nwACT
Northwest Oregon Area Commission on Transportation

# MEETING AGENDA

**Date:** **Thursday, September 14, 2023**
**Time:** **1:00 pm—3:00 pm**

**Location:** Tillamook Bay Comm. College
4301 3rd Street, Tillamook OR
2nd Floor Conference Room

**Contacts:** **Lianne Thompson, Chair:**
**503.741.1715**
**Sarah Lu Heath, Staff: 971.328.2877**
SarahLu@nworegon.org

**Virtual:**
**https://us02web.zoom.us/j/83755031485**
**Call-in Number:** 1-253 215 8782
**Meeting ID:** 837 5503 1485

NWACT meetings are open to the public and accommodations will be provided to persons with disabilities. If a sign language interpreter is needed, please call Sarah Lu Heath at 971.328.2877 at least 48 hours prior to the meeting.

| | | Action | Presenter |
|---|---|---|---|
| **Item 1**<br>1:00 p | **Welcome and Introductions** | | Sarah Lu Heath |
| **Item 2**<br>1:15 p | **NWACT Minutes/Updates**<br>July 2023 Meeting Minutes (attached)<br>Public Comment (Limited to 5 minutes per person)<br>ODOT Region 2 Updates<br>AOC Transportation Committee<br>Tillamook County Transportation Update | ✓ | Marsha Kirk<br>Bill Jablonski/ Caroline Crisp<br>Erin Skaar<br>Chris Laity |
| **Item 3**<br>1:30 p | **Notice of 2nd Chair Position Opening; Nominations Committee Formation** | ✓ | Marsha Kirk |
| **Item 4**<br>1:35 p | **Highway 6 Study Findings** | | Caroline Crisp |
| **Items 5**<br>2:00 p | **NWACT Strategy Update** | | Caroline Crisp |
| **Item 7**<br>2:15 p | **Highway 26 Accidents** | | Steve Wright |
| **Item 8**<br>2:35 p | **ODOT Service Changes** | | Bill Jablonski/ Mark Buffington |
| **Item 9**<br>2:40 p | **NWACT Business/Member Updates**<br>2-3 minutes, transportation projects, grant requests, relevant closures, or construction projects, etc. | | Marsha Kirk<br>All |

✓ Indicates the NWACT should vote on this item.

**Attachments:**
July 2023 Meeting Minutes

Note: A complete meeting packet is available on the NWACT website at NWOregon.org/NWACT

**Northwest Area Commission on Transportation**
**Meeting Minutes July 13, 2023**

The meeting was called to order at 1:01 pm by Chair Thompson. NWACT Members in Attendance are denoted with an asterisk:

***Clatsop County***
*Commission (v) Lianne Thompson**
*Commission (a) Terry Hendryx*
*Large City (v) Elisabeth Adams**
*Large City (a) Steve Wright**
*Small City (v)*
*Small City (a)*
*Citizen-at-Large Kathy Kleczek**
*Citizen-at-Large*

***Columbia County***
*Commission (v) Casey Garrett**
*Commission (a) Mike Russell**
*Large City (v)*
*Large City (a) Dave Sukau**
*Small City (v) Bob Brajcich*
*Small City (a) Scott Jorgenson**
*Citizen-at-Large Rosemary Lohrke**
*Citizen-at-Large Ryan Pearson*

***Tillamook County***
*Commission (v) Erin Skaar**
*Commission (a) Bill Baertlein*
*Large City (v)*
*Large City (a)*
*Small City (v)*
*Small City (a) Liane Welch**
*Citizen-at-Large Nicole Stevens*
*Citizen-at-Large*
*Citizen-at-Large Patrick McHugh**

***Washington County***
*Commission (v) Jerry Willey**
*Commission (a) Stacy Shetler*
*Large City (v)*
*Large City (a) Jolynn Becker*
*Small City (v) Marsha Kirk**
*Small City (a)*
*Citizen-at-Large Don Odermott**
*Citizen-at-Large Mike Borresen*
*Citizen-at-Large*

***Transit Districts***
*Columbia Co (v) John Dreeszen*
*Columbia Co (a)*
*Clatsop County (v) Tracy MacDonald*
*Clatsop County (a)*
*Tillamook Co (v)*
*Tillamook Co (a) Brian Vitulli**

***Ports***
*Port of Astoria (v) Frank Spence**
*Port of Astoria (a) Will Isom*
*Port of Columbia Co (v)*
*Port of Columbia Co (a) Sean Clark**
*Port of Tillamook Bay (v) Michele Bradley**
*Port of Garibaldi (a) Mike Saindon*

Others in attendance:

Adam Argo, ODOT
Debbie Booth-Schmidt, SETD
Mark Buffington, ODOT
Caroline Crisp, ODOT
Jeff Harrington, City of Astoria
Sarah Lu Heath, NWACT Administrator
Juliet Hyams, ColPac EDD
Tony Hyde, Columbia County/Knife River
Bill Jablonski, ODOT
Betsy Johnson, Regional Solutions
Arla Miller, ODOT
Don Odermott, Washington County
Michael Rock, ODOT
Nate Stice, Regional Solutions
Megan McKibben, Washington County
Brian Worley, Assoc of Oregon Counties

**Item 1: Welcome and Introductions**
Members and guests introduced themselves.

**Item 2: NWACT Minutes/Updates:**
May 2023 minutes were reviewed; Kathy Kleczek corrected the phrase "noted that as an accessibility advocate" to "was on the committee for mobility accessibility for ODOT." Motion to approve was made by Marsha Kirk and seconded by Steve Wright; unanimous approval.

**Public Comment:**
N/A

**ODOT Region 2 Updates:**
Bill Jablonski and Mark Buffington got speeds in Knappa on Highway 30, from 50 mph to 45 mph after feedback from the community. Signs have been held up for two weeks.

There are two rail safety projects are underway in Columbia County.

Improvements in the City of Seaside include addressing pavement deficiencies on Neptune Drive and Ecola. They will identify areas of defects to ensure warranties are upheld. New decking is being placed in the City of Banks.

Oregon Highway 6 Updates: 1) the Wilson Loop Road at OR 6, right turn lane going north will push out the deceleration lane 2) A barrier project runs the span from City of Tillamook to Banks, replacing the guardrail sections on both sides of the highway 3) Paving is being completed west of the slide.

Work at Mendenhall and US 26, east of 47 junction will go through September.

Community Path projects in Astoria and the City of Rockaway Beach are in design.

**AOC Transportation Committee Update:**
Commissioner Erin Skaar gave an end-of-session wrap up: 1) HB2101, the state fund exchange program passed for $35M for a fund exchange each year. 2) A bill regarding utilities in the right of way did not pass. Conversations with utilities will continue.

**Columbia County Transportation Update**

They worked with ODOT on Hwy 30 outside of Clatskanie. They appreciate the partnership with for two Safe Routes to School grants: 1. St. Helens McBride Elementary School 2. City of Scappoose demonstration project.

They received an All Roads transportation safety grant for corridor safety improvements to east/west routes; are developing a proposal for county crews to do the work. Managing vegetation and identifying hazard trees.

They applied for a Safe Streets for All planning grant for a comprehensive Safety Action Plan. Last year, all agencies who applied were funded; hoping that will repeat. Funds are from the Bipartisan Infrastructure Law.

A US Fish & Wildlife Fish Passage construction grant was not successful. They received an ODFW Fish Screening and Passage grant for 100 percent design for three failing culverts.

On Highway 30 by Scappoose at Bennett, it's hard to see at night.

For preservation/maintenance on highway 30, ODOT will use funding to maintain a C level of service on an inventory list. They will meet later with each county to brainstorm about this approach.

**Item 3: Butte Creek Culvert Replacement**

ODOT Senior Transportation Planner Caroline Crisp reported that ODOT is applying for a federal Protect grant to improve the emergency route for humans and fish. She requested support from the ACT to approve the grant.

Motion to approve was made by Liane Welch and seconded by Scott Jorgensen. The motion passed unanimously.

**Item 5, Report: ACT Chairs Meeting**

NWACT Chair Lianne Thompson attended the meeting. ODOT is underfunded; she will work with other chairs and wants a traffic safety commission for Clatsop County. They want to lobby the legislative branch to support committees through ODOT, the AOC and ATC, thereby leveraging the existing structure.

Commissioner Thompson announced her goal of having a traffic safety commission in each county.

The governor has put the tolling project on hold.

**Item 4: Columbia County Reimbursement re: Lewis & Clark Bridge Closure, Starting July 16** (agenda was modified; minutes reflect the order in which items were addressed)

Senator Johnson and Mark Buffington worked with WASHDOT and recognized problems of marooning ambulances in Washington. Also, Columbia River Fire & Rescue has access to Portland, via St. Johns. Questioned claim that they are ill equipped for certain emergencies.

Mark Buffington worked with WASHDOT; no traffic will still be allowed for ten hours , this represents a major decrease in number of closure hours. The Westport ferry will prioritize EMS.

**Item 6. Sunset Empire Transit District**

Debbie Booth-Schmidt reported that paratransit is operational and buses are still running on US 101 weekdays, making three round trips from Astoria to Cannon Beach. The Pacific Connector will run five trips on the weekends, from Astoria to Cannon Beach, connecting with Tillamook lines.

They are waiting on a line of credit for $500K; they have only $225K to carry them through July. A discussion considered causes of the shortfall and possible solutions. The District is awaiting a forensic audit to disclose more information.

**Item 7: Elect NWACT Liaison to the Aviation Review Committee**

Liane Welch moved to nominate Port of Tillamook Bay Executive Director Michele Bradley as the NWACT liaison to the Aviation Review Committee. The motion was seconded by Marsha Kirk and passed unanimously. Bradley requested the initial contact information for the role.

**Item 8: NWACT Strategy**

Caroline Crisp explained that the goal of the strategy exercise was to determine funding priority areas and illustrative project examples. The group identified the following, in addition to those in the handout:

Non-Highway Modernization:

- Safe pedestrian crossing on US 101 in Bay City.
- Traffic calming on Veteran's Way at Hwy 30 in Rainier.
- Awareness of the need to slow in residential areas; more bike and pedestrian opportunities.
- High School Way and Gable need modernization, a bus pullout and ADA access.
- Also address poor visibility off the docks onto US 101 and making a left/northbound turn.
- In Banks, Hwy 6 at Aerts Road will be developed for 800 houses; the developer wants a roundabout. The city wants an alternative, like in Tillamook, with a right turn in, right turn out, before 6 and 26 come together. It's a crash area.
- Chief Linz often has trouble getting fire & rescue vehicles onto US 26.
- Parking near Cannon Beach on the highway, due to little parking in state parks.

