Los Angeles County
Metropolitan Transportation Authority

Westside Purple Line Extension

Section 1 Project

QUARTERLY PROJECT STATUS REPORT
DECEMBER 2014

Metro®

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WESTSIDE PURPLE LINE EXTENSION SECTION 1 PROJECT

QUARTERLY 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).

DECEMBER 2014

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PROJECT SUMMARY

LOCATION: Los Angeles / Beverly Hills
DESIGN CONSULTANT: Parsons / Brinckerhoff

CONSTRUCTION MANAGEMENT CONSULTANT: WEST, a Joint Venture
CONTRACTOR: Skanska, Traylor and Shea, a Joint Venture

PRESSURE TEST FOR 6" WATERLINE WILSHIRE/ORANGE

WORK COMPLETED PAST MONTH

- Continuing real estate acquisitions
- C1055 Fairfax AUR ductbank Segments 11, 1, 34, 14, vault 702, 6111 complete
- C1055 Fairfax AUR Water Line relocation complete Orange & Wilshire

EXPENDITURE STATUS
($ In Millions)

ACTIVITIES	CURRENT BUDGET	EXPENDED AMOUNT	PERCENT EXPENDED
DESIGN	$157.7	$61.3	38.9%
RIGHT-OF-WAY	$175.6	$62.0	35.3%
CONSTRUCTION	$1,737.4	$23.5	1.4%
OTHER	$1,078.7	$72.4	6.7%
TOTAL	$3,149.4	$219.2	7.0%

Current Budget includes Environmental/Planning and Finance Costs.

AREAS OF CONCERN

SCHEDULE ASSESSMENT

MAJOR SCHEDULE ACTIVITIES	PRIOR PLAN	CURRENT PLAN	VARIANCE WEEKS
Environmental			
FEIS / FEIR	N/A	05/31/12	Complete
Design			
PE Notice to Proceed	N/A	01/12/11	Complete
Final Design complete	03/22/17	03/22/17	0
Right-of-Way			
All parcels available	12/31/15	12/31/15	0
Construction - Main Design / Build Contract			
Notice to Proceed	01/12/15	01/12/15	0
Construction complete	11/08/23	11/08/23	0

ROW ACQUISITION	PLAN	ACQUIRED	REMAINING
PERMANENT PARCELS	17	1	16
TEMPORARY PARCELS	1	1	1
TOTAL PARCELS	18	2	17

CRITICAL ACTIVITIES / 3 MONTH LOOK AHEAD

- C1034 Exploratory Shaft closeout complete
- C1048 AUR closeout complete
- C1045 Design/Build: Issue Notice to Proceed (NTP)
- C1055 Fairfax AUR: Construction of water & power, MS #1 to complete
- C1055 Wilshire East of Fairfax Power
- C1056 La Cienega AUR: Issue NTP

PROJECT OVERVIEW & STATUS

Section 1 of the Westside Purple Line Extension Project is the first 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 1 will extend the existing Purple Line by 3.92 miles beginning at the Wilshire/Western Station. From this station, the twin tunnel alignment will travel westerly within the existing Wilshire Boulevard right-of-way. Stations will be located at the intersections of Wilshire/La Brea, Wilshire/Fairfax, and Wilshire/La Cienega. All three of the station boxes will be located within the Wilshire Boulevard right-of-way with station portals extending to off-street entrances. Two of the stations, Wilshire/La Brea and Wilshire/Fairfax are within the jurisdiction of the City of Los Angeles. The Wilshire/La Cienega Station is within the City of Beverly Hills jurisdiction.

Design

The design team completed the final reports for the Wilshire/Fairfax Exploratory Shaft and continued to provide design support to the three Advanced Utility Relocation (AUR) contracts.

For the Wilshire/Fairfax Exploratory Shaft Contract (C1034), the team completed and submitted the Final Field Observations Summary Report, Predictions and Back Analysis Report, record drawings and specifications, and the final monthly progress report.

For the Wilshire/La Brea AUR Contract (C1048), the team continues to receive red line drawings from the contractor. The information from these drawings is being incorporated into the Tunnels, Stations, Trackwork, Systems and Systems Integration Testing Contract (C1045) composite utility drawings.

For the Wilshire/Fairfax AUR Contract (C1055), the team continues to support Metro in responding to Request for Information (RFI's) and submittals. The team continues to review potholing data from the contractor.

For the Wilshire/La Cienega Station AUR Contract (C1056), the team is supporting Metro with traffic control requests for additional potholing being undertaken by the third party contractors. The team is also providing support in discussions with the City of Los Angeles Department of Transportation where the traffic control plans extends beyond the City of Beverly Hills jurisdiction at San Vicente Boulevard.

The team continues to provide support to Metro in the coordination with various third parties involved in the Division 20 Maintenance-of-Way (MOW) and the Non-Revenue Vehicle (NRV) Building 61S Contract (C1078). The engineer's estimate has been prepared and is being reviewed.

Major Contract Procurement

The recommendation to award the C1045 contract was presented at the July 2014 Metro Board Meeting. The Board of Directors approved staff's recommendation to award to Skanska, Traylor and Shea, a joint venture (STS) and authorized the Chief Executive Officer (CEO) to award the 107 month firm fixed price contract, subject to the resolution of any timely protests. Two protests were received on July 22, 2014. Responses to the protests were issued on September 4, 2014. The two protesters issued appeals on September 16, 2014. The two appeals were denied on November 4, 2014 and the contract was awarded the same day. The contract Notice to Proceed (NTP) is planned for January 12, 2015.

The Wilshire/La Cienega AUR Contract (C1056) was advertised for bid on February 28, 2014. Price bids were received on May 21, 2014. The Notice of Intent to Award was issued on September 26, 2014. Contract award was issued to Steve Bubalo Construction Company on October 13, 2014. The Notice to Proceed (NTP) is planned for January 12, 2015.

The Division 20 Maintenance-of-Way (MOW) and the Non-Revenue Vehicle (NRV) Building 61S Contract (C1078) Invitation for Bid (IFB) was issued on September 19, 2014. Amendment 1 was issued on October 31, 2014, which extended the due date for bids from December 5, 2014 to January 16, 2015. A second amendment was issued on December 12, 2014, which extended the due date for bids from January 16, 2015 to February 6, 2015.

PROJECT OVERVIEW & STATUS (Continued)

Construction

The Wilshire/Fairfax Exploratory Shaft (C1034) is in the final closeout phase.

The Wilshire/La Brea AUR Contractor (C1048) achieved substantial completion on October 27, 2014. Work performed in the same area by AT&T is expected to be completed in March 2015. LADWP power and Southern California Gas work is anticipated to be completed in January 2015. This will complete all AUR work at this location.

The Wilshire/Fairfax AUR (C1055) contractor is continuing with submittals and water and power relocations, and is on schedule to complete in October 2015.

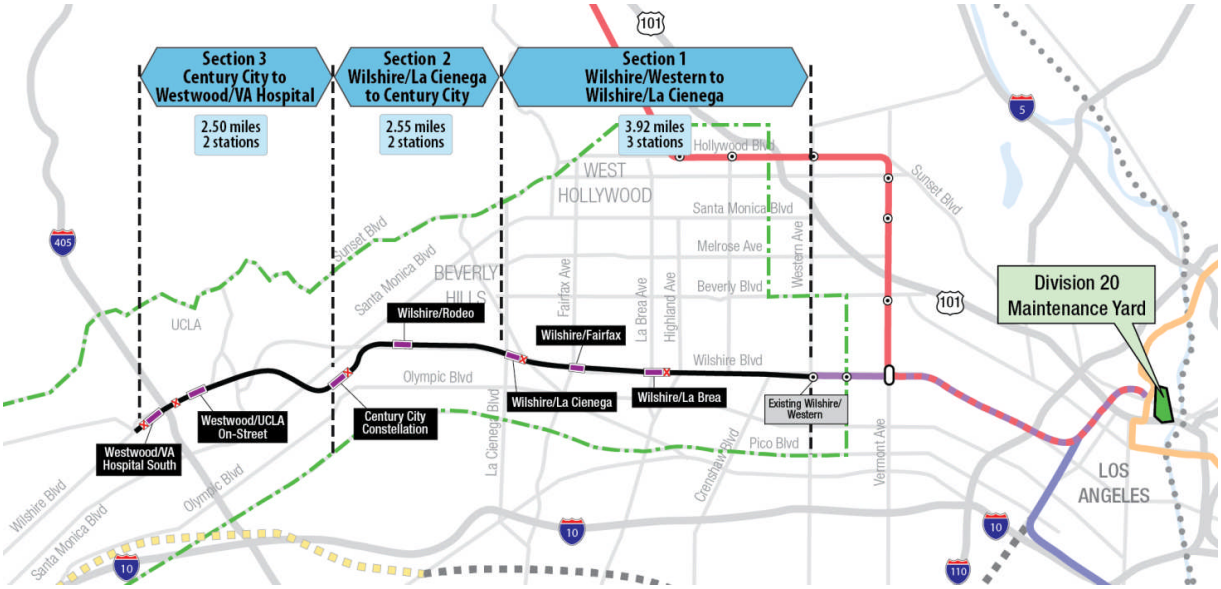
Cable Engineering Services (CES) is continuing fiber relocations at the Wilshire/Fairfax Station.

