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High capacity transit alignment technical modifications: New Tigard Triangle and branch service alignment options

4/14/16

Introduction

Project background

The Southwest Corridor Plan is a package of transit, roadway, bicycle and pedestrian solutions that can help reduce congestion, improve circulation and enhance quality of life in this corridor. The Plan is being developed by a group of partners, including jurisdictions in the project area and agencies involved in funding, constructing and operating the selected transportation investments. A steering committee consisting of elected leaders and appointees from these partners is leading the planning process.

A major component of the Southwest Corridor Plan is the analysis and evaluation of a new high capacity transit (HCT) line to link Central Portland, Southwest Portland, downtown Tigard and Tualatin. Project staff evaluated both bus rapid transit (BRT) and light rail transit (LRT) modes for this new line. In early April 2016, project staff recommended further study of LRT as the preferred HCT mode for the Southwest Corridor. The steering committee is scheduled to make the HCT mode decision in early May.

For more information on previous analysis and decisions, see the project website at www.swcorridorplan.org.

Tigard alignment decisions

In January 2016, the steering committee removed two looped alignments in downtown Tigard as part of an 18-month work plan to narrow the range of options under consideration prior to entering into the environmental review process. Because of concerns regarding the trade-offs between travel time, property impacts, wetland impacts, operating costs and station locations, the steering committee requested further refinement of the remaining HCT alignment options in the downtown Tigard and Tigard Triangle areas.

This memo highlights two new alignment options that emerged during further analysis: a two-way alignment on SW 70th Avenue in the Tigard Triangle and a branch service option that splits in the Tigard Triangle (east of OR-217) near Beveland Street. Project staff recommends adding these two options to the list of alignments under consideration.

Proposed modifications

Tigard Triangle

Current alignment option

In July 2015, the Southwest Corridor Steering Committee adopted project staff's recommended technical modification to replace the 68th/69th Avenue couplet option with the 68th/70th Avenue couplet. The 68th/69th couplet would have resulted in property access limitations along the blocks in the middle of the couplet due to turning restrictions and driveway closures. Additionally, HCT on 68th and 70th Avenues would better support the Tigard Triangle Strategic Plan's emphasis on slower traffic and a more enjoyable pedestrian and cycling experience on 69th.

Proposed addition: 70th Avenue two-way

Based on further examination of the constraints and opportunities for an HCT alignment through the Tigard Triangle, project staff recommends adding a new two-way option on 70th Avenue (see Figure 1). This option would include high capacity transit and auto traffic running in both directions. As with the 68th/70th couplet option, the 70th two-way would construct new segments of roadway that do not exist today, which supports the Tigard Triangle Strategic Plan's goal of a more connected street network in the area. The two-way option on 70th would have fewer impacts to auto traffic in the Triangle and could be constructed for \$30 million less than the couplet option (2014\$, excluding finance and escalation).

