

Sullivan's Gulch Trail Concept Plan



July 2012

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1.0 Introduction

The concept of a Sullivan’s Gulch Trail has been a community priority for more than 15 years. The roughly 5-mile-long trail, generally shown in Figure 1, connecting the I-205 multiuse path with the Eastbank Esplanade would play an integral role in the region’s transportation multiuse trail systems. The trail would provide a safe, comfortable, and direct active transportation and recreation option that is separated from vehicle traffic. While this concept plan focuses on the area from the Eastbank Esplanade to I-205, the trail is envisioned to ultimately extend to NE 122nd Avenue.

The Sullivan’s Gulch Trail is included in the City of Portland’s Transportation System Plan, the Portland Bicycle Plan for 2030, Portland Parks & Recreation’s 2020 Vision and Portland Parks & Recreation’s Recreational Trails Strategy. It is also included in Metro’s Regional Trail Plan and the 2035 Regional Transportation Plan. Even with this policy context, this concept plan is the first thorough assessment of the feasibility of constructing the trail, including alignment, right-of-way needs and costs.

The Sullivan’s Gulch Trail Concept Plan was completed between July 2011 and February 2012, and was managed jointly by the Portland Bureau of Transportation and Portland Parks & Recreation. The Concept Plan includes a recommended trail alignment, an assessment of where the trail may be able to pass under existing bridges along I-84, and points where the trail may be able to connect to adjacent neighborhoods. A 13-member project advisory committee provided ongoing input and recommendations that shaped the concept plan. In addition, representatives from the Oregon Department of Transportation, TriMet, Metro, the Bureau of Environmental Services, the Bureau of Planning and Sustainability, the Portland Police Bureau and the Office of Neighborhood Involvement reviewed design concepts and provided input.

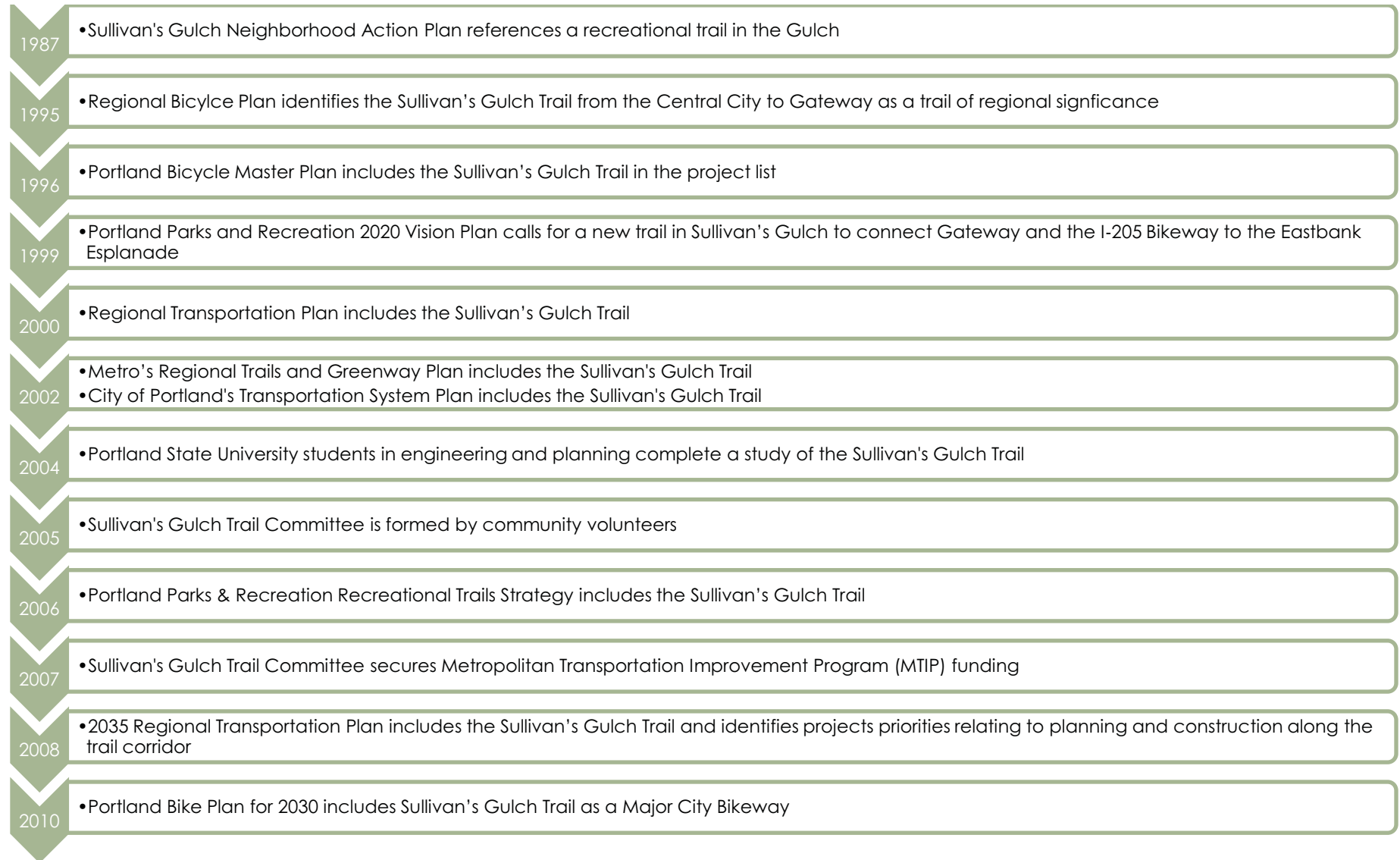
1.1 Project History

The idea for a Sullivan’s Gulch Trail goes back 25 years. In 1987, the Sullivan’s Gulch Neighborhood Action Plan references a recreational trail in the gulch. The first official reference to a trail extending from the Central City to Gateway Regional Center was in the Regional Bicycle Plan in 1995. The trail was included in the 1996 Portland Bicycle Master Plan. Since then, the Sullivan’s Gulch Trail has been identified in a range of local and regional policy documents and advocated for by the Sullivan’s Gulch Trail Committee, a grassroots community group. A timeline of key events related to the development of the Sullivan’s Gulch Trail is provided in Figure 2.

FIGURE 1
Project Overview



FIGURE 2
History of the Sullivan's Gulch Trail



1.2 Project Goal and Principles

The Project Advisory Committee discussed and agreed on a goal and a set of principles and criteria to guide trail concept development. The full set of criteria is included in Section 4, Public Involvement.

Goal: Create a safe, attractive, signature/cutting edge direct transportation and recreation facility for bicycles and pedestrians between I-205 and the Eastbank Esplanade near or adjacent to I-84 that minimizes impacts to private properties and is acceptable to those who own property required to construct the trail.

Principles:

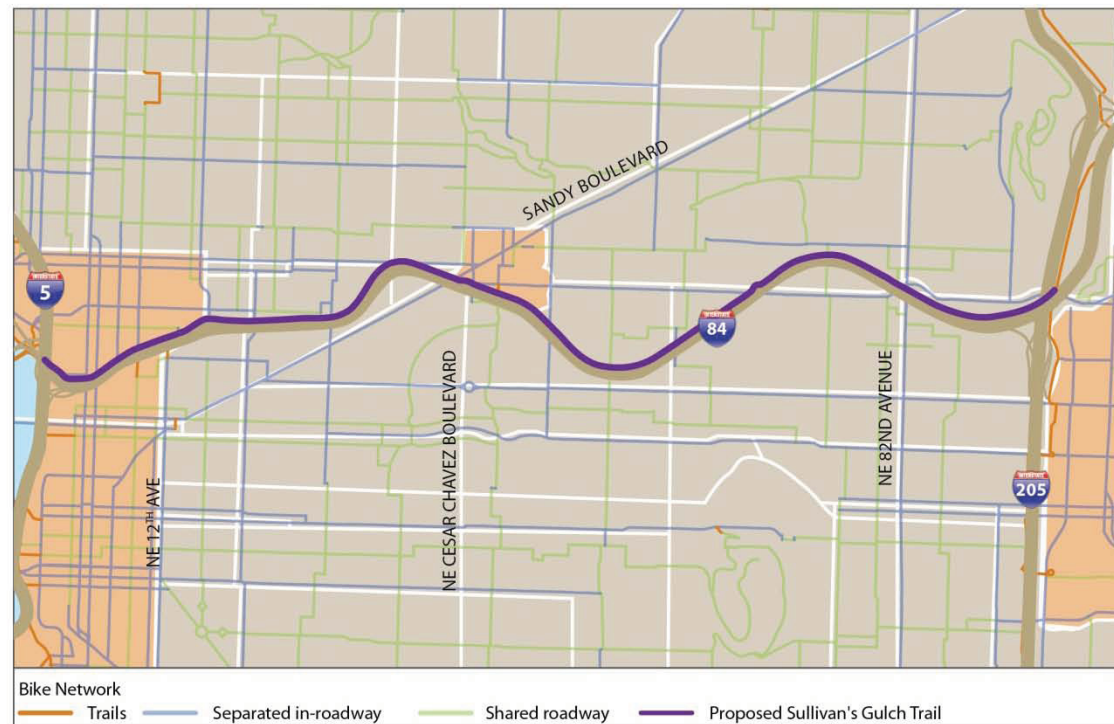
- Create a safe multiuse trail.
- Create a trail that is comfortable and accessible for a range of users and uses.
- Create a direct multiuse trail that provides connections to centers, neighborhoods, and the city's bicycle network.
- Minimize impacts to private properties.
- Create a trail that has the support of the community and is acceptable to the property owners who are impacted by the trail.

1.3 Project Context

The Sullivan's Gulch Trail would serve important regional destinations such as the Lloyd District, Gateway Regional Center, and Hollywood Town Center. It would provide connections to MAX stations along I-84, particularly stations at Gateway, 82nd Avenue, 60th Avenue, and Hollywood. It would provide a new way to get to neighborhoods, schools, parks, shopping, and employment through connections to city and regional bike and pedestrian routes. Connections to the city's bike routes are show in Figure 3. Major connections include:

- I-205 multiuse path
- Eastbank Esplanade
- Future North Portland Greenway Trail

FIGURE 3
Connections to City Bicycle Network



- Emerging north-south bikeway network including the 20s bikeway, the 40s bikeway, the 50s bikeway, and the 70s bikeway
- Lloyd, Hollywood, and Gateway pedestrian districts
- Future bicycle facility at Gateway Green

The trail would be located within a developed environment with businesses and private properties to the north and the Union Pacific Railroad's Graham Line to the south. As proposed, the trail would be located on a combination of property owned by individuals, Union Pacific Railroad, the Oregon Department of Transportation, and the City of Portland. The project opportunity and constraints report identified these major constraints:

- Seventeen buildings that abut the Union Pacific Railroad right-of-way.
- Steep, and possibly unstable, slope between Martin Luther King, Jr. Boulevard and NE 28th Avenue.
- Building (self-storage business) that is less than 30 feet from the centerline of the Union Pacific Railroad track east of NE 28th Avenue.
- Narrow railroad right-of-way between NE Cesar Chavez Boulevard and NE Sandy Boulevard.
- Business that leases Union Pacific Railroad right-of-way for parking.

The team also identified major opportunities:

- Existing trail connection across the Union Pacific Railroad for the Eastbank Esplanade and wide sidewalk along Lloyd Boulevard that connects to it.
- City-owned right-of-way from Grand Avenue to NE 21st Avenue.
- Undeveloped pedestrian easement at NE 16th Avenue behind the Marriott Residence Inn.
- Planned connection to the Sullivan's Gulch Trail through the former Albina Fuel site at NE 33rd Avenue.
- Constructed connection to the Sullivan's Gulch Trail through the newly developed Providence site at NE 44th Avenue.
- Width and height of existing overcrossings may allow enough space for a trail undercrossing without rebuilding structures.
- City-owned right-of-way on NE Jonesmore from NE Broadway (near NE 70th Avenue) to NE 82nd Avenue.

1.4 Key Assumptions

The trail alignment was developed with the best available data describing the corridor's topography, property lines, geotechnical conditions, and the conditions of structures. This included a basemap developed using geographic information system (GIS) data from the City of Portland describing the location of property lines, streets and other features, aerial photography that provided an idea of the location of structures and the railroad track, and LIDAR data that provided the corridor's topography. LIDAR is a technique for gathering data about the ground surface without physical access. While this technique can be quite accurate in areas with bare ground, it can introduce inaccuracies in areas with structures or dense vegetation. Given the dense blackberries and other brush that cover the slopes of Sullivan's Gulch, the basemap is somewhat inaccurate. While this level of accuracy is appropriate for concept planning, the design, particularly the height of retaining walls in the corridor, and cost estimates will change with more accurate data that is generally gathered through a field work including survey and geotechnical investigations.

The trail has been designed to be consistent with the American Association of State Highway and Transportation Officials (AASHTO) Guide for the Development of Bicycle Facilities (1999), as well as guidelines from both the Portland Bureau of Transportation and Portland Parks & Recreation. For the purposes of this concept plan, the proposed Sullivan's Gulch Trail would be 12 to 15 feet wide, with additional width for shoulders. While a narrower or wider trail may be designed in some locations, an approximately 15-foot-trail width was used for planning purposes. The proposed trail was designed to minimize grade changes and has a maximum grade of 5 percent.

The project team evaluated the possibility of passing under roadway overcrossings of Sullivan’s Gulch by studying as-built drawings and Google images and visually inspecting the bridge structures in the field. From this conceptual level, it appears possible to pass under all structures, maintaining at least 10 feet of trail width and 10 feet of vertical clearance. These assumptions would need to be revisited with a full site survey during the design process.

The trail connects to designated bicycle routes where possible. In some cases, a trail connection at a key bike connection is not feasible due to topography or existing structures on private property. In those cases, a connection was made to a nearby low-traffic street to provide access to the designated bicycle network. The Portland Pedestrian Master Plan states that all streets are intended for use by pedestrians, except limited access facilities. For this reason, connections to every designated pedestrian facility are not described in the concept plan, but connections to designated pedestrian districts are noted.