Operations/Preservation:

- In Astoria, a flashing light at Beacon and US 101.
- Astoria Riverwalk sections near rail and the waterline are eroding.
- Median on Bennett near Scappoose needs lighting.
- Striping can be hard to see at night when it's wet.
- Discussion of the value of retro reflective paint on striping and guardrails, which looks like it's illuminated. Example is on 101 S of Cannon Beach.
- Regarding the Manning/Buxton congestion, CBOSS deployed cameras to study behavior. It's a high crash corridor, where we should invest strategically for safety and to reduce emissions. Other problem areas are Peale Road by Jim Dandy's and 47 south to the junction of 47 north.
- Columbia County/port wants more trains and fewer trucks.
- In Seaside, Avenue U needs its signal redone and the bridge on 101 at Avenue S.

Safety:

- The Elk Project.
- Blue lights are blinding at night, so must rely on the fog line.
- Photo radar for enforcement.
- Re: Hwy 30, awareness of consequences of speeding.
- Enforcement and education are tools too.
- Public campaign about safe driving behavior. Driver education classes.
- In Knappa, with reduced speeds, many drivers go as fast as possible.

Resiliency:

- Necarney Bridge and Arch Cape Tunnel.
- Replace Ecola Creek Bridge in Cannon Beach; part of the evacuation road.

- Upland coastal preparation:  Resources to manage and care for evacuees.  Need Ecola Park Road as an alternative for pedestrians and a different route for vehicles.  Evacuations and more frequent inclement weather require versatile stations.
- Conex boxes of emergency supplies at the Port of Tillamook Bay; need distribution plan.

Rail/Air/Marine

- Damage to Pier 2 in Astoria, vital to fishing industry.
- East end Mooring Basin.
- More port support for airports.

**Item 9: Member Updates:**

None.

Meeting was adjourned at 3:03p.

# OR 6 WILSON RIVER HIGHWAY CORRIDOR STUDY (HB 4053)


REVISED DRAFT

July 2023

# Acknowledgements

We would like to thank the representatives of the following groups who served on advisory committees for this project:

Banks Fire District

Columbia-Pacific Economic Development District (Col-Pac)

City of Banks

City of Bay City

City of Forest Grove

City of Tillamook

Forest Grove Fire & Rescue

Lewis & Clark Timberlands Office

NW Oregon Transit Alliance (NWOTA)

Northwest Oregon Area Commission on Transportation

Oregon Coast Visitors Association

Oregon Department of Forestry

Oregon Department of Transportation

Oregon Parks and Recreation Department

Oregon State Legislature

Oregon State Police

Port of Tillamook Bay

Safety On 6 Community Group

Tillamook Chamber of Commerce

Tillamook Coast Visitors Association

Tillamook County

Tillamook County Sheriff

Tillamook County Creamery Association

Tillamook Fire District

Tillamook Forest Center

Tillamook Police Department

Verizon Wireless

Washington County

Washington County Sheriff

Zwald Transport, Inc.

All photos from Oregon Department of Transportation unless otherwise noted.

# OR 6 Wilson River Highway Corridor Study (HB 4053)

Prepared for

Oregon Department of Transportation
Ken Shonkwiler, ODOT Region 2

Prepared by

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Ashleigh Ludwig, AICP, PE
Molly McCormick, PE
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Lacy Brown Ph.D., PE, RSP1
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(Mason, Bruce & Girard, Inc.)

Project# 270030.007

July 19, 2023

# Contents


WEST
6

# Executive Summary

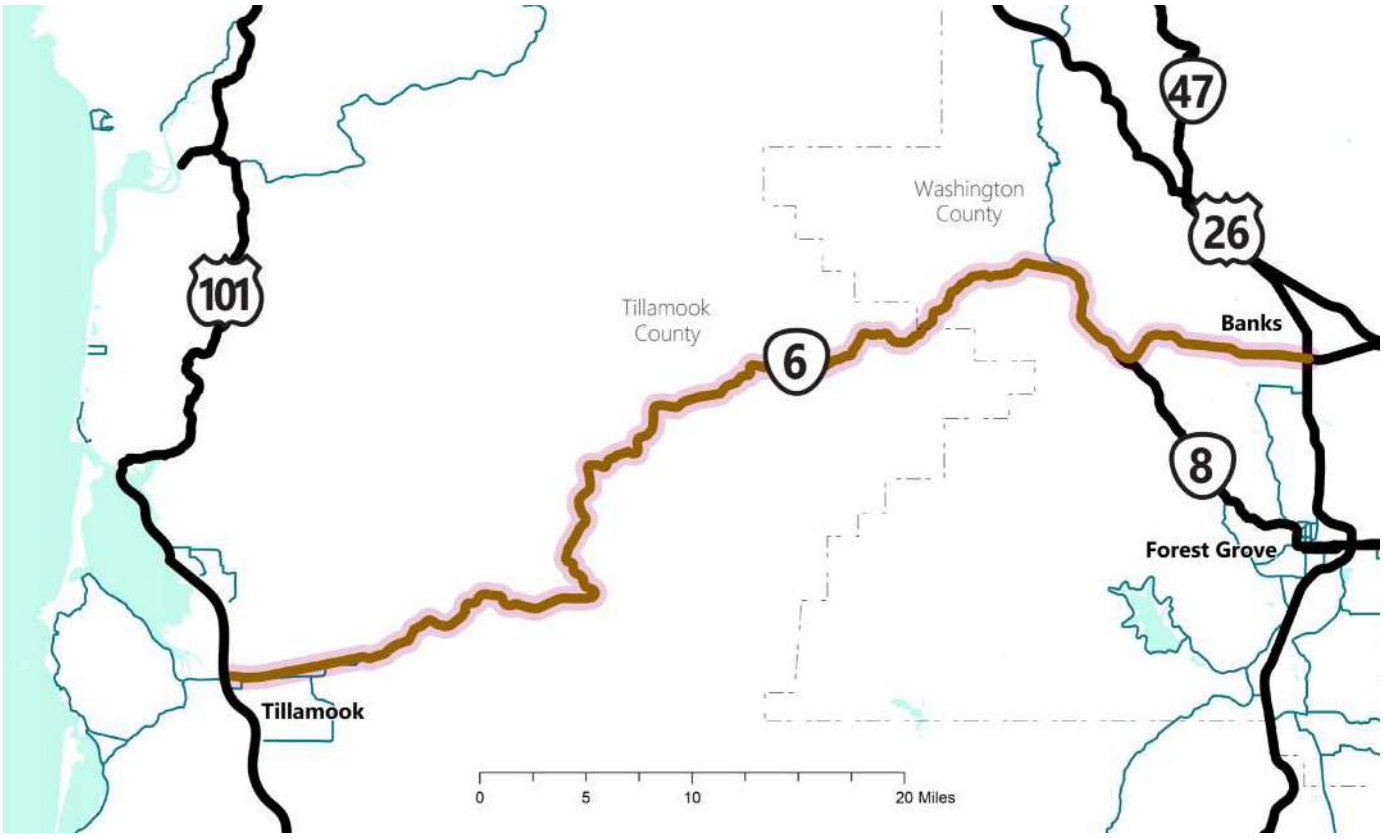
**OR 6, also known as the Wilson River Highway, is a 48-mile route that connects Banks and Tillamook. It's a popular route for tourists and an important commercial link between the Portland metro area and the Oregon Coast.**

In the past 10 to 15 years changes in the area's economy have brought more freight, tourist and transit traffic to OR 6. As traffic has increased, crashes and fatalities have become more common.

## THE NEED FOR A SAFER OR 6

Area residents and others who drive on OR 6 want this route to be and feel safer. They petitioned the Oregon State Legislature, which passed House Bill 4053 requiring Oregon Department of Transportation to prepare this safety study.

The study team gathered public input, reviewed data and developed a list of solutions to OR 6's pressing safety issues. These solutions were organized into project packages. The packages are not prioritized, and some solutions are included in multiple packages. This approach gives decision-makers the flexibility to match packages to available funding requirements.




Map by Kittelson & Associates

# SOLVING SAFETY PROBLEMS

The types of solutions grouped within each package have historically been completed at the same time.s

| Package | Description | Estimated cost[1] |
|---|---|---|
| **PACKAGE A: SYSTEMIC SIGNAGE** | Install signage throughout the corridor to encourage appropriate speeds, inform roadway users of potential conflicts and delineate curves and destinations. | $1.8 million |
| **PACKAGE B: CORRIDOR PAVEMENT MARKINGS** | Update all roadway striping. Restripe areas near communities and destinations to reinforce slower speeds. Minimize passing opportunities in these areas and provide a buffered shoulder when possible. | $7.3 million |
| **PACKAGE C: RUMBLE STRIPS[2]** | Install rumble strips along the outside of the travel lane to inform drivers if they leave the lane and along the centerline to alert them if they enter the oncoming travel lane. | $1.2 million |
| **PACKAGE D: INTELLIGENT TRANSPORTATION SYSTEM AND COMMUNICATIONS** | Expand ITS and communications devices throughout the corridor, such as a weather warning system; traffic cameras connected to applications such as TripCheck; variable message signs to warn drivers of incidents or conditions ahead; a variable speed guidance system that adjusts speed limits in hazardous weather. | $2.0 million |
| **PACKAGE E: PASSING OPPORTUNITIES CAPITAL PROJECTS** | This package includes several capital projects to address passing opportunities.<br>Project E1 focuses on eliminating unsafe passing opportunities and constructing new passing opportunities where it is most economical.<br>Project E2 focuses on constructing passing/ climbing lanes on both sides of the highway and over the summit. | $35.2 million<br>$102.8 million |
| **PACKAGE F: PRIORITIZED UNSTABLE SLOPES REMEDIATION** | Address the 18 priority unstable slopes along OR 6 based on ODOT's Geotechnical Report. Fourteen of the 18 priority locations are located between milepost 31 and milepost 35. | $38 million |

[1] Cost estimates are in 2023 dollars and based on current assumptions. They are meant to help decision-makers weigh the relative expense of the different packages. They are not detailed enough to support funding requests.

[2] A rumble strip project has been funded through design and is intended to be funded through construction.

| Package | Description | Estimated cost[1] |
|---|---|---|
| **PACKAGE G: OTHER LARGE CAPITAL PROJECTS** | Project G1: Pavement Rehabilitation Project | |
| | Poor pavement locations | $33.8 million |
| | Fair pavement locations | $7.6 million |
| | Project G2: Wilson River Loop Intersection Project[2] | Project G2: $3.9 million |
| | Project G3: Gales Creek Intersection Project | Project G3: $0.4 million |
| | Project G4: Summit Project | Project G4: $13.3 million |
| **PACKAGE H: STRATEGIES TO ADDRESS BEHAVIORAL COMPONENTS** | Conduct a safe driving media campaign and evaluate funding opportunities for increased enforcement. Consider installing speed feedback signs along more urban areas of the corridor that report driver speed compared to posted speed. | TBD |
| **PACKAGE I: POLICIES OR LONG-TERM STUDIES** | Complete policies or long-term studies to address safety issues on OR 6 related to finding and accessing recreational destinations and communities, the lack of passing opportunities and navigating roadway conditions. | TBD |
| **PACKAGE J: IDENTIFICATION OF FUNDING NEEDS** | Evaluate funding opportunities and look for occasions to partner with other agencies to increase maintenance and enforcement. | TBD |

[1] Cost estimates are in 2023 dollars and based on current assumptions. They are meant to help decision-makers weigh the relative expense of the different packages. They are not detailed enough to support funding requests.

