

PORTLAND • TIGARD • TUALATIN

Corridor
Light Rail Project

Southwest Corridor Light Rail Project

Record of Decision

April 2022



Metro

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U.S. Department
of Transportation
Federal Transit Administration

Southwest Corridor Light Rail Project

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Attachments

- A Mitigation Plan (Appendix M of the Final Environmental Impact Statement [EIS])
- B Memorandum of Agreement for Historic and Archaeological Resources (Appendix K of the Final EIS)
- C Biological Opinion (Appendix L of the Final EIS)
- D Final Section 4(f) Evaluation (Appendix D of the Final EIS)
- E U.S. Department of the Interior Concurrence with Section 4(f) Evaluation
- F Final EIS Comments
- G Final EIS Errata

1. DECISION

The Federal Transit Administration (FTA) has determined, pursuant to 23 Code of Federal Regulations (CFR) Part 771 and 40 CFR Parts 1500–1508, that the requirements of the National Environmental Policy Act (NEPA) have been met for the Southwest Corridor Light Rail Project (Project). This Record of Decision (ROD) also provides findings that the Project meets all other environmentally related federal statutory requirements.

FTA is the federal lead agency for the NEPA process, and Metro (the designated Metropolitan Planning Organization for the Portland, Oregon, region) and the Tri-County Metropolitan Transportation District of Oregon (TriMet) are the local co-lead agencies. If the Project receives FTA funding, TriMet would be the direct recipient. The Federal Highway Administration (FHWA) is a cooperating federal agency because the Project would involve the use of land from the federal interstate highway system, which would be subject to FHWA approval. FHWA is expected to base the environmental decision for their approval action on the Environmental Impact Statement (EIS) published for the Project. FTA, Metro, and TriMet conducted the NEPA process with input and assistance from the following:

- Confederated Tribes and Bands of the Yakama Nation
- Confederated Tribes of the Grand Ronde Community of Oregon
- Confederated Tribes of Siletz Indians of Oregon
- Confederated Tribes of the Warm Springs Reservation of Oregon
- Cowlitz Indian Tribe
- Federal Railroad Administration
- National Park Service (NPS)
- National Marine Fisheries Service (NMFS) (also known as NOAA Fisheries)
- U.S. Army Corps of Engineers (USACE)
- U.S. Environmental Protection Agency (USEPA)
- U.S. Fish and Wildlife Service (USFWS)
- Oregon Department of Transportation (ODOT)
- Oregon State Historic Preservation Office (SHPO)
- Clackamas County
- Washington County
- City of Lake Oswego
- City of Portland
- City of Tigard
- City of Tualatin
- Clean Water Services
- Tualatin Valley Water District
- West Multnomah Soil & Water Conservation District

This environmental review process has produced the *Southwest Corridor Light Rail Project Draft Environmental Impact Statement* (Draft EIS) (June 2018) and the *Southwest Corridor Light Rail Project Final Environmental Impact Statement* (Final EIS) (January 2022), and the supporting materials included therein, which are incorporated by reference and collectively referred to as the “environmental review documents.”

This ROD applies to the Project as described in the Final EIS. The Project consists of a light rail investment and related transportation improvements that would serve the southwestern portion of the Portland metropolitan area (see Figure 1-1). The Final EIS focuses on the Preferred Alternative for the light rail investment, which is the lead agencies’ favored course of action to meet the Project’s Purpose and Need.

The Preferred Alternative is a new 11-mile Metropolitan Area Express (MAX) light rail line extending from downtown Portland through southwest Portland and Tigard, terminating near Bridgeport Village in Tualatin. The Preferred Alternative also includes a connection to Marquam Hill, a shuttle route to the Portland Community College (PCC) Sylvania campus, park and rides, streetscape elements, and a new light rail operations and maintenance (O&M) facility. The Final EIS also evaluates two terminus options, which are portions of the Preferred Alternative that could be constructed if there is insufficient funding for the full-length alignment. The related transportation improvements consist of the Ross Island Bridgehead Reconfiguration and station access improvements. These are options for additional access and mobility improvements that could be phased to be built before, with, or after the light rail investment, depending on funding availability, including other federal grants or local funding initiatives.

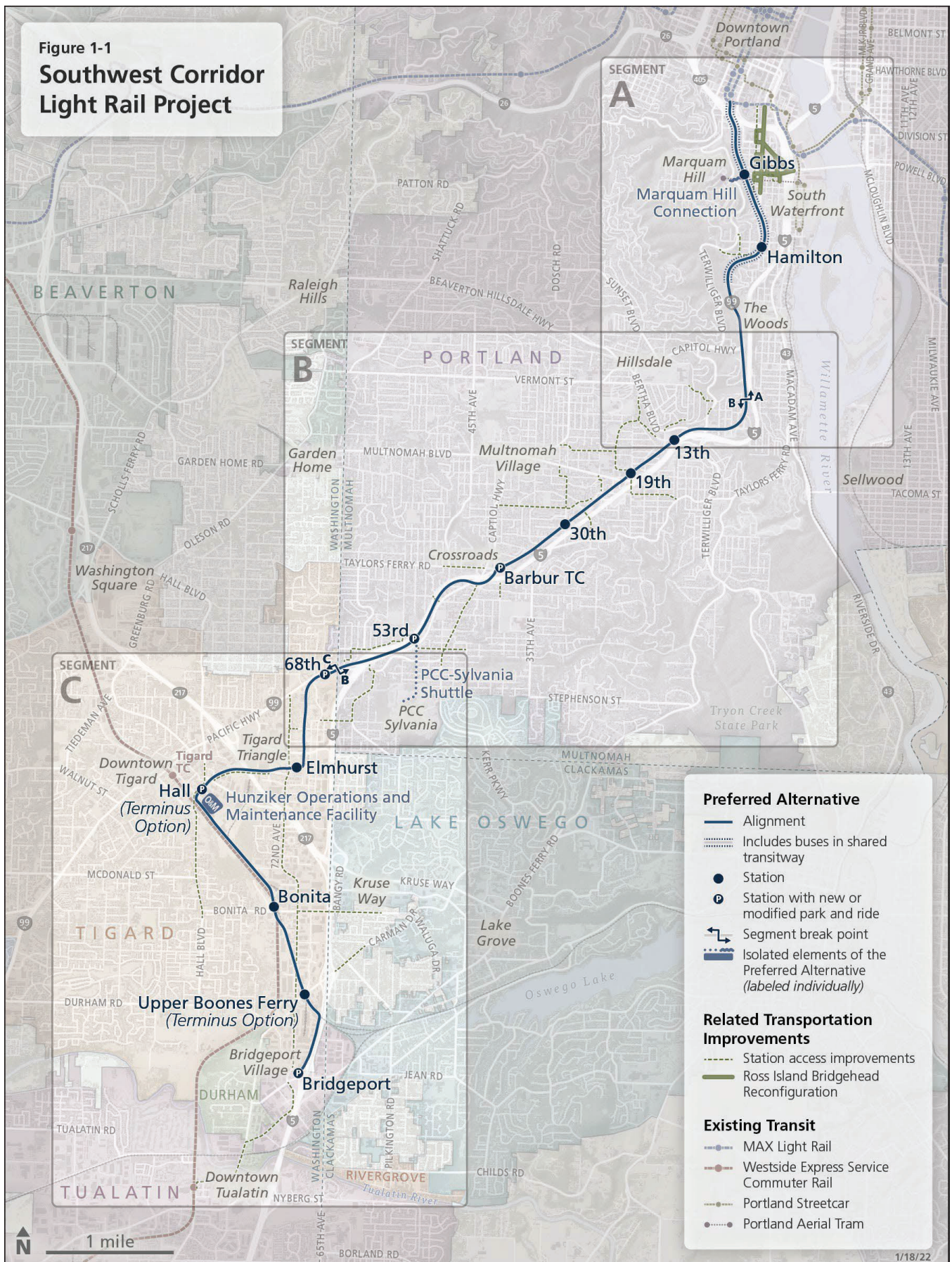
This ROD summarizes the key elements of the Project, background on the Project's development, alternatives considered, opportunities to comment, comments received and responses thereto, the basis for the decision, and the Project's mitigation commitments. The ROD does not supersede or negate any of the information, descriptions, or evaluations provided in the environmental review documents.

This ROD is supported by and includes the following attachments:

- Attachment A, Mitigation Plan (Appendix M of the Final EIS)
- Attachment B, Memorandum of Agreement for Historic and Archaeological Resources (Appendix K of the Final EIS)
- Attachment C, Biological Opinion (Appendix L of the Final EIS)
- Attachment D, Final Section 4(f) Evaluation (Appendix D of the Final EIS)
- Attachment E, U.S. Department of the Interior Concurrence with Section 4(f) Evaluation
- Attachment F, Final EIS Comments
- Attachment G, Final EIS Errata

Figure 1-1

Southwest Corridor Light Rail Project



2. BASIS FOR DECISION

The documents considered in making this decision include the following:

- Metro's *Scoping Summary Report* (2016)
- *Southwest Corridor Light Rail Project Draft EIS* (2018)
- *Southwest Corridor Light Rail Project Final EIS* (2022)
- all attachments to this ROD
- technical memoranda, correspondence, and other documents in the Project's administrative record

2.1. Process

Regional transit extending between downtown Portland, Tigard, and Tualatin was first identified at a conceptual level in Metro's 1982 *Light Rail System Plan*. In 2009, the Southwest Corridor was highlighted as a "near-term regional priority corridor" in Metro's *Regional High Capacity Transit System Plan*, which guided investments in light rail, commuter rail, bus rapid transit, and rapid streetcar in the Portland metropolitan area.

In September 2011, FTA and Metro issued an early scoping notice, which is an optional step prior to starting a project's NEPA process. The notice advised agencies, tribal governments, and the public that Metro and its partners were exploring alternatives for improving transit service between downtown Portland and Sherwood. The early scoping notice was followed by several years of open public study of alternatives for a high capacity transit project and other investment strategies. These efforts were conducted under the supervision of Metro's Southwest Corridor Steering Committee.¹ This planning provided the framework for the Project's Purpose and Need statement and the alternatives considered in the Draft EIS.

The first phase of this planning process concluded in July 2013 with the recommendation of the Shared Investment Strategy for the corridor. In this recommendation, Metro's steering committee proposed further study of a high capacity transit line between Portland and Tualatin via Tigard, using either light rail or bus rapid transit (BRT) running mostly in an exclusive transitway. The Shared Investment Strategy also prioritized roadway and active transportation projects in the corridor, including a set of projects recommended for further study as part of the high capacity transit project.

