




Metro

January 20, 2023

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FROM: KIMBERLY WILSON 
DEPUTY EXECUTIVE OFFICER, PROGRAM MANAGEMENT

SUBJECT: PURPLE (D LINE) EXTENSION PROJECT SECTION 1
DECEMBER 2022 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 30, 2022.

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.

KW: 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 2022

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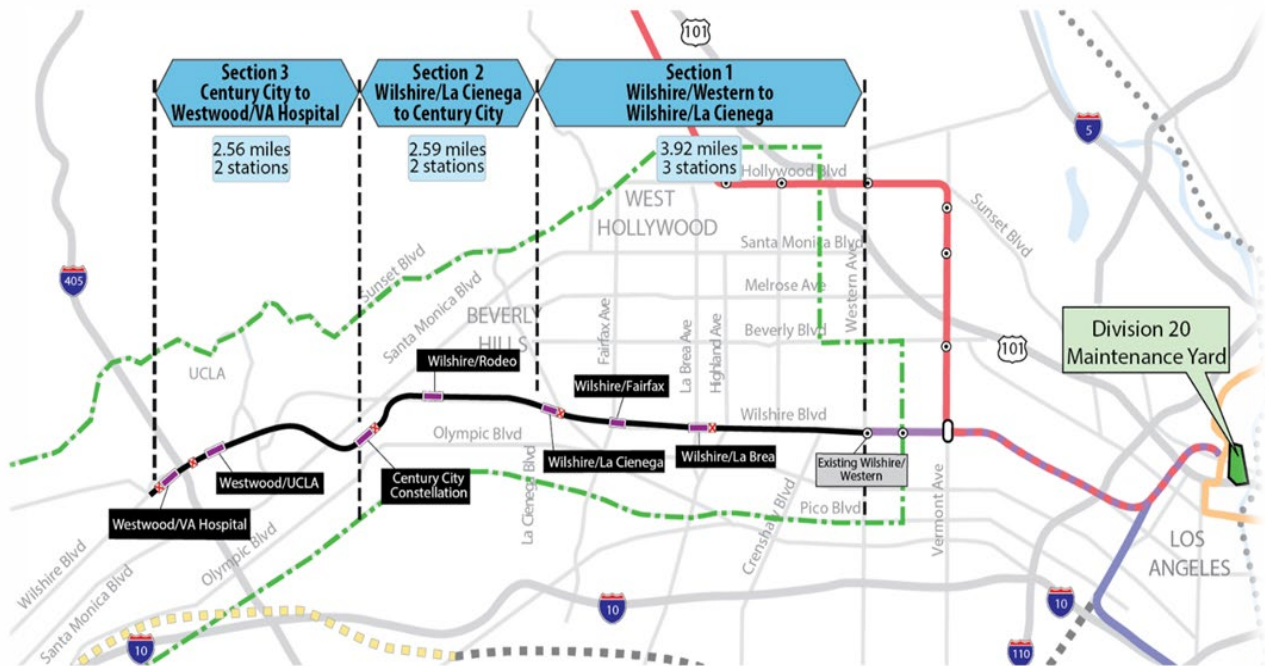
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PROJECT OVERVIEW

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

The Design/Build contract provides for final design and construction of the infrastructure along the 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 Fall of 2023 to 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's 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 2022, the Project achieved 82.3% completion based on earned value measurements for design and construction. The critical path of the Project remains the plenum and masonry installation at east end of Wilshire/La Cienega Station.

The target forecast substantial completion date is October 9, 2024. The forecast Revenue Service Date (RSD) for the Project remains Fall of 2024.

The C1045 Design/Build Contract substantial completion date for the Project is December 3, 2023. Negotiations with the C1045 Contractor on impacts associated with the Reach 3 (Wilshire/Fairfax to Wilshire/La Cienega) San Vicente Anomaly are ongoing.

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 to the C1045 Design/Build Contract during construction.

Construction Status

Reach 1 (Wilshire/Western to Wilshire/La Brea): electrical and communications installation work is ongoing.

Reach 2 (Wilshire/La Brea to Wilshire/Fairfax): *Track installation continues in the north (BR) tunnel.*

Reach 3 and Tail Track (Wilshire/Fairfax to Wilshire/La Cienega): *invert construction in the north (BR) and south (BL) tunnels and south tunnel (BL) walkway are complete. North tunnel (BR) walkway is underway. Cross passage #24 (Reach 3) is being used for trackwork concrete access and will be completed once all trackwork concrete is placed. TBM cutterhead removal is complete in the south (BL) tunnel, and the concrete end wall is placed.*

Wilshire/La Brea Station: *bus lane, curb/gutter and sidewalk restoration on the south side of Wilshire Blvd. continues. Main station box structure is complete. Entrance structure work and platform construction continue. MEP work is ongoing. Plenum construction continues at the west end.*

Wilshire/Fairfax Station: *Plenum and platform construction continues. Architectural and MEP activities move forward at the platform and concourse levels. Weekend decking removal and street restoration work on Wilshire Boulevard will resume after the holidays.*

Wilshire/La Cienega Station: *all station box roof placements are complete. Above roof waterproofing and backfilling activities are ongoing. Architectural and MEP work as well as plenum and masonry work continue at the east side of the Station. Southside appendage construction has started. 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 retention amount has been paid. 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. All running rail stored in the yard was moved to the project site by the end of July 2022. The WPLE Section 1 storage area in the Division 20 Yard has been turned over to the Portal Widening Project. *A new area near 6th Street bridge is being used for project material delivery.*

Cost and Schedule Summary

Metro has received the December 2022 schedule update for the C1045 Design/Build Contract. The December 2022 schedule update reports the substantial completion date 485 calendar days after the December 3, 2023 contractual date.

Based on current progress and maintaining the current schedule logic, the substantial completion is over five (5) months behind the target schedule completion date of October 9, 2024. The Project critical path is now the plenum and masonry installation at east end of Wilshire/La Cienega Station. With the placement of all main Station structural concrete nearing completion, all focus turns toward MEP and systems infrastructure installation. 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.

The critical path of the Project remains the plenum and masonry installation at the east end of 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	12/03/23	177	04/01/25	2024	-485 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 are currently two (2) open claims that are being evaluated:

- Claim 002 – Reach 2 Gas Differing Site Condition.
- Claim 003 – Tunnel Lighting.

