



This report summarizes the planning documents, policies, and regulations that are applicable to the City of Sherwood Transportation System Plan (TSP) update (see [Appendix A](#) for a complete list). The City's current TSP will serve as the foundation for the update process, upon which new information obtained from system analysis and stakeholder input will be applied to address changing transportation needs through the year 2035. Policies and requirements reviewed here will guide the TSP update; new strategies for addressing transportation needs and TSP recommendations will need to be coordinated with, and in some cases comply with, the plans, policies, and regulations described herein.

Transportation System Planning in Oregon

The Oregon Transportation Plan (OTP)¹ establishes goals, policies, strategies and initiatives that address the core challenges and opportunities facing transportation in Oregon. These are further refined in the Oregon Highway Plan (OHP) and implemented through the adopted targets and standards in this plan.² In addition, TSPs for cities within metropolitan planning organizations (MPOs) must also comply with the regional transportation plan, which is adopted to meet specific Federal requirements.

Transportation System Planning in Oregon is required by state law as one of the 19 statewide planning goals³ (Goal 12- Transportation). The Transportation Planning Rule (TPR), OAR 660-012⁴, defines how to implement State Planning Goal 12. Specifically, the TPR requires:

- The state to prepare a TSP, referred to as the Oregon Transportation Plan (OTP);
- Metropolitan planning organizations (MPOs) to prepare a Regional Transportation Plan (RTP) that is consistent with the OTP (the Metro RTP⁵ applies to the City of Sherwood); and
- Counties and cities to prepare local TSPs that are consistent with the OTP and RTP.

The TPR directs TSPs to integrate comprehensive plan land use with transportation needs and to promote systems that serve statewide, regional and local transportation needs. These requirements aim to improve community livability by encouraging land use patterns and transportation systems that make it more convenient for people to walk, bicycle, use transit and drive less to meet their daily needs. An evaluation of how the existing TSP and implementing code language meet requirements of the TPR and specific recommendations for changes will be included in the Needs, Opportunities, Constrains and Tools Report.

¹ Oregon Transportation Plan: <http://www.oregon.gov/ODOT/TD/TP/ortransplanupdate.shtml>

² Oregon Highway Plan: <http://www.oregon.gov/ODOT/TD/TP/orhwyplan.shtml>

³ Statewide Planning Goals: <http://www.oregon.gov/LCD/goals.shtml>

⁴ Transportation Planning Rule: http://arcweb.sos.state.or.us/rules/OARS_600/OAR_660/660_012.html

⁵ Metro Regional Transportation Plan: <http://www.oregonmetro.gov/index.cfm/go/by.web/id=25038>



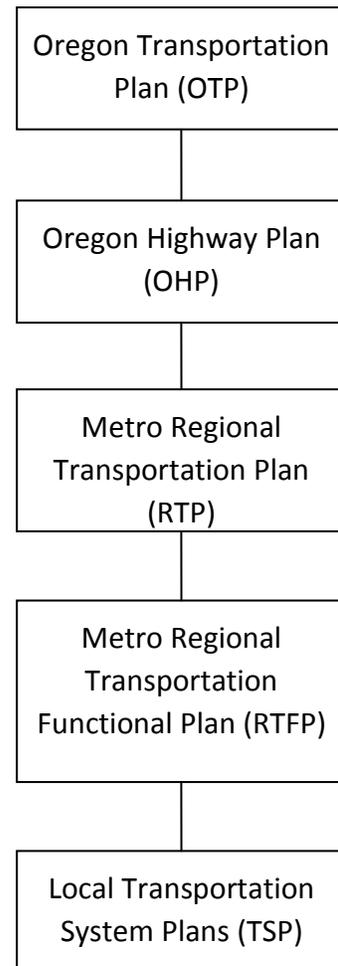
Why does the City of Sherwood need an Updated TSP?

The City's current TSP was adopted in 2005. Since then, new requirements have been made in the OTP, OHP and Metro RTP. Several regional planning efforts have also taken place since the TSP was adopted, and several Sherwood plans have also been updated or completed, including the Parks Master Plan, the Town Center Plan and concept plans for areas brought into the Urban Growth Boundary. The last 10+ years of regulatory, land use and transportation system changes will be considered in this TSP update.

ODOT's Transportation System Plan Guidelines⁶ direct TSP updates to address recent policy and regulatory changes, and calls out changes to the OTP, OHP, TPR, and federal changes implemented into the RTP. Since adoption of the 2005 City of Sherwood TSP, the OTP was updated (2006) to emphasize maintaining assets in place, optimizing existing system performance through technology and better system integration, creating sustainable funding, and investing in strategic capacity enhancements. Policy 1F (Mobility Standards) of the OHP was amended in 2011 to recognize and emphasize opportunities for developing alternative mobility targets where such a tool better identifies transportation needs and solutions and better balances state and local community needs and objectives. OHP Goal 3, Access Management, and its associated policies and standards were also modified in 2011, with text changes touching on balancing local economic development and state mobility needs, jurisdictional transfer agreements, and medians.

Metro's Regional Transportation Functional Plan⁷ (RTFP) directs how the City of Sherwood should implement the RTP through the TSP and land use regulations. The RTFP codifies existing and new requirements that local plans must comply with to be consistent with the RTP. If a TSP is consistent with the RTFP, Metro will find it to be consistent with the RTP.

The RTFP provides guidance on several areas including transportation design for various modal facilities, system plans, regional parking management plans and amendments to comprehensive plans. The following directives specifically pertain to updating local TSPs:



⁶ ODOT Transportation System Plan Guidelines: <http://www.oregon.gov/ODOT/TD/TP/pages/plans.aspx>

⁷ Metro Regional Transportation Functional Plan: <http://www.oregonmetro.gov/index.cfm/go/by.web/id=274>



- Include regional and state transportation needs identified in the 2035 RTP along with local needs
- Local needs must be consistent with RTP in terms of land use, system maps and non-SOV modal targets (portion of trips that are not “drive alone” in a single occupant vehicle)
- When developing solutions, local jurisdictions shall consider a variety of strategies, in the following order:
 - TSMO (Transportation System Management Operations)
 - Transit, bicycle and pedestrian improvements
 - Traffic calming
 - Land use strategies in OAR 660-012-0035(2)⁸
 - Connectivity, including pedestrian and bicycle facilities
 - Motor vehicle capacity improvements
- Local jurisdictions can propose regional projects as part of RTP process
- Local jurisdictions can propose alternate performance and mobility standards, however, changes must be consistent with regional and statewide planning goals
- Local parking regulations shall be consistent with the RTP

⁸ As part of the TSP update effort, general strategies that have the potential to impact land use designations, densities, and design standards will be considered to meet local and regional transportation needs.



How is the Transportation System Defined?

The following sections summarize the state highway classifications and regional land use designations for areas in the City of Sherwood. This information ultimately determines the adopted standards and regulations that apply to state highways in the city.

ODOT State Highway Classifications

OHP Policy 1A (State Highway Classification System) categorizes state highways for planning and management decisions. In Sherwood, OR 99W (Highway 99W) is classified as a Statewide Highway, National Highway System (NHS), National Network, Freight Route, and Reduction Review Route. It is intended to provide mobility, safe and efficient, high-speed, continuous-flow operation, and connections between and within cities and regions in the state, including connections to larger urban areas and areas that are not directly served by Interstate Highways. The designations can limit reductions to vehicle-carrying capacity and (under the Reduction Review Route designation) subjects proposed reductions to review.

State Highway Freight System: OHP Policy 1C addresses the need to balance the movement of goods and services with other uses. It states that the timeliness of freight movements should be considered when developing and implementing plans and projects on freight routes. OR 99W is a classified Freight Route and Truck Route.

Updates to the TSP will support the existing OR 99W state classifications and will enhance the ability of the highway to serve in their defined functions.

Metro Land Use Designations

Metro's 2040 Growth Concept⁹ in the RTP applies land use designations to the Portland region. The 2040 Growth Concept is the region's long range plan for managing growth by integrating land use and transportation. The concept concentrates mixed use and higher density development in areas of the region designated as "Centers," "Station Communities," and "Main Streets." The 2040 Growth Concept land uses are arranged in a hierarchy, with the primary and secondary land uses, referred to as 2040 Target Areas, as the focus of RTP investments. The hierarchy also serves as a framework for prioritizing RTP investments.