During the refinement phase of the planning process from 2013 to 2016, Metro's steering committee further developed and narrowed high capacity transit alternatives. In January 2014, the steering committee adopted a preliminary Purpose and Need statement to guide these refinement decisions. At several decision points between 2014 and 2016, the steering committee evaluated and narrowed alignment options for both light rail and BRT. In May 2016, the steering committee selected light rail as the preferred mode for a high capacity transit investment in the corridor. The refinement phase culminated in the

¹ Metro's steering committee for the Southwest Corridor efforts was initially made up of elected officials or other leaders from eight cities (Portland, Lake Oswego, Tigard, Tualatin, Sherwood, Beaverton, King City, and Durham), Multnomah County, Washington County, Metro, TriMet, and ODOT. As the Project was further defined and narrowed, the City of Lake Oswego and Multnomah County left the steering committee because they felt that it was no longer necessary to be part of the committee. Both jurisdictions continued to have the opportunity to have their comments heard through participation in Metro's Joint Policy Advisory Committee on Transportation.

steering committee's endorsement of a proposed range of alternatives for environmental review, which included several light rail alignment options as well as a set of roadway and active transportation projects.

On September 2, 2016, FTA published the Notice of Intent to prepare an Environmental Impact Statement, which initiated the NEPA process. In December 2016, informed by comments received during the scoping period, Metro's steering committee made final refinements to the alternatives considered in the Draft EIS. The Draft EIS, which was published in June 2018, considered the No-Build Alternative, a range of light rail alignment alternatives, and options for additional project elements. It also introduced design refinements that could avoid or minimize certain impacts and presented a draft Preferred Alternative, known as the initial route proposal. After the Draft EIS public comment period, the steering committee recommended a Preferred Alternative for the light rail investment. The Preferred Alternative was then endorsed by multiple partner agencies, approved by the Metro Council, and then adopted into the Regional Transportation Plan (RTP) in December 2018.

On January 28, 2022, FTA, Metro, and TriMet published the Notice of Availability of the Final EIS. The Final EIS evaluated the No-Build Alternative and the Project (incorporating multiple refinements since the selection of the Preferred Alternative).

2.2. Purpose and Need

The purpose of the Southwest Corridor Light Rail Project is to directly connect Tualatin, downtown Tigard, southwest Portland, and the region's central city with light rail, high quality transit, and appropriate community investments in a congested corridor to improve mobility and create the conditions that will allow communities in the corridor to achieve their land use visions. Specifically, the Project aims to, within the Southwest Corridor:

- provide light rail transit service that is cost-effective to build and operate with limited local resources
- serve existing transit demand and significant projected growth in ridership resulting from increases in population and employment in the corridor
- improve transit service reliability, frequency, and travel times, and provide connections to existing and future transit networks including Westside Express Service (WES) Commuter Rail
- support adopted regional and local plans, including the *2040 Growth Concept*, the *Barbur Concept Plan*, the *Tigard Triangle Strategic Plan*, and the *Tigard Downtown Vision* to accommodate projected significant growth in population and employment
- complete and enhance multimodal transportation networks to provide safe, convenient, and secure access to transit and adjacent land uses
- advance transportation projects that increase active transportation and encourage physical activity
- provide travel options that reduce overall transportation costs
- improve multimodal access to existing jobs, housing, and educational opportunities, and foster opportunities for commercial development and a range of housing types adjacent to transit
- ensure benefits and impacts that promote community equity
- advance transportation projects that are sensitive to the environment, improve water and air quality, and help achieve the sustainability goals and measures in applicable state, regional, and local plans

A light rail transit project in the Southwest Corridor is needed to address the following issues:

- Transit service to important destinations in the corridor is limited, and demand for transit is increasing due to growth.
- Limited street connectivity and gaps in pedestrian and bicycle facilities create barriers and unsafe conditions for transit access and active transportation.
- Travel is slow and unreliable on congested roadways.
- There are both a limited supply and a limited range of housing options in the Southwest Corridor that have good access to multimodal transportation networks. In addition, jobs and services are not located near residences.
- Regional and local plans call for high capacity transit in the corridor to meet local and regional land use goals.
- State, regional, and local environmental and sustainability goals require transportation investments to reduce greenhouse gas emissions.

Chapter 5, Evaluation of Alternatives, of the Final EIS discusses how the Project meets its Purpose and Need.

2.3. Alternatives Considered

The Final EIS evaluated the impacts of the Project and the No-Build Alternative, which represents future conditions without the proposed Project. The Draft EIS, published in June 2018, considered a range of alternatives for the Project. The Draft EIS analysis and public comments informed the selection of a Preferred Alternative for the light rail investment in December 2018. The Preferred Alternative was the focus of the Final EIS. The environmental impacts of the other alternatives considered in the Draft EIS were incorporated by reference in the Final EIS.

The alternatives considered are summarized in the following sections. For more detail, see Chapter 2, Alternatives Considered, of the Final EIS.

No-Build Alternative

The No-Build Alternative is the environmental baseline for evaluating the benefits and impacts of the Project. The No-Build Alternative represents transportation and environmental conditions without light rail to connect Portland, Tigard, and Tualatin, and without the roadway, bicycle, and pedestrian improvements included in the proposed light rail investment or the related transportation improvements. It assumes regionally adopted forecasts for future population and employment growth through the year 2035, as well as adopted land use plans and other transportation investments in the region.

Southwest Corridor Light Rail Project

As described in Section 1, the Project consists of a light rail investment and related transportation improvements. The Final EIS focused on the Preferred Alternative for the light rail investment. The Final EIS also evaluated two terminus options, which are portions of the Preferred Alternative that could be constructed if there is insufficient funding for the full-length alignment. Table 2-1 summarizes the elements of the Project.

Table 2-1. Elements of the Southwest Corridor Light Rail Project

Light Rail Investment
Preferred Alternative¹
<ul style="list-style-type: none"> • Light rail alignment: an 11-mile light rail line between downtown Portland and Tualatin via Tigard, which would primarily run at grade, with approximately 2.3 miles of elevated trackway or bridges and one cut-and-cover undercrossing • Stations and park and rides: 13 light rail stations with platforms up to 200 feet long, including five new or modified park and rides with up to 2,020 spaces total, one reconfigured transit center, third tracks at some stations to allow vehicles to dwell (similar to operations with tail tracks), and one pedestrian bridge connecting a station and park and ride • Light rail vehicles: purchase of 32 light rail vehicles (including spare vehicles) to add to the TriMet fleet, which would operate in two-car train sets • Light rail service: service frequencies ranging from 7 to 15 minutes in the forecast year 2035, depending on the location along the alignment and the time of day² • Bus routing changes: elimination or modification of bus routes to improve coverage and service levels and avoid duplicating light rail service (service hours mostly reallocated to other bus routes in the corridor) • Marquam Hill Connection: dual 370-foot-long inclined elevators on an angled structure to make a new pedestrian connection between the Gibbs Station on SW Barbur Blvd. and the medical and educational facilities on Marquam Hill • Shared transitway: 2 miles of paved light rail transitway in South Portland (between SW Lincoln St. and the 4900 block of SW Barbur Blvd.) to allow shared use by buses to and from downtown, with one station for buses located at SW Gibbs St. • PCC-Sylvania Shuttle: shuttle route connecting the PCC-Sylvania campus with the nearby light rail station at SW 53rd Ave., including the purchase of three van-sized shuttle buses • Hunziker O&M Facility: new light rail O&M facility in Tigard to accommodate about 36 light rail vehicles (includes storage for 4 additional vehicles than is needed for the Preferred Alternative to allow for system growth and operations flexibility) • Streetscape elements: modifications to roadways along or intersecting the light rail alignment, including addition or reconstruction of signalized intersections, gated rail crossings, bicycle facilities, sidewalks and water quality treatments
Upper Boones Ferry Terminus Option³
<p>All elements of the Preferred Alternative, except for the following differences:</p> <ul style="list-style-type: none"> • Light rail alignment: a 10-mile light rail line between downtown Portland and Tigard, with approximately 2.1 miles of elevated trackway or bridges and one cut-and-cover crossing • Stations and park and rides: 12 light rail stations, including four new or modified park and rides with 1,060 spaces total
Hall Terminus Option³
<p>All elements of the Preferred Alternative, except for the following differences:</p> <ul style="list-style-type: none"> • Light rail alignment: an 8-mile light rail line between downtown Portland and Tigard, with approximately 1.5 miles of elevated trackway or bridges and one cut-and-cover crossing • Stations and park and rides: 10 light rail stations, including four new or modified park and rides with 1,060 spaces total • Light rail vehicles: purchase of 30 light rail vehicles to add to the TriMet fleet
Related Transportation Improvements⁴
Ross Island Bridgehead Reconfiguration
<p>An option to modify the roads and ramps at the west end of the Ross Island Bridge to reduce regional traffic on SW Naito Pkwy., add new signalized intersections, and add or enhance facilities for walking and bicycling</p>
Station Access Improvements
<p>Options for new walking and bicycling infrastructure to improve access to stations, including sidewalks, bicycle facilities, three pedestrian bridges and one multi-use path on a light rail structure</p>

Note: O&M = operations and maintenance; PCC = Portland Community College; TriMet = Tri-County Metropolitan Transportation District of Oregon.

¹ To allow for comparison with the Draft EIS alignment alternatives, the analysis in this Final EIS separates the discussion of the Preferred Alternative into the alignment and stations for each segment, the Marquam Hill Connection, the PCC-Sylvania Shuttle and the Hunziker O&M Facility.

² 2035 is the forecast year used in the regional travel demand modeling for this Final EIS. Opening year frequencies have not yet been determined.

³ The terminus options are portions of the Preferred Alternative that could be constructed if there is insufficient funding for the full-length alignment.

⁴ The related transportation improvements are options for additional access and mobility improvements that could be phased to be built before, with or after the light rail investment, depending on funding availability, including other federal grants or local funding initiatives.

Preferred Alternative

The Preferred Alternative would extend the existing MAX network with a new 11-mile light rail line serving southwest Portland, Tigard, and Tualatin. The light rail alignment would generally be either center-running within existing or new streets, or adjacent to existing roadways or railroads. The Preferred Alternative would extend MAX Green Line service from its southern terminus along the Portland Transit Mall at SW Fifth Avenue and SW Jackson Street (near Portland State University).

