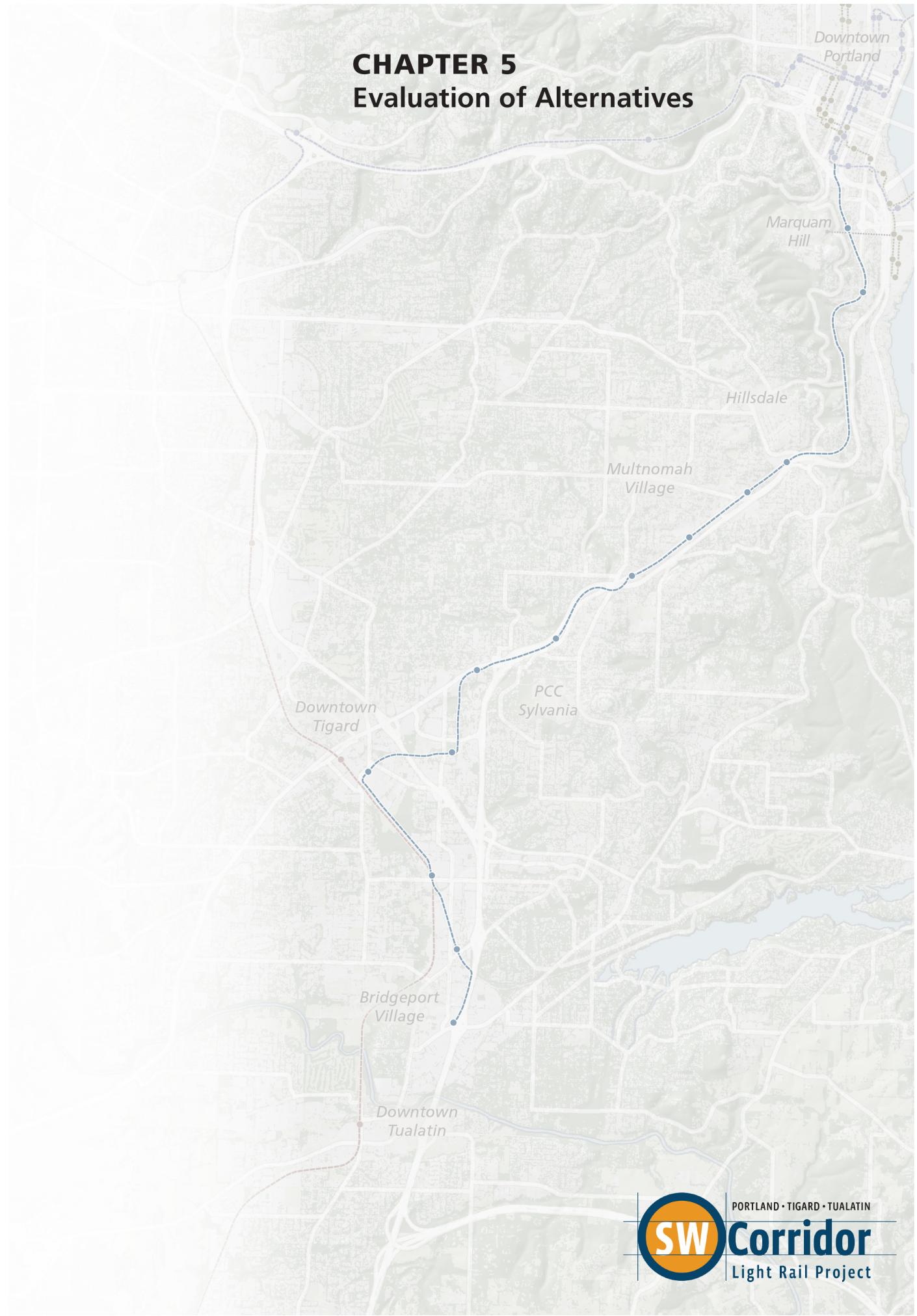


## **CHAPTER 5**

### Evaluation of Alternatives



## 5. EVALUATION OF ALTERNATIVES

This chapter provides the following evaluations of the alternatives considered in the Southwest Corridor Light Rail Project Environmental Impact Statement (EIS):

Section	Page
5.1 Ability to Meet the Purpose and Need.....	5-1
5.2 Summary Evaluation of Impacts .....	5-5
5.3 Cost and Funding Evaluation.....	5-9

- **Section 5.1** evaluates the ability of the Preferred Alternative to meet the Project's Purpose and Need statement, which is described in Chapter 1, Project Introduction. See Appendix H, References, for full reference information for the plans mentioned in the Purpose and Need statement.
- **Section 5.2** summarizes the transportation and environmental impacts of the Preferred Alternative and the terminus options, and compares them to the effects of the Draft EIS light rail alternatives.
- **Section 5.3** describes the capital costs, operating costs and funding plans for the Preferred Alternative and the terminus options.

