Oregon
Kate Brown, Governor

Department of Land Conservation and Development
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NOTICE OF ADOPTED CHANGE TO A COMPREHENSIVE PLAN OR LAND USE REGULATION

Date: November 17, 2015

Jurisdiction: Yamhill County

Local file no.: G-01-15

DLCD file no.: 003-15

The Department of Land Conservation and Development (DLCD) received the attached notice of adopted amendment to a comprehensive plan or land use regulation on 11/16/2015. A copy of the adopted amendment is available for review at the DLCD office in Salem and the local government office.

Notice of the proposed amendment was submitted to DLCD less than 35 days prior to the first evidentiary hearing.

Appeal Procedures

Eligibility to appeal this amendment is governed by ORS 197.612, ORS 197.620, and ORS 197.830. Under ORS 197.830(9), a notice of intent to appeal a land use decision to LUBA must be filed no later than 21 days after the date the decision sought to be reviewed became final. If you have questions about the date the decision became final, please contact the jurisdiction that adopted the amendment.

A notice of intent to appeal must be served upon the local government and others who received written notice of the final decision from the local government. The notice of intent to appeal must be served and filed in the form and manner prescribed by LUBA, (OAR chapter 661, division 10).

If the amendment is not appealed, it will be deemed acknowledged as set forth in ORS 197.625(1)(a). Please call LUBA at 503-373-1265, if you have questions about appeal procedures.

DLCD Contact

If you have questions about this notice, please contact DLCD's Plan Amendment Specialist at 503-934-0017 or plan.amendments@state.or.us

003-15 {23934}

DLCD FORM 2

NOTICE OF ADOPTED CHANGE TO A COMPREHENSIVE PLAN OR LAND USE REGULATION

DEPT OF
FOR DLCD USE
File No.:
Received NOV 16 2015
LAND CONSERVATION AND DEVELOPMENT

Local governments are required to send notice of an adopted change to a comprehensive plan or land use regulation **no more than 20 days after the adoption.** (*See* OAR 660-018-0040). The rules require that the notice include a completed copy of this form. **This notice form is not for submittal of a completed periodic review task or a plan amendment reviewed in the manner of periodic review.** Use Form 4 for an adopted urban growth boundary including over 50 acres by a city with a population greater than 2,500 within the UGB or an urban growth boundary amendment over 100 acres adopted by a metropolitan service district. Use Form 5 for an adopted urban reserve designation, or amendment to add over 50 acres, by a city with a population greater than 2,500 within the UGB. Use Form 6 with submittal of an adopted periodic review task.

Jurisdiction: Yamhill County

Local file no.: **G-01-15**

Date of adoption: 11/5/2015 Date sent: 11/13/2015

Was Notice of a Proposed Change (Form 1) submitted to DLCD?

Yes: Date (use the date of last revision if a revised Form 1was submitted): 8/26/2015

No

Is the adopted change different from what was described in the Notice of Proposed Change? Yes No

If yes, describe how the adoption differs from the proposal:

No change

Local contact (name and title): Ken Friday

Phone: 503-434-7516 E-mail: fridayk@co.yamhill.or.us

Street address: 525 NE Fourth Street City: McMinnville Zip: 97128-

PLEASE COMPLETE ALL OF THE FOLLOWING SECTIONS THAT APPLY

For a change to comprehensive plan text:

Identify the sections of the plan that were added or amended and which statewide planning goals those sections implement, if any:

Adopted update to the Transportation System Plan

For a change to a comprehensive plan map:

Identify the former and new map designations and the area affected:

Change from to acres. A goal exception was required for this change.

Change from to acres. A goal exception was required for this change.

Change from to acres. A goal exception was required for this change.

Change from to acres. A goal exception was required for this change.

Location of affected property (T, R, Sec., TL and address):

The subject property is entirely within an urban growth boundary

The subject property is partially within an urban growth boundary

If the comprehensive plan map change is a UGB amendment including less than 50 acres and/or by a city with a population less than 2,500 in the urban area, indicate the number of acres of the former rural plan designation, by type, included in the boundary.

Exclusive Farm Use – Acres:	Non-resource – Acres:
Forest – Acres:	Marginal Lands – Acres:
Rural Residential – Acres:	Natural Resource/Coastal/Open Space – Acres:
Rural Commercial or Industrial – Acres:	Other: – Acres:

If the comprehensive plan map change is an urban reserve amendment including less than 50 acres, or establishment or amendment of an urban reserve by a city with a population less than 2,500 in the urban area, indicate the number of acres, by plan designation, included in the boundary.

Exclusive Farm Use – Acres:	Non-resource – Acres:
Forest – Acres:	Marginal Lands – Acres:
Rural Residential – Acres:	Natural Resource/Coastal/Open Space – Acres:
Rural Commercial or Industrial – Acres:	Other: – Acres:

For a change to the text of an ordinance or code:
Identify the sections of the ordinance or code that were added or amended by title and number:

Adopted an updted Transportation System Plan

For a change to a zoning map:
Identify the former and new base zone designations and the area affected:

Change from	to	Acres:
Change from	to	Acres:
Change from	to	Acres:
Change from	to	Acres:

Identify additions to or removal from an overlay zone designation and the area affected:

Overlay zone designation:	Acres added:	Acres removed:

Location of affected property (T, R, Sec., TL and address):

List affected state or federal agencies, local governments and special districts:

Identify supplemental information that is included because it may be useful to inform DLCD or members of the public of the effect of the actual change that has been submitted with this Notice of Adopted Change, if any. If the submittal, including supplementary materials, exceeds 100 pages, include a summary of the amendment briefly describing its purpose and requirements.

Attached is a copy of the plan without the 300 + page appendicies. The appendicies are listed in the plan and are available upon request.

BEFORE THE BOARD OF COMMISSIONERS OF THE STATE OF OREGON

FOR THE COUNTY OF YAMHILL

SITTING FOR THE TRANSACTION OF COUNTY BUSINESS

In the Matter of an Ordinance Adopting the 2015 Yamhill County Transportation System Plan (TSP) Update as Part of the Transportation Element of the County Comprehensive Plan; Planning Docket G-01-15; and Declaring an Emergency	))))))	Ordinance 895

THE BOARD OF COMMISSIONERS OF YAMHILL COUNTY, OREGON (the Board) sat for the transaction of county business on November 5, 2015, Commissioners Allen Springer, Mary Starrett and Stan Primozich being present.

WHEREAS state and county law require that the county adopt and maintain a Transportation System Plan as part of the transportation element of the Yamhill County Comprehensive Plan; and

WHEREAS, the Transportation System Plan (TSP) update, attached as Exhibit B of this ordinance (labled "draft" but being adopted as the "final" 2015 Transportation System Plan update) was prepared by the county's consultant in a public process and with input from county staff, the county Road Improvement Advisory Committee and other interested parties; and

WHEREAS, the attached TSP update came before the Planning Commision for public hearing on September 3, 2015 and the Planning Commission voted 7-0 to recommend approval of the plan by the Board of Commissioners; and

WHEREAS, this matter came before the Board on October 22, 2015 for public hearing and that, following the hearing and deliberation, the Board voted 2-0 to approve the plan and to continue the matter to this date for adoption of written findings in support of approval; NOW, THEREFORE

THE BOARD ORDAINS AS FOLLOWS:

Section 1. The "draft" Yamhill County Transportation System Plan attached as Exhibit "B" and incorporated herein by reference is hereby adopted as the "final" 2015 county Transportation System Plan update, and is hereby added to the transportation element of the Yamhill County Comprehensive Land Use Plan.

Section 2. The findings attached as Exhibit "A" and incorporated herein by reference are hereby adopted in support of this ordinance.

Section 3. This ordinance being necessary for the health, safety and welfare of the citizens of Yamhill County, and an emergency having been declared to exist, is effective immediately.

DONE this 5th day of November, 2015, at McMinnville, Oregon.

ATTEST:

BRIAN VAN BERGEN
County Clerk

By: _____
Deputy Lucy Flores Mendez

FORM APPROVED BY:

Timothy S. Sadlo
Senior Assistant County Counsel

YAMHILL COUNTY BOARD OF COMMISSIONERS

Unavailable for signature
Chair ALLEN SPRINGER

Vice Chair MARY STARRETT

Commissioner STAN PRIMOZICH

ORDINANCE 895 - EXHIBIT A
FINDINGS IN SUPPORT OF APPROVAL

DOCKET NO.: G-01-15

REQUEST: To adopt the 2015 Yamhill County Transportation System Plan (TSP) as the transportation element of the Yamhill County Comprehensive Land Use Plan

APPLICANT: Yamhill County

CRITERIA:
1. State planning regulations (Statewide Goals, Oregon Transportation Plan, Oregon Highway Plan, Transportation Planning Rule, and Access Management Rule)
2. Sections III(A) and VII(A) of the Yamhill County Comprehensive Land Use Plan
3. Section VII(B) of the Yamhill County Comprehensive Land Use Plan

FINDINGS:

A. History of County Transportation System Planning

The Yamhill County Transportation System Plan (TSP) was adopted on March 27, 1996 by Ordinance 605. The plan was prepared by JRH Transportation Engineering, and contains a detailed transportation inventory; forecast; needs analysis; project and priorities list and financing options analysis. It was formally adopted as part of the Yamhill County Comprehensive Land Use Plan.

Since 1996, the following ordinances have been identified that purport to amend the TSP:

Ordinance 748, September 30, 2004

Ordinance 748 was drafted by attorneys working for ODOT. It amended the county's Comprehensive Plan and the county's Transportation System Plan of 1996 (without specifically referencing Ordinance 605) Finding 3.4.1.5 stated: "Yamhill County has an acknowledged Transportation System Plan (TSP), which it adopted in 1996. The TSP does not authorize construction of a bypass to relieve congestion on Oregon 99W and to enhance the efficiency of the transportation system."

Section 2 of Ordinance 748 states:

"The Yamhill County Transportation System Plan is hereby amended to:

1. Identify the Bypass Corridor on the transportation facility plan map.
2. Identify the Bypass corridor as a long-term project on the project list.
3. Identify the approximately $300 million as the estimated total Bypass Project cost, including the cost of improvements inside Newberg and Dundee; and

4. Identify federal and state dollars as the primary source of funding for the Bypass Project."

Ordinance 866, May 12, 2011

Ordinance 866 was also drafted by attorneys working for ODOT. It included amendments to the county's Comprehensive Plan, and also amended the Transportation System Plan, to incorporate and address proposed modifications to the Newberg-Dundee Bypass, as follows:

"Based on its determination that the proposed amendments and goal exceptions comply with all applicable standards, the Board hereby:

* * *

3. Amends the Yamhill County Transportation System Plan and Yamhill County Comprehensive Plan to identify bypass corridor and interchanges as modified and those changes to the local road system including Kreder Road, Riverwood Road, Crawford Lane, Fulquartz Landing Road, Fox Farm Road, Harmony Road, Klimek Road, Corral Creek Road, Old Parrett Mountain Road, Haugen Road and Quarry Road and the addition of new frontage roads along various sections of the Project on the transportation facility plan map."

Ordinance 875, August 16, 2012

Ordinance 875 amends the county's Comprehensive Plan and Zoning Ordinance to accommodate Newberg-Dundee Bypass modifications. With regard to the TSP, Ordinance 875:

"4. Amends the Yamhill County Transportation System Plan to identify the Phase 1 Interim south Dundee Connection and the modification to the Fulquartz Landing Road Realignment."

Ordinance 880, December 6, 2012

Ordinance 880 amends the TSP: "to Accommodate the Yamhelas 'Rails to Trails' Project." This amendment to the TSP was developed by JRH Transportation Engineering, the authors of the 1996 TSP. It is the only amendment to the TSP to incorporated the amended language into the original sections of the 1996 TSP.

The 1996 TSP and the above-listed TSP amendments contain historical information and provide a more detailed explanation of the county's transportation policies with regard to the Newberg-Dundee Bypass and the Yamhelas Westsider transportation corridor than does the new TSP attached as Exhibit B of this ordinance. Adoption of this ordinance, Ordinance 895, does not repeal any prior Transportation System Plan or TSP amendment, including those listed here. To the extent there is a conflict between the new TSP adopted through Ordinance 895 and earlier versions of the county's TSP and TSP amendments, Ordinance 895 controls.

B. Summary of New Transportation System Plan

Exhibit B to Ordinance 895 is the 2015 Yamhill County Transportation System Plan (TSP), adopted as the transportation element of the Yamhill County Comprehensive Land Use Plan. The TSP (labeled "Draft Yamhill County Transportation System Plan," but adopted as the final, "new' plan, provides a guide for long-term decision-making about investments in the County's transportation system. The plan was prepared following a process of identifying existing and future system needs; developing improvement options to address the needs; evaluating these options with the public, an advisory committee, and County staff; and identifying recommended improvements, including funding sources and time frame for implementation. [NOTE: Appendix A through Appendix J of the TSP are documents that support the TSP but that are not included in Exhibit B of this Ordinance. Those approximately 390 pages of materials are available for review and copying at the county Public Works and Planning Departments.]

C. State Planning Policy and Requirements

Statewide Land Use Goals

Under state requirements, the attached update of the Yamhill County Transportation System Plan (TSP), is being adopted as part of the state-acknowledged Yamhill County Comprehensive Land Use Plan. The following findings demonstrate that the adoption of the attached plan is consistent with relevant Statewide Land Use Planning Goals.

1. Goal 1 (Citizen Involvement) requires the development of a citizen involvement program that is widespread, allows two-way communication, provides for citizen involvement through all planning phases, and is understandable, responsive, and funded.

   Findings: The attached TSP update was developed through a process that included several opportunities for public involvement and input. As documented in the TSP, the following opportunities for involvement and input were offered:

   - Stakeholder interviews – In February and March 2012, 16 telephone interviews were conducted with key stakeholders in Yamhill County, including representatives from local jurisdictions in the county, school districts, emergency services, key employers, and industries whose freight and farm vehicles use county roadways.
   - Public survey – An online survey was conducted through Yamhill County's website and was advertised on the website and in local newspapers. The survey included several questions related to the county roadway system and the "top three" problem locations according to respondents.
   - Open House #1 – The first open house was held on August 8, 2013, which provided the public an opportunity to review information on existing and future projected transportation conditions in the county. Public input was sought on key transportation issues within the county, potential solutions, and which highest-priority safety locations to investigate. Participants identified several problem locations and potential improvements and expressed general interest in ensuring that bicycle and pedestrian improvements would be included in the TSP.
   - Open House #2 – A second open house was held on December 11, 2014 to provide an opportunity for the public to comment on improvement options for priority roadway and bicycle/pedestrian improvement locations. The results of this discussion are mapped priority locations shown in Figure 13 of the TSP update.

- RIAC and PMT meetings – A series of meetings of the County's Road Improvement Advisor Committee (RIAC), whose members represent local citizens with an attempt to achieve geographic balance and a wide range of experience (agriculture, construction, business, law enforcement and other areas) and the TSP Project Management Team (PMT), comprised of ODOT and County staff and project consultants, was held over the course of the TSP process.
- Public hearings – Adoption of the TSP was considered by the Planning Commission in a public hearing held on September 3, 2015, at which time the Commission voted 7-0 to recommend approval of the TSP update to the Board of Commissioners. The Board of Commissioners held a public hearing on the TSP update on October 22, 2015, and recommended approval pending the adoption of a final written decision (ordinance) with these findings.

2. Goal 2 (Land Use Planning) requires that a land use planning process and policy framework be established as a basis for all decisions and actions relating to the use of land. All local governments and state agencies involved in a land use action must coordinate with each other. City, county, state and federal agency and special districts plans and actions related to land use must be consistent with the comprehensive plans of cities and counties and regional plans adopted under Oregon Revised Statues (ORS) Chapter 268.

   Findings: A review of state, regional, and local plans and regulations that have bearing on the development of the Yamhill County TSP was conducted at the outset of the planning process and guided the development of a draft TSP. Following that, existing conditions and future projections for transportation facilities in Yamhill County were established, as documented in Section 4 (Existing Conditions) and Section 5 (Future Conditions) of the TSP update. These conditions and projections were used to determine transportation system needs. Improvements recommended to address these needs, presented in Section 10 of the TSP, were identified based on these needs and then selected based on a set of project criteria (Section 7, Goals, Objectives, and Evaluation Criteria) and review by the project team, other affected agencies and stakeholders, and members of the public. This review process is described in the findings for Statewide Goal 1 in this report. Consistency with the County Comprehensive Land Use Plan is addressed in Section C of this report.

3. Goal 9 (Economic Development) requires that local comprehensive plans and policies contribute to a stable and healthy economy in all regions of the state.

   Findings: The TSP supports economic development goals by recommending projects that address travel time delay and improve roadway capacity and operations, including the addition of turn lanes, medians, and roundabouts as well as roadway realignments. Several of these projects are located on OR 99W and OR 18 in the county, which are two major freight routes and are the roadways along which most of the county's commercial and employment development is focused. In addition, transit-related projects on county facilities recommended in the TSP call for improved service to large employers in the county and between communities in the county, making workplaces more accessible, and facilitating future commute options for employees (see Section 10).

4. Goal 10 (Housing) requires plans that provide for the appropriate type, location and phasing of public facilities and services sufficient to support housing development in areas presently developed or undergoing development or redevelopment.

Findings: The TSP update was developed based on traffic projections that account for residential growth and increases in future residential trips (see Section 5, Future Conditions). Recommended projects such as realigned roads, wider and paved shoulders, and expanded transit service and amenities improve safety, accessibility, and mobility for all transportation users and land uses in the county, including existing residents and future planned residential development.

5. Goal 11 (Public Facilities and Services) requires counties to plan and develop a timely, orderly and efficient arrangement of public facilities and services to serve as a framework for development. The goal requires that urban and rural development be guided and supported by types and levels of public facilities and services appropriate for, but limited to, the needs and requirements of the urban, urbanizable and rural areas to be served.

   Findings: Transportation facilities are considered a primary type of public facility. The transportation improvements recommended in the 2015 TSP specifically address future needs, as identified in the existing conditions evaluation and future conditions projections in Sections 4 and 5. The roadway, pedestrian, and bicycle improvements recommended in the TSP (Tables 3 and 4 in Section 10) are assigned time frames (short-term, medium-term, and long-term) based on when the need for the improvements are estimated to occur.

6. Goal 12 (Transportation) requires cities, counties, metropolitan planning organizations, and ODOT to provide and encourage a "safe, convenient and economic transportation system." This is accomplished through development of Transportation System Plans based on inventories of local, regional and state transportation needs. Goal 12 is implemented through OAR 660, Division 12, also known as the Transportation Planning Rule ("TPR"). The TPR contains numerous requirements governing transportation planning and project development.

   Findings: The 2015 TSP update provides a guide for decision making about future investments in the county's transportation system. The plan was prepared following a process of identifying existing and future system needs, developing improvement options to address the needs, and determining recommended improvements based on public, stakeholder, and county staff input. The plan applies to the rural (unincorporated) portion of the County. The recommended improvements not only address identified needs related to traffic operations and mobility, but also identified geometric deficiencies (including substandard lane and shoulder widths), high crash rates at intersections, and limited transit service hours and amenities. The TSP update is an update to the County's Comprehensive Land Use Plan. The county's TSP serves as the transportation element of the comprehensive plan. This report demonstrates that the update is consistent with applicable state regulations. Specific findings of consistency with the TPR are made in the "OAR 660 Division 12 Transportation Planning Rule (TPR)" section of these findings.

<u>Oregon Transportation Plan (2006)</u>

The Oregon Transportation Plan (OTP) is the state's long-range multimodal transportation plan. The OTP is the overarching policy document among a series of plans that together form the state transportation system plan. A TSP must be consistent with applicable OTP goals and policies. The most pertinent OTP goals and policies for local transportation planning are addressed in the

following findings.

1. POLICY 1.2 "Equity, Efficiency and Travel Choices" is the policy of the State of Oregon to promote a transportation system with multiple travel choices that are easy to use, reliable, cost-effective and accessible to all potential users, including the transportation disadvantaged.

   Findings: The 2015 TSP update includes several projects for improving bicycle and pedestrian safety and accessibility, including those that provide wider, paved shoulders on existing roadways (Table 4 in Section 10). Cross sections for new arterials and collectors in the TSP update include five- to six-foot wide paved shoulders (Figure 3 in Section 3). Transit improvements recommended in the TSP include expanding hours of service, establishing more frequent stops, and providing more amenities at stops. These improvements will be pursued in collaboration with the Yamhill County Transit Area (YCTA) once it begins preparation of its first Transit Development Plan.

2. POLICY 2.1 "Capacity and Operational Efficiency" articulates state policy to manage the transportation system to improve its capacity and operational efficiency for the long term benefit of people and goods movement. POLICY 2.2 Management of Assets states that Oregon will manage transportation assets to extend their life and reduce maintenance costs.

   Findings: Turn lanes, roundabouts, and roadway realignments are among the improvements recommended in the 2015 TSP update that will improve the capacity and operational efficiency of the transportation system in the county. These improvements, as well as recommended access management and safety improvements such as driveway consolidation and installation of medians, maximize and protect investments in transportation facilities. Existing county ordinance language regarding traffic impact studies and mitigation (Ordinance 787, adopted September 20, 2006) also serves to manage and protect transportation facility investments in the county.

3. POLICY 3.1 "An Integrated and Efficient Freight System" promotes an integrated, efficient and reliable freight system involving air, barges, pipelines, rail, ships and trucks to provide Oregon a competitive advantage by moving goods faster and more reliably to regional, national and international markets.

   POLICY 3.2 "Moving People to Support Economic Vitality" directs the State to develop an integrated system of transportation facilities, services and information so that intrastate, interstate and international travelers can travel easily for business and recreation.

   Findings: Highways OR 99W and OR 18 are state-designated truck routes and are the primary freight routes in the county. Projects recommended in the 2015 TSP update such as turn lanes, medians, roundabouts, and roadway realignments will help address goals of moving goods faster and more reliably in and through the county. TSP Section 8 (Management System and Tools) affirms that truck and hazardous routes in Yamhill County are well-established for both state highways and county roads and that no additional management systems or tools are recommended. In terms of other freight modes in the county, two freight rail lines operate within the County, the Portland & Western (PNWR) and the Hampton Railway. The PNWR is a short line railroad extending from Portland to Eugene, no part of which is listed at risk for abandonment in

Yamhill County during the 2013-2020 planning period, according to the Oregon State Rail Plan. The Oregon State Rail Plan indicates that the entire Hampton Railway line, which operates between Fort Hill and Willamina where it interchanges with PNWR, carries little traffic, had no active customers on the line in 2013, and does not meet the minimum standard for which larger railcars can be sustainably accommodated. Given these conditions, the 2015 TSP identifies no additional future freight rail needs, consistent with the Oregon State Rail Plan. It is nevertheless noted that the county has committed to purchase and bank an existing rail corridor between McMinnville and Gaston for potential future use for commuter and/or freight rail (ordinance 880, December 6, 2012).

4. POLICY 4.1 "Environmentally Responsible Transportation System" directs the State to provide a transportation system that is environmentally responsible and encourages conservation and protection of natural resources.

Finding: Environmental impacts and impacts to EFU-zoned land were used as evaluation criteria for the selection of recommended projects (see Section 7 of the TSP, Exhibit A). None of the recommended projects would require additional right-of-way. Further, environmentally responsible modes of transportation, including walking, biking, and taking transit, are supported by the projects recommended in the 2015 TSP. Widening and paving shoulders and expanding transit service and amenities to improve walking, biking, and transit conditions in the county are among the recommended projects.

5. POLICY 5.1 "Safety guides the State to continually improve the safety and security of all modes and transportation facilities for system users including operators, passengers, pedestrians, recipients of goods and services, and property owners."