Key Management Concerns

Item 1: *The critical path of the Project remains the plenum and masonry installation at east end of Wilshire/La Cienega Station. Currently, the C1045 forecast substantial completion date is trending over five (5) months behind the target schedule.*

Status/Action: *With the placement of all main station structural concrete completed, all focus turns toward MEP and systems infrastructure installation. The Project Team is in the process of establishing interim systems milestones, so that the Project can continue to track against the target Substantial Completion date of October 9, 2024. The Project is trending over five (5) months behind the target Substantial Completion date. Project staff will continue to monitor progress on all critical path and other near-term critical path target milestones.*

Project Construction Photos



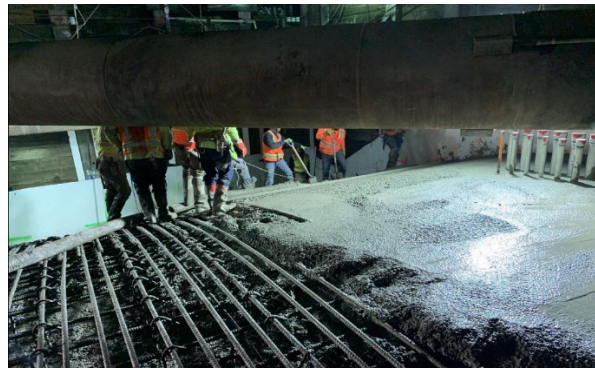
Wilshire/Western Interface Chamber Box Structure



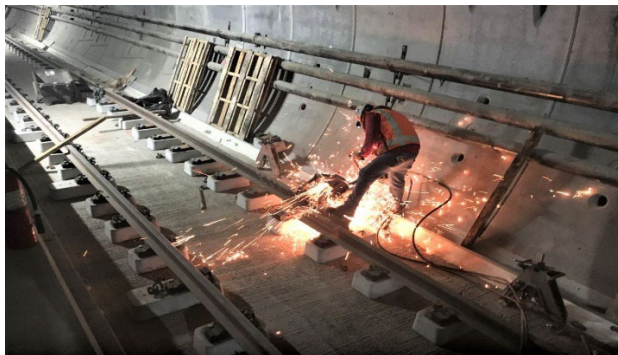
Wilshire/La Brea Station Entrance Structure Roof Shoring



