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**Thursday, November 07, 2019**

**6:45 PM – 8:30 PM**

**Development Services Building**

Main Floor Auditorium, Room 115

150 Beaver Creek Road, Oregon City, OR 97045

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## AGENDA

**6:45 p.m. Pledge of Allegiance**

**Welcome & Introductions**

*Chair Jim Bernard & Mayor Brian Hodson, Co-Chairs*

**Housekeeping**

- Approval of October 03, 2019 C4 Minutes **Page 03**
- 2020 Retreat Date

**6:50 p.m. Regional Flexible Funds Allocation (RFFA) Recommendation to Metro (Action Item)**

*Presenting: Steve Williams, Clackamas County and applying stakeholders*

- RFFA Draft Letter to Metro Council **Page 04**
- RFFA Staff Memo **Page 06**
- Supporting Materials **Page 09**

**7:50 p.m. Strategic Investment Fund**

*Presenting: Mike Bezner, Clackamas County*

- Staff Memo + Project Rankings **Page 21**

**8:15 p.m. Updates/Other Business**

- T2020
- Legislative Update
- JPACT/MPAC Updates
- Other Business

**8:30 p.m. Adjourn**

# General Information



## Current Voting Membership

		C4 Exec	C4 Metro	C4 Rural	JPACT	MPAC	R1ACT
<b>Clackamas County</b>	Chair Jim Bernard	●	●	●			
<b>Clackamas County</b>	Commissioner Paul Savas		●	●	●		●
<b>Canby</b>	Mayor Brian Hodson	●		●			●
<b>CPOs</b>	Laurie Freeman Swanson (Molalla CPO)	●	●	●			
<b>Estacada</b>	Mayor Sean Drinkwine			●			
<b>Fire Districts</b>	Matthew Silva (Estacada Fire District)	●					
<b>Gladstone</b>	Mayor Tammy Stempel		●				
<b>Hamlets</b>	Kenny Sernach (Beavercreek Hamlet)			●			
<b>Happy Valley</b>	Councilor Markley Drake		●				●
<b>Johnson City</b>	Vacant						
<b>Lake Oswego</b>	Councilor Theresa Kohlhoff	●	●				●
<b>Milwaukie</b>	Mayor Mark Gamba		●			●	
<b>Molalla</b>	Mayor Keith Swigart			●			
<b>Oregon City</b>	Mayor Dan Holladay		●				
<b>Portland</b>	Vacant						
<b>Rivergrove</b>	Mayor Walt Williams		●				
<b>Sandy</b>	Mayor Stan Pulliam			●			
<b>Sanitary Districts</b>	Paul Gornick (Oak Lodge Water Services)	●					
<b>Tualatin</b>	Councilor Paul Morrison		●				
<b>Water Districts</b>	Hugh Kalani (Clackamas River Water)						
<b>West Linn</b>	Mayor Russ Axelrod		●				
<b>Wilsonville</b>	Mayor Tim Knapp		●		●		

## Current Ex-Officio Membership

<b>MPAC Citizen Rep</b>	Vacant
<b>Metro Council</b>	Councilor Christine Lewis
<b>Port of Portland</b>	Emerald Bogue
<b>Rural Transit</b>	Julie Wehling
<b>Urban Transit</b>	Dwight Brashear

## Frequently Referenced Committees:

- CTAC:** Clackamas Transportation Advisory Committee (C4 Transportation TAC)
- JPACT:** Joint Policy Advisory Committee on Transportation (Metro)
- MPAC:** Metro Policy Advisory Committee (Metro)
- MTAC:** Metro Technical Advisory Committee (MPAC TAC)
- R1ACT:** Region 1 Advisory Committee on Transportation (ODOT)
- TPAC:** Transportation Policy Advisory Committee (JPACT TAC)

**Thursday, October 03, 2019**  
**Development Services Building**  
 Main Floor Auditorium, Room 115  
 150 Beaver Creek Road, Oregon City, OR 97045

**Attendance:**

**Members:** **Canby:** Brian Hodson; **Clackamas County:** Jim Bernard; Paul Savas; **CPOs:** Martin Meyers (Redland-Viola-Fischers Mill) (Alt.); **Estacada:** Sean Drinkwine; **Hamlets:** John Keith (Stafford) (Alt.); **Lake Oswego:** Theresa Kohlhoff; **Milwaukie:** Mark Gamba; **Molalla:** Keith Swigart; **MPAC Citizen:** Ed Gronke (Alt.); **Oregon City:** Rachel Lyles Smith (Alt.); **Sandy:** Stan Pulliam; **Sanitary Districts:** Paul Gornick; **Transit:** Julie Wehling (Canby); Dwight Brashear (SMART); Even Nilenders (TriMet); **Tualatin:** Paul Morrison; **Water Districts:** Hugh Kalani; **West Linn:** Teri Cummings (Alt.); **Wilsonville:** Tim Knapp

**Staff:** Chris Lyons (PGA)

**Guests:** Jaimie Huff (Happy Valley); Marge Stewart (Firwood CPO); Jamie Stasny (DTD); Kathy Hyzy (Milwaukie); Mike Pullen (Multnomah County); Dan Mahr (Sen. Merkley's office); Megan McKibben (Congressman Schrader's Office); Mark Ottenad (Wilsonville/SMART);

The C4 Meeting was recorded and the audio is available on the County's website at <http://www.clackamas.us/c4/meetings.html> . Minutes document action items approved at the meeting.

<b>Agenda Item</b>	<b>Action</b>
<b>Approval of September 5, 2019 C4 Minutes</b>	Approved.
<b>Burnside Bridge Briefing</b>	Mike Pullen with Multnomah County gave a presentation on the Burnside Bridge project.
<b>Strategic Investment Fund</b>	Mike Bezner presented CTAC's principles and process recommendations for selecting VRF Strategic Investment Fund projects. Members provided feedback on this work.
<b>T2020 Update</b>	Jamie Stasny provided a status update and upcoming opportunities on the T2020 process.
<b>Updates/Other Business</b> <ul style="list-style-type: none"> <li>• <b>JPACT/MPAC Updates</b></li> <li>• <b>Other Business</b></li> </ul>	JPACT/MPAC updates – No updates.  Other Business – Region 1 ACT meeting on 10/7 to focus on the Statewide Transportation Improvement Program (STIP) and potential projects for funding.

Adjourned at 7:55 p.m.

November **DRAFT**, 2019

Councilor Shirley Craddick, Chair  
Joint Policy Advisory Committee on Transportation  
Metro Regional Center  
600 NE Grand Ave  
Portland, Oregon 97232

**RE: Clackamas County project funding priorities for Regional Flexible Funds Allocation (RFFA) 2021-23**

Dear Chair Craddick and members of JPACT:

The Clackamas County Coordinating Committee (C4) has reviewed the Regional Flexible Funds Allocation (RFFA) projects submitted from Clackamas County jurisdictions and identified priority projects for JPACT to consider during the selection of projects for RFFA funding. The development of priority projects included a technical evaluation of the submitted projects by the Clackamas Transportation Advisory Committee (CTAC) and discussions by C4 and C4 Metro Subcommittee, as well as presentations by project sponsors at the C4 meeting on November 7<sup>th</sup>, 2019.

**From this process, C4 recommends the following projects receive top funding consideration from the Active Transportation Projects funding of RFFA:**

- Milwaukie: Monroe Street Greenway - Construction
- Gladstone: Trolley Trail Bridge Replacement – Project Development
- Clackamas County: Courtney Avenue Bike/Pedestrian – Construction

**Additionally, C4 supports inclusion of Clackamas County's Clackamas Industrial Areas ITS project using Freight & Economic Development funds from this RFFA cycle.**

As the leaders of C4 and representatives of Clackamas County and the Cities to JPACT, we would like to articulate the reasoning supporting this recommendation. The technical scores, both from Metro and by CTAC, highlighted that all of the projects have strong benefits, albeit in different categories. Each project would provide substantial benefit to users of the active transportation system in the County.

While the West Linn Highway 43 Multimodal Transportation Project received a strong overall score both from in Metro's technical evaluation and from CTAC's criteria, a critical consideration of Clackamas County's recommendations is that it is essential to make investments throughout Clackamas County's urban jurisdictions, and that there are limited funding opportunities available in the region. The early phases of the West Linn Hwy 43 Multimodal project received funding from the previous 2019-2021 RFFA cycle, as well as the most recent STIP cycle. By prioritizing projects in other locations in the County, C4 aims to achieve investment throughout the county that serves as many residents as possible with the limited funding available.



C4 appreciates the opportunity for county coordinating committees to provide JPACT with input on priorities for RFFA funding. We look forward to working with JPACT and members of the Metro Council to finalize the selection of RFFA projects from throughout the region at the December JPACT meeting.

Sincerely,

Jim Bernard, Chair  
Clackamas County  
C4 Co-Chair

Brian Hodson, Mayor  
City of Canby  
C4 Co-Chair

Paul Savas, Commissioner  
Clackamas County  
Clackamas JPACT Member

Tim Knapp, Mayor  
City of Wilsonville  
Cities of Clackamas JPACT Member

**MEMORANDUM**

**TO:** Clackamas County Coordinating Committee  
**FROM:** Steve Williams, Principal Transportation Planner  
**DATE:** October 30, 2019  
**SUBJECT:** Metro Regional Flexible Funding Application (RFFA)

Every 3 years Metro conducts a process to allocate funds from 3 federal sources to fund local government projects within the Portland UGB through the Regional Flexible Fund Application (RFFA) process. Metro has set aside \$43 million to fund RFFA projects in this round in two categories: Active Transportation and Complete Streets, and Regional Freight and Economic Development Initiatives. Metro has committed \$32 million for Active Transportation and Complete Streets, and \$11 million for Regional Freight and Economic Development Initiatives. A total of 23 projects were submitted for RFFA funding consideration by localities within the region: 3 freight projects and 20 active transportation projects.

There were six RFFA applications submitted by Clackamas County localities, 5 projects in the Active Transportation & Complete Streets Category and 1 project in the Freight and Economic Development Category. The table attached to this memorandum shows all the projects region-wide that were submitted for funding request and the Metro technical scoring for each project. Projects from Clackamas County localities are highlighted in blue in the attached table. Staff from the Clackamas sub-region localities submitting projects have prepared flyers that summarize the proposed projects for C4 Metro consideration. The flyers have been provided with this memo.

Metro scored the proposed RFFA projects based on their criteria – equity, safety, climate and congestion. At their meeting on October 14, CTAC reviewed and scored all six applications submitted by Clackamas County localities on the following criteria:

1. Project readiness
2. Connections to other bike, pedestrian or transit facilities
3. Benefits to areas outside the immediate vicinity of the project
4. Local match contribution.

CTAC’s scoring of the projects is shown below. On October 16, the C4 Metro Subcommittee discussed the projects and recommended project priorities for C4 consideration.

<b>Active Transportation Projects</b>	<b>Phases to be Funded</b>	<b>Request</b>	<b>Metro Score</b>	<b>CTAC Score</b>	<b>C4 Metro Priority</b>
Milwaukie: Monroe Street Greenway	Construction	\$3,860,788	13	16.1	1
Gladstone: Trolley Trail Bridge Replacement	Project	\$1,228,800	14	13.8	2
Clackamas County: Courtney Ave Bike/Ped	Development				
Oregon City: Hwy 99E Bike/Ped Improvements	Construction	\$5,079,992	16	15.4	3
	Project	\$673,000	15	14.8	4
	Development				
West Linn: Hwy 43 Multimodal Improvements	Construction	\$6,468,000	15	16.4	5
<b>Freight &amp; Economic Development Projects</b>					
Clackamas County: Clackamas Industrial Areas ITS	Construction	\$1,768,040	9	12.0	1

The schedule for the remainder of the RFFA process is as follows:

- C4 Prioritization of Clackamas County Projects – November 7, 2019
- TPAC/JPACT Discussion and Action – December 2019
- Metro Council Action – January 2020

At the C4 Meeting the following are recommended:

- 1. Provide 3 to 5 minutes for RFFA project proposers to make a brief statement about their project and respond to questions.**
- 2. Discuss the projects.**
- 3. Make a recommendation to Metro for the prioritization of the 5 Active Transportation & Complete Streets projects that were submitted, and the Freight and Economic Development Project.**

