



July 6, 2022

Regular Meeting | 7:00 p.m.

Troutdale Police Community Center – Kellogg Room
234 SE Kendall Ct, Troutdale, OR 97060

Public comments are welcome at any time during the meeting.

Agenda

1. Call to Order, Roll Call, & Pledge of Allegiance
2. Elections
 - a. Chair and Vice Chair
 - b. Town Center Advisory Board
3. Introductions: CAC & Staff
4. Public Comment on Non-Agenda Items
5. Discussion Items
 - a. Transportation System Plan Update
6. Staff Communications
7. Committee Member Comments
8. Adjournment

Participation

The public may attend the meeting in person or via Zoom using the link below. Full Zoom details, including call-in information is available [online here](#).

<https://us02web.zoom.us/j/95296848625?pwd=WEdHMzRPRDFNcTBGV2swcTNSNkJXZz09>

This meeting location is accessible to persons with disabilities. A request for an interpreter for the hearing impaired or for other accommodations for persons with disabilities should be made at least 48 hours prior to the meeting to the City of Troutdale (comdev@troutdaleoregon.gov or 503-665-5175).



Date: June 1, 2022 (Attachments added July 6, 2022)
From: Chris Damgen, Community Development Director
To: Members of City Committees
CC: Melissa Johnston, AICP, Associate Planner
Alex Lopez, Assistant Planner
Marlee Boxler, Economic Development Coordinator
Tim Seery, Parks & Facilities Superintendent

Subject: July 2022 CAC Meeting – Nominations & Appointments

The new term for committees and commissions begins on July 1st and ends on June 30th, 2023, which is a change from the traditional start matching the calendar year. With this change, there has been some confusion about actions that will need to take place to bring in the new term, particularly on committee appointments. This memo is meant to be shared at the June meetings of each of the committees to clarify the expectations for the July meeting actions and to prepare current and new members of each committee on how proceedings are to occur.

Appointment of Chair and Vice Chair

The first order of business for the July meeting is the nomination and appointment of the chair and vice chair of the committee, which serves in those capacities for a 12-month period beginning at the July meeting ending with the June meeting.

Assuming that the chair from the previous term (2021-2022) remains on the committee, that chair will open the meeting in July and request nominations for chair for the new term and will call for the vote. If the chair remains the same person, they can remain in that position and simply move on to nominations for vice chair. If there is a new chair appointed, then the new chair immediately takes the position and calls for nominations for vice chair.

If the person who was the chair in the previous term is either no longer on the committee or is absent for that meeting, the responsibility falls to the vice chair from the previous term to open the meeting. If the vice chair is no longer on the committee or is absent, then the responsibility to open the meeting falls to the staff liaison.

Committee members who have an interest in chairing or vice-chairing a committee should consider reaching out to the existing chairs and/or staff to discuss the obligations of the position and consider becoming more familiar with procedural rules. The City intends to share a condensed version of Roberts Rules of Order to every committee member in advance of the July meeting.

Appointment of Town Center Advisory Board Member

The City established the Town Center Advisory Board (TCAB, spoken as “tee-cab”) in 2022. The make-up of that committee allows for five directly appointed members that City Council selects on staggered, multi-year terms and one seat reserved for each of the standing committees of the city, which are one-year appointments. It is up to each committee to appoint their designee, which should be done at the July meeting. This designee has full voting rights on TCAB and is expected to fully participate in proceedings – it is not a liaison or ex-officio position. Any member of a committee can be appointed to TCAB, including the chair or vice-chair.

TCAB is expected to meet between four to six times a year in its first year, with the 2nd Thursday of the month likely being the regular meeting date. Its responsibilities include:

- Performing an annual review the 2020-2040 Town Center Plan to ensure its vision, goals, and implementation are being followed
- advise on what implementation projects should be pursued
- provide feedback on prospective development in the opportunity sites that were established in the plan to ensure development is consistent with the Plan.
- oversee an upcoming downtown parking study, expected to start in the next 3 to 6 months

Because of the comprehensive nature of the Town Center Plan, it was important that each of the standing committees had representation on TCAB. The designee is expected to regularly report at the CAC meeting about items that TCAB is working on and to share CAC activities with TCAB.

ATTACHMENTS (added by Melissa Johnston, 7/9/2022).

- Citizens Advisory Committee Roster, Effective June 14, 2022
- Elections And Duties of City Committee Officers (provided by the City Recorder)

CITIZENS ADVISORY COMMITTEE

<p style="text-align: center;">POSITION #1</p> <p style="text-align: center;">Will Knight <i>Vice Chair</i></p> <p style="text-align: center;">Email: knightwill@hotmail.com</p> <p>APPOINTED: 6/14/22 EXPIRES: 6/30/25</p>	<p style="text-align: center;">POSITION #2</p> <p style="text-align: center;">David Wheaton</p> <p style="text-align: center;">Email: wheweb@gmail.com</p> <p>APPOINTED: 12/10/19 EXPIRES: 6/30/23</p>
<p style="text-align: center;">POSITION #3</p> <p style="text-align: center;">Twilla Harrington</p> <p style="text-align: center;">Email: twilla_harrington@yahoo.com</p> <p>APPOINTED: 8/6/21 EXPIRES: 6/30/23</p>	<p style="text-align: center;">POSITION #4</p> <p style="text-align: center;">Alexander Lumiere</p> <p style="text-align: center;">Email: alexander.lumiere@zoho.com</p> <p>APPOINTED: 12/10/19 EXPIRES: 6/30/23</p>
<p style="text-align: center;">POSITION #5</p> <p style="text-align: center;">Shelly Reynolds <i>Chair</i></p> <p style="text-align: center;">Email: sanjesjen@comcast.net</p> <p>APPOINTED: 12/10/19 EXPIRES: 6/30/23</p>	<p style="text-align: center;">POSITION #6</p> <p style="text-align: center;">Amasa Moon</p> <p style="text-align: center;">Email: amasa6955@gmail.com</p> <p>APPOINTED: 6/8/21 EXPIRES: 6/30/24</p>
<p style="text-align: center;">POSITION #7</p> <p style="text-align: center;">Nicole Lawrence</p> <p style="text-align: center;">Email: pdx.nicolelawrence@gmail.com</p> <p>APPOINTED: 6/8/21 EXPIRES: 6/30/24</p>	<p style="text-align: center;">POSITION #8</p> <p style="text-align: center;">Chris Barney</p> <p style="text-align: center;">Email: christopherbarney1306@gmail.com</p> <p>APPOINTED: 6/8/21 EXPIRES: 6/30/24</p>
<p style="text-align: center;">POSITION #9</p> <p style="text-align: center;">Diane Castillo</p> <p style="text-align: center;">Email: sandyriverpottery@gmail.com</p> <p>APPOINTED: 6/14/22 EXPIRES: 6/30/25</p>	<p style="text-align: center;">POSITION #10</p> <p style="text-align: center;">Victoria Rizzo</p> <p style="text-align: center;">Email: viravi1313@aol.com</p> <p>APPOINTED: 6/14/22 EXPIRES: 6/30/25</p>
<p style="text-align: center;">POSITION #11</p> <p style="text-align: center;">Shelby Staffenson</p> <p style="text-align: center;">Email: bluewaterski@yahoo.com</p> <p>APPOINTED: 6/14/22 EXPIRES: 6/30/25</p>	<p style="text-align: center;">ALTERNATE</p> <p style="text-align: center;">Cynthia Velasquez</p> <p style="text-align: center;">Email: velobestia@gmail.com</p> <p>APPOINTED: 6/14/22 EXPIRES: 6/30/23</p>

Notes

10-5-20 – Sam Barnett (Position #11) resigned; Heidi Hinshaw (Alternate) was appointed to fill the vacancy

Ordinance #861 extended all terms by 6 months to expire on 6/30 rather than 12/31

8-6-21 – Timothy Erich (Position #3) resigned; Twilla Harrington (Alternate) was appointed to fill the vacancy



Election and Duties of City Committee Officers

Citizens Advisory Committee

- 1.** Each City committee shall elect officers at its first meeting after June 30 of each calendar year. Those officers are a chair and vice-chair. (TMC 2.20.030(A))
- 2.** Each committee member may nominate themselves or another committee member to be Chair or Vice-Chair. No second is necessary, and a person may decline a nomination. (Roberts Rules of Order Chap. 12)
- 3.** _____ is the current Chair, and _____ is the current Vice-Chair.
- 4.** No person may serve as chair of more than two city committees. (TMC 2.20.030(B))
- 5.** The chair of a committee presides over its meetings. The chair preserves order at the meetings, recognizes speakers and decides all questions of order. Any ruling of the presiding officer is subject to appeal by the entire committee by request of any two members. The chair shall have the right to vote. (TMC 2.20.030(B))
- 6.** The vice-chair acts as the presiding officer of the committee in the absence of the chair. (TMC 2.20.030(C))
- 7.** Each committee may adopt bylaws on its procedures and may further specify the duties of its officers. In the absence of adopted bylaws, the rules of the council covering order and decorum and procedures apply. All cases not provided for in the bylaws or applicable Council rules shall be governed by Roberts Rules of Order. (TMC 2.20.030(E))
- 8.** City Councilors have the right to attend meetings of city committees, commissions and task forces, but should not become involved in discussions of those groups unless they are liaison members of those bodies. (TMC 2.08.250)



Date: July 6, 2022
From: Melissa Johnston, Associate Planner
To: Citizens Advisory Committee
CC: Chris Damgen, Community Development Director

Subject: Transportation System Plan, Draft Updates

We will continue our discussion of the [Transportation System Plan](#) (TSP) update at the July 6, 2022, Citizens Advisory Committee (CAC) meeting. This project involves updating our current TSP (adopted in 2014) by evaluating and incorporating projects from the [2020-2040 Town Center Plan](#). At the July 6th meeting, we will review changes to the timeline, continue our review of the draft changes for Chapter 4 provided by Kittelson and Associates, and debrief the update process so far.

Timeline:

- **Introduction** | December 1st, 2021 & January 5th, 2022 CAC meetings
- **Tech Memo #1: Existing Conditions and Future Needs** | March 2nd CAC meeting
Guest presentation by Kittelson & Associates
- **Tech Memo #2: Alternatives Analysis** | May 4th CAC meeting
Guest presentation by Kittelson & Associates
- **Review of Draft TSP Updates** | June 1st CAC meeting
Guest presentation by Kittelson & Associates
- **Additional comments and debrief** | July 6th CAC meeting
- **City Council Briefing** | Anticipated on July 12th
- **Planning Commission Hearing** | Anticipated on August 24th
Guest presentation by Kittelson & Associates
- **City Council Hearings** | Anticipated in September

ATTACHED:

- Public Comment
 - Will Knight
 - Multnomah County
- TSP Update Needs Chart
- Chapter 4 Redlines

6/10/22

Public Comment from Will Knight regarding the draft TSP file titled "final_tspchpt4_CAC Redlines".

To the planning commission and city council: Please do not consider this document to be fully shaped by and agreeable to the CAC under its role of citizen involvement.

I find it interesting that the file is titled "final_tspchpt4_CAC Redlines" as nothing that was discussed in the latest CAC meetings as requested changes or additional comments are included in this document. There are numerous issues that were specifically brought into the discussions by CAC members that have not been addressed. Information regarding Sandy avenue Geotech was finally released to the CAC the day prior to the June meeting. Issues that CAC members brought to the table at the June meeting have apparently been completely ignored. To title this document "final_tspchpt4_CAC Redlines" would suggest that the CAC had a large hand in crafting this document. I am not seeing that the CAC had much if any actual participation in this process. In addition, the CAC will not have the opportunity to pass along a formal recommendation to the council. That being said, I am inclined to say that the CAC, were given the role as spectators in this process and not as full participants.

My specific concerns regarding Sandy Avenue:

Since the days of the Town Center Committee, a false narrative has been advanced that Sandy Ave is in immediate danger of erosion and that the city had to do something quickly. As a result, an agenda to close Sandy Ave to one way traffic has been pushed by the planning department. According to the Geotechnical report titled "Geotechnical; Engineering Report SE 2nd street and SE Sandy Ave Stability Assessments Troutdale", dated 4/13/2018 by Shannon & Wilson INC, this couldn't be further from the truth. Shannon & Wilson's official report says that they cannot tell when exactly the activity happened, however it definitely happened prior to 2001. Shannon & Williams gave no indication that the ground is currently active. As of 6/10/2022 we have data to show that the ground has not been active for over 22 years!! Please also understand that the area to watch for ground activity encompasses *only 35 feet* of the entire quarter mile stretch of Sandy Ave that is being proposed for closure.

Furthermore, Shannon & Williams give their top 3 professional recommendations regarding what to do going forward:

Recommended action: Action 1 -Monitoring the slope for activity

Possible Mitigation Alternatives if issues happen to arise in the future:

Option 1 -Install Drainage within the Upper Slope

Option 2 -Install Reinforced Wall Structure

Please note that nowhere in this document do Shannon & Williams suggest closing the road to one way traffic. It is obvious to me that the truth has been stretched regarding the immediacy of any potential slope activity. The planning department has not followed the professional recommendations and have installed their own ideas into the Town Center Plan and now the TSP draft. I believe that advancing the agenda of closing Sandy Ave solely based upon the false narrative of immediate erosion concerns is both erroneous and deceitful.

The CAC had made at least 3 separate requests to have access to the Shannon & Wilson Geotech report as part of the ongoing discussions and were not provided the document. As a member of the Town Center Committee, I had asked for a copy of the report in 2021 when it was originally introduced. I finally received the report, on 5/31/22, after I made an additional specific request from the planning department. This information is not new to the city as the date of the geotechnical report is 4/13/2018, prior to any efforts made on the Town Center Plan or current draft TSP

My concerns regarding the Springwater Trail in Troutdale:

I would like to remind us all about the meeting held by Metro on February 22, 2017, regarding the Springwater Trail coming into Troutdale. Metro was asking for input regarding their plans to extend the Springwater Trail through from Depot park in Downtown Troutdale, up Sandy Ave and along Troutdale Road to Mt Hood CC. During that meeting over 200 residents showed overwhelming opposition to connecting Troutdale with the Springwater Trail. Much of the discussion centered around safety and livability concerns, especially transient and homeless camps, and crime. *Please keep in mind that the Sandy Avenue section of the Springwater Trail follows a path that goes behind Troutdale elementary school and ends right at the school playground.*

<https://www.oregonmetro.gov/news/troutdale-residents-help-shape-walking-cycling-trail>

The public was SO OPPOSED to the idea that metro immediately stopped their plans to build the trail through town.

<https://www.oregonmetro.gov/news/hearing-residents-metro-suspends-troutdale-trail>

My question is whether public sentiment has changed regarding this connection? I do not believe the sentiment has changed and the city has not done adequate outreach to poll the residents of Troutdale regarding the issue.

Therefore, if the city has the historical backdrop and outcome of the 2017 meeting and no new data to suggest the citizens now support the Springwater Trail in downtown; Then why is the city moving forward with the exact trail plans that metro walked away from after citing serious safety concerns from Troutdale residents?

“This trail that we’re talking about tonight will not be crammed down the citizens of Troutdale,” Ray Young said. “We will get to decide.”

