	C
US 101 and 20th Avenue	16,000	30	4	C
OR 38 and West Railroad Avenue	7,000	25	2	A
OR 38 and Winchester Avenue	5,500	25	2	A
Winchester Avenue and 4th Street	2,000	25	2	A

Notes:
(1) Crossing Type Categories:
A = Candidate for marked crosswalk alone.;
B = Marked crosswalk plus potential additional enhancements (e.g., raised median refuge, pedestrian traffic signal, etc.).;
C = Marked crosswalk and mandatory additional enhancements.

Locations classified as a type C risk potential increase in pedestrian crashes if marked crosswalks are added without other pedestrian facility enhancements. Locations with a type A indication note that standard crosswalk controls are sufficient. The US 101/20th Street intersection is being proposed as a full signalized intersection. However, a raised median refuge area is mandatory at the two remaining pedestrian crossing enhancements locations on US 101 due to the high traffic volumes and mid-block location. The raised center median must be at least 6 feet wide with at least 1 feet of separation (shy distance) from the travel lanes. Similar pedestrian refuge improvements are planned for the City of Florence for crossings to US 101.

[4] *Traffic Control Devices Handbook*, Institute of Transportation Engineers, 2001; Chapter 13, Table 13-2.

Table 5-4: Potential Measures for Enhancing Pedestrian Crossings

Improvement	Description	Illustration	Cost Range
Marked Crosswalk	White, thermoplastic markings at street corner. Alternative material could include non-white color or textured surfaces.		$500 to $1,000 each crossing
New Corner Sidewalk Ramp	Construct ADA compliant wheelchair ramps consistent with city standards		$3,000 to $5,000 each corner
Median Refuge	Construct new raised median refuge area. Minimum width 6 feet, and minimum length of 30 feet. Curb can be mountable to allow emergency vehicles to cross, if required.		$3,000 to $10,000 depending on overall length and amenities.
Pedestrian Count Down Timer Signal	Install supplemental pedestrian signal controls to indicate the time remaining before crossing vehicles get 'green' signal indication.		$500 each signal head
Curb Extensions	Construct curb extension on road segments with on-street parking. Reduces pedestrian crossing area, and exposure to vehicle conflicts.		$5,000 to $8,000 depending on design amenities and aesthetic treatments.

Complementing Land Use Actions

Land use actions enable significant improvements to the pedestrian system to occur. A change in land use from vacant or under utilized land creates two key impacts to the pedestrian system:

- Added vehicle trips that conflict with pedestrian flows
- Added pedestrian volume that requires safe facilities

The above mentioned impacts require mitigation to maintain a safe pedestrian system. Pedestrians walking in the traveled way of motor vehicles are exposed to potential conflicts that can be minimized or removed entirely with sidewalk installation. The cost of a fronting sidewalk to an individual single family home would be roughly $1,000 to $2,000 (representing less than one percent of the cost of a house). Over a typical 50-year life of a house, this would represent less than $50 per year assuming that cost of money is 4% annually. This cost is substantially less than the potential risk associated with the cost of an injury accident or fatality without safe pedestrian facilities (injury accidents are likely to be $10,000 to $50,000 per occurrence and fatalities are $500,000 to $1,000,000). Sidewalks are essential for the safety of elderly persons, the disabled, transit patrons and children walking to school, a park or a neighbor's house. No area of the city can be isolated from the needs of these users (not residential, employment areas or shopping districts). Therefore, fronting improvements including sidewalks are recommended on every change in land use (new or developed property) or roadway project.

For any developing or redeveloping property in Reedsport, the cost savings to the private developer is the only benefit of not providing sidewalks – at the potential risk and future expense to the public. Therefore, sidewalks are required in Reedsport with all new development and roadway projects.

It is important that, as new development occurs, connections or accessways are provided to link the development to the existing pedestrian facilities in as direct manner as possible. As a guideline, the sidewalk distance from the building entrance to the public right-of-way should not exceed 1.25 times the straight line distance. If a development fronts a sidewalk (as shown in the Pedestrian Master Plan), the developer shall be responsible for providing the walkway facility as part of any frontage improvement required for mitigation.

It is also very important that residential developments consider the routes that children will use to walk to school and provide safe and accessible sidewalks to accommodate these routes, particularly within one mile of a school site. Additionally, all commercial projects generating over 1,000 trip ends per day should provide a pedestrian connection plan showing how pedestrian access to the site links to adjacent uses, the public right-of-way and the site front door. Conflict free paths and traffic calming elements should be identified, as appropriate.

6. BICYCLE PLAN

This chapter summarizes existing and future facility needs for bicycles in the City of Reedsport. The following sections outline the criteria to be used to evaluate needs and outlines strategies and an Action Plan to effectively mitigate deficiencies.

Facilities

Bicycle facilities are comprised of two primary categories:

- route facilities
- parking facilities

Route Facilities

There are three main bicycle route facility types: bike lanes, bicycle accommodation, or off-street bike paths/multi-use trails.

- *Bike lanes* are areas within the street right-of-way designated specifically for bicycle use. Federal research has indicated that bike lanes are the most cost effective and safe facilities for bicyclists when considering all factors of design. Bicycle lanes adjacent to the curb are preferred to bicycle lanes adjacent to parked cars or bicycle lanes combined with sidewalks. According to the Oregon Bicycle and Pedestrian Plan[1], on-street bike lanes should be six-feet wide. Provision of a bicycle lane not only benefits bicyclist but also motor vehicles which gain greater shy distance/emergency shoulder area. Additionally, pedestrians gain a buffer between walking areas and moving vehicles. On reconstruction projects, bicycle lanes of five feet may be considered due to right-of-way constraints.
- *Bicycle accommodations* are where bicyclists and autos share the same travel lane, including a wider outside lane and/or bicycle boulevard treatment (priority to through bikes on local streets). Widening the curb travel lane (for example, from 12 feet to 14 or 15 feet) can provide bicycle accommodations. This extra width is more accommodating to bicycle travel and provides a greater measure of safety.
- *Multi-use paths* are generally off-street routes (typically recreationally focused) that can be used by several transportation modes, including bicycles, pedestrians and other non-motorized modes (i.e. skateboards, roller blades, etc.). Wide sidewalks (greater than eight feet), can also be considered multi-use paths, however, the provision of wide sidewalks should not preclude the provision of on-street bike lanes. The shared space on the wide sidewalks can decrease pedestrian levels of service as well as pose adverse safety problems for both bikers and pedestrians. Off-street trails in the City of Reedsport should be planned for 10-12 feet in width[2], which is desirable for mixed-use activity (pedestrian and bike).

[1] Oregon Department of Transportation, *Oregon Bicycle and Pedestrian Plan*, Adopted June, 1995.
[2] Ibid.

Parking Facilities

Racks, lockers and shelters are typical bicycle parking facilities and are provided at individual land use sites. The provision, or lack there of, parking facilities can have a significant effect on bicycle ridership, especially for individuals attempting to use the bicycle as an alternative form of transportation to the automobile.

Signing and marking of bicycle lanes should follow the *Manual on Uniform Traffic Control Devices*. Design features in the roadway can improve bicycle safety. For example, using curb storm drain inlets rather than catch basins significantly improves bicycle facilities.

Criteria

The city has developed a set of goals and policies to guide transportation system development in Reedsport (see Chapter 2) as part of this TSP. Several of these policies pertain specifically to bicycle needs:

Goal 1: Develop a transportation system to enhance Reedsport's livability and meet federal, state, and local requirements.

- Policy a – Maintain the livability of Reedsport through proper location and design of transportation facilities.

Goal 2: Create a balanced transportation system.

- Policy b – Provide connectivity to each area of Reedsport to ensure pedestrian, bicycle, and vehicle access to schools, parks, employment and recreational areas.
- Policy e – Develop a bikeway system of bike lanes, shared roadways, and multi-use paths that allows pedestrians to travel from residential areas to schools, parks, commercial areas and major employment centers.

Goal 3: Improve the safety of the transportation system.

- Policy b – Where on-street pedestrian and bicycle facilities cannot reasonably be provided on highways and arterials, identify parallel routes that comply with state and city planning and design standards.
- Policy d – Designate safe routs form residential areas to schools.

Goal 4: Develop an efficient transportation system that will handle future traffic growth.

- Policy d – Implement the bicycle, pedestrian, and vehicle improvements to create a multi-modal transportation system.

These goals and policies are the criteria that all bikeway improvements in Reedsport should be measured against to determine if they conform to the intended direction of the City.

Strategies

Several strategies were considered for construction of future bikeway facilities in Reedsport. These strategies are aimed at providing the City with priorities since it is likely that the available funding will be insufficient to address all of the projects identified in the Bikeway Master Plan.

Strategy 1 – "Connect Key Bicycle Corridors to Schools, Parks and Activity Centers"

This strategy provides bikeway links to schools, parks, recreational facilities and activity centers from the arterial/collector bikeway network. This strategy provides added safety to likely bicyclist destinations as well as destinations where children are likely to travel.

Strategy 2 – "Bicycle Corridors that Connect to Major Recreational Facilities"

This strategy provides a connection between the bikeway network and major recreational facilities.

Strategy 3 - "Fill in Gaps in the Network where Some Bikeways Exist"

This strategy provides bikeways that fill in the gaps between existing bikeways where a significant portion of a bikeway corridor already exists. This strategy maximizes the use of existing bicycle facilities to create complete sections of an overall bikeway network.

Strategy 4 – "Develop Maintenance Program to Clean Bike Lanes"

This strategy establishes a program to provide maintenance services to clean the bike lanes. Debris in bike lanes is one of the biggest complaints (deterrents) of bicyclists.

Strategy 5 – "Bicycle Corridors that Travelers Might Use"

This strategy focuses on providing bicycle facilities where through bicycle travelers are likely to go such along US 101 or east on OR 38 to the Elk viewing area.

Strategy 6 - "Bicycle Corridors that Connect Neighborhoods"

This alternative puts priority on bicycle lanes for routes that link neighborhoods together. Some of these could include paths crossing parks, schools or utility rights-of-way.

Table 6-1: Bicycle Facility Strategy Comparisons

Strategy	Policies 1-a	2-b	2-e	3-b	3-d	4-d
1. Connect Key Bicycle Corridors to Schools, Parks, Recreational Uses, and Activity Centers	☐	■	■	☐	■	■
2. Bicycle Corridors that Connect to Major Recreational Uses	☐	☐	■	☐	☐	■
3. Fill in Gaps in the Network where Some Bikeways Exist	☐	●	☐	☐	●	■
4. Develop Maintenance Program to Clean Bike Lanes	❍	❍	●	●	●	❍
5. Bicycle Corridors that Travelers Might Use	☐	☐	■	☐	●	☐
6. Bicycle Corridors that Connect Neighborhoods	☐	☐	■	☐	☐	■

■ Fully meets criteria
☐ Mostly meets criteria
● Partially meets criteria
❍ Does not meet criteria

Needs

Bicycle trips are different from pedestrian and motor vehicle trips. Common bicycle trips are longer than walking trips and generally shorter than motor vehicle trips. Where walking trips are attractive at lengths of a quarter mile (generally not more than a mile), bicycle trips are attractive up to three miles. Bicycle trips can generally fall into three groups: commuting, activity-based and recreational. Commuter trips are typically home/work/home (sometimes linking to transit) and are made on direct, major connecting roadways and/or local streets. Bicycle lanes provide good accommodations for these trips. Activity based trips can be home-to-school, home-to-park, home-to-neighborhood commercial or home-to-home. Many of these trips are made on local streets with some connections to arterials and collectors. Their needs are for lower volume/speed traffic streets, safety and connectivity. It is important for bicyclists to be able to use through streets[3]. Recreational trips share many of the needs of both the commuter and activity-based trips, but create greater needs for off-street routes, connections to rural routes and safety. Typically, these bike trips will exceed the normal bike trip length.

State policy from the Transportation Planning Rule[4] indicates that all arterial and major collector roadways have sidewalks and bikeways whenever streets are constructed, reconstructed or relocated. Bicycle plan strategies outlined below were created to provide a basis for the bicycle master plan. The list of bicycle strategies include:

- Provide a multi-use path from Champion Park to Winchester Road
- Connect key bicycle corridors to schools, parks, and activity centers

[3] This can include end of cul-de-sac connections, but even better is regular spacing of local streets.
[4] ORS 366.514 (1)

- Arterial Crossing Enhancements
- Bicycle corridors connecting neighborhoods
- Fill in gaps in the network where some bikeways exist (arterials and collectors)
- Bicycle corridors connecting to major recreational facilities
- Bicycle corridors that access retail areas

The Action Plan are those projects which are selected from the Master Plan to be funded and constructed over the next 20 years. This selection process helps to focus community investment on those projects that are most effective at meeting critical needs, while deferring other projects of lesser value. With the action plan, a substantial bicycle network would be in place and would allow attention to move toward infill master plan projects. The bicycle master plan will require incremental implementation. As development occurs, streets are rebuilt and other project funding opportunities (such as grant programs) arise, projects on the master plan should be integrated into project development.

Bicycle Facility Plan

The Bicycle Master Plan is an overall plan and summarizes the list of bicycle-related projects in Reedsport, providing a long-term map for planning bicycle facilities. From this Master Plan, a more specific, shorter term, Action Plan was developed. The Action Plan consists of projects that the City should actively try to fund through local, county, state and federal sources. These projects form a basic bicycle grid system for Reedsport. As development occurs, streets are rebuilt and other opportunities (such as grant programs) arise, projects on the Master Plan should be pursued as well.

The Bicycle Facilities Master Plan identifies improvements to provide a connected bicycle network within the City of Reedsport along all arterial and collector roadways. Typically, local streets do not require delineated bicycle lanes as traffic volumes and speeds are low enough that bicycles and motor vehicles can share the same right of way safely.

In creating the Bicycle Action Plan, priority was given to completing the network (taking advantage of existing bike lanes) and providing bicycle access around land uses that are attractive to bicycle riders, such as schools and retail areas. Since US 101 and OR 38 have sporadic existing bicycle lanes, they were recommended for completion. The US 101 corridor between 18th Street and 22nd Street has right-of-way constraints and a high vehicle volume. Therefore it is proposed that a bicycle route be delineated through signage directing bicyclists to use Fir Avenue and Elm Avenue. These two streets provide a parallel route to US 101, but offer very low traffic volumes, increasing safety for bicyclists. Additionally, Longwood Drive offers on-street bicycle infrastructure to the middle and senior high schools of Reedsport. Table 6-2 outlines the bicycle projects, which are shown in Figure 6-1.

Table 6-2: Bicycle Plan Projects

Location	Description	From	To	Cost ($1,000)
Action Plan				
Longwood Drive (3)	Bicycle Lanes	US 101	Ranch Road	45 (1)
OR 38 (2,3)	Bicycle Lanes	6th Street	US 101	(1,4)
US 101 Parallel Route	Bicycle Route	Schofield River Bridge	Longwood Drive	5
Action Plan Subtotal(State Funded)				*$0*
Action Plan Subtotal (City Funded)				*$50*
Master Plan				
Ranch Road	Bicycle Lanes	Longwood Drive	Regents Place	375
Schofield River	Multi-Use Trail	Champion Park	US 101	927
Frontage Road	Bicycle Lanes	22nd Street	Ranch Road	420
Master Plan Subtotal(State Funded)				*$0*
Master Plan Subtotal (City Funded)				*$1,722*
Total (State Funded)				***$0***
Total (City Funded)				***$1,772***

Notes:

1. Due to current roadway width, only requires striping and signage.
2. Project eligible to be programmed into the State Transportation Improvement Plan (STIP).
3. Bicycle and Pedestrian project to be completed at the same time.
4. Included in pedestrian project costs.

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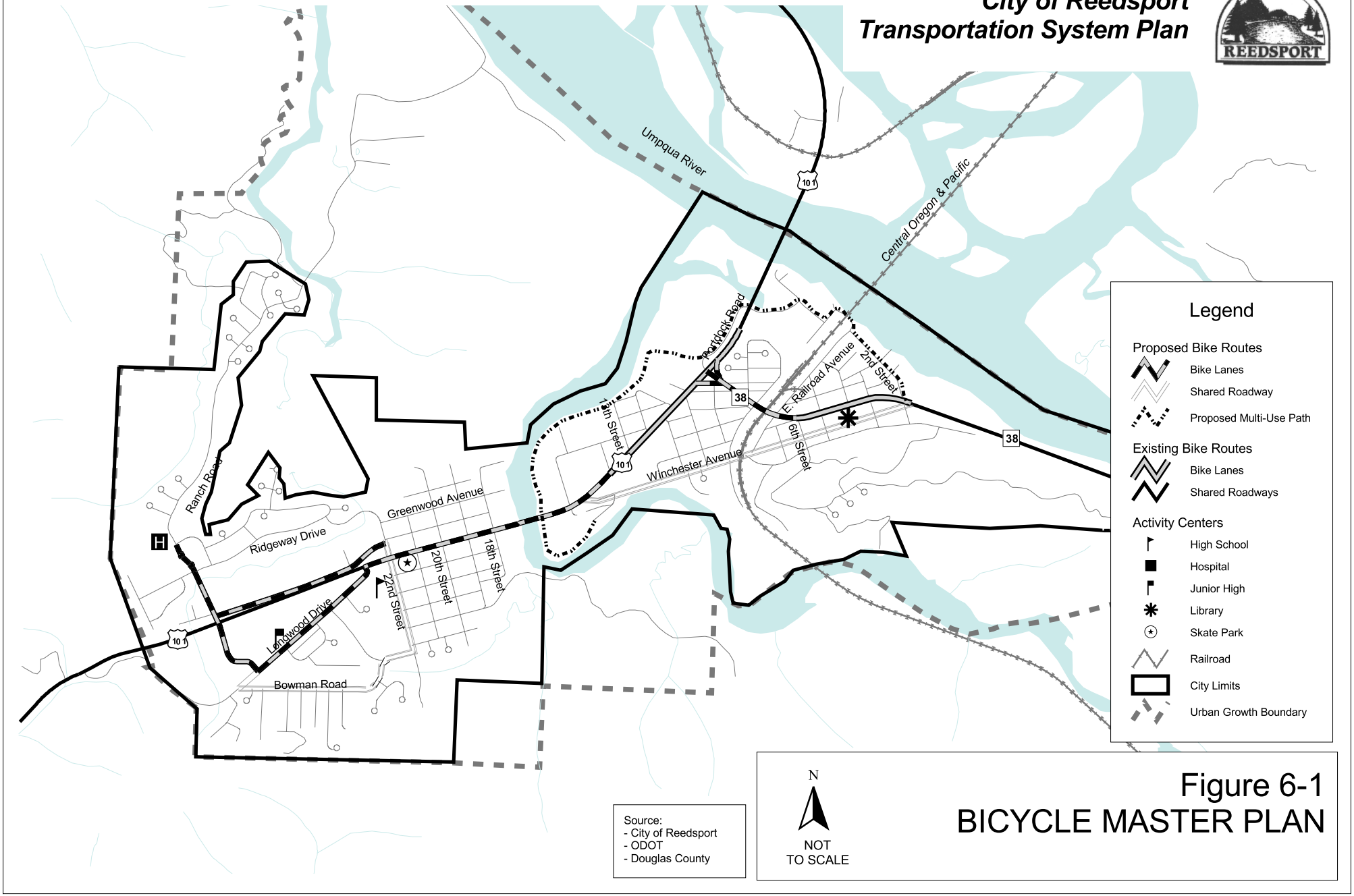


Figure 6-1
BICYCLE MASTER PLAN

Dedicated bicycle lanes do not need to extend the entire length of Ranch Road as traffic volumes and speeds are relatively low, allowing for the mix of motor vehicle and bicycle traffic. The same is true for Bowman Road, Winchester Street and 22nd Street. Longwood Drive, Frontage Road and the lower half of Ranch Road, however, should receive dedicated bicycle lanes as they form a complete bicycle network that can serve to encourage bicycle use.

Complementing Land Use Actions

Since the provision of a bicycle network will not be fully utilized without the supporting infrastructure, it is in the City's best interest to make bicycle options available. The City Zoning Code should provide on-site bicycle parking requirements based on land use categories such as residential, commercial, industrial and service zones.

It is important that, as new development occurs, connections or accessways are provided to link the development to the existing bicycle and pedestrian facilities in as direct manner as is reasonable. If a development fronts a bikeway or sidewalk (as shown in the Bicycle or Pedestrian Master Plans), the developer shall be responsible for providing the bikeway or walkway facility as part of any half-street improvement required for project mitigation.

7. MOTOR VEHICLES

The motor vehicle needs, criteria and strategies were identified in working with the City's Technical Advisory Committee. This group explored automobile and truck needs in the City of Reedsport and provided input about how they would like to see the transportation system develop.

The motor vehicle section involves several elements. This chapter is separated into the following sections:

- Criteria
- Functional Classification (including summary of cross sections and local street connectivity)
- Circulation and Capacity Needs
- Neighborhood Traffic Management
- Transportation System Management (TSM)
- Transportation Demand Management (TDM)
- Truck Routes

Criteria

An updated set of goals and policies to guide transportation system development in Reedsport has been developed as part of this TSP (see Chapter 2). Many of these goals and policies pertain specifically to motor vehicles. These goals and policies represent the criteria that all motor vehicle improvements or changes in Reedsport should be measured against to determine if they conform to the intended direction of the City.

Goal 1: Develop a transportation system to enhance Reedsport's livability and meet federal, state, and local requirements.

Policy a – Maintain the livability of Reedsport through proper location and design of transportation facilities.

Policy e – Cooperate with the Oregon Department of Transportation (ODOT) to maintain and improve US 101 and Highway 38 consistent with the Oregon Highway Plan (OHP).

Goal 2: Create a balanced transportation system.

Policy b – Provide connectivity to each area of Reedsport to ensure pedestrian, bicycle, and vehicle access to schools, parks, employment and recreational areas.

Policy c – Develop neighborhood and local connections to provide adequate circulation into and out of neighborhoods.

Goal 3: Improve the safety of the transportation system.

Policy c – Enhance safety by prioritizing and improving high accident locations within the City.

Policy e – Maintain access management standards for streets to reduce conflicts between vehicles and trucks, and between vehicles and bicycles and pedestrians.

Goal 4: Develop an efficient transportation system that will handle future traffic growth.

Policy a – Designate roadway functional classifications that reflect the desired function and characteristics of different roadways.

Policy e – Maintain levels of service consistent with the Oregon Transportation Plan. Reduce traffic congestion and enhance traffic flow through such measures as intersection improvements, intelligent transportation systems, signal synchronization, and other similar measures.

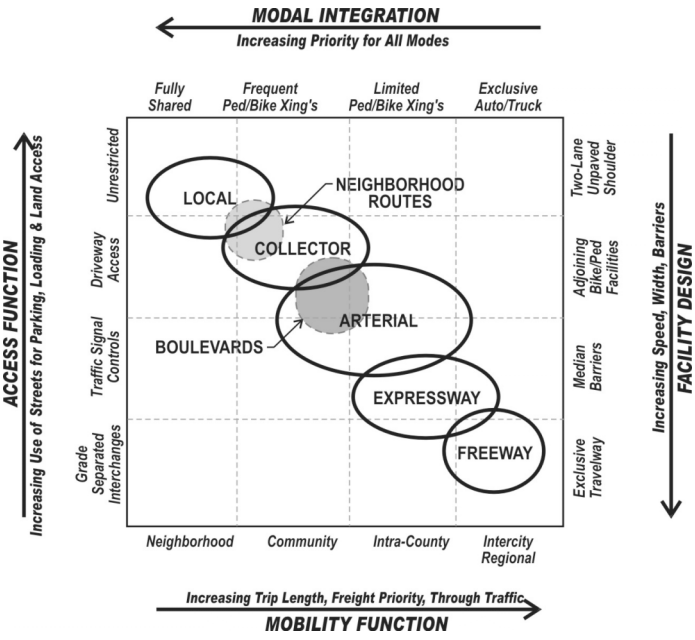
Functional Classification

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 low speeds are more desirable for land access. Arterials emphasize a high level of mobility for through movement; local facilities emphasize the land access function; and collectors offer a balance of both functions

Functional classification has commonly been mistaken as a determinate for traffic volume, road size, urban design, land use and various other features which collectively are the elements of a roadway, but do not represent function. For example, the volume of traffic on a roadway is directly related to land uses and because a roadway carries a lot or a little traffic does not necessarily determine its function. The traffic volume, design (including access standards) and size of the roadway are outcomes of function, but do not define function.

Connectivity and Functional Class

Function can be best defined by connectivity. Without connectivity, neither mobility nor access can be served. Roadways that provide the greatest reach of connectivity are the highest level facilities. Conversely, those with the shortest connections are the lowest level facilities. For a community such as Reedsport, the linkage between connectivity and street functional definition helps to relate street design, access spacing, and other transportation elements to issues specific to community design and livability. Other agencies, such as ODOT, use terms that conform to federal conventions and generally have a much higher requirement for mobility, whereas, most of the city streets (collector, local) emphasize access and neighborhood type values.



Arterials can be defined by regional level connectivity. These routes go beyond the city limits in providing connectivity and can be defined into two groups: principal arterials (typically state routes) and arterials. The efficient movement of persons, goods and services depends on an interconnected arterial system. **Collectors** can be defined by citywide or district wide connectivity. These routes span large areas of the city but typically do not

extend significantly into adjacent jurisdictions. They are important to city circulation. The past textbooks on functional classification generally defined all other routes as **local streets**, providing the highest level of access to adjoining land uses. These routes do not provide through connection at any significant regional, citywide or district level.

However, based upon connectivity, there is a fourth level of functional classification - **neighborhood route**. In many past plans, agencies defined a minor collector or a neighborhood collector; however, use of the term collector is not appropriate. Collectors provide citywide or large district connectivity and circulation. There is a function between a collector and a local street that is unique due to its level of connectivity. Local streets can be cul-de-sacs or short streets that do not connect to anything. Other routes people use to get in and around their neighborhood. They have connections within the neighborhood and between neighborhoods. These routes have neighborhood connectivity, but do not serve as citywide streets. They have been the most sensitive routes to through, speeding traffic due to their residential frontages. Because they do provide some level of connectivity, they can commonly be used as cut-through routes in lieu of congested or less direct arterial or collector streets that are not performing adequately. Cut-through traffic has the highest propensity to speed, creating negative impacts on these neighborhood routes. By designating these routes, a more systematic citywide program of neighborhood traffic management can be undertaken to protect these sensitive routes.

In the past, traffic volume and the size of a roadway have been directly linked to functional classification. More recently, urban design and land use designations have also been tied to functional classification. All of these approaches to functional classification tend to be confusing and ever changing, complicating an essential Transportation System Planning exercise. The planning effort to identify connectivity of routes in Reedsport is essential to preserve and protect future mobility and access, by all modes of travel. Without defining the varying levels of connectivity now in the Transportation System Plan, the future impact of development in the upper Ranch Road and Master Heights area will result in a degraded ability to move goods and people (existing and future) in Reedsport. The outcome would be intolerable delays and much greater costs to address solutions later rather than sooner.

By planning an effective functional classification of Reedsport streets, the City can manage public facilities pragmatically and cost effectively. These classifications do not mean that because a route is an arterial it is large and has lots of traffic. Nor do the definitions dictate that a local street should only be small with little traffic. Identification of connectivity does not dictate land use or demand for facilities. The demand for streets is directly related to the land use. The highest level connected streets have the greatest potential for higher traffic volumes, but do not necessarily have to have high volumes as an outcome, depending upon land uses in the area. Typically, a significant reason for high traffic volumes on surface streets at any point can be related to the level of land use intensity within a mile or two. Many arterials with the highest level of connectivity have only 35 to 65 percent "through traffic". Without the connectivity provided by arterials and collectors, the impact of traffic intruding into neighborhoods and local streets goes up substantially.

If land use is a primary determinate of traffic volumes on streets, then how is it established? In Oregon, land use planning laws require the designation of land uses in the Comprehensive Plan. These land use designations are very important not only to the City for planning purposes, but to the people that own land in Reedsport. The adopted land uses in Reedsport have been used in this study, and were obtained by working with the City and Umpqua Regional Council of Governments Buildable Lands Inventory which forecasts growth in the region for the next 20 years. The charge of this Transportation System Plan is to develop a set of multi-modal transportation improvements to support the Comprehensive Plan land uses. Key to this planning task is the functional classification of streets.

Functional Classification Definitions

The functional classification of streets in Reedsport is shown in Figure 7-1: Street Functional Classification. Any street not designated as an arterial, collector or neighborhood route is considered a local street.

Principal Arterials are typically freeways and state highways that are access controlled and provide the highest level of connectivity. These routes connect over the longest distance (sometimes miles long) and are less frequent than other arterials or collectors. These highways generally span several jurisdictions and many times have statewide importance (as defined in the State Highway Classification System).[1] In Reedsport, US 101 and OR 38 are both designated as a Statewide Highway.

Arterial streets serve to interconnect and support the principal arterial highway system. These streets link major commercial, residential, industrial and institutional areas. Arterial streets are typically spaced about one mile apart to assure accessibility and reduce the incidence of traffic using collectors or local streets for through traffic in lieu of a well placed arterial street. Access control is the key feature of an arterial route. Arterials are typically multiple miles in length.

None of the city streets are designated as arterial streets.

Collector streets provide both access and circulation within and between residential and commercial/industrial areas. Collectors differ from arterials in that they provide more of a citywide circulation function, do not require as extensive control of access (compared to arterials) and penetrate residential neighborhoods, distributing trips from the neighborhood and local street system. Collectors are typically greater than 0.5 to 1.0 miles in length.

The designated collector streets in Reedsport are: Ranch Road, Longwood Drive, Bowman Road, 22nd Street, Frontage Road (Ranch Road to 22nd Street), and Winchester Avenue.

Neighborhood routes are usually long relative to local streets and provide connectivity to collectors or arterials. Because neighborhood routes have greater connectivity, they generally have more traffic than local streets and are used by residents in the area to get into and out of the neighborhood, but do not serve citywide/large area circulation. They are typically about a quarter to a half-mile in total length. Traffic from cul-de-sacs and other local streets may drain onto neighborhood routes to gain access to collectors or arterials. Because traffic needs are greater than a local street, certain measures should be considered to retain the neighborhood character and livability of these routes. Neighborhood traffic management measures are often appropriate (including devices such as speed humps, traffic circles and other devices - refer to later section in this chapter). However, it should **not** be construed that neighborhood routes automatically get speed humps or any other measures. While these routes have special needs, neighborhood traffic management is only one means of retaining neighborhood character and vitality.

The designated neighborhood streets in Reedsport are: Ridgeway Drive, Arthur Drive, 20th Street, and Hawthorne Avenue and 16th Avenue.

Local Streets have the sole function of providing access to immediate adjacent land. Service to "through traffic movement" on local streets is deliberately discouraged by design.

All other city streets in Reedsport not designated above as collector streets or neighborhood streets are considered to be local streets.

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[1] *1999 Oregon Highway Plan*, An Element of the Oregon Transportation Plan, Adopted by the Oregon Transportation Commission, March 18, 1999.

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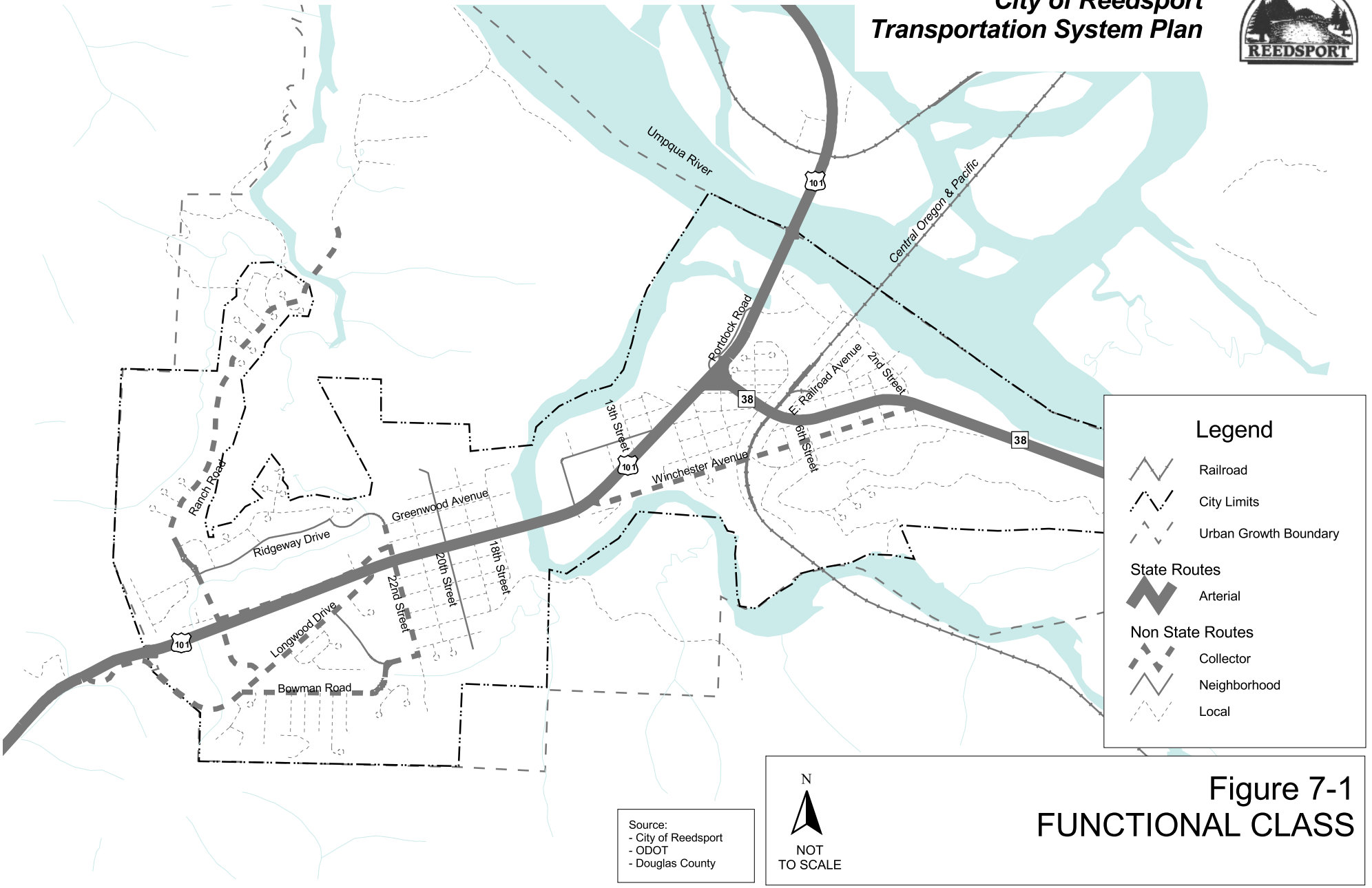


Figure 7-1
FUNCTIONAL CLASS

Functional Classification Changes in Reedsport

The functional classification differs from the existing approved functional classification. Neighborhood routes were not defined in the existing functional classification. The functional classification was developed following detailed review of Reedsport and Douglas County's functional classification. Table 7-1 summarizes the major differences between the functional classification and the existing designations for streets in Reedsport. Generally, the only changes were to upgrade several important local street connections to neighborhood routes, especially around areas that are expected to develop within the next 15-20 years.

Criteria for Determining Changes to Functional Classification

The criteria used to assess connectivity have two components: the extent of connectivity (as defined previously) and the frequency of the facility type. Maps can be used to determine regional, city/district and neighborhood connections. The frequency or need for facilities of certain classifications is not routine or easy to package into a single criterion. While planning textbooks call for arterial spacing of a mile, collector spacing of a quarter to a half-mile, and neighborhood connections at an eighth to a sixteenth of a mile, this does not form the only basis for defining functional classification. Changes in land use, environmental issues or barriers, topographic constraints, and demand for facilities can change the frequency for routes of certain functional classifications. Consequently, many local street were updated to neighborhood routes in order to accommodate changing land use patterns.

Table 7-1: Proposed Changes to Existing Functional Classification

Street	Existing Class	Adopted Class	Comment
16th Street	Not Classified	Neighborhood Route	Provide cohesive classification of street.
20th Street	Not Classified	Neighborhood Route	Upgrading to serve development.
22nd Street (Greenwood Avenue to Ridgeway Drive)	Not Classified	Neighborhood Route	Becomes an alternate route for north Ranch Road development.
Ridgeway Drive	Not Classified	Neighborhood Route	Becomes an alternate route for north Ranch Road development.
Arthur Drive	Not Classified	Neighborhood Route	Upgrading to provide direct connection between Scott Street and Longwood Drive.
Port Dock Road	Not Classified	Neighborhood Route	Upgrading to serve development.
Hawthorne Avenue	Not Classified	Neighborhood Route	Provide cohesive classification of street.

Functional Classification Street Characteristics

The street design characteristics in Reedsport were developed to meet the function and demand for each facility type. Because the actual design of a roadway can vary from segment to segment due to adjacent land uses and demands, the objective was to define a system that allows standardization of key characteristics to provide consistency, but also to provide criteria for application that provides some flexibility, while meeting standards.

In addition to the city streets, the two state highways within the community have an additional set of design considerations as defined in the *Oregon Highway Plan* (OHP) and in the *Highway Design Manual*. Both state highways are now designated as statewide freight routes, and are part of the National Highway System (NHS) based on recent amendments[2] to the OHP. Two key route designations that affect highway operations and design parameters are discussed below.

Urban Business Area (UBA) Designation

An UBA is a highway segment designation that recognizes existing areas of commercial activity or future types of centers of commercial activity within urban growth boundaries on District, Regional or Statewide Highways where vehicular accessibility is important to continued economic viability. The dual objectives of a UBA on the state highway are to provide local access to meet the access needs of abutting properties and to maintain existing speeds to move through traffic.

