

**Agenda**  
**Mid-Willamette Valley Area**  
**Commission on Transportation**  
**(MWACT)**

At the MWVCOG, we are taking extra precautions to protect against the COVID-19 by implementing additional cleaning protocols and social distancing practices. In addition, no outside guests, members, or visitors are permitted inside the COG office without a pre-arranged appointment. For meetings at the COG, **we are requesting all MWACT members, local staff, and the public to participate by teleconferencing rather than attending in person**. If participating by phone is not an option, please contact our offices (at 503-588-6177) **24 hours before the meeting begins**.

**For MWACT members – Please RVSP (e-mail to [lomoore@mwvcog.org](mailto:lomoore@mwvcog.org)), so we can best prepare for the MWACT meeting.**

Join Zoom Meeting  
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Trouble Connecting? Contact Karen Odenthal at 503-798-5584 or  
Mike Jaffe at 503-540-1606

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**Date: Thursday, September 2, 2021**  
**Time: 3:30 p.m.**  
**Place: Online meeting of MWACT**

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*Times listed below are approximate. Agenda items may be considered at any time or in any order per discretion of the MWACT Chair and/or member of the Commission, in order for the Commission to conduct the business of the Commission efficiently. Persons wishing to be present for a particular item are advised to arrive prior to the scheduled beginning of the meeting in order to avoid missing the presentation of items of interest.*

The Mid-Willamette Valley Area Commission on Transportation is pleased to comply with the Americans with Disabilities Act (ADA). If you need special accommodations including a sign language interpreter to attend this meeting, a complete agenda packet, or additional information, please contact Lori Moore at (503) 540-1609 or send e-mail to [lomoore@mwvcog.org](mailto:lomoore@mwvcog.org) at least 72 hours prior to the meeting. Alternate formats available upon request. Thank you.

**3:30 p.m.     Item 1. Call MWACT Meeting To Order ..... Chair Ken Woods, Jr.**

Welcome and Introductions  
Introduction of New Representatives  
Approval of June 3, 2021 Meeting Summary  
Public Comment  
Comments from the Legislative Delegation  
OTC Comments  
Commission Discussion/Area Updates

**3:40 p.m.     Item 2. Strategic Bike /Pedestrian Project Prioritizations for FY 24-27 STIP Update.....Susan Peithman, Ken Shonkwiler (ODOT)**

At the June MWACT meeting, ODOT staff presented the completed Active Transportation Needs Inventory (ATNI) on the statewide system. The ATNI mapped the sidewalks, bicycle lanes, and shoulders along state highways only, along with an inventory of system gaps and sub-standard infrastructure. The ATNI also contained prioritization scores for both bicycles and pedestrians needs. The ATNI is being used in the process to prioritize bike and pedestrian projects for the FY 24-27 Statewide Transportation Improvement Program (STIP).

ODOT staff will be holding an **online open house** for the statewide project selection (125 percent lists). The open house is scheduled from September 15th – October 31st.

The ODOT project managers will describe the project selection process, 125 percent lists, and the online open house with MWACT members. Slides of ODOT’s presentation are *attached*.

**Action:** Information item.

**4:00 p.m.     Item 3. Proposed Scoping Projects in Area 3 ..... John Huestis, ODOT**

As part of the 24-27 STIP update, each ODOT Region and Area is developing its lists of proposed projects to be scoped for possible inclusion in the next STIP. Staff will describe the status of the process for Area 3. See *attached* list.

**Action:** Information item.

**4:20 p.m. Item 4. Enhance Project Status ..... John Huestis, ODOT**

The FY 2024-2027 Statewide Transportation Improvement Program (STIP) has \$65 million available statewide for programming Enhance projects. The OTC decided that these funds are to be used for addressing freight-supportive projects along with congestion issues on the state highway system.

At MWACT's June meeting, MWACT recommended three projects for consideration (*see* June minutes). Two of those projects (additional funds for the **Newberg-Dundee Bypass, Phase 2** and funds for the **I-5: Kuebler to Delaney widening**) are still being considered among all the other projects in Region 2. The project proposal and business case for both of these projects are *attached*.

**Action:** Information item.

**4:45 p.m. Item 5. ACT Engagement Refocus Update ..... John Huestis, ODOT**

Earlier in the year, MWACT had discussions about the ACT Engagement and Refocus project. Those discussions with the ACTs resulted in a work plan that was approved by the OTC in March. That work plan has since evolved with a focus of better defining the roles and responsibilities of the ACTs, ODOT, and the OTC, as well as efforts to shift towards more meaningful engagement and follow-through. Oregon Transportation Commissioner Julie Brown is the OTC liaison in this task, assisted by ODOT staff. A meeting of Commissioner Brown and the ACT chairs and ODOT staff is being scheduled for mid-September.

**Action:** Information item.

**5:00 p.m. Item 6. I-5 @ Brooklake Interchange Update .....Dan Fricke, ODOT**

The consultant for the I-5 @ Brooklake interchange study has developed 6 concepts for consideration. ODOT staff will provide an update.

**Action:** Information item.

**5:25 p.m. Item 7. Other Business..... Chair Ken Woods, Jr.**

- Next MWACT Meeting

**5:30 p.m. Item 8. Adjournment ..... Chair Ken Woods, Jr.**

# **Draft      Summary      Draft**

Mid-Willamette Valley Area Commission on Transportation (MWACT)  
MWVCOG Conference Room  
100 High St. SE, Suite 200  
Salem, OR 97301  
Thursday, June 3, 2021

**This meeting was a call-in meeting with people attending via Zoom.  
Attendance is listed as follows:**

## **MWACT Members Present**

Danielle Bethell, Marion County Board of Commissioners  
Cathy Clark, 2021 Vice Chair, Keizer Mayor  
Ian Davidson, SAMTD Board of Directors  
Kathy Hadley, Polk County Private Sector  
Scott Hill, 99W/18/47 Corridor, McMinnville Mayor  
John Huestis, ODOT Area 3 Manager  
Casey Kulla, Yamhill County Board of Commissioners  
Michael Langley, Confederated Tribes of the Grand Ronde  
Jim Lewis, Salem City Council  
Lyle Mordhorst, Polk County Board of Commissioners  
Walt Perry, I-5 Corridor, Jefferson City Council  
Jim Sears, 99E/213 Corridor, Silverton City Council  
Della Seney, Hwy. 22E Corridor, Aumsville City Council  
Mitch Teal, Marion County Private Sector  
Cynthia Thompson, YCTA  
Ken Woods, Jr., 2021 Chair, Dallas City Council

## **MWACT Members Absent**

Yamhill County Private Sector-Vacant

## **Others Present**

Jenna Berman, ODOT  
Colleen Busch, SAMTD Board of Directors  
Steve Dickey, SAMTD  
Kristine Evertz, Summit Strategies  
Dan Fricke, ODOT Region 2  
Tom Hammer, xxx  
Marsha Hoskins, ODOT  
Mike Jaffe, MWVCOG-MWACT/SKATS Staff  
Rachel King, 99W/18/47 Corridor, Amity City Council (Alternate for Scott Hill)



Lori Moore, MWVCOG-MWACT/SKATS Staff  
Karen Odenthal, MWVCOG/SKATS Staff  
Julie Warncke, Salem Public Works

### **Agenda Item 1. Call to Order – 3:30 p.m. – Introductions**

Chair Ken Woods, Jr., called the meeting to order at 3:34 p.m. A quorum was established.

**Summary of May 6, 2021:** The summary of the May 6, 2021, meeting was approved as submitted by consensus of the members present online.

**Public Comment:** There were no comments from the public.

**Comments from the Legislative Delegation:** There were no comments from the legislative delegation.

**OTC Comments:** There were no comments from the Oregon Transportation Commission (OTC) members.

**Commission Discussion/Area Updates:** McMinnville Mayor Scott Hill and Michael Langley expressed continued support the Newberg-Dundee Bypass project. The Confederated Tribes of the Grand Ronde would like to see this ongoing project completed.

### **Agenda Item 2. Enhance Program for ODOT 2024-2027 STIP**

John Huestis explained that there is \$65 million available statewide for programming for Enhance projects in the FY 2024-2027 Statewide Transportation Improvement Program (STIP). This funding is intended to address freight supportive projects along with congestion issues on the state highway system. Mr. Huestis provided an overview of three potential projects within the MWACT area for consideration. MWACT members discussed the three projects along with additional suggestions. Consensus was reached to submit the following MWACT-area projects for Enhance funding in the FY 2024-2027 STIP cycle:

- Newberg-Dundee Bypass project – Proposed amount of request - \$5 million.
- I-5 Third Lane project: Kuebler to Delaney – Proposed amount of request - \$10 million
- Projects with the OR22E Facility Plan: (Mission St. SE in Salem) -Proposed amount of request - \$1-8 million.

### **Agenda Item 3. ODOT Active Transportation Needs Inventory (ATNI)**

ODOT staff explained that an Active Transportation Needs Inventory on the statewide system has been completed for Region 2 and other regions in Oregon. Sidewalks, bicycle lanes, and shoulders along state highways are included in inventory along with gaps and sub-standard infrastructure.

Staff members explained that six factors along with weights were used to create prioritization scores for both bicycles and pedestrians. The ATNI will be used to allocate funding in the FY2024-2027 STIP for bike, pedestrian, and transit projects.

An online webmap of the inventory and the final pedestrian and bicycle scores is here:

[ODOT ATNI - Evaluation Criteria and Prioritization \(arcgis.com\)](https://arcgis.com)

The webpage that describes the program and the methodology for scoring and weighting is here:

[Oregon Department of Transportation : Statewide Active Transportation Needs Inventory : Public Transportation : State of Oregon](https://www.oregon.gov/ODOT/Programs/Pages/Statewide-Active-Transportation-Needs-Inventory.aspx)

### **Agenda Item 4. ACT Refocus Implementation Work Plan**

John Huestis reminded MWACT members that discussions related to future ACT engagement with the Oregon Transportation Commission (OTC) has been under discussion. Referencing material included in the agenda package, Mr. Huestis noted that OTC members have approved an Implementation Work Plan to guide the refocus of the ACTs in their advisory role to the OTC. The three recommended themes of the plan include ACT engagement with the state Strategic Action Plan (SAP), ODOT and OTC coordinated communication efforts, and Internal ODOT improvements to strengthen ACT/ODOT/and OTC relations.

### **Agenda Item 5. Other Business**

#### ***Draft Oregon Transportation Safety Action Plan***

An ODOT press release regarding an opportunity for public comment related to the draft Oregon Transportation Safety Action Plan was included in the agenda package. Public comment will be accepted through July 9, 2021. A virtual public hearing is scheduled for 1:00 p.m. on June 9, 2021. Registration for the hearing is required no later than 5:00 p.m. on June 8, 2021. Links are provided in the press release included in the agenda package.

There is not likely to be a July MWACT meeting. Commission members will be kept advised about meeting details.

Chair Woods adjourned the meeting at 5:20 p.m.

## **Agenda Item 2.**

### **Strategic Bike /Pedestrian Project Prioritizations for FY 24-27 STIP Update**

**Mid-Willamette Valley Area  
Commission on Transportation  
(MWACT)**

**September 2, 2021**

# 24-27 PEDESTRIAN AND BICYCLE STRATEGIC PROGRAM UPDATE REGION 2

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Mid-Willamette Valley ACT, September 2nd, 2021

Susan Peithman, PTD Strategic Investments Manager

Ken Shonkwiler, R2 Planner

# Pedestrian and Bicycle Funding in 24-27 STIP

Program	System	Amount	Required/ Discretionary
ODOT Ped/Bike 1% (SWIP)	State	\$25.5m	Required
Community Paths GRANT	Local	\$36m	Discretionary
ODOT Ped/Bike Strategic	State	\$45m	Discretionary
HB 2017 SRTS Infra GRANT	Local	\$45m	Required
ODOT SRTS Infrastructure	State	\$10m	Discretionary
SRTS Education GRANT	n/a	\$4m	Discretionary



# Why fund walking and biking?

## Safety

Deaths (10 Years)



## Mobility & Efficiency

50% TRIPS  
=  
< 3 MILES

## Accessibility & Connectivity



## Community & Economic Vitality



## Health

\$1 INVESTED  
=  
\$3.4 SAVINGS

## Sustainability



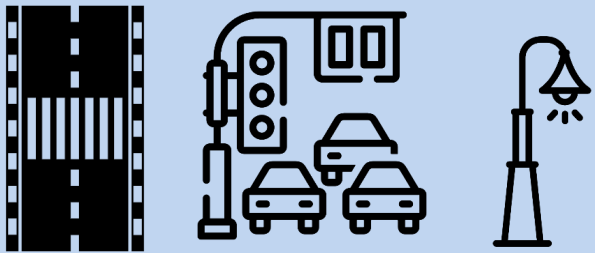
## Equity



# Equity & Pedestrian Safety: ODOT Research Findings



- Black, Indigenous, and People of Color experience a higher pedestrian injury burden than the average Oregonian
- Census tracts with high poverty rates experience higher rates of pedestrian injury than the Statewide average
- People in high poverty Census tracts are more likely to walk and take transit to meet their daily needs
- Concentrations of arterial roadway traffic is greater in high poverty Census tracts
- A lack of statewide database of pedestrian infrastructure prohibits full understanding of how pedestrian system deficiencies are contributing to disparate outcomes



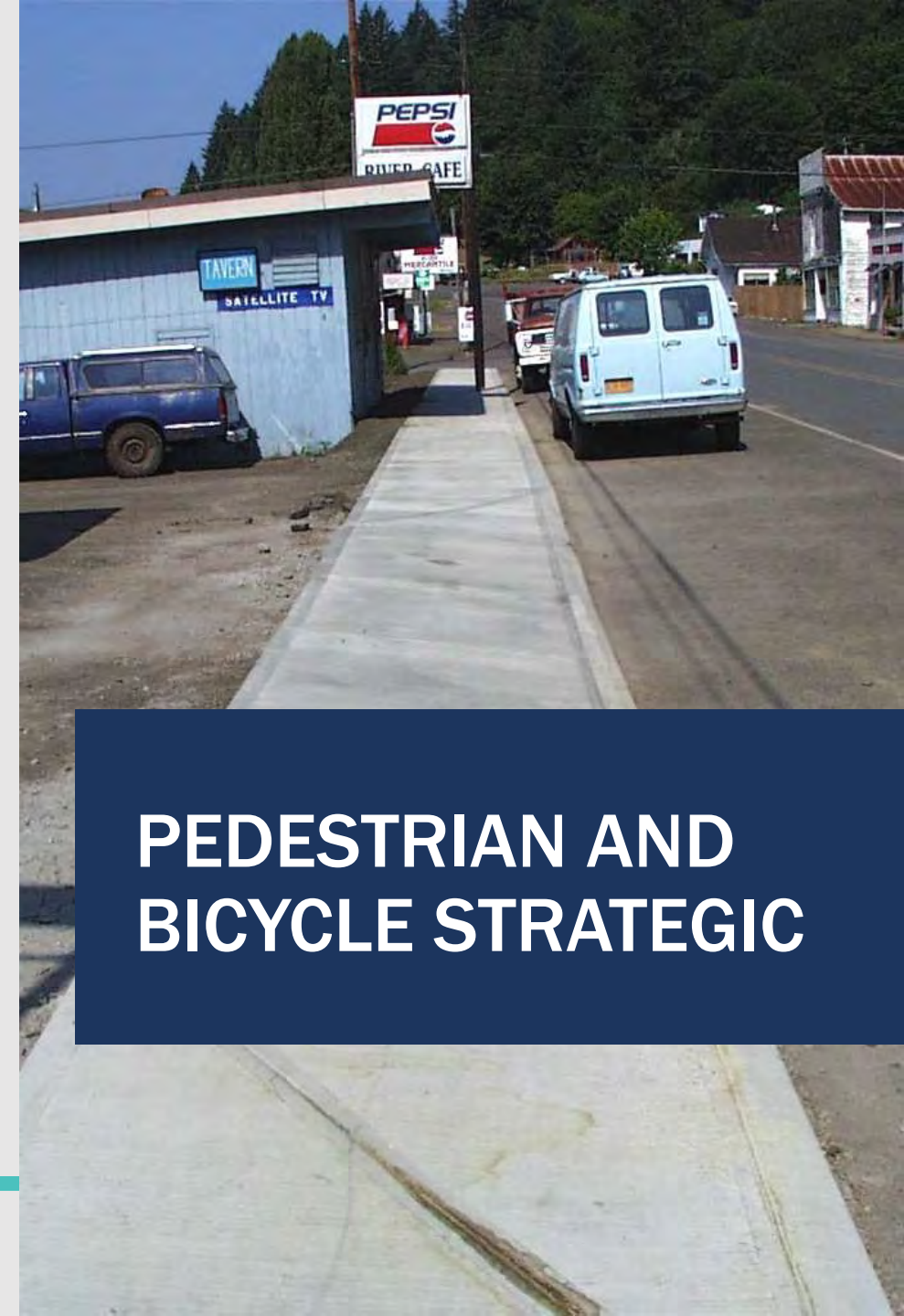




## PBS PROGRAM GOALS

1. Address gaps for people walking and biking on the state system such as missing sidewalks, bike lanes, and crossings.
2. Prioritize projects at locations that provide an equity and safety benefit.
3. Identify cost savings through leverage with other ODOT projects such as repaving or curb ramp replacement at high priority pedestrian or bicycle locations.

- Pedestrian and Bicycle Strategic (PBS)
  - Federal Funds for the State System
  - Utilize ATNI to prioritize project locations
  - Examples of projects:
    - Sidewalks
    - Bike facilities including buffered and physically protected bike lanes
    - Pedestrian crossings
    - Multiuse path crossings
    - Off-street paths if parallel to an ODOT facility\*
    - Illumination



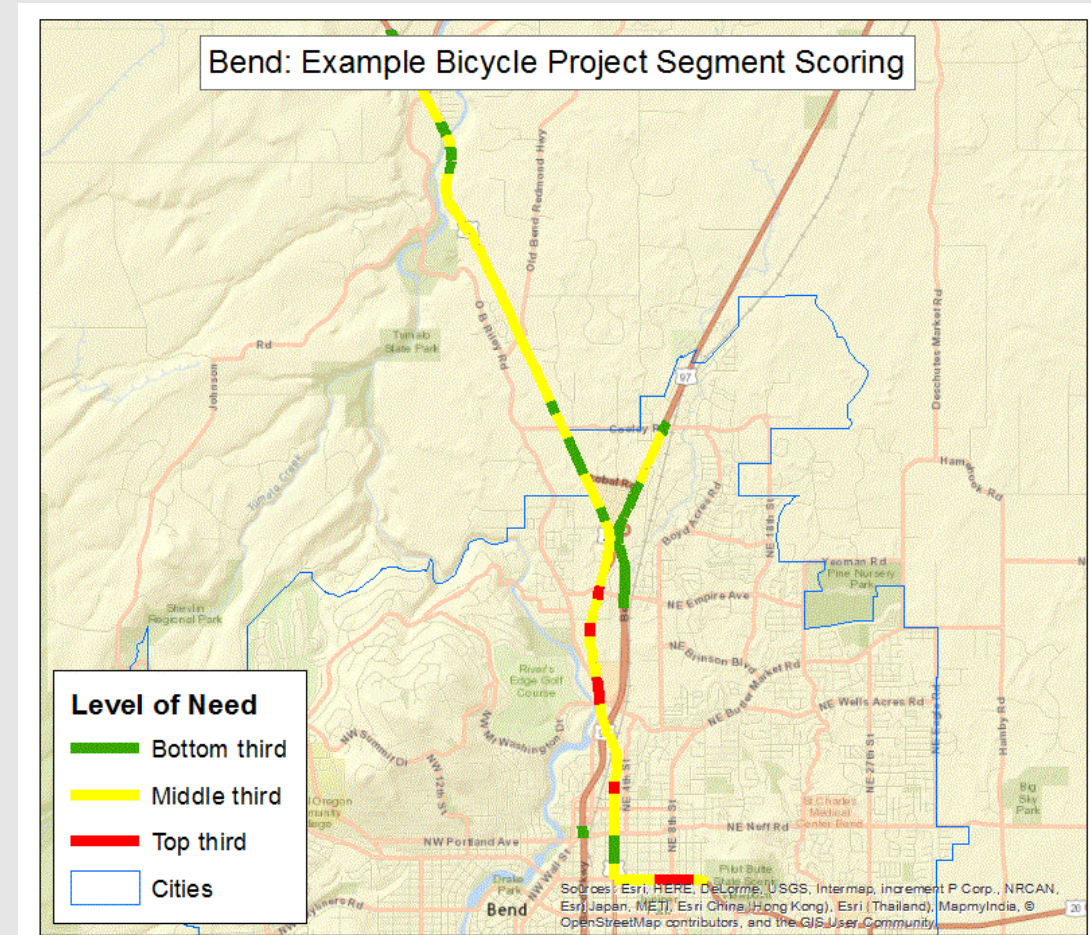
**PEDESTRIAN AND  
BICYCLE STRATEGIC**



# ACTIVE TRANSPORTATION NEEDS INVENTORY (ATNI)

## A management system that informs investments

- Inventory of the existing pedestrian, bicycle and shoulder facilities on state highways
- Assessment of the existing facilities relative to ODOT's minimum design standards
- An evaluation of gaps and deficiencies using evaluation criteria to prioritize system needs



# ATNI Considerations

- Crash history and crash risk factors
- Level of traffic stress (bicycle only)
- Access to transit & essential destinations
- Fills gap in system
- Transportation disadvantaged communities
- Health – Respiratory hazards
- Tourism/economy (recreational routes)
- Needs identified in local plans
- Existing facility presence & condition

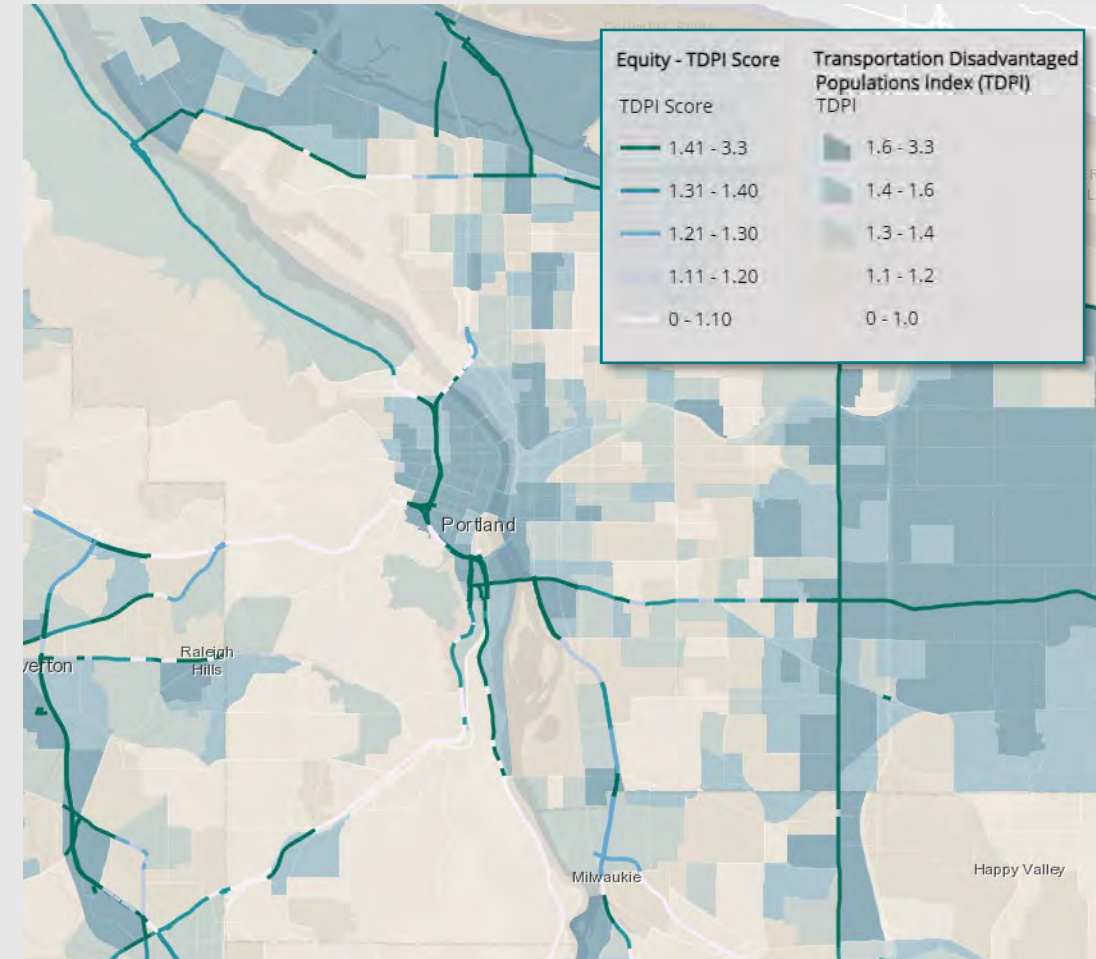




# ACTIVE TRANSPORTATION NEEDS INVENTORY (ATNI)

## Evaluation includes equity on the census tract scale

- Transportation Disadvantaged Index (TDI)
  - Age-based (over 65 and under 18)
  - Non-white and Hispanic populations
  - Low-income (households earning < 200% poverty level)
  - Limited English proficiency
  - No access to a vehicle
  - People with disabilities
  - Crowded Households
- Health (Respiratory Hazards)



# PBS PROJECT SELECTION STRATEGY

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- Leverage with other ODOT projects
  - Top 10% of ATNI
  - Projects funded through other programs like Fix-It, ADA, ARTS
- Stand-Alone
  - Top 1-5% ATNI need locations
  - Emphasis on
    - Aligning with Other Project Areas
    - Cost-Effectiveness
      - Crossings can be more cost-effective than sidewalks, for instance
    - Project Readiness & Capacity
    - Equity
    - Transit Connectivity



# PBS PROJECT SELECTION for R2

- 150% list under internal review
- List will be revised based on feasibility, project readiness, other funding sources
- Projects will be included in online open house for comment

DRAFT 150% list			
Project	Facility Type	Location	Type
Yamhill SRTS	Sidewalk infill (OR240), crossing improvement (OR47)	Yamhill	SRTS standalone
OR47 Gaston	Sidewalk infill, crossing improvements	Gaston	SRTS standalone
US30 Astoria	Road diet (8th to Basin), crossing improvements (2nd, 6th, Bay)	Astoria	Leverage with SSPF
OR99 Cottage Grove	reallocate for bike lanes, crossing/geometry improvement	Cottage Grove	Leverage with ADA

# PBS PROJECT SELECTION for R2 continued

## DRAFT 150% list (cont.)

Project	Facility Type	Location	Type
OR51 Independence	Bike lanes & sharrows, crossing improvements	Independence	Leverage with ADA
US20 Philomath	Wide sidewalk/path and midblock crossing, stripe bike lanes	Philomath	Leverage with ADA
OR214 Mt. Angel	Sidewalk infill Crossing improvements	Mt. Angel	Leverage with ADA
OR219 Newberg	Sidewalk infill Crossing improvements	Newberg	Leverage with ADA
OR 34 Waldport	Bike lanes Crossing improvements	Waldport	Leverage with SSPF
OR99W South Corvallis	2 overhead RRFBs or PHBs, illumination	Corvallis	Standalone



# REMINDER: Pedestrian and Bicycle Funding in 24-27 STIP

Program	System	Amount	Required/ Discretionary
ODOT Ped/Bike 1% (SWIP)	State	\$25.5m	Required
Community Paths GRANT	Local	\$36m	Discretionary
ODOT Ped/Bike Strategic	State	\$45m	Discretionary
HB 2017 SRTS Infra GRANT	Local	\$45m	Required
ODOT SRTS Infrastructure	State	\$10m	Discretionary
SRTS Education GRANT	n/a	\$4m	Discretionary

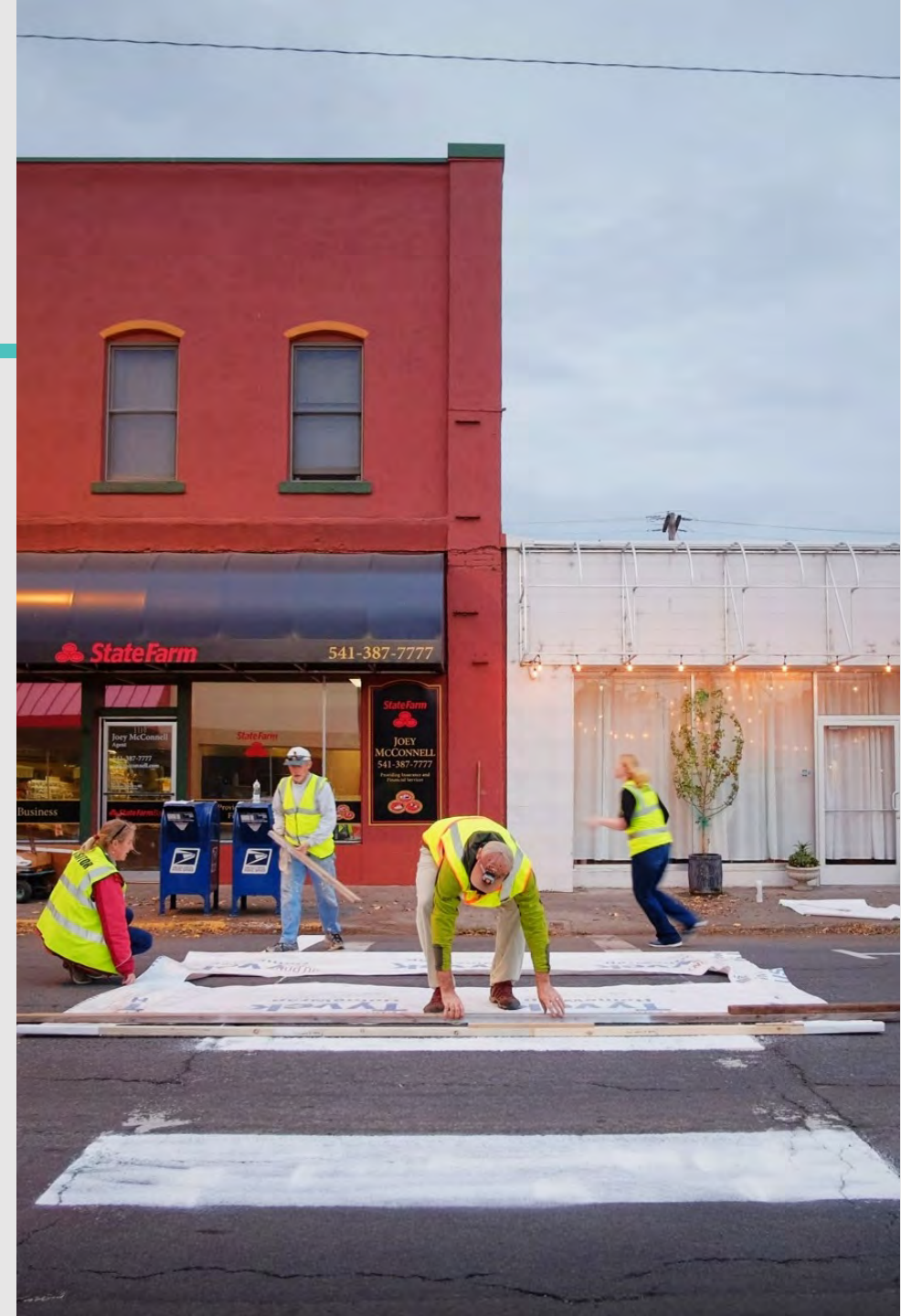


# PUBLIC INVOLVEMENT

- Online open house with 125% list of projects (September-October)

<https://www.oregon.gov/odot/STIP/Pages/PBS.aspx>

- Discussions with ACTs and Advisory Committees (May-Oct)



# Key Contacts

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- Susan Peithman, Strategic Investments Manager, Public Transportation Division
- [susan.peithman@odot.state.or.us](mailto:susan.peithman@odot.state.or.us)
- Jenna Berman, R2 Active Transportation Liaison
- [Jenna.berman@odot.state.or.us](mailto:Jenna.berman@odot.state.or.us)
- Ken Shonkwiler, R2 Planner
- [Kenneth.d.shonkwiler@odot.state.or.us](mailto:Kenneth.d.shonkwiler@odot.state.or.us)

## **Agenda Item 3.**

### **Proposed Scoping Projects in Area 3**


**Mid-Willamette Valley Area  
Commission on Transportation  
(MWACT)**

**September 2, 2021**

## MEMORANDUM

**DATE:** September 2, 2021

**TO:** Mid-Willamette Valley Area Commission on Transportation

**FROM:**  Dan Fricke, Senior Transportation Planner  
ODOT Region 2

**SUBJECT:** Project Scoping for the 2024-2027 Statewide Transportation Improvement Program

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ODOT Region 2 staff, assisted by our local partners and consultants, are about to begin scoping projects in various categories for potential inclusion in the 2024-2027 Statewide Transportation Improvement Program (STIP). The scoping process refines project descriptions and needs, as well as reviewing and verifying cost estimates. Four categories of projects are being considered:

- Fix-it
- All Roads Transportation Safety (ARTS)
- ADA
- Local Bridges

Projects advanced to scoping come from the various ODOT management systems and other technical review. Local bridges are advanced based on applications provided by local agencies.

Attached are a summary list of the projects selected for scoping followed by excerpts from the project Business Case which gives more information on the project description and need.

DLF:  
Attachments



## FIX-IT PROJECTS

Program (Work Type)	Area	Project Name <i>Per ODOT Naming Convention</i>	Description	Route	Pre-Scoping Estimate
PRESRV	3	OR22: Hart Road – Ricreall Interchange	Pavement resurfacing to replace deteriorating wearing course at end of its useful life.	OR 22	
PRESRV	3	OR18: S. McMinnville Intch. - E. McMinnville Intch.	Pavement rehabilitation of poor pavement, and safety improvements	OR 18	\$ 10,177,900
BIKPED	3	OR47: NW Olson Rd to NW Matteson Rd (Gaston)	Construct approximately 1,225 linear feet of 6' sidewalk along the west side of OR 47 from NW Olson Rd to NE Matteson Rd.	OR 47	\$ 1,042,422
BIKPED	3	Safe Routes to School crossing enhancements (Yamhill)	Install a grade separated sidewalk adjacent to and on the north side of OR 240 from N Helmick St (MP 0.22) to N Balm St (MP 0.49).	OR47 OR240	\$ 970,000
OPS-SLD	3	OR223: MP 12.5 slide repair	Slide repair.	OR-223	\$ 1,725,000
OPERAT	3	OR22: MP 18.87 culvert replacement	Replace culvert.	OR-22	\$ 700,000
OPS-SSI	3	OR47: MP 83.6 (Banks) Illumination Replacement	Lights and poles need replacing.	OR 47	\$ 1,500,000
OPERAT	3	OR22: Meadow Creek Culvert Replacement	Replace culvert.	OR 22	\$ 500,000
OPS-SLD	3	OR240: MP 4.7 Slide Repair	Repair slide.	OR 240	\$ 500,000
OPS-SLD	3	OR214: MP 37.5 Slide Repair	Repair slide.	OR 214	\$ 500,000
SAFETY	3	Libby Lane Rail Crossing (Marion County)	Install lights and gates and improve humped crossing to standard.	OR 164	\$ 1,000,000
SAFETY	3	Waconda Road Rail Crossing (Marion County)	Install lights and gates.	I-5	\$ 1,000,000
SAFETY	3	Ehlen Rd NE Rail Crossing (Aurora)	Install Queue Cutter in eastbound direction to prevent stopping on tracks.	OR 99E	\$ 600,000



STIP CYCLE 2024-2027	PROJECT NAME OR22: Hart Road – Ricreall Interchange	PROJECTWISE NO. (IF PREV. SCOPED)
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## ODOT PROJECT BUSINESS CASE OR22: Hart Road – Ricreall Interchange

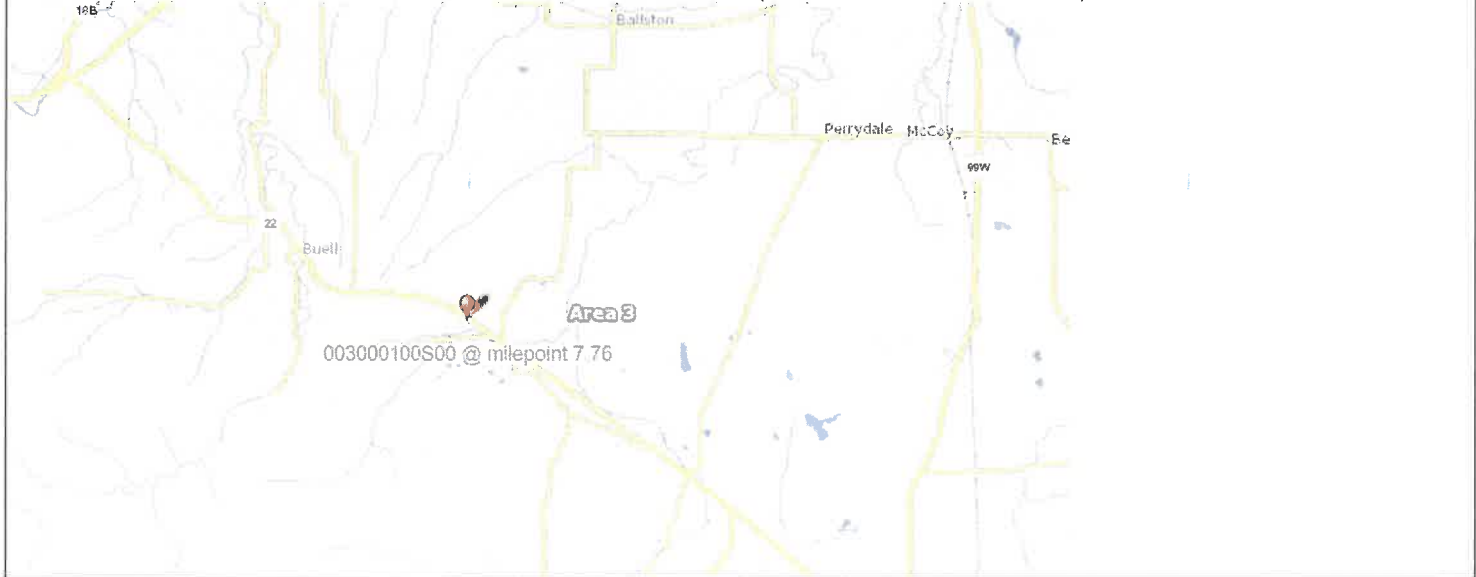
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### Project Location (Program Manager)

ROUTE NAME OR 22	HIGHWAY ID 030	BEGIN MP 7.76	END MP 15.34	LOCAL STREET / NON-HIGHWAY LOCATION
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PASTE LINK TO MAP OR PHOTO OF THE PROJECT AREA

CLICK IN THE FIELD BELOW TO BROWSE FOR AND INCLUDE A MAP OF THE PROJECT AREA (JPG, GIF, PNG, GIF, TIF, BMP FORMATS)



### Problem/Opportunity/Issue Description and Need (Program Manager)

DESCRIBE

Fatigue Cracking on up to 40% of the section. Pavement Condition is currently in the low Fair category

### Potential Solutions (Program Manager/Project Sponsor)

DESCRIBE

Pavement resurfacing to replace deteriorating wearing course at end of its useful life.

### Project Outcomes, Goals and Priorities (Program Manager/Project Sponsor)

DESCRIBE

Improve pavement condition and ride quality

### Planned Construction Year (Program Manager/Project Sponsor)

YEAR	NARRATIVE
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### High Impact Risks (Program Manager/Project Sponsor)

RISK TITLE	DETAILED DESCRIPTION OF RISK

### Additional Background Information (Program Manager/Project Sponsor)

DESCRIBE

### Leveraging Opportunities (Project Sponsor)

DESCRIBE

### Cost Estimate Assumptions and Methodology (Program Manager/Project Sponsor)

CONFIDENCE LEVEL Low	NARRATIVE Used a nominal unit cost per lane mile
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STIP CYCLE 2024-2027	PROJECT NAME OR18: S. McMinnville Intch. - E. McMinnville Intch.	PROJECTWISE NO. (IF PREV. SCORED) 2124_00084
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## ODOT PROJECT BUSINESS CASE

### OR18: S. McMinnville Intch. - E. McMinnville Intch.

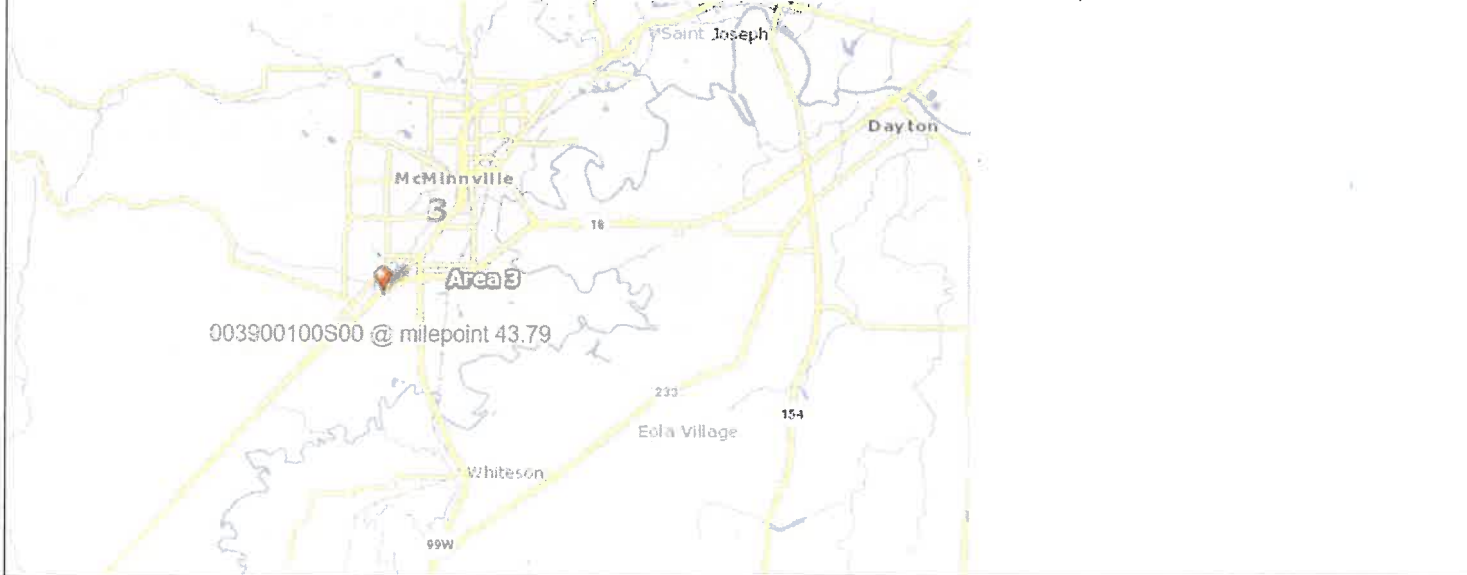
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#### Project Location (Program Manager)

ROUTE NAME OR 18	HIGHWAY ID 039	BEGIN MP 43.79	END MP 45.80	LOCAL STREET / NON-HIGHWAY LOCATION
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PASTE LINK TO MAP OR PHOTO OF THE PROJECT AREA

CLICK IN THE FIELD BELOW TO BROWSE FOR AND INCLUDE A MAP OF THE PROJECT AREA (JPG, GIF, PNG, GIF, TIF, BMP FORMATS)



#### Problem/Opportunity/Issue Description and Need (Program Manager)

DESCRIBE

Pavement condition is deteriorating rapidly. Structurally Deficient - Extensive Fatigue Cracking, Extensive Machine Patching. Maintenance is needing to place an increasing amount of patches to hold this section together.