Wilshire/Fairfax Station Platform Construction



Wilshire/La Cienega Station Box Roof Concrete Placement



Reach 2 BR Tunnel Track Welding

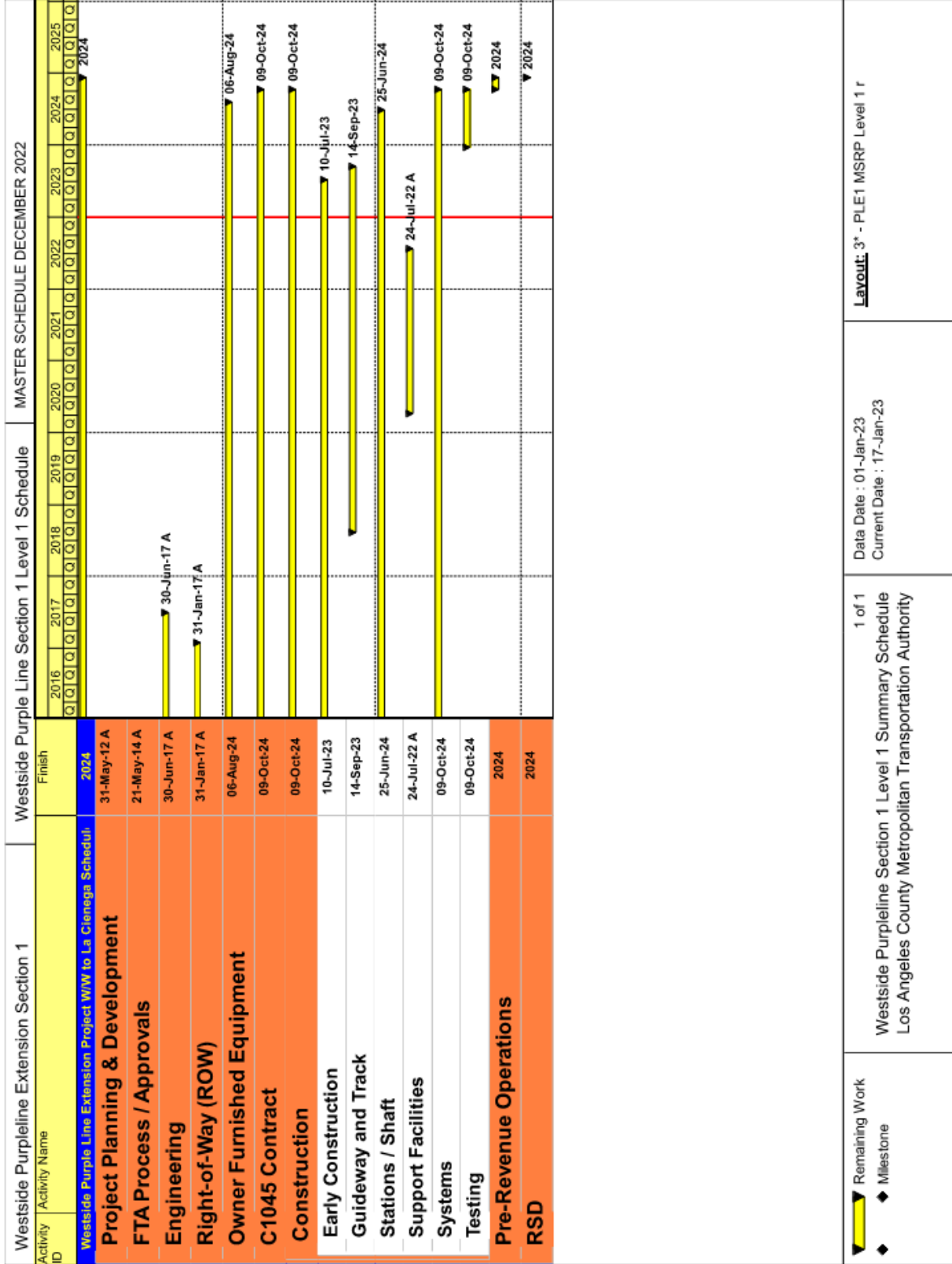


Reach 3 BL Tunnel Walkway Construction

PROJECT STATUS

PROJECT SCHEDULE

Project Summary Schedule

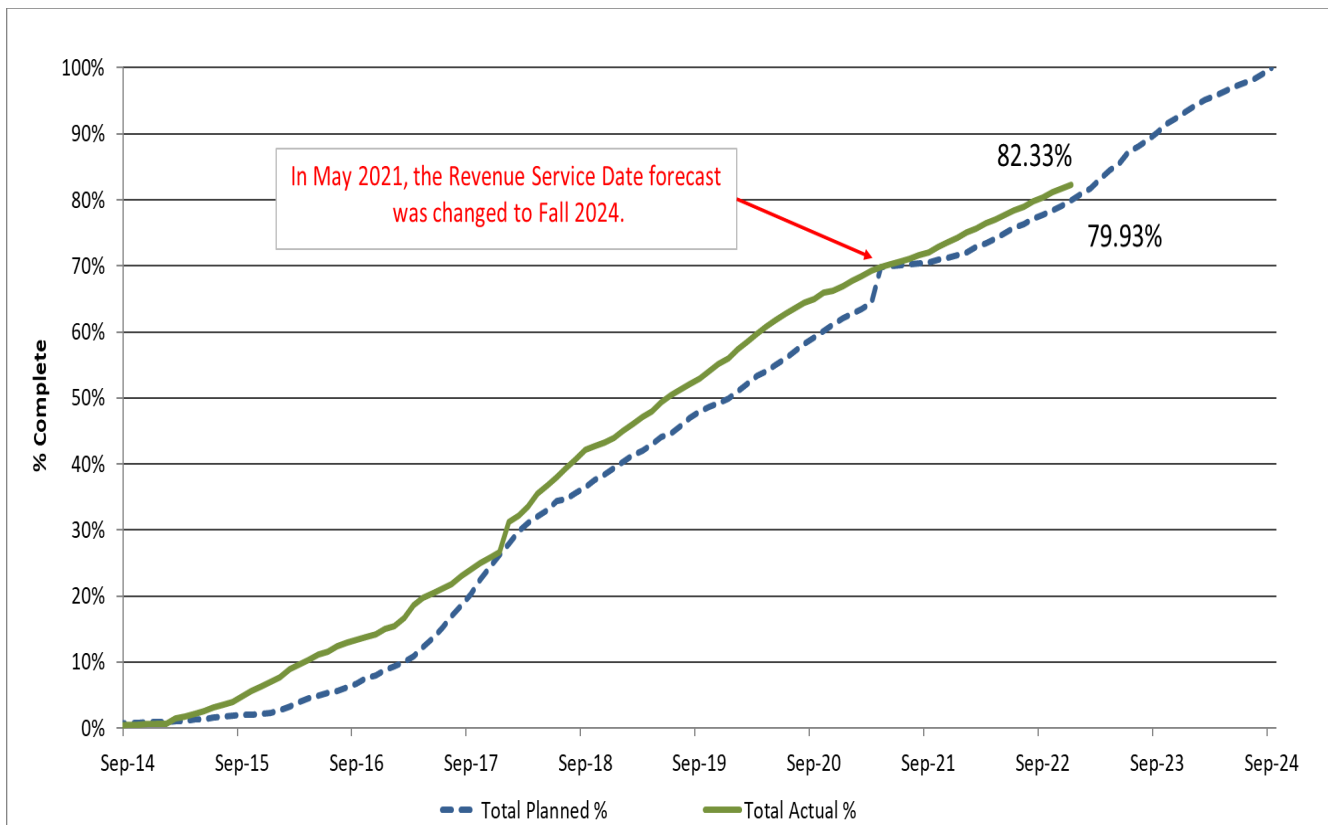


Progress Summary













	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	81.1%	0.6%	
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-22	Jan-23	Feb-23	Mar-23	Apr-23	May-23
Wilshire/La Brea Station: Complete All Roof Concrete Placements	12/2/22 A						
Complete Cutterhead Removal in the South Tunnel (BL)	12/16/22 A						
Wilshire/La Cienega Station: Complete All Roof Concrete Placements	12/28/22 A						
Wilshire/Fairfax Station: Complete Concrete Platform Deck	01/05/23						
Wilshire/La Brea Station: Complete Concrete Platform Deck	01/06/23						
Wilshire/La Cienega Station: First Concrete Placement Platform Level Walls	01/31/23						
Complete Reach 2 Trackwork Installation (Running Rail) Activities	02/14/23						
Complete Reach 4 Invert and Walkway Tunnel Concrete Placement	02/28/23						
Wilshire/Western Shaft: Complete Concrete Masonry Wall Construction	03/27/23						
Complete Reach 3 Trackwork Installation (Running Rail) Activities	03/29/23						
Wilshire/La Cienega Station: Complete Platform Level Walls	04/21/23						
Wilshire/La Brea Station: Commence Main Entrance Structure Roof Activities	05/25/23						

