



# 2022-2024 Regional Flexible Funds Project Application

## INTRODUCTION

This application is organized to consider, assess, screen, and select Regional Flexible Fund Allocation (RFFA) projects. The assessment is focused on first determining a candidate project's applicability to the RFFA program and their technical feasibility. Upon that assessment, promising projects will be assessed on the merits of their intended project outcomes that will be used for project scoring.

To be applicable to the RFFA program, a project must be at least one of the following project types:

- **Active Transportation and Complete Streets**, or
- **Freight and Economic Development Initiatives**

Each project should demonstrably support the four 2018 Regional Transportation Plan (RTP) investment priorities:

- Advancing **Equity**
- Improving **Safety**
- Implementing the region's **Climate Smart Strategy**
- Managing **Congestion**

Although information from the entire application may be used to inform project scoring, the questions presented in the section, "Project Outcomes" are directly related to scoring and evaluation criteria and the answers to these questions will directly inform the project scoring.

**After all relevant questions are completed, please secure the required signatures as indicated at the end of this application form, and email it, along with other required information and supporting documentation to [rffa@oregonmetro.gov](mailto:rffa@oregonmetro.gov). Applications MUST be received by 4:00 p.m. on Friday, June 21, 2019 in order to be considered.**

### APPLICANT INFORMATION

1. Jurisdiction name: City of Milwaukie
2. Contact info: Name, phone #, email: Stephen McWilliams, project manager, 503.786.7541, McWilliamsS@milwaukieoregon.gov
3. Funding category (check one): ☒ Active Transportation ☐ Freight ☐ Both
4. Project name: Monroe Street Neighborhood Greenway
5. Describe the project purpose. What problems or issues is the project intended to address?

Since 2007, the City of Milwaukie has planned for a neighborhood greenway on the Monroe Street corridor to connect neighborhoods and regional destinations. There are few connecting east-west streets in Milwaukie, so creating a corridor for active travel by people of all ages and abilities will fill a significant gap in the network. The project extends through equity lens tract areas for people of color/limited English proficiency/low income.

The Milwaukie Transportation System Plan (TSP) identifies neighborhood greenways as low-speed and low-traffic routes for walking and biking. The Monroe Street Neighborhood Greenway will connect Milwaukie's central neighborhoods with downtown, the Trolley Trail, the 17th Avenue bikeway to the west, and the Clackamas Regional Center to the east. Currently, people use portions of the street, but crossings are deficient, traffic speeds and volumes are not adequately controlled, and the corridor is not continuous. This project will create a continuous low-stress bikeway that features traffic calming measures, wayfinding signage and signalization at OR-224. Additionally, this project will feature upgrades to existing pedestrian facilities along Monroe Street, including ADA curb ramp construction, sidewalk gap infill, sidewalk widening, wayfinding signage, and Rectangular Rapid Flashing Beacon (RRFB) crossing installation.

### 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? <sup>1</sup> ☒ Yes ☐ No
7. What is the RTP Project ID #? 10099
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): N/A
  - ☒ Bicycle: Bicycle Parkway
  - ☒ Pedestrian: Pedestrian Parkway
  - ☐ Freight: N/A
  - ☐ Transit: N/A
9. List the project beginning and ending points. What specific streets/intersections are included in the project area?
  - o Beginning point: Trolley Trail (McLaughlin Blvd)

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<sup>1</sup> Project must be on the 2018 RTP Constrained list, available for download at: [oregonmetro.gov/RTP](https://oregonmetro.gov/RTP) or [oregonmetro.gov/sites/default/files/2019/04/02/2018-RTP-Master-Project-List-All-Projects-20190315.xls](https://oregonmetro.gov/sites/default/files/2019/04/02/2018-RTP-Master-Project-List-All-Projects-20190315.xls)

- Ending point: Linwood Avenue
- See Attachment Q9 - SegmentMapMilwaukie

Intersections within the project area include:

Segment A:

- SE Monroe and 21<sup>st</sup>
- SE Monroe and 25<sup>th</sup>
- SE Monroe and 28<sup>th</sup>
- SE Monroe and 29<sup>th</sup>
- SE Monroe and OR 224

Segment B:

- SE Monroe and SE Penzance
- SE Monroe and SE Campbell

Segment C:

- SE Campbell and SE Myrtle
- SE Campbell and SE Oak

Segment D:

- SE Railroad and SE 37<sup>th</sup>
- SE Washington and SE 37<sup>th</sup>
- SE Washington and SE 40<sup>th</sup>
- SE Washington and SE 42<sup>nd</sup>
- SE Washington and SE Garrett
- SE Washington and SE Ada
- SE Ada and SE Home

Segment E:

- SE Home and SE Monroe
- SE Monroe and SE 52<sup>nd</sup>
- SE Monroe and SE Wood
- SE Monroe and SE 55<sup>th</sup>
- SE Monroe and SE Stanley
- SE Monroe and SE 59<sup>th</sup>
- SE Monroe and SE 60<sup>th</sup>
- SE Monroe and SE Linwood

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

The 2013 Milwaukie TSP identifies Monroe Street as the city's first Neighborhood Greenway. Its primary objective is to create shared travel space that is safe for people walking and biking by reducing motor vehicle speeds and volumes, and creating safe crossings. Additionally, Monroe Street is identified as a principal active transportation route in Clackamas County's Active Transportation Plan.

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 city has identified several sources of funding for the Monroe Street Neighborhood Greenway corridor (see Table 1). The city has committed local Capital Improvement Plan funding

for the Monroe Greenway project, as well as the traffic diverter and HAWK signal at Monroe and Linwood Avenue. The funding for both the greenway and bike signal at OR-224 are identified in ODOT's 2021-2024 Draft STIP. While the draft STIP still awaits final approval by the Oregon Transportation Commission and Federal Highways Administration, inclusion on the 100% list of funded projects recommended by Region 1 is a strong indication that funding is probable. Cost savings related to the path on the [McFarland site](#) (see Figure 1) is certain as it will be completed with a pending development. The developer of the site has purchased the lots and submitted a development permit; the city will include a condition of approval requiring dedication of the right-of-way and construction of the path along the property line.

**Figure 1: McFarland Draft Site Design**



**Table 1: Funding Sources**

Source	Amount	Status
Capital Improvement Plan Funding	\$321,900	Certain (already secured)
ODOT STIP Greenway	\$3,100,000	Probable
ODOT STIP Monroe Street Bike	\$2,500,000*	Probable

Signal		
McFarland shared path savings	\$400,000	Certain
Total:	<b>\$6,321,900</b>	

\*The amount is limited to the actual costs of improvements. Any costs above the estimate will be paid by ODOT. Any savings under the estimate will not be available for other phases of the project

12. Which Project Development Stages are to be considered for RFFA funding?<sup>2</sup>

The city will use the RFFA funding for the construction phase for Segments D and E of the project.