This chapter has been updated for this Final EIS to focus on the Preferred Alternative. See Chapter 5 of the Draft EIS for an evaluation focused on the Draft EIS light rail alternatives. Appendix I of the Draft EIS, Project Background and Alternatives Considered, describes other build alternatives that were considered and removed from further consideration before the publication of the Draft EIS.

The related transportation improvements are not discussed in detail in this chapter, because they would not affect the ability of the Preferred Alternative to meet the Purpose and Need. Both the Ross Island Bridgehead Reconfiguration and the station access improvements would support elements of the Purpose and Need by improving multimodal connections and access to transit, and would have primarily beneficial effects.

### 5.1. Ability to Meet the Purpose and Need

This section evaluates the ability of the Preferred Alternative to meet the Project's Purpose and Need statement, in comparison to the No-Build Alternative. This evaluation focuses on the listed aims from the Purpose, which are to:

- 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

Compared to the No-Build Alternative, the Preferred Alternative would better meet these aims. Each aim is addressed in more detail below.

### **Provide light rail transit service that is cost-effective to build and operate with limited local resources**

Building the Project would require additional sources of revenue beyond the funding already available to the Tri-County Metropolitan Transportation District of Oregon (TriMet). Other sources of capital funding, including federal funds, dedicated local funds or potentially private funds, would be needed. Federal funds for high capacity transit projects such as the Southwest Corridor Light Rail Project are awarded on a nationally competitive basis, with projects typically needing a 50 percent local match to qualify for major federal capital funding grants. Federal funding eligibility is based on factors such as transportation benefits, environmental benefits, land use benefits and economic benefits. An important part of the evaluation is the project's cost-effectiveness, which measures projected ridership against annualized capital and operating costs. Table 5.1-1 shows the estimated range of capital and operations and maintenance (O&M) costs for the Preferred Alternative and the Interim Terminus. Projected ridership is summarized in Chapter 3, Transportation Impacts and Mitigation. Projects that have lower costs, maintain good travel times, provide accessible stations and have lower impacts would be the most cost-effective. See Section 5.3 for further information on TriMet's funding plans for the Preferred Alternative; those plans provide an analysis of the financial ability of the region to build and operate the light rail investment.

**Table 5.1-1. Estimated Project Capital and Operations and Maintenance Costs**

Alternative	Total Capital Costs <sup>1</sup>	Annual O&M Costs <sup>2</sup>
Preferred Alternative	\$3,086 million	\$22.8 million
Upper Boones Ferry Terminus Option	\$2,932 million	\$22.8 million
Hall Terminus Option	\$2,619 million	\$20.5 million

<sup>1</sup> Capital costs are in year-of-expenditure (2027) dollars and include finance costs.

<sup>2</sup> Operations and maintenance (O&M) costs assume 2035 light rail service frequencies.

### **Serve existing transit demand and significant projected growth in ridership resulting from increases in population and employment in the corridor**

To meet the projected growth in demand for transit trips in the corridor, the Preferred Alternative would offer higher-capacity transit service than the No-Build Alternative. The Preferred Alternative would serve almost 10 percent more transit riders than the No-Build Alternative.<sup>1</sup> Some of the highest ridership areas are discussed below.

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<sup>1</sup> This estimate is based on the projected number of trips using transit within the corridor in 2035, excluding trips within the central business district.

In Segment A, the Preferred Alternative would serve the Oregon Health & Science University (OHSU) Marquam Hill campus and the Veterans Affairs (VA) Portland Health Care System hospital via the Gibbs Station and the Marquam Hill Connection. This major employment, education and medical services complex is a regionally important destination.