[2] A modified right turn lane project has been funded through design and is intended to be funded through construction.

## THE FUNDING ROADBLOCK

None of the solutions to OR 6's identified safety issues are funded, and finding money for them will be challenging. Many can be classified as maintenance. Unfortunately, ODOT's maintenance budget is funded by gas taxes, and the value of this revenue source has declined with rising inflation and the growing popularity of fuel-efficient cars and trucks.

OR 6 must compete with roads across the state for limited funds for capital projects. The community's best hope for action is the Oregon State Legislature, which can pass legislation to address ODOT's looming maintenance shortfall or to directly fund improvements to OR 6. Any group providing funding for a project on OR 6 should discuss with ODOT before doing so to understand scope/budget.

## WHY FUND PROJECTS ON OR 6?

There is no convenient parallel route to OR 6. If a landslide closes the highway, travelers could be forced to go more than 30 miles out of their way. To make matters worse, cellphone service is limited. Even reporting an incident may require someone to drive out of the area.

Failure to take care of both basic maintenance work and underlying issues, like the unstable, landslide-prone slopes near the summit, will worsen current safety problems, and could introduce new ones.

# About the Project

**The Wilson River Highway, OR 6, is a 48-mile rural road that connects Banks and Tillamook. It's a popular route for tourists and an important commercial connection between the Oregon Coast and the Portland metro area.**

As freight and recreational use of OR 6 has increased, crashes and fatalities have become more common. Area residents and others who drive on OR 6 want this route to be and feel safer.

In response, the Oregon State Legislature passed House Bill 4053 requiring Oregon Department of Transportation to do a safety study. ODOT will present its findings to the State Legislature in fall 2023.

## THE SAFETY STUDY

This study was a collaborative effort between ODOT staff, experienced transportation planners and engineers, geotechnical and environmental experts and people who live and work in the communities connected by OR 6. To understand needs along the corridor, the study team:

- Gathered community feedback on existing problems.
- Looked at issues related to safety, freight, operations and road conditions.
- Created a list of potential solutions and projects, including estimated construction costs.

Though this report recommends future legislative funding, it's important to note that the solutions and projects recommended here are not yet funded through construction.

# PUBLIC ENGAGEMENT

The study team reached out to members of the public to understand the challenges faced by OR 6 users. They connected with the community through a project website, tabling events, in-person and online open houses and advisory committee meetings.

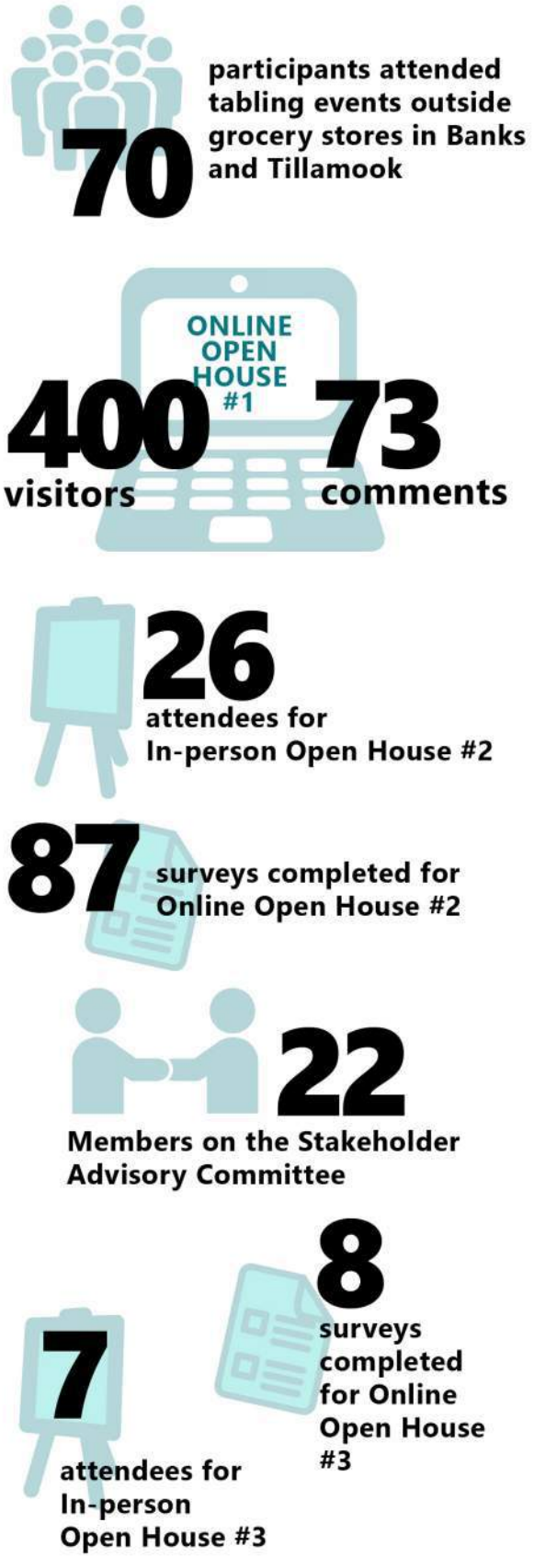
Public feedback helped the study team develop potential solutions and the example implementation packages discussed later in this report. Appendix A includes summaries of the team's public engagement activities.

## Public Engagement by the Numbers

The following key issues arose in conversations with the public and the study team's data review.

### Corridor-wide issues

- Roadway users have a hard time finding and accessing recreational destinations and communities.
- Some motorists drive too fast around curves.
- Some existing passing opportunities are too short, and motorists want more passing opportunities.
- There is increased risk of crashes when roadway conditions have rain, snow, or ice.
- Pavement condition is poor and unstable slopes increase the risk of landslides.
- Cellphone service is limited, making emergency response challenging.
- Some drivers take too many risks.



## Location-specific issues

- **Wilson River Loop intersection**
  - There have been more crashes here than usual for this type of intersection. ODOT identified the intersection as a high safety priority in 2019 and 2020. Vehicles in the westbound right-turn lane also restrict sight distance for southbound vehicles waiting to turn.
- **Gales Creek intersection**
  - There have been more crashes here than usual for this type of intersection. The intersection also meets volume criteria for a westbound left-turn lane on OR 6.
- **The corridor summit (approximately milepost 31 to milepost 35)**
  - **This section of OR 6 had the highest concentration of severe crashes in the corridor,** particularly between milepost 33 and milepost 34. It has many curves, poor pavement conditions and unstable slopes. There are several short passing lanes at sections with curves. This area has more reported snow- and ice-related crashes.

Photo: Kittelson & Associates


Photo: Kittelson & Associates

# Funding Context and Overview

Transportation departments across the United States struggle to fund operating costs, and ODOT is no exception. As inflation erodes the value of the gas tax revenues they depend on, almost every transportation department has begun to experience financial difficulties.

The state and federal government passed several funding packages to support transportation system projects and programs, such as HB 2017 and the Infrastructure Investment and Jobs Act. Unfortunately, these packages provide little support for routine expenses, such as road maintenance, revenue collection, program management or administrative and overhead costs.

## FUNDING FOR STUDY RECOMMENDATIONS

There are a number of potential sources the community could pursue to fund the safety improvements recommended in this report.

## State funding sources

- In Oregon, the State Highway Fund covers both projects and operating costs, including maintenance and operations, revenue collection and shared services.
- The Statewide Transportation Improvement Program or STIP, is ODOT's capital improvement plan for state- and federally-funded projects. Most STIP funding is dedicated by state or federal law to projects and cannot be used for agency operational costs.
- Enhance Highway programs are a smaller slice of the STIP budget and fund projects that enhance or expand and upgrade the state highway system. These projects can include a wide range of investments like new lanes and interchange improvements. Not all projects in this report will qualify for Enhance Highway program funding.

## Federal funding sources

- Rural Opportunities to Use Transportation for Economic Success (ROUTES) Initiative: Addresses disparities in rural transportation infrastructure by developing user-friendly tools and information, aggregating USDOT resources into a single web resource and providing technical assistance. This initiative can help rural communities in Oregon access information and resources to improve their transportation infrastructure.
- The PROTECT Discretionary Grant Program: Funds projects that address the climate crisis by improving the transportation system's resilience. Candidate projects should be grounded in the best available scientific understanding of climate change risks, impacts and vulnerabilities. Innovative and collaborative approaches to risk reduction are encouraged, including the use of natural infrastructure.
- Federal Lands Access Program: Improves transportation facilities that provide access to, are adjacent to or are located within federal lands. The Access Program supplements state and local resources for public roads, transit systems and other transportation facilities, with an emphasis on high-use recreation sites and economic generators.
- Building Resilient Infrastructure and Communities (BRIC): Supports hazard mitigation projects, reducing the risks that states, local communities, tribes and territories face from disasters and natural hazards. The BRIC program supports capability and capacity-building, innovation, and partnerships. It enables large projects and those that maintain flexibility and provide consistency.
- All Roads Transportation Safety Program: Addresses safety needs on all public roads in the state, promoting best practices for infrastructure safety and reducing fatal and serious-injury crashes. Collaboration with local road jurisdictions is key to the program's success. This program is funded through the federal Highway Safety Improvement Program.

# MAINTENANCE FUNDING

While ODOT has made several improvements to OR 6 in the past decade, funding availability has not kept up with the highway's deterioration. Meanwhile, the area's economy has drastically changed. Agriculture and manufacturing in Tillamook County have increased with the growth of businesses like Tillamook Creamery, which in turn has increased freight traffic.

The tourism industry has grown, bringing more people to tourist destinations accessed by OR 6. The corridor has also developed into a regional transit route over the last several years.