Much of the trail alignment follows the northern limit of the Union Pacific Railroad right-of-way. The project team sought to maintain 25 feet of separation between the centerline of the Union Pacific Railroad track and the southern edge of the trail in most locations. This general approach is consistent with best practices for the development of trails within or adjacent to active railroad and transit rights-of-way.¹ In some locations, the trail is farther from the centerline of track; in a few locations, the proposed trail is fewer than 25 feet from the track centerline. Union Pacific Railroad has not indicated support for this approach.

¹ Rails-with-Trails: Lessons Learned - Literature Review, Current Practices, Conclusions. US Department of Transportation. 2002. P. 65.

2.0 Recommended Sullivan’s Gulch Trail Alignment

The project team and Project Advisory Committee have worked together to reach agreement on a recommended alignment for the Sullivan’s Gulch Trail. The recommended trail alignment is approximately 5.6 miles long, from the Eastbank Esplanade to the I-205 multi-use path.

2.1 Roadway Crossings and Connections

At this point, the project team has determined the feasibility of many connections to the surrounding neighborhoods. The recommended trail alignment passes under all streets or highway structures. The plan notes connection points that the team has determined are feasible. These connections are included in the cost estimate. Other connections, including access to both sides of streets, may be feasible and will be explored during the design process to determine which connections and specific ramps are practical. Both roadway crossings and neighborhood connections included in the recommended trail alignment are included in Table 1.

TABLE 1
Roadway Crossings

Location	Crossing	Neighborhood Connection
NE Lloyd Boulevard	No crossing	Yes – at western project limit and along upper alignment
NE Martin Luther King Jr. Boulevard	Under	Yes – via Lloyd Boulevard
NE Grand Avenue	Under	Yes – via Lloyd Boulevard
NE 12th Avenue	Under	Yes – via upper alignment
NE 16th Avenue	Under	Yes
MAX/I-84 off ramp	Under	No
NE 21st Avenue	Under	Yes
NE 28th Avenue	Under	No
NE 32nd Avenue	No crossing	Yes
NE 33rd Avenue	Under	No
NE Sandy Boulevard	Under	No
NE Cesar Chavez Boulevard	Under	No
Hollywood Transit Center	No crossing	Yes
I-84 off-ramp to NE 42nd Avenue	Under	No
NE 47th Avenue	Under	Yes – at 44th and 49th Avenues
NE 53rd Avenue	Under	Yes
NE 60th Avenue	Under	Yes – at 61st Avenue
NE 63rd Avenue	No crossing	Yes
NE Halsey Street at NE 67th Avenue	Under	Yes
NE Jonesmore Street	No crossing	Yes – from 71st to 81st Avenues

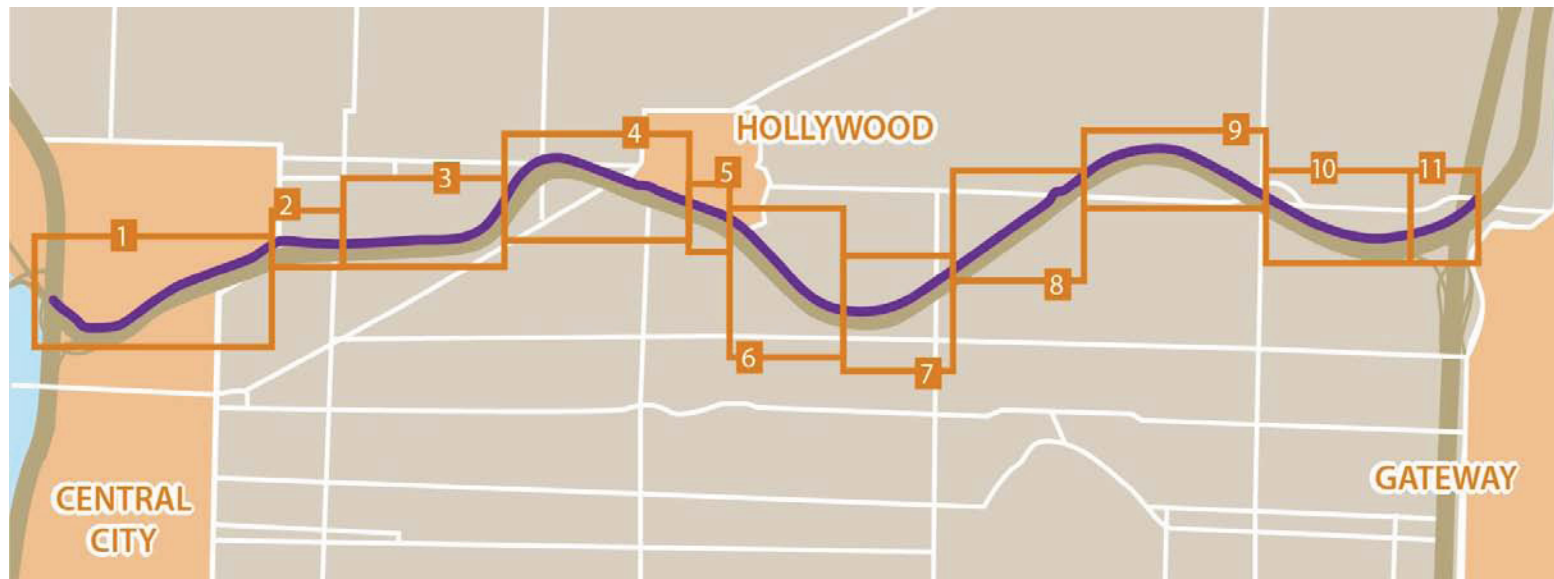
Location	Crossing	Neighborhood Connection
NE 74th Avenue	Under	Yes
NE Halsey Street at NE 82nd Avenue	Under	Yes
NE 82nd Avenue	Under	Yes
NE 88th Avenue	No crossing	Yes
NE 92nd Avenue	No crossing	Yes
I-205	Under	Yes – to I-205 multi-use path

Note: Additional connections to the street network may be feasible and will be considered when detailed project development work is conducted.

2.2 Trail Alignment by Segment

The trail alignment, working from west to east, is broken into 11 segments as shown in Figure 4 and described in detail in the pages that follow. Implementation segments would be identified based on available funding, expected usage, and connections with the existing and planned bicycle and pedestrian network.

FIGURE 4
Trail Segments



2.2.1 Segment 1: Eastbank Esplanade to NE 16th Avenue

Segment Overview

The proposed trail would begin near Peace Memorial on the east side of the existing Eastbank Esplanade bridge over the Union Pacific Railroad. It would follow the wide sidewalk on the south side of Lloyd Boulevard east passing under I-5. After about 800 feet, the trail would leave the existing sidewalk and travel down the slope into Sullivan's Gulch. The trail would continue under NE Martin Luther King, Jr. Boulevard and NE Grand Avenue. After passing under NE Grand Avenue, the trail would split into a trail near the bottom of the gulch and a trail at the top of the gulch along Lloyd Boulevard. The lower trail would pass under NE 12th Avenue and continue along the bottom of the gulch to NE 16th Avenue.

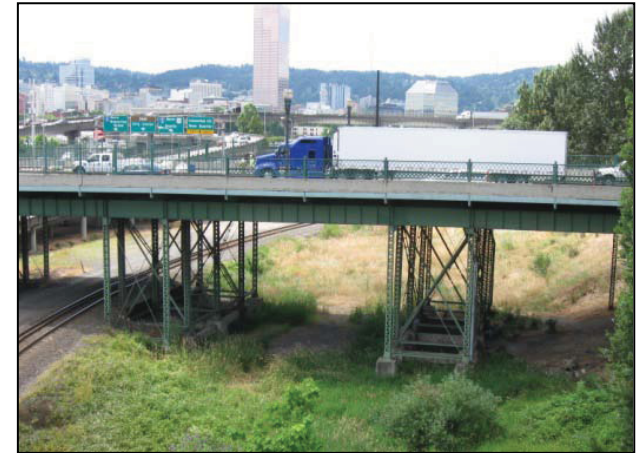
Beginning east of NE Grand Avenue, the upper trail would climb to the top of the slope and connect with the existing sidewalk along NE Lloyd Boulevard. The upper trail would extend the existing sidewalk at the same elevation providing connections to the street network and neighborhood. The upper trail would cross NE 12th Avenue at street level. The two trails would rejoin just west of NE 16th Avenue.

Both trails would require significant retaining walls, likely between 10 and 15 feet high, in this segment due to the extremely steep slopes. An illustration of what the trail could look like from NE 12th Avenue is provided in Figure 4. An illustration of how the both trails could look at NE 13th Avenue is provided as Figure 6.

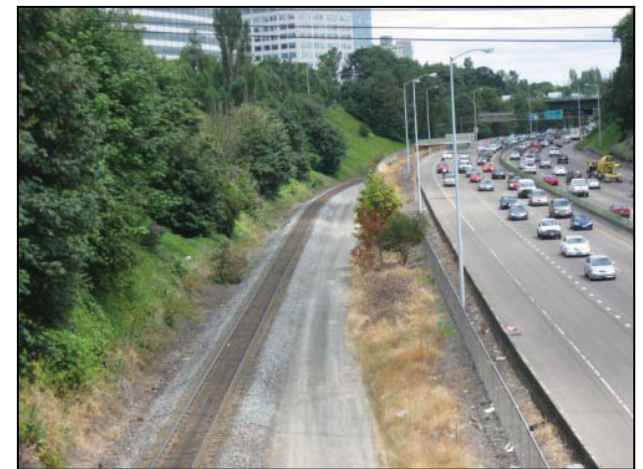
Neighborhood and System Connections

At the west end, the trail would connect to the Eastbank Esplanade, Lloyd Boulevard, and the future North Portland Greenway Trail. From the west end of the trail, users could access the Convention Center and the Rose Quarter Transit Center. The upper trail would provide neighborhood connections between NE 7th Avenue and NE 13th Avenue and a connection to NE Grand Avenue and Martin Luther King, Jr. Boulevard via the existing bike and pedestrian network. The lower trail, as designed at this conceptual level, would cross under the major streets in this segment.

The Portland Bicycle Plan for 2030 envisions a future crossing of I-84 between NE 7th Avenue and NE 12th Avenue. This future crossing may connect to the trail.



Looking west toward Grand Avenue



View of Sullivan's Gulch in the Lloyd District

Property Acquisition

The proposed trail is almost entirely on property owned by the City of Portland or other public agencies. Short segments just east of Grand Avenue and at the trail's west end may require some property acquisition from Union Pacific Railroad. The segment between Martin Luther King, Jr. Boulevard and NE Grand Avenue would require property acquisition from a private owner.

Cost

The upper and lower trails taken together are about 1.3 miles of new trail. It would cost approximately \$10.5 million or \$1.6 million per 1,000 feet of trail to construct. On a per-mile basis, this would be the most expensive segment of the Sullivan's Gulch Trail. This cost estimate does not include right-of-way acquisition.

Considerations

The supplemental trail at the top of the gulch is intended to provide a facility for users coming from or going to Lloyd District destinations. Providing an undercrossing of NE 12th Avenue with this alignment was considered and set aside because the required grade changes would be significant and would result in limited opportunities to connect to the street grid.

The slopes in this area of the gulch are extremely steep and heavily vegetated. The slope is likely to be unstable. The topographic data collected for this feasibility study would need to be improved with a land survey and combined with detailed geotechnical data to understand the soils and stability of the slopes to fully understand the required retaining walls and costs of either trail alignment. Due to the limited data available for this concept plan, the trail alignment in this area will need to be reconsidered during the design process.