Property abatement and remediation work is continuing prior to providing site access to the C1045 contractor.

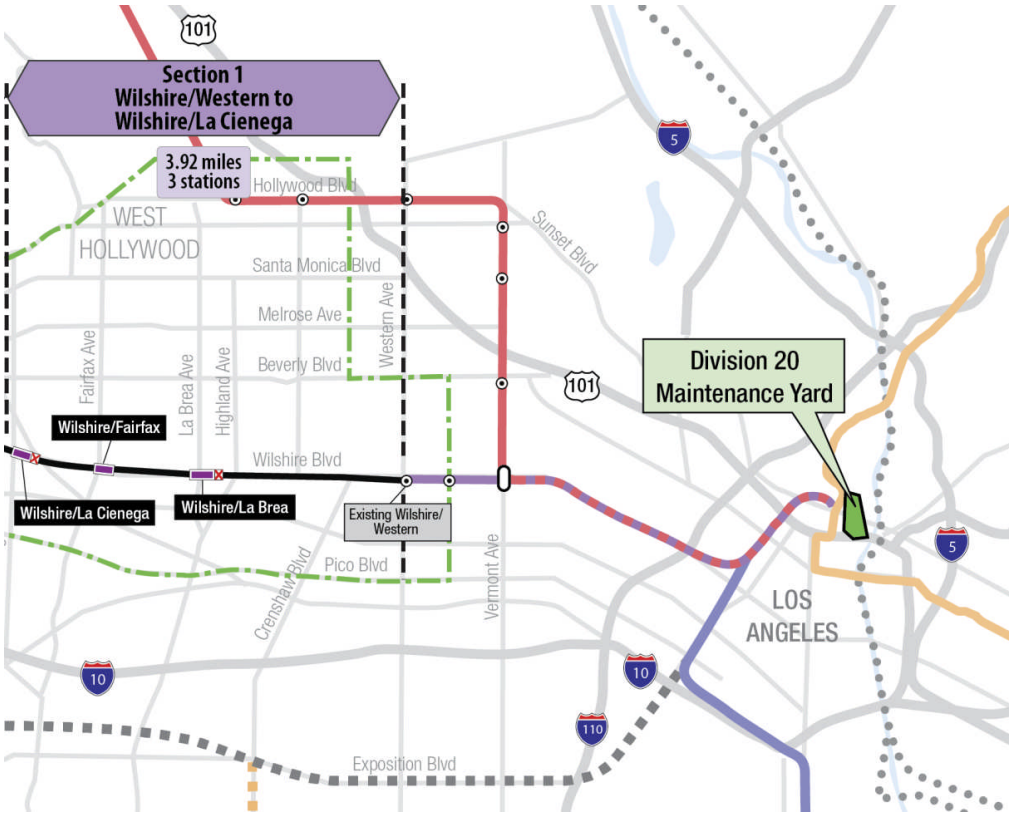
MANAGEMENT ISSUES

No Management Issues this period.

PROJECT ALIGNMENT by SECTIONS



PROJECT ALIGNMENT SECTION 1



BASE PROJECT SCOPE

Section 1 of the Westside Purple Line Extension Project is the first 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 1 will extend the existing Purple Line by 3.92 miles beginning at the Wilshire/Western Station. From this station, the twin tunnel alignment will travel westerly within the existing Wilshire Boulevard right-of-way. Stations will be located at the intersections of Wilshire/La Brea, Wilshire/Fairfax, and Wilshire/La Cienega. All three of the station boxes will be located within the Wilshire Boulevard right-of-way with station portals extending to off-street entrances. Two of the stations, Wilshire/La Brea and Wilshire/Fairfax are within the jurisdiction of the City of Los Angeles. The Wilshire/La Cienega Station is within the City of Beverly Hills jurisdiction.

The Wilshire/La Brea Station box will be located under the center of Wilshire Boulevard in between Detroit Street and Orange Drive. A double crossover will be located east of the station box. The station entrance will be on the northwest corner of Wilshire Boulevard and La Brea Avenue.

The Wilshire/Fairfax Station box will be located under the center of Wilshire Boulevard west of Fairfax Avenue to west of Ogden Drive. The station entrance will be on the southeast corner of Wilshire Boulevard and Orange Grove Avenue.

The Wilshire/La Cienega Station box will be located under the center of Wilshire Boulevard immediately east of La Cienega Boulevard. A double crossover will be located east of the station box. The station entrance will be on the northeast corner of Wilshire Boulevard and La Cienega Boulevard. Since the station will be the terminus station for Section 1, tail tracks will be located west of the station box.

Contract C1034 – Wilshire/Fairfax Exploratory Shaft

Metro is constructing an exploratory shaft to observe ground conditions prior to the award of Contract C1045. The location of the exploratory shaft is adjacent to the future Wilshire/Fairfax Station. The construction of the shaft includes furnishing and installing monitoring instruments, ventilation, and record and report instrumentation data during the excavation of the shaft. After construction of the shaft, the shaft will be maintained for an observation time period. Afterwards, the shaft will be dismantled and the site backfilled in a condition acceptable to the property owner.

Contract C1048 – Wilshire/La Brea Advanced Utility Relocations

Relocate existing LADWP power, water utilities and a sewer line within the construction limits of the Wilshire/La Brea Station. The contractor is responsible for working in streets, procure materials, and coordinate with the utility owner. The contractor is to construct the new facilities

BASE PROJECT SCOPE (Continued)

in accordance with utility plans and specifications, provide traffic control, restore streets, and support utility crews installing cabling and during cut-over of the existing utilities.

Contract C1055 – Wilshire/Fairfax Advanced Utility Relocations
Relocate existing LADWP power and water utilities within the construction limits of the Wilshire/Fairfax Station. The contractor is responsible for working in streets, procure materials, and coordinate with the utility owner. The contractor is to construct the new facilities in accordance with utility plans and specifications, provide traffic control, restore streets, and support utility crews installing cabling and during cut-over of the existing utilities.

Contract C1056 – Wilshire/La Cienega Advanced Utility Relocations
Relocate existing City of Beverly Hills water, storm drain and sewer utilities within the construction limits of the Wilshire/La Cienega Station. The contractor is responsible for working in streets, procure materials, and coordinate with the utility owner. The contractor is to construct the new facilities in accordance with utility plans and specifications, provide traffic control, restore streets, and support utility crews during cut-over of the existing utilities.

Contract C1045 – Tunnels, Stations, Trackwork, Systems and Systems Integration Testing
The procurement of this contract utilizes 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 3.92 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 finish work. A retrieval shaft will be constructed to the west of the existing Wilshire/Western Station for extraction of the tunnel boring machines. Three underground stations are to be constructed, two with double-crossovers, and the terminus station to include tail tracks. Each station has a single entrance plaza with stairs, escalators and elevators which meet ADA requirements. The scope of work includes all architectural finishes, mechanical, electrical, systems and equipment including train control, traction power, communications, trackwork and the system tie-in to the existing Metro Purple Line, testing and commissioning.

Contract C1078 – Division 20 Maintenance-of-Way and Non-Revenue Vehicle Building 61S
The Design/Build contract provides for final design and construction of a new Maintenance-Of-Way (MOW) stores and Non-Revenue Vehicle (NRV) building at the south end of the existing Division 20 Yard (Location 61S). The displacement of the existing MOW stores building and NRV facility are due to the proposed turn-back facility site in the yard.

BASE PROJECT SCOPE (Continued)

Metro Furnished Equipment

Metro will procure separate contacts to provide the 34 Heavy Rail Vehicles (HRV) and the Universal Fare System (UFS) necessary to operate the extension to the Purple Line. The scope of the HRV contract includes design, manufacturing, testing and delivery of the vehicles. The scope of the UFS contract includes design, fabrication and installation of equipment at the three 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 eventually 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.