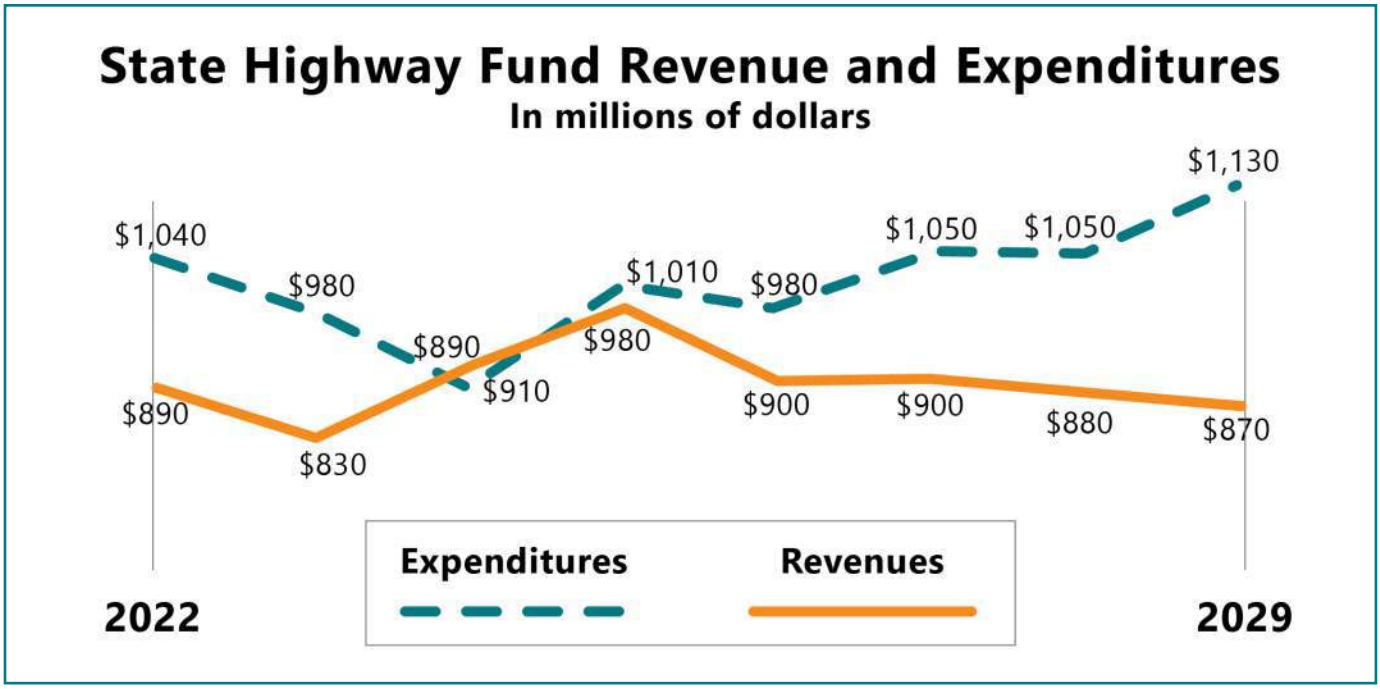
ODOT's current operations and maintenance budget is facing a wide funding gap in the near future. Gas tax funding, which supports these services, is impacted by both inflation and increased vehicle fuel efficiency.


Most new revenue for ODOT in the past 20 years has gone into construction projects and maintenance costs to preserve a rapidly deteriorating infrastructure system. This increases the need for ongoing maintenance funds, as shown on page 15. ODOT's operations and maintenance revenues remain flat while the costs continue to rise.

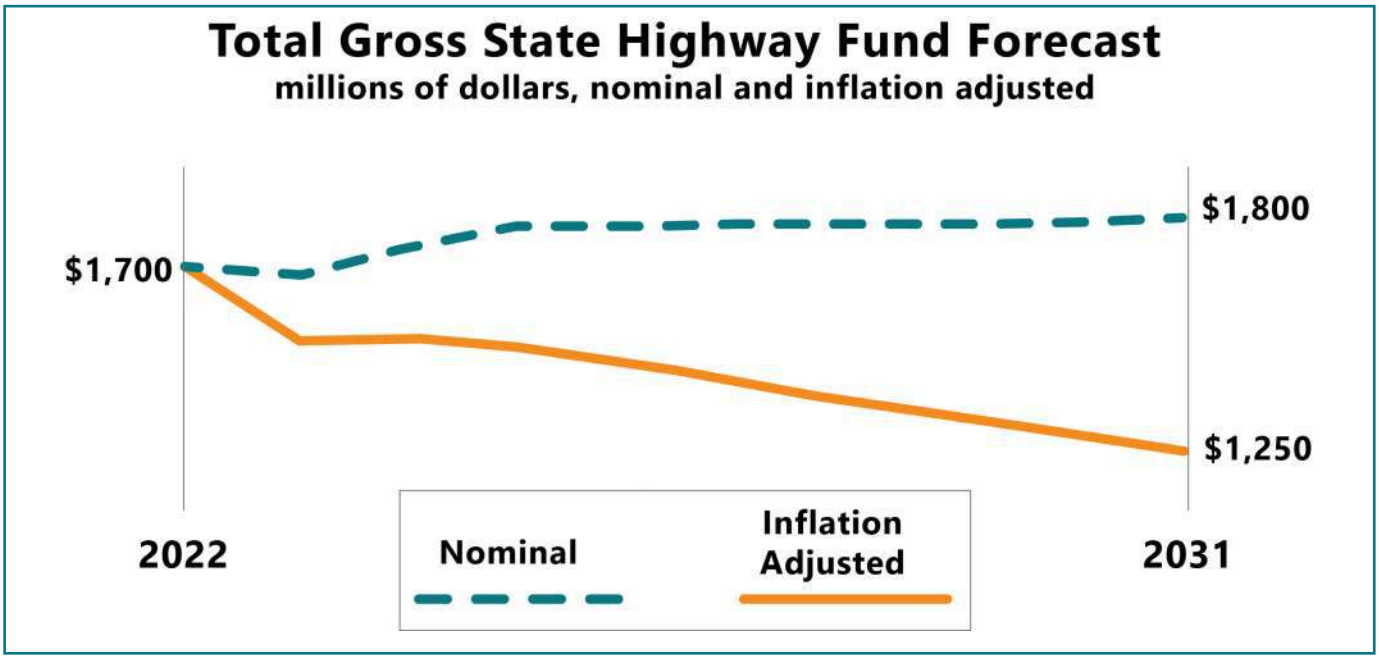
There are several options the State Legislature may consider to address ODOT's looming operations and maintenance shortfall:

- Raise additional revenue for operations and maintenance.
- Index taxes and fees, allowing them to increase to keep pace with inflation.
- Set a road usage charge for new efficient vehicles.
- Increase the share of HB 2017 funds going to maintenance.
- Increase DMV fees to cover cost of service.

For locations that need ongoing maintenance, it may be worth considering a larger, one-time project to improve the conditions of the existing infrastructure elements to reduce annual maintenance costs. It's important to remember there is a cost to doing nothing or maintaining status quo. Unstable slopes, for example, are an issue that creates more and more damage over time. Pavement conditions worsen, which impacts roadway markings and decreases driver visibility. Though these locations are restriped annually, the unstable slopes are not addressed, so pavement and striping issues keep occurring. An annual maintenance cost may not make sense in the long term if it becomes clear it will have to be repeated indefinitely.




*Oregon Department of Transportation Office of Revenue, Finance and Compliance*




*Oregon Department of Transportation Office of Revenue, Finance and Compliance*


Banks 7
Portland 27
EAST
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WERNER

# Recommendations and Considerations

As part of the study, the team developed potential project packages to address the safety issues on OR 6. The packages combine concepts from Technical Memorandum #5 Potential Corridor Solutions, available in Appendix B. This memorandum quantifies safety benefits for specific solutions when enough published research is available to do so. For others, the team included qualitative benefits.

Each package is described in the following pages, including rough construction costs. These cost estimates are meant to help decision-makers weigh the relative expense of the different packages. They are not detailed enough to support funding requests. The assumptions the study team made when estimating rough construction costs are shown in Appendix C.

The types of solutions grouped within each package have historically been completed at the same time. These groupings can be revised to meet funding requirements. Some solutions are included in more than one package. If one package that includes a given solution is completed, the scope and cost of the other packages that include it may be reduced.

It's important to note that all estimates are in 2023 dollars and do not account for inflation or future market changes. Construction costs continue to escalate every year and project budgets should be continuously reviewed to match market conditions. Many of the roadway condition issues seen on OR 6 stem from the unstable slopes, especially in the summit area (milepost 31 to milepost 35). Unstable slopes will need to be addressed before spending time and money to implement other projects that do not address the root cause of many of the issues along the corridor.

# PACKAGE A: SYSTEMIC SIGNAGE

## Description

**Install signage throughout the corridor to encourage appropriate speeds, inform roadway users of potential conflicts and delineate curves and destinations. Types of signs that are recommended are part of a safety-focused systemic sign project.**

## Types of signs include:

- Updating reflective signs where they are missing or old.
- Installing/updating appropriate warning signage, advanced street name signage and intersection signage as needed. Warning signs may include those for intersections, pedestrians, rough pavement, wildlife and narrow bridge.
- Adding destination signage for recreational areas or trailheads.
- Adding delineators to define driveways, intersections and/or curves.
- Verifying consistent curve signage and updating/installing signs as needed.
- Adding signs for chain-up areas and updating snow zone signs.
- Adding community signage at both ends of key communities as able (Glenwood area, Lee's Camp area and Jordan Creek area).

## Safety issues addressed

- **Finding and accessing recreational destinations and communities.**
- **Curves**
- **Safer passing opportunities**
- Roadway conditions (wet, snow, ice)
- Pavement/slope stability conditions
- **Communications**
- Risky driving behaviors

## General benefits

- Increased visibility and driver awareness of roadway conditions and context.
- Increased driver awareness/lower potential for vehicle interactions.
- Quantitative benefits detailed in Technical Memorandum #5 (Appendix B).

## Implementation considerations

Signage can be installed at any time. Other projects do not have to occur first. If widening or other work outside the paved roadway is planned soon in a signage location, combining the two efforts or waiting to install the sign until the other work is done will limit redundancy.

## Maintenance considerations

Adding signs and delineators to OR 6 will increase maintenance needs. Maintenance for signs that require power and communications to operate may be costly.

## Other considerations

This package has limited right of way, geotechnical and environmental impacts.

The Older Drivers and Pedestrians Special Rule may apply for some areas where this package could be installed.

