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TO: DISTRIBUTION

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SUBJECT: PURPLE (D LINE) EXTENSION PROJECT SECTION 1
DECEMBER 2021 QUARTERLY PROJECT STATUS REPORT

Enclosed herewith is the Quarterly Project Status Report for the Purple (D Line) Extension Project Section 1. This report contains the Los Angeles County Metropolitan Transportation Authority's (LACMTA) representation of the Purple (D Line) Extension Project Section 1 status for the period ending December 31, 2021.

If you have any questions regarding this report or its supporting information, please contact Salvador Chavez, Deputy Executive Officer, Program Control at (323) 900-2188.

JC: ah
Enclosure

PURPLE (D LINE) EXTENSION PROJECT Section 1



Metro[®]

Purple (D Line) Extension Project

Section 1

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 2021

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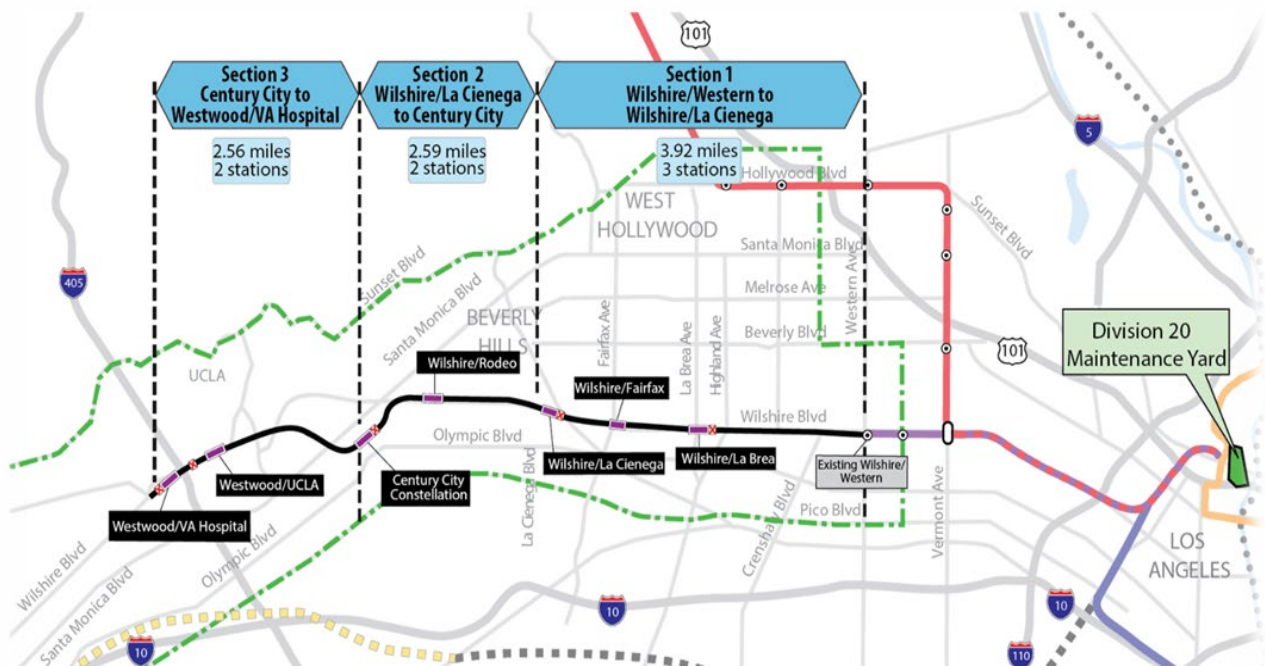
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PROJECT OVERVIEW

Project Background

Section 1 of the Purple (D 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 all three sections of the Project were environmentally cleared and adopted by LACMTA Board of Directors.

Section 1 will extend the existing Purple (D 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 C1034. 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 and 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 (D 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 is 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 (D 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 systems testing.

Program Management

The Purple (D Line) Extension Project Section 1 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 Project Staffing section of this report. The on-site program management team is also supported by Metro Headquarters' resources including but not limited to engineering, risk management, environmental, quality management, operations and creative services departments.

Project Schedule and Budget: Based on a review of the project schedule, Metro has adjusted the Revenue Service Date (RSD) from the Fall of 2023 to the Fall of 2024.

The Original Budget of \$3.1 billion reflects the Life of Project Budget approved by the Board on July 24, 2014 plus Finance Charges of \$0.4 billion. Based on a review of the project budget, the Current Budget and Current Forecast have been adjusted to \$3.5 billion. A detailed Life of Project Budget forecast is included under the Project Cost 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.

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 2021, the Project achieved 74.2% completion based on earned value measurements for design and construction. The critical path of the Project remains the west hammerhead structural work at the Wilshire/La Cienega Station.

The revised schedule has been incorporated into the monthly schedule update process and the new target forecast substantial completion date is October 9, 2024. The forecast Revenue Service Date (RSD) for the Project remains Fall of 2024.

No adjustments to the C1045 Design/Build Contract substantial completion date of June 15, 2023 have been made to date.

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

Reach 1 (Wilshire/Western to Wilshire/La Brea): *Trackwork installation activities on the north tunnel continue.* The south tunnel invert concrete placement was completed on October 29, 2021. Walkway concrete placement on the south tunnel continues.

Reach 2 (Wilshire/La Brea to Wilshire/Fairfax): Cross passage (CP) excavation continues. *Five of six cross passages (CPs 16, 18, 19, 20 and 21) have been excavated to date. The sixth cross passage (CP 17) is expected to commence excavation in January 2022. Concrete placement on cross passages 16 and 20 is complete. Rebar installation has started on cross passages 18 and 19.*

Reach 3 (Wilshire/Fairfax to Wilshire/La Cienega): Ground improvements to CP 23 are complete. *Continued ground mitigation efforts to cross passages 24 and 25 move forward.*

Wilshire/La Brea Station: West hammerhead and entrance structure work move forward. *Architectural and interior MEP rough-in work continues at the east concourse, platform level rooms and the high bay area. Work at Appendage #3 (Blast Relief Shaft), Appendage #4 (Exhaust Vent) and Appendage #5 (Emergency Exit) continue.*

Wilshire/Fairfax Station: All concrete roof sections (11 out of 16) for this phase of construction have been placed. *Concourse slab concrete placements at the east end of the Station are complete. Interior wall concrete placements at the west end of the station are also complete.* Entrance structure and work on Appendages A1C (Fan Room), A1D (Entrance Plaza), A2A (Supply Room/Exhaust), A2B (Emergency Exit) move forward. *Plenum slab placement is scheduled in January 2022.*

Wilshire/La Cienega Station: Construction is ongoing at Appendage AG (Emergency Exit), Appendage AF (Exhaust Vent) and Appendage AE (Traction Power/Blast Relief Shaft).

Traffic control was implemented at Gale Drive for Appendage AD (Emergency Exit) construction. Concourse slab concrete placements at the east end of the station have commenced. East and west hammerhead structural work continues. 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. Contract closeout efforts continue.