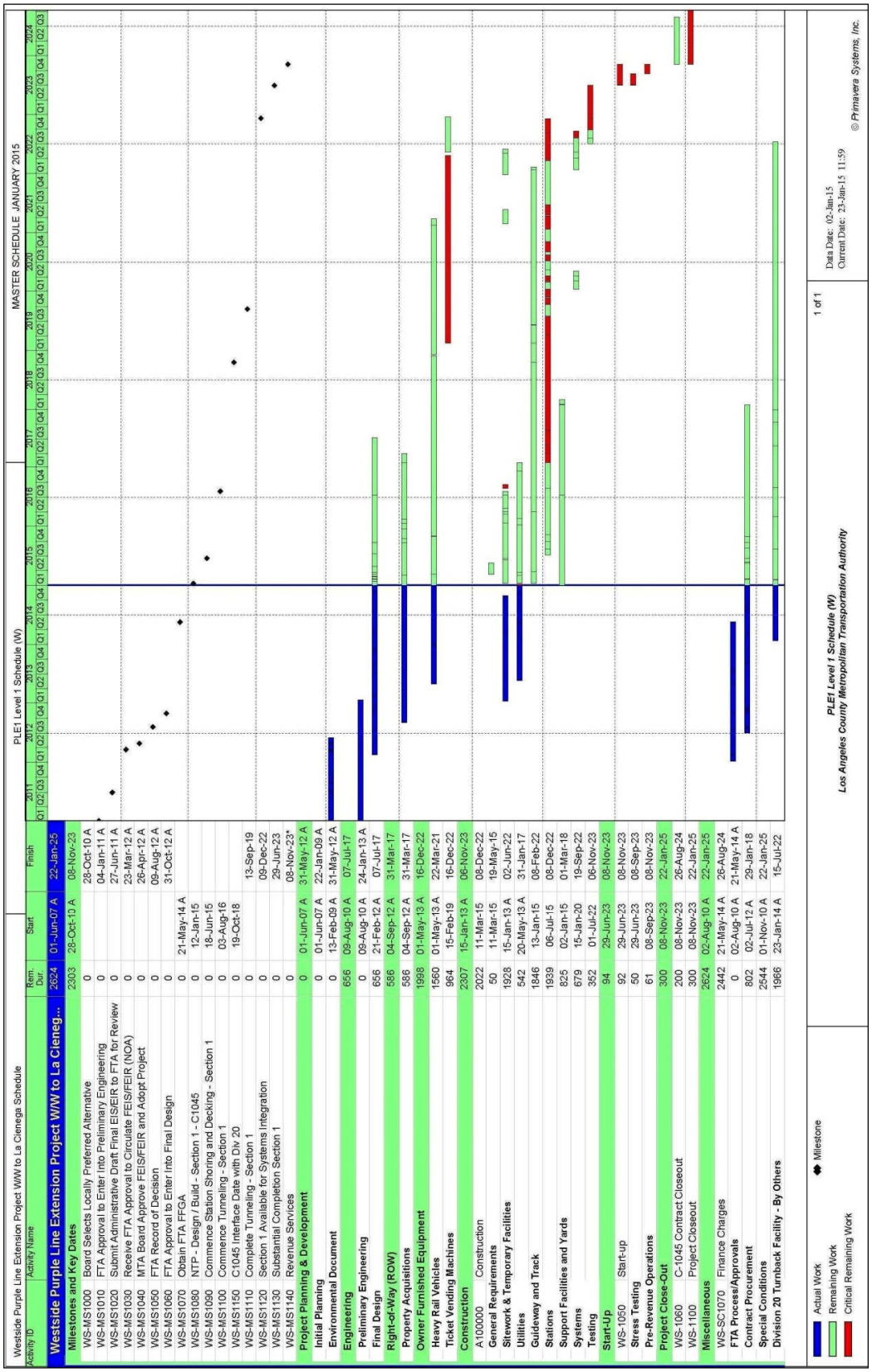
KEY MILESTONES SIX- MONTH LOOK AHEAD

	Milestone Date	Jan-15	Feb-15	Mar-15	Apr-15	May-15	Jun-15
C1034 Exploratory Shaft Contract Closeout Complete	01/30/15	◆					
C1048 La Brea AUR Contract Closeout Complete	01/30/15	◆					
C1056 La Cienega AUR - NTP	01/12/15	◆					
C1045 Design / Build Contract - NTP	01/12/15	◆					
C1055 MS#1 Water @ La Brea Complete	01/30/15	▭					
C1078 Division 21 MOW & NRV Facilities Receive Bids	02/06/15		▭				
C1045 Final Design Begins	02/25/15		▭				
C1045 Design Survey & Mapping	02/25/15		▭				
C1045 TBM Procurement - Issue Purchase Order	03/02/15			▭			
C1045 Begin Geotech Investigations	03/16/15			▭			
C1056 Begin Advanced Utility Relocations	03/23/15			▭			
C1045 Begin Pothole Investigations at La Brea	04/10/15				▭		
C1045 LADWP Power Drop at La Brea	04/15/15				▭		
C1045 Utility Work Begins La Brea	06/01/15						▭

◆ MTA Staff Ⓜ MTA Board Action **FTA** (Federal Transit Administration)

△ Other Agencies ▭ Contractors ⬭ PB

PROJECT SUMMARY SCHEDULE



SCHEDULE MEASUREMENTS

To be provided when the baseline schedule for Contract C1045 has been approved.

OVERALL CONSTRUCTION PROGRESS CURVE

To be provided when the baseline schedule for Contract C1045 has been approved.

MAJOR EQUIPMENT DELIVERY

To be provided when the baseline schedule for Contract C1045 has been approved.

DESIGN BUILDER'S (C1045) LONG LEAD ITEM LIST

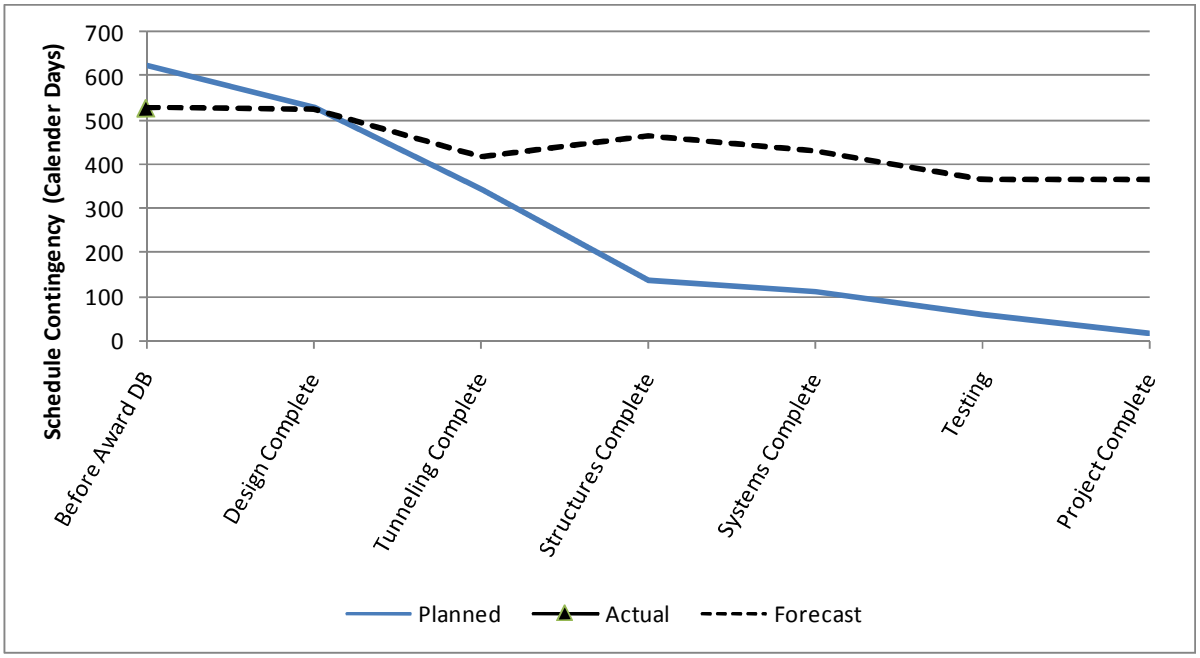
To be provided when the baseline schedule for Contract C1045 has been approved.

CRITICAL PATH NARRATIVE

Critical Path:

The critical path for the Westside Purple Line Extension Project begins with the procurement process for the C1045 Design / Build contract, mobilization of the design team for the selected contractor, and the start of final design for station boxes and tunnels. Final design is concurrent with the La Brea advanced utilities that are being relocated under the C1048 contract and by third parties. Upon completion of utility relocations, the contractor begins installation of soldier piles, first on the north side of the La Brea station box, and then on the south side. Street decking is then installed, the station structural box is excavated, and invert concrete is placed. Tunneling then begins, first driving eastbound from Wilshire / La Brea to Wilshire / Western. TBMs are removed though a retrieval shaft at Wilshire / Western, re-assembled at Wilshire / La Brea, and then driven westbound to Wilshire / La Cienega. Following construction of cross passages, the critical path continues through construction of the Wilshire / Fairfax station box, installation of trackwork and traction power, 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 a November 8, 2023 Revenue Service Date (RSD).

