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TO: DISTRIBUTION

FROM: JAMES COHEN
EXECUTIVE OFFICER, PROJECT MANAGEMENT

SUBJECT: WESTSIDE PURPLE LINE EXTENSION SECTION 1 PROJECT
NOVEMBER 2020 MONTHLY PROJECT STATUS REPORT

Enclosed herewith is the Monthly Project Status Report for the Westside Purple Line Extension Section 1 Project. This report contains the Los Angeles County Metropolitan Transportation Authority's (LACMTA) representation of the Westside Purple Line Extension Section 1 Project status for the period ending November 27, 2020.

If you have any questions regarding this report or its supporting information, please contact Rick Wilson, Executive Officer, Program Control at (323) 900-2113.

JC: ah
Enclosure

Westside Purple Line Extension Section 1 Project



Westside Purple Line Extension Section 1 Project

MONTHLY PROJECT STATUS REPORT

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

November 2020

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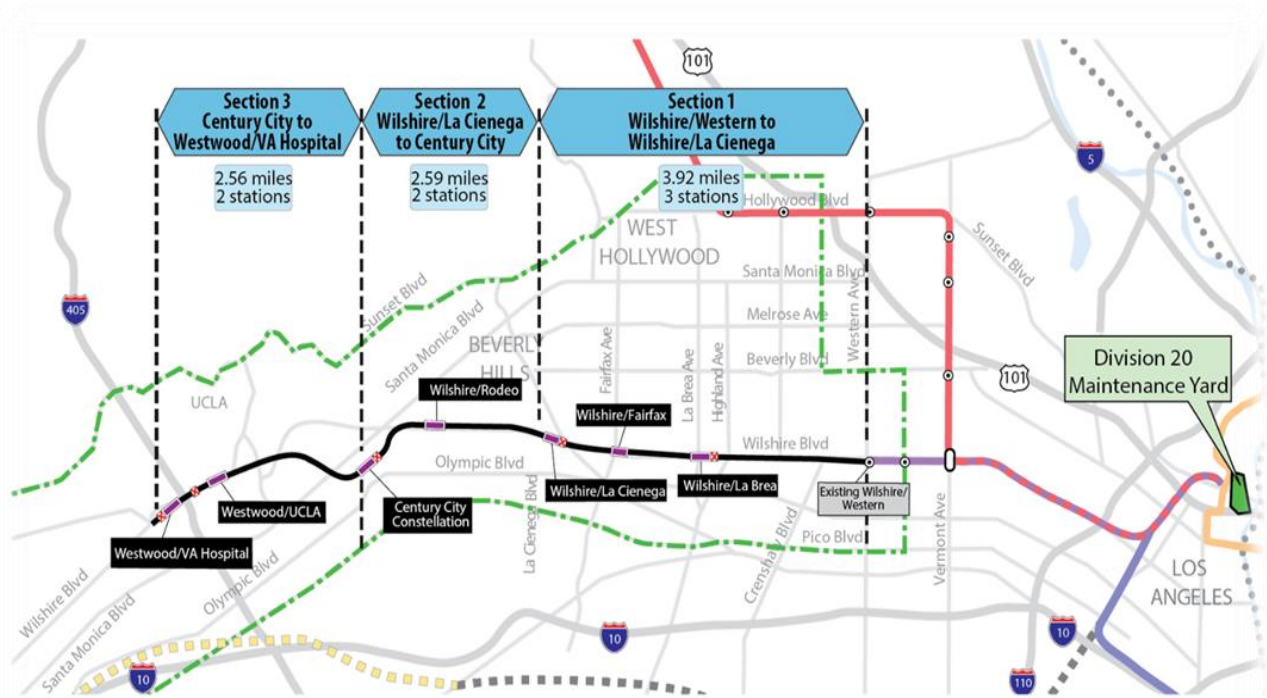
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PROJECT OVERVIEW

Project Background

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.

Major Procurements

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 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 provided for the 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 former MOW stores building and NRV facility are due to the future turn-back facility site in the yard. The contract substantial completion date was extended from May 1, 2019 to August 31, 2019.

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.

Program Management

The Westside Purple Line Extension Section 1 Project is being managed under the direction of an Integrated Project Management Office (IPMO). WSP provides engineering and design support services, while the Westside Extension Support Team (WEST) provides construction management support services. An overview of staffing is provided under the Staffing section of this report. The on-site program management team is also supported by Metro Headquarters resources to include, but not be limited to, engineering, risk management, environmental, quality management, operations and creative services departments.

Project Schedule and Budget: The Revenue Service Date (RSD) is planned for 2023.

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. The Current Budget and Current Forecast remain the same this period at \$3.2 billion. A detailed Life of Project Budget forecast is included under the Budget and Cost Forecast Section of this report.

Funding has been secured from a variety of sources to include:

- Federal Section 5309 New Starts
- Federal Section 5339 Alternative Analysis
- Measure R – TIFIA Loan (Transportation Infrastructure Finance & Innovation Act)
- Measure R 35%
- State STIP RIP
- CMAQ (Congestion Mitigation & Air Quality)
- State Capital Project Loans
- City of Los Angeles

Construction and Community Relations: The Construction and Community Relations team is tasked with promoting the Project and performing public outreach within the community to keep stakeholders informed of construction activities occurring along the Project alignment. To facilitate communication, community leadership councils have been formed which represent geographic-based constituent groups along the Project.

The Project is also engaged in social media outreach and various marketing and advertising efforts designed to keep the public informed and excited about the Project. These efforts are aimed at promoting businesses that are affected by construction. An overview of monthly activities is presented in the Construction and Community Relations section of this report.

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.

EXECUTIVE SUMMARY

In December 2020, the Project achieved 66.2% completion based on earned value measurements for design and construction. The critical path of the project remains the completion of the TBM tunnel drive, which is currently scheduled to finish in January 2021. The project team continues to review impacts differing site conditions and third-party requirements may be having on the schedule.

Currently, the C1045 Design/Build Contract substantial completion date remains June 15, 2023, and the forecast Revenue Service Date (RSD) for the Project remains unchanged at this time and is scheduled for completion in 2023. *The forecast Revenue Service Date (RSD) is under review.*

Design Status

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 engineering services during construction to the C1045 design/build contract.

Construction Status

As of November 30, 2020, the Red TBM (Soyeon) has mined 2,734 feet (83% complete) of the Reach 3 tunnel, and the Purple TBM (Elsie) has mined 2,828 feet (86% complete) of the Reach 3 tunnel. Both TBMs are parked east of the Wilshire/San Vicente intersection where a chemical grout block is being installed to mitigate the impacts of discovered anomalies within the tunnel envelope. Mining will resume once this grout block is completed.

To date, nine (9) out of twelve (12) Reach 1 cross passages have been excavated. Concrete placement for five (5) cross passages has been completed (#10, #11, #13, #14 & #15). Work continues at all other cross passages with anticipated completion in February 2021.

Except for the west hammerhead, all roof concrete placements (Blocks 1-13) at Wilshire/La Brea Station, have been completed. Above the roof (Blocks 6-13) activities move forward with the installation of permanent utilities and slurry placements. Plenum structural steel activities continue and metal decking installation (used to create the plenum) has commenced. Concrete placements at Appendage #1 (Wilshire/Orange) and excavation at Appendage #3 (between Wilshire & Sycamore) are scheduled in December 2020.

At Wilshire/Fairfax Station, concourse and 2nd lift wall concrete activities are scheduled for the months of December 2020 and January 2021. Work on the entrance structure and three appendages (Emergency Exit, Fan Room, Mechanical Room / Air Supply & Exhaust) move forward.