**2022-24 RFFA Project Evaluation**

Active Transportation & Complete Streets projects	County	Amount requested	Running total	Total policy rating	Safety rating	Equity rating	Climate rating	Congestion rating	Risk Level	Draft CC Priority	Public Comment	CMAQ Eligible
Portland: Stark-Washington Corridor Improvements	PDX	\$5,332,000	\$5,332,000	20.0	5.6	5.4	5.2	3.8	Mod	TBD	TBD	TBD
Portland: 122nd Avenue Corridor Improvements	PDX	\$4,543,700	\$9,875,700	19.2	5.6	5.8	4.0	3.8	Low	TBD	TBD	TBD
Portland: Willamette Blvd AT Corridor	PDX	\$4,456,000	\$14,331,700	18.6	5.8	4.8	4.8	3.2	Low	TBD	TBD	TBD
Portland: MLK Blvd Safety & Access to Transit	PDX	\$4,123,000	\$18,454,700	15.8	5.0	5.6	3.0	2.2	Low	TBD	TBD	TBD
Forest Grove: Council Creek Trail	WA	\$1,345,950	\$19,800,650	15.8	5.0	4.6	3.8	2.4	Mod	TBD	TBD	TBD
<b>Clackamas Co: Courtney Avenue Bike/Ped Improvements</b>	<b>CL</b>	<b>\$5,079,992</b>	<b>\$24,880,642</b>	<b>15.8</b>	<b>5.0</b>	<b>4.6</b>	<b>3.8</b>	<b>2.4</b>	<b>Low</b>	<b>3</b>	<b>TBD</b>	<b>TBD</b>
Washington Co.: Cornelius Pass Bike/Ped Bridge (US26)	WA	\$628,110	\$25,508,752	15.6	5.4	3.8	3.6	2.8	Low	TBD	TBD	TBD
<b>West Linn: Hwy 43 Multimodal Improvements - Mapleton to Barlow</b>	<b>CL</b>	<b>\$6,468,000</b>	<b>\$31,976,752</b>	<b>15.2</b>	<b>5.6</b>	<b>2.2</b>	<b>4.2</b>	<b>3.2</b>	<b>Mod</b>	<b>1</b>	<b>TBD</b>	<b>TBD</b>
<b>Oregon City: Hwy 99E Bike/Ped Improvements</b>	<b>CL</b>	<b>\$673,000</b>	<b>\$32,649,752</b>	<b>14.8</b>	<b>4.2</b>	<b>4.0</b>	<b>4.0</b>	<b>2.6</b>	<b>Mod</b>	<b>4</b>	<b>TBD</b>	<b>TBD</b>
Washington Co.: Aloha Safe Access to Transit	WA	\$5,193,684	\$37,843,436	14.6	3.8	5.4	3.2	2.2	Low	TBD	TBD	TBD
<b>Gladstone: Trolley Trail Bridge Replacement</b>	<b>CL</b>	<b>\$1,228,800</b>	<b>\$39,072,236</b>	<b>13.8</b>	<b>4.4</b>	<b>3.6</b>	<b>2.8</b>	<b>3.0</b>	<b>Low</b>	<b>5</b>	<b>TBD</b>	<b>TBD</b>
Portland: Central City in Motion - Belmont-Morrison	PDX	\$4,523,400	\$43,595,636	13.6	4.2	3.0	3.0	3.4	Low	TBD	TBD	TBD
Gresham: Division Street Complete Street	MU	\$5,240,760	\$48,836,396	13.6	3.0	4.0	3.6	3.0	Mod	TBD	TBD	TBD
<b>Milwaukie: Monroe Street Greenway</b>	<b>CL</b>	<b>\$3,860,788</b>	<b>\$52,697,184</b>	<b>13.0</b>	<b>3.8</b>	<b>3.6</b>	<b>4.0</b>	<b>1.6</b>	<b>Mod</b>	<b>2</b>	<b>TBD</b>	<b>TBD</b>
Portland: Taylors Ferry Road Transit Access & Safety	PDX	\$3,676,000	\$56,373,184	13.0	4.6	2.0	3.6	2.8	High	TBD	TBD	TBD
Tigard: Red Rock Creek Trail	WA	\$314,055	\$56,687,239	11.6	3.8	1.4	3.8	2.6	Mod	TBD	TBD	TBD
Portland: Springwater to 17th Avenue Trail	PDX	\$5,534,000	\$62,221,239	8.6	2.6	1.4	3.0	1.6	High	TBD	TBD	TBD
Tigard: Bull Mountain Road Complete Street	WA	\$4,486,500	\$66,707,739	7.2	3.2	1.0	2.0	1.0	Low	TBD	TBD	TBD

requested: \$66,707,739  
 available: \$32,458,519  
 difference: (\$34,249,220)

Freight & Economic Development projects	County	Amount requested	Running total	Total policy rating	Safety rating	Equity rating	Climate rating	Congestion rating	Risk Level	Draft CC Priority	Public Comment	CMAQ Eligible
Portland: Cully-Columbia Freight Improvements	PDX	\$3,434,193	\$3,434,193	15.8	4.4	4	2.4	5	Mod	TBD	TBD	TBD
<b>Clackamas Co.: Clackamas Industrial Area ITS</b>	<b>CL</b>	<b>\$1,768,040</b>	<b>\$5,202,233</b>	<b>8.8</b>	<b>2.6</b>	<b>1.6</b>	<b>0.8</b>	<b>3.8</b>	<b>Low</b>	<b>1</b>	<b>TBD</b>	<b>TBD</b>
Sherwood: Blake Street Design	WA	\$785,137	\$5,987,370	3.4	0.2	1.2	0.4	1.6	Low	TBD	TBD	TBD

requested: \$5,987,370  
 available: \$10,819,506  
 difference: \$4,832,136

Projects for consideration in both categories	County	Amount requested	Running total	Total policy rating	Safety rating	Equity rating	Climate rating	Congestion rating	Risk Level	Draft CC Priority	Public Comment	CMAQ Eligible
Multnomah Co.: Sandy Blvd - Gresham to 230th Avenue	MU	\$1,275,985	\$1,275,985	11.6	3	2.2	3.4	3	Low	TBD	TBD	TBD
Multnomah Co.: 223rd Avenue - Sandy Blvd to RR underpass	MU	\$3,862,190	\$5,138,175	8.4	2.8	2	2.2	1.4	Mod	TBD	TBD	TBD

requested: \$5,138,175  
 total requested: \$77,833,284  
 RFFA Step 2 funding: \$43,278,025  
 difference: (\$34,555,259)





### Building a Multimodal Future While Supporting Regional Corridors

This regionally significant multimodal and safety improvements project on Highway 43 (OR-43) will greatly enhance bike, pedestrian, transit, and vehicular mobility along State Highway OR-43 from Mapleton Dr. to Barlow St. The proposed project will result in the continuation of uninterrupted grade-separated protected bicycle paths and sidewalks with a consistent three lane vehicle cross section proposed for the majority of this corridor and with constrained cross sections used at creek crossings and drainage areas with steep slopes. Protected intersections will incorporate raised corner bike refuge islands, multiuse marked crossings, and other bicyclist and pedestrian safeguards.

More than 119,000 Clackamas County residents work outside of the county and depend on a well-functioning network of roadways, bike paths, and transit.

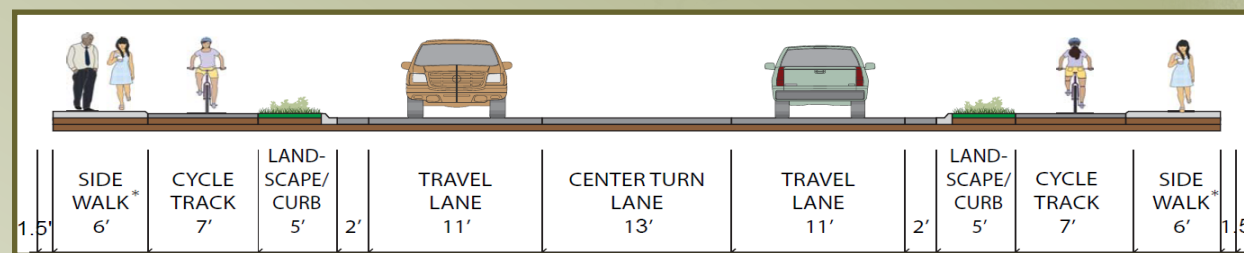
### Transportation Needs

- ◆ With over 21,000 vehicle trips daily, Oregon Highway 43 is a major regional corridor connecting Clackamas County to Portland.
- ◆ The OR-43 project area is a significant route connecting regional transit riders to the Oregon City and Lake Oswego Transit Centers.
- ◆ The project area ties directly into regional redevelopment of the Willamette Falls Locks Heritage.

- ✓ Improves Safety
- ✓ Enhances Bicycle and Pedestrian Access
- ✓ Regionally Significant
- ✓ Supports System Connectivity
- ✓ Improves Congestion
- ✓ Reduces Carbon Emissions

### Prioritizing Safety & Reducing Congestion

Decades without improvements have taken its toll on this corridor resulting in safety and accident risks while limiting pedestrian and bicycle options. Improvements to substandard intersections, coordinated with multimodal improvements, will significantly reduce existing congestion while providing access to alternate modes of transportation and reduce vehicle emissions.



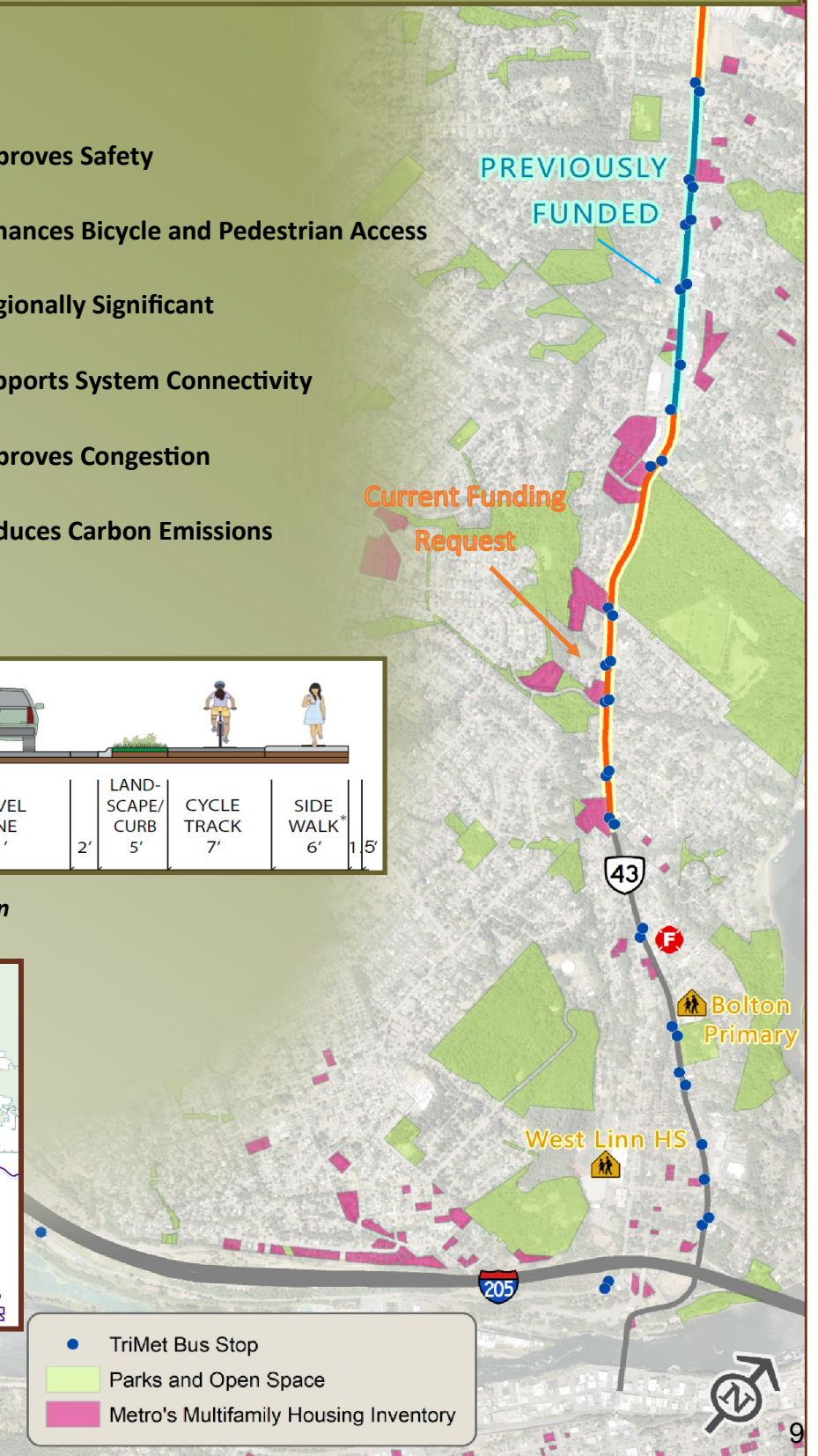
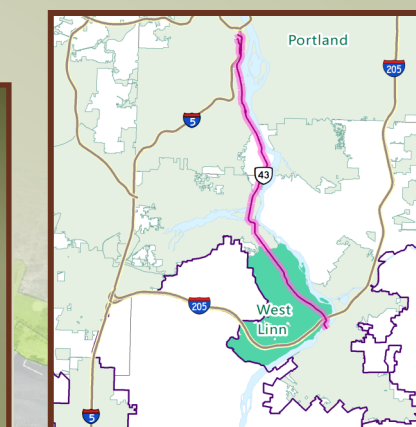
Proposed Standard Cross Section



Existing conditions provide limited shoulder in multiple areas within project boundary

### Project Readiness

- ◆ The design incorporates innovative separated bikeways/cycle tracks, protected intersections, and improvements to the bus stop at Hughes Dr. which will improve traffic flow while encouraging alternate modes of transportation.
- ◆ The project builds upon the City's current OR-43 multimodal project with ODOT as well as local bond funded arterial roadway engineering design currently underway for the corridor. This project will be positioned to immediately proceed to construction if awarded 2022-2024 RFFA Funds