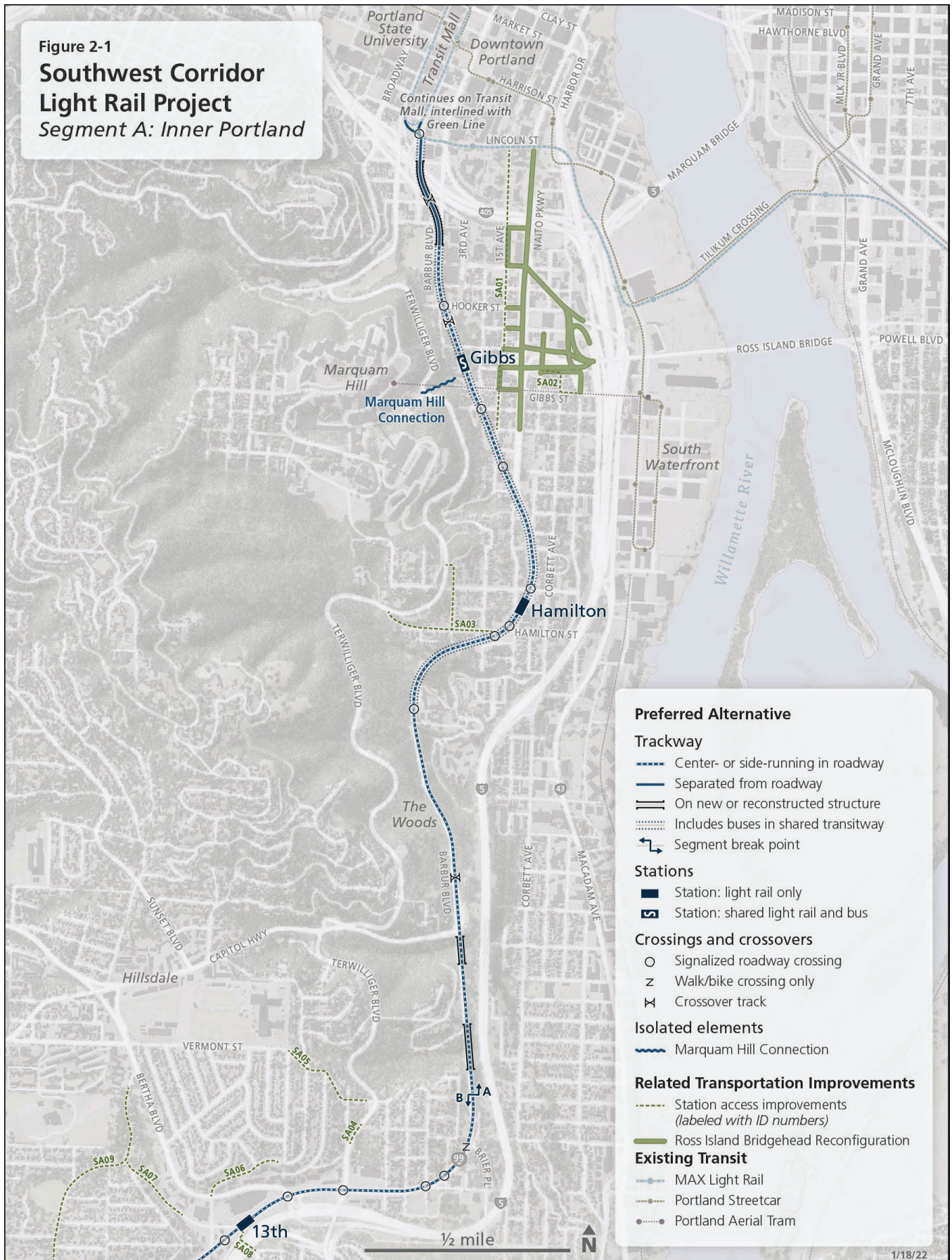
The Preferred Alternative would construct 13 new light rail stations: Gibbs Station, Hamilton Station, 13th Station, 19th Station, 30th Station, Barbur Transit Center Station, and 53rd Station in Portland; 68th Station, Elmhurst Station, Hall Station, Bonita Station, and Upper Boones Ferry Station in Tigard; and Bridgeport Station in Tualatin. The Preferred Alternative would include up to 2,020 park and ride spaces at five new or modified park and rides located at the Barbur Transit Center, 53rd, 68th, Hall, and Bridgeport Stations.

The Preferred Alternative would include new or rebuilt roadways and bridges as well as accompanying streetscape elements such as sidewalks, bicycle facilities, landscape buffers, and lighting. The Preferred Alternative would include a new inclined elevator connection to the educational and medical facilities on Marquam Hill, a shuttle route between the 53rd Station and the PCC-Sylvania campus, and a new light rail O&M facility in Tigard (the Hunziker O&M Facility). For nearly 2 miles of the light rail line along SW Barbur Boulevard, the Preferred Alternative would have a shared transitway to accommodate buses as well as light rail.

The Preferred Alternative is divided geographically into three segments for analysis purposes: Segment A, Inner Portland; Segment B, Outer Portland; and Segment C, Tigard and Tualatin.² Figures 2-1 through 2-3 show a map of the Preferred Alternative for each geographic segment.

² To allow for comparison with the Draft EIS alignment alternatives, the analysis in the Final EIS separates the discussion of the Preferred Alternative into the alignment and stations for each segment, the Marquam Hill Connection, the PCC-Sylvania Shuttle, and the Hunziker O&M Facility. The term “alignment and stations” in the Final EIS covers all of the fixed physical elements needed for light rail to operate, including the light rail trackway and shared transitway, overhead catenary wires and poles, stations, park and rides, transit centers, bus stops, streetscape elements, and other associated infrastructure such as systems buildings and stormwater treatment and detention facilities.

Figure 2-1
Southwest Corridor
Light Rail Project
Segment A: Inner Portland



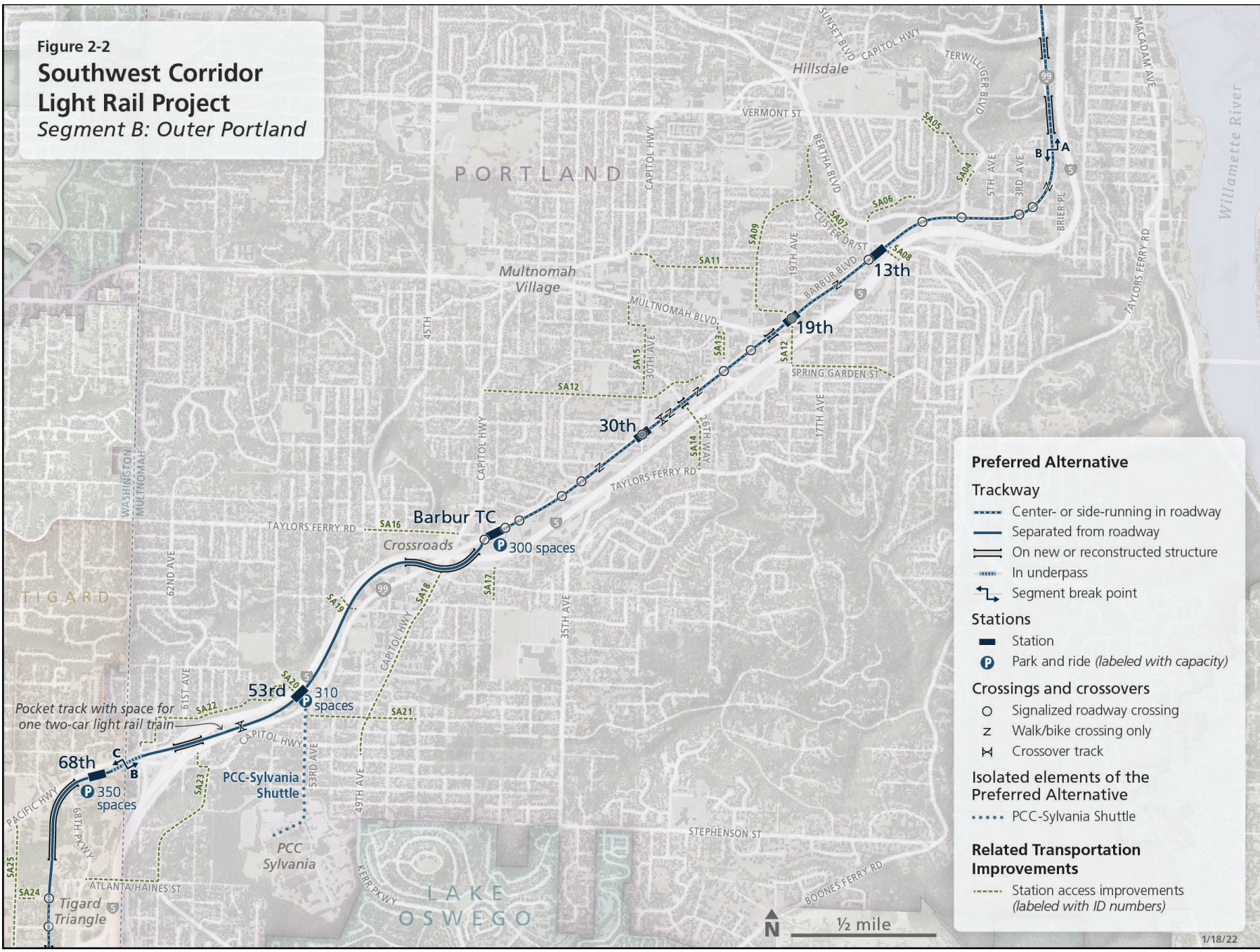
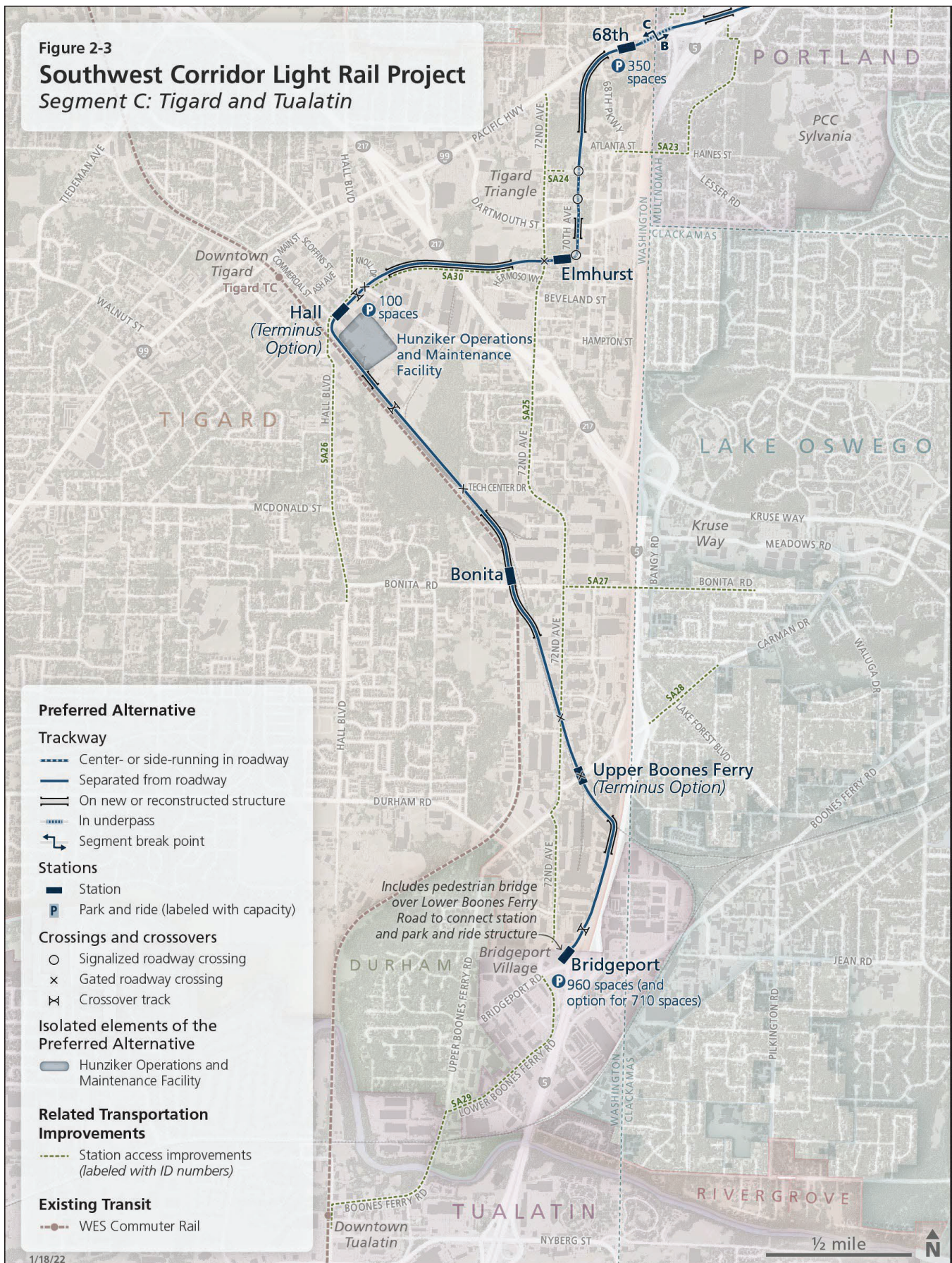