 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

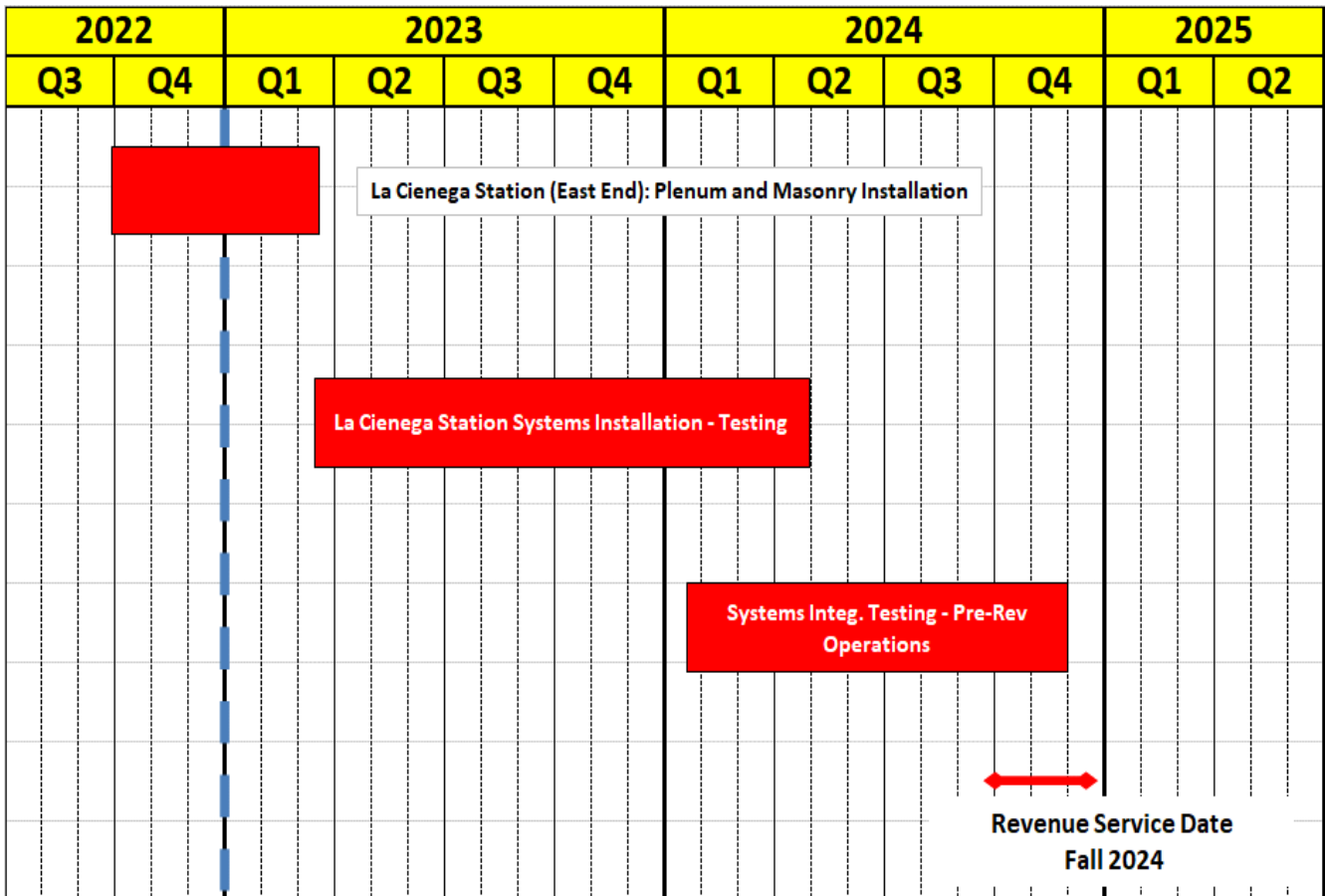
	Submittal	Procurement	Delivery	Installation
C1045 DESIGN/BUILD*				
Tunnel Boring Machine	1/29/16A	8/14/17A	12/15/17A	7/13/18A
Emergency Ventilation Fans	11/30/18A	4/1/19A	12/1/21A	12/21/21A
Station Elevators	4/27/18A	4/27/18A	5/23/23	7/10/23
Station Escalators	4/27/18A	4/27/18A	7/21/21A	7/13/23
Track - Running Rail	7/9/19A	8/9/19A	4/9/20A	10/18/21A
Traction Power Equipment	5/29/20A	11/5/21A	1/8/22A	1/24/23
Automatic Train Control	4/1/16A	7/1/16A	12/20/16A	8/23/23
SCADA RTU System	2/2/17A	1/16/18A	5/18/18A	1/17/24
Radio System	2/2/17A	2/3/20A	3/17/23	3/20/23
Heavy Rail Vehicles***	7/16/15A	5/1/19A	12/22/23	Fall 2024
Universal Fare System**	2/15/21A	9/30/21A	5/31/23	12/29/23

* Dates derived from STS's December 2022 Schedule.

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

*** Metro supplied equipment

Project Critical Path



The critical path for the month of December 2022 remains unchanged and progresses through plenum and masonry installation at east end of Wilshire/La Cienega Station.

After completing placement of all main station structural concrete, all focus turns toward MEP and systems infrastructure installation. Progress on all critical path and other near-term critical path target milestones will continue to be monitored.

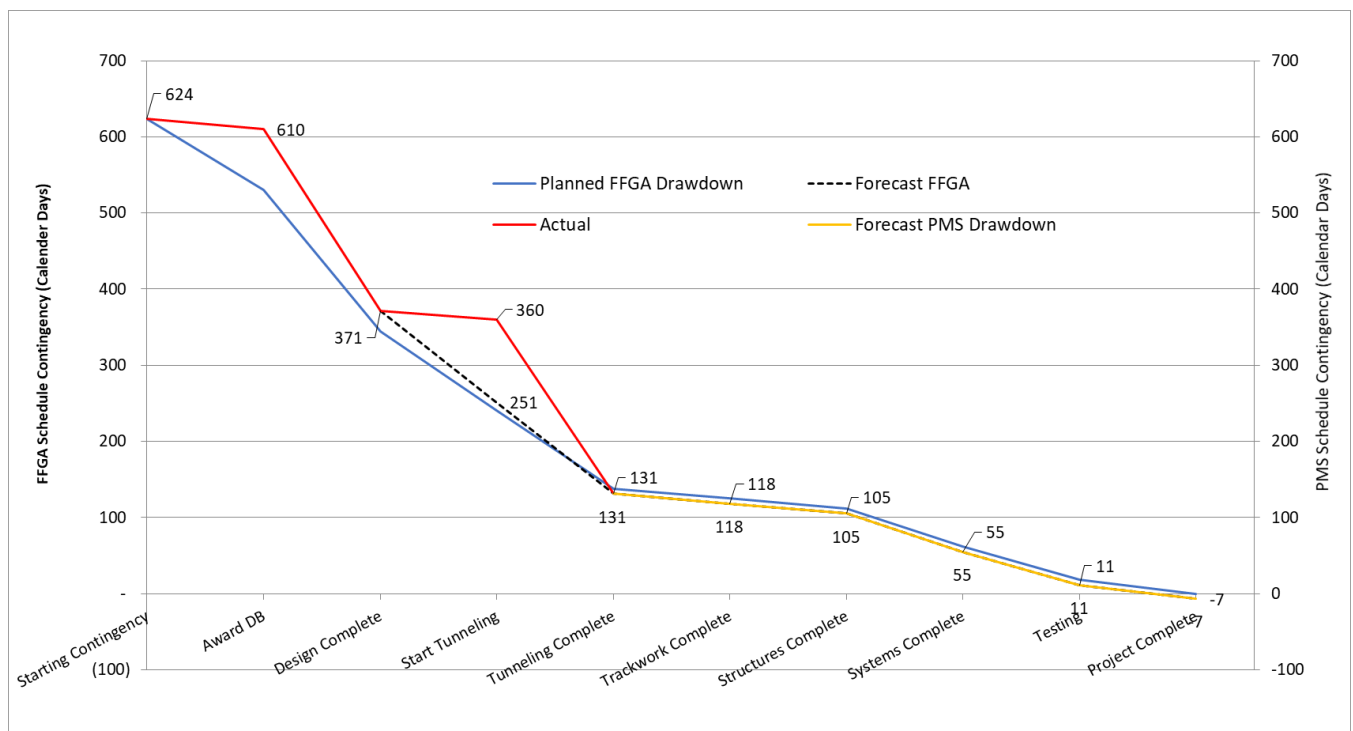
The Project's current target RSD remains Fall 2024.

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

One new risk was identified during the quarterly Risk Register meeting, and one risk was closed this period. A total of thirty-one (31) risks remain to be managed in the next quarter.