Speeds are generally 35 miles per hour or less. Vehicular accessibility and circulation is often as important as pedestrian, bicycle and transit accessibility. Safe and regular street connections are encouraged. Sidewalks and bicycle lanes are accommodated. Typically, the UBA designated areas do not provide on-street parking, except in cases where buildings are located directly behind the back of sidewalk, and where sufficient right-of-way is difficult to procure.

Prior to the OHP Amendment of August 2005, a corridor plan and/or local transportation system plan was required along with agreements by ODOT and the local government to make a UBA designation. Since the amendment, all statewide freight routes with posted speeds under 35 miles per hour (MPH) in urban areas that fully comply with UBA criteria are treated as a UBA. No further official action or agreements are necessary. However, a formal designation for UBA can still be requested by the responsible city or county agency, for any posted speed limit.

This UBA standards now applies, by default, to the majority of both US 101 and OR 38 highways within Reedsport, which are designated NHS routes, statewide freight routes, and have posted speed limits of 35 MPH or less. On US 101, this includes the segments between OR 38 and 22nd Avenue. Outside of these limits, the posted speeds increase to over 35 MPH. On OR 38, the designation applies from US 101 to Winchester Avenue.; further east, the posted speed limit increases above 35 MPH. One of the key changes associated with the UBA designation is the increase to the maximum v/c ratio standard from 0.75 to 0.80.

Special Transportation Area (STA) Designation

ODOT defines an STA as "a highway segment designation that may be applied to a highway segment when an existing downtown or planned downtown, business district or community center straddles the state highway in existing or certain planned urban centers." The main focus of an STA is to encourage pedestrian and bicycle movement, making an interconnected local

[2] Oregon Transportation Commission Action on August 17, 2005 amended freight route designations and changed the process for UBA designations in urban areas.

street network important to facilitate local automobile and pedestrian circulation. In order to be considered for STA designation, an area must:

- Straddle a state highway;
- Cannot be located on a freeway or expressway;
- The defined area does not apply to an entire city or the majority of a city or to strip development areas along individual highway corridors; and
- Have slow traffic speeds, generally 25 mph or less.

Typically, STAs are located with mixed land uses and buildings spaced close together and developed with little or no setback from the highway. Sidewalks should be wide and located adjacent to the buildings and the highway. In general, public road connections are preferred to private driveway access, which would mean that businesses would combine driveways and have access on the side streets as opposed to direct access to the highway. However, private driveway access would be retained where feasible access alternatives are not available. All public streets must be designed for ease of crossing by pedestrians.

OR 38 has many of the characteristics of a STA, especially between the railroad tracks and South 2nd Street. In this segment, the buildings are located immediately behind the sidewalk, the posted speed limits is 25 MPH, and on-street parking and bike lanes have been provided. There are several aspects of an STA designation that could be beneficial, and those include:

- Allowance for narrower travel lanes and turning lanes;
- Allowance for closer access spacing, and provision to allow mid-block driveways; and
- A maximum v/c ratio of 0.85 rather than 0.75 as required elsewhere on OR 38.

However, the recent roadway improvements on OR 38 were built by ODOT to full standards, and no modifications to design requirements are necessary within this segment. Similarly, the forecasted 2020 operating conditions are not expected to exceed the lesser v/c ratio standard, so a higher standard is not strictly needed either. The only one of the three potential benefits of the STA designation on OR 38 would be flexibility to have closer access and driveway spacing than with a UBA designation. As re-development occurs, this would mean that fewer driveways would need to be consolidated to comply with ODOT standards, and that there would be greater flexibility in forming alternative circulation plans for each development. The designation would not affect any of the existing uses or access points until application was made to change uses or re-develop.

The city has a choice in whether to leave this segment of OR 38 as a default UBA designation, or to pursue the STA designation which would give redevelopment flexibility in access and circulation planning. To effect the STA change from the default UBA designation, the following steps would need to be completed:

- Local jurisdiction adopts STA in their TSP. The STA designation then becomes an amendment to the OHP and are approved by the Oregon Transportation Commission.
- ODOT and local government agree to the plan provisions through an IGA or MOU or other jointly agreed to process.
- For statewide or higher classified highways, a STA management plan is required. However, OR 38 is a district level highway, and this requirement does not apply in this case.

OR 38 should be designated as an STA to enable this flexibility. This will require an agreement

between the City of Reedsport and ODOT, Region 3 to enact this designation.

Street Cross-Section and Right-of-Way Needs

The street design characteristics for city streets and the two state highways were developed to comply with current planning standards, with consideration to the above UBA and STA designation requirements for the ODOT highways. The resulting street cross-sections are depicted in Figure 7-2 through Figure 7-5 for arterials, collectors, neighborhood routes, local streets and trails.

Planning level right-of-way needs can be determined utilizing these figures and the typical dimensions noted for each street classification Table 7-2. Specific right-of-way needs will need to be monitored continuously through the development review process to reflect current needs and conditions (that is to say that more specific detail may become evident in development review which requires improvements other than these outlined in this 20 year general planning assessment of street needs).

Table 7-2: Street Cross Sections

Infrastructure	*Street Functional Class*					
	4-Lane Arterial (ODOT)*	*2-Lane Arterial (ODOT*)*	*Collector*	*Neighbor-hood*	*Local*	*Alley*
Travel Lane Width	48'- 4x12'	24'- 2x12'	20'- 2x10'	20' 2x10'	20'- 2x10'	20'- 2x10'
Left-Turn Lane (optional)	14'	14'	n/a	n/a	n/a	n/a
On-Street Parking (8' typical)	n/a**	n/a**	16'	16'	8'	n/a
Bike Lanes (6' typical)	12'	12'	n/a***	n/a	n/a	n/a
Sidewalks (6' typical)	12'	12'	12'	12'	12'	n/a
Paved Width	**74'**	**50'**	**36'**	**36'**	**28'**	**20'**
Utility Easement	—	—	10' - 2x5'	10' - 2x5'	10' - 2x5'	—
Minimum Grade	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%
Maximum Grade	6%	6%	15%	15%	20%	20%
Minimum Center Line Radius	400'	400'	200'	200'	100'	100'
Minimum Angle of street intersections (degrees)	80	80	80	80	80	80
Minimum distance between street intersections (same side of street)	400'	400'	300'	300'	200'	n/a
Minimum distance between street intersections (opposite side of street)	300'	300'	200'	200'	100'	n/a
Right-of-Way Width ****	**102'**	**78'**	**70'**	**58'**	**50'**	**20'**

* US 101 and OR 38 are state owned and maintained facilities, and they are the only designated arterial facilities in the city. These road standards are subject to the ODOT *Highway Design Manual,* which supercedes any local design standards, unless approved by ODOT.

** On-street parking on state highways are regulated by ODOT, not the City of Reedsport. "Special Transportation Area (STA)" cross sections include on-street parking paved width (see Figure 7-2).

*** Six foot bike lanes on each side of the collector street are required where traffic volumes are expected to exceed 5,000 vehicles a day.

**** Sufficient right-of-way width is shown for ODOT facilities to include a center left-turn lane and on-street parking.

Modifications to Standards

This plan outlines requirements, which will be used in establishing right-of-way needs for the development review process.

Under some conditions a variance to the adopted street cross-sections may be requested from the City Engineer. Typical conditions that may warrant consideration of a variance include (but are not limited to) the following:

- Infill sites
- Severe topographic constraints
- Existing developments and/or buildings that make it extremely difficult or impossible to meet the design standards.

Specific right-of-way needs will need to be monitored continuously through the development review process to reflect current needs and conditions. This will be necessary since more specific detail may become evident in development review which requires improvements other than these outlined in this 20 year general planning assessment of street needs.

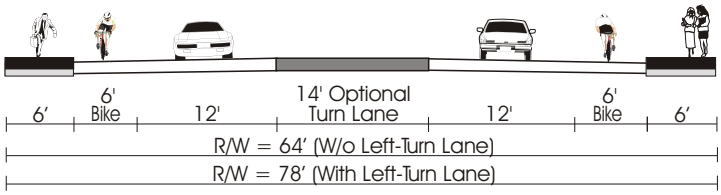
ODOT Design Exception Process

The arterial cross-sections illustrated in Figure 7-2 are based on standards for ODOT highway facilities, which were published in the 2003 *Highway Design Manual*. These standard street cross-sections can be modified, in special cases, to reduce significant impacts to the community. The design exception process is done in close coordination with ODOT staff, and the final decision for acceptance of a design exception lies with the ODOT Regional Roadway Engineering Manager. In general, a detailed engineering evaluation is made to determine the additional cost required to comply fully with the design standards. The scale of the project, the cost differential are evaluated before a final decision is made. Among the potential causes for justifying a design exception are:

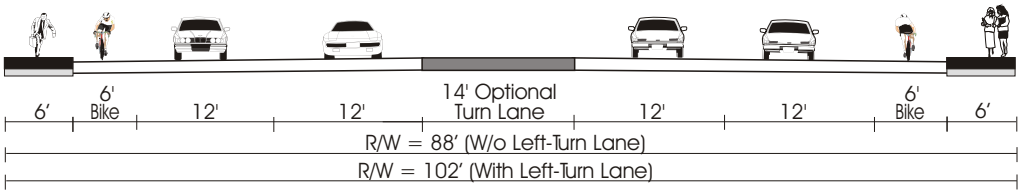
- Excessive construction cost
- Compatibility with adjacent sections
- No plans for improvement of adjacent section in the foreseeable future
- Additional right-of-way requirements

Several sections of US 101 could be candidates for a Design Exception review and approval to implement improvements without substantial impacts on adjoining property. The most likely candidate is the section in the Uptown area between 22nd Street and the Schofield Creek Bridge, as discussed in a later section in detail (see Traffic Safety Alternatives section). Four blocks of this section have far less right-of-way than required by the ODOT standard.

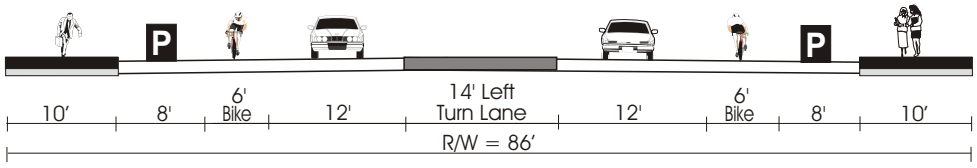
2/3 Lane Highway



4/5 Lane Highway



3 Lane STA Designated Sections



Notes:

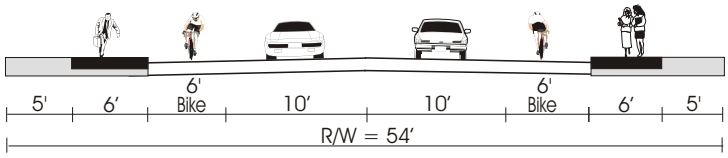
1. *For new or re-constructed roadways*
2. *Turn lane warrants should be reviewed using Highway Research Record No. 211, NCHRP Report No. 279 or other updated/superseding reference.*
3. *ODOT "Highway Design Manual" requirements supercede city standards.*

LEGEND

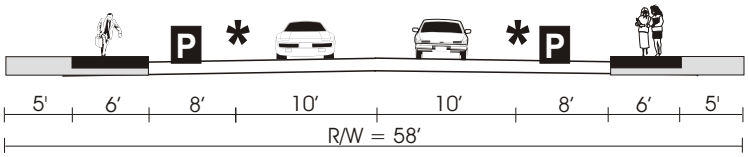
P - On-street Parking Lane (except at intersections)

Figure 7-2
ARTERIAL STREETS
STREET CROSS SECTIONS

2 Lane Section
(No On-Street Parking)



2 Lane Section
(With On-Street Parking)



Collector
Street Design Characteristics

Characteristic	*Collectors*
Vehicle Lane Widths	*10 ft.*
On-Street Parking	*8 ft.-Optional*
Bicycle Lanes (minimums)	*6 ft.*
Sidewalks (minimums)	*6 ft.*
Neighborhood Traffic Management (NTM)	*Under Special Conditions*
Turn Lanes	*When Warranted *3*
Utility Easement	*5' Each Side*

Notes:

1. For new or re-constructed roadways

2. Turn lane warrants should be reviewed using Highway Research Record No. 211, NCHRP Report No. 279 or other updated/superseding reference.

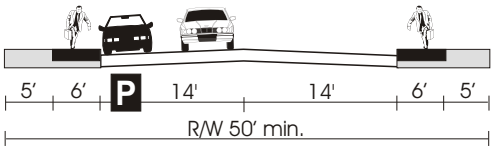
LEGEND

P - On-street Parking Lane (except at intersections)

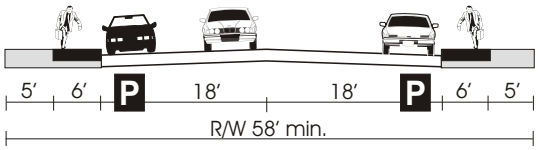
* - No Bike Lane Needed Unless Volume is Over 5,000 Per Day

Figure 7-3
COLLECTOR STREETS
STREET CROSS SECTIONS

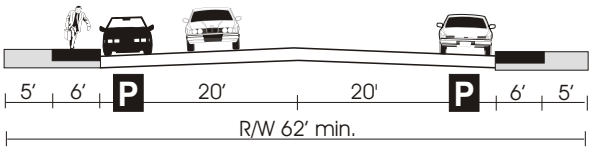
28' Standard Residential



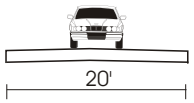
36' Neighborhood Route



40' Standard Commercial/Industrial Not Exceeding 3,000 Vehicles Per Day



20' Alley



Local Street Design Characteristics

(typically minimums unless stated otherwise)

Characteristic	*Neighborhoods*	*Locals*	*Comm/Ind*
Vehicle Lane Widths (Bus Route - 11 ft.)	*10 ft.*	*10 ft.*	*20 ft.* *
On-Street Parking		*8 ft.*	
Sidewalks (minimums)	*6 ft.*	*6 ft.*	*6 ft.*
Neighborhood Traffic Management (NTM)	*Acceptable*	*Should Not be Necessary*	*Acceptable*
Utility Easement	*5' Each Side*	*Should Not be Necessary*	*Acceptable*

* *Combined travel/parking lane.*

Notes:

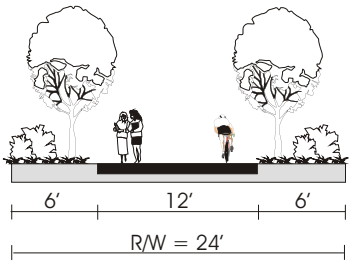
1. For new or re-constructed roadways

LEGEND

P - On-street Parking Lane (except at intersections)

Figure 7-4
LOCAL/NEIGHBORHOOD STREETS STREET CROSS SECTIONS

Primary Trail



Feeder Trail

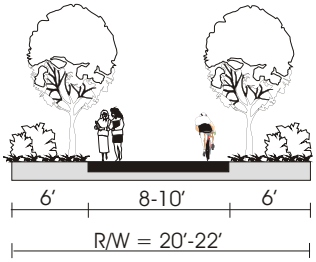


Figure 7-5
TRAIL STANDARDS
CROSS SECTIONS

Connectivity/Local Street Plan

Much of the local street network in Reedsport is built and, in many cases, fairly well connected. In other words, multiple access opportunities exist for entering or exiting neighborhoods. However, if not planned for in advance future development in a number of locations could result in the majority of neighborhood traffic being funneled onto one single street. This type of street network results in out-of-direction travel for motorists and an imbalance of traffic volumes that impacts residential frontage. The outcome can result in the need for wider roads, traffic signals and turn lanes (all of which negatively impact traffic flow and degrade safety). By providing connectivity between neighborhoods, out-of-direction travel and vehicle miles traveled (VMT) can be reduced, accessibility between various modes can be enhanced and traffic levels can be balanced out between various streets. Additionally, public safety response time is reduced. Several goals and policies established by this Transportation System Plan are intended to accomplish these objectives.

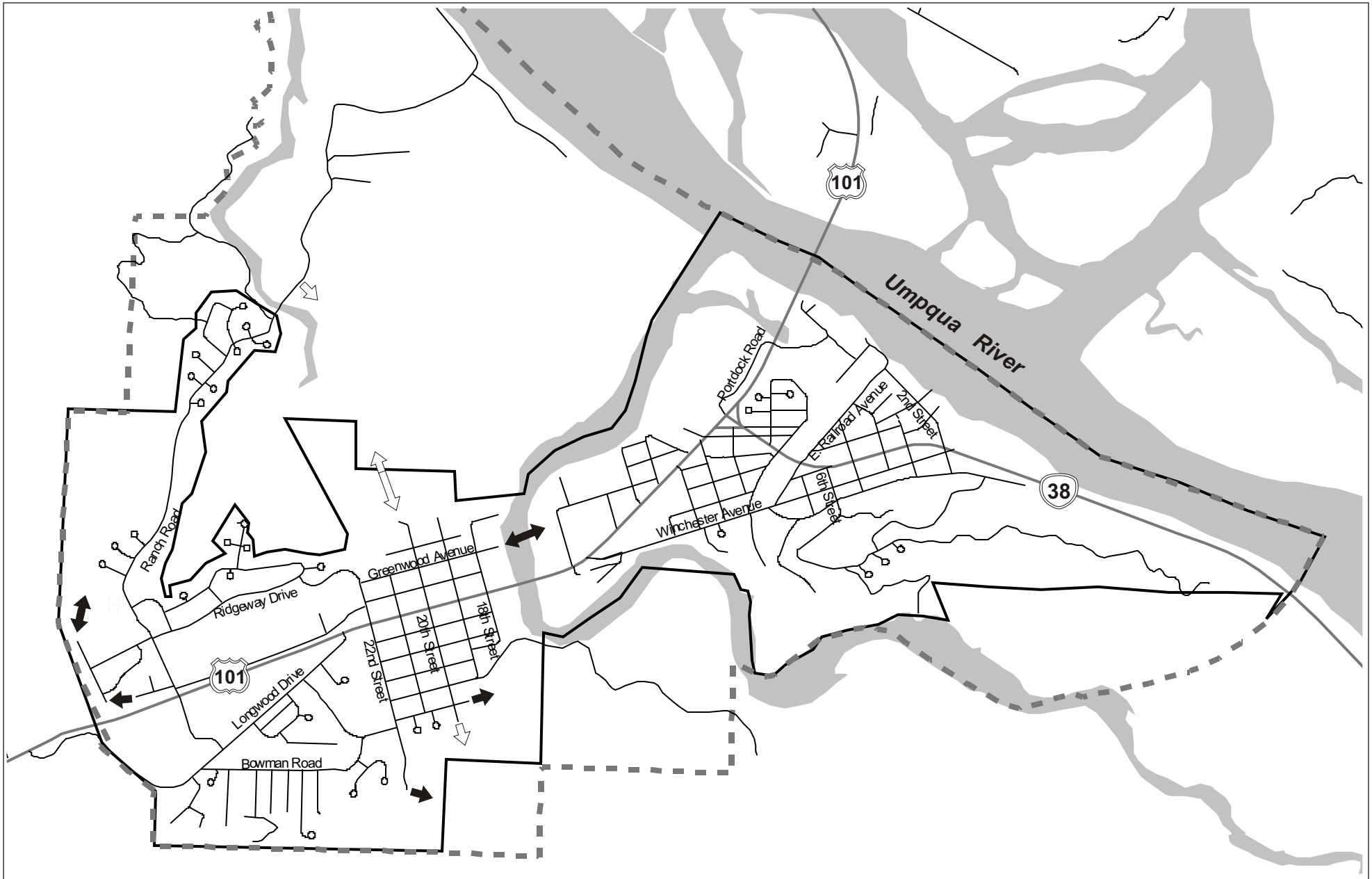
In Reedsport, some of these local connections can contribute with other street improvements to mitigate capacity deficiencies by better dispersing traffic. Several roadway connections will be needed within neighborhood areas to reduce out of direction travel for vehicles, pedestrians and bicyclists. This is most important in the areas where a significant amount of new development is possible. Figure 7-6 shows the Local Street Connectivity Plan for Reedsport. In most cases, the connector alignments are not specific and are aimed at reducing potential neighborhood traffic impacts by better balancing traffic flows on neighborhood routes. The arrows shown in the figures represent potential connections and the general direction for the placement of the connection. In each case, the specific alignments and design will be better determined upon development review. The criteria used for providing connections is as follows:

- Every 300 feet, a grid for pedestrians and bicycles
- Every 500 feet, a grid for automobiles

To protect existing neighborhoods from potential traffic impacts of extending stub end streets, connector roadways should incorporate neighborhood traffic management into their design and construction. Neighborhood traffic management is described later in this chapter. All stub streets should have signs indicating the potential for future connectivity. Additionally, new development that constructs new streets, or street extensions, must provide a proposed street map that:

- Provides full street connections with spacing of no more than 500 feet between connections except where prevented by barriers
- Provides bike and pedestrian access ways in lieu of streets with spacing of no more than 300 feet except where prevented by barriers
- Limits use of cul-de-sacs and other closed-end street systems to situations where barriers prevent full street connections
- Includes no close-end street longer than 220 feet or having no more than 25 dwelling units
- Includes street cross-sections demonstrating dimensions of ROW improvements, with streets designed for posted or expected speed limits
- The arrows shown on the local connectivity map, Figure 7-6, indicate priority connections only and represent future local and neighborhood routes. Topography, railroads and environmental conditions, such as the Schofield Creek, limit the level of connectivity in

Reedsport. Other stub end streets in the City's road network may become cul-de-sacs, extended cul-de-sacs or provide local connections. Pedestrian connections from the end of any stub end street that results in a cul-de-sac should be considered mandatory as future development occurs. The goal would continue to be improved city connectivity for all modes of transportation.



LEGEND

- ⬅ - Local Road Conceptual Street Connection
  (Connections are theoretical, additional studies should be completed for specific alignments)
- ⇦ - Neighborhood Route Conceptual Street Connection

NO SCALE

DKS Associates
TRANSPORTATION SOLUTIONS

Figure 7-6
LOCAL STREET CONNECTIVITY MAP

Circulation and Capacity Needs

The motor vehicle capacity and circulation needs in Reedsport were determined for existing and future conditions. The process used for analysis is outlined below, followed by the findings and recommendations of the analysis. The 2025 capacity analysis done through the city's Transportation System Plan confirmed the need for investments. The study also highlights long-range issues on state facilities that will require further analysis and design decisions to adequately support regional mobility and performance standards.

This section outlines the type of street improvements that would be necessary as part of a long-range master plan. Phasing of implementation will be necessary since not all the improvements can be done at once. This will require prioritization of projects and periodic updating to reflect current needs. It should be understood that the improvements outlined in the following section are a guide to managing growth in Reedsport, defining the types of right-of-way and street needs that will be required as development occurs.

Strategies

A series of strategies were developed to address the future motor vehicle needs of Reedsport. The following listing reflects the initial prioritization of strategies.

- Promote pedestrian and vehicular safety on US 101
- Improve Local Street Circulation (connectivity)
- Provide Additional Street System Capacity to LOS D[3] and a v/c ratio of 0.75 or better on state facilities(turn lanes, signals, widening, new roads)
- Improve Operation of Existing System (signal coordination, intelligent transportation systems, neighborhood traffic management)
- Transportation Demand Management (telecommuting, alternative modes, pricing)
- Improve Access Control to increase capacity

Future Intersection Capacity Analysis

Year 2025 traffic volume forecasts were analyzed to identify locations where peak hour performance will drop below minimum desirable levels (worse than LOS D and v/c below 0.75 on state routes). This focuses on the 10 study intersections that were previously examined under Existing Conditions (2004 traffic volumes), but also includes a review of road segment approaches to major intersections. The following tables summarize intersection levels of service in Reedsport for 2025 operating conditions for both no-Build and Build scenarios.

The No-Build scenario assumes no new enhancements have taken place.

The Build scenario includes the following improvement:

- US 101/22nd Street: Alter eastbound 22nd Street lane configuration (from current left/through and right turn lane to left turn lane and through/right lane.

Traffic volumes were developed as described previously and applied to existing intersection

[3] Level of service D as defined by the Highway Capacity Manual, latest version.

geometries. The value in this analysis as a starting point in reviewing the motor vehicle system performance is that it highlights where the planned system fails to meet performance standards. These locations will be reviewed to consider street improvements alternatives that could better serve planned growth.

2025 No Build Scenario

For the No-Build scenario, all of the intersections controlled by traffic signals will continue to operate at LOS D or better with growth planned to 2025. However, one of the three signalized intersections will operate above the acceptable ODOT mobility standard of 0.80 volume to capacity ratio.

Many of the unsignalized intersections operate at LOS C or better for the No-Build scenario. This means that the minor street approaches to these intersections experience short to moderate delays. The major street movements generally are not impeded and typically only a handful of minor street vehicles experience delay. Signal warrants were evaluated to determine where traffic signals might be needed at locations that do not have a traffic signal today (see discussion below). None of the unsignalized study intersections met MUTCD's Eight-Hour Volume Warrant (Warrant 1) under 2025 traffic volume conditions. Table 7-3 summarizes the no-build intersection level of service. The intersection of US 101 at 22nd Street will operate at 0.91 v/c ratio, significantly higher than the maximum recommended, 0.80, for this type of facility within UBA. Mitigation will be required at this location to correct the deficiency, as discussed in the next section.

Table 7-3: 2025 No-Build PM Peak Hour Intersection Level of Service

Intersection	Level of Service	Average Delay (Sec.)	Volume / Capacity
Signalized Intersections			
US 101/22nd Street	D	37.8	**0.91***
US 101/Winchester Avenue	C	29.3	0.79
US 101/OR 38	C	29.5	0.66
Unsignalized Intersections			
Ranch Road/Ridgeway Drive	A/C	-	-
Longwood Drive/Bowman Road	A/A	-	-
Longwood Drive/Ranch Road	A/B	-	-
US 101/Longwood Drive	A/C	-	0.34
East Fir Avenue/Winchester Avenue	A/C	-	-
OR 38 & East Fir Avenue/6th Street	A/C	-	0.08
OR 38/Winchester Avenue	A/C	-	0.19

Notes:

* Exceeds 0.80 v/c ratio maximum mobility standard.

Unsignalized Intersection Level of Service: A/A=Major Street turn LOS/Minor street turn LOS

Signalized and All-Way Stop Intersections: Delay = Average vehicle delay in the peak hour for entire intersection in seconds.

2025 Build Scenario

A 2025 Build scenario was evaluated. This scenario assumed that the 20th Street extension would be constructed in conjunction with development in the Master Heights area and upper Ranch Road. Since no timeline has been established for this development, the costs were allocated to the master plan. It is expected that this street improvement would be funded through exactions and direct improvements by the developer as a condition of approval for the proposed development.

The mitigation that would be required to achieve the levels of service for 2025 is as follows:

- US 101/22nd Street: Alter eastbound 22nd Street lane configuration from current left/through and right turn lane to left turn lane and through/right lane.

This change in the approach lanes at the intersection adds enough capacity to comply with the OHP maximum v/c ratio standards, dropping the PM peak hour conditions to 0.74. However, the intersections to the north in the Uptown area, between 21st Street and 18th Street, do not have left-turn lanes on the highway like at 22nd Street. The congestion level at these intersections could be significant without any improvements, especially at the 19th Street intersection , which is controlled by a traffic signal. The next section of this plan, Traffic Safety, investigates possible improvements that are recommended to address safety issues in this segment of US 101, which could include a center left-turn lane.

Table 7-4 displays the intersection operations associated with the above mentioned mitigation measures.

Table 7-4: 2025 Mitigated PM Peak Hour Intersection Level of Service

Intersection	Level of Service	Average Delay (Sec.)	Volume / Capacity
Signalized Intersections			
US 101/22nd Street	C	27.6	0.74
US 101/Winchester Avenue	C	25.6	0.79
US 101/OR 38	C	28.6	0.63
Unsignalized Intersections			
Ranch Road/Ridgeway Drive	A/C	-	-
Longwood Drive/Bowman Road	A/A	-	-
Longwood Drive/Ranch Road	A/B	-	-
US 101/Longwood Drive	A/C	-	0.21
East Fir Avenue/Winchester Avenue	A/C	-	-
OR 38 & East Fir Avenue/6th Street	A/C	-	0.08
OR 38/Winchester Avenue	A/C	-	0.19

Notes:
Maximum accepted volume-to-capacity ratio on US 101 in Reedsport is 0.80.
Unsignalized Intersection Level of Service: A/A=Major Street turn LOS/Minor street turn LOS
Signalized and All-Way Stop Intersections: Delay = Average vehicle delay in the peak hour for entire intersection in seconds.

One future option for access to and from the south on US 101 to augment the 22nd Street intersection is the concept of a grade-separated interchange near the existing Ranch Road highway undercrossing. If development patterns intensify beyond those forecasted in this study, consideration should be given to possible alternative access onto US 101. A separate interchange study for the Ranch Road area has been added to the Master Plan project list for this purpose.

Traffic Safety Alternatives on US 101

The most significant crash locations in the city are on US 101 between 18thStreet and 22nd Street. High pedestrian traffic related to the City of Reedsport High School, the city skate park and retail opportunities interact with high auto and truck vehicle volumes. The most recent three years of crash data available show that one pedestrian has been injured at the US 101/22nd Street intersection and four have been injured at the US 101/20th Street intersection. Three of these injured pedestrians were under the age of 13.

US 101 between 18th Street and 21st Street is a four lane cross section with on-street parking on both sides. The paved width is 66 feet between curbs. There are no left-turn lanes on the highway, and no center turn-lane to facilitate mid-block access, notably at the bank between 19th Street and 20th Street. The absence of left-turn refuge area was noted during Open House comments as an on-going safety concern, and as a possible improvement area. The existing cross-section on US 101 widens to five-lanes between 21st Street and 22nd Street. South of 22nd Street, the highway narrows back down to two-lanes.

The posted speeds on US 101 between 18th Street and 22nd Street is 30 mph, and this transitions to 40 mph just south of 22nd Street. Additionally, US 101 and 22nd Street is the first signalized intersection for northbound traffic entering the City of Reedsport, and travel speeds are likely higher than the posted limit.

This section of US 101 is a designated bicycle route, however, many segments of US 101 through the city do not have separate bike lanes adjacent to the highway. Michael Ronkin, ODOT Bicycle and Pedestrian Program manager, indicated[4] that this designation is consistent along the Oregon Coast for all communities. He stated there is not a mandate for adding new bike facilities as part of this designation. The general treatment along US 101 in downtown areas has been to give deference to on-street parking in front of businesses rather than displace parking in favor of adding bike lanes. He suggested that further refinement planning along the Uptown section of US 101 may assist the city and ODOT in striking the best balance of long-term facility needs.

It is also recommended that the existing traffic signal at 19th Street be removed and a new traffic signal be installed at US 101/20th Street intersection, consistent with state design standards and in compliance with state traffic signal warrants. The 20th Street location provides a more central crossing point for pedestrians between Lyons Park and retail uses on the opposite side of the highway, and it would better serve growing traffic volumes associated with local planned development, specifically the Master Heights project. In conjunction with the new traffic signal, an interconnect cable should be installed (or a wireless connection) between the new signal at 20th Street and the existing signal at 22nd Street. This will help to improve the through traffic progression on the highway.

In an effort to make this section of US 101 more safe and pedestrian friendly, four alternatives were explored. The first concept would retain the existing number of through lanes, and convert the space provided for on-street parking to other uses. The second alternative would keep the existing four-lane

[4] Telephone conversation with Michael Ronkin, Bicycle and Pedestrian Program Manager, October 27, 2005.

cross section, and change the pavement markings at unsignalized intersections to advise vehicles on US 101 to stop well in advance of crosswalks, in order to improve line of sight visibility of pedestrians in the crosswalk. A third alternative would be to construct the standard five-lane highway cross-section typically required by ODOT. It is recommended that these alternatives be further analyzed focusing on pedestrian safety for the area. The results should provide sufficient detail to use in applying for grants and other funding sources to construct pedestrian safety improvements. One other alternative was considered but rejected from further consideration, and this is noted in a later section. The alternatives are listed in priority order as established by the Reedsport City Council.

Alternative #1: On-Street Parking Removal to Add Left-Turn Lane

The existing roadway cross section would be modified to remove on-street parking on the east side of US 101 between 18th Street and 22nd Street, and the existing lane striping would be modified to create:

- Two 12' travel lanes for trucks (standard width is 12 feet),
- Two 11' travel lanes for vehicles (standard width is 12 feet — design exception required), and
- a 12' center turn lane (standard width is 14 feet — design exception required)..

This configuration would store left turning vehicles out of the through travel lane as well as accommodating the truck route designation. As noted above, two of the elements would be narrower than ODOT standard widths, and a design exception would be required. This cross-section would perform adequately, on a v/c ratio basis, but it would still be lacking on-street bike lane facilities.

One initial area of concern for this alternative was the absence of bike lanes on an improved highway segment. ODOT Region 3 roadway design staff initially suggested that this was a critical design issue, however, conversations with the ODOT Bicycle and Pedestrian Program manager in Salem suggested that not providing bike lanes was an acceptable solution within communities on US 101. Therefore, although a Design Exception would be required, this approach would be feasible.

Alternative #2: Modify 4-Lane US 101

The second alternative retains the four travel lanes on US 101, and adds other features without requiring pavement widening. The existing cross-section would be modified to change where vehicles stop at unsignalized crosswalks, add curb extensions at corners, and street lighting.

Figure 7-7: Example Curb Extension

Based on discussions with ODOT, another approach to resolving the left-turning conflicts and crashes with pedestrians in the Uptown area would be to apply advanced stop bars on the US 101 approaches to unsignalized intersections. The standard pavement markings and vehicle codes allow for vehicles to stop within 6 feet of a crosswalk when it is occupied. An advanced stop bar would be applied 30 feet before the

crosswalk, and vehicles would be required to stop there, which gives both drivers and pedestrians better view angles of each other. This has been used in some locations on US 101 in Reedsport, but it should be done more comprehensively to resolve the visibility problem that is typical on a four-lane facility, when a stopped vehicle in the inside travel lane blocks the sight line of a second vehicle approaching in the outside lane of any pedestrians in the crosswalk. All other elements of the current highway facility would remain the same, including on-street parking and travel lane widths. This advanced stop bar treatment would not be applied on the approach to an intersection controlled by traffic signals (22nd Street and the new signal at 20th Street), but only at locations with crosswalks alone.

This alternative would also add curb extension on both sides of the highway at all corners, and add street lighting as selected location to improve nighttime visibility. Curb extensions are recommended on US 101 at each intersection from 18th Street to 22nd Street corridor on the same side where on-street parking is allowed (see example in Figure 7-7). The curb extensions should enhance pedestrian safety by reducing speeds of vehicles on US 101 and reducing the width of the street pedestrians are required to cross.

Alternative #3: Full ODOT Standard Five-Lane Section

The conventional ODOT five-lane cross-section, as shown in Figure 7-8, requires 102 feet of right-of-way to construct. This cross-section includes two travel lanes in each direction on the highway, a center left-turn lane, on-street bike lanes and on-street parking.

This alternative would provide all the operational needs for this section of US 101, but the additional right-of-way required is substantially higher than is available. It is estimated that the existing right-of-way line is located at the back of the existing sidewalk, which is approximately 76 to 78 feet wide through this section. To comply with the ODOT standard width, an additional 24 to 26 feet is needed. On many blocks of Uptown, this additional width would require acquisition of existing buildings, and adversely impact existing operations of other buildings.

Other Related Safety Issues

A truck turn-out/parking lane in front of Lyons Park on US 101 between 20th and 21st Streets was considered based on suggestions at previous community meetings regarding safety on US 101. This turn-out lane would widen the highway along this block, with the intent to be used as a parking lane for large truck and recreational vehicles, and to improve the visibility of pedestrians at the 20th Street crossing of US 101. However, to be effective, a curb extension would be needed on the south side of US 101 at the corners so that a pedestrian could check for oncoming traffic without entering the roadway. This safety measure is desirable with or without traffic signal controls.. The curb extension would impede large vehicles from leaving the parking lane, and maneuvering trucks and recreational vehicles around it could add to the congestion and safety issues at this location. Overall, we find that merits of providing a slightly better triangle sight distance for vehicles traveling northbound on US 101 do not substantially increase safety for potential conflicts between pedestrians.

At the intersection of US 101/21st Street, the addition of a street safety light would greatly enhance the ability of drivers to see pedestrians crossing US 101 at night. Currently this intersection is fairly dark in the evening and nighttime hours.

Recommendations

The four alternative treatments for US 101 in the Uptown area were reviewed on the basis of their additional safety improvements, operational compliance, and impacts on adjoining properties. The findings related to each of the alternatives are summarized in Table 7-5 on the following page. The cross-section elements of the alternatives are illustrated in Figure 7-8.

Table 7-5: Summary of US 101 Safety Alternatives between 18th Street and 22nd Street

Alternative	Safety Improvements	Operation Issues	Potential Impacts
#1: On-Street Parking Removal (one side)	Adds center left-turn lane. No on-street bike lanes.	Operates within v/c ratios required by ODOT.	Loss of on-street parking could impact fronting business owners.
#2: Modified 4-Lane US 101	Advanced stop bar added on US 101 at 18th, 19th and 21st Street approaches. (See Note 2) Add curb extensions and street lighting.	Operates within v/c ratios required by ODOT.	No direct impacts to right-of-way or adjacent businesses.
#3: Full ODOT 5-Lane Standard Improvements	All required safety elements provided.	Operates within v/c ratios required by ODOT.	Major right-of-way acquisition required. If on-street parking is retained, an additional 24 to 26 feet is required. Without parking, the extra right-of-way would be 8 to 10 feet

Notes:

1. For all alternatives noted above, it is assumed that the existing traffic signal at 19th Street will be removed, and a new traffic signal at 20th Street will be installed, consistent with ODOT design standards.
2. An advanced stop bar is placed 30 feet before a crosswalk across both travel lanes at intersections not controlled by traffic signals. Vehicles stopped at the advanced stop bar would provide a better sight angle of pedestrians using the crosswalk.
3. Curb extensions are optional features for intersections that have crosswalks and on-street parking on adjacent blocks. These would be feasible for all three alternatives noted above.

