



Date: August 28, 2007

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Board Meeting Date: N/A

BOARD MEMORANDUM

ACTION DISCUSSION INFO X

TO: Downtown East Valley
Policy Advisory Board

FROM: Kevin Connolly *K*
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SUBJECT: Santa Clara/Alum Rock Capital and Operating Cost Estimates

FOR INFORMATION

The Santa Clara/Alum Rock Transit Improvement Project has been undergoing an update in each of the defined project alternatives. An update to the project alternative definition was completed early this year. As a result, three alternatives were re-defined: 1) No Build; 2) Single-car Light Rail; and 3) Bus Rapid Transit. Since then staff and consultant have completed additional analysis on ridership projection, parking impacts and travel times. Most recently, staff and the consultant completed cost estimates for the three alternatives, both capital and operating.

This memorandum presents the capital and operating cost estimates for these three alternatives. Attachment A is a summary of the key characteristics of the project alternatives.

Capital Cost Estimates

Capital costs is estimated at approximately \$393 million for the Single-car Light Rail alternative and \$128 million for the Bus Rapid Transit (BRT) alternative. The No Build alternative would not incur capital cost.

The Single-car Light Rail alternative cost includes vehicles, trackwork, stations, train control, communications/ security, utilities, right-of-way, parking replacement, light rail vehicles, and contingency. The Bus Rapid Transit cost includes vehicles, roadway improvements, stations, traffic signals, communications/security, right-of-way, parking replacement, BRT vehicles, and contingency. Attachment B provides details on the conceptual cost estimates.

Operating Cost Estimates

The operating cost includes the cost to operate and maintain transit services. In this study, the operating cost is annualized. The annual operating cost for the No Build alternative is the cost of operating the portion of the existing Rapid 522 within the project corridor, from Diridon to Eastridge.


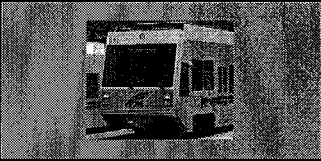
Operating costs for the two project alternatives are additional costs incurred because of the operation of Single-Car Light Rail and Bus Rapid Transit. The additional annual operating cost for the Single-Car Light Rail alternative is approximately \$11.7 million. The operating cost of Single-car Light Rail assumes maintenance of vehicles, stations, track and the overhead catenary system. Labor and overhead costs are also included. It was assumed that there would be no change to the bus services in the project corridor.

The annual operating cost for the Bus Rapid Transit alternative is approximately \$3.5 million. This cost includes BRT lines 522 and 523, each with 12-minute headways. The baseline Rapid 522 operating cost was subtracted. The operating cost of Bus Rapid Transit assumes maintenance of vehicles, stations and busway segments. Labor and overhead costs are also included.

Attachment A: Project Alternative Comparison Chart

Attachment B: Conceptual Capital Cost Estimates

Attachment A -- Project Alternative Comparison Chart

	 No Build	 Single-car Light Rail	 Bus Rapid Transit
Frequency	Existing-No Change	15-minutes	6-minute
Ridership (1)	5,718	3,959	15,089
Travel Time	28 minutes	26 minutes	19 minutes
Stations	Existing	10	10
Terminal Point	Existing	Diridon-Eastridge Mall	DeAnza College & Palo Alto -- Eastridge Mall
Dedicated Facilities	None	Alum Rock Avenue	Alum Rock Avenue
Service Implementation	2007	2021	2012
Parking Loss	0	219	123
Capital Cost	N/A	\$392,869,000	\$127,634,000
Annual Operating Cost	N/A	\$11,733,600	\$3,506,800

Notes:

(1) Ridership estimates are expressed in average daily boardings. Ridership estimate is for 2030 horizon year.

Attachment B-1

Santa Clara / Alum Rock Corridor Project - Conceptual Cost Estimate		
Light Rail Alternative Total Quantities and Costs		
Ref #	Description	Total Cost
4.2	Site Work	\$56,162,255
	Guideway, landscaping, track realignment, roadway improvement	
4.3	Concrete	\$4,374,500
	New bridge, modify structure	
4.4	Trackwork	\$13,324,740
	Tracks, track crossing, Vasona - Capitol connection	
4.5	Traction Electrification System (TES)	\$15,904,119
	Overhead contact system, traction power feed cables and breakers	
4.6	Traffic Signaling, Street Lighting and Grade Crossing Protection	\$10,119,700
	New signals and modify signals	
4.7	Communications / Security	\$17,054,390
	Station communication, communication system and raceways	
4.8	LRT Train Control and Traffic Control	\$3,739,400
	VTS system, underground electrical, upgrade to Vasona signaling	
4.9	Stations	\$26,350,000
4.10	Replacement Parking	\$995,000
4.11	Utilities	\$10,474,968
4.1	General	\$22,190,000
	Mobilization/contractor overhead	
5	Contingency	\$45,173,000
6	Add-On Allowances	\$117,449,000
	Engineering, construction, design support, artwork, reserve	
7	Right-of-Way (Including Agency Acquisition Cost)	\$21,397,000
8	Vehicles	\$28,160,000
	8 Kinkyo Sharyo light rail vehicles	
	Total Cost - Light Rail Alternative	\$392,869,000

All unit costs are in 2007 dollars with the total escalated to 2007 and does not include escalation to the mid-point of construction.

Attachment B-2

Santa Clara / Alum Rock Corridor Project - Conceptual Cost Estimate		
BRT Alternative Total Quantities and Cost		
Ref #	Description	Total Cost
4.2	Site Work	\$10,488,350
	Pavement, station area intersection paving, landscaping	
4.6	Traffic Signaling, Street Lighting and Grade Crossing Protection	\$2,715,000
	New signals and modify signals	
4.7	Communications / Security	\$840,000
	Station Communication	
4.9	Stations	\$33,230,000
4.10	Replacement Parking	\$180,000
4.1	General	\$6,643,000
	Mobilization/contractor overhead	
5	Contingency	\$13,524,000
6	Add-On Allowances	\$35,163,000
	Engineering, construction, design support, artwork, reserve	
7	Right-of-Way (Including Agency Acquisition Cost)	\$8,350,000
8	Vehicles	\$16,500,000
	15 Articulated Bus	
	Total Cost - BRT Alternative	\$127,634,000

All unit costs are in 2007 dollars and does not include escalation to the mid-point of construction.

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