Los Angeles County
Metropolitan Transportation Authority

Westside Purple Line Extension

Section 1 Project

QUARTERLY PROJECT STATUS REPORT
DECEMBER 2017

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 2017

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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 C1045 Contractor, Skanska, Traylor and Shea (STS), and their final design team, Parsons Transportation Group (PTG), completed final design in June 2017.

The Engineering Management Services (EMS) team continues to provide design support to the Design/Build Contract, and the Division 20 Maintenance-of-Way and Non-Revenue Vehicle Building Location 64 Contract.

For the Division 20 Maintenance-of-Way and Non-Revenue Vehicle Building Location 64 Contract (C1078), support to Metro continues with engineering services during construction, which included coordinating and reviewing Design Units #1 (Part Storage) and #2 (Location 64 Building) AFC design packages, both drawings and specifications. The 100% submittal for Design Unit #3 (Systems Communications) is scheduled for January 2018.

Notable meetings this period for the EMS team included a follow up meeting on fully guarded double crossover design, a coordination meeting with Division 20 representatives for the C1045 rail welding site, and a Systems Integration workshop.

The team also responded to over the shoulder comments on crossover design; assisted Metro in responding to contractor letters related to gassy ground conditions in Tunnel Reach 3, and dewatering at the Wilshire/ La Cienega Station; attended a second Factory Acceptance Test at the Ansaldo factory for the fail-safe operation of block design; and assisted Metro in preparation of a draft "Existing System Interface Tracking Matrix" to be used for monthly interface workshops.

The EMS team also assisted Metro in the review of systems design submittals, construction related work plans, third party submittals, and responses to RFIs continues.

Monthly Metro Fire/Life/Safety meetings are occurring.

STS is continuing with the required contractual submittals.

Major Contract Procurement

All construction contracts for the Project have been awarded.

Construction

SOE pile installation at the Wilshire/Western TBM retrieval site began on December 8, 2017. Jet grouting activities are planned to commence in January 2018. Closure(s) of Wilshire Boulevard are being planned for the anticipated decking operation in February 2018. Potholing to expose existing utility structures continues on an as-needed basis.

The Wilshire/La Brea Station excavation was completed in November 2017. The installation of the concrete mud slab started on November 22, 2017. Station dewatering activities, grounding grid installation and HDPE installation are on-going. Rebar installation for the first invert concrete pour is scheduled to begin in January 2018.

The Wilshire/Fairfax Station excavation continues beneath the concrete deck panels. The installation of Level B walers and struts continues. *Installation of walers at Level C is underway with strut installation expected to begin in January 2018. Station excavation east of Gridline 11 (west side of the muck shaft), is now clear of the Paleo zone.*

The Wilshire/La Cienega Station pile installation was completed on October 12, 2017. Street decking commenced on the weekend of October 6, 2017. *This operation is scheduled to complete in January 2018. Work on the electrical vaults inside the La Cienega Station Yard is on-going. The hanging of utilities below the concrete deck continues.*

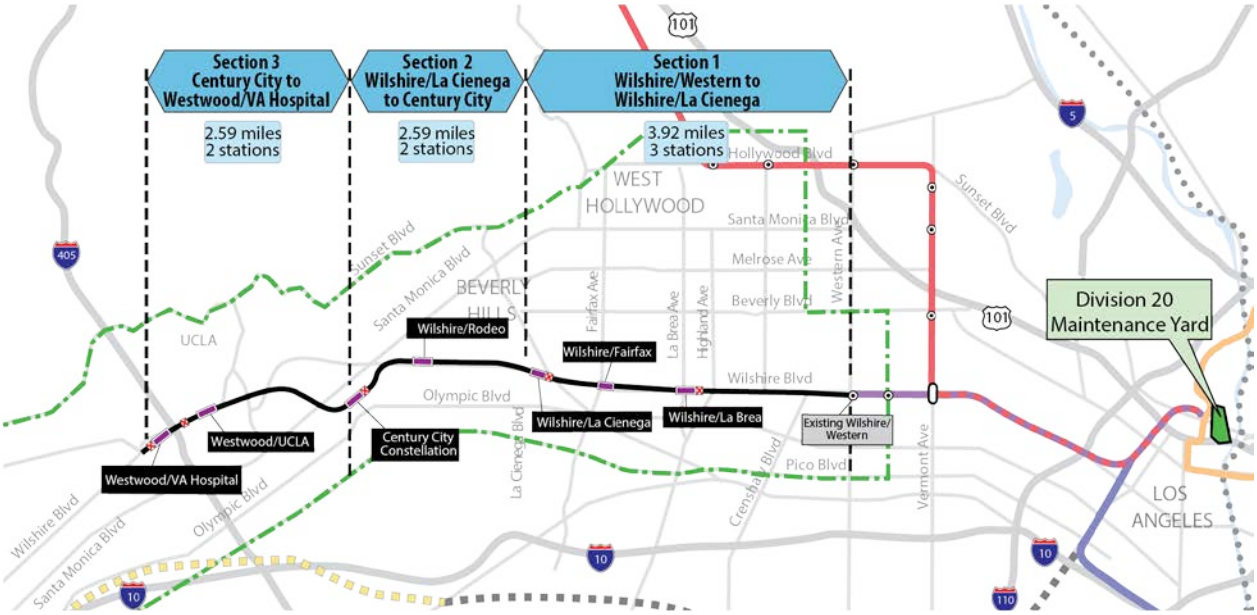
The two, Herrenknecht Tunneling Systems USA, Inc., Tunnel Boring Machines (TBMs) were delivered to the United States during December 2017. *TBM components are currently being shipped to contractor's storage site in Riverside, California*, *and will be sent to the Wilshire/La Brea Station site for the start of tunneling in August 2018.* Tunnel instrumentation installation along the (Reach 1) alignment continues.

The C1078 contractor has completed the below grade structure and the elevator/inspection pits at the Division 20 Maintenance-of-Way and Non-revenue Vehicle Building Location 64. Structural steel erection started on December 15, 2017, and is expected to 'top-out' in January 2018. Water relocation activities in the Division 20 Parts & Storage Expansion area are on-going.

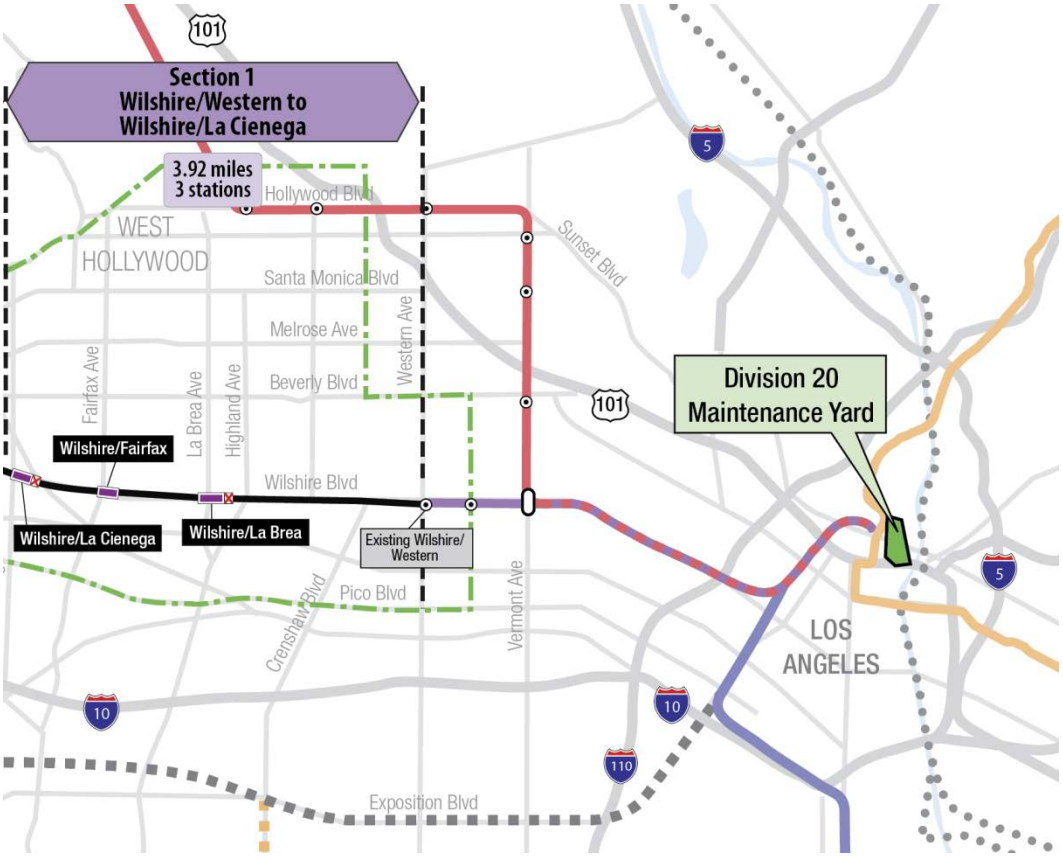
MANAGEMENT ISSUES

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.

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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 constructed an exploratory shaft to observe ground conditions prior to the award of Contract C1045. The location of the exploratory shaft was adjacent to the future Wilshire/Fairfax Station. The construction of the shaft included 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 was maintained for an observation time period. Afterwards, the shaft was dismantled and the site backfilled in a condition acceptable to the property owner. The contract was substantially completed on October 31, 2014.

Contract C1048 – Wilshire/La Brea Advanced Utility Relocations

The work scope of this contract included the relocation of existing LADWP power, water utilities and a sewer line within the construction limits of the Wilshire/La Brea Station. The contractor was responsible for working in streets, procuring materials, and coordinating with the utility owner. The contractor constructed the new facilities in accordance with the utility plans and specifications, provided traffic control, restored streets, and supported utility crews installing cabling and during cut-over of the existing utilities. The contract was substantially completed on October 27, 2014.

Contract C1055 – Wilshire/Fairfax Advanced Utility Relocations
The work scope of this contract included the relocation of existing LADWP power and water utilities within the construction limits of the Wilshire/Fairfax Station. The contractor was responsible for working in streets, procuring materials, and coordinating with the utility owner. The contractor constructed the new facilities in accordance with utility plans and specifications, provided traffic control, restored streets, and supported utility crews installing cabling and during cut-over of the existing utilities. The contract was substantially completed on October 7, 2015.

Contract C1056 – Wilshire/La Cienega Advanced Utility Relocations
The work scope of this contract included the relocation of existing City of Beverly Hills water, storm drain and sewer utilities within the construction limits of the Wilshire/La Cienega Station. The contractor was responsible for working in streets, procuring materials, and coordinating with the utility owner. The contractor constructed the new facilities in accordance with utility plans and specifications, provided traffic control, restored streets, and supported utility crews during cut-over of the existing utilities. The contract was substantially completed on August 5, 2016.

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 Location 64
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 64). 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 has procured a contract to provide 34 Heavy Rail Vehicles (HRV) necessary to operate the extension to the Purple Line. An additional contract will be procured for the Universal Fare System (UFS). 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 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.

