

Oregon City Loop Trail Refinement Plan

September 2023



FEHR & PEERS

Oregon City Loop Trail Refinement Plan

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Executive Summary

Overview

The **Oregon City Loop Trail** will create a loop around Oregon City providing travelers with off-street paths and on-street connections along local roadways.

This refinement plan was developed to further define **two segments of the Loop Trail** and **two ancillary paths** that will create local connections to the Loop Trail. This plan includes recommend alignments and cross-sections, planning-level cost-estimates, and phasing that could be considered to align construction of the paths with available funding.

The plan also identifies potential **funding sources** that the City could explore to advance design and construction of the paths.

This plan positions the City **to add projects to the Capital Improvement Program (CIP), condition new development** to design and construct portions of the path, and **apply for grant funding**, bringing the City's goal of improving options for people walking and riding a bicycle within the City to fruition.

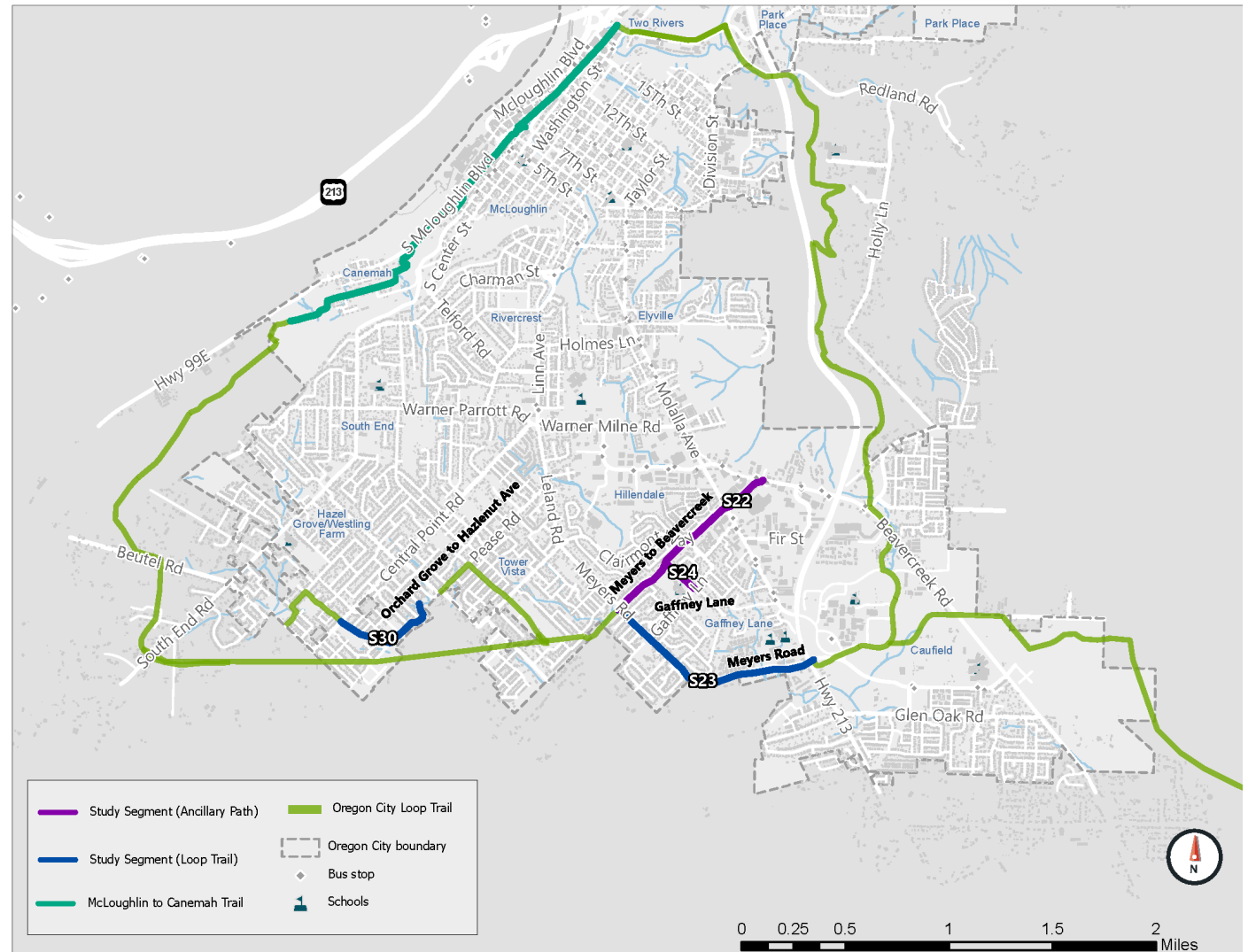


Figure ES-1. Oregon City Loop Trail

Meyers-Beavercreek Shared Use Path (Project S-22)

The Meyers-Beavercreek Shared Use Path is an ancillary path to the Oregon City Loop Trail that will provide an off-street connection for people walking, biking, and using other small mobility devices. This path will connect people from planned regional trails to Meyers Road.

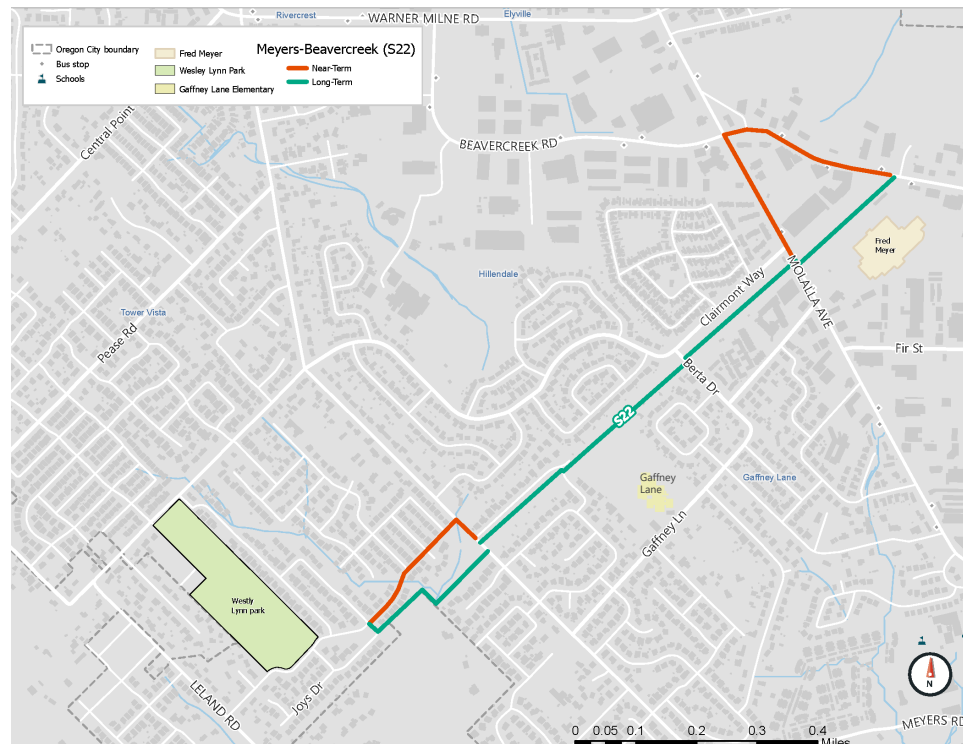


Figure ES-2. Meyers-Beavercreek Alignment

Proposed Cross-Section

The proposed cross-section for this path includes a 12-foot shared use path that is separated from existing roadways by a landscape buffer that will be at least four-feet wide. While the buffer will not be required when the path is not adjacent to roadways, adequate space will be provided to maintain separation from surrounding houses and private property. For additional cross-sections for this path, see **Appendix C: Concepts & Cross-Sections**.

Estimated Cost:

Beavercreek Road to Meyers Road - \$2.9M-\$4.4M

Near-Term: Meyers Road to Wesley Lynn Park - \$325K-\$485K

Long-Term: Meyers Road to Wesley Lynn Park - \$2.5M-\$3.8M

Total Long-Term: \$5.4M-\$8.2M

Proposed Alignment

The alignment for this path includes two segments that will require substantial coordination and funding to implement. To provide an option that could be implemented sooner, two near-term alignments have been identified. These include:

- **Beavercreek Road to Molalla Avenue** where the near-term alignment uses existing sidewalks and bicycle infrastructure while the long-term alignment provides a direct connection through existing parking lots.
- **Meyers Road to Joys Drive** where the near-term alignment uses existing infrastructure while the long-term alignment constructs a new path through existing green space.



Figure ES-3. Meyers-Beavercreek Cross-Section

Meyers Road Shared Use Path (Project S-23)

The Meyers Shared Use Path is a portion of the Oregon City Loop Trail that will connect people walking, biking, and using other small mobility devices from Oregon Route 213 (OR-213) to the Meyers-Beavercreek Shared Use Path. This path will also provide an important connection from residential areas along Meyers Road to Clackamas County Community College and Oregon City High School.

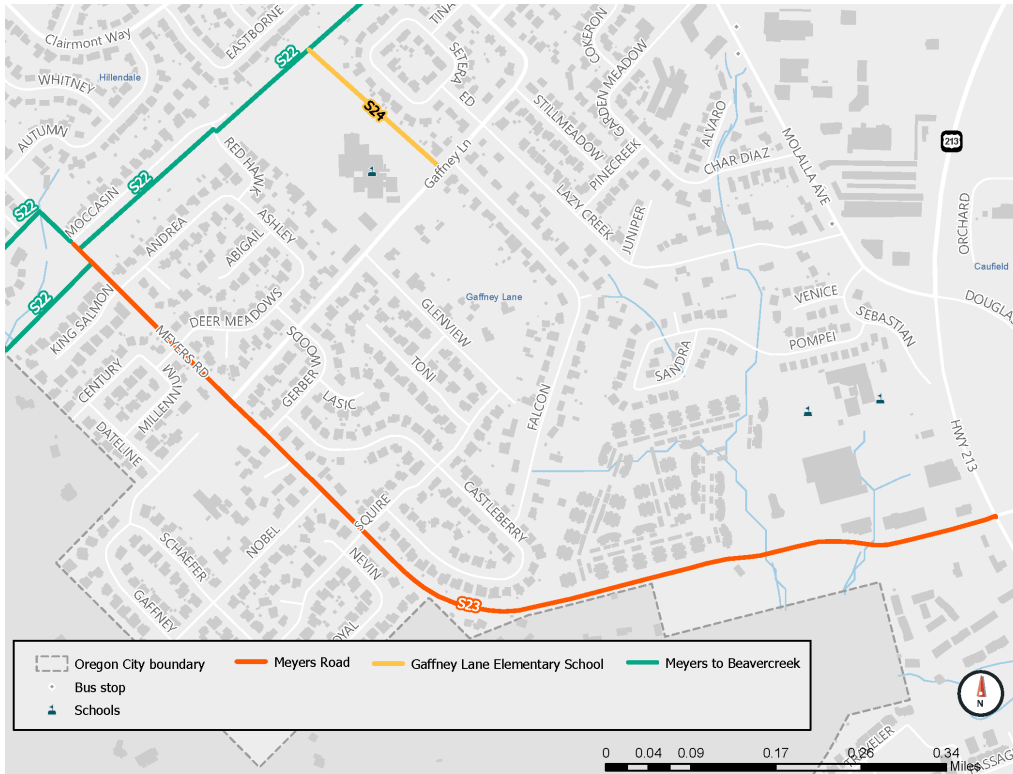


Figure ES-4. Meyers Road Alignment

Proposed Cross-Section

The cross-section for this path includes a 12-foot shared use path on the north side of Meyers Road. To achieve this, the on-street bicycle lanes will be removed and everyone riding bicycles and small mobility devices will use the shared use path. Moving the bicyclists and small mobility users to the shared use path will allow for moving the north curb in to create space to widen the existing sidewalk and provide a landscaped buffer without substantial impacts to residential properties.

Estimated Cost: \$4.8M-\$7.2M

Proposed Alignment

After a detailed evaluation, the north side of Meyers Road was selected as the ultimate location for the shared use path to:

- Keep the entire shared use path within the City's boundary
- Leverage the Right-of-Way allocated to the continuous sidewalks that exist today
- Minimize impacts to utilities
- Minimize the need to cross Meyers Road if you are accessing the path from the Gaffney Lane neighborhood

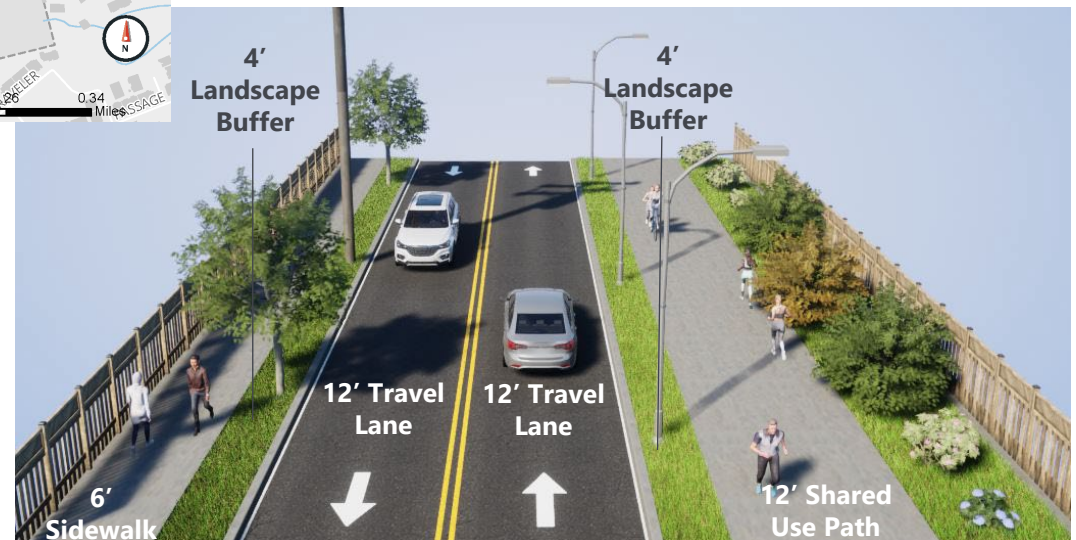


Figure ES-5. Meyers Road Cross-Section

Gaffney Lane Shared Use Path (Project S-24)

The Gaffney Lane Elementary Shared Use Path is an ancillary path that will connect people using the Meyers-Beavercreek Path to Gaffney Lane Elementary Path. This path exists today and is used by people connecting to the school and open space located behind the school. This refinement plan is not making recommendations to change the alignment but has identified the appropriate cross-section to formalize the path.

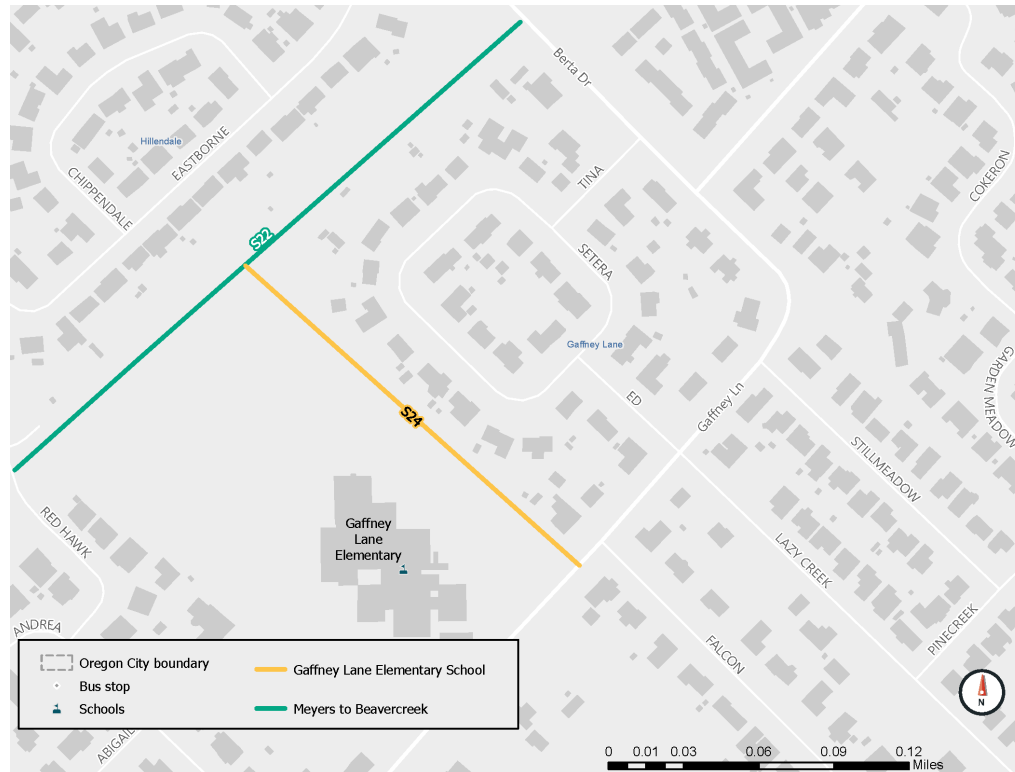


Figure ES-6. Gaffney Lane Alignment

Proposed Cross-Section & Cost-Estimate

The proposed cross-section for this path includes a 12-foot shared use path that is separated from surrounding properties by existing fences.

Estimated Cost: \$472,000 to \$708,000

Proposed Alignment

This alignment utilizes the existing rudimentary path that exists today. This path will create an off-street connection for families who live in the surrounding neighborhoods who may choose to walk to school if safe and comfortable facilities that are separated from vehicles are provided.

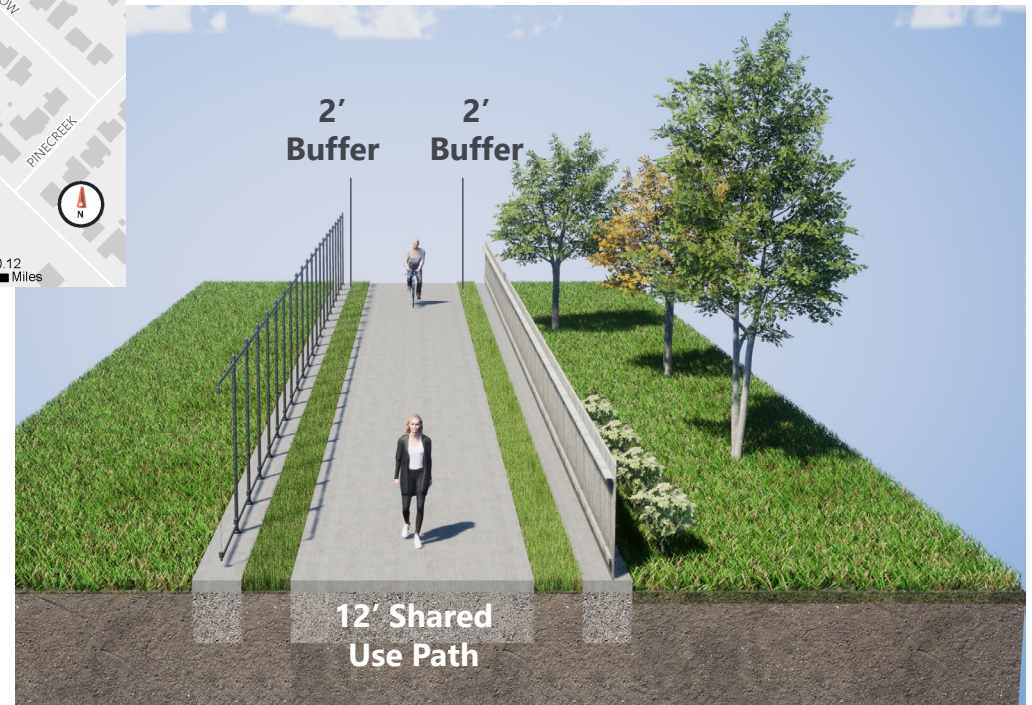


Figure ES-7. Gaffney Lane Cross-Section

Orchard Grove-Hazelnut Shared Use Path (Project S-30)

The Orchard Grove-Hazelnut Shared Use Path is a portion of the Loop Trail that will connect people walking, biking, and using other small mobility devices from Orchard Grove Drive to Hazelnut Court, Hazel Grove Park, and John McLoughlin Elementary School. This portion of the plan will serve as guidance for developers, which will likely be required to fund and build this portion of the Oregon City Loop Trail as development occurs.

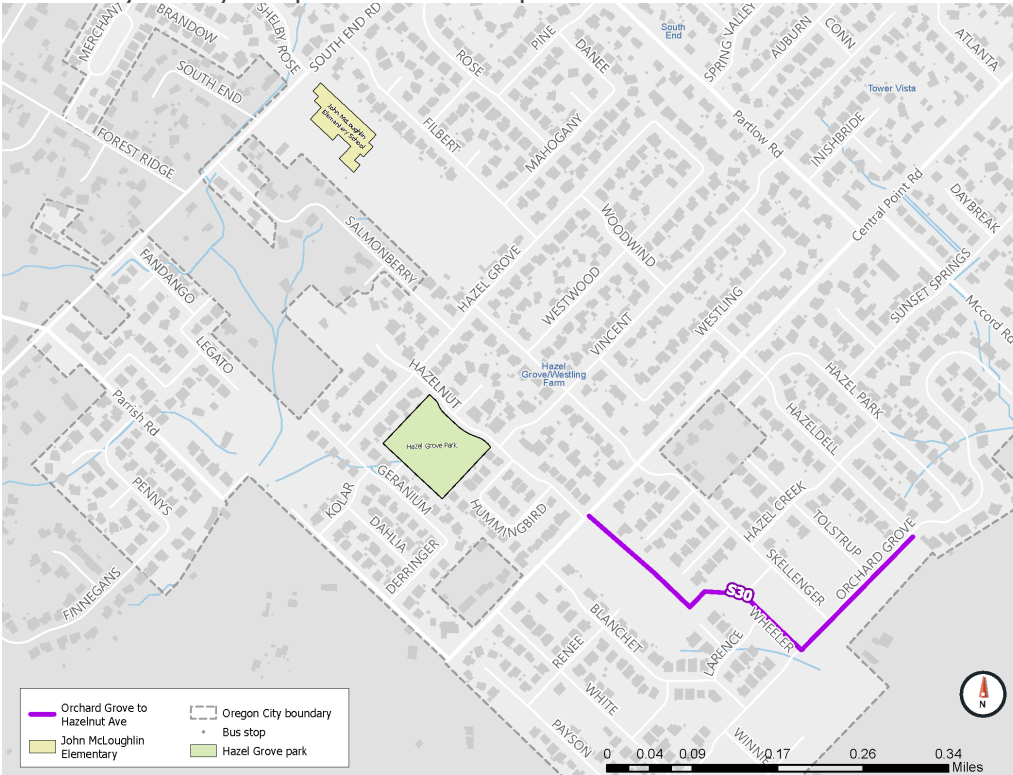


Figure ES-8. Orchard Grove-Hazelnut Alignment

Proposed Cross-Section & Cost-Estimate

The proposed cross-section utilizes existing streets and sidewalks. The primary addition to existing infrastructure included in the recommended cross-section is the addition of sharrows to indicate the people riding a bicycle or other small mobility devices should use the vehicle travel lane and alert drivers that they should be prepared to share the lane and help to create "family-friendly" streets.

Estimated Cost: \$56,000 to \$84,000

Proposed Alignment

This portion of the Loop Trail runs from Hazeldell Avenue to S. Central Point Road. Unlike other segments refined as part of this plan, the recommended alignment for this portion of the Trail utilizes on-street facilities for people riding a bicycle and sidewalks for people walking.

When construction occurs in the undeveloped lot, it is recommended that the connection be built consistent with the existing Hazelnut alignment.

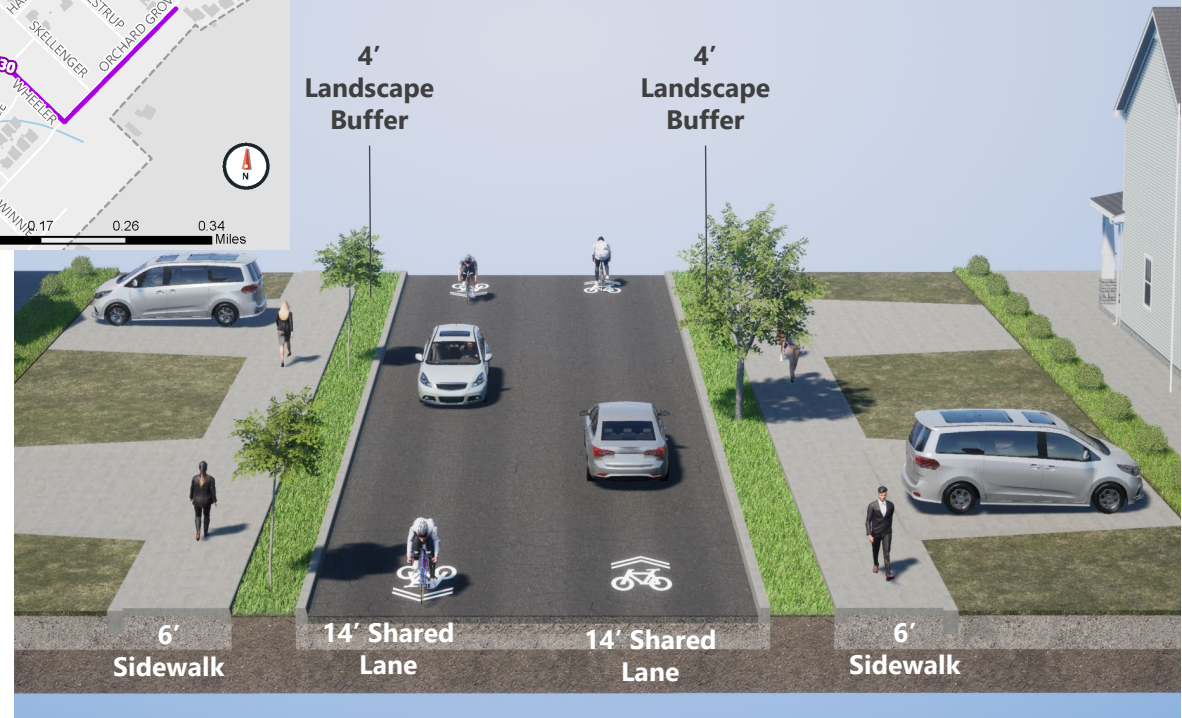


Figure ES-9. Orchard Grove-Hazelnut Cross-Section

Funding

There are three paths to funding design and construction of the four paths included in this plan. The first is by conditioning development to construct portions of the paths as development occurs. The second option is adding the path to the City's CIP, which allows the City to program funding based on the anticipated timeline for construction. Lastly, the City can apply for competitive grants. Four grants that the City could consider applying for to design and construct the paths are summarized below.

Safe Routes to School (SRTS)

The Oregon Department of Transportation provides funding for SRTS projects, under two umbrellas – construction and education. Funds from this program are allocated through a competitive grant process that consists of two applications typically due in March and July.

The paths eligible for funding under this grant program would be the Orchard Grove-Hazelnut, Gaffney Lane Elementary, and portions of the Meyers-Beavercreek Shared Use Paths. It is important to note that based on the demographic makeup of the schools at application, the schools may not be competitive.

Active Transportation Infrastructure Investment Program

This federally funded program is designed to fund communities looking to expand infrastructure for walking and biking. This is aimed at active transportation projects or group of projects with a total cost of over \$15 million, or total cost of \$100,000 for planning and design grants are eligible for funding under this program.

The Meyers Road and Meyers-Beavercreek Paths are estimated to cost roughly \$15 million when combined. As these paths would benefit from being constructed together, the City could consider apply for funding as one large project.

Recreational Trails Programs (RTP)

This federally funded program, which is administered by the Oregon Parks and Recreation Department, provides funds for local agencies to develop, improve, or expand motorized and non-motorized trails and their facilities.

The minimum grant request for this grant and the recommended maximum request is \$150,000. As part of the Loop Trail, the Orchard Grove-Hazelnut Shared Use Path, estimated to cost less than \$100,000, may be eligible for funding under this grant. The City also could use this grant to cover a portion of the cost for the Gaffney Lane Path.

Oregon Community Paths

The Oregon Community Paths program is geared towards helping communities create and maintain connections through shared use paths. This grant is geared towards projects that create continuous paths that are physically separated from the roadway.

Applications for this grant are on a two-year cycle with pre-applications due in the fall and applications accepted November through January. The two paths most likely to be competitive for this grant are the Meyers Road and Meyers-Beavercreek Shared Use Paths.

Introduction & Purpose

Introduction

The Oregon City Loop Trail, a regional trail planned to connect people walking, riding a bicycle, or other small mobility devices to adjacent communities, will create a loop around Oregon City through a series of shared use paths and on-street connections. This plan refines two segments of the Loop Trail and two ancillary paths, which will connect local users to the Loop Trail. The four segments, shown on **Figure 1**, included in this plan are:

- Meyers-Beavercreek Shared Use Path (S-22)
- Meyers Road Shared Use Path (S-23)
- Gaffney Lane Elementary Shared Use Path (S-24)
- Orchard Grove-Hazelnut Shared Use Path (S-30)

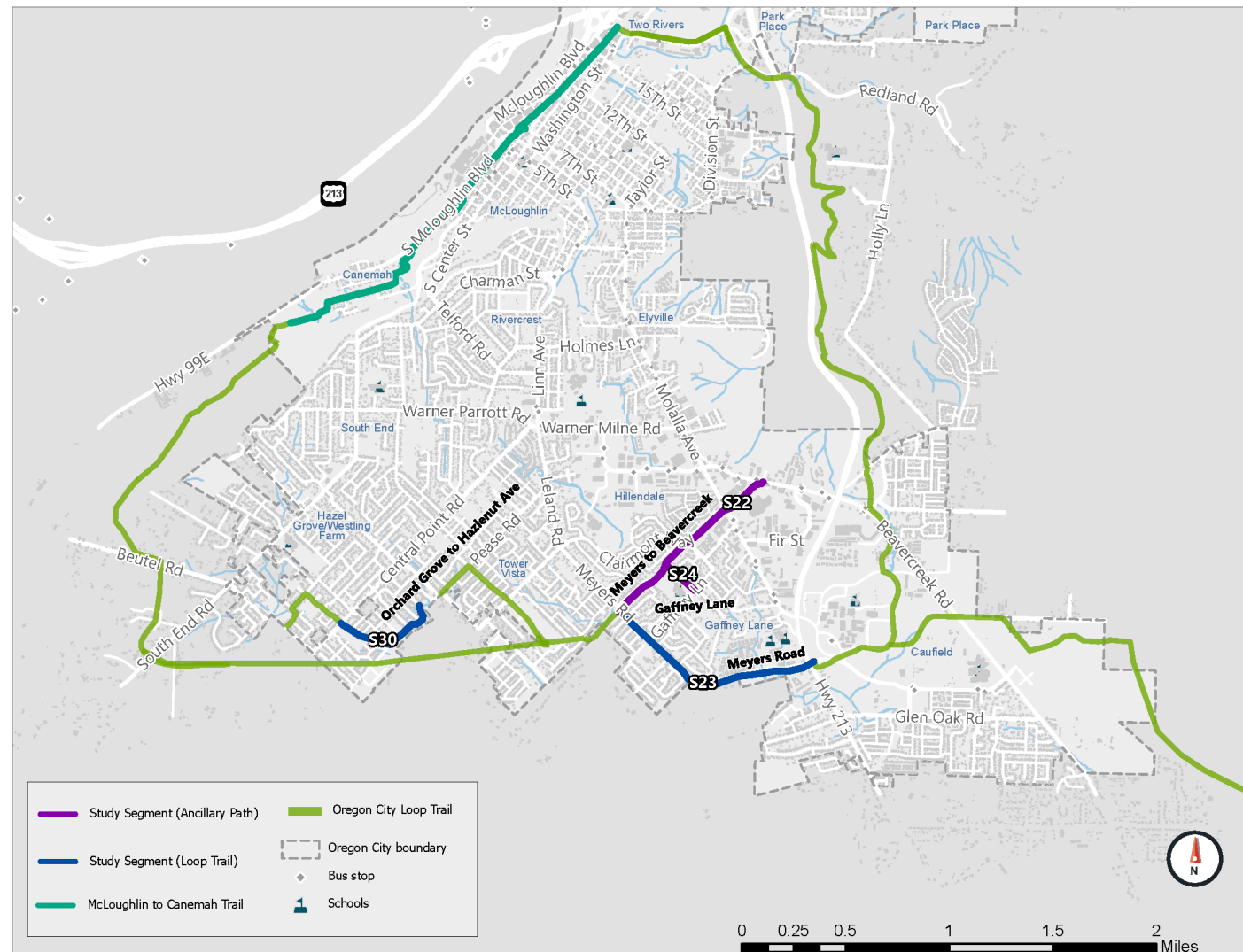


Figure 1. Study Segments

Purpose

One focus of the City's Transportation System Plan (TSP), adopted in 2013, was to emphasize a multimodal approach to solving transportation issues, including improving options for people walking and biking within the city. This approach is woven throughout the TSP goals, objectives, and the project list.