#### Potential Solutions (Program Manager/Project Sponsor)

DESCRIBE

3R paving project to include the shoulders. Bridge section to evaluate vertical clearances. Leverage option for bike facilities is not within the current project limits and scope. Adjacent OR-18 projects will not be bundled due to different "R" classes. V. Greenway 1/7/2018

This is a 3R project, with a 2 inch inlay of the travel lanes (base course) and a 2" overlay of the entire pavement width (wearing course). There is a pavement design of a 12" inlay beneath the structures so that the vertical clearance is NOT reduced with this project. According to Section 4.5.1 of the HDM, it indicates that a Design exception is not needed, however the statements are vague and could be interpreted that a DE is needed. For the assumptions of this 3R Project it is assumed that a Design Exception would be granted, IF it were to be required. The HDM also does not say that the substandard vertical clearance HAS to be corrected with every project either. The Bridge section of this narrative suggest that the vertical clearance needs to be corrected, but the final interpretation at this time is that it does not. These statements were based on conversations with the Roadway Designer for this project. Jerry Rosenblad PE, 6-6-2019.

#### Project Outcomes, Goals and Priorities (Program Manager/Project Sponsor)

DESCRIBE

Pavement resurfacing to repair cracking, improve smoothness, and reduce maintenance costs.

#### Planned Construction Year (Program Manager/Project Sponsor)

STIP CYCLE 24-27	PROJECT NAME OR47: NW Olson Rd to NW Matteson Rd (Gaston)	PROJECTWISE NO. (IF PREV. SCOPED)
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## ODOT PROJECT BUSINESS CASE

### OR47: NW Olson Rd to NW Matteson Rd (Gaston)

☒ Initial ☐ Final

#### Project Location (Program Manager)

ROUTE NAME OR 47	HIGHWAY ID 029	BEGIN MP 26.53	END MP 26.8	LOCAL STREET / NON-HIGHWAY LOCATION Front St.
PASTE LINK TO MAP OR PHOTO OF THE PROJECT AREA <a href="https://goo.gl/maps/B2jbNaJRB8nEzA526">https://goo.gl/maps/B2jbNaJRB8nEzA526</a>				
CLICK IN THE FIELD BELOW TO BROWSE FOR AND INCLUDE A MAP OF THE PROJECT AREA (JPG, GIF, PNG, GIF, TIF, BMP FORMATS)				

#### Problem/Opportunity/Issue Description and Need (Program Manager)

DESCRIBE	Students living on the south end of town off of NE Matteson Rd (lower income area) do not have a separated walking/biking connection to the schools. If they do walk or bike, it must be on the shoulder of the highway. As a result, almost all of these student are reported to either be driven or bused. Connecting these residents to the schools was a top priority identified in Gaston's recently completed Safe Routes to School Plan (February 2020). As part of their planning process, the following goal was established: "The Gaston School District community envisions a future where children and their families safely, comfortably, and conveniently walk and bicycle as part of the daily school commute and a healthy lifestyle."
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#### Potential Solutions (Program Manager/Project Sponsor)

DESCRIBE	Gaston's Safe Routes to School Plan proposes constructing approximately 1,225 linear feet of 6' sidewalk along the west side of OR 47 from NW Olson Rd to NE Matteson Rd. Note that this project will require significant infill of a drainage ditch and wetland mitigation. Because this is a Rural Community context (BUD) it would be ideal to have a larger pedestrian zone (9' to 5') if possible.
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#### Project Outcomes, Goals and Priorities (Program Manager/Project Sponsor)

DESCRIBE	Reduce pedestrian injury and fatalities. Reduce level of traffic stress. focus on high crash corridors. improve equitable access.
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#### Planned Construction Year (Program Manager/Project Sponsor)

YEAR 2027	NARRATIVE Assume latest construction year due to complexity.
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#### High Impact Risks (Program Manager/Project Sponsor)

RISK TITLE Environmental requirements	DETAILED DESCRIPTION OF RISK <b>Need to look more closely at fill and wetland mitigation requirements. Guessing that the overall cost could increase significantly based on environmental mitigation.</b>
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STIP CYCLE 24-27	PROJECT NAME Safe Routes to School crossing enhancements (Yamhill)	PROJECTWISE NO. (IF PREV. SCOPED)
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## ODOT PROJECT BUSINESS CASE

### Safe Routes to School crossing enhancements (Yamhill)

☒ Initial ☐ Final

#### Project Location (Program Manager)

ROUTE NAME	HIGHWAY ID	BEGIN MP	END MP	LOCAL STREET / NON-HIGHWAY LOCATION
OR47	029	34.35	34.35	N Maple St = OR 47
OR240	151	.22	.49	E Main St = OR 240

PASTE LINK TO MAP OR PHOTO OF THE PROJECT AREA

<https://goo.gl/maps/B2jbNaJRB8nEzA526>

CLICK IN THE FIELD BELOW TO BROWSE FOR AND INCLUDE A MAP OF THE PROJECT AREA (JPG, GIF, PNG, GIF, TIF, BMP FORMATS)

#### Problem/Opportunity/Issue Description and Need (Program Manager)

DESCRIBE

OR 240 and OR 47 both run through the center of Yamhill with OR 240 immediately adjacent to their K-8 school and OR 47 immediately adjacent to their high school. OR 240 connects many neighborhoods to Yamhill Carlton Intermediate School and is described by the city and school as a busy road. Currently, there is no shoulder or sidewalk on the north side of the street for pedestrians or bicyclists and there is vegetation, ditches, and parked vehicles blocking the shoulder in places. A drainage that runs north/south in this area also creates a barrier for people which forces them to cross the street to the south side sidewalk and then cross again to the north to access the school or downtown. Lastly, a new housing development is planned on the north side of highway which will increase both pedestrian and vehicular traffic.

On the north end of town by the high school is also a barrier for high school students who live west of the highway and want to walk or bike to the high school located east of the highway. In contrast to OR 240 which lacks sidewalk connectivity, OR 47 has sidewalks but significantly higher ADTs and no enhanced crossings for neighborhood students to get to the school.

#### Potential Solutions (Program Manager/Project Sponsor)

DESCRIBE

##### Hwy 240 Sidewalk Infill:

The proposed solution for OR 240 is to install a grade separated sidewalk adjacent to and on the north side of OR 240 from N Helmock St (MP 0.22) to N Balm St (MP 0.49). During the conceptual design process for their Safe Routes to School application, the City looked at various alternatives (discussed some with ODOT) including full half street improvements, curbside sidewalks, and a wide multi-use path. All design concepts except the 6-ft grade separated sidewalk involved substantial stormwater improvement costs. The grade separated sidewalk provides the most efficient method of pedestrian connectivity between a large residential area and the school. This concept came from City of Yamhill engineers.

##### OR 47 Enhanced Crossing:

In addition to the sidewalk infill along OR 240, the City has reached out to ODOT and the ARTS program regarding an enhanced

STIP CYCLE 24-27	PROJECT NAME OR223: MP12.5	PROJECTWISE NO. (IF PREV. SCOPED) 2124-00100
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## ODOT PROJECT BUSINESS CASE OR223: MP12.5

☒ Initial ☐ Final

### Project Location (Program Manager)

ROUTE NAME OR223 - Kings Valley	HIGHWAY ID 191	BEGIN MP 12.4	END MP 12.5	LOCAL STREET / NON-HIGHWAY LOCATION
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PASTE LINK TO MAP OR PHOTO OF THE PROJECT AREA

CLICK IN THE FIELD BELOW TO BROWSE FOR AND INCLUDE A MAP OF THE PROJECT AREA (JPG, GIF, PNG, GIF, TIF, BMP FORMATS)



### Problem/Opportunity/Issue Description and Need (Program Manager)

DESCRIBE

McTimmons Slide is a historic landslide/settlement area located both lanes. Significant movement occurs from October through June each year. The typical movement ranges from 1" to 6" that creates uneven pavement. Maintenance crews respond 3-4 times per years to either add pavement or cold plane the highway surface. Repairing this slide will reduce maintenance cost while improving safety in this important corridor.

### Potential Solutions (Program Manager/Project Sponsor)

DESCRIBE

The recommended solution is to make drainage improvements then see if the highway area stabilizes between milepoints 12.38 to 12.47. Then re-build the impacted roadway under a separate project if the drainage improvements are effective at stopping or minimizing slide movement. Drainage improvements include (1) trenchless repair (e.g. cured-in-place or slip-lining) of two existing culverts (30" and 48" dia.) (2) replace the existing culvert inlet concrete box structure with a new deep manhole (3) install new perforated trench drains (4) install new 30-inch cross culvert using jack and bore method (5) construct new deep manhole at inlet end of the new 30-inch culvert

Improvement plan sketch named "SC\_2124\_00100\_SCMEEx\_01" has been created for reference.

Alvin Shoblom 2-1-19

### Project Outcomes, Goals and Priorities (Program Manager/Project Sponsor)

DESCRIBE

Designs should be focused to either significantly slow or prevent future roadway movement that are kept within ODOT r/w if feasible. Based from internal investigations the drainage system has failed and directs water into the slide. Replacing the drainage system should provide substantial stabilization.

### Planned Construction Year (Program Manager/Project Sponsor)

YEAR 2026	NARRATIVE Could be advanced if possible.
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STIP CYCLE 24-27	PROJECT NAME OR22: MP 18.87 Culvert replacement	PROJECTWISE NO. (IF PREV. SCOPED)
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## ODOT PROJECT BUSINESS CASE OR22: MP 18.87 Culvert replacement

☒ Initial ☐ Final

### Project Location (Program Manager)

ROUTE NAME OR22 - Three River	HIGHWAY ID 032	BEGIN MP 18.87	END MP 18.87	LOCAL STREET / NON-HIGHWAY LOCATION
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PASTE LINK TO MAP OR PHOTO OF THE PROJECT AREA

CLICK IN THE FIELD BELOW TO BROWSE FOR AND INCLUDE A MAP OF THE PROJECT AREA (JPG, GIF, PNG, GIF, TIF, BMP FORMATS)



### Problem/Opportunity/Issue Description and Need (Program Manager)

DESCRIBE

The 24" culvert is failing causing the highway shoulders and WB lane to sink. The culvert needs to be a full replacement.

### Potential Solutions (Program Manager/Project Sponsor)

DESCRIBE

Replace culvert.

### Project Outcomes, Goals and Priorities (Program Manager/Project Sponsor)

DESCRIBE

Provide drainage structure in accordance with current hydraulic engineering and environmental compliance standards. Reduce potential for flooding of the highway.

### Planned Construction Year (Program Manager/Project Sponsor)

YEAR 2025	NARRATIVE There is risk the culvert will fail, so advancing this early in the cycle would be appropriate.
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### High Impact Risks (Program Manager/Project Sponsor)

RISK TITLE NA	DETAILED DESCRIPTION OF RISK
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### Additional Background Information (Program Manager/Project Sponsor)

DESCRIBE

NA

### Leveraging Opportunities (Project Sponsor)

DESCRIBE

NA

### Cost Estimate Assumptions and Methodology (Program Manager/Project Sponsor)

CONFIDENCE LEVEL Very Low	NARRATIVE
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STIP CYCLE 2024-2027	PROJECT NAME OR47: MP 83.6 (Banks) Illumination Replacement	PROJECTWISE NO. (IF PREV. SCOPED)
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## ODOT PROJECT BUSINESS CASE

### OR47: MP 83.6 (Banks) Illumination Replacement

☒ Initial ☐ Final

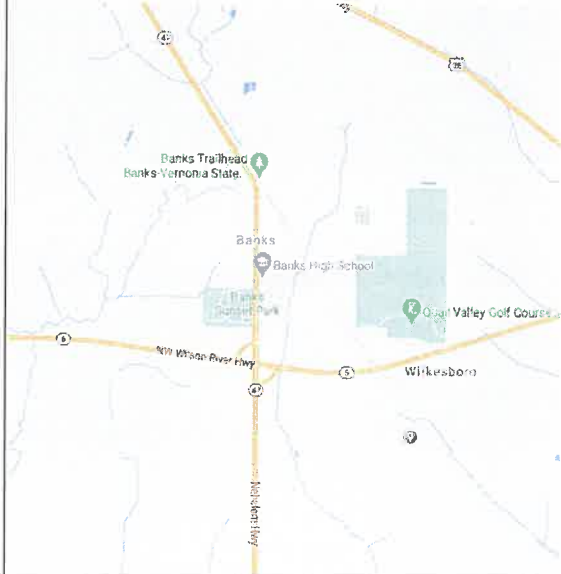
#### Project Location (Program Manager)

ROUTE NAME OR47	HIGHWAY ID 102	BEGIN MP 83.6	END MP 83.6	LOCAL STREET / NON-HIGHWAY LOCATION OR6 with OR47 Intersection
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PASTE LINK TO MAP OR PHOTO OF THE PROJECT AREA

<https://www.google.com/maps/@45.6112168,-123.1237145,14z>

CLICK IN THE FIELD BELOW TO BROWSE FOR AND INCLUDE A MAP OF THE PROJECT AREA (JPG, GIF, PNG, GIF, TIF, BMP FORMATS)



#### Problem/Opportunity/Issue Description and Need (Program Manager)

DESCRIBE

Replace Failing Illumination Components

#### Potential Solutions (Program Manager/Project Sponsor)

DESCRIBE

Lights and poles are old and fatigued and need replacing. Wiring is direct burial and is deteriorating.

#### Project Outcomes, Goals and Priorities (Program Manager/Project Sponsor)

DESCRIBE

Replace old signal components with new before imminent failure of illumination system.

#### Planned Construction Year (Program Manager/Project Sponsor)

YEAR 2024	NARRATIVE
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#### High Impact Risks (Program Manager/Project Sponsor)

RISK TITLE	DETAILED DESCRIPTION OF RISK

#### Additional Background Information (Program Manager/Project Sponsor)

DESCRIBE

If delayed too much longer, could result in lights, posts, and wiring failures.

#### Leveraging Opportunities (Project Sponsor)

DESCRIBE

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#### Cost Estimate Assumptions and Methodology (Program Manager/Project Sponsor)

CONFIDENCE LEVEL Medium	NARRATIVE Based on the estimate of the electrical manager: \$1,500,000.00
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STIP CYCLE 24-27	PROJECT NAME OR22: Meadow Creek Culvert Replacement	PROJECTWISE NO. (IF PREV. SCOPED)
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## ODOT PROJECT BUSINESS CASE OR22: Meadow Creek Culvert Replacement

☒ Initial ☐ Final

### Project Location (Program Manager)

ROUTE NAME OR 22	HIGHWAY ID 162	BEGIN MP 70.19	END MP 70.19	LOCAL STREET / NON-HIGHWAY LOCATION
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PASTE LINK TO MAP OR PHOTO OF THE PROJECT AREA

[https://www.google.com/maps/@44.5738799,-121.9923061,3a,75y,83.2h,74.38t/data=!3m7!1e1!3m5!1sK5PqpFkVH\\_aJ2-o8RfzV](https://www.google.com/maps/@44.5738799,-121.9923061,3a,75y,83.2h,74.38t/data=!3m7!1e1!3m5!1sK5PqpFkVH_aJ2-o8RfzV)

CLICK IN THE FIELD BELOW TO BROWSE FOR AND INCLUDE A MAP OF THE PROJECT AREA (JPG, GIF, PNG, GIF, TIF, BMP FORMATS)



### Problem/Opportunity/Issue Description and Need (Program Manager)

DESCRIBE

Deteriorating Reinforced concrete box culvert..

### Potential Solutions (Program Manager/Project Sponsor)

DESCRIBE

repair or replace culvert.

### Project Outcomes, Goals and Priorities (Program Manager/Project Sponsor)

DESCRIBE

Repair or replace culvert and address fish passage

### Planned Construction Year (Program Manager/Project Sponsor)

YEAR	NARRATIVE
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### High Impact Risks (Program Manager/Project Sponsor)

RISK TITLE	DETAILED DESCRIPTION OF RISK
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### Additional Background Information (Program Manager/Project Sponsor)

DESCRIBE

### Leveraging Opportunities (Project Sponsor)

DESCRIBE

### Cost Estimate Assumptions and Methodology (Program Manager/Project Sponsor)

CONFIDENCE LEVEL	NARRATIVE
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STIP CYCLE 24-27	PROJECT NAME OR240: MP 4.7 Slide Repair	PROJECTWISE NO. (IF PREV. SCOPED)
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## ODOT PROJECT BUSINESS CASE OR240: MP 4.7 Slide Repair

☒ Initial ☐ Final

### Project Location (Program Manager)

ROUTE NAME Or 240	HIGHWAY ID 151	BEGIN MP 4.7	END MP 5.0	LOCAL STREET / NON-HIGHWAY LOCATION
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PASTE LINK TO MAP OR PHOTO OF THE PROJECT AREA

CLICK IN THE FIELD BELOW TO BROWSE FOR AND INCLUDE A MAP OF THE PROJECT AREA (JPG, GIF, PNG, GIF, TIF, BMP FORMATS)



### Problem/Opportunity/Issue Description and Need (Program Manager)

DESCRIBE

Slide area requires regular maintenance every year to maintain a safe drivable surface

### Potential Solutions (Program Manager/Project Sponsor)

DESCRIBE

Possible soil nail or other repair to stop or slow down movement of the roadbed

### Project Outcomes, Goals and Priorities (Program Manager/Project Sponsor)

DESCRIBE

Reduce maintenance costs associated with repairing road surface due to the slide area

### Planned Construction Year (Program Manager/Project Sponsor)

YEAR	NARRATIVE
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### High Impact Risks (Program Manager/Project Sponsor)

RISK TITLE	DETAILED DESCRIPTION OF RISK
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### Additional Background Information (Program Manager/Project Sponsor)

DESCRIBE

### Leveraging Opportunities (Project Sponsor)

DESCRIBE

### Cost Estimate Assumptions and Methodology (Program Manager/Project Sponsor)

CONFIDENCE LEVEL	NARRATIVE
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STIP CYCLE 24-27	PROJECT NAME OR214: MP 37.5 Slide Repair	PROJECTWISE NO. (IF PREV. SCOPED)
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## ODOT PROJECT BUSINESS CASE OR214: MP 37.5 Slide Repair

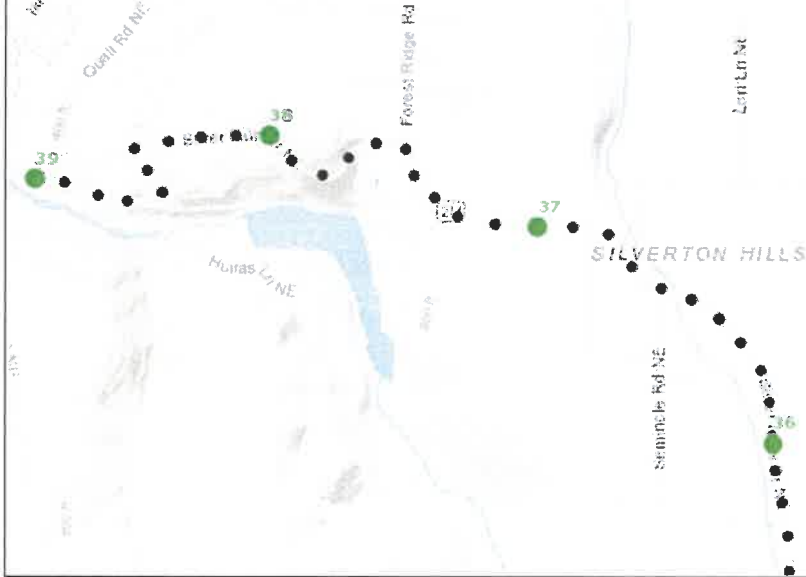
☒ Initial ☐ Final

### Project Location (Program Manager)

ROUTE NAME OR 214	HIGHWAY ID 163	BEGIN MP 37.5	END MP 38	LOCAL STREET / NON-HIGHWAY LOCATION
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PASTE LINK TO MAP OR PHOTO OF THE PROJECT AREA

CLICK IN THE FIELD BELOW TO BROWSE FOR AND INCLUDE A MAP OF THE PROJECT AREA (JPG, GIF, PNG, GIF, TIF, BMP FORMATS)



### Problem/Opportunity/Issue Description and Need (Program Manager)

DESCRIBE

Slide area requires regular maintenance every year to maintain a safe drivable surface

### Potential Solutions (Program Manager/Project Sponsor)

DESCRIBE

Possible soil nail or other repair to stop or slow down movement of the roadbed

### Project Outcomes, Goals and Priorities (Program Manager/Project Sponsor)

DESCRIBE

Reduce maintenance costs associated with repairing road surface due to the slide area

### Planned Construction Year (Program Manager/Project Sponsor)

YEAR NARRATIVE

### High Impact Risks (Program Manager/Project Sponsor)

RISK TITLE DETAILED DESCRIPTION OF RISK

### Additional Background Information (Program Manager/Project Sponsor)

DESCRIBE

### Leveraging Opportunities (Project Sponsor)

DESCRIBE

### Cost Estimate Assumptions and Methodology (Program Manager/Project Sponsor)

CONFIDENCE LEVEL NARRATIVE

STIP CYCLE 2024-27	PROJECT NAME Libby Lane Rail Crossing (Marion County)	PROJECTWISE NO. (IF PREV. SCOPED)
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## ODOT PROJECT BUSINESS CASE Libby Lane Rail Crossing (Marion County)

☒ Initial ☐ Final

### Project Location (Program Manager)

ROUTE NAME OR164, 164	HIGHWAY ID Jefferson Highway	BEGIN MP 4.6	END MP 4.6	LOCAL STREET / NON-HIGHWAY LOCATION Libby Lane
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PASTE LINK TO MAP OR PHOTO OF THE PROJECT AREA

CLICK IN THE FIELD BELOW TO BROWSE FOR AND INCLUDE A MAP OF THE PROJECT AREA (JPG, GIF, PNG, GIF, TIF, BMP FORMATS)



### Problem/Opportunity/Issue Description and Need (Program Manager)

DESCRIBE

This crossing was originally part of the upgrades to Duck Flat Road but was dropped from the project. Libby Lane, while at present is a dead end road, there is the likelihood of future development. The AADT is low, however the approaches are steep (humped). May need to improve humped crossing since adding signals and vehicles are not stopping any longer. JZ Trucking Company frequently passes over crossing with WB-65 trucks and dump trucks. The signal maintainer for UPRR stated that there have been several close calls with AMTRAK trains and JZ trucking. Train crews report trucks not stopping at the crossing.

ODOT Crossing No. C-702.20, USDOT 760079X

### Potential Solutions (Program Manager/Project Sponsor)

DESCRIBE

Proposal: Install lights and gates and improve humped crossing to standard.

### Project Outcomes, Goals and Priorities (Program Manager/Project Sponsor)

DESCRIBE

Improve safety at the rail crossing for the traveling public.

### Planned Construction Year (Program Manager/Project Sponsor) i

Provide proposed construction year and any factors considered. If it is a shelf project, identify year it will be ready for construction and type shelf into the narrative.

YEAR 2026	NARRATIVE Will need a PE agreement and right of way with UPRR which could take more time for the project schedule.
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### High Impact Risks (Program Manager/Project Sponsor)

STIP CYCLE 2024-27	PROJECT NAME Waconda Road Rail Crossing (Marion County)	PROJECTWISE NO. (IF PREV. SCOPED)
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## ODOT PROJECT BUSINESS CASE Waconda Road Rail Crossing (Marion County)

☒ Initial ☐ Final

### Project Location (Program Manager)

ROUTE NAME I-5, 001	HIGHWAY ID Pacific Highway	BEGIN MP 265.24	END MP 265.24	LOCAL STREET / NON-HIGHWAY LOCATION Waconda Rd
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PASTE LINK TO MAP OR PHOTO OF THE PROJECT AREA

CLICK IN THE FIELD BELOW TO BROWSE FOR AND INCLUDE A MAP OF THE PROJECT AREA (JPG, GIF, PNG, GIF, TIF, BMP FORMATS)



### Problem/Opportunity/Issue Description and Need (Program Manager)

DESCRIBE

Waconda Road in rural Marion County, crosses the rail line and has poor sight distances in all quadrants. This rural county road can often see drivers failing to obey the traffic stop signs. The best way to mitigate this behavior in to signalize the crossing which allows free flow without stopping until there is a train event in which the signalized crossing will activate and stop traffic.

ODOT Crossing No. 3E-061.30, USDOT 067177E

### Potential Solutions (Program Manager/Project Sponsor)

DESCRIBE

Proposal: Install lights and gates.

### Project Outcomes, Goals and Priorities (Program Manager/Project Sponsor)

DESCRIBE

Improve safety at the rail crossing for the traveling public.

### Planned Construction Year (Program Manager/Project Sponsor) i

Provide proposed construction year and any factors considered. If it is a shelf project, identify year it will be ready for construction and type shelf into the narrative.

YEAR 2026	NARRATIVE Could need right of way for roadway slopes which could take more time for the project schedule.
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### High Impact Risks (Program Manager/Project Sponsor)

RISK TITLE	DETAILED DESCRIPTION OF RISK <b>low risk</b>
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### Additional Background Information (Program Manager/Project Sponsor)





**ALL ROADS TRANSPORTATION SAFETY  
(ARTS) PROJECTS**

Program (Work Type)	Area	Project Name <i>Per ODOT Naming Convention</i>	Description	Route	Comment	#1 Comment	Pre-Scoping Estimate
			<p>Improve signal hardware at all ten (10) signalized intersections on River Road N:</p> <ul style="list-style-type: none"> <li>Change permissive green ball to permission flashing yellow arrow at six (6) signalized intersection on River Road N, including Glynbrook St N, Sam Orcutt Way NE, Sunset Ave N, Cummings Ln N, Claggett St NE, and McNary Estates Dr N.</li> </ul>				
ARTS	3	River Rd. N: Glynbrook St. to McNary Estates Dr. (Keizer)	<p>Replace doghouse signal heads with flashing yellow arrow signal heads at three (3) signalized intersections on River Road N including Sam Orcutt Way NE, Manbrin Dr NE, and Dearborn Ave NE.</p> <p>Install no pedestrian phase features with flashing yellow arrow at three (3) signalized intersections on River Road N including Sam Orcutt Way NE, Manbrin Dr NE, and Dearborn Ave NE.</p> <p>Install raised or recessed pavement markers. Install wider edge lines (widen existing edge lines from 4" to 6") on 5 corridors in Polk Co.: Corvallis Rd, Zena Rd, Falls City Rd, Airlie Rd, Ellendale Rd</p> <p>Install RREBs, crosswalks, and lighting at two locations: 1. Silverton Rd. NE between Lana Ave. NE &amp; 17th St. NE; 2. Market St. NE @ 25th St. NE.</p> <p>Install pedestrian lighting at six locations: 1. Center St. NE @ 14th St. NE; 2. Market St. NE @ 15th St. NE; 3. Sunnyside Rd. SE @ Keglers Ln.; 4. 14th St. NE @ North Salem High School; 5. 14th St. NE @ D St. NE; 6. 13th St. NE @ Court St. NE</p>	Local Roads	All the Equity Scores on this corridor	\$ 502,320	
ARTS	3	Polk County Striping & Delineation Improvements (2027)		Local Roads	All the Equity Scores within this project	\$ 849,569	
ARTS	3	City of Salem Pedestrian Crossing Enhancements (2027)		Local Roads	All the Equity Scores within this project	\$ 490,000	

The scope of the project is to replace old substandard signal heads with new signal heads with reflective backplates (I2). "Doghouse" signal heads will be retrofitted to flashing yellow left turn arrow (FYLT, I8) and No Pedestrian Phase feature (BP4) will be used as appropriate. Seven of the 19 intersections currently have left turn lanes with obsolete "doghouse" PPLT signal heads or no protected left turn phasing. These signals will be retrofitted for FYLT. ATC controllers will replace the existing obsolete signal controllers to provide the most options for improving safety, traffic operations, system monitoring and control. Specific intersection scope of work is noted below:

- Two of the FYLT intersections (Kuebler Rd & Turner Rd SE and Hawthorne Ave SE & Ryan Dr SE) are PPLT doghouse to FYLT conversions.
- Four intersections on Commercial Street (Rural, Hoyt, Boice, Vista) and Liberty St S & Vista St would add protected-permitted left turn phasing on Commercial Street/Liberty Street with FYLT. More study will be needed to determine specifically how that will operate within the coordinated signal system to adequately serve the area.

City of Salem SOUTH Signal Improvements  
(2027)

3

ARTS

Local Roads

All the Equity Scores within this project \$ 785,000



The scope of the project is to replace old standard signal heads with new signal heads with reflective backplates (I2). "Doghouse" signal heads will be retrofitted to flashing yellow left turn arrow (FYLA, I8) and No Pedestrian Phase feature (BP4) will be used as appropriate. Eight of the 19 intersections currently have left turn lanes with obsolete "doghouse" PPLT signal heads or no protected left turn phasing. These signals will be retrofitted for FYLA. ATC controllers will replace the existing obsolete signal controllers to provide the most options for improving safety, traffic operations, system monitoring and control. Specific intersection scope of work is noted below:

- At six signal locations, existing doghouse PPLT phasing will be upgraded to FYLA: Center St NE @ Willamette Town Center Entrance ("Evergreen"), Center St NE & 17th St NE, Center St NE & 17th St NE, Lancaster Dr NE & Devonshire Ave NE, Lancaster Dr NE & Beverly Ave NE, Mission St SE & Capitol St SE. Three signal locations (Lancaster at Devonshire, Beverly, Wolverine) were already designed under a previous project but were not constructed due to funding constraints.

From Silverton City limits (near Paradise Alley Rd NE) to Sublimity City limits (near Triumph Rd SE). Install ground-in shoulder rumble strips and new shoulder line striping on Cascade Highway. Install required and recommended curve warning and chevron signs according to the latest ball banking standards. Install post-mounted delineators on curves to address curve crashes at night.

Install post-mounted delineators, enhanced curve warning, recommended and required chevrons on the Howell Prairie Rd corridor.

LOCAL ROADS  
TWO SEPARATE ESTIMATES  
NEEDED

All the Equity Scores within this project \$ 750,000

Local Roads LowMed State Equity \$ 672,000

Local Roads LowMed State Equity \$ 315,000

ARTS 3 City of Salem NORTH Signal Improvements (2027)

ARTS 3 Cascade Highway SE: Silverton to Sublimity (Marion County)

ARTS 3 Howell Prairie Rd: OR99E to OR214 (Marion County)

ARTS	3	McKay Rd NE @ French Prairie Rd NE (Marion County)	Widen McKay Rd NE to provide eastbound and westbound left-turn lanes at the four-leg intersection with French Prairie Rd NE. McKay Rd NE is on the National Highway System (NHS) network, so the project will be designed according to AASHTO criteria.  Install a through-route intersection conflict warning system on the uncontrolled major approaches on McKay Rd NE. Install post-mounted flashing beacons above the stop signs for northbound and southbound traffic on French Prairie Rd NE.	Local Roads	Low State Equity	\$ 1,760,080
ARTS	3	Ehlen Rd NE @ Butteville Rd NE (Marion County)	Install a rural, single lane roundabout at the intersection of Ehlen Rd NE/Butteville Rd NE.  Install a pedestrian signal/beacon on Lancaster Dr NE between Auburn Rd and Amber St. Installation will include a refuge median, a continental crosswalk, ADA-compliant ramps and pushbuttons, advance pedestrian warning signs, and street lighting.	Local Roads	LowMed State Equity	\$ 5,370,658
ARTS	3	Marion County Pedestrian Crossing Enhancements (2027)	At the existing crosswalks located at Center St & 45th Pl and State St & 46th Ave, additional signing per ARTS countermeasure BP26 (markings and signs placed in advance of marked crosswalks to indicate where vehicles should yield or stop for pedestrians per the 2009 MUTCD) would be added to make the crosswalk more visible. Evaluate if existing illumination meets current design recommendations for marked pedestrian crossings.  Install centerline rumble strips and recessed pavement markers on River Rd NE from Parkmeadow Dr NE to French Prairie Rd NE; and French Prairie Rd NE from River Rd NE to OR-219.	Local Roads	High State Equity	\$ 552,105
ARTS	3	River Rd NE / French Prairie Rd NE: OR219 to Parkmeadow Dr NE (Marion County)		Local Roads River Rd NE continues north becoming French Prairie Rd NE	LowMed & MedHigh State Equity	\$ 441,000

ARTS	3	Yergen Rd NE / Ehlen Rd NE: OR219 to Bents Rd NE (Marion County)	<p>Install driver speed feedback signs for each travel direction at two locations along the corridor between OR-219 (River Rd NE) and Bents Rd NE. Install ground-in rumble strips on the edge line and new edge line striping.</p> <p>The project will include analysis of the horizontal curves along the roadway and installation of required and recommended curve warning signs according to the latest ball banking standards. Post-mounted delineators will be installed on curves as a countermeasure specific to reducing curve crashes at night.</p>	Local Roads Ehlen Rd turns into McKay Rd & Yergen Rd along this project corridor	All the Equity Scores EXCEPT High State Equity within this project	\$ 609,000
ARTS	3	OR18: SE Lafayette Highway to SE Ash Rd	<p>Construct roundabout at the intersection of OR-18 and SE Lafayette Hwy (OR-233). Sever west leg of Ash Rd and convert east leg to right-in / right-out.</p> <p>Install a traffic signal at the intersection of OR-99E and Lancaster Dr NE. Include the business access directly across from Lancaster Dr NE to create a 4-leg signalized intersection. Potentially realign Lancaster Dr NE to "T" up at 90 degrees with OR-99E if required to provide adequate intersection sight distance.</p> <p>Construct left turn lanes (both directions) on OR-99W at Bethel Rd. Reduce the vertical curve to the north of the intersection to ensure adequate intersection sight distance is provided after construction of the left turn lane. The project may include a slight realignment of the two Bethel Rd approaches to be directly across from each other (slightly offset right now).</p> <p>Reduce the intersection skew, create a 90 degree 4-leg intersection with increased intersection sight distance, reduce vertical curve to the west of the intersection.</p>	OR 18 Planning Estimate Available	OR-18 @ Lafayette = LowMed State Equity OR-18 @ Ash = MedHigh State Equity	\$ 6,397,000
ARTS	3	OR99E at Lancaster Dr	<p>City of Salem &amp; Marion County need to be invited to scoping team</p>	OR 99E	High State Equity ATNI Ped Score = 192.95 ATNI Bike Score = 147.59	\$ 2,086,700
ARTS	3	OR99W at Bethel Rd	<p>If not prioritized for ARTS funding, high priority for Safety Leverage (SSPF) program</p> <p>Planning Estimate Available</p> <p>Potentially desk scope (and not field scope) only to update existing estimate</p>	OR 99W	LowMed State Equity	\$ 2,629,300
ARTS	3	OR214 at Cascade Highway SE	<p>Marion County needs to be invited to the scoping team</p> <p>Planning Estimate Available</p>	OR 214	LowMed State Equity	\$ 1,436,200

THIS PROJECT INCLUDES ENHANCED CROSSWALKS (RRFBs) and intersection lighting at following listed state highway intersections. Additional site specific scope of work is noted below.

- US-101 (9) @ Makinster Rd (64.34 - 64.35) - NORTH leg (City of Tillamook) - Median island

- US-101 (9) @ Willow St (124.36) - SOUTH leg (Lincoln Beach Community) - Overhead RRFB & median island

- OR-47 (29) @ Larch Pl (34.35) - NORTH leg (City of Yamhill) ~ school Xing -

Grading/ramping between roadway and sidewalks for appropriate ADA accommodations

- US-20 (33) @ Eads St (0.32) - EAST leg (City of Newport) ~ school Xing - Median island

- OR-47 (102) @ Trellis Way (83.49) -

SOUTH leg (City of Banks) ~ school Xing - Median island & Sidewalk infill on the west side between SW Trellis Way north to Banks Sunset Park access

- OR-219 (140) @ Convent Dr (27.92) -

SOUTH leg (City of St. Paul) ~ school Xing - Sidewalk infill on the west side between Convent Dr south to McDonald Ave

Install the wrong way driving deterrents of signing and striping enhancements and channelizing islands (where appropriate) at various exit ramps on I-5 in Region 2 as a proactive approach to prevent wrong way driving at interchange off-ramps. The affected interchanges are exits 170, 172, 174, 176, 182, 188, 189, 191, 199, 209, 216, 233, 234, 235, 237, 238, 239, 242, 243, 244, 248 & 263.

Northwest Oregon pedestrian crossing enhancements (2027)

V

ARTS

I-5: Northwest Oregon wrong way driving treatments (2027)

V

ARTS

US 101  
US 101  
OR 47  
US 20  
OR 47  
OR 219  
OR 22  
OR 22

ONLY US-20 (33) location was scoped in 21-24

Potentially could be leveraged with an ADA project

Could also be partially or fully funded with Bike-Ped funding

NEED AT Rep at scoping

\$ 1,960,000

Can be desk scoped. Does NOT need field scoping.

The project only includes ramps/interchanges where there have not been any recently known construction projects in the area that could have made these enhancements.

I-5

\$ 630,000

ARTS	V	Northwest Oregon lighting & enhanced intersection warning (2027)	<p>Install enhanced regulatory, guide &amp; warning signs, striping &amp; delineation at the 8 listed intersections. Install rural intersection lighting to mitigate shading of adjacent and protected vegetation at two intersections noted below.</p> <p>OR47 (29) @ Scoggins Valley Rd (23.80)  OR99E (81) @ Keene Rd (MP 37.14)  OR99E (81) @ Perkins Rd (42.78) - install intersection lighting  OR99W (91) @ Durham Ln (39.93)  OR99W (91) @ Amity-Dayton Hwy Merge (43.38) - also evaluate for wrong way driving signing &amp; striping treatments  OR202 (102) @ Fifth St (1.52) - also evaluate guide signing as this is adjacent to a highway to highway connection  OR221 (150) @ Wheatland Rd (9.55)  OR221 (150) @ Zena Rd (14.98) - Install intersection lighting, replace overhead flashing beacon with post mounted beacons</p> <p>Install enhanced regulatory, guide &amp; warning signs, striping, delineation and splitter islands at the 9 listed <b>skewed</b> intersections. Where feasible, "T" up the Stop approaches at the intersections with striping and the splitter island placement.  US101 (9) @ Hobsonville Point Dr (57.52)  US101 (9) @ Nielsen Rd / McCormick Lp (67.63)  US30 (92) @ Maritime Rd / Nimitz (95.08)  OR47 (29) @ Spring Hill Rd (22.31)  OR47 (29) @ OR99W (42.43)  OR99E (81) @ 54th Ave (40.75)  US20 (16) @ Cascade Dr / Old Santiam (17.72)  OR223 (191) @ OR194 / Bridgeport Rd (9.95)  OR58 (18) @ Rattlesnake Rd (8.55)  OR22 (162) @ Fern Ridge Rd SE (14.30)</p>	<p>OR 47  OR 99E  OR 99E  OR 99W  OR 99W  OR 47  OR 221  OR 221</p> <p>Only in Areas 1 &amp; 3</p>	\$ 798,000
ARTS	V	Northwest Oregon enhanced rural intersection warning (2027)	<p>US 101  OR 101  US 30  OR 47  OR 47  OR 99E  US 20  OR 223  OR 58  OR 22</p>	<p>Can be desk scoped. Does NOT need field scoping.  Eligible for Safety Leverage (SSPF) program</p>	\$ 511,000

ARTS	V	Vehicle Activated Warning Systems (2027) (Lane, Marion & Yamhill Counties)	<p>Install through activated warning system's (TRAWS) at the following three, skewed intersections:</p> <ol style="list-style-type: none"> <li>OR-126E (Hwy #15) at Deerhorn (MP 11.32) (Area 5)</li> <li>OR-18 (Hwy #39) at Red Prairie (MP 31.66) (Area 3)</li> <li>OR-213 (Hwy #160) @ Mt. Angel-Scotts Mills Rd (MP 24.77) (Area 3)</li> </ol> <p>Install recommended and required chevron signs on horizontal curves at the below listed highway segments. Also included is the cost to replace curve warning speed riders to 2009 MUTCD standard and install roadway departure signing enhancements (per the ODOT Roadway Departure Implementation Plan) for curves with a higher than expected number of crashes.</p>	<p>ONLY Deerhorn and Red Prairie locations included in prior scoping effort</p> <p>Only in Area 3 &amp; 5</p> <p>Eligible for Safety Leverage (SSPF) program</p>	\$ 1,784,100
ARTS	V	Curve warning upgrades (2027) (Clatsop, Lincoln & Polk Counties)	<p>Hwy # 033 MP 0.00 to 56.80 (cut from K20193)</p> <p>Hwy # 046 MP 0.04 to 19.03 (cut from K20189)</p> <p>Hwy # 102 MP 0.00 to 46.14 (cut from K20189)</p> <p>Hwy # 103 MP 0.00 to 9.02 (cut from K20189)</p> <p>Hwy # 131 MP 0.00 to 9.08 (cut from K20189)</p> <p>Hwy # 181 MP -0.21 to 31.24 (portions cut from K20193)</p> <p>Hwy # 189 MP 0.00 to 4.32 (cut from K20193)</p> <p>Hwy # 191 MP 0.00 to 31.40 (cut from K20193)</p> <p>Hwy # 194 MP 0.00 to 7.56 (cut from K20193)</p>	<p>Can be desk scoped. Does NOT need field scoping.</p> <p>Clatsop, Lincoln, Polk Counties only</p> <p>Eligible for Safety Leverage (SSPF) program</p>	\$ 2,898,000

ARTS	V	Guardrail installations (2027) (Clatsop, Lane & Yamhill Counties)	<p>Install new guardrail at the following 7 locations:</p> <ul style="list-style-type: none"> <li>- OR-126 (15) between MP 29.83 - 29.92 on both sides of the highway (north &amp; south) (Area 5) - <i>MedHigh State Equity</i></li> <li>- OR-126 (62) between MP 23.00 - 23.17 on the northeast side of the highway (Area 5) - <i>LowMed State Equity</i></li> <li>- OR-99W (91) between MP 26.93 - 27.08 on both sides of the highway (northwest &amp; southeast) (Area 3) - <i>LowMed State Equity</i></li> <li>- Install bridge end guardrail treatments at the following 4 bridge locations on Little Nestucca River Hwy 130: MP 4.15, MP 5.97, MP 5.11, MP 7.55 (Area 1) - <i>High State Equity</i></li> </ul> <p>Install HFST on the three curves listed below in Region 2 with a pattern of wet pavement crashes. <b>Also install static flashers on curve warning signs.</b> The project locations may also benefit from tree trimming that can be identified and estimated at scoping, if applicable. Where there is an oil mat, replace with standard pavement cross section.</p>	<p>NEED a bridge rep from HQ for scoping</p> <p>OR 99W scoping</p> <p>OR 126 Eligible for Safety Leverage (SSPF) funding</p> <p>OR 126 Only OR 126 (15) location was scoped in 2124_00374</p> <p>OR 130</p>	\$ 2,708,000
ARTS	V	Curve treatments (2027) (Clatsop, Polk & Yamhill Counties)	<p>Hwy #9 MP 27.65 - 27.74 (Area 1) - <i>MedHigh State Equity</i></p> <p>Hwy # 32 MP 23.79 - 23.88 (Area 3) - <i>High State Equity</i></p> <p>Hwy # 155 MP 6.03 - 6.12 (Area 3) - <i>LowMed State Equity</i></p>	<p>NEED a pavement rep for scoping</p> <p>US 101</p> <p>OR 22 Only in Areas 1 &amp; 3</p> <p>OR 233 Only OR 233 (155) location was scoped in 2124_00377</p>	\$ 1,560,075
ARTS	3	OR22: Kings Valley Highway	<p>Improve intersection safety by reconfiguring the roadways including building a roundabout at Kings Valley Highway/Smithfield Road and realigning Perrydale Road into Smithfield Road for the safety of the traveling public.</p>	<p>OR 22</p>	\$ 3,500,000

No scoping required. The roundabout has been fully funded in 21-24 ARTS. The additional Perrydale realignment has been scoped and PE/ROW fully funded. This is to fully fund the CN phase of the additional Perrydale realignment scope of work with SSPF.

