



2022-2024 Regional Flexible Funds Project Application

Clackamas County: Courtney Avenue Complete Streets

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APPLICANT INFORMATION

1. Jurisdiction name: *Clackamas County*

2. Contact info: Name, phone #, email:

Scott Hoelscher, Senior Transportation Planner

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3. Funding category (check one): ☒ Active Transportation ☐ Freight ☐ Both

4. Project name: *Courtney Avenue Complete Street Project*

5. Describe the project purpose. What problems or issues is the project intended to address?

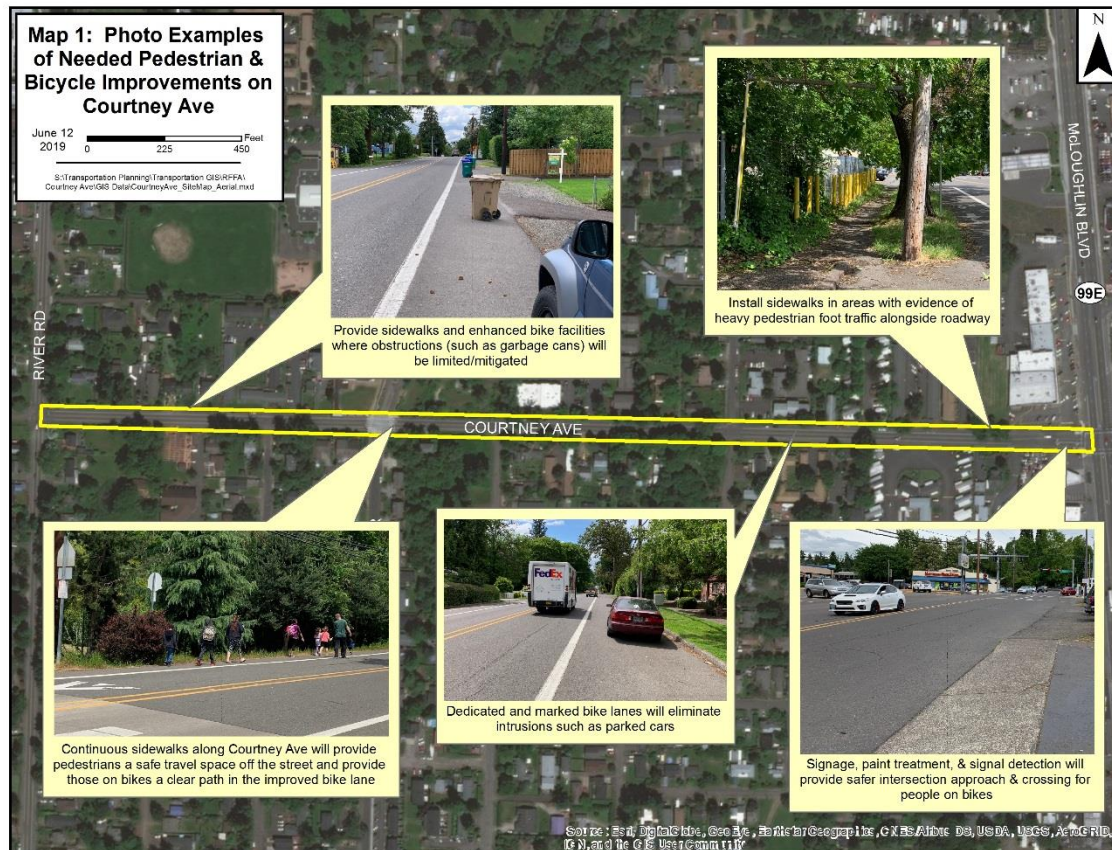
The purpose of the Courtney Avenue Complete Streets project is to facilitate nonvehicle transportation in the Oak Grove neighborhood of unincorporated Clackamas County. Currently Courtney Avenue is uncomfortable for bicyclists and unaccommodating for those walking. Map 1 on the following page shows existing issues on Courtney Ave. The lack of sidewalks force pedestrians to use the shoulder bike lane creating potential conflicts between all of transportation modes - pedestrians, bicyclists and automobile traffic. The complete streets project will improve safety and accessibility for vulnerable users by providing separated sidewalks; 8-foot wide buffered bike lanes; intermittent rain gardens for stormwater management; ADA compliant intersection curb ramps and crosswalk enhancements at two intersections, among other improvements. Further, the sidewalk and bikeway improvement proposed in the project will provide a direct east-west connection to the Trolley Trail, greatly expanding the scope of the active transportation system in the Oak Grove area.

This “complete streets” project will provide residents and visitors alike the needed infrastructure to safely bike, walk or take transit to community destinations. Importantly, improvements on Courtney Avenue will provide safe access to and from Oak Grove Elementary School, a Title One school with 63% students receiving free and reduced lunch. Currently students and families walking to school from the Courtney Avenue area must walk within the shoulder bike lane, which is often blocked by vehicles and other obstructions. See below project area map showing existing conditions. The Courtney Avenue Complete Streets project is also needed to provide multi-modal connection to three Tri-Met bus lines: 34 - River Road; frequent service line 33-McLoughlin/King Rd and 99-Macadam/McLoughlin). When constructed, residents will be able to use Courtney Avenue to access nearby transit by walking or bicycling.

This project will complete a gap in the regional active transportation network. Courtney Avenue has long been identified as a street in need of active transportation improvements. The project is a Tier One Capital Project (Project #1064) in the Clackamas County Transportation System Plan. It is also a high priority project in the Safe Routes to School Action Plan for Oak Grove Elementary School and is designated as a Regional Bikeway and as a Regional Pedestrian Corridor the Regional Active Transportation Plan. Courtney Avenue is intended to address the transportation needs of low income households, seniors, those with disabilities, and school children by providing safe, non-vehicular transportation. When complete the project will provide the historically marginalized communities of the area with a safer route to travel between home, school, work and community destinations.

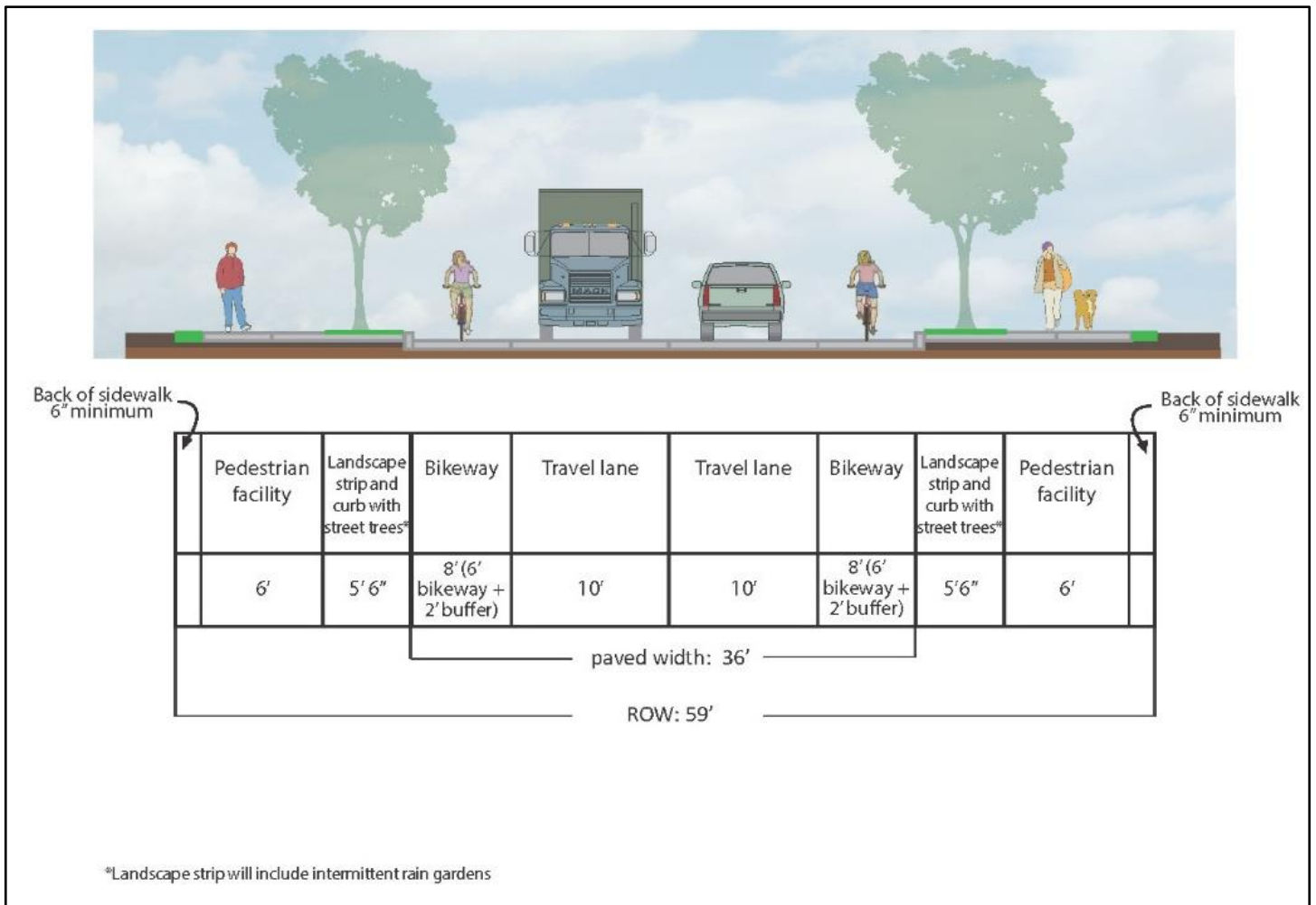
Finally, a continuous active transportation route on Courtney Avenue will help to integrate a

discontinuous street grid. The historical development patterns in Oak Grove led to a street grid system that frequently breaks down; most streets do not provide direct connections for extended distances. The disconnected street pattern leads to less direct routes and longer walking and biking trips, creating a disincentive to use active modes. In addition, most streets in the project area lack sidewalks altogether. Only Arista Drive and McLoughlin Boulevard in the project area have continuous sidewalks. Providing complete streets improvements on Courtney Avenue will encourage active travel by providing a safe, direct connection to community destinations.



The diagram below shows the improvements proposed for the project compared with the existing conditions. The proposed cross section is shown on the following page.





PROJECT READINESS

The following questions intend to gather information about how developed the project is and the steps that will still be required to complete the project. This section will be used for screening project feasibility.

Project Detail

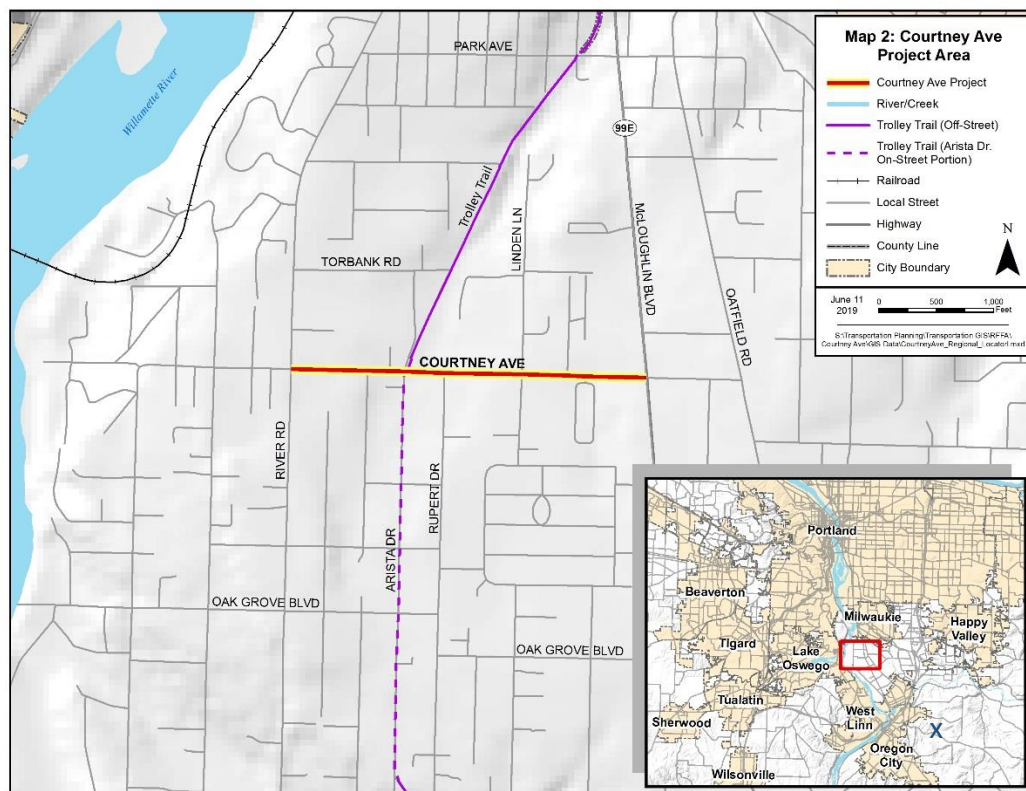
6. Is this project on the 2018 RTP Constrained list? ☒ Yes ☐ No
7. What is the RTP Project ID #? *RTP ID# 11525*
8. In which RTP network and policy map(s) is the project included? Check all that apply, indicate specific functional classification.
 - ☐ High Injury Corridor (or ODOT ARTS Hotspot map)
 - ☒ Bicycle: *Regional Bikeway*
 - ☒ Pedestrian: *Regional Pedestrian Corridor*
 - ☐ Freight
 - ☐ Transit

9. List the project beginning and ending points. What specific streets/intersections are included in the project area?

The proposed project extends along Courtney Avenue from the intersection with River Road on the west end to the intersection with OR 99E / McLoughlin Blvd on the east end. The following intersection are included in the project area:

- Courtney Avenue and Lee Avenue;
- Courtney Avenue and Arista Drive/Trolley Trail;
- Courtney Avenue and Rupert Drive;
- Courtney Avenue and Linden Lane;

Map #2 below shows the project location and intersecting streets.