Based on the above review, the first alternative (Alt. 1) is recommended for the Uptown area for two major reasons; first, it provides a center left-turn for improved visibility at crosswalks and narrower travel ways, without additional substantial impacts to adjoining properties or businesses. Parking removal along the east side of the highway would have modest impacts to the fronting businesses, which, typically have an off-street parking lot for their own use.

This alternative also assumes the installation of a new traffic signal at 20th Street, and the removal of the existing traffic signal at 19th Street. The resulting configuration would comply with the minimum highway performance standards in the long-range (2025). The five-lane

section would be consistent with the existing cross-section on US 101 between 21st Street and 22nd Street, which has five-lanes today, including a southbound left-turn pocket at the existing traffic signal.

Further, the following safety recommendations are also made:

- Remove the existing traffic signal at 19th Street.
- Installation of new traffic signals, pedestrian signals and street lights at US 101 and 20th Street intersection. Install interconnect cable between the new signal with the existing signal at 22nd Street.

The secondary recommended alternative would be Alt. 2, which is the least disruptive of all the alternatives. It does not impact existing on-street parking, or require significant re-striping of the highway. The implementation of the advanced stop bars on US 101 would be new to the community and it would likely require some behaviors changes by local residents. However, it would be an improvement over existing conditions with minimal costs.

Alt. 3 (Full 5-Lane US 101) would be the most costly alternative of all those considered, because substantial right-of-way acquisition needed (an additional 16 feet on each side of the highway), including purchasing some or all of existing buildings. The full cost for this alternative was not estimated, but it would likely exceed $1 million.

Rejected Alternative: Reducing Travel Lanes to Add Left-Turn Lane

One option was considered that would have converted one through lane in each direction to other uses. This would have included:

- One 12-foot through lane in each direction,
- One 14-foot center left-turn pocket and two-way center left-turn lane between 18th Street and 22nd Street and 18th Street, and
- Standard 6-foot bike lanes on both sides of the highway.

These lane widths would be consistent with ODOT standards.

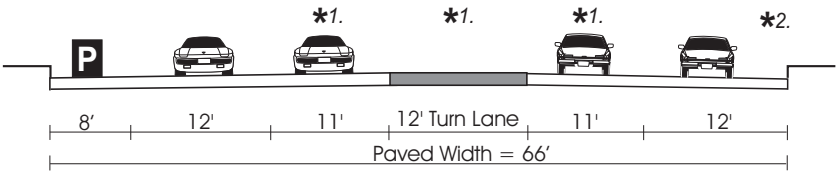
The key question was whether this section of roadway would still operate acceptably with one less through lanes in each direction. To test this proposed concept, a detailed analysis was done at US 101 / 22nd Street since it was shown to carry the highest traffic volume[5], and it also showed the lowest operating condition of any locations that was monitored in the city. This intersection was chosen as the "bottleneck" for purposes of this analysis, assuming that if this intersection could handle the narrower cross-section, downstream intersections could as well.

It was found that the change from a four-lane to a three-lane cross section caused the existing volume to capacity (v/c) ratio to increase from 0.40 to 0.61. This is less the maximum v/c ratio (0.80) allowed by ODOT on a Statewide freight route highway in a UBA[6]. However, by 2025 the volumes on US 101 would grow too much to adequately carry traffic in a three-lane configuration. The predicted v/c ratio would be well above 1.00, which is substantially over the limit for the UBA designation. Without other local circulation changes to relieve travel at this intersection, the future traffic volumes would exceed standards between 2010 and 2015. Therefore, this alternative was rejected from further consideration.

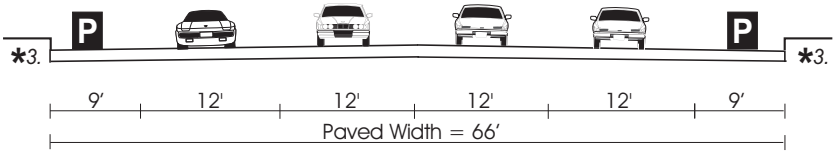
[5] Traffic Smithy turn movement count 9/30/04.

[6] *Oregon Highway Plan*, Oregon Department of Transportation, 1999, and amendment dated June, 2005 regarding UBA designation and revised maximum v/c ratios to 0.80 from the previous 0.75 limit.

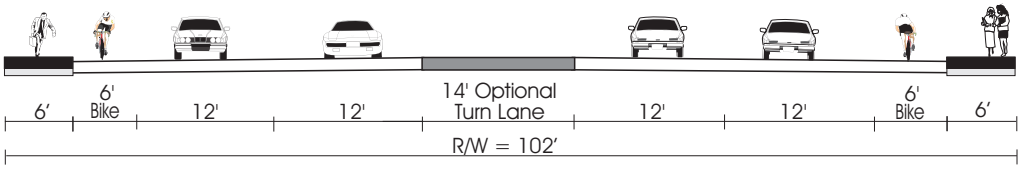
Alternative #1
On-Street Parking Removal



Alternative #2
Modified 4 Lane US 101



Alternative #3
Full ODOT Standard



*** *Notes:***

1. *Width less than ODOT design standards and bike lanes not permitted. Design exception required.*
2. *On-street parking to be removed on eastside of US 101.*
3. *Curb extensions at corner crosswalks are optional where on-street parking is provided.*

LEGEND

P - On-street Parking Lane (except at intersections)

Figure 7-8
US 101 ALTERNATIVES
CROSS-SECTION/UPTOWN AREA

Improvements

Motor Vehicle Master Plan

The improvements needed to mitigate 2025 future conditions were determined as the outcome of the Transportation System Plan analysis and are shown in Figure 7-9 and listed in Table 7-6.

The cost estimates shown in these tables are taken from prior plan documents, or are estimated by DKS Associates using standard assumptions for new facilities. Further refinement should be made of these estimates prior to capital budgeting. Road extensions are included that would serve the Master Heights subdivision north of the current terminus of 20th Street as well as residential development south of the current 22nd Street terminus. Costs associated with these road extensions could change substantially due to topography. Additionally, developers should be required to pay a portion of the costs to complete these extensions.

The study of a proposed interchange at the grade separated US 101/Ranch Road intersection is included in the master plan. This study would determine the future need, benefits and costs associated with the interchange mitigation. With the amount of development anticipated on north Ranch Road, this interchange would help to relieve congestion at the US 101/22nd Street intersection as well as provide decreased emergency response times for incidents south on US 101.

The master plan projects also include developing and adopting Access Management plans along portions of US 101 and OR 38 to increase safety and mobility as properties redevelop. These studies would be done in collaboration with the State and would require their approval.

Inclusion of an improvement project in the TSP does not commit the City or ODOT to allow, construct or participate in funding the specific improvement. Projects on the State Highway System that are contained in the TSP are not considered "planned" projects until they are programmed into the Statewide Transportation Improvement Plan (STIP).

As such, projects proposed in the TSP that are located on a State highway cannot be considered mitigation for future development or land use actions until they are programmed into the STIP. Unanticipated issues related to project funding, as well as the environment, land use, the economy, changes in the use of the transportation system, or other concerns may be causes for re-evaluation of alternatives discussed below and possible removal of a project from consideration for funding or construction. Highway projects that are programmed to be constructed may have to be altered or canceled at a later time to meet changing budgets or unanticipated conditions.

Table 7-6: Proposed Motor Vehicle Projects

Location	Project	From	To	Estimated Cost ($1,000)
	Street Projects			
Action Plan				
US 101	Analyze and implement pedestrian safety options in the Uptown area, including the recommended re-striping of US 101 to a 5-lane cross-section (Figure 7-7, Alt. 1)	18th Street	22nd Street	$20*
Master Plan				
22nd Street Extension	Construction of 2 lane road	southern terminus of 22nd Street	southern City boundary	$800**
20th Street Extension	Construction of 2 lane road	Hawthorne Avenue	Ranch Road	$3,200**
US 101	Develop and adopt access management plan to increase safety and mobility as properties re-develop	OR 38	22nd Street	$25*
OR 38	Develop and adopt access management plan to increase safety and mobility as properties re-develop	Winchester Avenue	US 101	$25*
	Intersection Enhancements			
Action Plan	**Description**			**Estimated Cost ($1,000)**
US 101 / 22nd Street	Re-stripe both side street approaches to US 101 to provide for a shared through and right-turn lane and a separate left-turn lane			$10*
US 101 / 19th Street	Remove existing traffic signal poles and hardware.			$5*
US 101 / 20th Street	Install new traffic signals, pedestrian signals and safety lighting in accordance with ODOT design standards. Provide hard wire or wireless connection and communications between 20th Street and the existing signal at 22nd Street.			$250*
Master Plan				
US 101 / Ranch Road Interchange Feasibility Study	Evaluation of long-term feasibility of constructing interchange ramps to and from US 101 south at the Ranch Road overcrossing. This project would relieve commute traffic at 22nd Street intersection with US 101.			TBD
Total (State Funded)				**$335**
Total (City Funded)				**$3,200**
Total (Development Funded)				**$800**

* Project eligible to be programmed into the State Transportation Improvement Plan (STIP) or otherwise funded by the State.

** Costs may increase substantially due to topology constraints. Project would be required in conjunction with residential development.

DKS Associates
TRANSPORTATION SOLUTIONS

City of Reedsport Transportation System Plan

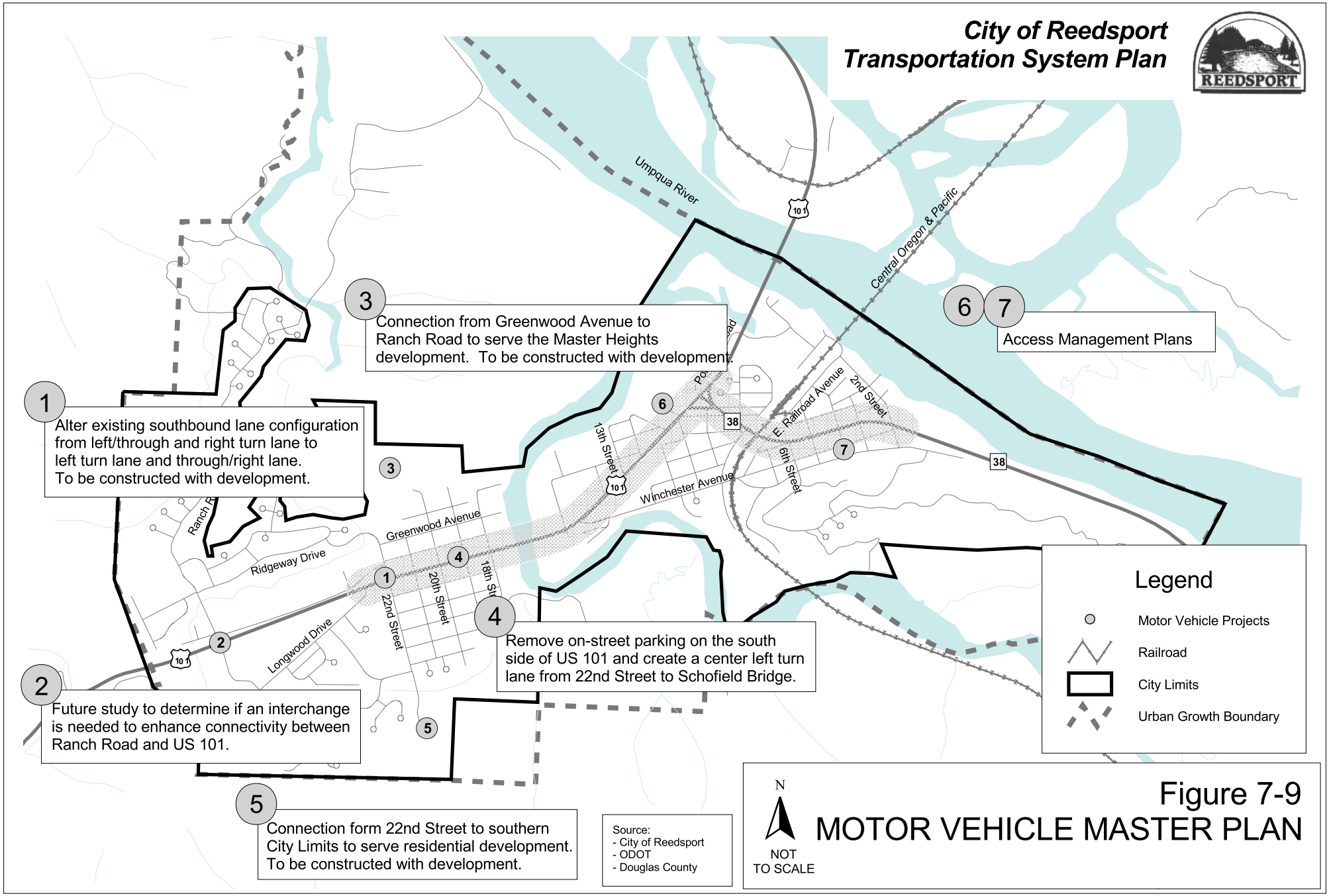


Figure 7-9
MOTOR VEHICLE MASTER PLAN

Neighborhood Traffic Management

Neighborhood Traffic Management (NTM) is a term that has been used to describe traffic control devices typically used in residential neighborhoods to slow traffic or possibly reduce the volume of traffic. NTM is descriptively called traffic calming due to its ability to improve neighborhood livability.

The following are examples of neighborhood traffic management strategies:

- speed cushions (similar to speed hump, but allows emergency vehicles to avoid traversing the hump)
- speed wagon (reader board that displays vehicle speed)
- speed humps
- traffic circles
- medians
- landscaping
- curb extensions
- chokers (narrows roadway at spots in street)
- narrow streets
- closing streets
- photo radar
- on-street parking

Typically, NTM can receive a favorable reception by residents adjacent to streets where vehicles travel at speeds above 30 MPH. However, NTM can also be a very contentious issue within and between neighborhoods, being viewed as moving the problem rather than solving it, impacting emergency travel or raising liability issues. A number of streets in Reedsport have been identified in the functional classification as neighborhood routes. These streets are typically longer than the average local street and would be appropriate locations for discussion of NTM applications. A wide range of traffic control devices is being tested throughout the State of Oregon, including such devices as chokers, medians, traffic circles and speed humps. NTM traffic control devices should be tested within the confines of Reedsport before guidelines are developed for implementation criteria and applicability. Also, NTM may be considered in an area wide manner to avoid shifting impacts between areas and should only be applied where a majority of neighborhood residents agree that it should be done.

The City could consider adopting a neighborhood traffic management program. This program would help prioritize implementation and address issues on a systematic basis rather than a reactive basis. Criteria should be established for the appropriate application of NTM in the City. This would address warrants, standards for design, funding, the required public process, use on collectors/arterials (fewer acceptable measures – medians) and how to integrate NTM into all new development design. A toolbox of traffic calming techniques is included in the appendix.

Transportation Demand Management

The Transportation Planning Rule outlines a goal of reducing vehicle miles traveled (VMT) per capita. Transportation Demand Management (TDM) is the general term used to describe any action that removes single occupant vehicle trips from the roadway network during peak travel demand periods. TDM measures applied on a regional basis can be an effective tool in reducing vehicle miles traveled. Additionally, the Employee Commute Options (ECO) program administered by the Department of Environmental Quality (DEQ) under OAR 340-20-047 requires larger employers (more than 50 employees) to provide commute options that encourage employees to reduce auto trips to the work site. TDM samples include:

- Employers installing bicycle racks, lockers and shower facilities
- Work with property owners to place parking stalls for carpoolers near building entrances
- Provide information regarding commute options to larger employers
- Encourage linkage of housing, retail and employment centers
- Encourage flexible working hours
- Encourage telecommuting
- Schedule deliveries outside of peak hours
- Business/government agencies with 50 or more employees develop TDM standards and programs to reduce peak hour traffic

The majority of Reedsport's current traffic congestion stems from through and recreational traffic, issues that TDM strategies do not address. TDM is an employment based congestion relief program. While a comprehensive TDM program might not address the transportation operational issues in Reedsport during the PM peak times, it is true that the Reedsport labor market includes the communities of North Bend, Coos Bay and Florence and encompasses an area that has an approximate population of 40,000 people. Three employers in the City of Reedsport currently have over 50 employees and include the Lower Umpqua Hospital (approximately 200 employees), Wicks Broadcast Solutions, LLC (approximately 140 employees) and Reedsport School District (approximately 105 employees). It is recommended that a van pool program, flexible working hours or another transportation demand management strategy that would influence regional trips be implemented and administered by these large employers to obtain compliance with OAR 340-20-047 mentioned above.

Access Management

Access management is important, particularly on high volume roadways, for maintaining traffic flow and mobility. Where local and neighborhood streets function to provide access, collector and arterial streets serve greater traffic volume. Numerous driveways, or street intersections, increase the number of conflicts and potential collisions and decrease mobility and traffic flow. Reedsport, as with every other city, needs a balance of streets that provide access with streets that serve mobility.

The two major roadways in the City of Reedsport are state facilities and are classified as statewide highways. The recommended access spacing standard for US 101 is 770 feet, and for OR 38 it is 550 feet, as is shown in Table 7-7.

Table 7-7: State Highway Access Spacing Standards

Facility	*Posted Speed (miles per hour)*	*Access spacing (feet)*
US 101	30	770
OR 38	25	550

Source: 1999 Oregon Highway Plan

These spacing standards are the distance between full access intersections, not the distance between driveways. However, spacing standards on US 101 currently exceed block length between 18th and 22nd Streets, which average 450'. Many businesses have access directly onto US 101, creating a deficiency in access spacing standards along much of US 101. Steps to resolve this issue include the following:

- Incorporate a policy statement regarding prohibition of new single family residential access on arterials. A design exception process should be outlined that requires mitigation of safety impacts for cases where access is requested.
- Require future development along US 101 and OR 38 to coordinate with ODOT to obtain an access permit prior to completing application to the city.
- As current development along US 101 and OR 38 make upgrades and re-development to existing properties, an evaluation of compliance with relevant access management policies must be made, and standards should be met. It should be noted that no business will be land locked or denied access, but with tools such as sharing driveways, consolidating driveways and reducing driveway width, the desired affect of maintaining functional classification integrity can be met.
- Specific access management plans should be developed for US 101 and OR 38 to maximize the capacity of the existing facilities and protect their functional integrity. These plans have been added to the Motor Vehicle master plan list.

Specific access management plans should be developed for arterial streets in Reedsport to maximize the capacity of the existing facilities and protect their functional integrity. New development and roadway projects should meet the requirements summarized in Table 7-8.

Table 7-8: Access Spacing Standards for City Street Facilities

Street Facility	Maximum spacing of roadways and driveways	Minimum spacing of roadways and driveways
Arterial:	1,000 feet	600 feet
Collector:	400 feet	100 feet (1 per residential lot)
Arterials and Collectors:	Require an access report stating that the driveway/roadway is safe as designed meeting adequate stacking, sight distance and deceleration requirements as set by ODOT, Douglas County and AASHTO.	

Trucks

Efficient truck movement plays a vital role in maintaining and developing Reedsport's economic base. Well planned truck routes can provide for the economical movement of raw materials, finished products and services. Trucks moving from industrial areas to regional highways or traveling through Reedsport are different than trucks making local deliveries. The transportation system should be planned to accommodate this goods movement need. The following goals and policies pertaining to freight movement and facilities have been developed as part of this Transportation System Plan.

Goal 6: Develop a transportation system to provide for efficient freight movement.

- Policy a—Truck routes and highway access are essential for efficient movement of goods. Design these facilities and adjacent land uses to reflect the needs of freight movement.
- Policy b—Consider the impact on railroad facilities in land use decisions.

The establishment of through truck routes provides for this efficient movement while at the same time maintaining neighborhood livability, public safety and minimizing maintenance costs of the roadway system. The existing truck routes are deemed to be adequate to serve future needs in Reedsport, so no new truck routes are proposed. These routes include:

- OR 38
- US 101

The plan is aimed at addressing the through movement of trucks, not local deliveries. The objective of this route designation is to allow these routes to focus on design criteria that is "truck friendly", i.e., 12 foot travel lanes, longer access spacing, 35 foot (or larger) curb returns and pavement design that accommodates a larger share of trucks. Because these routes are through routes and relate to regional movement, they should relate to the regional freight system.

8. OTHER MODES

This chapter summarizes existing and future rail, air, water and pipeline needs in the City of Reedsport. While auto, transit, bicycle and pedestrian transportation modes have a more significant effect on the quality of life in Reedsport, other modes of transportation must be considered and addressed.

Criteria

The following goals and policies pertaining to rail, pipeline, air and water facilities have been developed as part of this Transportation System Plan.

Goal 3: Improve the safety of the transportation system.

- Policy g-Meet federal and sate safety standards for rail crossings.
- Policy h-Provide safe routing of hazardous materials consistent with federal guidelines.

Goal 6: Develop a transportation system to provide for efficient freight movement.

- Policy a-Truck routes and highway access are essential for efficient movement of goods. Design these facilities and adjacent land uses to reflect the needs of freight movement.
- Policy b-Consider the impact on railroad facilities in land use decisions.

Facilities

Future needs for these modes of transportation are identified by their providers and are summarized below as they are understood.

Rail

The Central Oregon & Pacific (CORP) Railroad owns and operates the Coos Bay District (CO) Line that transverses the City of Reedsport. This rail line is operated as a class II railroad with a maximum of two trains traveling though the city a day. There are two at-grade crossings within the city, one across OR 38, and other across Winchester Avenue. Only the Winchester Avenue crossing has gate controls for vehicular traffic, which are activated as trains approach the crossing.

The OR 38 crossing carries much higher traffic and truck volumes compared to Winchester Avenue, and a new crossing and gate controls should be constructed there. This rail improvement is included in the Pedestrian System Action Plan as part of the recommended improvements along OR 38 between US 101 and Sixth Street.

The current train frequency and plans for growth in cars per train are not anticipated to change.

Water

There is a major freight movement waterway, the Umpqua River, located within the City of Reedsport limits. A small commercial fishing fleet and other water oriented business are located at

the dock facilities in Salmon Harbor. However no plans were identified for waterway infrastructure expansion.

Air

There are currently no airports within the Reedsport TSP Study area, with the closest airport being in the City of North Bend approximately 22 miles south. There are no planned airports in the City of Reedsport.

9. FINANCING & IMPLEMENTATION

This chapter outlines the funding sources that can be used to meet the needs of the transportation system. The costs for the elements of the transportation system plan are outlined and compared to the potential revenue sources. Options are discussed regarding how costs of the plan and revenues can be balanced.

Current Funding Strategies

Transportation funding is commonly viewed as a user fee system where the users of the system pay for infrastructure through motor vehicle fees (such as gas tax and registration fees) However, a great share of motor vehicle user fees goes to road maintenance, operation and preservation of the system rather than construction of new system capacity. Much of what the public views as new construction is commonly funded (partially or fully) through local improvement districts (LIDs) and frontage or off-site improvements required as mitigation for land development.

The City of Reedsport will collect approximately $82,000 for street construction and repair each year[1]. Total revenues collected over 20 years would be $1,640,000 with the current sources.

Table 9-1 summarizes the current funding sources. If the City spends more than the above revenues collected for transportation purposes, the funding will most likely have to be taken from City reserve funds. Therefore, it is reasonable to expect that adding more capital or maintenance responsibilities to the city will require new or expanded revenue sources.

Table 9-1 : Current Transportation Revenues for Reedsport

Funding Category	Annual Amount	Estimated 20 Year Revenues
State Gas Tax Apportioned by Douglas County applied to transportation capital projects	$22,000	$440,000
Timber Revenues from Douglas County	60,000	1,200,000
Total Revenues	**$82,000**	**$1,640,000**

Source: City of Reedsport, Adopted Budget, Fiscal Year 2005-2006.

[1] The City has historically allocated $20,000-30,000 a year for capital outlays from the gas tax revenues. This historical allocation is expected to increase over the next 20 years. The total gas tax revenue to the city for the current fiscal year is $208,000. The remainder of these funds are allocated to fund personnel activities and other city services.

Funding Strategies

The pedestrian, bicycle and motor vehicle facilities in the City of Reedsport were evaluated and projects were identified based on current and future demand. A hierarchy of projects were based on needs of each project and resulted in the action and master plans for each mode. Table 9-2 summarizes the total from each plan.

Table 9-2: Transportation System Plan Costs

Transportation Element	Approximate Cost ($1,000)
System Improvement Projects (Action Plans projects to be funded by City)	
Pedestrian	$147
Bicycle	$50
Transit	$0
Motor Vehicle	$0
Total Capital Projects	**$197**
Operations and Maintenance Programs and Services	
Road Maintenance ($725,000/yr)	$14,500
School Safety Program ($5,000/yr)	$100
Neighborhood Traffic Management ($5,000/yr)	$100
Transportation System Plan Support Documents	$50
	$14,750
20 YEAR TOTAL	**$14,947**

The new transportation improvement projects and recommended programs will require funding beyond the levels currently collected by the City and State. There are several potential funding sources for transportation improvements. This section summarizes several funding options available for transportation improvements. These are sources that have been used in the past by agencies in Oregon. In most cases these funding sources, when used collectively, are sufficient to fund transportation improvements for local communities. Due to the complexity of today's transportation projects, it is necessary to seek several avenues of funding projects. Unique or hybrid funding of projects generally will include these funding sources combined in a new package.

Transportation program funding options range from local taxes, assessments, and charges to state and federal appropriations, grants, and loans. All of these resources can be constrained based on a variety of factors, including the willingness of local leadership and the electorate to burden citizens and businesses; the availability of local funds to be dedicated or diverted to transportation issues from other competing City programs; and the availability and competitiveness of state and federal funds. Nonetheless, it is important for the City to consider all of its options and understand where its power may exist to provide and enhance funding for its Transportation programs.

General Transportation Funding Options

The following funding sources have been used by cities to fund the capital and maintenance aspects of their transportation programs. There may be means to begin to or further utilize these sources, as

described below, to address new needs identified in the Transportation System Plan.

- **General Fund Revenues**: At the discretion of the City Council, the City can allocate General Fund revenues to pay for its Transportation program. (General Fund revenues primarily include property, use taxes, and any other miscellaneous taxes and fees imposed by the City.) This allocation is completed as a part of the City's annual budget process, but the funding potential of this approach is constrained by competing community priorities set by the City Council. General Fund resources can fund any aspect of the program, from capital improvements to operations, maintenance, and administration. Additional revenues available from this source to fund new aspects of the Transportation program are only available to the extent that either General Fund revenues are increased or City Council directs and diverts funding from other City programs.
- **Voter-Approved Local Gas Tax**: Communities such as Sandy, Woodburn, and Tillamook have adopted local gas taxes by public vote. In Sandy, the tax is 1 cent per gallon, paid to the city monthly by distributors of fuel. The process for presenting such a tax to voters will need to be consistent with Oregon State law as well as the laws of the City of Reedsport.
- **Street Utility Fee Revenue**: Ten Oregon Cities supplement their street funds with street utility fees. Establishing user fees to fund applicable transportation activities and/or capital construction ensures that those who create the demand for service pay for it proportionate to their use. From a system health perspective, forming a utility also helps to support the ongoing viability of the program by establishing a source of reliable, dedicated funding for that specific function. Fee revenues can be used to secure revenue bond debt used to finance capital construction. A street utility can be formed by Council action and does not require a public vote.
- **System Development Charge (SDC)** – The SDC would be used as a funding source for all capacity adding projects for the transportation system as well as provide a capital recovery element to compensate for existing capacity paid for by current users. The SDC should be based on afternoon peak-hour trips rather than the average daily trips and should apply to all types of new development (e.g., commercial and residential).
- **Local Improvement District Assessment Revenue**: Subject to voter approval, the City may set up Local Improvement Districts (LIDs) to fund specific capital improvement projects within defined geographic areas, or zones of benefit. LIDs impose assessments on properties within its boundaries. LIDs may not fund ongoing maintenance costs. They require separate accounting, and the assessments collected may only be spent on capital projects within the geographic area. A vote by citizens representing 33% of the assessment can terminate a LID and overturn the planned projects so projects and costs of a LID must meet with broad approval of those within the boundaries of the LID.
- **TEA-21 Grant Revenue**: The Transportation Equity Act for the 21st Century, a federal program, provides for funding of surface transportation programs through grants with local matching. Funds are allocated to the states for distribution to capital projects at the local level. As with all special assistance programs provided by the state and federal governments, funding for specific projects is highly competitive; however these funds may be available for improvements identified in the Transportation Plan.
- **TGM Grant Program**: The State of Oregon TGM Grant Program provides grants for Transportation System Planning Projects. Under Category 1 of the program, projects can include system modeling to determine needs, planning for arterials and collectors, bike and pedestrian plans and public transportation plans. Category 2 includes grants for integrated land use and transportation planning projects. This includes corridor plans, specific development plans, and redevelopment plans for urban redevelopment districts.

- **Direct Appropriations**: The City can seek direct appropriations from the State Legislature and / or U.S. Congress for transportation capital improvements. There may be projects identified in the Plan for which the City may want to pursue these special, one-time appropriations.
- **Special Assessments**: A variety of special assessments are available in Oregon to defray costs of sidewalks, curbs, gutters, street lighting, parking and CBD or commercial zone transportation improvements. These assessments would likely fall within the Measure 50 limitations.

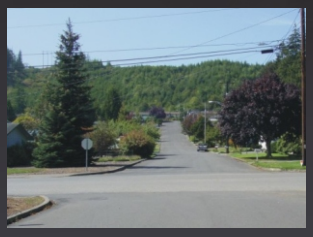
Debt Financing

Also, while not direct funding sources, debt financing can be used to mitigate the immediate impacts of significant capital improvement projects and spread costs over the useful life of a project. Though interest costs are incurred, the use of debt financing can serve not only as a practical means of funding major improvements, but is also viewed as an equitable funding strategy, spreading the burden of repayment over existing and future customers who will benefit from the projects. The obvious caution in relying on debt service is that a funding source must still be identified to fulfill annual repayment obligations.

- **Voter-Approved General Obligation Bond Proceeds:** Subject to voter approval, the City can issue General Obligation (G.O.) bonds to debt finance capital improvement projects. G.O. bonds are backed by the increased taxing authority of the City, and the annual principal and interest repayment is funded through a new, voter-approved assessment on property City-wide (a property tax increase). Depending on the critical nature of any projects identified in the Transportation Plan, and the willingness of the electorate to accept increased taxation for transportation improvements, voter-approved G.O. bonds may be a feasible funding option for specific projects. Proceeds may not be used for ongoing maintenance.
- **Revenue Bonds:** Revenue bonds are debt instruments secured by rate revenue. In order for the City to issue revenue bonds for transportation projects, it would need to identify a stable source of ongoing rate funding. Interest costs for revenue bonds are slightly higher than for general obligation bonds, due to the perceived stability offered by the "full faith and credit" of a jurisdiction.

Recommended Financing Options

Under the current gas tax structure, the City will not collect enough money to finance Action Plan projects identified in this TSP. Road maintenance is the majority of the budget, therefore, it is recommended that the City consider establishing a transportation, or street, utility as the backbone of its maintenance funding approach. Street utility fees can provide a stable source of dedicated revenue useable for transportation system operations and maintenance. Rate revenues can also secure revenue bond debt if used to finance capital improvements. Street utilities can be formed by Council action, and billed through the City utility billing system. In addition, the City should actively pursue grant and other special program funding in order to mitigate the costs to its citizens of transportation capital construction.



City of Reedsport
Transportation System Plan

February 2006

Technical Appendix

Prepared by

DKS Associates

TRANSPORTATION SOLUTIONS

Adopted by City Council
February 6, 2006

1. INTRODUCTION

This is the technical appendix for the Reedsport Transportation System Plan. The appendices provide supplemental materials that support the findings and recommendations in the plan.

