

MEMORANDUM

To: Clackamas County Planning Commission
From: Steve Williams, Principal Transportation Planner
Date: May 23, 2022
RE: Update of Transportation System Plan for Damascus

The purpose of the May 23 policy session is to:

1. Present to the Planning Commission the draft products developed to update the Clackamas County Transportation System Plan (TSP) for the area of the former City of Damascus:
 - Draft Damascus Mobility Plan
 - Draft amendments to Comprehensive Plan Map 5-11a that depict the proposed projects in the Damascus area
 - Draft amendments to Comprehensive Plan Tables 5-3a-d listing the proposed projects by priority
2. Give the Planning Commission an opportunity to discuss issues and ask staff questions about the draft amendments in order to help prepare for the public hearing on this matter.

Background

The Oregon Revised Statutes (ORS) require that local governments prepare and regularly update Transportation System Plans that identify and analyze the transportation needs within the entire jurisdiction and propose policies and projects to address the needs. Clackamas County's Transportation System Plan (TSP), which covers all of unincorporated Clackamas County, makes up Chapter 5 of the Comprehensive Plan. The last full TSP update was approved in 2013 and, aside from some minor project-related changes, it has not been amended since.

The disincorporation of the city of Damascus in 2016 resulted in an unincorporated area that has not been included in the TSP. Over the past year the DTD Long Range Planning staff worked with a consulting team to develop the materials needed to revise the TSP to include the unincorporated Damascus area.

After reviewing existing materials, staff determined:

1. With the recently adopted Clackamas County Transit Development Plan, there is sufficient information regarding transit needs and recommended improvements for the Damascus area.
2. A comprehensive update of the Pedestrian and Bikeway Plans scheduled to begin in 2022, which will cover this area and the Clackamas County Active Transportation Plan adopted in

2015, will provide sufficient information for the Damascus area regarding bicycle and pedestrian transportation needs.

Therefore this plan focused solely on vehicular transportation issues and needs in Damascus. Kittelson & Associates was the consulting team that conducted the technical analysis and prepare the draft plan.

Damascus Mobility Plan Development

Over the past year the draft Damascus Mobility Plan was developed through a six-step process.

1. Identification and documentation of existing conditions related to vehicular transportation and traffic, including an analysis of operations at 17 intersections using traffic volume and delay data collected pre-pandemic in April 2019.

- All the county intersections met the county's adopted performance measurements and operate at Level of Service (LOS) C or better during the PM peak hour period.
- Four intersections of OR 212 with county roads operated below LOS C including:
 - SE Tong Road and OR 212 which operates at LOS F
 - SE Sunnyside Road-SE Anderson Road and OR 212 which operates at LOS F
 - SE Foster Road and OR 212 which operates at LOS D
 - SE 222nd Drive and OR 212 which operates at LOS F
- All the intersections were below the statewide 90th percentile crash rate except for SE Bohna Park Road and SE Wiese Road, SE Sunnyside-SE Anderson Road and OR 212, and SE 222nd and OR 212.

A safety assessment was also prepared for the five-year period from January 1, 2015 to December 31, 2019. During that period 537 crashes occurred in the study area, including six fatal crashes and 19 serious injury crashes. Of the 537 crashes:

- 220 (41%) were rear-end crashes,
- 112 (21%) were turning crashes, and
- 109 (20%) were crashes where a vehicle left the road and hit a fixed object.

Three types of transportation improvements were identified to address existing transportation issues in the area:

- Roadway upgrades to provide shoulders to accommodate pedestrians and bicyclists to improve vehicular safety
- Capacity improvements to address congestion at key intersections of OR 212 and local roads
- Safety improvements to address the three high-crash rate intersections identified above.

2. Study of future conditions included the preparation of population forecasts f based on the County's Zoning and Development Ordinance (ZDO) and Metro's 2040 Population and Employment Forecasts. This data was used to model 2040 traffic in Damascus and the surrounding area of Clackamas and Multnomah counties. This analysis showed:

- All intersections continue to operate at LOS C or above in 2040 except for the four intersections on OR 212 identified above
- A fifth intersection, SE Tillstrom Road and SE Borges Road will operate at LOS D.

Based on the analysis of existing and future conditions, we determined that the primary road improvement needs focus on safety and intersection upgrade projects.

3. Development of a project list for the Damascus area was carried out as part of two distinct efforts:
 - A Mobility Plan Alternatives Analysis that focused on existing and future conditions on the county roads, and
 - The OR 212 (SE 187th Avenue to SE 242nd Avenue) Intersection Refinement Study that provided a more in-depth study of intersections of the local roads and OR 212.

As part of these efforts, improvements proposed as part of the Happy Valley Pleasant Valley/North Carver Comprehensive Plan and TSP update were included in the traffic analysis to determine the effect of those projects on traffic in Damascus. The traffic analysis showed that those improvements were beneficial for traffic in Damascus.

4. Identification of 22 projects, primarily adding turning lanes at some intersections, realigning one or more roads at some intersections to align the “legs” of the intersection and improve safety, and adding shoulders on arterial and collector roads as called for in the TSP and County Roadway Standards. In addition, seven regional projects proposed by ODOT and Happy Valley were identified as beneficial for traffic operations in Damascus.
5. Prioritization of the proposed projects into the categories used in the TSP:
 - Tier 1: 20-year capital projects that are needed and are matched with anticipated funding.
 - Tier 2: Preferred capital projects that are needed to meet population, housing and employment projections but that do not have identified funding at this time.
 - Tier 3: Long-term capital projects that would be beneficial if funding is available.

Chapter 6 of the Damascus Mobility Plan (pages 39 to 47) provides a complete list of the identified project by priority, with additional detail in Appendix A.

6. Public Engagement. Because development of the Damascus Mobility Plan took place entirely during the Covid-19 pandemic, public engagement was conducted as a virtual, online process. All materials and memoranda were posted online to improve public access to the process. County staff also used social media platforms such as Facebook and NextDoor to provide updates on the process and notices of the posting of materials.

Two virtual open houses were conducted to provide a method for direct public input. Each three-week long open house included the following:

- Notification with postcards (printed in English and Spanish) mailed to every residence and business in Damascus, as well as social media.
- A special web page linked from the project website with surveys and input tools allowing the public to share their comments and concerns.
- Interactive maps enabled the public to select intersections and road segments and provide input on issues or suggestions on improvements for that location.
- A Zoom public meeting during which the project team made a presentation and members of the public had the opportunity to ask questions and make comments.

There were 404 people who visited the opens house and viewed the materials. Of those, 35 provided comments. There were 21 attendees at the Zoom public meetings. Appendix B of the Damascus Mobility Plan provides additional detail and copies of all the materials that were used.

The process also included one virtual meeting with the Damascus Community Planning Organization (CPO) and an in-person presentation at a CPO-sponsored community meeting.

Although the virtual public engagement process was new and different for the project team and public, it provided a great deal of useful input and was very helpful in the process of identifying and prioritizing the projects.

Proposed Changes to Chapter 5 – Transportation System Plan

We anticipate the Damascus Mobility Plan will be adopted into the Clackamas County TSP as part of Appendix A. In addition, updates will be needed to the maps and table in Chapter 5, as described below.

1. Draft updates to Table 5-3 a-d. These tables contain the lists of the projects in the TSP.
 - Table 5-3a: 20-Year Capital Projects that are needed and matched with anticipated funding.
 - Table 5-3b: Preferred Projects that are need to meet expected growth in population, housing and employment but don't have identified funding.
 - Table 5-3c: Long-Term Capital Projects that would be beneficial if funding became available.
 - Table 5-3d: Regional Capital Projects that are the responsibility of other agencies and would provide a beneficial impact on Clackamas County.

These tables have been amended to include the proposed prioritized projects identified in the Damascus Mobility Plan. The proposed new projects are added at the end of each table and highlighted in italics and underlined. These tables must be amended into the TSP upon recommendation of the Planning Commission by action of the Board of Commissioners.

2. Update of Map 5-11a. This map shows all the projects in the Greater Clackamas Regional Center/Industrial Area, including those proposed to be added from the Damascus Mobility Plan. This map must be amended into the adopted TSP upon recommendation of the Planning Commission by action of the Board of Commissioners.

Discussion Items/Questions:

Does the Planning Commission have any comments, concerns, or questions regarding the Damascus Mobility Plan?

For more information: Please contact Steve Williams at 503-742-4696 or SWilliams@clackamas.us.

Draft Damascus Mobility Plan

Clackamas County Planning Commission

May 23, 2022



Agenda

- ▶ Purpose of the Damascus Mobility Plan
- ▶ Public Engagement Process
- ▶ Project List
 - ▶ Project Maps
 - ▶ Project Tables
- ▶ Questions and Comments



Draft Damascus Mobility Plan

Clackamas County

May 2022

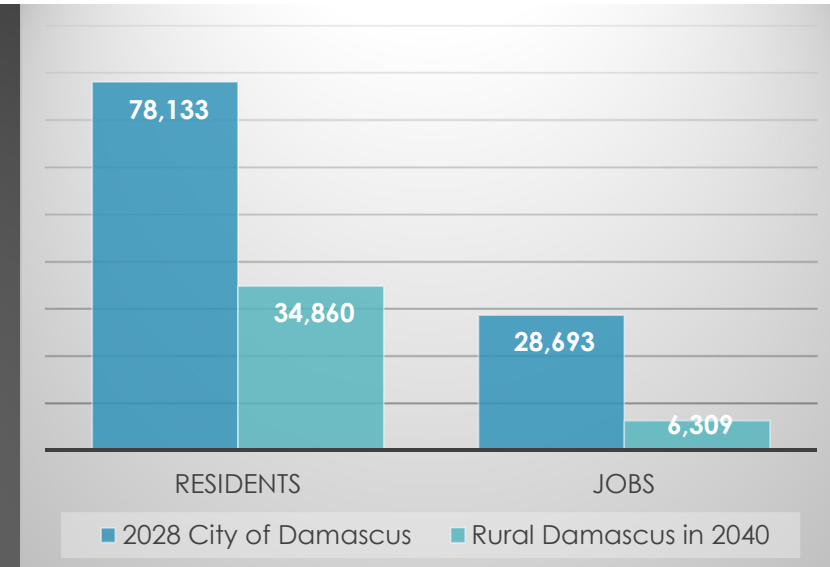


Damascus Mobility Plan Purpose

- ▶ State law requires Clackamas County to prepare and adopt a transportation system plan (TSP) for unincorporated areas
 - ▶ Damascus was a city when the county completed its TSP (2013), so was not included
 - ▶ Since disincorporation in 2016, the county is again responsible for area planning
- ▶ **FOCUS**
 - ▶ Near- and long-term vehicular and freight congestion and safety on county roads (not a study of OR 212)
 - ▶ Assume existing county land use and rural zoning
 - ▶ *Significantly less land use density than previous city zoning*
 - ▶ System solutions for local roads at key intersections, such as Sunnyside and Foster at OR 212 and 242nd at OR 212
 - ▶ Rely on other county efforts for transit, pedestrian and bicycle plans

Vision for Damascus

- ▶ Damascus transportation plans were reviewed for this study, but those:
 - ▶ Were for a **suburban city in 2028** twice the size of Happy Valley with **78,133** residents and **28,693** jobs
 - ▶ Were never adopted
 - ▶ Became invalid when the city disincorporated
- ▶ County land use & transportation designations now apply to Damascus area
 - ▶ County zoning is for a **rural, large-lot community** surrounding town center area
 - ▶ Projected **34,860** residents and **6,309** jobs in 2040
 - ▶ Fewer people and jobs, resulting in lower future traffic levels



Public Engagement Process



Gather Data:

Project team reviews related projects, existing conditions

Summer 2021

Public Open House:

What would you like us to know about the current road system?

August 2021

Public Open House:

What do you think about the potential projects? Did we miss anything?

Winter 2021-22

Report to Community:

Present to Planning Commission and Board of Commissioners

Spring 2022

Adopt Plan:

Board of Commissioners

Summer 2022

Public engagement: community meetings, open houses, web site, social media, email updates, postcard

<https://www.clackamas.us/damascusroads>

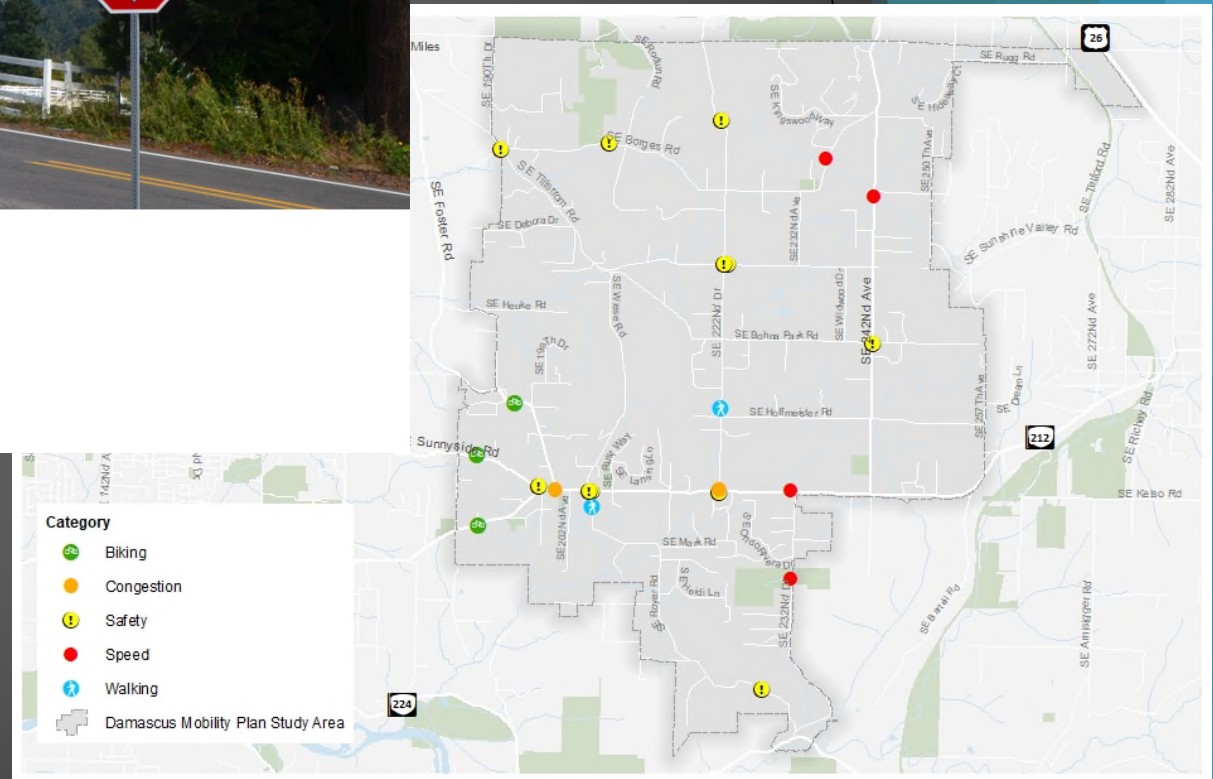
Public Engagement Process



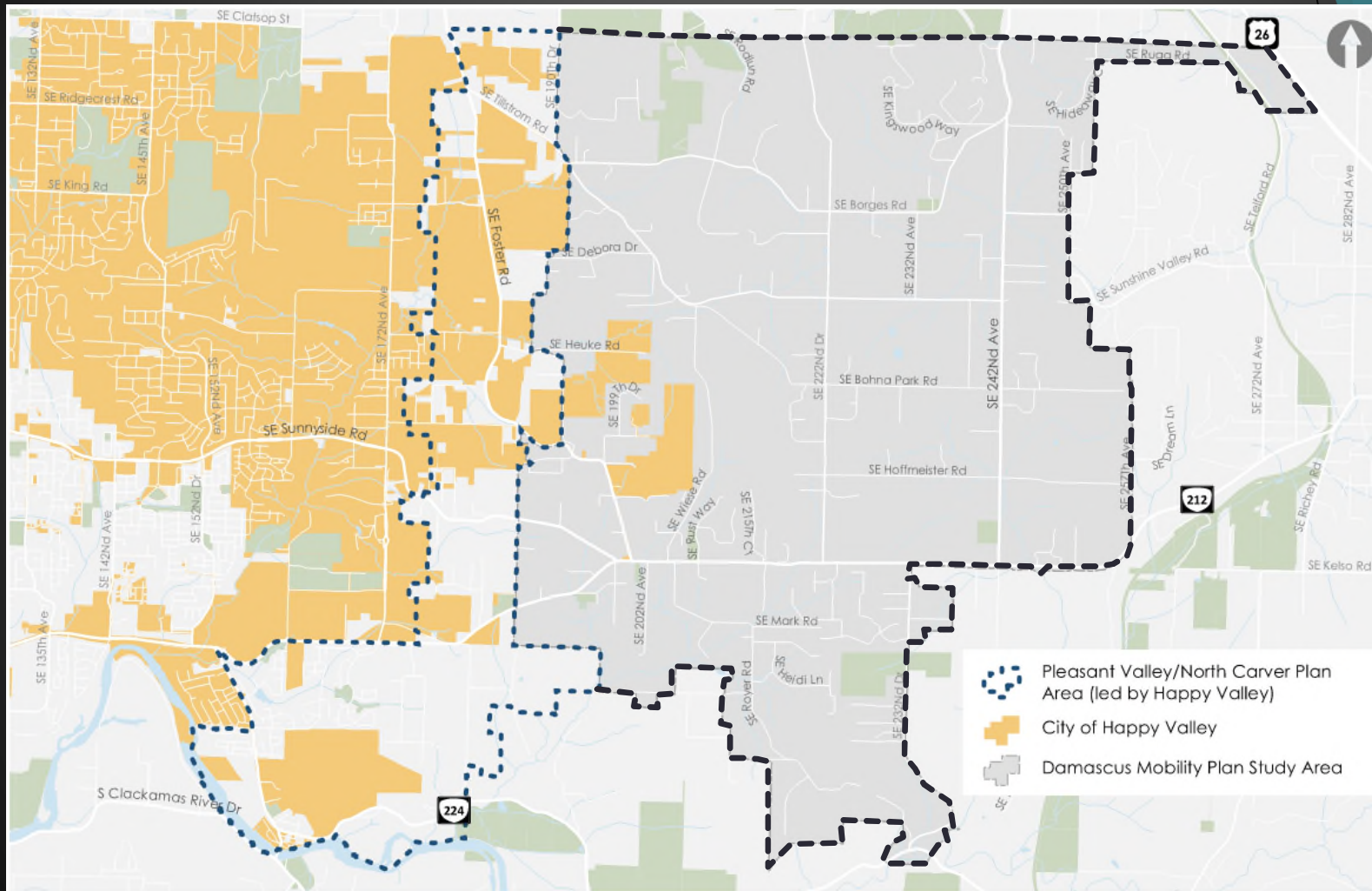
Damascus Mobility Plan Virtual Open House 2

February 28 - March 13

Live Meeting March 9th from 6 - 7:30 PM



Damascus Mobility Plan Study Area



Main Project Tasks

- ▶ Evaluated existing and future traffic volumes and crash patterns; supplemented that with public feedback from a project open house in August 2021
- ▶ Developed and evaluated alternatives in the Damascus area and OR 212 intersections
- ▶ Prioritized these projects using County's Transportation System Plan (TSP) criteria
- ▶ Incorporated public feedback from second project open house in March 2022 to create final project list

Outline of Draft Damascus Mobility Plan

1. Introduction/Goals
2. Public Engagement
3. Existing Conditions
4. Future Conditions
5. Project List Development
6. Mobility Plan Project List
7. Next Steps



Damascus Mobility Plan

Clackamas County

April 2022



K KITTELSON
& ASSOCIATES

Draft Mobility Plan Project List

- ▶ **Prioritizes County projects into 3 tiers consistent with the Clackamas County TSP:**
 - » **Tier 1: 20-year capital projects** – Needed projects and investments matched with anticipated funding (Project ID 1000 through 1137 in CC TSP)
 - » **Tier 2: Preferred capital projects** – Projects and investments needed to meet population, housing, and employment projections, but that do not have identified funding at this time (Project ID 2000 through 2044 in CC TSP)
 - » **Tier 3: Long-term capital project needs** – Projects that would be beneficial to do if funds were available (Project ID 3000 through 3182 in CC TSP)
- ▶ **Proposed projects can be found on pages 42 to 45 of the draft Damascus Mobility Plan**

Pleasant Valley/North Carver Plan

Project map includes three key planned Happy Valley projects from the draft PV/NC plan and other previous planning efforts:

- ▶ **172nd-190th Connector**
 - ▶ Construct new 5-lane facility between 172nd Avenue and 190th Drive
- ▶ **Happy Valley Boulevard (SE Sunnyside Road extension)**
 - ▶ Construct new 5-lane east-west facility from 172nd Avenue to Winston Road; realign existing Sunnyside Road to south
- ▶ **SE Sunnyside Road**
 - ▶ Widen to 3-lane facility between Happy Valley Boulevard and 187th Avenue

Legend:

- Regional Projects by Priority (4000s)**
 - High
 - Medium
 - Low
- County Projects by Priority**
 - Tier 1 (1000s)
 - Tier 2 (2000s)
 - Tier 3 (3000s)
- Planned Pleasant Valley/North Carver Projects (led by Happy Valley)
- Pleasant Valley/North Carver Plan Area (led by Happy Valley)
- Happy Valley City Boundary
- Damascus Mobility Plan Study Area

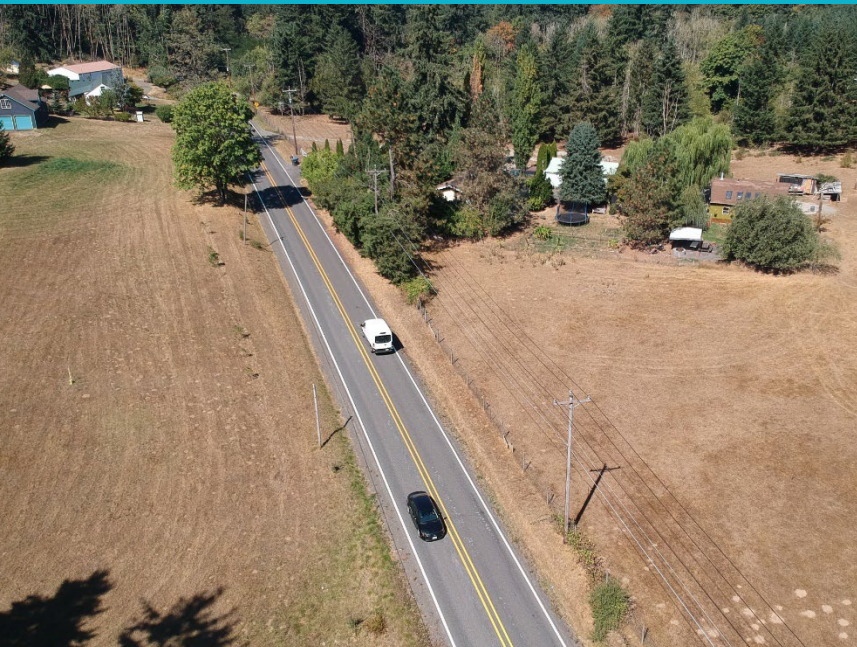
Summary of Proposed Projects

Project Tier	# of Projects	Total Estimated Cost
Tier 1	6	\$9,058,000
Tier 2	5	\$9,770,000
Tier 3	11	\$41,249,000
TOTAL	22	\$72,940,000

Questions and Comments

Stephen Williams, Principal Transportation Planner
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Draft Damascus Mobility Plan

Clackamas County

May 2022



Draft Damascus Mobility Plan

Clackamas County

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Clackamas County

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Project Number 23232

May 15, 2022

Note: The purpose of this plan is to identify potential property and environmental impacts, design and construction costs, and feasibility of the improvements. Actual impacts, further refinements, discussion with property owners, and timing of improvements will be subject to future funding availability and addressed during the project delivery phase.

Projects on state facilities (i.e. OR 212) will require coordination with ODOT and approval from the State or Regional Traffic Engineer. Inclusion of an improvement in the Plan does not represent a commitment by ODOT to fund, allow, or construct the project.

ACKNOWLEDGEMENTS

The Damascus Mobility Plan is the result of a collective effort, including the following:

PROJECT MANAGEMENT TEAM

- » Karen Buehrig, Clackamas County
- » Scott Hoelscher, Clackamas County
- » Ellen Rogalin, Clackamas County
- » Michael Walter, City of Happy Valley
- » Steve Williams, Clackamas County

TECHNICAL ADVISORY COMMITTEE

- » Shane Abbott, Clackamas County
- » Mike Bezner, Clackamas County
- » Martha Fritzie, Clackamas County
- » Vince Hall, Clackamas County
- » Joel Howie, Clackamas County
- » Joe Marek, Clackamas County
- » Christian Snuffin, Clackamas County
- » Glen Bolen, Oregon Department of Transportation
- » Seth Brumley, Oregon Department of Transportation

Special thanks to these individuals, as well as the community members who provided comments and input through the Plan's public engagement process.

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**SE 242nd Avenue &
SE Bohna Park Road**

EXECUTIVE SUMMARY

Executive Summary

The Damascus Mobility Plan provides a long-term roadway network for the Damascus-area that meets projected mobility and safety needs. While this project focuses on road improvements, the recently adopted Clackamas County Transit Development Plan identified transit improvements for the Damascus area, and the Clackamas County Bike Walk Plan will provide recommendations for active transportation improvements in Damascus.

Clackamas County updates its Transportation System Plan (TSP) for unincorporated areas of the county approximately every decade. When the last update took place, in 2013, Damascus was a city, so the area was not included in the county plan. Since then, the city was disincorporated in 2016 and lawsuits related to that action ended in 2020. As a result, the study area's land use and transportation system are governed by the County's Comprehensive Plan and 2013 Transportation System Plan, which are based on a more rural context than the urban context that had been contemplated by the former city.

This Damascus Mobility Plan provides transportation planning for the area formerly in the city boundaries. It is the result of a multiyear effort, including extensive involvement of staff from Clackamas County, the Oregon Department of Transportation (ODOT), and the City of Happy Valley, as well as engagement with the community. The plan will be incorporated into the Clackamas County TSP.

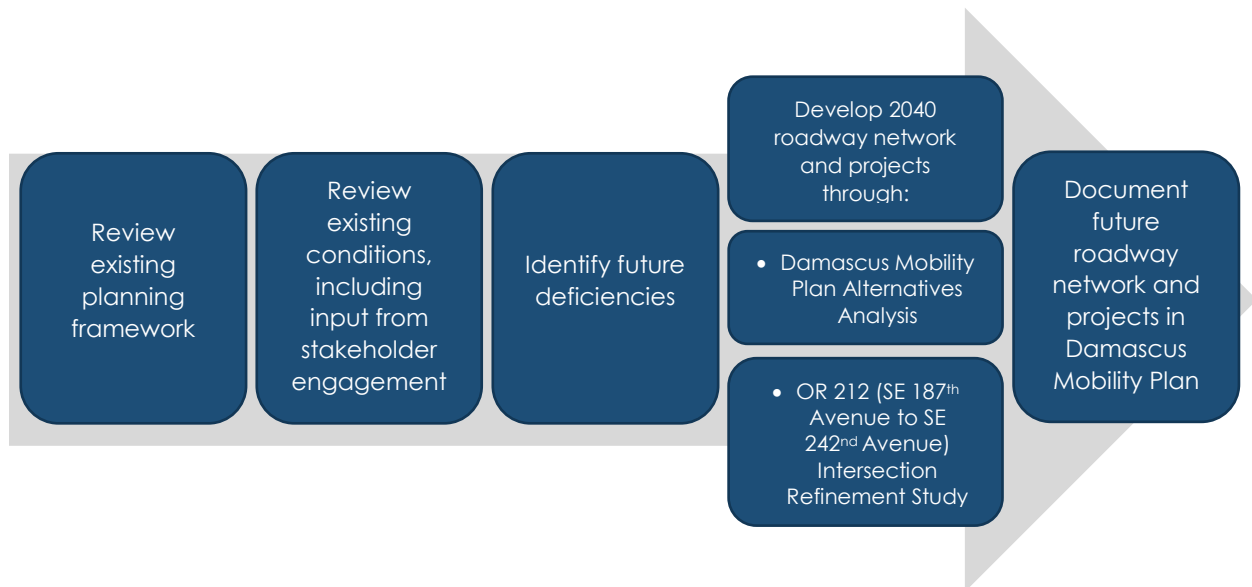
As evidenced through the operational assessment conducted for existing and future conditions, County intersections within the Damascus area are projected to continue to operate within the County's delay-based standards, with generally low levels of congestion and delays. Therefore, most projects recommended focus on safety improvements and upgrades to provide shoulders. As part of this plan, intersections on OR 212 between SE 187th Avenue and SE 242nd Avenue were more closely studied, given capacity needs on this corridor. Improvements were identified and are included in this Plan, to be coordinated with ODOT. Clackamas County will also continue to coordinate with the City of Happy Valley, who served as a key partner in developing this Plan. The City of Happy Valley is engaged in a concurrent effort to plan for the Pleasant Valley/North Carver area, which includes westerly areas of the previous City of Damascus that are now in the process of being annexed into Happy Valley. Projects in this area are important to how the system functions in Damascus, especially the planned 172nd-190th Connector and Sunnyside extension to Foster. A full list of the proposed projects is included in *Section 6: Mobility Plan*.

This document includes the following sections:

1. **Introduction:** Why the Damascus Mobility Plan is needed, related planning efforts, and Plan goals
2. **Public Engagement:** Key sources of feedback throughout the plan development
3. **Existing Conditions:** Current roadway characteristics, intersection operations, safety conditions, and transit system
4. **Future Conditions:** How traffic will function in 2040 on the current Damascus road network
5. **Project Development:** Efforts undertaken to identify projects to address existing and future mobility and safety needs
6. **Mobility Plan:** Prioritized projects and studies, and the future 2040 roadway network
7. **Next Steps:** Process to incorporate the Damascus Mobility Plan into the Clackamas County Transportation System Plan (TSP)

Figure 1 provides an overview of the tasks that contributed to development of the plan.

Figure 1. Damascus Mobility Plan Development



Key outcomes from the plan include:

- » A prioritized list of projects in the Damascus Mobility Plan Study Area that addresses mobility and safety needs
- » A refined improvement package recommended for OR 212 between SE 187th Avenue and SE 242nd Avenue, including concept sketches for intersection improvements
- » A 2040 Roadway Network that includes proposed network changes throughout the study area
- » A process for incorporating the Damascus Mobility Plan into the Clackamas County TSP



SE Tillstrom Road

1. INTRODUCTION

1. Introduction

The Damascus Mobility Plan outlines the street system needed through the year 2040 for passenger cars and freight. The plan reflects a vision expressed by the community and affected stakeholders and was developed through close coordination between Clackamas County, the Oregon Department of Transportation (ODOT), and the City of Happy Valley, with input from the public.

The plan is intended to:

- » Address gaps in the 2013 Clackamas County Transportation System Plan (TSP) as the land in the study area was within the then-City of Damascus in 2013 when the county TSP was last updated. The city never adopted a transportation plan, and the area reverted to the county's planning responsibility when the city disincorporated in 2016. As a result, there is no transportation plan for the area of the former city.
- » Identify street and intersection changes needed to address near- and long-term vehicular and freight congestion and safety needs. These changes reflect traffic growth associated with land development consistent with the County Comprehensive Plan as well as overall regional growth.
- » Address vehicular congestion and identified safety issues at key intersections along the OR 212 corridor between SE 187th Avenue and SE 242nd Avenue.
- » Coordinate with other County planning efforts for the area that identify the needs of people walking, riding bikes and taking transit. Two key plans supporting this plan are the County's Transit Development Plan (complete) and Walk Bike Clackamas Plan (in-progress).

BACKGROUND

The Clackamas County Transportation System Plan (TSP) was updated in 2013, with a focus on unincorporated areas of the County. The TSP deferred to each city's plans for County facilities within the boundaries of incorporated lands. At the time the TSP was updated, Damascus was incorporated and had developed a draft TSP for the area within the city's Urban Growth Boundary (UGB). When Damascus disincorporated in July 2016, all City of Damascus plans became void and it became necessary for Clackamas County to develop and adopt plans. The Damascus Mobility Plan presents street system changes needed within the area of the former city's UGB to support existing land use and regional growth through the 2040 planning horizon. When complete, this plan will be fully integrated into the Clackamas County TSP.

GOALS

This plan applies the adopted 2013 Clackamas County TSP goals process for evaluating and prioritizing projects. The TSP identifies the following goals:

- » **Goal 1: Sustainability** – Provide a transportation system that optimizes benefits to the environment, the economy and the community.
- » **Goal 2: Local Businesses and Jobs** – Plan the transportation system to create a prosperous and adaptable economy and further the economic well-being of businesses and residents of the County.
- » **Goal 3: Livable and Local** – Tailor transportation solutions to suit the diversity of local communities.
- » **Goal 4: Safety and Health** – Promote a transportation system that maintains or improves our safety, health, and security.
- » **Goal 5: Equity** – Provide an equitable transportation system.
- » **Goal 6: Fiscally Responsible** – Promote a fiscally responsible approach to protect and improve the existing transportation system and implement a cost-effective system to meet future needs.

DAMASCUS PLANNING AREA

The geographic area covered by this plan is illustrated in Figure 2. The area includes most of the former City of Damascus planning area within the Portland Metropolitan UGB; however, properties and roadways generally west of SE 190th Drive are now being planned and guided by the City of Happy Valley through the Pleasant Valley/North Carver (PV/NC) Comprehensive Plan. Additional changes to the OR 212 corridor are included in this plan that go beyond those documented in the PV/NC Plan. These changes will be incorporated into the County TSP's by updating the previously adopted project lists and maps.

