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SUBJECT: WESTSIDE PURPLE LINE EXTENSION SECTION 2 PROJECT  
NOVEMBER 2020 MONTHLY PROJECT STATUS REPORT

Enclosed herewith is the Monthly Project Status Report for the Westside Purple Line Extension Section 2 Project. This report contains the Los Angeles County Metropolitan Transportation Authority's (LACMTA) representation of the Westside Purple Line Extension Section 2 Project status for the period ending November 27, 2020.

If you have any questions regarding this report or its supporting information, please contact Rick Wilson, Executive Officer, Program Control at (424) 551-4470.

MM: PB  
Enclosure



# Westside Purple Line Extension Section 2 Project



Metro®



# **Westside Purple Line Extension Section 2 Project**

## **MONTHLY PROJECT STATUS REPORT**

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

**November 2020**

## TABLE OF CONTENTS

Project Overview.....	3
Executive Summary .....	6
Project Update .....	11
Project Schedule.....	11
Project Summary Schedule.....	11
Progress Summary .....	12
Planned vs. Actual Progress .....	12
Key Milestone Six-Month Look Ahead.....	13
Major Equipment Delivery .....	14
Critical Path .....	15
Project Schedule Contingency Drawdown.....	16
Project Cost.....	17
Project Cost Analysis.....	17
Cost Contingency Drawdown and Analysis.....	18
Risk Management.....	19
Summary of Contract Modifications.....	20
Disadvantaged Business Enterprise (DBE).....	21
Project Labor Agreements .....	22
Financial/Grant .....	23
Project Staffing .....	24
Real Estate .....	26
Quality Assurance .....	27
Environmental.....	28
Construction and Community Relations .....	29
Creative Services.....	29
Safety and Security.....	30
Appendix.....	31
Chronology of Events .....	31

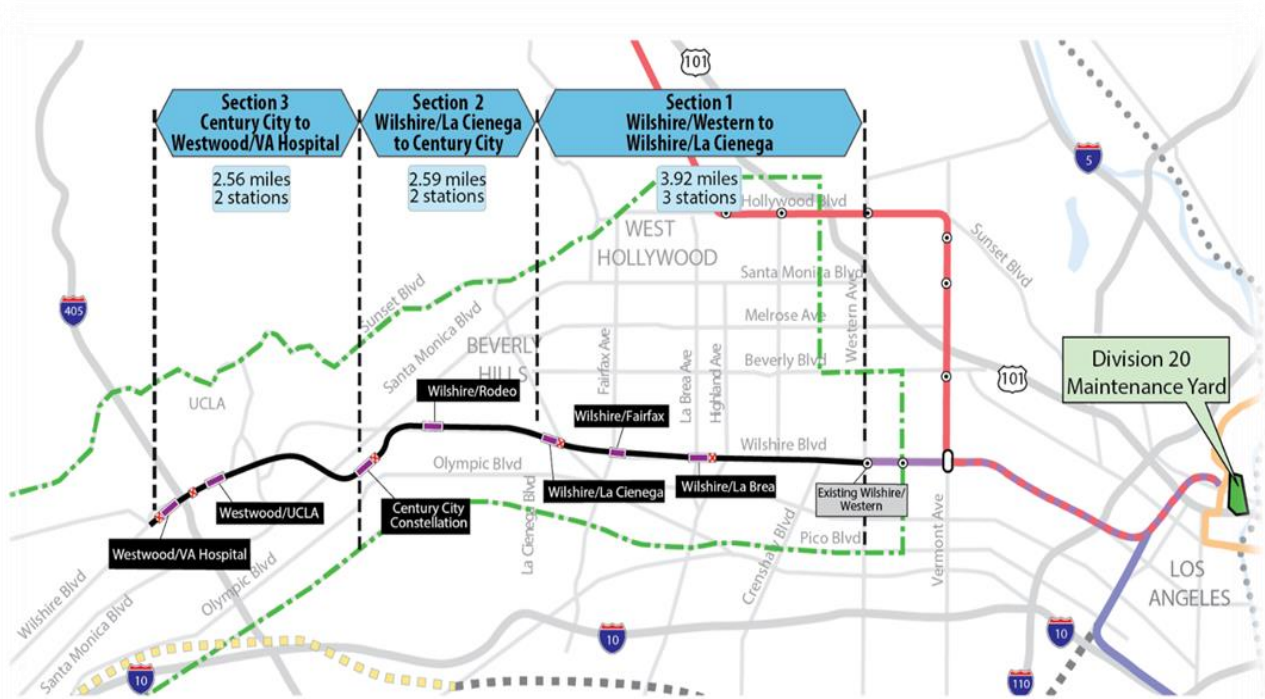


## PROJECT OVERVIEW

### Project Background

The Westside Purple Line Extension Section 2 Project (Project) is the second of three sections to be designed and constructed as part of the Los Angeles County Metropolitan Transportation Authority's (LACMTA) Measure R Program. The program was approved by Los Angeles County voters in November 2008 and provides a half-cent sales tax to finance new transportation projects. In April 2012, the three sections of the Project were environmentally cleared and adopted by LACMTA Board of Directors.

Section 2 will extend the future Wilshire/La Cienega Station that is part of the Westside Purple Line Extension Section 1 Project currently under construction to Century City. The Project is located entirely underground, primarily following Wilshire Boulevard, and includes the design and construction of approximately 2.59 miles of double-track heavy rail, two new stations as well as the purchase of 20 heavy rail vehicles. The Wilshire/Rodeo Station is within the jurisdiction of City of Beverly Hills, and the Century City Constellation Station is within the jurisdiction of City of Los Angeles. The Project also includes train controls, signals, traffic controls, communications, traction power supply and distribution, fare collection systems and equipment, acquisition of right-of-way, and utility relocations.





The Wilshire/Rodeo Station box will be under the center of Wilshire Boulevard beginning just east of South Canon Drive and extending to El Camino Drive. The entrance will be on the southwest corner of Wilshire Boulevard and Reeves Drive.

The Century City Constellation Station box will be under the center of Constellation Boulevard between Century Park East and Solar Way. A double crossover will be located east of this station. The entrance will be on the northeast corner of Constellation Boulevard and Avenue of the Stars. In lieu of tail tracks, safe breaking distance will be provided at the interim terminus station.

### **Major Procurements**

Contract C1120 – 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 2.59-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 finished work. A tunnel boring machine (TBM) launch shaft will be constructed at the Century City Constellation Station. Two underground stations are to be constructed with one double crossover location set east of the Century City Constellation (terminus) Station. Each station has a single entrance plaza with stairs, escalators and elevators which meet ADA requirements. The scope of work also includes all architectural finishes, mechanical and electrical systems and equipment including train control, traction power, communications, trackwork, system tie-in to the Wilshire/La Cienega Station (currently under construction), testing and commissioning.

### Metro Furnished Equipment

Metro has procured a contract to provide 20 Heavy Rail Vehicles (HRV) necessary to operate the extension of the Purple Line. An additional contract will be procured for the Universal Fare System (UFS). The scope of the HRV contract includes design, manufacturing, testing and delivery of the vehicles. The scope of the UFS contract will include design, fabrication and installation of equipment at the two new stations and system testing.

### **Program Management**

The Westside Purple Line Extension Section 2 Project is being managed under the direction of an Integrated Project Management Office (IPMO). WSP Global (WSP) provides engineering and design support services, while Purple Line 2 CM Partners, a Joint Venture

provides construction management support services. An overview of staffing is provided under the Staffing section of this report. The program management team is also supported by Metro headquarters' resources and includes engineering, risk management, environmental, quality management, operations and creative services departments.

Project Schedule and Budget: The Revenue Service Date (RSD) is planned for 2025.

On January 26, 2017, the Metro Board approved the Life of Project (LOP) Budget for the Westside Purple Line Extension Section 2 Project 865522 for \$2.4 billion excluding Finance Charges of \$88.7 million. A detailed Life of Project Budget forecast is included under the Project Cost Forecast section of this report.

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

- Federal – Section 5309 New Starts
- Federal CMAQ (Congestion Mitigation & Air Quality)
- Measure R – TIFIA Loan (Transportation Infrastructure Finance & Innovation Act)
- Measure R 35%
- State Capital Projects Loans

Construction and Community Relations: The Construction and Community Relations team is tasked with promoting the Project and performing public outreach within the community to keep stakeholders informed of construction activities occurring along the Project alignment. To facilitate the communication, community leadership councils have been formed which represent geographic-based constituent groups 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; abnormal and emergency scenarios in which random combinations of system interactions are tested and equipment “burned-in”; and training of emergency services as well as Metro personnel who will operate and maintain the extension. Activities occurring during Pre-Revenue Operations are carried out by a designated Metro Project Rail Activation Group.