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 project schedule is outlined in Table 2, with phasing associated with five sections of the Monroe St. Neighborhood Greenway. The sections are listed below and illustrated in Figure 2:

- Section A - SE 21st Avenue to OR-224
- Section B – OR-224 to SE Campbell Street
- Section C - SE Campbell Street to Oak Street
- Section D - Washington Street Bike Route (SE Oak to Home Avenue)
- Section E - SE Home Avenue to Linwood Avenue

The recommended phasing will allow for the RFFA grant to fund the construction of Sections D & E, leveraging the final design of the entire greenway and construction of Sections A, B, C, the OR-224 and Monroe signal, and the McFarland path—all of which accounts for 62% of the total project costs. The project schedule anticipates the RFFA funding would be used for construction of Section D and E between 2022-2024. RFFA funding would account for 38% of the total project costs.

Table 2: Segment Design, Construction, and Funding

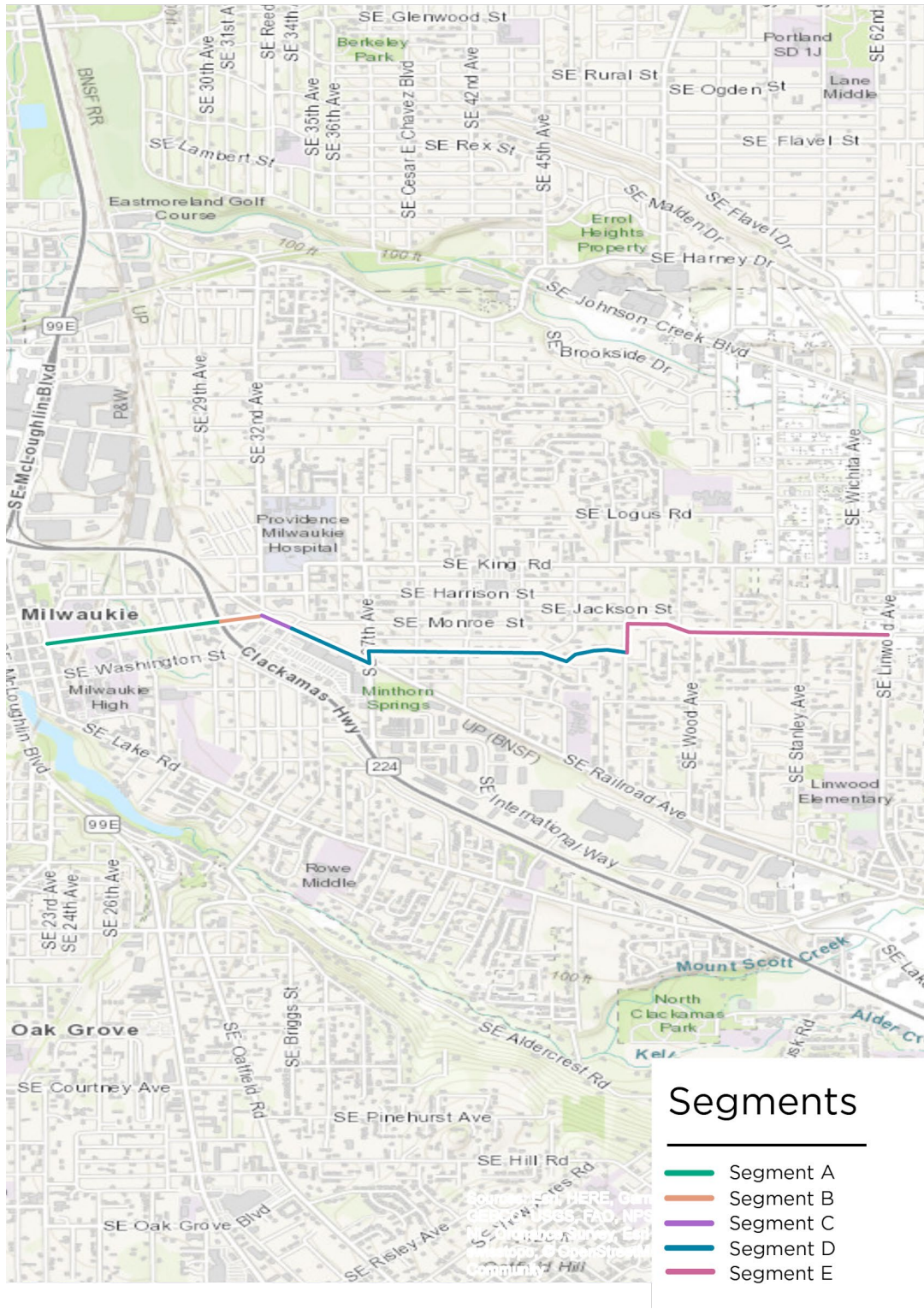
Task	Segments	Schedule	Funding
Preliminary Design (30%)	A-E	2020-2021	CIP
Final Design (100%)	A-E	2021-2022	ODOT STIP
Construction	A-C	2022-2024	ODOT STIP
Construction	D-E	2022-2024	RFFA

<sup>2</sup> Please refer to guidance found in the RFFA nomination process handbook.



Figure 2. Segment Map

## Monroe Street Neighborhood Greenway



### 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)?

Table 3: Project Development Process

Project Development Stage	Status	Notes
Planning	Complete	The city adopted the Monroe Street Neighborhood Greenway Plan in 2015 and updated it in 2018 (see below).
Alternatives Analysis	Complete	City Council adopted the Washington Street alignment in June 2018.
Preliminary Design	In-process; Funding secured	Local CIP funds have been secured to complete preliminary (30%) design of the entire greenway.
Final Design	Not started; Funding probable	It is probable that ODOT STIP funds will be allocated for construction documents for all segments of the project
Construction	Not started; Funding probable for Sections A-C	<p>It is probably that ODOT STIP funds will be allocated for the construction of sections A through C.</p> <p>RFFA funding would be used for construction of sections D and E of the project.</p>

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?

Yes, in limited amounts. The project is designed to be implemented within the existing public right-of-way, except in Section D where the right-of-way required for the pathway will be dedicated by the property owner as part of the land development process (as a condition of development approval).

The city may need to acquire Temporary Construction Easements and Right of Entry permits to construct certain elements of the project.

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?

The city has conducted several studies since the project was first identified in the 2007 TSP.

Specific sources, including hyperlinks to the source documents, are listed below:

- [Needs and Opportunities Memorandum, November 2014](#): this memo provides relevant corridor-wide and section by section narratives highlighting disparities between existing conditions and the community vision for Monroe Street (as outlined in the TSP).
- [Monroe Street Neighborhood Greenway Concept Plan, June 2015](#): the exact alignment of the Greenway has been updated since 2015, however, the original concept plan still speaks to the variety of improvements that will be incorporated into each segment.
- [Traffic Analysis Report, March 2018](#): provides up-to-date travel demand modeling analysis of 28 intersections to evaluate the extent of anticipated volume shifts and associated neighborhood impacts. Findings from the report generally support the recommendations of city and county concept plans, though it also identified demand for two additional signals.
- [Council Resolution No. 36-2018](#): provides instruction from City Council to modify the concept plan to include the Washington Street alignment option to mitigate impacts of added bicycle traffic, eliminate the planned diverters at both the intersections of 42nd at Monroe and 37th at Monroe, and add an additional traffic signal at 42nd and Harrison.
- [Revised Project Cost Estimates, June 2019](#): independent review of 2015 Monroe Street Neighborhood Greenway Concept Plan 2015 and project assumptions to derive a revised cost estimate in 2019 dollars (Revised Cost Estimate Attachment).