The map displays the following features:

- Pleasant Valley/North Carver Plan Area (led by Happy Valley):** Indicated by a blue dashed boundary.
- City of Happy Valley:** Shaded in orange.
- Damascus Mobility Plan Study Area:** Outlined with a grey dashed line.

Key roads shown include SE Clatsop St, SE Ridgecrest Rd, SE King Rd, SE 145th Ave, SE 132nd Ave, SE 172nd Ave, SE 190th Dr, SE Tillkom Rd, SE Foster Rd, SE Heuke Rd, SE 199th Dr, SE Wilkie Rd, SE Rust Way, SE 202nd Ave, SE Mark Rd, SE Royer Rd, SE Heidi Ln, SE 232nd Dr, SE Borge Rd, SE 232nd Ave, SE Bohna Park Rd, SE Hoffmeister Rd, SE 250th Ave, SE Sunshine Valley Rd, SE Rugg Rd, SE 262nd Ave, SE 272nd Ave, SE Kelso Rd, SE Richy Rd, SE Dream Ln, SE 257th Ave, SE 242nd Ave, SE 222nd Dr, SE 152nd Dr, SE 142nd Ave, SE 135th Ave, S Clackamas River Dr, and SE 152nd Ave. Highway shields for 26, 212, and 224 are also present. A north arrow is located in the top right corner.

RELATED PLANNING EFFORTS

This plan incorporates past and ongoing planning efforts in and near the study area. An overview of other related planning efforts is provided in Table 1.

Table 1. Relevant Planning Documents and Key Applications

Document	Key Applications for the Damascus Area
Clackamas County Transportation System Plan (TSP)	Does not specifically address roadways within Damascus, but does provide a framework for identifying and evaluating projects. The TSP is Chapter 5 of the County's Comprehensive Plan.
Clackamas County Comprehensive Plan (2005)	Addresses a density of development within the Damascus area that is significantly lower than development assumptions for the area when it was part of an incorporated city.
Clackamas County Active Transportation Plan (ATP)	Identifies key walking and cycling routes to connect people within Clackamas County; ATP recommends a project that connects people between Happy Valley, the Clackamas Regional Center, and the Damascus Area.
Clackamas County Transit Development Plan (TDP)	Includes near-term recommendation for new transit service on OR 224 and medium- and long-term recommendations for service within the Damascus area on Sunnyside Road and OR 212.
SE 172nd Avenue/190th Drive Corridor Management Plan	Provides a vision for the SE 172 nd Avenue/SE 190 th Drive Corridor just west of the project study area.
Sunrise Project Final Environmental Impact Statement (FEIS)	Analyzes environmental impacts that can be expected due to development of the Sunrise Expressway (OR224) between I-205 and SE 172 nd Ave.
City of Damascus Transportation System Plan (unadopted)	A draft TSP was developed for the City of Damascus in 2013 before the City was unincorporated. Although never adopted, this plan provided a thorough analysis of roadways within the study area and identified a number of projects that were considered for inclusion in the Damascus Mobility Plan.
Metro: 2018 Regional Transportation Plan (RTP)	Includes "financially constrained" projects along the SE 172 nd Avenue/SE 190 th Drive Corridor as well as a project to widen the OR 212 corridor.
East Metro Connections Project	Recommends transportation investments in Happy Valley and on the SE 182 nd Avenue/SE 190 th Drive corridor north of the study area.
Pleasant Valley/North Carver (PV/NC) Comprehensive Plan	The PV/NC area immediately west of the study area will be annexed into Happy Valley in the future. The Damascus Mobility Plan incorporates the street network developed in PV/NC.

Document	Key Applications for the Damascus Area
Clackamas to Columbia (C2C) Corridor Plan	Includes projects on the SE 181 st /182 nd /190 th /172 nd Avenue corridors through Gresham and Happy Valley, as well as projects to support broader connectivity in the area. Several projects are located partially within the Damascus Mobility Plan study area.
Walk Bike Clackamas Plan	The County is currently preparing to update the pedestrian and bicycle elements of the TSP in 2023. This will include recommendations for improvements to the Damascus area pedestrian and bicycle network.
Drive to Zero Safety Action Plan	The County's safety action plan identifies location-specific safety programs, systemic safety programs, and non-infrastructure programs for investments in transportation safety. While no projects are identified for the Damascus study area, this planning framework can help frame future safety investments.



SE 202nd Avenue &
SE Tillstrom Road

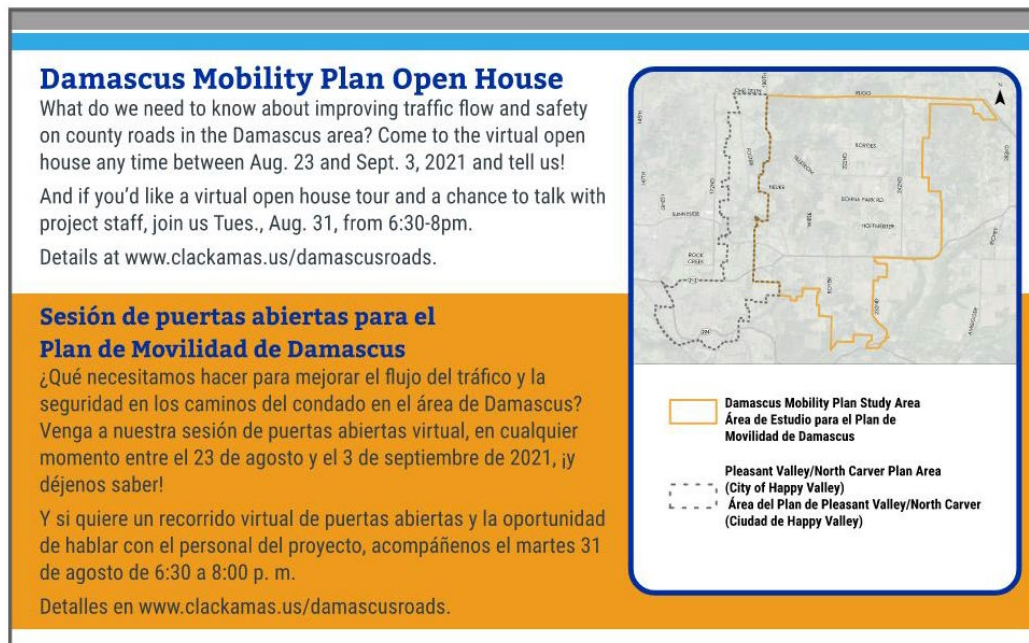
2. PUBLIC ENGAGEMENT

2. Public Engagement

Extensive public outreach and engagement activities shaped the plan's priorities, needs, vision and project recommendations. Key components of these activities include:

- » **Project mailings and notifications**, including information mailed twice during the plan preparation to all residents and businesses within the study area. An example of the postcard for the first mailing is shown in Figure 3.

Figure 3. First Postcard Sent to Residents



- » **Project website**, hosted by the County to provide project background, opportunities for involvement, and key project materials.
- » **Virtual open house #1** was held online from August 23 to September 3, 2021 and gathered feedback about existing conditions in the study area. An interactive map was used to gather comments on concerns by mode. Feedback received is summarized on the following page.
- » **Virtual open house #2** was held online from February 28 to March 13, 2022 and presented the future conditions assessment and draft County and Regional projects that addressed identified deficiencies. An interactive map was used to gather input on the draft project prioritization, which influenced the ultimate project list presented in *Section 6: Mobility Plan*. Feedback received is summarized on the following page.
- » **Planning Commission and Board of County Commissioner hearings**, held in 2022, presented the Damascus Mobility Plan for adoption.
- » A **Technical Advisory Committee (TAC)** comprised of staff from the County, ODOT, and City of Happy Valley provided technical review and feedback during the development of the final draft plan.

PUBLIC ENGAGEMENT FEEDBACK

Public engagement helped identify issues to be addressed, and then helped determine if the planned investments for the Damascus Mobility Plan were appropriate.

Feedback from virtual open house #1 included the following items:

- » Improving safety across the roadway system, with comments specific to turning movements at SE Tillstrom Road & SE Borges Road, the SE Sunnyside Road-SE Anderson Road & OR 212 intersection, and increasing the stop sign visibility at SE 222nd Drive & SE Bohna Park Road.
- » Reducing travel speeds, specifically along SE Wiese Road, SE Borges Road, SE 232nd Drive, and SE 242nd Avenue, as well as at the SE Bohna Park Road & SE 242nd Avenue, SE 222nd Drive & OR 212, and SE 242nd Avenue & Tillstrom Road intersections.
- » Addressing congestion concerns, specifically on OR 212.
- » Making it easier to walk and bike across Damascus with wider shoulders.
- » Addressing access management concerns at specific locations, including the intersection of SE 242nd Avenue & SE Bohna Park Road.

Feedback from virtual open house #2 included the following items:

- » Offering support for the proposed lane configuration and traffic control changes at intersections along OR 212. Suggesting the realignment of Wiese Road and Royer Road at OR 212 should be a higher-priority project.
- » Seeking additional information to what is being done to address capacity constraints on OR 212 through the Damascus area.
- » Supporting the new roadway configurations on Sunnyside Road and the new connection of 187th Avenue to the south.
- » Seeking higher prioritization for shoulder widening on 242nd Avenue, but otherwise supportive of the intersection project at 242nd Avenue & SE Borges Road. One participant noted that a flashing yellow eastbound left-turn arrow should be studied at the SE 242nd Avenue & OR 212 intersection.
- » Noting that Foster Road has several sharp turns, and while the shoulder widening is a good project, it may not address the crashes that occur on this roadway corridor.
- » Dropping the shoulder widening segments on SE Tillstrom Road and SE Hoffmeister Road to Tier 3 projects.

A full report on the public engagement for the Damascus Mobility Plan can be found in Appendix B.



*SE Sunnyside Road-SE
Anderson Road & OR 212*

3. EXISTING CONDITIONS

3. Existing Conditions

The existing conditions assessment focuses on vehicular and freight operations, and refers to the recently completed Clackamas County Transit Development Plan for transit components and active transportation components that will be addressed in the Walk Bike Clackamas Plan.

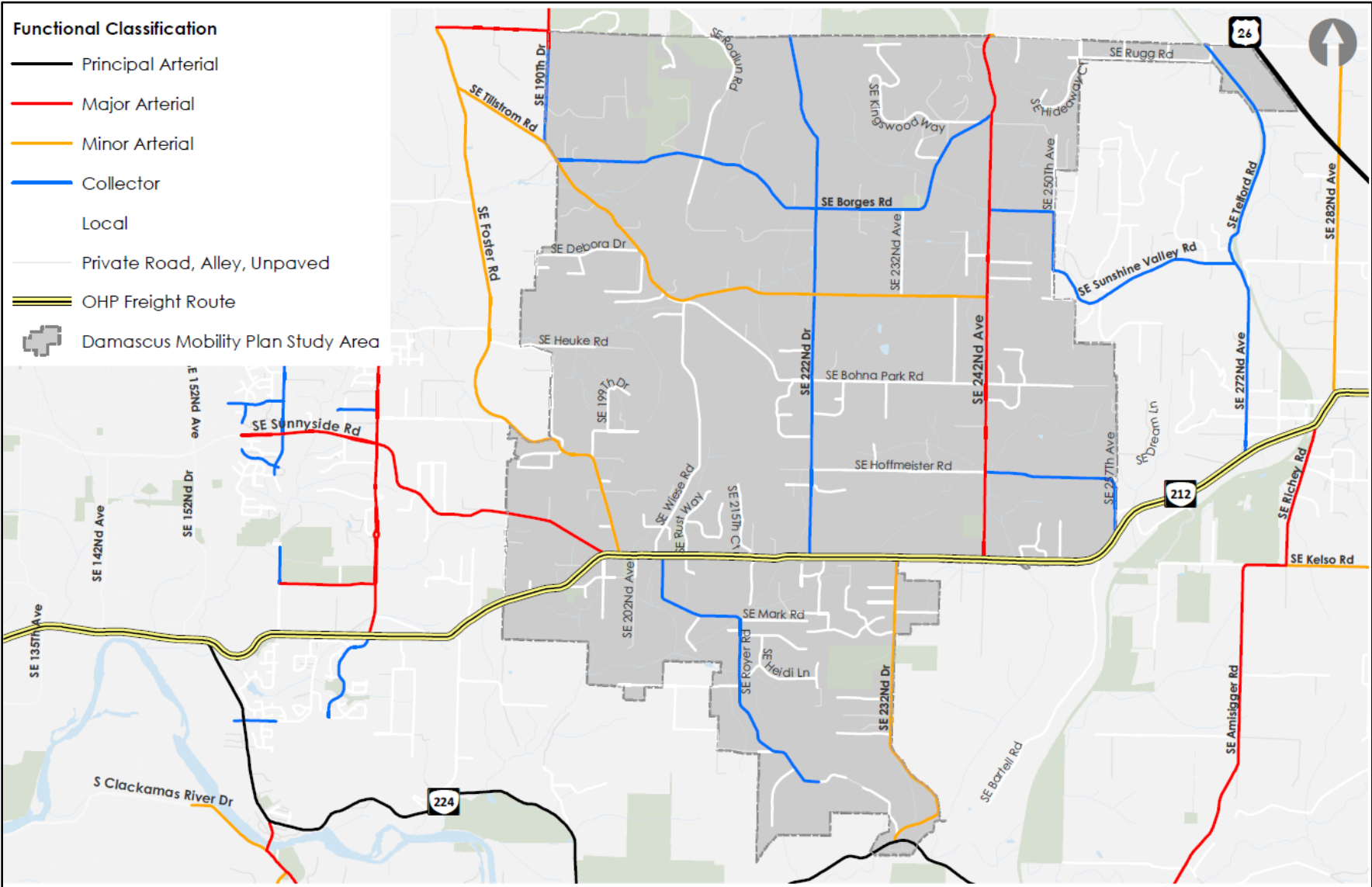
ROADWAY SYSTEM

The County's functional classification system defines the intended "role" of each roadway class and how each should be designed to serve people driving, walking, riding bikes and taking transit. A roadway's functional classification informs the roadway's maintenance and design, per the County's Comprehensive Plan and Typical Cross Sections. The TSP classifies County streets based on the following definitions from the Clackamas County Comprehensive Plan:

- » **Principal Arterial:** (freeway/expressway and other designated principal arterials). Serves interregional and intraregional trips and carries heavy volume at high speed. Primarily interstate freeways and state highways but also includes other roads designated as principal arterials. These roads make up the National Highway System.
- » **Major Arterial:** Carries local and through traffic to and from destinations outside local communities and connects cities and rural centers. Moderate to heavy volume; moderate to high speed.
- » **Minor Arterial:** Connects collectors to higher order roadways. Carries moderate volume at moderate speed.
- » **Collector:** Principal traffic carrier within neighborhoods or single land use areas. Links neighborhoods with major activity centers, other neighborhoods, and arterials. Generally not for through traffic. Low to moderate volume; low to moderate speed.
- » **Connector:** Collects traffic from and distributes traffic to local streets within neighborhoods or industrial districts. Usually longer than local streets. Low traffic volume and speed. Primarily serves access and local circulation functions. Not for through traffic in urban areas.
- » **Local:** Provides access to abutting property and connects to higher order roads. New local roads should intersect collectors, connectors, or, if necessary, minor arterials. Not for through traffic

Section 5.0 of the County's Comprehensive Plan provides Functional Classification and Design policies.

Figure 4 shows the existing roadway system in Damascus, identifying functional classification and freight routes.



The County's roadway standards call for paved or gravel shoulders on roadways of all functional classifications, with design speed and vehicle volume determining the appropriate width. Shoulders provide space for pedestrians and bicyclists and can also provide safety benefits for vehicles. As indicated Table 2, the majority of arterials and collectors in the study area have no to minimal shoulders (less than six feet in width).

Table 2. Arterial and Collector Road Characteristics¹

Roadway	Functional Classification	Speed Limit	Number of Lanes	Paved/Gravel Shoulders
OR 212	Principal Arterial/ State Highway	35-55 MPH	2 - 3 ²	Partial ³
OR 224	Principal Arterial/ State Highway	45 MPH	3	Minimal
SE 190th Drive	Major Arterial	40 MPH	2	No
SE 242nd Avenue	Major Arterial	45 MPH	2	No
SE Sunnyside Road	Major Arterial	40 MPH	2	Minimal
SE 232nd Drive	Minor Arterial	45 MPH	2	No
SE Foster Road	Minor Arterial	45 MPH	2	Minimal
SE Tillstrom Road	Minor Arterial	40 MPH	2	Minimal
SE 190th Drive	Collector	45 MPH	2	No
SE 222nd Drive	Collector	45 MPH	2	No
SE 257th Avenue	Collector	45 MPH	2	No
SE Borges Road	Collector	40 MPH	2	No
SE Hoffmeister Road	Collector	45 MPH	2	No
SE Royer Road	Collector	25 MPH	2	No
SE Sunshine Valley Road	Collector	40 MPH	2	No
SE Telford Road	Collector	45 MPH	2	No

¹ Based on Google Earthly imagery from 2021 and the portions of roadways within the study area.

² The three-lane cross-section of OR 212 extends from SE Sunnyside Road to SE Old Barn Lane, and again from SE 215th Court to SE Hollyview Terrace.

³ Sidewalks and marked bike lanes extend from OR 212/SE Sunnyside Road and OR 212/SE Old Barn Lane. East of SE Old Barn Lane, the shoulders remain wide enough (6+ feet wide on either side) for bicycles to ride with low levels of traffic stress. There are narrow paved shoulders west of SE Sunnyside Road.

FREIGHT SYSTEM

The Oregon Highway Plan (OHP) and Metro Regional Transportation Plan (RTP) both provide information on freight routes from a national, statewide, and regional perspective. Roadways included in one or both of these plans are noted below.

OR 212 is identified as a freight route in the OHP for its entirety between US 26 and I-205 (shown in Figure 4). It is classified as a National Highway Freight Route between the SE Foster Road/OR 212 intersection and I-205. The Metro RTP classifies OR 212 as a main roadway route, meaning it is one of the "designated freight routes that are freeways and highways that connect major activity centers in the region to other areas in Oregon or other states throughout the U.S., Mexico and Canada."

OR 224 is classified as a roadway connector between OR 212 and the County boundary in the Metro RTP, meaning it is one of the “roads that connect other freight facilities, industrial areas, and 2040 centers to a main roadway route.” Outside of the County, it is classified as a freight route outside the metropolitan planning area boundary.

SE 242nd Avenue is classified as a roadway connector between OR 212 and the County boundary in the Metro RTP, which identifies the industrial and employment areas along SE 242nd Avenue in this area.

Identifying these freight classifications is important for understanding how to balance regional travel needs, especially for freight, with those of local communities like Damascus.

CURRENT INTERSECTION OPERATIONS

Operations were assessed at these 17 study intersections:

- | | |
|--|---|
| 1. SE 190 th Drive & SE Tillstrom Road | 10. SE 242 nd Avenue & SE Hoffmeister Road |
| 2. SE Tillstrom Road & SE Borges Road | 11. SE Tong Road & OR 212* |
| 3. SE 242 nd Avenue & SE Borges Road | 12. SE Sunnyside Road-SE Anderson Road & OR 212* |
| 4. SE 222 nd Drive & SE Borges Road | 13. SE Foster Road & OR 212* |
| 5. SE 242 nd Avenue & SE Sunshine Valley Road | 14. SE 222 nd Drive & OR 212* |
| 6. SE Bohna Park Road & SE Tillstrom Road | 15. SE 232 nd Drive & OR 212* |
| 7. SE Wiese Road & SE Bohna Park Road | 16. SE 242 nd Avenue & OR 212* |
| 8. SE 222 nd Drive & SE Tillstrom Road | 17. SE 232 nd Drive & OR 224 |
| 9. SE 242 nd Avenue & SE Tillstrom Road | |

**Analyzed as part of the OR 212 (SE 187th Avenue to SE 242nd Avenue) Intersection Refinement Study.*

Data was collected at the study intersections in April 2019 and grown to reflect traffic volumes in 2021. The analysis tool Synchro was used to assess operations at the intersections during the weekday PM peak hour, and understand current levels of delay and congestion for vehicles. Two performance metrics were reviewed:

- » Level of Service (LOS): LOS is based on the delay drivers experience at an intersection and is ranked from A to F, with A representing no to insignificant delays and F representing a high level of congestion, long delays, and extension queueing. Generally, LOS C or better is considered an acceptable amount of delay, while LOS D means the intersection is starting to approach significant delays. At signalized intersections and all-way stop-controlled intersections, the LOS is based on the average delay of all vehicles at the intersection. At two-way stop-controlled intersections, through vehicles on the major street typically don't experience any delay, so looking at the average delay wouldn't be very informative. Therefore, the LOS is based on the

movement at the intersection that is most challenging to make, usually a left-turn from the minor street.

- » Volume-to-Capacity (v/c) ratio: the v/c ratio measures the number of intersections using an intersection divided by the number of vehicles that could theoretically use the intersection when at capacity. Generally, intersections with a v/c ratio less than 0.85 are considered under capacity, and all demand at the intersection can be accommodated. If the v/c ratio is between 0.85 and 0.98, the intersection is considered near capacity, and delays may start to be moderate to high. If the v/c ratio is over 0.98, the intersection is considered over capacity, and delays and traffic back-ups are likely to be long.

The County and ODOT both set mobility targets for intersection operations. If these targets are not met, it is an indication that capacity improvements (like adding turn lanes, roundabouts, or traffic signals) may need to be considered. The County uses LOS for its targets, and sets a threshold for unsignalized intersections at LOS E. ODOT uses v/c ratio targets for roadways it manages, including OR 224 and 212, with the v/c target based on the roadway location and type.

All County intersections analyzed operated at a LOS C or better during the weekday PM peak hour, and meet County mobility targets. Four of the intersections on OR 212 meet ODOT's v/c targets, but operate at a LOS D or F, as shown in Table 3.

Table 3. Intersections Operating below a LOS C under Existing Conditions

Intersection	Traffic Control	Standard	Operations
SE Tong Road & OR 212	Stop-controlled	v/c threshold of 0.99 on OR 212 approaches	LOS F (CM = NBL), OR 212 approaches meet standard
SE Sunnyside Road-SE Anderson Road & OR 212	Stop-controlled	v/c threshold of 0.99 on OR 212 approaches	LOS F (CM = NBL), OR 212 approaches meet standard
SE Foster Road & OR 212	Signalized	v/c threshold of 0.99 overall	LOS D, v/c = 0.99
SE 222nd Drive & OR 212	Stop-controlled	v/c threshold of 0.99 on OR 212 approaches	LOS F (CM = SB), OR 212 approaches meet standard

v/c = Volume to Capacity Ratio; LOS = Level of Service; CM = Critical Movement; NBL = Northbound Left Turn; SB = Southbound

The other intersections on OR 212 meet ODOT's mobility targets and operate at a LOS C or better. The one study intersection on OR 224 at SE 22nd Drive operates at a LOS C, but the delay for the southbound left-turn is within a second of the cut-off for LOS D. The intersection meets volume-based warrants in the Manual of Uniform Traffic Control Devices (MUTCD) for a traffic signal.

Figure 5 on the following page shows the LOS during the weekday PM peak hour at the study intersections.

SAFETY ASSESSMENT

The safety conditions of the study area were assessed based on the five most recent years of complete crash records (January 1, 2015 through December 31, 2019). The data for this analysis was provided by ODOT, the agency that collects and stores all crash data for the State of Oregon. The reported crashes by type are summarized in Table 4 and mapped in Figure 6.

Table 4. Crash Type within the Damascus Mobility Plan Study Area (2015 to 2019)

Crash Type	Number of Crashes Percent of Total	Number of Fatal Crashes	Number of Suspected Serious Injury Crashes ¹
Rear-End	220 41%	-	2
Turning	112 21%	-	3
Fixed Object	109 20%	2	5
Angle	39 7%	1	5
Sideswipe	36 7%	-	1
Head-On	8 1%	2	3
Other	7 1%	-	-
Backing	4 1%	-	-
Pedestrian	2 <1%	1	-
TOTAL	537 100%	6	19

¹ "Suspected Serious Injury" is the term that ODOT uses for a non-fatal injury crash that prevents the injured person from walking, driving or normally continuing the activities the person was capable of performing before the injury occurred.

Three crash types account for the majority of reported crashes within the study area:

- » rear-end (220 crashes, 41 percent),
- » turning movement (112 crashes, 21 percent), and
- » fixed object (109 crashes, 20 percent).

Of the six reported crashes that resulted in fatalities, three occurred on OR 212 and two took place on SE 232nd Drive. Three of the six fatal crashes involved speeding.

Reported crashes at the study intersections were used to develop intersection crash rates to compare to the ODOT 90th percentile crash rates identified in the Analysis Procedures Manual (APM). All study intersections have a crash rate that is below the statewide 90th percentile crash rate, except for the following:

- » **SE Bohna Park Road & SE Wiese Road.** The intersection crash rate is based on three reported crashes measured at this "low volume" intersection. All three crashes involved a northbound left-turning vehicle colliding with a vehicle heading either eastbound or westbound on Bohna Park Road, where sight distance may be limited due to roadway curvature.

- » **SE Sunnyside Road-SE Anderson Road & OR 212.** The intersection is stop-controlled north/south. The top two crash types were turning movement (48% of crashes) and angle (24% of crashes). Of the 21 crashes, 13 resulted in injury.
- » **SE 222nd Drive & OR 212.** The intersection is three-legged, and the southbound approach is stop-controlled. The top two crash types were turning movement (67% of crashes) and rear-end (17% of crashes). Of the 24 intersection crashes, 14 resulted in injury and one in a fatality. The fatal crash was a fixed-object crash, and alcohol and speeding were involved.

TRANSIT SYSTEM

Currently, there is no fixed-route transit or paratransit service (service for seniors or people with mobility limitations) within the study area. Damascus is located outside of the TriMet service boundary.

The recently completed Clackamas County Transit Development Plan (TDP) outlines two future routes within the study area. One local route (identified as MT-9 in the TDP) would serve Damascus and Boring along OR 212 up to the SE Rock Creek Boulevard and SE 172nd Avenue area. One regional route (MT-11 in the TDP) would run between the Sandy Transit Center and Clackamas Town Center, likely to be operated by Sandy Area Metro. The planned route would follow OR 212 to SE Sunnyside Road within the study area. Additional services are available near but not inside the study area, such as Sandy Area Metro's Sandy-Gresham service.

The long-term horizon for the TDP includes additional transit service on the MT-9 and MT-11 routes in the medium term and the long term. The TDP does not provide a timeline for the introduction of "medium-term" or "long-term" service, and does not identify fiscally constrained v. unconstrained as most services are operated by transit providers separate from the County. The exact stop locations were not determined as part of this countywide TDP, but will be identified when new services are implemented.

KEY FINDINGS

Based on the existing conditions assessment, the biggest opportunities for transportation improvements include:

- » Roadway upgrades to provide shoulders to accommodate pedestrians and bicyclists and improve vehicular safety
- » Capacity improvements to address congestion on OR 212
- » Safety improvements to address high-crash rate intersections

The next section analyzes intersection operations under future conditions to identify if there are longer-term capacity needs. *Section 5: Project Development* includes potential improvements to address existing and future needs.



SE Tillstrom Road north of SE
Debora Drive

4. FUTURE CONDITIONS

4. Future Conditions

In order to identify long-term capacity needs, operations were assessed at the study intersections in the year 2040. This analysis assumed no additional improvements beyond those included in the Metro 2040 Regional Transportation Plan (RTP), and with traffic volumes and transportation projects anticipated in the 2040 Metro RTP. The Metro 2040 RTP includes several planned improvements that affect the study area, including the access-controlled and grade-separated Sunrise Corridor from SE 122nd through to SE 172nd Drive, the SE 172nd Avenue-SE 190th Avenue connector, and the SE Sunnyside Road Extension from SE 172nd Avenue to SE Foster Road. The model also assumes SE Tong Road is rerouted to intersect with OR 212 at SE 187th Avenue.

The traffic volumes in the RTP are based on the County zoning, which is lower density than the previously proposed City of Damascus zoning. Therefore, the future traffic volumes are lower than what was previously forecasted in the unadopted City of Damascus transportation system plans.

Figure 7 illustrates level of service at the study intersections in 2040. As shown, all County intersections continue to operate at a LOS D or better, with the exception of the two-way stop-controlled intersection at SE Tillstrom Road & SE Borges Road. The eastbound approach is expected to operate at a LOS D and about seven seconds over the threshold for LOS C. All other approaches to the intersection operate at a LOS B. Several intersections along OR 212 are forecast to experience higher delays and not meet ODOT's adopted volume to capacity ratio thresholds in the year 2040, including:

- » SE Tong Road-SE 187th Avenue & OR 212 (unsignalized)
- » SE Sunnyside Road-SE Anderson Road & OR 212
- » SE Foster Road & OR 212
- » SE 222nd Drive & OR 212

The intersections along OR 212 were further studied as part of the OR 212 (SE 187th Avenue to SE 242nd Avenue) Intersection Refinement Study, given projected capacity needs are limited to this corridor. This study is covered in the next section, *Section 5: Project Development*. The project development for the remainder of the study area focused on safety and upgrade projects.

Study Intersections
Future Level of Service

- A
- B
- C
- D
- E
- F

Damascus Mobility Plan Study Area

Map showing the Damascus Mobility Plan Study Area with 17 numbered study intersections. The intersections are categorized by Future Level of Service (A-F) as indicated by the legend. The map includes major roads, water bodies, and surrounding areas.



**SE Borges Road &
SE Tillstrom Road**

5. PROJECT LIST DEVELOPMENT

5. Project List Development

Based on input from the public engagement, meetings with the Technical Advisory Committee, and existing and future conditions assessment, potential projects and studies were identified as part of two distinct efforts:

- » **Damascus Mobility Plan Alternatives Analysis**, which focuses on the existing and future conditions assessment, excluding the OR 212 corridor
- » **OR 212 (SE 187th Avenue to SE 242nd Avenue) Intersection Refinement Study**, which includes a more in-depth study of intersections on OR 212 and alternatives to addresses safety and mobility needs

When considering potential projects and studies, concurrent planning work as part of the Pleasant Valley/North Carver Comprehensive Plan and Happy Valley TSP Update was considered. These plans include projects that influence the Damascus Mobility Plan study area, such as the 172nd-190th Connector and Sunnyside Extension. These projects are listed and mapped in *Section 6: Mobility Plan*.

The key findings from the Alternatives Analysis and OR 212 Study are summarized in the following sections.

DAMASCUS MOBILITY PLAN ALTERNATIVES ANALYSIS

As shown in *Section 4: Future Conditions*, in general County intersections are projected to operate with relatively low delays and under capacity in the future. Therefore, the alternatives analysis focused on opportunities to improve mobility and safety, based on the key findings from the existing conditions assessment and comments received through the public engagement. Proposed projects focused on:

- » Upgrades to widen shoulders on roadways that do not currently meet the County's standards, given feedback about a desire for shoulder space to walk and bike in the Damascus area.
- » Safety improvements to address intersections with higher crash rates or where feedback was received from the public. The existing SE Wiese Road & SE Bohna Park Road intersection exceeds ODOT's 90th percentile crash rate for similar intersections.

In the short term, the County will be implementing street and intersection signage improvements at 14 locations across Damascus. These improvements, the result of a road safety audit in the area, are anticipated to be complete in 2022. These projects were not included in the project list in *Section 6: Mobility Plan* given their timeframe, but were reviewed when developing project alternatives.

Alternatives were developed, evaluated based on the Clackamas County TSP methodology, and reviewed by the Technical Advisory Committee. The recommendations resulting from this effort are shown below.

SE Tillstrom Road/SE Wiese Road/SE Bohna Park intersection area: alternatives include:

- restricting turn movements at SE Bohna Park Road/SE Tillstrom Road,
- implementing all-way stop control at SE Tillstrom Road/SE Bohna Park Road,
- rerouting SE Bohna Park Road to meet SE Delia Street, and
- establishing a new connection between SE Tillstrom Road and SE Bohna Park Road.



SE 242nd Avenue & SE Borges Road: the eastbound approach to the intersection has limited sight distance for southbound traffic. The County's preferred alternative extends SE Kingswood Way to the southeast of its existing intersection with SE Borges Road to connect with SE 242nd Avenue. The existing SE 242nd Avenue/SE Borges Road intersection will be closed, with access to the businesses at this intersection maintained via SE Borges Road. The county's current Capital Improvements Program lists this project's prospectus number as 22279.



SE 242nd Avenue & SE Bohna Park Road:

community comments noted opportunities to improve access management and sight distance. Alternatives include consolidating accesses and delineating shoulders.



SE 232nd Drive & OR 224:

SE 232nd Drive is stop-controlled at OR 224 and currently operates at a LOS C. Given that the intersection meets signal warrants and is expected to operate at a LOS D under future conditions, the County could consider further study of the intersection including collecting and analyzing additional volume data to assess the need for and feasibility of improvements, such as a signal or roundabout.



Shoulder widening: the County assesses the width needs for shoulders on a case-by-case basis, based on operating and safety performance. The alternatives analysis identified arterial, collector, and selected local roadway segments for potential shoulder widening.



Example of roadway without shoulders (SE Tillstrom Road at SE 222nd Avenue)

Further details on the alternatives analysis, including the cost estimates and goal ratings of the alternatives, are provided in Attachment A: Memorandum #6: Alternatives Analysis, Project List, and Cost Estimates.