## EXECUTIVE SUMMARY

*In November 2020, the Project reached 40% completion based on earned value measurements for design and construction. The focus of the Project continues to be completing final design, which is currently anticipated to complete in February 2021, and construction activities in Century City and Beverly Hills. The C1120 Design Build Contract is on schedule to substantially complete by May 2025 and demobilize by October 2025. The forecast Revenue Service Date (RSD) for the Project remains planned for 2025. The following is an overview of current design and construction activities.*

### Design Status

The Engineering Management Services team (WSP) continues to provide engineering services during construction as well as real estate support services. The team is also supporting Metro in reviewing final design submittals, responding to RFI's, and assisting in the preparation of change notices.

The design work has originally been identified into three distinct design unit packages. They are the following:

1. Design Package 1 – Utility/Civil Design at Launch Box in Century City
2. Design Package 2 – Remaining Utility Conflicts (Outside of Launch Box)
3. Design Package 3
  - (Volume 1) – Tunnel Reaches
  - (Volume 2) – Stations
  - (Volume 3) – Track & Systems

The design packages noted above have been broken out into discrete advanced design units/packages in order to facilitate and prioritize design deliverables.

Metro, Tutor Perini/O&G (TPOG) and STV have been working together to identify advanced partial design units for the abovementioned design packages and proposed submittal dates to facilitate timely design review to support the Project schedule.

Each design unit package will be submitted and evaluated at each of the following phases: 60%, 85%, 100%, Approved for Construction (AFC) and Issued for Construction (IFC). Critical design units have been advanced as Advanced Partial Design Units (APDU's) to support ongoing construction activities.

Design progress meetings are occurring weekly related to the design unit packages. Weekly design task force meetings (by individual discipline) began at the end of March 2018 and are scheduled to continue through design completion. TPOG is continuing with the required contractual submittals. *Design related submittals of note that TPOG has submitted this month are: AFC - CCS Temporary Roadway Partial APDU 2.5; AFC - CCS SOE Station and Entrance APDU 2.9; 100% - Santa Monica Bus Layover Restoration DU 1.1.1; 100% - WRS TBM Break-in Break-out APDU 3.3.2; and Draft - Tunnel Ventilation Analysis SES Report.*

## Construction Status

Advanced Utility Relocations: All advanced utility relocations for LADWP Power and AT&T are complete.

Century City Constellation Station: Metro obtained a permit to continue utility work at Century City Constellation Station.

- Nighttime noise variance for work between Century Park East and Century Park West including Avenue of the Stars was issued by the Los Angeles Police Commission for May 28, 2020 through December 31, 2020. *This permit will not be renewed as the work has been completed.*

Metro has obtained an additional permit to continue oil well removal work associated with the Century City Constellation Station.

- Nighttime noise variance for work on anomaly A at 1940 Century Park East was issued by the Los Angeles Police Commission for July 6, 2020 through October 6, 2020. This permit will not be renewed as the work has been completed.

TPOG has obtained the necessary permits for the relocation of the 12-inch water line west of the TBM launch box at the Century City Constellation Station. Nighttime work to relocate the water line began on April 7, 2020. On April 21, 2020, the Board of Public Works approved a 5-week expansion of the existing street closure of Constellation Boulevard to Avenue of the Stars to accommodate the relocation work during the Safer at Home Order.

TPOG completed the work to relocate the water line within the expanded street closure in mid-May 2020. TPOG's water line relocation work on Constellation Boulevard between Avenue of the Stars and Solar way is in progress.

Additional utility work for the Project includes TPOG working with City of Los Angeles to obtain permits to relocate a sanitary sewer and storm drain in the Project area.

TPOG is working with the City of Los Angeles, DOT and BOE, to obtain permits for a full street closure along Constellation Boulevard. Permits for full closures are generally located on separate areas along Constellation Boulevard. On July 31, 2020, TPOG obtained a permit from the City of Los Angeles to maintain the full closure of Constellation Boulevard, its permit is to expire on February 23, 2021. An additional permit was also obtained for a full street closure that encompasses the intersection of Constellation Boulevard and Avenue of the Stars, from the TBM launch box to Solar Way. The permit will span from October 21, 2020 to November 23, 2020. *Additionally, the Project is working with the City of Los Angeles about opportunities of working nights during the Holiday Moratorium for the area on Constellation Boulevard west of Avenue of the Stars.*

Metro executed a legal agreement with Enwave Corporation for the relocation of Enwave utilities at the Century City Constellation Station on June 16, 2020.

Excavation of the TBM launch box, along with the construction of the tunnel muck bin started in March 2019. The excavation of the TBM launch box was completed on November 1, 2019. *Station piling west of the TBM launch box began on May 12, 2020 and is currently*

*90% complete. Decking operations west of the TBM launch box are underway. Station pile installation is anticipated to be completed in January 2021 and the decking operations are anticipated to be completed in April 2021.*

Tunnels: Tunneling operations began on April 30, 2020 with the launch of the BL TBM, “Ruth”. “Ruth” broke into the tunnel access shaft on September 16, 2020 and has excavated 438 feet and erected 81 tunnel rings to date. Launch of the BR TBM “Harriet” began on July 20, 2020. “Harriet” broke into the tunnel access shaft on October 10, 2020 and has excavated 335 feet and erected 61 tunnel rings to date. Excavation of the tunnel access shaft was completed in August 2020. Tunneling operations will be transitioned to the tunnel access shaft after each TBM passes through the shaft. *BL TBM was re-launched on November 23, 2020 after successful completion of the remaining oil well abandonment work. BR TBM activity will resume once BL TBM breaks out of tunnel access shaft east wall.*

A right of entry agreement to access Beverly Hills Unified School Districts (BHUSD) was executed on March 16, 2020. TPOG assisted with the removal of three portable classroom buildings from the school campus on March 20, 2020 to provide surface access at Anomalies A and C. Digging to locate anomalies A and C began on March 30, 2020. Explorations at all three locations were completed in May 2020. The abandonment of both oils wells is complete. *A new anomaly was found and demonstrated to be related to the first abandoned well which was completed.*

*Production of tunnel rings continues and there are 4,055 of 4,187 precast tunnel rings, and 209 of 436 special seismic rings that have been produced as of this reporting period.*

Wilshire/Rodeo Station: On March 31, 2020, Beverly Hills City Council approved a full street closure of Wilshire Boulevard (between Beverly Drive and Crescent Drive) for the duration of the “Safer at Home” orders due to the COVID-19 Pandemic. Implementation of the closure occurred on April 2, 2020. The full street closure of Wilshire Boulevard ended, and the street reopened on June 15, 2020.

*On November 10, 2020, the Beverly Hills City Council approved the settlement agreement to end the city's lawsuit against the FTA and Metro. Beverly Hills City Council also approved Metro's holiday moratorium waiver request and nighttime excavation work hours, allowing construction of Wilshire/Rodeo Station to continue through New Year's Day.*

Wilshire/Rodeo Station piling operations for the south side of the station box, end walls, and station entrance started on April 12, 2020. Piling for the station box was completed on May 9, 2020. Piling for the station entrance at Reeves Drive was completed on May 13, 2020. *Excavation of the station box and entrance is 69% complete and is ongoing. Excavation of the station box and entrance is anticipated to be completed in February 2021.* Installation of the temporary street decking over the future station box excavation began on May 5, 2020 and was completed on June 6, 2020. Prior to the COVID-19 pandemic, this work was anticipated to be performed during weekend closures from August 2020 through January 2021 (excluding weekends during City holidays). *Canopy pipe installation on the East and West bulkheads for both tunnels is 67% complete.*

**Cost and Schedule Summary**

*For the C1120 Design/Build contract, Metro has received the Contractor’s November 2020 schedule update, which reports the substantial completion date finishing 47 calendar days ahead of the May 23, 2025 contractual date. Future revisions to the contractor’s means and methods and revised schedule logic, may have an impact on future updates. It is anticipated that the contractual completion date will be achieved.*

The Critical Path (CP) of the Project remains the same running through the Contractor’s required utility relocations at Century City Constellation Station, then followed by SOE, street decking, mass excavation and structural concrete for the station. Next it flows into installation of the interior finishes and electrical equipment, followed by systems, testing and pre-revenue operations. A summary graphic of the critical path is found on Page 15.

**C1120 Design-Build Contract Schedule Metrics**

	Original Contract Dates	Time Extension	Current Contract	Forecast	Variance CDs
Notice to Proceed	04/26/17A	0	04/26/17A		0
Substantial Completion	05/23/25	0	05/23/25	05/23/25	0

Project costs continue to track within budget and projected contingency limits. To date, the Current Budget and Current Forecast remain the same this period at \$2.5 billion.