Structural concrete activities at Wilshire/La Cienega Station continue with both roof placements and the entrance structure protection slab placement scheduled in December

2020. Daily maintenance of dewatering wells continues, along with maintenance of surface aesthetics per the City of Beverly Hills (COBH) Memorandum of Agreement (MOA).

Substantial completion for the Division 20 Maintenance-of-Way and Non-Revenue Vehicle Building Location 64 Contract (C1078) was extended to August 31, 2019. The final progress payment has been made, and contract close-out efforts are underway.

The C1045 design/build contractor has taken possession of the rail site at the Division 20 Rail Yard. The rail welding subcontractor commenced production welding on October 23, 2020. The current target completion date to complete rail welding is December 2020.

Cost and Schedule Summary

For the C1045 Design/Build contract, the re-sequenced schedule, which reflects the current construction approach for the remainder of the project, was incorporated into the schedule update process in July 2020. *Metro has received the November 2020 schedule update, which reports the substantial completion date finishing 204 calendar days after the June 15, 2023 contractual date.*

The project team continues to review potential schedule impacts associated with differing site conditions and third-party requirements. No changes to the contractual substantial completion date of June 15, 2023, have been made at this time. *The forecast completion date is currently under review.*

The critical path of the project remains the completion of the TBM tunnel drive, followed by Wilshire/La Cienega Station structural concrete placement and finishes, systems, testing and pre-revenue operations. A summary graphic of the critical path is found on Page 14.

C1045 Design-Build Contract Schedule Metrics

	Original Contract Date/Duration	Time Extension (CD)	Current Contract Schedule	Forecast (Metro PMS)	Variance CD (Trending)
NTP	01/12/2015				
Substantial Completion	06/9/23	6	01/05/24	06/15/23	-204 days

The project budget and cost forecast has been adjusted to reflect the project’s \$200M LOP budget increase approval by Metro’s Board. The Current Budget and Current Forecast for the Project are both at \$3.4 billion. There are no claims on the Project. Detailed cost and budget information is provided on Page 17.

Key Management Concerns

Item 1: During Reach 3 (Wilshire/Fairfax to Wilshire/La Cienega) Horizontal Directional Drilling (HDD), which is done prior to the arrival of the TBMs, 'unknown potential anomalies' were discovered within the tunnel envelope near the Wilshire/San Vicente intersection. This discovery is impacting tunnel mining activities, the project schedule critical path and the substantial completion date.

Status/Action: Remedial efforts which include the installation of a chemical grout block at the Wilshire/San Vicente intersection are underway to mitigate impacts associated with encountering potential anomalies. A re-sequencing of follow-on construction activities has also been implemented to address the impacts associated with the potential anomalies. *Currently, both TBMs are parked east of the Wilshire/San Vicente intersection where the chemical grout block is being installed. Mining will resume once this grout block is completed.*