FIGURE 5
Illustration of Sullivan's Gulch Trail looking west from NE 12th Avenue



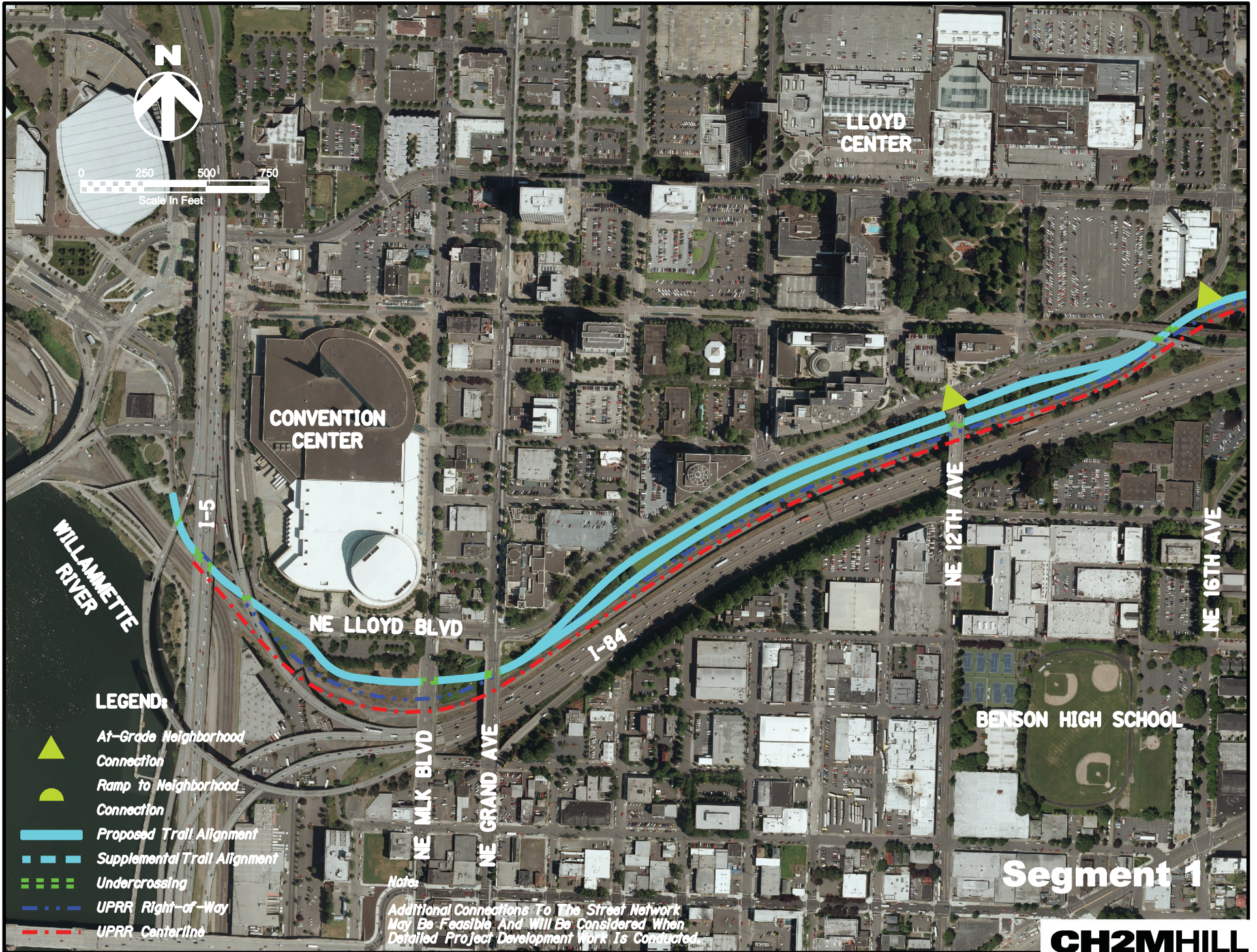
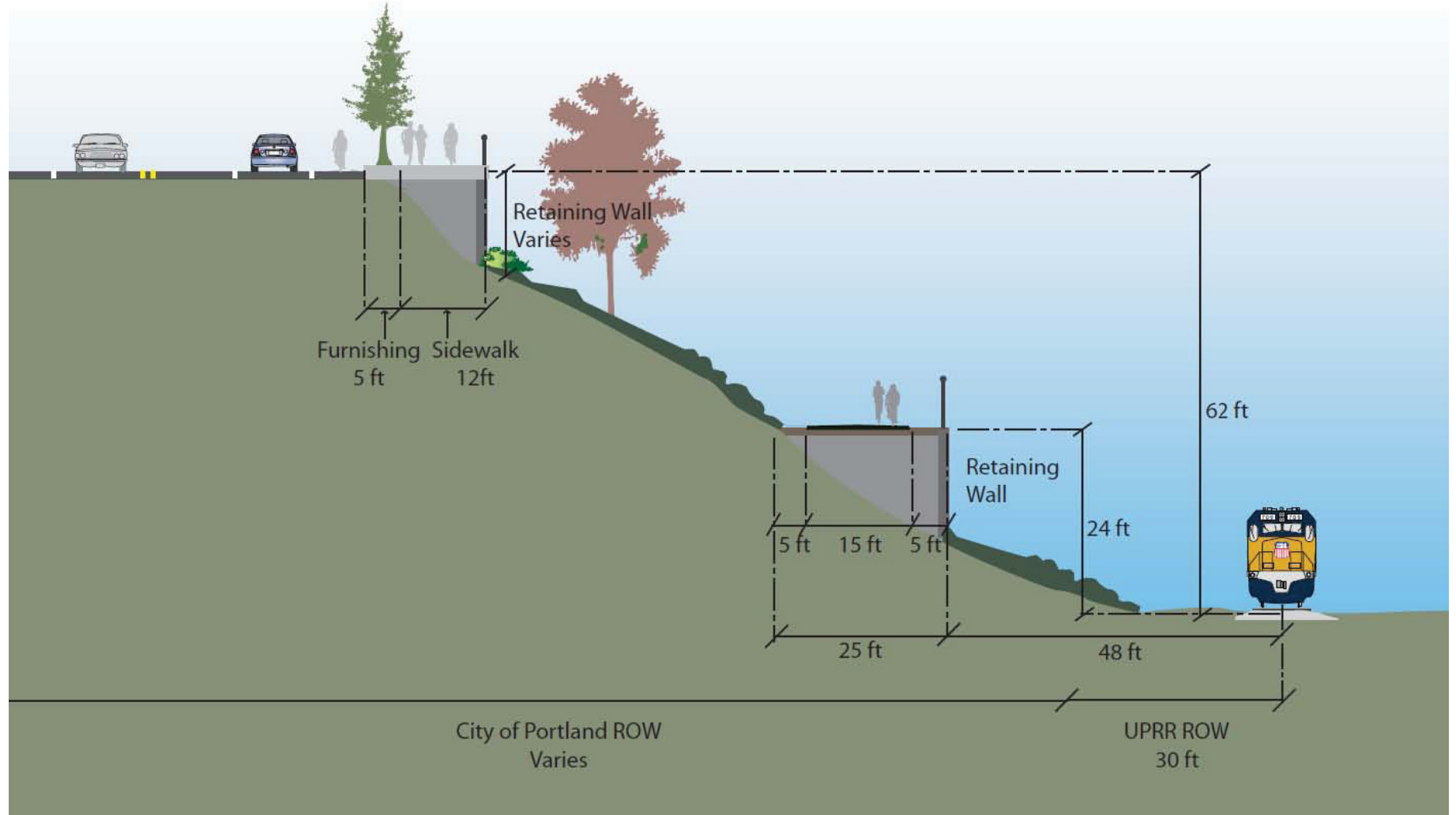


FIGURE 6
Illustrative View of the Trail at NE 13th Avenue



2.2.2 Segment 2: NE 16th Avenue to NE 21st Avenue

Segment Overview

From NE 16th Avenue, the trail would cross under the MAX tracks and off-ramp from I-84 and continue along the bottom of the gulch. A connection to NE 21st Avenue would be provided. Ten- to 15-foot-high retaining walls would be required in most of this segment, except for a short segment just west of 21st Avenue.

Neighborhood and System Connections

The trail would connect to NE 16th Avenue and NE 21st Avenue. NE 21st Avenue is an existing bikeway that provides connections to many east-west bikeways, including NE Multnomah Street and a planned bikeway on NE Holladay Street.

Property Acquisition

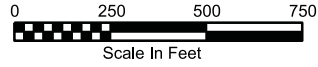
The west section of this segment and much of the ramp to NE 21st Avenue is located on property owned by the City of Portland. The east section of this segment and the undercrossing of NE 21st Avenue are located on right-of-way owned by Union Pacific Railroad. The area where the ramp connects to NE 21st Avenue is located on privately owned property.

Cost








This segment of trail is just over 0.2 mile long. It would cost approximately \$2 million or \$1.6 million per 1,000 feet of trail to construct. This cost estimate does not include right-of-way acquisition.

Considerations

A pedestrian-only easement exists along the southern edge of the Marriott Residence Inn site and through private property on the east to NE 21st Avenue. The project team evaluated an alignment that used this easement. Climbing from the bottom of the gulch near the I-84 off-ramp to the pedestrian easement and back down to cross under NE 21st Avenue at the required 5 percent grade made using this easement infeasible. The team also looked at the feasibility of connecting to NE 16th Avenue. Again, the required grade change made this connection infeasible.



LEGEND:

-  *At-Grade Neighborhood Connection*
-  *Ramp to Neighborhood Connection*
-  *Proposed Trail Alignment*
-  *Supplemental Trail Alignment*
-  *Undercrossing*
-  *UPRR Right-of-Way*
-  *UPRR Centerline*

Note:

Additional Connections To The Street Network May Be Feasible And Will Be Considered When Detailed Project Development Work Is Conducted.



Segment 2

2.2.3 Segment 3: NE 21st Avenue to NE 32nd Avenue

Segment Overview

The trail would cross under NE 21st Avenue and continue along the northern edge of the Union Pacific Railroad right-of-way to cross under NE 28th Avenue. West of NE 28th Avenue, the proposed trail is immediately adjacent to a building that abuts the railroad right-of-way. East of NE 28th Avenue, the railroad right-of-way narrows and the proposed trail is located on private property north of the railroad right-of-way. Construction of the trail in this area would impact a building that houses several businesses and would only be feasible upon redevelopment or through identification of a mutually-agreeable design by the property owner and the city.

Ten- to 15-foot-high retaining walls will be required along much of this segment, except for a short area immediately east of NE 28th Avenue.

Neighborhood and System Connections

The trail would access NE 32nd Avenue via a new connection to NE Halsey Street on the former Albina Fuel site. This access point provides a connection to the street network including bikeways, bicycle boulevards, and low-traffic streets. While a direct connection to the 20s bikeway at NE 28th Avenue was considered, its feasibility cannot be determined at this time.

Property Acquisition

Much of this segment is located on right-of-way owned by Union Pacific Railroad. A short segment just east of NE 28th Avenue is located on privately owned property.

Cost

This segment of trail is about 0.8 mile long. It would cost approximately \$3.5 million or \$800,000 per 1,000 feet of trail to construct. This cost estimate does not include right-of-way acquisition.

Considerations

There are feasible, but difficult, neighborhood connections near NE 28th Avenue that are not included in this recommended concept that should be considered during design or site redevelopment. The first, a long connection along the southern edge of the Fred Meyer parcel near NE 32nd Avenue to NE 28th Avenue is feasible but would require significant property acquisition. The others, a connection to NE 25th Avenue along an existing private driveway or a connection to NE 28th Avenue could be considered if the surrounding properties redevelop. A direct connection to NE 25th Avenue or NE 28th Avenue would far exceed the allowable slope for a bicycle and pedestrian path. The Project Advisory Committee strongly recommends that a direct connection to NE 28th Avenue be explored during design.



Building near railroad tracks east of NE 28th Avenue



LEGEND:

-  *At-Grade Neighborhood Connection*
-  *Ramp to Neighborhood Connection*
-  *Proposed Trail Alignment*
-  *Supplemental Trail Alignment*
-  *Undercrossing*
-  *UPRR Right-of-Way*
-  *UPRR Centerline*

Note:

Additional Connections To The Street Network May Be Feasible And Will Be Considered When Detailed Project Development Work Is Conducted.

Segment 3

CH2MHILL

2.2.4 Segment 4: NE 32nd Avenue to Hollywood Transit Center

Segment Overview

From NE 32nd Avenue to NE Sandy Boulevard, the trail would generally follow the northern edge of the Union Pacific Railroad right-of-way at the top of the slope. The trail would pass under NE 33rd Avenue and follow the top the gulch immediately behind several businesses that abut the railroad right-of-way. The trail would cross under NE Sandy Boulevard and NE Cesar Chavez Boulevard. This area, between NE Sandy Boulevard and NE Cesar Chavez Boulevard, is highly constrained, with the proposed trail only about 17 to 20 feet from the centerline of the railroad tracks at its nearest point. The trail would continue east at the top of the gulch with a connection to the Hollywood Transit Center.

Retaining walls would be required throughout this segment with walls that are less than 10 feet high east of NE Sandy Boulevard, between 10 and 15 feet high from NE Sandy Boulevard to NE Cesar Chavez Boulevard, and between 9 and 13 feet from NE Cesar Chavez Boulevard to the Hollywood Transit Center.

Neighborhood and System Connections

The approved site plan for redevelopment of the former Albina Fuel site at NE 33rd and Broadway provides for a trail connection along NE 33rd Avenue. This connection may be considered to provide a direct connection Grant High School. A short trail connection across the property to the Halsey Street right-of-way is also desired to provide a connection to on-street bike network. As the city has identified NE Sandy Boulevard as a future separated in-roadway bikeway, a connection to Sandy Boulevard may be desirable in the future. The trail would be at the same grade as the Hollywood Transit Center, providing several opportunities for connections to the transit center itself or the ramp to the pedestrian bridge across I-84. A connection at the Hollywood Transit Center would provide access to the Hollywood District via NE 42nd Avenue, a designated bikeway, and to the Laurelhurst Neighborhood south of I-84 via the existing pedestrian and bicycle bridge. The Hollywood District is also designated as a pedestrian district.

Property Acquisition

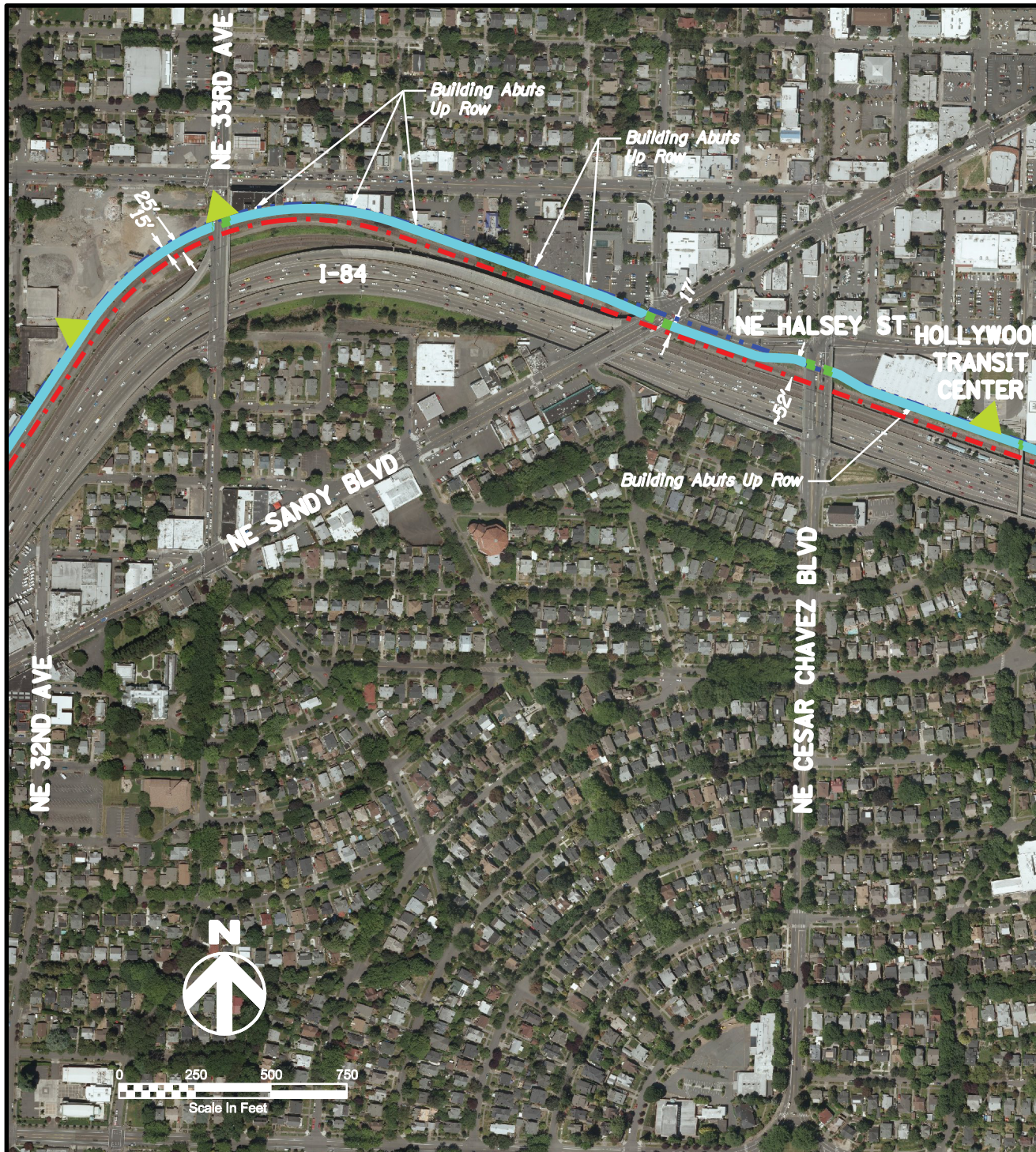
This entire segment is located on right-of-way owned by Union Pacific Railroad. The area between NE Sandy Boulevard and NE Cesar Chavez Boulevard is very constrained with the railroad right-of-way extending onto NE Halsey Street.