Transportation Division - Planning & Development

TO Chris Damgen, City of Troutdale
Melissa Johnston, AICP, City of Troutdale

CC Jon P. Henrichsen, Multnomah County Transportation Division Director, County Engineer

FROM Eve Nilenders, Transportation Planning Specialist, Multnomah County
Jessica Berry, Transportation Planning and Development Manager, Multnomah County

DATE June 7, 2022

RE: Troutdale TSP - Draft Chapter 4 Comments

Thank you for giving us the opportunity to review and provide comments on proposed changes to Chapter 4 of Troutdale's Transportation System Plan (TSP). As previously noted, Multnomah County (County) and the City of Troutdale (City) have a long history of working together due to the overlapping nature of our jurisdictions and authorities. We reiterate some of the same comments and concerns provided previously, along with specific comments on the draft Chapter 4.

General Comments

Authority:

The TSP is a City policy document, and it is within the City's purview to identify projects on roads within the City. At the same time, there are several County roads that are arterials and collectors within the City; as such, the County is responsible for designing, constructing, and maintaining these roads. Multnomah County is also responsible for the health and safety of the traveling public on these roads. The County will consider including City road projects in our Capital Improvement Plan if the County is confident that doing so will align with the County's goals for safety in the right of way. Be advised that some proposed projects in the City's TSP do not currently conform to the County's standards for design based on the functional classification of the road; consequently, it is unlikely the County will include them in the County's Capital Improvement Plan without modifications and additional analyses performed by the City. See our comments below on AASHTO requirements in our Design and Construction Manual.

Financial Capability:

As noted in earlier communications, the County has limited funds available for capital projects. In earlier communications, the County requested that the City develop cost estimates for improvements and clearly identify which projects will be included in the City's Capital Improvement Plan to collect SDCs. The tables in Chapter 4 identify which projects the City intends to include in its CIP and notes where the City is willing to contribute 10% of the project funding. How was this contribution percentage determined? What is the City's expectation for identifying additional funds to construct the project? How were the cost estimates in the table

Transportation Division - Planning & Development

determined? Please be advised that not all projects in the City's TSP can be constructed and maintained by Multnomah County.

Multnomah County Design and Construction

Multnomah County follows AASHTO standards for roadway design. In addition, according to the Local Agency Guidelines (LAG) for Certified Local Public Agencies Manual, "The American Association of State Highway and Transportation Officials (AASHTO) guidelines have been adopted as the design standard for FHWA funded projects on local national highway system (NHS) routes and projects on the LPA's transportation system. Design standards for projects on the state highway system must conform to the requirements detailed in ODOT's current Highway Design Manual, other ODOT Manuals, and ODOT Technical Bulletins and Directives." Please also note that the County has not historically designed, constructed, or maintained off-street trails.

Equity and Environmental Justice in Transportation

Multnomah County is committed to applying a racial equity lens to our own policies and programs. In reviewing the edits to Chapter 4, we observed that the only mention of equity or environmental justice remains the final, unedited paragraph of Chapter 4, which is largely disconnected from the body of the chapter. The City may wish to consider expanding upon or making more explicit how its commitment to historically underserved and transportation-disadvantaged populations is reflected in the TSP priorities, given the incorporation of the Town Center Plan's visions and goals.

Specific Comments on TSP Chapter edits

1. Page 4-2: Why is the reference changing from the 2035 RTP to the 2010 RTP? This is confusing.
2. Page 4-5, Table 4-1: Project P46 is a Pedestrian/Bicycle Bridge over 257th Drive. Be advised that the County has concerns about constructing or allowing the construction of a facility over 257th Drive which serves as a Regional Emergency Transportation Route, Major Arterial, and Freight Route. We are also not convinced that the project cost will only be \$1.2M. We are also not clear where the City intends to find the remaining 90% of the project cost.
3. Page 4-6, Table 4-1: Table footnotes indicate "projects shown in gray are under the jurisdiction of other agencies". This update adds several projects that are under the jurisdiction of Multnomah County and are not shown in gray. **Prior to completion of this plan, please schedule a time with the County to review which projects are County projects vs. City projects.** For instance, many new projects on Historic Columbia River Highways are not shown in gray. Is this an oversight or does the City intend to seek a transfer?
4. Page 4-6, Table 4-1: Table footnotes indicate "...cost figures shown represent only the City's estimated contribution". Please clarify how the City's contribution was calculated.
5. Page 4-11, Table 4-3: Project B2 includes the statement, "Make Buxton Road an experimental street for electric bicycles, scooters, micro-transit, and golf carts". Be advised that Buxton Road is a County maintained Major Collector that carries +6,000 cars per day (2013 County Traffic Counts). The County has suggested that the City consider using a parallel local route for the experimental street. Vehicle diversion onto neighboring roads is likely to occur. This designation is not consistent with the County Design and Construction Manual.

Transportation Division - Planning & Development

6. Page 4-13 through 4-18: The Transit section does not include any new or innovative transit solutions, even though the region has done a fair bit of work (in particular, on Enhanced Transit Concepts) since the last TSP update. While these particular solutions may not be the most relevant for Troutdale, not addressing this seems like a missed opportunity. Among other things, the City might consider looking at the TriMet Pedestrian Plan, which analyzed and ranked pedestrian projects within each jurisdiction based on their potential to improve access to transit.
7. Page 4-32: the first paragraph under the section Motor Vehicle Master Plan states that “As a result [of Metro modeling efforts], a few notable projects from the 2005 TSP have been removed from this latest TSP update...” Is this new language? It isn’t redlined. If it is from the 2015 TSP, it should be removed - otherwise is not an accurate statement about this TSP version.
8. Page 4-33: Project M19 includes constructing an extension of Kibling Street over the railroad to the Confluence site. Be advised that the County would consider this a local street and would not include this in our Capital Plan.
9. Page 4-37: the Freight section states, “This update incorporates the conclusions and recommendations of the 2012 East Metro Connections Plan.” This is likely language from the 2015 update and should be removed.

TSP Update Needs

Corridor A – Halsey Street	<ul style="list-style-type: none">• Update P5 and M6, added B19 to “construct...facilities according to the Main Streets on Halsey Plan”
Corridor C – Historic Columbia River Highway	<ul style="list-style-type: none">• Added P40 to “Widen sidewalks along the Historic Columbia River Highway from 257th Drive to Depot Park. Install street trees where right-of-way allows”
Corridor D - E Historic Columbia River Highway	<ul style="list-style-type: none">• Added P41 to “Construct sidewalks along the east side and widen sidewalks along the west side of the Historic Columbia River Highway from Depot Park to east city limits”• Added B20 to “Enhance bike lanes on Historic Columbia River Highway from Depot Park to east city limits”• Added M16 to “Install traffic calming features along the Historic Columbia River Highway from Depot Park to east city limits”
Corridor E – Buxton Road	<ul style="list-style-type: none">• Updated B2 to “...make Buxton Road an experimental street for electric bicycles, scooters, micro-transit and golf carts.”
Corridor G – Sandy Avenue	<ul style="list-style-type: none">• Added P43, B21, M17 to “Reduce the road to one-way access and provide multimodal facilities”• Added M18 to “Complete a resiliency project along Sandy Avenue”
Corridor H – Downtown URA Connections	<ul style="list-style-type: none">• Added P44 to “Construct a bicycle-pedestrian bridge that begins at the intersection of Harlow Avenue and Historic Columbia River Highway and ends in the Confluence site”• Added M19 to “create a vehicular connection that extends Kibling Avenue and crosses the railroad tracks at-grade and continues into the Confluence site”

TSP Update Needs

Site 1 – Depot Park	<ul style="list-style-type: none">• Added B22 to “Construct a bike/transit hub at Depot Park”
Site 6 – Four Square Tract Site 7 – Overlook Tract	<ul style="list-style-type: none">• Added P46 to “Construct a Pedestrian/Bicycle Bridge over 257th Drive from Site 7 – Overlook Tract to Site 6 – Four Square Tract.”
Site 11 – Beaver Creek West Tract Site 12 – Peninsula Tract	<ul style="list-style-type: none">• Added P47 to “Construct a trail on or near the roadway along Site 11 – Beaver Creek West Tract and a connector park in Site 12 – Peninsula Tract”
Confluence Site	<ul style="list-style-type: none">• Updated project M13 to “Conduct a parking study within the Troutdale Town Center – the study should include an evaluation of potential off-street parking facilities”
Other	<ul style="list-style-type: none">• Added P42 to “Provide continuous sidewalk connection between the Beaver Creek Bridge and the Sandy River Bridge”• Added P45 to “Construct a trail from Site 6 – Four Square Tract to downtown via 2nd Street• Added M21 to “Widen the existing [Beaver Creek] bridge to allow for two-lane traffic”• Added M22 to “Reconstruct the [Beaver Creek] bridge to current roadway standards”

CHAPTER 4. FUTURE NEEDS & IMPROVEMENTS

OVERVIEW

This chapter presents the major elements of the Transportation System Plan (TSP) for the City of Troutdale, which addresses the City's existing transportation system needs and identifies additional facilities that will be needed to serve future growth in travel demand.

As indicated throughout this chapter, the pedestrian, bicycle, and transit system plans have been updated along with sections of the motor vehicle system plan to reflect all of the policy changes, regulatory requirements, and developments that have occurred since [the adoption of the City's existing TSP in 2005 as well as to incorporate the vision and goals of the 2020-2040 Town Center Plan](#). The revisions include updated Master Plans and Action Plans that reflect the current and future needs of the City.

TRAVEL DEMAND AND LAND USE

Metro's urban area transportation forecast model was used in the development of the 2005 TSP, and more recently, in the [2011](#) Troutdale Interchange Area Management Plan (IAMP) and the [2012](#) East Metro Connections Plan (EMCP) to determine future traffic volumes in the Troutdale area. Metro's forecast model translates assumed land uses into person travel, selects modes, and assigns motor vehicles to the roadway network. These traffic volume projections form the basis for identifying potential roadway deficiencies and for evaluating alternative circulation improvements. As described throughout this chapter, the transportation improvement projects identified in the 2005 TSP were updated to reflect the conclusions and recommendations of a number of regional and local planning efforts, including the IAMP and the EMCP. The result is updated project lists that reflect the most recent modeling efforts [by Metro using the latest population and employment forecasts](#) as well as the most recent needs and perspectives of the City.

Pedestrian System

~~*This section has been revised as part of a targeted effort to update the City's TSP to comply with recent changes to the Oregon Transportation Planning Rule (TPR) and the 2035 Regional Transportation Plan (RTP) as well as to incorporate the conclusions and recommendations of the Troutdale and Sweetbriar elementary Safe Routes to School plans along with a number of other regional and local planning documents. The revisions include an updated Pedestrian Master Plan and Pedestrian Action Plan that reflect the current and future needs of the City.*~~

The existing conditions analysis presented in Chapter 3 identifies the pedestrian system needs within Troutdale, including new sidewalk connections, new pedestrian crossings, and new multi-use paths and trails that augment and support the pedestrian system. The Pedestrian Master Plan presented in this section includes all of the potential pedestrian improvement projects identified within Troutdale while

the Pedestrian Action Plan includes all of the projects that are reasonably expected to be funded over the next 20 years.

Coordination with Regional Plan Designations

The ~~2010~~²⁰³⁵ Regional Transportation Plan (RTP) includes designations within Troutdale for pedestrian districts, transit/mixed use corridors, and regional trails as defined below:

- Pedestrian districts are areas of high or potentially high pedestrian [activity](#) where the region has placed a priority on creating a walkable environment. These areas should be designed to reflect an urban development and design pattern where walking is a safe, convenient, and enjoyable travel mode.
- Transit/mixed-use corridors are priority areas for pedestrian improvements. These corridors generate substantial pedestrian traffic near neighborhood retail developments, schools, parks, and bus stops. These corridors should be designed to promote pedestrian travel with features such as wide sidewalks with buffering from adjacent vehicle traffic, street crossings with special crossing amenities at select locations, special lighting, benches, bus shelters, awnings and street trees. Mid-block pedestrian crossings should also be used along these corridors to provide full access to transit stops.
- Regional trails are paved off-street regional facilities that accommodate pedestrian and bicycle travel and are used by people walking or bicycling to work, school, to access transit or travel to a store or library.

The 2040 Growth Concept Map includes Town Center and Corridor design types that correspond with the pedestrian district and transit/mixed-use corridors identified in the RTP. The City of Troutdale Development Code also includes a Town Center overlay that generally corresponds to the area designated as a pedestrian district in the RTP and requires new development in the area to comply with RTP guidelines. Figure 4-1 illustrates the area with a Town Center overlay in yellow. This area should include continuous sidewalk connections, pedestrian crossings, and other pedestrian amenities to be consistent with the RTP. By complying with the RTP designations and completing the pedestrian system within these areas, the Pedestrian Master Plan is consistent with plans developed by Metro, Multnomah County, and the State.

Pedestrian Master Plan

The Pedestrian Master Plan was developed based on the pedestrian system needs identified in the existing conditions analysis and reflects all ~~of~~ the potential pedestrian improvement projects within Troutdale. The projects shown in Table 4-1 and on Figure 4-1 were evaluated based on the strategies identified below to create the Pedestrian Action Plan. Several of the projects identified in Table 4-1 and on Figure 4-1 are incorporated into the projects shown in the motor vehicle master plan.