ARTS	3	River Rd NE @ Quinaby Rd NE / Clear Lake Rd NE (Marion County)	<p>TWO SEPARATE PROJECT PROPOSALS needing two separate estimates:</p> <ol style="list-style-type: none"> <li>1. Replace all way stop with signal with left turn lanes</li> <li>2. Replace all way stop with roundabout</li> </ol> <p>For the listed corridors and with aging drivers in mind, upgrade and enhance substandard striping and delineation. Update and enhance regulatory, warning and guide signs and remove unnecessary and substandard signs that do not accommodate aging drivers</p> <p>Install recommended and required chevron signs on horizontal curves at the below listed highway segments. Also included is the cost to replace curve warning speed riders to 2009 MUTCD standard and install roadway departure signing enhancements (per the ODOT Roadway Departure Implementation Plan) for curves with a higher than expected number of crashes.</p>	US 101 US 101 US 101 OR-58 OR-22 US-20 OR-18 US-26	<p>LOCAL ROADS</p> <p>TWO SEPARATE ESTIMATES NEEDED</p> <p>SSPF - State Safety Leverage money from HB2017 Can be desk scoped. Does NOT need field scoping.</p> <p>SSPF - State Safety Leverage money from HB2017 Can be desk scoped. Does NOT need field scoping.</p>	<p>\$ 2,126,600</p> <p>\$ 1,200,000</p> <p>\$ 2,000,000</p>
ARTS	V	Northwest Oregon curve warning upgrades (2027)				
ARTS	V	Northwest Oregon corridor signing upgrades (2027)				



STIP CYCLE 2024-2027	PROJECT NAME River Rd N: McNary Estates Dr. - Glynbrook St. (Keizer)	PROJECTWISE NO. (IF PREV. SCOPED)
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## ODOT PROJECT BUSINESS CASE

### River Rd N: McNary Estates Dr. - Glynbrook St. (Keizer)

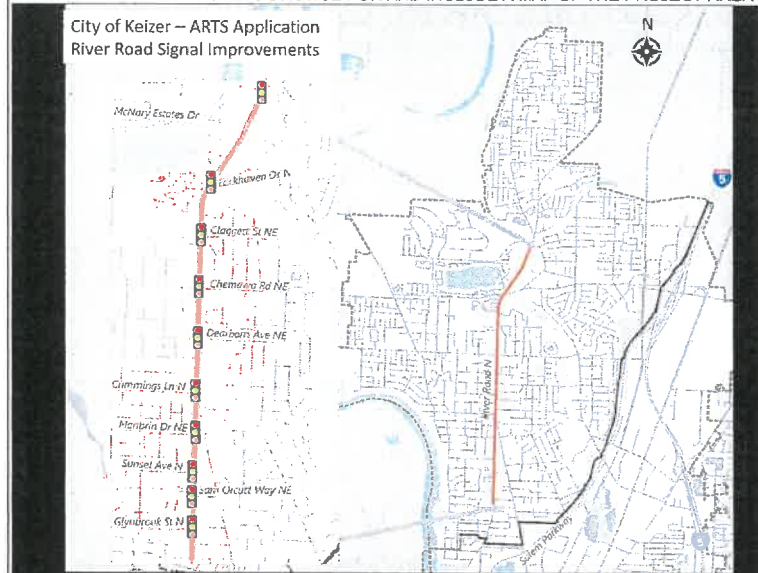
☒ Initial ☐ Final

#### Project Location (Program Manager)

ROUTE NAME	HIGHWAY ID	BEGIN MP	END MP	LOCAL STREET / NON-HIGHWAY LOCATION
LOCAL ROAD	N/A (I2 & I12)	N/A	N/A	River Rd & Glynbrook St
LOCAL ROAD	N/A (I2, I12, I8 & BP4)	N/A	N/A	River Rd & Sam Orcutt Way
LOCAL ROAD	N/A (I2 & I12)	N/A	N/A	River Rd & Sunset Ave
LOCAL ROAD	N/A (I2, I8 & BP4)	N/A	N/A	River Rd & Manbrin Dr
LOCAL ROAD	N/A (I2 & I12)	N/A	N/A	River Rd & Cummings Ln
LOCAL ROAD	N/A (I2, I8 & BP4)	N/A	N/A	River Rd & Dearborn Ave
LOCAL ROAD	N/A (I2)	N/A	N/A	River Rd & Chemawa Rd
LOCAL ROAD	N/A (I2)	N/A	N/A	River Rd & Claggett St
LOCAL ROAD	N/A (I2)	N/A	N/A	River Rd & Lockhaven Dr
LOCAL ROAD	N/A (I2 & I12)	N/A	N/A	River Rd & McNary Estates Dr

PASTE LINK TO MAP OR PHOTO OF THE PROJECT AREA

CLICK IN THE FIELD BELOW TO BROWSE FOR AND INCLUDE A MAP OF THE PROJECT AREA (JPG, GIF, PNG, GIF, TIF, BMP FORMATS)



#### Problem/Opportunity/Issue Description and Need (Program Manager)

##### DESCRIBE

The systemic analysis approach refers to a process of identifying locations and/or corridors with high-risk roadway features correlated with specific crash types or severities. This approach provides a more comprehensive method for safety planning and implementation that supplements and complements traditional hotspot analysis. The approach also helps broaden traffic safety efforts and consider risk as well as crash history when identifying where to make low-cost safety improvements. These sites are selected from ODOT's list of priority corridors for Intersection crashes.

This project seeks to improve safety at intersections along River Rd. There were a total of 229 crashes at the ten (10) identified signalized intersection on River Road N. Of these crashes, three (3) were fatal, nine (9) had serious injuries, 29 had minor injuries, 94 had possible injuries, and 94 were property damage only. The predominant crash types are rear-end, angle, left-turn, and pedestrian-involved.

MAP-21 & FAST Act requires states to establish targets for reducing fatalities and serious injuries and to make significant progress towards those targets. **Currently, Oregon is not meeting or making significant progress on any of the five safety targets.** The risk of not doing this project perpetuates the likelihood that we will continue to not

meet or make significant progress towards future safety performance targets set in the Transportation Safety Action Plan (TSAP).

#### **Potential Solutions** (Program Manager/Project Sponsor)

##### DESCRIBE

The project includes improving signal hardware (countermeasure I2) at all ten (10) signalized intersections on River Road N including Glynbrook St N, Sam Orcutt Way NE, Sunset Ave N, Manbrin Dr NE, Cummings Ln N, Dearborn Ave NE, Chemawa Rd NE, Claggett St NE, Lockhaven Dr N, and McNary Estates Dr N.

Change permissive green ball to permission flashing yellow arrow (countermeasure I12) at six (6) signalized intersection on River Road N, including Glynbrook St N, Sam Orcutt Way NE, Sunset Ave N, Cummings Ln N, Claggett St NE, and McNary Estates Dr N.

Replace doghouse signal heads with flashing yellow arrow signal heads (countermeasure I8) at three (3) signalized intersections on River Road N including Sam Orcutt Way NE, Manbrin Dr NE, and Dearborn Ave NE.

Install no pedestrian phase features with flashing yellow arrow (countermeasure BP4) at three (3) signalized intersections on River Road N including Sam Orcutt Way NE, Manbrin Dr NE, and Dearborn Ave NE.

#### **Project Outcomes, Goals and Priorities** (Program Manager/Project Sponsor)

##### DESCRIBE

The primary purpose is to reduce fatal and serious injury crashes therefore, the countermeasures selected for this location are chosen on the basis of the types of crashes and contributing factors known to exist.

These countermeasures are expected to reduce all crashes by at least 25%. The proposed countermeasures would target the signalized intersection related crashes (countermeasure I2) and the turning related crashes for both vehicles and pedestrians (countermeasures I12, I8, and BP4).

Improving signal visibility is a proven countermeasure to address all crash types at signalized intersections, and conversion to FYA reduces the risk of turning related crashes (proven to result in fewer "false positive" reactions compared to the green ball indication). Although not all intersections experienced pedestrian crashes, pedestrian activity across the City is high and pedestrian crash risk is similar at all locations. Installing the no ped phase feature with FYA allows the pedestrian to cross the approach entirely before the flashing yellow arrow indication is displayed, thereby reducing potential vehicle to pedestrian conflicts.

#### **Planned Construction Year** (Program Manager/Project Sponsor)

##### YEAR

2027

##### NARRATIVE

Assume latest construction year for the most conservative estimate at scoping.

#### **High Impact Risks** (Program Manager/Project Sponsor)

##### RISK TITLE

HSIP Program Rules

##### DETAILED DESCRIPTION OF RISK

The Safety Program utilizes Federal Highway Safety Improvement Program (HSIP) funds that require a data driven, strategic approach to improving highway safety on all public roads that focus on reducing fatal and serious injuries. Any elements included in the project scope and paid for with Safety Funds must be shown to be cost effective treatments that reduce fatal and serious injuries using a data driven approach to identify locations and measures. This project was applied for and prioritized based on the roundabout solution so this scope of work cannot change.

This project was applied for and prioritized based on the signal enhancement solutions listed above so this scope of work cannot change unless it's already in place from recent maintenance work.

The Federal Highway Safety Improvement Program (HSIP) currently requires a 7.78% cash match for projects.

##### RISK TITLE

No ROW Phase

##### DETAILED DESCRIPTION OF RISK

It is assumed this is a single function project with no ROW acquisitions or phase. If ROW is found to be needed, the scope of work triggering ROW will be removed from the project.

STIP CYCLE 2024-2027	PROJECT NAME Polk County Striping & Delineation Improvements (2027)	PROJECTWISE NO. (IF PREV. SCOPED)
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## ODOT PROJECT BUSINESS CASE

### Polk County Striping & Delineation Improvements (2027)

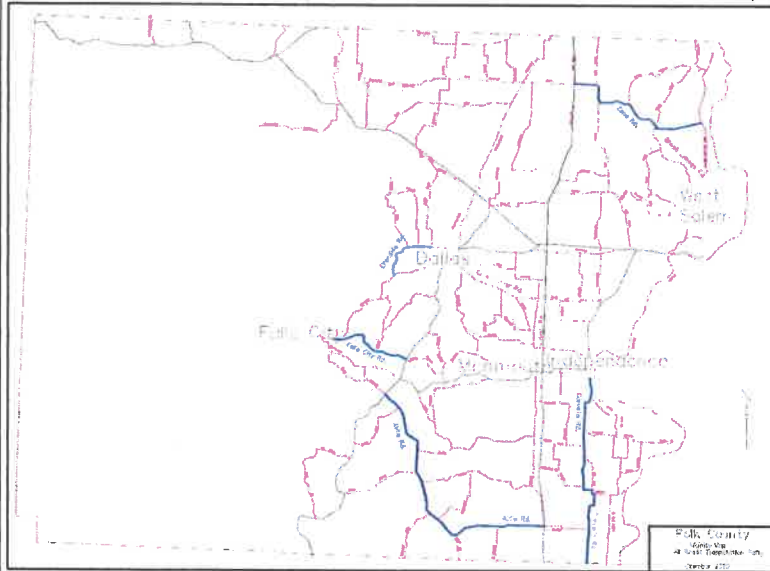
☒ Initial ☐ Final

#### Project Location (Program Manager)

ROUTE NAME	HIGHWAY ID	BEGIN MP	END MP	LOCAL STREET / NON-HIGHWAY LOCATION
LOCAL ROAD	N/A	N/A	N/A	Corvallis Rd
LOCAL ROAD	N/A	N/A	N/A	Zena Rd
LOCAL ROAD	N/A	N/A	N/A	Falls City Rd
LOCAL ROAD	N/A	N/A	N/A	Airlie Rd
LOCAL ROAD	N/A	N/A	N/A	Ellendale Rd

PASTE LINK TO MAP OR PHOTO OF THE PROJECT AREA

CLICK IN THE FIELD BELOW TO BROWSE FOR AND INCLUDE A MAP OF THE PROJECT AREA (JPG, GIF, PNG, GIF, TIF, BMP FORMATS)



#### Problem/Opportunity/Issue Description and Need (Program Manager)

DESCRIBE

The systemic analysis approach refers to a process of identifying locations and/or corridors with high-risk roadway features correlated with specific crash types or severities. This approach provides a more comprehensive method for safety planning and implementation that supplements and complements traditional hotspot analysis. The approach also helps broaden traffic safety efforts and consider risk as well as crash history when identifying where to make low-cost safety improvements.

On the identified high-crash roadways, more than 70% of non-intersection crashes (i.e., those along segments) are roadway departure. The identified roads experienced 132 crashes in the study period. Nearly half of all crashes in the study period (63 of 132) occurred in dark/dusk/dawn conditions.

MAP-21 & FAST Act requires states to establish targets for reducing fatalities and serious injuries and to make significant progress towards those targets. **Currently, Oregon is not meeting or making significant progress on any of the five safety targets.** Over half of our fatal and serious injury crashes in Oregon are roadway departure related and this proposed project is intended to mitigate these crash patterns in a cost-effective approach. The risk of not doing this project perpetuates the likelihood that we will continue to not meet or make significant progress towards future safety performance targets set in the Transportation Safety Action Plan (TSAP).

#### Potential Solutions (Program Manager/Project Sponsor)

DESCRIBE

Install raised or recessed pavement markers and install wider edge lines (widen existing edge lines from 4" to 6") on 5 corridors in Polk Co.: Corvallis Rd, Zena Rd, Falls City Rd, Airlie Rd, Ellendale Rd

**Project Outcomes, Goals and Priorities (Program Manager/Project Sponsor)**

DESCRIBE
<p>The primary purpose is to reduce fatal and serious injury crashes therefore, the countermeasures selected for this location are chosen on the basis of the types of crashes and contributing factors known to exist.</p> <p>Raised or recessed pavement markers make the striped pavement markings much more prominent in adverse weather conditions, helping a driver to safely navigate the path of the roadway.</p> <p>Wider edgelines increase visibility for drivers. They improves safety by keeping drivers in their designated travel lane and allows more time for drivers to focus on critical driving tasks.</p> <p>Rural highways typically have a pattern of roadway departure crashes as a result of various factors. Since rural highways tend to have higher posted speeds, there is a higher chance that a crash will end up as a fatal or serious injury crash.</p>

**Planned Construction Year (Program Manager/Project Sponsor)**

YEAR	NARRATIVE
2027	Assume latest construction year for the most conservative estimate at scoping.

**High Impact Risks (Program Manager/Project Sponsor)**

RISK TITLE	DETAILED DESCRIPTION OF RISK	
HSIP Program Rules	<p><b>The Safety Program utilizes Federal Highway Safety Improvement Program (HSIP) funds that require a data driven, strategic approach to improving highway safety on all public roads that focus on reducing fatal and serious injuries. Any elements included in the project scope and paid for with Safety Funds must be shown to be cost effective treatments that reduce fatal and serious injuries using a data driven approach to identify locations and measures.</b></p> <p><b>This project was applied for and prioritized based on the installation of pavement markers and wider edge lines so this scope of work cannot change.</b></p> <p><b>The Federal Highway Safety Improvement Program (HSIP) currently requires a 7.78% cash match for projects.</b></p>	+
RISK TITLE	DETAILED DESCRIPTION OF RISK	
No ROW Phase	<p><b>It is assumed this is a single function project with no ROW acquisitions or phase. The scope of work is only considered within the existing pavement cross section.</b></p>	+
RISK TITLE	DETAILED DESCRIPTION OF RISK	
Impacts of Wider Edgeline Pavement Markings on Lane/Shoulder Widths	<p><b>With the County representative, determine and document the impact on wider edgeline pavement markings to existing travel lane and shoulder widths (if any).</b></p>	+

**Additional Background Information (Program Manager/Project Sponsor)**

DESCRIBE
<p>Polk County representatives must be present at scoping.</p> <p>Most of the roads included in this application are roads that are receiving ARTS funds from a prior application for horizontal curve warning sign upgrades and enhanced (higher visibility) striping. The overlap in scope would be the edge line striping.</p> <p>EQUITY from ArcGIS Statewide Equity Layer: All Equity layers represented</p>

**Leveraging Opportunities (Project Sponsor)**

DESCRIBE
None identified.

**Cost Estimate Assumptions and Methodology (Program Manager/Project Sponsor)**

CONFIDENCE LEVEL	NARRATIVE
Medium	This proposed project estimate is only a Planning Level cost estimate utilizing the statewide ARTS cost estimating tool.



STIP CYCLE 2024-2027	PROJECT NAME City of Salem Pedestrian Crossing Enhancements (2027)	PROJECTWISE NO. (IF PREV. SCOPED)
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## ODOT PROJECT BUSINESS CASE

### City of Salem Pedestrian Crossing Enhancements (2027)

☒ Initial ☐ Final

#### Project Location (Program Manager)

ROUTE NAME	HIGHWAY ID	BEGIN MP	END MP	LOCAL STREET / NON-HIGHWAY LOCATION
LOCAL ROAD	N/A (RRFB, median island, lighting)	N/A	N/A	Silverton Rd NE: Lana Ave NE to 17th St NE
LOCAL ROAD	N/A (RRFB, median island, lighting)	N/A	N/A	Market St NE & 25th St NE
LOCAL ROAD	N/A (lighting infill)	N/A	N/A	Center St NE & 14th St NE
LOCAL ROAD	N/A (lighting infill)	N/A	N/A	Market St NE & 15th St NE
LOCAL ROAD	N/A (lighting infill)	N/A	N/A	14th St NE (North Salem High School)
LOCAL ROAD	N/A (lighting infill)	N/A	N/A	14th St NE & D Street NE
LOCAL ROAD	N/A (lighting infill)	N/A	N/A	13th St NE & Court St NE
LOCAL ROAD	N/A (lighting infill)	N/A	N/A	Sunnyside Rd & Keglers Ln

PASTE LINK TO MAP OR PHOTO OF THE PROJECT AREA

CLICK IN THE FIELD BELOW TO BROWSE FOR AND INCLUDE A MAP OF THE PROJECT AREA (JPG, GIF, PNG, GIF, TIF, BMP FORMATS)



#### Problem/Opportunity/Issue Description and Need (Program Manager)

DESCRIBE

The systemic analysis approach refers to a process of identifying locations and/or corridors with high-risk roadway features correlated with specific crash types or severities. This approach provides a more comprehensive method for safety planning and implementation that supplements and complements traditional hotspot analysis. The approach also helps broaden traffic safety efforts and consider risk as well as crash history when identifying where to make low-cost safety improvements.

This project is comprised of various locations that are in need of pedestrian-level improvements. Each location was identified through the City's Safer Crossings Program. The Safer Crossings Program is a community-driven process for requesting and implementing new or improved bicycle and pedestrian street crossings in Salem. This program was designed and implemented in collaboration with neighborhood associations, Salem-Keizer Public Schools, ODOT, Safe Routes to School, City of Salem Police Department, and Cherriots. All of the locations have identified and data driven risks (which could include crash history but is not limited to it) to pedestrian and bicycle safety.

At the 6 proposed locations for additional pedestrian/bicycle overhead lighting, there were 10 pedestrian/bicycle crashes between 2014-2018, and one recent fatality that is outside this crash period used for ARTS. Six of the 10 crashes occurred in dark/dusk conditions, as did the recent fatality.

MAP-21 & FAST Act requires states to establish targets for reducing fatalities and serious injuries and to make significant progress towards those targets. **Currently, Oregon is not meeting or making significant progress on any of the five safety targets.** In addition, pedestrian crashes are continuing to increase in Oregon and nationwide. The risk of not doing this project perpetuates the likelihood that we will continue to not meet or make significant progress towards future safety performance targets set in the Transportation Safety Action Plan (TSAP).

#### Potential Solutions (Program Manager/Project Sponsor)

##### DESCRIBE

This project includes enhanced crosswalks (new or existing) including median islands, RRFBs, and/or intersection lighting at the following listed locations. Additional site specific scope of work is noted below.

Two (2) new marked crossing/crosswalk locations with a median island, RRFB and overhead lighting:

- Silverton Road NE between Lana Ave. NE and 17th St. NE
- Market Street NE @ 25th Street NE

Install sufficient lighting (lighting infill) at six (6) listed locations below that already contain marked pedestrian crosswalks:

- Center Street NE @ 14th Street NE
- Market Street NE @ 15th Street NE
- Sunnyside Road SE @ Keglers Lane
- 14th Street NE (North Salem High School)
- 14th Street NE @ D Street NE
- 13th Street NE @ Court Street NE

#### Project Outcomes, Goals and Priorities (Program Manager/Project Sponsor)

##### DESCRIBE

The primary purpose is to reduce the risk of pedestrian related fatal and serious injury crashes therefore, the countermeasures selected for this location are chosen on the basis of the types of crashes and contributing risk factors known to exist.

The projects described in this application were all identified through the Safer Crossings Program, which is a tool for the public to request improved pedestrian crossings. Several of the locations are adjacent to bus stops, one is adjacent to a high school, and another is adjacent to a medical facility that specializes in addiction issues and sees a high amount of foot traffic. All locations are on City roads.

On multi-lane roads, there is a need to provide additional notification to motorists of the presence of crossing pedestrians or where there are insufficient gaps in vehicle traffic to provide a pedestrian a crossing opportunity. RRFB's can enhance safety by reducing crashes between vehicles and pedestrians by increasing driver awareness of potential pedestrian conflicts. With a pedestrian refuge island, pedestrians are able to more safely make a two-stage crossing by having to only look for a gap in one direction of traffic at a time while being protected by a concrete curbed island.

Intersection lighting allows for greater visibility of the intersection. Roadway users and features are more visible and help all users determine a safe path through the intersection. Intersection lighting is especially beneficial to illuminate pedestrians and aid in visibility of the intersection especially for aging road users.

#### Planned Construction Year (Program Manager/Project Sponsor)

YEAR	NARRATIVE
2027	Assume latest construction year for the most conservative estimate at scoping.

#### High Impact Risks (Program Manager/Project Sponsor)





**Oregon  
Department  
of Transportation**

☒ Initial    ☐ Final

ROUTE NAME	HIGHWAY ID	BEGIN MP	END MP	LOCAL STREET / NON-HIGHWAY LOCATION
LOCAL ROAD	N/A (I2 & BP4)			Liberty Rd S & Skyline Rd S
LOCAL ROAD	N/A (I2, I8 (doghouse to FYLTA) & BP4)			Kuebler Rd & Turner Rd SE
LOCAL ROAD	N/A (I2 & BP4)			Liberty Rd S & Madrona Ave SE
LOCAL ROAD	N/A (I2)			Madrona Ave SE & Peck Ave SE
LOCAL ROAD	N/A (I2, I8 (FYLTA on Liberty) & BP4)			Liberty Rd S & Vista Ave SE
LOCAL ROAD	N/A (I2, I8 (FYLTA on Commercial) & BP4)			Commercial St SE & Vista Ave SE
LOCAL ROAD	N/A (I2)			Fairview Ave SE & High St SE
LOCAL ROAD	N/A (I2, I8 (FYLTA on Commercial) & BP4)			Commercial St SE & Boice St S
LOCAL ROAD	N/A (I2, I8 (FYLTA on Commercial) & BP4)			Commercial St SE & Hoyt St SE
LOCAL ROAD	N/A (I2, I8 (FYLTA on Commercial) & BP4)			Commercial St SE & Rural Ave SE
LOCAL ROAD	N/A (I2 & BP4)			25th St SE & McGilchrist St SE
LOCAL ROAD	N/A (I2 & BP4)			Liberty St SE & Myers St SE
LOCAL ROAD	N/A (I2 & BP4)			Commercial St SE & Myers St S
LOCAL ROAD	N/A (I2 & BP4)			Commercial St SE & Owens St S
LOCAL ROAD	N/A (I2 & BP4)			Liberty St SE & Owens St S
LOCAL ROAD	N/A (I2)			Liberty St S & Salem Heights Ave S
LOCAL ROAD	N/A (I2 & BP4)			Liberty St S & Boone Rd S
LOCAL ROAD	N/A (I2 & I8 (FYLTA on SB 12th St) & BP4)			12th St SE & Ewald Ave SE
LOCAL ROAD	N/A (I2, I8 (doghouse to FYLTA) & BP4)			Hawthorne Ave SE & Ryan Dr SE

[https://www.google.com/maps/d/u/0/edit?mid=1Va\\_slfbaUbfadnmqB565PjSS-3sG4sgo&usp=sharing](https://www.google.com/maps/d/u/0/edit?mid=1Va_slfbaUbfadnmqB565PjSS-3sG4sgo&usp=sharing)

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DESCRIBE  
The systemic analysis approach refers to a process of identifying locations and/or corridors with high-risk roadway features correlated with specific crash types or severities. This approach provides a more comprehensive method for

safety planning and implementation that supplements and complements traditional hotspot analysis. The approach also helps broaden traffic safety efforts and consider risk as well as crash history when identifying where to make low-cost safety improvements.

The City of Salem has been taking a systemic approach to upgrade all existing protected-permitted left turn signal to FYLTA. The FYLTA standard allows more options for traffic engineers to improve traffic flow and safety. The complete phasing out of the obsolete "doghouse" left turn style operation provides overall system consistency that improves driver understanding and overall safety. Within the project area, there are crash patterns that indicate these solutions will be quite effective. Liberty and Madrona intersection has a high crash rate with many rear end crashes on Liberty Road. The left turn and pedestrian crashes on Commercial Street support the retrofit of these signals for FYLTA (on Commercial Street) and features that will reduce the conflict between left turning vehicles and pedestrians.

MAP-21 & FAST Act requires states to establish targets for reducing fatalities and serious injuries and to make significant progress towards those targets. **Currently, Oregon is not meeting or making significant progress on any of the five safety targets.** In addition, pedestrian crashes are continuing to increase in Oregon and nationwide. The risk of not doing this project perpetuates the likelihood that we will continue to not meet or make significant progress towards future safety performance targets set in the Transportation Safety Action Plan (TSAP).

#### Potential Solutions (Program Manager/Project Sponsor)

##### DESCRIBE

The scope of the project is to replace old substandard signal heads with new signal heads with reflective backplates (I2). "Doghouse" signal heads will be retrofitted to flashing yellow left turn arrow (FYLTA, I8) and No Pedestrian Phase feature (BP4) will be used as appropriate. Seven of the 19 intersections currently have left turn lanes with obsolete "doghouse" PPLT signal heads or no protected left turn phasing. These signals will be retrofitted for FYLTA. ATC controllers will replace the existing obsolete signal controllers to provide the most options for improving safety, traffic operations, system monitoring and control. Specific intersection scope of work is noted below:

- Two of the FYLTA intersections (Kuebler Rd & Turner Rd SE and Hawthorne Ave SE & Ryan Dr SE) are PPLT doghouse to FYLTA conversions.
- Four intersections on Commercial Street (Rural, Hoyt, Boice, Vista) and Liberty St S & Vista St would add protected-permitted left turn phasing on Commercial Street/Liberty Street with FYLTA. More study will be needed to determine specifically how that will operate within the coordinated signal system to adequately serve the access needs of the neighborhood and the through traffic demands of arterial while providing increasing safety for vehicles and pedestrians.
- SB 12th at Ewald will have protected-permitted left turn phasing with FYLTA installed. Future engineering evaluation and coordination with neighborhoods and schools will be help determine how the FYLTA and associated pedestrian safety features would be used.

#### Project Outcomes, Goals and Priorities (Program Manager/Project Sponsor)

##### DESCRIBE

The primary purpose is to reduce fatal and serious injury crashes therefore, the countermeasures selected for this location are chosen on the basis of the types of crashes and contributing factors known to exist.

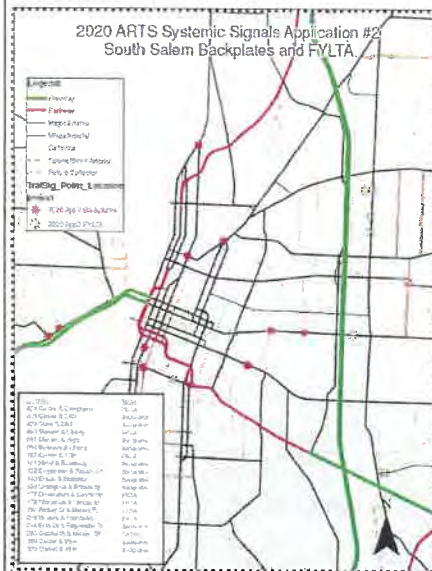
These improvements will address the overall crash rate, left turn crashes and pedestrian crashes. Reducing the overall crash rate generally will reduce the frequency of more serious crashes. Pedestrian crashes are more likely to be serious or fatal and the FYLTA features such as the No Pedestrian Phase feature and others that can reduce vehicle/ pedestrian conflicts will reduce the likelihood of fatal and serious pedestrian related crashes.

Improving signal visibility is a proven countermeasure to address all crash types at signalized intersections, and conversion to FYA reduces the risk of turning related crashes (proven to result in fewer "false positive" reactions compared to the green ball indication). Although not all intersections experienced pedestrian crashes, pedestrian activity across the City is high and pedestrian crash risk is similar at all locations.

Previous NCHRP studies (493 and Web-Only Document 123) have proven that the flashing yellow arrow is more intuitive with fewer "false positive" reactions as compared to the green ball indication on the doghouse signal head, resulting in a reduction of left turn crashes by 25%.

☒ Initial    ☐ Final

ROUTE NAME	HIGHWAY ID	BEGIN MP	END MP	LOCAL STREET / NON-HIGHWAY LOCATION
LOCAL ROAD	N/A (I2, I8 (doghouse to FYLTA) & BP4)	N/A	N/A	Center St NE @ Willamette Town Center
LOCAL ROAD	N/A (I2 & BP4)	N/A	N/A	Center St NE & Park Ave NE
LOCAL ROAD	N/A (I2 & BP4)	N/A	N/A	Center St NE & 24th St NE
LOCAL ROAD	N/A (I2, I8 (doghouse to FYLTA) & BP4)	N/A	N/A	Center St NE & 17th St NE
LOCAL ROAD	N/A (I2 & BP4)	N/A	N/A	45th Ave NE & Market St NE / Swegle
LOCAL ROAD	N/A (I2)	N/A	N/A	Liberty St SE & Bellevue St SE (City Hall)
LOCAL ROAD	N/A (I2)	N/A	N/A	Broadway St / River Rd N & Shangri-la
LOCAL ROAD	N/A (I2, I8 + Signal Rebuild & BP4)	N/A	N/A	Broadway St & Hood St NE
LOCAL ROAD	N/A (I2)	N/A	N/A	Edgewater St NW & Rosemont Ave NW
LOCAL ROAD	N/A (I2)	N/A	N/A	Edgewater St NW & Eola Dr NW
LOCAL ROAD	N/A (I2)	N/A	N/A	State St & 23rd St SE
LOCAL ROAD	N/A (I2)	N/A	N/A	Summer St NE & Fairground Rd NE (aka)
LOCAL ROAD	N/A (I2, I8 (doghouse to FYLTA) & BP4)	N/A	N/A	Lancaster Dr NE & Wolverine St NE
LOCAL ROAD	N/A (I2, I8 (doghouse to FYLTA) & BP4)	N/A	N/A	Lancaster Dr NE & Devonshire Ave NE
LOCAL ROAD	N/A (I2, I8 (doghouse to FYLTA) & BP4)	N/A	N/A	Lancaster Dr NE & Beverly Ave NE
LOCAL ROAD	N/A (I2, I8 & BP4)	N/A	N/A	Rickey St SE & Market Pl (Mall Entrance)
LOCAL ROAD	N/A (I2, I8 (doghouse to FYLTA) & BP4)	N/A	N/A	Mission St SE & Capitol St SE
LOCAL ROAD	N/A (I2, I8 & BP4)	N/A	N/A	Mission St SE & High St SE
LOCAL ROAD	N/A (I2, I8 & BP4)	N/A	N/A	Mission St SE & Liberty St SE



safety planning and implementation that supplements and complements traditional hotspot analysis. The approach also helps broaden traffic safety efforts and consider risk as well as crash history when identifying where to make low- cost safety improvements.

The City of Salem has been taking a systemic approach to upgrade all existing protected-permitted left turn signal to FYLTA. The FYLTA standard allows more options for traffic engineers to improve traffic flow and safety. The complete phasing out of the obsolete "doghouse" left turn style operation provides overall system consistency that improves driver understanding and overall safety. Within the project area, there are crash patterns that indicate these solutions will be quite effective. Crash data shows a significant number of turning movement crashes (85) and pedestrian crashes (10); most of them occurring at intersections that will receive the FYLTA and features that reduce left turn conflicts with pedestrians.

MAP-21 & FAST Act requires states to establish targets for reducing fatalities and serious injuries and to make significant progress towards those targets. **Currently, Oregon is not meeting or making significant progress on any of the five safety targets.** In addition, pedestrian crashes are continuing to increase in Oregon and nationwide. The risk of not doing this project perpetuates the likelihood that we will continue to not meet or make significant progress towards future safety performance targets set in the Transportation Safety Action Plan (TSAP).

#### **Potential Solutions** (Program Manager/Project Sponsor)

##### DESCRIBE

The scope of the project is to replace old substandard signal heads with new signal heads with reflective backplates (I2). "Doghouse" signal heads will be retrofitted to flashing yellow left turn arrow (FYLTA, I8) and No Pedestrian Phase feature (BP4) will be used as appropriate. Eight of the 19 intersections currently have left turn lanes with obsolete "doghouse" PPLT signal heads or no protected left turn phasing. These signals will be retrofitted for FYLTA. ATC controllers will replace the existing obsolete signal controllers to provide the most options for improving safety, traffic operations, system monitoring and control. Specific intersection scope of work is noted below:

- At six signal locations, existing doghouse PPLT phasing will be upgraded to FYLTA: Center St NE @ Willamette Town Center Entrance ("Evergreen"), Center St NE & 17th St NE, Center St NE & 17th St NE, Lancaster Dr NE & Devonshire Ave NE, Lancaster Dr NE & Beverly Ave NE, Mission St SE & Capitol St SE. Three signal locations (Lancaster at Devonshire, Beverly, Wolverine) were already designed under a previous project but were not constructed due to funding constraints.
- At two signal locations (Rickey St SE & Market Pl (Mall Entrance), Mission St SE & Liberty St SE) the project proposes adding protected-permissive left turn phasing with FYLTA.
- At the intersection of Broadway St & Hood St NE, include a standalone estimate for a full signal rebuild with the addition of protected-permissive left turn phasing with FYLTA. Signal hardware enhancements will be included in the project regardless.

#### **Project Outcomes, Goals and Priorities** (Program Manager/Project Sponsor)

##### DESCRIBE

The primary purpose is to reduce fatal and serious injury crashes therefore, the countermeasures selected for this location are chosen on the basis of the types of crashes and contributing factors known to exist.

These improvements will address the overall crash rate, left turn crashes and pedestrian crashes. Reducing the overall crash rate generally will reduce the frequency of more serious crashes. Pedestrian crashes are more likely to be serious or fatal and the FYLTA features such as the No Pedestrian Phase feature and others that can reduce vehicle/ pedestrian conflicts will reduce the likelihood of fatal and serious pedestrian related crashes.

Improving signal visibility is a proven countermeasure to address all crash types at signalized intersections, and conversion to FYA reduces the risk of turning related crashes (proven to result in fewer "false positive" reactions compared to the green ball indication). Although not all intersections experienced pedestrian crashes, pedestrian activity across the City is high and pedestrian crash risk is similar at all locations.

Previous NCHRP studies (493 and Web-Only Document 123) have proven that the flashing yellow arrow is more intuitive with fewer "false positive" reactions as compared to the green ball indication on the doghouse signal head, resulting in a reduction of left turn crashes by 25%.



STIP CYCLE 2024-2027	PROJECT NAME Cascade Highway SE: Silverton to Sublimity (Marion County)	PROJECTWISE NO. (IF PREV. SCOPED)
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## ODOT PROJECT BUSINESS CASE

### Cascade Highway SE: Silverton to Sublimity (Marion County)

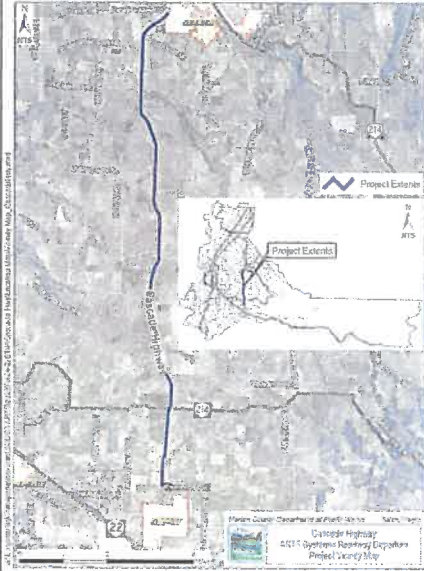
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#### Project Location (Program Manager)

ROUTE NAME LOCAL ROAD	HIGHWAY ID N/A	BEGIN MP N/A	END MP N/A	LOCAL STREET / NON-HIGHWAY LOCATION Cascade Highway SE: Silverton to Subli
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PASTE LINK TO MAP OR PHOTO OF THE PROJECT AREA

CLICK IN THE FIELD BELOW TO BROWSE FOR AND INCLUDE A MAP OF THE PROJECT AREA (JPG, GIF, PNG, GIF, TIF, BMP FORMATS)



#### Problem/Opportunity/Issue Description and Need (Program Manager)

##### DESCRIBE

The systemic analysis approach refers to a process of identifying locations and/or corridors with high-risk roadway features correlated with specific crash types or severities. This approach provides a more comprehensive method for safety planning and implementation that supplements and complements traditional hotspot analysis. The approach also helps broaden traffic safety efforts and consider risk as well as crash history when identifying where to make low-cost safety improvements.

This project was identified based on the 2017 Roadway Departure Implementation Plan and the over-representation of crashes indicated by the data provided by the ODOT ARTS program. The section/intersection of OR-214 (Silver Falls Hwy) that crosses Cascade Hwy SE is on the Top 5% 2018 SPIS (2015-2017 crashes). A review of the entire data set for the five-year analysis period indicates that single vehicle run-off-the-road was the most common crash type, with speeding being the most common cause. Many of these crashes occurred on straight roadway sections (36% of roadway departure crashes) or on horizontal curves (39% of roadway departure crashes).

Overall, the predominant crash types during the five-year screening period were fixed object (35%), and turning (19%) and angle (18%) at intersections. Thirty-eight percent of crashes were run-off-the-road, 25% occurred on straight roadway sections, and 18% of crashes occurred at horizontal curves. Twenty-nine percent of crashes occurred during hours of night, 28% occurred in wet conditions, and 11% of crashes occurred during both wet conditions and hours of night. Primary causes of crashes include: driving too fast, failure to avoid another vehicle, inattention, and not yielding right-of-way at intersections.