Of the thirty-one (31) risks, two (2) are scored as high, six (6) as medium and twenty-three (23) as low.

The next Purple (D Line) Extension Project Section 1 Risk Register quarterly update is scheduled for January 2023.

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.
628.0	Systems integration with existing Purple Line at Wilshire/Western Station.	6	1. Wilshire/Western cutover schedule being finalized. 2. Coordination of schedule with Metro Operations to follow. 3. Systems Integration Plan to be submitted in support of a January 2024 Systems Integration Testing start date.
680.0	Supply chain (material) delivery (NEW)	6	1. Actively manage schedule for material need/delivery dates.
675.0	DBE Participation Goal for Construction. Currently targeted at 17%.	5	1. Metro has approved the contractors DBE mitigation plan.
679.0	Permanent power availability at La Cienega Station.	5	1. Continued coordination with Southern California Edison (SCE).

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	-	465,330	5,101	419,456	-	485,009	(9,300)
20	STATIONS, STOPS, TERMINALS, INTERMODAL	440,621	-	606,997	1,326	572,365	2,544	462,005	-	608,297	1,300
30	SUPPORT FACILITIES: YARDS, SHOPS, ADMIN. BLDGS	43,323	-	45,723	-	45,702	-	45,702	-	45,723	-
40	SITework & SPECIAL CONDITIONS	751,566	-	824,103	-	813,889	3,203	730,360	-	834,678	10,575
50	SYSTEMS	113,574	-	122,195	-	107,733	2,038	54,345	-	123,925	1,730
CONSTRUCTION SUBTOTAL (10-50)		1,737,378	-	2,093,328	1,326	2,005,018	12,886	1,711,869	-	2,097,633	4,305
60	ROW, LAND, EXISTING IMPROVEMENTS	175,634	-	202,980	-	202,980	(39)	187,789	-	202,980	-
70	VEHICLES	160,196	-	108,302	-	99,230	-	29,816	-	108,302	-
80	PROFESSIONAL SERVICES	412,710	-	616,500	587	540,880	2,379	485,340	-	612,195	(4,305)
SUBTOTAL (10-80)		2,485,918	-	3,021,110	1,913	2,848,108	15,227	2,414,814	-	3,021,110	-
90	UNALLOCATED CONTINGENCY	248,592	-	68,400	-	-	-	-	-	68,400	-
100	FINANCE CHARGES	375,470	-	375,470	-	85,565	-	85,565	-	375,470	-
TOTAL PROJECTS 465518 & 865518 (10-100)		3,109,980	-	3,464,980	1,913	2,933,674	15,227	2,500,379	-	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	1,913	2,973,043	15,227	2,539,736	-	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 this period at \$3.5 billion.

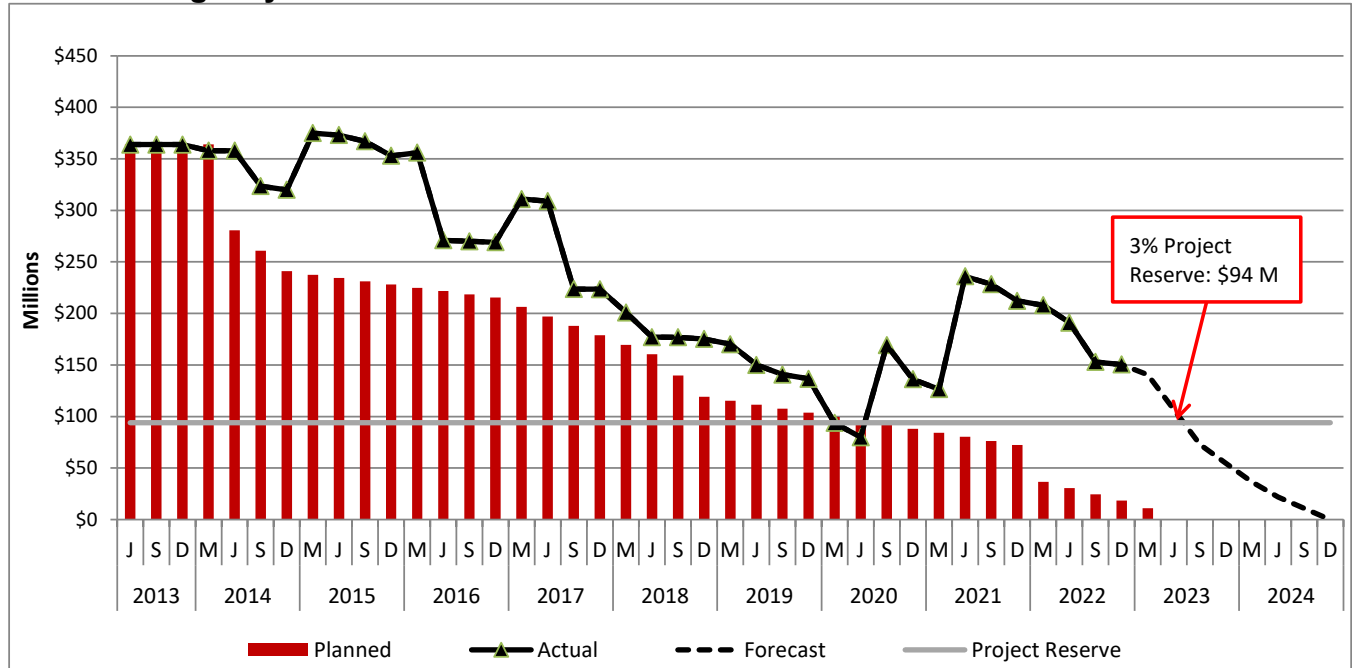
Commitments

The Commitments increased by \$1.9 million this period due to an executed Change Order for the C1045 Design/Build Contract and continuation of Systems Engineering Design Support During Construction Services. The \$3.0 billion in Commitments to Date represent 84.8% of the Current Budget.

Expenditures

The Expenditures increased by \$15.2 million primarily due to costs associated with the C1045 Design/Build Contract, City of Los Angeles Master Cooperative Agreements, City of Beverly Hills Memorandum of Agreement, Engineering Management Support Services and Metro Project Administration. The \$2.5 billion in Expenditures to Date represent 72.5% 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 February 2016, August 2020 and May 2021 the Board approved to amend the Life-of-Project (LOP) Budget to address cost contingency drawdowns and fund ongoing expenses. The LOP Budget was increased by \$5.0 million in 2016, \$200.0 million in 2020, and \$150.0 million in 2021. The 3% project reserve is currently \$93.9 million.