Figure 4-1: Pedestrian Master Plan

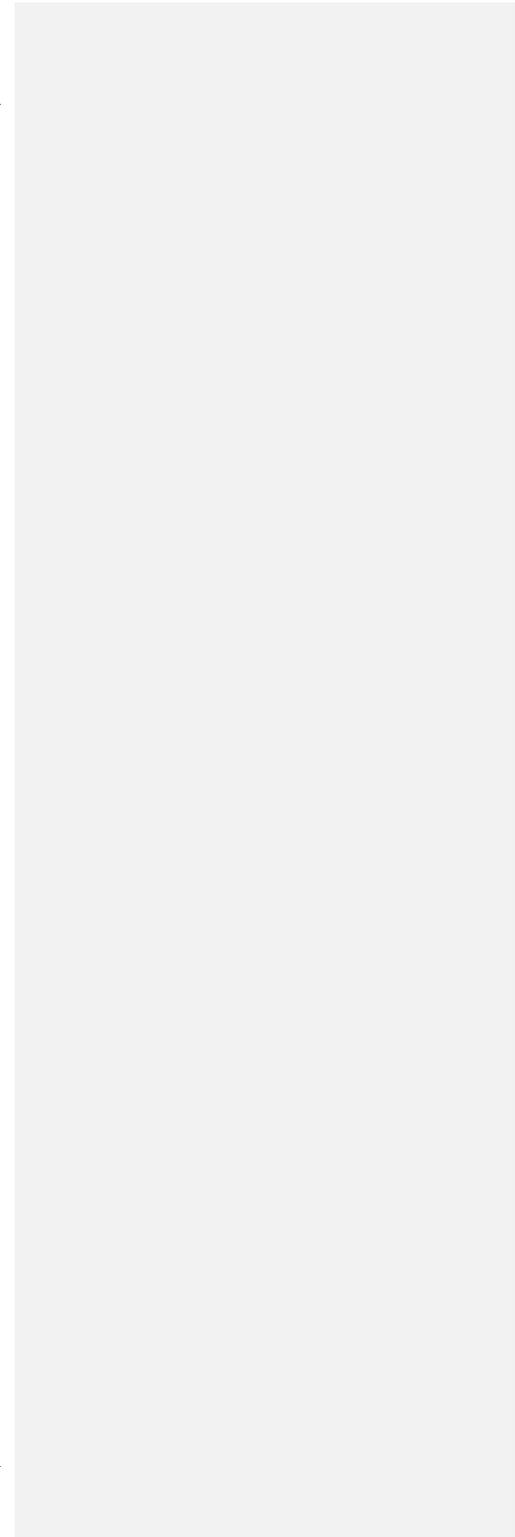


Table 4-1: Pedestrian Master Plan

Project ID	Location	Type	Project Description	Cost (\$1,000)
P1	Troutdale Road	Complete Sidewalks	Install sidewalks on both sides of Troutdale Road from Beaver Creek Lane to Stark Street	-
P2	Troutdale Road	Complete Sidewalks	Install sidewalks on both sides of Troutdale Road from Stark Street to the south City limits	-
P3	Stark Street	Complete Sidewalks	Install sidewalks on both sides of Stark Street from 257 th Avenue to Troutdale Road	.*
P4	Stark Street	Complete Sidewalks	Install sidewalks on the north side of Stark Street from Troutdale Road to Hampton Avenue	-
P5	Halsey Street	Complete Sidewalks	Construct facilities according to the Main Streets on Halsey Plan Install sidewalks on both sides of Halsey Street from the west-city limits to Historic Columbia River Highway	To Be Determined-
P6	Historic Columbia River Highway/244 th	Complete Sidewalks	Install sidewalks on both sides of Historic Columbia River Highway from 244 th Avenue to Halsey Street	-
P7	Hensley Road	Complete Sidewalks	Install sidewalks on the south side of Hensley Road (E/W) from 150 feet west of Laurel Court to Hensley Road (N/S)	\$45
P8	Hensley Road	Complete Sidewalks	Install sidewalks on the east side of Hensley Road (N/S) from Hensley Road (E/W) to Cherry Park Road consistent with the Troutdale Elementary SRTS Plan	\$350
P9	Kings Byway	Complete Sidewalks	Install sidewalks on the east side of Kings Byway from Cherry Park Road to 7 th Street consistent with the Troutdale Elementary SRTS Plan	\$50
P10	Evans Road	Complete Sidewalks	Install sidewalks on the northwest side of Evans Road from Sweetbriar Lane to 36 th Street consistent with the Sweetbriar Elementary SRTS Plan	\$45
P11	Sweetbriar Road	Complete Sidewalks	Install sidewalks on the south side of Sweetbriar Road from Troutdale Road to the east City limits	-
P12	Marine Drive	Complete Sidewalks	Install sidewalks on both sides of Marine Drive from the west City limits to North Frontage Road	-
P13	Sundial Road	Complete Sidewalks	Install sidewalks on both sides of Sundial Road from the north City limits to Marine Drive	-
P14	257 th Avenue at Hampton Heights Apartments Driveway	Pedestrian Crossing	Install enhanced pedestrian crossing treatments on 257 th Avenue at the Hampton Heights Apartments Driveway	-
P15	257 th Avenue at Jennings Lane	Pedestrian Crossing	Install enhanced pedestrian crossing treatments on 257 th Avenue at Jennings Lane	-
P16	257 th Avenue at 13 th Place	Pedestrian Crossing	Install enhanced pedestrian crossing treatments on 257 th Avenue at 13 th Place	-
P17	257 th Avenue at 26 th Street	Pedestrian Crossing	Install enhanced pedestrian crossing treatments on 257 th Avenue at 26 th Street	-
P18	Buxton Road at 7 th Street	Pedestrian Crossing	Reconfigure existing crossing on Buxton Road at 7 th Street consistent with the Troutdale Elementary SRTS Plan	-
P19	Buxton Road at Cherry Park Road	Pedestrian Crossing	Reconfigure existing crossing on Buxton Road at Cherry Park Road consistent with the Troutdale Elementary SRTS Plan	-
P20	Troutdale Road at Chapman Avenue	Pedestrian Crossing	Install enhanced pedestrian crossing treatments on Troutdale Road at Chapman Avenue consistent with the Troutdale Elementary SRTS Plan	-
P21	Troutdale Road at Beaver Creek Lane	Pedestrian Crossing	Install enhanced pedestrian crossing treatments on Troutdale Road at Beaver Creek Lane	-
P22	Troutdale Road at Planned Regional Trail	Pedestrian Crossing	Install enhanced pedestrian crossing treatments on Troutdale Road at the planned Regional Trail	-
P23	Cherry Park Road at Kings Byway	Pedestrian Crossing	Install enhanced pedestrian crossings treatments on Cherry Park Road at Kings Byway consistent with the Troutdale Elementary SRTS Plan	-

P24	Cherry Park Road at Imagination Way	Pedestrian Crossing	Install additional enhanced pedestrian crossing treatments on Cherry Park Road at Imagination Way	-
P25	Stark Street at Corbeth Lane	Pedestrian Crossing	Install enhanced pedestrian crossing treatments on Stark Street at Corbeth Way	-
P26	Stark Street at Planned Regional Trail	Pedestrian Crossing	Install enhanced pedestrian crossing treatments on Stark Street at the planned Regional Trail	-
P27	Troutdale Road at 21st Street	Pedestrian Crossing	Improve existing crossing on Troutdale Road at 21st Street consistent with the Sweetbriar Elementary SRTS Plan	\$60
P28	Evans Avenue at Stark street	Pedestrian Crossing	Improve existing crossing at the Evans Avenue/Stark Street intersection consistent with the Sweetbriar Elementary SRTS Plan	-
P29	40 Mile Regional Trail	Multi-Use Path	Install a multi-use path from Columbia/Sandy River Trail to downtown Troutdale	--
P30	Columbia Park Trail	Trail	Improve existing trail from 18 th Way to 22 nd Street	\$75
P31	Sturges Trail	Trail	Install a trail from Sturges Lane to 257 th Avenue	\$230
P32	Edgefield Trail (North of Halsey Street)	Trail	Install a trail from Edgefield's east access driveway to Historic Columbia River Highway	-
P33	Edgefield Trail (South of Halsey Street)	Trail	Install a trail from Edgefield's east access driveway to the planned Sturges Trail	-
P34	Halsey Street/Sturges Connector Trail	Trail	Install a trail from Halsey Street to the planned Sturges Trail	-
P35	Halsey/257 th Connector Trail	Trail	Install a trail from Halsey Street to 257 th Avenue; final project may be modified based on the Main Streets on Halsey Plan	-
P36	Sandy River and Springwater Area Connections Trail	Trail	Install a trail from Mt. Hood Community College to Historic Columbia River Highway	-
P37	Historic Columbia River Highway	Curb Extension	Install curb extensions along Historic Columbia River Highway at Kendal Avenue, Buxton Road Avenue , Dora Street , Harlow Avenue, and Kibling Street Avenue	\$240
P38	Sandy River and Springwater Area Connections Trail Master Plan	Trail	Develop a master plan for the Beaver Creek Trails to determine the alignment/recommended design treatments	-
P39	Hewitt Neighborhood Trail	Multi-Use Path	Complete the multi-use path that connects the Hewitt neighborhood to Stark Street to the south and 257 th to the west.	\$25
P40	Historic Columbia River Highway	Sidewalk Widening	Widen sidewalks along the Historic Columbia River Highway from 257th Drive to Depot Park. Install street trees where right-of-way allows.	-
P41	Historic Columbia River Highway	Sidewalk	Construct sidewalks along the east side and widen sidewalks along the west side of the Historic Columbia River Highway from Depot Park to the Beaver Creek Bridge east city limits.	-
P42	Historic Columbia River Highway	Sidewalks	Provide continuous sidewalk connection between the Beaver Creek Bridge and the Sandy River Bridge	-
P43	Sandy Avenue	Sidewalks	Reduce the road to one-way access and widen sidewalk on the west side of the roadway	\$385
P44	Downtown/Urban Renewal Area Connections	Pedestrian/Bicycle Bridge	Construct a bicycle-pedestrian bridge that begins at the intersection of Harlow Avenue and Historic Columbia River Highway and ends in the Confluence Site.	\$250**
P45	2nd Street Trail	Trail	Construct a trail from Kendall Avenue at 2nd Street to Halsey Street via the 2nd Street Bridge Site 6 – Four Square Tract to downtown via 2nd Street	\$135
P46	2nd Street Bridge	Pedestrian/Bicycle Bridge	Construct a Pedestrian/Bicycle Bridge over 257th Drive from Site 7 – Overlook Tract to Site 6 – Four Square Tract.	\$125**
P47	Beaver Creek West Trail	Trail	Construct a trail from Depot Park to Glenn Otto Park on or near the west side of Beaver Creek roadway along Site 11 – Beaver Creek West Tract and a connector park in Site 12 – Peninsula Tract	\$175

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Total	\$2,085 \$4,112 0
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Note: Cost estimates indicate the estimated funding to be provided by the City of Troutdale. The projects shown in grey are under the jurisdiction of other agencies. Cost estimates are provided for these outside agency projects only where it is anticipated that the City will contribute funding to the project, and the cost figures shown represent only the City’s estimated contribution. Projects shown in white are under the jurisdiction of the City.
 * The City of Troutdale’s contributions to these project costs are included in the Motor Vehicle Action Plan.
[** The City of Troutdale’s contribution to these project costs is assumed to be 10% of the overall project costs.](#)

As shown in Table 4-1, the pedestrian improvement projects consist of installing new sidewalk connections, pedestrian crossings, and multi-use paths and trails. While several of the projects can be constructed within existing City right-of-way, others will require additional right-of-way to be developed. In addition, while several of the projects are located along Multnomah County streets, there are a few located along City streets.

It is important to note that several of the pedestrian crossing projects are located along streets with volumes and speeds that could require significant crossing enhancements. Crossings on 257th Avenue and Stark Street, for example, could require flashing beacons or traffic signals, while crossings on Troutdale Road and Buxton Road could require striped crosswalks and crosswalk signs. The Needs, Opportunities, Constraints, and tools report provided in the Appendix provides a brief description of potential crossing treatments at each location.

Strategies

Several strategies have been identified to help guide the selection and prioritization of the pedestrian improvement projects included in the Pedestrian Action Plan. These strategies are intended to focus community investment on those projects that are most effective at meeting critical needs, while deferring other projects of lesser value. The following strategies were used to select and prioritize the pedestrian improvement projects (listed in order of importance):

- Connect key pedestrian corridors to schools, parks, and activity centers
- Pedestrian corridors that connect neighborhoods
- Arterial crossing enhancements
- Pedestrian corridors that connect to major transit Locations
- Fill in gaps in the network where some sidewalks exist
- Reconstruct all sidewalks to City of Troutdale standards
- Pedestrian corridors that connect to major recreational uses
- Pedestrian corridors that commuters might use

[Projects in the Pedestrian Action Plan were also reviewed to ensure an equitable distribution of projects through the community, including areas with high concentration of transportation disadvantaged populations.](#)

Pedestrian Action Plan

The Pedestrian Action Plan identifies the pedestrian system improvement projects that are reasonably expected to be funded over the next 20 years, which meets the requirements of the updated Transportation Planning Rule (TPR). The strategies identified above were used to rank the pedestrian projects identified in the Pedestrian Master Plan from highest to lowest in terms of priority. The highest ranking City projects that are reasonably expected to be funded were combined with projects from other agencies identified in previous planning studies to create the project list shown in Table 4-2, which are organized by location and type.

Table 4-2: Pedestrian Action Plan

Project ID	Location	Type	Project Description	Cost (\$1,000)
P1	Troutdale Road	Complete Sidewalks	Install sidewalks on both sides of Troutdale Road from Beaver Creek Lane to Stark Street	-
P2	Troutdale Road	Complete Sidewalks	Install sidewalks on both sides of Troutdale Road from Stark Street to the south City limits	-
P3	Stark Street	Complete Sidewalks	Install sidewalks on both sides of Stark Street from 257 th Avenue to Troutdale Road	.*
P5	Halsey Street	Complete Sidewalks	Construct facilities according to the Main Streets on Halsey Plan Install sidewalks on both sides of Halsey Street from the west city limits to Historic Columbia River Highway	To Be Determined
P7	Hensley Road	Complete Sidewalks	Install sidewalks on the south side of Hensley Road (E/W) from 150-foot west of Laurel Court to Hensley Road (N/S)	\$45
P8	Hensley Road	Complete Sidewalks	Install sidewalks on the east side of Hensley Road (N/S) from Hensley Road (E/W) to Cherry Park Road consistent with the Troutdale Elementary SRTS Plan. Includes minor pavement widening and drainage.	\$350
P17	257 th Avenue at 26 th Street	Pedestrian Crossing	Install enhanced pedestrian crossing treatments on 257 th Avenue at 26 th Street	-
P22	Troutdale Road at Planned Regional Trail	Pedestrian Crossing	Install enhanced pedestrian crossing treatments on Troutdale Road at the planned Regional Trail	-
P26	Stark Street at Planned Regional Trail	Pedestrian Crossing	Install enhanced pedestrian crossing treatments on Stark Street at the planned Regional Trail	-
P29	40-Mile Regional Trail	Multi-Use Path	Install a multi-use path from Columbia/Sandy River Levy Trail to downtown Troutdale	-
P30	Columbia Park Trail	Trail	Improve existing trail from 18 th Way to 22 nd Street	\$75
P31	Sturges Trail	Trail	Install a trail from Sturges Lane to 257 th Avenue	\$230
P36	Sandy River and Springwater Area Connections Trail	Trail	Install a trail from Mt. Hood Community College to Historic Columbia River Highway	-
P37	Historic Columbia River Highway	Curb Extension	Install curb extensions along Historic Columbia River Highway at Kendall Avenue, Buxton Road Avenue , Dora Street , Harlow Avenue, and Kibling Street Avenue	\$240
P38	Sandy River and Springwater Area Connections Trail Master Plan	Trail	Develop a master plan for the Sandy River and Springwater Area Connections Trail to determine the alignment/recommended design treatments	-
P39	Hewitt Neighborhood Trail	Multi-Use Path	Complete the multi-use path that connects the Hewitt neighborhood to Stark Street to the south and 257 th to the west.	\$25
P40	Historic Columbia River Highway	Sidewalk Widening	Widen sidewalks along the Historic Columbia River Highway from 257 th Drive to Depot Park. Install street trees where right-of-way allows.	-

P41	Historic Columbia River Highway	Sidewalk	Construct sidewalks along the east side and widen sidewalks along the west side of the Historic Columbia River Highway from Depot Park to east city limits	-
P42	Historic Columbia River Highway	Sidewalks	Provide continuous sidewalk connection between the Beaver Creek Bridge and the Sandy River Bridge	-
P43	Sandy Avenue	Sidewalk	Reduce the road to one-way access and widen sidewalk on the west side of the roadway	\$385
P44	Downtown/Urban Renewal Area Connections	Pedestrian/Bicycle Bridge	Construct a bicycle-pedestrian bridge that begins at the intersection of Harlow Avenue and Historic Columbia River Highway and ends in the Confluence Site.	\$250
P45	2nd Street Trail	Trail	Construct a trail from Site 6 – Four Square Tract to downtown via 2nd Street	\$135
P46	2nd Street Bridge	Pedestrian/Bicycle Bridge	Construct a Pedestrian/Bicycle Bridge over 257th Drive from Site 7 – Overlook Tract to Site 6 – Four Square Tract.	\$125
P47	Beaver Creek West Trail	Trail	Construct a trail on or near the roadway along Site 11 – Beaver Creek West Tract and a connector park in Site 12 – Peninsula Tract	\$175
Total				\$1,990

Note: Cost estimates indicate the estimated funding to be provided by the City of Troutdale. The projects shown in grey are under the jurisdiction of other agencies. Cost estimates are provided for these outside agency projects only where it is anticipated that the City will contribute funding to the project, and the cost figures shown represent only the City's estimated contribution. Projects shown in white are under the jurisdiction of the City.
 * The City of Troutdale's contributions to these project costs are included in the Motor Vehicle Action Plan.

