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**Wednesday, October 16, 2019**  
**7:30 AM – 9:00 AM**

**Development Services Building**  
Main Floor Auditorium, Room 120  
150 Beavercreek Road, Oregon City, OR 97045

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**Agenda DRAFT**

**7:30 a.m. Welcome & Introductions**

- November C4 Metro Subcommittee meeting canceled

**MPAC Issues** (*no issues presented*)

**7:35 a.m. JPACT Issues**

- Metro Regional Flexible Funding Allocation (RFFA) process

**8:25 a.m. T2020 Corridor Discussion/Update**

**9:00 a.m. Adjourn**

<b>Attachments:</b>	JPACT/MPAC Work Programs	Page 02
	RFFA Materials	Page 04
	T2020 Materials	Page 19
	TPAC Meeting Notes	Page 27



600 NE Grand Ave.  
 Portland, OR 97232-2736  
 oregonmetro.gov

**2019 JPACT Work Program**  
*As of 10/8/19*

*Items in italics are tentative*

	<p><b><u>October 17, 2019</u></b></p> <ul style="list-style-type: none"> <li>• <b>Resolution No. 19-5037</b>, For the Purpose of Adding or Amending Existing Projects to the 2018-21 Metropolitan Transportation Improvement Program Involving Four Projects Impacting Portland, TriMet, Tualatin, and Washington County (OC20-02-OCT) (<b>consent</b>)</li> <li>• Corridor Bottleneck Operations Study II (ODOT; 15 min)</li> <li>• T2020 Transportation Regional Investment Measure (Andy Shaw and Tyler Frisbee, Metro; 15 min)</li> <li>• Mobility Policy Update: Introduction to Draft Work Plan (Kim Ellis, Metro; 15 min)</li> <li>• Regional Flexible Funds Update (Dan Kaempff, Metro; 15 min)</li> </ul>
<p><b><u>November 21, 2019</u></b></p> <ul style="list-style-type: none"> <li>• Mobility Policy Update: Approve Work Plan* (Kim Ellis, Metro; 15 min)</li> <li>• Regional Flexible Funds: Draft Recommendation* (Dan Kaempff, Metro; 20 min)</li> <li>• Frog Ferry (TBD; 20 min)</li> </ul>	<p><b><u>December 19, 2019</u></b></p> <ul style="list-style-type: none"> <li>• <i>Resolution Hold for CBOS TIP amendment</i></li> <li>• Regional Flexible Funds: Recommendation to Metro Council* (Dan Kaempff, Metro; 20 min)</li> <li>• Designing Livable Streets (Lake McTighe, Metro; 20 min)</li> <li>• <i>T2020 Transportation Regional Investment Measure Update (Andy Shaw, Metro; 15 min)</i></li> </ul>

**Parking Lot:**

- *Burnside Bridge (Multnomah County)*
- *Emergency Transportation Routes Update*
- *Freight Commodity Study (Tim Collins, Metro; 20 min)*



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## **2019 MPAC Work Program** *as of 9/30/2019*

*Items in italics are tentative*

<p><b><u>Wednesday, October 9, 2019</u></b></p> <ul style="list-style-type: none"> <li>• 2040 Growth Concept: Employment Trends Panel (David Howitt, Meriwether Group, Lauren Golden Jones, Capstone Partners, Nita Shah, Micro Enterprise Services of Oregon and Stephen Green, Pensole Design Academy; 90 min)</li> </ul>	<p><b><u>Wednesday, October 23, 2019</u></b></p> <ul style="list-style-type: none"> <li>• Mobility Policy Update (Kim Ellis, Metro; 20 min)</li> <li>• 2040 Growth Concept Refresh: Growth and Climate Change (TBD; 75 minutes)</li> </ul>
<p><b><u>Wednesday, November 13, 2019</u></b></p> <ul style="list-style-type: none"> <li>• 2040 Planning and Development Grants: Updates to Grant Program (Lisa Miles, Metro; 15 min)</li> <li>• Housing Bond Measure Implementation Strategies (Jes Larson and Emily Lieb, Metro; 40 min)</li> <li>• Transportation Regional Investment Measure Update (Andy Shaw and Tyler Frisbee, Metro; 20 min)</li> </ul> <p><u>November 19-21</u>: Association of Oregon Counties Annual Conference, Eugene, OR</p>	<p><b><u>Wednesday, November 27, 2019</u></b> – Cancelled</p>
<p><b><u>Wednesday, December 11, 2019</u></b></p> <ul style="list-style-type: none"> <li>• Designing Livable Streets (Lake McTighe, Metro; 10 min)</li> <li>• Missing Middle Housing Legislation (HB 2001) Implementation Panel (TBD; 90 min)</li> </ul>	<p><b><u>Wednesday, December 25, 2019</u></b> – Cancelled</p>

**Parking Lot:**

- 2020 Census Follow Up
- Community Partnerships Program
- Regional Data Strategy

**MEMORANDUM**

**TO:** C4 Metro Subcommittee  
**FROM:** Steve Williams, Principal Transportation Planner  
**DATE:** October 15, 2019  
**SUBJECT:** Metro Regional Flexible Funding Application (RFFA)

Every 3 years Metro conducts a process to allocate funds from 3 federal grant programs: the Surface Transportation Program, the Congestion Mitigation/Air Quality Program, and the Transportation Alternatives Program. These programs allow greater flexibility in how the funds are allocated than other federal transportation programs which allows the use of the funds to focus on local priorities. Metro’s priorities for the use of these funds in this RFFA funding round are equity, safety, climate and congestion. Metro has set aside \$43 million for RFFA in this round, with \$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 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 that were submitted with the funding request and Metro scoring in each category. Projects from Clackamas County localities are highlighted in blue. 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.

At their meeting on October 14, CTAC review and scored all six applications submitted by Clackamas County localities. CTAC scored the projects 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.

Based on their scoring CTAC recommends the following prioritization of the projects:

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

<b>Freight &amp; Economic Development Projects</b>		<b>Phases</b>	<b>Request</b>	<b>Metro Score</b>	<b>CTAC Score</b>
1	Clackamas County: Clackamas Industrial Areas ITS	Construction	\$1,768,040	9	12.0

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

- C4 Metro discussion and recommendations – October 16, 2019
- C4 Input to Metro – November 7, 2019
- TPAC/JPACT Discussion and Action – December 2019
- Metro Council Action – January 2020

At the C4 Subcommittee Meeting the following actions are recommended:

1. **Make a recommendation to C4 for the prioritization of the Freight & Economic Development project.**  
The 3 freight projects submitted did not request the full \$11 million available in that category. Although there was only one project in this category submitted in the Clackamas sub-region staff is recommending that C4 Metro recommend prioritization of the freight project that was submitted so that the coordinating committee's support for funding of that project is clear to TPAC and JPACT.
2. **Make a recommendation to C4 for the prioritization of the 5 Active Transportation & Complete Streets projects that were submitted.**

**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.

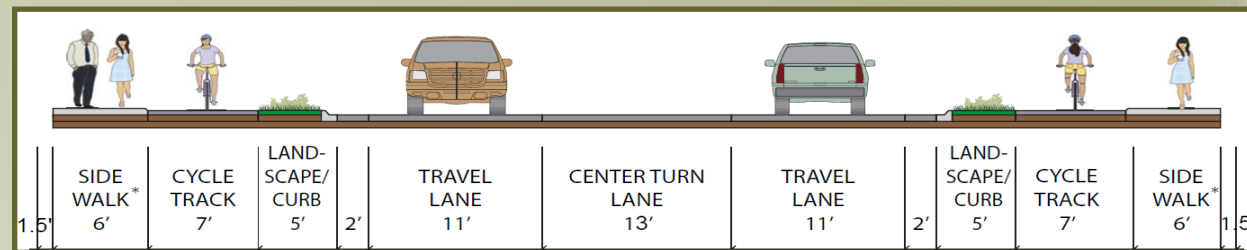
### Transportation Needs

- ◆ 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.



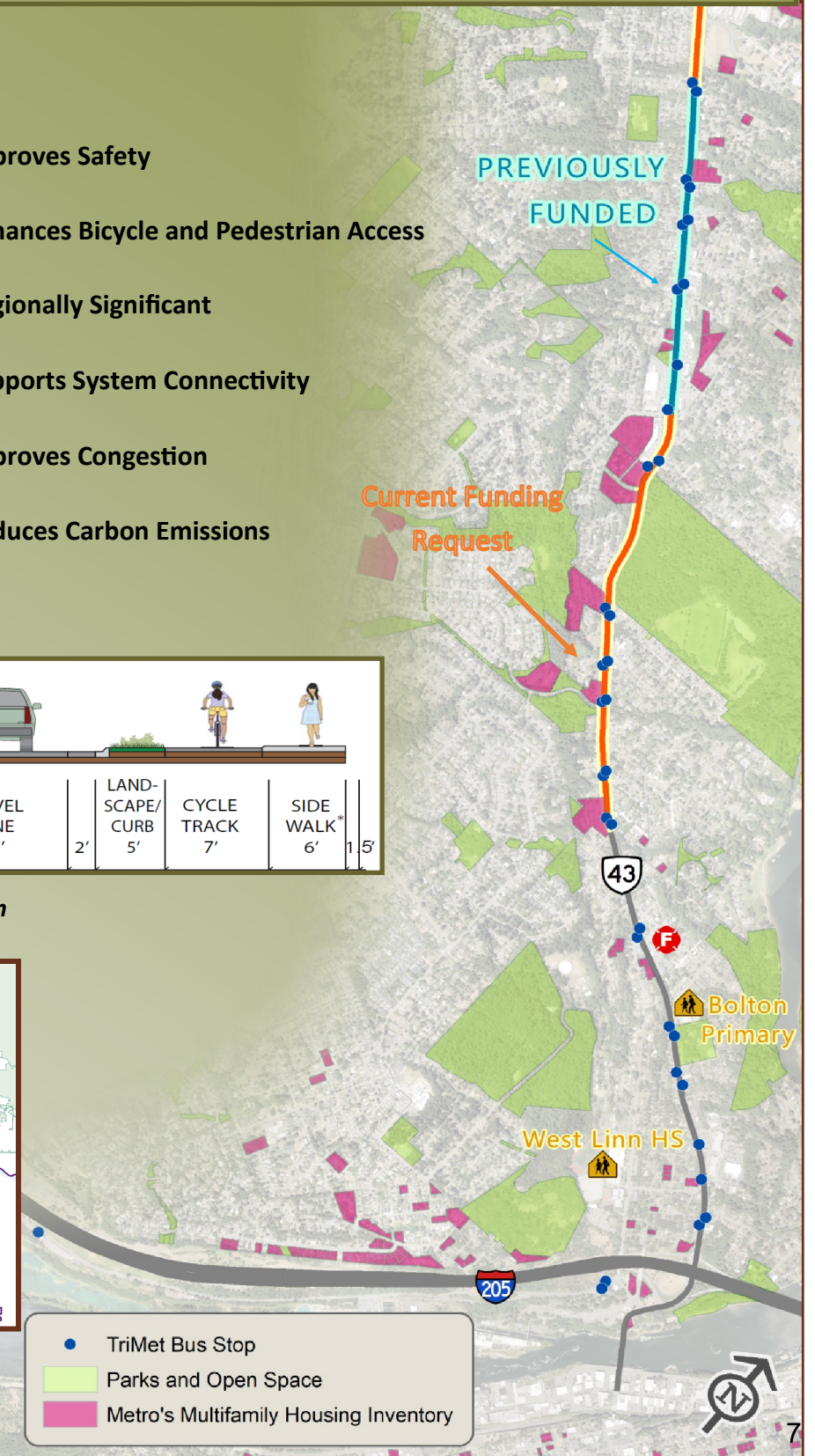
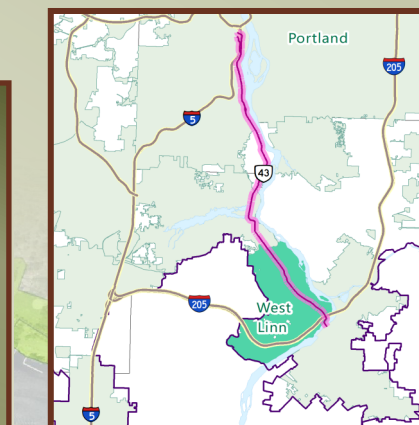
Proposed Standard Cross Section



Existing conditions provide limited shoulder in multiple areas within project boundary

### Project Readiness

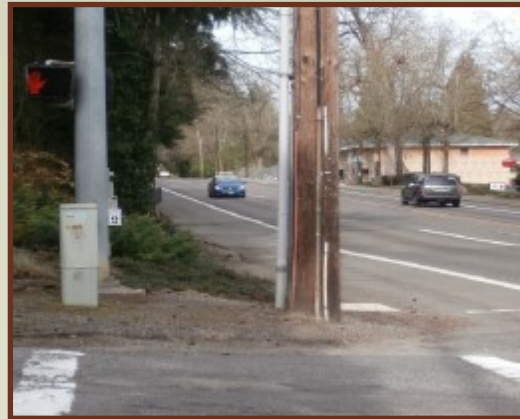
- ◆ The design incorporates innovative separated bikeways/cycle tracks, protected intersections, and improvements to the bus stop at Hughes Dr. which will improve traffic flow while encouraging alternate modes of transportation.
- ◆ The project builds upon the City's current OR-43 multimodal project 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

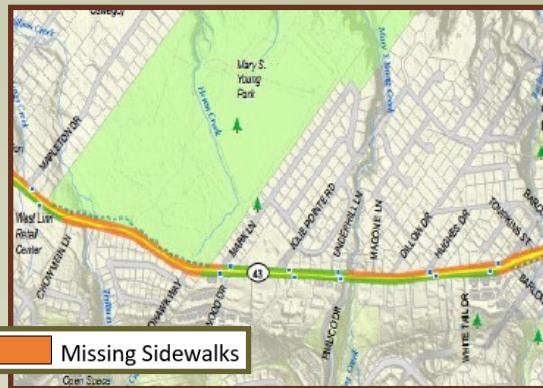
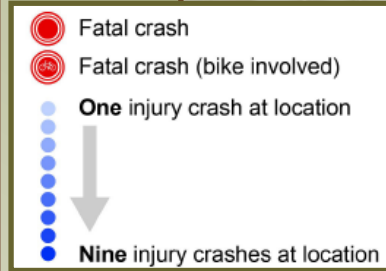
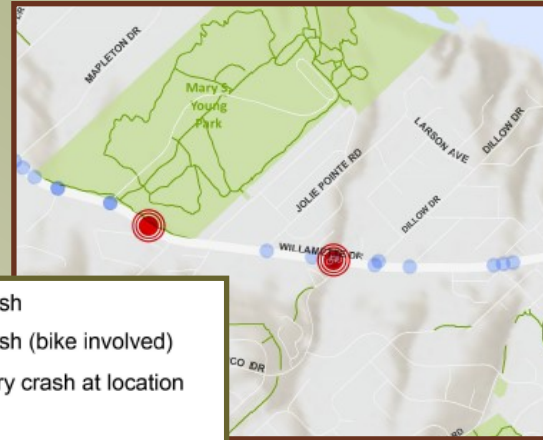


Numerous areas within the project boundary are not ADA compliant. The proposed project will address these sub-standard facilities.



