# Westside Purple Line Extension Section 2 Project



# WESTSIDE PURPLE LINE EXTENSION SECTION 2 PROJECT

MONTHLY PROJECT STATUS REPORT

THE PREPARATION OF THIS DOCUMENT HAS BEEN FINANCED IN PART THROUGH A GRANT FROM THE U. S. DEPARTMENT OF TRANSPORTATION, FEDERAL TRANSIT ADMINISTRATION (FTA).

**JULY 2017** 

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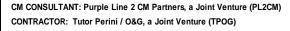
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#### **PROJECT SUMMARY**

LOCATION: Los Angeles / Beverly Hills DESIGN CONSULTANT: WSP USA Inc.

Century City Constellation LADWP Power Trenching



#### Century City Constellation

WORK COMPLETED PAST MONTH

- AT&T worksite traffic control plan submitted to LADOT for approval

- AT&T peak hour exemption application submitted to LADOT
- Conducted pre-construction meeting for SCG work through launch box

#### Wilshire/Rodeo

- Draft SCE work plan submitted to City of Beverly Hills (COBH)
- Obtained SCE construction permit from Beverly Hills City Council

EXPENDITURE STATUS (\$ In Millions)				SCHEDULE ASSESSMEN	п		
	CURRENT	EXPENDED	PERCENT	MAJOR SCHEDULE	PRIOR	CURRENT	
ACTIVITIES	BUDGET	AMOUNT	EXPENDED	ACTIVITIES	PLAN	PLAN	VARIANCE WEEKS
				Environmental			
DESIGN	\$153.5	\$55.9	36.4%	FEIS / FEIR	N/A	05/31/12	Complete
				SEIS	09/06/17	10/09/17	-5
RIGHT-OF-WAY	\$426.4	\$128.4	30.1%				
				Design			
CONSTRUCTION	\$1,416.2	\$95.4	6.7%	Approval to Enter into PE	N/A	01/24/13	Complete
				Final Design Complete	N/A	10/25/19	
OTHER	\$533.6	\$16.9	3.2%				
				Right-of-Way			
TOTAL	\$2,529.7	\$296.6	11.7%	All parcels available	N/A	11/19/19	
Current Budget includes Enviro	nmental/Plannir	ng and Finance	Costs.				
				Construction - Main Desi	gn / Build C	ontract	
AREAS OF CONCERN				Notice to Proceed	04/28/17	04/26/17	Complete
-None at this time.				Demobilization	10/25/25	10/25/25	
ROW ACQUISITION	PLAN	AVAILABLE	REMAINING	CRITICAL ACTIVITIES / 3	MONTH LO	OK AHEAD	
				- Continue negotiations wit	h City of Bev	erly Hills for M	emorandum of Agreement (MOA) governing utility work
PERMANENT PARCELS	30	0	30	- Start AT&T utility relocati	on at Century	/ City	
				- Resume DWP Power "Da	ay" work at C	entury City	
TEMPORARY PARCELS	3	0	3	- Start SCG work at Centu	ry City throug	h Launch Box	
				- Begin/finish cable pulling	and splicing	for Telecom at	Century City
				- Design Package 1 - Utilit	y/Civil Desigr	at Launch Bo	x in Century City 60% submittal
TOTAL PARCELS	33	0	33	- Design Package 2 - Rem	aining Utility	Conflicts (Outs	side of Launch Box) 60% submittal
				- Start SCE utility work at	Wilshire/Rod	eo	

### **PROJECT OVERVIEW & STATUS**

Section 2 of the Westside Purple Line Extension Project is the second of three sections to be designed and constructed as part of the Los Angeles County Metropolitan Transportation Authority (LACMTA) Measure R Program. The program was approved by Los Angeles County voters in November 2008 and provides a half-cent sales tax to finance new transportation projects. In April 2012, the three sections of the Project were environmentally cleared and adopted by LACMTA Board of Directors.

Section 2 will extend the future Wilshire/La Cienega Station that is part of the Westside Purple Line Extension Section 1 Project currently under construction to the Century City area. The Project is located entirely underground, primarily following Wilshire Boulevard, and includes the design and construction of approximately 2.59 miles of double-track heavy rail and two new stations as well as the purchase of 20 heavy rail vehicles. The Project also includes train controls, signals, traffic controls, communications, traction power supply and distribution, fare collection systems and equipment, acquisition of right-of-way, and utility relocations.

#### <u>Design</u>

The Engineering Management Services (EMS) team continues to provide design support for the Advanced Utility Relocation (AUR) work in Century City and real estate support services. The team is supporting Metro in reviewing final design submittals, responding to RFI's, and assisting in preparation of change notices.

The C1120 Contractor, Tutor Perini/O&G a Joint Venture (TPOG), has mobilized the final design team, STV.

The design work has been identified into three distinct design unit packages. They are:

- 1. Design Package 1 Utility/Civil Design at Launch Box in Century City
- 2. Design Package 2 Remaining Utility Conflicts (Outside of Launch Box)
- Design Package 3 (Volume 1) Tunnel Reaches Design Package 3 (Volume 2) – Stations Design Package 3 (Volume 3) – Track & Systems

Each design unit package will be submitted and evaluated at each of the following phases; 60%, 85%, 100%, Approved for Construction (AFC) and Issued for Construction (IFC). If required, critical design units can be advanced as Advanced Partial Design Units (APDU's) to support ongoing construction activities.

TPOG submitted for review the Tunnel Boring Machines (TBMs) preconstruction initial design demonstrating that the TBMs meet the Project's specifications. Design progress meetings are occurring weekly related to the design unit packages. Contractor is continuing with the required contractual submittals. *Other design related submittals that the Contractor has submitted this period are: Design Management Qualifications; Design Interface Management; Design Quality Manual; and BIM Implementation Plan.* 

The 120 Day Project Schedule has been submitted and approved and will be used as the basis for progress evaluation until such time as the Baseline Schedule is approved. Weekly working sessions are being conducted with the Contractor on the draft Contract Baseline CPM Schedule. *Baseline schedule is forecasted to be submitted for review next period.* 

#### Major Contract Procurement

All construction contracts for the Project have been awarded.

#### **Construction**

#### **Advanced Utility Relocations**

Century City Constellation: Telecom joint trench civil work completed in June 2017. Cable pulling and splicing work is anticipated to complete in September 2017. LADWP Water inside TBM launch box construction was completed in June 2017. LADWP Power construction began in May 2017. SCG and AT&T utility relocations are underway.

Wilshire/Rodeo: SCE will begin relocation of power lines in September 2017, followed by SCG and AT&T.

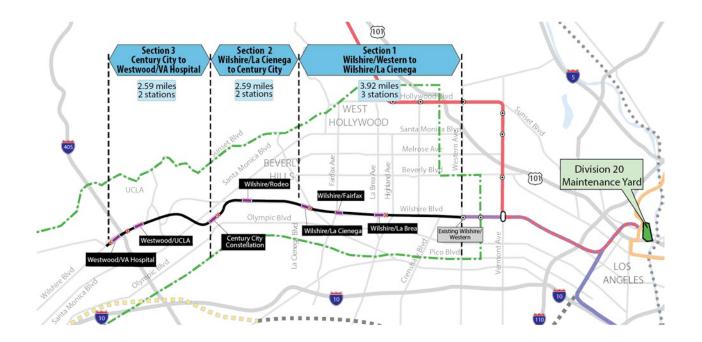
#### Contract C1120 – Tunnels, Stations, Trackwork and Systems (Design/Build)

Contract award was issued on January 31, 2017 and Notice to Proceed on April 26, 2017. *TBMs purchase order has been executed.* 

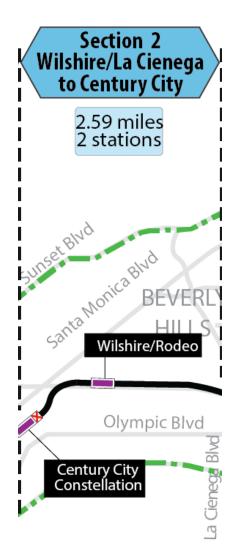
### MANAGEMENT ISSUES

No management issues this period.