The appendices include:

Appendix A: Street Inventory

Appendix B: Traffic Counts

Appendix C: Level of Service Analysis

Appendix D: Glossary

TECHNICAL APPENDIX

A: Street Inventory

Location	From	To	Pavement Width	Lanes	Pavement Type	Pavement Condition*	Curb (%)	Sidewalk (%)	Bike Lanes (%)
ARTERIAL STREETS									
OR 38	US 101	Fir Avenue	34	2	Asphalt	Poor	no	no	no
OR 38	Fir Avenue	3rd Street	60	2	Asphalt	Good	75	75	100
OR 38	3rd Street	Winchester Avenue	60	2	Asphalt	Good	25	no	100
OR 38	Winchester Avenue	East City Limits	32	2	Asphalt	Good	no	no	no
US 101	Umpqua River	Juniper Avenue	76	4	Asphalt	Poor	70	60	100
US 101	Juniper Avenue	Scholfield Creek Bridge	68	4	Asphalt	Poor	75	60	80
Scholfield Creek Bridge			56	4	Asphalt	Fair	100	100	100
US 101	Scholfield Creek Bridge	22nd Street	66	4	Asphalt	Poor	100	80	no
US 101	22nd Street	Longwood Drive	73	4	Asphalt	Poor	50	50	100
US 101	Longwood Drive	South City Limits	36	2	Asphalt	Fair	no	no	no
COLLECTOR STREETS									
22nd Street	Greenwood Avenue	Arthur Drive	56	2	Asphalt	Fair	75	95	no
Arthur Drive	22nd Street	Bowman Road	35	2	Asphalt	Fair	100	100	no
Bowman Road	Longwood Drive	Scott Street	30	2	Asphalt	Good	100	100	no
Frontage Road	Ranch Road	22nd Street	26	2	Asphalt	Fair	no	50	no
Longwood Drive	Ranch Road	City Limits	30	2	Asphalt	Fair	100	20	no
Ranch Road	Longwood Drive	Frontage Road	28	2	Asphalt	Good	no	100	no
Ranch Road	Frontage Road	Regents Place	36	2	Asphalt	Good	100	100	no
Ranch Road	Regents Place	Ashwood Court	24	2	Asphalt	Good	no	50	no
Ranch Road	Ashwood Court	Termnius	36	2	Asphalt	Fair	100	no	no
Scott Street	Arthur Drive	Bowman Road	36	2	Asphalt	Good	100	100	no
Winchester Avenue	OR 38	US 101	40	2	Asphalt	Fair/Poor	95	75	no
LOCAL STREETS									
10th Street	Winchester Avenue	US 101	40	2	Asphalt	Good	5	5	no
11th Street	Winchester Avenue	US 101	40	2	Asphalt	Good	10	10	no
12th Street	US 101	Juniper Avenue	32	2	Asphalt	Good	100	100	no
13th Street	US 101	Juniper Avenue	35	2	Asphalt	Fair	100	100	no
14th Street	US 101	Hawthorne Avenue	34	2	Asphalt	Fair	75	75	no
18th Street	Dogwood Avenue	Ivy Avenue	35	2	Asphalt	Good	85	85	no
18th Street	Dogwood Avenue	Cedar Avenue	18	2	Asphalt	Fair	no	no	no
19th Street	Birch Avenue	Hawthorne Avenue	33	2	Asphalt	Good	65	65	no
19th Street	Hawthorne Avenue	Termnius	26	2	Asphalt	Poor	10	10	no
20th Street	Alder Avenue	Termnius	35	2	Asphalt	Good	65	75	no
21st Street	Alder Avenue	Grenwood Avenue	35	2	Asphalt	Good	75	75	no

Location	From	To	Pavement Width	Lanes	Pavement Type	Pavement Condition*	Curb (%)	Sidewalk (%)	Bike Lanes (%)
2nd Street	E. Railroad Avenue	Water Avenue	28	2	Asphalt	Fair	100	no	no
2nd Street	Water Avenue	OR 38	16	2	Asphalt	Fair	no	no	no
2nd Street	OR 38	Elm Avenue	24	2	Asphalt	Fair	no	no	no
3rd Street	OR 38	Rainbow Plaza	36	2	Asphalt	Fair	no	no	no
3rd Street	OR 38	Elm Avenue	39	2	Asphalt	Fair	100	50	no
4th Street	Elm Avenue	Hawthorne Avenue	49	2	Asphalt	Fair	100	50	no
4th Street	Hawthorne Avenue	E. Railroad Avenue	49	2	Asphalt	Fair	100	no	no
5th Street	Winchester Avenue	Hawthorne Avenue	39	2	Asphalt	Good	100	100	no
5th Street	Winchester Avenue	Elm Avenue	39	2	Asphalt	Good	100	100	no
6th Street	OR 38	Elm Avenue	35	2	Asphalt	Good	100	100	no
6th Street	Elm Avenue	Crestview Drive	21	2	Asphalt	Good	50	no	no
7th Street	Fir Avenue	Winchester Avenue	35	2	Asphalt	Fair	100	100	no
7th Street	Winchester Avenue	Elm Avenue	22	2	Asphalt	Good	no	no	no
8th Street	OR 38	mobile home park	34	2	Asphalt	Fair	60	30	no
9th Street	Fir Avenue	Myrtle Avenue	36	2	Asphalt	Fair	90	90	no
Alder Avenue	22nd Street	East of 20th Street	35	2	Asphalt	Good	65	65	no
Arthur Drive	Longwood Drive	Bowman Road	35	2	Asphalt	Fair	85	85	no
Ashwood Court	Ranch Road	Termnius	35	2	Asphalt	Good	100	no	no
Bayberry Court	Ranch Road	Termnius	35	2	Asphalt	Fair	100	no	no
Bellevue Drive	Bowman Road	Termnius	22	2	Asphalt	Poor	25	no	no
Birch Avenue	22nd Street	19th Street	35	2	Asphalt	Fair	65	65	no
Bittersweet Court	Ranch Road	Termnius	35	2	Asphalt	Fair	100	no	no
Camellia Court	Ranch Road	Termnius	33	2	Asphalt	Fair	100	no	no
Cedar Avenue	22nd Street	19th Street	35	2	Asphalt	Fair	75	75	no
Country Club Court	Country Club Drive	Termnius	34	2	Asphalt	Good	100	no	no
Country Club Drive	Greenbriar Street	Country Club Court	34	2	Asphalt	Fair	100	no	no
Dogwood Avenue	22nd Street	18th Street	33	2	Asphalt	Good	75	75	no
Doyle Street	Bowman Road	Termnius	21	2	Asphalt	Fair	no	no	no
E. Alder Place	Alder Avenue	Termnius	25	2	Asphalt	Fair	100	no	no
E. Railroad Avenue	OR 38	2nd Street	32	2	Asphalt	Fair	100	no	no
E. Railroad Avenue	2nd Street	4th Street	21	2	Asphalt	Poor	100	no	no
E. Railroad Avenue	Fir Avenue	Winchester Avenue	24	2	Asphalt	Fair	no	no	no
Elm Avenue	2nd Street	3rd Street	21	2	Asphalt	Fair	no	no	no
Elm Avenue	3rd Street	5th Street	21	2	Asphalt	Fair	50	50	no
Elm Avenue	5th Street	6th Street	32	2	Asphalt	Fair	no	no	no

Location	From	To	Pavement Width	Lanes	Pavement Type	Pavement Condition*	Curb (%)	Sidewalk (%)	Bike Lanes (%)
Elm Avenue	6th Street	Winchester Avenue	34	2	Asphalt	Fair	no	no	no
Elm Avenue	22nd Street	18th Street	35	2	Asphalt	Good	80	80	no
Evergreen Loop Drive	Ranch Road	Termnius	35	2	Asphalt	Fair	100	no	no
Fern Place	Ranch Road	Termnius	35	2	Asphalt	Fair	100	no	no
Fernwood Place	Westmont Drive	Ridgeway Drive	35	2	Asphalt	Good	100	no	no
Fir Avenue	OR 38	E. Railroad Avenue	59	2	Asphalt	Fair	100	100	no
Fir Avenue	W. Railroad Avenue	11th Street	34	2	Asphalt	Good	100	100	no
Fir Avenue	11th Street		36	2	Asphalt	Good	50	100	no
Forest Hills Road	Ridgeway Drive	22nd Street	39	2	Asphalt	Good	no	no	no
Gardens Avenue	Highland Drive	Termnius	35	2	Asphalt	Fair	100	100	no
Greenbriar Drive	Greenbriar Street	Termnius	34	2	Asphalt	Good	100	no	no
Greenbriar Street	Regents Place	Ridgeway Drive	34	2	Asphalt	Good	100	no	no
Greenwood Avenue	3rd Street	E. Railroad Avenue	39	2	Asphalt	Fair	100	100	no
Greenwood Avenue	W. Railroad Avenue	11th Street	35	2	Asphalt	Fair	100	100	no
Hawthorne Avenue	E. Railroad	4th Street	32	2	Asphalt	Fair	no	no	no
Hawthorne Avenue	12th Street	16th Street	35	2	Asphalt	Fair	70	70	no
Hawthorne Avenue	South of 20th Street	North of 19th Street	35	2	Asphalt	Fair	85	85	no
Heather Court	Ranch Road	Termnius	35	2	Asphalt	Fair	100	no	no
Hemlock Court	Ranch Road	Termnius	35	2	Asphalt	Fair	100	no	no
High Street	Longwood Drive	Termnius	35	2	Asphalt	Fair	85	85	no
Highland Drive	Longwood Drive	Longwood Drive	35	2	Asphalt	Fair	100	100	no
Ivy Avenue	Juniper Avenue	13th Street	32	2	Asphalt	Good	100	100	no
Juniper Avenue	W. Railroad Avenue	US 101	32	2	Asphalt	Fair	90	90	no
Juniper Avenue	US 101	13th Street	32	2	Asphalt	Fair	90	50	no
Laurel Avenue	US 101	OR 38	28	2	Asphalt	Fair	60	80	no
Laurel Avenue	OR 38	8th Street	34	2	Asphalt	Fair	100	no	no
Laurel Avenue	8th Street	W. Railroad Avenue	28	2	Asphalt	Fair	no	no	no
Maple Drive	Longwood Drive	Termnius	28	2	Asphalt	Good	100	no	no
Mill Avenue	8th Street	W. Railroad Avenue	32	2	Asphalt	Fair	100	100	no
Moris Place	Bowman Road	Termnius	24	2	Asphalt	Fair	100	no	no
Myrtle Avenue	OR 38	W. Railroad Avenue	33	2	Asphalt	Fair	40	40	no
Park Court	Highland Drive	Termnius	35	2	Asphalt	Fair	100	100	no
Portdock Road	US 101	2nd Street	34	2	Asphalt	Fair	no	no	no
Providence Drive	Ranch Road	Termnius	35	2	Asphalt	Good	100	75	no
Rainbow Plaza	2nd Street	3rd Street	32	2	Asphalt	Fair	100	100	no

Location	*From*	*To*	*Pavement Width*	*Lanes*	*Pavement Type*	*Pavement Condition**	*Curb (%)*	*Sidewalk (%)*	*Bike Lanes (%)*
Regents Place	Ranch Road	Ridgeway Drive	34	2	Asphalt	Good	100	no	no
Ridgeway Drive	Westmont Drive	22nd Street	35	2	Asphalt	Fair	100	no	no
Rowe Street	Bowman Road	Termnius	24	2	Asphalt	Fair	25	25	no
Scott Terrace	Bowman Road	Termnius	32	2	Asphalt	Good	100	100	no
South Hill Drive	Bowman Road	Termnius	31	2	Asphalt	Good	75	75	no
Swain Court	Ranch Road	Termnius	35	2	Asphalt	Good	100	75	no
View Court	Maple Drive	Termnius	28	2	Asphalt	Fair	100	no	no
Vista Court	Scott Terrace	Termnius	30	2	Asphalt	Good	100	100	no
W. Alder Place	Alder Avenue	Termnius	25	2	Asphalt	Fair	100	no	no
W. Railroad Avenue	Winchester Avenue	OR 38	34	2	Asphalt	Fair	50	50	no
Ward Way	Greenbriar Street	Ridgeway Drive	35	2	Asphalt	Good	100	no	no
Westmont Drive	West of Ridgeway Drive	East of Fernwood Place	34	2	Asphalt	Fair	100	no	no
Westwood Court	Ranch Road	Termnius	35	2	Asphalt	Good	100	50	no
York Street	Bowman Road	Termnius	24	2	Asphalt	Fair	25	no	no

* Arterials rated by ODOT

Poor - extreme cracking and potholes

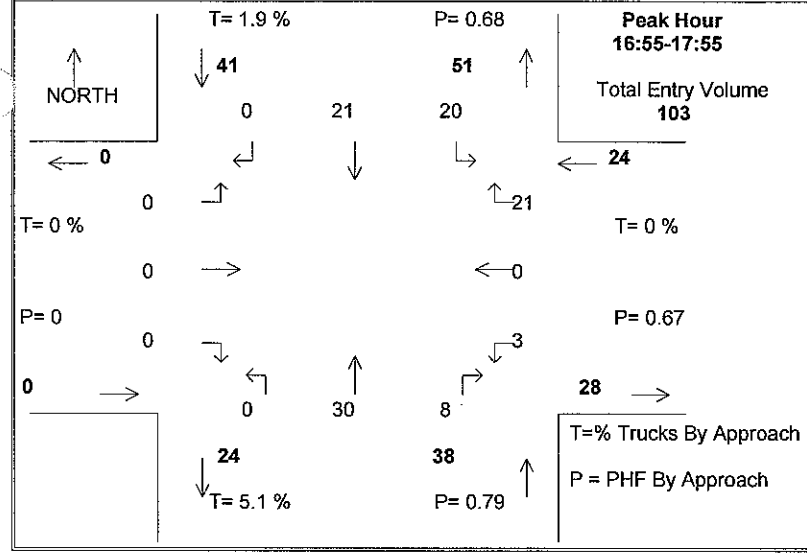
Fair - moderate cracking

Good - miminal cracking and/or new surface

B: Traffic Counts

INTERSECTION TURN MOVEMENT SUMMARY REPORT

File: W0FH01.TM1



Peak Hour
16:55-17:55

Total Entry Volume
103

LOCATION:

LONGWOOD DRIVE AND BOWMAN ROAD
REEDSPORT, OR

Date: **09.29.04** Day: **WED**
Time: **15:00 - 18:00**

Report Prepared for:
DKS

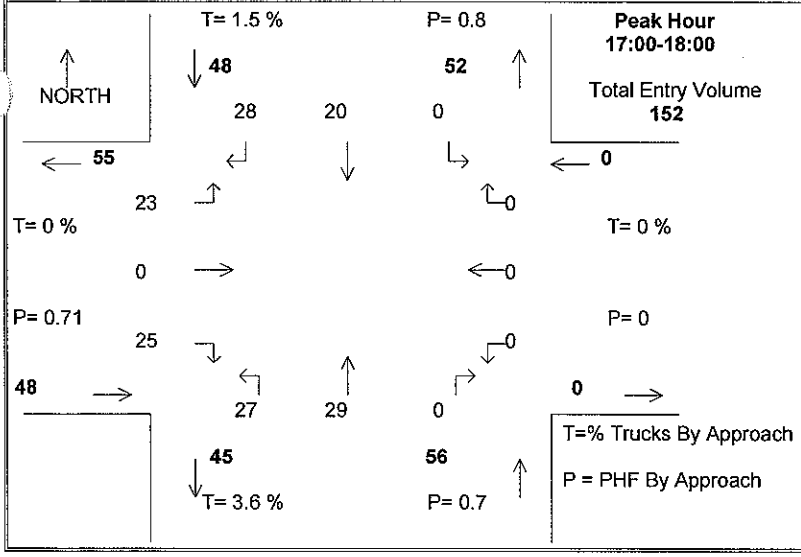
Surveyed By:
TRAFFIC SMITHY, INC
1225 NW MURRAY BLVD
PORTLAND, OR 97209
Phone: 503-641-6333 Fax: 503-643-8866

Report Reviewed by: KH

TIME PERIOD	EASTBOUND			SOUTHBOUND			NORTHBOUND			WESTBOUND			ALL
	↴	→	↱	↲	↓	↳	↰	↑	↱	↲	←	↰	
15:00-15:05	0	0	0	0	3	1	0	3	1	0	0	1	9
15:05-15:10	0	0	0	0	3	1	0	2	0	1	0	2	9
15:10-15:15	0	0	0	0	3	2	0	1	2	2	0	2	12
15:15-15:20	0	0	0	0	1	0	0	2	1	0	0	2	6
15:20-15:25	0	0	0	0	2	1	0	1	0	1	0	1	6
15:25-15:30	0	0	0	0	3	1	0	1	1	0	0	1	7
15:30-15:35	0	0	0	0	3	0	0	0	2	0	0	3	8
15:35-15:40	0	0	0	0	2	0	0	2	0	0	0	3	7
15:40-15:45	0	0	0	0	3	1	0	4	1	0	0	1	10
15:45-15:50	0	0	0	0	0	0	0	1	1	2	0	1	5
15:50-15:55	0	0	0	0	1	2	0	3	1	0	0	2	9
15:55-16:00	0	0	0	0	0	0	0	2	2	1	0	2	7
16:00-16:05	0	0	0	0	2	0	0	2	0	0	0	3	7
16:05-16:10	0	0	0	0	1	2	0	0	1	0	0	0	4
16:10-16:15	0	0	0	0	1	0	0	0	0	0	0	0	1
16:15-16:20	0	0	0	0	3	0	0	1	0	0	0	4	8
16:20-16:25	0	0	0	0	2	0	0	3	0	0	0	0	5
16:25-16:30	0	0	0	0	1	4	0	2	1	0	0	0	8
16:30-16:35	0	0	0	0	2	3	0	2	1	0	0	1	9
16:35-16:40	0	0	0	0	2	0	0	0	1	0	0	2	5
16:40-16:45	0	0	0	0	1	3	0	4	0	0	0	0	8
16:45-16:50	0	0	0	0	1	2	0	2	0	0	0	2	7
16:50-16:55	0	0	0	0	1	1	0	3	1	0	0	1	7
16:55-17:00	0	0	0	0	1	1	0	2	2	0	0	3	9
17:00-17:05	0	0	0	0	3	0	0	0	0	0	0	1	4
17:05-17:10	0	0	0	0	0	0	0	1	0	0	0	0	1
17:10-17:15	0	0	0	0	2	3	0	3	0	0	0	1	9
17:15-17:20	0	0	0	0	1	0	0	3	2	0	0	3	9
17:20-17:25	0	0	0	0	3	1	0	3	0	0	0	5	12
17:25-17:30	0	0	0	0	1	3	0	3	0	0	0	1	8
17:30-17:35	0	0	0	0	4	2	0	1	1	1	0	2	11
17:35-17:40	0	0	0	0	1	2	0	6	1	0	0	0	10
17:40-17:45	0	0	0	0	1	5	0	3	0	1	0	2	12
17:45-17:50	0	0	0	0	4	1	0	1	0	1	0	1	8
17:50-17:55	0	0	0	0	0	2	0	4	2	0	0	2	10
17:55-18:00	0	0	0	0	0	0	0	1	2	1	0	2	6
TOTALS	0	0	0	0	62	44	0	72	27	11	0	57	273
PHF	0	0	0	0	0.66	0.56	0	0.75	1	0.38	0	0.58	0.78
% Trucks	0	0	0	0	0	0	0	2.8	0	0	0	0	2.6
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	
Pedestrians		2			2			5			0		

INTERSECTION TURN MOVEMENT SUMMARY REPORT

File: W0FH02.TM1



LOCATION:

LONGWOOD DRIVE AND RANCH ROAD
REEDSPORT, OR

Date: **09.29.04** Day: **WED**
Time: **15:00 - 18:00**

Report Prepared for:
DKS

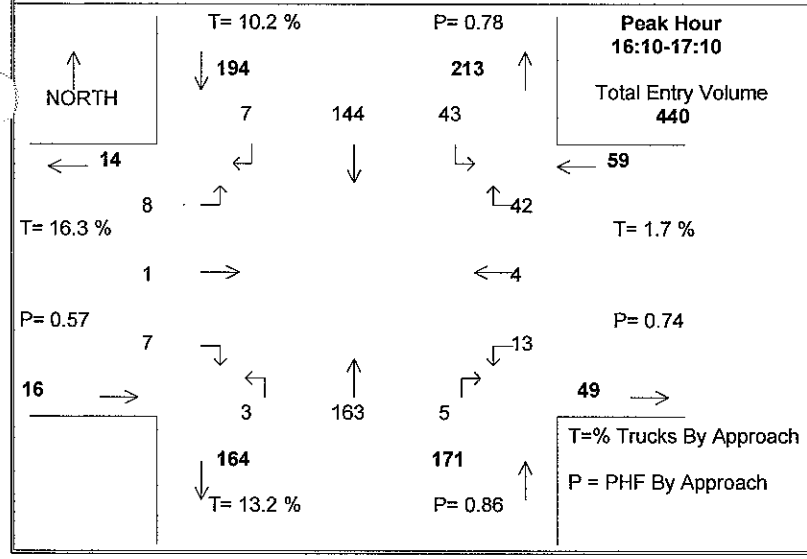
Surveyed By:
TRAFFIC SMITHY, INC
1225 NW MURRAY BLVD
PORTLAND, OR 97209
Phone: 503-641-6333 Fax: 503-643-8866

Report Reviewed by: KH

TIME PERIOD	EASTBOUND			SOUTHBOUND			NORTHBOUND			WESTBOUND			ALL
	↴	→	↱	↲	↓	↳	↰	↑	↱	↙	←	↰	
15:00-15:05	4	0	2	6	3	0	1	3	0	0	0	0	19
15:05-15:10	1	0	1	4	3	0	0	2	0	0	0	0	11
15:10-15:15	3	0	4	2	3	0	2	1	0	0	0	0	15
15:15-15:20	2	0	3	0	1	0	0	2	0	0	0	0	8
15:20-15:25	2	0	2	0	2	0	0	1	0	0	0	0	7
15:25-15:30	0	0	1	3	3	0	0	1	0	0	0	0	8
15:30-15:35	1	0	0	0	3	0	4	0	0	0	0	0	8
15:35-15:40	2	0	2	0	2	0	1	2	0	0	0	0	9
15:40-15:45	2	0	1	1	3	0	0	4	0	0	0	0	11
15:45-15:50	4	0	1	1	0	0	1	1	0	0	0	0	8
15:50-15:55	3	0	2	0	1	0	0	3	0	0	0	0	9
15:55-16:00	3	0	0	2	0	0	4	2	0	0	0	0	11
16:00-16:05	1	0	2	2	2	0	4	2	0	0	0	0	13
16:05-16:10	2	0	2	2	1	0	1	0	0	0	0	0	8
16:10-16:15	1	0	1	1	1	0	2	0	0	0	0	0	6
16:15-16:20	2	0	4	1	3	0	3	1	0	0	0	0	14
16:20-16:25	0	0	2	1	2	0	1	3	0	0	0	0	9
16:25-16:30	1	0	0	1	1	0	2	2	0	0	0	0	7
16:30-16:35	2	0	2	5	2	0	1	2	0	0	0	0	14
16:35-16:40	3	0	2	3	2	0	3	0	0	0	0	0	13
16:40-16:45	1	0	0	0	1	0	2	4	0	0	0	0	8
16:45-16:50	3	0	2	5	1	0	3	2	0	0	0	0	16
16:50-16:55	6	0	2	2	1	0	3	3	0	0	0	0	17
16:55-17:00	2	0	3	2	1	0	1	2	0	0	0	0	11
17:00-17:05	0	0	2	3	3	0	0	0	0	0	0	0	8
17:05-17:10	2	0	1	0	0	0	1	1	0	0	0	0	5
17:10-17:15	6	0	3	1	2	0	0	3	0	0	0	0	15
17:15-17:20	2	0	3	3	1	0	4	3	0	0	0	0	16
17:20-17:25	0	0	1	2	3	0	0	3	0	0	0	0	9
17:25-17:30	3	0	2	1	1	0	4	3	0	0	0	0	14
17:30-17:35	0	0	0	2	4	0	0	1	0	0	0	0	7
17:35-17:40	3	0	0	5	1	0	3	6	0	0	0	0	18
17:40-17:45	3	0	2	0	1	0	3	3	0	0	0	0	12
17:45-17:50	1	0	5	3	4	0	4	1	0	0	0	0	18
17:50-17:55	3	0	3	5	0	0	4	4	0	0	0	0	19
17:55-18:00	2	0	1	3	0	0	4	1	0	0	0	0	11
TOTALS	76	0	64	72	62	0	66	72	0	0	0	0	412
PHF	0.63	0	0.57	0.64	0.63	0	0.56	0.73	0	0	0	0	0.78
% Trucks	0	0	0	2.8	0	0	4.5	2.8	0	0	0	0	1.7
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	
Pedestrians		1			2			3			1		

INTERSECTION TURN MOVEMENT SUMMARY REPORT

File: W0FF41.TM1



LOCATION:

OR 38 AND WINCHESTER AVENUE
REEDSPORT, OR

Date: **09/30/04** Day: **WED**
Time: **15:00 - 18:00**

Report Prepared for:
DKS

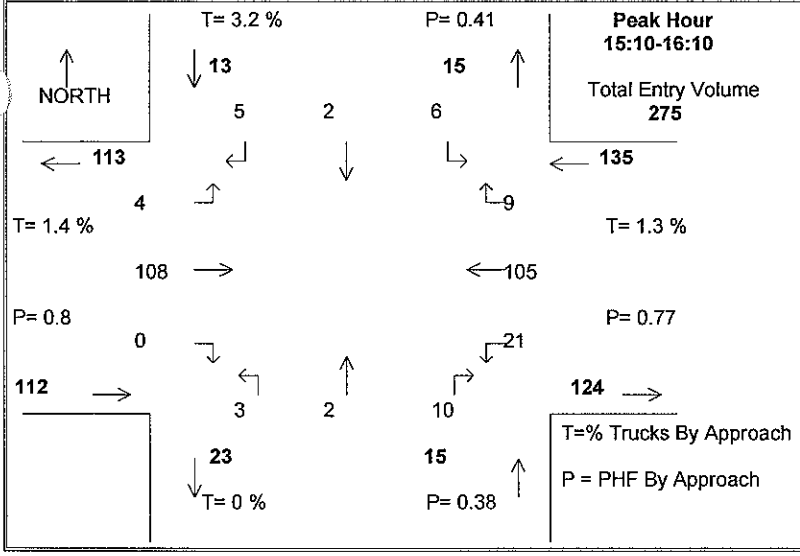
Surveyed By:
TRAFFIC SMITHY, INC
1225 NW MURRAY BLVD
PORTLAND, OR 97209
Phone: 503-641-6333 Fax: 503-643-8866

Report Reviewed by: KH

TIME PERIOD	EASTBOUND			SOUTHBOUND			NORTHBOUND			WESTBOUND			ALL
	↴	→	↱	↲	↓	↳	↰	↑	↱	↴	←	↰	
15:00-15:05	4	0	0	0	4	1	0	14	0	1	0	4	28
15:05-15:10	0	0	0	0	20	1	1	6	0	0	0	2	30
15:10-15:15	2	0	1	0	11	4	0	13	0	0	0	4	35
15:15-15:20	0	0	0	1	10	5	0	11	0	1	0	2	30
15:20-15:25	0	0	0	1	13	1	0	11	0	2	0	2	30
15:25-15:30	0	1	1	0	10	2	2	10	1	1	0	8	36
15:30-15:35	0	0	2	0	13	3	0	7	2	1	0	8	36
15:35-15:40	2	1	0	0	14	5	0	13	0	0	0	3	38
15:40-15:45	0	1	1	0	9	2	0	15	0	0	0	4	32
15:45-15:50	1	0	0	0	8	2	2	8	0	1	0	3	25
15:50-15:55	1	1	3	0	11	2	0	7	0	1	0	4	30
15:55-16:00	0	0	0	0	10	2	1	9	0	0	0	4	26
16:00-16:05	1	0	1	0	12	2	1	12	1	1	0	6	37
16:05-16:10	0	0	0	0	11	2	0	9	0	0	0	4	26
16:10-16:15	0	0	0	0	12	1	0	15	0	0	0	4	32
16:15-16:20	1	0	1	0	14	2	0	15	0	0	0	2	35
16:20-16:25	0	0	0	0	19	8	1	14	0	1	0	3	46
16:25-16:30	1	0	1	0	12	4	0	12	0	2	0	2	34
16:30-16:35	0	0	1	3	2	1	1	12	0	4	1	4	29
16:35-16:40	0	0	1	0	5	2	1	22	0	0	0	5	36
16:40-16:45	0	0	0	1	23	9	0	10	4	1	1	3	52
16:45-16:50	2	0	0	0	15	0	0	10	0	0	0	1	28
16:50-16:55	1	0	0	1	9	4	0	11	0	1	1	3	31
16:55-17:00	2	0	2	1	12	3	0	18	1	2	0	6	47
17:00-17:05	0	0	1	0	13	3	0	19	0	2	0	4	42
17:05-17:10	0	1	1	1	8	6	0	5	0	0	1	5	28
17:10-17:15	0	0	0	0	6	4	0	10	0	0	0	9	29
17:15-17:20	1	0	0	0	14	4	1	6	2	0	0	4	32
17:20-17:25	1	2	0	0	9	0	0	13	0	0	0	4	29
17:25-17:30	0	0	0	1	16	4	0	6	1	0	0	5	33
17:30-17:35	1	0	0	0	11	5	0	9	0	2	0	4	32
17:35-17:40	0	0	1	0	7	4	0	11	0	1	0	2	26
17:40-17:45	0	0	1	0	7	6	0	4	0	0	0	6	24
17:45-17:50	0	0	0	0	4	5	0	9	0	0	0	6	24
17:50-17:55	1	0	0	0	9	1	0	8	0	0	0	2	21
17:55-18:00	0	0	1	1	18	6	0	2	0	0	0	4	32
TOTALS	22	7	20	11	401	116	11	386	12	25	4	146	1161
PHF	0.35	0.25	0.5	0.44	0.77	0.77	0.38	0.85	0.31	0.46	0.5	0.7	0.92
% Trucks	31.8	14.3	0	27.3	12.2	1.7	45.5	12.7	0	4	0	1.4	10.2
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	
Pedestrians		0			0			2			0		

INTERSECTION TURN MOVEMENT SUMMARY REPORT

File: W0FE53.TM1



LOCATION:

RANCH ROAD AND RIDGEWAY DRIVE
REEDSPORT, OR

Date: **09/29/04** Day: **WED**
Time: **15:00 - 18:00**

Report Prepared for:
DKS

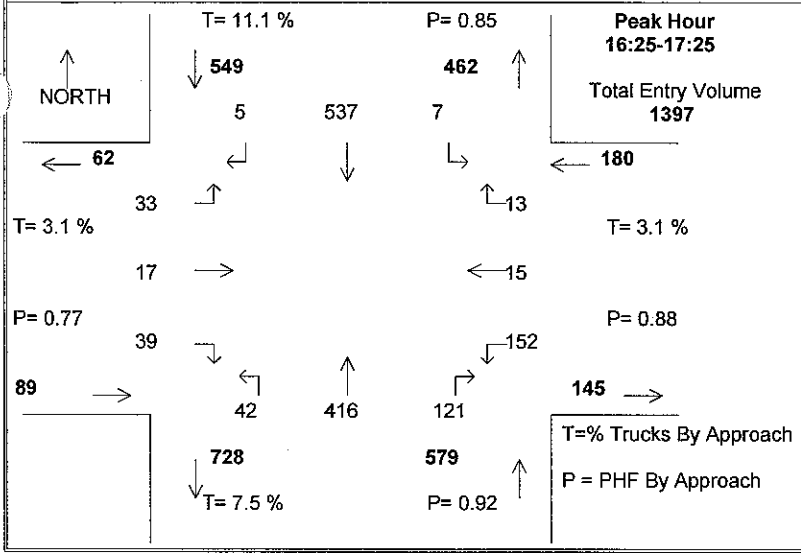
Surveyed By:
TRAFFIC SMITHY, INC
1225 NW MURRAY BLVD
PORTLAND, OR 97209
Phone: 503-641-6333 Fax: 503-643-8866

Report Reviewed by: KH

TIME PERIOD	EASTBOUND			SOUTHBOUND			NORTHBOUND			WESTBOUND			ALL
	↴	→	⤴	↲	↓	↳	↰	↑	↱	⤵	←	↥	
15:00-15:05	0	9	0	0	0	1	0	1	3	4	4	1	23
15:05-15:10	0	6	1	1	0	0	0	0	1	3	6	2	20
15:10-15:15	0	16	1	0	0	1	1	0	0	4	7	1	31
15:15-15:20	0	7	1	1	0	2	0	0	0	2	11	3	27
15:20-15:25	0	9	1	2	1	0	0	0	1	2	8	2	26
15:25-15:30	0	9	0	0	0	2	0	0	0	0	5	0	16
15:30-15:35	0	8	0	0	0	0	0	1	1	2	11	0	23
15:35-15:40	0	6	0	0	0	0	2	0	2	2	8	0	20
15:40-15:45	0	8	0	0	0	0	0	0	4	0	8	0	20
15:45-15:50	0	12	0	0	1	0	0	1	0	0	8	0	22
15:50-15:55	0	12	0	0	0	0	0	0	1	1	6	0	20
15:55-16:00	0	5	0	1	0	0	0	0	1	1	12	1	21
16:00-16:05	0	10	0	1	0	0	0	0	0	3	12	2	28
16:05-16:10	0	6	1	0	0	1	0	0	0	4	9	0	21
16:10-16:15	0	4	0	0	0	1	0	0	0	0	3	0	8
16:15-16:20	0	9	0	0	0	0	0	0	2	1	12	1	25
16:20-16:25	0	10	0	0	0	0	0	0	0	0	6	3	19
16:25-16:30	0	5	0	1	0	0	0	0	0	6	6	0	18
16:30-16:35	0	7	0	0	0	0	1	0	3	4	9	0	24
16:35-16:40	0	7	1	0	0	0	0	0	4	1	10	2	25
16:40-16:45	0	8	1	2	0	0	0	0	1	0	6	1	19
16:45-16:50	1	7	0	1	0	0	0	0	0	5	8	3	25
16:50-16:55	1	7	0	0	0	0	0	1	3	1	8	1	22
16:55-17:00	0	7	0	0	1	0	0	0	3	2	14	1	28
17:00-17:05	0	14	0	0	0	0	0	1	4	2	9	0	30
17:05-17:10	0	10	1	0	0	2	0	0	1	0	3	3	20
17:10-17:15	1	5	0	0	0	2	0	0	1	0	2	0	11
17:15-17:20	0	7	1	0	0	1	0	0	1	0	8	0	18
17:20-17:25	0	10	0	0	0	0	0	0	1	2	1	0	14
17:25-17:30	0	6	0	0	0	1	0	0	1	1	5	3	17
17:30-17:35	0	3	0	0	0	1	0	0	1	2	12	1	20
17:35-17:40	1	4	0	1	0	0	0	0	0	0	10	3	19
17:40-17:45	1	7	1	0	1	1	1	0	1	4	9	1	27
17:45-17:50	0	7	0	0	0	0	0	0	1	1	12	2	23
17:50-17:55	0	10	0	0	0	0	0	0	0	6	8	0	24
17:55-18:00	0	3	1	0	0	0	0	0	3	2	8	1	18
TOTALS	5	280	11	11	4	16	5	5	45	68	284	38	772
PHF	0	0.84	0.33	0.42	0.5	0.38	0.38	0.5	0.36	0.66	0.8	0.38	0.82
% Trucks	0	1.1	9.1	9.1	0	0	0	0	0	1.5	1.4	0	1.3
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	
Pedestrians		9			2			1			14		

INTERSECTION TURN MOVEMENT SUMMARY REPORT

File: W0FD44.TM1



LOCATION:

US 101 AND WINCHESTER STREET
REEDSPORT, OR

Date: **09/29/04** Day: **WED**
Time: **15:00 - 18:00**

Report Prepared for:
DKS

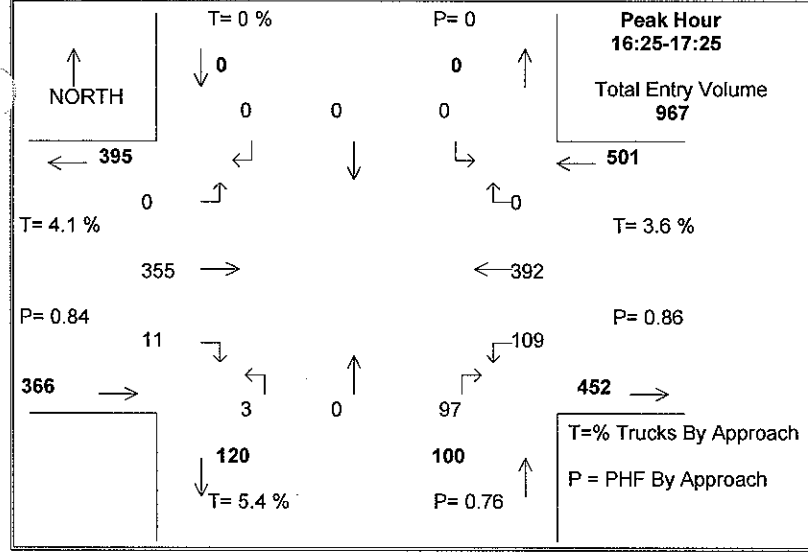
Surveyed By:
TRAFFIC SMITHY, INC
1225 NW MURRAY BLVD
PORTLAND, OR 97209
Phone: 503-641-6333 Fax: 503-643-8866

Report Reviewed by: KH

TIME PERIOD	EASTBOUND			SOUTHBOUND			NORTHBOUND			WESTBOUND			ALL
	↓	→	↑	↲	↓	↳	↰	↑	↱	↓	←	↑	
15:00-15:05	4	6	1	0	43	2	4	37	9	5	2	1	114
15:05-15:10	6	1	2	1	49	2	0	34	16	12	3	1	127
15:10-15:15	2	0	1	0	33	1	5	37	8	13	2	1	103
15:15-15:20	1	1	3	0	35	0	4	44	16	10	3	2	119
15:20-15:25	9	2	0	1	51	0	4	40	12	11	0	0	130
15:25-15:30	2	3	5	1	39	2	4	34	20	12	1	2	125
15:30-15:35	4	1	2	0	30	0	3	34	10	17	4	2	107
15:35-15:40	6	1	1	0	47	3	7	34	16	17	2	3	137
15:40-15:45	4	1	2	0	49	1	1	23	13	8	0	0	102
15:45-15:50	4	0	3	0	36	0	5	30	17	8	0	1	104
15:50-15:55	1	1	0	0	51	0	2	31	10	10	0	2	108
15:55-16:00	2	0	2	0	26	2	3	32	6	7	2	0	82
16:00-16:05	5	6	3	0	38	0	3	36	12	12	2	0	117
16:05-16:10	2	3	2	1	42	1	5	39	8	8	1	0	112
16:10-16:15	3	1	1	0	32	1	1	33	10	3	0	0	85
16:15-16:20	2	3	2	0	29	0	5	38	12	12	0	1	104
16:20-16:25	2	1	2	1	45	0	4	43	12	9	4	1	124
16:25-16:30	2	1	4	0	62	0	1	24	10	15	1	2	122
16:30-16:35	2	2	1	0	46	0	6	40	13	12	1	0	123
16:35-16:40	2	0	3	0	51	2	5	30	11	9	1	2	116
16:40-16:45	5	3	4	1	39	1	1	31	12	13	1	1	112
16:45-16:50	2	1	5	0	42	0	2	39	8	15	1	0	115
16:50-16:55	4	3	0	1	46	0	3	31	9	14	3	0	114
16:55-17:00	3	3	2	0	40	0	4	36	10	13	0	1	112
17:00-17:05	6	1	3	0	46	0	1	46	8	17	1	2	131
17:05-17:10	3	2	6	0	37	1	6	34	11	13	3	1	117
17:10-17:15	2	0	0	1	35	0	1	40	10	10	0	2	101
17:15-17:20	3	0	3	1	45	1	10	30	6	6	2	1	108
17:20-17:25	5	1	2	1	48	2	2	35	13	15	1	1	126
17:25-17:30	8	0	2	0	38	1	2	42	10	7	1	1	112
17:30-17:35	9	3	1	0	35	1	1	32	6	16	1	0	105
17:35-17:40	3	2	1	1	28	0	5	39	7	11	1	0	98
17:40-17:45	3	0	2	0	43	0	2	36	6	20	1	0	113
17:45-17:50	1	1	2	0	42	0	3	32	10	9	0	0	100
17:50-17:55	2	1	2	0	23	0	3	31	7	8	0	0	77
17:55-18:00	2	0	2	0	32	0	2	31	9	5	1	0	84
TOTALS	126	55	77	11	1453	24	120	1258	383	402	46	31	3986
PHF	0.75	0.61	0.69	0.42	0.84	0.58	0.62	0.87	0.84	0.86	0.75	0.65	0.97
% Trucks	2.4	1.8	5.2	9.1	11.2	4.2	2.5	9	4.2	3.7	0	0	8
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	
Pedestrians		4			5			11			11		

INTERSECTION TURN MOVEMENT SUMMARY REPORT

File: W0FB27.TM1



LOCATION:

US 101 AND LONGWOOD DRIVE
REEDSPORT, OR

Date: **09/29/04** Day: **WED**
Time: **15:00 - 18:00**

Report Prepared for:
DKS

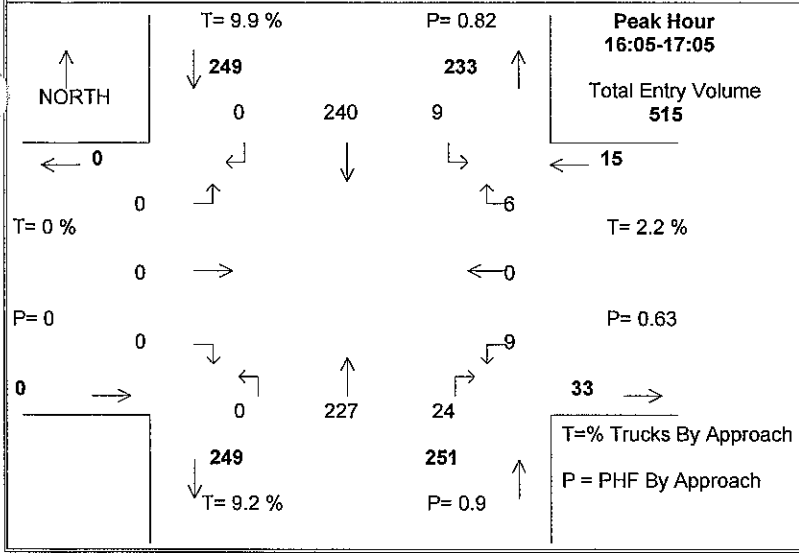
Surveyed By:
TRAFFIC SMITHY, INC
1225 NW MURRAY BLVD
PORTLAND, OR 97209
Phone: 503-641-6333 Fax: 503-643-8866