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 welding of running rail at the Division 20 Rail Yard was completed on December 9, 2020. Rail deliveries from the rail yard to Wilshire/La Brea Station commenced on March 29, 2021. *Rail delivery for the entire Reach 1 (Wilshire/Western to Wilshire/La Brea) tunnel was completed in December 2021.* It is anticipated that final rail deliveries to the Project will resume in April 2022.

Cost and Schedule Summary

Metro has received the December 2021 schedule update for the C1045 Design/Build Contract, and the schedule reports the substantial completion date 543 calendar days after the June 15, 2023 contractual date.

The revised schedule with a new target substantial completion date of October 9, 2024 has been incorporated into the monthly schedule update process. Based on current progress and maintaining the current schedule logic, the substantial completion is trending eight (8) weeks behind the target schedule. The Project critical path remains with the west hammerhead structural work at Wilshire/La Cienega Station. Contractor working schedules are already in place to mitigate some of the experienced delays.

The Project’s current target RSD remains Fall 2024. No adjustments to the contractual substantial completion date of June 15, 2023 have been made to date.

The current critical path of the Project remains the west hammerhead structural work at Wilshire/La Cienega Station followed by Station finishes, systems installation, 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	12/9/24	2024	-543 days

The Current Budget and Current Forecast for the Project are both \$3.5 billion. Detailed cost and budget information is provided on Page 17.

There is currently one (1) open claim that is being evaluated:

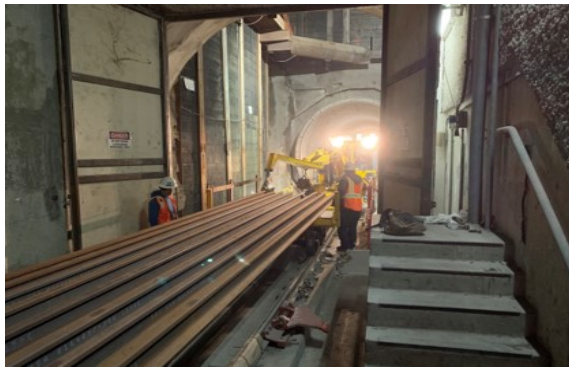
- Differing Site Conditions (DSCs) experienced during the Reach 2 tunnel drive (Claim 002).

Key Management Concerns

Item 1: The revised schedule with a new target substantial completion date of October 9, 2024 has been incorporated into the monthly schedule update process. *Based on current progress and maintaining the current schedule logic, the Substantial Completion Date is trending eight (8) weeks behind the target schedule. The critical path remains the west end of Wilshire/La Cienega Station, specifically the west hammerhead structure work.* Dewatering issues in this area have impacted progress.

Status/Action: Contractor working schedules are already in place to mitigate some of the experienced delays. Future opportunities to mitigate current delays and to potentially build schedule contingency will be reviewed and implemented as they are recognized. Progress on all critical path and other near-term critical path target milestones will continue to be monitored.

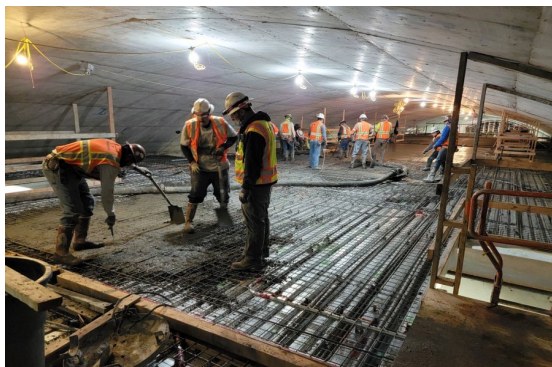
Project Construction Photos



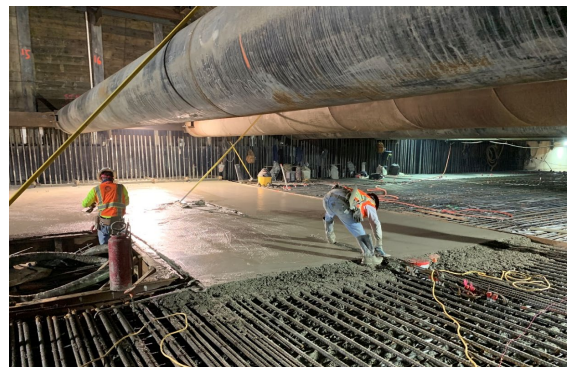
Delivery of Rail from the Division 20 Yard



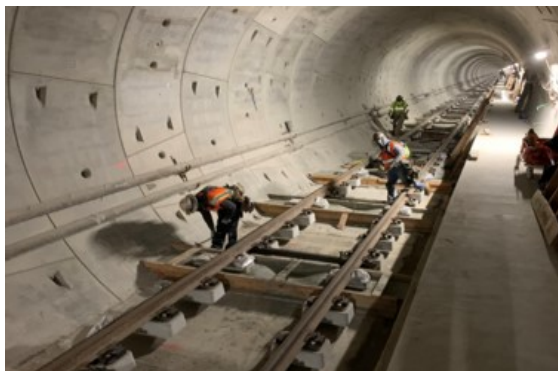
Installing Cable Trays at Wilshire/La Brea Station



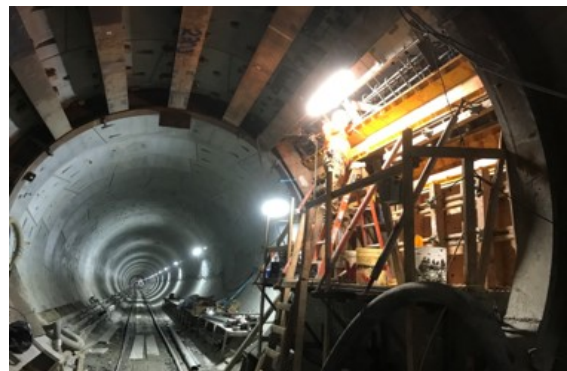
Plenum Slab Placement at Wilshire/Fairfax Station