OR 212 (SE 187TH AVENUE TO SE 242ND AVENUE) INTERSECTION REFINEMENT STUDY

An OR 212 Refinement Study was conducted for the OR 212 corridor between SE 187th Avenue and SE 242nd Avenue to inform project needs at key intersections in the area. The study primarily focused on projects that can be implemented within the next five to ten years, especially projects that mitigate deficiencies at the intersections that constrain land development that can occur along the OR 212 corridor.

A memorandum summarizing the study is provided in Attachment A: OR 212 (SE 187th Avenue to SE 242nd Avenue) Intersection Refinement Study. The recommendations from this study are shown below.

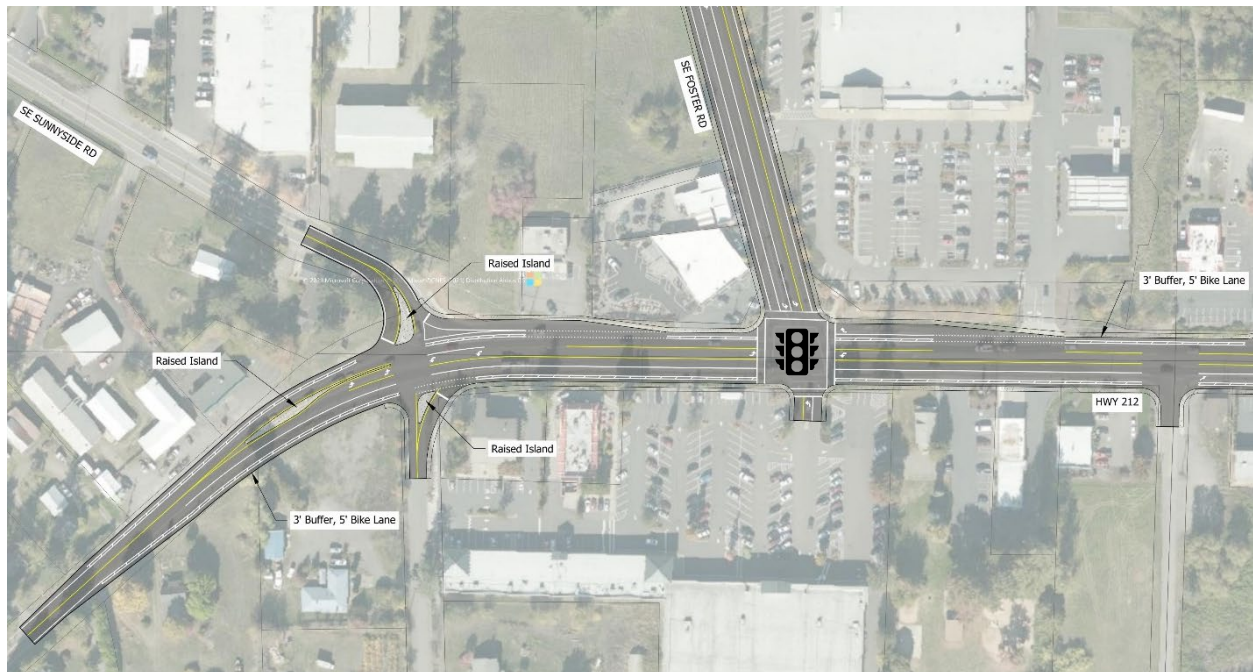
SE Tong Road: SE Tong Road currently meets OR 212 at a stop-controlled intersection with a significant skew. The PV/NC Plan includes realignment of SE Tong Road to intersection with the existing intersection of SE 187th Avenue and OR 212 (see below). This facilitates provision of a signal to serve both SE Tong Road and SE 187th Avenue and addresses the current intersection skew.



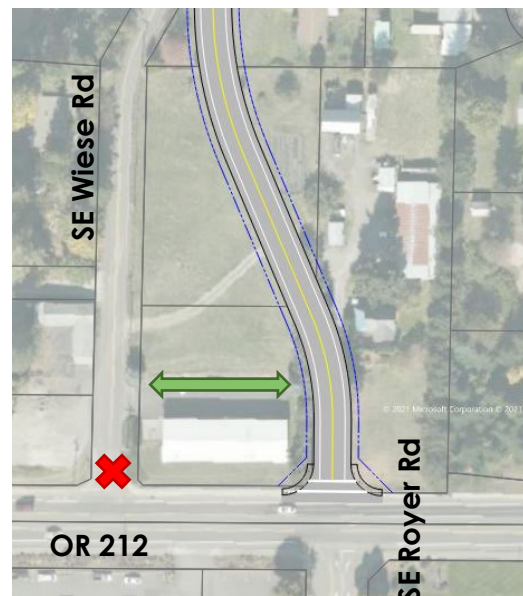
SE 187th Avenue and OR 212: The OR 212 study looked at options to accommodate future demand between on the OR 212 corridor. Widening SE 187th Avenue to a three-lane roadway provides needed north/south connectivity. With improvements on SE 187th Avenue, a roundabout at the intersection with SE Sunnyside Road and signal at the intersection with OR 212 are recommended.



OR 212/SE Sunnyside Road-Anderson Road and OR 212/SE Foster Road Intersections: the southbound left-turn at the two-way stop-controlled intersection of OR 212/SE Sunnyside Road-Anderson Road currently operates at a LOS F and over capacity. In addition, the intersection crash rate exceeds the statewide 90th percentile crash rate, with 13 injury crashes between 2015 and 2019. In the future, neither this intersection or the adjacent intersection at OR 212/SE Foster Road are projected to meet ODOT's mobility targets. The Study recommends converting OR 212/SE Sunnyside Road-Anderson Road to right-in/right-out/left-in. At OR 212/SE Foster Road, the study recommends an additional eastbound through and southbound left-turn lane.



SE Wiese Road: given community concerns around the intersection of SE Wiese Road at OR 212, the study recommended possible long-term realignment of SE Wiese Road to intersection OR 212 opposite SE Royer Road to create a single four-legged intersection. The existing Wiese Road would be disconnected, with a backage road provided for business access.



OR 212 & SE 222nd Drive: the southbound approach to this three-legged stop-controlled intersection currently operates at a LOS F and is over capacity. In addition, the crash rate at this intersection is above the statewide 90th percentile crash rate, with 15 injury crashes reported between 2015 and 2019. To address this capacity and safety deficiency, the study recommended signaling the intersection and providing separate left- and right-turn lanes southbound.



OR 212 & SE 242nd Drive: this intersection is projected to meet ODOT mobility targets under 2040 conditions, but if demand increases faster than projected provision of a separate southbound left-turn lane could be considered.



In addition, the following planning efforts were identified to address existing intersection deficiencies and promote cohesive planning efforts within the entire OR 212 corridor:

- » **OR 212 (SE 172nd Avenue to US 26) Corridor Plan:** To establish the long-term vision, conceptual alignment, cross-section, and access locations for OR 212 between SE 172nd Avenue and US 26.
- » **OR 212 (Rock Creek Junction to SE Foster Road) Alternative Mobility and Fee In Lieu Strategy:** To establish potential alternative mobility standards and funding strategy to allow near-term development and move towards long-term acceptable traffic operations at existing over-capacity intersections.



SE Foster Road &
OR 212

6. MOBILITY PLAN

6. Mobility Plan

This section summarizes the projects and studies within the Damascus Mobility Plan, which were prioritized based on stakeholder and Technical Advisory Committee feedback and the Project Development Alternatives Analysis. The priorities focus on responding to existing intersection deficiencies and proposed projects that facilitate future development. The 2040 Roadway Network reflects the Metro Regional Transportation Plan (RTP) that account for anticipated fiscally-constrained road network changes.

MOBILITY PLAN PROJECTS

Since the projects developed through this plan will be incorporated into the Clackamas County TSP, a similar approach to the TSP was used for the project list format, numbering convention, and prioritization. The TSP separates projects into four groups: Tier 1, Tier 2 and Tier 3 county projects, and Regional capital projects that are the responsibility of other agencies or organizations, such as ODOT or the City of Happy Valley.

The three tiers of county projects are defined as follows:

- » **Tier 1: 20-year capital projects** – Needed projects and investments matched with anticipated funding (Project ID 1000 through 1137 in CC TSP)
- » **Tier 2: Preferred capital projects** – Projects and investments needed to meet population, housing, and employment projections, but that do not have identified funding at this time (Project ID 2000 through 2044 in CC TSP)
- » **Tier 3: Long-term capital project needs** – Projects that would be beneficial to do if funds were available (Project ID 3000 through 3182 in CC TSP)

As with the TSP, the recommended projects do not include projects located in cities. The project list is provided in Table 5, with the following information:

- » **ID:** the project ID follows the numbering scheme used in the Clackamas County TSP, with the first digit indicating the project tier and picking up where project list in the adopted Clackamas County TSP ended (e.g. 1138 for the first project in Tier 1, 2045 for the first project in Tier 2, 3183 for the first project in Tier 3).
- » **Source:** indicates whether project was developed through the alternatives analysis or the OR 212 Intersection Refinement Study
- » **Category:** uses the project categories developed as part of the Clackamas County TSP to indicate the purpose of the project
- » **Cost Estimate:** Cost estimates were produced using 2021 costs and a 30% project contingency. Shoulder widening projects were pulled from a common cost estimate for 6 feet of shoulder widening for 1,000 feet, which was then applied to the length of any given project.

-
- » Priority: Tier 1, 2 or 3 for County projects and high, medium or low for Regional projects

Table 5. **Draft** Damascus Mobility Plan Project List

ID	Project or Street Name	Segment/Location	Description	Source	Category	Cost Estimate	Priority
Tier 1: Draft 20 Year Capital Projects							
1138	SE 242 nd Avenue	SE 242 nd Avenue/SE Borges Road intersection	Extend SE Kingswood Way from SE Borges Road to SE 242 nd Avenue. Close SE 242 nd Avenue/SE Borges Road intersection to through traffic.	Alternatives Analysis	Safety	\$1,483,000	Tier 1
1139	SE 242 nd Avenue	SE 242 nd Avenue/SE Bohna Park Road intersection	Access management on northwest corner; delineated shoulders on SE 242 nd Avenue.	Alternatives Analysis	Safety	\$210,000	Tier 1
1140	SE Foster Road	Happy Valley boundary to OR 212	Widen shoulder based on operational and safety analysis during project development.	Alternatives Analysis	Upgrade – Active Transportation	\$1,230,000	Tier 1
1141	SE Sunnyside Road	SE 187 th Avenue to OR 212	Widen shoulder based on operational and safety analysis during project development.	Alternatives Analysis	Upgrade – Active Transportation	\$860,000	Tier 1
1142	SE Sunshine Valley Road	SE 242 nd Avenue to County line	Widen shoulder based on operational and safety analysis during project development.	Alternatives Analysis	Upgrade – Active Transportation	\$1,000,000	Tier 1
1143	SE Tillstrom Road	SE Foster Road to SE 242 nd Avenue	Widen shoulder based on operational and safety analysis during project development.	Alternatives Analysis	Upgrade – Active Transportation	\$4,275,000	Tier 1

ID	Project or Street Name	Segment/Location	Description	Source	Category	Cost Estimate	Priority
Tier 2: Draft Preferred Capital Projects							
2045	SE 190 th Drive	County line to 172 nd -190 th Connector	Widen shoulder based on operational and safety analysis during project development.	Alternatives Analysis	Upgrade – Active Transportation	\$145,000	Tier 2
2046	SE 190 th Drive	172 nd -190 th Connector to SE Tillstrom Road	Widen shoulder based on operational and safety analysis during project development.	Alternatives Analysis	Upgrade – Active Transportation	\$775,000	Tier 2
2047	SE 232 nd Drive	OR 212 to OR 224	Widen shoulder based on operational and safety analysis during project development.	Alternatives Analysis	Upgrade – Active Transportation	\$2,690,000	Tier 2
2048	SE 242 nd Avenue	County line to OR 212	Widen shoulder based on operational and safety analysis during project development.	Alternatives Analysis	Upgrade – Active Transportation	\$4,305,000	Tier 2
2049	SE Tillstrom Road	SE Tillstrom Road/SE Bohna Park Road & SE Wiese Road/SE Bohna Park Road intersections	Reroute SE Bohna Park Road to meet SE Delia Street.	Alternatives Analysis	Safety	\$1,855,000	Tier 2

ID	Project or Street Name	Segment/Location	Description	Source	Category	Cost Estimate	Priority
Tier 3: Draft Long-Term Capital Project Needs							
3183	SE 187 th Avenue	SE Sunnyside Road to OR 212	Improve SE 187 th Avenue to three-lane roadway with sidewalks and bike lanes; construct roundabout at SE Sunnyside Road/SE 187 th Avenue.	OR 212 Study	Upgrade – Vehicle Capacity & Active Transportation	\$12,457,000	Tier 3
3184	SE 222 nd Drive	County line to OR 212	Widen shoulders based on operational and safety analysis during project development.	Alternatives Analysis	Upgrade – Active Transportation	\$4,305,000	Tier 3
3185	SE 257 th Avenue	SE Hoffmeister Road to OR 212	Widen shoulders based on operational and safety analysis during project development.	Alternatives Analysis	Upgrade – Active Transportation	\$385,000	Tier 3
3186	SE Bohna Park Road	SE Tillstrom Road to SE 242 nd Avenue	Widen shoulders based on operational and safety analysis during project development.	Alternatives Analysis	Upgrade – Active Transportation	\$2,885,000	Tier 3
3187	SE Borges Road	SE Tillstrom Road to SE 242 nd Avenue	Widen shoulders based on operational and safety analysis during project development.	Alternatives Analysis	Upgrade – Active Transportation	\$4,160,000	Tier 3
3188	SE Hoffmeister Road	SE 242 nd Avenue to SE 257 th Avenue	Widen shoulders based on operational and safety analysis during project development.	Alternatives Analysis	Upgrade – Active Transportation	\$1,105,000	Tier 3
3189	SE Royer Road	OR 212 to OR 224 (gap in roadway)	Widen shoulders based on operational and safety analysis during project development.	Alternatives Analysis	Upgrade – Active Transportation	\$2,690,000	Tier 3
3190	SE Telford Road	County line to County line	Widen shoulder based on operational and safety analysis during project development.	Alternatives Analysis	Upgrade – Active Transportation	\$685,000	Tier 3
3191	SE Tong Road	South of OR 212/SE Tong Road intersection	Realign SE Tong Road at OR 212 to align with SE 187 th Avenue to address skew.	OR 212 Study	Safety	\$7,732,000	Tier 3
3192	SE Wiese Road	SE Bohna Park Road to OR 212	Widen shoulders based on operational and safety analysis during project development.	Alternatives Analysis	Upgrade – Active Transportation	\$2,190,000	Tier 3
3193	SE Wiese Road Realignment	North of OR 212/SE Wiese Road	Realign SE Wiese Road to intersect with OR 212 and SE Royer Road.	OR 212 Study	Safety	\$2,655,000	Tier 3

ID	Project or Street Name	Segment/Location	Description	Source	Category	Cost Estimate	Priority
Draft Regional Projects							
4097	OR 212	OR 212/SE 222 nd Drive intersection	Install traffic signal and separate southbound right- and left-turn lanes.	OR 212 Study	Upgrade – Vehicle Capacity	\$1,420,000	High
4098	OR 212	OR 212/SE 242 nd Drive intersection	Install separate southbound left-turn.	OR 212 Study	Upgrade – Vehicle Capacity	\$1,835,000	Low
4099	OR 212	OR 212/SE Sunnyside Road-Anderson Road and OR 212/SE Foster Road	Convert OR 212/SE Sunnyside Road intersection to right-in/right-out/left in; add eastbound through and southbound left-turn lane at OR 212/SE Foster Road intersection, provide pedestrian and bicycle facilities.	OR 212 Study	Upgrade – Vehicle Capacity & Safety	\$8,790,000	High
4100	OR 212	OR 212/SE Tong Road/SE 187 th Avenue Intersection	Signalize intersection.	OR 212 Study	Upgrade – Vehicle Capacity	\$488,000	Medium
4101	OR 212 Corridor Plan	SE 172 nd Avenue to US 26	Planning effort to establish the long-term vision, conceptual alignment, cross-section, and access locations for OR 212 between SE 172 nd Avenue and US 26.	OR 212 Study	Study	\$200,000	Medium
4102	OR 212 Alternative Mobility and Fee in Lieu Strategy	Rock Creek Junction to SE Foster Road	Planning effort to establish alternative mobility standard, acceptable traffic operations levels, improvements, and cost estimates for over-capacity intersections.	OR 212 Study	Study	\$100,000	High
4103	OR 224	OR 224/SE 232 nd Drive Intersection	Study to assess need for and feasibility of improvements, such as a signal or roundabout (does not include improvement design or construction).	Alternatives Analysis	Study	\$30,000	Low

The projects are shown on the map in Figure 8. Figure 8 also shows critical system projects planned in the Pleasant Valley/North Carver area of the City of Happy Valley that influence the circulation and transportation system within the Damascus Mobility Plan study area. These critical system projects are described in Table 6.

Table 5. Critical Planned City of Happy Valley Pleasant Valley/North Carver Projects

ID	Project Name	Description
PVNC-A	172nd-190th Connector	Construct a new 5-lane facility between 172nd Avenue and 190th Drive.
PVNC-B	Happy Valley Boulevard (SE Sunnyside Road Extension)	Construct a new 5-lane east-west facility from 172nd Avenue to Winston Road, realign existing Sunnyside Road to south.
PVNC-C	SE Sunnyside Road	Widen to 3-lane facility between Happy Valley Boulevard and 187th Avenue.

Note: These projects were developed as a result of the PV/NC Plan and are included in amendments to the City of Happy Valley TSP currently under review. In the November 2021 Hearing Draft of the TSP they are listed as projects R7, R16, and W16, which is where the project names and descriptions shown were pulled from.

YEAR 2040 BUILD INTERSECTION OPERATIONS

Operations at the study intersections were assessed under 2040 conditions during the weekday PM peak hour, with the improvements proposed in the project list. With these improvements, all study intersections are projected to meet the applicable County and ODOT standards.



SE 242nd Avenue &
OR 212

7. Next Steps

7. Next Steps

When this plan is adopted, it will be incorporated into the Clackamas County TSP. The incorporation would have the following impacts on the 2013 Clackamas County TSP through the following updates:

- » The TSP project tables will be updated to add the Damascus Mobility Plan projects (from Table 5 of this document) at the end. The tables provide the Project ID, the TSP map the project is shown on, project name/street name, segment/location, and project description. The Clackamas County TSP includes four tables with project information: Table 5-3a 20 Year Capital Projects, Table 5-3b Preferred Projects, Table 5-3c Long Term Capital Projects, and Table 5-3d Regional Capital Projects.
- » The TSP project maps will be updated to add the Damascus Mobility Plan projects. The Damascus area is shown on Map 5-11a Capital Improvement Plan (Greater Clackamas Regional Center/Industrial Area) in the Clackamas County TSP, which would be updated to include the additional projects in Damascus.



SE 242nd Avenue north of
SE Bohna Park Road

ATTACHMENTS

Attachments

- A. Appendix A: Alternatives Analysis, Project List, and Cost Estimates
- B. Appendix B: Public Involvement Program

Appendix A

Alternatives Analysis, Project List and Cost Estimates

APPENDIX A: FINAL ALTERNATIVES ANALYSIS, PROJECT LIST, AND COST ESTIMATES

Date:	December 27, 2021
To:	Steve Williams, Ellen Rogalin, and Scott Hoelscher; Clackamas County Michael Walter, City of Happy Valley
From:	Marc Butorac PE, PTOE, PMP, Krista Purser, PE, and Russ Doubleday
Project:	Damascus Mobility Plan
Subject:	Final Alternatives Analysis, Project List, and Cost Estimates (Task 8.4)

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Introduction

This memorandum provides a summary of the future needs, imminent systemic safety enhancements, potential alternatives, alternatives analysis, and cost estimates for the project alternatives.

Future Needs

Key future network operational and safety needs identified in *Memorandum #5: Future Damascus Mobility Plan Area Transportation System Conditions* include:

- Monitor demand in the study area to ensure intersections are projected to continue to operate acceptably.
- Monitor the performance of the SE Tillstrom Road/SE Wiese Road/SE Bohna Park intersection area. The existing SE Wiese Road/SE Bohna Park Road intersection exceeds ODOT's 90th percentile crash rate for similar intersections. Metro's Regional Travel Demand Model shows this intersection as one meeting point in the future. Assess potential changes to the roadway network and consider how the change in traffic patterns and geometric changes in the area may impact safety performance.
- Consider the existing and future freight and transit networks in future recommendations.

In addition to these concerns, the project team heard safety concerns regarding speeding along several roadways and desire for shoulder space to walk and bike in the Damascus area.

Imminent Damascus Area Systemic Safety Enhancements

As described in *Memorandum #5: Future Damascus Mobility Plan Area Transportation System Conditions*, there are 12 intersections and two roadway segments that were identified as locations for additional safety signage. Table 1 identifies these locations.

Since these 14 projects are expected to go to bid shortly and be completed in 2022, they are included in this memorandum, but not included in the alternatives analysis.

Table 1. Safety Projects from the Damascus Area Systemic Safety Enhancements Project

ID	Location	Description
1	SE Tillstrom Road & SE 190 th Drive	Install safety signage
2	SE Tillstrom Road & SE Borges Road	Install safety signage
3	SE Tillstrom Road & SE Bohna Park Road	Install safety signage
4	SE Wiese Road & SE Bohna Park Road	Install safety signage
5	SE 222 nd Drive & SE Borges Road	Install safety signage
6	SE 222 nd Drive & SE Tillstrom Road	Install safety signage and overhead flashing beacons
7	SE 222 nd Drive & SE Bohna Park Road	Install safety signage
8	SE 242 nd Avenue & SE Sunshine Valley Road	Install safety signage
9	SE 222 nd Drive & SE Hoffmeister Road	Install safety signage
10	SE 242 nd Avenue & SE Tillstrom Road	Install safety signage
11	SE 242 nd Avenue & SE Bohna Park Road	Install safety signage
12	SE 242 nd Avenue & SE Hoffmeister Road	Install safety signage
13	SE 222 nd Drive	Install safety signage
14	SE Wiese Road	Install safety signage

Potential Alternatives

This section outlines potential alternatives at a series of intersections within the Damascus Mobility Plan study area, as well as one area-wide alternative, to address existing and future needs. This section discusses the reasons for including each alternative, as well as potential issues or drawbacks that any alternative may include.

A1 - SE TILLSTROM ROAD/SE BOHNA PARK ROAD AND SE WIESE ROAD/SE BOHNA PARK ROAD

SE Tillstrom Road and SE Bohna Park Road are parallel roadways that meet at a tight acute angle. Heading east from the intersection, SE Tillstrom Road maintains a relatively flat grade, while SE Bohna Park Road drops down toward Rock Creek. The SE Wiese Road/SE Bohna Park Road intersection, approximately 500 feet to the east of the SE Tillstrom Road/SE Bohna Park Road intersection, is only about 50 feet away from SE Tillstrom Road and separated by a 10 to 15-foot embankment (see Exhibit 1). Exhibit 2 shows the SE Wiese Road/SE Bohna Park Road intersection in the foreground; the truck in the background is on SE Tillstrom Road.

Exhibit 1. The SE Tillstrom Road/SE Bohna Park Road and SE Wiese Road/SE Bohna Park Road Intersections



Source: Google Earth

Exhibit 2. The SE Wiese Road/SE Bohna Park Road Intersection with SE Tillstrom Road in the Background



As identified in *Memorandum #4: Evaluation of the Damascus Mobility Plan Area Transportation System*, the SE Wiese Road/SE Bohna Park Road intersection has an intersection crash rate that exceeds the Oregon Department of Transportation's (ODOT) 90th percentile rate for three-legged stop-controlled intersections.

Potential mitigation solutions are divided into short-term alternatives that address safety concerns through traffic control changes, and long-term alternatives that more fundamentally address issues between these two closely-spaced intersections.

A1.1 Right-In, Right-Out, or Right-In, Right-Out, Left-In (Short-Term)

As shown in Figure 1, there are very few northbound right-turns and westbound left-turns at the SE Bohna Park Road/SE Tillstrom Road intersection. The majority of vehicles turning on or off of SE Bohna Park Road are making an eastbound right-turn or a northbound left-turn. Both of these turning movements, as shown in Figure 2, are low-angle turns, and the eastbound right-turn can be completed at high speed. This results in the northbound left-turn movement, which is stop-controlled, having to get up to very high speeds from a full stop while looking for traffic sharply over their right shoulder.

Figure 1. Existing Traffic Conditions at SE Bohna Park Road Intersections

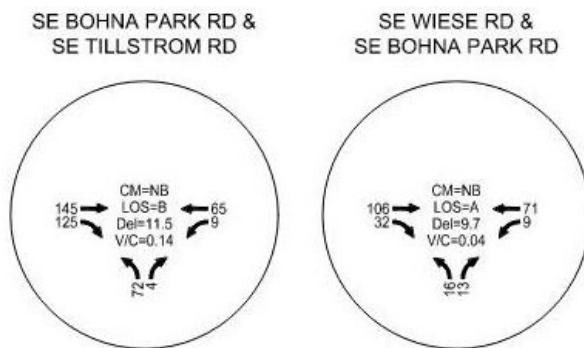


Figure 2. High-Volume Turning Movements at SE Bohna Park Rd/SE Tillstrom Rd Intersection



Source: Google Earth

In the short-term, reconfiguring this intersection to a right-in, right-out (RIRO), or right-in, right-out, left-in (RIROLI) configuration would eliminate the high-volume northbound left-turn movement, shown in Figure 3. Currently, these left-turning vehicles need to complete the turn onto a 40 MPH road with limited sight distance (see Exhibit 3). In addition, of the three reported crashes at the SE Wiese Road/SE Bohna Park Road intersection, two involved vehicles making a northbound left-turn. Under a RIRO or RIROLI scenario at the SE Tillstrom Road/SE Bohna Park Road intersection, these turns would no longer be legal at the SE Wiese Road/SE Bohna Park Road intersection, which should help address the intersection crash rate.

Under either a RIRO or RIROLI scenario, northbound left-turning vehicles would need to travel out of direction to reach SE Tillstrom Road, either via SE 222nd Drive to SE Borges Road or via Wiese Road to Highway 212 to SE Foster Road. Using existing speed limits, the travel time from the SE Bohna Park Road/SE Tillstrom intersection to the SE Foster Road/SE Tillstrom Road intersection is:

- » Approximately three minutes with no detour
- » Approximately six and a half minutes using SE 222nd Avenue and SE Borges Road
- » Approximately seven and a half minutes using SE Wiese Road and Highway 212 to SE Foster Road

These detours would impact approximately 25 properties near this intersection on SE Bohna Park Road. Larger vehicles may need to be restricted on SE Bohna Park Road.

A1.2. All-Way Stop Control at SE Tillstrom Road/SE Bohna Park Road Intersection

Another way to address a safety concern for the northbound left-turn movement from SE Bohna Park Road would be to change the intersection control from two-way stop control to all-way stop control. Such a change would address sight distance issues for these northbound vehicles looking east and would safely allow these vehicles to complete their turn without needing to navigate in front of high-speed traffic.

Given the horizontal curvature of SE Tillstrom Road to the east of the intersection (see Exhibit 3), signage will be key to ensure that westbound vehicles do stop at the intersection. While it would add considerable cost to the alternative, straightening this curve would allow oncoming vehicles to better see the stop sign at the oncoming intersection.

Exhibit 3. The SE Tillstrom Road/SE Bohna Park Road Intersection, Looking East



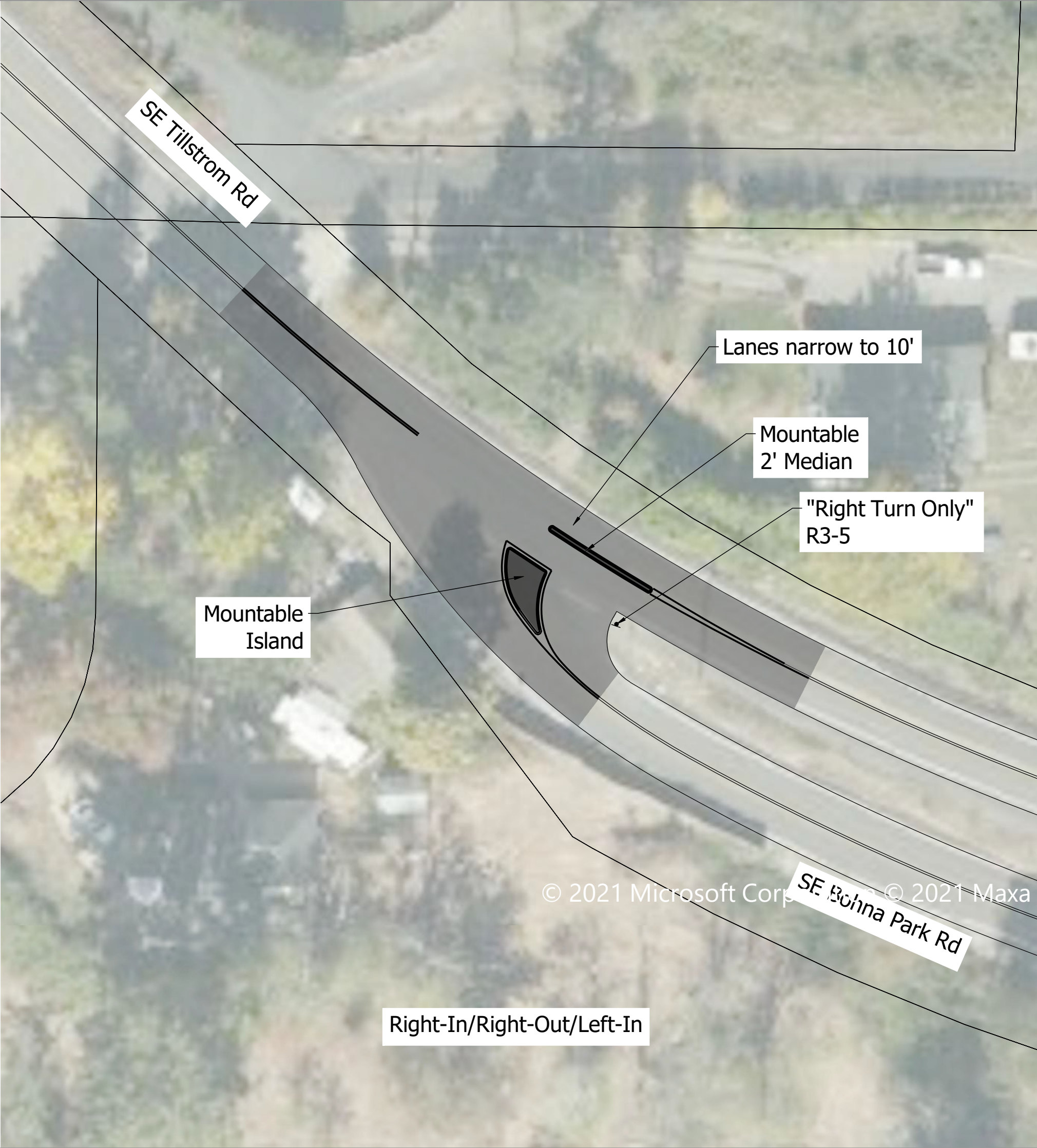
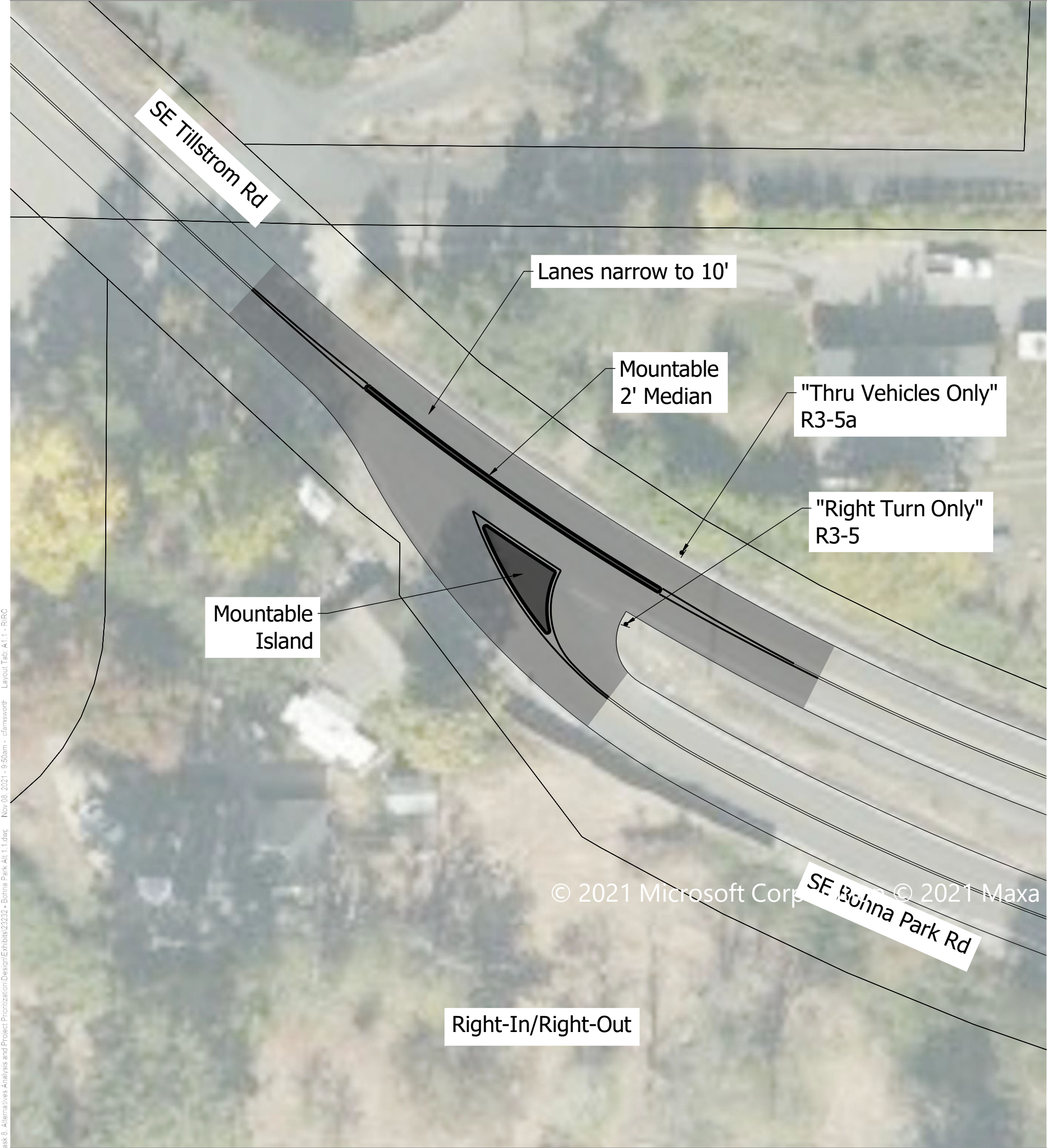
In the long-term, relocating the existing SE Tillstrom Road/SE Bohna Park Road intersection to establish a new orthogonal intersection would be beneficial for traffic safety and operations. The project team identified two potential locations for such an intersection, shown in Figure 4 and Figure 5.