In Segment B, the Preferred Alternative would run primarily on SW Barbur Boulevard, with stations designed to serve town centers and provide multimodal connection points for the surrounding neighborhoods and communities. This includes an expanded Barbur Transit Center and park and ride at the crossroads of Interstate 5 (I-5), SW Barbur Boulevard, SW Taylors Ferry Road and SW Capitol Highway, which are among the most heavily traveled facilities in the area.

In Segment C, the Preferred Alternative would serve downtown Tigard and Bridgeport Village, which are two of the larger sources for additional future transit ridership. They serve what are projected to be some of the fastest growing areas of the region for both households and employment, and they are already major transportation hubs for connecting corridors.

**Improve transit service reliability, frequency and travel times, and provide connections to existing and future transit networks including Westside Express Service (WES) Commuter Rail**

Compared to the No-Build Alternative, the Preferred Alternative would improve transit reliability, frequency and travel times, and would provide existing and future transit connections to increase overall transit use in the corridor and beyond. The Preferred Alternative would build a new shared transitway in the corridor, which would improve speed and reliability for buses serving the Washington Square, Hillsdale and Raleigh Hills areas, in addition to light rail to West Portland and Tigard. The Preferred Alternative would make other important transit network connections, including to multiple bus lines at the Barbur Transit Center, at WES Commuter Rail in Tigard, and at Tualatin.

**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**

Compared to the No-Build Alternative, the Preferred Alternative would better support the projected growth in population and employment in the Southwest Corridor, consistent with the *2040 Growth Concept*, with stations serving targeted growth areas and high capacity transit.

In Segments A and B, the Preferred Alternative would support the *Barbur Concept Plan* by improving multimodal function and connectivity along the entire segment of SW Barbur Boulevard to Tigard, with all of its stations along SW Barbur Boulevard. It also would accommodate the Ross Island Bridgehead Reconfiguration as a related transportation improvement to be implemented during or after implementation of the light rail investment. The Ross Island Bridgehead Reconfiguration would make multimodal improvements at the Ross Island Bridge ramps and along SW Naito Parkway into downtown, as called for in the *Barbur Concept Plan*, and it dovetails with the design of the Preferred Alternative to improve multimodal connectivity in the area.

In Segment C, the Preferred Alternative would support the *Tigard Triangle Strategic Plan* and the *Tigard Downtown Vision* with stations directly serving these areas, supporting anticipated growth in population and employment, and the future land use development the plan envisions.

**Complete and enhance multimodal transportation networks to provide safe, convenient and secure access to transit and adjacent land uses, and advance transportation projects that increase active transportation and encourage physical activity**

Compared to the No-Build Alternative, the Preferred Alternative would improve bicycle and pedestrian facilities in several areas, including at Marquam Hill, along SW Barbur Boulevard, to the Portland Community College (PCC) Sylvania campus, in the Tigard Triangle and in downtown Tigard. These new connections would help overcome barriers between neighborhoods and regional transit services.

In Segments A and B, the Preferred Alternative would rebuild the SW Barbur Boulevard right of way to accommodate light rail and meet existing City of Portland standards, replacing or completing substandard or missing sidewalks and bicycle facilities, and providing signalized intersections and pedestrian crossings to improve multimodal safety and access. In Segment C in the Tigard Triangle and into downtown Tigard, multiple new multimodal connections would be completed, including new or improved pedestrian and bicycle facilities.

**Provide travel options that reduce overall transportation costs**

The Preferred Alternative would help reduce vehicle miles traveled in the region compared to the No-Build Alternative, primarily by offering a viable alternative to travel by automobile or by bus on congested local streets. Improved transit, improved bicycle and pedestrian facilities, and less need for personal vehicle use would equate to reduced personal transportation costs. The reduced number of hours spent in congestion by buses would help reduce overall transit operational costs. Table 5.1-1 above provides the capital and O&M costs for the Preferred Alternative.

**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**

Compared to the No-Build Alternative, the Preferred Alternative would improve multimodal access and foster development adjacent to transit. It would make major multimodal access improvements to existing and planned employment, housing and education centers along the corridor. The Preferred Alternative would directly connect the southwest communities to downtown Portland and the regional Metropolitan Area Express (MAX) light rail system and to employment, housing, educational and service centers. Extending light rail to the southwest would improve corridor and regional connections to OHSU, the VA Portland hospital and PCC-Sylvania. Light rail would serve the town centers designated and planned for in the Crossroads area, the Tigard Triangle and downtown Tigard, as well as areas at and around Bridgeport Village. Much of the corridor today has large amounts of land dedicated to surface parking. Light rail would allow people to reach the region's centers and growth areas without needing to drive and park, thus reducing the proportion of land needed for parking. The Preferred Alternative would support local and regional plans that call for more compact forms of development in areas that can be well-served by transit, including developments that could offer a range of housing types.