Concourse Placement at Wilshire/La Cienega Station



Trackwork Installation in the Reach 1 North Tunnel

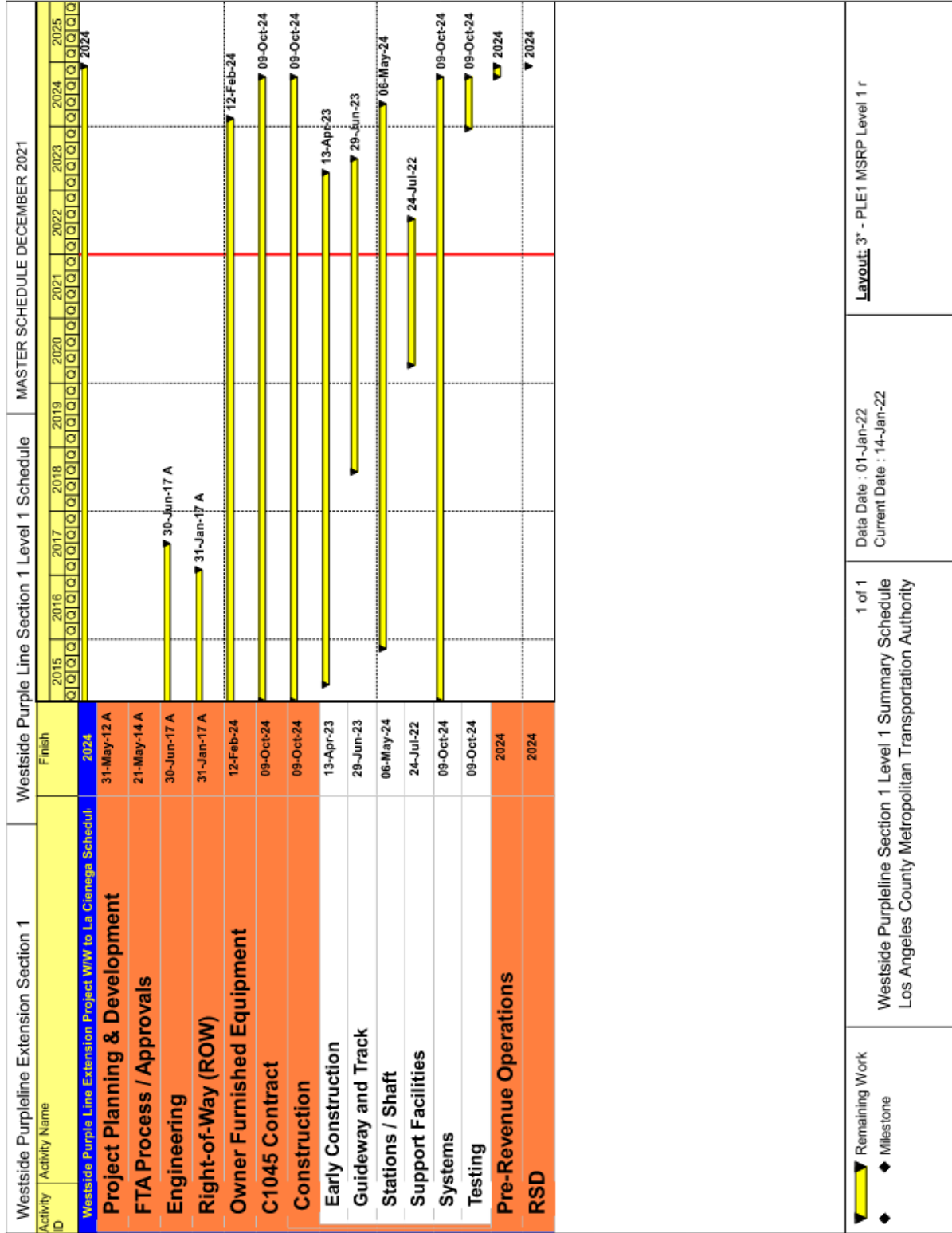


Cross Passage 16 (Reach 2) Roof Formwork

PROJECT STATUS

PROJECT SCHEDULE

Project Summary Schedule

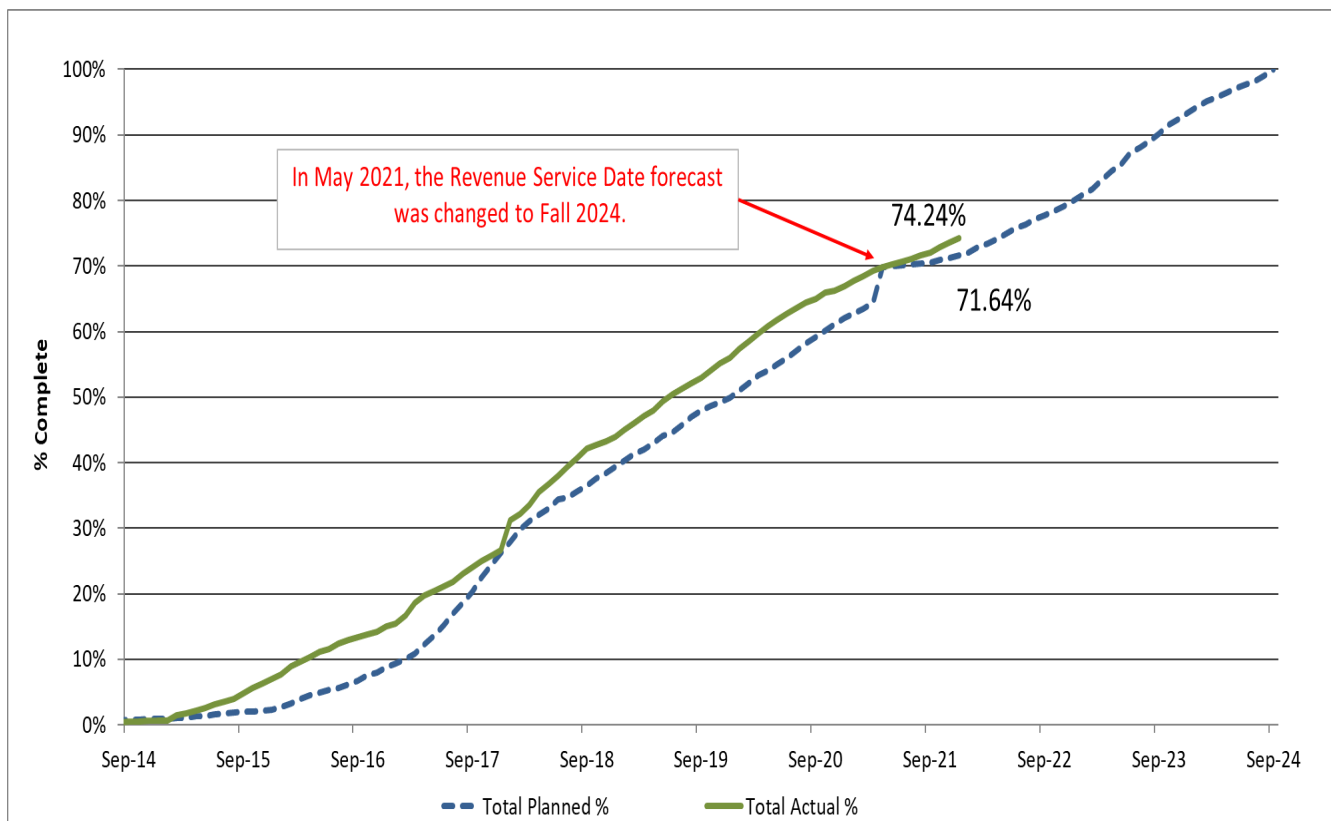


Progress Summary













	Status	Change from Last Period	Comment
Forecast Revenue Service	Fall 2024	None	
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	72.4%	0.7%	
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	Dec-21	Jan-22	Feb-22	Mar-22	Apr-22	May-22
Wilshire/Fairfax Station: Placed Concourse Slab (Block 14)	12/11/21 A						
Wilshire/Fairfax Station: Placed Concourse Slab (Block 15)	12/16/21 A						
Completed Cross Passage 23 Excavation (Reach 2)	12/23/21 A						
Wilshire/La Brea Station: Place Interior Wall Concrete (Block 16N)	01/04/22						
Wilshire/Fairfax Station: 1st Plenum Level Slab Concrete Placement	01/11/22						
Reach 1 Tunnel: Complete South Tunnel Walkway Concrete Placement	01/14/22						
Reach 2 Cross Passage Excavation Complete	02/25/22						
Wilshire/La Cienega Station: Place Lift 1 West End wall Concrete	02/28/22						
Wilshire/Fairfax Station: Complete All Concourse Slab Placements	03/16/22						
Reach 1 Tunnel: Complete North Tunnel Trackwork Installation	03/28/22						
Wilshire/La Brea Station: Commence 2nd Lift Wall Activities (West End)	04/19/22						
Wilshire/La Cienega Station: Complete 2nd Lift Wall Concrete (West End)	05/24/22						