10. Is the project included in an adopted local transportation safety plan or audit? ☒ Yes ☐ No

The Courtney Avenue project is included in the following local transportation safety plans:

- **Oak Grove Elementary Safe Routes to School Action Plan:** In 2017 Clackamas County completed a year-long planning effort to develop a Safe Routes to School (SRTS) Action Plan for Oak Grove Elementary School, a Title One school directly north of Courtney Avenue. Developed in conjunction with the community, the SRTS Action Plan summarizes existing transportation conditions at and around school and includes a priority list of needed infrastructure improvements for children to safely walk or bike. The SRTS Action Plan identified Courtney Avenue sidewalk construction from McLoughlin Boulevard to River Road as a priority project. Outreach and engagement included meetings with school administrators and teachers; attendance at Parent Teacher Association (PTA) meetings; a

walk audit to document existing conditions and brainstorm solutions and distribution of parent surveys to all kindergarten-5th grade families to collect feedback on SRTS needs.

- **Clackamas County Transportation Safety Action Plan (TSAP).** *The TSAP is the road map to achieve the county’s goal of eliminating fatal and serious injury crashes by 2035. The TSAP was first adopted in 2012 and updated in 2019. A priority action item of the 2019 update is “integrating pedestrian and bicycle safety considerations by providing infrastructure, encouraging slower motor vehicle, and minimizing conflict points between pedestrian’s bicyclists and motorists.” Action #VU4 in the updated TSAP is to “Continue to support the Clackamas County Safe Routes to School program.”*
- **North Clackamas School District Supplemental Walk Zone Plan:** *In 2017 the North Clackamas School District prepared a Supplemental Walk Zone Plan to review school walk zones for unsafe conditions based on vehicle speed, vehicle volume, marked crossings and presence of sidewalks, among other factors. The Courtney Avenue sidewalk project is included in the Supplemental Walk Zone Plan as a priority infrastructure need for Oak Grove Elementary School.*

11. Describe the non-RFFA funding sources available and amounts necessary for the project to be completed. How secured is the funding for each funding source (Certain, Probable, or Competitive?)

The non-RFFA funding for this project is Clackamas County Road Funds. These funds are certain and the full amount of required local funding was approved by the Board of County Commissioners at their meeting on June 13, 2019.

12. Which Project Development Stages are to be considered for RFFA funding?

The project development stages proposed for RFFA funding are preliminary engineering and environmental assessment, right-of-way, preparation of final plans, specifications and estimates, advertising, bid and award and construction.

13. If your project is found to not be as far along as indicated or has specific challenges that need to be (re)addressed to improved technical feasibility, are you interested in RFFA funding for project development activities? ☐ Yes ☒ No

14. Attach or describe the project schedule and include information about important schedule considerations or drivers.

The full project schedule is shown in Q28e. The schedule assumes that the project that the project award will be announced in January 2020. The project initiation phase will start at the beginning of FFY22 with negotiation and approval of the project IGA will extend through January 2022. The consultant RFP, selection and negotiations are expect to extend from March thru May 2022. The design phase of the project including survey, technical studies, environmental clearance, preliminary engineering and PS&E are expected to extend from June 2022 to April 2024. Both utility coordination and the Right of Way process will occur from March 2023 to February 2024. Advertising, bid, and award will take place in March and April 2024. Construction will extend from May 2024 to September 2024.

The most important drivers for the project schedule are utility coordination, and the right of way process. The project will require extensive coordination on moving of utilities located within the project foot print on both sides of the road. Although there will not be any costs to the project, experience indicates that this will be a lengthy process. To facilitate relocation, permanent utility easements will be obtained. There are no partial or full property acquisitions for this project. The

right of way process will be time consuming due to the large number of individual property owners with whom it will be necessary to negotiate and reach agreement on Temporary Construction Easements.

Project Completeness

- 15.** At what stage of the project development process is the project, and what is the status of each project stage (refer to Defining Project Development Stages above)?

Clackamas County has completed the planning stage for this project. The Courtney Avenue Complete Streets project was identified as a priority and incorporated into the Clackamas County Transportation System Plan in 2012/13. At that time it was also the subject of public input. It was received further study and public input through the development of the Oak Grove Elementary School Safe Routes to School Assessment in 2016. Planning steps undertaken to date include a detailed assessment of the corridor to identify all required active transportation improvements, a thorough assessment of safety concerns, utility issues, and a right-of-way assessment. The project development stages proposed for RFFA funding are preliminary engineering and environment assessment, right-of-way, preparation of construction plans, bid letting and construction.

- 16.** Is right of way (ROW) acquisition likely? Will the project need any unique ROW requirements such as temporary easements, special coordination with other agencies? What is the status of the ROW acquisition task of the project?

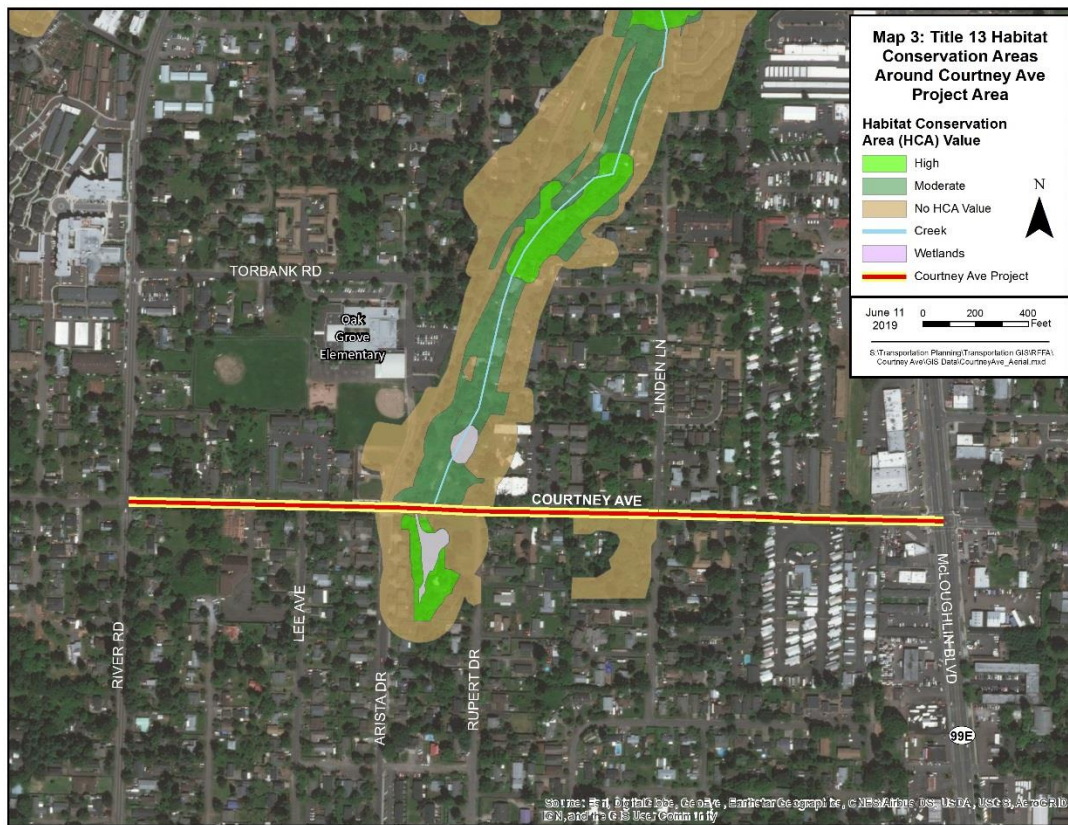
A right-of-way acquisition analysis was prepared by the Clackamas County Senior Right-of-Way Agent. All properties bounding the proposed project on the 3,000 foot section of Courtney Avenue in this project were analyzed to determine possible right-of-way impacts. That survey determined that 60 feet of right-of-way was available for the entire length of the project and that it was sufficient to accommodate the full proposed project cross section (59 feet) and other needs without any permanent property acquisition or displacement of residents or businesses. Some permanent utility easements and temporary construction easements will be necessary for the construction phase. Total right-of-way costs were estimated by the Senior Right-of-Way agent for the project are estimated to be \$678,500.

- 17.** What project development (project study reports, transportation safety plan, safety audit, feasibility studies) has been completed? How recent are these reports or this project development, and are they still relevant? Are they in digital format for possible transfer?

A Safe Routes to School Assessment for Oak Grove Elementary School was completed by Clackamas County in 2016 that showed that elementary school children were walking to school in the shoulder/bike lane on Courtney Avenue. This created a serious safety issue and caused their parents to limit the use of walking and biking for trips to school. Recommendations from the Safe Routes to School Assessment were subsequently incorporated into the 2019 update of the Clackamas County Transportation Safety Action Plan. Both of these documents are recent and remain relevant to the existing usage and traffic conditions on Courtney Ave. The documents are available in digital form.

- 18.** Does the project area intersect with Title 13 resource areas, wetlands, cemeteries, railroad tracks, Native American burial grounds, protected species habitat, or any other qualifiers that would require permitting?

The project area is within a developed area of urban, unincorporated Clackamas County. The fully developed area contains multi-family residential, commercial, institutional and single family residential uses. The only Title 13 resource is one HCA between SE Rupert Dr. and Arista associated with a seasonal stream and two small associated wetlands. The project intersects a Title 13 Habitat Conservation Area (HCA) resource near the west end of the project area (see Map #3, below). Costs have been included in the project cost estimate for mitigation related to the stream crossing and wetland mitigation. No other sensitive resources exist in the project area.



19. To what extent has environmental permitting been scoped or completed?

Environmental permitting requirements were scoped in the development of this application and cost estimate. The impacts to the stream and the two small wetlands will require permitting through Clackamas County Planning and Zoning. There is a second Title 13 HCA identified at the southwest corner of Courtney Avenue and Linden Lane. It should be noted that this HCA is identified as having no HCA value. There were no other resources identified in the project area. The environmental permitting requirements should be limited to that required for the stream and associated wetlands.

Community Support

20. What needs expressed by community members (e.g., unsafe crossing; egregiously long red lights) does the project address?