Report Reviewed by: KH

TIME PERIOD	EASTBOUND			SOUTHBOUND			NORTHBOUND			WESTBOUND			ALL
	↴	→	↱	↲	↓	↳	↰	↑	↱	↴	←	↰	
15:00-15:05	3	25	0	0	0	0	2	0	20	7	26	0	83
15:05-15:10	1	28	0	0	0	0	1	0	19	6	33	0	88
15:10-15:15	0	32	0	0	0	0	1	0	10	8	35	0	86
15:15-15:20	2	20	0	0	0	0	1	0	11	5	33	0	72
15:20-15:25	0	29	0	0	0	0	1	0	10	8	43	0	91
15:25-15:30	0	25	0	0	0	0	0	0	3	4	34	0	66
15:30-15:35	0	30	0	0	0	0	0	0	5	2	35	0	72
15:35-15:40	0	15	0	0	0	0	0	0	7	5	38	0	65
15:40-15:45	2	23	0	0	0	0	1	0	6	12	31	0	75
15:45-15:50	0	20	0	0	0	0	1	0	6	3	31	0	61
15:50-15:55	1	29	0	0	0	0	0	0	10	10	35	0	85
15:55-16:00	0	35	0	0	0	0	1	0	3	6	21	0	66
16:00-16:05	1	24	0	0	0	0	0	0	11	6	32	0	74
16:05-16:10	0	29	0	0	0	0	0	0	8	8	27	0	72
16:10-16:15	1	40	0	0	0	0	2	0	6	3	28	0	80
16:15-16:20	0	31	0	0	0	0	0	0	4	7	22	0	64
16:20-16:25	0	16	0	0	0	0	1	0	15	6	27	0	65
16:25-16:30	0	41	0	0	0	0	0	0	6	7	43	0	97
16:30-16:35	0	25	0	0	0	0	0	0	6	12	33	0	76
16:35-16:40	0	21	0	0	0	0	0	0	8	10	41	0	80
16:40-16:45	0	23	0	0	0	0	0	0	7	12	25	0	67
16:45-16:50	1	31	0	0	0	0	1	0	5	5	40	0	83
16:50-16:55	2	25	0	0	0	0	0	0	9	11	30	0	77
16:55-17:00	2	25	0	0	0	0	1	0	14	8	22	0	72
17:00-17:05	0	41	0	0	0	0	0	0	7	7	32	0	87
17:05-17:10	4	33	0	0	0	0	0	0	11	7	43	0	98
17:10-17:15	1	30	0	0	0	0	0	0	5	19	27	0	82
17:15-17:20	1	39	0	0	0	0	1	0	5	4	21	0	71
17:20-17:25	0	21	0	0	0	0	0	0	14	7	35	0	77
17:25-17:30	0	24	0	0	0	0	1	0	11	10	36	0	82
17:30-17:35	0	24	0	0	0	0	0	0	9	7	36	0	76
17:35-17:40	1	28	0	0	0	0	0	0	4	9	16	0	58
17:40-17:45	1	28	0	0	0	0	0	0	6	8	36	0	79
17:45-17:50	2	16	0	0	0	0	0	0	6	13	23	0	60
17:50-17:55	4	19	0	0	0	0	0	0	4	11	19	0	57
17:55-18:00	0	19	0	0	0	0	1	0	4	5	19	0	48
TOTALS	30	964	0	0	0	0	17	0	295	278	1108	0	2692
PHF	0.46	0.85	0	0	0	0	0.38	0	0.76	0.8	0.84	0	0.91
% Trucks	0	4.3	0	0	0	0	11.8	0	1.7	0.4	4.3	0	4.5
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	
Pedestrians		0			0			0			0		

INTERSECTION TURN MOVEMENT SUMMARY REPORT

File: W0FG32.TM1



LOCATION:

OR 38 AND EAST FIR/6TH STREET
REEDSPORT, OR

Date: **09/30/04** Day: **THU**
Time: **15:00 - 18:00**

Report Prepared for:
DKS

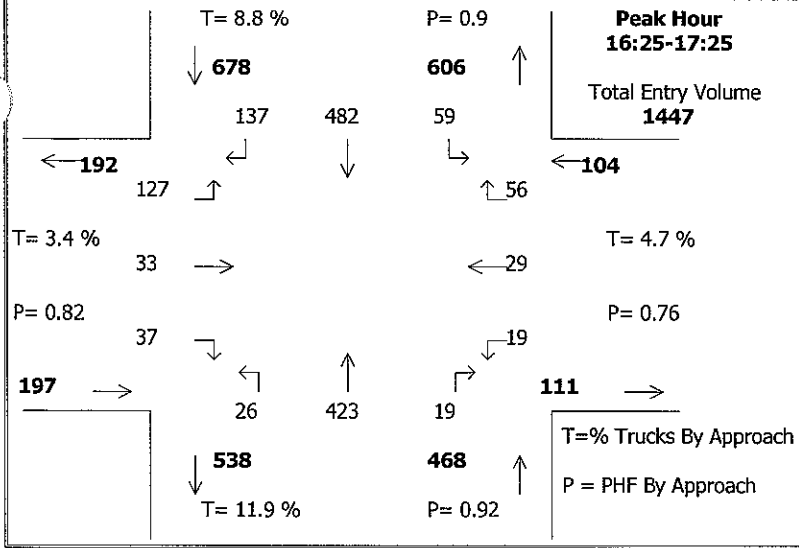
Surveyed By:
TRAFFIC SMITHY, INC
1225 NW MURRAY BLVD
PORTLAND, OR 97209
Phone: 503-641-6333 Fax: 503-643-8866

Report Reviewed by: KH

TIME PERIOD	EASTBOUND			SOUTHBOUND			NORTHBOUND			WESTBOUND			ALL
	↓	→	↑	↲	↓	↳	↰	↑	↱	↓	←	↰	
15:00-15:05	0	0	0	0	19	0	0	11	2	2	0	2	36
15:05-15:10	0	0	0	0	20	0	0	11	4	1	0	0	36
15:10-15:15	0	0	0	0	13	2	0	16	0	0	0	0	31
15:15-15:20	0	0	0	0	17	0	0	17	1	1	0	0	36
15:20-15:25	0	0	0	0	14	0	0	22	2	1	0	0	39
15:25-15:30	0	0	0	0	17	2	0	13	1	0	0	2	35
15:30-15:35	0	0	0	0	19	0	0	18	1	1	0	0	39
15:35-15:40	0	0	0	0	17	1	0	14	1	3	0	1	37
15:40-15:45	0	0	0	0	19	2	0	19	3	0	0	0	43
15:45-15:50	0	0	0	0	13	1	0	14	1	1	0	1	31
15:50-15:55	0	0	0	0	11	2	0	15	2	0	0	1	31
15:55-16:00	0	0	0	0	13	0	0	19	1	1	0	1	35
16:00-16:05	0	0	0	0	20	0	0	17	2	0	0	1	40
16:05-16:10	0	0	0	0	18	0	0	19	1	0	0	0	38
16:10-16:15	0	0	0	0	15	3	0	21	4	1	0	0	44
16:15-16:20	0	0	0	0	18	0	0	20	0	1	0	1	40
16:20-16:25	0	0	0	0	19	2	0	23	1	2	0	0	47
16:25-16:30	0	0	0	0	23	2	0	17	2	2	0	0	46
16:30-16:35	0	0	0	0	10	0	0	21	1	0	0	1	33
16:35-16:40	0	0	0	0	9	0	0	26	3	1	0	1	40
16:40-16:45	0	0	0	0	29	1	0	12	4	0	0	1	47
16:45-16:50	0	0	0	0	24	0	0	22	1	2	0	0	49
16:50-16:55	0	0	0	0	22	0	0	14	2	0	0	0	38
16:55-17:00	0	0	0	0	25	1	0	18	3	0	0	0	47
17:00-17:05	0	0	0	0	28	0	0	14	2	0	0	2	46
17:05-17:10	0	0	0	0	12	0	0	9	0	1	0	0	22
17:10-17:15	0	0	0	0	13	0	0	11	1	3	0	0	28
17:15-17:20	2	0	0	0	19	1	0	8	2	1	0	0	33
17:20-17:25	0	0	0	0	13	0	0	16	2	1	0	0	32
17:25-17:30	0	0	0	0	17	1	0	15	1	0	0	1	35
17:30-17:35	0	0	0	0	15	0	0	10	0	0	0	0	25
17:35-17:40	0	0	0	0	12	1	0	5	0	0	0	0	18
17:40-17:45	0	0	0	0	13	0	0	10	0	0	0	0	23
17:45-17:50	0	0	0	0	9	0	0	10	2	0	0	1	22
17:50-17:55	0	0	0	0	10	0	0	9	2	0	0	0	21
17:55-18:00	0	0	0	0	19	2	0	3	1	2	0	0	27
TOTALS	2	0	0	0	604	24	0	539	56	28	0	17	1270
PHF	0	0	0	0	0.8	0.45	0	0.89	0.75	0.45	0	0.5	0.95
% Trucks	0	0	0	0	10.3	0	0	10.2	0	0	0	5.9	9.3
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	
Pedestrians		0			0			0			0		

INTERSECTION TURN MOVEMENT SUMMARY REPORT

File: PMLT



Peak Hour
16:25-17:25

Total Entry Volume
1447

T=% Trucks By Approach

P = PHF By Approach

LOCATION:

US 101 AT 22ND ST
REEDSPORT, OR

Date: **09/30/04** Day: **THU**
Time: **15:00 - 18:00**

Report Prepared for:
DKS

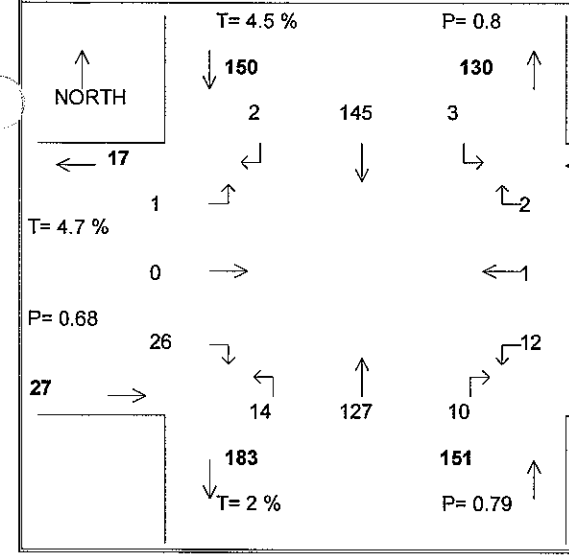
Surveyed By:
TRAFFIC SMITHY, INC
1225 NW Murray Blvd Suite 111
Portland, OR 97229
Phone: 503-641-6333 Fax: 503-643-8866

Report Reviewed by: JG

TIME PERIOD	EASTBOUND			SOUTHBOUND			NORTHBOUND			WESTBOUND			ALL
15:00-15:05	4	1	11	20	46	3	2	29	2	0	0	1	119
15:05-15:10	3	3	11	9	27	3	2	40	5	1	0	3	107
15:10-15:15	4	1	15	6	39	3	4	47	4	1	0	7	131
15:15-15:20	2	2	13	11	38	1	3	28	3	6	6	14	127
15:20-15:25	2	1	11	11	36	2	2	35	1	3	7	4	115
15:25-15:30	3	3	12	12	36	2	1	38	2	2	0	5	116
15:30-15:35	0	0	8	13	40	4	2	37	2	2	2	4	114
15:35-15:40	2	1	13	9	33	0	1	30	0	1	3	8	101
15:40-15:45	1	0	9	9	45	5	4	29	1	1	2	4	110
15:45-15:50	4	1	16	11	31	2	3	29	3	1	3	3	107
15:50-15:55	1	1	10	11	29	2	1	27	2	0	0	3	87
15:55-16:00	3	2	12	4	43	5	1	34	0	1	2	5	112
16:00-16:05	3	1	17	8	34	7	2	34	1	2	2	6	117
16:05-16:10	5	2	17	11	45	2	0	47	0	1	2	3	135
16:10-16:15	2	1	6	8	45	3	3	34	1	1	1	3	108
16:15-16:20	0	0	12	13	33	3	2	43	1	0	3	3	113
16:20-16:25	1	0	8	10	30	1	1	28	2	2	4	4	91
16:25-16:30	1	4	9	13	48	2	1	32	0	4	0	2	116
16:30-16:35	3	0	16	8	42	4	4	45	2	0	1	3	128
16:35-16:40	4	0	10	9	27	3	4	37	2	0	2	9	107
16:40-16:45	3	2	12	8	38	3	0	30	1	2	3	4	106
16:45-16:50	1	4	15	14	47	6	3	40	4	1	1	5	141
16:50-16:55	2	0	10	15	29	9	0	32	1	4	4	0	106
16:55-17:00	2	4	13	8	39	5	1	42	2	1	3	11	131
17:00-17:05	3	4	10	13	43	6	7	37	2	2	4	3	134
17:05-17:10	6	4	12	18	50	6	1	33	1	1	3	6	141
17:10-17:15	9	4	8	6	33	7	2	32	0	1	1	5	108
17:15-17:20	1	1	5	10	45	3	2	35	1	1	3	6	113
17:20-17:25	2	6	7	15	41	5	1	28	3	2	4	2	116
17:25-17:30	5	4	7	6	27	7	1	28	4	1	2	2	94
17:30-17:35	3	7	2	12	32	6	1	32	3	2	3	4	107
17:35-17:40	1	3	9	10	29	5	3	27	1	2	2	1	93
17:40-17:45	5	3	7	6	39	5	4	28	4	1	1	6	109
17:45-17:50	2	4	7	9	41	6	2	36	6	2	4	5	124
17:50-17:55	2	5	5	6	22	7	1	22	4	1	5	3	83
17:55-18:00	2	3	12	12	15	3	1	25	4	1	3	4	85
TOTALS	97	82	377	374	1317	146	73	1210	75	54	86	161	4052
PHF	0.51	0.69	0.84	0.88	0.91	0.74	0.65	0.93	0.68	0.68	0.66	0.7	0.89
% Trucks	5.2	3.7	2.9	3.7	11.1	1.4	2.7	12.6	9.3	5.6	7	3.1	8.8
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	
Pedestrians		53			14			8			15		

INTERSECTION TURN MOVEMENT SUMMARY REPORT

File: W0FL01.TM1



LOCATION: Winchester / Elm
~~OR-38 AND WINCHESTER AVENUE~~
REEDSPORT, OR

Date: **09/30/04** Day: **THU**
Time: **15:00 - 18:00**

Report Prepared for:
DKS

Surveyed By:
TRAFFIC SMITHY, INC
1225 NW MURRAY BLVD
PORTLAND, OR 97209
Phone: 503-641-6333 Fax: 503-643-8866

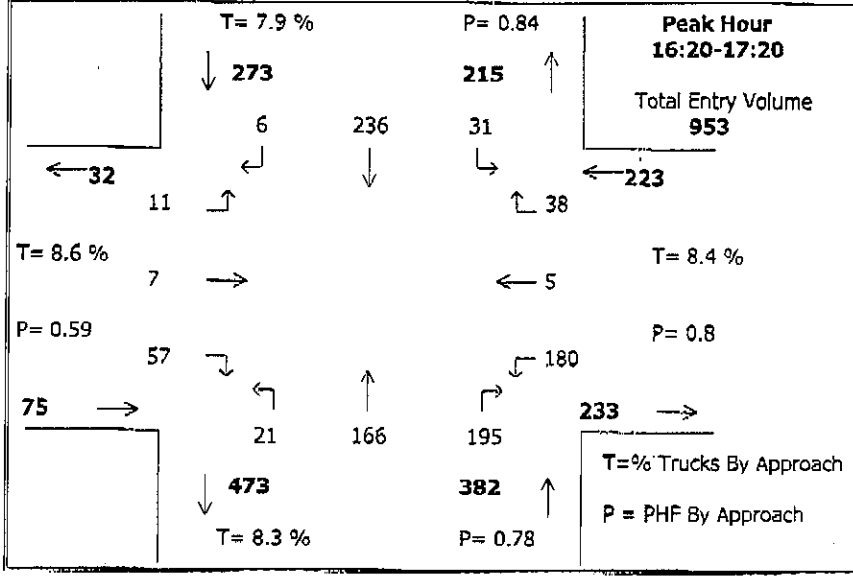
Report Reviewed by: KH

TIME PERIOD	EASTBOUND ↴	EASTBOUND →	EASTBOUND ↱	SOUTHBOUND ↲	SOUTHBOUND ↓	SOUTHBOUND ↳	NORTHBOUND ↰	NORTHBOUND ↑	NORTHBOUND ↱	WESTBOUND ↴	WESTBOUND ←	WESTBOUND ↰	ALL
15:00-15:05	1	0	0	0	11	1	2	10	1	1	0	0	27
15:05-15:10	2	0	0	1	5	0	0	9	1	1	0	0	19
15:10-15:15	2	0	0	1	8	0	2	11	1	1	0	0	26
15:15-15:20	4	0	0	0	12	0	0	11	0	2	0	0	29
15:20-15:25	2	1	0	0	10	0	2	14	0	0	0	1	30
15:25-15:30	4	0	0	0	14	0	4	8	1	0	2	0	33
15:30-15:35	2	0	0	0	12	1	1	12	0	0	0	0	28
15:35-15:40	1	0	0	0	18	0	0	12	0	0	1	1	33
15:40-15:45	3	0	0	0	6	0	4	9	0	0	0	0	22
15:45-15:50	5	0	0	0	12	0	3	8	0	0	0	0	28
15:50-15:55	2	0	0	0	15	0	0	13	0	0	0	0	30
15:55-16:00	2	2	0	0	6	0	4	10	0	0	0	0	24
16:00-16:05	4	0	0	0	10	0	1	10	0	0	0	0	25
16:05-16:10	1	1	0	0	13	0	2	13	3	0	0	0	33
16:10-16:15	1	1	0	0	5	1	2	14	1	1	0	0	26
16:15-16:20	1	0	0	1	12	1	2	9	1	1	0	0	28
16:20-16:25	2	0	0	0	10	2	0	10	0	1	0	0	25
16:25-16:30	2	0	1	1	8	0	1	14	1	4	1	2	35
16:30-16:35	4	0	0	0	10	0	2	8	0	2	0	0	26
16:35-16:40	2	0	0	0	6	0	0	15	0	0	0	0	23
16:40-16:45	1	0	0	0	21	0	0	6	0	2	0	0	30
16:45-16:50	0	0	0	0	10	0	1	3	2	0	0	0	16
16:50-16:55	4	0	0	0	10	0	1	12	1	0	0	0	28
16:55-17:00	5	0	0	0	11	0	1	12	1	1	0	0	31
17:00-17:05	1	0	0	0	24	0	2	9	2	0	0	0	38
17:05-17:10	3	0	0	0	9	0	2	14	2	1	0	0	31
17:10-17:15	1	0	0	0	14	0	2	15	0	0	0	0	32
17:15-17:20	2	0	0	0	14	0	0	6	1	1	0	0	24
17:20-17:25	2	0	0	0	8	0	0	10	1	0	0	0	21
17:25-17:30	1	0	0	0	7	0	0	12	0	0	0	0	20
17:30-17:35	1	0	0	0	7	0	0	9	0	1	0	1	19
17:35-17:40	3	0	0	0	9	0	2	11	0	1	0	0	26
17:40-17:45	2	0	0	0	17	0	1	6	1	0	0	0	27
17:45-17:50	5	0	0	0	8	0	2	13	0	0	0	0	28
17:50-17:55	1	0	0	0	6	0	1	9	2	0	0	0	19
17:55-18:00	1	0	0	0	10	0	0	7	1	2	0	0	21

TOTALS	80	5	1	4	388	6	47	374	24	23	4	5	961
PHF	0.65	0	0.25	0.25	0.77	0.25	0.58	0.84	0.5	0.43	0.25	0.25	0.85
% Trucks	3.8	20	0	0	4.4	16.7	0	1.9	8.3	4.3	0	0	3.3
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	
Pedestrians		0			10			3			0		

INTERSECTION TURN MOVEMENT SUMMARY REPORT

File: V9TJ54.TM1



LOCATION:

HIGHWAY 101 AT HIGHWAY 38/UMPQUA
REEDSPORT, OR

Date: **08/31/04** Day: **TUE**
Time: **16:00 - 18:00**

Report Prepared for:
DKS ASSOCIATES

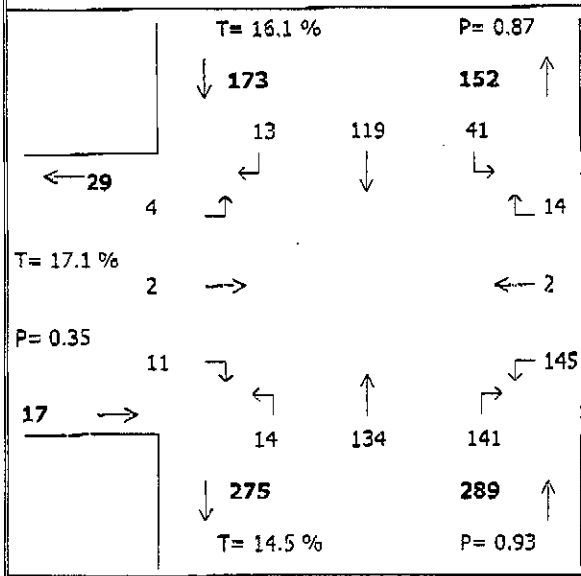
Surveyed By:
TRAFFIC SMITHY, INC
1225 NW Murray Blvd Suite 111
Portland, OR 97229
Phone: 503-641-6333 Fax: 503-643-8866

Report Reviewed by: JG

TIME PERIOD	EASTBOUND			SOUTHBOUND			NORTHBOUND			WESTBOUND			ALL
	↴	→	↱	↲	↓	↳	↰	↑	↱	↙	←	↖	
16:00-16:05	4	0	1	1	7	2	3	24	21	17	2	1	83
16:05-16:10	4	0	1	0	14	0	1	21	16	20	0	6	83
16:10-16:15	1	1	2	1	25	3	2	12	24	11	0	6	88
16:15-16:20	0	1	0	2	9	3	1	14	16	15	0	4	65
16:20-16:25	2	1	1	0	22	2	3	17	22	21	1	2	94
16:25-16:30	6	0	0	2	14	5	3	16	20	15	0	5	86
16:30-16:35	11	1	4	0	31	2	1	25	16	17	0	6	114
16:35-16:40	7	0	3	0	16	1	2	7	17	9	0	0	62
16:40-16:45	0	0	0	0	1	0	0	1	1	0	0	0	3
16:45-16:50	4	0	0	0	30	3	0	13	18	15	1	2	86
16:50-16:55	12	1	2	0	16	4	2	12	12	14	0	3	78
16:55-17:00	2	1	0	3	22	2	6	14	20	21	0	1	92
17:00-17:05	3	0	0	0	14	2	2	11	16	24	1	1	74
17:05-17:10	4	2	1	1	23	4	0	16	12	15	1	6	85
17:10-17:15	1	0	0	0	27	3	1	11	18	17	0	4	82
17:15-17:20	5	1	0	0	20	3	1	23	23	12	1	8	97
17:20-17:25	1	0	0	0	14	3	2	5	20	21	0	3	69
17:25-17:30	3	1	0	1	21	1	1	15	13	16	0	6	78
17:30-17:35	8	1	1	0	13	2	5	13	12	15	0	1	71
17:35-17:40	0	0	0	1	19	2	1	11	12	10	0	1	57
17:40-17:45	3	0	1	0	11	2	1	20	13	13	1	3	68
17:45-17:50	3	0	1	0	22	3	0	13	11	10	2	1	66
17:50-17:55	2	0	0	1	17	2	3	20	4	3	1	4	57
17:55-18:00	1	0	0	1	13	2	1	16	11	12	0	0	57
TOTALS	87	11	18	14	421	56	42	350	368	343	11	74	1795
PHF	0.59	0.58	0.39	0.38	0.84	0.77	0.52	0.72	0.84	0.75	0.63	0.53	0.81
% Trucks	10.3	0	5.6	14.3	7.8	7.1	16.7	8.6	7.1	8.7	18.2	5.4	8.2
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	
Pedestrians		2			0			0			1		

INTERSECTION TURN MOVEMENT SUMMARY REPORT

File: V9TF54.TM1



LOCATION:

HIGHWAY 101 AT HIGHWAY 38/UMPQUA
REEDSPORT, OR

Date: **08/31/04** Day: **TUE**
Time: **06:00 - 09:00**

Report Prepared for:
DKS ASSOCIATES

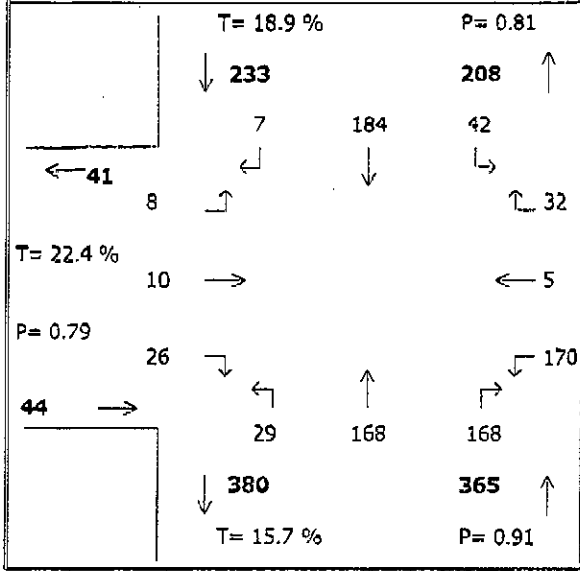
Surveyed By:
TRAFFIC SMITHY, INC
1225 NW Murray Blvd Suite 111
Portland, OR 97229
Phone: 503-641-6333 Fax: 503-643-8866

Report Reviewed by: JG

TIME PERIOD	EASTBOUND			SOUTHBOUND			NORTHBOUND			WESTBOUND			ALL
06:00-06:05	0	0	0	0	4	0	0	4	3	3	0	0	14
06:05-06:10	0	1	0	1	1	3	0	1	7	4	0	0	18
06:10-06:15	1	0	0	0	7	1	0	2	3	3	0	0	17
06:15-06:20	0	0	1	0	3	2	1	2	8	6	0	0	23
06:20-06:25	0	0	0	1	4	2	4	9	5	4	0	2	31
06:25-06:30	0	0	0	0	2	0	2	8	10	3	0	2	27
06:30-06:35	1	1	0	0	9	0	0	3	6	6	0	4	30
06:35-06:40	1	0	0	0	7	3	1	5	1	6	0	2	26
06:40-06:45	0	0	0	0	3	0	1	6	4	6	1	3	24
06:45-06:50	0	0	0	0	5	3	3	10	8	8	0	1	38
06:50-06:55	0	1	0	0	7	1	3	3	8	7	0	1	31
06:55-07:00	1	1	0	1	6	4	2	5	8	7	0	0	35
07:00-07:05	0	0	0	1	12	1	3	8	8	5	0	0	38
07:05-07:10	0	1	1	0	6	3	1	7	6	10	0	2	37
07:10-07:15	0	0	1	0	8	2	2	5	6	11	0	0	35
07:15-07:20	0	0	0	1	8	1	2	5	7	15	0	1	40
07:20-07:25	2	0	0	0	6	1	2	19	12	6	0	2	50
07:25-07:30	0	0	0	0	13	2	3	13	6	5	0	1	43
07:30-07:35	0	0	0	0	7	2	2	8	6	12	1	2	40
07:35-07:40	0	0	0	0	5	2	6	4	9	7	0	1	34
07:40-07:45	0	0	0	1	2	3	7	8	8	9	0	0	38
07:45-07:50	0	0	0	4	10	2	5	10	13	12	0	0	56
07:50-07:55	3	0	0	1	10	3	3	5	10	11	0	0	46
07:55-08:00	0	0	0	1	19	4	2	10	12	15	0	0	63
08:00-08:05	0	0	0	0	3	0	1	13	14	10	0	2	43
08:05-08:10	0	1	0	1	14	8	1	11	11	12	0	1	60
08:10-08:15	0	0	0	2	10	2	1	12	9	5	0	1	42
08:15-08:20	1	0	0	1	5	4	1	10	13	11	0	0	46
08:20-08:25	1	0	0	2	10	5	0	13	11	10	0	2	54
08:25-08:30	2	1	1	0	14	1	1	12	12	12	0	1	57
08:30-08:35	4	0	2	4	10	4	2	8	11	5	1	1	52
08:35-08:40	2	0	0	0	10	6	2	11	15	24	0	1	71
08:40-08:45	0	0	0	0	4	1	1	12	12	15	0	1	46
08:45-08:50	1	0	0	2	9	4	1	16	8	15	0	4	60
08:50-08:55	0	0	1	0	11	2	1	6	13	11	1	0	46
08:55-09:00	1	0	0	2	17	3	1	3	16	16	0	1	60
TOTALS	21	7	7	26	281	85	68	287	319	327	4	39	1471
PHF	0.34	0.5	0.33	0.54	0.83	0.73	0.7	0.86	0.93	0.67	0.5	0.58	0.89
% Trucks	9.5	28.6	28.6	15.4	12.8	27.1	1.5	13.6	18.2	25.7	0	35.9	18
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	
Pedestrians		0			0			1			4		

INTERSECTION TURN MOVEMENT SUMMARY REPORT

File: V9TG30.TM1



Peak Hour
10:00-11:00

Total Entry Volume
849

T=% Trucks By Approach

P = PHF By Approach

LOCATION:

HIGHWAY 101 AT HIGHWAY 38/UMPQUA
REEDSPORT, OR

Date: **08/31/04** Day: **TUE**
Time: **09:00 - 11:00**

Report Prepared for:
DKS ASSOCIATES

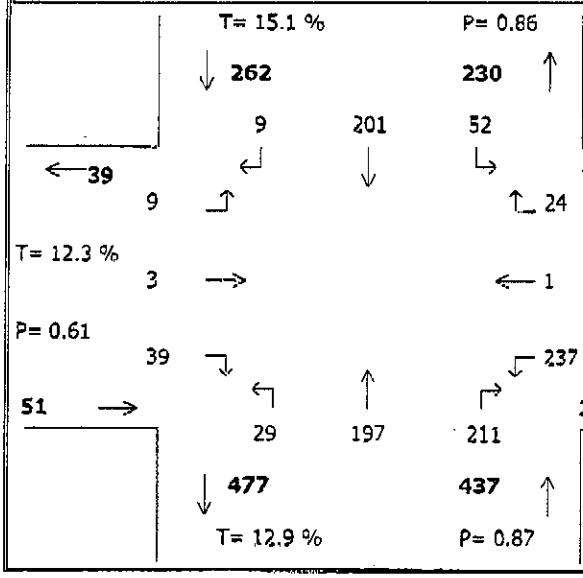
Surveyed By:
TRAFFIC SMITHY, INC
1225 NW Murray Blvd Suite 111
Portland, OR 97229
Phone: 503-641-6333 Fax: 503-643-8866

Report Reviewed by: JG

TIME PERIOD	EASTBOUND			SOUTHBOUND			NORTHBOUND			WESTBOUND			ALL
09:00-09:05	1	0	2	0	9	4	1	11	12	14	1	2	57
09:05-09:10	5	0	0	1	13	7	0	11	14	15	0	1	67
09:10-09:15	0	0	0	0	10	3	0	20	15	7	1	2	58
09:15-09:20	5	0	0	0	9	4	1	8	11	16	0	2	56
09:20-09:25	1	0	0	1	5	8	3	11	16	10	0	4	59
09:25-09:30	3	1	2	0	22	4	1	11	13	15	0	0	72
09:30-09:35	2	0	0	2	11	3	0	16	11	13	0	7	65
09:35-09:40	1	0	1	2	24	3	2	13	11	5	0	1	63
09:40-09:45	1	0	0	1	17	0	1	9	19	17	1	2	68
09:45-09:50	2	1	0	0	11	3	2	21	15	13	0	4	72
09:50-09:55	1	0	1	1	7	1	3	10	15	12	0	2	53
09:55-10:00	2	0	0	1	13	1	4	17	20	12	1	2	73
10:00-10:05	2	0	0	0	10	2	3	6	11	11	0	2	47
10:05-10:10	3	0	0	0	18	10	3	9	14	13	0	2	72
10:10-10:15	2	0	1	0	12	3	4	11	13	16	1	0	63
10:15-10:20	4	2	2	2	11	1	1	19	8	15	0	2	67
10:20-10:25	1	1	0	1	18	5	1	15	17	12	0	3	74
10:25-10:30	1	2	0	1	15	3	5	14	14	10	2	5	72
10:30-10:35	2	1	0	1	25	3	3	13	14	14	0	3	79
10:35-10:40	0	1	0	0	14	4	3	13	17	18	1	1	72
10:40-10:45	2	1	2	2	17	5	2	23	12	15	0	3	84
10:45-10:50	1	0	2	0	14	0	1	13	14	18	0	3	66
10:50-10:55	5	0	1	0	14	1	2	19	13	12	0	5	72
10:55-11:00	3	2	0	0	16	5	1	13	21	16	1	3	81
TOTALS	50	12	14	16	335	83	47	326	340	319	9	61	1612
PHF	0.72	0.5	0.4	0.44	0.79	0.7	0.66	0.76	0.88	0.83	0.42	0.73	0.9
% Trucks	16	41.7	28.6	12.5	16.4	30.1	12.8	17.5	14.4	13.8	33.3	44.3	17.7
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	
Pedestrians		0			0			2			0		

INTERSECTION TURN MOVEMENT SUMMARY REPORT

File: V9TH05.TM1



Peak Hour
11:40-12:40

Total Entry Volume
1012

T=% Trucks By Approach

P = PHF By Approach

LOCATION:

HIGHWAY 101 AT HIGHWAY 38/UMPQUA
REEDSPORT, OR

Date: **08/31/04** Day: **TUE**
Time: **11:00 - 13:00**

Report Prepared for:
DKS ASSOCIATES

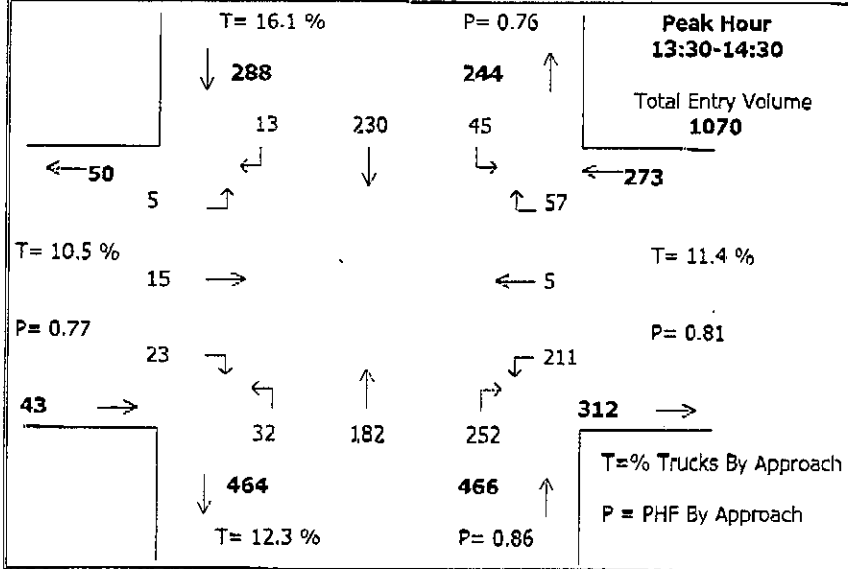
Surveyed By:
TRAFFIC SMITHY, INC
1225 NW Murray Blvd Suite 111
Portland, OR 97229
Phone: 503-641-6333 Fax: 503-643-8866

Report Reviewed by: JG

	EASTBOUND			SOUTHBOUND			NORTHBOUND			WESTBOUND			
TIME PERIOD	↴	→	↱	↲	↓	↳	↰	↑	↱	↲	←	↰	ALL
11:00-11:05	1	0	0	3	21	5	2	21	24	16	0	2	95
11:05-11:10	1	1	1	1	12	5	4	10	21	23	0	6	85
11:10-11:15	1	0	2	0	15	4	1	17	17	11	0	3	71
11:15-11:20	0	0	0	1	17	4	1	17	16	22	0	3	81
11:20-11:25	1	0	2	1	17	4	2	10	12	14	1	3	67
11:25-11:30	4	0	2	0	16	3	0	22	17	17	1	4	86
11:30-11:35	1	0	1	0	17	4	0	17	14	17	0	2	73
11:35-11:40	2	0	0	2	14	5	1	20	18	21	0	2	85
11:40-11:45	3	0	0	2	11	3	1	19	17	26	0	4	86
11:45-11:50	3	1	0	1	20	7	3	15	17	11	0	0	78
11:50-11:55	3	0	2	0	18	5	2	14	16	20	0	3	83
11:55-12:00	3	1	1	0	16	1	1	17	15	21	0	2	78
12:00-12:05	11	0	0	0	18	5	1	17	28	22	0	1	103
12:05-12:10	2	0	1	1	27	6	3	12	20	20	0	1	93
12:10-12:15	2	0	2	0	16	3	6	17	22	9	1	1	79
12:15-12:20	2	0	2	1	7	3	1	21	11	15	0	5	68
12:20-12:25	4	0	1	1	16	4	3	19	21	19	0	2	90
12:25-12:30	2	0	0	1	24	3	5	20	15	19	0	0	89
12:30-12:35	3	0	0	1	11	8	2	11	15	25	0	3	79
12:35-12:40	1	1	0	1	17	4	1	15	14	30	0	2	86
12:40-12:45	1	1	1	0	13	1	0	21	14	23	2	1	78
12:45-12:50	2	0	1	0	15	3	1	18	19	10	2	1	72
12:50-12:55	0	0	0	1	11	3	2	24	18	13	0	2	74
12:55-13:00	4	0	0	2	16	4	0	14	24	19	0	2	85
TOTALS	57	5	19	20	385	97	43	408	425	443	7	55	1964
PHF	0.57	0.38	0.45	0.75	0.82	0.87	0.73	0.82	0.75	0.8	0.25	0.75	0.92
% Trucks	5.3	20	31.6	15	13.5	21.6	16.3	12	13.4	14.2	28.6	20	14
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	
Pedestrians		0			0			3			0		

