

Attachment E reflects the constrained staff recommendation for public comment and a side-by-side comparison with all the Sub-Regional planning area project lists, including the Westside Cities COG. The comparisons capture the impacts of the end result of numerous moving parts, including refined cost estimates, updated performance results, project phasing assumptions necessary due to financial constraints, and changes to the overall structure of the working assumptions with respect to proposed multi-modal capital and operating divisions of the entire tax revenue pie. Overlaid on these changes is the impact of the Metro Board of Director's adopted Performance Metrics, which guided the proposed project schedules required by SB 764 (de León). Each of these changes is explained where it impacted a subregional list, as indicated herein.

Of note are the refined cost estimates for the West Santa Ana Transit Corridor and the Metro Gold Line Eastside Extension projects. Previous estimates from 2010 were updated to reflect inflation to the current year, market conditions, actual cost experience on similar projects, comprehensive categories of cost including soft costs, changes in infrastructure type and other project characteristics and adequate levels of contingency. Additional cost information is included in a separate attachment to this report. As a result, the draft plan only provides a phased implementation of the West Santa Ana Transit Corridor and only one alignment for the Gold Line Eastside Extension can be constructed in the 40 year plan scenario. With a 50 year plan scenario, the second alignment for the Gold Line Eastside Extension can be constructed, or the subregion where the first alignment was not selected can act to identify a replacement project(s) valued at \$1.5 billion, the amount conceded to the other subregion for the first alignment. The Metro Board of Directors must concur with the replacement project(s) recommendation.

**Expenditure Plan DRAFT
for Public Comment**

ATTACHMENT E - Difference Sheet

(2015 \$ in thousands)