The following needs expressed by community members are addressed by the Courtney Avenue Complete Streets project:

- **Sidewalks on a Collector Roadway:** *Currently pedestrians are forced to walk in the existing narrow bike lanes due to the lack of sidewalks, creating a barrier to accessing community destinations by alternative modes. The need for sidewalks on Courtney Avenue was expressed by the community through the Oak Grove Elementary Safe Routes to School Action Plan; the McLoughlin Area Plan and the Transportation System Plan.*
- **Improved Bicycle Facility:** *The current “rural” bike lanes lack adequate horizontal separation from vehicle traffic for less confident riders and vulnerable populations such as young children and senior citizens. The bike lanes are often used for vehicle parking and contain other obstructions such as garbage and recycle bins forcing bicyclists into the vehicle travel lane and creating a barrier to bicycle transportation. The need for improved bicycle facilities was expressed by the community through the Oak Grove Elementary Safe Routes to School Action Plan; the Transportation System Plan and by the citizen Pedestrian and Bikeway Advisory Committee.*
- **Connections to the Trolley Trail.** *Many east-west connecting streets that intersect the Trolley Trail lack bike lanes and sidewalks. Courtney Avenue is one of the primary east-west connectors in Oak Grove and an important connection to the Trolley Trail. Trolley Trail connections was expressed by the community through the McLoughlin Area Plan.*

21. Which community partners are involved?

The community partners involved in the Courtney Avenue Complete Streets project, in alphabetical order, are:

Clackamas County Pedestrian and Bikeway Advisory Committee (PBAC): *12-member citizen advisory committee that assists in the development of bicycle and pedestrian planning efforts and advises the county on active transportation matters. The PBAC was involved with project selection and development of project elements. At a June 4, 2019 meeting the PBAC voted unanimously to support the Courtney Avenue Complete Streets RFFA grant application. A letter of support is attached.*

McLoughlin Area Plan – Implementation Team (MAP-IT): *15 person community-driven task force established in 2012 to help implement projects and programs outlined in the McLoughlin Area Plan. The MAP-IT organization has identified the Courtney Avenue east-west connection as a priority active transportation project. A letter of support is attached.*

Oak Grove Community Council (OGCG): *The neighborhood planning organization in the Oak Grove area that advises the Board of County Commissioners, Planning Commission and Department of Transportation and Development staff on local transportation and land use issues. The Courtney Avenue Complete Streets project is supported by the OGCG. A letter of support is attached.*

Oak Grove Elementary Parent Teacher Organization (PTO): *Assisted in the development of the Safe Routes to School Action Plan for Oak Grove Elementary School and provided feedback on infrastructure needs in the walk zone and SRTS programmatic needs. A letter of support from the school and district is attached.*

Rose Villa: *Retirement community located on SE River Road just north of the project area. Recent infrastructure improvements at Rose Villa have created a unique, walkable “pocket neighborhood” and a village “main street” with restaurants, spas and stores. Providing active transportation connections to Rose Villa is an important community need and one of the*

objectives of this project. Improvements on Courtney Avenue will help senior citizens actively travel to destinations for utility trips as well as recreation. A letter of support is attached.

22. Describe the agency and community support (and any opposition) for the project. Discuss the focus on equity and stakeholder engagement process.

Based on past community engagement there is broad public support for the Courtney Avenue improvements. Community engagement in the Oak Grove neighborhood has been ongoing for several years. An extensive community engagement process took place in Oak Grove during the 2012/13 update of the County Transportation System Plan that identified the Courtney Avenue Complete Streets project as a priority. Most recently in 2017, Clackamas County completed a year-long planning process to develop a Safe Routes to School Action Plan for Oak Grove Elementary School. The Action Plan summarizes existing transportation conditions at and around the school and includes a priority list of needed infrastructure improvements for children to safely walk to and from school. Outreach included attendance at Parent Teacher Association (PTA) meetings to explain safe routes to school infrastructure projects and distribution of parent surveys to all kindergarten-5th grade families to collect feedback on SRTS needs. The parent survey asked for information about what factors affect whether parents allow their children to walk or bike to school and the conditions along routes to school. Parents identified speed of traffic; lack of adults to walk or bike with; lack of sidewalks; and unsafe intersections and crossings as the biggest barriers to walking or biking to Oak Grove Elementary school. Parent surveys included a route map to document specific areas of concern and a section for written comments. Several comments addressed the need for improved facilities on Courtney Avenue. Comments specific to Courtney Avenue from the SRTS parent survey collected in March of 2017. Parent Comment (transcribed verbatim from submitted surveys)

- “It would be much safer if there were sidewalk on Linden and especially Courtney. Without sidewalk on busy streets she’ll only ever walk with an adult, even in future years.”*
- “If they were to walk: Walnut, Bunnell-Courtney is the quickest route, but no sidewalks and a busy road Courtney.”*
- “Sidewalk on Courtney Ave”*
- “If they (kids) were to walk Courtney Avenue is the quickest route but no sidewalks and a busy road.”*
- “It would be great to have crosswalks signals at the intersections of Oak Grove Blvd. and Arista Dr. and Arista Dr. and Courtney Ave.”*
- “There needs to be sidewalks on Courtney Avenue and River Road (both sides of the street).”*

Although no opposition has been expressed to this point, opposition is expected from individual property owners who have impinged on the right-of-way and will oppose impacts to landscaping improvements on public property.

Interagency Connections

23. Are TriMet, SMART, or adjacent or overlapping jurisdictions (counties, cities) involved in and supportive of the project?

The proposed project provides a safer connection for pedestrians and bicyclists to TriMet stops on McLoughlin Blvd and on River Rd, as well as the MAX Orange line Park Avenue Station, but

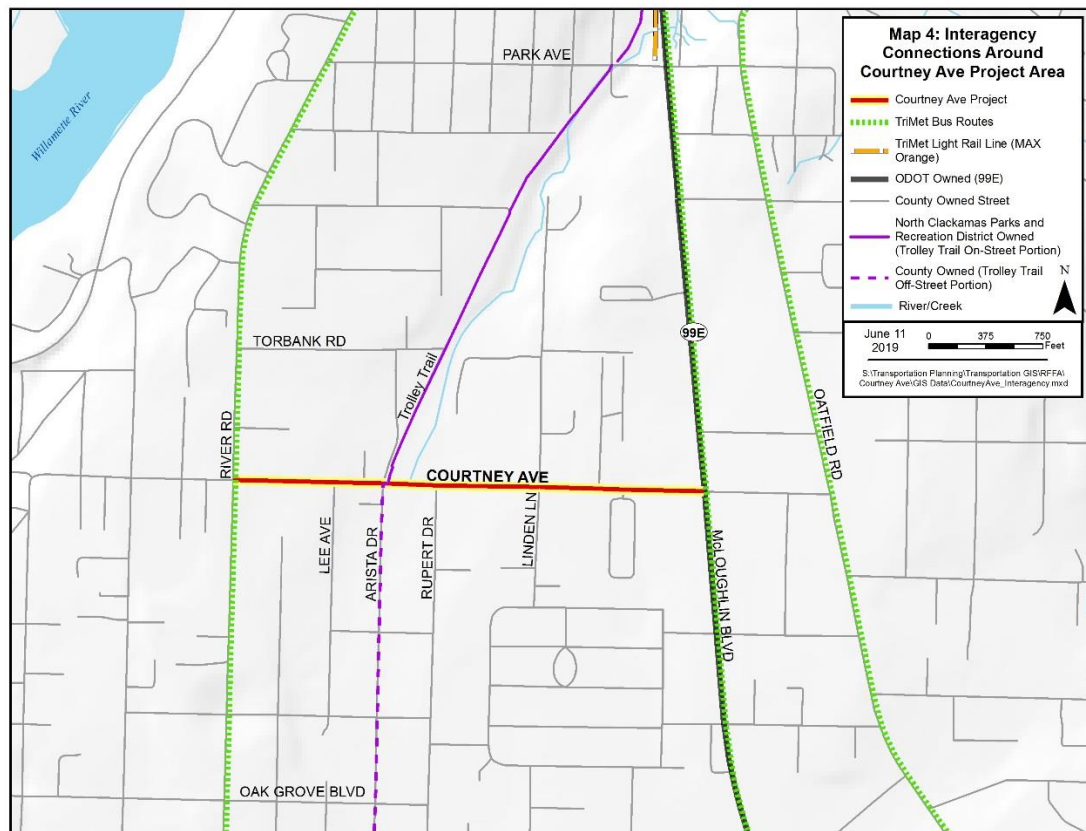
does not have any impact on any TriMet facility or route (see Map 4 below). The project is not adjacent to or overlapping any other local government jurisdiction.

- 24.** Is the project on or does it connect with a separate agency facility? Indicate all potentially involved agencies' awareness of and cooperation with the project. Potential agencies include Oregon Department of Transportation (ODOT) (Highway, Rail divisions and others as required), railroads, utilities, Bonneville Power Administration, or Port of Portland.

There are only two locations at which the Courtney Avenue Complete Streets project connects with separate agency facilities (see Map 4 below)

ODOT - The east end of the project is at the intersection of OR 99E / McLoughlin Blvd and Courtney Ave. The project does not propose any changes to the pavement, sidewalks or crosswalks at the intersection. The project will convert the dedicated right turn lanes that exist on both Courtney Avenue approaches into shared bike/vehicular lanes that will include “bike boxes” and infrared bike detection that will be incorporated into the signal control. Clackamas County staff traffic staff has consulted with ODOT Region #1 signal staff and secured their support for the project.

North Clackamas Parks and Recreation District - The project will intersect the Trolley Trail which is owned and maintained by the North Clackamas Parks and Recreation District. There have been two pedestrian fatalities at this intersection in the past 10 years, so the project will add RRFB warnings on both approaches to the Trolley Trail intersection to alert motorists to the presence of pedestrians crossing the road. None of the curb ramps at the intersection are ADA compliant so the project will also replace all 8 curb ramps at that location. There are no other project impacts to other agencies or organizations.



- 25.** Will utilities need to be relocated? Who owns the utilities and what is their level of awareness and support for the utility relocation?

Overhead utilities will be required to relocate to the back of the right-of-way in permanent utility easements. Any underground utilities that conflict with new stormwater infrastructure will be required to be adjusted. Those utilities, including PGE, Northwest Natural, and Comcast have been informed of that possibility and are aware of the project. Consistent with Clackamas County practice, the utilities will be engaged as part of the design process and utility relocation will occur coincident with project construction.

- 26.** Do you have design control consistently across the project area? If other agencies are affected by this project, do you have the necessary documentation of agreement regarding design elements reflected within this project? (Please obtain signatures as indicated on the Signature Page of this application.)

The project will be built entirely within existing right-of-way and there are no overlapping jurisdictions that will be affected. Clackamas County has full design control across the entire project.

Project Risks

The following questions intend to identify potential risks to project completion.

- 27.** Has a person(s) with the proper authority reviewed and agreed to the project design, and signed off on this application? ☐ Yes ☒ No

- 28.** Are there any anticipated risks for the following:

a. Right of way (ROW)

- i. Are ROW acquisition costs included in the cost estimate?

Yes. A right-of-way acquisition analysis was prepared by the Clackamas County Senior Right-of-Way Agent. All properties bounding the proposed project on the section of Courtney Avenue from OR 99E/McLoughlin Blvd to River Road were analyzed to determine possible right-of-way impacts. That survey determined that 60 feet of right-of-way was available for the entire length of the project and that it was sufficient to accommodate the full proposed project cross section and other needs without any permanent property acquisition or displacement of residents or businesses. Approximately 42 permanent utility and temporary construction easements will be necessary for the construction phase. Total right-of-way costs for the project are estimated to be \$678,500.

- ii. Were the federal Right of Way Uniform Act's acquisition and negotiation processes performed during the ROW acquisition stage or considered in the schedule and budget, for those projects which have not yet performed ROW acquisition?

All provisions of the federal Right of Way Uniform Act for acquisition and negotiation process will be followed for the Permanent Utility Easements and Temporary Construction Easements that will be necessary for this project. No full or partial property acquisitions are included in this project.

b. Utility Relocation

- i. Are utility relocation costs included in the cost estimate?

Clackamas County is not responsible for any costs for utility relocation. The individual utility districts and companies will be relocating and/or adjusting all utilities to grade as necessary to accommodate the construction. Utility relocation coordination will be performed by Clackamas County and the construction contractor.

c. Stormwater considerations

i. Water quantity

The project will need to meet federal water quantity and Clackamas County's Water Environment Services water quantity standards, whichever standard is more stringent. At a minimum, onsite storm quantity detention facilities will need to be designed for the 2-year, 24-hour post-developed runoff rate to ½ of the 2 year, 24-hour pre-developed discharge rate. Water quantity treatment alternatives will be evaluated during the design process, but it is expected rain gardens will be added to collect and detain stormwater runoff. The existing stormwater pipes and catch basins are sufficient for the conveyance of stormwater associated with the impervious surface of the street and for flow from adjacent properties. As part of the scoping of the project for this grant application, the existing stormwater infrastructure was inspected and determined to be in good condition, and is expected to remain in place.

ii. Water quality

The project will need to meet federal water quality and Clackamas County's Water Environment Services water quality standards, whichever standard is more stringent. At a minimum, storm water quality control facilities will be designed for events up to 2/3 of a 2-year, 24-hour storm in post-developed conditions. Water quality treatment alternatives will be evaluated during the design process, but it is expected water quality treatment will be performed through the infiltration of the stormwater through water quality media placed in the rain gardens.

d. Environmental and Permitting

i. Have potential State environmental (SEPA)/ National Environmental Policy Act (NEPA) impacts been identified?