INTERSECTION TURN MOVEMENT SUMMARY REPORT

File: VPTI33.TM1



LOCATION:

HIGHWAY 101 AT HIGHWAY 38/UMPQUA
REEDSPORT, OR

Date: **08/31/04** Day: **TUE**
Time: **13:00 - 16:00**

Report Prepared for:
DKS ASSOCIATES

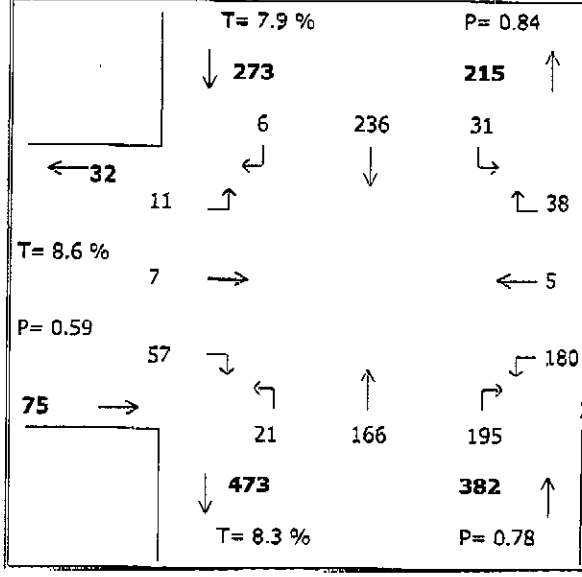
Surveyed By:
TRAFFIC SMITHY, INC
1225 NW Murray Blvd Suite 111
Portland, OR 97229
Phone: 503-641-6333 Fax: 503-643-8866

Report Reviewed by: JG

TIME PERIOD	EASTBOUND			SOUTHBOUND			NORTHBOUND			WESTBOUND			ALL
13:00-13:05	1	1	0	1	27	3	1	11	13	13	2	3	76
13:05-13:10	4	0	1	1	16	3	1	20	19	19	0	5	89
13:10-13:15	3	2	0	1	10	6	1	10	23	17	2	4	79
13:15-13:20	2	0	1	4	19	2	2	12	16	13	1	3	75
13:20-13:25	5	0	2	1	22	2	2	27	18	16	0	6	101
13:25-13:30	4	1	0	2	10	5	3	17	13	14	0	2	71
13:30-13:35	4	1	1	2	26	1	2	11	23	8	0	4	83
13:35-13:40	1	1	0	2	10	5	2	14	26	26	0	5	92
13:40-13:45	0	2	0	1	12	5	4	14	13	20	0	6	77
13:45-13:50	1	0	0	1	23	3	2	22	25	20	0	4	101
13:50-13:55	0	3	0	0	21	4	5	11	26	14	0	1	85
13:55-14:00	3	3	0	0	15	2	1	18	26	20	0	3	91
14:00-14:05	2	1	1	1	16	3	4	13	15	18	2	1	77
14:05-14:10	2	0	2	3	20	5	4	22	29	10	0	6	103
14:10-14:15	0	2	1	0	10	2	5	15	26	13	2	6	82
14:15-14:20	3	0	0	1	33	5	2	15	18	21	1	8	107
14:20-14:25	3	1	0	1	18	7	1	16	13	17	0	6	83
14:25-14:30	4	1	0	1	26	3	0	11	12	24	0	7	89
14:30-14:35	2	0	0	0	22	2	3	18	12	17	2	1	79
14:35-14:40	5	0	0	2	13	2	0	22	13	15	0	5	77
14:40-14:45	3	0	0	0	21	4	1	22	23	15	0	4	93
14:45-14:50	2	1	2	2	20	2	2	20	18	13	0	6	88
14:50-14:55	0	1	0	2	20	2	2	25	17	13	2	3	87
14:55-15:00	6	1	1	1	9	1	0	19	23	11	1	5	78
15:00-15:05	4	1	0	0	22	3	1	23	14	12	2	6	88
15:05-15:10	3	0	1	0	15	1	1	14	24	22	0	2	83
15:10-15:15	2	0	0	1	21	2	2	22	23	23	0	2	98
15:15-15:20	0	0	2	0	13	8	3	18	18	15	0	3	80
15:20-15:25	0	0	0	0	23	4	3	16	18	23	0	1	88
15:25-15:30	2	1	0	0	21	2	0	12	20	24	0	5	87
15:30-15:35	2	1	1	0	16	2	0	13	24	20	3	1	83
15:35-15:40	2	2	0	2	27	7	2	19	11	25	1	2	100
15:40-15:45	1	1	0	2	17	1	1	18	21	21	2	6	91
15:45-15:50	4	1	1	0	14	2	2	9	20	12	2	1	68
15:50-15:55	3	0	2	0	13	1	0	24	15	22	1	3	84
15:55-16:00	1	0	1	0	26	0	5	17	18	19	2	3	92
TOTALS	84	29	20	35	667	112	70	610	686	625	28	139	3105
PHF	0.57	0.54	0.31	0.65	0.75	0.75	0.62	0.86	0.82	0.8	0.31	0.68	0.92
% Trucks	4.8	27.6	10	14.3	15.6	19.6	15.7	11.6	12.5	11	17.9	11.5	13
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	
Pedestrians		0			0			4			0		

INTERSECTION TURN MOVEMENT SUMMARY REPORT

File: V9TJ54.TM1



LOCATION:

HIGHWAY 101 AT HIGHWAY 38/UMPQUA
REEDSPORT, OR

Date: **08/31/04** Day: **TUE**
Time: **16:00 - 18:00**

Report Prepared for:
DKS ASSOCIATES

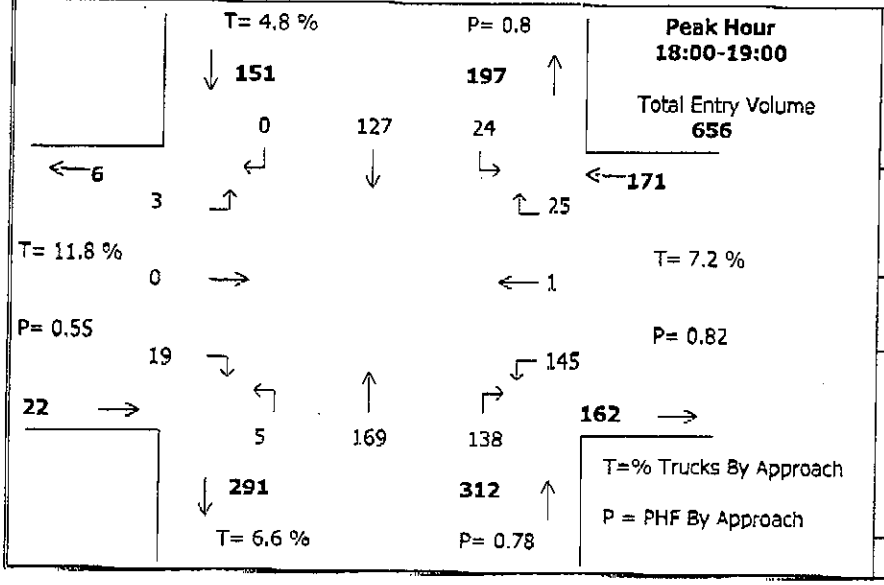
Surveyed By:
TRAFFIC SMITHY, INC
1225 NW Murray Blvd Suite 111
Portland, OR 97229
Phone: 503-641-6333 Fax: 503-643-8866

Report Reviewed by: JG

TIME PERIOD	EASTBOUND			SOUTHBOUND			NORTHBOUND			WESTBOUND			ALL
16:00-16:05	4	0	1	1	7	2	3	24	21	17	2	1	83
16:05-16:10	4	0	1	0	14	0	1	21	16	20	0	6	83
16:10-16:15	1	1	2	1	25	3	2	12	24	11	0	6	88
16:15-16:20	0	1	0	2	9	3	1	14	16	15	0	4	65
16:20-16:25	2	1	1	0	22	2	3	17	22	21	1	2	94
16:25-16:30	6	0	0	2	14	5	3	16	20	15	0	5	86
16:30-16:35	11	1	4	0	31	2	1	25	16	17	0	6	114
16:35-16:40	7	0	3	0	16	1	2	7	17	9	0	0	62
16:40-16:45	0	0	0	0	1	0	0	1	1	0	0	0	3
16:45-16:50	4	0	0	0	30	3	0	13	18	15	1	2	86
16:50-16:55	12	1	2	0	16	4	2	12	12	14	0	3	78
16:55-17:00	2	1	0	3	22	2	6	14	20	21	0	1	92
17:00-17:05	3	0	0	0	14	2	2	11	16	24	1	1	74
17:05-17:10	4	2	1	1	23	4	0	16	12	15	1	6	85
17:10-17:15	1	0	0	0	27	3	1	11	18	17	0	4	82
17:15-17:20	5	1	0	0	20	3	1	23	23	12	1	8	97
17:20-17:25	1	0	0	0	14	3	2	5	20	21	0	3	69
17:25-17:30	3	1	0	1	21	1	1	15	13	16	0	6	78
17:30-17:35	8	1	1	0	13	2	5	13	12	15	0	1	71
17:35-17:40	0	0	0	1	19	2	1	11	12	10	0	1	57
17:40-17:45	3	0	1	0	11	2	1	20	13	13	1	3	68
17:45-17:50	3	0	1	0	22	3	0	13	11	10	2	1	66
17:50-17:55	2	0	0	1	17	2	3	20	4	3	1	4	57
17:55-18:00	1	0	0	1	13	2	1	16	11	12	0	0	57
TOTALS	87	11	18	14	421	56	42	350	368	343	11	74	1795
PHF	0.59	0.58	0.39	0.38	0.84	0.77	0.52	0.72	0.84	0.75	0.63	0.53	0.81
% Trucks	10.3	0	5.6	14.3	7.8	7.1	16.7	8.6	7.1	8.7	18.2	5.4	8.2
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	
Pedestrians		2			0			0			1		

INTERSECTION TURN MOVEMENT SUMMARY REPORT

File: V9TK36.TM1



Peak Hour
18:00-19:00

Total Entry Volume
656

T=% Trucks By Approach

P = PHF By Approach

LOCATION:

HIGHWAY 101 AT HIGHWAY 38/UMPQUA
REEDSPORT, OR

Date: **08/31/04** Day: **TUE**
Time: **18:00 - 20:00**

Report Prepared for:
DKS ASSOCIATES

Surveyed By:
TRAFFIC SMITHY, INC
1225 NW Murray Blvd Suite 111
Portland, OR 97229
Phone: 503-641-6333 Fax: 503-643-8866

Report Reviewed by: JG

TIME PERIOD	EASTBOUND			SOUTHBOUND			NORTHBOUND			WESTBOUND			ALL
	↴	→	↱	↲	↓	↳	↰	↑	↱	↲	←	↰	
18:00-18:05	6	0	1	0	7	4	1	11	13	20	0	4	67
18:05-18:10	3	0	0	0	9	0	0	21	13	14	0	5	65
18:10-18:15	0	0	0	0	12	1	0	21	11	4	1	4	54
18:15-18:20	2	0	0	0	12	2	0	16	18	13	0	4	67
18:20-18:25	0	0	0	0	13	3	1	13	11	17	0	1	59
18:25-18:30	0	0	0	0	11	4	1	15	11	5	0	1	48
18:30-18:35	1	0	1	0	15	1	1	15	7	5	0	1	47
18:35-18:40	4	0	0	0	11	1	1	9	10	13	0	1	50
18:40-18:45	1	0	0	0	8	2	0	15	9	16	0	0	51
18:45-18:50	2	0	0	0	9	1	0	11	8	13	0	2	46
18:50-18:55	0	0	0	0	9	0	0	15	12	15	0	1	52
18:55-19:00	0	0	1	0	11	5	0	7	15	10	0	1	50
19:00-19:05	1	0	0	0	8	1	2	8	7	11	0	3	41
19:05-19:10	0	0	0	0	5	3	1	12	22	6	0	1	50
19:10-19:15	0	0	0	0	6	0	0	10	8	11	0	2	37
19:15-19:20	1	1	0	0	8	2	3	5	8	15	0	4	47
19:20-19:25	0	0	2	0	15	0	0	8	13	6	0	2	46
19:25-19:30	0	0	0	0	8	1	0	9	7	7	1	1	34
19:30-19:35	0	0	1	0	12	3	0	4	8	13	1	0	42
19:35-19:40	1	1	0	0	7	0	0	9	10	9	0	2	39
19:40-19:45	0	0	0	0	11	1	0	7	14	9	0	4	46
19:45-19:50	0	0	1	0	5	2	0	8	7	6	1	6	36
19:50-19:55	2	0	0	0	4	1	0	11	11	9	0	1	39
19:55-20:00	1	0	0	0	15	1	2	8	8	4	0	0	39

TOTALS	25	2	7	0	231	39	13	268	261	251	4	51	1152
PHF	0.53	0	0.75	0	0.81	0.67	0.42	0.73	0.82	0.82	0.25	0.48	0.88
% Trucks	12	50	0	0	4.3	7.7	30.8	6	6.1	6.8	0	9.8	6.5
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	
Pedestrians		0			0			0			1		

TRAFFIC SMITHY, INC.

1225 NW MURRAY BLVD SUITE 111
PORTLAND, OR 97229

Title1 : Hwy 101
Title2 : South of Schofield Bridge
Title3 :

Site:
Date: 08/31/04

Direction: NB

Begin Time	Total	1 Bikes	2 Cars & Tlrs	3 2 Axle Long	4 Buses	5 2 Axle 6 Tire	6 3 Axle Single	7 4 Axle Single	8 <5 Axl Double	9 5 Axle Double	10 >6 Axl Double	11 <6 Axl Multi	12 6 Axle Multi	13 >6 Axl Multi
12:AM	26	0	19	5	0	1	0	0	0	1	0	0	0	0
01:00	21	0	11	3	2	1	0	0	0	1	2	0	0	1
02:00	27	0	9	6	0	5	2	0	2	1	0	0	0	2
03:00	31	0	11	5	1	4	5	0	1	0	1	0	1	2
04:00	68	0	31	19	0	5	4	0	4	3	0	0	0	2
05:00	127	0	59	31	0	17	3	0	6	5	3	0	0	3
06:00	191	1	95	48	4	19	1	0	11	6	0	0	1	5
07:00	340	5	175	95	2	30	4	3	12	4	4	1	2	3
08:00	401	0	212	110	3	45	2	0	13	5	6	1	0	4
09:00	466	2	255	113	6	46	5	2	22	6	4	0	1	4
10:00	518	2	282	122	6	44	5	0	34	6	5	0	6	6
11:00	546	4	306	130	3	43	3	1	31	9	5	2	3	6
12:PM	571	6	320	133	4	42	10	2	29	6	11	2	2	4
01:00	604	7	346	137	5	48	2	0	33	9	5	4	2	6
02:00	611	7	338	157	1	46	4	0	37	11	3	0	3	4
03:00	618	9	363	137	3	51	5	1	36	4	5	1	2	1
04:00	617	9	351	139	5	58	5	2	36	5	3	3	0	1
05:00	498	2	315	112	2	33	2	0	18	2	5	2	3	2
06:00	417	1	251	102	1	32	2	1	16	4	4	1	1	1
07:00	303	2	191	79	1	14	2	1	5	5	0	2	0	1
08:00	249	1	168	59	0	12	2	0	3	0	2	1	0	1
09:00	147	1	105	32	0	9	0	0	0	0	0	0	0	0
10:00	86	0	64	15	0	3	0	0	1	2	0	0	0	1
11:00	50	0	32	9	1	5	0	0	1	1	1	0	0	0
Daily Totals	7,533	59	4,309	1,798	50	613	68	13	351	96	69	20	27	60
Percent of Total		0.8	57.2	23.9	0.7	8.1	0.9	0.2	4.7	1.3	0.9	0.3	0.4	0.8

TRAFFIC SMITHY, INC.

1225 NW MURRAY BLVD SUITE 111
PORTLAND, OR 97229

Title1 : Hwy 101 Site:
Title2 : South of Schofield Bridge Date: 09/01/04
Title3 : Direction: SB

Begin Time	Total	1 Bikes	2 Cars & Tlrs	3 2 Axle Long	4 Buses	5 2 Axle 6 Tire	6 3 Axle Single	7 4 Axle Single	8 <5 Axl Double	9 5 Axle Double	10 >6 Axl Double	11 <6 Axl Multi	12 6 Axle Multi	13 >6 Axl Multi
12:AM	57	0	34	11	0	5	0	0	4	1	0	0	1	1
01:00	28	0	18	5	0	4	0	0	0	0	0	0	0	1
02:00	17	0	7	5	1	2	0	0	1	0	1	0	0	0
03:00	25	0	11	7	0	1	1	0	2	3	0	0	0	0
04:00	44	0	18	13	1	4	1	0	0	3	1	1	1	1
05:00	114	1	48	33	4	12	2	0	4	4	3	1	0	2
06:00	159	0	81	41	3	15	1	0	10	3	2	1	1	1
07:00	295	0	181	63	2	22	5	0	9	5	2	1	0	5
08:00	325	2	167	101	1	32	2	2	6	4	4	0	0	4
09:00	436	1	218	121	6	37	6	0	33	7	4	1	1	1
10:00	514	6	248	153	7	42	3	3	36	6	3	1	4	2
11:00	568	4	279	168	8	43	2	2	38	5	10	1	6	2
12:PM	601	8	336	146	9	39	7	3	31	6	8	1	5	2
01:00	614	9	304	174	8	39	10	1	40	12	9	3	1	4
02:00	558	14	268	149	6	62	3	1	36	9	4	2	2	2
03:00	591	7	321	142	3	56	2	1	36	5	5	6	4	3
04:00	582	6	303	162	4	48	3	1	36	6	8	2	1	2
05:00	578	5	305	146	3	63	6	2	34	3	5	3	0	3
06:00	477	8	269	130	1	41	0	1	13	2	3	3	4	2
07:00	338	1	190	85	1	31	0	1	23	4	0	2	0	0
08:00	291	3	173	79	1	18	0	1	10	1	1	1	0	3
09:00	219	1	127	62	0	15	0	0	9	2	0	0	1	2
10:00	128	0	92	24	0	6	0	0	6	0	0	0	0	0
11:00	65	0	38	15	0	2	0	0	6	1	1	1	0	1
Daily Totals	7,624	76	4,036	2,035	69	639	54	19	423	92	74	31	32	44
Percent of Total		1.0	52.9	26.7	0.9	8.4	0.7	0.2	5.5	1.2	1.0	0.4	0.4	0.6

C: Level of Service Analysis

TRAFFIC LEVELS OF SERVICE

Analysis of traffic volumes is useful in understanding the general nature of traffic in an area, but by itself indicates neither the ability of the street network to carry additional traffic nor the quality of service afforded by the street facilities. For this, the concept of *level of service* (LOS) has been developed to subjectively describe traffic performance. Level of service can be measured at intersections and along key roadway segments.

Level of service categories are similar to report card ratings for traffic performance. Intersections are typically the controlling bottlenecks of traffic flow and the ability of a roadway system to carry traffic efficiently is generally diminished in their vicinities. Levels of Service A, B and C indicate conditions where traffic moves without significant delays over periods of peak travel demand. Level of service D and E are progressively worse peak hour operating conditions and F conditions represent where demand exceeds the capacity of an intersection. Most urban communities set level of service D as the minimum acceptable level of service for peak hour operation and plan for level of service C or better for all other times of the day. The *Highway Capacity Manual* provides level of service calculation methodology for both intersections and arterials[1]. The following sections provide interpretations of the analysis approaches.

[1] *Highway Capacity Manual 2000*, Transportation Research Board, Washington D.C., 2000, Chapters 16 and 17.

UNSIGNALIZED INTERSECTIONS (ALL-WAY STOP CONTROLLED)

Unsignalized intersections and all-way stop controlled intersections are each subject to a separate capacity analysis methodology. All-way stop controlled intersection operations are reported by leg of the intersection.

This method calculates a delay value for each approach to the intersection. The *2000 Highway Capacity Manual 2000* describes the detailed methodology. The following table describes the amount of delay associated with each level of service.

Level of Service	Delay (seconds)
A	0 – 10
B	> 10 – 15
C	> 15 – 25
D	> 25 – 35
E	> 35 – 50
F	> 50

Source: *Highway Capacity Manual 2000*, Exhibit 17-22

UNSIGNALIZED INTERSECTIONS (TWO-WAY STOP CONTROLLED)

Unsignalized intersection level of service is reported for the major street and minor street (generally, left turn movements). The method assesses available and critical gaps in the traffic stream which make it possible for side street traffic to enter the main street flow. The *Highway Capacity Manual 2000* describes the detailed methodology. It is not unusual for an intersection to experience level of service E or F conditions for the minor street left turn movement. It should be understood that, often, a poor level of service is experienced by only a few vehicles and the intersection as a whole operates acceptably.

Unsignalized intersection levels of service are described in the following table.

Level of Service	Delay (sec/veh)	Expected Delay
A	0 – 10	Little or no delay
B	> 10 – 15	Short traffic delays
C	> 15 – 25	Average traffic delays
D	> 25 – 35	Long traffic delays
E	> 35 – 50	Very long traffic delays
F	> 50	Extreme delays potentially affecting other traffic movements in the intersection

Source: *Highway Capacity Manual 2000*, Exhibit 17-2

SIGNALIZED INTERSECTIONS

For signalized intersections, level of service is evaluated based upon average vehicle delay experienced by vehicles entering an intersection. Control delay (or signal delay) includes initial deceleration delay, queue move-up time, stopped delay, and final acceleration delay. In previous versions of this chapter of the *HCM* (1994 and earlier), delay included only stopped delay. As delay increases, the level of service decreases. Calculations for signalized and unsignalized intersections are different due to the variation in traffic control. The *Highway Capacity Manual 2000* provides the basis for these calculations.

Level of Service	Delay (sec/veh)	Description
A	0 – 10	**Free Flow/Insignificant Delays:** No approach phase is fully utilized by traffic and no vehicle waits longer than one red indication. Most vehicles do not stop at all. Progression is extremely favorable and most vehicles arrive during the green phase.
B	> 10 – 20	**Stable Operation/Minimal Delays:** An occasional approach phase is fully utilized. Many drivers begin to feel somewhat restricted within platoons of vehicles. This level generally occurs with good progression, short cycle lengths, or both.
C	> 20 – 35	**Stable Operation/Acceptable Delays:** Major approach phases fully utilized. Most drivers feel somewhat restricted. Higher delays may result from fair progression, longer cycle lengths, or both. Individual cycle failures may begin to appear at this level, and the number of vehicles stopping is significant.
D	> 35 – 55	**Approaching Unstable/Tolerable Delays:** The influence of congestion becomes more noticeable. Drivers may have to wait through more than one red signal indication. Longer delays may result from some combination of unfavorable progression, long cycle lengths, or high v/c ratios. The proportion of vehicles not stopping declines, and individual cycle failures are noticeable.
E	> 55 – 80	**Unstable Operation/Significant Delays:** Volumes at or near capacity. Vehicles may wait though several signal cycles. Long queues form upstream from intersection. These high delay values generally indicate poor progression, long cycle lengths, and high v/c ratios. Individual cycle failures are a frequent occurrence.
F	> 80	**Forced Flow/Excessive Delays:** Represents jammed conditions. Queues may block upstream intersections. This level occurs when arrival flow rates exceed intersection capacity, and is considered to be unacceptable to most drivers. Poor progression, long cycle lengths, and v/c ratios approaching 1.0 may contribute to these high delay levels.

Source: *Highway Capacity Manual 2000*, Exhibit 16-2

Reedsport TSP
Existing Conditions (with growth adj)

Scenario Report

Scenario:	Default Scenario
Command:	Default Command
Volume:	Default Volume
Geometry:	Default Geometry
Impact Fee:	Default Impact Fee
Trip Generation:	Default Trip Generation
Trip Distribution:	Default Trip Distribution
Paths:	Default Paths
Routes:	Default Routes
Configuration:	Default Configuration

Reedsport TSP
Existing Conditions (with growth adj)

Impact Analysis Report
Level Of Service

Intersection	Base LOS	Base Del/ Veh	Base V/ C	Future LOS	Future Del/ Veh	Future V/ C	Change in
# 1 US 101/ 22nd Street	B	17.2	0.394	B	17.2	0.394	+ 0.000 D/V
# 2 US 101/ Winchester Avenue	B	16.3	0.393	B	16.3	0.393	+ 0.000 D/V
# 3 US 101/ OR 38	B	19.6	0.448	B	19.6	0.448	+ 0.000 D/V
# 4 Ranch Road/ Ridgeway Drive	B	10.3	0.000	B	10.3	0.000	+ 0.000 D/V
# 5 Longwood Drive/ Bowman Road	A	8.7	0.000	A	8.7	0.000	+ 0.000 D/V
# 6 Longwood Drive/ Ranch Road	A	9.2	0.000	A	9.2	0.000	+ 0.000 D/V
# 7 US 101/ Longwood Drive	B	11.4	0.000	B	11.4	0.000	+ 0.000 D/V
# 8 East Fir Avenue/ Winchester Av	B	11.4	0.000	B	11.4	0.000	+ 0.000 D/V
# 9 OR 38 & East Fir Avenue/ 6th S	B	13.2	0.000	B	13.2	0.000	+ 0.000 D/V
# 10 OR 38/ Winchester Avenue	B	11.7	0.000	B	11.7	0.000	+ 0.000 D/V

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Reedsport TSP
Existing Conditions (with growth adj)

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #1 US 101/ 22nd Street

Cycle (sec): 100 Critical Vol./Cap. (X): 0.394
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): 17.2
Optimal Cycle: 31 Level Of Service: B

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	0	1! 0	0	0	1	0	1	0	0	1	0
Volume Module: >> Count Date: 30 Sep 2004 <<												
Base Vol:	19	29	56	127	33	37	26	423	19	59	482	137
Growth Adj:	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25
Initial Bse:	24	36	70	159	41	46	33	529	24	74	603	171
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	24	36	70	159	41	46	33	529	24	74	603	171
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	24	36	70	159	41	46	33	529	24	74	603	171
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	24	36	70	159	41	46	33	529	24	74	603	171
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	24	36	70	159	41	46	33	529	24	74	603	171
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.87	0.87	0.87	0.68	0.68	0.85	0.95	0.94	0.94	0.95	0.92	0.92
Lanes:	0.18	0.28	0.54	0.79	0.21	1.00	1.00	1.91	0.09	1.00	1.56	0.44
Final Sat.:	302	462	891	1029	267	1615	1805	3434	154	1805	2718	773
Capacity Analysis Module:												
Vol/Sat:	0.08	0.08	0.08	0.15	0.15	0.03	0.02	0.15	0.15	0.04	0.22	0.22
Crit Moves:					****		****				****	
Green/Cycle:	0.39	0.39	0.39	0.39	0.39	0.39	0.05	0.48	0.48	0.13	0.56	0.56
Volume/Cap:	0.20	0.20	0.20	0.39	0.39	0.07	0.39	0.32	0.32	0.32	0.39	0.39
Delay/Veh:	20.2	20.2	20.2	22.4	22.4	19.1	49.5	16.0	16.0	40.5	12.4	12.4
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	20.2	20.2	20.2	22.4	22.4	19.1	49.5	16.0	16.0	40.5	12.4	12.4
HCM2kAvg:	3	3	3	7	7	1	2	5	5	2	7	7

Reedsport TSP
Existing Conditions (with growth adj)

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #2 US 101/ Winchester Avenue

Cycle (sec): 100 Critical Vol./Cap. (X): 0.393
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): 16.3
Optimal Cycle: 31 Level Of Service: B

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0	1	1	0	1	0	1	1	0	1	0
Volume Module: >> Count Date: 29 Sep 2004 <<												
Base Vol:	42	416	121	7	537	5	33	17	39	152	15	13
Growth Adj:	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25
Initial Bse:	53	520	151	9	671	6	41	21	49	190	19	16
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	53	520	151	9	671	6	41	21	49	190	19	16
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
PHF Volume:	54	536	156	9	692	6	43	22	50	196	19	17
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	54	536	156	9	692	6	43	22	50	196	19	17
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	54	536	156	9	692	6	43	22	50	196	19	17
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.92	0.92	0.95	0.95	0.95	0.78	0.78	0.85	0.72	0.72	0.72
Lanes:	1.00	1.55	0.45	1.00	1.98	0.02	0.66	0.34	1.00	0.85	0.08	0.07
Final Sat.:	1805	2701	786	1805	3573	33	974	502	1615	1156	114	99
Capacity Analysis Module:												
Vol/Sat:	0.03	0.20	0.20	0.00	0.19	0.19	0.04	0.04	0.03	0.17	0.17	0.17
Crit Moves:	****				****						****	
Green/Cycle:	0.08	0.56	0.56	0.01	0.49	0.49	0.43	0.43	0.43	0.43	0.43	0.43
Volume/Cap:	0.39	0.36	0.36	0.36	0.39	0.39	0.10	0.10	0.07	0.39	0.39	0.39
Delay/Veh:	45.8	12.5	12.5	57.3	16.1	16.1	17.0	17.0	16.8	19.9	19.9	19.9
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	45.8	12.5	12.5	57.3	16.1	16.1	17.0	17.0	16.8	19.9	19.9	19.9
HCM2kAvg:	2	6	6	1	7	7	1	1	1	7	7	7

Reedsport TSP
Existing Conditions (with growth adj)

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #3 US 101/ OR 38

Cycle (sec): 100 Critical Vol./Cap. (X): 0.448
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): 19.6
Optimal Cycle: 34 Level Of Service: B

Approach:	North Bound						South Bound						East Bound						West Bound					
Movement:	L	-	T	-	R		L	-	T	-	R		L	-	T	-	R		L	-	T	-	R	
Control:	Protected						Protected						Permitted						Permitted					
Rights:	Include						Include						Include						Include					
Min. Green:	0		0		0		0		0		0		0		0		0		0		0		0	
Lanes:	1	0	2	0	1		1	0	1	1	0		0	0	1!	0	0		0	1	0	0	1	
Volume Module: >> Count Date: 31 Aug 2004 <<																								
Base Vol:	21		166		195		31		236		6		11		7		57		180		5		38	
Growth Adj:	1.25		1.25		1.25		1.25		1.25		1.25		1.25		1.25		1.25		1.25		1.25		1.25	
Initial Bse:	26		208		244		39		295		8		14		9		71		225		6		48	
Added Vol:	0		0		0		0		0		0		0		0		0		0		0		0	
PasserByVol:	0		0		0		0		0		0		0		0		0		0		0		0	
Initial Fut:	26		208		244		39		295		8		14		9		71		225		6		48	
User Adj:	1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00	
PHF Adj:	0.81		0.81		0.81		0.81		0.81		0.81		0.81		0.81		0.81		0.81		0.81		0.81	
PHF Volume:	32		256		301		48		364		9		17		11		88		278		8		59	
Reduct Vol:	0		0		0		0		0		0		0		0		0		0		0		0	
Reduced Vol:	32		256		301		48		364		9		17		11		88		278		8		59	
PCE Adj:	1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00	
MLF Adj:	1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00	
Final Vol.:	32		256		301		48		364		9		17		11		88		278		8		59	
Saturation Flow Module:																								
Sat/Lane:	1900		1900		1900		1900		1900		1900		1900		1900		1900		1900		1900		1900	
Adjustment:	0.95		0.95		0.85		0.95		0.95		0.95		0.85		0.85		0.85		0.64		0.64		0.85	
Lanes:	1.00		2.00		1.00		1.00		1.95		0.05		0.15		0.09		0.76		0.97		0.03		1.00	
Final Sat.:	1805		3610		1615		1805		3506		89		237		151		1227		1179		33		1615	
Capacity Analysis Module:																								
Vol/Sat:	0.02		0.07		0.19		0.03		0.10		0.10		0.07		0.07		0.07		0.24		0.24		0.04	
Crit Moves:					****		****														****			
Green/Cycle:	0.07		0.42		0.42		0.06		0.40		0.40		0.53		0.53		0.53		0.53		0.53		0.53	
Volume/Cap:	0.26		0.17		0.45		0.45		0.26		0.26		0.14		0.14		0.14		0.45		0.45		0.07	
Delay/Veh:	45.1		18.4		21.5		48.4		19.9		19.9		12.2		12.2		12.2		15.2		15.2		11.7	
User DelAdj:	1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00	
AdjDel/Veh:	45.1		18.4		21.5		48.4		19.9		19.9		12.2		12.2		12.2		15.2		15.2		11.7	
HCM2kAvg:	1		2		7		2		4		4		2		2		2		9		9		1	

Reedsport TSP
Existing Conditions (with growth adj)

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #4 Ranch Road/ Ridgeway Drive

Average Delay (sec/veh): 1.7 Worst Case Level Of Service: B[10.3]

Approach:	North Bound									South Bound									East Bound									West Bound								
Movement:	L	-	T	-	R					L	-	T	-	R					L	-	T	-	R					L	-	T	-	R				
Control:	Uncontrolled									Uncontrolled									Stop Sign									Stop Sign								
Rights:	Include									Include									Include									Include								
Lanes:	0	0	1!	0	0					0	1	0	0	0					0	0	1!	0	0					0	0	1!	0	0				
Volume Module: >> Count Date: 24 Sep 2004 <<																																				
Base Vol:	21		105		9					4		108		0					3		2		10					6		2		5				
Growth Adj:	1.00		1.00		1.00					1.00		1.00		1.00					1.00		1.00		1.00					1.00		1.00		1.00				
Initial Bse:	21		105		9					4		108		0					3		2		10					6		2		5				
Added Vol:	0		0		0					0		0		0					0		0		0					0		0		0				
PasserByVol:	0		0		0					0		0		0					0		0		0					0		0		0				
Initial Fut:	21		105		9					4		108		0					3		2		10					6		2		5				
User Adj:	1.00		1.00		1.00					1.00		1.00		1.00					1.00		1.00		1.00					1.00		1.00		1.00				
PHF Adj:	0.82		0.82		0.82					0.82		0.82		0.82					0.82		0.82		0.82					0.82		0.82		0.82				
PHF Volume:	26		128		11					5		132		0					4		2		12					7		2		6				
Reduct Vol:	0		0		0					0		0		0					0		0		0					0		0		0				
Final Vol.:	26		128		11					5		132		0					4		2		12					7		2		6				
Critical Gap Module:																																				
Critical Gp:	4.1	xxxx	xxxxx							4.1	xxxx	xxxxx							7.1		6.5		6.2					7.1		6.5		6.2				
FollowUpTim:	2.2	xxxx	xxxxx							2.2	xxxx	xxxxx							3.5		4.0		3.3					3.5		4.0		3.3				
Capacity Module:																																				
Cnflict Vol:	132	xxxx	xxxxx							139	xxxx	xxxxx							330		332		132					334		326		134				
Potent Cap.:	1466	xxxx	xxxxx							1457	xxxx	xxxxx							627		591		923					624		595		921				
Move Cap.:	1466	xxxx	xxxxx							1457	xxxx	xxxxx							611		579		923					604		583		921				
Volume/Cap:	0.02	xxxx	xxxx							0.00	xxxx	xxxx							0.01		0.00		0.01					0.01		0.00		0.01				
Level Of Service Module:																																				
Queue:	0.1	xxxx	xxxxx							0.0	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx																		
Stopped Del:	7.5	xxxx	xxxxx							7.5	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx																		
LOS by Move:	A	*	*							A	*	*	*	*	*	*	*	*																		
Movement:	LT	-	LTR	-	RT					LT	-	LTR	-	RT					LT	-	LTR	-	RT					LT	-	LTR	-	RT				
Shared Cap.:	xxxx	xxxx	xxxxx							xxxx	xxxx	xxxxx							xxxx		781	xxxxx						xxxx		692	xxxxx					
SharedQueue:	xxxxx	xxxx	xxxxx							0.0	xxxx	xxxxx	xxxxx						0.1	xxxxx	xxxxx							0.1	xxxxx							
Shrd StpDel:	xxxxx	xxxx	xxxxx							7.5	xxxx	xxxxx	xxxxx						9.7	xxxxx	xxxxx							10.3	xxxxx							
Shared LOS:	*	*	*							A	*	*	*						A	*	*							B	*							
ApproachDel:	xxxxxx									xxxxxx									9.7									10.3								
ApproachLOS:	*									*									A									B								

Reedsport TSP
Existing Conditions (with growth adj)

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #5 Longwood Drive/ Bowman Road

Average Delay (sec/veh): 3.4 Worst Case Level Of Service: A[8.7]