MAP-21 & FAST Act requires states to establish targets for reducing fatalities and serious injuries and to make significant progress towards those targets. **Currently, Oregon is not meeting or making significant progress on any of the five safety targets.** Over half of our fatal and serious injury crashes in Oregon are roadway departure related and this proposed project is intended to mitigate these crash patterns in a cost-effective approach. The risk of not doing this project perpetuates the likelihood that we will continue to not meet or make significant progress towards future safety performance targets set in the Transportation Safety Action Plan (TSAP).

### Potential Solutions (Program Manager/Project Sponsor)

DESCRIBE  
From Silverton City limits (near Paradise Alley Rd NE) to Sublimity City limits (near Triumph Rd SE): about 11.27 miles total

Install ground-in shoulder rumble strips and new shoulder line striping.

Install required and recommended curve warning and chevron signs according to the latest ball banking standards. Also included is the cost to replace curve warning speed riders to 2009 MUTCD standard and install roadway departure signing enhancements for curves with a higher than expected number of crashes. **To help with sign visibility it may be necessary to do some brush removal along the corridor.**

Install post-mounted delineators on curves to address curve crashes at night.

### Project Outcomes, Goals and Priorities (Program Manager/Project Sponsor)

DESCRIBE  
The primary purpose is to reduce fatal and serious injury crashes therefore, the countermeasures selected for this location are chosen on the basis of the types of crashes and contributing factors known to exist.

Curve warning sign enhancements and chevrons are low cost, systemic countermeasures that can specifically address roadway departure crashes directly related to curves. They are being installed systemically because roadway departure crash locations are random in occurrence.

Rumble strips are used where you have a high frequency of lane departure crashes including fatal and serious injury crash patterns. The audible warning and physical vibration inside the car alerts drivers that they are leaving their travel lane, allowing them time to make a safe recovery back into their lane.

Retroreflective material, such as post-mounted delineators, can be a highly effective treatment for delineating curves, especially at nighttime. They improve driver lane position both at the entry to the curve and at its midpoint.

Rural highways typically have a pattern of roadway departure crashes as a result of various factors. Since rural highways tend to have higher posted speeds, there is a higher chance that a crash will end up as a fatal or serious injury crash.

### Planned Construction Year (Program Manager/Project Sponsor)

YEAR	NARRATIVE
2027	Assume latest construction year for the most conservative estimate at scoping.

### High Impact Risks (Program Manager/Project Sponsor)

RISK TITLE	DETAILED DESCRIPTION OF RISK
HSIP Program Rules	<p><b>The Safety Program utilizes Federal Highway Safety Improvement Program (HSIP) funds that require a data driven, strategic approach to improving highway safety on all public roads that focus on reducing fatal and serious injuries. Any elements included in the project scope and paid for with Safety Funds must be shown to be cost effective treatments that reduce fatal and serious injuries using a data driven approach to identify locations and measures.</b></p> <p><b>This project was applied for and prioritized based on the installation of curve warning, chevron signs, rumble strips and delineators so this scope of work cannot change.</b></p> <p><b>The Federal Highway Safety Improvement Program (HSIP) currently requires a 7.78% cash match for projects.</b></p>
Stakeholder Outreach	<p><b>Road noise from rumble strips could be a concern for local residents along the corridor. Consideration will be given to public outreach and policies related to installation of ground-in rumble strips near residences.</b></p>



STIP CYCLE 2024-2027	PROJECT NAME Howell Prairie Rd: OR99E to OR214 (Marion County)	PROJECTWISE NO. (IF PREV. SCOPED)
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## ODOT PROJECT BUSINESS CASE

### Howell Prairie Rd: OR99E to OR214 (Marion County)

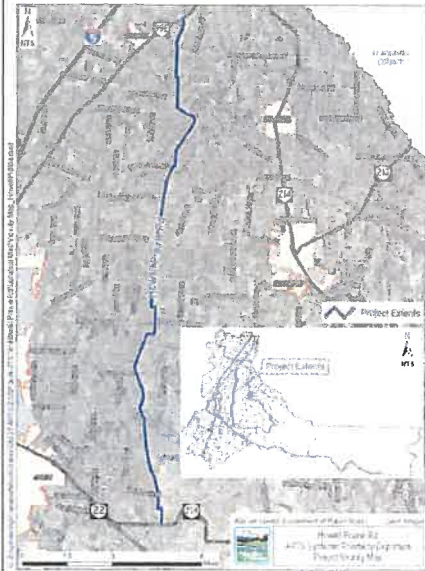
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#### Project Location (Program Manager)

ROUTE NAME LOCAL ROAD	HIGHWAY ID N/A	BEGIN MP N/A	END MP N/A	LOCAL STREET / NON-HIGHWAY LOCATION Howell Prairie Rd: OR99E to OR214
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PASTE LINK TO MAP OR PHOTO OF THE PROJECT AREA

CLICK IN THE FIELD BELOW TO BROWSE FOR AND INCLUDE A MAP OF THE PROJECT AREA (JPG, GIF, PNG, GIF, TIF, BMP FORMATS)



#### Problem/Opportunity/Issue Description and Need (Program Manager)

DESCRIBE

The systemic analysis approach refers to a process of identifying locations and/or corridors with high-risk roadway features correlated with specific crash types or severities. This approach provides a more comprehensive method for safety planning and implementation that supplements and complements traditional hotspot analysis. The approach also helps broaden traffic safety efforts and consider risk as well as crash history when identifying where to make low-cost safety improvements.

This project was identified as a safety priority based on an over-representation of fatal and injury crashes that occurred during the 2014-2018 crash history screening period and multiple safety project recommendations in the 2017 Roadway Departure Implementation Plan. A horizontal curve that is north of the intersection with Conifer St NE is on the Top 5% 2018 SPIS (2015-2017 crashes). A review of the entire data set for the five-year analysis period indicates that single vehicle run-off-the-road was the most common crash type, with speeding being the most common cause. Six run-off-the road fixed object type crashes resulted in fatalities and/or incapacitating injuries between 2014 and 2018.

Overall, the predominant crash types during the five year screening period were fixed object (40%), and angle (22%) and turning (15%) at intersections. Forty percent of all crashes were run-off-the-road, and 22% of crashes occurred at horizontal curves. Thirty-eight percent of crashes occurred during hours of night, 32% of crashes occurred in wet conditions, and 19% of crashes occurred during both wet conditions and night hours. Primary causes of crashes include: driving too fast, following to close, inattention, and did not yield right-of-way at intersections.

MAP-21 & FAST Act requires states to establish targets for reducing fatalities and serious injuries and to make significant progress towards those targets. **Currently, Oregon is not meeting or making significant progress on any of the five safety targets.** Over half of our fatal and serious injury crashes in Oregon are roadway departure related and this proposed project is intended to mitigate these crash patterns in a cost-effective approach. The risk of not doing this project perpetuates the likelihood that we will continue to not meet or make significant progress towards future safety performance targets set in the Transportation Safety Action Plan (TSAP).

### Potential Solutions (Program Manager/Project Sponsor)

#### DESCRIBE

From OR-99E (Portland Rd NE) to OR-214 (Silver Falls Hwy SE): about 18.34 miles total

Install post-mounted delineators on curves to address curve crashes at night.

Install required and recommended curve warning and chevron signs according to the latest ball banking standards. Also included is the cost to replace curve warning speed riders to 2009 MUTCD standard and install roadway departure signing enhancements for curves with a higher than expected number of crashes. **To help with sign visibility it may be necessary to do some brush removal along the corridor.**

### Project Outcomes, Goals and Priorities (Program Manager/Project Sponsor)

#### DESCRIBE

The primary purpose is to reduce fatal and serious injury crashes therefore, the countermeasures selected for this location are chosen on the basis of the types of crashes and contributing factors known to exist.

Curve warning sign enhancements and chevrons are low cost, systemic countermeasures that can specifically address roadway departure crashes directly related to curves. They are being installed systemically because roadway departure crash locations are random in occurrence.

Retroreflective material, such as post-mounted delineators, can be a highly effective treatment for delineating curves, especially at nighttime. They improve driver lane position both at the entry to the curve and at its midpoint.

Rural highways typically have a pattern of roadway departure crashes as a result of various factors. Since rural highways tend to have higher posted speeds, there is a higher chance that a crash will end up as a fatal or serious injury crash.

### Planned Construction Year (Program Manager/Project Sponsor)

#### YEAR

2027

#### NARRATIVE

Assume latest construction year for the most conservative estimate at scoping.

### High Impact Risks (Program Manager/Project Sponsor)

#### RISK TITLE

HSIP Program Rules

#### DETAILED DESCRIPTION OF RISK

**The Safety Program utilizes Federal Highway Safety Improvement Program (HSIP) funds that require a data driven, strategic approach to improving highway safety on all public roads that focus on reducing fatal and serious injuries. Any elements included in the project scope and paid for with Safety Funds must be shown to be cost effective treatments that reduce fatal and serious injuries using a data driven approach to identify locations and measures.**

**This project was applied for and prioritized based on the installation of curve warning, chevron signs and delineators so this scope of work cannot change.**

**The Federal Highway Safety Improvement Program (HSIP) currently requires a 7.78% cash match for projects.**

#### RISK TITLE

2009 MUTCD Curve Warning Standards & Compliance

#### DETAILED DESCRIPTION OF RISK

**Chevron placement and accompanying curve warning signs and advisory speeds are determined by the 2009 MUTCD.**

**In addition, the 2009 MUTCD saw a significant change in the design of curve warning which came with a December 31, 2019 compliance date. If construction cannot meet this compliance date, planning/programming the project should have been done by this compliance date at a minimum. Due to this compliance date requirement, this project should be prioritized as early in the STIP cycle as possible.**

#### RISK TITLE

No ROW Phase

#### DETAILED DESCRIPTION OF RISK

**It is assumed this is a single function project with no ROW acquisitions or phase. If ROW is found to be needed, the scope of work triggering ROW will be removed from the project.**

STIP CYCLE 2024-2027	PROJECT NAME McKay Rd. NE @ French Prairie Rd NE (Marion County)	PROJECTWISE NO. (IF PREV. SCOPED)
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## ODOT PROJECT BUSINESS CASE

### McKay Rd. NE @ French Prairie Rd NE (Marion County)

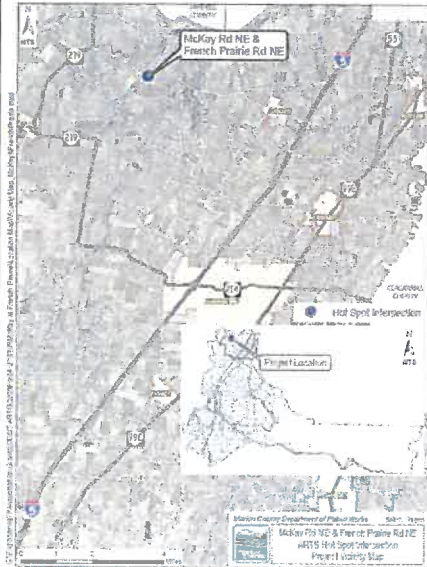
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#### Project Location (Program Manager)

ROUTE NAME LOCAL ROAD	HIGHWAY ID N/A	BEGIN MP N/A	END MP N/A	LOCAL STREET / NON-HIGHWAY LOCATION McKay Rd at French Prairie Rd
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PASTE LINK TO MAP OR PHOTO OF THE PROJECT AREA

CLICK IN THE FIELD BELOW TO BROWSE FOR AND INCLUDE A MAP OF THE PROJECT AREA (JPG, GIF, PNG, GIF, TIF, BMP FORMATS)



#### Problem/Opportunity/Issue Description and Need (Program Manager)

##### DESCRIBE

This location is identified as a hot spot (or within a group of hot spots) with highly effective countermeasures for reducing the target crashes at this location. Hot Spot analysis refers to a process of identifying locations where there appears to be higher than normal frequency or severity of crashes. These are often higher cost projects targeting a specific segment of roadway or intersection, and addressing a crash history of at least one fatal or serious injury crash within the last five years.

This project was identified based the over-representation of crashes indicated by the data provided by the ODOT ARTS program. There was a serious injury angle collision in 2019 and serious injury, aging driver involved, angle collision in 2018. Both of these serious injury crashes were angle collisions that involved a driver on French Prairie Rd NE that did not yield right-of-way to oncoming traffic on McKay Rd NE.

The most predominant crash type during the five-year screening period was rear-end (50%) collisions with the majority (over 70%) involving drivers on McKay Rd NE. Angle collisions accounted for 29% of crashes at the intersection and involved northbound or southbound traffic on French Prairie Rd NE that failed to yield right-of-way to traffic on McKay Rd NE. Primary causes of crashes include: failure to avoid another vehicle, followed too close, did not yield right of way, and various types of improper driving.

MAP-21 & FAST Act requires states to establish targets for reducing fatalities and serious injuries and to make significant progress towards those targets. **Currently, Oregon is not meeting or making significant progress on any of the five safety targets.** The risk of not doing this project perpetuates the likelihood that we will continue to not meet or make significant progress towards future safety performance targets set in the Transportation Safety Action Plan (TSAP).

#### Potential Solutions (Program Manager/Project Sponsor)

##### DESCRIBE

Widen and construct left-turn lanes (eastbound & westbound) on McKay Rd NE at the four-leg intersection with French Prairie Rd NE.

Install a through-route intersection conflict warning system. This warning system will provide actuated flashing beacons notifying motorists on the uncontrolled major approaches on McKay Rd NE, which will flash only when sensors detect a vehicle approaching stop-controlled minor approaches on French Prairie Rd NE.

Install static, red flashing beacons above the stop signs for northbound and southbound traffic on French Prairie Rd NE.

#### Project Outcomes, Goals and Priorities (Program Manager/Project Sponsor)

##### DESCRIBE

The primary purpose is to reduce fatal and serious injury crashes therefore, the countermeasures selected for this location are chosen on the basis of the types of crashes and contributing factors known to exist.

For this project, a left turn lanes allow vehicles to proceed through the intersection without having to stop or slow down for vehicles waiting to make a left turn. This will help address the high frequency of rear end crashes resulting from the conflicts between vehicles turning left and following vehicles.

Through Route Activated Warning System (TRAWS) show greater potential to decrease crashes compared to traditional sign and marking enhancements alone and have successfully deployed at several rural intersections in Oregon. The proposed solution will warn motorists approaching an intersection of potential conflicts with other approaching vehicles.

#### Planned Construction Year (Program Manager/Project Sponsor)

YEAR	NARRATIVE
2027	Assume latest construction year for the most conservative estimate at scoping.

#### High Impact Risks (Program Manager/Project Sponsor)

RISK TITLE	DETAILED DESCRIPTION OF RISK	
HSIP Program Rules	<p><b>The Safety Program utilizes Federal Highway Safety Improvement Program (HSIP) funds that require a data driven, strategic approach to improving highway safety on all public roads that focus on reducing fatal and serious injuries. Any elements included in the project scope and paid for with Safety Funds must be shown to be cost effective treatments that reduce fatal and serious injuries using a data driven approach to identify locations and measures.</b></p> <p>This project was applied for and prioritized based on the left-turn lanes (both approaches), TRAWS and static red flashing beacons solution so this scope of work cannot change.</p> <p>The Federal Highway Safety Improvement Program (HSIP) currently requires a 7.78% cash match for projects.</p>	+
Adjacent Property Impacts	<p><b>The property line of the house on the north side of the intersection is very close to this intersection. This may limit the primary direction of widening of McKay Rd for the left turn lanes.</b></p>	+
Experimental Use of a Traffic Control Device	<p><b>The 2009 MUTCD currently allows this device as part of an experimental use approval (Paragraph 11 of Section 1A.10) so it is possible experimental use approval could be rescinded at any time.</b></p>	+
Stakeholder Coordination	<p><b>This section of McKay Rd NE/Yergen Rd NE/Ehlen Rd NE was recently designated as a County Safety Corridor. Any improvements for the corridor will be communicated and coordinated with Marion County's advisory group for this Safety Corridor.</b></p>	+

#### Additional Background Information (Program Manager/Project Sponsor)

##### DESCRIBE

Marion County representatives must be present at scoping.

McKay Rd NE is on the National Highway System (NHS) network, so the project will be designed according to AASHTO criteria.



STIP CYCLE 2024-2027	PROJECT NAME Ehlen Rd. NE @ Butteville Rd. NE (Marion County)	PROJECTWISE NO. (IF PREV. SCOPED)
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## ODOT PROJECT BUSINESS CASE

### Ehlen Rd. NE @ Butteville Rd. NE (Marion County)

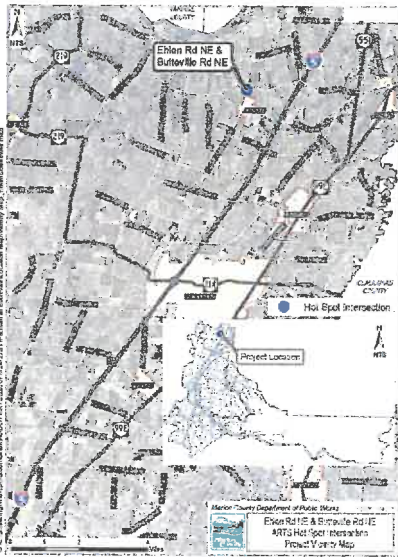
☒ Initial ☐ Final

#### Project Location (Program Manager)

ROUTE NAME LOCAL ROAD	HIGHWAY ID N/A	BEGIN MP N/A	END MP N/A	LOCAL STREET / NON-HIGHWAY LOCATION Ehlen Road NE @ Butteville Road NE
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PASTE LINK TO MAP OR PHOTO OF THE PROJECT AREA

CLICK IN THE FIELD BELOW TO BROWSE FOR AND INCLUDE A MAP OF THE PROJECT AREA (JPG, GIF, PNG, GIF, TIF, BMP FORMATS)



#### Problem/Opportunity/Issue Description and Need (Program Manager)

##### DESCRIBE

This location is identified as a hot spot (or within a group of hot spots) with highly effective countermeasures for reducing the target crashes at this location. Hot Spot analysis refers to a process of identifying locations where there appears to be higher than normal frequency or severity of crashes. These are often higher cost projects targeting a specific segment of roadway or intersection, and addressing a crash history of at least one fatal or serious injury crash within the last five years.

Between 2014-2018, the intersection of Ehlen Rd NE/ Butteville Rd NE experienced 21 crashes, including two fatal and one serious injury (angle and turning crashes). Approximately 76% of all crashes were angle, and another 19% were turning crashes. This intersection is within a Top 5% 2019 SPIS (crashes from 2016-2018) site and was also a Top 5% 2018 SPIS site.

MAP-21 & FAST Act requires states to establish targets for reducing fatalities and serious injuries and to make significant progress towards those targets. **Currently, Oregon is not meeting or making significant progress on any of the five safety targets.** The risk of not doing this project perpetuates the likelihood that we will continue to not meet or make significant progress towards future safety performance targets set in the Transportation Safety Action Plan (TSAP).

#### Potential Solutions (Program Manager/Project Sponsor)

##### DESCRIBE

Install a rural, single lane roundabout at the intersection of Ehlen Rd NE/Butteville Rd NE.

#### Project Outcomes, Goals and Priorities (Program Manager/Project Sponsor)

##### DESCRIBE

The primary purpose is to reduce fatal and serious injury crashes therefore, the countermeasures selected for this location are chosen on the basis of the types of crashes and contributing factors known to exist.

For this project, a roundabout will eliminate a number of vehicle conflict points (up to 82%) typically associated with

traditional intersections. They also enhance safety by reducing vehicle speeds (more typical in rural settings) both in and through the intersection and by changing the crash type from angle to sideswipe, which typically results in less severe crashes. Due to the crash activity at this intersection, this roundabout project is a high safety priority for the county.

While roundabouts treat all crash types, they are particularly effective at reducing angle and turning crash types, which are the predominant crash types at this intersection (and the type of all high severity crashes here). The rural, somewhat isolated nature of this location is well-suited for a roundabout (much more so than a traffic signal).

#### Planned Construction Year (Program Manager/Project Sponsor)

YEAR	NARRATIVE
2027	Assume latest construction year for the most conservative estimate at scoping.

#### High Impact Risks (Program Manager/Project Sponsor)

RISK TITLE	DETAILED DESCRIPTION OF RISK	
HSIP Program Rules	<p><b>The Safety Program utilizes Federal Highway Safety Improvement Program (HSIP) funds that require a data driven, strategic approach to improving highway safety on all public roads that focus on reducing fatal and serious injuries. Any elements included in the project scope and paid for with Safety Funds must be shown to be cost effective treatments that reduce fatal and serious injuries using a data driven approach to identify locations and measures.</b></p> <p><b>This project was applied for and prioritized based on the roundabout solution so this scope of work cannot change.</b></p> <p><b>The Federal Highway Safety Improvement Program (HSIP) currently requires a 7.78% cash match for projects.</b></p>	+
Adjacent Utility Poles	<p><b>There are utility poles located in the SE quadrant of the intersection, very close to the edge of pavement, and will likely need to be relocated or protected to accommodate a roundabout.</b></p>	+
Stakeholder Coordination	<p><b>While roundabouts are an official FHWA Proven Safety Countermeasure to reduce fatal/serious injury crashes, it is still considered high-risk for community and freight support. Early coordination should be implemented.</b></p> <p><b>In addition, this section of McKay Rd NE/Yergen Rd NE/Ehlen Rd NE was recently designated as a County Safety Corridor. Any improvements for the corridor will be communicated and coordinated with Marion County's advisory group for this Safety Corridor.</b></p>	+

#### Additional Background Information (Program Manager/Project Sponsor)

DESCRIBE
<p>Marion County representatives must be present at scoping.</p> <p>EQUITY from ArcGIS Statewide Equity Layer: LowMed State Equity</p> <p>GHG Primer Outcome: Addresses non-recurring congestion (chokepoints, safety constraints, and incident response).</p> <p>The Ehlen Rd NE/Butteville Rd NE intersection received 2015 ARTS Hot Spot funding for warning sign improvements, transverse rumble strips, and a through-route activate warning system. In response to increased crash activity, which included two fatal angle type crashes in 2016, Marion County completed warning sign enhancements in August 2016 and applied transverse rumble strips in March 2017 using county road funds. The intersection conflict warning system has not yet been implemented, and is in the PE phase. This system is intended to provide interim safety benefits until a roundabout is funded and constructed. Due to the crash history at this intersection, this roundabout project is a high safety priority for the County.</p>

#### Leveraging Opportunities (Project Sponsor)

DESCRIBE
<p>The project is on a segment of the McKay/Yergen/Ehlen corridor proposed Systemic improvement project for driver speed feedback signs, pavement markings, and curve signing applications between OR-219 (River Rd NE) and Bents</p>



STIP CYCLE 2024-2027	PROJECT NAME Marion County Pedestrian Crossing Enhancements (2027)	PROJECTWISE NO. (IF PREV. SCOPED)
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## ODOT PROJECT BUSINESS CASE

### Marion County Pedestrian Crossing Enhancements (2027)

☒ Initial ☐ Final

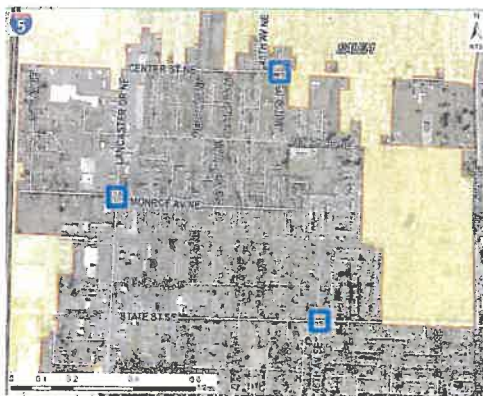
#### Project Location (Program Manager)

ROUTE NAME	HIGHWAY ID	BEGIN MP	END MP	LOCAL STREET / NON-HIGHWAY LOCATION
LOCAL ROAD	N/A (BP2, BP8, BP15, & BP18)	N/A	N/A	Lancaster Dr NE near Monroe Ave NE
LOCAL ROAD	N/A (BP26, potentially BP2)	N/A	N/A	45th Pl NE & Center St NE
LOCAL ROAD	N/A (BP26, potentially BP2)	N/A	N/A	46th Ave SE & State St

PASTE LINK TO MAP OR PHOTO OF THE PROJECT AREA

CLICK IN THE FIELD BELOW TO BROWSE FOR AND INCLUDE A MAP OF THE PROJECT AREA (JPG, GIF, PNG, GIF, TIF, BMP FORMATS)

Vicinity Map- Salem, Oregon



Pedestrian/Bicycle Systemic Safety Improvement Locations

#### Crosswalk Enhancements

Lancaster Drive near Monroe Ave (new crosswalk)  
Center Street and 45th Place (existing crosswalk)  
State Street and 46th Place (existing crosswalk)

#### Problem/Opportunity/Issue Description and Need (Program Manager)

##### DESCRIBE

The systemic analysis approach refers to a process of identifying locations and/or corridors with high-risk roadway features correlated with specific crash types or severities. This approach provides a more comprehensive method for safety planning and implementation that supplements and complements traditional hotspot analysis. The approach also helps broaden traffic safety efforts and consider risk as well as crash history when identifying where to make low-cost safety improvements.

This segment of Lancaster Dr is a high volume, five-lane arterial with over 32,000 ADT. With this level of ADT on Lancaster Dr, it is difficult for pedestrians to find gaps to safely cross, which makes a pedestrian signal or hybrid beacon a good countermeasure for this location. This segment also has many commercial uses on both sides of the corridor, is surrounded by residential properties to the west and east, and offers bus services in both the north- and southbound directions - all of which lend to a heavy demand in pedestrian crossings and facilities to safely do so. The nearest signalized intersections in this segment are over 1,800' apart, which is over three times longer than studies have shown an average pedestrian is willing to walk out of their way to a signalized crossing. A new enhanced crosswalk between Auburn Rd to Amber St would effectively attract pedestrians to cross in one location and alert motorists to yield to crossing pedestrians with beacons or signals. There was also a pedestrian crash in 2019 that occurred at the intersection of Lancaster Dr & Monroe Ave, which is an unsignalized intersection that is fairly centrally located in this segment. While this 2019 crash is not included in the crash data analysis for the ARTS application, it emphasizes the need for an enhanced crossing on this segment near this location.

The proposed additional signing at existing crosswalks on Center St and State St are desired to increase visibility. Both of these roads have higher traffic volumes and drivers often become complacent. New and additional signing will provide more warning for drivers and added safety for pedestrians.

MAP-21 & FAST Act requires states to establish targets for reducing fatalities and serious injuries and to make

significant progress towards those targets. **Currently, Oregon is not meeting or making significant progress on any of the five safety targets.** In addition, pedestrian crashes are continuing to increase in Oregon and nationwide. In addition, pedestrian crashes are continuing to increase in Oregon and nationwide. The risk of not doing this project perpetuates the likelihood that we will continue to not meet or make significant progress towards future safety performance targets set in the Transportation Safety Action Plan (TSAP).

#### Potential Solutions (Program Manager/Project Sponsor)

##### DESCRIBE

A crossing analysis will be conducted to determine the best location on Lancaster Dr NE for a "midblock" pedestrian signal/beacon within the segment between Auburn Rd and Amber St, likely near Monroe Ave. Either a pedestrian signal or hybrid beacon will be effective here; both countermeasures would provide the same crash reduction factor and achieve the overall same objective and function. The pedestrian signal/beacon would be installed with a refuge median, a continental crosswalk, ADA-compliant ramps and pushbuttons, advance pedestrian warning signs, and street lighting to illuminate the crossing. Public notice will be made to inform and educate the public on what to expect and how the new crossing operates.

At the existing crosswalks located at Center St & 45th Pl and State St & 46th Ave, additional signing per ARTS countermeasure BP26 (markings and signs placed in advance of marked crosswalks to indicate where vehicles should yield or stop for pedestrians per the 2009 MUTCD) would be added to make the crosswalk more visible.

**Evaluate if existing illumination meets current design recommendations for marked pedestrian crossings.**

#### Project Outcomes, Goals and Priorities (Program Manager/Project Sponsor)

##### DESCRIBE

The primary purpose is to reduce the risk of pedestrian related fatal and serious injury crashes therefore, the countermeasures selected for this location are chosen on the basis of the types of crashes and contributing risk factors known to exist.

Installing a pedestrian signal or beacon can reduce bike/ped crashes by up to 55%. They provide positive guidance to pedestrians regarding the permitted signal interval to cross a street and prohibit pedestrian crossings when conflicting traffic may impact pedestrian safety.

Installing intersection lighting allows for greater visibility of the intersection. Roadway users and features are more visible and help all users determine a safe path through the intersection. This can be especially helpful at rural intersections where the only source of lighting for the roadway is often provided by vehicle headlights.

Advanced yield and stop markings & signs improve the visibility of pedestrians therefore reducing crashes between vehicles and pedestrians. Discourages drivers from stopping too close to crosswalks and blocking other drivers' view of pedestrians. Pedestrians can see if a vehicle is stopping or not to take appropriate action.

#### Planned Construction Year (Program Manager/Project Sponsor)

##### YEAR

2027

##### NARRATIVE

Assume latest construction year for the most conservative estimate at scoping.

#### High Impact Risks (Program Manager/Project Sponsor)

##### RISK TITLE

HSIP Program Rules

##### DETAILED DESCRIPTION OF RISK

**The Safety Program utilizes Federal Highway Safety Improvement Program (HSIP) funds that require a data driven, strategic approach to improving highway safety on all public roads that focus on reducing fatal and serious injuries. Any elements included in the project scope and paid for with Safety Funds must be shown to be cost effective treatments that reduce fatal and serious injuries using a data driven approach to identify locations and measures.**

**This project was applied for and prioritized based on the pedestrian features and enhancements listed above being implemented so this scope of work cannot change.**

**The Federal Highway Safety Improvement Program (HSIP) currently requires a 7.78% cash match for projects.**

STIP CYCLE 2024-2027	PROJECT NAME River Rd NE / French Prairie Rd NE: OR219 to Parkmeadow Dr NE (Marion County)	PROJECTWISE NO. (IF PREV. SCOPED)
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## ODOT PROJECT BUSINESS CASE

☒ Initial ☐ Final

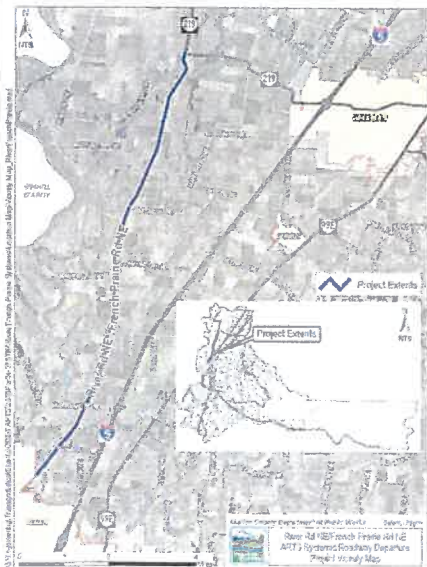
River Rd NE / French Prairie Rd NE: OR219 to Parkmeadow Dr NE (Marion County)

### Project Location (Program Manager)

ROUTE NAME LOCAL ROAD	HIGHWAY ID N/A	BEGIN MP N/A	END MP N/A	LOCAL STREET / NON-HIGHWAY LOCATION River Rd NE / French Prairie Rd NE: OR219 to Parkmeadow Dr NE
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PASTE LINK TO MAP OR PHOTO OF THE PROJECT AREA

CLICK IN THE FIELD BELOW TO BROWSE FOR AND INCLUDE A MAP OF THE PROJECT AREA (JPG, GIF, PNG, GIF, TIF, BMP FORMATS)



### Problem/Opportunity/Issue Description and Need (Program Manager)

#### DESCRIBE

The systemic analysis approach refers to a process of identifying locations and/or corridors with high-risk roadway features correlated with specific crash types or severities. This approach provides a more comprehensive method for safety planning and implementation that supplements and complements traditional hotspot analysis. The approach also helps broaden traffic safety efforts and consider risk as well as crash history when identifying where to make low-cost safety improvements.

This project was identified as a priority based on the recommendations in the 2017 Roadway Departure Implementation Plan and data provided by the ODOT ARTS program, which indicates an over-representation of fatal or serious injury crashes during the 2014-2018 crash screening period. A location south of the intersection with OR-219 is on the Top 5% 2017 SPIS (2014-2016 crashes), a straight section to the north of Lebrun Rd NE is on the Top 10% 2017 SPIS (2014-2016), and the section/intersection of Quinaby Rd that crosses River Rd NE is on the Top 5% 2018 SPIS (2015-2017).

Overall, the predominant crash types during the five-year screening period were turning (32%), angle (23%), fixed object (19%) and rear-end (21%). Over 50% of crashes occurred at intersections, 18% at alleys/driveways, 28% on straight roadway sections, and less than 5% at curves. About 30% of crashes occurred during hours of dusk night or dawn, and over 20% occurred when the pavement was wet. Primary causes of crashes include: following to close, failing to avoid another vehicle, driving too fast, various forms of improper driving, and not yielding right-of-way at intersections.

MAP-21 & FAST Act requires states to establish targets for reducing fatalities and serious injuries and to make significant progress towards those targets. **Currently, Oregon is not meeting or making significant progress on any of the five safety targets.** Over half of our fatal and serious injury crashes in Oregon are roadway departure related and this proposed project is intended to mitigate these crash patterns in a cost-effective approach. The risk of not doing this project perpetuates the likelihood that we will continue to not meet or make significant progress towards future safety performance targets set in the Transportation Safety Action Plan (TSAP).

### Potential Solutions (Program Manager/Project Sponsor)

#### DESCRIBE

River Rd NE from Parkmeadow Dr NE to French Prairie Rd NE; and French Prairie Rd NE from River Rd NE to OR-219 (Hillsboro-Silverton Hwy NE): about 10.49 miles total

The proposed project will install ground-in rumble strips and recessed reflective pavement markers (RPMs) along the River Rd NE and the French Prairie Rd NE centerline to address roadway departure and total corridor crashes. The project will also include new center line striping.

### Project Outcomes, Goals and Priorities (Program Manager/Project Sponsor)

#### DESCRIBE

The primary purpose is to reduce fatal and serious injury crashes therefore, the countermeasures selected for this location are chosen on the basis of the types of crashes and contributing factors known to exist.

Rumble strips are used where you have a high frequency of lane departure crashes including fatal and serious injury crash patterns. The audible warning and physical vibration inside the car alerts drivers that they are leaving their travel lane, allowing them time to make a safe recovery back into their lane.

RPMs make pavement markings much more prominent in adverse weather conditions, helping a driver to safely navigate the path of the roadway.

Rural highways typically have a pattern of roadway departure crashes as a result of various factors. Since rural highways tend to have higher posted speeds, there is a higher chance that a crash will end up as a fatal or serious injury crash.

### Planned Construction Year (Program Manager/Project Sponsor)

#### YEAR

2027

#### NARRATIVE

Assume latest construction year for the most conservative estimate at scoping.

### High Impact Risks (Program Manager/Project Sponsor)

#### RISK TITLE

HSIP Program Rules

#### DETAILED DESCRIPTION OF RISK

**The Safety Program utilizes Federal Highway Safety Improvement Program (HSIP) funds that require a data driven, strategic approach to improving highway safety on all public roads that focus on reducing fatal and serious injuries. Any elements included in the project scope and paid for with Safety Funds must be shown to be cost effective treatments that reduce fatal and serious injuries using a data driven approach to identify locations and measures.**

**This project was applied for and prioritized based on the installation of rumble strips and RPMs so this scope of work cannot change.**

**The Federal Highway Safety Improvement Program (HSIP) currently requires a 7.78% cash match for projects.**

#### RISK TITLE

No ROW Phase

#### DETAILED DESCRIPTION OF RISK

**It is assumed this is a single function project with no ROW acquisitions or phase. The scope of work is only considered within the existing pavement cross section.**

#### RISK TITLE

Scoping & PS&E Cost Estimate Expected Inconsistencies

#### DETAILED DESCRIPTION OF RISK

**The precise locations of rumble strip installations will need to be determined through the project design phase should the project receive funding as pavement conditions can significantly change within the 3-5 years between scoping and project construction. Therefore, the scoping estimate is applied conservatively and it is not expected to match the final PS&E estimate.**

#### RISK TITLE

Stakeholder Outreach

#### DETAILED DESCRIPTION OF RISK

**Road noise from rumble strips could be a concern for local residents along the corridor. Consideration will be given to public outreach and policies related to installation of ground-in rumble strips near residences.**

### Additional Background Information (Program Manager/Project Sponsor)

#### DESCRIBE

Marion County representatives must be present at scoping. Share the ODOT Rumble Strip Policy with the County representative to see if they want to adopt any of the guidelines in this/their project.



STIP CYCLE 2024-2027	PROJECT NAME Yergen Rd NE / Ehlen Rd. NE: OR219 to Bents Rd NE (Marion County)	PROJECTWISE NO. (IF PREV. SCOPED)
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## ODOT PROJECT BUSINESS CASE

☒ Initial ☐ Final

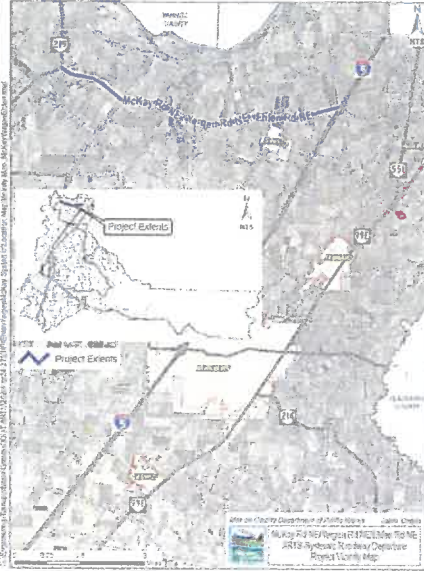
Yergen Rd NE / Ehlen Rd. NE: OR219 to Bents Rd NE (Marion County)

### Project Location (Program Manager)

ROUTE NAME LOCAL ROAD	HIGHWAY ID N/A	BEGIN MP N/A	END MP N/A	LOCAL STREET / NON-HIGHWAY LOCATION McKay Rd NE / Yergen Rd NE / Ehlen Rd NE
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PASTE LINK TO MAP OR PHOTO OF THE PROJECT AREA

CLICK IN THE FIELD BELOW TO BROWSE FOR AND INCLUDE A MAP OF THE PROJECT AREA (JPG, GIF, PNG, GIF, TIF, BMP FORMATS)



### Problem/Opportunity/Issue Description and Need (Program Manager)

#### DESCRIBE

The systemic analysis approach refers to a process of identifying locations and/or corridors with high-risk roadway features correlated with specific crash types or severities. This approach provides a more comprehensive method for safety planning and implementation that supplements and complements traditional hotspot analysis. The approach also helps broaden traffic safety efforts and consider risk as well as crash history when identifying where to make low- cost safety improvements.

This project was identified based on the 2017 Roadway Departure Implementation Plan and over-representation of crashes indicated by the data provided by the ODOT ARTS program. The section/intersection of Butteville Rd NE that crosses Ehlen Rd NE is on the Top 5% 2018 SPIS (2015-2017 crashes) and Top 5% 2019 SPIS (2016-2018 crashes). The intersection of Yergen Rd NE & Case Rd NE is on the top 15% of the OASIS intersection screen list. The section of McKay Rd NE just east of Arbor Grove Rd NE is on the Top 10% 2017 SPIS (2014-2016). A review of the entire data set for the five-year analysis period indicates an over-representation of fatal or serious injury crashes at varied locations along the corridor.

Overall, the predominant crash types during the five year screening period were fixed object (24%), rear-end (26%), angle (20%), and turning (19%). Forty-five percent of crashes occurred at intersections, 13% at alleys/driveways, 25% on straight roadway sections, and 15% of crashes happened at curves. Sixteen percent of crashes occurred during hours of night and 21% of crashes occurred in wet conditions. Primary causes of crashes include: following to close, failing to avoid another vehicle, driving too fast, various forms of improper driving, and not yielding right-of-way at intersections.

MAP-21 & FAST Act requires states to establish targets for reducing fatalities and serious injuries and to make significant progress towards those targets. **Currently, Oregon is not meeting or making significant progress on any of the five safety targets.** The risk of not doing this project perpetuates the likelihood that we will continue to not meet or make significant progress towards future safety performance targets set in the Transportation Safety Action Plan (TSAP).

### Potential Solutions (Program Manager/Project Sponsor)

#### DESCRIBE

From OR-219 (River Rd NE) to Bents Rd NE: about 6.95 miles total

Install driver speed feedback signs for each travel direction at two locations along the corridor between OR-219 (River Rd NE) and Bents Rd NE.

Install ground-in edge line rumble strips on the edge line and new edge line striping.

Install required and recommended curve warning and chevron signs according to the latest ball banking standards. Also included is the cost to replace curve warning speed riders to 2009 MUTCD standard and install roadway departure signing enhancements for curves with a higher than expected number of crashes. **To help with sign visibility it may be necessary to do some brush removal along the corridor.**

Install post-mounted delineators on curves to address curve crashes at night.

### Project Outcomes, Goals and Priorities (Program Manager/Project Sponsor)

#### DESCRIBE

The primary purpose is to reduce fatal and serious injury crashes therefore, the countermeasures selected for this location are chosen on the basis of the types of crashes and contributing factors known to exist.

Installation of dynamic speed feedback signs discourages speeding and reduces the risk of all crash types.

Curve warning sign enhancements and chevrons are low cost, systemic countermeasures that can specifically address roadway departure crashes directly related to curves. They are being installed systemically because roadway departure crash locations are random in occurrence.

Rumble strips are used where you have a high frequency of lane departure crashes including fatal and serious injury crash patterns. The audible warning and physical vibration inside the car alerts drivers that they are leaving their travel lane, allowing them time to make a safe recovery back into their lane.

Retroreflective material, such as post-mounted delineators, can be a highly effective treatment for delineating curves, especially at nighttime. They improve driver lane position both at the entry to the curve and at its midpoint.

Rural highways typically have a pattern of roadway departure crashes as a result of various factors. Since rural highways tend to have higher posted speeds, there is a higher chance that a crash will end up as a fatal or serious injury crash.

### Planned Construction Year (Program Manager/Project Sponsor)

YEAR	NARRATIVE
2027	Assume latest construction year for the most conservative estimate at scoping.