Project	Attach D Cost Assumption 2015\$	Attach D Target Amount 2015\$	Most Recent Cost Estimate 2015\$*	PBM funding 2015\$	Changes from Attachment D		Notes
					Cost Difference b/w Attach D & Most Recent Estimate	Difference b/w PBM Funding and Target Amount 2015\$	
Arroyo Verdugo							
BRT Connector Orange/Red Line to Gold Line	\$283,000	\$283,000	\$133,500	\$133,500	(\$149,500)	(\$149,500)	Cost Reduction; See Attached
Active Transportation Projects	\$136,500	\$136,500	\$136,500	\$136,500	\$0	\$0	
Goods Movement Projects	\$81,700	\$81,700	\$81,700	\$81,700	\$0	\$0	
Highway Efficiency, Noise Mitig. and Arterial Projects	\$602,800	\$602,800	\$602,800	\$602,800	\$0	\$0	
Modal Connectivity and Complete Streets Projects	\$202,000	\$202,000	\$202,000	\$202,000	\$0	\$0	
Transit Projects	\$257,100	\$257,100	\$257,100	\$257,100	\$0	\$0	
Arroyo Verdugo Projects to be Determined	\$67,900	\$67,900	\$217,400	\$217,400	\$149,500	\$149,500	Adjusted to ensure appropriate equity
Arroyo Verdugo Subtotal:	\$1,631,000	\$1,631,000	\$1,631,000	\$1,631,000	\$0	\$0	
San Fernando Valley							
City of San Fernando Bike Master Plan	\$5,000	\$5,000	\$5,000	\$5,000	\$0	\$0	
Complete LA River Bikepath	\$60,000	\$60,000	\$60,000	\$60,000	\$0	\$0	
East SF Valley Transit Corridor Project ®	\$1,000,000	\$1,000,000	\$1,331,000	\$810,500	\$331,000	(\$189,500)	\$ Spread added from LRTP \$'s §
BRT Connector Orange/Red Line to Gold Line	\$230,000	\$230,000	\$133,500	\$133,500	(\$96,500)	(\$96,500)	Cost Reduction; See Attached
Orange Line BRT Improvements	\$300,000	\$300,000	\$286,000	\$286,000	(\$14,000)	(\$14,000)	Cost Reduction; See Attached
Orange Line Conversion to Light Rail	\$1,400,000	\$62,000	\$1,429,000	\$362,000	\$29,000	\$300,000	Cost increase, paid with add'l LRTP\$
Sepulveda Pass Transit Corridor (Ph 1) ®	\$0	\$0	\$130,000	\$130,000	\$130,000	\$130,000	Project phased
Sepulveda Pass Transit Corridor (Ph 2) ®	\$3,390,000	\$1,400,000	\$2,837,000	\$1,270,000	(\$553,000)	(\$130,000)	Cost Reduc.; Project Phased
San Fernando Valley Subtotal:	\$6,385,000	\$3,057,000	\$6,211,500	\$3,057,000	(\$173,500)	\$0	
Westside							
Active Transportation 1st/Last Mile Connections Prog.	\$700,000	\$700,000	\$361,000	\$361,000	(\$339,000)	(\$339,000)	Reduced request to match target
Crenshaw Northern Extension	\$580,000	\$1,400,000	\$560,000	\$560,000	(\$20,000)	(\$840,000)	Cost Reduction; See Attached
Lincoln Blvd BRT	\$307,000	\$307,000	\$102,000	\$102,000	(\$205,000)	(\$205,000)	Cost Reduction; See Attached
Purple Line Extension to Bundy	\$2,647,100	\$1,400,000	\$2,647,100	\$0	\$0	(\$1,400,000)	Not funded to match target & perform.
Sepulveda Pass Transit Corridor (Ph 1) ®	\$0	\$0	\$130,000	\$130,000	\$130,000	\$130,000	Project phased
Sepulveda Pass Transit Corridor (Ph 2) ®	\$3,390,000	\$1,400,000	\$2,837,000	\$1,270,000	(\$553,000)	(\$130,000)	Cost Reduc.; Project Phased
Westside Requested Subtotal:	\$7,624,100	\$5,207,000	\$6,637,100	\$2,423,000	(\$987,000)	(\$2,784,000)	
Amount Requested in Excess of Constrained Target	N/A	\$ (2,484,000)	N/A	N/A			
Westside Subtotal:	\$7,624,100	\$2,723,000	\$6,637,100	\$2,423,000	(\$1,974,000)	(\$300,000)	\$300 million in LRTP added for equity
Central City Area							
Crenshaw Northern Extension	\$1,750,000	\$1,185,000	\$1,680,000	\$1,185,000	(\$70,000)	\$0	Cost reduction
Vermont Transit Corridor	\$425,000	\$425,000	\$425,000	\$25,000	\$0	(\$400,000)	Cost increase, paid with LRTP\$
BRT and 1st/Last Mile Solutions e.g. DASH	\$250,000	\$250,000	\$250,000	\$250,000	\$0	\$0	
Freeway Interchange and Operational Improvements	\$195,000	\$195,000	\$195,000	\$195,000	\$0	\$0	
Historic Downtown Streetcar	\$200,000	\$200,000	\$200,000	\$200,000	\$0	\$0	
LA River Waterway & System Bikepath	\$365,000	\$365,000	\$365,000	\$365,000	\$0	\$0	
Los Angeles Safe Routes to School Initiative	\$250,000	\$250,000	\$250,000	\$250,000	\$0	\$0	
LA Streetscape Enhance. & Great Streets Program	\$450,000	\$450,000	\$450,000	\$450,000	\$0	\$0	
Active Transportation, 1st/Last Mile, & Mobility Hubs	\$215,000	\$215,000	\$215,000	\$215,000	\$0	\$0	
Traffic Congestion Relief/Signal Synchronization	\$50,000	\$50,000	\$50,000	\$50,000	\$0	\$0	
Public Transit State of Good Repair Program	\$402,000	\$402,000	\$402,000	\$402,000	\$0	\$0	
West Santa Ana Transit Corridor LRT Ph 2 ®	\$0	\$0	\$1,482,500	\$400,000	\$1,482,500	\$400,000	
Central City Area Subtotal:	\$4,552,000	\$3,987,000	\$5,964,500	\$3,987,000	(\$70,000)	(\$400,000)	Central Area re-balancing request. See February 5, 2016 Letter from Central Subregion.
North County							
Active Transportation Program	\$264,000	\$264,000	\$264,000	\$264,000	\$0	\$0	
Arterial Program	\$726,130	\$726,130	\$726,130	\$726,130	\$0	\$0	
Goods Movement Program	\$104,000	\$104,000	\$104,000	\$104,000	\$0	\$0	
High Desert Corridor (HDC) Right-of-Way ®	\$270,000	\$170,000	\$270,000	\$170,000	\$0	\$0	
Highway Efficiency Program	\$128,870	\$128,870	\$128,870	\$128,870	\$0	\$0	
I-5 N Cap. Enhancements (SR-14 to Lake Hughes Rd) ®	\$785,000	\$240,000	\$784,080	\$240,000	(\$920)	\$0	Cost Reduction
Multimodal Connectivity Program	\$239,000	\$239,000	\$239,000	\$239,000	\$0	\$0	
Transit Program	\$88,000	\$88,000	\$588,000	\$88,000	\$500,000	\$0	High performer, \$ added for geo equity
North County Subtotal:	\$2,605,000	\$1,960,000	\$3,104,080	\$1,960,000	\$499,080	\$0	

