

**Measure R Cost Management Process and Policy Analysis
WESTSIDE PURPLE LINE EXTENSION PROJECT SECTION 2**

May 4, 2016

Introduction

The Measure R Cost Management Process and Policy (the Policy) was adopted by the Metro Board of Directors in March 2011. The Policy caps Measure R project funding at the amounts in the Expenditure Plan approved by voters. The intent of the Policy is to inform the Metro Board of Directors regarding potential cost increases to Measure R-funded projects and the strategies available to close any funding gaps. The Westside Purple Line Extension Section 2 Project warrants such an analysis due to a \$137.31 million, 6% cost increase relative to what was last reported to the Metro Board of Directors in June 2015. In addition, the City of Beverly Hills has not yet identified or agreed to their assumed 3% contribution of \$54.5 million. In total, \$191.81 million, 8.4% of new funding or cost reductions are needed to resolve the issue, as shown in Table 1:

Table 1 – Westside Purple Line Extension Section 2 Cost Increase Summary (\$ millions)

Cost Element	June 2015 SRTP Update	Current Cost Estimate	Difference
Guideways	\$ 378.23	\$ 385.32	\$ 7.09
Stations	\$ 479.82	\$ 517.38	\$ 37.56
Special Conditions	\$ 424.90	\$ 406.96	\$ (17.94)
Systems	\$ 91.42	\$ 96.73	\$ 5.31
ROW	\$ 221.71	\$ 312.42	\$ 90.71
Vehicles	\$ 100.06	\$ 85.35	\$ (14.71)
Professional Services	\$ 369.44	\$ 383.94	\$ 14.50
Unallocated Contingency	\$ 207.65	\$ 222.44	\$ 14.79
Subtotal Project Costs and Shortfall	\$2,273.23	\$2,410.54	\$137.31
Backfill of Beverly Hills Contribution	\$ -	\$ 54.50	\$ 54.50
Subtotal Revenue Shortfall		\$ 54.50	\$ 54.50
Total Funding Need			\$191.81

The total Measure R commitment to WSPLE is \$4,074 million. The Measure R funds targeted to the Westside Purple Line Extension (WPLE) Sections 1 and 2 as of June 2015 are \$2,266 million. The \$1,808 million remaining available for WPLE Section 3 from Measure R can be used to address the shortfall if doing so meets the Metro Board defined Measure R Debt Policy tests. Our cash flow and borrowing analysis indicates that any savings on the Exposition Phase 2 LRT project should be folded into the cash flow for the WPLE Section 2 project as soon as that figure is finalized. With this assumption, the cash flow and borrowing forecasts are permissible under the current

Measure R Debt Policy.

Measure R Cost Management Policy Summary

The adopted Policy stipulates the following:

If a project increase occurs, the LACMTA Board of Directors must approve a plan of action to address the issue prior to taking any action necessary to permit the project to move to the next milestone. Increases will be measured against the 2009 Long Range Transportation Plan (LRTP) as adjusted by subsequent actions on cost estimates taken by the LACMTA Board of Directors. With certain exceptions, shortfalls will first be addressed at the project level prior to evaluation for any additional resources using these methods in this order:

- 1) Value engineering and/or scope reductions;
- 2) New local agency funding resources;
- 3) Shorter segmentation;
- 4) Other cost reductions within the same transit corridor or highway corridor;
- 5) Other cost reductions within the same sub-region; and finally,
- 6) Countywide transit and highway cost reductions and/or other funds will be sought using pre-established priorities.

The policy was amended in January 2015 to establish Regional Facility Areas at Ports, airports and Union Station; and states that any:

“...capital project cost increases to Measure R funded projects within the boundaries of these facilities are exempt from the corridor and subregional cost reductions. Cost increases regarding these projects will be addressed from the regional programs share.”

The Westside Purple Line Extension Project Section 2 does not fall within a Regional Facility Area.