Cost







This segment of trail is about 0.6 mile long. It would cost approximately \$4.2 million or \$1.2 million per 1,000 feet of trail to construct. This cost estimate does not include right-of-way acquisition.



View from 33rd Avenue looking east



LEGEND:

-  At-Grade Neighborhood Connection
-  Ramp to Neighborhood Connection
-  Proposed Trail Alignment
-  Supplemental Trail Alignment
-  Undercrossing
-  UPRR Right-of-Way
-  UPRR Centerline

Note:

Additional Connections To The Street Network May Be Feasible And Will Be Considered When Detailed Project Development Work Is Conducted.

Segment 4

CH2MHILL

2.2.5 Segment 5: Hollywood Transit Center to NE 44th Avenue

Segment Overview

From the Hollywood Transit Center, the trail would continue at the top of the slope, passing under the pedestrian bridge at the MAX station and under the I-84 off-ramp to NE 42nd Avenue. A short retaining wall would be required for a portion of this segment. An illustration of what the trail could look like at the Hollywood Transit Center is provided in Figure 7. An illustration of how the trail could look near the Hollywood Transit Center is provided in Figure 8.

Neighborhood and System Connections

The trail would be at the same grade as the Hollywood Transit Center, providing several opportunities for connections to the transit center itself. One option would be a direct ramp to the north end of the existing pedestrian and bicycle bridge across I-84. A connection at the Hollywood Transit Center would provide access to the Hollywood District via NE 42nd Avenue, a city bikeway, and to the Laurelhurst Neighborhood south of I-84. The Hollywood District is also designated as a pedestrian district. An additional access would be provided via an existing connection at NE 45th Avenue. This connection would provide access to the Providence Health System office buildings and to the surrounding neighborhood.

FIGURE 7
Illustration of Sullivan's Gulch Trail at the Hollywood Transit Center



Property Acquisition

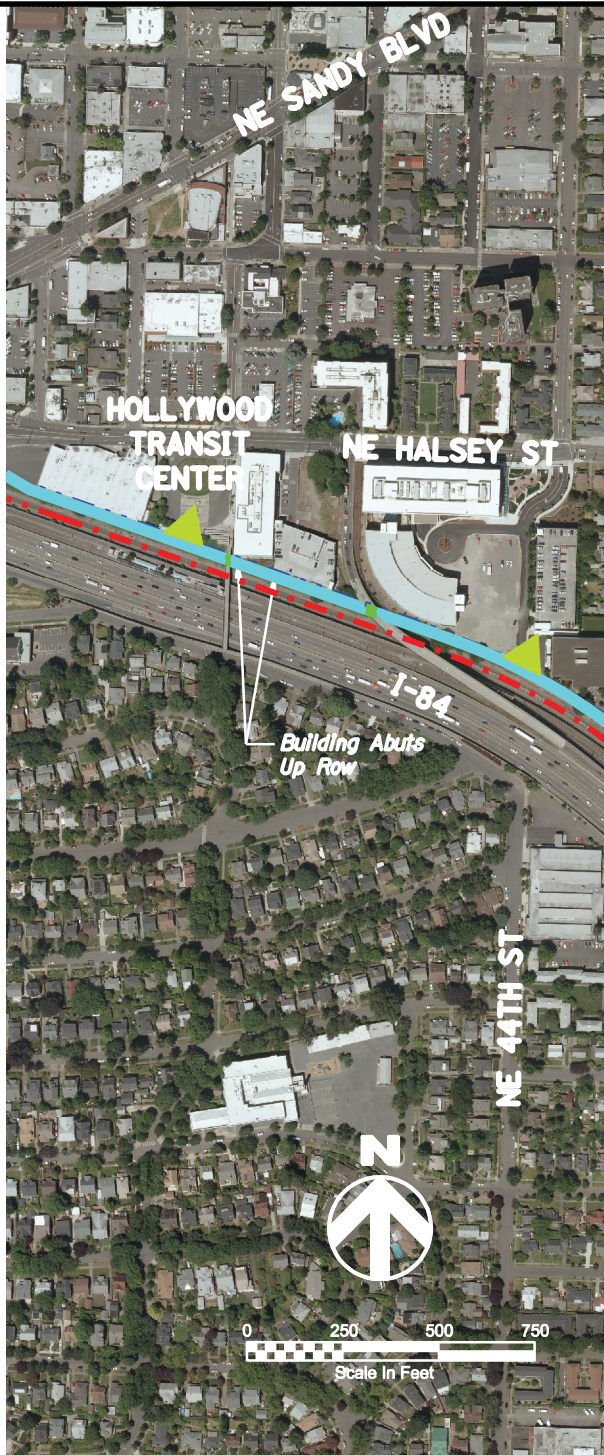
This entire segment is located on right-of-way owned by Union Pacific Railroad.

Cost








This segment of trail is just over 1,000 feet long. It would cost approximately \$700,000 to construct. This cost estimate does not include right-of-way acquisition.

Considerations

TriMet is working with the City of Portland to develop a redevelopment plan for the Transit Center. The integration of the trail and redevelopment plans should be considered during the design process.



LEGEND:

-  At-Grade Neighborhood Connection
-  Ramp to Neighborhood Connection
-  Proposed Trail Alignment
-  Supplemental Trail Alignment
-  Undercrossing
-  UPRR Right-of-Way
-  UPRR Centerline

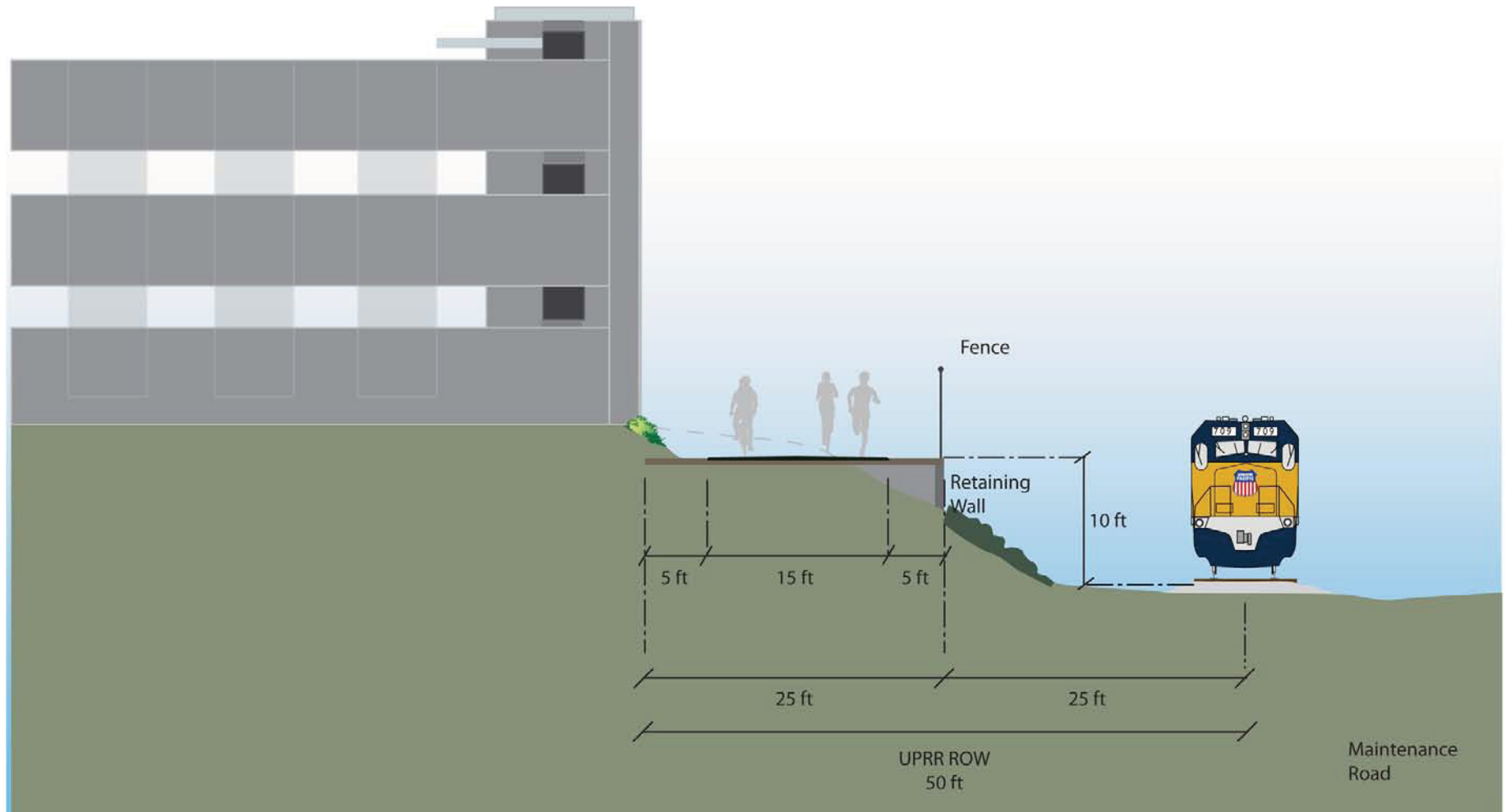
Note:

Additional Connections To The Street Network May Be Feasible And Will Be Considered When Detailed Project Development Work Is Conducted.

Segment 5

CH2MHILL

FIGURE 8
Illustrative View of the Trail East of the Hollywood Transit Center



2.2.6 Segment 6: NE 44th Avenue to NE 53rd Avenue

Segment Overview

From NE 44th Avenue, the trail would continue east at the top of the gulch, dropping down to cross under NE 47th Avenue. The trail would impact an auxiliary structure within the rail right-of-way immediately west of NE 47th Avenue. The trail would continue at the top of the slope from NE 47th Avenue to NE 53rd Avenue. Retaining walls would be needed in some areas of this segment, including a wall that varies from 5 to 12 feet between NE 49th Avenue and NE 53rd Avenue.

Neighborhood and System Connections

Access to the Sullivan's Gulch Trail would be provided via an at-grade connection to NE 49th Avenue and a ramp to NE 53rd Avenue. These connections would provide access to an on-street bikeway on 47th Avenue and a bike boulevard on NE 53rd Avenue. These routes would provide access to the Hollywood Town Center, as well as Providence Portland Medical Center, a major employer and regional destination.

Property Acquisition

This entire segment is located on right-of-way owned by Union Pacific Railroad. Standard TV and Appliance currently leases property from the railroad for a portion of their parking lot. Construction of the trail would require acquisition of this area.

Cost

This segment of trail is about 0.5 mile long. It would cost approximately \$2.4 million or \$900,000 per 1,000 feet of trail to construct. This cost estimate does not include right-of-way acquisition.

Considerations

A second connection to NE 53rd Avenue from the east was not evaluated but could be considered during the design process.



Segment 6

CH2MHILL

2.2.7 Segment 7: NE 53rd Avenue to NE 61st Avenue

Segment Overview

The trail would pass under NE 53rd Avenue and continue near the top of the bank before crossing under NE 60th Avenue. Ten- to 15-foot-high retaining walls would be required throughout this segment. An illustration the trail west of NE 60th Avenue is provided in Figure 9.

Neighborhood and System Connections

Access to the Sullivan's Gulch Trail would be provided via an at-grade connection to NE 61st Avenue. A future connection could also be provided at NE 56th Avenue or NE 57th Avenue if agreements could be reached with a property owner.

Property Acquisition

Most of this segment is located on right-of-way owned by Union Pacific Railroad. Near NE 60th Avenue, part of the trail would be located on privately owned property.

Cost







This segment of trail is about 0.4 mile long. It would cost approximately \$3.4 million or \$1.5 million per 1,000 feet of trail to construct. This cost estimate does not include right-of-way acquisition.

Considerations

A connection to NE 60th Avenue was considered, but was not feasible due to property constraints and the difference in elevation between the proposed trail and the street.