Primary land uses in Sherwood include:

- Tualatin-Sherwood Industrial Area¹⁰

⁹ Metro 2040 Growth Concept: <http://www.oregonmetro.gov/index.cfm/go/by.web/id=29882>

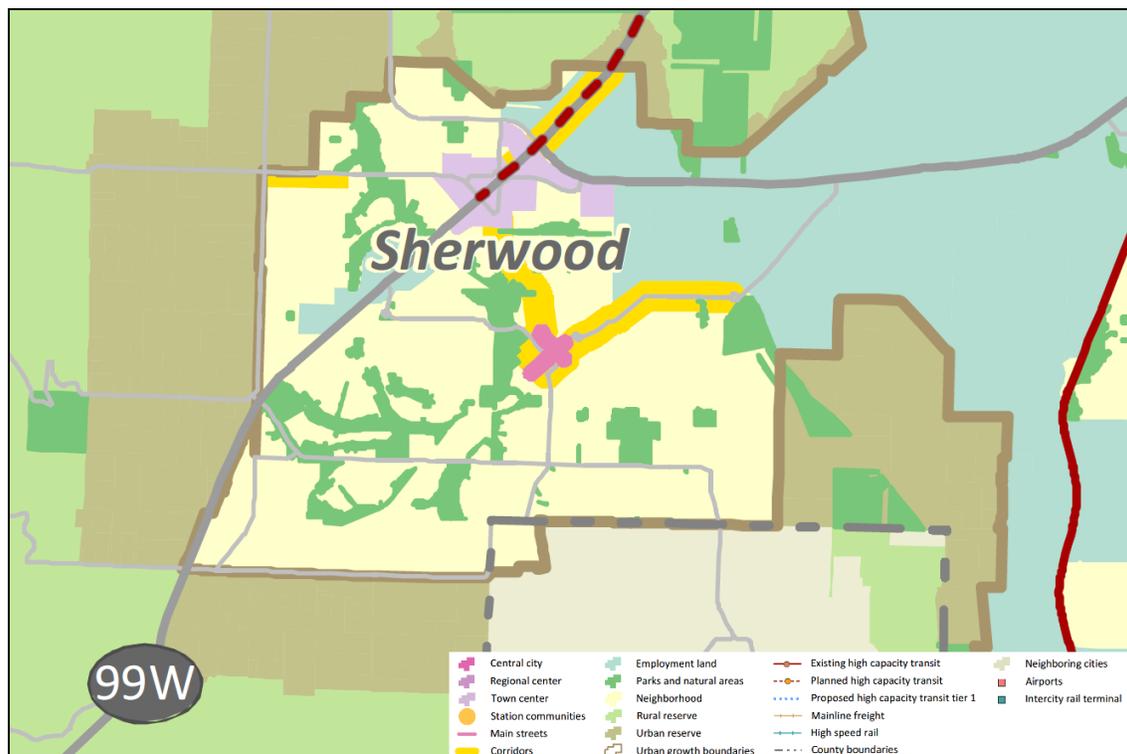
¹⁰ This area is shown on Metro's 2040 Growth Concept Map along the SW Tualatin-Sherwood Road corridor.

Secondary land uses in Sherwood include:

- The Sherwood Town Center.¹¹
- The “Main Streets” along SW Pine Street and SW 1st Street in Old Town.
- The “Barbur Boulevard/Highway 99W/I-5 Corridor,” generally running down Highway 99W from the northeast, turning south down Sherwood Boulevard to Old Town, and then moving back to the northeast along Railroad Street and turning east on Oregon.¹²
- “Employment Land,” generally located west of Langer Farms Parkway and north of Tualatin-Sherwood Road, as well as an area along Highway 99W west of Cedar Brook Way.

The remaining areas of Sherwood are designated as Neighborhood land uses. These areas have the lowest priority for RTP investments.

Figure 1: Excerpt of the 2040 Metro Growth Concept Map, Land Use in the City of Sherwood, OR



¹¹ As noted later in this document, the Sherwood Town Center designation and accompanying plan is currently being considered for local adoption.

¹² Note that this corridor designation generally follows the Southwest Corridor Plan study area, reviewed later in this document.



How is the Transportation System Managed?

State Highway Mobility Targets: OHP Policy 1F sets mobility targets for ensuring a reliable and acceptable level of mobility on the highway system. The following targets are applicable to OR 99W in Sherwood (pursuant to Policy 1F, Table 7). These targets relate to the “peak first hour” (hour of the day with the most traffic) as well as the “peak second hour” (hour with the second most traffic during the day):

- In the designated **Town Center** the mobility target indicates that the highway should operate at or below a volume to capacity (v/c) ratio of 1.1 during the peak first hour, and 0.99 during the peak second hour.
- Outside of the Town Center, the target for OR 99W is to operate at or below a volume to capacity (v/c) ratio of 0.99 during the peak first and second hours.

City and County Mobility Standards: The City of Sherwood Transportation System Plan (TSP)¹³ identifies level of service (LOS) as the primary indicator of performance, measured by letter grade (ranging from A through F), similar to a report card rating. The City identifies LOS D as the minimum performance standard for both signalized and unsignalized intersections under the city’s jurisdiction. In addition, the Roadway Element of the Washington County TSP sets target and acceptable performance measures (based on volume-to-capacity or V/C ratios) for different locations following Metro’s 2040 Design Types. The V/C ratio performance measures range from 0.9 to 0.99 depending on location and first/second peak hour of congestion. These standards are applied for signalized and unsignalized intersections on roadways under county jurisdiction.

Access Management on State Highways: The Oregon Access Management Rule¹⁴ (OAR 734-051) attempts to balance the safety and mobility needs of travelers along state highways with the access and economic development needs of property and business owners. ODOT’s rule sets guidelines for managing access to the state’s highway facilities in order to maintain highway function, operations, safety, and the preservation of public investment consistent with the policies of the OHP. Access management rules allow ODOT to control the issuing of permits for access to state highways, state highway rights of way and other properties under the State’s jurisdiction

In addition, the ability to close existing approaches, set spacing standards and establish a formal appeals process in relation to access issues is identified. These rules enable the State to set policy and direct location and spacing of intersections and approaches on state highways, ensuring the

¹³ Sherwood TSP, p. 3-22, Adopted March 2005.

¹⁴ Access Management Rule:
http://arcweb.sos.state.or.us/rules/OARS_700/OAR_734/734_051.html



relevance of the functional classification system and preserving the efficient operation of state routes.¹⁵

OHP Policy 3A sets access spacing standards for driveways and approaches to the state highway system.¹⁶ The standards are based on state highway classification and posted speed.

Access Management on Local Roadways: The adopted City of Sherwood TSP identifies minimum intersection and driveway spacing standards for public roadways under the city’s jurisdiction.¹⁷ Washington County also provides minimum access spacing requirements for County facilities.¹⁸ Access spacing guidelines for both jurisdictions are shown in Table 1.

Table 1: City of Sherwood and Washington County Intersection Spacing Standards

Street Facility	Maximum Spacing of Roadways and Driveways	Minimum Spacing of Roadways and Driveways
City of Sherwood, [Washington County]		
Arterial	1,000 feet	600 [600]* feet
Collector	400 feet	100 [100] feet
All roads	Require an access report stating that the driveway/ roadway is safe as designed meeting adequate stacking, sight distance and deceleration requirements as set by ODOT, Washington County and AASHTO.	

Note: * Direct access to County arterials shall be from collector or other arterial streets.

¹⁵ Amendments to OAR 734-051 were adopted in early 2012 based on passage of Senate Bill 1024 and Senate Bill 264 in the 2010 and 2011 Oregon Legislature respectively. The amendments were intended to allow more consideration for economic development when developing and implementing access management rules, and involved changes to how ODOT deals with approach road spacing, highway improvements requirements with development, and traffic impact analyses requirements for approach road permits. Senate Bill 408, which passed in the 2013 legislative session and becomes effective January 1, 2014, is expected to result in further rulemaking. This bill provides new requirements for development of facility plans and directs ODOT to develop an access management strategy for each highway modernization or improvement project.

¹⁶ ODOT Access Management Standards (Appendix C): <http://www.oregon.gov/ODOT/TD/TP/orhwyplan.shtml>

¹⁷ 2005 City of Sherwood TSP, Table 8-12: Access Spacing Standards for City Street Facilities

¹⁸ Article V: Public Facilities and Services, 501 Public Facilities and Service Requirements.



RTP Performance targets: The Metro RTP established new performance targets (see Table 2) for safety, congestion, freight reliability, climate change, active transportation, sidewalk/trail/transit infrastructure, clean air, travel, affordability, and access to daily needs. The performance targets are regional goals that the updated City of Sherwood TSP should work toward achieving.