A1.3. Rerouting SE Bohna Park Road to Meet SE Delia Street

Rerouting SE Bohna Park Road to SE Delia Street (shown in red on the figure below) would develop a new roadway connection to the south of the intersection with SE Tillstrom Road. The purpose of this alternative would be to utilize the existing SE Tillstrom Road/SE Delia Street intersection as a safer location for adding traffic that currently uses the SE Tillstrom Road/SE Bohna Park Road intersection. The alignment shown in the figure is illustrative; if this alternative is selected, an exact route would need to account for topography and existing structures.

A1.4. Establishing a New Connection between SE Tillstrom Road and SE Bohna Park Road

Establishing a new connection to the east (shown in blue in the figure below) would add a new roadway where the grade separation between the two roadways on either end is less extreme. This alternative would also remove SE Bohna Park Road to the west of SE Wiese Road, effectively turning this intersection into a curve in the road. This alternative was deemed to be cost-prohibitive given the location of Rock Creek and the need to build a roadway across wetlands.







A2 - SE 242ND AVENUE/SE BORGES ROAD

The SE 242nd Avenue/SE Borges Road intersection is a three-leg, stop-controlled intersection with a channelized southbound right-turn lane (see Exhibit 4). The speed limit on SE 242nd Avenue is 45 MPH, and the eastbound approach to the intersection has limited sight distance for southbound traffic, as shown in Exhibit 5. The County has already identified a preferred alternative based on previous work at this location.

Exhibit 4. The SE 242nd Avenue/SE Borges Road Intersection



Source: Google Earth

Exhibit 5. The SE 242nd Avenue/SE Borges Road Intersection (Looking North)

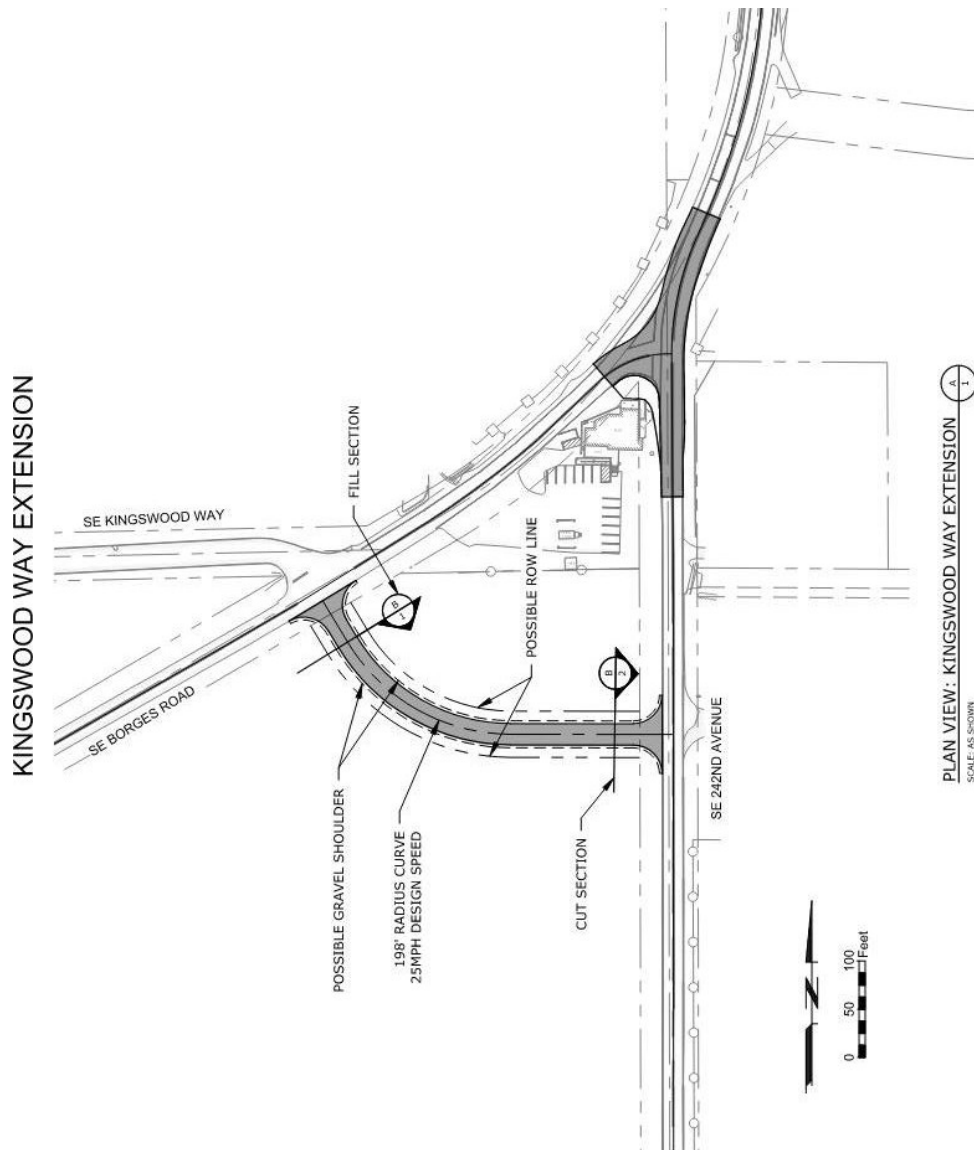


A2 – Extend SE Kingswood Way to Meet SE 242nd Avenue

As shown in Figure 6, the County's preferred alternative extends SE Kingswood Way to the southeast of its existing intersection with SE Borges Road to connect with SE 242nd Avenue. The existing SE 242nd Avenue/SE Borges Road intersection will be closed to through traffic, though access to the businesses will be maintained.

This alternative allows for improved sight distance compared to the existing SE 242nd Avenue/SE Borges Road intersection. This alternative will also need to account for elevation changes along the new roadway alignment, filling in the ditch on the west side of SE 242nd Avenue where the SE Kingswood Way alignment will tie in.

Figure 6. Realignment of the SE 242nd Avenue/SE Borges Road Intersection



Source: Murraysmith, Clackamas County

A3 - SE 242ND AVENUE/SE BOHNA PARK ROAD

Based on feedback from the virtual open house, the project team analyzed the SE 242nd Avenue/SE Bohna Park Road intersection to improve access management and sight distance for vehicles at the intersection as well as those at Thompson Farms on the northwest corner of the intersection (see Exhibit 6).

Exhibit 6. SE 242nd Avenue/SE Bohna Park Road



Source: Google Earth

Currently, Thompson Farms has a gravel parking lot for approximately 450 feet along the west side of SE 242nd Avenue (see Figure 7), as well as a site access along SE Bohna Park Road approximately 35 feet from the SE 242nd Avenue/SE Bohna Park Road intersection.

Figure 7. The Thompson Farms Property and Parking Area, Looking North on SE 242nd Avenue



To improve access management at this site and to improve predictability of vehicle movements for vehicles along SE 242nd Avenue and at the SE 242nd Avenue/SE Bohna Park Road intersection, the following alternatives are proposed (shown in Figure 8).

1. Close the access located on SE Bohna Park Road;
2. Consolidate access south of the Thompson Farms farm stand to one location;
3. Consolidate access north of the farm stand to one or two locations, and
4. Add delineated shoulders to better separate the roadway right of way and the farm parking lot. (These are included as part of the area-wide alternative, described in more detail below.)



A4 - DAMASCUS SEGMENT-BASED ALTERNATIVES

Across many county roads in Damascus, the roadway shoulders are either insufficiently narrow or non-existent (see Exhibit 7). The American Association of State Highway and Transportation Officials (AASHTO) publishes *A Policy on Geometric Design of Highways and Streets* (the *Green Book*), which Clackamas County uses for its shoulder width on arterial and collector roadways. According to Table 6-5 in the *Green Book*, roads with under 400 average daily traffic (ADT) should have a two-foot shoulder on each side of the road, roads with under 2,000 ADT should have a four-foot shoulder on each side of the road, and roads with more than 2,000 ADT should have a six-foot shoulder on each side of the road. At the same time, wider shoulders in rural environments can inadvertently promote higher speeds. As such, the County assesses the width needs for shoulders on a case-by-case basis, based on operating and safety performance.

Exhibit 7. SE Tillstrom Road (Located at SE 222nd Avenue) with No Shoulders



Adding the appropriate shoulder width to county roads within the Damascus Mobility Plan study area should create safer conditions for drivers to eliminate hard pavement edges and allow for easier shoulder pullovers. Wider shoulders could also provide a safer environment for people walking and biking, where sidewalks and/or bike paths are infeasible.

Table 2 lists the major arterial and collector roadways in the Damascus Mobility Plan study area that were included in *Memorandum #4: Evaluation of the Damascus Mobility Plan Area Transportation System*, along with two higher-speed local road segments that provide important connections within the community.

Table 2 also includes the length of each roadway segment to account for shoulder widening.

Table 2. Arterial, Collector and Selected Local Roadways Segment-Based Alternatives

Alt	Roadway	Functional Classification	Speed Limit	Segment Length
A4.1	SE 190 th Dr	Major Arterial	40 MPH	530 feet
A4.2	SE 242 nd Ave	Major Arterial	45 MPH	16,002 feet
A4.3	SE Sunnyside Rd (172 nd to 187 th)	Major Arterial	40 MPH	5,229 feet
A4.4	SE Sunnyside Rd (187 th to Hwy 212)	Major Arterial	40 MPH	3,182 feet
A4.5	SE 232 nd Dr	Minor Arterial	45 MPH	9,993 feet
A4.6	SE Foster Rd	Minor Arterial	45 MPH	4,567 feet
A4.7	SE Tillstrom Rd	Minor Arterial	40 MPH	15,891 feet
A4.8	SE 190 th Dr	Collector	45 MPH	2,870 feet
A4.9	SE 222 nd Dr	Collector	45 MPH	15,992 feet
A4.10	SE 257 th Ave	Collector	45 MPH	1,431 feet
A4.11	SE Borges Rd	Collector	40 MPH	15,465 feet
A4.12	SE Hoffmeister Rd	Collector	45 MPH	4,106 feet
A4.13	SE Royer Rd	Collector	25 MPH	10,001 feet
A4.14	SE Sunshine Valley Rd	Collector	40 MPH	3,716 feet
A4.15	SE Telford Rd	Collector	45 MPH	2,533 feet
A4.16	SE Bohna Park Road	Local	40 MPH	10,713 feet
A4.17	SE Wiese Road	Local	Unknown	8,142 feet

Cost Estimates

This section presents the cost estimates for the alternatives. All cost estimates were created at a planning level and based on roughly estimated earthwork and right-of-way information. As a result, cost estimates are subject to change with additional information, engineering, and design refinement.

Table 3 shows the preliminary cost estimates for the intersection-based alternatives for the Damascus Mobility Plan. The cost estimate for A2 is contingent on more information from the county on the details of the project at SE 242nd Avenue/SE Borges Road. All estimates include six-foot shoulders to the extent of the tie-in location.

Table 3. Cost Estimates for the Intersection-Based Alternatives

Alt	Name	Cost Estimate
A1.1	Right-In, Right-Out, or Right-In, Right-Out, Left-In	\$50,000
A1.2	All-Way Stop Control at SE Tillstrom Road/SE Bohna Park Road	\$5,000
A1.3	Rerouting SE Bohna Park Road to Meet SE Delia Street	\$1,855,000
A1.4	Establishing a New Connection between SE Tillstrom Road and SE Bohna Park Road	\$1,245,000
A2	Extend SE Kingswood Way to Meet SE 242 nd Avenue	\$1,483,000
A3	Access Management at SE 242 nd Avenue/SE Bohna Park Road	\$210,000

Table 4 shows the preliminary cost estimates for the segment-based alternatives for the Damascus Mobility Plan. All segments were assumed to have no existing shoulders. These segments assume an average of four feet of new shoulder on each side of the road with no right-of-way takes and moderate earthwork. Similar to the intersection-based alternatives, the segment cost estimates are planning-level cost estimates subject to further refinement and identification of appropriate shoulder width.

Table 4. Cost Estimates for Segment-Based Alternatives

Alt	Roadway	Segment Length (ft)	Cost Estimate
A4.1	SE 190 th Dr	530	\$145,000
A4.2	SE 242 nd Ave	16,002	\$4,305,000
A4.3	Sunnyside (172 nd -187 th)	5,229	\$1,410,000
A4.4	Sunnyside (187 th -OR 212)	3,182	\$860,000
A4.5	SE 232 nd Dr	9,993	\$2,690,000
A4.6	SE Foster Rd	4,567	\$1,230,000
A4.7	SE Tillstrom Rd	15,891	\$4,275,000
A4.8	SE 190 th Dr	2,870	\$775,000
A4.9	SE 222 nd Dr	15,992	\$4,305,000
A4.10	SE 257 th Ave	1,431	\$385,000
A4.11	SE Borges Rd	15,465	\$4,160,000
A4.12	SE Hoffmeister Rd	4,106	\$1,105,000
A4.13	SE Royer Rd	10,001	\$2,690,000
A4.14	SE Sunshine Valley Rd	3,716	\$1,000,000
A4.15	SE Telford Rd	2,533	\$685,000
A4.16	SE Bohna Park Road	10,713	\$2,885,000
A4.17	SE Wiese Road	8,142	\$2,190,000

Alternatives Analysis

The alternatives were analyzed using the evaluation criteria identified in *Memorandum #3: Damascus Mobility Plan Transportation Planning Framework*. These six criteria are:

- Goal 1: Sustainability
 - » Does the project increase the potential for walking, biking or taking transit?
 - » Does the project impact identified environmentally sensitive areas?
- Goal 2: Local Businesses and Jobs
 - » Is the project located in or near an existing or future employment area?
 - » Does the project create a direct connection from a highway or higher order facility to an employment area?
- Goal 3: Livable and Local
 - » Does the project increase connections between residential areas and commercial areas or to daily needs and services?
 - » Does the project reduce the potential impacts of flooding?
 - » Does the project help implement a local land use or development plan?
- Goal 4: Safety and Health
 - » Does the project improve a safety focus intersection, a candidate road safety audit corridor or an ODOT Safety Priority Index System (SPIS) site?
 - » Does the project have the potential to reduce emissions near schools or densely populated areas?
- Goal 5: Equity
 - » Is the project located in a transportation disadvantaged area and does it increase transportation options for that disadvantaged community?
 - » Does the project increase access for transportation-disadvantaged populations to daily needs and services such as schools, medical services, jobs and groceries?
- Goal 6: Fiscally Responsible
 - » What is the estimated cost effectiveness of the project?
 - » Is the project located within an area prone to landslides?

Each goal is scored on a -1 to 2 scale: an alternative receives a score of -1 if it degrades the evaluation criteria, a score of 0 if it has no impact on the evaluation criteria, a score of 1 if it indirectly improves the evaluation criteria, and a score of 2 if it directly improves the criteria. Table 5 below scores each of the six intersection alternatives according to the evaluation criteria.

Table 5. Evaluation Criteria Scoring of the Intersection-Based Alternatives

Alt	Criteria 1 Score	Criteria 2 Score	Criteria 3 Score	Criteria 4 Score	Criteria 5 Score	Criteria 6 Score	Total Score
A1.1	0	0	-1	2	0	2	3
A1.2	0	0	0	1	0	2	3
A1.3	0	0	2	2	0	-2	2
A1.4	-1	0	1	2	0	-1	1
A2.1	1	0	1	2	0	-1	3
A3.1	0	2	0	2	0	1	5

Of the A1 alternatives shown in Table 5, A1.1 is recommended in the mid-term, and A1.3 is recommended in the long-term. While A1.1 and A1.2 have identical scores above, limited sight distance may impact the effectiveness of an all-way stop control intersection, while a right-in, right-out intersection will not be impacted. Both alternatives A2.1 and A3.1 are recommended at SE 242nd Avenue/SE Borges Road and at SE 242nd Avenue/SE Bohna Park Road, respectively.

Table 6 scores each of the 16 segment-based alternatives according to the evaluation criteria.

Table 6. Evaluation Criteria Score of the Segment-Based Alternatives

Alt	Criteria 1 Score	Criteria 2 Score	Criteria 3 Score	Criteria 4 Score	Criteria 5 Score	Criteria 6 Score	Total Score
A4.1	1	0	0	0	0	2	3
A4.2	1	0	2	1	0	-1	3
A4.3	1	1	2	2	0	1	7
A4.4	1	1	1	2	0	-1	4
A4.5	1	0	2	1	0	-1	3
A4.6	1	1	1	1	0	1	5
A4.7	1	0	2	2	0	-1	4
A4.8	1	0	0	0	0	2	3
A4.9	1	0	0	0	0	-1	0
A4.10	1	0	0	0	0	-1	0
A4.11	1	0	0	0	0	-1	0
A4.12	1	0	2	2	0	-1	4
A4.13	1	1	0	0	0	-1	1
A4.14	1	0	0	0	0	-1	0
A4.15	1	0	0	0	0	-1	0
A4.16	1	0	0	0	0	-1	0
A4.17	1	0	0	0	0	-1	0

Of the A4 alternatives shown in Table 6, the highest-scoring segments, in order, are:

- A4.3 – SE Sunnyside Road (172nd – 187th)
- A4.6 – SE Foster Road
- A4.7 – SE Tillstrom Road
- A4.4 – SE Sunnyside Road (187th – OR 212)
- A4.12 – SE Hoffmeister Road
- A4.1/A4.8 – SE 190th Drive (arterial and collector segments)
- A4.2 – SE 242nd Avenue
- A4.5 – SE 232nd Drive

Preliminary Preferred Alternatives Recommendations

Table 7 summarizes the projects, cost, and timeframes for the alternatives recommended in this memorandum. These recommendations will be refined with feedback and follow-up information from the County.

Table 7. Recommended Alternatives

Alt	Description	Cost	Timeframe
A1.3	Reroute SE Bohna Park Road to meet SE Delia Street	\$1,855,000	Long-term
A2.1	Extend SE Kingswood Way to meet SE 242 nd Avenue	\$1,483,000	Short-term
A3.1	Access Management at SE 242 nd Avenue/SE Bohna Park Road	\$210,000	Mid-term
A4.1	SE 190 th Dr Shoulders	\$145,000	Long-term
A4.2	SE 242 nd Ave Shoulders	\$4,305,000	Long-term
A4.3	Sunnyside (172 nd -187 th) Shoulders	\$1,410,000	Mid-term
A4.4	Sunnyside (187 th -OR 212) Shoulders	\$860,000	Mid-term
A4.5	SE 232 nd Dr Shoulders	\$2,690,000	Long-term
A4.6	SE Foster Rd Shoulders	\$1,230,000	Mid-term
A4.7	SE Tillstrom Rd Shoulders	\$4,275,000	Mid-term
A4.8	SE 190 th Dr Shoulders	\$775,000	Long-term
A4.9	SE 222 nd Dr Shoulders	\$4,305,000	Long-term
A4.10	SE 257 th Ave Shoulders	\$385,000	Long-term
A4.11	SE Borges Rd Shoulders	\$4,160,000	Long-term
A4.12	SE Hoffmeister Rd Shoulders	\$1,105,000	Mid-term
A4.13	SE Royer Rd Shoulders	\$2,690,000	Long-term
A4.14	SE Sunshine Valley Rd Shoulders	\$1,000,000	Long-term
A4.15	SE Telford Rd Shoulders	\$685,000	Long-term
A4.16	SE Bohna Park Road Shoulders	\$2,885,000	Long-term
A4.17	SE Wiese Road Shoulders	\$2,190,000	Long-term

Appendix B

Public Involvement Program

APPENDIX B: SUMMARY OF PUBLIC INVOLVEMENT

Table of Contents

Introduction.....	1
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Introduction

Public involvement was an important component of the Damascus mobility planning effort to ensure that the final proposed plan was informed by the priorities, needs, and issues important to the residents and stakeholders in the project area.

This report summarizes the outreach conducted during the project and is organized as follows:

- » Project Website
- » Materials and Notifications
- » Virtual Open Houses
 - » Virtual Open House 1 Summary
 - » Virtual Open House 2 Summary
- » Other Comments Received

WORKING DOCUMENT

THIS PAPER IS A WORKING DRAFT
AND WILL BE UPDATED AS PUBLIC
INVOLVEMENT CONTINUES TO
OCCUR

Materials and Notifications

Several materials and notifications were used to get public input and engagement in this effort, including:

- » Residents of the Damascus Mobility Plan Study Area were mailed a postcard alerting them to the project website and encouraging them to sign-up for the email list. This postcard also alerted them to the first virtual open house and corresponding live event (see Attachment A for a copy of the postcard). A second postcard was mailed to people in the project area to invite them to the second online open house and a virtual meeting to learn about the project and have a chance to ask questions and express their views. Both postcards included text in English and Spanish to make the information accessible to a wider audience. The postcards are included in Attachment A.
- » A project overview flyer provided community members with information about the project purpose, scope, study area, study components, and next steps. The overview flyer was provided at community meetings. The flyer is included in Attachment A.
- » Clackamas County staff made several presentations to the public, including at a Damascus CPO meeting and a Damascus Community Meeting. Attendees received a project overview, asked questions, and provided feedback to staff.
- » Social media posts advertised upcoming meetings and online open house activities.
- » Clackamas County staff maintained an interested parties email list, which community members could sign-up for on the website or contact County staff to receive emails. The list was used alongside social media posts and public meetings to communicate online open house and other feedback opportunities.

Project Website

The County hosted a project website (<https://www.clackamas.us/damascusroads>) that included the project purpose, schedule, information about how members of the public could stay involved, upcoming meetings, information from past meetings and project memorandums and other materials. Participants were able to sign-up for an email list for project updates and access the online open houses and virtual meetings.

Virtual Open Houses

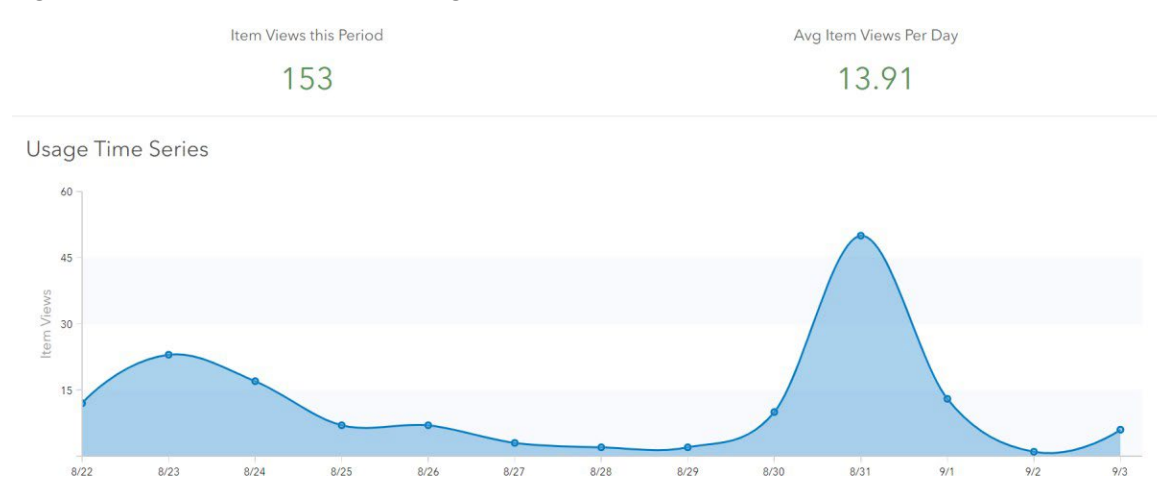
The first virtual open house was intended to gather feedback about the existing study area. The second virtual open house provided information about the projects under consideration and sought feedback on these projects.

VIRTUAL OPEN HOUSE 1 SUMMARY

The first Virtual Open House was held online from August 23 to September 3, 2022. It provided a summary of the project purpose, timeline, background, overview of other projects in the study area, and analysis conducted to date (Attachment B provides screenshots of the virtual open house pages). It also included a livestreamed virtual meeting on August 31 where members of the public could ask questions about the project, and a comment map where the public could

provide comments related to concerns about roads in the Damascus Study Area and/or suggestions for improving the roadway network in the Damascus Study Area. As shown in Figure 1, Virtual Open House 1 received 153 views between August 23 – September 3, 2022.

Figure 1: Virtual Open House 1 Usage



The livestreamed virtual meeting was attended by two community members who provided the following comments on the transportation system in the Damascus Study Area:

- » ODOT needs to address issues along Highway 212
- » Reduce speeding at Bohna Park Road/ 242nd Avenue, 222nd Drive/Highway 212, and Tillstrom Road/242nd Avenue to improve safety
- » Thompson Farms is concerned about the safety of their customers and would ideally like a signal to be added to the intersection of Tillstrom Road/242nd Avenue
- » There is a lack of safe walking and bicycle in the area. Providing wider shoulders is a potential solution.

Figure 2 shows the location of comments provided by the public during Virtual Open House 1. There were 24 comments related to biking, walking, congestion, speed, and safety. More specifically, the public gave the following feedback:

- » Safety (11) - remove gates on Royer Road, conduct access management on Highway 212, provide designated turn signals at 222nd Drive/Tillstrom Road, limit turning movements at 222nd Drive/Highway 212, increase visibility of stop sign at 222nd Drive/Bohna Park Road, improve traffic flows along Highway 212, improve the Sunnyside/Highway 212 intersection, add warning signs for snow on Borges Road, and improve turning movements at Tillstrom Road/Borges Road.
- » Speed (4) – speeding concerns along Wiese Road, Borges Road, 232nd Drive, and 242nd Avenue
- » Biking (3) – Foster Road, Sunnyside Road, and Highway 212 are unsafe for bicyclists
- » Congestion (4) – congestion on Highway 212 and a number of intersections in the study area
- » Walking (2) – need walking facilities on Royer Road and 222nd Drive

The second Virtual Open House was held online from February 28 to March 13, 2022. It provided a summary of the project purpose, timeline, background, an existing conditions overview, and a list of potential projects for the Damascus Mobility Plan (Attachment C provides screenshots of the virtual open house pages). It also included a livestreamed virtual meeting on March 9 where members of the public could ask questions about the project, and a comment map where the public could provide comments on the proposed projects and whether they agreed or disagreed with the implementation timeline for each project. A survey within the virtual open house provided another way to give feedback on the potential project list. As shown in Figure 3, Virtual Open House 2 received 251 views between February 28 – March 13, 2022.

Item Views this Period

251

Avg Item Views Per Day

19.31

Usage Time Series

The chart displays the daily item views over a period of 17 days. The y-axis represents 'Item Views' ranging from 0 to 56. The x-axis shows dates from 2/27 to 3/13. The data points are connected by a blue line, and the area below the line is filled with a light blue gradient. The chart shows a significant peak in early March (around 3/1) followed by a sharp decline and then a smaller peak in late March (around 3/8).

Date	Item Views
2/27	20
2/28	45
3/1	18
3/2	25
3/3	22
3/4	18
3/5	12
3/6	14
3/7	12
3/8	25
3/9	22
3/10	10
3/11	12
3/12	10
3/13	8

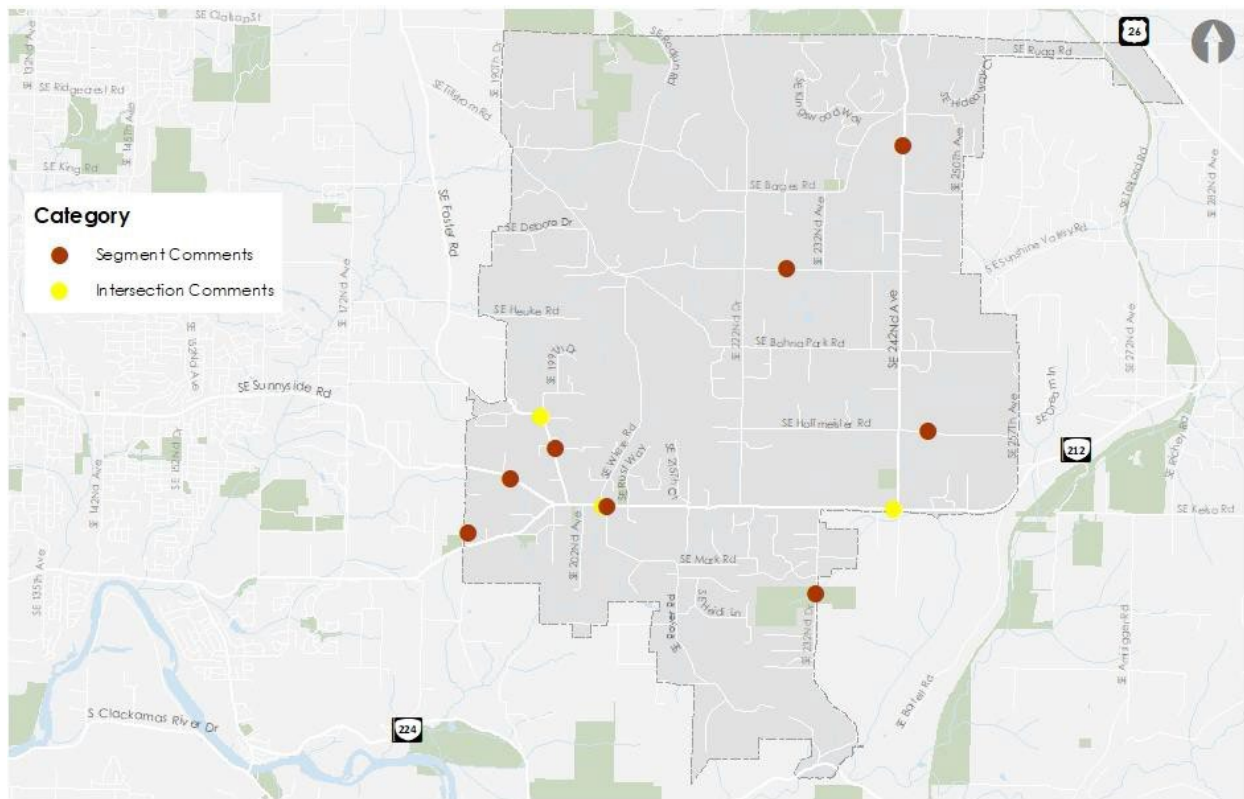
The livestreamed virtual meeting was attended by 19 community members who provided the following comments:

- » Debated the best approach to Royer Road, whether it should be kept as a local road with no through access between Highway 212 and SE 232nd Drive or whether to connect the roadway to help relieve congestion on Highway 212 that will be needed with redevelopment
- » Concerned about Happy Valley's annexation of former City of Damascus land, as well as Happy Valley's siting of industrial land next to residential areas near the Damascus Mobility Plan study area
- » Supported recent changes to Highway 212 operations, including the new southbound left-turn at Foster Road, as well as the proposed changes at Sunnyside, Foster, and 242nd Avenue on Highway 212
- » Questioned whether enough is being done to address congestion issues on Highway 212 through Damascus and whether there are plans to extend the Sunrise corridor beyond 172nd Avenue
- » Asked about the status of a Damascus bypass highway, as proposed by Damascus CPO Chair Mike Hammons. (Neither ODOT nor Clackamas County have plans for such a facility.)