### High Impact Risks (Program Manager/Project Sponsor)

RISK TITLE	DETAILED DESCRIPTION OF RISK
HSIP Program Rules	<p><b>The Safety Program utilizes Federal Highway Safety Improvement Program (HSIP) funds that require a data driven, strategic approach to improving highway safety on all public roads that focus on reducing fatal and serious injuries. Any elements included in the project scope and paid for with Safety Funds must be shown to be cost effective treatments that reduce fatal and serious injuries using a data driven approach to identify locations and measures.</b></p> <p><b>This project was applied for and prioritized based on the installation of new chevron and updated curve warning signs, rumble strips, delineators and speed feedback signs so this scope of work cannot change.</b></p> <p><b>The Federal Highway Safety Improvement Program (HSIP) currently requires a 7.78% cash match for projects.</b></p>



STIP CYCLE 2024-2027	PROJECT NAME OR18: SE Lafayette Highway to SE Ash Rd	PROJECTWISE NO. (IF PREV. SCOPED)
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## ODOT PROJECT BUSINESS CASE OR18: SE Lafayette Highway to SE Ash Rd

☒ Initial ☐ Final

### Project Location (Program Manager)

ROUTE NAME	HIGHWAY ID	BEGIN MP	END MP	LOCAL STREET / NON-HIGHWAY LOCATION
OR-18	Hwy 39 - Salmon River Highway	49.91	50.10	at Lafayette Hwy/SE Dayton Bypass & Ash Rd

PASTE LINK TO MAP OR PHOTO OF THE PROJECT AREA

CLICK IN THE FIELD BELOW TO BROWSE FOR AND INCLUDE A MAP OF THE PROJECT AREA (JPG, GIF, PNG, GIF, TIF, BMP FORMATS)



### Problem/Opportunity/Issue Description and Need (Program Manager)

#### DESCRIBE

This location is identified as a hot spot (or within a group of hot spots) with highly effective countermeasures for reducing the target crashes at this location. Hot Spot analysis refers to a process of identifying locations where there appears to be higher than normal frequency or severity of crashes. These are often higher cost projects targeting a specific segment of roadway or intersection, and addressing a crash history of at least one fatal or serious injury crash within the last five years.

Between 2014 and 2018 there were 5 INJA Angle type crashes involving angle & turning movements on OR-18; 3 INJAs occurred at Lafayette Hwy in 2015, 2017 & 2018 and 2 INJAs occurred at Ash Rd in 2016 & 2018. Turning and angle crashes are the primary crash types at these two intersections. At Lafayette Hwy intersection, 2018 SPIS investigation cited a higher than expected number of angle crashes and failure to yield involved crashes for the intersection type. This intersection was identified as a SPIS 2019 site (based on 2016-2018 crashes) within the top 5% (95th percentile) of all SPIS scores. It has been a consistent Top 5% or 10% SPIS site since 2010 SPIS.

MAP-21 & FAST Act requires states to establish targets for reducing fatalities and serious injuries and to make significant progress towards those targets. **Currently, Oregon is not meeting or making significant progress on any of the five safety targets.** The risk of not doing this project perpetuates the likelihood that we will continue to not meet or make significant progress towards future safety performance targets set in the Transportation Safety Action Plan (TSAP).

### Potential Solutions (Program Manager/Project Sponsor)

#### DESCRIBE

Construct roundabout at the intersection of OR-18 and SE Lafayette Hwy (OR-233). Sever west leg of Ash Rd and convert east leg to right-in / right-out.

### Project Outcomes, Goals and Priorities (Program Manager/Project Sponsor)

#### DESCRIBE

The primary purpose is to reduce fatal and serious injury crashes therefore, the countermeasures selected for this location are chosen on the basis of the types of crashes and contributing factors known to exist.

For this project, installing a roundabout will reduce all crash types by 82%. A roundabout at this location will eliminate conflict points typically associated with traditional intersections. Most notably, the potential to significantly decrease or eliminate the frequency and severity of turning and angle crashes as well as to reduce the speeds both in and through the intersection. Reducing speed will also reduce the crash severity.

#### Planned Construction Year (Program Manager/Project Sponsor)

YEAR	NARRATIVE
2027	Assume latest construction year for the most conservative estimate at scoping.

#### High Impact Risks (Program Manager/Project Sponsor)

RISK TITLE	DETAILED DESCRIPTION OF RISK
HSIP Program Rules	<b>The Safety Program utilizes Federal Highway Safety Improvement Program (HSIP) funds that require a data driven, strategic approach to improving highway safety on all public roads that focus on reducing fatal and serious injuries. Any elements included in the project scope and paid for with Safety Funds must be shown to be cost effective treatments that reduce fatal and serious injuries using a data driven approach to identify locations and measures.</b>  <b>This project was applied for and prioritized based on the roundabout solution so this scope of work cannot change.</b>
Yamhill County TSP & OR-18 Expressway Plan	<b>The Yamhill County TSP recommends a roundabout at this location but the long-term OR-18 Expressway Plan calls for a grade separated interchange. This conflict will have to be reconciled if the project is funded.</b>
Stakeholder Coordination	<b>While the TSP public outreach process resulted in overall support for a roundabout at this location and it is an official FHWA Proven Safety Countermeasure to reduce fatal/serious injury crashes, it is still considered high-risk for community and freight support. Early coordination should be implemented.</b>
Partial/Full Multi-lane Roundabout Risk	<b>Due to the volumes on this highway and expressway designation, there is a risk that a partial multi-lane roundabout may need to be constructed initially. In addition, there is a high chance of the need for a future multi-lane roundabout. This needs to be accounted for accordingly at scoping.</b>

#### Additional Background Information (Program Manager/Project Sponsor)

<p>DESCRIBE</p> <p>EQUITY from ArcGIS Statewide Equity Layer</p> <p>OR-18 @ Lafayette = LowMed State Equity</p> <p>OR-18 @ Ash = MedHigh State Equity</p> <p>GHG Primer Outcome: Addresses non-recurring congestion (chokepoints, safety constraints, and incident response).</p> <p>Higher risk of needing to be a multi-lane roundabout in the future. An update to the OR-18 Expressway Plan may need to be done to incorporate a roundabout alternative. The expressway plan identifies an interchange at this location, however, the Yamhill County TSP (2015) identifies a roundabout at this location.</p>
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#### Leveraging Opportunities (Project Sponsor)

<p>DESCRIBE</p> <p>No leverage opportunities identified yet, however, this project does qualify for the Enhance Highway Discretionary Program if ARTS doesn't fund this proposed project.</p>
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#### Cost Estimate Assumptions and Methodology (Program Manager/Project Sponsor)

CONFIDENCE LEVEL	NARRATIVE
Medium	A planning level estimate was completed for this scope of work by the Region 2 Tech Center in 2017.

#### Funding (Program Manager)

AMOUNT	PROGRAM TYPE	STIP CYCLE	FUNDING PROGRAM MANAGER NAME	FUNDING PROGRAM MGR. SIGNATURE AND DATE
\$6,397,000	ARTS - Safety/HSIP	2024-2027	Keith Blair, R2 Traffic Unit Manager	

#### Signatures

STIP CYCLE 2024-2027	PROJECT NAME OR99E at Lancaster Dr.	PROJECTWISE NO. (IF PREV. SCOPED)
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## ODOT PROJECT BUSINESS CASE OR99E at Lancaster Dr.

☒ Initial ☐ Final

### Project Location (Program Manager)

ROUTE NAME	HIGHWAY ID	BEGIN MP	END MP	LOCAL STREET / NON-HIGHWAY LOCATION
OR-99E	Hwy 1E / 81 - Pacific Highway East	45.25	45.25	at Lancaster Dr

PASTE LINK TO MAP OR PHOTO OF THE PROJECT AREA

<https://goo.gl/maps/KXmTrfYZxgaNRNGP6>

CLICK IN THE FIELD BELOW TO BROWSE FOR AND INCLUDE A MAP OF THE PROJECT AREA (JPG, GIF, PNG, GIF, TIF, BMP FORMATS)



### Problem/Opportunity/Issue Description and Need (Program Manager)

DESCRIBE

This location is identified as a hot spot (or within a group of hot spots) with highly effective countermeasures for reducing the target crashes at this location. Hot Spot analysis refers to a process of identifying locations where there appears to be higher than normal frequency or severity of crashes. These are often higher cost projects targeting a specific segment of roadway or intersection, and addressing a crash history of at least one fatal or serious injury crash within the last five years.

For this project, this intersection was first flagged as a potential safety project location in 2017 and 2018 SPIS. The 2018 SPIS investigation cited turning crashes to and from Lancaster Dr NE as the primary crash pattern. Turning, dark/lit and failure to yield crashes were flagged as higher than expected for the intersection type. The intersection has a 21.3 degree skew. Of the 34 crashes between 2014-2018, MP 45.22 - 45.27, 23 involved left turning movements (12 E-S movement, 12 N-E movement). Seven E-S left-turn movement crashes involved an aging (65+) driver, six were at fault. Three N-E left-turn movement crashes involved an aging driver, all at fault. These aging driver crash patterns support the Human Factors theory of the risk of skewed intersections to aging drivers.

MAP-21 & FAST Act requires states to establish targets for reducing fatalities and serious injuries and to make significant progress towards those targets. **Currently, Oregon is not meeting or making significant progress on any of the five safety targets.** The risk of not doing this project perpetuates the likelihood that we will continue to not meet or make significant progress towards future safety performance targets set in the Transportation Safety Action Plan (TSAP).

### Potential Solutions (Program Manager/Project Sponsor)

DESCRIBE

Install a traffic signal at the intersection of OR-99E and Lancaster Dr NE. Include the business access directly across from Lancaster Dr NE to create a 4-leg signalized intersection. Potentially realign Lancaster Dr NE to reduce/eliminate skew angle with OR-99E, if required to provide adequate intersection sight distance.

### Project Outcomes, Goals and Priorities (Program Manager/Project Sponsor)

DESCRIBE The primary purpose is to reduce fatal and serious injury crashes therefore, the countermeasures selected for this location are chosen on the basis of the types of crashes and contributing factors known to exist.  Urban traffic signals are installed where volumes or angle/turning crashes justify more restricted traffic control. Installing an urban traffic signal will reduce angle and turning crashes by 67%. Traffic signals assign protected right of way to angle and turning traffic movements, reducing the risk of failure to yield driving errors. This is especially beneficial for aging drivers who have a more difficult time navigating skewed intersections and determining appropriate gaps for safe turning maneuvers.	
<b>Planned Construction Year (Program Manager/Project Sponsor)</b>	
YEAR 2027	NARRATIVE Assume latest construction year for the most conservative estimate at scoping.
<b>High Impact Risks (Program Manager/Project Sponsor)</b>	
RISK TITLE HSIP Program Rules	DETAILED DESCRIPTION OF RISK <b>The Safety Program utilizes Federal Highway Safety Improvement Program (HSIP) funds that require a data driven, strategic approach to improving highway safety on all public roads that focus on reducing fatal and serious injuries. Any elements included in the project scope and paid for with Safety Funds must be shown to be cost effective treatments that reduce fatal and serious injuries using a data driven approach to identify locations and measures. This project was applied for and prioritized based on the roundabout solution so this scope of work cannot change.</b>  <b>This project was applied for and prioritized based on the traffic signal solution, so this scope of work cannot change.</b>
RISK TITLE Signal Warrant Analysis Not Completed	DETAILED DESCRIPTION OF RISK <b>Volume warrant traffic analysis has not yet been completed for this intersection, however, the calendar years of 2016 and 2017 met crash warrant #7 per the 2009 MUTCD. It is expected that volume warrant analysis will be completed before field scoping to ensure the correct solution moves forward to scoping.</b>
RISK TITLE Intersection Sight Distance Potential Remediation	DETAILED DESCRIPTION OF RISK <b>Field scoping will need to be completed to estimate the full impact of providing adequate intersection sight distance needed to get approval for installing a traffic signal. This could add significantly to the cost of the project.</b>
RISK TITLE No TSP Reference	DETAILED DESCRIPTION OF RISK <b>Neither the Marion County TSP nor City of Salem TSP cite this intersection as a high priority project location. Therefore, neither document have an identified solution supported by a public outreach process for the intersection.</b>
<b>Additional Background Information (Program Manager/Project Sponsor)</b>	
DESCRIBE Marion County AND the City of Salem must be present at scoping. While this intersection is currently within Marion County jurisdiction, this intersection is slated for eventual City of Salem jurisdiction and their staff have supported eventual signalization of the intersection.  EQUITY from ArcGIS Statewide Equity Layer: High State Equity ATNI Ped Score = 192.95 ATNI Bike Score = 147.59  GHG Primer Outcome: Addresses non-recurring congestion (chokepoints, safety constraints, and incident response).	
<b>Leveraging Opportunities (Project Sponsor)</b>	
DESCRIBE If this ARTS program is selected, potentially <u>cost share</u> with ADA for ramp remediation. All of Salem state highways are on the ADA 150% Scoping list for '24-'27.	
<b>Cost Estimate Assumptions and Methodology (Program Manager/Project Sponsor)</b>	
CONFIDENCE LEVEL Medium	NARRATIVE This project was scoped in the 2021-2024 STIP number 2124_00354 and that is the project estimate cited.



STIP CYCLE 2024-2027	PROJECT NAME OR99W at Bethel Rd.	PROJECTWISE NO. (IF PREV. SCOPED)
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## ODOT PROJECT BUSINESS CASE OR99W at Bethel Rd.

☒ Initial ☐ Final

### Project Location (Program Manager)

ROUTE NAME OR-99W	HIGHWAY ID Hwy 1W / 91 - Pacific Highway West	BEGIN MP 49.72	END MP 49.72	LOCAL STREET / NON-HIGHWAY LOCATION at Bethel Rd
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PASTE LINK TO MAP OR PHOTO OF THE PROJECT AREA

<https://goo.gl/maps/iHEZnFV9mfi479nt5>

CLICK IN THE FIELD BELOW TO BROWSE FOR AND INCLUDE A MAP OF THE PROJECT AREA (JPG, GIF, PNG, GIF, TIF, BMP FORMATS)



### Problem/Opportunity/Issue Description and Need (Program Manager)

DESCRIBE

This location is identified as a hot spot (or within a group of hot spots) with highly effective countermeasures for reducing the target crashes at this location. Hot Spot analysis refers to a process of identifying locations where there appears to be higher than normal frequency or severity of crashes. These are often higher cost projects targeting a specific segment of roadway or intersection, and addressing a crash history of at least one fatal or serious injury crash within the last five years.

The project location has been within a Top SPIS site on and off since 2008, most recently a Top 5% SPIS site in both 2017 & 2018 SPIS screenings. The primary crash patterns are rear-end, angle and turning crashes. Between 2014-2018, there were 22 crashes within the intersection mile point limits including a serious injury fixed-object crash from an avoidance maneuver of a phantom vehicle in 2015 and left turning (E-S) crash in 2016. Of the 22 crashes, 13 were angle & turning and 5 were rear-end crashes. In addition, there was a fatality that occurred at this intersection in April 2020 that stirred public interest in this project moving forward.

MAP-21 & FAST Act requires states to establish targets for reducing fatalities and serious injuries and to make significant progress towards those targets. **Currently, Oregon is not meeting or making significant progress on any of the five safety targets.** The risk of not doing this project perpetuates the likelihood that we will continue to not meet or make significant progress towards future safety performance targets set in the Transportation Safety Action Plan (TSAP).

### Potential Solutions (Program Manager/Project Sponsor)

DESCRIBE

Construct left-turn lanes (both directions) on OR-99W to allow vehicles to proceed through the intersection without having to stop or slow down for vehicles waiting to make a left turn. This project will include reducing the vertical curve to the north of the intersection to ensure adequate intersection sight distance is provided after construction of the left-turn lanes. The project may include a slight realignment of the two Bethel Rd approaches to be directly across from each other (slightly offset right now).

**Project Outcomes, Goals and Priorities (Program Manager/Project Sponsor)**

## DESCRIBE

The primary purpose is to reduce fatal and serious injury crashes therefore, the countermeasures selected for this location are chosen on the basis of the types of crashes and contributing factors known to exist.

For this project, a left turn lanes allow vehicles to proceed through the intersection without having to stop or slow down for vehicles waiting to make a left turn. This will help address the high frequency of rear end crashes resulting from the conflicts between vehicles turning left and following vehicles.

**Planned Construction Year (Program Manager/Project Sponsor)**

## YEAR

2027

## NARRATIVE

Assume latest construction year for the most conservative estimate at scoping.

**High Impact Risks (Program Manager/Project Sponsor)**

## RISK TITLE

HSIP Program Rules

## DETAILED DESCRIPTION OF RISK

**The Safety Program utilizes Federal Highway Safety Improvement Program (HSIP) funds that require a data driven, strategic approach to improving highway safety on all public roads that focus on reducing fatal and serious injuries. Any elements included in the project scope and paid for with Safety Funds must be shown to be cost effective treatments that reduce fatal and serious injuries using a data driven approach to identify locations and measures.**

**This project was applied for and prioritized based on the left-turn lanes (both approaches) solution so this scope of work cannot change.**

## RISK TITLE

Historic/Protected Trees

## DETAILED DESCRIPTION OF RISK

**There are some historical trees and potentially a house in the NW quadrant at the intersection that will need to be avoided.**

## RISK TITLE

Design Exceptions for Intersection Approach Grades

## DETAILED DESCRIPTION OF RISK

**The previous scoping effort MAY have assumed a design exception to improve, but not meet the standard for, the OR-99W approach grades to the intersection.**

**Additional Background Information (Program Manager/Project Sponsor)**

## DESCRIBE

See cost estimate note below.

EQUITY from ArcGIS Statewide Equity Layer: LowMed State Equity

GHG Primer Outcome: Addresses non-recurring congestion (chokepoints, safety constraints, and incident response).

**Leveraging Opportunities (Project Sponsor)**

## DESCRIBE

No leverage opportunities identified yet, however, this project does qualify for the Enhance Highway Discretionary Program if ARTS doesn't fund this proposed project.

**Cost Estimate Assumptions and Methodology (Program Manager/Project Sponsor)**

## CONFIDENCE LEVEL

High

## NARRATIVE

This project was scoped for potential inclusion into K18584 and that is the project estimate cited. Previously, this left-turn lane project had been a programmed safety project that was canceled due to the cost to replace this bridge for widening. The estimate provided was one completed during the bridge project development to see if it was feasible to add the cost of building the left-turn lanes to that project (it was not). Instead, the failing bridge was replaced with a culvert that can accommodate widening for future left-turn lanes.

**Funding (Program Manager)**

## AMOUNT

\$2,629,300

## PROGRAM TYPE

ARTS - Safety/HSIP

## STIP CYCLE

2024-2027

## FUNDING PROGRAM MANAGER NAME

Keith Blair, R2 Traffic Unit Manager

## FUNDING PROGRAM MGR. SIGNATURE AND DATE

**Signatures**

## PROJECT SPONSOR NAME

Amanda Salyer

## PROJECT SPONSOR TITLE

R2 Traffic Investigations Engineer

## PROJECT SPONSOR SIGNATURE AND DATE



STIP CYCLE 2024-2027	PROJECT NAME OR214 at Cascade Highway SE	PROJECTWISE NO. (IF PREV. SCOPED)
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## ODOT PROJECT BUSINESS CASE OR214 at Cascade Highway SE

☒ Initial ☐ Final

### Project Location (Program Manager)

ROUTE NAME	HIGHWAY ID	BEGIN MP	END MP	LOCAL STREET / NON-HIGHWAY LOCATION
OR-214	Hwy 163 - Silver Creek Falls Highway	15.53	15.66	at Cascade Highway

PASTE LINK TO MAP OR PHOTO OF THE PROJECT AREA

CLICK IN THE FIELD BELOW TO BROWSE FOR AND INCLUDE A MAP OF THE PROJECT AREA (JPG, GIF, PNG, GIF, TIF, BMP FORMATS)

OR-214\_CascadeHwy\_ReduceSkew



### Problem/Opportunity/Issue Description and Need (Program Manager)

#### DESCRIBE

This location is identified as a hot spot (or within a group of hot spots) with highly effective countermeasures for reducing the target crashes at this location. Hot Spot analysis refers to a process of identifying locations where there appears to be higher than normal frequency or severity of crashes. These are often higher cost projects targeting a specific segment of roadway or intersection, and addressing a crash history of at least one fatal or serious injury crash within the last five years.

The proposed project location/intersection has been on and off SPIS since the 2000s. It most recently became a Top 5% site in 2018 SPIS and 2019 SPIS. Between 2014-2018, there were 20 crashes including a serious injury angle crash in 2017. 15 of the 20 crashes were angle (14) and turning (1) crashes; 3 crashes involved aging (65+) drivers. Of the 14 angle crashes, 6 had the errant vehicle traveling southbound and 8 had the errant vehicle traveling northbound. The aging driver crash patterns support the Human Factors theory of the risk of skewed intersections to aging drivers.

MAP-21 & FAST Act requires states to establish targets for reducing fatalities and serious injuries and to make significant progress towards those targets. **Currently, Oregon is not meeting or making significant progress on any of the five safety targets.** The risk of not doing this project perpetuates the likelihood that we will continue to not meet or make significant progress towards future safety performance targets set in the Transportation Safety Action Plan (TSAP).

### Potential Solutions (Program Manager/Project Sponsor)

#### DESCRIBE

Reduce the intersection skew, create a 90-degree 4-leg intersection with increased intersection sight distance, reduce vertical curve **to the west** of the intersection.

### Project Outcomes, Goals and Priorities (Program Manager/Project Sponsor)

#### DESCRIBE

The primary purpose is to reduce fatal and serious injury crashes therefore, the countermeasures selected for this location are chosen on the basis of the types of crashes and contributing factors known to exist.

For this project, reducing the intersection skew will reduce crashes by 17% and flattening the crest vertical curve will reduce crashes by 20%. Also, increasing the triangle sight distance will reduce injury crashes by 48%. Changing the skewed intersection to a 90-degree intersection will greatly improve the intersection sight distance and visibility as well as the speed of certain turning movements as entering vehicles attempt to get aligned in the traffic lane going in the direction of travel. This is especially beneficial to aging drivers per the Human Factors Guidelines. Flattening a crash vertical curve prior to an intersection provides a more complete visual to drivers of the upcoming alignment of the roadway and intersection and subsequently more stopping sight distance. Increasing the intersection sight distance will allow drivers to see approaching vehicles on the mainline without obstruction and therefore make better decisions about entering the intersection safely.

The current skew of the intersection creates three separate access points on OR-214 from slip lanes. By realigning the skewed intersection to a 90-degree intersection, these slip lane access points can be eliminated, reducing the total amount of conflict points created by this existing intersection.

#### Planned Construction Year (Program Manager/Project Sponsor)

YEAR	NARRATIVE
2027	Assume latest construction year for the most conservative estimate at scoping.

#### High Impact Risks (Program Manager/Project Sponsor)

RISK TITLE	DETAILED DESCRIPTION OF RISK
HSIP Program Rules	<p><b>The Safety Program utilizes Federal Highway Safety Improvement Program (HSIP) funds that require a data driven, strategic approach to improving highway safety on all public roads that focus on reducing fatal and serious injuries. Any elements included in the project scope and paid for with Safety Funds must be shown to be cost effective treatments that reduce fatal and serious injuries using a data driven approach to identify locations and measures.</b></p> <p><b>This project was applied for and prioritized based on reducing the intersection skew angle, flattening the adjacent crest vertical curve and increasing the intersection triangle sight distance so this scope of work cannot change unless geometrically unfeasible.</b></p>
Surrounding Farm Use Property	<p><b>Obtaining right of way in an area with exclusive farm land use can increase the cost risk to the project significantly. In the NW quadrant of the intersection is fertilizer facility and this proposed project assumes this property/business will not be impacted.</b></p>

#### Additional Background Information (Program Manager/Project Sponsor)

**DESCRIBE**  
Cascade Highway historically was a state highway before being jurisdictionally transferred to the County (20+ year ago). Therefore, the major/minor approach volumes are not as expected between a state highway and local road. Volume on Cascade Hwy has been approximately three times greater than the ADT on OR-214 in last 10 yrs but Cascade Hwy has the stop control, however, higher volume approaches vary throughout the year due to tourist and agricultural influences. Both minor approaches have separated stop-controlled legs to turn left. This adds a level of complexity to the type of traffic control used at the intersection and has lead to many requests over the years for a 4-way stop. In addition, both minor approaches have separated stop-controlled legs to turn left.

EQUITY from ArcGIS Statewide Equity Layer: LowMed State Equity

GHG Primer Outcome: Addresses non-recurring congestion (chokepoints, safety constraints, and incident response).

#### Leveraging Opportunities (Project Sponsor)

DESCRIBE
None identified.

#### Cost Estimate Assumptions and Methodology (Program Manager/Project Sponsor)

CONFIDENCE LEVEL	NARRATIVE
Medium	This proposed project estimate is only a Planning Level cost estimate utilizing the statewide ARTS cost estimating tool.

STIP CYCLE 2024-2027	PROJECT NAME Northwest Oregon pedestrian crossing enhancements (2027)	PROJECTWISE NO. (IF PREV. SCOPED) 2124_00362
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## ODOT PROJECT BUSINESS CASE

☒ Initial ☐ Final

### Northwest Oregon pedestrian crossing enhancements (2027)

#### Project Location (Program Manager)

ROUTE NAME	HIGHWAY ID	BEGIN MP	END MP	LOCAL STREET / NON-HIGHWAY LOCATION
US-101	Hwy 9 - Oregon Coast Hwy (Tillamook)	64.34	64.35	north leg of Makinster Rd
US-101	Hwy 9 - Oregon Coast Hwy (Lincoln Beach)	124.36	124.36	south leg of Willow St
OR-47	Hwy 29 - Tualatin Valley Hwy (Yamhill)	34.35	34.35	north leg of Larch Pl
US-20	Hwy 33 - Corvallis-Newport Hwy (Newport)	0.32	0.32	east leg of Eads St
OR-47	Hwy 102 - Nehalem Hwy (Banks)	83.49	83.49	south leg of Trellis Way
OR-219	Hwy 140 - Hillsboro-Silverton Hwy (St. Paul)	27.92	27.92	south leg of Convent Dr
OR-22	Hwy 162 - North Santiam Hwy (Gates)	33.11	33.11	west leg of Gates Hill St
OR-22	Hwy 162 - North Santiam Hwy (Idanha)	54.54	54.54	west leg of Main St

PASTE LINK TO MAP OR PHOTO OF THE PROJECT AREA

CLICK IN THE FIELD BELOW TO BROWSE FOR AND INCLUDE A MAP OF THE PROJECT AREA (JPG, GIF, PNG, GIF, TIF, BMP FORMATS)



#### Problem/Opportunity/Issue Description and Need (Program Manager)

##### DESCRIBE

The systemic analysis approach refers to a process of identifying locations and/or corridors with high-risk roadway features correlated with specific crash types or severities. This approach provides a more comprehensive method for safety planning and implementation that supplements and complements traditional hotspot analysis. The approach also helps broaden traffic safety efforts and consider risk as well as crash history when identifying where to make low-cost safety improvements.

For this project, these eight locations were identified by communities, safe routes to school program and/or safety investigations and pedestrian activity justifies an enhanced pedestrian crossing. All of the locations have identified and data driven risks (which could include crash history but is not limited to it) to pedestrian and bicycle safety.

MAP-21 & FAST Act requires states to establish targets for reducing fatalities and serious injuries and to make significant progress towards those targets. **Currently, Oregon is not meeting or making significant progress on any of the five safety targets.** In addition, pedestrian crashes are continuing to increase in Oregon and nationwide. The risk of not doing this project perpetuates the likelihood that we will continue to not meet or make significant progress towards future safety performance targets set in the Transportation Safety Action Plan (TSAP).

#### Potential Solutions (Program Manager/Project Sponsor)

**DESCRIBE**

This project includes enhanced crosswalks including median islands, RRFBs, and/or intersection lighting at the following listed state highway intersections. Additional site specific scope of work is noted below. Italicized scope of work is copied from a previous 21-24 ARTS Final business case.

**US-101 (9) @ Makinster Rd (64.34 - 64.35) - NORTH leg (City of Tillamook, District 1)**

- Median island

**US-101 (9) @ Willow St (124.36) - SOUTH leg (Lincoln Beach Community, District 4)**

- Overhead RRFB & median island

**OR-47 (29) @ Larch Pl (34.35) - NORTH leg (City of Yamhill, District 3) ~ school crossing**

- Grading/ramping between roadway and sidewalks for appropriate ADA accommodations

**US-20 (33) @ Eads St (0.32) - EAST leg (City of Newport, District 4) ~ school crossing**

- Median island

*Install a solar powered RRFB and accessible cut through pedestrian refuge island on the east leg of the intersection of US20 and Eads Rd. at MP 0.32. The RRFB will consist of two poles, one on each side of the highway with back to back type installation. Two new illumination poles will be installed to illuminate the crossing. The new illumination poles may be omitted if the existing utility provided illumination adequately illuminates the crossing.*

**OR-47 (102) @ Trellis Way (83.49) - SOUTH leg (City of Banks, District 1) ~ school crossing**

- Median island
  - Sidewalk infill on the west side between SW Trellis Way north to Banks Sunset Park access
- Replace the existing curb and construct new sidewalk on the west side of OR47 from where the sidewalk currently ends near MP 83.46 south to the intersection of OR47 and Trellis Ct. at MP 83.51. Install a crosswalk across OR47 with accessible cut through pedestrian refuge island on the south leg of the OR47/Trellis Ct. intersection. The OR47/Trellis Ct. intersection is a T-intersection. On the west side of the intersection, new parallel style ADA compliant curb ramps will be provided for crossing OR47. On the east side of the intersection the existing single curb ramps at each corner on the north and south side of the intersection will be replaced with two new ADA compliant curb ramps at each corner to provide pedestrian crossing of OR47 and Trellis Ct.*

**OR-219 (140) @ Convent Dr (27.92) - SOUTH leg (City of St. Paul, District 3) ~ school crossing**

- Sidewalk infill on the west side between Convent Dr south to McDonald Ave

**OR-22 (162) @ Gates Hill (33.11) - WEST leg (City of Gates, District 3)**

- Lane/shoulder reallocation to create space for a median island between left turn lane and opposing through lane

**OR-22 (162) @ Main St (54.54) - WEST leg (City of Idanha, District 3)**

- Lane/shoulder reallocation to create space for a median island between through lanes
- Curb and/or sidewalk to define the open access/paved area to the north

**Project Outcomes, Goals and Priorities (Program Manager/Project Sponsor)**

**DESCRIBE**

The primary purpose is to reduce the risk of pedestrian related fatal and serious injury crashes therefore, the countermeasures selected for this location are chosen on the basis of the types of crashes and contributing risk factors known to exist.

On multi-lane roads, there is a need to provide additional notification to motorists of the presence of crossing pedestrians or where there are insufficient gaps in vehicle traffic to provide a pedestrian a crossing opportunity. RRFB's can enhance safety by reducing crashes between vehicles and pedestrians by increasing driver awareness of potential pedestrian conflicts. With a pedestrian refuge island, pedestrians are able to more safely make a two-stage crossing by having to only look for a gap in one direction of traffic at a time while being protected by a concrete curbed island.

Intersection lighting allows for greater visibility of the intersection. Roadway users and features are more visible and help all users determine a safe path through the intersection. Intersection lighting is especially beneficial to illuminate pedestrians and aid in visibility of the intersection especially for aging road users.



STIP CYCLE 2024-2027	PROJECT NAME I-5: Northwest Oregon wrong way driving treatments (2027)	PROJECTWISE NO. (IF PREV. SCOPED)
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## ODOT PROJECT BUSINESS CASE

☒ Initial ☐ Final

### I-5: Northwest Oregon wrong way driving treatments (2027)

#### Project Location (Program Manager)

ROUTE NAME	HIGHWAY ID	BEGIN MP	END MP	LOCAL STREET / NON-HIGHWAY LOCATION
I-5	001	170	263	Specific Connection LRMs listed below
I-5 @ OR-99	22600D00	19.55	20.05	I-5 Exit 170 NB Off Ramp at OR-99
I-5	001JZI00	172.46	172.62	I-5 Exit 172 SB Off Ramp
I-5	001KDI00	174.72	174.80	I-5 Exit 174 NB Off/On Ramp; intersect
I-5	001KEI00	175.29	175.34	I-5 Exit 174 SB Off/On Ramp; intersect
I-5	001KII00	176.57	176.76	I-5 Exit 176 NB Off/On Ramp; intersect
I-5	001KMI00 & 001KLI00	177.26 & 177.28 & 177.26		I-5 Exit 176 SB Off/On Ramp; intersect
I-5	001KRI00	182.57	182.83	I-5 Exit 182 NB Off/On Ramp; intersect
I-5	001KSI00 & 001YZI00	183.30 & 183.40 & 182.97		I-5 Exit 182 SB Off/On Ramp; intersect
I-5	001KYI00	188.05	188.30	I-5 Exit 188A NB Off Ramp onto OR-58
I-5 @ OR-99	22600I00	0.02	0.16	I-5 Exit 188 SB Off Ramp onto OR-58
OR-99	22600D00	0.00	0.14	OR-99 merge ramp onto OR-58 EB
I-5	001XBI00	188.66	188.99	I-5 Exit 188B NB Off Ramp onto conn.
I-5 @ OR-225	22500D00	2.30	2.52	I-5 Exit 189 NB Off Ramp which is the
I-5	001LDI00	190.73	191.03	I-5 Exit 189 SB Off Ramp to 22500I00
I-5 @ OR-225	225AEI00	1.18	1.30	I-5 NB Ramp @ McVay Hwy intersection
I-5	001LFI00	191.76	191.99	I-5 Exit 191 NB Off Ramp to conn. 001
I-5	001LII00	192.01	192.14	I-5 Exit 191 SB Off Ramp to conn. 001
I-5	001LWI00	198.70	199.15	I-5 Exit 199 NB
I-5	001LZI00	199.38	199.61	I-5 Exit 199 SB
I-5	001MFI00	208.82	209.07	I-5 Exit 209 NB
I-5	001MII00	209.30	209.55	I-5 Exit 209 SB
I-5	001MLI00	216.34	216.58	I-5 Exit 216 NB
I-5	001MMI00	216.80	217.04	I-5 Exit 216 SB
I-5	001MSI00 & 001MRI00	233.43 & 233.47 & 233.45		I-5 Exit 233 NB to Santiam Hwy
I-5	001MTI00	233.53	233.56	I-5 Exit 233 SB to Santiam Hwy
I-5	001MWI00	233.86	234.28	I-5 Exit 234 NB to Knox Butte Rd
OR-99E	058ABI00	0.66	0.95	OR-99E merge ramp onto Knox Butte Rd
I-5 @ OR-99E	05800I00	0.30	0.41	I-5 Exit 234 SB to OR-99E
I-5	001NDI00	235.76	235.89	I-5 Exit 235 NB to Frontage Rd 001NA
I-5	001NFI00	235.70	235.76	I-5 Exit 235 SB Old Salem Rd to conn.
I-5	001NHI00	235.53	235.64	I-5 Exit 235 SB Off Ramp to Old Salem
I-5	001NKI00	237.85	238.04	I-5 Exit 237 SB Off Ramp to conn. 001N
I-5	001NNI00	238.25	238.62	I-5 Exit 238 NB Off Ramp to Jefferson
I-5 @ OR-164	16400D00	8.43	8.90	I-5 Exit 238 SB Off Ramp to Jefferson



I-5	001NOI00	239.64	239.73	I-5 Exit 239 NB Off Ramp to Dever Cor
I-5	001NQI00	239.98	240.05	I-5 Exit 239 SB Off Ramp to Dever Cor
I-5	001VQI00	242.14	242.37	I-5 Exit 242 NB Off Ramp to conn. 001N
I-5	001OBI00	242.28	242.33	I-5 Exit 242 SB Off Ramp to frontage rd
I-5	001OEI00	243.35	243.55	I-5 Exit 243 NB Off Ramp to Ankeny Hill
I-5	001OHI00	243.72	243.93	I-5 Exit 243 SB Off Ramp to Ankeny Hill
I-5	001OKI00	244.49	244.69	I-5 Exit 244 NB Off Ramp to Jefferson H
I-5 @ OR-164	164ABI00	0.20	0.43	I-5 Exit 244 SB Off Ramp to Jefferson H
I-5	001ONI00	248.22	248.41	I-5 Exit 248 NB Off Ramp to Delaney P
I-5	001OPI00	248.62	248.82	I-5 Exit 248 SB Off Ramp to Delaney P
I-5	001PSI00	263.28	263.52	I-5 Exit 263 NB Off Ramp to Brooklake
I-5	001PVI00	263.69	236.93	I-5 Exit 263 SB Off Ramp to Brooklake

PASTE LINK TO MAP OR PHOTO OF THE PROJECT AREA

CLICK IN THE FIELD BELOW TO BROWSE FOR AND INCLUDE A MAP OF THE PROJECT AREA (JPG, GIF, PNG, GIF, TIF, BMP FORMATS)



### Problem/Opportunity/Issue Description and Need (Program Manager)

#### DESCRIBE

The systemic analysis approach refers to a process of identifying locations and/or corridors with high-risk roadway features correlated with specific crash types or severities. This approach provides a more comprehensive method for safety planning and implementation that supplements and complements traditional hotspot analysis. The approach also helps broaden traffic safety efforts and consider risk as well as crash history when identifying where to make lower-cost safety improvements.

A wrong-way driving (WWD) crash occurs when a vehicle traveling in a direction opposing the legal flow of traffic on a high-speed divided highway or access ramp collides with a vehicle traveling on the same roadway in the proper direction. This definition typically concerns only controlled-access highways (freeways) and associated entrance and exit ramps. Because WWD crashes involve head-on or opposite direction sideswipe crashes at high speeds, they tend to be relatively more severe than other types of crashes. So while Region 2 does not have documented wrong way driving crash patterns, it is critical to be proactive and consistent with our signing and striping at ramp terminals to prevent wrong way driving maneuvers. This is especially critical in a state that has low traffic law enforcement, a continued decrease in highway funding for large scale interchange projects for the foreseeable future and a continually aging driving population. These are all high risk factors in wrong way driving crashes as cited in the PSU Wrong Way Driving Analysis and Recommendations report completed for ODOT in 2017. In addition, interchange ramp terminals are not consistently included in Preservation projects for sign replacements or enhancements so it is likely many of our exit ramps have inconsistent signing and striping at best, substandard at worst.

By 2030, there will be approximately 72.1 million aging persons, accounting for roughly one-fifth of the population of driving age in this country. This means that there will be a steadily increasing proportion of drivers and pedestrians who experience declining vision; slowed decision-making and reaction times; exaggerated difficulty when dividing attention between traffic demands and other important sources of information. Decades of research has shown that aging drivers especially have difficulty in detecting,

comprehending, and responding to signs within an appropriate time frame for the safe completion of intersection maneuvers. Federal legislation requires us to consider implementing proven countermeasures specifically for aging drivers. As highway funding continues to decrease and maintenance needs continue to increase, it is critical to focus on maintaining and enhancing the most cost-effective tools we have for decreasing fatal/serious injury and aging driver crashes: Traffic Control Devices. In addition, the NTSB's FARS analysis determined that drivers over the age of 70 are over-represented in fatal wrong-way crashes (NTSB, 2013) so the FHWA Aging Driver Handbook recommends additional treatments to counter wrong-way driving by aging driver should be considered where exit ramps intersection with surface streets.

MAP-21 & FAST Act requires states to establish targets for reducing fatalities and serious injuries and to make significant progress towards those targets. Currently, Oregon **is not meeting or making significant progress on any of the five safety targets**. The risk of not doing this project perpetuates the likelihood that we will continue to not meet or make significant progress towards future safety performance targets set in the Transportation Safety Action Plan (TSAP).

#### Potential Solutions (Program Manager/Project Sponsor)

##### DESCRIBE

For this project, install the wrong way driving deterrents of signing and striping enhancements and channelizing islands (where appropriate) at various exit ramps on I-5 in Region 2 as a proactive approach to prevent wrong way driving at interchange off-ramps. The affected interchanges are exits 170, 172, 174, 176, 182, 188, 189, 191, 199, 209, 216, 233, 234, 235, 237, **238**, 239, 242, 243, **244**, **248** & 263. The project only includes ramps/interchanges where there have not been any recently known construction projects in the area that could have made these enhancements. The crashes included in the benefit/cost analysis are only for exit/off-ramps at the above listed interchanges.

It is assumed that all interchange exit ramps meet the minimum MUTCD and ODOT requirements for signing and pavement markings. However, exit ramps should be reviewed for compliance with the current minimum recommendations for WRONG WAY (WW), DO NOT ENTER (DNE), and ONE WAY signing and wrong-way arrows (WWA). These are countermeasures/recommendations from the PSU Wrong Way Driving Analysis and Recommendations report to mitigate and deter wrong way driving.

#### Project Outcomes, Goals and Priorities (Program Manager/Project Sponsor)

##### DESCRIBE

The primary purpose is to reduce fatal and serious injury crashes therefore, the countermeasures selected for this location are chosen on the basis of the types of crashes and contributing factors known to exist.

Installing wrong way signing, striping and delineation countermeasures can reduce crashes by 20%. Larger signs and additional signs along the roadway will benefit drivers by increasing visibility and giving repeated cues, respectively. They recommend the use of signs with fluorescent red sheeting and retroreflective sheeting to improve conspicuity, especially during dawn and dusk conditions. The use of low-mounted signs improve conspicuity during nighttime under low-beam vehicle headlights. Because impaired and older drivers focus on the area of the pavement in front of the vehicle, low-mounted signs were intended to target these drivers. Any enhancement to the visibility of pavement markings can reduce the chance of wrong-way driving crashes. The installation of two-lane direction pavement marking arrows downstream from the exit ramp has been proven to significantly reduce a wrong-way movement.

#### Planned Construction Year (Program Manager/Project Sponsor)

##### YEAR

2027

##### NARRATIVE

Assume latest construction year for the most conservative estimate at scoping.