Table 2: 2035 RTP Performance Targets

Objective	Target by 2035
Safety	Reduce serious injuries and fatalities in all modes of travel by 50% (vs. 2005)
Congestion*	Reduce vehicle hours of delay (VHD) by 10% per person (vs. 2005)
Freight reliability	Reduce VHD per truck trip by 10% (vs. 2005)
Climate change	Reduce transportation greenhouse gas emissions by 40% (vs. 1990)
Active transportation	Triple walking, biking and transit mode share (vs. 2005)
Basic infrastructure	Increase by 50% access times to sidewalks, trails and transit (vs. 2005)
Clean air	Ensure 0% population exposure to at-risk levels of pollution ¹⁹
Travel	Reduce vehicle miles traveled per person by 10% (vs. 2005)
Affordability	Reduce average household combined cost of housing and transportation by 25% (vs. 2000)
Access to daily needs	Increase by 50% the number of essential destinations within 30 minutes by bike, transit for low-income, minority, disabled pop. (vs. 2005)

¹⁹ The region is expected to meet the target for carbon monoxide and ozone (VOC and NOX) exposure from transportation sources. Carbon monoxide is estimated at 836,484 lbs/day, 29% below the regional motor vehicle emissions budget for 2035; Hydrocarbons (VOC) is estimated at 17 tons/day, 58% below the regional motor vehicle emissions budget for 2035. A regional standard for air toxics is under development. For more information see RTP Table 2.3 and Metro’s 2010 Air Quality Conformity Determination <http://www.oregonmetro.gov/index.cfm/go/by.web/id=6502>.



* Interim volume-to-capacity ratio (v/c) measures still apply

In addition to supporting the performance targets, the TSP will need to incorporate transportation system management and operations (TSMO) into planning. The following RTP policies provide the foundation for TSMO in the region:

- Use advanced technologies, pricing strategies and other tools to actively manage the transportation system
- Provide comprehensive real-time traveler information to people and businesses
- Improve incident detection and clearance times on the region's transit, arterial and throughway networks
- Implement incentives and programs to increase awareness of travel options and incentive change

RTP Non-Single Occupancy Vehicle (SOV) Target: The RTP also established regional mode share targets that are intended to be goals for cities and counties to work toward as they implement the 2040 Growth Concept at the local level. Increases in walking, bicycling, ridesharing and transit mode shares will be used to demonstrate compliance with per capita travel reductions required by the state Transportation Planning Rule. The following modal targets apply to RTP land uses in Sherwood:

- Town Centers and Corridors: Non-SOV (non-drive alone) modal target of 45 to 55 percent
- Industrial areas, Employment areas and Neighborhoods: Non-drive alone modal target of 40 to 45 percent

As required by the RTP and the TPR, jurisdictions within the Metro region must adopt policies and actions that encourage a shift towards non-SOV modes. The Metro Non-Single Occupancy Vehicle (SOV) Target Actions Study summarizes the required non-SOV strategy requirements for local jurisdictions to implement:

- Adopt 2040 modal targets in TSP policies
- Adopt street connectivity plans and implementing ordinances
- Adopt maximum parking ratios to implement the parking requirements of Title 2 of the Urban Growth Management Functional Plan
- Adopt transit strategies, including planning for adequate transit facilities and service; pedestrian facility planning and infrastructure that support transit use; location and design of buildings in transit zones that encourages transit use; and adoption of a transit system map, consistent with Metro requirements.



The following measures are additional strategies to be considered in the City of Sherwood TSP update:²⁰

- Continue to require transportation-efficient development through efforts to meet density and other land use targets in centers and corridors as part of compliance with Metro’s RTP and related requirements.
- Construct bicycle and pedestrian improvements, consistent with state, federal and local government requirements. Local governments and Metro should prioritize improvements that enhance connectivity of the bicycle and pedestrian system and access to transit.
- Continue to support TriMet and other transit agencies in providing frequent, reliable and comprehensive transit service, and local implementation of pedestrian and bicycle infrastructure to improve access to transit. Credit local jurisdictions with efforts to support transit agencies in these efforts.
- Support and encourage efforts to implement employer-based transportation demand management (TDM) strategies that reduce reliance on single occupant motor vehicles. Coordinate with employers even in areas where the formation of transportation management associations (TMAs) that have organized TDM plans is not required.
- Encourage and assist in implementing parking cash-out programs or other techniques to eliminate employer subsidies for parking. Consider requiring local governments to eliminate free employee parking and provide informational materials and technical assistance to employers interested in implementing such programs.
- Support and coordinate Safe Routes to School programs and projects. Local jurisdictions and Metro should support and help coordinate these efforts through project funding and technical assistance.

Major Improvements: OHP Policy 1G requires maintaining performance and improving safety by improving efficiency and management before adding capacity. The intent of policy 1G and Action 1G.2 is to ensure that major improvement projects to state highway facilities have been through a planning process that involves coordination between state, regional, and local stakeholders and the public, and that there is substantial support for the proposed improvement.

Off-System Improvements: OHP Policy 2B establishes ODOT’s interest in improvements on local roads that maintain or improve safety and mobility performance on state roadways, and supports local jurisdictions in adopting land use and access management policies. The TSP development will consider existing and future land use patterns, access management, and implementation measures.

²⁰ From Metro’s 2005 non-SOV Target Actions Study, *Evaluation of Potential Measures for Achieving Modal Targets*.



Traffic Safety: OHP Policy 2F identifies the need for projects in the state to improve safety for all users of the state highway system through engineering, education, enforcement, and emergency services. One component of the TSP is to identify existing crash patterns and rates and to develop strategies to address safety issues. Proposed improvements will aim to reduce the vehicle crash potential and/or improve bicycle and pedestrian safety by providing upgraded facilities that meet current standards.

Alternative Passenger Modes: OHP Policy 4B, Action 4B.4 requires that highway projects encourage the use of alternative passenger modes to reduce local trips. The TSP will develop ways to support and increase the use of alternative passenger modes to reduce trips on highways and other facilities. This will include improvement to bicycle and pedestrian facilities and consideration of transit movement along roadways.

Improvements on State Highways: The Highway Design Manual²¹ (HDM) provides uniform standards and procedures for ODOT and is in general agreement with the 2001 American Association of State Highway and Transportation Officials (AASHTO) *A Policy on Geometric Design of Highways and Streets*. Some key areas where guidance is provided are the location and design of new construction, major reconstruction, and resurfacing, restoration or rehabilitation (3R) projects. The HDM should be used for all projects on OR 99W to determine design requirements, including the maximum allowable volume to capacity ratios for use in the design of highway projects.

Other Background Information for the TSP Update

The following sections summarize additional background information or guidance documents that will be used in updating the City of Sherwood TSP.

Projects to be considered in Future Transportation Analysis

Several of the documents reviewed identified transportation improvement projects that will be considered in future transportation analysis in Sherwood. The projects are listed below, under the documents in which they are found, and include:

2010-2013 Statewide Transportation Improvement Program²² (STIP) projects:

- Pavement preservation on OR-99W from Tualatin River Bridge to Sunset Boulevard.
- Traffic Signal Modernization on OR-99W from milepost 14.66 to 19.92.
- Cedar Creek/Tonquin Trail: Roy Rodgers Road, Bicycle trail construction to better accommodate pedestrian access.

²¹ ODOT Highway Design Manual: http://www.oregon.gov/ODOT/HWY/ENGSERVICES/hwy_manuals.shtml

²² ODOT STIP: <http://www.oregon.gov/ODOT/HWY/STIP/>



- Traffic operation improvements: Upgrade traffic signal systems and install video detection system on various Highways.

Metro RTP: Needed improvements were identified along Metro Mobility Corridor #20, Tigard to Sherwood and Sherwood to Newberg. Investment strategies prioritize the following:

Near-term (1-4 years)

- System and demand management along mobility corridor and parallel facilities for all modes of travel
- Address arterial connectivity and crossings
- Complete mobility corridor refinement plan.
- Complete alternatives analysis for high capacity transit (HCT) corridor. High capacity transit, as defined by Metro is *“any form of public transit that has an exclusive right of way, a non-exclusive right of way or a possible combination of both. High capacity transit vehicles make fewer stops, travel at higher speeds, have more frequent service and carry more people than local service transit such as typical bus lines. High capacity transit includes options such as light rail, commuter rail and bus rapid transit.”*²³
- Complete land use planning of HCT corridor as part of HCT System Expansion Policy.
- Complete gaps and make crossing improvements in the sidewalk and bike network.
- Implement the Tigard OR 99W Corridor Improvement and Management Plan.

Medium-term (5-10 years)

- Complete gaps in the arterial network.
- Intersection improvements, consistent with refinement plan.
- Coordinate TSM/TDM strategies.
- Implement the Tigard OR 99W Corridor Improvement and Management Plan.

Long-term (10-25 years)

- Implement the Tigard OR 99W Corridor Improvement and Management Plan.

TriMet Transit Investment Plan²⁴ (TIP): Sherwood is served by TriMet bus lines 93 (local service between Sherwood and Tigard via OR 99W) and 94 (weekday service between Sherwood and

²³ Defining high capacity transit, <http://www.oregonmetro.gov/index.cfm/go/by.web/id=28462>

²⁴ TriMet Transit Improvement Plan: <http://trimet.org/tip/index.htm>



Tigard and express service between Tigard and Portland City Center).²⁵ TriMet’s Transit Investment Priorities (TIP) program is the organization’s roadmap for investments in bus and rail service, capital projects and customer information, as well as financial stability and partnerships over the next five years. Over the long term, TIP priorities are to:

1. Build the Total Transit System - Safe, secure trips on frequent, reliable and convenient service, easy access to transit, amenities at stops and stations, and clear customer information.
2. Expand high-capacity transit - Invest in MAX Light Rail, Commuter Rail, Bus Rapid Transit and Streetcar service along key corridors to connect Regional Centers.
3. Expand Frequent Service - Add to TriMet’s network of bus lines that run every 15 minutes or better, every day.
4. Improve local service - Work with local jurisdictions to improve transit service in specific local areas.