Figure 4 shows the location of comments provided by the public during Virtual Open House 2. There were 11 comments related to the proposed projects. More specifically, the public gave the following feedback:

- » Foster Road (2) – the sharp turn on Foster Road at 197th Avenue has caused several crashes, and while shoulder widening would be helpful on this segment, it won't stop crashes from happening. Additionally, because a lot of the challenges at Foster Road (at Highway 212) are outside of the county's control, one person suggested this segment could be a lower priority.
- » Royer Road/Wiese Road at Highway 212 (2) –Would like these intersection changes to be a higher priority; adding a signal would improve safety for those turning to or from Highway 212.
- » Sunnyside Road and 187th Avenue (2) – approve of new configurations with Sunnyside Road and with the 187th Avenue connection to the south.
- » 242nd Avenue (2) – Because 242nd Avenue is a major artery for the Damascus area and for the region, the shoulder widening should be a higher priority; approve of the proposed intersection changes at Borges and at Highway 212;; consider a flashing yellow left-turn arrow at the Highway 212 intersection.
- » Tillstrom Road (1) – drop this segment to Tier 3.
- » Hoffmeister Road (1) – drop this segment to Tier 3.
- » 232nd Drive (1) – install a crosswalk with flashing lights at the Deep Creek school to create safer crossing conditions for students.

Figure 4. Virtual Open House 2 Comment Map



OTHER COMMENTS RECEIVED

This section summarizes emails, calls, messages, and other meetings sent to or attended by County staff.

Damascus CPO meeting: July 20, 2021; online (7 people in attendance)

- Intersection needs: 232nd/Highway 212; 222nd and Royer; few crashes at 242nd
- Population growth – planning for growth, planning for no growth
- Work done by former city of Damascus
- Cost of study
- ODOT projects, including Sunrise
- Current planning efforts by Happy Valley

Damascus Community Meeting: March 19, 2022, Deer Creek Damascus Elementary School (about 150 people in attendance)

- Highway 212 -- Need more traffic control at 222nd and 212 – ban left turns or add a light; i212 intersection refinement study; need study from Tong to 242nd; discussions with state;
- Population growth -- Happy Valley's expansion; Happy Valley's authority to plan for an area outside of their city boundaries; islands of annexations with involuntary annexations; pressures of urban development are coming here; county's projection of 34,000 people in 20 years includes 14,000 already in the area
- Building new roads or improving current roads
- Transportation System Plan – The impact of the Damascus Mobility Plan on the county TSP; relationship of county TSP to ODOT; TSP updates

County staff also received emails and phone calls about the project with questions and suggestions about specific locations in the project area, as well as inquiries about the relationship of this project to other nearby projects, including Happy Valley's Pleasant Valley-North Carver Plan and Sunrise Corridor planning.

Share feedback Aug. 23-Sept. 3!
¡Comparta sus comentarios del 23 de agosto
al 3 de septiembre!
www.clackamas.us/damascusroads

Damascus Mobility Plan

Help Clackamas County identify improvements needed to make county roadways in the Damascus area safer, easier to get to and less congested over the next 20 years.

A Damascus transportation plan will help guide public investments, support future development, and coordinate regional roadway needs. The findings will be incorporated into the next Clackamas County Transportation System Plan Update, in 2023-24.

The study area includes most of the former City of Damascus inside the Portland Metropolitan Urban Growth Boundary (UGB), except for:

- The area generally west of 190th Drive planned by Happy Valley through the Pleasant Valley/North Carver Comprehensive Plan.
- Projects along OR 212, a state highway, that are the responsibility of the Oregon Department of Transportation (ODOT).

Plan de Movilidad de Damascus

Ayude al Condado de Clackamas a identificar las mejoras necesarias para hacer que los caminos del área de Damascus sean más seguros, tengan acceso más fácil y estén menos congestionados en los próximos 20 años.

Un plan de transporte en Damascus ayudará a guiar las inversiones públicas, a respaldar el desarrollo futuro y a coordinar las necesidades regionales de los caminos. Los hallazgos se incorporarán en la próxima Actualización del Plan del Sistema de Transporte del Condado de Clackamas, en 2023-24.

El área de estudio incluye la mayor parte de la antigua ciudad de Damascus adentro de los Límites de Crecimiento Urbano de la Zona Metropolitana de Portland (UGB), salvo por:

- La mayor parte del área al oeste de 190th Drive, que planea Happy Valley por medio del Plan Integral de Pleasant Valley/North Carver.
- Proyectos a lo largo de OR 212, la autopista estatal, que son la responsabilidad del Departamento de Transporte de Oregon (ODOT).

Project Timeline / Cronograma del proyecto

Project team reviews related projects, gathers data	Public provides input on the current road system through open house	Public provides feedback about the potential projects through open house	Report to community, Planning Commission and Board of County Commissioners	Incorporate Damascus Mobility Plan into County Transportation System Plan update
Summer 2021	August 2021	Winter 2021-22	Spring 2022	2023-24
Verano del 2021	Agosto del 2021	Invierno 2021-22	Primavera 2022	2023-24
El equipo de proyecto revisa los proyectos relacionados, recolecta la información	El público hace comentarios sobre el sistema de caminos actuales en la sesión de puertas abiertas.	El público hace comentarios sobre los proyectos potenciales en sesión de puertas abiertas.	Informar a la comunidad, a la Comisión de Planeación y al Consejo de Comisionados del Condado	Incorporar el Plan de Movilidad de Damascus a la actualización del Plan de Sistema de Transporte del Condado



We strive to make public information accessible. To request an accommodation, contact Steve Williams at swilliams@clackamas.us or 503-742-4696. For meeting accommodations, please allow at least 48 hours of notice.



Nos esforzamos para que la información pública sea accesible. Para solicitar adaptaciones, contacte a Steve Williams a swilliams@clackamas.us o al 503-742-4696. Para adaptaciones para la reunión, por favor, notifique por lo menos con 48 horas de anticipación.

Damascus Mobility Plan Open House #2

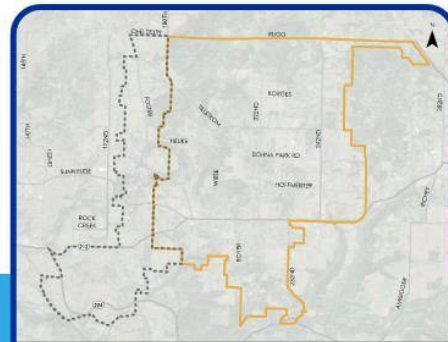
After months of study and public input, Clackamas County has developed proposals for ways to ease congestion and improve safety on county roadways in the Damascus area over the next 20 years. Join our second online open house, Feb. 28 to March 13, to let us know what you think about the proposed alternatives. Your feedback will help us refine and adjust recommendations to include in the Damascus Mobility Plan.

If you'd like a virtual open house tour and a chance to talk with and ask questions of project staff, join us March 2, from 6-7:30 p.m. Details at www.clackamas.us/damascusroads.


Sesión de puertas abiertas para el Plan de Movilidad de Damascus #2

Después de meses de estudios y comentarios públicos, el Condado de Clackamas ha desarrollado propuestas sobre formas de aliviar la congestión y mejorar la seguridad en las carreteras del condado en el área de Damascus durante los próximos 20 años. Únase a nuestra segunda sesión abierta en línea, del 28 de febrero al 13 de marzo, para comentarnos qué piensa sobre las alternativas propuestas. Sus comentarios nos ayudarán a pulir y ajustar las recomendaciones que se incluirán en el Plan de movilidad de Damascus.

Si desea un recorrido virtual de la sesión abierta y una oportunidad de hablar con el personal del proyecto y de hacerles preguntas, conéctese con nosotros, 6-7:30 p.m., 2 de marzo. Detalles en www.clackamas.us/damascusroads.



 **Damascus Mobility Plan Study Area**
Área de Estudio para el Plan de Movilidad de Damascus

 **Pleasant Valley/North Carver Plan Area**
(City of Happy Valley)
Área del Plan de Pleasant Valley/North Carver
(Ciudad de Happy Valley)

Learn more and share your ideas

- **Watch for project discussions** at meetings of the Damascus Community Planning Organization (CPO) and other area organizations. Go to www.damascusorcpo.org to learn more about the CPO and its focus on Damascus area plans.
- Find out more about this study and what we've learned on the project website at www.clackamas.us/damascusroads.
- To receive project updates by email, contact Ellen Rogalin at ellenrog@clackamas.us.



Transportation Engineering
150 Beaver Creek Road
Oregon City, OR 97045
www.clackamas.us/engineering

Obtenga más información y comparta sus ideas

- **Busque las conversaciones sobre el proyecto** en las asambleas de la Organización de Planificación Comunitaria de Damascus (CPO, por sus siglas en inglés) y otras organizaciones del área. Visite www.damascusorcpo.org para obtener más información sobre la CPO y su enfoque en los planes para el área de Damascus.
- Encuentre más información sobre este estudio y sobre lo que hemos descubierto en el sitio web del proyecto en www.clackamas.us/damascusroads.
- Si desea recibir actualizaciones por correo electrónico, contacte a Ellen Rogalin en ellenrog@clackamas.us.

Questions or suggestions? ¿Tiene preguntas o sugerencias?

Steve Williams: swilliams@clackamas.us/503-742-4696

503-742-4696: ¿Traducción e interpretación? | Требуется ли вам устный или письменный перевод? | 翻译或口译? | Cần Biên dịch hoặc Phiên dịch? | 번역 또는 통역?



Share feedback Feb. 28- March 13!
¡Comparta sus comentarios del 28 de febrero al 13 de marzo!
www.clackamas.us/damascusroads

Damascus Mobility Plan

Clackamas County is identifying improvements needed to make county roadways in the Damascus area safer, easier to get to and less congested over the next 20 years. This transportation plan will help guide public investments, support development, and coordinate regional roadway needs in coming years. The findings will be incorporated into the next Clackamas County Transportation System Plan Update, planned for 2023-24.

The study area includes most of the former City of Damascus inside the Portland Metropolitan Urban Growth Boundary (UGB), except for:

- The area generally west of 190th Drive planned by Happy Valley through the Pleasant Valley/North Carver Comprehensive Plan.
- Beyond several key intersections, OR 212 corridor evaluation (i.e., alignment, widening, capacity needs to support increased density) are not part of this project's scope. OR 212, a state highway, is the responsibility of the Oregon Department of Transportation (ODOT). Future needs east of 172nd Ave will be addressed in planning after Sunrise Phase 2 (122nd to 172nd) is funded.

Plan de Movilidad de Damascus

Ayude al Condado de Clackamas a identificar las mejoras necesarias para hacer que las carreteras del área de Damascus sean más seguras, sean de más fácil acceso y estén menos congestionadas en los próximos 20 años. Este plan de transporte ayudará a guiar las inversiones públicas, a apoyar el desarrollo futuro y a coordinar las necesidades de las carreteras regionales en los próximos años. Los resultados se incorporarán en la próxima Actualización del Plan del Sistema de Transporte del Condado de Clackamas, en 2023-24.

El área de estudio incluye la mayor parte de la antigua ciudad de Damascus adentro de los Límites de Crecimiento Urbano de la Zona Metropolitana de Portland (UGB), salvo por:

- La mayor parte del área al oeste de 190th Drive, que planea Happy Valley por medio del Plan Integral de Pleasant Valley/North Carver.
- Más allá de varias intersecciones clave, la evaluación del corredor OR 212 (es decir, alineación, ampliación, necesidades de capacidad para apoyar una mayor densidad) no es parte del alcance de este proyecto. OR 212, la autopista estatal, es responsabilidad del Departamento de Transporte de Oregon (ODOT, por sus siglas en inglés). Las necesidades futuras de 172nd Ave se abordarán en la planificación después de que se financie la etapa 2 de Sunrise (122nd y 172nd).

Project Timeline / Cronograma del proyecto

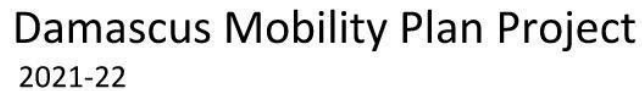
Project team reviews related projects, gathers data	Public provides input on the current road system through open house	Public provides feedback about the potential projects through open house	Report to community, Planning Commission and Board of County Commissioners	Incorporate Damascus Mobility Plan into County Transportation System Plan update
Summer 2021	August 2021	Winter 2021-22	Spring 2022	2023-24
Verano del 2021	Agosto del 2021	Invierno del 2021-22	Primavera del 2022	2023-24
El equipo de proyecto revisa los proyectos relacionados, recolecta la información	El público hace comentarios sobre el sistema de caminos actuales en la sesión de puertas abiertas	El público hace comentarios sobre los proyectos potenciales en sesión de puertas abiertas	Informar a la comunidad, a la Comisión de Planeación y al Consejo de Comisionados del Condado	Incorporar el Plan de Movilidad de Damascus a la actualización del Plan de Sistema de Transporte del Condado



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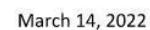
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- Identify roadway improvements needed to the County transportation system to enhance safety, equity, and mobility for travelers in the unincorporated Damascus area over the next 20 years
- Incorporate results into the Clackamas County Transportation System Plan (TSP)

- Focused on passenger and freight vehicle travel
- Based on existing County land use and zoning designations in the study area
- Excludes Oregon State Highway 212

- Properties and roadways generally west of 190th Drive that are planned by the City of Happy Valley through the [Pleasant Valley/North Carver \(PV/NC\) Comprehensive Plan](#).



Study Components:

- Review existing conditions and past studies
- Gather public input
- Analyze existing and future traffic
- Identify road locations that require improvements to serve expected traffic in 2040
- Develop possible alternatives to improve safety, and to increase mobility and access

Planning for Roads in Damascus

Today the transportation plans for Damascus anticipate fewer people and jobs in the area than when it was being planned by the City of Damascus.

County land use & transportation designations now apply to the Damascus area:

- County zoning is for a rural, large-lot community surrounding a commercial center
- County projects 34,860 residents and 6,309 jobs in 2040
- Fewer people and jobs, lower future traffic levels
- Land use plans will need to be revised before urbanization of the area occurs

Past City of Damascus transportation plans (never adopted):

- Projected a population of more than 78,000 people in 2040 (which would have made it larger than any other city in the county)

Next Steps

For the draft final plan, the County is evaluating more than 20 possible projects on county roads based on traffic analysis, available funds and public input, including adding shoulders to existing roads and upgrading intersections to improve safety.

- Spring 2022: Revise the draft Damascus Mobility Plan based on the analysis above and public feedback
- Spring: Post draft plan online for public review and comment
- Spring-Summer 2022: Present findings and recommendations to Planning Commission and Board of Commissioners for review and action
- Fall 2022: Include the final Damascus Mobility Plan in the County Transportation System Plan (TSP)

Partners:

- City of Happy Valley
- Oregon Department of Transportation

For More Information...

- ... Check the project website: <https://www.clackamas.us/damascusroads>
- ... Contact Project Manager Steve Williams, swilliams@clackamas.us

To Receive Project Updates by Email...

- ... Community Relations Specialist Ellen Rogalin, ellenrog@clackamas.us

March 14, 2022

Attachment B. Virtual Open House 1 Content

Damascus Mobility Plan Virtual Open House



Damascus Mobility Plan Virtual Open House

August 23 - September 3

[Welcome](#) [Project Purpose](#) [Project Timeline](#) [Project Background](#) [Other Projects](#) [What Do We Know?](#) [What do You Think?](#) [Live Meeting](#) [Get Involved](#)

Welcome

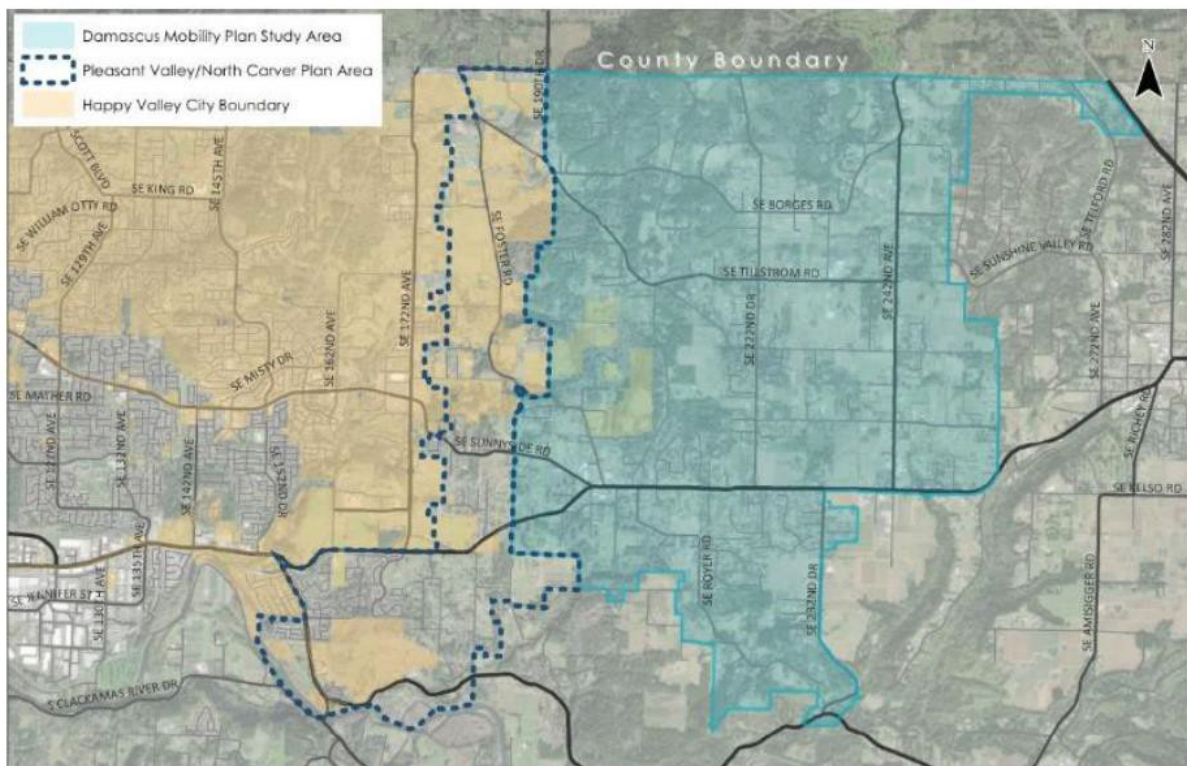
Thank you for visiting the Damascus Mobility Plan Virtual Open House! The virtual open house is now closed (it was open August 23 to September 3). Comments provided helped the project team understand the public's transportation needs in the study area and will be considered as we create project recommendations for the study area. You may still read through these materials to learn about this project.

Much of the information presented in this open house is provided on the project website. If you already reviewed the materials in the project website, please use the navigation bar above to skip to the *What do We Know?* and *What do You Think?* sections of this open house. *A link to the project website is provided at the end of this open house.*

Project Purpose

The Damascus Mobility Plan is a project to identify roadway improvements needed to the County transportation system to enhance safety, equity, and mobility for travelers in the Damascus area over the next 20 years. The project is focused primarily on passenger and freight vehicle travel. The plan will be developed based on existing land use and zoning designations within the study area (see map below).

The findings will be incorporated into the next update of the Clackamas County Transportation System Plan, expected in 2023-24.



Damascus Mobility Plan Study Area

The study area includes most of the former City of Damascus planning area inside the Portland Metropolitan Urban Growth Boundary (UGB), except for:

- Properties and roadways generally west of 190th Drive that are planned by the City of Happy Valley through the Pleasant Valley/North Carver (PV/NC) Comprehensive Plan.
- Projects along OR 212, a state highway, that are the responsibility of the Oregon Department of Transportation (ODOT).

Project Timeline

The project is expected to take about one year to complete. Throughout that time the project team will report to and seek input from area residents, businesses and property owners through public meetings, presentations at community meetings, social media, mailings, email updates and the project website. In addition, two open houses are planned to share information, answer questions and listen to comments and suggestions.

Major project milestones are shown below.



Project Schedule

Why are you doing this now?

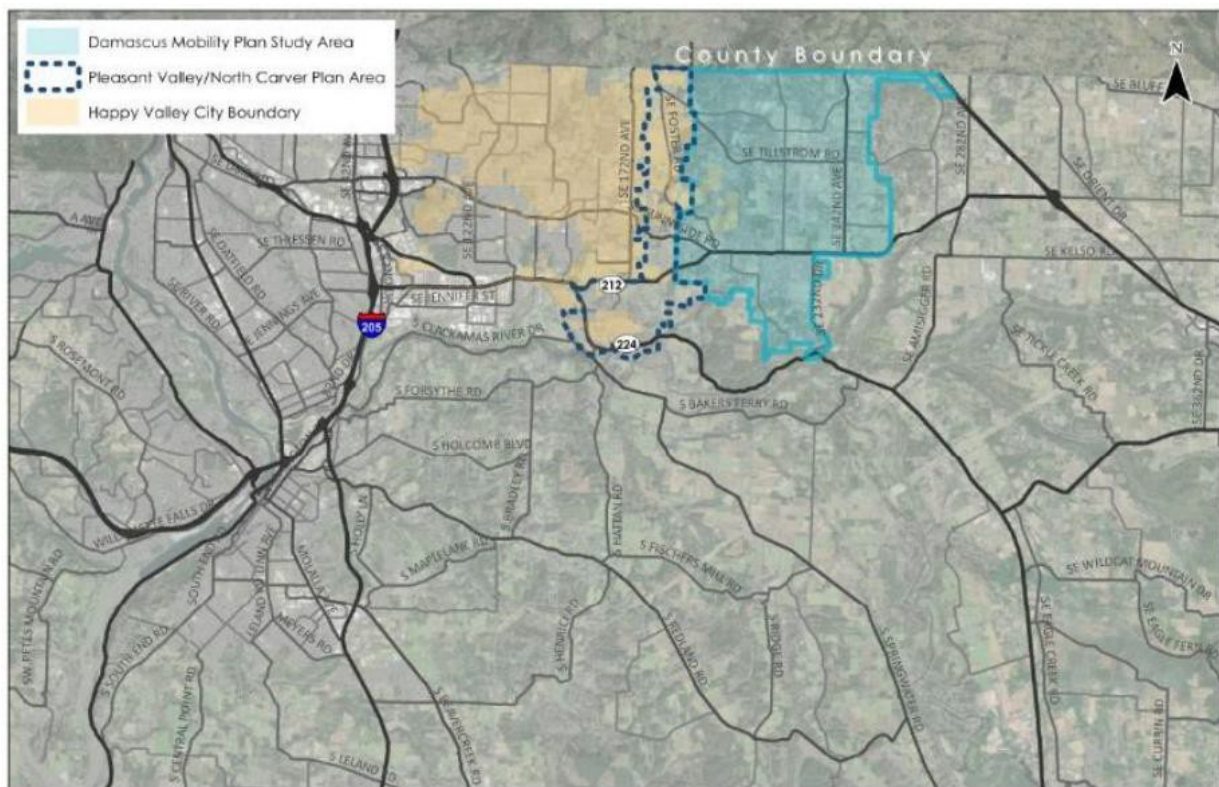
Clackamas County is required to update its Transportation System Plan (TSP) for unincorporated areas of the county approximately every 10 years. When the last update took place, in 2013, Damascus was a city, so the area was not included in the county plan. Since then, the city was disincorporated in 2016 and lawsuits related to that action ended in 2020. As a result, the study area's land use and transportation system are governed by the Clackamas County Comprehensive Plan, and 2013 transportation system plan, which are based on a more rural context for the Damascus area compared to the urban context contemplated by the former city.

While this project focuses on road improvements, the recently adopted [Clackamas County Transit Development Plan](#) identified transit improvements for the Damascus area, and the [Clackamas County Bike and Walk Plan](#) currently underway will provide recommendations for active transportation improvements in Damascus.

Project Background

Didn't the City of Damascus have road plans?

The City of Damascus did develop some transportation system plans, but those were never finished and became invalid when the city disincorporated and the area once again became a Clackamas County responsibility. With disincorporation, applicable land use and transportation plans for the Damascus area reverted to the County's Comprehensive Plan and Zoning & Development Ordinance (ZDO).



Will this project include Happy Valley's plans for the western portion of Damascus?

Yes, it will. Happy Valley, through the [Pleasant Valley/North Carver \(PV/NC\) Comprehensive Plan](#), has been working on plans for transportation improvements in the western portion of Damascus from 190th Avenue west to the current Happy Valley city limits. The County's Damascus Mobility Plan assumes the future development of the proposed Happy Valley transportation improvements in that area per the provisions of the Urban Growth Management Agreement (UGMA) approved by the county and the City of Happy Valley.

Will this project also look at land use issues?

No, this project is focused on roadway transportation facilities to support passenger and freight vehicle travel. After the disincorporation of the City of Damascus, Clackamas County re-adopted the land use plans and zoning requirements that were in place prior to the formation of the City of Damascus. This project is assessing existing and future traffic based on the re-adopted county land use plans and zoning requirements. Land use changes are addressed through large-scale urban planning efforts and updates to the County's Comprehensive Plan.

How much does this project cost and where does the money come from?

This project has a planning budget of \$200,000 which comes from County planning funds and funds transferred to the County following the disincorporation of Damascus.

Other Projects

Other transportation projects that have taken place, are underway, or are planned in areas adjacent to Damascus are listed in the table below. The City of Happy Valley is working on the [Pleasant Valley/North Carver Comprehensive Plan](#), and Clackamas County recently began work on the [Bike Walk Clackamas Plan](#). Projects from these plans are mapped and described in the table below. Please note that the map and table of previously planned projects do not include all work within Damascus, such as ongoing road maintenance.

1. Clackamas County is currently refining its 2021-2026 Capital Improvement Program (CIP), which includes more than \$3.3 million in transportation-related investments within the Damascus Study Area. The CIP has not yet been adopted by the Board of County Commissioners and is subject to change. These projects will be shared once a final project list is adopted.
2. Clackamas County is updating its list of planned road maintenance projects. This list will be shared with the public once it is complete.

Previously Planned Projects in the Damascus Area

Project ID	Project Name/Location	Description	Plan
1	SE Tillstrom Road/SE 190 th Drive	Install safety signage	Damascus Area Systemic Safety Enhancements
2	SE Tillstrom Road/SE Borges Road		
3	SE Tillstrom Road/SE Bohna Park Road		
4	SE Wiese Road/SE Bohna Park Road		
5	SE 222 nd Drive/SE Borges Road		
6	SE 222 nd Drive/SE Tillstrom Road	Install safety signage and overhead flashing beacons	
7	SE 222 nd Drive/SE Bohna Park Road	Install safety signage	
8	SE 242 nd Avenue/SE Sunshine Valley Road		
9	SE 222 nd Drive/SE Hoffmeister Road		
10	SE 242 nd Avenue/SE Tillstrom Road		
11	SE 242 nd Avenue/SE Bohna Park Road		
12	SE 242 nd Avenue/SE Hoffmeister Road		
13	SE 222 nd Drive		
14	SE Wiese Road		
15	Sunnyside Connector Route, I-205 to Hwy 212	Buffered bike lanes or cycle track on Sunnyside Road	Clackamas County Active Transportation Plan
16	Foster Road, Cheldelin Road to Hwy 212	Provide three-lane vehicle cross-section, bicycle lanes, landscape strip, and sidewalks	Clackamas to Columbia (C2C) Corridor Plan
17	Tillstrom Road		
18	SE Sunnyside Road East Extension	Construct new five-lane road with continuous left-turn lane, sidewalks, bike lanes, and traffic signals	

Previously Planned Projects in the Damascus Area

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What Do We Know?

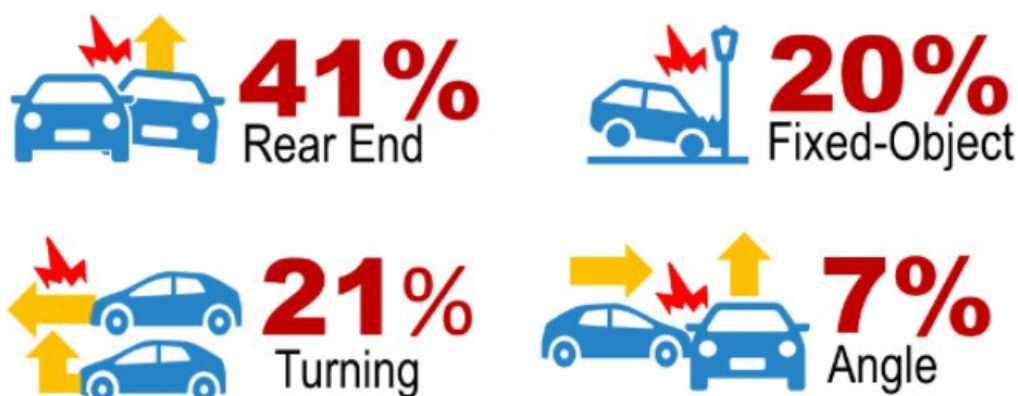
The Damascus Mobility Plan examined 11 study intersections, broadly located along SE Tillstrom Road, SE Borges Road, and SE 242nd Avenue (excluding Highway 212). All of these intersections meet the County's rural intersection operating thresholds, meaning that there are no significant, regular capacity issues or delays at these intersections.

On Highway 212, three intersections (Highway 212/SE Sunnyside Road, Highway 212/SE 222nd Drive, and Highway 212/SE 242nd Avenue) have high congestion and do not meet Oregon Department of Transportation operating thresholds. In the future, congestion is expected to grow and exceed thresholds at two of these intersections (Highway 212/SE 222nd Drive and Highway 212/SE 242nd Avenue).

From a safety perspective, there were 537 reported crashes within the Damascus Study Area between 2015 and 2019 (the five most recent years with complete data). As shown in the infographic below, the most common crash types include rear-end crashes, turning movement crashes, and fixed object crashes, which collectively accounted for 441 of the 537 reported crashes (82%). There were six crashes that resulted in a total of eight fatalities: two head-on crashes, two fixed object crashes, one angle crash, and one pedestrian crash.

Nine of the 11 study intersections are slated to receive new safety signage, with the SE 222nd Drive/SE Tillstrom Road intersection also set to receive an overhead flashing beacon for drivers approaching the intersection. Future analysis will consider potential safety improvements at locations where a high quantity of crashes and/or fatal crashes occurred.

MOST FREQUENT CRASH TYPES



Most Frequent Crash Types in the Damascus Study Area (2015-2019)

What do You Think?

The open house included a comment map for people to add comments related to concerns about roads in the Damascus Study Area and/or suggestions for improving the roadway network in the Damascus Study Area. This comment map is now closed to new comments, but you can use the map to see what comment were made.

[Comment Map]

Live Meeting

A livestreamed meeting was held on Zoom on August 31 at 6:30 PM. You can watch a recording of the meeting by clicking the button below.

[Click Here to Watch the Recording](#)

Get Involved

We'll be sharing information at meetings in your community, and looking for your input during the next virtual open house in January-February 2022 to provide feedback on potential proposed projects to address existing and future transportation needs.

To be placed on a list to receive project email updates, contact Community Relations Specialist [Ellen Rogalin](mailto:ellenrog@clackamas.us) at ellenrog@clackamas.us.

Questions or ideas? Contact Project Manager Steve Williams at swilliams@clackamas.us.

Visit the project website here: <https://www.clackamas.us/damascusroads>.

Damascus Mobility Plan Virtual Open House 2

February 28 - March 13

Live Meeting March 9th from 6 - 7:30 PM

[Project Timeline](#) [Project Background](#) [What Have We Learned?](#) [Potential Improvements](#) [What Do You Think?](#) [Live Meeting](#)

Welcome

Thank you for visiting the Damascus Mobility Plan Virtual Open House! Please review the information below about current and projected roadways in the Damascus area and then share your observations and suggestions in the *What do You Think?* section. Your comments will help us understand your transportation needs and refine project recommendations.

Project Purpose

The purpose of the Damascus Mobility Plan is to identify roadway improvements needed to the Clackamas County transportation system over the next 20 years to enhance safety, equity, and mobility for residents, businesses, and travelers in the Damascus area. The project focuses primarily on passenger and freight vehicle travel.

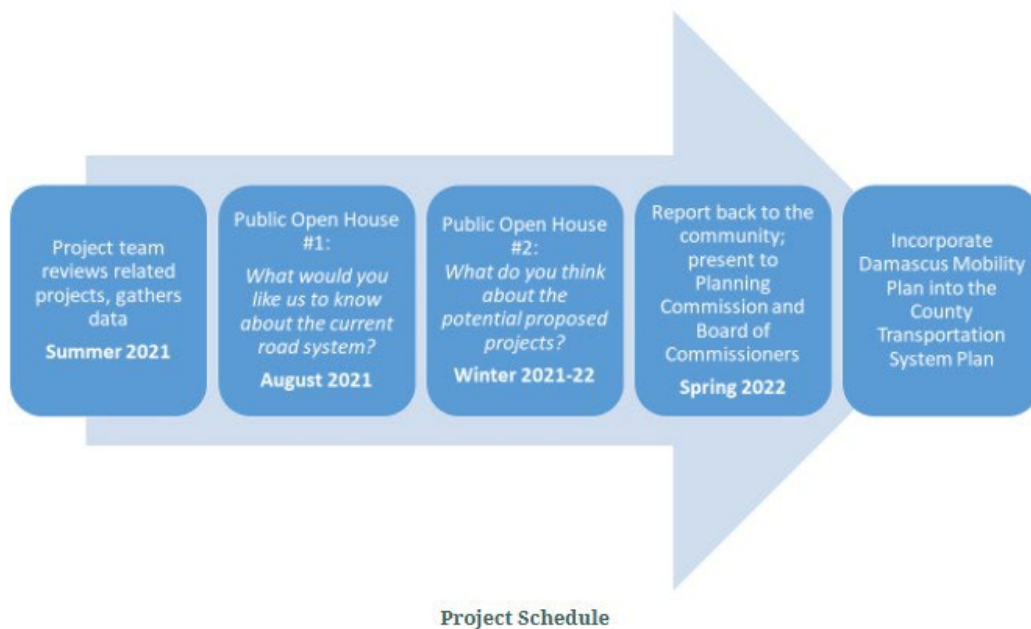
The findings from this Damascus study will be incorporated into the next update of the Clackamas County Transportation System Plan, expected in 2023-24.