18. Does the project area intersect with Title 13 resource areas<sup>3</sup>, wetlands, cemeteries, railroad tracks, Native American burial grounds, protected species habitat, or any other qualifiers that would require permitting?

- The project intersects with a narrow band of mapped **Title 13 resources** near the intersection of Monroe Street and Spring Creek. This Title 13 area is predominantly categorized as Class I (areas supporting 3 or more riparian functions) and Class II (areas supporting 1 or 2 primary riparian functions). City natural resource land use review and permitting would not be triggered given the project is public ROW.
- The alignment intersects with a **heavy rail corridor** near the intersection of SE Oak Street and SE Campbell Street. Union Pacific Railroad (UPRR) approval of 100% drawings is required. Once UPRR approves, an amendment to the existing rail order will be submitted for the specific crossing with ODOT Rail Division.

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

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<sup>3</sup> Available for download at: [oregonmetro.gov/urban-growth-management-functional-plan](https://oregonmetro.gov/urban-growth-management-functional-plan)



The project does not individually or cumulatively have a significant effect on the human environment, therefore, neither an environmental assessment nor an environmental impact statement is required. Areas of disturbance exceeding 5 acres will require a 1200-C Construction Stormwater General Permit to be administered by the Oregon DEQ. The extents of the Monroe Street Greenway project will disturb 1-5 acres, requiring a 1200-CN Construction Stormwater General Permit to be administered by the city.

### Community Support

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

**Table 4: Community Needs**

<b>Community Concerns Heard</b>	<b>Strategy</b>	<b>Improvements</b>
Lack of safe bikeways in the city	Continuous bikeway connecting neighborhoods from east to west	Fill gaps in the network, improve safety of crossings, provide wayfinding signs
Pedestrian safety and connectivity	Sidewalk and pathway improvements	Improve existing walkways to 6-foot sidewalks, construct 7-foot pervious pedestrian path along eastern portion of project area, buffer sidewalks with landscape strips, street trees, bioswales, and parking
High Traffic Speed/Volumes	Traffic calming and diversion	Speed cushion, chicanes, curb extensions, traffic circles, turn-control diverter medians
Unsafe/Uncomfortable Crossings	Traffic calming and crossing enhancements	Marked crossings, ADA curb ramps, stop controlled intersections, RRFB crossings
Insufficient drainage	Green stormwater infrastructure	Bioswales (to be installed with new curb extensions/chicanes), landscaped medians and traffic circles, sections of permeable walkway
Character/Placemaking	Green Street Improvements	Addition of landscaping and decrease in cut-through traffic will enhance neighborhood character of Monroe

21. Which community partners are involved?

- The city has engaged representatives from a diverse group of organizations, including:
  - i. Historic Milwaukie Neighborhood District Association
  - ii. Ardenwald Neighborhood District Association
  - iii. Hector Campbell Neighborhood District Association
  - iv. Linwood Neighborhood District Association
  - v. Bike Milwaukie
  - vi. Public Safety Advisory Committee
  - vii. Clackamas County Pedestrian/Bikeway Advisory Committee
  - viii. Clackamas County Planning Department
  - ix. Clackamas Fire District
  - x. ODOT

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

- **TSP Outreach Process:** Public and interagency engagement/support for an enhanced bike corridor on Monroe Street can be traced back to the city's 2007 TSP development process, during which an advisory committee of residents, business representatives, and agency representatives (including participants from ODOT, Clackamas County, TriMet, and Metro) collaborated on bicycle and pedestrian topics. The TSP ultimately identified Monroe Street (between downtown and Linwood Ave) as a vital connection. This committee envisioned neighborhood greenways as optimal for traffic calming, intersection improvements, pavement marking treatments, and additional wayfinding signage. The TSP outreach process also included a total of seven public workshops, two of which centered on pedestrians and three of which centered on bicyclists.
- **Monroe Street Greenway PAC:** The project's public advisory committee is a two-part committee that included eight community representatives (including participants from Neighborhood District Associations, non-profits, and members of the county-wide Pedestrian and Bikeway Advisory Committee) and six technical advisors (including representatives from ODOT and Clackamas County) tasked to guide the planning process and review draft concepts. This committee met for five PAC-wide sessions between the Fall of 2014 and the Spring of 2015 to discuss a range of topics, including:
  - i. Existing conditions and challenges
  - ii. The Needs and Opportunities Memo
  - iii. Concept Design
  - iv. Member Concerns
  - v. Public Workshop Outcomes
- **Public Workshops:** The city held three public workshops during the course of project planning to provide residents with the opportunity to see and comment on drafts of the concept design and discuss trade-offs. These workshops were attended by community members with a diversity of perspectives. While many attendees supported traffic calming improvements for their bicycle/pedestrian safety benefits, some also expressed concern about impacts to emergency response time, parking availability, and traffic volumes/speeds on surrounding streets.
- **City Council Resolution 36-2018:** City Council directed staff to pursue grants, design, and construction for the Concept Plan, with modifications including the Washington Street alignment options with added pedestrian elements along the Washington Street corridor. (See attachment Q22 - City Council Resolution 36-2018)

- **2019 Letters of Support:** The City received 6 letters of support from stakeholder, community members, and active transportation advocates. (See attachment Q22 – 2019 Letters of Support. Letters of support received are from:
  - i. Milwaukie City Council
  - ii. Bike Milwaukie
  - iii. Oregon Walks
  - iv. The Street Trust
  - v. Linwood Neighborhood Association
  - vi. Jason Start, Community Member

### Interagency Connections

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

The City of Milwaukie and Clackamas County are intergovernmental partners in delivering a Neighborhood Greenway along Monroe St from I-205 through downtown Milwaukie. The county has lead planning and development of [the segment from I-205 to Linwood Ave.](https://www.clackamas.us/engineering/monroestreetplan.html) (<https://www.clackamas.us/engineering/monroestreetplan.html>)

Other partner agencies (including TriMet, ODOT, Clackamas County, and Metro) participated in the TSP process that identified Monroe Street as a Neighborhood Greenway and the development of the Monroe Street Neighborhood Greenway Concept Plan.

ODOT's support of the project has included 2015 TGM grant funding of the concept plan.

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.