PROJECT COST STATUS

COST REPORT
DOLLARS IN THOUSANDS

SCC CODE	DESCRIPTION	ORIGINAL BUDGET	CURRENT BUDGET		COMMITMENTS		EXPENDITURES		CURRENT FORECAST		CURRENT BUDGET / FORECAST VARIANCE
			PERIOD	TO DATE	PERIOD	TO DATE	PERIOD	TO DATE	PERIOD	TO DATE	
10	GUIDEWAY & TRACK ELEMENTS	388,294	-	388,294	-	380,680	-	-	-	388,294	-
20	STATIONS, STOPS, TERMINALS, INTERMODAL	440,621	-	440,621	-	431,981	-	-	-	440,621	-
30	SUPPORT FACILITIES: YARDS, SHOPS, ADMIN. BLDGS	43,323	-	43,323	-	-	-	-	-	43,323	-
40	SITEWORK & SPECIAL CONDITIONS	751,566	-	751,566	(183)	728,326	2,419	23,512	(492)	754,326	2,760
50	SYSTEMS	113,574	-	113,574	-	97,466	-	-	-	113,574	-
	CONSTRUCTION SUBTOTAL (10-50)	**1,737,378**	**-**	**1,737,378**	**(183)**	**1,638,453**	**2,419**	**23,512**	**(492)**	**1,740,138**	**2,760**
60	ROW, LAND, EXISTING IMPROVEMENTS	175,634	-	175,634	-	175,634	316	61,896	-	175,634	-
70	VEHICLES	160,196	-	160,196	-	-	-	-	-	160,196	-
80	PROFESSIONAL SERVICES	412,710	-	412,710	-	199,228	841	94,552	-	412,710	-
	SUBTOTAL (10-80)	**2,485,918**	**-**	**2,485,918**	**(183)**	**2,013,315**	**3,576**	**179,960**	**(492)**	**2,488,678**	**2,760**
90	UNALLOCATED CONTINGENCY	248,592	-	248,592	-	-	-	-	492	245,832	(2,760)
100	FINANCE CHARGES	375,470	-	375,470	-	-	-	-	-	375,470	-
	TOTAL PROJECTS 465518 & 865518 (10-100)	**3,109,980**	**-**	**3,109,980**	**(183)**	**2,013,315**	**3,576**	**179,960**	**-**	**3,109,980**	**-**
	ENVIRONMENTAL/PLANNING - 405518	8,505	-	8,505	-	8,505	-	8,505	-	8,505	-
	ENVIRONMENTAL/PLANNING - 465518	30,865	-	30,865	-	30,865	3	30,707	-	30,865	-
	TOTAL PROJECTS 405518 & 465518 (ENV / PLAN'G)	**39,370**	**-**	**39,370**	**-**	**39,370**	**3**	**39,212**	**-**	**39,370**	**-**
	TOTAL PROJECTS 405518, 465518 & 865518	**3,149,350**	**-**	**3,149,350**	**(183)**	**2,052,685**	**3,579**	**219,172**	**-**	**3,149,350**	**-**

NOTE: EXPENDITURES ARE CUMULATIVE THROUGH NOVEMBER 2014

PROJECT COST ANALYSIS

Original Budget and Current Budget

The Original Budget and Current Budget of $3.1 billion reflect the Board approved Life of Project Budget, July 24, 2014, plus Finance Charges of $0.4 billion.

Current Forecast

The Current Forecast remains within the Board approved budget of $3.1 billion. However, the Sitework & Special Conditions was decreased by $0.5 million due to the closeout of contract C1034-Wilshire/Fairfax Exploratory Shaft.

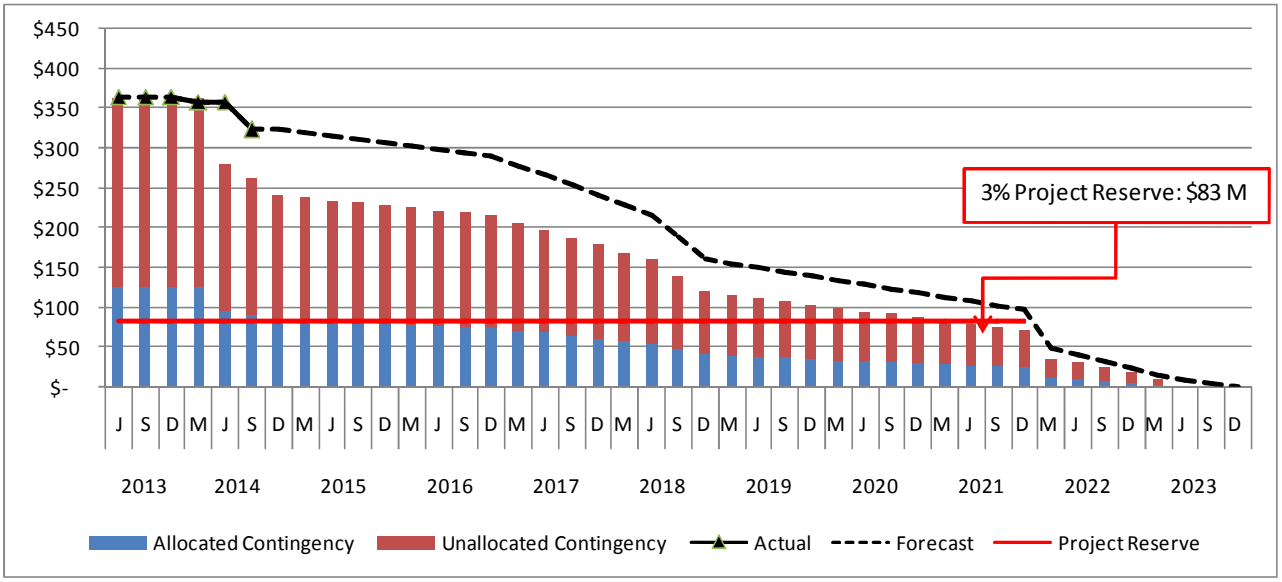
Commitments

The Commitments decreased by $0.2 million due to the closeout of contract C1034-Wilshire/Fairfax Exploratory Shaft. The $2.1 billion in Commitments to date represents 65.2% of the Current Budget.

Expenditures

The expenditures are cumulative through November 2014. The expenditures increased by $3.6 million this period primarily for costs associated Advanced Utility Relocations, Environmental Mitigation, Real Estate Acquisitions, Legal Services, and Metro Project Administration. The $219.2 million in Expenditures to date represents 7.0% of the Current Budget.

PROJECT COST CONTINGENCY DRAWDOWN



PROJECT COST CONTINGENCY DRAWDOWN ANALYSIS

The current budget of $2.8 billion, excluding finance charges, for the project includes an unallocated contingency amount of $248.6 million. Also included within the current budget is an allocated contingency of $75.0 million which is allocated, where applicable, to specific contracts within each Standard Cost Category (SCC) item. The allocated contingency is an amount to cover anticipated but unknown contract modifications issued by Metro. The total project cost contingency is $323.6 million or 11.7% of total project cost.

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

The project cost contingency drawdown curve is based on a November 8, 2023 Revenue Service Date.

DISADVANTAGED BUSINESS ENTERPRISE (DBE)

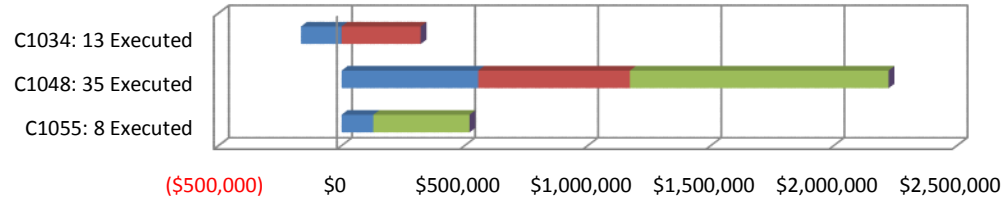
To be provided when the baseline schedule for Contract C1045 has been approved.

PROJECT LABOR AGREEMENTS (PLA) STATUS

To be provided when the baseline schedule for Contract C1045 has been approved.

SUMMARY OF CONTRACT MODIFICATIONS

Contract Modifications (MODs) by Cost Level



	C1034: 13 Executed	C1048: 35 Executed	C1055: 8 Executed	**Total**
Under $100K	(164,288)	554,831	129,091	**519,634**
$100K to $250K	321,000	616,809	-	**937,809**
$250K to $1M	-	1,050,980	390,709	**1,441,689**
Over $1M	-	-	-	**-**
Total Contract MODs	**156,712**	**2,222,620**	**519,800**	**2,899,132**
Contract Award Amount	**6,487,020**	**6,181,000**	**14,430,000**	**27,098,020**
% of Contract MODs	**2.4%**	**36.0%**	**3.6%**	**10.7%**

Percent of Contract MODs equals the Total Contract MODs divided by the Contract Award Amount.