 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

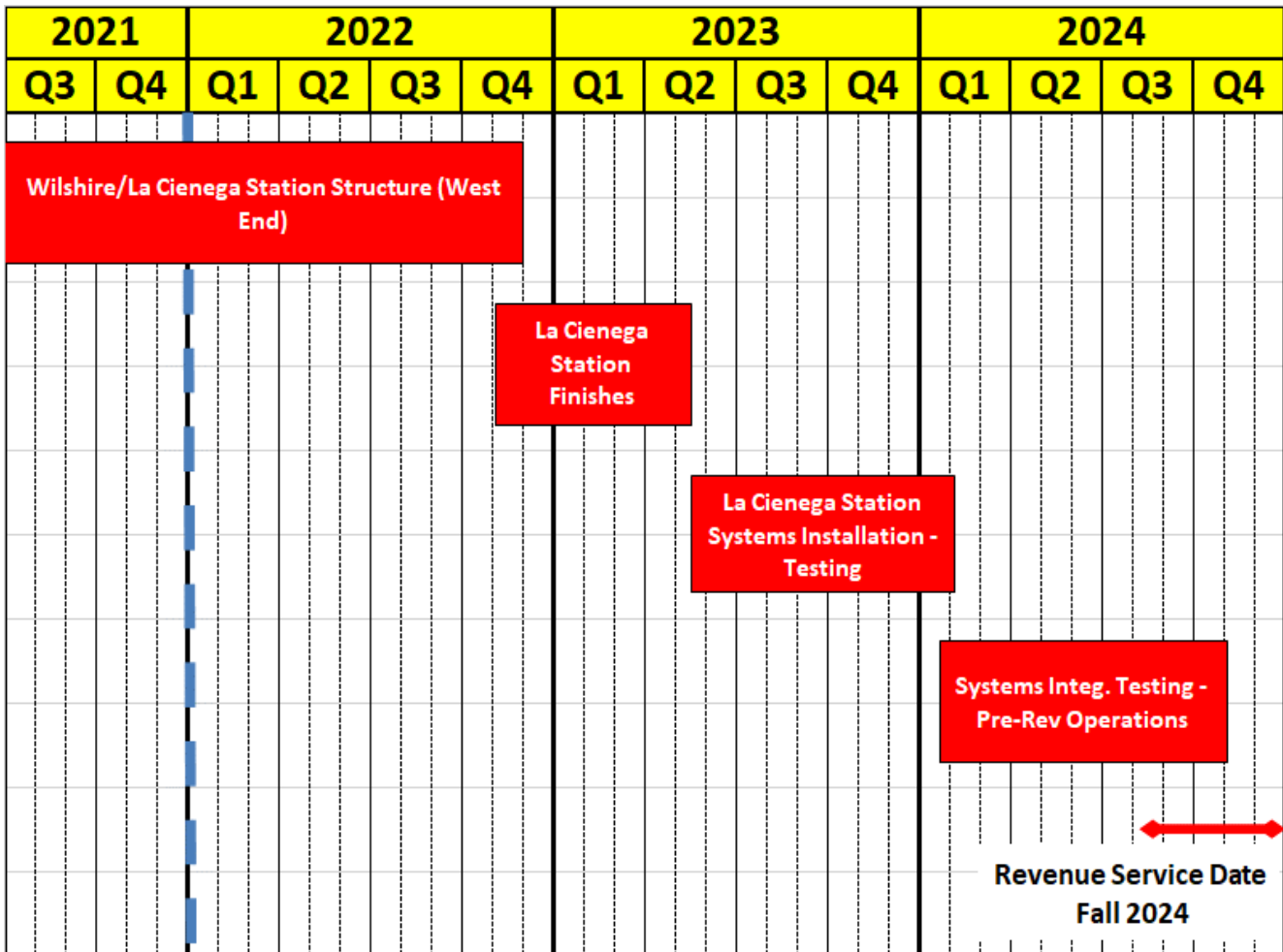
	Submittal	Procurement	Delivery	Installation
C1045 DESIGN/BUILD*				
Tunnel Boring Machine	01/29/16A	08/14/17A	12/15/17A	7/13/18A
Emergency Ventilation Fans	11/30/18A	04/1/19A	12/01/21A	12/21/21A
Station Elevators	04/27/18A	04/27/18A	12/1/22	8/17/23
Station Escalators	04/27/18A	04/27/18A	7/21/21A	2/28/23
Track - Running Rail	7/09/19A	08/09/19A	04/9/20A	10/18/21A
Traction Power Equipment	1/4/22	1/20/22	3/18/22	5/12/22
Automatic Train Control	04/1/16A	07/1/16A	12/20/16A	12/30/22
SCADA RTU System	02/2/17A	01/16/18A	05/18/18A	10/13/23
Radio System	2/2/17A	2/03/20A	3/28/22	5/10/22
Heavy Rail Vehicles***	07/16/15A	05/1/19A	12/22/23	Fall 2024
Universal Fare System**	02/15/21 A	9/30/21A	10/14/22	9/18/23

* Dates derived from STS's December 2021 Schedule.

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

*** Metro supplied equipment

Project Critical Path



In November 2021, the latest revised schedule which reflects the current construction approach for the remainder of the Project was incorporated into the monthly schedule update process.

The critical path of the Project remains the west hammerhead structural work at Wilshire/La Cienega Station.

Based on current progress and maintaining the current schedule logic, the substantial completion is trending eight (8) weeks behind the target schedule. Dewatering issues in this area have impacted progress. Contractor working schedules are already in place to mitigate some of the experienced delays. Progress on all critical path and other near-term critical path target milestones will continue to be monitored.