- ◆ 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

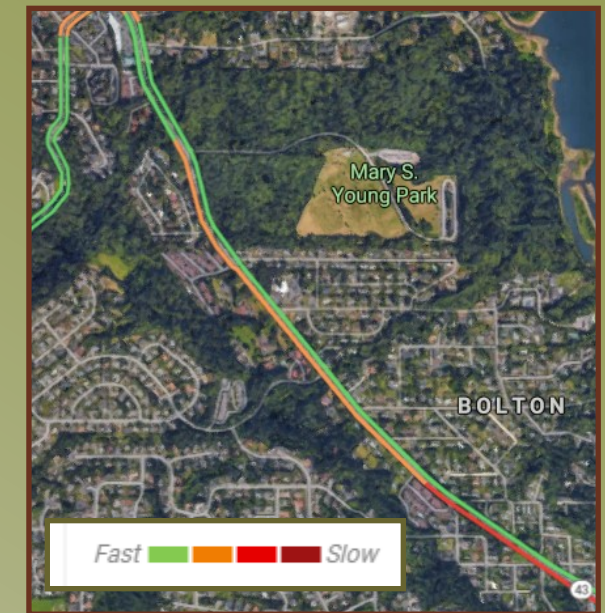


Many existing stormwater facilities are substandard and/or clogged with debris.



- ◆ West Linn has a consistent history of utilizing various design elements including but not limited to: appropriate roadside landscaping, raingardens (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.

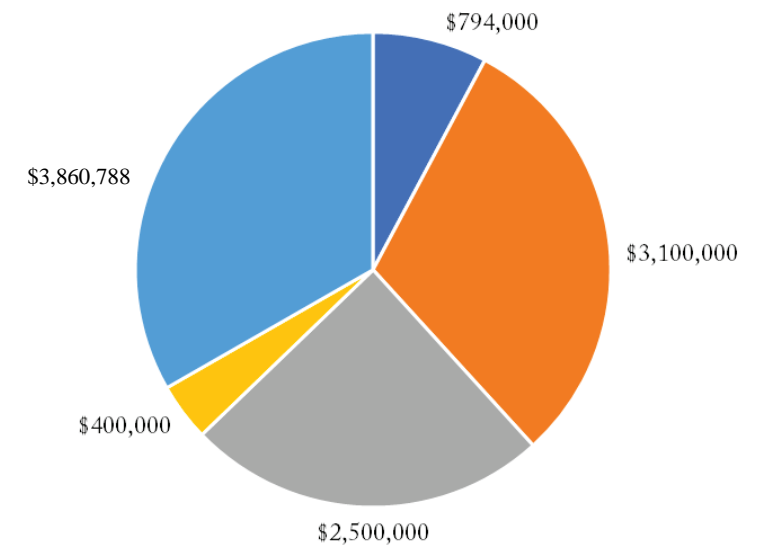
### Local Matching Contributions & Leverage

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.

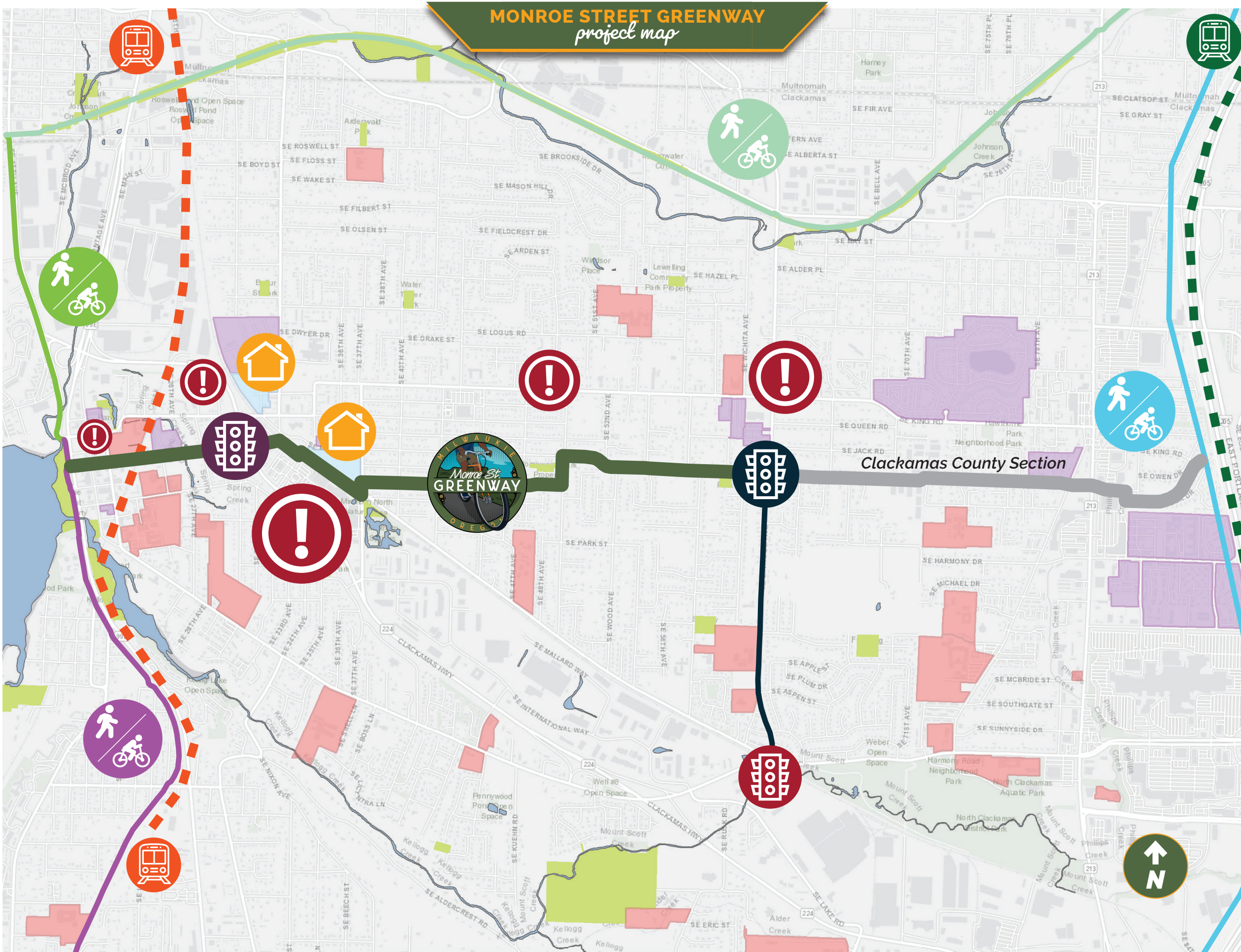
Local contribution and leverage accounts for approximately two-thirds of the full design development and construction costs for the Monroe Street Greenway.

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.

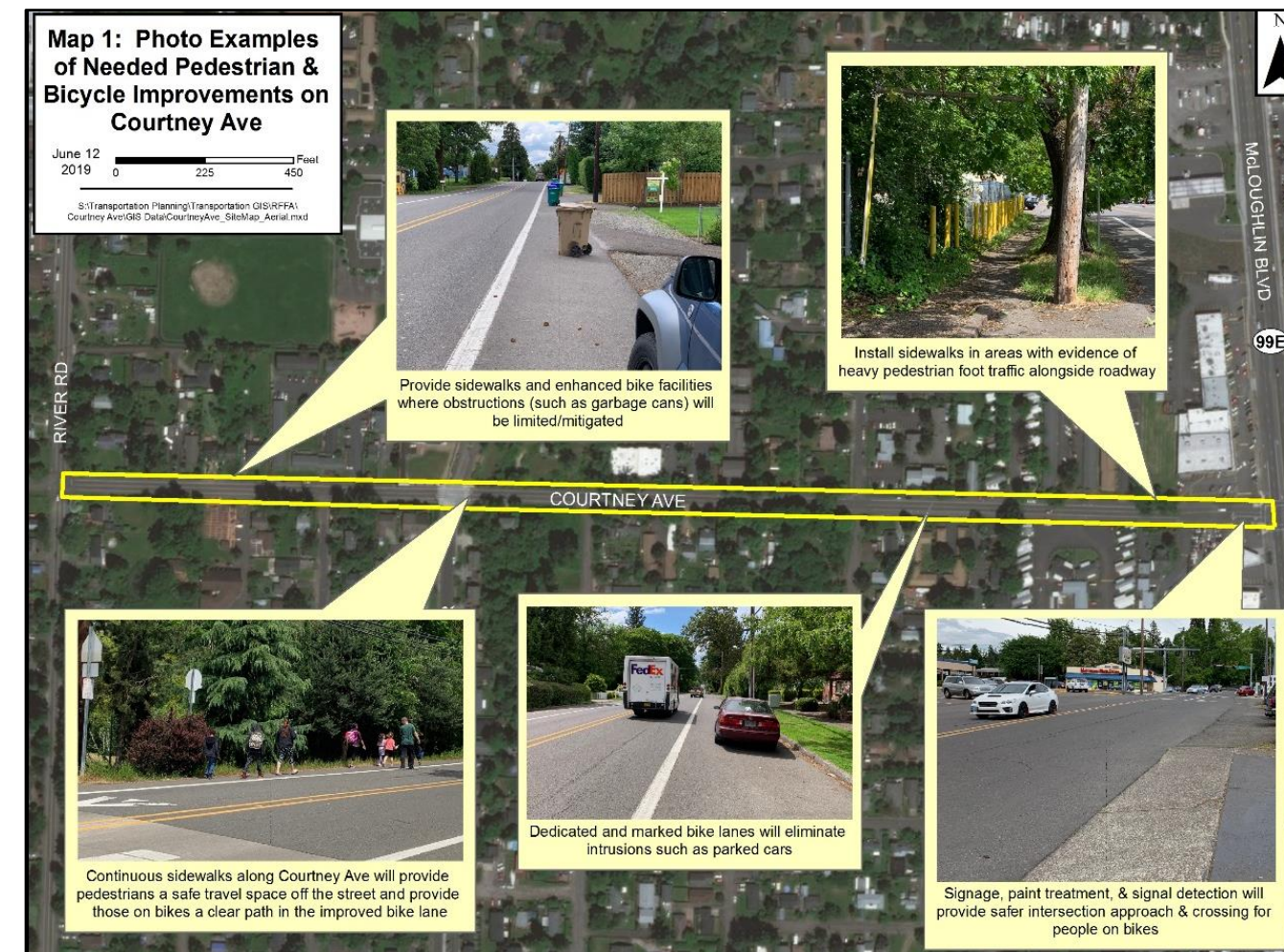
- Limited sidewalks force pedestrians to use the shoulder bike lane creating potential conflicts between all of transportation modes - pedestrians, bicyclists and automobile traffic.
- Lack of dedicated bike lanes and sidewalks reduce access to the Trolley Trail
- Unsafe pedestrian crossings without 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.

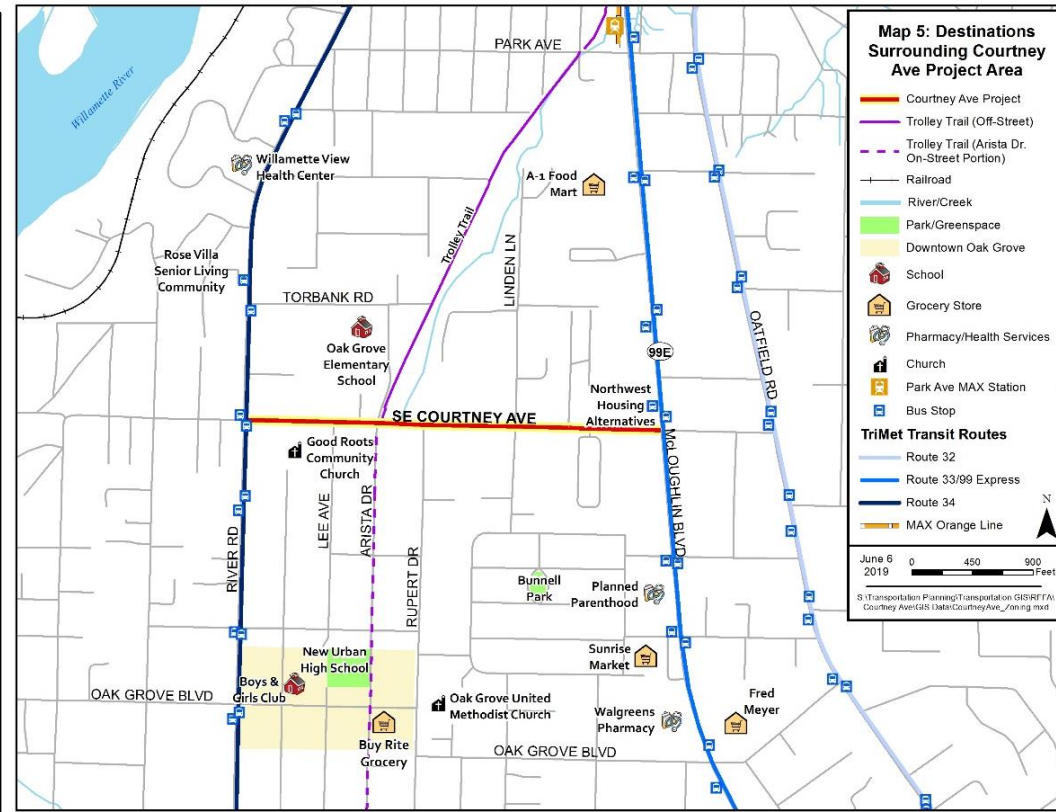
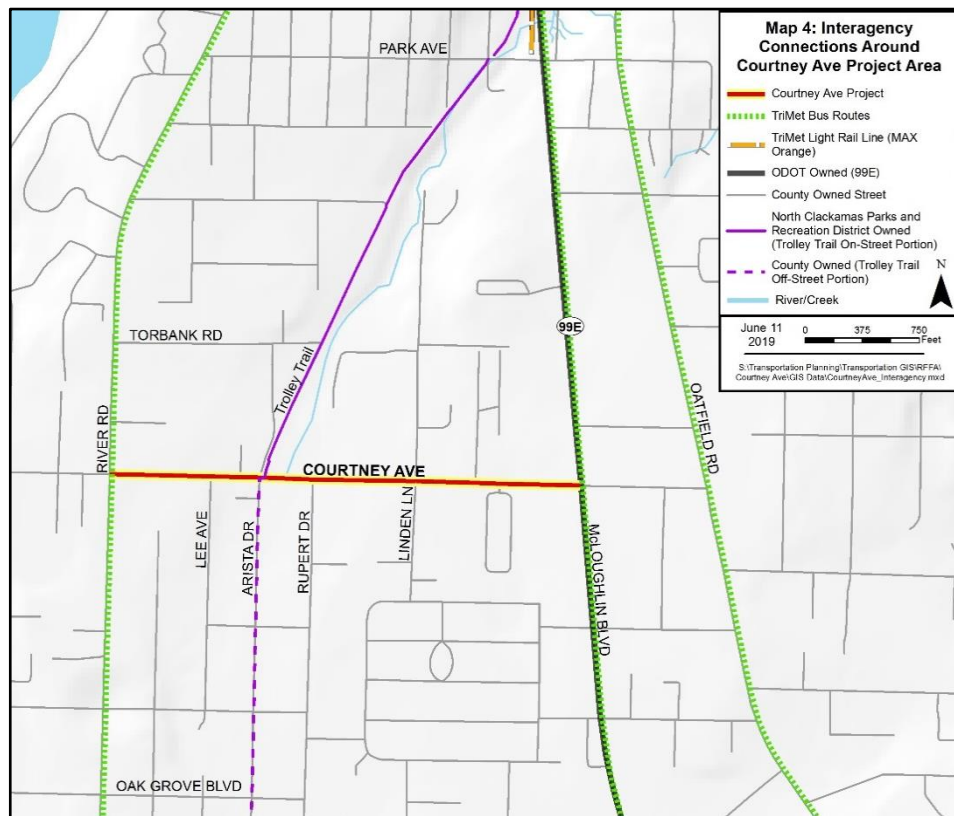
**Proposed Improvements** (see diagram at right and cross-section on reverse side):