* The most recent cost estimate equals the accelerated cost.

**Expenditure Plan DRAFT
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ATTACHMENT E - Difference Sheet

(2015 \$ in thousands)

Project	Attach D Cost Assumption 2015\$	Attach D Target Amount 2015\$	Most Recent Cost Estimate 2015\$*	PBM funding 2015\$	Changes from Attachment D		Notes
					Cost Difference b/w Attach D & Most Recent Estimate	Difference b/w PBM Funding and Target Amount 2015\$	
Las Virgenes-Malibu							
Active Transportation, Transit, and Tech. Program	\$32,000	\$32,000	\$32,000	\$32,000	\$0	\$0	
Highway Efficiency Program	\$133,000	\$133,000	\$133,000	\$133,000	\$0	\$0	Accelerated for geographic equity
Modal Connectivity Program	\$68,000	\$68,000	\$68,000	\$68,000	\$0	\$0	
Traffic Congestion Relief and Improvement Program	\$63,000	\$63,000	\$63,000	\$63,000	\$0	\$0	
Las Virgenes-Malibu Subtotal:	\$296,000	\$296,000	\$296,000	\$296,000	\$0	\$0	
Gateway Cities							
Gold Line Eastside Extension (One Alignment) ®	\$1,500,000	\$543,000	\$1,500,000	\$543,000	\$0	\$0	
Green Line Eastern Extension (Norwalk)	\$500,000	\$500,000	\$770,000	\$0	\$270,000	(\$500,000)	Low perf. transferred to system asset
I-5 Corridor Improvements (I-605 to I-710)	\$1,100,000	\$1,059,000	\$1,105,060	\$1,059,000	\$5,060	\$0	See Attached
I-605 Corridor "Hot Spot" Interchange Improvements ®	\$850,000	\$300,000	\$1,240,000	\$1,000,000	\$390,000	\$700,000	See Attached
I-710 South Corridor Project (Ph 1) ®	\$4,000,000	\$500,000	\$400,000	\$250,000	(\$3,600,000)	(\$250,000)	Goods mvmnt fee excluded from equity
I-710 South Corridor Project (Ph 2) ®	incl. above		\$908,500	\$250,000	\$0	\$250,000	Goods mvmnt fee excluded from equity
SR 60/I-605 Interchange HOV Direct Connectors	\$260,000	\$200,000	\$0	\$0	(\$260,000)	(\$200,000)	Geo equity adjustment
West Santa Ana Transit Corridor LRT Ph 1 ®	\$ 2,000,000	\$ 1,035,000	\$1,035,000	\$535,000	(\$965,000)	(\$500,000)	Project built in separate phases
West Santa Ana Transit Corridor LRT Ph 2 ®	incl. above		\$1,482,500	\$500,000	\$0	\$500,000	Project built in separate phases
Active Transportation Program	TBD	TBD	TBD	TBD	TBD	TBD	
Gateway Cities Subtotal:	\$10,210,000	\$4,137,000	\$8,441,060	\$4,137,000	(\$4,159,940)	\$0	
San Gabriel Valley							
Active Transportation Program (Including Greenway Proj.)	\$231,000	\$231,000	\$231,000	\$231,000	\$0	\$0	
Bus System Improvement Program	\$55,000	\$55,000	\$55,000	\$55,000	\$0	\$0	
Goods Movement (Improvements & RR Xing Elim.)	\$33,000	\$33,000	\$33,000	\$33,000	\$0	\$0	
Highway Demand Based Prog. (HOV Ext. & Connect.)	\$231,000	\$231,000	\$231,000	\$231,000	\$0	\$0	
Highway Efficiency Program	\$534,000	\$534,000	\$534,000	\$534,000	\$0	\$0	
I-605/I-10 Interchange	\$126,000	\$126,000	\$598,400	\$126,000	\$472,400	\$0	See Attached
ITS/Technology Program (Advanced Signal Tech.)	\$66,000	\$66,000	\$66,000	\$66,000	\$0	\$0	
Gold Line Eastside Extension (One Alignment) ®	\$1,500,000	\$543,000	\$1,500,000	\$543,000	\$0	\$0	
Gold Line Foothill Extension to Claremont ®	\$1,130,000	\$1,019,000	\$1,097,000	\$1,019,000	(\$33,000)	\$0	Cost reduction; see Attached
First/Last Mile and Complete Streets	\$198,000	\$198,000	\$198,000	\$198,000	\$0	\$0	
SR 60/I-605 Interchange HOV Direct Connectors	\$130,000	\$130,000	\$490,600	\$130,000	\$360,600	\$0	See Attached
SR-57/SR-60 Interchange Improvements	\$205,000	\$205,000	\$770,000	\$205,000	\$565,000	\$0	See Attached
San Gabriel Valley Subtotal:	\$4,439,000	\$3,371,000	\$5,804,000	\$3,371,000	\$1,365,000	\$0	
South Bay							
South Bay Highway Operational Improvements	\$1,100,000	\$500,000	\$1,100,000	\$500,000	\$0	\$0	
I-405 South Bay Curve Improvements	\$150,000	\$150,000	\$400,840	\$150,000	\$250,840	\$0	See Attached
I-405/I-110 Int. HOV Connect Ramps & Intrchg Improv ®	\$355,000	\$355,000	\$250,000	\$250,000	(\$105,000)	(\$105,000)	Cost reduction; see Attached
I-110 Express Lane Ext South to I-405/I-110 Interchange	\$81,500	\$51,500	\$280,000	\$51,500	\$198,500	\$0	See Attached
I-105 Express Lane from I-405 to I-605	\$350,000	\$200,000	\$175,000	\$175,000	(\$175,000)	(\$25,000)	Cost reduction; see Attached
Green Line Extension to Crenshaw Blvd in Torrance ®	\$607,500	\$607,500	\$891,000	\$737,500	\$283,500	\$130,000	See Attached; funding rebalance
Transportation System and Mobility Improve. Program	\$350,000	\$350,000	\$350,000	\$350,000	\$0	\$0	
South Bay Subtotal:	\$2,994,000	\$2,214,000	\$3,446,840	\$2,214,000	\$452,840	\$0	
GRAND TOTAL	40,736,100	23,376,000	41,536,080	23,076,000	(\$3,073,520)	\$0	