- Properties and roadways generally west of 190th Drive that are being planned by the City of Happy Valley through the Pleasant Valley/North Carver (PV/NC) Comprehensive Plan.
- Beyond several key intersections, evaluation of the OR 212 corridor (i.e., alignment, widening, and capacity to support any future increased density) are not part of this project's scope. OR 212 is a state highway and is the responsibility of the Oregon Department of Transportation (ODOT). Future OR 212 needs east of 172nd Avenue will be addressed through future planning efforts.

Project Timeline

Major project milestones are shown below.



Why is the County doing this planning now?

Clackamas County is required to update its Transportation System Plan (TSP) for unincorporated areas of the county approximately every 10 years. Damascus was a city when the last update took place in 2013, so the area was not included in the county plan. Since the city was disincorporated in 2016 and related lawsuits ended in 2020, the area's transportation system is again the responsibility of Clackamas County. County plans are based on a more rural context for the Damascus area than the urban context that had been contemplated by the former city.

Project Background

Didn't the City of Damascus have road plans?

The city did develop some transportation plans, but those were never finished and became invalid when the city disincorporated. With disincorporation, applicable transportation plans for the Damascus area reverted to the County's Comprehensive Plan.

Does this project include Happy Valley's plans for the western portion of Damascus?

Yes, it does. Happy Valley, through the [Pleasant Valley/North Carver \(PV/NC\) Comprehensive Plan](#), is planning transportation improvements in the western portion of Damascus from the current Happy Valley city limits east to 190th Avenue based on an Urban Growth Management Agreement (UGMA) between the County and the City of Happy Valley.

Is this project also looking at land use issues?

No, this project is focused on roadway facilities to support passenger and freight vehicle travel. After Damascus disincorporated, Clackamas County re-adopted the lower density land use plans and zoning requirements that had been in place before the city was formed.

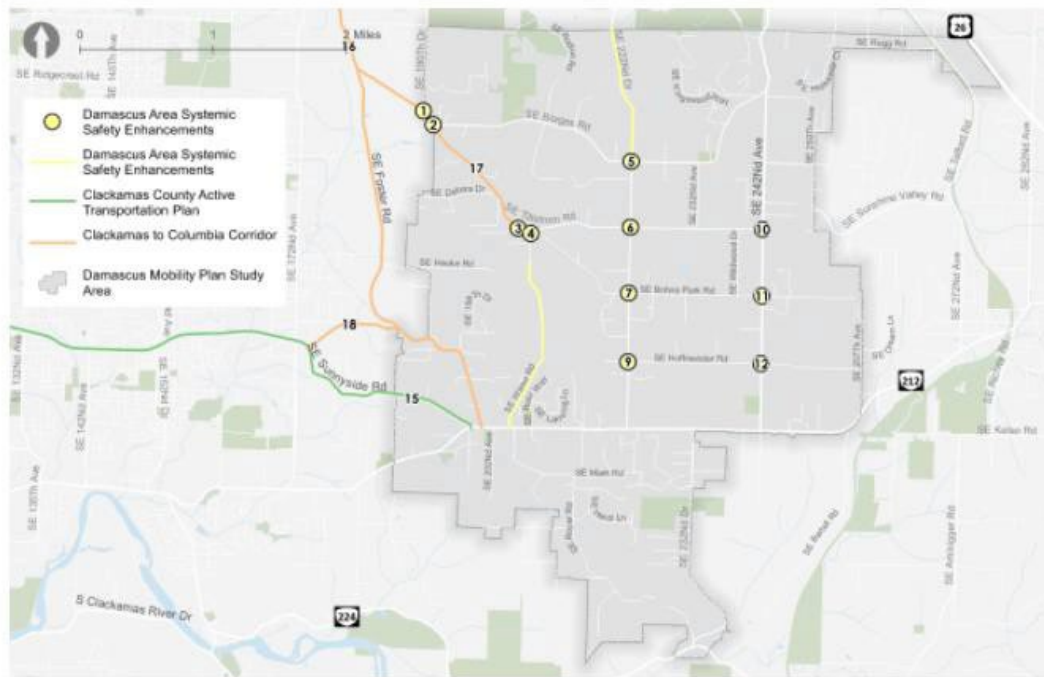
How much does this project cost and where does the money come from?

This project has a budget of \$200,000 from funds transferred to the County after disincorporation of Damascus.

What other planning efforts are going on in the area?

Other transportation projects that have taken place, are underway, or are planned in areas adjacent to Damascus are mapped and described in the table below.

Please note that the map and table of previously planned projects do not include all road maintenance work within Damascus. Clackamas County's draft 2021-2026 Capital Improvement Program (CIP) includes more than \$3.3 million in transportation-related investments in the Damascus Study Area. Clackamas County is updating its list of planned road maintenance projects in Damascus and will provide that when it is complete.



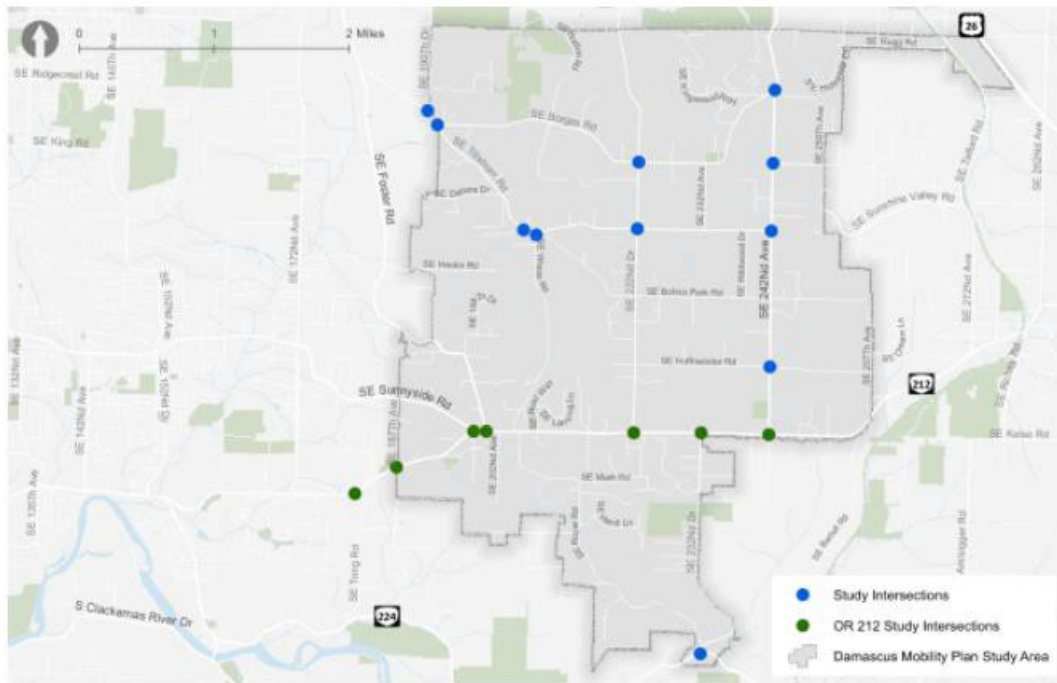
Previously Planned Projects in the Damascus Area

Project ID	Project Name/Location	Description	Plan
1	SE Tillstrom Road/SE 190 th Drive	Install safety signage	Damascus Area Systemic Safety Enhancements
2	SE Tillstrom Road/SE Borges Road		
3	SE Tillstrom Road/SE Bohna Park Road		
4	SE Wiese Road/SE Bohna Park Road		
5	SE 222 nd Drive/SE Borges Road		
6	SE 222 nd Drive/SE Tillstrom Road	Install safety signage and overhead flashing beacons	
7	SE 222 nd Drive/SE Bohna Park Road	Install safety signage	
8	SE 242 nd Avenue/SE Sunshine Valley Road		
9	SE 222 nd Drive/SE Hoffmeister Road		
10	SE 242 nd Avenue/SE Tillstrom Road		
11	SE 242 nd Avenue/SE Bohna Park Road		
12	SE 242 nd Avenue/SE Hoffmeister Road		
13	SE 222 nd Drive		
14	SE Wiese Road		
15	Sunnyside Connector Route, I-205 to Hwy 212	Add buffered bike lanes or cycle track on Sunnyside Road	Clackamas County Active Transportation Plan
16	Foster Road, Cheldelin Road to Hwy 212	Provide three-lane vehicle cross-section, bicycle lanes, landscape strip, and sidewalks	
17	Tillstrom Road		
18	SE Sunnyside Road East Extension	Construct new five- lane road with continuous left-turn lane, sidewalks, bike lanes, and traffic signals	Clackamas to Columbia (C2C) Corridor Plan

Previously Planned Projects in the Damascus Area

What Have We Learned?

We studied 11 intersections in Damascus based on existing and future traffic volumes, safety, and known community concerns. Of the 11 study intersections, 10 are two-way stop-controlled intersections, and one (SE 222nd Drive/SE Tillstrom Road) is an all-way stop-controlled intersection.



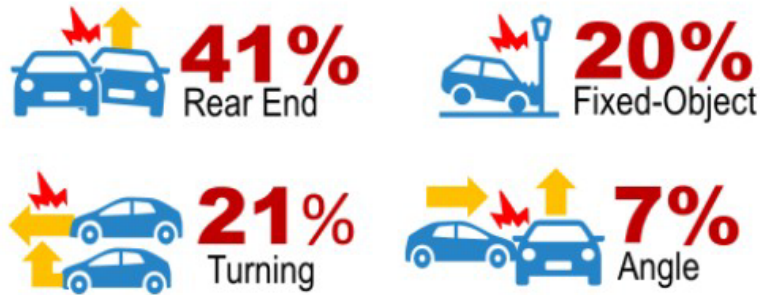
Study Intersections

Congestion: Our study shows that all of the study intersections meet the County's rural intersection operating standards, meaning that at this time there are no significant, regular capacity issues or delays at these intersections.

In addition to intersections on Clackamas County roads, we evaluated the seven major intersections on OR 212 between 187th Avenue and 242nd Avenue.

- Two intersections (at SE Sunnyside Road and at SE 222nd Drive) have high congestion and do not meet state standards today.
- Three intersections (at SE Sunnyside Road, at SE 222nd Drive and at SE Foster Road) are expected to have increasing congestion and to exceed ODOT congestion thresholds in the future.
- The remaining intersections are expected to continue to meet for state standards the next 20 years and not have congestion issues.

MOST FREQUENT CRASH TYPES



Most Frequent Crash Types in the Damascus Study Area (2015-2019)

Potential Improvements

To address the needs identified through technical analysis and public input, the project team developed and evaluated alternatives for both County and Regional projects on ODOT roads. (Regional projects on ODOT facilities are under ODOT's jurisdiction, therefore the County has limited influence over them.) The projects are sorted into high, medium, and low priority based on the operational assessment and relative severity of current congestion.

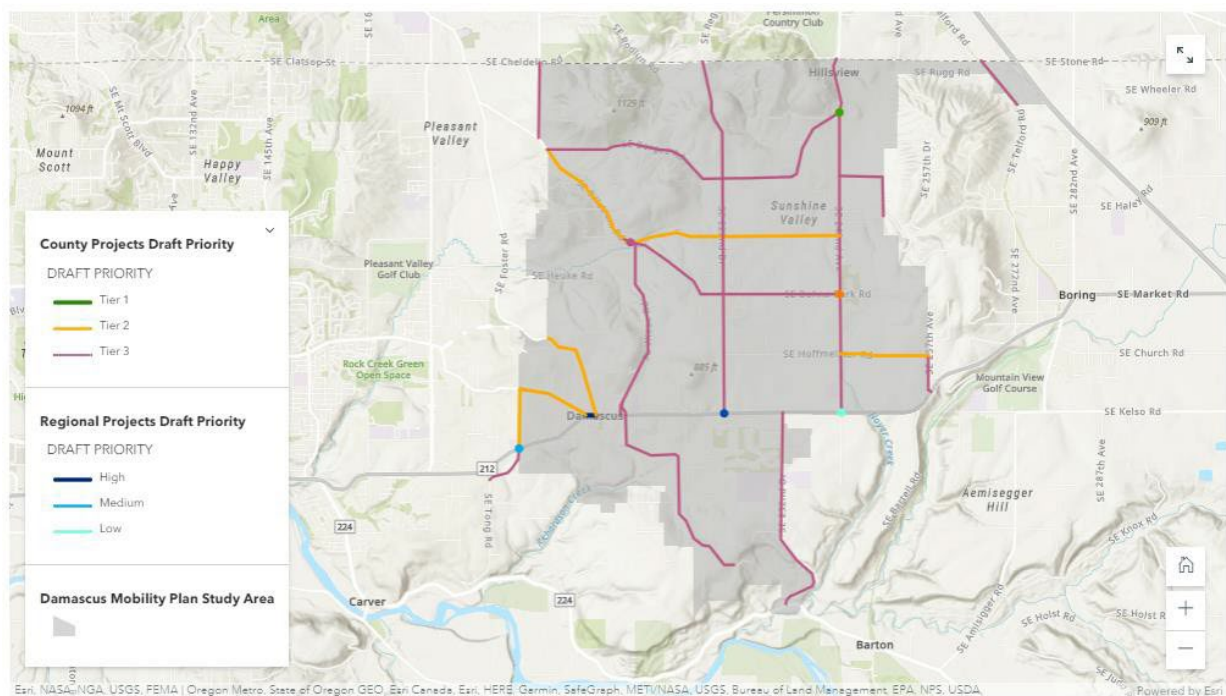
County projects are prioritized into draft tiers:

- **Tier 1: 20-year capital projects** – Needed projects and investments matched with anticipated funding in the next 20 years.
- **Tier 2: Preferred capital projects** – Projects and investments needed to meet population, housing, and employment projections, but that don't have identified funding at this time.
- **Tier 3: Long-term capital project needs** – Projects that would be beneficial to do if funds were available, but aren't needed in a 20-year timeframe.
- **Regional projects** – Projects on ODOT Facilities.

The map below shows the location of potential improvements by priority. Regional projects are shown in shades of blue for the priority. You can click on the projects to read a description of the potential improvement and see the cost estimate and in the *What Do You Think?* section you can comment on the projects.

Conceptual plans for several improvements are shown below. More information on the other alternatives can be found in the [Alternatives Analysis, Project List, and Cost Estimates and OR 212 \(187th to 242nd\) Intersection Refinement Study](#) on the project website.

Please note: The purpose of this plan is to identify possible future transportation improvements, including potential property and environmental impacts, design and conceptual costs, and feasibility. These draft materials are provided for public review and comment. The proposed projects are under consideration, but have not been approved by Clackamas County. If any of the projects are approved by the county, then determining the actual impacts, holding discussions with property owners and setting project schedules will depend on the availability of future funding and would take place during the design and construction phases.



Damascus Mobility Plan Draft Project Map

The images below illustrate several of the County and regional projects displayed on the map.

Instructions for the slider images below: Move slider to the left to see potential improvement / move slider to the right to see existing conditions.



SE Tillstrom Road/SE Bohna Park Road/SE Wiese Road Intersection Improvements (County Project)



SE 242nd Avenue/SE Bohna Park Road Intersection Improvements (County Project)



SE Sunnyside Road Extension to SE Foster Road (City of Happy Valley Project)



SE Wiese Road Realignment (County Project)



Restrict movements at OR 212/SE Sunnyside Road-Anderson Road and provide additional lanes at intersection of OR 212/SE Foster Road (Regional Project)



SE Tong Road realignment (County Project), SE 187th Avenue improvements and roundabout at SE Sunnyside Road/SE 187th Avenue (County Project), and Signalize intersection of OR 212/SE Tong Road/SE 187th Avenue (Regional Project)



Signalize and provide additional turn lanes at intersection of OR 212/SE 222nd Drive (Regional Project)

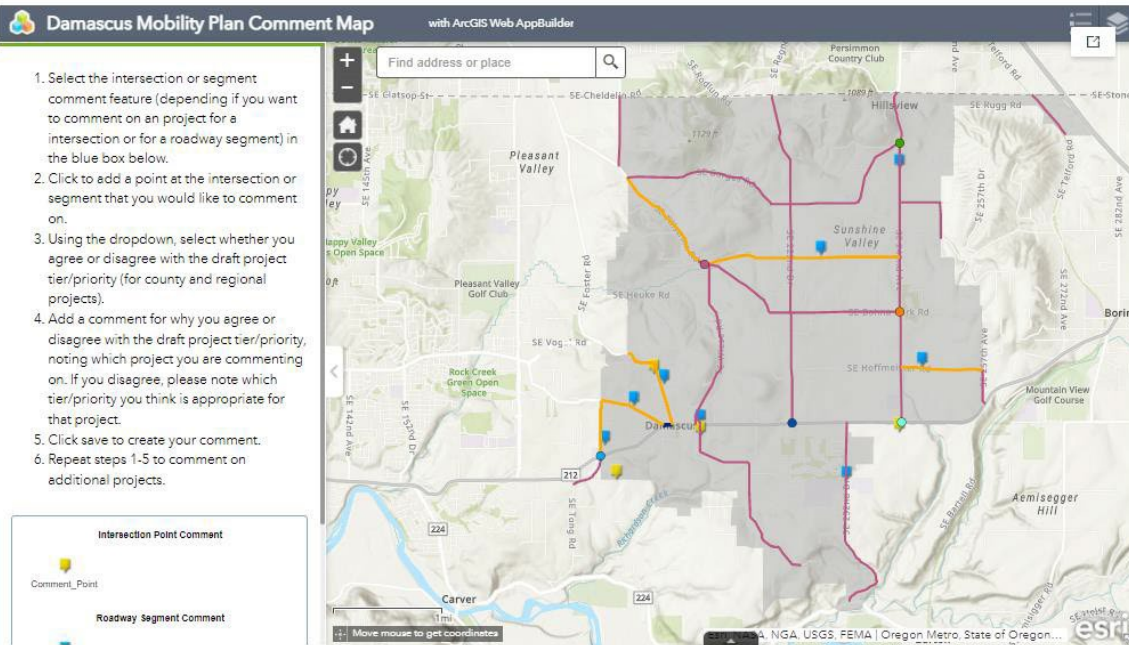


Provide additional turn lane at intersection of OR 212/SE 242nd Drive (Regional Project)



What Do You Think?

To help us refine and prioritize the initial set of recommended preferred alternatives, please provide your comments on the map below and fill out the interactive survey.



Damascus Mobility Plan - Virtual Open House

1. The following projects were identified as a high priority (Tier 1). Please check the box next to any project(s) that you DISAGREE with.

- ☐ SE 242nd Avenue/SE Borges Road Intersection Improvements
- ☐ Restrict movements at OR 212/SE Sunnyside Road-Anderson Road and provide additional lanes at Intersection of OR 212/SE Foster Road
- ☐ Signalize and provide additional turn lanes at intersection of OR 212/SE 222nd Drive

Please specify what you don't like about the projects that you checked.

2. The following projects were identified with a medium (Tier 2) priority. Please check the box next to any project(s) that you DISAGREE with.

- ☐ SE 242nd Avenue/SE Bohna Park Road intersection improvements
- ☐ SE 187th Avenue improvements and roundabout at SE Sunnyside Road/SE 187th Avenue
- ☐ Signalize intersection of OR 212/SE Tong Road/SE 187th Avenue
- ☐ SE Tillstrom Road (SE Foster Road to SE 242nd Avenue) Shoulder Widening
- ☐ SE Hoffmeister Road (SE 242nd Avenue to SE 257th Avenue) Shoulder Widening
- ☐ SE Foster Road (Happy Valley Boundary to OR 212) Shoulder Widening
- ☐ SE Sunnyside Road (SE 187th Avenue to OR 212) Shoulder Widening

Please specify what you don't like about the projects that you checked.

0 of 4 answered

Damascus Mobility Plan - Virtual Open House

3. The following projects were identified with a low (Tier 3) priority. Please check the box next to any project(s) you DISAGREE with.

- ☐ SE Tillstrom Road/SE Bohna Park Road & SE Wiese Road/SE Bohna Park Road intersection improvements
- ☐ SE Tong Road realignment
- ☐ SE Wiese Road realignment
- ☐ Provide additional turn lane at intersection of OR 212/SE 242nd Drive
- ☐ SE 190th Drive (County line to SE Tillstrom Road) Shoulder Widening
- ☐ SE Borges Road (SE Tillstrom Road to SE 242nd Avenue) Shoulder Widening
- ☐ SE Bohna Park Road (SE Tillstrom Road to SE 242nd Avenue) Shoulder Widening
- ☐ SE 222nd Drive (County line to OR 212) Shoulder Widening
- ☐ SE 242nd Avenue (County line to OR 212) Shoulder Widening
- ☐ SE Telford Road (County line to County line) Shoulder Widening
- ☐ SE Sunshine Valley Road (SE 242nd Avenue to County line) Shoulder Widening
- ☐ SE Wiese Road (SE Bohna Park Road to OR 212) Shoulder Widening
- ☐ SE Royer Road (OR 212 to OR 224) Shoulder Widening
- ☐ SE 232nd Drive (OR 212 to OR 224) Shoulder Widening
- ☐ SE 257th Avenue (SE Hoffmeister Road to OR 212) Shoulder Widening

Please specify what you don't like about the project(s) that you checked.

0 of 4 answered

Damascus Mobility Plan - Virtual Open House

Live Meeting on March 9th

A livestreamed meeting was held on Zoom on March 9th from 6 - 7:30 PM to review the open house, respond to questions and discuss the issues. Please click on the button below to watch the meeting recording.

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Get Involved

We'll be sharing information at meetings throughout Damascus and seeking feedback on potential proposed projects to address existing and future transportation needs.

To be placed on a list to receive project email updates, contact Community Relations Specialist [Ellen Rogalin](#) at ellenrog@clackamas.us.

Questions or ideas? Contact Project Manager Steve Williams at swilliams@clackamas.us.


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4. Please share any other comments you may have about road improvements in the Damascus area.

Thank You!

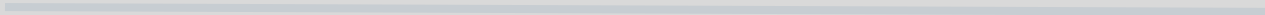
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0 of 4 answered

Damascus Mobility Plan - Virtual Open House



DRAFT Table 5-3a 20-Year Capital Projects

Project ID	Map	Project Name / Street Name	Segment / Locations	Project Description
1000	County-wide	ITS Plan Program	N/A	Develop a program to support the implementation of the County's ITS Plan and support the County's efforts to make improvements to traffic operations based on the ITS Plan. Deploy traffic responsive signal timing, ramp metering, traffic management equipment for better routing of traffic during incidents along the three key ODOT corridors - I-205, I-5, 99E. Install signal controller upgrades and update County ITS plan.
1001	County-wide	Transportation Safety Action Plan Program	N/A	Develop a program to support the implementation of the County's TSAP and support the County's efforts to make improvements based on the outcomes of the road safety audits and other safety studies.
1002	5-11a	122nd Ave	Eagle Glen Dr to Hubbard Rd	Perform road safety audit or transportation safety review to identify appropriate safety improvements
1003	5-11a	122nd Ave	Sunnyside Rd to Hubbard Rd	Fill gaps in pedestrian facilities, turn lanes at Mather Rd
1004	5-11a	122nd Ave	Sunnyside Rd to Timber Valley Dr	Add bikeways and turn lanes at major intersections
1005	5-11a	132nd Ave	Sunnyside Rd to OR 212	Add bikeways, pedestrian facilities, traffic calming and turn lanes at major intersections
1006	5-11a	142nd Ave	Sunnyside Rd to OR 212	Add bikeways and pedestrian facilities
1007	5-11a	72nd Ave Multi-Use Path Connection	Thompson Rd to Harmony Rd	Construct multi-use path
1008	5-11a	82nd Dr	OR 212 to Lawnfield Rd	Fill in bikeways and pedestrian facilities gaps
1009	5-11a	85th Ave	Causey Ave to Monterey Ave	Add sidewalks and bikeways. Perform Pedestrian Safety Audit to verify lighting, crosswalk striping and signing at Causey Ave.
1010	5-11a	92nd Ave	Johnson Creek Blvd to Emmert View Ct	Fill gaps in pedestrian facilities
1011	5-11a	97th Ave / Mather Rd	Lawnfield Rd to Summers Ln	Add bikeways, pedestrian facilities and eastbound left turn lanes at Mather Rd / Summers Ln
1012	5-11a	Boyer Dr	OR 213 to Fuller Rd	Construct new 2 lane roadway with turn lanes at OR 213 and Fuller Rd, bikeways and pedestrian facilities; install flashing yellow arrow for left turns on northbound and southbound approaches at OR 213 intersection.
1013	5-11a	Boyer Dr / 85th Ave / Spencer Dr	OR 213 to I-205 bike path	Add bikeways
1014	5-11a	Causey Ave	Fuller Rd to I-205	Add bikeways and shared facility markings in accordance with the Active Transportation Plan.
1015	5-11a	Clackamas Industrial area multi-modal improvements	N/A	Complete bike and pedestrian connections within the Clackamas Industrial area on Jennifer St., Evelyn St., 106 th Ave, 122 nd Ave, 130 th Ave and 135 th Ave.
1016	5-11a	Clackamas Regional Center Bike/Pedestrian Corridors	N/A	Construct pedestrian and bike improvements as described in the Clackamas Regional Center Pedestrian / Bicycle Plan
1017	5-11a	Clackamas Town Center Alternative Performance Standards Study	Clackamas Regional Center	Develop alternative performance standards for the intersections within the Clackamas Regional Center.
1018	5-11a	Clackamas Town Center Circulation Plan	West of the Town Center	Study area circulation and create plan
1019	5-11a	Flavel Dr	Alberta Ave to County boundary	Add bikeways in accordance with the Active Transportation Plan.
1020	5-11a	Fuller Rd	Otty St to Johnson Creek Blvd	Add pedestrian facilities, turn lanes, on-street parking, central median and landscaping.
1021	5-11a	Fuller Rd / King Rd Improvements	Fuller Rd / King Rd intersection	Restrict access to right-in/right-out only

DRAFT Table 5-3a 20-Year Capital Projects

Project ID	Map	Project Name / Street Name	Segment / Locations	Project Description
1022	5-11a	Harmony Rd	OR 213 to OR 224	Construct bikeways and pedestrian facilities. Linwood Ave to Aquatic Center, construct in accordance with the Active Transportation Plan. Provide left turn movement for cyclists from Harmony Rd to CCC Harmony Campus and a pedestrian crossing.
1023	5-11a	Harmony Rd	Railroad Ave / Linwood Ave / Harmony Rd	Railroad crossing and intersection improvements based on further study of intersection operations including bikeways and pedestrian facilities to be undertake jointly by the City of Milwaukie and the County
1024	5-11a	Harmony Rd / Sunnyside Rd	Harmony Rd / Sunnyside Rd / OR 213 intersection	Extend queue storage and double left turn lanes on westbound approach and rebuild median, including pedestrian island; extend queue storage on eastbound approach and install median; convert to right-in-right-out accesses on frontage road.
1025	5-11a	I-205 Multi-Use Path Connection	Between Sunnyside Rd and Sunnybrook Blvd	Construct ADA compliant access to the commercial area from the I-205 Multi-Use Path
1026	5-11a	I-205 Multi-Use Path Gap	OR 224/OR 213 to OR 212	Study the I-205 multi-use path gap to create a plan for connection and path completion in accordance with the Active Transportation Plan
1027	5-11a	Johnson Creek Blvd	55th Ave to I-205	Perform road safety audit or transportation safety review to identify appropriate safety improvements
1028	5-11a	Johnson Creek Blvd	Johnson Creek Blvd near 79th Pl	Add signal to either Johnson Creek Blvd and 79th Pl or 80th Ave
1029	5-11a	Johnson Creek Blvd	55th Ave to Bell Ave	Widen to 3 lanes with bikeways and pedestrian facilities
1030	5-11a	Johnson Creek Blvd	Johnson Creek Blvd / OR 213 intersection	Extend westbound left-turn lane and rebuild median; install dual northbound and southbound left-turn lanes
1031	5-11a	Johnson Creek Blvd	OR 213 to 92nd Ave	Add pedestrian facilities with a crossing near 77th Ct, restripe for bikeways. Analyze for turn lane improvements at 92nd Ave.
1032	5-11a	Johnson Rd	SE Lake Rd to North Clackamas Park Trail	Identify bike/pedestrian connections to fill gaps along 82nd Ave
1033	5-11a	Lake Rd	Lake Rd / International Way intersection	Add northbound right-turn lane
1034	5-11a	Linwood Ave	Monroe St to Johnson Creek Blvd	Add pedestrian facilities in accordance with the Active Transportation Plan.
1035	5-11a	Monroe St	72nd Ave to Fuller Rd	Add bikeways, pedestrian facilities and traffic calming in accordance with the Active Transportation Plan.
1036	5-11a	Monroe St / 72nd Ave / Thompson Rd / Fuller Rd	Linwood Ave to Causey Ave	Add bikeways and traffic calming in accordance with the Active Transportation Plan.
1037	5-11a	Monterey Ave	Stevens Rd to Bob Schumacher Rd	Construct collector roadway with bikeways and pedestrian facilities
1038	5-11a	Monterey Ave	OR 213 to Fuller Rd	Construct new 2 lane extension with pedestrian facilities and bikeways. Install flashing yellow arrow for left-turns on northbound and southbound approaches at OR 213 intersection.
1039	5-11a	North Clackamas Regional Park Trail	Linwood Ave to North Clackamas Park Complex	Construct multi-use path
1040	5-11a	North Clackamas Regional Parks Trail	OR 213 to Linwood Ave	Construct multi-use path
1041	5-11a	Otty Rd	OR 213 to 92nd Ave	Improve to minor arterial standard consistent with Fuller Road Station Plan; improve curb radius; add turn lanes, on-street parking, central median, landscaping, bikeways and pedestrian facilities. Install pedestrian crossings between Fuller Rd and I-205 and near 91st Ave.
1042	5-11a	Otty St	Otty St / OR 213 / Otty Rd	Realign Otty St with Otty Rd at OR 213; install dual westbound left-turn lanes; install flashing yellow arrow for left-turns on northbound and southbound approaches.
1043	5-11a	Southwest Connector Multi-Use Path	North Clackamas Aquatic Center access road to 82nd Ave	Construct multi-use path in accordance with the Active Transportation Plan.