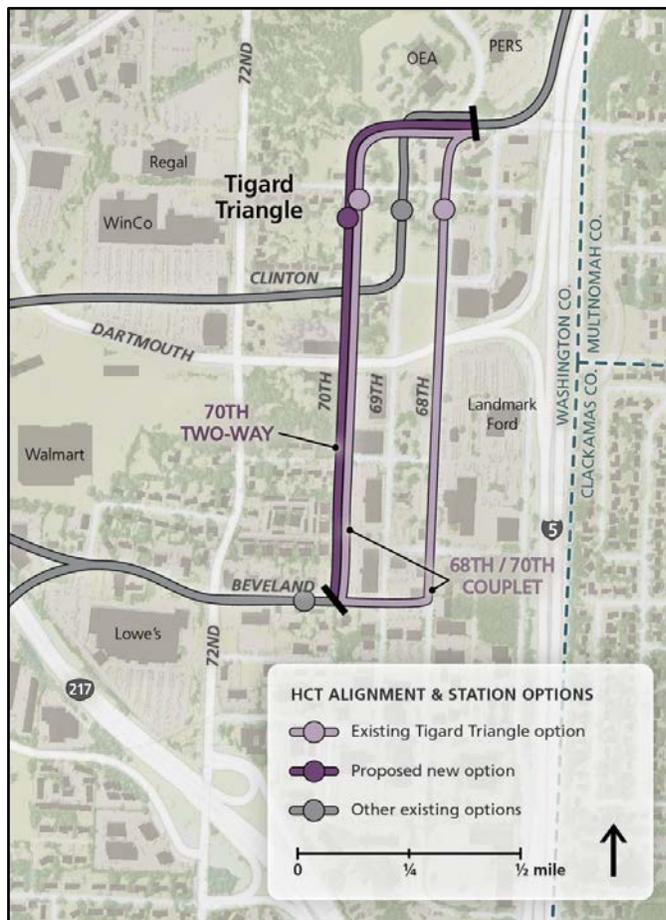


Figure 1: Tigard Triangle alignment options

Branch service

Current alignment options

There are currently two direct route options and one branched option under consideration in the downtown Tigard area.

As shown in the left map in Figure 2, a direct route could either run between downtown Tigard and the northern Tigard Triangle on a new structure extending from Clinton Street over parking lots and OR-217 (the Clinton Crossing alignment), or travel farther south in the Triangle with a crossing over OR-217 via Beveland Street (the Ash Avenue alignment). Both of these direct route options would run parallel to the WES commuter rail and freight rail tracks south of the Tigard Transit Center, and then either adjacent to the freight rail tracks or adjacent to I-5 in southeast Tigard.

The branch service alignment already under consideration would cross OR-217 via Beveland Street then split at Wall Street, with alternating trains continuing either north to downtown Tigard or south to Bridgeport Village (see center map in Figure 2). Between the Tigard Triangle and Bridgeport Village, the Wall branch alignment would save about two minutes over the Ash Avenue alignment.

For more detailed information on the trade-offs between the direct and branched alignment options, see *High Capacity Transit Technical Evaluation Results and Methodology Part 2: Downtown Tigard, Southeast Tigard and Tualatin*, available at this URL: <http://www.oregonmetro.gov/sites/default/files/SWCP-HCT-TechEval-Part2-20151015.pdf>.