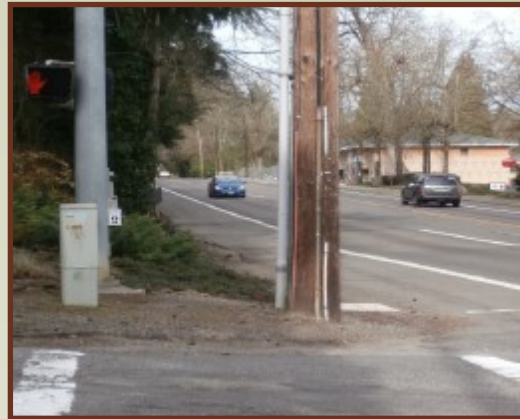




## Advancing Equity

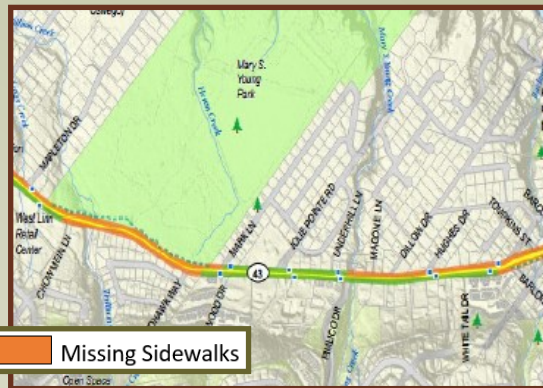
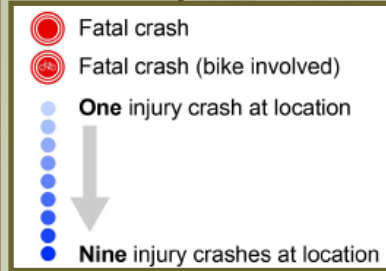
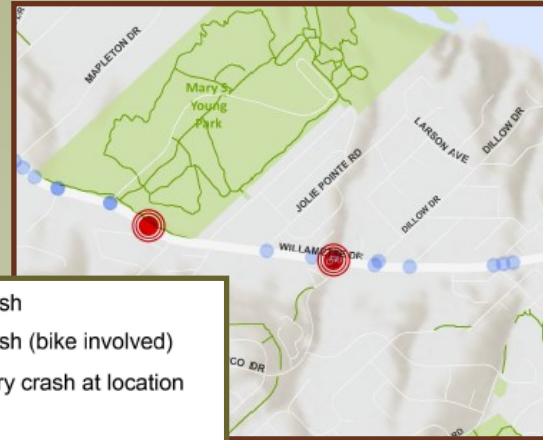


Numerous areas within the project boundary are not ADA compliant. The proposed project will address these sub-standard facilities.



- ◆ The areas around Highway 43 within the project area have an above average percentage of seniors as reported in the Regional Equity Atlas.
- ◆ West Linn's disable population is centered within the project area with an estimated 26-30% categorized as such along OR-43 within the City's Transportation System Plan (TSP).
- ◆ West Linn's TSP shows a 10-15% minority population on the south side of OR-43 adjacent to the project area as well as 11-25% population poverty rate, the highest in West Linn.

## Improving Safety



- ◆ Project will improve cross-modal safety especially where sidewalk and clear bicycle lanes are lacking.
- ◆ New sidewalk and grade-separated bicycle facilities will provide a designated family-safe, low stress area for users of all levels.
- ◆ Positioning sidewalk and bike path adjacent to each other will create a large clear vision area making users more visible to motorists.
- ◆ Protected intersection designs are intended to extend the safe environment for bicyclists and pedestrians through the use of raised corner islands, forward stop bars, and well defined marked crossings.

## Environmental Stewardship

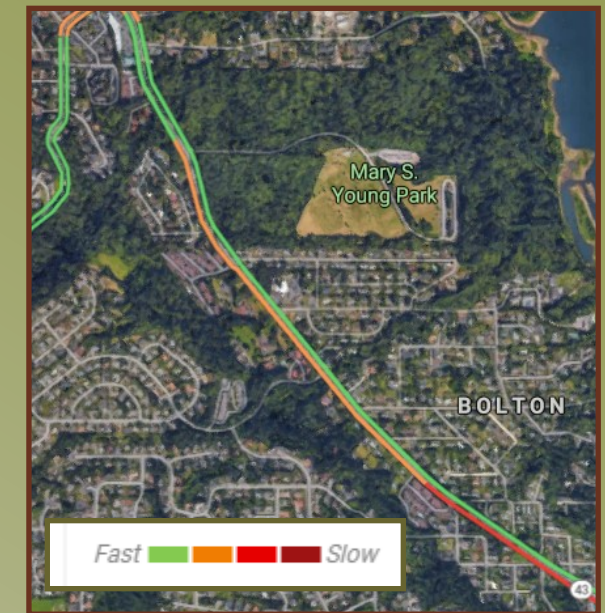


Many existing stormwater facilities are substandard and/or clogged with debris.



- ◆ West Linn has a consistent history of utilizing various design elements including but not limited to: appropriate roadside landscaping, rain gardens (pictured above), and bioswales to reduce environmental impacts.
- ◆ Encouraged use of active transportation elements will reduce potential greenhouse gas emissions. In addition, installation of landscape buffer strips will enhance plantings in the area. The City will use native plants to the greatest extent possible.
- ◆ The City has standardized LED street lighting in partnership with ODOT and all improved lighting will be dark skies compliant.

## Reducing Congestion



- ◆ The proposed project takes into account 2040 growth projections and future traffic volumes. The design increases opportunities for active transportation while decreasing motor vehicle use, particularly single occupancy vehicle trips while simultaneously reducing delays and optimizing the efficiency of vehicle flow in the corridor.
- ◆ Transit will be prioritized in the corridor without having to move out of the travel lane thus improving transit reliability and minimizing delay.
- ◆ Creation of a low stress active transportation network provides new alternative transportation opportunities for users of all levels to access transit, retail, schools, employment, and recreational destinations.
- ◆ Congestion impacting freight goods movement will be impacted with improved traffic flow and continuous center turn lanes allowing for improved freight travel time and reliability.



# MONROE STREET GREENWAY

## Project Description



The Monroe Street Greenway will create a nearly 4-mile, continuous, low-stress bikeway from downtown Milwaukie to the I-205 Multi-Use Path. Once complete, it will serve as the spine of Milwaukie's active transportation network, connecting users to the MAX Orange and Green Lines, Trolley Trail, 17th Avenue Bike Path, I-205 Multi-Use Path, neighborhoods, schools and parks.

Milwaukie's application for Regional Flexible Fund Allocation (RFFA) dollars, along with other sources of funding, will allow the city to complete the 2.2 miles of the Monroe Greenway within city limits over the next five years.

## Project Need

Today, the only continuous east-west connection for bicycles in Milwaukie is the Springwater Corridor at the far northern edge of the city. This forces most cyclists within Milwaukie to use SE King Road, a busy arterial, or SE Railroad Avenue/Harmony Road, which has long segments without any bicycle facilities.

The greenway will serve the growing area of central Milwaukie, which will experience significant housing and commercial development over the next few years. Many of the housing units will be part of Clackamas County's Hillside development project, a 16-acre public housing community. The Monroe Street Greenway will provide access to a safe and low-cost transportation option for those most in need.

## CTAC Criteria

### Project Readiness

The city will begin design for the project in early 2020 with city Capital Improvement Program (CIP) funds. Project design will be completed prior to the anticipated disbursement of 2022-2024 RFFA grant funding to ensure timely delivery of the project. Elements of the greenway are already underway. Design and construction for a safe routes to school project along SE Linwood Avenue has begun and is anticipated to be complete by August 2021. Also, the greenway section from SE Oak Street to 37<sup>th</sup> Avenue is slated for delivery by a private development project within the next two years.

Thanks to the city's robust Safe Access for Everyone program, the city has hired additional design, contract management and inspection staff, who are ready and able to deliver the Monroe Greenway project on time and within budget.

### Active Transportation Connectivity

The greenway, when implemented in connection with Clackamas County's section, will connect the active transportation facility of the I-205 bicycle-pedestrian path in the east and the Trolley Trail/17th Avenue bicycle-pedestrian path in the west. These trails, in turn, connect to the larger, well-established Springwater Corridor.

## CTAC Criteria *continued*

### Benefits to Areas Outside the Vicinity of the Project

The greenway will serve as the backbone of east-west active transportation in Milwaukie, benefit low-income and limited English proficiency households, and help provide a safe connection to multiple Title 1 schools. The greenway will also:

- connect the Milwaukie community to high capacity transit options, such as the MAX Orange and Green Lines
- increase connectivity to bus routes that provide accessibility to shopping and recreation areas in Clackamas County and Portland Metropolitan region.
- increase connectivity to employment in Clackamas County and Portland Metropolitan region.

This, in turn, reduces congestion and carbon emissions by decreasing the number of single car trips needed to connect the Milwaukie community with Clackamas County and Portland Metropolitan area, while increasing economic resilience.

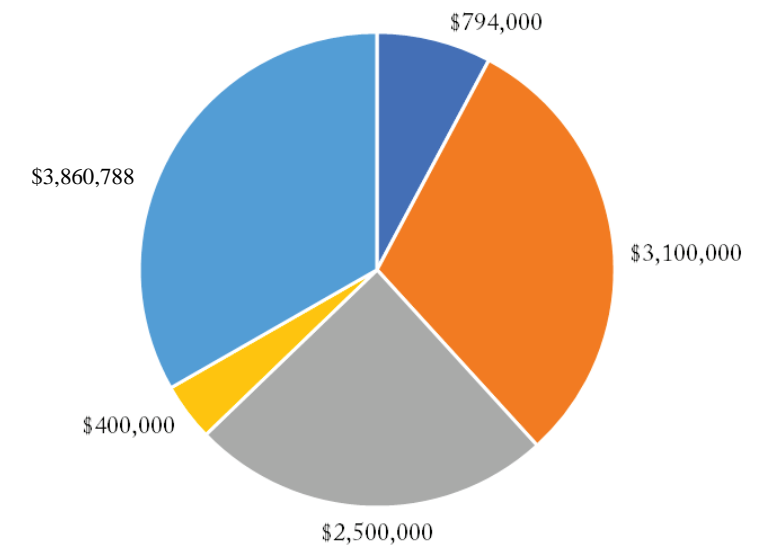
### Local Matching Contributions & Leverage

Metro's RFFA grant would leverage multiple sources of funds, development opportunities and partner projects for a significant return on investment. By investing in the Monroe Street Greenway, Metro will provide the final piece of funding needed to design and construct the entire Milwaukie segment of the greenway.

The city is contributing up to \$794,000 through the CIP. The project is primarily leveraged through both the ODOT Statewide Transportation Improvement Program funding and ODOT Safety Leverage Program. The greenway project also leverages private development from the Monroe Apartments to build 1,500 feet of off-street greenway path, which is estimated to save the city and other funding sources approximately \$400,000.

Local contribution and leverage accounts for approximately two-thirds of the full design development and construction costs for the Monroe Street Greenway.

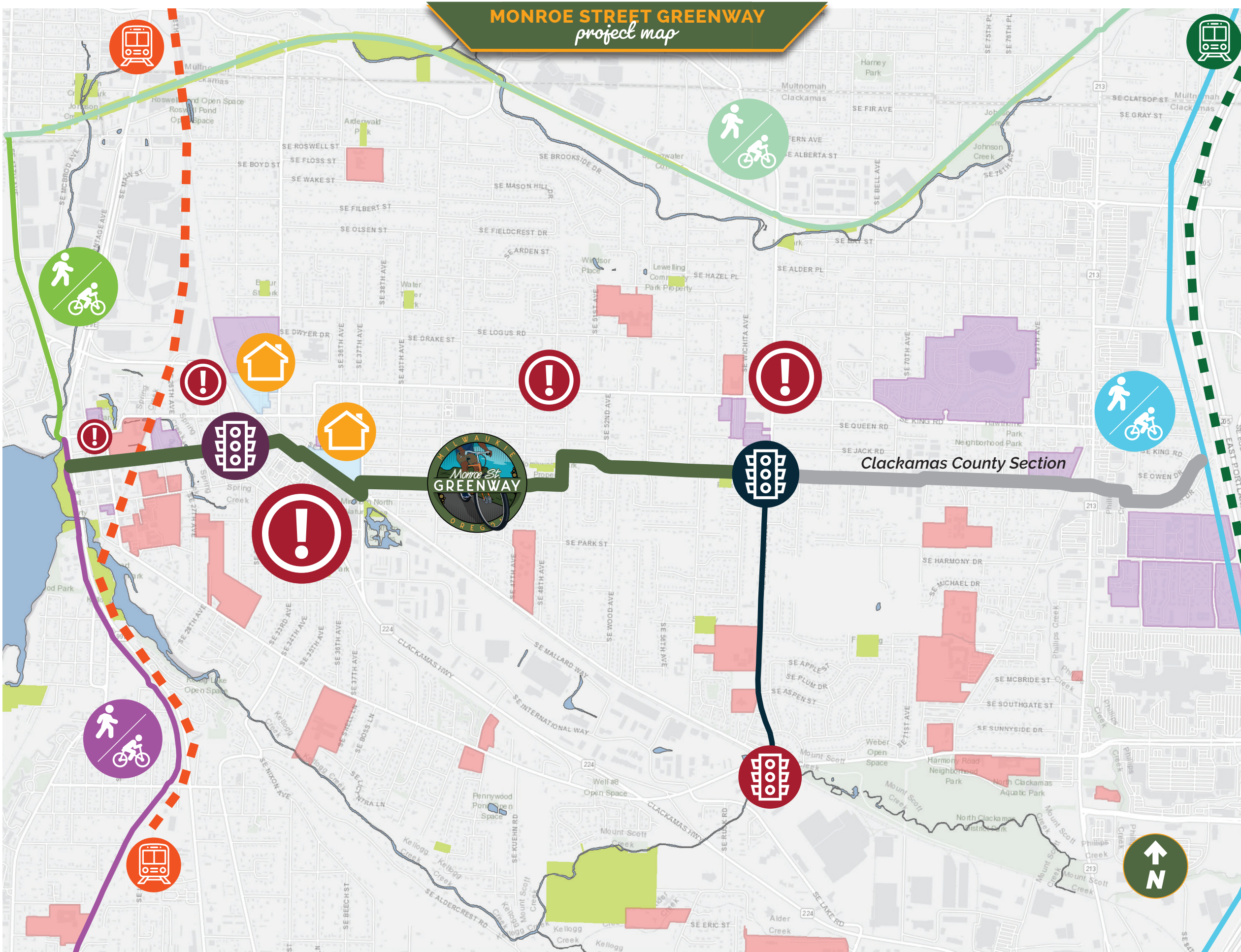
RFFA Funds Leverage \$6.7 Million














■ City ■ ODOT Safety Leverage ■ ODOT Signal ■ Shared Path Savings ■ RFFA Grant



# MONROE STREET GREENWAY project map



## KEY

-  MAX Orange Line
-  MAX Green Line
-  I-205 Multi-Use Path
-  Springwater Corridor
-  17th Avenue Multi-Use Path
-  Trolley Trail
-  Planned Housing Project
-  ODOT Intersection Safety Improvements (2022)
-  Linwood Avenue Intersection Safety Improvements (2021)
-  Failing intersection
-  Reported collisions  
(Size proportionate to number of reports)