### **PROJECT ALIGNMENT by SECTIONS**



#### **PROJECT ALIGNMENT SECTION 2**



### **BASE PROJECT SCOPE**

Section 2 of the Westside Purple Line Extension Project is the second of three sections to be designed and constructed as part of the Los Angeles County Metropolitan Transportation Authority (LACMTA) Measure R Program. The program was approved by Los Angeles County voters in November 2008 and provides a half-cent sales tax to finance new transportation projects. In April 2012, the three sections of the Project were environmentally cleared and adopted by LACMTA Board of Directors.

Section 2 will extend the future Wilshire/La Cienega Station that is part of the Westside Purple Line Extension Section 1 Project currently under construction to the Century City area. The Project is located entirely underground, primarily following Wilshire Boulevard, and includes the design and construction of approximately 2.59 miles of double-track heavy rail and two new stations as well as the purchase of 20 heavy rail vehicles. The Project also includes train controls, signals, traffic controls, communications, traction power supply and distribution, fare collection systems and equipment, acquisition of right-of-way, and utility relocations.

The Wilshire/Rodeo Station box will be under the center of Wilshire Boulevard, beginning just east of South Canon Drive, and extending to El Camino Drive. The entrance will be on the southwest corner of Wilshire Boulevard and Reeves Drive.

The Century City Constellation Station box will be under the center of Constellation Boulevard, between Century Park East and Solar Way. A double crossover will be located east of this station. The entrance will be on the northeast corner of Constellation Boulevard and Avenue of the Stars. In lieu of tail tracks, safe breaking distance will be provided at the interim terminus station.

#### <u>Contract C1120 – Tunnels, Stations, Trackwork, Systems and Systems Integration</u> <u>Testing</u>

The procurement of this contract utilized a two-step approach with the submittal of qualification statements through a Request for Qualification (RFQ) process, prequalification of qualified proposers followed by the release of a Request for Proposals (RFP) soliciting technical and price proposals with an option at Metro's discretion for Best and Final Offers (BAFO).

The Design/Build contract provides for final design and construction of the infrastructure along the 2.59 mile alignment. Contract scope includes demolition and removal of structures and clearing sites to facilitate construction operations. The structures to be constructed include twin bored tunnels, complete with cross-passages and walkways, including all mechanical, electrical and finished work. A tunnel boring launch (TBM) shaft will be constructed at the Century City Constellation Station. Two underground stations are to be constructed, one double crossover location, which is located east of the Century City Constellation Station which is the terminus station. Each station has a single entrance plaza with stairs, escalators and elevators which meet ADA requirements. The scope of work also includes all architectural finishes, mechanical and electrical systems and equipment including train control, traction power, communications, trackwork, system tie-in to the Wilshire/La Cienega Station (currently under construction), testing and commissioning.

### **BASE PROJECT SCOPE (Continued)**

#### Metro Furnished Equipment

Metro has procured a separate contract to provide the 20 Heavy Rail Vehicles (HRV) and will procure a separate contract for the Universal Fare System (UFS) necessary to operate the Purple Line. The scope of the HRV contract includes design, manufacturing, testing and delivery of the vehicles. The scope of the UFS contract will include design, fabrication and installation of equipment at the two stations and system testing.

#### Start Up

The commencement of pre-revenue operations will be determined by Metro. Generally, all systems integration testing will have been completed and passed. All testing will be required to include and pass a "stress test" of maximum operational service levels to be acceptable. Pre-Revenue Operations include train runs, especially those involving multiple trains, on the integrated and fully operational extension; rehearsal of expected revenue operations scenarios; as well as abnormal and emergency scenarios in which random combinations of system interactions are tested; equipment "burned-in"; and training of Metro personnel, who will operate and maintain the extension, and for emergency services personnel. Activities occurring during Pre-Revenue Operations are carried out by a designated Metro Project Rail Activation Group.

### **KEY MILESTONES SIX-MONTH LOOK AHEAD**

	Milestone Date	Aug-17	Sep-17	Oct-17	Nov-17	Dec-17	Jan-18
Third party utility construction begins at Century City Constellation - SCG (inside Launch Box)	08/14/17	Δ					
Submit 60% Design Package 2 - Remaining Utility Conflicts (Outside of Launch Box)	08/15/17						
Submit 60% Design Package 1 - Utility/Civil Designt at Launch Box in Century City	08/18/17						
Third party utility construction begins at Century City Constellation - AT&T	09/05/17		Δ				
Third party utility construction begins at Wilshire/Rodeo - SCE	09/05/17		Δ				
Third party utility construction complete at Century City Constellation - SCG (inside Launch Box)	09/25/17		Δ				
Third party utility construction begins at Century City Constellation - SCG (outside Launch Box)	09/26/17		Δ				
Third party utility cable pulling & splicing completes at Century City Constellation -Telecom	09/29/17		Δ				
Complete SEIS	10/09/17			٠			
Submit 85% Design Package 1 - Utility/Civil Designt at Launch Box in Century City	10/16/17						
Submit 85% Design Package 2 - Remaining Utility Conflicts (Outside of Launch Box)	11/01/17						
Submit 100% Design Package 1 - Utility/Civil Designt at Launch Box in Century City	12/06/17						
Third party utility construction complete at Century City Constellation - AT&T	12/21/17					Δ	
Third party utility cable pulling & splicing begins at Wilshire/Rodeo - SCE	01/17/18						$\triangle$
MTA Staff MTA Board Action FTA (Federal Transit Administration)	Δ	Other		Contracto			

٠ • • MASTER SCHEDULE Data Date: 29-Jul-17 1 of 1 ٠ Westside Purple Line Extension Section 2 Project Los Angeles County Metropolitan Transportation Authority Management Schedule - MPSR 09-Aug-12 A 24-Jan-13 A 07-Aug-26 07-Oct-25\* 26-Apr-17 A 26-Apr-12 A 31-Dec-14 A 15-Dec-16 A 28-Sep-18 26-Jan-17 A 26-Apr-17 A 31-Dec-26\* 09-Oct-17 13-Apr-16 A 25-Oct-19 28-Sep-18 24-Aug-18 21-Nov-23 29-Dec-23 31-Jul-25 10-Jan-24 20-Dec-16 A 23-May-25\* 15-Aug-25 25-Feb-25 23-May-25 28-Aug-25 31-Dec-26 09-Oct-17 25-Oct-19 15-Aug-25 03-Apr-20 31-Jan-24 31-Jul-25 28-Aug-25 07-Aug-26 6-Apr-17 A 28-May-15 A 28-May-15 A 06-Sep-16 A 31-Jul-17 05-Jan-15 A 02-Mar-15 A 03-Aug-15 A 31-Dec-14 A 20-May-15 A 12 4 05-Jan-15 A 02-Mar-15 A 19-Jun-25 81-Dec-14 A 01-Jul-15 A 06-Sep-16 A 29-Aug-25\* 02-Mar-15 A 05-Jan-15 A 02-Mar-15 A 03-Jan-22 27-Apr-17 A 25-Apr-19 01-Feb-24 22-Mar-24 01-Jul-21 19-Jun-25 14-Jul-25 14-Jul-25 start DR-Ani 1210 264 1072 647 2565 2565 497 2234 1630 897 1694 1464 **658** 658 902 902 600 500 332 345 270 583 494 481 270 000000000 0 7 7 0 Contract C1120 Milestone # 1 - Substantial Completion (NTP+2,950 CD Project Close Out C1120 Milestone # 4 - Complete Demobilization (NTP+3,100 CD) FTA Issue Full Funding Grant Agreement (FFGA) Metro Board Adopt Project & Authorize Life of Project Budget FTA Approval to Enter Into Preliminary Engineering FTA Approval to Enter into New Starts Engineering Phase WPLE Section 2 - Wilshire La Grenega to Century City Constellation - Current Schedule Forecast Revenue Service Date - RSD Issue NTP to Major D/B Contractor MTA Board Approve Final EIS/EIR city FFGA Revenue Service Date iga to Century FTA Record of Decision Advanced Preliminary Engineering (APE) PROJECT PLANNING & DEVELOPMENT Re-Start Section 2 Summary Heavy Rail Vehicles Contract HR4000 Universal Fare Collection Equipment OWNER FURNISHED EQUIPMENT Wilshire/La Cier Environmental Document Update SCADA Software and Equipment Site Work & Temporary Facilities **WILESTONES & KEY DATES RE Acquisitions - Critical** FTA Process & Approvals **RE Relocations - Critical** Remaining Work Critical Remaining Work **Contract Procurement** RIGHT-OF-WAY (R/W) Pre-revenue Service Guideway & Track WS2-WS-PC-1000 WS2-WS-PC-1005 Final Design (FD) Project Close-Out CONSTRUCTION Actual Work
Remaining Wol ENGINEERING WS2-MS1020 WS2-MS1070 WS2-MS1110 WS2-MS1120 WS2-MS1000 WS2-MS1005 WS2-MS1010 WS2-MS1030 WS2-MS1040 WS2-MS1050 WS2-MS1060 ♦ Milestone Stations Systems Utilities Testing Start Up Miscellar VPLE

