

**WEST CONTRA COSTA HIGH-CAPACITY TRANSIT STUDY
TASK NUMBER 13.1 PRELIMINARY SCREENING COST ESTIMATE**

**PRELIMINARY ESTIMATE OF
PROBABLE CONSTRUCTION COST
(AN OPINION OF PROBABLE CONSTRUCTION COST)
BASED ON
DRAFT TECHNICAL MEMORANDUM #8 PRELIMINARY ALTERNATIVES**

**Owner
WEST CONTRA COSTA TRANSPORTATION ADVISORY COMMITTEE
(WCCTAC)**

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Date: 01/11/2016 Draft

1165 WCCTAC HCTS-Alts Cost Estimate 20160111.xlsx

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Date: 01/11/2016 Draft

**WEST CONTRA COSTA HIGH-CAPACITY TRANSIT STUDY
PRELIMINARY ESTIMATE OF PROBABLE CONSTRUCTION COSTS
BASED ON TECH MEMO #8 PRELIMINARY ALTERNATIVES - PRELIMINARY SCREENING
PREAMBLE (BASIS OF ESTIMATE)**

Date: 01/11/2016 Draft

1.0 Outline

1.1 The preliminary conceptual construction cost estimate, which represents our opinion of probable construction costs, is comprised of the following integral parts:

- A) Preamble
- B) Summary
- C) Cost Detail Estimates

1.2 The estimate is part of Task 13.1 for preliminary screening of alternatives so that a preferred alternative can be selected for further more detailed study.

2.0 Basis of Estimate:

2.1 The estimate has been prepared based on the following information:

- Revised Draft Technical Memorandum #8 - Preliminary Alternatives dated October 2015 prepared by WSP/Parsons Brinckerhoff with Kimley-Horn and RL Banks.
- Power Point Presentation slides to WCCTAC dated November 19, 2015
- SCC_Workbook_Rev_14
- TM 13_cost Estimates_Outlines_v01
- Responses from the team on our queries
- Clarifications from designers/planners via emails and telephone calls.

2.2 The estimate is considered as Class 4 Estimate by AACE Estimate Classification, which is based on limited information with project definition from 1 to 15% complete. Expected accuracy ranges for this class of estimate are -15% to -30% on the lower end and +20 to +50% on the higher end.

3.0 Scope

3.1 The general major scope of work in this estimate, per the information listed above, is for eight alternatives including one for express bus, two for BRT, two for commuter rail and three for BART.

Assume there are no additional improvements for BRT route at "Mixed Flow" roadways.

3.2 Items specifically excluded from the estimate:

- All estimated costs are in 2015 dollars (base year); no cost escalation is included
- Finance charges are excluded
- Parking structures assumed to be 500 spaces per location
- Surface parking lots are assumed to be 300 spaces per location
- Parking spaces assumed to be 350 square feet each

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PREAMBLE (BASIS OF ESTIMATE)**

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No land purchase needed for parking structure
Scope of work outside of West Contra Costa HCT Project limit is excluded except where specifically noted in the cost estimate
Exclude support facilities
Exclude sea level rise mitigation work
Exclude additional negotiation cost with UPRR and BNSF
Exclude grade separated station and tracks (layover track) Oakland Amtrak (Jack London Square) for freight and pedestrians
No roadway improvements for "mixed flow" roadway
Roadway improvements include allowance for repair of (E) sub base (30% of total roadway)
Abatement of contaminated soils or hazmat, if any

It is assumed that the above items, if needed, are included elsewhere in the owner's overall project budget.

- 3.3 All costs are base year costs in 2015 dollars. No cost escalation to YOE is included as there is no project schedule available for the escalation/projection calculation.

4.0 Assumptions and Qualifications

- 4.1 The estimate is based on estimated prices current as of December 2015, with a minimum of four responsible and responsive bids under a competitive bidding environment for a fixed price lump sum contract (a fair market condition).

Note: Experience indicates that fewer bidders may result in higher bids, and conversely more bidders may result in more competitive bids. Therefore it is important to obtain as many bids as possible.

- 4.2 The estimate is based on all work to be performed during normal working hours.
- 4.3 Allowances have been used for items which are required but are not able to be defined at this time.
- 4.4 The unit prices used in the direct cost section are composite unit prices which include costs for material including tax, labor, equipment and subcontractor's/supplier's mark-ups.
- 4.5 Items potentially affecting the cost estimate, but which are not included in this estimate, may include, but are not limited to, the following:
Modifications to the scope of work included in this estimate.

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PREAMBLE (BASIS OF ESTIMATE)**

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Unforeseen sub-surface conditions.
Unforeseen structural upgrade requirements.
Special phasing requirements.
Restrictive technical specifications or excessive contract conditions.
Any specified item of equipment, material, or product that cannot be obtained from at least three different sources.
Any other non-competitive bid situations.

4.6 The estimate has been prepared using accepted practices and it represents our opinion of probable construction costs. We make no other warranties, either expressed or implied, and are not responsible for the interpretation by others of the contents herein the cost estimate. It should also be noted that the cost estimate is a "snapshot in time" and that the reliability of this opinion of probable construction cost will inherently degrade over time.

4.7 Please note that the estimate has been based on very preliminary and limited information and it only serves as a general guideline for preliminary screening of alternatives. More specific and detailed studies in the future should be conducted as the design and planning progress.

5 Basis for Pricing

In pricing the estimate, we have made references to the following sources for cost data:

Historical cost data, escalated to 2015 costs

2015 RS Means Construction Cost Data by RS Means (general use for building up unit costs)

2015 National Construction Estimator by Craftsman (general use for building up unit costs)

Construction Economics in Engineering-News-Record (ENR) (for material costs and building market trends)

Walker's Building Estimator's Reference Book by Frank R. Walker Company (for general references)

Based on the above cost sources, our analysis of the project specific requirements and our judgment of the current market conditions, we have arrived at the unit costs specifically for this project.

**WEST CONTRA COSTA HIGH-CAPACITY TRANSIT STUDY
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PREAMBLE (BASIS OF ESTIMATE)**

Date: 01/11/2016 Draft

6.0 Abbreviations used in the estimate:

CY = cubic yard

EA = each

GSF = Gross Square Area

LF = linear foot

LS = lump sum

NIC = Not in Contract (Excluded from the Estimate)

SF = square foot

ESTIMATED PROJECT COST BASE YEAR 2015

WCCTAC HCT Alternatives Cost Estimate				
Alternative #	Name	2015 Base Year Estimated Cost	Corridor Length Miles	Cost per Mile
Alternative 1	Express Bus	\$ 247,900,000	17.50	\$ 14,170,000
Alternative 2	San Pablo Avenue/ Macdonald Avenue BRT	\$ 247,600,000	16.67	\$ 14,850,000
Alternative 3	23rd Street BRT	\$ 120,800,000	10.70	\$ 11,290,000
Alternative 4	UPRR Corridor Commuter Rail			
	Phase 1	\$ 185,900,000	19.50	\$ 9,530,000
	Phase 2	\$ 152,100,000	13.00	\$ 11,700,000
	Total	\$ 338,000,000	32.50	\$ 10,400,000
Alternative 5	UPRR BNSF Corridor Commuter Rail			
	Phase 1	\$ 192,600,000	1.90	\$ 101,370,000
	Phase 2	\$ 153,900,000	13.00	\$ 11,840,000
	Total	\$ 346,500,000	14.90	\$ 23,260,000
Alternative 6	BART Extension from Richmond Station to Hercules	\$ 2,452,700,000	8.00	\$ 306,590,000
Alternative 7.1	BART Extension from del Norte Station to Hercules	\$ 2,465,200,000	7.50	\$ 328,690,000
Alternative 7.2	BART DMU Extension from del Norte Station to Hercules	\$ 2,169,600,000	7.50	\$ 289,280,000

Please see attached Preamble (Basis of Estimate), Estimate Summaries and Details for basis of estimate, estimate scope, assumptions, qualifications, inclusions and exclusions.

ESTIMATED PROJECT COST BASE YEAR 2015

General Assumptions Applicable to All Alternatives Unless Noted Otherwise

- 1 All estimated costs are in 2015 dollars (base year); no cost escalation is included
- 2 Finance charges are excluded
- 3 Parking structures assumed to be 500 spaces per location
- 4 Surface parking lots are assumed to be 300 spaces per location
- 5 Parking spaces assumed to be 350 square feet each
- 6 No land purchase needed for parking structure
- 7 Scope of work outside of West Contra Costa HCT Project limit is excluded except where specifically noted in the cost estimate
- 8 Exclude support facilities
- 9 Exclude sea level rise mitigation work
- 10 Exclude additional negotiation cost with UPRR and BNSF
- 11 Exclude grade separated station and tracks (layover track) Oakland Amtrak (Jack London Square) for freight and pedestrians
- 12 No roadway improvements for "mixed flow" roadway
- 13 Roadway improvements include allowance for repair of (E) sub base (30% of total roadway)
- 14 Abatement of contaminated soils or hazmat, if any

WEST CONTRA COSTA HIGH-CAPACITY TRANSIT STUDY
 PRELIMINARY ESTIMATE OF PROBABLE CONSTRUCTION COSTS
 BASED ON TECH MEMO #8 PRELIMINARY ALTERNATIVES - PRELIMINARY SCREENING
 GRAND ESTIMATE SUMMARY (ROUNDED TO THE NEAREST 100,000)