LEGEND:

-  *At-Grade Neighborhood Connection*
-  *Ramp to Neighborhood Connection*
-  *Proposed Trail Alignment*
-  *Supplemental Trail Alignment*
-  *Undercrossing*
-  *UPRR Right-of-Way*
-  *UPRR Centerline*

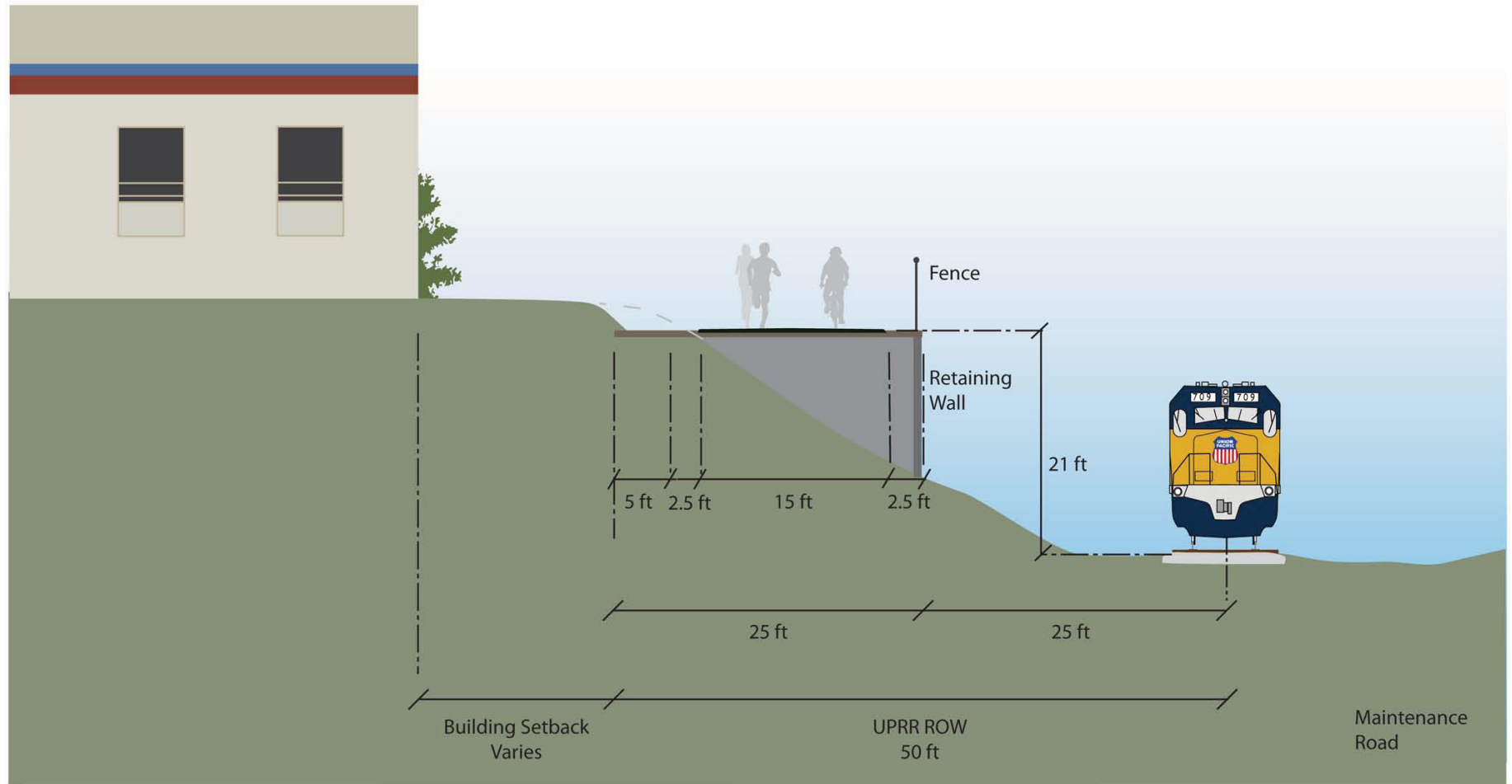
Note:

Additional Connections To The Street Network May Be Feasible And Will Be Considered When Detailed Project Development Work Is Conducted.

Segment 7

CH2MHILL

FIGURE 9
Illustrative View of the Trail West of NE 60th Avenue



2.2.8 Segment 8: NE 61st Avenue to NE Broadway

Segment Overview

From NE 61st Avenue, the trail would continue along the top of the slope. Near NE 67th Avenue, the trail would pass under NE Halsey Street via a new tunnel before returning to the top of the gulch. A 15-foot-high retaining wall may be required west of Halsey Street in this segment.

Neighborhood and System Connections

Access to the Sullivan's Gulch Trail would be provided via an at-grade connection to NE 63rd Avenue and a ramp to NE 67th Avenue.

Property Acquisition


Most of this segment is located on right-of-way owned by Union Pacific Railroad. The new tunnel under Halsey Street would require acquisition from a vacant parcel at the corner of NE Halsey Street and NE 67th Avenue.

Cost

This segment of trail is about 0.6 mile long. It would cost approximately \$2.7 million or \$900,000 per 1,000 feet of trail to construct. This cost estimate does not include right-of-way acquisition.



LEGEND:

-  *At-Grade Neighborhood Connection*
-  *Ramp to Neighborhood Connection*
-  *Proposed Trail Alignment*
-  *Supplemental Trail Alignment*
-  *Undercrossing*
-  *UPRR Right-of-Way*
-  *UPRR Centerline*

Note:

Additional Connections To The Street Network May Be Feasible And Will Be Considered When Detailed Project Development Work Is Conducted.

Segment 8

2.2.9 Segment 9: NE Broadway to NE 82nd Avenue (Jonesmore Street segment)

Segment Overview

At NE Broadway, the trail would shift to city-owned right-of-way between NE Jonesmore Street and a soundwall at the top of the Gulch. The trail would split west of NE 74th Avenue with one route crossing under NE 74th Avenue and one option crossing at street level. To accommodate the crossing of NE 74th Avenue at street level, NE Jonesmore Street would be converted to one-way, with only one travel lane for vehicular traffic, from NE 73rd Avenue to NE 75th Avenue. A hybrid pedestrian signal, sometimes called a HAWK beacon, is proposed to provide a safe, efficient crossing of NE 74th Avenue. This kind of signal can be designed so that cyclists trigger the signal in advance of the crossing, minimizing wait time.

From NE 74th Avenue, the trail would be located between NE Jonesmore Street and the soundwall to NE 77th Avenue. At NE 77th Avenue, the trail would continue on an unimproved right-of-way for NE Jonesmore Street connecting to an existing path under NE Halsey Street. From there, the trail would split, with a connection to NE 82nd Avenue north of the TriMet power substation and a connection under NE 82nd Avenue south of the substation. A 7-foot-high retaining wall would be required for a short section just west of NE 82nd Avenue. An illustration of the trail along NE Jonesmore Street is provided in Figure 10.

Neighborhood and System Connections

Access to the Sullivan's Gulch Trail would be provided via an at-grade connection at NE 74th Avenue, a future bicycle boulevard, and at NE 82nd Avenue. Much of this segment would be adjacent to NE Jonesmore Street, providing continuous access from the surrounding neighborhood.

Property Acquisition

This segment is mostly located on right-of-way owned by the City of Portland. The undercrossing of NE 74th Avenue would be located on right-of-way owned by the Union Pacific Railroad.

Cost

This segment of trail is about 0.7 mile long. It would cost approximately \$2.9 million or \$900,000 per 1,000 feet of trail to construct. This cost estimate does not include right-of-way acquisition. The undercrossing at NE 74th Avenue would cost about \$1.2 million without right-of-way acquisition. The cost of the undercrossing, as well as an at-grade crossing of NE 74th Avenue is included in the cost of this segment and the total project.



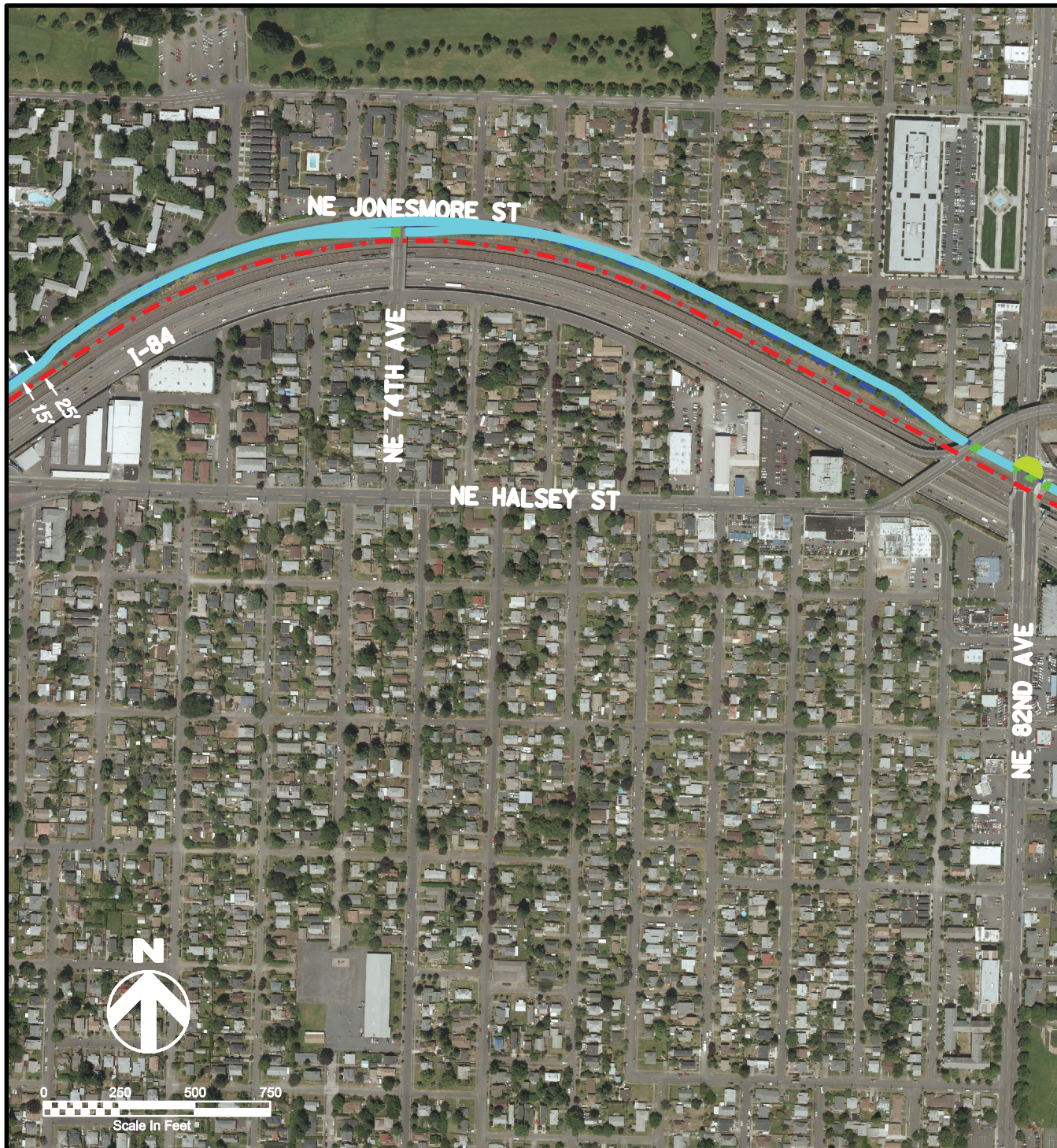
NE Jonesmore Street looking east










Hybrid signal on NE Burnside Street



Existing path under NE Halsey Street at 82nd Avenue



LEGEND:

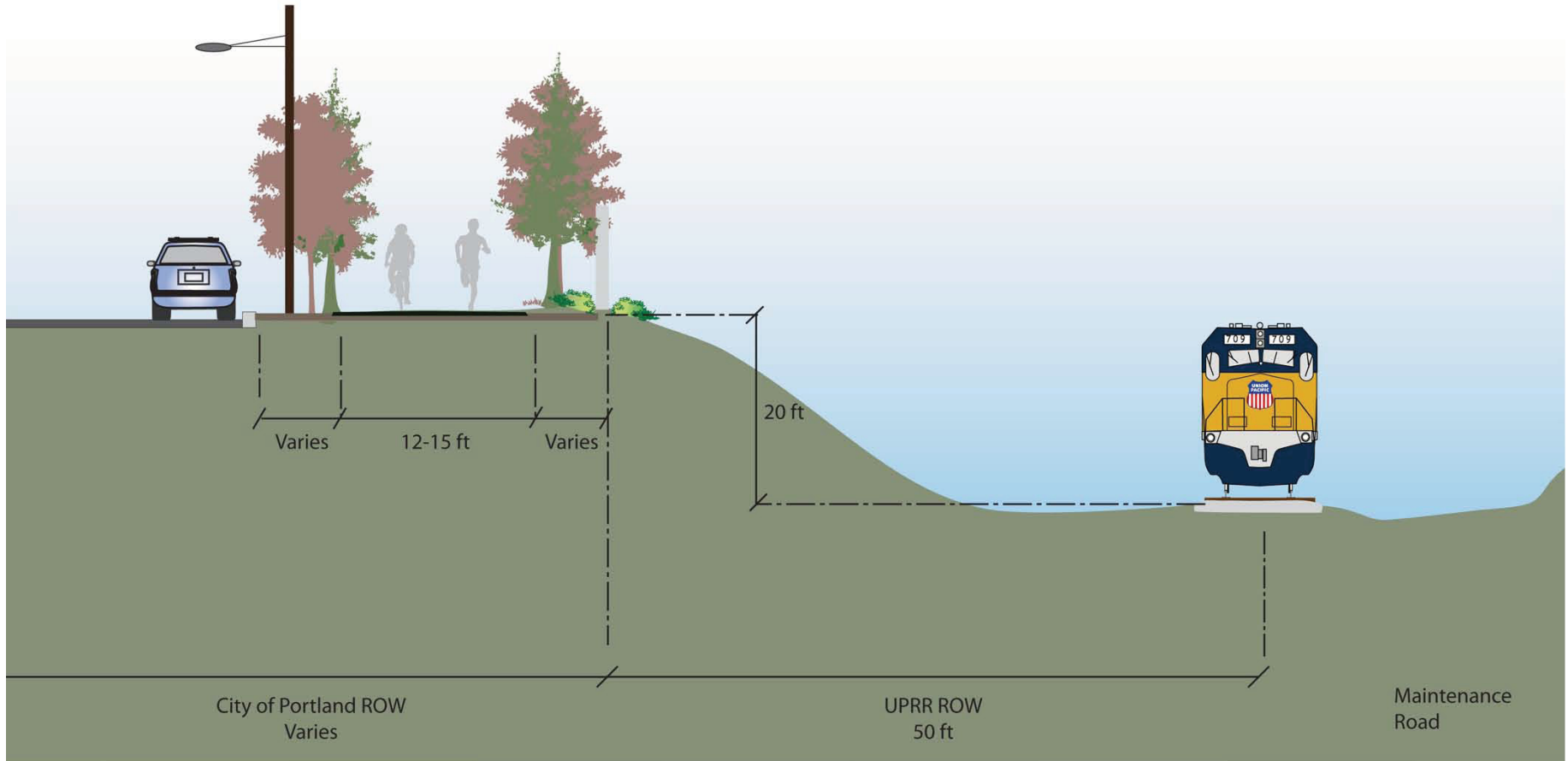
-  *At-Grade Neighborhood Connection*
-  *Ramp to Neighborhood Connection*
-  *Proposed Trail Alignment*
-  *Supplemental Trail Alignment*
-  *Undercrossing*
-  *UPRR Right-of-Way*
-  *UPRR Centerline*

Note:

Additional Connections To The Street Network May Be Feasible And Will Be Considered When Detailed Project Development Work Is Conducted.