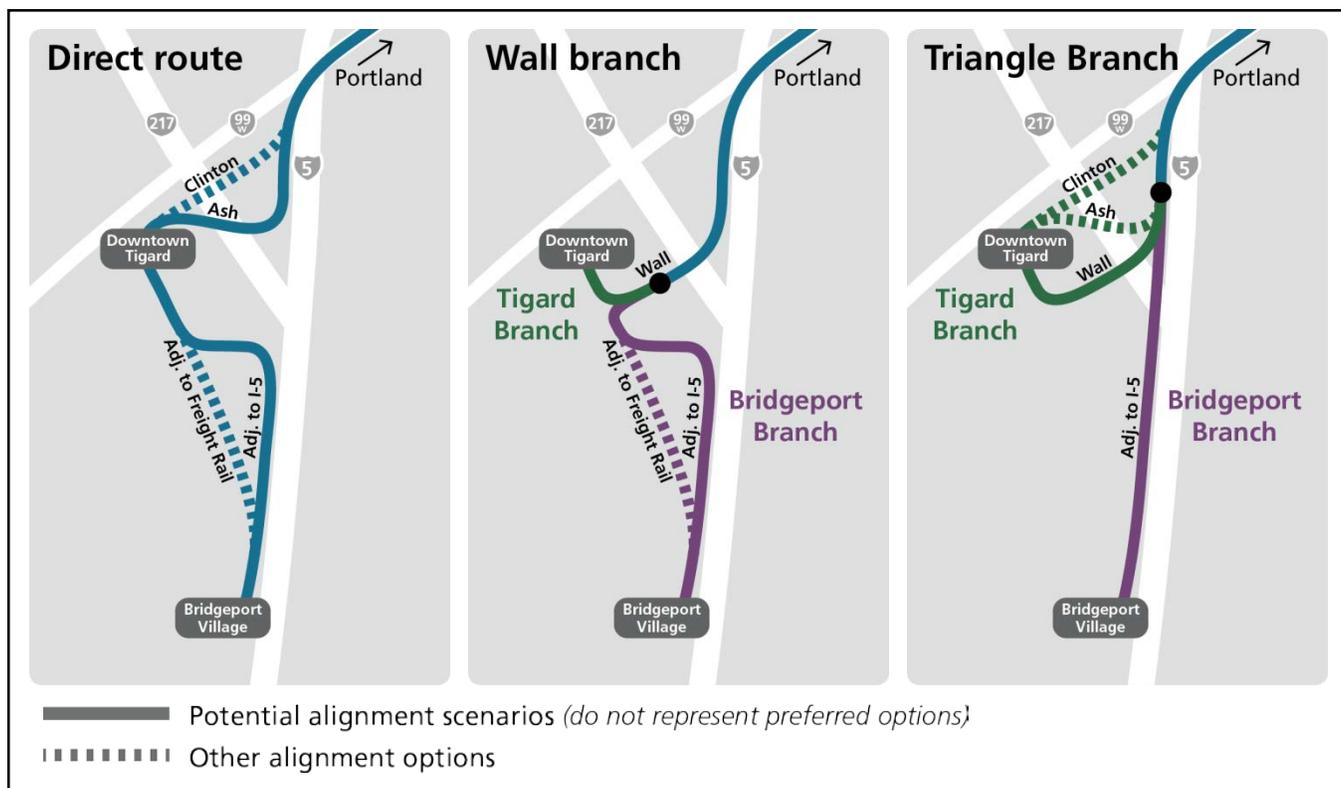


Figure 2: Direct and branched alignment options in downtown Tigard

Proposed addition: branch service with Tigard Triangle split

Project staff proposes adding one new branch service option for further consideration. The new branch option would split in the Tigard Triangle, using the Clinton, Ash or Wall alignment to reach the Tigard Transit Center and using the adjacent to I-5 alignment to reach Bridgeport Village (see right map in Figure 2).

Compared to the existing alignment options, this new option would provide a faster route for the Bridgeport branch. For travel to Bridgeport Village, a branch alignment with a split in the Tigard Triangle could save three to four minutes over the branch with a split at Wall Street and five to six minutes over the Ash Avenue alignment (see table below).

LRT travel time: PSU to Bridgeport Village (2035 PM peak)

		Downtown Tigard alignment		
		Direct: Ash Avenue	Wall branch	Triangle branch
Southeast Tigard alignment	Adjacent to freight rail	31 minutes	29 minutes	N/A
	Adjacent to I-5	32 minutes	30 minutes	26 minutes

The new alignment segment that would be added for design and analysis is from Beveland Street and 70th Avenue in the Tigard Triangle to the existing adjacent to I-5 alignment just south of the I-5 and OR-217 interchange (see Figure 3).

Future analysis will further explore the trade-offs between direct and branched options, including information about capital cost, operating cost, travel patterns and service frequencies.

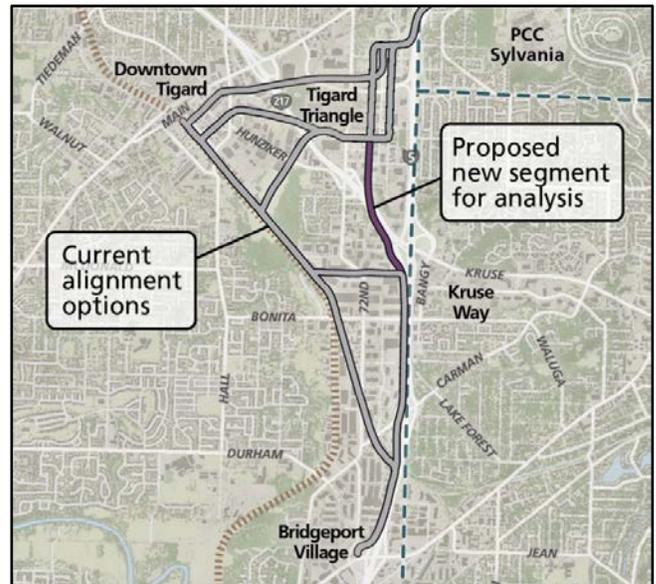


Figure 3: New alignment segment proposed for analysis