Approach:	North Bound						South Bound						East Bound						West Bound					
Movement:	L	-	T	-	R		L	-	T	-	R		L	-	T	-	R		L	-	T	-	R	
Control:	Uncontrolled						Uncontrolled						Stop Sign						Stop Sign					
Rights:			Include						Include						Include						Include			
Lanes:	0	0	0	1	0		0	1	0	0	0		0	0	0	0	0		0	0	1!	0	0	
Volume Module: >> Count Date: 29 Sep 2004 <<																								
Base Vol:	0		30		8		20		21		0		0		0		0		3		0		21	
Growth Adj:	1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00	
Initial Bse:	0		30		8		20		21		0		0		0		0		3		0		21	
Added Vol:	0		0		0		0		0		0		0		0		0		0		0		0	
PasserByVol:	0		0		0		0		0		0		0		0		0		0		0		0	
Initial Fut:	0		30		8		20		21		0		0		0		0		3		0		21	
User Adj:	1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00	
PHF Adj:	0.78		0.78		0.78		0.78		0.78		0.78		0.78		0.78		0.78		0.78		0.78		0.78	
PHF Volume:	0		38		10		26		27		0		0		0		0		4		0		27	
Reduct Vol:	0		0		0		0		0		0		0		0		0		0		0		0	
Final Vol.:	0		38		10		26		27		0		0		0		0		4		0		27	
Critical Gap Module:																								
Critical Gp:	xxxxx	xxxx	xxxxx				4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx							6.4	xxxx			6.2	
FollowUpTim:	xxxxx	xxxx	xxxxx				2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx							3.5	xxxx			3.3	
Capacity Module:																								
Cnflict Vol:	xxxx	xxxx	xxxxx				49	xxxx	xxxxx		xxxx	xxxx	xxxxx						122	xxxx			44	
Potent Cap.:	xxxx	xxxx	xxxxx				1571	xxxx	xxxxx		xxxx	xxxx	xxxxx						878	xxxx			1032	
Move Cap.:	xxxx	xxxx	xxxxx				1571	xxxx	xxxxx		xxxx	xxxx	xxxxx						867	xxxx			1032	
Volume/Cap:	xxxx	xxxx	xxxx				0.02	xxxx	xxxx		xxxx	xxxx	xxxx						0.00	xxxx			0.03	
Level Of Service Module:																								
Queue:	xxxxx	xxxx	xxxxx				0.0	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx										
Stopped Del:	xxxxx	xxxx	xxxxx				7.3	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx										
LOS by Move:	*	*	*				A	*	*	*	*	*	*	*	*										
Movement:	LT -	LTR -	RT				LT -	LTR -	RT				LT -	LTR -	RT				LT -	LTR -	RT			
Shared Cap.:	xxxx	xxxx	xxxxx				xxxx	xxxx	xxxxx				xxxx	xxxx	xxxxx				xxxx	1008	xxxxx			
SharedQueue:	xxxxx	xxxx	xxxxx				0.0	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx				0.1	xxxxx				
Shrd StpDel:	xxxxx	xxxx	xxxxx				7.3	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx				8.7	xxxxx				
Shared LOS:	*	*	*				A	*	*	*	*	*	*	*	*				A	*				
ApproachDel:	xxxxxx						xxxxxx						xxxxxx						8.7					
ApproachLOS:	*						*						*						A					

Reedsport TSP
Existing Conditions (with growth adj)

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #6 Longwood Drive/ Ranch Road

Average Delay (sec/veh): 4.2 Worst Case Level Of Service: A[9.2]

Approach:	North Bound						South Bound						East Bound						West Bound					
Movement:	L	-	T	-	R		L	-	T	-	R		L	-	T	-	R		L	-	T	-	R	
Control:	Uncontrolled						Uncontrolled						Stop Sign						Stop Sign					
Rights:			Include						Include						Include						Include			
Lanes:	0	1	0	0	0		0	0	0	1	0		0	0	1!	0	0		0	0	0	0	0	
Volume Module: >> Count Date: 29 Sep 2004 <<																								
Base Vol:	27		29		0		0		20		28		23		0		25		0		0		0	
Growth Adj:	1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00	
Initial Bse:	27		29		0		0		20		28		23		0		25		0		0		0	
Added Vol:	0		0		0		0		0		0		0		0		0		0		0		0	
PasserByVol:	0		0		0		0		0		0		0		0		0		0		0		0	
Initial Fut:	27		29		0		0		20		28		23		0		25		0		0		0	
User Adj:	1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00	
PHF Adj:	0.78		0.78		0.78		0.78		0.78		0.78		0.78		0.78		0.78		0.78		0.78		0.78	
PHF Volume:	35		37		0		0		26		36		29		0		32		0		0		0	
Reduct Vol:	0		0		0		0		0		0		0		0		0		0		0		0	
Final Vol.:	35		37		0		0		26		36		29		0		32		0		0		0	
Critical Gap Module:																								
Critical Gp:	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx							6.4	xxxx			6.2		xxxxx	xxxx	xxxxx			
FollowUpTim:	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx							3.5	xxxx			3.3		xxxxx	xxxx	xxxxx			
Capacity Module:																								
Cnflict Vol:	62	xxxx	xxxxx	xxxx	xxxx	xxxxx							150	xxxx			44		xxxx	xxxx	xxxxx			
Potent Cap.:	1554	xxxx	xxxxx	xxxx	xxxx	xxxxx							847	xxxx			1032		xxxx	xxxx	xxxxx			
Move Cap.:	1554	xxxx	xxxxx	xxxx	xxxx	xxxxx							832	xxxx			1032		xxxx	xxxx	xxxxx			
Volume/Cap:	0.02	xxxx	xxxx	xxxx	xxxx	xxxx							0.04	xxxx			0.03		xxxx	xxxx	xxxx			
Level Of Service Module:																								
Queue:	0.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx												
Stopped Del:	7.4	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx												
LOS by Move:	A	*	*	*	*	*	*	*	*	*	*	*												
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT												
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	926	xxxxx	xxxx	xxxx	xxxxx												
SharedQueue:	0.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	0.2	xxxxx	xxxxx	xxxx	xxxxx												
Shrd StpDel:	7.4	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	9.2	xxxxx	xxxxx	xxxx	xxxxx												
Shared LOS:	A	*	*	*	*	*	*	A	*	*	*	*												
ApproachDel:	xxxxxx			xxxxxx			xxxxxx			9.2			xxxxxx											
ApproachLOS:	*			*			*			A			*											

Reedsport TSP
Existing Conditions (with growth adj)

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #7 US 101/ Longwood Drive

Average Delay (sec/veh): 2.2 Worst Case Level Of Service: B[11.4]

Approach:	North Bound						South Bound						East Bound						West Bound					
Movement:	L	-	T	-	R		L	-	T	-	R		L	-	T	-	R		L	-	T	-	R	
Control:	Stop Sign						Stop Sign						Uncontrolled						Uncontrolled					
Rights:	Include						Include						Include						Include					
Lanes:	0	0	1!	0	0		0	0	0	0	0		0	0	1	1	0		1	0	2	0	0	
Volume Module: >> Count Date: 29 Sep 2004 <<																								
Base Vol:	3		0		97		0		0		0		0		355		11		109		392		0	
Growth Adj:	1.25		1.25		1.25		1.25		1.25		1.25		1.25		1.25		1.25		1.25		1.25		1.25	
Initial Bse:	4		0		121		0		0		0		0		444		14		136		490		0	
Added Vol:	0		0		0		0		0		0		0		0		0		0		0		0	
PasserByVol:	0		0		0		0		0		0		0		0		0		0		0		0	
Initial Fut:	4		0		121		0		0		0		0		444		14		136		490		0	
User Adj:	1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00	
PHF Adj:	0.91		0.91		0.91		0.91		0.91		0.91		0.91		0.91		0.91		0.91		0.91		0.91	
PHF Volume:	4		0		133		0		0		0		0		488		15		150		538		0	
Reduct Vol:	0		0		0		0		0		0		0		0		0		0		0		0	
Final Vol.:	4		0		133		0		0		0		0		488		15		150		538		0	
Critical Gap Module:																								
Critical Gp:	6.8	xxxx			6.9	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx		4.1	xxxx	xxxxx									
FollowUpTim:	3.5	xxxx			3.3	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx		2.2	xxxx	xxxxx									
Capacity Module:																								
Cnflict Vol:	1064	xxxx			251	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx		503	xxxx	xxxxx									
Potent Cap.:	221	xxxx			754	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx		1072	xxxx	xxxxx									
Move Cap.:	198	xxxx			754	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx		1072	xxxx	xxxxx									
Volume/Cap:	0.02	xxxx		0.18	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx		0.14	xxxx	xxxx										
Level Of Service Module:																								
Queue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx		0.5	xxxx	xxxxx											
Stopped Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx		8.9	xxxx	xxxxx											
LOS by Move:	*	*	*	*	*	*	*	*	*		A	*	*											
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT															
Shared Cap.:	xxxx	696	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx															
SharedQueue:	xxxxx	0.7	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx															
Shrd StpDel:	xxxxx	11.4	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx															
Shared LOS:	*	B	*	*	*	*	*	*	*															
ApproachDel:	11.4			xxxxxx			xxxxxx																	
ApproachLOS:	B			*			*																	

Reedsport TSP
Existing Conditions (with growth adj)

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #8 East Fir Avenue/ Winchester Avenue

Average Delay (sec/veh): 1.6 Worst Case Level Of Service: B[11.4]

Approach:	North Bound						South Bound						East Bound						West Bound					
Movement:	L	-	T	-	R		L	-	T	-	R		L	-	T	-	R		L	-	T	-	R	
Control:	Stop Sign						Stop Sign						Uncontrolled						Uncontrolled					
Rights:	Include						Include						Include						Include					
Lanes:	0	0	1!	0	0		0	0	1!	0	0		0	0	1!	0	0		0	0	1!	0	0	
Volume Module: >> Count Date: 30 Sep 2004 <<																								
Base Vol:	12		1		2		1		0		26		14		127		10		3		145		2	
Growth Adj:	1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00	
Initial Bse:	12		1		2		1		0		26		14		127		10		3		145		2	
Added Vol:	0		0		0		0		0		0		0		0		0		0		0		0	
PasserByVol:	0		0		0		0		0		0		0		0		0		0		0		0	
Initial Fut:	12		1		2		1		0		26		14		127		10		3		145		2	
User Adj:	1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00	
PHF Adj:	0.85		0.85		0.85		0.85		0.85		0.85		0.85		0.85		0.85		0.85		0.85		0.85	
PHF Volume:	14		1		2		1		0		31		16		149		12		4		171		2	
Reduct Vol:	0		0		0		0		0		0		0		0		0		0		0		0	
Final Vol.:	14		1		2		1		0		31		16		149		12		4		171		2	
Critical Gap Module:																								
Critical Gp:	7.1		6.5		6.2		7.1	xxxx			6.2		4.1	xxxx	xxxxx				4.1	xxxx	xxxxx			
FollowUpTim:	3.5		4.0		3.3		3.5	xxxx			3.3		2.2	xxxx	xxxxx				2.2	xxxx	xxxxx			
Capacity Module:																								
Cnflict Vol:	382		368		155		369	xxxx			172		173	xxxx	xxxxx				161	xxxx	xxxxx			
Potent Cap.:	579		564		896		591	xxxx			877		1416	xxxx	xxxxx				1430	xxxx	xxxxx			
Move Cap.:	553		556		896		583	xxxx			877		1416	xxxx	xxxxx				1430	xxxx	xxxxx			
Volume/Cap:	0.03		0.00		0.00		0.00	xxxx			0.03		0.01	xxxx	xxxx				0.00	xxxx	xxxx			
Level Of Service Module:																								
Queue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx		0.0	xxxx	xxxxx						0.0	xxxx	xxxxx			
Stopped Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx		7.6	xxxx	xxxxx						7.5	xxxx	xxxxx			
LOS by Move:	*	*	*	*	*	*	*	*	*		A	*	*						A	*	*			
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT															
Shared Cap.:	xxxx	583	xxxxx	xxxx	861	xxxxx	xxxx	xxxx	xxxxx															
SharedQueue:	xxxxx	0.1	xxxxx	xxxxx	0.1	xxxxx	xxxxx	xxxx	xxxxx															
Shrd StpDel:	xxxxx	11.4	xxxxx	xxxxx	9.3	xxxxx	xxxxx	xxxx	xxxxx															
Shared LOS:	*	B	*	*	A	*	*	*	*															
ApproachDel:	11.4			9.3			xxxxxx																	
ApproachLOS:	B			A			*																	

Reedsport TSP
Existing Conditions (with growth adj)

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #9 OR 38 & East Fir Avenue/ 6th Street

Average Delay (sec/veh): 0.9 Worst Case Level Of Service: B[13.2]

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 0 1!	0	0	0 0 1!	0	0	0 0 1!	0	0	0 1	0	0 0
Volume Module: >> Count Date: 30 Sep 2004 <<												
Base Vol:	9	0	6	8	1	7	3	227	24	9	240	0
Growth Adj:	1.24	1.24	1.24	1.24	1.24	1.24	1.24	1.24	1.24	1.24	1.24	1.24
Initial Bse:	11	0	7	10	1	9	4	281	30	11	298	0
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	11	0	7	10	1	9	4	281	30	11	298	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	12	0	8	10	1	9	4	296	31	12	313	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	12	0	8	10	1	9	4	296	31	12	313	0
Critical Gap Module:												
Critical Gp:	7.1	xxxx	6.2	7.1	6.5	6.2	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:	3.5	xxxx	3.3	3.5	4.0	3.3	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	662	xxxx	312	660	672	313	313	xxxx	xxxxx	328	xxxx	xxxxx
Potent Cap.:	378	xxxx	733	379	380	732	1258	xxxx	xxxxx	1243	xxxx	xxxxx
Move Cap.:	369	xxxx	733	371	375	732	1258	xxxx	xxxxx	1243	xxxx	xxxxx
Volume/Cap:	0.03	xxxx	0.01	0.03	0.00	0.01	0.00	xxxx	xxxx	0.01	xxxx	xxxx
Level Of Service Module:												
Queue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	0.0	xxxx	xxxxx	0.0	xxxx	xxxxx
Stopped Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.9	xxxx	xxxxx	7.9	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	A	*	*	A	*	*
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	460	xxxxx	xxxx	474	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	0.1	xxxxx	xxxxx	0.1	xxxxx	xxxxx	xxxx	xxxxx	0.0	xxxx	xxxxx
Shrd StpDel:	xxxxx	13.2	xxxxx	xxxxx	13.0	xxxxx	xxxxx	xxxx	xxxxx	7.9	xxxx	xxxxx
Shared LOS:	*	B	*	*	B	*	*	*	*	A	*	*
ApproachDel:		13.2			13.0		xxxxxx			xxxxxx		
ApproachLOS:		B			B		*			*		

Reedsport TSP
Existing Conditions (with growth adj)

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #10 OR 38/ Winchester Avenue

Average Delay (sec/veh): 9.9 Worst Case Level Of Service: B[11.7]

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 1	0	0 1	1	0	0 1	0	0	0 1!	0	0	0 0
Volume Module:												
Base Vol:	3	163	5	43	144	7	8	1	7	13	4	42
Growth Adj:	1.24	1.24	1.24	1.24	1.24	1.24	1.24	1.24	1.24	1.24	1.24	1.24
Initial Bse:	4	202	6	53	179	9	10	1	9	16	5	52
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	4	202	6	53	179	9	10	1	9	16	5	52
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
PHF Volume:	4	220	7	58	194	9	11	1	9	18	5	57
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	4	220	7	58	194	9	11	1	9	18	5	57
Critical Gap Module:												
Critical Gp:	7.1	6.5	6.2	7.1	6.5	6.2	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	3.5	4.0	3.3	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	198	125	6	210	101	34	62	xxxx	xxxxx	11	xxxx	xxxxx
Potent Cap.:	765	770	1083	752	793	1045	1554	xxxx	xxxxx	1622	xxxx	xxxxx
Move Cap.:	604	756	1083	572	779	1045	1554	xxxx	xxxxx	1622	xxxx	xxxxx
Volume/Cap:	0.01	0.29	0.01	0.10	0.25	0.01	0.01	xxxx	xxxx	0.01	xxxx	xxxx
Level Of Service Module:												
Queue:	xxxxx	xxxx	0.0	0.3	xxxx	xxxxx	0.0	xxxx	xxxxx	0.0	xxxx	xxxxx
Stopped Del:	xxxxx	xxxx	8.3	12.0	xxxx	xxxxx	7.3	xxxx	xxxxx	7.2	xxxx	xxxxx
LOS by Move:	*	*	A	B	*	*	A	*	*	A	*	*
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	752	xxxx	xxxxx	xxxx	xxxx	788	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	1.2	xxxx	xxxxx	xxxxx	xxxx	1.0	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd StpDel:	11.8	xxxx	xxxxx	xxxxx	xxxx	11.2	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	B	*	*	*	*	B	*	*	*	*	*	*
ApproachDel:		11.7			11.3		xxxxxx			xxxxxx		
ApproachLOS:		B			B		*			*		

Reedsport TSP
Future Conditions

Scenario Report

Scenario:	Future Conditions
Command:	Future Conditions
Volume:	Future Conditions
Geometry:	Default Geometry
Impact Fee:	Default Impact Fee
Trip Generation:	Future Conditions
Trip Distribution:	Default Trip Distribution
Paths:	Default Paths
Routes:	Default Routes
Configuration:	Default Configuration

Reedsport TSP
Future Conditions

Impact Analysis Report
Level Of Service

Intersection	Base LOS	Base Del/ Veh	Base V/ C	Future LOS	Future Del/ Veh	Future V/ C	Change in
# 1 US 101/ 22nd Street	C	20.8	0.527	D	37.8	0.912	+16.994 D/V
# 2 US 101/ Winchester Avenue	B	19.5	0.492	C	29.3	0.793	+ 9.838 D/V
# 3 US 101/ OR 38	C	25.7	0.446	C	29.5	0.663	+ 3.779 D/V
# 4 Ranch Road/ Ridgeway Drive	B	10.3	0.000	C	23.0	0.000	+12.690 D/V
# 5 Longwood Drive/ Bowman Road	A	8.7	0.000	A	8.8	0.000	+ 0.167 D/V
# 6 Longwood Drive/ Ranch Road	A	9.2	0.000	B	12.2	0.000	+ 3.041 D/V
# 7 US 101/ Longwood Drive	B	12.1	0.000	F	136.9	0.000	+124.770 D/V
# 8 East Fir Avenue/ Winchester Av	B	11.4	0.000	C	16.9	0.000	+ 5.583 D/V
# 9 OR 38 & East Fir Avenue/ 6th S	B	13.8	0.000	C	18.4	0.000	+ 4.567 D/V
# 10 OR 38/ Winchester Avenue	B	12.8	0.000	C	20.9	0.000	+ 8.101 D/V

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Reedsport TSP
Future Conditions

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #1 US 101/ 22nd Street

Cycle (sec):	100	Critical Vol./Cap. (X):	0.912
Loss Time (sec):	12 (Y+R = 4 sec)	Average Delay (sec/veh):	37.8
Optimal Cycle:	116	Level Of Service:	D

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0 0	1! 0	0	0 1	0 0	1	1 0	1 1	0	1 0	1 1	0
Volume Module:	>> Count Date: 30 Sep 2004 <<											
Base Vol:	19	29	56	127	33	37	26	423	19	59	482	137
Growth Adj:	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.48	1.25	1.25	1.48	1.25
Initial Bse:	24	36	70	159	41	46	33	624	24	74	711	171
Added Vol:	22	22	48	142	21	87	90	145	30	56	131	159
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	46	58	118	301	62	133	123	769	54	130	842	330
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
PHF Volume:	49	63	127	323	67	143	132	827	58	140	905	355
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	49	63	127	323	67	143	132	827	58	140	905	355
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	49	63	127	323	67	143	132	827	58	140	905	355
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.75	0.75	0.75	0.56	0.56	0.85	0.95	0.94	0.94	0.95	0.91	0.91
Lanes:	0.21	0.26	0.53	0.83	0.17	1.00	1.00	1.87	0.13	1.00	1.44	0.56
Final Sat.:	295	375	760	885	183	1615	1805	3340	234	1805	2484	974
Capacity Analysis Module:												
Vol/Sat:	0.17	0.17	0.17	0.37	0.37	0.09	0.07	0.25	0.25	0.08	0.36	0.36
Crit Moves:					****		****				****	
Green/Cycle:	0.40	0.40	0.40	0.40	0.40	0.40	0.08	0.37	0.37	0.11	0.40	0.40
Volume/Cap:	0.42	0.42	0.42	0.91	0.91	0.22	0.91	0.68	0.68	0.68	0.91	0.91
Delay/Veh:	22.1	22.1	22.1	51.9	51.9	19.9	95.2	28.2	28.2	51.3	37.8	37.8
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	22.1	22.1	22.1	51.9	51.9	19.9	95.2	28.2	28.2	51.3	37.8	37.8
HCM2kAvg:	7	7	7	24	24	3	7	12	12	6	22	22

Reedsport TSP
Future Conditions

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #2 US 101/ Winchester Avenue

Cycle (sec):	100	Critical Vol./Cap. (X):	0.793
Loss Time (sec):	12 (Y+R = 4 sec)	Average Delay (sec/veh):	29.3
Optimal Cycle:	76	Level Of Service:	C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1 0	1 1	0	1 0	1 1	0	0 1	0 0	1	0 0	1! 0	0
Volume Module:	>> Count Date: 29 Sep 2004 <<											
Base Vol:	42	416	121	7	537	5	33	17	39	152	15	13
Growth Adj:	1.25	1.48	1.25	1.25	1.48	1.25	1.25	1.25	1.25	1.25	1.25	1.25
Initial Bse:	53	614	151	9	792	6	41	21	49	190	19	16
Added Vol:	7	300	148	7	379	0	0	3	10	180	2	7
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	60	914	299	16	1171	6	41	24	59	370	21	23
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
PHF Volume:	61	942	309	16	1207	6	43	25	61	381	21	24
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	61	942	309	16	1207	6	43	25	61	381	21	24
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	61	942	309	16	1207	6	43	25	61	381	21	24
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.91	0.91	0.95	0.95	0.95	0.72	0.72	0.85	0.69	0.69	0.69
Lanes:	1.00	1.51	0.49	1.00	1.99	0.01	0.63	0.37	1.00	0.89	0.05	0.06
Final Sat.:	1805	2619	858	1805	3587	19	865	509	1615	1164	65	73
Capacity Analysis Module:												
Vol/Sat:	0.03	0.36	0.36	0.01	0.34	0.34	0.05	0.05	0.04	0.33	0.33	0.33
Crit Moves:	****				****						****	
Green/Cycle:	0.04	0.46	0.46	0.01	0.42	0.42	0.41	0.41	0.41	0.41	0.41	0.41
Volume/Cap:	0.79	0.79	0.79	0.79	0.79	0.79	0.12	0.12	0.09	0.79	0.79	0.79
Delay/Veh:	88.9	25.9	25.9	153.4	27.9	27.9	18.2	18.2	18.0	33.6	33.6	33.6
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	88.9	25.9	25.9	153.4	27.9	27.9	18.2	18.2	18.0	33.6	33.6	33.6
HCM2kAvg:	4	18	18	2	18	18	2	2	1	18	18	18

Reedsport TSP
Future Conditions

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #3 US 101/ OR 38

Cycle (sec): 100 Critical Vol./Cap. (X): 0.663
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 29.5
Optimal Cycle: 55 Level Of Service: C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Permitted			Permitted		
Rights:	Ignore			Include			Include			Ignore		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1 0	2	0 1	1	0 1	1 0	0 0	1!	0 0	0	1 0	0 1
Volume Module: >> Count Date: 31 Aug 2004 <<												
Base Vol:	21	166	195	31	236	6	11	7	57	180	5	38
Growth Adj:	1.25	1.48	1.36	1.25	1.48	1.25	1.25	1.25	1.25	1.36	1.36	1.36
Initial Bse:	26	245	266	39	348	8	14	9	71	245	7	52
Added Vol:	17	154	76	23	200	0	0	3	30	96	2	19
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	43	399	342	62	548	8	14	12	101	341	9	71
User Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
PHF Adj:	0.81	0.81	0.00	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.00
PHF Volume:	53	492	0	76	677	9	17	15	125	421	11	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	53	492	0	76	677	9	17	15	125	421	11	0
PCE Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
MLF Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
Final Vol.:	53	492	0	76	677	9	17	15	125	421	11	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.95	1.00	0.95	0.95	0.95	0.84	0.84	0.84	0.63	0.63	1.00
Lanes:	1.00	2.00	1.00	1.00	1.97	0.03	0.11	0.09	0.80	0.97	0.03	1.00
Final Sat.:	1805	3610	1900	1805	3554	49	174	148	1279	1159	30	1900
Capacity Analysis Module:												
Vol/Sat:	0.03	0.14	0.00	0.04	0.19	0.19	0.10	0.10	0.10	0.36	0.36	0.00
Crit Moves:	****				****						****	
Green/Cycle:	0.04	0.25	0.00	0.08	0.29	0.29	0.55	0.55	0.55	0.55	0.55	0.00
Volume/Cap:	0.66	0.54	0.00	0.54	0.66	0.66	0.18	0.18	0.18	0.66	0.66	0.00
Delay/Veh:	65.8	32.9	0.0	48.4	33.0	33.0	11.4	11.4	11.4	18.6	18.6	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	65.8	32.9	0.0	48.4	33.0	33.0	11.4	11.4	11.4	18.6	18.6	0.0
HCM2kAvg:	3	7	0	3	10	10	3	3	3	15	15	0

Reedsport TSP
Future Conditions

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #4 Ranch Road/ Ridgeway Drive

Average Delay (sec/veh): 1.8 Worst Case Level Of Service: C[23.0]

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Lanes:	0 0	1!	0 0	0	1 0	0 0	0	0	1! 0	0	0	1! 0
Volume Module: >> Count Date: 24 Sep 2004 <<												
Base Vol:	21	105	9	4	108	0	3	2	10	6	2	5
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	21	105	9	4	108	0	3	2	10	6	2	5
Added Vol:	0	462	0	40	346	0	0	0	0	0	0	49
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	21	567	9	44	454	0	3	2	10	6	2	54
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
PHF Volume:	26	691	11	54	554	0	4	2	12	7	2	66
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	26	691	11	54	554	0	4	2	12	7	2	66
Critical Gap Module:												
Critical Gp:	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx	7.1	6.5	6.2	7.1	6.5	6.2
FollowUpTim:	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx	3.5	4.0	3.3	3.5	4.0	3.3
Capacity Module:												
Cnflict Vol:	554	xxxx	xxxxx	702	xxxx	xxxxx	1443	1415	554	1416	1409	697
Potent Cap.:	1027	xxxx	xxxxx	904	xxxx	xxxxx	111	139	536	116	140	444
Move Cap.:	1027	xxxx	xxxxx	904	xxxx	xxxxx	87	127	536	104	128	444
Volume/Cap:	0.02	xxxx	xxxx	0.06	xxxx	xxxx	0.04	0.02	0.02	0.07	0.02	0.15
Level Of Service Module:												
Queue:	0.1	xxxx	xxxxx	0.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Stopped Del:	8.6	xxxx	xxxxx	9.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	A	*	*	A	*	*	*	*	*	*	*	*
Movement:	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	218	xxxxx	xxxx	319	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	0.2	xxxx	xxxxx	xxxxx	0.3	xxxxx	xxxxx	0.9	xxxxx
Shrd StpDel:	xxxxx	xxxx	xxxxx	9.2	xxxx	xxxxx	xxxxx	23.0	xxxxx	xxxxx	19.8	xxxxx
Shared LOS:	*	*	*	A	*	*	*	C	*	*	C	*
ApproachDel:	xxxxxx			xxxxxx			23.0			19.8		
ApproachLOS:	*			*			C			C		

Reedsport TSP
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Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #5 Longwood Drive/ Bowman Road

Average Delay (sec/veh): 5.5 Worst Case Level Of Service: A[8.8]

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Lanes:	0 0 0 1 0			0 1 0 0 0			0 0 0 0 0			0 0 1! 0 0		
Volume Module: >> Count Date: 29 Sep 2004 <<												
Base Vol:	0	30	8	20	21	0	0	0	0	3	0	21
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	30	8	20	21	0	0	0	0	3	0	21
Added Vol:	0	0	0	44	0	0	0	0	0	0	0	35
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	30	8	64	21	0	0	0	0	3	0	56
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78
PHF Volume:	0	38	10	82	27	0	0	0	0	4	0	72
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	0	38	10	82	27	0	0	0	0	4	0	72
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	6.4	xxxx	6.2
FollowUpTim:	xxxxx	xxxx	xxxxx	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	3.5	xxxx	3.3
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	49	xxxx	xxxxx	xxxx	xxxx	xxxxx	235	xxxx	44
Potent Cap.:	xxxx	xxxx	xxxxx	1571	xxxx	xxxxx	xxxx	xxxx	xxxxx	758	xxxx	1032
Move Cap.:	xxxx	xxxx	xxxxx	1571	xxxx	xxxxx	xxxx	xxxx	xxxxx	726	xxxx	1032
Volume/Cap:	xxxx	xxxx	xxxx	0.05	xxxx	xxxx	xxxx	xxxx	xxxx	0.01	xxxx	0.07
Level Of Service Module:												
Queue:	xxxxx	xxxx	xxxxx	0.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Stopped Del:	xxxxx	xxxx	xxxxx	7.4	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	A	*	*	*	*	*	*	*	*
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	1011	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	0.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	0.2	xxxxx
Shrd StpDel:	xxxxx	xxxx	xxxxx	7.4	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	8.8	xxxxx
Shared LOS:	*	*	*	A	*	*	*	*	*	*	A	*
ApproachDel:	xxxxxx			xxxxxx			xxxxxx			8.8		
ApproachLOS:	*			*			*			A		

Reedsport TSP
Future Conditions

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #6 Longwood Drive/ Ranch Road

Average Delay (sec/veh): 5.3 Worst Case Level Of Service: B[12.2]

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Lanes:	0 1 0 0 0			0 0 0 1 0			0 0 1! 0 0			0 0 0 0 0		
Volume Module: >> Count Date: 29 Sep 2004 <<												
Base Vol:	27	29	0	0	20	28	23	0	25	0	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	27	29	0	0	20	28	23	0	25	0	0	0
Added Vol:	21	14	0	0	16	132	90	0	28	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	48	43	0	0	36	160	113	0	53	0	0	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78
PHF Volume:	62	55	0	0	46	205	145	0	68	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	62	55	0	0	46	205	145	0	68	0	0	0
Critical Gap Module:												
Critical Gp:	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	6.4	xxxx	6.2	xxxxx	xxxx	xxxxx
FollowUpTim:	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	3.5	xxxx	3.3	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	251	xxxx	xxxxx	xxxx	xxxx	xxxxx	327	xxxx	149	xxxx	xxxx	xxxxx
Potent Cap.:	1326	xxxx	xxxxx	xxxx	xxxx	xxxxx	671	xxxx	903	xxxx	xxxx	xxxxx
Move Cap.:	1326	xxxx	xxxxx	xxxx	xxxx	xxxxx	647	xxxx	903	xxxx	xxxx	xxxxx
Volume/Cap:	0.05	xxxx	xxxx	xxxx	xxxx	xxxx	0.22	xxxx	0.08	xxxx	xxxx	xxxx
Level Of Service Module:												
Queue:	0.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Stopped Del:	7.8	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	A	*	*	*	*	*	*	*	*	*	*	*
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	711	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	0.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	1.3	xxxxx	xxxxx	xxxx	xxxxx
Shrd StpDel:	7.8	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	12.2	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	A	*	*	*	*	*	*	B	*	*	*	*
ApproachDel:	xxxxxx			xxxxxx			12.2			xxxxxx		
ApproachLOS:	*			*			B			*		

Reedsport TSP
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Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #7 US 101/ Longwood Drive

Average Delay (sec/veh): 16.4 Worst Case Level Of Service: F[136.9]

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 0	1!	0 0	0 0	0	0 0	0 0	1	1 0	1 0	2	0 0
Volume Module: >> Count Date: 29 Sep 2004 <<												
Base Vol:	3	0	97	0	0	0	0	355	11	109	392	0
Growth Adj:	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.48	1.25	1.25	1.48	1.25
Initial Bse:	4	0	121	0	0	0	0	524	14	136	578	0
Added Vol:	41	0	55	0	0	0	0	209	69	66	174	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	45	0	176	0	0	0	0	733	83	202	752	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
PHF Volume:	49	0	194	0	0	0	0	805	91	222	827	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	49	0	194	0	0	0	0	805	91	222	827	0
Critical Gap Module:												
Critical Gp:	6.8	xxxx	6.9	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:	3.5	xxxx	3.3	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	2.2	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	1708	xxxx	448	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	896	xxxx	xxxxx
Potent Cap.:	84	xxxx	564	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	766	xxxx	xxxxx
Move Cap.:	65	xxxx	564	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	766	xxxx	xxxxx
Volume/Cap:	0.76	xxxx	0.34	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	0.29	xxxx	xxxx
Level Of Service Module:												
Queue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	1.2	xxxx	xxxxx
Stopped Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	11.6	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	*	*	*	B	*	*
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	221	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	11.0	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd StpDel:	xxxxx	137	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	F	*	*	*	*	*	*	*	*	*	*
ApproachDel:		136.9			xxxxxx			xxxxxx			xxxxxx	
ApproachLOS:		F			*			*			*	

Reedsport TSP
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Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #8 East Fir Avenue/ Winchester Avenue

Average Delay (sec/veh): 1.0 Worst Case Level Of Service: C[16.9]

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 0	1!	0 0	0 0	1!	0 0	0 0	1!	0 0	0 0	1!	0 0
Volume Module: >> Count Date: 30 Sep 2004 <<												
Base Vol:	12	1	2	1	0	26	14	127	10	3	145	2
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	12	1	2	1	0	26	14	127	10	3	145	2
Added Vol:	0	0	0	0	0	0	0	158	0	0	189	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	12	1	2	1	0	26	14	285	10	3	334	2
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
PHF Volume:	14	1	2	1	0	31	16	335	12	4	393	2
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	14	1	2	1	0	31	16	335	12	4	393	2
Critical Gap Module:												
Critical Gp:	7.1	6.5	6.2	7.1	xxxx	6.2	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	3.5	xxxx	3.3	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	791	776	341	777	xxxx	394	395	xxxx	xxxxx	347	xxxx	xxxxx
Potent Cap.:	310	331	706	317	xxxx	659	1174	xxxx	xxxxx	1223	xxxx	xxxxx
Move Cap.:	292	325	706	311	xxxx	659	1174	xxxx	xxxxx	1223	xxxx	xxxxx
Volume/Cap:	0.05	0.00	0.00	0.00	xxxx	0.05	0.01	xxxx	xxxx	0.00	xxxx	xxxx
Level Of Service Module:												
Queue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	0.0	xxxx	xxxxx	0.0	xxxx	xxxxx
Stopped Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	8.1	xxxx	xxxxx	8.0	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	A	*	*	A	*	*
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	319	xxxxx	xxxx	633	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	0.2	xxxxx	xxxxx	0.2	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd StpDel:	xxxxx	16.9	xxxxx	xxxxx	11.0	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	C	*	*	B	*	*	*	*	*	*	*
ApproachDel:		16.9			11.0			xxxxxx			xxxxxx	
ApproachLOS:		C			B			*			*	

Reedsport TSP
Future Conditions

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #9 OR 38 & East Fir Avenue/ 6th Street

Average Delay (sec/veh): 1.0 Worst Case Level Of Service: C[18.4]

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 0 1! 0 0			0 0 1! 0 0			0 0 1! 0 0			0 1 0 0 0		
Volume Module: >> Count Date: 30 Sep 2004 <<												
Base Vol:	9	0	6	8	1	7	3	227	24	9	240	0
Growth Adj:	1.24	1.24	1.24	1.24	1.24	1.24	1.24	1.35	1.24	1.24	1.35	1.24
Initial Bse:	11	0	7	10	1	9	4	307	30	11	324	0
Added Vol:	6	0	0	0	0	0	0	92	10	0	111	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	17	0	7	10	1	9	4	399	40	11	435	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	18	0	8	10	1	9	4	420	42	12	458	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	18	0	8	10	1	9	4	420	42	12	458	0
Critical Gap Module:												
Critical Gp:	7.1	xxxx	6.2	7.1	6.5	6.2	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:	3.5	xxxx	3.3	3.5	4.0	3.3	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	936	xxxx	441	934	951	458	458	xxxx	xxxxx	462	xxxx	xxxxx
Potent Cap.:	247	xxxx	621	248	262	607	1113	xxxx	xxxxx	1110	xxxx	xxxxx
Move Cap.:	240	xxxx	621	242	258	607	1113	xxxx	xxxxx	1110	xxxx	xxxxx
Volume/Cap:	0.08	xxxx	0.01	0.04	0.01	0.02	0.00	xxxx	xxxx	0.01	xxxx	xxxx
Level Of Service Module:												
Queue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	0.0	xxxx	xxxxx	0.0	xxxx	xxxxx
Stopped Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	8.2	xxxx	xxxxx	8.3	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	A	*	*	A	*	*
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	295	xxxxx	xxxx	330	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	0.3	xxxxx	xxxxx	0.2	xxxxx	xxxxx	xxxx	xxxxx	0.0	xxxx	xxxxx
Shrd StpDel:	xxxxx	18.4	xxxxx	xxxxx	16.6	xxxxx	xxxxx	xxxx	xxxxx	8.3	xxxx	xxxxx
Shared LOS:	*	C	*	*	C	*	*	*	*	A	*	*
ApproachDel:		18.4			16.6			xxxxxx			xxxxxx	
ApproachLOS:		C			C			*			*	

Reedsport TSP
Future Conditions

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #10 OR 38/ Winchester Avenue

Average Delay (sec/veh): 4.4 Worst Case Level Of Service: C[20.9]