Segment 9

FIGURE 10
Illustrative View of the Trail Along NE Jonesmore Street



2.2.10 Segment 10: NE 82nd Avenue to NE 92nd Avenue

Segment Overview

From NE 82nd Avenue to NE 92nd Avenue, the trail would follow the northern edge of the Union Pacific Railroad right-of-way. Starting from NE 82nd Avenue, a 10-foot-high retaining wall would be required for less than a quarter mile.

Neighborhood and System Connections

Access to the Sullivan's Gulch Trail would be provided via at-grade connections to NE 88th Avenue and NE 92nd Avenue.

Property Acquisition








This segment is located on right-of-way owned by Union Pacific Railroad. In some locations, the trail could likely be designed on adjacent private properties rather than the railroad right-of-way.

Cost

This segment of trail is about 0.6 mile long. It would cost approximately \$2.1 million or \$700,000 per 1,000 feet of trail to construct. This cost estimate does not include right-of-way acquisition.



LEGEND:

-  *At-Grade Neighborhood Connection*
-  *Ramp to Neighborhood Connection*
-  *Proposed Trail Alignment*
-  *Supplemental Trail Alignment*
-  *Undercrossing*
-  *UPRR Right-of-Way*
-  *UPRR Centerline*

Note:

Additional Connections To The Street Network May Be Feasible And Will Be Considered When Detailed Project Development Work Is Conducted.

Segment 10

CH2MHILL

2.2.11 Segment 11: NE 92nd Avenue to the I-205 Multi-Use Path

Segment Overview

From NE 92nd Avenue to I-205, the trail would follow the northern edge of the Union Pacific Railroad right-of-way. The trail would pass under I-205 and the I-205/I-84 interchange to connect to the I-205 multi-use path.

Neighborhood and System Connections

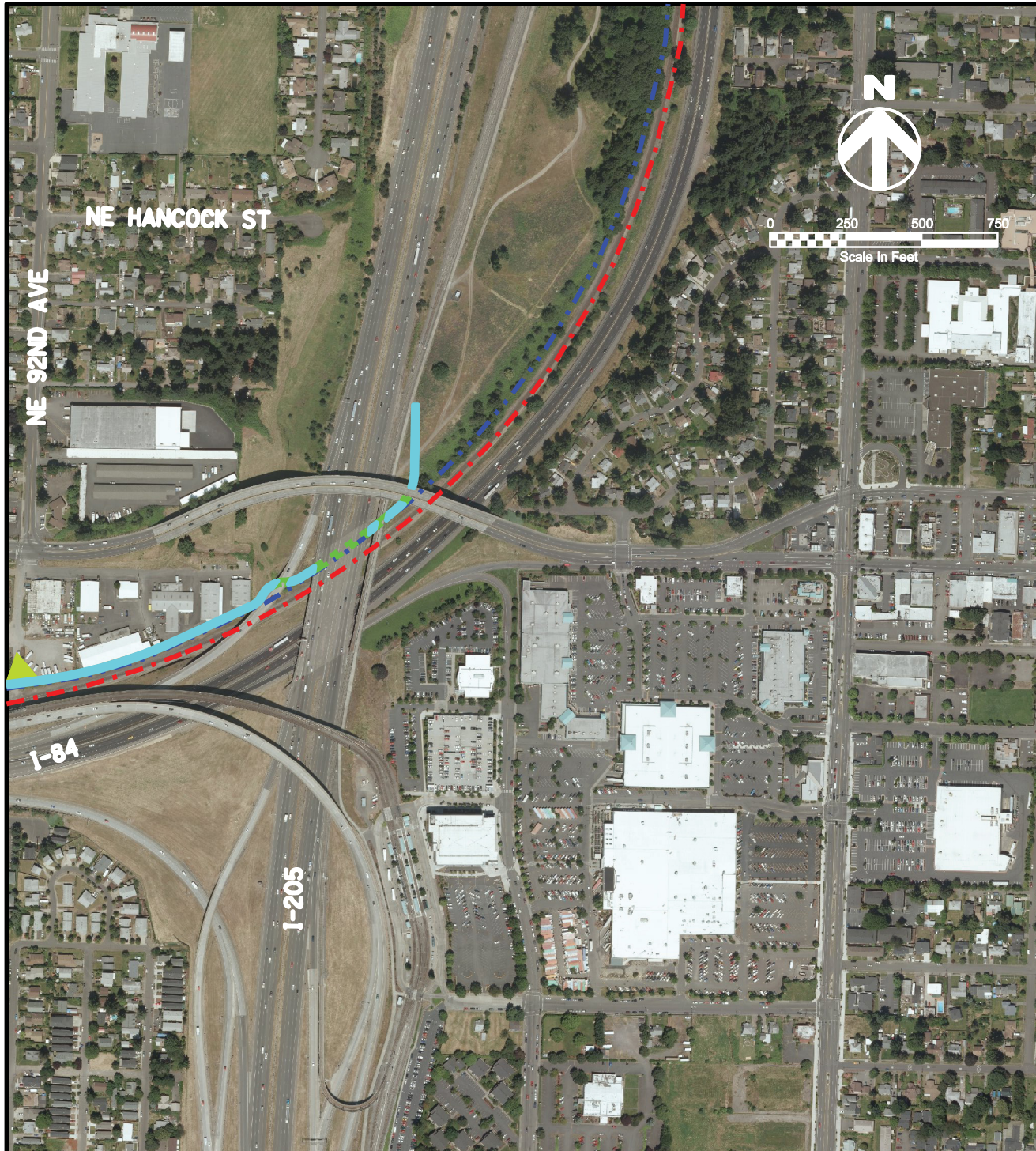
The trail would connect to the I-205 multi-use path after crossing under I-205, providing access to the Gateway Regional Center and Gateway Transit Center. Gateway is a designated pedestrian district. The Sullivan's Gulch Trail would also provide another access point to Gateway Green, a future recreational area.

Property Acquisition








Most of this segment is located on property owned by the Oregon Department of Transportation. Some of this segment is located on right-of-way owned by Union Pacific Railroad. In some locations, the trail could likely be designed on adjacent private properties rather than the railroad right-of-way.

Cost

This segment of trail is about 0.3 mile long. It would cost approximately \$1.5 million or \$900,000 per 1,000 feet of trail to construct. This cost estimate does not include right-of-way acquisition.



LEGEND:

-  *At-Grade Neighborhood Connection*
-  *Ramp to Neighborhood Connection*
-  *Proposed Near-Term Project*
-  *Proposed Sullivan's Gulch Trail Alignment*
-  *Undercrossing*
-  *UPRR Right-of-Way*
-  *UPRR Centerline*

Note:

Additional Connections To The Street Network May Be Feasible And Will Be Considered When Detailed Project Development Work Is Conducted.

Segment 11

3.0 Costs and Impacts

Based on the conceptual design, the project team developed a planning-level cost estimate for trail construction. This estimate does not include right-of-way costs. The team also estimated the right-of-way required to construct the project.

3.1 Order-of-magnitude Cost Estimate

The construction cost estimate for the trail alignment developed during this concept planning process is an order-of-magnitude that reflects the limited engineering work and technical data gathering that has been completed. To account for this, a construction contingency of 40 percent is included in construction cost estimates. A contingency is added as a percentage of the total construction cost and should not be considered as potential saving.

Design and construction of the Sullivan’s Gulch Trail is expected to cost about \$36 million (2012) without right-of-way acquisition. The cost per 1,000 feet of trail construction varies from \$700,000 to \$1.6 million. Table 2 details the cost for each segment.

TABLE 2
Construction Cost by Segment

	Segment and Description	Segment Cost (millions)	Length (miles)	Cost per 1,000 feet (millions)
1	West limit to NE 16th Avenue	\$10.5	1.3	\$1.6
2	NE 16th Avenue to NE 21st Avenue	\$2.0	0.2	\$1.6
3	NE 21st Avenue to NE 32nd Avenue	\$3.5	0.8	\$0.8
4	NE 32nd Avenue to Hollywood Transit Center	\$4.2	0.6	\$1.2
5	Hollywood Transit Center to NE 44th Avenue	\$0.7	0.2	\$0.7
6	NE 44th Avenue to NE 53rd Avenue	\$2.4	0.5	\$0.9
7	NE 53rd Avenue to NE 61st Avenue	\$3.4	0.4	\$1.5
8	NE 61st Avenue to NE Broadway	\$2.7	0.6	\$0.9
9	NE Broadway to NE 82nd Avenue	\$2.9	0.7	\$0.8
10	NE 82nd Avenue to NE 92nd Avenue	\$2.1	0.6	\$0.7
11	NE 92nd to I-205 multiuse path	\$1.5	0.3	\$0.9
Total Cost		\$35.9	5.6	\$1.1

Note: All estimates are in 2012 dollars.

Planning-Level Cost Estimates

As projects move from ideas and conceptual designs to final designs, engineers are able to determine costs with increasing certainty. At the concept plan level, engineers prepare planning-level cost estimates.

These cost estimates include significant contingencies to cover items that cannot be defined at the planning level. These estimates also rely on many assumptions including the width of the trail, the topography in the corridor, and the types of landscaping, lighting, and surfaces that would be used. The planning-level cost estimates do not include right-of-way acquisition costs.

These estimates should be used to gauge the amount of funding that should be sought to design and construct the trail. More accurate estimates will be developed as the design progresses.

3.2 Property Impacts

Based on this concept, the Sullivan’s Gulch Trail would be constructed on a combination of property owned by the City of Portland, the Oregon Department of Transportation, individual property owners, and Union Pacific Railroad. The project team has assumed that some areas of the trail could not be constructed unless redevelopment occurs because of the proximity of actively used buildings to the proposed trail alignment. To construct the trail, the City of Portland would acquire all property required to construct and operate the trail either through fee-simple purchase or through acquisition of easements. The estimated property impacts, shown in Table 3, are based on a 25-foot-wide trail corridor and available mapping of tax lot boundaries. A full survey of the project would be needed to accurately define acquisition required to construct the trail.

TABLE 3
Trail Right-of-Way by Owner

Ownership	Area (Sq Feet)	Percent of Total Right-of-Way Required
Oregon Department of Transportation	31,000	4
Other owners	47,000	6
City of Portland	205,000	26
Union Pacific Railroad	510,000	64

Note: All estimates are based on planning-level design of a 25-foot-wide trail corridor and City of Portland GIS data.

4.0 Public Involvement

Public involvement activities included open houses, Project Advisory Committee meetings that were open to the public, a project website, and public information. The 13-member Project Advisory Committee met five times during the development of the concept plan with meetings that focused on development of principles to guide concept design, a discussion of opportunities and constraints, a review of an initial trail alignment, a review of a refined alignment with proposed trail under-crossings and neighborhood connections, and a review of the draft concept plan. The principles and criteria developed by the PAC to guide development of the trail concept are provided in Table 4.

TABLE 4
PAC Principles and Criteria

Principle	Criteria
Create a safe multiuse trail.	<p>1A: Provide for the maximum separation between the trail and auto traffic parallel to the trail.</p> <p>1B: Strive for no at-grade crossings of streets.</p> <p>1C: Use crime prevention through environmental design techniques to improve safety and security (e.g. maximizing areas with “eyes on the trail”).</p> <p>1D: Provide a design that minimizes bicycle/pedestrian conflicts.</p> <p>1E: Provide a design that minimizes east/west user conflicts.</p>
Create a trail that is comfortable and accessible for a range of users and uses.	<p>2A: Provide a trail with adequate width and design to accommodate a range of users.</p> <p>2B: Where possible, provide space for rest, enjoying views and congregating outside of the trail’s throughway.</p> <p>2C: Minimize grade changes.</p> <p>2D: Design as a safe, direct and efficient connection for bicycle traffic with minimal delays.</p>
Create a direct multiuse trail that provides connections to centers, neighborhoods and the city’s bicycle network.	<p>3A: Minimize travel distance between I-205 and the Eastbank Esplanade.</p> <p>3B: Provide access to regional centers, town centers, main streets and transit stops.</p> <p>3C: Create a continuous trail that is easy for users to follow.</p> <p>3D: Provide connections to the city’s bike and pedestrian systems.</p> <p>3E: Provide enough access points to make the trail accessible to pedestrians.</p> <p>3F: Connect to the regional trail system including the I-205 path, Gateway Green, the Eastbank Esplanade, and the future North Portland Greenway Trail.</p>
Minimize impacts to private properties.	<p>4A: Provide acceptable separation between the centerline of the UP Graham Line and the southern edge of the trail, increasing user safety and minimizing noise from the railroad.</p> <p>4B: Minimize impacts to occupied buildings or impacts to properties that would compromise existing uses.</p>
Create a trail that has the support of the community and is acceptable to the property owners who are impacted by the trail.	

The project team hosted two open houses. The first was aimed at reviewing the initial trail alignment and gathering input on neighborhood connections. The second was aimed at reviewing the final alignment, including roadway crossings and neighborhood connections. Outreach to support the open houses included email, mailers, and distribution of posters to community businesses.

In addition to public meetings, the city hosted a project web site that included all meeting materials and electronic versions of the open house comment forms. To support outreach to traditionally under-represented communities, the city provided a small grant to the Latino Network to engage their constituents.

The project team made a special effort to reach out to property owners affected by the proposed trail alignment. The team mailed letters to all property owners immediately adjacent to the gulch when the project commenced, offering one-on-one meetings. The team also met with interested stakeholders during the development of the concept plan.