- **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



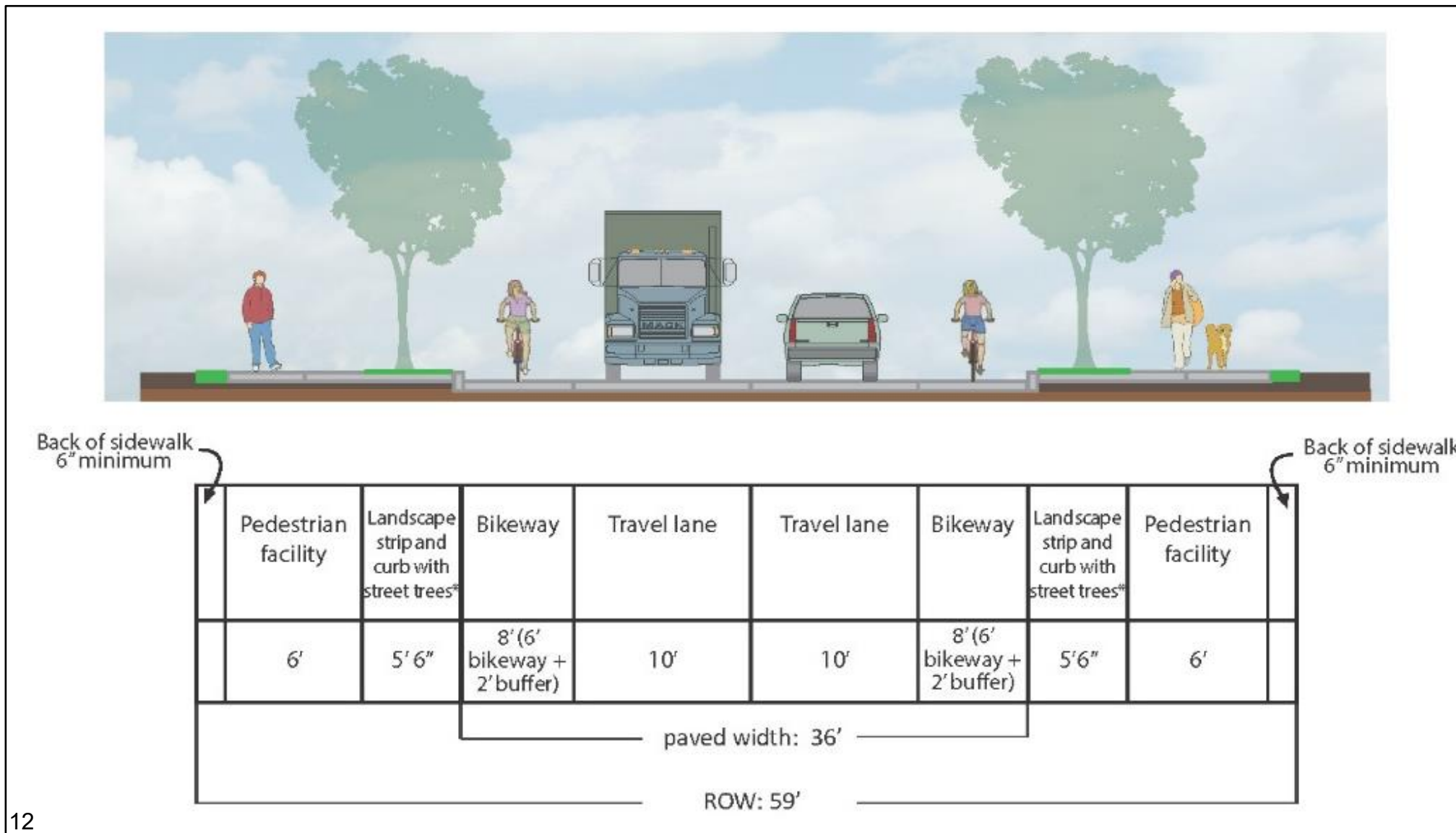


### Courtney Avenue - River Rd to OR 99E Bike and Sidewalk Improvement Project

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
23	Reinforced Concrete Pavement, 8 Inches Thick (@ Linden)	S.Y.	190	\$110.00	\$20,900
24	Concrete Walks	S.F.	36,000	\$9.00	\$324,000
25	Concrete Curbs, Standard	L.F.	3,100	\$18	\$55,800
26	Concrete Curb, Gutter and Curb	L.F.	2,325	\$22	\$51,150
27	18" Concrete Valley Gutter	L.F.	775	\$15	\$11,630
28	Concrete Driveway Connections	EA	42	\$3,500	\$147,000
29	Retrofit Concrete Sidewalk Ramps	EA	6	\$5,000	\$30,000
30	Extra for New Sidewalk Ramps	EA	22	\$5,000	\$110,000
31	Truncated Domes on New Surfaces	EA	28	\$500	\$14,000
<b>800</b>	<b>Permanent Traffic Safety and Guidance Devices</b>				
32	Longitudinal Pavement Markings - Paint	L.F.	24,800	\$2.00	\$49,600
33	Pavement Legend, Type AB: Pkg Lot Stripe	EA	25	\$200	\$5,000
34	Pavement Legend, Type B-HS: Bicycle	EA	6	\$500	\$3,000
35	Pavement Bar, Type B: Crosswalk	SF	120	\$15	\$1,800
36	Pavement Legend, Type B-HS: Green Bicycle Box	SF	740	\$15	\$11,100
<b>900</b>	<b>Permanent Traffic Control and Illumination Systems</b>				
37	Permanent Roadway Signing	EA	12	\$400	\$4,800
38	Bike Infrared Video Detection at OR 99E	L.S.	1	\$50,000	\$50,000
39	Signal Flasher Pole at River Road	L.S.	1	\$20,000	\$20,000
40	RRFB System at Trolley Trail	L.S.	1	\$90,000	\$90,000
41	Streetlighting	L.S.	1	\$375,000	\$375,000
<b>1000</b>	<b>Right of Way Development and Control</b>				
42	Temporary Seed Mix	ACRE	0.75	\$5,000	\$3,750
43	Permanent Seed Mix (water quality)	ACRE	0.20	\$10,000	\$2,000
44	Seeded Lawn Areas	ACRE	0.75	\$10,000	\$7,500
45	Rain Garden (3/4 one side of road)	S.F.	11,625	\$10	\$116,250
46	Topsoil (6" thick)	C.Y.	500	\$80	\$40,000
47	Relocate Mailboxes	C.Y.	42	\$200	\$8,400
48	Fencing, Type 2	L.F.	750	\$35	\$26,250
49	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.



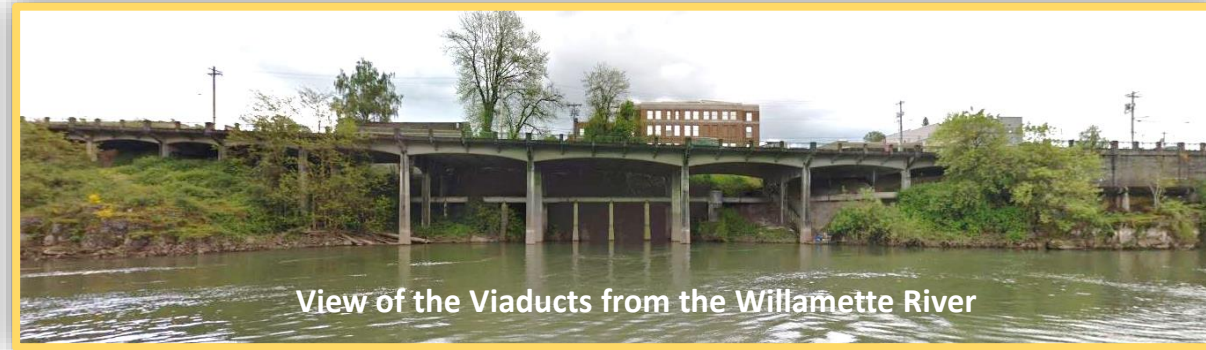


# 99E Bike & Pedestrian Improvements

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



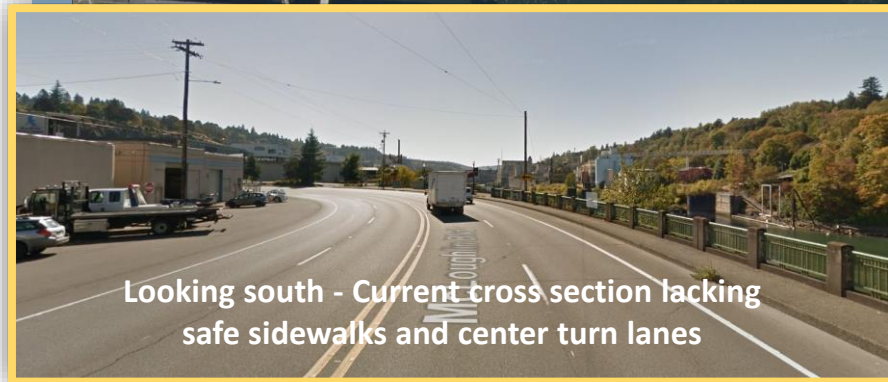
Looking North – Current cross section lacking safe sidewalks and center turn lanes



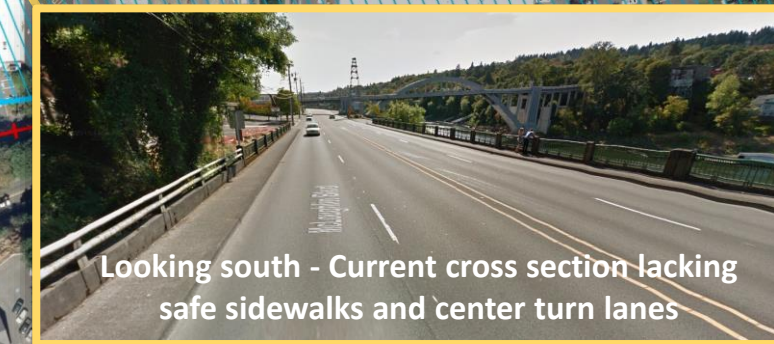
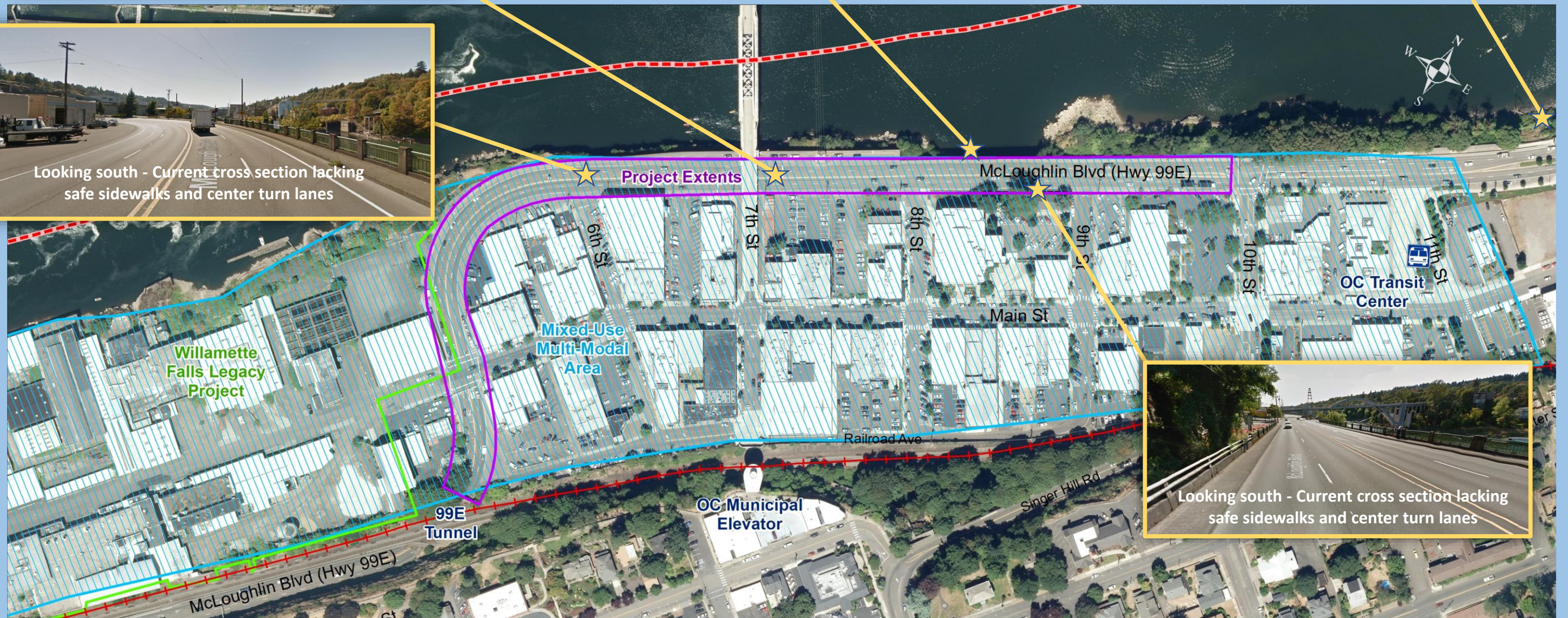
View of the Viaducts from the Willamette River



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.