The Monroe Street Neighborhood Greenway provides an important regional active transportation connection in Milwaukie and northwest Clackamas County. Together with the Clackamas County portion of the Greenway, the combined project would link the I-205 multi-use path in the east with the Trolley Trail in the west. The Monroe Street Neighborhood Greenway also provides an important connection between TriMet's MAX Orange Line light rail in downtown Milwaukie with the Green Line light rail along I-205. Involved agencies would include Union Pacific Railroad and ODOT Rail Division to modify the existing crossing rail order at the crossing at SE Campbell and Oak streets.

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

The need for utility relocations will be determined during the final design phase of the project. The anticipated cost of utility relocations is included in the contingency costs. Minor drainage infrastructure is anticipated to be relocated in order to install stormwater planter facilities. Relocation of private utilities that are in the public right of way will be paid for by the private business.

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.)

Yes, the City of Milwaukie has control over the section of the project that would be funded by the RFFA grant (Section D & E). City staff has informed Union Pacific Railroad (UPRR) and ODOT Rail of the project's proximity to the railroad and will work to receive UPRR approval of 100% design plans once that stage of the project is reached. The City of Milwaukie has a long-standing relationship with the UPRR as their rail line runs through the downtown corridor. The city attests to follow all avenues of coordination and procedures that are required by both UPRR and ODOT Rail to modify the pedestrian rail crossing.

## 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?<sup>4</sup> ☒ 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, temporary construction easement and right of entry costs are included in the cost estimate. Minor ROW acquisition is included within the contingency per the attached cost estimate.

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?

Right of Way Uniform Act has been taken into account in the schedule and budget.

b. Utility Relocation

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

The cost of public utility relocations is included in the contingency costs of the project.

c. Stormwater considerations

i. **Water quantity:** Regular flooding occurred frequently after heavy rainfalls, particularly around SE Home and 55th avenues, until the city installed five drywells in recent years. These have eased, but not eliminated the problem; flooded basements are still relatively common in conjunction with major storm events. Green street treatments in this project (including permeable pavement and curb extensions and chicanes that feature bioswales to hold runoff) have the potential to reduce flooding even further.

ii. **Water quality:** At present, stormwater runoff within the project area picks up chemical and particulate contaminants associated with on-street and rail corridor conditions. The addition of bioswales throughout Monroe Street will aid in the filtration of stormwater that is detained before permeating to the

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<sup>4</sup> As indicated on final page of application.

water table, as well as runoff that filters laterally through green stormwater infrastructure before rejoining a surface body of water.

d. Environmental and Permitting

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

No impacts identified. It is anticipated that the project will be categorically excluded from an environmental analysis

e. Schedule: Schedule is dependent on STIP and RFFA funding for final design.

f. Budget: Construction costs and inflation are all market dependent.

g. Staff availability:

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

The city has, at minimum, five staff members involved in the Monroe Street project, including:

- Steve Adams - City Engineer and Program Manager
  - Steve Adams is the City Engineer for the City of Milwaukie, but worked for the City of Wilsonville as the Development Engineering Manager for 17.5 years. The list below is his related experience in capital improvement projects.
  - Tooze Road Improvements – Grahams Ferry Road, \$5.5 M: project manager to upgrade 2,500 feet of a 2-lane rural road to a 3-lane minor arterial, including bike lanes, a cycle track, sidewalks, adding stormwater LIDA facilities, and installing a signalizing intersection. Held public meetings, managed the design consultant team, managed project construction through close-out and acceptance.
  - Canyon Creek Road Extension, \$3.4 M: project manager to widen 1,300 feet of a minor arterial from 2-lanes to 3-lanes, and extend the roadway an additional 1,000 feet, including adding bike lanes, a sidewalk and a multi-use path, adding stormwater LIDA facilities, and installing a signalizing intersection. Held public meetings, managed the design consultant team, managed project construction through close-out and acceptance.
  - 5<sup>th</sup> Street to Kinsman Road Extension: \$16 M estimate once completed. A combined 2,500-foot extension of a 3-lane minor arterial and a 2-lane collector, reconstruction of 600 feet of an existing collector, and a 1,900-foot extension of a multi-use pathway. Design includes adding stormwater LIDA facilities, combined use off-street bike paths/sidewalks, two bridges over a perennial stream, and adding a boardwalk section for the multi-use path. Project manager through holding public



meetings, siting of the new location of the roadways, hiring design consultant team, and taking the project to 100% design.

- Kelly Brooks - Assistant City Manager and Program Supervisor
  - Prior to joining the City of Milwaukie, Kelly Brooks served as the Policy and Development Manager for ODOT Region 1. In this capacity, she managed the development of the Region's State Transportation Improvement Program (STIP) and served as the Program Manager for the Region 1 Enhance Program during development of the 2019-2021 STIP. Several projects in both the 2015-18 and 2019-21 Enhance Program incorporated Regional Flexible Fund grant dollars. Kelly also has experience with federally funded transportation projects through her work on the Mt. Hood ITS Public Lands Highway Discretionary Project and a TIGER funded US 26 ITS Active Traffic Management Project.
- Jen Garbely - Assistant City Engineer and Project Supervisor
  - Jennifer Garbely is the Project Manager for the Kronberg Park Multi-Use Walkway. This project received \$1.2 M in funding through Oregon Connect. Jennifer secured matching funds to construct the bridge walkway for \$2.4 M. The project is under construction within budget and meeting schedule to be complete by December 2019.
- Stephen McWilliams - Associate Engineer and Project Manager
  - Stephen McWilliams has experience in the private sector designing sidewalks and ramps to meet ADA compliance in constrained corridors, designing stormwater treatment and detention facilities, road reconstruction, and utility relocation. Stephen is managing construction for the city on a \$3 M downtown project that includes full road reconstruction, full utility upgrades, including stormwater facilities, sidewalks, and ramps that are all up to ADA standards.
- Alex Roller - Engineering Technician II and Inspection Coordinator
  - Alex Roller has been working in his current position for approximately four years to provide inspections on capital improvement projects and private development to ensure public infrastructure is being installed to city design standards.

## 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.

Reducing vehicle speeds and volumes is essential for enhancing the safety and comfort of people walking and biking in the corridor. The design and installation of traffic calming devices including curb extensions and chicanes will both reduce traffic speeds and pedestrian crossing distances in many locations, while diverter medians will reduce overall traffic volumes on Monroe Street. Additional safety improvements will include marking crosswalks, painting sharrows and signalization upgrades.

