

What is the Southwest Corridor Light Rail Project?

The project is a proposed 12-mile MAX line connecting downtown Portland to Tigard and Tualatin.

After several years of early planning, the project is now undergoing environmental review.

What is the purpose of the decision briefing books?

Several project decisions remain, including options for alignments, stations, maintenance facilities and station access improvements.

Through fall 2017, individual decision briefing books will be released to inform conversations about the key considerations for each major decision. Because the environmental impact analysis is ongoing, briefing books will be updated as new information becomes available.

When will the decisions be made?

The steering committee is anticipated to narrow down the remaining options to a "Preferred Alternative" in early 2018.

Further outreach, design and environmental analysis will occur before a final decision on what to construct.

Decision Overview

The Southwest Corridor light rail line would extend the MAX Green Line south of the Downtown Portland Transit Mall. South of downtown, the line could run on either SW Barbur Boulevard or SW Naito Parkway.

The **Barbur alignment** would depart the existing MAX tracks at SW 4th Avenue and SW Lincoln Street and cross over I-405 on a new light rail bridge. The line would run along the east side of Barbur until SW Hooker Street, where it would enter the center of Barbur. The alignment would include a station at SW Gibbs Street, including a new connection to Marquam Hill. The line would continue center-running in Barbur until the Burlingame area.

The **Naito alignment** would continue on the Orange Line MAX tracks until Naito and Lincoln, and would serve the existing station on Lincoln. The alignment would run in the center of Naito until its intersection with Barbur. A station would be located at Gibbs (or an alternate location at Hooker), also including a new connection to Marquam Hill. South of Naito, the alignment would continue center-running in Barbur until the Burlingame area.

Both alignments would include paved trackways between the Transit Mall and where SW Capitol Highway intersects with Barbur in "The Woods" area to allow buses to bypass traffic congestion.

More detailed maps of the Naito and Barbur alignments are provided in the *Light Rail Alternatives for Environmental Review* document, available on the project website: www.swcorridorplan.org/light-rail-study.