§ Spread is the difference between cost increase and revenue decrease.

* The most recent cost estimate equals the accelerated cost.

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COMPARISON OF COST ESTIMATES - HIGHWAY PROJECT (2015\$)

Line #	Dec 2015 Board Item 17 Attachment D Line Item	Highway Projects	Total Project Cost Metro Estimates	Dec 2015 Board Item 17 Attachment D	Difference
1	59	I-605 Corridor "Hot Spot" Interchange Improvements	\$ 1,540,000,000	\$ 850,000,000	\$ 690,000,000
2	77	SR-57/SR-60 Interchange Improvements	\$ 770,000,000	\$ 205,000,000	\$ 565,000,000
3	71	I-605/I-10 Interchange	\$ 598,400,000	\$ 126,000,000	\$ 472,400,000
4	81	I-405 South Bay Curve Widening	\$ 400,840,000	\$ 150,000,000	\$ 250,840,000
5	83	I-110 Express Lanes Extension South to I-405/I-110	\$ 280,000,000	\$ 81,500,000	\$ 198,500,000
6	60	I-710 South Corridor Project	\$ 4,108,500,000	\$ 4,000,000,000	\$ 108,500,000
7	61	SR-60/I-605 Interchange HOV Direct Connectors	\$ 490,600,000	\$ 390,000,000	\$ 100,600,000
8	58	I-5 Corridor Improvements (I-605 to I-710)	\$ 1,105,060,000	\$ 1,100,000,000	\$ 5,060,000
9	43	High Desert Corridor (HDC) Right-of-Way	\$ 270,000,000	\$ 270,000,000	\$ -
10	80	South Bay Highway Operational Improvements	\$ 1,100,000,000	\$ 1,100,000,000	\$ -
11	45	I-5 North Capacity Enhancements (Parker Rd. + 1.5 miles)	\$ 784,080,000	\$ 785,000,000	\$ (920,000)
12	82	I-405/I-110 Interchange HOV Connector Ramps and Interchange Improvements	\$ 250,000,000	\$ 355,000,000	\$ (105,000,000)
13	84	I-105 Hot Lane from I-405 to I-605	\$ 175,000,000	\$ 350,000,000	\$ (175,000,000)
		Total Highway Projects:	\$ 11,872,480,000	\$ 9,762,500,000	\$ 2,109,980,000