Figure 2-3

Southwest Corridor Light Rail Project Segment C: Tigard and Tualatin



Terminus Options

The Final EIS considers two terminus options for phasing the construction of the Preferred Alternative in the event that there is insufficient funding to construct the full length of the alignment (see Figure 2-3):

- Upper Boones Ferry Terminus Option
- Hall Terminus Option

In accordance with FTA's Capital Investment Grants Program guidance (FTA Circular C-9300.1B), a project that would construct a portion of a preferred alternative, referred to as a minimum operable segment, "must be able to function as a stand-alone project and not be dependent on any future segments being constructed". Either terminus option could meet these requirements and function as a minimum operable segment. If, at a later date, additional funding were identified, either terminus option could ultimately be extended to build the full-length Preferred Alternative alignment described in the Final EIS.

The Upper Boones Ferry Terminus Option is defined as a 10-mile alignment with 12 stations, terminating at the Upper Boones Ferry Station. The Hall Terminus Option is defined as an 8-mile alignment with 10 stations, terminating at the Hall Station, but including trackway extending beyond the station to access the adjacent Hunziker O&M Facility. Both terminus options would include the Marquam Hill Connection, the PCC-Sylvania Shuttle and the Hunziker O&M Facility.

Related Transportation Improvements

The related transportation improvements are options for additional access and mobility improvements, separate from the light rail investment, that would extend the benefits of light rail. The related transportation improvements consist of:

- **Ross Island Bridgehead Reconfiguration.** This is an option to improve neighborhood access to light rail in South Portland. It would supplement the circulation changes made by the Preferred Alternative in South Portland with several measures to improve circulation for bicycles, pedestrians, and local vehicles.
- **Station access improvements.** These are 30 options for walking and bicycling investments that would enhance access to the light rail stations with the Preferred Alternative. The improvements include adding bikeways, sidewalks, enhanced pedestrian crossings, and pedestrian bridges or multi-use paths over Interstate 5 (I-5) and Highway 217.

These optional improvements could be phased to be built before, concurrent with, or after the light rail investment, depending on funding availability, including other federal grants or local funding initiatives.

Draft EIS Light Rail Alternatives

The Draft EIS considered a range of alternatives and options for the light rail investment and related transportation improvements. These alternatives included:

- **Segment A alignment alternatives.** The Draft EIS considered three alignment alternatives in Segment A, which included two locations for the light rail alignment, either on SW Barbur Boulevard or on SW Naito Parkway. All Draft EIS alignment alternatives in Segment A would run on SW Barbur Boulevard south of SW Naito Parkway. For the alignment alternatives on SW Naito Parkway, the

Draft EIS studied two different approaches for the configuration of the roads and ramps that access the west end of the Ross Island Bridge.

- **Segment B alignment alternatives.** The Draft EIS considered four alignment alternatives in Segment B that would be located in the center of SW Barbur Boulevard, adjacent to I-5, or a combination of the two. All Draft EIS alignment alternatives in Segment B would turn south near SW 60th Avenue and cross into the Tigard Triangle (the triangle-shaped area bounded by I-5, Highway 217, and Pacific Highway) on a light rail structure over I-5.
- **Segment C alignment alternatives.** The Draft EIS studied six alignment alternatives in Segment C that would use two different route configurations: a “Through Route” to Bridgeport Village via downtown Tigard or a “Branched Route” with a split in the Tigard Triangle, where some trains would continue south to Bridgeport Village while others would turn west to serve downtown Tigard. In the Tigard Triangle and downtown Tigard area, the Draft EIS considered three alignments: Ash, Clinton, and Wall. Between downtown Tigard and Bridgeport Village, the Draft EIS considered two alignments: adjacent to the railroad and adjacent to I-5.
- **Marquam Hill connection options.** The Draft EIS considered four options for connecting to Marquam Hill, including various combinations of bridges, elevators, pathways, and pedestrian tunnels.
- **PCC-Sylvania shuttle options.** The Draft EIS included two options for the route of a shuttle to connect to PCC-Sylvania, either connecting to the Barbur Transit Center and Baylor Stations or to the 53rd Station.
- **O&M facility options.** The Draft EIS included three options for the location of a new O&M facility, all located in Tigard.
- **Station access improvement options.** The Draft EIS considered 29 options for constructing sidewalks, safe crossings, bikeways, and pedestrian bridges to improve access to the proposed light rail stations.

The Draft EIS also introduced six design refinements that could avoid or minimize certain impacts, and presented a draft Preferred Alternative, known as the initial route proposal.

2.4. Environmentally Preferred Alternative

All of the light rail alternatives considered in the Draft EIS and Final EIS would advance environmental and sustainability goals of the state and region by reducing vehicle miles traveled and greenhouse gas emissions. They also would support local and regional land use plans that call for high capacity transit and for reducing people’s reliance on automobiles, and all would improve the availability and reliability of public transportation for people in the corridor. These characteristics make all of the light rail alternatives environmentally preferable to the No-Build Alternative.

The Preferred Alternative was the focus of the Final EIS. The Draft EIS analysis and public comments informed the selection of the Preferred Alternative and refinements to the project design to further minimize impacts. Table 2-2 compares the quantified range of long-term impacts of the Draft EIS light rail alternatives to the quantified long-term impacts of the Preferred Alternative. As shown in Table 2-2, the impacts of the Preferred Alternative would be fewer than or similar to the range of impacts of the Draft EIS

light rail alternatives. For more information, see Chapter 5, Evaluation of Alternatives, of the Final EIS. Attachment D to this ROD, Final Section 4(f) Evaluation also includes the analysis supporting FTA's determination that the Preferred Alternative would have the least overall harm based on the seven factors set forth in 23 CFR 774.3(c)(1).

Table 2-2. Full-Corridor Comparison of Quantitative Long-Term Impacts

EIS Section/Resource	Impact	Draft EIS Light Rail Alternatives ¹	Preferred Alternative
3. Transportation	Intersections with operations exceeding V/C ratio targets	19–24 intersections	14 intersections
	Impacts due to queue lengths ²	9–11 queuing impacts	3–4 queuing impacts
4.1 Acquisitions, Displacements and Relocations	Residential displacements	78–293 residential units	95 residential units
	Business displacements	106–156 businesses	114 businesses
4.2 Land Use	Acres of land converted to transportation use	64.4–91.5 acres	77.6 acres
4.3 Economics	Affected employees	961–2,284 employees	1,418 employees
4.6 Historic and Archaeological Resources	Anticipated adverse effects to historic properties (includes partial acquisitions and parks)	14–27 adverse effects	11 adverse effects
4.9 Ecosystems	Permanent wetland impacts	1.3–1.6 acres	1.3 acres
4.11 Noise and Vibration	Severe noise impacts	Up to 24	12
	Moderate noise impacts	Up to 572	169
	Vibration impacts	Up to 126	34
4.14 Hazardous Materials	Affected sites with higher risk for hazardous materials	5–8 sites	7 sites

Note: EIS = Environmental Impact Statement; V/C = volume-to-capacity.

¹ This information is based on the range of impacts of the alignment alternatives from each segment, as well as the Marquam Hill connection options, the PCC-Sylvania shuttle options, and the operations and maintenance facility options.

² Queue length refers to the length of the line of vehicles when there is a delay at an intersection. The typical impacts of concern involve queuing that blocks adjacent intersections, or when queuing backups extend to the deceleration zone of highway off-ramps or into freeway lanes.

3. IMPACTS AND MITIGATION MEASURES

This section provides a summary of the Project's environmental impacts, mitigation measures to address the adverse impacts, and monitoring and enforcement of the mitigation commitments.

3.1. Environmental Impacts of the Project

Preferred Alternative and Terminus Options

Table 3-1 summarizes notable long-term impacts associated with the Preferred Alternative, Upper Boones Ferry Terminus Option, and Hall Terminus Option. More information about the impacts of the Preferred Alternative and terminus options is available in the Final EIS.