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)

Appendix C Checklist (all that apply are listed below in Table 5 - please note that not every measure applies to the entirety of the corridor, as noted in the Monroe Street Greenway design description):

**Table 5: Appendix C Checklist Elements Applicable to Q30**

<b>Appendix C - Pedestrian Project Design Elements</b>	<b>Monroe St Greenway Design Description</b>
Add sidewalk width and/or buffer for a total width of 10 feet or more (recommended), 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. Greater width overall is desired in high activity areas, greater buffer separation is desired on streets with higher motor vehicle speeds and or volumes.	Existing sidewalks range from 4 to 5 feet and generally do not include buffering from on-street conditions. Improvements will widen existing sidewalks to 6 feet with 5 to 7-foot buffers in the form of landscaped strips, chicanes, curb extensions, and parking lanes. The eastern-most portion of the corridor will feature a 7-foot-wide pervious asphalt walkway with 4 to 8 foot landscaped buffers.
Sidewalk clear zone of 6 feet or more	Existing 4 to 5-foot sidewalks will be widened to 6 feet with 4 to 8-foot buffers from moving traffic in most locations.
Remove obstructions from the primary pedestrian-way or add missing curb ramps	Curb ramps are missing or damaged in many locations throughout the corridor. Deteriorating sidewalks in some locations have cracks and overgrowth that pose obstruction to safe and comfortable pedestrian activity. Areas with damage will be improved during the sidewalk widening process and bi-directional curb ramps are to be installed per current ADA Standards

Add enhanced pedestrian crossing(s) at appropriate locations	Crossings along the corridor are generally not marked. High visibility crosswalks will be added in key locations. Critical crossings outlined in the concept plan will included Rectangular Rapid Flash Beacons (RRFB) for enhanced pedestrian safety.
Reduced pedestrian crossing distance	Existing roadway width ranges from approximately 22 to 40 feet wide along the corridor. The addition of curb extension in key locations will reduce pedestrian crossing distance by (up to) 10 feet in some locations.
Narrowed travel lanes (reduces pedestrian crossing distance)	In addition to travel lane width reduction associated with curb extensions, the addition of landscaped buffers and widened sidewalks will limit travel lane width to as little as 9 feet in some locations (not factoring in the presence of chicanes).
Reduced corner radii (e.g. truck apron) (enhances pedestrian safety)	The addition of curb extensions will reduce corner radii at many locations throughout the corridor, helping enhance pedestrian visibility and slow turning traffic.
Curb extensions and/or in-lane transit boarding	The Monroe Street Concept Plan identified the need for curb extensions at most existing intersections along the corridor
Rectangular Rapid Flashing Beacon (RRFB) or pedestrian signal	The Concept Plan identified two potential sites for RRFB treatments to enhance the visibility of cyclists and pedestrians crossing. These locations include: the intersections of Campbell/Oak and Washington/37th.
Arterial traffic calming: Textured intersections, gateway treatments, raised medians, road diets, roundabouts	While Monroe Street is not an arterial, many of the traffic calming features listed (and more) will be included with the project. Traffic calming improvements from existing conditions will include: curb extensions, chicanes, speed humps, traffic circles, and median diverters.
Wayfinding	The Concept Plan identifies the addition of wayfinding for pedestrians and cyclists as a defining characteristic of neighborhood greenways. The project team will identify the

	location and type of wayfinding enhancements most suitable for the corridor during subsequent levels of design.
<b>Appendix C - Bicycle Project Design Elements</b>	<b>Monroe St. Greenway Design Description</b>
Bicycle boulevard treatment (markings, slowed traffic speeds, wayfinding etc.) where ADT is less than 3,000 per day and speeds are equal to or less than 20 mph	Today the majority of Monroe Street has a posted speed limit of 25 miles per hour, however with traffic calming improvements and diversion of higher speed through traffic, Monroe Street will be a suitable location for Neighborhood Greenway (Bicycle Boulevard) treatments. Improvements over existing conditions will also include the addition of sharrows, and “crossbikes” (green dashed bicycle crossings).
Arterial traffic calming: Textured intersections, gateway treatments, raised medians, road diets, roundabouts	While Monroe Street is not an arterial, many of the traffic calming features listed (and more) will be included with the project. Traffic calming improvements from existing conditions will include: curb extensions, chicanes, speed humps, traffic circles, and median diverters.
Other bicycle priority design elements	The Concept Plan identifies the addition of bike signals at the intersection of Monroe Street and OR-224.
<b>Appendix C - Other Complete Street Features</b>	<b>Monroe St. Greenway Design Description</b>
Intelligent Transportation System (ITS) Elements	In addition to bike activated signals detailed above, the project will include improvements to pedestrian and vehicle phasing at intersections identified by Clackamas County to be deficient.

31. Duplicate question, please see question 48 per Project Application Errata Sheet instructions.

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?

N/A

## 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.

The project extends through equity lens tract areas for people of color/limited English proficiency/low income.

34. List the community places<sup>5</sup>, affordable housing, and Title 1 schools within ¼ mile of project.

Community Places:

- Four educational facilities, including:
  - i. Milwaukie Academy of the Arts
  - ii. Milwaukie High School
  - iii. Lot Whitcomb Elementary
  - iv. Portland Waldorf School
- Providence Milwaukie Hospital
- Four parks, including:
  - i. Milwaukie Bay Park
  - ii. Dogwood Park
  - iii. Minthorn North Natural Area
  - iv. Homewood Park
- Campbell community garden

Title 1 Schools:

- Lot Whitcomb Elementary -- 7400 SE Thompson Rd.

Low-Income Tax Credit Housing:

- North Main Village -- 10554 SE Main St.
- Cascade Meadows -- 10005 SE Bell Ave.

Public Housing

- Hillside Park, Housing Authority of Clackamas County

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?

Tables 6, 7, and 8 show the ethnic origin, age, and income demographics of Milwaukie residents. Nearly all of Milwaukie falls within an approximate bikeshed of 1.5 to 2 miles from the project, so the population will benefit from the project. Figure 3 illustrates the median household income of residents who live adjacent to the Monroe Street Greenway. The project will ultimately be a key east-west connector through the city, serving one of the community's lowest income areas. Additionally, people living and working in Clackamas County near the Monroe corridor will also benefit from the project.

**Table 6: Milwaukie Racial and Ethnic Origin Demographics**

Racial Demographic	Percentage	Estimated Number
Non-hispanic White	82.5%	16,740
Hispanic/Latino	8.6%	1,745

<sup>5</sup> Community places are defined as key local destinations such as schools, libraries, grocery stores, pharmacies, hospitals and other medical facilities, general stores, parks, greenspaces, and other places that provide key services and/or daily needs.