Finally, the project team presented the trail concept to several city advisory committees including the Portland Commission on Disabilities, the Bicycle Advisory Committee and the Pedestrian Advisory Committee.



Community members review materials at an open house

5.0 Union Pacific Railroad Right-of-Way Review

After endorsement by the Project Advisory Committee (PAC), the concept plan was reviewed by Union Pacific Railroad (UPRR) including staff from network design and planning, engineering, safety, real estate and police departments. In May 2012, UPRR provided input confirming their concerns about non-railroad uses in their right-of-way. They also stated their opposition to transferring right-of-way to the City of Portland given their desire to construct a second track in Sullivan's Gulch. The City previously evaluated the constraints to UPRR constructing a second track using UPRR's current design standards and found several issues that would make constructing a second track difficult or expensive, or would require varying from design standards.

UPRR generally uses these standards when designing new tracks:

- 20 feet of space between the centerline of existing track to the centerline of a new track
- 25 feet of space between centerline of a new (northern) track and the nearest structure (e.g., bridge pier, roadway, building)

These requirements mean that UPRR would need about 45 feet of space between the centerline of their existing track and the nearest structure to meet their own standards in constructing a new track to the north of the existing track.

There are several areas where a second track could not be designed to these standards:

- NE 12th Avenue to NE 17th Avenue: UPRR only owns 30 feet of right-of-way from the centerline of the existing track. In this case, the City of Portland owns property immediately north of the UPRR right-of-way and could build a trail in this area.
- NE 28th Avenue to NE 29th Avenue: In this area, a building is 30 feet from the centerline of the existing track.
- NE Sandy Boulevard to NE Cesar Chavez Boulevard: The retaining wall supporting NE Halsey Street is only 33 feet from the centerline of the existing track.
- I-205: UPRR only owns about 40 feet of right-of-way from the centerline of existing track.
- Various roadway structures: In most cases, piers supporting roadway overcrossing structures are within 40 feet of the centerline of the existing track. There are 20 of these structures in the corridor and many would require reconstruction.

Based on this analysis, construction of the second track may not be possible without compromising some of UPRR's design standards and would be both difficult and expensive given these constraints. After reviewing this analysis, UPRR still maintains its desire to retain ownership of all current right-of-way for future system expansion.

6.0 Conclusions

This concept plan reflects a planning-level review of the design of the Sullivan's Gulch Trail with the intention of demonstrating the feasibility of the trail. This process uncovered additional issues and opportunities that will need to be resolved in future phases. These include right-of-way acquisition, geotechnical challenges, the presence of utilities in the gulch, and trail under-crossings.

Nearly three-quarters of the right-of-way required to construct the trail is currently owned by entities other than the City of Portland. In addition, in many cases, buildings are directly adjacent to the proposed trail. To successfully construct the trail, these affected property owners would need to be consulted during the design process. Union Pacific Railroad (UPRR) would need to convey property along their northern boundary to the city for those segments of the trail that are shown on UPRR property.

A variety of public and private utilities operate in the gulch. During this planning process, the publicly owned utilities mapped in the City of Portland's GIS database were documented, but privately owned utilities are also likely present in the corridor. The City's Bureau of Environmental Services (BES) owns a major sewer pipe that extends from the Willamette River to Hollywood that would be generally under the proposed trail alignment. Due to its age, this pipe is expected to require major maintenance or replacement. BES will be engaged in future design processes to ensure coordination between the trail project and any maintenance or improvement projects that would affect the sewer pipe.

The project team evaluated each roadway overcrossing referencing PBOT and ODOT bridge plans and maps to determine if there is adequate vertical and horizontal space to allow the trail to pass under these structures. In all cases, there appears to be adequate space for the trail. During the design process, a more detailed evaluation of these crossing opportunities will be required, including an evaluation of structure foundations and site investigations to determine the actual space available for a trail.

Much of the proposed Sullivan's Gulch Trail is located on steep slopes and relies on retaining walls to create the space for a trail. The heights of retaining walls included in the programming-level cost estimate are based on what is known about the ground profile in the project area. During the design process, a site-specific geotechnical investigation and a land survey will be required to precisely determine the extent and design of retaining walls or other structural solutions. The results of the geotechnical investigation may influence the location of the trail in some areas, particularly the area between Grand Avenue and NE 21st Avenue. The location of the proposed trail creates questions about the noise and air pollution exposure for trail users. Additional study should be undertaken to understand the noise and air pollution conditions that users are likely to encounter on the proposed trail and, if needed and practical, potential mitigation measures.

Other system planning items include street connections at either end and land use along the trail. The Sullivan's Gulch Trail would connect to the I-205 multiuse path at the east end and to a variety of on and off-street bike and pedestrian facilities at the west end. Changes or improvements to these facilities may be required to accommodate future trips from the Sullivan's Gulch Trail and should be considered during future system planning efforts. Future land use studies along the corridor should consider land use or zoning changes to take advantage of the potential for bike or trail oriented development to support local businesses and car-light lifestyles.

The trail is broken into 11 segments that can be constructed independently as right-of-way is obtained and funding is available. To advance the project, staff recommends City Council adopt this concept plan and the trail alignment into the City of Portland's comprehensive plan, zoning plan maps and transportation system plan maps.

Appendices

Appendix A. Public Involvement

Appendix B. Undercrossing of I-205 and Connection to NE Hancock Street

A.1 Public Involvement Plan

Prepared: November 9, 2010

Project Manager: Denver Igarta – PBOT
 Sarah Coates-Huggins – Parks & Recreation
 PI Coordinator: Elizabeth Kennedy-Wong
 Meeting Facilitator: EKW
 PI Start: January 2011 – committee recruitment
 PI Complete: July 2012

Project Scope

PBOT and PP&R will convene an Advisory Committee to assist in the development of a concept plan. The concept plan will determine the trail alignment and basic design and indicate cost. This concept plan will be developed by working with a consultant team to conduct a technical evaluation of the proposed alignment for a shared-use bicycle/pedestrian trail along the northern property limit of the Union Pacific (UP) Railroad’s Graham Line, and produce a conceptual plan for the amenity.

Project Background

1996: The City of Portland Bicycle Master Plan is adopted, and includes the Sullivan’s Gulch Trail as a “Priority 3 (10-20 Year)” project
 2000: Metro Council adopted the proposed trail route in Metro’s Regional Transportation Plan
 2001: Placed on Metro’s Regional Trails Plan
 2003: Placed on Metro’s Financially Constrained List, making the project eligible for feasibility study funding
 2004: Portland State University Engineering Alignment
 2006: Project Awarded MTIP funds for feasibility study

The proposed Sullivan’s Gulch Trail alignment is within the Banfield Corridor in Northeast Portland. The corridor extends from the Eastbank Esplanade at the Willamette River to I-205 at Rocky Butte and the Gateway District. The trail corridor is adjacent to an interstate highway, a MAX light rail line, and a freight rail line. The trail would be placed in along the northern property limit of the Graham line and be approximately 4.3 miles in length. The western end of the trail would connect with the Eastbank Esplanade, and the east end of the trail would connect to the I-205 trail.

The trail is a 4.3 mile long opportunity to connect East Portland with a bicycle and pedestrian route that is primarily separated from auto traffic. This trail will provide safe, continuous, and quick transportation options for cyclists and pedestrians.

The trail will connect all of the neighborhoods along the route through connections at existing overpasses and will encourage more people to ride or walk to work, for fun or for errands.

Sullivan’s Gulch Trail is a missing link in the regional network of off-street paths. It will link major regional trails, as well as local bikeways, walkways, and streets, enhancing travel across an urban area filled with various barriers. The route will serve transportation demand generated by major employment centers, including Lloyd Center and Downtown Portland, and residential neighborhoods. As noted by Metro Councilor Rod Monroe, it will provide residents in eastern Portland neighborhoods with direct bicycle access to the jobs and amenities located near the central city. It will also improve pedestrian and bicycle access to public transit and public facilities including schools, parks and libraries.

Specific benefits include:

- Continuous bicycle and pedestrian facility from the Eastbank Esplanade to the I-205 Trail
- Smooth, American Disability Act (ADA) accessible grade for the entire length
- Connections to Downtown Portland, the Rose Quarter and Convention Center, Lloyd District, Hollywood District, 82nd Ave., Gateway District, and the City of Maywood Park.
- Connection to all MAX light rail stations from the Rose Quarter Transit Center to the Gateway Town Center
- Direct connection with 14 neighborhoods
- Approximately 50 trail access points on the north side
- 17 existing bridges connect to neighborhoods south of the freeway
- Habitat restoration potential in Sullivan’s Gulch
- City beautification and gateway to Portland and the region

Project Direction

There are two clear outcomes for this phase of the project. Develop a preferred alignment for the trail that results in:

1. public and political support, and
2. an alignment option with cost and feasibility analysis

Public Involvement Overview

An Advisory Committee will be appointed by the Mayor and Commissioner Fish that will:

- Represent the project to their constituents
- Represent the perspectives of their constituents to the project
- Provide political/public support
- Identify and work to mitigate negative impacts on impacted property owners
- Maximize vision of design and adjacent community development opportunities

The Advisory Committee will include:

- ODOT
- Union Pacific Railroad
- Impacted Property Owners
- Low-Income Advocates
- Environmental Justice Advocates
- Asian Community
- African American Community
- Adjacent residents
- Bicycle advocates
- Pedestrian advocates

In addition to the appointed advisory committee, technical advisors should be identified; those would include:

- Metro
- TriMet
- PPR staff
- PBOT staff

In addition to the Advisory Committee, the general public will have the opportunity to be engaged in the project through two public meetings. Clear public support for the project has already been demonstrated. This phase of the project will focus on developing the support of the impacted property owners and identify a feasible trail alignment.

The public will receive regular updates on the progress of the Advisory Committee through electronic notifications, local newsletters and two public meetings.

Stakeholder Identification

The following stakeholders were contacted to participate in this project.

- | | |
|--|---|
| <ul style="list-style-type: none"> ■ BTA ■ Willamette Pedestrian Coalition ■ Portland Bicycle Advisory Committee ■ Portland Pedestrian Advisory Committee ■ Sullivan's Gulch Trail Committee ■ ODOT ■ Metro ■ Union Pacific ■ Office of Mayor Adams | <ul style="list-style-type: none"> ■ Office of Commissioner Fish ■ PBOT ■ PPR ■ Adjacent property owners ■ Adjacent business community ■ Neighborhood Associations <ul style="list-style-type: none"> ○ Central Northeast Neighbors ○ Southeast Uplift Neighborhood Program ○ Irvington |
|--|---|

- Sullivan’s Gulch
- Hollywood
- Kerns – very low income
- Laurelhurst
- North Tabor
- Montavilla – very low income
- Grant Park
- Rose City Park
- Madison South
- Parkrose Heights
- Parkrose
- Argay
- Russell
- Wilkes
- Hazelwood – very low income
- Roseway – very low income
- Business District Associations
 - Lloyd District
 - Hollywood Boosters
 - Gateway Business Association
 - Northeast Broadway
 - 42nd Ave
 - Parkrose
 - Swan Island TMA
 - Central Eastside
 - Montavilla/East Tabor
- Cultural Organizations
 - OPAL
 - Native Advisory Committee
 - Immigrant /Refugee Center of Oregon
 - Asian Family Center
 - SE Asian Vicariate
 - African American Health Coalition
 - Latino Network

A.2 Open House #1 Summary

Overview

The proposed Sullivan's Gulch Trail will provide a safe and direct bike and pedestrian thoroughfare from I-205 to downtown Portland. In help with the conceptualization of the project a public opinion survey was conducted electronically from November 2 through November 16, 2011; and was also available in a paper handwritten format at the first project open house on November 2, 2011. A total of 272 surveys were completed.

Results

The following is a summary of the responses. When reading this information, it is important to remember that this information represents the opinions of 272 individuals. The data cannot be used to make generalizations about the entire trail community, but does provide a sense of how those who would use (or would not use) the trail feel. The response was overwhelming positive and in support of creating the trail.

Each of the respondents ranked the importance of characteristics of the trail and its construction. The scale ranged from 1-5 with 1 representing "very important"; 3 representing "I don't have an opinion"; and 5 as "not important".

- No interaction with cars: 85% thought this was important; 8.5% didn't have an opinion; and 7% did not find this characteristic important
- Access to home/work/destinations: 81% thought this was important; 11% didn't have an opinion; and 8% did not find this characteristic important
- Directness of route (limited stops): 61% thought this was important; 24% didn't have an opinion; and 15% did not find this characteristic important
- Separation from trains: 58% thought this was important; 20% didn't have an opinion; and 21% did not find this characteristic important
- Reasonably flat trail: 55% thought this was important; 22% didn't have an opinion; and 23% did not find this characteristic important
- Welcoming environment (signs, benches, viewpoints): 50% thought this was important; 27% didn't have an opinion; and 23% did not find this characteristic important
- Cost to build: 39% thought this was important; 36% didn't have an opinion; and 25% did not find this characteristic important

After ranking the characteristics individually, respondents were asked to pick their top two choices from the list.

Separation from cars was the most important feature, with quality of the trail and ease of negotiating the trail tied for second.

Most important features to trail users

Separation from cars	179	33%
Quality of the trail/tread surface	118	22%
Ease of negotiating trail	117	21%
Ability to enjoy a peaceful/quiet experience	77	14%
Aesthetics/views	23	4%
Availability of trail maps/trail signage	20	3%
Availability of parking	13	2%

“Other” items of importance not included on list

Safety concerns	14	
Directness/Connectivity	4	
Access to key areas	3	
Air quality	2	
Co-existence of bike/pedestrians	2	
Landscaping	2	
Width	1	

How people would use the trail

Recreation and to commute were equally listed as the two most common uses of the trail: 34% and 32% of users. 23% said they would use it to make short trips, and 11% to access TriMet.

For recreation	190	34%
To commute	183	32%
To make short trips	130	23%
To access TriMet	60	11%

Respondents also stated how the trail would help them travel through Portland. Besides how they would use the trail (i.e., commuting, etc.), many people commented how:

- The trail would give them a safer route to travel, especially for household without cars
- Give them better access to places, routes, and additional trails
- Create less stress in their lives, and also give them greater quality of life
- Help them travel through Portland where bike lanes do not currently exist
- Change the way they commuted, with many stating they would start biking with this trail, or bike year round.