# Courtney Avenue Complete Streets Proposal

A RFFA proposal to create a safe route for children and adults by adding sidewalks and buffered bike lanes

### Contact information

Scott Hoelscher, Bicycle and Pedestrian Coordinator  
ScottHoe@clackamas.us  
503-742-4533

## Critical Safety Needs on Courtney Avenue from McLoughlin Blvd to River Road

**Project Purpose:** The purpose of the Courtney Avenue Complete Streets project is to facilitate nonvehicle transportation in the Oak Grove neighborhood of unincorporated Clackamas County.

**Needs:** Currently Courtney Avenue is uncomfortable for bicyclists and unaccommodating for those walking. Map 1 on the right shows existing issues on Courtney Ave.

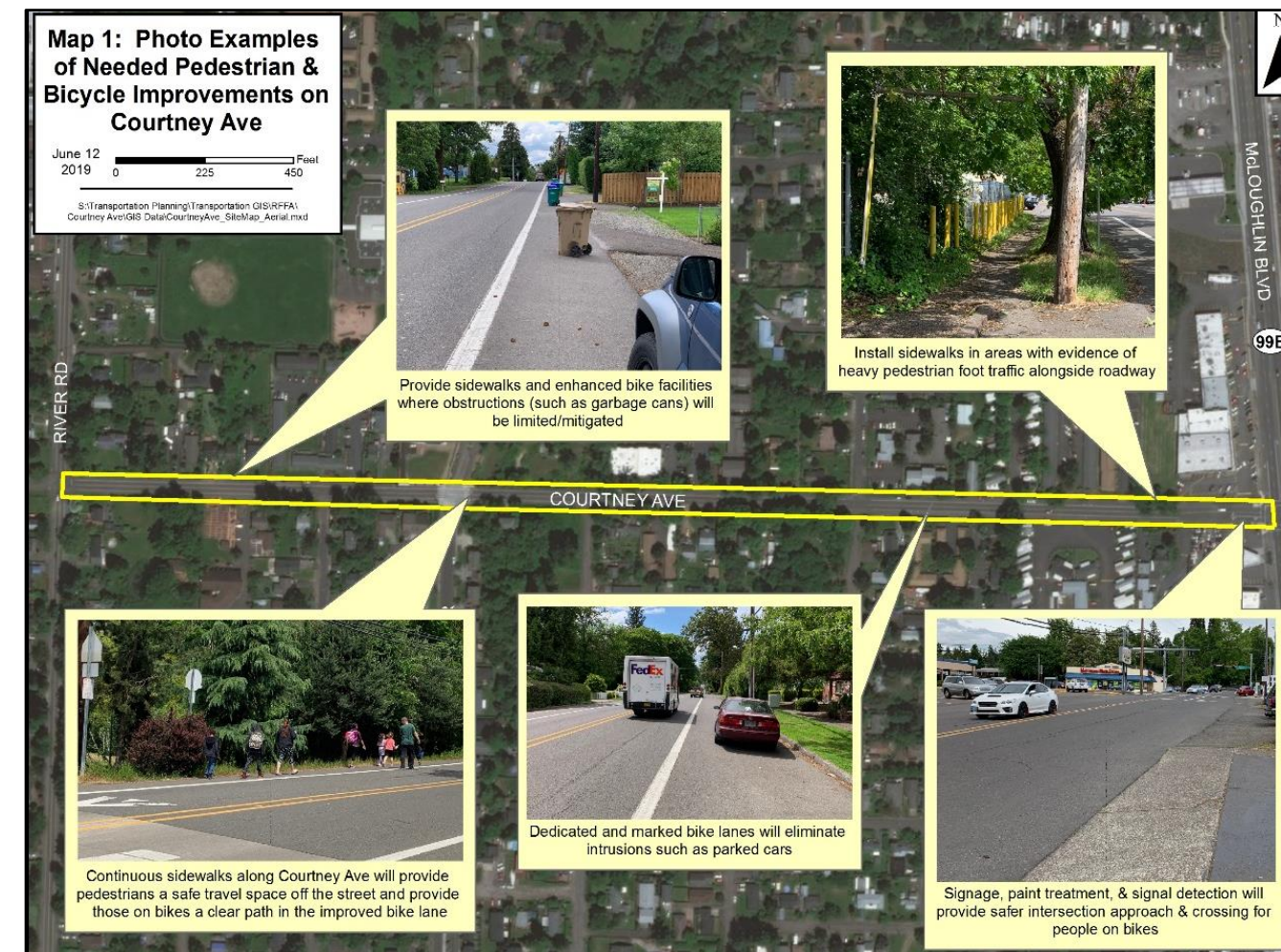
- Limited sidewalks force pedestrians to use the shoulder bike lane creating potential conflicts between all of transportation modes - pedestrians, bicyclists and automobile traffic.
- Lack of dedicated bike lanes and sidewalks reduce access to the Trolley Trail
- Unsafe pedestrian crossings without pavement markings, signage, lighting or ADA compliant curb ramps. Parents are reluctant for children to walk to school because the lack of sidewalks requires them to walk in the street. A 2017 Safe Routes to School project identified sidewalks as the most important need for encouraging students to walk or bike to school
- Unsafe conditions lead to vehicle use for almost any trip in a neighborhood where 53% of households are very low or low income. Adults are discouraged from walking to transit on McLoughlin Blvd or River Road
- Transportation disadvantaged populations including seniors (23.6%) and those with disabilities (16.2%) occur at double the rate of the Portland Metropolitan area.

**Proposed Improvements** (see diagram at right and cross-section on reverse side):

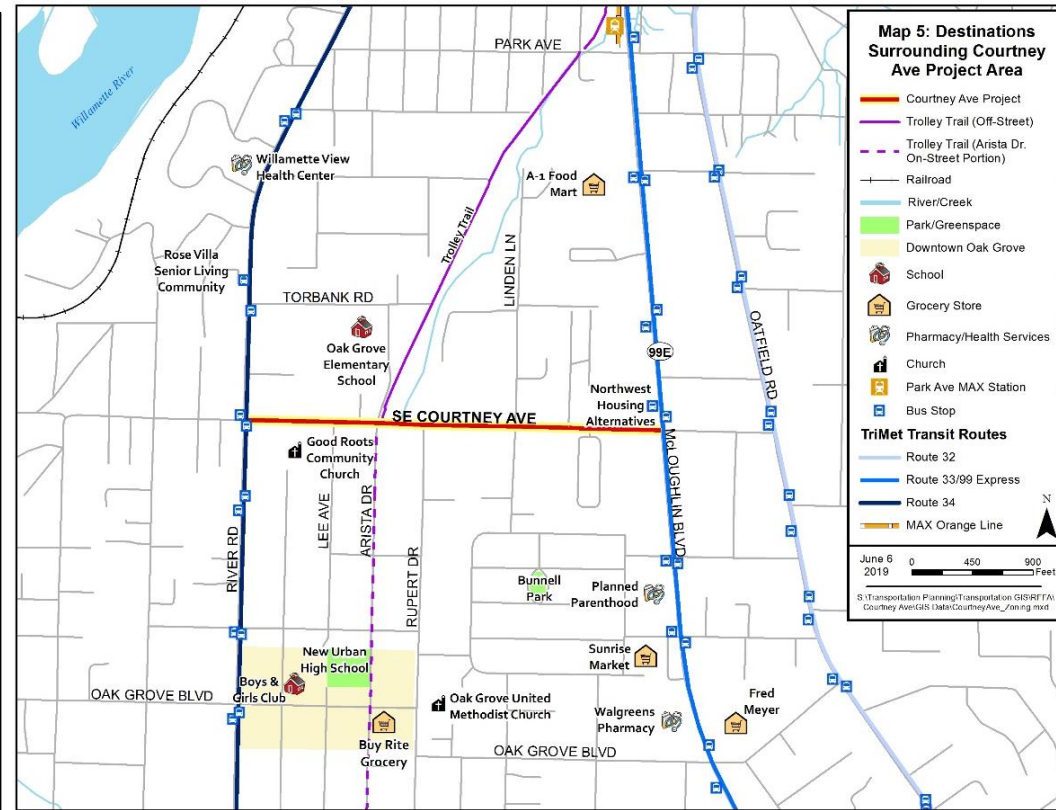
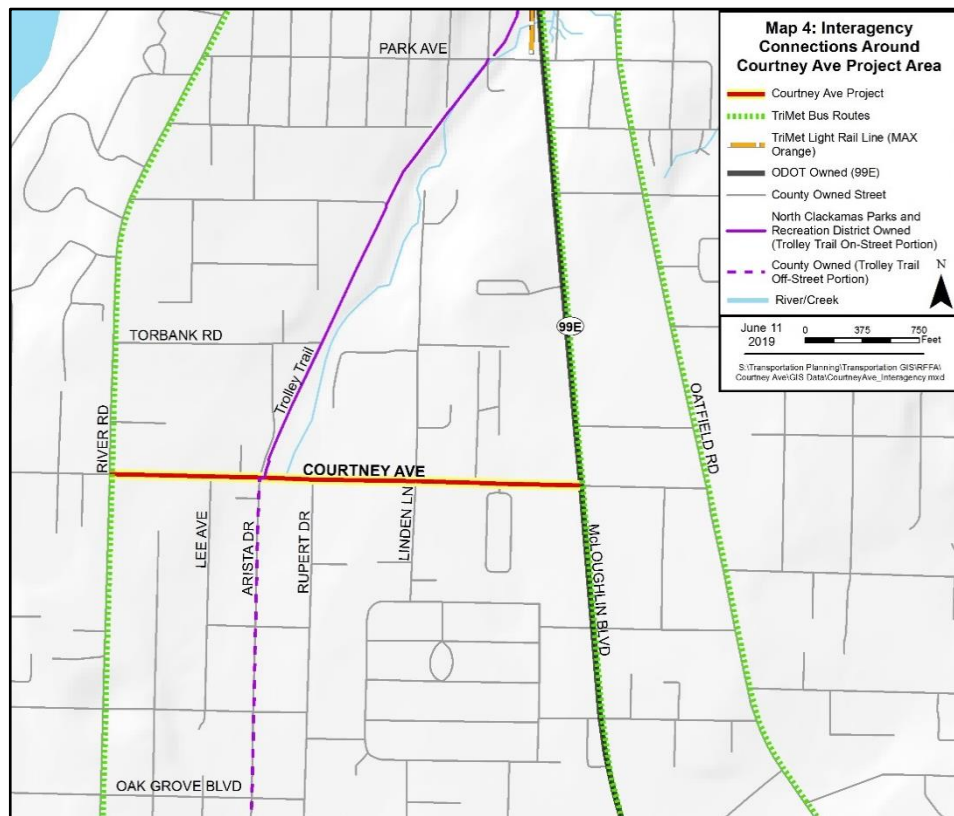
- **Sidewalks** - Install 6,100 lineal feet of 6 foot wide sidewalks
- **Landscape Buffer** – Install minimum 5 foot wide landscape buffer on both sides
- **Narrow Travel Lanes** – Reduce existing 12 foot wide travel lanes to 10 foot width
- **Raised Crosswalks** – Add a speed table with raised crosswalks at the intersection of Linden Lane and Courtney Avenue
- **Buffered Bikeway** – Add 6 foot wide bike lanes with 2 foot wide marked buffer for entire length on both sides
- **Bike Safety Features** – Construct bike box with ingress lanes on both sides of the intersection of Courtney Avenue and McLoughlin Blvd.
- **Bicycle Detection** –At intersection with McLoughlin Blvd
- **Stormwater Improvements** – addition of rain gardens in landscape strip on both sides of road