#### **PROJECT SUMMARY SCHEDULE**

#### July 2017

### SCHEDULE MEASUREMENTS

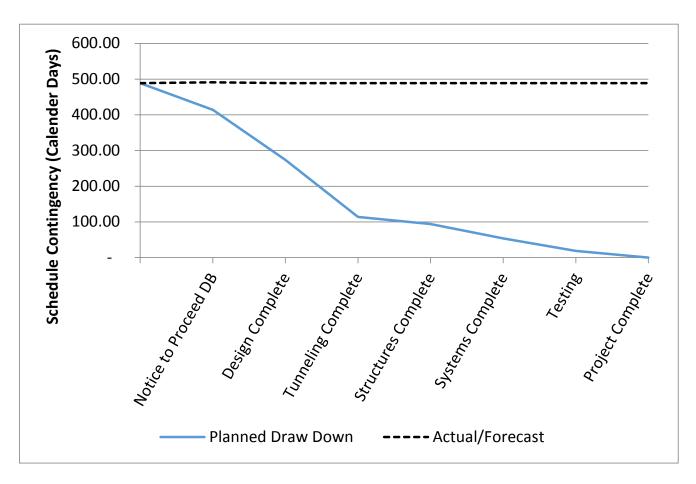
### **OVERALL CONSTRUCTION PROGRESS CURVE**

#### MAJOR EQUIPMENT DELIVERY

### DESIGN BUILDER'S (C1120) LONG LEAD ITEM LIST

### **CRITICAL PATH NARRATIVE**

The Critical Path begins with the procurement process for the C1120 Design/Build (D/B) contract, mobilization of the design team for the contractor, and the start of final design for station boxes and tunnels. The Design/Build contractor begins installation of soldier piles, first on the north side of the Century City Constellation Station box, and then on the south side. Temporary Street decking is then installed, the station structural box is excavated, and invert concrete is placed. Concurrently with this is the procurement and assembly of the tunnel boring machines (TBM). The path continues with tunneling and then street decking, station box excavation and concrete invert at the Wilshire/Rodeo Station. The path then follows into systems integration and testing and pre-revenue operations.



### PROJECT SCHEDULE CONTINGENCY DRAWDOWN

#### **PROJECT SCHEDULE CONTINGENCY DRAWDOWN ANALYSIS**

The project schedule contingency drawdown curve is based on an August 29, 2025 Forecast Revenue Service Date (RSD).

### **PROJECT COST STATUS**

SCC CODE	DESCRIPTION	original Budget	CURRENT BUDGET		COMMITMENTS		EXPENDITURES		CURRENT FORECAST		FORECAST/ BUDGET
CODL		DODGET	PERIOD	TO DATE	PERIOD	TO DATE	PERIOD	TO DATE	PERIOD	TO DATE	VARIANCE
10	GUIDEWAY & TRACK ELEMENTS	346,440	-	346,440	-	329,943	-	5,175	-	346,440	-
20	STATIONS, STOPS, TERMINALS, INTERMODAL	434,990	-	434,990	-	410,368	-	41	-	434,990	-
30	SUPPORT FACILITIES: YARDS, SHOPS, ADMIN. BLDGS	-	-	-	-	-	-	-	-	-	-
40	SITEWORK & SPECIAL CONDITIONS	553,282	-	553,282	51	520,677	322	90,169	-	553,282	-
50	SYSTEMS	81,457	-	81,457	-	68,537	-	-	-	81,457	-
	CONSTRUCTION SUBTOTAL (10-50)		-	1,416,169	51	1,329,525	322	95,386	-	1,416,169	-
60	ROW, LAND, EXISTING IMPROVEMENTS		-	426,396	-	166,839	3,388	128,357	-	426,396	-
70	VEHICLES	42,000	-	42,000	-	-	-	-	-	42,000	-
80	PROFESSIONAL SERVICES	374,878	-	374,878	-	167,592	465	70,853	-	374,878	-
	SUBTOTAL (10-80)	2,259,444	-	2,259,444	51	1,663,956	4,174	294,596	-	2,259,444	-
90	UNALLOCATED CONTINGENCY	177,176	-	177,176	-	-	-	-	-	177,176	-
100	FINANCE CHARGES	88,695	-	88,695	-	-	-	-	-	88,695	-
DTAL PR	OJECT 865522 (FFGA & NON-FFGA CONCURRENT ACTIVITIES)	2,525,314	-	2,525,314	51	1,663,956	4,174	294,596	-	2,525,314	-
	ENVIRONMENTAL/PLANNING - 465518 & 465522		-	4,349	-	2,203	48	2,008	-	4,349	-
	TOTAL PROJECT 465518 & 465522 (ENV / PLAN'G)	4,349	-	4,349	-	2,203	48	2,008	-	4,349	-
	TOTAL PROJECTS 465518, 465522 & 865522	2.529.664	-	2,529,664	51	1,666,159	4,223	296,604	-	2,529,664	_

### **PROJECT COST ANALYSIS**

#### **Original Budget, Current Budget and Forecast**

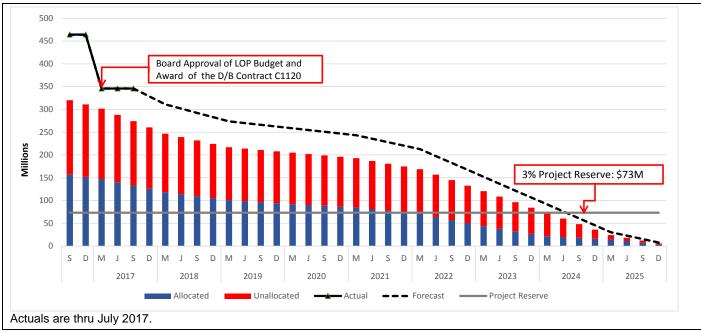
The Original Budget, Current Budget and Forecast of \$2.5 billion reflect the Life of Project (LOP) budget approved by the Board on January 26, 2017, plus Finance Charges of \$88.7 million.

#### Commitments

The Commitments increased this period by \$0.05 million due to executed work orders for private utility companies. The \$1.7 billion in Commitments to date represents 65.9% of the Current Budget.

#### Expenditures

The Expenditures increased this period by \$4.2 million this period primarily for costs associated with Private Utilities, Real Estate Acquisitions, and Metro Project Administration. The \$296.6 million in Expenditures to date represents 11.7% of the Current Budget.



#### PROJECT COST CONTINGENCY DRAWDOWN

### PROJECT COST CONTINGENCY DRAWDOWN ANALYSIS

The Current Budget of \$2.5 billion includes finance charges totaling \$88.7 million. It also includes a project cost contingency of \$345.7 million or 13.7% of the total project, which is based upon the Life of Project (LOP) Budget approved by the Board in January 2017. An allocated contingency amount of \$168.5 million is included in the total cost contingency. The allocated contingency is an amount to cover anticipated but unknown contract modifications issued by Metro where applicable to specific contracts within each Standard Cost Category (SCC).

A 3% project reserve threshold is included in the project cost contingency drawdown. Metro's Board is to be notified when it becomes necessary to drawdown contingency below the project reserve threshold to cover project costs. This process was adopted by the Metro Board of Directors in September 2012.

The project cost contingency drawdown curve is based on an August 29, 2025 Forecast Revenue Service Date (RSD).

The project contingency remained unchanged this period.