Most common destinations

Lloyd Center	65	21%
Hollywood District	47	15%
Eastbank Esplanade	29	9%
Downtown	28	9%
I-205	21	7%
Gateway	15	5%
Rose City	9	3%
Rocky Butte	7	2%
N. Portland (non-specific)	7	2%
Hawthorne	5	1%
Other	55	18%

Additional Priorities and Observations

There was an overwhelming positive response to the project. However there were many concerns and features that respondents wanted to acknowledge. Listed are some of the major categories and some responses.

- Safety. Although citing a safer way to travel throughout Portland, many respondents were also concerned about their safety on the trail.
- Issues of noise and air quality
- Want aesthetically pleasing looks and vegetation

A.3 Open House #2 Summary

Overview

The proposed Sullivan's Gulch Trail will provide a safe and direct bike and pedestrian thoroughfare from I-205 to downtown Portland. A public survey was available online and also distributed and collected at the second open house for the project on January 11, 2012. More than 60 people attended the Open House. A total of 41 surveys were completed.

Results

The following is a summary of the responses. When reading this information, it is important to remember that this information represents the opinions of 41 individuals. The data cannot be used to make generalizations about the entire trail community, but does provide a sense of how those who would use (or would not use) the trail feel. The response was overwhelming positive and in support of creating the trail.

Each respondent was asked about their general reaction to the draft concept for the trail:

- 95% of the respondents were in support with 85% in strong support
- 2 respondents were neutral (5%)

Each of the respondents was asked whether the trail design met certain principles on a 1-5 scale with 1 representing “very well”; 3 representing “no opinion”; and 5 as “not at all”.

- Create a safe multiuse trail: 93% thought this was well met; 5% didn't have an opinion; and 2% did not think this was well met
- Create a trail that is comfortable and accessible for a range of users and uses: 83% thought this was well met; 10% didn't have an opinion; 7% did not think this was met well
- Create a direct multiuse trail that provides connections to centers, neighborhoods, and the city's bicycle network: 90% thought this was well met; 5% didn't have an opinion; and 5% did not think this was met well
- Minimize impacts to private properties: 61% thought this was well met; 34% didn't have an opinion; and 5% did not think this was well met
- Create a trail that has the support of the community and is acceptable to the property owners who are impacted by the trail: 68% thought this was well met; 22% didn't have an opinion; 5% did not think this was well met; and one person remarked that this was an “unknown,” and Union Pacific's reaction will be the deciding factor.

Appendix B. I-205 Undercrossing and Connection to Hancock Street Project

The section of the proposed Sullivan's Gulch Trail under I-205 along with a trail connection to NE Hancock Street would provide critical access from the west to Gateway Green, a future park between I-205 and I-84, and provide a connection from the I-205 multiuse path to the on-street bike network. This initial segment does not require access to Union Pacific Railroad property, and will provide important access, even before additional segments of the Sullivan's Gulch Trail are constructed.

The Sullivan's Gulch Trail Concept Plan includes the undercrossing of I-205. This appendix references the conceptual design, property acquisition needs and costs of both the I-205 undercrossing and the connection to NE Hancock Street. The connection to NE Hancock Street is not included in the Sullivan's Gulch Trail alignment documented in the remainder of the concept plan. Given the importance of this connection, construction of this part of segment 11 and the connection to NE Hancock Street is a near term priority for the City of Portland.

Near Term Project Overview

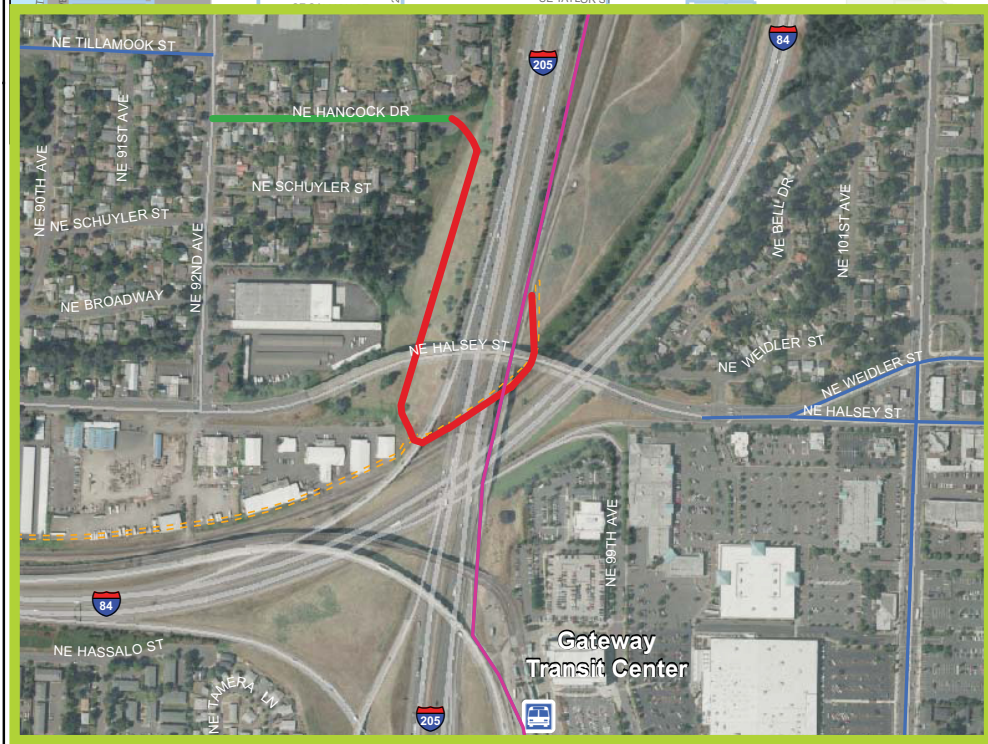
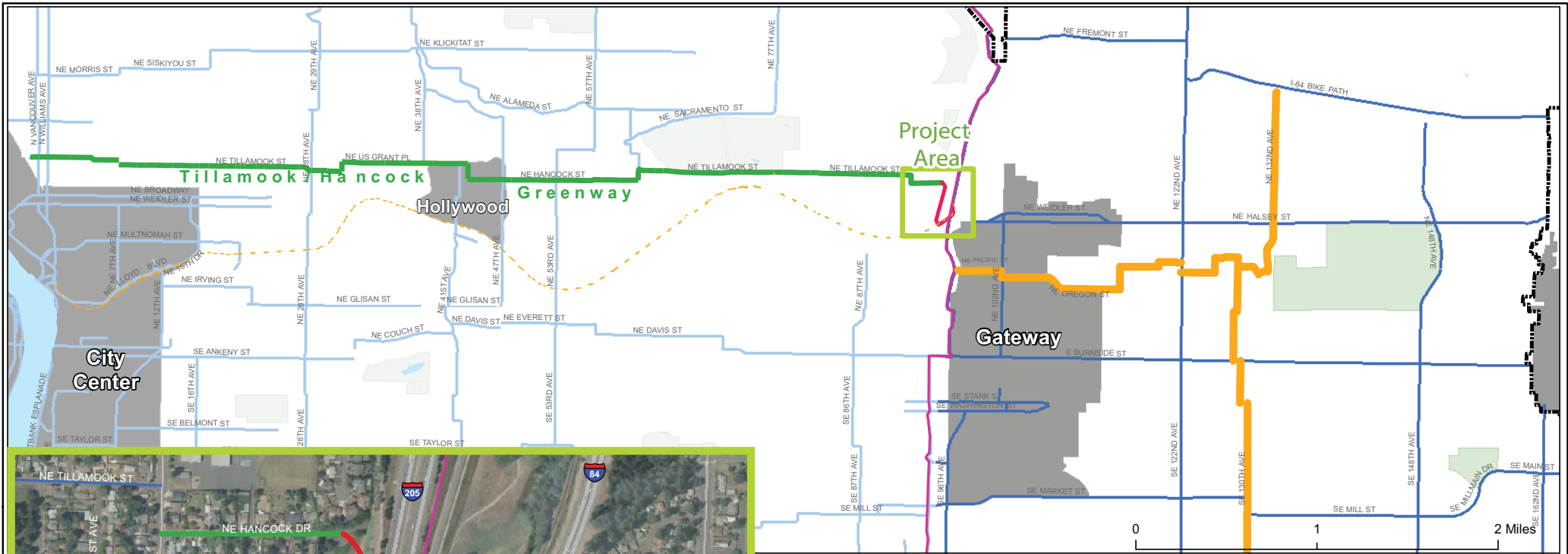
From the I-205 multiuse path, the trail would extend west under I-205 and the I-84 westbound on-ramp. This section of the trail would be constructed on a slope supported by a 10-foot-high retaining wall on ODOT right-of-way. Just west of the I-84 on-ramp, the trail would turn north and follow ODOT right-of-way for about four blocks where it would connect to Hancock Street and the Tillamook-Hancock Greenway. The street connections are shown in Figure B1. This section of the trail would also be constructed on a slope and supported by a five- to-10-foot-high retaining wall. The detail of the proposed alignment is shown in Figure B2.

Property Acquisition

This segment is primarily located on right-of-way owned by ODOT with a small segment near NE Hancock Street on right-of-way owned by the City of Portland.

Cost

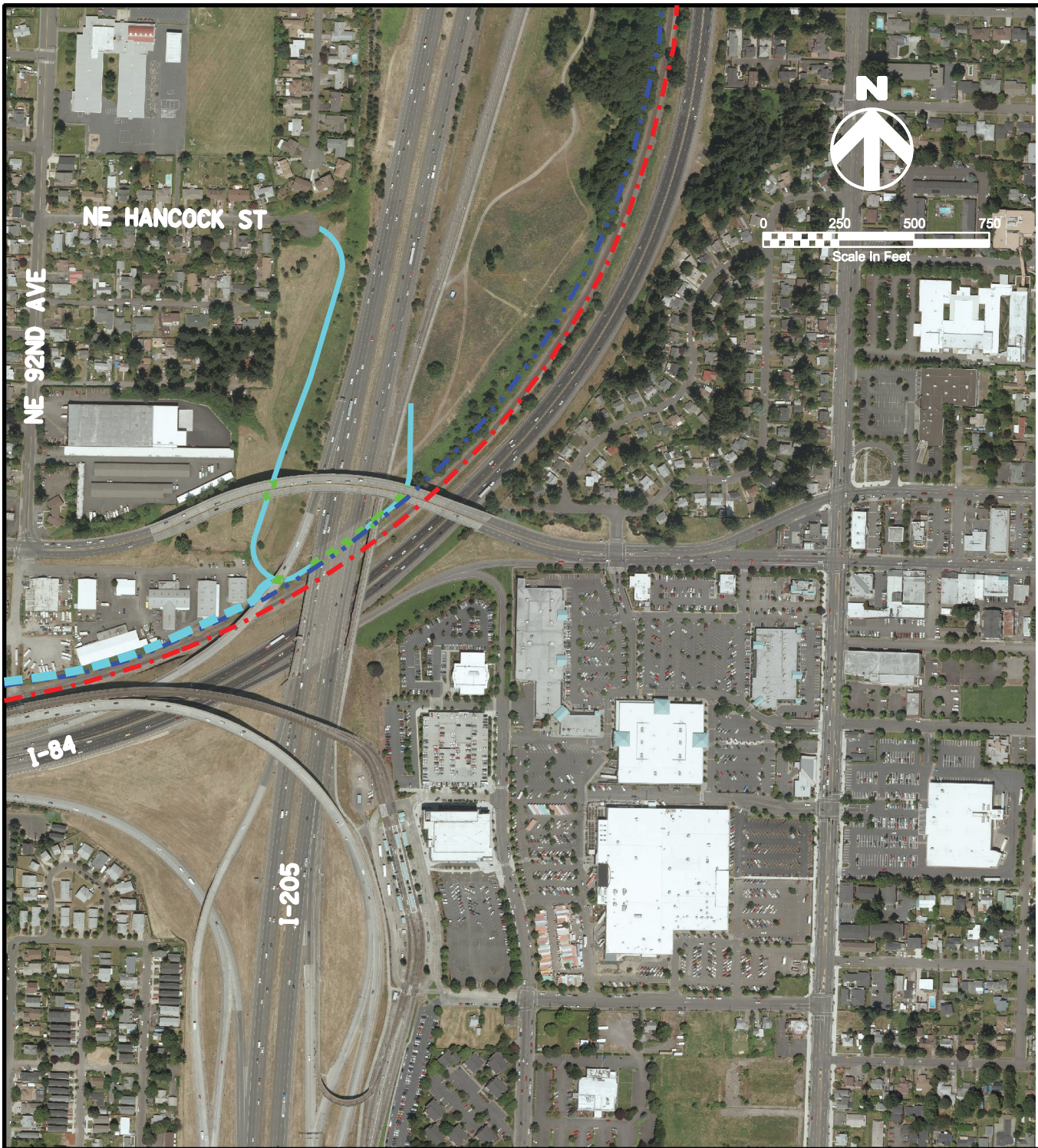
This segment of trail is about 0.4 mile long. It would cost approximately \$1.7 million to construct. This cost estimate does not include right-of-way acquisition.










Proposed Sullivan's Gulch Trail Undercrossing of I-205 and Connection to Tillamook-Hancock Greenway and East Portland

- Proposed Project
- Tillamook-Hancock Greenway
- East Portland Active Transportation (Funded Regional Flexible Funds)
- Existing/Funded Bikeways
- I-205 Path
- - - SGT_Alignment
- Regional Waterbodies
- Regional 2040 Centers
- Parks and Open Spaces
- Transit Centers
- Portland City Limits





LEGEND:

-  *At-Grade Neighborhood Connection*
-  *Ramp to Neighborhood Connection*
-  *Proposed Near-Term Project*
-  *Proposed Sullivan's Gulch Trail Alignment*
-  *Undercrossing*
-  *UPRR Right-of-Way*
-  *UPRR Centerline*

Note:

Additional Connections To The Street Network May Be Feasible And Will Be Considered When Detailed Project Development Work Is Conducted.

**I-205 Undercrossing
& Hancock Street
Connection**