Thirteen Contract MODs with a total value of $0.2 million have been executed since the award of Contract C1034 – Exploratory Shaft Construction by Innovative Construction Solutions (ICS).

Thirty-five Contract MODs with a total value of $2.2 million have been executed since the award of Contract C1048 – Advanced Utility Relocations at Wilshire/La Brea by Metro Builders & Engineering Group, LTD.

Eight Contract MODs with a total value of $0.5 million have been executed since the award of Contract C1055 - Advanced Utility Relocations at Wilshire/Fairfax by W. A. Rasic Construction Company, Inc.

FINANCIAL/GRANT STATUS

DECEMBER 2014 **STATUS OF FUNDS BY SOURCE**

SOURCE	(A) ORIGINAL BUDGET	(B) TOTAL FUNDS ANTICIPATED	(C) TOTAL FUNDS AVAILABLE	(D) COMMITMENTS $	(D/B) COMMITMENTS %	(E) EXPENDITURES $	(E/B) EXPENDITURES %	(F) BILLED TO FUNDING SOURCE $	(F/B) BILLED TO FUNDING SOURCE %
FEDERAL - SECTION 5309 NEW STARTS	$1,250.000	$1,250.000	$65.000	$1,250.000	100%	$65.000	5%	$65.000	5%
FEDERAL CMAQ	$12.171	$12.171	$0.000	$0.000	0%	$0.000	0%	$0.000	0%
FEDERAL SECTION 5339 - ALTERNATIVES ANALYSIS	$0.512	$0.512	$0.512	$0.512	100%	$0.512	100%	$0.512	100%
MEASURE R - TIFIA LOAN	$856.000	$856.000	$0.000	$0.000	0%	$0.000	0%	$0.000	0%
MEASURE R 35%	$869.178	$869.178	$255.104	$715.957	82%	$96.615	11%	$70.333	8%
STATE STIP RIP	$2.568	$2.568	$2.568	$2.568	100%	$2.568	100%	$2.568	100%
STATE CAPITAL PROJECT LOANS - OTHERS *	$83.648	$83.648	$64.931	$83.648	100%	$50.898	61%	$50.898	61%
CITY OF LOS ANGELES	$75.273	$75.273	$0.000	$0.000	0%	$0.000	0%	$0.000	0%
TOTAL	$3,149.350	$3,149.350	$388.115	$2,052.685	65.2%	$219.172	7.0%	$189.311	6.0%

EXPENDITURES ARE CUMULATIVE THROUGH NOVEMBER 2014
ORIGINAL BUDGET BASED ON JULY 2014 BOARD APPROVED LOP BUDGET

* OTHERS INCLUDE TDA ADMINISTRATION ($4.1M), LTF GENERAL REVENUES ($1.8M),AND LEASE REVENUES ($37.8M)

STATUS OF FUNDS ANTICIPATED

FEDERAL SECTION 5309 NEW STARTS: FTA grant application of $65 million was awarded on June 2, 2014. Funds are available for drawdown.

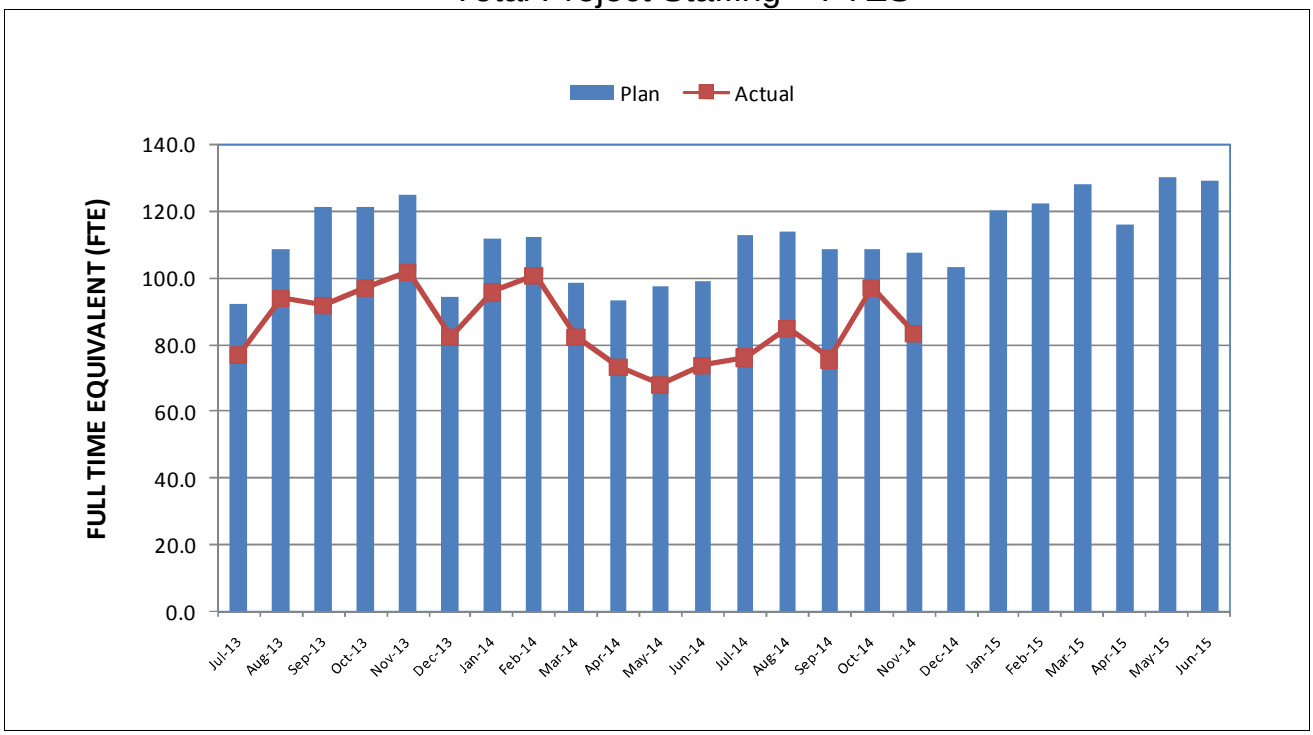
FEDERAL SECTION 5309 ALTERNATIVE ANALYSIS: FTA grant application of $511.6 million was awarded on July 25, 2014. Funds are available for drawdown.

MEASURE R – TIFIA LOAN (Transportation Infrastructure Finance & Innovation Act): TIFIA Loan was executed on May 21, 2014 for $856 million. First disbursement is planned for FY 2018.

STATE STIP RIP: State grant application of $8.4 million, of which $2.6 million has been allocated to this project, was awarded on July 26, 2007. Funds are available for drawdown.

STAFFING STATUS

Total Project Staffing – FTES



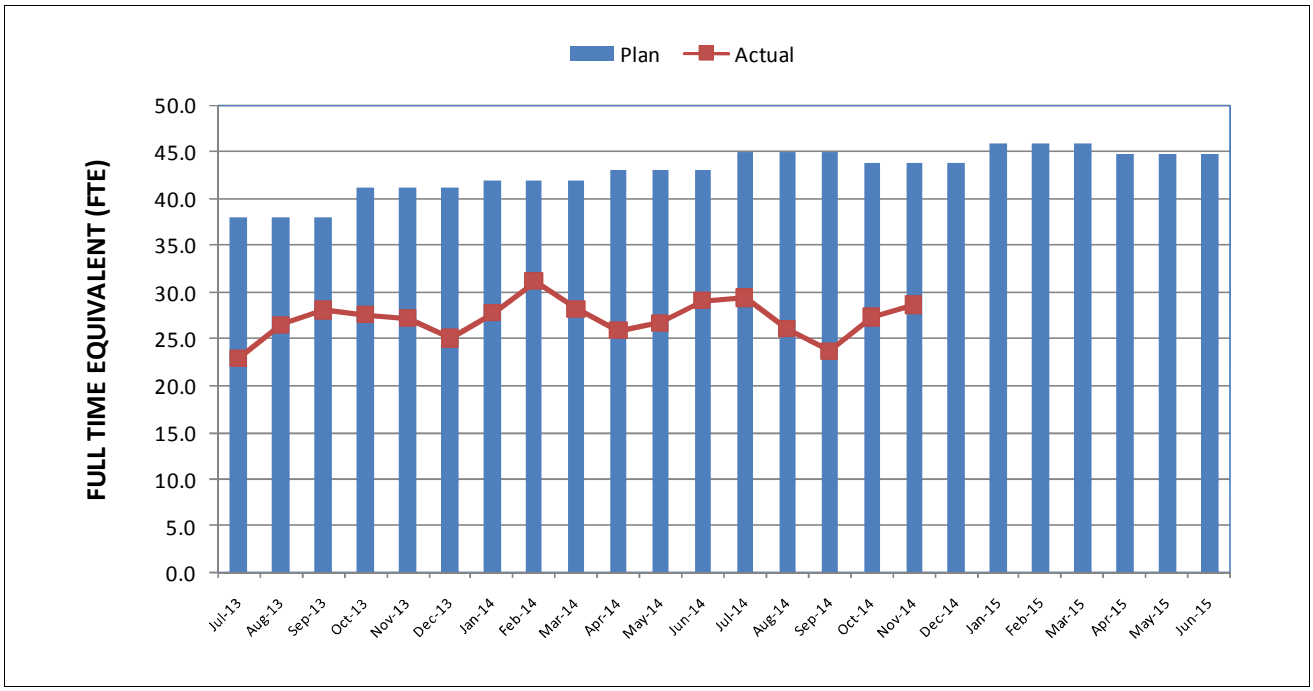
TOTAL PROJECT STAFFING

The overall FY15 Total Project Staffing plan averages 116.5 FTEs per month.