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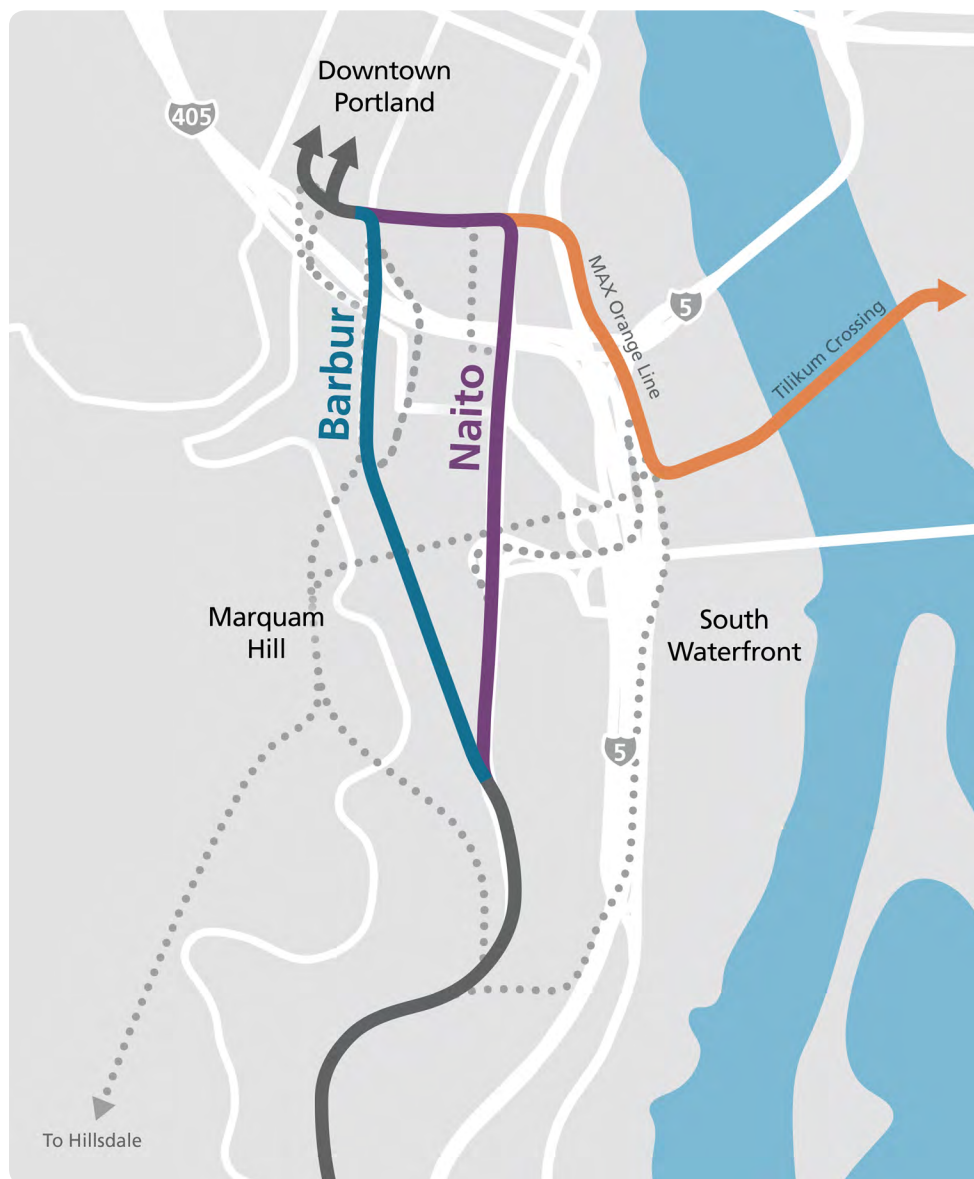
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Alignments Considered and Removed

During the refinement phase of the project, many alignment options were considered. Options that were considered and removed in the South Portland area included alignments that departed from the Orange Line MAX tracks in the South Waterfront area and tunnels under Marquam Hill. The map below shows the multiple South Waterfront and Marquam Hill tunnel alignments that were removed during the refinement phase.

More information on options considered and removed is provided in the *Project Background and Alternatives Considered* document, available on the project website: www.swcorridorplan.org/light-rail-study.



..... Alignments considered and removed

Related Decisions

[describe Bridgehead and Marquam Hill connection options]

For more information on the full range of alternatives under consideration, see the *Light Rail Alternatives for Environmental Review* document, available on the project website: www.swcorridorplan.org/light-rail-study.

Considerations

This first version of this briefing book focuses on the differences between the Barbur and Naito light rail alignments, without addressing the trade-offs between the two potential Naito roadway designs (Bridgehead Reconfiguration and Limited Access). Light rail travel time, station locations and ridership are discussed on the following pages. A summary table is provided on the back page of this document.

Several considerations depend on the differences between the Bridgehead Reconfiguration and Limited Access designs for a Naito alignment, such as property impacts, capital cost, traffic impacts and redevelopment potential. These considerations will be discussed in more detail in the next version of this briefing book.

Travel time

The **Barbur alignment would be one minute, 10 seconds faster** than the Naito alignment. The Naito alignment would provide access to the Lincoln Station built as part of the Orange Line, which accounts for most of the alignment's additional travel time compared to the Barbur alignment.