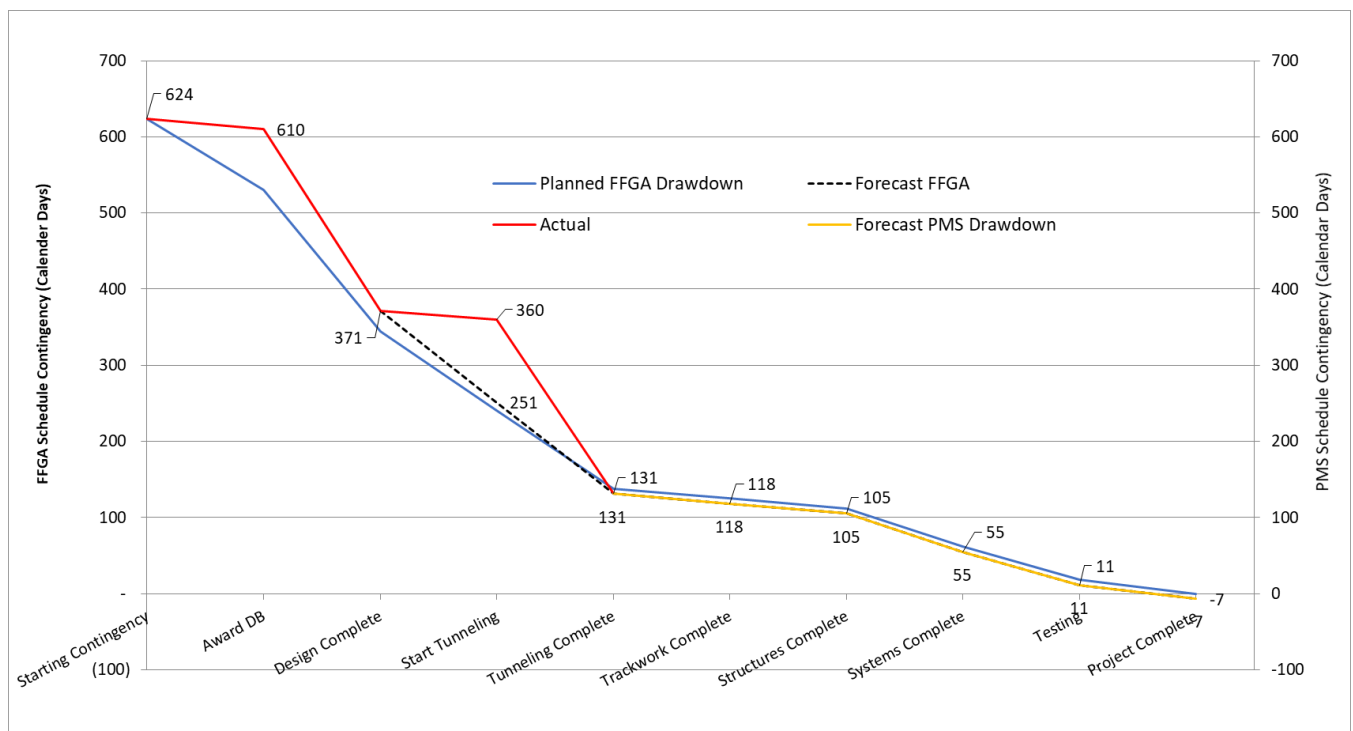
The Project’s current target RSD remains Fall 2024.

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 newly adjusted Project Master Schedule (PMS) forecast RSD of Fall 2024.

The model has been updated to reflect both the completion of TBM tunnel mining in May 2021 and the adjusted Metro forecast RSD from Fall 2023 to Fall 2024. At the start of TBM mining in October 2018, there was a noticeable buffer of available float between the PMS model and the FFGA model. This float buffer has been eroded due to the impacts associated with the Reach 3 anomaly, which has hindered TBM tunnel mining progress resulting in a later than planned actual completion of this milestone.

The next planned update for this model is after completion of trackwork installation. The forecast completion timeframe for this milestone is the second quarter of 2023.



Risk Management Narrative

Summary of Risks

During the quarterly risk register meeting there was one (1) new risk identified. No risks were closed this period. A total of thirty-one (31) risks remains to be managed in the next quarter.

Of the thirty-one (31) risks, two (2) are scored as high, eight (8) as medium and twenty-one (21) as low.

The next Purple (D Line) Extension Project Section 1 Risk Register quarterly update is scheduled for January 2022.

Top Risks

The table below shows the top Project risks:

Risk ID	Risk Description	Risk Score	Action Items
678.0	COVID-19 Pandemic Impact.	15	1. Evaluate state and local government guidelines. 2. Put contingency plans in place.
676.0	Subcontractor ability to get the required resources to perform work. Resource (Labor) shortage (Direct and Indirect).	10	1. Actively manage schedule and resource needs.
203.1	Dewatering cost increase (main issues are for cross passages).	8	1. Performing jet grouting. 2. Reach 1 cross passage #7 is completed. 3. Potential issues on cross passage #16 (Reach 2). Excavation has been completed. 4. Reach 3 cross passages are in the process of being probed.
628.0	Systems integration with existing Purple Line at Wilshire/Western Station.	6	1. Contractor complying with Systems Integration Plan [In Progress].

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	-	494,309	-	426,003	2,743	328,967	-	494,309	-
20	STATIONS, STOPS, TERMINALS, INTERMODAL	440,621	-	606,997	-	562,021	1,792	396,812	-	606,997	-
30	SUPPORT FACILITIES: YARDS, SHOPS, ADMIN. BLDGS	43,323	-	45,723	-	45,707	-	45,702	-	45,723	-
40	SITework & SPECIAL CONDITIONS	751,566	-	824,103	-	805,535	3,069	687,745	-	824,073	(30)
50	SYSTEMS	113,574	-	122,195	-	102,507	1,751	41,638	-	122,225	30
CONSTRUCTION SUBTOTAL (10-50)		1,737,378	-	2,093,328	-	1,941,773	9,356	1,500,864	-	2,093,328	-
60	ROW, LAND, EXISTING IMPROVEMENTS	175,634	-	202,980	-	202,980	816	186,481	-	202,980	-
70	VEHICLES	160,196	-	108,302	-	98,248	-	27,156	-	108,302	-
80	PROFESSIONAL SERVICES	412,710	-	616,500	-	523,886	2,800	449,418	-	616,500	-
SUBTOTAL (10-80)		2,485,918	-	3,021,110	-	2,766,887	12,973	2,163,919	-	3,021,110	-
90	UNALLOCATED CONTINGENCY	248,592	-	68,400	-	-	-	-	-	68,400	-
100	FINANCE CHARGES	375,470	-	375,470	-	-	-	-	-	375,470	-
TOTAL PROJECTS 465518 & 865518 (10-100)		3,109,980	-	3,464,980	-	2,766,887	12,973	2,163,919	-	3,464,980	-
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	-	3,504,350	-	2,806,256	12,973	2,203,276	-	3,504,350	-

Original Budget

The Original Budget of \$3.1 billion reflects the Board approved Life of Project Budget approved on July 24, 2014 plus Finance Charges of \$0.4 billion.

Current Budget and Current Forecast

The Current Budget and Current Forecast remain the same at \$3.5 billion.