*There are currently four (4) open claims that are being evaluated.*

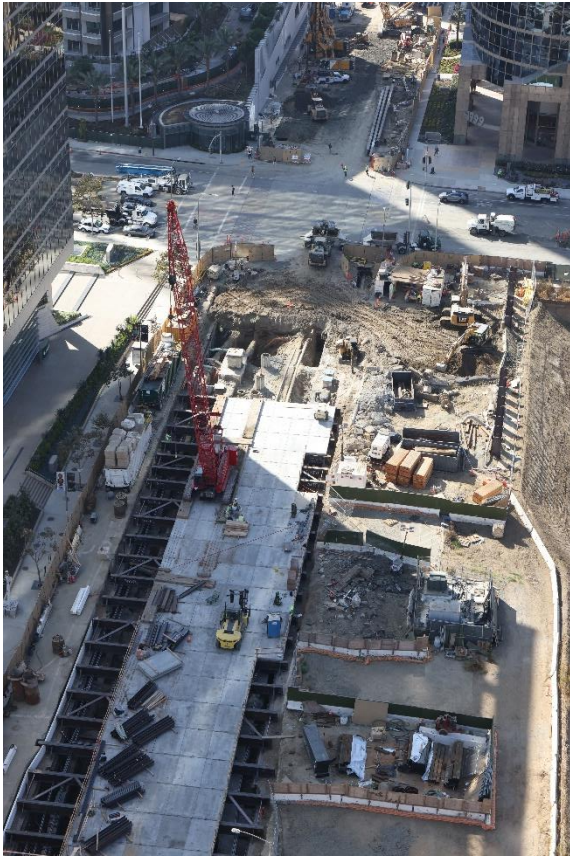
- WRS 21-inch Sanitary Sewer Relocation Design Only (Claim 7)
- Construction Vibration Control (Claim 10)
- AT&T Wilshire/Rodeo Appendage (Claim 12)
- Impact of Utility Relocation work at City of Beverly Hills due to MOA and other COBH Restrictions (Claim 13)

Detailed cost and budget information is provided on Page 17.

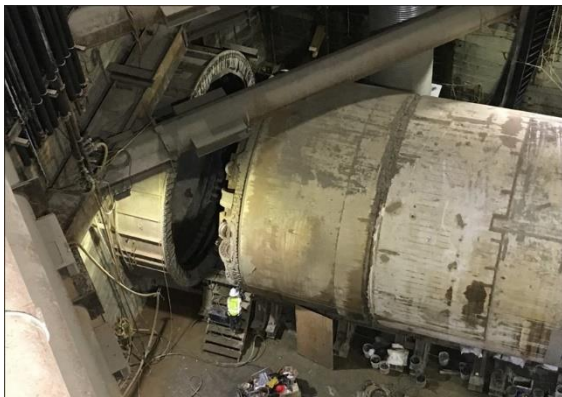
**Key Management Concerns**

No concerns to report at this time.

Project Construction Photos



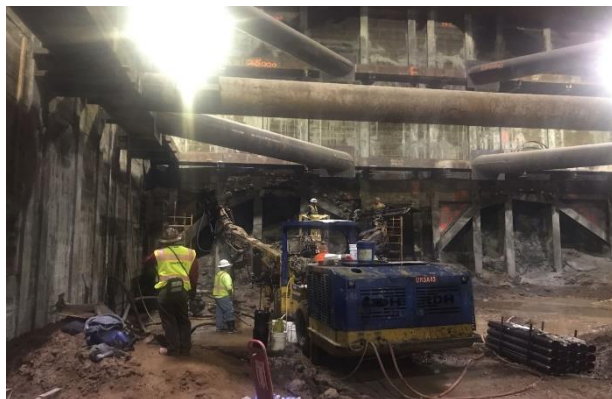
Excavation Activities West of the TBM Launch Box in Century City