Value Engineering and/or Scope Reductions

During the development of the Preliminary Engineering for the Request for Proposal (RFP) documents, staff conducted Value Engineering (VE) Workshops utilizing a VE Panel of transit industry professionals with participation including the FTA’s Project Management Oversight Consultant (PMOC). The VE items believed to have the potential of yielding the largest cost savings were incorporated into the Advanced Preliminary Engineering (PE) designs in 2012. These items included the reduction of underground station footprint sizes and station depths. Station room layouts and other architectural elements were standardized to reduce design, construction, operations and maintenance costs. The Project Team also analyzed constructability issues and various construction sequencing scenarios to reduce risks and the overall durations for tunneling and cut-and-cover underground construction.

In 2014, an operational analysis was performed and the operational infrastructure was evaluated to determine the impacts if scope items were not constructed or purchased. The resulting operational impacts are as follows:

- Not constructing the track crossover, east of the Wilshire/Rodeo Station, will increase passenger wait times between trains when one track is out of service between Wilshire/La Cienega and Century City/Constellation stations.
- Not constructing tunnel/systems/track for the tailtrack west of the Century City/Constellation Station will not provide for storage of trains for routine operations, special events or vehicle maintenance issues. However, the station will still provide the minimum operational requirements for a temporary WPLE Section 2 terminus to be located at the Century City/Constellation Station.
- Reducing the heavy rail vehicles to be acquired for WPLE Section 2 from 20 to 10 will require either: 1) increases in the passenger wait times or 2) operation of shorter trains.

The impact of the crossover and tailtrack elimination has been determined to be reasonably acceptable for the operation of WPLE Section 2.

Further reductions in scope would likely substantially delay the project or result in a project not consistent with the Locally Preferred Alternative. As a result, we recommend moving to the next step.

New Local Agency Funding Resources

Per Note G in the Measure R Expenditure Plan, local agencies are expected to contribute an amount equal to three percent of total costs for transit corridor projects listed in the Expenditure Plan. Since the City of Beverly Hills cannot meet their local contribution requirement in the time available for the Full Funding Grant Agreement (FFGA) schedule required by the FTA, this has led to a \$54.5 million shortfall in the project that puts at risk \$1.5 billion in New Starts grants and TIFIA loans. We are continuing negotiate with the City of Beverly Hills to reach a mutually satisfactory resolution to several environmental, real estate, and 3% contribution issues. Per Measure R, we will continue to seek the 3% contribution from the City of Beverly Hills.

Similarly, the \$1,187 million New Starts FFGA and the \$307 million TIFIA loan currently being negotiated between the FTA and Metro will both state that all cost increases are to be borne by the project sponsor, not the Federal Transit Administration or TIFIA. Pursuant to those agreements, we are assuming that no additional New Starts or TIFIA loan funds can be made available to cover the cost increase.

Shorter Segmentation

While shorter segmentation is possible for the Westside Purple Line Extension, we recommend against this step for several reasons. The only Section which could be shortened is Section 3. This would require eliminating the Veteran Affairs Station and moving the terminus to Westwood. In addition to higher real estate prices in Westwood, eliminating the Veteran Affairs station would require LACMTA to prepare a supplemental Environmental Impact Statement/Environmental Impact Report (EIS/EIR) due to significant project changes. As a result, there may be significant project delays and increased costs to the project. We do not recommend shorter segmentation.

Other Cost Reductions within the Same Transit Corridor

The Westside Purple Line Extension is broken into three sections. Section 1 is already under construction and there are no reductions that can be moved from Section 2 to Section 3. As we enter into advanced preliminary engineering for Section 3, we will be considering further value engineering studies. The results of these studies will not be available in the timeframe necessary for this action.

Other Cost Reductions within the Same Subregion

Should the Metro Board elect not to use Measure R 35% from the Westside Purple Line Extension, the Metro Board could choose to use the cost underruns from the Exposition Light Rail Transit Phase 2 Project to partially cover the cost increase. The Metro Board can elect to use the Measure R 35% from the Transit Capital Subfund¹ forecasted as a reserve for Westside replacement projects. This subfund is comprised of reserves of Measure R 35% which are allocated to the Westside Purple Line Extension per the Measure R Ordinance as well as project savings from the Exposition Light Rail Line Phase 2.