Once existing Frequent Service lines have been restored to a basic level of 15-minute or better service seven days a week, TriMet will work toward expanding the number of bus lines that are included in Frequent Service and extending service on current lines. The extension of Line 12 – Barbur/Sandy from Durham Rd to Sherwood is a Tier 3 Priority for Frequent Service expansion, based upon criteria of ridership productivity, transit/pedestrian friendly streets, density of transit-dependent population, RTP designation, relationship to existing or proposed high-capacity transit, land use connectivity, and transportation demand management.

Tualatin-Sherwood Road Improvements: Tualatin-Sherwood Road between Adams Avenue and Borchers Drive currently experiences heavy traffic congestion, primarily during peak travel hours. In addition, this section of roadway intersects with OR 99W which is also heavily traveled. The Tualatin-Sherwood (Adams to Borchers) project²⁶ funded by Washington County through Major Streets Transportation Improvement Program (MSTIP) proposes to make needed enhancements to this section of roadway in order to improve traffic circulation in the area, address safety for all modes of transportation and accommodate existing and future capacity needs.

²⁵ TriMet service changes became effective September 1, 2013. New Line 93-Tigard/Sherwood runs between Sherwood and the Tigard Transit Center. It serves all stops and run weekdays and weekends. Line 94-Highway 99W/Sherwood runs weekdays between Sherwood and downtown Portland from approximately 5:45 a.m. to 7:30 p.m. The line no longer serves Tigard Transit Center and does not run weekends.
<http://trimet.org/alerts/service-change/index.htm>

²⁶ Washington County link: <http://www.co.washington.or.us/LUT/TransportationProjects/tualatin-sherwood-adams-to-borchers.cfm>



In addition to the planned road improvements through the MSTIP project, the county also has plans to implement the second phase of an Intelligent Transportation System (ITS) upgrade on Tualatin-Sherwood Road. ITS helps improve traffic flow by adapting traffic signals in real time as traffic conditions change. Phase 1 upgraded the signals between Teton Avenue and Interstate 5 in 2011. Phase 2 would upgrade the signals between Teton Avenue and Highway 99W beginning in 2013.

Sherwood Capital Improvement Plan: Sherwood’s Capital Improvement Plan (CIP) includes planned improvements based on current needs and priorities of the City. The CIP includes planned allocation of funds for projects through year 2018 in transportation, storm, sanitary, water, and general construction. Construction of projects in future years is subject to funding. The following transportation projects and year of planned budget allocation are currently included in the CIP:

- Cedar Brook Way Analysis (2013/2014)
- Adams Avenue North Construction (2013/2014)
- Kruger-Elwert/Hwy 99W Design and Construction (2014/2015, 2015/2016)
- Oregon St/Tonquin Rd (2016/2017)
- Pine St Phase 2 (2014/2015)

Sherwood Town Center Plan: The draft Town Center Plan, once adopted, will update the comprehensive plan and established a vision and implementing strategies for growth and improvement in an area designated as the city’s Town Center. The plan includes recommendations for “complete streets” along Langer Drive and Sherwood Boulevard, as well as specific improvements to the bicycle and pedestrian system.²⁷ The plan also has updated policies and strategies pertaining to parking and transit.

The recommended bicycle and pedestrian improvements are shown on Map 2 of the Town Center Plan and include:

- General bicycle/pedestrian improvements throughout central Old Town Sherwood (#1)
- Neighborhood Greenway improvements on Gleneagle Drive and 10th Street (#11)
- Shared use path on east side of Sherwood Blvd. between Langer Drive and Old Town (#12)
- Shared use path connecting Langer Dr. and Trumpeter Dr. (#13)

²⁷ <http://www.sherwoodoregon.gov/sherwoodtowncenter/page/sherwood-town-center-plan>



- Neighborhood Greenway improvements on Holland Lane (#16)
- Neighborhood Greenway improvements on Baler Way (#17)
- Shared use path on north side of Hopkins Elementary School (#18)
- Shared use path on east side of Hopkins Elementary School (#20)
- Shared use path on east side of Sherwood Middle School (#21)
- Neighborhood Greenway improvements on Oregon Street (#22)

The Town Center Plan lays out policies and strategies to guide future planning and development within the town center. Town center goals, policies, and strategies will be incorporated into the City's Comprehensive Plan.

Policy 8 of the Town Center Plan reads: "The City will balance the need for vehicular mobility within and adjacent to the Town Center with the other transportation and land use goals and priorities identified in the Town Center Plan." Strategies relevant to this policy include:

- Through the TSP update, examine changes to the City's OR 99W Capacity Allocation Program (CAP) to ensure that it doesn't restrict future growth that supports and implements the Town Center vision and recommendations. (Strategy 8.1)
- Through the TSP update, identify strategic road capacity improvement projects to address congestion within and adjacent to the Town Center. Necessary transportation improvements will be analyzed and evaluated for how they support a vibrant walkable Town Center. (Strategy 8.2)
- Through the TSP update, establish transportation mobility targets for new development within and adjacent to the Town Center that are appropriate for a Town Center context and capture the community's priorities. (Strategy 8.3)
- The City will work with the County, ODOT, and local stakeholders to enhance vehicular and pedestrian access from the Town Center to developments adjacent to the Town Center. (Strategy 8.4)

Ice Age Tonquin Trail Master Plan (2013): A three pronged network of trails will eventually connect Tualatin, Sherwood and Wilsonville. One section has been completed within Metro's Graham Oaks Nature Park in Clackamas County. The northern prong of the trail connects with the Westside Trail at a proposed ped/bike bridge over the Tualatin River near King City. The western prong passes through the City of Sherwood as the Cedar Creek Trail.



The Trail Master Plan identifies a conceptual alignment alternative, trail type, and recommended improvements and opportunities across several jurisdictions. Recommended improvements and opportunities within the City of Sherwood can be found on Tile Maps 7-13 in the plan; selected items are listed below with reference numbers:

- Trail alignment could follow existing unimproved roadway; final alignment to be determined in coordination with Sherwood's Tonquin Employment Area Concept Plan (which includes a future east-west road in this area) (7D)
- Widen sidewalk on Oregon Street's south side between Tonquin Road and Murdock Road to accommodate trail (8B)
- Widen sidewalk on SW and southeast (SE) sides of roundabout to accommodate trail (8C)
- City of Sherwood to coordinate shared roadway treatments on Railroad Street (including wayfinding) (8L)
- City of Sherwood to conduct further analysis to determine specific trail alignment in this area; trail design to be based on guidance provided in the Ice Age Tonquin Trail Master Plan specific to the Cedar Creek corridor (9E)
- Proposed trail/wildlife undercrossing of Pacific Highway/Oregon 99W (subject to ODOT approval) (9G)
- Potential to create future trail/wildlife undercrossing of Edy Road (10D)
- Potential motorist sight distance issues on horizontal curve of Roy Rogers Road; signalization proposed to provide protected bicyclist/pedestrian crossings (10E)
- Widen existing sidewalk on east side of Roy Rogers Road to accommodate trail (vegetation removal necessary) (11A)
- Widen existing bridge over Chicken Creek to accommodate trail, or construct cantilevered bridge or independent structure immediately east of Roy Rogers Road; retaining walls/bank stabilization necessary immediately north and south of creek crossing (11B)
- Trail alignment to follow Oregon Street's east side between Tonquin Road and Tualatin-Sherwood Road; alignment to be sited immediately east of power line corridor (vegetation removal necessary in several locations); property easements/acquisitions could occur as part of Tonquin Employment Area Concept Plan implementation. (12A)
- Use existing signalized intersection of Tualatin-Sherwood Road and Oregon Street; potential need to relocate existing signal poles and utility boxes on intersection's SE and northeast (NE) corners to accommodate trail (12E)
- Tualatin's Transportation System Plan proposes widening Cipole Road to three vehicle travel lanes, plus bike lanes and sidewalks; trail alignment to follow Cipole Road's west side between Tualatin-Sherwood Road and Pacific Highway/OR 99W; trail should be constructed in lieu of a sidewalk on the roadway's west side (13A)



- Vegetation removal and utility pole/mailbox relocation necessary in several locations to accommodate future Cipole Road widening and trail development between Tualatin-Sherwood Road and Herman Road (13B)
- Use existing at-grade railroad/roadway crossing at Cipole Rd; upgrade crossing treatments on roadway’s west side (in tandem with future roadway widening) to accommodate trail (13D)

The Trail Master Plan also describes design guidelines for shared use paths, shared use paths adjacent to roadways, on street facilities, trail-roadway intersections, grade separated crossings, and special design requirements such as Bonneville Power Administration (BPA) requirements for trails within powerline corridors, Westside Express Service (WES) commuter rail, trail features and signage, educational elements, and environmentally sensitive construction. The following table describes plan actions for which Sherwood is responsible.