#### High Impact Risks (Program Manager/Project Sponsor)

##### RISK TITLE

HSIP Program Rules

##### DETAILED DESCRIPTION OF RISK

**The Safety Program utilizes Federal Highway Safety Improvement Program (HSIP) funds that require a data driven, strategic approach to improving highway safety on all public roads that focus on reducing fatal and serious injuries. Any elements included in the project scope and paid for with Safety Funds must be shown to be cost effective treatments that reduce fatal and serious injuries using a data driven approach to identify locations and measures.**

**This project was applied for and prioritized based on the WWD systemic countermeasures solution (implementing what doesn't already exist) so this scope of work cannot change.**



STIP CYCLE 2024-2027	PROJECT NAME Northern northwest lighting & enhanced intersection warning (2027)	PROJECTWISE NO. (IF PREV. SCOPED)
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## ODOT PROJECT BUSINESS CASE

☒ Initial ☐ Final

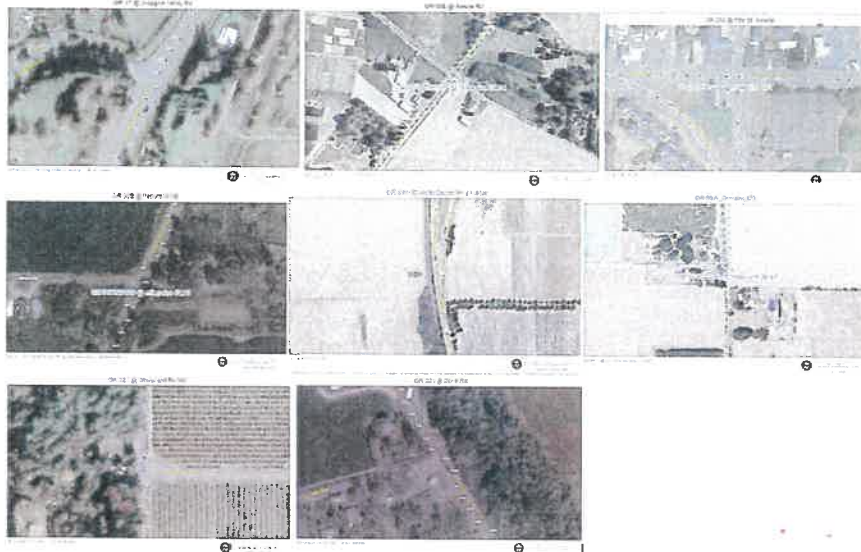
**Northern northwest lighting & enhanced intersection warning (2027)**

### Project Location (Program Manager)

ROUTE NAME	HIGHWAY ID	BEGIN MP	END MP	LOCAL STREET / NON-HIGHWAY LOCATION
OR-47	Hwy 29 - Tualatin Valley Hwy	23.80	23.80	Scoggins Valley Rd (Area 3)
OR-99E	Hwy 1E/81 - Pacific Highway East	37.14	37.14	Keene Rd (Area 3)
OR-99E	Hwy 1E/81 - Pacific Highway East	42.78	42.78	Perkins Rd (Area 3)
OR-99W	Hwy 1W / 91 - Pacific Highway West	39.93	39.93	Durham Ln (Area 3)
OR-99W	Hwy 1W / 91 - Pacific Highway West	43.38	43.38	Amity-Dayton Hwy Merge (Area 3)
OR-202	Hwy 102 - Nehalem Hwy	1.52	1.52	Fifth St (Area 1)
OR-221	Hwy 150 - Salem-Dayton Hwy	9.55	9.55	Wheatland Rd (Area 3)
OR-221	Hwy 150 - Salem-Dayton Hwy	14.98	14.98	Zena Rd (Area 3)

PASTE LINK TO MAP OR PHOTO OF THE PROJECT AREA

CLICK IN THE FIELD BELOW TO BROWSE FOR AND INCLUDE A MAP OF THE PROJECT AREA (JPG, GIF, PNG, GIF, TIF, BMP FORMATS)



### Problem/Opportunity/Issue Description and Need (Program Manager)

#### DESCRIBE

The systemic analysis approach refers to a process of identifying locations and/or corridors with high-risk roadway features correlated with specific crash types or severities. This approach provides a more comprehensive method for safety planning and implementation that supplements and complements traditional hotspot analysis. The approach also helps broaden traffic safety efforts and consider risk as well as crash history when identifying where to make lower-cost safety improvements.

By 2030, there will be approximately 72.1 million aging persons, accounting for roughly one-fifth of the population of driving age in this country. This means that there will be a steadily increasing proportion of drivers and pedestrians who experience declining vision; slowed decision-making and reaction times; exaggerated difficulty when dividing attention between traffic demands and other important sources of information. Decades of research has shown that aging drivers especially have difficulty in detecting, comprehending, and responding to signs within an appropriate time frame for the safe completion of intersection maneuvers. Federal legislation requires us to consider implementing proven countermeasures specifically for aging drivers. As highway funding continues to decrease and maintenance needs continue to increase, it is critical to focus on maintaining and enhancing the most cost-effective tools we have for decreasing fatal/serious injury and aging driver crashes: Traffic Control Devices.

All of these locations have been identified either through SPIS or a crash screenings requested to DKS for intersections that would be candidates for illumination and/or signing/stripping enhancements (i.e. run the stop) where there are crashes but not enough to justify a larger cost hotspot project at this time. The 8 intersections included in the proposed project had a combined 5 fatal/serious injury crashes (see list below) between 2014-2018. This proposed project is a proactive attempt to better warn and

guide motorists through these intersections. In addition, lighting will be included at two of the intersections that have adjacent vegetation regularly shading the highway/intersection but cannot be removed or heavily trimmed due to environmental protection statuses. This proposed project is a proactive attempt to better warn and guide aging drivers (one of our key emphasis areas as encouraged by FHWA) through the intersections with an increasing risk of crashes but do not have a high level or severity of existing crashes to justify a larger cost Safety project at this time.

INJA in 2015 at OR-47 and Scoggins Valley Rd - fixed object crash involving passing the STOP

INJA in 2016 at OR-99E and Perkins Rd - LT turning crash involving inattention/distraction

INJA in 2016 at OR-99W and Amity-Dayton Hwy Merge - LT turning crash involving passing the STOP (younger driver involved)

Fatal in 2017 at OR-99W and Durham Ln - rear-end crash involving inattention/distraction

INJA in 2018 at OR-221 and Wheatland Rd - sideswipe-meeting crash related to passing at the intersection (aging and younger driver involved)

MAP-21 & FAST Act requires states to establish targets for reducing fatalities and serious injuries and to make significant progress towards those targets. Currently, Oregon **is not meeting or making significant progress on any of the five safety targets**. The risk of not doing this project perpetuates the likelihood that we will continue to not meet or make significant progress towards future safety performance targets set in the Transportation Safety Action Plan (TSAP).

#### Potential Solutions (Program Manager/Project Sponsor)

##### DESCRIBE

Install enhanced regulatory, guide & warning signs, striping & delineation at the 8 listed intersections consistent with FHWA-SA-17-056 publication: Systemic Application of Multiple Low-Cost Countermeasures at Stop-Controlled Intersections. Any location specific signing/striping enhancements are noted below. Install rural intersection lighting to mitigate shading of adjacent and protected vegetation at two intersections noted below.

OR47 (29) @ Scoggins Valley Rd (23.80)

OR99E (81) @ Keene Rd (MP 37.14)

OR99E (81) @ Perkins Rd (42.78) - install intersection lighting

OR99W (91) @ Durham Ln (39.93)

OR99W (91) @ Amity-Dayton Hwy Merge (43.38) - also evaluate for wrong way driving signing & striping treatments

OR202 (102) @ Fifth St (1.52) - also evaluate guide signing as this is adjacent to a highway to highway connection

OR221 (150) @ Wheatland Rd (9.55)

OR221 (150) @ Zena Rd (14.98) - install intersection lighting, replace overhead flashing beacon with post mounted beacons

#### Project Outcomes, Goals and Priorities (Program Manager/Project Sponsor)

##### DESCRIBE

The primary purpose is to reduce fatal and serious injury crashes therefore, the countermeasures selected for this location are chosen on the basis of the types of crashes and contributing factors known to exist.

For this project, installing intersection lighting will reduce crashes by 38%. Improving intersection visibility through enhanced warning, guide and regulatory signs and pavement markings can be used to increase drivers' alertness to the presence of an unsignalized intersection and reduce potential conflicts with other entering vehicles. Larger signs and additional signs along the roadway will benefit drivers by increasing visibility and giving repeated cues, respectively. Intersection lighting allows for greater visibility of the intersection, making signs and markings more visible and helping drivers determine a safe path through the intersection. This can be especially helpful at rural intersections where the only source of lighting for the roadway is often provided by vehicle headlights.

#### Planned Construction Year (Program Manager/Project Sponsor)

YEAR	NARRATIVE
2027	Assume latest construction year for the most conservative estimate at scoping.

#### High Impact Risks (Program Manager/Project Sponsor)



STIP CYCLE 2024-2027	PROJECT NAME Northwest Oregon enhanced rural intersection warning (2027)	PROJECTWISE NO. (IF PREV. SCOPED)
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## ODOT PROJECT BUSINESS CASE

☒ Initial ☐ Final

### Northwest Oregon enhanced rural intersection warning (2027)

#### Project Location (Program Manager)

ROUTE NAME	HIGHWAY ID	BEGIN MP	END MP	LOCAL STREET / NON-HIGHWAY LOCATION
US-101	Hwy 9 - Oregon Coast Hwy	57.52	57.52	Hobsonville Point Dr (Area 1)
US-101	Hwy 9 - Oregon Coast Hwy	67.63	67.63	Nielsen Rd / McCormick Lp (Area 1)
US-30	Hwy 2W/92 - Lower Columbia River Hwy	95.08	95.08	Maritime Rd / Nimitz (Area 1)
OR-47	Hwy 29 - Tualatin Valley Hwy	22.31	22.31	Spring Hill Rd (Area 3)
OR-47	Hwy 29 - Tualatin Valley Hwy	42.43	42.43	OR99W (Area 3)
OR-99E	Hwy 1E/81 - Pacific Highway East	40.75	40.75	54th Ave (Area 3)
US-20	Hwy 16 - Santiam Hwy	17.72	17.72	Cascade Dr / Old Santiam (Area 4)
OR-223	Hwy 191 - Kings Valley Hwy	9.95	9.95	OR194 / Bridgeport Rd (Area 4)
OR-58	Hwy 18 - Willamette Hwy	8.55	8.55	Rattlesnake Rd (Area 5)
OR-22	Hwy 162 - North Santiam Hwy	14.22	14.31	Fern Ridge Rd SE (Area 3)

PASTE LINK TO MAP OR PHOTO OF THE PROJECT AREA

OR-22 @ Fern Ridge Rd SE Map Link - <https://goo.gl/maps/XdHpXudYaJqsw8e8>

CLICK IN THE FIELD BELOW TO BROWSE FOR AND INCLUDE A MAP OF THE PROJECT AREA (JPG, GIF, PNG, GIF, TIF, BMP FORMATS)



#### Problem/Opportunity/Issue Description and Need (Program Manager)

##### DESCRIBE

The systemic analysis approach refers to a process of identifying locations and/or corridors with high-risk roadway features correlated with specific crash types or severities. This approach provides a more comprehensive method for safety planning and implementation that supplements and complements traditional hotspot analysis. The approach also helps broaden traffic safety efforts and consider risk as well as crash history when identifying where to make lower-cost safety improvements.

By 2030, there will be approximately 72.1 million aging persons, accounting for roughly one-fifth of the population of driving age in this country. This means that there will be a steadily increasing proportion of drivers and pedestrians who experience declining vision; slowed decision-making and reaction times; exaggerated difficulty when dividing attention between traffic demands and other important sources of information. Decades of research has shown that aging drivers especially have difficulty in detecting, comprehending, and responding to signs within an appropriate time frame for the safe completion of intersection maneuvers. Federal legislation requires us to consider implementing proven countermeasures specifically for aging drivers. As highway funding continues to decrease and maintenance needs continue to increase, it is critical to focus on maintaining and enhancing the most cost-effective tools we have for decreasing fatal/serious injury and aging driver crashes: Traffic Control Devices.

Skewed intersections makes detection of and judgments about potential conflicting vehicles on crossing roadways much more

difficult and poses a particular problems for aging drivers. Many aging drivers experience a decline in head and neck mobility. A restricted range of motion reduces an aging driver's ability to effectively scan to the rear and sides of his or her vehicle to observe blind spots, and similarly may be expected to hinder the timely recognition of conflicts during turning and merging maneuvers at intersections. This creates more of a problem in determining appropriate gaps.

All of these locations have been identified through one or both crash screenings requested to DKS: run the stop and/or passing at an intersection. In reviewing those crash screenings, it became apparent there was a pattern in a number of the intersections being skewed. The 10 intersections included in the proposed project had a combined 5 fatal/serious injury crashes (see list below) between 2014-2018. This proposed project is a proactive attempt to better warn and guide motorists through the skewed intersections which are a high risk to aging drivers, one of our key emphasis areas as encouraged by FHWA.

INJA in 2016 at US-101 and McCormick Lp - fixed object crash at intersection

INJA in 2015 at US-101 and Cascade Dr - RT turning crash involving passing the STOP (younger drivers involved)

Fatal in 2017 at OR-58 and Rattlesnake Rd - LT turning crash involving passing the STOP (aging & younger driver involved)

INJA in 2014 at US-30 and Maritime Rd - LT turning crash involving failure to yield

INJA in 2014 at OR-22 and Fern Ridge Rd SE - angle crash involving failure to yield (aging drivers involved)

MAP-21 & FAST Act requires states to establish targets for reducing fatalities and serious injuries and to make significant progress towards those targets. Currently, Oregon **is not meeting or making significant progress on any of the five safety targets**. The risk of not doing this project perpetuates the likelihood that we will continue to not meet or make significant progress towards future safety performance targets set in the Transportation Safety Action Plan (TSAP).

#### Potential Solutions (Program Manager/Project Sponsor)

##### DESCRIBE

For this project, install enhanced regulatory, guide & warning signs, striping, delineation and splitter islands at the 10 listed **skewed** intersections consistent with FHWA-SA-17-056 publication: Systemic Application of Multiple Low-Cost Countermeasures at Stop-Controlled Intersections. Where feasible, "T" up the Stop approaches at the intersections with striping and the splitter island placement.

#### Project Outcomes, Goals and Priorities (Program Manager/Project Sponsor)

##### DESCRIBE

The primary purpose is to reduce fatal and serious injury crashes therefore, the countermeasures selected for this location are chosen on the basis of the types of crashes and contributing factors known to exist.

For this project, improving the intersection warning can reduce crashes by 25%. Improving intersection warning, guide and regulatory signs and pavement markings can be used to increase drivers' alertness to the presence of an unsignalized intersection and reduce potential conflicts with other entering vehicles. Larger signs and additional signs along the roadway will benefit drivers by increasing visibility and giving repeated cues, respectively. The installation of splitter islands allows for the addition of a stop sign in the median to make the intersection and presence of a Stop control more conspicuous.

#### Planned Construction Year (Program Manager/Project Sponsor)

YEAR	NARRATIVE
2027	Assume latest construction year for the most conservative estimate at scoping.

#### High Impact Risks (Program Manager/Project Sponsor)

RISK TITLE	DETAILED DESCRIPTION OF RISK
HSIP Program Rules	<p><b>The Safety Program utilizes Federal Highway Safety Improvement Program (HSIP) funds that require a data driven, strategic approach to improving highway safety on all public roads that focus on reducing fatal and serious injuries. Any elements included in the project scope and paid for with Safety Funds must be shown to be cost effective treatments that reduce fatal and serious injuries using a data driven approach to identify locations and measures.</b></p> <p><b>This project was applied for and prioritized based on the improved intersection warning and splitter island countermeasures solution (implementing what doesn't already exist) so this scope of work cannot change unless geometrically not feasible.</b></p>

STIP CYCLE 2024-2027	PROJECT NAME Vehicle Activated Warning Systems (2027) (Yamhill, Marion & Lane Counties)	PROJECTWISE NO. (IF PREV. SCOPED) 2124_00370
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## ODOT PROJECT BUSINESS CASE

☒ Initial ☐ Final

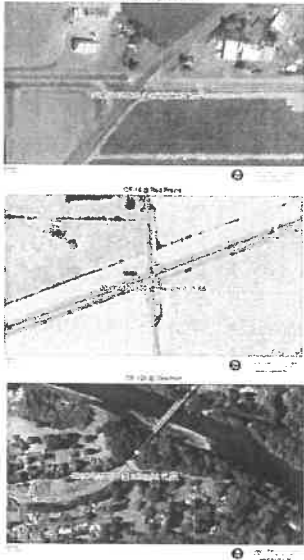
### Vehicle Activated Warning Systems (2027) (Yamhill, Marion & Lane Counties)

#### Project Location (Program Manager)

ROUTE NAME	HIGHWAY ID	BEGIN MP	END MP	LOCAL STREET / NON-HIGHWAY LOCATION
OR-126	Hwy 15 - McKenzie Hwy	11.32	11.32	at Deerhorn Rd
OR-18	Hwy 39 - Salmon River Hwy	31.66	31.66	at Red Prairie Rd
OR-213	Hwy 160 - Cascade Hwy	24.77	24.77	at Mt. Angel-Scotts Mills Rd

PASTE LINK TO MAP OR PHOTO OF THE PROJECT AREA

CLICK IN THE FIELD BELOW TO BROWSE FOR AND INCLUDE A MAP OF THE PROJECT AREA (JPG, GIF, PNG, GIF, TIF, BMP FORMATS)



#### Problem/Opportunity/Issue Description and Need (Program Manager)

##### DESCRIBE

The systemic analysis approach refers to a process of identifying locations and/or corridors with high-risk roadway features correlated with specific crash types or severities. This approach provides a more comprehensive method for safety planning and implementation that supplements and complements traditional hotspot analysis. The approach also helps broaden traffic safety efforts and consider risk as well as crash history when identifying where to make lower-cost safety improvements.

For this project, all of these locations have been identified through SPIS in the last 5 years. All three locations are rural high-speed unsignalized, skewed intersections with a significant crash history where turning and angle crashes are the primary crash type and involve younger and aging drivers.

1. OR-126E (Hwy #15) at Deerhorn (MP 11.32) - two fatal crashes in 2016 & 2018 (both involving aging drivers), two injury A crashes in 2018 & 2019. This intersection has been within a recurring SPIS site since 2013 and is currently within a Top 5% 2019 SPIS site.
2. OR-18 (Hwy #39) at Red Prairie (MP 31.66) - two injury A crashes in 2014 & 2017 (one aging and one younger driver involved), one fatal crash in 2015. This intersection has been within a recurring SPIS site since 2013 and is currently within a Top 5% 2019 SPIS site. This intersection has been on and off SPIS since at least 2007 and was last a Top SPIS site in 2018 SPIS (Top 10%).
3. OR-213 (Hwy #160) at Mt. Angel-Scotts Mills Rd (MP 24.77) - two injury A crashes in 2016 & 2019. This intersection has been on and off SPIS since at least 2007 and is currently within a Top 10% 2019 SPIS site.

MAP-21 & FAST Act requires states to establish targets for reducing fatalities and serious injuries and to make

significant progress towards those targets. **Currently, Oregon is not meeting or making significant progress on any of the five safety targets.** The risk of not doing this project perpetuates the likelihood that we will continue to not meet or make significant progress towards future safety performance targets set in the Transportation Safety Action Plan (TSAP).

#### Potential Solutions (Program Manager/Project Sponsor)

##### DESCRIBE

Install through route activated warning systems (TRAWS) at the three listed skewed intersections.

At OR-18/Red Prairie & OR-213/Mt. Angel-Scotts Mills intersections, install two TRAWS assemblies; one on the left and one on the right side of the highway approximately 700 feet from the intersection for a total installation of four TRAWS assemblies per intersection.

At the OR126/Deerhorn Rd. intersection, install two TRAWS assemblies west of the intersection, and one assembly east of the intersection. The TRAWS assembly that is installed east of the intersection will be structure mounted and will replace an existing Intersection Ahead warning sign with flashing beacon.

In addition to installing the TRAWS at the OR126/Deerhorn Rd. intersection, remove the existing eastbound right-turn lane onto Deerhorn Rd. and remove the existing right-turn lane from Deerhorn Rd. to OR126 eastbound. Tighten the intersection radii by removing the asphalt from the turn lanes that is no longer needed and reconfigure the guardrail at the radius to follow the new edge of pavement at the intersection.

Install radar detection at all intersections. Radar will be mounted on existing poles or luminaires if present. At intersections that do not have existing poles or luminaires, new luminaires will be installed to provide a location for mounting radar and to provide the benefit of illumination at the intersection.

#### Project Outcomes, Goals and Priorities (Program Manager/Project Sponsor)

##### DESCRIBE

The primary purpose is to reduce fatal and serious injury crashes therefore, the countermeasures selected for this location are chosen on the basis of the types of crashes and contributing factors known to exist.

Through Route Activated Warning System (TRAWS) show greater potential to decrease crashes compared to traditional sign and marking enhancements alone and have successfully deployed at several rural intersections in Oregon. The proposed solution will warn motorists approaching an intersection of potential conflicts with other approaching vehicles.

#### Planned Construction Year (Program Manager/Project Sponsor)

YEAR	NARRATIVE
2027	Assume latest construction year for the most conservative estimate at scoping.

#### High Impact Risks (Program Manager/Project Sponsor)

RISK TITLE	DETAILED DESCRIPTION OF RISK
HSIP Program Rules	<p><b>The Safety Program utilizes Federal Highway Safety Improvement Program (HSIP) funds that require a data driven, strategic approach to improving highway safety on all public roads that focus on reducing fatal and serious injuries. Any elements included in the project scope and paid for with Safety Funds must be shown to be cost effective treatments that reduce fatal and serious injuries using a data driven approach to identify locations and measures.</b></p> <p><b>This project was applied for and prioritized based on the TRAWS solution so this scope of work cannot change.</b></p>
Minimum Shoulder Widths for Maintenance Activities	<p><b>The existing shoulders at the sign locations need to be wide enough to provide Maintenance access to the TRAWS. At these locations where existing shoulder is too narrow, the shoulder need to be widened in accordance with standard drawing RD160 to provide a pad that will allow a maintenance vehicle to park outside of the travel lane to access the TRAWS installation.</b></p>

STIP CYCLE 2024-2027	PROJECT NAME Curve warning upgrades (2027) (Clatsop, Lincoln & Polk Counties)	PROJECTWISE NO. (IF PREV. SCOPED) K20189 & K20193
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## ODOT PROJECT BUSINESS CASE

☒ Initial ☐ Final

### Curve warning upgrades (2027) (Clatsop, Lincoln & Polk Counties)

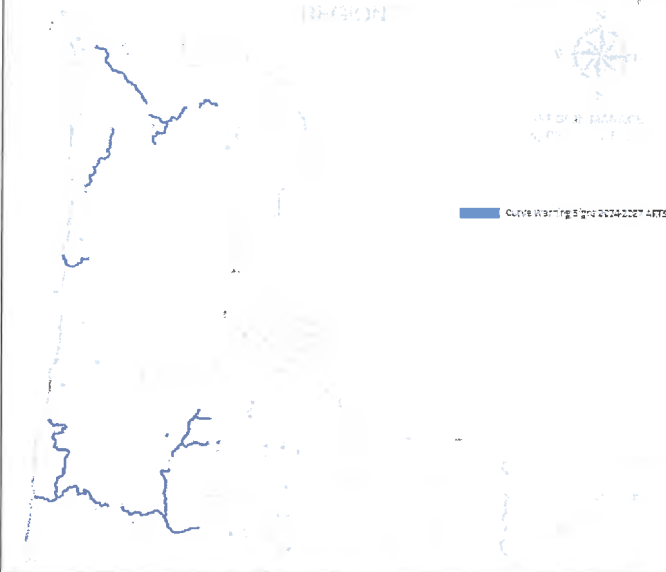
#### Project Location (Program Manager)

ROUTE NAME	HIGHWAY ID	BEGIN MP	END MP	LOCAL STREET / NON-HIGHWAY LOCATION
US-20	Hwy 33 - Corvallis-Newport Hwy	0.00	56.80	District 4; cut from K20193
OR-53	Hwy 46 - Necanicum Hwy	0.04	19.03	District 1; cut from K20189
OR-202	Hwy 102 - Nehalem Hwy	0.00	46.14	District 1; cut from K20189
OR-103	Hwy 103 - Fishhawk Falls Hwy	0.00	9.02	District 1; cut from K20189
OR-131	Hwy 131 - Netarts Hwy	0.00	9.08	District 1; cut from K20189
OR-229	Hwy 181 - Siletz Hwy	-0.21	31.24	District 4; portions cut from K20193
OR-223	Hwy 189 - Dallas-Rickreall Hwy	0.00	4.32	District 3; cut from K20193
OR-223	Hwy 191 - Kings Valley Hwy	0.00	31.40	District 3; cut from K20193
OR-194	Hwy 194 - Monmouth Hwy	0.00	7.56	District 3; cut from K20193

PASTE LINK TO MAP OR PHOTO OF THE PROJECT AREA

Long segments, refer to Region map image

CLICK IN THE FIELD BELOW TO BROWSE FOR AND INCLUDE A MAP OF THE PROJECT AREA (JPG, GIF, PNG, GIF, TIF, BMP FORMATS)



#### Problem/Opportunity/Issue Description and Need (Program Manager)

##### DESCRIBE

The systemic analysis approach refers to a process of identifying locations and/or corridors with high-risk roadway features correlated with specific crash types or severities. This approach provides a more comprehensive method for safety planning and implementation that supplements and complements traditional hotspot analysis. The approach also helps broaden traffic safety efforts and consider risk as well as crash history when identifying where to make low- cost safety improvements.

These locations were listed as priority locations in ODOT's 2010 & 2017 Roadway Departure Implementation plans to receive curve warning enhancements. Enhancements include chevrons, fluorescent yellow signing, oversized signing and/or doubled up signing based on specific crash number thresholds. The highways included in this application are the last priority for installing these countermeasures based on the number of fatal and injury A crashes per mile.

MAP-21 & FAST Act requires states to establish targets for reducing fatalities and serious injuries and to make significant progress towards those targets. **Currently, Oregon is not meeting or making significant progress on any of the five safety targets.** Over half of our fatal and serious injury crashes in Oregon are roadway departure related and this proposed project is intended to mitigate these crash patterns in a cost-effective approach. The risk of



not doing this project perpetuates the likelihood that we will continue to not meet or make significant progress towards future safety performance targets set in the Transportation Safety Action Plan (TSAP).

#### Potential Solutions (Program Manager/Project Sponsor)

##### DESCRIBE

Install recommended and required chevron signs on horizontal curves at the below listed highway segments. Also included is the cost to replace curve warning speed riders to 2009 MUTCD standard and install roadway departure signing enhancements (per the ODOT Roadway Departure Implementation Plan) for curves with a higher than expected number of crashes.

The location of curve warning signs will need to be determined through the project design phase should the project receive funding. Ball banking, curve processing and crash analysis used to determine curve warning sign design and placement cannot be done through the scoping process, these are design phase tasks.

#### Project Outcomes, Goals and Priorities (Program Manager/Project Sponsor)

##### DESCRIBE

The primary purpose is to reduce fatal and serious injury crashes therefore, the countermeasures selected for this location are chosen on the basis of the types of crashes and contributing factors known to exist.

Curve warning sign enhancements and chevrons are low cost, systemic countermeasures that can specifically address roadway departure crashes directly related to curves. They are being installed systemically because roadway departure crash locations are random in occurrence.

Rural highways typically have a pattern of roadway departure crashes as a result of various factors. Since rural highways tend to have higher posted speeds, there is a higher chance that a crash will end up as a fatal or serious injury crash.

#### Planned Construction Year (Program Manager/Project Sponsor)

YEAR	NARRATIVE
2025	However, assume latest construction year (2027) for the most conservative estimate at scoping.

#### High Impact Risks (Program Manager/Project Sponsor)

RISK TITLE	DETAILED DESCRIPTION OF RISK	
HSIP Program Rules	<b>The Safety Program utilizes Federal Highway Safety Improvement Program (HSIP) funds that require a data driven, strategic approach to improving highway safety on all public roads that focus on reducing fatal and serious injuries. Any elements included in the project scope and paid for with Safety Funds must be shown to be cost effective treatments that reduce fatal and serious injuries using a data driven approach to identify locations and measures. This project was applied for and prioritized based on the roundabout solution so this scope of work cannot change.</b>  <b>This project was applied for and prioritized based on the installation of new chevron signs so this scope of work cannot change.</b>	+
ODOT Curve Warning Sign Policy & 2009 MUTCD	<b>Chevron placement and accompanying curve warning signs and advisory speeds are determined by both the 2009 MUTCD and ODOT Curve Warning Sign Policy.</b>  <b>In addition, the 2009 MUTCD outlined a significant change in the design of curve warning which came with a December 31, 2019 compliance date. If construction cannot meet this compliance date, planning/programming the project should have been done by this compliance date at a minimum. Due to this compliance date requirement, this project should be prioritized as early in the STIP cycle as possible. This is why the planned construction year is listed as 2025.</b>	+
Construction Project Delivery - Multiple Areas	<b>This project includes scope of work at locations in Area 1, Area 3 &amp; Area 4. This needs to be considered and accounted for when determining project delivery type and construction bundling, if the project is funded. Mobility costs could be higher than expected if all locations are bundled into the same construction contract.</b>	+

STIP CYCLE 2024-2027	PROJECT NAME Curve treatments (2027) (Clatsop, Yamhill & Polk Counties)	PROJECTWISE NO. (IF PREV. SCOPED) 2124_00377
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## ODOT PROJECT BUSINESS CASE

### Curve treatments (2027) (Clatsop, Yamhill & Polk Counties)

☒ Initial ☐ Final

#### Project Location (Program Manager)

ROUTE NAME	HIGHWAY ID	BEGIN MP	END MP	LOCAL STREET / NON-HIGHWAY LOCATION
US-101	Hwy 9 - Oregon Coast Hwy	27.65	27.74	District 1
OR-22	Hwy 32 - Three Rivers Hwy	23.79	23.88	District 3
OR-233	Hwy 155 - Amity-Dayton Hwy	5.00	5.15	District 3

PASTE LINK TO MAP OR PHOTO OF THE PROJECT AREA

CLICK IN THE FIELD BELOW TO BROWSE FOR AND INCLUDE A MAP OF THE PROJECT AREA (JPG, GIF, PNG, GIF, TIF, BMP FORMATS)



#### Problem/Opportunity/Issue Description and Need (Program Manager)

DESCRIBE

The systemic analysis approach refers to a process of identifying locations and/or corridors with high-risk roadway features correlated with specific crash types or severities. This approach provides a more comprehensive method for safety planning and implementation that supplements and complements traditional hotspot analysis. The approach also helps broaden traffic safety efforts and consider risk as well as crash history when identifying where to make lower cost safety improvements. These sites are selected from ODOT's list of priority corridors for wet weather, roadway departure crashes.

These three locations were identified as having a higher than expected number of crashes in wet conditions on curves through either the 2017 RDI Plan and/or the Top 10% OASIS list for wet pavement condition & curve crashes in Region 2 (2013-2017 crashes).

Hwy #9 MP 27.65 - 27.74: 4 out of 5 lane departure (LD) crashes occurred in wet conditions (2014-2018) including 3 fatal/serious injury crashes

Hwy # 32 MP 23.79 - 23.88: 5 out of 8 LD crashes occurred in wet conditions (2014-2018) including 1 serious injury crash

Hwy # 155 MP 6.03 - 6.12: 9 out of 14 LD crashes occurred in wet conditions (2014-2018), however, none resulted in a fatal or serious injury

MAP-21 & FAST Act requires states to establish targets for reducing fatalities and serious injuries and to make significant progress towards those targets. **Currently, Oregon is not meeting or making significant progress on any of the five safety targets.** Over half of our fatal and serious injury crashes in Oregon are roadway departure related and this proposed project is intended to mitigate these crash patterns in a cost-effective approach. The risk of

not doing this project perpetuates the likelihood that we will continue to not meet or make significant progress towards future safety performance targets set in the Transportation Safety Action Plan (TSAP).

#### Potential Solutions (Program Manager/Project Sponsor)

##### DESCRIBE

Install high friction surface treatment and/or replace/mitigate the oil mat to improve drainage/run off on the 3 curve locations listed above. These curves have significant wet weather crash patterns.

Also install static flashers on enhanced curve warning signs for all three curves.

For the US-101 curve, evaluate if the end of passing lane section should be adjusted ahead of the horizontal curve (similar to what we did on OR-126 (62) @ Badger Mountain MP 36).

The project locations may also benefit from tree trimming that can be identified and estimated at scoping, if applicable.

#### Project Outcomes, Goals and Priorities (Program Manager/Project Sponsor)

##### DESCRIBE

The primary purpose is to reduce fatal and serious injury crashes therefore, the countermeasures selected for this location are chosen on the basis of the types of crashes (wet weather & curve) and contributing factors known to exist.

Rural highways typically have a pattern of roadway departure crashes as a result of various factors. Since rural highways tend to have higher posted speeds, there is a higher chance that a crash will end up as a fatal or serious injury crash. High friction surface treatment (HFST) is used where drivers are braking excessively; for example, when going around curves. The road surface can become prematurely polished, reducing the pavement friction and allowing vehicles to skid or hydroplane. HFST uses aggregates that are both polish- and wear-resistant and develop channels to prevent water buildup on wet surfaces creating an exceptionally durable surface capable of withstanding extreme roadway friction demands.

Static flashers on curve warning signs can be used on curves with a high frequency of roadway departure crashes and other more traditional, low cost treatments have not shown an improvement in safety. Using flashing beacons with a warning sign is another way to gain motorists' attention.

#### Planned Construction Year (Program Manager/Project Sponsor)

YEAR	NARRATIVE
2027	Assume latest construction year for the most conservative estimate at scoping.

#### High Impact Risks (Program Manager/Project Sponsor)

RISK TITLE	DETAILED DESCRIPTION OF RISK	
HSIP Program Rules	<b>The Safety Program utilizes Federal Highway Safety Improvement Program (HSIP) funds that require a data driven, strategic approach to improving highway safety on all public roads that focus on reducing fatal and serious injuries. Any elements included in the project scope and paid for with Safety Funds must be shown to be cost effective treatments that reduce fatal and serious injuries using a data driven approach to identify locations and measures. This project was applied for and prioritized based on the roundabout solution so this scope of work cannot change.</b>  <b>This project was applied for and prioritized based on the HFST and flashing warning beacon solutions so this scope of work cannot change unless already in place.</b>	+
Oil Mat Replacement/Mitigation Cost	<b>The intent of this project is to replace or mitigate the oil mat base, where it exists. Replacing the oil mat on a curve may be a higher cost than anticipated.</b>	+
Pavements Unit Preferred Solution	<b>The intent of this project is to reduce the amount and severity of the wet weather pavement crashes by improving or enhancing the existing pavement design. It is unknown at this time if pavements unit would prefer a full depth rebuild on these curves or just a 2" grind/inlay with HFST for these three curves knowing the remaining highway portions won't be treated with the same solution.</b>	+

STIP CYCLE 2024-2027	PROJECT NAME River Rd NE @ Quinaby Rd NE / Clear Lake Rd NE (Marion County)	PROJECTWISE NO. (IF PREV. SCOPED)
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## ODOT PROJECT BUSINESS CASE

☒ Initial ☐ Final

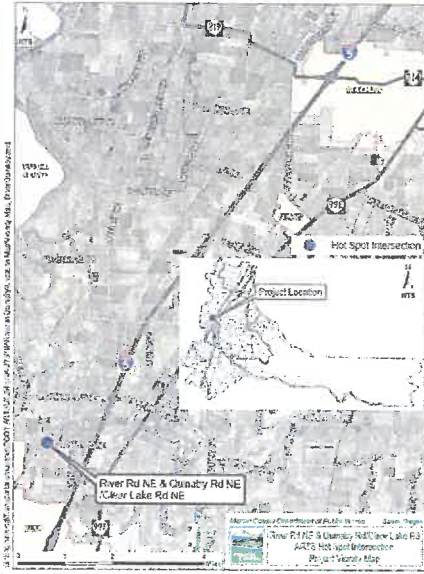
River Rd NE @ Quinaby Rd NE / Clear Lake Rd NE (Marion County)

### Project Location (Program Manager)

ROUTE NAME LOCAL ROAD	HIGHWAY ID N/A	BEGIN MP N/A	END MP N/A	LOCAL STREET / NON-HIGHWAY LOCATION River Rd NE @ Quinaby Rd NE / Clear Lake Rd NE
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PASTE LINK TO MAP OR PHOTO OF THE PROJECT AREA

CLICK IN THE FIELD BELOW TO BROWSE FOR AND INCLUDE A MAP OF THE PROJECT AREA (JPG, GIF, PNG, GIF, TIF, BMP FORMATS)



### Problem/Opportunity/Issue Description and Need (Program Manager)

#### DESCRIBE

This location is identified as a hot spot (or within a group of hot spots) with highly effective countermeasures for reducing the target crashes at this location. Hot Spot analysis refers to a process of identifying locations where there appears to be higher than normal frequency or severity of crashes. These are often higher cost projects targeting a specific segment of roadway or intersection, and addressing a crash history of at least one fatal or serious injury crash within the last five years.

This intersection is a top safety priority for Marion County due to its over-representation of severe angle crashes throughout the years. The intersection of Quinaby Rd NE/Clear Lake Rd NE as it crosses River Rd NE is on the Top 5% 2019 SPIS (2016-2018) and has been within a Top 5% site since at least 2016 SPIS. Between 2014-2018, the intersection of River Road/Quinaby Road/Clear Lake Road experienced 26 crashes, including one fatal and one serious injury (both angle crashes). Over 70% of all crashes were angle, and another 15% were turning crashes.

MAP-21 & FAST Act requires states to establish targets for reducing fatalities and serious injuries and to make significant progress towards those targets. **Currently, Oregon is not meeting or making significant progress on any of the five safety targets.** The risk of not doing this project perpetuates the likelihood that we will continue to not meet or make significant progress towards future safety performance targets set in the Transportation Safety Action Plan (TSAP).

### Potential Solutions (Program Manager/Project Sponsor)

#### DESCRIBE

Produce scoping estimates and narratives for TWO SOLUTIONS:

1. Install a rural, single lane roundabout at the intersection from an all-way STOP condition.
2. Install a rural traffic signal **with left-turn lanes** on all approaches from an all-way STOP condition.

### Project Outcomes, Goals and Priorities (Program Manager/Project Sponsor)

DESCRIBE

The primary purpose is to reduce fatal and serious injury crashes therefore, the countermeasures selected for this location are chosen on the basis of the types of crashes and contributing factors known to exist.

This intersection is near the Keizer city limits and situated along a heavy commute route, and increasing volumes have contributed to the safety concerns. This intersection was recently converted from two-way stop control to all-way stop control due to crash trends, but this will not continue to function acceptably in the long term as traffic volumes will eventually exceed capacity of the all-way stop. As this intersection has a unique mix of suburban & rural characteristics, both a signal and roundabout need to be considered.

A roundabout will eliminate a number of vehicle conflict points (up to 82%) typically associated with traditional intersections. They also enhance safety by reducing vehicle speeds (more typical in rural settings) both in and through the intersection and by changing the crash type from angle to sideswipe, which typically results in less severe crashes. Due to the crash activity at this intersection, this roundabout project is a high safety priority for the county.

Traffic signals are installed where volumes or angle/turning crashes justify more restricted traffic control. Installing a traffic signal will reduce angle and turning crashes by 67 - 77%. Traffic signals assign protected right of way to angle and turning traffic movements, reducing the risk of failure to yield driving errors. This is especially beneficial for aging drivers who have a more difficult time navigating skewed intersections and determining appropriate gaps for safe turning maneuvers. The installation of left-turn lanes will address all remaining crash types at this location, including turning and rear-end crashes.

**Planned Construction Year** (Program Manager/Project Sponsor)

YEAR	NARRATIVE
2027	Assume latest construction year for the most conservative estimate at scoping.

**High Impact Risks** (Program Manager/Project Sponsor)

RISK TITLE	DETAILED DESCRIPTION OF RISK	
HSIP Program Rules	<p><b>The Safety Program utilizes Federal Highway Safety Improvement Program (HSIP) funds that require a data driven, strategic approach to improving highway safety on all public roads that focus on reducing fatal and serious injuries. Any elements included in the project scope and paid for with Safety Funds must be shown to be cost effective treatments that reduce fatal and serious injuries using a data driven approach to identify locations and measures. This project was applied for and prioritized based on the roundabout solution so this scope of work cannot change.</b></p> <p><b>This project was applied for and prioritized based on BOTH the traffic signal and roundabout solutions, so this scope of work cannot change.</b></p> <p><b>The Federal Highway Safety Improvement Program (HSIP) currently requires a 7.78% cash match for projects.</b></p>	+
Intersection Sight Distance Potential Remediation	<p><b>Field scoping will need to be completed to estimate the full impact of providing adequate intersection sight distance needed to get approval for installing a traffic signal. This could add significantly to the cost of the project.</b></p>	+
Stakeholder Coordination	<p><b>The most appropriate and cost-effective solution (roundabout vs. signal) is still being determined. A robust scoping effort for both potential solutions will provide significant information to the County and stakeholders in this discussion and benefit/cost analysis.</b></p> <p><b>While roundabouts are an official FHWA Proven Safety Countermeasure to reduce fatal/serious injury crashes, it is still considered high-risk for community and freight support. Early coordination should be implemented.</b></p>	+
Open Frontage at Intersection in NE Quadrant	<p><b>The open frontage business access in the NE quadrant of the intersection will be impacted and will likely not be able to retain access as close to the intersection as it would conflict with intersection operations (and design standards) of either solution.</b></p>	+



## ADA PROJECTS

Program (Work Type)	Project Name <i>Per ODOT Naming Convention</i>		Description	Route	Comment	Pre-Scoping Estimate
	Area					
ADAP	3	Amity Curb Ramps	Develop a project comprised of settlement curb ramps within the Amity area that can be cost effectively designed and constructed, preferable during a single construction season.	Various	Scoping to be outsourced.	\$ 2,056,030
ADAP	3	Salem Curb Ramps	Develop a project comprised of settlement curb ramps within the Salem area that can be cost effectively designed and constructed, preferable during a single construction season.	Various	Scoping to be outsourced.	\$ 17,648,200
ADAP	3	Newberg Curb Ramps	Develop a project comprised of settlement curb ramps within the Newberg area that can be cost effectively designed and constructed, preferable during a single construction season.	Various	Scoping to be outsourced.	\$16,759,175 (ADA) \$3,350,000 (BikePed)
ADAP	3	Independence Curb Ramps	Develop a project comprised of settlement curb ramps within the Independence area that can be cost effectively designed and constructed, preferable during a single construction season.	OR 51	Scoping to be outsourced.	\$4,137,170 (ADA) \$1,300,000 (BikePed)
ADAP	3	Monmouth Curb Ramps	Develop a project comprised of settlement curb ramps within the Monmouth area that can be cost effectively designed and constructed, preferable during a single construction season.	Various	Scoping to be outsourced.	\$ 1,659,835
ADAP	3	Mount Angel Curb Ramps	Develop a project comprised of settlement curb ramps within the Mt. Angel area that can be cost effectively designed and constructed, preferable during a single construction season.	OR 214	Scoping to be outsourced.	\$2,188,540 (ADA) \$2,100,000 (BikePed)



Sooner - Factors considered for this planned construction year include little to no conflicts in the following criteria: Right-of-Way, signals, or utilities.