As development occurs, streets are rebuilt, and other opportunities (such as grant programs) arise, the projects identified in the Pedestrian Master Plan should be completed as well. It should be noted that development of any of the projects identified in the Pedestrian Master Plan or Pedestrian Action Plan will ultimately help the City make progress toward achieving its non-single occupancy vehicle (SOV) modal targets.

BICYCLE SYSTEM

~~This section has been revised as part of a targeted effort to update the City's TSP to comply with recent changes to the Oregon TPR and the 2035 RTP as well as to incorporate the conclusions and recommendations of the Troutdale and Sweetbriar elementary Safe Routes to School plans along with a number of other regional and local planning documents. The revisions include an updated Bicycle Master Plan and Bicycle Action Plan that reflect the current and future needs of the City.~~

The existing conditions analysis presented in Chapter 3 identifies the bicycle system needs within Troutdale, including new on-street bike lanes, new bicycle crossings, and new multi-use paths and trails that augment and support the bicycle system. The Bicycle Master Plan presented in this section identifies all of the potential bicycle improvement projects identified within Troutdale while the Bicycle Action Plan identifies all of the projects that are reasonably expected to be funded over the next 20 years.

Coordination with Regional Plan Designations

The ~~2010~~2035 RTP includes designations within Troutdale for Regional Bikeways, Community Bikeways, and Regional Trails as defined below:

- Regional Bikeways provide for travel to and within the central city, regional centers, and town centers. Travel time is an important factor as these bikeways generally have high volumes.
- Community Bikeways provide for travel to and within main streets, corridors, and industrial and employment areas. These routes provide access to regional attractions such as schools and parks, and connect neighborhoods to the rest of the regional bicycle network.
- Regional Trails are paved, off-street facilities serving bicyclists and other non-motorized uses. They typically serve as longer distance routes connecting neighborhoods to 2040 target areas, often providing access to parks, schools, and natural areas.

The ~~2010~~²⁰³⁵ RTP also includes a designation for Regional Bicycle Parkways, although it has not yet been applied to any roadways. However, Regional Bicycle Parkways will likely be comprised of routes currently designated as Regional Bikeways, Community Bikeways, and Regional Trails. Based on the RTP:

- Regional Bicycle Parkways will form the backbone of the regional bicycle network, providing for direct and efficient travel with minimal delays in different urban environments and to destinations outside the region.

There are several routes in Troutdale with RTP designations. These routes should include on-street bicycle lanes, multi-use paths, and other bicycle amenities to be consistent with the RTP. By complying with the RTP designations and completing the bicycle system along these routes, the Bicycle Master Plan is consistent with plans developed by Metro, Multnomah County, and the State.

Bicycle Master Plan

The Bicycle Master Plan was developed based on the bicycle system needs identified in the existing conditions analysis and reflects all of the potential bicycle improvement projects within Troutdale. The projects shown in Table 4-3 and on Figure 4-2 were evaluated based on the strategies identified below to create the Bicycle Action Plan. Several of the projects identified in Table 4-3 and on Figure 4-2 are incorporated into the projects shown in the motor vehicle master plan.

Figure 4-2: Bicycle Master Plan

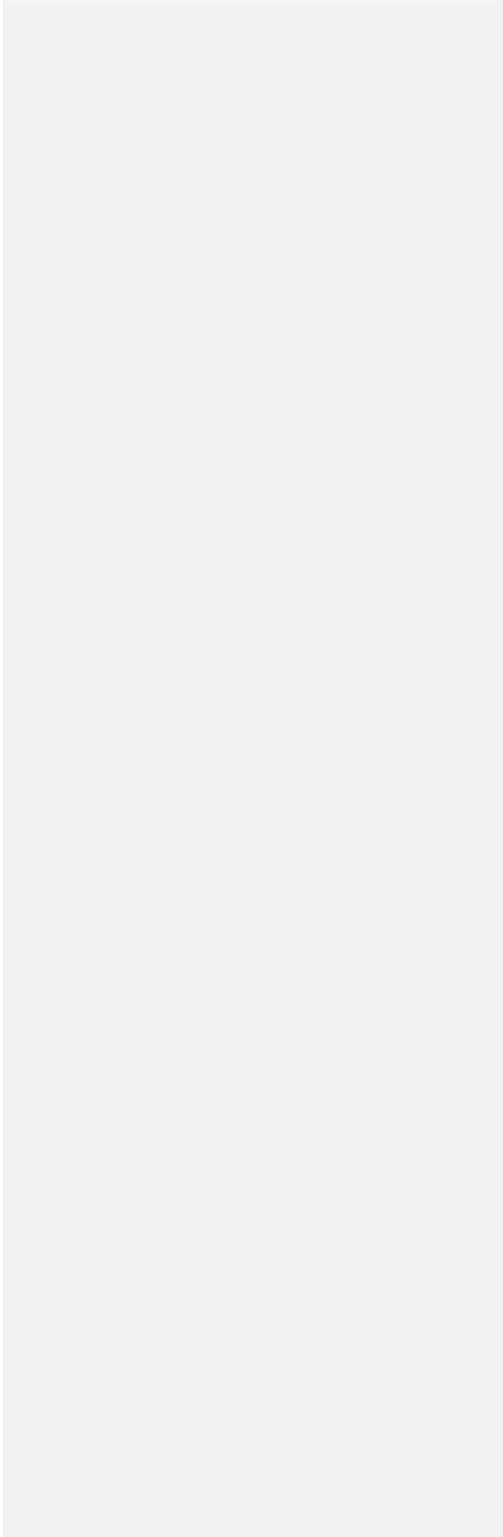


Table 4-3: Bicycle Master Plan

Project ID	Location	Type	Project Description	Cost (\$1,000)
B1	Stark Street	Bike Lane	Install on-street bike lanes from 257 th Avenue to Troutdale Road.	-
B2	Buxton Road	Bike Lane	Install on-street bike lanes from Historic Columbia River Highway to Cherry Park Road. Make Buxton Road an experimental street for electric bicycles, scooters, micro-transit, and golf carts.	-
B3	Historic Columbia River Highway	Bike Lane	Install on-street bike lanes from Halsey Street to the railroad underpass 244 th Avenue	-
B4	Troutdale Road	Bike Lane	Install on-street bike lanes from Cherry Park Road to Stark Street	-
B5	Troutdale Road	Bike Lane	Install on-street bike lanes from Stark Street to the south City limits	-
B6	Cochran Road	Bike Lane	Install on-street bike lanes from the west City limits to Troutdale Road	-
B7	Sweetbriar Road	Bike Lane	Install on-street bike lanes from Troutdale Road to the east City limits	-
B8	Marine Drive	Bike Lane	Install on-street bike lanes from west City limits to approximately 1,500-foot east of Sundial Road	-
B9	Sundial Road	Bike Lane	Install on-street bike lanes from the north City limits to Swigert Way	-
B10	238 th Avenue	Bike Lane	Install on-street bike lanes from Cherry Park Road to the west City limits	-
B11	Hensley Road (EW/NS)	Shared Roadways	Install shared roadway pavement markings and signs on Hensley Road (EW/NS) consistent with MUTCD standards	\$15
B12	21 st Avenue	Shared Roadway	Install shared roadway pavement markings and signs on 21 st Avenue consistent with MUTCD standards	\$5
B13	Sturges Lanes	Shared Roadways	Install shared roadway pavement markings and signs on Sturges Lane consistent with MUTCD standards	\$15
B14	Sweetbriar Lane	Shared Roadways	Install shared roadway pavement markings and signs on Sweetbriar lane consistent with MUTCD standards	\$15
B15	3 rd Street/Sandy Avenue	Shared Roadways	Install shared roadway pavement markings and signs on 3 rd Street and Sandy Avenue consistent with MUTCD standards	\$15
B16	257 th Avenue at Historic Columbia River Highway	Bike Crossing	Improve existing crossing conditions with combined bike lane/turn lane pavement markings and signs	\$5
B17	257 th Avenue at Stark Street	Bike Crossing	Improve existing crossing conditions with continuous bicycle lane striping along the north side of the east leg of the intersection	\$5
B18	Troutdale Town Center	Bicycle Parking	Install covered bicycle parking in the Troutdale Town Center	\$30
B19	Halsey Street	Bike Lanes	Construct bike facilities according to the Main Streets on Halsey Plan	To Be Determined
B20	Historic Columbia River Highway	Bike Lanes	Enhance bike lanes on Historic Columbia River Highway from Depot Park to east city limits	-
B21	Sandy Avenue	Bicycle Facilities	Reduce the road to one-way access and provide bicycle facilities	\$150
B22	Depot Park	Other	Construct a bike/transit hub at Depot Park	\$250
Total				\$410

Note: Cost estimates indicate the estimated funding to be provided by the City of Troutdale. The projects shown in grey are under the jurisdiction of other agencies. Cost estimates are provided for these outside agency projects only where it is anticipated that the City will contribute funding to the project, and the cost figures shown represent only the City's estimated contribution. Projects shown in white are under the jurisdiction of the City. * The City of Troutdale's contributions to these project costs are included in the Motor Vehicle Action Plan.

As shown in Table 4-3, the bicycle improvement projects consist of installing on-street bike lanes, ~~and~~ shared roadway [signage, pavement markings](#) and improving existing bicycle crossings. While several of the bike lane projects can be completed by striping the existing roadway, others will require widening and potentially additional right-of-way to be developed. Each of the shared roadway projects can be completed within the existing right-of-way, ~~but will need to be accompanied by signs located along the roadway shoulders per the MUTCD.~~ In addition, while each of the bike lane projects (and bicycle crossing projects) are located along Multnomah County streets, each of the shared roadway projects are located along City streets.

Strategies

Several strategies have been identified to help guide the selection and prioritization of the bicycle improvement projects included in the Bicycle Action Plan. These strategies are intended to focus community investment on those projects that are most effective at meeting critical needs, while deferring other projects of lesser value. The following strategies were used to select and prioritize the bicycle improvement projects (listed in order of importance):

- Connect key bicycle corridors to schools, parks, and activity centers
- Finish the 40-mile Loop in Troutdale
- Bicycle corridors that connect neighborhoods
- Bicycle corridors that connect to major recreational facilities
- Fill in gaps in the network where some bikeways exist (arterials and collectors)
- Arterial Crossing Enhancements
- Bicycle corridors that commuters might use
- Bicycle corridors that access retail areas
- Upgrade existing bikeways to Multnomah County standards

[Projects in the Bicycle Action Plan were also reviewed to ensure an equitable distribution of projects through the community, including areas with high concentration of transportation disadvantaged populations.](#)

Bicycle Action Plan

The Bicycle Action Plan identifies the bicycle improvement projects that are reasonably expected to be funded over the next 20 years, which meets the requirements of the updated TPR. The strategies identified above were used to rank the bicycle projects from highest to lowest in terms of priority. The highest-ranking City projects that are reasonably expected to be funded were combined with projects from other agencies identified in previous planning studies to create the project list shown in Table 4-4, which are organized by location and type.

Table 4-4: Bicycle Action Plan

Project ID	Location	Type	Project Description	Cost (\$1,000)
B1	Stark Street	Bike Lane	Install on-street bike lanes from 257 th Avenue to Troutdale Road.	.*
B4	Troutdale Road	Bike Lane	Install on-street bike lanes from Cherry Park Road to Stark Street	-
B5	Troutdale Road	Bike Lane	Install on-street bike lanes from Stark Street to the south City limits	-
B10	238th Avenue	Bike Lane	Install on-street bike lanes from Cherry Park Road to the west City limits	-
B11	Hensley Road (EW/NS)	Shared Roadways	Install shared roadway pavement markings and signs on Hensley Road (EW/NS) consistent with MUTCD standards	\$15
B12	21 st Avenue	Shared Roadway	Install shared roadway pavement markings and signs on 21 st Avenue consistent with MUTCD standards	\$5
B13	Sturges Lane	Shared Roadways	Install shared roadway pavement markings and signs on Sturges Lane consistent with MUTCD standards	\$15
B14	Sweetbriar Lane	Shared Roadways	Install shared roadway pavement markings and signs on Sweetbriar lane consistent with MUTCD standards	\$15
B15	3 rd Street/Sandy Avenue	Shared Roadways	Install shared roadway pavement markings and signs on 3 rd Street and Sandy Avenue consistent with MUTCD standards	\$15
B18	Troutdale Town Center	Bicycle Parking	Install covered bicycle parking in the Troutdale Town Center	\$30
B19	Halsey Street	Bike Lanes	Construct bike facilities according to the Main Streets on Halsey Plan	To Be Determined
B20	Historic Columbia River Highway	Bike Lanes	Enhance bike lanes on Historic Columbia River Highway from Depot Park to east city limits	-
B21	Sandy Avenue	Bicycle Facilities	Reduce the road to one-way access and provide bicycle facilities	150
B22	Depot Park	Other	Construct a bike/transit hub at Depot Park	250
Total				\$400 \$95

Note: Cost estimates indicate the estimated funding to be provided by the City of Troutdale. The projects shown in grey are under the jurisdiction of other agencies. Cost estimates are provided for these outside agency projects only where it is anticipated that the City will contribute funding to the project, and the cost figures shown represent only the City’s estimated contribution. Projects shown in white are under the jurisdiction of the City.
 * The City of Troutdale’s contributions to these project costs are included in the Motor Vehicle Action Plan.

As development occurs, streets are rebuilt, and other opportunities (such as grant programs) arise, the projects identified in the Bicycle Master Plan should be completed as well. It should be noted that development of any of the projects identified in the Bicycle Master Plan or Bicycle Action Plan will ultimately help the City make progress toward achieving its non-SOV modal targets.

TRANSIT SYSTEM

This section has been revised as part of a targeted effort to update the City’s TSP to comply with recent changes to the Oregon TPR, the 2035 RTP, and the 2035 High Capacity Transit (HCT) System Plan. The revisions include an updated Transit Master Plan and Transit Action Plan that reflect the current and future needs of the City.

Tri-Met is the primary regional transit service provider for the Portland metropolitan area. TriMet provides both fixed-route and dial-a-ride service in Troutdale, which is located in the northeast corner of their service area. Due to its location, Troutdale is an end point for the regional transit system. TriMet’s

Transit Investment Plan (TIP) identifies strategies for meeting regional public transportation needs, focusing on investments and improvements to the total transit system, such as improvements on existing lines. Therefore, the TIP focuses on targeted, strategic improvements to the system, with priorities in the following order: maintain the quality of the existing system; expand the high-capacity transit system (MAX Light rail or bus rapid transit); expand the frequent service system; and improve local service.

Troutdale is not served by high-capacity transit or frequent service routes. The 2035 HCT System Plan identifies 257th Avenue as a Developing Regional Priority Corridor, which is a corridor where projected 2035 land use and commensurate ridership potential are not supportive of HCT implementation, but which have long-term potential due to political aspirations. Therefore, the Transit Master Plan includes potential transit improvement projects that focus on the quality of the existing transit service and local service enhancements.