Asian	4.1%	832
African American/Black	2.2%	446
American Indian/Alaskan Native	1.6%	325
Native Hawaiian/Pacific Islander	0.1%	20
Two or more races	3.3%	670

**Table 7: Milwaukie Age and Health Demographics**

<b>Age/Health Demographics</b>	<b>Percentage</b>	<b>Estimated Number</b>
Persons under 5 years of age	5.5%	1,116
Persons under 18 years of age	17.4%	3,531
Persons 65 years of age or greater	16.2%	3,287
Persons under 65 with a disability	8.2%	1,664

**Table 8: Milwaukie Household Income Demographics**

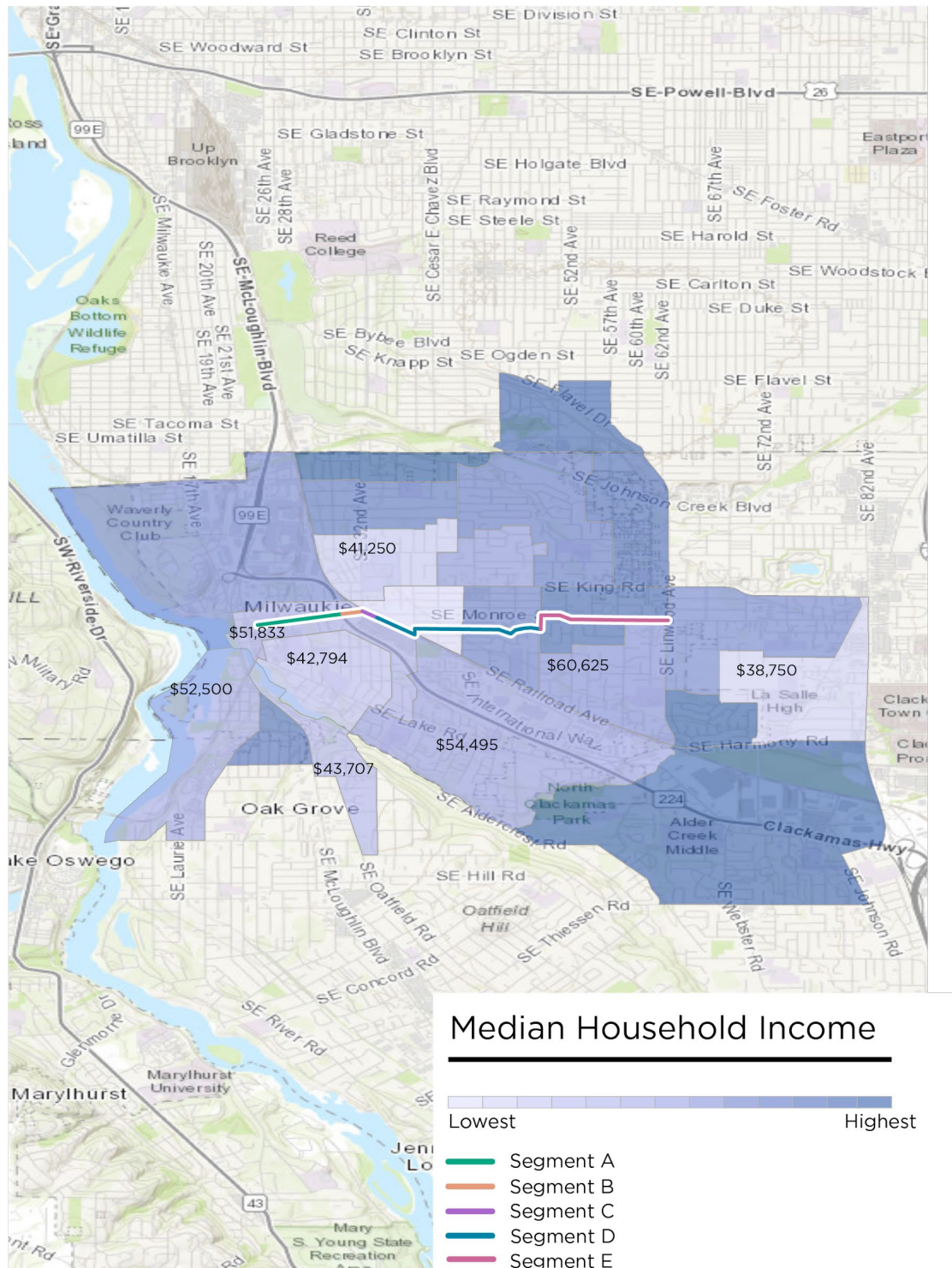
<b>Household Income Measure</b>	<b>Percentage</b>	<b>Estimated Number</b>
Less than \$10,000	4.6%	933
\$10,000 to \$14,999	4.1%	832
\$15,000 to \$24,999	12%	2,435
\$25,000 to \$34,999	8.9%	1,806

## 2022-2024 RFFA Project Application

\$35,000 to \$49,999	13%	2,638
\$50,000 to \$74,999	21.1%	4,281
\$75,000 to \$99,999	14.7%	2,983
\$100,000 to \$149,999	3.7%	751
\$200,000 or more	3.3%	670

**Figure 3: Median Income and Alignment Map**

## Monroe Street Neighborhood Greenway



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

Neighborhoods identified as containing higher rates of **low-income residents, residents of color, and/or residents with limited English proficiency** along the eastern and western portions of Monroe Street Neighborhood Greenway experience deterrents and barriers to walking and biking, including: high vehicle speeds, high volume traffic environments, unsafe crossings, and flood risk. The Monroe Street Neighborhood Greenway includes design treatments to address these issues, helping to make active transportation a viable option to residents.

**Community members over the age of 65 and community members with disabilities** will also benefit from the reduction of traffic speeds/volumes and the installation of marked crossings, in addition to benefiting from the installation/improvement of ADA curb ramps throughout the project area.

**Youth** will likely find walking and cycling on a Neighborhood Greenway more suitable to their skill level than current conditions on and around Monroe Street. These engineering upgrades will help support Safe Routes to School programs and goals shared by Clackamas County and the City of Milwaukie.

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 barriers to hire and advance COBID firms in infrastructure projects?

The city would be excited to partner with COBID to contract with Disadvantaged Business Enterprises. Milwaukie is committed to being an inclusive community of diverse people from a variety of backgrounds that provides opportunities and support for all of its residents. Per Milwaukie [Public Contracting Rule \(PCR\) 25](#), the city pursues a policy of providing opportunities for available contracts to emerging small businesses and will collaborate with advocate for minority, women, and emerging small business to determine the best means by which to make such opportunities available. In PCR 25, the city reserves the authority to require that services or materials must be provided by a certified emerging small business and/or establish other requirements authorized by [ORS 279A.105](#).

## 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)?

Between 2011 and 2017 the City of Milwaukie recorded two crashes causing major injury and 21 crashes causing moderate injury on Monroe Street. No fatal crashes on Monroe Street were recorded during this time period.

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

Future crashes along the corridor may be mitigated through a variety of project improvements, including:

- Reduction of crossing distance/pedestrian exposure via curb extensions
- An increase in time drivers have to react given slower vehicle speeds
- Diversion of through traffic to streets more suitably designed to accommodate the associated vehicle volumes/speeds

In addition to crash mitigation, Neighborhood Greenway improvements on Monroe would likely play a role in reducing the severity of future crashes along the corridor; since speed, one of the primary determinants in degree of injury incurred during crashes, would be reduced through a variety of traffic calming measures.

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 project will ultimately culminate in a shared street that balances the needs of cyclists, pedestrians, and neighborhood motorists. The interaction of these modes will become lower stress for all travelers as speeds decrease with traffic calming infrastructure and pedestrian/cyclist visibility increases with better and clearer active transportation pavement markings and signage. Intersection improvements (including signal upgrades and RRFBs in some locations) will also serve to mitigate turning conflict that may occur between cyclists, pedestrians, and cars. Please see Table 9 for a complete list of Appendix C Checklist items.