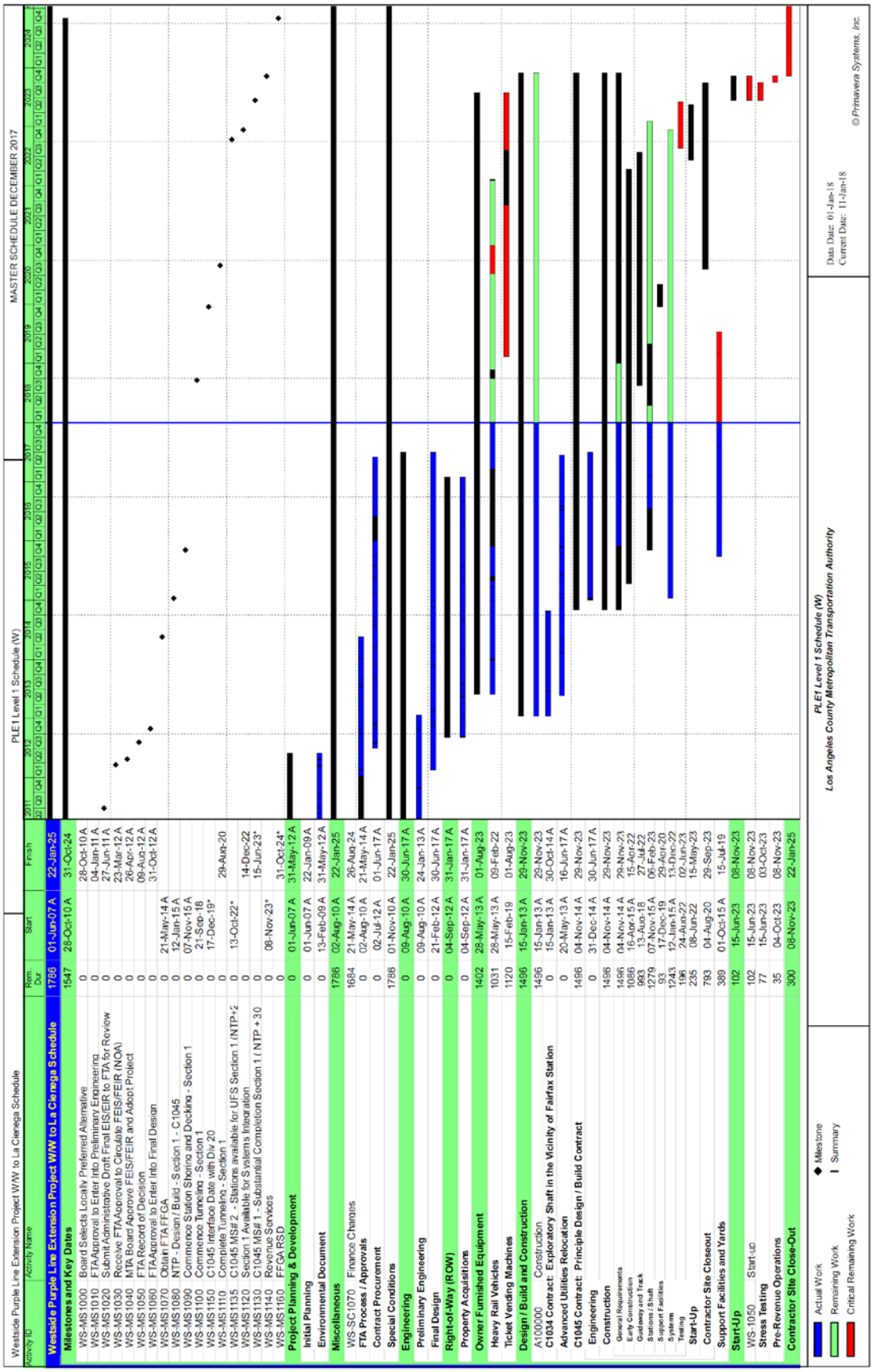
KEY MILESTONES SIX-MONTH LOOK AHEAD

	Milestone Date	Jan-18	Feb-18	Mar-18	Apr-18	May-18	Jun-18
C1045 Wilshire/La Cienega Decking Complete	01/08/18	☐					
C1045 Wilshire/La Brea Station Structural Concrete Begins (Invert)	01/22/18	☐					
C1045 Wilshire/Western Jet Grouting Begins	01/22/18	☐					
C1078 Div 20 Building Structural Steel Erection Complete	02/08/18		☐				
C1045 Wilshire/La Cienega Support in Place Utilities During Decking Completes	02/26/18		☐				
C1078 Div 20 Building Slab on Grade Begins	03/08/18			☐			
C1045 Wilshire/La Cienega Excavation / Strut Installation Begins	03/19/18			☐			
C1045 Wilshire/La Brea Station Structural Concrete Begins (Walls)	04/02/18				☐		
C1045 Wilshire/Western Complete Installation of Dewatering System	04/26/18				☐		
C1045 Wilshire/Western Begins Hanging Utilities Under Deck	05/21/18					☐	
C1045 Commence TBM Assembly	06/26/18						☐

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

△ Other Agencies ☐ Contractors

PROJECT SUMMARY SCHEDULE

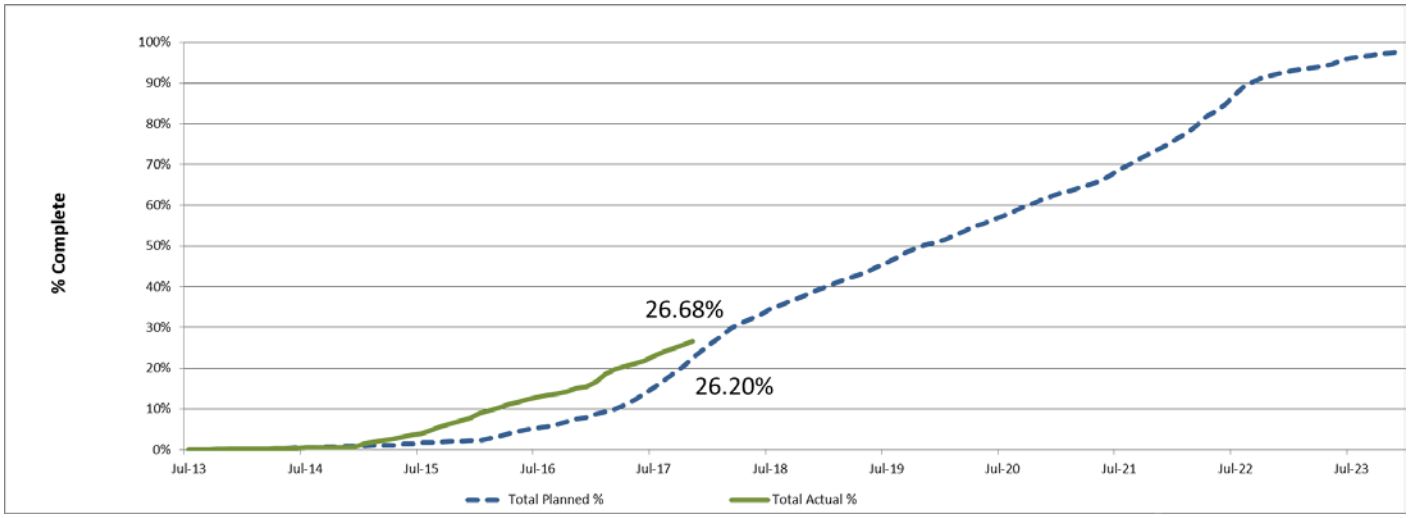


SCHEDULE MEASUREMENTS

	Status	Change from Last Period	Comment
Forecast Revenue Service	11/8/2023	None	
FFGA Revenue Service	10/31/2024	None	
Final Design Progress:			
Contract C1045	100.00%	0.00%	
Contract C1078	81.71%	0.52%	
Construction Contracts Progress*:			
Contract C1048	100.00%	0.00%	Completed on schedule
Contract C1045	24.54%	0.81%	
Contract C1055	100.00%	0.00%	Completed on schedule
Contract C1056	100.00%	0.00%	Completed on schedule
Contract C1078	24.20%	2.15%	

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

OVERALL CONSTRUCTION PROGRESS CURVE



The actual overall construction progress is 26.68% versus a planned of 26.20% through December 2017. The progress curves represent a composite percentage for the physical progress of work performed to complete the Project's construction contracts, including the major Design-Build (C1045), the three Advanced Utility Relocations (C1048, C1055 & C1056), and the Division 20 MOW & NRV Building Location 64 (C1078).

The physical progress percentage excludes non-construction items such as contractor's design and construction mobilization costs and all general requirement costs not tied specifically to a construction work effort.

MAJOR EQUIPMENT DELIVERY

	Initial Procurement	Submittal	Delivery	Installation
Tunnel Boring Machine	1/29/16	5/30/16	*12/15/17*	*6/26/18*
Deliver to Site - Station HVAC System	*1/31/18*	*4/21/18*	*6/24/19*	*8/20/20*
Deliver to Site - Ventilation Fans	*1/31/18*	*4/21/18*	*10/17/19*	*10/18/19*
Deliver to Site - Elevators	8/6/17	*4/1/18*	*7/9/19*	*7/22/21*
Deliver to Site - Escalators	10/5/17	*5/31/18*	*9/7/19*	*7/22/21*
Heavy Rail Vehicles	7/16/15	10/3/18	2/9/22	1/9/23
Ticket Vending Machines	4/29/20	12/25/20	6/23/21	12/20/21