BL TBM "Ruth" at the Tunnel Access Shaft in Century City



TBM Launch Box in Century City



Canopy Pipe Drilling Wilshire/Rodeo Station

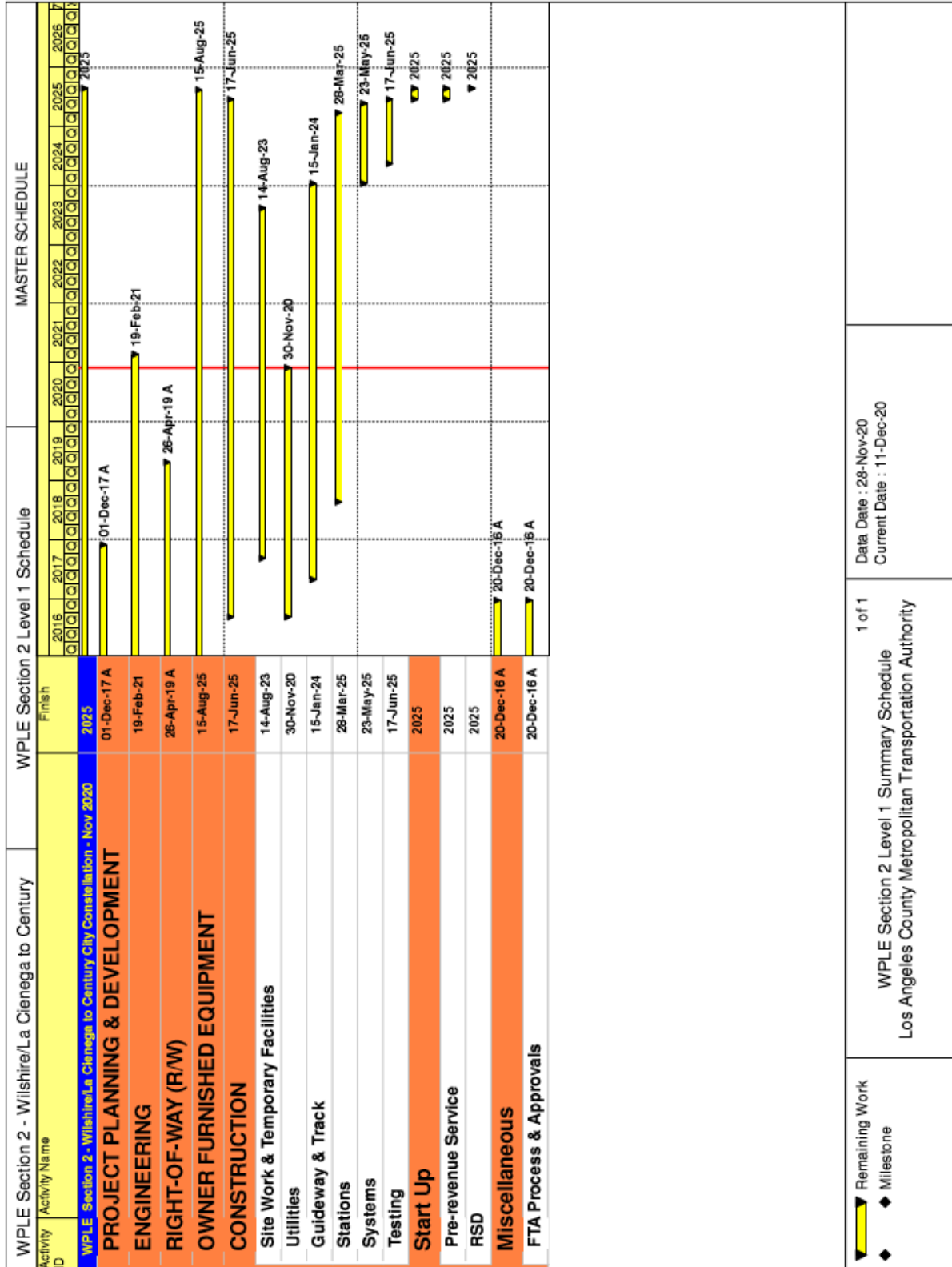


Wilshire/Rodeo Station Excavation Activities

# PROJECT UPDATE

## PROJECT SCHEDULE

### Project Summary Schedule



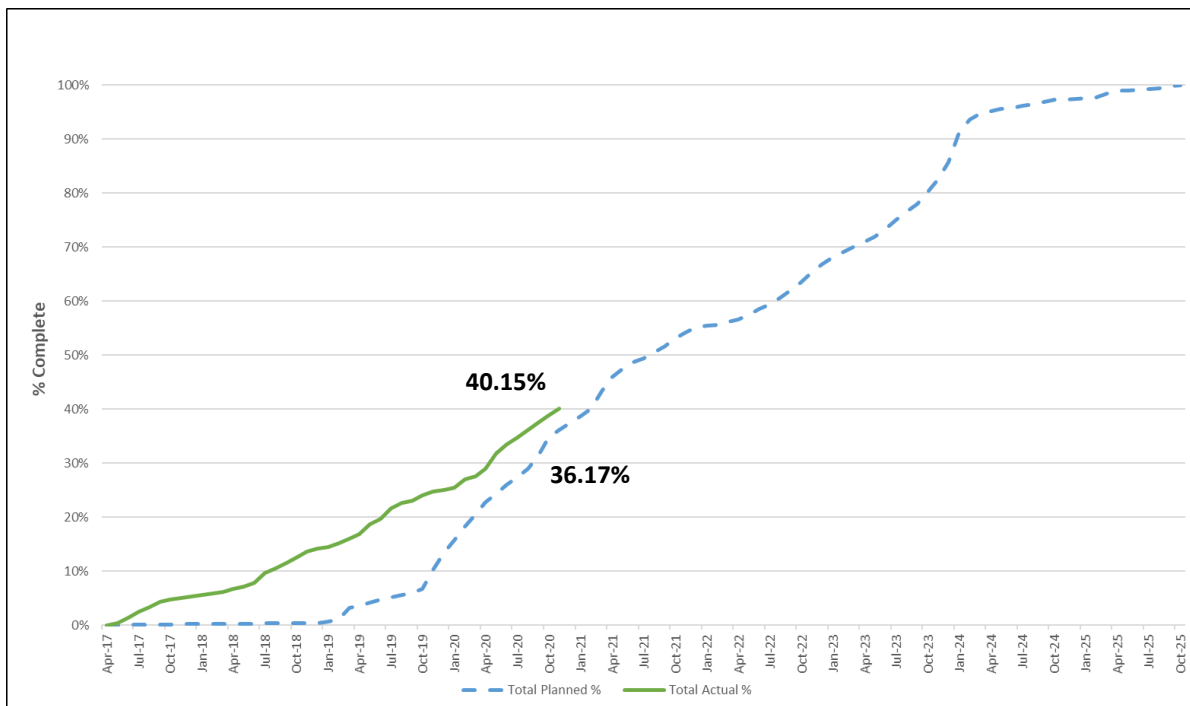


**Progress Summary**

	Status	Change from Last Period	Comment
Forecast Revenue Service Date	2025		
TIFIA Revenue Service Date	12/31/2026	None	
FFGA Revenue Service Date	12/31/2026	None	
<b>Final Design Progress:</b>			
Contract C1120	99.6%	0.0%	<i>Final Design is anticipated to complete in February 2021. No impact to Project schedule.</i>
<b>Construction Contracts Progress:</b>			
Contract C1120	40.2%	1.3%	

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

**Planned vs. Actual Progress**



The actual overall construction progress is 40.15% versus a planned of 36.17% through November 2020. The progress curves represent the physical progress of work performed to complete Contract C1120. The "Total Planned %" curve is based on the Contractor's late schedule dates from the approved baseline schedule.

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

**Key Milestone Six-Month Look Ahead**

	Milestone Date	Nov-20	Dec-20	Jan-21	Feb-21	Mar-21	Apr-21
Break-Out of BL TBM "Ruth" at tunnel access shaft (TAS) in Century City	11/16/20 A	⬡					
Complete concrete pour of muck bin slab in Century City	12/10/20		⬡				
Complete installation of BL TBM Support Equipment at TAS	01/07/21			⬡			
Start installation of BL Special Rings	01/25/21			⬡			
Complete pile installation in Constellation Blvd west of the Launch Box and East of Avenue of the Stars	01/27/21			⬡			
Break-Out of BR TBM "Harriet" at TAS	02/04/21				⬡		
Complete Design Package 3 - Stations (Vol 2), Track & Systems (Vol 3)	02/20/21				⬡		
Expiration of full street closure of Constellation Blvd.	02/23/21				△		
Complete installation of 2nd level of struts & wales at Century City Constellation Station	03/22/21					⬡	
Start installation of BR Special Rings	03/31/21					⬡	
Complete decking operations west of the launch box at Century City Constellation Station	04/16/21						⬡
Complete excavation of Lift 3 to below 3rd Level of Struts at Century City Constellation Station	04/20/21						⬡

◆ MTA Staff

Ⓜ MTA Board Action

⚡ FTA (Federal Transit Administration)

▽ Utility Company

△ Other Agencies

□ Contractors

○ Design Consultant

⬡ C1120 D/B Contractor

"A" following date is actual and completed

\* New

**Major Equipment Delivery**

**MAJOR EQUIPMENT DELIVERY**

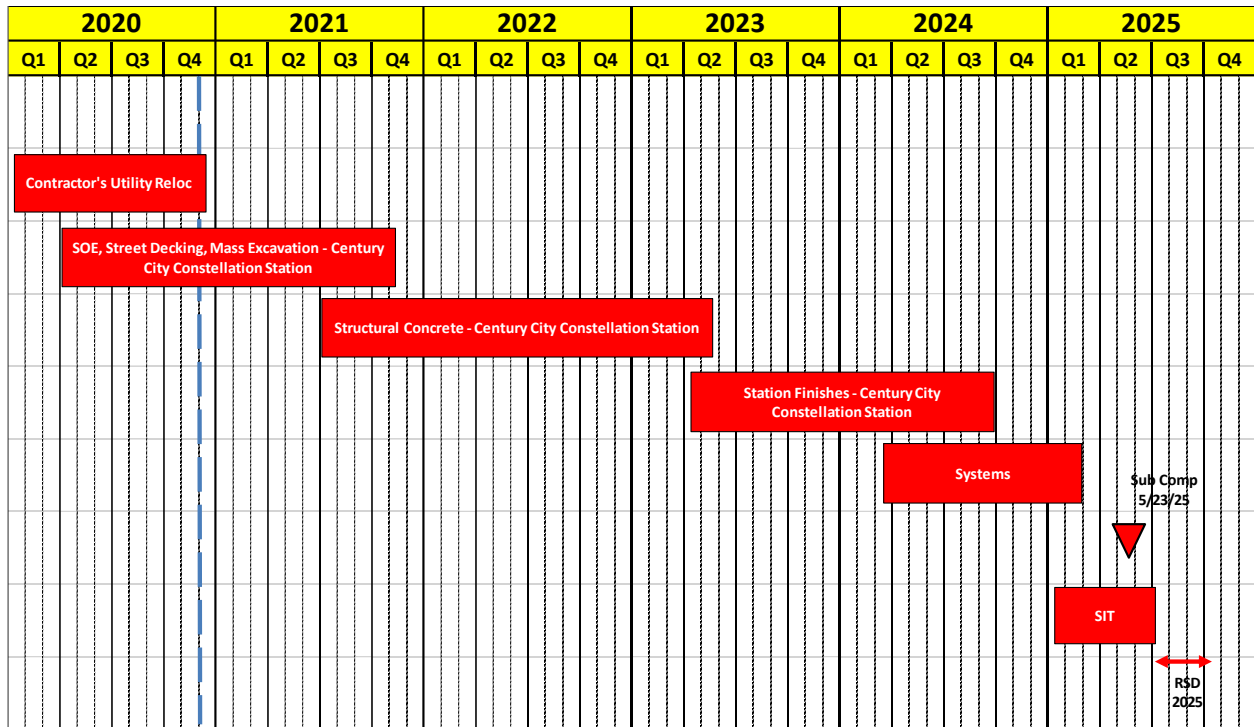
	<b>Submittal</b>	<b>Procurement</b>	<b>Delivery</b>	<b>Installation</b>
<b>C1120 DESIGN/BUILD*</b>				
Tunnel Boring Machines	Jul-27-17(A)	Aug-14-17(A)	Sep-13-18(A)	Dec-26-19(A)
Emergency Ventilation Fans	<i>Feb-22-21</i>	<i>Feb-23-21</i>	<i>Aug-11-21</i>	<i>Feb-28-22</i>
Station Elevators/Escalators	<i>Apr-26-21</i>	<i>Apr-26-21</i>	<i>Apr-14-23</i>	<i>Aug-21-23</i>
Track - Running Rail	<i>Apr-05-21</i>	<i>Apr-05-21</i>	<i>Jun-30-21</i>	<i>Jun-26-23</i>
Traction Power Equipment	<i>May-27-21</i>	<i>May-28-21</i>	<i>Feb-07-22</i>	<i>Oct-05-23</i>
Automatic Train Control	<i>Dec-04-20</i>	<i>Dec-04-20</i>	<i>Jul-08-21</i>	<i>Nov-21-23</i>
Radio System	<i>Dec-04-20</i>	<i>Dec-04-20</i>	<i>Jul-08-21</i>	<i>Dec-14-22</i>
SCADA RTU System	<i>Dec-04-20</i>	<i>Dec-04-20</i>	<i>Jul-08-21</i>	<i>Dec-14-22</i>
<b>Heavy Rail Vehicles***</b>	Exercise Option #3 March 1, 2021			
<b>Universal Fare System***</b>	TBD	TBD	TBD	June 2023**

\* Dates derived from TPOG's Nov. 2020 Schedule.

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

\*\*\* Metro supplied equipment. Reevaluation of exercising this option will be in Spring 2021.