The June 2015 Short Range Transportation Plan Financial Model Update identified up to \$691.6 million in Measure R 35% assigned to the Westside Purple Line Extension as potentially available from the Transit Capital Subfund Westside reserve. A substantial, but as yet undetermined additional amount could potentially be added when the Exposition Phase 2 project is closed-out by the Metro Board of Directors. More current planning documents not yet presented to the Metro Board indicate that the reserve stands at \$360.48 million due to additional needs for WPLE Section 3. Allocating \$191.81 from this source now to Section 2 to meet the cost and revenue shortfall in Table 1 will limit the amount remaining to \$168.67 (plus any Expo Phase 2 savings yet to be determined) using these more current forecasts. None of these forecasts assume passage of the Potential Ballot Measure.

¹ Section 7(1)(d)(4) of the Measure R Ordinance allows any unused Measure R be credited to the Transit Capital Subfund and expended for Capital Projects located within the same subregion as the project so completed.

As shown in the previous step, Measure R funds are to be used in the same subregion as the project. We recommend the Metro Board utilize the Measure R savings from the Exposition Light Rail Transit Phase II Project to cover the funding shortfall on Section 2 of the Westside Purple Line Extension as soon as the close out figure is approved by the Metro Board.

The Metro Board may also decide to defer Call for Projects located within the subregion as shown in Table 2. Currently, the Westside Subregion has \$12.2 million in committed funds for the Call for Projects. The projects shown below came from the 2013 and 2015 Call for Projects and do not have executed MOU/LOAs. We do not recommend this option as the projects would not fully address the funding gap and are important transportation projects.

Table 2 – Metro Call for Projects Located in the Westside Subregion

ProjID	Agency	Project	Source	FY2017	FY2018	FY2019	FY2020	FY2021	Total
F7401	Culver City	Culver CityBus Clean Fuel Bus Replacement	LTF	\$ -	\$ -	\$ -	\$ 1.69	\$ 2.52	\$ 4.21
F7507	Culver City	Ballona Creek Bike Path Connectivity Project at Higuera Bridge	LTF	\$ -	\$ 0.23	\$ -	\$ 0.39	\$ -	\$ 0.62
F7704	Santa Monica	Multi-modal Wayfinding: Congestion Reduction/Station Access	LTF	\$ -	\$ 0.36	\$ 0.57	\$ 0.36	\$ -	\$ 1.29
2013 CFP Total				\$ -	\$ 0.60	\$ 0.57	\$ 2.43	\$ 2.52	\$ 6.11
F9537	Beverly Hills	Beverly Hills Bikeshare Program	LTF	\$ 0.010	\$ 0.010			\$ 0.262	\$ 0.28
F9625	Santa Monica	17th Street/SMC Expo Pedestrian Connectivity Improvements	CMAQ	\$ 0.163	\$ 1.332				\$ 1.49
F9434	Santa Monica	Bus Replacement - City of Santa Monica	CMAQ	\$ 1.765					\$ 1.77
F9807	Santa Monica	Santa Monica Expo and Localized Travel Planning Assistance	LTF	\$ 0.127	\$ 0.123	\$ 0.126			\$ 0.38
F9533	Santa Monica	Beach Bike Path Ramp Connection to Santa Monica Pier	CMAQ	\$ 0.138				\$ 0.912	\$ 1.05
F9517	West Hollywood	WeHo Bikeshare Implementation and Interoperability Project	LTF	\$ 0.511					\$ 0.51
F9424	West Hollywood	West Hollywood CityLine Vehicle Replacement	LTF		\$ 0.640				\$ 0.64
2015 CFP Total				\$ 2.71	\$ 2.10	\$ 0.13	\$ -	\$ 1.17	\$ 6.12
Total CFP Eligible Revenues				\$ 2.71	\$ 2.70	\$ 0.70	\$ 2.43	\$ 3.69	\$ 12.23

Countywide Transit Cost Reductions and/or Other Funds

This cost increase does not require any countywide cost reductions or other funds.