**Ensure benefits and impacts that promote community equity, and 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**

To address these two aims from the Purpose and Need statement, the evaluation in Section 5.2 reviews the environmental impacts identified in the Draft EIS and Final EIS. It also considers the benefits offered by the Preferred Alternative, which would provide light rail stations and other multimodal improvements mostly

along existing facilities and transit routes serving communities along the corridor. People closest to the light rail line would have the easiest access to the mobility benefits offered by light rail. In addition, measures to improve safety, provide multimodal connections, improve water quality or reduce noise would also benefit people along and adjacent to the corridor, which would help offset the temporary impacts of construction on their communities. These benefits would not occur with the No-Build Alternative.

## **5.2. Summary Evaluation of Impacts**

This section compares the potential impacts of the Preferred Alternative with those of the light rail alternatives previously considered in the Draft EIS. See Chapter 2, Alternatives Considered, for descriptions of these light rail alternatives. This section also summarizes the potential impacts of the terminus options compared to the full-length Preferred Alternative. Chapters 3 and 4 of this Final EIS contain detailed description of the analyses for the Preferred Alternative and terminus options, as well as a comparison to the Draft EIS light rail alternatives.

### **Evaluation of Draft EIS Light Rail Alternatives and the Preferred Alternative**

Overall, the magnitude of impacts for the Preferred Alternative would be similar to the range of impacts for the Draft EIS light rail alternatives. Table 5.2-1 compares the quantified long-term impacts between the range of Draft EIS light rail alternatives and the Preferred Alternative. Table 5.2-2 provides a more detailed comparison by segment, including both quantitative and qualitative measures.

The Preferred Alternative would fall within or below the range of impacts for the Draft EIS light rail alternatives at the full-corridor level for all resources. There are some cases where the impacts would be slightly higher at the segment level, as shown in Table 5.2-2. The design of the Preferred Alternative incorporates some measures to avoid or minimize impacts identified in the Draft EIS, such as adjustments in roadway configuration to avoid traffic impacts. For information about these and other design changes, see Appendix I, Preferred Alternative Selection and Project Refinements.

**Table 5.2-1. Full-Corridor Comparison of Quantitative Long-Term Impacts**

EIS Section/Resource	Impact	Draft EIS Light Rail Alternatives <sup>1</sup>	Preferred Alternative
3. Transportation	Intersections with operations exceeding V/C ratio targets	19–24 intersections	14 intersections
	Impacts due to queue lengths <sup>2</sup>	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.

<sup>1</sup> 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.

<sup>2</sup> 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.