Later - Factors considered for this planned construction year include conflicts present in one or multiple of the following: Right-of-Way, signals, or utilities.

For this particular project, the following were a consideration for the planned construction year; coordination with other projects and Environmental concerns.

#### High Impact Risks (Program Manager/Project Sponsor)

RISK TITLE	DETAILED DESCRIPTION OF RISK	
Geography	<b>Sites should be grouped by geography to maximize contractor efficiency and expedite the construction.</b>	+
Quick PS&E Packages	<b>Design and review efforts must be streamlined in order to create PS&amp;E packages that each can be bid early enough to ensure ramps can be completed in a single construction season.</b>	+
Existing Programmed STIP Projects	<b>Ramps that are part of existing Programmed STIP projects should be deferred to be addressed with the existing STIP project.</b>	+

#### Additional Background Information (Program Manager/Project Sponsor)

DESCRIBE  
To achieve the proposed delivery schedule, this project is planned to be outsourced and likely be utilizing the Agency's ADA Pilot Program Project mechanism. This mechanism provides a delivery method that deviates from a level of detail normally required for ADA STIP projects.

#### Leveraging Opportunities (Project Sponsor)

DESCRIBE  
If possible, the project may look to incorporate additional curb ramps into existing projects within the same STIP cycle to maximize efficiency and execution of curb ramp replacements.

High-Impact Risks: Proposed active transportation leveraging opportunities subject to further engineering analysis, ODOT and local agency coordination and approval.

##### Active Transportation Leveraging Opportunities:

- Opportunities identified in previous plans:
  - OR 153 at Stanley: Sidewalk infill/multi-use path in vicinity of intersection (per Amity TSP) (note: TSP does not specify which side of the road is targeted for multi-use path versus sidewalk improvements)
  - OR 153 at OR 99W, Getchell, Oak, Jellison, Goucher: Sidewalk infill in vicinity of intersections; bike lanes on OR 153 (per Amity TSP)
  - OR 99W at 4<sup>th</sup>, 3<sup>rd</sup>, 2<sup>nd</sup>, 1<sup>st</sup>, Rice, Inez: Sidewalk infill/sidewalk repair in vicinity of intersections (per Amity TSP)
- Other potential leveraging opportunities (not identified in previous plans): Identified separately by ODOT Region 2 staff and included on separate internal ODOT Region 2 list.

#### Cost Estimate Assumptions and Methodology (Program Manager/Project Sponsor)

CONFIDENCE LEVEL	NARRATIVE
Medium	Scoping efforts identified site specific variables associated with project costs. Variables include existing geometric conditions, presence of pedestrian or vehicular traffic devices or signals, nearby utilities, and right-of-way needs. Costs were assumed and assigned to variables based on previous ODOT Region 3, 4, and 5 ADA Improvement projects, industry standards, and limited information about possible utilities and reimbursable utilities within project limits.

#### Funding (Program Manager)

AMOUNT	PROGRAM TYPE	STIP CYCLE	FUNDING PROGRAM MANAGER NAME	FUNDING PROGRAM MGR. SIGNATURE AND DATE
\$2,056,030.00	ADA	2024-27	Tony Snyder	

#### Signatures

734-2948B (3/2021)

Amity Curb Ramps

Page 2 of 3





delivered over several years that will address all of the Region 2 curbs ramps identified in ODOT's ADA Settlement Agreement.

Ped/Bike: The following leverage opportunities were vetted at a high level and are proposed to be added to the ADA project:

- 1) Hwy 219 and Everest (MP 20.8): Change wig wag to RRFB. Need to find out if we need ped island (if so, opportunity may not be viable). Evaluate illumination.
- 2) Hwy 219 and Church St. (MP 20.63): Evaluate feasibility of enhanced crossing from neighborhood to Grocery Outlet. Include curb extensions and illumination if possible. Stripe bike lane/parking area on north side of 1st St east of Church St (~490').
- 3) Near Hwy 219 and Everest : Sidewalk infill on south side of 219 from Everest (MP 20.79) to enhanced crossing (MP 20.69). ~500 feet. Connects crossings to apartments and Grocery Outlet.
- 4) M. Main St (OR240) and Illinois St. (MP 11.15): Bulb-outs and illumination at crosswalk parallel to the highway.
- 5) Sidewalk infill from Brustcher St to Vittoria Way along north side of OR 99W (~1050').

### Project Outcomes, Goals and Priorities (Program Manager/Project Sponsor)

#### DESCRIBE

- 1) Bring approximately 447 settlement curb ramps and associated Accessible Pedestrian Signals into compliance with ADA requirements.
- 2) Design and construct these ramps using innovative strategies that reduce the cost of delivery and construction to allow STIP funds to address more non-compliant locations.
- 3) Look to leverage community opportunities within the corridor to leverage potential planned community improvements that may improve the accessibility and walk-ability of the corridor. This would allow opportunity for a more efficient and complete design.

The goals of the Pedestrian and Bicycle Program are to reduce crashes involving people walking and biking and promote walking and biking to improve health, climate, and equity outcomes. Locations for proposed improvements have been identified as top 10% scoring Active Transportation Needs Inventory (ATNI) locations based on opportunity to reduce ped/bike crash history, reduce crash risk factors, increase access to transit stops and other essential destinations (schools, groceries, health care, etc), implement projects in local TSPs, improve public health, serve transportation disadvantaged communities, and improve existing sidewalk and bike facility conditions. The key performance measures for the Ped/Bike Program are:

- % urban state highway miles with complete sidewalks and bicycle facilities in fair or better condition
- % of urban highway miles that meet Blueprint for Urban Design crossing spacing guidelines

### Planned Construction Year (Program Manager/Project Sponsor)

YEAR	NARRATIVE
2026	<p>Timing of each project will be driven by available funding and potential lead time activities such as Right-of-way needs, level of design, environmental permitting and clearances, and utility conflicts. For planning purposes, the following criteria was used to guide preliminary CN planning years.</p> <p>Sooner - Factors considered for this planned construction year include little to no conflicts in the following criteria: Right-of-Way, signals, or utilities.</p> <p>Later - Factors considered for this planned construction year include conflicts present in one or multiple of the following: Right-of-Way, signals, or utilities.</p> <p>For this particular project, the following were a consideration for the planned construction year; coordination with other projects; ROW; signals; utilities; Environmental.</p>

### High Impact Risks (Program Manager/Project Sponsor)

RISK TITLE	DETAILED DESCRIPTION OF RISK	
Geography	<b>Sites should be grouped by geography to maximize contractor efficiency and expedite the construction.</b>	+
Quick PS&E Packages	<b>Design and review efforts must be streamlined in order to create PS&amp;E packages that each can be bid early enough to ensure ramps can be completed in a single construction season.</b>	+ -
Existing Programmed STIP Projects	<b>Ramps that are part of existing Programmed STIP projects should be deferred to be addressed with the existing STIP project.</b>	+ -

STIP CYCLE 2024-27	PROJECT NAME Salem Curb Ramps	PROJECTWISE NO. (IF PREV. SCOPED)
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## ODOT PROJECT BUSINESS CASE Salem Curb Ramps

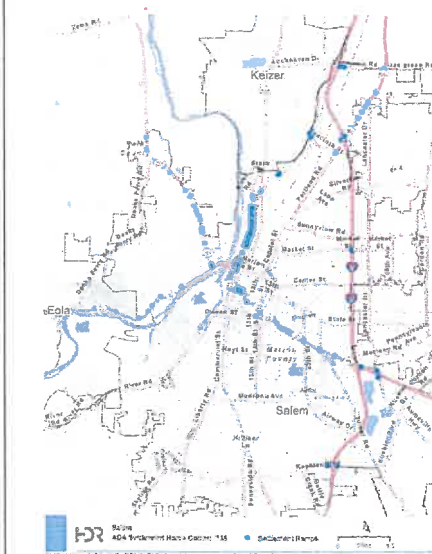
☒ Initial ☐ Final

### Project Location (Program Manager)

ROUTE NAME	HIGHWAY ID	BEGIN MP	END MP	LOCAL STREET / NON-HIGHWAY LOCATION
OR 22	03000I00 - Willamina-Salem	22.66	26.14	030AJ FRONT. (CHERRY HILL LN. NW
OR 221	15000I00 - Salem-Dayton	17.57	20.78	MICHIGAN CITY LN. NW to EDGEWATER
OR 22 / OR99EB	07200I00 - Salem	1.54	8.26	VERDA LN. NE (HYACINTH ST. NE) to
OR 22	16200I00 - North Santiam	1.29	1.55	001PE CONN. M.P. 3C254.56 to 001PC
OR 99E	08100I00 - Pacific Highway East	44.46	46.49	CHEMAWA RD. NE (HAZELGREEN RD
I-5	001PNI00 - Pacific Hwy	260.28	260.37	001PM CONN. M.P. 1C260.24 to INDIA
OR 22	030AVI00 - Willamina-Salem	23.99	25.34	MANORVIEW LN. NW to EDGEWATER
OR 22	03000D00 - Willamina-Salem	26.18	26.18	072AC CONN. (COMMERCIAL ST. NE
OR 22 / OR99EB	072ABI00 - Salem	1.54	1.54	HYACINTH ST. NE
OR 22 / OR99EB	07200D00 - Salem	3.40	6.14	TAYLOR ST. NE to ENTRANCE TO WI
OR 22 / OR99EB	072ACI00 - Salem	4.79	4.79	UNION ST. NE
OR 22 / OR99EB	072AGI00 - Salem	6.10	6.10	ENTRANCE TO UNIVERSITY STATION
OR 22 / OR99EB	072AEI00 - Salem	6.30	6.30	12TH ST. SE
OR 22	162ADI00 - North Santiam	1.85	1.96	162AG CONN. M.P. 5C1.62 to 162AC
I-5	001OYI00 - Pacific Hwy	251.34	251.55	001YN CONN. M.P. 7C252.56 to 001Q
I-5	001PHI00 - Pacific Hwy	256.30	256.30	MARKET ST. NE
I-5	001XRI00 - Pacific Hwy	256.13	256.13	MARKET ST. NE

PASTE LINK TO MAP OR PHOTO OF THE PROJECT AREA

CLICK IN THE FIELD BELOW TO BROWSE FOR AND INCLUDE A MAP OF THE PROJECT AREA (JPG, GIF, PNG, GIF, TIF, BMP FORMATS)



### Problem/Opportunity/Issue Description and Need (Program Manager)

DESCRIBE

ODOT Region 2 is looking to scope a series of projects that will ultimately address all ADA settlement curb ramps. These projects are planned to be delivered within the 2024-27 STIP cycle. The purpose of this project is to reconstruct ADA settlement curb ramps within Region 2 within the terms and timelines within the ADA settlement agreement and comply with pedestrian push button and signal requirements. To efficiently meet this goal, this particular project includes settlement curb ramps in the

community of Salem.

### Potential Solutions (Program Manager/Project Sponsor)

#### DESCRIBE

Develop a project comprised of settlement curb ramps within the Salem area that can be cost effectively designed and constructed, preferable during a single construction season. The intent is to develop a set of construction packages which can be delivered over several years that will address all of the Region 2 curbs ramps identified in ODOT's ADA Settlement Agreement.

### Project Outcomes, Goals and Priorities (Program Manager/Project Sponsor)

#### DESCRIBE

- 1) Bring approximately 738 settlement curb ramps and associated Accessible Pedestrian Signals into compliance with ADA requirements.
- 2) Design and construct these ramps using innovative strategies that reduce the cost of delivery and construction to allow STIP funds to address more non-compliant locations.
- 3) Look to leverage community opportunities within the corridor to leverage potential planned community improvements that may improve the accessibility and walk-ability of the corridor. This would allow opportunity for a more efficient and complete design.

### Planned Construction Year (Program Manager/Project Sponsor)

#### YEAR

2027

#### NARRATIVE

Timing of each project will be driven by available funding and potential lead time activities such as Right-of-way needs, level of design, environmental permitting and clearances, and utility conflicts. For planning purposes, the following criteria was used to guide preliminary CN planning years.

Sooner - Factors considered for this planned construction year include little to no conflicts in the following criteria: Right-of-Way, signals, or utilities.

Later - Factors considered for this planned construction year include conflicts present in one or multiple of the following: Right-of-Way, signals, or utilities.

For this particular project, the following were a consideration for the planned construction year; coordination with other projects; ROW; signals; utilities; and Environmental concerns.

### High Impact Risks (Program Manager/Project Sponsor)

#### RISK TITLE

Geography

#### DETAILED DESCRIPTION OF RISK

**Sites should be grouped by geography to maximize contractor efficiency and expedite the construction.**

#### RISK TITLE

Quick PS&E Packages

#### DETAILED DESCRIPTION OF RISK

**Design and review efforts must be streamlined in order to create PS&E packages that each can be bid early enough to ensure ramps can be completed in a single construction season.**

#### RISK TITLE

Existing Programmed STIP Projects

#### DETAILED DESCRIPTION OF RISK

**Ramps that are part of existing Programmed STIP projects should be deferred to be addressed with the existing STIP project.**

### Additional Background Information (Program Manager/Project Sponsor)

#### DESCRIBE

To achieve the proposed delivery schedule, this project is planned to be outsourced and likely be utilizing the Agency's ADA Pilot Program Project mechanism. This mechanism provides a delivery method that deviates from a level of detail normally required for ADA STIP projects.

### Leveraging Opportunities (Project Sponsor)

#### DESCRIBE

If possible, the project may look to incorporate additional curb ramps into existing projects within the same STIP cycle to maximize efficiency and execution of curb ramp replacements.

### Cost Estimate Assumptions and Methodology (Program Manager/Project Sponsor)

#### CONFIDENCE LEVEL

Medium

#### NARRATIVE

Scoping efforts identified site specific variables associated with project costs. Variables include existing geometric conditions, presence of pedestrian or vehicular traffic devices or signals, nearby utilities, and right-of-way needs. Costs were assumed and assigned to variables based on previous ODOT Region 3, 4, and 5 ADA Improvement projects, industry standards, and limited information about possible utilities and reimbursable utilities within project limits.

STIP CYCLE 2024-27	PROJECT NAME Independence Curb Ramps	PROJECTWISE NO. (IF PREV. SCOPED)
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## ODOT PROJECT BUSINESS CASE Independence Curb Ramps

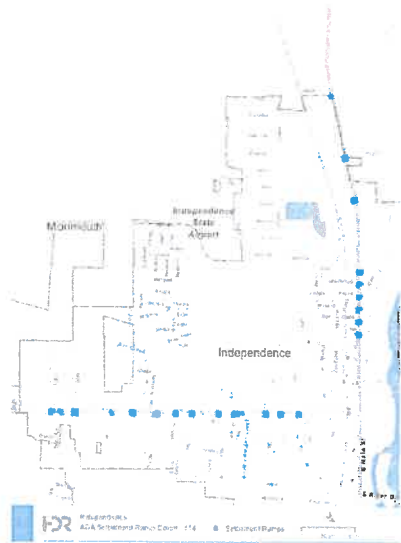
☒ Initial ☐ Final

### Project Location (Program Manager)

ROUTE NAME	HIGHWAY ID	BEGIN MP	END MP	LOCAL STREET / NON-HIGHWAY LOCATION
OR 51	04300100 - Monmouth-Independence	0.92	2.07	S. 17th St. to S 5th St.
OR 51	19300100 - Independence	4.88	6.23	Stryker Rd. to B. St.

PASTE LINK TO MAP OR PHOTO OF THE PROJECT AREA

CLICK IN THE FIELD BELOW TO BROWSE FOR AND INCLUDE A MAP OF THE PROJECT AREA (JPG, GIF, PNG, GIF, TIF, BMP FORMATS)



### Problem/Opportunity/Issue Description and Need (Program Manager)

#### DESCRIBE

ODOT Region 2 is looking to scope a series of projects that will ultimately address all ADA settlement curb ramps. These projects are planned to be delivered within the 2024-27 STIP cycle. The purpose of this project is to reconstruct ADA settlement curb ramps within Region 2 within the terms and timelines within the ADA settlement agreement and comply with pedestrian push button and signal requirements. To efficiently meet this goal, this particular project includes settlement curb ramps in the community of Independence.

**Ped/Bike:** Region 2 has received numerous inquiries from community members interested in crossing improvements along OR 51 north of Main Street (downtown area). The region has also received an ADA complaint about missing ramps at several intersections including OR 51 @ Grand St, Picture St., and Boatlanding St. The dog park and the river path are on the east side of the highway while most of the nearby residents live on the west side. OR 51 through this corridor is wide, has a posted speed of 35 MPH, an AADT of 7600, lacks many ramps, and currently has no pedestrian crossing enhancements.

In addition to receiving several inquiries about crossings along OR 51, Independence is very interested in improving bicycle connectivity throughout their system. There is currently a gap in the bike lanes on OR51 from Polk to E St. The riverfront path proves an alternate route for recreational and regional traffic, but does not provide direct connections for people biking to/from neighborhood destinations. The City is close to completing their TSP (currently in draft form) which calls for 5' bike lanes and 2' buffers along OR 51 (Major Arterial).

Desire is to address ADA, bicycle, and pedestrian needs as a bundled project where feasible to achieve efficiencies and address holistic needs of non-motorized system users.

### Potential Solutions (Program Manager/Project Sponsor)

#### DESCRIBE

Develop a project comprised of settlement curb ramps within the Independence area that can be cost effectively designed and constructed, preferable during a single construction season. The intent is to develop a set of construction packages which can be



delivered over several years that will address all of the Region 2 curbs ramps identified in ODOT's ADA Settlement Agreement.

**Ped/Bike:** Leverage the ADA project to add crossing enhancements where OR 51 intersects with Grand St., Picture St., at Boatlanding St. In response to the ADA complaint (CQCR), Region 2 tech center created concepts and estimates for each of these locations, which includes two ramps at each corner. The ADA Program, however, will only be required to replace existing ramps. Thus, PBS funds will be added to address remaining ramps as well as illumination, signs and pavement markings at Grand St. The following enhancements are included for each location:

Ramps (mini bulb-outs), pavement markings, illumination and signs at OR 51 and Grand St. (MP 5.93)

Ramps (mini bulb-outs and appropriate crossing treatments & illumination) at OR 51 and Picture. (MP 5.81)

Ramps (mini bulb-outs and appropriate crossing treatments & illumination) at OR 51 and Boatlanding. (MP 5.76)

Ramps (mini bulb-outs and appropriate crossing treatments & illumination) at OR 51 and Williams (MP 5.86) - in draft TSP

Add buffered bike lanes (5' + 2' buffer) from Stryker Rd. (MP 4.87) to B St. (MP 6.23) and shared lane markings from B St. (MP 6.23) to Monmouth St. (MP 6.34).

Project Outcomes, Goals and Priorities (Program Manager/Project Sponsor)	
DESCRIBE	<p>1) Bring approximately 114 settlement curb ramps and associated Accessible Pedestrian Signals into compliance with ADA requirements.</p> <p>2) Design and construct these ramps using innovative strategies that reduce the cost of delivery and construction to allow STIP funds to address more non-compliant locations.</p> <p>3) Look to leverage community opportunities within the corridor to leverage potential planned community improvements that may improve the accessibility and walk-ability of the corridor. This would allow opportunity for a more efficient and complete design.</p> <p>The goals of the Pedestrian and Bicycle Program are to reduce crashes involving people walking and biking and promote walking and biking to improve health, climate, and equity outcomes. Locations for proposed improvements have been identified as top 10% scoring Active Transportation Needs Inventory (ATNI) locations based on opportunity to reduce ped/bike crash history, reduce crash risk factors, increase access to transit stops and other essential destinations (schools, groceries, health care, etc), implement projects in local TSPs, improve public health, serve transportation disadvantaged communities, and improve existing sidewalk and bike facility conditions. The key performance measures for the Ped/Bike Program are:</p> <ul style="list-style-type: none"> <li>- % urban state highway miles with complete sidewalks and bicycle facilities in fair or better condition</li> <li>- % of urban highway miles that meet Blueprint for Urban Design crossing spacing guidelines</li> </ul>

Planned Construction Year (Program Manager/Project Sponsor)	
YEAR	NARRATIVE
2024	<p>Timing of each project will be driven by available funding and potential lead time activities such as Right-of-way needs, level of design, environmental permitting and clearances, and utility conflicts. For planning purposes, the following criteria was used to guide preliminary CN planning years.</p> <p>Sooner - Factors considered for this planned construction year include little to no conflicts in the following criteria: Right-of-Way, signals, or utilities.</p> <p>Later - Factors considered for this planned construction year include conflicts present in one or multiple of the following: Right-of-Way, signals, or utilities.</p> <p>For this particular project, the following were a consideration for the planned construction year; coordination with other projects; utilities.</p>

High Impact Risks (Program Manager/Project Sponsor)	
RISK TITLE	DETAILED DESCRIPTION OF RISK
Geography	<b>Sites should be grouped by geography to maximize contractor efficiency and expedite the construction.</b>
RISK TITLE	DETAILED DESCRIPTION OF RISK
Quick PS&E Packages	<b>Design and review efforts must be streamlined in order to create PS&amp;E packages that each can be bid early enough to ensure ramps can be completed in a single construction season.</b>



STIP CYCLE 2024-27	PROJECT NAME Monmouth Curb Ramps	PROJECTWISE NO. (IF PREV. SCOPED)
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## ODOT PROJECT BUSINESS CASE Monmouth Curb Ramps

☒ Initial ☐ Final

### Project Location (Program Manager)

ROUTE NAME	HIGHWAY ID	BEGIN MP	END MP	LOCAL STREET / NON-HIGHWAY LOCATION
OR 51	04300I00 - Monmouth-Independence	0.07	0.55	High St. N to Entrance to Vacant Lot
OR 194	19400I00 - Monmouth	6.75	7.09	MCDONALD LN. W to COLLEGE ST.
OR 99W	09100I00 - Pacific Highway West	62.31	63.79	Hoffman Rd. to Gwinn St. E

PASTE LINK TO MAP OR PHOTO OF THE PROJECT AREA

CLICK IN THE FIELD BELOW TO BROWSE FOR AND INCLUDE A MAP OF THE PROJECT AREA (JPG, GIF, PNG, GIF, TIF, BMP FORMATS)



### Problem/Opportunity/Issue Description and Need (Program Manager)

DESCRIBE

ODOT Region 2 is looking to scope a series of projects that will ultimately address all ADA settlement curb ramps. These projects are planned to be delivered within the 2024-27 STIP cycle. The purpose of this project is to reconstruct ADA settlement curb ramps within Region 2 within the terms and timelines within the ADA settlement agreement and comply with pedestrian push button and signal requirements. To efficiently meet this goal, this particular project includes settlement curb ramps in the community of Monmouth.

### Potential Solutions (Program Manager/Project Sponsor)

DESCRIBE

Develop a project comprised of settlement curb ramps within the Monmouth area that can be cost effectively designed and constructed, preferable during a single construction season. The intent is to develop a set of construction packages which can be delivered over several years that will address all of the Region 2 curbs ramps identified in ODOT's ADA Settlement Agreement.

### Project Outcomes, Goals and Priorities (Program Manager/Project Sponsor)

DESCRIBE

- 1) Bring approximately 112 settlement curb ramps and associated Accessible Pedestrian Signals into compliance with ADA requirements.
- 2) Design and construct these ramps using innovative strategies that reduce the cost of delivery and construction to allow STIP funds to address more non-compliant locations.
- 3) Look to leverage community opportunities within the corridor to leverage potential planned community improvements that may improve the accessibility and walk-ability of the corridor. This would allow opportunity for a more efficient and complete design.

### Planned Construction Year (Program Manager/Project Sponsor)

YEAR	NARRATIVE
2025	Timing of each project will be driven by available funding and potential lead time activities such as Right-of-way needs, level of design, environmental permitting and clearances, and utility conflicts. For planning purposes, the

following criteria was used to guide preliminary CN planning years.

Sooner - Factors considered for this planned construction year include little to no conflicts in the following criteria: Right-of-Way, signals, or utilities.

Later - Factors considered for this planned construction year include conflicts present in one or multiple of the following: Right-of-Way, signals, or utilities.

For this particular project, the following were a consideration for the planned construction year; coordination with other projects; funding cash-flow; ROW; utilities; Environmental.

#### High Impact Risks (Program Manager/Project Sponsor)

RISK TITLE	DETAILED DESCRIPTION OF RISK	
Geography	<b>Sites should be grouped by geography to maximize contractor efficiency and expedite the construction.</b>	+
Quick PS&E Packages	<b>Design and review efforts must be streamlined in order to create PS&amp;E packages that each can be bid early enough to ensure ramps can be completed in a single construction season.</b>	+ -
Existing Programmed STIP Projects	<b>Ramps that are part of existing Programmed STIP projects should be deferred to be addressed with the existing STIP project.</b>	+ -

#### Additional Background Information (Program Manager/Project Sponsor)

DESCRIBE  
To achieve the proposed delivery schedule, this project is planned to be outsourced and likely be utilizing the Agency's ADA Pilot Program Project mechanism. This mechanism provides a delivery method that deviates from a level of detail normally required for ADA STIP projects.

#### Leveraging Opportunities (Project Sponsor)

DESCRIBE  
If possible, the project may look to incorporate additional curb ramps into existing projects within the same STIP cycle to maximize efficiency and execution of curb ramp replacements.  
High-Impact Risks: Proposed active transportation leveraging opportunities subject to further engineering analysis, ODOT and local agency coordination and approval.  
Active Transportation Leveraging Opportunities:

- Opportunities identified in previous plans:
  - OR 51 at Heffley: Sidewalk infill in vicinity of intersection (per Monmouth TSP)
  - OR 51 at Atwater: Sidewalk infill in vicinity of intersection (per Monmouth TSP)
  - OR 51 at East Main: Sidewalk infill in vicinity of intersection (per Monmouth TSP)
  - OR 51 at OR 99W, High, Craven, Heffley, Atwater, East Main: Evaluate drainage grates within bike lanes and upgrade as needed to improve bicycle travel (per Monmouth TSP)
  - OR 194 at McDonald, Ackerman, Clay, Main, College: Bike lanes (per Monmouth TSP) (note: future curb ramps should avoid precluding future bike lanes)
- Other potential leveraging opportunities (not identified in previous plans): Identified separately by ODOT Region 2 staff and included on separate internal ODOT Region 2 list.

#### Cost Estimate Assumptions and Methodology (Program Manager/Project Sponsor)

CONFIDENCE LEVEL	NARRATIVE
Medium	Scoping efforts identified site specific variables associated with project costs. Variables include existing geometric conditions, presence of pedestrian or vehicular traffic devices or signals, nearby utilities, and right-of-way needs. Costs were assumed and assigned to variables based on previous ODOT Region 3, 4, and 5 ADA Improvement projects, industry standards, and limited information about possible utilities and reimbursable utilities within project limits.

#### Funding (Program Manager)

AMOUNT	PROGRAM TYPE	STIP CYCLE	FUNDING PROGRAM MANAGER NAME	FUNDING PROGRAM MGR. SIGNATURE AND DATE
\$1,659,835.00	ADA	2024-27	Tony Snyder	



- 2) Sidewalk infill from Charles St to Church St. The cost estimate may not cover the entire segment and so the team should prioritize the segment from Charles St to College St and see how far the remaining funds can go.
- 3) Enhance one leg of crossing at Highway 214 and College St. Possibly include curb extensions, RRFB, illumination, signage, pavements markings.
- 4) Enhanced crossing at Marquam. Possibly include curb extensions, RRFB, illumination, signage, pavements markings.
- 5) Bulb-outs at Hwy 214 /Palmer and Hwy 214/Taylor (7 corners total).
- 6) Add shared lane markings to downtown section of Hwy 214 to meet Bike Bill requirements for bicycle accommodations

### Project Outcomes, Goals and Priorities (Program Manager/Project Sponsor)

#### DESCRIBE

- 1) Bring approximately 62 settlement curb ramps and associated Accessible Pedestrian Signals into compliance with ADA requirements.
- 2) Design and construct these ramps using innovative strategies that reduce the cost of delivery and construction to allow STIP funds to address more non-compliant locations.
- 3) Look to leverage community opportunities within the corridor to leverage potential planned community improvements that may improve the accessibility and walk-ability of the corridor. This would allow opportunity for a more efficient and complete design.

The goals of the Pedestrian and Bicycle Program are to reduce crashes involving people walking and biking and promote walking and biking to improve health, climate, and equity outcomes. Locations for proposed improvements have been identified as top 10% scoring Active Transportation Needs Inventory (ATNI) locations based on opportunity to reduce ped/bike crash history, reduce crash risk factors, increase access to transit stops and other essential destinations (schools, groceries, health care, etc), implement projects in local TSPs, improve public health, serve transportation disadvantaged communities, and improve existing sidewalk and bike facility conditions. The key performance measures for the Ped/Bike Program are:

- % urban state highway miles with complete sidewalks and bicycle facilities in fair or better condition
- % of urban highway miles that meet Blueprint for Urban Design crossing spacing guidelines

### Planned Construction Year (Program Manager/Project Sponsor)

YEAR	NARRATIVE
2025	<p>Timing of each project will be driven by available funding and potential lead time activities such as Right-of-way needs, level of design, environmental permitting and clearances, and utility conflicts. For planning purposes, the following criteria was used to guide preliminary CN planning years.</p> <p>Sooner - Factors considered for this planned construction year include little to no conflicts in the following criteria: Right-of-Way, signals, or utilities.</p> <p>Later - Factors considered for this planned construction year include conflicts present in one or multiple of the following: Right-of-Way, signals, or utilities.</p> <p>For this particular project, the following were a consideration for the planned construction year; coordination with other projects; funding cash-flow; utilities.</p>

### High Impact Risks (Program Manager/Project Sponsor)

RISK TITLE	DETAILED DESCRIPTION OF RISK	
Geography	<b>Sites should be grouped by geography to maximize contractor efficiency and expedite the construction.</b>	+
Quick PS&E Packages	<b>Design and review efforts must be streamlined in order to create PS&amp;E packages that each can be bid early enough to ensure ramps can be completed in a single construction season.</b>	+ -
Existing Programmed STIP Projects	<b>Ramps that are part of existing Programmed STIP projects should be deferred to be addressed with the existing STIP project.</b>	+ -
Current Planning work	<b>Ped/bike solutions were based on projects/needs identified in previous plans as well as based on desk scoping by ODOT staff. The current SRTS planning work could potentially shift project priorities. But the plan will be completed well before this project is designed and could be cross-referenced upon completion.</b>	+ -

## LOCAL BRIDGE PROJECTS



Program (Work Type)	Area	Project Name <i>Per ODOT Naming Convention</i>	Description	Route	Comment	Pre-Scoping Estimate
BRIDGE	3	River Road South: Willamette River Bridge (Independence)	Surface rust and paint would be removed and the area repainted at the steel pins and hangars and at the bases of the steel bents, and the deck joints would be replaced.		05789A. Will be scoped by consultant.	\$ 3,673,000
BRIDGE	3	Helmick Road: Luckiamute River Bridge	Seismic retrofit, scour repair, reseal joints, repair spalls, and deck seal.		53C122. Will be scoped by consultant.	\$ 2,604,000
BRIDGE	3	Patty Lane: Ash Swale Bridge	Replace bridge.		11629. Will be scoped by consultant.	\$ 4,022,000

STIP CYCLE 2025 - 2027	OPTIONAL REFERENCE NUMBER	PROJECT NAME Willamette River Bridge #05789A, Ir
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## ODOT PROJECT BUSINESS CASE

### Willamette River Bridge #05789A, Independence Bridge Repair

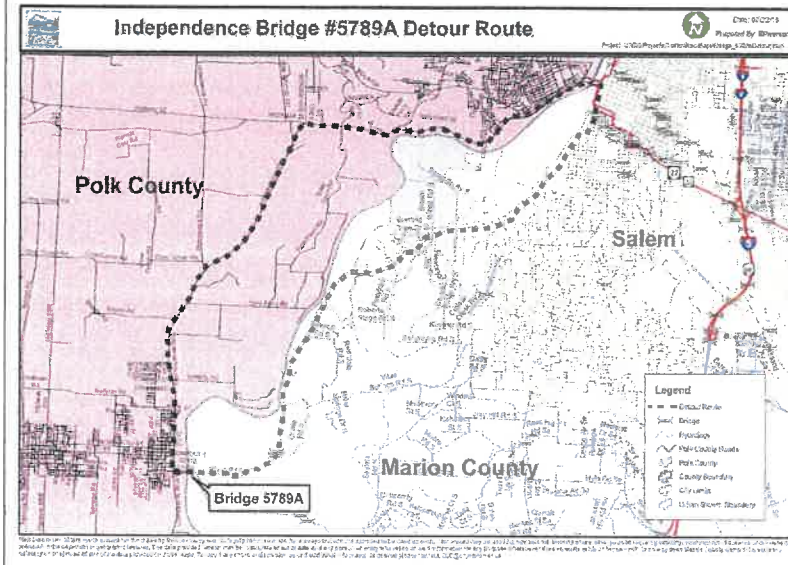
☒ Initial ☐ Final

#### Project Location (Program Manager)

HIGHWAY NUMBER CR53	BEGIN MP 0.00	END MP 0.42	LOCAL STREET / NON-HIGHWAY LOCATION River Road South
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PASTE LINK TO MAP OR PHOTO OF THE PROJECT AREA

CLICK IN THE FIELD BELOW TO BROWSE FOR AND INCLUDE A MAP OF THE PROJECT AREA (JPG, GIF, PNG, GIF, TIF, BMP FORMATS)



#### Problem/Opportunity/Issue Description and Need (Program Manager)

##### DESCRIBE

The Independence Bridge (05789A) was designed in 1947 and has been in service since 1951. The sufficiency rating is 42.5 (2019 inspection), but will be reduced once a recently completed load rating is accounted for. The bridge is considered functionally obsolete, mainly due to its narrow clear width of 26 feet. It is the only structure over the Willamette River between Albany and Salem, and is the only accessible truck route into a large agricultural area on the east (Marion Co.) side of the river, due to restricted vertical clearances on all other routes. The bridge has recently been load limited to 25 tons for SHVs and 27 tons for tractor trailers. In addition to a significant amount of farm-related trucks, the bridge carries commuter traffic between Salem, the Independence-Monmouth area and Western Oregon University. Rehabilitation projects to date include replacement of all wood piles and caps with a steel approach substructure in 1984-85, a Phase I seismic retrofit, painting, deck overlay, and other upgrades in 2000-01, and a scour repair at Piers 1 and 2 in 2008. Design of a scour repair that will remove the scour critical designation is underway. Failure to remove the load rating and to maintain the bridge in as good an operating condition as possible would place severe economic hardship on farms and other local businesses that depend on the bridge for access by legal weight trucks and farm equipment. It is important that we repair the structural deficiencies driving the load rating results, which will improve the bridge sufficiency rating to a level where this vital link between Polk and Marion counties is available to the public and businesses that depend on it now and into the foreseeable future.

#### Potential Solutions (Program Manager/Project Sponsor)

##### DESCRIBE

The proposal is to strengthen the girders and floor beams in the main spans by supplementing the webs and flanges and providing additional bracing. Repair of the bridge rail due to several impacts in recent years would be completed, surface rust and paint would be removed and the area repainted at the steel pins and hangars and at the bases of the steel bents, and the deck joints would be replaced.

#### Project Outcomes, Goals and Priorities (Program Manager/Project Sponsor)

##### DESCRIBE

River Road S, including this bridge, is designated a Strategic Inter-County Route in the Marion County Rural TSP. This river crossing is regionally significant given the limited number of crossings of the Willamette River in the mid-Willamette Valley area between Albany and Newberg/Wilsonville. When incidents in the Salem area (suicide attempts, crashes, spills) have impacted traffic on the Center and Marion Street bridges, this bridge assumes the role of significant regional traffic movement across the river, which back ups for many miles. The detour around this bridge is also significant, and is extremely limited for large vehicles due to height-restricted structures on all available detour routes.

**Constraints and Risks (Program Manager/Project Sponsor)**

DESCRIBE

The most important item needing addressed on the structure is the load limit, which will have a severe impact on local agriculture and commerce. Of significant concern is the serious damage the bridge rail has sustained in recent years due to vehicle impacts. Additional concerns include general maintenance of the steel and deck joints in order to preserve the bridge and this significant route.

**Additional Background Information (Program Manager/Project Sponsor)**

DESCRIBE

Marion County is certified in federal aid project delivery including consultant selection. The project may be delivered using a full service consultant contract awarded to the highest qualified firm.

**Leveraging Opportunities (Project Sponsor)**

DESCRIBE

The total project cost is estimated to be \$3.673M for the structural improvements, repairs and maintenance. Marion County's Capital Improvement Plan includes match funding for multiple federal aid bridge projects of this size in the 2025-2027 STIP time frame and Marion County is prepared to meet the schedule required to expend the funds within the fiscal years in which bridge funding is awarded.

**Funding (Program Manager)**

AMOUNT	PROGRAM TYPE	STIP CYCLE	FUNDING PROGRAM MANAGER NAME	FUNDING PROGRAM MGR SIGNATURE/DATE
\$3,673,000	Local Bridge	2025 - 2027	Brian Nicholas, Director of Publi	Brian Nicholas <small>Digitally signed by Brian Nicholas Date: 2021.03.29 16:20:19 -07'00'</small>

**Signatures**

PROJECT SPONSOR NAME Ryan Crowther	PROJECT SPONSOR TITLE Capital Projects Manager	PROJECT SPONSOR SIGNATURE/DATE 
MAINTENANCE MANAGER NAME	MAINTENANCE MANAGER TITLE	MAINTENANCE MANAGER SIGNATURE/DATE

STIP CYCLE 2025 - 2027	OPTIONAL REFERENCE NUMBER 53C122959900443	PROJECT NAME Luckiamute River, Helmick Road
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## ODOT PROJECT BUSINESS CASE

### 53C122959900443 Luckiamute River, Helmick Road

☒ Initial ☐ Final

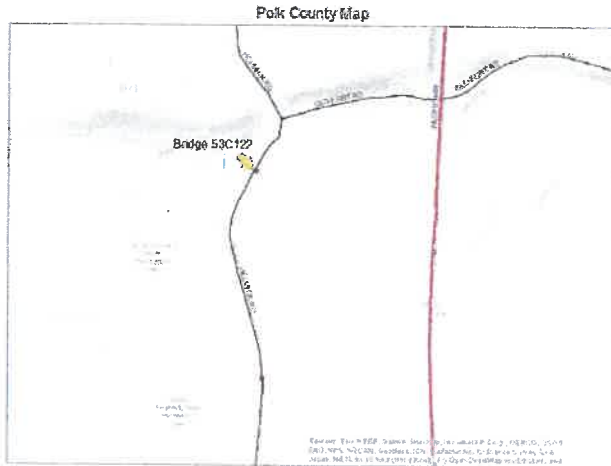
#### Project Location (Program Manager)

HIGHWAY NUMBER C9599	BEGIN MP 4.42	END MP 4.48	LOCAL STREET / NON-HIGHWAY LOCATION Helmick Road
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PASTE LINK TO MAP OR PHOTO OF THE PROJECT AREA

<https://www.google.com/maps/@44.7825893,-123.232719,349m/data=!3m1!1e3>

CLICK IN THE FIELD BELOW TO BROWSE FOR AND INCLUDE A MAP OF THE PROJECT AREA (JPG, GIF, PNG, GIF, TIF, BMP FORMATS)



#### Problem/Opportunity/Issue Description and Need (Program Manager)

DESCRIBE

This existing Steel Thru Pony Truss bridge with concrete girders was constructed in 1928 and was part of the old highway replaced by OR99W Pacific Highway West in the 1950s. The bridge is scour critical with a scour rating of 3-unstable, seismically vulnerable, and structurally deficient. Urgent maintenance recommendations are listed for active corrosion, RC column scour repair, and removal of former column now laying over in channel. The superstructure is rated 4-poor condition, areas of section loss noted on the steel truss, floor beam and bridge railings. Rehabilitation is more cost effective than replacement and we would like to preserve the historical architecture of this existing bridge.

#### Potential Solutions (Program Manager/Project Sponsor)

DESCRIBE

Rehabilitation is preferred for this Category I, historic bridge steel bridge. It will address all maintenance recommendations from the PONTIS report and additional items including seismic retrofit, scour repair, paint, reseal joints, repair spalls, seal deck, and removal of former pier from channel.

#### Project Outcomes, Goals and Priorities (Program Manager/Project Sponsor)

DESCRIBE

Success is a rehabilitated bridge that will maintain its historical and architectural significance and appearance. It also regains its structural capacity, is seismically resilient, resistant to scour, architecturally consistent with its historical status, and is more cost effective than a new structure. This bridge will remain to be a good example of the truss spans being built in the late 1920s featuring steel facing railings on the truss span, a reinforced concrete rail on the approaches, riveted trusses, railings, as well as its location on the old West Side Highway, demonstrating the history of construction of bridges in Oregon.

#### Constraints and Risks (Program Manager/Project Sponsor)

DESCRIBE

Agency funding constraints.