Goal 1 of the TSP states that the City should "Ensure that the transportation system maintains and improves individual health, safety and security by maximizing the comfort and convenience of walking, biking and transit options, public safety and service access." By refining the four segments included in this plan, this effort positions the City to advance the objective of providing a network of family-friendly walking and biking routes. This refinement plan also includes potential funding sources that the City can use to design and construct these paths, aligning with the City's goal of identifying transportation investments that can be made with available funding.

Outcomes

This plan includes the recommended alignment and cross-section for the four paths, phasing that could be used to implement the shared use paths based on funding availability, and planning-level cost-estimates.

Additionally, this plan serves as guidance for Development Review Staff to condition new development to design and construct portions of the path, positions the City to add projects to the Capital Improvement Program (CIP) that would design and construct portions of the path, and most importantly, positions the City to secure grant funding to support design and construction.

Report Organization

This report is organized in the following sections:

- **Stakeholder & Community Input:** Overview of engagement with stakeholders and community members
- **Meyers-Beavercreek Shared Use Path (S-22):** Opportunities, constraints, and recommendations for the Meyers-Beavercreek Shared Use Path
- **Meyers Road Shared Use Path (S-23):** Opportunities, constraints, and recommendations for the Meyers Road Shared Use Path
- **Gaffney Lane Elementary Shared Use Path (S-24):** Opportunities, constraints, and recommendations for the Gaffney Lane Shared Use Path
- **Orchard Grove-Hazelnut Shared Use Path (S-30):** Opportunities, constraints, and recommendations for the Orchard Grove Shared Use Path
- **Funding Opportunities:** Overview of grants that could be used to design and implement the shared use paths

Stakeholder & Community Input

Stakeholder Input

While portions of the alignments identified in this plan can be constructed on property currently owned by the City, in some cases easements will be required to connect the paths through privately held properties.

To understand concerns from property owners and agencies that could have large portions of the shared use paths traversing or adjacent to their properties, stakeholder interviews were completed early in the planning process. Stakeholder interviews also included representatives from key destinations along the paths and regional planning agencies.

Representatives from the following agencies participated in stakeholder interviews, a summary of which can be found in **Appendix A: Opportunities & Constraints**:

- Clackamas County Community College
- Deering Property Management
- Gaffney Lane Neighborhood Association
- Oregon City Parks Department
- Portland General Electric (PGE)
- Metro
- Oregon City School District



OREGON CITY

LOOP TRAIL Plan

WE WANT TO HEAR FROM YOU!

Oregon City Public Works is developing a plan for four segments of the Oregon City Loop Trail that are included in the City's Transportation System Plan. This plan will identify **where to build the trails** and what type of trail to build.

To share your thoughts on the proposed trails, please take our survey which can be found here:

<https://bit.ly/3A0kpzu>

For updates on the project, visit the project website here:

<https://www.oregoncity.org/publicworks/project/ps-22-002>



THE SURVEY IS AVAILABLE FROM SEPTEMBER 9 TO OCTOBER 3, 2022.

Community Input

Community members had two opportunities to share their concerns and priorities for development of the Loop Trail and ancillary paths.

The first opportunity was through an online survey, which asked community members to share how they would use the paths, what discourages them from walking or riding a bicycle today, and what design features would make them feel safer and more comfortable when using the paths.

Nearly 70 community members responded to the survey. Key takeaways that informed recommendations in this plan include:

- A concern about the loss of privacy in areas where paths may be located next to residential areas
- A desire for amenities such as trash cans, dog waste stations, and landscaping
- A need for separation from vehicles and enhanced lighting
- A need for paths that meet the needs of a wide variety of users

The second opportunity was an in-person workshop held at Gaffney Lane Elementary School which focused on the Gaffney Lane path and the Meyers-Beavercreek path. Feedback from community members included:

- A desire to maintain existing green space between Meyers Road and Frontier Parkway
- Paths that used to traverse the existing school property were highly-utilized; opportunities to follow that alignment should be prioritized
- Concerns about proximity of the paths to houses and the elementary school







Postcards were used to promote opportunities to share feedback, along with promotion on City websites and social media platforms.

Meyers-Beavercreek Shared Use Path (Project S-22)

The Meyers-Beavercreek Shared Use Path is an ancillary path to the Oregon City Loop Trail that will provide an off-street connection for people walking, biking, and using other small mobility devices. This path will connect people from the planned regional trails to the Oregon City Loop Trail on Meyers Road.

Table 1 summarizes the key opportunities and constraints that were identified and used to inform development of the proposed cross-section and alignment for this path.

Table 1. Meyers-Beavercreek Opportunities & Constraints

	<ul style="list-style-type: none"> This path is part of the Not Likely to be Funded Transportation System and identified as a Long-term Phase 2 project in the TSP This path is identified as a Local Trail in the City's Trails Master Plan
	<ul style="list-style-type: none"> Between Beavercreek Road and Molalla Avenue, the most direct path requires traversing an existing retail center The predominate land use along the planned alignment is single-family residential Gaffney Lane Elementary School and Wesley Lynn Park are the primary generators for bicycle and pedestrian trips along the planned path
	<ul style="list-style-type: none"> Much of the planned alignment is along property owned by the City of Oregon City and Oregon City School District Several homes have fences that extend into the Right-of-Way between Berta Drive and the elementary school There is an existing easement, granted to Portland General Electric (PGE) from Beavercreek Road to Frontier Parkway that follows the powerlines and is approximately 225-feet wide
	<ul style="list-style-type: none"> Existing roadways offer low-speed alternatives as a near-term option until funding can be secured for off-street connections If the alignment uses on-street connections as a near-term connection, enhancements are needed to improve safety and comfort This path will connect to the planned Gaffney Lane Elementary Shared Use Path, creating an off-street connection to the elementary school between Beavercreek Road and Meyers Road
	<ul style="list-style-type: none"> From Beavercreek Road to Frontier Parkway, the alignment follows high-voltage transmission lines that will require 50-feet of horizontal clearance from the path There are two stormwater management areas, located on either side of Meyers Road that need to be maintained
	<ul style="list-style-type: none"> Water and natural resources in the area between Meyers Road and Frontier Parkway will need to be incorporated in the design for the path The only geologic hazard present along this path alignment are slopes, which are greater than 25% near the stormwater management areas

Proposed Alignment

This shared use path alignment runs from the signalized intersection on Beavercreek Road that provides access to Fred Meyer to Joys Drive, where it connects users to Frontier Parkway, which can be used to access Wesley Lynn Park.

Along this alignment, this path will intersect with the Meyers Road segment of the Oregon City Loop Trail where it crosses the Meyers Road Path (S-23) and the Gaffney Lane Path (S-24).

While the long-term alignment of the path will provide separated facilities, dedicated space outside the existing roadway, two segments may use existing facilities until funds can be allocated to construct these segments.

Between Beavercreek and Molalla Avenue, the long-term alignment would connect along existing property lines. Constructing a path between the two existing parking lots will require coordination with property owners and significant investment. In the interim, recently improved facilities for people walking and bicycling on Beavercreek Road can be used to connect users to the portion of the path located to the west of Molalla Avenue.

A near-term alignment has also been identified between Meyers Road and Frontier Parkway. While the near-term alignment will connect users to Wesley Lynn Park using the existing sidewalks and sharrows indicating the people riding a bicycle should use the vehicle travel lane, the long-term alignment will provide an off-street connection through existing green space. As this space is privately owned and will require substantial investment to address environmental constraints, this alignment has been identified as long-term.

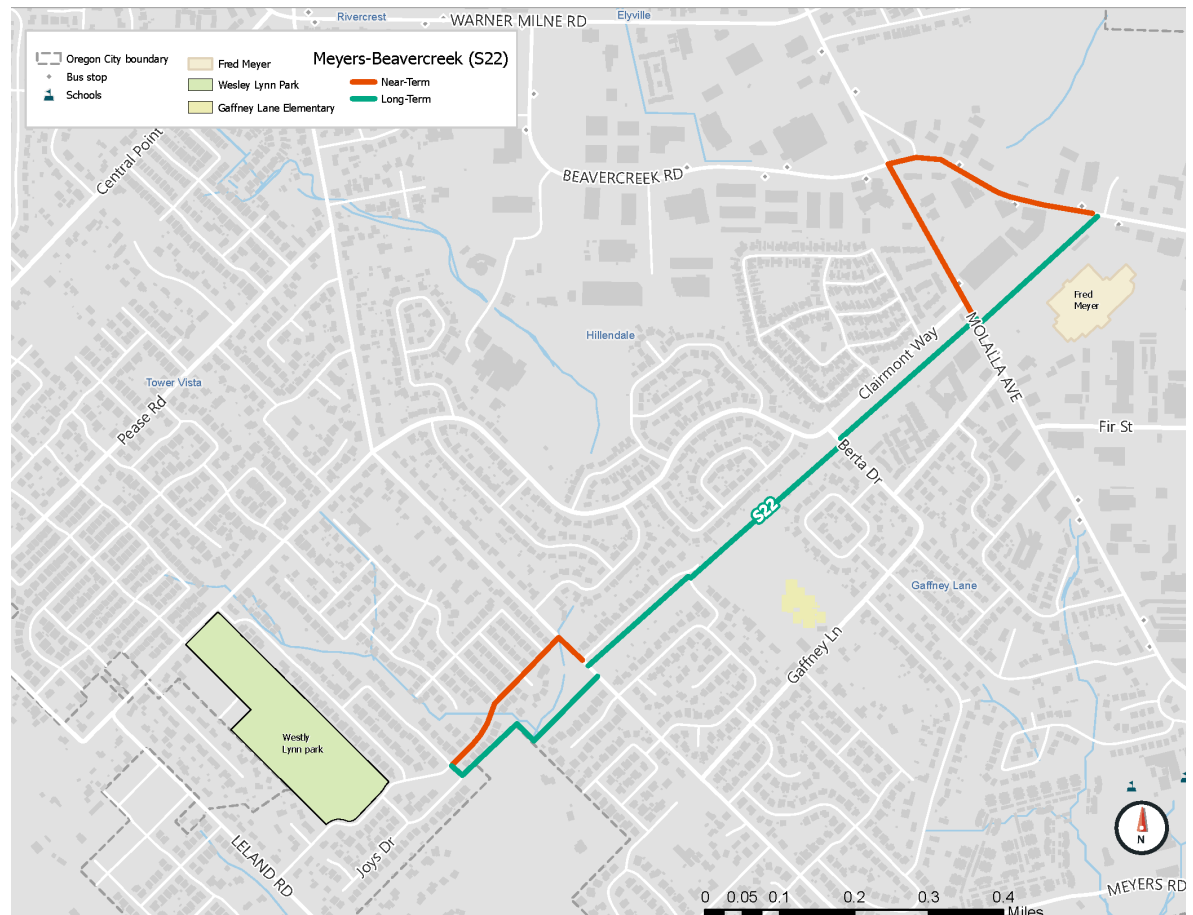


Figure 2. Meyers-Beavercreek Proposed Alignment

Proposed Cross-Section

As shown on **Figure 3**, the proposed cross-section for this path includes a 12-foot shared use path that is separated from existing roadways by a landscape buffer that should be at least four-feet wide.

The cross-section for this path will vary as it traverses the alignment based on the surrounding context. **Figure 4**, shows the proposed cross-section as the path crosses the existing open-space behind Gaffney Lane Elementary. See **Appendix C: Concepts and Cross-Sections**, for more detail on how the cross-section will change along the path.

Additional considerations that will need to be addressed as this path is constructed include:

- Ability to integrate amenities such as dog waste stations and benches
- Adjustment to the alignment may be needed to maintain appropriate distance from existing powerlines and maximize remaining space as plans for empty lots are refined
- An elevated structure may be required to minimize environmental impacts between Meyers Road and Frontier parkway for the long-term alignment
- Opportunities to enhance existing on-street facilities should be explored if the near-term alignment is utilized

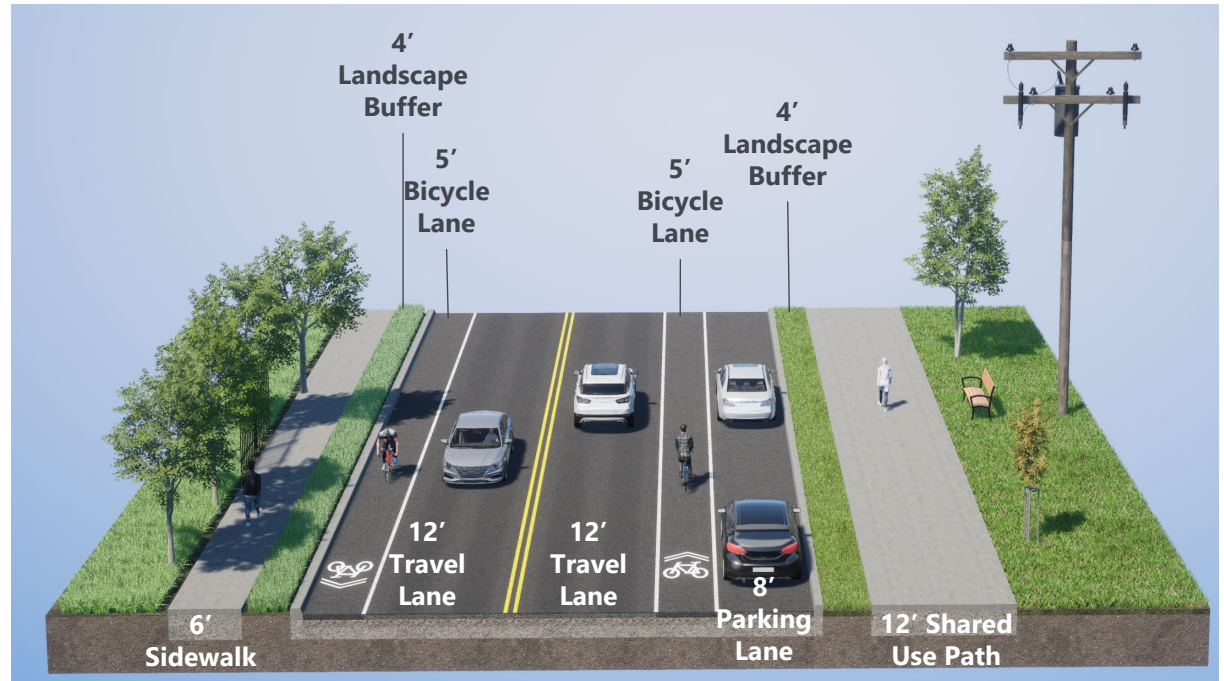


Figure 3. Meyers-Beavercreek Cross-Section Along Clairmont Way



Figure 4. Meyers-Beavercreek Cross-Section Through Open Space

Estimated Cost

The planning-level cost-estimate for this segment was split into two segments: Beavercreek Road to Meyers Road and Meyers Road to Wesley Lynn Park. For the second segment, separate estimates were prepared for the near-term and long-term alignments, as shown in **Table 2**.

Detailed cost-estimates can be found in **Appendix D: Cost-Estimates**.







Table 2. Meyers Beavercreek Cost-Estimate		
Segment	Low Estimate (2023 \$)	High Estimate (2023 \$)
Segment 1: Meyers Road to Beavercreek Road	\$2,950,000	\$4,420,000
Segment 2 (Near-Term): Meyers Road to Wesley Lynn Park	\$325,000	\$485,000
Segment 2 (Long-Term): Meyers Road to Wesley Lynn Park	\$2,530,000	\$3,790,000
Total (with Near-Term):	\$3,275,000	\$4,905,000
Total (with Long-Term):	\$5,480,000	\$8,210,000

Meyers Road Shared Use Path (Project S-23)

The Meyers Shared Use Path (S-23) is a portion of the Oregon City Loop Trail that will connect people walking, biking, and using other small mobility devices from Oregon Route 213 (OR-213) to the Meyers-Beavercreek Shared Use Path (S-22). This path will also provide an important connection from residential areas along Meyers Road to Clackamas County Community College and Oregon City High School.

Table 3 summarizes the key opportunities and constraints that were identified and used to inform development of the proposed cross-section and alignment for this path.

Table 3. Meyers-Road Opportunities & Constraints

	<ul style="list-style-type: none"> This path is part of the Not Likely to be Funded Transportation System and identified as a Long-term Phase 3 project in the TSP As part of the Loop Trail, this path is identified as a Regional Trail
	<ul style="list-style-type: none"> Land use along the corridor is predominantly single-family homes with areas of high-density residential and commercial at the Meyers Road and OR-213 intersection This path will provide an important multimodal connection from the residential areas to the west of OR-213 to Clackamas County Community College and Oregon City High School
	<ul style="list-style-type: none"> Coordination with private landowners will be required to widen easements for existing sidewalks
	<ul style="list-style-type: none"> While there are on-street bicycle lanes on Meyers Road and continuous sidewalks along most of the corridor, enhancements are needed to improve comfort for people walking and riding a bicycle
	<ul style="list-style-type: none"> There are no significant on-street utilities along Meyers Road other than utility access holes, catch basins, fire hydrants, electricity poles, and electricity cabinets
	<ul style="list-style-type: none"> There are no significant environmental limitations to align the shared use path along Meyers Road

Proposed Alignment

This shared use path alignment runs along Meyers Road from OR-213 to Moccasin Way where it connects to the Meyers-Beavercreek Path (S-22).

After a detailed evaluation, the north side of Meyers Road was selected as the ultimate location for the shared use path.

The north side of Meyers Road was selected for the following reasons:

- This alignment would keep the entire shared use path within the City's boundary.
- There are already continuous sidewalks on the north side of Meyers Road.
- There will be fewer impacts to utilities with widening sidewalks and moving the curb on the north side of the road.
- Placing the shared use path on the north side allows community members that live to the north and east of Meyers Road to access the path without having to cross Meyers Road.

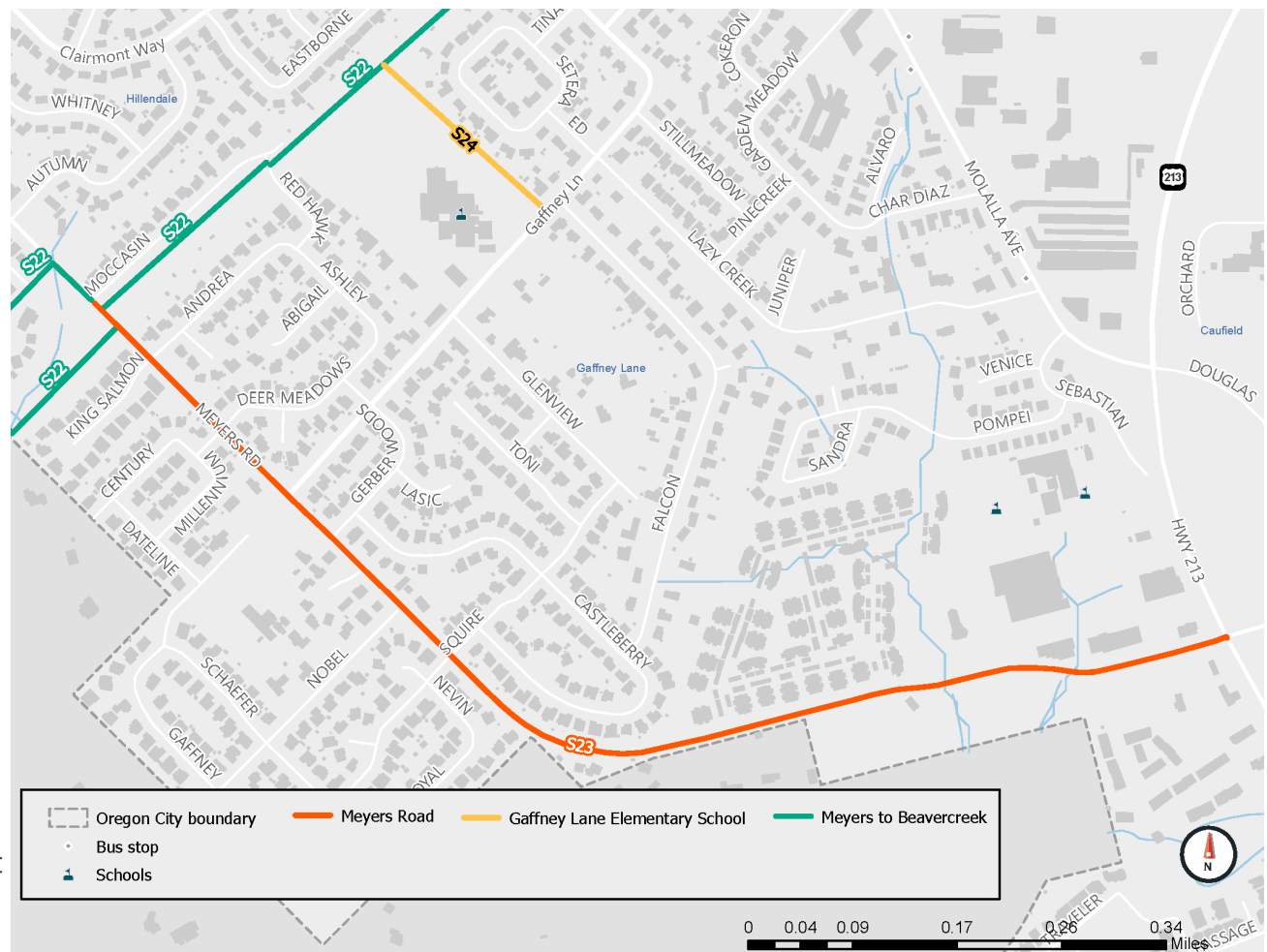


Figure 5. Meyers Road Proposed Alignment

Proposed Cross-Section

As shown on **Figure 7**, the proposed cross-section for this path includes a 12-foot shared use path on the north side of Meyers Road.

To achieve this, the on-street bicycle lanes will be removed and everyone riding bicycles and other small mobility devices will use the shared use path. This will allow for moving the north curb in to create space to widen the existing sidewalk and provide a landscaped buffer without substantial impacts to residential properties.

Additional considerations that will need to be addressed as this path is constructed include:

- Additional treatments to improve safety at driveways and intersections along Meyers Road, including raised crosswalks and additional signage
- There are some locations where existing easements will need to be widened to accommodate the shared use path

Estimated Cost

Based on the planning-level cost-estimate for this segment, the cost for design and construction of this shared use path is between \$4.5 million on the low end and \$7.16 million on the high end, as shown in **Table 4**.

Concepts used to develop cost-estimates are provided in **Appendix C: Concepts & Cross-Sections** while detailed cost-estimates can be found in **Appendix D: Cost-Estimates**.

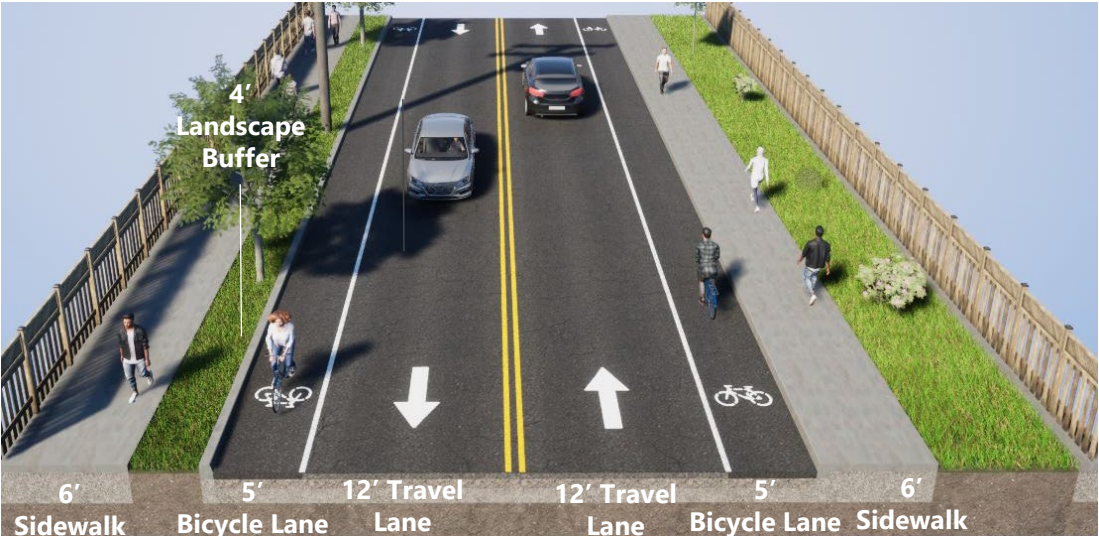


Figure 6. Existing Meyers Road Cross-Section

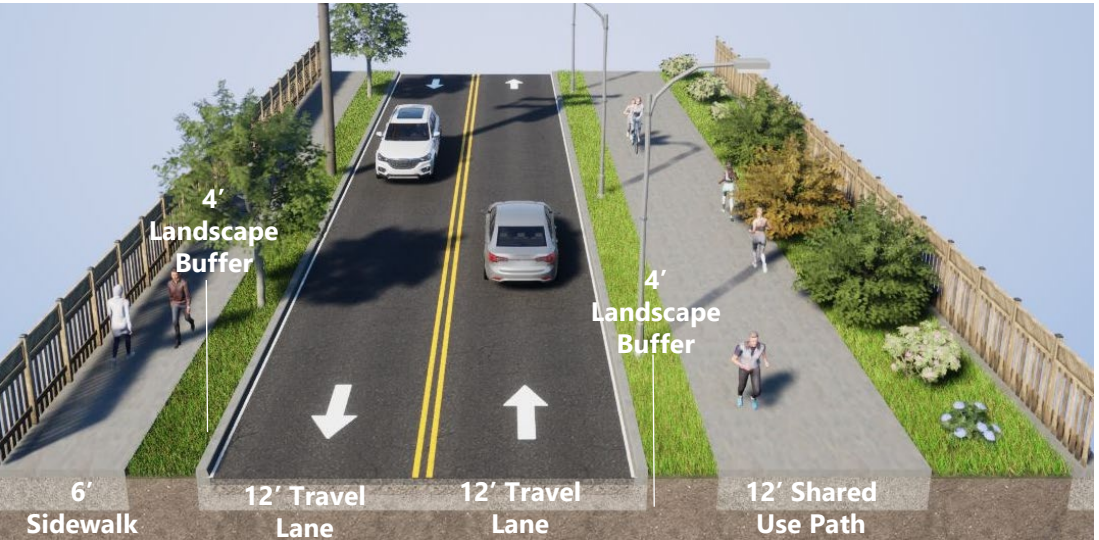


Figure 7. Proposed Meyers Road Cross-Section







Table 4. Meyers Road Cost-Estimate		
Segment	Low Estimate (2023 \$)	High Estimate (2023 \$)
Meyers Road Shared Use Path	\$4,776,000	\$7,164,000

Gaffney Lane Elementary Shared Use Path (Project S-24)

The Gaffney Lane Elementary Shared Use Path (S-24) is an ancillary path that will create a connection from Gaffney Lane to the Meyers-Beavercreek Path (S-22). This path exists today and is used by people connecting to the school and open space located behind the school. This refinement plan is not making recommendations to change the alignment but has identified the appropriate cross-section to formalize the path.

Table 5 summarizes the key opportunities and constraints that were identified and used to inform development of the proposed cross-section and alignment for this path.

Table 5. Gaffney Lane Opportunities & Constraints

	<ul style="list-style-type: none"> This path is part of the TSP's Likely to be Funded Transportation System and prioritized for implementation before 2035 This path is identified as a part of the Hillendale South Trail in the City's Master Plan, which will ultimately connect Gaffney Lane to Hillendale Park
	<ul style="list-style-type: none"> Land use surrounding the shared use path alignment is entirely built out with single-family homes located east of the path and Gaffney Lane Elementary School located to the west of the path
	<ul style="list-style-type: none"> The shared use path alignment is located on two lots, both owned by Oregon City School District who is open to formalizing use of the space by the City for the purpose of the shared use path
	<ul style="list-style-type: none"> The alignment for the shared use path is already in place along the first lot owned by the School District with approximately 150-feet of asphalt path before a gravel section, which is approximately 250-feet long
	<ul style="list-style-type: none"> There are no utilities that need to be considered until the connection with the planned Meyers-Beavercreek Shared Use Path
	<ul style="list-style-type: none"> The proposed alignment does not have any environmental constraints

Proposed Alignment

This shared use path alignment runs from Gaffney Lane to the Proposed Meyers-Beavercreek Shared Use Path (S-22), as shown on **Figure 8**.

This alignment utilizes the existing rudimentary path that exists today and connects people from Gaffney Lane to the open space located behind Gaffney Lane Elementary School.

This path will provide an off-street connection for families who may choose to walk to school, specifically those located behind the school. Once the Meyers-Beavercreek Path is constructed, there would be an off-street connection from Meyers Road to Berta Drive and a connection to Gaffney Lane.

As this alignment exists today, there are no environmental considerations or ROW impacts; however, coordination with surrounding residential areas and the school will be needed to ensure that security and privacy are maintained.

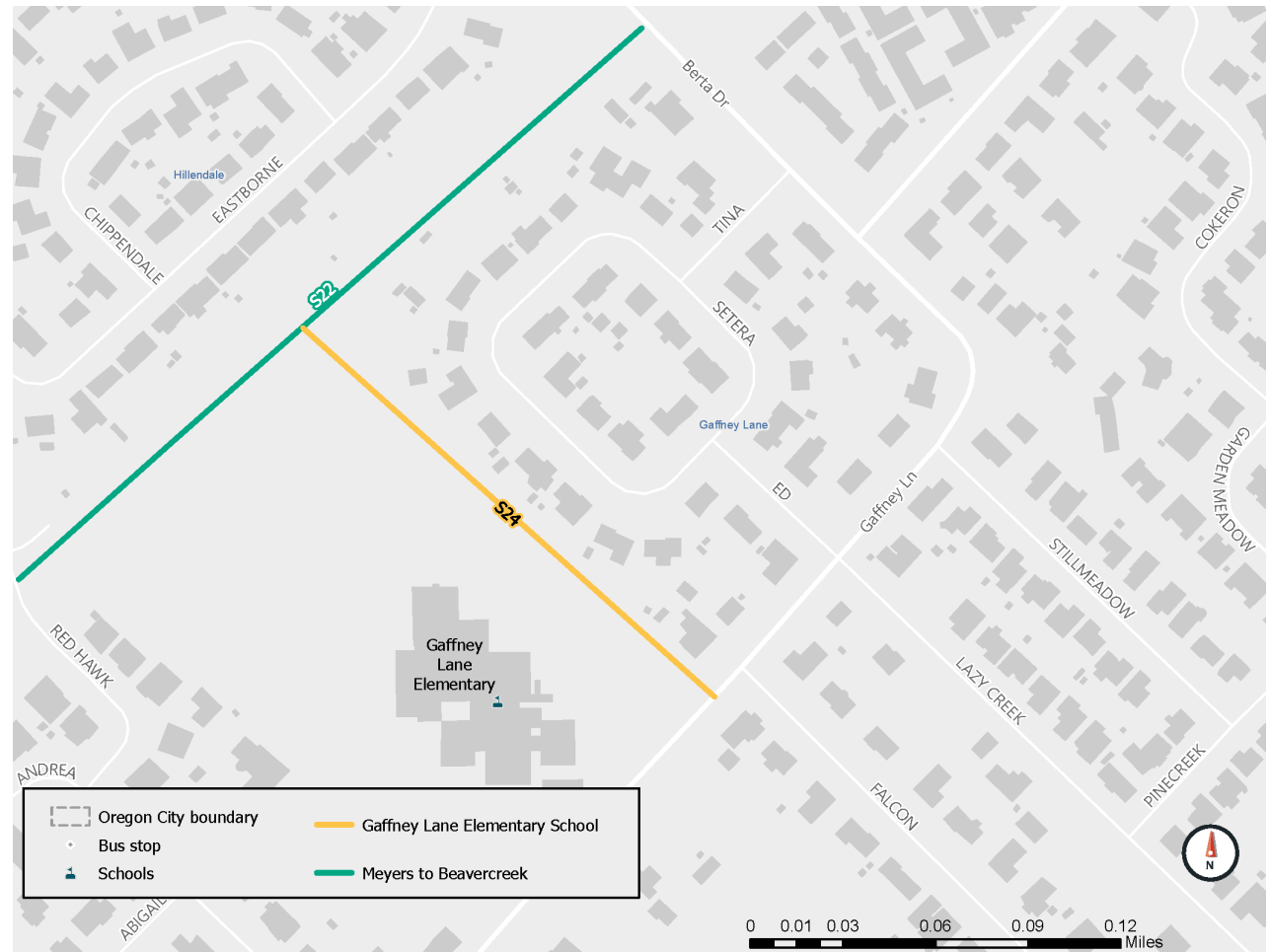


Figure 8. Gaffney Lane Proposed Alignment

Proposed Cross-Section

As shown on **Figure 9**, the proposed cross-section for this path includes a 12-foot shared use path that is separated from surrounding properties by existing fences.