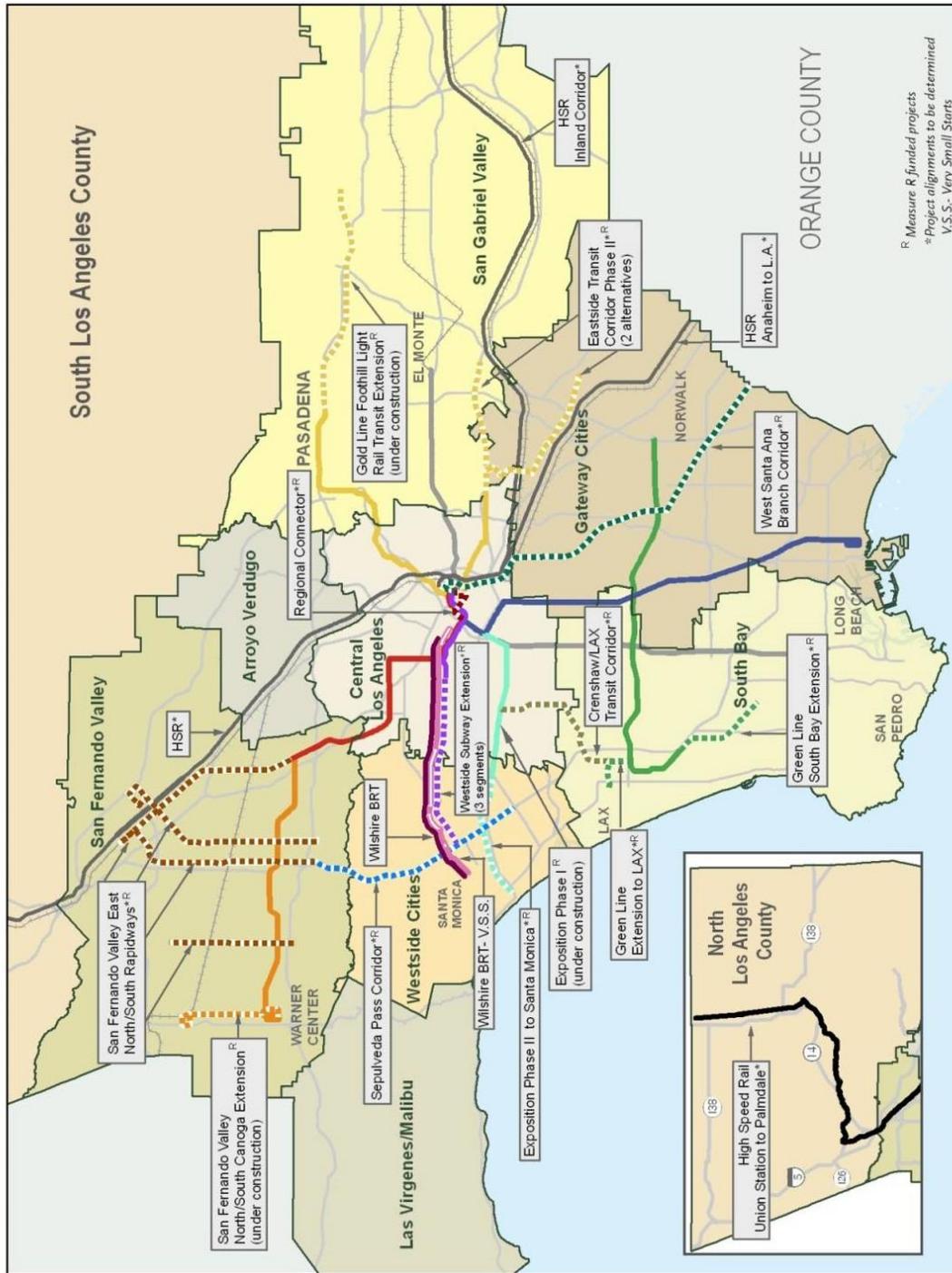
Long Range Transportation Plan Financial Forecast
Westside Purple Line Extension Project Funding Comparison (Section 2)