Findings: The majority of improvements recommended in the 2015 TSP are focused on safety. Crash rate analysis of existing conditions indicated that there are multiple roadway segments in Yamhill County with crash rates of 200% or more of the statewide average for similar facilities (see Figure 5 in Section 4). Most of these segments are on county roadways. There are also 13 locations on state highways in the county that are in the top 10% of Safety Priority Index System (SPIS) sites statewide, a majority of these being intersections and locations on OR 18 and OR 99W. As part of the TSP process, additional detailed crash analysis was performed for seven intersections or road segments identified by crash rates, SPIS sites, the RIAC, stakeholders, and County staff (see Section 4 of the 2015 TSP, Exhibit A). Improvements for each of these locations are recommended in the draft TSP.

6. POLICY 7.1 "A Coordinated Transportation System identifies State policy to work collaboratively with other jurisdictions and agencies with the objective of removing barriers so the transportation system can function as one system."

Findings: ODOT and YCTA are the primary agencies that the County needs to coordinate with regarding transportation system planning in unincorporated Yamhill County. As a grant and project manager, ODOT staff has been involved in project management meetings as well as the public meetings addressed under Statewide Goal 1 in this report. YCTA staff participated in stakeholder interviews and provided information on existing and future transit service as well as recommendations regarding facilities and planned transit improvements.

7. POLICY 7.3 "Public Involvement and Consultation directs the State to involve Oregonians to the fullest practical extent in transportation planning and implementation in order to deliver a transportation system that meets the diverse needs of the state."

POLICY 7.4 "Environmental Justice articulates the obligation to provide all Oregonians, regardless of race, culture or income, equal access to transportation decision-making so all Oregonians may fairly share in benefits and burdens and enjoy the same degree of protection from disproportionate adverse impacts."

Findings: The 2015 TSP update was developed through a process that included several opportunities for public involvement and input as described in detail in the findings for Statewide Goal 1 in this report. The TSP process included a demographic analysis of the county, which found slightly higher percentages of Hispanic/Latino residents in the county as compared to the rest of the state. Consequently, advertisements regarding the TSP process were printed in both English and Spanish and a Spanish interpreter was made available at the two open house meetings.

Oregon Highway Plan

The 1999 Oregon Highway Plan (OHP) establishes long-range policies and investment strategies for Oregon's state highway system and refines the goals and policies found in the OTP. Policies in the OHP emphasize the efficient management of the highway system to increase safety and to extend highway capacity, partnerships with other agencies and local governments, and the use of new techniques to improve road safety and capacity. OHP policies also link land use and transportation, set standards for highway performance and access management, and emphasize the relationship between state highways and local road, bicycle, pedestrian, transit, rail, and air systems. The policies applicable to the Yamhill County TSP are addressed below.

1. Policy 1A (Highway Classification) defines the function of state highways to serve different types of traffic that should be incorporated into and specified through TSPs. Policy 1C (State Highway Freight System) states the need to balance the movement of goods and services with other uses.

Findings: For the future roadway needs analysis conducted for the TSP update process, traffic forecasts were prepared for both county roads and state highways in the county (OR 18, OR 47, OR 99W, OR 153, OR 154, OR 219, OR 221, OR 233, and OR 240). The analysis showed most of the future traffic growth occurring on state highways, with relatively little growth on county roadways. Even with this growth, future needs are projected be similar to existing needs and are focused on improving safety for all modes. Additional needs are related to mobility and traffic operations along state highways. One set of projects that are recommended as priority projects in the 2015 TSP, so identified because they are projected to enable state facilities to meet state mobility targets, are classified as "reasonably likely" by ODOT to be funded based on the 20-year funding estimates. These projects include OR 18 from Ash Road to OR 154/Lafayette Highway and the OR 47/OR 99W intersection (Project 5 and Project 7 in Table 3). The TSP also identifies projects that address mobility needs at state highway locations , but which are not considered reasonably likely to be funded in the next 20 years, including OR 99W from Dundee to OR18 and the OR 99W/Fox Farm Road intersection. As stated in TSP Section

9, Yamhill County supports the Oregon Transportation Commission (OTC) adopting alternative mobility targets for these locations to reflect the State and county's mutual expectations for highway operational performance over the next 20 years. Other recommended projects on state highways including turn lanes, medians, roundabouts, and roadway realignments also serve freight needs while balancing those needs with other user needs, particularly on OR 99W and OR 18, two major freight routes in the county.

2. Policy 1B (Land Use and Transportation) recognizes the integrated nature between land uses and the transportation system that serves them and the need for coordination between state and local jurisdictions.

Findings: As has been described in previous findings, and particularly in response to Statewide Goals 1 and 2 and OTP Policy 7.1A, development of the 2015 TSP update has involved close coordination between Yamhill County and ODOT, and has included coordination between the County, YCTA, and cities in the county as needed. In addition, existing County ordinance language regarding traffic impact studies and mitigation provides a crucial connection between land use development decisions and managing and protecting the county's transportation system.

3. Policy 1F (Highway Mobility Policy) sets mobility targets for ensuring a reliable and acceptable level of mobility on the highway system. Where it is infeasible or impractical to meet state mobility targets, this policy allows for the development of alternate mobility targets for a specific facility, corridor, or area through a collaborative planning process between ODOT and a local jurisdiction with land use authority.

Findings: While mobility was not found to be an existing or projected issue on many of the state highway segments and county roads in Yamhill County, there were "problem areas" identified on state highway segments and at state highway intersections (see Sections 4 and 5). Some of these locations will be addressed through projects recommended in the 2015 TSP. Others are in locations where needed improvements are recommended, but not currently considered to be reasonably likely to be funded in the next 20 years and, therefore, the County supports establishing alternative mobility targets for these segments and a reevaluation of the needed improvements (see Section 10), as discussed in more detail in the findings for OHP Policy 1A.

4. Policy 1G (Major Improvements) requires maintaining performance and improving safety by improving efficiency and management before adding capacity. ODOT works with regional and local governments to address highway performance and safety.

Finding: Projects recommended in the 2015 TSP favor managing and maximizing capacity over adding capacity, including projects that add turn lanes, roundabouts, and medians, remove sight obstructions, realign roadways, and widen and pave shoulders. In particular, projects such as adding turn lanes are lower cost solutions that manage and maximize capacity as well as improve safety.

5. Policy 2B (Off-System Improvements) helps local jurisdictions adopt land use and access management policies.

Findings: Projects recommended for county roads, such as turn lanes, realignment of

roadways, removal of sight obstructions, signage, striping, and traffic control (see Table 3), are expected to improve both mobility and safety, thus making county roadways more appealing for local travel and potentially alleviating traffic on state roadways. As addressed in prior findings, existing County ordinance language regarding development requirements related to transportation improvements/mitigation serves to balance land use and development and the planned transportation system in the county and protect the function of transportation facilities whether they are county roads or state highways.

6. Policy 2F (Traffic Safety) affirms the State's aim to continually improve safety for all users of the highway system.

Findings: As described in the findings for OTP Policy 5.1, a detailed crash analysis was performed during the TSP update process for seven key locations as identified by statewide crash rates, state SPIS sites, the RIAC, stakeholders, and county staff. Roadway improvements recommended in the 2015 TSP address each of those locations (Projects 1-7 in Table 3). Recommended projects also include the addition of turn lanes, removal of sight obstructions, roadways realignments, and widening and paving of shoulders that improve safety for all modes at several other locations around the county.

7. Policy 3A (Classification and Spacing Standards) sets access spacing standards for driveways and approaches to the state highway system. Policy 3B (Medians) is the policy of the State of Oregon to plan for and manage the placement of medians and the location of median openings on state highways to enhance the efficiency and safety of the highways, and influence and support land use development patterns that are consistent with approved transportation system plans.

Findings: County Road Standards refer to state access management standards. As identified in the existing conditions section of the 2015 TSP update, numerous access points along state highways do not comply with existing state access management standards, particularly along OR 47 and OR 240. However, greater safety concerns related to managing access exist on OR 18 and OR 99W, therefore consolidation of access and installation of medians are recommended at locations along these highways (e.g., Projects 6, 8, and 19 in Table 3).

8. Policy 4A (Efficiency of Freight Movement) is the State policy to maintain and improve the efficiency of freight movement on the state highway system and access to intermodal connections. The State seeks to balance the needs of long distance and through freight movements with local transportation needs on highway facilities in both urban areas and rural communities.

Findings: Of the handful of locations in the county where mobility targets are being exceeded or are projected to be exceeded in any significant way, two of these locations will be addressed by projects recommended in the 2015 TSP update (Projects 5 and 7 in Table 3) and two locations are recommended for consideration by the OTC for alternative mobility standards. Benefits for freight are also addressed in the findings for Statewide Goal 9, OTP Policy 3.1, and OHP Policy 1A in these findings, where the county generally find that the projects recommended in the 2015 TSP update serve freight needs and balance those needs with those of other users, particularly on OR 99W and OR 18 in the county. In addition, analysis performed for the TSP found that information on truck and hazardous

routes in Yamhill County is already available and well-defined for both state highways and county roads, so that no additional management systems or tools are recommended related to these routes (see Section 8).

9. Policy 4B (Alternative Passenger Modes) articulates State policy to advance and support alternative passenger transportation systems where travel demand, land use, and other factors indicate the potential for successful and effective development of alternative passenger modes.

Findings: With the exception of the proposed Yamhelas Westsider trail, pedestrian and bicycle travel in the county is occurs mainly on roads and along roadway shoulders. Several projects are recommended in the 2015 TSP to widen and pave shoulders for greater pedestrian and bicycle accessibility and safety (see Table 4). Several improvements are also recommended for transit service in the draft TSP and these will need to be pursued in conjunction with YCTA. Improvements identified in Section 10 of the TSP update include additional service during the evenings and on weekends, more frequent bus stops, expanded service to large employers (e.g. Spirit Mountain Casino and the Riverside Drive industrial area), improved service to outlying areas, bus pull-outs, and improved ADA accessibility. The TSP update notes that additional improvements may be identified in a Transit Development Plan to be prepared by the YCTA.

OAR 660 Division 12 Transportation Planning Rule (TPR)

The purpose of the TPR is "to implement Statewide Planning Goal 12 (Transportation) and promote the development of safe, convenient and economic transportation systems that are designed to reduce reliance on the automobile so that the air pollution, traffic and other livability problems faced by urban areas in other parts of the country might be avoided." A major purpose of the Transportation Planning Rule (TPR) is to promote more careful coordination of land use and transportation planning, to ensure that planned land uses are supported by and consistent with planned transportation facilities and improvements.

1. Sections 660-012-0005 through 660-012-0055 of the TPR contain policies for preparing and implementing a transportation system plan.

Findings: The 2015 TSP update includes sections on existing conditions, future conditions, a roadway classification system and corresponding standards, recommended improvements by mode, and a general funding plan as required by Section -0020 of the TPR. The original 1996 TSP and all subsequent updates were acknowledged by the Department of Land Conservation and Development as being in compliance with the TPR. No county Land Division Ordinance or Zoning Ordinance requirements have been identified as needing update or modification in order to implement this 2015 TSP update.

OAR 734, Division 51, Highway Approaches, Access Control, Spacing Standards and Medians

1. OAR 734-051 governs the permitting, management, and standards of approaches to state highways to ensure safe and efficient operation of the state highways. OAR 734-051 policies address how to bring existing and future approaches into compliance with access spacing standards and ensure the safe and efficient operation of the highway; the purpose

and components of an access management plan; and requirements regarding mitigation, modification and closure of existing approaches as part of project development.

Findings: As described in the findings for OHP Policies 3A and 3B, County Road Standards defer to state access management standards and the 2015 TSP includes projects that improve access conditions and move in the direction of closer compliance with State spacing standards at several locations in the county. Numerous existing access points along state highways in the county do not comply with existing state access management standards, a situation that the 2015 TSP acknowledges is similar to many state highways throughout the state that both serve through traffic demand and provide access to adjacent property. Inconsistency with existing state access management standards is particularly marked along OR 47 and OR 240 where the standards are not met along nearly the entire length of these highways in unincorporated Yamhill County. However, the greatest safety concerns related to managing access exist on OR 18 and OR 99W and, consequently, consolidation of access and installation of medians are recommended at locations along these highways (see Project 6, Project 8, and Project 19 in Table 3 in the TSP, Exhibit A).

C. Comprehensive Land Use Plan

Subsection A of Section III (Transportation, Communications and Public Utilities) and Subsection A of Section VII (Implementation, Evaluation, and Review) of the Yamhill County Comprehensive Land Use Plan contain the following relevant policies regarding transportation planning and citizen involvement.

1. *C. Yamhill County will cooperate and establish close liaison with the State Department of Transportation, the cities of the county, the Tri-County Metropolitan Transportation District of Oregon (Tri-Met), the Southern Pacific Railroad, the Federal Aviation Administration, Federal Highway Administration, and private utility companies operating in the county, in respect to matters relating to the location, design and programming of roads, railroads, public transit facilities, airports, transmission lines, pipelines, waterways, energy corridors and communications facilities to guide and accommodate the emerging development patterns of the county.*

   Findings: As described in Statewide Goal 1-related findings in this report, development of the 2015 TSP update has involved close coordination between Yamhill County and ODOT, and has included coordination between the county, YCTA, and cities in the county, as needed. The county is also in the process of purchasing from Union Pacific (which now includes the Southern Pacific Railroad) a existing transportation corridor between McMinnville and Gaston. Rail, air, waterway, and pipeline needs were not significantly updated during the most recent TSP process and, therefore, agencies related to those modes were not involved in development of the 2015 TSP update.

2. *D. Yamhill County will, in cooperation with the State Highway Division and the cities of the county, establish a comprehensive list of recommended road improvements throughout the county, establish a suitable review mechanism for arriving at and amending priorities on a continuing basis and work towards the creation of an on-going capital improvement program closely coordinated with all agencies of government responsible, including cities for road location, construction, finance and maintenance.*

Findings: The system analysis and set of recommended projects prepared for the 2015 TSP address roads in unincorporated Yamhill County and involved necessary, but limited, coordination with cities in the county. City representatives participated in stakeholder interviews early in the TSP process in order to identify transportation issues and locations of concern. Projects recommended in the TSP require more intensive coordination between the County and ODOT. The recommended roadway, pedestrian, and bicycle improvement projects presented in Tables 3 and 4 in the 2015 TSP update represent a combination of projects for which the County and ODOT will have primary responsibility. The projects are prioritized according to when the need for them is expected to occur. Otherwise, the TSP states that projects will be implemented as funding is available.

3. *A. Yamhill County will continue to implement an ongoing citizen involvement program that provides county residents opportunity to be involved in all phases of the planning process.*

Findings: As addressed in findings earlier in this report, several opportunities for public involvement and input were provided during the TSP update process, including stakeholder interviews, a public survey, open houses, and public hearings. Section 9 (Public Process) of the 2015 TSP update describes how public input influenced the selection of projects recommended in the TSP.

Subsection B of Section VII (Implementation, Evaluation, and Review) of the Yamhill County Comprehensive Land Use Plan contains the following policies regarding review and update of the comprehensive plan.

1. *A. Yamhill County will review any development concepts or proposals which conflict with the Plan Map, goals or policies in light of changing needs and conditions and in keeping with established procedures of Plan evaluation, amendment, and update.*

Findings: Adoption of the 2015 TSP update is an update of the transportation element of the Yamhill County Comprehensive Land Use Plan and is based on the conditions, needs, and community input documented in the updated TSP. The goals and policies in Subsection A (Transportation) of Section III (Transportation, Communications and Public Utilities) of the existing County Comprehensive Land Use Plan will continue to serve as the transportation policies in County decisions for zone changes and legislative amendments and are not amended by Ordinance 895. The 2015 TSP is consistent with applicable Comprehensive Land Use Plan policies, as demonstrated in the preceding findings.

2. *B. Yamhill County will undertake a major update of the Comprehensive Plan and review of all supporting documents every five years to ensure that an adequate factual basis for planning decisions is maintained.*

Findings: The 2015 TSP update represents the county's efforts to ensure that county transportation planning is based on current data, analysis and public input. The update is supported by a record that contains almost 400 pages of appendices and other materials. [NOTE: the plan update Table of Contents lists the appendices, but does not reflect actual page numbers.] Information and input from County staff, the County's Road Improvement Advisory Committee, partner agencies such as ODOT, and members of the

public supplements the data and analysis provided by the county's consultant, to provide a factual basis for county transportation planning decisions now and into the future.

3. *C. Yamhill County will encourage federal, state, and regional agencies and special districts to coordinate their planning efforts with those of the county.*

Findings: Yamhill County coordinated development of the 2015 TSP update most closely with agencies most affected by recommendations in the TSP update, namely ODOT and the YCTA. In addition, the County supports coordination between ODOT and OTC in developing and adopting alternative mobility targets for the two locations identified in the TSP update where solutions for mobility issues are not reasonably likely to be funded in the next 20 years.

While the TSP update focuses on transportation facilities in unincorporated Yamhill County, the County coordinated early in development of the update with cities in the county. In particular, cities participated in stakeholder interviews, to the extent that needs and potential projects involved transportation facilities bordering or extending into city urban growth areas.

CONCLUSIONS

1. Ordinance 895 amends the Yamhill County Comprehensive Land Use Plan to add the 2015 Yamhill County Transportation System Plan (labeled "draft" but constituting the "final") to the transportation element of the Comprehensive Land Use Plan.

2. As demonstrated in these findings, the TSP attached as Exhibit B to Ordinance 895 complies with applicable Statewide Land Use Planning Goals and Guidelines, applicable State regulations, and applicable Yamhill County Comprehensive Land Use Plan policies.

3. Ordinance 895 complies with the review criteria for an update of the comprehensive plan in Section VII(B) of the Yamhill County Comprehensive Land Use Plan.

ORDINANCE 895- EXHIBIT B
YAMHILL COUNTY TRANSPORTATION
SYSTEM PLAN UPDATE

draft

Yamhill County
Transportation System Plan

Prepared for

Prepared by

April 2015

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Section 1. Executive Summary

The Yamhill County Transportation System Plan (TSP) provides a guide for decision-making about future investments in the County's transportation system. The plan was prepared following a process of identifying existing and future system needs, developing improvement options to address the needs, and defining recommended improvements based on public and county staff input. The study area for the plan is the rural (unincorporated) portion of the County.

Transportation System Needs

Transportation system needs were analyzed for both existing and future conditions. Future conditions were considered for a 20-year planning horizon for the Year 2035.

Roadway Needs

Prior to roadway needs analysis, the County's existing roadway functional classification system and standards were updated. The functional classification system describes the hierarchy of roadway types and their relative roles in the system, and provides criteria for classifying specific roadways. Roadway standards provide guidance for Yamhill County staff when either constructing or reconstructing county roadways.

Roadway needs were analyzed in the areas of congestion/mobility, traffic operations, safety, geometrics, access, and bridges. Daily, non-seasonal congestion is not an issue on most state highways and county roads. The only chronic problem areas are on OR 99W between Newberg and Dundee and between Dundee and OR 18 and at the intersections of OR 18/OR 154/Lafayette Hwy., OR 99W/OR 47, and OR 99W/Fox Farm Rd.

Traffic operations needs were identified where left-turn lanes or right-turn lanes may be needed at unsignalized intersections. Most of the turn lane needs are on state highways and near urban areas where traffic volumes are higher.

With regard to safety, a crash rate analysis indicated that there are multiple roadway segments with crash rates of 200% or more of the statewide average for similar facilities. Most of these are on county roadways. There are also 13 locations on state highways with crash rates within the top 10% of all locations statewide. A majority of the locations are at intersections. OR 18 and OR 99W have the largest number of sites.

Geometrics describe the physical features of the roadway. Roughly 70% of the county roadways classified as minor collector or above do not meet the lane width standards and about 30% do not meet the shoulder width standards. For state highways, the shoulder width standard is not met along more than 50% of the total mileage within the study area. A number of state highway and county road intersections were also found to have geometric deficiencies.

Similar to many state highways that serve both through traffic demand and provide access to adjacent property, there are several state highways in the study area with high concentrations of access points. OR 47 and OR 240, in particular, have relatively large numbers of access points.

Based on their sufficiency rating, 60% of the ODOT bridges and 36% of the county bridges are eligible for either rehabilitation or replacement.

To serve as the basis for the future roadway needs analysis, traffic forecasts were prepared for both county roads and state highways. The analysis reflects the construction of Phase One of the Newberg-Dundee Bypass. Most of the future traffic growth will occur on state highways, with relatively low growth on county roadways. Future needs will be similar to existing needs, with most of the additional needs related to mobility and traffic operations along state highways.

Bicycle and Pedestrian Needs

Bicycle needs exist where there are higher bicycle and vehicle volumes and the roadway shoulders are either too narrow or not paved. These conditions exist along portions of OR 47, OR 99W, OR 154/Lafayette Hwy., Westside Rd., and Old Sheridan Rd. Pedestrian needs exist where the shoulder width standards are not met. Because bicyclists and pedestrians share the roadway with traffic, the needs at these locations will increase as traffic volumes grow in the future.

Corridor Health

A measure of the combined need of each roadway segment was developed by applying a Corridor Health Tool. The corridor health concept is based on the idea of measuring the "health" of each corridor segment within several different categories of performance, and then combining the measurements to obtain a picture of overall corridor health. For existing conditions, most corridor segments fall within the good and fair categories. Future corridor health would remain the same for all county roadways and most state highways.

Transit Needs

Existing transit service needs within the study area include the lack of evening and weekend service, the need for more bus stops, and expanded to service to large employers and outlying areas. Transit facility needs consist of the lack of designated bus stops with signs/schedules, transit shelters , sidewalks, curb cuts, loading spaces, and ADA-compliant facilities. Based on the anticipated slow rates of population and employment growth within the rural portion of the County, the type and level of future transit needs will likely be similar to the existing needs.

Air, Rail, Pipeline, and Waterway Needs

No air, waterway, or pipeline needs were identified. The *Oregon State Rail Plan*[1] indicates that the Hampton Railway, which operates freight service between Fort Hill and Willamina, is considered at-risk for abandonment, with zero percent of the line meeting the minimum standard for which larger railcars can be sustainably accommodated. There is also a potential need for a passenger rail connection between the Yamhill County and the Portland metropolitan area.

Funding Analysis

Funding for capital improvement projects to address the transportation system needs is expected to be very limited over the next 20-year period. Therefore, existing and potential future funding sources were explored to determine an approximate budget for future transportation improvements.

Historically, the County has received nearly all of its transportation funding from the State Highway Fund. This funding has been spent mainly on maintenance and operation of the road system, with the remaining amount used for capital improvement projects. County staff expects that the share of the revenue to be spent on capital improvement projects will increase in the future, to about $300,000 per year or $6M over the 20-year planning horizon. ODOT's funding for improvements to the state highway system comes from a variety of federal programs. Based on the continuation of current funding levels, for planning purposes ODOT estimates[2] that total funding for state highway improvements in Yamhill County over the next 20 years could be in the $10-15M range.

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[1] Oregon Department of Transportation, Oregon State Rail Plan, 2014.

[2] The State has not committed any future funding for projects in Yamhill County. This estimate is based on the assumption that Yamhill County will receive a reasonable share of the state/federal funding projected to be available over the 20-year planning horizon in Region 2 and based on ODOT sustaining their current revenue structure. It is used to illustrate the degree of financial constraints faced by ODOT as of the writing of this document. Actual funding through state and federal sources may be higher or lower than the range of this estimate. This estimate does not include projects that might be funded through the federal Highway Safety Improvement Program (HSIP).

In addition to the State Highway Fund, other local transportation funding mechanisms were investigated as potential sources of additional revenue to the County. All of these mechanisms are authorized by the Oregon Revised Statutes. Two mechanisms that have been successfully used by other Oregon counties similar to Yamhill County are property taxes and local improvement districts. Additional funding mechanisms available to the County are transportation utility fees, franchise fees, and county road districts.