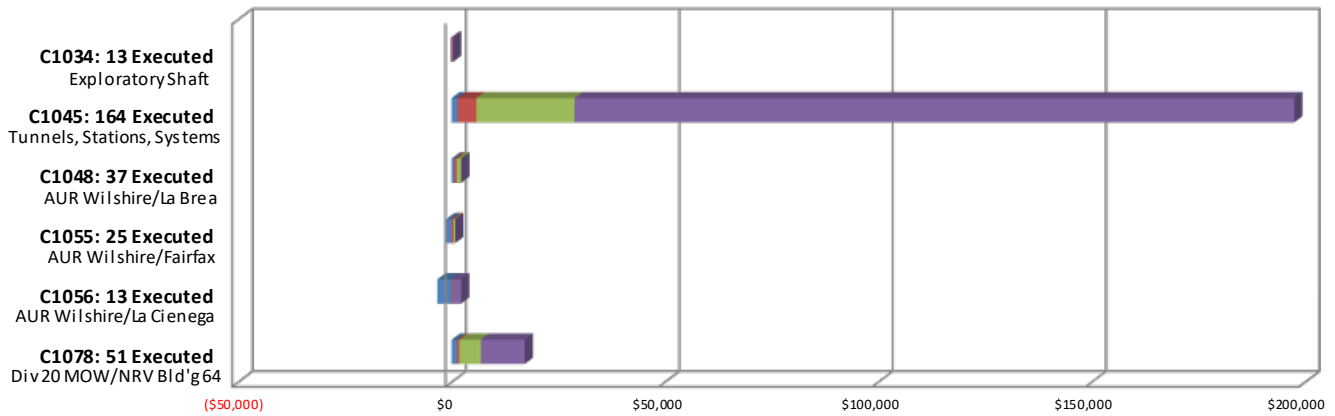
The Project Cost Contingency Drawdown curve has been adjusted to reflect the Fall 2024 Revenue Service Date forecast.

The Allocated Contingency decreased this period by \$1.3 million due to an executed Change Order 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	(180,192)	-	(180,192)	68,400
Allocated Contingency	71,963	11,405	(1,326)	10,079	82,043
Total Contingency	320,555	(168,787)	(1,326)	(170,113)	150,443

Summary of Contract Modifications

Contract Modifications (MODs) by Cost Level
 Dollars in Thousands



	C1034 13 Executed	C1045 164 Executed	C1048 37 Executed	C1055 25 Executed	C1056 13 Executed	C1078 51 Executed	Total
Under \$100K	(164)	1,341	574	(1,179)	(3,325)	1,217	(1,536)
\$100K to \$250K	321	4,437	617	436	245	578	6,634
\$250K to \$1M	-	22,978	1,051	391	-	5,034	29,454
Over \$1M	-	168,715	-	-	1,983	10,309	181,007
Total Contract MODs	157	197,471	2,242	(352)	(1,097)	17,138	215,559
Contract Award Amount	6,487	1,636,419	6,181	14,430	20,250	52,830	1,736,597
% of Contract MODs	2.4%	12.1%	36.3%	-2.4%	-5.4%	32.4%	12.4%

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 sixty-four Contract MODs with a total value of \$197.5 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 2022:

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	\$14.6 M 20.25%
Current DBE Participation Total amount paid to date to DBEs divided by the amount paid to date to Prime	\$14.6 M 21.67%

Seventeen (17) 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	\$269.8 M 15.44%
Current DBE Participation Total amount paid to date to DBEs divided by the amount paid to date to Prime	\$228.9 M 15.77%

One hundred sixty-seven (167) Construction DBE sub-contractors have been identified to date.

PROJECT LABOR AGREEMENTS (PLA)

As of November 2022:

Targeted Worker Goal Construction work to be performed by residents from Economically Disadvantaged Areas in the United States	40.00%
Targeted Worker Current Attainment	62.54%
Apprentice Worker Goal Construction work to be performed by Apprentices	20.00%
Apprentice Worker Current Attainment	20.24%
Disadvantaged Worker Goal Construction work to be performed by disadvantaged workers	10.00%
Disadvantaged Worker Current Attainment	12.71%

FINANCIAL/GRANT

Status of Funds by Source

DOLLARS IN MILLIONS

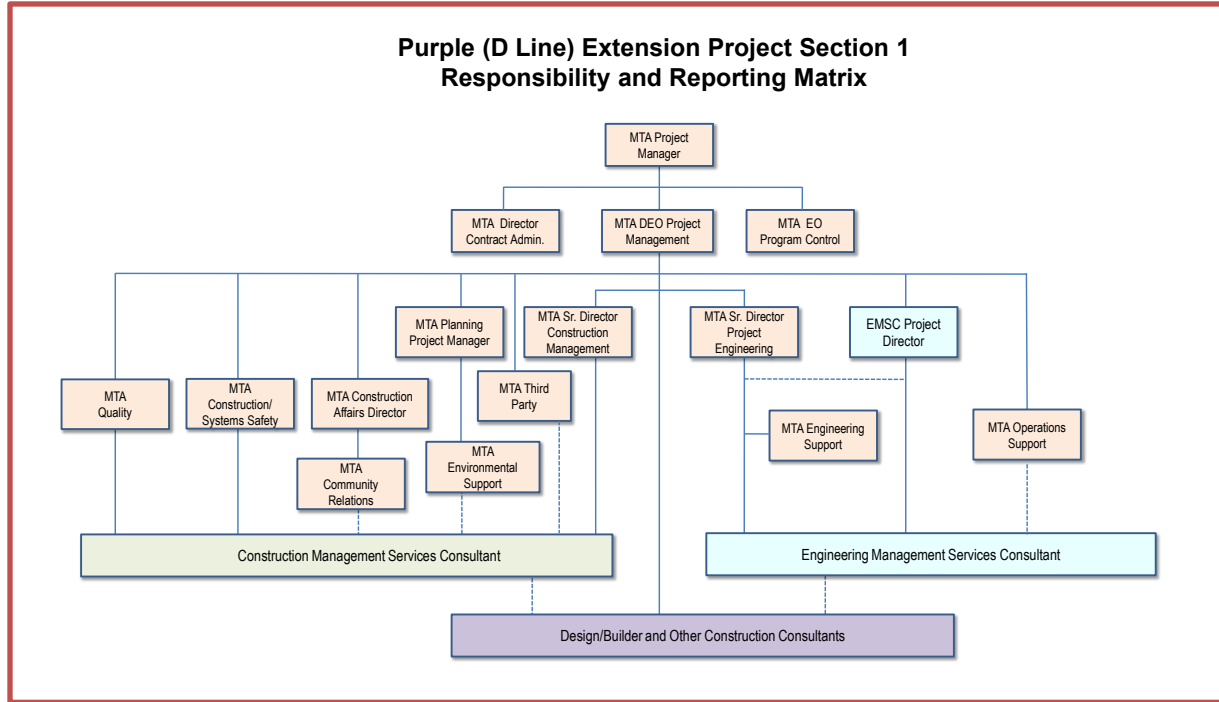
SOURCE	(A)	(B)	(C)	(D)	(D/B)	(E)	(E/B)	(F)	(F/B)
	ORIGINAL BUDGET	TOTAL FUNDS ANTICIPATED	TOTAL FUNDS AVAILABLE	\$	%	\$	%	\$	%
FEDERAL - SECTION 5309 NEW STARTS	\$1,250.000	\$1,250.000	\$762.711	\$1,152.119	92%	\$762.711	61%	\$757.741	61%
FEDERAL - SECTION 5309 NEW STARTS (ARPA-CIG**)	\$0.000	\$66.429	\$66.429	\$66.429	100%	\$66.429	100%	\$66.429	100%
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	\$1,321.938	\$1,321.938	\$957.495	72%	\$913.596	69%	\$681.434	52%
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	\$26.153	\$26.153	\$26.153	100%	\$26.153	100%	\$26.153	100%
CITY OF LOS ANGELES	\$75.273	\$75.273	\$6.290	\$6.290	8%	\$6.290	8%	\$6.290	8%
TOTAL	\$3,149.350	\$3,504.350	\$2,948.078	\$2,973.043	84.8%	\$2,539.736	72.5%	\$2,302.604	65.7%