A comprehensive environmental analysis has not yet been performed for the Courtney Avenue project. An initial review of mapped environment resources in the area indicated the presence of a Title 13 Habitat Conservation Area (HCA) just east of the Trolley Trail. As shown on Map 4 on page 9, the HCA resource areas are outside the right-of-way on private property. The presence of the HCA resource renders the project subject to Section 706 of the Clackamas County Zoning and Development Ordinance (ZDO) and will require local HCA permitting through the Clackamas County Planning and Zoning Division. In addition, an existing culvert just to the east of the Trolley Trail which may need to be extended during project construction. Culvert extension is included in the cost estimate. The National Wetlands Inventory (NWI) indicates the presence of two wetlands on either side of Courtney Avenue. One wetland is approximately 600 feet north of the right-of-way; the second, larger wetland directly abuts the southern edge of the right-of-way. See Map 4 on page 9 for location of

wetlands. The proximity of these resources may require a joint Department of State Lands (DSL) and Army Corps of Engineers wetlands permit. There are no other expected significant environmental issues that would require permitting as the project occurs in a “built-out” suburban area.

e. Schedule

The anticipated project schedule is shown below.

Month	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36						
	Oct '21	Nov '21	Dec '21	Jan '22	Feb '22	Mar '22	Apr '22	May '22	Jun '22	Jul '22	Aug '22	Sep '22	Oct '22	Nov '22	Dec '22	Jan '23	Feb '23	Mar '23	Apr '23	May '23	Jun '23	Jul '23	Aug '23	Sep '23	Oct '23	Nov '23	Dec '23	Jan '24	Feb '24	Mar '24	Apr '24	May '24	Jun '24	Jul '24	Aug '24	Sep '24						
Project Initiation	IGA Process/Approval																																									
				NTP																																						
Design Phase					Constiant RFP/Negotiations																																					
								Survey/Technical Studies																																		
												Draft/Final DAP																														
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ROW																		ROW Appraisal, Appraisal Review, Offer, Negotiations and Certification																								
Const. Phase																																		NTP				Construction				

f. Budget

The total budget for the project will be \$5,661,420, of which \$5,079,992 is the requested RFFA funding and \$581,428 is matching funds at the 10.27% rate committed by the Board of County Commissioners in their action on June 13, 2019. The full cost estimate for the project can be found in Q60

g. Staff availability

- i. Does the agency have sufficient and qualified staffing resources to lead, manage, and deliver the project? Please describe.

Clackamas County is an ODOT Certified Local Government and has a qualified staff that is trained in all aspects of the project management and delivery process with sufficient available time to lead this project. This project would be led by one of the department's ODOT/FHWA trained project managers under the direction of Joel Howie, PE, the department's Capital Project Supervisor..

Project Design

Project designs will be scored on the level of safety and environmental improvements they can provide. A project that includes as many safety and environmental mitigation elements as feasible will more completely meet the criteria.

29. Describe the project elements and countermeasures that address safety.

The design elements and countermeasures included in the Courtney Avenue Complete Streets project that address safety are (see diagram on page 4):

- *Construct 6-foot wide sidewalks with curbs on both sides of Courtney Avenue. Safety will be enhanced by creating a defined space for pedestrians that is vertically separated from vehicle traffic.*

- *Add 5-foot landscape buffer on both sides of Courtney Avenue for a total sidewalk width of 11 feet, creating a safer and more comfortable pedestrian environment horizontally separated from vehicle traffic.*
- *Remove obstructions from space utilized by pedestrians and add missing ADA curb ramps. The existing shoulder bike lane shared by pedestrians and bicyclists contains obstructions, forcing active transportation users into the vehicle travel lane. The new roadway cross section will provide dedicated space for all users.*
- *The project area will also eliminate accessibility barriers by adding 32 ADA compliant curb ramps at the following locations:*

Courtney Avenue Complete Streets: Number of new ADA compliant curb ramps

Intersection	# of Curb Ramps
<i>Courtney Avenue and River Road</i>	<i>4</i>
<i>Courtney Avenue and Lee Avenue</i>	<i>6</i>
<i>Courtney Avenue and Trolley Trail/Arista Drive</i>	<i>8</i>
<i>Courtney Avenue and Rupert Drive</i>	<i>6</i>
<i>Courtney Avenue and Linden Lane</i>	<i>8</i>
<i>Total</i>	<i>32</i>

- *Enhance an existing crossing at the Courtney Avenue - Trolley Trail intersection with ADA ramps, connecting sidewalks, lighting and new Rectangular Rapid Flashing Beacon (RRFB) at the Courtney Avenue approach.*
- *Add street and pedestrian lighting. This project will include street lights throughout the limits of the project increasing the visibility of pedestrians and bicyclists and providing navigation assistance to active transportation users during nighttime and winter months.*
- *Construct a speed table for the intersection of Linden Lane and Courtney Avenue allowing pedestrians to cross at nearly a constant grade and increasing driver awareness of the intersection and crosswalks. A speed table is already in place at the intersection of Courtney Avenue and the Trolley Trail/Arista Drive.*
- *Narrow vehicle travel lanes to 10 feet from the current 12 feet thereby reducing pedestrian crossing widths, redistributing space to create 2 foot buffers on both sides of the bikeways. Narrowing the lanes in this fashion will also benefit by calming traffic and increasing driver awareness of their surroundings.*
- *Access management: Along the corridor there are locations where the vehicle travel lane is adjacent to parking areas, creating random access points. This project will work to clearly define driveways at areas lacking appropriate access management.*
- *Construct 8-foot bikeway consisting of a 6-foot bike lane with a 2-foot buffer. The current “rural” striped bike lanes function more as a shoulders for the collector roadway than an active transportation facility. Upgrading the existing facility to separated bicycle lanes and sidewalks will improve safety by providing distinct facilities for use by pedestrians, bicyclists*

and motorists. The bikeway will also be marked and signed as a bikeway to prevent use by residents for on-street parking

- *Construct bike box with ingress lanes on Courtney Avenue on both sides of the intersection of Courtney Avenue and McLoughlin Boulevard. For east-bounder travelers, the existing bicycle facility disappears approximately 200 feet west of the Courtney Avenue- McLoughlin Boulevard intersection. A bike box will be installed at the southeast corner of this intersection to provide bicyclists with a safe and visible way to get ahead of queuing traffic.*
- *Bicycle detection. An infrared video detection camera will be installed on the traffic signal at the Courtney Avenue-McLoughlin Boulevard intersection to detect bikes separately from passenger vehicles. In conjunction with the detection cameras the project will involve implementing signal timing to help bikes safely cross the wide intersection of Highway 99.*

30. What countermeasures are included that reduce conflicts between modes (vehicles, pedestrians, bicycles, railroad crossings) and improve safety? (Use Appendix C design checklist, check all that apply)

This project includes the following 10 pedestrian and 5 bicycle design elements listed in Appendix C: Active Transportation Design Guidelines.

Pedestrian Design Elements

- *Add sidewalks or improve vertical delineation of pedestrian right-of-way (i.e. missing curb)*
 - *Existing: Four sidewalks segments scattered throughout project area totaling approximately 760 liner feet.*
 - *Proposed: 3100 lineal feet of 6 foot wide sidewalk; 6" curb with minimum 5-foot wide landscape buffer for a total width of 11'-6".*
- *Add sidewalk width and/or buffer for a total width of 10 feet or more, 8 feet minimum on streets with lower traffic volumes and speeds (ADT less than 6,000 and 25 mph or less). Buffer may be provided by parking, protected bike lane, furnishing zone, street trees/planting strip.*
 - *Existing: There are four short sidewalks segments scattered throughout project area totaling approximately 760 liner feet. Approximately 565 feet of which are barely 5 feet wide, curb-tight and in some cases obstructed by mailboxes, further narrowing the sidewalk to widths inaccessible to wheelchairs and strollers. There is one new sidewalk segment approximately 195' feet in length constructed in conjunction with a new development on the north side of Courtney Avenue near the Trolley Trail.*
 - *Proposed: 3100 lineal feet of 6 foot wide sidewalk; 6" curb and with minimum 5-foot wide landscape buffer for a total sidewalk width of 11'-6".*
- *Sidewalk clear zone of 6 feet or more.*
 - *Existing: The existing sidewalk segments in the project area are not ADA accessible due to inadequate widths and lack of compliant curb ramps.*

- *Proposed: 3100 lineal feet of sidewalk with minimum 6-foot wide clear zone with minimum 5-foot wide landscape buffer with compliant curb ramps at all required locations.*
- *Remove obstructions from the primary pedestrian-way or add missing curb ramps.*
 - *Existing: Pedestrians currently use the shoulder bike lanes which is often obstructed by vehicles, trash containers, among other obstruction. The only ADA compliant curb ramps are at the intersection of Courtney Avenue and McLoughlin Boulevard.*
 - *Proposed: 6,100 lineal feet of 6-foot sidewalk and 32 ADA compliant curb ramps at five intersections throughout the project area.*
- *Add enhanced pedestrian crossing(s) at appropriate locations*
 - *Existing: There is existing speed table with raised pedestrian crossings at Courtney Avenue and Arista Drive/Trolley Trail.*
 - *Proposed: Construct a new speed table with raised crosswalks at the intersection of Linden Lane and Courtney Avenue allowing pedestrians to cross at nearly a constant grade and increasing visibility approaching vehicles while making motorist more aware of the pedestrian crossing.*
- *Narrowed travel lanes.*
 - *Existing: Two 12 foot travel lanes, widening to three lanes for left turning movement at the intersection with McLoughlin Boulevard.*
 - *Proposed Features: Two 10 foot travel lanes.*
- *Rectangular Rapid Flashing Beacon (RRFB) or pedestrian signal*
 - *Existing: Intersection of Courtney Avenue and Arista Drive/Trolley Trail is marked with white crosswalk line and school zone signage/flasher.*
 - *Proposed: new RRFB at intersection of Courtney Avenue and Arista Drive/Trolley Trail on both approaches.*
- *Lighting, especially at crosswalks – pedestrian scale (10-15 feet) preferably positioned over sidewalk*
 - *Existing: Intermittent lighting co-located on existing power line utility poles*
 - *Proposed: Project will provide new street and pedestrian lighting located along the length of project.*
- *Access management: minimize and spacing of driveways*
 - *Existing: The east end of the project area has few defined access points, which allows vehicles to enter and leave the roadway at any location instead of only at intersections and driveways.*
 - *Proposed: Sidewalk continuation at east end of project area with clearly defined driveways to the adjacent commercial businesses.*

Bicycle Design Elements

- *Buffered bicycle lanes, at least 6 foot bike lane with minimum 2 foot buffer.*
 - *Existing: shoulder bike lane variable in width. Most sections 5 feet.*
 - *Proposed: 8' buffered bike lane- 6 foot travel lane; 2 foot buffer.*
- *Bike priority treatments at intersections and crossings, including advance stop signs, bike boxes, bicycle priority signals, high-intensity activated crosswalk (HAWK) signals, user-activated signals.*
 - *Existing: The project area currently does not contain bike priority treatments.*
 - *Proposed: Bike box at the intersection of Courtney Avenue and McLoughlin Boulevard*
- *Lighting at intersections:*
 - *Existing: Intermittent lighting co-located on existing power line utility poles*
 - *Proposed: Project will provide new street and pedestrian lighting along length of project.*
- *Access management: minimize and spacing of driveways*
 - *Existing: The east end of the project area does not have curb or sidewalk defining access points, which allows vehicles to enter and leave the roadway at any location instead of only at intersections and driveways.*
 - *Proposed: Sidewalk and curb construction at east end of project area with clearly defined driveways to the adjacent commercial businesses.*
- *Other bicycle priority design elements: Wayfinding:*
 - *Existing: Intertwine signage existing along the Trolley Trail*
 - *Proposed: Bicycle wayfinding signage at decision points will be installed throughout the project area.*

Other Complete Street Features

- *Street trees and/or landscaping*
 - *Existing: One new sidewalk segment with a landscape strip and three street trees was constructed in conjunction with a private development. This “orphan” sidewalk is approximately 195' feet in length.*
 - *Proposed: 6 foot side and 5 foot landscape across along both sides of the entire street, for a total of approximately 6,100 feet.*
- *Stormwater treatments*

- *Existing: Existing stormwater conveyance system will remain in place to accommodate over flow from rain gardens and any existing flow from outside the project area. Existing system consists of 22 catch basin and 6 stormwater manholes.*
- *Proposed: Rain garden on one side of the street for approximately 2/3 of length of the project.*

31. What specific project design elements are aimed at reducing environmental impacts (street trees, bioswales, etc.)?

See response to Q48.