**Critical Path Project**



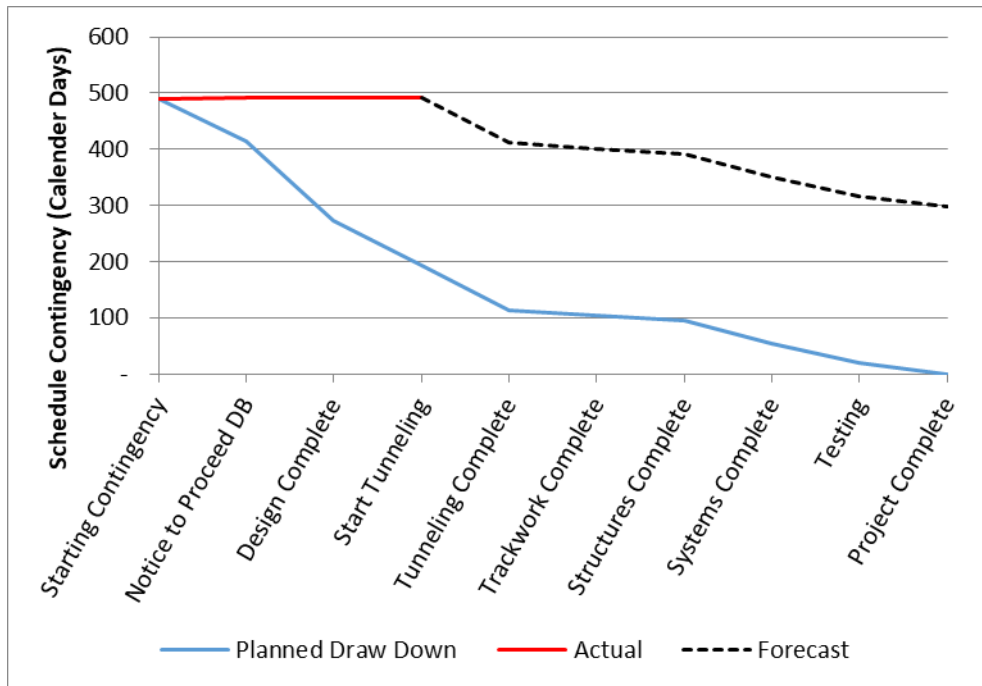
*The Critical Path in November 2020 remained the same as portrayed last month.*

**Project Schedule Contingency Drawdown Analysis**

The project schedule contingency drawdown model provides a dual-axis perspective based upon the FFGA RSD of December 2026 and Metro’s Project Master Schedule (PMS) forecast of 2025.

The introduction of the PMS model axis reflects a proportional distribution of available float relative to the FFGA model.

With regard to the FFGA RSD, schedule float of sixteen (16) months has been maintained.



## PROJECT COST

### Project Cost Analysis – 865522

DOLLARS IN THOUSANDS

SCC CODE	DESCRIPTION	ORIGINAL BUDGET	CURRENT BUDGET		COMMITMENTS		EXPENDITURES		CURRENT FORECAST		FORECAST/ BUDGET VARIANCE
			PERIOD	TO DATE	PERIOD	TO DATE	PERIOD	TO DATE	PERIOD	TO DATE	
10	GUIDEWAY & TRACK ELEMENTS	346,440	-	321,703	29	311,367	2,291	113,402	-	321,703	-
20	STATIONS, STOPS, TERMINALS, INTERMODAL	434,990	-	455,245	-	415,621	8,773	120,287	-	455,245	-
30	SUPPORT FACILITIES: YARDS, SHOPS, ADMIN. BLDGS	-	-	-	-	-	-	-	-	-	-
40	SITework & SPECIAL CONDITIONS	553,282	-	583,924	-	564,743	4,156	388,988	-	583,254	(669)
50	SYSTEMS	81,457	-	80,525	-	70,758	-	8,357	-	81,194	669
<b>CONSTRUCTION SUBTOTAL (10-50)</b>		<b>1,416,169</b>	<b>-</b>	<b>1,441,396</b>	<b>29</b>	<b>1,362,489</b>	<b>15,219</b>	<b>631,034</b>	<b>-</b>	<b>1,441,396</b>	<b>-</b>
60	ROW, LAND, EXISTING IMPROVEMENTS	426,396	-	430,075	-	318,091	504	247,047	-	430,075	-
70	VEHICLES	42,000	-	42,000	-	-	-	-	-	42,000	-
80	PROFESSIONAL SERVICES	374,878	-	403,558	582	289,070	4,117	246,477	-	403,558	-
<b>SUBTOTAL (10-80)</b>		<b>2,259,444</b>	<b>-</b>	<b>2,317,029</b>	<b>610</b>	<b>1,969,650</b>	<b>19,839</b>	<b>1,124,559</b>	<b>-</b>	<b>2,317,029</b>	<b>-</b>
90	UNALLOCATED CONTINGENCY	177,176	-	119,591	-	-	-	-	-	119,591	-
100	FINANCE CHARGES	88,695	-	88,695	-	-	-	-	-	88,695	-
<b>TOTAL PROJECT 865522 (FFGA &amp; NON-FFGA CONCURRENT ACTIVITIES)</b>		<b>2,525,314</b>	<b>-</b>	<b>2,525,314</b>	<b>610</b>	<b>1,969,650</b>	<b>19,839</b>	<b>1,124,559</b>	<b>-</b>	<b>2,525,314</b>	<b>-</b>
ENVIRONMENTAL/PLANNING 465522		4,349	-	4,349	-	3,957	-	3,377	-	4,349	-
<b>TOTAL PROJECT 465522 (ENV / PLAN'G)</b>		<b>4,349</b>	<b>-</b>	<b>4,349</b>	<b>-</b>	<b>3,957</b>	<b>-</b>	<b>3,377</b>	<b>-</b>	<b>4,349</b>	<b>-</b>
<b>TOTAL PROJECTS 465522 &amp; 865522</b>		<b>2,529,664</b>	<b>-</b>	<b>2,529,664</b>	<b>610</b>	<b>1,973,607</b>	<b>19,839</b>	<b>1,127,936</b>	<b>-</b>	<b>2,529,664</b>	<b>-</b>

#### Original Budget

Original Budget of \$2.5 billion reflects the Life of Project (LOP) budget approved by the Board on January 26, 2017, plus Finance Charges of \$88.7 million.

#### Current Budget and Current Forecast

Current Budget and Current Forecast remain the same this period at \$2.5 billion.

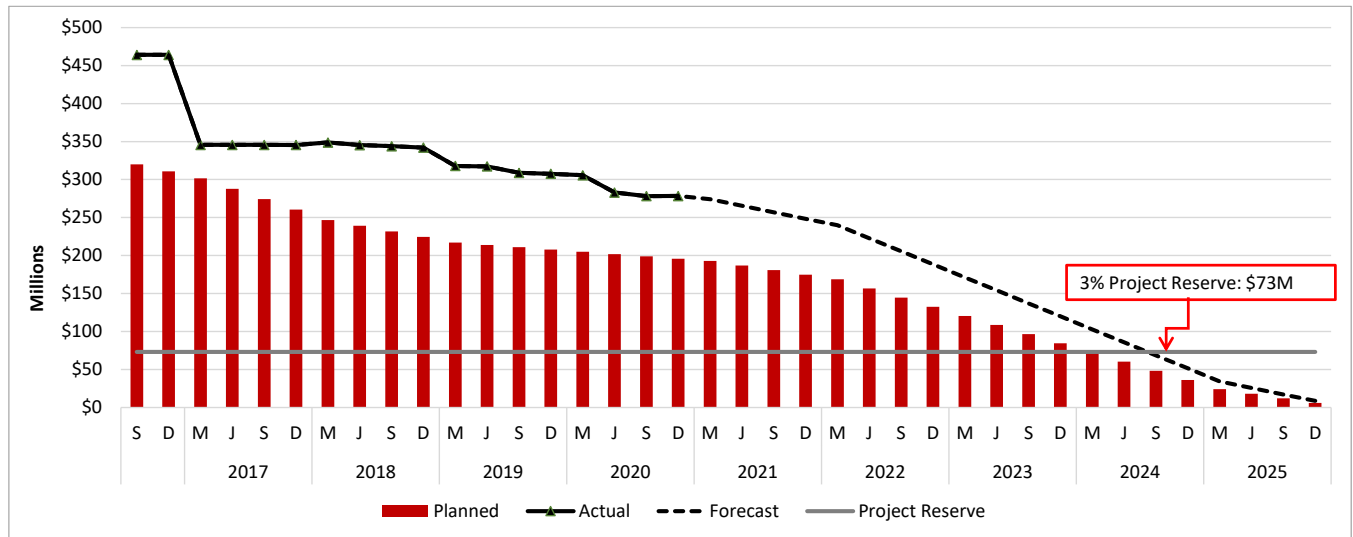
#### Commitments

*The Commitments increased this period by \$0.6 million mainly due to an executed Contract Modification for the Design/Build Contract C1120, and a Modification for Quality Management Services. The \$1.9 billion in Commitments to date represent 78.0% of the Current Budget.*

#### Expenditures

*The Expenditures increased this period by \$19.8 million primarily for costs associated with Design/Build Contract C1120, Third Party Private Utilities, Environmental Services, Real Estate Acquisitions, Metro Project Administration, Engineering Management Support Services, Construction Management Support Services, Legal Services, Quality Management Services, City of Beverly Hills Memorandum of Agreement and City of Los Angeles Master Cooperative Agreement. The \$1.1 billion in Expenditures to date represent 44.6% of the Current Budget.*

### Cost Contingency Drawdown



### Cost Contingency Drawdown Analysis

The Original Budget of \$2.5 billion includes finance charges of \$88.7 million. It also includes a project cost contingency of \$345.7 million or 13.7% of the total project, which is based on the Life of Project (LOP) Budget approved by the Board in January 2017. An allocated contingency amount of \$168.5 million is included in the total cost contingency. The allocated contingency is an amount to cover anticipated but unknown contract modifications issued by Metro [when applicable to specific contracts within each Standard Cost Category (SCC)].