Date: 01/11/2016 Draft
 2015 BASE YEAR DOLLARS

SCC	ITEMS	Alt 1	Alt 2	Alt 3	Alt 4	Alt 5	Alt 6	Alt 7.1	Alt 7.2
	DIRECT CONSTRUCTION COST								
10	Guideway	79,579,500	45,306,261	15,451,937	128,531,403	77,735,238	1,271,770,500	1,211,710,500	1,055,554,500
20	Stations	55,663,608	21,108,087	13,999,986	20,870,850	57,657,600	337,086,750	448,197,750	394,744,350
30	Support Facilities	-	-	-	-	-	-	-	-
40	Sitework and Special Conditions	15,549,534	32,539,007	20,885,865	19,519,500	22,672,650	with above	with above	with above
50	Systems	3,003,000	31,361,831	20,150,130	2,252,250	7,357,350	with above	with above	with above
A	SUBTOTAL 10 TO 50 - DIRECT CONSTRUCTION COST	153,795,642	130,315,186	70,487,918	171,174,003	165,422,838	1,608,857,250	1,659,908,250	1,450,298,850
	ALLOWANCE								
60	ROW, Land, Existing Improvements	18,375,000	2,500,500	1,605,000	54,562,500	70,312,500	None	None	None
70	Vehicles	24,480,000	70,200,000	24,960,000	37,200,000	37,200,000	84,960,000	86,400,000	108,000,000
80	Professional Services	45,068,320	38,187,600	20,655,800	56,430,990	54,535,001	665,211,250	629,475,000	529,278,750
B	SUBTOTAL 60 TO 80 - ALLOWANCE	87,923,320	110,888,100	47,220,800	148,193,490	162,047,501	750,171,250	715,875,000	637,278,750
90	Unallocated Contingency	6,161,722	6,358,555	3,065,755	18,614,232	19,009,920	93,651,875	89,437,500	82,020,625
100	Finance Charges - Excluded	Excluded	Excluded	Excluded	Excluded	Excluded	Excluded	Excluded	Excluded
C	SUBTOTAL 90 - UNALLOCATED CONTINGENCY	6,161,722	6,358,555	3,065,755	18,614,232	19,009,920	93,651,875	89,437,500	82,020,625
A+B+C	TOTAL PROJECT ESTIMATED COST (10 - 100)	247,880,684	247,561,841	120,774,473	337,981,725	346,480,259	2,452,680,375	2,465,220,750	2,169,598,225
	Rounded - off to nearest \$100,000	247,900,000	247,600,000	120,800,000	338,000,000	346,500,000	2,452,700,000	2,465,200,000	2,169,600,000

Please see attached Preamble (Basis of Estimate), Estimate Summaries and Details for basis of estimate, estimate scope, assumptions, qualifications, inclusions and exclusions.

General Assumptions Applicable to All Alternatives Unless Noted Otherwise

- 1 All estimated costs are in 2015 dollars (base year); no cost escalation is included
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- 8 Exclude support facilities
- 9 Exclude sea level rise mitigation work
- 10 Exclude additional negotiation cost with UPRR and BNSF
- 11 Exclude grade separated station and tracks (layover track) Oakland Amtrak (Jack London Square) for freight and pedestrians
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- 13 Roadway improvements include allowance for repair of (E) sub base (30% of total roadway)
- 14 Abatement of contaminated soils or hazmat, if any

WEST CONTRA COSTA HIGH-CAPACITY TRANSIT STUDY
 PRELIMINARY ESTIMATE OF PROBABLE CONSTRUCTION COSTS
 BASED ON TECH MEMO #8 PRELIMINARY ALTERNATIVES - PRELIMINARY SCREENING
 PRELIMINARY ESTIMATE OF PROBABLE CONSTRUCTION COSTS
 ESTIMATE SUMMARY ALTERNATIVE 1 - EXPRESS BUS

Date: 01/11/2016 Draft

SCC	ITEMS	Subtotal Direct Construction Cost \$	5% Contractor OH & Profit \$ (5%)	10% Contractor General Conditions \$ (10%)	30% Contingency \$ (30%) (Direct Construction Cost only)	Base Year Total \$ (2015)	Notes
	DIRECT CONSTRUCTION COST						
10	Guideway	53,000,000	2,650,000	5,565,000	18,364,500	79,579,500	
20	Stations	37,072,000	1,853,600	3,892,560	12,845,448	55,663,608	
30	Support Facilities - Not used	-	-	-	-	-	
40	Sitework and Special Conditions	10,356,000	517,800	1,087,380	3,588,354	15,549,534	
50	Systems	2,000,000	100,000	210,000	693,000	3,003,000	
A	SUBTOTAL - DIRECT CONSTRUCTION COST	102,428,000	5,121,400	10,754,940	35,491,302	153,795,642	
	ALLOWANCE						
60	ROW, Land, Existing Improvements	12,250,000	N/A	N/A	6,125,000	18,375,000	50% Contingency
70	Vehicles, includes markups	20,400,000	N/A	N/A	4,080,000	24,480,000	20% Contingency
80	Professional Services (% of Direct Construction Cost "A"): 40%	40,971,200	N/A	N/A	4,097,120	45,068,320	10% Contingency
B	SUBTOTAL - ALLOWANCE	73,621,200	-	-	14,302,120	87,923,320	
90	Unallocated Contingency (3.5%)	6,161,722	N/A	N/A	-	6,161,722	
100	Finance Charges - Excluded	-	-	-	-	-	
C	SUBTOTAL - UNALLOCATED CONTINGENCY	6,161,722	-	-	-	6,161,722	
A+B+C	TOTAL PROJECT ESTIMATED COST (10 - 100)	182,210,922	5,121,400	10,754,940	49,793,422	247,880,684	

Please see attached Preamble (Basis of Estimate), Estimate Summaries and Details for basis of estimate, estimate scope, assumptions, qualifications, inclusions and exclusions.

WEST CONTRA COSTA HIGH-CAPACITY TRANSIT STUDY
 PRELIMINARY ESTIMATE OF PROBABLE CONSTRUCTION COSTS
 BASED ON TECH MEMO #8 PRELIMINARY ALTERNATIVES - PRELIMINARY SCREENING
 PRELIMINARY ESTIMATE OF PROBABLE CONSTRUCTION COSTS
 ESTIMATE SUMMARY - ALTERNATIVE 2 SAN PABLO AVE / MACDONALD AVE BRT

Date: 01/11/2016 Draft

SCC	ITEMS	Subtotal Direct Construction Cost \$	5% Contractor OH & Profit \$ (5%)	10% Contractor General Conditions \$ (10%)	30% Contingency \$ (30%) (Direct Construction Cost only)	Base Year Total \$ (2015)	Notes
	DIRECT CONSTRUCTION COST						
10	Guideway	30,174,000	1,508,700	3,168,270	10,455,291	45,306,261	
20	Stations	14,058,000	702,900	1,476,090	4,871,097	21,108,087	
30	Support Facilities - Not used	-	-	-	-	-	
40	Sitework and Special Conditions	21,671,000	1,083,550	2,275,455	7,509,002	32,539,007	
50	Systems	20,887,000	1,044,350	2,193,135	7,237,346	31,361,831	
A	SUBTOTAL - DIRECT CONSTRUCTION COST	86,790,000	4,339,500	9,112,950	30,072,736	130,315,186	
	ALLOWANCE						
60	ROW, Land, Existing Improvements	1,667,000	N/A	N/A	833,500	2,500,500	50% Contingency
70	Vehicles, includes markups	58,500,000	N/A	N/A	11,700,000	70,200,000	20% Contingency
80	Professional Services (% of Direct Construction Cost "A"): 40%	34,716,000	N/A	N/A	3,471,600	38,187,600	10% Contingency
B	SUBTOTAL - ALLOWANCE	94,883,000	-	-	16,005,100	110,888,100	
90	Unallocated Contingency (3.5%)	6,358,555	N/A	N/A	-	6,358,555	
100	Finance Charges - Excluded	-	-	-	-	-	
C	SUBTOTAL - UNALLOCATED CONTINGENCY	6,358,555	-	-	-	6,358,555	
A+B+C	TOTAL PROJECT ESTIMATED COST (10 - 100)	188,031,555	4,339,500	9,112,950	46,077,836	247,561,841	

Please see attached Preamble (Basis of Estimate), Estimate Summaries and Details for basis of estimate, estimate scope, assumptions, qualifications, inclusions and exclusions.

WEST CONTRA COSTA HIGH-CAPACITY TRANSIT STUDY
 PRELIMINARY ESTIMATE OF PROBABLE CONSTRUCTION COSTS
 BASED ON TECH MEMO #8 PRELIMINARY ALTERNATIVES - PRELIMINARY SCREENING
 PRELIMINARY ESTIMATE OF PROBABLE CONSTRUCTION COSTS
 ESTIMATE SUMMARY ALTERNATIVE 3 - 23RD STREET BRT

Date: 01/11/2016 Draft

SCC	ITEMS	Subtotal Direct Construction Cost \$	5% Contractor OH & Profit \$ (5%)	10% Contractor General Conditions \$ (10%)	30% Contingency \$ (30%) (Direct Construction Cost only)	Base Year Total \$ (2015)	Notes
	DIRECT CONSTRUCTION COST						
10	Guideway	10,291,000	514,550	1,080,555	3,565,832	15,451,937	
20	Stations	9,324,000	466,200	979,020	3,230,766	13,999,986	
30	Support Facilities - Not used	-	-	-	-	-	
40	Sitework and Special Conditions	13,910,000	695,500	1,460,550	4,819,815	20,885,865	
50	Systems	13,420,000	671,000	1,409,100	4,650,030	20,150,130	
A	SUBTOTAL - DIRECT CONSTRUCTION COST	46,945,000	2,347,250	4,929,225	16,266,443	70,487,918	
	ALLOWANCE						
60	ROW, Land, Existing Improvements	1,070,000	N/A	N/A	535,000	1,605,000	50% Contingency
70	Vehicles, includes markups	20,800,000	N/A	N/A	4,160,000	24,960,000	20% Contingency
80	Professional Services (% of Direct Construction Cost "A"): 40%	18,778,000	N/A	N/A	1,877,800	20,655,800	10% Contingency
B	SUBTOTAL - ALLOWANCE	40,648,000	-	-	6,572,800	47,220,800	
90	Unallocated Contingency (3.5%)	3,065,755	N/A	N/A	-	3,065,755	
100	Finance Charges - Excluded	-	-	-	-	-	
C	SUBTOTAL - UNALLOCATED CONTINGENCY	3,065,755	-	-	-	3,065,755	
A+B+C	TOTAL PROJECT ESTIMATED COST (10 - 100)	90,658,755	2,347,250	4,929,225	22,839,243	120,774,473	