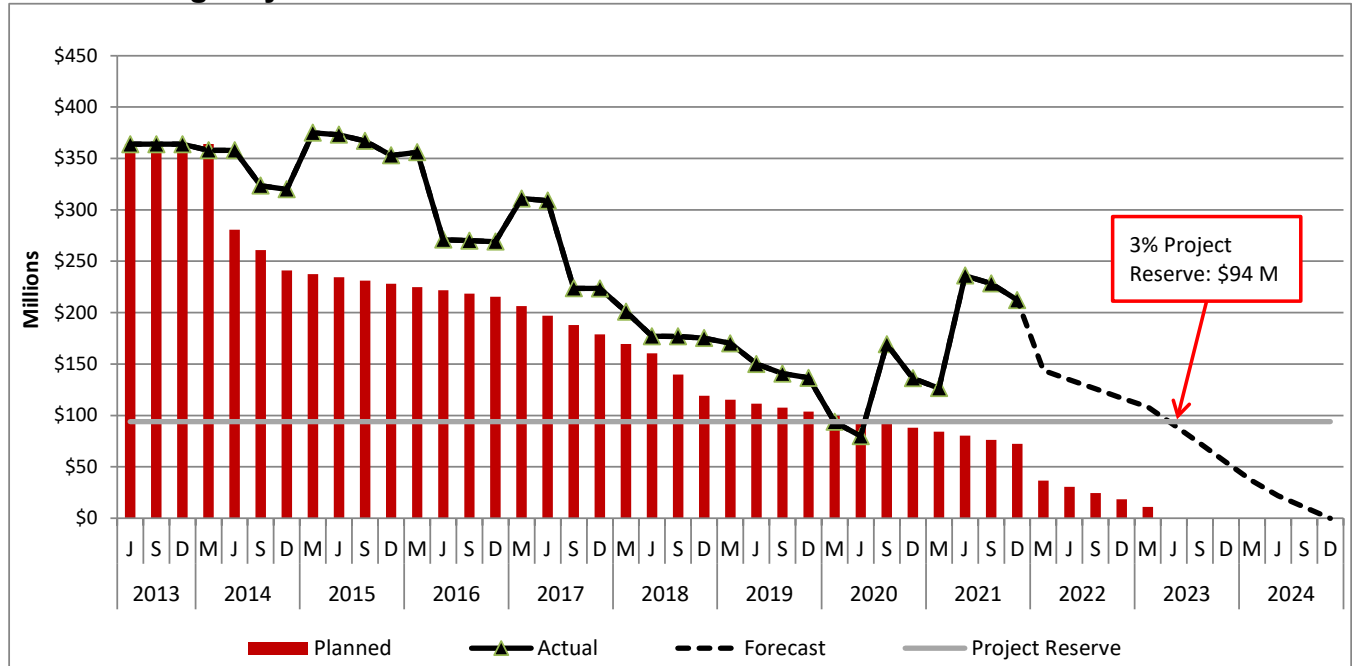
Commitments

The Commitments remained the same this period. The \$2.8 billion in Commitments to date represent 80.1% of the Current Budget.

Expenditures

The Expenditures increased by \$13.0 million for costs associated with the C1045 Design/Build Contract, City of Los Angeles Master Cooperative Agreements, Beverly Hills Memorandum of Agreement, Real Estate - Temporary Construction Easement fee, Engineering Management Support Services, Construction Management Support Services, and Metro Project Administration. The \$2.2 billion in Expenditures to date represent 62.9% of the Current Budget.

Cost Contingency Drawdown



Cost Contingency Drawdown Analysis

The Project’s Original Budget of \$3.1 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 May 2021, the Board approved to amend the Life-of-Project (LOP) budget to address the cost contingency drawdowns and fund ongoing construction and professional services expenses. The LOP budget was increased by \$150.0 million, and the 3% project reserve is now \$93.9 million.

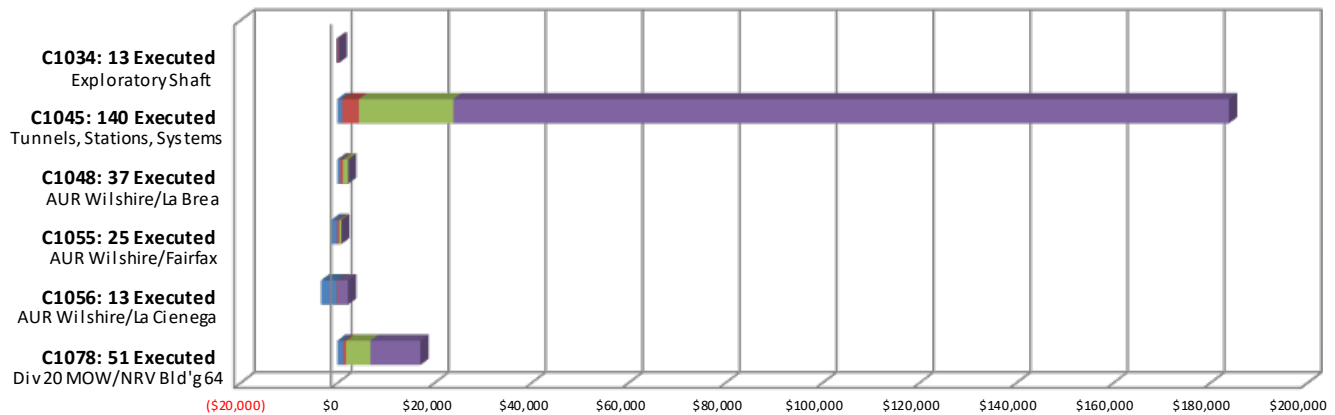
The Project Cost Contingency Drawdown curve has been adjusted to reflect the Fall 2024 Revenue Service Date forecast.

The Project Contingency remained the same this period.

PROJECT COST CONTINGENCY DOLLARS IN THOUSANDS					
	Original Contingency (Budget)	Previous Period	Current Period	To-Date	Remaining Contingency (Forecast)
Unallocated Contingency	248,592	(180,192)	-	(180,192)	68,400
Allocated Contingency	71,963	71,833	-	71,833	143,797
Total Contingency	320,555	(108,359)	-	(108,359)	212,197

Summary of Contract Modifications

Contract Modifications (MODs) by Cost Level
 Dollars in Thousands



	C1034 13 Executed	C1045 140 Executed	C1048 37 Executed	C1055 25 Executed	C1056 13 Executed	C1078 51 Executed	Total
Under \$100K	(164)	949	574	(1,179)	(3,325)	1,217	(1,929)
\$100K to \$250K	321	3,491	617	436	245	578	5,688
\$250K to \$1M	-	19,483	1,051	391	-	5,034	25,959
Over \$1M	-	159,952	-	-	1,983	10,309	172,244
Total Contract MODs	157	183,875	2,242	(352)	(1,097)	17,138	201,963
Contract Award Amount	6,487	1,636,419	6,181	14,430	20,250	52,830	1,736,597
% of Contract MODs	2.4%	11.2%	36.3%	-2.4%	-5.4%	32.4%	11.6%

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 forty Contract MODs with a total value of \$183.9 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 November 2021:

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	\$14.3 M 20.25%
Current DBE Participation Total amount paid to date to DBEs divided by the amount paid to date to Prime	\$13.5 M 20.14%

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	\$229.3 M 13.34%
Current DBE Participation Total amount paid to date to DBEs divided by the amount paid to date to Prime	\$180.6 M 14.40%

One hundred fifty-six (156) Construction DBE sub-contractors have been identified to date.