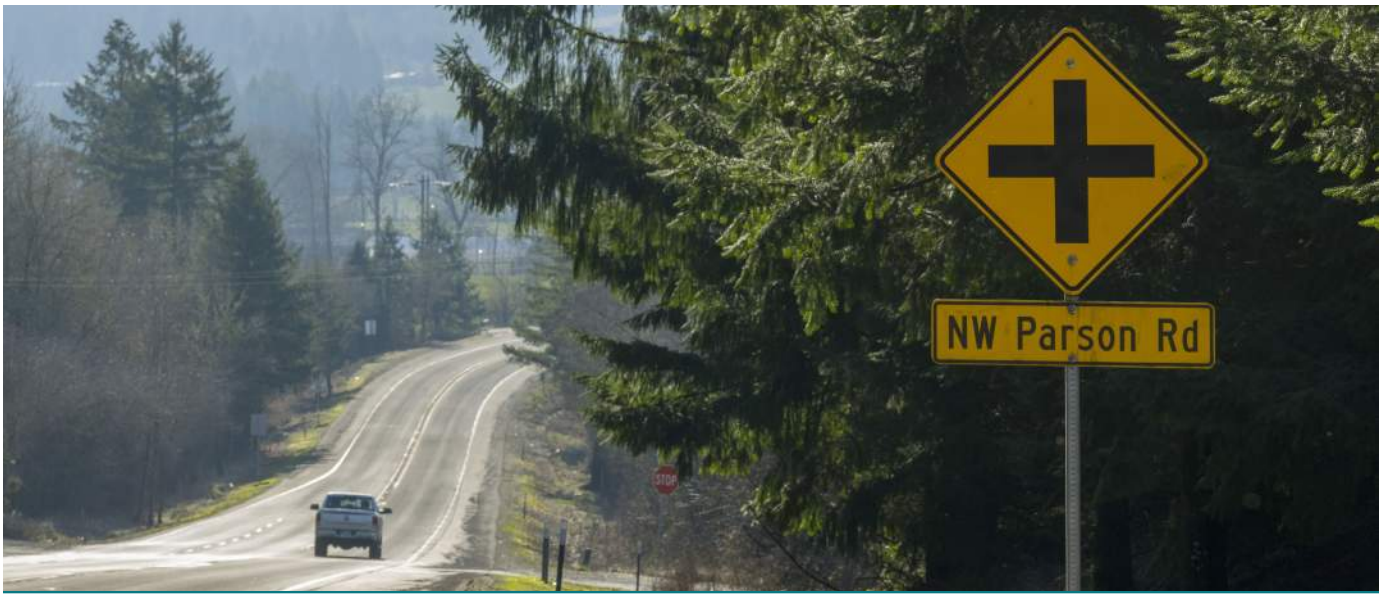
## Total Package Construction Cost

*$1.8 million with current assumptions:*

- *Delineators at 15% of intersections and driveways*
- *Delineators along all curves*
- *Updating missing or old signs*
- *120 miscellaneous signs*

This is a baseline cost that could increase if other elements or more locations are added. The study team made general assumptions about which locations require the improvements in this package, but more work is needed to refine the project scope before implementation.

A full list of assumptions used to estimate the order-of-magnitude total construction cost for this package can be found in Appendix C.



# PACKAGE B: CORRIDOR PAVEMENT MARKINGS

## Description

**Update and maintain highly retroreflective roadway striping throughout the corridor to ensure visibility, including recessed pavement markers. Update pavement markings to meet all current standards including stripe types, pavement marking materials and stripe widths.**

In areas with existing roadway width to restripe, convert wide shoulders or non-standard passing lanes to chain-up areas for winter conditions.

Restripe areas near communities and areas with more destinations to reinforce slower speeds. Minimize passing opportunities in these areas and provide a buffered shoulder when possible.

## Safety issues addressed

- Finding and accessing recreational destinations and communities.
- Curves
- Safer passing opportunities
- Roadway conditions (wet, snow, ice)
- Pavement/slope stability conditions
- Communications
- Risky driving behaviors

## General benefits

- Increased visibility of lanes and curves.
- Support toward slower speeds through communities.
- Using existing space to provide additional chain-up areas.
- Quantitative benefits detailed in Technical Memorandum #5 (Appendix B).

Photo: 3M

## Implementation considerations

Large systemic safety projects have historically included both signing and new or enhanced pavement markings. If funding allows, all or some of the work included in Package A could be included with Package B. Much of this package could be considered maintenance efforts, but there is need above and beyond normal maintenance efforts for striping along the corridor. If pavement rehabilitation work is planned, this work should be coordinated with those efforts.

## Maintenance considerations

Adding new striping to OR 6 will increase maintenance costs.

## Other considerations

There are no anticipated right of way, geotechnical or environmental impacts for this package.

The Older Drivers and Pedestrians Special Rule may apply for some areas where this package could be installed.

## Total Package Construction Cost

*$7.3 million assuming new or enhanced pavement markings for the entire length of the corridor.*

This baseline cost could increase if other elements or more locations are added. The study team made general assumptions about which locations require the improvements in this package, but more work is needed to refine the project scope before implementation.

Assumptions used to estimate the order-of-magnitude total construction cost for this package can be found in Appendix C.

# PACKAGE C: RUMBLE STRIPS

## Description

**Install rumble strips in the following locations:**

- Along the outside of the travel lane to inform drivers if they leave the lane (shoulder rumble strips).
- Along the centerline of the roadway to inform drivers if they enter the oncoming travel lane (centerline rumble strips). Install along no-pass zones as well as curves.

Pavement must be rehabilitated before rumble strips can be installed. Modified rumble strips may be used to reduce noise impacts in residential areas.

## Safety issues addressed

- Finding and accessing recreational destinations and communities.
- **Curves**
- Safer passing opportunities
- Roadway conditions (wet, snow, ice)
- **Pavement/slope stability conditions**
- Communications
- **Risky driving behaviors**

## General benefits

- Warning drivers when they leave their lane or the roadway and could be endangering themselves and others.
- Quantitative benefits detailed in Technical Memorandum #5 (Appendix B).

Photo: FHWA

## Implementation considerations

- Pavement must be rehabilitated before rumble strip installation. The cost for pavement rehabilitation varies. Pavement rehabilitation costs are not included in this package's cost estimate (see Package G, Project G1 for more information).
- May include items from Package B such as recessed pavement markers.
- A rumble strip project has been funded through design in ODOT's STIP. Construction funding is still in the process of being identified.

## Maintenance considerations

There are no major maintenance considerations for this package. It is worth noting that pavement maintenance is already difficult to fund for this corridor.

## Other considerations

There are no anticipated  right of way, geotechnical or environmental impacts for this package. Shoulder rumble strip locations need to be reviewed for adequate shoulder width and proximity to residences. Centerline rumble strip locations need to be reviewed for proximity to residences.

## Total Package Construction Cost

*$1.2 million with current assumptions that shoulder rumble strips and centerline rumble strips are installed at all locations in corridor that meet installation guidelines.*

*Pavement rehabilitation is excluded from estimate.*

This baseline cost could increase if other elements such as pavement rehabilitation or more locations are added. Pavement in poor and fair condition would need to be remediated, including unstable slopes listed in Package F, for rumble strips to be implemented corridor-wide.

Assumptions used to estimate the order-of-magnitude total construction cost for this package can be found in Appendix C.

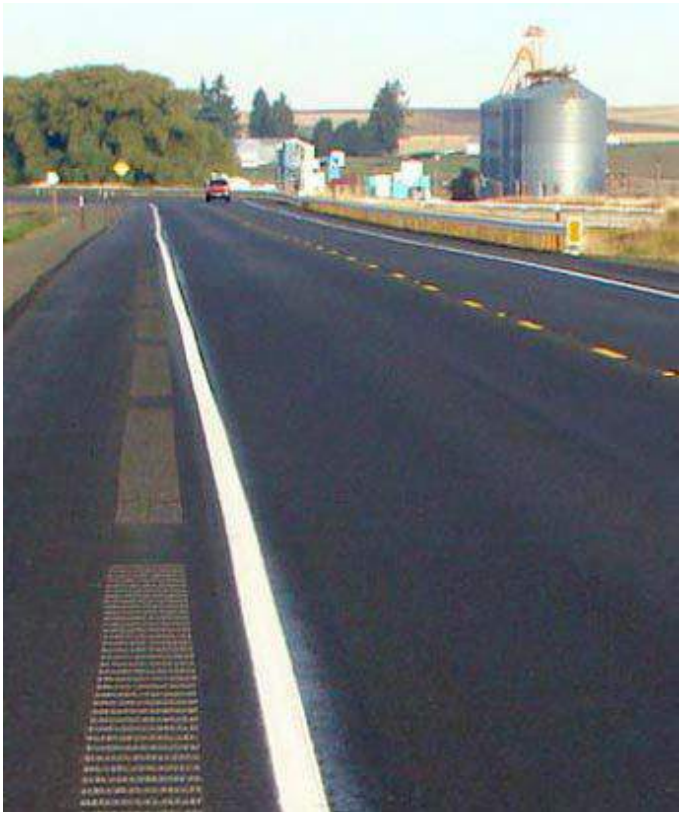


Photo: FHWA

# PACKAGE D: INTELLIGENT TRANSPORTATION SYSTEM AND COMMUNICATIONS

## Description

**Expand ITS and communications devices throughout the corridor, contingent on fiber installation and utility companies. Types of devices that are recommended as part of a safety-focused systemic project include:**

- A weather warning system that allows drivers to look up current conditions and warns them when an alternative route is recommended or conditions are difficult.
- Traffic cameras to reflect road conditions through applications such as TripCheck.
- Variable message signs to warn drivers of incidents or conditions ahead, provide travel times or emphasize the need to drive safely.
- A variable speed guidance system that adjusts speed limits based on winter weather.

## Safety issues addressed

- Finding and accessing recreational destinations and communities.
- Curves
- Safer passing opportunities
- **Roadway conditions (wet, snow, ice)**
- Pavement/slope stability conditions
- **Communications**
- **Risky driving behaviors**

## General benefits

- Increased driver awareness of roadway conditions.
- Warning drivers of incidents and conditions in time to reroute if necessary.


Photo: Kittelson & Associates

## Implementation considerations

Fiber communication must be installed for this package to be completed — a public-private partnership effort that relies on parties outside of ODOT.

## Maintenance considerations

Adding signs and delineators to the corridor will increase maintenance costs. Maintenance for signs that require power and communications to operate may be costly.

## Other considerations

There are potential right of way, geotechnical or environmental impacts for this package, especially for larger signs or signs that require power and communications to operate.

The Older Drivers and Pedestrians Special Rule may apply for some areas where this package could be installed.

## Total Package Construction Cost

*$2.0 million with current assumptions:*

- *2 weather warning signs*
- *2 variable message signs*

This baseline cost could increase if other elements or more locations are added and ongoing coordination with ODOT is recommended to determine future prices. This estimate does not include the fiber communications project that is a prerequisite for completing this package.

Assumptions used to estimate the order-of-magnitude total construction cost for this package can be found in Appendix C.

# Package E: Passing Opportunities Capital Projects

**This package includes several capital project options to address passing opportunities along OR 6. The study team investigated multiple passing opportunity solutions for Technical Memorandum #5 Potential Corridor Solutions. The team reviewed and presented these solutions as two potential projects with different approaches to creating additional passing opportunities.**

Project E1 focuses on eliminating unsafe passing opportunities and constructing new passing opportunities where it is most economical. Project E2 focuses on constructing passing/climbing lanes on both sides of the highway and over the summit.

No matter which projects move forward, together or separately, constructing new passing lanes that meet ODOT standards along OR 6 between Banks and Tillamook will require significant investment. Though there are opportunities to improve existing passing/climbing lanes and introduce new passing opportunities, it may not be possible to build them all.