Additional considerations that will need to be addressed as this path is constructed include:

- Coordination with surrounding property owners to determine additional amenities that could be incorporated to maintain both access and privacy
- Coordination with the school to ensure that the path provides direct access to the school while maintaining security for school children
- There are missing sidewalks on Gaffney Lane where this path would end; opportunities to fill sidewalk gaps on Gaffney Lane should be explored to maximize connections to the Gaffney Lane neighborhood

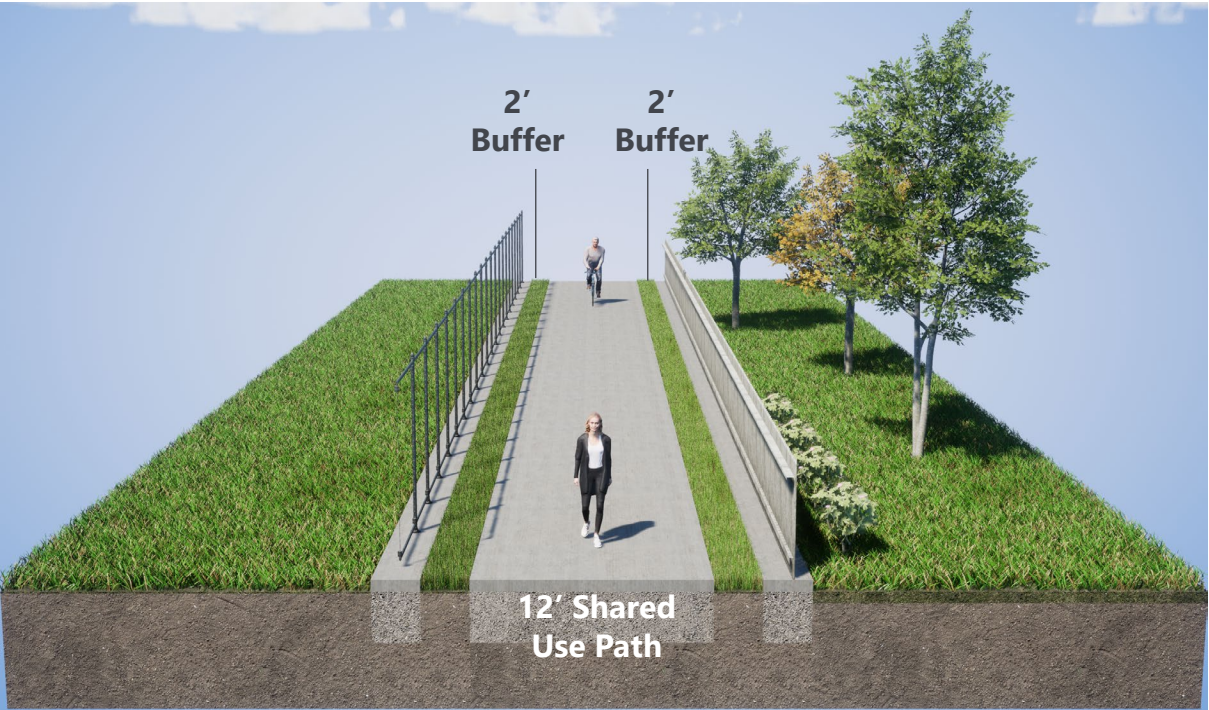


Figure 9. Gaffney Lane Cross-Section

Estimated Cost

Based on the planning-level cost-estimate for this segment, the cost for this path is expected to range from approximately \$500,000 to \$700,000 as shown in **Table 6**.

Concepts used to develop cost-estimates are provided in **Appendix C: Concepts & Cross-Sections** while detailed cost-estimates can be found in **Appendix D: Cost-Estimates**.







Table 6. Gaffney Lane Cost-Estimate		
Segment	Low Estimate (2023 \$)	High Estimate (2023 \$)
Gaffney Lane Shared Use Path	\$472,000	\$708,000

Orchard Grove- Hazelnut Shared Use Path (Project S-30)

The Orchard Grove-Hazelnut Shared Use Path is a portion of the Loop Trail that will connect people walking, biking, and using other small mobility devices from Orchard Grove Drive to Hazelnut Court, Hazel Grove Park, and John McLoughlin Elementary School. This portion of the plan will serve as guidance for developers which will likely be required to fund and build this portion of the Loop Trail as development occurs.

Table 7 summarizes the key opportunities and constraints that were identified and used to inform development of the proposed cross-section and alignment for this path.

Table 7. Orchard Grove-Hazelnut Opportunities & Constraints

	<ul style="list-style-type: none"> The Transportation System Plan described this section of the regional trail as part of the Not Likely to be Funded Transportation System and is part of the lowest priority projects after the Likely to be Funded Transportation System is implemented This segment is identified as part of the Oregon City Loop Trail
	<ul style="list-style-type: none"> The surrounding land use and zoning is low-density residential Major generators for the planned trail include Hazel Grove Park and John McLoughlin Elementary School
	<ul style="list-style-type: none"> The off-street portion of the proposed alignment crosses land that is privately owned and undeveloped. Portions of this segment of the Loop Trail will need to be constructed by private development as it occurs
	<ul style="list-style-type: none"> Orchard Grove Drive and Wheeler Way are local streets with a 25-mph speed limit There are no existing on-street bike lanes in the study area; except for a small gap on Orchard Drive, sidewalks are provided on all existing streets When implemented, this portion of the Loop Trail will connect people walking, biking, and using small mobility devices to parks and schools using sidewalks and on-street facilities appropriate for the residential context and slow neighborhood streets
	<ul style="list-style-type: none"> There are no significant utilities along the proposed alignment
	<ul style="list-style-type: none"> There are no significant environmental constraints along the proposed alignment

Proposed Alignment

This portion of the Loop Trail runs from Hazeldell Avenue to S. Central Point Road.

Unlike other segments refined as part of this plan, the recommended alignment for this portion of the Trail utilizes on-street facilities for people riding a bicycle and other small mobility devices and sidewalks for people walking.

This recommendation was based on several factors including:

- The existing streets are low-volume with low-speeds
- Existing sidewalks include a landscape buffer and are compliant with Americans with Disabilities Act (ADA) standards
- As development occurs, this plan can be used to require developers to construct the extension of Hazelnut Avenue consistent with the recommended cross-section for this portion of the trail

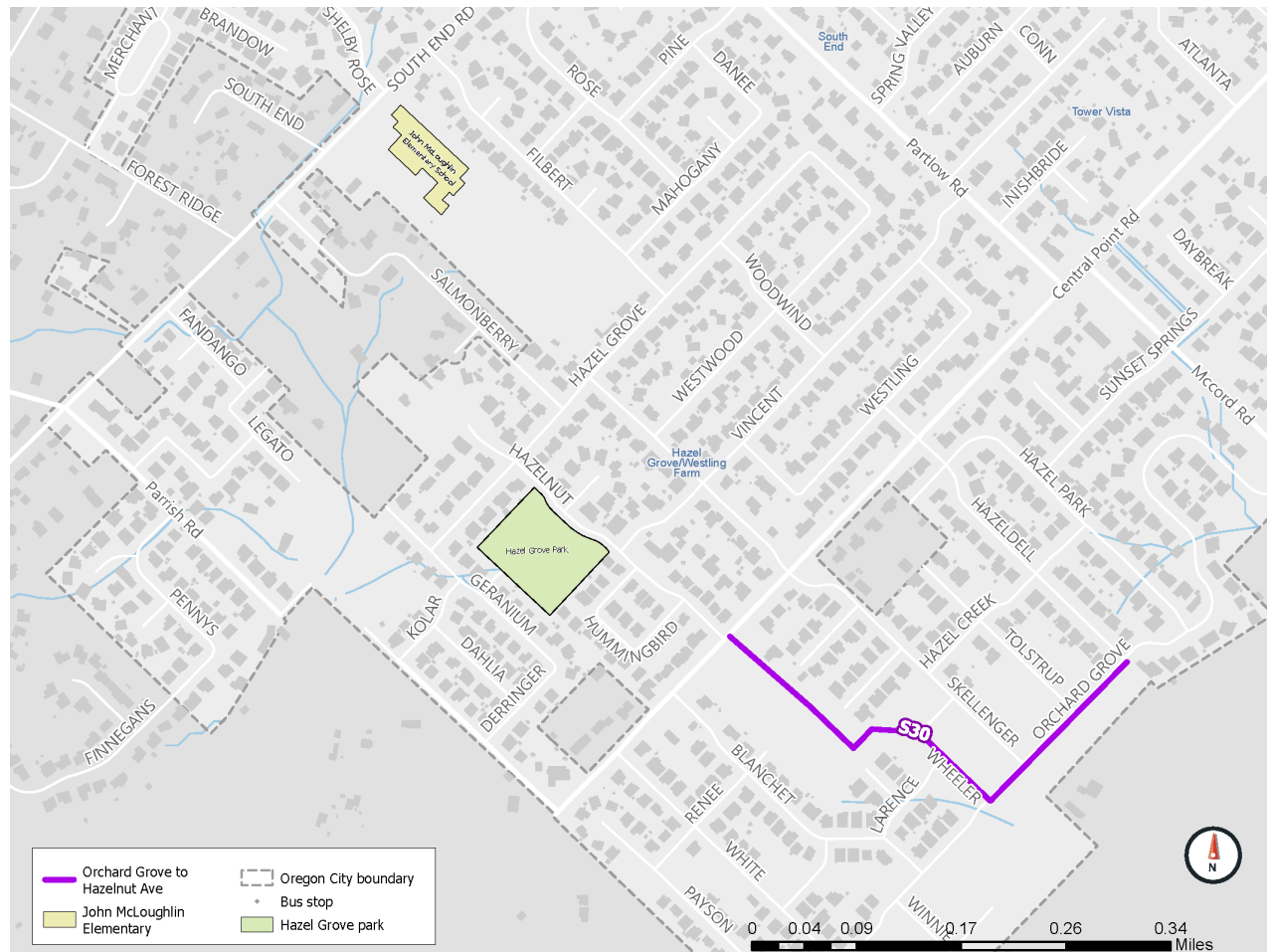


Figure 10. Orchard Grove-Hazelnut Proposed Alignment

Proposed Cross-Section

As shown on **Figure 10**, the proposed cross-section utilizes existing streets and sidewalks.

The primary addition to existing infrastructure included in the recommended cross-section is the addition of sharrows to indicate the people riding a bicycle should use the vehicle travel lane and alert drivers that they should be prepared to share the lane.

Additional considerations that will need to be addressed as this path is constructed include:

- The City should require development to construct Hazelnut Avenue with a similar cross-section as development occurs
- Additional safety features may need to be incorporated in the final design to maintain safety and comfort; this could include speed bumps/humps or additional features to limit cut-through traffic
- This route should be developed consistent with the standards for “family friendly routes” identified in the TSP

Estimated Cost

The planning-level cost-estimate for this segment includes elements needed to enhance existing streets. This estimate does not include the connection of Hazelnut Avenue as that is expected to be constructed by development. As shown in **Table 8**, the existing portion of the trail could be implemented for less than \$100,000.

Concepts used to develop cost-estimates are provided in **Appendix C** while detailed cost-estimates can be found in **Appendix D**.

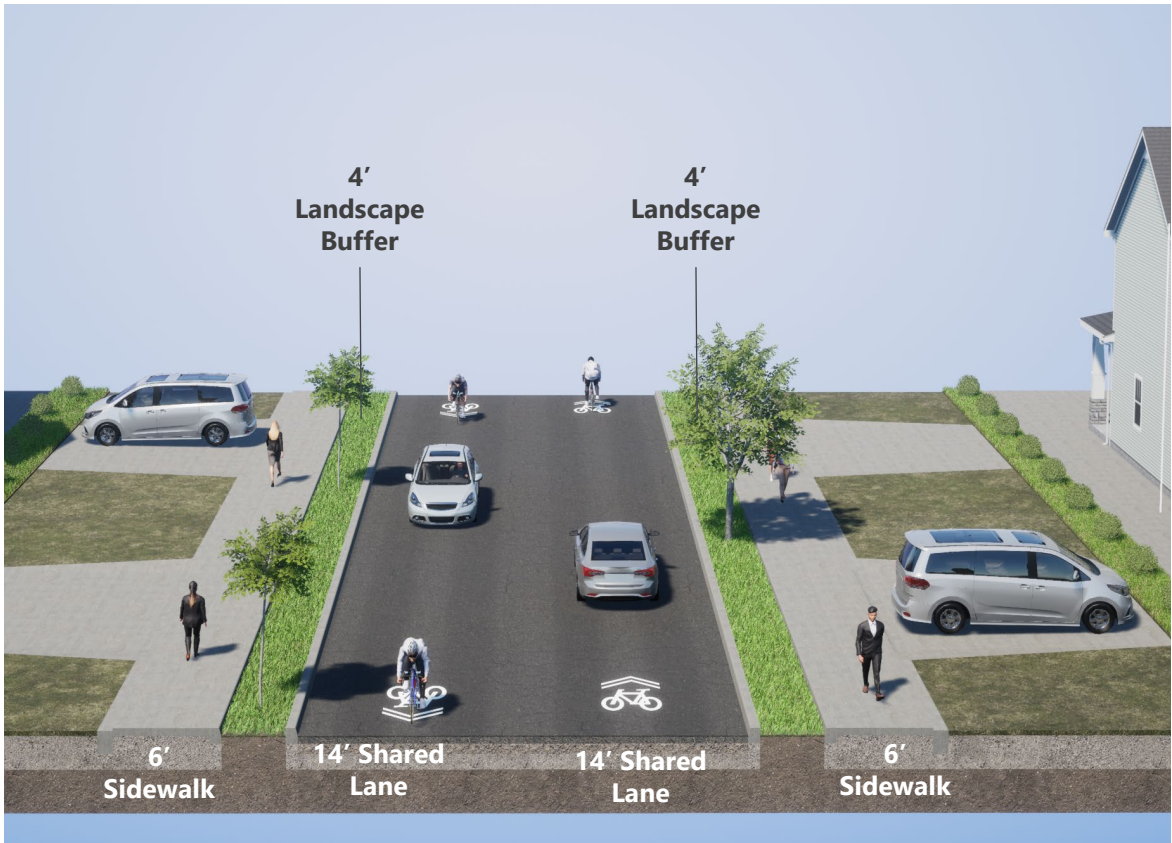


Figure 11. Orchard Grove-Hazelnut Cross-Section

Table 8. Orchard Grove-Hazelnut Cost-Estimate		
Segment	Low Estimate (2023 \$)	High Estimate (2023 \$)
Orchard Grove-Hazelnut	\$56,000	\$84,000

Funding Opportunities

One path to funding design and construction of the proposed path is to secure grant funding. Typically, grant funding is secured through competitive grant programs that the City must apply for. These grants often include a local match, requiring the City to provide anywhere from 10 percent to 40 percent of the project funds. The following grants have been identified as potential funding opportunities that the City could explore to implement the shared use paths.

Recreational Trails Programs (RTP)

This federally funded program, which is administered by the Oregon Parks and Recreation Department, provides funds for local agencies to develop, improve, or expand motorized and non-motorized trails and their facilities.

Eligible projects for these funds include:

- Construction of new trails
- Major rehabilitation of existing trails
- Development or improvement of trailhead or other support facilities
- Acquisition of land or easements for the purpose of trail development
- Safety and education projects

Oregon's annual RTP allocation is approximately \$1.6 million, which is awarded through an annual grant cycle, which opens in September.

The minimum grant request for this grant and the recommended maximum request is \$150,000. As part of the Loop Trail, the Orchard Grove-Hazelnut Shared Use Path, estimated to cost less than \$100,000, may be eligible for funding under this grant. Alternatively, the City could use this grant to cover a portion of the cost for the Gaffney Lane Elementary Path.

Oregon Community Paths

The Oregon Community Paths program is geared towards helping communities create and maintain connections through shared use paths. Eligible projects to receiving funding under this grant include:

- Continuous paths made up of one or more connected segments that are primarily physically separated from the roadway
- Paths that connect two or more communities, with each community no more than 15 miles apart, or traverses a single large community with a path that is 10 miles or longer
- Paths that will serve as a connection point for people commuting between communities, or is a part of an officially designated walking and bicycling route
- Paths that are endorsed by elected bodies along path alignment

Applications for this grant are on a two-year cycle with pre-applications due in the fall and applications accepted November through January. The two paths most likely to be competitive for this grant are the Meyers Road and Meyers-Beavercreek Shared Use Paths.

Safe Routes to School (SRTS)

The Oregon Department of Transportation provides funding for SRTS projects, under two umbrellas – construction and education. Projects that are eligible for this funding source include projects that are:

- Within the public road right-of-way
- Within one-mile of a school
- At or within the funding request minimum and maximum
- Have adequate local match
- Have support of the school or school district
- Provide a safety benefit
- Included in or aligned with an existing plan
- Committed to outreach

Funds from this program are allocated through a competitive grant process that consists of two applications typically due in March and July. The two paths eligible for funding under this grant program would be the Orchard Grove-Hazelnut and Gaffney Lane Elementary Shared Use Paths. It is important to note that funding under this program is allocated to schools serving low-income and/or historically disadvantaged communities so based on the demographic makeup of the schools at application, the schools may not be competitive.

Active Transportation Infrastructure Investment Program

This federally funded program is designed to fund communities looking to expand existing infrastructure for walking and biking to safely connect people to destinations and create opportunities for sustainable transportation and recreation.

This program received \$45 million in funding in fiscal year 2023 and is aimed at active transportation projects or group of projects with a total cost of over \$15 million, or total cost of \$100,000 for planning and design grants are eligible for funding under this program.

While none of the proposed paths exceed \$15 million individually, the Meyers Road and Meyers-Beavercreek Paths are estimated to cost roughly \$15 million when combined. As these paths would benefit from being constructed together, the City could consider apply for funding as one large project to improve multimodal connectivity in this part of the City.

Appendix A: Opportunities & Constraints

Technical Memorandum

Oregon City Loop Trail Refinement Plan

October 6, 2022

Prepared by Fehr & Peers

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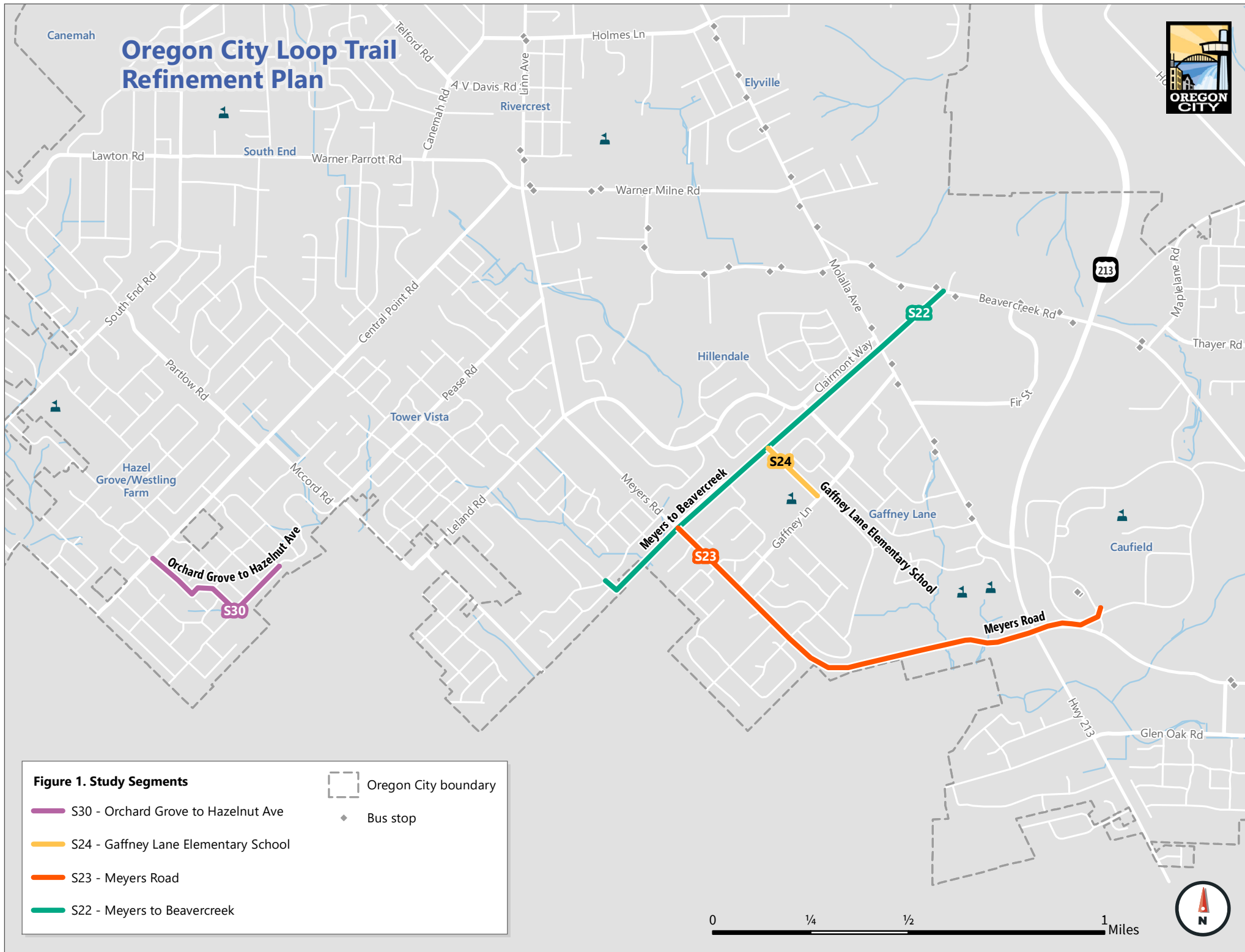
Introduction

The Oregon City Loop Trail, identified in the City's Trails Master Plan, will create a loop around Oregon City providing travelers with both off-street connections and connections along local roadways. The City's Transportation System Plan (TSP) also identifies ancillary shared use paths that will connect people walking, biking, and using other small mobility devices to the Loop Trail. The Oregon City Loop Trail Refinement Project presents an opportunity to further define two path segments of the Loop Trail and two ancillary paths. While the general route for these connections is known, this project will refine the shared use path alignment along existing roadways, through planned subdivisions and along property lines, and will identify the appropriate cross-section for each of the segments to meet the needs of anticipated users. This project will result in a planning document that will provide guidance for Development Review Staff to condition new development to design and construct portions of the path, position the City to add projects to the Capital Improvement Program (CIP) that would design and construct portions of the path, and most importantly, position the City to secure grant funding to support design and construction.

The four segments, shown on **Figure 1**, that will be refined as part of this project are:

- S22 – Meyers-Beavercreek Shared Use Path
- S23 – Meyers Road Shared Use Path
- S24 – Gaffney Lane Elementary Shared Use Path
- S30 – Orchard Grove-Hazelnut Shared Use Path

Oregon City Loop Trail Refinement Plan





Purpose

One focus of the City's TSP, adopted in 2013, was to emphasize a multimodal approach to solving transportation issues, including improving options for people walking and biking within the city. This approach is woven throughout the TSP goals, objectives, and the project list.

Goal 1 of the TSP states that the City should "Ensure that the transportation system maintains and improves individual health, safety and security by maximizing the comfort and convenience of walking, biking and transit options, public safety and service access." By beginning the process of refining the four segments identified for this study, this effort is positioning the City to advance the objective of providing a network of family-friendly walking and biking routes. This refinement plan will also identify potential funding sources that the City can use to design and construct these trail segments, aligning with the City's goal of identifying transportation investments that can be made with available funding.

The Loop Trail

The Oregon City Loop Trail will create a loop around Oregon City for people walking, biking, and using other small mobility devices and provide a connection to other planned local and regional trails. In addition to the four segments being evaluated in more detail, early information gathering for this effort also focused on answering questions about two segments of the trail that will be key pieces to connecting the loop, the portion of the trail that will cross Canemah Bluff and the portion that will use the alignment for the old Willamette Valley Southern Railway line through Newell Creek Canyon.

To understand priority for those segments at the regional level and next steps that would be needed to move development of the segments forward, the project team reached out to Metro staff as part of the stakeholder interviews. A summary of all stakeholder interviews is included as **Appendix A** of this document.

In 2018, the City completed the McLoughlin to Canemah Trail Plan, which evaluated options for connecting Canemah Bluff to the McLoughlin Promenade as part of the Loop Trail. The plan identified interim and permanent recommendations for the trail. For the segment of the trail that would connect to the McLoughlin to Canemah Trail and traverse Canemah Bluff Metro shared that developing the trail in this area is a long-term priority due to the resources required and the understanding that this will be a challenging segment to construct due to the need to protect existing wildlife habitats and the challenge of navigating private property in the area.

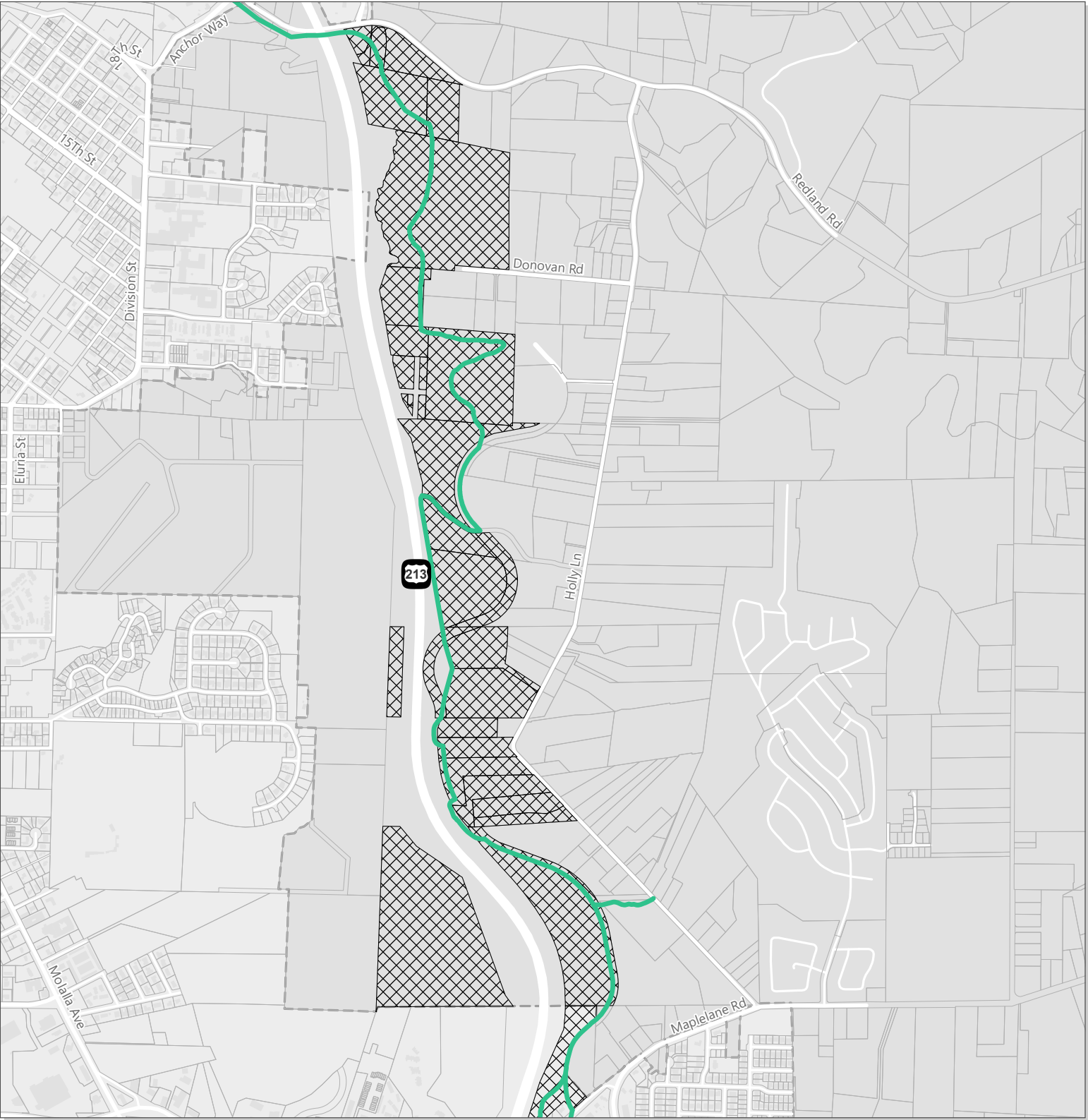
For the segment through Newell Creek Canyon, Metro shared that much of the property needed to complete that connection is currently held by Metro and efforts to purchase remaining properties needed to complete the connection continue. The existing property owned by Metro along the railroad alignment is shown on **Figure 2**, below. To move development of this segment






of the trail forward, the City would need to initiate and fund development of the trail as a local partner.



Figure 2. Clackamas County Community College to Downtown



-  Oregon City Loop Trail System
-  Metro Owned Property
-  Oregon City Boundary


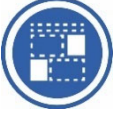




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Miles



Opportunities & Constraints

This technical memorandum will serve as the baseline for the refinement study, documenting opportunities, constraints, and issues for each of the segments that will need to be considered as the alignments and cross-sections are developed. Each topic area reviewed is described below.

Topic Areas

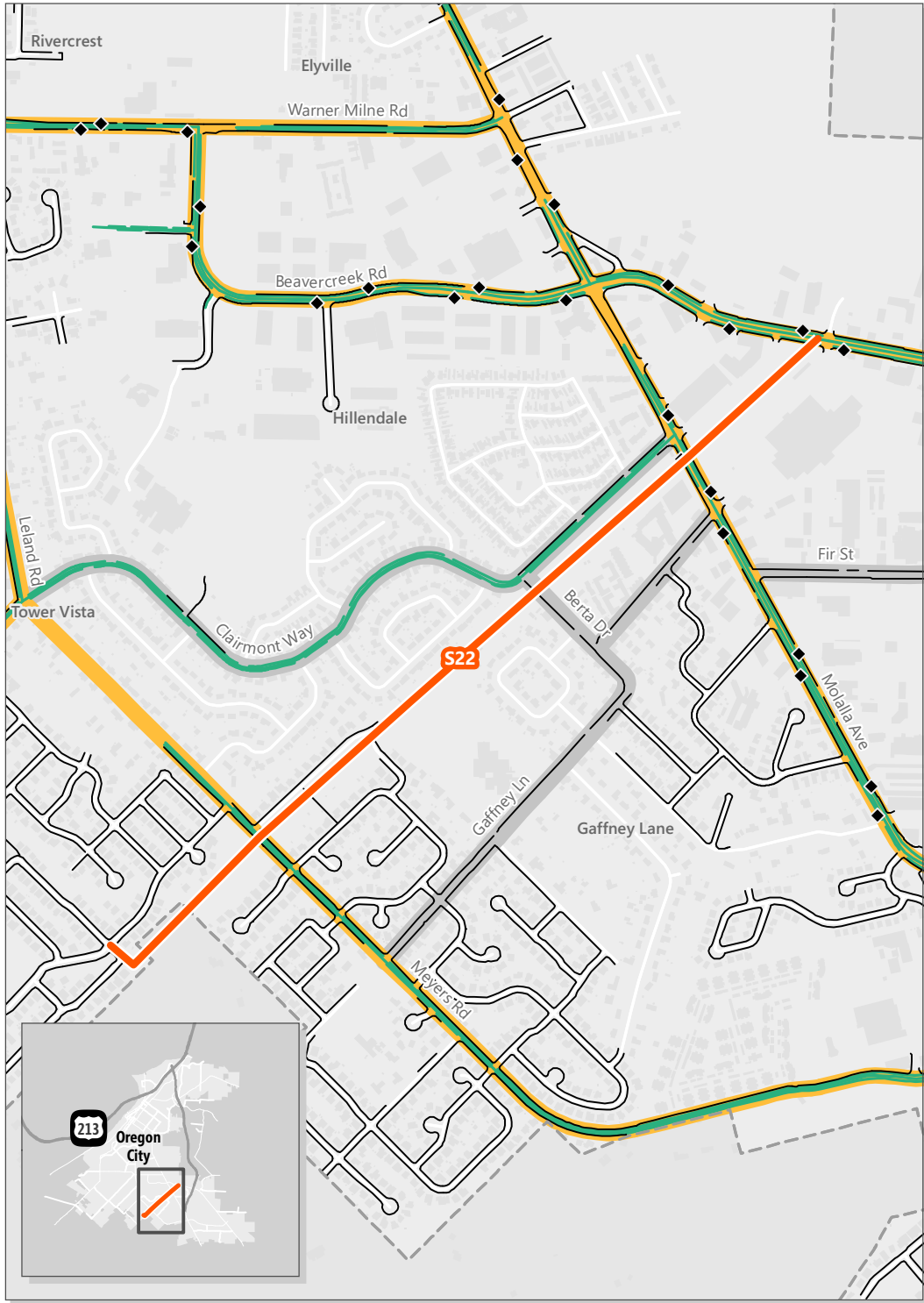
	Previous Planning Efforts: A review of planning documents that identify or provide direction for each of the segments that serve as a starting point for this effort.
	Surrounding Land Use & Context: The existing and planned land uses surrounding each segment, including identification of uses likely to generate bicycle and pedestrian trips such as schools and parks.
	Land Ownership & Right-of-Way (ROW): A review of ownership for the properties that may be needed to construct each of the segments and available ROW.
	Existing Infrastructure: An inventory of the roadway, bicycle, and pedestrian network in the area surrounding each segment.
	Utilities: An inventory of existing utilities within the anticipated alignment of each segment that will need to be considered in the refinement process.
	Environmental Constraints: A description of constraints including geologic hazards, water, and natural resources that will influence alignment and cross-section options.