Project Construction Photos



Checking Welded Rail at Division 20 Rail Yard



Knockout Panels Removed at Wilshire/Western Station



Installation of Plenum Beams at Wilshire/La Brea Station



Concourse Rebar Installation at Wilshire/Fairfax Station



HDPE Placement at Wilshire/La Cienega Station

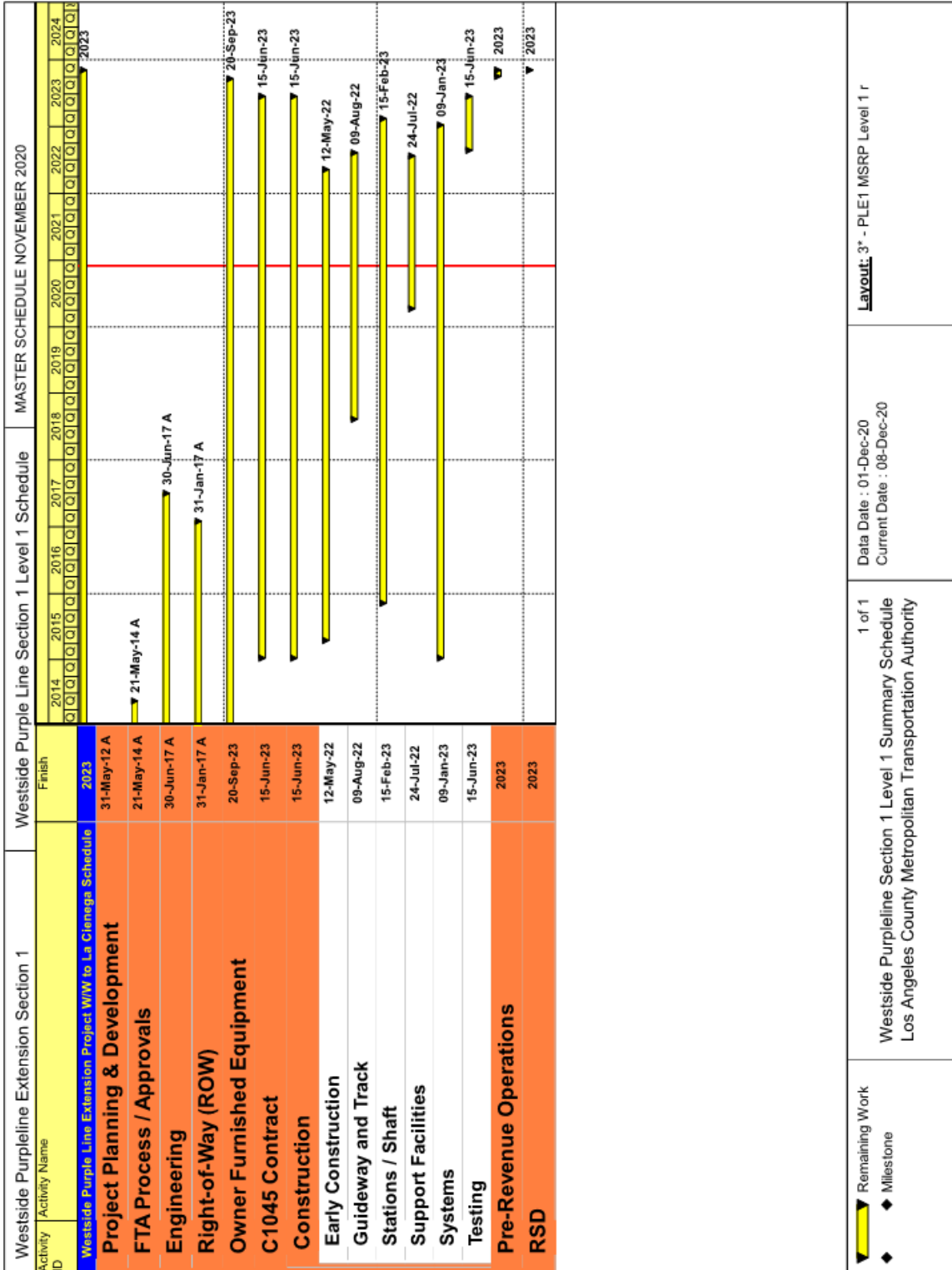


Reach 3 Anomaly Work at Wilshire/San Vicente

PROJECT STATUS

PROJECT SCHEDULE

Project Summary Schedule

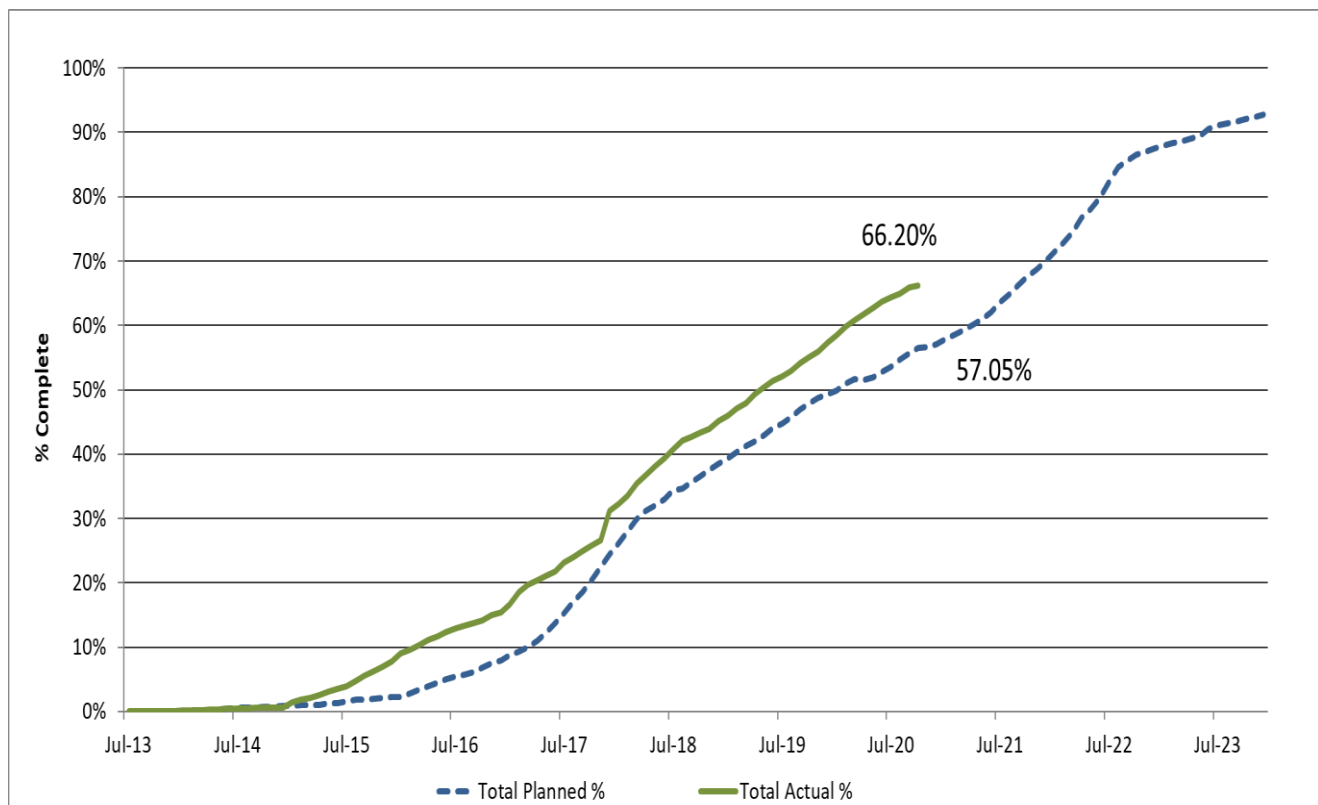


Progress Summary













	Status	Change from Last Period	Comment
Forecast Revenue Service	2023		Reviewing impacts from DSCs / 3rd Party Reqs.
TIFIA Revenue Service	10/31/2024	None	
FFGA Revenue Service	10/31/2024	None	
Final Design Progress:			
Contract C1045	100.0%	0.0%	
Contract C1078	100.0%	0.0%	
Construction Contracts Progress:			
Contract C1048	100.0%	0.0%	Completed on Schedule
Contract C1045	63.8%	0.3%	
Contract C1055	100.0%	0.0%	Completed on Schedule
Contract C1056	100.0%	0.0%	Completed on Schedule
Contract C1078	100.0%	0.0%	Completed

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

Planned vs. Actual Progress



Key Milestone Six-Month Look Ahead


	Milestone Date	Nov-20	Dec-20	Jan-21	Feb-21	Mar-21	Apr-21
Wilshire/La Brea: Roof Concrete Placement (Block 5) Completed	11/5/2020 A						
Wilshire/La Cienega: Placed Protection Slab - Entrance Structure	11/14/2020 A						
Wilshire/Fairfax: Placed Interior Wall Concrete (GL 3.5 - 5.5)	11/14/2020 A						
Division 20 Rail Yard: Complete Welding Running Rail	12/09/20						
Wilshire/La Brea: Appendage #1 Invert Concrete Placement (Emerg Exit)	12/17/20						
Wilshire/Fairfax: Concourse Concrete Placement (GL 5.5-8)	12/22/20						
Wilshire/La Cienega: Roof Concrete Placement (Block 13)	01/15/21						
Wilshire/Fairfax: Complete Fan Room Appendage (A1C)	01/18/21						
Wilshire/La Brea: Begin Concrete Platform Wall Activities	02/12/21						
Reach 1 Cross Passage Concrete Activities Complete	02/28/21						
Wilshire/La Brea: Complete Emergency Exit Appendage (#1)	03/30/21						
Wilshire/Fairfax: Complete Lift 2 Exterior Walls (GL 1-13)	04/06/21						


 MTA Staff

 MTA Board Action

 FTA (Federal Transit Administration)