32. Are there additional design elements or countermeasures not on the checklist that are included in the project design that will improve safety and environmental outcomes?

No additional design elements or countermeasures that will improve safety and environmental outcomes.

Project Outcomes

Projects will be scored in terms of their ability to create positive outcomes that align with RFFA priorities and regional goals. The following questions aim to gather details directly related to those potential outcomes. Please provide all relevant data to support your response, using Metro-provided data or additional sources. Metro staff will provide data to the scoring committee to confirm

Affordability/Equity

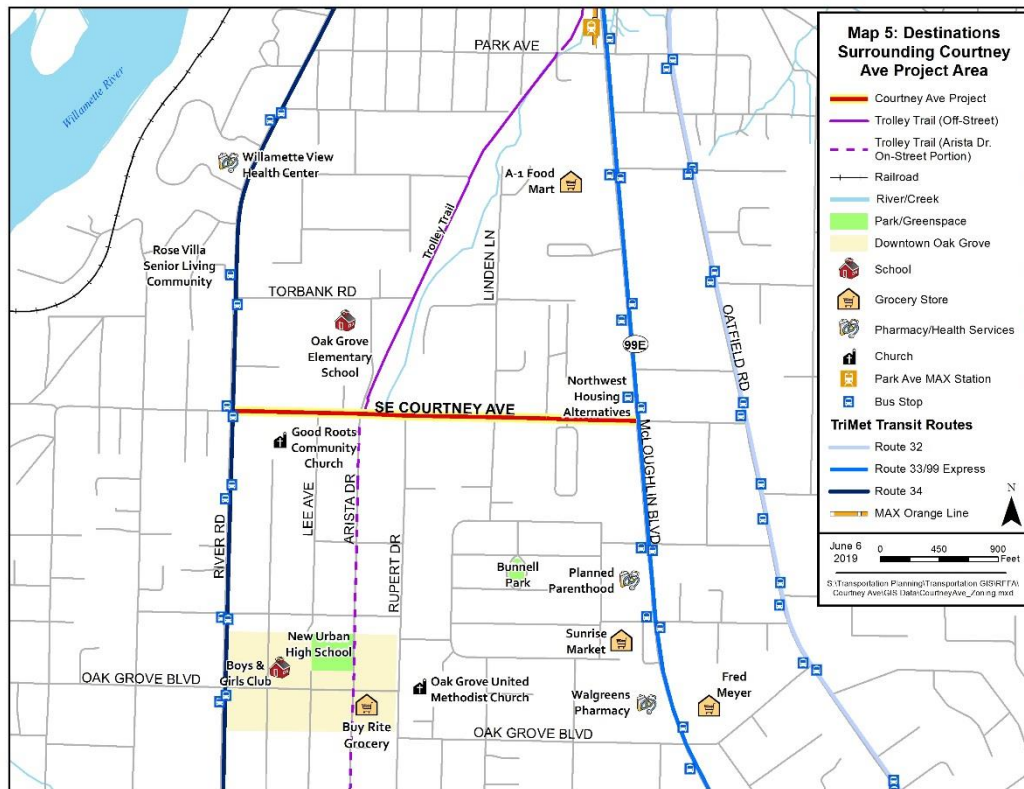
33. Is the project in an Equity Focus Area? ☒ Yes ☐ No Please indicate which Focus Area.

People of color and/or limited English proficiency and/or low income

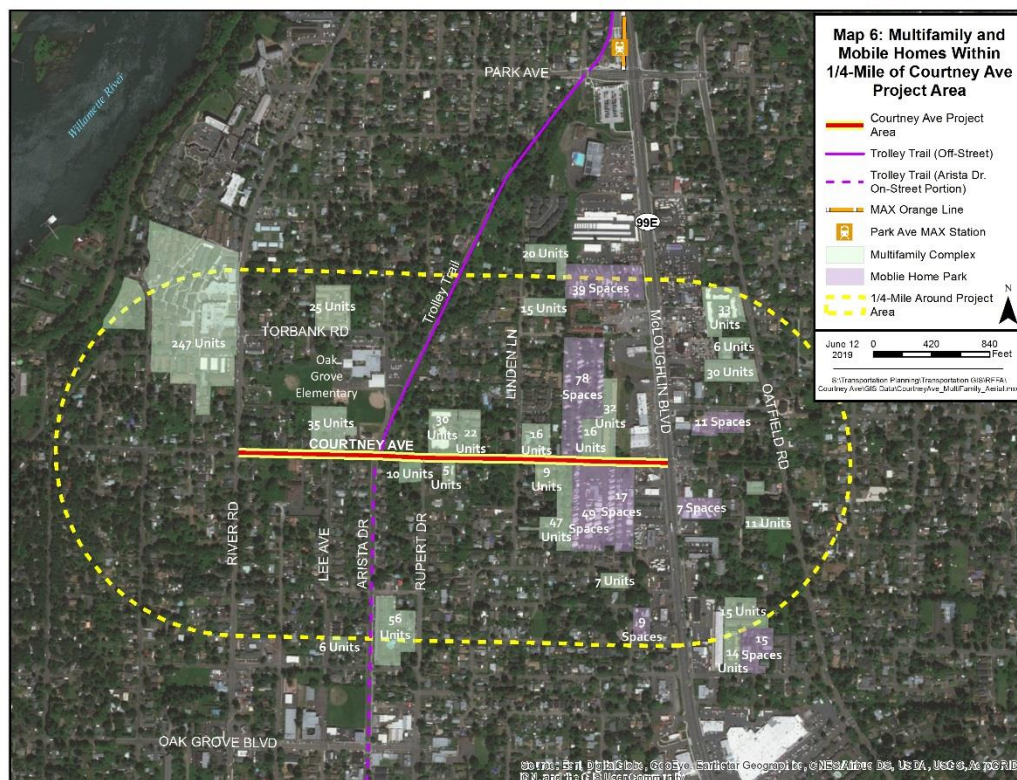
34. List the community places, affordable housing, and Title 1 schools within ¼ mile of project.

See Map 9 on the following page:

- *Title 1 School: Oak Grove Elementary School*
- *Community Places:*
 - *Good Roots Community Church – provides a variety of services to the local community including a food bank, community garden and a clothes closet that provides donated clothing*
 - *Rose Villa Senior Living Community – hosts a seasonal farmers market providing home grown vegetables, seasonal fruits and baked goods, and a 2 acre Community Garden*
 - *Planned Parenthood located on OR 99E/McLoughlin Blvd, about 1,200 ft south of the project location*
 - *Retail/Services – a variety of local retail/services are available along OR 99E/McLoughlin Blvd north and south of Courtney Ave*
 - *Trolley Trail – The Trolley Trail is the primary recreation facility in the project area*



- *Affordable Housing – A survey was conducted by Clackamas County staff to determine the number of housing units within the project area (see Map 7 below). This is one of the highest density neighborhoods in Clackamas County and includes 578 single family homes,*



707 affordable multi-family units and 225 mobile home units within ¼ mile of the Courtney Avenue project, for a total of 932 affordable units within a ¼ mile radius of the project. Since there are 1,510 households in the project area, this means that 62% of households in the project area live in multifamily or mobile home units.

35. What are the estimated totals of low-income, low-English proficiency, non-white, seniors and youth, and persons with disabilities who will benefit from this project?

- *Data used for the analysis for this question was derived from the 2017 5-year ACS data for the Portland Urban Area and the block groups surrounding Courtney Ave.*
- *Based on the average number of persons per unit in the surrounding census block groups and the number of units in the project area, the total estimated population of the project area is 3,599 and the total number of households in the project area is 1,510.*
- *The median household income for the Oregon portion of the Portland Urban Area is \$66,614. Of the households in the region, 24.5% are very low income (below 50% of median household income) and 15.7% are low income (between 50% and 80% of median household income) for a total of 40.2% of regional households that are either low or very low income. Using regional median household income and household income data for the surrounding block groups, the project area was determined to have:*
 - *421 very low income households below 50% of the regional median household income*
 - *379 low income households between 50% and 80% of the regional median household income*
 - *Total of 800 low or very low income households.*

Since there are 1,510 households in the project area this means that

- *27.9% of households in the project area are very low income*
- *25.1% are low income*
- *Total of 53.0% of household are very low or low income.*
- *The project area has 53.0% low or very low income households compared with 40.2% for the region. **This means the project area has very low or low income households at a rate 31.8% higher than the Portland region.***
- *The number of persons reporting that they spoke English not-well or not at all is 112, or 3.1% of the project area population. This is a slightly lower share of the population than in the region where 3.9% of the Oregon portion of the Portland Urban Area reported that they spoke English “not well” or “not at all.”*
- *The non-white population (including non-white Latinos) is 17.1% of the project area population or 615 people. This rate is somewhat lower than the rate for the Portland Urban Area in which those who are non-white make up 21.1% of the total population.*
- *The youth (below 18 years) is 284 or 7.9% of the total population. This is significantly below the regional figure of 21.5% below the age of 18 years.*

- *The senior population (65 or above) is 849 or 23.6% of the total population. The rate for the Portland Urban Area is 12.7%. **This project area has a senior population that is 85.8% higher than the region.***
- *The number of persons with disabilities is 583 or 16.2% of the area population. The rate for the Portland Urban Area is 10.25%. **This project area has a population of those with disabilities that is 58.0% higher than the region.***

The following table summarizes the equity analysis for the Courtney Avenue Complete Streets project area:

Equity Group	Portland Urbanized Area	Courtney Avenue Complete Street Project Area
<i>Low Income</i>	40.2%	53.6%
<i>Low English Proficiency</i>	3.9%	3.1%
<i>Non-white</i>	21.1%	17.1%
<i>Seniors</i>	12.7%	23.6%
<i>Youth</i>	21.5%	7.9%
<i>People with Disabilities</i>	10.3%	16.2%

- 36.** What are the barriers faced by these communities that the project addresses or overcomes, and how will these populations benefit from this project?

The main barrier faced by the community in the Courtney Avenue area is the lack of safe pedestrian and bicycle facilities. The bike lane shoulder that is marked on either side of the road in many places is not full width (6 feet). The bike lane is also poorly marked/signed and in some locations residents park cars in the bike lane. The presence of the parked cars forces bicyclist to swerve into the street. There are only very limited sidewalks on Courtney Avenue and such sidewalks that do exist are not full width (6 feet) and do not provide ADA compliant curb ramps at the corners. This forces all pedestrians, including children on their way to/from school, and those with disabilities to use the bike lane/shoulder. This project will add full sidewalks on both sides of Courtney Avenue including ADA compliant curb ramps the entire length of the project area. In addition, the project will include 5 foot landscape strips with street trees on both sides, to increase the security of pedestrians. The project will also add full width 6 foot bikeways with a marked 2 foot buffer separating the bikeway from the travel lanes. These improvements will greatly improve bicycle and pedestrian connections to the following important destinations:

- **Oak Grove Elementary School** – *The Oak Grove Elementary School is a Title 1 school and the primary walking or biking route to the school is via the Trolley Trail. However, the main connection to the Trolley Trail is Courtney Avenue, which for most of its length does not have sidewalks. As a result, parents walk their children to and from school on the shoulder of Courtney Avenue every day. When the Safe Routes to School Action Plan for Oak Grove Elementary School was developed in 2017 one of the most prominent statements was that sidewalks were needed on Courtney Avenue.*
- **Employment** – *Often the lowest cost transportation mode for travel to work for those with low income is transit, and the area surrounding the Courtney Avenue project area includes frequent transit on McLoughlin Blvd, transit on River Road and Oatfield Rd which is only 850 feet from the project area, as well as access via the Trolley Trail to the MAX Orange line Park*

Avenue station. With 53% low income households in the project area, it would be expected that boardings at nearby transit stops would be high, but that is not the case. Average daily boardings at the stops on McLoughlin are less than 100 per day, and average daily boardings at transit stops on River Road are under 10. Improvements to pedestrian and bike facilities on Courtney should make transit a viable travel choice for a higher share of the project area population.