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WEST CONTRA COSTA HIGH-CAPACITY TRANSIT STUDY
 PRELIMINARY ESTIMATE OF PROBABLE CONSTRUCTION COSTS
 BASED ON TECH MEMO #8 PRELIMINARY ALTERNATIVES - PRELIMINARY SCREENING
 PRELIMINARY ESTIMATE OF PROBABLE CONSTRUCTION COSTS
 ESTIMATE SUMMARY ALTERNATIVE 4 - UPRR CORRIDOR COMMUTER RAIL
 PHASE 1 AND PHASE 2 TOTAL

Date: 01/11/2016 Draft

SCC	ITEMS	Subtotal Direct Construction Cost \$	5% Contractor OH & Profit \$ (5%)	10% Contractor General Conditions \$ (10%)	30% Contingency \$ (30%) (Direct Construction Cost only)	Base Year Total \$ (2015)	Notes
	DIRECT CONSTRUCTION COST						
10	Guideway	85,602,000	4,280,100	8,988,210	29,661,093	128,531,403	
20	Stations	13,900,000	695,000	1,459,500	4,816,350	20,870,850	
30	Support Facilities - Not used	-	-	-	-	-	
40	Sitework and Special Conditions	13,000,000	650,000	1,365,000	4,504,500	19,519,500	
50	Systems	1,500,000	75,000	157,500	519,750	2,252,250	
A	SUBTOTAL - DIRECT CONSTRUCTION COST	114,002,000	5,700,100	11,970,210	39,501,693	171,174,003	
	ALLOWANCE						
60	ROW, Land, Existing Improvements	36,375,000	N/A	N/A	18,187,500	54,562,500	50% Contingency
70	Vehicles, includes markups	31,000,000	N/A	N/A	6,200,000	37,200,000	20% Contingency
80	Professional Services (% of Direct Construction Cost "A"): 45%	51,300,900	N/A	N/A	5,130,090	56,430,990	10% Contingency
B	SUBTOTAL - ALLOWANCE	118,675,900	-	-	29,517,590	148,193,490	
90	Unallocated Contingency (8%)	18,614,232	N/A	N/A	-	18,614,232	
100	Finance Charges - Excluded	-	-	-	-	-	
C	SUBTOTAL - UNALLOCATED CONTINGENCY	18,614,232	-	-	-	18,614,232	
A+B+C	TOTAL PROJECT ESTIMATED COST (10 - 100)	251,292,132	5,700,100	11,970,210	69,019,283	337,981,725	

Please see attached Preamble (Basis of Estimate), Estimate Summaries and Details for basis of estimate, estimate scope, assumptions, qualifications, inclusions and exclusions.

WEST CONTRA COSTA HIGH-CAPACITY TRANSIT STUDY
 PRELIMINARY ESTIMATE OF PROBABLE CONSTRUCTION COSTS
 BASED ON TECH MEMO #8 PRELIMINARY ALTERNATIVES - PRELIMINARY SCREENING

Date: 01/11/2016 Draft

PRELIMINARY ESTIMATE OF PROBABLE CONSTRUCTION COSTS
 ESTIMATE SUMMARY ALTERNATIVE 4 - UPRR CORRIDOR COMMUTER RAIL
 PHASE 1: Richmond BART/Amtrak Station and the Martinez Amtrak Station

SCC	ITEMS	Subtotal Direct Construction Cost \$	5% Contractor OH & Profit \$ (5%)	10% Contractor General Conditions \$ (10%)	30% Contingency \$ (30%) (Direct Construction Cost only)	Base Year Total \$ (2015)	Notes
	DIRECT CONSTRUCTION COST						
10	Guideway	51,466,200	2,573,310	5,403,951	17,833,038	77,276,499	
20	Stations	8,400,000	420,000	882,000	2,910,600	12,612,600	
30	Support Facilities - Not used	-	-	-	-	-	
40	Sitework and Special Conditions	8,600,000	430,000	903,000	2,979,900	12,912,900	
50	Systems	750,000	37,500	78,750	259,875	1,126,125	
A	SUBTOTAL - DIRECT CONSTRUCTION COST	69,216,200	3,460,810	7,267,701	23,983,413	103,928,124	
	ALLOWANCE						
60	ROW, Land, Existing Improvements	-	N/A	N/A	-	-	50% Contingency
70	Vehicles	31,000,000	N/A	N/A	6,200,000	37,200,000	20% Contingency
80	Professional Services (% of Direct Construction Cost "A"): 45%	31,147,290	N/A	N/A	3,114,729	34,262,019	10% Contingency
B	SUBTOTAL - ALLOWANCE	62,147,290	-	-	9,314,729	71,462,019	
90	Unallocated Contingency (8%)	10,509,079	N/A	N/A	-	10,509,079	
100	Finance Charges - Excluded	-	-	-	-	-	
C	SUBTOTAL - UNALLOCATED CONTINGENCY	10,509,079	-	-	-	10,509,079	
A+B+C	TOTAL PROJECT ESTIMATED COST (10 - 100)	141,872,569	3,460,810	7,267,701	33,298,142	185,899,222	

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WEST CONTRA COSTA HIGH-CAPACITY TRANSIT STUDY
 PRELIMINARY ESTIMATE OF PROBABLE CONSTRUCTION COSTS
 BASED ON TECH MEMO #8 PRELIMINARY ALTERNATIVES - PRELIMINARY SCREENING
 PRELIMINARY ESTIMATE OF PROBABLE CONSTRUCTION COSTS
 ESTIMATE SUMMARY ALTERNATIVE 4 - UPRR CORRIDOR COMMUTER RAIL

Date: 01/11/2016 Draft

PHASE 2: Oakland Jack London Square Amtrak Station and Richmond BART/Amtrak Station

5% 10% 30%

SCC	ITEMS	Subtotal Direct Construction Cost \$	Contractor OH & Profit \$ (5%)	Contractor General Conditions \$ (10%)	Contingency \$ (30%) (Direct Construction Cost only)	Base Year Total \$ (2015)	Notes
	DIRECT CONSTRUCTION COST						
10	Guideway	34,135,800	1,706,790	3,584,259	11,828,055	51,254,904	
20	Stations	5,500,000	275,000	577,500	1,905,750	8,258,250	
30	Support Facilities - Not used	-	-	-	-	-	
40	Sitework and Special Conditions	4,400,000	220,000	462,000	1,524,600	6,606,600	
50	Systems	750,000	37,500	78,750	259,875	1,126,125	
A	SUBTOTAL - DIRECT CONSTRUCTION COST	44,785,800	2,239,290	4,702,509	15,518,280	67,245,879	
	ALLOWANCE						
60	ROW, Land, Existing Improvements	36,375,000	N/A	N/A	18,187,500	54,562,500	50% Contingency
70	Vehicles	-	N/A	N/A	-	-	20% Contingency
80	Professional Services (% of Direct Construction Cost "A"): 45%	20,153,610	N/A	N/A	2,015,361	22,168,971	10% Contingency
B	SUBTOTAL - ALLOWANCE	56,528,610	-	-	20,202,861	76,731,471	
90	Unallocated Contingency (8%)	8,105,153	N/A	N/A	-	8,105,153	
100	Finance Charges - Excluded	-	-	-	-	-	
C	SUBTOTAL - UNALLOCATED CONTINGENCY	8,105,153	-	-	-	8,105,153	
A+B+C	TOTAL PROJECT ESTIMATED COST (10 - 100)	109,419,563	2,239,290	4,702,509	35,721,141	152,082,503	

Please see attached Preamble (Basis of Estimate), Estimate Summaries and Details for basis of estimate, estimate scope, assumptions, qualifications, inclusions and exclusions.

WEST CONTRA COSTA HIGH-CAPACITY TRANSIT STUDY
 PRELIMINARY ESTIMATE OF PROBABLE CONSTRUCTION COSTS
 BASED ON TECH MEMO #8 PRELIMINARY ALTERNATIVES - PRELIMINARY SCREENING
 PRELIMINARY ESTIMATE OF PROBABLE CONSTRUCTION COSTS
 ESTIMATE SUMMARY ALTERNATIVE 5 - UPRR BNSF CORRIDOR COMMUTER RAIL
 PHASE 1 AND PHASE 2 TOTAL

Date: 01/11/2016 Draft

SCC	ITEMS	Subtotal Direct Construction Cost \$	5% Contractor OH & Profit \$ (5%)	10% Contractor General Conditions \$ (10%)	30% Contingency \$ (30%) (Direct Construction Cost only)	Base Year Total \$ (2015)	Notes
	DIRECT CONSTRUCTION COST						
10	Guideway	51,771,720	2,588,586	5,436,031	17,938,901	77,735,238	
20	Stations	38,400,000	1,920,000	4,032,000	13,305,600	57,657,600	
30	Support Facilities - Not used	-	-	-	-	-	
40	Sitework and Special Conditions	15,100,000	755,000	1,585,500	5,232,150	22,672,650	
50	Systems	4,900,000	245,000	514,500	1,697,850	7,357,350	
A	SUBTOTAL - DIRECT CONSTRUCTION COST	110,171,720	5,508,586	11,568,031	38,174,501	165,422,838	
	ALLOWANCE						
60	ROW, Land, Existing Improvements	46,875,000	N/A	N/A	23,437,500	70,312,500	50% Contingency
70	Vehicles, includes markups	31,000,000	N/A	N/A	6,200,000	37,200,000	20% Contingency
80	Professional Services (% of Direct Construction Cost "A"): 45%	49,577,274	N/A	N/A	4,957,727	54,535,001	10% Contingency
B	SUBTOTAL - ALLOWANCE	127,452,274	-	-	34,595,227	162,047,501	
90	Unallocated Contingency (8%)	19,009,920	N/A	N/A	-	19,009,920	
100	Finance Charges - Excluded	-	-	-	-	-	
C	SUBTOTAL - UNALLOCATED CONTINGENCY	19,009,920	-	-	-	19,009,920	-
A+B+C	TOTAL PROJECT ESTIMATED COST (10 - 100)	256,633,914	5,508,586	11,568,031	72,769,728	346,480,259	

Please see attached Preamble (Basis of Estimate), Estimate Summaries and Details for basis of estimate, estimate scope, assumptions, qualifications, inclusions and exclusions.