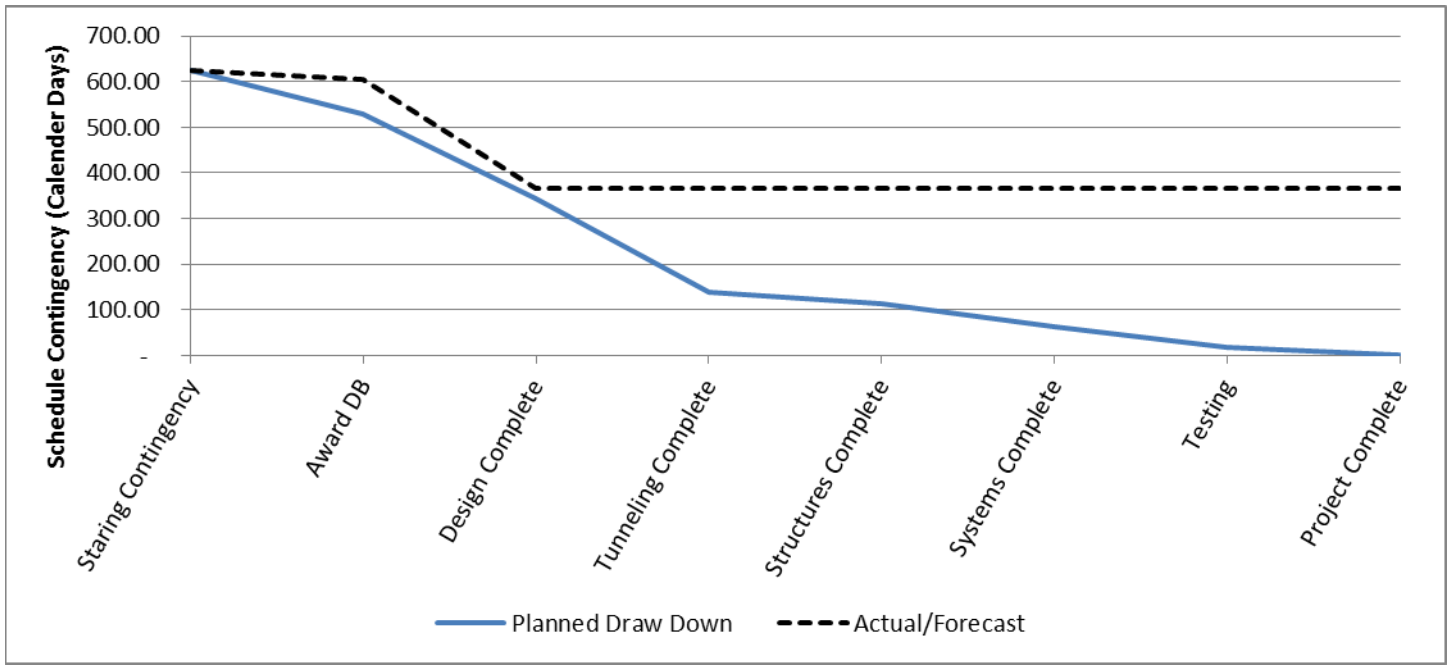
DESIGN BUILDER'S (C1045) LONG LEAD ITEM LIST

Item	Initial Procurement	Approved Submittal	Delivery	Installation Date
Procure / Deliver Fiber Optic Cable	29-Oct-18	24-Nov-18	22-Feb-19	14-Sep-20
Procure / Deliver Innerduct	29-Oct-18	24-Nov-18	22-Feb-19	20-Aug-20
Procure / Deliver Radio Cable	29-Oct-18	24-Nov-18	22-Feb-19	1-Oct-20
SCADA: Procure / Deliver Devices	28-Dec-18	19-Jan-19	19-Apr-19	22-Apr-21
Procure / Deliver SCADA Cable	29-Oct-18	24-Nov-18	22-Feb-19	20-Aug-20
Procure / Deliver TPS Bonding Cable	28-Dec-18	19-Jan-19	19-Apr-19	28-Sep-21
Procure / Deliver Traction Power Cable	28-Dec-18	19-Jan-19	19-Apr-19	21-May-20
TPS: Procure/Deliver BLS Equipment & Devices	28-Dec-18	19-Jan-19	19-Apr-19	21-May-20
Mfgr/Assemble/Wire DC Rectifier/Transformer - La Cienega TPSS	14-Nov-18	11-Dec-18	11-Mar-19	12-Mar-19
Mfgr/Assemble/Wire HV Metering Switchgear - La Cienega TPSS	14-Nov-18	11-Dec-18	11-Mar-19	12-Mar-19
Mfgr/Assemble/Wire DC Switches - Fairfax GBS	14-Nov-18	11-Dec-18	11-Mar-19	12-Mar-19
Mfgr/Assemble/Wire HV Metering Switchgear - Fairfax GBS	12-Mar-19	3-Apr-19	2-Jul-19	3-Jul-19
Mfgr/Assemble/Wire HV Metering Switchgear - La Brea TPSS	3-Jul-19	26-Jul-19	24-Oct-19	25-Oct-19
CCTV: Assemble/Rack & Stack/Factory Test COM Equipment for Western	30-Apr-19	30-May-19	28-Aug-19	8-Dec-21
CCTV: Assemble/Rack & Stack/Factory Test COM Equipment for La Brea	26-Apr-18	26-May-18	24-Aug-18	30-Nov-21
CCTV: Assemble/Rack & Stack/Factory Test COM Equipment for Fairfax	27-Aug-18	29-Sep-18	28-Dec-18	16-Sep-21
CCTV: Assemble/Rack & Stack/Factory Test COM Equipment for La Cienega	31-Dec-18	29-Jan-19	29-Apr-19	6-Dec-21
CTS: Assemble/Rack & Stack/Factory Test COM Equipment for Western	18-Mar-19	17-Apr-19	16-Jul-19	20-Dec-21
CTS: Assemble/Rack & Stack/Factory Test COM Equipment for La Brea	14-Mar-18	13-Apr-18	12-Jul-18	25-Jun-21
CTS: Assemble/Rack & Stack/Factory Test COM Equipment for Fairfax	13-Jul-18	11-Aug-18	9-Nov-18	3-May-21
CTS: Assemble/Rack & Stack/Factory Test COM Equipment for La Cienega	13-Nov-18	15-Dec-18	15-Mar-19	20-Sep-21
EMER MGMT: Assemble/Rack & Stack/Factory Test COM Equipment for La Brea	26-Apr-18	26-May-18	24-Aug-18	11-Apr-22
EMER MGMT: Assemble/Rack & Stack/Factory Test COM Equipment for Fairfax	27-Aug-18	29-Sep-18	28-Dec-18	8-Feb-22
EMER MGMT: Assemble/Rack & Stack/Factory Test COM Equipment for La Cienega	31-Dec-18	29-Jan-19	29-Apr-19	7-Mar-22
FIRE ALARM: Assemble/Rack & Stack/Factory Test COM Equipment for Western	18-Mar-19	17-Apr-19	16-Jul-19	17-Dec-22
FIRE ALARM: Assemble/Rack & Stack/Factory Test COM Equipment for La Brea	14-Mar-18	13-Apr-18	12-Jul-18	25-Oct-21
FIRE ALARM: Assemble/Rack & Stack/Factory Test COM Equipment for Fairfax	13-Jul-18	11-Aug-18	9-Nov-18	13-Aug-21
FIRE ALARM: Assemble/Rack & Stack/Factory Test COM Equipment for La Cienega	13-Nov-18	15-Dec-18	15-Mar-19	2-Dec-21
GAS DETECTION: Assemble/Rack & Stack/Factory Test COM Equipment for Western	30-Apr-19	30-May-19	28-Aug-19	15-Feb-21
GAS DETECTION: Assemble/Rack & Stack/Factory Test COM Equipment for La Brea	26-Apr-18	26-May-18	24-Aug-18	15-Feb-21
GAS DETECTION: Assemble/Rack & Stack/Factory Test COM Equipment for Fairfax	27-Aug-18	29-Sep-18	28-Dec-18	11-Aug-21
GAS DETECTION: Assemble/Rack & Stack/Factory Test COM Equipment for La Cienega	31-Dec-18	29-Jan-19	29-Apr-19	12-May-21
INTRUSION: Assemble/Rack & Stack/Factory Test COM Equipment for Western	30-Apr-19	30-May-19	28-Aug-19	26-Jan-21
INTRUSION: Assemble/Rack & Stack/Factory Test COM Equipment for La Brea	26-Apr-18	26-May-18	24-Aug-18	11-Jan-22
INTRUSION: Assemble/Rack & Stack/Factory Test COM Equipment for Fairfax	27-Aug-18	29-Sep-18	28-Dec-18	27-Oct-21
INTRUSION: Assemble/Rack & Stack/Factory Test COM Equipment for La Cienega	31-Dec-18	29-Jan-19	29-Apr-19	21-Dec-21
RADIO: Assemble/Rack & Stack/Factory Test COM Equipment for Western	2-Jan-18	21-Mar-18	19-Jun-18	26-Oct-20
RADIO: Assemble/Rack & Stack/Factory Test COM Equipment for La Brea	2-Jan-18	21-Mar-18	19-Jun-18	21-Sep-21
RADIO: Assemble/Rack & Stack/Factory Test COM Equipment for Fairfax	2-Jan-18	21-Mar-18	19-Jun-18	16-Jul-21
RADIO: Assemble/Rack & Stack/Factory Test COM Equipment for La Cienega	2-Jan-18	21-Mar-18	19-Jun-18	11-Jun-21
SCADA: Assemble/Rack & Stack/Factory Test COM Equipment for Western	18-Mar-19	17-Apr-19	16-Jul-19	16-Feb-21
SCADA: Assemble/Rack & Stack/Factory Test COM Equipment for La Brea	14-Mar-18	13-Apr-18	12-Jul-18	3-Sep-21
SCADA: Assemble/Rack & Stack/Factory Test COM Equipment for Fairfax	13-Jul-18	11-Aug-18	9-Nov-18	28-Jun-21
SCADA: Assemble/Rack & Stack/Factory Test COM Equipment for La Cienega	13-Nov-18	15-Dec-18	15-Mar-19	22-Sep-21
SEISMIC: Assemble/Rack & Stack/Factory Test COM Equipment for La Brea	14-Mar-18	13-Apr-18	12-Jul-18	19-Apr-22
SEISMIC: Assemble/Rack & Stack/Factory Test COM Equipment for Fairfax	13-Jul-18	11-Aug-18	9-Nov-18	16-Feb-22
SEISMIC: Assemble/Rack & Stack/Factory Test COM Equipment for La Cienega	13-Nov-18	15-Dec-18	15-Mar-19	31-Mar-22
TELEPHONE: Assemble/Rack & Stack/Factory Test COM Equipment for Western	30-Apr-19	30-May-19	28-Aug-19	27-Jan-21
TELEPHONE: Assemble/Rack & Stack/Factory Test COM Equipment for La Brea	26-Apr-18	26-May-18	24-Aug-18	15-Mar-22
TELEPHONE: Assemble/Rack & Stack/Factory Test COM Equipment for Fairfax	27-Aug-18	29-Sep-18	28-Dec-18	17-Dec-22
TELEPHONE: Assemble/Rack & Stack/Factory Test COM Equipment for La Cienega	31-Dec-18	29-Jan-19	29-Apr-19	7-Feb-22
TPIS: Assemble/Rack & Stack/Factory Test COM Equipment for La Brea	26-Apr-18	26-May-18	24-Aug-18	23-Feb-22
TPIS: Assemble/Rack & Stack/Factory Test COM Equipment for Fairfax	27-Aug-18	29-Sep-18	28-Dec-18	20-Jan-22
TPIS: Assemble/Rack & Stack/Factory Test COM Equipment for La Cienega	31-Dec-18	29-Jan-19	29-Apr-19	15-Mar-22
UPS: Manufacture/Factory Test COM Equipment for La Brea	14-Mar-18	13-Apr-18	12-Jul-18	12-Aug-20
UPS: Manufacture/Factory Test COM Equipment for Fairfax	13-Jul-18	11-Aug-18	9-Nov-18	22-Sep-21
UPS: Manufacture/Factory Test COM Equipment for La Cienega	13-Nov-18	15-Dec-18	15-Mar-19	24-Sep-21
PROCURE GAS/WATERPROOFING MATERIALS FOR LA BREA STATION	13-Dec-17 A	29-Jun-17A	18-Dec-17 A	19-Dec-17 A
FABRICATE CANOPY STRUCTURE - FAIRFAX STATION	30-Jul-18	29-Jul-18	27-Oct-18	23-Aug-21
FABRICATE CANOPY STRUCTURE - LA CIENEGA STATION	28-Oct-18	27-Oct-18	25-Jan-19	24-Sep-21
Mfgr/Assemble/Wire DC Switchgear - La Cienega TPSS	14-Nov-18	22-Jan-19	22-Apr-19	5-Nov-21
Mfgr/Assemble/Wire AC Switchgear - La Cienega TPSS	14-Nov-18	22-Jan-19	22-Apr-19	19-Nov-21
Mfgr/Assemble/Wire DC Switchgear - La Brea TPSS	23-Apr-19	28-Jun-19	26-Sep-19	19-Jun-20
Mfgr/Assemble/Wire AC Switchgear - Fairfax GBS	23-Apr-19	28-Jun-19	26-Sep-19	28-Dec-20
Mfgr/Assemble/Wire AC Switchgear - La Brea TPSS	27-Sep-19	6-Dec-19	5-Mar-20	30-Jun-20
ATC: Procure/Deliver Switch Machines	01-Jul-16 A	21-Jul-17 A	20-Dec-16 A	10-Feb-22
COMPLETE MOCK-UP & FABRICATE CANOPY STRUCTURE - LA BREA STATION	1-Apr-18	30-Apr-18	29-Jul-18	15-Nov-21
FAB/DELIVER SOLDIER PILES / BEAMS - WESTERN TBM RETRIEVAL SHAFT	19-Sep-17 A	19-Nov-17A	10-Apr-18	6-Jan-18
FAB/DELIVER SOLDIER PILES / BEAMS - FAIRFAX STATION	26-Jul-16 A	30-Jul-16 A	1-Aug-16 A	18-Aug-16 A
FAB/DELIVER SOLDIER PILES / BEAMS - LA CIENEGA STATION	23-Jan-17 A	14-Feb-17 A	1-Mar-17 A	20-Mar-17 A
ATC: Assemble/Rack & Stack TC&C Equipment for Western	17-May-18	14-Apr-18	13-Jul-18	26-Jun-20
ATC: Assemble/Rack & Stack ATC Equipment for La Brea	01-Sep-17 A	5-Sep-17 A	10-Sep-17 A	12-Jun-20
ATC: Assemble/Rack & Stack ATC Equipment for Fairfax	11-Sep-17 A	2-May-16 A	20-Oct-17 A	22-Dec-20
ATC: Assemble/Rack & Stack ATC Equipment for La Cienega	20-Dec-17 A	2-May-16 A	26-Jan-18	2-Nov-21
FABRICATE TRACK MATERIALS	11-May-18	28-Aug-18	26-Nov-18	17-Dec-19
ATC: Procure/Deliver WS Equipment & Devices	01-Dec-15 A	19-Feb-18	21-Mar-18	1-Oct-21
ATC: Procure/Deliver Components & Materials - Western	01-Aug-16 A	1-Sep-17 A	2-Jan-18	26-Jun-20
ATC: Procure/Deliver Components & Materials - La Brea	01-Aug-16 A	1-Sep-17 A	02-Jun-17 A	12-Jun-20
ATC: Procure/Deliver Components & Materials - Fairfax	01-Aug-16 A	1-Sep-17 A	10-Sep-17 A	22-Dec-20
ATC: Procure/Deliver Components & Materials - La Cienega	01-Aug-16 A	1-Sep-17 A	18-Oct-17 A	2-Nov-21