 Utility Company

 Other Agencies

 Contractors

 Design Consultant

 D/B Contractor

"A" following date is actual and completed

* New

Major Equipment Delivery

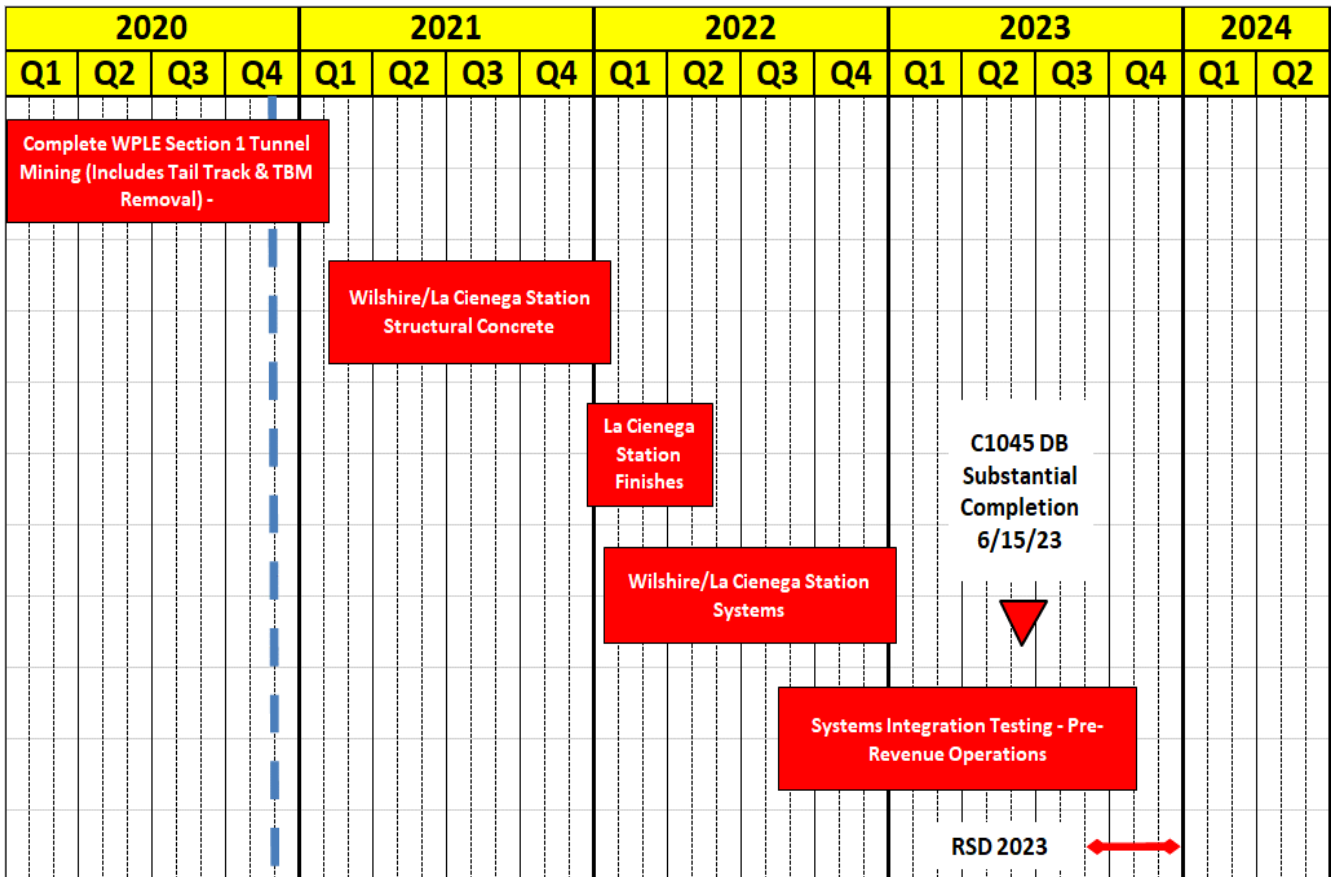
	Submittal	Procurement	Delivery	Installation
C1045 DESIGN/BUILD*				
Tunnel Boring Machine	1/29/16A	8/14/2017A	12/15/17A	7/13/18A
Emergency Ventilation Fans	11/30/18A	4/1/19A	6/21/21	6/22/21
Station Elevators	4/27/18A	4/27/18A	10/30/21	1/13/23
Station Escalators	4/27/18A	1/31/21	12/29/21	6/15/22
Track - Running Rail	7/09/19A	8/09/19A	4/9/20A	4/1/21
Traction Power Equipment	12/8/20	6/4/21	12/9/21	12/16/21
Automatic Train Control	4/1/16A	7/1/16A	12/20/16A	3/16/22
SCADA RTU System	2/2/17A	1/16/18A	5/18/18A	5/4/21
Radio System	2/2/17A	2/03/20A	2/25/21	7/29/21
Heavy Rail Vehicles***	7/16/15A	5/1/19A	3/31/23	4/15/23
Universal Fare System**	2/15/21	11/17/21	9/14/22	1/12/23

* Dates derived from STS's November 2020 Schedule.

** Forecast release date by STS to UFS contractor access at stations.

*** Metro supplied equipment

Project Critical Path



The re-sequenced schedule, which reflects the current construction approach for the remainder of the project, was incorporated into the schedule update process in July 2020.

For the month of November 2020, the critical path of the project remains the completion of the TBM tunnel drive, which is currently scheduled to finish in January 2021.

During Reach 3 (Wilshire/Fairfax to Wilshire/La Cienega) Horizontal Directional Drilling (HDD), which is done prior to the arrival of the TBMs, ‘unknown potential anomalies’ were discovered within the tunnel envelope near the Wilshire/San Vicente intersection. This discovery is impacting tunnel mining activities, the project schedule critical path and the substantial completion date.

Remedial efforts, which include the installation of a chemical grout block at the Wilshire/San Vicente intersection, are on-going to mitigate impacts associated with encountering potential anomalies. A re-sequencing of follow-on construction activities has also been implemented to address the impacts associated with the potential anomalies.

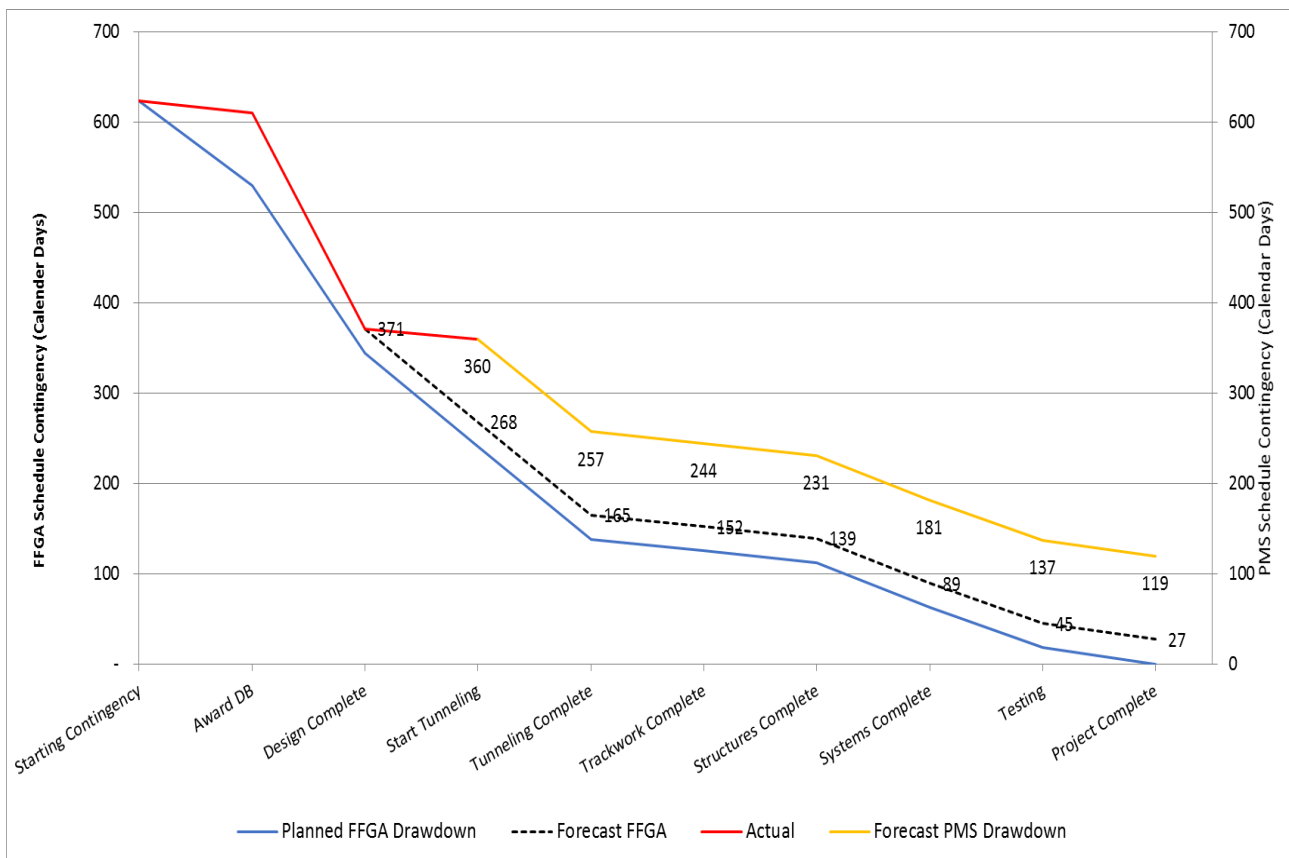
Currently, the Revenue Service Date is targeted for 2023. This forecast date is under review.

Project Schedule Contingency Drawdown Analysis

The project schedule contingency drawdown model provides a dual-axis perspective based upon the FFGA RSD of October 2024 and Metro’s Project Master Schedule (PMS) forecast of fall 2023.