Table 3: Tonquin Ice Age Trail Plan Actions

Segment	Responsibility	Funding	Operation/ Maintenance	Issues	Actions	Responsibility for Actions
Immediately west of Tonquin Road/Oregon Street intersection to immediately north of Park Street (Old Town Sherwood)	Sherwood	To be determined in coordination with Metro and ODOT.	Sherwood	Sherwood will work with Metro and ODOT to determine if 2014-15 Regional Flex Funds award for Cedar Creek trail will include design and construction of this segment. Need to acquire easement/land for trail from 2 land owners.	Refine cost estimates for Cedar Creek trail project to see if the award amount will cover proposed improvements. Sherwood and Metro to determine acquisition strategy.	Sherwood, Metro, ODOT
Immediately north of Park Street to immediately south of Hwy 99	Sherwood	Design and construct.	Sherwood	None	Sherwood will design and construct by 2016	Sherwood with involvement of Metro and partners as needed.
Immediately south of Highway 99 to Roy Rogers Road, including Roy Rogers	Sherwood	To be determined in coordination with Metro and ODOT.	Sherwood	Sherwood to work with Metro and ODOT to determine scope of work for this segment pursuant to 2014-15 Regional Flex Funds award for Cedar Creek trail. Hwy 99	Public involvement needed to determine alignment in this area. Sherwood may need to	Sherwood Sherwood, ODOT Sherwood, ODOT with support of Metro and



Segment	Responsibility	Funding	Operation/ Maintenance	Issues	Actions	Responsibility for Actions
intersection)				undercrossing not included in 2014-15 Regional Flex Funds award.	acquire land for trail. Sherwood will apply in 2012 for ODOT/ STIP Enhance funds to design/construct Hwy 99 undercrossing.	partners.
Roy Rogers Road north to Tualatin River National Wildlife Refuge trailhead	Sherwood or Washington County	None	Sherwood may consider role in owning/building/operating and maintaining once the Cedar Creek portion of the trail is built.	Segment is in unincorporated Washington County, no obvious trail provider. Need to acquire land from one land owner.	Sherwood and Washington County determine ownership and O&M agreements.	Sherwood, Washington County
Immediately east of Tonquin Road/Oregon Street intersection to immediately north of Tualatin-Sherwood Road.	Sherwood	None	Sherwood	Funding not identified for design/construction. Need to acquire land from 8 land owners between Tonquin Rd. and Oregon St.	Sherwood to identify funding strategy Include trail in Sherwood's TSP update. Update trail description in Metro's 2035 RTP, including the Financially Constrained list. Sherwood to acquire trail.	City of Sherwood
Immediately north of Tualatin-Sherwood Road to immediately west of Cipole Road	Sherwood	None	Sherwood	Trail is recommended on north side of road in Right of Way. Funding not identified for design/construction	Include trail in Sherwood and Washington County TSP updates. Update trail description in Metro's 2035 RTP, including the Financially Constrained list. Sherwood to identify funding strategy	Sherwood, Tualatin, Washington County, Metro



Approved Ordinances: Since its adoption, the TSP has been amended by ordinance several times by City Council. Amendments have included modifications to support adopted concept plans for urban growth boundary (UGB) expansion areas and reclassification of local roadways to support development. The following is a brief summary of land use amendments and the associated adopted transportation system changes that will need to be incorporated into the plan development (and alternatives analysis) in the updated TSP document.

- Area 59.²⁸ Area 59, bordered on Elwert and Edy Road, is an area that was designated by Metro and brought into the Sherwood UGB in 2002. City Council adopted a concept plan in April 2006. In January 2007, the Council adopted amendments to the Comprehensive Plan to implement the concept plan, including amendments to TSP Figure 8-1 Functional Class. Classifications of Elwert and Handley (Arterial and Collector, respectively), are consistent with the Council amendments, but proposed local roadways are not reflected in the current TSP's.
- Brookman Road Concept Plan.²⁹ Brought into the UGB in 2002, the city adopted the Brookman Road Concept Plan in 2009. The project identified future land uses and public facilities, including parks and open space, civic uses, and transportation corridors. In order to implement the plan, amendments to the comprehensive plan, zoning code, and public facility plans are needed. The Brookman area will remain in unincorporated Washington County until voter-approved annexation brings it into the city.
- Adams Avenue North Concept Plan.³⁰ Metro also added this 33 acres north of Tualatin-Sherwood Road Metro as part of the 2002 regional UGB expansion. Metro's primary purpose was to allow for development of a road connection (Adams Avenue) between OR 99W and SW Tualatin-Sherwood Road. The North Adams Area was annexed in November 2009 and is zoned primarily Light Industrial with a portion of the area along 99W-zoned Office Commercial. The City's 2005 Transportation System Plan (TSP) identifies a new collector street through portions of land identified in the Metro Ordinance. The TSP identifies this project as "Adams Avenue, Tualatin-Sherwood Road to Home Depot" (Table 8-11, City Street Projects, ID 2). This portion of Adams Avenue will complete a direct connection between OR 99W and Old Town, an area where significant urban renewal investment has occurred and is planned.

²⁸ <http://www.sherwoodoregon.gov/planning/page/area-59>

²⁹ <http://www.sherwoodoregon.gov/planning/page/brookman-road-concept-plan>

³⁰ <http://www.sherwoodoregon.gov/planning/page/adams-avenue-north-concept-plan>



- Sherwood Cannery Square.³¹ The Cannery Planned Unit Development (PUD) is located at the site of the former cannery in Old Town near the railroad tracks. The PUD proposal included a TSP amendment to change the classification of Columbia Street from a collector to a local street, an action City council approved in 2010. The proposal includes a mixed-use development with up to 10 construction phases and includes construction of new streets, public plaza, retail, office and residential. Public streets will be constructed prior to construction of development phases. While some improvements associated with the project have already been completed, the following transportation projects related to the site (that are not yet completed) have the potential to impact traffic circulation in the Old Town area:
 - Construct improvements to improve the operations of Pine Street/1st Street to meet City performance standards and mitigate queuing impacts at the Pine Street railroad crossing. This shall be accomplished by implementing a modified circulation for the downtown streets that includes:
 - Install a diverter for south-westbound on 1st Street at Ash Street or Oak Street to require vehicles travelling towards Pine Street to divert to 2nd Street.
 - Remove one side of on-street parking Ash Street-2nd Street or Oak Street-2nd Street to provide two 12-foot travel lanes from the diverter to Pine Street. Convert to one-way traffic flow approaching Pine Street for this segment.
 - Install an all-way stop at Pine Street/2nd Street. Stripe the south-westbound approach of 2nd Street to have a left turn lane and a shared through/right-turn lane.
 - Install traffic calming measures on 2nd Street southwest of Pine Street to manage the impact of the added traffic.
 -
- Tonquin Employment Area. The Tonquin Employment Area was brought into the UGB in 2002 and the City adopted a concept plan in 2010 that amended the Comprehensive Plan, Community Development Code, and TSP. Amendments to the TSP include a proposed east-west collector, the extension of SW Blake Street (as proposed in the Southwest Tualatin Concept Plan) through the area and connecting to Oregon Street. The proposed extension of SW 124th Avenue south was adopted as a proposed Arterial.

³¹ <http://www.sherwoodoregon.gov/planning/project/cannery-pud>



- Cedar Brook Way. In 2012 the functional classification of SW Cedar Brook Way was changed from a local to a collector road connecting SW Elwert Road to SW Handley Street. The TSP amendment also identified one connection to SW Pacific Hwy along the extension, the location of which was to be determined at a later date.

Actions or Strategies to be considered in Updating the TSP

Several of the regional and local documents reviewed for this project identified transportation actions or strategies that will be considered in updated the City of Sherwood TSP. Relevant actions or strategies are summarized below.

Metro State of Safety Report (2012): It is the Portland Metro region’s adopted goal to reduce the number of pedestrians, bicyclists, and automobile occupants killed or seriously injured on the region’s roadways by 50% by 2035, compared to a 2005 baseline. The State of Safety report indicates that Sherwood has a lower rate of injury crashes and fatal crashes than the region, and is ranked 24th in the region for serious crashes per million residents (Tables 4-5 and Figure 1).