Both alignments' connection to the transit mall will test LRT on-time performance. Existing tracks used by the Orange Line cross over each other at SW 5th Avenue near SW Lincoln Street Avenue in order for northbound trains to reach SW 6th Avenue on the transit mall and for southbound trains to connect from SW 5th Avenue on the transit mall. In this crossover section, only one train at a time can pass in either direction. With the Naito alignment, Southwest Corridor light rail vehicles would merge with Orange line vehicles on Naito west of SW 1st Avenue, introducing additional trains through the crossover location at SW 5th. With the Barbur alignment, Southwest Corridor light rail vehicles would merge with Orange line vehicles at SW 4th Avenue, less than 250 feet from the crossover. The merge location's proximity to the crossover location and to a complex auto circulation point **increases the potential of a Barbur alignment to affect light rail operations.** Operations analysis that will clarify the impacts is not complete, and results could impact travel time assumptions used in light rail modeling, including differences between the Barbur and Naito alignments.

Station locations: Gibbs

The Naito and Barbur alignments would both include stations at Gibbs. The map below shows the areas accessible within a half-mile walk from each station location. [add map and info about households & employment, proximity to South Waterfront vs. Marquam Hill, etc.]



Ridership

Projected ridership in 2035 is 2 percent higher for Barbur than Naito, with 41,600 daily line riders compared to 40,900 line riders with the Naito alignment. **The Barbur alignment also has a 9 percent higher projected change in daily system transit ridership** compared to the Naito alignment, with 17,800 new system trips compared to 16,300 new system trips. The Barbur alignment gains riders due to its faster travel time near the peak load point, but the advantage is partially offset by the riders gained by the Naito alignment's access to the Lincoln Station.

Lincoln Station

The Lincoln station serves portions of southern downtown Portland and the RiverPlace area that would not be served with a Barbur alignment. With Naito, the Lincoln station would attract nearly 700 daily walk ons and offs. It would also provide a convenient cross-platform transfer location to/from the Southwest Corridor light rail by the Orange line riders from/to areas east of the Willamette River. The Lincoln Station would have 1,800 daily ons and offs by Orange line transfers. With the Barbur alignment, those transfers could occur at different stations along the transit mall, likely at Portland State University, but riders would need to walk one block between the north- and southbound directions of the transit mall to make the transfer. For Yellow line riders from the north, however, a transfer to the Southwest Corridor line would be more attractive with a Barbur alignment due to the faster travel time to the south. Projected Yellow/Orange line ridership in 2035 grows by 1,150 riders, or nearly 2.5 percent, with a Naito alignment.