Stakeholder interviews were also completed with key stakeholders, identified by the City, for each segment. Takeaways for each segment are documented in the following sections and a full summary is included in **Appendix A**.



Oregon City Loop Trail Refinement Plan
Figure 3. S22 - Meyers to Beavercreek

Transportation



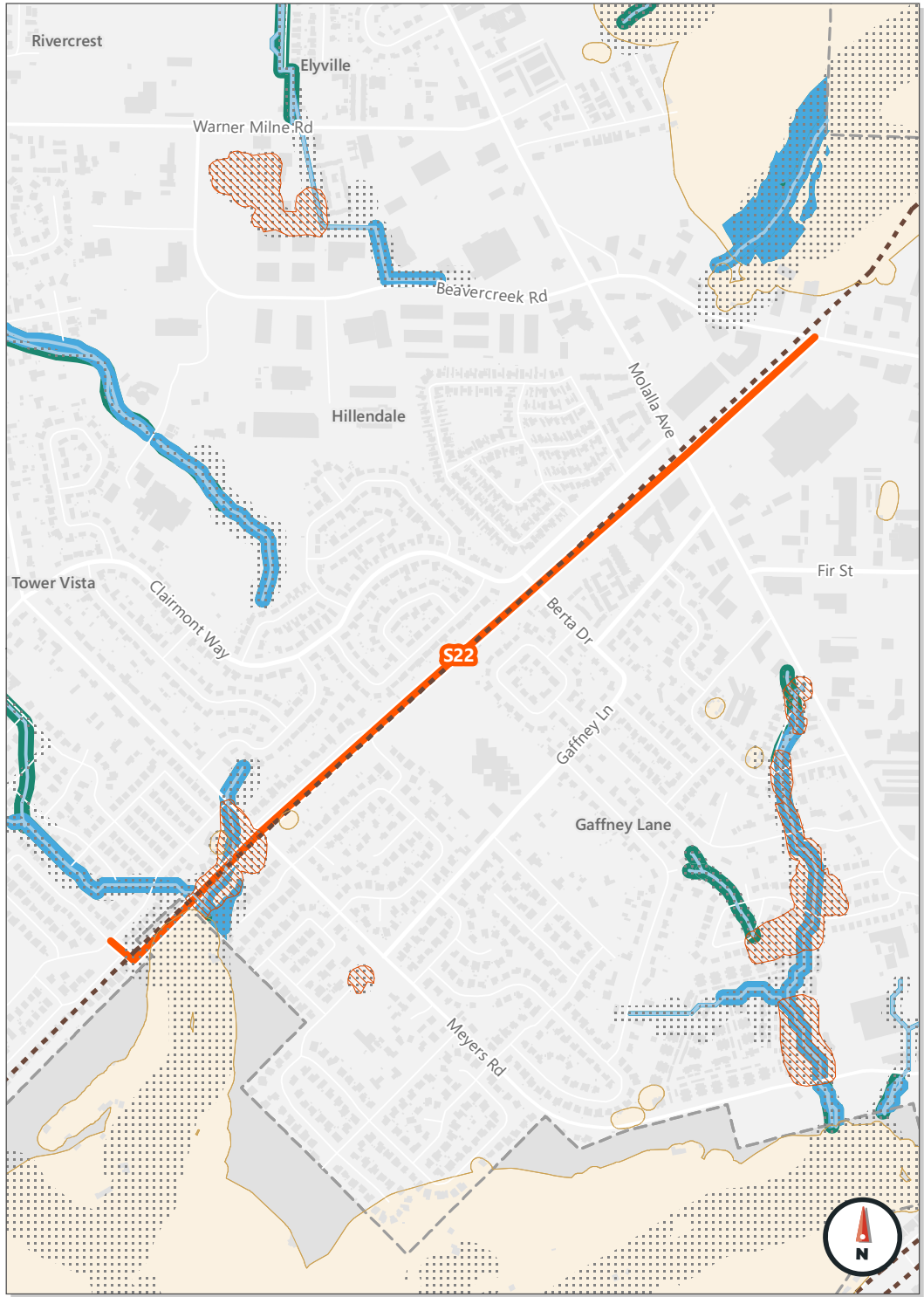
- | | |
|-------------------------|------------------------|
| Functional Class | ◆ Bus stop |
| — Freeway | — Sidewalk |
| — Collector | — Bike lane |
| — Arterial | — Oregon City Boundary |
| — Local | |

Land Use



- | | | |
|-------------------------|---------------------------|-----------------|
| — Easement | ▤ Privately Owned Tax Lot | Zoning |
| ▨ Storm detention basin | 🏫 School | — Commercial |
| — Unimproved ROW | — Oregon City Boundary | — Industrial |
| | | — Institutional |
| | | — Mixed use |
| | | — Residential |

Utilities & Environmental



- | | | |
|--|--------------------------------|-------------|
| ▤ Natural Resource Overlay District (NROD) | — Potential vegetated corridor | — Powerline |
| ▨ Wetland | — Geologic hazard area | — Stream |
| — Riparian area | — Oregon City Boundary | |



Meyers-Beavercreek Shared Use Path - S22

The Meyers-Beavercreek Shared Use Path is an ancillary path that is intended to provide an off-street connection for people walking, biking, and using other small mobility devices from Beavercreek Road to Meyers Road. **Figure 3** shows the proposed connection, existing infrastructure, surrounding land use, utilities, and environmental constraints. A summary of issues and opportunities is provided below, followed by a detailed description of each of the topic areas.



Meyers-Beavercreek Shared Use Path Opportunities & Constraints

	<ul style="list-style-type: none"> Identified as project S22 in the City's TSP, this project is part of the Not Likely to be Funded Transportation System. As a Long-term Phase 2 project, it is a high priority after the Likely to be Funded Transportation System is implemented. As a Local Trail, the City's Trails Master Plan states that this shared use path should be designed to provide access for most, if not all, trail users with a width of between 6 to 12 feet and a paved or other smooth surface.
	<ul style="list-style-type: none"> Between Beavercreek Road and Molalla Avenue, options for accommodating the path within the developed retail centers or alternate routes will need to be considered. The predominate land use along the planned alignment is single-family residential. Gaffney Lane Elementary School and Wesley Lynn Park are the primary generators for bicycle and pedestrian trips along the planned path.
	<ul style="list-style-type: none"> Much of the planned alignment is along property owned by the City of Oregon City and Oregon City School District. There is 12 feet of unimproved ROW between single-family homes from S Berta Drive to Gaffney Lane Elementary; however, several homes have fences that extend into the ROW. There is an existing easement, granted to Portland General Electric (PGE), from Beavercreek Road to Frontier Parkway that follows the powerlines and is approximately 225 feet wide.
	<ul style="list-style-type: none"> The primary consideration for roadways in the area will be how to create a safe crossing for the shared use path. Clairmont Way, Moccasin Way, and Frontier Parkway offer low-speed alternatives if an off-street connection is deemed infeasible or too expensive. On-street bicycle lanes and sidewalks are provided in the area surrounding the planned path; however, if on-street alternatives are identified, enhancements to the existing on-street bicycle lanes will likely be needed to create a route that is comfortable for users of all ages and abilities. This path will connect to the planned Gaffney Lane Elementary Shared Use Path, creating an off-street connection to the elementary school between Beavercreek Road and Meyers Road.
	<ul style="list-style-type: none"> From Beavercreek Road to Frontier Parkway, the alignment follows high-voltage transmission lines that will require 50 feet of horizontal clearance from the shared use path and any street furniture. There are two stormwater management areas, located on either side of Meyers Road, in areas where the shared use path is identified as providing an off-street connection.



Meyers-Beavercreek Shared Use Path Opportunities & Constraints



- Water and natural resources in the area between Meyers Road and Frontier Parkway will need to be considered as off-street options in that area are considered.
- The only geologic hazard present along this path alignment are slopes. Areas with slopes greater than 25% are located near the two stormwater management areas.



Previous Planning Efforts

Two planning documents, the City's TSP and Trails Master Plan, include details and guidance related to refinement of this shared use path. As the long-term guide for the City's transportation investments, the TSP provides a starting point for project refinement, while the Trails Master Plan provides design guidance based on the path's purpose and intended users.

TSP

The Meyers-Beavercreek Shared Use Path is identified as project S22 in the City's 2013 TSP. The project is identified as part of the Not Likely to Be Funded Transportation System. The Not Likely to Be Funded Transportation System is a list of projects that are not reasonably expected to be implemented by 2035 but will provide important connections for the transportation system.

The TSP project description states that this project will "Add a shared-use path under the power lines between Morrie Drive and Beavercreek Road. Will require a portion of the parking lot between Molalla and Beavercreek." The project limits are Morrie Drive to Beavercreek Road and it is identified as a Long-term Phase 2 project estimated to cost \$1.2 million. Because this project is identified as a Long-term Phase 2 project, it is considered one of the highest priority projects after the Likely to be funded Transportation System is implemented.

Trails Master Plan

The City's Trails Master Plan, completed in 2004, provides guidance on trail designs based on the facility type, the types of anticipated users, available width, and surface options. The Trails Master plan also provides guidance on trail-roadway crossings that will need to be considered for this segment.

The Meyers-Beavercreek Shared Use Path is identified as a proposed local trail in the Trails Master Plan. The Master Plan states that "City trails provide access for most, if not all, trail users within neighborhoods, parks, greenspaces, and other recreational areas. They are similar to regional trails in that they typically have their own right-of-way and serve only non-motorized users. These trails should be at least six feet wide and at least eight feet wide if bicycle use is anticipated. All



efforts should be made so that at least one ADA accessible trail is available and serves the most desirable parts of the area (i.e., picnic areas, viewpoints, playground equipment, etc.).”

Based on the Trail Design Types and Standards in the Master Plan, these trails should be designed with a width of between 6 and 12 feet and should be a paved or other smooth-rolling surface to accommodate all trail users.

This shared use path may have up to four roadway crossings at:

- Beaver Creek Road
- Molalla Avenue
- S Berta Drive
- Meyers Road

The Trails Master Plan will be referenced to provide guidance on three potential crossing solutions that will be explored as part of this refinement phase:

- Unprotected/Marked
- Route Users to an Existing Intersection
- Signalized/Controlled

Guidance in the Trails Master Plan will be used to determine which crossing types may be appropriate and what enhancements may be needed based on traffic volume, speed, and line of sight.



Surrounding Land Use & Context

Today, there are three land uses adjacent to the identified alignment for the shared use path: commercial, residential, and institutional.

At the northeast end of the path, from Beaver Creek Road to just south of Molalla Avenue, the surrounding land use is retail. The area is zoned as General Commercial and designated as an Enterprise Zone.

The area between the retail use just south of Molalla Avenue and S Berta Drive is zoned as High-Density Residential District; however, along the identified alignment, the land is undeveloped and currently serves as a construction staging area for the city.

Between S Berta Drive and McVey Lane, land use zoning allows for low density residential uses. Today, there are single-family homes on both sides of the proposed shared use path and an elementary school. From McVey Lane to Morrie Drive, the land use is zoned as R-8, another low-density residential use. There is no development between Red Hawk Drive and Meyers Road due



to a stormwater management area. There is also a stormwater management area located directly across Meyers Road. Except for the stormwater ponds, the land use surrounding the shared use path is fully built out.

Today, the primary land use that would generate bicycle and pedestrian trips along the shared use path is the elementary school. When constructed, this path would provide a connection from the Gaffney Lane neighborhood to Wesley Linn Park, another key destination for people walking, biking, and using other small mobility devices in this part of the city.



Land Ownership & Right-of-Way (ROW)

Properties along the proposed alignment are owned by a mix of private and public owners as shown on **Figure 3**. Undeveloped properties along this path alignment are owned by:

- Settlers Point Homeowners Association
- The City of Oregon City
- Oregon City School District

Other property owners along the proposed alignment include:

- Fred Meyer Stores
- Wesberg Family Properties LLC
- Private residence owners

There is an existing easement, the length of the proposed path, that is approximately 225 feet wide between Beaver Creek Road and Frontier Parkway. The easement, granted to PGE, allows the land to be used for power lines and includes wooden distribution poles and transmission lines.

Conversations with the School District also indicate that the district is open to collaborating with the City on an easement allowing access and use of their property outside the fenced area that provides access to the school and playground.

In addition to the parcels owned by the City, there are also 12 feet of unimproved ROW between parcels located on Eastborne Drive and Tina Street. This ROW runs from S Berta Drive to about halfway through the parcel owned by the School District. While this ROW appears to be available for public use, several property owners have built privacy fences that extend into this ROW and block access.



Existing Infrastructure

Vehicles

There are seven roadways that will be considered as the design for this shared use path is refined. A brief description of each is provided below.

Beavercreek Road is a four-lane roadway with a posted speed limit of 35 miles per hour (mph) and is identified as a Major Arterial by the City's Functional Roadway Classification System. The primary challenge for this roadway will be determining where and how shared use path users should cross to connect to planned trails northeast of Beavercreek Road.

Molalla Avenue is a two-lane roadway with a center turn lane, a posted speed limit of 35 mph, and is identified as a Major Arterial. Where and how the shared use path crosses Molalla Avenue is the primary challenge for this roadway.

S Fir Street is a two-lane roadway with on-street parking permitted on both sides and a posted speed limit of 25 mph. Identified as a Collector, S Fir Street may be considered as an alternative to a connection through the existing retail area, if needed.

Clairmont Way is a two-lane Collector with a posted speed limit of 25 mph and is adjacent to the shared use path alignment between Molalla Avenue and S Berta Drive. On-street parking is permitted on both sides of the road.

Moccasin Way is a two-lane Local Street with a posted speed limit of 25 mph that serves only as residential access for the homes along it. On-street parking is permitted on both sides of the road. Moccasin Way may be considered as an alternative to constructing the shared use path through the parcel with the stormwater pond.

Meyers Road is a two-lane Minor Arterial with a posted speed limit of 35 mph and no on-street parking permitted near the shared use path. Creating a safe connection across Meyers Road will be the primary challenge for this roadway.

Frontier Parkway is a two-lane Local Street with on-street parking permitted on both sides of the street and a posted speed limit of 25 mph. Frontier Parkway connects to Wesley Lynn Park and may be considered as an alternative to constructing the shared use path through the stormwater retention area southwest of Meyers Road.

Bicycle and Pedestrian

Today, on-street bicycle lanes are provided on the following roadways:

- Beavercreek Road
- S Fir Street (from Beavercreek Road to approximately 0.25 miles south of the intersection)



- Molalla Avenue
- Clairmont Way
- Meyers Road

Except for Molalla Avenue, the on-street bicycle lanes are unprotected and do not have a buffer. On Molalla Avenue, the recent streetscape project included the addition of buffered bicycle lanes.

Sidewalks are also prevalent in the area surrounding this shared use path alignment. Only the south sides of Clairmont Way and Moccasin Way are missing sidewalks.

When constructed, this path will connect to the Gaffney Lane Elementary Shared Use Path, creating an off-street connection to the elementary school between Beavercreek Road and Meyers Road.

Transit

When constructed, this shared use path could provide an off-street connection to transit stops on Beavercreek Road and Molalla Avenue.

Bus stops near the shared use path alignment on Molalla Avenue are served by TriMet Route 33 and 99, which provide connections to Clackamas Town Center and downtown Portland, respectively. On Beavercreek Road, the shared use path would connect travelers to Route 32, which provides service to Milwaukie.



Utilities

Existing powerlines and stormwater facilities are the primary utilities that will need to be considered along the shared use path alignment.

Powerlines: The proposed alignment follows the powerlines from Beavercreek Road to Frontier Parkway. Within the proposed alignment, there are seven lattice towers used for transmission lines and several wooden poles with distribution lines. PG&E owns the transmission and distribution lines. Wooden distribution poles can be relocated, as needed, to provide space for the shared use path. Based on documentation provided by PG&E, 50 feet of clearance will be required between the shared use path and the higher voltage transmission lines. Access for maintenance vehicles, including vehicles as large as a bucket truck, should also be maintained as the shared use path alignment is refined.

Stormwater: There are two stormwater management areas located along the shared use path alignment. One is located on the northeast corner of Moccasin Way and Meyers Road on land owned by the City. The second pond is located directly across Meyers Road on land owned by the Settlers Point Homeowners Association.



Environmental Constraints

For this path, the only area with environmental constraints is the area surrounding the stormwater management areas at the southwest end of the path.

Water and Natural Resources: The area between Meyers Road and Frontier Parkway is home to water and other natural resources that will need to be considered in evaluating off-street options in this area. Those resources include:

- A stream that runs from the northeast side of Meyers Road across Frontier Parkway
- Wetlands
- Riparian Area
- A vegetated corridor

Geologic Hazards: The only geologic hazards that will need to be considered are slopes. In this area, there are small areas with slopes greater than 25% near the stormwater management areas.



Meyers Road Shared Use Path - S23

The Meyers Shared Use Path is a portion of the Oregon City Loop Trail that will connect people walking, biking, and using other small mobility devices from Oregon Route 213 (OR-213) to the Meyers-Beavercreek Shared Use Path. **Figure 4** shows the proposed connection, existing infrastructure, surrounding land use, utilities, and environmental constraints. A summary of issues and opportunities is provided below, followed by a detailed description of each of the topic areas.

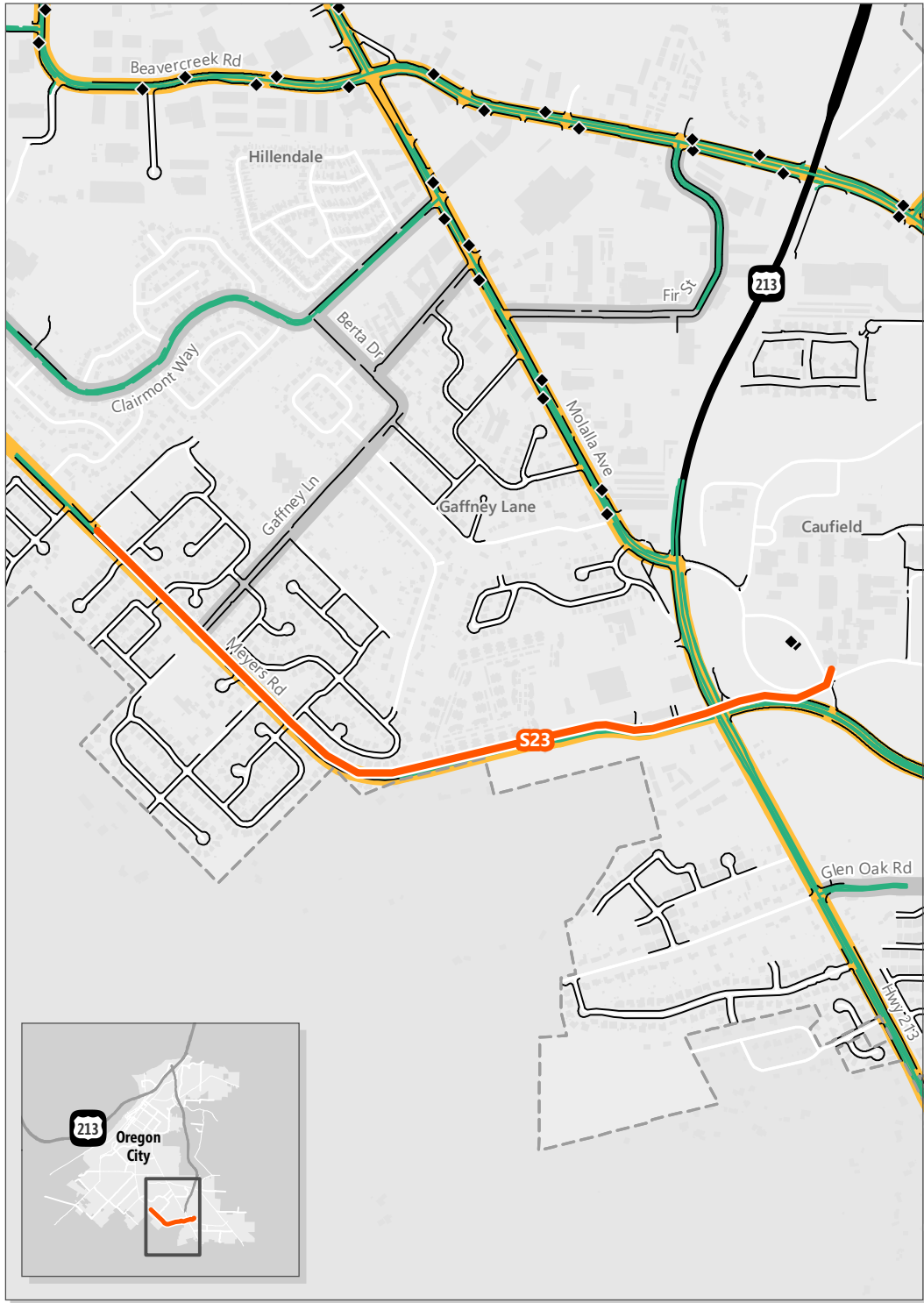
Meyers Road Shared Use Path Opportunities & Constraints

	<ul style="list-style-type: none"> Identified as project S23 in the City's TSP, this project is part of the Not Likely to Be Funded Transportation System. As a Long-term Phase 3 project, it is part of the lowest priority projects after the Likely to Be Funded Transportation System is implemented. As a Regional Trail, this shared use path may be eligible for regional funding. The City's Trails Master Plan indicates that the trail should be designed to provide two-way travel for people walking and biking with a width of between 10 and 12 feet. The Linn Avenue, Leland Road, and Meyers Road Corridor Plan identified a preferred cross-section for Meyers Road from Moccasin Way to Leland Road that was created to guide development of the corridor and ensure that when completed the corridor reflected the priorities identified in the City's TSP.
	<ul style="list-style-type: none"> Land use along the corridor is predominantly single-family homes, with areas of high-density residential and commercial at the Meyers Road and OR-213 intersection. This shared use path would provide an important multimodal connection from the residential areas to the west of OR-213 to Clackamas County Community College and Oregon City High School, located just east of OR-213.
	<ul style="list-style-type: none"> Coordination with private land owners will be required if connecting existing sidewalks along Meyers Road is identified as the most feasible solution for people walking.
	<ul style="list-style-type: none"> Major generators of users are located at the east section of the proposed shared use path. Generators include retail stores, Clackamas Community College, and Oregon City High School.
	<ul style="list-style-type: none"> There are no significant on-street utilities along Meyers Road other than utility access holes, catch basins, fire hydrants, electricity poles, and electricity cabinets.
	<ul style="list-style-type: none"> There are no significant environmental limitations to align the shared use path along Meyers Road.



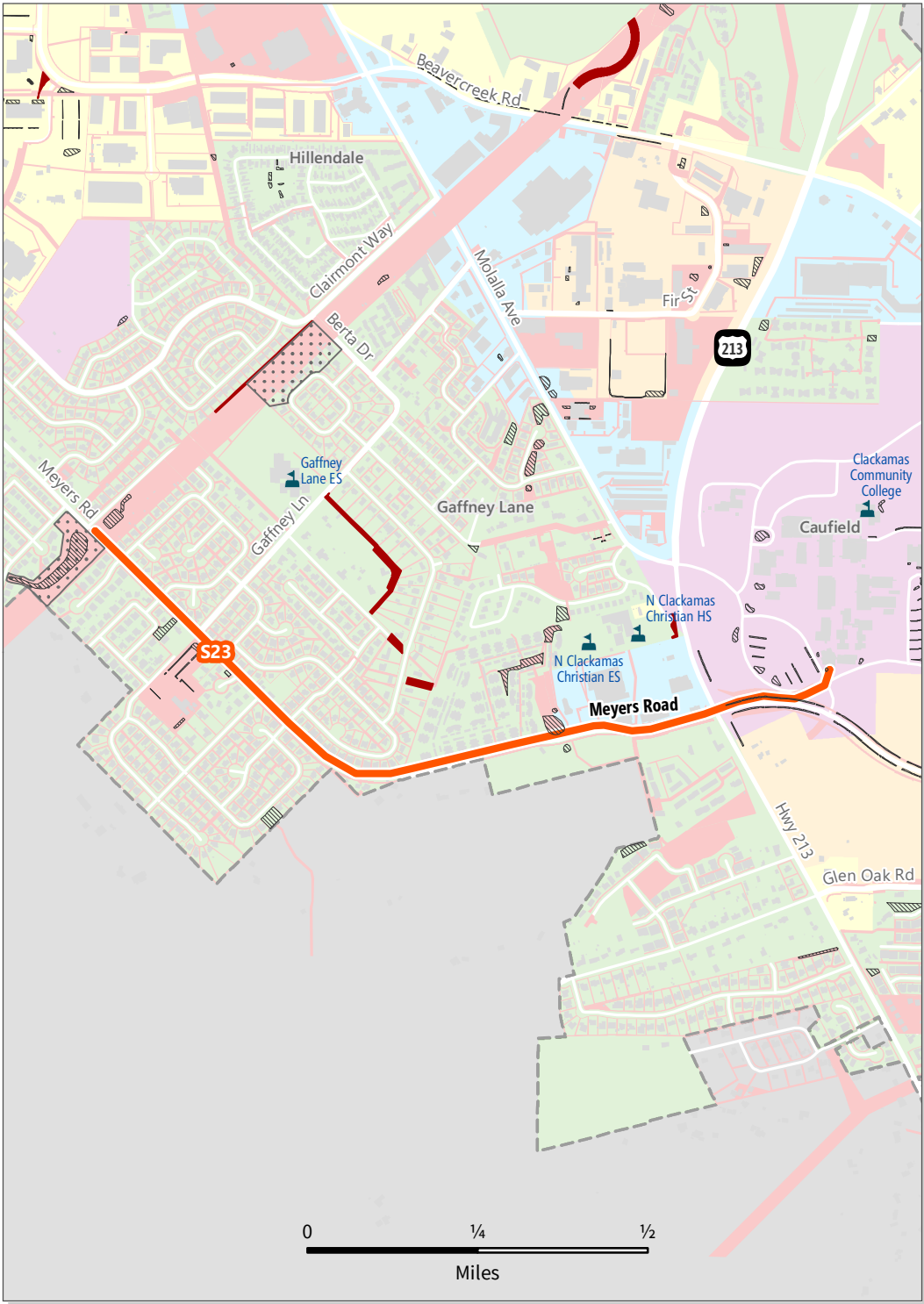
Oregon City Loop Trail Refinement Plan
Figure 4. S23 - Meyers Road

Transportation



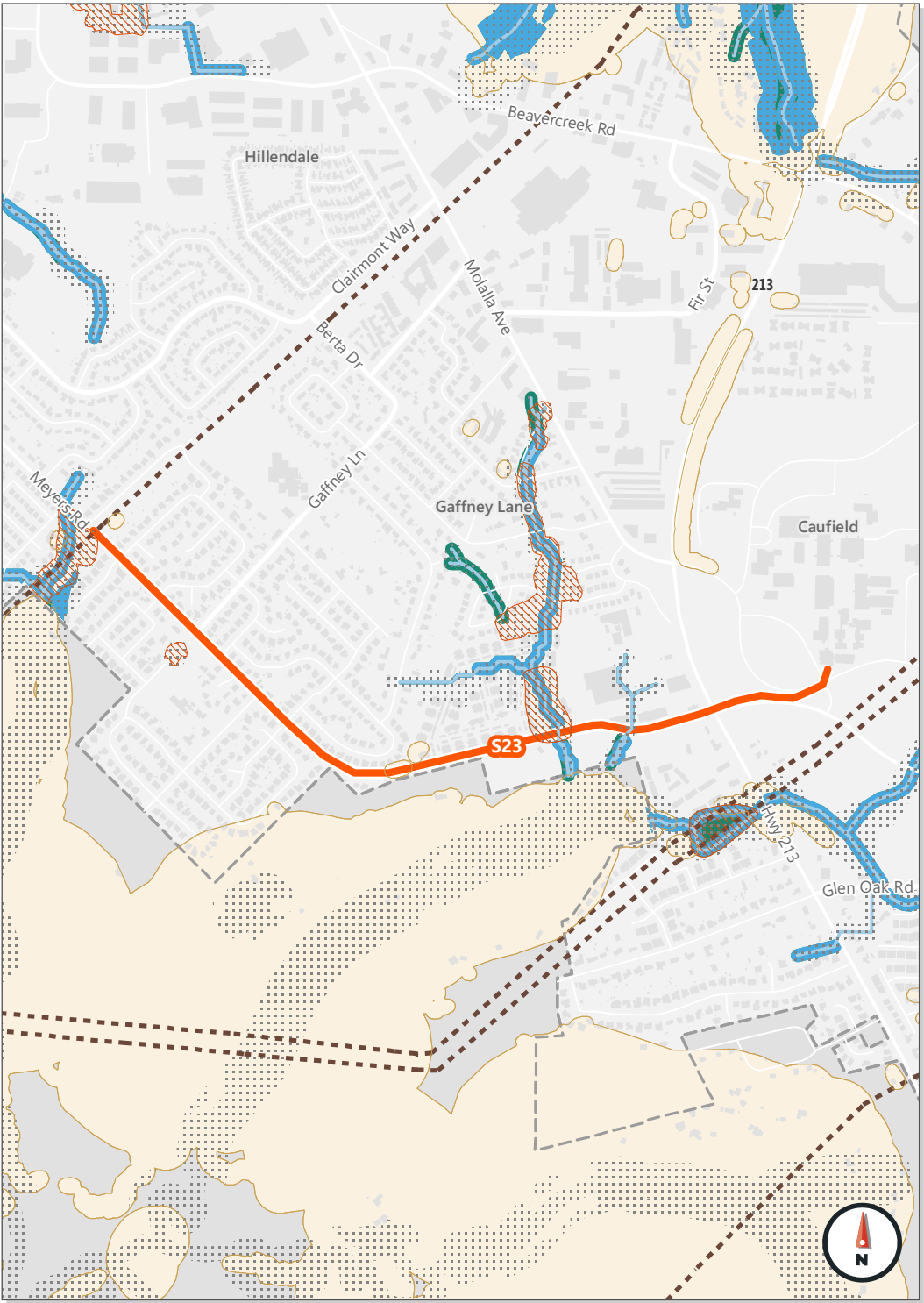
- | | |
|-------------------------|------------------------|
| Functional Class | ◆ Bus stop |
| — Freeway | — Sidewalk |
| — Collector | — Bike lane |
| — Arterial | — Oregon City Boundary |
| — Local | |

Land Use



- | | | |
|-----------------------|-------------------------|---------------|
| Easement | Privately Owned Tax Lot | Zoning |
| Storm detention basin | School | Commercial |
| Unimproved ROW | Oregon City Boundary | Industrial |
| | | Institutional |
| | | Mixed use |
| | | Residential |

Utilities & Environmental



- | | | |
|--|------------------------------|-----------|
| Natural Resource Overlay District (NROD) | Potential vegetated corridor | Powerline |
| Wetland | Geologic hazard area | Stream |
| Riparian area | Oregon City Boundary | |



Previous Planning Efforts

Three planning documents provide guidance related to refinement of this shared use path: the City's TSP; the Trails Master Plan; and the Linn Avenue, Leland Road, and Meyers Road Corridor Plan.