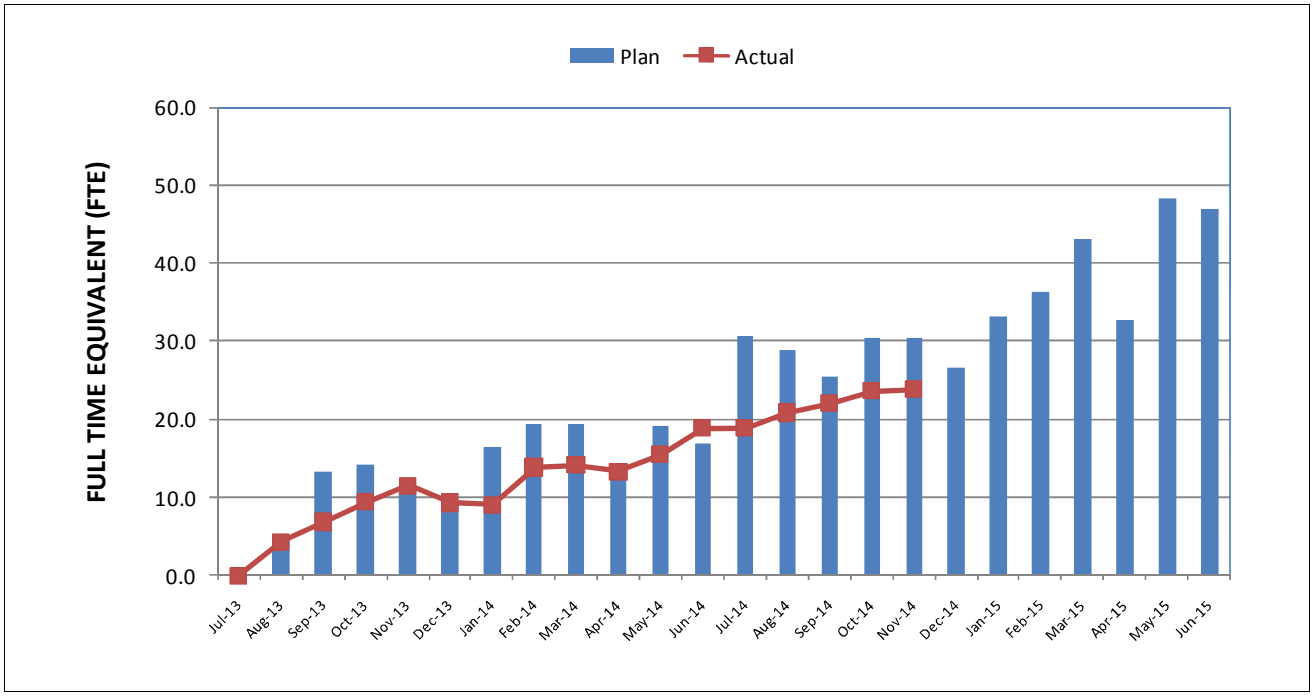
For November 2014, there were a total of 28.6 FTEs for MTA's Project Administration staff and 54.8 FTEs for consulting staff. The total project staffing for November 2014 was 83.4 FTEs.

STAFFING STATUS (Continued)

METRO STAFFING – FTES

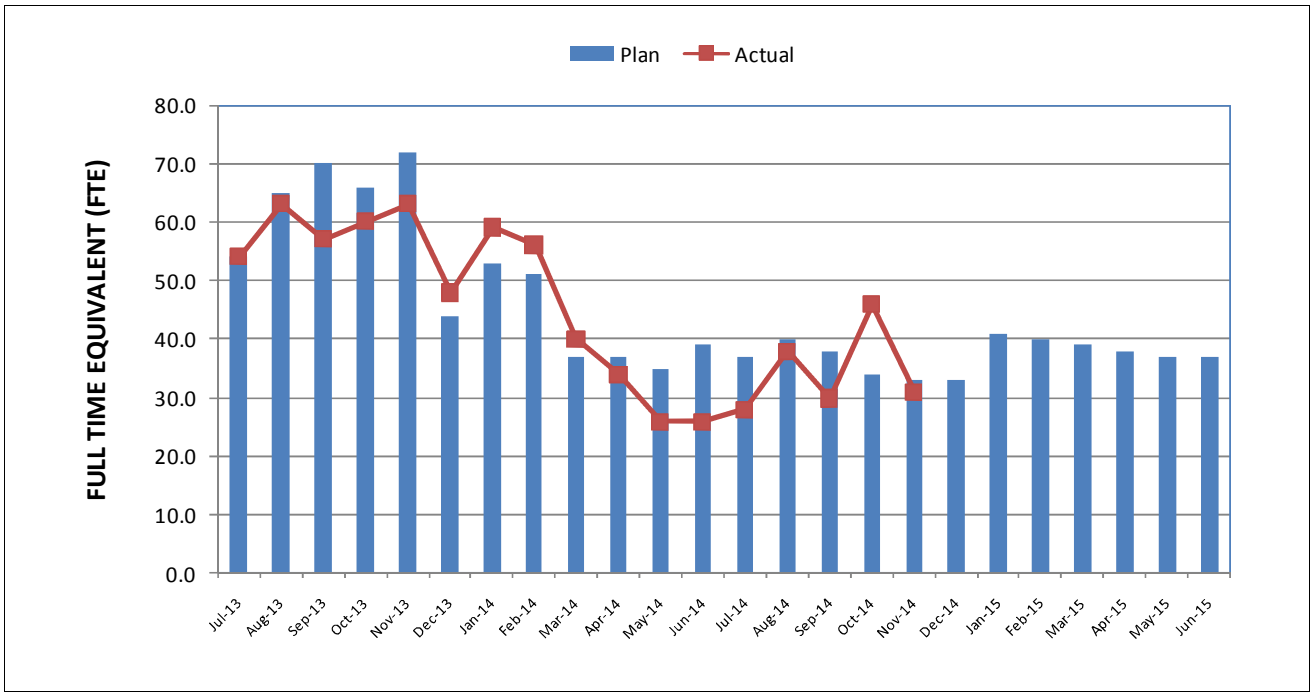


CONSTRUCTION MANAGEMENT SERVICES CONSULTANT – FTES



STAFFING STATUS (Continued)

ENGINEERING MANAGEMENT SERVICES CONSULTANT – FTES



REAL ESTATE STATUS

Purple Line Extension Section 1 - Real Estate Status Summary

Description	Number of Parcels	Certified	Appraisals Completed	Offers Made	Agreements Signed	Condemnation Filed	Relocations		Parcels Available
							Required	Completed	
Full Takes	15	15	15	15	2	13	109	19	1
Part Takes	2	2	2	2	0	2	0	0	1
TCE	1	1	1	1	0	1	0	0	0
Total Parcels	**18**	**18**	**18**	**18**	**2**	**16**	**109**	**19**	**2**

QUALITY ASSURANCE STATUS

C1045 – Tunnels, Stations, Trackwork, Systems and Systems Integration Testing

- Attended bi-weekly Project staff meetings and pre-construction meetings.
- Ongoing discussions with the Project staff to plan for EMSC/CMSC coordination and oversight.

C1048 – Advanced Utility Relocations – Wilshire/La Brea

- Attended weekly Project meetings with the Contractor.
- Coordination with CMSS Inspector. Reviewed daily inspection reports from the Contractor/Field Technician.

C1055 – Advanced Utility Relocations – Wilshire/Fairfax

- Attended-weekly Project meetings with the Contractor.
- Reviewed and provided comments on quality related submittals.
- Coordination with CMSS Inspector. Reviewed daily inspection reports from the Contractor/Field Technician.