CRITICAL PATH NARRATIVE

The critical path for the Westside Purple Line Extension Section 1 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 C1055 Wilshire/Fairfax Advanced Utility Relocation and C1056 Wilshire/ La Cienega Advanced Utility Relocation contracts being performed by Metro's AUR Contractors and by third party utility companies. Upon completion of advanced utility relocations, the Design/Build contractor begins installation of soldier piles, first on the north side of the Wilshire/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, reassembled 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/La Brea station box, installation of track-work 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

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	-	380,970	4,157	65,260	-	387,938	(356)
20	STATIONS, STOPS, TERMINALS, INTERMODAL	440,621	-	440,621	-	447,611	9,343	99,093	-	473,316	32,695
30	SUPPORT FACILITIES: YARDS, SHOPS, ADMIN. BLDGS	43,323	-	43,323	-	41,556	1,138	5,918	-	43,352	29
40	SITEWORK & SPECIAL CONDITIONS	751,566	-	754,491	2,817	776,636	9,257	476,754	-	799,094	44,604
50	SYSTEMS	113,574	-	113,574	33	99,544	2,709	14,893	-	114,574	1,000
	CONSTRUCTION SUBTOTAL (10-50)	1,737,378	-	1,740,303	2,850	1,746,317	26,605	661,919	-	1,818,275	77,972
60	ROW, LAND, EXISTING IMPROVEMENTS	175,634	-	175,634	-	202,980	5,125	187,839	-	202,980	27,346
70	VEHICLES	160,196	-	160,196	-	98,118	-	5,475	-	108,302	(51,893)
80	PROFESSIONAL SERVICES	412,710	-	414,785	-	344,087	2,768	272,943	-	486,283	71,498
	SUBTOTAL (10-80)	2,485,918	-	2,490,918	2,850	2,391,502	34,498	1,128,177	-	2,615,840	124,922
90	UNALLOCATED CONTINGENCY	248,592	-	248,592	-	-	-	-	-	168,075	(80,517)
100	FINANCE CHARGES	375,470	-	375,470	-	-	-	-	-	331,065	(44,405)
	TOTAL PROJECTS 465518 & 865518 (10-100)	3,109,980	-	3,114,980	2,850	2,391,502	34,498	1,128,177	-	3,114,980	-
	ENVIRONMENTAL/PLANNING - 405518	8,505	-	8,505	-	8,505	-	8,505	-	8,505	-
	ENVIRONMENTAL/PLANNING - 465518	30,865	-	30,865	-	30,865	-	30,852	-	30,865	-
	TOTAL PROJECTS 405518 & 465518 (ENV / PLAN'G)	39,370	-	39,370	-	39,370	-	39,357	-	39,370	-
	TOTAL PROJECTS 405518, 465518 & 865518	3,149,350	-	3,154,350	2,850	2,430,871	34,498	1,167,534	-	3,154,350	-

PROJECT COST ANALYSIS

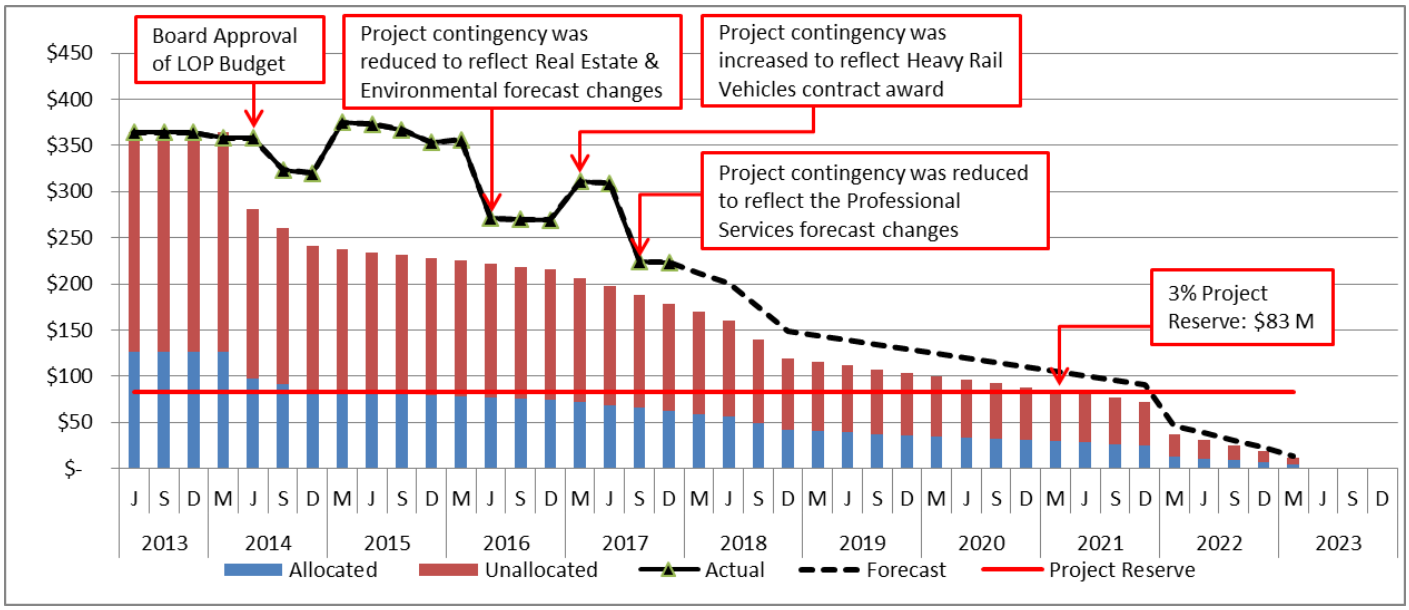
Original Budget
The Original Budget of $3.2 billion reflects the Board approved Life of Project Budget, July 24, 2014, plus Finance Charges of $0.4 billion.

Current Budget and Current Forecast
The Current Budget and Current Forecast remains the same this period at $3.2 billion.

Commitments
The Commitments increased by $2.9 million primarily due to Work Orders issued to Third Party Private Utilities. The $2.4 billion in Commitments to date represents 77.1% of the Current Budget.

Expenditures
The Expenditures increased by $34.5 million primarily for costs associated with the Design/Build Contracts C1045 and C1078, Real Estate Acquisitions, City of Los Angeles (Master Cooperative Agreement), Legal Services, Engineering Management Services, Construction Management Support Services, and Metro Project Administration. The $1.2 billion in Expenditures to date represents 37.0% of the Current Budget.

PROJECT COST CONTINGENCY DRAWDOWN



PROJECT COST CONTINGENCY DRAWDOWN ANALYSIS

The Current Budget of $3.2 billion (plus Finance Charges of $0.4 billion) includes a project cost contingency of $320.6 million or 10.2% of the total project. The project cost contingency of $320.6 million is based upon the Life of Project (LOP) Budget that was approved by the Board in July 2014. The LOP Budget also included an allocated contingency amount of $72.0 million. 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).

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.

The allocated contingency decreased this period by $33K due to an executed Contract Modification for the Design/Build Contract C1045.