PROJECT LABOR AGREEMENTS (PLA)

As of November 2021:

Targeted Worker Goal Construction work to be performed by residents from Economically Disadvantaged Areas in the United States	40.00%
Targeted Worker Current Attainment	61.47%
Apprentice Worker Goal Construction work to be performed by Apprentices	20.00%
Apprentice Worker Current Attainment	20.33%
Disadvantaged Worker Goal Construction work to be performed by disadvantaged workers	10.00%
Disadvantaged Worker Current Attainment	12.84%

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	\$762.711	\$1,250.000	100%	\$721.583	58%	\$717.346	57%
FEDERAL - SECTION 5309 NEW STARTS (ARPA-CIG**)	\$0.000	\$66.429	\$0.000	\$0.000	0%	\$0.000	0%	\$0.000	0%
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	\$1,297.193	\$932.750	\$739.511	57%	\$664.948	51%	\$624.048	48%
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	\$3,504.350	\$2,512.206	\$2,806.256	80.1%	\$2,203.276	62.9%	\$2,158.139	61.6%

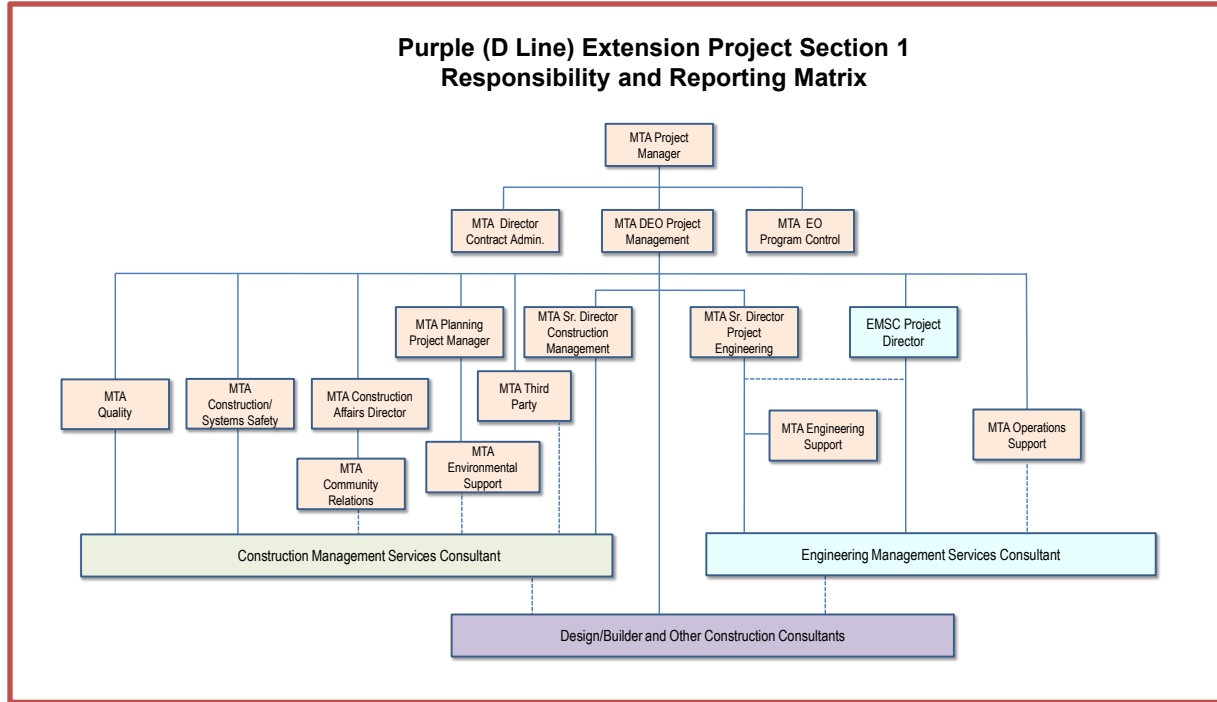
EXPENDITURES ARE CUMULATIVE THROUGH DECEMBER 31, 2021
 ORIGINAL BUDGET BASED ON JULY 2014 BOARD APPROVED LOP BUDGET

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

**AMERICAN RESCUE PLAN ACT - CAPITAL INVESTMENTS PROGRAM (ARPA-CIG)

PROJECT ORGANIZATION AND STAFFING

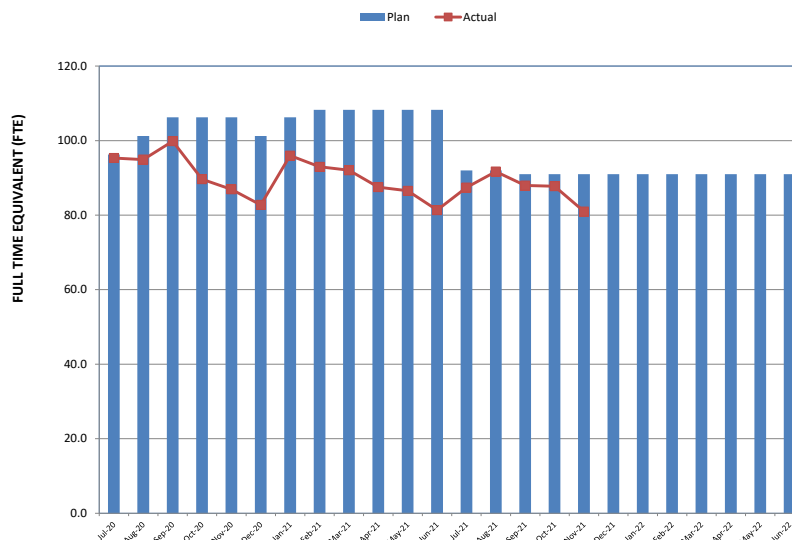
The Design-Build Contract is being managed by a joint team of Metro and consultant personnel jointly located at the Integrated Project Management Office (IPMO).



The overall FY22 Total Staffing Plan averages 91.2 FTEs per month.

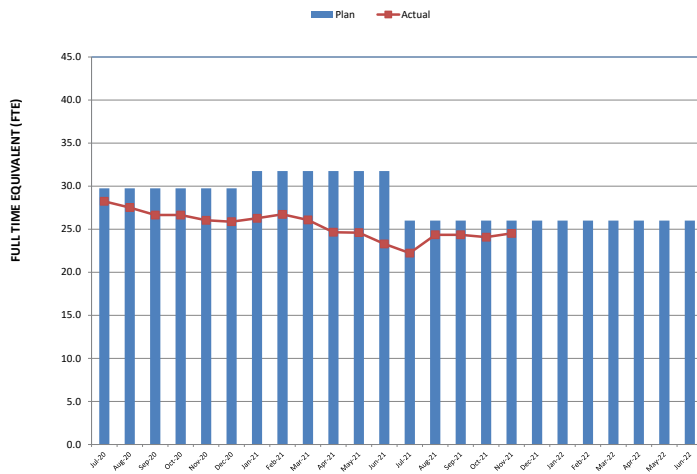
For November 2021 there were a total of 24.5 FTEs for MTA's Project Administration Staff and 56.5 FTEs for Consulting Staff. The total Project staffing for November 2021 was 81.0* FTEs.