Coordination with Regional Plan Designations

The [20102035](#) RTP includes designations within Troutdale for Frequent Bus Service and Regional Bus Service as defined below:

- Frequent Bus service offers local and regional bus service with stops approximately every 750 to 1,000 feet, providing corridor service rather than nodal service along selected arterial streets. This service typically runs at least every 15 minutes throughout the day and on weekends. Frequency may increase based on demand, and can include transit preferential treatments such as reserved bus lanes and signal preemption and enhanced passenger infrastructure along the corridor and at major bus stops, such as covered bus shelters, curb extensions, special lighting and median stations.
- Regional Bus service operates on arterial streets with typical frequencies of 15 minutes during most of the day, though midday headways may drop to 30 minutes. Regional bus may operate seven days per week, but not necessarily, based on demand or policy. Stops are generally spaced every 750 to 1,000 feet. Transit preferential treatments and passenger infrastructure such as bus shelters, special lighting, transit signal priority and curb extensions are appropriate at some locations such as those with high ridership.

Transit Master Plan

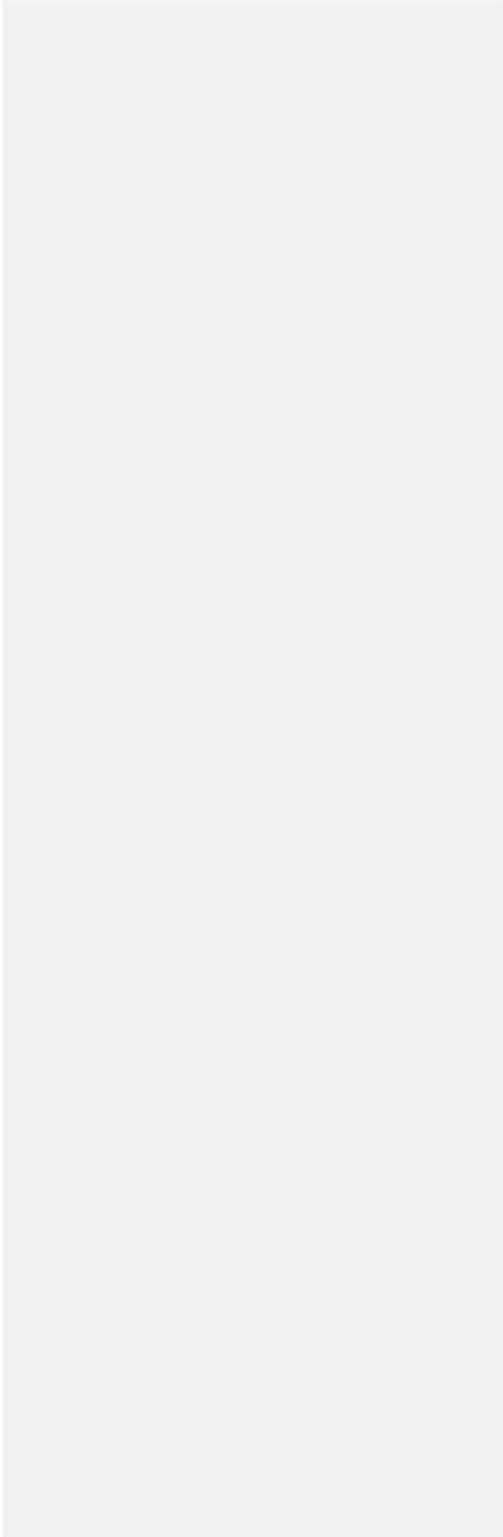
The Transit Master Plan was developed based on the transit system needs identified in the existing conditions analysis and reflects all of the potential transit improvement projects within Troutdale. The projects shown in Table 4-5 and on Figure 4-3 were evaluated based on the strategies identified below to create the Transit Action Plan.

Table 4-5: Transit Master Plan

Project ID	Location	Description	Cost (\$1,000's)
T1	Halsey/Graham Road	Coordinate with TriMet to provide a new route connecting the Outlet Mall to Rockwood MAX Station.	-
T2	Cherry Park Road	Coordinate with TriMet to provide a new route between 242 nd and 257 th Avenue.	-
T3	Bus Stop Enhancements	Coordinate with TriMet to provide bus shelters at transit stops that meet TriMet's minimum thresholds and support community goals for local transit services the following transit stop: <ul style="list-style-type: none"> • Stop 8747- Historic Columbia River Highway & SW Kendall Road • Stop 9792- Stark Street & SW Sundial Avenue • Stop 5398- Stark Street & McGinnis Avenue • Stop 13532- 257th Avenue & Historic Columbia River Highway 	-
T4	Park-and-Ride Lot	Coordinate with TriMet to study the feasibility of a Park-and-ride lot in the I-84 interchange area that would serve Troutdale and communities to the east and in potential conjunction with a parking structure facility at The Confluence site . This lot should provide access to the planned 40-Mile Loop Regional Multiuse Trail , the Sandy Riverfront Trail , and the bike/transit hub at Depot Park.	\$50
T5	Transit Signal Priority	Coordinate with TriMet and Multnomah County to implement transit signal priority on Halsey Avenue, 257 th Avenue and Stark Street.	-
T6	Marine/Sundial/Graham	Coordinate with TriMet to further enhance service to provide a new route serving the north industrial area.	-
T7	Troutdale Road/17 th Street/Cochran Road	Coordinate with TriMet to provide a new route serving the southeast Troutdale area.	-
T8	Stark/Sweetbriar/Evans	Study the feasibility of a local shuttle service to serve neighborhoods not covered by TriMet routes (including the Stark/Sweetbriar/Evans area).	\$50
T9	Existing Transit Routes	Coordinate with TriMet to reduce transit route headways (the amount of time between transit vehicle arrivals at a stop) .	-
T10	Transit Corridors	Direct growth to increase the density of development along transit routes in the City of Troutdale in an effort to support regional transit service goals.	-
Total			\$100

Note: Cost estimates indicate the estimated funding to be provided by the City of Troutdale. The projects shown in grey are under the jurisdiction of other agencies. Cost estimates are provided for these outside agency projects only where it is anticipated that the City will contribute funding to the project, and the cost figures shown represent only the City's estimated contribution. Projects shown in white are under the jurisdiction of the City.

Figure 4-3: Transit Master Plan



Strategies

Several strategies have been identified to help guide the selection and prioritization of the transit improvement projects included in the Transit Action Plan. These strategies are intended to focus community investment on those projects that are most effective at meeting critical needs, while deferring other projects of lesser value. The following strategies, which rely on coordination with TriMet, were used to select and prioritize the transit improvement projects (listed in order of importance):

- Provide direct/express access to MAX
- Provide access to employment areas
- Provide park-and-ride lots
- Provide express routes to regional employment centers
- Provide frequent service in peak commute periods
- Provide access to commercial areas
- Provide access to activity and service centers
- Provide bus shelters

Transit system enhancements with the TriMet service area are ultimately decided based on regional transit goals. As such, Troutdale has limited control over dictating the expansion of local service or increasing route frequency. These decisions can be influenced if the proper density is achieved along transit corridors or if roadway infrastructure is built to serve transit routes, a decision over which the City has more control. Another tactic for increasing transit service to the City is through inter-governmental agreements and funding strategies between Troutdale and TriMet in order to leverage transit dollars for local projects, providing better connections to transit facilities and supply transit amenities at transit locations.

Transit Action Plan

The Transit Action Plan identifies the transit improvement projects that are reasonably expected to be funded over the next 20 years, which meets the requirements of the updated TPR. The strategies identified above were used to rank the transit projects from highest to lowest in terms of priority. The highest-ranking City projects that are reasonably expected to be funded were combined with projects from other agencies identified in previous planning efforts to create the project list shown in Table 4-6, which are organized by location and type.

Table 4-6: Transit Action Plan

Project ID	Location	Description	Cost (\$1,000)
T1	Halsey/Graham Road	Coordinate with TriMet to provide a new route connecting the Outlet Mall to Rockwood MAX Station.	-
T2	Cherry Park Road	Coordinate with TriMet to provide a new route between 242 nd and 257 th Avenue.	-

T3	Bus Stop Enhancements	Coordinate with TriMet to provide bus shelters at transit stops that meet TriMet's minimum thresholds and support community goals for local transit services the following steps: Stop 8747- Historic Columbia River Highway & SW Kendall Road Stop 9792- Stark Street & SW Sundial Avenue Stop 5398- Stark Street & McGinnis Avenue Stop 13532- 257th Avenue & Historic Columbia River Highway	-
T5	Transit Signal Priority	Coordinate with TriMet and Multnomah County to implement transit signal priority on Halsey Street, 257 th Avenue, and Stark Street.	-
T6	Marine/Sundial/Graham	Coordinate with TriMet to further enhance service to provide a new route serving the north industrial area.	-
T7	Troutdale Road/17 th Street/Cochran Road	Coordinate with TriMet to provide a new route serving the southeast Troutdale area.	-
T9	Existing Transit Routes	Coordinate with TriMet to reduce transit route headways (the amount of time between transit vehicle arrivals at a stop) .	-
T10	Transit Corridors	Direct growth to increase the density of development along transit routes in the City of Troutdale in an effort to support regional transit service goals	-
Total			\$0

Note: Cost estimates indicate the estimated funding to be provided by the City of Troutdale. The projects shown in grey are under the jurisdiction of other agencies. Cost estimates are provided for these outside agency projects only where it is anticipated that the City will contribute funding to the project, and the cost figures shown represent only the City's estimated contribution. Projects shown in white are under the jurisdiction of the City.

Motor Vehicles

~~This section has been revised as part of a targeted effort to update to the City's TSP to comply with recent changes to the Oregon TPR and the 2035 RTP as well as to incorporate the conclusions and recommendations from the Troutdale IAMP and the EMCP. The revisions include an updated Motor Vehicle Master Plan and Motor Vehicle Action Plan that reflect the current and future needs of the City.~~

The existing conditions analysis presented in Chapter 3 identifies several corridors within Troutdale that do not meet performance standards, including 238th/242nd, 257th/Kane, Troutdale/Buxton, Stark, and the Troutdale Interchange. To meet performance standards and serve future growth, the future transportation system needs significant multi-modal improvements and strategies to manage the forecasted travel demand.

The following sections outline the type of improvements that would be necessary as part of a long-range master plan. Phasing of implementation will be necessary since all of the improvements cannot be done at once. This will require prioritization of projects and periodic updating to reflect current needs. Most importantly, it should be understood that the improvements outlined in the following sections are a guide to managing growth in Troutdale.

Transportation System Management (TSM)

Transportation System Management (TSM) focuses on low-cost strategies to enhance operational performance of the transportation system by seeking solutions to immediate transportation problems, finding ways to better manage transportation, maximizing urban mobility, and treating all modes of travel as a coordinated system. These types of measures include such things as signal improvements, ramp metering, traffic calming, access management, local street connectivity, intelligent transportation

systems (ITS) and programs that enhance and smooth transit operations. Typically, the most significant measures that can provide tangible benefits to the traveling public are traffic signal coordination and systems. Measures that are more difficult to measure but provide system reliability to maintain transportation flows include transit signal priority and incident management.

TSM measures focus primarily on region wide improvements, however there are a number of TSM measures that could be used in a smaller scale environment such as the Troutdale area. The following sections discuss TSM measures that could be appropriate for the Troutdale area.

Intelligent Transportation Systems (ITS)

ITS involves the application of advanced technologies and proven management techniques to relieve congestion, enhance safety, provide services to travelers, and assist transportation system operators in implementing suitable traffic management strategies. ITS focuses on increasing the efficiency of existing transportation infrastructure, which enhances the overall system performance and reduces the need to add capacity (e.g. travel lanes). Efficiency is achieved by providing services and information to travelers so they can (and will) make better travel decisions and to transportation system operators so they can better manage the system and improve system reliability. Multnomah County has developed an ITS deployment plan that includes projects in the Troutdale area, such as:

- Traffic monitoring and surveillance
- Signal coordination and optimization
- Signal priority
- Information availability
- Incident management

The devices and communications planned to implement these projects are shown in the Traffic Control Master Plan on Figure 4-4. Signal priority corridors are shown in the Transit Master Plan (Figure 4-3).

Neighborhood Traffic Management (NTM)

The City of Troutdale has a Speed Hump Program that establishes a process to guide speed hump installation through neighborhood involvement. This program includes considerations of street classification and emergency response needs, but it does not provide the opportunity for application of other NTM devices.

The Speed Hump Program could be updated to consider other traffic calming measures and work with the community to find the traffic calming solution that best meets their needs and maintains roadway function. Table 4-7 lists common NTM applications and suggests which devices might be supported by Gresham Fire and Emergency Services. Additional NTM measure descriptions that include diagrams, benefits, and costs are included in the technical appendix. Any NTM project should include coordination with emergency agency staff to assure public safety.

Figure 4-4: Traffic Control Master Plan

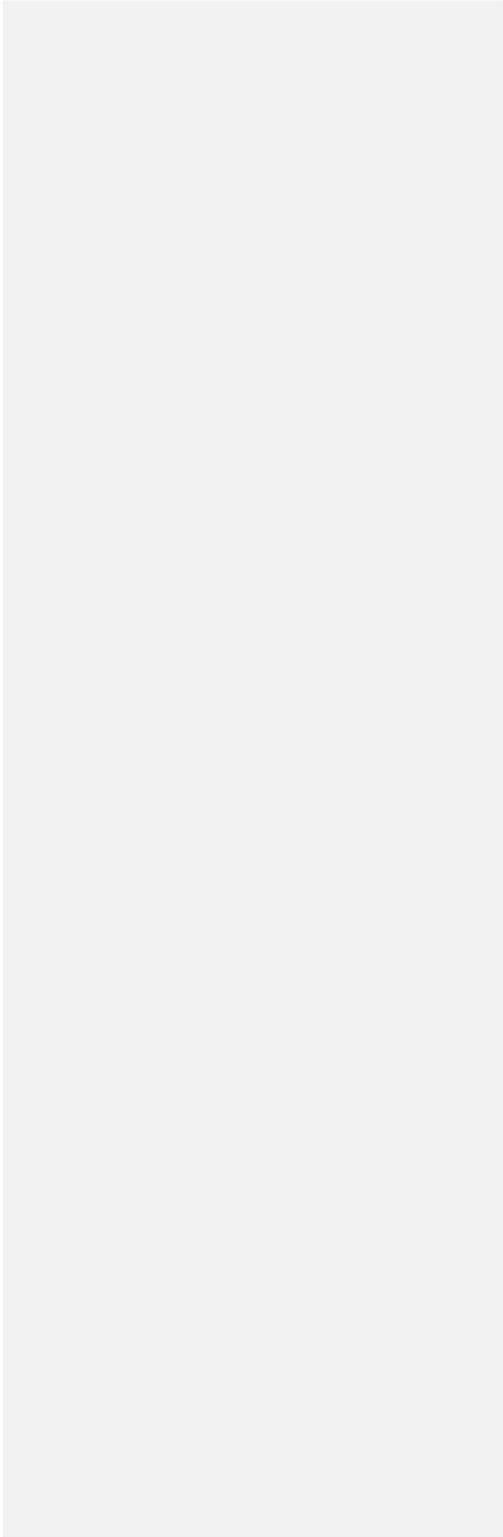


Table 4-7: Traffic Calming Measures by Roadway Functional Classification¹

Traffic Calming Measure	Roadway Classification		
	Arterial	Collector	Neighborhood/Local Street
Curb Extensions			Calming measures are okay on Lesser response routes that have connectivity (more than two accesses) and are accepted and field tested by Gresham Fire and Emergency Services.
Medians			
Pavement Texture			
Speed Hump	Not Supported	Not Supported	
Roundabout			
Raised Crosswalk	Not Supported	Not Supported	
Speed Cushion (provides emergency pass-through with no vertical deflection)	Not Supported		
Choker ²	Not Supported	Not Supported	
On-Street Parking			
Traffic Circle	Not Supported	Not Supported	
Diverter (with emergency vehicle pass through)	Not Supported	Not Supported	
Street Trees			

¹It is desired to have all traffic calming measures meet Gresham Fire Department guidelines including minimum street width, emergency vehicle turning radius, and accessibility/connectivity.