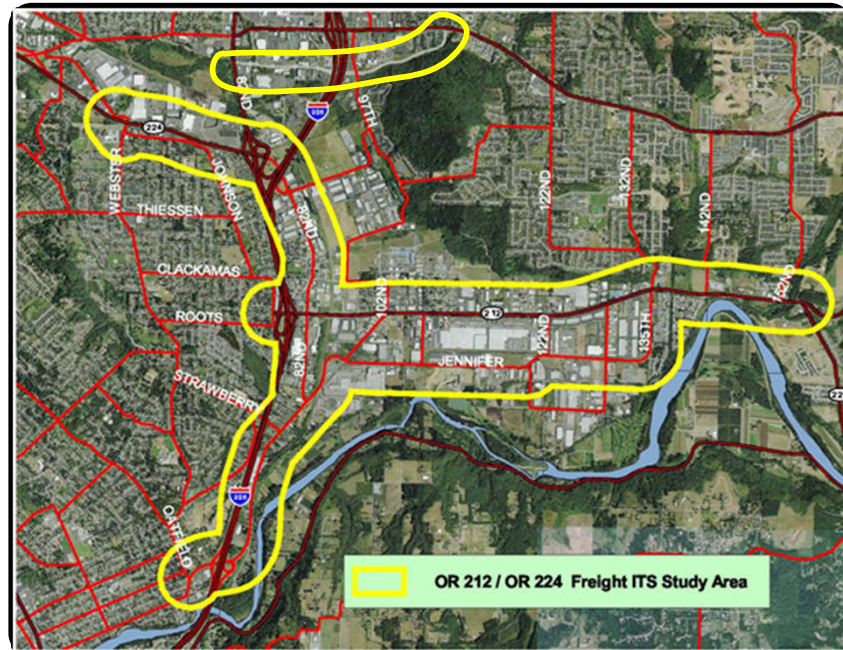
*For more information, please contact Jacque Betz, [betz@ci.gladstone.or.us](mailto:betz@ci.gladstone.or.us)*



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

**Contact Information**  
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 PM/Senior Traffic Engineer  
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 503-742-4706

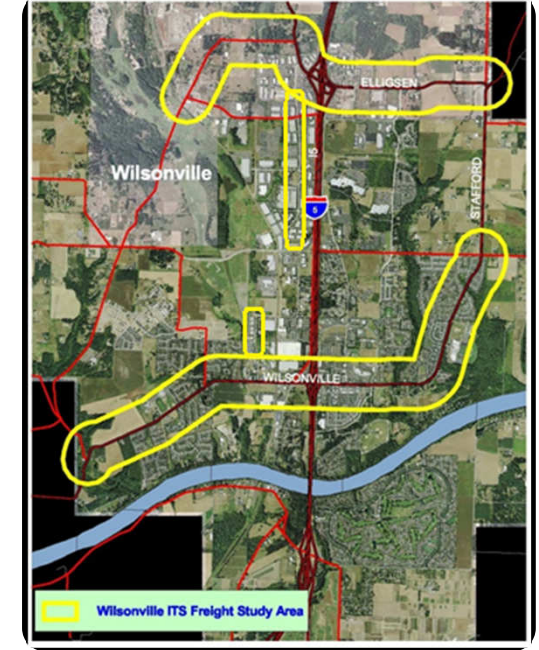
## Clackamas Industrial Area



- 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)



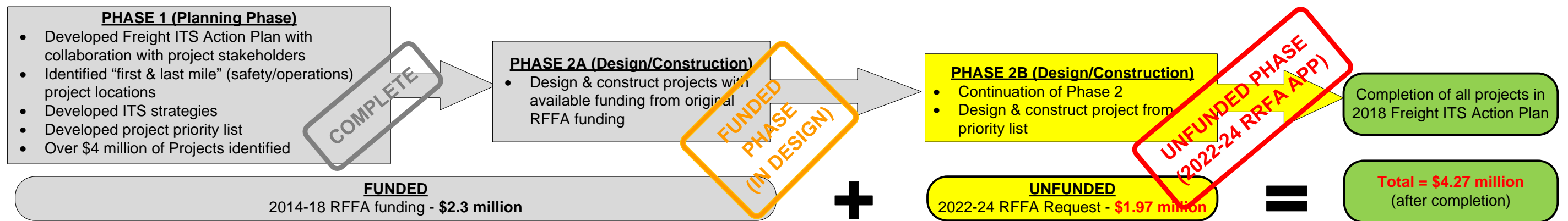
## Wilsonville Study Area



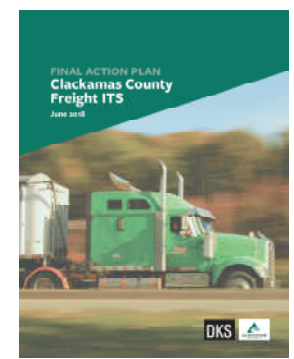
- Wilsonville Industrial Area Corridors**
- SW 95<sup>th</sup> Ave (SW Boones Ferry Rd to Boeckman Rd)
    - SW Elligsen Rd (I-5 to Canyon Creek Rd)
    - SE Kinsman Rd at SE Barber St
  - SW Wilsonville Rd (Willamette Way to Advance Rd)



## Current Project Timeline



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

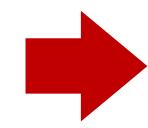


**Project Goals and Operational Objectives:**

**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.

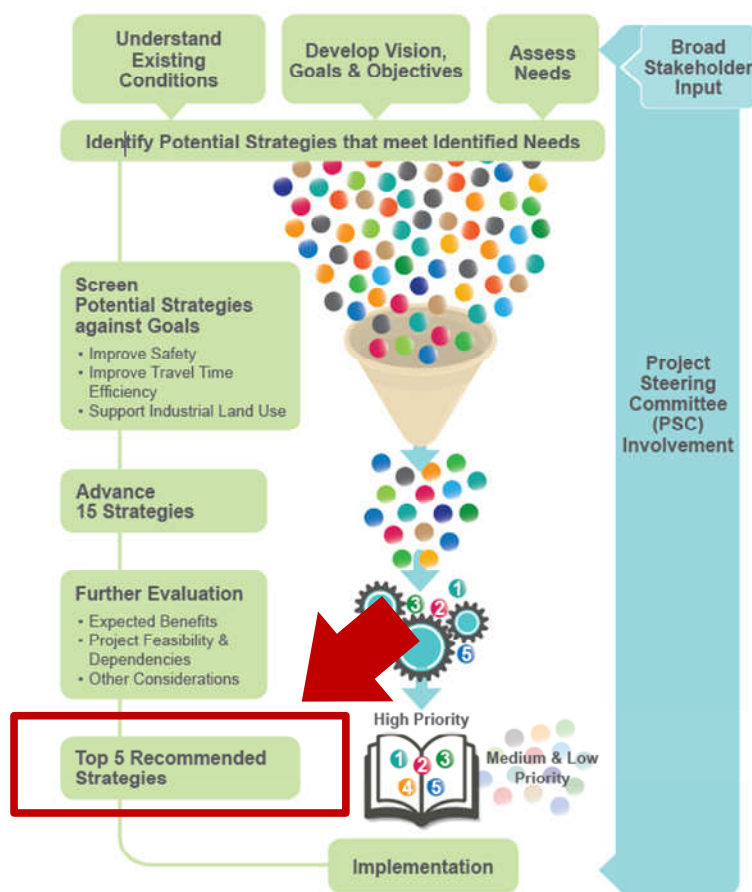


**Freight Related ITS Deployment Plan with Phase 2B:**

- 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 Sunnyside 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. \$15k 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 Sunnyside 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 Sunnyside 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 involve coordination with Portal for regional data archiving. Installation along OR 224 and OR 212 may require coordination with ODOT.

**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.

**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.

### 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 Sunnyside 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**

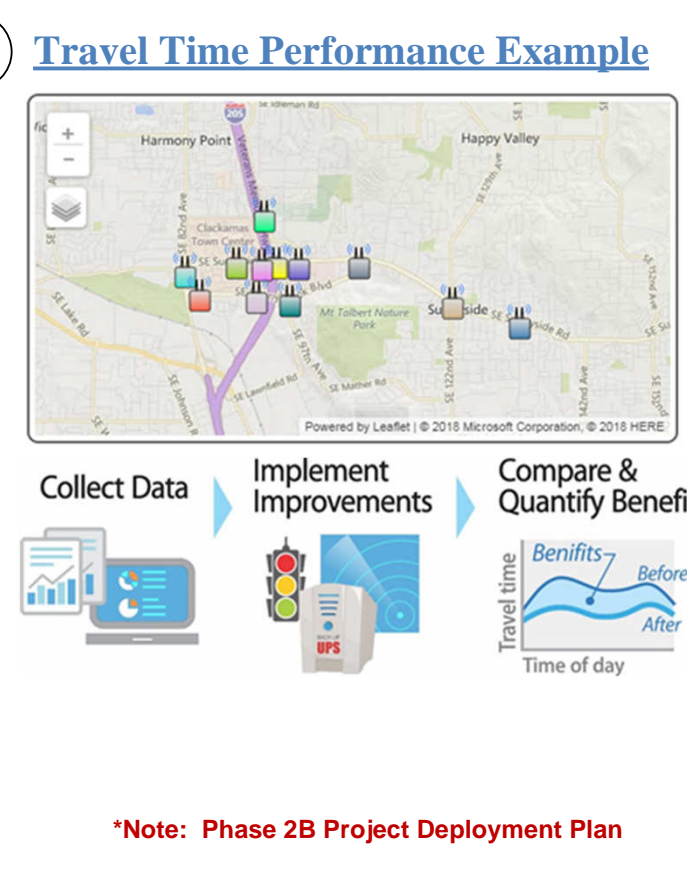
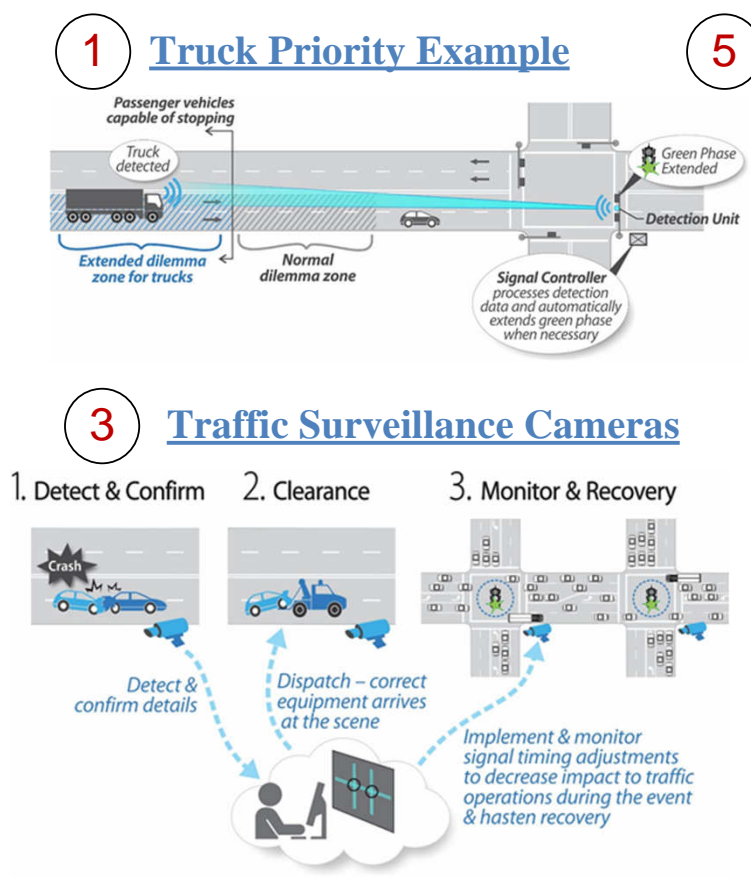
**Capital Costs**  
\$2 to \$3k per unit

**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.



# SUNRISE GATEWAY CORRIDOR / HWY 212

A transformative community investment to implement the Metro 2040 Growth Concept

### Contact information

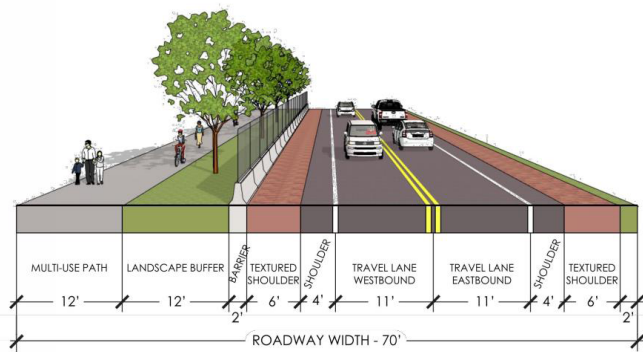
Jamie Stasny, Regional Transportation and Land Use Policy Coordinator  
jstasny@clackamas.us  
503-742-4339

## Metro T2020 desired outcomes

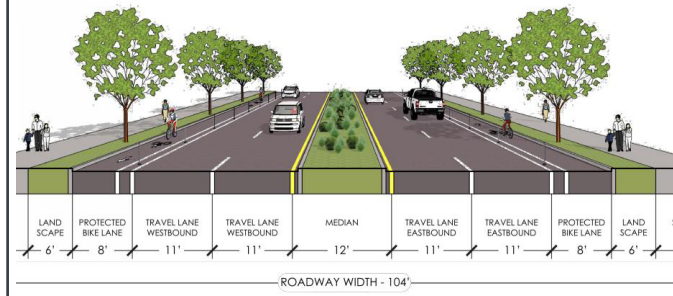
Clackamas County, ODOT, and the City of Happy Valley have worked together to develop the Sunrise Gateway Corridor package to address the evolving economic, housing, safety, alternative modal and operational needs and to ensure the corridor provides the desired T2020 outcomes.

- Improves safety
- Increases access, especially for people of color
- Protects clean air and reduces carbon emissions
- Prioritizes support for communities of color
- Supports resiliency
- Is regional in nature
- Reduces congestion
- Supports economic growth and system connectivity
- Leverages housing, open space investments

## Sunrise Gateway Corridor performance-based design cross sections



## Highway 212 transforms into an Urban Arterial – Complete Street



Right-of-way reserved for future Bus Rapid Transit (BRT)

## Critical for current residents and the future of our region

The 13,400 residents in the Sunrise Gateway Corridor are underserved and need safe connections and multi-modal options.

**Improves Safety:** With 42,900 average daily trips, Highway 212 has segments in the top 10% of ODOT's safety priority ranking system. The Sunrise Gateway Corridor improvements will increase the safety of these high crash intersections.

**Creates multi-use connections:** Unique opportunity to establish a world-class on- and off-road trail system

- Support the regional Mt. Scott/Scouters Mt. Trail Loop Master Plan that would connect the Springwater Corridor to the Clackamas River and Industrial Area (162 miles of proposed new trails within 5 miles of the Sunrise Gateway Corridor)
- Protected multi-use path from the Clackamas Town Center to 172nd Avenue

**Supports Housing Affordability:** Happy Valley is taking steps to create access to housing in a broad range of income levels:

- New urban renewal district will dedicate 7% for affordable housing projects.
- Missing middle housing, including multi-family, attached single-family and cottage clusters, are encouraged through zoning designations and incentives.