Table 3-1. Summary of Notable Long-Term Impacts of the Preferred Alternative and Terminus Options

EIS Section/ Resource	Impact Description	Preferred Alternative	UBF Terminus Option	Hall Terminus Option
3 Transportation	Intersections with operations exceeding mobility target	14 intersections	14 intersections	14 intersections
	Impacts due to queue lengths that would require mitigation ¹	3–4 queuing impacts	2 queuing impacts	2 queuing impacts
4.1 Acquisitions, Displacements and Relocations	Residential displacements	95 residential units	95 residential units	95 residential units
	Business displacements	114 businesses	113 businesses	105 businesses
4.2 Land Use	Acres of land converted to transportation use	77.6 acres	75.6 acres	68.9 acres
4.3 Economics	Affected employees	1,418 employees	1,413 employees	1,281 employees
4.4 Communities	Neighborhood cohesion, neighborhood quality of life, community facilities	Parking impacts at two churches, displacement of two childcare facilities	Parking impacts at two churches, displacement of two childcare facilities	Parking impacts at two churches, displacement of one childcare facility
4.5 Visual Quality	Overall visual impact	High for Marquam Hill Connection and Moderate/High in Tigard Triangle (Low to Moderate elsewhere)	High for Marquam Hill Connection and Moderate/High in Tigard Triangle (Low to Moderate elsewhere)	High for Marquam Hill Connection and Moderate/High in Tigard Triangle (Low to Moderate elsewhere)
4.6 Historic and Archaeological Resources	Anticipated adverse effects to historic properties (<i>including partial acquisitions and historic parks</i>)	11 adverse effects	11 adverse effects	11 adverse effects
4.7 Parks and Recreation Resources	Parks with partial acquisitions or easements	4 parks	4 parks	4 parks
4.8 Geology, Soils and Hydrogeology	No significant adverse impacts	N/A	N/A	N/A
4.9 Ecosystems	Permanent wetland impacts	1.3 acres	1.3 acres	0.6 acre
4.10 Water Resources	Floodplain and floodway impacts	Bridge columns placed within the mapped floodplain and assumed floodway	Bridge columns placed within the mapped floodplain and assumed floodway	Bridge columns placed within the mapped floodplain and assumed floodway
4.11 Noise and Vibration	Severe noise impacts	12	12	12
	Moderate noise impacts	169	169	169
	Vibration impacts	34	34	34
4.12 Air Quality and Greenhouse Gases	No significant adverse impacts	N/A	N/A	N/A
4.13 Energy	No significant adverse impacts	N/A	N/A	N/A
4.14 Hazardous Materials	Acquired sites with contamination issues	7 sites	6 sites	6 sites
4.15 Utilities	No significant adverse impacts	N/A	N/A	N/A
4.16 Public Services	No significant adverse impacts	N/A	N/A	N/A
4.17 Safety and Security	No significant adverse impacts	N/A	N/A	N/A

Note: N/A = not applicable; UBF = Upper Boones Ferry.

¹ Queue length refers to the length of the line of vehicles when there is a delay at an intersection. The typical impacts of concern involve queuing that blocks adjacent intersections, or when queuing backups extend to the deceleration zone of highway off-ramps or into freeway lanes.

Related Transportation Improvements

Ross Island Bridgehead Reconfiguration

The Ross Island Bridgehead Reconfiguration would result in changed traffic patterns and increased connectivity of local streets, and additionally it would involve limited property acquisitions and associated environmental impacts. The Ross Island Bridgehead Reconfiguration would result in three impacts to motor vehicle operations for which mitigation is proposed. The Ross Island Bridgehead Reconfiguration would also result in changes to traffic noise as a result of realigning roadways; further analysis would be completed based on final design.

The Ross Island Bridgehead Reconfiguration would not require full property acquisitions and would not displace any existing residents or businesses, though it would require partial parcel acquisitions. The Ross Island Bridgehead Reconfiguration would not result in long-term adverse impacts to public parks or historic properties.

The benefits of the Ross Island Bridgehead Reconfiguration would include reducing the barrier effect of SW Naito Parkway within the South Portland neighborhood, improving walking and bicycling access, and rerouting regional traffic off of local residential streets.

Station Access Improvements

The impacts of the station access improvements would be minor because they are anticipated to be constructed within existing right of way. One station access improvement, a pedestrian bridge over I-5 at the 13th Station (SA08), would require a permanent easement where the bridge would cross over a portion of Burlingame Park (see Appendix D, Final Section 4(f) Evaluation, of the Final EIS for more information).

The station access improvements would provide improved safety and access for people walking and bicycling, including providing new routes across existing barriers such as I-5 and Highway 217.

3.2. Measures to Avoid, Minimize, and Mitigate Adverse Impacts

Measures to avoid, minimize, and mitigate the impacts of the Project are presented in the Final EIS and are summarized in Attachment A, Mitigation Plan, to this ROD. Implementation of the mitigation measures is a condition of this ROD. Section 3.3 identifies TriMet's commitments to report on its progress toward implementing these mitigation measures.

FTA finds that, with the accomplishment of these mitigation measures, all practicable means to avoid or minimize environmental harm from the selected alternative will have been taken.

3.3. Monitoring and Enforcement

The Project is subject to the monitoring and enforcement requirements in 40 CFR 1505.2(a)(3). To ensure compliance with the Project's mitigation commitments and to assist with FTA oversight, TriMet will establish a mitigation monitoring program for the Project, to be approved by FTA, which will track, monitor, and report the status of the environmental mitigation actions identified in the ROD. On a quarterly basis, TriMet will submit a status report describing the status of the monitoring program to FTA. The monitoring program may, upon FTA approval, be revised during the final design, permitting, and construction process as warranted in order to implement similar effective mitigation monitoring.

4. OPPORTUNITIES TO COMMENT

Public and agency involvement has been integral to the Project’s decision-making process since the early scoping notice in 2011. Table 4-1 summarizes the opportunities to comment through the various phases of the Project leading up to this ROD. As required by NEPA, FTA, TriMet, and Metro responded to public and agency comments received during the Draft EIS comment period (see Appendix J, Draft EIS Comments and Responses, of the Final EIS). In addition, FTA, TriMet, and Metro received comments during the 30-day waiting period after the Notice of Availability of the Final EIS on January 28, 2022 (see Attachment F, Final EIS Comments, to this ROD). Seven individuals contacted FTA, TriMet, or Metro during the waiting period. One of the individuals raised a question about specific noise mitigation at a property on SW Barbur Boulevard, which resulted in the issuance of errata documentation that is included in Attachment G, Final EIS Errata to this ROD. The remaining individuals did not comment to this ROD but requested information about how their individual properties would be affected and asked general questions about future project development. TriMet or Metro responded directly to those individuals.

For more information on public and agency involvement, see Chapter 6, Public Involvement, Agency Coordination and Required Permits, of the Final EIS.

Table 4-1. Summary of Opportunities for Public and Agency Involvement (*multipage table*)

Topic	Time Period	Decisions Informed	Public Notices and Involvement Opportunities	Agency Involvement Opportunities
Early scoping, initial project planning, and project refinement	2011 to 2016	<ul style="list-style-type: none"> light rail as the preferred high capacity transit mode for the Project recommendation of light rail alignments and related transportation improvements for study in the Draft EIS 	<ul style="list-style-type: none"> community focus groups briefings forums workshops public meetings surveys interactive maps partnership with local organizations and service providers public testimony at the steering committee’s public meetings 	<ul style="list-style-type: none"> An early scoping notice in September 2011 advised agencies and tribal governments that Metro and its partners were exploring alternatives for improving transit service in the corridor. Partner agencies were involved through Metro’s steering committee as well as at multiple levels of staff groups.
EIS scoping period	September 2 to October 3, 2016	<ul style="list-style-type: none"> refinements to the range of alternatives to consider in the Draft EIS environmental resources to study in the EIS Purpose and Need statement for the Project 	<ul style="list-style-type: none"> email notices online Metro News stories two public online surveys five briefings at neighborhood association meetings public scoping meeting 	<ul style="list-style-type: none"> Comments were solicited in email notices to potentially interested agencies and tribal governments, and an agency and tribal scoping meeting was offered.
Initial route proposal development	2017 to 2018	<ul style="list-style-type: none"> development of design refinements to avoid or minimize impacts and reduce costs of Draft EIS alternatives selection of a draft Preferred Alternative for identification in the Draft EIS 	<ul style="list-style-type: none"> project steering committee and CAC meetings public forums briefing books about each choice a project mailing/newsletter project website and social media postings briefings with business and neighborhood associations ongoing public awareness events such as tabling and presentations 	<ul style="list-style-type: none"> Partner agencies were involved through Metro’s steering committee as well as at multiple levels of staff groups.

Table 4-1. Summary of Opportunities for Public and Agency Involvement (*multipage table*)

Topic	Time Period	Decisions Informed	Public Notices and Involvement Opportunities	Agency Involvement Opportunities
			<ul style="list-style-type: none"> individual meetings and door-to-door visits with potentially impacted property and business owners targeted outreach to minority and low-income populations 	
Draft EIS comment period	June 15 to July 30, 2018	<ul style="list-style-type: none"> selection of Preferred Alternative 	<ul style="list-style-type: none"> email notices letters to property owners potentially affected by acquisitions postcards to addresses within approximately 0.25 mile of the light rail alignment alternatives and design refinements notices at major bus stops newspaper advertisements two open house events (including translation services) two public hearings one multilingual event/hearing four informational hours at libraries near the proposed alignments 24 association, commission, or organization visits by project partner staff 	<ul style="list-style-type: none"> Comments were solicited in email notices to cooperating and participating agencies and tribal governments, Section 106 consulting parties, and other potentially interested agencies.
Project refinements	2018 to 2020	<ul style="list-style-type: none"> refinements in the Crossroads area¹ selection of Marquam Hill Connection refinements to park and rides preliminary design details, as documented in the CDR 	<ul style="list-style-type: none"> project steering committee and CAC meetings three Crossroads area community meetings letters to potentially affected property owners in the Crossroads area Marquam Hill Connection Green Ribbon Committee meetings two Marquam Hill Connection open houses postcards to property owners and households within 0.5 mile of the light rail alignment online CDR open house two in-person CDR open houses social media posts and videos 22 CDR presentations to interested organizations 	<ul style="list-style-type: none"> Partner agencies were involved through Metro's steering committee as well as at multiple levels of staff groups. Certain agencies also participated in the Marquam Hill Connection Work Group and Green Ribbon Committee.
Section 4(f) and Section 106 public comment period	December 17, 2020, to January 19, 2021	<ul style="list-style-type: none"> Section 4(f) determinations and mitigations Section 106 determinations of eligibility, findings of effect, and mitigations 	<ul style="list-style-type: none"> email to TriMet's interested parties list virtual public meeting opportunities to comment on TriMet's project website and at the virtual meeting 	<i>N/A (separate process for tribal and agency consultation)²</i>

Table 4-1. Summary of Opportunities for Public and Agency Involvement (*multipage table*)

Topic	Time Period	Decisions Informed	Public Notices and Involvement Opportunities	Agency Involvement Opportunities
Final EIS waiting period	January 28 to February 28, 2022	· ROD issuance	· email to TriMet’s interested parties list · letters to property owners potentially affected by acquisitions · emails or letters to Draft EIS commenters · newspaper advertisements	Metro and FTA sent notifications of the Final EIS publication to cooperating and participating agencies and tribal governments, Section 106 consulting parties, and other potentially interested agencies.

Note: CAC = community advisory committee; CDR = Conceptual Design Report; EIS = Environmental Impact Statement; N/A = not applicable; ROD = Record of Decision.

¹ Crossroads is the area at the intersection of SW Barbur Boulevard and SW Capitol Highway (near the Barbur Transit Center).

² For more information on tribal and agency consultation under Section 4(f) and Section 106, see Appendix D, Final Section 4(f) Evaluation, and Appendix E, Agency Coordination and Correspondence, of the Final EIS.

5. DETERMINATION AND FINDINGS

This section describes FTA’s NEPA determination for the Project, as well as FTA’s findings for other federal environmental requirements. The determination and findings are supported by the analysis in the Project’s Final EIS, which is summarized in Section 3 of this ROD, and Attachment A to this ROD, which lists mitigation measures that will be incorporated into the Project.