The introduction of the PMS model axis reflects a proportional distribution of available float relative to the FFGA model. Based on an October 15, 2018 actual start of TBM mining, schedule contingency appears to maintain a noticeable buffer from the FFGA model. *This model will be updated when TBM mining is complete. The TBM mining completion date is currently being impacted by the Reach 3 anomaly discovered at the Wilshire/San Vicente intersection.*

With regards to the FFGA RSD, schedule float of twelve (12) months has been maintained.



Risk Management Narrative

Summary of Risks

During the quarterly risk register meeting, two (2) new risks were identified and one (1) risk was closed. A total of thirty-five (35) risks remain to be managed in the next quarter.

Of the thirty-five (35) risks, four (4) are scored as high, twelve (12) as medium and nineteen (19) as low.

The next WPLE Section 1 Project Risk Register quarterly update is scheduled for January 2021.

Top Four (4) Risks

The table below shows the top four (4) project risks.

Top Risks

Risk ID	Risk Description	Risk Score	Action Items
678.0	COVID-19 Pandemic Impact	20	1. Evaluate state and local government guidelines 2. Put contingency plans in place.
625.1	Encountering unknown anomalies during tunneling (e.g. tie-backs, steel beam, oil wells).	14	1. Continued investigation of anomaly under investigation at western array of Reach 3. 2. Work activities for surface chemical grouting from inside the box culvert and from the surface is underway. 3. Project impacts are currently being assessed.
202.0	Areas with concentrated methane and H2S presence will complicate construction progress and safety, increase price and may cause delays.	12	1. Metro has strict safety requirements in place, which are part of the safety requirements for contractors. Metro will further supplement existing safety requirements based on Geotechnical/Environmental investigations. 2. The Gas Task Force has been reassembled. 3. Reach 2 Tunneling has been completed. Currently mining Reach 3 tunnel.
676.0	Subcontractor ability to get the required resources to perform work.	10	1. Actively manage schedule and resource needs.

PROJECT COST

Project Cost Analysis – 865518

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	-	452,400	9,050	416,172	4,719	274,949	-	452,400	-
20	STATIONS, STOPS, TERMINALS, INTERMODAL	440,621	-	572,197	191	535,329	3,861	342,344	-	572,197	-
30	SUPPORT FACILITIES: YARDS, SHOPS, ADMIN. BLDGS	43,323	-	46,012	-	45,712	4	45,702	-	45,723	(288)
40	SITWORK & SPECIAL CONDITIONS	751,566	-	825,008	50	805,229	18,551	647,024	-	824,103	(905)
50	SYSTEMS	113,574	-	118,995	-	102,477	841	34,340	-	118,995	-
CONSTRUCTION SUBTOTAL (10-50)		1,737,378	-	2,014,612	9,291	1,904,919	27,977	1,344,358	-	2,013,419	(1,193)
60	ROW, LAND, EXISTING IMPROVEMENTS	175,634	-	202,980	-	202,980	-	184,427	-	202,980	-
70	VEHICLES	160,196	-	108,302	-	98,248	-	24,549	-	108,302	-
80	PROFESSIONAL SERVICES	412,710	-	575,463	285	457,555	3,398	406,056	-	575,450	(13)
SUBTOTAL (10-80)		2,485,918	-	2,901,357	9,576	2,663,702	31,375	1,959,390	-	2,900,151	(1,206)
90	UNALLOCATED CONTINGENCY	248,592	-	38,153	-	-	-	-	-	39,359	1,206
100	FINANCE CHARGES	375,470	-	375,470	-	-	-	-	-	375,470	-
TOTAL PROJECTS 465518 & 865518 (10-100)		3,109,980	-	3,314,980	9,576	2,663,702	31,375	1,959,390	-	3,314,980	-
	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	-	3,354,350	9,576	2,703,071	31,375	1,998,747	-	3,354,350	-

Original Budget

The Original Budget of \$3.1 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 remain the same this period at \$3.4 billion.

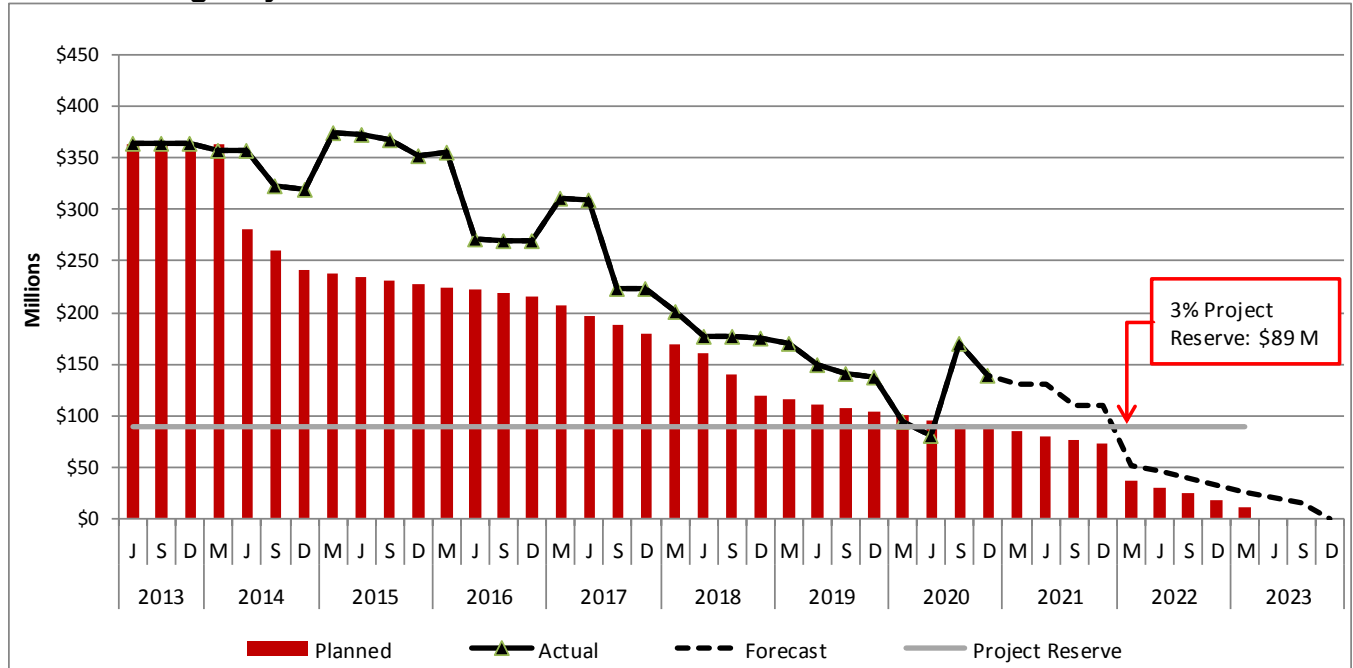
Commitments

The Commitments increased by \$9.6 million due to executed Contract Modifications for the Design/Build Contract C1045. The \$2.7 billion in Commitments to date represent 80.6% of the Current Budget.

Expenditures

The Expenditures increased by \$31.7 million for costs associated with the Design/Build Contract C1045, Engineering Management Support Services, Construction Management Support Services, and Metro Project Administration. The \$2.0 billion in Expenditures to date represent 59.6% of the Current Budget.

Cost Contingency Drawdown



Cost Contingency Drawdown Analysis

The Project’s Original Budget of \$3.2 billion (plus Finance Charges of \$0.4 billion) included a project cost contingency of \$320.6 million or 10.2% of the total project budget. In June 2020, the remaining contingency balance was below the 3% project reserve threshold of \$83.4 million. To date, the Project has experienced higher than expected differing site conditions, an increase in third party and safety requirements, and changes in scope.