**Table 9: Appendix C Checklist Elements Relevant to Q. 48**

<b>Appendix C - Pedestrian Project Design Elements</b>	<b>Monroe St Greenway Design Description</b>
Add sidewalk width and/or buffer for a total width of 10 feet or more (recommended), 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. Greater width overall is desired in high activity areas, greater buffer separation is desired on streets with higher motor vehicle speeds and or volumes.	Existing sidewalks range from 4 to 5 feet and generally do not include buffering from on-street conditions. Improvements will widen existing sidewalks to 6 feet with 5 to 7-foot buffers in the form of landscaped strips, chicanes, curb extensions, and parking lanes. The eastern-most portion of the corridor will feature a 7-foot-wide pervious asphalt walkway with 4 to 8-foot landscaped buffers.
Sidewalk clear zone of 6 feet or more	Existing 4 to 5-foot sidewalks will be widened to 6 feet with 4-8 foot buffers from moving traffic.
Remove obstructions from the primary pedestrian-way or add missing curb ramps	Curb ramps are missing or damaged in many locations throughout the corridor. Deteriorating sidewalks in some locations have cracks and overgrowth that pose obstruction to safe and comfortable pedestrian activity. Areas with damage will be improved during the sidewalk widening process.
Add enhanced pedestrian crossing(s) at appropriate locations	Crossings along the corridor are generally not marked. The addition of high visibility crosswalks in key locations



Reduced pedestrian crossing distance	Existing roadway width ranges from approximately 22 to 40 feet wide along the corridor. The addition of curb extension in key locations will reduce pedestrian crossing distance by (up to) 10 feet in some locations.
Narrowed travel lanes (reduces pedestrian crossing distance)	In addition to travel lane width reduction associated with curb extensions, the addition of landscaped buffers and widened sidewalks will limit travel lane width to as little as 9 feet in some locations (not factoring in the presence of chicanes).
Reduced corner radii (e.g. truck apron) (enhances pedestrian safety)	The addition of curb extensions will reduce corner radii at many locations throughout the corridor, helping enhance pedestrian visibility and slow turning traffic.
Curb extensions and/or in-lane transit boarding	The Monroe Street Concept Plan identified the need for curb extensions at most existing intersections along the corridor
Rectangular Rapid Flashing Beacon (RRFB) or pedestrian signal	The Concept Plan identified two potential sites for RRFB treatments to enhance the visibility of cyclists and pedestrians crossing. These locations include: the intersections of Campbell/Oak and Washington/37th.
Arterial traffic calming: Textured intersections, gateway treatments, raised medians, road diets, roundabouts	While Monroe Street is not an arterial, many of the traffic calming features listed (and more) will be included with the project. Traffic calming improvements from existing conditions will include: curb extensions, chicanes, speed humps, traffic circles, and median diverters.
Wayfinding	The Concept Plan identifies the addition of wayfinding for pedestrians and cyclists as a defining characteristic of neighborhood greenways. The project team will identify the location and type of wayfinding enhancements most suitable for the corridor during subsequent levels of design.
<b>Bicycle Project Design Elements</b>	<b>Description</b>
Bicycle boulevard treatment (markings, slowed traffic speeds, wayfinding etc.) where	Today the majority of Monroe Street has a posted speed limit of 25 miles per hour,

ADT is less than 3,000 per day and speeds are equal to or less than 20 mph	however with traffic calming improvements and diversion of higher speed through traffic, Monroe Street will be a suitable location for Neighborhood Greenway (Bicycle Boulevard) treatments. Improvements over existing conditions will also include the addition of sharrows, and “crossbikes” (green dashed bicycle crossings).
Arterial traffic calming: Textured intersections, gateway treatments, raised medians, road diets, roundabouts	While Monroe Street is not an arterial, many of the traffic calming features listed (and more) will be included with the project. Traffic calming improvements from existing conditions will include: curb extensions, chicanes, speed humps, traffic circles, and median diverters.
Other bicycle priority design elements	The Concept Plan identifies the addition of bike signals at the intersection of Monroe Street and OR 224.
Wayfinding	The Concept Plan identifies the addition of wayfinding for pedestrians and cyclists as a defining characteristic of neighborhood greenways. The project team will identify the location and type of wayfinding enhancements most suitable for the corridor during subsequent levels of design.
<b>Other Complete Street Features</b>	<b>Description</b>
Intelligent Transportation System (ITS) Elements	In addition to bike activated signals detailed above, the project will include improvements to pedestrian and vehicle phasing at intersections identified by Clackamas County to be deficient.
Street trees and/or landscaping	The addition of landscaped strips and bioswales will coincide with the design and construction of traffic calming infrastructure, including: curb extensions, chicanes, and traffic circles.
Wayfinding	The Concept Plan identifies the addition of wayfinding for pedestrians and cyclists as a defining characteristic of neighborhood greenways. The project team will identify the

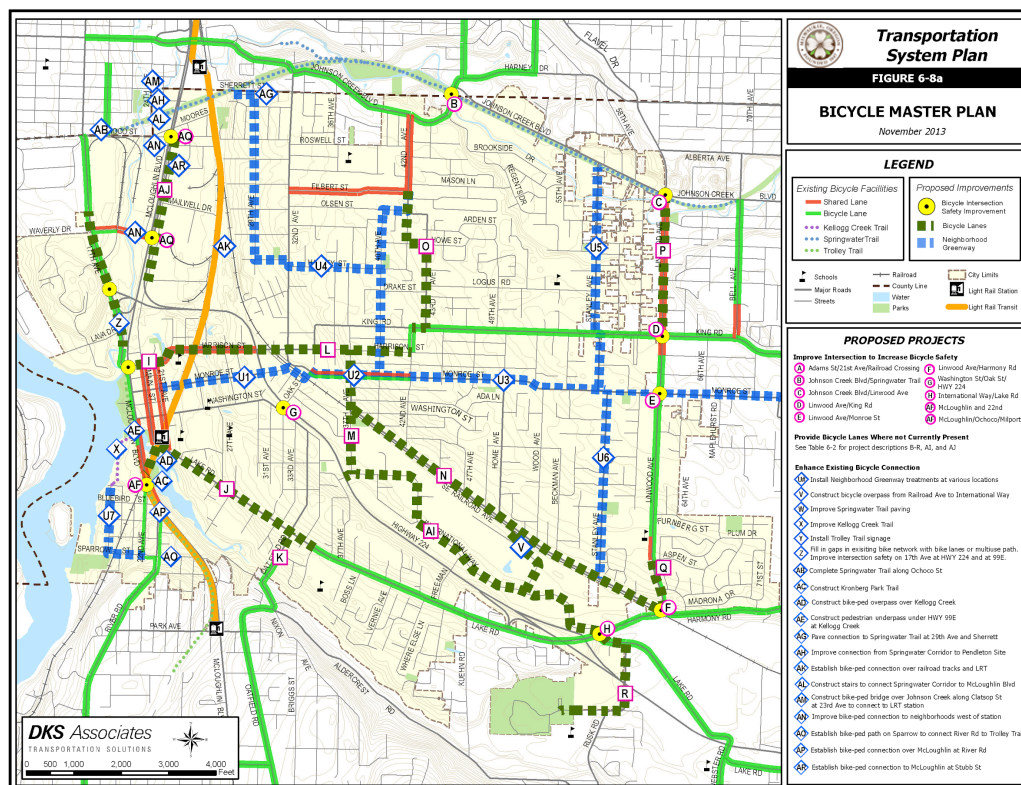
location and type of wayfinding enhancements most suitable for the corridor during subsequent levels of design.