### Benefits

- Safe walking route for children from neighborhoods to Oak Grove Elementary
- Safe walking route for adults to transit and local destinations (see Map 4 and Map 5 on reverse side)
- Improved access for pedestrians and bicyclists to the Trolley Trail
- Buffered bikeway connecting McLoughlin and River Road
- Pedestrian and bicyclist connection to Rivervilla Park and Oak Grove – Lake Oswego Bridge
- Pedestrian access from Rose Villa to Trolley Trail and downtown Oak Grove





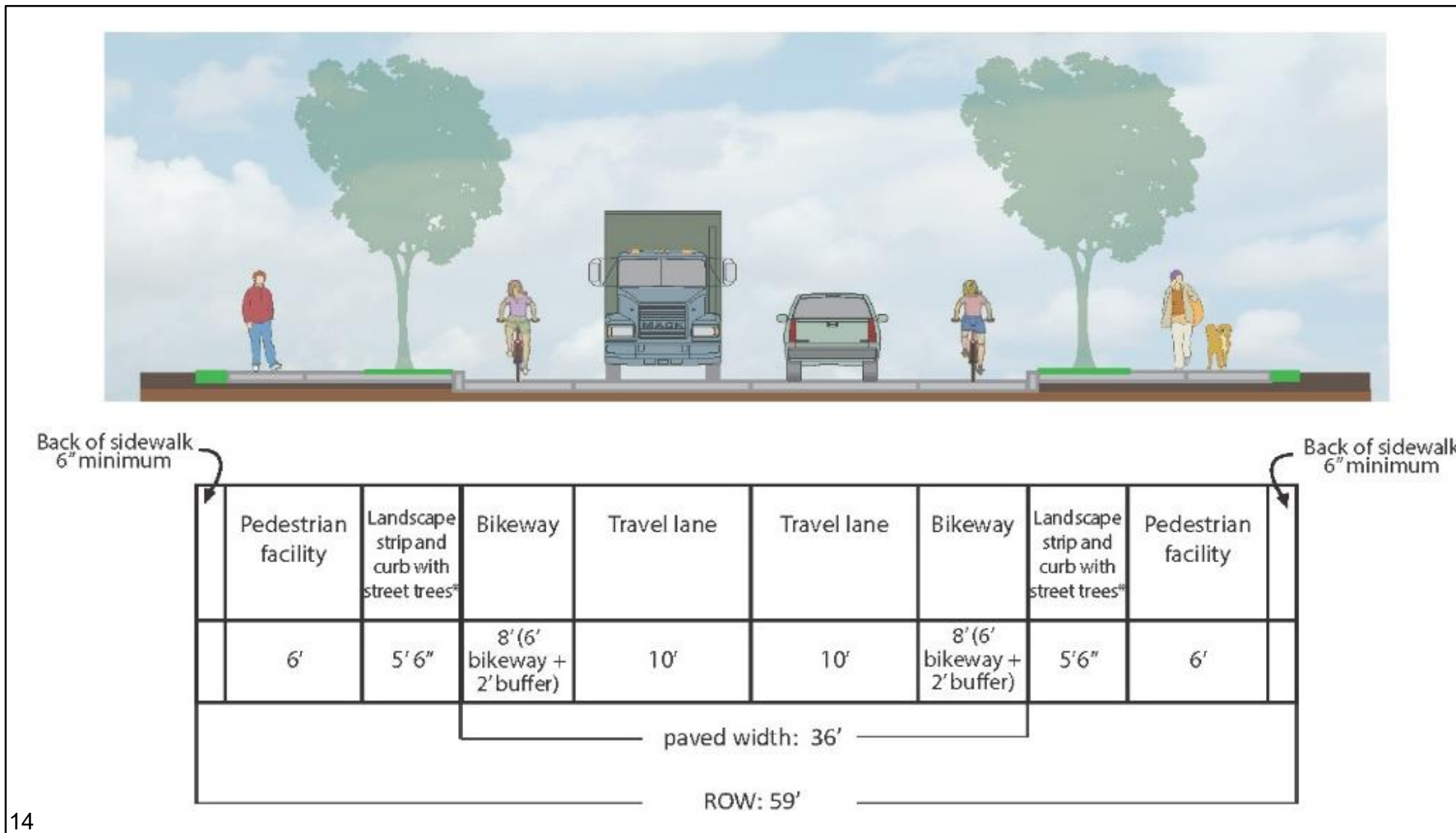


### Courtney Avenue - River Rd to OR 99E Bike and Sidewalk Improvement Project

6/12/2019

Prepared by: Joel Howie

				Engineers Estimate	
ITEM	DESCRIPTION	UNIT	QUANTITY	UNIT PRICE	TOTAL
<b>200</b>	<b>Temporary Features and Appurtenances</b>				
1	Mobilization (8% of Items)	L.S.	1	\$217,000	\$217,000
2	Temporary Protection and Direction of Traffic, Complete (5%)	L.S.	1	\$129,000	\$129,000
3	Temporary Erosion Control (2%)	L.S.	1	\$51,000	\$51,000
4	Pollution Control Plan	L.S.	1	\$750	\$750
<b>300</b>	<b>Roadway Work</b>				
5	Construction Survey	L.S.	1	\$25,000	\$25,000
6	Asphalt Pavement Sawcutting	L.F.	6,200	\$2.00	\$12,400
7	Clearing and Grubbing	L.S.	1	\$75,000	\$75,000
8	Removal of Structures and Obstructions	L.S.	1	\$7,500	\$7,500
9	General Excavation	C.Y.	3,680	\$25	\$92,000
10	Subgrade Stabilization	S.Y.	500	\$40	\$20,000
<b>400</b>	<b>Drainage and Sewers</b>				
11	36 Inch Culvert Pipe, 10 Foot Depth	L.F.	16	\$250	\$4,000
12	12 Inch Ductile Iron Pipe, 5 Foot Depth	L.F.	216	\$100	\$21,600
13	12 Inch HDPE Pipe, 5 Foot Depth	L.F.	540	\$90	\$48,600
14	Concrete Manholes, Type Standard	EA	8	\$5,000	\$40,000
15	Concrete Inlets, Type G-2	EA	30	\$3,000	\$90,000
16	Adjust Manholes to Grade	EA	6	\$1,500	\$9,000
17	Adjust Catchbasins to Grade	EA	22	\$1,000	\$22,000
<b>600</b>	<b>Bases</b>				
18	Aggregate Base	C.Y.	2,760	\$35	\$96,600
<b>700</b>	<b>Wearing Surfaces</b>				
19	Level 3, 1/2 Inch ACP Mixture	Ton	2,100	\$120	\$252,000
20	Level 1, 1/2 Inch ACP Mixture (Parking Lot)	Ton	100	\$150	\$15,000
21	Extra for Asphalt Approaches at Intersections	EA	5	\$5,000	\$25,000
22	Extra for Asphalt Approaches at Driveways	EA	42	\$1,000	\$42,000
	Reinforced Concrete Pavement, 8 Inches Thick (@ Linden)	S.Y.	190	\$110.00	\$20,900
23	Concrete Walks	S.F.	36,000	\$9.00	\$324,000
24	Concrete Curbs, Standard	L.F.	3,100	\$18	\$55,800
25	Concrete Curb, Gutter and Curb	L.F.	2,325	\$22	\$51,150
26	18" Concrete Valley Gutter	L.F.	775	\$15	\$11,630
27	Concrete Driveway Connections	EA	42	\$3,500	\$147,000
28	Retrofit Concrete Sidewalk Ramps	EA	6	\$5,000	\$30,000
29	Extra for New Sidewalk Ramps	EA	22	\$5,000	\$110,000
30	Truncated Domes on New Surfaces	EA	28	\$500	\$14,000
<b>800</b>	<b>Permanent Traffic Safety and Guidance Devices</b>				
31	Longitudinal Pavement Markings - Paint	L.F.	24,800	\$2.00	\$49,600
32	Pavement Legend, Type AB: Pkg Lot Stripe	EA	25	\$200	\$5,000
33	Pavement Legend, Type B-HS: Bicycle	EA	6	\$500	\$3,000
34	Pavement Bar, Type B: Crosswalk	SF	120	\$15	\$1,800
35	Pavement Legend, Type B-HS: Green Bicycle Box	SF	740	\$15	\$11,100
<b>900</b>	<b>Permanent Traffic Control and Illumination Systems</b>				
36	Permanent Roadway Signing	EA	12	\$400	\$4,800
37	Bike Infrared Video Detection at OR 99E	L.S.	1	\$50,000	\$50,000
38	Signal Flasher Pole at River Road	L.S.	1	\$20,000	\$20,000
39	RRFB System at Trolley Trail	L.S.	1	\$90,000	\$90,000
40	Streetlighting	L.S.	1	\$375,000	\$375,000
<b>1000</b>	<b>Right of Way Development and Control</b>				
41	Temporary Seed Mix	ACRE	0.75	\$5,000	\$3,750
42	Permanent Seed Mix (water quality)	ACRE	0.20	\$10,000	\$2,000
43	Seeded Lawn Areas	ACRE	0.75	\$10,000	\$7,500
44	Rain Garden (3/4 one side of road)	S.F.	11,625	\$10	\$116,250
45	Topsoil (6" thick)	C.Y.	500	\$80	\$40,000
46	Relocate Mailboxes	C.Y.	42	\$200	\$8,400
47	Fencing, Type 2	L.F.	750	\$35	\$26,250
48	Temporary Irrigation	L.S.	1	\$50,000	\$50,000
<b>ESTIMATED CONSTRUCTION TOTAL</b>					<b>\$2,924,380</b>
<b>Miscellaneous</b>					
	Preliminary Engineering (20%)	L.S.	1		\$584,880
	Preliminary Engineering (ODOT)	L.S.	1		\$25,000
	Preliminary Engineering (County)	L.S.	1		\$75,000
	Construction Engineering (10%)	L.S.	1		\$292,440
	Construction Engineering (ODOT)	L.S.	1		\$50,000
	Wetland Mitigation	L.S.	1		\$7,680
	Right of Way	L.S.	1		\$678,500
	Contingencies (25%)	L.S.	1		\$731,100
	Inflation (2.5% per year for 4 years)	L.S.	1		\$292,440
<b>ESTIMATED CONTRACT ADMINISTRATION TOTAL</b>					<b>\$2,737,040</b>
<b>ESTIMATED PROJECT TOTAL</b>					<b>\$5,661,420</b>







# 99E Bike & Pedestrian Improvements

Willamette Falls Shared Use Path & OR 99E Corridor Enhancement Project



Project Development  
\$673,000

Alternatives Identification & Evaluation  
Preliminary Design (up to 30%)

**Willamette Falls Shared Use Path & OR 99E Corridor Enhancement Project** will provide project development funding for the final phase of the adopted 2005 McLoughlin Boulevard Enhancement Plan. The project is located on OR 99E, or more commonly referred to as McLoughlin Boulevard,

which is an Oregon Department of Transportation facility. The corridor is identified as a **Regional Bikeway, Pedestrian Parkway**, and a **frequent transit service** runs parallel to the corridor. This remaining phase of the McLoughlin Boulevard Enhancement Plan has been the most

complicated to complete as it is **interwoven with the OR 99E viaducts**. Lack of proper lighting, crumbling sidewalks not wide enough to provide a barrier from adjacent fast-moving traffic and dilapidated railings make transit users and pedestrians feel unsafe.

The project has **two main goals** that address barriers to investing and revitalizing properties that front McLoughlin Boulevard in Oregon City:

1. *Close the gap and provide safe pedestrian and bicycle access.*
2. *Provide a complete street design for McLoughlin Boulevard from 10th Street to the 99E tunnel.*

## BACKGROUND

*Taking Steps Forward to Complete This Key Corridor*

- ❖ **McLoughlin Boulevard Enhancement Plan** adopted in 2005.
- ❖ **Special Transportation Area (STA)** designation by the Oregon Transportation Commission in January 2014, which identifies a corridor where the convenience of movement is focused upon pedestrians, bicycle traffic, and transit modes. The primary objective of an STA is to provide access to and circulation among community activities, businesses, and residences and to accommodate pedestrian, bicycle, and transit movement along and across the highway.
- ❖ **Mixed-Use Multi-Modal Area** adopted in October 2014, with a different set of values that places importance on multi-modal travel and compact, mixed-use development.
- ❖ **Phase Accomplishment** – Design and construction of **McLoughlin Boulevard – Phase 1** (I-205 to 10<sup>th</sup> Street - 2009) and **McLoughlin Boulevard – Phase 2** (Dunes Drive to Clackamas River Bridge - 2012).



## LEVERAGE & COMMUNITY SUPPORT

*Working Together as a Catalyst to Generate a Viable Downtown*

- ❖ The **Willamette Falls Legacy Project** partners (Metro, Clackamas County, State of Oregon, and Oregon City) have worked together for many years to advance this site.
- ❖ In August, the **Confederated Tribes of the Grande Ronde** announced their purchase of the Willamette Falls Legacy Project site.
- ❖ **Metro** continues to work toward construction of the Riverwalk Phase 1 which is anticipated to begin in 2020. Phase 1 is funded with \$11 million raised by the partners and \$7 million donated by the **Willamette Falls Trust**.
- ❖ Oregon City is actively working on implementing the adopted **Transportation Demand Management Plan** through a \$150,000 Regional Travel Options Grant. This work strives to implement a **“Park Once”** philosophy in downtown Oregon City.
- ❖ The **Downtown Oregon City Association** continues to support improvements in this corridor and works toward creating a welcoming environment in our historic downtown.
- ❖ The City is working on a **Comprehensive Plan Update** that will strive to seek policy to better support reduced vehicle trips.