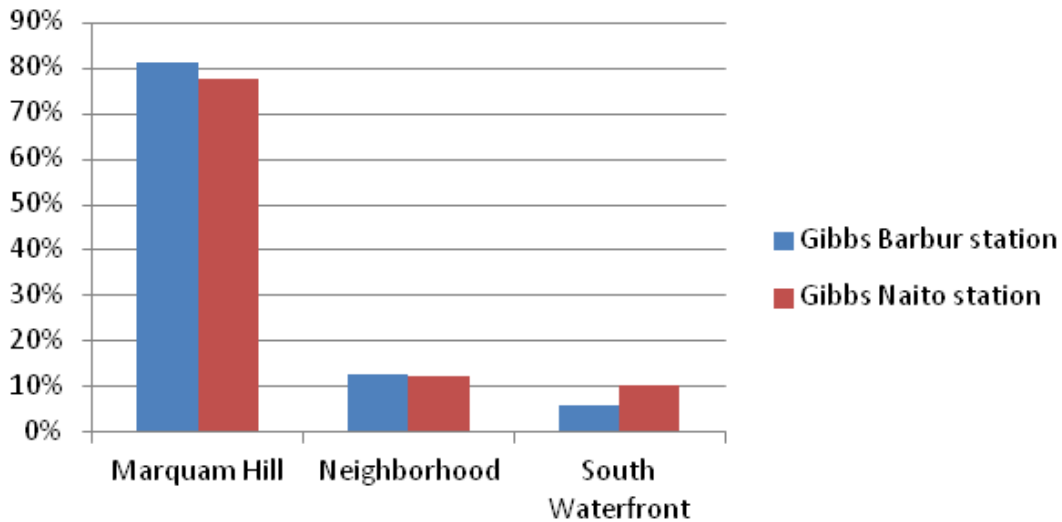
Gibbs Station

While the proposed Gibbs station site on Barbur is only slightly more than 1/10th of a mile away from the Naito site, grade changes and traffic would result in slightly different ridership markets for walk-on riders on each alignment. The Gibbs Barbur station would be closer to the Marquam Hill connection, and the Gibbs Naito station would be closer to the South Waterfront via the Hooley pedestrian bridge, and to the National University of Naturopathic Medicine. While Marquam Hill riders would use a Gibbs Naito station and South Waterfront riders would use a Gibbs Barbur station, those riders would need to cross Barbur or Naito and use a stairway or a ramp. As a result, ridership differs. Overall, the Gibbs Barbur station is projected to have 7,800 daily walk ons and offs in 2035, while the Gibbs Naito station would have 6,600.

A Gibbs station with the Naito alignment, though, would experience more transfers between light rail and bus than a Gibbs station with the Barbur alignment. Both alignments include a shared transitway for approximately two miles from SW Lincoln Street to the Capitol Highway ramps to Barbur. Buses could operate in the shared transitway to avoid congestion and speed up service. For both model runs, the line 54, which in 2035 is assumed to interline with the line 6, is routed on the shared transitway (whether on Barbur or Naito). The line 44 is assumed to operate on the opposite street—on Barbur when light rail is on Naito, and on Naito when the light rail is on Barbur. The Gibbs Naito station would have 960 daily transfers between the line 54/6 and light rail in 2035, while the Gibbs Barbur station would have 530 daily transfers. With the Naito alignment a transfer between the 54/6 and light rail at Gibbs would avoid the light rail dwell time at the Lincoln Station. With the Barbur alignment, riders would save time by making the same transfer further north along the transit mall instead of at Gibbs.

Share of walk-on riders by location

[Better incorporate chart & table into text]



Walk distance from station

| | Marquam Hill connector | Hooley ped bridge (west end) |
|--------------|------------------------|------------------------------|
| Gibbs Barbur | adjacent | .29 mile |
| Gibbs Naito | .16 mile | .16 mile |

Pending information

[Note importance of property impacts, traffic impacts, cost, redevelopment potential, etc. but will be included in next version along with more detail comparing Bridgehead Reconfiguration vs. Limited Access]

An updated version of this briefing book will be released when new information becomes available.

Summary Table

The following summary table will be updated as new information becomes available. The ongoing environmental impact analysis could reveal significant impacts associated with Naito and Barbur alignments. [Insert note explaining that the next version will address Bridgehead vs. Limited Access.]

| | Barbur | Naito |
|---|--------------|--------------|
| Transit Performance <i>(Full Corridor)</i> | | |
| New system transit trips <i>2035 average weekday</i> | 17,800 | 16,300 |
| Line ridership <i>2035 average weekday</i> | 41,600 | 40,900 |
| Travel time: PSU to Bridgeport Village <i>2035 average weekday, peak period</i> | 32.9 minutes | 34.0 minutes |
| Finance <i>(Full Corridor)</i> | | |
| Capital cost | TBD | TBD |
| Access and Development <i>(Segment A only)</i> | | |
| Specific measures TBD | TBD | TBD |
| Communities and Built Environment <i>(Segment A only)</i> | | |
| Property acquisitions | TBD | TBD |
| Residential and business displacements | TBD | TBD |
| Other specific relevant impacts TBD | TBD | TBD |
| Natural Environment <i>(Segment A only)</i> | | |
| Specific relevant impacts TBD | TBD | TBD |

Assumptions

For full-corridor information, Alternative A1 (Barbur) is assumed for Segment A and Alternative B2 (I-5 Barbur Transit Center to 60th) is assumed for Segment B and Alternative C1 (Ash to I-5) is assumed for Segment C.

For more information on the range of alignment alternatives under consideration, see the *Light Rail Project Alternatives for Environmental Review* document, available on the project website: www.swcorridorplan.org/light-rail-study.