PROJECT COST CONTINGENCY DOLLARS IN THOUSANDS									
	Original Contingency (Budget)	Previous Period	Current Period	To-Date	Remaining Contingency (Forecast)				
Unallocated Contingency	177,176	0	0	0	177,176				
Allocated Contingency	168,534	0	0	0	168,534				
Total Contingency	345,710	0	0	0	345,710				

#### DISADVANTAGED BUSINESS ENTERPRISE (DBE)

None to report at this time.

### PROJECT LABOR AGREEMENTS (PLA) STATUS

The Contractor has committed to comply with PLA/CCP requirements for the Project. Project Staff will monitor and report the contractor's progress toward meeting the goals of the PLA/CCP once construction begins.

### SUMMARY OF CONTRACT MODIFICATIONS

No Contract MODs have been executed since the award of Contract C1120–Tunnels, Stations, Trackwork, and Systems to Tutor Perini/O&G, a Joint Venture.

### **FINANCIAL/GRANT STATUS**

	(4)	(IN MILLIONS O	,		(D(D)	(E)	(E/D)	(E)	(E(D)
SOURCE	(A) ORIGINAL BUDGET	(B) TOTAL FUNDS	(C) TOTAL FUNDS	(D) COMMIT	(D/B) MENTS	(E) EXPI	(E/B) ENDITURES	(F) BILLED TO SOURC	
		ANTICIPATED	AVAILABLE	\$	%	\$	%	\$	%
FEDERAL - SECTION 5309 NEW STARTS	\$1,187.000	\$1,187.000	\$100.000	\$1,044.007	88%	\$91.965	8%	\$88.428	7%
FEDERAL CMAQ	\$169.000	\$169.000	\$43.000	\$43.000	25%	\$22.703	13%	\$22.703	13%
MEASURE R - TIFIA LOAN	\$307.000	\$307.000	\$146.000	\$307.000	100%	\$0.000	0%	\$0.000	0%
MEASURE R 35%	\$811.902	\$811.902	\$145.783	\$217.390	27%	\$127.174	16%	\$56.265	7%
STATE CAPITAL PROJECT LOANS	\$54.762	\$54.762	\$54.762	\$54.762	100%	\$54.762	100%	\$54.762	100%
TOTAL	\$2,529.664	\$2,529.664	\$489.545	\$1,666.159	65.9%	\$296.604	11 7%	\$222.158	8.8%

### STATUS OF FUNDS ANTICIPATED

**FEDERAL SECTION 5309 NEW STARTS:** FTA grant CA-2016-047 for \$100.0 million was awarded by the FTA on December 15, 2016. Funds are available for drawdown. *FTA grant CA-2016-047 Amendment No. 1 for \$100.0 million was submitted in July 2017.* 

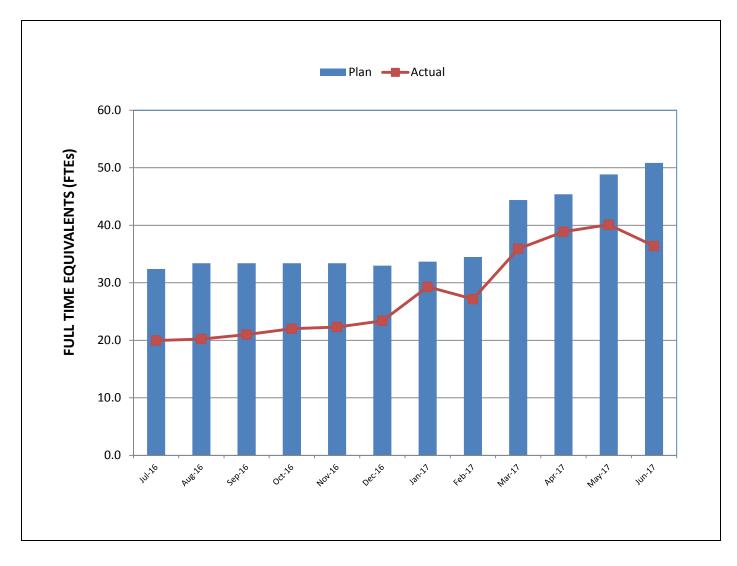
**CMAQ (Congestion Mitigation & Air Quality):** FTA grant CA-2016-2045 for \$43.0 million was awarded by the FTA on December 15, 2016. Funds are available for drawdown.

**MEASURE R – TIFIA LOAN (Transportation Infrastructure Finance & Innovation Act):** TIFIA Loan was executed on December 20, 2016 for \$307.0 million. \$146 million funds are available for drawdown. First disbursement is planned for November 2017.

**MEASURE R:** *\$145.8 million have been allocated to the Project through FY18.* Funds are available for drawdown.

#### **STAFFING STATUS**

Total Project Staffing – FTEs



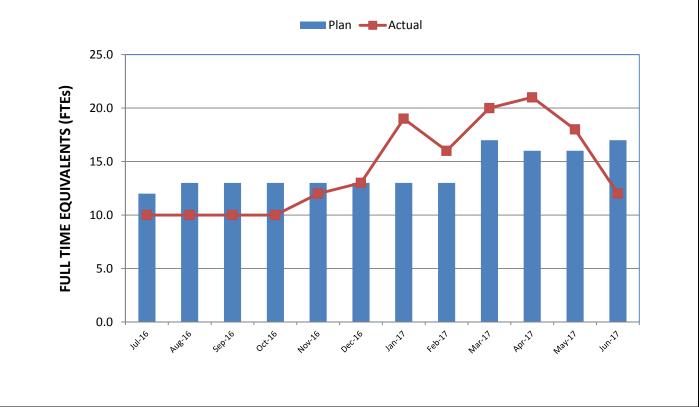
### TOTAL PROJECT STAFFING

The overall FY17 Total Project Staffing Plan averages 38.1 FTEs per month.

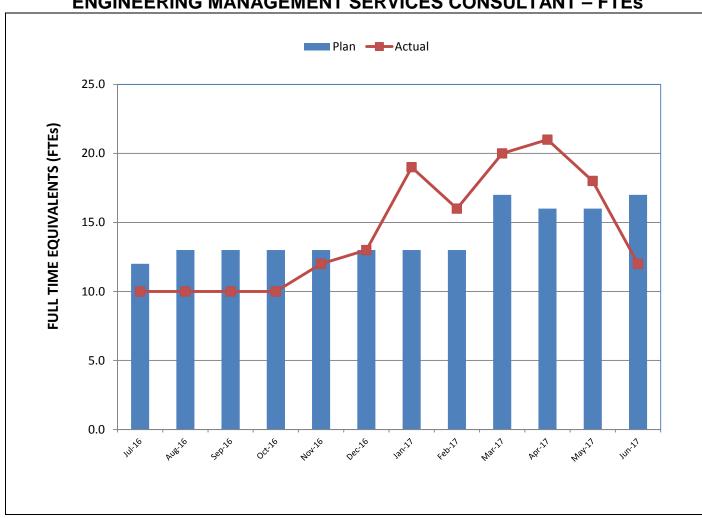
For June 2017, there were a total of 15.8 FTEs for MTA's Project Administration Staff and 20.6 FTEs for Consulting Staff. The total project staffing for July 2017 was 36.4 FTEs.

**METRO STAFFING – FTEs** Plan 25.0 FULL TIME EQUIVALENTS (FTEs) 20.0 15.0 10.0 5.0 0.0 Mar.17 Nov-16 Decilo API-1 000-10 Feb.11 Jun:11 101-26 AU8:16 Jan'11 Mayill Sepi16

> **CONSTRUCTION MANAGEMENT SUPPORT SERVICES CONSULTANT – FTEs**



**STAFFING STATUS (Continued)** 



#### **STAFFING STATUS (Continued)** ENGINEERING MANAGEMENT SERVICES CONSULTANT – FTES

### **REAL ESTATE STATUS**

	Real Estate Status Summary										
Decorintien	Number	Certified	Appraisals	Offers	Agreements	Condemnation	Reloc	Parcels			
Description	of Parcels	Certified	Completed	Made	Signed	Filed	Required	Completed	Available		
						· · · · · · · · · · · · · · · · · · ·					
Full Takes	3	3	3	3	1	2	21	11	1		
Part Takes	3	1	1	1	0	0	0	0	0		
TCE	3	3	1	1	0	1	1	0	0		
SSE	23	1	1	1	0	1	3	0	0		
Permanent Easements	1	0	0	0	0	0	0	0	0		
Total Parcels	33	8	6	6	1	4	25	11	1		

### **QUALITY ASSURANCE STATUS**

• None to report at this time.