## EQUITY & SAFETY

*Keeping Equity and Safety at the Forefront on McLoughlin Blvd.*

- ❖ The Willamette Falls Legacy Project partners recognize the special role and voice that **Native Americans** have in the land and water around Willamette Falls. This land has been occupied and used by members of many tribes. The project partners have initiated dialogue with each of these tribal governments to include their voices and perspectives in the development and use of the Riverwalk.
- ❖ **Racial diversity** in Oregon City has increased, and there are now **41 different languages** spoken within the Oregon City School District.
- ❖ In Oregon City, **50% of renters** and **28% of homeowners** are **cost burdened** (paying 30% or more of their household income on housing costs).
- ❖ Having **safe access** to jobs and open space is important to historically underrepresented communities. This project will **enhance transit services** to living wage jobs both in downtown and via the transit center.
- ❖ The corridor experiences a variety of crashes. Recent crash data will be reviewed to **improve safety** and **mitigate crashes** in the corridor.

## CLIMATE CHANGE & CONGESTION

*Implementing a “Park Once” Philosophy*

- ❖ Develop options to **reduce delay and improve reliability for transit** in this key corridor.
- ❖ Provide a **safe, convenient, and comfortable setting** that encourages visitors of Willamette Falls Legacy Project, Riverwalk, and historic downtown Oregon City to come by walking, biking or taking transit.
- ❖ Implement the **Oregon City Transportation Demand Management (TDM) “Park Once”** philosophy where visitors feel comfortable parking once within our Regional Center and walking to their various destinations in our award-winning downtown.

## ECONOMIC DEVELOPMENT & EMPLOYMENT

*Working to Grow the Oregon City Regional Center*

- ❖ The project is located within the **Oregon City Regional Center** and **Historic Downtown Oregon City** and is one block away from the **Oregon City Transit Center**. **Oregon City’s Municipal Elevator** is located two blocks from the project site on 7th Street and connects transit riders, pedestrians, and bicyclists to residences and businesses in the McLoughlin District above the bluff and OR 99E.
- ❖ Regional Center reports show that the **Oregon City Regional Center** has **“room to grow”** and has many steps it can take to become a fully functioning regional center.





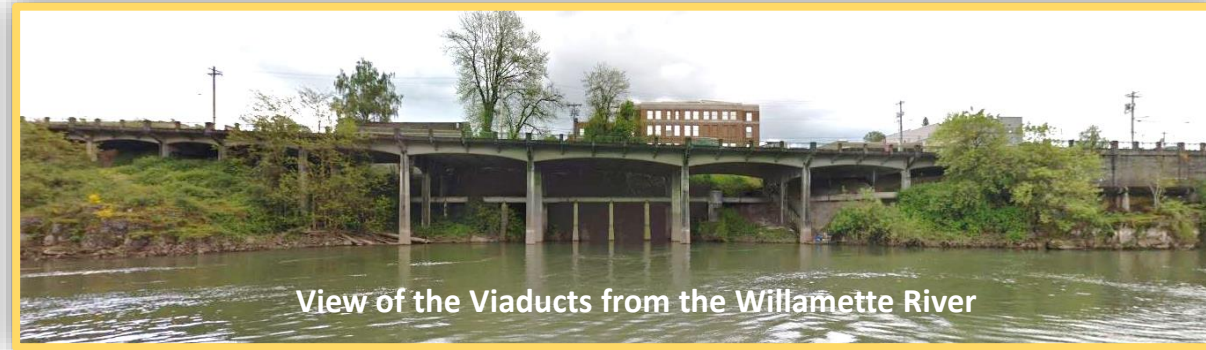


# 99E Bike & Pedestrian Improvements

Willamette Falls Shared Use Path & OR 99E Corridor Enhancement Project



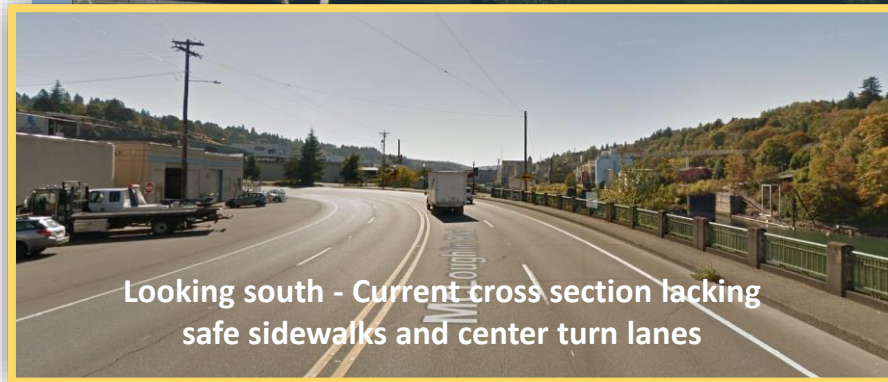
Looking North – Current cross section lacking safe sidewalks and center turn lanes



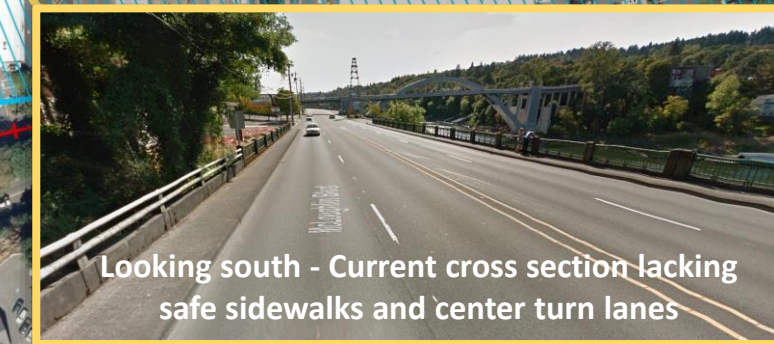
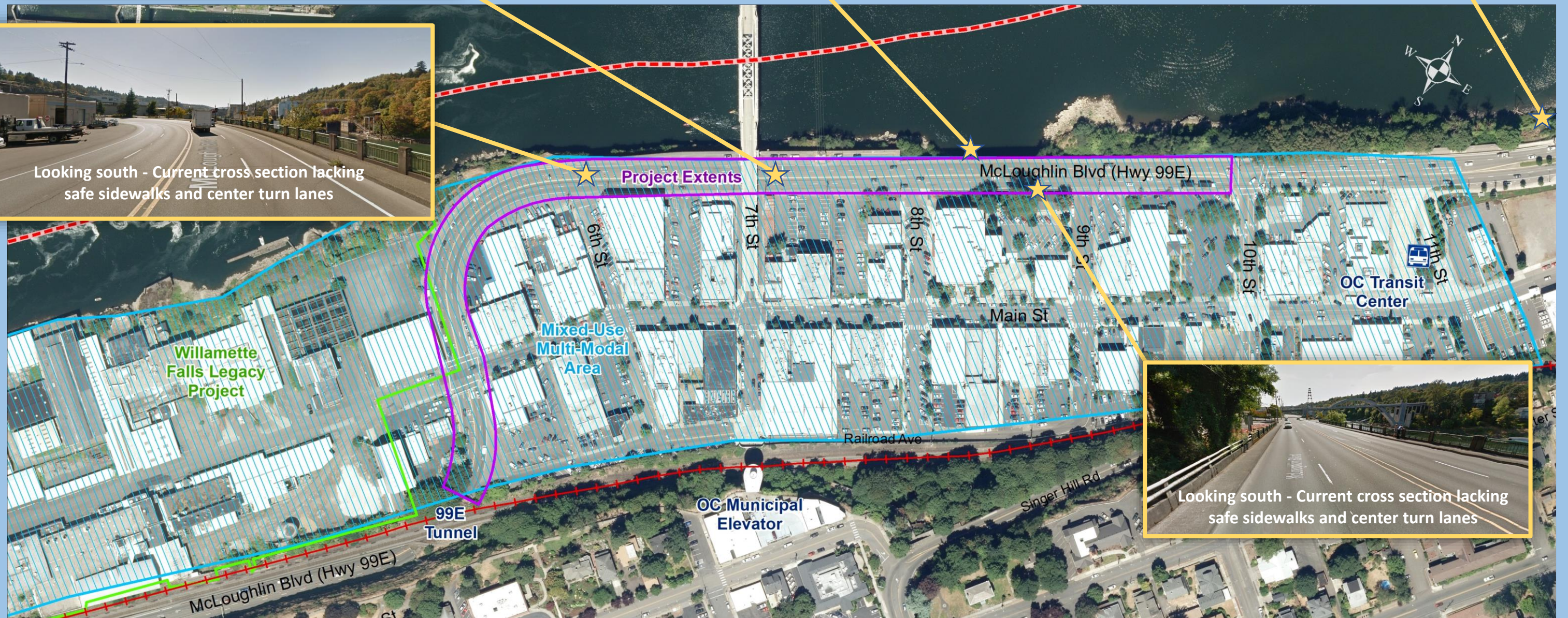
View of the Viaducts from the Willamette River



View of Phase 1 with safe sidewalks, landscaped medians, and center turn lanes



Looking south - Current cross section lacking safe sidewalks and center turn lanes



Looking south - Current cross section lacking safe sidewalks and center turn lanes





## Trolley Trail Bridge – Gladstone

### Request for 2020 Regional Flexible Funds Allocation

- Our request is for final design, engineering, and permitting for the Trolley Bridge. The Bridge would be located where the original trolley bridge was situated. The old bridge collapsed in 2014.
- Our total budget for this effort is \$1,375,800. We propose a match of \$147,000; our RFF request is therefore \$1,228,800. Our match is included in the current City budget.
- The project is ready to go – we will have a concept/feasibility plan completed by the end of 2019. The City's match of \$147,000 is in place now. Clackamas County is willing to provide project manager services, as a federal "certified local agency". There are no foreseeable impediments to initiating and completing the work if we are funded. We are also aware of funding sources for the future construction phase of the bridge, including possible State dollars, or T2020 dollars and Metro Open Space bond dollars, if these bonds are approved by the voters in 2020 and 2019, respectively.
- The bridge will be a vital link in the Trolley Trail, which connects with the regional trail system (including the Portland Eastbank Waterfront Trail and the Springwater Corridor). The Trolley Bridge is at the foot of Portland Avenue, Downtown Gladstone's "Main Street", which serves as the Gladstone alignment of the Trolley Trail.
- Currently, pedestrians and bicyclists traveling in the McLoughlin Corridor have poor options for crossing the Clackamas River – either McLoughlin itself (treacherous for non-motorized modes), or the 82<sup>nd</sup> Ave bridge which is out of direction and is subject to closure.
- Our proposal received a high technical ranking by the Metro staff team, with strong scoring in almost all categories of evaluation – safety, equity, climate, and congestion.
- Congestion and safety issues – by providing a safe and convenient alternative to McLoughlin, this project has the potential to significantly reduce fatal/serious accidents between motorized vehicles and alternative modes.

- Climate issues – this project will support Gladstone’s DT revitalization efforts, related to promotion of higher density mixed use development.
- Equity – Gladstone is a poor community, and the vast majority of adults have to commute to other jurisdictions for their jobs. The Trolley Bridge will make it easier to utilize alternative modes to get to work, diminishing their reliance on cars.
- Resilience – the rebuilt Trolley Bridge would comply with current seismic standards. As such it would be the only bridge in the area that would provide emergency vehicle and other vehicle access in the event of a catastrophic occurrence.
- Even in the ordinary course of events, the bridge will provide an option for Emergency Vehicles – if for instance McLoughlin is clogged or shut down due to a major accident or congestion.
- The Trolley Bridge would, with related City initiatives, serve as a major catalyst for DT Gladstone redevelopment which would align with the region’s aspirations related to equity, sustainability, climate-smart, walkable centers and corridors. With Metro funding assistance, the City completed a Downtown Revitalization Plan calling for the Bridge, multi-modal upgrades to Portland Avenue, and revisions to the zoning code supporting higher density/mixed use development. The City also recently completed a Housing Code Audit, which reinforced the need for zoning more supportive of mixed use/medium density development in our downtown. We are seeking DLCD funding to implement the Housing Code Audit.