WEST CONTRA COSTA HIGH-CAPACITY TRANSIT STUDY
 PRELIMINARY ESTIMATE OF PROBABLE CONSTRUCTION COSTS
 BASED ON TECH MEMO #8 PRELIMINARY ALTERNATIVES - PRELIMINARY SCREENING
 PRELIMINARY ESTIMATE OF PROBABLE CONSTRUCTION COSTS
 ESTIMATE SUMMARY ALTERNATIVE 5 - UPRR BNSF CORRIDOR COMMUTER RAIL
 PHASE 1: Richmond BART/Amtrak Station and the Martinez Amtrak Station

Date: 01/11/2016 Draft

SCC	ITEMS	Subtotal Direct Construction Cost \$	5% Contractor OH & Profit \$ (5%)	10% Contractor General Conditions \$ (10%)	30% Contingency \$ (30%) (Direct Construction Cost only)	Base Year Total with Markup \$ (2015)	Notes
	DIRECT CONSTRUCTION COST						
10	Guideway	12,672,720	633,636	1,330,636	4,391,098	19,028,090	
20	Stations	37,900,000	1,895,000	3,979,500	13,132,350	56,906,850	
30	Support Facilities - Not used	-	-	-	-	-	
40	Sitework and Special Conditions	10,200,000	510,000	1,071,000	3,534,300	15,315,300	
50	Systems	3,775,000	188,750	396,375	1,308,038	5,668,163	
A	SUBTOTAL - DIRECT CONSTRUCTION COST	64,547,720	3,227,386	6,777,511	22,365,786	96,918,403	
	ALLOWANCE						
60	ROW, Land, Existing Improvements	10,500,000	N/A	N/A	5,250,000	15,750,000	50% Contingency
70	Vehicles	31,000,000	N/A	N/A	6,200,000	37,200,000	20% Contingency
80	Professional Services (% of Direct Construction Cost "A"): 45%	29,046,474	N/A	N/A	2,904,647	31,951,121	10% Contingency
B	SUBTOTAL - ALLOWANCE	70,546,474	-	-	14,354,647	84,901,121	
90	Unallocated Contingency (8%)	10,807,536	N/A	N/A	-	10,807,536	
100	Finance Charges - Excluded	-	-	-	-	-	
C	SUBTOTAL - UNALLOCATED CONTINGENCY	10,807,536	-	-	-	10,807,536	
A+B+C	TOTAL PROJECT ESTIMATED COST (10 - 100)	145,901,730	3,227,386	6,777,511	36,720,433	192,627,060	

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WEST CONTRA COSTA HIGH-CAPACITY TRANSIT STUDY
 PRELIMINARY ESTIMATE OF PROBABLE CONSTRUCTION COSTS
 BASED ON TECH MEMO #8 PRELIMINARY ALTERNATIVES - PRELIMINARY SCREENING
 PRELIMINARY ESTIMATE OF PROBABLE CONSTRUCTION COSTS
 ESTIMATE SUMMARY ALTERNATIVE 5 - UPRR BNSF CORRIDOR COMMUTER RAIL
 PHASE 2: Oakland Jack London Square Amtrak Station and Richmond BART/Amtrak Station

Date: 01/11/2016 Draft

SCC	ITEMS	Subtotal Direct Construction Cost \$	Contractor OH & Profit \$ (5%)	Contractor General Conditions \$ (10%)	Contingency \$ (30%) (Direct Construction Cost only)	Base Year Total with Markup \$ (2015)	Notes
	DIRECT CONSTRUCTION COST						
10	Guideway	39,099,000	1,954,950	4,105,395	13,547,804	58,707,149	
20	Stations	500,000	25,000	52,500	173,250	750,750	
30	Support Facilities - Not used	-	-	-	-	-	
40	Sitework and Special Conditions	4,900,000	245,000	514,500	1,697,850	7,357,350	
50	Systems	1,125,000	56,250	118,125	389,813	1,689,188	
A	SUBTOTAL - DIRECT CONSTRUCTION COST	45,624,000	2,281,200	4,790,520	15,808,717	68,504,437	
	ALLOWANCE						
60	ROW, Land, Existing Improvements	36,375,000	N/A	N/A	18,187,500	54,562,500	50% Contingency
70	Vehicles	-	N/A	N/A	-	-	20% Contingency
80	Professional Services (% of Direct Construction Cost "A"): 45%	20,530,800	N/A	N/A	2,053,080	22,583,880	10% Contingency
B	SUBTOTAL - ALLOWANCE	56,905,800	-	-	20,240,580	77,146,380	
90	Unallocated Contingency (8%)	8,202,384	N/A	N/A	-	8,202,384	
100	Finance Charges - Excluded	-	-	-	-	-	
C	SUBTOTAL - UNALLOCATED CONTINGENCY	8,202,384	-	-	-	8,202,384	
A+B+C	TOTAL PROJECT ESTIMATED COST (10 - 100)	110,732,184	2,281,200	4,790,520	36,049,297	153,853,201	

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WEST CONTRA COSTA HIGH-CAPACITY TRANSIT STUDY
 PRELIMINARY ESTIMATE OF PROBABLE CONSTRUCTION COSTS
 BASED ON TECH MEMO #8 PRELIMINARY ALTERNATIVES - PRELIMINARY SCREENING
 PRELIMINARY ESTIMATE OF PROBABLE CONSTRUCTION COSTS
 ESTIMATE SUMMARY ALTERNATIVE 6 - BART EXTENSION FROM RICHMOND STATION TO HERCULES

Date: 01/11/2016 Draft

SCC	ITEMS	Subtotal Direct Construction Cost \$	Contractor OH & Profit \$ (5%)	Contractor General Conditions \$ (10%)	Contingency \$ (30%) (Direct Construction Cost only)	Base Year Total \$ (2015)	Notes
	DIRECT CONSTRUCTION COST						
10	Guideway	847,000,000	42,350,000	88,935,000	293,485,500	1,271,770,500	
20	Stations	224,500,000	11,225,000	23,572,500	77,789,250	337,086,750	
30	Support Facilities - Not used	-	-	-	-	-	
40	Sitework and Special Conditions	42,000,000	2,100,000	4,410,000	14,553,000	63,063,000	
50	Systems	84,000,000	4,200,000	8,820,000	29,106,000	126,126,000	
A	SUBTOTAL - DIRECT CONSTRUCTION COST	1,197,500,000	59,875,000	125,737,500	414,933,750	1,798,046,250	
	ALLOWANCE						
60	ROW, Land, Existing Improvements	-	N/A	N/A	-	-	50% Contingency
70	Vehicles, includes markups	70,800,000	N/A	N/A	14,160,000	84,960,000	20% Contingency
80	Professional Services (% of Direct Construction Cost "A"):50%	604,737,500	N/A	N/A	60,473,750	665,211,250	10% Contingency
B	SUBTOTAL - ALLOWANCE	675,537,500	-	-	74,633,750	750,171,250	
90	Unallocated Contingency (5%)	93,651,875	N/A	N/A		93,651,875	
100	Finance Charges - Excluded	-	-	-	-	-	
C	SUBTOTAL - UNALLOCATED CONTINGENCY	93,651,875	-	-	-	93,651,875	
A+B+C	TOTAL PROJECT ESTIMATED COST (10 - 100)	1,966,689,375	59,875,000	125,737,500	489,567,500	2,641,869,375	

Please see attached Preamble (Basis of Estimate), Estimate Summaries and Details for basis of estimate, estimate scope, assumptions, qualifications, inclusions and exclusions.