**Opens Access to New Jobs and Housing:** By 2040, this corridor is projected to have over 14,000 new jobs and 14,000 additional housing units (approximately an additional 43,000 people).

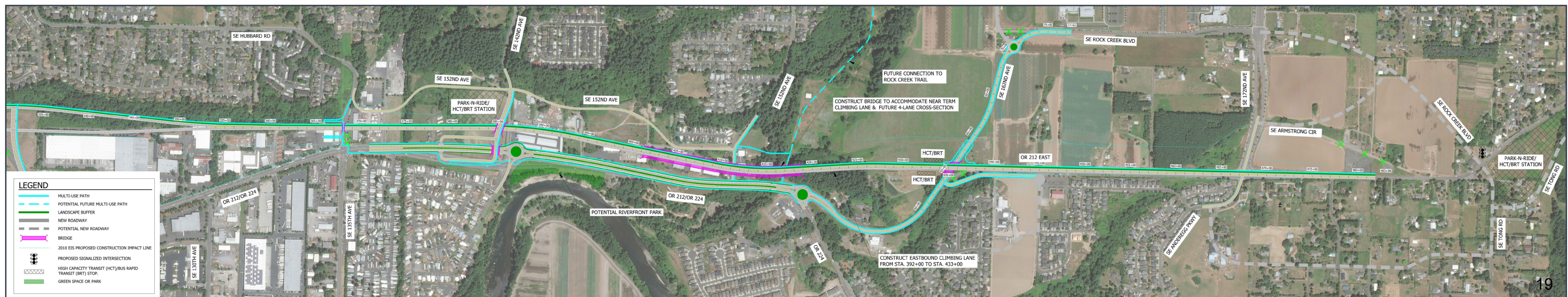
**Provides a parkway:** This project will create new connections and transform Hwy 212 from a dangerous state highway into a safer corridor that connects people to jobs and accommodates additional housing. The improvements will create a complete transportation network with new multi-modal connections, safety and access improvements.

- Two-lane parkway (40-45 mph) with a separated multi-use path
- Multi-modal options
  - Current residents will have alternative modal options to access their public schools, regional parks, public transit, employment, etc. without driving
  - Transition existing Hwy 212/224 to an Urban Arterial - Complete Street with improved bike/pedestrian facilities

**Clackamas to Columbia (C2C):** The Sunrise Gateway and C2C provide the necessary multi-modal corridors to service the undeveloped southeast area of the Metro UGB.

**Supports Metro's 2040 Growth Concept:** Happy Valley cannot implement the growth concept without having the transportation infrastructure to address the existing mobility barriers in this corridor.

**Climate Smart Project:** The proposed Sunrise/212 Concept will reduce greenhouse gasses by .1 ton during the daily 5 to 6 p.m. peak hour. This decrease is attributed to a reduction in congestion and the addition of mode options.



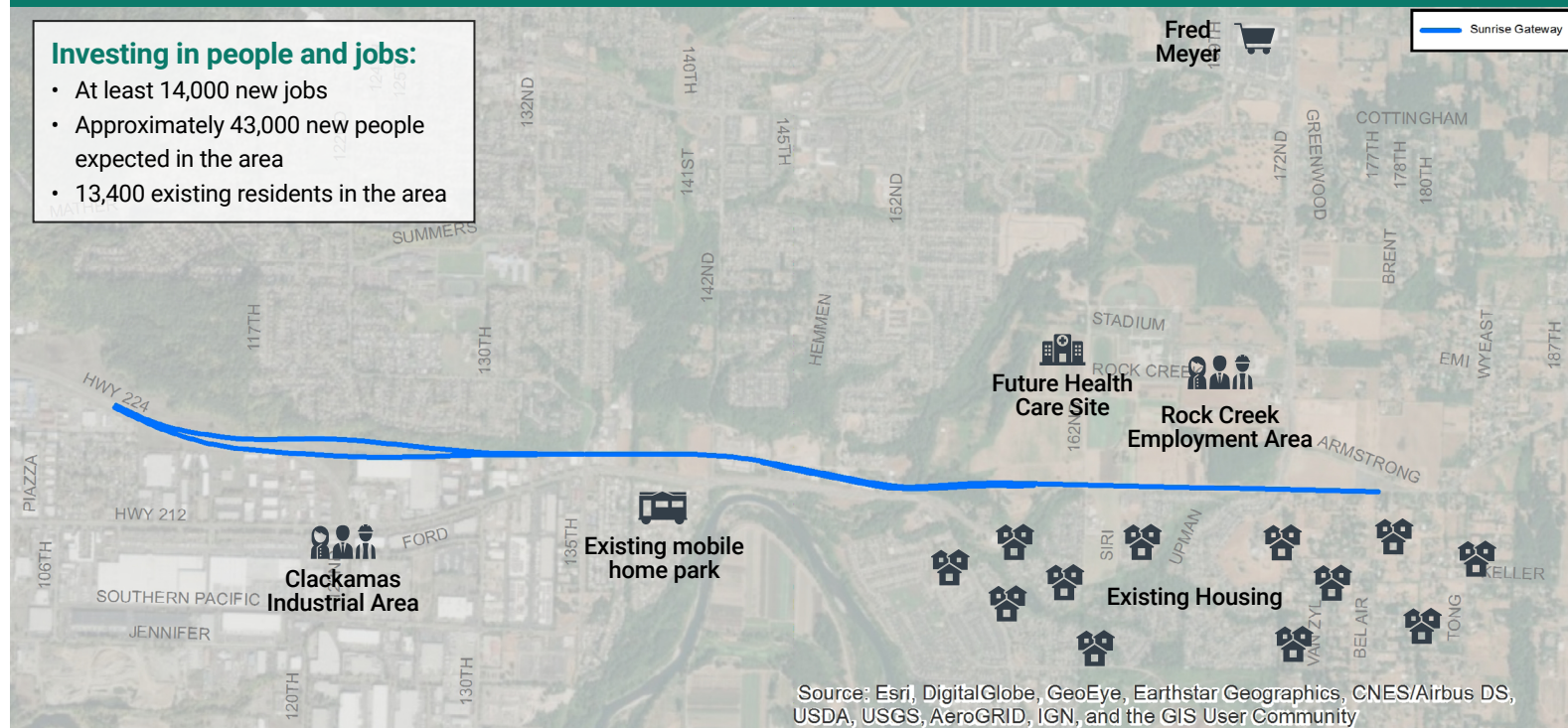


# Opening access to jobs and housing

Improvements would support new commercial and employment lands in key growth areas

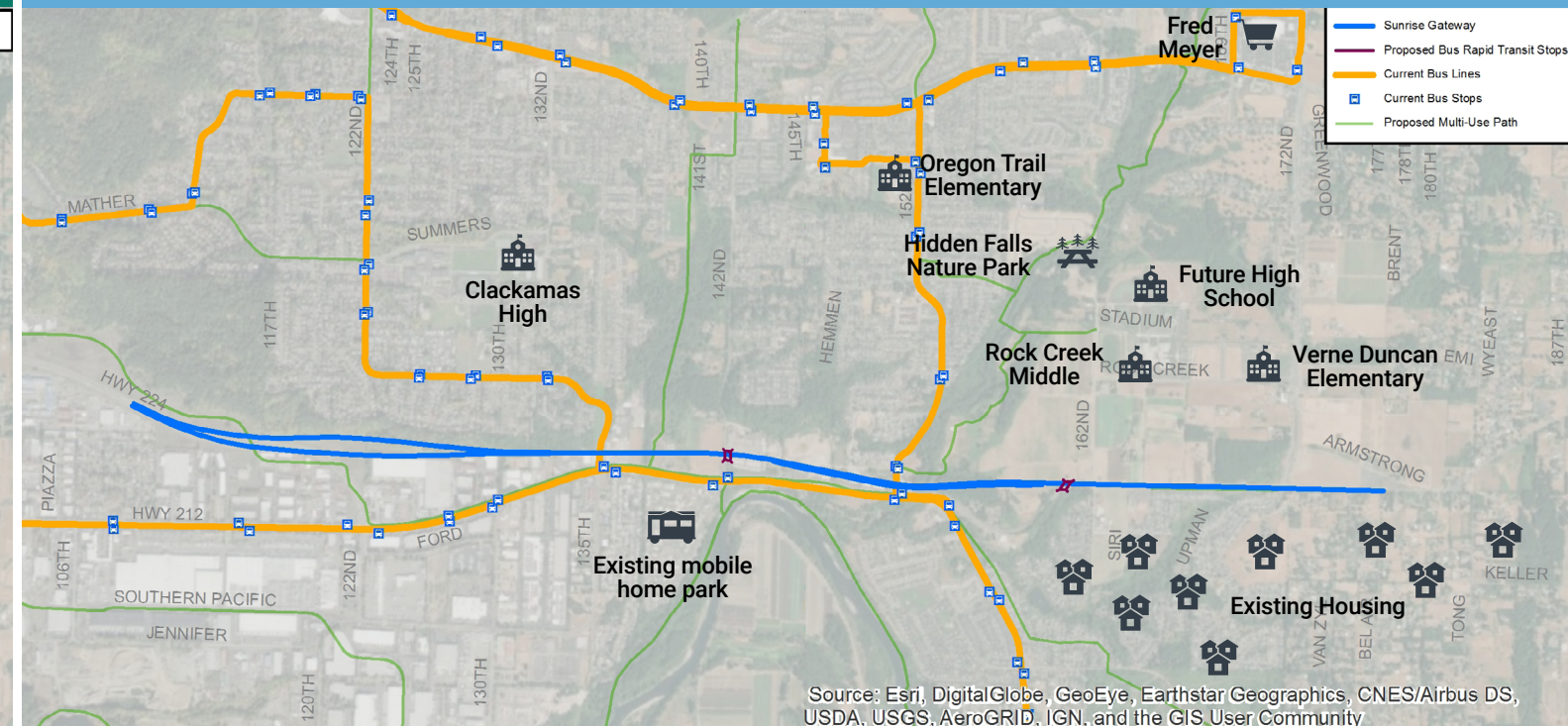
### Investing in people and jobs:

- At least 14,000 new jobs
- Approximately 43,000 new people expected in the area
- 13,400 existing residents in the area



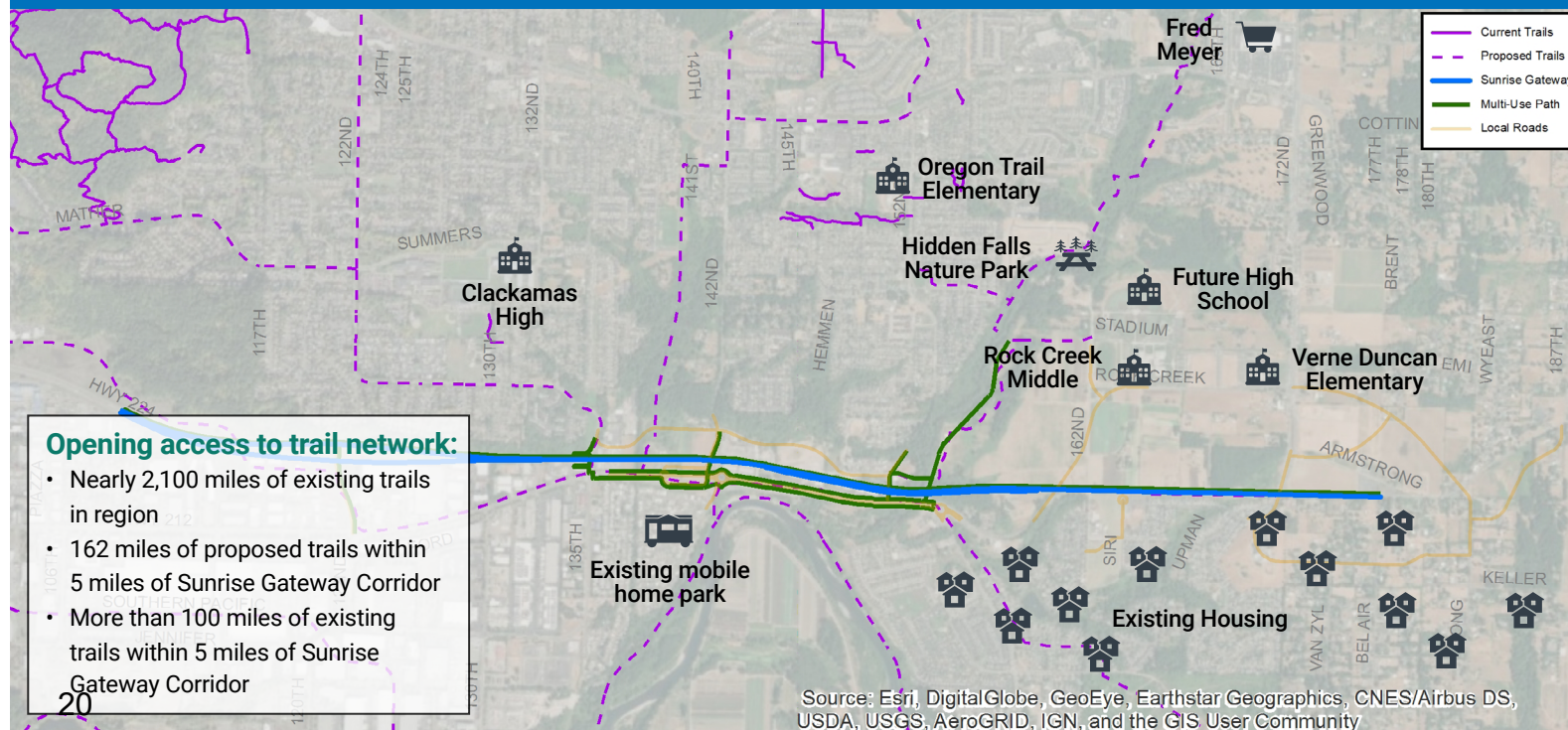
# Transforming local streets and transit

Providing safe pathways for trips from neighborhoods to schools, parks, recreation and retail



# Extending trail miles in the Metro area

Connecting Mt. Scott/Scouters Mt. Trail Loop Master Plan to the Clackamas Town Center