Goals, Objectives, and Evaluation Criteria

A set of goals and objectives reflecting Yamhill County's values was developed to guide the preparation and implementation of the TSP. The goals describe the desired outcomes of future transportation improvements in the County. The objectives identify actions to be taken to accomplish the goals. More broadly, the goals and objectives will be used to guide the County's future transportation system management decisions.

The recommended improvements in the TSP must be consistent with the goals and objectives. To accomplish this, evaluation criteria reflecting the goals and objectives were developed for selecting the recommended improvements from a set of improvement options. The evaluation criteria are measurable factors used in determining the extent to which an improvement will meet the goals and objectives.

The goals are:

1. Provide for efficient and convenient motor vehicle travel.
2. Provide for the safety of al transportation modes.
3. Provide an equitable, balanced and connected multi-modal transportation system.
4. Increase the quality and availability of pedestrian and bicycle facilities.
5. Work with transit service providers to provide transit service and amenities that encourage and increase ridership.
6. Manage the transportation system to support a prosperous and competitive economy.

7. Provide transportation facilities and services that are fiscally responsible and economically feasible.
8. Provide a transportation system that conserves energy and protects and improves the environment.
9. Coordinate with local and state agencies and transportation plans.

Management Systems and Tools

The County has several management systems and tools in place to support decision-making about expenditures for capital improvements and maintenance for the County's roadway system:

- Project prioritization – the County's Road Maintenance/Reconstruction Prioritization Policy is used to identify annual road maintenance and reconstruction improvements.
- Ranking of safety problem locations – a system developed and implemented by the County's Road Improvement Advisory Committee (RIAC) is used for ranking safety problem locations based on multiple criteria.
- Gravel road condition rating - the County uses an informal Gravel Road Condition Rating System to calculate a gravel condition index (GCI) value for gravel roads.
- Prioritization of paving of gravel roads- the County's Gravel Collector Roads Upgrade Prioritization System is used to rank collector roadways considered as potential candidates for paving.
- Road ownership transfer - the County follows a policy that encourages the expeditious transfer of jurisdiction of roadways to incorporated cities in conjunction with annexation.

Because the TSP should provide not only recommendations about future capital improvement projects, but also guidance on the on-going, day-to-day management of the transportation system, the development of management approaches in the following additional areas was investigated:

- Mitigation of traffic diversion from state highways to county roads
- Designation of scenic routes
- Designation of truck/hazardous materials routes

There are three primary traffic diversion routes in the County that involve drivers trying to avoid congestion on OR 99W. An effective way to decrease the amount of diverted traffic along these routes is to improve the OR 99W corridor. In addition to Phase I of the Newberg-Dundee Bypass, several improvements are recommended in the TSP that will enhance the attractiveness of OR 99W.

Both objective and subjective criteria should be used in identifying potential scenic routes. The recommended criteria are related to roadway characteristics and crash history, as well roadside features and the level of local support.

Because information on truck and hazardous routes in Yamhill County is already available and well-defined for both state highways and county roads, no additional management systems or tools are recommended in this area.

Public Process

Development of the TSP was a collaborative process among the County, ODOT, RIAC, key stakeholders, and the community. Several methods were used to engage the community, including stakeholder interviews, an online survey, and two public open house meetings. Public involvement was carried out according to the Title VI requirements and guidance found in ODOT's *Guidelines for Addressing Title VI and Environmental Justice in Transportation Planning.*[3]

The first open house was held on August 8, 2013. The purpose of the meeting was to provide the public an opportunity to review information on existing and future projected transportation

[3] Oregon Department of Transportation, Guidelines for Addressing Title VI and Environmental Justice in Transportation Planning, 2015.

conditions in the County and obtain comments on key transportation issues. Comments were received from the public about several local road problem locations and potential improvements. There was also general interest in ensuring that bicycle and pedestrian improvements would be included in the TSP. A second open house was held on December 11, 2014 to provide an opportunity to the public to comment on proposed improvement options for 21 priority roadway improvement locations and a list of proposed bicycle/pedestrian improvements.

The improvement options were developed to address the needs identified in the existing and future conditions analysis and by the RIAC, stakeholders, and public. Prior to the second open house, the options were screened using the evaluation criteria and the findings were reviewed with the County, ODOT, and RIAC. There was general agreement about the improvement concepts and the results of the evaluation.

Public input was obtained at the second open house on several of the roadway improvement options. There were also several comments about general importance of adequate shoulders and the need to safely accommodate bicyclists.

Recommended Transportation System Improvements

Based on the public input received at the second open house, evaluation results, and input from the RIAC and county staff, recommended improvements were selected that best meet the goals, objectives, and needs for the County's transportation system. The recommended improvements also recognize the future funding constraints for both county and state transportation facilities. None of the improvements are expected to have disproportionately negative impacts on Title VI populations. Rather, these improvements will benefit the entire population.

Roadway Projects

The recommended roadway improvements are in the form of projects, which consist of a bundle of one or more individual improvements that address both the primary and secondary needs at a location. The recommendations describe the type of improvements to be implemented, not their specific design characteristics or features. These would be determined at the time of project development.

Improvement projects are recommended for nine county roadway locations. Almost all of the projects are at intersections and primarily address safety needs and substandard geometric features, such as skewed intersection angle, poor sight distance, and narrow lanes and shoulders. The general improvement types at these locations are realignment of the intersection, removal of sight distance obstructions, and lane and shoulder widening.

There are 12 recommended projects for state highways, primarily along OR 99W and OR 18. Similar to the county roadways, these projects address safety and geometric needs. Because of the higher traffic volumes on state highways, however, they also address mobility and traffic operations needs at several locations. The mobility and traffic operations improvements include roundabouts and the installation of intersection turn lanes. Prior to implementation of the roundabouts, further analysis would be required by ODOT to determine their feasibility and desirability.

Bicycle and Pedestrian Improvements

The recommended bicycle and pedestrian improvements are located throughout the County and consist mainly of shoulder widening and/or paving to accommodate bicycle and pedestrian use. In some cases, lane widening is also recommended because having adequate lane width for vehicular traffic also improves safety for bicyclists and pedestrians. In addition to the shoulder and lane widening improvements, the Yamhela's Westsider Trail is also recommended, which will run parallel to OR 47 between OR 99W and Gaston.

Transit Improvements

The recommended transit improvements address the needs identified in the existing and future transportation conditions analysis. The general transit service improvements include increased evening and weekend service, more bus stops, and expanded to service to large employers and outlying areas. The transit facility improvements consist of designated bus stops with signs/schedules, transit shelters , sidewalks, curb cuts, loading spaces, and ADA-compliant facilities.

Air, Rail, and Pipeline Improvements

No significant improvements are planned for the McMinnville Municipal Airport or the Sportsman Airpark within the 20-year planning horizon. No freight rail improvements are identified in *Oregon State Rail Plan;*[4] however, the plan does indicate that there is potential for a passenger rail connection between the County and Portland metropolitan area. No changes are expected for the existing gas transmission pipelines.

Implementation of Recommended Improvements

Implementation of the recommended projects, both for county and state facilities, will be significantly constrained by the anticipated future funding amounts. For the County, this is estimated to be roughly $300,000 per year or $6M over the 20-year planning horizon. For planning purposes, a total of $10-15M in state and federal funding administered by ODOT is estimated to be available for capital improvements on state highways over the 20-year period.[5]

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[4] Oregon Department of Transportation, Oregon State Rail Plan, 2014.

[5] The State has not committed any future funding for projects in Yamhill County. This estimate is based on assuming that Yamhill County will receive a reasonable share of the state/federal funding projected to be available over the 20-year planning horizon in Region 2 and based on ODOT sustaining their current revenue structure. It is used to illustrate the degree of financial constraints faced by ODOT as of the writing of this document. Actual funding through state and federal sources may be higher or lower than the range of this estimate. This estimate does not include projects that might be funded through the federal Highway Safety Improvement Program (HSIP).

County Projects

The county roadway projects are recommended for implementation in the short-term, medium-term, or long-term based, primarily, on whether the needs exist today or are expected in the future with traffic growth. No additional prioritization is recommended for the county roadway projects. Implementation of specific projects can occur as funding becomes available or other opportunities arise during each budget cycle. Similarly, all of the recommended bicycle and pedestrian improvements address existing needs and therefore can be considered equally important, with implementation based on funding availability or as other opportunities arise during each budget cycle. Retaining this flexibility will enable the County to best address those issues that are affordable and of greatest concern during each budget cycle.

ODOT Projects

Some of the projects on ODOT facilities are recommended as priority projects because there are mobility needs at these locations that must be addressed to meet the State's mobility targets. The following priority projects are considered "reasonably likely" by ODOT to be funded based on the estimated 20-year funding amount available for state highways in Yamhill County:[6]

- OR 18 from Ash Rd. to OR 154/Lafayette Hwy. - Close Ash Rd. north and south of OR 18, install a multi-lane roundabout at the OR 18/OR 154/Lafayette Hwy. intersection, and widen Lafayette Hwy. and OR 154 near the intersection.
- OR 47/OR 99W intersection - merge the eastbound and westbound roadways on OR 99W into a single roadway and install a multi-lane roundabout; widen shoulders on OR 47 in the vicinity of the intersection.

[6] The State has not committed any future funding for projects in Yamhill County. This estimate is based on assuming that Yamhill County will receive a reasonable share of the state/federal funding projected to be available over the 20-year planning horizon in Region 2 and based on ODOT sustaining their current revenue structure. It is used to illustrate the degree of financial constraints faced by ODOT as of the writing of this document. Actual funding through state and federal sources may be higher or lower than the range of this estimate. This estimate does not include projects that might be funded through the federal Highway Safety Improvement Program (HSIP).

In addition, there are several other state highway locations where there are existing and/or future mobility needs, but improvements are considered not reasonably likely to be funded. These are:

- OR 99W/OR 18/McDougall Rd. intersection (Location #4)
- OR 18 west of Dayton
- OR 18 west of McMinnville
- OR 99W – Dundee to OR18 (Location #8)
- OR 99W/Fox Farm Rd. intersection

In lieu of improvements, Yamhill County supports the Oregon Transportation Commission (OTC) adopting alternate mobility targets for these locations to ensure that state mobility standards reflect the State and County's mutual expectations for highway operational performance over the planning horizon given the likely financial constraints.

All of the other ODOT projects, including the bicycle/pedestrian improvements, can be treated in a similar manner to the recommended county projects, with no specific prioritization. These can be implemented as funding becomes available or as other opportunities arise.

Section 2. Introduction

The Yamhill County Transportation System Plan identifies how to best improve or preserve existing and future county roadway and state transportation facilities in the unincorporated portion of Yamhill County. The plan assesses the current and future function of the transportation system, identifies how to improve operations and safety, and preserves the transportation system's functional integrity.

The plan is intended to provide transportation options for the County over the next 20 years. Recommended improvements are identified that can be implemented after project funding, programming, and design have been completed.

The plan reflects the outcomes of the following study tasks:

- Public and stakeholder involvement
- Review land use and transportation plans and policies
- Update roadway functional classification system and roadway classifications
- Update roadway standards
- Assess existing transportation conditions
- Assess future transportation conditions
- Conduct funding analysis
- Develop goals, objectives and evaluation criteria
- Analyze and refine improvement options
- Recommend improvements
- Prepare Draft TSP and Final TSP

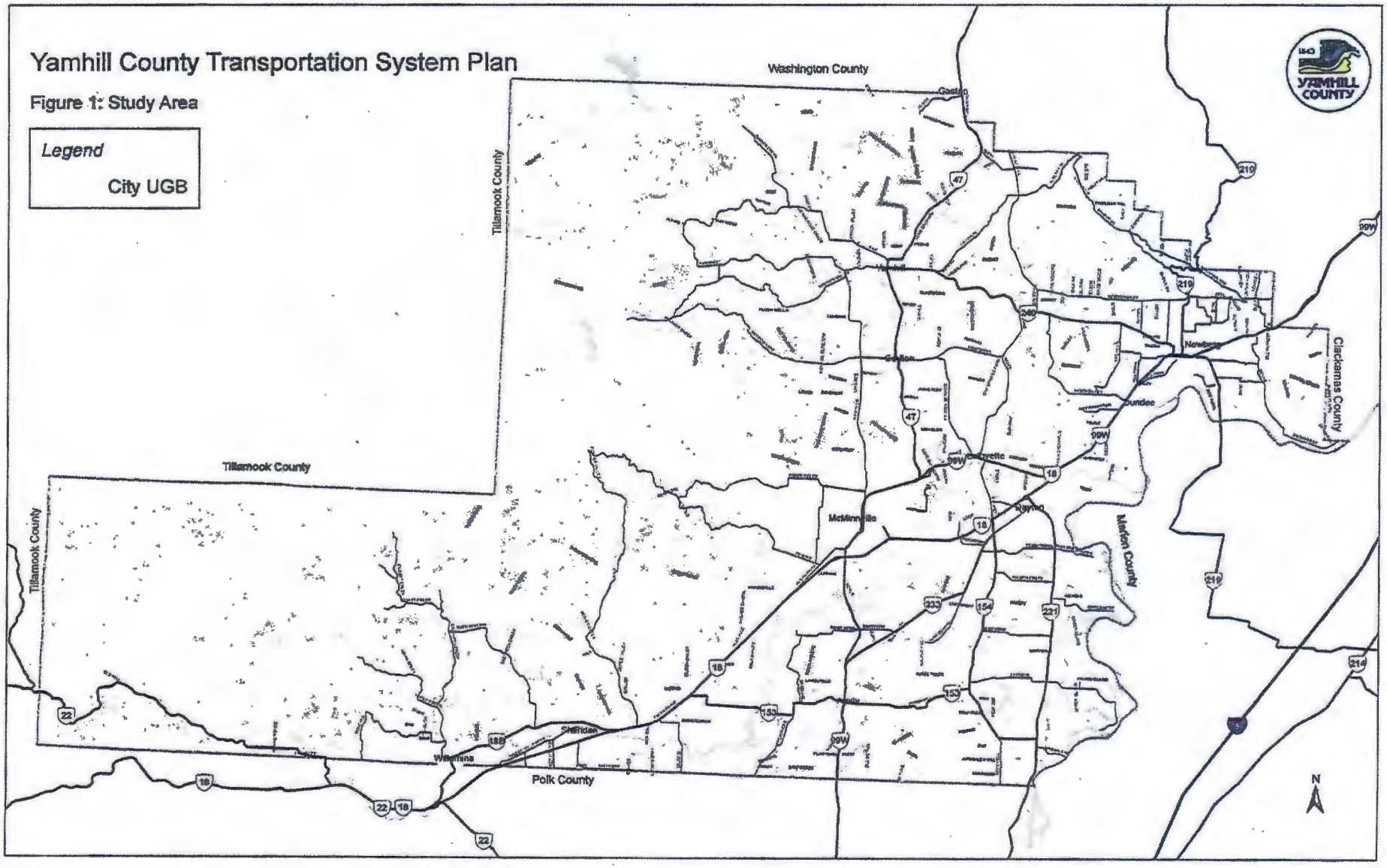
Study Area

The study area, shown in Figure 1, is the rural portion of Yamhill County. It does not include the incorporated areas or county roads within these areas. Within the study area, agriculture is the predominant land use, with some commercial and residential development. The wine industry is a significant component of the agricultural sector. Over 80 wineries and 200 vineyards represent the largest concentration of wine growers and producers in Oregon.

Yamhill County is adjacent to Tillamook, Washington, Clackamas, Marion, and Polk Counties. There is a significant amount of commute traffic between the incorporated areas of the County, such as Newberg and McMinnville, and the Portland metropolitan and Salem areas. The primary commute routes are OR 99W, OR 47, and OR 221. OR 99W and OR 18 also serve as one of the main routes for recreational travel from the Portland area to the Oregon coast.

Yamhill County Transportation System Plan

Figure 1: Study Area



Section 3. Roadway Functional Classification and Standards

Functional Classification

The functional classification system describes the hierarchy of roadway types and their relative roles in the system, and provides criteria for classifying specific roadways. The classifications provide guidance for the design standards to be applied when a roadway is improved and, for county roads, prioritization of improvement and maintenance projects (described further in Section 8: Management Systems and Tools). The County's design standards are applied for county roads and ODOT's design standards are applied for state highways.

The roadway network performs two essential functions: to facilitate mobility and provide access to property. Higher-classified roadways (e.g., arterials) primarily provide mobility, while lower-classified roadways such as local roads primarily provide land access. Intermediate classifications (e.g., collectors) serve both mobility and access needs.

Principal Arterial

- Carries substantial volume of statewide or interstate travel; and
- Penetrates urban boundaries or comes within 10 miles of the center of an urban area.

Minor Arterial

- Links cities, larger towns, and other major traffic generators, providing interregional and intercounty service;
- Serves travel flows of greater length and density than those served by lower-classified roads;
- Connects state highways; and
- Typically carries an average daily traffic (ADT) volume of 2,000 vehicles or higher.

Major Collector

- Provides service to larger towns not served by higher-classified roads. Also serves schools, county parks, and important agricultural areas;
- Connects these places with nearby larger towns or cities or with arterials; and
- Serves intra-county travel.

Minor Collector

- Collects traffic from local roads;
- Provides service to remaining smaller communities; and
- Serves locally important traffic generators.

Resource Roads

- Provides a connection between resource areas and the remaining roadway network; and
- Facilitates movement of goods and services.

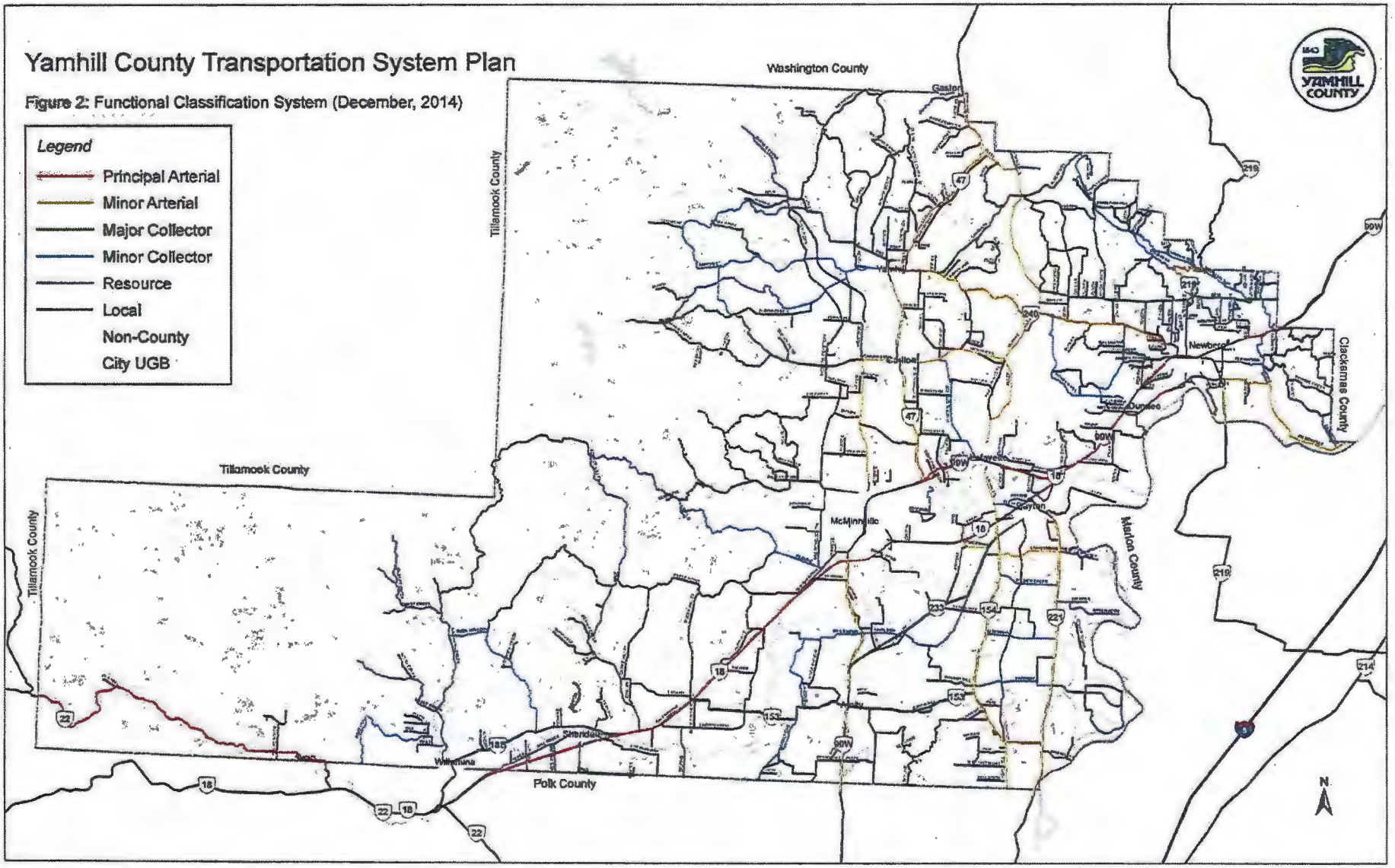
Local Roads

- Provides access to adjacent land and higher-classified roads; and
- Accommodates travel over shorter distances compared to collectors or arterials.

Figure 2 shows the Yamhill County functional classification system. Most state highways are classified as principal arterials or major arterials. There are a few county roads classified as minor arterials, primarily in the more developed northern portion of the study area (Westside Rd., Abbey Rd./Kuehne Rd., Hendricks Rd., Spring Hill Rd./Flett Rd., Wilsonville Rd., Stringtown Rd., and Hopewell Hwy.). Most of the county roads, however, are classified as collectors, resource, or local roads.

Yamhill County Transportation System Plan

Figure 2: Functional Classification System (December, 2014)



Roadway Standards

Roadway standards provide guidance for Yamhill County staff when either constructing or reconstructing county roadways.[7] The standards that are applied depend on the functional classification of the roadway. There are two sets of standards - one for new construction and reconstruction projects (more stringent) and one for maintenance projects (less stringent). The purpose of having two sets of standards is that when a new roadway is built or an existing road is reconstructed, the desired standards should be met. The standards for improvements done as a part of maintenance projects are less stringent, however, because there may not be enough funding to meet the desired standards or there may not be adequate right-of-way to build the improvement to the higher standard.

The new construction/reconstruction standards cover a variety of roadway elements, including:

- Design average daily traffic (ADT)
- Design speed
- Maximum grade
- Sight distance
- Lane and shoulder widths[8]
- Surface and shoulder type
- Maximum superelevation rate
- Minimum curve radius
- Maximum degree of curvature
- Vertical clearance
- Minimum right-of-way width
- Cross slope

The maintenance standards include a subset of these elements, including lane and shoulder widths, surface type, total roadway width, and cross slope.

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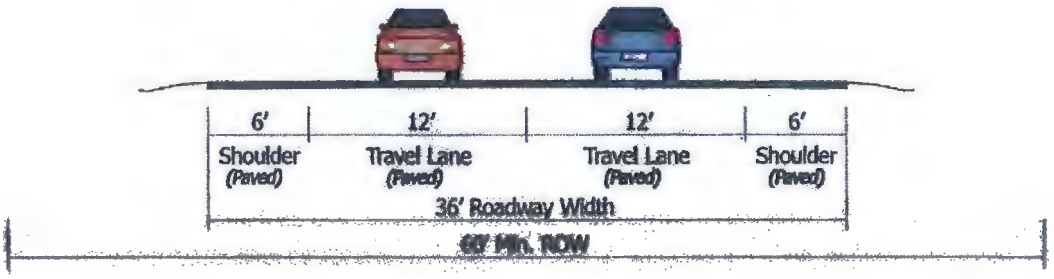
[7] ODOT's design standards are applied for state highways.
[8] The standards for lane width, shoulder width, and shoulder type do not apply to gravel surface types.