EXPENDITURES ARE CUMULATIVE THROUGH DECEMBER 31, 2022
 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 (\$20.253M)
 **AMERICAN RESCUE PLAN ACT - CAPITAL INVESTMENTS PROGRAM (ARPA-CIG)

PROJECT ORGANIZATION AND STAFFING

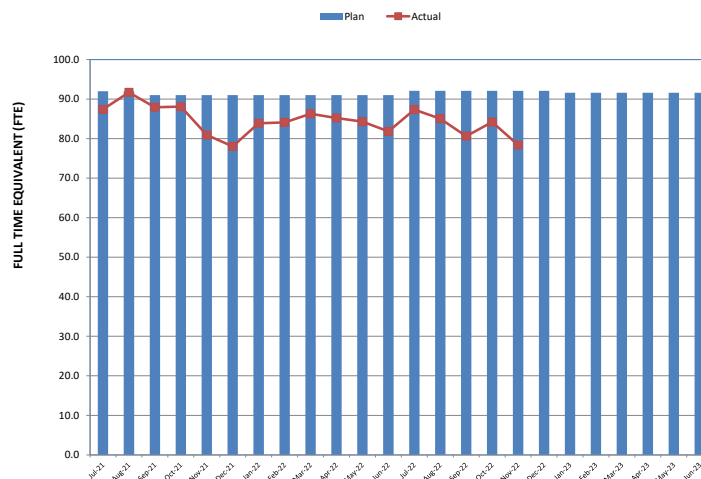
The Design-Build Contract is being managed by a joint team of Metro and consultant personnel jointly located at the Integrated Project Management Office (IPMO).



The overall FY23 Total Staffing Plan averages 91.9 FTEs per month.

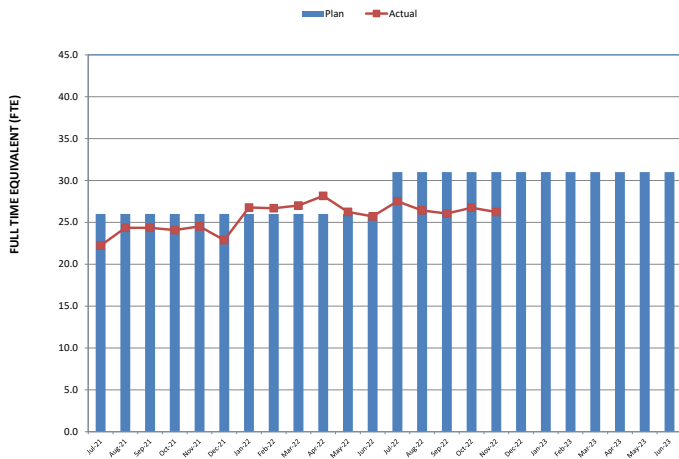
For November 2022 there were a total of 26.2 FTEs for MTA's Project Administration Staff and 52.2 FTEs for Consulting Staff. The total Project staffing for November 2022 was 78.4* FTEs.

Total Project Staffing – Metro and Consultants

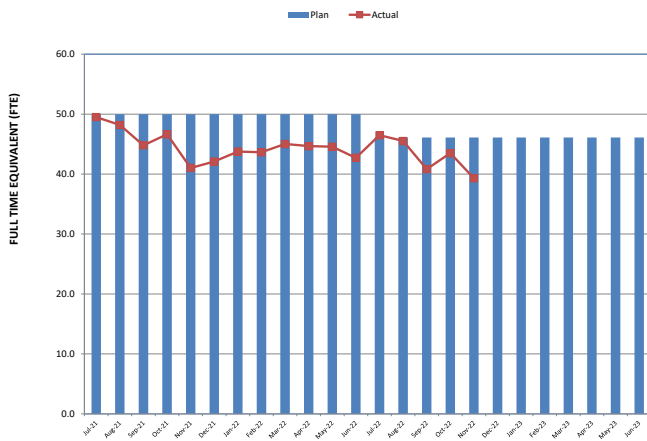


*Actuals include 1.9 FTEs related to Project Management Support Services (PMSS).

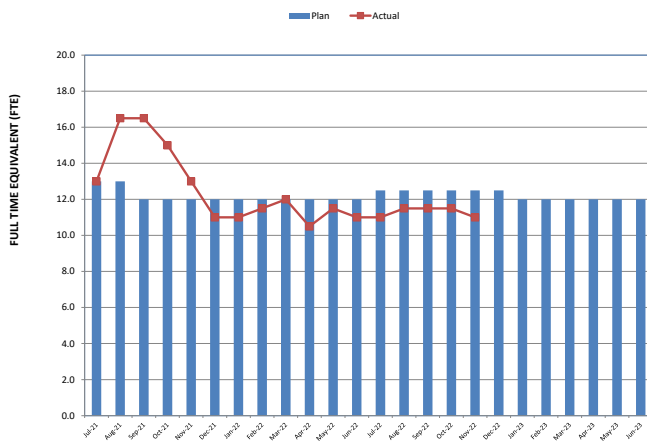
Metro Staff



CM Support Services Staff (Consultant)



Engineering Services Staff (Consultant)



All above data through November 2022

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.