Each option has unique associated benefits and challenges. ODOT will need to consider which option is likely to yield the largest return on investment.

# PROJECT E1: LONGER PASSING OPPORTUNITIES

## Description

**Project E1 focuses on evaluating short passing opportunities and constructing longer ones where most economical. As shown on page 28, it includes the following elements:**

- Investigate the short westbound passing/climbing lanes to determine how to reallocate the existing pavement.
- From milepost 16.0 to 16.4 **a new 0.4-mile passing lane will replace the slow-moving vehicle turnout in the eastbound direction and the westbound passing lane will be maintained.**
- From milepost 37.5 to milepost 38.5, **new 1-mile passing lanes will be constructed in both the eastbound and westbound directions.**

## Safety issues addressed


## General benefits

- Reduces the risk associated with short passing/climbing lanes by reallocating the pavement associated with the westbound passing/climbing lanes. The three short westbound passing/climbing lanes are within a segment where trucks are likely to travel slower than typical.
- Focuses on investing in passing opportunities away from the summit where it is more economical to widen the existing roadway.

## Implementation considerations

This project excludes repairing the unstable slopes near the summit because it's possible to construct new passing lanes where is it more economical to do so.

## Maintenance considerations

Adding new roadway width and signs to the corridor will increase maintenance costs.

## Other considerations

There are right of way, geotechnical and environmental impacts for this project.

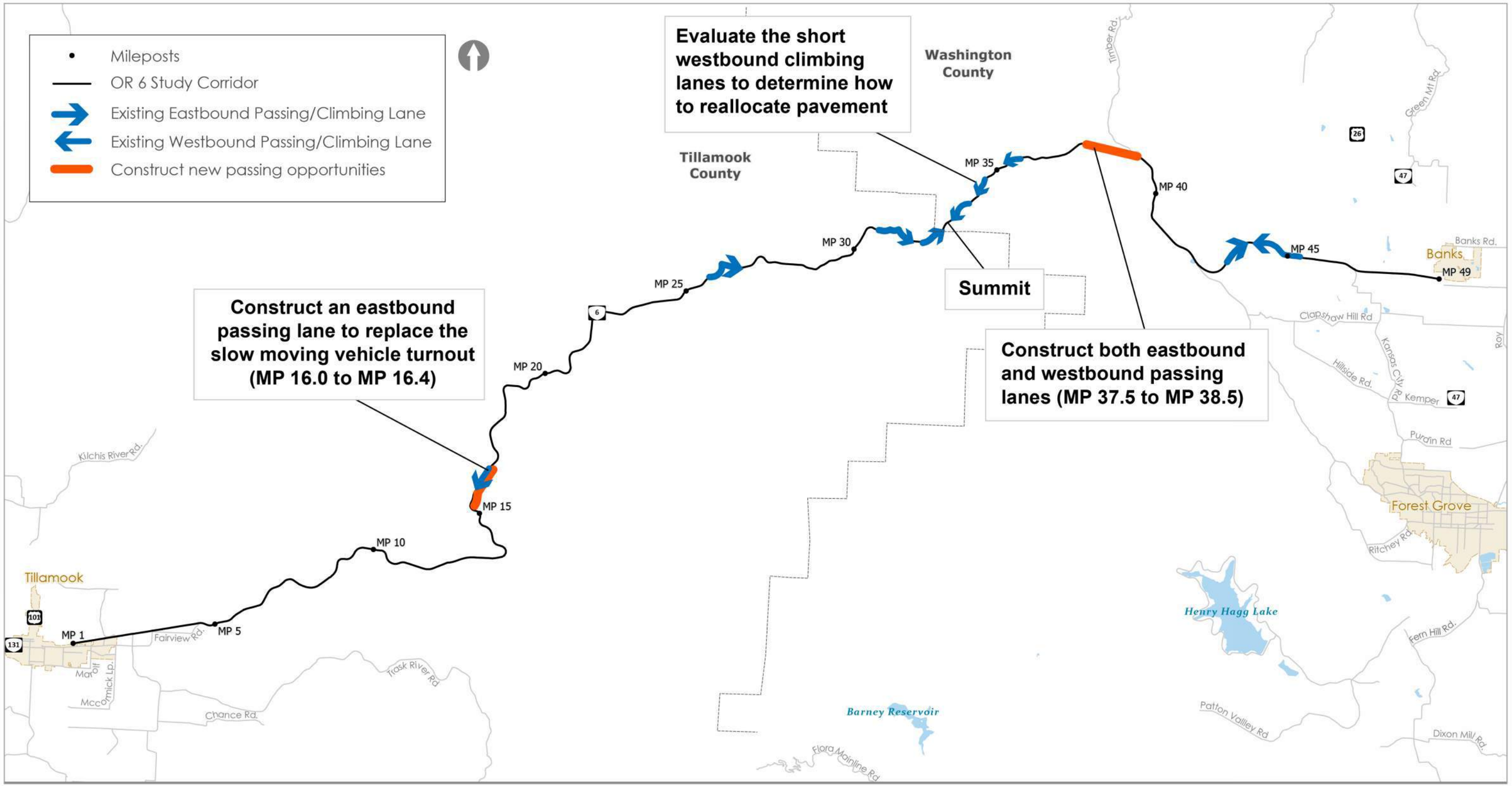
## Total Package Construction Cost

*$35.2 million with current assumptions.*

The baseline cost that could increase if more elements or locations are added. An additional $40.9 million would be required to fix all unstable slopes within the limits of the substandard passing lanes. However, there are no unstable slopes in the two additional passing lane locations.

Assumptions used to estimate the order-of-magnitude total construction cost for this package can be found in Appendix C.

# Project E1: Longer Passing Opportunities



# PROJECT E2: FULL CLIMBING LANES OVER THE SUMMIT

## Description

**This project connects and extends all existing passing/climbing lanes over the summit, as shown on page 30. This allows the eastbound passing/climbing lanes to end on the straight segment of OR 6 just past the summit, resulting in an eastbound climbing lane from milepost 30.88 to milepost 33.32. The westbound passing/climbing lane will also be extended past the summit, resulting in a westbound passing/climbing lane from milepost 32.27 to milepost 35.70.**

## Safety issues addressed


## General benefits

- Reduced risk associated with short passing/climbing lanes (higher speed differentials, short merges).
- Lower speed differential at the merge on the downhill side of the summit due to extending the passing/climbing lane over the summit.
- Improved sight distance and awareness of the end of passing opportunities due to locating the start and end of passing/climbing lanes on straight segments of OR 6.
- The extension over the summit will provide passing opportunities the full length of the segment with the greatest speed differentials.

## Implementation considerations

If the passing/climbing lanes are constructed over the summit, then the existing bridge over Devils Lake Fork Creek will need to be widened or reconstructed.

If the passing/climbing lanes are constructed, then it would be practical to repair all of the unstable slopes within the project limits for long-term impact.

## Maintenance considerations

Having more roadway width to maintain will increase maintenance costs. However, the project's pavement reconstructions will reduce recurring maintenance costs.

## Other considerations

There are right of way, geotechnical and/or environmental impacts for this project.

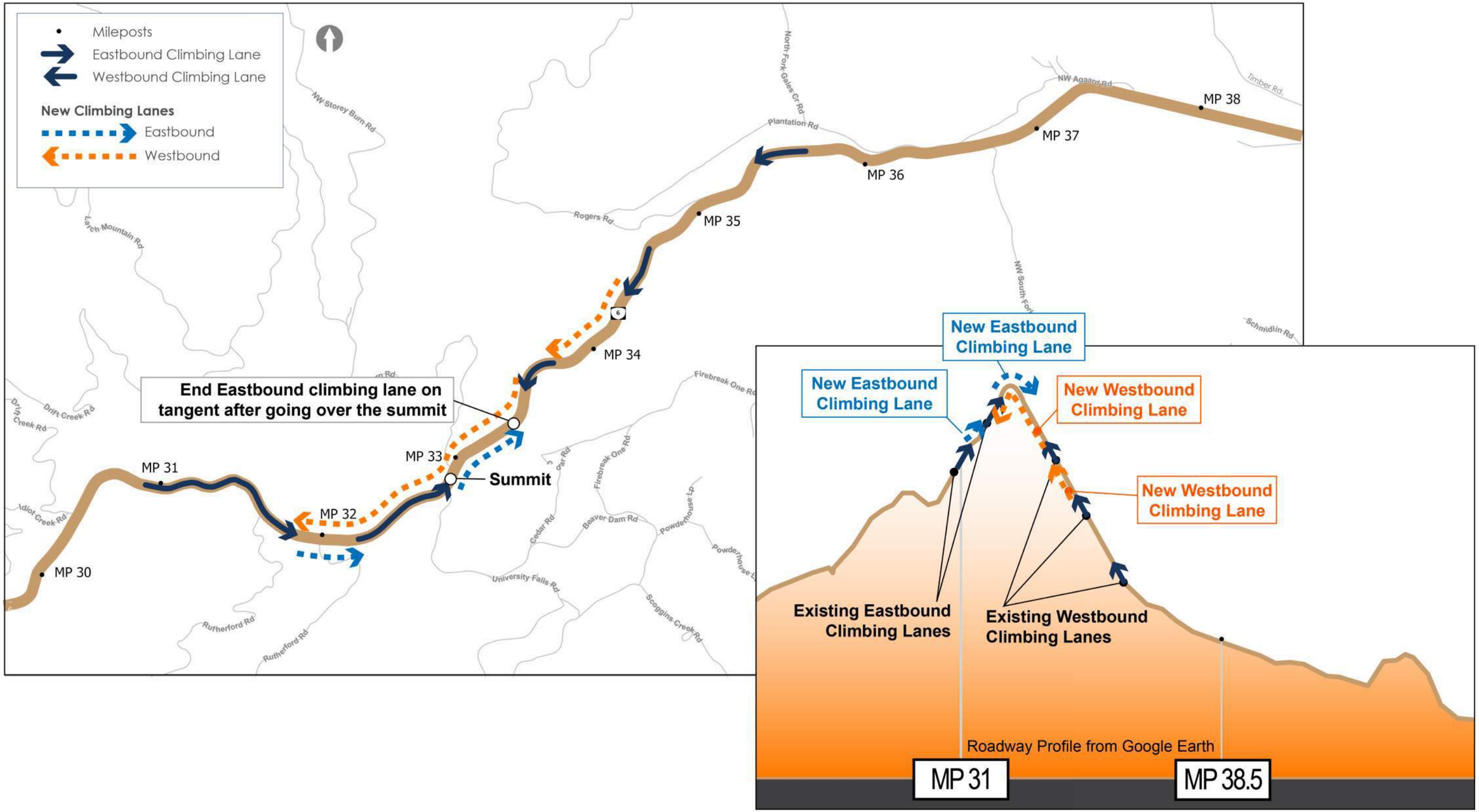
## Total Package Construction Cost

*$102.8 million with current assumptions.*

This baseline cost could increase if more elements or locations are added, including the cost to fix all unstable slopes within the project limits.