Table 4: Number of Automobile Crashes³²

Jurisdiction	Annual Crashes	Fatal Crashes (per capita)	Injury A	Injury B	Injury C	All Injury	Fatal/Incapac (per capita)
Sherwood	111	0.3	1	14	30	45	1.3
METRO	18263	NA	481	1907	5174	7562	532

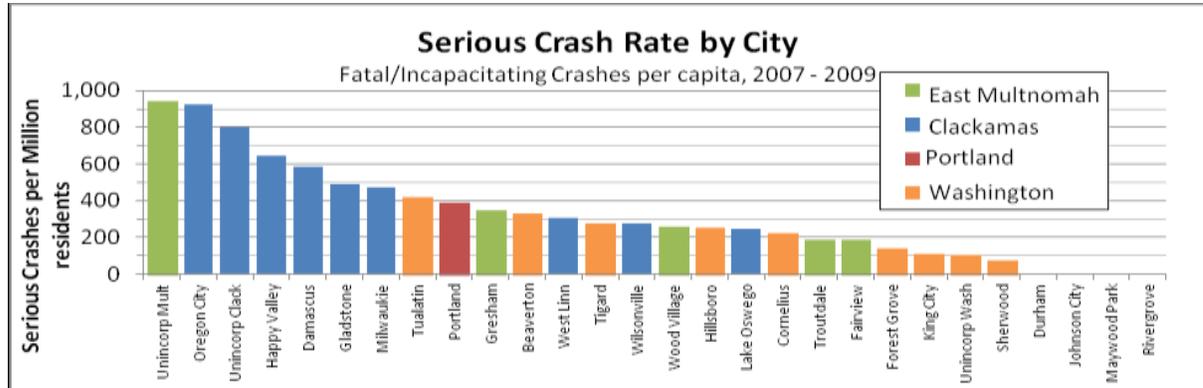
Table 5: Crashes per million residents³³

Jurisdiction	Population	All injury (per million)	Fatal/incapac. (per million)	Ped. Injury Crashes (per Million)	Ped Fatal/Incapac. (per million)	Bike Injury Crashes	Bike Fatal/Incap
Sherwood	18,207	2453	73	54.9	18.3	91.5	0.0
METRO	1,481,118	5106	359	190.6	40.7	230.9	27.2

³² Crash rates were determined per capita. See p. 15 of the 2012 Metro State of Safety Report, <http://www.oregonmetro.gov/index.cfm/go/by.web/id=42790>, under “Related Documents.”

³³ 2012 Metro State of Safety Report, pp. 16, 42, 63

Figure 1: Serious Crash Rate by City³⁴



Section 10 – Findings and Strategies states:

- Arterial roadways comprise 59% of the region’s serious crashes, 67% of the serious pedestrian crashes, and 52% of the serious bike crashes, while accounting for 40% of vehicle travel.
- Arterials have the highest serious crash rate per road mile and per VMT.

The safety report lists high-level strategies for implementation, several of which are relevant to this TSP update, including:

- Policies that reduce the need to drive, and therefore limit vehicle-miles travelled
- Strategies to reduce the prevalence of speeding and aggressive driving on surface streets
- Revisions to state, regional, and local mobility standards to consider safety as equally important, at a minimum, as vehicular capacity
- A focus on crosswalk and intersection lighting where pedestrian activity is expected
- Policies to improve the quality and frequency of pedestrian crossings on arterials and multi-lane roadways
- A focus on safe cycling facilities and routes, particularly in areas where serious crashes are occurring

Draft Regional Active Transportation Plan (August 2013): The need for a regional Active Transportation Plan (ATP) was identified as a follow up activity in the 2035 RTP. A regional Stakeholder Advisory Committee composed of staff from cities and counties and advocacy groups has been working to develop a strategy to complete and expand regional pedestrian and bicycle networks, including way to integrate non-motorized networks with transit and increase

³⁴ 2012 Metro State of Safety Report, p. 16



competitiveness for active transportation-related funding. The Ice Age Tonquin Trail and Western Trail and are shown as Regional Bicycle Parkways and Regional Pedestrian Parkways on the recommended Regional Bicycle Network and Regional Pedestrian Network.³⁵ While this document will remain a draft until it is proposed for adoption as a component of the RTP in July 2014, the TSP update will take into consideration design guidelines, policies and implementation actions related to trails and proposed improvements in Sherwood, where transportation system alternatives impact these facilities.

Southwest Corridor Plan: The Southwest Corridor Plan addresses the Barbur Boulevard/Highway 99W/I-5 corridor between Portland and Sherwood Town Center (see Figure 2.) The plan is being developed through a partnership of the cities of King City, Portland, Sherwood, Tigard, and Tualatin, Clackamas and Multnomah counties, ODOT, TriMet, and Metro. The intent of this project is to let the local plans and aspirations help shape and inform ultimate improvements so that all potential projects and ideas are screened through a local lens.

A brief overview of the project is summarized below:

- 2009 – The Joint Policy Advisory Committee on Transportation (JPAC) and the Metro Council designated the corridor as the next regional priority for high capacity transit (HCT) expansion. Based on existing traffic and transit counts, the Southwest Corridor shows the greatest ridership projections for potential HCT corridors in the region.
- December 2010 – Metro received a \$2 million grant from the Federal Transit Administration to analyze alternatives for improving transit in the corridor.
- Spring 2012 – Metro completed a public involvement process to determine a vision and goals for the Southwest Corridor Plan. The outcomes of this process include: 1) bus rapid transit, light rail, roadway expansions/new roadways, rapid streetcar, and increasing local bus capacity are all transportation alternatives that must be included in the analysis. 2) Opportunities to expand the bicycle network and improve pedestrian mobility will also be studied.
- July 2013 – The Southwest Corridor Plan Steering Committee recommended transit alternatives for further study along with a set of potential roadway, bicycle, pedestrian, parks, trails and natural area investments that support land use, transportation and community-building goals in the corridor as part of the Southwest Corridor Shared Investment Strategy.

³⁵ <http://www.oregonmetro.gov/index.cfm/go/by.web/id=39005>



As part of the Shared Investment strategy, the transit recommendation directs TriMet to work with Southwest corridor jurisdictions and stakeholders to develop the Southwest Service Enhancement Plan. Plan implementation is intended to provide transit service that connects key Southwest corridor locations quickly and reliably to one another and to a potential high capacity transit line. Locations for future transit improvements include downtown Sherwood; however, the Steering Committee removed a high capacity transit (HCT) connection between Tigard and Sherwood on Highway 99W from further consideration to avoid impacts to auto and freight movement as well as to commercial

Recommended Roadway and Active Transportation projects in Sherwood are listed below and include the project reference number, which are keyed to maps in the Steering Committee Recommendation:³⁶

- Arrow Street (Herman Road) - Build 3 lanes with sidewalks and bike lanes. Construct new road to collector standards (Project 1062). Build new 3 lane roadway with stream crossing and with bike lanes and sidewalks from Langer Farms Parkway Phase 2 to Gerda Lane/Galbreath Drive.
- Town Center Signal & Intersection Improvements (Downtown Sherwood) – Project 1068)- Improve intersection at Edy & Borchers; remove traffic signal at Baler/Tualatin-Sherwood Road; on Sherwood Boulevard remove traffic signal at Langer and disallow left turns from Langer to Sherwood, and add traffic signal at Century Drive.
- Tualatin-Sherwood Rd. (Langer Parkway to Teton Ave.) - Widening to 5 lanes with ped./bike (Project 1154). Widen from 3 to 5 lanes with bike lanes and sidewalks from Langer Parkway to Teton Avenue.
- Oregon-Tonquin Intersection & Street Improvements (Project 5020). Intersection improvements (consider roundabout) on Oregon at Tonquin Road; sidewalks and bike access through the intersection.
- 99W Sherwood TC Bicycle/Ped. Bridges (Project 6042). Ped/bike under/overcrossings of 99W at Sunset, Meinecke, Edy. Listed as a Regional Bicycle Parkway in the Regional Active Transportation Plan (5/9/13).
- Tonquin Trail (Project 9003). Construct multi-use trail with some on-street segments connecting multiple communities in Washington and Clackamas County. Listed as a

³⁶ See Steering Committee Recommendation “Attachment A,”
<http://www.oregonmetro.gov/index.cfm/go/by.web/id=35309>



Regional Bicycle Parkway and Regional Pedestrian Parkway in the Regional Active Transportation Plan (5/9/13).

- Westside Trial Segments (Project 9029). Tail opportunities within easements of BPA and PGE for connectivity. Listed as a Regional Bicycle Parkway and Regional Pedestrian Parkway in the Regional Active Transportation Plan (5/9/13).

Note that the bicycle/pedestrian and trail projects are only considered a priority where HCT is extended to the City of Sherwood. Widening Tualatin-Sherwood Road (Project 1154) is considered “critical” in this scenario, but less so if HCT does not extend to Sherwood.

With the first phase of the plan is completed, next steps will include implementation of the shared investment strategy and identifying projects to be packaged with the HCT alternative(s) for consideration in a Draft Environmental Impact Statement.