**Table 5.2-2. Comparison of Long-Term Impacts by Segment (*multipage table*)**

EIS Section/Resource	Adverse Impacts	Segment A <sup>1</sup>		Segment B <sup>2</sup>		Segment C <sup>3</sup>	
		Draft EIS Light Rail Alternatives	Preferred Alternative	Draft EIS Light Rail Alternatives	Preferred Alternative	Draft EIS Light Rail Alternatives	Preferred Alternative
3. Transportation	Intersections exceeding V/C ratio targets	2–6 intersections	4 intersections	9–10 intersections	7 intersections	8 intersections	3 intersections
	Impacts due to queue lengths	4 queuing impacts	2 queuing impacts	1 queuing impact	No queuing impacts	4–6 queuing impacts	1–2 queuing impacts
4.1 Acquisitions, Displacements and Relocations	Residential displacements	41–125 residential units	35 residential units	32–78 residential units	39 residential units	5–85 residential units	21 residential units
	Business displacements	15–23 businesses	13 businesses	54–66 businesses	66 businesses	31–55 businesses	35 businesses
4.2 Land Use	Acres of land converted to transportation use	8.0–10.7 acres	6.3 acres	24.0–30.3 acres	19.8 acres	32.4–56.0 acres	51.5 acres
4.3 Economics	Affected employees	108–371 employees	150 employees	469–565 employees	447 employees	323–839 employees	821 employees
4.4 Communities	Neighborhood cohesion, neighborhood quality of life, community facilities	<ul style="list-style-type: none"> <li>· Church parking impact</li> </ul>	<ul style="list-style-type: none"> <li>· Church parking impact</li> </ul>	<i>None of note</i>	<ul style="list-style-type: none"> <li>· Church parking impact</li> <li>· Childcare facility</li> </ul>	<ul style="list-style-type: none"> <li>· Community lodge</li> <li>· Counseling/medical businesses</li> <li>· Tigard Post Office</li> <li>· Medical clinic</li> <li>· Ash Ave. area apts.</li> </ul>	· Childcare facility
4.5 Visual Quality	Overall visual impact	Moderate	High for Marquam Hill Connection (Moderate elsewhere)	Moderate	Low to Moderate	High in Tigard Triangle and downtown Tigard	Moderate/High in Tigard Triangle (Low elsewhere)
4.6 Historic and Archaeological Resources	Anticipated adverse effects to historic properties (includes partial acquisitions and historic parks)	11–20 adverse effects	7 adverse effects	3–6 adverse effects	4 adverse effects	0–1 adverse effects	None
4.7 Parks and Recreation Resources	Parks with partial acquisitions or easements	Up to 6 parks	3 parks	2 parks	1 park	None	None
4.8 Geology, Soils and Hydrology	No significant adverse impacts	N/A	N/A	N/A	N/A	N/A	N/A
4.9 Ecosystems	Permanent wetland impacts	<0.1 acre	0.2 acre	<0.1 acre	0.3 acre	0.4–1.6 acres	0.8 acre

**Table 5.2-2. Comparison of Long-Term Impacts by Segment (*multipage table*)**

EIS Section/Resource	Adverse Impacts	Segment A <sup>1</sup>		Segment B <sup>2</sup>		Segment C <sup>3</sup>	
		Draft EIS Light Rail Alternatives	Preferred Alternative	Draft EIS Light Rail Alternatives	Preferred Alternative	Draft EIS Light Rail Alternatives	Preferred Alternative
4.10 Water Resources	Floodplain impacts	N/A	N/A	N/A	N/A	Impact for all except Alt. C6	Impact
4.11 Noise and Vibration	Severe noise impacts	Up to 8	12	Up to 1	0	Up to 15	0
	Moderate noise impacts	Up to 353	64	Up to 147	59	Up to 72	46
	Vibration impacts	Up to 76	20	Up to 29	9	Up to 21	5
4.12 Air Quality and Greenhouse Gases	No significant adverse impacts	N/A	N/A	N/A	N/A	N/A	N/A
4.13 Energy	No significant adverse impacts	N/A	N/A	N/A	N/A	N/A	N/A
4.14 Hazardous Materials	Acquired properties with contamination	None	1 site	3 sites	4 sites	2–5 sites	2 sites
4.15 Utilities	No significant adverse impacts	N/A	N/A	N/A	N/A	N/A	N/A
4.16 Public Services	No significant adverse impacts	N/A	N/A	N/A	N/A	N/A	N/A
4.17 Safety and Security	No significant adverse impacts	N/A	N/A	N/A	N/A	N/A	N/A

Note: EIS = Environmental Impact Statement; N/A = not applicable; O&M = operations and maintenance; PCC = Portland Community College; V/C = volume-to-capacity ratio.

<sup>1</sup> The Draft EIS light rail alternatives include a range of the Segment A alignment alternatives combined with the Marquam Hill connection options. The Preferred Alternative includes the Segment A alignment and stations and the Marquam Hill Connection (inclined elevator).

<sup>2</sup> The Draft EIS light rail alternatives include a range of the Segment B alignment alternatives combined with the PCC-Sylvania shuttle options. The Preferred Alternative includes the Segment B alignment and stations and the PCC-Sylvania Shuttle (SW 53rd Avenue route).

<sup>3</sup> The Draft EIS light rail alternatives include a range of the Segment C alignment alternatives combined with the O&M facility options. The Preferred Alternative includes the Segment C alignment and stations and the Hunziker O&M Facility.