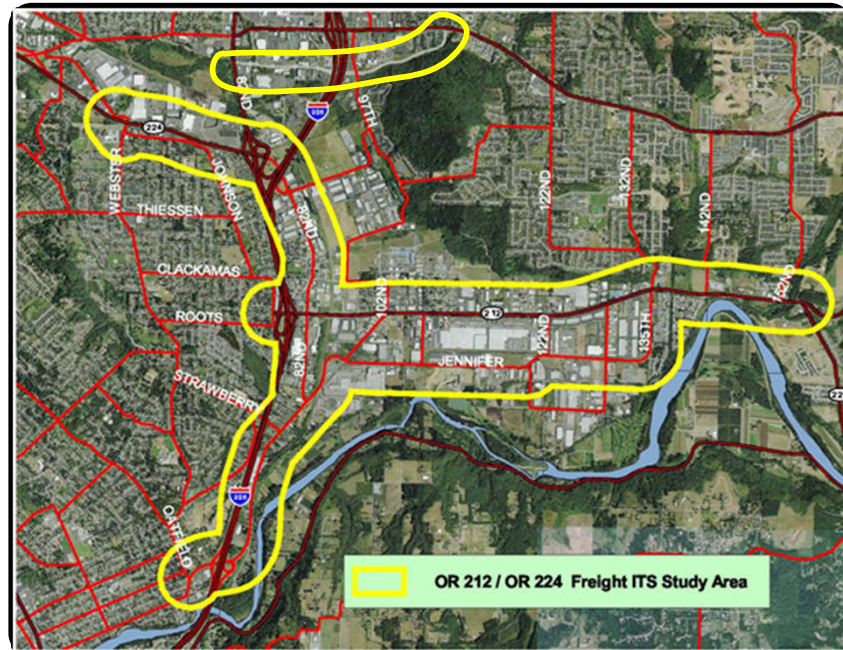
*For more information, please contact Jacque Betz, [betz@ci.gladstone.or.us](mailto:betz@ci.gladstone.or.us)*



# Clackamas County Regional Freight Intelligent Transportation System (ITS) Project – Phase 2B

**Contact Information**  
 Bikram Raghubansh, PE, PTOE  
 PM/Senior Traffic Engineer  
 bikramrag@clackamas.us  
 503-742-4706

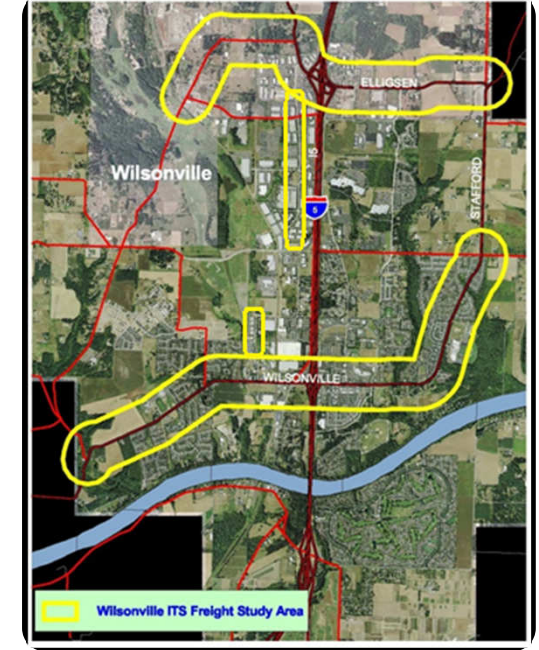
## Clackamas Industrial Area



- Clackamas Industrial Area Corridors**
- SE 82<sup>nd</sup> Drive (SE Sunnybrook Blvd to Oatfield Rd)
  - SE Jennifer St at SE Evelyn St
  - OR 212 (OR 224 to I-205 interchange)
  - OR 224 (I-205 to SE Lake Rd)
  - SE Sunnybrook Blvd (SE Sunnyside Rd to SE 84<sup>th</sup> Ave)



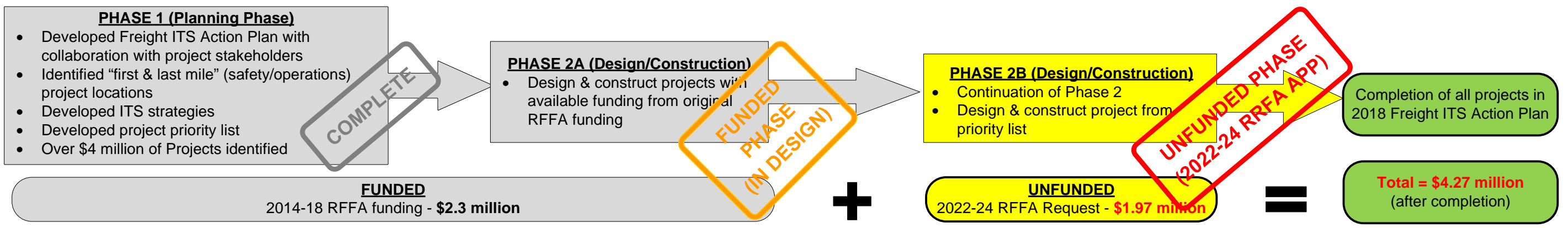
## Wilsonville Study Area



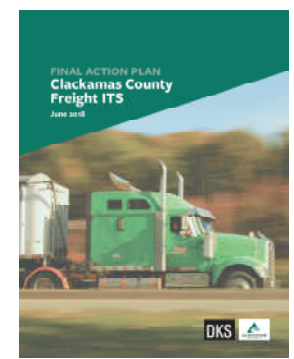
- Wilsonville Industrial Area Corridors**
- SW 95<sup>th</sup> Ave (SW Boones Ferry Rd to Boeckman Rd)
    - SW Elligsen Rd (I-5 to Canyon Creek Rd)
    - SE Kinsman Rd at SE Barber St
  - SW Wilsonville Rd (Willamette Way to Advance Rd)



## Current Project Timeline



**Project Submittal Category: Regional Freight & Economic Development (Funding Availability \$9.91 million), Funding Request = \$1.97 million**

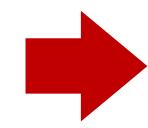


**Project Goals and Operational Objectives:**

**IMPROVE SAFETY** - Improve safety for all roadway users by advancing technology based solutions. Reduce the rate and severity of freight-related crashes.

**IMPROVE TRAVEL TIME EFFICIENCY** – Improve travel time for “first and last mile” trips within the industrial areas through use of technology. Reduce number of stops, improve travel time reliability, reduce the duration of vehicle idling time (which in turn reduces exhaust emissions).

**SUPPORT INDUSTRIAL LAND USE** – Improve connectivity to industrial land uses for the “first and last mile” trip by advancing technology based solutions.



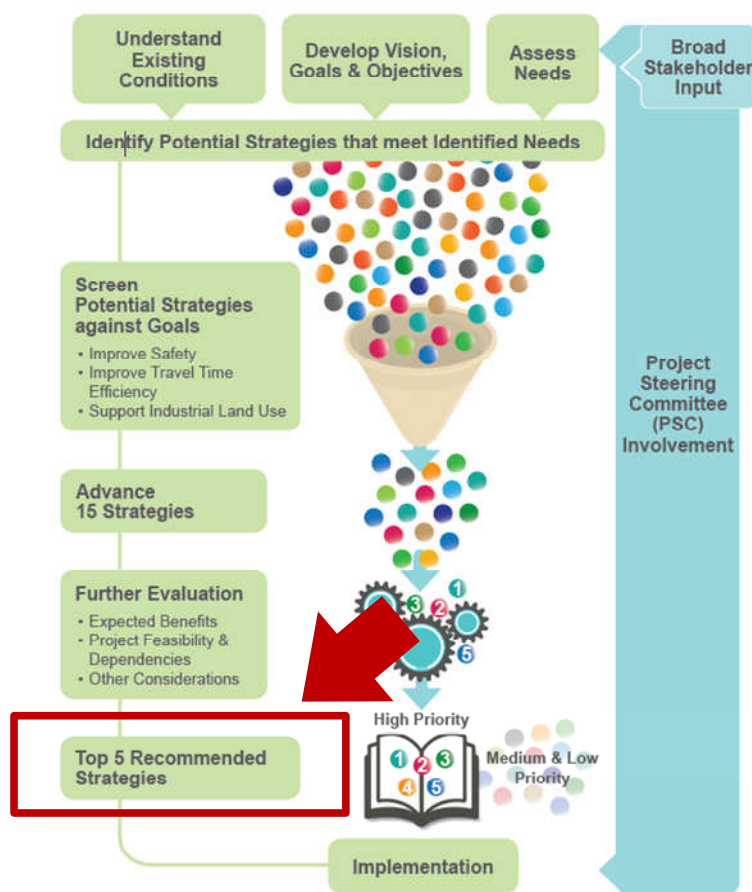
**Freight Related ITS Deployment Plan with Phase 2B:**

- 1. TRUCK SIGNAL PRIORITY & ADVANCED TRAFFIC SIGNAL CONTROLLERS (ATC)** - 31 Radar Detection Units (14 intersections), 52 ATC Units with signal optimization
- 2. UPS BATTERY BACKUP** – 25 units (one per intersection)
- 3. TRAFFIC SURVEILLANCE CAMERAS** – 3 units (one per intersection)
- 4. VEHICLE COUNT STATIONS** – 4 locations
- 5. TRAVEL TIME PERFORMANCE MEASUREMENT** – 6 units (one per intersection)



# Freight Intelligent Transportation System (ITS) Plan

## List of ITS Project Strategies



### 1 PROJECT 1: Truck Priority SAF.1

**Description and Locations**

Install truck signal dilemma zone protection/truck signal priority with communications and performance measure collection. The technology detects trucks and either extends green when an oncoming truck is detected in the dilemma zone, or extends the all red when a truck is detected entering the intersection late. Exact configuration can be decided during design stages.

Upgrading signal controllers and optimizing signal timing where truck priority is used, as needed.

Install at priority traffic signals along these routes:

Clackamas Industrial Area	Wilsonville Industrial Area
OR 224	SE 95th Ave @ SE Ridder Rd
OR 212	SW Elligsen Rd @ I-5 SB
82nd Dr	SW Wilsonville Rd

**31 Radar Units\***  
**52 ATC Controllers\***

**Benefits**

**Crash Reduction**  
Truck-related crashes were reduced by 0.5% in one study involving dilemma zone protection combined with an advanced warning (Appiah et al., 2011. CMF ID 4896). The same system also reduced angle crashes by 44% and all injury crashes by 11%. Another study found that dilemma zone detection (for all types of vehicles) based on connected vehicle data can reduce crashes by 20% with only a 2% decrease in efficiency.)

**Feasibilities**

**Capital Costs**  
\$15k per intersection (source: ODOT Regional ATM project)

**Operations and Maintenance Costs**  
\$500 per intersection (assumes 3% of capital cost)

**Freight Operations**  
Reduced stopping and delay saves fuel, reduces emissions, pavement wear, and tire and brake wear.

**Magnitude of Benefits to Freight**  
Portion of trucks that tend to benefit from signal priority ranges from 4% to 22%.

**Performance Monitoring Capabilities**  
Documents activations. Monitor the number of activations and compare with crash data

**Institutional Factors**  
Coordination with ODOT needed for signals along OR 224 and 212

**Dependencies**  
Preceded by systems to store/manage data

**Construction Considerations**  
No new ROW required. Minimal impact to existing infrastructure

### 2 PROJECT 2: Uninterruptible Power Supply Battery Backup OCM.16

**Description and Locations**

Install uninterruptible power supply (UPS) battery backup systems at critical intersections on these corridors:

Clackamas Industrial Area	Wilsonville Industrial Area
SE 82nd Dr	SW Wilsonville Rd (Note: at Wilsonville/Stafford/Boeckman/ Advance battery back up is in progress)
SE Jennifer St	SW Elligsen Rd
SE Sunnybrook Blvd	SW 95th Ave (Note: at Elligsen/95th battery back up is in progress)
OR 212	SW Kinsman Rd
OR 224	SW Day Rd

**25 UPS Units\***

**Benefits**

**Crash Reduction**  
May reduce crashes that could occur during power outages by reducing the frequency and length of signal downtime from power outages.

**Freight Operations**  
Reduces delay and stops for freight during a power outage.

**Feasibilities**

**Capital Costs**  
Approx. \$5k per intersection (Source: Clackamas County)

**Operations and Maintenance Costs**  
< \$1k. Should reduce O&M for existing signals. Anticipate maintenance will fall within existing traffic signal cabinet maintenance activity.

**Institutional Factors**  
Support from Clackamas County operations.

**Magnitude of Benefits to Freight Travelers**  
Benefits all freight traffic during a power outage.

**Performance Monitoring Capabilities**  
Monitor battery health, frequency of power outages, length of outages

**Dependencies**  
None

**Construction Considerations**  
No new ROW required. Minimal impact to existing infrastructure

### 3 PROJECT 3: Traffic Surveillance OCM.17

**Description and Locations**

Install pan-tilt-zoom camera systems to monitor critical intersections on these corridors:

Clackamas Industrial Area	Wilsonville Industrial Area
SE 82nd Dr	SW Wilsonville Rd
SE Jennifer St	SW Elligsen Rd
SE Sunnybrook Blvd	SW 95th Ave
OR 212	SW Kinsman Rd
OR 224	SW Day Rd

**3 Cameras\***

**Benefits**

**Crash Reduction**  
Not expected to directly reduce crashes.

**Freight Operations**  
Improves management of traffic signal system, providing indirect benefit to freight.

**Feasibilities**

**Capital Costs**  
Approx. \$5k to \$10k per intersection (Source: ODOT Regional ATM project)

**Operations and Maintenance Costs**  
< \$1k. Cleaning cameras, replacing faulty equipment.

**Institutional Factors**  
Support from Clackamas County operations. No obstacles are anticipated. Could coordinate with ODOT to integrate new cameras into ODOT TripCheck.

**Dependencies**  
Camera monitoring system (Note: already in place)

**Magnitude of Benefits to Freight Travelers**  
Benefit to freight travelers over time through better operations management of system.

**Performance Monitoring Capabilities**  
Not expected to directly provide performance measurement capabilities. Augments other performance measure strategies by providing visual check

**Construction Considerations**  
No new ROW required. Minimal impact to existing infrastructure.

### 4 PROJECT 4: Count Stations OCM.18

**Description and Locations**

Install permanent traffic counting systems at key locations with communications and performance measure collection.