#### Additional Background Information (Program Manager/Project Sponsor)

DESCRIBE

This bridge serves as a primary route for agricultural/farming vehicles between parcels of land owned on the north and south side of the bridge. Agricultural vehicles and trucks south of the bridge attempting to go north on OR99W Pacific Hwy West must use this bridge to gain access to OR99W Highway Pacific West due to the skewed intersection and no left turn at the south end of Helmick Road.

**Leveraging Opportunities (Project Sponsor)**

DESCRIBE	
There could be an opportunity to paint 2 other county bridges at the same time.	

**Funding (Program Manager)**

AMOUNT	PROGRAM TYPE	STIP CYCLE	FUNDING PROGRAM MANAGER NAME	FUNDING PROGRAM MGR SIGNATURE/DATE
		2025 - 2027		

**Signatures**

PROJECT SPONSOR NAME	PROJECT SPONSOR TITLE	PROJECT SPONSOR SIGNATURE/DATE
TODD WHITAKER	PUBLIC WORKS DIRECTOR	[Signature] 11/6/2020
MAINTENANCE MANAGER NAME	MAINTENANCE MANAGER TITLE	MAINTENANCE MANAGER SIGNATURE/DATE



STIP CYCLE	OPTIONAL REFERENCE NUMBER	PROJECT NAME
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## ODOT PROJECT BUSINESS CASE

☐ Initial ☐ Final

### Project Location (Program Manager) i

HIGHWAY NUMBER <b>BR 11629</b>	BEGIN MP <b>0.4</b>	END MP <b>0.4</b>	LOCAL STREET / NON-HIGHWAY LOCATION <b>Patty Lane</b>
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PASTE LINK TO MAP OR PHOTO OF THE PROJECT AREA

*See attached PDF for Project Area Map*

CLICK IN THE FIELD BELOW TO BROWSE FOR AND INCLUDE A MAP OF THE PROJECT AREA (JPG, GIF, PNG, GIF, TIF, BMP FORMATS)



### Problem/Opportunity/Issue Description and Need (Program Manager) i

DESCRIBE

The existing bridge is a 127 foot long, 20.3 foot wide, 6 span timber bridge. The timber deck is supported on timber girders and timber piles. Some of the timber piles have been replaced with steel H pile due to rot. The timber deck is in poor condition and the substructure is rated as serious. The bridge rail, approach rail and transitions are all substandard. The appraisal rating for structural is intolerable along with the deck. The sufficiency rating is 18.6.

### Potential Solutions (Program Manager/Project Sponsor) i

DESCRIBE

Replace the bridge with a new bridge. The new bridge will be a multispan steel or precast concrete beam bridge supported on piles or drilled shafts.

### Project Outcomes, Goals and Priorities (Program Manager/Project Sponsor) i

DESCRIBE

The bridge replacement will remove a county bridge which requires high maintenance and is in poor condition. The new bridge will provide needed access for agricultural vehicles.

### Constraints and Risks (Program Manager/Project Sponsor) i

DESCRIBE

This bridge crosses an irrigation impoundments. Irrigation season will impact in water work window.

### Additional Background Information (Program Manager/Project Sponsor) i

DESCRIBE

The existing timber bridge was built in 1958 and is in poor condition. The bridge has a sufficiency rating of 18.6 with unknown scour risk. The bridge is load posted and has an inventory rating of 2.9 tons. The bridge serves a large agricultural area and experiences heavy loading from agricultural vehicles. The bridge requires frequent maintenance and upkeep to maintain open. This bridge has significant structural deficiencies. Piles with the most deteriorated condition are as follows:

- Bent 1 – Pile has a 2" shell with 8" of decay and 100% loss of bearing.
- Bent 4 – Pile 2 has a 1" shell with 10" of decay.
- Bent 4 – Pile 5 has a 1.5" shell with greater than 7" of decay.
- Bent 5 – Pile 4 has a 1" shell with 9" of decay.

### Leveraging Opportunities (Project Sponsor) i

DESCRIBE

754-2945B (10/2019)

## **Agenda Item 4.**

### **Enhance Project Status**

**Mid-Willamette Valley Area  
Commission on Transportation  
(MWACT)**

**September 2, 2021**

STIP CYCLE 21-24	PROJECT NAME OR18: Newberg Dundee Bypass (Phase 2)	PROJECTWISE NO. (IF PREV. SCOPED) K19909
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## ODOT PROJECT BUSINESS CASE

☒ Initial ☐ Final

### Project Location (Program Manager) i

ROUTE NAME	HIGHWAY ID	BEGIN MP	END MP	LOCAL STREET / NON-HIGHWAY LOCATION
OR18	039			

PASTE LINK TO MAP OR PHOTO OF THE PROJECT AREA

<https://www.oregon.gov/odot/projects/pages/project-details.aspx?project=19909>

CLICK IN THE FIELD BELOW TO BROWSE FOR AND INCLUDE A MAP OF THE PROJECT AREA (JPG, GIF, PNG, GIF, TIF, BMP FORMATS)



### Problem/Opportunity/Issue Description and Need (Program Manager) i

DESCRIBE

The purpose of the Newberg Dundee Bypass project is to improve mobility and safety for interregional highway traffic through Newberg and Dundee and to relieve congestion by reducing truck and passenger vehicle traffic on Oregon 99W in these communities.

Over the past two decades, traffic on Oregon 99W in the downtowns of Newberg and Dundee has increased by over 40 percent. Vehicle backup on Oregon 99W often stretches for more than a mile in both directions on weekdays and weekends. This congestion blocks turning movements and access across Oregon 99W and creates an unfriendly and unhealthy environment for residents, shoppers, and tourists using the downtown areas and for people who need to cross Oregon 99W to get from one side of the town to the other. Traffic congestion and travel delays have now reached unacceptable levels for those who live, work in, or travel through Newberg, Dundee and the surrounding areas. By 2035, Newberg and Dundee are expected to have congestion in their downtowns for more than 14 hours a day. The Newberg Dundee Bypass will reduce increasing congestion on Oregon 99W through Newberg and Dundee by redirecting truck and vehicle traffic to the Bypass. Oregon 99W serves daily commuters from Yamhill County to the Portland metropolitan area and is the most direct route between the northern Willamette Valley and the central Oregon Coast. Average daily traffic (ADT) along this corridor has increased over 40 percent since 2000 and is estimated to increase another 25-75 percent by 2035.

### Potential Solutions (Program Manager/Project Sponsor) i

DESCRIBE

Due to funding, construction of the full Bypass is not an option so and the decision was made to phase the project. Phase 1 constructed the middle section of the Bypass from Dundee through south Newberg connecting to OR219 and opened to traffic January 2018. Since its opening, the cities of Newberg and Dundee have experienced some improvement in their downtown areas but not to the extent they could with the addition of Phase 2. Phase 2 of the Bypass is critical to unlocking the project's full utility, alleviating traffic congestion that impedes the efficient movement of people and goods on this State Highway as well as improve safety in the local communities. Phase 2 will construct the eastern section of the Bypass by creating a new highway continuing the connection from OR219 to a connection at OR99W at the bottom of Rex Hill in Newberg. Phase I relies on local street connections to facilitate traffic to the Bypass. Constructing Phase 2 will eliminate the need for local connections by providing a continuous connection therefore further reducing the number of vehicles on OR99W.

### Project Outcomes, Goals and Priorities (Program Manager/Project Sponsor) i

DESCRIBE

If the Bypass or Phase 2 is funded and constructed:  
 Fewer vehicles on OR99W between East Newberg and Dundee which will result in a decrease of daily traffic volumes.  
 Shorter travel times on OR99W.  
 Fewer vehicles in Newberg and Dundee downtowns. Daily traffic volumes will decrease and the number of freight trips in each of the downtowns will also be reduced. The removal of through and many regional trips from OR99W will also provide for much more efficient local freight movement within the communities of Newberg and Dundee.  
 Fewer failing local intersections by reducing the number of vehicles on OR99W.  
 Safer traffic operations with the reduction of traffic volumes along OR99W should reduce the potential for conflicts between vehicles. The reduced traffic volumes will make the roadway safer for pedestrians and bicycles. +

#### Planned Construction Year (Program Manager/Project Sponsor) i

YEAR	NARRATIVE
2023	The first phase (2A) of this project is schedule to break ground in 2023.

#### High Impact Risks (Program Manager/Project Sponsor) i

RISK TITLE	DETAILED DESCRIPTION OF RISK
Approach Fill Settlement and Construction Timing +	<b>Tall fills will cause consolidation settlements in the native soils under the new embankments. Settlements could cause downdrag loads on the deep foundations supporting the new bridges. To limit the potential for downdrage, it's recommended that staged construction of the embankments happen well in advance of pile driving so the primary consolidation can occur prior to bridge construction.</b> +

#### Additional Background Information (Program Manager/Project Sponsor) i

DESCRIBE
The OHP classifies OR99W and OR18 as Statewide Freight Routes through the Phase 2 project area and the Bypass is intended to replace OR99W as the designated Statewide Freight Route in this part of Oregon. As the primary freight route from Portland to the Oregon Coast, these routes have local and statewide economic importance for freight movement. Tier Two FEIS - Design Tier One FEIS - Location +

#### Leveraging Opportunities (Project Sponsor) i

DESCRIBE
We are requesting \$10M to use as a match for future grant applications that will become available through the next infrastructure bill. There is significant momentum for the project currently. The Parkway committee is working toward a local match \$5M-\$10M and Congresswoman Bonamici included an earmark for \$8M in the recent version of the infrastructure bill. This \$10M will open the door for many more options to acquire funding to fully fund the project. +

#### Cost Estimate Assumptions and Methodology (Program Manager/Project Sponsor) i

CONFIDENCE LEVEL	NARRATIVE
Medium	The PE phase and the RW phase are fully funded for the entire phase 2 project. Based on the design verification package (15% design), the CN phase cost for the entire phase 2 corridor will be \$172M. The project recently received \$32M in funding from HB 3011. This funding is being used to construction a segment of the project building toward the entire corridor. +

#### Funding (Program Manager) i

AMOUNT	PROGRAM TYPE	STIP CYCLE	FUNDING PROGRAM MANAGER NAME	FUNDING PROGRAM MGR. SIGNATURE AND DATE	
\$22,000,000	HB2017 Discretionary	15-18	Hope Derrickson		+
\$10,500,000	Other/OTIB	15-18	Sonny Chickering		+ -

#### Signatures i

PROJECT SPONSOR NAME	PROJECT SPONSOR TITLE	PROJECT SPONSOR SIGNATURE AND DATE
	Region 2 - Area 3 Manager	
MAINTENANCE MANAGER NAME	MAINTENANCE MANAGER TITLE	MAINTENANCE MANAGER SIGNATURE AND DATE
Cole Mullis	District 3 Manager	+



REGION 2	PROJECT NAME OR18: Newberg-Dundee Bypass (Phase 2)
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## 2024-2027 STIP HIGHWAY ENHANCE PROJECT PROPOSAL

☐ Initial

☒ Final

Proposed projects must be consistent with one or more statewide, regional, and/or local plans, such as the OTP or its mode or topic plans, a regional or local TSP, or a local transit development or land use plan. List the current plans this project is consistent with in the space below.

### DESCRIBE

*This project is consistent with the following state, regional, and local plans:*

- Oregon Transportation Plan
- Oregon Highway Plan
- City of Newberg Transportation System Plan
- Yamhill County Transportation System Plan
- Newberg-Dundee Bypass Final Environmental Impact Statement
- Newberg-Dundee Bypass/OR18 Facility Plan

## Eligibility

Projects must provide benefits to the transportation system for either congestion relief or freight mobility. Please indicate which one is the primary type of benefit provided by your project.

☒ Congestion Relief      ☐ Freight Mobility

Briefly describe the expected project benefits in the primary area. If there are benefits for both congestion relief and freight mobility, please describe benefits for each. The examples listed are intended to provide ideas to consider, but do not constitute exhaustive lists of possible benefits.

### Congestion Relief

Benefits may include: reduce hours of delay on state highways, improve traffic flow/reliability, address a system bottleneck, or improve the efficiency of the highway segment.

### DESCRIBE

*The Newberg Dundee Bypass will reduce increasing congestion on OR 99W through Newberg and Dundee by redirecting truck and vehicle traffic to the Bypass. OR 99W serves daily commuters from Yamhill County to the Portland metropolitan area and is the most direct route between the northern Willamette Valley and the central Oregon Coast. Average daily traffic (ADT) along this corridor has increased over 40 percent since 2000 and is estimated to increase another 25-75 percent by 2035. Phase 2 of the Bypass will allow travelers to bypass Newberg and Dundee, which is critical to unlocking the project's full utility and alleviating traffic congestion that impedes the efficient movement of people and goods on this State Highway.*

*To evaluate the impact of Phase 2 on the local transportation system, recent traffic analysis evaluated existing, future No Build, and Future Build conditions on relevant segments of OR 219, OR 99W, OR 18, S Springbrook Road, and NE Wynooski Road. Under existing conditions, none of the Phase II intersections currently meet the City of Newberg mobility target of LOS D or their corresponding statewide target volume-to-capacity (v/c) during the PM peak hour. Under No Build 2044 conditions, none of the intersections meet the statewide mobility target during either peak hour. In addition, delays under the No Build 2044 scenario range from 46 to more than 200 seconds per vehicle during the AM and PM Peak Hours.*

*Alternatively, Phase 2 will produce an efficient, high-speed, continuous-flow operation for regional and statewide trips in alignment with the Oregon Highway Plan's Bypass Policy and the Oregon Transportation Plan's initiative to invest strategically in capacity enhancements. Compared to the No Build 2044 scenario, Phase 2 will decrease per vehicle delays on the system by an average of approximately 80 percent.*



### Freight Mobility

Benefits may include: reduce freight delay, address a known freight bottleneck, remove barriers or pinch points to improve movement on identified freight routes and corridors, address truck parking needs, or improve freight efficiency within or through regulatory facilities such as weigh stations or ports of entry.

### DESCRIBE

*will facilitate faster, safer, and more efficient freight movement through and to the region. Recent estimates indicate travel time on the completed Bypass will be 12 minutes in 2035, compared to up to 50 minutes under the No Build on OR 99W. The removal of through and many regional trips from OR 99W also will provide for much more efficient local freight movement within the communities of Newberg and Dundee.*





The Oregon Highway Plan (OHP) classifies OR 99W and OR 18 as Statewide Freight Routes through the Phase 2 project area, and the Bypass is intended to replace OR 99W as the designated Statewide Freight Route in this part of Oregon. As the primary freight route from the Port of Portland to the Oregon Coast, these routes have local and statewide economic importance for freight movement. During the AM and PM peak hours, 9,048 vehicles (5.6% heavy trucks) navigate the intersections of OR 219 with OR 18 and S Springbrook Road. Under existing conditions, freight traffic must traverse minor streets with potential stops at 8-12 intersections to reach 99W in Newberg, contributing to congestion and queuing. With Phase 2 completed, through trucks would only have two potential stops at each end of the bypass.

The direct connection to 99W that Phase 2 provides will allow truck and vehicle traffic to avoid the commercial center of Newberg. As a result, traffic analysis projects queues near the northern portion of the project area along OR 219 will improve significantly due to the Phase 2 improvements. For example, during the PM Peak hour under No Build Conditions, the southbound through at OR 219 and OR 18 is expected to queue back approximately 1300 feet compared to just 475 feet following completion of the Phase 2 project.

## Additional Benefits and Considerations

Briefly describe any expected project benefits or impacts in the outcome areas below. Projects need not provide benefits in all areas. The examples and questions listed below are intended to help identify benefits and impacts, but are not meant to be exhaustive. Consider each topic below and describe the expected project benefit and/or other impacts identified, along with considerations and conclusions made regarding how to improve possible benefits and reduce possible impacts. Include benefits or impacts the proposed project may have on related aspects of the . As climate and equity are central themes of the SAP, responses to these items are *required*.

### Safety

The primary benefit ODOT looks for is reductions in fatalities or serious injuries; if project analysis shows this, please describe the results. There may be other safety benefits or impacts. Other benefits may include better linking destinations or crossing points, making the area easier to navigate for travelers, reducing possible conflicts with wildlife, etc. Other impacts could result in improving the area for some users but possibly reducing safety for others due to project or location characteristics. Briefly describe the project's expected benefits and impacts. If there are potentially negative impacts, describe mitigations or creative solutions included to improve outcomes.

#### DESCRIBE

A principal objective of the Bypass is to improve safety on OR 99W and OR 219 by reducing congestion and restoring system function by providing facilities that are more appropriate for the type of travel that they will support. Rear-end crashes are the most common type of crash for intersections along OR 99W. Frequent congestion on OR 99W results in long queues, with a higher potential for rear-end collisions. Phase 2 will allow all through traffic to bypass the 12 traffic signals on the east Newberg commercial corridor into downtown Newberg. Less traffic approaching signals will reduce the potential for rear-end crashes, and the diversion of freight traffic onto the Bypass will reduce their severity.

Phase 2 will also remove several conflicts between vehicles along OR 219, which produce a mixture of turning and angle crashes on the minor and major intersection approaches. These crashes likely result from a combination of high travel speeds and limited acceptable gaps in the mainline traffic stream, particularly during peak-hour conditions. The OR 219/OR 18 signalized intersection will be reconstructed as a partial cloverleaf interchange with two ramp terminals, eliminating conflicts between through traffic on OR 18 and travelers on OR 219.

At NE Wynooski Road and OR 219, the approach is stop-controlled and mainline volumes can make it challenging to find a gap in traffic. Recent field visits observed queuing of up to 175 feet at the intersection during the PM peak hour. Drivers attempting to turn left from OR 219 northbound to NE Wynooski Road tended to accept very short gaps under heavy traffic. Phase 2 would add a traffic signal at this location, significantly improving the safety of turning movements on and off OR 219.

### Multimodal Accessibility

Does the proposed project improve the ability to access key locations by non-automobile modes, if so, how? Other multimodal benefits may include better connecting existing multimodal facilities, completing gaps in the system, or adding new multimodal facilities in places where they are lacking. Other impacts could include improving access for some modes but reducing access or creating obstacles for others due to project or location characteristics. Briefly describe multimodal accessibility benefits and impacts of the proposed project. If impacts are identified, describe any mitigations or other creative solutions included to improve outcomes.

DESCRIBE Statewide Active Transportation Needs Inventory reveals significant gaps and deficiencies in the project area that inhibit access to key locations. Bicycle facilities from OR 18/OR 219 to OR 99W in downtown Newberg are Substandard, with Gaps on OR 219 from Milepost (MP) 20.55 to MP 20.74 and on S Springbrook Road from MP 60.00 to MP 60.70. Pedestrian Gaps are identified on OR 219 from OR 18 to OR 99W, except for a Substandard portion from MP 21.65 to 21.75. The entire length of S Springbrook Road from OR 219 to OR 99W is a pedestrian facility Gap.

Phase 2 will facilitate more compact and pedestrian/bicycle friendly development patterns in Newberg and Dundee along OR 99W by removing vehicle trips, making that roadway safer and lower stress for bikes and walkers traveling along or crossing OR 99W. While OR 99W would remain the designated bicycle route through Newberg and Dundee, bicyclists could also use the 8-foot-wide outside shoulders planned for the Bypass. Sidewalks and other pedestrian facilities would be constructed at the OR 219 Interchange. Local circulation changes to bicycle and pedestrian facilities disrupted by the Bypass will be reconstructed to ensure continued local access.

ODOT is also coordinating with Chehalem Park & Recreation District (CPRD) to ensure compatibility between Phase 2 and the Newberg-Dundee Bypass Trail. The Trail will ultimately connect Newberg to Dundee, making this busy traffic artery completely traversable by pedestrians and bicyclists for the first time, providing connections for work, commerce, and recreation. The 7,300 LF path will connect pedestrian-friendly elements of the Bypass to an existing 9,800 LF continuous network of sidewalks and bike lanes east of OR 219 to create a safe and attractive community path that will improve livability by linking South Newberg to the Springbrook area.

### Equity Required

Does the project improve economic and social well-being for Black, Indigenous, People of Color (BIPOC), low-income Oregonians, or others who have been marginalized, if so, how? What research or study has been done to identify equity benefits or impacts, and what were the results? Are benefits and other impacts distributed among local populations? What mitigations does the project include? Are there other creative solutions to be implemented that reduce impacts or improve benefits?

#### DESCRIBE

Yamhill County ranks sixth in Oregon for market value of agricultural products, many of which require highway freight access to be exported. Ten percent of Oregon's Latinx agricultural producers are in Yamhill County, and nine percent of Yamhill County's producers are BIPOC, compared to six percent statewide. By reducing congestion and constructing new roadway, Phase 2 provides more efficient, direct access for BIPOC producers to the Portland metro area major market and its nationwide gateway. In addition, it will improve access to the reservation of the Confederated Tribes of the Grand Ronde Community of Oregon.

Pedestrian facilities will be constructed at the OR 219 interchange to provide accessibility for disabled residents while contributing to the curb ramp remediation target per the 2016 ADA Settlement Agreement. The associated Newberg Dundee Bypass Trail will connect residential areas to key commercial, employment, and institutional destinations including Fred Meyer, PCC Newberg and Providence Newberg as well as existing and proposed parks, opening opportunities for recreation and home-to-school routes.

Census Tract 302.02, which includes a lower-income community west of OR 219 that is served by NW Wynooski Road, has a Transportation Disadvantaged Populations Index Score of 1.8. The existing stop-controlled intersection at NE Wynooski Road/OR 219 can make it difficult for residents to enter or leave. Phase 2 will signalize NE Wynooski Road/OR 219, which will improve safety and access for these low-income residents.

Finally, Phase 2 will be guided by agreements to increase opportunities for Native Americans, women, minorities, and veterans. This includes a Tribal Employment Rights Ordinance with the Confederated Tribes of Grand Ronde, which requires Tribal and Indian preference for hiring and subcontracting and a Project Labor Agreement requiring payment above prevailing wage and at least 15 percent of total work hours performed by the aforementioned groups.

### Climate Mitigation, Adaptation and Sustainability Required

Is the project anticipated to advance climate goals (e.g. reduce GHG emissions, enhance adaptation and system resilience, and/or improve system sustainability)? Are elements incorporated to help offset greenhouse gas emissions? What scope or design features are included that increase climate resiliency or system sustainability? Has a climate analysis been completed? If so, what are the results? Are benefits and other impacts distributed among local populations? Are there any mitigations included to reduce impacts to communities, including historically marginalized communities? Are there other creative solutions to be implemented that reduce impacts or improve benefits?

#### DESCRIBE

Emissions, and other transportation sources contribute to air pollution and are the largest source of GHG emissions in Oregon. Emissions from traffic on OR 99W are exacerbated by frequent stops and idling as through traffic must pass up to 12 intersections in Newberg. The congestion creates a noisy, unhealthy environment for pedestrians. Within a one-mile radius of Newberg, the EJSCREEN Index for Traffic Proximity and Volume is in the 84th percentile in the state. The 2012 Tier 2 Final EIS also identified an EJ population surrounding the OR 219 intersection. The EJSCREEN mapping tool reveals that population experiences higher exposure to particulate matter, traffic proximity, and volume.

Under Phase 2, through traffic will be diverted from OR 99W in Newberg, reducing noise, congestion and its associated emissions and improving air quality in the area. In addition, upgraded pedestrian and bicycle facilities will encourage travel via lower emission modes.

Stormwater management will reduce pollution flowing to surface waters and aquatic life, while increasing efficiency in operations and maintenance over the life of the project. A minimum storm size was selected to make sure that the “first flush” of high pollutant concentration is always captured. A maximum storm size has also been set in recognition that large storms have low pollutant concentrations and loads at the end. ODOT’s robust maintenance program will include adaptive management for stormwater treatment to account for higher precipitation events during winters while maintaining facility vegetation required for biological treatment during summers.

Consistent with the SAP and Executive Order No. 20-04, ODOT is exploring ways Phase 2 can incorporate creative solutions to reduce its carbon footprint. This includes utilizing energy efficient LED lighting limited solely to conflict points to conserve energy and reduce life cycle costs; recycling disturbed soils during construction; and utilizing cleaner construction equipment and fuels.

**Signature**

PROPOSER NAME John Huestis	PROPOSER TITLE Region 2 - Area 3 Manager	PROPOSER SIGNATURE AND DATE
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STIP CYCLE 21-24	PROJECT NAME I-5: Kuebler Blvd. to Delaney Road Widening	PROJECTWISE NO. (IF PREV. SCOPED) K19929
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## ODOT PROJECT BUSINESS CASE

☒ Initial ☐ Final

### Project Location (Program Manager) i

ROUTE NAME I-5 (Roadbed 1)	HIGHWAY ID 001	BEGIN MP SB 248.41	END MP SB 250.53	LOCAL STREET / NON-HIGHWAY LOCATION Salem south City Limits to Federal Aid
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PASTE LINK TO MAP OR PHOTO OF THE PROJECT AREA

<https://www.oregon.gov/odot/projects/pages/project-details.aspx?project=19929>

CLICK IN THE FIELD BELOW TO BROWSE FOR AND INCLUDE A MAP OF THE PROJECT AREA (JPG, GIF, PNG, GIF, TIF, BMP FORMATS)



### Problem/Opportunity/Issue Description and Need (Program Manager) i

DESCRIBE

The proposed project will add construction funding for a third lane to connect the existing three lane section on I-5 Southbound at MP 250.6 to the third lane that will be constructed in 2023 that widens I-5 southbound from MP 248.4 to MP 250.2. If not funded, the current proposed project will leave a 0.4 mile gap of two lane section between adjacent three lane sections. Traffic analysis shows if the 0.4 mile gap remains, traffic volume/capacity ratio during AM and PM peak hours will show a marginal improvement with the current planned widening to the south of Battle Creek Bridge in the 2045 design year. If the project receives the enhance grant funding, the full southbound widening will significantly increase the volume/capacity ratio. Currently, the Battle Creek Road Undercrossing Bridge does not have the span required to accommodate the proposed 3 travel lanes in the north and south directions, creating a bottleneck in the corridor. The majority of the grant funding would be used to remove the existing bridge and build a new bridge that has an up-to-date section with ADA compliant sidewalks and a span that can accommodate I-5 widening in both directions.

#### Comments and edits:

NAME OF COMMENTER	COMMENT DATE AND TIME	COMMENT / EDIT (FIELD WILL EXPAND AS YOU TYPE, CLICK TAB TO SEE TEXT IN EXPANDED FIELD)

### Potential Solutions (Program Manager/Project Sponsor) i

DESCRIBE

Replacing the Battle Creek Road overcrossing (MP 250.32) bridge will allow three travel lanes on I-5 and will correct the current substandard vertical clearance. Funding this section of the project will also fill a gap between the previously constructed FFO - I5 @ Kuebler Interchange - SB Ramp Improvements (Salem) Sec. improvements (completed 2017) and the currently funded southern portion of the project, eliminating the remaining two-lane bottleneck in the corridor and increasing freight mobility movement through the I-5 corridor in Salem.

#### Comments and edits:

NAME OF COMMENTER	COMMENT DATE AND TIME	COMMENT / EDIT (FIELD WILL EXPAND AS YOU TYPE, CLICK TAB TO SEE TEXT IN EXPANDED FIELD)

### Project Outcomes, Goals and Priorities (Program Manager/Project Sponsor) i

DESCRIBE

The annual crash rate in the project area has been steadily increasing on average since 2015. Likely contributing factors are



increasing AADTs and truck volumes combined with steep grades and only two through lanes. These factors contribute to major congestion from large slow moving trucks. As volume to capacity ratio increases, driving behaviors become less predictable which increases overall crash risk. By widening the freeway and bridges and realigning the ramps, enhance discretionary funding is expected to reduce the risk for high speed crashes related to weaving, merging (lane changing) and congestion within the project area.

The Battle Creek Road Bridge has had only one improvement is the 67 years since it was built. Though the current condition is rated fair, the structure is aging and will reach the point of needing replacement. This is the opportune time to both replace the aging structure and construct for the future of the corridor and improve safety for pedestrians crossing the bridge by providing barrier separated sidewalks that meet current ADA standards.

The replacement of the Battle Creek Road Bridge would improve pedestrian and bicycle traffic traveling Battle Creek Road and Whiltsey Rd on the east and west sides of Interstate 5. The existing Battle Creek Road Bridge has no shoulders and narrow lanes. The project proposes 6' bike lanes and sidewalks to accomodate pedestrian and bicycle traffic on this rural collector within the City of Salem's Urban Growth Boundary. Interstate 5 (identified as a bicycle route) pedestrian and bicycle traffic access would be improved with the additional travel lane and increased shoulder width (currently under 8 feet in width where adjacent sections are, or will be 12 feet or greater).

#### Comments and edits:

NAME OF COMMENTER	COMMENT DATE AND TIME	COMMENT / EDIT (FIELD WILL EXPAND AS YOU TYPE, CLICK TAB TO SEE TEXT IN EXPANDED FIELD)	+	-

#### Planned Construction Year (Program Manager/Project Sponsor) i

YEAR	NARRATIVE
2023	Scheduled Bid Let Date 08/24/2023.

#### High Impact Risks (Program Manager/Project Sponsor) i

RISK TITLE	DETAILED DESCRIPTION OF RISK	+
Right of Way (R/W) Acquisition	With the project currently between DAP and Preliminary Plans level design, the major project risks for schedule and budget at this point of the project are associated with timely R/W acquisition. The project team has completed the final legal descriptions and the programming estimate. The R/W phase funding is in the process of being approved and obligated by FHWA. Notice to Proceed on the R/W phase is anticipated on or before October 1, 2021. The project team has allowed 19 months to complete appraisals, make offers, negotiate with property owners, and complete closeout of the R/W phase. There are 21 acquisition files associated with Phase 1 and Phase 2 of the project. The project team has recognized that the R/W phase is a risk for the project and worked to minimize R/W takes and allowed sufficient time for the R/W acquisition.	+

#### Additional Background Information (Program Manager/Project Sponsor) i

DESCRIBE	+
<p>This project is consistent with the following state, regional, and local plans:</p> <ul style="list-style-type: none"> <li>• Oregon Transportation Plan (applicable key initiative: Invest Strategically in Capacity Enhancements)</li> <li>• Oregon Highway Plan (1G: Major Improvements Policy)</li> <li>• Salem-Keizer Metropolitan Planning Organization (SKATS) Regional Transportation System Plan</li> <li>• City of Salem Comprehensive Plan and Transportation System Plan</li> <li>• Marion County Comprehensive Plan and Transportation System Plan</li> <li>• Salem Area Mass Transit District does not currently have any routes in the study area and no routes are shown in the long range transit Plan</li> </ul> <p>Value Engineering Study Outsourced Design</p>	+

#### Comments and edits:

NAME OF COMMENTER	COMMENT DATE AND TIME	COMMENT / EDIT (FIELD WILL EXPAND AS YOU TYPE, CLICK TAB TO SEE TEXT IN EXPANDED FIELD)	+	-

#### Leveraging Opportunities (Project Sponsor) i

DESCRIBE	+
Receiving the Enhance funding would allow the project to leverage the \$2M pledge from the bridge program to include the full Southbound widening.	+

#### Cost Estimate Assumptions and Methodology (Program Manager/Project Sponsor) i

CONFIDENCE LEVEL	NARRATIVE
Very High	The PE phase and RW phase are fully funded for the project. The Current CN funding is



\$25.6M. The CN estimate for the full SB widening is \$37.5M. Enhance funding will help fill the \$12M gap in the CN phase. \$10M is being requested from Enhance funding and \$2M has been pledge by the Bridge Program. These estimates are based on a DAP level design and have a 25% contingency derived from the completed Cost Risk Assessment workshop, which included a Monte Carlo Simulation of risks and price inflation in the year 2024.

**Funding (Program Manager)** *i* C

AMOUNT \$17,000,000	PROGRAM TYPE FIX-IT REGION 2	STIP CYCLE 21-24	FUNDING PROGRAM MANAGER NAME SONNY CHICKERING	FUNDING PROGRAM MGR. SIGNATURE AND DATE	+
AMOUNT \$6,700,000	PROGRAM TYPE HB2017 BridgeSeismic	STIP CYCLE 21-24	FUNDING PROGRAM MANAGER NAME BERT HARTMAN	FUNDING PROGRAM MGR. SIGNATURE AND DATE	+ -
AMOUNT \$8,529,285	PROGRAM TYPE SW NATL HWY FREIGH	STIP CYCLE 21-24	FUNDING PROGRAM MANAGER NAME JEFF FLOWERS	FUNDING PROGRAM MGR. SIGNATURE AND DATE	+ -
AMOUNT \$3,136,151	PROGRAM TYPE FIX-IT SW IM	STIP CYCLE 21-24	FUNDING PROGRAM MANAGER NAME JUSTIN MODERIE	FUNDING PROGRAM MGR. SIGNATURE AND DATE	+ -

**Signatures** *i*

PROJECT SPONSOR NAME	PROJECT SPONSOR TITLE Region 2 Area 3	PROJECT SPONSOR SIGNATURE AND DATE
MAINTENANCE MANAGER NAME Cole Mullis	MAINTENANCE MANAGER TITLE District 3 Manager	MAINTENANCE MANAGER SIGNATURE AND DATE

REGION 2	PROJECT NAME I-5: Kuebler Blvd. to Delaney Road Widening
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## 2024-2027 STIP HIGHWAY ENHANCE PROJECT PROPOSAL

☒ Initial  
☐ Final

Proposed projects must be consistent with one or more statewide, regional, and/or local plans, such as the OTP or its mode or topic plans, a regional or local TSP, or a local transit development or land use plan. List the current plans this project is consistent with in the space below.

<p>DESCRIBE</p> <p><i>This project is consistent with the following state, regional, and local plans:</i></p> <ul style="list-style-type: none"> <li>• Oregon Transportation Plan</li> <li>• Oregon Highway Plan</li> <li>• Salem-Keizer Metropolitan Planning Organization (SKATS) Regional Transportation System Plan</li> <li>• City of Salem Comprehensive Plan and Transportation System Plan</li> <li>• Marion County Comprehensive Plan and Transportation System Plan</li> <li>• Salem Area Mass Transit District does not currently have any routes in the study area and no routes are shown in the long range transit Plan</li> </ul>
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### Eligibility

Projects must provide benefits to the transportation system for either congestion relief or freight mobility. Please indicate which *one* is the primary type of benefit provided by your project.

☒ Congestion Relief    ☐ Freight Mobility

Briefly describe the expected project benefits in the primary area. If there are benefits for both congestion relief and freight mobility, please describe benefits for *each*. The examples listed are intended to provide ideas to consider, but do not constitute exhaustive lists of possible benefits.

### Congestion Relief

Benefits may include: reduce hours of delay on state highways, improve traffic flow/reliability, address a system bottleneck, or improve the efficiency of the highway segment.

<p>DESCRIBE</p> <p><i>The proposed project will add construction funding to a third lane to connect the existing three lane section on I-5 Southbound at MP 250.6 to the third lane that will be constructed in 2023 that widens I-5 southbound from MP 248.4 to MP 250.2. If not funded, the current proposed project will leave a 0.4 mile gap of two lane section between adjacent three lane section. Traffic analysis shows if the 0.4 mile gap remains, traffic volume/capacity ratio during AM and PM peak hours will show a marginal improvement with the current planned widening to the south of Battle Creek Bridge in the 2045 design year. If the project receives the enhance grant funding, the full southbound widening will significantly increase the volume/capacity ratio. Currently, the Battle Creek Road Bridge does not have the span required to accommodate the proposed 3 travel lanes in the north and south directions, creating a bottleneck in the corridor. The majority of the grant funding would be used to remove the existing bridge and build a new bridge that has an up-to-date section with ADA compliant sidewalks and a span that can accommodate I-5 widening in both directions.</i></p>
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### Freight Mobility

Benefits may include: reduce freight delay, address a known freight bottleneck, remove barriers or pinch points to improve movement on identified freight routes and corridors, address truck parking needs, or improve freight efficiency within or through regulatory facilities such as weigh stations or ports of entry.

<p>DESCRIBE</p> <p><i>Replacing the Battle Creek Road overcrossing (MP 250.32) bridge will allow three travel lanes on I-5 and will correct the current substandard vertical clearance. Funding this section of the project will also fill a gap between the previously constructed FFO - I5 @ Kuebler Interchange - SB Ramp Improvements (Salem) Sec. improvements (completed 2017) and the currently funded southern portion of the project, eliminating the remaining two-lane bottleneck in the corridor and increasing freight mobility movement through the I-5 corridor in Salem.</i></p>
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### Additional Benefits and Considerations

Briefly describe any expected project benefits or impacts in the outcome areas below. Projects need not provide benefits in all areas. The examples and questions listed below are intended to help identify benefits and impacts, but are not meant to be exhaustive. Consider each topic below and describe the expected project benefit and/or other impacts identified, along with considerations and conclusions made regarding how to improve possible benefits and reduce possible impacts. Include benefits or impacts the proposed project may have on related aspects of the . As climate and equity are central themes of the SAP, responses to these items are *required*.

## Safety

The primary benefit ODOT looks for is reductions in fatalities or serious injuries; if project analysis shows this, please describe the results. There may be other safety benefits or impacts. Other benefits may include better linking destinations or crossing points, making the area easier to navigate for travelers, reducing possible conflicts with wildlife, etc. Other impacts could result in improving the area for some users but possibly reducing safety for others due to project or location characteristics. Briefly describe the project's expected benefits and impacts. If there are potentially negative impacts, describe mitigations or creative solutions included to improve outcomes.

### DESCRIBE

*The crash rate in the project area is increased dramatically by steep grades with only two through lanes contributing to major congestion from large slow moving trucks. By widening the freeway and bridges and realigning the ramps, grant funding is expected to reduce the number of dangerous crashes by 40 percent.*

*The Battle Creek Road Bridge has had only one improvement in the 67 years since it was built. Though the current condition is rated fair, the structure is aging and will reach the point of needing replacement. This is the opportune time to both replace the aging structure and construct for the future of the corridor and improve safety for pedestrians crossing the bridge by providing barrier separated sidewalks that meet current ADA standards.*



## Multimodal Accessibility

Does the proposed project improve the ability to access key locations by non-automobile modes, if so, how? Other multimodal benefits may include better connecting existing multimodal facilities, completing gaps in the system, or adding new multimodal facilities in places where they are lacking. Other impacts could include improving access for some modes but reducing access or creating obstacles for others due to project or location characteristics. Briefly describe multimodal accessibility benefits and impacts of the proposed project. If impacts are identified, describe any mitigations or other creative solutions included to improve outcomes.

### DESCRIBE

*The replacement of the Battle Creek Road Bridge would improve pedestrian and bicycle traffic traveling Battle Creek Road and Whiltsey Rd on the east and west sides of Interstate 5. The existing Battle Creek Road Bridge has no shoulders and narrow lanes. The project proposes 6' bike lanes and sidewalks to accommodate pedestrian and bicycle traffic on this rural collector within the City of Salem's Urban Growth Boundary. Interstate 5 (identified as a bicycle route) pedestrian and bicycle traffic access would be improved with the additional travel lane and increased shoulder width (currently under 8 feet in width where adjacent sections are, or will be 12 feet or greater).*



## Equity Required

Does the project improve economic and social well-being for Black, Indigenous, People of Color (BIPOC), low-income Oregonians, or others who have been marginalized, if so, how? What research or study has been done to identify equity benefits or impacts, and what were the results? Are benefits and other impacts distributed among local populations? What mitigations does the project include? Are there other creative solutions to be implemented that reduce impacts or improve benefits?

### DESCRIBE

*Disadvantaged Business Enterprise (DBE) goals established for the construction phase of the project are intended to improve the economic and social well-being to those who have been marginalized. Though the goal for this project has not yet been set, recent similar projects in the vicinity have been 4.0%. The construction phase of the project, the current estimate would create nearly \$1,040,000 set aside for DBE firms.*

*TERO agreements with the Grand Ronde tribe will provide both direct funds to the local tribes as well as employment opportunities as the construction phase of the project proceeds. Though the Indian Employment Preference Goal for this project has not yet been set, similar projects in the vicinity required 15.0%. Compliance fees associated with the Memorandum of Understanding are a fee of 1.00% for the first \$500,000 of the contract value, 0.75% for the second \$500,000, 0.50% for the next \$1,000,000 and a fee of 0.25% for the remaining contract value in excess of \$2,000,000. With the current construction estimate of \$26,000,000, the fee due the Grand Ronde tribe would be \$73,750 in addition to the wages earned by tribe members meeting the 15% Employment Preference Goal. Compliance fees are paid by the construction contractor to the Tribe for workforce training and development for tribal members. Preliminary contact with the Grand Ronde's tribal contact for TERO indicates, they would be very interested in this project and including it in their TERO agreement projects in 2023.*

*The consultant DBE goal for the design phase of the project is set at 8.5%. The design contract is on track to exceed that percentage before the completion of the design, providing economic opportunities for historically marginalized Oregonians.*



**Climate Mitigation, Adaptation and Sustainability** *Required*

Is the project anticipated to advance climate goals (e.g. reduce GHG emissions, enhance adaptation and system resilience, and/or improve system sustainability)? Are elements incorporated to help offset greenhouse gas emissions? What scope or design features are included that increase climate resiliency or system sustainability? Has a climate analysis been completed? If so, what are the results? Are benefits and other impacts distributed among local populations? Are there any mitigations included to reduce impacts to communities, including historically marginalized communities? Are there other creative solutions to be implemented that reduce impacts or improve benefits?

DESCRIBE
<i>By widening the existing two lane bottleneck to three lanes this project will ease current and future congestion. The reduction in congestion associated with this proposed project will reduce air pollutant emissions and associated greenhouse gas emissions from idling and slow vehicles which will improve the surrounding air quality. Water quality and detention ponds and swales will be design and constructed as part of this project. These features will help increase water quality for fish in Battle Creek, which is an important resource for local tribes. The project has made a strong effort to minimize impacts to surrounding properties, including a mobile home park. Through creative design and construction staging solutions, the project will avoid the originally planned project impacts and property acquisition at the Terrace Lake mobile home park.</i>

**Signature**

PROPOSER NAME	PROPOSER TITLE	PROPOSER SIGNATURE AND DATE
<i>John Huestis</i>	<i>Region 2 – Area 3</i>	