#### ENVIRONMENTAL STATUS

- Performed daily noise monitoring activities at Century City Constellation Station for utility relocation work and submitted daily field reports.
- Participated in various project pre-construction and utility relocation meetings and reported on environmental compliance with local, state and federal regulations, specifications and EIR.
- Provided environmental awareness training to construction crew as required.
- Conducted field environmental monitoring and spot check inspections for stormwater and dust BMPs, cultural resources and Metro's Green Construction Policy.
- Participated in various C1120 contract coordination meetings and evaluated progress and schedules for environmental compliance and sustainability efforts.
- Completed 9<sup>th</sup> Quarter Mitigation Measures Status Report (MMSR) and submitted to FTA.
- Reviewed June 2017 Noise Monitoring Report.
- Submitted draft Noise Control and Monitoring Plan and Haul Route to City of Beverly Hills.
- Coordinated with City of Beverly Hills staff on the permit process for abatement of the former Ace Gallery building.
- Researched groundwater quality and quantity for future station dewatering activities.

### **CONSTRUCTION RELATIONS STATUS**

- Attended the following meetings: Construction Management, Advanced Utility Relocations, Construction Relations, Environmental Mitigations, Third Party Workshop, Marketing, Social Media and Bus Relocations and Stops.
- Conducted online and door-to-door outreach for community meetings.
- Addressed traffic control complaints related to utility work on Constellation Boulevard.
- Updated Facebook/Twitter Website as needed.
- Produced and distributed two pre-construction work notices for advanced utility relocations.
- Made Project presentations at the following: Elected Officials Briefing, Spago and Citizen

Restaurant Meeting and Century City Business Improvement District Meeting.

• Conducted field outreach regarding Ace Gallery building abatement with businesses in the Wilshire/Rodeo area.

### CREATIVE SERVICES STATUS

- Conducted community outreach and coordinated cultural partnerships.
- Attended site meeting and tour with Westfield Mall management.

### SAFETY & SECURITY STATUS

- Third party advanced utility relocation work continues. *No injuries reported during July 2017.*
- Third party advance utility construction work is being monitored to document contractor compliance with regulations and good business practices.
- Attended LADWP Water and Power Field Tool-Box Safety Meetings and conducted site safety walks.
- Attended weekly Project Issues Standing Meetings.
- Conducted Safety Workshop and coordination meetings with TPOGJV safety staff and defined over-the- shoulder review schedules.
- Attended Telecom Joint Trench Weekly Construction Meetings.
- Attended LADWP Water/Power Relocation Weekly Construction Meeting.
- Continued coordination with the D/B's Contractor safety personnel to insure presubmittal compliance for adequate contractual construction safety staffing.
- Conducted project safety orientation for new Metro/Consultants and IPMO project staff.
- Will track injury and work hour statistics when the D/B's NTP date commences. Coordination with the D/B's Contractor Safety Manager is ongoing.
- Continued ongoing project safety and security administrative requirements.
- Conducted over-the-shoulder reviews on safety/security submittal drafts with TPOGJV safety staff.
- Conducted ROW and worksite safety walks.

### THIRD PARTY AGREEMENT STATUS

No.	Third Party	Type of Agreement	Forecast Execution Date	Required Need Date	Status/ Comments
1	City of Los Angeles (LA)	Master Cooperative Agreement	N/A	N/A	Parties will work under 2003 MCA.
2	City of Beverly Hills (COBH)	Memorandum of Agreement	03/17(A)	03/17(A)	Reimbursement Agreement was executed in March 2017.
			06/17(A)	06/17(A)	Beverly Hills City Council approved the construction permit for SCE work in June 2017. Other utility relocation construction permits will be processed as needed.
			03/18	04/18	Metro continues to work with the City to establish an MOA for the C1120 Design/Build contract. Required Need Date reflects turnover date to C1120 contractor for station footprint availability.
3	Los Angeles Department of Water and Power (LADWP)- Water & Power	Master Cooperative Agreement	N/A	N/A	Metro and LADWP will continue to work under the terms of the previous Master Cooperative Agreement.
4	Los Angeles County Public Works Flood Control	Master Cooperative Agreement	N/A	N/A	Executed.
5	Private Utilities	Utility Cooperative Agreement	N/A	N/A	AT&T, Pac Bell, SBC, MCI, Verizon, Southern California Gas Company (SCGC), TCG Los Angeles – Metro is working under existing agreements.
			11/17	11/17	Level 3 – Metro and Level 3 have initiated a new agreement. Currently, awaiting comments from Level 3. Time Warner Pacific West LLC, D/B/A Time Warner Cable – County Counsel to respond to Time Warner's latest comments. SCE – Metro and SCE have initiated a new agreement. A draft is under review. Veolia – A draft agreement has been submitted to Veolia for review and comment. Sprint – A draft of the Agreement submitted has been submitted to Sprint, pending comments.
			09/17	09/17	Zayo, XO Communications, LLC – the agreements have been finalized and will be presented to the Board.

### ADVANCED UTILITY RELOCATION STATUS

#### Century City Constellation

- Telecom joint trench civil work in Century City was completed in June 2017. Telecom joint trench cable pulling and splicing work is anticipated completion by September 2017.
- The Los Angeles Department of Water and Power (LADWP) Water utility relocations inside the TBM launch box completed in June 2017.
- LADWP Power utility relocations are ongoing at the Century City Constellation Station.

#### Wilshire/Rodeo

• Advanced third party utility relocations at the Wilshire/Rodeo Station will begin with the relocation of SCE facilities in September 2017. Obtained approval of SCE construction permit by the City of Beverly Hills in June 2017.

#### PEAK HOUR AND NIGHTTIME CONSTRUCTION VARIANCES

Metro is actively pursuing extended hour variances/exemptions to accommodate the Project needs. Metro staff is working with the City of Beverly Hills, City of Los Angeles Bureau of Engineering and the Los Angeles Police Commission to obtain Peak Hour Exemptions and Nighttime Construction Variances.

- Peak Hour Exemption application is in progress for the TBM launch box excavation.
- A peak hour exemption for the LADWP Water relocation has been approved from May 15, 2017 to August 17, 2017. Construction work completed in June 2017.
- Peak Hour Exemption application for AT&T relocations on Constellation Boulevard is being processed.
- Nighttime noise variance for relocation of third party utilities on Constellation Boulevard is approved through October 2017. *Application for extension of noise* variance will be submitted at the end of August 2017 to LAPD.

### CHRONOLOGY OF EVENTS

August 2012	FTA Record of Decision
January 2013	FTA approval to enter to Preliminary Engineering
December 2014	FTA approval to enter to New Starts Engineering Phase
March 2015	Began Real Estate Acquisition
May 2015	Began Advanced Preliminary Engineering
September 2015	Issued RFQ for C1120 Design/Build contract
October 2015	Received RFQ responses for C1120 Design/Build contract
May 2016	Submitted draft FFGA application
May 2016	Submitted TIFIA loan application
June 2016	Submitted application to FTA requesting an FFGA
June 2016	Received RFP Proposals for Contract C1120
September 2016	Began joint trench construction in Century City
December 2016	FTA executed FFGA
December 2016	Received TIFIA Loan
January 2017	NTP for Construction Management Support Services Contract
January 2017	Metro Board approved staff recommendation to award the Design/Build Contract C1120 to Tutor Perini/O&G, a Joint Venture (TPOG) and approved Life-of-Project Budget
January 2017	Issued C1120 Contract Award TPOG
April 2017	Issued C1120 Contract NTP to TPOG
May 2017	Mobilized C1120 Contract Design and Construction Team