Clackamas Industrial Area	Wilsonville Industrial Area
SE 82nd Dr	SW Wilsonville Rd
SE Jennifer St	SW Elligsen Rd
SE Sunnybrook Blvd	SW 95th Ave
OR 212	SW Kinsman Rd
OR 224	SW Day Rd

**4 Count Stations\***

**Benefits**

**Crash Reduction**  
Not expected to directly reduce crashes.

**Freight Operations**  
Improves management of roadway system, providing indirect benefit to freight.

**Feasibilities**

**Capital Costs**  
Approx. \$5k to \$10k per location assuming power and comm are nearby. If placing mid-block and additional comm or power is needed, assume \$50/foot. (Source: DKS cost estimating tool)

**Operations and Maintenance Costs**  
< \$1k per year

**Institutional Factors**  
Support from Clackamas County operations. Should involve coordination with Clackamas County departments and staff who use traffic count data. Could

**Magnitude of Benefits to Freight Travelers**  
Benefit to freight travelers over time through better operations management of system.

**Performance Monitoring Capabilities**  
Measures speeds, volumes, and vehicle classifications.

**Dependencies**  
Should be preceded by systems to store and manage data collected

**Construction Considerations**  
No new ROW required. Minimal to moderate impacts to existing infrastructure, depending on existing conduit availability.

### 5 PROJECT 5: Performance Measurement OCM.19

**Description and Locations**

Install travel time monitoring systems on key corridors with communications and performance measure collection.

Clackamas Industrial Area	Wilsonville Industrial Area
SE 82nd Dr	SW Wilsonville Rd
SE Jennifer St	SW Elligsen Rd
SE Sunnybrook Blvd	SW 95th Ave
OR 212	SW Kinsman Rd
OR 224	SW Day Rd

**6 Bluetooth Units\***

**Benefits**

**Crash Reduction**  
Not expected to directly reduce crashes.

**Freight Operations**  
Improves management of roadway system, providing indirect benefit to freight.

**Magnitude of Benefits to Freight Travelers**  
Benefit to freight travelers over time through better operations management of system.

**Performance Monitoring Capabilities**  
Measures speeds and travel times. Useful for before/after analyses.

**Feasibilities**

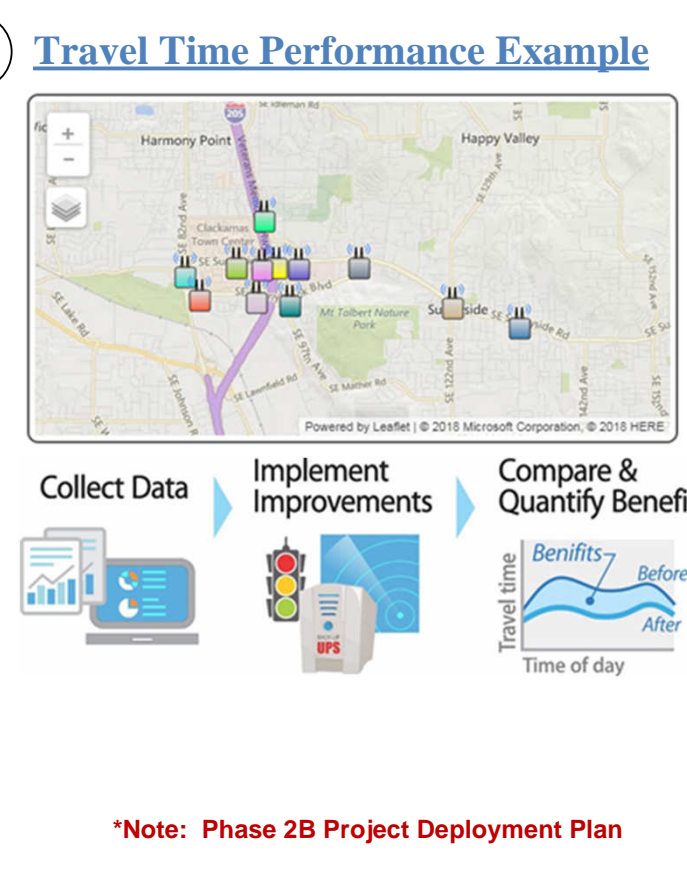
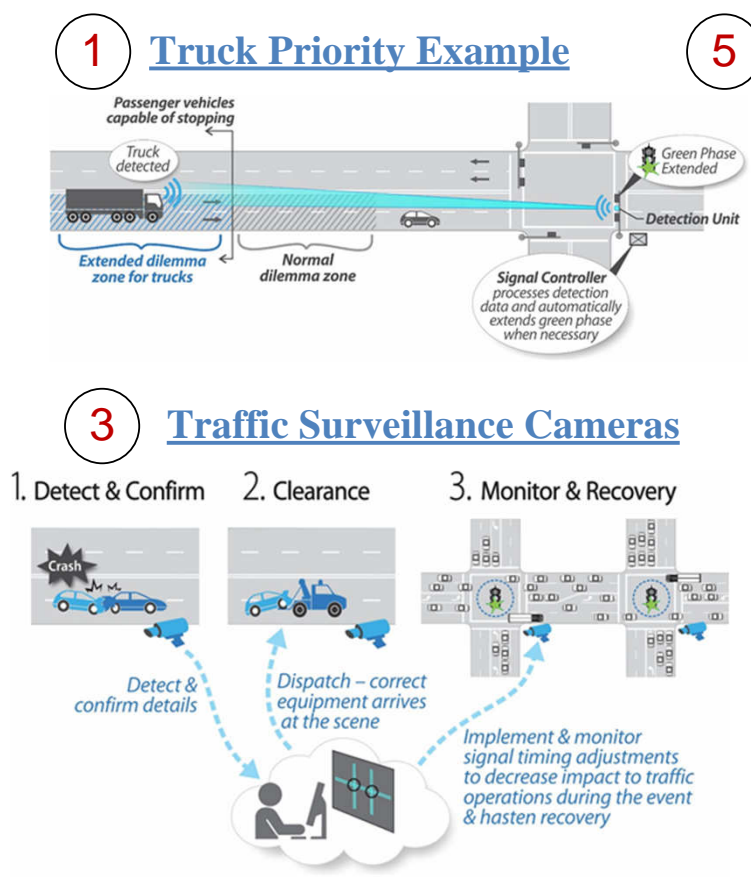
**Capital Costs**  
\$2 to \$3k per unit

**Operations and Maintenance Costs**  
< \$1k per unit

**Institutional Factors**  
Support from Clackamas County operations. Could involve coordination with Portal for regional data archiving. Installation along OR 224 and OR 212 may require coordination with ODOT.

**Dependencies**  
Needs to integrate with existing BlueMAC travel time monitoring system

**Construction Considerations**  
No new ROW required. Minimal to moderate impacts to existing infrastructure.



TO: Clackamas County Coordinating Committee (C4)  
FROM: Mike Bezner, Assistant Director of Transportation, DTD  
DATE: October 31, 2019  
SUBJECT: Update on Strategic Investment Fund Project review

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**Overview:**

Last month, C4 members discussed potential criteria for reviewing Strategic Investment Fund (SIF) projects. The potential projects were identified during meetings between County and City staff.

The criteria included:

- Does the project leverage other sources?
- Is the project in a rural or urban area?
- Does the project address any safety issues?

The attached list (“Strategic Investment Fund – Capital Projects for Discussion”) is a draft application of the criteria, with the emphasis placed on Safety and Rural projects. The list also indicates whether the project can leverage other funds and whether it is eligible to receive County System Development Charges.

Several projects have a total cost estimated to be close to the \$1 million in SIF funds available every year. Others have much higher costs but can use the SIF to either partially fund them, or fund project development work. Alternatively, jurisdictional transfers can be funded for those cities with projects that cost significantly more than the SIF funding available. An example of this is also attached (“Strategic Investment Fund – Possible Funding List”).

Strategic Investment Fund - Possible Funding List

11/04/19

City	Road / Project	Leverage Other Funds?	SDC % Eligible	Only SIF	Rural / Urban	Safety - (SPIS, based on recent crash history)	CRITERIA - Rural-2; Urban 0	CRITERIA - Safety (4: SPIS >39; 2: SPIS>20; 1: SPIS >10)	Total	Total Project Cost Estimate	Possible SDC Contribution	Total Project Cost with SDC Contribution
Sandy	362nd: Paved shoulders from Skogan to OR 211 (362nd near Skogan curve and 362nd/Deming intersection relocation not included- add'l \$1.4 million minimum)	SDC Eligible	29.4%		Rural	65	2	4	6	\$1,264,000	\$371,616	\$892,384
Estacada	Duus, Eagle Creek intersection relocation and turn lanes	SDC Eligible	53.4%		Rural	0	2	0	2	\$955,000	\$510,257	\$444,744
Molalla	Bear Creek Bridge replacement and Molalla Ave shoulders (gravel) from Sawtell to Molalla City limits	SDC Eligible	44.9%		Rural	0	2	0	2	\$1,648,000	\$739,293	\$908,707
Tualatin	Borland (sidewalks, multi-use path to Rolling Hills Church)	SDC Eligible	30.6%		Urban / Rural	0	1	0	1	\$1,773,675	\$542,567	\$1,231,108
West Linn	Highway 43 (Hidden Springs to I-205) Project Development	Fed/State/Regional (not funded yet)			Urban	0	0	0	0	\$1,000,000	\$0	\$1,000,000
Canby	Jurisdictional Transfer - Maple, Redwood, 13th, Pine, Locust, 1st (includes 86 ADA ramps)				Rural					\$1,400,000	\$0	\$1,400,000
Gladstone	Jurisdictional Transfer - Glen Echo, 82nd Dr, Kirkwood, Portland (6 ADA ramps)				Urban					\$250,000	\$0	\$250,000
Happy Valley	Jurisdictional Transfer - Monner, Hagen, Sager, 162nd, Callahan, Idleman (5 ADA ramps)				Urban					\$580,000	\$0	\$580,000
Lake Oswego	Jurisdictional Transfer - 20 roads (1 ADA ramp)				Urban					\$350,000		\$350,000
Milwaukie	Jurisdictional Transfer - Lake (0 ADA ramps)				Urban					\$210,000	\$0	\$210,000
Oregon City	Jurisdictional Transfer - Beaver Creek Road (includes 25 ADA ramps)				Urban					\$700,000	\$0	\$700,000
Wilsonville	Jurisdictional Transfer - Stafford, Frog Pond, 53rd (0 ADA ramps)				Urban					\$150,000	\$0	\$150,000

Strategic Investment Fund - Capital Projects for Discussion

11/04/19

City	Road / Project	Leverage Other Funds?	SDC % Eligible	Only SIF	Rural / Urban	Safety - (SPIS, based on recent crash history)	CRITERIA - Rural-2; Urban 0	CRITERIA - Safety (4: SPIS >39; 2: SPIS>20; 1: SPIS >10)	Total	Total Project Cost Estimate	Possible SDC Contribution	Total Project Cost with SDC Contribution
Sandy	362nd: Paved shoulders from Skogan to OR 211 (362nd near Skogan curve and 362nd/Deming intersection relocation not included- add'l \$1.4 million minimum)	SDC Eligible	29.4%		Rural	65	2	4	6	\$1,264,000	\$371,616	\$892,384
Oregon City	Beavercreek/213 intersection (project development)	Fed, State, Regional (not funded yet)			Urban	45	0	4	4	\$1,000,000	\$0	\$1,000,000
Canby	Holly paved shoulders from Territorial to Ferry			Yes	Rural	33	2	2	4	\$2,400,000	\$0	\$2,400,000
Lake Oswego	Stafford/Childs Intersection	SDC Eligible; CRF Congestion	36.0%		Rural	31	2	2	4	\$6,661,462	\$2,398,126	\$4,263,336
Gladstone	Webster bike/ped entire length (fill gaps in county, intersection crossings in city).	SDC Eligible	46.5%		Urban	29	0	2	2	\$12,350,400	\$5,739,231	\$6,611,169
Estacada	Duus, Eagle Creek intersection relocation and turn lanes	SDC Eligible	53.4%		Rural	0	2	0	2	\$955,000	\$510,257	\$444,744
Molalla	Bear Creek Bridge replacement and Molalla Ave shoulders (gravel) from Sawtell to Molalla City limits	SDC Eligible	44.9%		Rural	0	2	0	2	\$1,648,000	\$739,293	\$908,707
Wilsonville	65th / Elligsen /Stafford intersection	SDC Eligible	46.2%		Rural	0	2	0	2	\$11,684,500	\$5,395,902	\$6,288,598
Happy Valley	142nd overlay and ADA (6200 feet from Hwy 212 to just north of Sunnyside)	Metro RFFA?; SDC Eligible (ADA only- % estimated)	25.0%		Urban	16	0	1	1	\$2,158,500	\$539,625	\$1,618,875
Tualatin	Borland (sidewalks, multi-use path to Rolling Hills Church)	SDC Eligible	30.6%		Urban / Rural	0	1	0	1	\$1,773,675	\$542,567	\$1,231,108
Milwaukie	Linwood/Harmony intersection (project development)	Fed/State/Regional (not funded yet)			Urban	0	0	0	0	\$1,000,000	\$0	\$1,000,000
West Linn	Highway 43 (Hidden Springs to I-205) Project Development or contribution	Fed/State/Regional (not funded yet)			Urban	0	0	0	0	\$1,000,000	\$0	\$1,000,000