In August 2020, the Board approved to amend the life-of-project (LOP) budget to address the cost contingency drawdowns, fund ongoing construction, third party and professional services expenses. The LOP budget was increased by \$200.0 million and the 3% project reserve is now \$89.4 million.

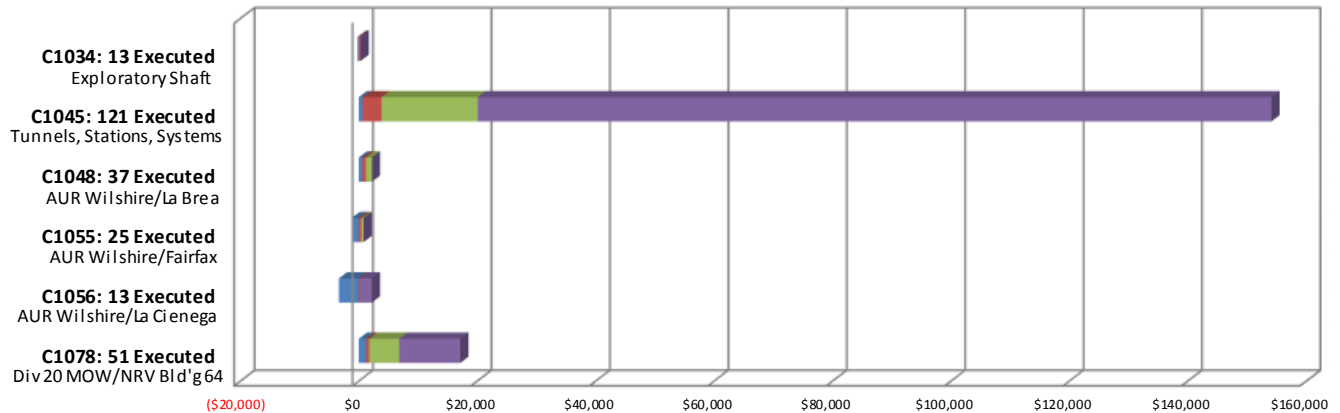
The project cost contingency drawdown curve is based on a 2023 Revenue Service date.

The allocated contingency decreased this period by \$9.6 million due to executed contract modifications for the C1045 Design/Build Contract.

PROJECT COST CONTINGENCY					
DOLLARS IN THOUSANDS					
	Original Contingency (Budget)	Previous Period	Current Period	To-Date	Remaining Contingency (Forecast)
Unallocated Contingency	248,592	(209,233)	-	(209,233)	39,359
Allocated Contingency	71,963	38,041	(9,576)	28,465	100,428
Total Contingency	320,555	(171,192)	(9,576)	(180,768)	139,787

Summary of Contract Modifications

Contract Modifications (MODs) by Cost Level
 Dollars in Thousands



	C1034 13 Executed	C1045 121 Executed	C1048 37 Executed	C1055 25 Executed	C1056 13 Executed	C1078 51 Executed	Total
Under \$100K	(164)	667	574	(1,179)	(3,325)	1,217	(2,211)
\$100K to \$250K	321	3,177	617	436	245	578	5,374
\$250K to \$1M	-	16,249	1,051	391	-	5,034	22,724
Over \$1M	-	134,059	-	-	1,983	10,309	146,351
Total Contract MODs	157	154,151	2,242	(352)	(1,097)	17,138	172,239
Contract Award Amount	6,487	1,636,419	6,181	14,430	20,250	52,830	1,736,597
% of Contract MODs	2.4%	9.4%	36.3%	-2.4%	-5.4%	32.4%	9.9%

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.

One hundred and twenty-one Contract MODs with a total value of \$154.2 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.

Fifty-one Contract MODs with a total value of \$17.1 million have been executed since the award of Contract C1078 – Division 20 Maintenance-of-Way and Non-Revenue Vehicle Building Location 64.

DISADVANTAGED BUSINESS ENTERPRISE (DBE)

As of October 2020:

DBE Goal – Design The percentage of funds apportioned to Design Contracts	20.25%
Current DBE Commitment Design Total DBE Committed Dollars divided by Total Contract Value for Design	\$13.6 M 20.25%
Current DBE Participation Total amount paid to date to DBEs divided by the amount paid to date to Prime	\$13.1 M 19.85%

Sixteen (16) Design DBE sub-consultants have been identified to date.

DBE Goal – Construction The percentage of funds apportioned to Construction Contracts	17.00%
Current DBE Commitment Construction Contract commitment divided by current contract value for Construction	\$200.3 M 12.53%
Current DBE Participation Total amount paid to date to DBEs divided by the amount paid to date to Prime	\$154.1 M 14.15%

One hundred forty-seven (147) Construction DBE sub-contractors have been identified to date.

PROJECT LABOR AGREEMENTS (PLA)

As of October 2020:

Targeted Worker Goal Construction work to be performed by residents from Economically Disadvantaged Areas in the United States	40.00%
Targeted Worker Current Attainment	61.89%
Apprentice Worker Goal Construction work to be performed by Apprentices	20.00%
Apprentice Worker Current Attainment	19.78%
Disadvantaged Worker Goal Construction work to be performed by disadvantaged workers	10.00%
Disadvantaged Worker Current Attainment	11.98%

FINANCIAL/GRANT

Status of Funds by Source

DOLLARS IN MILLIONS

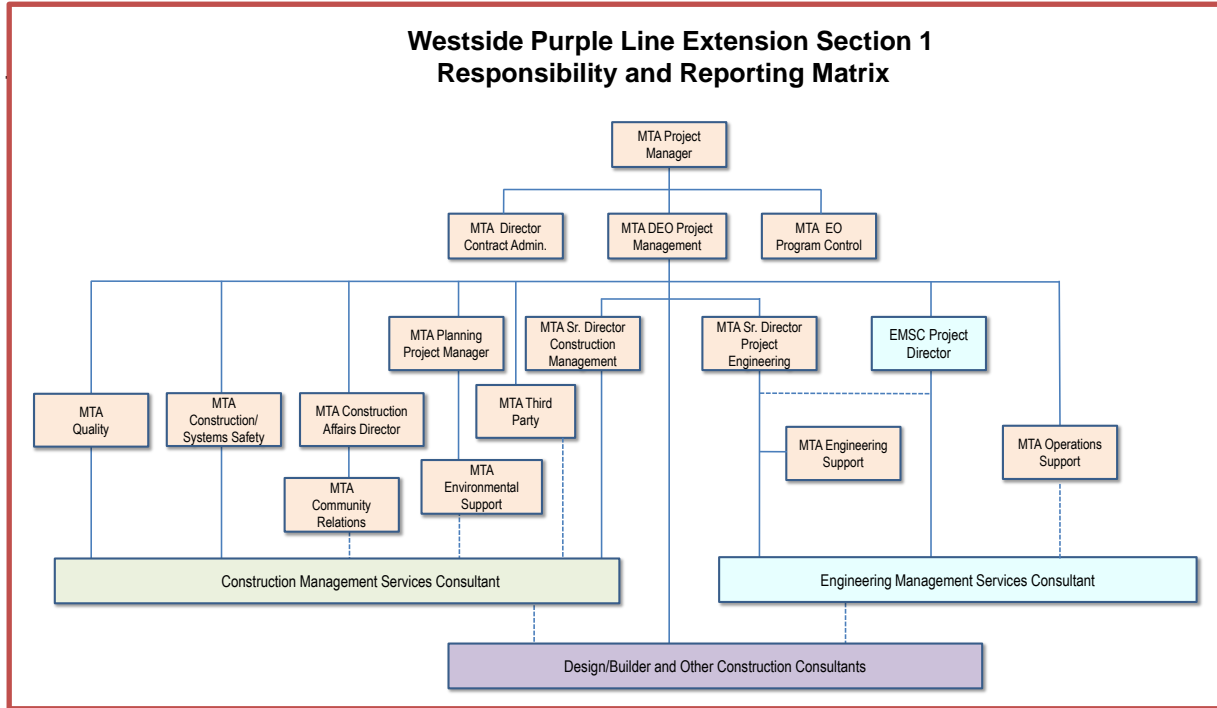
SOURCE	(A)	(B)	(C)	(D)	(D/B)	(E)	(E/B)	(F)	(F/B)
	ORIGINAL BUDGET	TOTAL FUNDS ANTICIPATED	TOTAL FUNDS AVAILABLE	COMMITMENTS \$	%	EXPENDITURES \$	%	BILLED TO FUNDING SOURCE \$	%
FEDERAL - SECTION 5309 NEW STARTS	\$1,250.000	\$1,250.000	\$665.000	\$1,250.000	100%	\$623.578	50%	\$617.795	49%
FEDERAL CMAQ	\$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	\$749.306	\$749.306	\$749.306	100%	\$749.306	100%	\$749.306	100%
MEASURE R 35%	\$869.178	\$1,213.622	\$932.750	\$636.326	52%	\$558.424	46%	\$499.871	41%
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	\$50.898	\$50.898	\$50.898	100%	\$50.898	100%	\$50.898	100%
CITY OF LOS ANGELES	\$75.273	\$75.273	\$1.290	\$1.290	2%	\$1.290	2%	\$1.290	2%
TOTAL	\$3,149.350	\$3,354.350	\$2,414.495	\$2,703.071	80.6%	\$1,998.747	59.6%	\$1,934.411	57.7%