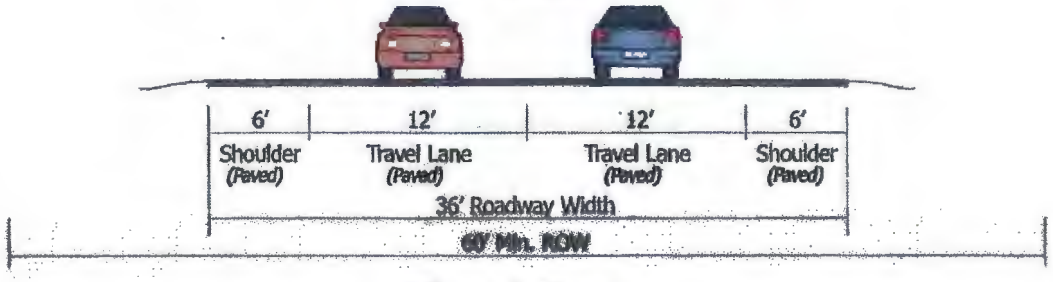
A third set of advisory standards provides guidance on private roadways. Although these roadways are not constructed or maintained by the County, the standards are intended to provide guidance to developers on the construction/improvement of safe and efficient private roads.

The County's roadway standards are presented in Appendix A. Typical cross-section drawings corresponding to the County's road standards are shown in Figure 3 and Figure 4.

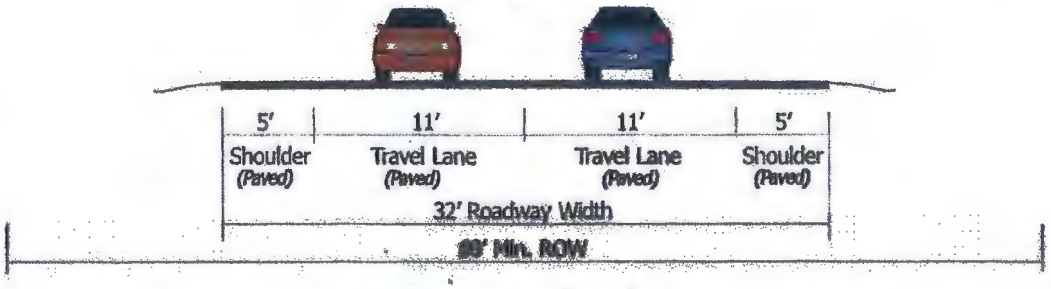
Principal Arterial/Minor Arterial



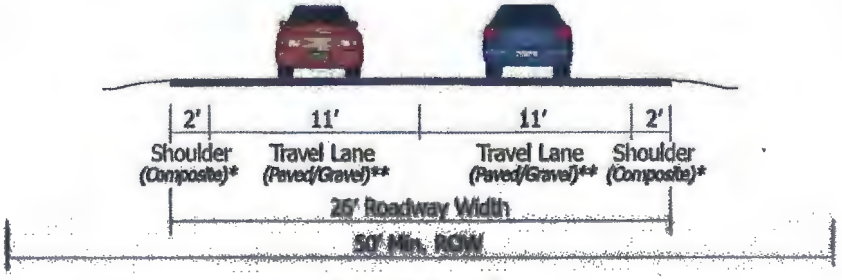
Major Collector



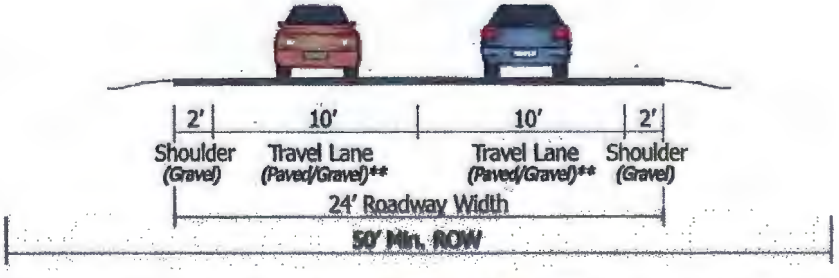
Minor Collector



Resource Road



Local Road



* Paved plus other surface type

** To be determined by County Road Engineer

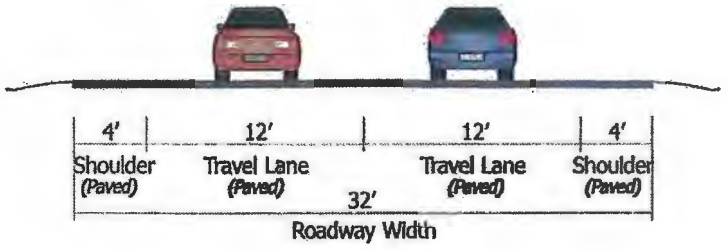
Note: See design standards for reduced shoulder/roadway width requirements in rolling hills or mountainous terrain

DKS

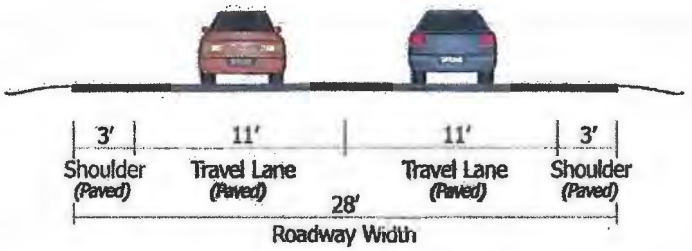
Figure 3

Roadway Cross-Section Standards for New Construction/ Reconstruction Projects

Principal Arterial



Minor Arterial



Major Collector/Minor Collector

Resource Roads/Local Roads

* Composite for resource roads (paved plus other surface type) Gravel for local roads

** To be determined by County Road Engineer

Note: See design standards for reduced shoulder/roadway width requirements in rolling hills or mountainous terrain

DKS

Figure 4

Roadway Cross-Section Standards for Maintenance Projects

Section 4. Existing Conditions

The existing roadway network has roughly 117 miles of state highways and 210 miles of county roadways classified as minor collector or above. There are 11 state highways providing connections to all of the urban areas within the County as well as the surrounding five-county area.

The county road system consists entirely of two-lane roads with no medians. Most of the county roadways classified as resource road or above are paved, while the local roads are mostly gravel. Turn lanes are provided at only a few county intersections. The basic speed rule covers most of the system, with slower speed zones in rural developed areas and for specific segments with geometric deficiencies. Currently within the rural area, there are no signalized county intersections.

The majority of state highways are two-lane facilities, with additional through lanes at some locations along OR 99W and OR 18. Turning lanes are provided at most major intersections along OR 99W and OR 18, but generally are not provided on other state highways. The basic speed rule is in effect for almost all state highways, with isolated slower speed zones in rural developed areas. There are no signalized intersections along the state highways outside of the incorporated areas within the County.

Nearly all of the bicycle facilities within the rural Yamhill County area are either shoulder bikeways and shared roadways. A shoulder bikeway is a paved shoulder that provides a suitable area for bicycling to reduce conflicts with faster moving motor vehicle traffic. On a shared roadway, bicyclists and motorists share the same travel lanes. There are only a few bike lanes in the study area, located near Newberg and McMinnville. A shared-use path differs from a shared-use roadway by being separated from motor vehicle traffic. There are no shared-use paths within the rural area.

There are no sidewalks or paths within rural Yamhill County. All of the pedestrian facilities in the County consist of shoulders, which may be used to serve pedestrians as well as bicyclists in rural areas.

The Yamhill County Transit Area (YCTA) provides the majority of the transit service within the County. This includes intra-city service within McMinnville and Newberg, inter-city link routes, Dial-a-Ride service, and Volunteer Medical Transportation.

The intra-city service includes two routes in McMinnville and two routes in Newberg, with connections to the link routes. Four link routes connect McMinnville, Newberg, and other communities to destinations outside of Yamhill County. These operate along fixed routes with fixed schedules, and serve major stops within each community. Dial-a-Ride is a curb-to-curb transportation service operating throughout Yamhill County that is available to anyone unable to access YCTA fixed routes. Volunteer Medical Transportation is a volunteer-operated van service providing Yamhill County residents access to medical appointments in the Portland area. There are no supporting transit facilities such as bus shelters, bus pull-outs, or official park-and-ride lots within the study area.

There are a number of private airports as well as two public airports in the County - the McMinnville Municipal Airport and the Sportsman Airpark in Newberg. Two freight rail lines operate within the County, the Portland & Western (PNWR) and the Hampton Railway.[9] There are no commercial ports or waterways. Gas transmission pipelines are located between McMinnville and south of Amity and in the Newberg-Dundee area.

Existing Transportation Conditions and Needs

Existing Roadway Needs

Two approaches were used to analyze existing transportation conditions. With the first approach, transportation data such as traffic volumes and roadway characteristics were

[9] Oregon Department of Transportation, State of Oregon: Oregon Railroads Map, 2014.

collected and analyzed. The results of this analysis were compared to standards, and for locations that did not meet the standards, a potential need was identified. The second approach was to gather and assess information on existing transportation needs received from stakeholders, agency staff and the RIAC. Existing transportation conditions and needs are summarized below; additional information can be found in Appendix B.

Existing Mobility Needs

Congestion is not an issue on most state highway and county roads. There are, however, locations where congestion regularly occurs. The County and ODOT have established mobility targets that reflect the maximum levels of congestion that should occur on county roads and state highways. The only roadway segments that do not meet ODOT's targets are OR 99W between Newberg and Dundee and OR 99W between Dundee and OR 18. All county road segments currently operate well within the targets. Most of the state highway and county road intersections operate acceptably, with the exception of the OR 18/OR 154/Lafayette Hwy., OR 99W/OR 47, and OR 99W/Fox Farm Rd. intersections.

There were multiple comments from the stakeholders, agency staff and RIAC about the general need for additional capacity along the OR 99W/OR 18 corridor, the need for alternate routes to OR 99W, and the need for more routes connecting communities (see Figure C-1 and Table C-1 in Appendix C). Overall, however, aside from the OR 99W/OR 18 corridor in the Newberg-Dundee area, mobility within the County is not a significant concern.

Existing Traffic Operations Needs

Traffic operations issues were identified where left-turn lanes or right-turn lanes may be needed at unsignalized intersections. Most of the turn lane needs are on state highways and near urban areas where traffic volumes are higher.

Stakeholders, agency staff and the RIAC reported numerous roadway operational needs. Many of their comments relate to problems with turning vehicles and the lack of turn lanes at intersections, particularly along OR 18. Other problems include driver confusion at intersections due to non-standard intersection layouts, difficulty in accessing and crossing state highways from side roads, and the need for traffic signals at several intersections.

Existing Safety Needs

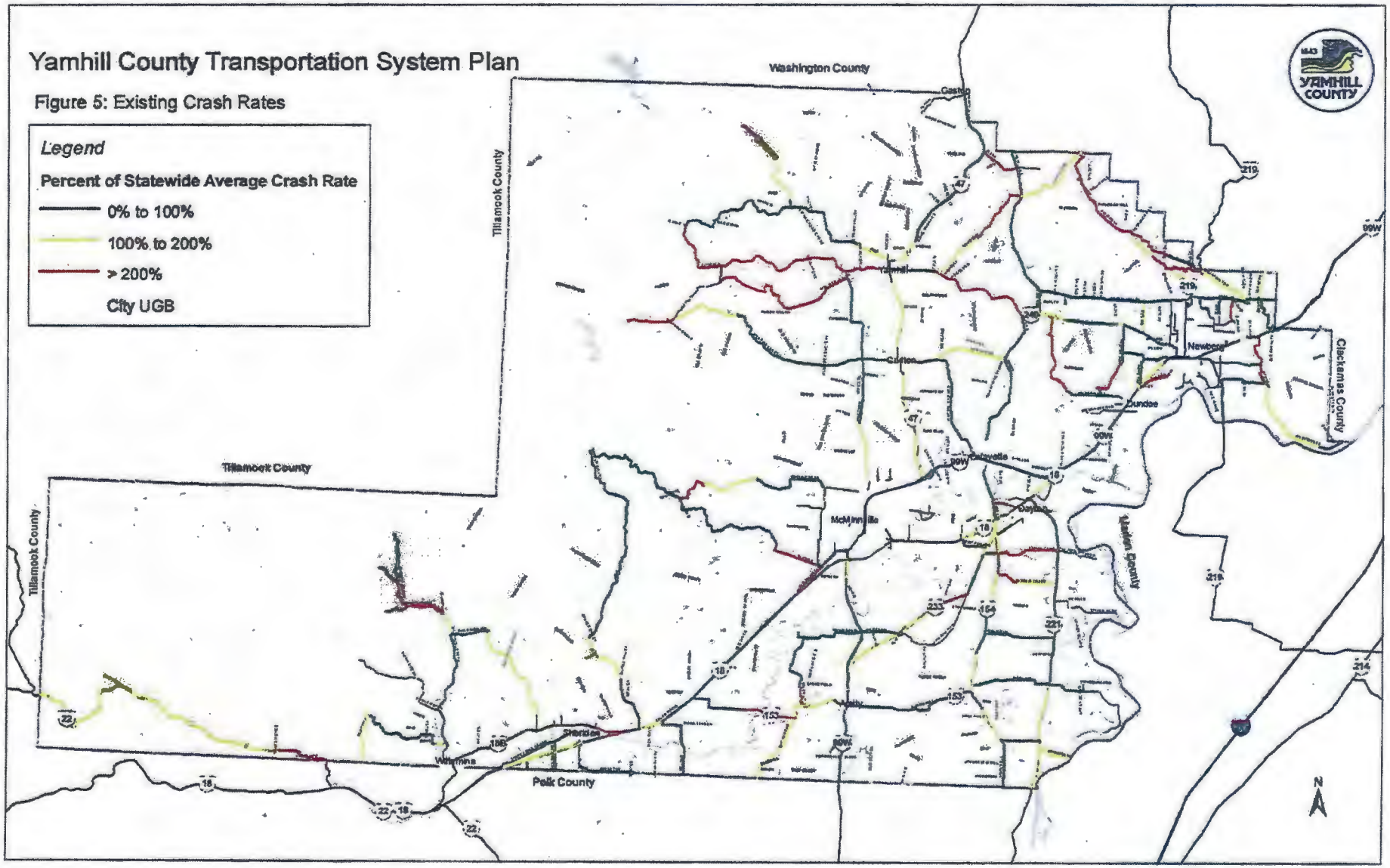
The safety needs analysis included the calculation of crash rates for intersections and road segments along all roads with a functional classification of minor collector or higher. ODOT's Safety Priority Index System (SPIS) locations were also included in the analysis. ODOT maintains the SPIS system to analyze and identify locations on the state highway system which have the greatest safety issues related to crash frequency and severity. Each year, a SPIS report is produced that identifies locations in the top 5% and 10% of all SPIS sites statewide.

The crash rate analysis indicated that there are multiple roadway segments with crash rates of 200% or more of the statewide average for similar facilities (see Figure 5). Most of these are on county roadways. Only one of the intersections analyzed has a higher-than-acceptable crash rate. This is at OR 18/Cruickshank Rd.

There are 13 locations within the top 10% of SPIS sites statewide. A majority of these are at intersections. OR 18 and OR 99W have the largest number of sites. There are two areas along these highways with closely-spaced SPIS sites. The first is on OR 99W to the east of Dundee and the second is on OR 18 between Ash Rd. and Lafayette Hwy.

Yamhill County Transportation System Plan

Figure 5: Existing Crash Rates



Nearly all of the safety needs reported by the stakeholders, agency staff, and RIAC were at intersections of state highways and county roads. At several of these intersections, difficulty in accessing the highway because of high traffic volumes and high speeds was cited as a problem. This includes the OR 18/OR 154/Lafayette Hwy. intersection, which was the most frequently reported location. At other intersections, the confusing intersection layout and lack of driver awareness of the intersection were mentioned as possible crash causes. Segment safety needs were identified on OR 99W to the north and east of Dundee, where the highway narrows from two westbound lanes to one lane, and on OR 18 at the South Yamhill River Bridge near McMinnville, which was described as needing replacement.

Based on the crash rates, SPIS locations, and input from the RIAC, stakeholders, and county staff, seven priority safety improvement locations were identified. These are:

- Abbey Rd./Hendricks Rd. intersection
- Stringtown Rd. between OR 154 and OR 221
- Worden Hill Rd. from OR 240 to the end of pavement
- OR 99W/OR 18/McDougall Rd. intersection
- OR 18 between Ash Rd. and OR 154/Lafayette Hwy
- OR 18/Red Prairie Rd. intersection
- OR 99W/OR 47 intersection

Detailed crash analysis was performed for these locations, which served as the basis for the recommended safety improvements described in Section 10.

Existing Geometric Needs

Geometrics describe the physical features of the roadway, such as lane and shoulder widths for roadway segments and approach width, approach grade, intersection angle for intersections. Existing geometric needs were identified for roadway segments and intersections by comparing existing geometric features to roadway standards.

Roughly 70% of the county roadways classified as minor collector or above do not meet the lane width standards and about 30% do not meet the shoulder width standards. For state highways, shoulder width standards are not met along more than 50% of the total mileage within the study area. The existing lane width and shoulder width deficiencies for state highways and county roads are shown in Figure 6.

For intersections, geometric needs were analyzed for intersections where a potential problem was identified by the stakeholders, County or ODOT staff, the RIAC, or field reconnaissance. Approach width, approach grade, intersection angle, and intersection sight distance were compared to the American Association of State Highway and Transportation Officials (AASHTO) standards.[10] A number of state highway and county road intersections were found to be deficient (see Appendix B).

Comments from the stakeholders, agency staff and the RIAC members regarding geometric needs were focused on inadequate shoulder widths and skewed intersections. It was reported that wider shoulders are needed on many roadways throughout the County to provide an adequate area for emergencies as well as bicycle and pedestrian use.

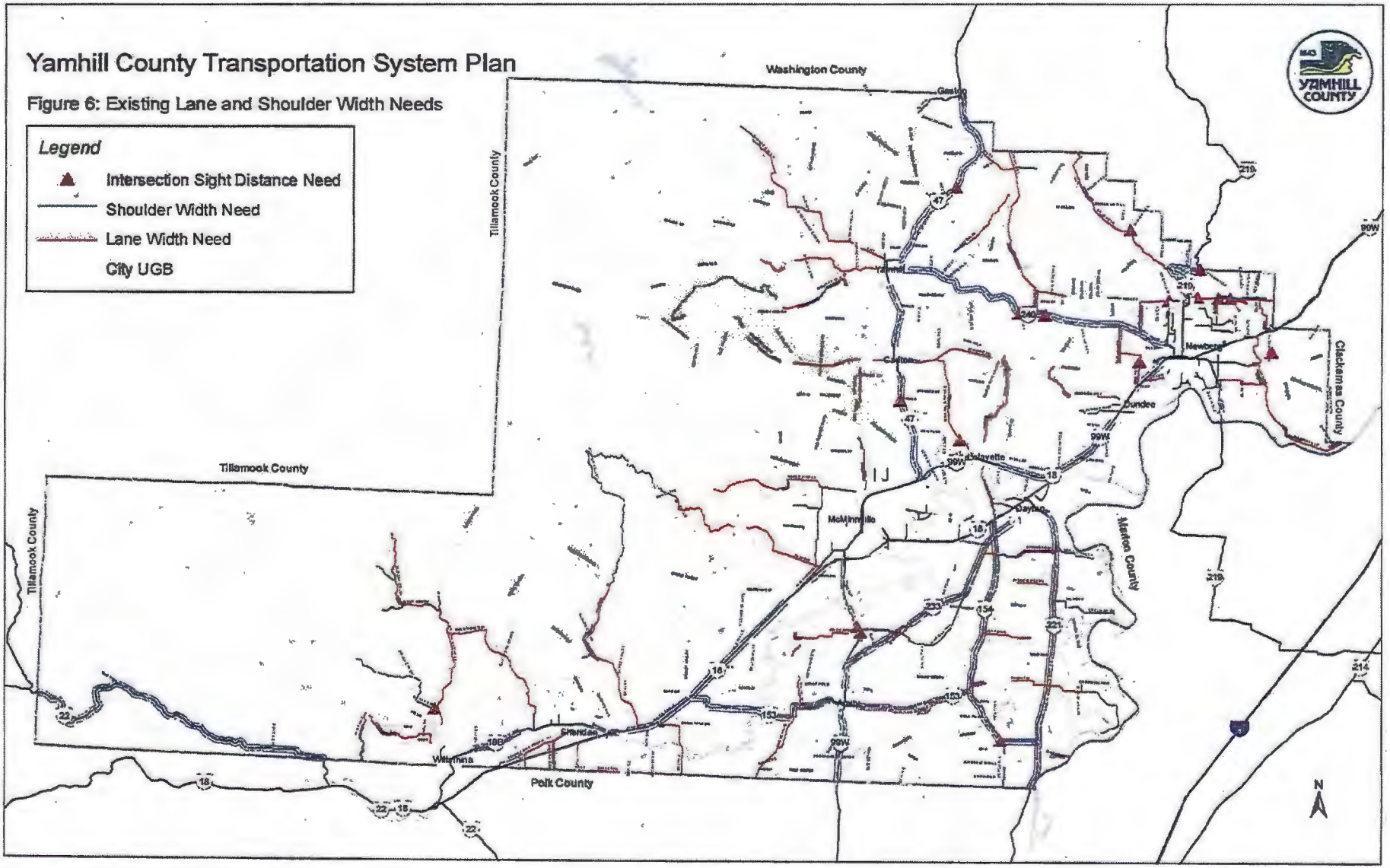
Existing Access Needs

Similar to many state highways that both serve through traffic demand and provide access to adjacent property, there are several state highways in the study area with high concentrations of access points. The problems associated with high access density are well understood, including reduced capacity, traffic operations and safety conflicts between slower-moving turning vehicles and higher-speed through-traffic, and degradation of the bicycle and pedestrian environment.

[10] AASHTO, A Policy on the Geometric Design of Highways and Streets, (2004)

Yamhill County Transportation System Plan

Figure 6: Existing Lane and Shoulder Width Needs



OR 47 and OR 240, in particular, have relatively large numbers of access points. These were compared to the access spacing standards for state highways contained in the *OHP*.[11] It was found that the maximum number of approaches that would be allowed based on the standards is exceeded along nearly the entire length of both highways.

Existing Bridge Needs

Existing County and ODOT bridge conditions were analyzed using data from ODOT's Bridge Management System. This data includes a bridge sufficiency rating for each bridge determined based on periodic inspections performed by ODOT. The rating is a numeric value representing the capacity of a bridge to remain in service. A score of 100% would represent a completely sufficient bridge, while a score 0% would indicate a completely deficient bridge.

The Federal Highway Administration (FHWA) uses this index in evaluating the nation's bridges for funding distribution and eligibility. Bridges with a sufficiency rating of 80 or less are eligible for rehabilitation. Bridges with a rating of 50 or less are eligible for replacement.

Sixty percent of the ODOT bridges and 36% of the county bridges are eligible for either rehabilitation or replacement (sufficiency rating of less than 80). The bridges eligible for replacement (sufficiency rating of less than 50) are:

- OR 99W at North Yamhill River
- OR 22 at South Yamhill River
- Palmer Creek Rd. at Palmer Creek
- Dejong Rd. at South Yamhill River

Existing Bicycle and Pedestrian Needs

The *ODOT Bicycle and Pedestrian Guide*[12] states that shared roadways are suitable for bicycle use on low-volume rural roads and highways. On a shared roadway, bicyclists and motorists

[11] Oregon Department of Transportation, Oregon Highway Plan, (1999).
[12] Oregon Department of Transportation, Bicycle and Pedestrian Design Guide, (2011).

share the same travel lanes. Based on traffic volumes, shared roadways are appropriate for most county roads and some state highways within the study area. For these roadways, there are no bicycle needs.

On rural roads with high bicycle use, however, the guide states that roads should include paved shoulders where vehicle speeds and volumes are high. Further, the guide recommends that the shoulder width standards for rural highways contained in the *ODOT Highway Design Manual (HDM)*[13] should be used in determining adequate shoulder widths for bicycle use. Similarly, the County uses their Maintenance Project shoulder width standards in determining adequate shoulder widths for bicycle use along county roadways.