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

The project cost contingency drawdown curve is based on a 2025 Forecast Revenue Service Date (RSD).

*The allocated contingency decreased this period by \$29K due to an executed Contract Modification for the Design/Build Contract C1120.*

PROJECT COST CONTINGENCY					
DOLLARS IN THOUSANDS					
	Original Contingency (LOP Budget)	Previous Period	Current Period	To-Date	Remaining Contingency (Forecast)
Unallocated Contingency	177,176	(57,585)	-	(57,585)	119,591
Allocated Contingency	168,534	(9,759)	(29)	(9,788)	158,746
<b>Total Contingency</b>	<b>345,710</b>	<b>(67,344)</b>	<b>(29)</b>	<b>(67,373)</b>	<b>278,337</b>

## Risk Management

### Summary of Risks

During the quarterly risk register meeting, one (1) new risk was identified and one (1) risk was closed. There is a total of sixty-seven (67) risks to be managed in the next quarter.

#### New Risk Identified:

Risk ID	Risk Description	SCC	Risk Score
TBD	Potential tunnel delays that are encountered after November 2020.	10	9.0

#### Closed Risk:

Risk ID	Risk Description	SCC	Risk Score
PLE2-90	Development around Century City Station restrict availability of staging areas.	40	3.0

Of the sixty-seven (67) risks, three (3) are scored as high, twenty-six (26) are scored as medium and thirty-eight (38) as low.

The Project Risk Register will continue to be updated quarterly.

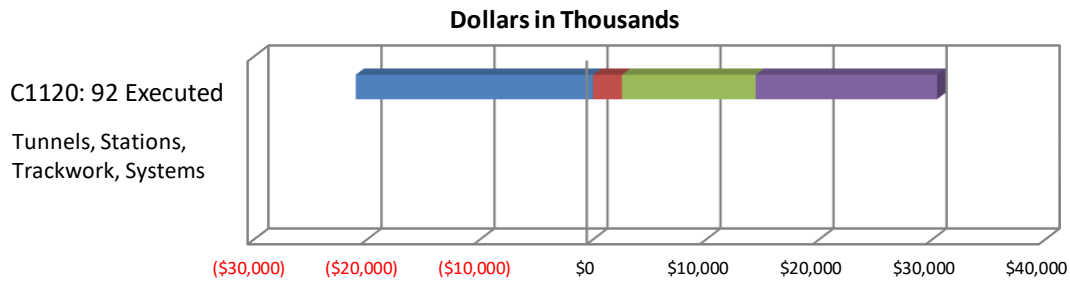
### Top Five Risks

The table below shows the top five (5) Project risks.

Risk ID	Risk Description	Risk Score	Action Items
PLE2-136	COVID-19 Pandemic Impact	20.0	1) Evaluate the guidelines from State and local Government. 2) Put contingency plans in place.
PLE2-95	Magnetic anomalies discovered in tunnel alignment.	14.0	1. Complete HDD study per approved plan. 2. Additional Investigations are required to determine the exact location and nature of the three (3) anomalies. 3. If the anomalies are proven to be well casings, follow MMRP Con-53. 4. Metro and BHUSD continue to coordinate with CalGEM with regards to next steps. Metro will continue to monitor the progress of the investigations and any subsequent oil well abandonment work that may be required if the presence of oil wells is confirmed on the alignment of either tunnel.
PLE2-70	Public protest to the Project causes delays.	12.0	1. Continue working collaboratively with the COLA and COBH communities.
PLE2-34	TBM breaks down in tunnel and has to be repaired/retrieved.	9.0	1. Metro to discuss with Section 1 regarding TBM screw issues and review TBM design and spare parts if necessary.
PLE2-102	Potential tunnel delays that are encountered after November 2020.	9.0	1. If potential anomalies prove to be well casings then follow MMRP Con-53.



### Summary of Contract Modifications



	<b>C1120: 92 Executed</b>
■ Under \$100K	(20,985)
■ \$100K to \$250K	2,558
■ \$250K to \$1M	11,833
■ Over \$1M	16,051
<b>Total Contract MODs</b>	<b>9,458</b>
<b>Contract Award Amount</b>	<b>1,376,500</b>
<b>% of Contract MODs</b>	<b>0.69%</b>

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

*Ninety-two (92) Contract Modifications (MODS) with a total value of \$9.4 million have been executed since the award of C1120 Contract – Tunnels, Stations, Trackwork and Systems.*

## DISADVANTAGED BUSINESS ENTERPRISE (DBE)

*As of October 2020:*

<b>DBE Goal – Design</b> The percentage of funds apportioned to Design Contracts	25.31%
<b>Current DBE Commitment Design</b> Total DBE Committed Dollars divided by Total Contract Value for Design	\$16.9M 27.49%
<b>Current DBE Participation</b> Total amount paid to date to DBEs divided by the amount paid to date to Prime	\$18.9M 33.42%

Twenty (20) Design DBE sub-consultants have been identified to date.

<b>DBE Goal – Construction</b> The percentage of funds apportioned to Construction Contracts	17.00%
<b>Current DBE Commitment Construction</b> Contract commitment divided by current contract value for Construction	\$138.5M 10.60%
<b>Current DBE Participation</b> Total amount paid to date to DBEs divided by the amount paid to date to Prime	\$69.8M 12.38%

Forty (40) Construction DBE sub-contractors have been identified to date.

## PROJECT LABOR AGREEMENTS (PLA)

*As of October 2020:*

<b>Targeted Worker Goal</b> Construction work to be performed by residents from Economically Disadvantaged Area in the United States	40.00%
<b>Targeted Worker Current Attainment</b>	41.21%
<b>Apprentice Worker Goal</b> Construction work to be performed by Apprentices	20.00%
<b>Apprentice Worker Current Attainment</b>	14.87%
<b>Disadvantaged Worker Goal</b> Construction work to be performed by disadvantaged workers	10.00%
<b>Disadvantaged Worker Current Attainment</b>	1.47%

## FINANCIAL/GRANT

### Status of Funds by Source

(IN MILLIONS OF DOLLARS)

NOVEMBER 2020

#### STATUS OF FUNDS BY SOURCE

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	\$1,187.000	\$1,187.000	\$500.000	\$1,057.536	89%	\$455.600	38%	\$440.645	37%
FEDERAL CMAQ	\$169.000	\$169.000	\$169.000	\$160.939	95%	\$151.000	89%	\$147.199	87%
MEASURE R - TIFIA LOAN	\$307.000	\$307.000	\$307.000	\$307.000	100%	\$307.000	100%	\$307.000	100%
MEASURE R 35%	\$811.902	\$811.902	\$206.783	\$393.370	48%	\$159.574	20%	\$137.055	17%
STATE CAPITAL PROJECT LOANS	\$54.762	\$54.762	\$54.762	\$54.762	100%	\$54.762	100%	\$54.762	100%
<b>TOTAL</b>	<b>\$2,529.664</b>	<b>\$2,529.664</b>	<b>\$1,237.545</b>	<b>\$1,973.607</b>	<b>78.0%</b>	<b>\$1,127.936</b>	<b>44.6%</b>	<b>\$1,086.661</b>	<b>43.0%</b>

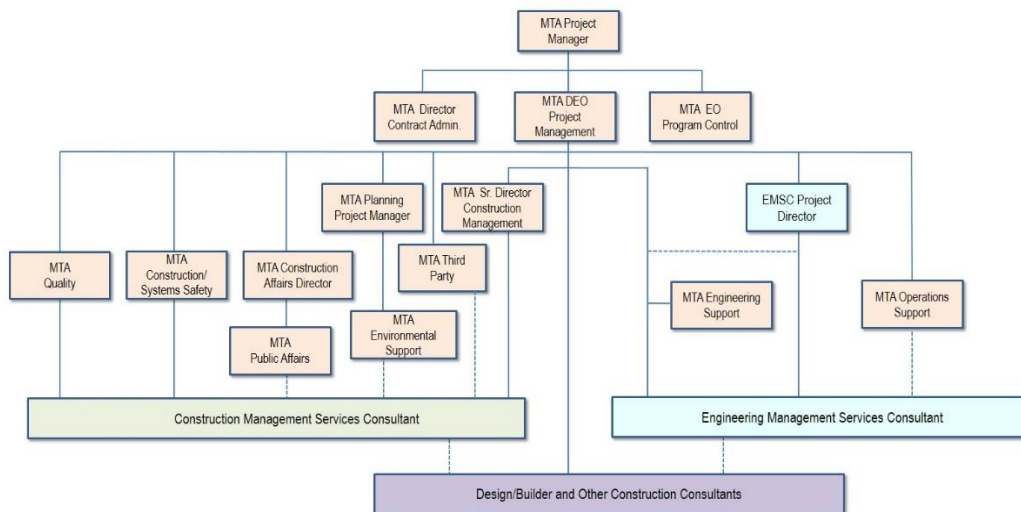
EXPENDITURES ARE CUMULATIVE THROUGH NOVEMBER 30, 2020

Original Budget based on 2017 Board approved LOP Budget, plus Finance Charges of \$88.7 million.