Assumptions used to estimate the order-of-magnitude total construction cost for this package can be found in Appendix C.

# Project E2: Full Climbing Lanes Over the Summit



# PACKAGE F: UNSTABLE SLOPES REMEDIATION

## Description

**Address the 18 priority unstable slopes along OR 6 based on ODOT's Geotechnical Report. Fourteen of the 18 priority locations are located between milepost 31 and milepost 35.**

## Safety issues addressed

- Finding and accessing recreational destinations and communities.
- Curves
- Safer passing opportunities
- Roadway conditions (wet, snow, ice)
- **Pavement/slope stability conditions**
- Communications
- Risky driving behaviors

## General benefits

- Reduced frequency of landslides and other unstable slope events.
- Less ODOT maintenance staff time needed for these locations.
- Reduced pavement condition and marking impacts on drivers.
- Increased driver comfort and driver expectations of road conditions.

## Implementation considerations

Many of the roadway condition issues seen on OR 6 stem from the unstable slopes, especially in the summit area (milepost 31 to milepost 35). Unstable slopes would need to be addressed before spending time and money to implement other projects that do not address the root cause of many of the issues along the corridor.

- Consider adding geogrid to the pavement as part of a paving project to extend the pavement's life.

## Maintenance considerations

If the unstable slopes are addressed, ODOT will spend less time on maintenance in these areas.

## Other considerations

Large-scale right of way, geotechnical and environmental impacts are anticipated for this package.

## Total Package Construction Cost

*$38 million with current assumptions, but ongoing coordination with ODOT recommended for future cost estimating.*

This baseline cost could increase if more elements or locations are added.

Assumptions used to estimate the order-of-magnitude total construction cost for this package can be found in Appendix C.

# Package G: Other Large Capital Projects

## PROJECT G1: PAVEMENT REHABILITATION PROJECT

### Description

**Improve pavement segments in poor or fair condition.**

Poor-condition pavement segments will likely require significant pavement rehabilitation such as full replacement of the existing roadway. Based on current data, these sections include:

- Milepost 4.40 – 11.80
- Milepost 32.96 – 35.20

Fair condition pavements will likely require moderate pavement rehabilitation such as grinding existing pavement and repaving. Based on current data, these sections include:

- Milepost 27.80 – 32.96
- Milepost 35.20 – 37.61

### Safety issues addressed

- Finding and accessing recreational destinations and communities.
- Curves
- Safer passing opportunities
- **Roadway conditions (wet, snow, ice)**
- **Pavement/slope stability conditions**
- Communications
- Risky driving behaviors

### General benefits

- Decreased hazards on the road.
- Increased comfort for drivers.
- Improved pavement performance in wet conditions.
- Quantitative benefits detailed in Technical Memorandum #5 (Appendix B).

### Implementation considerations

- If unstable slopes will be addressed in a project in the near future, this project should be delayed to minimize redundant work. Consider adding geogrid to the pavement as part of a paving project to extend the pavement's life.
- Superelevation corrections are only included in a 3R or 4R project.

### Maintenance considerations

Pavement maintenance is already difficult to fund for this corridor.

### Other considerations

There are no anticipated right of way, geotechnical or environmental impacts for this package, assuming the increased impervious surface area will not modify environmental impacts and pavement will stay within existing pavement footprint.

### Total Package Construction Cost

*Poor pavement locations: $33.8 million with current assumptions.*

*Fair pavement locations: $7.6 million with current assumptions.*

These baseline costs could increase if more elements or locations are added. There would be an additional cost to repair the unstable slopes within the pavement limits.

Assumptions used to estimate the order-of-magnitude total construction cost for this package can be found in Appendix C.

# PROJECT G2: WILSON RIVER LOOP INTERSECTION PROJECT

## Description

**The near-term option for this intersection includes creating a 12-foot buffer between the westbound through travel lane and the right-turn lane as shown on page 34.**

An intersection control evaluation will be completed as part of this project to determine future intersection improvements.

## Safety issues addressed

- **Finding and accessing recreational destinations and communities.**
- Curves
- Safer passing opportunities
- Roadway conditions (wet, snow, ice)
- Pavement/slope stability conditions
- Communications
- **Risky driving behaviors**

## General benefits

- Improved sight distance for southbound vehicles.
- Quantitative benefits detailed in Technical Memorandum #5 (Appendix B).

## Implementation considerations

A modified right turn lane project has been funded through design in ODOT's STIP. Construction funding is still in the process of being identified.

ODOT plans to build this project and will have a better idea of the construction schedule and cost as the project gets further in design. While currently not funded, ODOT estimates starting construction in 2026.

## Maintenance considerations

Minimal additional maintenance costs may be incurred with the additional asphalt.

## Other considerations

No right of way costs are anticipated because the Wilson River Loop realignment project acquired significant right of way widths in this area to account for the wetland mitigation and highway improvement locations.

The weigh station is located just east of this intersection, creating a weave section approximately 900 feet long. This project must balance achieving separation between the right-turn lane and through lane with allowing an adequate length for accelerating trucks to merge back into the through lane.

There is a utility pole that is likely in the clear zone for the offset right-turn lane. Guardrail will be needed to protect traffic from this object in the clear zone or it will have to be relocated.

This area is near the headwaters of Hoquarten Slough and wetlands mapped in the Tillamook Local Wetland Inventory and the National Wetland Inventory. Minor retaining walls may be required to avoid wetland impacts within the project limits.

## Total Package Construction Cost

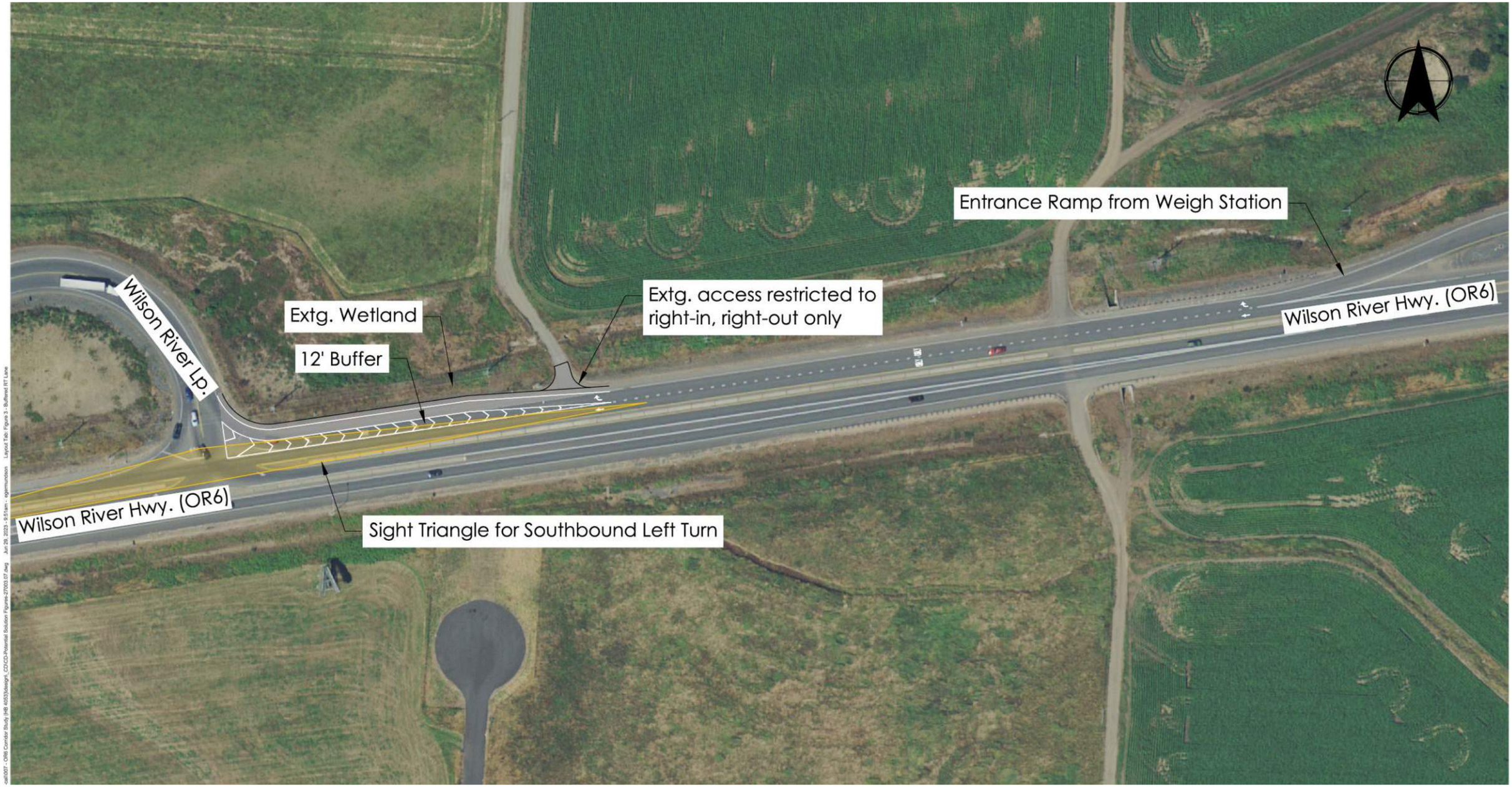
*$3.9 million with current assumptions.*

This baseline cost could increase if more elements or locations are added.

Assumptions used to estimate the order-of-magnitude total construction cost for this package can be found in Appendix C.

## Project G2: Wilson River Loop Intersection Project

Concept Design Subject to Change



# PROJECT G3: GALES CREEK INTERSECTION PROJECT

## Description

**Install delineators, additional intersection warning signage and striping, and an actuated intersection warning system to increase intersection awareness for drivers, as shown on page 36. The actuated intersection warning system would alert drivers traveling westbound on OR 6 if there is a vehicle stopped in the travel lane to turn left onto Gales Creek Road.**

As part of the project, assess future needs and evaluate feasibility of constructing a potential westbound left-turn lane.

## Safety issues addressed

- **Finding and accessing recreational destinations and communities.**
- Curves
- Safer passing opportunities
- Roadway conditions (wet, snow, ice)
- Pavement/slope stability conditions
- Communications
- **Risky driving behaviors**

## General benefits

- Increased visibility and awareness of the intersection and drivers' presence on the upcoming roadway.
- Quantitative benefits detailed in Technical Memorandum #5 (Appendix B).


## Implementation considerations

Power and communications will be needed to operate non-static signs, such as the actuated intersection warning system.

## Maintenance considerations

Signs and delineators added to the corridor will increase maintenance costs. Maintenance for signs that require power and communications to operate may be costly.

## Other considerations

There are potential right of way, geotechnical or environmental impacts for this package, especially for larger signs or signs that require power to operate.