Description: Purple Line Extension Design-Bui Contractor: Tutor Perini/O&G a Joint Venture	Contract No. C1120 Status as of: July 28, 2017								
Progress / Work Completed:	Major Activities (In Progress):								
<ul> <li>Quality design plan submitted for review and approval</li> <li>Draft geotechnical boring plan submitted for review</li> <li>BIM Implementation Plan submitted</li> <li>Safety plan submitted for review and approval</li> <li>Draft CDRL comments received</li> <li>Sustainability plan submitted for review and approval</li> </ul>	<ul> <li>Prepare 60% Design Package 1 - Utility/Civil Design at Launch Box Century City</li> <li>Prepare 60% Design Package 2 - Remaining Utility Conflicts (Outsic of the Launch Box)</li> <li>Prepare Quality Construction Plan</li> </ul>								
Areas of Concern: - None	<ul> <li>Major Activities Next Period:</li> <li>Discuss draft demolition schedule with COBH for former ACE Gallen Targeting November for building demolition</li> <li>Baseline schedule submission</li> <li>Establish partnering goals, agendas, schedules, and next steps for first partnering session</li> <li>Public outreach meeting for geotechnical borings in COBH</li> <li>Continue final design development</li> <li>Link schedule activities to CDRL list</li> </ul>	у.							
Schedule Summary:	Original Contract Dates Extension Contract Forecast Variand	ce CDs							
Date of Award:01/31/17Notice to Proceed:04/26/17	Notice to Proceed (Estimated)         04/26/17         0         04/26/17         04/26/17	0							
Original Contract Duration:3,100CDCurrent Contract Duration:3,100CD	MS 1 (NTP + 2950): Substantial Completion         05/24/25         0         05/24/25         05/24/25         0	0							
Elapsed Time from NTP: 94 CD	MS 2 (NTP + 2600): Stations Available 06/08/24 0 06/08/24 06/08/24 06/08/24	0							
	MS 3 (NTP + 2700): Ready for Systems 09/16/24 0 09/16/24 09/16/24 09/16/24 09/16/24	0							
	MS 4 (NTP + 3100): Demobilization 10/21/25 0 10/21/25 0	0							
Physical Percent Complete:	Cost Summary:\$ In millions1. Award Value:1,376.5								
Physical completion: 2.55%  * Note: Physical completion assessment reflects	<ol> <li>Executed Modifications: 0.0</li> <li>Approved Change Orders: 0.0</li> <li>Current Contract Value (1+2+3): 1,376.5</li> </ol>								
work completed and work in progress.	4. Current Contract Value (1+2+3).         1,370.3           5. Incurred Cost:         149.8								

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### **CONSTRUCTION PHOTOGRAPHS**



LAWDP Power relocation work in Century City

#### COST AND BUDGET TERMINOLOGY

#### **Project Cost Descriptions**

ORIGINAL BUDGET	The Original Project Budget as authorized by the Metropolitan Transportation Authority (Metro) Board.	
CURRENT BUDGET	The Original Budget plus all budget amendments approved by formal Metro Board action. Also referred to as Approved Budget.	
COMMITMENTS	The total of actual contracts awarded, executed change orders or amendments, and approved work orders of Master Cooperative Agreements, offers accepted for purchase of real estate, and other Metro actions which have been spent or result in the obligation of specific expenditures at a future time.	
EXPENDITURES	The total dollar amount of funds expended by Metro for contractor or consultant services, third party services, staff salaries, real estate and other expenses that is reported in Metro's Financial Information System (FIS).	
CURRENT FORECAST	The best estimate of the final cost of the Project when all checks have been issued and the Project is closed out. Current Forecast is composed of actual costs incurred to date, the best estimate of work remaining and a current risk assessment for each budgeted cost item.	
Cost Report by Element Descriptions		

CONSTRUCTION	Includes construction contracts. Cost associated with Guideways, Stations, Southwestern Yard, Sitework/Special Conditions and Systems.
RIGHT-OF-WAY	Includes purchase cost of parcels, easements, right-of-entry permits, escrow fees, contracted real estate appraisals and tenant relocation.
VEHICLES	Includes the purchase of Heavy Rail Vehicles and spare parts for the Project.
PROFESSIONAL SERVICES	Includes design engineering, project management assistance, construction management support services, legal counsel, agency staff costs, and other specialty consultants.
CONTINGENCY	A fund established at the beginning of a project to provide for anticipated but unknown additional costs that may arise during the course of the Project.
PROJECT REVENUE	Includes all revenue received by Metro as a direct result of project activities. This includes cost sharing construction items, insurance premium rebates, and the like.

#### LIST OF ACRONYMS AND ABBREVIATIONS

		LIST OF ACKONTINIS AND ABBREVIATIONS
	ATC	Automatic Train Control
	ATSAC	Automated Traffic Surveillance and Control
	BAFO	Best and Final Offer
	BIM	Building Information Modeling
	BNSF	Burlington Northern Santa Fe Railway Company
	BRT	Bus Rapid Transit
	CADD	Computer Aided Drafting and Design
	CALTRANS	California Department of Transportation
	CCTV	Closed Circuit Television
	CD	Calendar Day
	CEQA	California Environmental Quality Act
	CM	Construction Manager
	CMAQ	Congestion Mitigation and Air Quality Improvement Program
	CMSSC	Construction Management Support Services Consultant
	CN	Change Notice
	CO	Change Order
	COBH	City of Beverly Hills
	COLA	City of Los Angeles
	CPM	Critical Path Method
	CPUC	California Public Utilities Commission
	CR	Camera Ready
	CRMMP	Cultural Resource Monitoring and Mitigation Plan
	CSPP	Construction Safety Phasing Plan
	CTC	California Transportation Commission
	CUD	Contract Unit Description
	D/B	Design/Build
	DBB	Design Bid Build
	DOT	Department of Transportation
	DWP	Department of Water and Power
	EIR	Environmental Impact Report
	EIS	Environmental Impact Statement
	EMS	Engineering Management Services
	EPBM	Earth Pressure Balance Machine
	FAA	Federal Aviation Administration
	FAR	Federal Acquisition Regulation
	FD	Final Design
	FEIS	Final Environmental Impact Statement
	FEIR	Final Environmental Impact Report
	FIS	Financial Information System
	FLSR	Fire Life Safety Report
	FONSI	Finding of No Significant Impact
	FRA	Federal Railroad Administration
	FSEIR	Final Supplemental Environmental Impact Report
	FSEIS	Final Supplemental Environmental Impact Statement