TSP

The Meyers Road Shared Use Path is identified as project S23 in the City's TSP and is included in the list of projects identified as not likely to be funded prior to 2035.

The TSP project description states that this project will "Add a shared-use path on the south side of Meyers Road between the Meyers-Beavercreek Shared Use Path and the Clackamas Community College Shared Use Path." The project is estimated to cost \$1.1 million with project limits defined as between the Meyers-Beavercreek Shared Use Path and OR-213. The project is identified as a Long-term Phase 3 project, meaning it is in the second set of projects identified for implementation after the Likely to be Funded Transportation System is complete.

Trails Master Plan

In 2004 the Trails Master Plan identified Meyers Road as a potential roadway to implement bike lanes to expand the bike network connecting the city in the north-south directions. Meyers Road was also identified as a corridor for the Oregon City Loop Trail. Oregon City Loop Trail is classified as a regional trail, part of the Metro's Regional Transportation Plan (RTP), which makes this section of the shared use path on Meyer Road eligible for regional funding.

According to the City's Trails Master Plan, regional trails should be designed for two-way bicycle and pedestrian traffic with its own ROW and should be able to accommodate maintenance and emergency vehicles. Based on the design guidelines the shared use path should:

- Be between 10 and 12 feet wide with 2 feet of soft shoulders
- Have a paved or other smooth rolling surface to accommodate all trail users, which include bicyclists, pedestrians, wheelchairs, baby strollers, equestrians, and skaters.

This shared use path may have up to nine roadway crossings at the roadways listed below. Except for the OR-213 crossing, these crossings will be unprotected/marked crossings of residential and collector streets. Likely crossings include:

- OR-213
- Squire Drive
- S Nobel Road
- S Gerber Woods Drive
- Gaffney Lane



- Century Drive
- Andrea Street
- S Moccasin Way
- Frontier Parkway

Based on the Trails Master Plan, Type 1 and Type 2 crossings may be appropriate along this segment. Type 1 crossings are unprotected but marked crosswalks, with no additional devices to slow down the traffic. Type 2 crossings are required within 250 feet of existing signalized intersections, and all trail users are diverted to the crosswalk of the existing intersection by using signs and barriers where the trail meets the roadway.

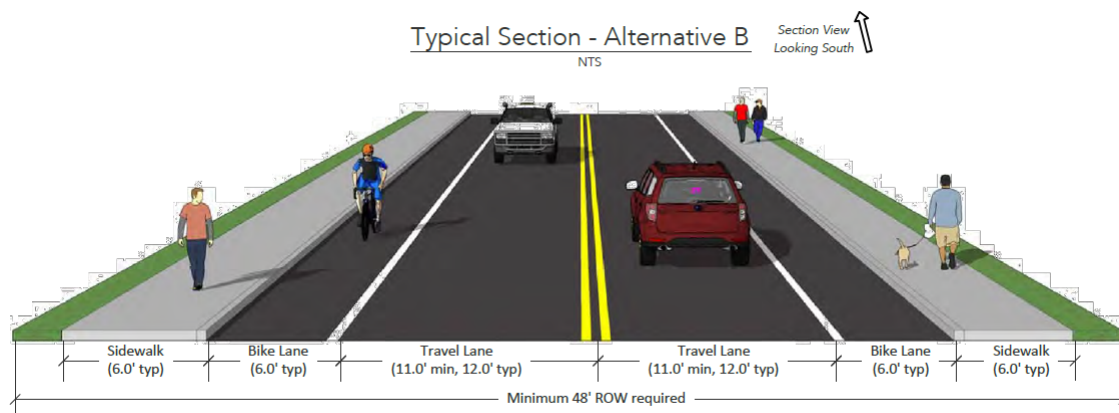
The Trails Master Plan will be referenced to provide guidance as to what enhancements may be needed based on traffic volume, speed, and line of sight for unprotected or marked crossings.

Linn Avenue, Leland Road & Meyers Road Corridor Plan

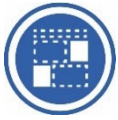
The Linn Avenue, Leland Road & Meyers Road Corridor Plan was completed in 2015 to guide development along the corridor from Jackson Street to Moccasin Way, the beginning of the Meyers Road Shared Use Path.

This planning effort proposed closing the gaps on the sidewalk and bike networks by building the missing sidewalks and bike lanes along the corridor, enhancing options for residents to travel along the corridor using alternative modes of transportation.

The final cross-section design was defined within 48 feet of right-of-way with two 12-foot travel lanes, one 6-foot-wide bike lane in each direction, one 6-foot sidewalk on each side of the street, see the illustration below.



Source: Linn Avenue, Leland Road, and Meyers Road Corridor Plan 2015.



Surrounding Land Use & Context

The primary land use along Meyers Road is low-density residential as shown on **Figure 4**.

At the intersection of Meyers Road and OR-213, zoning allows for high-density residential and commercial uses.

Between Moccasin Way and Pioneer Ridge, land use along the corridor is fully built out with single-family homes. Between Pioneer Ridge and OR-213 on the north side of Meyers Road, there is multi-family housing and general commercial. The south side of Meyers Road is zoned for high-density residential but has not been developed.

Across OR-213, this shared use path will connect to Clackamas County Community College and Oregon City High School. The Meyers Road Shared Use Path will connect people living in the residential areas west of OR-213 to the institutional land uses to the east.

Data analyzed by Clackamas County Community College in 2020, found that the Gaffney Lane neighborhood is home to many students that attend Clackamas County Community College, with most of the neighborhood having a student density of nearly 15 students per quarter mile. Multi-family developments near the college have a student population density of nearly 60 students per quarter mile, indicating that the college could be a substantial generator of bicycle and pedestrian trips along the corridor if safe and comfortable facilities are provided.



Land Ownership & Right-of-Way (ROW)

As shown on **Figure 4**, all properties along Meyers Road between OR-213 and Moccasin Way are privately owned. Most properties on the south side of Meyers Road have a slope easement granted to the City of Oregon City that is 12 feet in width. There are three properties within the city that do not have an existing easement, and one property located outside the city limits that does not have an easement. On the north side, there are no gaps in the easement between OR-213 and Moccasin Way and the easement varies from 10 feet to 23 feet.



Existing Infrastructure

Vehicles

Meyers Road is classified as minor arterial which connects local streets and collectors with major arterials such as OR-213. It is a two-lane corridor with a posted speed limit of 35 mph. Between OR-213 and Moccasin Way, there are no signalized intersections or on-street parking.

Bicycle and Pedestrian

Today, Meyers Road has on-street bicycle lanes that provide dedicated space for people biking in both directions. The bicycle lanes are 5-feet wide with no buffer or separation from vehicle travel



lanes. There are several utility accesses covers and storm drain covers located in the bicycle lanes, which, due to the narrow width of the bicycle lane, can be a hazard for people biking.

For people walking, the north side of Meyers Road has continuous sidewalks that are 7-feet wide in most locations and largely free of obstructions. Curb ramps are also present at all intersections on the north side of Meyers Road. On the south side of Meyers Road, there are several gaps in the sidewalks and locations without curb ramps. The largest gap is an approximately half-mile segment from OR-213 to the west end of the Pioneer Ridge development.

Transit

Clackamas County operates the Clackamas County Connects Shuttle Service which connects underserved portions of Oregon City and the Clackamas Industrial Area. The shuttle operates between 6 AM and 6 PM with a route that connects people to destinations between the Oregon City Shopping Center and Clackamas County Community College. There is one stop located just north of Moccasin Way and three stops along the shared use path alignment, one at Gaffney Lane and two stops near the Pioneer Ridge apartment complex.



Utilities

There are two storm ponds located on the north and south side of Meyers Road in the Meyers Road Natural Resource Area. On the north side, the pond is located just eight feet from the road. On the south side, the pond is located 35 feet from the road. The Millennium Park Basin storm pond is also located on Meyers Road just south of the Century Drive intersection. Street lighting is provided by overhead light poles between OR-213 and Moccasin Way. On the south side of Meyers Road, wooden distribution poles are in the ROW between Moccasin Way and Nobel Road.









Environmental Constraints

The Meyers Road Natural Resource Area surrounds the stream that passes under Meyers Road just east of Pioneer Ridge, as shown on **Figure 4**. This area includes a Title 3 riparian area and wetlands and is part of a natural resource overlay district.



Gaffney Lane Elementary Shared Use Path - S24

The Gaffney Lane Elementary Shared Use Path is an ancillary path that would connect the Gaffney Lane neighborhood to the Meyers-Beavercreek Shared Use Path (S22), which will provide a connection to the Loop Trail. **Figure 5** shows the proposed connection, existing infrastructure, surrounding land use, utilities, and environmental constraints. Unlike the other segments being evaluated as part of this effort, the alignment for this path already exists. This effort will need to focus on identifying the appropriate width, surface, and potential funding sources for this connection. A summary of issues and opportunities is provided below, followed by a detailed description of each of the topic areas.

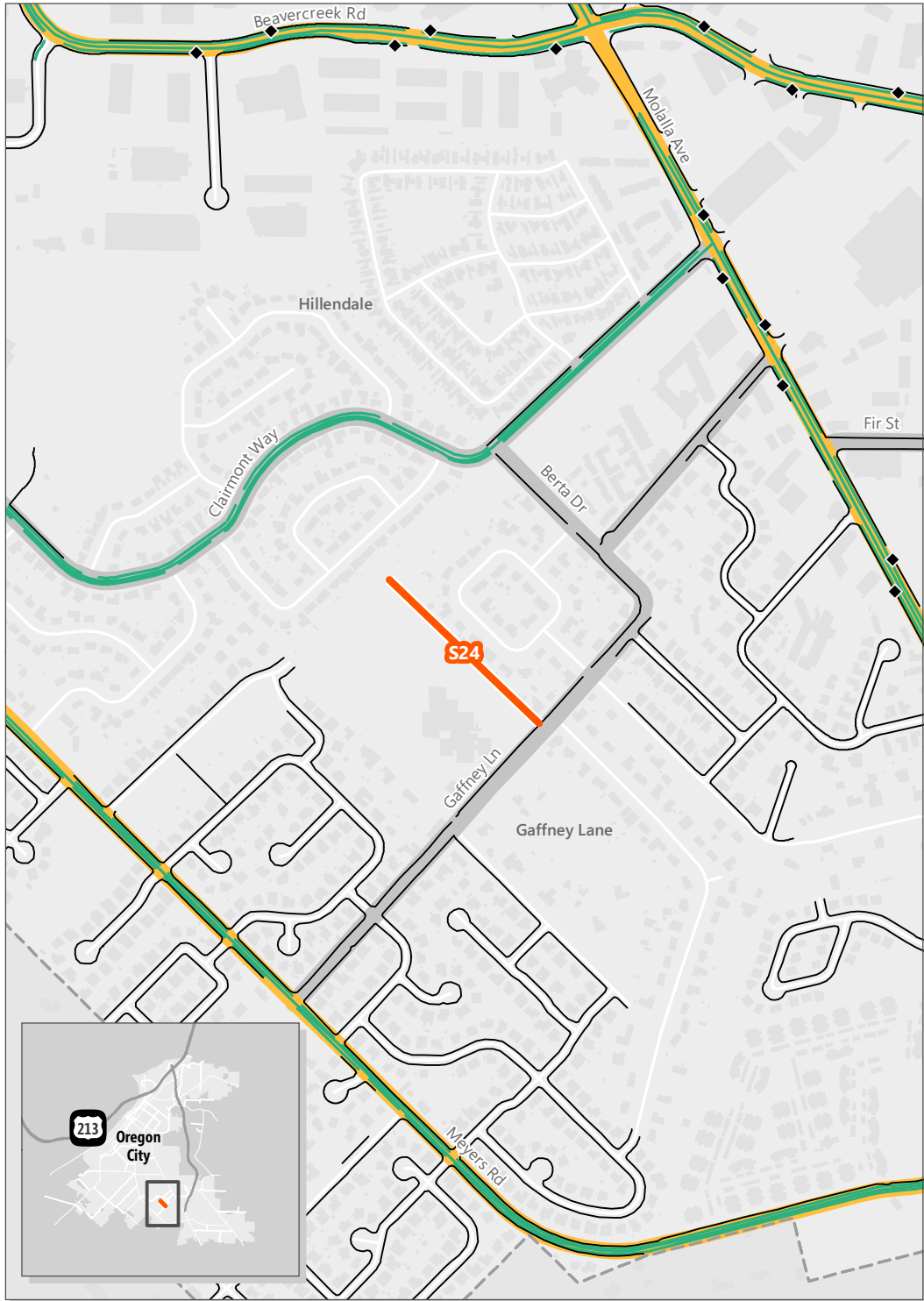
Gaffney Lane Elementary Shared Use Path Opportunities & Constraints	
	<ul style="list-style-type: none"> Identified as project S24 in the City's TSP, this project was included in the Likely to be Funded Transportation System and prioritized for implementation between 2023 and 2035. The City's Trails Master Plan identifies this shared use path as part of the Hillendale South Trail which will connect the Gaffney Lane neighborhood to Hillendale Park.
	<ul style="list-style-type: none"> Land use surrounding the shared use path alignment is entirely built out with single-family homes located east of the path and Gaffney Lane Elementary School located to the west of the path.
	<ul style="list-style-type: none"> The shared use path alignment is located on two lots, both owned by Oregon City School District who is open to formalizing use of the space by the City for the purpose of the shared use path.
	<ul style="list-style-type: none"> The alignment for the shared use path is already in place along the first lot owned by the School District. Today, there is approximately 150 feet of asphalt path before a gravel section, which is approximately 250 feet long. The alignment will be refined and specifically designed to enhance the existing conditions.
	<ul style="list-style-type: none"> There are no utilities that need to be considered until the connection with the planned Meyers-Beavercreek Shared Use Path.
	<ul style="list-style-type: none"> The proposed alignment does not have any environmental constraints.



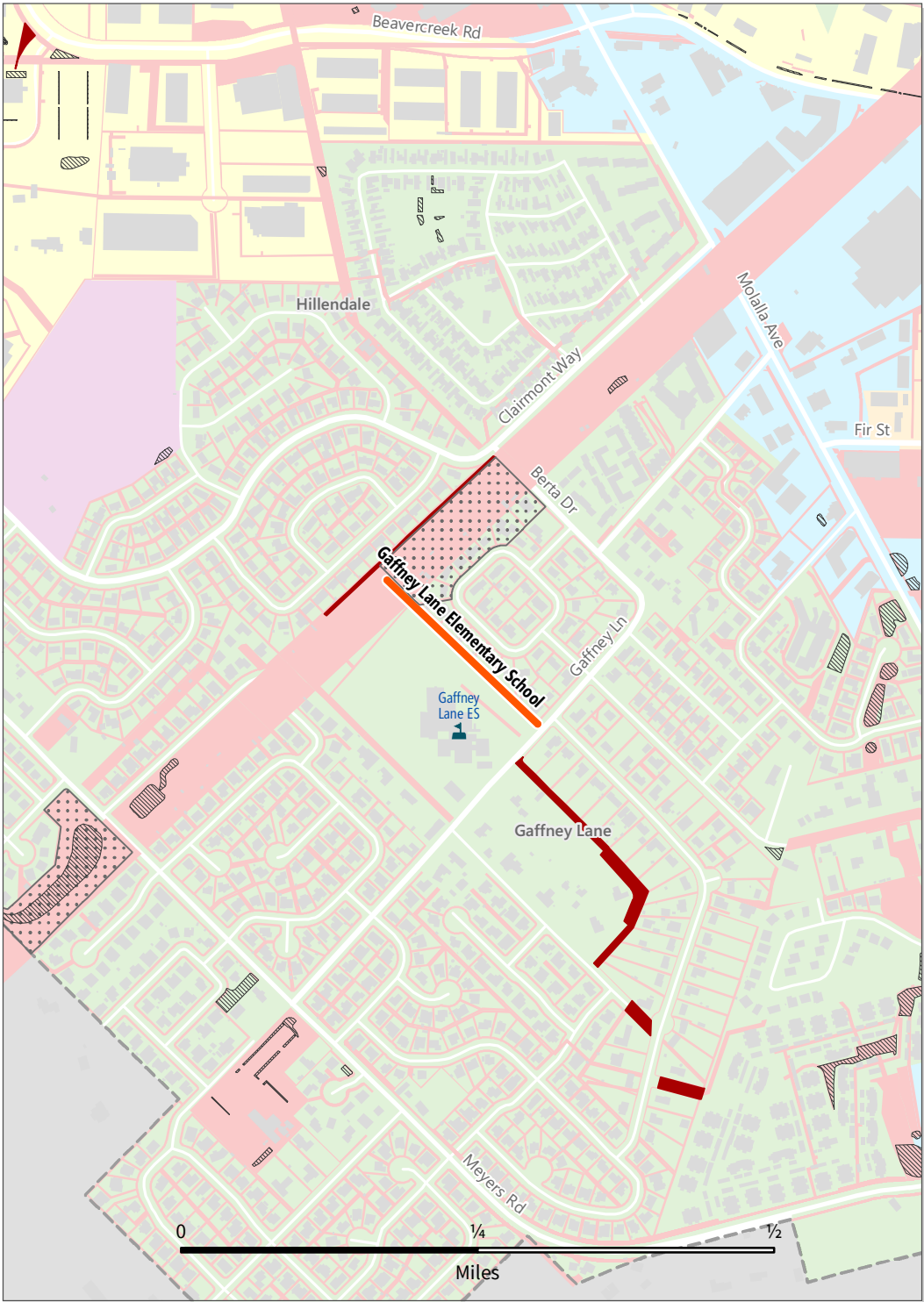
Oregon City Loop Trail Refinement Plan

Figure 5. S24 - Gaffney Lane Elementary School

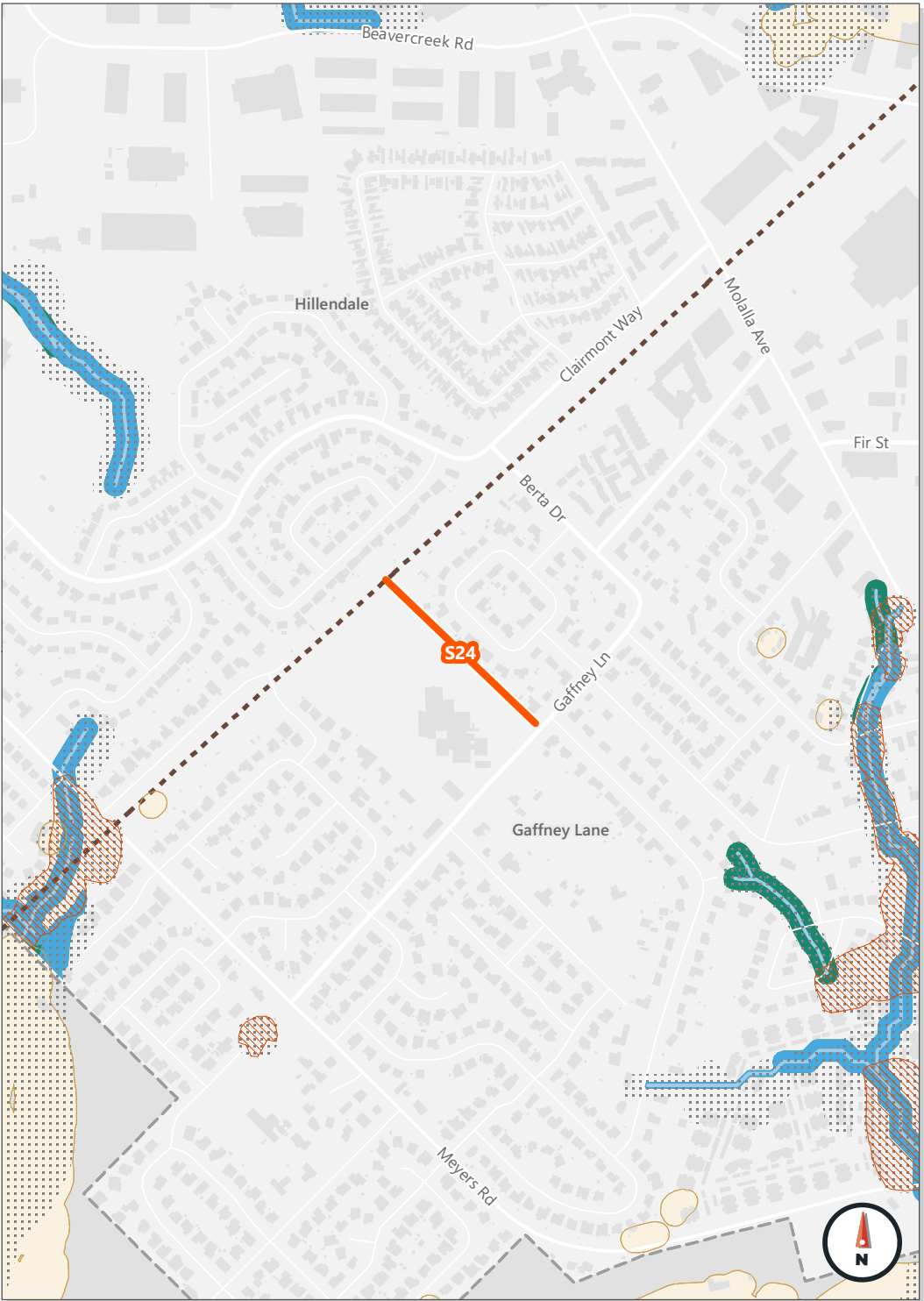
Transportation



Land Use



Utilities & Environmental



- Functional Class**
- Freeway
 - Collector
 - Arterial
 - Local
- Bus stop**
- Sidewalk
 - Bike lane
 - Oregon City Boundary

- Easement**
- Storm detention basin
 - Unimproved ROW
- Privately Owned Tax Lot**
- School
 - Oregon City Boundary

- Zoning**
- Commercial
 - Industrial
 - Institutional
 - Mixed use
 - Residential

- Natural Resource Overlay District (NROD)**
- Wetland
 - Riparian area
- Potential vegetated corridor**
- Geologic hazard area
 - Oregon City Boundary
- Powerline**
- Stream



Previous Planning Efforts

Two planning documents were reviewed for guidance related to refinement of this shared use path, the City's TSP and Trails Master Plan.

TSP

The Gaffney Lane Elementary Shared Use Path is identified as project S24 in the City's TSP and is included in the Likely to be Funded Transportation System. Identified as a long-term project, this project is slated for implementation between 2023 (10 years after adoption of the TSP) and 2035.

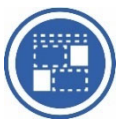
The TSP project description states that this project will "Add a shared use path along the northern boundary of the Gaffney Lane Elementary School between the Eastborne Drive path and Falcon Drive." The project is estimated to cost \$216,000 with the project limits defined as Eastborne Drive to Falcon Drive.

Trails Master Plan

The City's Trails Master Plan identifies this shared use path as part of the Hillendale South Trail, which creates a connection from Gaffney Lane to Hillendale Park. This trail is identified as a local trail and planned to utilize sidewalks to connect from the planned Meyers-Beavercreek Shared Use Path to Hillendale Park and continue onto a paved trail along the school's property.

As a local trail, the shared use path should be designed to provide access for most, if not all, users. The trail should have its own right-of-way, serve only non-motorized users, and be at least six feet wide and at least eight feet wide if bicycle use is anticipated. All efforts should be made so that at least one ADA accessible trail is available and serves the most desirable parts of the area (i.e., picnic areas, viewpoints, playground equipment, etc.)."

Based on the Trail Design Types and Standards in the Master Plan, these trails should be designed with a width of between 6 and 12 feet and should be a paved or other smooth-rolling surface to accommodate all trail users.



Surrounding Land Use & Context

The area surrounding the shared use path alignment is zoned for low-density residential. Today, there are single-family homes to the east of the path from Gaffney Lane to the power lines. The shared use path is located on the Gaffney Lane Elementary School property.

The primary generator for bicycle and pedestrian trips for this shared use path is Gaffney Lane Elementary School. When completed, this path would provide an off-street connection to the Meyers-Beavercreek Shared Use Path and residential areas located along it, expanding the number of families able to reach the elementary school using off-street facilities.



Land Ownership & Right-of-Way (ROW)

The proposed alignment of the Gaffney Lane Elementary Shared Use Path spans two lots, both owned by the Oregon City School District. Stakeholder interviews completed with representatives from Oregon City School District indicate the school district is open to formalizing use of the alignment for the shared use path.



Existing Infrastructure

Vehicles

The shared-use path will be off-street and will not interact with any roadways or vehicle traffic.

Bicycle and Pedestrian

Today, an asphalt path that is approximately five feet wide exists for 150 feet beginning at Gaffney Lane. The alignment for the shared use path continues after the asphalt path to the end of the school's first lot but is not paved.

Transit

There are no transit stops located on or near the shared use path alignment.



Utilities

There are no constraints related to existing utilities for this shared use path.



Environmental Constraints


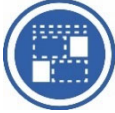




This shared use path does not have any water, natural resources, or geologic hazards that will need to be considered.



Orchard Grove-Hazelnut Shared Use Path - S30

The Orchard Grove-Hazelnut Shared Use Path is a portion of the Loop Trail that will connect people walking, biking, and using other small mobility devices from Orchard Grove Drive to Hazelnut Court, Hazelwood Park, and John McLoughlin Elementary School. This portion of the effort will serve as guidance for private developers which will be in charge to fund and build this portion of the Loop Trail. **Figure 6** shows the proposed connection, existing infrastructure, surrounding land use, utilities, and environmental constraints. A summary of issues and opportunities is provided below, followed by a detailed description of each of the topic areas.

Orchard Grove-Hazelnut Shared Use Path Opportunities & Constraints

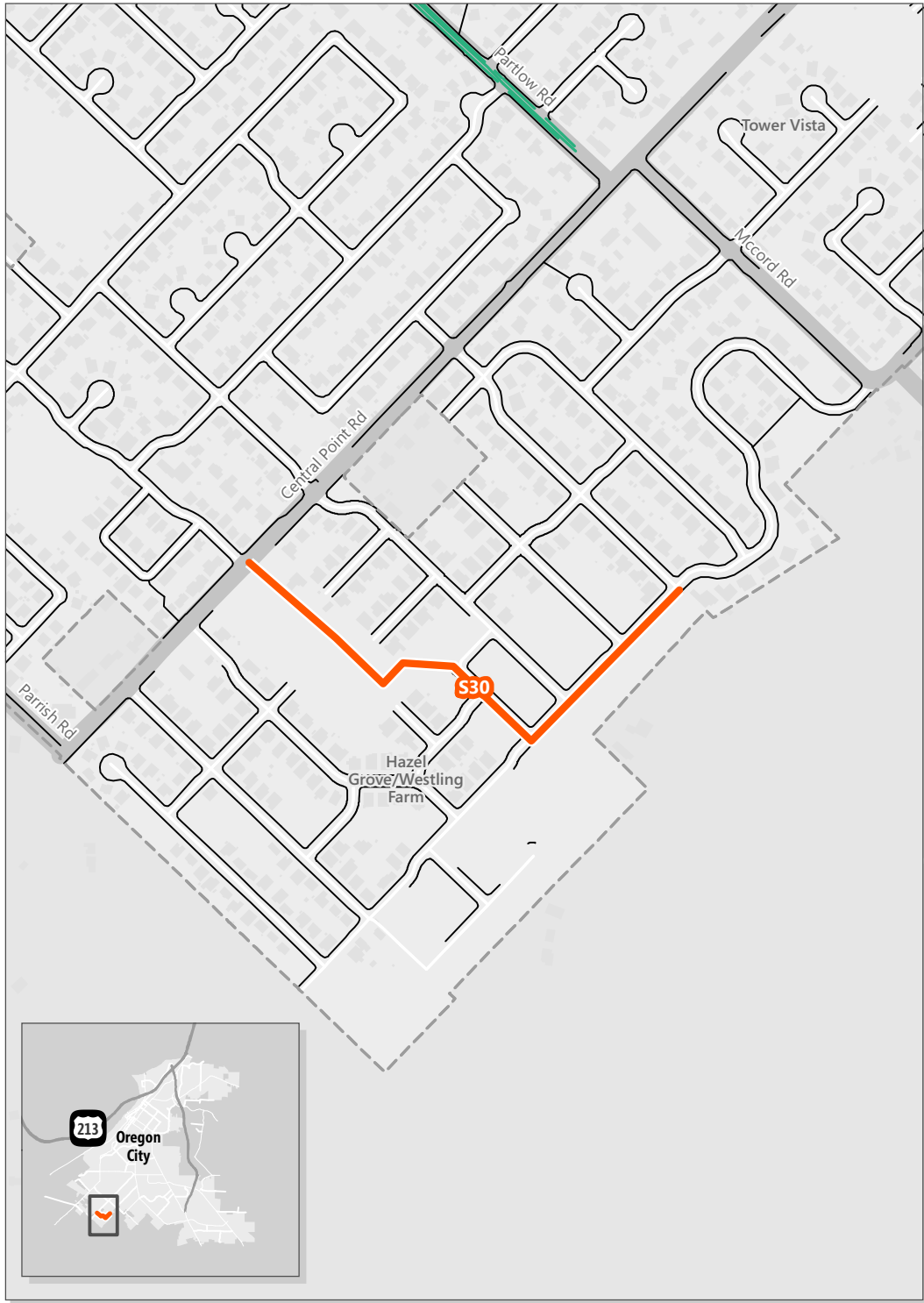
	<ul style="list-style-type: none"> The Transportation System Plan described this section of the regional trail as part of the Not Likely to be Funded Transportation System. As a Long-term Phase 3 project, it is part of the lowest priority projects after the Likely to be Funded Transportation System is implemented. This segment is identified as part of the Oregon City Loop Trail.
	<ul style="list-style-type: none"> The surrounding land use and zoning is low-density residential. Major generators for the planned trail include Hazel Grove Park and John McLoughlin Elementary School.
	<ul style="list-style-type: none"> The off-street portion of the proposed alignment crosses land that is privately owned and undeveloped. This segment of the Loop Trail will be constructed by private development as it occurs.
	<ul style="list-style-type: none"> Orchard Grove Drive and Wheeler Way are local streets with a 25-mph speed limit. There are no existing on-street bike lanes in the study area; except for a small gap on Orchard Drive, sidewalks are provided on all existing streets. When implemented, this portion of the Loop Trail will connect people walking, biking, and using small mobility devices to parks and schools using sidewalks and on-street facilities appropriate for the residential context and slow neighborhood streets.
	<ul style="list-style-type: none"> There are no significant utilities along the proposed alignment.
	<ul style="list-style-type: none"> There are no significant environmental constraints along the proposed alignment.