- **Community Services** - *Many community services are available within ½ mile of the project area north and south on McLoughlin Blvd. Also, community services in downtown Oak Grove are less than ½ mile to the south on the Trolley Trail. Due to the lack of safe facilities for walking and biking, trips to those community services must currently be short vehicle trips. The addition of the sidewalks, curb ramps and buffered bikeways on both sides of Courtney Avenue will allow many of those vehicle trips to be replaced by walk or bike trips. This will have benefits for the residents of the project area as well as the broader area. Increased use of walk/bike modes for trips will reduce transportation costs and improve the health of area residents. This area also has very high transit access which is underused due to the unsafe conditions for pedestrians on Courtney Ave. Transit stops are available on McLoughlin Blvd and River Road, as well as on Oatfield Road, only 850 from the east end of the project. In addition, the MAX Orange Line Park Avenue Station is about ½ mile from the project area on the Trolley Trail. These facilities will also allow those with disabilities to safely meet many of their needs with dependence on paratransit services or rides by friends and neighbors. This will increase the freedom and independence of those with disabilities and increase their quality of life. In addition, replacement of short vehicle trips with a bike or walk trip will greatly decrease greenhouse gas emissions.*

- 37.** What contracting opportunities are available to Office for Business Inclusion and Diversity (COBID) firms through this project? What is your agency's policy, history, or removing of barriers to hire and advance COBID firms in infrastructure projects?

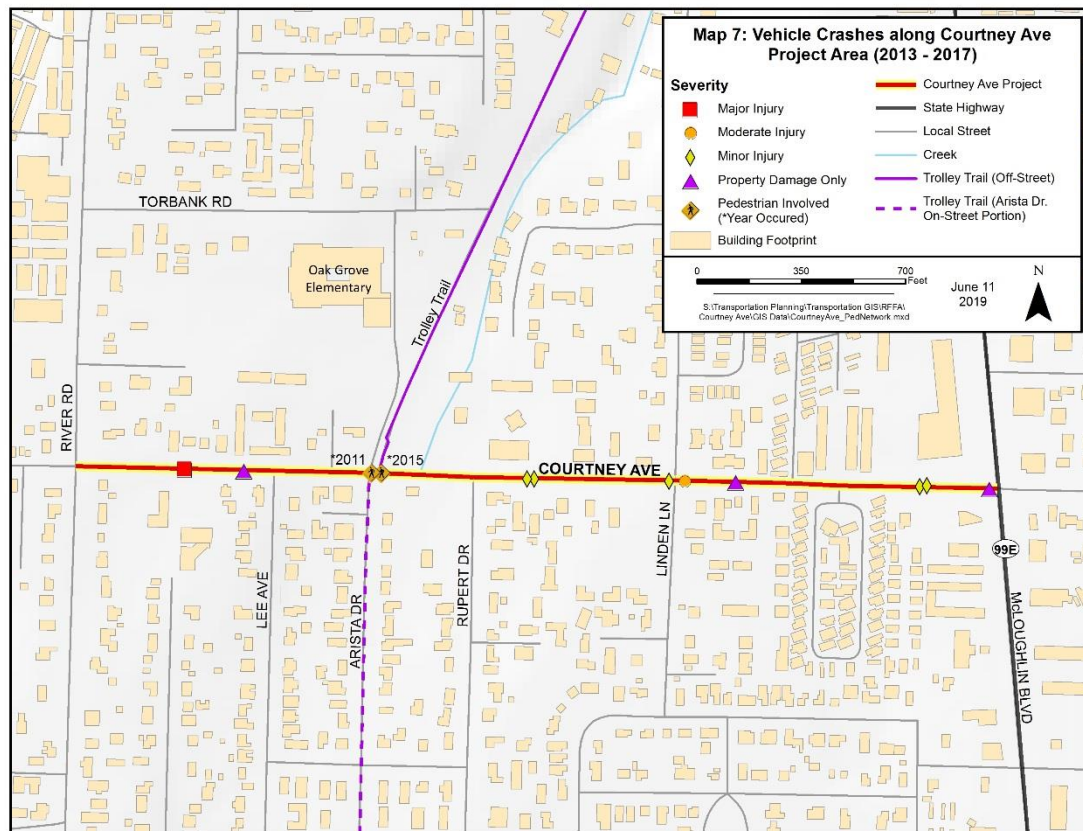
Clackamas County has been very active in providing opportunities for COBID firms in infrastructure projects. Clackamas County is an ODOT Local Certified Agency. As such Clackamas County is given targets by ODOT for inclusion and diversity among firms receiving contracts for both professional services and construction. Clackamas County has always been able to meet the targets given by ODOT. In addition, to encourage submittal of proposals and bids from inclusively from all types of businesses, Clackamas County distributes RFPs and bid materials not only to the typical clearinghouses but also for those that specifically encourage business diversity and inclusion such as ORPIN. Beyond infrastructure, the Clackamas County Procurement Office aggressively seeks proposals and bids from minority-owned, women-owned and service-disabled veteran-owned businesses for the materials and services required throughout the county government.

Safety

- 38.** How many fatal or serious injury crashes have occurred in the project area in the last 5 years (or most recent 5 years of available crash data)?

Vehicle and pedestrian crashes occurring on SE Courtney Avenue were reviewed using data from the Oregon Department of Transportation – Transportation Development Division (Transportation Data Section – Crash Analysis and Reporting Unit). There were 11 non-fatal vehicle crashes on SE Courtney Avenue in the project area (between milepost .1 and milepost 0.7)

for a five year period from July 1, 2013 to December 31, 2017. The location of the crashes within the project area is shown on Map 7 on the following page. Of those crashes, 4 vehicle crashes occurred at intersections; 5 at driveway access points and 2 occurred on a straight away. Four



crashes were caused by either speeding or following too closely. Failure to yield ROW was the most common crash cause. Within the reporting period one crash involved a pedestrian that was not struck. A second crash involving pedestrian who suffered level C injuries occurred in February of 2011.

39. How does the project aim to reduce the number of fatal or serious injury crashes?

Courtney Avenue from River Road to McLoughlin Boulevard is substandard collector street built to a rural standard and lacks sidewalks, continuous bike lanes and ADA compliant curb ramps.

Currently, pedestrians and bicyclists are forced to use the existing shoulder bike lanes which are often obstructed by vehicles, trash containers and other obstructions forcing active transportation users into the vehicle travel lane. This project will add sidewalks vertically separated from the road by curbs and an 8 foot wide buffered bikeway for bicyclists. Providing defined space for bikes and pedestrians will reduce modal conflicts and create a safer environment for all travelers. A new speed table / raised crosswalk at the intersection of Courtney and Linden Avenue will help increase the visibility of pedestrians and slow traffic.

40. How does the project remove or mitigate conflicts, with (including) active transportation, railroad crossings, turning movements, and others? (Use Appendix C design checklist, indicate all that apply)

The following section identifies how the Courtney Avenue Complete Streets project mitigates and removes conflicts between travel modes.

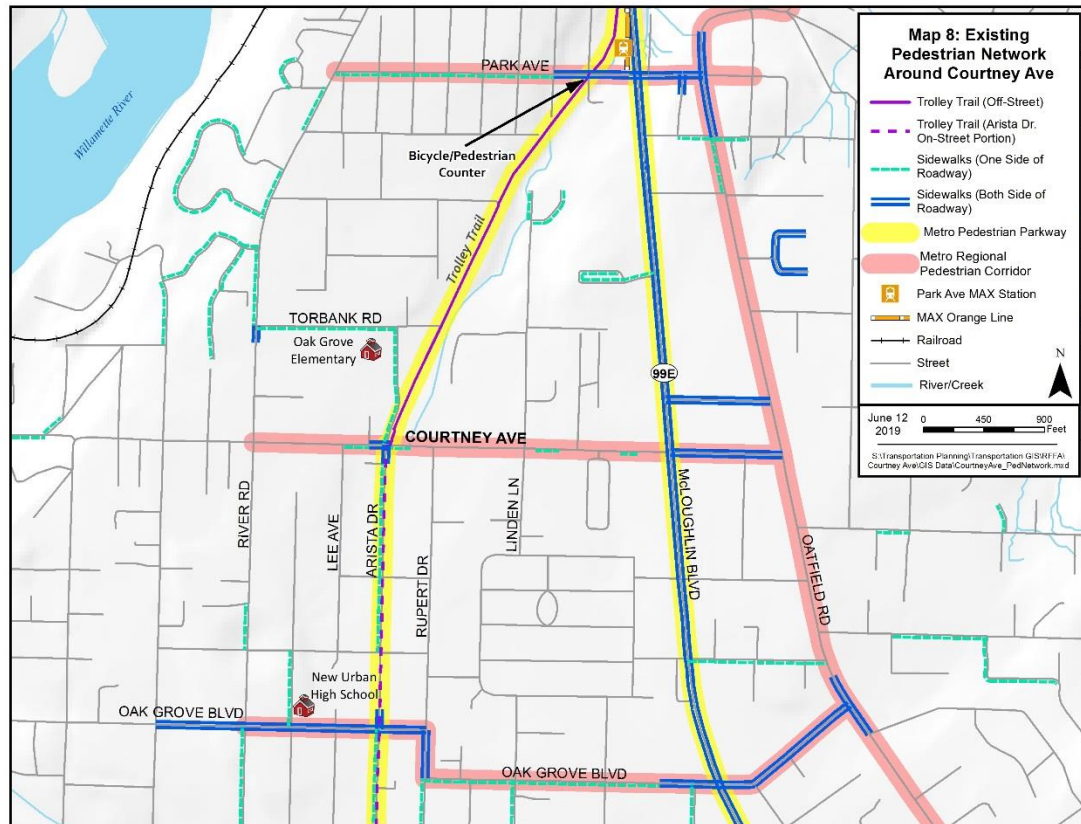
- *New 6-foot wide sidewalks and 5 foot landscape strip with curbs: Adding new sidewalks along the entire corridor will mitigate conflicts with active transportation users by providing distinct facilities for use by pedestrians, bicyclists and motorists.*
- *Obstruction removal from the pedestrian way and addition of ADA curb ramps: The existing shoulder bike lane shared by pedestrians and bicyclists contains obstructions, forcing active transportation users into the vehicle travel lane. New facilities along Courtney Avenue constructed to current design standards will improve safety by more clearly discouraging illegal motor vehicle parking and other obstructions in the current shoulder bike lane.*
- *Add enhance pedestrian crossing at appropriate location: Currently there is not a safe place for pedestrians and bicyclist to cross the collector roadway between the Trolley Trail and Hwy. 99E. Conflicts between vulnerable users and motorists will be mitigated by construct a new raised crosswalk at the intersection of SE Linden Lane and SE Courtney Avenue; allowing pedestrians to cross at nearly a constant grade and increasing visibility approaching vehicles.*
- *Lighting: This project will includes the addition of pedestrian scale street lights along both sides of Courtney Avenue; increasing the viability of pedestrians and bicyclists. Pedestrian scale lighting is proposed along the project corridor.*
- *Bike Priority treatments at intersections. For east-bounder bicyclists, the existing bicycle facility disappears 200 feet west of the SE Courtney Avenue-SE McLoughlin Boulevard intersection. This project will include installation of a bike box at the southeast corner of this intersection to provide bicyclists with a safe and visible way to get ahead of queuing traffic. Bike box will include ingress lane to the “queuing area” at the intersection of SE Courtney Avenue and SE McLoughlin Boulevard.*
- *Rectangular Rapid Flashing Beacon (RRFB) or pedestrian signal: New RRFBs will be installed on both approaches to the intersection of Courtney Avenue and Arista Drive/Trolley Trail.*
- *Narrowed travel lanes: Travel lanes will be narrowed from the current 11 feet to 10 feet; thereby, reducing pedestrian crossing widths and redistributing space for active transportation users.*
- *Access management: Along the corridor there are locations where the vehicle travel lane is not separated from adjacent to commercial parking areas by curb and sidewalk, creating random access points. The curb and sidewalk added as part of this project will clearly define driveways and minimize the number of access points.*
- *Bicycle detection. An infrared video detection camera will be installed on the traffic signal at the SE Courtney Avenue-SE McLoughlin Boulevard intersection that detects bikes separately from passenger vehicles. An updated controller will be added that will implement signal timing to help bikes safely cross the wide intersection of OR 99E.*
- *Buffered bicycle lane at least 6 foot bike lane with minimum 2 foot buffer. Construct 8 foot bikeway consisting of a 6 foot bike lane with minimum 2 foot buffer. The current “rural” striped bike lanes function more like shoulders for the collector roadway then an active*

transportation facility. The current facility invites parking and storage of garbage containers, among other items. Upgrading the existing facility to 8 foot wide buffered bicycle lanes and sidewalks will improve safety by providing distinct facilities for use by all travel modes. These improvements to Courtney will also discourage the illegal motor vehicle parking and placement of other obstructions such as trash containers in the current shoulder bicycle lanes.