Based on these guidelines, bicycle needs exist where there are higher bicycle and vehicle volumes and:

- The shoulder width standard is not met; or
- The shoulder is not paved.

The locations meeting these criteria include all or portions of:

- OR 47
- OR 99W
- OR 154/Lafayette Hwy.
- Westside Rd.
- Old Sheridan Rd.

It is unlikely that additional bike lanes are currently needed within the study area. This is because all of the locations with higher bicycle volumes are on high-speed rural roadways, where bike lanes are generally not recommended.[14]

[13] Oregon Department of Transportation, Highway Design Manual, 2012.
[14] Oregon Department of Transportation, Bicycle and Pedestrian Design Guide, 2011.

For pedestrians, shoulders are typically the most appropriate facility type in rural areas, because pedestrian volumes are too low to warrant sidewalks or paths. The *ODOT Bicycle and Pedestrian Guide*[15] states that the shoulder widths recommended in the *HDM*[16] are generally adequate to accommodate pedestrians. The County considers shoulders meeting their Maintenance Project shoulder width standards to be adequate for pedestrians. There were numerous comments from the stakeholders that conditions for bicycle and pedestrian travel are unsafe throughout the County, particularly in the rural areas. Figure 7 shows the existing bicycle and pedestrian needs within the study area.

Existing Corridor Health

A measure of the combined need of each roadway segment was developed by applying a Corridor Health Tool. The corridor health concept is based on the idea of measuring the "health" of each corridor segment within several different categories of performance, and then combining the measurements to obtain a picture of overall corridor health.

The Tool was applied for the same areas of need described in the previous sections. A combined health score was generated for each segment, which was used to assign a good, fair, or poor rating according to the following categories:

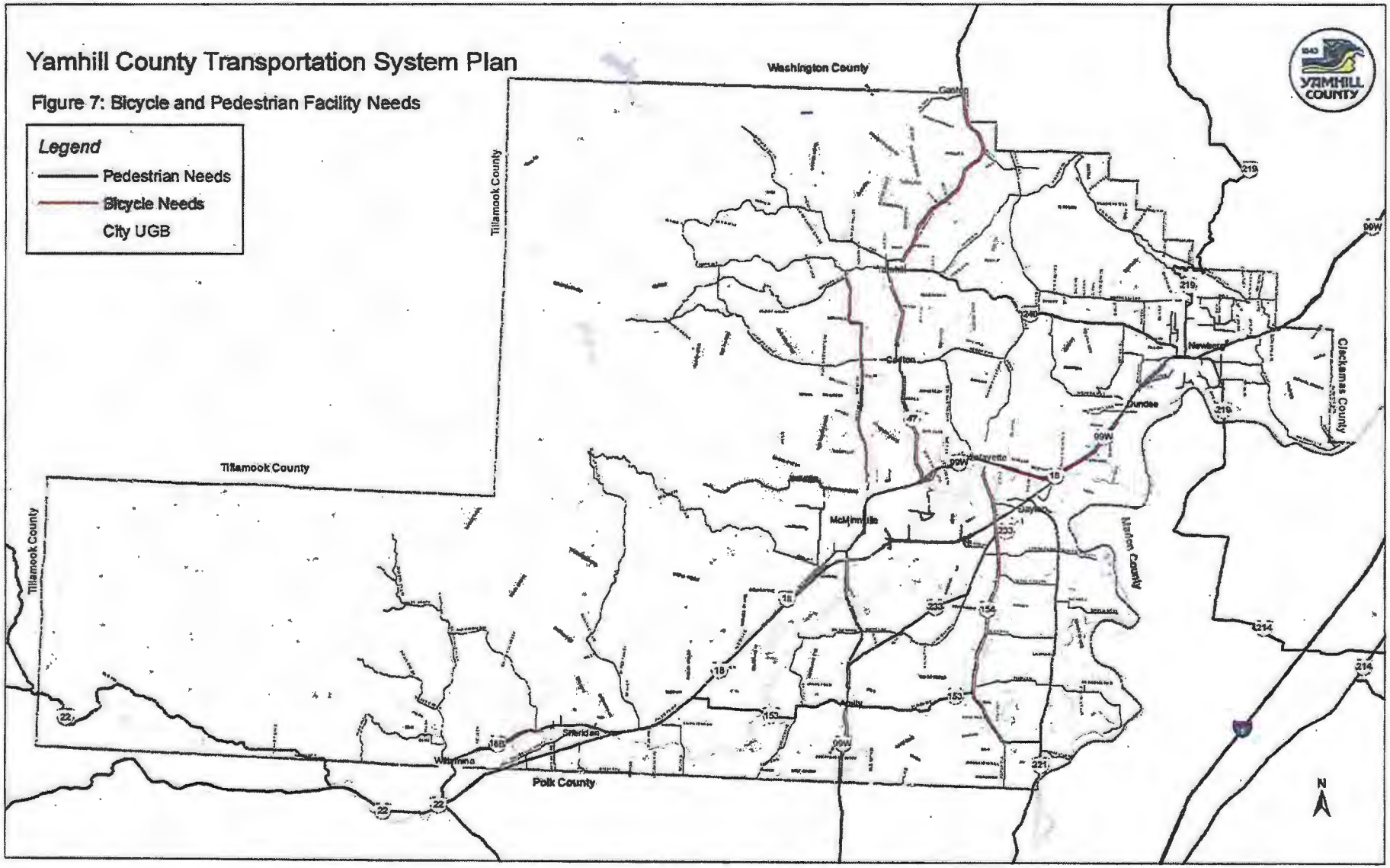
- Good – 75 – 100
- Fair – 50 – 74
- Poor - < 50

As shown in Figure 8, most corridor segments fall in the good or fair categories, with a handful of exceptions. The overall percentages of total state highway and county road mileage by category are shown in Table 1.

[15] Ibid.
[16] Ibid.

Yamhill County Transportation System Plan

Figure 7: Bicycle and Pedestrian Facility Needs



Yamhill County Transportation System Plan

Figure 8: Existing Corridor Health

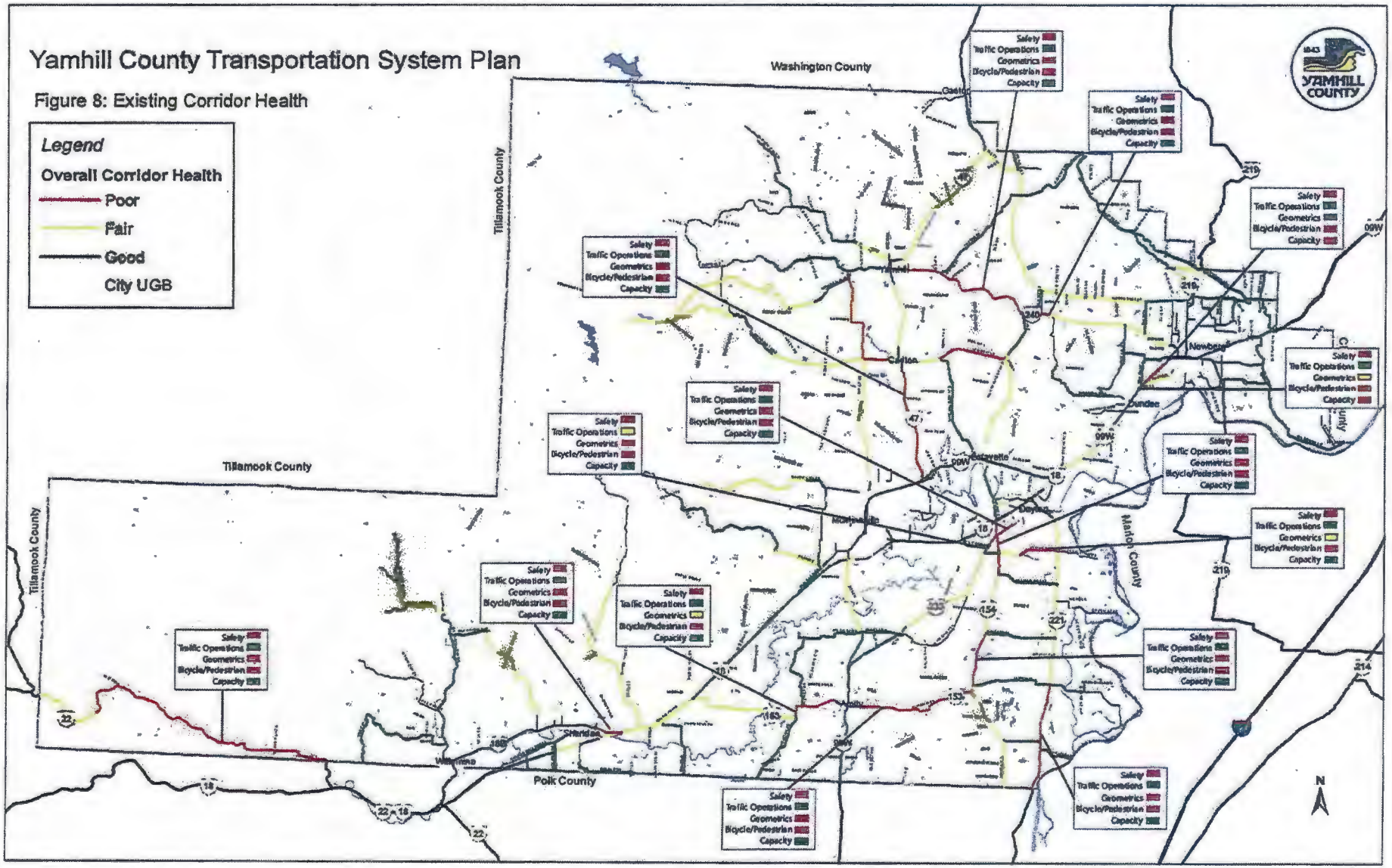


Table 1: Overall Corridor Health

Corridor Health Rating	County Roads	State Highways
Good	86%	29%
Fair	13%	40%
Poor	5%	31%

The primary need areas contributing to the poor scores are safety, geometrics, and bicycle/pedestrian facilities.

Existing Transit Needs

The *Yamhill County Coordinated Human Services Public Transportation Plan: The Next Steps*[17] was prepared by the Mid-Willamette Valley Council of Governments in 2007 to identify strategies to improve transportation services for people with disabilities, seniors, and individuals with lower incomes. Some of the transit-related needs identified in the study for the rural portion of the County are:

- Lack of evening and weekend service
- Need for more bus stops
- Need for expanded service to large employers, such as the Spirit Mountain Casino and the Riverside Dr. industrial area
- Gaps in outlying areas
- Need for intercity service between Yamhill and Carlton and between Sheridan, Willamina and Grand Ronde
- Inadequate transit facilities/amenities, such as designated bus stops with signs/schedules, transit shelters , sidewalks, curb cuts, loading spaces, and ADA-compliant facilities

[17] Mid-Willamette Valley Council of Governments, Coordinated Human Services Public Transportation Plan, (2007).

YCTA staff identified the following additional needs:

- Pull-outs for buses
- Improved travel time reliability on OR 99W
- More regional connections (e.g., the Oregon coast)

The only transit needs reported by the stakeholders are the lack of pull-outs for buses and the lack of designated stop areas.

Existing Air, Rail, Pipeline, and Waterway Needs

No existing needs were identified for either the McMinnville Municipal Airport or the Sportsman Airpark.

The PNWR is a short line railroad with tracks extending from Portland to Eugene through the Willamette Valley. None of the PNWR lines in Yamhill County are listed as being at risk for abandonment in the *Oregon State Rail Plan*[18] for the 2013-2020 period. The Hampton Railway operates freight service in the County between Fort Hill and Willamina, where it interchanges traffic with the PNWR. The *Oregon State Rail Plan* indicates that the entire Hampton Railway is considered at-risk for abandonment, with zero percent of the line meeting the minimum standard for which larger railcars can be sustainably accommodated. The line carries little traffic, with no active customers on the line in 2013, making it a vulnerable abandonment candidate.

No existing needs were identified for waterways or pipelines.

[18] Oregon Department of Transportation, Oregon State Rail Plan, 2014.

Section 5. Future Conditions

Future Transportation Conditions and Needs

Future transportation conditions in the County were analyzed for the 2035 No-Build scenario, in which no transportation improvements were assumed beyond those that are currently programmed. The 2035 forecast year is consistent with the Transportation Planning Rule requirement that a 20-year planning horizon from the time of plan adoption must be used. The 2035 time frame is also consistent with the forecast year used in the Newberg-Dundee Bypass planning. Phase 1 of the Bypass between Newberg and Dundee was assumed to be in place for the future conditions analysis.

Roadways

Future roadway needs were analyzed in the areas of mobility, traffic operations, safety, and geometrics for the same facilities included in the existing conditions analysis. The analysis was based on a set of traffic forecasts prepared as a part of the study. The forecasts are based on historical traffic growth rates and anticipated future land use and economic development. In general, future traffic volumes are expected to increase about 1.9 % annually on state highways and about 0.6 % on county roads. The highest future volumes will occur along OR 99W and OR 18. The highest growth rates are expected on OR 219 and OR 18, which are popular commute routes. County roads have significantly lower future volumes and traffic growth rates, due to the limited development opportunities within the rural portion of the County.

Future Mobility Needs

Consistent with the relatively low traffic growth for county roads, all county roadway segments will operate well within the mobility standard for the 2035 horizon year.

As for existing conditions, a majority of the state highway segments will operate within the mobility targets in the future. The segments not meeting the targets are:

- OR 99W east of Newberg
- OR 99W between Dundee and OR 18
- OR 99W between OR 47 and McMinnville
- OR 18 between Dayton and OR 154
- OR 18 between McMinnville and OR 153

The percentage of deficient miles along OR 18 increases from 0% for existing conditions to 47% for 2035, but decreases from 27% to 25% along OR 99W. The reason for the decrease along OR 99W is that the mobility target is met for the segment between Newberg and Dundee with the addition of the Phase 1 Bypass. Overall, the percentage of state highway miles not meeting current mobility targets increases from 4% to 10% by 2035. With the exception of the segment of Oregon 99W between Dundee and OR 18, the degree to which the current mobility targets are expected to be exceeded is very minor.

All county road intersections will meet the mobility targets for 2035. The only state highway intersections not meeting the targets are:

- OR 18/ OR 99W/McDougall Rd.
- OR 18/Ash Rd.
- OR 18/Lafayette Hwy.
- OR 47/OR 99W
- OR 99W/Fox Farm Rd.

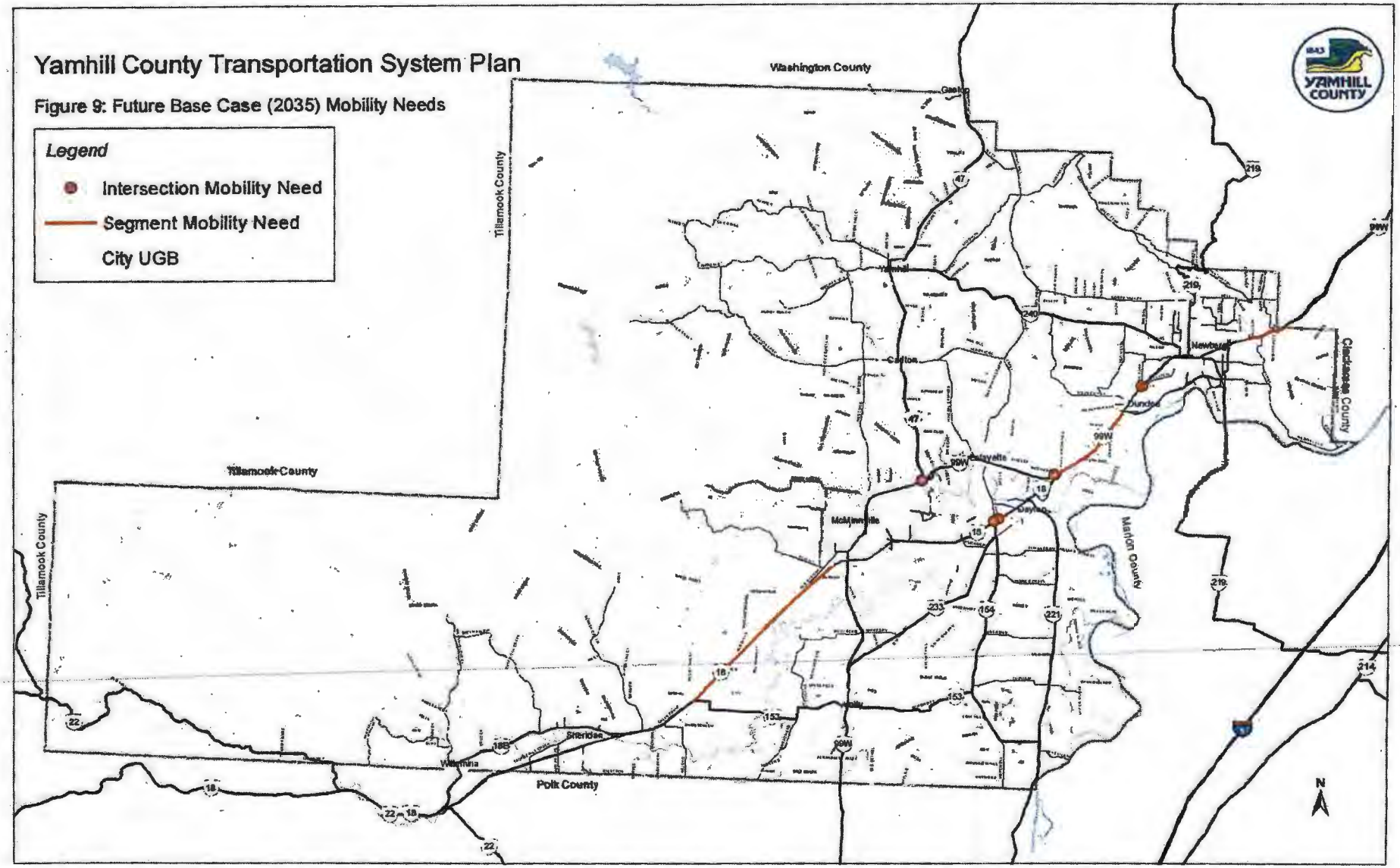
Locations with future mobility needs are shown in Figure 9.

Future Traffic Operations Needs

The majority of the future turn lane needs are on state highways along OR 18, OR 153, OR 154, and OR 99W. There are only two county road intersections with future needs. These are shown in Figure 10.

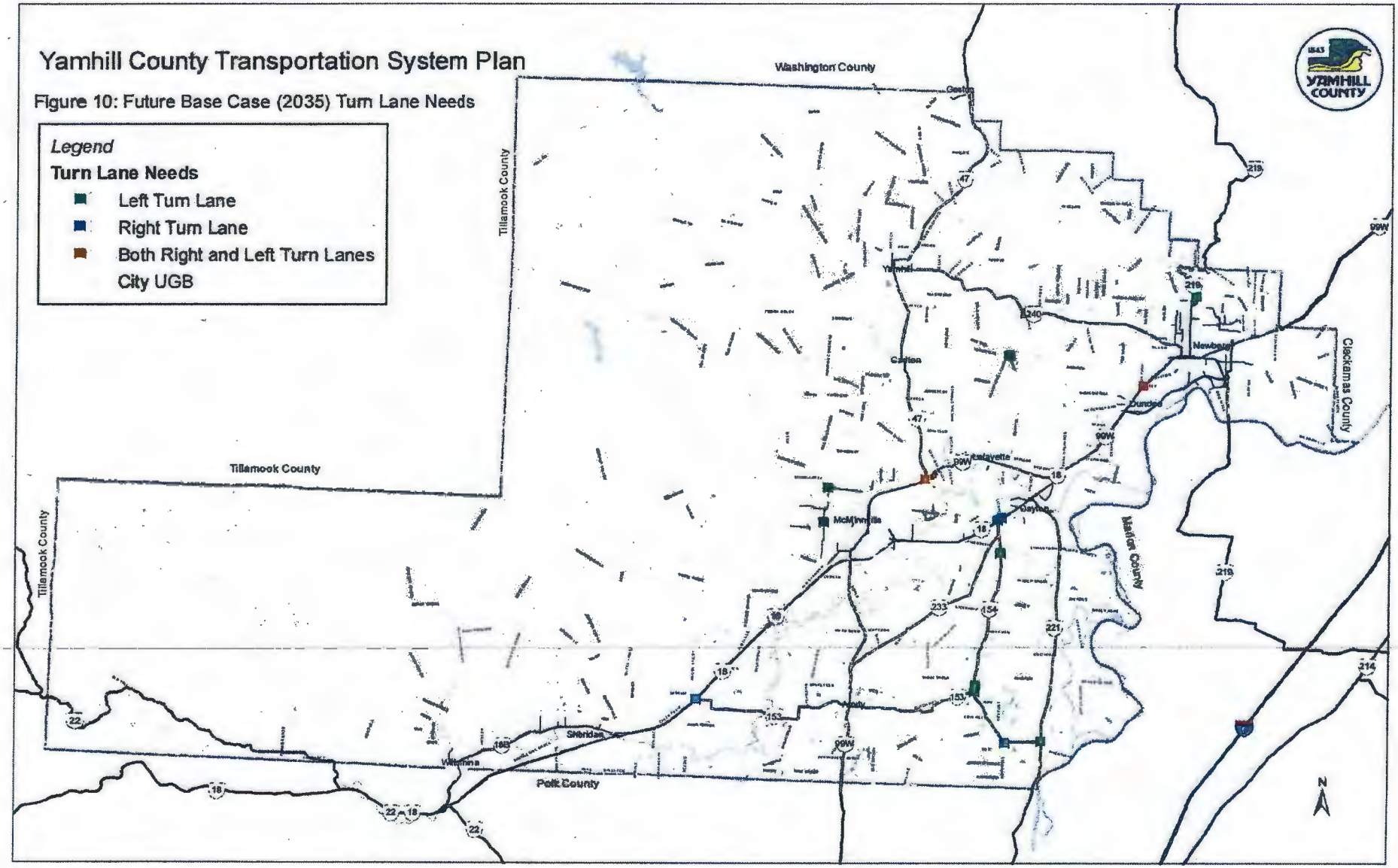
Yamhill County Transportation System Plan

Figure 9: Future Base Case (2035) Mobility Needs



Yamhill County Transportation System Plan

Figure 10: Future Base Case (2035) Turn Lane Needs



Future Safety Needs

Future safety conditions were estimated using the *Highway Safety Manual (HSM)*[19] procedures. Within the procedures, changes in crash rates are estimated based on differences between existing and future traffic volumes. The analysis indicated no changes in the future crash rates for any of the seven roadway segments examined in the existing conditions analysis. The *HSM* procedures do not include volume-based adjustments for intersections, so future crash rates could not be estimated for intersections.

Future Geometric Needs

Future geometric needs may differ from existing needs depending on the level of future traffic volumes. Such a difference may occur where an existing geometric feature is adequate for lower volumes, but falls below the standard for higher future volumes.