5.1. National Environmental Policy Act and Executive Order 11514 Protection and Enhancement of Environmental Quality

Title 42, Sections 4321 through 4347 and 4372 through 4375 of the United States Code (USC), as well as Executive Order 11514, Protection and Enhancement of Environmental Quality, require that federal agencies evaluate the environmental impacts of their actions, integrate such evaluations into their decision-making processes, and implement appropriate policies.

The environmental record for the Project includes the Draft EIS (2018), the Final EIS (2022), and the supporting materials incorporated therein. Those documents represent the detailed statements required by NEPA and describe:

- the environmental impacts of the Project
- the adverse environmental impacts that cannot be avoided if the Project is implemented
- alternatives to the Project
- irreversible and irretrievable commitments of resources that will be involved if the Project is implemented

Having carefully considered the environmental record; mitigation commitments (summarized in Attachment A to this ROD); tribal, agency, and public comments; and the findings below, FTA has determined that:

- The environmental review documents include a record of the environmental impacts of the Project; adverse environmental impacts that cannot be avoided; alternatives to the Project; and irreversible and irretrievable impacts on the environment.

- The environmental process included cooperation and consultation with USEPA Region 10, per the requirements of Section 309 of the Clean Air Act.
- All reasonable steps have been taken to minimize the adverse environmental impacts of the Project.
- The Project meets its Purpose and Need and the requirements of NEPA.

5.2. Clean Air Act

Under the Clean Air Act, USEPA has established National Ambient Air Quality Standards (NAAQS), which specify maximum allowable concentrations for certain criteria pollutants (42 USC §§ 7401–7431). Proposed transportation projects requiring federal funding or approval must demonstrate compliance with USEPA’s Transportation Conformity Rule (40 CFR Part 93). This rule requires showing that a project will not cause or contribute to any new violation of any NAAQS, increase the frequency or severity of any existing NAAQS violations, or delay timely attainment of the NAAQS.

The Project meets project-level air quality conformity in accordance with state and federal regulations as follows:

- The Project is included in the region’s 2018 update of the RTP and in the 2021–2024 Metropolitan Transportation Improvement Plan (MTIP). FTA and FHWA, in consultation with USEPA, have found that the RTP and the MTIP conform to the State Implementation Plan, in accordance with the Clean Air Act.
- The Project would not cause or contribute to any localized violation of the NAAQS. Carbon monoxide emissions are projected to be lower in 2035 than today, and the Final EIS estimates that the Preferred Alternative will result in fewer emissions than the No-Build Alternative.³ For all other criteria pollutants besides carbon monoxide, the Portland region is in compliance.

5.3. Clean Water Act Sections 401 and 402

Clean Water Act (CWA) (33 USC § 1251 et seq.) Sections 401 and 402 address discharges into surface water and construction-related stormwater management. Section 401 provides for USEPA certification (delegated to the state) that a project’s discharges to water or to wetlands will meet state water quality standards. Under Section 402, a discharge of domestic or industrial wastewater into surface water requires a National Pollutant Discharge Elimination System permit, including a General Construction Permit for applicable construction activities. TriMet will obtain the required Section 401 and 402 permits from applicable regulators before commencing construction activities and will abide by the permit conditions.

Accordingly, FTA finds that, with the mitigation measures identified in Attachment A to this ROD, the Project meets the requirements of Sections 401 and 402 of the CWA.

³ After the completion of two consecutive 10-year maintenance plans, the Portland area maintenance period ended in October 2017, and transportation conformity no longer applies for the NAAQS for carbon monoxide. However, the terms of the State Implementation Plan for maintenance remain in effect. For example, the region must continue to comply with transportation control measures and all measures and requirements contained in the State Implementation Plan until the state submits a revision to the plan and it is approved by the USEPA.

5.4. Clean Water Act Section 404 and Executive Order 11990, Protection of Wetlands

The CWA establishes the basic structure for regulating discharges of pollutants (including dredged materials) into the waters of the United States and for regulating quality standards for surface waters. Section 404 of the CWA applies to the Project's wetland and stream impacts and stormwater discharges. TriMet must obtain a Section 404 permit from the USACE and may also need other state and local permits. The Project will meet all requirements arising from these permits.

Executive Order 11990 requires federal agencies to prepare wetland assessments for proposed actions located in or affecting wetlands. Agencies must avoid undertaking new construction in wetlands unless no practicable alternative is available and the proposed action includes all practicable measures to minimize harm to wetlands.

Regulatory compliance measures (e.g., permitting under Sections 404/401 of the CWA) and adopted mitigation measures will be implemented to minimize adverse impacts on wetlands. Accordingly, FTA finds that, with the mitigation measures identified in Attachment A to this ROD, the Project meets the requirements of Section 404 of the CWA and Executive Order 11990 on Protection of Wetlands.

5.5. Fish and Wildlife Coordination Act

The Fish and Wildlife Coordination Act (16 USC §§ 661–667) requires consultation with the USFWS whenever the waters of channel of a body of water are modified by a department or agency of the United States, with a view to the conservation of wildlife resources.

Based on USFWS data and field assessment, no critical or suitable habitat for the species listed as protected by the Fish and Wildlife Coordination Act occurs in the project area. Due to lack of critical or suitable habitat for protected species under the Fish and Wildlife Coordination Act, no formal consultation with the USFWS was required. Accordingly, FTA finds that the Project meets the requirements of the Fish and Wildlife Coordination Act.

5.6. Executive Order 11988, Floodplain Management

Executive Order 11988 for Floodplain Management directs federal agencies to avoid direct or indirect support of floodplain development wherever there is a practicable alternative. To approve an action in a floodplain, the federal agency must find that it is the only practicable alternative and, prior to taking action, must design or modify the action in order to minimize potential harm to or within the floodplain.

U.S. Department of Transportation (USDOT) Order 5650.2 implements Executive Order 11988 and gives further detailed procedural directions. The USDOT order requires analysis of floodplain impacts to identify whether or not the action would result in a significant encroachment. If a significant encroachment is identified for a proposed project, USDOT cannot approve the project unless it is the only practicable alternative.

The Preferred Alternative would involve development within a floodplain from two crossings of Red Rock Creek where there is a mapped floodplain approved by the Federal Emergency Management Agency (FEMA). The Project therefore requires approval from FEMA though the process defined in 44 CFR 65.12. The northern crossing of Red Rock Creek would place piles and substructural support elements within the

mapped 100-year floodplain. The southern crossing of Red Rock Creek would have an elevated structure across the floodplain and would involve approximately three columns within the floodplain. In this location, the FEMA mapping lacks the detail needed to determine the location of the floodplain boundary relative to the light rail trackway and related structures. The FEMA mapping also does not define a floodway, which affects the detailed definition of mitigation necessary for both the northern and the southern crossings of the Project.

The proposed Project cannot effectively meet its Purpose and Need to connect the Southwest Corridor communities, particularly the growing urban areas of the Tigard Triangle, downtown Tigard and Tualatin, without crossing Red Rock Creek or another floodplain. Alternatives to avoid the crossing of the floodplain are impracticable because they would not serve the urban growth areas defined in the Purpose and Need. They also would involve out of direction travel and result in higher environmental impacts. This leaves no practicable alternative to a floodplain crossing to make a light rail connection between the Tigard Triangle, downtown Tigard and south to Tualatin.

Pursuant to USDOT Order 5650.2, the Project has assessed the potential floodplain impacts to the Red Rock Creek floodplain to determine if the Project would represent a significant encroachment of the floodplain or involve construction within the assumed floodway, which is not separately identified in floodplain maps. The impact represents less than 0.2 percent of the floodplain area. To minimize impacts, the columns would be placed as close as practicable to the edges of the floodplain, avoiding in-water work and impacts to the stream channel. During final design, TriMet would seek to further minimize the number and size of columns in the floodplain, and would provide compensatory storage.

The analysis of the potential for a significant encroachment on the floodplain also takes into account the Project's mitigation commitments. TriMet has identified acquisitions of currently developed properties in the floodplain, which provides multiple opportunities for compensatory storage areas. This allows the Project to effectively provide compensatory storage within the existing regulatory floodplain area and avoid the loss of floodplain values.

In addition, during the development of the Final EIS, the Project conducted detailed planning and redesign to minimize development within the floodplain, including moving the O&M facility outside of the floodplain and using bridging structures instead of fill within the floodplain.

Considering the above, the Project would have a minimal potential to result in a significant encroachment upon the floodplain, as defined in USDOT Order 5650.2, given the following factors:

1. The probability of loss of human life would be low because of the small extent of fill compared to adjacent area of the floodplain, and considering the Project's mitigation commitment to provide compensatory storage to maintain floodplain functions; the area is also mostly undeveloped or industrial.
2. The potential for future flood damage associated with the encroachment is unlikely to be substantial in cost or extent, and there would be a low potential for interruption of service or loss of a vital transportation facility because the major transportation facilities are outside and above the floodplain. Other developed properties are limited. The existing freight railroad to the southeast is on an embankment above and outside of the floodplain. The proposed Hunziker O&M Facility would be to the northwest and would also be outside the floodplain.

3. The Project includes appropriate measures to avoid an adverse impact to floodplain values, which are further defined below as well as within Attachment A, Mitigation Plan. The Project commits to working with the City of Tigard and consulting with FEMA during final design and comply with 44 CFR 65.12 governing federal approvals of a Project in a regulatory floodplain. The Project would avoid placing columns in the stream channel and adjacent areas and would provide compensatory measures to offset displaced storage. The limited amount of the area these columns would occupy compared to the total floodplain area would not give rise to adverse impacts on natural and beneficial floodplain values. The Project would not directly or indirectly enable other developments within the floodplain. Other Project mitigation commitments that include wetland restoration, including for wetland areas within the floodplain, would also avoid notable adverse impacts on natural and beneficial floodplain values. This includes the potential loss of floodplain functions such as the natural moderation of floods.

During final design and permitting, TriMet will seek FEMA approval of a Conditional Letter of Map Revision, in accordance with 44 CFR 65.12:

1. TriMet will complete a detailed survey and hydraulic modeling to confirm the base flood elevation and delineate the regulated floodway boundary in coordination with the City of Tigard and FEMA.
2. TriMet will refine designs to minimize unavoidable encroachments in the floodplain and minimize or avoid encroachments within the floodway defined in step 1.
3. TriMet will provide compensatory flood storage where encroachments within the floodplain are unavoidable.
4. If any encroachments to the floodway are identified in step 2, or if adequate compensatory storage areas cannot be identified for floodplain encroachments under step 3, then TriMet will perform a net-rise analysis to map the floodplain and floodway boundaries that would result from the Project.
5. If the Project would impact new areas by the increased base flood elevation or channel impacts, TriMet will coordinate with the local jurisdictions and FEMA to provide flood-impact prevention or mitigation in accordance with 44 CFR 65.12, such as relocating a stream, elevating buildings or installing flood berms.
6. TriMet, in coordination with the City of Tigard, will submit a Conditional Letter of Map Revision to FEMA for conditional approval.
7. After construction, TriMet, in coordination with the City of Tigard, will submit a Letter of Map Revision to FEMA.