## 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).

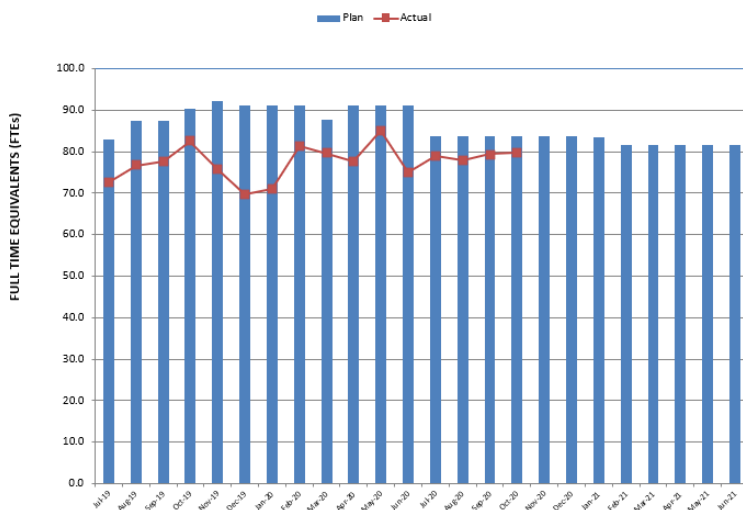
**Westside Purple Line Extension Section 2  
 Responsibility and Reporting Matrix**



The overall FY21 Total Project Staffing Plan averages 82.8 FTEs per month.

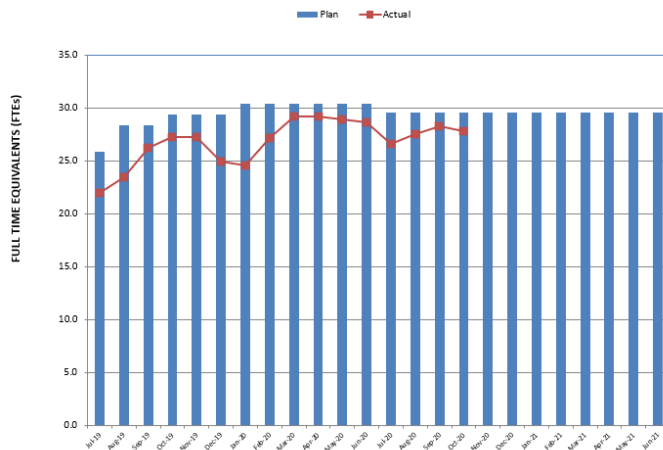
For October 2020, there were a total of 27.8 FTEs for MTA’s Project Administration Staff and 51.8\* FTEs for Consulting Staff. The total project staffing for October 2020 was 79.6 FTEs. Review of staffing plans is on-going to ensure staffing needs are appropriately managed.

### Total Project Staffing – Metro and Consultants

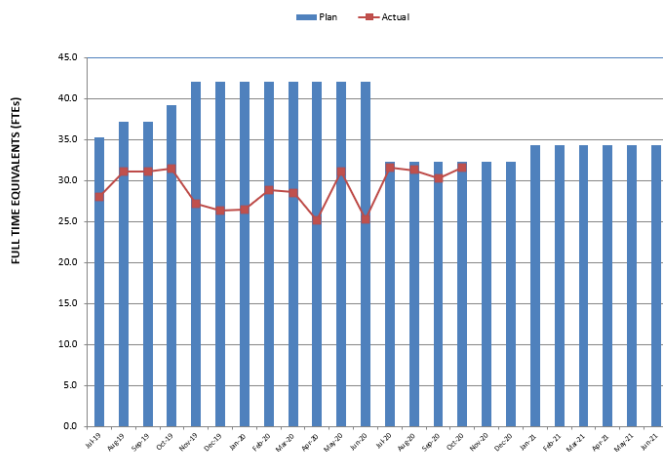


Actuals include 4.2 FTEs related to Project Management Support Services (PMSS).

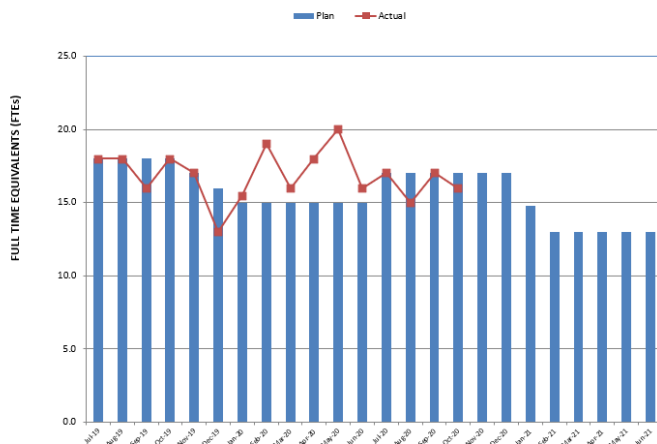
### Metro Staff



### CM Support Services Staff (Consultant)



### Engineering Services Staff (Consultant)



### Staffing by Group

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

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

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

## REAL ESTATE

Real Estate Status Summary									
Description	Number of Parcels	Certified	Appraisals Completed	Offers Made	Agreements Signed	Condemnation Filed	Relocations		Parcels Available
							Required	Completed	
Full Takes	3	3	3	3	1	2	21	21	3
Part Takes	0	0	0	0	0	0	0	0	0
TCE	3	3	3	3	2	1	1	1	3
SSE	23	23	23	23	15	9	3	3	23
Permanent Easements	3	3	3	3	3	1	0	0	3
<b>Total Parcels</b>	<b>32</b>	<b>32</b>	<b>32</b>	<b>32</b>	<b>21</b>	<b>13</b>	<b>25</b>	<b>25</b>	<b>32</b>

- TPOG has possession of the former ACE Gallery property for construction staging and ultimately construction of the Wilshire/Rodeo Station entrance.
- TBM Launch Box site turnover to TPOG was issued on January 11, 2018, and access to the adjacent sidewalk was provided on January 16, 2018.
- AAA property and Gillis Family Partnership property turnover to TPOG was provided on January 26, 2018.
- TPOG gained possession of 2040 Century Park East (JMB parking lot) on February 24, 2018.
- TPOG gained possession of the three parcels (W-3001, W-3001-01 and W-3002) located at the Wilshire/Rodeo Construction Staging Area (North) on July 11, 2018.
- TPOG gained possession of the Wilshire/Rodeo Station footprint after completion of third-party utility relocations on October 18, 2018.
- TPOG gained possession of W-3604 and W-3604-1 (AT&T) on March 20, 2019.
- Settlement agreement reached for W-3603 (Gillis) for loss of goodwill.
- TPOG gained site access to Parcel W-3901 located on the Southeast corner of Constellation Boulevard and Century Park West 10250 Constellation Boulevard on September 27, 2019.
- The acquisition for Parcel W-3604 (Pacific Bell) was completed on November 21, 2019.
- Settlement agreement reached for Subsurface Easement Parcel W-3402 (GCIP Holdings II, LLC).
- TPOG gained possession of W-3801 for the Century City Constellation Station entrance on August 21, 2020.
- *Parcel W-3903 under platform exhaust will be moved to public sidewalk. Requirement from Westfield will be decertified and reduces the total parcel number to 32.*
- *W-3801 Available under right of entry. Pending final Acquisition Agreement and payment.*

## QUALITY ASSURANCE

- Attended weekly Project construction progress meetings.
- Reviewed construction submittals, inspection reports at various job locations, Twining Independent test laboratory reports (TPOG), Ninyo and Moore test laboratory reports (Metro) and invoices for the work performed by Ninyo and Moore and PQM.
- Contributed to the development of Metro Quality Management Oversight Program and managed the implementation of the Project.
- Chaired weekly quality meetings with TPOG Quality Manager for the status, corrective actions, close out documents and verification actions for NCRs issued by Metro; quality control results for the current works; planning activities of Metro laboratory materials verification testing and special processes construction assessments.
- Reviewed the following with a disposition for record only/approved/approved as noted:
  - *CWP Entrance & Appendages Concrete Reinforcing (Rebar) Wilshire/Rodeo Station and Century City Constellation Station*
  - *CWP Embedded Track and Storm Drainage Installation Wilshire/Rodeo Station and Century City Constellation Station*
  - *CWP Waterproofing & Gas Venting System Wilshire/Rodeo Station and Century City Constellation Station.*