System Completion

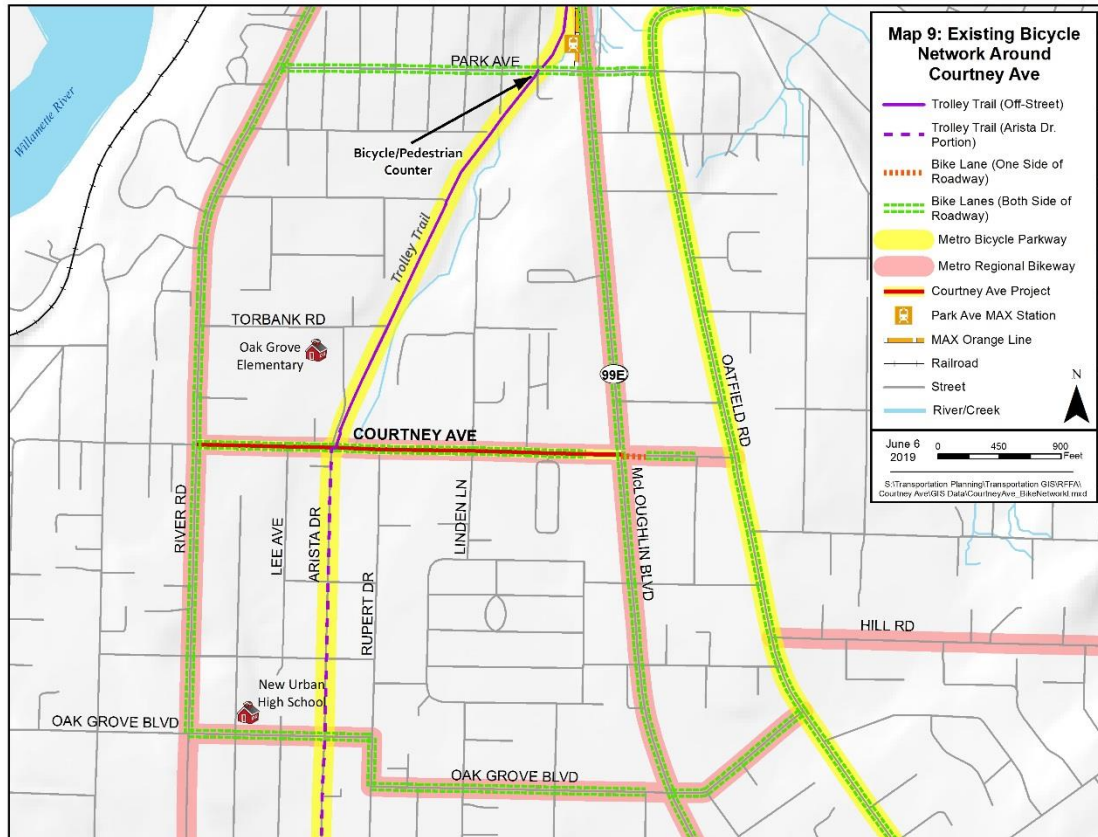
- 41.** What network gap(s) will be completed by this project? How will system connectivity or network deficiencies be improved?

The development pattern of Oak Grove is that many north-south routes are available with the 3 most important being OR 99E/McLoughlin, Oatfield Road and River Road. However, most east-west roads don't fully connect between those three primary north-south routes. As a result, there are large east-west network gaps. For example, between Park Avenue and Oak Grove Blvd there is a gap of one mile between east-west routes with facilities for bikes and pedestrians. Such a very large gaps between the east-west routes particularly makes it difficult for pedestrians, bicyclists and those with disabilities who usually make short trips of no more than a mile or two in length. The proposed Courtney Avenue Complete Streets project will reduce that one mile gap for the bike and pedestrian network to only ½ mile. This will result in a great improvement in bike/ped connectivity and mobility for area residents, and also improve connectivity for regional users of active transportation. Maps 8 and 9 below and on the following page show existing pedestrian and bicycle network in the project area.



- 42.** How will access to active transportation be improved? What specific barriers in addition to the network gaps identified above will the project eliminate?

The major barrier to active transportation in the area is safety and security for users of the active transportation system. This project will add full 6 ft sidewalks and buffered bike lanes on both sides of Courtney, providing a complete and safe active transportation connection for area residents to regional active transportation network.



Multimodal Travel, Mode Share, and Congestion

- 43.** How will the project reduce transit delay and improve transit reliability?

The proposed project will have no impact on transit delay or transit reliability because there is currently no transit service on Courtney Ave. If transit service is offered on Courtney Avenue in the future the improvements proposed in this project will greatly increase the safety and security of users and remove a major barrier to transit use.

- 44.** How does the project improve connections to transit and employment or residential sites/areas?

Although there is a great deal of transit service available in the immediate area around Courtney Avenue on McLoughlin Blvd, River Rd and Oatfield Rd, as well as the MAX Orange Line at Park Avenue (see Map 5 on page 21), it is not safe for area residents to access that transit. Due to the unsafe conditions on Courtney Avenue for pedestrians and bicyclists, people who might consider transit are discouraged from walking or biking to the many transit services available in the area. With the completion of the proposed improvements it will be easy and safe for all bicyclist and pedestrians, including those with disabilities to access transit service. This improvement in the

connections to transit are particularly important in this area due to the fact that over 53% of households are low income, 23.6% of the population is seniors and 16.2% of the population has a disability. The proposed bike and pedestrian improvements will also allow residents of the project area to walk or bike to the Park Avenue station and access the MAX Orange line. Safe access to transit provided by this project should help more area residents to access employment and important services such as health services that are usually provided at regional centers accessible by transit.

45. How will the project reduce vehicle trips or VMT (other than freight-related trips)?

As can be seen in the response to question #35, the population of the project area has a high concentration of people that would benefit from use of active transportation modes, particularly walking: members of low income households - 53.6% of total households; seniors - 23.6% of the population; those with disabilities - 16.2% of the total population. For those populations walking, biking and transit represent the lowest cost and healthiest mode options. The addition of a fully ADA compliant sidewalk on both sides of Courtney Avenue as well as buffered bikeways, can be expected to result in a large mode shift to walk, bike and transit. That mode shift will result in a reduction in vehicle trips and VMT.

To quantify the expected benefit in reduced vehicle trips and VMT, Clackamas County analyzed data for the Portland Urbanized area from the 2017 National Household Transportation Survey (NHTS). The table below summarizes relevant data from the NHTS for trip mode choice for household trips within the Oregon portion of the Portland Metro area.

<i>Portland Metro Area Mode Choice</i>	<i>Daily Trips / Household</i>	<i>Average Trip Length</i>
<i>Walk</i>	<i>1.11</i>	<i>0.45 mi</i>
<i>Bike</i>	<i>0.22</i>	<i>3.68 mi</i>
<i>Auto/Light Truck</i>	<i>6.07</i>	<i>9.49 mi</i>
<i>Transit (all types)</i>	<i>0.32</i>	<i>5.21 mi</i>

As described above in the response to Q34, there are 1,510 households within the project area. By applying the above average trip data by mode for the Portland Metro area it is possible to estimate daily trips and trip length by mode in the project area as shown in the table below:

<i>Mode</i>	<i>Daily Trips</i>	<i>Total Miles Traveled</i>
<i>Walk</i>	<i>1,676</i>	<i>754.3 mi</i>
<i>Bike</i>	<i>332</i>	<i>1,222.5 mi</i>
<i>Auto/Light Truck</i>	<i>9,166</i>	<i>86,982 mi</i>
<i>Transit (all types)</i>	<i>483</i>	<i>2,517.5 mi</i>

There are several sources of information that suggest that the lack of sidewalks and full bikeways is reducing the use of walk, bike, and transit modes on Courtney Ave.

- *Input to the Oak Grove Elementary Safe Routes to School Assessment indicated that many parents felt uncomfortable walking on Courtney Avenue and were unwilling for their children to do so.*

- TriMet data shows only 99 average trips at the closest bus stops to Courtney Ave, about 20% of the number transit trips expected in the project area.
- Traffic counts conducted in 2018 on Courtney Avenue and surrounding streets point to traffic volumes higher than expected based on the NHTS data.

Based on this admittedly incomplete data and field observations, Clackamas County staff believes that the lack of sidewalks and full bikeways impacts the mode choice of Courtney Avenue area residents and is causing them to shift at least 50% of short trips from walk and bike to auto/light truck. Clackamas County staff also believes that transit use is reduced by at least 50% due to discomfort and perceived safety risk of walking on Courtney Avenue without full sidewalks. If these mode shifts are occurring, the table below shows the Clackamas County estimates of the additional vehicle trips and vehicle miles traveled resulting from the lack of adequate active transportation facilities on Courtney Ave:

Mode	Daily Trips Shifted to Vehicles	Average Trip Length	Additional Daily VMT
Walk	838	0.45 mi	377
Bike	166	3.68 mi	611
Transit (all types)	242	5.21 mi	1,258
Total	1,246		2,246

Based on this analysis Clackamas County has concluded that implementation of the Courtney Avenue Complete Streets project would reduce daily vehicle trips by at least 1,246 per day, and reduce vehicle miles traveled by at least 2,246 per day. It is also possible that the availability of safe and adequate sidewalks and bikeways on Courtney Avenue would result in shifts of additional trips away from vehicular modes to walk, bike and transit. Those facilities could also encourage those currently using vehicular modes in the surrounding area to shift to walk or bike.

46. How does the project reduce the need for throughway expansion?

Courtney Avenue serves an area that is primarily residential. The only non-residential destination in the project area is the Oak Grove Elementary School, which has an attendance of 350. Based on the analysis in Q45 Clackamas County estimates that 1,246 vehicle trips will shift from vehicular modes to active transportation modes (walk, bike and transit). Of the 1,246 trips that will shift to active transportation modes, Clackamas County estimates that 115 trips will be children who will walk or bike to school if safe and adequate walk and bike facilities are available on Courtney Ave. Since there are no other non-residential destinations in the project area, the remaining 1,131 trips and 2,194 daily vehicle miles traveled would main impact the only remaining destination in the immediate area – OR 99E / McLoughlin Blvd. Oregon Department of Transportation Traffic Counts show that traffic volume on OR 99E in the area of Courtney Avenue is 26,950 AADT. As a result, the 1,131 trips vehicle trips per day attributable to the lack of adequate walk and bike facilities would be removed from OR 99E / McLoughlin Blvd. Volume counts conducted for ODOT show that these trips make up 4.2% of the total volume on OR 99E at that location. This analysis shows that the shift of trips from vehicle mode to walk, bike and transit mode that result from provision of adequate walk and bike facilities should reduce traffic volume on OR 99E by 4.2% to 25,819 AADT and reduce the need for expansion of that throughway by 4.2%.

Climate Change and Environmental Impact

- 47.** Describe the measures included to specifically mitigate the project’s greenhouse gas emissions and environmental impact.

The proposed Courtney Avenue Complete Streets project will not result in additional greenhouse gas emissions and will in fact reduce greenhouse gas emissions. As described above in response to Q45 it is anticipated that the project will reduce daily vehicle trips by 1,246 and daily vehicle miles traveled by 2,246 resulting in a decrease in greenhouse gas generation. Traffic data collected by Clackamas County in 2018 shows average speed on project section of Courtney Avenue was 30.0 mph and the total traffic volume was 4,495 AADT. The reductions attributable to the shift of vehicle trips to walk/bike/transit will reduce the total volume on Courtney Avenue to 3,249 AADT. The table below shows an estimate of the decrease in total greenhouse gas emissions that will result for the implementation of this project;

	Existing Conditions	After Courtney Avenue Complete Streets Project
Traffic Volume on Courtney Ave	4,495 AADT	3,249 AADT
Project Length (miles)	.577 miles	.577 miles
Daily Vehicle Miles Traveled on Courtney	2,594	1,874
Greenhouse Gas Emission Rate (2027 summer passenger car rate, arterial 30 mph)	296.6000971 g/mile	296.6000971 g/mile
Daily Greenhouse Gases Emitted in grams	769,380.65 g	555,828 g
Daily Greenhouse Gases Emitted in Pounds	1,696.19 lbs	1,225.39 lbs
Daily Reduction in Greenhouse Gas Emitted		470.8 lbs/day
% Decrease in Greenhouse Gas Emissions		27.76%

- 48.** What specific project design elements are aimed at reducing environmental impacts (street trees, bioswales, etc.)?