TriMet will also meet the City of Tigard's requirements for a detailed engineering study to confirm that the Project would not increase the base (100-year) flood elevation.

Given the above, FTA finds that the Project meets the requirements of Executive Order 11988, Floodplain Management.

5.7. Endangered Species Act

The Endangered Species Act (ESA) (16 USC § 1531 et seq.) is intended to protect threatened and endangered species and the ecosystems on which they depend. When the federal government takes an

action subject to the ESA, it must comply with Section 7 of the ESA. Section 7 generally requires that any action authorized, approved, or funded by a federal agency is not likely to jeopardize the continued existence of any threatened or endangered species or adversely modify any designated critical habitat of such species. Federal agencies must consult with federal wildlife agencies to ensure that their actions meet these requirements.

FTA therefore consulted with NMFS and USFWS regarding the Project. NMFS is primarily responsible for marine wildlife and anadromous fish (such as salmon), while USFWS is primarily responsible for terrestrial and freshwater organisms.

Through informal consultation with USFWS, FTA has determined that the Project would have no effect on listed species or critical habitat under USFWS jurisdiction. This determination was informed by field surveys and formal reviews of the USFWS Information for Planning and Consultation database, as documented in Appendix E of the Final EIS.

On March 18, 2020, FTA submitted the Project's Biological Assessment to NMFS that addresses fish species utilizing the lower Columbia River for migration and rearing. In a letter dated September 1, 2021, NMFS issued a Biological Opinion that the Project is not likely to jeopardize the continued existence of the identified species or destroy or adversely modify their designated critical habitat (the Biological Opinion is included as Attachment C to this ROD). In the Biological Opinion NMFS also stipulated reasonable and prudent measures, as well as implementing terms and conditions, to minimize the incidental take of protected species during construction and operation of the Project. In Attachment A to this ROD, TriMet commits to adhering to these stipulations listed in the Biological Opinion.

FTA finds that, with the mitigation measures identified in Attachment A to this ROD, the Project meets the requirements of the ESA.

5.8. Magnuson-Stevens Fisheries Conservation and Management Act

The Magnuson-Stevens Fisheries Conservation and Management Act (16 USC § 1801 et seq.) requires federal fisheries management regulations to identify and conserve habitat that is essential to federally managed fish species. Essential fish habitat is defined as "those waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity."

FTA's Biological Assessment determined that the Project will not destroy or adversely modify the designated critical habitat of fish species that utilize the lower Columbia River for migration. NMFS concurred with this determination in its Biological Opinion issued on September 1, 2021 (included as Attachment C to this ROD). FTA therefore finds that the Project meets the requirements of the Magnuson-Stevens Fisheries Conservation and Management Act.

5.9. Migratory Bird Treaty Act and Bald and Golden Eagle Protection Act

The Migratory Bird Treaty Act (16 USC §§ 703–712) prohibits taking, killing, or possessing native migratory birds. Bald eagles and golden eagles are further protected by the Bald and Golden Eagle Protection Act (16 USC § 668–668d), which prohibits taking or possessing these two migratory bird species. To comply with the Migratory Bird Treaty Act and Bald and Golden Eagle Protection Act, TriMet will consult with state and federal resource agencies on measures to avoid impacts on migratory birds due to vegetation removal. These measures may include preconstruction surveys for migratory birds and/or

restrictions on vegetation clearing during the breeding season for migratory birds. Therefore, FTA finds that with the mitigation measures identified in Attachment A to this ROD, the Project meets the requirements of the Migratory Bird Treaty Act and the Bald and Golden Eagle Protection Act.

5.10. Section 106 of the National Historic Preservation Act

The National Historic Preservation Act (NHPA) (54 USC § 300101 et seq.) establishes government policy and procedures regarding “historic properties,” which include districts, sites, buildings, structures, and objects that are listed in or are eligible for listing on the National Register of Historic Places (NRHP). Section 106 of the NHPA (54 USC § 306108) and its implementing regulations (36 CFR Part 800) require federal agencies to consider the effects of their actions on historic properties. FTA is the federal lead agency for Section 106 for the Project.

FTA consulted with SHPO to identify and assess the Project’s impacts on historic buildings, structures, districts, objects, and sites. FTA also consulted and coordinated with interested parties including the Confederated Tribes and Bands of the Yakama Nation, Confederated Tribes of the Grand Ronde Community of Oregon, Confederated Tribes of Siletz Indians of Oregon, Confederated Tribes of the Warm Springs Reservation of Oregon, Cowlitz Indian Tribe, City of Portland, City of Tigard, ODOT, and Restore Oregon.

FTA identified 11 listed or eligible historic properties that would be adversely impacted by the Project. One is the South Portland Historic District, where five buildings contributing to the district’s significance would be removed. Other removals include the Capitol Hill Motel at 9110 SW Barbur Boulevard, buildings located at 5350 SW Pasadena Street and 11125 SW Barbur Boulevard in Portland, and three bridges (SW Newbury Street Viaduct, SW Vermont Street Viaduct, and Oregon Electric Railway Overcrossing). Alteration of grounds or buildings would occur at Congregation Ahavath Achim Synagogue at 3225 SW Barbur Boulevard (with potential removal of a building), Terwilliger Parkway (Historic District), Jewish Shelter Home at 4133 SW Corbett Avenue, and Rasmussen Village at 4950 SW Barbur Boulevard.

Four archaeological resources that are eligible or may be eligible for listing in the NRHP were identified within the portion of the Project’s defined area of potential effect (APE) where there may be direct impacts. The Preferred Alternative could possibly impact one unevaluated/potentially eligible historic-period site near the Marquam Hill Connection. Another unevaluated/potentially eligible site that the Preferred Alternative could impact is documented in Tigard, though the resource could not be fully delineated within the APE due to property access restriction. Two previously recorded unevaluated/potentially eligible historic-period archaeological sites may be affected by the Ross Island Bridgehead Reconfiguration, but the area has not been completely surveyed for archaeological resources. In addition, an ethnographic village location is suspected to be in the APE in Tigard, although it has yet to be confirmed on the ground. FTA will continue to consult with tribes regarding this village location. If any additional archaeological sites are discovered that may be eligible for listing in the NRHP, then FTA will consult with SHPO regarding inadvertent discovery, documentation, evaluation, assessment, and mitigation measures, if necessary, in accordance with the stipulations in the Section 106 Memorandum of Agreement that was developed in consultation with SHPO, the tribes, and other consulting parties, attached as Appendix K to the Final EIS and Attachment B to this ROD.

SHPO concurred with FTA’s determinations of eligibility of and effect to historic and archaeological resources in letters dated February 12, May 27, and October 20, 2021. FTA is responsible for compliance with the stipulations in the Section 106 Memorandum of Agreement and will require that TriMet carry out

the requirements of the agreement as a condition of the award of any federal funding. (Attachment B to this ROD).

Based on the cultural resources analysis and coordination with SHPO, tribes, and other consulting parties, FTA finds that there is adequate mitigation for these identified impacts and suitable procedures to address any inadvertent discovery, and therefore the Project meets the consultation requirements of Section 106. Attachment B to this ROD includes a fully executed copy of the Memorandum of Agreement and is identical to Appendix K of the Final EIS.

5.11. Section 4(f) of the U.S. Department of Transportation Act

Section 4(f) of the U.S. Department of Transportation Act (49 USC § 303) requires that the use of land from public parks, recreation areas, wildlife and/or waterfowl refuges, or historical sites of local, state, or federal significance be approved and constructed only if (a) there is no feasible and prudent alternative, and (b) the project includes all possible planning to minimize harm to these resources. If resources protected by Section 4(f) are involved in a project's planning, a determination is required to confirm if there is a "use" of those resources. The Final Section 4(f) Evaluation was included as Appendix D of the Final EIS and is provided as Attachment D to this ROD. FTA sent the Final Section 4(f) Evaluation to the U.S. Department of the Interior (USDOI) for review on December 2, 2022. USDOI replied to FTA on February 14, 2022, stating that it concurs with Section 4(f) approval of the Project. The letter from USDOI is included as Attachment E to this ROD, U.S. Department of the Interior Concurrence with Section 4(f) Evaluation.

Based on consultation with USDOI, views of the officials with jurisdiction, and the Final Section 4(f) Evaluation, FTA determined that the Project would result in permanent uses of 34 properties, including 11 uses that would be greater than *de minimis*. There would also be 11 properties that would qualify for temporary occupancy exceptions to a Section 4(f) use and 37 properties with no use. Affected Section 4(f) resources include public parks, recreation resources, and historical sites. There are no wildlife or waterfowl refuges in the study area.

FTA determined that the Project has no feasible and prudent alternatives that could avoid use of Section 4(f) properties. Based on the analysis in Appendix D of the Final EIS and supporting planning efforts, the Preferred Alternative and the light rail alternatives evaluated in the Draft EIS represent the only alternatives that are feasible and prudent. FTA also determined that all possible planning to minimize harm has been conducted. In accordance with 23 CFR Part 774, the officials with jurisdiction have concurred with the *de minimis* impacts and temporary occupancy exceptions. Mitigation commitments that would minimize harm to properties with permanent uses are documented in the Section 106 Memorandum of Agreement (included as Attachment B to this ROD) for historic resources and in a signed agreement with the City of Portland (included in Attachment D to this ROD) for parks and recreation resources.

After considering the Project's mitigation commitments and other efforts to minimize harm, FTA considers the Preferred Alternative to be the least harmful alternative for the Project. FTA finds that the Project meets the requirements of Section 4(f).

5.12. Section 6(f) of the Land and Water Conservation Fund Act

Section 6(f) of the Land and Water Conservation Fund (LWCF) Act of 1965 (54 USC § 200305 et seq.) prohibits the conversion of property acquired or developed with LWCF funds to a non-recreational purpose without the approval of NPS. These protections cover the entire recreational area at the time it

received LWCF funding, in addition to the specific parcels or facilities within the recreational area that were acquired or developed with these LWCF funds.

The Draft EIS identified potential LWCF conversions for the Project at two separate parcels that are part of Terwilliger Parkway (a city park). FTA later provided documentation to the NPS showing that the Project as described in the Final EIS would avoid impacts to properties associated with LWCF funding. The Preferred Alternative would avoid impacts to one of the two parcels identified in the Draft EIS. The other parcel would be partially or fully acquired for the Preferred Alternative, but based on additional information provided by FTA, NPS has determined that this parcel is not tied to any LWCF funding. For more information, see Appendix N, Section 6(f) of the Land and Water Conservation Fund Documentation, of the Final EIS.

Based on the research and coordination described above, FTA has determined that no Section 6(f) properties would be converted for the Project and that the Project meets the requirements of Section 6(f).