## **Terminus Options**

This Final EIS considers two terminus options for phasing the construction of the Preferred Alternative in the event there is insufficient funding to construct the full length of the alignment: the Upper Boones Ferry Terminus Option and the Hall Terminus Option. The Upper Boones Ferry Terminus Option would not construct 1 mile of the Preferred Alternative south of the Upper Boones Ferry Station, and the Hall Terminus Option would not construct 3 miles of the Preferred Alternative south of the Hall Station. See Chapter 2 for more information about the elements of the Preferred Alternative that would or would not be constructed for each terminus option.

The terminus options would have most of the same impacts as the Preferred Alternative, except that they would avoid, at least temporarily, the impacts associated with the portion of the Preferred Alternative that would not be constructed. If and when the remaining part of the line is built, the total impacts would be the same as the full-length Preferred Alternative, except that the construction-period effects would be extended because they would occur in two phases.

The terminus options would provide many of the benefits of the full-length Preferred Alternative, but the mobility benefits would be reduced for people traveling to or from areas south of the terminus station for each option. There would be a slight shift in local traffic patterns in Segment C compared to the Preferred Alternative, as some park and ride users who might otherwise have driven to the Bridgeport Station would drive to the Hall Station (the southernmost park and ride along the alignment for either terminus option). See Chapter 3 for more information on transit ridership and traffic patterns with the terminus options. Other area-wide benefits, such as improvements in air quality and reductions in energy consumption, would be lower for the terminus options than the Preferred Alternative. The terminus options would also be less supportive of regional plans for land use and the transportation system compared to the full-length Preferred Alternative, but would be more supportive of these plans than the No-Build Alternative.

### **5.3. Cost and Funding Evaluation**

This section describes the latest cost estimates for the Preferred Alternative and the terminus options, as well as general funding concepts for the Preferred Alternative.

Planning and design efforts for the Project were paused in late 2020 after voters did not approve a regional funding measure that would have provided a large portion of the local funding for further design and construction of both the Preferred Alternative and the Ross Island Bridgehead Reconfiguration. However, FTA, TriMet and Metro have completed this Final EIS in anticipation of other options for local project funding being identified in the future. Where appropriate, the sections below address the implications of the project pause as well as the COVID-19 pandemic. The cost estimates and funding plan will be reevaluated when project planning and design is resumed.

#### **Estimated Costs**

##### ***Capital Costs***

The estimated costs to design and construct the Preferred Alternative and the terminus options are shown in Table 5.3-1. These costs include construction costs, right of way costs, engineering costs, contingency and the cost of light rail vehicles. These estimated costs also include the costs to construct the Hunziker O&M Facility, improvements for the PCC-Sylvania Shuttle, the Marquam Hill Connection and certain

streetscape elements. These costs do not include the costs of the related transportation improvements (i.e., the Ross Island Bridgehead Reconfiguration and station access improvements), which are not part of the Preferred Alternative or the terminus options.

Based on the current level of design, the capital costs shown in Table 5.3-1 were estimated in 2020 dollars and then escalated to the years in which they are scheduled to be incurred (i.e., year-of-expenditure dollars, which are assumed to be 2027 dollars). The finance costs shown include the estimated interest paid for any interim borrowing required due to the assumed elongated schedule of FTA's Capital Investment Grants (CIG) Program appropriations (see the explanation of FTA's CIG Program funding under Capital Funding Plan, below). The finance costs do not include any interest that would be paid during the construction period on any regional bonds issued to provide local matching funds.

The capital costs would be refined as part of further design and engineering activities conducted after project planning and design is resumed. The current uncertainty in the project schedule could result in increased capital costs by further postponing project construction, which would add to the currently assumed escalation costs. Similarly, materials and land acquisition costs could change depending on the timing of construction relative to market trends.

**Table 5.3-1. Estimated Capital Costs for the Preferred Alternative and the Terminus Options**

Cost Element	Estimated Cost, in millions of dollars		
	Preferred Alternative	Upper Boones Ferry Terminus Option	Hall Terminus Option
<b>Cost Components in 2020\$</b>			
Construction and systems installation	\$1,557	\$1,481	\$1,323
Right of way and land acquisition	\$341	\$317	\$281
Vehicles	\$165	\$165	\$165
Professional services	\$410	\$390	\$348
Contingency	\$103	\$98	\$88
<b>Escalation and Finance Costs</b>			
Escalation to YOE\$	\$394	\$374	\$338
Finance charges <sup>1</sup>	\$116	\$110	\$75
<b>Totals<sup>2</sup></b>			
Cost in 2020\$ without finance charges	\$2,576	\$2,452	\$2,206
Cost in YOE\$ with finance charges <sup>1</sup>	\$3,086	\$2,932	\$2,619

Note: 2020\$ = 2020 dollars; YOE\$ = year-of-expenditure (2027) dollars.