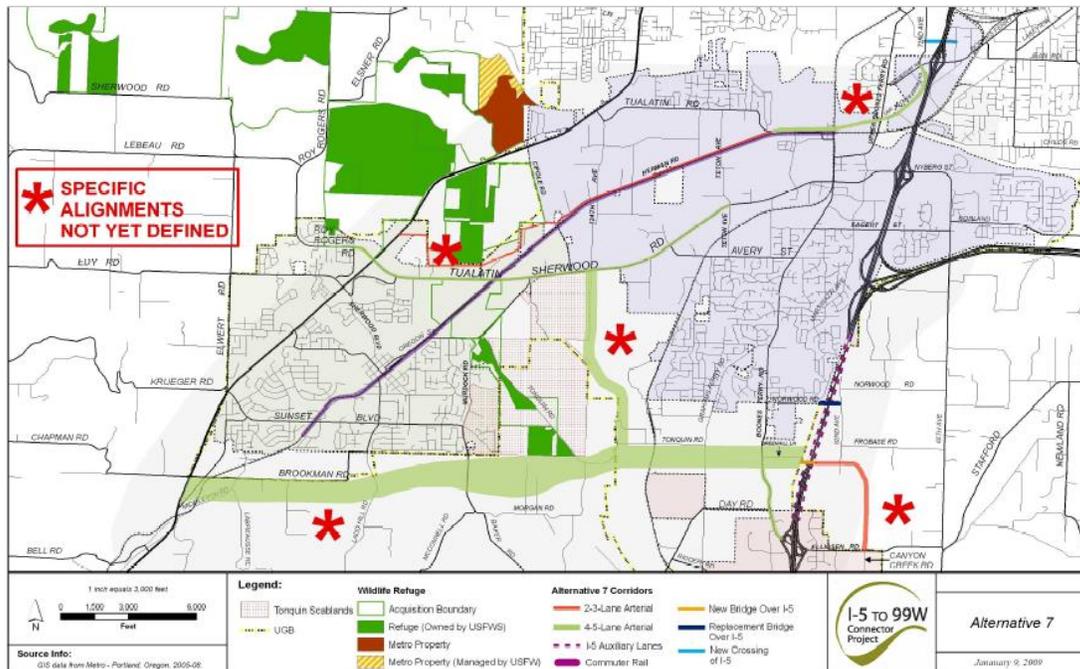
I-5 to 99W Connector Project: The I-5 to 99W Connector Project³⁷ is intended to develop long-term solutions to improving mobility between I-5 and OR 99W and is a collaboration between ODOT, Metro, Washington County, and other affected agencies and jurisdictions.

The project identified a number of improvements to support access to 2040 land uses, address existing deficiencies and serve increased travel demand. One primary function of this route is to connect the Washington Regional Center to the cities of Tigard, Tualatin and Sherwood, as well as to provide access to the Tualatin/Sherwood Industrial Area and Tualatin National Wildlife Refuge. The corridor provides short-line heavy rail access the region from the Willamette Valley and connects agricultural areas to the interstate highway system in this region, while serving as a secondary gateway to the region.

The study recommended a variety of transportation investments to improve the area’s road, transit, bicycle, pedestrian and trail networks and to distribute traffic across a network of three arterials so that no single route would function as a defacto “connector.” The Metro 2035 RTP places additional conditions on the Three Arterial Corridors Alternative recommendation and implementation. A map of Alternative 7 is provided in Figure 2.

³⁷ <http://www.i5to99w.org/>

Figure 2. I-5 to 99W Connector Alternative 7 (2009)



Alternative 7 is based on arterial development in a set of three northern, central, and southern arterial corridors. The central arterial projects are focused in Sherwood, although a proposed northern arterial project and area-wide projects affect Sherwood as well.

As noted in the figure, alignments are not yet final. The Alternative 7 recommendations that are relevant to Sherwood include the projects below. Cost estimates provided are conceptual costs in 2008 dollars.

Northern Arterial Project

- SW Herman Road – Construct a 3-lane extension between Tualatin Road and OR 99W; \$30 million.

Central Arterial Projects

- Tualatin–Sherwood Road – Widen to 5 lanes from OR 99W to SW 124th Avenue; \$25 million.
- Tualatin–Sherwood Road – Widen to 5 lanes from SW 124th Avenue to Teton Avenue; \$20 million.
- Roy Rogers Road – Widen to 5 lanes between Borchers Road and OR 99W; \$5 million.



Other Projects

- TSM / TDM – Regional trail system, bike lanes, sidewalks, and bus stops; \$30 million.
- Commuter Rail – Rail extension to Sherwood; \$40 million.
- SW 124th Avenue – Extend 4-5 lane roadway between Tualatin-Sherwood Road and the Southern Arterial; \$70 million.

The 2010-2013 STIP includes programmed funding for planning work related to the project. The 2035 Regional Transportation Plan (RTP) includes the following components related to the I-5 99W Connector, including those denoted in the financially-constrained (FC) project list:

- RTP 11179 (FC) – I-5 to 99W Replacement Projects – Construct improvements consistent with recommendations from I-5/99W Connector process
- RTP 10598 – I-5/99W Southern Arterial Right of Way – Purchase right-of-way when all project conditions are met: including integration with land use plans for UGB expansion areas and Urban Reserves, Conducting the I-5 South Corridor Refinement Plan, including Mobility Corridors³⁸ 2, 3, and 20 and resolution of access between I-5 and southern arterial with no negative impacts to I-5 and I-205 beyond the forecasted No-Build condition, addressing National Environmental Policy Act (NEPA)³⁹ compliance to determine the preferred alignment and addressing any conditions associated with land use goal exception for southern arterial.
- RTP 11339 I-5/99W Southern Arterial Improvements – Construct the initial 2-3 lane arterial phase of the Southern Arterial from OR99W to the SW 124th Ave. Extension when all project conditions are met: including integration with land use plans for UGB expansion areas and Urban Reserves, Conducting the I-5 South Corridor Refinement Plan, including Mobility Corridors 2, 3, and 20 and resolution of access between I-5 and southern arterial with no negative impacts to I-5 and I-205 beyond the forecasted No-Build condition, addressing NEPA to determine the preferred alignment and addressing any conditions associated with land use goal exception for southern arterial.

³⁸ Metro has defined 24 “mobility corridors” that connect regional areas. These corridors include the following linkages: Corridor 2 (Portland Central City to Tualatin), Corridor 3 (Tualatin to Wilsonville), and Corridor 20 (Tualatin to Sherwood and Sherwood to Newberg).

³⁹ For some large scale projects, agencies are required to prepared documentation known as an Environmental Impact Statement (EIS) through a formalized process that demonstrates compliance with NEPA by showing that environmental values are integrated into the decision making process along with reasonable alternatives.



- RTP 11340 – I-5/99W Southern Arterial Improvements – Expand to 4-5 lanes to serve growth in the area after improvements to Tualatin-Sherwood Rd. and an improved connection from SW Tualatin Rd. to the I-5/Lower Boones Ferry Rd. Interchange and when all project conditions are met: including integration with land use plans for UGB expansion areas and Urban Reserves, Conducting the I-5 South Corridor Refinement Plan, including Mobility Corridors 2, 3, and 20 and resolution of access between I-5 and southern arterial with no negative impacts to I-5 and I-205 beyond the forecasted No-Build condition, addressing NEPA to determine the preferred alignment and addressing any conditions associated with land use goal exception for southern arterial.
- RTP 11342 – I-5/99W Connector Southern Arterial/I-5 Interface –Connect the Southern Arterial to I-5 or other surface arterials in the vicinity of the N. Wilsonville interchange when all project conditions are met: including integration with land use plans for UGB expansion areas and Urban Reserves, Conducting the I-5 South Corridor Refinement Plan, including Mobility Corridors 2, 3, and 20 and resolution of access between I-5 and southern arterial with no negative impacts to I-5 and I-205 beyond the forecasted No-Build condition, addressing NEPA to determine the preferred alignment and addressing any conditions associated with land use goal exception for southern arterial.

City of Sherwood Comprehensive Plan (1991): The City of Sherwood originally adopted the Comprehensive Plan II in 1991. Elements of the Plan have been periodically updated, including the last update in 2009. Given the original adoption date, note that some data, findings, policies, and strategies in the Plan are outdated. The purpose of the Plan is to guide the physical growth and development of the community consistent with City policy goals and State Goals and Guidelines. The Plan is intended to articulate the City of Sherwood's perception of what it is, what it seeks to be and how it will achieve its desired future. Its aim is to preserve what is essential to its identity, develop what it needs to be economically and environmentally healthy and meet the needs of the people who contribute to its community life and make use of its land use resources.

Chapter 6, Transportation, provides goals, policies, and strategies relevant to the City's transportation system. The TSP update will need to combine transportation analysis with the application of the goals, objectives and policies described in this chapter.