### Opening access to trail network:

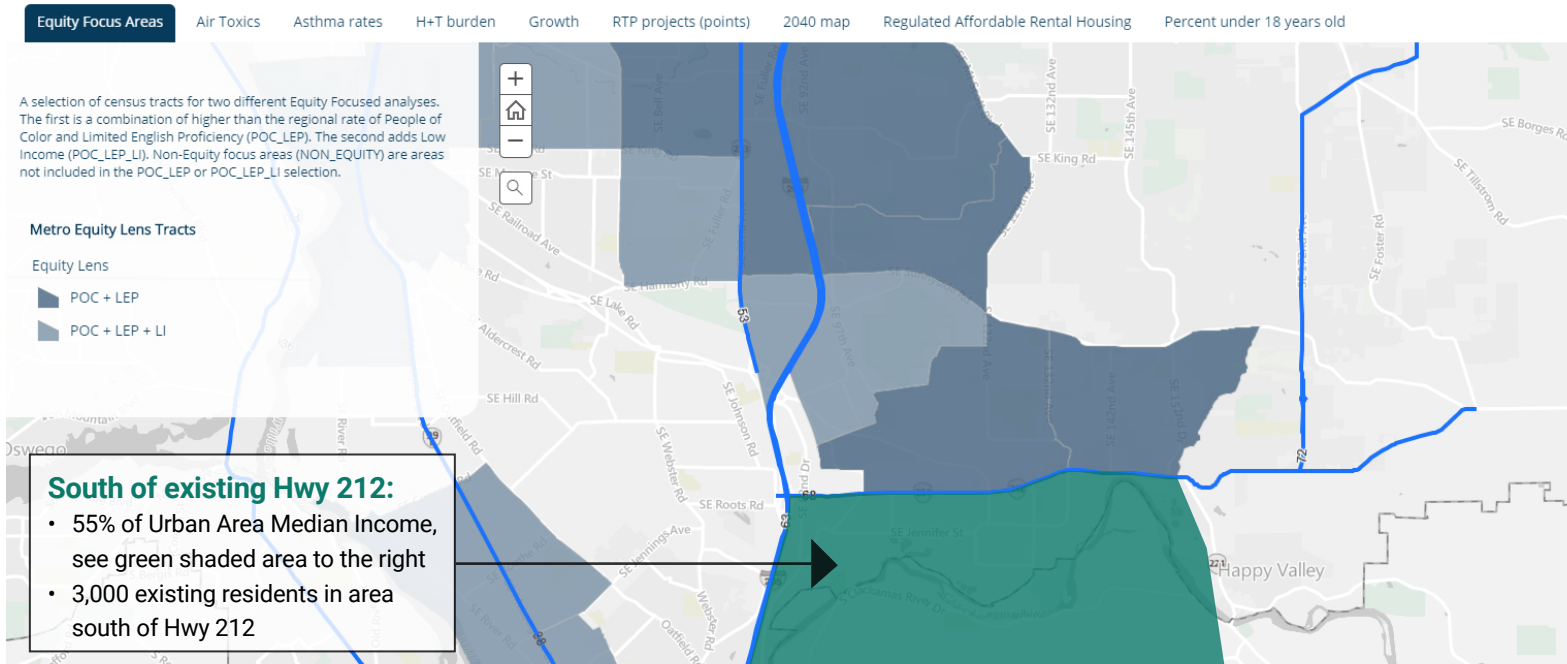
- Nearly 2,100 miles of existing trails in region
- 162 miles of proposed trails within 5 miles of Sunrise Gateway Corridor
- More than 100 miles of existing trails within 5 miles of Sunrise Gateway Corridor



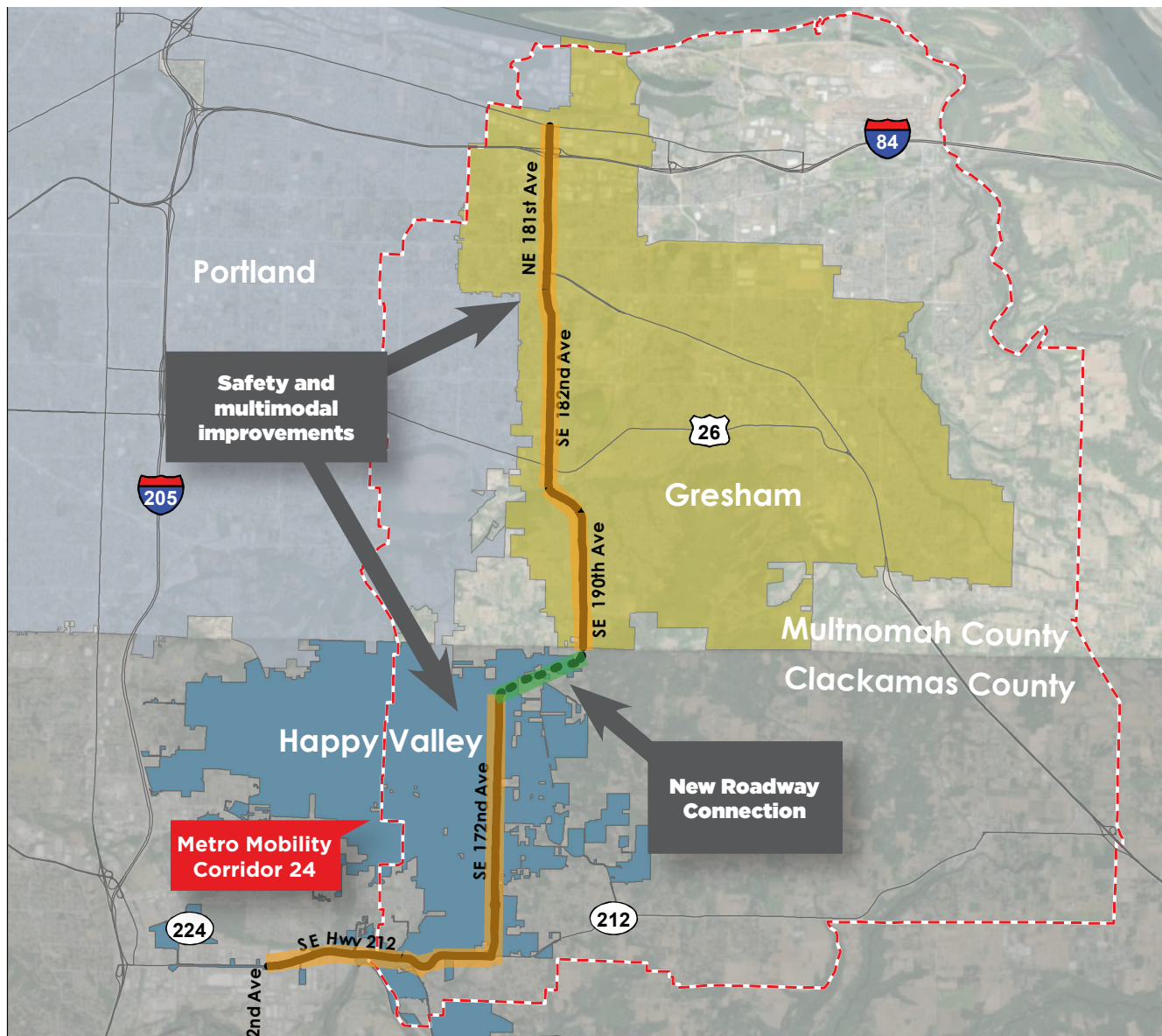
# Increasing connections and access for communities with diverse populations and lower than regional average incomes

### Regional Investment Strategy map resources

Designed in Oregon by Metro



# EFFICIENT NORTH-SOUTH TRAVEL: A CRITICAL NEED FOR A GROWING REGION



## The Clackamas to Columbia (C2C) Corridor

The C2C Corridor is the only major north-south through route east of I-205. It is a vital link between major employment centers at its north and south ends and residential areas in between. Though used heavily as a through route, it is not continuous. Improving this route will yield **immediate, noticeable benefits** for people traveling by all modes through some of the Metro area's fastest growing communities and some of its most underserved neighborhoods. The C2C Corridor is recognized within Metro Mobility Corridor 24 in the 2018 Regional Transportation Plan.

# Supporting local priorities.

Improvements to the C2C Corridor **will leverage current planning efforts in the area**, including the Pleasant Valley TSP Refinement Study, Happy Valley TSP, Pleasant Valley/North Carver Plan, and Damascus Mobility Plan.

## Safety.

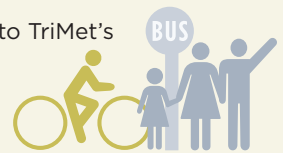
- A continuous north-south route with equally continuous sidewalks and bike lanes will promote **safer movement for all modes**.
- It will **reduce congestion and consequently crashes** in the Sunrise Corridor, along Jenne Rd and on facilities identified on the region's top 10% Safety Priority Index System project list, including 162nd Ave, 174th Ave, Foster Rd, and Sunnyside Rd.
- The portion of C2C on SE/NE 181st Ave between NE Sandy Blvd and SE Yamhill St has the **8th highest rate of serious crashes** in Metro's planning area.

## Reducing congestion.

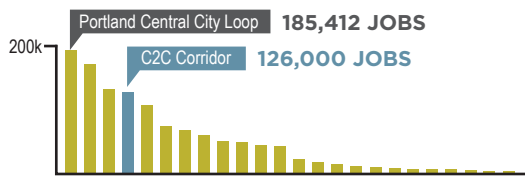
- **Without this improvement, there is no continuous north/south corridor east of I-205** for commuters and freight to easily access I-84, the Columbia Industrial Corridor, or the OR 212/Sunnyside Corridor.
- **A continuous C2C Corridor could accommodate north-south transit service** along its entire alignment (service currently stops in Gresham, but there's a service gap between Gresham and Sunnyside Rd in Happy Valley).
- **Improving the C2C Corridor will also reduce congestion** on the Sunrise Corridor, Foster Road and Jenne Road, increasing the effectiveness of improvement projects along those corridors.

## Fostering a clean, multimodal future.

- **Walking and transit:** A continuous north/south route between the Clackamas and Columbia Rivers will benefit both walking and transit.
- **Supporting technological innovation:** This improvement project will further enable and add value to TriMet's rollout of next-generation transit signal priority operations at signalized intersections.
- **Connecting the bike network:** Without this improvement there is no north/south bike route south of Powell between I-205 and the Springwater Corridor—a critical missing link in the bike network for recreational cyclists and commuters.



### Metro Mobility Corridor Jobs



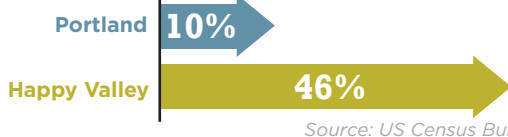
## Economic Impacts.

- **Better access** between developable residential, commercial, and industrial properties
- **High visibility and impact:** the C2C Corridor has the fourth highest jobs number of Metro's 24 mobility corridors.
- **Area jobs are expected to more than double in the next 20 years**, according to Metro's 2040 Distributed Forecast.

## C2C is a diverse corridor.

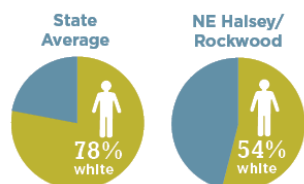
- The C2C will benefit residents in Rockwood with an **average household income that ranks in the bottom 10 of all Metro's identified mobility corridors**
- Over 60 languages are spoken in Rockwood.
- Happy Valley is **the fastest growing city** in Oregon.