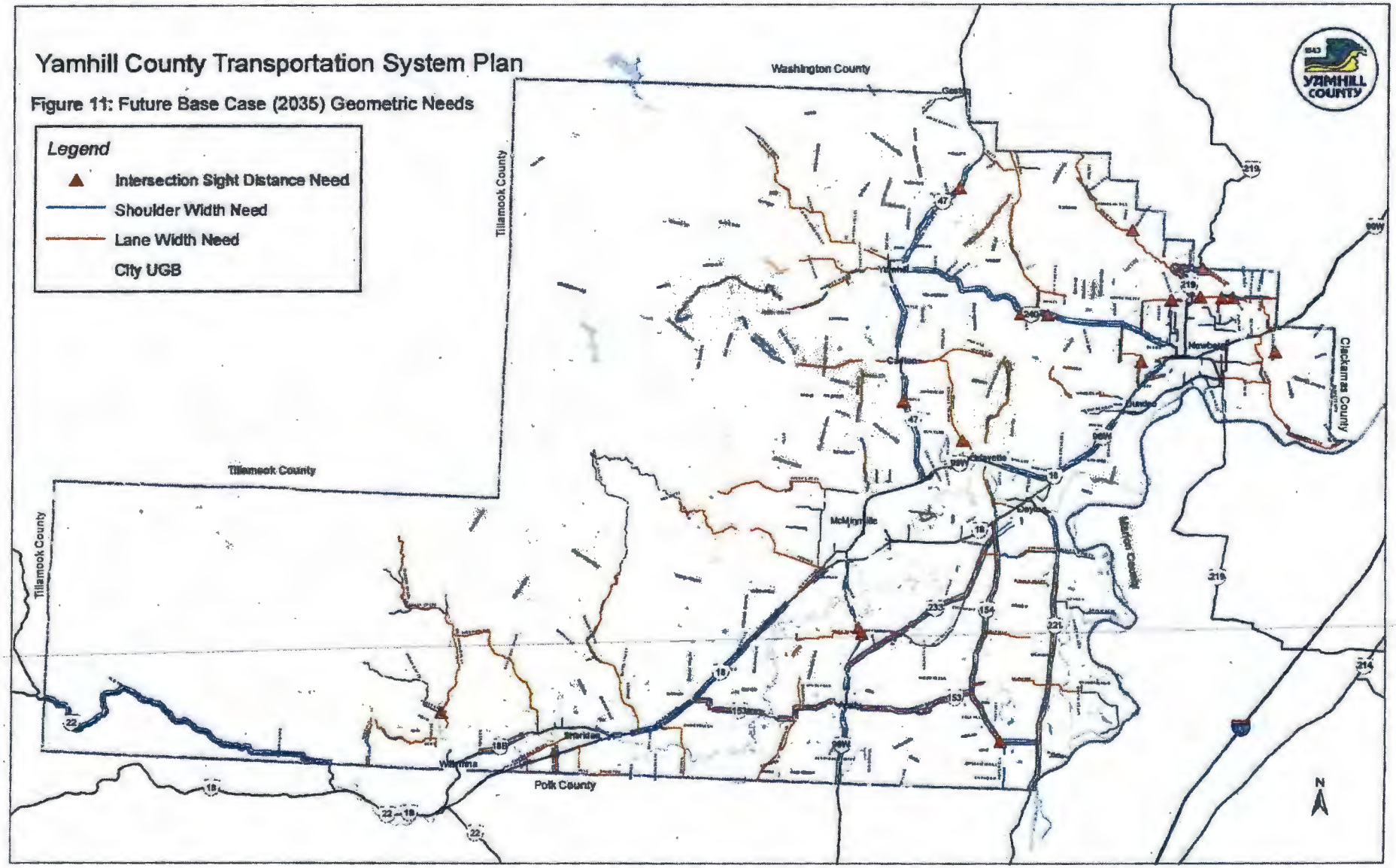
Based on ODOT's standards and the future volumes, several additional lane width needs were identified along OR 153 and OR 219. There were no additional shoulder width needs for state highways.

The lane width and shoulder width standards for county roads are based strictly on functional classification and do not consider traffic volume. Therefore, future lane and shoulder width needs for county roads would be the same as existing needs. Future geometric needs are summarized in Figure 11.

[19] American Association of State Highway and Transportation Officials, Highway Safety Manual, 2010.

Yamhill County Transportation System Plan

Figure 11: Future Base Case (2035) Geometric Needs



Future Bicycle and Pedestrian Needs

Because traffic volumes will remain low on most county roads and most state highways, shared roadways will continue to be adequate for bicycle use along these facilities. For roadways with existing bicycle needs, the level of need will become higher as traffic volumes increase. These are:

- OR 47
- OR 99W
- OR 154/Lafayette Hwy.
- Westside Rd.
- Old Sheridan Rd.

Due to higher traffic volumes, the level of need will also be higher at those locations with pedestrian needs identified in the existing conditions analysis. These are largely the same as the locations with bicycle needs, in addition to OR 18B between Sheridan and Willamina.

Future Corridor Health

The future corridor health category would not change for any of the county road segments compared to existing conditions. Corridor health also remains the same in the future for most state highway segments. Along OR 99W, the segments between Newberg and Dundee improve from poor to fair because of the improved mobility with the construction of the Bypass. State highway segments with lower future corridor health are OR 153 from Hopewell Rd. to OR 221, OR 18 from Red Prairie Rd. to the Polk County line, and OR 219 north of North Valley Rd.

Future Transit Needs

Based on the anticipated slow rates of population and employment growth within the rural portion of the County, the type and level of future needs for YCTA transit services will likely be similar to the existing needs.

Future Air, Rail, Pipeline, and Waterway Needs

No future needs were identified for the air, pipeline, or waterway modes.

The *Oregon State Rail Plan*[20] identifies the potential need for a passenger rail connection between Yamhill County and the Portland metropolitan area. No additional future freight rail needs were identified.

[20] Oregon Department of Transportation, Oregon State Rail Plan, 2014.

Section 6. Transportation Funding

Funding for capital improvement projects for county and state transportation facilities is expected to be very limited over the next 20-year period. Therefore, existing and potential future funding sources were explored to determine an approximate budget for future transportation system improvements.

Future revenues from existing funding sources were estimated by examining the amount of revenues received from these sources over roughly the past 10 years. The average annual amounts over this period served as the initial estimates of future funding levels. The initial estimates were reviewed by county and ODOT staff and adjusted based on their assessment of how future funding levels may change.

Historically, the County has received nearly all of its transportation funding from the State Highway Fund. State Highway Fund revenue sources include motor vehicle fuel taxes, motor vehicle registration and title fees, driver's license fees, and the motor carrier weight-mile tax. Each county's share of the revenue is distributed based on the ratio of the number of vehicles registered in the county to the number of registered vehicles statewide. It may be spent for construction, improvement, maintenance, operation and use of public highways, roads, streets and roadside rest areas.

In the past, most of the County's State Highway Fund revenue has been spent on maintenance and operation of the road system, with the remaining amount used for capital improvement projects. County staff expects that the share of the revenue to be spent on capital improvement projects will increase in the future, to about $300,000 per year or $6M over the 20-year planning horizon.

ODOT's funding for capital improvements to the state highway system comes primarily from a variety of federal programs, with state matching funds. ODOT expenditures on state highway

improvements in Yamhill County have been mainly financed from the following federal programs:

- Surface Transportation Program (STP) - Projects on any Federal-Aid highway other than local or rural minor collector roads, unless they were on the Federal-Aid Highway System on January 1, 1991.
- Highway Safety Improvement Program (HSIP) - Infrastructure-related highway safety improvements to achieve a significant reduction in traffic fatalities and serious injuries on all public roads.
- Advance Construction (ADVCON) - Construction of Federal-Aid projects in advance of the apportionment of authorized funds.

For planning purposes, approximately $10-15M in state and federal funding administered by ODOT is estimated be available for capital improvements on state highways over the 20-year period.[21].

In addition to the State Highway Fund, which has been the primary source of revenue to the County in the past, other local transportation funding mechanisms were investigated as potential sources of additional revenue to the County in the future. All of these mechanisms are authorized by the Oregon Revised Statutes.

Two mechanisms that have successfully used by other Oregon counties similar to Yamhill County are property taxes and local improvement districts. Property taxes or local option ad valorem taxes for roads require voter approval and the tax levies must be shared with the cities. These taxes may be permanent or of limited duration. A local improvement district (LID) is a geographic area in which real property is taxed to defray all or part of the costs of a public

[21] The State has not committed any future funding for projects in Yamhill County. This estimate is based on the assumption that Yamhill County will receive a reasonable share of the state/federal funding projected to be available over the 20-year planning horizon in Region 2 and based on ODOT sustaining their current revenue structure. It is used to illustrate the degree of financial constraints faced by ODOT as of the writing of this document. Actual funding through state and federal sources may be higher or lower than the range of this estimate. This estimate does not include projects that might be funded through the federal Highway Safety Improvement Program (HSIP).

improvement. Costs are apportioned according to the estimated benefit that will accrue to each property. The average revenue generated from these sources by the other Oregon counties is roughly $800,000 per year.[22]

Examples of other funding mechanisms available to the County are transportation utility fees, and franchise fees. A transportation utility fee is a recurring monthly charge that is paid by all residences and businesses within the county based on the number of trips generated. It is collected through a regular utility bill (e.g., water or sewer). There are no Oregon counties currently using utility fees, but there are a number of cities with this mechanism in place.

Franchise fees are fees charged on utilities' and telecommunications providers' operations. The assessment limits are not controlled by the state, i.e., each county establishes its own ordinances and codes. Franchise fees are currently assessed by Clackamas, Morrow, and Wallowa Counties.

Another funding source established by the County is the County Road Improvement Program (CRIP). The CRIP provides funding from private property owners for improvements to specific county roads. It is currently being modified to better fit the objectives of the program.

In addition to these local funding sources, there are several state sources available to the County other than the State Highway Fund. The Special Public Works Fund provides funds for publicly owned facilities that support economic and community development in Oregon. Low-interest loans are available from $100,000 to $10M. Initial loan terms are up to 25 years or the useful life of the project. This program has been utilized by several Oregon counties. Funding is provided by the Infrastructure Finance Authority, an Oregon state agency.

ODOT Pedestrian and Bicycle Program grants are awarded using a statewide competitive process. A local match is seen as a local commitment to a project and can be a consideration in project selection. Typical grants range from $50,000 - $500,000.

[22] Estimated based on historical funding data for similar Oregon counties obtained from the Association of Oregon Counties' website.

A complete listing of the existing funding sources for county roads and state highways is provided in Appendix E, together with potential alternative revenue sources for county roads.

Section 7. Goals, Objectives, and Evaluation Criteria

A set of goals and objectives reflecting Yamhill County's values was developed to guide the preparation and implementation of the TSP. The goals describe the desired outcomes of future transportation improvements in the County. The objectives identify actions to be taken to accomplish the goals. More broadly, the goals and objectives will be used to guide the County's future transportation system management decisions.

The recommended improvements in the TSP must be consistent with the goals and objectives. To accomplish this, evaluation criteria reflecting the goals and objectives were developed for selecting the recommended improvements from a set of improvement options. The evaluation criteria are measurable factors used in determining the extent to which the improvement options would meet the goals and objectives.

Goal 1: Provide for Efficient and Convenient Motor Vehicle Travel

- Objective 1: Establish mobility standards to maintain the minimum level of motor vehicle travel efficiency. State and county standards for mobility will be supported by the respective jurisdiction.
- Objective 2: Maintain mobility and traffic operations according to standards.

  Evaluation Criteria:

  - Reduction in congestion and delay
  - Reduction in traffic conflicts
- Objective 3: Maintain the existing system of roads and bridges to a level suitable for the function of the road, allowing for smooth and comfortable travel, and reducing vehicle maintenance costs through the preservation of pavements and prevention of damage by overweight vehicles.

- Objective 3: Identify opportunities to reduce the use of state highways for local trips.
- Objective 4: Establish and maintain a functional classification system that provides a plan for system purpose and design.
- Objective 5: Limit access points on highways and arterials. Support consolidated and shared access points.

  Evaluation Criteria:

  - Improvement in access conditions[23]

Goal 2: Provide for the Safety of All Transportation Modes

- Objective 1: Identify improvements to address high-collision locations to enhance safety for all modes.

  Evaluation Criteria:

  - Reduction in crash rate/severity
- Objective 2: Improve roadway geometrics.

  Evaluation Criteria:

  - Type/level of geometric improvement[24]

Goal 3: Provide an Equitable, Balanced and Connected Multi-modal Transportation System

- Objective 1: Provide adequate facilities for all transportation modes.

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[23] Includes the reduction in the number of access points and the improvement of access design.
[24] Type of improvement refers to the suitability of an improvement for addressing a specific type of need. Level of improvement represents the extent or degree of an improvement relative to the standard.

- **Objective 2:** Distribute the benefits and impacts of transportation decisions fairly and address the transportation needs and safety of all users, including the young, elderly, people with disabilities, and people of all races, ethnicities, and income levels.
- **Objective 3:** Provide connections to all modes that meet applicable County and Americans with Disabilities Act (ADA) standards.
- **Objective 4:** Support connectivity between the various communities in the County.

Goal 4: Increase the Quality and Availability of Pedestrian and Bicycle Facilities

- **Objective 1:** Improve bicycle and pedestrian facilities.

  Evaluation Criterion:

  - Type/level of bicycle/pedestrian facility improvement[25]

- **Objective 2:** Consider bicycle/pedestrian improvements that complement the basic provision of facilities to encourage higher levels of usage (e.g., wayfinding signage).
- **Objective 3:** Support the development of the Yamhela's Westsider Trail.

Goal 5: Work with Transit Service Providers to Provide Transit Service and Amenities that Encourage and Increase Ridership

- **Objective 1:** Identify areas that support additional transit services, and coordinate with transit providers and transit plans to improve the coverage, reliability and frequency of services.
- **Objective 2:** Promote transit accessibility for transportation-disadvantaged groups.
- **Objective 3:** Enhance intercity transit connectivity.

[25] Type of improvement refers to the suitability of an improvement for addressing a specific type of need. Level of improvement represents the extent or degree of an improvement relative to the standard.

- Objective 4: Implement bus stops, park-and-ride lots, and transit centers identified in the *Yamhill County Coordinated Human Services Public Transportation Plan: The Next Steps.*[26]
- Objective 5: Identify needs for services to regional employment and activity centers.
- Objective 6: Consider transit user needs that complement the basic provision of service to encourage higher levels of usage (e.g., shelters and benches).

Goal 6: Manage the Transportation System to Support a Prosperous and Competitive Economy

- Objective 1: Enhance access to major employment and industrial locations.
- Objective 2: Enhance the efficiency, access, capacity and reliability of the freight system.

Goal 7: Provide Transportation Facilities and Services that are Fiscally Responsible and Economically Feasible

- Objective 1: Plan for an economically viable and cost-effective transportation system that makes the best use of limited transportation funds.

  Evaluation Criteria:

  - Minimization of construction cost

- Objective 2: Identify and develop diverse and stable funding sources to implement recommended projects in a timely fashion and ensure sustained funding for road maintenance and transportation improvement projects.
- Objective 3: Actively seek state and federal transportation funds to finance programs and improvements.

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[26] Mid-Willamette Valley Council of Governments, Coordinated Human Services Public Transportation Plan, 2007.

- Objective 4: Maintain the existing transportation system assets to preserve their intended function and maintain their useful life.
- Objective 5: Consider costs and benefits when identifying project solutions and prioritizing public investments.
- Objective 6: Ensure transparency when determining transportation system investments.

Goal 8: Provide a Transportation System that Conserves Energy and Protects and Improves the Environment

- Objective 1: Minimize impacts to preserve the natural, scenic, and cultural resources in the County.

  Evaluation Criteria:

  - Minimization of impacts to environmentally sensitive areas

- Objective 2: Minimize land use impacts.

  Evaluation Criteria:

  - Minimization of impacts to EFU-zoned and developed parcels
  - Minimization of required right-of-way

Goal 9: Coordinate with Local and State Agencies and Transportation Plans

- Objective 1: Coordinate with the Oregon Transportation Plan and associated modal plans.

  Evaluation Criteria:

  - Consistency with ODOT standards

- Objective 2: Coordinate with local agency transportation system plans for communities within Yamhill County.
- Objective 3: Meet the requirements of the Oregon Transportation Planning Rule.
- Objective 4: Coordinate with local agencies and entities within Yamhill County including major employers, incorporated and unincorporated communities, and other stakeholders or groups, as appropriate, on transportation issues involving these entities.
- Objective 5: Coordinate regional project development and implementation with local jurisdictions (e.g. evacuation routes, countywide transit, and jurisdictional transfer of roadways).
- Objective 6: Coordinate with cities and ODOT to review and assess potential impacts and appropriate mitigation of proposed development applications.

A further description of the development of the goals, objectives, and evaluation criteria is included in Appendix F.

Section 8. Management Systems and Tools

The County has several management systems and tools in place to support decision-making about expenditures for capital improvements and maintenance for the County's roadway system. The use of these systems and tools allows the County to examine needs on a system-wide basis and then make objective, defensible decisions about the best allocation of limited resources to address those needs. The existing systems and tools are applied for the following purposes:

- Project prioritization
- Ranking of safety problem locations
- Gravel road condition rating
- Prioritization of paving of gravel roads
- Road ownership transfer

Because the TSP should provide not only recommendations about specific future capital improvement projects, but also guidance on the on-going, day-to-day management of the transportation system, the development of management approaches in the following additional areas was investigated:

- Mitigation of traffic diversion from state highways to county roads
- Designation of scenic routes
- Designation of truck/hazardous materials routes

In addition to these approaches, the County's existing management systems and tools are documented in this section.

Mitigation of Traffic Diversion from State Highways to County Roads

There are three primary traffic diversion routes in the County that involve drivers trying to avoid congestion on OR 99W (see Figure 12). These are:

- Newberg to Lafayette, Carlton, and McMinnville via OR 240, Kuehne Rd, Hendricks Rd., and Abbey Rd.
- Newberg to Dundee via Sunnycrest Rd., Hidden Springs Rd., and Fox Farm Rd.
- Dundee to OR 99W at Fulquartz Landing Rd. via 5th St., Edwards Dr., and Fulquartz Landing Rd.

An effective way to decrease the amount of diverted traffic along these routes is to improve the OR 99W corridor. In addition to Phase I of the Bypass, there are several improvements recommended in Section 10 that would enhance traffic operations, geometrics, and safety along OR 99W. Also, if the phase of the Bypass from Dundee to OR 18 is constructed, most, if not all, of the traffic from this corridor to county roads would be eliminated.

These routes should be monitored after the opening of Phase I to determine the level of diversion. If this does not significantly decrease, the following improvement opportunities should be explored:

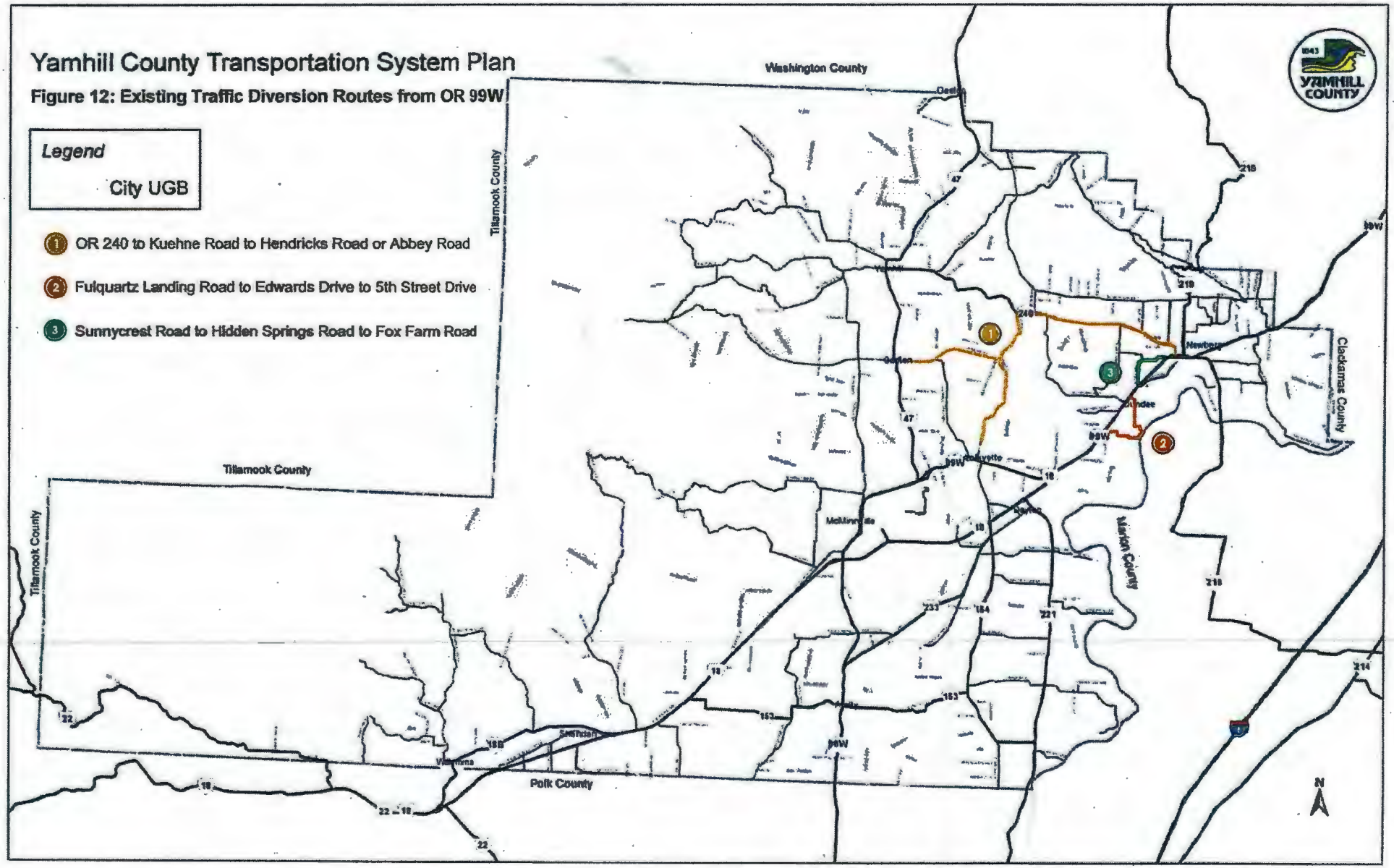
- Advancement of the improvements along the OR 99W corridor recommended in Section 10.
- For the first two diversion routes listed above, advancement of the improvements for these routes recommended in Section 10. Although this approach would not reduce the level of diversion, the improvements would allow the diverted traffic to be accommodated more safely.

Designation of Scenic Routes

Both objective (measurable) criteria and subjective criteria should be applied in determining suitable scenic routes. Once a potential route has been defined, County staff should work with county and state tourism organizations to refine and implement the route.

Yamhill County Transportation System Plan

Figure 12: Existing Traffic Diversion Routes from OR 99W



The objective criteria to be met are:

- Roadway is paved
- Adequate lane width or roadway width
- Crash rate less than or equal to two times the statewide average for the same facility type (minor collector and above)
- Roadway does not have a SPIS location

A second set of criteria should be subjectively applied to determine whether a roadway is suitable for sightseeing traffic, which behaves differently than typical traffic (e.g., slower moving, less likely to recognize potential safety problems). These are:

- Horizontal alignment
- Vertical alignment
- Presence of sight distance deficiencies
- Surface quality
- Access density
- Availability of turnouts
- Scenic value of surrounding terrain
- Types of vehicles on roadway (e.g., farm vehicles)
- Presence of roadway lighting

Additional subjective criteria are the level of support from local groups and municipalities and plans for the protection, enhancement, and promotion of the roadway as a scenic route.

While these criteria are primarily for county roadways, it is important to also recognize that most travelers are likely to use state highways to access the county roadways.

Once the criteria have been applied and a potential route has been identified, the County should work with county and/or state tourism organizations to determine whether to pursue

adoption of the route. If it is adopted, the County should work these organizations, as well as key local stakeholders, to develop signing/way finding and to promote the route.

Designation of Truck/Hazardous Materials Routes

Truck and freight routes can be defined as either recommended or prohibited routes. Within Yamhill County, truck/freight routes are currently defined for both state highways and county roadways.