WEST CONTRA COSTA HIGH-CAPACITY TRANSIT STUDY
 PRELIMINARY ESTIMATE OF PROBABLE CONSTRUCTION COSTS
 BASED ON TECH MEMO #8 PRELIMINARY ALTERNATIVES - PRELIMINARY SCREENING
 PRELIMINARY ESTIMATE OF PROBABLE CONSTRUCTION COSTS
 ESTIMATE SUMMARY ALTERNATIVE 7.1 - BART EXTENSION FROM DEL NORTE STATION TO HERCULES

Date: 01/11/2016 Draft

SCC	ITEMS	Subtotal Direct Construction Cost \$	Contractor OH & Profit \$ (5%)	Contractor General Conditions \$ (10%)	Contingency \$ (30%) (Direct Construction Cost only)	Base Year Total \$ (2015)	Notes
	DIRECT CONSTRUCTION COST						
10	Guideway	807,000,000	40,350,000	84,735,000	279,625,500	1,211,710,500	
20	Stations	298,500,000	14,925,000	31,342,500	103,430,250	448,197,750	
30	Support Facilities - Not used	-	-	-	-	-	
40	Sitework and Special Conditions	39,000,000	1,950,000	4,095,000	13,513,500	58,558,500	
50	Systems	-	-	-	-	-	
A	SUBTOTAL - DIRECT CONSTRUCTION COST	1,144,500,000	57,225,000	120,172,500	396,569,250	1,718,466,750	
	ALLOWANCE						
60	ROW, Land, Existing Improvements	-	N/A	N/A	-	-	50% Contingency
70	Vehicles, includes markups	72,000,000	N/A	N/A	14,400,000	86,400,000	20% Contingency
80	Professional Services (% of Direct Construction Cost "A"): 50%	572,250,000	N/A	N/A	57,225,000	629,475,000	10% Contingency
B	SUBTOTAL - ALLOWANCE	644,250,000	-	-	71,625,000	715,875,000	
90	Unallocated Contingency (5%)	89,437,500	N/A	N/A	-	89,437,500	
100	Finance Charges - Excluded	-	-	-	-	-	
C	SUBTOTAL - UNALLOCATED CONTINGENCY	89,437,500	-	-	-	89,437,500	
A+B+C	TOTAL PROJECT ESTIMATED COST (10 - 100)	1,878,187,500	57,225,000	120,172,500	468,194,250	2,523,779,250	

Please see attached Preamble (Basis of Estimate), Estimate Summaries and Details for basis of estimate, estimate scope, assumptions, qualifications, inclusions and exclusions.

WEST CONTRA COSTA HIGH-CAPACITY TRANSIT STUDY
 PRELIMINARY ESTIMATE OF PROBABLE CONSTRUCTION COSTS
 BASED ON TECH MEMO #8 PRELIMINARY ALTERNATIVES - PRELIMINARY SCREENING
 PRELIMINARY ESTIMATE OF PROBABLE CONSTRUCTION COSTS
 ESTIMATE SUMMARY ALTERNATIVE 7.2 - BART DMU EXTENSION FROM DEL NORTE STATION TO HERCULES

Date: 01/11/2016 Draft

SCC	ITEMS	Subtotal Direct Construction Cost \$	5% Contractor OH & Profit \$ (5%)	10% Contractor General Conditions \$ (10%)	30% Contingency \$ (30%) (Direct Construction Cost only)	Base Year Total \$ (2015)	Notes
	DIRECT CONSTRUCTION COST						
10	Guideway	703,000,000	35,150,000	73,815,000	243,589,500	1,055,554,500	
20	Stations	262,900,000	13,145,000	27,604,500	91,094,850	394,744,350	
30	Support Facilities - Not used	-	-	-	-	-	
40	Sitework and Special Conditions	35,100,000	1,755,000	3,685,500	12,162,150	52,702,650	
50	Systems	68,250,000	3,412,500	7,166,250	23,648,625	102,477,375	
A	SUBTOTAL - DIRECT CONSTRUCTION COST	1,069,250,000	53,462,500	112,271,250	370,495,125	1,605,478,875	
	ALLOWANCE						
60	ROW, Land, Existing Improvements	-	N/A	N/A	-	-	50% Contingency
70	Vehicles, includes markups	90,000,000	N/A	N/A	18,000,000	108,000,000	20% Contingency
80	Professional Services (% of Direct Construction Cost "A"): 45%	481,162,500	N/A	N/A	48,116,250	529,278,750	10% Contingency
B	SUBTOTAL - ALLOWANCE	571,162,500	-	-	66,116,250	637,278,750	
90	Unallocated Contingency (5%)	82,020,625	N/A	N/A	-	82,020,625	
100	Finance Charges - Excluded	-	-	-	-	-	
C	SUBTOTAL - UNALLOCATED CONTINGENCY	82,020,625	-	-	-	82,020,625	
A+B+C	TOTAL PROJECT ESTIMATED COST (10 - 100)	1,722,433,125	53,462,500	112,271,250	436,611,375	2,324,778,250	

Please see attached Preamble (Basis of Estimate), Estimate Summaries and Details for basis of estimate, estimate scope, assumptions, qualifications, inclusions and exclusions.

WEST CONTRA COSTA HIGH-CAPACITY TRANSIT STUDY
 PRELIMINARY ESTIMATE OF PROBABLE CONSTRUCTION COSTS
 BASED ON TECH MEMO #8 PRELIMINARY ALTERNATIVES - PRELIMINARY SCREENING
 ESTIMATE DETAILS

Date: 01/11/2016 Draft

ALTERNATIVE 1 - EXPRESS BUS SERVICE

Line #	SCC #	Roll-out No.	Description of Work	Quantity	Unit	Unit Cost	Estimated \$	Remarks/ Notes
1	10		<u>GUIDEWAY</u>					
2							-	
3	10		Access ramp from Hercules Transit Center to State Route 4 connector ramp to I-80	1	EA	15,000,000.00	15,000,000	TM-8 page 30
4	10		Direct Access Express Bus/HOV Ramp to free median on north side of I-80 and Richmond Parkway Exchange	2	EA	19,000,000.00	38,000,000	TM-8 page 30
5							-	
6								
7							53,000,000	
8								
9								
10	20		<u>STATIONS</u>					
11							-	
12	20		At grade stations on I-580 Corridor	2	EA	156,000.00	312,000	TM 8, Fig 3-1, page 24
13	20		At grade stations on I-80 Corridor	2	EA	156,000.00	312,000	TM 8, Fig 3-1, page 24
14	20		Surface bus stops for Berkeley Destination	5	EA	56,000.00	280,000	TM 8, page 32
15	20		Surface bus stops for Emeryville Destination	4	EA	56,000.00	224,000	TM 8, page 32
16	20		Surface bus stops for Oakland Destination	4	EA	56,000.00	224,000	TM 8, page 32
17	20		Bus Stations at Direct Access Ramp	2	EA	210,000.00	420,000	TM 8, page 32
18	20		Parking Garage Structure at Hercules Transit Center	500	SPACES	35,000.00	17,500,000	TM-8 page 31; build at (E) surface parking; costs per MTC Parking Structure Report
19	20		Parking Garage Structure at Richmond Parkway Transit Center	500	SPACES	35,000.00	17,500,000	TM-8 page 31; build at (E) surface parking; costs per MTC Parking Structure Report
20	20		Elevator to Direct Access Ramp	2	EA	150,000.00	300,000	TM-8 page 30
21							-	
22								
23							37,072,000	
24								
25								
26	30		<u>SUPPORT FACILITIES</u>					
27								
28								
29							-	
30								

WEST CONTRA COSTA HIGH-CAPACITY TRANSIT STUDY
 PRELIMINARY ESTIMATE OF PROBABLE CONSTRUCTION COSTS
 BASED ON TECH MEMO #8 PRELIMINARY ALTERNATIVES - PRELIMINARY SCREENING
 ESTIMATE DETAILS

Date: 01/11/2016 Draft

ALTERNATIVE 1 - EXPRESS BUS SERVICE

Line #	SCC #	Roll-out No.	Description of Work	Quantity	Unit	Unit Cost	Estimated \$	Remarks/ Notes
31								
32	40		<u>SITEWORK AND SPECIAL CONDITIONS</u>					
33							-	
34	40		Pedestrian access from park-and-ride to direct access platform	800	LF	570.00	456,000	TM-8 page 30; average distance is 400 to 1,200 ft depending on where riders park
35	40		Surface Parking Lot at I-80/San Pablo Ave Interchange	100	SPACES	7,000.00	700,000	TM-8 page 31; costs per MTC Parking Structure Report
36	40		Surface Parking Lot along I-580 at Richmond Parkway/Canal Blvd Interchange	300	SPACES	7,000.00	2,100,000	TM-8 page 31; costs per MTC Parking Structure Report
37	40		Surface Parking Lot along I-580 at 234d St/Marina Bay Parkway Interchange	300	SPACES	7,000.00	2,100,000	TM-8 page 31; costs per MTC Parking Structure Report
38	40		Other Sitework and Special Conditions, allowance	1	LS	5,000,000.00	5,000,000	
39							-	
40								
41							10,356,000	
42								
43								
44	50		<u>SYSTEMS</u>					
45							-	
46	50		Traffic control for transit priority treatment for express bus route, allow for 20 intersections	20	EA	100,000.00	2,000,000	TM-8 page 28
47							-	
48								
49							2,000,000	
50								
51								
52	60		<u>ROW, LAND, EXISTING IMPROVEMENTS</u>					
53							-	
54	60		Purchase land for Surface Parking Lot at I-80/San Pablo Ave Interchange, for 100 spaces	35,000	SF	50.00	1,750,000	per Zillow, lot sales in Oakland
55	60		Purchase land for Surface Parking Lot along I-580 at 23rd St/Marina Bay Parkway Interchange, for 300 spaces	105,000	SF	50.00	5,250,000	per Zillow, lot sales in Oakland
56	60		Purchase land for Surface Parking Lot at I-80/San Pablo Ave Interchange, for 300 spaces	105,000	SF	50.00	5,250,000	per Zillow, lot sales in Oakland
57							-	
58								

WEST CONTRA COSTA HIGH-CAPACITY TRANSIT STUDY
 PRELIMINARY ESTIMATE OF PROBABLE CONSTRUCTION COSTS
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 ESTIMATE DETAILS

Date: 01/11/2016 Draft

ALTERNATIVE 1 - EXPRESS BUS SERVICE

Line #	SCC #	Roll-out No.	Description of Work	Quantity	Unit	Unit Cost	Estimated \$	Remarks/ Notes
59							12,250,000	
60								
61								
62	70		<u>VEHICLES (number)</u>					
63							-	
64	70		Over-the-road buses, double decker, 42 ft long, 80 passengers	24	EA	850,000.00	20,400,000	TM-8 page 31; vehicle quantity and costs per Kimley Horn
65							-	
66								
67							20,400,000	
68								
69								
70								
71								
72								