DRAFT Table 5-3a 20-Year Capital Projects

Project ID	Map	Project Name / Street Name	Segment / Locations	Project Description
1044	5-11a	Springwater Rd	OR 224 to Hattan Rd	Widen to 3 lanes with shoulders (in accordance with the Active Transportation Plan between Clackamas River Dr and Gronlund Rd) and pedestrian facilities; bridge remains two lanes
1045	5-11a	Sunnyside Rd	93rd Ave to 126th Ave	Perform road safety audit or transportation safety review to identify appropriate safety improvements
1046	5-11a	Sunnyside Rd	Sunnyside Rd / Stevens Rd intersection	Intersection improvements, such as additional turn lanes, turn lane extensions, and/or signal timing modifications
1047	5-11a	Tolbert St Overcrossing	82nd Dr to Industrial Way	Construct new 2 lane overcrossing with bikeways and pedestrian facilities
1048	5-11b	282nd Ave	US 26 to OR 212	Perform road safety audit or transportation safety review to identify appropriate safety improvements
1049	5-11b	Amisigger Rd / Kelso Rd	OR 224 to Kelso / Richey Rd	Add paved shoulders; turn lanes at Amisigger/OR 212 and Kelso/Richey; smooth curves.
1050	5-11b	Arrah Wana Blvd	US 26 to Fairway Ave	Add paved shoulders. In the interim, add 4-foot paved shoulders.
1051	5-11b	Cazadero Multi-Use Trail	Community of Boring to City of Estacada	Construct multi-use path in accordance with the Active Transportation Plan.
1052	5-11b	Compton Rd	US 26 to 352nd Ave	Perform road safety audit or transportation safety review to identify appropriate safety improvements
1053	5-11b	Dodge Park Rd Bridge	~192 feet south of Pipeline Rd	Replace bridge nearing the end of its useful life and include paved shoulders
1054	5-11b	Eagle Creek Rd	Firwood Rd to Duus Rd	Perform road safety audit or transportation safety review to identify appropriate safety improvements
1055	5-11b	Eagle Creek Rd	Currin Rd to Duus Rd	Remove horizontal curve, relocate intersection, add paved shoulders and turn lanes at major intersection; investigate speed zone south of Currin Rd
1056	5-11b	Fairway Ave	Arrah Wana Blvd to Salmon River Rd	Add paved shoulders
1057	5-11b	OR 211	OR 211 / Judd Rd intersection	Realign roadway
1058	5-11b	Richey Rd	Kelso Rd to OR 212	Add paved shoulders and left turn lane at Richey Rd and OR 212
1059	5-11b	Welches Rd	US 26 to Birdie Ln	Add paved shoulders; add pedestrian facilities in Welches rural center; evaluate pedestrian crossing near Stage Stop Rd; add multi-use path. Improve pedestrian crossing near Fairway Ave with advance signs and split flashing beacons
1060	5-11c	Aldercrest Dr	Thiessen Rd to Oatfield Rd	Perform road safety audit or transportation safety review to identify appropriate safety improvements
1061	5-11c	Concord Rd	River Rd to Oatfield Rd	Fill gaps in pedestrian facilities
1062	5-11c	Concord Rd	River Rd to Oatfield Rd	Add turn lanes at major intersections
1063	5-11c	Courtney Ave	OR 99E to Oatfield Rd	Fill gaps in pedestrian facilities and bikeways
1064	5-11c	Courtney Ave	River Rd to OR 99E (McLoughlin Blvd)	Construct pedestrian facilities / complete gaps on the south side; add bikeways
1065	5-11c	Harold Ave	Concord Rd to Roethe Rd	Add pedestrian facilities and traffic calming
1066	5-11c	Hull Ave	Wilmot St to Tims View Ave	Fill gaps in pedestrian facilities
1067	5-11c	Jennings Ave	Webster Rd to OR 99E	Perform road safety audit or transportation safety review to identify appropriate safety improvements
1068	5-11c	Jennings Ave	River Rd to Oatfield Rd	Widen to 2-lane urban minor arterial standard with bikeway and pedestrian facilities infill
1069	5-11c	Oak Grove Blvd	Oatfield Rd to River Rd	Fill gaps in pedestrian facilities and bikeways
1070	5-11c	Oatfield Rd	Jennings Ave to Lake Rd	Perform road safety audit or transportation safety review to identify appropriate safety improvements
1071	5-11c	Oatfield Rd	Oatfield Rd / Park Rd intersection	Install traffic signal and add turn lanes
1072	5-11c	Oatfield Rd	Oatfield Rd / McNary Rd intersection	Add southbound and eastbound left-turn lanes

Clackamas County Comprehensive Plan
DRAFT Table 5-3a 20-Year Capital Projects

Project ID	Map	Project Name / Street Name	Segment / Locations	Project Description
1073	5-11c	Park Ave	River Rd to OR 99E (McLoughlin Blvd)	Add pedestrian facilities
1074	5-11c	River Rd	Lark St to Courtney Ave	Add pedestrian facilities
1075	5-11c	River Rd	Oak Grove Blvd to Risley Ave	Fill gaps in bikeways in accordance with the Active Transportation Plan and fill gaps in pedestrian facilities
1076	5-11c	School Pedways	Johnson Rd / Clackamas Rd / Webster Rd	Fill gaps in pedestrian facilities on Johnson Rd, Clackamas Rd and Webster Rd within 1/4 mile of schools
1077	5-11c	Thiessen Rd	Thiessen Rd / Aldercrest Rd intersection	Add turn lanes on Thiessen Rd; consider converting to two-way stop controlled
1078	5-11c	Torbark Rd	River Rd to Trolley Trail	Fill gaps in pedestrian facilities
1079	5-11d	65th Ave	65th Ave / Elligsen Rd / Stafford Rd intersection	Construct roundabout
1080	5-11d	Advance Rd	53rd Ave to 43rd Dr	Grade and sight distance improvements
1081	5-11d	Borland Rd	Tualatin city limits to Stafford Rd	Add paved shoulders in accordance with the Active Transportation Plan and turn lanes at major intersections
1082	5-11d	Borland Rd	Stafford Rd to West Linn city limits	Add paved shoulders in accordance with the Active Transportation Plan
1083	5-11d	Carman Dr	Lake Oswego city limits to Roosevelt Ave	Add bikeways and pedestrian facilities; analyze for turn lanes
1084	5-11d	Childs Rd	Sycamore Ave to 65th Ave	Transfer roadway to local jurisdiction
1085	5-11d	French Prairie Bridge	Willamette River near I-5	Construct a bridge in accordance with the Active Transportation Plan
1086	5-11d	Rosemont Rd	Stafford Rd to West Linn	Add paved shoulders and turn lanes at major intersections
1087	5-11d	Stafford Rd	I-205 to Boeckman Rd / Advance Rd	Perform road safety audit or transportation safety review to identify appropriate safety improvements
1088	5-11d	Stafford Rd	Rosemont Rd to I-205	Add paved shoulders in accordance with the Active Transportation Plan and turn lanes at major intersections
1089	5-11d	Stafford Rd	Stafford Rd / Childs Rd intersection	Install traffic signal and southbound and northbound turn lanes or roundabout
1090	5-11d	Stafford Rd	Rosemont Rd to I-205	Perform road safety audit or transportation safety review to identify appropriate safety improvements
1091	5-11d	Tonquin Trail	Willamette River through Wilsonville	Construct bike / pedestrian facilities pursuant to the Tonquin Trail Master Plan
1092	5-11d	Wilsonville Rd / Ladd Hill Rd	Wilsonville Rd / Ladd Hill Rd	Install Collision Countermeasure System
1093	5-11e	Airport Rd	Airport Rd / Miley Rd intersection	Install traffic signal
1094	5-11e	Barlow Rd	Barlow Rd / OR 99E intersection	Add dual left-turn lanes on southbound Barlow Rd
1095	5-11e	Beavercreek Rd	Lower Highland Rd to Butte Rd	Perform road safety audit or transportation safety review to identify appropriate safety improvements
1096	5-11e	Beavercreek Rd	Ferguson Rd to Spangler Rd	Perform road safety audit or transportation safety review to identify appropriate safety improvements
1097	5-11e	Beavercreek Rd	Henrici Rd to Yeoman Rd/Steiner Rd	Add paved shoulders in accordance with the Active Transportation Plan and turn lanes at major intersections.
1098	5-11e	Beavercreek Rd	Beavercreek Rd / Leland Rd / Kamrath Rd intersection	Construct roundabout with additional analysis

DRAFT Table 5-3a 20-Year Capital Projects

Project ID	Map	Project Name / Street Name	Segment / Locations	Project Description
1099	5-11e	Canby-Marquam Highway	Canby-Marquam Hwy / Lone Elder Rd intersection	Reconstruct intersection; install northbound left-turn lane and southbound right-turn lane
1100	5-11e	Canby-Marquam Highway	~1,900 ft south of Barnards Rd	Replace bridge nearing the end of its useful life with 2-lane structure including paved shoulders
1101	5-11e	Clarkes Four Corners Intersection	Beavercreek Rd / Unger Rd	Reconstruct intersection
1102	5-11e	Emerald Necklace Trail	To Canby Ferry	Extend Molalla Forest Rd to Locust St in accordance with the Active Transportation Plan.
1103	5-11e	Ferguson Multi-Use Path	Thayer Rd to Ferguson Rd	Multi-use path to connect Ferguson Rd to Thayer Rd
1104	5-11e	Fischers Mill Rd	Fischers Mill / Hattan Rd intersection	Install eastbound left-turn lane
1105	5-11e	Graves Rd/Passmore Rd/Mulino Rd/ OR 213	Graves Rd/Passmore Rd/Mulino Rd/ OR 213	Work in conjunction with the Molalla River School District, ODOT and community stake-holders to complete a safety audit to look at all options for the safe movement of Mulino Elementary School students in relation to the adjacent transportation system. Utilize the results from the audit to develop a list of projects and/or programs to maximize safety for all users.
1106	5-11e	Greater Arndt Rd/I-5/Canby Access Feasibility Study	Southwest County in the vicinity of Arndt Rd/I-5/Canby	Conduct an alternatives analysis and land use study to identify and consider roadway improvements to address access to I-5 within the Southwest County and address capacity deficiencies.
1107	5-11e	Hattan Rd	Hattan Rd / Gronlund Rd intersection	Install southbound right-turn lane
1108	5-11e	Henrici Rd	Beavercreek Rd to Ferguson Rd	Add paved shoulders and turn lanes at major intersections. Remove horizontal and vertical curves
1109	5-11e	Holly St	Territorial Rd to Canby Ferry	Add paved shoulders in accordance with the Active Transportation Plan.
1110	5-11e	Hult Rd	OR 211 to Unger Rd	Re-open and improve Hult Rd
1111	5-11e	Klang's Mill Bridge	~1,000 ft north of OR 211	Replace bridge nearing the end of its useful life
1112	5-11e	Lone Elder Rd Bridge	~5,800 feet east of Barlow Rd	Replace bridge (nearing the end of its useful life) and include paved shoulders
1113	5-11e	Maplelane Rd	Beavercreek Rd to Ferguson Rd	Perform road safety audit or transportation safety review to identify appropriate safety improvements
1114	5-11e	Meridian Rd	Meridian Rd / Whiskey Hill Rd intersection	Limit access/egress points to and from school on NE corner of intersection
1115	5-11e	Molalla Ave Flooding	Just south of city of Molalla	Construct bridge to resolve flooding issues
1116	5-11e	Mulino Rd	Mulino Rd / 13th Ave	Relocate intersection to south away from railroad trestle
1117	5-11e	OR 170	OR 99E to Macksburg Rd	Perform road safety audit or transportation safety review to identify appropriate safety improvements
1118	5-11e	Redland Rd	OR 213 to Hattan Rd	Perform road safety audit or transportation safety review to identify appropriate safety improvements
1119	5-11e	Redland Rd	Redland Rd / Springwater Rd intersection	Perform road safety audit or transportation safety review to identify appropriate safety improvements
1120	5-11e	Redland Rd	Redland Rd / Holly Rd intersection	Install traffic signal and westbound and northbound left-turn lanes or roundabout
1121	5-11e	Redland Rd	Redland Rd / Ferguson Rd intersection	Construct roundabout
1122	5-11e	Ridge Rd	~1 miles north of Lower Highland Rd	Fix sinkhole
1123	5-11e	Springwater Rd	Springwater Rd / Clackamas River Dr intersection	Install signal at Clackamas River Dr

Clackamas County Comprehensive Plan
DRAFT Table 5-3a 20-Year Capital Projects

Project ID	Map	Project Name / Street Name	Segment / Locations	Project Description
1124	5-11e	Springwater Rd	400 ft east of Hattan Rd	Construct bridge to accommodate paved shoulders
1125	5-11e	Springwater Rd	Hattan Rd to Bakers Ferry Rd	Add paved shoulders in accordance with the Active Transportation Plan and turn lanes at major intersections
1126	5-11e	Township Rd	Central Point Rd to Canby City limit	Add paved shoulders and turn lanes at major intersections
1127	5-11e	Union Mills Rd	OR 213 to OR 211	Add turn lanes at major intersections
1128	5-11e	Union Mills Rd	OR 213 to OR 211	Construct a shoulder on the south side of the roadway
1129	5-11e	Upper Highland Rd	Beavercreek Rd to Lower Highland Rd	Perform road safety audit or transportation safety review to identify appropriate safety improvements
1130	5-11c	Oetkin Rd - Naef Rd	Thiessen Rd to River Rd	Construct bike boulevard consistent with the Active Transportation Plan
1131	5-11c	River Rd	Park Ave to Glen Echo Ave	Construct buffered bike lane in accordance with the Active Transportation Plan.
1132	5-11a	Bob Schumacher Rd	Otty Rd to Sunnyside Rd	Investigate improved striping including centerline rumble stripe.
1133	5-11a	97th Ave	Sunnybrook Blvd to Mather Rd	Investigate improved striping including outside fog lines and rumble striping. Verify lighting, drainage and surface friction.
1134	5-11a	92nd Ave	Phillips Pl	Install a pedestrian crossing near Phillips Pl
1135	5-11a	Otty St	80th Ave	Install a pedestrian crossing near 80th Ave
1136	5-11a	Fuller Rd	Boyer Dr to Sunnyside Dr	Install pedestrian crossings near Boyer Dr, Causey Ave, Stephanie Ct and Southgate St
1137	5-11b	Brightwood Loop Rd	US 26 to US 26	Add 4-foot paved shoulders
<i><u>1138</u></i>	<i><u>5-11a</u></i>	<i><u>SE 242nd Avenue</u></i>	<i><u>SE 242nd Avenue/SE Borges Road intersection</u></i>	<i><u>Extend SE Kingswood Way from SE Borges Road to SE 242nd Avenue. Close SE 242nd Avenue/SE Borges Road intersection to through traffic.</u></i>
<i><u>1139</u></i>	<i><u>5-11a</u></i>	<i><u>SE 242nd Avenue</u></i>	<i><u>SE 242nd Avenue/SE Bohna Park Road intersection</u></i>	<i><u>Access management on northwest corner; delineated shoulders on SE 242nd Avenue.</u></i>
<i><u>1140</u></i>	<i><u>5-11a</u></i>	<i><u>SE Foster Road</u></i>	<i><u>Happy Valley boundary to OR 212</u></i>	<i><u>Widen shoulder based on operational and safety analysis during project development.</u></i>
<i><u>1141</u></i>	<i><u>5-11a</u></i>	<i><u>SE Sunnyside Road</u></i>	<i><u>SE 187th Avenue to OR 212</u></i>	<i><u>Widen shoulder based on operational and safety analysis during project development.</u></i>
<i><u>1142</u></i>	<i><u>5-11a</u></i>	<i><u>SE Sunshine Valley Road</u></i>	<i><u>SE 242nd Avenue to County line</u></i>	<i><u>Widen shoulder based on operational and safety analysis during project development.</u></i>
<i><u>1143</u></i>	<i><u>5-11a</u></i>	<i><u>SE Tillstrom Road</u></i>	<i><u>SE Foster Road to SE 242nd Avenue</u></i>	<i><u>Widen shoulder based on operational and safety analysis during project development.</u></i>

Projects in italics and underlined (1138-1143) added from Damascus Mobility Plan (May 2022)

DRAFT Table 5-3b Preferred Projects

Project ID	Map	Project Name / Street Name	Segment / Locations	Project Description
2000	5-11a	Bell Ave / Alberta St / 72nd Ave	King Rd to County line	Add bikeways and pedestrian facilities
2001	5-11a	Clatsop St / Luther Rd	72nd Ave to Fuller Rd	Add turn lanes and signals at OR 213 intersection; add bikeways, pedestrian facilities and traffic calming
2002	5-11a	Evelyn St	OR 224 to Jennifer St	Add bikeways and pedestrian facilities
2003	5-11a	Evelyn St / Mangan Dr	Jennifer St to Water Ave	Add bikeways
2004	5-11a	Hubbard Rd	122nd Ave to 132nd Ave	Fill gaps in pedestrian facilities
2005	5-11a	Jennifer St	82nd Dr to 135th Ave	Add pedestrian facilities
2006	5-11a	Lake Rd	Milwaukie City limits east to OR 224	Fill gaps in pedestrian facilities
2007	5-11a	Linwood Ave	Linwood Ave / Monroe St intersection	Add curbs/sidewalks, improve horizontal alignments
2008	5-11a	Linwood Ave	Queen Rd to Johnson Creek Blvd	Add bikeways in accordance with the Active Transportation Plan
2009	5-11a	Mather Rd	Summers Ln Rd to 122nd Ave	Add bikeways, pedestrian facilities and eastbound left turn lanes at Mather Rd / 122nd Ave
2010	5-11a	Monroe St / 72nd Ave / Thompson Rd	Linwood Ave to Fuller Rd	Add pedestrian facilities
2011	5-11a	Scouters Mountain / Mt Scott Loop Trail	Loop trail through Happy Valley, Damascus, Clackamas County and Portland	Construct multi-use path in accordance with the Active Transportation Plan
2012	5-11a	Stevens Rd / Stevens Way	Causey Ave to Idleman Rd	Add pedways and optional traffic calming
2013	5-11a	Strawberry Ln	Strawberry Ln / 82nd Dr intersection	Install traffic signal and eastbound turn lane
2014	5-11a	Sunnybrook Blvd	Sunnybrook Blvd / 82nd Ave intersection	Add dual southbound left-turn lanes, extend queue storage for southbound lefts and westbound lefts
2015	5-11a	Sunnyside Rd	OR 213 to 97th Ave	Modified boulevard treatment including lane redesign, medians, beautification, curb extensions, reconstructed sidewalks, landscaping, south side bikeways. Consider flashing yellow arrow for left-turns at signalized intersections.
2016	5-11b	282nd Ave	282nd / Haley Rd intersection	Install traffic signal and reduce speed limit on 282nd
2017	5-11b	362nd Ave	Skogan Rd to OR 211	Add paved shoulders
2018	5-11b	Eagle Creek Rd	OR 211 to Duus Rd	Add paved shoulders
2019	5-11b	Firwood Rd	Wildcat Mountain Dr to US 26	Add paved shoulders and turn lanes at major intersections.
2020	5-11c	Clackamas Rd	Johnson Rd and Webster Rd	Fill gaps in bikeways and pedestrian facilities
2021	5-11c	Jennings Ave	Oatfield Rd to Webster Rd	Widen to 2-lane urban minor arterial standard with bikeway and pedestrian facilities infill
2022	5-11c	Lake Oswego to Milwaukie Bridge	Between Sellwood and Oregon City	Construct bike/pedestrian crossing over the Willamette River in accordance with the Active Transportation Plan
2023	5-11c	Roots Rd	Webster Rd to McKinley Rd	Add pedestrian facilities

DRAFT Table 5-3b Preferred Projects

Project ID	Map	Project Name / Street Name	Segment / Locations	Project Description
2024	5-11c	Thiessen Rd	Oatfield Rd to Webster Rd	Add bikeways and pedestrian facilities. For the Oetkin Rd to Webster Rd section, construct in accordance with the Active Transportation Plan
2025	5-11c	Webster Rd	OR 224 to Gladstone	Fill gaps in bikeways and pedestrian facilities
2026	5-11d	Advance Rd	~2,900 ft west of Mountain Rd	Realign roadway and grade improvements
2027	5-11d	Advance Rd	65th Ave to Mountain Rd	Add paved shoulders
2028	5-11d	Stafford Rd / 65th Ave	I-205 to Boeckman Rd / Advance Rd	Add paved shoulders in accordance with the Active Transportation Plan and turn lanes at major intersections
2029	5-11e	Arndt Rd Extension	Barlow to OR 99E	Construct new 2 or 3 lane roadway
2030	5-11e	Barlow Rd	Knights Bridge Rd to OR 99E	Add paved shoulders
2031	5-11e	Beavercreek Multi-Use Path	Loder Rd to Ferguson Rd	Construct multi-use path consistent with the Beavercreek Road Concept Plan
2032	5-11e	Boones Ferry Rd	Boones Ferry Rd / Butteville Rd intersection	Remove bank, remove/decrease horizontal curve
2034	5-11e	Dryland Rd	Macksburg Rd S to Macksburg Rd N	Realign to form one intersection at Dryland Rd
2035	5-11e	Hattan Rd	Fischers Mill Rd to Gronlund Rd	Add paved shoulders and turn lanes at major intersections
2036	5-11e	Henrici Rd	OR 213 to Beavercreek Rd	Add paved shoulders and turn lanes at major intersections
2037	5-11e	Henrici Rd	Ferguson Rd to Redland Rd	Add paved shoulders and turn lanes at major intersections. Remove horizontal and vertical curves
2038	5-11e	Molalla Forest Rd	City of Canby to City of Molalla	Pave to provide bicycle access in accordance with the Active Transportation Plan
2039	5-11e	Mulino Rd (13th St segment)	Canby city limits to OR 213	Add paved shoulders and turn lanes at major intersections
2040	5-11e	Newell Creek Trail / Oregon City Loop Trail	Loop around the perimeter of Oregon City	Construct Oregon City Loop Trail and Newell Creek Trail in accordance with the Active Transportation Plan
2041	5-11e	Redland Rd	Redland Rd / Bradley Rd intersection	Install eastbound left-turn lane
2042	5-11e	Redland Rd	Redland Rd / Fischers Mill Rd / Henrici Rd intersection	Install eastbound left-turn, eastbound right-turn and westbound right-turn lanes at Henrici Rd
2043	5-11e	Springwater Rd	Springwater Rd / Bakers Ferry Rd intersection	Install southbound left-turn lane; realign intersection to fix skew
2044	5-11b	Sleepy Hollow Rd	Barlow Trail Rd to US 26	Add 4-foot paved shoulders
<u>2045</u>	<u>5-11a</u>	<u>SE 190th Drive</u>	<u>County line to 172nd - 190th Connector</u>	<u>Widen shoulder based on operational and safety analysis during project development.</u>
<u>2046</u>	<u>5-11a</u>	<u>SE 190th Drive</u>	<u>172nd - 190th Connector to SE Tillstrom Road</u>	<u>Widen shoulder based on operational and safety analysis during project development.</u>
<u>2047</u>	<u>5-11a</u>	<u>SE 232nd Drive</u>	<u>OR 212 to OR 224</u>	<u>Widen shoulder based on operational and safety analysis during project development.</u>

DRAFT Table 5-3b Preferred Projects

Project ID	Map	Project Name / Street Name	Segment / Locations	Project Description
<u>2048</u>	<u>5-11a</u>	<u>SE 242nd Avenue</u>	<u>County line to OR 212</u>	<u>Widen shoulder based on operational and safety analysis during project development.</u>
<u>2049</u>	<u>5-11a</u>	<u>SE Tillstrom Road</u>	<u>SE Tillstrom Road/SE Bohna Park Road & SE Wiese Road/SE Bohna Park Road intersections</u>	<u>Reroute SE Bohna Park Road to meet SE Delia Street.</u>

Projects in italics and underlined (2045-2049) added from Damascus Mobility Plan (May 2022)

DRAFT Table 5-3c Long Term Capital Projects

Project ID	Map	Project Name / Street Name	Segment / Locations	Project Description
3000	5-11a	106th Ave	OR 212 to Jennifer St	Add bikeways and pedestrian facilities
3001	5-11a	152nd Ave Phase 2	Sunnyside Rd to OR 212	Add bikeways, pedestrian facilities and turn lanes at major intersections
3002	5-11a	162nd Ave	Sager Rd north to County line	Add bikeways, pedestrian facilities, turn lanes at major intersections
3003	5-11a	172nd Ave Bridge	~140 feet south of Troge Rd	Replace bridge nearing the end of its useful life
3004	5-11a	82nd Dr	OR 212 to Gladstone	Widen to 5 lane with bikeways and pedestrian facilities
3005	5-11a	84th Ave	Sunnyside Rd to Sunnybrook Blvd	Fill in bikeways and pedestrian facilities gaps
3006	5-11a	93rd Ave	Sunnyside Rd to Sunnybrook Blvd	Add bikeways in accordance with the Active Transportation Plan
3007	5-11a	Cheldelin Rd	Foster Rd to 190th Dr	Add bikeways and pedestrian facilities
3008	5-11a	Cheldelin Rd (Clatsop St extension)	172nd Ave to Foster Rd	Construct new two lane roadway with bikeways and pedestrian facilities
3009	5-11a	Cornwell Ave	OR 213 to Fuller Rd	Add pedestrian facilities; connect to I-205 Multi-Use Path
3010	5-11a	Fuller Rd	Otty Rd to King Rd / OR 213	Construct new 2 lane extension with pedestrian facilities and bikeways
3011	5-11a	Fuller Rd	Johnson Creek Blvd to County line	Add pedestrian facilities
3012	5-11a	Hillcrest St	92nd Ave to Stevens Rd	Add pedestrian facilities
3013	5-11a	I-205 Pedestrian / Bike Overpass	Between Causey Ave and Sunnyside Rd	Construct a bike / pedestrian crossing over I-205 to connect transit services, businesses and residents in accordance with the Active Transportation Plan
3014	5-11a	Idleman Rd	92nd Ave to Westview Ct	Fill gaps in bikeways and pedestrian facilities
3015	5-11a	Jennifer St	106th Ave to 130th Ave	Add bikeways
3016	5-11a	Johnson Creek Blvd	Bell Ave to OR 213	Widen to 3 lanes from Bell Ave to 76th Ave and 5 lanes from 76th Ave to 82nd Ave ; add bikeways and pedestrian facilities
3017	5-11a	King Rd	Milwaukie City Limits to Spencer Dr	Fill gaps in pedestrian facilities in accordance with the Active Transportation Plan
3018	5-11a	Lake Rd	OR 224 west to Milwaukie city limits	Add pedestrian facilities and turn lanes at major intersections
3019	5-11a	Lake Rd	Johnson Rd to Webster Rd	Fill gaps in pedestrian facilities and bikeways
3020	5-11a	Linwood Ave Bridge over Johnson Creek	Bridge	Construct bridge with bike lanes and sidewalks in accordance with the Active Transportation Plan
3021	5-11a	Luther Rd Bridge	Bridge crossing Johnson Creek	Replace bridge
3022	5-11a	Mather Rd	Mather Rd / 122nd Ave intersection	Install traffic signal or compact roundabout
3023	5-11a	Mather Rd	122nd Ave to 132nd Ave	Construct new 2 lane roadway with pedestrian facilities and bikeways
3024	5-11a	Mather Rd	Industrial Way to 98th Ave	Maintain as pedestrian facilities and bikeway. Construct undercrossing at Sunrise Expressway.
3025	5-11a	Michael Dr	72nd Ave to Fuller Ave	Fill gaps in pedestrian facilities
3026	5-11a	Phillips Creek Multi-Use Path	Causey Ave to North Clackamas Regional Parks Trail	Construct multi-use path
3027	5-11a	Sunnyside Rd Adaptive Signal Timing	OR 213 to 172nd Ave	Add adaptive timing to traffic signals

DRAFT Table 5-3c Long Term Capital Projects

Project ID	Map	Project Name / Street Name	Segment / Locations	Project Description
3028	5-11a	Valley View Terrace	Sunnyside Rd to Otty Rd	Add bikeways and pedestrian facilities
3029a	5-11a	West 82nd Ave Parallel Road	Luther Rd to Johnson Creek Blvd	Construct collector road parallel to OR 213 with bikeways and pedestrian facilities
3029b	5-11b	West 82nd Ave Parallel Road	Johnson Creek Blvd to King Rd	Construct collector road parallel to OR 213 with bikeways and pedestrian facilities
3030	5-11b	282nd Ave	282nd Ave / OR 212 intersection	Add second right-turn lane on 282nd Ave and additional intersection improvements as needed
3031	5-11b	282nd Ave	OR 212 to Multnomah County line	Add paved shoulders
3032	5-11b	352nd Ave / Dunn Rd	Bluff Rd to Bluff Rd	Add paved shoulders
3033	5-11b	362nd Dr	Colorado Rd to Dubarko Rd	Remove or decrease horizontal and vertical curves
3034	5-11b	362nd Dr	362nd Ave / Deming Rd intersection	Remove or decrease vertical curve, relocate intersection
3035	5-11b	Barlow Trail Rd/ Lolo Pass Rd	Between communities of Timberline, Welches and Zig Zag	Add paved shoulders in accordance with the Active Transportation Plan. In the interim, install 4-foot shoulders or 4-foot shoulders at specific areas with limited sight distance or steep uphill sections.
3036	5-11b	Bluff Rd	City of Sandy to County line	Add paved shoulders in accordance with the Active Transportation Plan
3037	5-11b	Bull Run Rd	Ten Eyck Rd to Multnomah County line	Add paved shoulders and turn lanes at major intersections.
3038	5-11b	Bull Run Truss	Bull Run truss between Waterworks Rd and Bowman Rd	Replace bridge nearing the end of its useful life
3039	5-11b	Coalman Rd / Cherryville Dr	Ten Eyck Rd to US 26	Add paved shoulders. In the interim, add 4-foot paved shoulders.
3040	5-11b	Compton Rd	US 26 to 352nd Ave	Remove vertical curve near Orient Dr and relocate intersection; add paved shoulders
3041	5-11b	Coupland Rd	Estacada City limits to Divers Rd	Add paved shoulders and turn lanes at major intersections
3042	5-11b	Eagle Creek Rd	Keegan Rd to Currin Rd	Realign Eagle Creek Rd to remove or decrease downgrade
3043	5-11b	Firwood Rd	Firwood Rd / Trubel Rd intersection	Realign Trubel Rd to remove or decrease downgrade
3044	5-11b	Hayden Rd	Springwater Rd to OR 211	Add paved shoulders in accordance with the Active Transportation Plan
3045	5-11b	Howlett Rd	OR 211 to Wildcat Mountain Dr	Add paved shoulders
3046	5-11b	Kelso Rd	Richey Rd to Orient Dr	Add paved shoulders
3047	5-11b	Kelso Rd	Orient Dr to Sandy Urban Growth Boundary	Remove vertical curve, relocate intersection, add paved shoulders and turn lanes at major intersections; investigate speed zone
3048	5-11b	Lolo Pass Rd	US 26 to Barlow Trail Rd	Safety analysis; add paved shoulders in accordance with the Active Transportation Plan
3049	5-11b	Mt Hood Aerial Transportation Link	Between Ski Bowl, Government Camp Village and Timberline Lodge	Aerial transportation link
3050	5-11b	Orient Dr	US 26 north to County line	Add paved shoulders
3051	5-11b	Porter Rd Bridge over Delph Creek	~100 ft east of Wilcox Rd	Replace bridge

DRAFT Table 5-3c Long Term Capital Projects

Project ID	Map	Project Name / Street Name	Segment / Locations	Project Description
3052	5-11b	Salmon River Rd	US 26 to Welches Rd	Add paved shoulders. Between US 26 and Fairway Ave, add paved shoulders or multi-use path
3053	5-11b	Springwater Rd	Hayden Rd to OR 211	Add paved shoulders
3054	5-11b	Ten Eyck Rd	Lusted Rd to City of Sandy	Remove vertical curve, relocate intersection, add paved shoulders, turn lanes at major intersections; investigate speed zone. For paved shoulders between City of Sandy and Marmot Rd, refer to the Active Transportation Plan
3055	5-11b	Tickle Creek Trail	Springwater Corridor to Sandy city limits	Construct multi-use path in accordance with the Active Transportation Plan
3056	5-11b	Welches Rd	Birdie Ln to Salmon River Rd	Add paved shoulders or add multi-use path
3057	5-11b	Wildcat Mountain Dr	OR 224 to Firwood Rd	Add paved shoulders
3058	5-11c	Aldercrest Dr	Thiessen Rd to Oatfield Rd	Add pedestrian facilities to one side of the road and bikeways
3059	5-11c	Clackamas Rd	Clackamas Rd / I-205 interchange	Construct bike/pedestrian bridge over I-205
3060	5-11c	Hill Rd	Oatfield Rd to Thiessen Rd	Add bikeways and pedestrian facilities
3061	5-11c	Johnson Rd / McKinley Rd	OR 224 to I-205 multi-use path	Bikeway and pedestrian facilities infill. From Thiessen Rd to I-205 Multi-use Path, construct in accordance to the Active Transportation Plan
3062	5-11c	McNary Rd / Mabel Ave	Oatfield Rd to Webster Rd	Add bikeways and pedestrian facilities
3063	5-11c	Naef Rd	Oatfield Rd to River Rd	Add pedestrian facilities in accordance with the Active Transportation Plan
3064	5-11c	Oatfield Rd	Oatfield Rd / Hill Rd intersection	Add left-turn lanes, install signal if warranted
3065	5-11c	Oatfield Rd	Milwaukie city limits to Gladstone city limits	Fill gaps in pedestrian facilities and bikeways
3066	5-11c	Oatfield Ridge Connection	Between Jennings Ave and Thiessen Ave over Oatfield Ridge	Construct multi-use path
3068	5-11c	Portland Ave	Jennings Ave to Hull Ave	Fill gaps in pedestrian facilities
3069	5-11c	Risley Ave	Arista Dr to Hager Rd	Fill gaps in pedestrian facilities
3070	5-11c	River Rd	Courtney Ave to Oak Grove Blvd	Add pedestrian facilities
3071	5-11c	River Rd	Risley Ave to Rinearson Rd	Add pedestrian facilities
3072	5-11c	Roethe Rd	River Rd to OR 99E (McLoughlin Blvd)	Add bikeways, pedestrian facilities and traffic calming
3073	5-11c	Rusk Rd	OR 224 South to Aldercrest Rd	Add pedestrian facilities on one side of the roadway and bikeways
3074	5-11c	Strawberry Ln	Webster Rd to 82nd Dr	Add pedestrian facilities and fill bikeway gaps
3075	5-11c	Thiessen Rd	Thiessen Rd / Hill Rd intersection	Add right-turn lane on Thiessen Rd; consider converting to two-way stop controlled or installing roundabout
3076	5-11c	View Acres Rd	Oatfield Rd to Hill Rd	Add pedestrian facilities and traffic calming
3077	5-11c	Webster Rd	Webster Rd / Jennings Ave and Webster Rd / Roots Rd intersections	Construct traffic signals, turn lanes
3078	5-11c	Webster Rd	Webster Rd / Strawberry Ln intersection	Add signal; construct southbound and westbound left-turn lane