²Chokers are not supported when they do not shadow parking. If parking is shadowed, see curb extensions.

Access Management

Access Management is a broad set of techniques that balance the need to provide efficient, safe and timely travel with the ability to allow access to the individual destination. ODOT and Multnomah County have clear access management policies and the supporting documentation to ensure that the highway system is managed as wisely as possible for the traveling public. Proper implementation of Access Management techniques should guarantee reduced congestion, reduced accident rates, less need for highway widening, conservation of energy, and reduced air pollution.

Access management involves controlling or limiting ~~of~~ access on arterial and collector facilities to preserve their functional capacity. Numerous driveways erode the capacity of arterial and collector roadways. Preservation of capacity is particularly important on higher volume roadways for maintaining traffic flow and mobility. Whereas local and neighborhood streets function to provide access, collector and arterial streets serve greater traffic volume. Numerous driveways or street intersections increase the number of conflicts and potential for accidents and decrease mobility and traffic flow.

Troutdale, as with every city, needs a balance of streets that provide access with streets that serve mobility. The following access management strategies are identified to improve access and mobility in Troutdale:

- Provide left turn lanes where warranted for access onto cross streets
- Work with land use development applications to consolidate driveways where feasible
- Meet Multnomah County access requirements on arterials and collectors

- Establish City access standards for new developments on collectors and arterials
- New development and roadway projects should meet the requirements summarized in Table 4-8. The minimum spacing of roadways and driveways listed in this table is consistent with Multnomah County’s access spacing standards.

Table 4-8: Access Spacing Standards for City Street Facilities

Street Facility	Maximum spacing of roadways and driveways	Minimum spacing of roadways and Driveways
Arterials	1,000 Feet	530 Feet
Collector	530 Feet	150 Feet
Neighborhood/Local	530 Feet	-
All Roads	Require an access report for new access points stating that the driveway/roadway is safe as designed meeting adequate stacking, sight distance and deceleration requirements as set by ODOT, Multnomah County and AASHTO.	

Access management is not easy to implement and requires long institutional memory of the impacts of short access spacing – increased collisions, reduced capacity, poor sight distance and greater pedestrian exposure to vehicle conflicts. The most common opposition response to access control is that “there are driveways all over the place at closer spacing than mine – just look out there”. These statements are commonly made without historical reference. Many of the pre-existing driveways that do not meet access spacing requirements were put in when traffic volumes were substantially lower and no access spacing criteria were mandated. With higher and higher traffic volume in the future, the need for access control on all arterial roadways is critical – the outcome of not managing access properly is additional wider roadways which have much greater impact than access control.

Local Street Connectivity

Much of the local street network in Troutdale is built out and, in many cases, fairly well connected. In other words, multiple access opportunities exist for entering or exiting neighborhoods. However, there are still a number of locations where the majority of neighborhood traffic is funneled onto one single street. This results in out-of-direction travel for motorists and an imbalance of traffic volumes that impacts residential frontage. The outcome can result in the need for wider roads, traffic signals and turn lanes (all of which negatively impact traffic flow and degrade safety). By providing connectivity between neighborhoods, out-of-direction travel and vehicle miles traveled (VMT) can be reduced, accessibility between various modes can be enhanced and traffic levels can be balanced out between various streets. Additionally, public safety response time is reduced.

In Troutdale, some of these local connections can contribute with other street improvements to mitigate capacity deficiencies by better dispersing traffic. Several roadway connections will be needed within neighborhood areas to reduce out of direction travel for vehicles, pedestrians and bicyclists. This is most important in the areas where a significant amount of new development is possible.

Figure 4-5 shows the Local Street Connectivity Plan for Troutdale. In most cases, the connector alignments are not specific and are aimed at reducing potential neighborhood traffic impacts by better balancing traffic flows on neighborhood routes. The arrows shown in the figures represent potential connections and the general direction for the placement of the connection. In each case, the specific alignments and design will be better determined upon development review. The criteria used for providing connections are as follows:

- Every 300 feet, a grid for pedestrians and bicycles
- Every 530 feet, a grid for automobiles

To protect existing neighborhoods from potential traffic impacts of extending stub end streets, connector roadways should incorporate NTM into their design and construction. All stub streets should have signs indicating the potential for future connectivity. Additionally, any new development that involves the construction of a new street or street extension is required by the current development code to meet the following connectivity standards:

- Provides full street connections with spacing of no more than 530 feet between connections except where prevented by barriers
- Provides bike and pedestrian access ways in lieu of streets with spacing of no more than 330 feet except where prevented by barriers
- Limits use of cul-de-sacs and other closed-end street systems to situations where barriers prevent full street connections
- Includes no close-end street longer than 200 feet or having no more than 25 dwelling units
- Includes street cross-sections demonstrating dimensions of ROW improvements, with streets designed for posted or expected speed limits

The arrows shown on Figure 4-5 indicate priority connections only. Topography, railroads and environmental conditions limit the level of connectivity in some areas of Troutdale. Other stub end streets in the City's road network may become cul-de-sacs, extended cul-de-sacs or provide local connections. Pedestrian connections from the end of any stub end street that results in a cul-de-sac should be considered mandatory as future development occurs. The goal would continue to be improved city connectivity for all modes of transportation.

Functional Classification

A street's functional classification defines its role in the transportation system and reflects desired operational and design characteristics such as right-of-way requirements, pavement widths, pedestrian and bicycle features, and driveway (access) spacing standards. Figure 4-6 illustrates the functional classification plan for Troutdale, which includes the following designations:

- Major Arterials Streets carry high volumes of traffic between cities as part of the regional transportation system. Priority may be given to transit- and pedestrian-oriented land uses by way of regional boulevard design treatments. Design and management of major arterial streets emphasizes preservation of the ability to move auto and transit traffic

Figure 4-5: Local Street Connectivity Plan

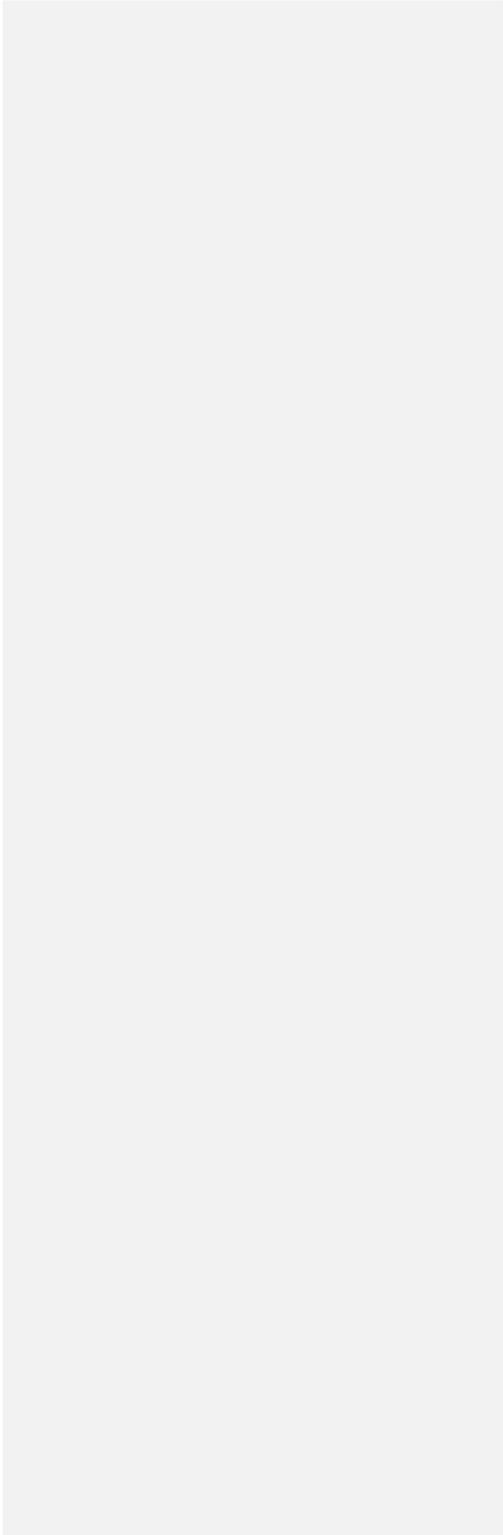
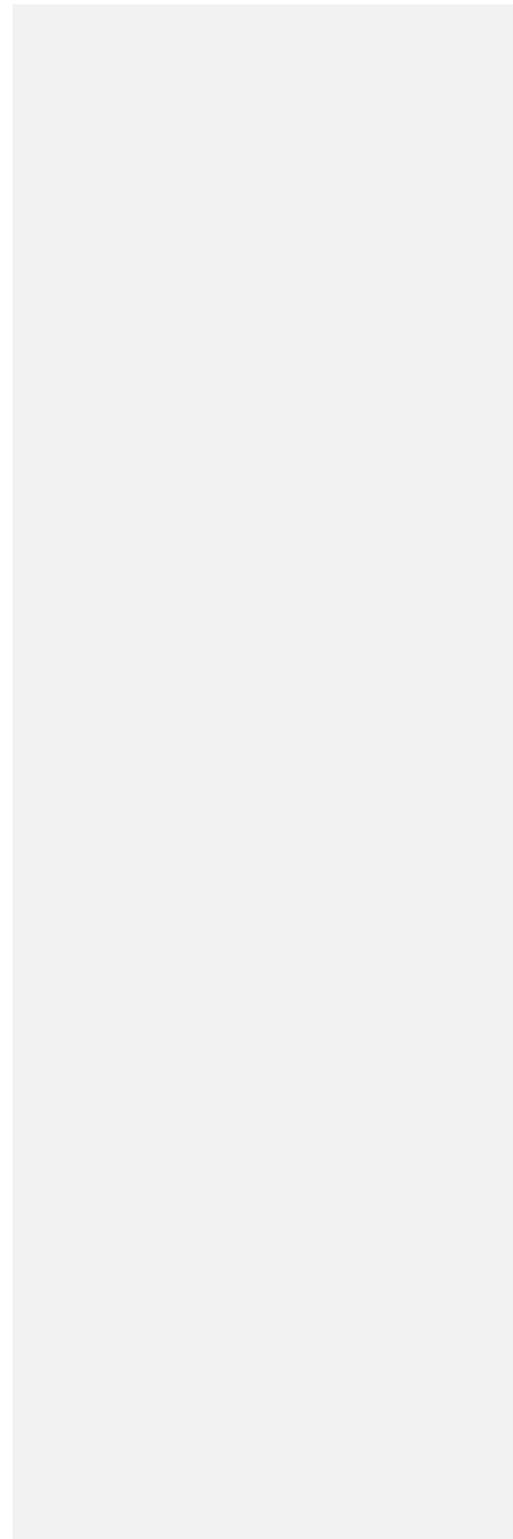


Figure 4-6: Functional Classification Plan



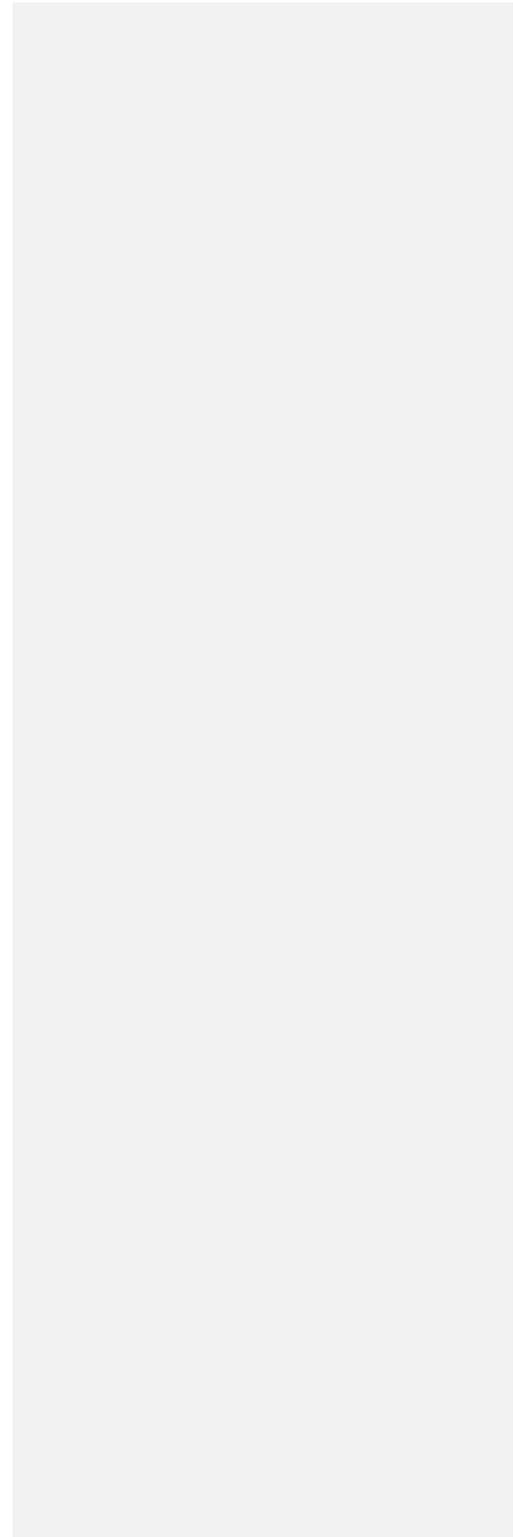
- Arterial streets typically carry less traffic volume than major arterials, but have a higher degree of connectivity between communities. Access management may be implemented to preserve traffic capacity. Land uses along the corridor are a mixture of community and regional activities. Arterial streets provide major links in the regional road and bikeway networks; provide for truck mobility and transit corridors; and are significant links in the local pedestrian system.
- Collector streets serve several purposes including linking neighborhoods to the regional system of bicycle and automobile streets, and basic transit services. They typically provide direct access between residential and commercial developments, schools and parks and carry higher volumes of traffic than neighborhood streets. Collector streets are also utilized to access industrial and employment areas and other locations with large truck and oversized load volumes.
- Neighborhood collector streets provide access primarily to residential land uses and link neighborhoods to higher order roads. They generally have higher traffic volumes than local streets.
- Local streets provide access to abutting land uses on low traffic volume and low speed facilities. Their primary purpose is to serve local pedestrian, bicycle and automobile trips and limited public transportation use in urban areas; and auto and farm vehicle circulation with local pedestrian, bicycle and equestrian use in rural areas.

The City of Troutdale has adopted standards for street cross sections that apply citywide to local streets (32' curb-to-curb), neighborhood collector streets (36' curb-to-curb), and commercial/industrial streets (36' curb-to-curb). In addition, there is a special local street cross section for the town center area that allows narrower widths (28' curb-to-curb). These cross sections are detailed in the *City of Troutdale Construction Standards for Public Works Facilities*. Refer to ODOT and Multnomah County standards for additional information related to all collector and arterial cross sections.