PROJECT COST CONTINGENCY
DOLLARS IN THOUSANDS

	Original Contingency (Budget)	Previous Period	Current Period	To-Date	Remaining Contingency (Forecast)
Unallocated Contingency	248,592	(80,517)	-	(80,517)	168,075
Allocated Contingency	71,963	(16,582)	(33)	(16,615)	55,349
Total Contingency	**320,555**	**(97,099)**	**(33)**	**(97,132)**	**223,424**

DISADVANTAGED BUSINESS ENTERPRISE (DBE)

DISADVANTAGED BUSINESS ENTERPRISE (DBE) STATUS

Contract C1045 Westside Purple Line Extension - Section 1

(Reported Data as of December 2017)

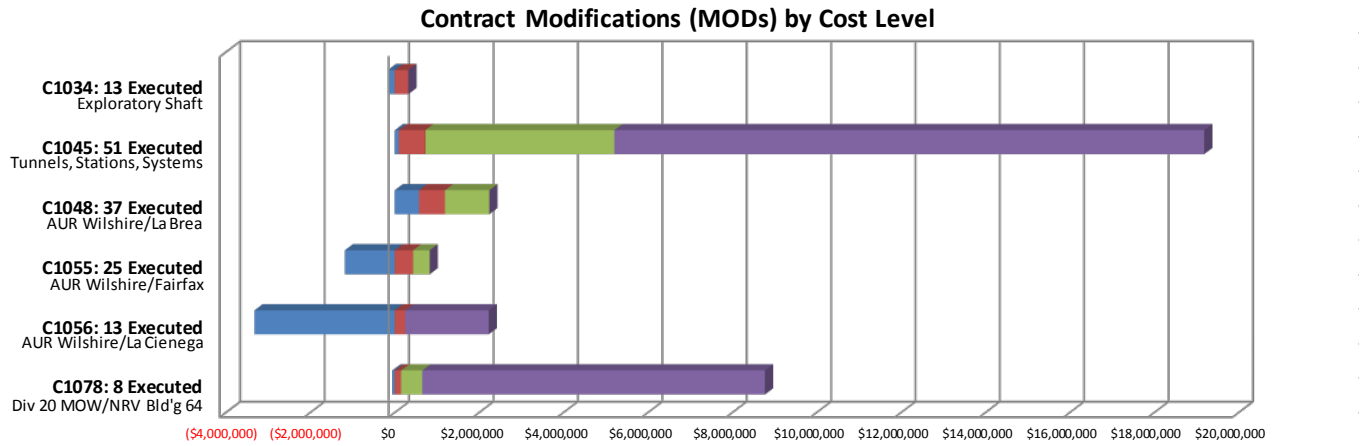
• **DBE Goal – Design** A numerically expressed percentage of funds apportioned to Design Contracts and is calculated based upon the relative availability of DBE firms as compared to all firms in the relevant geographic market area.	20.00%
• **Current DBE Commitment – Design** Total DBE Committed Dollars divided by Total Contract Value for Design or Construction.	*$13,063,561* (20.25%)
• **Current DBE Participation** Total amount paid to date to DBEs divided by the amount paid to date to Prime.	*$11,860,022* *(18.70%)*
Fourteen (14) Design DBE subcontractors have been identified to-date.	
• **DBE Goal – Construction** A numerically expressed percentage of funds apportioned to Construction Contracts and is calculated based upon the relative availability of DBE firms as compared to all firms in the relevant.	17.00%
• **Current DBE Commitment – Construction** Contract commitment divided by current contract value for Construction.	*$261,800,754* (17.00%)
• **Current DBE Participation** Total amount paid to date to DBEs divided by the amount paid to date to Prime.	*$74,069,521* *(14.36%)*
One hundred-two (102) Construction DBE subcontractors have been identified to-date.	

PROJECT LABOR AGREEMENTS (PLA) STATUS

Contract C1045 Westside Purple Line Extension, Section 1 Design-Build
(Reporting Data as of October 2017)

• **Targeted Worker Goal** Construction work to be performed by residents from Economically Disadvantaged Area in the United States	40.00%
• **Targeted Worker Current Participation**	66.09%
• **Apprentice Worker Goal** Construction work to be performed by Apprentices	20.00%
• **Apprentice Worker Current Participation**	16.89%
• **Disadvantaged Worker Goal** Construction work to be performed by Disadvantaged Workers who are residents of the United States	10.00%
• **Disadvantaged Worker Current Participation**	6.36%

SUMMARY OF CONTRACT MODIFICATIONS



	C1034 13 Executed	C1045 51 Executed	C1048 37 Executed	C1055 25 Executed	C1056 13 Executed	C1078 8 Executed	Total
Under $100K	(164,288)	95,248	574,448	(1,179,119)	(3,324,793)	(57,435)	**(4,055,939)**
$100K to $250K	321,000	626,791	616,809	436,190	245,024	151,324	**2,397,138**
$250K to $1M	-	4,482,506	1,050,980	390,709	-	500,798	**6,424,993**
Over $1M	-	13,979,069	-	-	1,983,179	8,121,591	**24,083,839**
Total Contract MODs	**156,712**	**19,183,614**	**2,242,237**	**(352,220)**	**(1,096,590)**	**8,716,278**	**28,850,031**
Contract Award Amount	**6,487,020**	**1,636,418,585**	**6,181,000**	**14,430,000**	**20,250,000**	**52,830,310**	**1,736,596,915**
% of Contract MODs	**2.4%**	**1.2%**	**36.3%**	**-2.4%**	**-5.4%**	**16.5%**	**1.7%**

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). The contract has been completed and is closed out.

Fifty-one Contract MODs with a total value of $19.2 million have been executed since the award of Contract C1045 – Tunnels, Stations, Trackwork, Systems and Systems Integration Testing by Skanska - Traylor - Shea, a Joint Venture.

Thirty-seven 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. The contract has been completed and is closed out.

Twenty-five Contract MODs with a total value of <$0.4> million have been executed since the award of Contract C1055 – Advanced Utility Relocations at Wilshire/Fairfax by W. A. Rasic Construction Company, Inc. The contract has been completed and is closed out.

Thirteen Contract MODs with a total value of <$1.1> million have been executed since the award of Contract C1056 – Advanced Utility Relocations at Wilshire/La Cienega by Steve Bubalo Construction Co. *The contract has been completed and is closed out.*

Eight Contract MODs with a total value of $8.7 million have been executed since the award of Contract C1078 – Division 20 Maintenance-of-Way and Non-Revenue Vehicle Building Location 64.

(IN MILLIONS OF DOLLARS)

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	$365.000	$1,250.000	100%	$330.584	26%	$321.170	26%
FEDERAL CMAQ	$12.171	$12.171	$12.171	$12.171	100%	$12.171	100%	$12.171	100%
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	$340.644	$340.644	40%	$340.644	40%	$340.644	40%
MEASURE R 35%	$869.178	$874.178	$593.732	$741.328	85%	$397.407	45%	$397.407	45%
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	$83.648	$83.648	100%	$83.648	100%	$54.500	65%
CITY OF LOS ANGELES	$75.273	$75.273	$0.000	$0.000	0%	$0.000	0%	$0.000	0%
TOTAL	$3,149.350	$3,154.350	$1,398.275	$2,430.871	77.1%	$1,167.534	37.0%	$1,128.972	35.8%

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)

FINANCIAL/GRANT STATUS

STATUS OF FUNDS ANTICIPATED

FEDERAL SECTION 5309 NEW STARTS: FTA Grant CA-03-0824 for $65.0 million was awarded on June 2, 2014. FTA Grant CA-03-0824-01 for $100.0 million was awarded on August 10, 2015. FTA Grant CA-2016-017 for $100.0 million was awarded on September 8, 2016. FTA Grant CA-2016-017 Amendment No. 1 for $100.0 million was awarded on September 22, 2017. Funds are available for drawdown.

FEDERAL SECTION 5339 ALTERNATIVE ANALYSIS: FTA Grant CA-39-0006 of $0.5 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 $856.0 million. $340.7 million funds are available for drawdown.

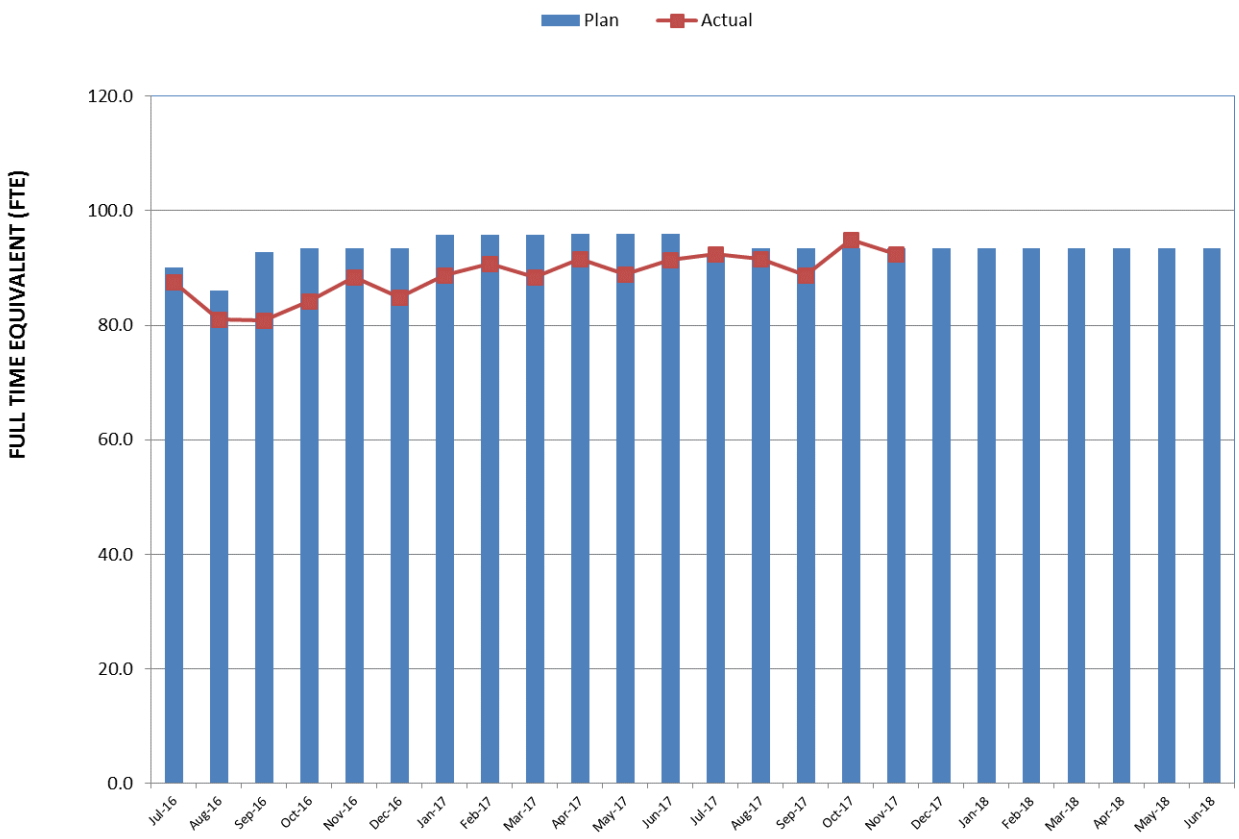
MEASURE R 35%: $593.7 million have been allocated to the Project through FY18. Funds are available for drawdown.

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.

CMAQ (Congestion Mitigation & Air Quality): FTA Grant CA-95-X264 for $12.2 million was awarded on July 27, 2015. Funds are available for drawdown.