COMPARISON OF COST ESTIMATES - TRANSIT PROJECT (2015\$)

Line #	Dec 2015 Board Item 17 Attachment D Line Item	Transit Corridor Projects	Total Project Cost Metro Estimates	Dec 2015 Board Item 17 Attachment D	Difference
1	12	East San Fernando Valley Transit Corridor Project as LRT	\$ 1,331,000,000	\$ 1,000,000,000	\$ 331,000,000
2	28	Vermont "Short Corridor" Subway from Wilshire to Exposition	\$ 2,006,000,000	\$ 1,700,000,000	\$ 306,000,000
3	85	Green Line Extension to Crenshaw Blvd in Torrance	\$ 891,000,000	\$ 607,500,000	\$ 283,500,000
4	57	Green Line Eastern Extension (Norwalk) LRT	\$ 770,000,000	\$ 500,000,000	\$ 270,000,000
5	23	Purple Line Extension to Santa Monica	\$ 2,730,000,000	\$ 2,647,100,000	\$ 82,900,000
6	15	Orange Line Conversion to Light Rail (Phased with Line 14)	\$ 1,429,000,000	\$ 1,400,000,000	\$ 29,000,000
7	56	Metro Gold Line Eastside Transit Corridor Phase II - Washington Alignment	\$ 3,000,000,000	\$ 1,500,000,000	\$ -
8	73	Metro Gold Line Eastside Transit Corridor Phase II - SR-60		\$ 1,500,000,000	
9	62	West Santa Ana Branch (Eco Rapid Transit Project) - Total Project	\$ 2,000,000,000	\$ 2,000,000,000	\$ -
10	14	Orange Line BRT Improvements	\$ 286,000,000	\$ 300,000,000	\$ (14,000,000)
11	74	Metro Gold Line Foothill Light Rail Extension - Phase 2B	\$ 1,097,000,000	\$ 1,130,000,000	\$ (33,000,000)
12	21	Crenshaw Line Extension to West Hollywood/Hollywood LRT	\$ 2,240,000,000	\$ 2,330,000,000	\$ (90,000,000)
13	22	Lincoln Blvd BRT	\$ 102,000,000	\$ 307,000,000	\$ (205,000,000)
14	2	North Hollywood to Pasadena BRT Corridor	\$ 267,000,000	\$ 513,000,000	\$ (246,000,000)
15	16A	Sepulveda Pass Transit Corridor (N) - PLE Westwood/UCLA to Orange Van Nuys Station	\$ 5,934,000,000	\$ 6,780,000,000	\$ (846,000,000)
16	N/A	Westside Purple Line Extension Section 3	\$ 1,980,390,000	N/A	\$ -
Total Transit Projects:			\$24,083,000,000	\$ 24,214,600,000	\$ (131,600,000)

Note:

Cost Reduction:

- All Metro Parametric Estimate (MPE) contingencies were reduced to 25% from 35%
- Metro Gold Line Eastside Phase II, use Dec 2015 Board Item #17 Attachment D of \$3 billion, instead of MPE of \$4.81 billion
- West Santa Ana Branch Corridor, use Dec 2015 Board Item #17 Attachment D of \$2 billion, instead of MPE of \$3.74 billion
- Lincoln Blvd BRT, MPE was adjusted lower with less uncertainty than before to replicate with the completed Wilshire BRT project

Cost Increase:

- Orange Line Conversion to LRT, current MPE is for the entire alignment, where the Dec 2015 Board Item #17 Attachment D cost was only for the E-W (N. Hollywood to Warner Center) portion
- Higher Heavy Rail project's ROW and Vehicle costs because of the recent updated information from the Purple Line Extension