ODOT truck/freight routes are identified in ODOT's functional classification system. In Yamhill County, the primary truck routes are on OR 99W and OR 18. Trucks are allowed on other state highways, but through truck traffic is encouraged to use these designated routes when possible. Yamhill County's recommended truck route map shows both length and weight-restricted routes. Trucks are allowed on all county roadways unless prohibited. The specific restrictions are shown in the *Yamhill County Weight Restricted Bridges and Approved Route List.*[27]

With regard to hazardous materials routes, Federal regulations state that motor carriers "shall operate the vehicle over routes which do not go through or near heavily populated areas, places where crowds are assembled, tunnels, narrow streets, or alleys, except where there is no practicable alternative".[28] All commercial vehicle operators are expected to be aware of these regulations and the current state highway and county road hazardous materials restrictions within Yamhill County.

Because information on truck and hazardous routes in Yamhill County is already available and well-defined for both state highways and county roads, no additional management systems or tools are recommended.

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[27] Yamhill County, Yamhill County Weight Restricted Bridges and Approved Route List: Attachment C36, 2008.
[28] 49 CFR 397.67 - Motor Carrier Responsibility for Routing, 2011.

Project Prioritization Process

The County's Road Maintenance/Reconstruction Prioritization Policy is used to identify annual road maintenance and reconstruction improvements to protect public safety and property, make effective use of available funds, and preserve the County's investment in its transportation system. It was adopted by the Yamhill County Board of Commissioners on May 14, 2008 by board order. The policy includes eight implementation strategies:

- Confine road maintenance and reconstruction to roads formally accepted as county roads.
- Prioritize road maintenance and reconstruction expenditures annually in a resolution and order adopted by the Board of Commissioners, using a road maintenance priority matrix as a guide. The matrix assigns point values to various activities and roadway classifications.
- The RIAC will recommend revisions as needed to the Yamhill County Board of Commissioners to ensure the most effective use of available funds.
- Implement a base condition concept for the maintenance of paved roads based on a set of criteria that consist of an average pavement condition index (PCI) value and a minimum percentage of road miles greater than or equal to a specific PCI value for each functional classification.
- Develop a base condition concept for gravel roads that will provide a systematic measurement and reporting of their condition (see "Gravel Road Condition Rating System" below).
- Limit expenditures for major reconstruction projects to county roads that are not identified as needing capacity improvements in the near-term.
- Finance reconstruction and minor improvement activities for local streets through localized funding mechanisms, such as the creation of service districts or local improvement districts (LIDs), established exclusively for maintenance of these roads.
- Encourage annexation to a city for local roads within urban and urban reserve areas.

Ranking of Safety Problem Locations

The County currently uses a ranking system for safety problem locations that was developed and implemented by the RIAC. The criteria considered are traffic volume, the number of reported crashes, total fatalities, total injuries, and the number of property damage only (PDO) crashes. Total fatalities and injuries are weighted more heavily than PDO crashes. Prioritization points are calculated based on these criteria. The County will continue to use this ranking system, with possible modifications over time.

Gravel Road Condition Rating System

The County currently uses an informal Gravel Road Condition Rating System. The following factors are evaluated in the field and used to calculate a gravel condition index (GCI) value:

- Crown
- Drainage - culverts and ditches
- Safety
- Width
- Vegetation – sight distance
- Rock

Roadways are determined to be in generally good, fair, or poor condition based on the GCI score. Roadways with lower GCI scores are given a higher maintenance priority. If there are near-term plans for paving a roadway, it is not given a maintenance priority.

A more detailed rating system is not anticipated due to the dynamic nature of gravel roadway conditions, which can vary along the length of the roadway and on a daily basis depending on weather conditions and other factors.

Prioritization of Paving of Gravel Roads

The County's Gravel Collector Roads Upgrade Prioritization System is used to rank collector roadways considered as potential candidates for paving. Prioritization points are calculated based on traffic volume, crashes, gravel condition, and residential density along the roadway. The paving prioritization is determined by ranking the roadways by total points.

Road Ownership Transfer

The County follows a policy established in the previous Yamhill County TSP[29] for the transfer of road ownership from the County to the cities. The policy encourages the expeditious transfer of jurisdiction of roadways to incorporated cities in conjunction with annexation. Developers who propose annexation and have frontage on a road that does not meet city road standards have the primary responsibility for upgrading the road to city standards. Roads must be upgraded at the time of annexation or the developer must sign with the city an agreement to upgrade the road at the time of development. The policy also requires the transfer or an agreement to transfer jurisdiction of county roadways within urban growth boundaries at the time of annexation. Although the terms of the agreement may vary from case-to-case, the County adheres to this policy and will continue to do so in the future.

A management system that the County has used in the past to identify pavement maintenance needs is the Pavement Management System (MTC – PMS). This system utilizes a Pavement Condition Index which rates the overall condition of the pavement. The PMS is not currently in use; however, the County may be purchasing an updated system in the future.

Additional information on the County's existing and recommended roadway management systems and tools is included in Appendix G.

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[29] Yamhill County, Yamhill County Transportation System Plan, 1995.

Section 9. Public Process

Development of the TSP was a collaborative process among the County, ODOT, RIAC, key stakeholders, and the community. Throughout the study, the project team took time to understand multiple points of view, obtain fresh ideas and resource materials, and encourage participation from the public. Several methods were used to engage the community, including stakeholder interviews, an online survey, and two public open house meetings. This section summarizes the public process and the input received from the stakeholders and the community.

Compliance with Title VI Outreach Requirements

Public involvement for the TSP is subject to the requirements and guidance found in ODOT's *Guidelines for Addressing Title VI and Environmental Justice in Transportation Planning*.[30] Specifically, Title VI identifies measures to reach and solicit comments from disadvantaged populations within a community. Although Yamhill County has relatively limited concentrations of minorities and low-income residents, these populations must be accommodated. Yamhill County Planning Department staff did not identify any known groups that should be specifically approached. They indicated that the groups typically expressing interest in the County's planning projects would not qualify for Title VI or Environmental Justice noticing, since these groups' issues are typically focused on environmental concerns unrelated to the disadvantaged populations identified in ODOT's guidelines.

Based on 2010 Census data, about 85% of the County's population is white and about 15% of the population is classified as Hispanic/Latino. This is a comparable percentage of white, and slightly higher percentage of Hispanic/Latino, compared to Oregon as a whole. The percentage of people of races other than white in Yamhill County is also similar to Oregon as a whole. To

[30] Oregon Department of Transportation, Guidelines for Addressing Title VI and Environmental Justice in Transportation Planning, 2015.

help reach Hispanic/Latino populations, newspaper advertisements were printed in both English and Spanish and a Spanish interpreter was made available at the two open house meetings.

An estimated 15% of individuals in the County were below the poverty line in 2013, which is comparable to the state as a whole.

County Transportation Issues

To obtain input on key issues, meetings were held at the start of the study with the RIAC, and telephone interviews were conducted with stakeholders representing local governments, school districts, police and fire departments, and local businesses. In addition, an online survey was conducted through the County's website.

Overall, about 90% of the respondents to the online survey rated the transportation system in the County as "good" or "fair". The most common concerns among the stakeholders and survey respondents were in the following areas:

- Safety – in particular, intersections along OR 18 and OR 99W, such as OR 99W/OR 18 and OR 18/Lafayette Hwy.
- Lack of bicycle and pedestrian facilities – shoulders are too narrow or there are no shoulders for bicyclists
- Congestion and delay – need for the Newberg-Dundee Bypass and additional capacity on OR 18
- Geometrics – narrow and winding county roads and narrow shoulders or no shoulders
- Improved transit service and facilities – additional service to Portland and Salem and the lack of bus shelters and bus stop signage
- Traffic operations – lack of turn lanes on state highways, particularly OR 18, and difficulty in crossing state highways
- Roadway maintenance – need for repairs beyond spot maintenance

Summaries of the stakeholder interview and online survey results are included in Appendix I.

Open House #1

The first open house was held on August 8, 2013. The purpose of the open house was to provide the public an opportunity to review information on existing and future projected conditions in the County. Another objective was to obtain comments on key transportation issues within the County, potential solutions to address the issues, and the highest-priority locations to investigate. Comments were received from the public about several local road problem locations and potential improvements. There was also general interest in ensuring that bicycle and pedestrian improvements would be included in the TSP.

Open House #2

A second open house was held on December 11, 2014 to provide an opportunity for the public to comment on improvement options for the priority roadway and bicycle/pedestrian improvement locations shown in Figure 13.

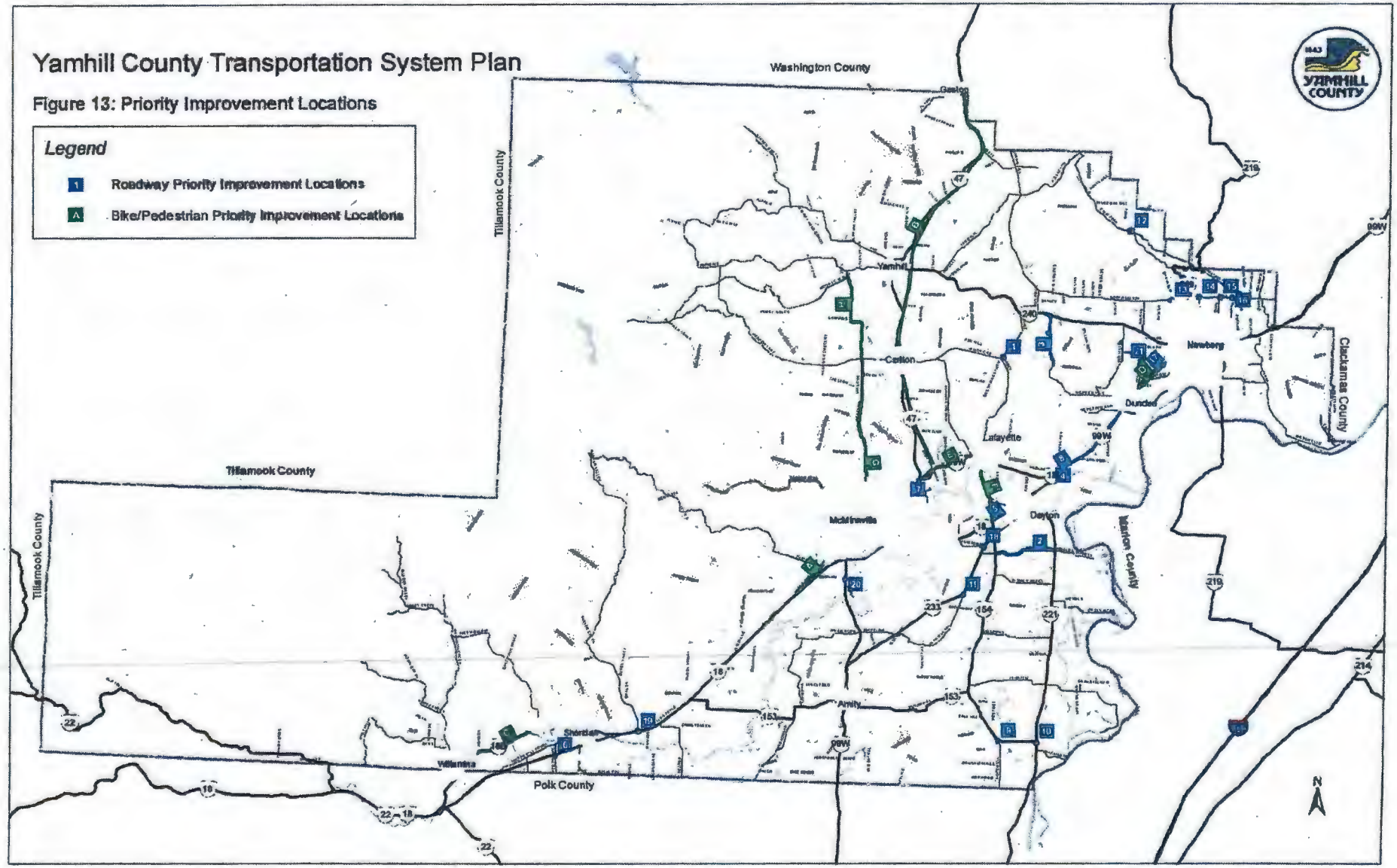
Roadway Improvement Options

The 21 priority roadway improvement locations were determined based on the needs identified in the existing and future conditions analysis and comments received from the RIAC, stakeholders, agency staff, and public. The list below does not reflect the order of importance of these locations.

1. Kuehne Rd./Abbey Rd./Hendricks Rd. intersection
2. Stringtown Rd. between OR 221 and OR 154
3. Worden Hill Rd. from OR 240 to north of Fairview Dr.
4. OR 99W/OR 18/McDougall Rd. intersection
5. OR 18 between Ash Rd. and OR 154/Lafayette Hwy.
6. OR 18/Red Prairie Rd. intersection
7. OR 99W/OR 47 Intersection
8. OR 99W – Dundee city limits to OR 18 junction
9. OR 153/Hopewell Rd./Webfoot Rd.

Yamhill County Transportation System Plan

Figure 13: Priority Improvement Locations



10. OR 221/OR 153 intersection
11. OR 233/Starr Quarry Rd. intersection
12. Bald Peak Rd./Mountain Top Rd. intersection
13. North Valley Rd./Chehalem Dr. intersection
14. Bell Rd./Aspen Way intersection
15. Bell Rd./Zimri Rd. intersection
16. Bell Rd./Springbrook Rd. intersection
17. OR 99W – Newberg city limits to Dundee city limits
18. OR 233/Cruickshank Rd. intersection.
19. OR 18/Gopher Valley Rd. intersection
20. OR 99W/Durham Ln. intersection
21. Fox Farm Rd./Hidden Springs Rd. intersection

The improvement options were developed to address the needs identified in the existing and future conditions analysis and by the RIAC, stakeholders, and public. The goals, objectives, and evaluation criteria were used as a guide in the development of the options, as well as the future funding constraints identified in the funding analysis. The focus was to identify options that would improve safety and maintain traffic operations, while minimizing cost and environmental and land use impacts. Another objective was to develop a package of improvements for each location that would address not only the primary need, but secondary needs within the vicinity.

In some cases, due to the type of need or specific characteristics of the location, only one improvement option is available. An example of this would be a location where there are conflicts between turning vehicles and through traffic. Here, the only option would be to provide a turn lane. The improvement options are briefly summarized in Table 2 below. Additional details are provided in the Improvement Options memo in Appendix H.

Table 2: Roadway Improvement Options

Location		Needs	Improvement Options
No.	Description		
1	Kuehne Rd./Abbey Rd./Hendricks Rd.	• Improved safety • Skewed intersections • Lack of turn lanes	1. Realign Abbey Rd. as "T" intersection with Hendricks Rd., add turn lanes 2. Realign Hendricks Rd. as "T" intersection with Abbey Rd., add turn lanes 3. Install roundabout
2	Stringtown Rd. between OR 221 and OR 154	• Improved safety • Narrow lanes and shoulders	1. Widen lanes and shoulders, install shoulder rumble stripes, install signing and striping at curves
3	Worden Hill Rd. from OR 240 to north of Fairview Dr.	• Improved safety on Worden Hill Rd. • Poor intersection geometrics at OR 240/Worden Hill Rd.	1. Improve OR 240/Worden Hill Rd. intersection 2. Same as Option 1, plus install rumble stripes and curve signs/striping on Worden Hill Rd. 3. Same as Option 2, plus add shoulders and remove two crests on Worden Hill Rd. 4. Same as Option 3, plus realign four curves on Worden Hill Rd.
4	OR 99W/OR 18/McDougall Rd.	• Improved safety and traffic operations • Non-standard intersection layout • Future mobility need	1. Install roundabout
5	OR 18 between Ash Rd. and OR 154/Lafayette Hwy.	• Improved safety • Future mobility need	1. Close Ash Rd., install roundabout at OR 18/OR 154/Lafayette Hwy. 2. Close Ash Rd., realign Lafayette Hwy. and OR 154 as offset "T" intersections with OR 18
6	OR 18/Red Prairie Rd.	• Improved safety • Difficulty in crossing OR 18	1. Install median on OR 18 to allow two-stage crossing

Location		Needs	Improvement Options
No.	Description		
7	OR 99W/OR 47	• Improved safety • Lack of turn lane • Existing and future mobility needs • Poor pavement condition	1. Install traffic signals on eastbound and westbound OR 99W, rehabilitate pavement 2. Merge eastbound and westbound OR 99W into single roadway and install traffic signal, add turn lane 3. Merge eastbound and westbound OR 99W into single roadway and install roundabout
8	OR 99W – Dundee City Limits to OR 18 Junction	• Existing and future mobility needs	1. Widen OR 99W to four lanes with median between Bypass junction and OR 18
9	OR 153/Hopewell Rd./Webfoot Rd.	• Improved safety • Lack of turn lane • Narrow lanes and shoulders	1. Remove vegetation near intersection, install intersection warning beacon 2. Same as Option 1, plus widen lanes and shoulders and consider turn lane
10	OR 221/OR 153	• Improved safety • Confusing intersection, sharp angles • Lack of turn lane • Narrow lanes	1. Remove intersection connector roads to create standard intersection, install turn lane, widen lanes
11	OR 233/Starr Quarry Rd.	• Improved safety • Narrow lanes and shoulders • Confusing intersection • Substandard curve on OR 223	1. Improve curve on OR 233, realign Starr Quarry Rd. as "T" intersection with OR 233, install turn lane and guide signs on OR 233, widen lanes and shoulders
12	Bald Peak Rd./Mountain Top Rd.	• Improved safety • Skewed intersection • Narrow lanes and shoulders	1. Realign Ornduff Rd. and Mountain Top Rd. to form single intersection and connect with Bald Peak Rd., reduce crest on Bald Peak Rd.
13	North Valley Rd./Chehalem Dr.	• Poor sight distance • Narrow lanes • Offset intersection approaches	1. Trim vegetation near intersection, remove crest on North Valley Rd. 2. Same as Option 1, plus realign south leg of Chehalem Dr.

Location		Needs	Improvement Options
No.	Description		
14	Bell Rd./Aspen Way	• Poor sight distance • Narrow lanes and shoulders	1. Reduce crest on Bell Rd., widen lanes and shoulders
15	Bell Rd./Zimri Rd.	• Poor sight distance • Narrow lanes and shoulders	1. Remove /relocate sight obstructions on southwest corner of intersection
16	Bell Rd./Springbrook Rd.	• Improved safety • Poor sight distance • Narrow lanes and shoulders	1. Convert intersection to three-way stop, remove vegetation near intersection, install advance intersection warning signs and intersection beacon
17	OR 99W – Newberg City Limits to Dundee City Limits	• Improved safety • Existing mobility need • Narrow shoulders • Merge problem in lane reduction area east of Dundee	1. Widen shoulders, monitor merge problem
18	OR 233/Cruickshank Rd.	• Improved safety • Confusing intersection • Narrow lanes and shoulders	1. Remove connector roads at intersection and realign Cruikshank Rd. as "T" intersection with OR 233 south of existing home, consider turn lanes, widen lanes and shoulders 2. Remove connector roads and realign Cruickshank Rd. as "T" intersection with removal of existing home, consider turn lanes, widen travel lanes and shoulders 3. Install roundabout with removal of existing home
19	OR 18/Gopher Valley Rd.	• Poor access conditions at driveways on OR 18 • Narrow lanes and shoulders	1. County and ODOT to work with property owners to consolidate driveways over time
20	OR 99W/Durham Ln.	• Improved safety • Narrow shoulders	1. Install intersection beacon, remove sight distance obstructions, consider turn lanes
21	Fox Farm Rd./Hidden Springs Rd.	• Improved safety • Poor sight distance • Substandard curves	1. Create "T" intersection 2. Realign Fox Farm Rd. to improve curves, create "T" intersection

The improvement options were screened using the evaluation criteria described in Section 7 and the findings were reviewed with the County, ODOT, and the RIAC. There was general agreement about the improvement concepts and the results of the evaluation. Minor revisions were made to the options based on County and ODOT input. The evaluation scores are shown in the summary sheets at the end of the Improvement Alternatives memo in Appendix H.

Proposed Bicycle and Pedestrian Improvements

The proposed bicycle and pedestrian improvements presented at the second open house address the locations where improvements are needed to safely accommodate higher bicycle or pedestrian volumes. The improvements generally consist of widening travel lanes and/or shoulders to provide greater separation between bicyclists/pedestrians and vehicular traffic. These improvements were proposed at the following locations (see Figure 13):

a. Old Sheridan Rd. between McMinnville city limits and OR 18
b. OR 47 between OR 99W and Washington County line
c. OR 18B between Sheridan and Willamina
d. OR 99W between Newberg and Dundee
e. OR 99W between Lafayette and McMinnville
f. Lafayette Hwy. between Lafayette and OR 18
g. Westside Rd. between McMinnville and Meadowlake Rd.
h. Westside Rd. between Meadowlake Rd. and Moore's Valley Rd.

The only exception to the lane/shoulder widening improvements is for OR 47 between OR 99W and the Washington County line. Here, the planned Yamhela's Westsider Trail was proposed, which will run parallel to OR 47, with connections via OR 47 and intersecting county roads.

Community Preferred Options

Public input was provided at the second open house on several of roadway improvement options. For Worden Hill Rd. (Location #3), both Option 3 and Option 4 were supported. Option 3 includes improvements to the OR 240/Worden Hill Rd. intersection, and on Worden Hill Rd., the installation of rumble stripes and curve signs/striping, the addition of shoulders, and the removal of two crests. Option 4 is the same as Option 3, plus the realignment of four curves on Worden Hill Rd.

One comment was received for OR 18 between Ash Rd. and Lafayette Hwy. (Location #5) supporting Option 2, which includes the closure of Ash Rd. north and south of OR 18 and the realignment of Lafayette Hwy. and OR 154 as offset "T" intersections with OR 18.

Option 2 was preferred for the OR 153/Hopewell Rd./Webfoot Rd. intersection (Location #9). This would improve sight distance by removing vegetation near the intersection, install a warning beacon at the intersection, and widen the lanes and shoulders on OR 153 and Hopewell Rd. in the vicinity of the intersection. In addition, an eastbound right-turn lane would be considered.

One comment was received in support of Option #3 at the OR 99W/OR 47 intersection (Location #7). This option would feature the merging of the eastbound and westbound OR 99W roadways into a single roadway, with the installation of a roundabout.

For the OR 233/Cruickshank Rd. intersection (Location #18), both Option 2 and Option 3 were supported. With both options, the existing home located in the center of the intersection would be removed. Option 2 would remove the connector roads at the intersection and realign Cruickshank Rd. to meet OR 233 as a "T" intersection. A northbound left-turn lane and southbound right-turn lane on OR 233 would be considered, and the lanes and shoulders on OR 233 would be widened near the intersection. Option 3 would reconstruct the intersection as a roundabout.

There was one comment in favor of Option 2 for the Fox Farm Rd./Hidden Springs Rd. intersection, which would realign Fox Farm Rd. to improve the radii on the "S" curve and realign Hidden Springs Rd. as a "T" intersection with Fox Farm Rd.

Several other comments not related to the improvement options were also received:

- Roundabouts help the flow of traffic
- Add shoulders when performing maintenance work on county roads
- Widen Lafayette Hwy. between OR 18 and OR 99W to better accommodate bicyclists
- Consider adding paved shoulders on Baker Creek Rd. for bicycle access to the county parks outside of McMinnville
- OR 99W needs shoulders between Trunk Rd. and Riverwood Rd.

Additional information on the public process can be found in in Appendix I.

Section 10. Recommended Transportation System Improvements

The improvements presented below are recommended for further investigation. Based on the public input received at the second open house, evaluation results, and input from the RIAC and county staff, these improvements best meet the goals, objectives, and needs for the County's transportation system. None of the recommended improvements involve any significant right-of-way or property impacts. They are not expected to have any disproportionately negative impacts on Title VI populations. Rather, these improvements will benefit the entire population. Complete documentation of the selection of the recommended improvements is included in Appendix J.