WEST CONTRA COSTA HIGH-CAPACITY TRANSIT STUDY
 PRELIMINARY ESTIMATE OF PROBABLE CONSTRUCTION COSTS
 BASED ON TECH MEMO #8 PRELIMINARY ALTERNATIVES - PRELIMINARY SCREENING
 ESTIMATE DETAILS

Date: 01/11/2016 Draft

ALTERNATIVE 2 - SAN PABLO AVENUE/MACDONALD AVENUE BRT

Line #	SCC #	Roll-out No.	Description of Work	Quantity	Unit	Unit Cost	Estimated \$	Remarks/ Notes
			Scope					
1			Total BRT Corridor Length for San Pablo Dam Road/Macdonald Ave BRT (to Alameda/Contra Costa County border)	16.67	Miles			
2			Equivalent to	88,000	LF			
3			Stations need to meet 1 station every 0.28 miles	60	EA			
4								
5	10		GUIDEWAY					
6							-	
7	10		Roadway improvements at San Pablo Ave (I-80 and San Pablo Dam Road), 76' curb to curb	7,900	LF	450.00	3,555,000	Fig 3-9
8	10		Roadway improvements at San Pablo Ave (San Pablo Dam Rd to 23rd St), 70' curb to curb	4,000	LF	750.00	3,000,000	Fig 3-10
9	10		Roadway improvements at Richmond Parkway (Blume Dr. to San Pablo Ave.), 89' curb to curb	4,500	LF	1,590.00	7,155,000	Fig 3-11
10	10		Roadway improvements at San Pablo Ave (Kay Rd to Del Monte Dr), 46' to 72' curb to curb	5,600	LF	420.00	2,352,000	Fig 3-12
11	10		Roadway improvements at San Pablo Ave (Del Monte Dr to Sunnyview Dr), 68' to 82' curb to curb	12,500	LF	410.00	5,125,000	Fig 3-13
12	10		Roadway improvements at Macdonald Ave (40th and 20th Street), 64' curb to curb	7,400	LF	430.00	3,182,000	Fig 3-14
13	10		BRT Roadway improvements south of San Pablo Dam Road/Macdonald Ave intersection (center guideway)	12,900	LF	450.00	5,805,000	No roadway section provided. Assume same as Fig 3-9
14							-	
15								
16							30,174,000	
17								
18								
19	20		STATIONS					
20							-	
21	20		BRT Station, Medium Platform at North Branch	1	EA	318,000.00	318,000	
22	20		BRT Station, Curbside at North Branch	4	EA	156,000.00	624,000	
23	20		BRT Station, Medium Platform at West Branch	1	EA	318,000.00	318,000	
24	20		BRT Station, Curbside at West Branch	1	EA	156,000.00	156,000	
25	20		BRT Stations, Medium Platform to meet (1/4 to 1/3 mile spacing), allow	27	EA	318,000.00	8,586,000	Say 1/2 of station allowance

WEST CONTRA COSTA HIGH-CAPACITY TRANSIT STUDY
 PRELIMINARY ESTIMATE OF PROBABLE CONSTRUCTION COSTS
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 ESTIMATE DETAILS

Date: 01/11/2016 Draft

ALTERNATIVE 2 -SAN PABLO AVENUE/MACDONALD AVENUE BRT

Line #	SCC #	Roll-out No.	Description of Work	Quantity	Unit	Unit Cost	Estimated \$	Remarks/ Notes
26	20		BRT Station, Curbside to meet (1/4 to 1/3 mile spacing), allow	26	EA	156,000.00	4,056,000	Say 1/2 of station allowance
27							-	
28								
29							14,058,000	
30								
31								
32	30		<u>SUPPORT FACILITIES</u>					NIC - Excluded
33							-	
34								
35							-	
36								
37								
38	40		<u>SITWORK AND SPECIAL CONDITIONS</u>					
39							-	
40			Sitework and Special Conditions, allow	16.67	Mile	1,300,000	21,671,000	Based on AC Transit EB BRT
41							-	
42								
43							21,671,000	
44								
45								
46	50		<u>SYSTEMS</u>					
47							-	
48	50		Systems upgrades, allow	16.67	Mile	1,100,000.00	18,337,000	
49	50		Preferential signalization at intersections, say 0.5 miles per intersection average	34.00	EA	75,000.00	2,550,000	
50							-	
51								
52							20,887,000	
53								
54								
55	60		<u>ROW, LAND, EXISTING IMPROVEMENTS</u>					
56							-	
57			ROW, Land, Existing Improvements, allow	16.67	Mile	100,000.00	1,667,000	Based on AC Transit EB BRT
58							-	
59								
60							1,667,000	

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ALTERNATIVE 2 -SAN PABLO AVENUE/MACDONALD AVENUE BRT

Line #	SCC #	Roll-out No.	Description of Work	Quantity	Unit	Unit Cost	Estimated \$	Remarks/ Notes
61								
62								
63	70		<u>VEHICLES (number)</u>					
64							-	
65	70.04		Articulated buses	45	EA	1,300,000.00	58,500,000	Vehicle cost and quantity per Kimley-Horn
66							-	
67								
68							58,500,000	
69								

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ALTERNATIVE 3 -23RD STREET BRT

Line #	SCC #	Roll-out No.	Description of Work	Quantity	Unit	Unit Cost	Estimated \$	Remarks/ Notes
1		<u>Scope</u>	Total Corridor Length 23rd Street BRT	10.70	Miles			
2				56,500	LF			
3			Stations needed to meet 1 station every .28 miles	39	EA			
4								
5	10		<u>GUIDEWAY</u>					
6							-	
7	10		Roadway improvements at 23rd St (Macdonald Ave to Roosevelt Ave), 54' curb to curb	2,800	LF	410.00	1,148,000	Fig 3-20
8	10		Roadway improvements at San Pablo Ave (Hilltop Dr to Richmond Parkway), 50' curb to curb	2,200	LF	420.00	924,000	Fig 3-21
9	10		Roadway improvements at San Pablo Ave (Kay Rd to Del Monte Dr), 46' to 72' curb to curb	6,000	LF	420.00	2,520,000	Fig 3-12
10	10		Roadway improvements at San Pablo Ave (Del Monte Dr to Sunnyview Dr), 68' to 82' curb to curb	13,900	LF	410.00	5,699,000	Fig 3-13
11							-	
12								
13							10,291,000	
14								
15								
16	20		<u>STATIONS</u>					
17							-	
18	20		BRT Station, Median Platform	20	EA	318,000.00	6,360,000	Assume 1 station/.28 miles sim to AC Transit EB BRT (1/2 platform, 1/2 curbside).
19	20		BRT Station, Curbside	19	EA	156,000.00	2,964,000	Assume 1 station/.28 miles sim to AC Transit EB BRT (1/2 platform, 1/2 curbside).
20							-	
21								
22							9,324,000	
23								
24								
25	30		<u>SUPPORT FACILITIES</u>					
26								NIC - Excluded
27							-	
28							-	
29								

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ALTERNATIVE 3 -23RD STREET BRT

Line #	SCC #	Roll-out No.	Description of Work	Quantity	Unit	Unit Cost	Estimated \$	Remarks/ Notes
30								
31	40		<u>SITWORK AND SPECIAL CONDITIONS</u>					
32							-	
33			Sitework and Special Conditions, allow	10.70	Mile	1,300,000	13,910,000	Based on AC Transit EB BRT
34							-	
35								
36							13,910,000	
37								
38								
39	50		<u>SYSTEMS</u>					
40							-	
41			Systems upgrades, allow	10.70	Mile	1,100,000.00	11,770,000	
41	50		Preferential signalization at intersections, say 0.5 miles per intersection average	22.00	EA	75,000.00	1,650,000	
43							-	
44								
45							13,420,000	
46								
47								
48	60		<u>ROW, LAND, EXISTING IMPROVEMENTS</u>					
49							-	
50			ROW, Land, Existing Improvements, allow	10.70	Mile	100,000.00	1,070,000	Based on AC Transit EB BRT
51							-	
52								
53							1,070,000	
54								
55								
56	70		<u>VEHICLES (number)</u>					
57							-	
58	70.04		Articulated buses	16	EA	1,300,000.00	20,800,000	Vehicle cost and quantity per Kimley-Horn
59							-	
60								
61							20,800,000	
62								

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ALTERNATIVE 4 - UPRR CORRIDOR COMMUTER RAIL

Line #	SCC #	Roll-out No.	Description of Work	Quantity	Unit	Unit Cost	Estimated \$	Remarks/ Notes
1			Overall Scope					
2			Richmond BART/Amtrak Station (MP 12.1) and the Martinez Amtrak Station (MP 31.6)	19.50	Miles			
3			Oakland Jack London Square Amtrak Station (MP 7.1) Richmond BART/Amtrak Station (MP 12.1), 13 miles, at grade	13.00	Miles			TM#2 page 79
4								
5				32.50	Miles			
6								
7								
8			PHASE 1					
9			Richmond BART/Amtrak Station (MP 12.1) and the Martinez Amtrak Station (MP 31.6)					
10								
11	10		GUIDEWAY					
12	10		Third main track, 19.5 miles, at grade	102,960	LF	470.00	48,391,200	
13	10		Raise grade to prevent sea level inundation		NIC - Excluded		-	
14	10		Cross over tracks	3	EA	150,000.00	450,000	
15	10		At grade crossings	5	EA	525,000.00	2,625,000	
16								
17							51,466,200	
18								
19								
20	20		STATIONS					
21	20		New station at Hercules Intermodal Transit Center	1	EA	4,000,000.00	4,000,000	Cost per Oakland Coliseum Station, escalated to 2015
22	20		New third track and platform at Richmond Amtrak station, 800 ft long	1	EA	4,400,000.00	4,400,000	
23								
24							8,400,000	
25								
26								
27	30		SUPPORT FACILITIES					
28	30		Support facilities for maintenance		NIC - Excluded		-	
29								
30							-	