ENVIRONMENTAL STATUS

- Noise and Volatile Organic Compounds (VOC) monitoring in support of AUR Contracts and basic oversight on SWPPP requirements.
- Continued review of Wilshire/Fairfax submittals. Continued to finalize the Baseline Ambient Noise Report and adding 13 additional sensitive receptor locations. Working on supplemental ambient noise report for six locations including the Saban Theater. An additional seven locations are being proposed pending City of Beverly Hills approval of survey methods.
- Attended weekly progress meetings for Wilshire/Fairfax and Wilshire/La Brea AUR contracts.
- Held meeting with the City of Beverly Hills to introduce the independent compliance monitor (ICM) per CBH MOA.
- Submitted Tree Removal Plan and Mitigation Plan for Wilshire/Fairfax, Wilshire/La Brea and Wilshire/Western locations. Plan was prepared by a qualified Registered Arborist. Planning nesting surveys in May 2015 for trees that are planned to be removed.
- Seventh Quarter MMRP in progress and planning to submit to FTA in January 2015.
- Working on DTSC requirements regarding clearance of 590 S. Santa Fe (LOC 61S) Purple Line Extension Yard.
- Working on 675 Crenshaw demolition. Hazardous material abatement completed. City gas line requires disconnect prior to demolition.

CONSTRUCTION RELATIONS STATUS

- Attended the following meetings: Pre-Construction, Construction Management, Advanced Utility Relocations, Construction Relations, Environmental Mitigations, Traffic Mitigation with COLA/COBH, sound wall and station art program, and emergency preparedness.
- Produced and distributed 10 construction work notices for advance utility relocations.
- Gave Project Presentations to Wilshire Median Advisory Group and President, and the Board of Public Works on tree removal, replacement and landscaping.
- Visited and updated businesses and residences at future station locations to discuss utility relocations, business profiles and project area discounts.
- Fielded and addressed early water shutdown on Orange and Wilshire/Crenshaw Yard, Lorraine Avenue parking signage.
- Updated Facebook/Twitter website as needed.

CREATIVE SERVICES STATUS

- Continue to support mitigation efforts.
- Participated in Systemwide Design Workshops and document reviews.

SAFETY & SECURITY STATUS

- There were no recordable injuries on the Project during December 2014.
- Safety staff participated in scheduled readiness review meetings to ensure compliance with approved Work Plans and contract specifications.
- Construction activities (Advance Utility Relocations and Exploratory Shaft Punch List) continue to be monitored during both day and night work shifts to ensure contractor compliance with contract specifications.
- Safety staff attended weekly progress meetings and other project meetings to evaluate Contractors Safety Program compliance with contract requirements.
- Construction Safety staff continue to work with Program Management and Construction Relations staff to monitor issues related to public concerns regarding noise, traffic and transient encampment hazards as well as public interactions with the construction crews.
- Work Hour and Injury statistics are reported with a one month lag. Contract C1048 failed to submit November hours report in time for this report. They will be included in a future report.
- November Contractor Work Hours (Design & Construction): 4,691
- Contractor – Project to Date Work Hours (Design & Construction through 11/30/2014): 85,570
- Total Project to Date Work Hours (Contractor & the IPO Staff through 11/30/2014): 170,121
- Project to Date Recordable Injury Rate: 0.0 (Zero Recordable Injuries). Each rate is per 200,000 work hours.
- Project to Date Total Time Away Injury Rate: 0.0 (Zero Time Away From Work Injuries).
- Project to Date Total Days Away Rate: 0.0 (Zero Days Away From Work).

THIRD PARTY AGREEMENT STATUS

Third Party	Type of Agreement	Forecast Execution Date	Required Need Date	Status/ Comments
City of Los Angeles (LA)	Amendment to Master Cooperative Agreement	N/A	N/A	Parties will work under 2003 MCA.
City of Beverly Hills (BH)	MOAs (La Cienega only)	9/14 (AUR) 3/15 (D/B)	9/14 (AUR) 9/15 (D/B)	City of Beverly Hills approved the MOA for the C1056 Wilshire/La Cienega AUR contract on August 19, 2014. Metro continues to work with the City to establish an MOA for the C1045 Design/Build contract.
Los Angeles Department of Water and Power	Amendment to Memorandum of Understanding	N/A	N/A	Metro and LADWP will continue to work under the terms of the previous Cooperative Agreement.
Los Angeles County Public Works	Letter of Agreement	4/11	3/12	Executed
Caltrans	Amendment	8/11	3/12	Executed
Private Utilities	LOA, MOU, MCA, or MUA	9/14	N/A	Metro is working with affected third party utilities under existing agreements except for Qwest and Level 3. Metro has provided comments to Qwest on the revised agreement. Awaiting Level 3 response to accept and honor an existing agreement in lieu of a new MCA. Metro's proposed MOU is being reviewed by SCE. In absence of an agreement, work is being performed by work orders.

ADVANCED UTILITY RELOCATION STATUS

- C1048 AUR for the Wilshire/La Brea Station was substantially completed on October 27, 2014. Punch list items are underway with an expected completion in January 2015.
- AT&T relocations at the Wilshire/La Brea Station are scheduled to be completed in March 2015. AT&T relocations at the Wilshire/Fairfax Station are scheduled to begin in January 2015.
- LADWP Power continued cable pulling at the Wilshire/La Brea Station site and is scheduled to be completed in January 2015. Southern California Gas relocations in the same area are also scheduled to be completed in January 2015.
- The C1055 AUR contractor for Wilshire/Fairfax Station continues with submittals and power and water relocations.
- CES is continuing fiber relocations at the Wilshire/Fairfax Station. The Notice of Intent to Award for the Wilshire/La Cienega AUR Contract (C1056) was issued on September 26, 2014. Contract award occurred on October 13, 2014 with a Notice to Proceed (NTP) planned for January 12, 2015.

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 Los Angeles Bureau of Engineering and the Los Angeles Police Commission to obtain Peak Hour Exemptions and Nighttime Construction Variances. Current efforts center around extending the existing nighttime noise variances to accommodate advanced utility relocations at the Wilshire/La Brea and Wilshire/Fairfax Station sites as well as obtaining new nighttime noise variances and peak hour exemptions to allow night work and weekend work to accommodate the Wilshire/La Brea, Wilshire/Fairfax and Wilshire/Western piling operations for the Design/Build contractor.

- The Peak Hour Exemption for Wilshire/La Brea pile installation was approved by the City of Los Angeles on November 8, 2013.
- The Peak Hour Exemptions for Wilshire/Fairfax and Wilshire/Western pile installations were approved by the City of Los Angeles on May 12, 2014.
- The Nighttime Noise Variance for the Wilshire/La Brea and Wilshire/Fairfax Advanced Utility Relocation work was extended to February 17, 2015 by the Los Angeles Police Commission.
- Metro is working with the City of Los Angeles on a Peak Hour Exemption for the area near the La Cienega Station. This will accommodate the spillover of traffic control devices from the City of Beverly Hills into the City of Los Angeles.
- An exception to the City of Los Angeles Holiday Moratorium was issued on October 27, 2014 to allow utility relocations to continue during the holiday season at both Wilshire/La Brea and Wilshire/Fairfax Stations.
- An approved Nighttime Noise Variance for pile installations at the Wilshire/La Brea Station was obtained and is valid until April 30, 2015, at which time a six-month extension will be requested.

CHRONOLOGY OF EVENTS

June 2007	Began Alternatives Analysis study
January 2009	Board approval of Alternatives Analysis study and next phase
February 2009	Began Draft Environmental Impact Statement / Report (EIS / EIR)
October 2010	Board approval of Draft EIS / EIR and selection of locally preferred alternative
January 2011	FTA approval to enter Preliminary Engineering
May 2011	Began Preliminary Engineering
April 2012	Board certification of Final EIS / EIR and adoption of project
July 2012	Completion of Exploratory Shaft final design
August 2012	FTA Record of Decision
September 2012	Began Real Estate Acquisition
November 2012	Began Final Design - C1048 - Advanced Utility Relocations contract – Wilshire/La Brea
November 2012	Began Final Design - C1055 - Advanced Utility Relocations contract – Wilshire/Fairfax
November 2012	Issued RFQ for C1045 Design / Build contract
December 2012	Began Final Design - C1056 - Advanced Utility Relocations contract – Wilshire/La Cienega
January 2013	Began C1034 Exploratory Shaft construction
February 2013	Received RFQ responses for C1045 Design / Build contract
June 2013	Issued RFP for C1045 Tunnels, Stations, Trackwork, Systems and Systems Integration Testing
June 2013	Beginning of C1055 AUR Wilshire/Fairfax Bid Period
July 2013	Submitted draft FFGA application

CHRONOLOGY OF EVENTS (Continued)

July 2013	Completed Final Design - C1048 - Advanced Utility Relocations contract – Wilshire/La Brea
July 2013	Submitted TIFIA loan application
August 2013	Began C1048 Advanced Utility Relocations contract – Wilshire/La Brea
August 2013	NTP for Construction Management Services Contract
January 2014	Submitted application to FTA requesting an FFGA
January 2014	Received RFP Proposals for Contract C1045
February 2014	Beginning of C1056 AUR Wilshire/La Cienega Bid Period
May 2014	FTA awarded FFGA
May 2014	Received TIFIA Loan
June 2014	Began C1055 Advanced Utility Relocations at Wilshire/Fairfax
July 2014	Metro Board approved staff recommendation to award Contract C1045 and approved Life-of-Project Budget
September 2014	Issued Invitation to Bid for Contract C1078.
November 2014	Issued C1045 Contract Award