5.13. Executive Order 12898, Environmental Justice

The Project's efforts are in accordance with Presidential Executive Order 12898, Federal Actions to Address Environmental Justice to Minority Populations and Low-Income Populations (February 1994); the U.S. Department of Transportation (USDOT) Order 5610.2, Actions to Address Environmental Justice in Minority Populations and Low-Income Populations (April 1997), updated by the USDOT Order 5610.2(a) (May 2012) to consider environmental justice principles in all programs, policies and activities; and FTA's Circular 4703.1, Environmental Justice Policy Guidance for Federal Transit Administration Recipients (August 2012). The environmental justice policies of the USDOT agencies, including FTA, are summarized below. The agencies are to:

1. avoid, minimize, and mitigate disproportionately high and adverse effects on minority and low-income populations
2. ensure full and fair opportunities for public involvement by members of minority and low-income populations during the planning and development of a proposal involving federal action (including the identification of potential effects, alternatives, and mitigation measures)
3. prevent the denial of, reduction in, or significant delay in the receipt of benefits by minority and low-income populations

As part of the public project planning process through completion of the Final EIS, FTA, TriMet, and Metro implemented meaningful outreach efforts to minority and low-income communities to provide those communities a means to participate in the NEPA process. The outreach efforts are described in Appendix C, Environmental Justice Compliance, of the Final EIS.

For most resources, the Project's mitigation commitments would reduce the severity of impacts to an extent that there would be no high and adverse impacts on any populations, and therefore there would be no disproportionately high and adverse impacts on minority and low-income populations for those resources. For certain resources, the Project would have adverse impacts that would remain high after taking into account mitigations, but that would be offset by the Project's benefits. These impacts and the offsetting benefits are described in Appendix C of the Final EIS.

Taking into account the impact avoidance measures of the Project, the distribution of high and adverse impacts throughout the community, mitigation commitments, and benefits, FTA concludes that the Project would not result in disproportionately high and adverse effects on minority and low-income populations. Therefore, FTA finds that the Project meets the requirements of Executive Order 12898 and USDOT Order 5610.2(a).

5.14. Executive Order 13175, Consultation and Coordination with Indian Tribes

Under Executive Order 13175, Consultation and Coordination with Indian Tribes, and other federal authorities, FTA conducted government-to-government consultation and coordination with the following federally recognized tribes:

- Confederated Tribes and Bands of the Yakama Nation
- Confederated Tribes of the Grand Ronde Community of Oregon (Grand Ronde)
- Confederated Tribes of Siletz Indians of Oregon
- Confederated Tribes of the Warm Springs Reservation of Oregon
- Cowlitz Indian Tribe

FTA consulted with the five tribes listed above through the Section 106 process, including providing opportunities to comment on the APE, determinations of eligibility, findings of effect, and the Memorandum of Agreement. The Final EIS responds to and incorporates tribal comments and suggestions made in response to the Draft EIS. One tribe, Grand Ronde, submitted a letter during the Draft EIS comment period. FTA, Grand Ronde, Metro, and TriMet held two government-to-government meetings to discuss the concerns raised in Grand Ronde's comment letter. Informed by these meetings, a mitigation commitment is included in Attachment A to this ROD to offer opportunities for consulting tribes to harvest culturally significant native plants before construction and, to the extent practical, to incorporate culturally sensitive native plant species, as identified by the Section 106 consulting tribes, within landscaped areas. See Appendix E, Agency Coordination and Correspondence, of the Final EIS for more information on tribal consultation.

Based on the consultation and coordination described above, FTA finds that the Project meets the requirements of Executive Order 13175.

5.15. Executive Order 12372, Intergovernmental Review of Federal Programs

Executive Order 12372, Intergovernmental Review of Federal Programs, directs federal agencies to consult with and solicit comments from state and local governments whose jurisdictions will be affected by a federal action. As required by 23 USC § 139, FTA asked state and local agencies and tribes to comment on the Purpose and Need statement for the Project, the range of alternatives to be considered, and the Draft EIS. Section 4 of this ROD describes the opportunities FTA, TriMet, and Metro provided for agencies and tribes to comment during the environmental review process, including during the scoping period, the development of the Draft EIS, the Draft EIS comment period, the development of the Final EIS, and the waiting period after the publication of the Final EIS. Comments received during the scoping period are summarized in Metro's *Scoping Summary Report* for the Project (2016). Several agencies and one tribe (Grand Ronde) provided comments during the Draft EIS comment period. These comments and the accompanying responses are provided in Appendix J, Draft EIS Comments and Responses, of the Final EIS.

No tribal or agency comments were received during the 30-day waiting period after the Notice of Availability of the Final EIS on January 28, 2022.

As described in Section 5.10 of this ROD, FTA consulted with SHPO, tribes, and consulting parties to meet the requirements of Section 106. As described in Section 5.11 of this ROD, FTA consulted with the City of Portland, SHPO, and USDOJ to meet the requirements of Section 4(f).

Several state and local agencies were directly involved in the Project as partner agencies, including during the development of the Draft EIS, the selection of the Preferred Alternative, the refinement of project designs, and the development of the Final EIS. In each phase, the partner agencies were involved at multiple levels, including technical staff, executive staff, and steering committees composed of elected officials and other leaders. Several state and local agencies also accepted invitations to be participating agencies for the Project under NEPA and consulting parties for the Project under Section 106. Chapter 6, Public Involvement, Agency Coordination and Required Permits, of the Final EIS provides more details on agency participation.

Based on the activities described above, FTA finds that the Project meets the requirements of Executive Order 12372.

5.16. Noise Control Act and Quiet Communities Act

The Noise Control Act (as amended by the Quiet Communities Act) (42 USC §§ 4901–4918) requires federal agencies to develop programs to promote an environment free of noise that jeopardizes public health and welfare. This act requires that the agencies comply with state and local noise ordinances. FTA consequently developed criteria documented in its Transit Noise and Vibration Impact Assessment Manual (2018) for measuring, assessing, and mitigating noise impacts from transit and transit/highway projects. The Final EIS identified impacts consistent with these methods; mitigation measures to address impacts are documented in Attachment A to this ROD.

FTA finds that with the mitigation measures identified in Attachment A to this ROD, the Project meets the requirements of the Noise Control Act and the Quiet Communities Act.

5.17. Americans with Disabilities Act

The Americans with Disabilities Act (ADA) (42 USC § 126 and 47 USC § 5) addresses issues relating to accessibility to places of public accommodation; the Architectural Barriers Act (ABA) (42 USC § 4151) further specifies accessibility standards. The Project will be designed to meet all ADA and ABA requirements. Accordingly, FTA finds that the Project meets the requirements of the ADA and ABA.

5.18. Uniform Relocation Assistance and Real Property Acquisition Policies Act

The Fifth Amendment of the U.S. Constitution requires that property owners are provided with “just compensation” when all or a portion of their property is acquired for public use. Just compensation must not be less than the fair market value of the property acquired, including damages or benefits to the remaining property in the case of partial parcel acquisitions. The federal Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (Uniform Relocation Act), as amended, provides further direction on the process of acquiring property, as well as the process of compensating residents, businesses, or organizations that must be relocated. While the Uniform Relocation Act specifically applies

to federal agencies and agencies receiving federal funding for a project, it is also referenced by state regulations in Chapter 35 of the Oregon Revised Statutes, which regulates eminent domain and the public acquisition of property.

When acquiring properties and relocating existing residents and businesses, TriMet will comply with the Uniform Relocation Act and related federal and state laws, as well as TriMet's acquisition and relocation policy, procedures, and guidelines. The project sponsors for the related transportation improvements will also comply with the Uniform Relocation Act and related federal and state laws, as applicable, when acquiring property.⁴ Based on the commitments made by TriMet and required by federal and state laws, FTA finds that the Project meets the requirements of the Uniform Relocation Act.

5.19. Interstate Right of Way Agreements

The Project's use of and access to Interstate highway rights of way is subject to 23 USC § 111 and the regulations in 23 CFR 710.405. FHWA is a cooperating agency in the development of the Draft EIS and Final EIS for the Project due to the agency's responsibilities for subsequent approvals related to the Interstate System.

The Project would have the following temporary and permanent impacts on Interstate System facilities:

- The Project would construct three new light rail bridges over Interstate rights of way in Portland (one new bridge over Interstate 405 [I-405] and two new bridges over I-5). The Project could also construct new pedestrian overcrossings over I-5. These pedestrian overcrossings are included in the Project as related transportation improvements, which are options for additional access and mobility improvements, separate from the light rail investment, that would extend the benefits of light rail.
- The Project would involve use of I-5 right of way to construct and operate light rail adjacent to the freeway in several locations in Portland, Tigard, and Tualatin.
- No changes to freeway lanes and no new or modified vehicle access points to freeway lanes are proposed, but the Project would modify intersections at the terminals of several off-ramps.
- During construction, the Project would involve intermittent short-term closures of I-405 and I-5 lanes, ramps, and shoulders.
- The Project would make temporary and permanent structural and visual changes to parts of the roadside environment along I-405 and I-5, which could affect safety conditions. New retaining walls, safety barriers, guardrails, or columns would be constructed along the roadway, including in median or off-roadway areas within the interstate rights of way. Federal regulations for interstates require that any new features within the right of way conform to FHWA's requirements for managing the right of way. Therefore, during final design TriMet would complete an operational and safety analysis, considering hazard minimization measures, as part of ODOT and FHWA review and approval processes for the use of I-405 and I-5 rights of way.

⁴ Property acquisitions for the Ross Island Bridgehead Reconfiguration would be undertaken by the City of Portland or ODOT. The station access improvements are not anticipated to result in permanent property acquisition. If permanent property acquisition for the station access improvements is later found to be needed, it would be the responsibility of local implementing agencies to ensure just compensation for any related acquisitions or relocations.

Chapter 3, Transportation Impacts and Mitigation, of the Final EIS evaluates the potential transportation impacts related to the new crossings of I-405 and I-5, where right of way adjacent to the freeway lanes could be modified, and where freeway ramp terminals or the Ross Island Bridge ramps would be modified. Attachment A to this ROD identifies mitigation, including a commitment to prepare Interchange Access Modification Requests and meet other applicable design and documentation requirements of ODOT and FHWA, including a detailed safety analysis and hazard minimization assessment, as part of ODOT and FHWA review and approval processes.

6. CONCLUSION

FTA has considered all of the alternatives, information, analyses, and objections submitted by state, tribal, and local governments and public commenters for consideration by the lead and cooperating agencies in developing the environmental impact statement. Based on its consideration of the environmental review documents, FTA determines that the Southwest Corridor Light Rail Project meets all NEPA requirements. FTA further finds that the Project meets all other applicable requirements described in Section 5 of this ROD.

**LINDA M
GEHRKE** Digitally signed by
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Linda M. Gehrke, Regional Administrator
U.S. Department of Transportation
Federal Transit Administration