### LIST OF ACRONYMS AND ABBREVIATIONS (Continued)

FTAFederal Transit AdministrationFTEFull Time EquivalentGBRGeotechnical Baseline ReportGDSRGeotechnical Design Summary ReportHRTHeavy Rail TransitHRVHeavy Rail VehicleIFBInvitation for BidIPMOIntegrated Project Management OfficeJVJoint-VentureLALos AngelesLABOELos Angeles Bureau of EngineeringLABOELos Angeles Bureau of Street LightingLACFCDLos Angeles Bureau of Street LightingLACFCDLos Angeles Department of Transportation AuthorityLADDWLos Angeles Department of Public WorksLADWPLos Angeles Department of Vater and PowerLAUSDLos Angeles International AirportLAXLos Angeles International AirportLAXLos Angeles International AirportLAYLos Angeles International AirportLAYLos Angeles International AirportLAXLos Angeles International AirportLAXLos Angeles Transportation PlanMCAMaster Cooperative AgreementMISMajor Investment StudyMMRPMitigation Monitoring and Reporting PlanMOUMerorandum of UnderstandingMPSRMonthly Project Status ReportN/ANot ApplicableNPESNational Pollution Discharge Elimination SystemNTENotice To ProceedOCCOperational Health and Safety AdministrationPAVMSPublic Address/Visual Messaging SignPEERPreliminary		
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LADPWLos Angeles Department of Public WorksLADWPLos Angeles Department of Water and PowerLAUSDLos Angeles Unified School DistrictLAWALos Angeles Unified School DistrictLAWALos Angeles International AirportsLAXLos Angeles International AirportLNTPLimited Notice To ProceedLONPLetter Of No PrejudiceLOPLife-of-ProjectLPALocally Preferred AlternativeLRTPLong Range Transportation PlanMCAMaster Cooperative AgreementMISMajor Investment StudyMMRPMitigation Monitoring and Reporting PlanMOUMemorandum of UnderstandingMPSRMonthly Project Status ReportN/ANot ApplicableNEPANational Environmental Protection ActNODNotice of DeterminationNPDESNational Pollution Discharge Elimination SystemNTENot to ExceedNTPNotice To ProceedOCCOperations Control CenterOSHAOccupational Health and Safety AdministrationPAVMSPublic Address/Visual Messaging SignPEPreliminary EngineeringPEERPermit Engineering Evaluation ReportPIPProject Implementation Plan	LACMTA	Los Angeles County Metropolitan Transportation Authority
LADWPLos Angeles Department of Water and PowerLAUSDLos Angeles Unified School DistrictLAWALos Angeles World AirportsLAXLos Angeles International AirportLNTPLimited Notice To ProceedLONPLetter Of No PrejudiceLOPLife-of-ProjectLPALocally Preferred AlternativeLRTPLong Range Transportation PlanMCAMaster Cooperative AgreementMISMajor Investment StudyMMRPMitigation Monitoring and Reporting PlanMOUMemorandum of UnderstandingMPSRMonthly Project Status ReportN/ANot ApplicableNEPANational Environmental Protection ActNODNotice of DeterminationNPDESNational Pollution Discharge Elimination SystemNTENot to ExceedNTPNotice To ProceedOCCOperations Control CenterOSHAOccupational Health and Safety AdministrationPA/VMSPublic Address/Visual Messaging SignPEPreliminary EngineeringPEERPermit Engineering Evaluation ReportPIPProject Implementation Plan	LADOT	Los Angeles Department of Transportation
LAUSDLos Angeles Unified School DistrictLAWALos Angeles World AirportsLAXLos Angeles International AirportLNTPLimited Notice To ProceedLONPLetter Of No PrejudiceLOPLife-of-ProjectLPALocally Preferred AlternativeLRTPLong Range Transportation PlanMCAMaster Cooperative AgreementMISMajor Investment StudyMMRPMitigation Monitoring and Reporting PlanMOUMemorandum of UnderstandingMPSRMonthly Project Status ReportN/ANot ApplicableNEPANational Environmental Protection ActNODNotice of DeterminationNPDESNational Environmental Protection ActNTENot to ExceedNTPNotice To ProceedOCCOperations Control CenterOSHAOccupational Health and Safety AdministrationPAVMSPublic Address/Visual Messaging SignPEPreliminary EngineeringPEERPermit Engineering Evaluation ReportPIPProject Implementation Plan	LADPW	Los Angeles Department of Public Works
LAWALos Angeles World AirportsLAXLos Angeles International AirportLNTPLimited Notice To ProceedLONPLetter Of No PrejudiceLOPLife-of-ProjectLPALocally Preferred AlternativeLRTPLong Range Transportation PlanMCAMaster Cooperative AgreementMISMajor Investment StudyMMRPMitigation Monitoring and Reporting PlanMOUMemorandum of UnderstandingMPSRMonthly Project Status ReportN/ANot ApplicableNEPANational Environmental Protection ActNODNotice of DeterminationNTENot to ExceedNTFNotice To ProceedOCCOperations Control CenterOSHAOccupational Health and Safety AdministrationPA/VMSPublic Address/Visual Messaging SignPEPreliminary EngineeringPEERPermit Engineering Evaluation ReportPIPProject Implementation Plan	LADWP	Los Angeles Department of Water and Power
LAXLos Angeles International AirportLNTPLimited Notice To ProceedLONPLetter Of No PrejudiceLOPLife-of-ProjectLPALocally Preferred AlternativeLRTPLong Range Transportation PlanMCAMaster Cooperative AgreementMISMajor Investment StudyMMRPMitigation Monitoring and Reporting PlanMOUMemorandum of UnderstandingMPSRMonthly Project Status ReportN/ANot ApplicableNEPANational Environmental Protection ActNODNotice of DeterminationNTENot to ExceedNTPNotice To ProceedOCCOperations Control CenterOSHAOccupational Health and Safety AdministrationPA/VMSPublic Address/Visual Messaging SignPEPreliminary EngineeringPEERPermit Engineering Evaluation ReportPIPProject Implementation Plan	LAUSD	Los Angeles Unified School District
LNTPLimited Notice To ProceedLONPLetter Of No PrejudiceLOPLife-of-ProjectLPALocally Preferred AlternativeLRTPLong Range Transportation PlanMCAMaster Cooperative AgreementMISMajor Investment StudyMMRPMitigation Monitoring and Reporting PlanMOUMemorandum of UnderstandingMPSRMonthly Project Status ReportN/ANot ApplicableNEPANational Environmental Protection ActNODNotice of DeterminationNPDESNational Pollution Discharge Elimination SystemNTENot to ExceedNTPNotice To ProceedOCCOperations Control CenterOSHAOccupational Health and Safety AdministrationPA/VMSPublic Address/Visual Messaging SignPEPreliminary EngineeringPEERPermit Engineering Evaluation ReportPIPProject Implementation Plan	LAWA	Los Angeles World Airports
LONPLetter Of No PrejudiceLOPLife-of-ProjectLPALocally Preferred AlternativeLRTPLong Range Transportation PlanMCAMaster Cooperative AgreementMISMajor Investment StudyMMRPMitigation Monitoring and Reporting PlanMOUMemorandum of UnderstandingMPSRMonthly Project Status ReportN/ANot ApplicableNEPANational Environmental Protection ActNODNotice of DeterminationNPDESNational Pollution Discharge Elimination SystemNTENot to ExceedNTPNotice To ProceedOCCOperations Control CenterOSHAOccupational Health and Safety AdministrationPA/VMSPublic Address/Visual Messaging SignPEPreliminary EngineeringPEERPermit Engineering Evaluation ReportPIPProject Implementation Plan	LAX	Los Angeles International Airport
LOPLife-of-ProjectLPALocally Preferred AlternativeLRTPLong Range Transportation PlanMCAMaster Cooperative AgreementMISMajor Investment StudyMMRPMitigation Monitoring and Reporting PlanMOUMemorandum of UnderstandingMPSRMonthly Project Status ReportN/ANot ApplicableNEPANational Environmental Protection ActNODNotice of DeterminationNPDESNational Pollution Discharge Elimination SystemNTENot to ExceedNTPNotice To ProceedOCCOperations Control CenterOSHAOccupational Health and Safety AdministrationPA/VMSPublic Address/Visual Messaging SignPEPreliminary EngineeringPEERPermit Engineering Evaluation ReportPIPProject Implementation Plan	LNTP	Limited Notice To Proceed
LPALocally Preferred AlternativeLRTPLong Range Transportation PlanMCAMaster Cooperative AgreementMISMajor Investment StudyMMRPMitigation Monitoring and Reporting PlanMOUMemorandum of UnderstandingMPSRMonthly Project Status ReportN/ANot ApplicableNEPANational Environmental Protection ActNODNotice of DeterminationNPDESNational Pollution Discharge Elimination SystemNTENot to ExceedNTPNotice To ProceedOCCOperations Control CenterOSHAOccupational Health and Safety AdministrationPA/VMSPublic Address/Visual Messaging SignPEPreliminary EngineeringPEERPermit Engineering Evaluation ReportPIPProject Implementation Plan	LONP	Letter Of No Prejudice
LRTPLong Range Transportation PlanMCAMaster Cooperative AgreementMISMajor Investment StudyMMRPMitigation Monitoring and Reporting PlanMOUMemorandum of UnderstandingMPSRMonthly Project Status ReportN/ANot ApplicableNEPANational Environmental Protection ActNODNotice of DeterminationNPDESNational Pollution Discharge Elimination SystemNTENot to ExceedNTPNotice To ProceedOCCOperations Control CenterOSHAOccupational Health and Safety AdministrationPA/VMSPublic Address/Visual Messaging SignPEPreliminary EngineeringPERPermit Engineering Evaluation ReportPIPProject Implementation Plan	LOP	Life-of-Project
MCAMaster Cooperative AgreementMISMajor Investment StudyMMRPMitigation Monitoring and Reporting PlanMOUMemorandum of UnderstandingMPSRMonthly Project Status ReportN/ANot ApplicableNEPANational Environmental Protection ActNODNotice of DeterminationNPDESNational Pollution Discharge Elimination SystemNTENot to ExceedNTPNotice To ProceedOCCOperations Control CenterOSHAOccupational Health and Safety AdministrationPA/VMSPublic Address/Visual Messaging SignPEPreliminary EngineeringPEERPermit Engineering Evaluation ReportPIPProject Implementation Plan	LPA	Locally Preferred Alternative
MISMajor Investment StudyMMRPMitigation Monitoring and Reporting PlanMOUMemorandum of UnderstandingMPSRMonthly Project Status ReportN/ANot ApplicableNEPANational Environmental Protection ActNODNotice of DeterminationNPDESNational Pollution Discharge Elimination SystemNTENot to ExceedNTPNotice To ProceedOCCOperations Control CenterOSHAOccupational Health and Safety AdministrationPA/VMSPublic Address/Visual Messaging SignPEPreliminary EngineeringPEERPermit Engineering Evaluation ReportPIPProject Implementation Plan	LRTP	Long Range Transportation Plan
MMRPMitigation Monitoring and Reporting PlanMOUMemorandum of UnderstandingMPSRMonthly Project Status ReportN/ANot ApplicableNEPANational Environmental Protection ActNODNotice of DeterminationNPDESNational Pollution Discharge Elimination SystemNTENot to ExceedNTPNotice To ProceedOCCOperations Control CenterOSHAOccupational Health and Safety AdministrationPA/VMSPublic Address/Visual Messaging SignPEPreliminary EngineeringPEERPermit Engineering Evaluation ReportPIPProject Implementation Plan	MCA	Master Cooperative Agreement
MOUMemorandum of UnderstandingMPSRMonthly Project Status ReportN/ANot ApplicableNEPANational Environmental Protection ActNODNotice of DeterminationNPDESNational Pollution Discharge Elimination SystemNTENot to ExceedNTPNotice To ProceedOCCOperations Control CenterOSHAOccupational Health and Safety AdministrationPA/VMSPublic Address/Visual Messaging SignPEPreliminary EngineeringPERRPermit Engineering Evaluation ReportPIPProject Implementation Plan	MIS	Major Investment Study
MPSRMonthly Project Status ReportN/ANot ApplicableNEPANational Environmental Protection ActNODNotice of DeterminationNPDESNational Pollution Discharge Elimination SystemNTENot to ExceedNTPNotice To ProceedOCCOperations Control CenterOSHAOccupational Health and Safety AdministrationPA/VMSPublic Address/Visual Messaging SignPEPreliminary EngineeringPERRPermit Engineering Evaluation ReportPIPProject Implementation Plan	MMRP	Mitigation Monitoring and Reporting Plan
N/ANot ApplicableNEPANational Environmental Protection ActNODNotice of DeterminationNPDESNational Pollution Discharge Elimination SystemNTENot to ExceedNTPNotice To ProceedOCCOperations Control CenterOSHAOccupational Health and Safety AdministrationPA/VMSPublic Address/Visual Messaging SignPEPreliminary EngineeringPERPermit Engineering Evaluation ReportPIPProject Implementation Plan	MOU	Memorandum of Understanding
NEPANational Environmental Protection ActNODNotice of DeterminationNPDESNational Pollution Discharge Elimination SystemNTENot to ExceedNTPNotice To ProceedOCCOperations Control CenterOSHAOccupational Health and Safety AdministrationPA/VMSPublic Address/Visual Messaging SignPEPreliminary EngineeringPERPermit Engineering Evaluation ReportPIPProject Implementation Plan	MPSR	Monthly Project Status Report
NODNotice of DeterminationNPDESNational Pollution Discharge Elimination SystemNTENot to ExceedNTPNotice To ProceedOCCOperations Control CenterOSHAOccupational Health and Safety AdministrationPA/VMSPublic Address/Visual Messaging SignPEPreliminary EngineeringPERPermit Engineering Evaluation ReportPIPProject Implementation Plan	N/A	Not Applicable
NPDESNational Pollution Discharge Elimination SystemNTENot to ExceedNTPNotice To ProceedOCCOperations Control CenterOSHAOccupational Health and Safety AdministrationPA/VMSPublic Address/Visual Messaging SignPEPreliminary EngineeringPERPermit Engineering Evaluation ReportPIPProject Implementation Plan	NEPA	National Environmental Protection Act
NTENot to ExceedNTPNotice To ProceedOCCOperations Control CenterOSHAOccupational Health and Safety AdministrationPA/VMSPublic Address/Visual Messaging SignPEPreliminary EngineeringPERPermit Engineering Evaluation ReportPIPProject Implementation Plan	NOD	Notice of Determination
NTPNotice To ProceedOCCOperations Control CenterOSHAOccupational Health and Safety AdministrationPA/VMSPublic Address/Visual Messaging SignPEPreliminary EngineeringPERPermit Engineering Evaluation ReportPIPProject Implementation Plan	NPDES	National Pollution Discharge Elimination System
OCCOperations Control CenterOSHAOccupational Health and Safety AdministrationPA/VMSPublic Address/Visual Messaging SignPEPreliminary EngineeringPEERPermit Engineering Evaluation ReportPIPProject Implementation Plan	NTE	Not to Exceed
OSHAOccupational Health and Safety AdministrationPA/VMSPublic Address/Visual Messaging SignPEPreliminary EngineeringPERPermit Engineering Evaluation ReportPIPProject Implementation Plan	NTP	Notice To Proceed
PA/VMSPublic Address/Visual Messaging SignPEPreliminary EngineeringPEERPermit Engineering Evaluation ReportPIPProject Implementation Plan	OCC	Operations Control Center
PEPreliminary EngineeringPEERPermit Engineering Evaluation ReportPIPProject Implementation Plan	OSHA	Occupational Health and Safety Administration
PEER Permit Engineering Evaluation Report PIP Project Implementation Plan	PA/VMS	Public Address/Visual Messaging Sign
PIP Project Implementation Plan	PE	Preliminary Engineering
PIP Project Implementation Plan	PEER	Permit Engineering Evaluation Report
	PIP	
	PLA	• •