STAFFING STATUS

Total Project Staffing – FTES



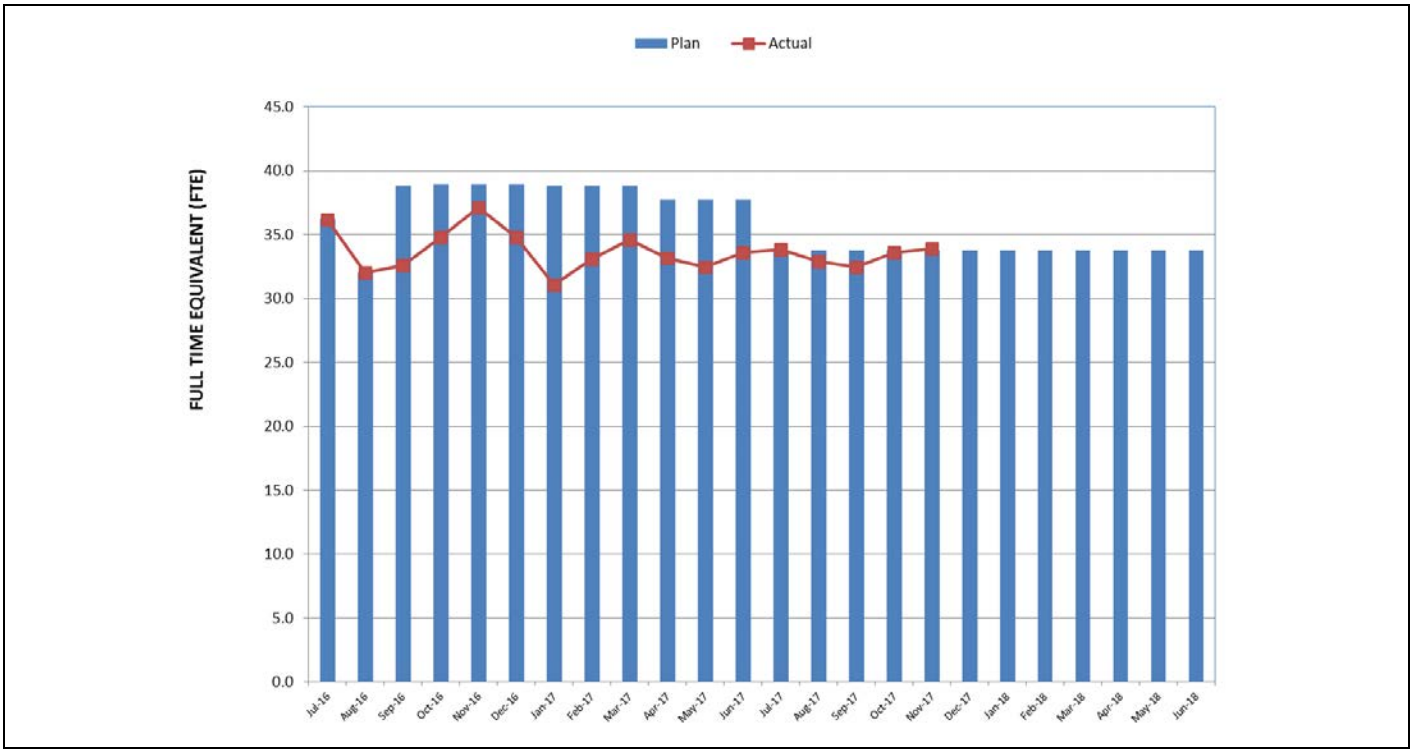
TOTAL PROJECT STAFFING

The overall FY18 Total Project Staffing Plan averages 93.4 FTEs per month.

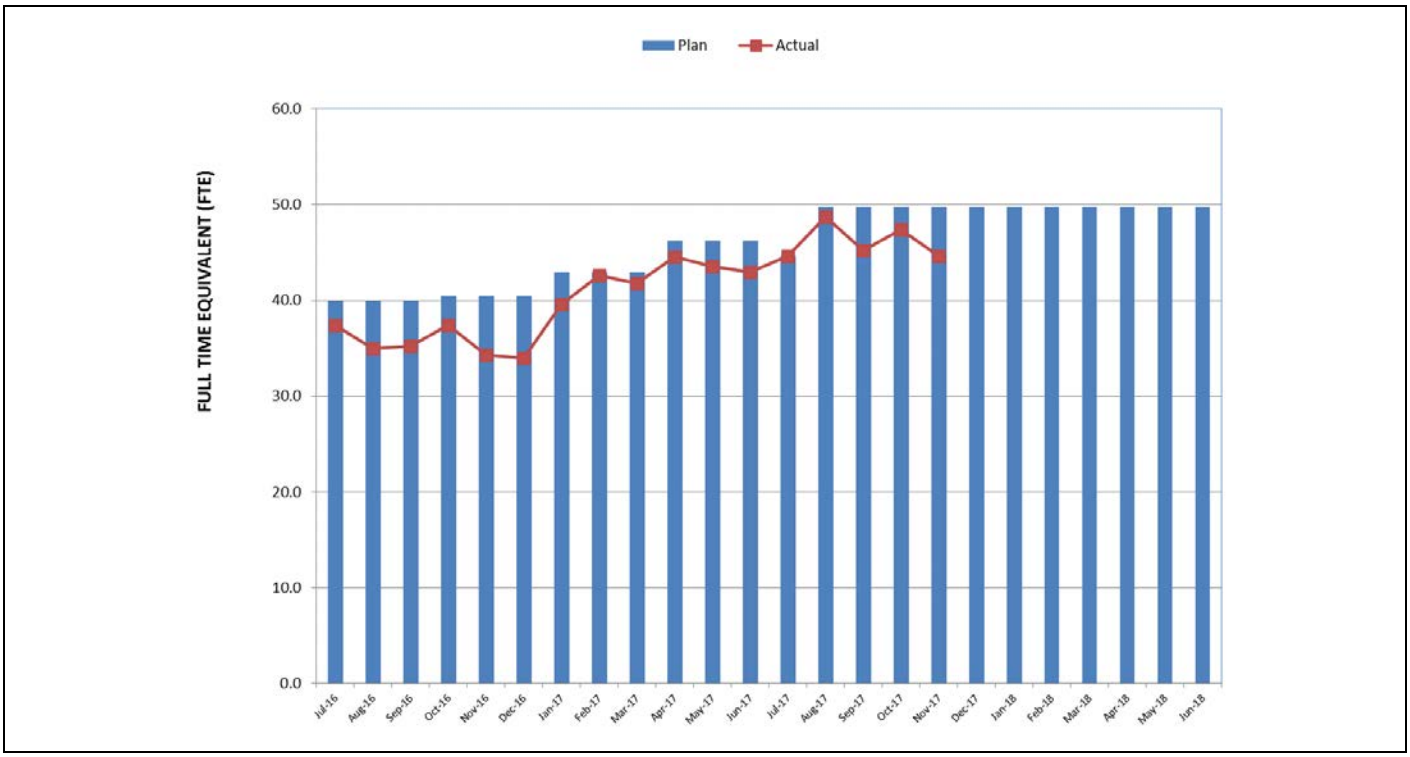
For November 2017, there were a total of 33.9 FTEs for MTA's Project Administration Staff and 58.6 FTEs for Consulting Staff. The total project staffing for November 2017 was 92.5 FTEs.

STAFFING STATUS (Continued)

METRO STAFFING – FTES

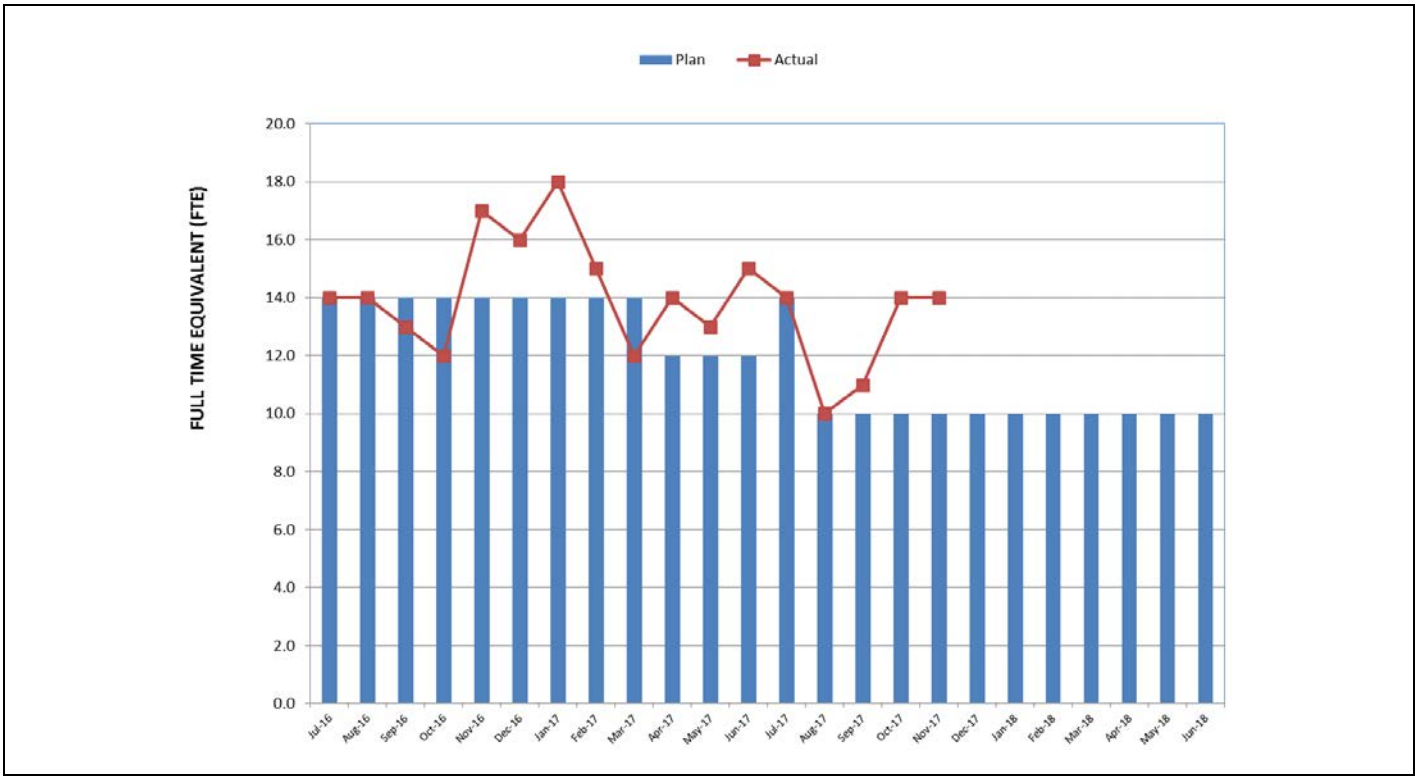


CONSTRUCTION MANAGEMENT SUPPORT SERVICES CONSULTANT – FTES



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/ Settlements Signed	Relocations		Parcels Available
						Required	Completed	
Full Takes	9	9	9	9	8	109	109	9
Part Takes	6	6	6	6	6	0	0	6
TCE	4	4	4	4	2	0	0	4
Total Parcels	**19**	**19**	**19**	**19**	**16**	**109**	**109**	**19**