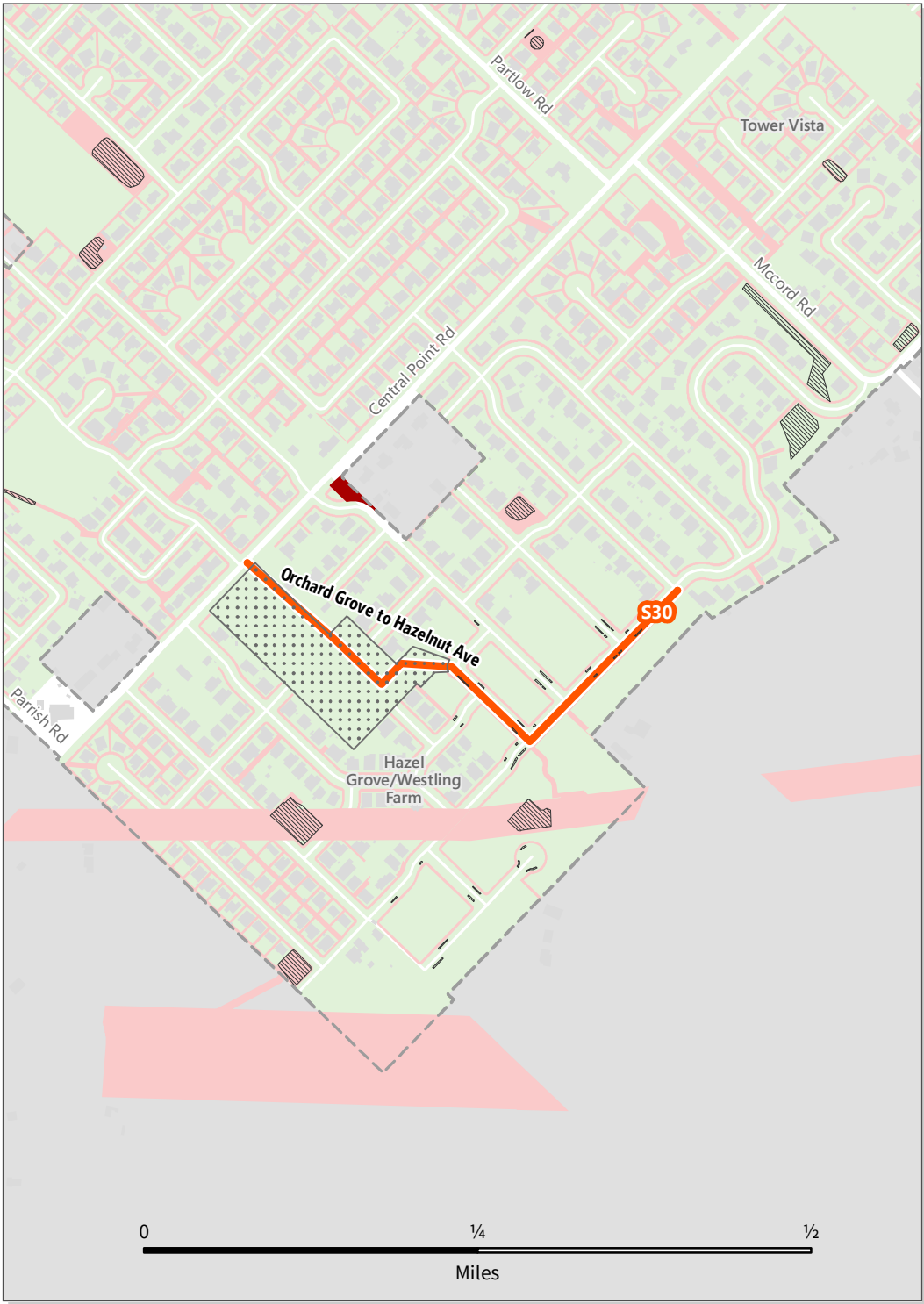
Oregon City Loop Trail Refinement Plan

Figure 6. S30 - Orchard Grove to Hazelnut Ave

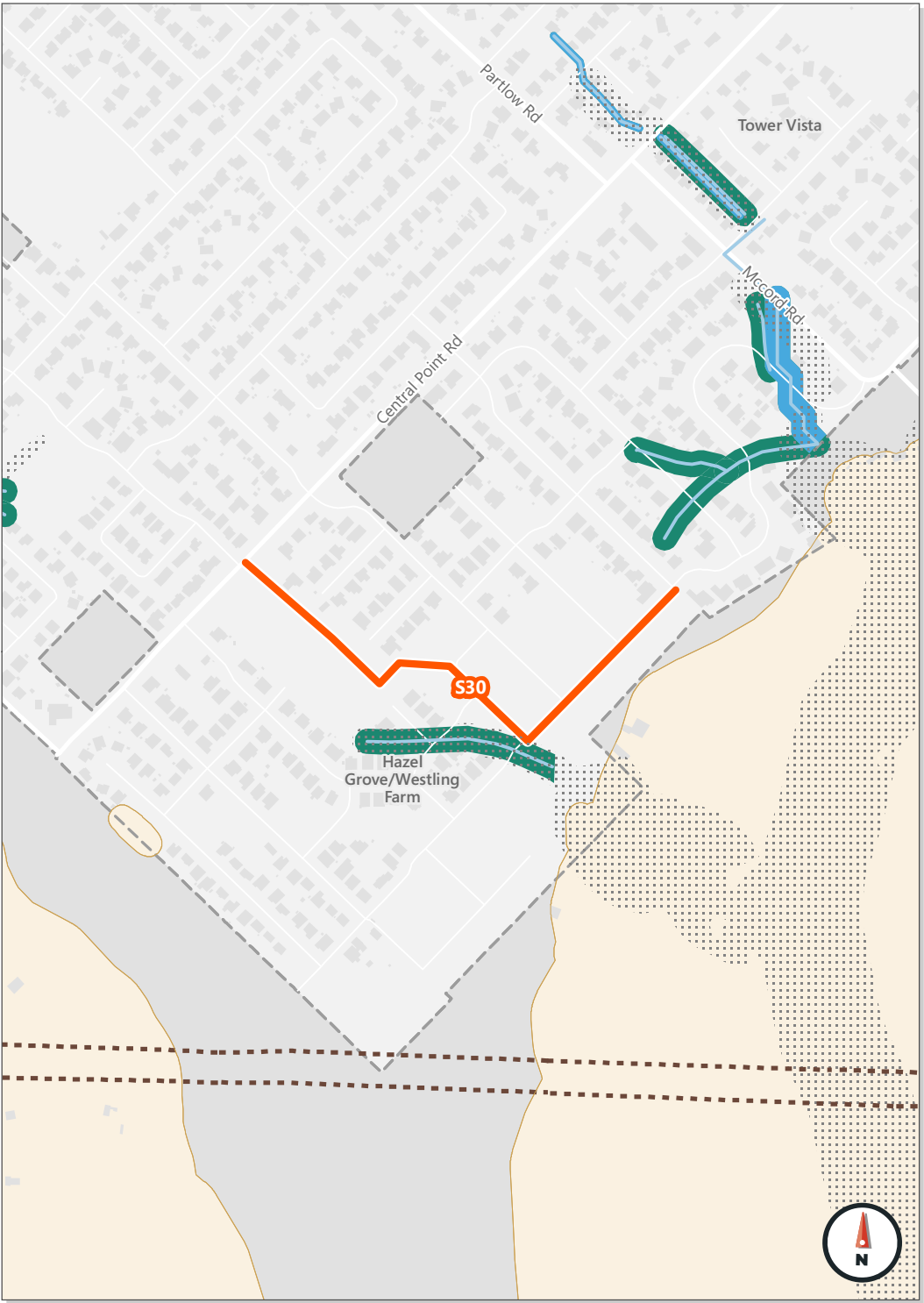
Transportation



Land Use



Utilities & Environmental



- Functional Class**
- Freeway
 - Collector
 - Arterial
 - Local
- Other Features**
- Bus stop
 - Sidewalk
 - Bike lane
 - Oregon City Boundary

- Other Features**
- Easement
 - Storm detention basin
 - Unimproved ROW
 - Privately Owned Tax Lot
 - School
 - Oregon City Boundary

- Zoning**
- Commercial
 - Industrial
 - Institutional
 - Mixed use
 - Residential

- Utilities & Environmental**
- Natural Resource Overlay District (NROD)
 - Wetland
 - Riparian area
 - Potential vegetated corridor
 - Geologic hazard area
 - Oregon City Boundary
 - Powerline
 - Stream



Previous Planning Efforts

Two planning documents were reviewed for guidance related to refinement of this shared use path, the City's TSP and Trails Master Plan.

TSP

The Orchard Grove-Hazelnut Shared Use Path is identified as project S30 in the City's TSP. The project is included in the City's Not Likely to Be Funded Transportation System and identified as a Long-term Phase 3 project.

The TSP project description states that this project will "Add a shared use path between Orchard Grove and Hazelnut Court." Based on the project description in the TSP, the project is estimated to cost \$375,500.

Trails Master Plan

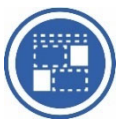
The Orchard Grove – Hazelnut Shared Use Path is part of the Oregon City Loop Trail described in the City's Trails Master Plan.

As part of a regional trail, the path should be designed for two-way bicycle and pedestrian traffic with its own ROW and should be able to accommodate maintenance and emergency vehicles. Based on the design guidelines the shared use path should:

- Be between 10 and 12 feet wide with 2 feet of soft shoulders
- Have a paved or other smooth rolling surface to accommodate all trail users which include bicyclists, pedestrians, wheelchairs, baby strollers, equestrians, and skaters.

For this segment, it is expected that the Type 1 crossings recommended by the City's Trails Master Plan will be used to create safe crossings where necessary.

The Trails Master Plan will be referenced to provide guidance as to what enhancements may be needed based on traffic volume, speed, and line of sight for unprotected or marked crossings.



Surrounding Land Use & Context

The primary land use surrounding this planned shared use path is single family residential. While the area around the proposed path is generally built out, the undeveloped area the trail will cross is zoned as R-10, low-density residential.

The primary generators for bicycle and pedestrian trips in the surrounding area is Hazel Grove Park, just north of the planned shared use path, and John McLoughlin Elementary School.



Land Ownership & Right-of-Way (ROW)

The section along Orchard Grove Drive between Hazelnut Avenue and Wheeler Way is developed with single-family homes that are privately owned. The section between Wheeler Way and S Central Point Road is undeveloped and privately owned.

This study will refine the preferred alignment of the shared use path, such that when development of the vacant lot occurs, construction of the shared use path can be included in the Conditions of Approval for development.



Existing Infrastructure

Vehicle

Orchard Grove Drive and **Wheeler Way** are defined as local residential streets that provide one lane of travel in each direction and have a posted speed limit of 25mph. On-street parking is allowed on both streets.

Central Point Road is defined as a two-lane minor arterial with a posted speed of 35 mph. On-street parking is permitted where there is available space.

Bicycle and Pedestrian

There are no bicycle facilities in the area; however, sidewalks that are generally seven feet wide and include a planted buffer are provided on all roadways. Today, there is only one gap in the sidewalks, a 230 foot segment on the south side of Orchard Grove Drive where there are no existing sidewalks.

Transit

There are no public transportation routes close to the proposed alignment of this shared use path or in the vicinity of the neighborhood. The closest bus stop is located at S Central Point Road and S McCord Road, approximately half a mile from the planned shared use path.



Utilities

There are no major utilities that will need to be considered as part of this alignment.



Environmental Constraints

There are no major environmental constraints that will need to be considered as part of this alignment.



Appendix A: Stakeholder Interviews



Oregon City Loop Trail Stakeholder Interview Summary

Clackamas County Community College

Interviewee: Bob Cochran – Dean of Campus Services

Date: 6/6/2022

- Recent projects have constructed sidewalks connecting from Beavercreek Road and the Meyers Road into the campus, ideally the Loop Trail project will connect to the sidewalks and connections of the Community College entrance at the entrance of S Douglas Loop and Keyser Way and improve sidewalks at the entrance.
- Today, most people commuting to the college drive. People biking to the college are limited despite bike racks on campus.
- There is an opportunity to connect the Oregon City Loop Trail with the existing exercise and trail loop on Campus and connecting with the High School east of the community college. Today, the campus loop is highly used by people who drive and park on campus to access the trail.

Deering Management

Interviewee: Lacey Wright – Property Manager (Oregon/Washington)

Date: 6/14/2022

- Cut-through traffic from Beavercreek Road to access Fred Meyer is a concern today. If there is an opportunity to close the existing access between this property and Fred Meyer to eliminate this, that would be a positive for this project.
- The speed of vehicles in the parking lot is also a concern for safety of people in the parking lot and potential trail users.
- There is concern about providing a direct connection from the area to the east into the site and question about who would use the trail, specifically if there are no changes to the land use and connections to other recreational areas to the east of the property.
- Recent construction on Molalla Avenue was impactful to access to the property and the landscaping.



Gaffney Lane Association

Interviewee: Ray Atkinson – Transportation Systems Analyst Clackamas Community College / Gaffney Lane Resident
Date: 6/9/2022

Note: Ryan is the transportation analyst at Clackamas Community College, a member of the Gaffney Lane Neighborhood Association, and a member of the Oregon City Transportation Advisory Committee.

- Clackamas County Community College is primarily a commuter school; however, there are many students that live within two miles of the Campus and could bike if there were safe and comfortable facilities that would help to make biking more attractive.
- Clackamas Community College will be restarting the bike program, for students and staff, which allows students to rent bicycles for the semester. The program has up to 10 bikes that can be rented out.
- Along Meyers Road and Gaffney Lane existing bike infrastructure is insufficient, making it uncomfortable to bike or walk. Bike lanes are narrow, there are section with sidewalks gaps, and at points the bike lane disappears, forcing bikes to the edge of the road which is typically covered with gravel.
- Bikeshare programs, including ebikes and scooters, could be an option incentivize more users to use alternative modes of transportation on the existing and proposed multi-use paths and trails and address first- and last-mile gaps.
- This project should consider how it connects to the local network, for example connecting Hillendale Park to the Gaffney Lane neighborhood with bike infrastructure and multi-use paths that use local streets and allows people biking to avoid major roads will make biking more attractive to students and families that live in the area.
- Neighborhood members may be concerned about who will use the trail
- If possible, this project should evaluate options to the pair the trail under the power lines with more active uses such as food trucks.

Oregon City Parks Department

Interviewee: Justin Moore – Administrative Assistant, D Conrad, Kendall Reid, Jonathan Waverly – Parks Operations Manager
Date: 6/16/2022

- For the Power Lines Trail alignment, Parks has considered that area for an off-leash dog park either adjacent to or replacing the area where the City currently stores construction materials.
- At this time, Parks is not planning to add more parks and is not interested in the addition of pocket parks along the trail.



- There are likely to be significant environmental challenges to navigate the stormwater runoff pond at the intersection of Meyers, Moccasin, and Frontier. Based on Parks investigation of this area, using Frontier Street for on-street connections in this area is likely to be the most feasible options.
- Off-street paths, trails and bike infrastructure are maintained by Oregon City Street Division (Public Works). In the future, Parks may oversee the full maintenance of the Loop Trail but at this time they do not have staff or budget to take on additional responsibilities.
- Parks is just starting a project to update the City's Parks Master Plan. The update will include community outreach to identify what are the need and the desires are related to parks and connections to existing parks. The project is estimated to take a year and should be complete in Summer 2023.

Portland General Electric - PGE

Interviewee: Jessica North Utility Large Project and Design Engineer Manager, Deanna Kaneshiro – Municipal Program Manager

Date: 6/7/2022

- This group manages distribution lines and the wooden poles in the study area alignment. The transmission towers are managed by a different group, but they will provide additional contacts and documentation related to those towers.
- For the distribution poles, there are no requirements for a multi-path trail and those poles can easily be relocated.
- As the alignment is refined, additional coordination with PGE will be needed if there are illumination needs and to ensure that PGE can continue to access their infrastructure.
- The path should be wide enough to allow truck access to those poles and the large transmission towers. The Bucket Truck would be the primary vehicle that would need access to the infrastructure.
- Transmission lines and towers require 50 feet of clearance as to maintain safety. This standard should be considered with the design of the cross-section an alignment of the multi-use path.

Metro

**Interviewee: Alex Gilbertson – Landscape Architect
Robert Spurlock – Regional Trails Planner
Rod Wojtanik - Parks and Nature Planning Manager**
Date: 7/7/2022

- Metro has expressed that the section of the city loop trail on Canemah Bluff Nature Area is on the long-term plans. There are concerns related to the topography of the area, wildlife protection and the door or access to the trail.



- The section of the loop on the northeast end of the city (by OR-213) is well advanced, Metro has purchased and now owns most of the land along the proposed route; there are some sections that are still missing but looks promising.
- Metro team expressed the approach to trail development. Metro does acquire and own the land but looks for partnerships that build and manage such trails. Following this approach, Metro intends to get an agreement with Oregon City to build and manage the trail close to OR-213.
- Metro does not have standards for the cross-section, materials, or users of the trails. It is suggested that these two trails should have multiple users, including bikes. Some regional trails do not allow for bikes, these city trails should also consider not only asphalt surfaces for bikes, but it should also include probably gravel or dirt to include possible mountain bikes on the trails.

Oregon City School District

Interviewee: Michael Sweeten – Director of Operations and Capital Projects

Date: 6/10/2022

- The school district shared support for both the Gaffney Lane Elementary Shared Use Path and the Meyers Beavercreek Shared Use Path.
- The school district would be open to a maintenance and access agreement with the City to allow access to both paths similar to the agreement being developed at Gardiner Middle School.
- Primary concerns the school district shared were related to ongoing maintenance of the path.
- The school has fenced off all areas used by students and limits access during the day so there are no concerns regarding security and proximity to the paths.

Appendix B:

Community Survey Summary

Oregon City Loop Trail Refinement Plan
Community Survey Summary

November 9, 2022

Prepared by Fehr & Peers

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Overview 4

Meyers Road Shared Use Path – S23 5

Meyers Beavercreek Shared Use Path – S22 10

Gaffney Lane Elementary Shared Use Path – S24..... 13

Orchard Grove Hazelnut Shared Use Path – S30 17

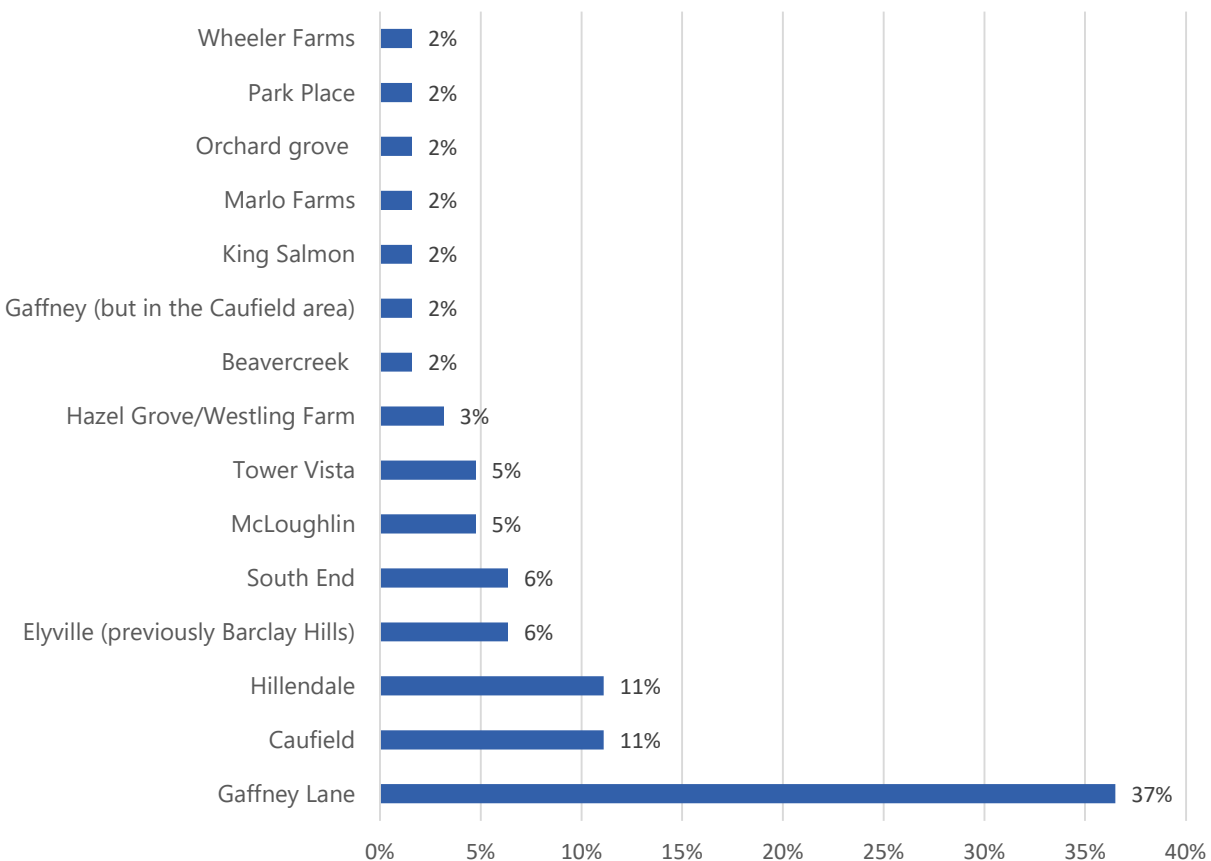
Introduction

To gather input as part of the early technical work for the Oregon City Loop Trail Refinement Plan, an online community survey was launched in early September and was available for community members to complete through mid-October. This survey focused on two segments of the Oregon City Loop Trail (Meyers Road Shared Use Path and Orchard Grove-Hazelnut Shared Use Path) and two paths that will connect people walking and bicycling to the Loop Trail (Gaffney Lane Elementary School Shared Use Path and Meyers Road to Beavercreek Shared Use Path). This survey asked respondents to share how they would use the proposed paths and to identify challenges, concerns, and opportunities for each of the four paths.

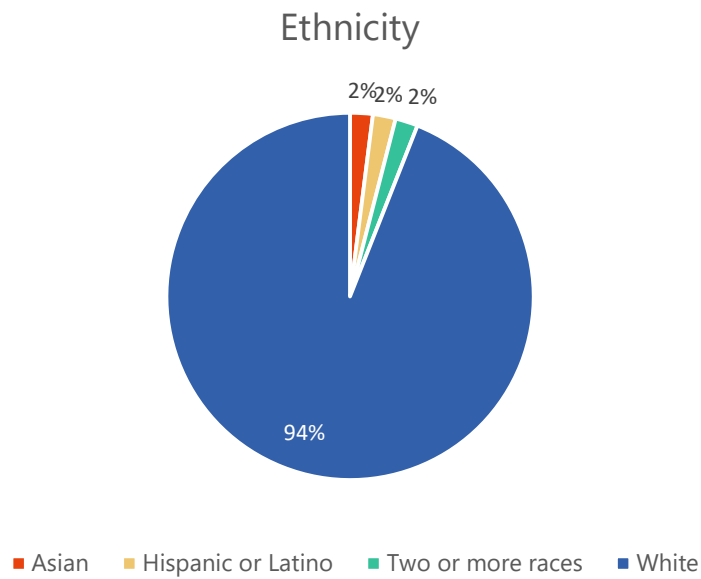
Demographics

Sixty-eight respondents completed the online survey. While nearly 40 percent of respondents live in the Gaffney Lane neighborhood, with the exception of the Canemah, Rivercrest, and Two Rivers neighborhoods, all other neighborhoods within the City were represented in the responses.

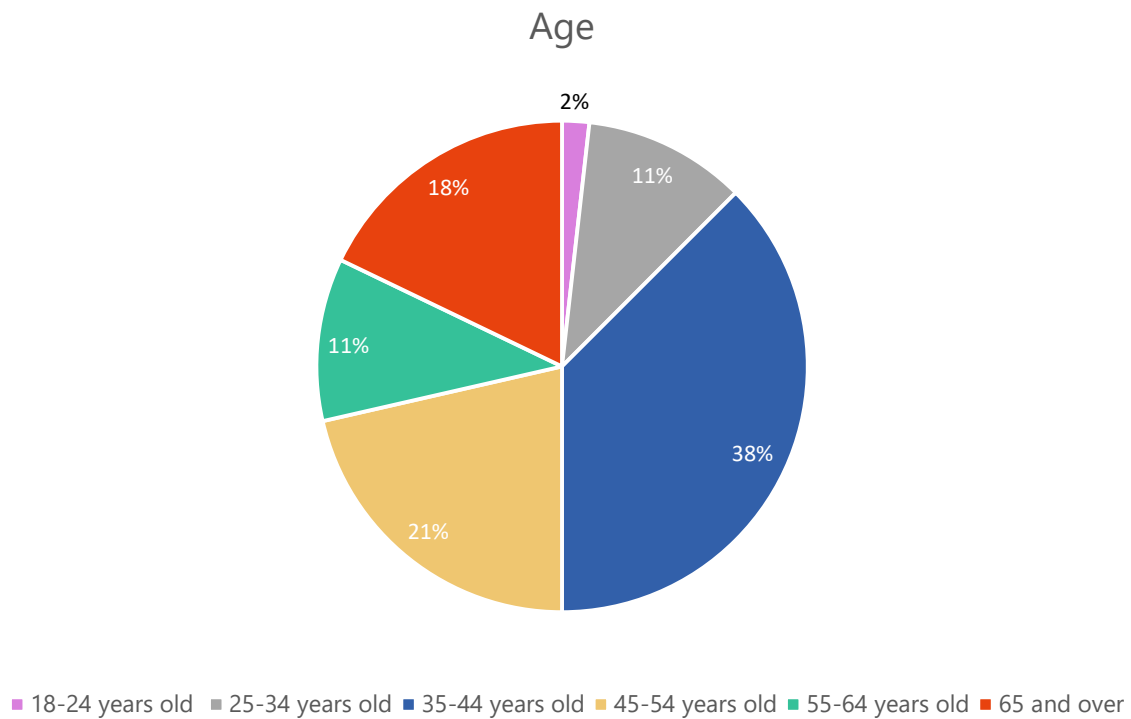
Neighborhoods



Most respondents, who chose to share, identify as White.



Of respondents who chose to share, nearly 40% identify as 35-44 years old, approximately 20% identify as 45-54 years old, and 20% identify as 65 and over.



Overview

Community members were asked whether they typically walk or bike, the reasons behind their mode choice, why they would use the proposed shared use paths, which challenges they face when walking or bicycling in the area near the proposed paths, and which safety features would encourage them to walk or bike.

Most respondents shared that they currently walk or bike for recreation or exercise and identified that as how they would use each of the proposed paths when constructed.

When asked what prevents them from walking or bicycling today, most respondents identified interactions with cars and poor sidewalks/pavement condition as barriers. Safety is also a major concern for most of the respondents across all shared use paths. Some respondents identified additional concerns, including:

- Concerns about proximity of the houseless/transient population to residential areas
- The need for dog waste stations along the paths
- Lack of connections to existing infrastructure when paths end
- Loss of privacy where trails would be located adjacent to residential areas
- Proximity to Gaffney Lane Elementary School
- Lack of ADA infrastructure in areas where paths may be on-street

While most respondents would be encouraged to walk or bike more if the proposed paths were separated, many did not feel that on-street facilities with vertical barriers would address their concerns. When asked what additional safety and design features would make it more likely that they would walk or bike, respondents identified:

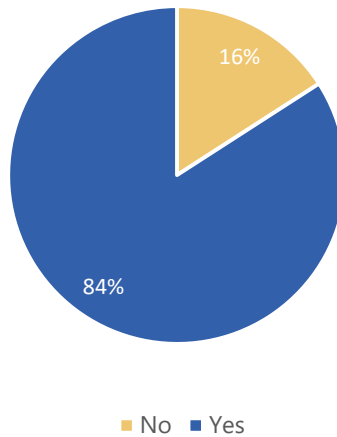
- Better signage
- Traffic calming measures to slow cars
- A more complete sidewalk network
- Connectivity for biking (instead of connecting to no-outlet streets)
- Improved lighting
- Dog waste stations
- Improved driveways and entrances to businesses

One respondent also expressed desire for trails that can be used for mountain biking and hiking.

Meyers Road Shared Use Path – S23

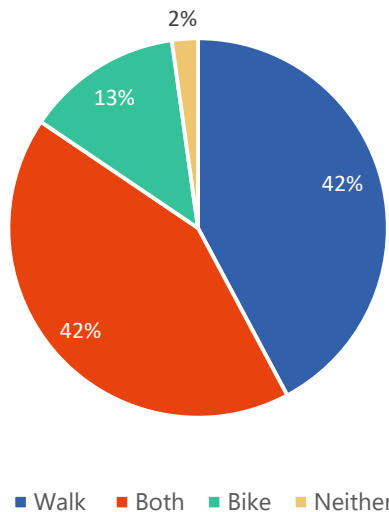
This segment received the most feedback with 45 responses.

Would you use this proposed trail segment to walk or bike if it were built?



Most respondents either walk, or both walk and bike.

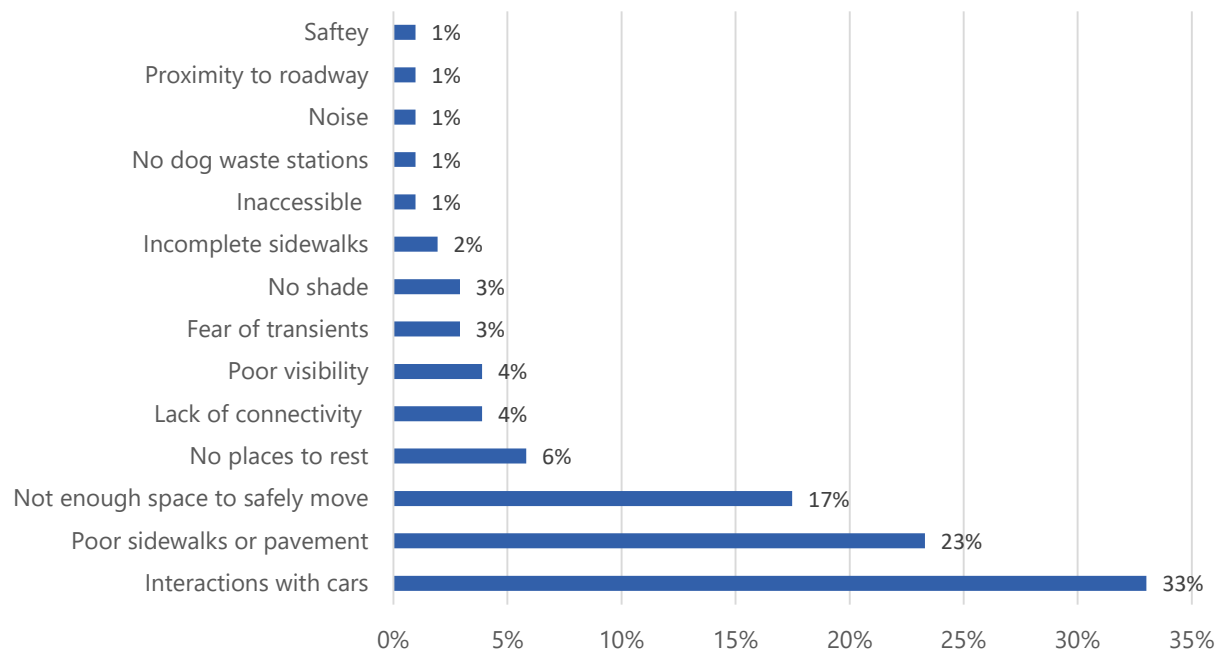
Do you typically walk or bike?



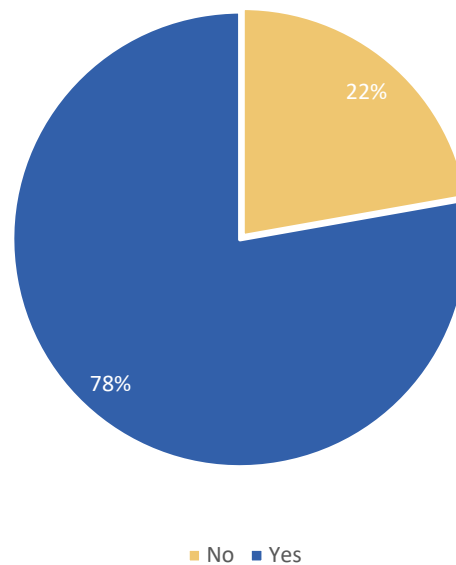
Challenges and Concerns

The main challenges that respondents experience when walking or biking in the area near the proposed Meyers Road Shared Use Path include interactions with cars, poor sidewalks or pavement, and not enough space to travel safely.

What challenges do you face when walking or biking in the area near this proposed trail segment? Please choose all that apply.

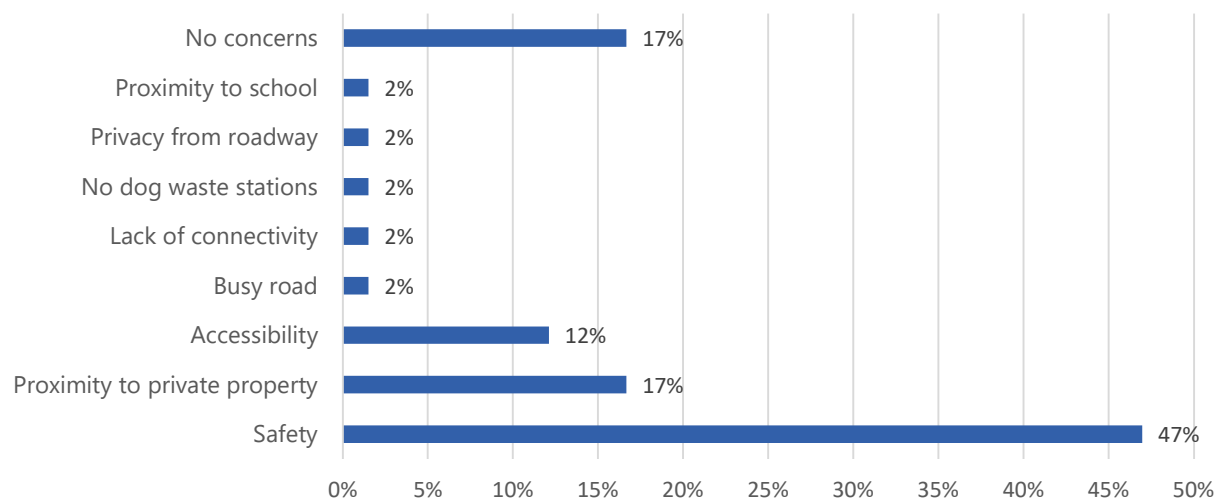


Do these challenges discourage you from walking or biking?