CONTRACT C1034 STATUS

Description: Exploratory Shaft
Contractor: Innovative Construction Solutions (ICS)

Contract No. C1034
Status as of: January 2, 2015

Progress / Work Completed:

- Notice to Proceed: 01/15/13
- Demolition / site preparation: 04/05/13 - 06/17/13
- Site Utilities: 05/06/13 - 09/04/13
- Soldier Piles: 07/05/13 - 08/27/13
- Shaft excavation started: 09/03/13
- Shaft excavation to 15' depth: 10/18/13
- Shaft excavation to 20' depth: 11/01/13
- Shaft excavation to 32' depth: 11/30/13
- Shaft excavation to 44' depth: 12/27/13
- Shaft excavation to 58' depth: 01/31/14
- Shaft excavation to 66' depth: 02/28/14
- Shaft excavation to bottom of pit: 03/28/14
- Monitoring period began: 04/01/14
- Monitoring period completed: 09/22/14
- Backfill complete 10/22/14
- Substantial Completion 10/28/14
- Demobilized

Areas of Concern:

None

Major Activities (In Progress):

- Contract closeout

Major Activities Next Period:

- Complete contract closeout

Schedule Summary:

Date of Award:	11/26/12
Notice to Proceed:	01/15/13
Original Contract Duration:	669 CD
Current Contract Duration:	669 CD
Elapsed Time from NTP:	669 CD

	Original Contract Dates	Time Extension	Current Contract	Forecast	Variance CDs
Notice to Proceed	01/15/13	0	01/15/13	01/15/13	0
Milestone 1: Shaft Completion	02/14/14	16	03/07/14	03/28/14	-21
Milestone 2: Substantial Completion	11/15/14	0	11/15/14	11/15/14	0

Physical Percent Complete:

Physical completion: 100%*

** Note: Physical completion assessment reflects work completed and work in progress.*

Cost Summary:

	$ In millions
1. Award Value:	6.5
2. Executed Modifications:	0.2
3. Approved Change Orders:	0.0
4. Current Contract Value (1+2+3):	6.6
5. Incurred Cost:	6.6

CONTRACT C1048 STATUS

Description: AUR - Wilshire/La Brea
Contractor: Metro Builders & Engineers Group, Ltd.

Contract No. C1048
Status as of: January 2, 2015

Progress / Work Completed:

- Substantial Completion

Major Activities (In Progress):

- Contract closeout

Areas of Concern:

None

Major Activities Next Period:

-Complete contract closeout

Schedule Summary:

Date of Award:	05/13/13
Notice to Proceed:	08/01/13
Original Contract Duration:	230 CD
Current Contract Duration:	452 CD
Elapsed Time from NTP:	452 CD

	Original Contract Dates	Time Extension	Current Contract	Forecast	Variance CDs
Notice to Proceed	08/01/13	0	08/01/13	08/01/13	0
Milestone 1: Completion of LADWP Power Work	12/28/13	0	12/28/13	05/22/14	-145
Milestone 2: Substantial Completion	03/18/14	223	10/27/14	10/27/14	0

Physical Percent Complete:

Physical completion: 99%*

* *Note: Physical completion assessment reflects work completed and work in progress.*

Cost Summary:

	$ In millions
1. Award Value:	6.2
2. Executed Modifications:	2.2
3. Approved Change Orders:	0.0
4. Current Contract Value (1+2+3):	8.4
5. Incurred Cost:	8.4

CONTRACT C1055 STATUS

Description: Fairfax AUR
Contractor: W.A. RASIC Construction Company, Inc.

Contract No. C1055
Status as of: January 2, 2015

Progress / Work Completed:

- SCG line excavation
- Vault 6100, 702 installed
- Power segments 18,20,34

Major Activities (In Progress):

- Power west on Wilshire
- Power on Fairfax
- La Brea waterline @Orange
- Soundwall gate
- La Brea waterline @Sycamore

Areas of Concern:

None

Major Activities Next Period:

- Waterline at La Brea complete
- Major material fabrication & delivery complete
- Ductbank at Wilshire/Fairfax intersection continues
- Soundwall gate complete
- MH 703
- Mobilize for water at Fairfax

Schedule Summary:

Date of Award:	03/28/14
Notice to Proceed:	05/01/14
Original Contract Duration:	535 CD
Current Contract Duration:	535 CD
Elapsed Time from NTP:	240 CD

	Original Contract Dates	Time Extension	Current Contract	Forecast	Variance CDs
Notice to Proceed	05/01/14	0	05/01/14	05/01/14	0
Milestone 1: Water @ La Brea	08/29/14	139	01/15/15	01/30/15	-15
Milestone 2: Power @ Fairfax	07/25/15	0	07/25/15	07/25/15	0
Milestone 3: Substantial Completion	10/18/15	0	10/18/15	10/18/15	0

Physical Percent Complete:

Physical completion: 33%*

** Note: Physical completion assessment reflects work completed and work in progress.*

Cost Summary:

	$ In millions
1. Award Value:	14.4
2. Executed Modifications:	0.5
3. Approved Change Orders:	0.0
4. Current Contract Value (1+2+3):	14.9
5. Incurred Cost:	5.2

CONSTRUCTION PHOTOGRAPHS

C1055 Contractor Setup Operations at Wilshire/Fairfax Intersection

C1055 Contractor Performing Power Relocations

APPENDIX

COST AND BUDGET TERMINOLOGY

Project Cost Descriptions

ORIGINAL BUDGET	The Original Project Budget as authorized by the Metropolitan Transportation Authority (Metro) Board (to be established).
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.

APPENDIX

LIST OF ACRONYMS

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
CMSC	Construction Management 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
CSPP	Construction Safety Phasing Plan
CTC	California Transportation Commission
CUD	Contract Unit Description
DB	Design Build
DBB	Design Bid Build
DOT	Department of Transportation
DWP	Department of Water and Power
EIR	Environmental Impact Report
EIS	Environmental Impact Statement
EMSC	Engineering Management Services Consultant
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

APPENDIX

LIST OF ACRONYMS (Continued)

FTA	Federal Transit Administration
FTE	Full Time Equivalent
GBR	Geotechnical Baseline Report
GDSR	Geotechnical Design Summary Report
HMM	Hatch Mott MacDonald
HRT	Heavy Rail Transit
HRV	Heavy Rail Vehicle
IFB	Invitation for Bid
IPMO	Integrated Project Management Office
JV	Joint Venture
LA	Los Angeles
LABOE	Los Angeles Bureau of Engineering
LABOS	Los Angeles Bureau of Sanitation
LABSL	Los Angeles Bureau of Street Lighting
LACFCD	Los Angeles County Flood Control District
LACMTA	Los Angeles County Metropolitan Transportation Authority
LADOT	Los Angeles Department of Transportation
LADPW	Los Angeles Department of Public Works
LADWP	Los Angeles Department of Water and Power
LAUSD	Los Angeles Unified School District
LAWA	Los Angeles World Airports
LAX	Los Angeles International Airport
LNTP	Limited Notice To Proceed
LONP	Letter Of No Prejudice
LOP	Life-of-Project
LPA	Locally Preferred Alternative
LRTP	Long Range Transportation Plan
LRV	Light Rail Vehicle
MCA	Master Cooperative Agreement
MIS	Major Investment Study
MOU	Memorandum of Understanding
MPSR	Monthly Project Status Report
N/A	Not Applicable
NEPA	National Environmental Protection Act
NOD	Notice of Determination
NPDES	National Pollution Discharge Elimination System
NTE	Not to Exceed
NTP	Notice To Proceed
OCC	Operations Control Center
OSHA	Occupational Health and Safety Administration
PA/VMS	Public Address/Visual Messaging Sign
PE	Preliminary Engineering

APPENDIX

LIST OF ACRONYMS (Continued)

PEER	Permit Engineering Evaluation Report
PIP	Project Implementation Plan
PLA	Project Labor Agreement
PM	Project Manager
PMIP	Project Management Implementation Plan
PMOC	Project Management Oversight Consultant
PMP	Project Management Plan
P&P	Policies & Procedures
PR	Project Report
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
RLPE	Red Light Photo Enforcement
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

APPENDIX

LIST OF ACRONYMS (Continued)

SP	Special Provision
SSMP	Safety and Security Management Plan
STB	Surface Transportation Board
STIP	State Transportation Improvement Program
STP	Surface Transportation Program
STV	STV Group
TBD	To Be Determined
TBM	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
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