## ENVIRONMENTAL

- Issued various QMO reports assessing implementation of environmental requirements.
- Excavation at the tunnel access shaft has been completed. Archeological/Paleontological monitoring is no longer required.
- Archeological/Paleontological monitoring for excavation activities at Wilshire/Rodeo Station is on-going.
- Confirmed asbestos ductbank in conflict with SOE pile line at Century City Constellation Station. Abatement and removal TBD.
- Participated in various Project coordination meetings and evaluated progress and schedules for environmental compliance and sustainability efforts.
- Provided environmental awareness training as needed.
- Conducted field environmental monitoring and spot check inspections for construction noise and vibration, stormwater and fugitive dust BMPs, and Metro's Green Construction Policy.
- Reviewed and provided responses to various contractor submittals and requests for information related to environmental matters.
- *Abatement completed for additional oil lines uncovered that were in conflict with the Century City Constellation Station pile line.*

## CONSTRUCTION AND COMMUNITY RELATIONS

- *Produced and distributed five (5) construction work notices including accelerated work updates in Beverly Hills and Century City and monthly look ahead notices for Century City and Beverly Hills.*
- Conducted monthly construction update project presentations via webinar for community and business stakeholders in Beverly Hills and Century City. *Multiple one on one stakeholder meetings were conducted in Century City regarding full closure plans for piling, decking and water shutdown activities, and in Beverly Hills for the Holiday Moratorium exemption request.*
- Extensive outreach at community meetings and events including distribution of notices door to door, digital and direct emails and paid advertising. Limited to online outreach efforts only during COVID19 restrictions. *Expanded door to door distribution in Beverly Hills.*
- Participated in the following online meetings: Construction Management Weekly meetings, Construction Relations weekly meetings, Third Party Coordination, LADOT coordination, BOE and BSS coordination, LADWP review meeting, Wilshire/Rodeo Station and Century City Constellation Station Construction Coordination weekly meetings.
- Continued efforts for Eat Shop Play and Business Interruption Fund in Century City and Beverly Hills. Updated Facebook/Twitter and website as needed.

## CREATIVE SERVICES

- Outreach and coordination with area stakeholders
- Fabrication and materials research
- Artist selection research and preparation
- Participation in Artwork Lighting Task Force Meetings

## SAFETY & SECURITY

- *Tutor Perini-O&G (TPOG) reported one (1) Recordable Injuries in November 2020.*
- Metro Safety staff attended daily toolbox meetings, weekly crew all hand safety meeting, progress meetings, readiness reviews, and other project meetings to evaluate Contractor's Safety Program compliance with contract requirements.
- Metro and TPOG Project safety staff conducted schedule, safety/security and over-the-shoulder review meetings.
- Safety staff worked 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.
- Metro project safety staff conducted project Safety Orientation, SCSR and H2S Safety Training for new Metro/Consultants and IPMO project staff.
- *Hosted the Monthly All Hands Safety/Security Meeting Contractors on December 11th, 2020.*
- Metro project safety staff conducted right-of-way (ROW) and Safety/Security walks, Safety/Security reviews and coordination with TPOG staff for oversight and support of all project field work activities.
- *TPOG-JV reported 49,439 actual work hours through November 2020.*
- *TPOG Project to Date Work Hours are 1,653,968 with twenty (20) Recordable Injuries and five (5) Day's Away from Work Injuries.*
- *The Recordable Injury Rate is 2.41* The Bureau of Labor Statistics reports the National Average Recordable Injury Rate is 2.5.

## APPENDIX CHRONOLOGY OF EVENTS

January 2011	FTA approval to enter Preliminary Engineering
August 2012	FTA Record of Decision
December 2014	FTA approval to enter New Starts Engineering Phase
March 2015	Began Real Estate Acquisition
May 2015	Began Advanced Preliminary Engineering
September 2015	Issued RFQ for C1120 Design/Build contract
October 2015	Received RFQ responses for C1120 Design/Build contract
May 2016	Submitted draft FFGA application
May 2016	Submitted TIFIA loan application
June 2016	Submitted application to FTA requesting an FFGA
June 2016	Received RFP Proposals for Contract C1120
September 2016	Began telecom joint trench construction in Century City
December 2016	FTA executed FFGA
December 2016	Received TIFIA Loan
January 2017	NTP for Construction Management Support Services Contract
January 2017	Metro Board approved staff recommendation to award the Design/Build Contract C1120 to TPOG and approved Life-of-Project Budget
January 2017	Issued C1120 Contract Award to TPOG
April 2017	Issued C1120 Contract NTP to TPOG
May 2017	Mobilized C1120 Contract Design and Construction Team
August 2017	Third party relocations started at Century City Constellation Station
September 2017	Third party relocations started at the Wilshire/Rodeo Station
November 2017	Beverly Hills City Council approved Memorandum of Agreement (MOA) governing remaining third-party utility relocations

December 2017	Final Supplemental Environmental Impact Statement (FSEIS) was available to the public in the Federal Registry on December 1, 2017
January 2018	Completed all utility relocations within the Tunnel Boring Machine “Launch Box”
February 2018	Held Groundbreaking Ceremony on February 23, 2018
May 2018	Bureau of Engineering approved a nine-month street closure of Constellation Blvd. between Century Park East and Avenue of the Stars
September 2018	Full street closure of Constellation Blvd. commenced
September 2018	Delivery of tunnel boring machines (TBMs) commenced
October 2018	Piling installation commenced at launch box in Century City
October 2018	Granted Wilshire/Rodeo Station footprint right-of-way (ROW) access to TPOG
December 2018	Completed all civil work for third parties at Century City Constellation Station
December 2018	Demolition of former Ace Gallery completed
January 2019	Completed soldier pile installation for the TBM launch box at the eastern end of the Century City Constellation Station
January 2019	Metro Board Approves City of Beverly Hills MOA for C1120 Contract
February 2019	City of Beverly Hills City Council Approves MOA for C1120 Contract
March 2019	Start of installation of deck beams for the TBM launch box
May 2019	Completed soldier pile installation for Tunnel Access Shaft in Century City
June 2019	TBM Unveiling Event
June 2019	Full Street Closure of Constellation Blvd. Extension Granted
August 2019	Completed Construction of Santa Monica Boulevard Bus Layover in Century City
September 2019	Metro’s request to lift the holiday moratorium for construction activities in Beverly Hills was rejected by the City Council
October 2019	Piling installation commenced for the Wilshire/Rodeo Station box.
November 2019	Poured invert slab at TBM launch box in Century City.

December 2019	An Additional 7-Month Full Street Closure of Constellation Blvd. was Granted by Los Angeles Board of Public Works.
December 2019	Started TBM Assembly.
December 2019	Motion for prejudgment possession for SSE under Beverly Hill High School was granted.
January 2020	Piling activities resumed at Wilshire/Rodeo Station after the holiday moratorium.
March 2020	LADWP completed 4.8kv system cabling pulling and splicing, along with the remaining cable removals at Century City Constellation Station.
March 2020	Beverly Hills City Council approved a full street closure of Wilshire Boulevard (between Beverly Drive and Crescent Drive) for the duration of the "Safer at Home" orders due to the COVID-19 Pandemic.
March 2020	Right of Entry Executed to Access BHUSD
April 2020	Began tunneling operations of the BL Tunnel.
April 2020	Completed implementation of the Wilshire Boulevard closure (between Beverly Drive and Crescent Drive) for the duration of the "Safer at Home" orders due to the COVID-19 Pandemic.
May 2020	Completed station box and entrance piling activities at Wilshire/Rodeo Station.
June 2020	Wilshire Boulevard reopened to traffic following completion of decking at Wilshire/Rodeo Station.
July 2020	Began tunneling operations of the BR Tunnel.
August 2020	Completed excavation of Tunnel Access Shaft.
August 2020	Access granted to contractor to W-3801 for the Century City Constellation Station entrance.
September 2020	Abandonment of the first legacy oil well was completed.
September 2020	BL TBM "Ruth" Breaks into Tunnel Access Shaft.
October 2020	BR TBM "Harriet" Breaks into Tunnel Access Shaft.
November 2020	<i>Settlement agreement reached with City of Beverly Hills ending city's lawsuit against FTA and Metro.</i>

*November 2020 Beverly Hills City Council approved Metro's holiday moratorium waiver request and work hours established by the Memorandum of Agreement (MOA). Construction of Wilshire/Rodeo Station will continue through New Year's Day.*

*November 2020 City of Los Angeles approved additional closures east of Avenue of the Stars along Constellation Boulevard through January 2, 2021.*