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Project ID	Map	Project Name / Street Name	Segment / Locations	Project Description
3079	5-11d	65th Ave	Stafford Rd to Tualatin city limits	Add paved shoulders
3080	5-11d	Baker Rd	Tooze Rd to County line	Add paved shoulders
3081	5-11d	Bell Rd	Ladd Hill Rd to Wilsonville Rd	Add paved shoulders
3082	5-11d	Bonita Rd	Carman Dr to I-5	Add bikeways and pedestrian facilities
3083	5-11d	Childs Rd	Stafford Rd to Lake Oswego city limits	Add pedestrian facilities, bikeways and turn lanes at major intersections
3084	5-11d	Graham's Ferry Rd	County line to Westfall Rd	Add paved shoulders
3085	5-11d	Graham's Ferry Rd	Wilsonville Rd to Wilsonville city limits	Add paved shoulders
3086	5-11d	Hoffman Rd / Peach Cove Rd / Riverwood Rd	Mountain Rd to Tualatin River	Add paved shoulders
3087	5-11d	Homesteader Rd	Stafford Rd to Mountain Rd	Add paved shoulders
3088	5-11d	Johnson Rd	Stafford Rd to West Linn city limits	Add paved shoulders and turn lanes at major intersections
3089	5-11d	Ladd Hill Rd	Wilsonville Rd to Washington County line	Add paved shoulders and turn lanes at major intersections
3090	5-11d	Mountain Rd	Stafford Rd to Canby Ferry	Add paved shoulders in accordance with the Active Transportation Plan
3091	5-11d	Petes Mountain Rd	West Linn city limits to Hoffman Rd	Add paved shoulders and turn lanes at major intersections
3092	5-11d	Pleasant Hill Rd / McConnell Rd / Tooze Rd	Ladd Hill Rd to Westfall Rd	Add paved shoulders
3093	5-11d	Schaeffer Rd	Mountain Rd to Petes Mountain Rd	Add paved shoulders
3094	5-11d	Schatz Rd / 55th Ave / Meridian Way	65th Ave to Stafford Rd	Add paved shoulders
3095	5-11d	Tualatin / Lake Oswego Pedestrian and Bicycle Bridge	Tualatin River Bridge	Construct bike / pedestrian bridge
3096	5-11d	Wilsonville Rd	Wilsonville Rd / Bell Rd intersection	Realign roadway and grade improvements
3097	5-11d	Wilsonville Rd	Wilsonville Rd / Edminston Rd intersection	Remove bank, remove horizontal curve, relocate intersection
3098	5-11d	Wilsonville Rd Bridge	~300 feet south of Bell Rd	Replace bridge nearing the end of its useful life
3099	5-11d	Wisteria Rd / Woodbine Rd	Rosemont Rd to Johnson Rd	Add paved shoulders
3100	5-11e	Airport Rd	Arndt Rd to Miley Rd	Add turn lanes at major intersections
3101	5-11e	Bakers Ferry Rd	Springwater Rd to OR 224	Add paved shoulders in accordance with the Active Transportation Plan and turn lanes at major intersections; remove horizontal curve and relocate intersection from Eaden Rd to OR 224
3102	5-11e	Barnards Rd	Meridian Rd to Canby-Marquam Hwy	Add paved shoulders
3103	5-11e	Barnards Rd	Needy Rd to Stuwe Rd	Reconstruct bridge and widen to 36 feet
3104	5-11e	Beavercreek Rd	Yeoman Rd/Steiner Rd to OR 211	Add paved shoulders

DRAFT Table 5-3c Long Term Capital Projects

Project ID	Map	Project Name / Street Name	Segment / Locations	Project Description
3105	5-11e	Bradley Rd	Redland Rd to Holcomb Blvd	Add turn lanes at major intersections
3106	5-11e	Bradley Rd	Gronlund Rd to Redland Rd	Add paved shoulders
3107	5-11e	Buckner Creek Rd	Gard Rd to Cochell Rd	Add paved shoulders
3108	5-11e	Canby-Marquam Highway	OR 170 / Macksburg Rd intersection	Reconstruct intersection; install southbound left-turn lane and northbound right-turn lane
3109	5-11e	Canby-Marquam Highway	City of Canby to OR 211	Add paved shoulders
3110	5-11e	Carus Rd	Central Point Rd to Beaver Creek Rd	Add paved shoulders in accordance with the Active Transportation Plan
3111	5-11e	Casto Rd	Spangler Rd to Central Point Rd	Add paved shoulders and turn lanes at major intersections
3112	5-11e	Central Point Rd	Parrish Rd to Mulino Rd	Smooth curves; add paved shoulders (Parrish Rd to Bremer Rd in accordance with the Active Transportation Plan)
3113	5-11e	Clackamas River Dr	Oregon City limits to Springwater Rd	Construct bikeway in accordance with the Active Transportation Plan. Add turn lanes at Springwater Rd and Forsythe Rd.
3114	5-11e	Fellows Rd	Redland Rd to Lower Highland Rd	Add paved shoulders and turn lanes at major intersections
3115	5-11e	Ferguson Rd	Beaver Creek Rd and Henrici Rd	Reduce the speed limit and install traffic calming
3116	5-11e	Fischers Mill Rd	Redland Rd to Springwater Rd	Add paved shoulders in accordance with the Active Transportation Plan
3118	5-11e	Forsythe Rd	Oregon City limit to Bradley Rd	Add center turn lane and paved shoulders
3119	5-11e	Forsythe Rd	Forsythe Rd / Victory Rd intersection	Realign, widen Victory Rd; remove or decrease curves along Forsythe Rd; relocate intersection
3120	5-11e	Gard Rd	~100 ft south of Old Clarke Rd	Reconstruct bridge to accommodate paved shoulders
3121	5-11e	Gronlund Rd / Hattan Rd	Bradley Rd to Springwater Rd	Add paved shoulders and turn lanes at major intersections
3122	5-11e	Henrici Rd	Between Driftwood Dr and Shore Vista Dr	Widen bridge to accommodate paved shoulders
3123	5-11e	Holcomb Blvd	Edenwild Ln to Bradley Rd	Add paved shoulders and turn lanes at Holcomb Blvd / Bradley Rd
3124	5-11e	Kamrath Rd	Carus Rd to Spangler Rd	Safety analysis at Carus Rd, add paved shoulders, remove or decrease horizontal curves north of Spangler Rd
3125	5-11e	Knights Bridge Rd Bridge	~3,200 feet east of Barlow Rd	Replace bridge (nearing the end of its useful life)
3126	5-11e	Leland Rd	Oregon City line to Beaver Creek Rd	Add paved shoulders
3127	5-11e	Leland Rd	~1,000 ft north of Warnock Rd	Reconstruct bridge to accommodate paved shoulders
3128	5-11e	Lone Elder Rd	County line to Canby-Marquam Hwy	Add paved shoulders
3129	5-11e	Lower Highland Rd	Beaver Creek Rd to Fellows Rd	Add paved shoulders and turn lanes at major intersections
3130	5-11e	Macksburg Rd	Canby Marquam Hwy to OR 213	Add paved shoulders and turn lanes at major intersections
3131	5-11e	Maplelane Rd	~1,800 ft west of Walker Rd	Add paved shoulders
3132	5-11e	Maplelane Rd	Oregon City Urban Growth Boundary to Ferguson Rd	Add paved shoulders

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Project ID	Map	Project Name / Street Name	Segment / Locations	Project Description
3133	5-11e	Mattoon Rd	Fischers Mill Rd to Redland Rd	Add paved shoulders in accordance with the Active Transportation Plan and turn lanes at major intersections; remove vertical curves, remove horizontal curves north of Redland Rd
3134	5-11e	Meridian Rd	Lone Elder Rd to OR 211	Add paved shoulders
3135	5-11e	Meridian Rd	Elliott Prairie Rd to Barlow Rd	Add paved shoulders; remove or decrease horizontal and vertical curves
3136	5-11e	Miley Rd	Airport Rd to Eilers Rd	Add paved shoulders
3137	5-11e	Molalla Ave	OR 213 to Molalla City limits	Add paved shoulders
3138	5-11e	New Era Rd / Haines Rd	OR 99E to Leland Rd	Add paved shoulders
3140	5-11e	Redland Rd	~900 ft west of Holly Ln	Reconstruct bridge to include shoulders and bikeways
3141	5-11e	Redland Rd	~400 ft west of Holly Ln	Reconstruct bridge to include shoulders and bikeways
3142	5-11e	Redland Rd	Henrici Rd to Oregon City limit	Add paved shoulders and bikeway in accordance with the Active Transportation Plan
3143	5-11e	Redland Rd	Henrici Rd to Springwater Rd	Add paved shoulders and turn lanes at major intersections. For the section between Mattoon Rd and Jubb Rd, see the Active Transportation Plan.
3144	5-11e	Ridge Rd	Lower Highland Rd to Redland Rd	Add paved shoulders
3145	5-11e	Rock Creek (Kropf Rd) Bridge	~3,500 ft north of Gibson Rd	Replace bridge
3146	5-11e	S Killdeer Rd	Ferguson Road and Yeoman Road	Extend S Killdeer Rd to connect with S. Ivel Rd. and provide bike/pedestrian access
3147	5-11e	South End Rd	Oregon City limits to OR 99E	Smooth curves; add paved shoulders
3148	5-11e	Spangler Rd	Casto Rd to Beaver Creek Rd	Add paved shoulders and turn lanes at major intersections
3149	5-11e	Springwater Rd	Bakers Ferry Rd to Hayden Rd	Add paved shoulders and turn lanes at major intersections. For paved shoulders between Eaden Rd and Hayden Rd, see the Active Transportation Plan.
3150	5-11e	Thayer Rd/Ferguson Rd	Oregon City line to Redland Rd	Add paved shoulders
3151	5-11e	Toliver Rd	Dryland Rd to Molalla city Limits	Add paved shoulders in accordance with the Active Transportation Plan
3152	5-11e	Unger Rd	Beaver Creek Rd to OR 211	Add paved shoulders and turn lanes at major intersections
3153	5-11e	Union Hall Rd	Central Point Rd to El Dorado Rd	Add paved shoulders
3154	5-11f	Bird Rd	Groshong Rd to Wilhoit Rd	Add paved shoulders and turn lanes at major intersections
3155	5-11f	Blair Rd	Groshong Rd to Maple Grove Rd	Add paved shoulders and turn lanes at major intersections
3156	5-11f	Callahan Rd S / Ramsby Rd	Dickey Prairie Rd to Fernwood Rd	Add paved shoulders and turn lanes at major intersections
3157	5-11f	Dhooghe Rd	OR 211 to Fernwood Rd	Add paved shoulders and turn lanes at major intersections
3158	5-11f	Fernwood Rd	Dhooghe Rd to Callahan Rd	Add paved shoulders and turn lanes at major intersections
3159	5-11f	Gray's Hill Rd	Green Mountain Rd to OR 211	Add paved shoulders
3160	5-11f	Maple Grove Rd	Nowlens Bridge Rd to Sawtell Rd	Add paved shoulders and turn lanes at major intersections

DRAFT Table 5-3c Long Term Capital Projects

Project ID	Map	Project Name / Street Name	Segment / Locations	Project Description
3161	5-11f	Nowlens Bridge Rd	OR 213 to Maple Grove Rd	Add paved shoulders and turn lanes at major intersections
3162	5-11f	Sawtell Rd	Maple Grove Rd to Wilhoit Rd	Add paved shoulders and turn lanes at major intersections
3163	5-11f	Wildcat Rd	Wilhoit Rd to OR 213	Add paved shoulders and turn lanes at major intersections
3164	5-11f	Wright Rd	OR 211 to Callahan Rd	Add paved shoulders
3165	5-11a	Sunnyside Rd	93rd Ave to OR 212	Add pedestrian facilities and bikeways in accordance with the Active Transportation Plan
3167	5-11b	Marmot Rd	Ten Eyck to Barlow Trail Rd	Add paved shoulders in accordance with the Active Transportation Plan. In the interim, widen to 4-feet within Wildwood/Timberline, Zigzag, Rhododendron and Wemme/Welches.
3168	5-11c	Thiessen Rd	Webster Rd to Johnson Rd	Add pedestrian facilities and bikeways in accordance with the Active Transportation Plan
3169	5-11d	Willamette River Greenway	Lake Oswego north to County Line	Construct multi-use path in accordance with the Active Transportation Plan.
3170	5-11d	Willamette River Greenway	Canby Ferry to City of Wilsonville	Construct multi-use path in accordance with the Active Transportation Plan.
3171	5-11e	Bremer Rd	Central Point Rd to Haines Rd	Add paved shoulders in accordance with the Active Transportation Plan
3172	5-11e	Butteville Rd	Willamette River to County line	Add paved shoulders in accordance with the Active Transportation Plan
3173	5-11e	Dryland Rd	Macksburg Rd to Toliver Rd	Add paved shoulders in accordance with the Active Transportation Plan
3174	5-11e	Eaden Rd	Bakers Ferry Rd to Springwater Rd	Add paved shoulders in accordance with the Active Transportation Plan
3175	5-11e	Haines Rd	Bremer Rd to Territorial Rd	Add paved shoulders in accordance with the Active Transportation Plan
3176	5-11e	Harms Rd	Kraxberger Rd to Macksburg Rd	Construct bikeway in accordance with Active Transportation Plan
3177	5-11e	Hwy 170 / Kraxberger Rd	City of Canby to Harms Rd	Add paved shoulders in accordance with the Active Transportation Plan
3178	5-11e	Jubb Rd	Redland Rd to Springwater Rd	Add paved shoulders in accordance with the Active Transportation Plan
3179	5-11e	Kamrath Rd	Leland Rd to Carus Rd	Add paved shoulders in accordance with the Active Transportation Plan
3180	5-11e	Knights Bridge Rd / Barlow Rd / Arndt Rd	Canby boundary to Airport Rd	Add bikeway in accordance with the Active Transportation Plan
3181	5-11e	Territorial Rd	Haines Rd to OR 99E	Add bikeways in accordance with the Active Transportation plan
3182	5-11e	Willamette River Greenway	Oregon City to Canby	Construct multi-use path in accordance with the Active Transportation Plan.
<u>3183</u>	<u>5-11a</u>	<u>SE 187th Avenue</u>	<u>SE Sunnyside Road to OR 212</u>	<u>Improve SE 187th Avenue to three-lane roadway with sidewalks and bike lanes; construct roundabout at SE Sunnyside Road/SE 187th Avenue.</u>
<u>3184</u>	<u>5-11a</u>	<u>SE 222nd Drive</u>	<u>County line to OR 212</u>	<u>Widen shoulders based on operational and safety analysis during project development.</u>
<u>3185</u>	<u>5-11a</u>	<u>SE 257th Avenue</u>	<u>SE Hoffmeister Road to OR 212</u>	<u>Widen shoulders based on operational and safety analysis during project development.</u>
<u>3186</u>	<u>5-11a</u>	<u>SE Bohna Park Road</u>	<u>SE Tillstrom Road to SE 242nd Avenue</u>	<u>Widen shoulders based on operational and safety analysis during project development.</u>
<u>3187</u>	<u>5-11a</u>	<u>SE Borges Road</u>	<u>SE Tillstrom Road to SE 242nd Avenue</u>	<u>Widen shoulders based on operational and safety analysis during project development.</u>
<u>3188</u>	<u>5-11a</u>	<u>SE Hoffmeister Road</u>	<u>SE 242nd Avenue to SE 257th Avenue</u>	<u>Widen shoulders based on operational and safety analysis during project development.</u>
<u>3189</u>	<u>5-11a</u>	<u>SE Royer Road</u>	<u>OR 212 to OR 224 (gap in roadway)</u>	<u>Widen shoulders based on operational and safety analysis during project development.</u>

DRAFT Table 5-3c Long Term Capital Projects

Project ID	Map	Project Name / Street Name	Segment / Locations	Project Description
<u>3190</u>	<u>5-11a</u>	<u>SE Telford Road</u>	<u>County line to County line</u>	<u>Widen shoulder based on operational and safety analysis during project development.</u>
<u>3191</u>	<u>5-11a</u>	<u>SE Tong Road</u>	<u>South of OR 212/SE Tong Road intersection</u>	<u>Realign SE Tong Road at OR 212 to align with SE 187th Avenue to address skew.</u>
<u>3192</u>	<u>5-11a</u>	<u>SE Wiese Road</u>	<u>SE Bohna Park Road to OR 212</u>	<u>Widen shoulders based on operational and safety analysis during project development.</u>
<u>3193</u>	<u>5-11a</u>	<u>SE Wiese Road Realignment</u>	<u>North of OR 212/SE Wiese Road</u>	<u>Realign SE Weise Road to intersect with OR 212 and SE Royer Road.</u>

Projects in italics and underlined (3183-3193) added from Damascus Mobility Plan (May 2022)

DRAFT Table 5-3d Regional Capital Projects

Project ID	Map	Project Name / Street Name	Segment / Locations	Project Description	Priority
4000	County-wide	TSP Refinement	State facility locations applicable where mobility target is not met in 2035	TSP Refinement to develop alternative mobility targets for state facilities consistent with Oregon Highway Plan (OHP) 1F3.	High
4001	5-11a	I-205 / Sunnyside Road interchange	I-205 / Sunnyside Road interchange	Add dual northbound right-turns; install bike signal; construct sidewalk extension / bulb to accommodate pedestrians and bicyclists around signal pole.	High
4002	5-11a	OR 212	OR 212 / 172nd Ave intersection	Add second eastbound left-turn lane	High
4003	5-11a	OR 212	SE 162nd to Anderson Rd	Add bikeways, pedestrian facilities ways, and landscape pedestrian facilities buffer; widen to 6 lanes within Happy Valley; add center turn lane within Damascus	High
4004	5-11a	OR 213	Sunnybrook Blvd to Portland City Limits	Extend fiberoptic communications, CCTV at key intersections and adaptive signal timing	High
4005	5-11a	OR 224	OR 224 / Lake Rd / Webster Rd intersection	Add turn-lanes, including second left-turn lane on westbound OR 224, second left-turn lane and right-turn lane on northbound SE Webster Rd, and second left-turn lane on southbound SE Lake Rd	High
4006	5-11a	OR 224	OR 224 / Johnson Rd intersection	Add second left-turn lane on westbound OR 224	High
4007	5-11a	OR 224	OR 224 / Hubbard Rd / 135th Ave intersection	Add intersection improvements, including right-turn lanes	High
4008	5-11a	OR 224	Springwater Rd / OR 224 intersection	Add signal and turn lanes on all approaches	High
4009	5-11a	OR 224	Rock Creek Junction to Midway St	Widen to four lanes; add bikeways.	High
4010	5-11a	Sunrise Project - Preliminary Engineering	Webster Rd/ OR 224 to 172nd Ave / OR 212	Preliminary engineering from Webster Rd to 172nd Ave	High
4011	5-11a	Sunrise Project - Right-of-Way	Webster Rd/ OR 224 to 172nd Ave / OR 212	Acquire right-of-way to accommodate 6 lane expressway plus auxiliary lanes	High
4012	5-11a	SunriseProject - Multi-use Path	122nd to Rock Creek Junction	Construct multi-use path from 122nd to Rock Creek Junction parallel to the Sunrise project consistent with FEIS.	High
4013	5-11b	OR 224	OR 224 /232nd Ave intersection	Install traffic signal or roundabout	High
4014	5-11b	OR 224	Eaglecreek Rd / OR 224 intersection	Install signal	High
4015	5-11c	OR 99E	Milwaukie city limit to Gladstone city limit	Add bikeways, pedestrian facilities ways, median enhancements, crosswalks and pedestrian facilities refuges	High
4016	5-11d	I-205	Stafford Rd to OR 99E	Work with ODOT, Metro, Oregon City, West Linn and any other effected jurisdictions to analyze and develop a solution to the transportation bottle neck on I-205 between Oregon City and I-205 / Stafford Road Interchange. Possible solutions include widening to 3-lanes in each direction.	High
4017	5-11e	I-205	Willamette River to West Linn city limit	Add southbound truck climbing lane	High
4018	5-11e	I-205	I-205 Corridor	Corridor-wide operational improvements	High
4019	5-11e	OR 211	Beavercreek Rd, Union Hall Rd to Dhooghe Rd	Widen to include shoulders, bikeways, add passing lanes where needed and turn lanes at major intersections	High
4020	5-11e	OR 213	OR 213 / Spangler Rd intersection	Install traffic signal to replace existing two-way stop	High

DRAFT Table 5-3d Regional Capital Projects

Project ID	Map	Project Name / Street Name	Segment / Locations	Project Description	Priority
4021	5-11e	OR 213	OR 213 / Henrici Rd intersection	Install traffic signal or roundabout and additional intersection improvements as needed	High
4022	5-11e	OR 213	OR 213 / Leland Rd intersection	Add northbound through auxiliary lane	High
4023	5-11e	OR 213	Leland Rd / Union Hall Rd intersection	Add southbound auxiliary lane	High
4024	5-11e	OR 213	Mulino to Molalla	Perform road safety audit or transportation safety review to identify appropriate safety improvements	High
4025	5-11e	OR 99E	OR 99E / Barlow Rd intersection	Add left-turn lane on southbound Barlow Rd - To widen Barlow Rd to add a southbound left turn lane on the north approach would need to modify the existing railroad crossing warning system	High
4026	5-11a	I-205 / Johnson Creek Blvd interchange	I-205 / Johnson Creek Blvd interchange	Add loop ramp and northbound on-ramp; realign southbound off-ramp and install dual right-turn lanes	Medium
4027	5-11a	I-205 / OR 212/224 Interchange	In vicinity of Roots Rd and McKinley Ave	Connect bikeways in accordance with the Active Transportation Plan	Medium
4028	5-11a	OR 212	Rock Creek Junction to 172nd	Construct climbing lane	Medium
4029	5-11a	OR 212	OR 212 / SE 162nd Ave intersection	Add left-turn pockets and traffic signal	Medium
4030	5-11a	OR 213	Sunnyside Rd to Sunnybrook Rd	Widen to 7 lanes with boulevard treatments	Medium
4031	5-11a	OR 213	OR 213 / Harmony Rd / Sunnyside Rd intersection	Add bikeways, pedestrian facilities ways, dual northbound and southbound left-turn lanes, and lighting; convert driveways north of intersection to right-in / right-out	Medium
4032	5-11a	OR 224	OR 224 / Rusk Rd off-ramp	Extend right-turn lane on OR 224	Medium
4033	5-11a	OR 224	Milwaukie city limits to I-205	Construct multi-use path as parallel route to OR 224	Medium
4034	5-11a	OR 224	Lake Rd / Johnson Rd / Pheasant Ct	Realign Lake Rd / Johnson Rd to provide southern OR 224 access via Pheasant Ct; add turn lanes at OR 224 / Pheasant Ct intersection; close access at Lake / Webster south of OR 224	Medium
4035	5-11a	OR 99E	OR 99E / Jennings Ave intersection	Determine safe connection of Trolley Trail at OR 99E / Jennings Ave intersection	Medium
4036	5-11a	Sunrise Project	I-205 to 172nd Ave	Construct improvements to 172nd	Medium
4037	5-11b	OR 211	Hayden Rd to OR 224	Widen to rural arterial standard with shoulders, bikeways in accordance with the Active Transportation Plan and turn lanes at major intersections	Medium
4038	5-11b	US 26	Govt. Camp Loop W to OR 35	Implement Finding of Mt Hood Multimodal Study including phased safety improvements	Medium
4039	5-11b	US 26	OR 35 Junction to Wasco County line	Widen roadway to include bikeways /shoulders, add passing lanes where needed and turn lanes at major intersections	Medium
4040	5-11e	OR 211	OR 170 (Canby-Marquam Hwy) / OR 211 intersection	Install eastbound and westbound left-turn lanes, and eastbound right-turn lane; remove or decrease horizontal curve	Medium
4041	5-11e	OR 211	Marion County line to OR 170 (Canby-Marquam Hwy)	Widen to include shoulders, bikeways, add passing lanes where needed and turn lanes at major intersections	Medium
4042	5-11e	OR 99E	Barlow Rd to Marion County line	Four lane widening with median, left-turn lanes from mile post 24.05	Medium
4043	5-11e/f	OR 213	Oregon City boundary to Marion County line	Add shoulders and bikeways	Medium

DRAFT Table 5-3d Regional Capital Projects

Project ID	Map	Project Name / Street Name	Segment / Locations	Project Description	Priority
4044	5-11a	OR 212	I-205 to OR 224	Perform road safety audit or transportation safety review to identify appropriate safety improvements	Low
4045	5-11a	OR 212	Within the Damascus City Limits (Armstrong Cr to 257th)	Obtain right-of-way for future 4 lane facility with planted median and 5 lanes at major intersections; build as major development occurs and apply access management to reduce number of driveways.	Low
4046	5-11a	OR 213	Clatsop St to Sunnyside Rd	OR 213/82nd Avenue Boulevard Design Improvements - Widen to add sidewalks, lighting, central median, planting strips and landscaping; fill gaps in the bike and pedestrian facilities network. Add pedestrian crossings in the vicinity of Luther Rd, Glencoe Rd and south of Boyer Dr. Install access management median Hinkley Ave to Lindy St and Monterey Ave to Harmony Rd. Install advanced street name signs from Sunnyside Rd to Sunnyside Dr. Remove signal at north entrance of Clackamas Town Center and evaluate traffic diversion. 2014 ODOT OR 213 paving project programmed King to OR 224.	Low
4047	5-11a	OR 213 (82nd Ave)	Luther Road to Sunnybrook Blvd	Perform road safety audit or transportation safety review to identify appropriate safety improvements	Low
4048	5-11a	OR 224	Webster Rd and 82nd Ave	Provide frontage connection on the north side of OR 244	Low
4049	5-11a	OR 224	Springwater Rd to 232nd Dr	Shoulder widening, horizontal realignment, realignment of roadway to bluff	Low
4050	5-11b	OR 211	OR 224 to eastbound US 26	Perform road safety audit or transportation safety review to identify appropriate safety improvements	Low
4051	5-11b	OR 211	OR 224 to Hillcockburn Rd	Perform road safety audit or transportation safety review to identify appropriate safety improvements	Low
4052	5-11b	OR 211	Tickle Creek Rd/OR 211 intersection	Remove or decrease horizontal curve, relocate intersection	Low
4053	5-11b	OR 211	362nd Dr / OR 211 intersection	Remove or decrease vertical curve and remove vegetation	Low
4054	5-11b	OR 211	Eagle Creek Rd to Tickle Creek Rd	Widen to include bikeways /shoulders and add passing /climbing lanes where needed	Low
4055	5-11b	OR 211	0.14 miles east of Coop Rd to Jackknife Rd	Widen to add shoulder / bikeways; realign to remove horizontal and vertical curves	Low
4056	5-11b	OR 211	Tickle Creek Rd to 362nd Dr	Widen to include bikeways /shoulders and add passing /climbing lanes where needed	Low
4057	5-11b	OR 211	Bornstedt Rd to City of Sandy	Add shoulders and bikeways	Low
4058	5-11b	OR 224	232nd Ave to OR 211	Perform road safety audit or transportation safety review to identify appropriate safety improvements	Low
4059	5-11b	OR 224	Fish Creek Rd to National Forest Rd 46	Perform road safety audit or transportation safety review to identify appropriate safety improvements	Low
4060	5-11b	OR 224	Bakers Ferry Rd / OR 224 intersection	Add eastbound right-turn lane	Low
4061	5-11b	OR 224	Amisigger Rd / OR 224 intersection	Install traffic signal; add southbound and eastbound left-turn lanes and westbound right-turn lane	Low
4062	5-11b	OR 224	Heiple Rd / OR 224 intersection	Add southbound right-turn lane	Low
4063	5-11b	OR 224	OR 212 to Estacada city limits	Widen to include shoulders and bikeways; add passing lanes where needed	Low
4065	5-11b	US 26	US 26 / Haley Rd intersection	Develop a plan to address to address access and safety issues on US 26 at this intersection and implement that plan	Low

DRAFT Table 5-3d Regional Capital Projects

Project ID	Map	Project Name / Street Name	Segment / Locations	Project Description	Priority
4066	5-11b	US 26	Kelso Rd to Duncan Rd	Perform road safety audit or transportation safety review to identify appropriate safety improvements	Low
4067	5-11b	US 26	Duncan Rd to Langensand Rd	Perform road safety audit or transportation safety review to identify appropriate safety improvements	Low
4068	5-11b	US 26	Firwood Rd to Sleepy Hollow Dr	Perform road safety audit or transportation safety review to identify appropriate safety improvements	Low
4069	5-11b	US 26	Rhododendron to OR 35	Perform road safety audit or transportation safety review to identify appropriate safety improvements	Low
4070	5-11b	US 26	US 26 / Firwood Rd intersection	Add eastbound right-turn lane	Low
4071	5-11b	US 26	US 26 / Brightwood Loop W	Add westbound right-turn lane	Low
4072	5-11b	US 26	US 26 / Brightwood Loop E	Add westbound right-turn lane	Low
4073	5-11b	US 26	Lolo Pass Rd to Govt. Camp Loop Rd. W	Implement Finding of Mt Hood Multimodal Study including ITS approach with variable speed signage; construct multi-use path between Lolo Pass Rd and John Lake Rd; add enhanced pedestrian crossing, sidewalks, curbs, gutters, pedestrian refuge island, pedestrian illumination and access management in Rhododendron; construct multi-use path connecting Mt. Hood Express transit stop and Pioneer Bridle Trailhead	High
4074	5-11c	OR 99E	Park Ave to Gladstone city limits	Perform road safety audit or transportation safety review to identify appropriate safety improvements	Low
4075	5-11d	OR 43	Lake Oswego to Portland	Develop active transportation connection in accordance with the Active Transportation Plan.	Low
4076	5-11e	OR 211	Dhooghe Rd / OR 211 intersection	Remove or decrease horizontal curve, relocate intersection	Low
4077	5-11e	OR 211	OR 170 (Canby-Marquam Hwy) to City of Molalla	Add shoulders and bikeways	Low
4078	5-11e	OR 211	Needy Rd to 0.6 miles west of Needy Rd	Remove or decrease vertical curve to allow passing zone, add passing lane in one or both directions, possible relocation of intersection	Low
4079	5-11e	OR 211	Molalla city limits to Hayden Rd	Widen to rural arterial standard (2 lanes) with shoulders and bikeways	Low
4080	5-11e	OR 211	Beavercreek Rd to Upper Highland Rd	Perform road safety audit or transportation safety review to identify appropriate safety improvements	Low
4081	5-11e	OR 213	OR 213 / Carus Rd intersection	Install traffic signal to replace existing two-way stop See U339	Low
4082	5-11e	OR 213	OR 213 / Beavercreek Rd intersection	Perform road safety audit or transportation safety review to identify appropriate safety improvements	Low
4083	5-11e	OR 213	Carus Rd / OR 213 intersection	Install southbound left-turn and right-turn lanes	Low
4085	5-11e	OR 99E	Oregon City to Canby	Add shoulders and bikeways	Low
4086	5-11e	OR 99E	Sequoia Parkway to Lone Elder Rd	Perform road safety audit or transportation safety review to identify appropriate safety improvements	Low
4087	5-11e	OR 99E	Territorial Rd to Metro boundary	Perform road safety audit or transportation safety review to identify appropriate safety improvements	Low
4088	5-11b	Government Camp Loop Rd	US 26 to US 26	Add bikeways through Government Camp in accordance with the Active Transportation Plan	High
4089	5-11a	OR 213	Causey Ave to King Rd	Work with TriMet and ODOT to evaluate the Business Access Transit lane and identify projects / approaches to improve safety and enhance transit operation.	High

DRAFT Table 5-3d Regional Capital Projects

Project ID	Map	Project Name / Street Name	Segment / Locations	Project Description	Priority
4090	5-11a	I-205 MUP	I-205 SB Ramp / Sunnyside Rd	Travelling south on the I-205 multi-use path, install a pedestrian signal to cross the I-205 southbound / Sunnyside right turn lane. Perform traffic analysis to evaluate impacts to vehicle queuing. Modification subject to ODOT approval.	High
4091	5-11a	I-205 MUP	Monterey Ave	Install parabolic mirror and/or signage to resolve limited sight distance issues at the intersection of the I-205 MUP and the path extension at Monterey Ave.	High
4092	5-11b	US 26	Arrah Wanna Blvd to Welches Rd	Add multi-use path on north side of US 26	High
4093	5-11b	US 26	Main Park Rd to Salmon River Rd	Add multi-use path on south side of US 26	High
4094	5-11b	US 26 / Welches Rd	US 26 / Welches Rd	Pedestrian and ADA improvements at signal, including crossing improvements on the north side of the intersection.	Medium
4095	5-11b	US 26 / Arrah Wanna Blvd	US 26 / Arrah Wanna Blvd	Install a continental style crosswalk, accompanied by roadway and streetscape improvements	Medium
4096	5-11b	US 26 / Salmon River Rd	US 26 / Salmon River Rd	Install an enhanced pedestrian crossing	High
<u>4097</u>	<u>5-11a</u>	<u>OR 212</u>	<u>OR 212/SE 222nd Drive intersection</u>	<u>Install traffic signal and separate southbound right- and left-turn lanes.</u>	<u>High</u>
<u>4098</u>	<u>5-11a</u>	<u>OR 212</u>	<u>OR 212/SE 242nd Drive intersection</u>	<u>Install separate southbound left-turn.</u>	<u>Low</u>
<u>4099</u>	<u>5-11a</u>	<u>OR 212</u>	<u>OR 212/SE Sunnyside Road-Anderson Road and OR 212/SE Foster Road</u>	<u>Convert OR 212/SE Sunnyside Road intersection to right-in/right-out/left in; add eastbound through and southbound left-turn lane at OR 212/SE Foster Road intersection, provide pedestrian and bicycle facilities.</u>	<u>High</u>
<u>4100</u>	<u>5-11a</u>	<u>OR 212</u>	<u>OR 212/SE Tong Road/SE 187th Avenue Intersection</u>	<u>Signalize intersection.</u>	<u>Medium</u>
<u>4101</u>	<u>5-11a</u>	<u>OR 212 Corridor Plan</u>	<u>SE 172nd Avenue to US 26</u>	<u>Planning effort to establish the long-term vision, conceptual alignment, cross-section, and access locations for OR 212 between SE 172nd Avenue and US 26.</u>	<u>Medium</u>
<u>4102</u>	<u>5-11a</u>	<u>OR 212 Alternative Mobility and Fee in Lieu Strategy</u>	<u>Rock Creek Junction to SE Foster Road</u>	<u>Planning effort to establish alternative mobility standard, acceptable traffic operations levels, improvements, and cost estimates for over-capacity intersections.</u>	<u>High</u>
<u>4103</u>	<u>5-11a</u>	<u>OR 224</u>	<u>OR 224/SE 232nd Drive Intersection</u>	<u>Study to assess need for and feasibility of improvements, such as a signal or roundabout (does not include improvement design or construction).</u>	<u>Low</u>

Projects in italics and underlined (4097-4103) added from Damascus Mobility Plan (May 2022)