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ALTERNATIVE 4 - UPRR CORRIDOR COMMUTER RAIL

Line #	SCC #	Roll-out No.	Description of Work	Quantity	Unit	Unit Cost	Estimated \$	Remarks/ Notes
31								
32								
33	40		<u>SITWORK AND SPECIAL CONDITIONS</u>					
34	40		Widen railroad bridges	3	EA	1,000,000.00	3,000,000	
35	40		Drainage	5	EA	100,000.00	500,000	
36	40		Allow for other sitework & special conditions	1	LS	5,100,000.00	5,100,000	Assume 10% of Guideway cost
37								
38							8,600,000	
39								
40								
41	50		<u>SYSTEMS</u>					
42	50		Signals	5	EA	150,000.00	750,000	
43								
44							750,000	
45								
46								
47	60		<u>ROW, LAND, EXISTING IMPROVEMENTS</u>		None			
48							-	
49							-	
50								
51							-	
52								
53								
54	70		<u>VEHICLES (number)</u>					
55			Locomotives	4	EA	5,000,000.00	20,000,000	www.railway-technical.com/tr-ops.shtml
56			Bi-level commuter coaches	11	EA	1,000,000.00	11,000,000	www.railway-technical.com/tr-ops.shtml
57							-	
58								
59							31,000,000	
60								
61								
62								

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ALTERNATIVE 4 - UPRR CORRIDOR COMMUTER RAIL

Line #	SCC #	Roll-out No.	Description of Work	Quantity	Unit	Unit Cost	Estimated \$	Remarks/ Notes
63								
64			PHASE 2					
65			Oakland Jack London Square Amtrak Station (MP 7.1) Richmond BART/Amtrak Station (MP 12.1), 13 miles, at grade					
66								
67	10		<u>GUIDEWAY</u>					
68	10		Third main track, 13 miles, at grade	68,640	LF	470.00	32,260,800	TM#8, Page 79
69	10		Cross over tracks	2	EA	150,000.00	300,000	
70	10		At grade crossings	3	EA	525,000.00	1,575,000	
71	10		Grade separated station and tracks (layover track) Oakland Amtrak (Jack London Square) for freight and pedestrians		NIC - Excluded		-	
72								
73							34,135,800	
74								
75								
76	20		<u>STATIONS</u>					
77	20		Reduce platform width for new track at Berkeley Amtrak	1	EA	500,000.00	500,000	
78	20		New platform under BART track at West Oakland	1	EA	5,000,000.00	5,000,000	PP presentation
79								
80							5,500,000	
81								
82								
83	30		<u>SUPPORT FACILITIES</u>					
84	30		Support facilities for maintenance		NIC - Excluded		-	
85								
86							-	
87								
88								
89	40		<u>SITWORK AND SPECIAL CONDITIONS</u>					
90	40		Widen railroad bridges	1	EA	1,000,000.00	1,000,000	
91	40		Drainage	-	None		-	
92	40		Allow for other sitework & special conditions	1	LS	3,400,000.00	3,400,000	Assume 10% of Guideway cost
93								
94							4,400,000	
95								

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ALTERNATIVE 4 - UPRR CORRIDOR COMMUTER RAIL

Line #	SCC #	Roll-out No.	Description of Work	Quantity	Unit	Unit Cost	Estimated \$	Remarks/ Notes
96								
97	50		SYSTEMS					
98	50		Signals	5	EA	150,000.00	750,000	
99								
100							750,000	
101								
102								
103	60		ROW, LAND, EXISTING IMPROVEMENTS					
104	60		ROW, 20-30 ft between Grand Ave in Oakland and 65th Street in Emeryville, approx 5 miles	727,500	SF	50.00	36,375,000	per Zillow, lot sales in Oakland
105								
106							36,375,000	
107								
108								
109	70		VEHICLES (number)					
110			Locomotives		With Phase 1		-	
111			Bi-level commuter coaches		With Phase 1		-	
112							-	
113								
114							-	
115								

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ALTERNATIVE 5—UPRR BNSF CORRIDOR COMMUTER RAIL

Line #	SCC #	Roll-out No.	Description of Work	Quantity	Unit	Unit Cost	Estimated \$	Remarks/ Notes
1			Overall Scope					
2			Phase 1: Richmond BART/Amtrak Station (MP 12.1) and the Martinez Amtrak Station (MP 31.6)	1.90	Miles			TM#8 page 88
3			Phase 2: Oakland Jack London Square Amtrak Station (MP 7.1) and Richmond BART/Amtrak Station (MP 12.1), 15 miles, at grade, third main track	15.00	Miles			
4								
5				16.90	Miles			
6								
7			PHASE 1					
8			Richmond BART/Amtrak Station (MP 12.1) and the Martinez Amtrak Station (MP 31.6)					
9								
10	10		GUIDEWAY					
11	10		Dedicated running track between North Bay Siding at MP 1184.5 and Gateley Siding at MP1182.6, 1.9 miles	10,032	LF	470.00	4,715,040	TM#8, Page 88
12	10		Dedicated running track between North Bay Siding at MP 1184.5 and Gateley Siding at MP1182.6, 2.3 miles	12,144	LF	470.00	5,707,680	TM#8, Page 86
13	10		Cross over tracks	1	EA	150,000.00	150,000	
14	10		At grade crossings	4	EA	525,000.00	2,100,000	
15								
16							12,672,720	
17								
18								
19	20		STATIONS					
20	20		New stations	4	EA	4,000,000.00	16,000,000	TM#8, Page 86
21	20		New platform at Richmond/Amtrak Station	1	EA	4,400,000.00	4,400,000	TM#8, Page 86
22	30		Parking structure at Hercules Transit Center, say 500 spaces	500	space	35,000.00	17,500,000	TM#8, Page 92
23								
24							37,900,000	
25								
26								
27	30		SUPPORT FACILITIES					
28	30		Support facilities for maintenance		NIC - Excluded		-	
29								
30							-	

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ALTERNATIVE 5—UPRR BNSF CORRIDOR COMMUTER RAIL

Line #	SCC #	Roll-out No.	Description of Work	Quantity	Unit	Unit Cost	Estimated \$	Remarks/ Notes
31								
32								
33	40		<u>SITWORK AND SPECIAL CONDITIONS</u>					
34	40		Widen railroad bridges	3	EA	1,000,000.00	3,000,000	
35	40		New bridge at Tara Hills Rd and Garrity Creek (MP1183.5)	1	EA	1,500,000.00	1,500,000	
36	40		Drainage	2	EA	100,000.00	200,000	
37	40		Parking lot, at Pacheco Station say 300 spaces	300	space	7,000.00	2,100,000	TM#8, Page 91
38	40		Parking lot at Hercules Station, N/A, Assume parking structure at Hercules Transit Center, see "Station" section above		N/A			TM#8, Page 92
39	40		Parking lot at Atlas Road Station, say 300 spaces	300	space	7,000.00	2,100,000	TM#8, Page 92
39	40		Allow for other sitework & special conditions	1	LS	1,300,000.00	1,300,000	Assume 10% of Guideway cost
41								
42							10,200,000	
43								
44								
45	50		<u>SYSTEMS</u>					
46	50		Signals to control crossover and station transitions	8	EA	275,000.00	2,200,000	
47	50		Signals on UPRR line	7	EA	225,000.00	1,575,000	
48								
49							3,775,000	
50								
51								
52	60		<u>ROW, LAND, EXISTING IMPROVEMENTS</u>					
53			Land purchase for surface parking, for 600 spaces	210,000	sf	50.00	10,500,000	per Zillow, lot sales in Oakland
54			Land purchase for parking structure		Assume not required		-	
55								
56							10,500,000	
57								
58								
58	70		<u>VEHICLES (number)</u>					
59			Locomotives	4	EA	5,000,000.00	20,000,000	www.railway-technical.com/tr-ops.shtml
60			Bi-level commuter coaches	11	EA	1,000,000.00	11,000,000	www.railway-technical.com/tr-ops.shtml
62							-	
63								

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ALTERNATIVE 5—UPRR BNSF CORRIDOR COMMUTER RAIL

Line #	SCC #	Roll-out No.	Description of Work	Quantity	Unit	Unit Cost	Estimated \$	Remarks/ Notes
64							31,000,000	

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ALTERNATIVE 5—UPRR BNSF CORRIDOR COMMUTER RAIL

Line #	SCC #	Roll-out No.	Description of Work	Quantity	Unit	Unit Cost	Estimated \$	Remarks/ Notes
65								
66								
67			PHASE 2					
68			Oakland Jack London Square Amtrak Station (MP 7.1) Richmond BART/Amtrak Station (MP 12.1), 15 miles, at grade, third main track					
69								
70	10		<u>GUIDEWAY</u>					
71	10		Third main track, 15 miles, at grade	79,200	LF	470.00	37,224,000	TM#8, Page 86
72	10		Cross over tracks	2	EA	150,000.00	300,000	
73	10		At grade crossings	3	EA	525,000.00	1,575,000	
74	10		Grade separated station and tracks (layover track) Oakland Amtrak (Jack London Square) for freight and pedestrians		NIC - Excluded		-	
75								
76							39,099,000	
77								
78								
79	20		<u>STATIONS</u>					
80	20		Reduce platform width for new track at Berkeley Amtrak	1	EA	500,000.00	500,000	
81								
82								
83							500,000	
84								
85								
86	30		<u>SUPPORT FACILITIES</u>					
87	30		Support facilities for maintenance		NIC - Excluded		-	
88								
89							-	
90								
91								
92	40		<u>SITWORK AND SPECIAL CONDITIONS</u>					
93	40		Widen railroad bridges	1	EA	1,000,000.00	1,000,000	
94	40		Drainage		None		-	
94	40		Allow for other sitework & special conditions	1	LS	3,900,000.00	3,900,000	Assume 10% of Guideway cost
96								
97							4,900,000	