### System Completion

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

The Monroe Street Neighborhood Greenway (indicated on Figure 4 as the primary east-west bicycle connection in dashed blue) will provide as the primary continuous east-west cycling connection in Milwaukie. Cyclists who are confident riding on a higher-speed corridor can ride four blocks north to access painted bike lanes on King Road (highlighted in solid green), which will connect to planned bike lanes on Harrison Street into downtown. Monroe Street Greenway will also act as a “greenway collector” by collecting active transportation traffic from 4 additional North-South greenways planned in the City TSP. These are shown as North-South dashed blue lines.

Figure 4: Milwaukie Bicycle Master Plan Map



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

In addition to the role this Neighborhood Greenway will play in expanding local level active transportation network access, the project will also expand regional scale bike access from unincorporated Clackamas (where the route will begin on a coordinated Neighborhood

Greenway project managed by the county), through residential and downtown Milwaukie, and connecting into bike facilities that connect into Portland's Sellwood neighborhood.

### Multimodal Travel, Mode Share, and Congestion

43. How will the project reduce transit delay and improve transit reliability? N/A

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

A multitude of transit routes have one or more stops within walking distance of the project alignment, including routes: 29, 30, 32, 33, 34, 70, 75, 99, and 152. Improvements to walking and biking facilities along the corridor will provide safer and more comfortable first and last mile connections for prospective riders.

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

Providing a safe, comfortable, and attractive active transportation corridor will expand sustainable transportation access and appeal to a broader portion of the community, including residents whose skill level isn't sufficient for cycling on unimproved auto-oriented roadways.

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

Throughway expansion near the project area is not currently under consideration.

### Climate Change and Environmental Impact

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

The project's environmental impact is minimal, and outweighed by the benefits provided by the project purpose: to provide a safe cross-town connection for people of all ages and abilities to travel by bike or utilizing safe pedestrian facilities. The project will not increase vehicular miles traveled or increase vehicular capacity of the existing system.

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

The project concept plan incorporates bioswales and landscaping into most curb extensions, chicanes, traffic circles, and medians planned. Additionally, the concept plan identifies permeable paving as a suitable option for walkway improvements in some locations.

### Freight Related Impact

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

N/A - Monroe Street does not serve as a high-volume freight corridor.

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?

No

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?

N/A

### 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?<sup>6</sup>

According to Metro's Economic Value Atlas, the project could serve up to 2,663 workers in manufacturing and other traded sectors.

53. Describe how the project supports and catalyzes low-carbon and resource efficient economic sectors.<sup>7</sup>

According to Metro's Economic Value Atlas, Milwaukie is home to 198 "clean tech jobs" within biking distance of the project. Access to safe and comfortable active transportation facilities will support tech industry workers who are able and interested in walking or biking to work.

### Project Leverage

54. How does this project leverage other funding sources?

Awarding an RFFA grant for this project would leverage several other funding sources that are committed or likely to be committed. These include: local CIP funding, ODOT STIP grants, previous TGM grants, and private development funding related to the McFarland site.

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.

Yes, RFFA funding will position the project to receive the probable ODOT STIP Greenway funds.

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

The Neighborhood Greenway project includes the optimization of Monroe Street signalization. The project traffic analysis included recommendations for three new traffic signals and one new pedestrian signal at locations including:

- Harrison Street and 42nd Avenue
- Oak Street/Monroe Street/Railroad Avenue
- 37th Avenue and Harrison Street
- Monroe Street and Linwood Avenue

Additionally, Clackamas County has identified a list of deficient traffic signals, ITS, fiber routes, flashers, and PTRs that the project team will use to upgrade TSMO on Monroe Street.

57. Is this project on the Regional Emergency Transportation Network?<sup>8</sup> Will this project help improve resiliency of the transportation network? If so, describe how.

This project is not on the Regional Emergency Transportation Network.

### PROJECT COST ESTIMATE

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

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<sup>6</sup> Traded sector industries as indicated in the Economic Value Atlas, available at: [oregonmetro.gov/tools-partners/guides-and-tools/economic-value-atlas](https://oregonmetro.gov/tools-partners/guides-and-tools/economic-value-atlas)

<sup>7</sup> Clean Technology industry sectors as defined in the Oregon Business Plan, <https://oregonbusinessplan.org/about-the-plan/industry-clusters/>

<sup>8</sup> [oregonmetro.gov/sites/default/files/2019/04/05/Regional\\_Emergency\\_Transportation\\_Routes\\_2006.pdf](https://oregonmetro.gov/sites/default/files/2019/04/05/Regional_Emergency_Transportation_Routes_2006.pdf)



☐ **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 planning level cost estimate was created in 2015. An updated cost estimate associated with the alternatives identification and evaluation was completed in 2019.

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

- a. Right of way (ROW): Yes, considered in the cost estimate
- b. Utility relocation or underground: N/A
- c. Stormwater considerations: Yes, considered in the contingency
- d. Environmental mitigation strategies: N/A
- e. Bridge, railroad, or major facility impacts: Yes, considered in the cost estimate
- f. Retaining walls: N/A
- g. Clearing and grading: Yes, considered in the cost estimate
- h. Removal of current pavement or facilities: Yes, considered in the cost estimate
- i. Signing and pavement markings: Yes, considered in the cost estimate
- j. Sidewalk and street furniture: Yes, considered in the cost estimate
- k. Street trees, landscaping, irrigation: Yes, considered in the contingency
- l. Mobilization, staging, and traffic control: Yes, considered in the cost estimate
- m. Staff availability or need for outside services: Yes, considered in the cost estimate

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

- a. Unit cost assumptions
- b. Contingency assumptions include: public utility improvements, stormwater improvements, landscaping, irrigation, and street trees.

Please see the Revised Cost Estimate Attachment, which includes unit cost assumptions and contingency assumptions.

**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 \_\_\_\_\_

Engineering \_\_\_\_\_

Right of Way \_\_\_\_\_

Environmental \_\_\_\_\_

**Other agency signatures (as required):**

ODOT Highway \_\_\_\_\_

ODOT Rail \_\_\_\_\_

TriMet \_\_\_\_\_

SMART \_\_\_\_\_

Utilities \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Railroads \_\_\_\_\_

Other (please indicate) \_\_\_\_\_