## Total Package Construction Cost

*$13.3 million with current assumptions:*

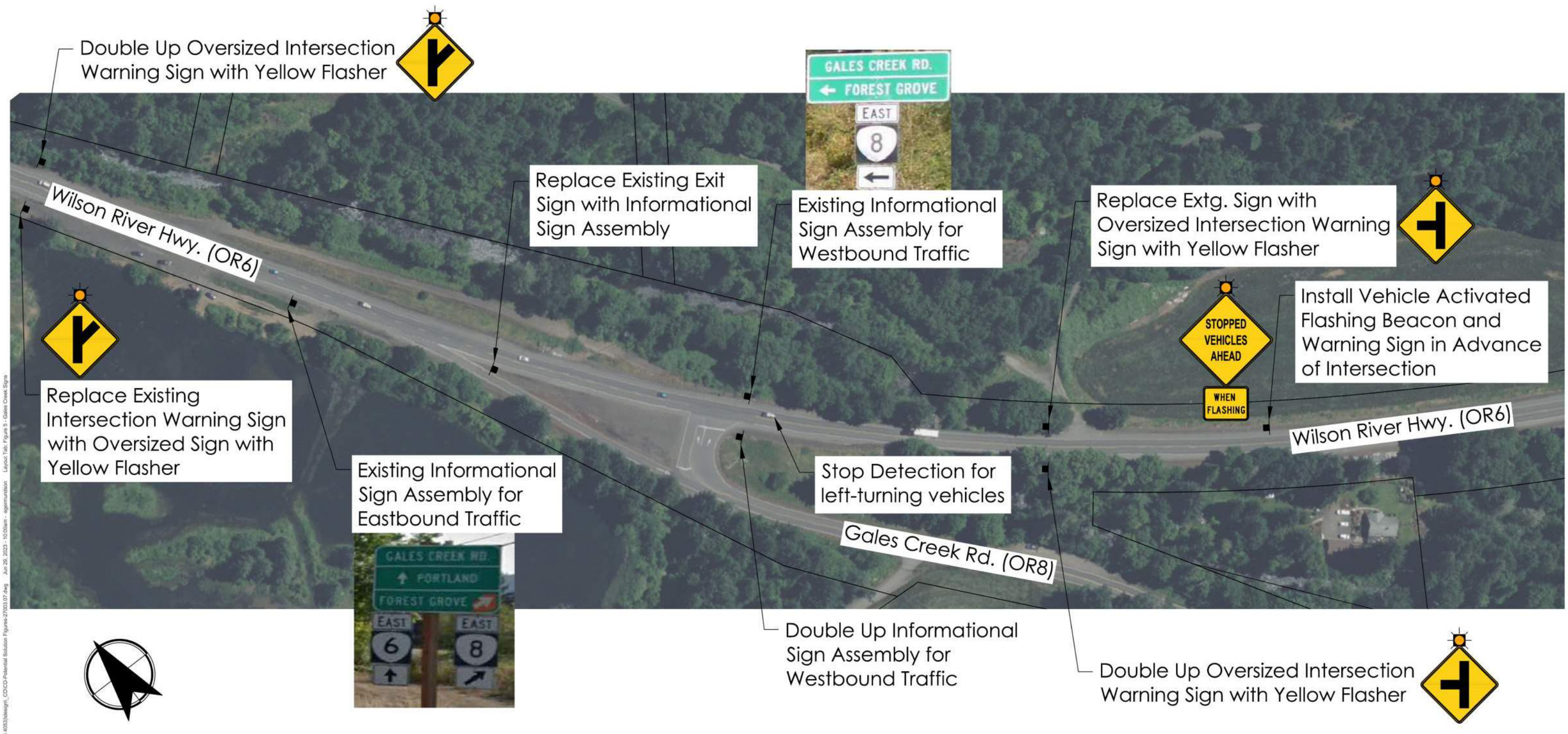
- *Delineators throughout segment*
- *Recessed pavement markers throughout segment*
- *Pavement rehabilitation (excluding unstable slopes)*
- *Weather warning system*

This baseline cost could increase if more elements or locations are added.

Assumptions used to estimate the order-of-magnitude total construction cost for this package can be found in Appendix C.

# Project G3: Gales Creek Intersection Project

Concept Design Subject to Change



# PROJECT G4: SUMMIT PROJECT

## Description

**The summit project focuses on OR 6 from approximately milepost 31 to milepost 35. Install delineators to define the roadway. Install a weather warning system, including temperature gauges, cameras and variable message signs. Complete full pavement reconstruction, including installing recessed pavement markers. Evaluate Packages E (passing opportunities) and Package F (pavement rehabilitation) for items to include in the broader Summit project.**

## Safety issues addressed

- Finding and accessing recreational destinations and communities.
- Curves
- Safer passing opportunities
- Roadway conditions (wet, snow, ice)
- Pavement/slope stability conditions
- Communications
- Risky driving behaviors

## General benefits

- Increased visibility and awareness of roadway conditions and context.
- Improved pavement performance in wet conditions.
- Quantitative benefits detailed in Technical Memorandum #5 (Appendix B).

## Implementation considerations

This package does not include fixing unstable slopes. If unstable slopes will be addressed in a project in the near future (such as Package F), the summit should be addressed afterward to minimize redundant work. This package also does not include modifying passing opportunities, which is covered in Package E and would impact the corridor summit.

Unstable slopes and pavement condition are a priority to make this project successful.

## Maintenance considerations

New delineators added to the corridor will increase maintenance costs. Maintenance for signs that require power and communications to operate may be costly.

## Other considerations

There are potential right of way, geotechnical or environmental impacts for this package, especially for larger signs or signs that require power to operate.

## Total Package Construction Cost

*$13.3 million with current assumptions:*

- *Delineators throughout segment*
- *Recessed pavement markers throughout segment*
- *Pavement rehabilitation (excluding unstable slopes)*
- *Weather warning system*

This baseline cost could increase if more elements or locations are added.

Assumptions used to estimate the order-of-magnitude total construction cost for this package can be found in Appendix C.

# PACKAGE H: STRATEGIES TO ADDRESS BEHAVIORAL COMPONENTS

## Description

**Conduct a safe driving media campaign and evaluate funding opportunities for increased enforcement. Consider installing speed feedback signs along more developed areas of the corridor that report driver speed compared to posted speed. Speed feedback signs are not typically operated or maintained by ODOT; partnerships with other agencies will be needed.**

## Safety issues addressed

- Finding and accessing recreational destinations and communities.
- Curves
- Safer passing opportunities
- Roadway conditions (wet, snow, ice)
- Pavement/slope stability conditions
- Communications
- **Risky driving behaviors**

## General benefits

- Increased driver awareness of how they impact their own safety and that of others when traveling on OR 6.

## Implementation considerations

- Enforcement, including speed feedback signs, is a multi-jurisdictional effort that relies on parties outside of ODOT.
- Power needs to be provided to operate non-static signs, such as speed feedback signs.

## Maintenance considerations

Speed feedback signs typically are not funded or installed by ODOT, and ODOT is not typically responsible for operations or maintenance. Maintenance for signs that require power and communications to operate may be costly.

## Other considerations

Even if additional funding is secured for enforcement, staff shortages and prioritizing staff covering large regions may make it impossible for more enforcement to be stationed on OR 6 consistently.

There are no anticipated right of way, geotechnical or environmental impacts for this package.

The Older Drivers and Pedestrians Special Rule may apply for some areas where this package could be installed.

## Cost Considerations

The cost for this package will vary based on the amount of staff time ODOT and local law enforcement can allocate to these efforts.

# PACKAGE I: POLICIES OR LONG-TERM STUDIES

## Description

**Complete policies or long-term studies that help address safety issues on OR 6 related to finding and accessing recreational destinations and communities, the lack of passing opportunities and navigating roadway conditions.**

Policies and long-term studies to complete include:

- Establish access management principles and strategies: Minimize conflict points along the corridor by defining access points with curb or paint; encouraging appropriate use of parking areas along the side of the road; increasing awareness and visibility of parking areas through signage; and partnering with other agencies to encourage defined parking areas near destinations (such as trailheads or retail locations).
- Complete passing opportunities evaluation: Evaluate passing lane lengths, taper lengths and other existing conditions within passing lanes against current standards.
- Continue to evaluate OR 6 against the safety corridor designation. Review the Safety Corridor designation criteria to determine if a section of the corridor meets the criteria.

## Safety issues addressed


## General benefits

- Reducing driver confusion for access points off OR 6.
- Providing convenient and standard-meeting passing opportunities.
- Providing additional support to the corridor through special safety-related designations.

## Cost considerations

The cost for this package will vary based on the amount of staff time ODOT and other applicable agencies can allocate to these efforts.

# PACKAGE J: IDENTIFICATION OF FUNDING NEEDS

## Description

**Evaluate funding opportunities and look for occasions to partner with other agencies to increase maintenance and enforcement.**

## Safety issues addressed

- Finding and accessing recreational destinations and communities.
- Curves
- Safer passing opportunities
- **Roadway conditions (wet, snow, ice)**
- **Pavement/slope stability conditions**
- Communications
- **Risky driving behaviors**

## General benefits

Reducing the maintenance budget gap to address roadway conditions before they cause safety issues.

## Implementation considerations

Many of the recommendations from this study will result in increased maintenance costs and be contingent on increasing the ODOT maintenance budget, further emphasizing the need for more funding. Maintaining the roadway is critical to extending the life of capital investments and therefore saving money in the long run.

ODOT should look for opportunities to pursue new funding opportunities as well as consider partnering with other agencies and private entities to accomplish funding needs.

## Cost considerations

The cost for this package will vary based on the amount of new funds ODOT and other agencies are able to acquire.

# Future Considerations

ODOT does not currently have funding through construction for any of the project packages and associated solutions identified through the study. If funding becomes available, the cost and time it will take to implement the packages will depend on which ones are chosen.

Potential methods for funding improvements to OR 6 include:

- State legislation to provide funding
- State funding programs (funds are scarce, and OR 6 is unlikely to be competitive)
- Federal funding programs (funds are scarce, and OR 6 is unlikely to be competitive)

In addition to the solutions presented in this document, there are other ongoing efforts for the OR 6 corridor that need support from the legislature, ODOT and local partner agencies. This includes the effort to establish fiber communications and cellphone coverage along the corridor. The large unserved area in the middle of the corridor is a barrier for community members trying to report incidents that occur on the roadway.

ODOT can leverage these projects to establish some of the solutions discussed in this document, such as speed feedback signs, weather warning systems and other ITS devices that would require power and/or communications.


JCT
6
DETOUR
Heavy Haul Trucks
Use 6 East
NEXT RIGHT
2 HR PARKING
9AM-5PM
EXCEPT SUNDAYS & HOLIDAYS
Trees to Sea
Scenic Byway
Food Mart
ONE WAY