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ALTERNATIVE 5—UPRR BNSF CORRIDOR COMMUTER RAIL

Line #	SCC #	Roll-out No.	Description of Work	Quantity	Unit	Unit Cost	Estimated \$	Remarks/ Notes
98								
99								
100	50		SYSTEMS					
101	50		Signals	5	EA	225,000.00	1,125,000	
102								
103							1,125,000	
104								
105								
106	60		ROW, LAND, EXISTING IMPROVEMENTS					
107	60		ROW, 20-30 ft between Grand Ave in Oakland and 65th Street in Emeryville, 5 miles	727,500	SF	50.00	36,375,000	per Zillow, lot sales in Oakland
108								
109							36,375,000	
110								
111								
112	70		VEHICLES (number)					
113			Locomotives		With Phase 1		-	
114			Bi-level commuter coaches		With Phase 1		-	
115							-	
116								
117							-	
118								
119								

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ALTERNATIVE 6—BART EXTENSION FROM RICHMOND STATION TO HERCULES

Line #	SCC #	Roll-out No.	Description of Work	Quantity	Unit	Unit Cost	Estimated \$	Remarks/ Notes
1			BART Extension from Richmond Station to Hercules, total 8 miles	8.0	Mile			
2								
3	10		<u>GUIDEWAY</u>					
4	10		BART extension, aerial structure, 7.0 miles	7.0	Mile	80,000,000	560,000,000	TM#8, A-1
5	10		Deep bored tunnel, 1.0 miles	1.0	mile	285,000,000	285,000,000	TM#8, A-1; Assumed Roadheader 40' Dia dual tunnel
6	10		Additional tracks at Richmond BART Yard	1	LS	2,000,000.00	2,000,000	
7								
8							847,000,000	
9								
10								
11	20		<u>STATIONS</u>					
12	20		New station, aerial, at Hercules Transit Center	1	EA	82,000,000	82,000,000	Based on WSX station
13	20		New station, underground, at Hilltop Mall	1	EA	125,000,000	125,000,000	TM#8, Page 100
14	20		Parking structure at Hercules Transit Center, say 500 spaces	500	space	35,000.00	17,500,000	costs per MTC Parking Structure Report
15								
16							224,500,000	
17								
18								
19	30		<u>SUPPORT FACILITIES</u>					
20	30		Parking lot		None		-	
21	30		Support facilities at Contra Costa College & Richmond Parkway Transit Center		Excluded		-	
22								
23							-	
24								
25								
26	40		<u>SITWORK AND SPECIAL CONDITIONS</u>					
27	40		Sitework at guideway	7.0	Mile	6,000,000.00	42,000,000	
28	40						-	
29	40						-	
30								
31							42,000,000	
32								
33								

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ALTERNATIVE 6—BART EXTENSION FROM RICHMOND STATION TO HERCULES

Line #	SCC #	Roll-out No.	Description of Work	Quantity	Unit	Unit Cost	Estimated \$	Remarks/ Notes
34	50		<u>SYSTEMS</u>					
35	50		Systems	7.0	Mile	12,000,000.00	84,000,000	
36	50						-	
37								
38							84,000,000	
39								
40								
41	60		<u>ROW, LAND, EXISTING IMPROVEMENTS</u>		None			
42							-	
43							-	
44								
45							-	
46								
47								
48	70		<u>VEHICLES (number)</u>					
49			BART cars	24	EA	2,950,000.00	70,800,000	Per BART new car contract for Bombardier, 5/10/2012, escalated to 2015 and adjusted for a smaller number of cars
50							-	
51								
52							70,800,000	
53								
54								
55								
56								

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ALTERNATIVE 7.1—BART EXTENSION FROM EL CERRITO DEL NORTE STATION TO HERCULES

Line #	SCC #	Roll-out No.	Description of Work	Quantity	Unit	Unit Cost	Estimated \$	Remarks/ Notes
1			Alt 7.1 use Regular BART train on existing BART technology				-	
2			BART Extension from Del Norte Station to Hercules, total 7.5 miles	7.5	Mile			
3								
4	10		GUIDEWAY					
5	10		BART on aerial structure, 6.5 miles	6.5	Mile	80,000,000	520,000,000	TM#8
6	10		Deep bored tunnel, 1.0 miles	1.0	mile	285,000,000	285,000,000	TM#8, A-1; Assumed Roadheader 40' Dia dual tunnel
7	10		Additional tracks at Richmond BART Yard	1	LS	2,000,000.00	2,000,000	
8								
9							807,000,000	
10								
11								
12	20		STATIONS					
13	20		New station, aerial	3	EA	82,000,000	246,000,000	Based on WSX station
14	20		Modify El Cerrito del Norte station	1	EA	35,000,000.00	35,000,000	
15	30		Parking structure at Hercules & Applan Way/San Pablo Dam Rd Stations, say 500 spaces	500	space	35,000.00	17,500,000	costs per MTC Parking Structure Report
16								
17							298,500,000	
18								
19								
20	30		SUPPORT FACILITIES					
21	30		Parking lot		None		-	
22	30		Support facilities		Excluded		-	TM#8, Page 103
23								
24							-	
25								
26								
27	40		SITWORK AND SPECIAL CONDITIONS					
28	40		Sitework at guideway	6.5	Mile	6,000,000.00	39,000,000	
29	40						-	
30	40						-	
31								
32							39,000,000	
33								

WEST CONTRA COSTA HIGH-CAPACITY TRANSIT STUDY
 PRELIMINARY ESTIMATE OF PROBABLE CONSTRUCTION COSTS
 BASED ON TECH MEMO #8 PRELIMINARY ALTERNATIVES - PRELIMINARY SCREENING
 ESTIMATE DETAILS

Date: 01/11/2016 Draft

ALTERNATIVE 7.1—BART EXTENSION FROM EL CERRITO DEL NORTE STATION TO HERCULES

Line #	SCC #	Roll-out No.	Description of Work	Quantity	Unit	Unit Cost	Estimated \$	Remarks/ Notes
34								
35	50		<u>SYSTEMS</u>					
36	50		Systems	6.5	Mile	12,000,000.00	78,000,000	
37	50						-	
38								
39							78,000,000	
40								
41								
42	60		<u>ROW, LAND, EXISTING IMPROVEMENTS</u>		None			
43							-	
44							-	
45								
46							-	
47								
48								
49	70		<u>VEHICLES (number)</u>					
50	70		BART cars, regular	24	EA	2,950,000.00	72,000,000	Per BART new car contract for Bombardier, 5/10/2012, escalated to 2015 and adjusted for a smaller number of cars
51							-	
52								
53							72,000,000	
54								

WEST CONTRA COSTA HIGH-CAPACITY TRANSIT STUDY
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 ESTIMATE DETAILS

Date: 01/11/2016 Draft

ALTERNATIVE 7.2—BART EXTENSION FROM EL CERRITO DEL NORTE STATION TO HERCULES

Line #	SCC #	Roll-out No.	Description of Work	Quantity	Unit	Unit Cost	Estimated \$	Remarks/ Notes
1			Alt 7.2 use DMU train				-	
2			BART Extension from Del Norte Station to Hercules, total 7.5 miles	7.5	Mile			
3								
4	10		GUIDEWAY					
5	10		BART on aerial structure, 6.5 miles	6.5	Mile	64,000,000	416,000,000	80% of Traditional BART
6	10		Deep bored tunnel, 1.0 miles	1.0	mile	285,000,000	285,000,000	TM#8, A-1; Assumed Roadheader 40' Dia dual tunnel
7	10		Additional tracks at Richmond BART Yard	1	LS	2,000,000.00	2,000,000	
8								
9							703,000,000	
10								
11								
12	20		STATIONS					
13	20		New station, aerial	3	EA	73,800,000	221,400,000	90% of Traditional BART
14	20		Reconfigure El Cerrito del Norte Station to permit cross-platform transfer	1	LS	24,000,000.00	24,000,000	TM#8, Page 105
15	20		Parking structure at Hercules & Applan Way/San Pablo Dam Rd Stations, say 500 spaces	500	space	35,000.00	17,500,000	costs per MTC Parking Structure Report
16								
17							262,900,000	
18								
19								
20	30		SUPPORT FACILITIES					
21	30		Support facilities		Excluded		-	TM#8, Page 103
22								
23							-	
24								
25								
26	40		SITWORK AND SPECIAL CONDITIONS					
27	40		Sitework at guideway	6.5	Mile	5,400,000.00	35,100,000	90% of Traditional BART
28	40		Parking lot		None		-	Allowance
29	40						-	
30	40						-	
31								
32							35,100,000	
33								

WEST CONTRA COSTA HIGH-CAPACITY TRANSIT STUDY
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ALTERNATIVE 7.2—BART EXTENSION FROM EL CERRITO DEL NORTE STATION TO HERCULES

Line #	SCC #	Roll-out No.	Description of Work	Quantity	Unit	Unit Cost	Estimated \$	Remarks/ Notes
34								
35	50		<u>SYSTEMS</u>					
36	50		Systems	6.5	Mile	10,500,000.00	68,250,000	80% of Traditional BART
37	50						-	
38								
39							68,250,000	
40								
41								
42	60		<u>ROW, LAND, EXISTING IMPROVEMENTS</u>		None			
43							-	
44							-	
45								
46							-	
47								
48								
49	70		<u>VEHICLES (number)</u>					
50	70		BART cars, DMU, use 2-car DMU for a total of 24 cars	12	EA	7,500,000.00	90,000,000	Per E-BART awarded to Stadler, 4/29/2014, escalated to 2015 dollar
51							-	
52								
53							90,000,000	
54								