

First Hill Streetcar Alignment Assessment Summary

February 2010

Range of Cost: Conceptual design cost estimates were developed for each alignment, using common unit cost assumptions for all alternatives. For each alternative, the low end of the range is based on the Weller Street Turnback Loop and the high end of the range is based on the Pioneer Square Turnback Loop. The maximum funding available for the project through the City-Sound Transit interlocal agreement is \$132.8 M.

Operating Cost: Describes the total number of vehicles required for operation at 10-minute service intervals during peak hours, based on the estimated travel time for each route. These vehicle requirements are the main variable in operating cost of First Hill Streetcar.

Travel Time: Describes the average time it will take to travel from First Hill to Link Light Rail at either the Capitol Hill Station (CHS) or the Chinatown/International District Station (IDS) during peak commute hours (Marion Street was used as the point of origin for each alignment alternative).

Ridership Potential: Commercial, institutional and residential buildings within easy walking distance (one-quarter mile) of streetcar station locations are potential generators of streetcar trips. The ridership potential analysis quantifies employees, visitors, students, and residents located within walking distance of alternative station locations. Existing development and future capacity are each considered. Travel time will be one of the considerations affecting how many of the potential riders ultimately choose to use the streetcar.

Bicycle Integration: Seattle's Complete Streets policy establishes principles for street design and requires comprehensive policy considerations for all road users. Streetcar tracks can pose challenges for cyclists, which can be addressed and minimized through track alignment and bicycle facility design. The Alignment Assessment Summary incorporates findings from analysis by the City's bicycle planning consultant for the First Hill Streetcar project; their report is available on-line at: www.seattlestreetcar.org/firsthill.asp

Utility Relocation/Construction Impacts: Utility relocations are the most disruptive work that may be associated with streetcar construction, as underground utilities may be deep and excavations may interfere with several lanes of traffic. The conceptual design cost estimate includes utility relocations identified based on parallel utilities located within 10 feet of the track alignment alternatives.

Traffic/Parking Revisions: Streetcars share the roadway with other users including general traffic, transit, emergency services, freight, bicycles and pedestrians. Introducing the streetcar into established roadways may require changes to traffic operations and on-street parking to accommodate streetcar turning movements, bicycles, and other users of the roadway. Some changes may create a better environment for all users, while others may present challenges or create new constraints for other users; these revisions vary with the alignment alternatives.

Alignment Assessment Summary

	Two-Way BROADWAY	Two-Way BROADWAY with Park Loop	BROADWAY/12TH Couplet	BOYLSTON/SENECA	BOREN/SENECA
RANGE OF COST with Weller Loop or Pioneer Square Loop	\$122M - \$125M	\$124M - \$128M	\$125M - \$128M	\$135M - \$139M	\$144M - \$147M
OPERATING COST (Peak Hour Vehicle Requirements)	4	4	4	4	5
TRAVEL TIME (Average Peak Hour Minutes)					
FIRST HILL (Marion St) to IDS	12	12	11	12	13
FIRST HILL (Marion St) to CHS	4	5	5	6	7
DAILY RIDERSHIP POTENTIAL (Trip Generators Within Walking Distance to Station Areas)					
EXISTING CONDITIONS	6,000 - 9,000	6,000 - 9,000	6,000 - 8,000	7,000 - 10,000	7,000 - 10,000
BUILD-OUT CONDITIONS	13,000 - 20,000	13,000 - 20,000	12,000 - 18,000	14,000 - 20,000	14,000 - 21,000
BICYCLE INTEGRATION					
UTILITY RELOCATIONS/ CONSTRUCTION IMPACTS					
TRAFFIC/PARKING REVISIONS					
	Turn restrictions and/or parking restrictions one side of Broadway	Converts 11th Ave to one-way northbound	Turn restrictions and/or parking restrictions one side of Broadway OR converts 11th Ave to one-way northbound	Parking restrictions, both sides of Boylston	Congestion impacts at Broadway, James; Conflicts with emergency services on Minor

Legend

Good

Fair

Poor