Total Project Staffing – Metro and Consultants

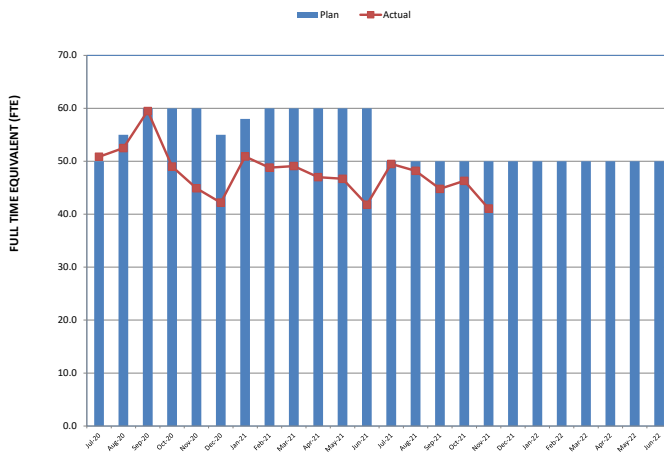


*Actuals include 2.4 FTEs related to Project Management Support Services (PMSS).

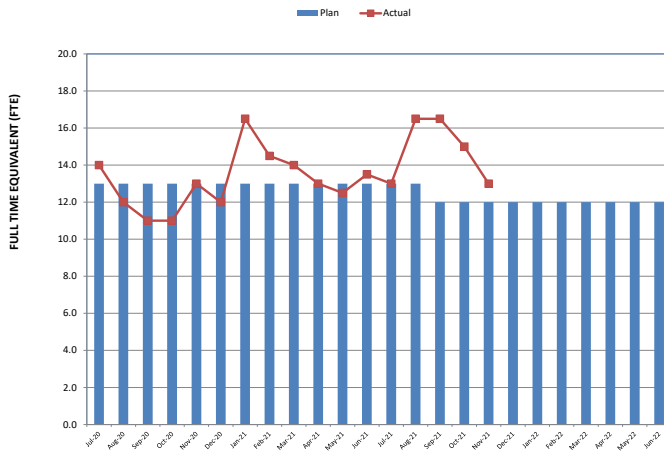
Metro Staff



CM Support Services Staff (Consultant)



Engineering Services Staff (Consultant)



All above data through November 2021

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.

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 is still being closed out. The closeout date has not been established at this time.

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 floor and wall surface finishes, entrance excavation and SOE, appendages and interior wall construction.
 - Wilshire/Fairfax – engaged in oversight activities for construction of station entrance structure, east and west hammerhead wall structure as well as interior walls, appendage structures and plenum structure.
 - Wilshire/La Cienega – engaged in oversight activities for construction of station entrance structure excavation, interior walls, hammerhead end wall, and appendage structures.
 - Reach 1– engaged in oversight of tunnel invert, walkway structures and track trail construction/welding.
- Processed 46 surveillances, 23 Quality Action Requests (QARs), 31 Nonconformance Reports (NCRs) and one (1) Corrective Action Request (CAR).

ENVIRONMENTAL

- *Evaluated plans to verify that no unforeseen environmental impacts are anticipated for Wilshire/La Cienega appendages, decking removal and street restoration over east end of Wilshire/La Brea Station next spring.*
- *Conducted environmental monitoring at all yards. Provided recommendation for stormwater BMP improvements prior to and after rain events for the month.*
- *Tracked progress of groundwater treatment/discharge systems at all yards to ensure they worked properly during/after rain events.*
- *Closed out all end of year submittals and permit requirements as needed.*

CONSTRUCTION AND COMMUNITY RELATIONS

- *Attended monthly/weekly meetings with City of Los Angeles Department of Transportation, virtual Neighborhood Council, monthly environmental mitigation meetings and daily/weekly internal construction update meetings as well as held meetings online and conducted monthly meeting project update presentations to Beverly Hills residents and business stakeholders, elected officials' deputies, various stakeholders along the alignment and at construction community meetings.*
- Corresponded with and presented to Los Angeles City Council district offices, the Board of Public Works, Greater Miracle Mile and Beverly Hills Chambers of Commerce, and City of Beverly Hills staff regarding construction effects on traffic, and shared major stakeholder concerns.
- 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 or other service-oriented businesses that remain or have reopened for onsite pickup, dining in and delivery during continued COVID-19 restrictions.
- Continued additional construction mitigations including business signage, street signs and print ads at no cost to the businesses. *Referred businesses to Metro's Business Interruption Fund (BIF).*
- Updated website, Facebook, and Twitter regularly. 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:
 - *Thirty-two (32) 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

- *Coordinate scope of work (SOW) and design budget with Program Management for "Metro Pin" station identifier updates.*
- Ongoing station signage review for continuity of customer experience between sections.
- Continued coordination with Design/Builder on design development for artwork lighting.
- Continued coordination with Design/Builder for artwork fabrication procurement.

SAFETY & SECURITY

- *There were no recordable injuries and three COVID-19 cases in December 2021.*
- *Metro Safety staff conducted daily safety inspections, attended weekly Toolbox, 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.*
- *Mining of cross-passages is ongoing.*
- *November 2021 Contractor Work Hours (Design & Construction): 81,029*
- *Contractor - Project to Date Work Hours (Design & Construction) (through 11/30/21): 5,279,576*
- *Total Project to Date Work Hours (Contractor & the IPO Staff) (through 11/30/21): 6,515,098*
- *Project to Date Recordable Injury Rate: 1.20 (39 Recordable Injuries) (each rate is per 200,000 work hours) (National Rate: 2.4)*
- *Project to Date Total Days Away (DART) Injury Rate: 0.09 (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	Placed protection slab at the Wilshire/La Cienega Station entrance.
December 2020	Completed welding of running rail at the Division 20 Rail Yard.
January 2021	The Purple TBM (Elsie) restarted the Reach 3 tunnel drive and has reached the Wilshire/San Vicente anomaly site.
February 2021	The Purple TBM (Elsie) completed the Reach 3 tunnel drive.

February 2021	Start of Reach 1 tunnel invert concrete placement.
March 2021	The Red TBM (Soyeon) completed the Reach 3 tunnel drive.
April 2021	The Purple TBM (Elsie) completed Tail Track tunnel drive.
May 2021	Completed TBM tunnel mining activities for the Project.
June 2021	Completed Reach 1 cross passage structures.
July 2021	Commenced TBM Gantry removal from Wilshire/La Cienega Station.
August 2021	Commenced Reach 2 cross passage excavation.
September 2021	All concrete roof sections (11 out of 16) for this phase of construction have been placed at Wilshire/Fairfax Station.
October 2021	Commenced Reach 1 trackwork installation activities.
November 2021	Commenced cross passage 19 (Reach 2) excavation.
<i>December 2021</i>	<i>Completed concourse concrete slab placement at the east end of Wilshire/Fairfax Station.</i>