Roadway Projects

The recommended roadway improvements are in the form of projects, which consist of a bundle of one or more individual improvements that address both the primary and secondary needs at a location. This approach enhances the cost-effectiveness of improvement projects by increasing the total benefit and reducing the total cost, compared to separate projects for each improvement. The recommendations describe the type of improvements to be implemented, not their specific design characteristics or features. These would be determined at the time of project development.

For each project, a funding source is identified. In the past, County roadway improvements have typically been funded using revenues from the State Highway Fund that are allocated to the County or Oregon Transportation Investment Act (OTIA) funds, which are specifically used for bridge projects.[31] Alternative funding sources not currently used by the County are also included, such as local improvement districts, transportation utility fees, franchise fees, and county road districts bonds, property taxes for roads, and ODOT Pedestrian and Bicycle

[31] Going forward, OTIA funds will not be available.

Program grants. For planning purposes, ODOT estimates approximately $10-15M in state and federal funding administered by ODOT is will be available for capital improvements on state highways over the 20-year period.[32]

A recommended time frame is also provided for each project. The time frame estimates are primarily based on when a project will be needed to address the identified needs: short-term (2015-2020), medium-term (2020-2025), and long-term (2025-2030+). Other factors were considered in some cases, including:

- Phasing – the project can be implemented in an inexpensive, short-term phase together with a longer-term phase, which may require additional time to secure funding.
- Other recent improvements – if an improvement has recently been made at a location, the priority for another project at the same location may be lower.
- Related improvements – another improvement is scheduled which would eliminate the need for the recommended project.
- Cost – higher-cost projects will likely require more time to secure funding.

The time frame is not intended to reflect priority. The recommended county roadway projects can be considered as a pool of potential improvements that the county can select from according to future circumstances, such as the availability of funding for a specific improvement type or the ability to combine the project with another project.

The recommended roadway improvements are summarized in Table 3 and Figure 13.

[32] The State has not committed any future funding for projects in Yamhill County. This estimate is based on the assumption that Yamhill County will receive a reasonable share of the state/federal funding projected to be available over the 20-year planning horizon in Region 2 and based on ODOT sustaining their current revenue structure. It is used to illustrate the degree of financial constraints faced by ODOT as of the writing of this document. Actual funding through state and federal sources may be higher or lower than the range of this estimate. This estimate does not include projects that might be funded through the federal Highway Safety Improvement Program (HSIP).

Table 3: Recommended Roadway Improvements

Location		Recommended Project	Cost	Funding Source	Time Frame
No.	Description				
1	Abbey Rd./Hendricks Rd./Kuehne Rd.	Option 1: • Realign Abbey Rd. as "T" intersection with Hendricks Rd. • Install southbound left-turn lane on Hendricks Rd. at Abbey Rd. • Install acceleration/merge lane from Abbey Rd. to Kuehne Rd. • Realign and widen travel lanes on Abbey Rd. • Realign Oak Spring Farm Rd. as "T" intersection with Abbey Rd. • Widen travel lanes and shoulders on Hendricks Rd. and Kuehne Rd	$625,000 + ROW cost	• County (State Highway Fund) • Alternate county funding sources	Short-term
2	Stringtown Rd. - OR 221 to OR 154	Option 1: • Install signing/striping at several curves* • Widen road • Widen/improve shoulders • Install shoulder rumble stripes	$4.25M	• County (State Highway Fund) • Alternate county funding sources	Short-term* Medium/long-term

Location		Recommended Project	Cost	Funding Source	Time Frame
No.	Description				
3	Worden Hill Rd. - OR 240 to north of Fairview Dr.	Option 4: • Realign OR 240/Worden Hill Rd. intersection to eliminate skew, widen shoulders on OR 240 near intersection • Install signing/striping at several curves, install rumble stripes for length of roadway • Widen shoulders and remove crests at two locations • Straighten curves at several locations	$5.4M	• County (State Highway Fund) • Alternate county funding sources	Long-term
4	OR 99W/OR 18/ McDougall Rd.[33]	Option 1: • Close McDougall Rd. approach to intersection* • Install multi-lane roundabout • Widen shoulders on OR 99W and OR 18 in vicinity of intersection	$9.0M	ODOT	Short-term* Long-term
5	OR 18 - Ash Rd. to OR 154/Lafayette Hwy.	Option 1: • Close Ash Rd. north and south of OR 18* • Install multi-lane roundabout, widen Lafayette Hwy. and OR 154 near intersection	$8.0M	ODOT	Short-term* Medium/long-term

[33] This project may be pursued if the Dundee to OR 18 phase of the Bypass is not built.

Location		Recommended Project	Cost	Funding Source	Time Frame
No.	Description				
6	OR 18/Red Prairie Rd.	Option 1: • Install median on OR 18 with adequate width to allow two-stage crossing movements • Widen lanes and shoulders on Red Prairie Rd. in vicinity of intersection	$7.0M	ODOT	Medium/long-term
7	OR 99W/OR 47	Option 3: • Merge eastbound and westbound roadways on OR 99W into single roadway and install multi-lane roundabout • Widen shoulders on OR 47 in vicinity of intersection	$6.0M	ODOT	Short-term
8	OR 99W – Dundee to OR 18	Option 1: • Widen and rehabilitate shoulders* • Widen OR 99W to four lanes with median between Newberg-Dundee Bypass junction and OR 18	$40.0-50.0M	ODOT	Medium-term* Long-term[34]
9	OR 153/Hopewell Rd./Webfoot Rd.	Option 2: • Remove vegetation, install warning beacon at intersection* • Widen travel lanes and shoulders near intersection, consider adding eastbound right-turn lane on OR 153	$1.0M	• ODOT • County (State Highway Fund) • Alternate county funding sources	Short term* Medium/long-term

[34] Pending outcome of future Bypass phase.

Location		Recommended Project	Cost	Funding Source	Time Frame
No.	Description				
10	OR 221/OR 153	Option 1: • Vacate south-to-west and north-to-west connector roads to create standard intersection • Install northbound left-turn lane on OR 221 • Widen travel lanes on OR 221 in vicinity of intersection	$1.5M	ODOT	Short-term
11	OR 233/ Starr Quarry Rd.	Option 1: • Realign OR 233 so curve meets standard • Realign Starr Quarry Rd. as "T" intersection with OR 233 • Install southbound left-turn lane on OR 233 • Install guide signs on OR 233 • Widen travel lanes and shoulders in vicinity of intersection	$1.5M	• ODOT • County (State Highway Fund) • Alternate county funding sources	Short-term
12	Bald Peak Rd./ Mountain Top Rd.	Option 1: • Realign Orndorff Rd. and Mountain Top Rd. to form single intersection north of Bald Peak Rd. • Connect new intersection to Bald Peak Rd. • Reduce crest on Bald Peak Rd. at intersection	$620,000	• County (State Highway Fund) • Alternate county funding sources	Medium-term

Location		Recommended Project	Cost	Funding Source	Time Frame
No.	Description				
13	North Valley Rd./ Chehalem Dr.	Option 2: • Reconstruct North Valley Rd. west of intersection to reduce crest • Trim/remove vegetation • Realign south leg of Chehalem Dr. to eliminate offset	$525,000	• County (State Highway Fund) • Alternate county funding sources • City of Newberg (future development fees)	Short-term[35]
14	Bell Rd./Aspen Way	Option 1: • Reduce crest on Bell Rd. to west of intersection • Widen travel lanes and shoulders on Bell Rd. • Replace and/or install guardrail in vicinity of intersection	$710,000	• County (State Highway Fund) • Alternate county funding sources	Short-term
15	Bell Rd./Zimri Rd.	Option 1: • Remove/relocate sight obstructions on SW corner of intersection	$20,000	• County (State Highway Fund) • Alternate county funding sources	Short-term

[35] Contingent on Newberg development.

Location		Recommended Project	Cost	Funding Source	Time Frame
No.	Description				
16	Bell Rd./ Springbrook Rd.	Option 1: • Convert intersection to three-way stop control • Remove vegetation on SE corner of intersection • Relocate utility pole on north side of Bell Rd. to improve clear zone safety • Install "stop ahead" advance warning signs with beacons on Bell Rd. • Install warning beacon at intersection	$130,000	• County (State Highway Fund) • Alternate county funding sources	Short-term
17	OR 99W – Newberg to Dundee	Option 1: • Widen shoulders on OR 99W where deficient • Monitor lane reduction area east of Dundee; identify appropriate improvement measures as needed	$3.0M	ODOT	Medium-term
18	OR 233/ Cruickshank Rd.	Option 2: • Remove connector roads • Realign Cruickshank Rd. as "T" intersection with OR 233, removing existing home • Consider northbound left-turn lane and southbound right-turn lane on OR 233 at new intersection • Widen travel lanes and shoulders on OR 233 in vicinity of intersection	$2.0M	ODOT	Medium-term
19	OR 18/ Gopher Valley Rd.	Option 1: • County and ODOT to work with property owners to consolidate accesses over time	N/A	ODOT	Medium/Long-term

Location		Recommended Project	Cost	Funding Source	Time Frame
No.	Description				
20	OR 99W/Durham Ln.	Option 1: • Install overhead flashing beacon at intersection • Remove/relocate sight distance obstructions on OR 99W • Relocate stop sign on Durham Ln. as close to intersection as possible • Consider northbound left-turn lane and southbound right-turn lane on OR 99W • Move existing intersection warning signs closer to intersection	$1.0M	ODOT	Medium-term
21	Fox Farm Rd./Hidden Springs Rd.	Options 1 and 2: • Create "T" intersection* • Realign Fox Farm Rd. to improve radii on "S" curves; realign Hidden Springs Rd. as "T" intersection at Fox Farm Rd.	$415,000	• County (State Highway Fund) • Alternate county funding sources	Short-term* Long-term

Bicycle/Pedestrian Improvements

Nearly all of the proposed bicycle/pedestrian improvements presented at the second open house are recommended for implementation. The improvements are located throughout the County, as shown in Table 4 and Figure 13. They consist mainly of shoulder widening and/or paving to a minimum of six feet, or to the County's or ODOT's standard if it is higher. In some cases, lane widening is also recommended because having adequate lane width for vehicular traffic also improves safety for bicyclists and pedestrians.

In addition to the shoulder and lane widening improvements, the Yamhela's Westsider Trail is recommended (see Figure 13). The trail will run parallel to OR 47 from OR 99W to Gaston, linking up with the State Highway Bicycle trail to Forest Grove and to Hagg Lake. The cities of Gaston, Yamhill and Carlton are situated along the trail. Access will be available from intersecting county roads and nearby OR 47.

All of the recommended improvements are based on existing needs, so they can be implemented as soon as funding becomes available.

Transit Improvements

The recommended improvements for transit service in Yamhill County were determined based on the needs identified in the *Yamhill County Coordinated Human Services Public Transportation Plan: The Next Steps*[36] and by YCTA staff, stakeholders, and the public. The recommended improvements are:

- Additional service during the evenings and on weekends
- More frequent bus stops
- Expanded service to large employers (e.g. Spirit Mountain Casino and the Riverside Drive industrial area)
- Improved service to outlying areas

[36] Mid-Willamette Valley Council of Governments, Coordinated Human Services Public Transportation Plan, 2007.

Table 4: Recommended Bicycle and Pedestrian Improvements

Location		Recommended Improvement	Cost	Funding Source	Time Frame
A	Old Sheridan Rd. - McMinnville to OR 18	• Widen travel lanes • Widen and pave shoulders to six feet	$2.0M + culvert replacement	County	Short-term
B	OR 47 - OR 99W to Washington County	• Yamhela's Westsider Trail	N/A	County/ Private	Short-term
C	OR 18B - Sheridan to Willamina	• Widen travel lanes • Widen and pave shoulders to six feet	$3.0M	ODOT	Medium-term
D	OR 99W - Newberg to Dundee	• Widen and pave shoulders to six feet*	See Location #17 in Table 3	ODOT	Medium-term or with Location #17 improvement
E	OR 99W - Lafayette to McMinnville	• Widen and pave shoulders to six feet	Reconstruction of two bridges**	ODOT	Medium-term
F	Lafayette Hwy. - Lafayette to OR 18	• Widen travel lanes • Widen and pave shoulders to six feet	$1.7M + utility pole relocation	County	Short-term

* Alternatively, the shoulders on Dayton Avenue could be widened, consistent with the Dundee TSP and Chehalem Heritage Trail Strategic Plan.
** South Yamhill River bridges only.

- New service between Yamhill and Carlton
- New service between Sheridan, Willamina and Grand Ronde (West Valley)
- Designated bus stops with signs and posted schedules
- Transit shelters for fixed routes
- Sidewalks, curb cuts, loading spaces, and crosswalks in areas adjacent to transit lines
- Improved ADA accessibility
- Pull-outs for buses
- More regional connections (e.g. to the Oregon coast)

Additional improvements may be identified in a Transit Development Plan that may be developed by the YCTA in the near future.

ODOT provides limited transit funding through the Enhance category of the Statewide Transportation Improvement Program (STIP), Special Transportation Fund (STF), and *Connect*Oregon program. The Enhance category of the STIP funds projects that expand or improve the state's multimodal transportation system. For transit, this includes capital projects only. STF funds can be used to provide transportation services to seniors and people with disabilities, including transit service. *Connect*Oregon funds investments in air, rail, marine, transit, and bicycle/pedestrian infrastructure through grants and loans.

The primary federal transit funding sources available are the Section 5310 and 5311 programs. Section 5310 funds may be used for the special needs of elderly individuals and individuals with disabilities. Section 5311 is a rural program that provides funding to the states for the purpose of supporting public transportation in rural areas.

A small amount of transit funding is also provided from the Yamhill County General Fund.

Air, Rail, Pipeline, and Waterway Improvements

There are no recommended air, pipeline, or waterway improvements.

The potential passenger rail connection between Yamhill County and the Portland metropolitan area identified in the *Oregon State Rail Plan*[37] was examined in the *Yamhill County Commuter Rail Study*.[38] The study evaluated the potential for commuter rail operation from McMinnville to Milwaukie utilizing existing freight rail lines which generally parallel OR 99W (see Figure 14). Key findings from the study include the following:

- Service would include five inbound trips in the morning peak period and five outbound trips in the evening peak based on 30-minute frequencies. Two trains in each peak would run to and from McMinnville, with the remainder operating to and from Newberg.
- Although adequate for low-speed freight service, the rail line would require considerable upgrading to accommodate commuter rail operations safely and cost-effectively.
- The estimated capital cost to place a McMinnville-to-Milwaukie commuter rail line into operation would be $112M (1997 dollars).
- The estimated operating cost would be $3.0M annually.
- Daily boardings for 2015 are estimated to be 1,580.
- Given the number of riders with trip destinations in the OR 217 corridor and Wilsonville, a timed connection with Tri-Met's Westside Express Service between Wilsonville and Beaverton would be important.

Development of new service will require a detailed feasibility study that examines potential ridership, technical feasibility, implementation, costs, and other factors.

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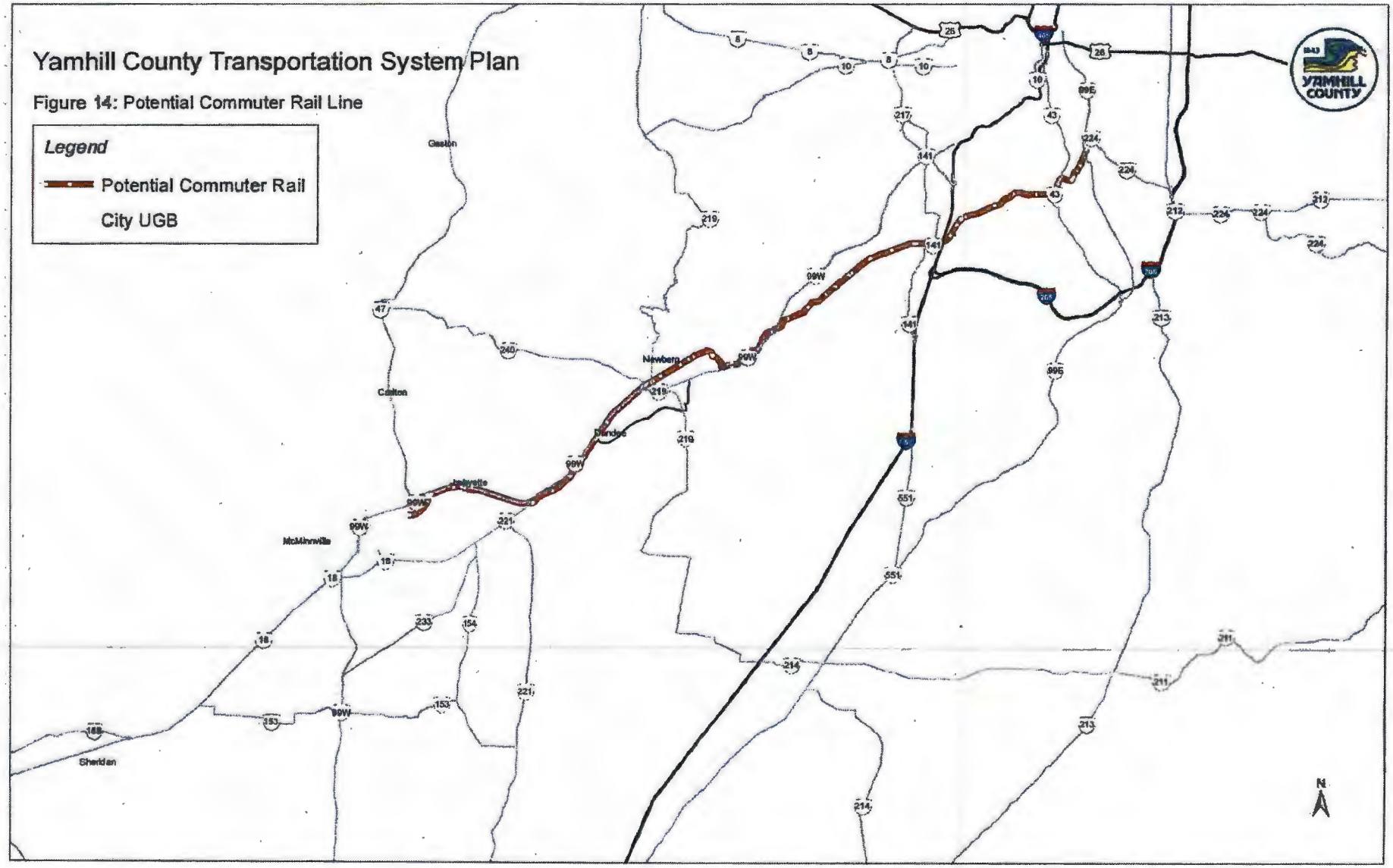
[37] Oregon Department of Transportation, Oregon State Rail Plan, 2014.
[38] Oregon Department of Transportation, Yamhill County Commuter Rail Study, 1998.

Yamhill County Transportation System Plan

Figure 14: Potential Commuter Rail Line



Implementation of Recommended Improvements

Implementation of the recommended projects, both for county and state facilities, will be significantly constrained by the anticipated future funding amounts. For the County, this is estimated to be roughly $300,000 per year or $6M over the 20-year planning horizon. For ODOT, a total of $10-15M is estimated be available for capital transportation improvements on state highways over the 20-year period.

County Projects

County roadway projects are identified as short-term, medium-term, or long-term based, primarily, on whether the needs exist today or are expected with future with traffic growth. Some projects are classified as longer-term based on input from the County, such as locations where a project has been recently constructed (e.g., Worden Hill Rd.). No additional prioritization is recommended for the County roadway projects. Implementation of specific projects can occur as funding becomes available or other opportunities arise. An example of this is bundling a project with another capital improvement or a scheduled maintenance project. Project bundling could also be done with ODOT if there are complementary nearby projects on County and ODOT facilities.

Similarly, all of the recommended bicycle and pedestrian improvements address existing needs and therefore are considered equally important. Specific improvements can be implemented base on funding availability or as other opportunities arise.

ODOT Projects

Some of the projects on ODOT facilities are recommended as priority projects because there are mobility needs at these locations that must be addressed to meet the State's mobility targets. The following priority projects are considered "reasonably likely" by ODOT to be funded based on the estimated 20-year funding amount for state highways in unincorporated Yamhill County:

- OR 18 – Ash Rd. to OR 154/Lafayette Hwy. (Location #5) - Close Ash Rd. north and south of OR 18, install a multi-lane roundabout at the OR 18/OR 154/Lafayette Hwy. intersection,[39] and widen Lafayette Hwy. and OR 154 near the intersection.

- OR 47/OR 99W intersection (Location #7) – merge the eastbound and westbound roadways on OR 99W into a single roadway and install a multi-lane roundabout;[40] widen shoulders on OR 47 in the vicinity of the intersection.

In addition, there are several other state highway locations where there are existing and/or future mobility needs, but improvements are considered not reasonably likely to be funded. These are:

- OR 99W/OR 18/McDougall Rd. intersection (Location #4)
- OR 18 west of Dayton
- OR 18 west of McMinnville
- OR 99W – Dundee to OR18 (Location #8)
- OR 99W/Fox Farm Rd. intersection

At the first three locations, the mobility needs are for future conditions only and the mobility targets are only slightly exceeded. Also, at OR 99W/OR 18/McDougall Rd., the need would be eliminated if the Dundee-to-Dayton phase of the Bypass is constructed, because the Bypass is expected to draw a significant amount of traffic from OR 99W.

On OR 99W between Dundee and OR 18, four-lane widening is required to address the existing and future needs. Two factors make this improvement not reasonably likely to be funded:

- It will not be needed if the Dundee-to-Dayton phase of the Bypass is constructed, because the Bypass is expected to draw a significant amount of traffic from OR 99W.

[39] Further analysis of the feasibility and desirability of a multi-lane roundabout at this location will be required.
[40] Further analysis of the feasibility and desirability of a multi-lane roundabout at this location will be required.

- With an estimated cost of over $50M, this improvement alone would well exceed ODOT's entire funding amount for state highways in Yamhill County over the 20-year planning horizon.

The shoulder widening and rehabilitation portion of this project is recommended in the medium-term, however, because this is a much lower-cost improvement that is needed whether the future phase of the Bypass is built or not.

With regard to OR 99W/Fox Farm Rd., ODOT is currently working with the City of Dundee to develop an improvement at the intersection of OR 99W/First St. in Dundee. The scope of this improvement will either include or have an effect on the intersection of OR 99W/Fox Farm Rd. At this time, there is no estimate of how this improvement will impact the operation of the OR 99W/Fox Farm Rd. intersection, but some improvement is expected, particularly in combination with the reduction in traffic expected with the opening of Phase 1 of the Bypass. The operational conditions at this intersection should continue to be monitored by ODOT, post-Phase 1, and addressed to the extent practicable from a property impact and funding standpoint, in consideration of the magnitude of any operational or safety problems that may develop by the end of the 20-year planning horizon. The potential for the Dundee-to-Dayton segment of the bypass to be constructed should also be a factor in these considerations, as its construction would include a complete reconstruction/replacement of the existing OR 99W/Fox Farm Rd. intersection.

In lieu of improvements at these locations, ODOT should request that the OTC adopt alternate mobility targets to reflect likely highway performance, given the anticipated funding constraints and the State's and County's inability to construct the improvements needed to mitigate the expected future conditions.[41]

[41] On OR 99W between Dundee and OR 18, the alternate mobility target should be a volume/capacity (v/c) ratio of 1.00 based on average weekday P.M. peak hour traffic volumes, with no peak hour factor (PHF). At OR 99W/Fox Farm Rd., the alternate mobility target should be a v/c ratio of 0.90 based on average weekday P.M. peak hour traffic volumes, with no peak hour factor.

All of the other ODOT projects, including the bicycle/pedestrian improvements, can be treated in a similar manner to the recommended county projects, with no specific prioritization. Because none of these projects will substantially impact mobility expectations, they can be implemented as funding becomes available or other opportunities arise.

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