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 0 1! 0 0			0 0 1! 0 0			1 0 0 1 0			1 0 0 1 0		
Volume Module: >> Count Date: 30 Sep 2004 <<												
Base Vol:	13	4	42	8	1	7	3	163	5	43	144	7
Growth Adj:	1.24	1.24	1.24	1.24	1.24	1.24	1.24	1.35	1.24	1.24	1.35	1.24
Initial Bse:	16	5	52	10	1	9	4	220	6	53	195	9
Added Vol:	0	0	79	0	0	0	0	50	0	105	63	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	16	5	131	10	1	9	4	270	6	158	258	9
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
PHF Volume:	18	5	142	11	1	9	4	294	7	172	280	9
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	18	5	142	11	1	9	4	294	7	172	280	9
Critical Gap Module:												
Critical Gp:	7.1	6.5	6.2	7.1	6.5	6.2	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	3.5	4.0	3.3	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	940	939	297	1008	938	285	289	xxxx	xxxxx	301	xxxx	xxxxx
Potent Cap.:	246	266	747	221	267	759	1284	xxxx	xxxxx	1272	xxxx	xxxxx
Move Cap.:	216	229	747	157	230	759	1284	xxxx	xxxxx	1272	xxxx	xxxxx
Volume/Cap:	0.08	0.02	0.19	0.07	0.01	0.01	0.00	xxxx	xxxx	0.14	xxxx	xxxx
Level Of Service Module:												
Queue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	0.0	xxxx	xxxxx	0.5	xxxx	xxxxx
Stopped Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.8	xxxx	xxxxx	8.3	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	A	*	*	A	*	*
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	560	xxxxx	xxxx	248	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	1.2	xxxxx	xxxxx	0.3	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd StpDel:	xxxxx	14.1	xxxxx	xxxxx	20.9	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	B	*	*	C	*	*	*	*	*	*	*
ApproachDel:		14.1			20.9			xxxxxx			xxxxxx	
ApproachLOS:		B			C			*			*	

Reedsport TSP
Future Conditions
Mitigated

Scenario Report

Scenario:	Future Conditions
Command:	Future Conditions
Volume:	Future Conditions
Geometry:	Default Geometry
Impact Fee:	Default Impact Fee
Trip Generation:	Future Conditions
Trip Distribution:	Default Trip Distribution
Paths:	Default Paths
Routes:	Default Routes
Configuration:	Default Configuration

Reedsport TSP
Future Conditions
Mitigated

Impact Analysis Report
Level Of Service

Intersection	Base LOS	Base Del/ Veh	Base V/ C	Future LOS	Future Del/ Veh	Future V/ C	Change in
# 1 US 101/ 22nd Street	B	18.4	0.457	C	27.6	0.749	+ 9.194 D/V
# 2 US 101/ Winchester Avenue	B	17.8	0.452	C	25.6	0.731	+ 7.773 D/V
# 3 US 101/ OR 38	C	25.5	0.424	C	28.6	0.629	+ 3.176 D/V
# 4 Ranch Road/ Ridgeway Drive	B	10.3	0.000	C	23.0	0.000	+12.690 D/V
# 5 Longwood Drive/ Bowman Road	A	8.7	0.000	A	8.8	0.000	+ 0.167 D/V
# 6 Longwood Drive/ Ranch Road	A	9.2	0.000	B	11.3	0.000	+ 2.109 D/V
# 7 US 101/ Longwood Drive	B	12.1	0.000	C	21.2	0.000	+ 9.083 D/V
# 8 East Fir Avenue/ Winchester Av	B	11.4	0.000	C	16.9	0.000	+ 5.583 D/V
# 9 OR 38 & East Fir Avenue/ 6th S	B	13.8	0.000	C	18.4	0.000	+ 4.567 D/V
# 10 OR 38/ Winchester Avenue	B	12.8	0.000	C	20.9	0.000	+ 8.101 D/V

Reedsport TSP
Future Conditions
Mitigated

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #1 US 101/ 22nd Street

Cycle (sec): 100 Critical Vol./Cap. (X): 0.749
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 27.6
Optimal Cycle: 67 Level Of Service: C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	0	1! 0	0	1	0	0 1	0	1	1	0	1	0	1	1	0
Volume Module: >> Count Date: 30 Sep 2004 <<												
Base Vol:	19	29	56	127	33	37	26	423	19	59	482	137
Growth Adj:	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.48	1.25	1.25	1.48	1.25
Initial Bse:	24	36	70	159	41	46	33	624	24	74	711	171
Added Vol:	22	22	48	142	21	124	99	145	30	56	131	159
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	46	58	118	301	62	170	132	769	54	130	842	330
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	48	61	124	317	66	179	138	809	57	137	886	348
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	48	61	124	317	66	179	138	809	57	137	886	348
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	48	61	124	317	66	179	138	809	57	137	886	348
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.82	0.82	0.82	0.74	0.89	0.89	0.95	0.94	0.94	0.95	0.91	0.91
Lanes:	0.21	0.26	0.53	1.00	0.27	0.73	1.00	1.87	0.13	1.00	1.44	0.56
Final Sat.:	320	408	826	1401	453	1238	1805	3340	234	1805	2484	974
Capacity Analysis Module:												
Vol/Sat:	0.15	0.15	0.15	0.23	0.14	0.14	0.08	0.24	0.24	0.08	0.36	0.36
Crit Moves:				****			****				****	
Green/Cycle:	0.30	0.30	0.30	0.30	0.30	0.30	0.10	0.44	0.44	0.14	0.48	0.48
Volume/Cap:	0.50	0.50	0.50	0.75	0.48	0.48	0.75	0.55	0.55	0.55	0.75	0.75
Delay/Veh:	29.5	29.5	29.5	38.8	29.2	29.2	59.2	21.1	21.1	42.8	23.3	23.3
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	29.5	29.5	29.5	38.8	29.2	29.2	59.2	21.1	21.1	42.8	23.3	23.3
HCM2kAvg:	7	7	7	13	6	6	6	10	10	5	17	17

Reedsport TSP
Future Conditions
Mitigated

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #2 US 101/ Winchester Avenue

Cycle (sec): 100 Critical Vol./Cap. (X): 0.731
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 25.6
Optimal Cycle: 64 Level Of Service: C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0	1	1	0	1	0	1	1	0	0	1	0	0	1	0
Volume Module: >> Count Date: 29 Sep 2004 <<												
Base Vol:	42	416	121	7	537	5	33	17	39	152	15	13
Growth Adj:	1.25	1.48	1.25	1.25	1.48	1.25	1.25	1.25	1.25	1.25	1.25	1.25
Initial Bse:	53	614	151	9	792	6	41	21	49	190	19	16
Added Vol:	7	300	148	7	379	0	0	3	10	180	2	7
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	60	914	299	16	1171	6	41	24	59	370	21	23
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
PHF Volume:	61	932	305	16	1195	6	42	25	60	378	21	24
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	61	932	305	16	1195	6	42	25	60	378	21	24
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	61	932	305	16	1195	6	42	25	60	378	21	24
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.91	0.91	0.95	0.95	0.95	0.83	0.83	0.85	0.71	0.92	0.92
Lanes:	1.00	1.51	0.49	1.00	1.99	0.01	0.63	0.37	1.00	1.00	0.47	0.53
Final Sat.:	1805	2619	858	1805	3587	19	997	586	1615	1357	825	925
Capacity Analysis Module:												
Vol/Sat:	0.03	0.36	0.36	0.01	0.33	0.33	0.04	0.04	0.04	0.28	0.03	0.03
Crit Moves:		****		****						****		
Green/Cycle:	0.05	0.49	0.49	0.01	0.45	0.45	0.38	0.38	0.38	0.38	0.38	0.38
Volume/Cap:	0.73	0.73	0.73	0.73	0.73	0.73	0.11	0.11	0.10	0.73	0.07	0.07
Delay/Veh:	75.7	22.1	22.1	127.9	24.2	24.2	20.1	20.1	20.0	31.9	19.7	19.7
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	75.7	22.1	22.1	127.9	24.2	24.2	20.1	20.1	20.0	31.9	19.7	19.7
HCM2kAvg:	3	16	16	2	16	16	2	2	1	15	1	1

Reedsport TSP
Future Conditions
Mitigated

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #3 US 101/ OR 38

Cycle (sec): 100 Critical Vol./Cap. (X): 0.629
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 28.6
Optimal Cycle: 51 Level Of Service: C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Permitted			Permitted		
Rights:	Ignore			Include			Include			Ignore		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0 2	0 1	1	0 1	1 0	0	0 1!	0 0	0	1 0	0 1
Volume Module: >> Count Date: 31 Aug 2004 <<												
Base Vol:	21	166	195	31	236	6	11	7	57	180	5	38
Growth Adj:	1.25	1.48	1.36	1.25	1.48	1.25	1.25	1.25	1.25	1.36	1.36	1.36
Initial Bse:	26	245	266	39	348	8	14	9	71	245	7	52
Added Vol:	17	154	76	23	200	0	0	3	30	96	2	19
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	43	399	342	62	548	8	14	12	101	341	9	71
User Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
PHF Adj:	0.85	0.85	0.00	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.00
PHF Volume:	51	469	0	73	645	9	16	14	119	401	10	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	51	469	0	73	645	9	16	14	119	401	10	0
PCE Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
MLF Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
Final Vol.:	51	469	0	73	645	9	16	14	119	401	10	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.95	1.00	0.95	0.95	0.95	0.84	0.84	0.84	0.63	0.63	1.00
Lanes:	1.00	2.00	1.00	1.00	1.97	0.03	0.11	0.09	0.80	0.97	0.03	1.00
Final Sat.:	1805	3610	1900	1805	3554	49	174	149	1282	1169	30	1900
Capacity Analysis Module:												
Vol/Sat:	0.03	0.13	0.00	0.04	0.18	0.18	0.09	0.09	0.09	0.34	0.34	0.00
Crit Moves:	****				****						****	
Green/Cycle:	0.04	0.25	0.00	0.08	0.29	0.29	0.55	0.55	0.55	0.55	0.55	0.00
Volume/Cap:	0.63	0.51	0.00	0.51	0.63	0.63	0.17	0.17	0.17	0.63	0.63	0.00
Delay/Veh:	61.7	32.4	0.0	47.3	32.1	32.1	11.4	11.4	11.4	17.6	17.6	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	61.7	32.4	0.0	47.3	32.1	32.1	11.4	11.4	11.4	17.6	17.6	0.0
HCM2kAvg:	3	7	0	3	9	9	2	2	2	14	14	0

Reedsport TSP
Future Conditions
Mitigated

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #4 Ranch Road/ Ridgeway Drive

Average Delay (sec/veh): 1.8 Worst Case Level Of Service: C[23.0]

Approach:	North Bound						South Bound						East Bound						West Bound					
Movement:	L	-	T	-	R		L	-	T	-	R		L	-	T	-	R		L	-	T	-	R	
Control:	Uncontrolled						Uncontrolled						Stop Sign						Stop Sign					
Rights:	Include						Include						Include						Include					
Lanes:	0	0	1!	0	0		0	1	0	0	0		0	0	1!	0	0		0	0	1!	0	0	
Volume Module: >> Count Date: 24 Sep 2004 <<																								
Base Vol:	21		105		9		4		108		0		3		2		10		6		2		5	
Growth Adj:	1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00	
Initial Bse:	21		105		9		4		108		0		3		2		10		6		2		5	
Added Vol:	0		462		0		40		346		0		0		0		0		0		0		49	
PasserByVol:	0		0		0		0		0		0		0		0		0		0		0		0	
Initial Fut:	21		567		9		44		454		0		3		2		10		6		2		54	
User Adj:	1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00	
PHF Adj:	0.82		0.82		0.82		0.82		0.82		0.82		0.82		0.82		0.82		0.82		0.82		0.82	
PHF Volume:	26		691		11		54		554		0		4		2		12		7		2		66	
Reduct Vol:	0		0		0		0		0		0		0		0		0		0		0		0	
Final Vol.:	26		691		11		54		554		0		4		2		12		7		2		66	
Critical Gap Module:																								
Critical Gp:	4.1	xxxx	xxxxx				4.1	xxxx	xxxxx				7.1		6.5		6.2		7.1		6.5		6.2	
FollowUpTim:	2.2	xxxx	xxxxx				2.2	xxxx	xxxxx				3.5		4.0		3.3		3.5		4.0		3.3	
Capacity Module:																								
Cnflict Vol:	554	xxxx	xxxxx				702	xxxx	xxxxx				1443		1415		554		1416		1409		697	
Potent Cap.:	1027	xxxx	xxxxx				904	xxxx	xxxxx				111		139		536		116		140		444	
Move Cap.:	1027	xxxx	xxxxx				904	xxxx	xxxxx				87		127		536		104		128		444	
Volume/Cap:	0.02	xxxx	xxxx				0.06	xxxx	xxxx				0.04		0.02		0.02		0.07		0.02		0.15	
Level Of Service Module:																								
Queue:	0.1	xxxx	xxxxx				0.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx										
Stopped Del:	8.6	xxxx	xxxxx				9.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx										
LOS by Move:	A	*	*				A	*	*	*	*	*	*	*	*										
Movement:	LT	-	LTR	-	RT		LT	-	LTR	-	RT		LT	-	LTR	-	RT		LT	-	LTR	-	RT	
Shared Cap.:	xxxx	xxxx	xxxxx				xxxx	xxxx	xxxxx				xxxx		218		xxxxx		xxxx		319		xxxxx	
SharedQueue:	xxxxx	xxxx	xxxxx				0.2	xxxx	xxxxx	xxxxx			0.3	xxxxx	xxxxx				0.9	xxxxx				
Shrd StpDel:	xxxxx	xxxx	xxxxx				9.2	xxxx	xxxxx	xxxxx			23.0	xxxxx	xxxxx				19.8	xxxxx				
Shared LOS:	*	*	*				A	*	*	*			C	*	*				C	*				
ApproachDel:	xxxxxx						xxxxxx						23.0						19.8					
ApproachLOS:	*						*						C						C					

Reedsport TSP
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Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #5 Longwood Drive/ Bowman Road

Average Delay (sec/veh): 5.5 Worst Case Level Of Service: A[8.8]

Approach:	North Bound						South Bound						East Bound						West Bound					
Movement:	L	-	T	-	R		L	-	T	-	R		L	-	T	-	R		L	-	T	-	R	
Control:	Uncontrolled						Uncontrolled						Stop Sign						Stop Sign					
Rights:	Include						Include						Include						Include					
Lanes:	0	0	0	1	0		0	1	0	0	0		0	0	0	0	0		0	0	1!	0	0	
Volume Module: >> Count Date: 29 Sep 2004 <<																								
Base Vol:	0	30	8				20	21	0				0	0	0				3	0	21			
Growth Adj:	1.00	1.00	1.00				1.00	1.00	1.00				1.00	1.00	1.00				1.00	1.00	1.00			
Initial Bse:	0	30	8				20	21	0				0	0	0				3	0	21			
Added Vol:	0	0	0				44	0	0				0	0	0				0	0	35			
PasserByVol:	0	0	0				0	0	0				0	0	0				0	0	0			
Initial Fut:	0	30	8				64	21	0				0	0	0				3	0	56			
User Adj:	1.00	1.00	1.00				1.00	1.00	1.00				1.00	1.00	1.00				1.00	1.00	1.00			
PHF Adj:	0.78	0.78	0.78				0.78	0.78	0.78				0.78	0.78	0.78				0.78	0.78	0.78			
PHF Volume:	0	38	10				82	27	0				0	0	0				4	0	72			
Reduct Vol:	0	0	0				0	0	0				0	0	0				0	0	0			
Final Vol.:	0	38	10				82	27	0				0	0	0				4	0	72			
Critical Gap Module:																								
Critical Gp:	xxxxx	xxxx	xxxxx				4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx							6.4	xxxx	6.2			
FollowUpTim:	xxxxx	xxxx	xxxxx				2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx							3.5	xxxx	3.3			
Capacity Module:																								
Cnflict Vol:	xxxx	xxxx	xxxxx				49	xxxx	xxxxx	xxxx	xxxx	xxxxx							235	xxxx	44			
Potent Cap.:	xxxx	xxxx	xxxxx				1571	xxxx	xxxxx	xxxx	xxxx	xxxxx							758	xxxx	1032			
Move Cap.:	xxxx	xxxx	xxxxx				1571	xxxx	xxxxx	xxxx	xxxx	xxxxx							726	xxxx	1032			
Volume/Cap:	xxxx	xxxx	xxxx				0.05	xxxx	xxxx	xxxx	xxxx	xxxx							0.01	xxxx	0.07			
Level Of Service Module:																								
Queue:	xxxxx	xxxx	xxxxx				0.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx									
Stopped Del:	xxxxx	xxxx	xxxxx				7.4	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx									
LOS by Move:	*	*	*				A	*	*	*	*	*	*	*	*									
Movement:	LT	-	LTR	-	RT		LT	-	LTR	-	RT		LT	-	LTR	-	RT		LT	-	LTR	-	RT	
Shared Cap.:	xxxx	xxxx	xxxxx				xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	1011	xxxxx								
SharedQueue:	xxxxx	xxxx	xxxxx				0.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	0.2	xxxxx								
Shrd StpDel:	xxxxx	xxxx	xxxxx				7.4	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	8.8	xxxxx								
Shared LOS:	*	*	*				A	*	*	*	*	*	*	*	A	*								
ApproachDel:	xxxxxx						xxxxxx						xxxxxx						8.8					
ApproachLOS:	*						*						*						A					

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2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #6 Longwood Drive/ Ranch Road

Average Delay (sec/veh): 4.5 Worst Case Level Of Service: B[11.3]

Approach:	North Bound						South Bound						East Bound						West Bound					
Movement:	L	-	T	-	R		L	-	T	-	R		L	-	T	-	R		L	-	T	-	R	
Control:	Uncontrolled						Uncontrolled						Stop Sign						Stop Sign					
Rights:	Include						Include						Include						Include					
Lanes:	0	1	0	0	0		0	0	0	1	0		0	0	1!	0	0		0	0	0	0	0	
Volume Module: >> Count Date: 29 Sep 2004 <<																								
Base Vol:	27	29	0				0	20	28				23	0	25				0	0	0			
Growth Adj:	1.00	1.00	1.00				1.00	1.00	1.00				1.00	1.00	1.00				1.00	1.00	1.00			
Initial Bse:	27	29	0				0	20	28				23	0	25				0	0	0			
Added Vol:	21	14	0				0	16	122				53	0	28				0	0	0			
PasserByVol:	0	0	0				0	0	0				0	0	0				0	0	0			
Initial Fut:	48	43	0				0	36	150				76	0	53				0	0	0			
User Adj:	1.00	1.00	1.00				1.00	1.00	1.00				1.00	1.00	1.00				1.00	1.00	1.00			
PHF Adj:	0.78	0.78	0.78				0.78	0.78	0.78				0.78	0.78	0.78				0.78	0.78	0.78			
PHF Volume:	62	55	0				0	46	192				97	0	68				0	0	0			
Reduct Vol:	0	0	0				0	0	0				0	0	0				0	0	0			
Final Vol.:	62	55	0				0	46	192				97	0	68				0	0	0			
Critical Gap Module:																								
Critical Gp:	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx							6.4	xxxx	6.2	xxxxx	xxxx	xxxxx						
FollowUpTim:	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx							3.5	xxxx	3.3	xxxxx	xxxx	xxxxx						
Capacity Module:																								
Cnflict Vol:	238	xxxx	xxxxx	xxxx	xxxx	xxxxx							321	xxxx	142	xxxx	xxxx	xxxxx						
Potent Cap.:	1340	xxxx	xxxxx	xxxx	xxxx	xxxxx							677	xxxx	911	xxxx	xxxx	xxxxx						
Move Cap.:	1340	xxxx	xxxxx	xxxx	xxxx	xxxxx							653	xxxx	911	xxxx	xxxx	xxxxx						
Volume/Cap:	0.05	xxxx	xxxx	xxxx	xxxx	xxxx							0.15	xxxx	0.07	xxxx	xxxx	xxxx						
Level Of Service Module:																								
Queue:	0.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx												
Stopped Del:	7.8	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx												
LOS by Move:	A	*	*	*	*	*	*	*	*	*	*	*												
Movement:	LT	-	LTR	-	RT		LT	-	LTR	-	RT		LT	-	LTR	-	RT		LT	-	LTR	-	RT	
Shared Cap.:	xxxx	xxxx	xxxxx				xxxx	xxxx	xxxxx	xxxx	739	xxxxx	xxxx	xxxx	xxxxx									
SharedQueue:	0.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	0.9	xxxxx	xxxx	xxxxx												
Shrd StpDel:	7.8	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	11.3	xxxxx	xxxx	xxxxx												
Shared LOS:	A	*	*	*	*	*	*	*	B	*	*	*												
ApproachDel:	xxxxxx			xxxxxx					11.3			xxxxxx												
ApproachLOS:	*			*					B			*												

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Intersection #7 US 101/ Longwood Drive

Average Delay (sec/veh): 3.1 Worst Case Level Of Service: C[21.2]

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 0 1! 0 0			0 0 0 0 0			0 0 1 1 0			1 0 2 0 0		
Volume Module: >> Count Date: 29 Sep 2004 <<												
Base Vol:	3	0	97	0	0	0	0	355	11	109	392	0
Growth Adj:	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.48	1.25	1.25	1.48	1.25
Initial Bse:	4	0	121	0	0	0	0	524	14	136	578	0
Added Vol:	4	0	55	0	0	0	0	219	60	66	211	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	8	0	176	0	0	0	0	743	74	202	789	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
PHF Volume:	9	0	194	0	0	0	0	816	81	222	867	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	9	0	194	0	0	0	0	816	81	222	867	0
Critical Gap Module:												
Critical Gp:	6.8	xxxx	6.9	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:	3.5	xxxx	3.3	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	2.2	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	1735	xxxx	449	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	897	xxxx	xxxxx
Potent Cap.:	80	xxxx	563	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	765	xxxx	xxxxx
Move Cap.:	62	xxxx	563	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	765	xxxx	xxxxx
Volume/Cap:	0.14	xxxx	0.34	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	0.29	xxxx	xxxx
Level Of Service Module:												
Queue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	1.2	xxxx	xxxxx
Stopped Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	11.6	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	*	*	*	B	*	*
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	421	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	2.5	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd StpDel:	xxxxx	21.2	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	C	*	*	*	*	*	*	*	*	*	*
ApproachDel:		21.2			xxxxxx			xxxxxx			xxxxxx	
ApproachLOS:		C			*			*			*	

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2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #8 East Fir Avenue/ Winchester Avenue

Average Delay (sec/veh): 1.0 Worst Case Level Of Service: C[16.9]

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 0 1! 0 0			0 0 1! 0 0			0 0 1! 0 0			0 0 1! 0 0		
Volume Module: >> Count Date: 30 Sep 2004 <<												
Base Vol:	12	1	2	1	0	26	14	127	10	3	145	2
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	12	1	2	1	0	26	14	127	10	3	145	2
Added Vol:	0	0	0	0	0	0	0	158	0	0	189	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	12	1	2	1	0	26	14	285	10	3	334	2
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
PHF Volume:	14	1	2	1	0	31	16	335	12	4	393	2
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	14	1	2	1	0	31	16	335	12	4	393	2
Critical Gap Module:												
Critical Gp:	7.1	6.5	6.2	7.1	xxxx	6.2	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	3.5	xxxx	3.3	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	791	776	341	777	xxxx	394	395	xxxx	xxxxx	347	xxxx	xxxxx
Potent Cap.:	310	331	706	317	xxxx	659	1174	xxxx	xxxxx	1223	xxxx	xxxxx
Move Cap.:	292	325	706	311	xxxx	659	1174	xxxx	xxxxx	1223	xxxx	xxxxx
Volume/Cap:	0.05	0.00	0.00	0.00	xxxx	0.05	0.01	xxxx	xxxx	0.00	xxxx	xxxx
Level Of Service Module:												
Queue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	0.0	xxxx	xxxxx	0.0	xxxx	xxxxx
Stopped Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	8.1	xxxx	xxxxx	8.0	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	A	*	*	A	*	*
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	319	xxxxx	xxxx	633	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	0.2	xxxxx	xxxxx	0.2	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd StpDel:	xxxxx	16.9	xxxxx	xxxxx	11.0	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	C	*	*	B	*	*	*	*	*	*	*
ApproachDel:		16.9			11.0			xxxxxx			xxxxxx	
ApproachLOS:		C			B			*			*	

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2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #9 OR 38 & East Fir Avenue/ 6th Street

Average Delay (sec/veh): 1.0 Worst Case Level Of Service: C[18.4]

Approach:	North Bound						South Bound						East Bound						West Bound					
Movement:	L	-	T	-	R		L	-	T	-	R		L	-	T	-	R		L	-	T	-	R	
Control:	Stop Sign						Stop Sign						Uncontrolled						Uncontrolled					
Rights:	Include						Include						Include						Include					
Lanes:	0	0	1!	0	0		0	0	1!	0	0		0	0	1!	0	0		0	1	0	0	0	
Volume Module: >> Count Date: 30 Sep 2004 <<																								
Base Vol:	9	0	6				8	1	7				3	227	24				9	240	0			
Growth Adj:	1.24	1.24	1.24				1.24	1.24	1.24				1.24	1.35	1.24				1.24	1.24	1.24			
Initial Bse:	11	0	7				10	1	9				4	307	30				11	324	0			
Added Vol:	6	0	0				0	0	0				0	92	10				0	111	0			
PasserByVol:	0	0	0				0	0	0				0	0	0				0	0	0			
Initial Fut:	17	0	7				10	1	9				4	399	40				11	435	0			
User Adj:	1.00	1.00	1.00				1.00	1.00	1.00				1.00	1.00	1.00				1.00	1.00	1.00			
PHF Adj:	0.95	0.95	0.95				0.95	0.95	0.95				0.95	0.95	0.95				0.95	0.95	0.95			
PHF Volume:	18	0	8				10	1	9				4	420	42				12	458	0			
Reduct Vol:	0	0	0				0	0	0				0	0	0				0	0	0			
Final Vol.:	18	0	8				10	1	9				4	420	42				12	458	0			
Critical Gap Module:																								
Critical Gp:	7.1	xxxx	6.2				7.1	6.5	6.2				4.1	xxxx	xxxxx				4.1	xxxx	xxxxx			
FollowUpTim:	3.5	xxxx	3.3				3.5	4.0	3.3				2.2	xxxx	xxxxx				2.2	xxxx	xxxxx			
Capacity Module:																								
Cnflict Vol:	936	xxxx	441				934	951	458				458	xxxx	xxxxx				462	xxxx	xxxxx			
Potent Cap.:	247	xxxx	621				248	262	607				1113	xxxx	xxxxx				1110	xxxx	xxxxx			
Move Cap.:	240	xxxx	621				242	258	607				1113	xxxx	xxxxx				1110	xxxx	xxxxx			
Volume/Cap:	0.08	xxxx	0.01				0.04	0.01	0.02				0.00	xxxx	xxxx				0.01	xxxx	xxxx			
Level Of Service Module:																								
Queue:	xxxxx	xxxx	xxxxx				xxxxx	xxxx	xxxxx				0.0	xxxx	xxxxx				0.0	xxxx	xxxxx			
Stopped Del:	xxxxx	xxxx	xxxxx				xxxxx	xxxx	xxxxx				8.2	xxxx	xxxxx				8.3	xxxx	xxxxx			
LOS by Move:	*	*	*				*	*	*				A	*	*				A	*	*			
Movement:	LT	-	LTR	-	RT		LT	-	LTR	-	RT		LT	-	LTR	-	RT		LT	-	LTR	-	RT	
Shared Cap.:	xxxx		295	xxxxx			xxxx		330	xxxxx			xxxx	xxxx	xxxxx				xxxx	xxxx	xxxxx			
SharedQueue:	xxxxx		0.3	xxxxx			xxxxx		0.2	xxxxx			xxxxx	xxxx	xxxxx				0.0	xxxx	xxxxx			
Shrd StpDel:	xxxxx		18.4	xxxxx			xxxxx		16.6	xxxxx			xxxxx	xxxx	xxxxx				8.3	xxxx	xxxxx			
Shared LOS:	*		C	*			*		C	*			*	*	*				A	*	*			
ApproachDel:			18.4						16.6						xxxxxx						xxxxxx			
ApproachLOS:			C						C						*						*			

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Intersection #10 OR 38/ Winchester Avenue

Average Delay (sec/veh): 4.4 Worst Case Level Of Service: C[20.9]

Approach:	North Bound						South Bound						East Bound						West Bound					
Movement:	L	-	T	-	R		L	-	T	-	R		L	-	T	-	R		L	-	T	-	R	
Control:	Stop Sign						Stop Sign						Uncontrolled						Uncontrolled					
Rights:	Include						Include						Include						Include					
Lanes:	0	0	1!	0	0		0	0	1!	0	0		1	0	0	1	0		1	0	0	1	0	
Volume Module: >> Count Date: 30 Sep 2004 <<																								
Base Vol:	13	4	42				8	1	7				3	163	5				43	144	7			
Growth Adj:	1.24	1.24	1.24				1.24	1.24	1.24				1.24	1.35	1.24				1.24	1.35	1.24			
Initial Bse:	16	5	52				10	1	9				4	220	6				53	195	9			
Added Vol:	0	0	79				0	0	0				0	50	0				105	63	0			
PasserByVol:	0	0	0				0	0	0				0	0	0				0	0	0			
Initial Fut:	16	5	131				10	1	9				4	270	6				158	258	9			
User Adj:	1.00	1.00	1.00				1.00	1.00	1.00				1.00	1.00	1.00				1.00	1.00	1.00			
PHF Adj:	0.92	0.92	0.92				0.92	0.92	0.92				0.92	0.92	0.92				0.92	0.92	0.92			
PHF Volume:	18	5	142				11	1	9				4	294	7				172	280	9			
Reduct Vol:	0	0	0				0	0	0				0	0	0				0	0	0			
Final Vol.:	18	5	142				11	1	9				4	294	7				172	280	9			
Critical Gap Module:																								
Critical Gp:	7.1	6.5	6.2				7.1	6.5	6.2				4.1	xxxx	xxxxx				4.1	xxxx	xxxxx			
FollowUpTim:	3.5	4.0	3.3				3.5	4.0	3.3				2.2	xxxx	xxxxx				2.2	xxxx	xxxxx			
Capacity Module:																								
Cnflict Vol:	940	939	297				1008	938	285				289	xxxx	xxxxx				301	xxxx	xxxxx			
Potent Cap.:	246	266	747				221	267	759				1284	xxxx	xxxxx				1272	xxxx	xxxxx			
Move Cap.:	216	229	747				157	230	759				1284	xxxx	xxxxx				1272	xxxx	xxxxx			
Volume/Cap:	0.08	0.02	0.19				0.07	0.01	0.01				0.00	xxxx	xxxx				0.14	xxxx	xxxx			
Level Of Service Module:																								
Queue:	xxxxx	xxxx	xxxxx				xxxxx	xxxx	xxxxx				0.0	xxxx	xxxxx				0.5	xxxx	xxxxx			
Stopped Del:	xxxxx	xxxx	xxxxx				xxxxx	xxxx	xxxxx				7.8	xxxx	xxxxx				8.3	xxxx	xxxxx			
LOS by Move:	*	*	*				*	*	*				A	*	*				A	*	*			
Movement:	LT	-	LTR	-	RT		LT	-	LTR	-	RT		LT	-	LTR	-	RT		LT	-	LTR	-	RT	
Shared Cap.:	xxxx		560	xxxxx			xxxx		248	xxxxx			xxxx	xxxx	xxxxx				xxxx	xxxx	xxxxx			
SharedQueue:	xxxxx		1.2	xxxxx			xxxxx		0.3	xxxxx			xxxxx	xxxx	xxxxx				xxxxx	xxxx	xxxxx			
Shrd StpDel:	xxxxx		14.1	xxxxx			xxxxx		20.9	xxxxx			xxxxx	xxxx	xxxxx				xxxxx	xxxx	xxxxx			
Shared LOS:	*		B	*			*		C	*			*	*	*				*	*	*			
ApproachDel:			14.1						20.9						xxxxxx						xxxxxx			
ApproachLOS:			B						C						*						*			

D: Glossary

COMMON TERMS

Access Management: Refers to measures regulating access to streets, roads and highways from public roads and private driveways. Measures may include but are not limited to restrictions on the type and amount of access to roadways, and use of physical controls such as signals and channelization including raised medians, to reduce impacts of approach road traffic on the main facility.

Accessway: Refers to a walkway that provides pedestrian and or bicycle passage either between streets or from a street to a building or other destination such as a school, park, or transit stop.

ADT: Average Daily Traffic. This is the measurement of the average number of vehicles passing a certain point each day on a highway, road or street.

Alternative Modes: Transportation alternatives other than single-occupant automobiles such as rail, transit, bicycles and walking.

Arterial (Street): A street designated in the functional class system as providing the highest amount of connectivity and mostly uninterrupted traffic flow through an urban area.

Bicycle Facility: Any facility provided for the benefit of bicycle travel, including bikeways and parking facilities.

Bicycle Network: A system of connected bikeways that provide access to and from local and regional destinations.

Bike Lane: A portion of the roadway which has been designated by striping and pavement markings for the preferential or exclusive usr of bicyclists.

Capacity: The maximum number of vehicles or individuals that can traverse a given segment of a transportation facility with prevailing roadway and traffic conditions.

CBD: Central Business District. This is the traditional downtown area, and is usually characterized by slow traffic speeds, on street parking and a compact grid system.

Collector (Street): A street designated in the functional class system that provides connectivity between local and neighborhood streets with the arterial streets serving the urban area. Usually shorter in distance than arterails, designed with lower traffic speeds and has more traffic control devises than the arterial classification.

Congestion Mitigation/Air Quality (CMAQ): A program within the federal ISTEA and TEA-21 regulations that address congestion and transportation-related air pollution.

Crosswalk: Portion of a roadway designated for pedestrian crossing and can be either marked or unmarked. Unmarked crosswalks are the national extension of the shoulder, curb line or sidewalk.

Demand Management: Refers to actions which are designed to change travel behavior in order to improve performance of transportation facilities and to reduce need for additional road capacity. Methods may include subsidizing transit for the journey to work trip, charging for parking, starting a van or car pool system, or instituting flexible work hours.

Grade Separation: The vertical separation of conflicting travelways.

Grade: A measure of the steepness of a roadway, bikeway or walkway, usually expressed in a percentage form of the ratio between vertical rise to horizontal distance. (eg. a 5% grade means that the facility rises 5 feet in height over a 100 feet in length.)

Impervious Surfaces: Hard surfaces that do not allow water to soak into the ground, increasing the amount of stormwater running into the drainage system.

Level of Service (LOS): A qualitative measure describing the perception of operation conditions within a traffic steam by motorists and or passengers. An LOS rating of "A" to "F" describes the traffic flow on streets and at intersections, ranging from LOS A, representing virtually free flow conditions and no impedance to LOS F representing forced flow conditions and congestion.

Local (Street): A street designated in the functional class system that's primary purpose is to provide access to land use as opposed to enhancing mobility. These streets typically have low volumes and are very short in relation to collectors and arterials.

Metropolitan Planning Organization (MPO): An organization in each federally recognized urbanized area (population over 50,000) designated by the Governor which has the responsibility for planning, programming and coordinating the distribution of federal transportation resources.

Multi-Modal: Involving several modes of transportation including bus, rail, bicycle, motor vehicle etc.

Multi-Use Path: A path separated from motor vehicle traffic by open space or barrier used by bicyclists, pedestrians, joggers, skaters and other non-motorized travelers.

National Highway System (NHS): The National Highway System is interconnected urban and rural principal arterial and highways that serve major population centers, ports, airports and other major travel destinations, meet national defense requirements and serve interstate and interregional travel.

Neighborhood (Street): A street designated in the functional class system that's primary purpose is to provide access to land use, but provides more mobility than a local street. These streets typically have moderate volumes and are shorter in relation to collectors and arterials.

Peak Period or Peak Hour: The period of the day with the highest number of travelers. This is normally between 4-6 PM on weekdays.

Pedestrian Connection: A continuous, unobstructed, reasonability direct route between two points that is intended and suitable for pedestrian use. These connections could include sidewalks, walkways, accessways, stairways and pedestrian bridges.

Pedestrian District: A comprehensive plan designation or implementing land use regulation, such as an overlay zone, that establishes requirements to provide a safe and convenient pedestrian environment an area planned for a mix of uses likely to support a relatively high level of pedestrian activity.

Pedestrian Facility: A facility provided for the benefit of pedestrian travel, including walkways, crosswalks, signs, signals and benches.

Pedestrian Scale: Site and building design elements that are oriented to the pedestrian and are dimensionally less than those sites designed to accommodate automobile traffic.

Right-Of-Way (ROW): A general term denoting publicly-owned land or property upon which public facilities and infrastructure is placed.

Shared Roadway: A type of bikeway where bicyclists and motor vehicles share a travel lane.
Sight Distance: The distance a person can see along an unobstructed line of site.

Traffic Control Devices: Signs, signals or other fixtures placed on or adjacent to a travelway that regulates, warns or guides traffic. Can be either permanent or temporary.

Transportation Analysis Zone (TAZ): A geographic sub-area used to assess travel demands using a travel demand forecasting model. Often defined by the transportation network and US Census blocks.

Transportation Disadvantaged: Individuals who have difficulty obtaining transportation because of their age, income, physical or mental disability.

Transportation System Plan: Is a comprehensive plan that is developed to provide a coordinated, seamless integration of continuity between modes at the local level as well as integration with the regional transportation system.

Urban Area: The area immediately surrounding an incorporated city or rural community that is urban in character, regardless of size.