Metro has possession of all the parcels by either acquisition, possession and use agreements or stipulations. The C1045 contractor has possession of all properties needed to construct the Project. The purchase agreement for Parcel W-6104 (Chalmers) at Division 20 was approved by the Metro Board in June 2016. A right-of-entry agreement has been executed between Chalmers and Metro in order to proceed with construction work in advance of closing escrow. *Escrow is expected to close in January 2018.*

QUALITY ASSURANCE STATUS

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

- Attended weekly Project staff meetings and progress meetings with the Contractor Skanska/Traylor/Shea (STS).
- Attended bi-weekly Quality Meeting with Contractor's Quality Department.
- Ongoing discussions and coordination with the Engineering Management Services Consultant (EMSC) and Construction Management Support Services Consultant (CMSSC) support staff for quality oversight.
- Reviewed daily inspection reports from the Contractor/Field Technician and CMSSC oversight inspection personnel. Inspections show that the work is predominately compliant.
- Reviewed and provided comments on quality related submittals construction work plan, project specifications, product data and quality manuals.
- Continue to track structural support members which require modification through open items list and RFI process (Wilshire/La Brea and Wilshire/Fairfax Support of Excavation).
- *Engaged in oversight activities for the installation of HDPE membrane at the Wilshire/La Brea Station. Contractor's independent lab is on site to verify proper installation and testing.*
- Processed 16 surveillances, 7 Quality Action Requests and 9 Nonconformance Reports and 1 Corrective Action Request.

C1078 – Division 20 MOW and NRV Building Location 64

- Attended weekly Project Staff Meetings and Progress Meetings with the Contractor.
- Reviewed and provided comments on quality related submittals.
- Reviewed daily inspection reports from Contractor's quality assurance inspection team. Inspections show that the work is predominately compliant.
- *Attended Workshops and Readiness Review Meetings for upcoming construction activities.*
- *Engaged in oversight activities for the erection, inspection and NDE testing of steel members for the construction of building structures.*
- *Processed 1 surveillance, 2 Quality Action Requests and 9 Nonconformance Reports.*

ENVIRONMENTAL STATUS

- Conducted field environmental monitoring and spot inspections for construction noise, vibration, storm water Best Management Practices (BMPs), dust and cultural resources for C1045, C1078, and Third Party work activities.
- *Attended weekly Project staff meetings and progress meetings with the Contractor Skanska/Traylor/Shea (STS) C1045, Clark Construction C1078 and adjacent city jurisdictions.*
- Conducted weekly Environmental Compliance Progress Meetings and monthly Environmental Mitigation (MMRP) update meeting with C1045 contractor.
- Reviewed Work Plans and attended Workshops and Readiness Review Meetings for various activities including Mud Matt Installation, HDPE Placement and Decking at Wilshire/La Brea Station.
- Evaluated potential water treatment and ventilation system mitigation measures for Wilshire/La Cienega station.
- Continued review of disposal quantities and soil classification documentation to assess potential contract changes related to increase disposal costs.
- *Cogstone paleo monitors found two fossils during the Wilshire/La Brea Station excavation. Fossil wood and a large mammal bone was identified. All finds were reported to the FTA.*
- Evaluated environmental sampling results (soil, air, water) to confirm compliance with local and state regulatory requirements and assess potential changes to associated protocol, permits and project activities.
- Began groundwater monitoring and remediation plans for Building Location 64.
- Evaluated updates to station Water Treatment Systems and compiled NPDES permit amendment for submittal to Water Board.
- *Evaluated issues requiring potential revisions, expert interpretation or amendment to EIR/EIS mitigation measures including vibration and street closures.*
- Finalized updates to noise level thresholds and reporting protocols between the City and Metro staff for activities in the City of Beverly Hills.
- *Finalized MMRP 18th quarterly updates.*

CONSTRUCTION RELATIONS STATUS

- *Produced and distributed eleven construction work notices for construction activities*.
- Held Meetings and made Project Presentations at the following: Wilshire Center Koreatown Neighborhood Council; Mid City West Community Council, Elected Officials Briefing, Sycamore Square Neighborhood Association, Construction Community Meetings and various stakeholders.
- Construction issues: Noise complaints near Wilshire/Western. Traffic complaints near Wilshire/La Cienega. Business mitigation measures put in place to address complaints from Young Dong Restaurant.
- Visited and updated businesses and residences at future station locations to discuss jet grouting, tie-in work and weekend closures at Wilshire/Western, decking installation and closures at Wilshire/La Cienega Station.
- Continued outreach for Tunnel Boring Machine Contest. *Public voting continues on Facebook until January 31, 2018.*
- *Continued additional business mitigations including: alternative parking options, business signage and print ads at no cost to the businesses.*
- *Attended the following meetings: Construction Management, Advanced Utility Relocations, Construction Relations, Environmental Mitigations, STS Third Party Workshop, Beverly Hills MOA and AUR, Marketing, Social Media, Eat, Shop, Play, Bus Relocations and Stops, DOT/Elected Officials, Beverly Hills Traffic Coordination and Board of Public Works.*
- Updated website, Facebook, Twitter as needed.
- *Continued with the "Eat, Shop, Play Spotlight" campaign to advertise and promote businesses that participate in ESP Wilshire and Beverly Hills.*

CREATIVE SERVICES STATUS

- Responded to RFIs and submittals.
- Participated in Design Build Workshops and document reviews.
- *Selected artists for nine corridor locations.*
- Continued design development for Wilshire Customer Center artwork relocation.
- Continued design development for MOW Building Location 64.
- *Hosted Art Coordination Meeting and studio visit for MOW Building Location 64*.

SAFETY & SECURITY STATUS

- *The Design Build Contractor (C1045) reported one recordable injury during December 2017.*
- Design Builder's construction activities (both day and swing) and the C1078 Maintenance of Way Building Location 64 site continue to be monitored to document contractor compliance with contract specifications.
- Safety staff attended weekly Tool Box Meetings, Progress Meetings, readiness reviews, and other project meetings to evaluate Contractors Safety Program compliance with contract requirements.
- *Metro Construction Safety hosted Monthly All Hands Safety Meeting for all Westside-Purple Line Extension Contractors (including environmental contractors) on December 19, 2017.*
- Construction Safety staff continue to work with Program Management and Construction Relations staff to monitor issues related to public concerns regarding noise, traffic and public/construction interfaces and public interactions with the construction crews.
- *November 2017 Contractor Work Hours (Design & Construction): 66,740*
- *Contractor - Project to Date Work Hours (Design & Construction) (through 11/30/2017): 1,813,751*
- *Total Project to Date Work Hours (Contractor & the IPO Staff) (through 11/30/2017): 2,305,676*
- *Project to Date Recordable Injury Rate: 1.0 (Eleven Recordable Injuries) (each rate is per 200,000 work hours) (National Rate: 2.8)*
- *Project to Date Total Days Away (DART) Injury Rate: 0.3 (Four Time Away From Work Injuries) (National Rate: 1.7)*
- *Project to Date Total Days Away Rate: 34.6 (399 Days Away From Work) (No National Rate Published)*
- National Rates for Heavy and Civil Construction (NAICS Code 237) are for Calendar Year 2016, published by USBLS in November 2017.

THIRD PARTY AGREEMENT STATUS

Third Party	Type of Agreement	Forecast Execution Date	Required Need Date	Status/ Comments
City of Los Angeles (LA)	Master Cooperative Agreement	N/A	N/A	Parties will work under 2003 MCA.
City of Beverly Hills (BH)	Memorandum of Agreement (La Cienega only)	9/14 (AUR) 02/17 (D/B)	9/14 (AUR) 1/17 (D/B)	City of Beverly Hills approved the MOA for the C1056 Wilshire/La Cienega AUR contract on August 19, 2014. City Council approved the MOA for the C1045 Design/Build contract on February 21, 2017. Required Need Date reflects the early contractual turnover date to C1045 contractor for all areas at Wilshire/La Cienega.
Los Angeles Department of Water and Power	Master Cooperative Agreement	N/A	N/A	Metro and LADWP will continue to work under the terms of the previous MCA.
Los Angeles County Public Works	Master Cooperative Agreement	4/11	3/12	Executed
Caltrans	Master Cooperative Agreement	8/11	3/12	Executed
Private Utilities	Utility Cooperative Agreement	9/14	N/A	Metro is working with affected third party utilities under existing agreements except for Qwest/Century Link and Level 3. Draft agreements for Qwest/Century Link and Level 3, and a new agreement for SCE are all under review. In absence of an agreement, work is being performed via work orders.

ADVANCED UTILITY RELOCATION STATUS

- All advanced utility relocations by third parties have been completed.

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.

- *A Peak Hour Exemption for the center muck shaft at Wilshire/La Brea Station has been approved by the City of Los Angeles for the dates of December 4, 2017 through March 30, 2018.*
- The Nighttime Noise Variance for the Wilshire/Fairfax Advanced Utility Relocation work has been extended to December 16, 2017 by the Los Angeles Police Commission.
- *The Nighttime Noise Variances for the five yard locations in the City of Los Angeles (North La Brea, South La Brea, Fairfax, Western and Crenshaw) have been extended to July 15, 2018 by the Los Angeles Police Commission.*
- The Nighttime Noise Variance for the decking and excavation work at Wilshire/La Brea Station has been extended to January 30, 2018 by the Los Angeles Police Commission.
- A Nighttime Noise Variance for utility relocations at the Wilshire/Western Station has been approved for the dates of September 3, 2017 through February 1, 2018.
- A Nighttime Noise Variance for piling operations and jet grouting at the Wilshire/Western TBM Retrieval Shaft has been approved for the dates of October 11, 2017 through February 11, 2018.
- A Nighttime Noise Variance for jet grouting operations at Cross Passage 6 has been approved for the dates of November 18, 2017 through April 30, 2018.
- *A Nighttime Noise Variance for concrete work at the MOW Building Location 64 has been approved for the dates of November 17, 2017 through March 17, 2018.*
- A Peak Hour Exemption for jet grouting operations at Cross Passage 6 has been approved by the City of Los Angeles for the dates of November 20, 2017 through January 29, 2018.
- A Holiday Moratorium Exemption for 2017 has been approved by the City of Los Angeles for the dates of November 20, 2017 through January 2, 2018.