### LIST OF ACRONYMS AND ABBREVIATIONS (Continued)

	ACKONTING AND ABBREVIATIONS (CONT
PM	Project Manager
PMIP	Project Management Implementation Plan
PMOC	Project Management Oversight Consultant
PMP	Project Management Plan
P&P	Policies & Procedures
PR	Project Report
PRMMP	Paleontological Resource Monitoring Mitigation Plan
PSR	Project Study Report
QA	Quality Assurance
QAR	Quality Assurance Report
QC	Quality Control
QPSR	Quarterly Project Status Report
QTIB	Qualified Transit Improvement Bonds
RAMP	Real Estate Acquisition Management Plan
RCHAR	Rail Crossing Hazards Analysis Report
RCMP	Risk Assessment Management Plan
RFC	Request For Change
RFP	Request For Proposals
RFSC	Request for Special Consideration
RHA	Risk Hazard Analysis
ROC	Rail Operations Center
ROD	Record Of Decision
ROM	Rough Order of Magnitude
ROW	Right-Of-Way
RPZ	Runway Protection Zone
RSD	Revenue Service Date
SAV	Stand Alone Validator
SCAQMD	Southern California Air Quality Management District
SCADA	Supervisory Control and Data Acquisition
SCC	Standard Cost Category
SCE	Southern California Edison
SCG	Southern California Gas Company
SCRRA	Southern California Regional Rail Authority
SHA	State Highway Account
SHPO	State Historic Preservation Office
SIT	System Integration Testing
SOQ	Statement of Qualification
SOV	Schedule Of Value
SOW	Statement Of Work
SP	Special Provision
SSMP	Safety and Security Management Plan
STB	Surface Transportation Board
STIP	State Transportation Improvement Program
STP	Surface Transportation Program

### LIST OF ACRONYMS AND ABBREVIATIONS (Continued)

STV	STV Group
SWPPP	Storm Water Pollution Prevention Plan
TBD	To Be Determined
ТВМ	Tunnel Boring Machine
TCE	Temporary Construction Easement
TCRP	Traffic Congestion Relief Program
TIFIA	Transportation Infrastructure Finance and Innovation Act
TIGER	Transportation Investment Generating Economic Recovery
TPOG	Tutor Perini/O&G a Joint Venture
TPSS	Traction Power Substation
TRACS	Transit Automatic Control System
TVA	Threat Vulnerability Analysis
TVM	Ticket Vending Machine
UFS	Universal Fare System
USDOT	United States Department Of Transportation
VE	Value Engineering
WBS	Work Breakdown Structure
WP	Work Package
YOE	Year of Expenditure