Respondents for this proposed shared use path are primarily concerned with safety.

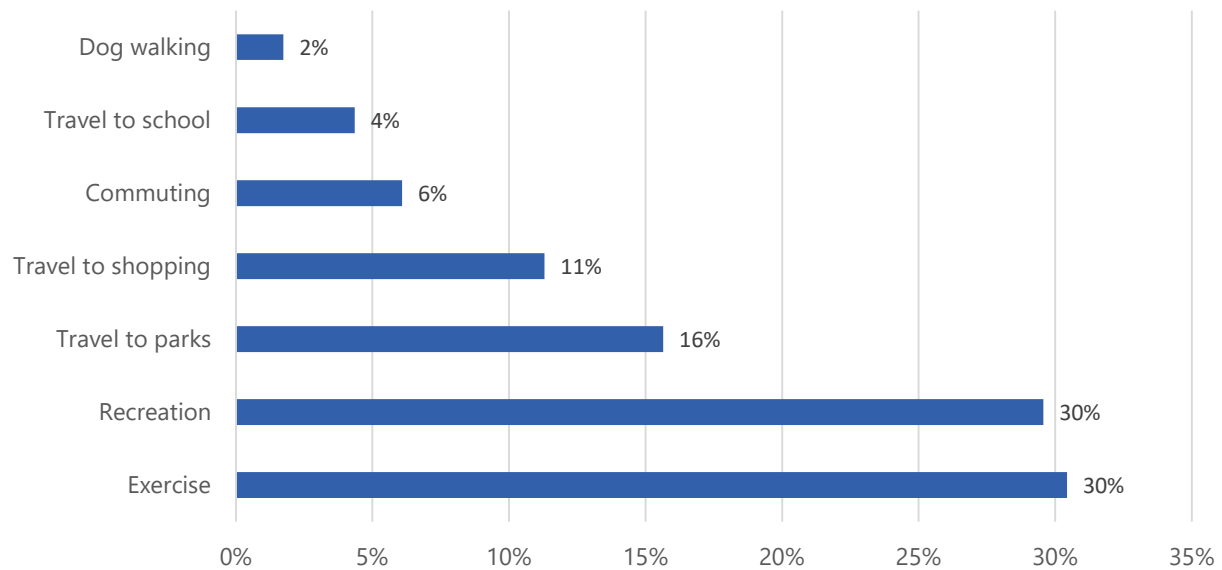
What concerns, if any, do you have about where the trail could be located? Please choose all that apply.



Opportunities

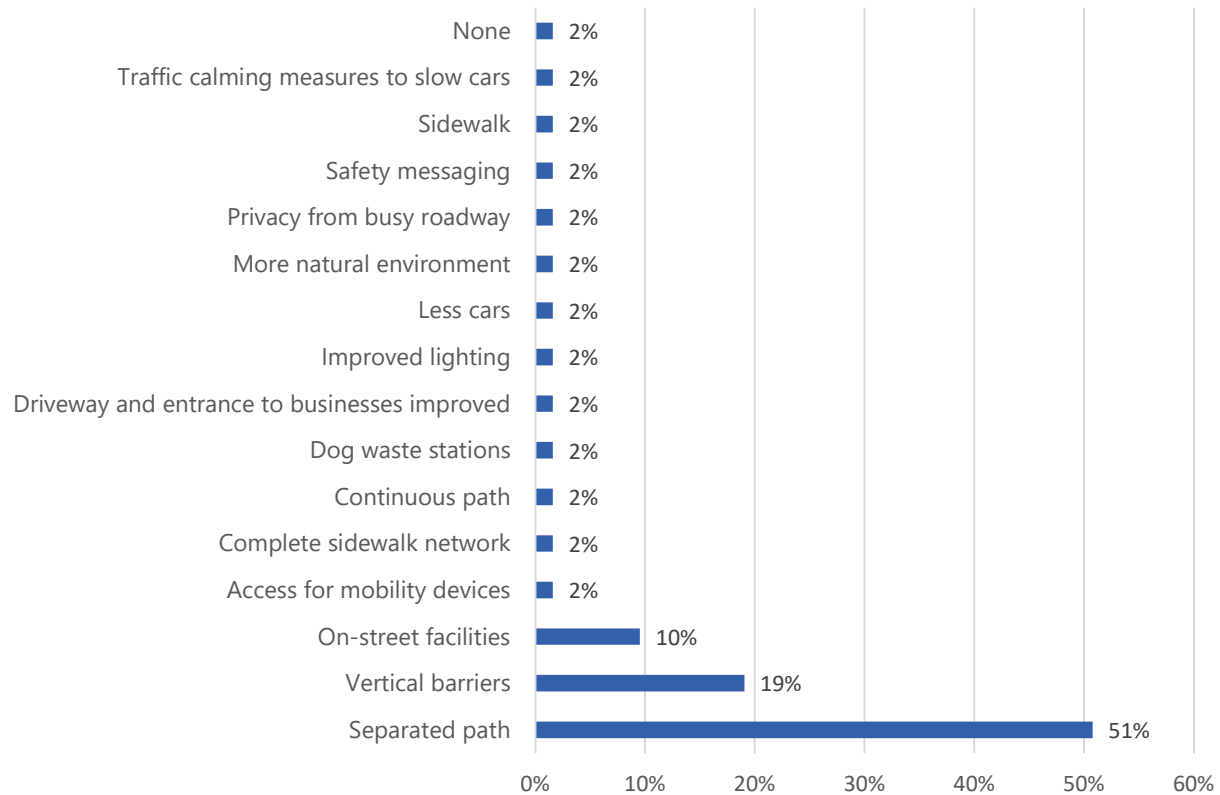
Respondents shared that they would use the proposed shared use path most for recreation or exercise.

For which reasons would you use this proposed trail segment? Please choose all that apply.



Most respondents would be encouraged to walk or bike more if the proposed path was separated.

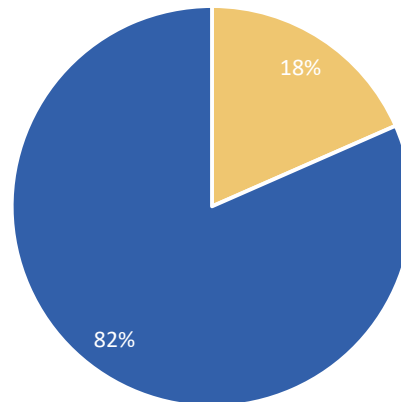
Which safety or design features would encourage you to walk or bike more? Please choose all that apply.



Meyers Beavercreek Shared Use Path – S22

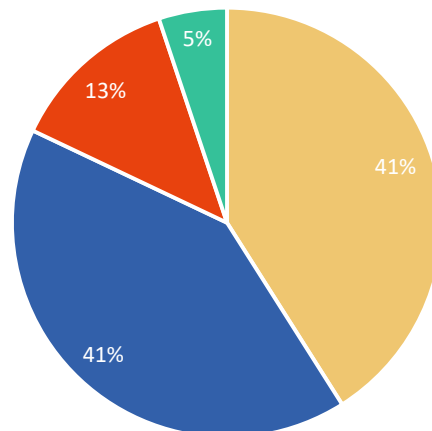
This segment received 39 responses and more than 80% of respondents said they would use the trail if it were built.

Would you use this proposed trail segment to walk or bike if it were built?



■ No ■ Yes

Do you typically walk or bike?

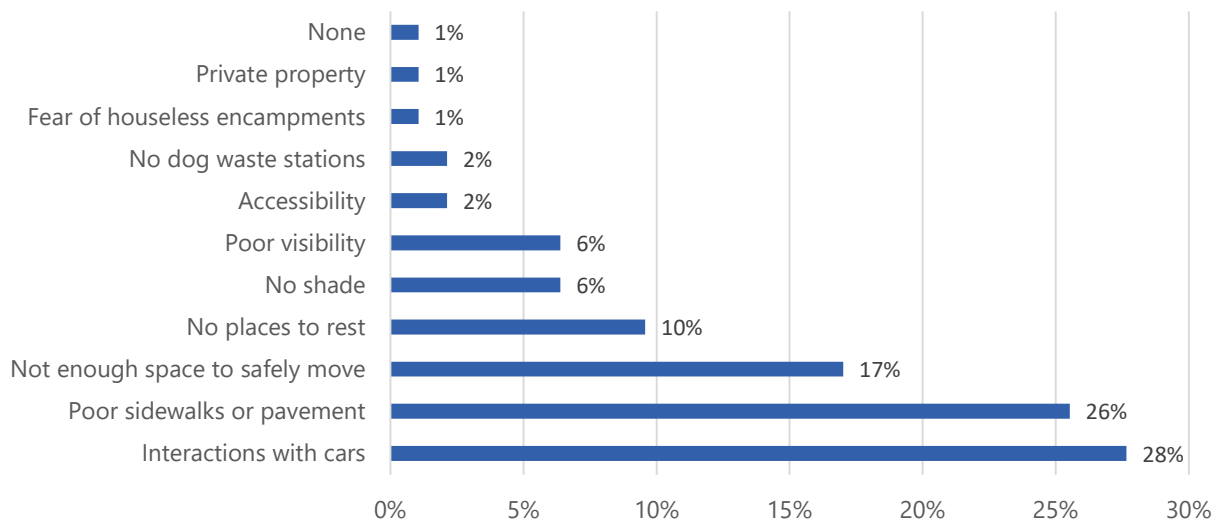


■ Walk ■ Both ■ Bike ■ Neither

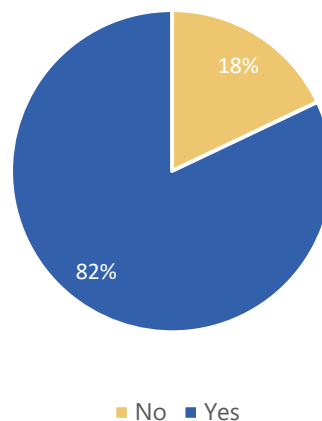
Challenges and Concerns

Respondents identified interactions with cars, poor sidewalks or pavement, and not enough space to safely move as significant challenges. Approximately 80% of respondents said these challenges discourage them from walking or biking.

What challenges do you face when walking or biking in the area near this proposed trail segment? Please choose all that apply.

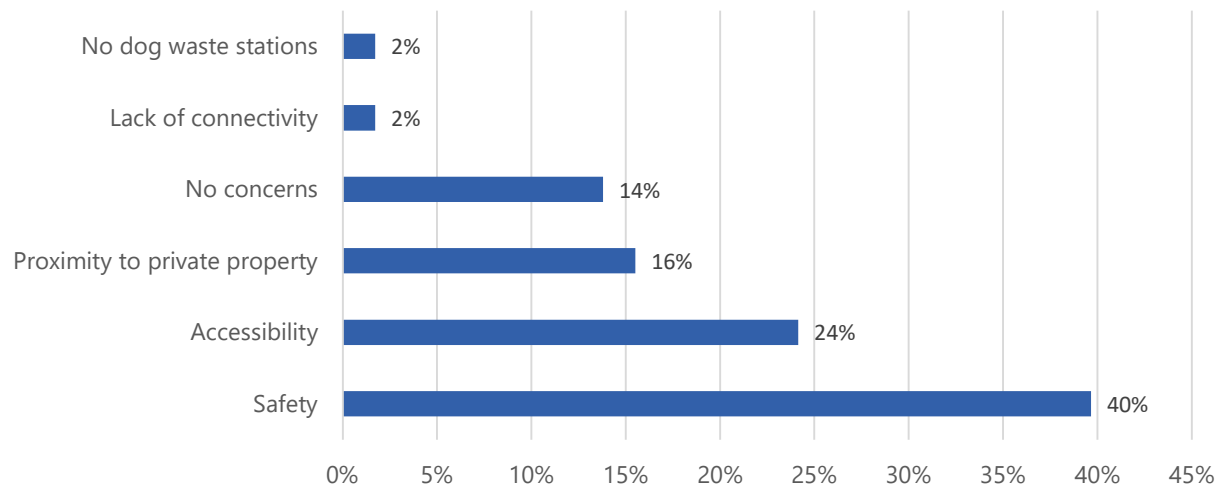


Do these challenges discourage you from walking or biking?



Safety was the primary concern identified by community members when asked about location of the proposed trail.

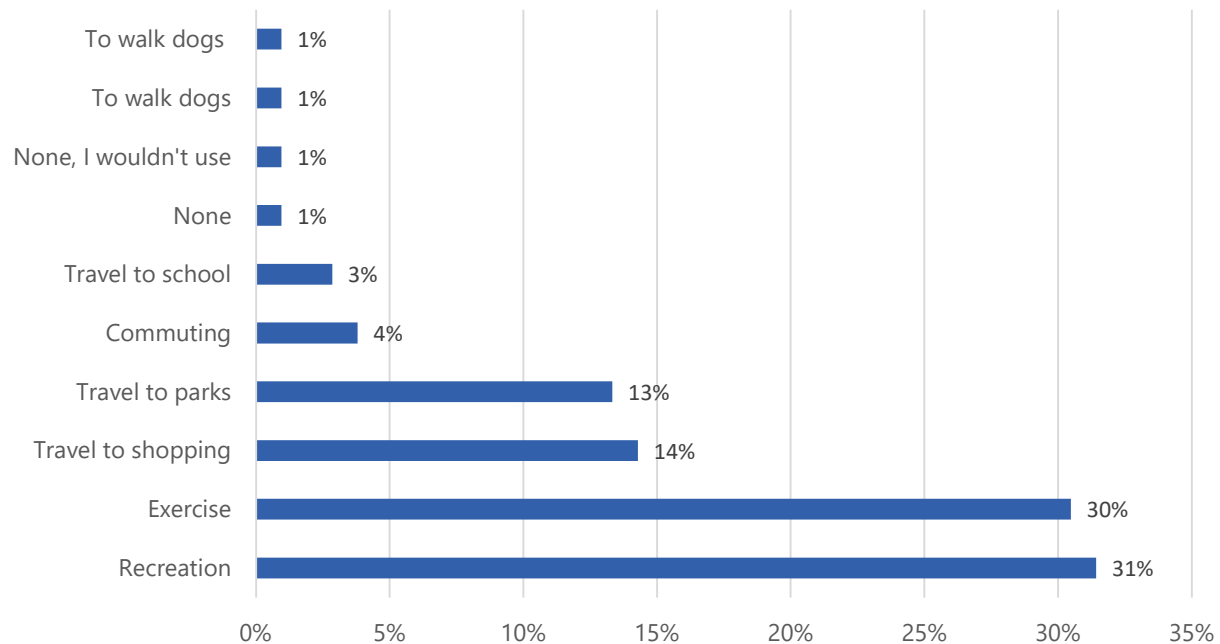
What concerns, if any, do you have about where the trail could be located? Please choose all that apply.



Opportunities

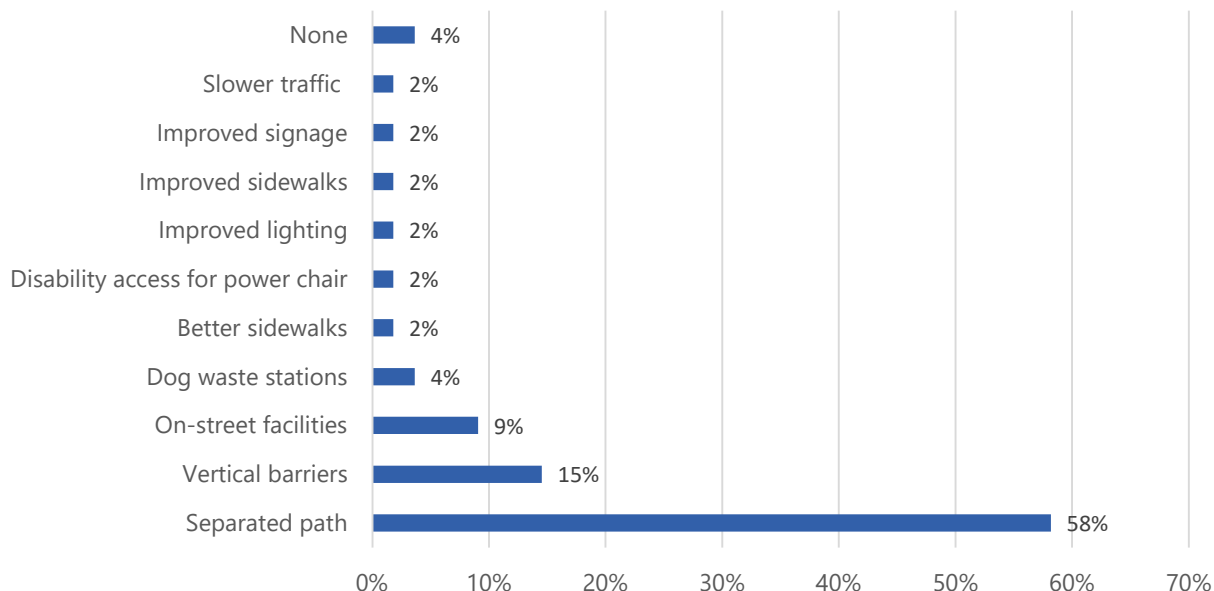
Respondents shared that they would use the proposed shared use path for recreation or exercise. Travel to shopping and travel to parks were other notable reasons for using the proposed path.

For which reasons would you use this proposed trail segment? Please choose all that apply.



Most respondents would be encouraged to walk or bike more if the proposed path was separated.

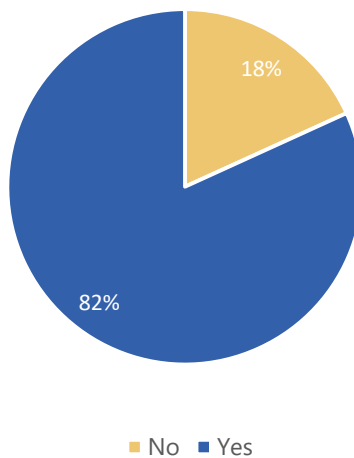
Which safety or design features would encourage you to walk or bike more? Please choose all that apply.



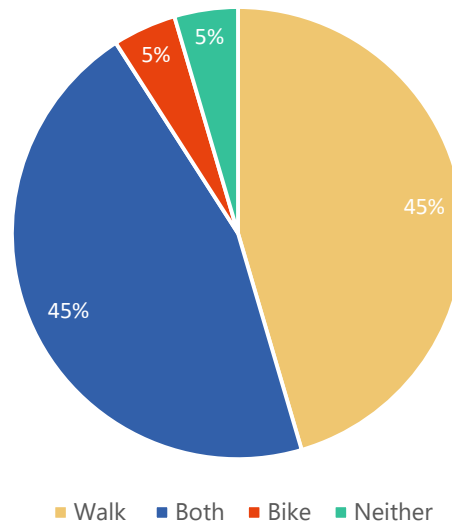
Gaffney Lane Elementary Shared Use Path – S24

This segment received 22 responses. Similar to other segments, over 80% of respondents said they would walk or bike more frequently if this trail were built.

Would you use this proposed trail segment to walk or bike if it were built?



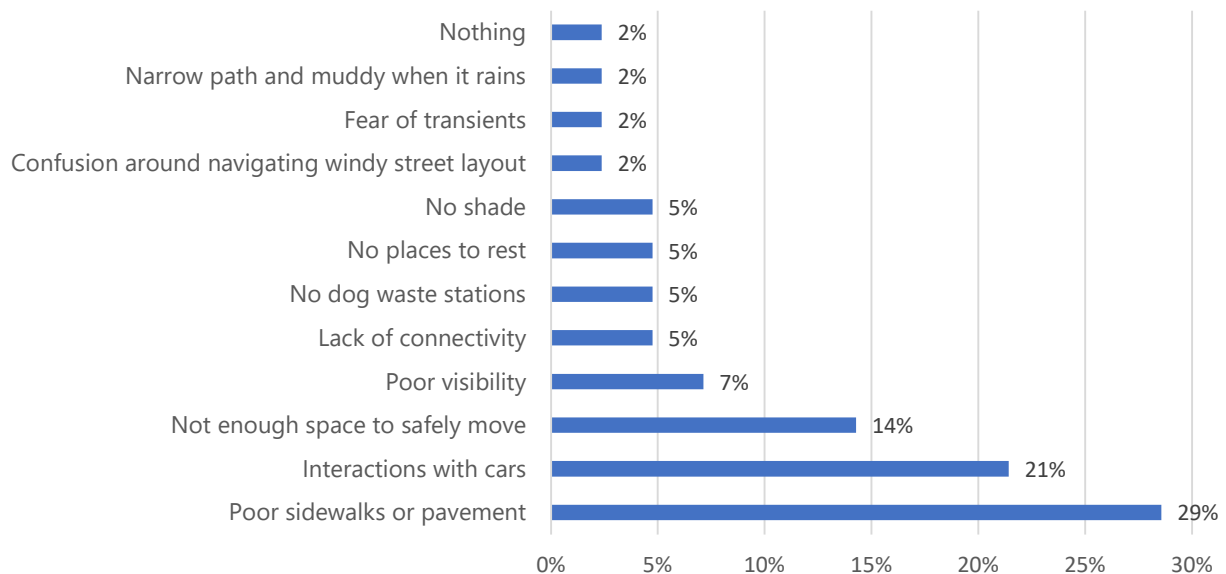
Do you typically walk or bike?



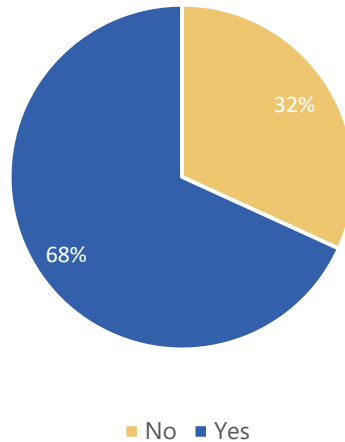
Challenges and Concerns

The major challenges for respondents include poor sidewalks or pavement, interactions with cars, and not enough space to safely move.

What challenges do you face when walking or biking in the area near this proposed trail segment? Please choose all that apply.

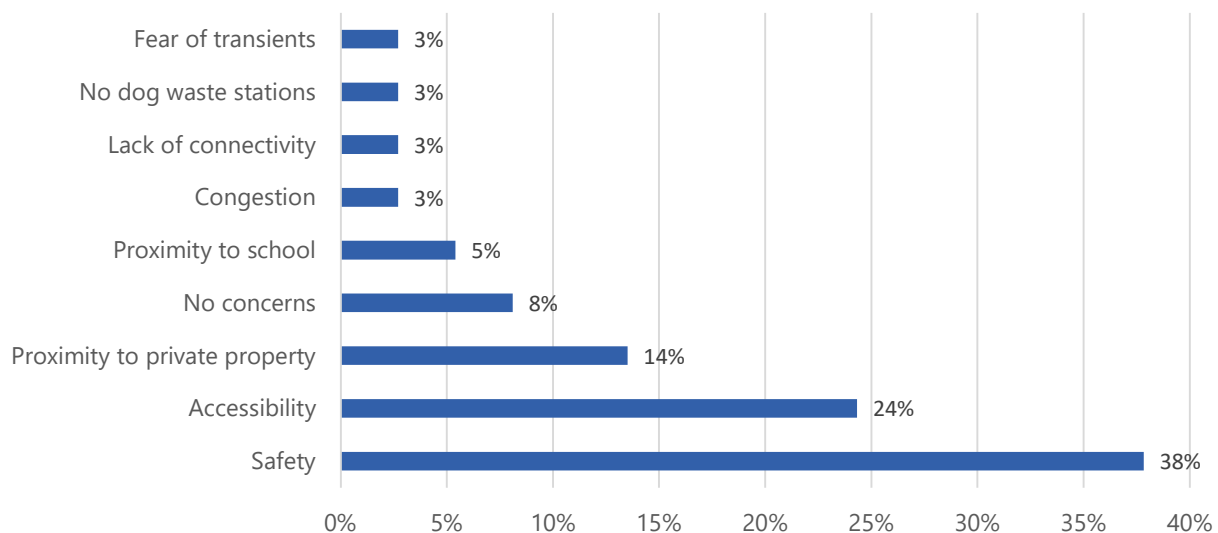


Do these challenges discourage you from walking or biking?



The biggest concerns for respondents when it comes to the location of this shared use path are safety and accessibility.

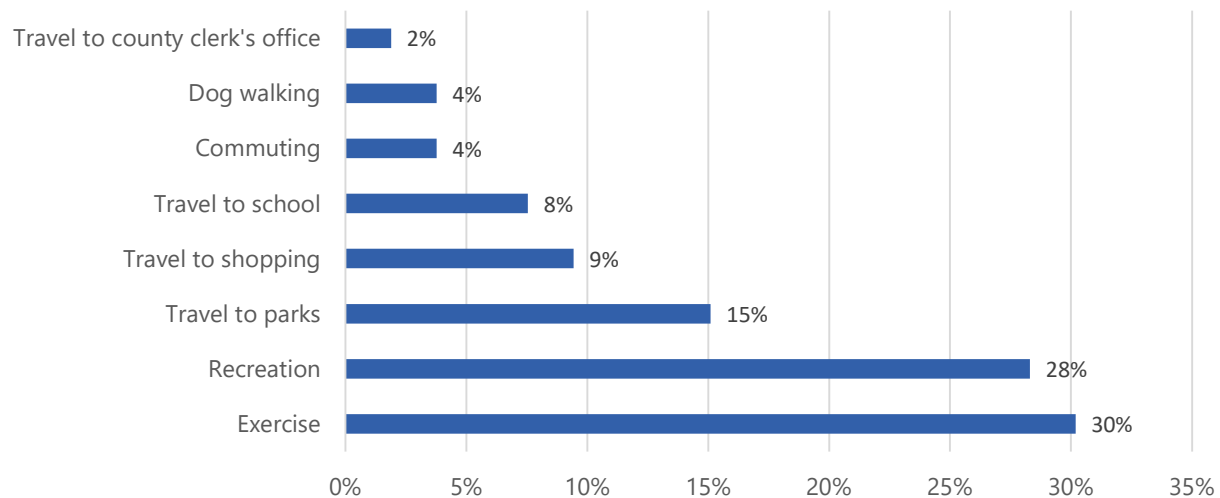
What concerns, if any, do you have about where the trail could be located? Please choose all that apply.



Opportunities

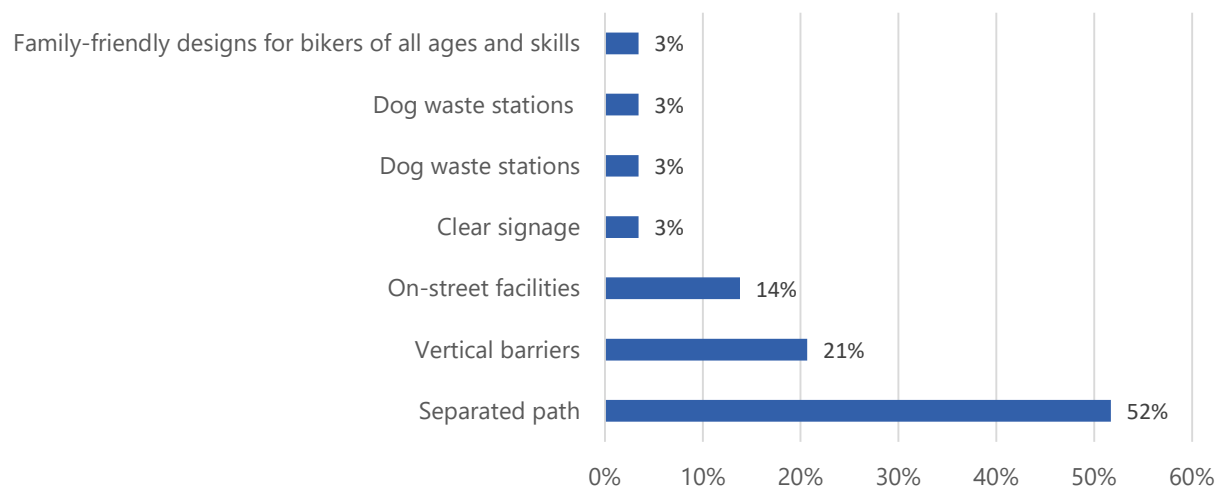
Respondents would likely use the proposed shared use path for recreation or exercise.

For which reasons would you use this proposed trail segment? Please choose all that apply.



Most respondents would be encouraged to walk or bike more if the proposed path were separated from vehicle traffic.

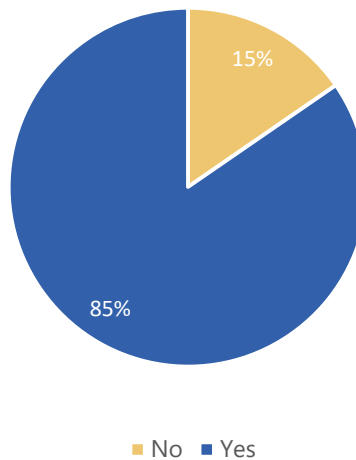
Which safety or design features would encourage you to walk or bike more? Please choose all that apply.



Orchard Grove Hazelnut Shared Use Path – S30

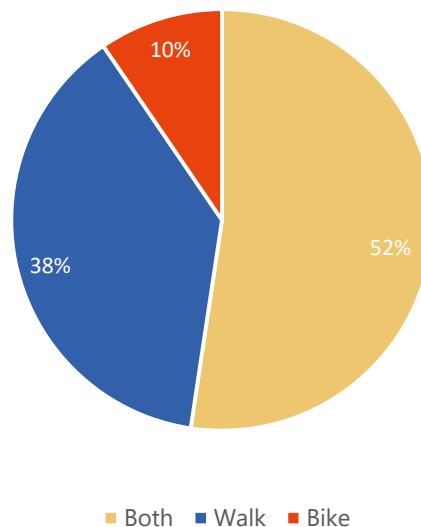
This proposed shared use path received 14 responses.

Would you use this proposed trail segment to walk or bike if it were built?



Most respondents typically walk, or both walk and bike.

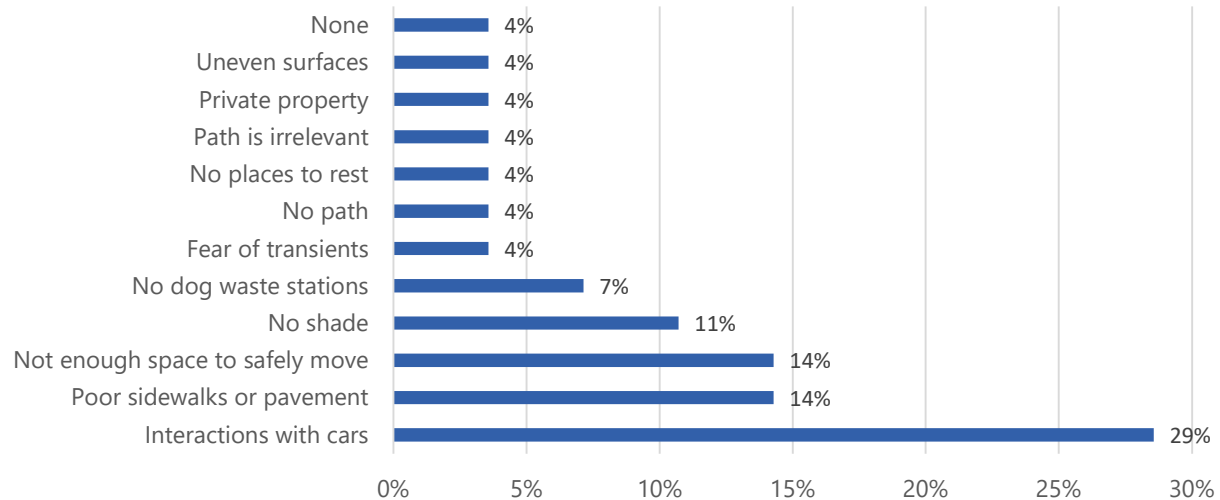
Do you typically walk or bike?