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
July 2013	Completed Final Design - C1048 - Advanced Utility Relocations contract – Wilshire/La Brea

CHRONOLOGY OF EVENTS (Continued)

July 2013	Submitted TIFIA loan application
August 2013	Began C1048 Advanced Utility Relocations contract – Wilshire/La Brea
August 2013	NTP for Construction Management Support 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
October 2014	Issued C1056 Contract Award
November 2014	Issued C1045 Contract Award
January 2015	Issued C1045 Contract Notice to Proceed
January 2015	Issued C1056 Contract Notice to Proceed
February 2015	Received Contract C1078 Bids
August 2015	Issued C1078 Contract Award
September 2015	Issued C1078 Contract Notice to Proceed
October 2015	Contract C1055 achieved Substantial Completion
December 2015	Began piling operations for Wilshire/La Brea Station
June 2016	Began deck beam and decking operations for Wilshire/La Brea Station
August 2016	Began piling operations for Wilshire/Fairfax Station
August 2016	Contract C1056 achieved Substantial Completion

CHRONOLOGY OF EVENTS (Continued)

February 2017	Began deck beam and decking operations for Wilshire/Fairfax Station
March 2017	Began piling operations for Wilshire/La Cienega Station
June 2017	Decking operations for Wilshire/Fairfax Station are complete
September 2017	Began utility relocation work at the Wilshire/Western site
October 2017	Began street decking for Wilshire/La Cienega Station
November 2017	Began concreting activities for Wilshire/La Brea Station
December 2017	*Structural steel erection commenced at the Division 20 Maintenance-of-Way and Non-revenue Vehicle Building Location 64*

CONTRACT C1045 STATUS

Description: Westside Purple Line Extension Design-Build

Contractor: SKANSKA - TRAYLOR - SHEA

Contract No. **C1045**

Status as of: **December 29, 2017**

Progress / Work Completed:

- Wilshire/La Cienega decking (Stage 9) complete
- Tunnel Boring Machines (TBM) have been delivered to the US
- Wilshire/Western piling installation commenced
- Wilshire/La Brea Station waterproofing commenced

Major Activities (In Progress):

- Wilshire/La Brea Station concrete mud mat placement
- Wilshire/La Brea Station HDPE installation
- Wilshire/Fairfax excavation continues
- Wilshire/Fairfax strut and waler installation
- Wilshire/La Cienega street decking
- Wilshire/La Cienega instrumentation installation
- Tunnel instrumentation installation along Reach 1

Areas of Concern:

Contract Modification 45, which is the advancement of critical work at La Brea Station, was executed and the Wilshire/La Brea Station excavation effort was completed in November 2017. This issue is now closed.

Major Activities Next Period:

- Wilshire/La Cienega street decking completes
- Wilshire/Western jet grouting
- Wilshire/La Brea Station structural concrete work
- Wilshire/Fairfax Station under deck strut installation continues
- Tunnel instrumentation installation along Reach 1 continues

Schedule Summary:

Date of Award:	11/04/14
Notice to Proceed:	01/12/15
Original Contract Duration:	3250 CD
Current Contract Duration:	3250 CD
Elapsed Time from NTP:	1082 CD

	Original Contract Dates	Time Extension	Current Contract	Forecast	Variance CDs
Notice to Proceed (Estimated)	01/12/15	0	01/12/15	01/12/15	0
Milestone 1: Substantial Completion	06/09/23	0	06/09/23	06/09/23	0
Milestone 2: Stations available to UFS	10/07/22	0	10/07/22	10/07/22	0
Milestone 3: Start of Integration Testing to ROC	01/10/23	0	01/10/23	01/10/23	0
Milestone 4: Demobilization	12/06/23	0	12/06/23	12/06/23	0
Milestone 5: Temporary Construction Easements	01/10/23	0	01/10/23	01/10/23	0

Physical Percent Complete:

Physical completion: 24.54%*

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

Cost Summary:

	$ In millions
1. Award Value:	1,636.4
2. Executed Modifications:	19.2
3. Approved Change Orders:	0.0
4. Current Contract Value (1+2+3):	1,655.6
5. Incurred Cost:	635.4

CONTRACT C1078 STATUS

Description: Building Location 64 (MOW/NRV)
Contractor: Clark Construction

Contract No. **C1078**
Status as of: **December 29, 2017**

Progress / Work Completed:

- Artwork: Material review underway in coordination with Clark/Gruen
- Construction banner draft distributed for comment
- Real Estate: Property exchange agreement between Metro and Chalmers currently in escrow. Targeting to close escrow in January 2018
- Awaiting final signature for the COLA access road and track easement
- Lucky Brand Jeans: Backfilling retaining wall complete. Obtained permit to tie in to drainage system to Santa Fe
- Perimeter precast wall footing complete
- Rampwall backfill and below grade work complete

Major Activities (In Progress):

- Contractor continues design development
- Processing CN-00011: Schedule impacts to 3rd Party contractor work - Cost Schedule Proposal (CSP) in review. Independent Cost Estimate (ICE) in progress
- Processing CN-00012: City of Los Angeles access gate - CN issued to the Contractor. Pending CSP clarification
- Processing CN-00013: AST Leak Detection and Remote Lubrication Fill/Extract Station - CN issued to the Contractor. Pending CSP
- Processing CN-00015: Additional Sidewalk - CN issued. Pending CSP & ICE
- Processing CN-00016: Additional street lights, trees, and drip irrigation - CN issued. Pending CSP and ICE
- Processing CN-00018: Storm Drain Differing Site Conditions - CSP in review. Completion of ICE in progress
- Structural steel and decking erection ongoing
- Waterline relocation ongoing

Areas of Concern:

- Access to C1045 Contractor of December 17, 2019 continues to be monitored and tracked. No impact at this time.

Major Activities Next Period:

- Foundation excavation, shoring and layout begins at Parts Storage Building
- Deep plumbing installation continues
- Structural steel and decking erection ongoing
- Relocation of existing condensing unit to the roof at Parts Storage Building ongoing

Schedule Summary:

Date of Award:	08/03/15
Notice to Proceed:	09/30/15
Original Contract Duration:	853 CD
Current Contract Duration:	1,023 CD
Elapsed Time from NTP:	821 CD

	Original Contract Dates	Time Extension	Current Contract	Forecast	Variance CDs
Notice to Proceed (Estimated)	09/30/15	0	0	09/30/15	0
Milestone 1: Substantial Completion	01/30/18	170	1,023	07/19/18	-170

Physical Percent Complete:

Physical completion: 24.20%

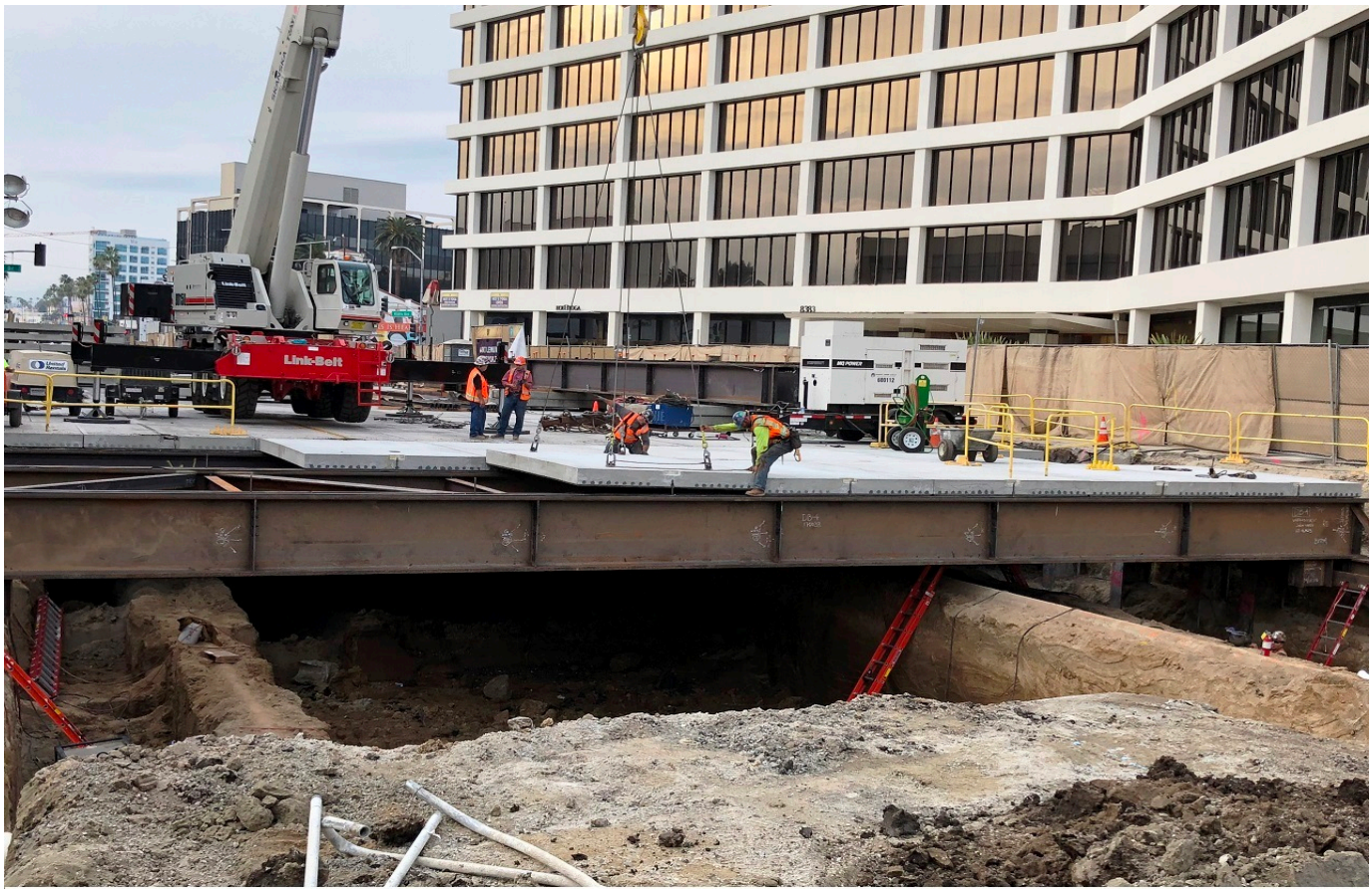
* *Note: Physical completion assessment reflects work completed and work in progress.*

Cost Summary:

	$ In millions
1. Award Value:	$ 52.8
2. Executed Modifications:	$ 8.7
3. Approved Change Orders:	$ 1.2
4. Current Contract Value (1+2+3):	$ 62.7
5. Incurred Cost:	$ 20.1

CONSTRUCTION PHOTOGRAPHS

Wilshire/La Brea Station HDPE Installation Looking East



Wilshire/La Cienega Station Street Decking Operation

APPENDIX

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.

APPENDIX

LIST OF ACRONYMS 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
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
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

APPENDIX

LIST OF ACRONYMS AND ABBREVIATIONS (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
MMRP	Mitigation Monitoring and Reporting Plan
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 AND ABBREVIATIONS (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
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
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
SBCC	*Steve Bubalo Construction Co*
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
SOE	Support of Excavation
SOQ	Statement of Qualification
SOV	Schedule Of Value
SOW	Statement Of Work

APPENDIX

LIST OF ACRONYMS AND ABBREVIATIONS (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
SWPPP	Storm Water Pollution Prevention Plan
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