EXPENDITURES ARE CUMULATIVE THROUGH NOVEMBER 30, 2020
 ORIGINAL BUDGET BASED ON JULY 2014 BOARD APPROVED LOP BUDGET

*OTHERS INCLUDE Prop A/C/TDA Admin (\$4.1M), General Fund (\$1.8M), and State Capital (\$45.0M)

PROJECT ORGANIZATION AND STAFFING

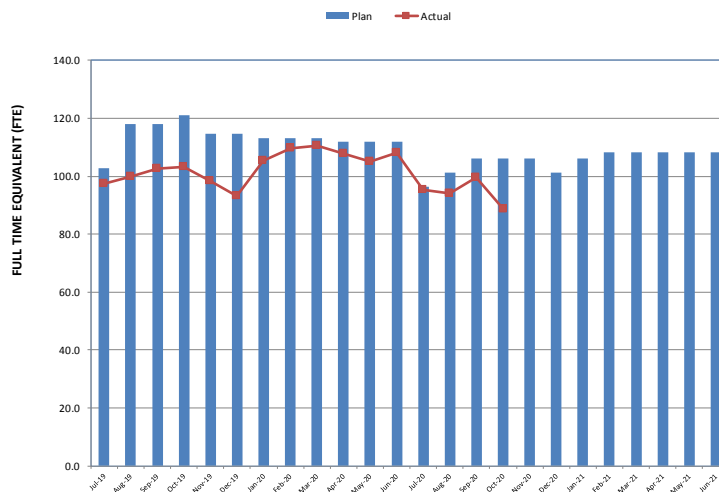
The design-build contract is being managed by a joint team of Metro and consultant personnel jointly located at the Integrated Project Management Office (IPMO).



The overall FY21 Total Staffing Plan averages 105.4 FTEs per month.

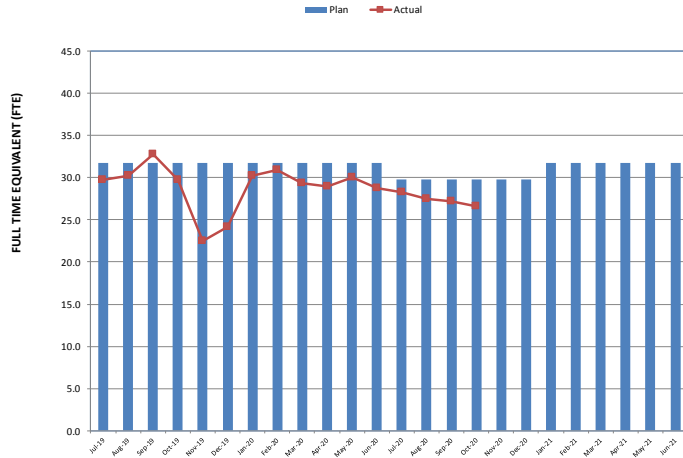
For October 2020, there were a total of 26.7 FTEs for MTA's Project Administration Staff and 62.0 FTEs for Consulting Staff. The total project staffing for October 2020 was 88.7* FTEs.

Total Project Staffing – Metro and Consultants

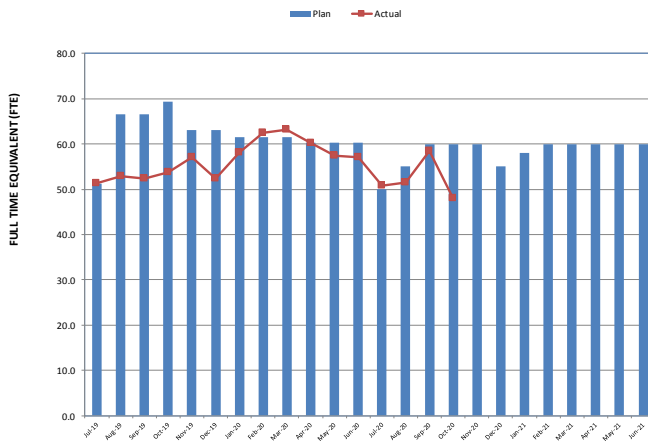


*Actuals include 3.0 FTEs related to Project Management Support Services (PMSS).

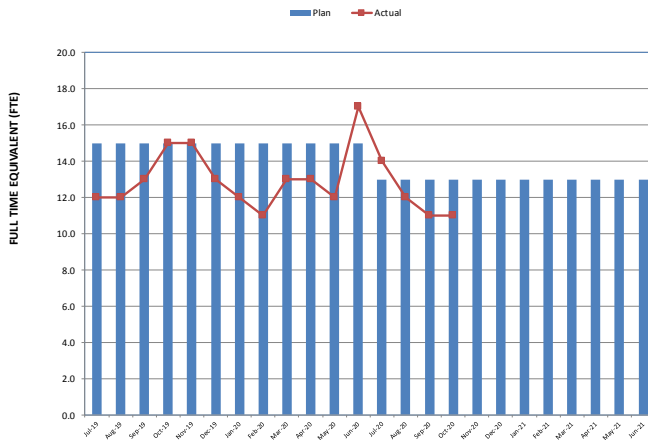
Metro Staff



CM Support Services Staff (Consultant)



Engineering Services Staff (Consultant)



Staffing by Group

The opposing graphs represent planned vs. actual staffing levels by group.

Metro staffing includes full time staff located in the IPMO as well as part-time support located at Gateway Headquarters.

Staffing plans are developed for each fiscal year based on project needs.

All above data through October 2020

REAL ESTATE

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	9	109	109	9
Part Takes	6	6	6	6	6	0	0	6
TCE	4	4	4	4	3	0	0	4
Total Parcels	19	19	19	19	18	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 along the alignment needed to construct the Project.