### Average annual population growth since 2010

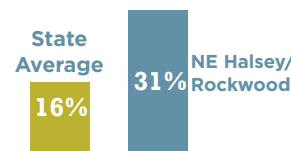


**84%** Happy Valley's **projected growth between now and 2040**, per Metro forecast

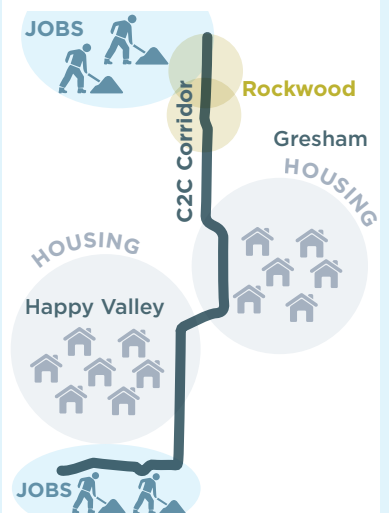
### Population Diversity



### Poverty Rate



## C2C Connects...

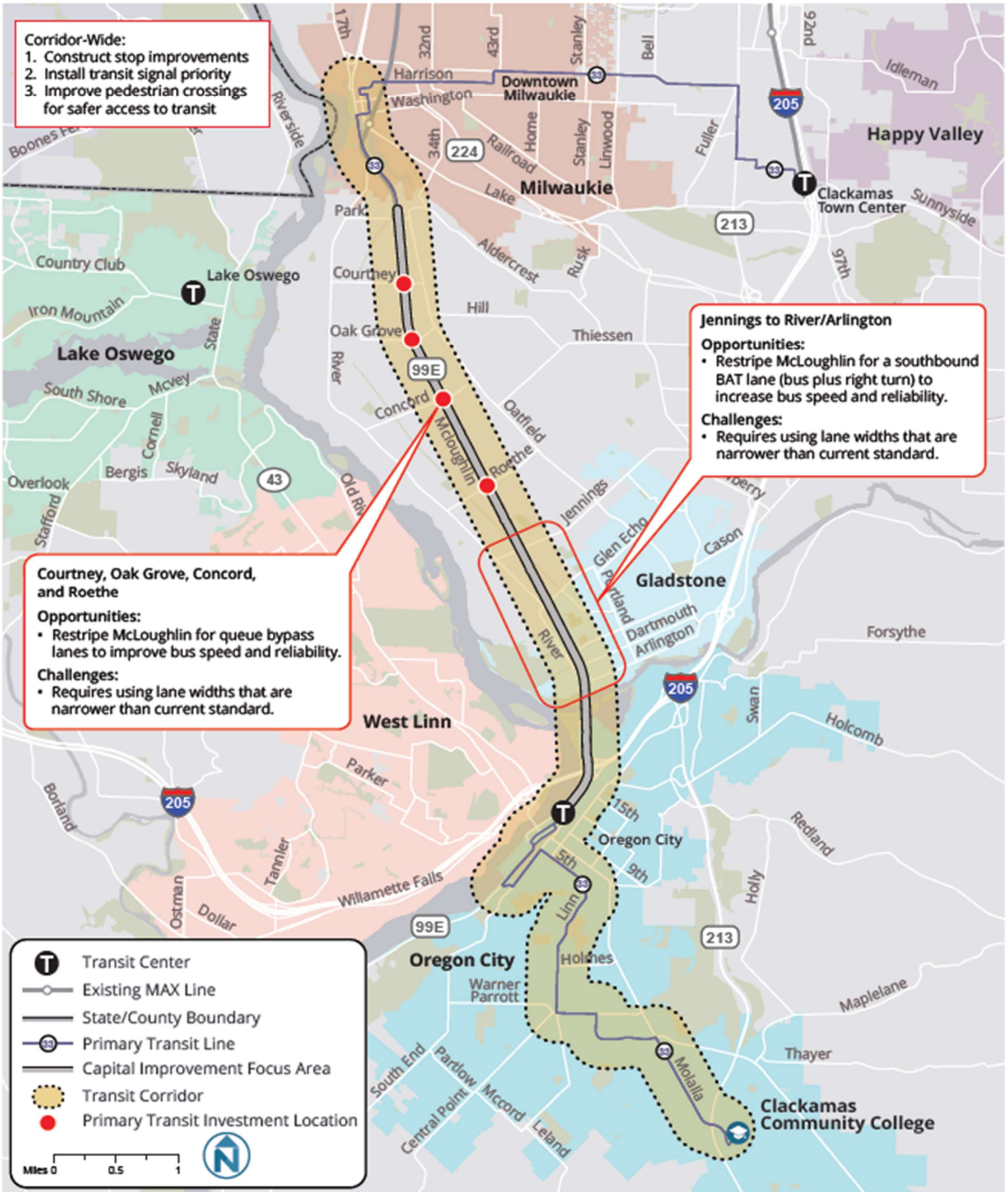


# DRAFT

## MCLOUGHLIN BLVD. TRANSIT CORRIDOR



### Downtown Milwaukie to Oregon City and Clackamas Community College



Information provided by Metro Regional ETC Program

# T2020 Corridor: McLoughlin/OR99E

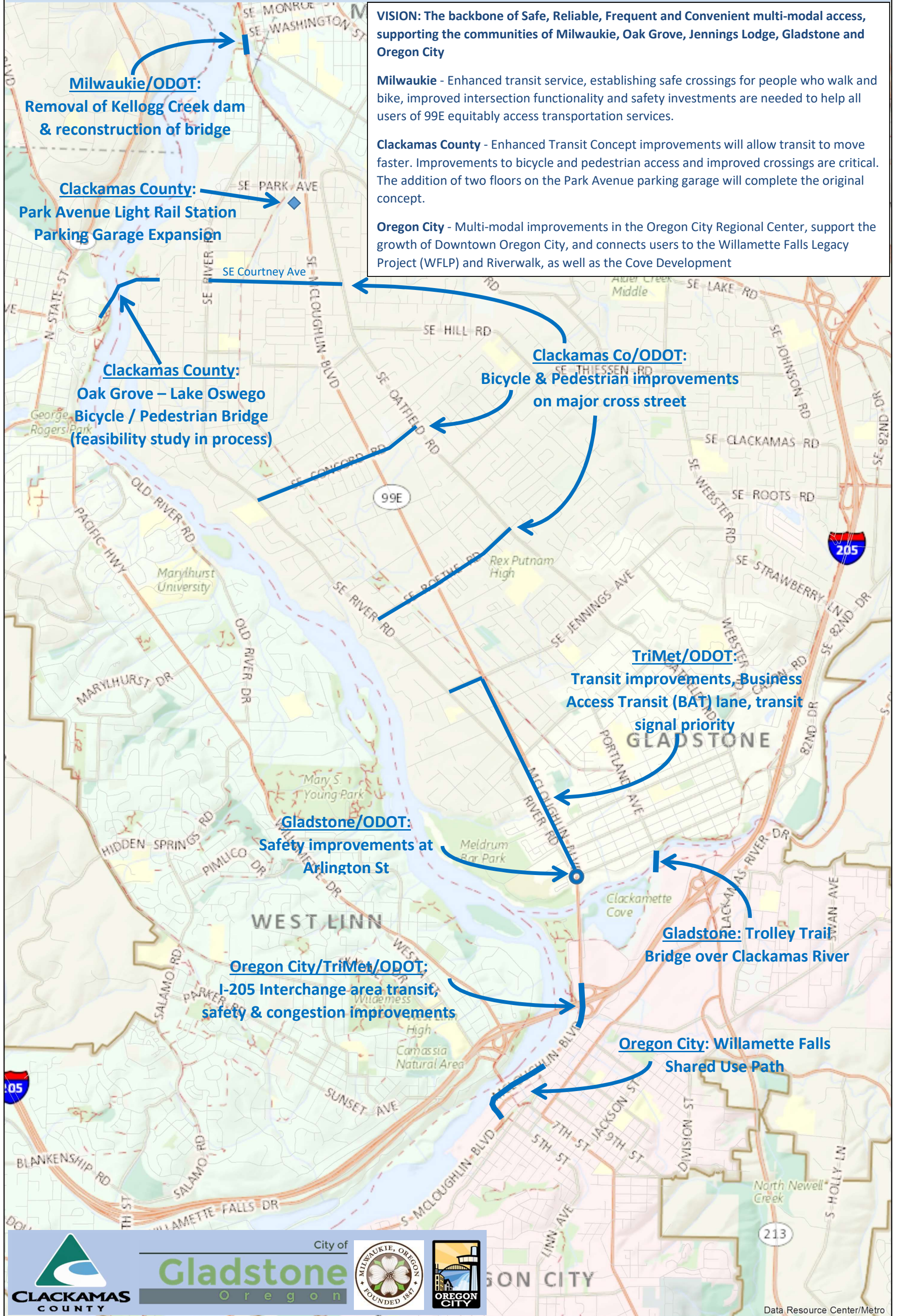
## Local Projects needed in Corridor

**VISION:** The backbone of Safe, Reliable, Frequent and Convenient multi-modal access, supporting the communities of Milwaukie, Oak Grove, Jennings Lodge, Gladstone and Oregon City

**Milwaukie** - Enhanced transit service, establishing safe crossings for people who walk and bike, improved intersection functionality and safety investments are needed to help all users of 99E equitably access transportation services.

**Clackamas County** - Enhanced Transit Concept improvements will allow transit to move faster. Improvements to bicycle and pedestrian access and improved crossings are critical. The addition of two floors on the Park Avenue parking garage will complete the original concept.

**Oregon City** - Multi-modal improvements in the Oregon City Regional Center, support the growth of Downtown Oregon City, and connects users to the Willamette Falls Legacy Project (WFLP) and Riverwalk, as well as the Cove Development





# OAK GROVE-LAKE OSWEGO (OGLO) PEDESTRIAN/BICYCLE BRIDGE FEASIBILITY STUDY

August 2019



*Clackamas County is leading a Metro-funded study with the City of Lake Oswego, the City of Milwaukie, Metro and the North Clackamas Parks & Recreation District to determine the feasibility of a pedestrian/bicycle bridge across the Willamette River between Oak Grove and Lake Oswego.*

## Study Purpose

To determine the feasibility of a new pedestrian/bicycle bridge across the Willamette River between Oak Grove and Lake Oswego. While there has been a lot of interest in such a bridge over the years, questions remain regarding its feasibility:

- Are bridge "landing locations" available on publicly-owned property on both sides of the river?
- Would it be possible to connect a new bridge to other pedestrian/bicycle trails without interfering with existing land uses, e.g., residential or commercial property?
- How much would it cost to construct such a bridge and which jurisdiction(s) would pay for it?
- What steps would have to be taken to build a bridge at that location?
- If a bridge were built, which jurisdiction(s) would own and maintain it?

## Existing Railroad Bridge is not an Option

- The bridge owners would not agree to the addition of pedestrian /bicycle facilities.
- Access to the railroad bridge for pedestrians and bicyclists would be very difficult.

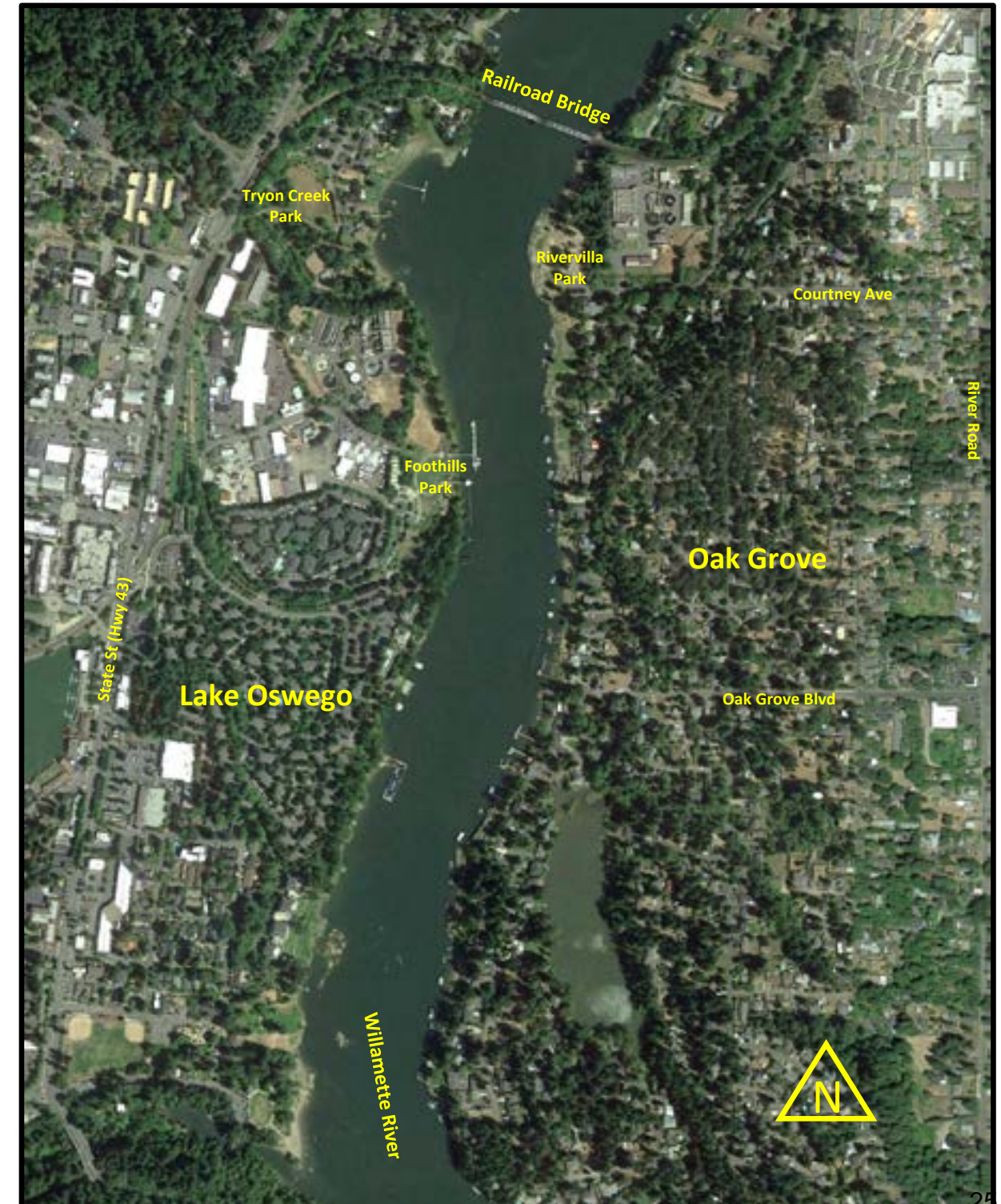
## Study Activities

The study is funded by the *Metro Active Transportation Development Fund* and is scheduled to be completed in fall 2019. Three key groups are providing input and guidance on this project – a Community Advisory Committee, a Technical Advisory Committee and a Policy Committee.

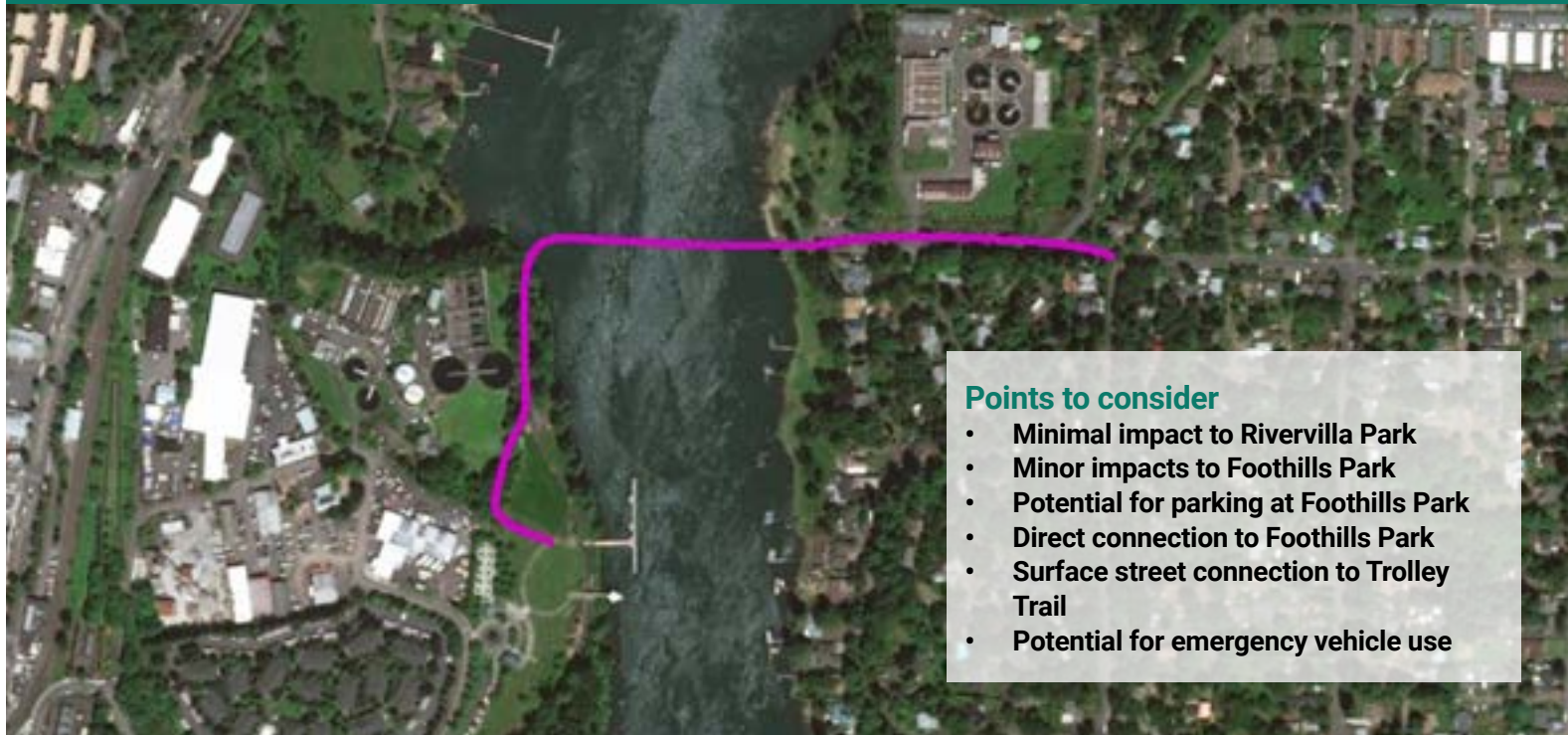
To this point, the project has:

- **Identified and approved evaluation criteria** to use when considering possible landing points for the bridge on both sides of the Willamette River
- **Identified 10 possible bridge alignments to consider, including high level cost estimates:** In July and August, the public and project committees were asked to review and comment about the alternatives, to reduce the number of alignments being considered to three.
- Hundreds of people participated in the open houses, either online or in person. The three alignments that gained the most public support are shown on the back of this page. Those alignments are:
  - **Alignment A:** Between Foothills Park in Lake Oswego and SE Courtney Road in Oak Grove
  - **Alignment B:** Between SW Terwilliger Boulevard in Lake Oswego and SE Courtney Road in Oak Grove
  - **Alignment C:** Between Foothills Park in Lake Oswego and SE Bluff Road in Oak Grove
- **In September:**
  - **The Policy Committee** – made up of one elected official each from Metro, Clackamas County, Lake Oswego and Milwaukie – will review input and recommendations from the public, the CAC and the TAC; and reach consensus on the top three alignments and whether the study should move to the next phase.
  - **The Community Advisory Committee** will meet to complete their work on this phase
  - **A public meeting** will be held to share the recommendations and answer questions.