<sup>1</sup> Finance charges include interest paid for interim borrowing. Interest paid for regional bonds issued to provide local match is not included.

<sup>2</sup> Columns may not sum due to rounding.

### **Operations and Maintenance Costs**

The estimated annual O&M costs for year 2035 service levels would be \$22.8 million for the Preferred Alternative, \$22.8 million for the Upper Boones Ferry Terminus Option and \$20.5 million for the Hall Terminus Option, in 2020 dollars. These costs include operator staffing (including personnel, materials and services), rail equipment maintenance, maintenance of way, facilities management, field equipment and security, and operating the Hunziker O&M Facility. Like the capital costs, the estimated O&M costs would be refined as part of further design and engineering activities.

## **Funding Plan**

### ***Capital Funding Plan***

The capital funding plan for the Preferred Alternative includes a federal grant from FTA's CIG Program and a combination of state and local funding sources.

FTA's CIG Program funds high capacity transit projects, such as light rail, on a competitive basis. Currently about \$2.3 billion is authorized annually for this program. Demand for these funds exceeds the amount authorized. Large fixed-guideway projects, such as the Southwest Corridor Light Rail Project, are funded under the New Starts category of the CIG Program. The maximum New Starts funding share is limited by law to 60 percent of the project's capital cost, and FTA's rating of a project may consider the extent to which that project requests a lower New Starts share. A project must be rated at least "medium" by FTA to be eligible for New Starts funds, but higher rated projects are more likely to be recommended for funding. The Preferred Alternative is anticipated to compete well nationally.

The majority of the state and local funding for construction and final engineering of the Preferred Alternative has been assumed to come from a regional funding measure. In November 2020, Metro unsuccessfully sought voter approval of Measure 26-218, which would have funded transportation projects and programs around the region, including an anticipated \$975 million for the Southwest Corridor Light Rail Project. Metro has not yet determined if and when it would refer a second transportation funding measure to voters, and what projects and programs could be included in a future measure.

The remaining capital funding is assumed to be derived from a variety of state and regional sources. Metro has already committed about \$44.7 million from the region's federal formula grant program to fund project development for the Preferred Alternative. Under its jurisdictional transfer agreement with the City of Portland regarding SW Barbur Boulevard, the Oregon Department of Transportation has pledged \$65 million to help fund the replacement of the Vermont and Newberry trestle bridges as part of the Preferred Alternative. TriMet, as it has done on previous light rail projects, could pledge a portion of its payroll and self-employment taxes to bonds issued to provide local matching funds. There also have been extensive discussions with other state and local agencies regarding additional contributions of local matching funds.

TriMet and Metro will continue to evaluate the impacts of the COVID-19 pandemic and the unsuccessful regional funding measure on the funding plan and make adjustments as needed.

### ***Operations and Maintenance Funding Plan***

TriMet would provide the O&M funding for the Preferred Alternative and TriMet's associated feeder bus systems. TriMet funds its services through a combination of revenue sources, including its payroll and self-employment taxes, passenger fares, state and federal grants, and other sources.

Immediately preceding the COVID-19 pandemic, TriMet was in a strong financial condition, as reflected by the AAA (or equivalent) ratings it received from three separate rating agencies. As with virtually all governmental agencies, TriMet was financially impacted by the social response to the COVID19 pandemic and has been taking measures to mitigate the impacts (see Chapter 3 for a summary of corresponding ridership and service changes). If the recovery is similar to that associated with the 2007–2009 recession, TriMet could rebalance its financial footing well before the Preferred Alternative would be operational. If necessary, TriMet has taxing authorities under Oregon Revised Statutes 267 that it has not implemented,

which, subject to Board of Directors approval, could be made available for system-wide O&M expenses, including for the Southwest Corridor. The impacts of the COVID-19 pandemic on O&M funding will continue to be evaluated when capital funding is identified and project planning and design are resumed.