One parcel at the Wilshire/Fairfax Station location remains in the condemnation phase. The final settlement agreement is being closed out, and the closeout date has not been established. Metro is in the process of extending the lease agreements for the Temporary Construction Easements (TCEs) based on the Fall 2024 Revenue Service Date (RSD).

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 entrance structures, tunnel eye seals, platform walls, track infill concrete and platform slab member.
 - Wilshire/Fairfax – engaged in oversight activities for entrance structure/ancillary level, maintenance walkways, masonry at concourse level, roof structures and station backfill.
 - Wilshire/La Cienega – engaged in oversight activities for construction of plenum deck structure, appendage structures and backfill activities.
 - Reach 2 – engaged in oversight surveillance of tunnel invert, walkway structures and track trail construction/thermite welding.
- Processed 46 surveillances, 23 Quality Action Requests (QARs), 32 Nonconformance Reports (NCRs) and one (1) Corrective Action Request (CAR).

ENVIRONMENTAL

- Conducted field environmental monitoring and spot inspections for stormwater BMPs, dust, and cultural resources for C1045 and third party work activities.
- Reviewed tentative plans for the completion of Wilshire/La Brea Station equipment hatch construction in the middle of Wilshire Boulevard and commented on the requirements of the EIR/FEIS. *Drafted study in preparation for possible CEQA reporting for the City of Los Angeles.*
- *Compiled Project disposal documentation and data.*

CONSTRUCTION AND COMMUNITY RELATIONS

- Attended monthly/weekly meetings with City of Los Angeles Department of Transportation, virtual Neighborhood Council meetings, monthly environmental mitigation meetings and daily/weekly internal construction update meetings for work in the cities of Los Angeles and Beverly Hills as well as held meetings online and conducted monthly 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.
- 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) program.
- Updated website, Facebook, and Twitter regularly. Published monthly Purple Line Extension (PLE) newsletter to email list. Placed monthly ads in local papers.
- *Produced and distributed sixty-five (65) construction work notices for construction activities; the La Cienega Monthly Look Ahead; weekly look-ahead for Division 20; weekly construction look-ahead emails to community stakeholders; and monthly look-ahead emails as well as door-to-door distributions for the City of Beverly Hills.*

CREATIVE SERVICES

- *Reviewed and responded to Contractor submittals: art glass shop drawings; Wilshire/La Brea Station porcelain enamel steel artwork layout drawings and material samples; and Contractor RFI's.*
- *Continued ongoing discussions with Systemwide Design, Architecture and Program Management regarding location of platform edge light equipment vis-à-vis sign band.*
- Continued coordination with Contractor on design development for artwork lighting.
- Managed fabrication sample reviews with artist in coordination with the Contractor.
- Coordinated station signage for continuity of customer experience between sections.

SAFETY & SECURITY

- *There were no recordable injuries or COVID cases in December 2022.*
- 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 construction crews.
- Metro and STS have extra safety staff assigned to monitor safety performance and program changes instituted after the March 23, 2022 fatality.
- *November 2022 Contractor Work Hours (Design & Construction): 99,424*
- *Contractor Project to Date Work Hours (Design & Construction) (through 11/30/22): 6,536,087*
- *Total Project to Date Work Hours (Contractor & the IPO Staff) (through 11/30/22): 7,910,457*
- Project to Date Recordable Injury Rate: 1.03 (40 Recordable Injuries) (each rate is per 200,000 work hours) (National Rate: 2.4)
- Project to Date Total Days Away (DART) Injury Rate: 0.07 (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	Completed decking operations for Wilshire/Fairfax Station.
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	Completed decking operations for Wilshire/La Cienega Station.
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	Completed concrete wall pours needed to support TBM assembly at Wilshire/La Brea Station.
July 2018	Began delivery of TBM components to the Wilshire/La Brea Station site.
October 2018	Commenced Reach One's (1) mining operation with the launch of TBM #1 from Wilshire/La Brea Station.
November 2018	Launched TBM #2 from Wilshire/La Brea Station.
December 2018	Reached the bottom of excavation at the Wilshire/Western TBM retrieval site.
January 2019	Placed the temporary concrete slab at the Wilshire/Western TBM retrieval site.
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	Achieved substantial completion for the C1078 Contract (Division 20 MOW/NRV Building Location 64) on May 1, 2019.
June 2019	Both TBM #1 (Soyeon) and TBM #2 (Elsie) completed 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	Reached bottom of excavation 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 Reach #2 tunnel drive. TBM #2 (Elsie) commenced 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 Reach #3 tunnel drive.
August 2020	Commenced concourse concrete placement at Wilshire/Fairfax Station.
September 2020	Completed first roof placement (Block 7) at Wilshire/La Cienega Station.
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 Reach 3 tunnel drive and has reached the Wilshire/San Vicente anomaly site.
February 2021	The Purple TBM (Elsie) completed Reach 3 tunnel drive.

February 2021	Started Reach 1 tunnel invert concrete placement.
March 2021	The Red TBM (Soyeon) completed 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	Placed all concrete roof sections (11 out of 16) for this phase of construction at Wilshire/Fairfax Station.
October 2021	Commenced Reach 1 trackwork installation activities.
November 2021	Commenced cross passage 19 (Reach 2) excavation.
December 2021	Completed concourse concrete slab placement at the east end of Wilshire/Fairfax Station.
January 2022	Completed Reach 1 south tunnel walkway concrete placement.
February 2022	Completed concrete concourse deck placement at the west end of Wilshire/Fairfax Station.
March 2022	Completed Reach 2 cross passage excavation.
April 2022	Commenced the weekend deck beam removal/station backfill operation on Wilshire Boulevard.
May 2022	Completed concrete concourse deck placement at the west end of Wilshire/La Brea Station.
June 2022	Completed concrete concourse deck placement at the west end of Wilshire/La Cienega Station.
July 2022	Completed all arched concrete roof placements at Wilshire/Fairfax Station.
August 2022	Commenced remaining roof concrete placements at the west end of Wilshire/La Brea Station.
September 2022	Commenced remaining roof concrete placements at the west end of Wilshire/La Cienega Station.
October 2022	Commenced Reach 2 trackwork installation activities.

November 2022 Completed concrete roof placements at the Gale shaft section of
Wilshire/La Cienega Station (Blocks 8 & 9)

*December 2022 Completed all arched roof concrete placements at Wilshire/La Brea and
Wilshire/La Cienega Stations.*