The goals and policies described in this chapter are nearly identical from the 2005 Transportation System Plan, with the following exceptions:

- TSP Goal 1 Policy 5 is omitted from the comprehensive plan Policy 5 ("The City shall work cooperatively with the Port of Portland and local governments in the region to ensure sufficient air and marine passenger access for Sherwood residents.")



- Comprehensive Plan Goal 3, Policy 10 is not part of the Transportation System Plan (“The City of Sherwood will establish a set of guidelines and standards for traffic calming measures to retrofit existing streets and as part of land use review.”)

Comprehensive Plan policies will need to be made consistent with modified and new transportation policies developed as part of the TSP update.

Sherwood Zoning and Development Code: The Zoning and Development Code (“code”) implements the City’s Comprehensive Plan by establishing zoning designations and use and other development regulations for the zones, as well as regulations and procedures for land division and application review. The following highlights code sections that address transportation-related requirements.

Access Management

Subsection .040.M of Chapter 16.106 (Transportation Facilities) addresses access management, and establishes required minimum spacing between driveways and intersections for local roads, neighborhood routes and collectors (25 feet, 50 feet, and 100 feet respectively). The subsection also refers to the Engineering Design and Standard Details Manual for street standards.⁴⁰ Minimum and maximum roadway and driveway spacing standards for city arterials and collectors are provided in the 2005 TSP.

Performance Standards and Targets

As referred to earlier in this report, the 2005 TSP and Roadway Element of the Washington County TSP establish level-of-service standards for both signalized and unsignalized intersections under their jurisdiction. This report also addresses regional performance targets from the RTP and RTFP regarding issues such as safety, congestion, freight reliability, and active transportation that will be integrated into the updated TSP.

These standards and targets do not need to “live” in the code, but to ensure compliance with performance standard requirements a traffic impact analyses (TIA) requirement should be established in the code. Existing code sections 16.90.030.D and 16.106.040 include general TIA requirements for development proposals based on the type of proposed development, whether they are subject to site plan review, and their projected average daily vehicle trips (ADT).

Coordinated Review and Conditions of Approval

⁴⁰ The purpose of the city’s Engineering Design and Standard Details Manual is to set standards for the construction of new public improvements and for the reconstruction of existing facilities to upgrade existing infrastructure. These standards are primarily geared towards construction design; however, where applicable, this engineering document will need to be consistent with, and implement, the standards that are proposed in the updated TSP, as well as those reflected in development code requirements.



Written notice of Type II, III, IV, and V quasi-judicial and legislative actions is sent to Oregon Department of Transportation (ODOT), Metro, applicable transit service providers, and other affected or potentially affected agencies (Section 16.72.020.C). Also, pre-application conferences established in existing code (Section 16.70.010) are an opportunity to coordinate with other transportation facility and service providers.

General approval criteria for development applications grant authority to the Hearing Authority and Appeal Authority to approve the application with conditions (Section 16.72.010.C.1).

Plan and Land Use Regulation Amendments

The TPR seeks to protect transportation facilities by requiring consistency of land use with the function, capacity, and performance standards of transportation facilities. Existing Sherwood code provisions regarding approval criteria for plan amendments address TPR compliance, although the provisions do not necessarily reflect more recent TPR amendments (Section 16.80.030.C).

Pedestrian and Bicycle Access, Circulation, and Amenities

Requirements for on-site pedestrian, bicycle, and vehicular circulation are established in existing code (Chapter 16.96). Standards for residential and non-residential development require that a private pathway/sidewalk system extend throughout the site that connects existing development, building entrances, adjacent development, future phases of development, public rights-of-way, open space, and parking and storage areas.

Bicycle parking is required for uses including multi-family housing, office and most other commercial uses, institutional uses, and park-and-ride facilities (Section 16.94.020.C). The provisions address location and design of bicycle parking, and allow for long-term parking but do not require it.

Transportation Demand Management

Existing off-street parking regulations allow for shared parking, blended parking rates, on-street parking credits, preferential carpool/vanpool parking, residential parking districts, and reduced parking requirements in environmentally sensitive areas (Section 16.94.010).

On-site pathway/sidewalk systems addressed in Chapter 16.96 require the system to connect to transit facilities within 500 feet of the site. This is reinforced by language in the transportation facilities section that requires site connections to transit streets, as designated in the TSP, and either provision of or allowance for transit amenities and/or easements (Section 16.106.040.J). Commercial, multi-family, institutional, and mixed-use development must be oriented to existing and planned transit facilities and be built with no or minimal setbacks according to underlying zoning and site plan provisions (Section 16.90.030.D.7).

Transportation System Design and Connectivity



Street design guidelines are provided in a transportation facilities section of existing code (Section 16.106.010). The narrowest street is a 28-foot local street, which is also shown in a cross-section in the 2005 TSP.

Street spacing is an element of network connectivity; currently, street collector spacing is addressed in the Engineering Design and Standard Details manual and 2005 TSP, as discussed above. Existing code (Section 16.106.30) establishes maximum block lengths of 530 feet for new streets, except for arterials, which have a maximum block length requirement of 1,800 feet. Where full street crossings occur at distances of more 1,200 feet, bicycle and pedestrian crossings must be provided at an average of 530 feet. Section 16.106.30 also requires consistency with a local connectivity plan established in the 2005 TSP.

Code requirements will need to be consistent with the recommendations of the updated TSP. An evaluation of the code and an assessment of how regulatory provisions meet the state TPR and regional RTPFP will be included in the Needs, Opportunities, Constraints and Tools Report.

Sherwood Parks Master Plan (2006): The Sherwood Parks and Recreation Master Plan involves a comprehensive review of the existing inventory of land, recreation facilities, and recreation opportunities; development of a mission statement; development of a strategic set of goals, objectives, and actions for the next twenty years; survey of the needs of residents; identification of land for future parks and open space acquisition, preservation, or conservation; development of conceptual designs for parks; provision of a capital improvement schedule, and review of existing finance strategies; and development of recommendations to fund improvements.

High priority recommendations include:

- Preservation of natural areas, particularly the Tualatin River National Wildlife Refuge, as new development occurs to preserve and connection of such areas with the fabric of the community
- The creation of new trails wherever the opportunity arises, and provision of ten new walking loops.

The Plan also notes the following acquisitions and developments of Pedestrian & Bike Paths:

- from Edy Road south along Cedar Creek
- from the Senior Center to Stella Olsen Park
- Cedar Creek Trail and Land in the UGB expansion area.

The updated pedestrian and bicycle elements of the TSP will need need to be consistent with path and trail acquisitions and the recommendations of the Parks Master Plan.



Sherwood Urban Renewal Plan (Adopted 2000, updated through 2012): The Sherwood Urban Renewal Plan aims to eliminate blighting influences found in the Renewal Area and to implement the goals and objectives of the Sherwood Comprehensive Plan and the Vision for Old Town-2000. The boundary of the Renewal Area includes Old Town, Six Corners, and a portion of Sherwood High School.

Transportation improvements eligible for urban renewal funding may include streetscape enhancements, existing roadways reconstruction, new streets construction, and pedestrian and bicycle access improvements. Aesthetic improvements on the N. Sherwood Boulevard corridor connecting Old Town and Six Corners, creating vehicular and pedestrian linkages between Highway 99 and the Old Town area, and improving access to Stella Olson Park are mentioned specifically. Parking improvements called for in the plan include construction of public parking to support Old Town businesses and activities, and provision of separate areas for employee parking so close-in parking can be available for customers.



Appendix A: Applicable Plan and Policies

The following plans and policies were reviewed for the City of Sherwood TSP Update:

State of Oregon

- Transportation System Planning Guidelines
- Transportation Planning Rule (OAR 660-012-0010)
- Oregon Statewide Planning Goals
- Oregon Access Management Rule (OAR 734-051)
- Oregon Transportation Plan
- Oregon Highway Plan
- ODOT Highway Design Manual
- 2010-2013 Statewide Transportation Improvement Program

Metro/Regional Plans

- Metro 2035 Regional Transportation Plan
- Metro 2035 Regional Transportation Functional Plan
- Metro 2040 Growth Concept
- Metro Non-Single Occupancy Vehicle (SOV) Target Actions Study
- Metro State of Safety Report
- Regional Active Transportation Plan (August 2013 draft)
- Southwest Corridor Plan
- I-5 – 99W Connector Study
- Ice Age Tonquin Trail Master Plan

City of Sherwood

- 2005 City of Sherwood Transportation System Plan (and amendments)
- City of Sherwood Capital Improvement Plan
- City of Sherwood Comprehensive Plan
- City of Sherwood Zoning and Development Code
- City Engineering Design and Standard Details Manual
- City of Sherwood Urban Renewal Plan
- Sherwood Town Center Plan
- Sherwood Parks Master Plan
- Sherwood Capital Improvement Plan



Washington County

- Washington County Transportation System Plan

TriMet

- TriMet Transit Investment Plan