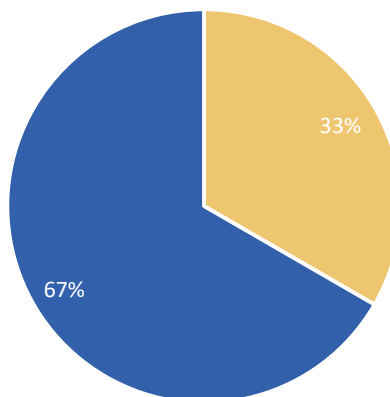
Challenges and Concerns

The challenges that respondents face when walking or biking include interactions with cars, not enough space to safely move, poor sidewalks, and no shade.

What challenges do you face when walking or biking in the area near this proposed trail segment? Please choose all that apply.



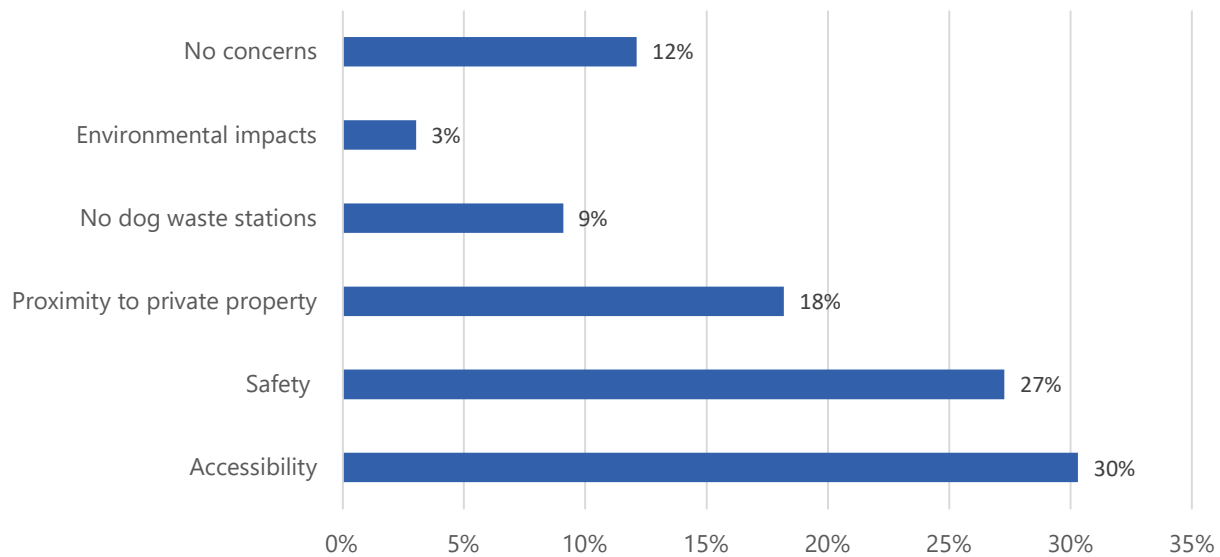
Do these challenges discourage you from walking or biking?



■ No ■ Yes

For this segment, respondents are concerned with safety, accessibility, and proximity to private property.

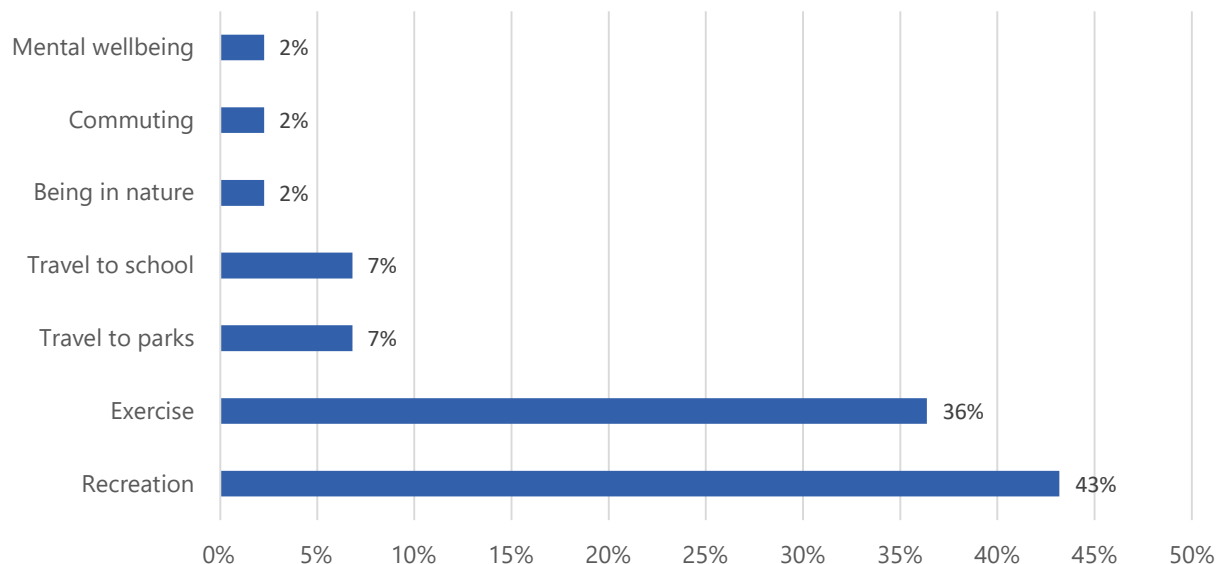
What concerns, if any, do you have about where the trail could be located? Please choose all that apply.



Opportunities

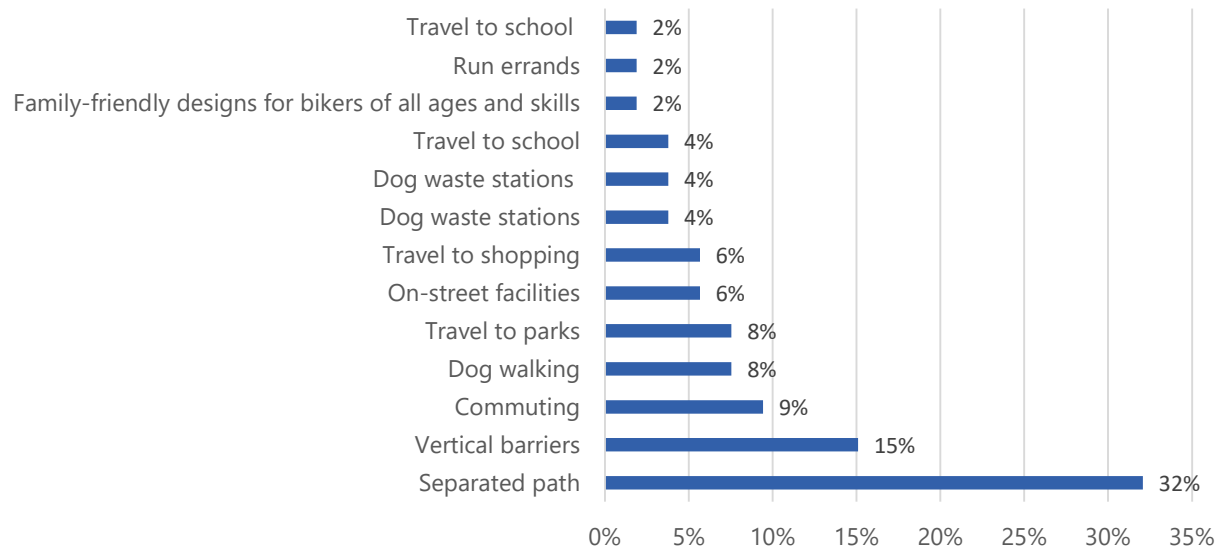
If the proposed path were built, respondents would likely use it for recreation or exercise.

For which reasons would you use this proposed trail segment? Please choose all that apply.



Most respondents would be encouraged to walk or bike more if the proposed path were separated from vehicle traffic.

Which safety or design features would encourage you to walk or bike more? Please choose all that apply.



Appendix C:

Concepts & Cross-Sections



Figure 1

Oregon City Loop Trail
Gaffney Lane & Beaver Creek to Meyers Multi-use Paths
Gaffney Lane Elementary School



CONCEPTUAL - NOT FOR CONSTRUCTION. ADDITIONAL
DETAILED ANALYSIS AND ENGINEERING DESIGN REQUIRED.



Proposed Multi-use
Path - Alternative 1
On-Street Sharrows

Proposed Multi-use
Path - Alternative 1

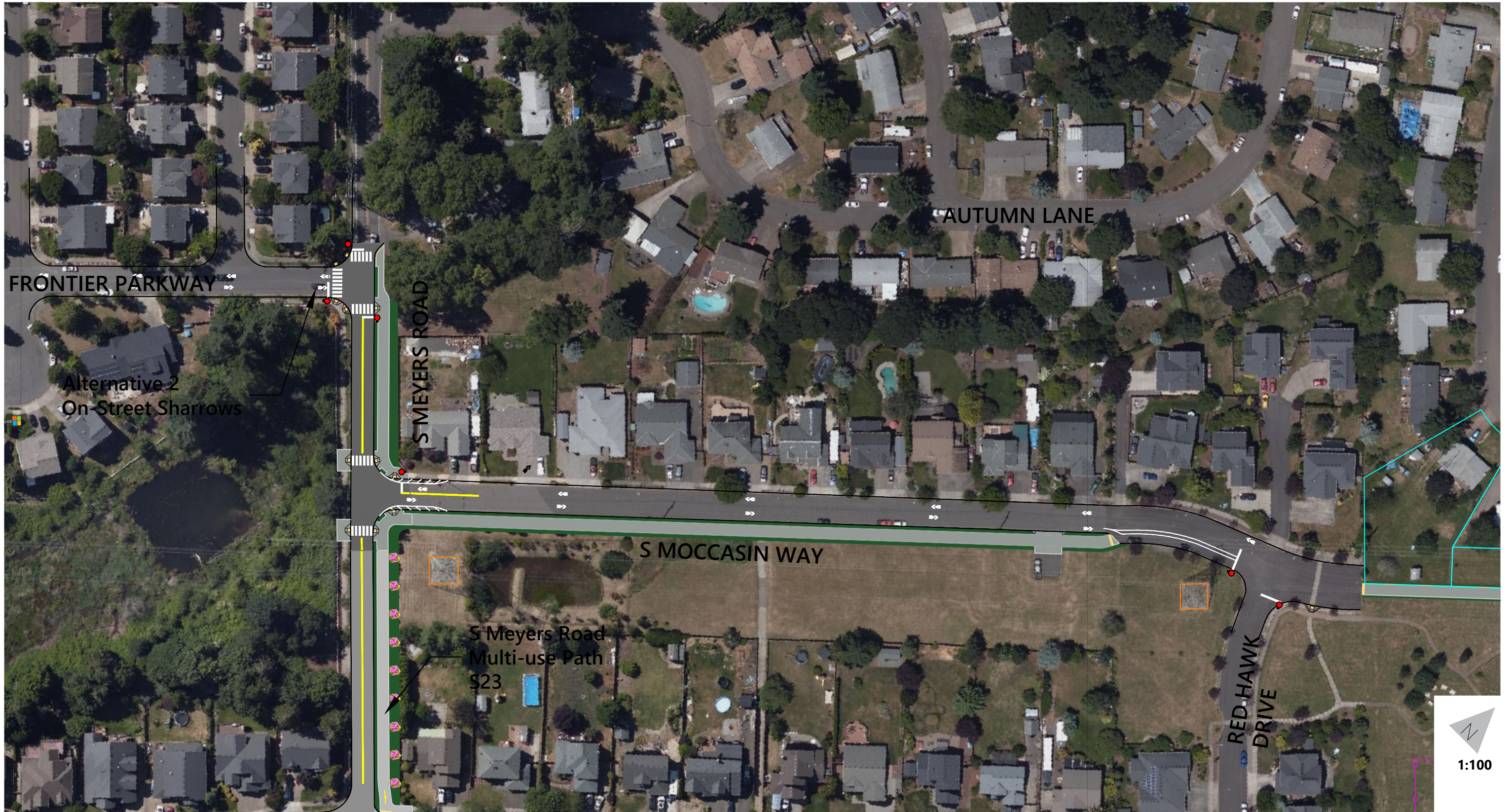


CONCEPTUAL - NOT FOR CONSTRUCTION. ADDITIONAL
DETAILED ANALYSIS AND ENGINEERING DESIGN REQUIRED.

Sheet 1 of 7
Oregon City Loop Trail
Meyers Road to Beaver Creek Road
Frontier Parkway (Alternative 1)



CONCEPTUAL - NOT FOR CONSTRUCTION. ADDITIONAL
DETAILED ANALYSIS AND ENGINEERING DESIGN REQUIRED.



CONCEPTUAL - NOT FOR CONSTRUCTION. ADDITIONAL
DETAILED ANALYSIS AND ENGINEERING DESIGN REQUIRED.

Sheet 4 of 7
Oregon City Loop Trail
Meyers Road to Beaver Creek Road
S Moccasin Way / Meyers Road Alternative 2



CONCEPTUAL - NOT FOR CONSTRUCTION. ADDITIONAL
DETAILED ANALYSIS AND ENGINEERING DESIGN REQUIRED.

Sheet 6 of 7
Oregon City Loop Trail
Meyers Road to Beaver Creek Road
Clairmont Way / Molalla Avenue Intersection



CONCEPTUAL - NOT FOR CONSTRUCTION. ADDITIONAL
DETAILED ANALYSIS AND ENGINEERING DESIGN REQUIRED.

Sheet 7 of 7
Oregon City Loop Trail
Meyers Road to Beaver Creek Road
Beaver Creek Road / Fred Meyer Parking Lot



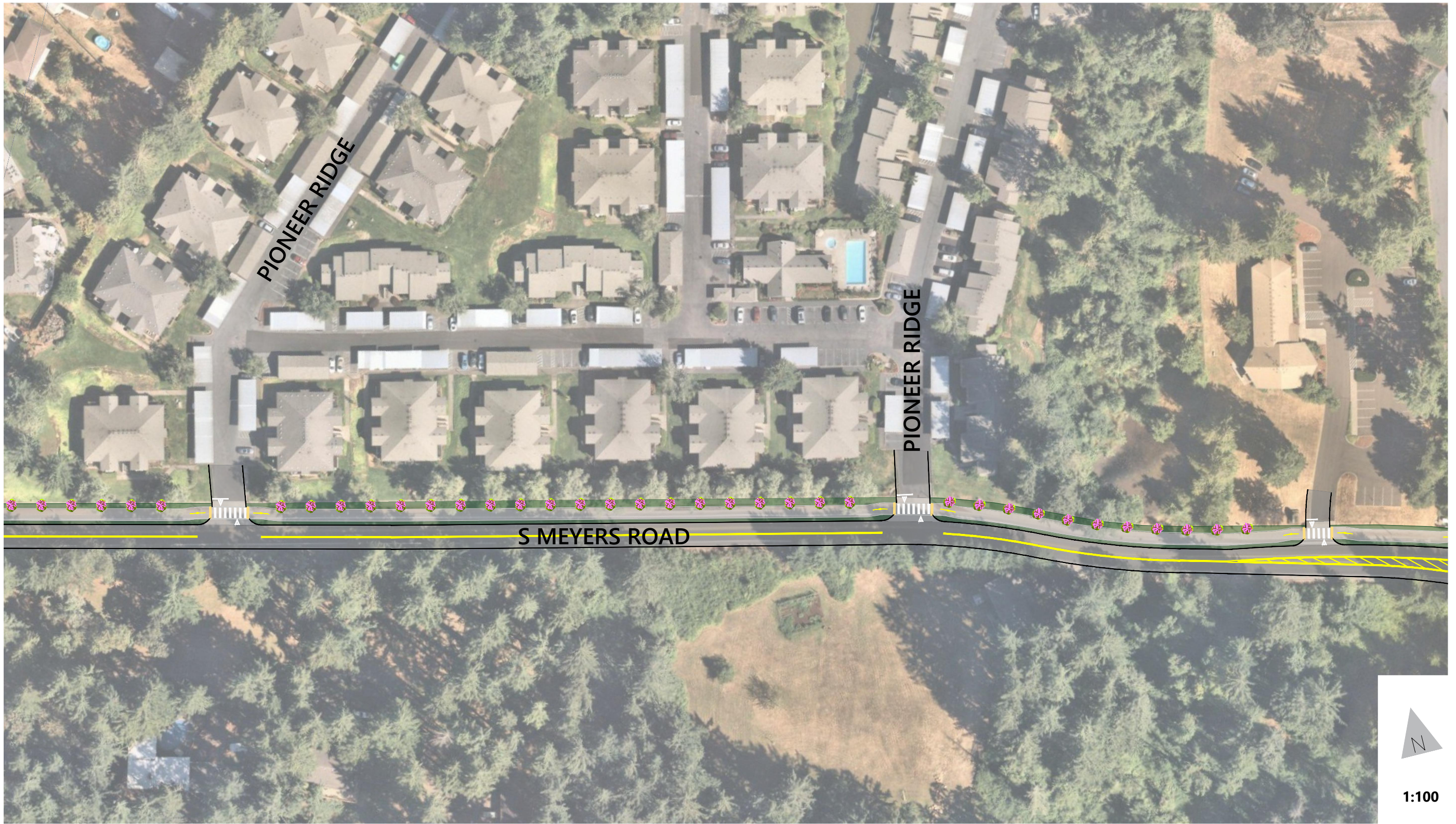
CONCEPTUAL - NOT FOR CONSTRUCTION. ADDITIONAL
DETAILED ANALYSIS AND ENGINEERING DESIGN REQUIRED.

Figure 2
Oregon City Loop Trail
Meyers Road



CONCEPTUAL - NOT FOR CONSTRUCTION. ADDITIONAL
DETAILED ANALYSIS AND ENGINEERING DESIGN REQUIRED.

Figure 3
Oregon City Loop Trail
Meyers Road



CONCEPTUAL - NOT FOR CONSTRUCTION. ADDITIONAL
DETAILED ANALYSIS AND ENGINEERING DESIGN REQUIRED.

Figure 4
Oregon City Loop Trail
Meyers Road



CONCEPTUAL - NOT FOR CONSTRUCTION. ADDITIONAL
DETAILED ANALYSIS AND ENGINEERING DESIGN REQUIRED.

Figure 5
Oregon City Loop Trail
Meyers Road



Figure 1
Oregon City Loop Trail
Orchard Grove - Hazelnut Avenue

CONCEPTUAL - NOT FOR CONSTRUCTION. ADDITIONAL
DETAILED ANALYSIS AND ENGINEERING DESIGN REQUIRED.



CONCEPTUAL - NOT FOR CONSTRUCTION. ADDITIONAL
DETAILED ANALYSIS AND ENGINEERING DESIGN REQUIRED.



Figure 2
Oregon City Loop Trail
Orchard Grove - Hazelnut Avenue

Additional Cross-Sections

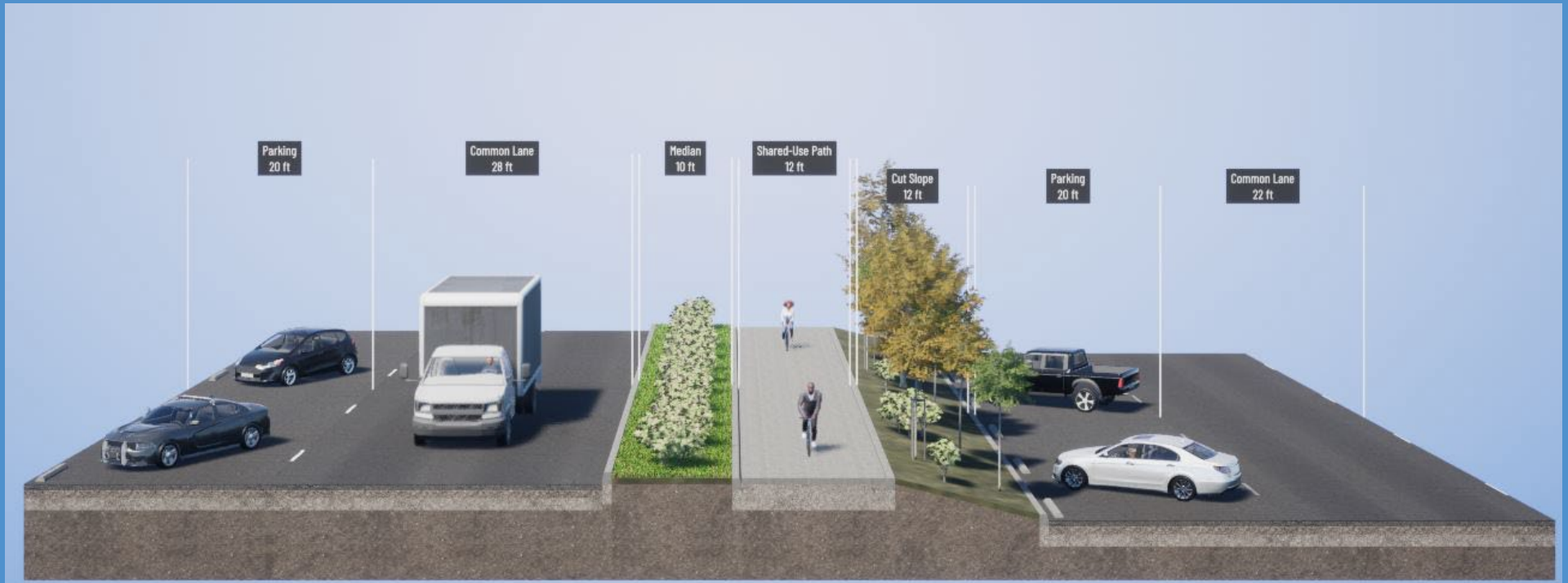


Figure D-1. Meyers-Beavercreek Proposed Cross-Section (Through Retail)

Appendix D: Cost-Estimates

S22 - Meyers to Beaver Creek (Beaver Creek to Meyers Road)

Item	Unit	Unit Cost (\$)	Quantity	Total Cost (\$)
General Excavation	C.Y.	\$100	6,786	\$678,600
Borrow	C.Y.	\$35	5,352	\$187,320
Granular Base	C.Y.	\$40	669	\$26,760
Emulsified Asphalt	TON	\$700	1,497	\$1,047,900
Curb and Gutter	L.F.	\$10	5,160	\$51,600
Painted Line (white)	L.F.	\$2	3,115	\$6,230
Painted Line (yellow)	L.F.	\$2	2,500	\$5,000
Painted Stop Line	S.F.	\$13	355	\$4,615
Painted Traffic Arrow	EACH	\$300	25	\$7,500
Painted Crosswalk (white, green)	S.F.	\$13	890	\$11,570
Painted Bike Lane Symbol	EACH	\$300	10	\$3,000
Painted Bike Sharrows	EACH	\$350	11	\$3,850
COB Green Plastic Bike Crossing	S.F.	\$15	1,760	\$26,400
ADA Ramp (New)	EACH	\$12,000	20	\$240,000
Reflective Stop Sign (New)	EACH	\$900	5	\$4,500
Traffic Signal Installation - Hawk Signal	Each	\$250,000	0	\$0
Site Prep & Demolition	15%			\$180,300
Traffic Control	20%			\$240,400
Mobilization	10%			\$120,200
Items Subtotal				\$2,845,745
Contingency	20%			\$372,000
Design Engineering	15%			\$279,000
Construction Admin	10%			\$186,000
Project Total Cost				\$3,685,000
Low Cost	-20%			\$2,950,000
Base Cost	0%			\$3,685,000
High Cost	20%			\$4,420,000

Right-Of-Way, environmental permits, retaining walls and match slopes, new and relocation of utilities, and temporary easements are not included in these cost estimates. These estimates are based on planning level analysis of project needs, they are not final. While assumptions were made for quantities the level of information these assumptions were based on was limited. The estimates are based on a conceptual cross-section and a 10% design concept plan, based on the best information available at the time. These are not engineered drawings and further study and design is needed.

S22 - Meyers to Beaver Creek (Meyers Road to Wesley Lynn Park, Long-Term)

Item	Unit	Unit Cost (\$)	Quantity	Total Cost (\$)
General Excavation	C.Y.	\$100	2743	\$274,000
Borrow	C.Y.	\$35	2163	\$76,000
Granular Base	C.Y.	\$40	271	\$11,000
Emulsified Asphalt	TON	\$700	605	\$424,000
Curb and Gutter	L.F.	\$10	250	\$3,000
Painted Line (white)	L.F.	\$2	0	\$0
Painted Line (yellow)	L.F.	\$2	600	\$1,000
Painted Stop Line	S.F.	\$13	77	\$1,000
Painted Traffic Arrow	EACH	\$300	0	\$0
Painted Crosswalk (white, green)	S.F.	\$13	340	\$4,000
Painted Bike Lane Symbol	EACH	\$300	3	\$1,000
Painted Bike Sharrows	EACH	\$350	20	\$7,000
COB Green Plastic Bike Crossing	S.F.	\$15	0	\$0
ADA Ramp (New)	EACH	\$12,000	12	\$144,000
Reflective Stop Sign (New)	EACH	\$900	7	\$6,000
Traffic Signal Installation - Hawk Signal	Each	\$250,000	1	\$250,000
Site Prep & Demolition	30%			\$360,600
Traffic Control	5%			\$60,100
Mobilization	20%			\$240,400
Items Subtotal				\$1,860,000
Contingency	40%			\$744,000
Design Engineering	20%			\$372,000
Construction Admin	10%			\$186,000
Project Total Cost				\$3,160,000
Low Cost	-20%			\$2,530,000
Base Cost	0%			\$3,160,000
High Cost	20%			\$3,790,000

Right-Of-Way, environmental permits, retaining walls and match slopes, new and relocation of utilities, and temporary easements are not included in these cost estimates. These estimates are based on planning level analysis of project needs, they are not final. While assumptions were made for quantities the level of information these assumptions were based on was limited. The estimates are based on a conceptual cross-section and a 10% design concept plan, based on the best information available at the time. These are not engineered drawings and further study and design is needed.

S22 - Meyers to Beavercreek (Meyers Road to Wesley Lynn Park, Near-Term)

Item	Unit	Unit Cost (\$)	Quantity	Total Cost (\$)
General Excavation	C.Y.	\$100	948	\$95,000
Borrow	C.Y.	\$35	747	\$26,000
Granular Base	C.Y.	\$40	94	\$4,000
Emulsified Asphalt	TON	\$700	209	\$146,000
Curb and Gutter	L.F.	\$10	720	\$7,000
Painted Line (white)	L.F.	\$2	0	\$0
Painted Line (yellow)	L.F.	\$2	900	\$2,000
Painted Stop Line	S.F.	\$13	77	\$1,000
Painted Traffic Arrow	EACH	\$300	0	\$0
Painted Crosswalk (white, green)	S.F.	\$13	600	\$8,000
Painted Bike Lane Symbol	EACH	\$300	3	\$1,000
Painted Bike Sharrows	EACH	\$350	32	\$11,000
COB Green Plastic Bike Crossing	S.F.	\$15	0	\$0
ADA Ramp (New)	EACH	\$12,000	20	\$240,000
Reflective Stop Sign (New)	EACH	\$900	8	\$7,000
Traffic Signal Installation - Hawk Signal	Each	\$250,000	0	\$0
Site Prep & Demolition	10%			\$54,800
Traffic Control	10%			\$54,800
Mobilization	10%			\$54,800
Items Subtotal				\$160,000
Contingency	20%			\$109,600
Design Engineering	15%			\$82,200
Construction Admin	10%			\$54,800
Project Total Cost				\$405,000
Low Cost	-20%			\$325,000
Base Cost	0%			\$405,000
High Cost	20%			\$485,000

Right-Of-Way, environmental permits, new and relocation of utilities, and temporary easements are not included in these cost estimates. These estimates are based on planning level analysis of project needs, they are not final. While assumptions were made for quantities the level of information these assumptions were based on was limited. The estimates are based on a conceptual cross-section and a 10% design concept plan, based on the best information available at the time. These are not engineered drawings and further study and design is needed.

S23 - Meyers Road Planning Level Cost-Estimate

Item Number	Item	Unit	Unit Cost (\$)	Quantity	Total Cost (\$)
	General Excavation	C.Y.	\$100	7960	\$796,000
	Borrow	C.Y.	\$35	6280	\$220,000
	Granular Base	C.Y.	\$40	790	\$32,000
	Emulsified Asphalt	TON	\$700	1760	\$1,232,000
	Curb and Gutter	L.F.	\$10	6050	\$61,000
	Painted Line (white)	L.F.	\$2	2350	\$5,000
	Painted Line (yellow)	L.F.	\$2	12160	\$24,000
	Painted Stop Line	S.F.	\$13	370	\$5,000
	Painted Traffic Arrow	EACH	\$300	20	\$6,000
	Painted Crosswalk (white, green)	S.F.	\$13	1700	\$22,000
	Painted Bike Lane Symbol	EACH	\$300	10	\$3,000
	Painted Bike Sharrows	EACH	\$350	30	\$11,000
	COB Green Plastic Bike Crossing	S.F.	\$15	1600	\$24,000
	ADA Ramp (New)	EACH	\$4,500	5	\$23,000
	Tactile Pad	EACH	\$1,500	30	\$45,000
	Painted dashed line (yellow)	L.F.	\$2	1130	\$2,000
	Traffic Signal Installation - Hawk Signal	Each	\$250,000	1	\$250,000
Site Prep & Demolition	15%			\$	414,000
Traffic Control	10%			\$	276,000
Mobilization	10%			\$	276,000
Items Subtotal					\$4,120,000
Contingency	20%				\$824,000
Design Engineering	15%				\$618,000
Construction Admin	10%				\$412,000
Project Total Cost					\$5,970,000
Low Cost	-20%		\$4,776,000		\$4,776,000
Base Cost	0%		\$5,970,000		\$5,970,000
High Cost	20%		\$7,164,000		\$7,164,000

These estimates are based on planning level analysis of project needs, they are not final. While assumptions were made for quantities the level of information these assumptions were based on was limited. The estimates are based on a conceptual cross-section and a 10% design concept plan, based on the best information available at the time. These are not engineered drawings and further study and design is needed.

Right-Of-Way, new and reallocation of utilities, and temporary easements are not included in these cost estimates

S24 - Gaffney Lane Elementary Shared Use Path Planning Level Cost-Estimate

Item Number	Item	Unit	Unit Cost (\$)	Quantity	Total Cost (\$)
	General Excavation	C.Y.	\$100	1170	\$117,000
	Borrow	C.Y.	\$35	920	\$32,000
	Granular Base	C.Y.	\$40	120	\$5,000
	Emulsified Asphalt	TON	\$700	250	\$175,000
	ADA Ramp (New)	EACH	\$4,500	2	\$9,000
Site Prep & Demolition	10%				\$34,000
Traffic Control	5%				\$17,000
Mobilization	10%				\$34,000
Items Subtotal					\$420,000
Contingency	20%				\$84,000
Design Engineering	10%				\$42,000
Construction Admin	10%				\$42,000
Project Total Cost					\$590,000
Low Cost	-20%		\$472,000		\$472,000
Base Cost	0%		\$590,000		\$590,000
High Cost	20%		\$708,000		\$708,000

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Right-Of-Way, new and reallocation of utilities, and temporary easements are not included in these cost estimates

S-30 Orchard Grove-Hazelnut Planning Level Cost-Estimate

Item Number	Item	Unit	Unit Cost (\$)	Quantity	Total Cost (\$)
	Painted Bike Lane Symbol	EACH	\$300	8	\$2,400
	Painted Bike Sharrows	EACH	\$300	10	\$3,000
	ADA Ramp (New)	EACH	\$4,500	4	\$18,000
	Reflective Stop Sign (New)	EACH	\$500	2	\$1,000
	W11-2 Sign (Pedestrians Crossing)	EACH	\$500	4	\$2,000
				0	\$0
				0	\$0
				0	\$0
				0	\$0
Site Prep & Demolition	15%				\$4,000
Traffic Control	10%				\$3,000
Mobilization	10%				\$3,000
Items Subtotal					\$40,000
Contingency	20%				\$8,000
Design Engineering	15%				\$6,000
Construction Admin	10%				\$4,000
Project Total Cost					\$70,000
Low Cost	-20%		\$56,000		\$56,000
Base Cost	0%		\$70,000		\$70,000
High Cost	20%		\$84,000		\$84,000

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Right-Of-Way, new and reallocation of utilities, and temporary easements are not included in these cost estimates