Attachment B - Exhibit 1

		2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2026	Total		
(\$ in millions)		Prior	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027			
SRTP Mar 2014	As of March 2014																	
	Planning/Environmental																-	
	Proposition A 35%																-	
	Proposition C 25%																-	
	Measure R 35%	3.8	1.0	1.1	47.2	47.8	63.7	168.7	67.3	96.8	50.3	1.3	2.7	(85.0)			466.7	
	Measure R 35% TIFIA Loan				146.0	61.0	100.0											307.0
	Lease Revenues																	-
	Repayment of Capital Projects Fund 3562	14.8	33.1						41.1									89.0
	Local Agency Funds									54.5								54.5
	Regional Improvement Program																	-
	CMAQ & RSTP				11.0	2.0	30.0	56.0	44.0		26.0							169.0
	Section 5309 New Starts			66.0	134.0	100.0	100.0	100.0	147.0	147.0	147.0	115.0	36.0	95.0				1,187.0
	5309 Capital Grant Rcpt Rev Bonds Proceeds																	-
	5309 Capital Grant Rcpt Rev Bonds Repay & Int																	-
Other State & Federal																	-	
Total	18.6	34.1	67.1	338.2	210.8	293.7	324.7	299.4	298.3	223.3	116.3	38.7	10.0	0.0		2,273.2		
April 20, 2016	As of 12/7/15																	
	Planning/Environmental																-	
	Proposition A 35%																-	
	Proposition C 25%																-	
	Measure R 35%	3.8	7.5	49.1	33.4	48.1	60.5	174.7	112.9	120.3	70.2	(1.1)	12.0	(53.0)			638.3	
	Measure R 35% TIFIA Loan			-	146.0	61.0	100.0											307.0
	Lease Revenues																	-
	Repayment of Capital Projects Fund 3562	14.8	40.0	-														54.8
	Local Agency Funds													54.5				54.5
	Regional Improvement Program																	-
	CMAQ & RSTP				11.0	2.0	30.0	56.0	44.0	26.0								169.0
	Section 5309 New Starts			66.0	134.0	100.0	100.0	100.0	147.0	147.0	147.0	115.0	36.0	95.0				1,187.0
	5309 Capital Grant Rcpt Rev Bonds Proceeds																	-
	5309 Capital Grant Rcpt Rev Bonds Repay & Int																	-
Other State & Federal																	-	
Total	18.6	47.5	115.1	324.4	211.1	290.5	330.7	303.9	293.3	217.2	113.9	48.0	96.5	0.0		2,410.6		
Change	Change																	
	Planning/Environmental	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	Proposition A 35%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	Proposition C 25%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	Measure R 35%	(0.0)	6.5	47.9	(13.9)	0.3	(3.2)	6.0	45.6	23.6	19.9	(2.4)	9.2	32.0			171.6	
	Measure R 35% TIFIA Loan ⁽¹⁾	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	Lease Revenues	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	Repayment of Capital Projects Fund 3562	-	6.9	-	-	-	-	-	(41.1)	-	-	-	-	-	-	-		(34.2)
	Local Agency Funds	-	-	-	-	-	-	-	-	(54.5)	-	-	-	-	54.5	-		-
	Regional Improvement Program	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-
	CMAQ & RSTP ⁽²⁾	-	-	-	-	-	-	-	-	26.0	(26.0)	-	-	-	-	-		-
	Section 5309 New Starts	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-
	5309 Capital Grant Rcpt Rev Bonds Proceeds	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-
	5309 Capital Grant Rcpt Rev Bonds Repay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-
Other State & Federal ⁽⁵⁾	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	
Total	(0.0)	13.4	47.9	(13.9)	0.3	(3.2)	6.0	4.5	(4.9)	(6.1)	(2.4)	9.2	86.5	-		137.3		

Map 1: 2009 LRTP – Subregions and Transit Corridors

2009 LRTP - Transit Corridors



^R Measure R funded projects
^{*} Project alignments to be determined
 V.S.S. - Very Small Starts

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