The following project design elements will reduce environmental impacts:

- *Street Trees – Street trees will be located in the landscape strips every 30 feet the entire length of the project on both sides of the street.*
- *Rain Gardens – Rain gardens will be included within the landscape strip for approximately 2/3rds of the length on the north side of the project and about ¼ of the south side of the project. Six connections between the rain gardens on the north side of the street and the south side will be added during construction for conveyance of stormwater.*

Freight Related Impact

- 49.** How does the project address freight travel time reliability and reoccurring or nonrecurring congestion affecting freight goods movement?

The project will not address freight travel time reliability and congestion because Courtney Avenue is not a freight route and is only used by trucks for local deliveries/pickups.

- 50.** Is this project on a “Reduction Review Route” (defined and stipulated by statute; OAR 731-012 and ORS 366.215) and to what extent has coordination occurred with the freight industry?

Courtney Avenue is not a “Reduction Review Route.”

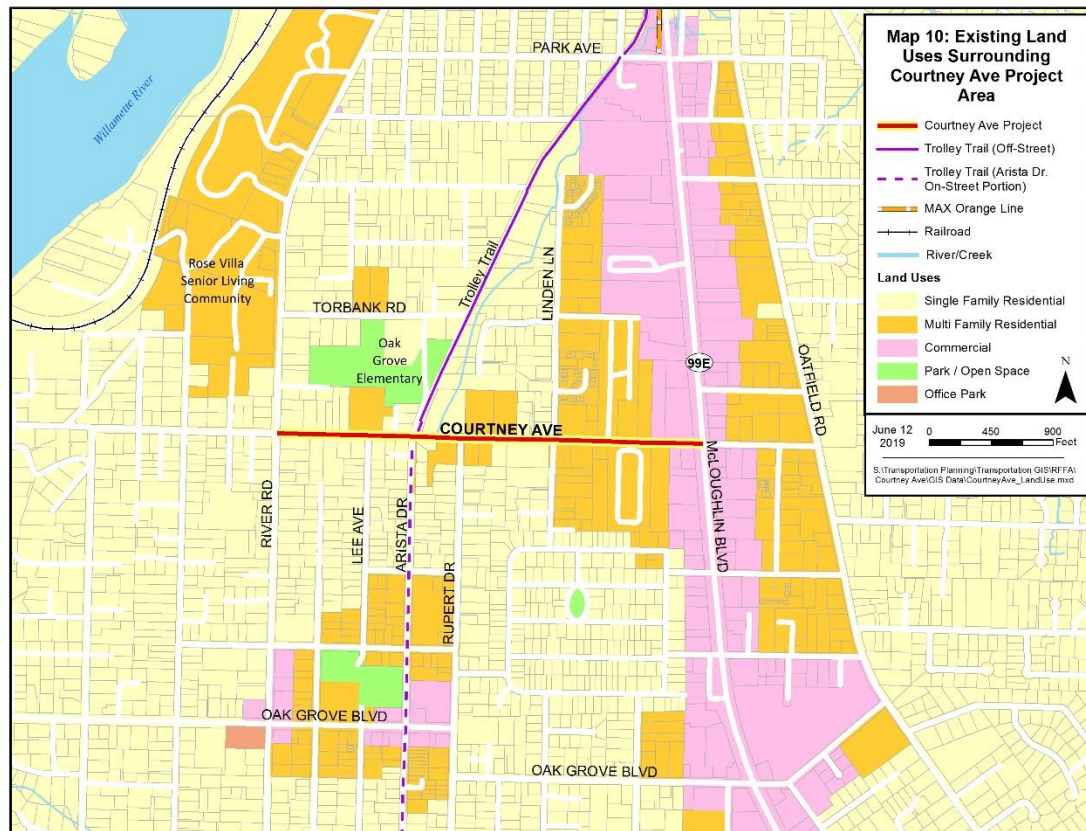
- 51.** If there is freight delay along the corridor, when does this delay occur, to what extent is there delay, and how does this project address that delay?

There is no freight delay along the corridor.

Employment/Economic Development

- 52.** Describe the employment area(s) served by this project. What is the number of current and projected jobs in traded sectors?

The Courtney Avenue Complete Streets project is located in a purely residential area with the only non-residential uses being the Oak Grove Elementary School and the Good Roots Community Church, and . There is no projected increase in jobs within the project area due to this project. Map 10 below shows the existing land uses in the project area.



- 53.** Describe how the project supports and catalyzes low-carbon and resource efficient economic sectors.

The project is located in a purely residential area and will not support or catalyze low-carbon or resource efficient economic sectors.

Project Leverage

- 54.** How does this project leverage other funding sources?

The Clackamas County Department of Transportation and Development will contribute a 10.27 % cash match. The County Road Fund, derived from the collection of gas taxes, will be used as the funding source to cover the required federal match. At a June 13, 2019 Business Meeting, the Clackamas County Board of County Commissioners authorized the use of road funds for this project and for staff to submit this grant application, demonstrating their commitment to moving forward with this active transportation project.

This project also supports work currently underway for the Park Avenue Community Project, funded by a 2040 Planning and Development grant from Metro to develop updated land use

development and design standards for the area near the light rail station at Park Avenue and McLoughlin Boulevard in Oak Grove. A primary project goal is to create a more walkable, transit-oriented neighborhood. The Courtney Avenue project, approximately one half mile from the Park Avenue light rail station, will support this effort by providing a needed connection to area transit lines. Additionally, the Courtney Avenue Complete Streets project supports the County's sidewalk investment on SE Torbank Road, a local street two blocks north of Courtney Avenue to which it is connected via the Trolley Trail. Sidewalk Improvement Fund monies from the county's Fee In Lieu of Construction program (Section 1007.08 of the Zoning and Development Ordinance) are being utilized to build 600 linear feet of sidewalk from SE River Road to Oak Grove Elementary School. Construction is programmed to begin summer of 2019.

- 55.** Will the receipt of RFFA funding position the region to take advantage of federal and state funding opportunities as they arise? If so, explain.

The receipt of RFFA funding for the SE Courtney Avenue project will position the region to take advantage of federal and state funding for the Oak Grove-Lake Oswego Pedestrian/Bicycle Bridge Feasibility Study project. Clackamas County is leading a study to determine if it is feasible to build a pedestrian and bicycle across the Willamette River between Oak Grove and the City of Lake Oswego. The purpose of this study includes, but is not limited to, identifying landing locations for a potential bridge and how to connect to the existing active transportation system on both side of the Willamette River. The current work is only looking at the feasibility of such a crossing; there is not funding for construction at this time. However, if a bridge is constructed in the future, Courtney Avenue is viewed as a critical connection between east side landing point and the Trolley Trail.

- 56.** Will this help advance any Transportation Systems Management and Operations (TSMO) goals and strategies?

The Courtney Avenue Complete Streets project will include bicycle detection equipment at the intersection of SE McLoughlin Boulevard and SE Courtney Avenue. Infrared video detection cameras operated bike detection –installed on traffic signal that detects bikes separately from passenger vehicles and implement signal timing to help bikes safely cross the wide intersection. This will help advance the 2010 regional Transportation Systems Management and Operations (TSMO) goals and strategies as follows.

Goal 1: Reliability – Provide reliable travel times for people and goods movement. The SE McLoughlin Boulevard and SE Courtney Avenue infrared video detection will utilize “smart cameras” that detect bikes mixed in with vehicle traffic. Existing pavement loop detectors are not capable of differentiating bike vs vehicles. This will provide more efficient and reliable movements of all modes in the project area.

Goal 2: Safety and Security – Enhance transportation safety and security for all modes. The bicycle detection will provide a longer crossing phase for bicyclists, ensuring there is sufficient time to cross a 5 lane state highway for all vulnerable users.

- 57.** Is this project on the Regional Emergency Transportation Network? Will this project help improve resiliency of the transportation network? If so, describe how.

This section of Courtney Avenue is not on the Regional Emergency Transportation Network. This project will improve the resiliency of the area by providing facilities for two additional modes –

walking and biking that can be used in the case of a major emergency. Experience has shown that in natural disasters the bike and walk mode often remain available when vehicles are blocked due to debris.

Project Cost Estimate

58. What is the source of the project cost estimate?

☐ **Conceptual:** These cost estimates are used where a significant need has been identified but a detailed project scope has not been developed. These cost estimates have the potential to change significantly as the project scope becomes more defined.

☒ **Planning level:** These cost estimates are based on a generally defined scope. Cost estimates are usually based on limited field-work and general cost assumptions. No actual design work has been done prior to the development of these cost estimates. The cost estimate could still change significantly as design work begins, but the estimate is more reliable than the conceptual estimates. (e.g., comprehensive plan, TSP, Metro cost estimate worksheet, corridor plan).

☐ **Engineering level:** These cost estimates are based on actual preliminary design work. If done for all facets of the project and there are no further additions to the project scope, these estimates should represent a fairly accurate cost for the project. (e.g. detailed planning report, preliminary engineering, final design, NEPA documentation, etc.)

59. During what project development stage (refer to page 9 of the RFFA application guidebook) was the cost estimate created?

☒ Planning

☐ Alternatives Identification and Evaluation

☐ Preliminary Design

☐ Final Design

60. What year was the cost estimate created? Does it include any escalation factors and to what year?

The cost estimate was created in 2019 for this RFFA application. An escalation factor of 2.5% per year is applied to the costs for four years, to 2023.

61. To what extent were the following considered during cost estimating?

- a. Right of way (ROW) - *Included*
- b. Utility relocation or underground – *Not included, responsibility of utilities*
- c. Stormwater considerations - *Included*
- d. Environmental mitigation strategies – *Estimated costs for mitigations associated with the HCA and wetlands were added to the project cost estimate.*
- e. Bridge, railroad, or major facility impacts – *Not included because there are no major facilities that will be impacted by the project*
- f. Retaining walls – *Not included, field inspection by county engineering staff showed that retaining walls would not be necessary*
- g. Clearing and grading - *Included*
- h. Removal of current pavement or facilities - *Included*
- i. Signing and pavement markings - *Included*
- j. Sidewalk and street furniture - *Included*
- k. Street trees, landscaping, irrigation - *Included*
- l. Mobilization, staging, and traffic control - *Included*

- m. Staff availability or need for outside services – Included. Staff will be available for this project but will not be charged to the project.*

62. Please attach your cost estimate. Verify that it includes the following items:

Full cost estimate shown in the table on the following page.

- a. Unit cost assumptions

Unit cost assumptions were derived from material unit costs from project construction bids submitted to Clackamas County for similar construction within the past year.

- b. Contingency assumptions

A contingency of 25% was applied to construction total for this project based on extensive previous experience with estimates prepared for this type of project in recent years.

2022-2024 RFFA Project Application – Clackamas County: Courtney Avenue Complete Streets Project

Courtney Avenue - River Rd to OR 99E Bike and Sidewalk Improvement Project Project Estimate					6/12/2019
Prepared by: Joel Howie					
					Engineers Estimate
ITEM	DESCRIPTION	UNIT	QUANTITY	UNIT PRICE	TOTAL
200	Temporary Features and Appurtenances				
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
300	Roadway Work				
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
400	Drainage and Sewers				
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
600	Bases				
18	Aggregate Base	C.Y.	2,760	\$35	\$96,600
700	Wearing Surfaces				
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
800	Permanent Traffic Safety and Guidance Devices				
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
900	Permanent Traffic Control and Illumination Systems				
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
1000	Right of Way Development and Control				
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
ESTIMATED CONSTRUCTION TOTAL					\$2,924,380
	Miscellaneous				
	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
ESTIMATED CONTRACT ADMINISTRATION TOTAL					\$2,737,040
ESTIMATED PROJECT TOTAL					\$5,661,420

2022-2024 RFFA Project Application – Clackamas County: Courtney Avenue Complete Streets Project

SIGNATURE PAGE

All relevant applicant agency and other agency staff with authority must attest to the design and cost estimates of the project, and that proper coordination and cooperation exists between all parties. Please attach additional signature pages as warranted.

Applicant agency staff signatures:

Project manager

Joel Howie

Engineering

Joel Howie

Right of Way

Maureen Hamm - Se Duca, SR/WA

Environmental

Ben Higgins, CFM

Other agency signatures (as required):

ODOT Highway

Mandy Pethig 6/19/19

ODOT Rail

TriMet

SMART

Utilities

Railroads

Other (please indicate)

Kathryn Kryger, Planning & Dev. Mgr.
North Clackamas
Parks & Rec. District