There remains one parcel at the Wilshire/Fairfax Station location in the condemnation phase. *The final settlement agreement has been reached and is expected to be closed in January 2021.*

QUALITY ASSURANCE

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

- 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.
- Station quality progress:
 - Wilshire/La Brea – engaged in oversight activities for construction of roof structure, plenum structure, and HDPE.
 - *Wilshire/Fairfax – monitored entrance structure (SOE) excavation, concourse deck level walls, appendage structures/wall room.*
 - *Wilshire/La Cienega – engaged in oversight activities for construction of exterior walls (second lift), HDPE, roof structure, and concourse deck structure.*
- *Processed 42 surveillances, 22 Quality Action Requests (QARs), 30 Nonconformance Reports (NCRs) and one (1) Corrective Action Request (CAR).*

C1078 – Division 20 MOW and NRV Building Location 64

- Project is in final phase of completing punch list items.
- Processed two (2) surveillances, 11 QARs (all closed), 17 NCRs and one (1) CAR.

ENVIRONMENTAL

- *Resolved comments, provided supporting documentation, and coordinated with FTA/PMOC to close out MMRP report from 2nd Quarter of 2020 (Q29).*
- *Conducted field environmental monitoring and spot inspections for stormwater BMPs, dust, and cultural resources for Contract C1045 and third-party work activities.*
- *Submitted the MMRP, 30th Quarterly Report to the FTA.*
- *Transmitted the July, August, September, and October 2020 Paleontological Resources Monthly Reports to the FTA.*
- *Coordinated with the Contractor to improve cycling of ventilation speeds at all yards during periods of inactivity based on feedback from residents within the project area.*

CONSTRUCTION AND COMMUNITY RELATIONS

- Attended virtual Neighborhood Council meetings, monthly environmental mitigation meetings, held meetings online and made Project presentations to: Beverly Hills residents and business stakeholders, elected officials' deputies, construction community meetings and various stakeholders.
- Continued with the "Eat, Shop, Play Spotlight" (ESP) campaign to advertise and promote businesses that participate in ESP Wilshire and Beverly Hills, specific to eateries that remained open for pick-up and delivery during COVID-19 restrictions.
- Continued additional construction mitigations including business signage, street signs and print ads at no cost to the businesses.
- Corresponded with Los Angeles City Council district offices and City of Beverly Hills regarding construction effects on traffic and shared major stakeholder concerns.
- Updated website, Facebook, Twitter as needed. Published monthly PLE (Purple Line Extension) newsletter to email list. Placed monthly ads in local papers.
- Tours were suspended due to COVID-19.
- Produced and distributed:
 - *Six (6) construction work notices for construction activities;*
 - The La Cienega Monthly Look Ahead;
 - Weekly look-ahead for Division 20;
 - Weekly construction look-ahead emails to construction stakeholders; and
 - Monthly look-ahead emails for the City of Beverly Hills.

CREATIVE SERVICES

- *Continued design development for artwork lighting.*
- Continued design development for Wilshire Customer Center artwork relocation to Wilshire/Western Station.
- Continued design development for concourse glass tile artwork design at Wilshire/La Cienega Station.
- Coordination underway with design-builder for fabrication procurement.

SAFETY & SECURITY

- *There was no recordable injury in November 2020.*
- *There were four (4) COVID-19 cases in November 2020.*
- *Metro Safety staff conducted daily safety inspections, attended weekly Tool Box, Progress, readiness review and other project meetings to evaluate contractor's safety program compliance with contract requirements.*
- *Metro Safety staff worked regularly with Program Management and Construction Relations staff to monitor issues related to public concerns regarding noise, traffic and public/construction interfaces as well as public interactions with the construction crews.*
- *Both Tunnel Boring Machines (TBM's) have stopped mining in Reach 3 (Wilshire/Fairfax to Wilshire/La Cienega) and have encountered no methane alarms. TBMs are close to the San Vicente anomalies that are being grouted to accept TBM entry.*
- *On November 2, 2020 Cal OSHA Mining and Tunneling conducted a 'Programmed' inspection and observed small violations. The Project has not received any definitive reports.*
- *October 2020 Contractor Work Hours (Design & Construction): 96,413*
- *Contractor - Project to Date Work Hours (Design & Construction) (through 10/31/20): 4,111,426*
- *Total Project to Date Work Hours (Contractor & the IPO Staff) (through 10/31/20): 5,223,927*
- *Project to Date Recordable Injury Rate: 1.26 (33 Recordable Injuries) (each rate is per 200,000 work hours) (National Rate: 2.5)*
- *Project to Date Total Days Away (DART) Injury Rate: 0.115 (3 Days Away or Lost Time) (each rate is per 7 Days/Time Away from Work Injuries) (National Rate: 1.5)*

APPENDIX 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

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
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
January 2018	Decking operations for Wilshire/La Cienega Station are complete
February 2018	Began invert slab concrete placement at the Wilshire/La Brea Station
April 2018	Wilshire/Fairfax Station excavation cleared the Paleo Zone (Elevation 105')
June 2018	Concrete wall pours needed to support TBM assembly at Wilshire/La Brea Station have been completed
July 2018	Began delivery of TBM components to the Wilshire/La Brea Station site
October 2018	The Reach One (1) mining operation commenced with the launch of TBM #1 from Wilshire/La Brea Station.
November 2018	TBM #2 was launched from Wilshire/La Brea Station.
December 2018	The bottom of excavation was reached at the Wilshire/Western TBM Retrieval site.
January 2019	The temporary concrete slab at the Wilshire/Western TBM Retrieval site was placed.
February 2019	Reached the bottom of excavation at Wilshire/Fairfax Station.
March 2019	Completed mud mad placement at Wilshire/Fairfax Station.
April 2019	HDPE protection slab placement commenced at Wilshire/Fairfax Station.
May 2019	Substantial Completion for the C1078 Contract (Division 20 MOW/NRV Building Location 64) was achieved on May 1, 2019.
June 2019	Both TBM #1 (Soyeon) and TBM #2 (Elsie) completed the Reach One (1) tunnel alignment mining.

July 2019	Began transport of both TBMs (#1 Soyeon and #2 Elsie) from the Wilshire/Western Shaft to Wilshire/La Brea Station.
August 2019	Completed invert concrete placement at Wilshire/Fairfax Station.
September 2019	Bottom of excavation reached at Wilshire/La Cienega Station.
October 2019	TBM #2 (Elsie) commenced Reach #2 tunnel drive.
November 2019	Completed 1 st lift exterior wall concrete placement at Wilshire/Fairfax Station.
December 2019	Commenced station invert concrete placement at Wilshire/La Cienega Station.
January 2020	Commenced Reach 1 cross passage excavation.
February 2020	Completed Wilshire/La Cienega Station invert concrete placement.
March 2020	Commenced Wilshire/La Brea Station roof concrete placement.
April 2020	Arrival of first rail delivery to the Division 20 Rail Yard.
May 2020	TBM #1 (Soyeon) completed the Reach #2 tunnel drive. TBM #2 (Elsie) commenced the Reach #3 tunnel drive.
June 2020	Completed 1st lift wall concrete placement (GL 3-15) at Wilshire/La Cienega Station. Completed Reach Two (2) tunnel mining.
July 2020	TBM #1 (Soyeon) commenced the Reach #3 tunnel drive.
August 2020	Commenced concourse concrete placement at Wilshire/Fairfax Station.
September 2020	The first roof placement (Block 7) at Wilshire/La Cienega Station was completed.
October 2020	Commenced welding running rail at the Division 20 Rail Yard.
November 2020	<i>Placed protection slab at the Wilshire/La Cienega Station entrance.</i>