Street Right-of-Way Needs

Wherever arterial or collectors cross each other, planning for additional right-of-way to accommodate turn lanes should be considered within 500 feet of the intersection. Figure 4-7 summarizes the Troutdale streets that are anticipated within the Transportation System Plan horizon to require right-of-way for more than two lanes. Planning level right-of-way needs can be determined utilizing street cross-sections and the lane geometry outlined later in this chapter. Specific right-of-way needs will need to be monitored continuously through the development review process to reflect current needs and conditions. This will be necessary since more specific detail may become evident in development review which requires improvements other than these outlined in this 20-year general planning assessment of street needs.

Figure 4-7: Streets with Right-of-Way of More than 2-Lanes



Parking Requirements

The City of Troutdale has off-street parking ratios (minimum and maximum) in Chapter 9 of the Development Code. These ratios are consistent with the TPR and RTP parking ratio requirements.

Transportation Demand Management (TDM)

Transportation Demand Management (TDM) is the general term used to describe any action that removes single occupant vehicle trips from the roadway network during peak travel demand periods. As growth in the Troutdale area occurs, the number of vehicle trips and travel demand in the area will also increase. The ability to change a user’s travel behavior and provide alternative mode choices will help accommodate this growth.

Generally, TDM focuses on reducing vehicle miles traveled and promoting alternative modes of travel for large employers of an area. This is due in part to the Employee Commute Options (ECO) rules that were passed by the Oregon Legislature in 1993 to help protect the health of Portland area residents from air pollution and to ensure that the area complied with the Federal Clean Air Act.

Research has shown that a comprehensive set of complementary policies implemented over a large geographic area can have an effect on the number of vehicle miles traveled to/from that area. However, the same research indicates that in order for TDM measures to be effective, they should go beyond the low-cost, uncontroversial measures commonly used such as carpooling, transportation coordinators/associations, priority parking spaces, etc.

The more effective TDM measures include elements related to parking and congestion pricing, improved services for alternative modes of travel, and other market-based measures. However, TDM includes a wide variety of actions that are specifically tailored to the individual needs of an area. Table 4-9 provides a list of several strategies outlined in the ECO program that could be applicable to the Troutdale area.

Table 4-9: Transportation Demand Management Strategies

Strategy	Description	Potential Trip Reduction
Telecommuting	Employees perform regular work duties at home or at a work center closer to home, rather than commuting from home to work. This can be full time or on selected workdays. This can require computer equipment to be most effective.	82-91% (Full Time) 14-36% (1-2 day/week)
Compressed Work Week	Schedule where employees work their regular scheduled number of hours in fewer days per week.	7-9% (9 day/80 hour) 16-18% (4 day/40 hour) 32-36% (3 day/36 hour)
Transit Pass Subsidy	For employees who take transit to work on a regular basis, the employer pays for all or part of the cost of a monthly transit pass.	19-32% (full subsidy, high transit service) 2-3% (half subsidy, medium transit service)
Cash Out Employee Parking	A-n employer that has been subsidizing parking (free parking) discontinues the subsidy and charges all employees for parking. An amount equivalent to the previous subsidy is then provided to each employee, who then can decide which mode of travel to use.	Reduction 8-20% 5-9% 2-4% Transit High Medium Low
Reduced Parking Cost for HOVs	Parking costs charged to employees are reduced for high occupancy vehicles (HOV) such as carpools and vanpools.	1-3%

Alternative Mode Subsidy	For employees that commute to work by modes other than driving alone, the employer provides a monetary bonus to the employee.	21-34% (full subsidy of cost, high alternative modes) 2-4% (half subsidy of cost, medium alternative modes)
Bicycle Program	Provides support services to those employees that bicycle to work. Examples include: safe/secure bicycle storage, shower facilities and subsidy of commute bicycle purchase.	0-10%
On-site Rideshare Matching for HOVs	Employees who are interested in carpooling or vanpooling provide information to a transportation coordinator regarding their work hours, availability of a vehicle and place of residence. The coordinator then matches employees who can reasonably rideshare together.	1-2% (without support strategies) 6-8% (with support strategies)
Provide Vanpools	Employees that live near each other are organized into a vanpool for their trip to work. The employer may subsidize the cost of operation and maintaining the van.	15-25% (company provided van with fee) 30-40% (company subsidized van)
Gift/Awards for Alternative Mode Use	Employees are offered the opportunity to receive a gift or an award for using modes other than driving alone.	0-3%
Walking Program	Provide support services for those who walk to work. This could include buying walking shoes or providing lockers and showers.	0-3%
Company Cars for Business Travel	Employees are allowed to use company cars for business-related travel during the day	0-1%
Guaranteed Ride Home Program	A company owned or leased vehicle or taxi fare is provided in the case of an emergency for employees that use alternative modes.	1-3%
Time off with Pay for Alternative Mode Use	Employees are offered time off with pay as an incentive to use alternative modes.	1-2%

Source: Guidance for Estimating Trip Reductions from Commute Options, Oregon Department of Environmental Quality, August 1996.

Employment development north of I-84 will allow for TDM friendly development. Setting TDM goals and policies for new development will be necessary to help implement TDM measures in the future. With many regional trips destined to, or traveling through, the Troutdale area, region wide TDM measures should help to reduce congestion. Metro has established non-SOV (Single Occupancy Vehicle) mode share targets to be achieved by 2040. The 2040 non-SOV model target for town centers and main streets (downtown Troutdale) is 45-55%.¹

Metro’s [regional travel demand model](#) ~~Regional Demand Model~~ provides an analysis tool for monitoring non-SOV trip percentages between the various RTP funding scenarios. The forecasted non-SOV trip percentages take into account all RTP improvement projects (including transit, pedestrian, and bicycle system improvements), as well as the TAZ performance factors (which includes an increase in parking pricing and a decrease in transit pass fees paid by individual riders). Parking factors are based on a ratio of parking costs in comparison to a South/North Draft Environmental Impact Study (DEIS) parking survey. Transit Pass factors represent the amount of full transit fare that a transit rider is expected to pay (considering ECO rule and discount downtown fares). The RTP projects included in the 2025 financially constrained and priority models are shown in Table 4-10 and Table 4-11, respectively.

¹ Based on the 2000 Metro Regional Transportation Plan, Ordinance No. 00-869A (August 10, 2000), page 1-62.

Table 4-10: TDM Improvements included in the 20042025 RTP Financially Constrained System

RTP#	Location	Improvement	Jurisdiction	Time-Line	Cost (\$1,000s)
-	Troutdale Town Center	Implement Parking Pricing	Troutdale	-	-
2120	Sandy Boulevard Bicycle and Pedestrian Improvements	Retrofit bike lanes and sidewalks on existing street between 162 nd to Troutdale Road.	Multnomah Co.	2016-25	\$8,316
2124	Halsey Street Improvements -Troutdale	Improve Halsey Street to 3 lanes and complete boulevard design improvements	Multnomah Co.	2010-15	\$3,742
2125	Troutdale TC Pedestrian Improvements	Improve sidewalks, lighting, crossings, bus shelters and benches	Multnomah Co./Troutdale	2016-25	\$116
2126	257 th Avenue Pedestrian Improvements	Improve sidewalks, lighting, crossings, bus shelters and benches	Troutdale	2004-09	\$1,155
8028	Region-wide	Vehicle purchases to provide for expanded service – 1.5% per year	TriMet	2004-25	\$169,785
8032	Region-wide	Bus operating facilities	TriMet	2004-25	\$75,000
8043	Region-wide	Bus stop improvements	TriMet	2004-25	\$7,939
8046	Region-wide	Transit Signal Priority	TriMet	2004-25	\$19,892
8049	Region-wide	Construct improvements that enhance pedestrian access to transit – sidewalks, crosswalks, ADA improvements	TriMet	2004-25	\$20,000
8050	Region-wide	Regional employer outreach, transit marketing, vanpool and carpool, station cars and car sharing program	TriMet	2004-25	\$1,500
8052	Region-wide	Regional Travel Options TDM Program	TriMet	2004-25	\$16,978
Total					\$324,423

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Note: These improvements are assumed in Metro’s 20042025 RTP Financially Constrained System and do not necessarily correspond with the action plan of this TSP.

Table 4-11: Additional TDM Improvements included in the 20042025 RTP Priority System

RTP#	Location	Improvement	Jurisdiction	Time-Line	Cost (\$1,000s)
-	Troutdale	50% increase of parking costs in the Town Center	Troutdale	2004-25	-
-	Troutdale	Increase in street connectivity (from >8 per mile to >10 per mile)	Troutdale	2004-25	-
8030	Region-wide	Vehicle purchases to provide for expanded service – 3.8% per year	TriMet	2004-25	\$546,000
8033	Region-wide	Bus operating facilities	TriMet	2004-25	\$152,062
8045	Region-wide	Bus stop improvements	TriMet	2004-25	\$13,212
8048	Region-wide	Transit Signal Priority	TriMet	2004-25	\$83,746
8051	Region-wide	Regional Travel Options TDM Program	TriMet	2004-25	\$47,124
Total					\$842,114

Note: These improvements are assumed in Metro’s 20042025 RTP Priority System and do not necessarily correspond with the action plan of this TSP.

The overall Troutdale study area forecasted non-SOV percentage with the RTP financially constrained improvements is 37.6%. Additional improvements in the RTP priority scenario increase the overall non-SOV percentage to 39.4%, which corresponds to an increase of approximately 2%.

Figure 4-8 shows the non-SOV percentage increase at the TAZ level, which shows the areas with the greatest growth toward meeting the 2040 targets.

Figure 4-8: Growth in Non-SOV Use

These forecasted non-SOV percentages can only be achieved with significant improvements to the transportation system and implementation of trip reduction strategies. The City of Troutdale should coordinate with Multnomah County and TriMet to implement strategies to assure that the TDM assumptions in the RTP are implemented. The TDM action plan includes:

- Support continued efforts by TriMet, Metro, ODOT, and Multnomah County to develop productive TDM measures that reduce commuter vehicle miles and peak hour trips.
- Encourage the expansion of high-speed communication in all part of the city (fiber optic, digital cable, DSL, etc.). The objective would be to allow employers and residents the maximum opportunity to rely upon other systems for conducting business and activities than the transportation system during peak periods.
- Encourage developments that effectively mix land uses to reduce vehicle trip generation. These plans may include development linkages (particularly non-auto) that support greater use of alternative modes.
- Continued implementation of motor vehicle minimum and maximum parking ratios for new development.
- Continued implementation of building orientation and transit planning requirements for new development.
- Continued implementation of street connectivity requirements.
- Require new employment development to install bicycle racks.
- Implementation of bicycle, pedestrian, motor vehicle and transit system action plan.
- Monitor and manage the parking needs in the Troutdale Town Center, which could include long-term strategies such as parking pricing.

Motor Vehicle Master Plan

The transportation improvement projects identified in the 2005 TSP were updated to reflect the conclusions and recommendations of a number of regional and local planning efforts, including the [2011 IAMP](#) and the [2012 EMCP](#). The result is an updated project list that reflects the most recent modeling efforts by Metro as well as the most recent needs and perspectives of the City. As a result, a few notable projects from the 2005 TSP have been removed from this latest TSP update, including:

- 242nd Street Extension – This extension was removed from the Motor Vehicle Master Plan as part of the EMCP planning effort.
- 238th Street Extension – This extension was removed from the Motor Vehicle Master Plan as it is no longer consistent with other local and regional planning efforts.
- 2nd Street Extension – This extension was removed from the Motor Vehicle Master Plan due access management concerns along 257th Avenue.

- 257th Avenue/Cherry Park Road (south) – the addition of dual left turn lanes was removed from the Motor Vehicle Master Plan due to right of way constraints and long-term need.

The Motor Vehicle Master plan was developed based on the motor vehicle system needs identified in the existing conditions analysis, the I-84 IAMP, and the EMCP and reflects all of the potential motor vehicle improvement projects within Troutdale. The projects shown in Table 4-12 and on Figure 4-9 were evaluated based on the strategies identified below to create the Motor Vehicle Action Plan. Several of the projects identified in Table 4-12 and on Figure 4-9 incorporate improvements shown in other mode master plans, including the pedestrian and bicycle master plans. The cost estimates shown in the table were taken from prior plan documents, or are estimated using standard assumptions for new facilities. Further refinements should be made of these estimates prior to capital budgeting.

Table 4-12: Motor Vehicle Master Plan

No.	Location	Description	Cost (\$1,000)
M1	Troutdale Road	Widen to 3 lanes from Beaver Creek Road to Stark Street. Includes sidewalks and bike lanes.	-
M2	Troutdale Road	Widen to 3 lanes from Stark Street to the south City limits. Includes sidewalks and bike lanes.	-
M3	Sundial Road Widening	Widen to 3 lanes from Rogers Circle to the North City limits. Includes sidewalks and bike lanes.	-
M4	Stark Street Widening (West)	Widen to 5 lanes between 257 th Avenue and Troutdale Road. Includes sidewalks and bike lanes.	\$300
M5	Stark Street Widening (East)	Widen to 3 lanes between Troutdale Road and Evans Avenue. Includes sidewalks and bike lanes.	-
M6	Halsey Street Widening	Construct facilities according to the Main Streets on Halsey Plan Widen to 3 lanes from 238 th Avenue to Historic Columbia River Highway. Includes sidewalks and bike lanes.	To Be Determined-
M7	Marine Drive	Widen Marine Drive to a two-way five-lane cross-section under I-84.	-
M8	Graham Road	Reconstruct Graham Road.	\$550
M9	Marine Drive	Construct the Marine Drive Extension.	\$980
M10	Marine Drive/Sundial Road	Improvement intersection of Marine Drive/Sundial Road. Includes widening Marine Drive from approximately 500 feet west of intersection to existing five-lane section.	-
M11	Historic Columbia River Highway/Buxton Avenue	Signalize in coordination with 257 th Avenue/Historic Columbia River Highway	\$200
M12	257 th Way	Extend 257 th Way to the urban renewal area.	-
M13	Parking Study	Conduct a parking study within the Troutdale Town Center – the study should include an evaluation of potential off-street parking facilities	\$50
M14	Dunbar Avenue	Reconstruct Dunbar Avenue.	\$450
M16	Historic Columbia River Highway	Install traffic calming features along the Historic Columbia River Highway from Depot Park to east city limits	\$150
M17	Sandy Avenue	Reduce the road to one-way access and provide multimodal facilities	-*
M18	Sandy Avenue	Complete a resiliency project along Sandy Avenue	\$1,240
M19	Downtown/Urban Renewal Area Connections	Construct a vehicular connection that extends Kibling Avenue and crosses the railroad tracks at-grade and continues into the Confluence site.	\$170**
M20	Historic Columbia River Highway/Depot Park	Install a traffic control device where E Columbia River Highway turns to the south	\$150
M15	Swigert Way Extension	Extend Swigert Way to the Graham Road	-
Total			\$3,690 \$2,530

Note: Cost estimates indicate the estimated funding to be provided by the City of Troutdale. The projects shown in grey are under the jurisdiction of other agencies. Cost estimates are provided for these outside agency projects only where it is anticipated that the City will contribute funding to the

project, and the cost figures shown represent only the City's estimated contribution. Projects shown in white are under the jurisdiction of the City.