## OGLO Bridge Study Area



# Alignment A: Foothills Park to SE Courtney Road



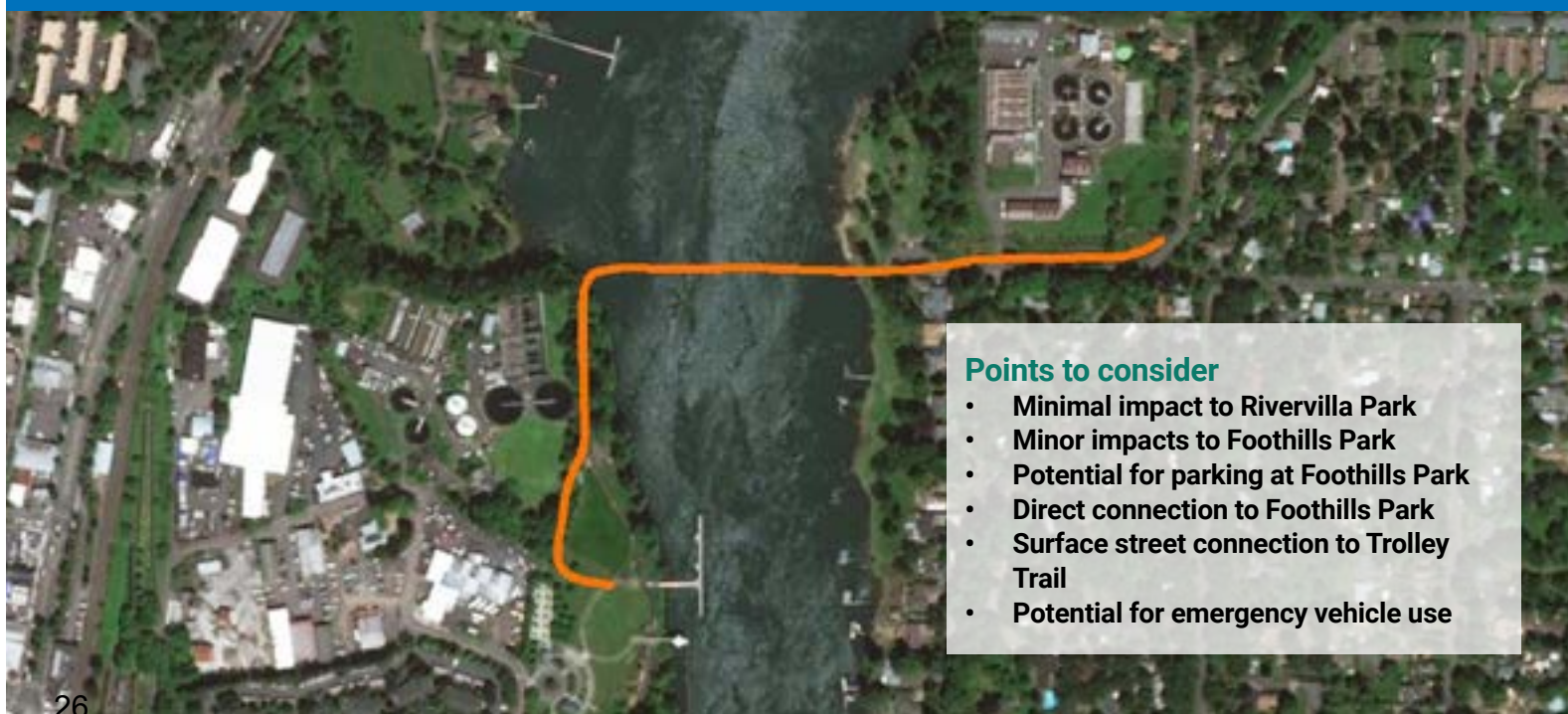
- Points to consider**
- Minimal impact to Riverville Park
  - Minor impacts to Foothills Park
  - Potential for parking at Foothills Park
  - Direct connection to Foothills Park
  - Surface street connection to Trolley Trail
  - Potential for emergency vehicle use

# Alignment B: SW Terwilliger Blvd to SE Courtney Road



- Points to consider**
- Minimal impact to Riverville Park
  - Major impacts to Tryon Cove Park
  - No parking on either end
  - Provides Hwy43 crossing and connection to Terwilliger Trail
  - Connection to Foothills Park over proposed Tryon Cove bridge
  - Surface street connection to Trolley Trail
  - Longest and most expensive alternative
  - Potential for emergency vehicle use

# Alignment C: Foothills Park to SE Bluff Road



- Points to consider**
- Minimal impact to Riverville Park
  - Minor impacts to Foothills Park
  - Potential for parking at Foothills Park
  - Direct connection to Foothills Park
  - Surface street connection to Trolley Trail
  - Potential for emergency vehicle use



## Next Steps

**If the jurisdictions involved decide to continue to consider a bridge, the next study phase would include:**

- **Preliminary Conceptual Design** for a possible bridge
- **Planning Cost Estimate and Funding Plan** for bridge construction and long-term maintenance
- **Environmental Scoping** to identify environmental issues and permitting requirements
- **Equity Analysis** to ensure that no group is disproportionately affected.
- **Governance Agreement** to determine which group of local and regional governments would move the project forward.
- **Extensive Public Engagement** to keep the community informed and gather feedback.

**Alignments shown had the greatest support from the public at open houses August 3 and 5, and online between July 29 and August 9.**

**For more information**  
 Stephen Williams, Project Manager  
 swilliams@clackamas.us  
 503-742-4696  
 www.clackamas.us/transportation/oglo

## Memorandum

**To:** C4 Metro Subcommittee  
**From:** Dayna Webb, City of Oregon City  
Jaimie Huff, City of Happy Valley  
Cities of Clackamas County TPAC Representatives  
**Re:** October 4, 2019 TPAC Meeting  
**Date:** October 16, 2019

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### Overview

Following is a brief summary of the October 4, 2019 TPAC Meeting. The TPAC packet, as well as the full TPAC Work Program can be found [here](#).

#### General Updates

- TriMet continues to make progress on its “[Mobility on Demand](#)” open trip planner demonstration project. This tool uses the real-time location of vehicles, bikes, and e-scooters to perform trip planning using a mix of travel options. The tool is mobile-friendly for smartphones, including a map for laying out a user trip. Because this tool uses open source technology and open data, other transit agencies may adjust the trip planner for their system and share improvements back and forth. Try out the beta-version tool [here](#)!
- Metro is preparing the 2020-2021 [Unified Planning Work Program](#) update, which documents all federally-funded planning projects. Document viewer can expect the new UPWP to be reformatted to enhance user experience, as well as new language that more clearly identifies how each planning project supports the RTP priorities of equity, safety, climate and congestion.
- Metro is preparing base data for the 2021-2024 MTIP No-Build Network. Jurisdictions have until October 31 to provide feedback on roadway and bicycle projects, if they have not done so already.

#### Metropolitan Transportation Improvement Program (MTIP) Formal Amendment 19-5037

**Purpose:** Adding or amending existing projects to the 2018-21 Metropolitan Transportation Improvement Program involving four projects impacting Portland, TriMet, Tualatin, and Washington County (OC20-02-OCT).


- TPAC recommended item by moved to JPACT.

#### Frog Ferry Project Update

**Purpose:** Overview of the Frog Ferry project concept.

- The Friends of Frog Ferry, a non-profit organization, is researching the feasibility of a public passenger ferry service. As proposed, a [Frog Ferry](#) may provide up to four 149-passenger commuter ferries with up to 9 stops between Oregon City and Vancouver, Washington. The service schedule, time, and stops will vary based on demand.<sup>1</sup>
- Since 2017, project partners have advanced concept feasibility studies. Findings from these studies are anticipated in 2020. Concurrently, an operation finance plan is scheduled to go into development next year. If successful, partners hope to begin service in 2023 with 30 percent farebox cost recovery.
- According to the Frog Ferry Project Team, every major U.S. river city has water transit, except for Portland. A ferry may assist in the

Frog Ferry Fast Facts
<b>\$1 million</b> <i>Cost per month for 4 boats</i>
<b>\$50 million</b> <i>Startup capital construction cost (up to 85% FTA funding)</i>
<b>2,400,000</b> <i>Est. passenger capacity per year</i>
<b>\$5.50</b> <i>Est. daily ticket cost</i>



<sup>1</sup> Estimated commute time Vancouver to Salmon Springs forecasted to be 38 minutes.

reduction of congestion and greenhouse gas emissions, enhancing regional livability, a healthy economy and supporting emergency response services.

### Regional Flexible Funds Allocation (RFFA) technical, risk, public comment report

**Purpose:** Brief TPAC on the technical and risk assessment outcomes, discuss issues in developing draft recommendation.

- Over the next three months, TPAC and JPACT will discuss RFFA project applications and create an approved project list to be considered by Metro Council in January 2020. There are four primary sources of information that TPAC will leverage to develop its December recommendation to JPACT: the technical evaluation (radial graphs assessing how well each project meets RTP priorities), risk assessment report (assessing feasibility of project delivery), public comment and county coordinating committee feedback. TPAC may need to rely more heavily on the latter three tools, as strictly following the technical evaluation may not result in a project package that fulfills RFFA objectives.<sup>2</sup>
- As of October 3, Metro received about 2,700 public comments about RFFA candidate projects. The public comment period closed on October 7<sup>th</sup>. To help facilitate public comment on proposed projects, Metro hosted an [online survey](#). Results of the Metro survey may not be scientifically valid with regard to regional demographics. At first glance, low income communities and communities of color appear to represent a smaller share of survey responses. Project staff will assess whether environmental justice groups had remarkably different feedback than other groups, and other outreach strategies could be considered, if appropriate.
- Coordinating committees are requested to provide their feedback prior to JPACT's November meeting.



### **Process Connection**

*JPACT is scheduled to discuss TPAC's feedback on October 17. Leading into the JPACT meeting, TPAC has been made aware of nuances emanating from the RFFA project evaluation process. Clackamas Cities TPAC representatives suggest that JPACT representatives consider these nuances when forming their RFFA recommendations:*

- *No projects from East Multnomah County achieved ratings sufficiently high enough to be in the top half of project evaluations.*
- *Multnomah County requested their projects be considered in both the Active Transportation and Freight categories, per direction from TPAC in developing the RFFA policy report to allow applicants to request evaluation in both categories.*
- *Only three projects were submitted in the Freight category, and only one of those projects scored in the top half of the project evaluations.*
- *Total funding requests in the Freight category are just under \$6 million; the target amount in this category is \$10.8 million. At TPAC's request, Metro will prepare multiple options for how the outstanding freight revenue could be reallocated, such as funding projects that simultaneously applied for both freight and active transportation category.*
- *Initially, the technical evaluation was anticipated to be represented by radial graphs. The evaluation now includes tangible scoring numbers. Further explanation from RFFA consultants may provide deeper context for interpreting the numerical scores.*

### Regional Mobility Policy Work Plan

**Purpose:** Report back on scoping activities and seek feedback on draft work plan and engagement plan.

- As reminder, Metro and ODOT are partnering on a process to update the Regional Mobility Policy<sup>3</sup>. The policy update is expected to take two years. This November, TPAC will make a recommendation to JPACT on a work plan to guide the update process.

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<sup>2</sup>Allocating funding by strictly following the technical ratings results would result in no investments in East Multnomah County, and only funds \$3.4 million in the Freight category.

<sup>3</sup>The Regional Mobility Policy contains quality of service target ranges for the operational conditions of the auto network. These operational conditions are evaluated using the ratio of traffic volume to planned roadway capacity (referred to as the volume/capacity ratio). These metrics diagnose the extent of auto congestion during different times of the day in order to identify deficient roadway facilities and services in the plan.

- Since TPAC last discussed this item, project staff have completed stakeholder interviews across the region. A report summarizing scoping engagement activities and feedback received will be available in mid-October.
- Under the draft work plan, project staff hopes to leverage existing Metro policy committees within the decision-making process. This approach may provide a nexus for Clackamas County stakeholders to provide input as work progresses.
- The draft mobility policy work plan and public engagement plan will come before JPACT for approval in later this year. Next June, JPACT will have the opportunity to provide policy direction on the measures to be tested through the policy update.



### Local Impact: New Plan Guidance

*Why is this project important? Under the current policy, mobility targets are focused on motor vehicle operations and do not reflect multi-modal transportation/transit system performance or "people trips". Additionally, mobility targets are often exceeded in future operation analyses and potential mitigations may be infeasible due to funding, community goals and environmental constraints. The updated policy will address all modes of transportation in the context of planned land uses.*

*At a high level, the Mobility Policy update is expected to result in new frameworks to guide regional and local Transportation System Plans (TSPs) and the evaluation of the potential impacts of plan amendments and zoning changes on the transportation system as required by Section 0060 of the Transportation Planning Rule.*



### Process Connection

*In prior discussion at JPACT, members expressed interest in adding metrics to assess area access to alternative transportation modes, asset effectiveness (e.g., transit) and system completeness. Some members, however, desired clarification on which metrics should be primary and which metrics should be secondary.*

## Upcoming Agenda Highlights

- November 1, 2019
  - Regional Mobility Policy Work Plan – **Recommendation to JPACT**
  - Regional Flexible Funds Allocation – Information/Discussion
  - Designing Livable Streets and Trails – Information/Discussion
  - Regional Congestion Pricing Study – Information Discussion
- December 6, 2019
  - Regional Flexible Fund Allocation – **Recommendation to JPACT**
  - TSMO Strategic Projects Work Program – **Recommendation to JPACT**
  - CBOS II Amendment to UPWP – **Recommendation to JPACT**
  - State of Transportation Safety within the Region – Information/Discussion
  - Regional Congestion Pricing Technical Analysis
- January 10, 2020
  - TSMO Strategic Projects Work Plan – **Recommendation to JPACT**
  - Tri-Met Mobility Strategy & Mobility on Demand/Open Trip Planner – Project Update
  - Regional Mobility Policy Update – Information/Discussion

## For additional information, please contact:

Dayna Webb, City of Oregon City [dwebb@orcity.org](mailto:dwebb@orcity.org)

Jaimie Huff, City of Happy Valley [jaimiel@happyvalleyor.gov](mailto:jaimiel@happyvalleyor.gov)