* [The City of Troutdale's contributions to these project costs are included in the Pedestrian and Bicycle Plans.](#)

** [The City of Troutdale's contribution to these project costs is assumed to be 10% of the overall project costs.](#)

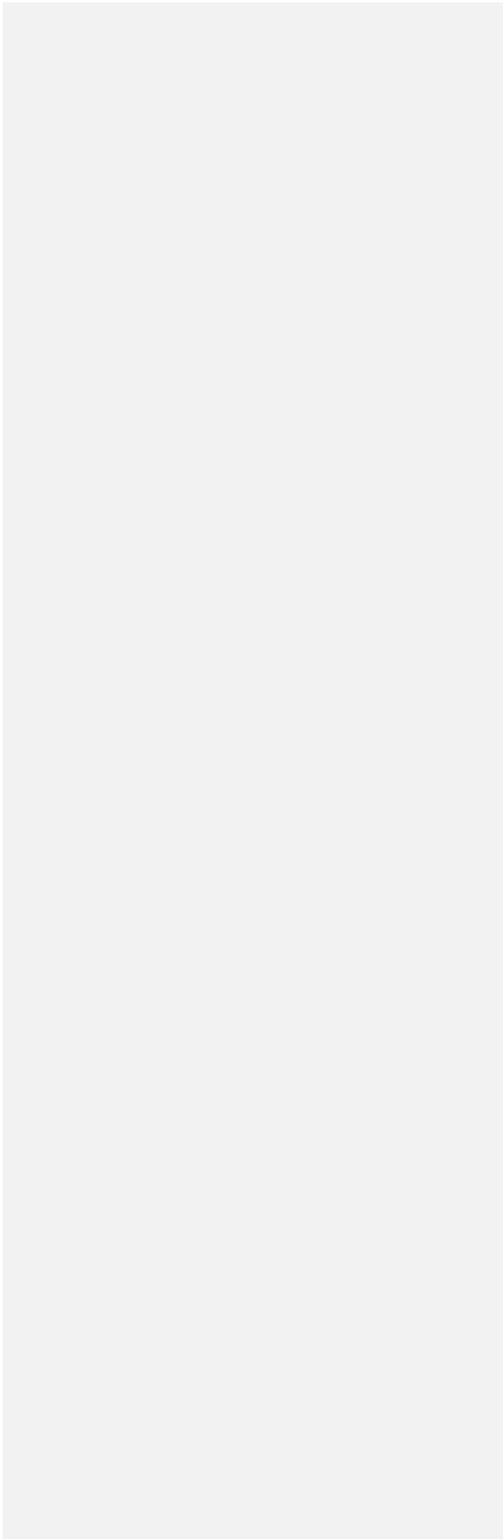
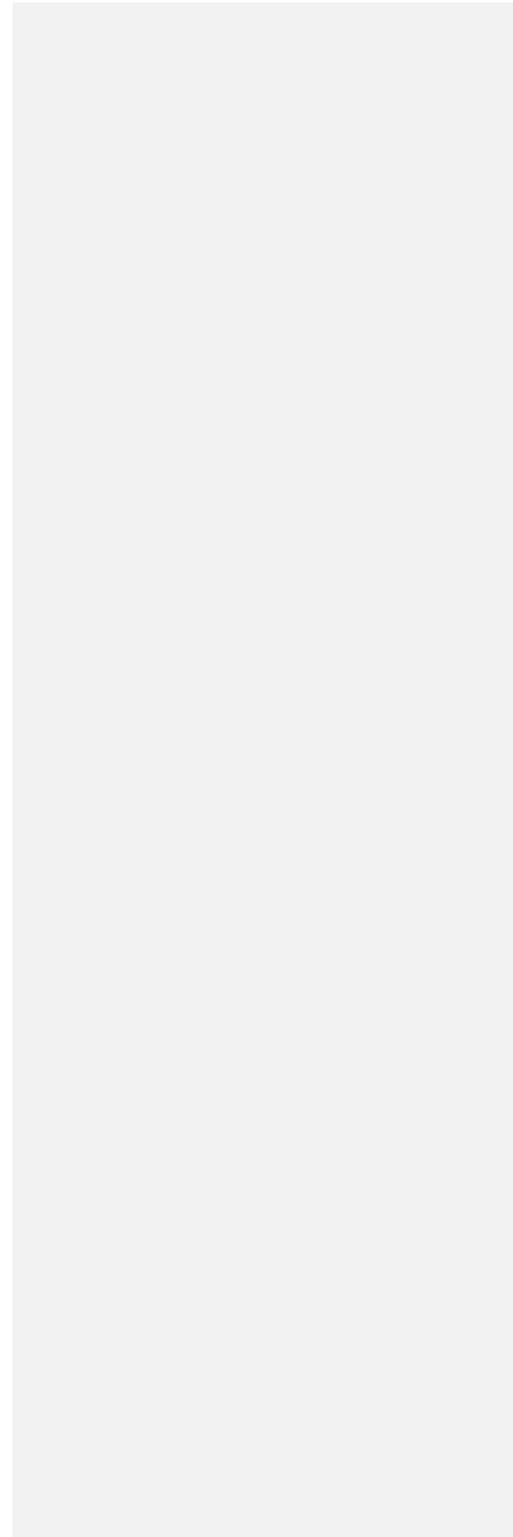


Figure 4-9: Motor Vehicles Master Plan



Strategies

Several strategies have been identified to help guide the selection and prioritization of the motor vehicle improvement projects included in the Motor Vehicle Action Plan. These strategies are intended to focus community investment on those projects that are most effective at meeting critical needs, while deferring other projects of lesser value. The following strategies were used to select and prioritize the motor vehicle improvement projects (listed in order of importance):

- Provision of **L**eft turning **L**anes on collectors
- Regional **C**irculation
- Adopt TSM measures to improve system efficiency (including ITS, NTM, access management, **L**ocal street connectivity, and functional classification)
- Circulation **E**nhancements
- Mitigate all **I**ntersections to **L**evel of **S**ervice D in the PM **P**eak **H**our
- Intersection **M**odifications
- Additional **S**ignals on **A**rterial/**C**ollector **I**ntersections
- Improve **C**irculation of **R**esidential **A**reas
- Develop TDM **P**rograms to **R**educe **P**eak **T**raffic for **E**mployers in Troutdale
- Neighborhood **T**raffic **M**anagement

[Projects in the Motor Vehicle Action Plan were also reviewed to ensure an equitable distribution of projects through the community, including areas with high concentration of transportation disadvantaged populations.](#)

Motor Vehicle Action Plan

The Motor Vehicle Action Plan identifies the motor vehicle improvement projects that are reasonably expected to be funded over the next 20 years, which meets the requirements of the updated Transportation Planning Rule. The strategies identified above were used to rank the motor vehicle projects from highest to lowest in terms of priority. The highest-ranking City projects that are reasonably expected to be funded were combined with projects from other agencies identified in previous planning studies to create the project list shown in Table 4-13, which are organized by location and type.

Table 4-13: Motor Vehicle Action Plan

No.	Location	Description	Cost (\$1,000)
M2	Troutdale Road	Widen to 3 lanes from Stark Street to the south City limits. Includes sidewalks and bike lanes.	-
M4	Stark Street Widening (West)	Widen to 5 lanes between 257th Avenue and Troutdale Road. Includes sidewalks and bike lanes.	\$300
M6	Halsey Street Widening	Widen to 3 lanes from 238 th Avenue to Historic Columbia River Highway. Includes sidewalks and bike lanes.	-

No.	Location	Description	Cost (\$1,000)
M7	Marine Drive	Widen Marine Drive to a two-way five-lane cross-section under I-84.	-
M8	Graham Road	Reconstruct Graham Road.	\$550
M9	Marine Drive	Construct the Marine Drive Extension.	\$980
M10	Marine Drive/Sundial Road	Improve intersection of Marine Drive/Sundial Road. Includes widening Marine Drive from approximately 500 feet west of intersection to existing five-lane section.	-
M11	Historic Columbia River Highway/Buxton Road	Signalize in coordination with 257 th Avenue/Historic Columbia River Highway	\$200
M12	257 th Way	Extend 257 th Way to the urban renewal area.	-
M13	Parking Study	Conduct a parking study within the Troutdale Town Center – the study should include an evaluation of potential off-street parking facilities, including a parking structure at The Confluence site.	\$50
M14	Dunbar Avenue	Reconstruct Dunbar Avenue.	\$450
M16	Historic Columbia River Highway	Install traffic calming features along the Historic Columbia River Highway from Depot Park to east city limits	\$150
M17	Sandy Avenue	Reduce the road to one-way access and provide multimodal facilities	-\$*
M18	Sandy Avenue	Complete a resiliency project along Sandy Avenue	\$1,240
M20	Historic Columbia River Highway/Depot Park	Install a traffic control device where E Columbia River Highway turns to the south	\$150
Total			\$3,520 \$2,530

Note: Cost estimates indicate the estimated funding to be provided by the City of Troutdale. The projects shown in grey are under the jurisdiction of other agencies. Cost estimates are provided for these outside agency projects only where it is anticipated that the City will contribute funding to the project, and the cost figures shown represent only the City's estimated contribution. Projects shown in white are under the jurisdiction of the City. [* The City of Troutdale's contributions to these project costs are included in the Pedestrian and Bicycle Plans.](#)

OTHER MODES

~~While pedestrian, bicycle, transit, and motor vehicle transportation modes have a more significant effect on the quality of life in Troutdale, other modes of transportation must be considered.~~ Future needs for freight, air and pipeline infrastructure are identified by their providers and are summarized below.

Freight

This update incorporates the conclusions and recommendations of the 2012 East Metro Connections Plan. The projects identified in this planning effort have been incorporated into the updated Master Plans as well as the designation of 257th Avenue as a road connection on the regional freight network. This change was ~~partially in part,~~ due to the cancellation of the 242nd Avenue extension as previously identified in the RTP. Given the existing characterizes of 257th Avenue as a ~~de-facto~~ freight route, this change will have little impact on the TSP.

Trucks

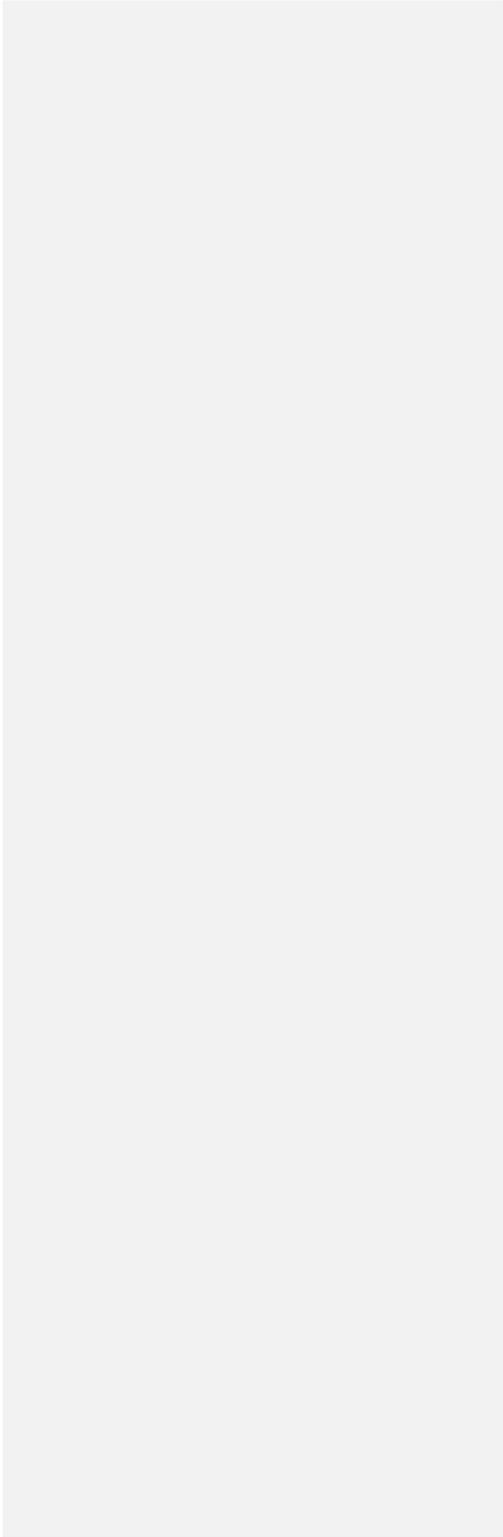
Efficient truck movement plays a vital role in the economical movement of raw materials and finished products. The establishment of through truck routes provides for this efficient movement while at the same time maintaining neighborhood livability, public safety, and minimizing maintenance costs of the roadway system. The freight plan is shown in Figure 4-10. The objective of this plan is to allow these streets to focus on design criteria that are "truck friendly"; i.e. 12-foot travel lanes, longer access spacing, 35-foot (or larger) curb returns, and pavement design that accommodates a larger share of trucks. The

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designated truck routes shown in Figure 4-10 are consistent with recent changes to the Regional Freight Plan as identified in the East Metro Connections Plan.

Figure 4-10 Freight Plan



Rail

There are two rail lines, the Graham (2A) and the Kenton (2AE) that currently traverse the City of Troutdale, combining to transport over 53 million gross tons of freight in 2002. Both lines are owned and operated as a Class 1 Railroad by Union Pacific Railroad (UPRR). The Graham (2A) line runs 17 trains a day with a maximum authorized speed of 50 mph. It has one at-grade rail crossing in the study area at 244th Avenue. The Kenton (2AE) line runs 30 trains a day at a maximum authorized speed of 50 mph. The Kenton has one at-grade rail crossing in the study area located along a spur track off of the main line that serves the former aluminum plant. There are no passenger trains currently running through Troutdale. The volume, length and schedule of the freight trains are not expected to change significantly over the 20-year planning horizon.

Gas Pipelines

Two high-pressure natural gas pipelines serve Troutdale. One line runs north-south adjacent to 242nd Drive, crossing I-84, then turning eastward and northeasterly through the Troutdale Reynolds Industrial Park to the NE corner of the City, and continuing across the Columbia River into Washington. The second line runs east-west along Sandy Boulevard, until turning north at I-84 before terminating at the Kenton (2AE) UPRR rail line. The future service of gas pipelines are not expected to change significantly over the 20 year planning horizon.

Air

The Troutdale Airport is located north of Interstate 84 and is classified as a Category 2 – Business or High Activity General Aviation Airport. The runway is 150 feet wide by 5,400 feet long, and has over 30,000 annual aircraft operations (take offs and landings). Pavement condition varies over the length of the runway and was found to be deficient in meeting runway pavement strength by the Oregon Aviation Plan. However, reconstruction is not planned for several years. The Troutdale Airport Master Plan predicts a modest 2 percent growth in both the number of operations and number of aircraft based in Troutdale over the next 10 years, concluding that current infrastructure is adequate to meet demand. Consequently, the airport is considering leasing some of the land it does not currently require for their operations. The RTP designates the Troutdale airport as an Inter-city air passenger terminal.

ENVIRONMENTAL JUSTICE

Socioeconomic conditions within the City of Troutdale were considered in the development of the TSP update to ensure that the future transportation system meets the needs of the entire population. The transportation improvement projects identified in the pedestrian, bicycle, transit, and motor vehicle plans were selected to ensure that the transportation system meets the needs while not creating adverse conditions for select segments of the population. These projects will ensure that the transportation disadvantaged will have equal access to public facilities and services located throughout Troutdale as well as in neighboring communities.